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ASSESSMENT REPORT

describing

DIAMOND DRILLING

at the Osiris and Orion Projects of the

RACKLA GOLD PROPERTY

AT 1-206; BOB 1-16; BT 1-192; Dale 1-12; EN 1-192, EX 1-18; IS 1-28; JAM 1-32; OS 1-576, 641-676, 749-770, 841-846, 913-1076; PH 1-22; Q 25-109, R1-60, 62, 64, 66, 68, 70, 72, 74, 76, 78, 80, 82, 84, 86, 88, 90, 92, 94, 96, 98, 100, 102, 106, 108, RR 1-222; ST 1-517; Smac 1-3; STEN 1-142; T 1-3133 and WH 1-61

NTS 106C/01, 02, 03, 07, 08 and 106B/04
Latitude 64°01´N to 64°16´ N; Longitude 133°19´W to 131°54´W

in the

Mayo Mining District, Yukon Territory

Field work performed from May 15th to September 18th, 2018

prepared by

Archer, Cathro & Associates (1981) Limited

for

ATAC RESOURCES LTD.

By
A.B. Coulter, M.Sc., GIT

May 2019

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INTRODUCTION

The Rackla Gold Property comprises a 1700 km^2 area of highly prospective, platform to basin facies, sedimentary rocks located along the northern edge of the Tintina Gold Belt at the transition from the Selwyn Basin to the Mackenzie Platform in east-central Yukon Territory (Fig. 1). Various commodities have been explored for and discovered both currently and historically within the claim block. Past exploration focused on base metal mineralization, while recently the emphasis has been directed towards gold potential. The property is wholly owned by ATAC Resources Ltd. (ATAC) and is comprised of three projects: the advanced Carlin-type gold Osiris Project, the early stage Carlin-type gold Orion Project and the advanced Rau Project which hosts the Tiger Gold Deposit.

This report describes the work completed, methods used and the results obtained from the 2018 exploration program conducted at the Osiris and Orion Projects between May 15th and September 18th, 2018. Management and labour for the project was provided by Archer, Cathro & Associates (1981) Limited (Archer Cathro) on behalf of ATAC. The authors supervised and participated in the program and interpreted all resulting data. The author's Statements of Qualifications is listed in Appendix I; while Appendix II provides a Statement of Expenditures related to the program.

PROPERTY LOCATION, CLAIM DATA, ACCESS AND INFRASTRUCTURE

The Osiris and Orion Projects of the Rackla Gold Property consists of 5,424 contiguous mineral claims located from 64°01´N to 64°16´ N and stretching from 133°19´W to 131°54´W on NTS map sheets NTS 106C/01, 02, 03, 07, 08 and 106B/04 (Fig. 2). The work presented in this report was filed for all 5,424 claims. Claim information for these claims is presented below in Table I. The claims are all registered with the Mayo Mining Recorder. The Osiris Project claims are held in the name of Archer Cathro, who holds them in trust for ATAC, while the Orion Project claim are held in the name of ATAC. The Smac claims are held 50% by Archer Cathro and 50% by ATAC. Specifics concerning claim registration are tabulated below while the locations of individual claims associated with this report are shown on Figures 2.

The Osiris Project is made up of Claim Groups A and B and the Orion Project is made up of Claim Groups C through F (Figs. 2 A-D). The cluster of showings in the Osiris Project is known as the Osiris cluster and the cluster of showings in the Orion Project is known as the Anubis Cluster (Fig. 3). The combination of the Osiris cluster and the Anubis cluster are referred to herein as the Nadaleen Trend.

TABLE I: NADALEEN TREND CLAIM INFORMATION

Claim	Numbers	Grants	Expiry
AT	1-206	YF44251-YF44456	April 28, 2038
Bob	1-16	YF44457-YF44472	April 28, 2027
BT	1-192	YF42501-YF42692	April 28, 2028
Dale	1-12	YD08533-YD08544	April 28, 2051
EN	1-192	YD01401-YD01592	April 28, 2040
EX	1-18	YD72482-YD72499	April 28, 2038

IS	1-28	YC99751-YC99778	April 28, 2040
Jam	1-32	YD08501-YD08532	April 28, 2030
OS	1-576	YD69731-YD70306	April 28, 2038
OS	641-676	YD70371-YD70406	April 28, 2040
OS	749-770	YD70479-YD70500	April 28, 2040
OS	841-846	YD70571-YD70576	April 28, 2040
OS	913-1076	YD70643-YD70806	April 28, 2040
PH	1-11	YE55701-YE55711	April 28, 2038
PH	12	YE55712	April 28, 2034
PH	13-22	YE55713-YE55722	April 28, 2038
Q	25-26	YC92385-YC92386	April 28, 2041
Q	27-52	YC92387-YC92412	April 28, 2034
Q	53-58	YC92413-YC92418	April 28, 2038
Q	59-84	YC92419-YC92444	April 28, 2034
Q	85-88	YC92445-YC92448	April 28, 2038
Q	89	YC92449	April 28, 2034
Q	90	YC92450	April 28, 2038
Q	91-109	YC92451-YC92469	April 28, 2034
R	1-6	YC68334-YC68339	April 28, 2043
R	7-10	YC68340-YC68343	April 28, 2040
R	11-12	YC68344-YC68345	April 28, 2036
R	13-20	YC68346-YC68353	April 28, 2043
R	21-24	YC68354-YC68357	April 28, 2040
R	25-54	YC68358-YC68387	April 28, 2036
R	55-60	YC68388-YC68393	April 28, 2043
R	62	YC68395	April 28, 2043
R	64	YC68397	April 28, 2043
R	66	YC68399	April 28, 2043
R	68	YC68401	April 28, 2040
R	70	YC68403	April 28, 2040
R	72	YC68405	April 28, 2036
R	74	YC68407	April 28, 2036
R	76	YC68409	April 28, 2036
R	78	YC68411	April 28, 2036
R	80	YC68413	April 28, 2036
R	82	YC68415	April 28, 2036
R	84	YC68417	April 28, 2036
R	86	YC68419	April 28, 2036
R	88	YC68421	April 28, 2036
R	90	YC68423	April 28, 2036
R	92	YC68425	April 28, 2036
R	94	YC68427	April 28, 2036
R	96	YC68429	April 28, 2036
R	98	YC68431	April 28, 2036
R	100	YC68433	April 28, 2036
R	102	YC68435	April 28, 2036
R	106	YC68439	April 28, 2043
R	108	YC68441	April 28, 2043
RR	1-222	YC89701-YC89922	April 28, 2036
Smac	1-2	YD07302-YD07303	March 1, 2029
Smac	3	YD07301	March 1, 2029
ST	1-24	YD26901-YD26924	April 28, 2048
ST	25-86	YD26925-YD26986	April 28, 2044

ST	87-91	YD26987-YD26991	April 28, 2048
ST	92-431	YD26992-YD27331	April 28, 2044
ST	432-517	YD27332-YD27417	April 28, 2045
Sten	1-20	YC99501-YC99520	April 28, 2049
Sten	21-38	YC99523-YC99540	April 28, 2047
Sten	39-54	YD08485-YD08500	April 28, 2047
Sten	55-89	YD10405-YD10439	April 28, 2047
Sten	90	YD10440	April 28, 2051
Sten	91	YD10441	April 28, 2047
Sten	92	YD10442	April 28, 2051
Sten	93	YD10443	April 28, 2047
Sten	94	YD10444	April 28, 2051
Sten	95	YD10445	April 28, 2047
Sten	96	YD10446	April 28, 2051
Sten	97	YD10447	April 28, 2047
Sten	98	YD10448	April 28, 2051
Sten	99	YD10449	April 28, 2047
Sten	100	YD10450	April 28, 2051
Sten	101	YD10451	April 28, 2047
Sten	102-104	YD10452-YD10454	April 28, 2051
Sten	105-126	YD10455-YD10476	April 28, 2047
Sten	127-142	YD10477-YD10492	April 28, 2051
T	1-670	YD09731-YD10400	March 1, 2036
T	671-747	YD22801-YD22877	March 1, 2036
T	748-771	YD22878-YD22901	March 1, 2045
T	772-785	YD22902-YD22915	March 1, 2041
T	786-809	YD22916-YD22939	March 1, 2045
T	810-823	YD22940-YD22953	March 1, 2041
T	824-847	YD22954-YD22977	March 1, 2045
T	848-861	YD22978-YD22991	March 1, 2041
T	862-889	YD22992-YD23019	March 1, 2045
T	890-903	YD23020-YD23033	March 1, 2041
T	904-1071	YD23034-YD23201	March 1, 2045
T	1072-1521	YD23202-YD23651	March 1, 2032
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T	2162	YD24292	March 1, 2031
T	2163	YD24293	March 1, 2027
T	2164	YD24294	March 1, 2031
T	2165	YD24295	March 1, 2027
T	2166	YD24296	March 1, 2031
T	2167	YD24297	March 1, 2027
T	2168	YD24298	March 1, 2031
T	2169	YD24299	March 1, 2027
T	2170	YD24300	March 1, 2031
T	2171	YD24301	March 1, 2027
T	2172	YD24302	March 1, 2031
T	2173	YD24303	March 1, 2027
T	2174	YD24304	March 1, 2031
T	2175	YD24305	March 1, 2027

T	2176	YD24306	March 1, 2031
T	2177	YD24307	March 1, 2027
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T	2196	YD24326	March 1, 2031
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T	2200	YD24330	March 1, 2031
T	2201	YD24331	March 1, 2027
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T	2203	YD24333	March 1, 2027
T	2204-2295	YD24334-YD24425	March 1, 2031
T	2296	YD24426	March 1, 2045
T	2297	YD24427	March 1, 2031
T	2298	YD24428	March 1, 2045
T	2299-2341	YD24429-YD24471	March 1, 2031
T	2342-2348	YD24472-YD24478	March 1, 2045
T	2349-2387	YD24479-YD24517	March 1, 2031
T	2388-2397	YD24518-YD24527	March 1, 2045
T	2398-2427	YD24528-YD24557	March 1, 2031
T	2428-2437	YD24558-YD24567	March 1, 2045
T	2438-2467	YD24568-YD24597	March 1, 2031
T	2468-2477	YD24598-YD24607	March 1, 2045
T	2478-2507	YD24608-YD24637	March 1, 2031
T	2508-2517	YD24638-YD24647	March 1, 2045
T	2518-2547	YD24648-YD24677	March 1, 2031
T	2548-2557	YD24678-YD24687	March 1, 2045
T	2558-2570	YD24688-YD24700	March 1, 2031
T	2571-2587	YD11401-YD11417	March 1, 2031
T	2588-2597	YD11418-YD11427	March 1, 2045
T	2598-2627	YD11428-YD11457	March 1, 2031
T	2628-2637	YD11458-YD11467	March 1, 2045
T	2638-2667	YD11468-YD11497	March 1, 2031
T	2668-2677	YD11498-YD11507	March 1, 2045
T	2678-2707	YD11508-YD11537	March 1, 2031
T	2708-2717	YD11538-YD11547	March 1, 2045

T	2718-2747	YD11548-YD11577	March 1, 2031
T	2748-2757	YD11578-YD11587	March 1, 2045
T	2758-2771	YD11588-YD11601	March 1, 2031
T	2772	YD11602	March 1, 2045
T	2773	YD11603	March 1, 2031
T	2774	YD11604	March 1, 2045
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T	2784	YD11614	March 1, 2045
T	2785	YD11615	March 1, 2031
T	2786	YD11616	March 1, 2045
T	2787	YD11617	March 1, 2031
T	2788-2807	YD11618-YD11637	March 1, 2045
T	2808-2814	YD11638-YD11644	March 1, 2031
T	2815-2850	YD11645-YD11680	March 1, 2045
T	2851-2858	YD11681-YD11688	March 1, 2031
T	2859-2870	YD11689-YD11700	March 1, 2045
T	2871-2894	YD32901-YD32924	March 1, 2045
T	2895-2902	YD32925-YD32932	March 1, 2031
T	2903-2938	YD32933-YD32968	March 1, 2045
T	2939-2949	YD32969-YD32979	March 1, 2031
T	2950-2957	YD32980-YD32987	March 1, 2045
T	2958	YD32988	March 1, 2048
T	2959	YD32989	March 1, 2045
T	2960	YD32990	March 1, 2048
T	2961	YD32991	March 1, 2045
T	2962-2971	YD32992-YD33001	March 1, 2048
T	2972-3004	YD33002-YD33034	March 1, 2044
T	3005	YD33035	March 1, 2045
T	3006	YD33036	March 1, 2044
T	3007	YD33037	March 1, 2045
T	3008-3125	YD33038-YD33155	March 1, 2044
T	3126-3131	YD33156-YD33161	March 1, 2036
T	3132-3133	YD33239-YD33240	March 1, 2031
WH	1-61	YF41901-YF41961	April 28, 2042

**Expiry dates include 2018 work which has been filed and has received assessment credit.*

The closest road access is to the community of Keno City, situated 60 km by road northeast of the town of Mayo. Access to the project in 2018 was routed via Mayo to the Stewart airstrip approximately180 km east-northeast or directly from Whitehorse to the Stewart airstrip approximately 400 km north-northeast. Alkan Air provided the project's service flights several times per week with a Cessna 208B Grand Caravan. The locations of the Stewart airstrip and Nadaleen camp is shown on Figure 3.

Daily access to work areas on the project was provided by Horizon Helicopters utilizing two Eurocopter AS350 SD2 (A-Star) helicopter. This machine also transferred all supplies into camp from the airstrip and completed the diamond and rotary air blast (RAB) drill moves between their respective drill sites.

HISTORY AND PREVIOUS WORK

The earliest recorded exploration in the area of the Nadaleen Trend occurred when McIntyre Mines staked the Birkeland claims, then called Tom and Mom, in 1974 approximately 205 km east-northeast of Mayo. Mapping, geochemical soil sampling, trenching and the drilling of 10 BQ and 22 Winkie holes were carried out in 1975. The most significant results achieved were 4.4% zinc, 0.5% lead and 2.7 g/t silver over 1.8 m in DDH75-31 (Shearer, 1975). In 1978, McIntyre Mines entered a joint venture with Canadian Superior Exploration Ltd. No further work was reported and the Birkeland claims expired.

In 1976 the Sian claims were staked approximately 37 km southwest of the Birkeland claims by McIntyre Mines following prospecting of geological targets. Mapping, geochemical soil sampling and EM, mag and SP geophysical surveys were carried out in 1977. Gold was tested for in four grab samples; however, results did not exceed the detection limit for gold (Birkeland, 1978). After entering a joint venture with Canadian Superior Exploration, detailed mapping, trenching and sampling was completed in 1979. Results of this work found low grade lead and zinc throughout a folded dolomite unit. One diamond drill hole was completed in 1980 but did not intersect any mineralization. No further work was recommended and in 1982 the Sian property passed to Serem Ltd, after which the claims were voided and no further exploration was reported.

The Highhawk and Leah showings are situated approximately five and ten kilometres west of the Sian showing respectively. They occur within the Leah claims which adjoin the Star, Lee and Nod claims. The Leah claims were staked by a syndicate composed of Highhawk Mines Ltd, Envoy Resources Ltd, Sprott Silver Mines Ltd, Hecate Gold Corporation and Bow River Resources Ltd in 1976. The Star claims, which adjoined to the north, were staked by private prospectors and optioned to Prism Resources Ltd in 1977. Mapping and soil geochemical testing completed by Prism in 1977 returned disappointing results and all claims were dropped. The Lee and Nod claims were staked to the south of the Leah claims in December of 1976 and were optioned to Tay River Mines. No work is on record for these claims and they were allowed to lapse.

McIntyre Mines staked the Jam property in 1977, 4.2 km north of its Sian property. Soil and silt sampling in conjunction with mapping later that year found a favorable dolomite breccia host rock with associated zinc and lead sulphide mineralization. No further work was reported and the Jam claims lapsed.

In 1976, the Black, Ida, Red and Eira claims, located approximately 8 km east of the Sian claims, were staked by the Ortell Syndicate (Precambrian Shield Resources Ltd, Giant Yellowknife Mines Ltd, Nemco Resources Ltd and Highwood Resources Ltd). In 1977, the Black and Ida

claims were optioned to a joint venture between DeJour Mines Limited and Nova-Co Exploration Limited (Thompson, 1977). Mapping and geochemical sampling on the Ida claims later that year returned moderately anomalous zinc values, with erratic lead and silver support.

Also in 1977, prospecting and stream sediment sampling carried out on the Eira property by the Ortell Syndicate returned anomalous silver and zinc results, up to 2.4 ppm and 680 ppm respectively (Curry, 1977). This led to more detailed grid soil sampling and geological mapping. This work returned a number of moderate, non-coincident silver, zinc and lead anomalies.

In 2001, the Geological Survey of Canada completed a regional stream sediment sampling program (Heon, 2003), which included coverage of the current Sten claims, in an area now referred to as the Nadaleen Trend. Creeks draining this area returned weak gold and strong arsenic anomalies.

ATAC's initial interest in the area was to follow up on an anomalous arsenic silt sample collected by the Geological Survey of Canada in 2001. Over a three day period in 2009, 89 stream sediment, 1 rock and 9 soil samples were collected on the Sten claims. These samples returned a string of moderately to very strongly anomalous results ranging from 12 to 1775 ppb gold and 123 to 155,000 ppm arsenic (Eaton, 2010). Additional claims were staked by ATAC as a result of this work. A summary of the work completed to date by ATAC is presented below in Table II. Locations of showings and historical work areas referred to in this report can be found on Figure 3.

TABLE II: ANNUAL ATAC RESULTS SUMMARY TABLE

Year	Work Completed	General Results	Highlight Results	Reference
2010	Mapping, prospecting, soil sampling and 1289.24 m of diamond drilling in 9 holes	Drilling defined three Carlin-type gold bearing zones – Osiris (5 holes), Conrad (2 holes) and Ibis (1 hole)	7 holes intersected significant mineralization. **Osiris** – OS-10-01 65.20 m of 4.65g/t Au. **Conrad** – OS-10-08 21.13 m of 8.03 g/t Au **Ibis** - OS-10-07 17.00 m of 0.92 g/t Au	Lane, 2011
2011	Diamond drill program (26,675 m in 89 holes), mapping, prospecting, airborne magnetic and radiometric geophysical survey	Mapping continued to refine the stratigraphic section, prospecting identified prospective anomalies. Targeted drilling at Osiris, Ibis and Conrad Zones and scout drilling at Atum, Amon, Dale, Ptah and Pyramid Zones	50 holes intersected significant mineralization. **Conrad** – OS-11-010 114.93 m of 3.15 g/t Au Ibis – OS-11-073 51.82 m of 3.13 g/t Au **Osiris** – OS-11-082 44.20 m of 4.41 g/t Au **Sunrise** – OS-11-053 30.98 m of 3.09 g/t Au	Lane and Carne, 2012 & McDivitt, 2012
2012	Diamond drill program (36,920 m in 116 holes) , soil sampling, mapping, auger sampling and geophysical surveys	Soil sampling and prospecting led to the discovery of gold mineralization at the Pharaoh and Anubis Zones. Detailed drilling at Conrad, Osiris, Ibis, Atum, Sunrise,	67 drill holes intersected significant mineralization. **Anubis** – AN-12-001 8.51 m of 19.85 g/t Au **Conrad** – OS-12-114 42.93 m of 18.44 g/t Au	Lane et al., 2013

		Pyramid, Anubis and GT Zones	**Ibis** – OS-12-120 27.43 m of 6.28 g/t Au **Osiris** – OS-12-139 27.43 m of 2.00 g/t Au **Sunrise** – OS-12-173 14.86 m of 10.54 g/t Au	
2013	Diamond drill program (7,303 m in 26 holes), soil sampling, prospecting, mapping, hand and excavator pit sampling	Discovery of six new targets including Lyra, Corona, Dorado, Draco, Columbia and Zodiac	15 drill holes intersected significant mineralization. **Conrad** – OS-13-219 68.58 m of 4.23 g/t Au **Ibis** – OS-13-207 21.87 m of 2.62 g/t Au **Sunrise** – OS-13-206 15.24 m of 9.83 g/t Au	Lane and Phillips, 2014)
2014	Diamond drill program (4,733 m in 10 holes), trenching, auger drilling and surface mapping	Extended known soil geochemical anomalies and improved geologic understanding of local units and structures	6 drill holes intersected significant mineralization. **Conrad** – OS-14-227 30.79 m of 9.50 g/t Au **Sunrise** – OS-14-225 12.19 m of 3.09 g/t Au	Lane and Phillips, 2015
2015	RAB drill program (482 m in 31 holes) and a diamond drill program (1,289 m in 1 hole)	Discovery of the Orion zone, tested continuity and between Conrad Upper and Middle zones	1 drill hole intersected significant mineralization. **Conrad** – OS-15-231 124.96 m of 3.02 g/t Au 1 RAB hole intersected significant mineralization **Orion** – ARB-15-026 47.24 m of 3.79 g/t Au	Lane and Phillips, 2016
2016	Diamond drill program (1,540 m in 10 holes) and RAB drill program (2,141 m in 42 holes)	Discovery of oxide gold mineralization in the Anubis Fault, confirmed RAB drill results in diamond drill core at Orion	6 drill holes intersected significant mineralization. **Orion** – AN-16-010 61.29 m of 2.75 g/t Au	Lane and Walsh, 2017
2017	Diamond drill program (15,088 m in 32 holes), RAB drill program (1,532 m in 32 holes), mapping, excavator trenching, soil sampling, ridge and spur sampling, gravity survey.	Discovered high-grade gold mineralization in the 650- and 850-faults at Conrad, expanded the Osiris and Sunrise Zones at depth and refined the stratigraphy of the Orion project	25 drill holes intersected significant mineralization. **Conrad** – OS-17-259 76.20m of 3.54 g/t Au **Sunrise** – OS-17-249 15.24 m of 13.52 g/t Au **Osiris** – OS-17-244 12.19 m or 9.60 g/t Au	Coulter and Lane, 2018

GEOMORPHOLOGY AND CLIMATE

The Nadaleen Trend occurs on the eastern half of the 175 km east-west oriented Rackla Gold Property in the Selwyn and Wernecke Mountains and is drained by creeks that flow into the Nadaleen, Rackla and Stewart Rivers, all part of the Yukon River watershed. Local topography varies from low forested valleys to alpine terrain and features generally east-west to northwest trending broad glaciated valleys. Elevations range from approximately 600 to 2,000 m above sea level. Outcrop is most abundant near ridge crests and in actively eroding creek beds. Most hillsides are talus covered at slope breaks and are blanketed by glacial till at lower elevations.

The region was glaciated in the Late Pleistocene, 22,000 years ago (Duk-Rodkin, 1999) with ice flow generally occurring from east to west.

Treeline in the vicinity of the project is at about 1,500 m. Slopes above that elevation, especially steep north facing slopes, have little vegetation. Moderately steep, south facing slopes are well drained and are often lightly forested with poplar and spruce. The density and size of vegetation gradually increases on lower slopes, and the valley floors are well treed with mature black spruce. Understory vegetation typically consists of low shrubs and moss.

The climate in the Nadaleen Trend area is typical of northern continental regions with long, cold winters, truncated fall and spring seasons and short, mild summers. Although summers are relatively mild, arctic cold fronts often cover the area and snowfall can occur in any month. The property is mostly snow free from early June through late September.

REGIONAL GEOLOGY

The Geological Survey of Canada performed geological mapping in the vicinity of the Rackla Gold Property at 1:250,000 scale in the early 1970s (Blusson, 1974). In 1999, the Geological Survey of Canada (Gordey and Makepeace, 1999) completed a compilation of Yukon-wide geology and updated the lithological units named in the Rackla area. The Yukon Geological Survey conducted mapping on 106C/03 and 106C/04 1:50,000 map sheets in 2010 and 2011 (Colpron, 2012 and Chakungal and Bennett, 2010), completed map sheets 106D/01, 106C/01-04 in 2012 (Colpron et al., 2013), extended coverage to the east in 2013 on map sheet 106B/04 (Moynihan, 2014). In early 2016 the Yukon Geological Survey released a revised bedrock geology map for Yukon that built upon the previous compilations (Colpron, 2016).

The Rackla Gold Property straddles the boundary between deep water dominantly clastic rocks of the Selwyn Basin to the south and shallower water shelf strata of the Mackenzie platform to the north (Colpron and Nelson, 2011). The Dawson Fault, which juxtaposes rocks of Selwyn Basin against rocks of Mackenzie Platform, is a crustal break that may date back to late Neoproterozoic rifting and was reactivated as a north directed thrust in the Cretaceous (Macdonald et. al, 2010). The tectonic setting of the Rackla Gold Property is shown in Figure 4, while regional relationships and the importance of the Dawson Fault system are presented in Figure 5.

Recent mapping by the Yukon Geological Survey has refined the Proterozoic to Paleozoic sedimentary stratigraphy underlying the Nadaleen Trend as seen in Figure 6. A description of this revised mapping is outlined below, with Proterozoic to Lower Cambrian rocks described in Table II and Paleozoic rocks in Table III. To date, mineralization along the Nadaleen Trend has dominantly been found between the Kathleen Lakes and Dawson Thrust Faults.

TABLE III: PROTEROZOIC TO LOWER CAMBRIAN ROCKS ALONG THE NADALEEN TREND

REGIONAL LOCATION	AGE	REGIONAL UNIT NAME

North of Kathleen Lakes fault	Neoproterozoic	Windermere Supergoup and Rapitan Group stratigraphy.
Hanging wall (south) of Dawson Thrust fault.	Neoproterozoic to Cambrian	Hyland Group, Earn Group, with south eastern areas dominated by Gull Lake Formation and volcanic rocks of the Old Cabin Formation.
Between Kathleen Lakes and Dawson Thrust faults		Nadaleen and Blueflower Assemblages correlative with the uppermost portion of the Windermere Supergroup overlain by upper Hyland Group stratigraphy.

TABLE IV: PALEOZOIC ROCKS ALONG THE NADALEEN TREND

FACIES	AGE	ROCK TYPE
Off Shelf Rocks	Ordovician to Lower Devonian	Black shale of the Road River Group
	Ordovician to Silurian	Limestone and calcareous sandstone
	Middle Devonian	Limestone
	Middle Devonian to Lower Mississippian	Silty-mudstone and limestone; and shale of the Earn Group
	Mississippian to Lower Devonian	Clastic rocks
Platform Rocks	Upper Cambrian to Devonian (?)	Limestone and Dolostone

PROPERTY GEOLOGY

The distribution of lithologies and regional scale structures defined to date along the Nadaleen Trend are shown in Figure 7. Stratigraphic relationships between the mapped units along the Nadaleen Trend are described below.

It is believed that the Nadaleen Trend area underwent extensive deformation as part of a Mesozoic to early Cretaceous fold and thrust event, followed by a transition into a probable strike slip regime. Two major regional structures transect the property: the Dawson Thrust and the Kathleen Lakes Faults. The Dawson Thrust, historically described as defining the northern edge of Selwyn basin, placed Precambrian slope and basinal sedimentary rocks over Paleozoic shelf carbonates during a Jurassic to Cretaceous compressional tectonic event. This fault is likely a much older structure, possibly dating back to Precambrian rifting, which was reactivated during a later compressional regime.

The Kathleen Lakes Fault marks the contact between Paleozoic platform rocks to the north and Paleozoic shelf to basin rocks to the south in the western part of the property. Both the Dawson Thrust Fault and Kathleen Lakes Faults become difficult to trace to the east as they move into broad valleys covered by a thick layer of glacial till. The Nadaleen Fault near the eastern end of the property appears to be a splay off the Kathleen Lakes Fault.

The prevalence of debrite and turbidite facies within almost all units, along with the highly variable stratigraphic thicknesses of units provides strong evidence for long lived syn-sedimentary tectonism.

ANUBIS AREA TO OSIRIS AREA – PROPERTY GEOLOGY

Lithologies of the Nadaleen Trend between the Anubis Area and Osiris Area have been divided into three groups: Paleozoic Rocks, Neoproterozoic to Cambrian Rocks, and Neoproterozoic Rocks. Descriptions of each of these are provided below, while maps outlining the distribution of these units are shown on Figures 6 and 7.

Paleozoic Rocks – Are exposed from the Pyramid Zone to just south and west of Nadaleen Camp. This group has been subdivided into nine lithologically distinct map units:

- **P**: Well bedded, typically yellow-orange weathered, likely reworked, sandy limestones (mudstones to predominately crinoidal wacke-packstones, to fossiliferous floatstones, in place with coarse lithic clasts), possibly calcareous sandstones to conglomerates; interbedded with non-calcareous shales.

- **PM**: Shale-siltstone interbeds of limestone (mostly crinoidal wacke-packstones and mudstones) and siliceous rocks, likely formed by diagentietc silicification of carbonate (limestone or calcarente) beds.

- **M**: Light grey, thick bedded spire-forming limestones, predominately crinoid packstones. Common presence of diagenetic(?) silicification in the form of bands, lenses and completely replaced beds up to several meters thick. Common karst features (caves, dissolution cavities with speleothems and infill breccia).

- **MD30**: Steel grey-black, laminated non-calcareous shale, calcareous shale and shaly mud limestone and discontinuous interlayered thin (1-5mm) bioclastic (crinoid fragments) and lithic (chert and shale) packstones.

- **MD20:** Steel grey-black, laminated non-calcareous shale with interlayered lithic (chert clast rich) arenite, gritstone and rarer conglomerate

- **MD10**: Carbonaceous non-calcareous and calcareous shales and siltstones, contain fossiliferous wackestone-rudstone debris flow beds with 2-hole crinoids.

- **D40**: Grey-tan, massive bedded (rare bedding surfaces) lime mudstone, bioclastic wackestone, packstone. Macro-fossils including rugose colonial coral (hexagonaria), brachiopods, bryozoans, single and 2-hole crinoids.

- **D30**: Grey-tan dolomite, burrows and fenestral fabric, low clastic input based on geochemistry.

- **D20**: Grey-tan dolomite, burrows and fenestral fabric higher clastic input based on the geochemistry.

- **D10**: Dark grey to black fossiliferous limestone wackestone, locally variably dolomitic with hexagonal corals rugose corals and brachiopods

- **S30**: Similar to S10, light-medium grey, coarse thick bedded bioclastic rudstone, locally graded beds and basal bed scours and flute casts. Coarse fossil debris includes whole and broken rugose and colonial corals (halysites, syringoporella(?)), bryozoans, stromatoporoids, brachiopods, rare trilobites and crinoids (including 'star' crinoids)

- **S20**: Dark-medium grey couplets of 10-20 cm graded bed lime fine-grained wackestone-mudstone and laminated to cm-planar bedded lime mudstone.

- **S10:** Light-medium grey, coarse, thick bedded bioclastic rudstone, locally graded beds and basal bed scours, flute casts. Coarse fossil debris include whole and broken rugose and colonial coral (halysites, syringoporella (?), bryozoans, stromatoporoids, brachiopods, rare trilobites and crinoids (including 'star' crinoids).

- **O30:** Yellow-orange weathering, grey-brown laminated calcareous siltstone and planar cm-bedded lime mudstone. Locally includes coarse lithic-fragmental rudstone-floatstone (debris flow).

- **O20:** Black laminated carbaceous graptolitic shale and cm-bedded, siliceous mudstone. Graptolites include isograptus, tetragraptus, didymograptus, phyllograptus and dicanograptus.

- **O10:** Medium grey, generally massive bedded coarse lithic fragmental rudstone-floatstone. Mostly rounded lime mudstone clasts and brown-black laminated siliceous mudstone. Locally contains fine fossil fragments (crinoid, brachiopod shells).

Neoproterozoic to Cambrian Rocks - This stratigraphy is exposed across the entire length of the map area. It is divided into two lithologic map units as follows:

- **PCd**: Neoproterozoic (to Cambrian?) dolostone

- **PCs**: Neoproterozoic (to Cambrian?) black carbonaceous shales to siltstone at the south flank of the property.

- **D:** "Whitecliff" dolostone (to dolomitic limestone?); likely fault-bounded slice, stratigraphic setting unknown

    a. **Cs1:** Buff-brown, cm bedded fine-medium grained quartz sandstone. Bedding parallel burrows.

- **PCn:** Maroon-green shale with thin-interbedded fine-grained sandstone, prominent pencil cleavage

- **pC:** Angular dolomite fragment rudstone with a lime mud matrix, capped by black, crystalline limestone.

OSIRIS AREA – PROPERTY GEOLOGY

Lithologies in the Osiris Area have been subdivided from the regional lithologies due to the extensive detailed mapping and core logging that has taken place between 2010 and 2018. Detailed descriptions of each lithology are outlined below, while their distribution with respect to one another is displayed on Figure 7. From oldest to youngest, these include:

- **NONAD:** The North of Nadaleen mudstone is part of the upper Ice Brook Formation and is a light teal-green to maroon and brown mudstone with minor interbedded quartz pebble conglomerate. The mudstone displays distinctive rusty brown weathering.

- **C-LST1:** The Conrad limestone 1 is part of the lower Nadaleen Formation and is a light grey, silty laminated clastic limestone with cone in cone and beef calcite, and wispy fine quartz sand layers.

- **C-SLC**: The Conrad siliciclastic unit is part of the Nadaleen Formation and is a grey-green pyritic siltstone and mudstone, poorly sorted matrix-supported quartz pebble conglomerate with lesser grey, well sorted, weakly calcareous sandstone. The conglomerate, informally referred to as 'starry night', consists of rounded quartz pebbles floating in a mix of sand and silt with occasional larger clasts that appear to be rip up clasts of matrix material.

- **C-DST:** The Conrad dolostone is part of the Nadaleen Formation and is a finely crystalline hydrothermal dolostone with distinct black crackle breccia veinlets in the Conrad area. Further to the west, nearer to the Nadaleen fault, it is a non- to partially-dolomitized limestone.

- **C-SHL:** The Conrad shale is part of the Nadaleen Formation and is a black, laminated siltstone to shale with local intervals of sandstone associated with trace disseminated pyrite.

- **C-LST2**: The Conrad limestone (2) is part of the Nadaleen Formation and is a dark, crystalline lime mudstone, calc-arenite, and lensoidal pebble to boulder conglomerates. It is interpreted as debris flows with lesser interbedded siltstone and grey to black shale. Clast composition of the conglomerate is dominated by limestone and lesser dolostone.

- **O-MST**: The Osiris mudstone is part of the upper Nadaleen Formation and is a finely laminated maroon and green to greenish-grey siltstone. This unit can be subdivided into an overlying maroon and green siltstone and a lower greenish-grey siltstone.

- **O-LST1:** The Osiris limestone (1) is part of the lower Gametrail Formation and is a well bedded, tan and grey limestone with primary sedimentary structures. Monolithic, intraclast rudstone layers, averaging 0.5 - 2 m thick, are common throughout the unit. They consist of randomly oriented to imbricated, tabular to equant clasts in a carbonate mudstone matrix. Clast composition is almost exclusively the same as the enclosing carbonate mudstones.

- **O-DST:** The Osiris dolostone is part of the middle Gametrail Formation and is a fine-grained diagenetic dolostone. The dolostone retains many of the original depositional fabrics identical to O-LST1 (see above for further description).

- **O-DMT:** The Osiris diamictite is part of the upper Gametrail Formation and is a limestone pebble to boulder conglomerate, predominantly matrix supported debrites. Clasts vary from centimeter- to meter-scale and comprise limestone that is similar to O-LST1. Matrix composition is variable comprising non to weakly calcareous green siltstone and shale and/or crystalline limestone. The bottom of the unit is consistently marked with a non-calcareous siltstone horizon that is approximately 5 m in true thickness.

- **O-LST2:** The Osiris limestone (2) is part of the lower Blueflower Formation and is a very dark grey-black, coarsely crystalline limestone. The base of the unit is often associated with beds of polymict floatstone containing clasts of orange-weathering dolostone, limestone, rounded quartz pebbles and minor shale.

- **O-GAB:** The 465.6 ± 4.4 Ma (Tucker, 2015) Osiris gabbro has a slight rusty coating on weathered surfaces and dark grey-green on fresh surfaces. The gabbro is composed of medium to coarse grained amphibole, plagioclase and clinopyroxene.

- **C-INT:** The 74.4 ± 1 Ma (Tucker, 2015) Conrad gabbroic dikes dip approximately 60° to the north, 2 sub-parallel dikes trend roughly east-west and are up to 20 m in true thickness. The dikes are generally competent in drill core, pale beige grey in colour and pervasively altered. The gabbro dikes are composed of coarse plagioclase, clinopyroxene and abundant secondary carbonate and pyrite.

MINERALIZATION

The focus of exploration along the Nadaleen Trend is for Carlin-type gold mineralization. Carlin-type deposits have been reported around the world, but to date, major economic occurrences have been restricted to the Great Basin of the southwestern United States. Recent discoveries along the Nadaleen Trend have many characteristics of Carlin-type deposits, and hold promise of great potential for new discoveries of economic importance (Arehart et al., 2013).

Carlin-type deposits are characterized as sediment-hosted micron-scale gold hosted within disseminated arsenian pyrite (Arehart, 1996). The deposits are typically found as replacement bodies in silty-carbonates within slope and basinal facies and have both structural and

stratigraphic controls with a strong relationship to deep seated crustal-scale structures (Cline et al., 2005; Muntean et al., 2011). Carlin-type mineralizing fluids are typically weakly acidic, resulting in the dissolution of carbonate which is followed in the mineralization process by precipitation of quartz and gold-bearing arsenian pyrite and trace metal enrichments of As-Sb-Hg-Tl (Muntean et al., 2011). Permeability is the key factor controlling the distribution of alteration and mineralization and features that control it include primary fluid conduits, such as fault and shear zones, as well as stylolites, veinlets and fold hinges (Tucker, 2015).

Along the Nadaleen Trend, Carlin-type mineralization has been drill-proven at the Osiris, Conrad, Sunrise, Ibis, Anubis and Orion Zones. Gold mineralization is best developed within limestone sequences where alteration, characterized by decalcification occurs in association with realgar mineralization peripheral to calcite flooding. Mineralization hosted within non-calcareous rocks generally occurs within brittle fractures and is directly associated with fault breccia and/or intense fracture development. Table V presents a summary of all significantly mineralized zones along the Nadaleen Trend.

TABLE V – SUMMARY OF MINERALIZED ZONES ALONG THE NADALEEN TREND

Area	Mineralized Zone	Year Discovered	Comments	Mineralization Type
Osiris Area	Osiris	2010	Original location of Carlin-type mineralization in 2010. Discovery hole OS-10-001 returned 65.20 m of 4.65 g/t gold. 63 drill holes have been completed and the zone remains open down dip and to the north.	Carlin-Type Au
	Conrad	2010	800 metres northeast of Osiris, Conrad is the most advanced Carlin-type gold zone with 123 holes drilled to date. It has a total strike length of 800 m and remains open in all directions. Highlight 2012 hole intersected 42.93 m of 18.44 g/t gold in hole OS-12-114.	Carlin-Type Au
	Atum	2010	Large gold in soil anomaly 600 m west of Osiris. Rock grab samples up to 28.9 g/t Au. To date, most significant mineralization encountered during drilling includes 17.00 m of 0.92 g/t Au in hole OS-10-07.	Carlin-Type Au
	Ibis	2011	Encouraging near surface gold zone directly south of Osiris with 26 drill holes. Highlight 2012 drill hole intersected 27.43 m of 6.28 g/t gold in OS-12-120. Mineralization remains open at depth.	Carlin-Type Au
	Sunrise	2012	Directly east of Osiris the true discovery of the Sunrise zone was uncovered during road building in 2012. Hole OS-17-249 intersected 15.24 m of 13.52 g/t gold. Sunrise Zone remains open at depth and along strike.	Carlin-Type Au
Anubis Area	Pyramid	2011	4 by 0.6 km arsenic anomaly and orpiment/realgar boulder train about 10 km northwest of Anubis.	Carlin-Type Au
	Anubis	2012	Located 10 km west of Osiris, outcrop samples collected in 2012 returned up to 139 g/t Au. Hole AN-12-01 intersected 8.51 m of 19.85 g/t gold	Carlin-Type Au

			within strongly altered carbonate interbeds within an argillite package.	
	Ana	2012	550 m northwest of Anubis, grab samples from hand pits collected at the sites of anomalous gold-in-soil samples returned up to 5.59 g/t Au in clay rich fault breccia. Two drill holes targeted this fault zone at depth in 2012 though no significant mineralization was intersected.	Carlin-Type Au
	Hydra	2012	600 m north of Anubis, with a strong arsenic and thallium soil geochemical anomaly. Samples collected from hand pits returned up to 0.80 g/t Au within rubbly variably oxidized limestone. Excavator pit sampling in 2013 returned samples with up to 151 g/t Ag, 0.2 % Pb and 2.45 % Zn.	Carlin-Type Au & earlier (?) Ag, Pb
	Draco	2013	1.4 km northwest of Anubis within a moderate silver, mercury and thallium geochemical anomaly. Excavator pits dug in 2013 in the vicinity of the soil anomaly returned rock samples yielding up to 1.57 g/t Au in moderately oxidized thickly bedded limestone.	Carlin-Type Au
	Columba	2013	1.8 km northwest of Anubis on a north facing thickly covered area within a strong mercury anomaly. Grab samples from excavator pits returned up to 0.52 g/t Au from altered argillite samples collected proximal to the Anubis Fault.	Carlin-Type Au
	Dorado	2013	2.2 km northwest of Anubis within a moderately strong mercury and thallium soil geochemical anomaly. Grab samples from hand pits returned up to 4.64 g/t Au in strongly oxidized limestone.	Carlin-Type Au
	Zodiac	2013	3.5 km northwest of Anubis within a strong mercury and thallium anomaly. Mineralization was confirmed through prospecting and hand pitting in 2013. Grab samples from hand pits returned up to 1.03 g/t Au within gouge material of the Anubis Fault. Samples mineralized in up to 900 g/t Ag, 11.75 % Pb and 28.99% Zn showed strong silica alteration of dolomitic limestone proximal to the Anubis fault.	Carlin-Type Au & earlier (?) Ag, Pb, Zn
	Corona	2013	400 m east-northeast of Anubis, within a moderately strong arsenic and strong thallium anomaly. Samples collected from excavator pits dug within the surface trace of the Northern Fault returned gold up to 2.41 g/t Au within altered argillite. Arsenic and lead oxide coated samples containing galena returned up to 2,910 g/t Ag, and 73.15 % Pb.	Carlin-Type Au & earlier (?) Ag, Pb
	Lyra	2013	2.95 km northwest of Anubis and associated with a strong thallium soil geochemical anomaly. Silver and lead mineralization occurs associated with galena veinlets up to 2 cm thick within strongly altered dolomite (?) with antimony and lead oxide coating.	Ag, Pb
	Orion	2015	300 metres northwest of the Anubis discovery outcrop. Hole AN-16-010 twinned the Orion discovery hole ARB-15-026, and returned 61.29 m of 2.75 g/t Au.	Carlin-Type Au

MINERAL RESOURCE

ATAC announced a maiden Mineral Resource estimate for the Osiris Project on June 18, 2018. The Mineral Resource estimate is based on diamond drilling completed between 2010 and 2017. Data analysis, domain modeling, grade interpolation and classification were undertaken by Steven Ristorcelli, C.P.G. of Mine Development Associates (MDA). The estimate was prepared using 238 diamond drill holes totalling 78,614 m. The Osiris Project Inferred Mineral Resource contains 1,685,000 ounces of gold at an average grade of 4.23 g/t in 12,380,000 tonnes, including a pit-constrained Mineral resource containing 1,055,000 ounces of gold at 4.08 g/t in 8,045,000 tonnes (Ristorcelli et al., 2018).

Explicitly modelled gold domains were interpreted using wire frames of the geological model as a guide. In each of the Conrad, Sunrise, Osiris, and Ibis zones, high- and low-grade gold domains were modeled. The grade ranges for the domains were defined separately for each zone based on population breaks for gold on cumulative probability plots, and each domain represents distinct and unique geological and mineralogical characteristics. Outliers within each domain were capped prior to three metre down-hole compositing.

Gold grades were estimated into the block model using inverse distance to the third power. Separate estimations using polygonal, nearest neighbour, and ordinary kriging were also completed for validation purposes.

For reporting, technical and economic factors likely to influence the "*reasonable prospects for eventual economic extraction*" were evaluated by running a series of pit and mine-stope optimizations at variable gold prices, mining costs, processing costs, and anticipated metallurgical recoveries.

MDA reports resources at cut-offs that are reasonable for deposits like those at Osiris, given anticipated mining methods and processing costs. A gold price of US$1400 per ounce was used to determine the cut-off grades. Tables showing the pit-constrained and underground Mineral Resources at varying cut-off grades are presented below.

TABLE VI – TOTAL INFERRED MINERAL RESOURCE BY ZONE

Zone	Tonnes	Grade (Au g/t)	Gold (oz)
Pit Constrained (1.30 g/t gold cut-off)			
Conrad	6,487,000	4.00	835,000
Osiris	474,000	4.61	70,000
Sunrise	309,000	4.23	42,000
Ibis	775,000	4.35	108,000
Total Pit-Constrained	**8,045,000**	**4.08**	**1,055,000**
Underground Constrained (2.60 g/t gold cut-off)			
Conrad	3,174,000	4.46	455,000

Osiris	427,000	3.79	52,000
Sunrise	531,000	5.53	95,000
Ibis	203,000	4.27	28,000
Total Underground-Constrained	**4,335,000**	**4.52**	**630,000**
TOTAL	**12,380,000**	**4.23**	**1,685,000**

TABLE VII – TOTAL INFERRED PIT-CONSTRAINED MINERAL RESOURCES AT VARYING CUT-OFF GRADES

Gold Cut-Off (g/t)	Tonnes	Grade (Au g/t)	Gold (oz)
1.00	9,091,000	3.74	1,094,000
1.20	8,370,000	3.97	1,069,000
1.30	**8,045,000**	**4.08**	**1,055,000**
1.40	7,740,000	4.19	1,043,000
1.60	7,115,000	4.42	1,012,000
2.00	6,030,000	4.90	949,000
2.50	4,885,000	5.53	868,000

TABLE VIII – TOTAL INFERRED UNDERGROUND-CONSTRAINED MINERAL RESOURCES AT VARYING CUT-OFF GRADES

Gold Cut-Off (g/t)	Tonnes	Grade (Au g/t)	Gold (oz)
2.00	6,337,000	3.81	776,000
2.30	5,223,000	4.16	699,000
2.50	4,612,000	4.40	652,000
2.60	4,335,000	4.52	630,000
2.70	4,076,000	4.63	607,000
3.00	3,392,000	4.99	545,000

DIAMOND DRILLING

GENERAL

All diamond drilling at the Osiris Project in 2018 was completed outside above stated Mineral Resource; no targeted infill work has been completed to date. Diamond drilling was carried out between May 30th and September 18th by Superior Diamond Drilling Ltd. of Powell River, BC. The work was completed using PQ, HQ and NQ equipment on a heli-portable Discovery II drill.

A total of 7,779.80 m of diamond drilling was completed in 20 holes at the Osiris project and 7,413.19 m of diamond drilling was completed in 16 holes at the Orion project.

The drills were set up on wood framed structures approximately 20 feet long by 20 feet wide. This pad type was prepared by Minconsult Exploration Services. Following completion of the hole, the drill collar was marked with a piece of drill rod cemented into the hole and labeled with the basic drill hole information. Drill hole locations were surveyed using a Leica Geosystems differential GPS.

The drill collar locations are plotted on Figure 8 and 9, and key data for the holes are listed in Table IX for the Osiris Project and Table X for the Orion Project. Geologic cross sections for all drill holes are presented in Appendix VI. Sampling and analytical procedures, data verification and QAQC results are provided in Appendix III, while geological and sample logs are given in Appendix IV. Certificates of analysis from 2018 sampling are shown in Appendix V.

TABLE IX: 2018 OSIRIS DIAMOND DRILL HOLE SPECIFICS

Zone	Hole Name	Easting	Northing	Elevation	Azimuth	Dip	Depth	Core Size
Conrad	OS -18-261	630872	7112516	1328	271	-60	47.65	HQ
Conrad	OS -18-262	630868	7112451	1285	271	-60	520.29	HQ-NQ
Conrad	OS -18-263	630926	7112502	1308	270	-60	463.91	HQ-NQ
Conrad	OS -18-264	630931	7112452	1279	271	-60	472.44	HQ-NQ
Conrad	OS -18-265	630983	7112499	1287	269	-63	580.03	HQ-NQ
Conrad	OS -18-266	630897	7112529	1331	263	-55	321.87	HQ-NQ
Conrad	OS -18-267	630875	7112399	1248	283	-64	564.49	HQ-NQ
Conrad	OS -18-268	630929	7112503	1308	358	-75	393.80	HQ-NQ
Sunrise	OS -18-269	629601	7111888	1780	357	-60	359.36	HQ-NQ
Conrad	OS -18-270	630931	7112412	1258	269	-65	251.46	HQ
Sunrise	OS -18-271	629663	7112000	1734	344	-55	171.60	HQ
Conrad	OS -18-272	630986	7112500	1287	358	-76	380.39	HQ-NQ
Sunrise	OS -18-273	629552	7112167	1689	178	-51	329.18	HQ
Sunrise	OS -18-274	629501	7112156	1694	179	-52	376.43	HQ
Osiris	OS -18-275	629478	7112299	1617	268	-50	413.61	HQ
Sunrise	OS -18-276	629501	7112156	1694	179	-57	516.64	HQ
Osiris	OS -18-277	629143	7112394	1552	89	-50	386.18	HQ
Conrad	OS -18-278	630969	7112565	1316	264	-51	391.36	HQ-NQ
Osiris	OS -18-279	629434	7112454	1548	266	-53	418.49	HQ
Osiris	OS -18-280	629037	7112512	1466	87	-51	420.62	HQ

TABLE X: 2018 ORION DIAMOND DRILL HOLE SPECIFICS

Zone	Hole Name	Easting	Northing	Elevation	Azimuth	Dip	Depth	Core Size
Hydra	BDO-18-005	619096	7113609	1415	216	-55	173.61	HQ

Corona	BDO-18-006	619667	7113131	1524	215	-55	672.23	HQ-NQ
Hydra	BDO-18-007	619096	7113609	1415	215	-60	488.59	HQ-NQ
Hydra	BDO-18-008	619366	7113384	1495	215	-65	531.88	HQ
Corona	BDO-18-009	619874	7112548	1304	35	-63	297.18	HQ
Lyra	BDO-18-010	616577	7114658	1246	38	-55	260.60	HQ
Hydra	BDO-18-011	618807	7113909	1367	215	-65	592.98	HQ
Columba	BDO-18-012	617604	7114215	1115	206	-75	332.23	HQ
Zodiac	BDO-18-013	616055	7114430	1106	188	-65	274.62	HQ
Zodiac	BDO-18-014	615211	7114271	1006	219	-60	798.58	HQ-NQ
Zodiac	BDO-18-015	614705	7115237	1008	220	-65	665.38	PQ-HQ-NQ
Hydra	BDO-18-016	619280	7113547	1453	216	-70	738.83	PQ-HQ-NQ
Anubis	BDO-18-017	619086	7113057	1485	355	-72	431.90	HQ
Corona	BDO-18-018	619320	7112933	1524	205	-65	346.56	HQ
Dorado	BDO-18-019	617078	7114089	1166	200	-60	151.18	HQ
Corona	BDO-18-020	620146	7112705	1363	206	-83	656.84	PQ-HQ-NQ

DIAMOND DRILLING RESULTS

Observations from the Osiris and Orion project drilling are described below. Significantly mineralized intervals from the holes are listed in Table XI.

TABLE XI: 2018 SIGNIFICANT DIAMOND DRILL INTERSECTIONS

Zone	Hole Name	From (m)	To (m)	Interval (m)	Gold (g/t)
Conrad	OS -18-261	32.31	35.36	3.05	10.50
Conrad	OS -18-262	3.05	21.34	18.29	1.74
Conrad	and	66.11	80.00	13.89	4.14
Conrad	and	363.71	387.30	23.59	9.50
Conrad	incl.	379.80	387.30	7.50	22.87
Conrad	OS -18-263	19.81	83.82	64.01	1.55
Conrad	and	309.37	321.56	12.19	5.27
Conrad	OS -18-264	69.39	75.29	5.90	1.37
Conrad	and	96.62	101.19	4.57	2.00
Conrad	and	133.20	139.29	6.09	1.88
Conrad	OS -18-265	128.02	132.59	4.57	2.42
Conrad	and	304.80	308.17	3.37	3.33
Conrad	OS -18-266	56.69	71.93	15.24	2.42
Conrad	incl.	68.88	71.93	3.05	6.31
Conrad	and	126.62	179.53	52.91	2.83
Conrad	and	193.85	203.00	9.15	1.55
Conrad	OS -18-267	92.66	100.37	7.71	1.88
Conrad	and	404.36	405.65	1.29	13.30

Conrad	OS -18-268	53.04	57.61	4.57	1.52
Conrad	and	271.88	284.00	12.12	2.76
Conrad	and	293.22	299.10	5.88	5.86
Conrad	incl.	294.70	295.75	1.05	19.35
Conrad	OS -18-270	120.40	129.54	9.14	1.62
Conrad	OS -18-272	173.48	175.17	1.69	8.32
Sunrise	OS -18-273	272.00	298.70	26.70	12.95
Sunrise	incl.	272.00	284.99	12.99	23.81
Osiris	OS -18-275	244.10	252.73	8.63	11.72
Osiris	incl.	244.10	245.97	1.87	31.90
Osiris	and	366.30	368.43	2.13	7.27
Conrad	OS -18-278	156.97	160.02	3.05	6.79
Conrad	and	172.21	184.40	12.19	2.40
Conrad	and	210.79	219.56	8.77	3.37
Conrad	and	312.12	339.55	27.43	3.21
Conrad	incl.	312.12	319.41	7.29	8.90
Osiris	OS -18-279	185.92	202.08	16.16	6.46
Osiris	incl.	188.93	192.94	4.01	20.04
Osiris	OS -18-280	334.43	350.52	16.09	2.64
Osiris	incl.	334.43	337.38	2.95	7.30
Hydra	BDO-18-008	509.84	514.50	4.66	6.95
Hydra	incl.	511.45	513.08	1.63	15.95
Anubis	BDO-18-017	361.80	369.41	7.61	10.48
Anubis	incl.	361.80	369.32	1.52	28.00
Anubis	and incl.	367.89	369.41	1.52	13.55
Corona	BDO-18-018	166.73	177.46	10.73	7.20
Corona	incl.	169.77	171.50	1.73	13.15
Dorado	BDO-18-019	135.94	138.72	2.78	9.49

Osiris Project Summary

A total of 7,779.80 m of diamond drilling was completed in 20 holes at the Osiris project in 2018 (Fig. 8). All drill holes stepped out on the recently announced Maiden Inferred Mineral Resource.

Conrad

A total of 4,387.69 m was drilled at eastern Conrad in 11 diamond drill holes. Drilling primarily targeted the 650-850 fault corridor beyond the limits of the inferred mineral resource. The exploration was focused around the recognition of structurally controlled high-grade gold in the 650-850 fault corridor observed late in the 2017 field season. All 11 diamond drill holes at Conrad encountered gold hosted in the 650-850 fault corridor and was mostly hosted C-SLC.

Holes OS-18-263 and OS-18-266 intersected broad, near surface intervals of low grade mineralization outside of the inferred mineral resource, 64.01 m of 1.55 g/t Au and 52.91 m of 2.83 g/t Au, respectively. In core, the zones appear as a broad damage zone that is dark black in colour, highly fractured and contains sporadic realgar throughout. Several holes were drilled deeper to intersect the C-LST1 unit, the more typical gold host. Holes OS-18-262 and OS-18-278 intersected 23.59 m of 9.50 g/t Au and 27.43 m of 3.21 g/t Au near the contact between the limestone and siliciclastic units at what is referred to as the Conrad Middle Zone. The Conrad Zone remains open to the east, west and at depth.

Sunrise

A total of 1,753.21 m was drilled at Sunrise in five diamond drill holes. Drilling stepped out on the Mineral Resource at depth and along strike to the east. OS-18-273 intersected the highest gram meter (grade x interval) to date at Sunrise: 26.70 m of 12.95 g/t Au including 12.99 m of 23.81 g/t Au. OS-18-273 was drilled from north to south and is believed to represent approximately 60% of true width. Three holes were drilled in this orientation due to the drill pad location being at a lower elevation which in-turn resulted in shorter drill holes. Holes OS-18-274 and OS-18-276 were oriented in the same direction 50 m to the west and both encountered narrow zones of anomalous gold. Interestingly, hole OS-18-276 did not encounter the Sunrise fault and remained in O-LST1 until end of hole at 516.64 m, suggesting the Sunrise Fault shallows to the south at depth. The Sunrise zone is open at depth.

Osiris

A total of 1,638.90 m was drilled at Osiris in four diamond drill holes. All drilling was designed to step out on the Mineral Resource at depth. OS-18-275 intersected 8.63 m of 11.72 g/t Au in the O-LST1 at the contact with the stratigraphically older O-MST1. OS-18-279 intersected 16.16 m of 6.46 g/t Au in O-LST1 at the contact with the stratigraphically younger O-DST. Interestingly, OS-18-27 also encountered 2.13 m of 7.27 g/t Au in O-DMT unit at the contact with overlying crystalline O-LST2. This is the first time mineralization has been observed at this higher stratigraphic position. The Osiris zone remains open at depth and to the north.

Orion Project Summary

A total of 7,413.19 m of diamond drilling was completed in 16 holes at the Orion project (Fig. 9). Drilling targeted fault intersections, favorable stratigraphy, soil geochemical anomalies and/or geophysical anomalies over broad kilometer-scale intervals and is described in more detail below.

BDO-18-008 was drilled towards the southwest targeting the Anubis Fault plane at depth below AN-12-001. This hole intersected 4.66 m of 6.95 g/t Au including 1.63 m of 15.95 g/t Au within sheared, weakly silicified mudstone approximately 535 m down dip of AN-12-001. The step-out represents the deepest intersection of mineralization to date on the Orion Project.

BDO-18-017 intersected 7.61 m of 10.48 g/t gold within a broader 70 m wide interval of intermittently sheared and altered mudstone in the hanging wall of the Anubis Fault. This mineralized interval is a 390 m undercut of mineralization intersected in AN-12-001.

BDO-18-018 targeted shallow mineralization along the Anubis Fault 285 m east of AN-12-001. This hole intersected 10.73 m of 7.20 g/t gold within a decalcified and silicified interval of calcareous mudstone.

BDO-18-019 tested the Anubis Fault 2.3 km northwest of AN-12-001 beneath the Dorado target, where hand pit samples collected in 2013 returned 4.64 g/t gold and 3.98 g/t gold. This hole intersected 2.78 m of 9.49 g/t Au within strongly sheared mudstone approximately 170 m down dip of the mineralized pit samples.

Geologic modeling of data collected during the 2017 stratigraphic drill campaign identified three faults that were all projected to intersect with the Anubis Fault in proximity to favourable stratigraphy. Holes BDO-18-005, 006, 007, 009, 011, 015, 016 and 020 were drilled targeting these areas. None of these eight drill holes intersected the modeled structural targets. Moderate to intense alteration and pathfinder element response was encountered in several of these holes providing evidence for hydrothermal fluid transport in the area, however, no significant gold mineralization was intersected. The 2018 program provided valuable information about structural orientation and stratigraphy at depth that will be incorporated into ongoing geological modelling. The projected fault intersections still remain priority targets for future work.

Four holes tested targets identified by geophysical and geochemical surveys, but none encountered significant gold mineralization. BDO-18-010 targeted a discrete pathfinder element geochemical anomaly located within the Anubis fault corridor. Drilling failed to explain the anomaly. BDO-18-012 and 013 targeted areas of anomalous gravitational response adjacent to the Anubis Fault. Hole 012 was abandoned before reaching its target depth, while hole 013 did not intersect significant mineralization. BDO-18-014 targeted a conceptual regional scale fault, which was suggested by mapping and geophysics to terminate the Anubis fault corridor. The key pathfinder arsenic minerals realgar and orpiment were observed throughout the hole, and strong cataclastic fault textures were observed at depth.

The results of the 2018 diamond drilling have confirmed high-grade gold over broad intervals along the Anubis Fault and warrants additional drilling. Shallow infill drilling along the Anubis fault between Dorado and Anubis is recommended. In addition, the Anubis and Northern Fault intersection was never intersected and remains a priority target at depth.

DISCUSSION AND CONCLUSIONS

The Rackla Gold Property lies at the boundary between Mackenzie Platform and Selwyn Basin, within geomorphological and geological settings similar to those at the Carlin gold district in northeast Nevada. At the eastern end of the 185 km long Rackla Gold Property, the Nadaleen Trend represents the first discovery of Carlin type gold mineralization in Canada. Progression of the property's known geochemical anomalies has resulted in the discovery of many significant new gold zones.

The announcement of a maiden Mineral Resource estimate for the Osiris Project was a major milestone for the Rackla Gold Property. Diamond drilling in 2018 has identified gold mineralization outside of the Mineral Resource and proves that the Mineral Resource estimate is

open for expansion. All zones remain open in multiple directions therefore all zones warrant additional diamond drilling.

The 2018 drilling on the Orion Project successfully identified the regional-scale gold bearing potential of the Anubis Fault. The Anubis Fault appears to be most productive along a 2.5 kilometer strike length between the Dorado and Anubis showings and warrants infill drilling. Furthermore, the intersection of the Anubis Fault and the Northern Fault remains untested and provides excellent upside for future exploration.

Respectfully submitted,

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED



Adam Coulter, M.Sc., GIT

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APPENDIX I

STATEMENTS OF QUALIFICATIONS

STATEMENT OF QUALIFICATIONS

I, Adam Coulter, geologist, with business addresses in Whitehorse, Yukon Territory and Vancouver, British Columbia and residential address in Vancouver, British Columbia, hereby certify that:

1. I graduated from the University of Western Ontario in 2013 with a B.Sc. in Honors Specialization in Geology and in 2015 with a M.Sc. in Geology.

2. From 2012 to present, I have been actively engaged in mineral exploration in Yukon Territory, Northwest Territories and Ontario.

3. I am a Geoscientist in Training (GIT) with the Association of Professional Geoscientist of Ontario (Member Number 10136)

4. I have personally participated in the fieldwork reported herein and have interpreted all data resulting from this work.



Adam Coulter, M.Sc., GIT

APPENDIX II

STATEMENT OF EXPENDITURES

Statement of Expenditures
Rackla Gold Project
Group A
February 19, 2019

Expenditures

Contract Diamond Drilling - Superior Drilling		
Invoice Number	Hole Number	
2013	OS-18-262	$ 79,149.25
2014	OS-18-261	$ 93,815.61
	OS-18-263	
2020	OS-18-264	$ 109,398.54
	OS-18-266	
2021	OS-18-265	$ 96,549.58
2027	OS-18-268	$ 42,353.08
2028	OS-18-267	$ 130,449.09
	OS-18-270	
2037	OS-18-272	$ 60,370.16
2050	OS-18-278	$ 43,216.34
		$ 655,301.65

$ 655,301.65

Statement of Expenditures
Rackla Gold Project
Group B
February 19, 2019

Expenditures

Contract Diamond Drilling - Superior Drilling		
Invoice Number	Hole Number	
2027	OS-18-269	$ 38,990.96
	OS-18-271	$ 20,077.20
2036	OS-18-273	$ 58,539.06
2041	OS-18-274	$ 68,267.31
2049	OS-18-275	$ 121,587.93
	OS-18-277	
2050	OS-18-276	$ 60,446.88
2057	OS-18-280	$ 94,773.06
2058	OS-18-279	$ 73,425.22
		$ 536,107.62

Statement of Expenditures
Rackla Gold Project
Group C
February 19, 2019

Expenditures

Contract Diamond Drilling - Superior Drilling		
Invoice Number	Hole Number	
2018	BDO-18-009	$ 111,863.43
2056	BDO-18-020	$ 71,081.45
		$ 182,944.88

Prorated Support Costs

Prorated support costs based on invoice totals, divided by metreage per grouping

Horizon Helicopters, as attached	$ 124,151.67
	$ 307,096.55

Statement of Expenditures
Rackla Gold Project
Group D
February 19, 2019

Expenditures

Camp Room and Board - Nine Drillers, 63 Drilling days $150.00/day, per person	$ 85,050.00
Camp Room and Board AC Support staff, 6 Staff, 63 Days, $150.00/Day, per person	$ 56,700.00
	$ 141,750.00

Contract Diamond Drilling - Superior Drilling

Invoice Number	Hole Number	
2019	BDO-18-008	$ 71,588.68
2012	BDO-18-008	$ 40,125.00
		$ 111,713.68

Prorated Support Costs

Prorated support costs based on invoice totals, divided by metreage per grouping

Horizon Helicopters, as attached	$ 69,216.36
	$ 322,680.04

Statement of Expenditures
Rackla Gold Project
Group E
February 19, 2019

Expenditures

Contract Diamond Drilling - Superior Drilling		
Invoice Number	Hole Number	
2043	BDO-18-005	$ 18,000.00
2015	BDO-18-005	$ 69,746.54
2022	BDO-18-007	$ 121,634.32
2029	BDO-18-007	$ 23,790.00
2052	BDO-18-016	$ 40,462.50
2059	BDO-18-016	$ 156,132.92
		$ 429,766.28

Prorated Support Costs

Prorated support costs based on invoice totals, divided by metreage per grouping

Horizon Helicopters, as attached	$ 182,323.44
	$ 612,089.72

Statement of Expenditures
Rackla Gold Project
Group F
February 19, 2019

Expenditures

Contract Diamond Drilling - Superior Drilling		
Invoice Number	Hole Number	
2019	BDO-18-006	$ 71,588.68
2039	BDO-18-017	
2039	BDO-18-018	$ 123,704.82
		$ 195,293.50

Prorated Support Costs

Prorated support costs based on invoice totals, divided by metreage per grouping

Horizon Helicopters, as attached	$ 188,785.96
	$ 384,079.46

Statement of Expenditures
Rackla Gold Project
Group G
February 19, 2019

Expenditures

Contract Diamond Drilling - Superior Drilling		
Invoice Number	Hole Number	
2035	BDO-18-012	$ 79,821.10
2025	BDO-18-013	$ 32,130.54
2034	BDO-18-014	$ 137,975.04
2040	BDO-18-019	$ 17,688.06
		$ 267,614.74

Prorated Support Costs

Prorated support costs based on invoice totals, divided by metreage per grouping

Horizon Helicopters, as attached	$ 202,569.89
	$ 470,184.63

Statement of Expenditures
Rackla Gold Project
Group H
February 19, 2019

Expenditures

Contract Diamond Drilling - Superior Drilling		
Invoice Number	Hole Number	
2038	BDO-18-011	$ 151,361.19
2040	BDO-18-015	$ 76,653.08
2025	BDO-18-010	$ 30,490.20
		$ 258,504.47

Prorated Support Costs

Prorated support costs based on invoice totals, divided by metreage per grouping

Horizon Helicopters, as attached	$ 120,502.67
	$ 379,007.14

APPENDIX III

DIAMOND DRILLING - SAMPLING METHODS, ANALYSIS, DATA VERIFICATION AND QA/QC RESULTS

2018 Drill Core Sampling Methods, Sample Analysis, Data Verification and QA/QC Results

Geotechnical and geological logging was performed on all drill core from the 2018 program. A geotechnical log was filled out prior to geological logging of drill core and included the conversion of drill marker blocks from imperial to metric and determinations of recovery, rock quality designations (RQD), hydrochloric acid reactivity, fracture frequency, hardness, weathering, strength and joint sets. Wetted core photographs were taken and catalogued prior to logging.

Random samples were collected for density measurements using both wet and dry evaluation methods to provide base level density data for resource evaluation.

All logging data were either recorded as a hardcopy during the day and transcribed to digital format during the evenings or directly into a MS SQL Server® database.

Drill core samples were collected using the following procedures:

1) Core was reassembled, lightly washed and measured.
2) Core was photographed.
3) Core was geotechnically logged.
4) Core was geologically logged and sample intervals were designated. Sample intervals were set at geological boundaries, drill blocks or sharp changes in visual mineral content.
5) Core recovery was calculated for each sample interval.
6) In 2010, visually promising core intervals were split with an impact core splitter. In 2011 through 2017, intervals of core deemed to hold promise of gold mineralization were sawn in half using a rock saw and the remainder left unsampled. All drill intervals not sawn had chips sampled every ten centimetres for up to six metre long intervals of core.
7) Samples were double bagged in 6 mm plastic bags, a sample tag was placed in each sample bag, then two or three samples were placed in a durable fiber bag sealed with a metal clasp and sample numbers were written on the outside of that bag with permanent felt pen. The fibre bag was sealed with a numbered security tag.
8) Two blank and two standard samples were randomly included in every batch of 31 core samples (in 2012 to 2017, batches comprised 30 core samples). In 2017, 1 blank and 1 standard were randomly included in every batch of 37 core samples at the Orion Project. In 2018, 1 blank and 2 standards were randomly included in every batch of 35 core samples at the Osiris and Orion Projects.
9) One quarter-split duplicate sample was included in every batch of 31 core samples (in 2012 to 2017, batches comprised 30 core samples). In 2017, 1 quarter-split duplicate sample was included in every batch of 37 core samples at the Orion Project. In 2018, 1 quarter-split sample was included in every batch of 35 core samples at the Osiris and Orion Projects.
10) In 2012 and 2017, one coarse reject (laboratory) duplicate sample was included in every batch of 30 core samples. In 2017, no coarse reject (laboratory) duplicate samples were included at the Orion Project. In 2018, 1 coarse reject duplicate sample was included in every batch of 35 core samples at the Osiris and Orion projects.

Core recovery is generally poor in the top 10-20 metres of the holes and excellent below that, with a mean value of 91.2% for all drilled intervals at the Nadaleen Trend Drill Zones. Care was taken to ensure that the sample split was not biased to sulphide content and, therefore, the sampling should be reliable and representative of the mineralization.

Sample Handling and Security

Drill core was flown by helicopter from the drill sites to a logging and sampling area in the Nadaleen Camp. The samples were later flown by helicopter to the Stewart Airstrip, flown by fixed wing to the Mayo airport and transported to Whitehorse by truck. All samples were controlled by employees of Archer Cathro until they were delivered directly to ALS Minerals' laboratory in Whitehorse for preparation. ALS Minerals was responsible for shipping the prepared sample splits to its North Vancouver laboratory, where they were analyzed.

Archer Cathro ensured that a Chain of Custody form accompanied all batches of drill core during transportation from the Property to the laboratory. A unique security tag was attached to each individual fibre bag when the bag was sealed. The bags and security tags had to be intact in order to be delivered to ALS Minerals.

Sample Analysis

All samples were sent to ALS Minerals' laboratory in Whitehorse for preparation and then on to its laboratory in North Vancouver for analysis. ALS Minerals, a wholly owned subsidiary of ALS Limited, is an independent commercial laboratory specializing in analytical geochemistry services. Both ALS Minerals' Whitehorse and North Vancouver laboratories are individually certified to standards within ISO 9001:2008. The North Vancouver laboratory has also received accreditation to ISO/IEC 17025:2005 from the Standards Council of Canada for several analytical methods.

Diamond drill samples were forwarded to ALS Minerals in Whitehorse, Y.T., where they were fine crushed before a 250 gram split was pulverized to better than 85% passing 75 microns. Pulps were then analyzed at ALS Minerals in North Vancouver, B.C. where gold determinations were carried out. Splits of the pulverized fraction were dissolved using a four acid digestion and analyzed for 49 elements using inductively coupled plasma (ICP) together with mass spectrometry (MS) and atomic emission spectroscopy (AES). Gold analyses were by the Au-ICP21 procedure that involves fire assay preparation using a 30 gram charge with an atomic emission spectrometry (AES) finish for the Orion Project. Gold analyses were by the Au-AA25 procedure that involves fire assay preparation using a 30 gram charge with an atomic absorption spectroscopy (AAS) finish for the Osiris Project. Over limit gold analysis were run with Au-GRA21 that involves fire assay with a gravimetric finish. Mercury analyses were digested with aqua regia and analyzed by inductively coupled plasma mass spectrometry (ICP-MS).

DATA VERIFICATION

Database

Geological and geotechnical logging in 2010 was initially recorded as a hardcopy and then transcribed into MS Excel®. Since then, all of the 2010 data has been transferred to a MS SQL Server® database. In 2011 through 2016, logging was recorded as a hardcopy and then entered into a MS SQL Server® database. In 2017 through 2018, logging was entered directly into a MS SQL Server® database.

Visual comparison of hardcopy data and digital data was conducted on select holes to ensure accuracy. Any discrepancies identified by this process were investigated, by examining the core stored on the Property, and corrected.

Collar Locations

All drill hole collars were located and recorded using a Leica RTK GPS system.

Down-hole Orientations

Prior to 2011, no down-hole azimuth measurements were made and dip deviations were measured using an acid test at the bottom of each hole.

Original 2011 to 2018 survey data obtained from the Reflex survey tools in CSV format has been imported directly into the MS SQL Server® database. All of the down-hole data was visually inspected and erroneous data has been omitted.

Assays

Assay certificates, for all of the drilling done to date, were obtained from ALS Minerals in CSV format and imported directly into the MS SQL Server® database. Spot checking of data within the database to hard copy certificates issued by ALS Minerals has not revealed any issues.

Samples from the diamond drilling programs were subjected to a QA/QC program designed by Archer Cathro for ATAC. The QA/QC program consisted of:

1) Sequentially numbered sample tickets: to identify each sample with a unique number to minimize the possibility of sample numbering errors and to ensure uniform collection of sample data.
2) Sealed sample bags: to secure individual sample bags in order to reduce the possibility of sample contamination, spilling or tampering.
3) Chain of custody: samples were stored in a secure preparation area and delivered to the laboratory directly by Archer Cathro personnel.
4) Sample duplicates: select samples were quartered and re-submitted for assay. In addition, duplicates of coarse reject material of select 2012 through 2014 samples were re-submitted for assay.

5) Sample blanks: commercial samples were purchased and inserted in the sample sequence. All blank samples yielded background values, including samples inserted directly following a "standard" value to test for "smear effect" during the sample preparation process, indicating no observable contamination. These blanks each comprised 5 kg (NQ samples) and 7 kg (HQ samples) of material and were assigned unique sample numbers within the sample sequence so as to be "blind" to the laboratory.
6) Reference standard samples: commercially available standard samples consider matrix compatible with Nadaleen Trend –style gold mineralization were purchased for the 2010 through 2012 drill programs. Four standards were prepared from coarse reject material from the 2012 core samples for use during the 2012 through 2016 drill programs. Four standards were prepared from coarse reject material from the 2016 core samples for use during the 2017 drill program. Standards were assigned a unique sample number within the sample sequence. Four standards were prepared from coarse reject material from the 2017 core samples for use during the 2018 drill program. Standards were assigned a unique sample number within the sample sequence.

The consensus and two standard deviation values for each of the standard samples used during the 2018 program while the certificates for each of the standard samples prepared occur in the following pages.

2018 Standard Sample Parameters

Standard Name	Standard Gold Grade	2Sigma
OS-CS2	2.54	0.158
OS-CS3	7.75	0.44
OS-CS4	12.80	0.39
OS-CS5	0.539	0.044
OS-CS6	2.67	0.10
OS-CS7	8.24	0.24
OS-CS8	12.86	0.60
OS-CS9	1.086	0.040
OS-CS10	1.445	0.048
OS-CS11	2.890	0.128
OS-CS12	5.23	0.19
BCH-OX-06	0.283	0.028
BCH-OX-07	2.58	0.27
BCH-SR-05	2.08	0.10
CDN-GS-15B	15.98	0.71
CDN-GS-4C	4.25	0.20

Of the 148 batches analyzed in 2018, four batches failed the QA/QC program. Three of these batches failed due to a standard returning a gold value above the acceptable grade, while one returned lower. All four batches were reanalyzed and returned acceptable gold values for the problem standards.

CDN Resource Laboratories Ltd.

#2, 20148 – 102nd Avenue, Langley, B.C., Canada, V1M 4B4, 604-882-8422, Fax: 604-882-8466 (www.cdnlabs.com)

REFERENCE MATERIAL: BCH-OX-06

Recommended value and the "Between Laboratory" two standard deviations

Gold concentration: 0.283 ± 0.028 g/t (30g Fire Assay / Instrumental finish)

PREPARED BY: CDN Resource Laboratories Ltd.
CERTIFIED BY: Duncan Sanderson, B.Sc., Licensed Assayer of British Columbia
INDEPENDENT GEOCHEMIST: Dr. Barry Smee., Ph.D., P. Geo.
DATE OF CERTIFICATION: April 4, 2013

ORIGIN OF REFERENCE MATERIAL:

Standard BCH-OX-06 was prepared using ore supplied by Barrick Gold Inc. from their Bald Mountain Mine in Nevada, USA. It is Carlin Style Mineralization in the prolific Battle Mountain-Eureka Trend in Northern Nevada, USA. The material is from breccias near the contact between the Mississippian Pilot Shale and the underlying Devonian Guilmette formation.

METHOD OF PREPARATION:

Reject ore material was dried, crushed, pulverized and then passed through a 270 mesh screen. The +270 material was discarded. The -270 material was mixed for 5 days in a double-cone blender. Splits were taken and sent to 14 commercial laboratories for round robin assaying. Round robin results are displayed below:

	Lab 1	Lab 2	Lab 3	Lab 4	Lab 5	Lab 6	Lab 7	Lab 8	Lab 9	Lab 10	Lab 11	Lab 12	Lab 13	Lab 14	Lab 15
SAMPLE	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t
BCH-OX-06-01	0.267	0.262	0.295	0.260	0.303	0.28	0.275	0.292	0.289	0.244	0.286	0.286	0.303	0.310	0.300
BCH-OX-06-02	0.288	0.255	0.278	0.283	0.304	0.27	0.267	0.280	0.300	0.243	0.276	0.280	0.358	0.281	0.294
BCH-OX-06-03	0.281	0.267	0.269	0.286	0.297	0.27	0.280	0.288	0.302	0.257	0.266	0.297	0.299	0.294	0.293
BCH-OX-06-04	0.276	0.271	0.285	0.288	0.321	0.26	0.265	0.294	0.305	0.237	0.278	0.288	0.316	0.299	0.282
BCH-OX-06-05	0.286	0.281	0.282	0.280	0.309	0.27	0.275	0.293	0.310	0.238	0.267	0.282	0.306	0.285	0.296
BCH-OX-06-06	0.296	0.288	0.279	0.279	0.302	0.27	0.282	0.287	0.279	0.257	0.286	0.288	0.319	0.277	0.287
BCH-OX-06-07	0.283	0.266	0.270	0.266	0.308	0.28	0.271	0.278	0.299	0.251	0.275	0.277	0.308	0.273	0.277
BCH-OX-06-08	0.270	0.264	0.289	0.270	0.295	0.27	0.271	0.290	0.267	0.243	0.284	0.288	0.288	0.309	0.277
BCH-OX-06-09	0.272	0.282	0.289	0.271	0.320	0.27	0.263	0.283	0.313	0.241	0.277	0.267	0.323	0.295	0.279
BCH-OX-06-10	0.307	0.269	0.298	0.284	0.320	0.26	0.263	0.282	0.278	0.253	0.300	0.270	0.314	0.298	0.275
Mean	0.283	0.271	0.283	0.277	0.308	0.270	0.271	0.287	0.294	0.246	0.280	0.282	0.313	0.292	0.286
Std. Dev'n	0.0124	0.0102	0.0097	0.0094	0.0096	0.0067	0.0068	0.0057	0.0153	0.0075	0.0100	0.0091	0.0188	0.0128	0.0092
%RSD	4.38	3.78	3.43	3.39	3.11	2.47	2.50	1.98	5.19	3.04	3.59	3.23	5.98	4.37	3.21

Note: Data from laboratory 10 was removed for failing the t test.

APPROXIMATE CHEMICAL COMPOSITION (by whole rock analysis):

	Percent			Percent			ppm
SiO2	59.8		Na2O	0.6		As	560
Al2O3	12.1		MgO	0.3		Sb	80
Fe2O3	9.1		K2O	1.7			
CaO	0.7		TiO2	1.0			
MnO	< 0.1		LOI	13.2			
Total S	3.0		Total C	0.1			
Sulphide S	0.4		Inorganic C	0.1			

REFERENCE MATERIAL: BCH-OX-06

Statistical Procedures:

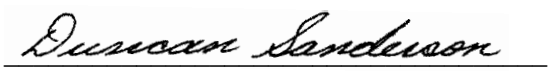
The final limits were calculated after first determining if all data was compatible within a spread normally expected for similar analytical methods done by reputable laboratories. Data from any one laboratory was removed from further calculations when the mean of all analyses from that laboratory failed a t test of the global means of the other laboratories. The mean and standard deviation were calculated using all remaining data. Any analysis that fell outside of the mean ±2 standard deviations was removed from the ensuing data base. The mean and standard deviations were again calculated using the remaining data. This method is different from that used by Government agencies in that the actual "between-laboratory" standard deviation is used in the calculations. This produces upper and lower limits that reflect actual individual analyses rather than a grouped set of analyses. The limits can therefore be used to monitor accuracy from individual analyses, unlike the Confidence Limits published on other standards.

Participating Laboratories: (not in same order as table of assays)

Acme Analytical Laboratories Ltd., Vancouver, B.C., Canada
Activation Laboratories, Ancaster, Ontario, Canada
Activation Laboratories, Thunder Bay, Ontario, Canada
Activation Laboratories, Kamloops, B.C., Canada
AGAT Laboratories Ltd., Mississauga, Ontario, Canada
ALS Chemex, North Vancouver, B.C., Canada
ALS Chemex, Nevada, USA
American Assay Laboratories, Nevada, USA
Certimin, Lima, Peru
Labtium Inc., Finland
ALS, Loughrea, Ireland
SGS, Lima, Peru
SGS, Toronto, Ontario, Canada
Skyline, Tucson, Arizona, USA
TSL Laboratories Ltd., Saskatoon, SK, Canada

Legal Notice:

This certificate and the reference material described in it have been prepared with due care and attention. However CDN Resource Laboratories Ltd. nor Barry Smee accept any liability for any decisions or actions taken following the use of the reference material. Our liability is limited solely to the cost of the reference material.

Certified by 

Duncan Sanderson, Certified Assayer of B.C.

Geochemist 

Dr. Barry Smee, Ph.D., P. Geo.

CDN Resource Laboratories Ltd.

#2, 20148 – 102nd Avenue, Langley, B.C., Canada, V1M 4B4, 604-882-8422, Fax: 604-882-8466 (www.cdnlabs.com)

REFERENCE MATERIAL: BCH-OX-07

Recommended value and the "Between Laboratory" two standard deviations

Gold concentration: 2.58 ± 0.27 g/t (30g Fire Assay / Instrumental finish)

PREPARED BY: CDN Resource Laboratories Ltd.
CERTIFIED BY: Duncan Sanderson, B.Sc., Licensed Assayer of British Columbia
INDEPENDENT GEOCHEMIST: Dr. Barry Smee., Ph.D., P. Geo.
DATE OF CERTIFICATION: April 4, 2013

ORIGIN OF REFERENCE MATERIAL:

Standard BCH-OX-07 was prepared using ore supplied by Barrick Gold Inc. from their Bald Mountain Mine in Nevada, USA. It is Carlin Style Mineralization in the prolific Battle Mountain-Eureka Trend in Northern Nevada, USA. The material is from breccias near the contact between the Mississippian Pilot Shale and the underlying Devonian Guilmette formation. Near the center of the system, micron-sized native Au occurs with base metal sulfides and sulfosalts. In peripheral deposits and in later stages of mineralization, Au is typically submicron in size and resides in pyrite or arsenopyrite
.

METHOD OF PREPARATION:

Reject ore material was dried, crushed, pulverized and then passed through a 270 mesh screen. The +270 material was discarded. The -270 material was mixed for 5 days in a double-cone blender. Splits were taken and sent to 14 commercial laboratories for round robin assaying. Round robin results are displayed below:

	Lab 1	Lab 2	Lab 3	Lab 4	Lab 5	Lab 6	Lab 7	Lab 8	Lab 9	Lab 10	Lab 11	Lab 12	Lab 13	Lab 14	Lab 15
SAMPLE	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t
BCH-OX-07-1	2.50	2.61	2.49	2.65	2.68	2.44	2.59	2.47	2.75	2.35	2.70	2.57	2.41	2.51	2.82
BCH-OX-07-2	2.58	2.45	2.54	2.63	2.54	2.40	2.57	2.66	2.56	2.50	2.58	2.63	2.20	2.70	2.70
BCH-OX-07-3	2.82	2.50	2.39	2.62	2.73	2.36	2.60	2.54	2.50	2.45	2.76	2.71	2.42	2.83	2.80
BCH-OX-07-4	2.63	2.53	2.40	2.70	2.77	2.34	2.59	2.59	2.67	2.42	2.43	2.52	2.50	2.76	2.74
BCH-OX-07-5	2.70	2.60	2.44	2.54	2.64	2.60	2.63	2.34	2.33	2.34	2.51	2.40	2.95	2.68	2.71
BCH-OX-07-6	2.53	2.68	2.50	2.71	2.64	2.33	2.55	2.49	2.55	2.49	2.33	2.62	2.92	2.80	2.73
BCH-OX-07-7	2.37	2.54	2.45	2.62	2.78	2.41	2.58	2.30	2.87	2.39	2.72	2.44	2.52	2.72	2.78
BCH-OX-07-8	2.96	2.56	2.46	2.60	2.87	2.41	2.59	2.64	2.70	2.50	2.66	2.58	2.48	2.69	2.68
BCH-OX-07-9	2.52	2.53	2.63	2.55	2.83	2.47	2.54	2.81	2.43	2.50	2.61	2.66	2.56	2.63	2.68
BCH-OX-07-10	2.77	2.67	2.58	2.54	2.63	2.35	2.64	2.66	2.79	2.42	2.55	2.56	2.49	2.83	2.61
Mean	2.64	2.57	2.49	2.62	2.71	2.41	2.59	2.55	2.61	2.44	2.59	2.57	2.55	2.72	2.73
Std. Dev'n	0.1757	0.0730	0.0770	0.0605	0.1030	0.0803	0.0313	0.1557	0.1706	0.0610	0.1351	0.0956	0.2279	0.0983	0.0633
%RSD	6.66	2.85	3.09	2.31	3.80	3.33	1.21	6.11	6.52	2.50	5.23	3.72	8.96	3.62	2.32

APPROXIMATE CHEMICAL COMPOSITION (by whole rock analysis):

	Percent			Percent			ppm
SiO2	80.6		Na2O	0.1		As	160
Al2O3	8.0		MgO	0.4		Sb	120
Fe2O3	2.5		K2O	1.7			
CaO	0.5		TiO2	0.4			
MnO	< 0.1		LOI	4.7			
Total S	0.8		Total C	0.1			
Sulphide S	0.2		Inorganic C	0.1			

REFERENCE MATERIAL: BCH-OX-07

Statistical Procedures:

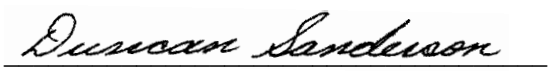
The final limits were calculated after first determining if all data was compatible within a spread normally expected for similar analytical methods done by reputable laboratories. Data from any one laboratory was removed from further calculations when the mean of all analyses from that laboratory failed a t test of the global means of the other laboratories. The mean and standard deviation were calculated using all remaining data. Any analysis that fell outside of the mean ±2 standard deviations was removed from the ensuing data base. The mean and standard deviations were again calculated using the remaining data. This method is different from that used by Government agencies in that the actual "between-laboratory" standard deviation is used in the calculations. This produces upper and lower limits that reflect actual individual analyses rather than a grouped set of analyses. The limits can therefore be used to monitor accuracy from individual analyses, unlike the Confidence Limits published on other standards.

Participating Laboratories: (not in same order as table of assays)

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Activation Laboratories, Ancaster, Ontario, Canada
Activation Laboratories, Thunder Bay, Ontario, Canada
Activation Laboratories, Kamloops, B.C., Canada
AGAT Laboratories Ltd., Mississauga, Ontario, Canada
ALS Chemex, North Vancouver, B.C., Canada
ALS Chemex, Nevada, USA
American Assay Laboratories, Nevada, USA
Certimin, Lima, Peru
Labtium Inc., Finland
ALS, Loughrea, Ireland
SGS, Lima, Peru
SGS, Toronto, Ontario, Canada
Skyline, Tucson, Arizona, USA
TSL Laboratories Ltd., Saskatoon, SK, Canada

Legal Notice:

This certificate and the reference material described in it have been prepared with due care and attention. However CDN Resource Laboratories Ltd. nor Barry Smee accept any liability for any decisions or actions taken following the use of the reference material. Our liability is limited solely to the cost of the reference material.

Certified by 

Duncan Sanderson, Certified Assayer of B.C.

Geochemist 

Dr. Barry Smee, Ph.D., P. Geo.

CDN Resource Laboratories Ltd.

#2, 20148 – 102nd Avenue, Langley, B.C., Canada, V1M 4B4, 604-882-8422, Fax: 604-882-8466 (www.cdnlabs.com)

REFERENCE MATERIAL: BCH-SR-05

Recommended value and the "Between Laboratory" two standard deviations

Gold concentration: 2.08 ± 0.10 g/t (30g Fire Assay / ICP)

PREPARED BY: CDN Resource Laboratories Ltd.
CERTIFIED BY: Duncan Sanderson, B.Sc., Licensed Assayer of British Columbia
INDEPENDENT GEOCHEMIST: Dr. Barry Smee., Ph.D., P. Geo.
DATE OF CERTIFICATION: June 10, 2013

ORIGIN OF REFERENCE MATERIAL:

Standard BCH-SR-05 was prepared using ore supplied by Barrick Gold Inc. from their Goldstrike Mine in Nevada, USA. It is Carlin Style Mineralization in the prolific Northern Carlin Trend in Northern Nevada, USA. The source material is from Devonian carbonates of the Popovich Formation. Gold is strongly associated with pyrite and other sulfides including the arsenic minerals orpiment and realgar.

METHOD OF PREPARATION:

Reject ore material was dried, crushed, pulverized and then passed through a 270 mesh screen. The +270 material was discarded. The -270 material was mixed for 5 days in a double-cone blender. Splits were taken and sent to 14 commercial laboratories for round robin assaying. Round robin results are displayed below:

	Lab 1	Lab 2	Lab 3	Lab 4	Lab 5	Lab 6	Lab 7	Lab 8	Lab 9	Lab 10	Lab 11	Lab 12	Lab 13	Lab 14
	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t
BCH-SR-05-1	2.04	2.11	2.10	1.95	2.00	1.95	2.04	2.09	1.97	2.10	2.18	2.08	1.73	2.09
BCH-SR-05-2	2.10	2.09	2.09	2.01	2.05	2.05	2.04	2.09	2.04	2.08	2.20	2.17	1.72	2.08
BCH-SR-05-3	2.05	2.11	2.07	1.95	2.13	2.02	2.08	2.07	1.98	2.10	2.06	2.15	1.70	2.11
BCH-SR-05-4	2.06	2.14	2.08	1.99	2.07	2.04	2.03	2.06	2.02	2.12	2.17	2.16	1.69	2.08
BCH-SR-05-5	2.06	2.10	2.10	2.02	2.00	2.05	2.09	2.12	2.06	2.14	2.17	2.11	1.65	2.14
BCH-SR-05-6	1.91	2.14	2.10	2.01	1.98	2.07	2.00	2.13	2.04	2.11	2.13	2.09	1.72	2.08
BCH-SR-05-7	2.03	2.06	2.07	2.02	2.09	2.05	2.01	2.10	2.03	2.10	2.13	2.08	1.74	2.07
BCH-SR-05-8	2.05	2.11	2.11	2.00	2.00	1.95	2.06	2.11	2.00	2.08	2.16	2.08	1.74	2.07
BCH-SR-05-9	2.02	2.11	2.12	2.01	1.99	1.99	2.05	2.09	2.04	2.13	2.13	2.08	1.71	2.09
BCH-SR-05-10	1.95	2.12	2.09	2.02	2.10	1.96	2.04	2.11	2.07	2.14	2.17	2.11	1.69	2.09
Mean	2.03	2.11	2.09	2.00	2.04	2.01	2.04	2.10	2.02	2.11	2.15	2.11	1.71	2.09
Std. Dev'n	0.0574	0.0233	0.0164	0.0255	0.0544	0.0464	0.0277	0.0216	0.0322	0.0230	0.0394	0.0360	0.0277	0.0211
%RSD	2.83	1.11	0.78	1.27	2.67	2.31	1.35	1.03	1.59	1.09	1.83	1.71	1.62	1.01

Note: Data from Lab 13 was excluded for failing the t test.

APPROXIMATE CHEMICAL COMPOSITION:

	Percent			Percent			ppm
SiO2	53.7		Na2O	<0.1		As	440
Al2O3	4.7		MgO	5.7		Sb	80
Fe2O3	2.2		K2O	1.1			
CaO	15.5		TiO2	0.3			
MnO	<0.1		LOI	16.5			
Total S	1.2		Total C	4.6			
Sulphide S	0.3		Inorganic C	3.7			

REFERENCE MATERIAL: BCH-SR-05

Statistical Procedures:

The final limits were calculated after first determining if all data was compatible within a spread normally expected for similar analytical methods done by reputable laboratories. Data from any one laboratory was removed from further calculations when the mean of all analyses from that laboratory failed a t test of the global means of the other laboratories. The mean and standard deviation were calculated using all remaining data. Any analysis that fell outside of the mean ±2 standard deviations was removed from the ensuing data base. The mean and standard deviations were again calculated using the remaining data. This method is different from that used by Government agencies in that the actual "between-laboratory" standard deviation is used in the calculations. This produces upper and lower limits that reflect actual individual analyses rather than a grouped set of analyses. The limits can therefore be used to monitor accuracy from individual analyses, unlike the Confidence Limits published on other standards.

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Certimin, Lima, Peru
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OMAC Laboratories Ltd., Ireland
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Certified by

Duncan Sanderson, Certified Assayer of B.C.

Geochemist

Dr. Barry Smee, Ph.D., P. Geo.

CDN Resource Laboratories Ltd.

#2, 20148 – 102nd Avenue, Langley, B.C., Canada, V1M 4B4, 604-882-8422, Fax: 604-882-8466 (www.cdnlabs.com)

REFERENCE MATERIAL: CDN-GS-15B

Recommended value and the "Between Laboratory" two standard deviations

Gold concentration: 15.98 ± 0.71 g/t (30g Fire Assay / Gravimetric finish)

PREPARED BY: CDN Resource Laboratories Ltd.
CERTIFIED BY: Duncan Sanderson, B.Sc., Licensed Assayer of British Columbia
INDEPENDENT GEOCHEMIST: Dr. Barry Smee., Ph.D., P. Geo.
DATE OF CERTIFICATION: May 1, 2010

ORIGIN OF REFERENCE MATERIAL:

Standard CDN-GS-15B was prepared using ore supplied by Barrick Gold Inc. from their Goldstrike Mine in Nevada, USA. It is Carlin Style Mineralization in the prolific Northern Carlin Trend in Northern Nevada, USA. The source material is from Devonian carbonates of the Popovich Formation. Gold is strongly associated with pyrite and other sulfides including the arsenic minerals orpiment and realgar. 800kg of the -270 Barrick ore was blended with 46 kg of a high grade gold ore (also screened to -270).

METHOD OF PREPARATION:

Reject ore material was dried, crushed, pulverized and then passed through a 270 mesh screen. The +270 material was discarded. The -270 material was mixed for 5 days in a double-cone blender. Splits were taken and sent to 15 commercial laboratories for round robin assaying. Round robin results are displayed below:

	Lab 1	Lab 2	Lab 3	Lab 4	Lab 5	Lab 6	Lab 7	Lab 8	Lab 9	Lab 10	Lab 11	Lab 12	Lab 13	Lab 14	Lab 15
SAMPLE	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t
GS-15B-1	16.17	15.95	16.60	16.4	15.95	15.7	15.5	15.6	15.77	16.3	16.07	16.4	15.49	16.09	16.29
GS-15B-2	16.40	16.25	15.90	15.7	16.18	15.5	15.5	15.6	16.10	16.2	15.70	15.8	15.55	15.63	16.59
GS-15B-3	16.46	15.70	16.30	16.5	16.11	15.6	15.6	16.0	16.12	15.9	15.67	16.4	15.11	16.10	16.79
GS-15B-4	16.49	16.00	16.30	15.8	15.75	15.4	15.9	15.8	15.35	16.0	15.67	16.5	14.96	16.23	15.12
GS-15B-5	16.61	16.25	15.83	16.4	16.03	15.3	16.0	15.0	15.64	16.1	15.70	16.1	14.93	16.00	15.79
GS-15B-6	16.62	15.90	16.20	16.6	15.89	15.6	16.0	14.7	15.35	16.3	16.13	16.4	15.83	16.13	15.80
GS-15B-7	16.38	15.85	15.77	16.4	16.25	15.9	16.0	15.2	15.98	15.9	15.93	16.3	15.43	15.93	16.09
GS-15B-8	16.41	16.00	16.23	16.6	16.01	15.5	16.1		15.36	16.5	16.03	16.2	15.23	16.40	15.79
GS-15B-9	16.24	15.80	15.80	16.6	16.04	15.4	15.9	15.4	16.13	16.6	16.03	16.4	15.57	16.19	15.63
GS-15B-10	16.47	15.90	16.47	15.9	16.23	15.7	15.7	15.4	15.43	16.3	15.70	16.3	15.97	15.52	16.49
Mean	16.43	15.96	16.14	16.29	16.04	15.56	15.82	15.41	15.72	16.21	15.86	16.28	15.41	16.02	16.04
Std. Dev'n	0.1421	0.1776	0.2962	0.3510	0.1566	0.1776	0.2251	0.4014	0.3393	0.2151	0.1911	0.2044	0.3492	0.2690	0.5083
%RSD	0.87	1.11	1.84	2.15	0.98	1.14	1.42	2.60	2.16	1.33	1.20	1.26	2.27	1.68	3.17

APPROXIMATE CHEMICAL COMPOSITION:

	Percent			Percent			ppm
SiO2	50.0		Na2O	0.1		As	1300
Al2O3	3.5		MgO	1.3		Sb	110
Fe2O3	5.0		K2O	0.5			
CaO	20.0		TiO2	0.2			
MnO	0.1		LOI	17.4			
Total S	2.0		Total C	5.3			
Sulphide S	1.4		Inorganic C	4.7			

REFERENCE MATERIAL: CDN-GS-15B

Statistical Procedures:

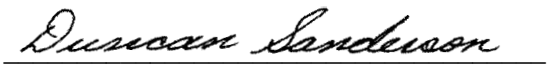
The final limits were calculated after first determining if all data was compatible within a spread normally expected for similar analytical methods done by reputable laboratories. Data from any one laboratory was removed from further calculations when the mean of all analyses from that laboratory failed a t test of the global means of the other laboratories. The mean and standard deviation were calculated using all remaining data. Any analysis that fell outside of the mean ±2 standard deviations was removed from the ensuing data base. The mean and standard deviations were again calculated using the remaining data. This method is different from that used by Government agencies in that the actual "between-laboratory" standard deviation is used in the calculations. This produces upper and lower limits that reflect actual individual analyses rather than a grouped set of analyses. The limits can therefore be used to monitor accuracy from individual analyses, unlike the Confidence Limits published on other standards.

Participating Laboratories: (not in same order as table of assays)

Acme Analytical Laboratories Ltd., Vancouver, B.C., Canada
Activation Laboratories, Ancaster, Ontario, Canada
Activation Laboratories, Thunder Bay, Ontario, Canada
Alaska Assay Lab, Anchorage, Alaska, USA
AGAT Laboratories, Mississauga, Ontario, Canada
ALS Chemex, North Vancouver, B.C., Canada
American Assay Laboratory, Nevada, USA
Assayers Canada Ltd., Vancouver, B.C., Canada
Eco Tech Laboratory Ltd., Kamloops, B.C., Canada
International Plasma Laboratories, Richmond, B.C., Canada
Labtium Inc., Finland
SGS, Toronto, Canada
SGS, Lima, Peru
Skyline Assayers & Laboratories, Arizona, USA
TSL Laboratories Ltd., Saskatoon, SK, Canada

Legal Notice:

This certificate and the reference material described in it have been prepared with due care and attention. However CDN Resource Laboratories Ltd. nor Barry Smee accept any liability for any decisions or actions taken following the use of the reference material. Our liability is limited solely to the cost of the reference material.

Certified by 

Duncan Sanderson, Certified Assayer of B.C.

Geochemist 

Dr. Barry Smee, Ph.D., P. Geo.

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REFERENCE MATERIAL: CDN-GS-4C

Recommended value and the "Between Laboratory" two standard deviations

Gold concentration: 4.26 ± 0.22 g/t (30g Fire Assay / ICP)
Gold concentration: 4.25 ± 0.20 g/t (30g Fire Assay / Grav.)

PREPARED BY: CDN Resource Laboratories Ltd.
CERTIFIED BY: Duncan Sanderson, B.Sc., Licensed Assayer of British Columbia
INDEPENDENT GEOCHEMIST: Dr. Barry Smee., Ph.D., P. Geo.
DATE OF CERTIFICATION: March 10, 2010

ORIGIN OF REFERENCE MATERIAL:

Standard CDN-GS-4C was prepared using ore supplied by Barrick Gold Inc. from their Goldstrike Mine in Nevada, USA. It is Carlin Style Mineralization in the prolific Northern Carlin Trend in Northern Nevada, USA. The source material is from Devonian carbonates of the Popovich Formation. Gold is strongly associated with pyrite and other sulfides including the arsenic minerals orpiment and realgar.

METHOD OF PREPARATION:

Reject ore material was dried, crushed, pulverized and then passed through a 270 mesh screen. The +270 material was discarded. The -270 material was mixed for 5 days in a double-cone blender. Splits were taken and sent to 15 commercial laboratories for round robin assaying. Round robin results are displayed below:

ICP	Lab 1	Lab 2	Lab 3	Lab 4	Lab 5	Lab 6	Lab 7	Lab 8	Lab 9	Lab 10	Lab 11	Lab 12	Lab 13	Lab 14	Lab 15
	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t
CDN-GS-4C-1	4.23	4.18	4.52	4.16	4.11	4.01	4.46	4.20	4.34	4.41	4.34	4.10	4.26	4.23	4.21
CDN-GS-4C-2	4.48	4.20	4.44	4.13	4.13	4.08	4.56	4.30	4.29	4.40	4.21	4.19	4.22	4.47	4.15
CDN-GS-4C-3	4.23	4.16	4.37	4.20	4.21	4.05	4.47	4.27	4.32	4.39	4.30	4.18	4.29	4.43	4.09
CDN-GS-4C-4	4.24	4.20	4.27	4.25	4.22	4.13	4.58	4.20	4.38	4.44	4.30	4.16	4.24	4.41	4.15
CDN-GS-4C-5	4.46	4.27	4.59	4.14	4.21	4.09	4.47	4.29	4.28	4.38	4.25	4.11	4.27	4.39	4.17
CDN-GS-4C-6	4.18	4.34	4.60	4.26	4.27	4.07	4.35	4.36	4.26	4.33	4.32	4.13	4.22	4.39	4.11
CDN-GS-4C-7	4.27	4.26	4.46	4.30	4.24	4.06	4.40	4.28	4.29	4.34	4.27	4.19	4.30	4.25	4.20
CDN-GS-4C-8	4.15	4.41	4.38	4.16	4.24	4.02	4.27	4.22	4.31	4.34	4.25	4.14	4.26	4.43	4.16
CDN-GS-4C-9	4.29	4.29	4.59	4.27	4.20	4.06	4.28	4.13	4.28	4.39	4.37	4.00	4.32	4.35	4.12
CDN-GS-4C-10	4.21	4.33	4.46	4.15	4.27	4.13	4.28	4.18	4.22	4.41	4.27	3.95	4.31	4.43	4.13
Mean	4.27	4.26	4.47	4.20	4.21	4.07	4.41	4.24	4.30	4.38	4.29	4.12	4.27	4.38	4.15
Std. Dev'n	0.1109	0.0804	0.1092	0.0625	0.0533	0.0420	0.1146	0.0685	0.0440	0.0359	0.0476	0.0810	0.0349	0.0796	0.0381
%RSD	2.59	1.89	2.44	1.49	1.27	1.03	2.60	1.61	1.02	0.82	1.11	1.97	0.82	1.82	0.92

Gravimetric	Lab 1	Lab 2	Lab 3	Lab 4	Lab 5	Lab 6	Lab 7	Lab 8	Lab 9	Lab 10	Lab 11	Lab 12	Lab 13	Lab 14	Lab 15
	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t	Au g/t
CDN-GS-4C-1	4.32	4.16	4.80	4.23	4.33	4.146	4.26	4.31	4.42		4.3		4.19	4.120	4.30
CDN-GS-4C-2	4.32	4.23	4.53	4.26	4.33	4.065	4.23	4.24	4.39		4.2		4.23	4.310	4.33
CDN-GS-4C-3	4.35	4.15	4.33	4.30	4.36	4.058	4.20	4.25	4.51		4.1		4.23	4.467	4.27
CDN-GS-4C-4	4.28	4.26	4.57	4.33	4.34	4.121	4.13	4.22	4.56		4.2		4.22	4.067	4.30
CDN-GS-4C-5	4.26	4.25	4.77	4.26	4.30	4.012	4.24	4.30	4.22		4.1		4.24	4.061	4.33
CDN-GS-4C-6	4.24	4.11	4.33	4.20	4.32	4.091	4.26	4.33	4.37		4.4		4.24	4.223	4.20
CDN-GS-4C-7	4.23	4.19	4.50	4.33	4.26	4.097	4.15	4.23	4.58		4.2		4.19	4.061	4.30
CDN-GS-4C-8	4.27	4.26	4.67	4.31	4.31	4.146	4.28	4.24	4.38		4.3		4.20	4.122	4.27
CDN-GS-4C-9	4.08	4.18	4.30	4.23	4.26	4.103	4.28	4.23	4.43		4.5		4.22	4.238	4.23
CDN-GS-4C-10	4.25	4.26	4.67	4.19	4.33	4.198	4.26	4.17	4.42		4.4		4.20	4.000	4.23
Mean	4.26	4.21	4.55	4.26	4.31	4.10	4.23	4.25	4.43		4.27		4.22	4.17	4.28
Std. Dev'n	0.0742	0.0544	0.1832	0.0517	0.0327	0.0527	0.0528	0.0480	0.1042		0.1337		0.0196	0.1426	0.0443
%RSD	1.74	1.29	4.03	1.21	0.76	1.28	1.25	1.13	2.35		3.13		0.46	3.42	1.04

Note: Labs 10 and 12 did not report gravimetric results.
Gravimetric data from Lab 3 was excluded for failing the "t" test.

REFERENCE MATERIAL: CDN-GS-4C

APPROXIMATE CHEMICAL COMPOSITION:

	Percent			Percent			ppm
SiO2	45.1		Na2O	0.1		As	500
Al2O3	5.2		MgO	8.9		Sb	60
Fe2O3	2.7		K2O	1.1			
CaO	14.3		TiO2	0.2			
MnO	0.1		LOI	20.8			
Total S	1.4		Total C	5.9			
Sulphide S	1.2		Inorganic C	5.3			

Statistical Procedures:

The final limits were calculated after first determining if all data was compatible within a spread normally expected for similar analytical methods done by reputable laboratories. Data from any one laboratory was removed from further calculations when the mean of all analyses from that laboratory failed a t test of the global means of the other laboratories. The mean and standard deviation were calculated using all remaining data. Any analysis that fell outside of the mean ±2 standard deviations was removed from the ensuing data base. The mean and standard deviations were again calculated using the remaining data. This method is different from that used by Government agencies in that the actual "between-laboratory" standard deviation is used in the calculations. This produces upper and lower limits that reflect actual individual analyses rather than a grouped set of analyses. The limits can therefore be used to monitor accuracy from individual analyses, unlike the Confidence Limits published on other standards.

Participating Laboratories: (not in same order as table of assays)

Acme Analytical Laboratories Ltd., Vancouver, B.C., Canada
Acme Analytical Laboratories Ltd., Santiago, Chile
Activation Laboratories, Ancaster, Ontario, Canada
Activation Laboratories, Thunder Bay, Ontario, Canada
Alaska Assay Lab, Anchorage, Alaska, USA
Alex Stewart Argentina SA
ALS Chemex, North Vancouver, B.C., Canada
ALS Chemex, Nevada, USA
Assayers Canada Ltd., Vancouver, B.C., Canada
Bourlamaque Assay Laboratories, Quebec, Canada
Eco Tech Laboratory Ltd., Kamloops, B.C., Canada
Labtium Inc., Finland
SGS, Toronto, Canada
SGS, Lima, Peru
TSL Laboratories Ltd., Saskatoon, SK, Canada

Legal Notice:

This certificate and the reference material described in it have been prepared with due care and attention. However CDN Resource Laboratories Ltd. nor Barry Smee accept any liability for any decisions or actions taken following the use of the reference material. Our liability is limited solely to the cost of the reference material.

Certified by Duncan Sanderson

Duncan Sanderson, Certified Assayer of B.C.

Geochemist

Dr. Barry Smee, Ph.D., P. Geo.

SMEE & ASSOCIATES CONSULTING LTD.
CONSULTING GEOCHEMISTRY / GEOLOGY

Certificate of Analysis

Archer Cathro Standard OS CS-10

Element	Certified Mean	Two Standard Deviations (between lab)
FA Au	**1.445 g/t**	**0.048 g/t**

Means and standard deviations for all variables were calculated from data supplied by six laboratories each assaying ten randomly selected packages from the total lot. Au was analyzed using fire assay and instrument finish.

The participating laboratories were:

ALS, Vancouver
BV, Vancouver
Actlabs, Thunder Bay
MS Analytical, Langley
TSL, Saskatoon
SGS, Vancouver

The final limits were calculated after first determining if all data was compatible within a spread normally expected for similar analytical methods done by reputable laboratories. Data from any one laboratory was removed from further calculations when the mean of all analyses from that laboratory failed a t test of the global means of the other laboratories. The means and standard deviations were calculated using all remaining data. Any analysis that fell outside of the mean ±2 standard deviations was removed from the ensuing data base. The mean and standard deviations were again calculated using the remaining data. This method is different from that used by Government agencies in that the actual "between-laboratory" standard deviation is used in the calculations. This produces upper and lower limits that reflect actual individual analyses rather than a grouped set of analyses. The limits can therefore be used to monitor accuracy from individual analyses, unlike the Confidence Limits published on other standards. Standards with an RSD of near or less than 5 % are certified, RSD's of between near 5 % and 15 % are Provisional and should be used with care, and RSD's over 15 % or that have insufficient data are Indicated and cannot be used to monitor accuracy of a single analysis.

Smee and Associates Consulting Ltd.
4658 Capilano Rd. North Vancouver, B.C., Canada, V7R 4K3
Tel: 604-929-0667; Fax: 604-929-0662
e-mail: bwsmee@geochemist.com
web site: www.geochemist.com

The bulk standards were prepared by CDN Labs of Langley B.C. Each standard was screened to 270 mesh and the oversize discarded and the fines homogenized in a large rotating mixer. Each standard was packaged in tin-tie kraft paper bags and then sealed in plastic to prevent gravity separation and oxidation.



Barry W. Smee, Ph.D., P.Geo., FGC
April, 2018

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Certificate of Analysis

Archer Cathro Standard OS CS-11

Element	Certified Mean	Two Standard Deviations (between lab)
FA Au	**2.890 g/t**	**0.128 g/t**

Means and standard deviations for all variables were calculated from data supplied by six laboratories each assaying ten randomly selected packages from the total lot. Au was analyzed using fire assay and instrument finish.

The participating laboratories were:

ALS, Vancouver
BV, Vancouver
Actlabs, Thunder Bay
MS Analytical, Langley
TSL, Saskatoon
SGS, Vancouver

The final limits were calculated after first determining if all data was compatible within a spread normally expected for similar analytical methods done by reputable laboratories. Data from any one laboratory was removed from further calculations when the mean of all analyses from that laboratory failed a t test of the global means of the other laboratories. The means and standard deviations were calculated using all remaining data. Any analysis that fell outside of the mean ±2 standard deviations was removed from the ensuing data base. The mean and standard deviations were again calculated using the remaining data. This method is different from that used by Government agencies in that the actual "between-laboratory" standard deviation is used in the calculations. This produces upper and lower limits that reflect actual individual analyses rather than a grouped set of analyses. The limits can therefore be used to monitor accuracy from individual analyses, unlike the Confidence Limits published on other standards. Standards with an RSD of near or less than 5 % are certified, RSD's of between near 5 % and 15 % are Provisional and should be used with care, and RSD's over 15 % or that have insufficient data are Indicated and cannot be used to monitor accuracy of a single analysis.

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The bulk standards were prepared by CDN Labs of Langley B.C. Each standard was screened to 270 mesh and the oversize discarded and the fines homogenized in a large rotating mixer. Each standard was packaged in tin-tie kraft paper bags and then sealed in plastic to prevent gravity separation and oxidation.



Barry W. Smee, Ph.D., P.Geo., FGC
April, 2018

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web site: www.geochemist.com

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Certificate of Analysis

Archer Cathro Standard OS CS-12

Element	Certified Mean	Two Standard Deviations (between lab)
FA Au	**5.23 g/t**	**0.19 g/t**

Means and standard deviations for all variables were calculated from data supplied by six laboratories each assaying ten randomly selected packages from the total lot. Au was analyzed using fire assay and instrument finish.

The participating laboratories were:

ALS, Vancouver
BV, Vancouver
Actlabs, Thunder Bay
MS Analytical, Langley
TSL, Saskatoon
SGS, Vancouver

The final limits were calculated after first determining if all data was compatible within a spread normally expected for similar analytical methods done by reputable laboratories. Data from any one laboratory was removed from further calculations when the mean of all analyses from that laboratory failed a t test of the global means of the other laboratories. The means and standard deviations were calculated using all remaining data. Any analysis that fell outside of the mean ±2 standard deviations was removed from the ensuing data base. The mean and standard deviations were again calculated using the remaining data. This method is different from that used by Government agencies in that the actual "between-laboratory" standard deviation is used in the calculations. This produces upper and lower limits that reflect actual individual analyses rather than a grouped set of analyses. The limits can therefore be used to monitor accuracy from individual analyses, unlike the Confidence Limits published on other standards. Standards with an RSD of near or less than 5 % are certified, RSD's of between near 5 % and 15 % are Provisional and should be used with care, and RSD's over 15 % or that have insufficient data are Indicated and cannot be used to monitor accuracy of a single analysis.

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The bulk standards were prepared by CDN Labs of Langley B.C. Each standard was screened to 270 mesh and the oversize discarded and the fines homogenized in a large rotating mixer. Each standard was packaged in tin-tie kraft paper bags and then sealed in plastic to prevent gravity separation and oxidation.



Barry W. Smee, Ph.D., P.Geo., FGC
April, 2018

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SMEE & ASSOCIATES CONSULTING LTD.
CONSULTING GEOCHEMISTRY / GEOLOGY

Certificate of Analysis

ATAC OS CS 2

Element	Certified Mean	Two Standard Deviations (between lab)
FA Au Inst.	**2.544 g/t**	**0.158 g/t**

Means and standard deviations were calculated from data supplied by six laboratories. Instructions to the laboratories were for the laboratory to finish the fire assay gold with AAS or ICP and with gravimetric if above 5 g/t.

The participating laboratories were:

ALS Chemex, Vancouver
Acme, Vancouver
TSL, Saskatoon
Actlabs, Ancaster
Actlabs, Thunder Bay
SGS, Vancouver

The final limits were calculated after first determining if all data was compatible within a spread normally expected for similar analytical methods done by reputable laboratories. Data from any one laboratory was removed from further calculations when the mean of all analyses from that laboratory failed a t test of the global means of the other laboratories. The means and standard deviations were calculated using all remaining data. Any analysis that fell outside of the mean ± 2 standard deviations was removed from the ensuing data base. The mean and standard deviations were again calculated using the remaining data (shown as the 1st Iteration in the attached Excel spreadsheets). The standard deviation values are known as the "Between Lab" deviations, and can be used to monitor accuracy of a single analysis.

Standards with a Relative Standard Deviation (RSD) of near or less than 5 % are classified as Certified, RSD's of between near 5 % and 15 % are classified as Provisional and must be used with caution when assessing the accuracy of a single analysis, and RSD's of more than 15 % are Indicated and cannot be used to monitor accuracy.

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web site: www.geochemist.com

The bulk standards were prepared and packaged by CDN Labs of Langley B.C. Each bulk sample was pulverized in a large rod mill, screened through 270 mesh using an electric sieve, and homogenized in a large rotating mixer.



Barry W. Smee, Ph.D., P.Geo.
June, 2013

Smee and Associates Consulting Ltd.
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CONSULTING GEOCHEMISTRY / GEOLOGY

Certificate of Analysis

ATAC OS CS 3

Element	Certified Mean	Two Standard Deviations (between lab)
FA Au Grav.	**7.75 g/t**	**0.44 g/t**

Means and standard deviations were calculated from data supplied by six laboratories. Instructions to the laboratories were for the laboratory to finish the fire assay gold with AAS or ICP and with gravimetric if above 5 g/t.

The participating laboratories were:

ALS Chemex, Vancouver
Acme, Vancouver
TSL, Saskatoon
Actlabs, Ancaster
Actlabs, Thunder Bay
SGS, Vancouver

The final limits were calculated after first determining if all data was compatible within a spread normally expected for similar analytical methods done by reputable laboratories. Data from any one laboratory was removed from further calculations when the mean of all analyses from that laboratory failed a t test of the global means of the other laboratories. The means and standard deviations were calculated using all remaining data. Any analysis that fell outside of the mean ± 2 standard deviations was removed from the ensuing data base. The mean and standard deviations were again calculated using the remaining data (shown as the 1st Iteration in the attached Excel spreadsheets). The standard deviation values are known as the "Between Lab" deviations, and can be used to monitor accuracy of a single analysis.

Standards with a Relative Standard Deviation (RSD) of near or less than 5 % are classified as Certified, RSD's of between near 5 % and 15 % are classified as Provisional and must be used with caution when assessing the accuracy of a single analysis, and RSD's of more than 15 % are Indicated and cannot be used to monitor accuracy.

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The bulk standards were prepared and packaged by CDN Labs of Langley B.C. Each bulk sample was pulverized in a large rod mill, screened through 270 mesh using an electric sieve, and homogenized in a large rotating mixer.



Barry W. Smee, Ph.D., P.Geo.
June, 2013

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Certificate of Analysis

ATAC OS CS 4

Element	Certified Mean	Two Standard Deviations (between lab)
FA Au Grav.	**12.80 g/t**	**0.39 g/t**

Means and standard deviations were calculated from data supplied by six laboratories. Instructions to the laboratories were for the laboratory to finish the fire assay gold with AAS or ICP and with gravimetric if above 5 g/t.

The participating laboratories were:

ALS Chemex, Vancouver
Acme, Vancouver
TSL, Saskatoon
Actlabs, Ancaster
Actlabs, Thunder Bay
SGS, Vancouver

The final limits were calculated after first determining if all data was compatible within a spread normally expected for similar analytical methods done by reputable laboratories. Data from any one laboratory was removed from further calculations when the mean of all analyses from that laboratory failed a t test of the global means of the other laboratories. The means and standard deviations were calculated using all remaining data. Any analysis that fell outside of the mean ± 2 standard deviations was removed from the ensuing data base. The mean and standard deviations were again calculated using the remaining data (shown as the 1st Iteration in the attached Excel spreadsheets). The standard deviation values are known as the "Between Lab" deviations, and can be used to monitor accuracy of a single analysis.

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OS CS-5

Element	Certified Mean	Two Standard Deviations (between lab)
FA Au	**0.539 g/t**	**0.044 g/t**

Means and standard deviations were calculated from data supplied by six laboratories each assaying 10 randomly selected packages from the total lot. Gold was assayed using a normal fire assay and either AAS or ICP finish.

The participating laboratories were:

BV, Vancouver

ALS, Vancouver

MS Analytical, Langley

Actlabs, Thunder Bay

TSL, Saskatoon

SGS, Vancouver

The final limits were calculated after first determining if all data was compatible within a spread normally expected for similar analytical methods done by reputable laboratories. Data from any one laboratory was removed from further calculations when the mean of all analyses from that laboratory failed a t test of the global means of the other laboratories. The means and standard deviations were calculated using all remaining data. Any analysis that fell outside of the mean ±2 standard deviations was removed from the ensuing data base. The mean and standard deviations were again calculated using the remaining data. This method is different from that used by Government agencies in that the actual "between-laboratory" standard deviation is used in the calculations. This produces upper and lower limits that reflect actual individual analyses rather than a grouped set of analyses. The limits can therefore be used to monitor accuracy from individual analyses, unlike the Confidence Limits published on other standards. Standards with

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an RSD of near or less than 5 % are certified, RSD's of between near 5 % and 15 % are Provisional, and RSD's over 15 % or that have insufficient data are Indicated.

The bulk standards were prepared by CDN Labs of Langley B.C. Each standard was screened to 270 mesh and the oversize discarded and the fines homogenized in a large rotating mixer. Each standard was packaged in tin-tie kraft paper bags and then sealed in plastic to prevent gravity separation and oxidation.



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May, 2017

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OS CS-6

Element	Certified Mean	Two Standard Deviations (between lab)
FA Au	**2.67g/t**	**0.10 g/t**

Means and standard deviations were calculated from data supplied by six laboratories each assaying 10 randomly selected packages from the total lot. Gold was assayed using a normal fire assay and either AAS or ICP finish.

The participating laboratories were:

BV, Vancouver

ALS, Vancouver

MS Analytical, Langley

Actlabs, Thunder Bay

TSL, Saskatoon

SGS, Vancouver

The final limits were calculated after first determining if all data was compatible within a spread normally expected for similar analytical methods done by reputable laboratories. Data from any one laboratory was removed from further calculations when the mean of all analyses from that laboratory failed a t test of the global means of the other laboratories. The means and standard deviations were calculated using all remaining data. Any analysis that fell outside of the mean ±2 standard deviations was removed from the ensuing data base. The mean and standard deviations were again calculated using the remaining data. This method is different from that used by Government agencies in that the actual "between-laboratory" standard deviation is used in the calculations. This produces upper and lower limits that reflect actual individual analyses rather than a grouped set of analyses. The limits can therefore be used to monitor accuracy from

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individual analyses, unlike the Confidence Limits published on other standards. Standards with an RSD of near or less than 5 % are certified, RSD's of between near 5 % and 15 % are Provisional, and RSD's over 15 % or that have insufficient data are Indicated.

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OS CS-7

Element	Certified Mean	Two Standard Deviations (between lab)
FA Au	**8.24 g/t**	**0.24 g/t**

Means and standard deviations were calculated from data supplied by six laboratories each assaying 10 randomly selected packages from the total lot. Gold was assayed using a normal fire assay and either gravimetric or AAS or ICP finish, depending on the laboratory.

The participating laboratories were:

BV, Vancouver
ALS, Vancouver
MS Analytical, Langley
Actlabs, Thunder Bay
TSL, Saskatoon
SGS, Vancouver

The final limits were calculated after first determining if all data was compatible within a spread normally expected for similar analytical methods done by reputable laboratories. Data from any one laboratory was removed from further calculations when the mean of all analyses from that laboratory failed a t test of the global means of the other laboratories. The means and standard deviations were calculated using all remaining data. Any analysis that fell outside of the mean ±2 standard deviations was removed from the ensuing data base. The mean and standard deviations were again calculated using the remaining data. This method is different from that used by Government agencies in that the actual "between-laboratory" standard deviation is used in the calculations. This produces upper and lower limits that reflect actual individual analyses rather than a grouped set of analyses. The limits can therefore be used to monitor accuracy from

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individual analyses, unlike the Confidence Limits published on other standards. Standards with an RSD of near or less than 5 % are certified, RSD's of between near 5 % and 15 % are Provisional, and RSD's over 15 % or that have insufficient data are Indicated.

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OS CS-8

Element	Certified Mean	Two Standard Deviations (between lab)
FA Au	**12.86 g/t**	**0.60 g/t**

Means and standard deviations were calculated from data supplied by six laboratories each assaying 10 randomly selected packages from the total lot. Gold was assayed using a normal fire assay and gravimetric finish.

The participating laboratories were:

BV, Vancouver

ALS, Vancouver

MS Analytical, Langley

Actlabs, Thunder Bay

TSL, Saskatoon

SGS, Vancouver

The final limits were calculated after first determining if all data was compatible within a spread normally expected for similar analytical methods done by reputable laboratories. Data from any one laboratory was removed from further calculations when the mean of all analyses from that laboratory failed a t test of the global means of the other laboratories. The means and standard deviations were calculated using all remaining data. Any analysis that fell outside of the mean ±2 standard deviations was removed from the ensuing data base. The mean and standard deviations were again calculated using the remaining data. This method is different from that used by Government agencies in that the actual "between-laboratory" standard deviation is used in the calculations. This produces upper and lower limits that reflect actual individual analyses rather than a grouped set of analyses. The limits can therefore be used to monitor accuracy from

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Archer Cathro Standard OS CS-9

Element	Certified Mean	Two Standard Deviations (between lab)
FA Au	**1.086 g/t**	**0.040 g/t**

Means and standard deviations for all variables were calculated from data supplied by six laboratories each assaying ten randomly selected packages from the total lot. Au was analyzed using fire assay and instrument finish.

The participating laboratories were:

ALS, Vancouver
BV, Vancouver
Actlabs, Thunder Bay
MS Analytical, Langley
TSL, Saskatoon
SGS, Vancouver

The final limits were calculated after first determining if all data was compatible within a spread normally expected for similar analytical methods done by reputable laboratories. Data from any one laboratory was removed from further calculations when the mean of all analyses from that laboratory failed a t test of the global means of the other laboratories. The means and standard deviations were calculated using all remaining data. Any analysis that fell outside of the mean ±2 standard deviations was removed from the ensuing data base. The mean and standard deviations were again calculated using the remaining data. This method is different from that used by Government agencies in that the actual "between-laboratory" standard deviation is used in the calculations. This produces upper and lower limits that reflect actual individual analyses rather than a grouped set of analyses. The limits can therefore be used to monitor accuracy from individual analyses, unlike the Confidence Limits published on other standards. Standards with an RSD of near or less than 5 % are certified, RSD's of between near 5 % and 15 % are Provisional and should be used with care, and RSD's over 15 % or that have insufficient data are Indicated and cannot be used to monitor accuracy of a single analysis.

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April, 2018

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APPENDIX IV

DIAMOND DRILLING - GEOLOGICAL, GEOTECHNICAL AND SAMPLE LOGS

BDO-18-005

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
0.00	0.70	0.70	NSP	--	No Recovery							
0.70	2.80	2.10	LST	FG	Low recovery. Rubbly, calcareous mudstone and limestone clasts. Strongly reactive to 10% HCl. Weak to locally strong oxidation along fractures.							
						DK	GY					
						MD	GY	RB	OXI	W		
2.80	72.37	69.57	LST	MG	Bioclastic debris flow beds interbedded with calcareous mudstone. Possible shear zone from 18.64 m - 20.73 m.							
						MD	BN					
						DK	BK					
						MD	GY	SH	SIL	W		
						LT	GY	DB	OXI	W		
72.37	173.61	101.24	LST	MG	Alternating dark grey to black fine grained calcareous mudstone interbedded with light to medium coarse grained grey limestone with local debris flows and siltstone beds. Weak to locally moderate oxidation. Some sections are strongly oxidized. Weak oxidized clay seams with some sections having strongly oxidized clay. Debris flows are clastic and bioclastic. Trace to locally minor calcite veins and infills. Trace to locally minor pyrite.							
						DK	BL					
						DK	GY					
						MD	GY	SD	CLY	W		
						LT	GY	DB	OXI	W		

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
0.00	0.70	0.70	0	0	0.00	0	--	--	--	OVB
0.70	0.91	0.21	0.21	100	0.00	0	2R	3H	3W	RBZ
0.91	2.44	1.53	0.32	21	0.00	0	3R	3H	4W	RBZ
2.44	3.96	1.52	0.64	42	0.31	20	3R	3H	2W	Small RBZ between competent intervals.
3.96	5.49	1.53	1.51	99	1.04	68	3R	4H	2W	Heavily clay altered fracture surfaces
5.49	7.01	1.52	1.5	99	1.29	85	3R	3H	2W	Moderately clay altered fracture surfaces
7.01	8.53	1.52	1.52	100	0.75	49	4R	2H	3W	Thick/heavy clay alteration along fracture surfaces.
8.53	10.06	1.53	1.23	80	0.93	61	3R	3H	2W	Competent run with two ~5-10cm zones of heavy clay altered fractures
10.06	11.58	1.52	1.5	99	1.38	91	4R	3H	1W	Minor fracturing
11.58	13.11	1.53	1.47	96	1.01	66	3R	2H	1W	fracturing within mudstone unit.
13.11	14.63	1.52	0.3	20	0.00	0	2R	3H	2W	RBZ
14.63	16.15	1.52	1.37	90	1.00	66	2R	3H	1W	Graphite on fracture surfaces
16.15	17.68	1.53	1.44	94	1.19	78	2R	3H	1W	Fractures cross cutting bedding.
17.68	19.20	1.52	1.16	76	0.70	46	2R	3H	1W	Intervals of strong reactivity near middle of the run.
19.20	20.73	1.53	1.53	100	0.74	48	1R	3H	1W	Small (.1 to .5m) RBZ
20.73	22.25	1.52	1.52	100	1.41	93	2R	3H	1W	Thin calcite on fracture surfaces.
22.25	23.77	1.52	1.51	99	1.31	86	2R	3H	1W	Graphite along fracture surfaces.
23.77	25.30	1.53	1.44	94	1.08	71	2R	3H	1W	Intervals of moderate calcite veining.
25.30	26.82	1.52	1.49	98	1.22	80	2R	2H	1W	Clay along fracture surfaces
26.82	28.35	1.53	1.38	90	1.19	78	3R	3H	1W	Fine grained pyrite along one fracture surface.
28.35	29.87	1.52	1.45	95	1.40	92	3R	3H	1W	Competent interval with small 5 cm clay seam near 29.85m
29.87	31.39	1.52	1.06	70	1.00	66	3R	3H	1W	Competent interval. Lost core in gouge near 29.87 block?
31.39	32.92	1.53	1.51	99	1.44	94	3R	3H	1W	"
32.92	34.44	1.52	1.2	79	0.71	47	3R	3H	1W	Small RBZ (0.5m) near end of run.
34.44	35.97	1.53	1.39	91	1.15	75	3R	3H	1W	Clay fill on some fracture surfaces.

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
35.97	37.49	1.52	1.47	97	1.44	95	2R	3H	1W	One clay filled fracture (2-3 cm thick)
37.49	39.01	1.52	1.42	93	1.21	80	3R	3H	1W	Clay or calcite on fracture surfaces.
39.01	40.54	1.53	1.53	100	1.51	99	3R	3H	1W	Competent unit with one (1-2cm thick clay filled fracture)
40.54	42.06	1.52	1.17	77	0.76	50	1R	2H	1W	10 cm of gouge and rock fragments. Fractures are clay filled.
42.06	43.59	1.53	1.1	72	0.00	0	1R	2H	1W	HCl reactivity here is weak to nonexistent. There is a range from moderate to very soft rock.
43.59	45.11	1.52	1.34	88	0.00	0	1R	1H	5W	This interval is largely soft clay material
45.11	46.63	1.52	1.16	76	0.21	14	2R	1H	4W	This material is largely clay and reactivity varies from weak to moderate.
46.63	48.16	1.53	0.58	38	0.22	14	2R	1H	1W	This is largely oxidation and clay with short intervals of fresher limestone
48.16	49.68	1.52	0.85	56	0.00	0	2R	1H	1W	
49.68	51.20	1.52	0.66	43	0.16	11	2R	1H	1W	
51.20	52.73	1.53	1.36	89	0.17	11	2R	1H	5W	incredibly soft oxidized clay material
52.73	54.25	1.52	1.49	98	0.74	49	2R	1H	4W	
54.25	55.78	1.53	1.44	94	0.28	18	3R	1H	4W	soft but largely cohesive oxidized clay material with intervals of limestone
55.78	57.30	1.52	1.33	88	0.63	41	3R	1H	3W	this interval contains over half competent limestone, with somewhat cohesive oxidized clay material making up the rest of the rock. HCl reaction varies a bit but is generally pretty strong.
57.30	58.83	1.53	1.19	78	0.11	7	3R	1H	4W	The rock here is largely cohesive oxidized clay material with some sections of competent limestone within it. HCl reaction varies some: generally stronger on the limestone, but produces a moderate-strong reaction in the clay as well.
58.83	60.35	1.52	1.35	89	0.30	20	2R	1H	3W	This contains a large amount of the clay materiall still and is quite oxidized. The competent limestone sections are fragmented and short for the most part. Reactivity varies from strong to weak depending on the lithology: brown/red clay sections react much weaker.

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
60.35	61.87	1.52	1.4	92	0.70	46	3R	2H	2W	This rock is largely moderately hard limestone with soft, oxidzed clay infilling fractured surfaces. Joints infilled with clay and carbonate material.
61.87	63.40	1.53	1.47	96	1.05	69	3R	3H	1W	Most of this rock is moderately hard with soft clay in fractured surfaces.
63.40	64.92	1.52	1.38	91	0.88	58	3R	3H	1W	reactivity is fairly consistently strong. Joints and fractures are filled with clay and oxidation.
64.92	66.45	1.53	1.4	92	1.10	72	3R	3H	1W	most joints are infilled with clay, one set contains carbonate with particularly euhedral crystals
66.45	67.97	1.52	1.35	89	1.02	67	3R	2H	1W	
67.97	69.49	1.52	1.36	89	1.11	73	3R	3H	1W	
69.49	71.02	1.53	1.45	95	1.28	84	3R	3H	1W	
71.02	72.54	1.52	1.5	99	1.42	93	2R	3H	1W	
72.54	74.07	1.53	1.47	96	1.33	87	2R	3H	1W	reactivity is variable in interbedded limestone/mudstone lithologies of this interval.
74.07	75.59	1.52	1.48	97	1.32	87	2R	3H	1W	
75.59	77.11	1.52	1.09	72	0.52	34	3R	3H	1W	reactivity variable from mudstone to limestone layer. Oxidation weathering abundant in fractures and joints
77.11	78.64	1.53	1.52	99	1.39	91	2R	3H	1W	a small amount of carbonate in joint surfaces.
78.64	80.16	1.52	1.43	94	1.32	87	3R	3H	1W	reactivity variable from weak to strong in visible lithology change. Dark, soft graphitic clay infill in joints
80.16	81.69	1.53	1.39	91	0.98	64	2R	2H	1W	Variability in hardess, with zones of moderately hard rock and zones of softer, more fractured rock. Variability in reactivity from moderate to strong.
81.69	83.21	1.52	1.43	94	0.90	59	2R	2H	1W	generally strong, hard material, with short sections of soft, crumbling material. Reactivity varies (little to no reaction in some mudstone layers), but is mostly strong.
83.21	84.73	1.52	1.46	96	1.07	70	2R	3H	1W	variably moderate to strong HCl reaction (moderate in darker layers).
84.73	86.26	1.53	1.49	97	1.24	81	2R	3H	1W	joint infill material is dark, soft clay

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
86.26	87.78	1.52	1.48	97	1.32	87	2R	3H	1W	
87.78	89.30	1.52	1.5	99	1.17	77	3R	3H	1W	
89.30	90.83	1.53	1.43	93	1.16	76	2R	3H	1W	
90.83	92.35	1.52	1.33	88	1.20	79	2R	3H	1W	
92.35	93.89	1.54	1.42	92	1.28	83	2R	3H	1W	
93.89	95.40	1.51	1.46	97	1.22	81	2R	3H	1W	some fractured surfaces have very soft, dark graphitic clay material
95.40	96.93	1.53	1.49	97	1.00	65	2R	3H	1W	
96.93	98.45	1.52	1.52	100	1.22	80	2R	3H	1W	Increase in chaotoic calcite veining and local graphitic clay
98.45	99.97	1.52	1.49	98	1.12	74	2R	3H	1W	
99.97	101.50	1.53	1.48	97	1.34	88	2R	3H	1W	
101.50	103.02	1.52	1.5	99	1.17	77	2R	3H	1W	Increase in choatic calcite veining (<1-2mm) within a fine-grained dark grey calcaerous mudstone.
103.02	104.55	1.53	1.53	100	1.42	93	2R	3H	1W	Increase in carbonate content and fossil fragments.
104.55	106.07	1.52	1.42	93	1.37	90	3R	3H	1W	
106.07	107.59	1.52	1.52	100	1.42	93	3R	2H	1W	Oxidized and clay altered zone ~8cm wide at 106.22
107.59	109.12	1.53	1.48	97	0.76	50	3R	3H	1W	weak to moderate oxidation on joint and fracture surfaces
109.12	110.64	1.52	1.35	89	1.13	74	3R	3H	1W	Oxidized and fractured section at the start of the run.
110.64	112.16	1.52	1.52	100	0.89	59	3R	3H	1W	
112.16	113.69	1.53	1.44	94	0.51	33	2R	3H	1W	Dominantly fine-grained, thinly laminated calcaerous mudstone.
113.69	115.21	1.52	1.42	93	0.45	30	2R	2H	1W	
115.21	116.74	1.53	1.36	89	0.75	49	3R	3H	1W	
116.74	118.26	1.52	1.38	91	0.88	58	3R	3H	1W	
118.26	119.79	1.53	1.52	99	0.37	24	3R	2H	1W	Oxidised, clay-altered (7-10 cm wide) zones are responsible for the weak nature of this run.
119.79	121.31	1.52	1.52	100	1.47	97	3R	3H	1W	2 oxidized joint sets observed
121.31	122.83	1.52	1.48	97	1.48	97	3R	3H	1W	Competent run.

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
122.83	124.36	1.53	1.5	98	0.82	54	3R	2H	1W	Increase in oxidation of dark grey, fine-grained, calcareous mudstone beds and entering a highly oxidized zone at the end of the run.
124.36	125.88	1.52	1.47	97	0.81	53	2R	2H	1W	33 cm wide, highly oxidized, clay altered zone observed
125.88	128.93	3.05	2.97	97	2.12	70	2R	2H	1W	Upper 50cm of the run contains a clay-rich oxidized zone. Change from geoteching 5 to 10 ft runs, even though the drill is using 5 ft tool.
128.93	131.98	3.05	3.01	99	2.22	73	2R	3H	1W	
131.98	135.03	3.05	2.96	97	2.57	84	2R	3H	1W	Competant 10ft run.
135.03	138.07	3.04	3.04	100	2.26	74	2R	3H	1W	
138.07	141.12	3.05	2.76	90	0.19	6	2R	2H	1W	
141.12	144.17	3.05	2.86	94	1.35	44	2R	2H	1W	
144.17	147.22	3.05	2.64	87	0.59	19	2R	2H	1W	
147.22	150.27	3.05	2.81	92	0.72	24	2R	2H	1W	
150.27	153.31	3.04	2.67	88	1.09	36	2R	2H	1W	
153.31	156.36	3.05	3.02	99	1.32	43	3R	2H	1W	Highly altered, heamatitic clay along fracture surface !25 degrees TCA.
156.36	159.41	3.05	2.99	98	2.93	96	3R	3H	1W	
159.41	162.46	3.05	2.87	94	1.42	47	3R	3H	1W	Haematitic clay rich seams present at low angles TCA
162.46	165.51	3.05	2.95	97	2.59	85	2R	3H	1W	
165.51	168.55	3.04	3.04	100	1.75	58	3R	2H	1W	
168.55	171.60	3.05	2.46	81	1.37	45	3R	3H	1W	
171.60	173.61	2.01	1.38	69	0.73	36	3R	3H	1W	

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From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
0.00	0.00	0.00	-QC-	0.00	0	V766030	☐	O18-003	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V766048	☐	O18-004	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V766065	☐	O18-004	Core	OX6	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V766078	☐	O18-004	Core	SR5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V766008	☐	O18-003	Core	OX6	☐	☐	☐
2.44	5.49	3.05	LST	2.15	70	V766001	☐	O18-003	Core		☐	☐	☐
5.49	8.53	3.04	LST	3.04	100	V766002	☐	O18-003	Core		☐	☐	☐
8.53	10.32	1.79	LST	1.54	86	V766003	☐	O18-003	Core		☐	☐	☐
10.32	12.70	2.38	LST	2.35	99	V766004	☐	O18-003	Core		☐	☐	☐
12.70	14.63	1.93	LST	0.69	36	V766005	☐	O18-003	Core		☐	☐	☐
14.63	17.68	3.05	LST	2.81	92	V766006	☐	O18-003	Core		☐	☐	☐
17.68	20.73	3.05	LST	2.71	89	V766007	☐	O18-003	Core		☐	☐	☐
20.73	23.77	3.04	LST	3.04	100	V766009	☐	O18-003	Core		☐	☐	☐
23.77	25.30	1.53	LST	1.44	94	V766010	☐	O18-003	Core		☐	☐	☐
25.30	27.15	1.85	LST	1.82	98	V766011	☐	O18-003	Core		☐	☐	☐
27.15	29.87	2.72	LST	2.33	86	V766012	☐	O18-003	Core		☐	☐	☐
29.87	32.92	3.05	LST	2.57	84	V766013	☐	O18-003	Core		☐	☐	☐
32.92	35.97	3.05	LST	2.59	85	V766014	☐	O18-003	Core		☐	☐	☐
35.97	39.01	3.04	LST	2.89	95	V766015	☐	O18-003	Core		☐	☐	☐
39.01	40.54	1.53	LST	1.53	100	V766016	☐	O18-003	Core		☐	☐	☐
40.54	42.06	1.52	LST	1.17	77	V766017	☐	O18-003	Core		☐	☐	☐
42.06	43.59	1.53	LST	1.10	72	V766018	☐	O18-003	Core		☐	☐	☐
43.59	45.11	1.52	LST	1.34	88	V766019	☐	O18-003	Core		☐	☐	☐
45.11	46.63	1.52	LST	1.16	76	V766020	☐	O18-003	Core		☐	☐	☐
46.63	48.16	1.53	LST	0.58	38	V766021	☐	O18-003	Core		☐	☐	☐
48.16	49.68	1.52	LST	0.85	56	V766022	☐	O18-003	Core		☐	☐	☐
49.68	51.20	1.52	LST	0.66	43	V766023	☐	O18-003	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
51.20	52.73	1.53	LST	1.36	89	V766024	☐	O18-003	Core		☐	☐	☐
52.73	54.25	1.52	LST	1.49	98	V766025	☐	O18-003	Core		☐	☐	☐
54.25	55.78	1.53	LST	1.44	94	V766026	☐	O18-003	Core		☐	☐	☐
55.78	57.30	1.52	LST	1.33	88	V766027	☐	O18-003	Core		☐	☐	☐
57.30	58.83	1.53	LST	1.19	78	V766028	☐	O18-003	Core		☐	☐	☐
58.83	60.35	1.52	LST	1.35	89	V766029	☐	O18-003	Core		☐	☐	☐
60.35	63.40	3.05	LST	2.87	94	V766031	☐	O18-003	Core		☐	☐	☐
63.40	66.45	3.05	LST	2.78	91	V766032	☐	O18-003	Core		☐	☐	☐
66.45	69.49	3.04	LST	2.71	89	V766033	☐	O18-003	Core		☐	☐	☐
69.49	72.54	3.05	LST	2.95	97	V766034	☐	O18-003	Core		☐	☐	☐
69.49	72.54	3.05	LST	2.95	97	V766035	☐	O18-003	Core		☐	☑	☐
72.54	75.59	3.05	LST	2.95	97	V766036	☐	O18-003	Core		☐	☐	☐
75.59	78.64	3.05	LST	2.61	86	V766037	☐	O18-003	Core		☐	☐	☐
78.64	81.69	3.05	LST	2.82	92	V766038	☐	O18-003	Core		☐	☐	☐
81.69	84.73	3.04	LST	2.89	95	V766039	☐	O18-003	Core		☐	☐	☐
84.73	87.78	3.05	LST	2.97	97	V766040	☐	O18-003	Core		☐	☐	☐
87.78	90.83	3.05	LST	2.93	96	V766041	☐	O18-004	Core		☐	☐	☐
90.83	93.89	3.06	LST	2.75	90	V766042	☐	O18-004	Core		☐	☐	☐
93.89	96.93	3.04	LST	2.95	97	V766043	☐	O18-004	Core		☐	☐	☐
96.93	99.97	3.04	LST	3.01	99	V766044	☐	O18-004	Core		☐	☐	☐
99.97	103.02	3.05	LST	2.98	98	V766045	☐	O18-004	Core		☐	☐	☐
103.02	106.07	3.05	LST	2.95	97	V766046	☐	O18-004	Core		☐	☐	☐
106.07	109.12	3.05	LST	3.00	98	V766047	☐	O18-004	Core		☐	☐	☐
109.12	112.16	3.04	LST	2.87	94	V766049	☐	O18-004	Core		☐	☐	☐
112.16	115.21	3.05	LST	2.86	94	V766050	☐	O18-004	Core		☐	☐	☐
115.21	118.26	3.05	LST	2.74	90	V766051	☐	O18-004	Core		☐	☐	☐
118.26	121.31	3.05	LST	3.04	100	V766052	☐	O18-004	Core		☐	☐	☐
121.31	124.36	3.05	LST	2.98	98	V766053	☐	O18-004	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
124.36	127.41	3.05	LST	2.95	97	V766054	☐	O18-004	Core		☐	☐	☐
127.41	130.45	3.04	LST	2.98	98	V766055	☐	O18-004	Core		☐	☐	☐
130.45	133.50	3.05	LST	3.03	99	V766056	☐	O18-004	Core		☐	☐	☐
133.50	136.55	3.05	LST	2.95	97	V766057	☐	O18-004	Core		☐	☐	☐
136.55	138.07	1.52	LST	1.52	100	V766058	☐	O18-004	Core		☐	☐	☐
138.07	139.60	1.53	LST	1.43	93	V766059	☐	O18-004	Core		☐	☐	☐
139.60	141.12	1.52	LST	1.36	89	V766060	☐	O18-004	Core		☐	☐	☐
141.12	142.64	1.52	LST	1.37	90	V766061	☐	O18-004	Core		☐	☐	☐
142.64	144.17	1.53	LST	1.44	94	V766062	☐	O18-004	Core		☐	☐	☐
144.17	145.69	1.52	LST	1.04	68	V766063	☐	O18-004	Core		☐	☐	☐
145.69	147.22	1.53	LST	1.50	98	V766064	☐	O18-004	Core		☐	☐	☐
147.22	148.74	1.52	LST	1.38	91	V766066	☐	O18-004	Core		☐	☐	☐
148.74	150.27	1.53	LST	1.35	88	V766067	☐	O18-004	Core		☐	☐	☐
150.27	151.79	1.52	LST	1.22	80	V766068	☐	O18-004	Core		☐	☐	☐
151.79	153.31	1.52	LST	1.24	82	V766069	☐	O18-004	Core		☐	☐	☐
153.31	154.84	1.53	LST	1.45	95	V766070	☐	O18-004	Core		☐	☐	☐
154.84	156.36	1.52	LST	1.50	99	V766071	☐	O18-004	Core		☐	☐	☐
156.36	157.89	1.53	LST	1.51	99	V766072	☐	O18-004	Core		☐	☐	☐
156.36	157.89	1.53	LST	1.51	99	V766073	☐	O18-004	Core		☐	☑	☐
157.89	159.41	1.52	LST	1.50	99	V766074	☐	O18-004	Core		☐	☐	☐
159.41	160.93	1.52	LST	1.51	99	V766075	☐	O18-004	Core		☐	☐	☐
160.93	162.46	1.53	LST	1.48	97	V766076	☐	O18-004	Core		☐	☐	☐
162.46	163.98	1.52	LST	1.50	99	V766077	☐	O18-004	Core		☐	☐	☐
163.98	165.51	1.53	LST	1.52	99	V766079	☐	O18-004	Core		☐	☐	☐
163.98	165.51	1.53	LST	1.52	99	V766080	☐	O18-004	Core		☐	☑	☐
165.51	167.03	1.52	LST	1.52	100	V766081	☐	O18-007	core		☐	☐	☐
167.03	168.55	1.52	LST	1.52	100	V766082	☐	O18-007	core		☐	☐	☐
168.55	170.08	1.53	LST	1.50	98	V766083	☐	O18-007	core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
170.08	171.60	1.52	LST	1.52	100	V766084	☐	O18-007	core		☐	☐	☐
171.60	173.61	2.01	LST	1.52	76	V766085	☐	O18-007	core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
0.00	4.80	4.80	OVB	--	Overburden no recovery							
4.80	62.48	57.68	CMS	FG	Interbedded gray tan limestone and black mudstone becoming all tan gray limestone with minor sandstone and siltstone beds. Locally bioturbated with fossil fragments of crinoids, brachiopods and rugose corals. Silty composition to the limestone 15-25% Ca variable Ti, Al, and Si. Possible turbidite sequence with scoured beds.							
						--	BK					
						--	TN					
						--	GY		OXI	W		
62.48	80.77	18.29	LST	CG	Light to dark grey bioclastic/lithic debris flow with clasts of turbidites (dark grey beds are fine grained and light grey beds are coarse grained). Debris flow contains bioclasts (crinoids, coral fragments, brachiopods) and lithic clasts up to 25 cm. Strong to moderate clay alteration with moderate oxidation along fractures.							
						MD	BN					
						DK	GY	RD				
						LT	GY	DB	OXI	M		
80.77	272.76	191.99	LST	FG	Interbedded, thinly laminated dark grey, fine-grained calcareous mudstone and light grey, coaser-grained limestone turbudite sequence. Locally observed bioclast-rich debris flows present throughout displaying scouring, load casts and soft sediment deformation features. Crinoids, amphrapora and rugose corals observed within bioclastic debris flows. Choatic calcite veining observed throughout; however, preferentially within limestone beds. Brecciated fault zone observed between 83.68 - 84.10m.							
272.76	310.50	37.74	MST	FG	Fault contact between the Silurian and Mississipian units. Sequence of dark black, fine-grained mudstone with weak to moderate carbon content (MD10?)							
						DK	BK					

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
310.50	461.33	150.83	MST	FG	Dark black, competant, fine-grained (carbonaceous?) mudstone with rare-weak bedding and locally observed shearing. Increase in high Ti, low Mo (pXRF)							
						DK	BK					
461.33	519.68	58.35	MST	FG	Interlayered dark grey/black, fine-grained, non-calareous mudstone and light-medium grey, medium-grained bioclastic debris flows.							
								DB				
								BD				
519.68	672.23	152.55	LST	MG	light grey, medium-grained limestone (D40?) with locally observed light pink medium-grained limestone (dolostone?) exhibiting a intense network of calcite-infill crackle texture.							
						LT	GY	CR				

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
0.00	4.80	4.80	0	0	0.00	0	--	--	--	No recovery 0-4.80m.
4.80	7.62	2.82	1.29	46	0.00	0	4R	3H	2W	Top of hole. RBZ
7.62	10.67	3.05	1.42	47	0.00	0	3R	2H	4W	RBZ
10.67	13.72	3.05	2.1	69	0.00	0	2R	1H	4W	RBZ
13.72	16.76	3.04	2.02	66	0.66	22	2R	1H	4W	RBZ
16.76	19.81	3.05	1.82	60	0.40	13	3R	1H	4W	RBZ
19.81	22.86	3.05	2.04	67	0.79	26	4R	3H	3W	
22.86	25.91	3.05	1.64	54	0.46	15	3R	3H	3W	
25.91	28.95	3.04	2.96	97	1.95	64	2R	3H	2W	
28.95	32.00	3.05	2.62	86	1.64	54	4R	3H	2W	Perpendicular joining
32.00	35.05	3.05	2.81	92	2.49	82	4R	3H	2W	Oxidized joints, competant core
35.05	38.10	3.05	2.94	96	2.32	76	4R	3H	3W	Some joints contain a small amount of clay
38.10	41.15	3.05	3	98	2.58	85	4R	3H	2W	Perpendicular joints are present. Very thin calcite veins are present at the same attitude throughout
41.15	44.20	3.05	2.97	97	2.73	90	4R	3H	1W	Oxidized weathering around joints
44.20	47.24	3.04	2.94	97	2.66	88	4R	3H	3W	
47.24	50.29	3.05	3	98	2.06	68	4R	3H	3W	Oxidized on fracture surfaces as well as limonite and clay
50.29	53.34	3.05	2.85	93	1.50	49	3R	3H	2W	Relatively competant, oxide weathering on fracture surfaces
53.34	56.39	3.05	3.02	99	1.38	45	2R	3H	2W	Relatively competent, contains fractures with oxidized joint sets
56.39	59.44	3.05	2.34	77	1.03	34	2R	3H	2W	Reaction strong along calcite veins
59.44	62.48	3.04	2.01	66	1.38	45	2R	1H	3W	Relatively competent regular fracture frequency with a clay zone from 61.50 to 62.48
62.48	65.53	3.05	1.67	55	0.52	17	2R	2H	3W	Clay-rich rubble zone from 62.48 to 64.60
65.53	68.58	3.05	1.47	48	0.52	17	3R	2H	3W	Bioclast-rich limestone until 67, at which point clay-rich gouge along fractures from 67 to 68.58
68.58	71.63	3.05	1.87	61	0.55	18	3R	2H	3W	Recovery loss in clay-rich joint sets

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
71.63	74.68	3.05	2.33	76	1.33	44	3R	3H	4W	Heavily fratcured interval with rock fragments, clay and pervasive oxidation along fracture surfaces. RBZ
74.68	77.72	3.04	2.42	80	1.46	48	3R	2H	3W	Abundant clay filled fractures.
77.72	80.77	3.05	2.47	81	1.56	51	3R	2H	3W	Abundant clay fill along fractures. Small RBZ in this unit. Strong reactivity in weathered soil.
80.77	83.82	3.05	2.81	92	2.45	80	3R	1H	1W	Competent unit with local soft mud and intense reactivity.
83.82	86.87	3.05	2.99	98	2.81	92	3R	3H	1W	Competent, graphite/clay on fractured surface.
86.87	89.92	3.05	2.92	96	2.81	92	3R	3H	1W	Competent, graphite/clay on fractured surfaces.
89.92	92.96	3.04	2.86	94	2.49	82	3R	3H	1W	Competent, graphite/clay on fractured surfaces.
92.96	96.01	3.05	2.82	92	2.75	90	3R	3H	1W	Competent, graphite/clay on fractured surfaces.
96.01	99.06	3.05	2.98	98	2.84	93	3R	3H	1W	Graphitic along fractured surfaces.
99.06	102.11	3.05	2.99	98	2.34	77	3R	3H	2W	Graphitic along fractured surfaces.
102.11	105.16	3.05	2.97	97	2.85	93	3R	3H	1W	1-2H along graphitic fracture surfaces.
105.16	108.20	3.04	3.02	99	2.64	87	3R	3H	1W	Small amount of oxidation/clay/graphitie along fracture surfaces.
108.20	111.25	3.05	3.04	100	2.81	92	3R	3H	1W	Competent unit with grapite along fracture surfaces.
111.25	114.30	3.05	2.98	98	2.48	81	3R	3H	1W	Relatively competant. Unit breaks along bedding. Locally graphitic along bedding/fracture surfaces.
114.30	117.35	3.05	3.05	100	2.93	96	3R	3H	1W	Competant unit with minor fractures +/- Ox
117.35	120.40	3.05	2.98	98	2.42	79	3R	3H	1W	Moderate reactivity in mudstone. Infill along fractures is graphitic.
120.40	123.44	3.04	2.95	97	2.52	83	2R	3H	1W	Primarily mudstone, stronger reactivity along mudstones.
123.44	126.49	3.05	3.02	99	2.91	95	2R	3H	2W	Joint infill also contains calcite and brown clay with minor rock fragments.
126.49	129.54	3.05	2.98	98	2.29	75	3R	3H	2W	Joints with calcite infill also contain dark brown mud.

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
129.54	132.59	3.05	2.95	97	2.74	90	3R	3H	2W	Stronger reactivity along limestone bedding. Clay infill along joints is dark-brown/black mud.
132.59	135.64	3.05	3.02	99	2.76	90	3R	3H	2W	Joint infill with oxidation also contains minor mudstone.
135.64	138.68	3.04	2.99	98	2.70	89	2R	3H	1W	Primarily silty mudstone, reactivity is stronger along debris flows and limestone bedding.
138.68	141.73	3.05	2.98	98	2.92	96	2R	3H	1W	Joint infill also contains minor calcite and pyrite.
141.73	144.78	3.05	3.03	99	3.00	98	2R	3H	1W	1 joint set from 143-144.5m with average spacing of 0.5m.
144.78	147.83	3.05	2.85	93	1.98	65	2R	2H	1W	Joint infill is a light brown mud containing hematite. Mud also contains minor rock fragments - matrix supported.
147.83	150.88	3.05	2.86	94	1.84	60	2R	2H	2W	Section of bedding parallel graphitic-clay joints between 148.43 - 148.82m. Smooth planar joints spacing ~6cm apart. Steep angle (~65 TCA) graphitic clay and calcite-filled joints.
150.88	153.92	3.04	2.75	90	2.07	68	2R	3H	2W	Sequence of bedding parallel graphitic claiy-rich joints throughout the run. Two bedding parallel graphitic clay-rich with different attitudes (TCA) and spacing.
153.92	156.97	3.05	2.75	90	1.75	57	2R	3H	1W	Two joint types. 40 TCA joints with calcit-infill and 40 TCA planar/very smooth joints.
156.97	160.02	3.05	2.98	98	2.12	70	2R	3H	2W	Dominantly bedding parallel breaks +/- calcite infill
160.02	163.07	3.05	2.88	94	1.66	54	3R	3H	1W	Dominantly bedding parallel fractures
163.07	166.12	3.05	3.05	100	1.85	61	3R	4H	1W	
166.12	169.16	3.04	2.85	94	2.48	82	3R	4H	1W	Local broken sections, likely due to breaks along calcite veins.
169.16	172.21	3.05	2.96	97	2.25	74	2R	3H	1W	Bedding parallel breaks and minor jointing with either graphitic clay or calcite infill
172.21	175.26	3.05	2.98	98	2.05	67	2R	4H	1W	Bedding parallel breaks and minor jointing with either graphitic clay or calcite infill
175.26	178.31	3.05	2.9	95	2.08	68	2R	4H	1W	Bedding parallel breaks and minor jointing with either graphitic clay or calcite infill

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
178.31	181.36	3.05	2.99	98	2.11	69	2R	4H	1W	Bedding parallel breaks and minor jointing with either graphitic clay or calcite infill
181.36	184.40	3.04	2.98	98	2.60	86	3R	4H	1W	Bedding parallel breaks and minor jointing with either graphitic clay or calcite infill
184.40	187.45	3.05	2.93	96	2.35	77	2R	4H	1W	Bedding parallel breaks and minor jointing with either graphitic clay or calcite infill
187.45	190.50	3.05	2.84	93	1.24	41	3R	3H	2W	Bedding parallel breaks and minor jointing with either graphitic clay or calcite infill
190.50	193.55	3.05	2.4	79	0.35	11	3R	3H	2W	Zone of low RQD. Regular breaks concordant with bedding and bedding-parallel stylolites
193.55	196.59	3.04	2.37	78	0.69	23	3R	3H	3W	Zone of low RQD and an increase in oxidation.
196.59	199.64	3.05	2.25	74	0.53	17	3R	3H	3W	Zone of low RQD , an increase in oxidation seen in section
199.64	202.69	3.05	2.92	96	0.96	31	3R	2H	4W	Zone of low RQD highly weathered rubbly material present
202.69	205.74	3.05	2.1	69	0.90	30	3R	3H	3W	Transition into calcareous mudstone, low RQD with some competent segments after 204 m
205.74	208.79	3.05	2.52	83	0.92	30	3R	3H	2W	Oxidation and clay weathering abundant on fracture surfaces, and very minor calcite
208.79	211.84	3.05	2.87	94	1.93	63	3R	3H	2W	clay material infilling joints. A small amount of weakly oxidized surface present
211.84	214.88	3.04	2.55	84	1.44	47	3R	3H	2W	clay infilling fracture surfaces. One joint set appears to be the majority of the fracturing in the area.
214.88	217.93	3.05	2.72	89	1.56	51	3R	3H	2W	some softer, muddy layers (0.03m thick) within more competent calcareous rock. Some clay and carbonate, as well as minor oxidation in fractured/jointed surfaces
217.93	220.98	3.05	2.65	87	1.50	49	3R	3H	2W	less muddy, soft layers present, and increased oxidation on fractures
220.98	224.03	3.05	2.28	75	0.80	26	3R	3H	2W	this interval is lightly oxidized on most fractured surfaces. Some joints also contain minor calcite and clay
224.03	227.08	3.05	2.86	94	2.40	79	3R	3H	2W	interval has few fractures and clay in the jointed/fractured surface

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
227.08	230.12	3.04	2.32	76	1.42	47	3R	3H	2W	Interval is competent but heavily fractured calcareous rock. It is strongly oxidized on a few surfaces, but is generally weakly weathered.
230.12	233.17	3.05	2.9	95	1.92	63	3R	3H	2W	RBZ with oxidation, but generally slightly weathered. 1.5cm calcite vein in the first RBZ.
233.17	236.22	3.05	2.89	95	1.65	54	3R	3H	3W	Strong oxidation on fractures. 2cm calcite vein. RBZ.
236.22	239.27	3.05	2.94	96	1.69	55	3R	2H	3W	Transition to soft and dark colored rock. Highly fractured. RBZ. Microfractured zone.
239.27	242.32	3.05	2.14	70	0.41	13	3R	2H	4W	RBZ with soft zone and highly oxidized zone. Transition from soft dark rock type to relatively hard lighy grey rock type.
242.32	245.36	3.04	2.79	92	1.58	52	3R	2H	3W	RBZ with oxidized zone. 25cm thick dark colored mudstone including RBZ.
245.36	248.41	3.05	2.75	90	0.43	14	3R	2H	2W	80% is RBZ.
248.41	251.46	3.05	1.82	60	0.53	17	3R	2H	2W	RBZ
251.46	254.51	3.05	1.71	56	0.13	4	3R	2H	2W	RBZ
254.51	257.56	3.05	1.67	55	0.60	20	3R	2H	2W	oxidation along joints
257.56	260.60	3.04	2.27	75	1.49	49	2R	1H	4W	Highliy oxidized zone
260.60	263.65	3.05	2.1	69	1.40	46	4R	2H	3W	High oxidation along the joints in limestone
263.65	266.70	3.05	2.68	88	2.00	66	3R	2H	3W	oxidation along the joints in limestone
266.70	269.75	3.05	2.51	82	2.16	71	3R	3H	2W	
269.75	272.80	3.05	2.31	76	1.84	60	3R	2H	3W	oxidation along the joints
272.80	275.84	3.04	1.64	54	0.75	25	0R	1H	5W	weak decalcification zone
275.84	278.89	3.05	1.9	62	0.65	21	0R	1H	5W	Fault zone
278.89	281.94	3.05	0	0	0.00	0	0R	--	--	10ft of no recovery
281.94	284.99	3.05	0.86	28	0.00	0	0R	1H	5W	Fault zone
284.99	288.04	3.05	0.89	29	0.00	0	0R	1H	5W	Fault zone
288.04	291.08	3.04	2.48	82	0.88	29	0R	1H	5W	Fault zone
291.08	294.13	3.05	2.8	92	0.34	11	0R	1H	5W	Fault zone
294.13	297.18	3.05	3.02	99	0.41	13	0R	1H	5W	Fault zone
297.18	300.23	3.05	2.62	86	0.46	15	0R	1H	5W	Fault zone

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
300.23	303.28	3.05	3.03	99	1.17	38	0R	1H	5W	Fault zone
303.28	306.32	3.04	2.22	73	0.25	8	0R	1H	5W	Fault zone
306.32	309.37	3.05	2.65	87	0.83	27	0R	1H	5W	Fault zone
309.37	312.42	3.05	3.04	100	1.70	56	0R	1H	5W	Fault zone
312.42	315.47	3.05	3.04	100	2.07	68	0R	3H	2W	Fault zone
315.47	318.52	3.05	3.02	99	2.58	85	0R	3H	2W	Fault zone
318.52	321.56	3.04	3.03	100	1.53	50	0R	3H	2W	Fault zone
321.56	324.61	3.05	3	98	1.70	56	0R	3H	2W	Lower, more competant portion of the fault zone.
324.61	327.66	3.05	3.01	99	1.93	63	0R	3H	2W	
327.66	330.71	3.05	2.99	98	1.35	44	0R	2H	3W	
330.71	333.76	3.05	2.93	96	0.54	18	0R	3H	2W	Regular breraks along fracture surfaces.
333.76	336.80	3.04	2.6	86	0.64	21	0R	2H	3W	One soft, carbon-rich clay joint observed at the lower portion of the run.
336.80	339.85	3.05	3.04	100	1.13	37	0R	3H	2W	Weak planes along bedding.
339.85	342.90	3.05	2.89	95	0.45	15	0R	2H	2W	
342.90	345.95	3.05	2.95	97	0.56	18	0R	2H	2W	Rubbly zone with an increase in weathering/fracturing.
345.95	348.99	3.04	3.02	99	1.79	59	0R	3H	2W	
348.99	352.04	3.05	2.85	93	1.30	43	0R	3H	2W	Joints commonly parallel to bedding. Some small, heavily fractured sections of rock include more clay weathering, but overall the rock is only slightly weathered. Veinlets react moderate-strong with HCl, but the host rock does not react
352.04	355.09	3.05	1.11	36	0.10	3	0R	2H	2W	highly fractured run with clay weathering
355.09	358.14	3.05	0.18	6	0.00	0	0R	2H	2W	Rubbly rock with poor recovery and clay weathering
358.14	361.19	3.05	1.92	63	0.00	0	0R	2H	2W	Rubbly run with rock and clay weathering.
361.19	364.24	3.05	1.8	59	0.00	0	0R	2H	2W	Rubbly run with rock and clay weathering. Some sheared textures in joints.
364.24	367.28	3.04	2.38	78	0.88	29	0R	3H	2W	Clay weathering present on fractured surfaces, very few veinlets present.
367.28	370.33	3.05	1.02	33	0.22	7	0R	2H	2W	Mostly highly fractured rock with clay weathering.

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
370.33	373.38	3.05	0.88	29	0.00	0	0R	2H	3W	Rubbly run with locally highly clay altered rock, but generally moderate weathering
373.38	376.43	3.05	1.66	54	0.00	0	0R	2H	3W	Rubble with clay (and some graphitic) weathering
376.43	379.48	3.05	2.02	66	0.45	15	0R	2H	2W	Highly fractured run with graphitic and clay weathering. Breaks are planar and smooth generally
379.48	382.52	3.04	1.12	37	0.00	0	0R	2H	2W	Weathering increases in the second half of this run; the second half has more clays and is more soft and rubbly.
382.52	385.57	3.05	1.4	46	0.23	8	0R	3H	2W	Highly fractured rock with some more competent sections in the middle
385.57	388.62	3.05	1.52	50	0.54	18	0R	2H	3W	Sections of highly weathered clay and rock material occur within fractures of competent rock. Some graphitic weathering on fractured surfaces
388.62	391.67	3.05	1.85	61	0.45	15	0R	2H	3W	Abundant sections of highly weathered material with clay and rock fragments in fractured areas.
391.67	394.72	3.05	2.33	76	1.19	39	0R	1H	4W	Large middle section of highly weathered rock/clay. Slight clay weathering of fractured areas above and below.
394.72	397.76	3.04	2.32	76	0.23	8	0R	3H	3W	Highly fractured, moderately clay weathered run.
397.76	400.81	3.05	2.99	98	2.17	71	0R	1H	4W	Largely competent with a moderately brecciated and clay-rich weathered zone from 400.20-400.40m.
400.81	403.86	3.05	2.74	90	0.93	30	0R	3H	2W	
403.86	406.91	3.05	2.72	89	0.84	28	0R	2H	3W	Highly fractured, weak, clay-rich zone 404.27-404.82m.
406.91	409.96	3.05	2.35	77	1.48	49	0R	1H	4W	Mostly competant, fine-grained weakly laminated, weakly Carbon-rich mudstone. One main clay rich-zone 408.93-409.09m
409.96	413.00	3.04	2.52	83	1.05	35	0R	2H	4W	intermittent zones (5-15cm) of clay altered, soft and carbon-rich mudstone. Locally observed fine-grained, euhdral pyrite within clay zones.
413.00	416.05	3.05	2.51	82	1.07	35	0R	3H	2W	Graphitic weathering on fracture surfaces.
416.05	419.10	3.05	2.93	96	2.26	74	0R	3H	2W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
419.10	422.15	3.05	2.97	97	2.83	93	0R	3H	2W	Competent run with few joints contaiing <1mm carbonaeous clay.
422.15	425.20	3.05	2.8	92	2.08	68	0R	3H	2W	unit contains lenses of light grey, fine-grained mudstone lenses containing lense-restricted <1mm choatic veinlets.
425.20	428.24	3.04	2.51	83	1.64	54	0R	3H	2W	
428.24	431.29	3.05	3.04	100	2.09	69	0R	2H	3W	Run contains a 6cm wide soft zone of carbonaceous clay (~50 degrees TCA), in addition to three, 1-3cm wide quartz (50 degrees TCA) veins.
431.29	434.34	3.05	3.02	99	2.48	81	0R	3H	2W	From 434.29-434.32m a 3cm wide quartz-calcite vein/vein breccia.
434.34	437.39	3.05	2.69	88	1.28	42	0R	2H	3W	Run contains two rubble zones associated with carbonaeous clay and quartz-calcite veining.
437.39	440.44	3.05	2.93	96	2.27	74	0R	3H	2W	
440.44	443.48	3.04	2.92	96	2.18	72	0R	3H	2W	
443.48	446.53	3.05	2.76	90	1.64	54	0R	3H	2W	
446.53	449.58	3.05	2.84	93	1.49	49	0R	3H	2W	
449.58	452.63	3.05	1.1	36	0.57	19	0R	1H	1W	
452.63	455.68	3.05	1.83	60	0.63	21	0R	1H	2W	
455.68	458.72	3.04	1.45	48	0.80	26	0R	1H	2W	
458.72	461.77	3.05	2	66	0.89	29	0R	1H	2W	
461.77	464.82	3.05	3.05	100	2.81	92	2R	2H	1W	
464.82	467.87	3.05	2.68	88	2.30	75	3R	3H	1W	
467.87	470.92	3.05	2.77	91	2.12	70	2R	2H	1W	
470.92	473.96	3.04	2.89	95	2.43	80	1R	2H	1W	
473.96	477.01	3.05	2.76	90	2.61	86	2R	2H	1W	
477.01	480.06	3.05	2.83	93	2.20	72	1R	2H	1W	
480.06	483.11	3.05	2.56	84	2.34	77	0R	3H	1W	
483.11	486.16	3.05	2.45	80	1.92	63	0R	3H	1W	
486.16	489.20	3.04	2.69	88	1.87	62	1R	2H	1W	
489.20	492.25	3.05	2.87	94	2.70	89	3R	3H	1W	
492.25	495.30	3.05	2.96	97	2.74	90	3R	4H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
495.30	498.35	3.05	3.03	99	2.69	88	3R	4H	1W	Competant debris flow.
498.35	501.40	3.05	2.7	89	0.69	23	1R	2H	2W	Interlayered soft, fine-grained, carbonaceous mudstone and light grey, medium-grained limestone debris flow.
501.40	504.44	3.04	2.38	78	0.54	18	2R	2H	3W	Rubble zone.
504.44	507.49	3.05	2.26	74	0.95	31	2R	2H	3W	Rubble zone.
507.49	510.54	3.05	1.61	53	0.15	5	1R	2H	4W	Rubble zone
510.54	513.59	3.05	1.66	54	1.19	39	3R	2H	4W	Competant calcareous, lithic-rich debris flow with clay-rich rubble zones.
513.59	516.64	3.05	0.56	18	0.00	0	3R	2H	4W	Rubble/clay-rich fault zone.
516.64	519.68	3.04	0.33	11	0.00	0	0R	2H	4W	Very poor recovery through the fault zone. No reaction with HCl compared to the previous run. Possible decalcification.
519.68	522.73	3.05	0.34	11	0.00	0	3R	2H	3W	Lower portion of the fault and competant, reactive (HCL) light grey medium-grained, limestone.
522.73	525.78	3.05	2.26	74	1.73	57	3R	3H	2W	
525.78	528.83	3.05	2.46	81	1.10	36	3R	2H	3W	Run containing a calcite-infill breccia.
528.83	531.88	3.05	1.38	45	0.78	26	3R	3H	3W	
531.88	534.92	3.04	3.04	100	2.19	72	3R	4H	1W	
534.92	537.97	3.05	2.79	91	1.11	36	3R	3H	1W	
537.97	541.02	3.05	2.42	79	1.29	42	4R	3H	1W	
541.02	544.07	3.05	2.97	97	1.81	59	3R	3H	1W	
544.07	547.12	3.05	3	98	2.21	72	3R	3H	2W	AsO present alnong jointing
547.12	550.16	3.04	2.95	97	2.31	76	3R	3H	2W	agenta/purple oxidized surfaces present
550.16	553.21	3.05	2.98	98	2.59	85	3R	4H	1W	
553.21	556.26	3.05	2.59	85	2.47	81	3R	3H	1W	
556.26	559.31	3.05	3.04	100	2.84	93	3R	4H	1W	
559.31	562.36	3.05	3.04	100	2.20	72	3R	2H	1W	
562.36	565.40	3.04	3	99	1.77	58	3R	3H	1W	
565.40	568.45	3.05	2.82	92	1.71	56	3R	3H	1W	
568.45	571.50	3.05	2.89	95	2.32	76	3R	3H	2W	weak-moderate oxidation (AsO) on fracture and joint
571.50	574.55	3.05	1.99	65	1.17	38	3R	3H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
574.55	577.60	3.05	1.77	58	1.28	42	3R	3H	1W	
577.60	580.64	3.04	3.04	100	1.54	51	3R	2H	2W	Clay, oxidized zone at the top of the run
580.64	583.69	3.05	3.02	99	1.82	60	3R	3H	1W	
583.69	586.74	3.05	3.03	99	1.74	57	3R	3H	1W	
586.74	589.79	3.05	2.8	92	2.10	69	3R	3H	1W	
589.79	592.84	3.05	2.98	98	2.25	74	3R	3H	1W	Increase in calcite veining and <1mm stylolites.
592.84	595.88	3.04	2.83	93	1.33	44	3R	3H	1W	
595.88	598.93	3.05	2.12	70	1.22	40	3R	3H	1W	
598.93	601.98	3.05	0.58	19	0.28	9	3R	3H	1W	
601.98	605.03	3.05	0.93	30	0.49	16	3R	3H	1W	Void in hole at the end of the run
605.03	608.08	3.05	1.94	64	1.45	48	3R	3H	1W	
608.08	611.12	3.04	1.28	42	0.81	27	3R	3H	1W	Generally competant with some broken sections. Void in hole block at the end of the run.
611.12	614.17	3.05	1.93	63	1.75	57	3R	3H	1W	Generally competant with broken sections.
614.17	617.22	3.05	2.95	97	2.50	82	3R	2H	1W	Fine rubbly section with minor Fe-Ox on fracture surfaces.
617.22	620.27	3.05	2.96	97	2.96	97	3R	3H	1W	
620.27	623.32	3.05	3.01	99	2.83	93	3R	3H	1W	
623.32	626.36	3.04	3.04	100	2.69	88	3R	3H	1W	
626.36	629.41	3.05	3.01	99	3.01	99	3R	3H	1W	
629.41	632.46	3.05	3.04	100	2.88	94	3R	3H	1W	
632.46	635.51	3.05	3.03	99	2.90	95	3R	3H	1W	
635.51	638.56	3.05	3.05	100	2.64	87	3R	3H	1W	
638.56	641.60	3.04	2.98	98	2.98	98	3R	3H	1W	
641.60	644.65	3.05	3.05	100	2.96	97	3R	3H	1W	Minor re-mobilized carbon on joint surfaces.
644.65	647.70	3.05	3.03	99	2.94	96	3R	3H	1W	Rough joint surface with slickenslides present.
647.70	650.75	3.05	3.04	100	2.97	97	3R	3H	1W	
650.75	653.80	3.05	2.85	93	2.07	68	3R	3H	1W	Increase in fracture surfaces and re-mobilized carbon along joint surfaces.

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
653.80	656.84	3.04	2.94	97	2.74	90	3R	3H	1W	Moderate (dissolution-related) crackle texture.
656.84	659.89	3.05	3.04	100	2.90	95	3R	3H	1W	
659.89	662.94	3.05	3.03	99	2.95	97	3R	3H	1W	
662.94	665.99	3.05	2.86	94	2.58	85	3R	3H	1W	
665.99	669.04	3.05	3.04	100	2.86	94	3R	3H	1W	Re-moilized carbon on joint surfaces (25 degrees TCA).
669.04	672.08	3.04	3.04	100	3.04	100	3R	3H	1W	
672.08	672.23	0.15	0.14	93	0.00	0	3R	3H	1W	

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From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
0.00	0.00	0.00	-QC-	0.00	0	V762811	☐	O18-011	Core	OX6	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V762604	☐	O18-001	Core	OX6	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V762839	☐	O18-011	Core	SR5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V762808	☐	O18-011	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V762798	☐	O18-008	core	OX7	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V762796	☐	O18-008	core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V762779	☐	O18-008	core	SR5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V762770	☐	O18-008	core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V762758	☐	O18-006	Core	SR5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V762733	☐	O18-006	Core	SR5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V762719	☐	O18-005	Core	SR5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V762703	☐	O18-005	Core	OX6	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V762692	☐	O18-005	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V762676	☐	O18-002	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V762850	☐	O18-013	Core	SR5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V762645	☐	O18-002	Core	OX6	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V762638	☐	O18-001	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V762742	☐	O18-006	Core		☑	☐	☐
4.80	7.62	2.82	OVB, CMS	1.29	46	V762601	☐	O18-001	Core		☐	☐	☐
7.62	10.67	3.05	CMS	1.42	47	V762602	☐	O18-001	Core		☐	☐	☐
10.67	13.72	3.05	CMS	2.10	69	V762603	☐	O18-001	Core		☐	☐	☐
13.72	16.76	3.04	CMS	2.02	66	V762605	☐	O18-001	Core		☐	☐	☐
16.76	19.81	3.05	CMS	1.82	60	V762606	☐	O18-001	Core		☐	☐	☐
19.81	22.86	3.05	CMS	2.04	67	V762607	☐	O18-001	Core		☐	☐	☐
22.86	25.91	3.05	CMS	1.64	54	V762608	☐	O18-001	Core		☐	☐	☐
25.91	28.95	3.04	CMS	2.96	97	V762609	☐	O18-001	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
28.95	32.00	3.05	CMS	2.62	86	V762610	☐	O18-001	Core		☐	☐	☐
32.00	35.05	3.05	CMS	2.81	92	V762611	☐	O18-001	Core		☐	☐	☐
32.00	35.05	3.05	CMS	2.81	92	V762612	☐	O18-001	Core		☐	☑	☐
35.05	38.10	3.05	CMS	2.94	96	V762613	☐	O18-001	Core		☐	☐	☐
38.10	41.15	3.05	CMS	3.00	98	V762614	☐	O18-001	Core		☐	☐	☐
41.15	44.20	3.05	CMS	2.97	97	V762615	☐	O18-001	Core		☐	☐	☐
44.20	47.24	3.04	CMS	2.94	97	V762616	☐	O18-001	Core		☐	☐	☐
47.24	50.29	3.05	CMS	3.00	98	V762617	☐	O18-001	Core		☐	☐	☐
50.29	53.34	3.05	CMS	2.85	93	V762618	☐	O18-001	Core		☐	☐	☐
53.34	56.39	3.05	CMS	3.02	99	V762619	☐	O18-001	Core		☐	☐	☐
56.39	59.44	3.05	CMS	2.34	77	V762620	☐	O18-001	Core		☐	☐	☐
59.44	62.48	3.04	CMS	2.01	66	V762621	☐	O18-001	Core		☐	☐	☐
62.48	65.53	3.05	LST, CMS	1.67	55	V762622	☐	O18-001	Core		☐	☐	☐
65.53	68.58	3.05	LST	1.47	48	V762623	☐	O18-001	Core		☐	☐	☐
68.58	71.63	3.05	LST	1.87	61	V762624	☐	O18-001	Core		☐	☐	☐
71.63	74.68	3.05	LST	2.33	76	V762625	☐	O18-001	Core		☐	☐	☐
74.68	77.72	3.04	LST	2.42	80	V762626	☐	O18-001	Core		☐	☐	☐
77.72	80.77	3.05	LST	2.47	81	V762627	☐	O18-001	Core		☐	☐	☐
80.77	83.82	3.05	LST, LST	2.81	92	V762628	☐	O18-001	Core		☐	☐	☐
83.82	86.87	3.05	LST	2.99	98	V762629	☐	O18-001	Core		☐	☐	☐
86.87	89.92	3.05	LST	2.92	96	V762630	☐	O18-001	Core		☐	☐	☐
89.92	92.96	3.04	LST	2.86	94	V762631	☐	O18-001	Core		☐	☐	☐
92.96	96.01	3.05	LST	2.82	92	V762632	☐	O18-001	Core		☐	☐	☐
96.01	99.06	3.05	LST	2.98	98	V762633	☐	O18-001	Core		☐	☐	☐
99.06	102.11	3.05	LST	2.99	98	V762634	☐	O18-001	Core		☐	☐	☐
102.11	105.16	3.05	LST	2.97	97	V762635	☐	O18-001	Core		☐	☐	☐
105.16	108.20	3.04	LST	3.02	99	V762636	☐	O18-001	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
108.20	111.25	3.05	LST	3.04	100	V762637	☐	O18-001	Core		☐	☐	☐
111.25	114.30	3.05	LST	2.98	98	V762639	☐	O18-001	Core		☐	☐	☐
114.30	117.35	3.05	LST	3.05	100	V762640	☐	O18-001	Core		☐	☐	☐
117.35	120.40	3.05	LST	2.98	98	V762641	☐	O18-002	Core		☐	☐	☐
120.40	123.44	3.04	LST	2.95	97	V762642	☐	O18-002	Core		☐	☐	☐
123.44	126.49	3.05	LST	3.02	99	V762643	☐	O18-002	Core		☐	☐	☐
126.49	129.54	3.05	LST	2.98	98	V762644	☐	O18-002	Core		☐	☐	☐
129.54	132.59	3.05	LST	2.95	97	V762646	☐	O18-002	Core		☐	☐	☐
132.59	135.64	3.05	LST	3.02	99	V762647	☐	O18-002	Core		☐	☐	☐
135.64	138.68	3.04	LST	2.99	98	V762648	☐	O18-002	Core		☐	☐	☐
138.68	141.73	3.05	LST	2.98	98	V762649	☐	O18-002	Core		☐	☐	☐
141.73	144.78	3.05	LST	3.03	99	V762650	☐	O18-002	Core		☐	☐	☐
144.78	147.83	3.05	LST	2.85	93	V762651	☐	O18-002	Core		☐	☐	☐
147.83	150.88	3.05	LST	2.86	94	V762652	☐	O18-002	Core		☐	☐	☐
150.88	153.92	3.04	LST	2.75	90	V762653	☐	O18-002	Core		☐	☐	☐
153.92	156.97	3.05	LST	2.75	90	V762654	☐	O18-002	Core		☐	☐	☐
153.92	156.97	3.05	LST	2.75	90	V762655	☐	O18-002	Core		☐	☑	☐
156.97	160.02	3.05	LST	2.98	98	V762656	☐	O18-002	Core		☐	☐	☐
160.02	163.07	3.05	LST	2.88	94	V762657	☐	O18-002	Core		☐	☐	☐
163.07	166.12	3.05	LST	3.05	100	V762658	☐	O18-002	Core		☐	☐	☐
166.12	169.16	3.04	LST	2.85	94	V762659	☐	O18-002	Core		☐	☐	☐
169.16	172.21	3.05	LST	2.96	97	V762660	☐	O18-002	Core		☐	☐	☐
172.21	175.26	3.05	LST	2.98	98	V762661	☐	O18-002	Core		☐	☐	☐
175.26	178.31	3.05	LST	2.90	95	V762662	☐	O18-002	Core		☐	☐	☐
178.31	181.36	3.05	LST	2.99	98	V762663	☐	O18-002	Core		☐	☐	☐
181.36	184.40	3.04	LST	2.98	98	V762664	☐	O18-002	Core		☐	☐	☐
184.40	187.45	3.05	LST	2.93	96	V762665	☐	O18-002	Core		☐	☐	☐
187.45	190.50	3.05	LST	2.84	93	V762666	☐	O18-002	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
190.50	193.55	3.05	LST	2.40	79	V762667	☐	O18-002	Core		☐	☐	☐
193.55	196.59	3.04	LST	2.37	78	V762668	☐	O18-002	Core		☐	☐	☐
196.59	199.64	3.05	LST	2.25	74	V762669	☐	O18-002	Core		☐	☐	☐
199.64	202.69	3.05	LST	2.92	96	V762670	☐	O18-002	Core		☐	☐	☐
202.69	205.74	3.05	LST	2.10	69	V762671	☐	O18-002	Core		☐	☐	☐
205.74	208.79	3.05	LST	2.52	83	V762672	☐	O18-002	Core		☐	☐	☐
208.79	211.84	3.05	LST	2.87	94	V762673	☐	O18-002	Core		☐	☐	☐
211.84	214.88	3.04	LST	2.55	84	V762674	☐	O18-002	Core		☐	☐	☐
214.88	217.93	3.05	LST	2.72	89	V762675	☐	O18-002	Core		☐	☐	☐
217.93	220.98	3.05	LST	2.65	87	V762677	☐	O18-002	Core		☐	☐	☐
220.98	224.03	3.05	LST	2.28	75	V762678	☐	O18-002	Core		☐	☐	☐
224.03	227.08	3.05	LST	2.86	94	V762679	☐	O18-002	Core		☐	☐	☐
227.08	230.12	3.04	LST	2.32	76	V762680	☐	O18-002	Core		☐	☐	☐
230.12	233.17	3.05	LST	2.90	95	V762681	☐	O18-005	Core		☐	☐	☐
233.17	236.22	3.05	LST	2.89	95	V762682	☐	O18-005	Core		☐	☐	☐
236.22	239.27	3.05	LST	2.94	96	V762683	☐	O18-005	Core		☐	☐	☐
239.27	242.32	3.05	LST	2.14	70	V762684	☐	O18-005	Core		☐	☐	☐
242.32	245.36	3.04	LST	2.79	92	V762685	☐	O18-005	Core		☐	☐	☐
245.36	248.41	3.05	LST	2.75	90	V762686	☐	O18-005	Core		☐	☐	☐
248.41	251.46	3.05	LST	1.82	60	V762687	☐	O18-005	Core		☐	☐	☐
251.46	254.51	3.05	LST	1.71	56	V762688	☐	O18-005	Core		☐	☐	☐
254.51	257.56	3.05	LST	1.67	55	V762689	☐	O18-005	Core		☐	☐	☐
257.56	258.36	0.80	LST	0.80	100	V762690	☐	O18-005	Core		☐	☐	☐
258.36	260.60	2.24	LST	2.10	94	V762691	☐	O18-005	Core		☐	☐	☐
260.60	263.65	3.05	LST	2.10	69	V762693	☐	O18-005	Core		☐	☐	☐
263.65	266.70	3.05	LST	2.68	88	V762694	☐	O18-005	Core		☐	☐	☐
266.70	269.75	3.05	LST	2.51	82	V762695	☐	O18-005	Core		☐	☐	☐
269.75	272.76	3.01	LST	2.27	75	V762696	☐	O18-005	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
272.76	275.84	3.08	LST, MST	1.68	55	V762697	☐	O18-005	Core		☐	☐	☐
275.84	278.89	3.05	MST	1.90	62	V762698	☐	O18-005	Core		☐	☐	☐
281.94	284.99	3.05	MST	0.86	28	V762699	☐	O18-005	Core		☐	☐	☐
284.99	288.04	3.05	MST	0.89	29	V762700	☐	O18-005	Core		☐	☐	☐
288.04	291.08	3.04	MST	2.48	82	V762701	☐	O18-005	Core		☐	☐	☐
291.08	294.13	3.05	MST	2.80	92	V762702	☐	O18-005	Core		☐	☐	☐
294.13	297.18	3.05	MST	3.02	99	V762704	☐	O18-005	Core		☐	☐	☐
297.18	300.23	3.05	MST	2.62	86	V762705	☐	O18-005	Core		☐	☐	☐
300.23	303.28	3.05	MST	3.03	99	V762706	☐	O18-005	Core		☐	☐	☐
303.28	306.32	3.04	MST	2.22	73	V762707	☐	O18-005	Core		☐	☐	☐
306.32	309.37	3.05	MST	2.65	87	V762708	☐	O18-005	Core		☐	☐	☐
309.37	312.42	3.05	MST	3.04	100	V762709	☐	O18-005	Core		☐	☐	☐
312.42	315.47	3.05	MST	3.04	100	V762710	☐	O18-005	Core		☐	☐	☐
315.47	318.52	3.05	MST	3.02	99	V762711	☐	O18-005	Core		☐	☐	☐
318.52	321.56	3.04	MST	3.03	100	V762712	☐	O18-005	Core		☐	☐	☐
321.56	324.61	3.05	MST	3.00	98	V762713	☐	O18-005	Core		☐	☐	☐
324.61	327.66	3.05	MST	3.01	99	V762714	☐	O18-005	Core		☐	☐	☐
324.61	327.66	3.05	MST	3.01	99	V762715	☐	O18-005	Core		☐	☑	☐
327.66	330.71	3.05	MST	2.99	98	V762716	☐	O18-005	Core		☐	☐	☐
327.66	330.71	3.05	MST	2.99	98	V762717	☐	O18-005	Core		☐	☐	☑
330.71	333.76	3.05	MST	2.93	96	V762718	☐	O18-005	Core		☐	☐	☐
333.76	336.80	3.04	MST	2.60	86	V762720	☐	O18-005	Core		☐	☐	☐
336.80	339.85	3.05	MST	3.04	100	V762721	☐	O18-006	Core		☐	☐	☐
339.85	342.90	3.05	MST	2.89	95	V762722	☐	O18-006	Core		☐	☐	☐
342.90	345.95	3.05	MST	2.95	97	V762723	☐	O18-006	Core		☐	☐	☐
345.95	348.99	3.04	MST	3.02	99	V762724	☐	O18-006	Core		☐	☐	☐
348.99	352.04	3.05	MST	2.85	93	V762725	☐	O18-006	Core		☐	☐	☐
352.04	355.09	3.05	MST	1.11	36	V762726	☐	O18-006	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
355.09	358.14	3.05	MST	0.18	6	V762727	☐	O18-006	Core		☐	☐	☐
358.14	361.19	3.05	MST	1.92	63	V762728	☐	O18-006	Core		☐	☐	☐
361.19	364.24	3.05	MST	1.80	59	V762729	☐	O18-006	Core		☐	☐	☐
364.24	367.28	3.04	MST	2.38	78	V762730	☐	O18-006	Core		☐	☐	☐
367.28	370.33	3.05	MST	1.02	33	V762731	☐	O18-006	Core		☐	☐	☐
370.33	373.38	3.05	MST	0.88	29	V762732	☐	O18-006	Core		☐	☐	☐
373.38	376.43	3.05	MST	1.66	54	V762734	☐	O18-006	Core		☐	☐	☐
376.43	379.48	3.05	MST	2.02	66	V762735	☐	O18-006	Core		☐	☐	☐
379.48	382.52	3.04	MST	1.12	37	V762736	☐	O18-006	Core		☐	☐	☐
382.52	386.00	3.48	MST	1.45	42	V762737	☐	O18-006	Core		☐	☐	☐
386.00	388.62	2.62	MST	1.38	53	V762738	☐	O18-006	Core		☐	☐	☐
388.62	391.67	3.05	MST	1.85	61	V762739	☐	O18-006	Core		☐	☐	☐
391.67	392.65	0.98	MST	0.62	63	V762740	☐	O18-006	Core		☐	☐	☐
392.65	393.40	0.75	MST	0.71	95	V762741	☐	O18-006	Core		☐	☐	☐
393.40	394.72	1.32	MST	0.93	70	V762743	☐	O18-006	Core		☐	☐	☐
394.72	397.76	3.04	MST	2.32	76	V762744	☐	O18-006	Core		☐	☐	☐
397.76	400.81	3.05	MST	2.99	98	V762745	☐	O18-006	Core		☐	☐	☐
397.76	400.81	3.05	MST	2.99	98	V762746	☐	O18-006	Core		☐	☑	☐
400.81	403.86	3.05	MST	2.74	90	V762747	☐	O18-006	Core		☐	☐	☐
403.86	406.91	3.05	MST	2.72	89	V762748	☐	O18-006	Core		☐	☐	☐
406.91	409.96	3.05	MST	2.35	77	V762749	☐	O18-006	Core		☐	☐	☐
409.96	413.00	3.04	MST	2.52	83	V762750	☐	O18-006	Core		☐	☐	☐
409.96	413.00	3.04	MST	2.52	83	V762751	☐	O18-006	Core		☐	☐	☑
413.00	416.05	3.05	MST	2.51	82	V762752	☐	O18-006	Core		☐	☐	☐
416.05	419.10	3.05	MST	2.93	96	V762753	☐	O18-006	Core		☐	☐	☐
419.10	422.15	3.05	MST	2.97	97	V762754	☐	O18-006	Core		☐	☐	☐
422.15	425.20	3.05	MST	2.80	92	V762755	☐	O18-006	Core		☐	☐	☐
425.20	428.24	3.04	MST	2.51	83	V762756	☐	O18-006	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
428.24	431.29	3.05	MST	3.04	100	V762757	☐	O18-006	Core		☐	☐	☐
431.29	434.34	3.05	MST	3.02	99	V762759	☐	O18-006	Core		☐	☐	☐
434.34	437.39	3.05	MST	2.69	88	V762760	☐	O18-006	Core		☐	☐	☐
437.39	440.44	3.05	MST	2.93	96	V762761	☐	O18-008	core		☐	☐	☐
440.44	443.48	3.04	MST	2.92	96	V762762	☐	O18-008	core		☐	☐	☐
443.48	446.53	3.05	MST	2.76	90	V762763	☐	O18-008	core		☐	☐	☐
446.53	449.58	3.05	MST	2.84	93	V762764	☐	O18-008	core		☐	☐	☐
449.58	452.63	3.05	MST	1.10	36	V762765	☐	O18-008	core		☐	☐	☐
452.63	455.68	3.05	MST	1.83	60	V762766	☐	O18-008	core		☐	☐	☐
455.68	458.72	3.04	MST	1.45	48	V762767	☐	O18-008	core		☐	☐	☐
458.72	461.33	2.61	MST	1.44	55	V762768	☐	O18-008	core		☐	☐	☐
461.33	461.89	0.56	MST, MST	0.32	57	V762769	☐	O18-008	core		☐	☐	☐
461.89	464.82	2.93	MST	2.93	100	V762771	☐	O18-008	core		☐	☐	☐
464.82	467.87	3.05	MST	2.68	88	V762772	☐	O18-008	core		☐	☐	☐
467.87	470.92	3.05	MST	2.77	91	V762773	☐	O18-008	core		☐	☐	☐
470.92	473.96	3.04	MST	2.89	95	V762774	☐	O18-008	core		☐	☐	☐
473.96	477.01	3.05	MST	2.76	90	V762775	☐	O18-008	core		☐	☐	☐
477.01	480.06	3.05	MST	2.83	93	V762776	☐	O18-008	core		☐	☐	☐
480.06	483.11	3.05	MST	2.56	84	V762777	☐	O18-008	core		☐	☐	☐
483.11	486.16	3.05	MST	2.45	80	V762778	☐	O18-008	core		☐	☐	☐
486.16	489.20	3.04	MST	2.69	88	V762780	☐	O18-008	core		☐	☐	☐
489.20	492.25	3.05	MST	2.87	94	V762781	☐	O18-008	core		☐	☐	☐
492.25	495.30	3.05	MST	2.96	97	V762782	☐	O18-008	core		☐	☐	☐
495.30	498.35	3.05	MST	3.03	99	V762783	☐	O18-008	core		☐	☐	☐
498.35	501.40	3.05	MST	2.70	89	V762784	☐	O18-008	core		☐	☐	☐
501.40	504.44	3.04	MST	2.38	78	V762785	☐	O18-008	core		☐	☐	☐
504.44	507.49	3.05	MST	2.26	74	V762786	☐	O18-008	core		☐	☐	☐
507.49	510.54	3.05	MST	1.61	53	V762787	☐	O18-008	core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
510.54	513.59	3.05	MST	1.66	54	V762788	☐	O18-008	core		☐	☐	☐
513.59	516.64	3.05	MST	0.56	18	V762789	☐	O18-008	core		☐	☐	☐
513.59	516.64	3.05	MST	0.56	18	V762790	☐	O18-008	core		☐	☐	☑
516.64	519.68	3.04	MST	0.33	11	V762791	☐	O18-008	core		☐	☐	☐
519.68	522.73	3.05	MST, LST	0.34	11	V762792	☐	O18-008	core		☐	☐	☐
522.73	525.78	3.05	LST	2.26	74	V762793	☐	O18-008	core		☐	☐	☐
525.78	526.30	0.52	LST	0.52	100	V762794	☐	O18-008	core		☐	☐	☐
526.30	528.00	1.70	LST	1.05	62	V762795	☐	O18-008	core		☐	☐	☐
528.00	529.00	1.00	LST	0.86	86	V762797	☐	O18-008	core		☐	☐	☐
529.00	531.88	2.88	LST	1.25	43	V762799	☐	O18-008	core		☐	☐	☐
529.00	531.88	2.88	LST	1.25	43	V762800	☐	O18-008	core		☐	☑	☐
531.88	534.92	3.04	LST	3.04	100	V762801	☐	O18-011	Core		☐	☐	☐
534.92	537.97	3.05	LST	2.79	91	V762802	☐	O18-011	Core		☐	☐	☐
537.97	541.02	3.05	LST	2.42	79	V762803	☐	O18-011	Core		☐	☐	☐
541.02	542.08	1.06	LST	1.06	100	V762804	☐	O18-011	Core		☐	☐	☐
542.08	543.12	1.04	LST	0.98	94	V762805	☐	O18-011	Core		☐	☐	☐
543.12	544.33	1.21	LST	1.20	99	V762806	☐	O18-011	Core		☐	☐	☐
544.33	545.35	1.02	LST	1.02	100	V762807	☐	O18-011	Core		☐	☐	☐
545.35	547.12	1.77	LST	1.72	97	V762809	☐	O18-011	Core		☐	☐	☐
547.12	549.00	1.88	LST	1.80	96	V762810	☐	O18-011	Core		☐	☐	☐
549.00	550.16	1.16	LST	1.16	100	V762812	☐	O18-011	Core		☐	☐	☐
550.16	552.00	1.84	LST	1.84	100	V762813	☐	O18-011	Core		☐	☐	☐
552.00	553.21	1.21	LST	1.09	90	V762814	☐	O18-011	Core		☐	☐	☐
553.21	556.26	3.05	LST	2.59	85	V762815	☐	O18-011	Core		☐	☐	☐
556.26	559.31	3.05	LST	3.04	100	V762816	☐	O18-011	Core		☐	☐	☐
559.31	562.36	3.05	LST	3.04	100	V762817	☐	O18-011	Core		☐	☐	☐
562.36	565.40	3.04	LST	3.00	99	V762818	☐	O18-011	Core		☐	☐	☐
565.40	568.45	3.05	LST	2.82	92	V762819	☐	O18-011	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
568.45	571.50	3.05	LST	2.89	95	V762820	☐	O18-011	Core		☐	☐	☐
568.45	571.50	3.05	LST	2.89	95	V762821	☐	O18-011	Core		☐	☑	☐
571.50	574.55	3.05	LST	1.99	65	V762822	☐	O18-011	Core		☐	☐	☐
574.55	577.60	3.05	LST	1.77	58	V762823	☐	O18-011	Core		☐	☐	☐
577.60	580.64	3.04	LST	3.04	100	V762824	☐	O18-011	Core		☐	☐	☐
580.64	583.69	3.05	LST	3.02	99	V762825	☐	O18-011	Core		☐	☐	☐
583.69	586.74	3.05	LST	3.03	99	V762826	☐	O18-011	Core		☐	☐	☐
586.74	589.79	3.05	LST	2.80	92	V762827	☐	O18-011	Core		☐	☐	☐
586.74	589.79	3.05	LST	2.80	92	V762828	☐	O18-011	Core		☐	☐	☑
589.79	592.84	3.05	LST	2.98	98	V762829	☐	O18-011	Core		☐	☐	☐
592.84	595.88	3.04	LST	2.83	93	V762830	☐	O18-011	Core		☐	☐	☐
595.88	598.93	3.05	LST	2.12	70	V762831	☐	O18-011	Core		☐	☐	☐
598.93	601.98	3.05	LST	0.58	19	V762832	☐	O18-011	Core		☐	☐	☐
601.98	605.03	3.05	LST	0.93	30	V762833	☐	O18-011	Core		☐	☐	☐
605.03	608.08	3.05	LST	1.94	64	V762834	☐	O18-011	Core		☐	☐	☐
608.08	611.12	3.04	LST	1.28	42	V762835	☐	O18-011	Core		☐	☐	☐
611.12	614.17	3.05	LST	1.93	63	V762836	☐	O18-011	Core		☐	☐	☐
614.17	617.22	3.05	LST	2.95	97	V762837	☐	O18-011	Core		☐	☐	☐
617.22	620.27	3.05	LST	2.96	97	V762838	☐	O18-011	Core		☐	☐	☐
620.27	623.32	3.05	LST	3.01	99	V762840	☐	O18-011	Core		☐	☐	☐
623.32	626.36	3.04	LST	3.04	100	V762841	☐	O18-013	Core		☐	☐	☐
626.36	629.41	3.05	LST	3.01	99	V762842	☐	O18-013	Core		☐	☐	☐
629.41	632.46	3.05	LST	3.04	100	V762843	☐	O18-013	Core		☐	☐	☐
632.46	635.51	3.05	LST	3.03	99	V762844	☐	O18-013	Core		☐	☐	☐
635.51	638.56	3.05	LST	3.05	100	V762845	☐	O18-013	Core		☐	☐	☐
638.56	641.60	3.04	LST	2.98	98	V762846	☐	O18-013	Core		☐	☐	☐
641.60	644.65	3.05	LST	3.05	100	V762847	☐	O18-013	Core		☐	☐	☐
644.65	647.70	3.05	LST	3.03	99	V762848	☐	O18-013	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
647.70	650.75	3.05	LST	3.04	100	V762849	☐	O18-013	Core		☐	☐	☐
650.75	653.80	3.05	LST	2.85	93	V762851	☐	O18-013	Core		☐	☐	☐
653.80	656.84	3.04	LST	2.94	97	V762852	☐	O18-013	Core		☐	☐	☐
656.84	659.89	3.05	LST	3.04	100	V762853	☐	O18-013	Core		☐	☐	☐
659.89	662.94	3.05	LST	3.03	99	V762854	☐	O18-013	Core		☐	☐	☐
662.94	665.99	3.05	LST	2.86	94	V762855	☐	O18-013	Core		☐	☐	☐
665.99	669.04	3.05	LST	3.04	100	V762856	☐	O18-013	Core		☐	☐	☐
669.04	672.23	3.19	LST	3.17	99	V762857	☐	O18-013	Core		☐	☐	☐

BDO-18-007

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
0.00	3.05	3.05	OVB	FG	No overburden recovered in this hole.							
3.05	69.63	66.58	LST	MG	Debris flows are composed of limestone clasts, calcareous mudstone clasts, peloids, fossil fragments (crinoids, brachiopods, bryozoans, rugose coral, tabulate coral, bivalves, bryozoans, coral fragments). Trace to locally minor calcite veins and infills.							
						LT	WH					
						MD	GY		OXI	W		
						LT	GY	DB	CLY	W		
69.63	273.00	203.37	LST	FG	Alternating dark grey to black fine grained calcareous mudstone interbedded with light grey coarse grained limestone with local siltstone and debris flow beds. Weak to locally strong oxidation. Minor calcite veins and infills.							
273.00	370.65	97.65	LST	MG	Bioclastic debris flow with clastic components and thin interbedded calcareous mudstone. Orpiment and realgar prevalent in some sections.							
370.65	481.89	111.24	CMS	FG	Dark grey to black fine grained calcareous mudstone with light grey medium grained limestone with intermittent debris flows. Minor to moderate calcite veins. Pyrite occurs as blebs, specks and is disseminated in the rock.							
481.89	488.59	6.70	MST	FG	Dark grey to black mudstone with intermittent siltstone beds and sheared/fault zones.							

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
0.00	3.05	3.05	0	0	0.00	0	--	--	--	no recovery
3.05	5.49	2.44	1.3	53	0.26	11	4R	2H	2W	DELETE
5.49	8.53	3.04	2.18	72	0.74	24	2R	1H	3W	RBZ
8.53	11.58	3.05	2.62	86	1.67	55	3R	1H	2W	RBZ
11.58	14.63	3.05	1.88	62	1.44	47	2R	2H	2W	
14.63	17.68	3.05	2.04	67	0.55	18	2R	2H	2W	RBZ
17.68	20.73	3.05	2.18	71	0.00	0	2R	2H	2W	RBZ
20.73	23.77	3.04	2.43	80	0.67	22	1R	1H	2W	RBZ
23.77	26.82	3.05	2.26	74	0.64	21	1R	1H	2W	RBZ
26.82	29.87	3.05	2.56	84	1.25	41	2R	3H	4W	
29.87	32.92	3.05	1.87	61	0.91	30	3R	1H	3W	RBZ
32.92	35.97	3.05	2.83	93	1.71	56	3R	3H	2W	
35.97	39.01	3.04	2.47	81	1.74	57	2R	3H	3W	
39.01	42.06	3.05	2.3	75	0.92	30	1R	1H	4W	RBZ
42.06	45.11	3.05	1.96	64	0.56	18	1R	1H	4W	RBZ
45.11	48.16	3.05	1.97	65	0.34	11	1R	1H	4W	RBZ
48.16	51.21	3.05	2.09	69	1.59	52	3R	1H	3W	
51.21	54.25	3.04	2.93	96	1.42	47	4R	1H	4W	Thick (5-20cm) clay filled seams.
54.25	57.30	3.05	2.95	97	1.88	62	4R	1H	3W	Thick clay seams
57.30	60.35	3.05	2.43	80	1.43	47	3R	1H	3W	Clay filled fractures and small (10-25cm) rubble zones
60.35	63.40	3.05	2.69	88	2.20	72	2R	2H	3W	
63.40	66.45	3.05	2.95	97	2.62	86	4R	3H	2W	
66.45	69.49	3.04	2.81	92	2.29	75	3R	3H	3W	
69.49	72.54	3.05	2.98	98	2.93	96	2R	4H	1W	
72.54	75.59	3.05	2.9	95	2.75	90	3R	4H	1W	
75.59	78.64	3.05	2.41	79	1.85	61	3R	1H	3W	
78.64	81.69	3.05	2.52	83	1.51	50	3R	1H	3W	
81.69	84.73	3.04	2.28	75	1.90	63	3R	1H	3W	
84.73	87.78	3.05	2.9	95	2.79	91	3R	1H	2W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
87.78	90.83	3.05	2.91	95	2.77	91	3R	2H	2W	Mostly compotent rock with weak, clay fractures
90.83	93.88	3.05	3.05	100	3.00	98	3R	4H	1W	
93.88	96.93	3.05	2.91	95	2.80	92	3R	4H	1W	
96.93	99.97	3.04	3.02	99	2.98	98	3R	4H	1W	
99.97	103.02	3.05	2.87	94	2.80	92	3R	4H	2W	
103.02	106.07	3.05	3.05	100	3.00	98	3R	4H	1W	
106.07	109.12	3.05	2.88	94	1.34	44	3R	2H	3W	Dominantly light grey, competant limestone with a weak, soft, clay-rich zone from 108.46-108.74m.
109.12	112.16	3.04	2.95	97	2.15	71	3R	3H	1W	
112.16	115.21	3.05	2.84	93	1.40	46	3R	2H	3W	Dominantly shear fabrics and clay-rich seams along shear planes
115.21	118.26	3.05	2.86	94	0.75	25	2R	2H	4W	Highly fragmented, clay-rich, zone from 115.45-115.73m.
118.26	121.31	3.05	2.91	95	0.79	26	2R	3H	2W	
121.31	124.36	3.05	2.81	92	1.05	34	2R	2H	2W	
124.36	127.41	3.05	2.86	94	1.87	61	2R	3H	2W	Some arsenic oxide weathering present, but largely just clay weathering
127.41	130.45	3.04	2.67	88	1.58	52	2R	3H	2W	Arsenic oxide weathering (green colour on fracture surfaces). Locally observed medium-grained, light grey, limestone intebeds displays strong HCL reaction.
130.45	133.50	3.05	2.75	90	0.95	31	2R	2H	3W	Rubble zone from 131.52-132.15m. Oxidized weathering observed. Rubble zone is primarily composed of competant angular clasts.
133.50	136.55	3.05	2.08	68	1.42	47	2R	2H	3W	
136.55	139.60	3.05	1.38	45	0.46	15	2R	2H	3W	Predominantly a rubble zone.
139.60	142.65	3.05	2.89	95	1.03	34	2R	2H	2W	Minor As oxide on fracture surfaces
142.65	145.69	3.04	2.99	98	1.72	57	2R	2H	3W	144.34-144.87m moderate-highly weathered, clay-rich rubble zone.
145.69	148.74	3.05	3.02	99	2.06	68	2R	3H	2W	
148.74	151.79	3.05	2.75	90	0.95	31	2R	3H	3W	149.00-150.35m rubble zone. Arsenic oxides observed locally on fracture surfaces
151.79	154.84	3.05	2.86	94	0.98	32	2R	3H	2W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
154.84	157.89	3.05	2.75	90	1.52	50	2R	2H	3W	154.84-156.36m rubble zone, low RQD. 156.36-157.89m competant calcareous mudstone.
157.89	160.93	3.04	2.96	97	1.73	57	3R	2H	3W	slightly oxidized, zone at the transition from calcareous mudstone to medium-grained limestone.
160.93	163.98	3.05	2.98	98	2.35	77	3R	3H	2W	
163.98	167.03	3.05	2.32	76	0.67	22	3R	2H	3W	164.32-166.32 oxidized, clay-rich rubble zone.
167.03	170.08	3.05	2.95	97	2.35	77	2R	3H	2W	
170.08	173.13	3.05	2.79	91	0.20	7	3R	3H	2W	broken zone from 170.90-171.60m
173.13	176.13	3.00	2.92	97	2.03	68	3R	2H	3W	
176.13	179.22	3.09	2.55	83	1.28	41	3R	2H	2W	176.67-177.26m Oxidized, clay-rich rubble zone.
179.22	182.27	3.05	2.94	96	2.12	70	3R	3H	2W	
182.27	185.32	3.05	2.96	97	2.62	86	3R	3H	2W	183.19-183.39 clay-containing broken up sections
185.32	188.37	3.05	2.94	96	2.34	77	3R	3H	1W	
188.37	191.41	3.04	2.93	96	2.57	85	3R	3H	2W	
191.41	194.46	3.05	3.05	100	2.67	88	2R	3H	1W	
194.46	197.51	3.05	2.93	96	2.13	70	2R	3H	2W	
197.51	200.56	3.05	2.45	80	1.22	40	3R	2H	2W	197.51-199.03 broken up sections
200.56	203.61	3.05	2.99	98	2.17	71	3R	3H	2W	
203.61	206.65	3.04	2.84	93	1.89	62	3R	2H	2W	
206.65	209.70	3.05	2.96	97	2.27	74	3R	2H	2W	
209.70	212.75	3.05	2.67	88	2.31	76	3R	3H	2W	
212.75	215.80	3.05	2.9	95	2.68	88	3R	3H	2W	
215.80	218.85	3.05	2.92	96	1.67	55	3R	3H	2W	
218.85	221.89	3.04	2.95	97	1.91	63	2R	4H	1W	
221.89	224.94	3.05	2.58	85	1.65	54	2R	2H	1W	
224.94	227.99	3.05	2.94	96	2.46	81	3R	3H	1W	
227.99	231.04	3.05	2.48	81	1.91	63	3R	2H	1W	
231.04	233.78	2.74	2.57	94	2.01	73	3R	4H	1W	
233.78	236.83	3.05	2.37	78	1.03	34	3R	2H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
236.83	239.88	3.05	2.96	97	1.27	42	3R	2H	1W	
239.88	242.93	3.05	2.95	97	2.10	69	3R	3H	1W	
242.93	245.97	3.04	2.28	75	0.93	31	3R	2H	1W	
245.97	249.02	3.05	2.73	90	1.40	46	3R	2H	1W	
249.02	252.07	3.05	2.29	75	1.28	42	3R	2H	1W	
252.07	255.12	3.05	1.83	60	0.90	30	3R	2H	1W	
255.12	258.17	3.05	2.64	87	1.60	52	3R	3H	1W	
258.17	261.21	3.04	2.74	90	2.10	69	3R	3H	1W	
261.21	264.26	3.05	2.76	90	2.30	75	3R	3H	1W	
264.26	267.31	3.05	2.49	82	1.32	43	3R	2H	1W	Galena present in limestone here.
267.31	270.36	3.05	2.67	88	1.42	47	3R	2H	1W	
270.36	273.41	3.05	1.97	65	0.85	28	3R	2H	1W	
273.41	276.45	3.04	2.73	90	1.73	57	3R	2H	1W	
276.45	279.50	3.05	1.68	55	0.60	20	3R	2H	1W	
279.50	282.55	3.05	2.96	97	2.46	81	3R	2H	1W	
282.55	284.99	2.44	2.03	83	1.26	52	3R	2H	1W	
284.99	288.04	3.05	2.76	90	1.86	61	3R	2H	1W	Some graphitic weathering on surfaces of fracture.
288.04	289.86	1.82	1.77	97	1.43	79	3R	2H	1W	
289.86	291.69	1.83	1.54	84	0.81	44	3R	2H	1W	
291.69	293.52	1.83	1.72	94	1.15	63	3R	2H	1W	Some graphitic weathering on fractured surfaces
293.52	295.96	2.44	1.89	77	0.65	27	2R	2H	1W	Rock here is very weak, but not very soft. There is abundant graphitic weathering on fractures
295.96	298.09	2.13	1.56	73	0.62	29	2R	2H	1W	
298.09	300.53	2.44	1.87	77	0.27	11	3R	2H	1W	graphitic/clay weathering on surfaces, and arsenic oxide present on some surfaces as well
300.53	302.06	1.53	1.46	95	0.00	0	3R	2H	1W	
302.06	302.97	0.91	0.86	95	0.00	0	3R	2H	1W	
302.97	305.10	2.13	1.65	77	0.51	24	3R	2H	1W	
305.10	306.63	1.53	0.75	49	0.33	22	4R	2H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
306.63	307.54	0.91	0.56	62	0.00	0	3R	2H	1W	
307.54	309.98	2.44	2.28	93	0.59	24	4R	2H	1W	
309.98	311.81	1.83	1.7	93	0.86	47	4R	2H	1W	
311.81	314.55	2.74	2.25	82	0.22	8	4R	2H	1W	
314.55	317.60	3.05	1.8	59	0.14	5	4R	2H	1W	
317.60	319.13	1.53	1.53	100	0.63	41	3R	2H	1W	
319.13	322.17	3.04	2.62	86	1.17	38	3R	2H	1W	
322.17	325.22	3.05	3.02	99	0.94	31	3R	3H	1W	
325.22	328.27	3.05	2.65	87	0.75	25	4R	2H	1W	
328.27	331.32	3.05	3.05	100	1.45	48	4R	2H	1W	
331.32	334.37	3.05	2.98	98	1.60	52	4R	3H	1W	
334.37	337.41	3.04	2.99	98	1.46	48	4R	3H	1W	
337.41	340.26	2.85	2.85	100	1.99	70	4R	2H	1W	
340.26	343.51	3.25	2.94	90	1.58	49	4R	2H	1W	
343.51	346.56	3.05	2.8	92	0.58	19	4R	2H	1W	
346.56	348.39	1.83	1.81	99	0.95	52	3R	3H	1W	
348.39	350.82	2.43	2.41	99	0.32	13	3R	2H	1W	
350.82	351.74	0.92	0.69	75	0.20	22	3R	2H	1W	
351.74	354.79	3.05	1.58	52	0.57	19	3R	2H	1W	
354.79	357.23	2.44	1.67	68	0.56	23	4R	2H	1W	
357.23	359.05	1.82	1.5	82	0.64	35	3R	2H	1W	
359.05	361.19	2.14	1.94	91	0.27	13	4R	2H	1W	
361.19	362.71	1.52	1.46	96	0.65	43	4R	2H	1W	
362.71	363.32	0.61	0.6	98	0.18	30	4R	2H	1W	
363.32	365.15	1.83	1.52	83	0.24	13	3R	2H	1W	
365.15	366.98	1.83	1.62	89	0.22	12	4R	2H	1W	
366.98	368.81	1.83	1.25	68	0.10	5	3R	2H	1W	
368.81	371.86	3.05	2.08	68	0.63	21	3R	2H	1W	
371.86	373.99	2.13	0.96	45	0.25	12	3R	2H	1W	
373.99	377.04	3.05	2.31	76	1.23	40	3R	3H	1W	
377.04	380.09	3.05	2.32	76	0.77	25	3R	2H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
380.09	381.61	1.52	1.13	74	0.38	25	3R	2H	1W	
381.61	383.13	1.52	1.17	77	0.46	30	2R	3H	1W	
383.13	386.18	3.05	2.41	79	0.86	28	2R	3H	1W	
386.18	389.23	3.05	2.65	87	1.66	54	2R	3H	1W	
389.23	391.97	2.74	2.33	85	0.74	27	2R	3H	1W	
391.97	395.33	3.36	3.16	94	2.09	62	3R	3H	1W	
395.33	398.37	3.04	2.34	77	1.13	37	3R	3H	1W	Less reactivity in mudstone than limestone.
398.37	401.42	3.05	2.86	94	1.23	40	3R	4H	1W	
401.42	404.47	3.05	2.83	93	2.23	73	3R	3H	1W	
404.47	407.52	3.05	2.93	96	2.18	71	3R	3H	1W	
407.52	410.57	3.05	2.92	96	2.34	77	3R	3H	1W	
410.57	413.61	3.04	2.97	98	2.26	74	2R	3H	1W	
413.61	416.66	3.05	2.97	97	2.67	88	3R	3H	1W	
416.66	419.71	3.05	3.04	100	2.74	90	3R	3H	1W	
419.71	422.76	3.05	3	98	2.98	98	3R	4H	1W	
422.76	425.81	3.05	2.91	95	2.61	86	3R	3H	1W	
425.81	428.83	3.02	2.95	98	1.83	61	3R	4H	1W	
428.83	431.90	3.07	2.95	96	1.98	64	3R	3H	1W	
431.90	434.95	3.05	3.05	100	2.63	86	4R	3H	1W	
434.95	438.00	3.05	2.96	97	2.78	91	4R	3H	1W	
438.00	441.05	3.05	2.9	95	2.47	81	4R	3H	1W	
441.05	444.09	3.04	2.99	98	2.60	86	4R	3H	1W	
444.09	447.14	3.05	2.92	96	1.78	58	3R	3H	1W	Less reactivity in mudstone than limestone.
447.14	450.19	3.05	2.98	98	2.41	79	2R	3H	1W	3R in limestones.
450.19	453.24	3.05	2.54	83	1.65	54	2R	3H	1W	3R in limestone.
453.24	456.29	3.05	2.99	98	1.90	62	3R	3H	1W	
456.29	457.51	1.22	1.02	84	0.25	20	3R	3H	1W	Sphalerite present in calcite veins.
457.51	459.33	1.82	1.65	91	0.82	45	3R	3H	1W	
459.33	462.38	3.05	2.8	92	1.18	39	3R	3H	1W	
462.38	465.43	3.05	2.88	94	1.52	50	3R	3H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
465.43	466.95	1.52	0.65	43	0.37	24	3R	3H	1W	1-2R near end of interval.
466.95	468.78	1.83	1.59	87	0.15	8	2R	3H	1W	No reactivity from 466.95-467.20 and 468.37-368.72m.
468.78	471.22	2.44	0.86	35	0.00	0	0R	2H	1W	
471.22	472.14	0.92	0.09	10	0.00	0	0R	3H	1W	
472.14	474.57	2.43	1.4	58	0.25	10	0R	2H	1W	
474.57	474.88	0.31	0.23	74	0.00	0	0R	3H	1W	
474.88	476.71	1.83	1.04	57	0.27	15	0R	3H	1W	
476.71	479.76	3.05	2.09	69	1.17	38	0R	2H	1W	
479.76	481.89	2.13	1.45	68	0.15	7	0R	2H	1W	Clay-rich with crackle breccia texture
481.89	483.73	1.84	1.56	85	1.20	65	0R	3H	1W	
483.73	486.77	3.04	2.56	84	0.93	31	0R	2H	1W	
486.77	488.59	1.82	1.26	69	0.43	24	0R	2H	1W	Crackle breccia texture and clay-rich fracture surfaces abundant

BDO-18-007

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
0.00	0.00	0.00	-QC-	0.00	0	V766258	☐	O18-014	core	4C	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V766313	☐	O18-015	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V766311	☐	O18-015	Core	SR5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V766298	☐	O18-015	Core	OX6	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V766092	☐	O18-007	core	SR5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V766271	☐	O18-014	core	4C	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V766252	☐	O18-014	core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V766238	☐	O18-012	Core	OX7	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V766218	☐	O18-012	Core	OX6	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V766109	☐	O18-007	core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V766200	☐	O18-010	Core	OX6	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V766189	☐	O18-010	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V766181	☐	O18-010	Core	SR5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V766275	☐	O18-014	core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V766155	☐	O18-009	Core	OX6	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V766147	☐	O18-009	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V766132	☐	O18-009	Core	OX7	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V766120	☐	O18-007	core	SR5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V766212	☐	O18-012	Core		☑	☐	☐
3.05	5.49	2.44	LST, OVB	1.30	53	V766086	☐	O18-007	core		☐	☐	☐
5.49	8.53	3.04	LST	2.18	72	V766087	☐	O18-007	core		☐	☐	☐
8.53	11.58	3.05	LST	2.62	86	V766088	☐	O18-007	core		☐	☐	☐
11.58	13.11	1.53	LST	1.13	74	V766089	☐	O18-007	core		☐	☐	☐
13.11	17.25	4.14	LST	3.05	74	V766090	☐	O18-007	core		☐	☐	☐
17.25	20.73	3.48	LST	2.18	63	V766091	☐	O18-007	core		☐	☐	☐
20.73	23.77	3.04	LST	2.43	80	V766093	☐	O18-007	core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
23.77	26.44	2.67	LST	1.82	68	V766094	☐	O18-007	core		☐	☐	☐
26.44	29.87	3.43	LST	2.56	75	V766095	☐	O18-007	core		☐	☐	☐
29.87	32.92	3.05	LST	1.87	61	V766096	☐	O18-007	core		☐	☐	☐
32.92	35.97	3.05	LST	2.83	93	V766097	☐	O18-007	core		☐	☐	☐
35.97	39.41	3.44	LST	2.87	83	V766098	☐	O18-007	core		☐	☐	☐
39.41	42.06	2.65	LST	2.30	87	V766099	☐	O18-007	core		☐	☐	☐
42.06	43.59	1.53	LST	1.15	75	V766100	☐	O18-007	core		☐	☐	☐
43.59	45.11	1.52	LST	1.40	92	V766101	☐	O18-007	core		☐	☐	☐
45.11	46.63	1.52	LST	0.82	54	V766102	☐	O18-007	core		☐	☐	☐
45.11	46.63	1.52	LST	0.82	54	V766103	☐	O18-007	core		☐	☑	☐
46.63	48.16	1.53	LST	1.51	99	V766104	☐	O18-007	core		☐	☐	☐
48.16	51.21	3.05	LST	2.09	69	V766105	☐	O18-007	core		☐	☐	☐
51.21	54.25	3.04	LST	2.93	96	V766106	☐	O18-007	core		☐	☐	☐
54.25	57.30	3.05	LST	2.95	97	V766107	☐	O18-007	core		☐	☐	☐
57.30	60.35	3.05	LST	2.43	80	V766108	☐	O18-007	core		☐	☐	☐
60.35	63.40	3.05	LST	2.95	97	V766110	☐	O18-007	core		☐	☐	☐
63.40	66.45	3.05	LST	1.34	44	V766111	☐	O18-007	core		☐	☐	☐
66.45	67.97	1.52	LST	1.32	87	V766112	☐	O18-007	core		☐	☐	☐
67.97	69.63	1.66	LST	1.66	100	V766113	☐	O18-007	core		☐	☐	☐
67.97	69.63	1.66	LST	1.66	100	V766114	☐	O18-007	core		☐	☐	☑
69.63	72.54	2.91	LST, LST	2.90	100	V766115	☐	O18-007	core		☐	☐	☐
72.54	75.59	3.05	LST	2.90	95	V766116	☐	O18-007	core		☐	☐	☐
75.59	78.64	3.05	LST	2.41	79	V766117	☐	O18-007	core		☐	☐	☐
78.64	81.69	3.05	LST	2.52	83	V766118	☐	O18-007	core		☐	☐	☐
81.69	84.73	3.04	LST	2.28	75	V766119	☐	O18-007	core		☐	☐	☐
84.73	87.78	3.05	LST	2.90	95	V766121	☐	O18-009	Core		☐	☐	☐
87.78	90.83	3.05	LST	2.91	95	V766122	☐	O18-009	Core		☐	☐	☐
90.83	93.88	3.05	LST	3.05	100	V766123	☐	O18-009	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
93.88	96.93	3.05	LST	2.91	95	V766124	☐	O18-009	Core		☐	☐	☐
96.93	99.97	3.04	LST	3.02	99	V766125	☐	O18-009	Core		☐	☐	☐
99.97	103.02	3.05	LST	2.87	94	V766126	☐	O18-009	Core		☐	☐	☐
103.02	106.07	3.05	LST	3.05	100	V766127	☐	O18-009	Core		☐	☐	☐
106.07	109.12	3.05	LST	2.88	94	V766128	☐	O18-009	Core		☐	☐	☐
109.12	112.16	3.04	LST	2.95	97	V766129	☐	O18-009	Core		☐	☐	☐
112.16	115.21	3.05	LST	2.84	93	V766130	☐	O18-009	Core		☐	☐	☐
115.21	116.74	1.53	LST	1.08	71	V766131	☐	O18-009	Core		☐	☐	☐
116.74	118.26	1.52	LST	1.25	82	V766133	☐	O18-009	Core		☐	☐	☐
118.26	121.31	3.05	LST	2.91	95	V766134	☐	O18-009	Core		☐	☐	☐
121.31	124.36	3.05	LST	2.81	92	V766135	☐	O18-009	Core		☐	☐	☐
124.36	127.41	3.05	LST	2.86	94	V766136	☐	O18-009	Core		☐	☐	☐
127.41	130.45	3.04	LST	2.67	88	V766137	☐	O18-009	Core		☐	☐	☐
130.45	133.50	3.05	LST	2.75	90	V766138	☐	O18-009	Core		☐	☐	☐
133.50	136.55	3.05	LST	2.08	68	V766139	☐	O18-009	Core		☐	☐	☐
136.55	139.60	3.05	LST	1.38	45	V766140	☐	O18-009	Core		☐	☐	☐
139.60	142.65	3.05	LST	2.89	95	V766141	☐	O18-009	Core		☐	☐	☐
139.60	142.65	3.05	LST	2.89	95	V766142	☐	O18-009	Core		☐	☑	☐
142.65	144.17	1.52	LST	1.42	93	V766143	☐	O18-009	Core		☐	☐	☐
144.17	145.69	1.52	LST	1.52	100	V766144	☐	O18-009	Core		☐	☐	☐
145.69	147.22	1.53	LST	1.52	99	V766145	☐	O18-009	Core		☐	☐	☐
147.22	148.74	1.52	LST	1.52	100	V766146	☐	O18-009	Core		☐	☐	☐
148.74	150.27	1.53	LST	1.37	90	V766148	☐	O18-009	Core		☐	☐	☐
150.27	151.79	1.52	LST	1.52	100	V766149	☐	O18-009	Core		☐	☐	☐
151.79	153.31	1.52	LST	1.49	98	V766150	☐	O18-009	Core		☐	☐	☐
153.31	154.84	1.53	LST	1.47	96	V766151	☐	O18-009	Core		☐	☐	☐
154.84	156.36	1.52	LST	1.50	99	V766152	☐	O18-009	Core		☐	☐	☐
156.36	157.89	1.53	LST	1.45	95	V766153	☐	O18-009	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
157.89	159.41	1.52	LST	1.52	100	V766154	☐	O18-009	Core		☐	☐	☐
159.41	160.93	1.52	LST	1.52	100	V766156	☐	O18-009	Core		☐	☐	☐
160.93	162.46	1.53	LST	1.52	99	V766157	☐	O18-009	Core		☐	☐	☐
162.46	163.98	1.52	LST	1.49	98	V766158	☐	O18-009	Core		☐	☐	☐
163.98	165.51	1.53	LST	1.25	82	V766159	☐	O18-009	Core		☐	☐	☐
163.98	165.51	1.53	LST	1.25	82	V766160	☐	O18-009	Core		☐	☐	☑
165.51	167.03	1.52	LST	1.39	91	V766161	☐	O18-010	Core		☐	☐	☐
167.03	168.55	1.52	LST	1.45	95	V766162	☐	O18-010	Core		☐	☐	☐
168.55	170.08	1.53	LST	1.52	99	V766163	☐	O18-010	Core		☐	☐	☐
170.08	171.60	1.52	LST	1.40	92	V766164	☐	O18-010	Core		☐	☐	☐
171.60	173.13	1.53	LST	1.45	95	V766165	☐	O18-010	Core		☐	☐	☐
173.13	174.65	1.52	LST	1.50	99	V766166	☐	O18-010	Core		☐	☐	☐
174.65	176.17	1.52	LST	1.50	99	V766167	☐	O18-010	Core		☐	☐	☐
176.17	177.70	1.53	LST	1.22	80	V766168	☐	O18-010	Core		☐	☐	☐
177.70	179.22	1.52	LST	1.52	100	V766169	☐	O18-010	Core		☐	☐	☐
179.22	180.75	1.53	LST	1.52	99	V766170	☐	O18-010	Core		☐	☐	☐
179.22	180.75	1.53	LST	1.52	99	V766171	☐	O18-010	Core		☐	☐	☑
180.75	182.27	1.52	LST	1.48	97	V766172	☐	O18-010	Core		☐	☐	☐
182.27	183.79	1.52	LST	1.34	88	V766173	☐	O18-010	Core		☐	☐	☐
183.79	185.32	1.53	LST	1.35	88	V766174	☐	O18-010	Core		☐	☐	☐
185.32	188.37	3.05	LST	2.94	96	V766175	☐	O18-010	Core		☐	☐	☐
188.37	189.89	1.52	LST	1.52	100	V766176	☐	O18-010	Core		☐	☐	☐
189.89	192.94	3.05	LST	3.05	100	V766177	☐	O18-010	Core		☐	☐	☐
192.94	195.99	3.05	LST	3.03	99	V766178	☐	O18-010	Core		☐	☐	☐
195.99	197.51	1.52	LST	1.52	100	V766179	☐	O18-010	Core		☐	☐	☐
197.51	199.03	1.52	LST	1.33	88	V766180	☐	O18-010	Core		☐	☐	☐
199.03	200.56	1.53	LST	1.34	88	V766182	☐	O18-010	Core		☐	☐	☐
199.03	200.56	1.53	LST	1.34	88	V766183	☐	O18-010	Core		☐	☑	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
200.56	202.08	1.52	LST	1.52	100	V766184	☐	O18-010	Core		☐	☐	☐
202.08	203.61	1.53	LST	1.52	99	V766185	☐	O18-010	Core		☐	☐	☐
203.61	205.13	1.52	LST	1.45	95	V766186	☐	O18-010	Core		☐	☐	☐
205.13	206.65	1.52	LST	1.42	93	V766187	☐	O18-010	Core		☐	☐	☐
206.65	208.18	1.53	LST	1.50	98	V766188	☐	O18-010	Core		☐	☐	☐
208.18	211.23	3.05	LST	2.78	91	V766190	☐	O18-010	Core		☐	☐	☐
211.23	214.23	3.00	LST	3.00	100	V766191	☐	O18-010	Core		☐	☐	☐
214.23	217.32	3.09	LST	2.97	96	V766192	☐	O18-010	Core		☐	☐	☐
217.32	220.37	3.05	LST	3.04	100	V766193	☐	O18-010	Core		☐	☐	☐
220.37	223.42	3.05	LST	3.01	99	V766194	☐	O18-010	Core		☐	☐	☐
223.42	226.47	3.05	LST	2.87	94	V766195	☐	O18-010	Core		☐	☐	☐
226.47	229.51	3.04	LST	3.02	99	V766196	☐	O18-010	Core		☐	☐	☐
229.51	231.04	1.53	LST	1.32	86	V766197	☐	O18-010	Core		☐	☐	☐
231.04	233.78	2.74	LST	2.57	94	V766198	☐	O18-010	Core		☐	☐	☐
233.78	236.83	3.05	LST	2.37	78	V766199	☐	O18-010	Core		☐	☐	☐
236.83	239.88	3.05	LST	2.96	97	V766201	☐	O18-012	Core		☐	☐	☐
239.88	242.93	3.05	LST	2.95	97	V766202	☐	O18-012	Core		☐	☐	☐
242.93	245.97	3.04	LST	2.28	75	V766203	☐	O18-012	Core		☐	☐	☐
245.97	249.02	3.05	LST	2.73	90	V766204	☐	O18-012	Core		☐	☐	☐
249.02	252.07	3.05	LST	2.29	75	V766205	☐	O18-012	Core		☐	☐	☐
252.07	255.12	3.05	LST	1.83	60	V766206	☐	O18-012	Core		☐	☐	☐
255.12	258.17	3.05	LST	2.64	87	V766207	☐	O18-012	Core		☐	☐	☐
258.17	261.21	3.04	LST	2.74	90	V766208	☐	O18-012	Core		☐	☐	☐
261.21	264.26	3.05	LST	2.76	90	V766209	☐	O18-012	Core		☐	☐	☐
264.26	265.00	0.74	LST	0.60	81	V766210	☐	O18-012	Core		☐	☐	☐
265.00	265.92	0.92	LST	0.83	90	V766211	☐	O18-012	Core		☐	☐	☐
265.92	267.31	1.39	LST	1.36	98	V766213	☐	O18-012	Core		☐	☐	☐
267.31	270.36	3.05	LST	2.67	88	V766214	☐	O18-012	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
270.36	273.41	3.05	LST	1.97	65	V766215	☐	O18-012	Core		☐	☐	☐
273.41	276.45	3.04	LST	2.73	90	V766216	☐	O18-012	Core		☐	☐	☐
276.45	279.50	3.05	LST	1.68	55	V766217	☐	O18-012	Core		☐	☐	☐
279.50	282.55	3.05	LST	2.96	97	V766219	☐	O18-012	Core		☐	☐	☐
282.55	284.99	2.44	LST	2.03	83	V766220	☐	O18-012	Core		☐	☐	☐
284.99	288.04	3.05	LST	2.76	90	V766221	☐	O18-012	Core		☐	☐	☐
288.04	289.86	1.82	LST	1.77	97	V766222	☐	O18-012	Core		☐	☐	☐
289.86	291.69	1.83	LST	1.54	84	V766223	☐	O18-012	Core		☐	☐	☐
291.69	293.52	1.83	LST	1.72	94	V766224	☐	O18-012	Core		☐	☐	☐
291.69	293.52	1.83	LST	1.72	94	V766225	☐	O18-012	Core		☐	☐	☑
293.52	295.96	2.44	LST	1.89	77	V766226	☐	O18-012	Core		☐	☐	☐
295.96	298.80	2.84	LST	2.39	84	V766227	☐	O18-012	Core		☐	☐	☐
298.80	300.53	1.73	LST	1.73	100	V766228	☐	O18-012	Core		☐	☐	☐
300.53	302.97	2.44	LST	2.32	95	V766229	☐	O18-012	Core		☐	☐	☐
302.97	306.63	3.66	LST	2.40	66	V766230	☐	O18-012	Core		☐	☐	☐
306.63	307.54	0.91	LST	0.56	62	V766231	☐	O18-012	Core		☐	☐	☐
307.54	310.43	2.89	LST	2.41	83	V766232	☐	O18-012	Core		☐	☐	☐
310.43	311.65	1.22	LST	1.20	98	V766233	☐	O18-012	Core		☐	☐	☐
310.43	311.65	1.22	LST	1.20	98	V766234	☐	O18-012	Core		☐	☑	☐
311.65	314.55	2.90	LST	2.18	75	V766235	☐	O18-012	Core		☐	☐	☐
314.55	317.60	3.05	LST	1.80	59	V766236	☐	O18-012	Core		☐	☐	☐
317.60	318.56	0.96	LST	0.95	99	V766237	☐	O18-012	Core		☐	☐	☐
318.56	320.00	1.44	LST	1.40	97	V766239	☐	O18-012	Core		☐	☐	☐
320.00	322.17	2.17	LST	1.65	76	V766240	☐	O18-012	Core		☐	☐	☐
322.17	323.37	1.20	LST	1.19	99	V766241	☐	O18-014	core		☐	☐	☐
323.37	324.41	1.04	LST	0.97	93	V766242	☐	O18-014	core		☐	☐	☐
324.41	326.10	1.69	LST	1.49	88	V766243	☐	O18-014	core		☐	☐	☐
326.10	328.44	2.34	LST	1.90	81	V766244	☐	O18-014	core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
328.44	329.75	1.31	LST	1.31	100	V766245	☐	O18-014	core		☐	☐	☐
329.75	331.32	1.57	LST	1.56	99	V766246	☐	O18-014	core		☐	☐	☐
331.32	334.37	3.05	LST	2.98	98	V766247	☐	O18-014	core		☐	☐	☐
334.37	336.38	2.01	LST	1.96	98	V766248	☐	O18-014	core		☐	☐	☐
336.38	337.41	1.03	LST	0.99	96	V766249	☐	O18-014	core		☐	☐	☐
337.41	339.67	2.26	LST	2.26	100	V766250	☐	O18-014	core		☐	☐	☐
339.67	341.13	1.46	LST	1.37	94	V766251	☐	O18-014	core		☐	☐	☐
341.13	342.32	1.19	LST	1.19	100	V766253	☐	O18-014	core		☐	☐	☐
342.32	343.95	1.63	LST	0.68	42	V766254	☐	O18-014	core		☐	☐	☐
343.95	345.15	1.20	LST	1.20	100	V766255	☐	O18-014	core		☐	☐	☐
345.15	346.56	1.41	LST	1.24	88	V766256	☐	O18-014	core		☐	☐	☐
346.56	348.39	1.83	LST	1.81	99	V766257	☐	O18-014	core		☐	☐	☐
348.39	350.45	2.06	LST	2.06	100	V766259	☐	O18-014	core		☐	☐	☐
350.45	351.74	1.29	LST	1.15	89	V766260	☐	O18-014	core		☐	☐	☐
351.74	354.79	3.05	LST	1.58	52	V766261	☐	O18-014	core		☐	☐	☐
351.74	354.79	3.05	LST	1.58	52	V766262	☐	O18-014	core		☐	☐	☑
354.79	357.23	2.44	LST	1.67	68	V766263	☐	O18-014	core		☐	☐	☐
357.23	359.05	1.82	LST	1.50	82	V766264	☐	O18-014	core		☐	☐	☐
359.05	361.19	2.14	LST	1.94	91	V766265	☐	O18-014	core		☐	☐	☐
361.19	362.71	1.52	LST	1.46	96	V766266	☐	O18-014	core		☐	☐	☐
362.71	363.32	0.61	LST	0.60	98	V766267	☐	O18-014	core		☐	☐	☐
363.32	365.15	1.83	LST	1.52	83	V766268	☐	O18-014	core		☐	☐	☐
365.15	366.98	1.83	LST	1.62	89	V766269	☐	O18-014	core		☐	☐	☐
366.98	368.81	1.83	LST	1.25	68	V766270	☐	O18-014	core		☐	☐	☐
368.81	370.65	1.84	LST	1.70	92	V766272	☐	O18-014	core		☐	☐	☐
368.81	370.65	1.84	LST	1.70	92	V766273	☐	O18-014	core		☐	☑	☐
370.65	373.99	3.34	CMS, LST	2.00	60	V766274	☐	O18-014	core		☐	☐	☐
373.99	377.04	3.05	CMS	2.31	76	V766276	☐	O18-014	core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
377.04	380.09	3.05	CMS	2.32	76	V766277	☐	O18-014	core		☐	☐	☐
380.09	381.61	1.52	CMS	1.13	74	V766278	☐	O18-014	core		☐	☐	☐
381.61	383.13	1.52	CMS	1.17	77	V766279	☐	O18-014	core		☐	☐	☐
383.13	386.18	3.05	CMS	2.41	79	V766280	☐	O18-014	core		☐	☐	☐
386.18	389.23	3.05	CMS	2.65	87	V766281	☐	O18-015	Core		☐	☐	☐
389.23	391.97	2.74	CMS	2.33	85	V766282	☐	O18-015	Core		☐	☐	☐
391.97	395.33	3.36	CMS	3.16	94	V766283	☐	O18-015	Core		☐	☐	☐
395.33	398.37	3.04	CMS	2.34	77	V766284	☐	O18-015	Core		☐	☐	☐
398.37	401.42	3.05	CMS	2.86	94	V766285	☐	O18-015	Core		☐	☐	☐
401.42	404.47	3.05	CMS	2.83	93	V766286	☐	O18-015	Core		☐	☐	☐
404.47	407.52	3.05	CMS	2.93	96	V766287	☐	O18-015	Core		☐	☐	☐
407.52	410.57	3.05	CMS	2.92	96	V766288	☐	O18-015	Core		☐	☐	☐
410.57	413.61	3.04	CMS	2.97	98	V766289	☐	O18-015	Core		☐	☐	☐
410.57	413.61	3.04	CMS	2.97	98	V766290	☐	O18-015	Core		☐	☐	☑
413.61	416.66	3.05	CMS	2.97	97	V766291	☐	O18-015	Core		☐	☐	☐
416.66	419.71	3.05	CMS	3.04	100	V766292	☐	O18-015	Core		☐	☐	☐
419.71	422.76	3.05	CMS	3.00	98	V766293	☐	O18-015	Core		☐	☐	☐
422.76	425.81	3.05	CMS	2.91	95	V766294	☐	O18-015	Core		☐	☐	☐
425.81	428.83	3.02	CMS	2.95	98	V766295	☐	O18-015	Core		☐	☐	☐
428.83	431.90	3.07	CMS	2.95	96	V766296	☐	O18-015	Core		☐	☐	☐
431.90	434.95	3.05	CMS	3.05	100	V766297	☐	O18-015	Core		☐	☐	☐
434.95	438.00	3.05	CMS	2.96	97	V766299	☐	O18-015	Core		☐	☐	☐
438.00	441.05	3.05	CMS	2.90	95	V766300	☐	O18-015	Core		☐	☐	☐
441.05	444.09	3.04	CMS	2.99	98	V766301	☐	O18-015	Core		☐	☐	☐
444.09	447.14	3.05	CMS	2.92	96	V766302	☐	O18-015	Core		☐	☐	☐
447.14	450.19	3.05	CMS	2.98	98	V766303	☐	O18-015	Core		☐	☐	☐
450.19	453.24	3.05	CMS	2.54	83	V766304	☐	O18-015	Core		☐	☐	☐
453.24	456.29	3.05	CMS	2.99	98	V766305	☐	O18-015	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
456.29	457.51	1.22	CMS	1.02	84	V766306	☐	O18-015	Core		☐	☐	☐
457.51	459.33	1.82	CMS	1.65	91	V766307	☐	O18-015	Core		☐	☐	☐
459.33	462.38	3.05	CMS	2.80	92	V766308	☐	O18-015	Core		☐	☐	☐
462.38	465.43	3.05	CMS	2.88	94	V766309	☐	O18-015	Core		☐	☐	☐
465.43	466.95	1.52	CMS	0.65	43	V766310	☐	O18-015	Core		☐	☐	☐
466.95	468.78	1.83	CMS	1.59	87	V766312	☐	O18-015	Core		☐	☐	☐
468.78	472.14	3.36	CMS	0.95	28	V766314	☐	O18-015	Core		☐	☐	☐
472.14	474.88	2.74	CMS	1.63	59	V766315	☐	O18-015	Core		☐	☐	☐
474.88	476.71	1.83	CMS	1.04	57	V766316	☐	O18-015	Core		☐	☐	☐
476.71	479.76	3.05	CMS	2.09	69	V766317	☐	O18-015	Core		☐	☐	☐
479.76	481.89	2.13	CMS	1.45	68	V766318	☐	O18-015	Core		☐	☐	☐
479.76	481.89	2.13	CMS	1.45	68	V766319	☐	O18-015	Core		☐	☑	☐
481.89	483.72	1.83	CMS, MST	1.83	100	V766320	☐	O18-015	Core		☐	☐	☐
483.72	486.77	3.05	MST	3.01	99	V766321	☐	O18-021	CORE		☐	☐	☐
486.77	488.59	1.82	MST	1.26	69	V766322	☐	O18-021	CORE		☐	☐	☐

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From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
0.00	3.08	3.08	NSP	--	No recovery							
3.08	415.20	412.12	CMS	MG	Turbidites with intermittent bioclastic debris flows. Weak to moderate oxidation along fractures and bedding. Weak to locally moderate decalciification. Lower portion becomes limestone dominant with locally variable fossil fragments.							
415.20	450.40	35.20	MST	FG	Black, fine grained, non-calcareous, moderately silicified, carbonaceous mudstone.							
						DK	BK					
450.40	528.65	78.25	MST	FG	Black, fine grained thinly laminated mudstone with intermittent silty laminations. Unit is less dark and less silvery/shiny than previous MD10 package. Pyrite lenses are pominent throughout.							
528.65	528.95	0.30	FLT	--	anubis fult. Rubbly zone of highly oxidized, drk, non-calcareous MD20 unit							
									CLY	W		
									OXI	M		
528.95	531.88	2.93	LST	CG	Tan to light-gray, coarse grained, limestone unit. Limestone unit contains sub-mm, rounded, dark clasts of possible mudstone (?). Occasional, discontinuous, mm-sized calcite veins locally observed. Upper portion of the unit is moderately oxidized long veins. Oxidized cavities locally found within calcite veins.							

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
0.00	3.01	3.01	0	0	0.00	0	--	--	--	no recovery
3.01	5.49	2.48	1.92	77	1.06	43	2R	2H	3W	small RBZ
5.49	8.53	3.04	2.44	80	2.09	69	2R	3H	2W	rbz
8.53	11.58	3.05	2.75	90	1.55	51	3R	3H	4W	rbz
11.58	14.63	3.05	2.6	85	1.73	57	4R	3H	3W	rbz
14.63	17.68	3.05	2.07	68	0.95	31	3R	3H	2W	rbz
17.68	20.73	3.05	1.25	41	0.53	17	3R	3H	2W	rbz
20.73	23.77	3.04	2.99	98	2.59	85	4R	3H	2W	
23.77	26.82	3.05	2.32	76	1.80	59	3R	3H	1W	rbz
26.82	29.87	3.05	2.63	86	1.99	65	3R	2H	1W	rbz
29.87	32.92	3.05	3.04	100	2.54	83	3R	3H	1W	
32.92	35.97	3.05	2.99	98	1.94	64	4R	3H	1W	rbz
35.97	39.01	3.04	2.85	94	1.28	42	3R	2H	1W	rbz
39.01	42.06	3.05	2.09	69	1.98	65	3R	4H	1W	
42.06	45.11	3.05	3.04	100	1.77	58	4R	3H	1W	
45.11	48.16	3.05	2.94	96	1.54	50	4R	3H	1W	
48.16	51.21	3.05	3	98	2.68	88	4R	3H	1W	
51.21	54.25	3.04	2.98	98	2.25	74	4R	4H	1W	
54.25	57.30	3.05	3.04	100	2.29	75	4R	4H	1W	
57.30	60.35	3.05	2.98	98	2.58	85	4R	5H	1W	
60.35	63.40	3.05	2.83	93	2.65	87	4R	5H	1W	
63.40	66.45	3.05	3.04	100	2.78	91	3R	4H	1W	
66.45	69.49	3.04	2.95	97	2.64	87	2R	3H	1W	
69.49	72.54	3.05	2.9	95	2.42	79	2R	2H	1W	competent rock with local rubble zone and some clay oxidized alterations along fractures.
72.54	75.59	3.05	3	98	2.74	90	3R	2H	1W	
75.59	78.64	3.05	2.92	96	2.66	87	3R	2H	1W	
78.64	81.69	3.05	2.08	68	0.98	32	4R	1H	1W	rubble zone with clay oxidized alterations along the fractures.

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
81.69	84.73	3.04	2.79	92	2.11	69	2R	2H	1W	competent rock with oxidized clay alterations along fractures.
84.73	87.78	3.05	2.8	92	1.93	63	2R	2H	1W	competent rock with local rubble areas and oxidized clay alteration along fractures
87.78	90.83	3.05	2.84	93	2.05	67	2R	1H	1W	competent rock with local gouge.
90.83	93.88	3.05	2.96	97	2.70	89	2R	2H	1W	competent rock with oxidized clay alterations along fractures.
93.88	96.93	3.05	3	98	2.17	71	2R	2H	1W	
96.93	99.97	3.04	2.82	93	2.36	78	2R	2H	1W	
99.97	103.02	3.05	3.02	99	2.77	91	2R	3H	1W	
103.02	106.07	3.05	1.89	62	0.97	32	3R	2H	1W	rubble zone with local competent rock. Oxidzed clay alterations along fractures.
106.07	109.12	3.05	2.74	90	2.42	79	3R	3H	1W	competent rock with local rubble. Oxidized clay alterations along fractures.
109.12	112.17	3.05	2.65	87	1.74	57	3R	2H	1W	Rbz. With oxidized clay alteration along fractures.
112.17	115.21	3.04	2.35	77	1.14	38	3R	3H	1W	RBZ
115.21	118.26	3.05	2.78	91	0.87	29	4R	3H	1W	RBZ
118.26	121.31	3.05	2.98	98	2.49	82	4R	3H	1W	RBZ
121.31	124.36	3.05	2.92	96	2.79	91	3R	4H	1W	
124.36	127.41	3.05	3.01	99	2.69	88	3R	4H	1W	RBZ
127.41	130.45	3.04	3.02	99	2.82	93	3R	3H	1W	
130.45	133.50	3.05	3.04	100	2.80	92	3R	4H	1W	
133.50	136.55	3.05	2.9	95	1.28	42	3R	3H	1W	RBZ
136.55	139.59	3.04	2.72	89	2.14	70	4R	3H	1W	RBZ
139.59	142.65	3.06	2.95	96	2.79	91	4R	4H	1W	
142.65	145.69	3.04	2.99	98	2.69	88	3R	4H	1W	
145.69	148.74	3.05	2.72	89	2.45	80	3R	4H	1W	
148.74	151.79	3.05	2.85	93	2.12	70	4R	3H	1W	
151.79	154.84	3.05	2.7	89	2.22	73	3R	3H	1W	
154.84	157.89	3.05	3.04	100	2.77	91	3R	4H	1W	
157.89	160.93	3.04	3.04	100	3.04	100	3R	4H	1W	
160.93	163.98	3.05	3.04	100	2.63	86	4R	4H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
163.98	167.03	3.05	3.04	100	3.04	100	3R	4H	1W	
167.03	170.08	3.05	3.04	100	2.50	82	4R	4H	1W	RBZ
170.08	173.13	3.05	3.04	100	2.73	90	4R	4H	1W	
173.13	176.17	3.04	3.04	100	2.81	92	4R	3H	1W	
176.17	179.22	3.05	2.26	74	1.85	61	3R	2H	1W	RBZ
179.22	182.27	3.05	3.04	100	1.95	64	3R	3H	1W	
182.27	185.32	3.05	3.02	99	2.34	77	4R	3H	1W	
185.32	188.37	3.05	2.81	92	2.47	81	1R	2H	1W	
188.37	191.41	3.04	2.91	96	2.86	94	2R	3H	1W	
191.41	194.46	3.05	2.46	81	1.58	52	3R	3H	1W	
194.46	197.51	3.05	2.85	93	2.50	82	3R	3H	1W	
197.51	200.56	3.05	2.86	94	2.14	70	3R	3H	1W	
200.56	203.61	3.05	2.93	96	2.59	85	3R	3H	1W	
203.61	206.65	3.04	2.91	96	2.40	79	3R	3H	1W	
206.65	209.70	3.05	2.78	91	2.41	79	3R	3H	1W	RBZ
209.70	212.75	3.05	2.88	94	2.55	84	3R	3H	1W	
212.75	215.80	3.05	2.2	72	1.55	51	3R	3H	1W	rbz
215.80	218.85	3.05	2.52	83	1.77	58	3R	3H	1W	
218.85	221.89	3.04	2.51	83	2.18	72	3R	3H	1W	
221.89	224.94	3.05	2.77	91	2.06	68	3R	3H	1W	rbz
224.94	227.99	3.05	3.04	100	2.08	68	3R	3H	1W	
227.99	231.04	3.05	2.85	93	2.58	85	2R	3H	1W	
231.04	234.09	3.05	2.98	98	2.92	96	3R	3H	1W	
234.09	237.13	3.04	2.98	98	2.74	90	2R	3H	1W	
237.13	240.18	3.05	2.89	95	1.84	60	2R	3H	1W	RBZ
240.18	243.23	3.05	2.95	97	2.38	78	2R	3H	1W	
243.23	246.28	3.05	2.99	98	2.19	72	2R	3H	1W	
246.28	249.33	3.05	2.99	98	2.22	73	3R	3H	1W	
249.33	252.37	3.04	2.62	86	1.62	53	3R	3H	1W	
252.37	255.42	3.05	2.63	86	2.15	70	3R	3H	1W	
255.42	258.47	3.05	2.83	93	2.39	78	2R	3H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
258.47	261.52	3.05	2.99	98	1.59	52	2R	3H	1W	
261.52	264.57	3.05	2.72	89	2.38	78	3R	3H	1W	competent rock with local rubble zone.
264.57	267.61	3.04	2.24	74	1.77	58	3R	3H	1W	competent rock with local rubble zone.
267.61	270.66	3.05	2.68	88	1.81	59	3R	3H	1W	competent rock with local rubble zones.
270.66	273.71	3.05	2.75	90	1.27	42	2R	3H	1W	rbz.
273.71	276.76	3.05	1.76	58	1.14	37	3R	3H	1W	rbz.
276.76	279.81	3.05	1.85	61	0.53	17	3R	3H	1W	rbz.
279.81	282.85	3.04	2.45	81	0.60	20	3R	2H	1W	Rbz.
282.85	285.90	3.05	2.15	70	1.55	51	3R	2H	1W	RBZ with some competent rock and gouge.
285.90	288.95	3.05	2.75	90	1.42	47	2R	3H	1W	rbz.
288.95	292.00	3.05	2.75	90	1.80	59	2R	3H	1W	
292.00	295.05	3.05	2.8	92	1.76	58	3R	2H	1W	rbz.
295.05	298.09	3.04	2.9	95	1.91	63	2R	3H	1W	RBZ
298.09	301.14	3.05	3	98	2.24	73	2R	2H	1W	competent rock with gouge.
301.14	304.19	3.05	2.37	78	1.40	46	2R	3H	1W	
304.19	307.24	3.05	3.02	99	2.44	80	3R	3H	1W	Competent rock with 1 rubble area.
307.24	310.29	3.05	2.9	95	1.92	63	2R	1H	1W	competent rock, 2 rubble areas with gouge.
310.29	313.33	3.04	2.68	88	1.45	48	2R	3H	1W	
313.33	316.38	3.05	2.98	98	1.83	60	3R	2H	1W	
316.38	319.43	3.05	2.7	89	1.16	38	3R	2H	1W	
319.43	322.48	3.05	2.5	82	1.17	38	3R	3H	1W	
322.48	325.53	3.05	2.92	96	1.84	60	3R	3H	1W	
325.53	328.57	3.04	2.2	72	0.60	20	2R	3H	1W	
328.57	331.62	3.05	1.97	65	0.81	27	3R	1H	1W	rbz with some competent rock and gouge areas.
331.62	334.67	3.05	2.24	73	0.78	26	3R	3H	1W	rubble zone with some competwetnr ock.
334.67	337.72	3.05	1.67	55	0.80	26	3R	1H	1W	competent rock with gouge.
337.72	340.77	3.05	2.4	79	0.16	5	3R	2H	1W	mix of competent rock and rubble with local gouge.
340.77	343.38	2.61	0.92	35	0.37	14	3R	3H	1W	rbz.
343.38	346.86	3.48	1.12	32	0.26	7	3R	3H	1W	rbz.

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
346.86	349.91	3.05	1.67	55	0.13	4	3R	3H	1W	rbz.
349.91	352.96	3.05	2.67	88	1.50	49	3R	3H	1W	competent rock with local rubble areas.
352.96	356.01	3.05	1.83	60	1.10	36	3R	2H	1W	mix of rubble and competent rock with gouge.
356.01	359.05	3.04	1.59	52	0.23	8	3R	2H	1W	rbz with local gouge.
359.05	362.10	3.05	2.71	89	1.67	55	3R	3H	1W	
362.10	365.15	3.05	2.29	75	0.62	20	3R	3H	1W	
365.15	368.20	3.05	2.58	85	0.83	27	3R	3H	1W	
368.20	371.25	3.05	2.27	74	0.72	24	3R	3H	1W	
371.25	374.29	3.04	0.7	23	0.23	8	3R	2H	1W	rbz.
374.29	377.34	3.05	1.88	62	0.65	21	3R	2H	1W	rubble zone with some competent rock.
377.34	380.39	3.05	2.25	74	1.15	38	3R	3H	1W	some competent rock with many rubble areas.
380.39	383.44	3.05	1.6	52	0.55	18	3R	3H	1W	rbz.
383.44	386.49	3.05	1.5	49	0.53	17	3R	3H	1W	rbz with local competent rock.
386.49	389.53	3.04	2.7	89	1.89	62	3R	2H	1W	rubble zone with gouge and local competent rock.
389.53	392.58	3.05	2.74	90	1.80	59	3R	3H	1W	
392.58	395.63	3.05	2.82	92	1.09	36	3R	3H	1W	
395.63	398.68	3.05	2.65	87	1.67	55	3R	3H	1W	
398.68	401.73	3.05	2.68	88	1.25	41	3R	3H	1W	
401.73	404.77	3.04	2.66	88	1.46	48	3R	3H	1W	
404.77	407.82	3.05	2.83	93	2.17	71	3R	3H	1W	
407.82	410.87	3.05	2.67	88	2.19	72	3R	3H	1W	
410.87	413.92	3.05	2.43	80	1.54	50	3R	3H	1W	Rubble zone from 413.00-413.12m. Weakly reactive mudstone section from 412.26-413.12m.
413.92	416.97	3.05	1.54	50	0.48	16	1R	2H	1W	Strong reactivity from 413.92- 415.08m, and non-weakly reactive from 415.08-416.97m.
416.97	420.01	3.04	1.56	51	0.43	14	0R	3H	1W	
420.01	423.06	3.05	2.63	86	1.30	43	0R	3H	1W	Fractured surfaces are rich in graphite.
423.06	426.11	3.05	2.58	85	0.28	9	0R	3H	1W	
426.11	429.16	3.05	2.9	95	1.30	43	0R	3H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
429.16	432.21	3.05	2.9	95	2.26	74	0R	3H	1W	
432.21	435.25	3.04	2.82	93	0.99	33	0R	3H	1W	
435.25	438.30	3.05	2.23	73	0.38	12	0R	3H	1W	
438.30	441.35	3.05	2.1	69	0.68	22	0R	3H	1W	
441.35	444.40	3.05	1.97	65	0.84	28	0R	2H	1W	
444.40	447.45	3.05	2.6	85	1.32	43	0R	3H	1W	
447.45	450.50	3.05	2.75	90	1.15	38	0R	3H	1W	
450.50	453.54	3.04	2.77	91	2.21	73	0R	3H	1W	
453.54	456.59	3.05	2.8	92	2.33	76	0R	3H	1W	
456.59	459.64	3.05	2.72	89	1.79	59	0R	3H	1W	
459.64	462.67	3.03	2.22	73	0.34	11	0R	3H	1W	
462.67	465.73	3.06	2.77	91	1.49	49	0R	3H	1W	
465.73	468.78	3.05	2.2	72	0.66	22	0R	3H	1W	rbz from 466.65 - 468.78
468.78	471.83	3.05	2.81	92	1.31	43	0R	3H	1W	rbz from 468.78 - 469.88
471.83	474.88	3.05	2.91	95	1.51	50	0R	3H	1W	
474.88	477.93	3.05	2.2	72	0.59	19	0R	3H	1W	
477.93	480.97	3.04	2.7	89	0.65	21	0R	2H	1W	
480.97	484.02	3.05	3.04	100	1.43	47	0R	3H	1W	
484.02	487.07	3.05	3	98	2.08	68	0R	3H	1W	
487.07	490.12	3.05	2.92	96	1.19	39	0R	2H	1W	
490.12	493.17	3.05	2.9	95	1.25	41	0R	3H	1W	
493.17	496.21	3.04	2.68	88	0.86	28	0R	2H	1W	
496.21	499.26	3.05	3	98	2.04	67	0R	3H	1W	
499.26	502.31	3.05	2.86	94	2.14	70	0R	3H	1W	
502.31	505.36	3.05	2.9	95	1.10	36	0R	3H	1W	
505.36	508.41	3.05	2.68	88	0.59	19	0R	3H	1W	
508.41	511.45	3.04	2.89	95	1.23	40	0R	3H	1W	
511.45	514.50	3.05	2.17	71	0.91	30	0R	3H	1W	
514.50	517.55	3.05	2.45	80	0.79	26	0R	3H	1W	
517.55	520.60	3.05	2.72	89	1.77	58	0R	3H	1W	
520.60	523.65	3.05	2.45	80	0.57	19	0R	2H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
523.65	526.69	3.04	2.2	72	0.72	24	0R	2H	1W	
526.69	529.74	3.05	1.48	49	0.10	3	2R	2H	1W	
529.74	531.88	2.14	1.85	86	1.56	73	4R	3H	1W	

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From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
0.00	0.00	0.00	-QC-	0.00	0	V765634	☐	O18-023	core	SR5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V765679	☐	O18-024	CORE	4C	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V762874	☐	O18-013	Core	OX6	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V765649	☐	O18-024	CORE	SR5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V765623	☐	O18-023	core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V765609	☐	O18-023	core	OX6	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V763000	☐	O18-020	core	OX7	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V762979	☐	O18-020	core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V762956	☐	O18-017	Core	SR5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V762940	☐	O18-017	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V762927	☐	O18-017	Core	SR5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V762911	☐	O18-016	Core	OX7	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V765669	☐	O18-024	CORE		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V762907	☐	O18-016	Core	OX6	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V762889	☐	O18-016	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V762876	☐	O18-013	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V762964	☐	O18-020	core	OX6	☐	☐	☐
3.01	5.49	2.48	NSP	1.92	77	V762858	☐	O18-013	Core		☐	☐	☐
5.49	8.53	3.04	CMS	2.44	80	V762859	☐	O18-013	Core		☐	☐	☐
8.53	11.58	3.05	CMS	2.75	90	V762860	☐	O18-013	Core		☐	☐	☐
11.58	14.63	3.05	CMS	2.60	85	V762861	☐	O18-013	Core		☐	☐	☐
14.63	17.68	3.05	CMS	2.07	68	V762862	☐	O18-013	Core		☐	☐	☐
17.68	20.73	3.05	CMS	1.25	41	V762863	☐	O18-013	Core		☐	☐	☐
20.73	23.77	3.04	CMS	2.99	98	V762864	☐	O18-013	Core		☐	☐	☐
23.77	26.82	3.05	CMS	2.32	76	V762865	☐	O18-013	Core		☐	☐	☐
26.82	29.87	3.05	CMS	2.63	86	V762866	☐	O18-013	Core		☐	☐	☐
29.87	32.92	3.05	CMS	3.04	100	V762867	☐	O18-013	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
29.87	32.92	3.05	CMS	3.04	100	V762868	☐	O18-013	Core		☐	☐	☑
32.92	35.97	3.05	CMS	2.99	98	V762869	☐	O18-013	Core		☐	☐	☐
35.97	39.01	3.04	CMS	2.85	94	V762870	☐	O18-013	Core		☐	☐	☐
39.01	42.06	3.05	CMS	2.09	69	V762871	☐	O18-013	Core		☐	☐	☐
39.01	42.06	3.05	CMS	2.09	69	V762872	☐	O18-013	Core		☐	☑	☐
42.06	45.11	3.05	CMS	3.04	100	V762873	☐	O18-013	Core		☐	☐	☐
45.11	48.16	3.05	CMS	2.94	96	V762875	☐	O18-013	Core		☐	☐	☐
48.16	51.21	3.05	CMS	3.00	98	V762877	☐	O18-013	Core		☐	☐	☐
51.21	54.25	3.04	CMS	2.98	98	V762878	☐	O18-013	Core		☐	☐	☐
54.25	57.30	3.05	CMS	3.04	100	V762879	☐	O18-013	Core		☐	☐	☐
57.30	60.35	3.05	CMS	2.98	98	V762880	☐	O18-013	Core		☐	☐	☐
60.35	63.40	3.05	CMS	2.83	93	V762881	☐	O18-016	Core		☐	☐	☐
63.40	66.45	3.05	CMS	3.04	100	V762882	☐	O18-016	Core		☐	☐	☐
66.45	69.49	3.04	CMS	2.95	97	V762883	☐	O18-016	Core		☐	☐	☐
69.49	72.54	3.05	CMS	2.90	95	V762884	☐	O18-016	Core		☐	☐	☐
72.54	75.59	3.05	CMS	3.00	98	V762885	☐	O18-016	Core		☐	☐	☐
75.59	78.64	3.05	CMS	2.92	96	V762886	☐	O18-016	Core		☐	☐	☐
78.64	81.69	3.05	CMS	2.08	68	V762887	☐	O18-016	Core		☐	☐	☐
81.69	84.73	3.04	CMS	2.79	92	V762888	☐	O18-016	Core		☐	☐	☐
84.73	87.78	3.05	CMS	2.80	92	V762890	☐	O18-016	Core		☐	☐	☐
87.78	90.83	3.05	CMS	2.84	93	V762891	☐	O18-016	Core		☐	☐	☐
90.83	93.88	3.05	CMS	2.96	97	V762892	☐	O18-016	Core		☐	☐	☐
93.88	96.93	3.05	CMS	3.00	98	V762893	☐	O18-016	Core		☐	☐	☐
96.93	99.97	3.04	CMS	2.82	93	V762894	☐	O18-016	Core		☐	☐	☐
99.97	103.02	3.05	CMS	3.02	99	V762895	☐	O18-016	Core		☐	☐	☐
99.97	103.02	3.05	CMS	3.02	99	V762896	☐	O18-016	Core		☐	☑	☐
103.02	106.07	3.05	CMS	1.89	62	V762897	☐	O18-016	Core		☐	☐	☐
106.07	109.12	3.05	CMS	2.74	90	V762898	☐	O18-016	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
109.12	112.17	3.05	CMS	2.65	87	V762899	☐	O18-016	Core		☐	☐	☐
112.17	115.21	3.04	CMS	2.35	77	V762900	☐	O18-016	Core		☐	☐	☐
115.21	118.26	3.05	CMS	2.78	91	V762901	☐	O18-016	Core		☐	☐	☐
118.26	121.31	3.05	CMS	2.98	98	V762902	☐	O18-016	Core		☐	☐	☐
121.31	124.36	3.05	CMS	2.92	96	V762903	☐	O18-016	Core		☐	☐	☐
124.36	127.41	3.05	CMS	3.01	99	V762904	☐	O18-016	Core		☐	☐	☐
127.41	130.45	3.04	CMS	3.02	99	V762905	☐	O18-016	Core		☐	☐	☐
130.45	133.50	3.05	CMS	3.04	100	V762906	☐	O18-016	Core		☐	☐	☐
133.50	136.55	3.05	CMS	2.90	95	V762908	☐	O18-016	Core		☐	☐	☐
133.50	136.55	3.05	CMS	2.90	95	V762909	☐	O18-016	Core		☐	☐	☑
136.55	139.59	3.04	CMS	2.72	89	V762910	☐	O18-016	Core		☐	☐	☐
139.59	142.65	3.06	CMS	2.95	96	V762912	☐	O18-016	Core		☐	☐	☐
142.65	145.69	3.04	CMS	2.99	98	V762913	☐	O18-016	Core		☐	☐	☐
145.69	148.74	3.05	CMS	2.72	89	V762914	☐	O18-016	Core		☐	☐	☐
148.74	151.79	3.05	CMS	2.85	93	V762915	☐	O18-016	Core		☐	☐	☐
151.79	154.84	3.05	CMS	2.70	89	V762916	☐	O18-016	Core		☐	☐	☐
154.84	157.89	3.05	CMS	3.04	100	V762917	☐	O18-016	Core		☐	☐	☐
157.89	160.93	3.04	CMS	3.04	100	V762918	☐	O18-016	Core		☐	☐	☐
160.93	163.98	3.05	CMS	3.04	100	V762919	☐	O18-016	Core		☐	☐	☐
163.98	167.03	3.05	CMS	3.04	100	V762920	☐	O18-016	Core		☐	☐	☐
167.03	170.08	3.05	CMS	3.04	100	V762921	☐	O18-017	Core		☐	☐	☐
170.08	173.13	3.05	CMS	3.04	100	V762922	☐	O18-017	Core		☐	☐	☐
173.13	176.17	3.04	CMS	3.04	100	V762923	☐	O18-017	Core		☐	☐	☐
176.17	179.22	3.05	CMS	2.26	74	V762924	☐	O18-017	Core		☐	☐	☐
179.22	182.27	3.05	CMS	3.04	100	V762925	☐	O18-017	Core		☐	☐	☐
182.27	185.32	3.05	CMS	3.02	99	V762926	☐	O18-017	Core		☐	☐	☐
185.32	188.37	3.05	CMS	2.81	92	V762928	☐	O18-017	Core		☐	☐	☐
188.37	191.41	3.04	CMS	2.91	96	V762929	☐	O18-017	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
191.41	194.46	3.05	CMS	2.46	81	V762930	☐	O18-017	Core		☐	☐	☐
194.46	197.51	3.05	CMS	2.85	93	V762931	☐	O18-017	Core		☐	☐	☐
197.51	200.56	3.05	CMS	2.86	94	V762932	☐	O18-017	Core		☐	☐	☐
200.56	203.61	3.05	CMS	2.93	96	V762933	☐	O18-017	Core		☐	☐	☐
203.61	206.65	3.04	CMS	2.91	96	V762934	☐	O18-017	Core		☐	☐	☐
206.65	209.70	3.05	CMS	2.78	91	V762935	☐	O18-017	Core		☐	☐	☐
209.70	212.75	3.05	CMS	2.88	94	V762936	☐	O18-017	Core		☐	☐	☐
209.70	212.75	3.05	CMS	2.88	94	V762937	☐	O18-017	Core		☐	☑	☐
212.75	215.80	3.05	CMS	2.20	72	V762938	☐	O18-017	Core		☐	☐	☐
215.80	218.85	3.05	CMS	2.52	83	V762939	☐	O18-017	Core		☐	☐	☐
218.85	221.89	3.04	CMS	2.51	83	V762941	☐	O18-017	Core		☐	☐	☐
221.89	224.94	3.05	CMS	2.77	91	V762942	☐	O18-017	Core		☐	☐	☐
224.94	227.99	3.05	CMS	3.04	100	V762943	☐	O18-017	Core		☐	☐	☐
227.99	231.04	3.05	CMS	2.85	93	V762944	☐	O18-017	Core		☐	☐	☐
231.04	234.09	3.05	CMS	2.98	98	V762945	☐	O18-017	Core		☐	☐	☐
234.09	237.13	3.04	CMS	2.98	98	V762946	☐	O18-017	Core		☐	☐	☐
237.13	240.18	3.05	CMS	2.89	95	V762947	☐	O18-017	Core		☐	☐	☐
240.18	243.23	3.05	CMS	2.95	97	V762948	☐	O18-017	Core		☐	☐	☐
243.23	246.28	3.05	CMS	2.99	98	V762949	☐	O18-017	Core		☐	☐	☐
243.23	246.28	3.05	CMS	2.99	98	V762950	☐	O18-017	Core		☐	☐	☑
246.28	249.33	3.05	CMS	2.99	98	V762951	☐	O18-017	Core		☐	☐	☐
249.33	252.37	3.04	CMS	2.62	86	V762952	☐	O18-017	Core		☐	☐	☐
252.37	255.42	3.05	CMS	2.63	86	V762953	☐	O18-017	Core		☐	☐	☐
255.42	258.47	3.05	CMS	2.83	93	V762954	☐	O18-017	Core		☐	☐	☐
258.47	261.52	3.05	CMS	2.99	98	V762955	☐	O18-017	Core		☐	☐	☐
261.52	264.57	3.05	CMS	2.72	89	V762957	☐	O18-017	Core		☐	☐	☐
264.57	267.61	3.04	CMS	2.24	74	V762958	☐	O18-017	Core		☐	☐	☐
267.61	270.66	3.05	CMS	2.68	88	V762959	☐	O18-017	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
270.66	273.71	3.05	CMS	2.75	90	V762960	☐	O18-017	Core		☐	☐	☐
273.71	276.76	3.05	CMS	1.76	58	V762961	☐	O18-020	core		☐	☐	☐
276.76	279.81	3.05	CMS	1.85	61	V762962	☐	O18-020	core		☐	☐	☐
279.81	282.85	3.04	CMS	2.45	81	V762963	☐	O18-020	core		☐	☐	☐
282.85	285.90	3.05	CMS	2.15	70	V762965	☐	O18-020	core		☐	☐	☐
285.90	288.95	3.05	CMS	2.75	90	V762966	☐	O18-020	core		☐	☐	☐
288.95	292.00	3.05	CMS	2.75	90	V762967	☐	O18-020	core		☐	☐	☐
292.00	295.05	3.05	CMS	2.80	92	V762968	☐	O18-020	core		☐	☐	☐
295.05	298.09	3.04	CMS	2.90	95	V762969	☐	O18-020	core		☐	☐	☐
298.09	301.14	3.05	CMS	3.00	98	V762970	☐	O18-020	core		☐	☐	☐
301.14	304.19	3.05	CMS	2.37	78	V762971	☐	O18-020	core		☐	☐	☐
304.19	307.24	3.05	CMS	3.02	99	V762972	☐	O18-020	core		☐	☐	☐
307.24	310.29	3.05	CMS	2.90	95	V762973	☐	O18-020	core		☐	☐	☐
307.24	310.29	3.05	CMS	2.90	95	V762974	☐	O18-020	core		☐	☑	☐
310.29	313.33	3.04	CMS	2.68	88	V762975	☐	O18-020	core		☐	☐	☐
313.33	316.38	3.05	CMS	2.98	98	V762976	☐	O18-020	core		☐	☐	☐
316.38	319.43	3.05	CMS	2.70	89	V762977	☐	O18-020	core		☐	☐	☐
319.43	322.48	3.05	CMS	2.50	82	V762978	☐	O18-020	core		☐	☐	☐
322.48	325.53	3.05	CMS	2.92	96	V762980	☐	O18-020	core		☐	☐	☐
325.53	327.00	1.47	CMS	1.30	88	V762981	☐	O18-020	core		☐	☐	☐
327.00	328.57	1.57	CMS	1.01	64	V762982	☐	O18-020	core		☐	☐	☐
328.57	330.32	1.75	CMS	1.11	63	V762983	☐	O18-020	core		☐	☐	☐
330.32	331.62	1.30	CMS	1.12	86	V762984	☐	O18-020	core		☐	☐	☐
331.62	333.30	1.68	CMS	1.32	79	V762985	☐	O18-020	core		☐	☐	☐
333.30	334.67	1.37	CMS	1.22	89	V762986	☐	O18-020	core		☐	☐	☐
334.67	336.16	1.49	CMS	0.89	60	V762987	☐	O18-020	core		☐	☐	☐
336.16	337.72	1.56	CMS	0.70	45	V762988	☐	O18-020	core		☐	☐	☐
337.72	339.56	1.84	CMS	1.13	61	V762989	☐	O18-020	core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
337.72	339.56	1.84	CMS	1.13	61	V762990	☐	O18-020	core		☐	☐	☑
339.56	340.77	1.21	CMS	1.03	85	V762991	☐	O18-020	core		☐	☐	☐
340.77	342.50	1.73	CMS	0.45	26	V762992	☐	O18-020	core		☐	☐	☐
342.50	344.00	1.50	CMS	0.50	33	V762993	☐	O18-020	core		☐	☐	☐
344.00	346.86	2.86	CMS	0.99	35	V762994	☐	O18-020	core		☐	☐	☐
346.86	348.80	1.94	CMS	0.95	49	V762995	☐	O18-020	core		☐	☐	☐
348.80	349.91	1.11	CMS	0.71	64	V762996	☐	O18-020	core		☐	☐	☐
349.91	351.56	1.65	CMS	1.44	87	V762997	☐	O18-020	core		☐	☐	☐
351.56	352.96	1.40	CMS	1.04	74	V762998	☐	O18-020	core		☐	☐	☐
352.96	354.39	1.43	CMS	0.76	53	V762999	☐	O18-020	core		☐	☐	☐
354.39	356.01	1.62	CMS	0.78	48	V765601	☐	O18-023	core		☐	☐	☐
356.01	359.05	3.04	CMS	1.59	52	V765602	☐	O18-023	core		☐	☐	☐
359.05	362.10	3.05	CMS	2.71	89	V765603	☐	O18-023	core		☐	☐	☐
362.10	365.15	3.05	CMS	2.29	75	V765604	☐	O18-023	core		☐	☐	☐
365.15	368.20	3.05	CMS	2.58	85	V765605	☐	O18-023	core		☐	☐	☐
368.20	371.25	3.05	CMS	2.27	74	V765606	☐	O18-023	core		☐	☐	☐
371.25	374.29	3.04	CMS	0.70	23	V765607	☐	O18-023	core		☐	☐	☐
374.29	377.34	3.05	CMS	1.88	62	V765608	☐	O18-023	core		☐	☐	☐
377.34	380.39	3.05	CMS	2.25	74	V765610	☐	O18-023	core		☐	☐	☐
380.39	383.44	3.05	CMS	1.60	52	V765611	☐	O18-023	core		☐	☐	☐
383.44	386.49	3.05	CMS	1.50	49	V765612	☐	O18-023	core		☐	☐	☐
386.49	389.53	3.04	CMS	2.70	89	V765613	☐	O18-023	core		☐	☐	☐
389.53	392.58	3.05	CMS	2.74	90	V765614	☐	O18-023	core		☐	☐	☐
392.58	395.63	3.05	CMS	2.82	92	V765615	☐	O18-023	core		☐	☐	☐
395.63	398.68	3.05	CMS	2.65	87	V765616	☐	O18-023	core		☐	☐	☐
398.68	401.73	3.05	CMS	2.68	88	V765617	☐	O18-023	core		☐	☐	☐
401.73	404.77	3.04	CMS	2.66	88	V765618	☐	O18-023	core		☐	☐	☐
404.77	407.82	3.05	CMS	2.83	93	V765619	☐	O18-023	core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
404.77	407.82	3.05	CMS	2.83	93	V765620	☐	O18-023	core		☐	☐	☑
407.82	410.87	3.05	CMS	2.67	88	V765621	☐	O18-023	core		☐	☐	☐
410.87	412.25	1.38	CMS	1.35	98	V765622	☐	O18-023	core		☐	☐	☐
412.25	415.10	2.85	CMS	1.75	61	V765624	☐	O18-023	core		☐	☐	☐
415.10	416.97	1.87	CMS	0.94	50	V765625	☐	O18-023	core		☐	☐	☐
416.97	420.01	3.04	MST	1.56	51	V765626	☐	O18-023	core		☐	☐	☐
420.01	423.06	3.05	MST	2.63	86	V765627	☐	O18-023	core		☐	☐	☐
423.06	426.11	3.05	MST	2.58	85	V765628	☐	O18-023	core		☐	☐	☐
426.11	429.16	3.05	MST	2.90	95	V765629	☐	O18-023	core		☐	☐	☐
429.16	432.21	3.05	MST	2.90	95	V765630	☐	O18-023	core		☐	☐	☐
432.21	435.25	3.04	MST	2.82	93	V765631	☐	O18-023	core		☐	☐	☐
435.25	438.30	3.05	MST	2.23	73	V765632	☐	O18-023	core		☐	☐	☐
438.30	441.35	3.05	MST	2.10	69	V765633	☐	O18-023	core		☐	☐	☐
441.35	444.40	3.05	MST	1.97	65	V765635	☐	O18-023	core		☐	☐	☐
444.40	447.45	3.05	MST	2.60	85	V765636	☐	O18-023	core		☐	☐	☐
447.45	450.50	3.05	MST	2.75	90	V765637	☐	O18-023	core		☐	☐	☐
450.50	453.54	3.04	MST	2.77	91	V765638	☐	O18-023	core		☐	☐	☐
450.50	453.54	3.04	MST	2.77	91	V765639	☐	O18-023	core		☐	☑	☐
453.54	456.59	3.05	MST	2.80	92	V765640	☐	O18-023	core		☐	☐	☐
456.59	459.64	3.05	MST	2.72	89	V765641	☐	O18-024	CORE		☐	☐	☐
459.64	462.67	3.03	MST	2.22	73	V765642	☐	O18-024	CORE		☐	☐	☐
462.67	465.73	3.06	MST	2.77	91	V765643	☐	O18-024	CORE		☐	☐	☐
465.73	468.78	3.05	MST	2.20	72	V765644	☐	O18-024	CORE		☐	☐	☐
468.78	471.83	3.05	MST	2.81	92	V765645	☐	O18-024	CORE		☐	☐	☐
471.83	474.88	3.05	MST	2.91	95	V765646	☐	O18-024	CORE		☐	☐	☐
474.88	477.93	3.05	MST	2.20	72	V765647	☐	O18-024	CORE		☐	☐	☐
477.93	480.97	3.04	MST	2.70	89	V765648	☐	O18-024	CORE		☐	☐	☐
480.97	484.02	3.05	MST	3.04	100	V765650	☐	O18-024	CORE		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
484.02	487.07	3.05	MST	3.00	98	V765651	☐	O18-024	CORE		☐	☐	☐
487.07	490.12	3.05	MST	2.92	96	V765652	☐	O18-024	CORE		☐	☐	☐
490.12	493.17	3.05	MST	2.90	95	V765653	☐	O18-024	CORE		☐	☐	☐
493.17	496.21	3.04	MST	2.68	88	V765654	☐	O18-024	CORE		☐	☐	☐
496.21	497.90	1.69	MST	1.66	98	V765655	☐	O18-024	CORE		☐	☐	☐
497.90	499.26	1.36	MST	1.36	100	V765656	☐	O18-024	CORE		☐	☐	☐
499.26	500.61	1.35	MST	1.23	91	V765657	☐	O18-024	CORE		☐	☐	☐
500.61	502.31	1.70	MST	1.39	82	V765658	☐	O18-024	CORE		☐	☐	☐
500.61	502.31	1.70	MST	1.39	82	V765659	☐	O18-024	CORE		☐	☑	☐
502.31	503.58	1.27	MST	1.01	80	V765660	☐	O18-024	CORE		☐	☐	☐
503.58	505.06	1.48	MST	1.43	97	V765661	☐	O18-024	CORE		☐	☐	☐
505.06	506.54	1.48	MST	1.29	87	V765662	☐	O18-024	CORE		☐	☐	☐
506.54	508.07	1.53	MST	1.36	89	V765663	☐	O18-024	CORE		☐	☐	☐
506.54	508.07	1.53	MST	1.36	89	V765664	☐	O18-024	CORE		☐	☐	☑
508.07	509.84	1.77	MST	1.63	92	V765665	☐	O18-024	CORE		☐	☐	☐
509.84	511.45	1.61	MST	1.32	82	V765666	☐	O18-024	CORE		☐	☐	☐
511.45	513.08	1.63	MST	1.22	75	V765667	☐	O18-024	CORE		☐	☐	☐
513.08	514.50	1.42	MST	1.00	70	V765668	☐	O18-024	CORE		☐	☐	☐
514.50	516.00	1.50	MST	1.19	79	V765670	☐	O18-024	CORE		☐	☐	☐
516.00	517.55	1.55	MST	1.15	74	V765671	☐	O18-024	CORE		☐	☐	☐
517.55	519.21	1.66	MST	1.40	84	V765672	☐	O18-024	CORE		☐	☐	☐
519.21	520.60	1.39	MST	1.26	91	V765673	☐	O18-024	CORE		☐	☐	☐
520.60	522.16	1.56	MST	1.21	78	V765674	☐	O18-024	CORE		☐	☐	☐
522.16	523.65	1.49	MST	1.06	71	V765675	☐	O18-024	CORE		☐	☐	☐
523.65	525.42	1.77	MST	1.10	62	V765676	☐	O18-024	CORE		☐	☐	☐
525.42	526.69	1.27	MST	1.12	88	V765677	☐	O18-024	CORE		☐	☐	☐
526.69	528.95	2.26	MST	1.10	49	V765678	☐	O18-024	CORE		☐	☐	☐
528.95	530.80	1.85	LST, FLT	0.99	54	V765680	☐	O18-024	CORE		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
530.80	531.88	1.08	LST	1.02	94	V765681	☐	O18-027	CORE		☐	☐	☐

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From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
0.00	28.96	28.96	OVB	--	Broken, rubbly overburden +/- rounded clasts of multiple lithologies including; light grey, fine to medium-grained limestone, fine-grained siliciclastic units and dark black, fine-grained mudstone. Moderate surface oxidation and clay near surface. 22.86-28.96m dominantly rubbly, dark black, fine-grained, non-weakly calcareous mudstone (MD10) with minor <1mm calcite veinlets. Subrounded clasts of a calcite vein breccia observed at 27.43 - 28.900m, thought to be overburden. MD30 contact chosen where non-weakly calcareous mudstone dominates and no subrounded clasts (overburden) is observed.							
28.96	297.18	268.22	MST	FG	Dark grey/black, fine-grained, non-calcareous to calcareous, carbonaceous mudstone with locally observed medium grey, fine to medium-grained, variably laminated, variably bioclastic and lithic-rich limestone (debris flows) interbeds. Several fault zones cross-cut the unit exhibiting moderate-intense shearing, broken appearance, clay-rich and moderate to locally intense calcite veining/vein networks.							

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
0.00	3.05	3.05	0.66	22	0.00	0	2R	1H	6W	OVB. Soil material is unreactive with HCl until 2-3.05m, where rock pieces have strong-intense reactions.
3.05	6.10	3.05	0.64	21	0.00	0	3R	1H	4W	OVB rubble and clay, with moderate-strong oxidation
6.10	9.14	3.04	2.43	80	0.97	32	2R	1H	4W	OVB. Variable HCl reactivity. Soil-rich with oxidation weathering.
9.14	12.19	3.05	1.26	41	0.58	19	2R	1H	4W	OVB. HCl reactivity variable from weak to strong.
12.19	15.24	3.05	0.85	28	0.00	0	3R	1H	4W	OVB. Rubble and soil with dominantly strong HCl reaction (although more rarely some weak reactivity).
15.24	18.29	3.05	0.75	25	0.00	0	3R	1H	4W	OVB. Rubble and soil
18.29	21.34	3.05	0.76	25	0.00	0	3R	1H	4W	OVB
21.34	24.38	3.04	0.81	27	0.00	0	3R	1H	4W	OVB. From 22.86-24.38m, a section of incredibly rubbly, dark clay-rich material.
24.38	27.43	3.05	0.47	15	0.00	0	2R	1H	2W	OVB. Very rubbly, with variable HCl reactivity from weak-moderate.
27.43	30.48	3.05	1.57	51	0.00	0	2R	1H	2W	Variable reactivity from weak-moderate. Dominantly very soft, clay-rich material.
30.48	33.53	3.05	2.03	67	0.23	8	0R	1H	1W	Sporadic weak HCl reactivity, although generally nonexistent.
33.53	36.58	3.05	2.43	80	0.00	0	0R	1H	1W	Very weak, clay-rich rock
36.58	39.62	3.04	2.78	91	0.95	31	0R	1H	1W	Dominantly unreactive with HCl, although there are small sections (10-14cm) of highly reactive limestone.
39.62	42.67	3.05	2.39	78	0.95	31	0R	1H	1W	Rich in clay and graphitic clay, particularly on fractured surfaces.
42.67	45.72	3.05	2.8	92	1.96	64	1R	2H	1W	Very rubbly until 43.03m, where the rock becomes competent. HCl reactivity is consistently weak.
45.72	48.77	3.05	2.64	87	1.17	38	1R	1H	1W	Competent until rubble section from 48.25-48.77m, which is clay rich and highly fractured.
48.77	51.82	3.05	2.75	90	1.19	39	1R	1H	1W	Dominantly competent with clay-rich fractured sections. Graphitic clay material on some fractures.

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
51.82	54.86	3.04	2.72	89	1.57	52	0R	1H	1W	From 54.19-54.66m, it is a highly fractured, clay-rich zone.
54.86	57.91	3.05	2.03	67	0.25	8	0R	1H	1W	Rubbly, clay-rich material. Dominantly unreactive with HCl, although occasional moderately reactive.
57.91	60.96	3.05	2.43	80	0.40	13	1R	2H	1W	Highly fractured run with graphitic fracture surfaces.
60.96	64.01	3.05	2.89	95	1.55	51	0R	2H	1W	clay-rich fractured surfaces
64.01	67.06	3.05	2.62	86	1.66	54	0R	2H	1W	Host rock generally unreactive with HCl, although minor carbonate on fractures reacts moderately with HCl. Fractured surfaces are softer, containing clay.
67.06	70.10	3.04	2.47	81	1.23	40	1R	2H	1W	Clay present on frcatured surfaces
70.10	73.15	3.05	2.76	90	1.99	65	0R	3H	1W	Gougey joints, but generally competent
73.15	76.20	3.05	2.58	85	1.60	52	1R	3H	1W	
76.20	79.25	3.05	2.72	89	1.53	50	1R	2H	1W	
79.25	82.30	3.05	2.53	83	0.98	32	1R	2H	1W	Section of strongly reactive limestone from 79.49-79.69m, but otherwise not reactive with HCl
82.30	85.34	3.04	2.32	76	1.53	50	0R	2H	1W	
85.34	88.39	3.05	2.76	90	0.11	4	0R	2H	1W	
88.39	91.44	3.05	2.51	82	0.66	22	0R	2H	1W	
91.44	94.49	3.05	2.58	85	0.00	0	0R	2H	1W	Clay-rich rubble zone
94.49	97.54	3.05	2.63	86	1.06	35	0R	1H	1W	
97.54	100.58	3.04	2.82	93	1.08	36	0R	1H	1W	largely competent from 97.54-98.9m. From 98.9-100.58m, the fracture count is very high. Non-weakly reactive with HCl
100.58	103.63	3.05	2.55	84	0.99	32	0R	2H	1W	variable HCl reactivity from non-weakly reactive
103.63	106.68	3.05	2.9	95	1.35	44	0R	2H	1W	
106.68	109.73	3.05	2.55	84	0.57	19	1R	2H	1W	Variable HCl reactivity: non-strongly reactive
109.73	112.78	3.05	2.41	79	0.94	31	2R	3H	1W	Variable HCl reactivity: weakly-strongly reactive.
112.78	115.82	3.04	2.67	88	2.04	67	2R	3H	1W	
115.82	118.87	3.05	2.7	89	1.63	53	1R	3H	1W	Some fractured surfaces contain carbon-rich, shiny clays

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
118.87	121.92	3.05	2.33	76	1.13	37	0R	3H	1W	
121.92	124.97	3.05	2.59	85	1.15	38	0R	2H	1W	Variable HCl reactivity from non-strongly reactive, with most commonly no reaction
124.97	128.02	3.05	2.5	82	1.41	46	3R	1H	1W	carbonaceous clay alteration very abundant in areas of the run, although generally competent. Variable HCl reactivity from non-strongly reactive, with dominantly strong reaction.
128.02	131.06	3.04	2.71	89	2.16	71	3R	3H	1W	Variably reactive with HCl from non-strongly reactive
131.06	134.11	3.05	2.35	77	1.97	65	3R	2H	1W	
134.11	137.16	3.05	2.82	92	1.70	56	3R	2H	1W	Non-strongly reactive with HCl, although dominantly strong.
137.16	140.21	3.05	2.75	90	0.75	25	2R	1H	1W	Non-strongly reactive with HCl
140.21	143.26	3.05	2.59	85	1.20	39	2R	1H	1W	Non-reactive to strongly-reactive with HCl, but generally moderate reaction
143.26	146.30	3.04	2.82	93	1.72	57	1R	2H	1W	Generally weak HCl reactivity, but there is variation from none-strong.
146.30	149.35	3.05	2.59	85	1.19	39	1R	2H	1W	Generally weak HCl reaction, though varies from none-strong.
149.35	152.40	3.05	2.93	96	2.64	87	1R	3H	1W	
152.40	155.45	3.05	2.98	98	2.10	69	2R	3H	1W	
155.45	158.50	3.05	2.45	80	1.85	61	3R	2H	1W	
158.50	161.54	3.04	2.76	91	1.30	43	3R	2H	1W	carbonaceous clay on fractures
161.54	164.59	3.05	2.56	84	1.06	35	2R	2H	1W	
164.59	167.64	3.05	2.27	74	1.71	56	3R	2H	1W	
167.64	170.69	3.05	2.67	88	1.15	38	3R	2H	1W	
170.69	173.74	3.05	2.83	93	1.76	58	3R	1H	1W	
173.74	176.78	3.04	2.47	81	1.21	40	2R	2H	1W	Locally weak-strong reactivity, but generally moderate.
176.78	179.83	3.05	2.79	91	1.47	48	2R	2H	1W	
179.83	182.88	3.05	2.79	91	2.00	66	2R	2H	1W	
182.88	185.93	3.05	2.6	85	1.56	51	1R	2H	1W	Locally weak-strong HCl reactivity, but generally non-weakly calcareous lithology is dominant.
185.93	188.98	3.05	2.97	97	2.70	89	1R	2H	1W	non-weakly reactive with HCl

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
188.98	192.02	3.04	2.78	91	2.18	72	1R	2H	1W	
192.02	195.07	3.05	2.81	92	2.29	75	2R	2H	1W	
195.07	198.12	3.05	2.95	97	2.44	80	2R	3H	1W	
198.12	201.17	3.05	2.86	94	1.28	42	2R	2H	1W	
201.17	204.22	3.05	2.45	80	0.80	26	1R	1H	1W	Rubbly, clay-rich material dominant with few, short sections of limestone. HCl varies with lithology from non-strongly reactive.
204.22	207.26	3.04	2.76	91	1.53	50	3R	2H	1W	Limestone dominant, with large sections of rubbly, dark, clay-rich material. HCl reactivity varies with lithology.
207.26	210.31	3.05	2.2	72	0.72	24	1R	1H	1W	Dominantly cohesive clay material with rubbly rock fragments; limestone from 207.26-207.56m and 210.00-210.31m.
210.31	213.36	3.05	2.71	89	0.85	28	1R	2H	1W	Dominantly non-weak HCl reaction with mudstone lithology. Rubbly clay-rich zone from 210.78-211.34m
213.36	216.41	3.05	2.57	84	0.28	9	1R	1H	1W	Rubbly, carbonaceous material.
216.41	219.46	3.05	2.59	85	1.21	40	1R	1H	1W	Rubbly, dark, clay-rich material until 218.13m, where limestone is incorporated.
219.46	222.50	3.04	2.78	91	2.00	66	3R	2H	1W	HCl reativity varying with lithlogy; limestone dominant in this interval. Carbon-rich joints and fractures
222.50	225.55	3.05	2.53	83	1.42	47	1R	1H	1W	Rubbly until 223.85m.
225.55	228.60	3.05	2.48	81	1.52	50	1R	1H	1W	
228.60	231.65	3.05	2.7	89	1.39	46	2R	1H	1W	Moderately HCl reactive limestone dominant lithology
231.65	234.70	3.05	2.68	88	1.31	43	2R	2H	1W	
234.70	237.74	3.04	3	99	2.48	82	2R	3H	1W	
237.74	240.79	3.05	2.6	85	1.74	57	3R	2H	1W	Soft, rubbly clay zones of weak HCl reactivity from 238.70-239.27m and 240.39-240.79m. Otherwise, competent and highly reactive limestone present.
240.79	243.84	3.05	2.74	90	1.65	54	3R	2H	1W	Carbon-rich fracture surfaces.
243.84	246.89	3.05	2.72	89	2.27	74	1R	3H	1W	Carbon-rich, competent, weakly reactive rock with fossiliferous beds that are strongly reactive.

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
246.89	249.94	3.05	2.98	98	2.00	66	2R	2H	1W	Ranging from weak-strong reactivity with moderate reactivity most common.
249.94	252.98	3.04	3	99	2.50	82	1R	3H	1W	Ranging from weak-strong HCl reactivity, but generally weak.
252.98	256.03	3.05	2.79	91	2.10	69	3R	2H	1W	Rubbly, clay-rich from 253.94-254.29m.
256.03	259.08	3.05	2.47	81	0.89	29	1R	2H	1W	
259.08	262.13	3.05	2.92	96	2.00	66	3R	2H	1W	
262.13	265.18	3.05	2.85	93	1.53	50	3R	2H	1W	
265.18	268.22	3.04	2.65	87	1.67	55	3R	2H	1W	
268.22	271.27	3.05	2.69	88	1.42	47	3R	2H	1W	
271.27	274.32	3.05	2.7	89	1.61	53	3R	2H	1W	carbon-rich fracture surfaces throughout
274.32	277.37	3.05	2.84	93	2.49	82	1R	3H	1W	variation between weak and strong HCl reactivity, though weak is dominant.
277.37	280.42	3.05	2.91	95	2.78	91	3R	3H	1W	
280.42	283.48	3.06	2.77	91	2.32	76	1R	3H	1W	
283.48	286.51	3.03	2.55	84	1.77	58	3R	3H	1W	
286.51	289.56	3.05	2.74	90	2.31	76	1R	3H	1W	Carbonaceous fracture surfaces
289.56	292.61	3.05	3.05	100	2.60	85	3R	3H	1W	
292.61	295.66	3.05	2.67	88	1.85	61	3R	3H	1W	
295.66	297.18	1.52	1.52	100	0.52	34	3R	3H	1W	

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From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
0.00	0.00	0.00	-QC-	0.00	0	V767013	☐	O18-018	core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V767031	☐	O18-018	core	SR5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V767048	☐	O18-019	CORE	SR5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V767052	☐	O18-019	CORE		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V767074	☐	O18-019	CORE	SR5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V767090	☐	O18-022	core	SR5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V767096	☐	O18-022	core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V767010	☐	O18-018	core	SR5	☐	☐	☐
3.05	6.10	3.05	OVB	1.30	43	V767001	☐	O18-018	core		☐	☐	☐
6.10	9.14	3.04	OVB	2.43	80	V767002	☐	O18-018	core		☐	☐	☐
9.14	12.19	3.05	OVB	1.26	41	V767003	☐	O18-018	core		☐	☐	☐
12.19	15.24	3.05	OVB	0.85	28	V767004	☐	O18-018	core		☐	☐	☐
15.24	18.29	3.05	OVB	0.75	25	V767005	☐	O18-018	core		☐	☐	☐
18.29	21.34	3.05	OVB	0.76	25	V767006	☐	O18-018	core		☐	☐	☐
21.34	24.38	3.04	OVB	0.81	27	V767007	☐	O18-018	core		☐	☐	☐
24.38	27.43	3.05	OVB	0.47	15	V767008	☐	O18-018	core		☐	☐	☐
27.43	30.48	3.05	OVB	1.57	51	V767009	☐	O18-018	core		☐	☐	☐
30.48	33.53	3.05	MST	2.03	67	V767011	☐	O18-018	core		☐	☐	☐
33.53	36.58	3.05	MST	2.43	80	V767012	☐	O18-018	core		☐	☐	☐
36.58	39.62	3.04	MST	2.78	91	V767014	☐	O18-018	core		☐	☐	☐
39.62	42.67	3.05	MST	2.39	78	V767015	☐	O18-018	core		☐	☐	☐
42.67	45.72	3.05	MST	2.80	92	V767016	☐	O18-018	core		☐	☐	☐
45.72	48.77	3.05	MST	2.64	87	V767017	☐	O18-018	core		☐	☐	☐
48.77	51.82	3.05	MST	2.75	90	V767018	☐	O18-018	core		☐	☐	☐
51.82	54.86	3.04	MST	2.72	89	V767019	☐	O18-018	core		☐	☐	☐
54.86	57.91	3.05	MST	2.03	67	V767020	☐	O18-018	core		☐	☐	☐
57.91	60.96	3.05	MST	2.43	80	V767021	☐	O18-018	core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
60.96	64.01	3.05	MST	2.89	95	V767022	☐	O18-018	core		☐	☐	☐
64.01	67.06	3.05	MST	2.62	86	V767023	☐	O18-018	core		☐	☐	☐
67.06	70.10	3.04	MST	2.47	81	V767024	☐	O18-018	core		☐	☐	☐
70.10	73.15	3.05	MST	2.76	90	V767025	☐	O18-018	core		☐	☐	☐
73.15	76.20	3.05	MST	2.58	85	V767026	☐	O18-018	core		☐	☐	☐
76.20	79.25	3.05	MST	2.72	89	V767027	☐	O18-018	core		☐	☐	☐
76.20	79.25	3.05	MST	2.72	89	V767028	☐	O18-018	core		☐	☐	☑
79.25	82.30	3.05	MST	2.53	83	V767029	☐	O18-018	core		☐	☐	☐
82.30	85.34	3.04	MST	2.32	76	V767030	☐	O18-018	core		☐	☐	☐
85.34	88.39	3.05	MST	2.76	90	V767032	☐	O18-018	core		☐	☐	☐
88.39	91.44	3.05	MST	2.51	82	V767033	☐	O18-018	core		☐	☐	☐
91.44	94.49	3.05	MST	2.58	85	V767034	☐	O18-018	core		☐	☐	☐
94.49	97.54	3.05	MST	2.63	86	V767035	☐	O18-018	core		☐	☐	☐
94.49	97.54	3.05	MST	2.63	86	V767036	☐	O18-018	core		☐	☑	☐
97.54	100.58	3.04	MST	2.82	93	V767037	☐	O18-018	core		☐	☐	☐
100.58	103.63	3.05	MST	2.55	84	V767038	☐	O18-018	core		☐	☐	☐
103.63	106.68	3.05	MST	2.90	95	V767039	☐	O18-018	core		☐	☐	☐
106.68	109.73	3.05	MST	2.55	84	V767040	☐	O18-018	core		☐	☐	☐
109.73	112.78	3.05	MST	2.41	79	V767041	☐	O18-019	CORE		☐	☐	☐
112.78	115.82	3.04	MST	2.67	88	V767042	☐	O18-019	CORE		☐	☐	☐
115.82	118.87	3.05	MST	2.70	89	V767043	☐	O18-019	CORE		☐	☐	☐
118.87	121.92	3.05	MST	2.33	76	V767044	☐	O18-019	CORE		☐	☐	☐
121.92	124.97	3.05	MST	2.59	85	V767045	☐	O18-019	CORE		☐	☐	☐
124.97	128.02	3.05	MST	2.50	82	V767046	☐	O18-019	CORE		☐	☐	☐
128.02	131.06	3.04	MST	2.71	89	V767047	☐	O18-019	CORE		☐	☐	☐
131.06	134.11	3.05	MST	2.35	77	V767049	☐	O18-019	CORE		☐	☐	☐
134.11	137.16	3.05	MST	2.82	92	V767050	☐	O18-019	CORE		☐	☐	☐
137.16	140.21	3.05	MST	2.75	90	V767051	☐	O18-019	CORE		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
140.21	143.26	3.05	MST	2.59	85	V767053	☐	O18-019	CORE		☐	☐	☐
143.26	146.30	3.04	MST	2.82	93	V767054	☐	O18-019	CORE		☐	☐	☐
146.30	149.35	3.05	MST	2.59	85	V767055	☐	O18-019	CORE		☐	☐	☐
149.35	152.40	3.05	MST	2.93	96	V767056	☐	O18-019	CORE		☐	☐	☐
152.40	155.45	3.05	MST	2.98	98	V767057	☐	O18-019	CORE		☐	☐	☐
155.45	158.50	3.05	MST	2.45	80	V767058	☐	O18-019	CORE		☐	☐	☐
155.45	158.50	3.05	MST	2.45	80	V767059	☐	O18-019	CORE		☐	☑	☐
158.50	161.54	3.04	MST	2.76	91	V767060	☐	O18-019	CORE		☐	☐	☐
161.54	164.59	3.05	MST	2.56	84	V767061	☐	O18-019	CORE		☐	☐	☐
164.59	167.64	3.05	MST	2.27	74	V767062	☐	O18-019	CORE		☐	☐	☐
167.64	170.69	3.05	MST	2.67	88	V767063	☐	O18-019	CORE		☐	☐	☐
170.69	173.74	3.05	MST	2.83	93	V767064	☐	O18-019	CORE		☐	☐	☐
173.74	176.78	3.04	MST	2.47	81	V767065	☐	O18-019	CORE		☐	☐	☐
176.78	179.83	3.05	MST	2.79	91	V767066	☐	O18-019	CORE		☐	☐	☐
179.83	182.88	3.05	MST	2.79	91	V767067	☐	O18-019	CORE		☐	☐	☐
182.88	185.93	3.05	MST	2.60	85	V767068	☐	O18-019	CORE		☐	☐	☐
185.93	188.98	3.05	MST	2.97	97	V767069	☐	O18-019	CORE		☐	☐	☐
188.98	192.02	3.04	MST	2.78	91	V767070	☐	O18-019	CORE		☐	☐	☐
192.02	195.07	3.05	MST	2.81	92	V767071	☐	O18-019	CORE		☐	☐	☐
195.07	198.12	3.05	MST	2.95	97	V767072	☐	O18-019	CORE		☐	☐	☐
198.12	201.17	3.05	MST	2.86	94	V767073	☐	O18-019	CORE		☐	☐	☐
201.17	204.22	3.05	MST	2.45	80	V767075	☐	O18-019	CORE		☐	☐	☐
204.22	207.26	3.04	MST	2.76	91	V767076	☐	O18-019	CORE		☐	☐	☐
207.26	210.31	3.05	MST	2.20	72	V767077	☐	O18-019	CORE		☐	☐	☐
207.26	210.31	3.05	MST	2.20	72	V767078	☐	O18-019	CORE		☐	☐	☑
210.31	213.36	3.05	MST	2.71	89	V767079	☐	O18-019	CORE		☐	☐	☐
213.36	216.41	3.05	MST	2.57	84	V767080	☐	O18-019	CORE		☐	☐	☐
216.41	219.46	3.05	MST	2.59	85	V767081	☐	O18-022	core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
219.46	222.50	3.04	MST	2.78	91	V767082	☐	O18-022	core		☐	☐	☐
222.50	225.55	3.05	MST	2.53	83	V767083	☐	O18-022	core		☐	☐	☐
225.55	228.60	3.05	MST	2.48	81	V767084	☐	O18-022	core		☐	☐	☐
228.60	231.65	3.05	MST	2.70	89	V767085	☐	O18-022	core		☐	☐	☐
231.65	234.70	3.05	MST	2.68	88	V767086	☐	O18-022	core		☐	☐	☐
234.70	237.74	3.04	MST	3.00	99	V767087	☐	O18-022	core		☐	☐	☐
237.74	240.79	3.05	MST	2.60	85	V767088	☐	O18-022	core		☐	☐	☐
240.79	243.84	3.05	MST	2.74	90	V767089	☐	O18-022	core		☐	☐	☐
243.84	246.89	3.05	MST	2.72	89	V767091	☐	O18-022	core		☐	☐	☐
246.89	249.94	3.05	MST	2.98	98	V767092	☐	O18-022	core		☐	☐	☐
249.94	252.98	3.04	MST	3.00	99	V767093	☐	O18-022	core		☐	☐	☐
252.98	256.03	3.05	MST	2.79	91	V767094	☐	O18-022	core		☐	☐	☐
256.03	259.08	3.05	MST	2.47	81	V767095	☐	O18-022	core		☐	☐	☐
259.08	262.13	3.05	MST	2.92	96	V767097	☐	O18-022	core		☐	☐	☐
262.13	265.18	3.05	MST	2.85	93	V767098	☐	O18-022	core		☐	☐	☐
265.18	268.22	3.04	MST	2.65	87	V767099	☐	O18-022	core		☐	☐	☐
268.22	271.27	3.05	MST	2.69	88	V767100	☐	O18-022	core		☐	☐	☐
271.27	274.32	3.05	MST	2.70	89	V767101	☐	O18-022	core		☐	☐	☐
274.32	277.37	3.05	MST	2.84	93	V767102	☐	O18-022	core		☐	☐	☐
277.37	280.42	3.05	MST	2.91	95	V767103	☐	O18-022	core		☐	☐	☐
280.42	283.48	3.06	MST	2.77	91	V767104	☐	O18-022	core		☐	☐	☐
283.48	286.51	3.03	MST	2.55	84	V767105	☐	O18-022	core		☐	☐	☐
286.51	289.56	3.05	MST	2.74	90	V767106	☐	O18-022	core		☐	☐	☐
289.56	292.61	3.05	MST	3.05	100	V767107	☐	O18-022	core		☐	☐	☐
292.61	295.66	3.05	MST	2.67	88	V767108	☐	O18-022	core		☐	☐	☐
295.66	297.18	1.52	MST	1.52	100	V767109	☐	O18-022	core		☐	☐	☐

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From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
0.00	6.10	6.10	NSP	--	No recovery							
6.10	14.47	8.37	OVB	--	Overburden. Dark black +/- brown, clay altered overburden.							
14.47	235.50	221.03	CMS	FG	Dark black/grey non - moderately calcareous, carbonaceous mudstone with locally observed light to medium-grey, medium-grained, variably bioclastic (fossil hash; <2mm fossils and fossil fragments) limestone interbeds (debris flows).							
235.50	260.60	25.10	SMS	FG	Dark grey/light grey, finely laminated (<1-2mm laminations), fine-grained, variably siliceous mudstone/siltone with abundant pyrite (up to 10%) as fine-grained disseminations and as <3cm blebs within specific beds. pXRF hi Ti (>3500ppm), Al (~5%), low Mo (mostly below detection).							

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From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
0.00	6.10	6.10	0	0	0.00	0	0R	--	--	No recovery
6.10	9.14	3.04	1.3	43	0.00	0	1R	1H	4W	Clay altered near the top of the hole.
9.14	12.19	3.05	1.85	61	0.00	0	0R	1H	4W	Clay altered near surface
12.19	15.24	3.05	2.72	89	0.00	0	0R	1H	4W	Clay altered and soft near surface.
15.24	18.29	3.05	2.95	97	0.00	0	1R	1H	4W	Clay altered near surface
18.29	21.34	3.05	2.46	81	0.00	0	1R	2H	3W	Broken and clay altered near the top of the hole. The lower portion of the run starts to become more competant stratigraphy.
21.34	24.38	3.04	2.32	76	0.10	3	2R	2H	2W	Slightly oxidized and clay altered.
24.38	27.43	3.05	2.05	67	1.06	35	2R	2H	2W	Slightly oxidized and clay altered. Some areas area more non-weakly reactive.
27.43	30.48	3.05	2.51	82	0.20	7	0R	2H	2W	Greenish oxidation material present (AsO?) on fracture surfaces.
30.48	33.53	3.05	1.9	62	0.31	10	0R	2H	2W	Clay alteration and slight oxidation present
33.53	36.58	3.05	2.54	83	0.00	0	0R	2H	2W	Very rubbly section with marroon to forest green weathering on fractured surfaces.
36.58	39.62	3.04	2.68	88	0.34	11	0R	2H	1W	non-moderately reactive section of mudstone, with incrweasing reactivity throughout the interval. Large calcite veins are present and intensely reactive.
39.62	42.67	3.05	1.75	57	0.10	3	1R	2H	1W	
42.67	45.72	3.05	2.66	87	0.61	20	1R	2H	1W	
45.72	48.77	3.05	2.61	86	0.90	30	2R	2H	1W	Moderately reactive mudstone until strongly reactive calcite vein from 46.77-48.00m.
48.77	51.82	3.05	2.74	90	0.10	3	1R	2H	1W	
51.82	54.86	3.04	2.18	72	0.58	19	2R	1H	1W	
54.86	57.91	3.05	2.6	85	1.23	40	2R	2H	1W	
57.91	60.96	3.05	2.43	80	0.76	25	0R	2H	1W	Highly fractuerd section from 59.17-60.62m.
60.96	64.00	3.04	3.04	100	1.76	58	2R	2H	1W	carbon-rich fracture surfaces abundant
64.00	67.06	3.06	2.98	97	1.78	58	1R	2H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
67.06	70.10	3.04	2.86	94	1.66	55	0R	3H	1W	
70.10	73.15	3.05	2.8	92	1.72	56	1R	3H	1W	
73.15	76.20	3.05	3.05	100	2.41	79	1R	3H	1W	
76.20	79.25	3.05	2.68	88	1.44	47	0R	1H	1W	Rubbly clay-rich section from 76.60-77.00m. Throughout section, carbonaceous fractures found.
79.25	82.30	3.05	2.93	96	1.22	40	0R	2H	1W	
82.30	85.34	3.04	2.99	98	1.66	55	0R	3H	1W	
85.34	88.39	3.05	2.93	96	2.72	89	0R	3H	1W	generally nonreactive with HCl except for limey interbeds that react strongly.
88.39	91.44	3.05	2.86	94	1.93	63	2R	2H	1W	
91.44	94.49	3.05	2.63	86	0.76	25	1R	3H	1W	
94.49	97.54	3.05	2.34	77	0.89	29	1R	3H	1W	Generally nonreactive with trace amount of limestone bedding.
97.54	100.58	3.04	2.47	81	1.61	53	1R	3H	1W	
100.58	103.63	3.05	2.58	85	1.73	57	1R	3H	1W	
103.63	106.68	3.05	1.13	37	0.00	0	1R	3H	1W	Rubbly
106.68	109.73	3.05	2.76	90	0.71	23	0R	1H	1W	Rubbly with minor gouge.
109.73	112.78	3.05	2.26	74	0.38	12	2R	3H	1W	
112.78	115.82	3.04	2.41	79	0.49	16	0R	3H	1W	
115.82	118.87	3.05	2.87	94	1.20	39	0R	1H	1W	Rubbly with moderate gouge.
118.87	121.92	3.05	2.9	95	1.40	46	1R	3H	1W	
121.92	124.97	3.05	2.87	94	0.70	23	1R	2H	1W	Rubbly with minor gouge.
124.97	128.02	3.05	2.73	90	0.71	23	2R	3H	1W	Mix of competent rock and intermittent rubbly zones.
128.02	131.06	3.04	2.76	91	1.39	46	2R	3H	1W	Reactivity occuring along intermittent limey beds.
131.06	134.11	3.05	2.78	91	1.94	64	2R	3H	1W	
134.11	137.16	3.05	2.76	90	0.61	20	2R	3H	1W	
137.16	140.21	3.05	2.87	94	1.27	42	2R	3H	1W	
140.21	143.26	3.05	2.67	88	1.47	48	0R	3H	1W	
143.26	146.30	3.04	2.32	76	1.17	38	0R	3H	1W	Rubbly with minor gouge.
146.30	149.35	3.05	2.71	89	1.17	38	1R	3H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
149.35	152.40	3.05	2.84	93	1.60	52	1R	3H	1W	
152.40	155.45	3.05	2.83	93	1.89	62	1R	3H	1W	
155.45	158.50	3.05	2.82	92	1.16	38	1R	3H	1W	
158.50	161.54	3.04	2.8	92	1.48	49	1R	3H	1W	
161.54	164.59	3.05	2.77	91	1.67	55	1R	3H	1W	
164.59	167.64	3.05	2.78	91	1.98	65	0R	3H	1W	
167.64	170.69	3.05	2.83	93	0.94	31	0R	3H	1W	Minor to moderate shearing, rubbly.
170.69	173.74	3.05	2.87	94	2.33	76	0R	2H	1W	Locally moderate to highly sheared.
173.74	176.78	3.04	2.9	95	2.76	91	1R	3H	1W	
176.78	179.83	3.05	2.95	97	1.30	43	1R	3H	1W	
179.83	182.88	3.05	2.49	82	1.49	49	1R	3H	1W	
182.88	185.93	3.05	2.89	95	2.10	69	1R	3H	1W	
185.93	188.98	3.05	3.02	99	2.78	91	0R	3H	1W	
188.98	192.02	3.04	3.03	100	2.74	90	0R	3H	1W	
192.02	195.07	3.05	2.43	80	0.64	21	0R	2H	1W	Rubbly with moderate gouge and locally observed pale yellow-green powedery iron-oxide on fractured surfaces and margins of veins.
195.07	198.12	3.05	2.93	96	1.64	54	2R	2H	1W	Moderate gouge from 195.7-195.78m
198.12	201.17	3.05	2.95	97	1.91	63	2R	3H	1W	
201.17	204.22	3.05	2.82	92	1.35	44	3R	3H	1W	Primarily limestone. Pale green-yellow powdery iron oxide locally observed on fractured surfaces.
204.22	207.26	3.04	2.98	98	1.83	60	4R	4H	1W	Two small rubbly zones.
207.26	210.31	3.05	2.96	97	0.68	22	3R	3H	1W	
210.31	213.36	3.05	3.01	99	1.79	59	4R	3H	1W	Mix of limestone and limey mud.
213.36	216.41	3.05	2.72	89	2.13	70	3R	3H	1W	
216.41	219.46	3.05	2.77	91	1.34	44	2R	3H	1W	
219.46	222.50	3.04	2.95	97	1.84	61	3R	3H	1W	
222.50	225.55	3.05	2.9	95	1.56	51	3R	4H	1W	
225.55	228.60	3.05	2.92	96	2.23	73	3R	4H	1W	
228.60	231.65	3.05	2.83	93	1.56	51	3R	4H	1W	
231.65	234.70	3.05	3.02	99	1.84	60	3R	4H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
234.70	237.74	3.04	2.75	90	2.07	68	2R	4H	1W	
237.74	240.79	3.05	2.35	77	0.34	11	0R	2H	1W	
240.79	243.84	3.05	2.33	76	0.85	28	0R	3H	1W	
243.84	246.89	3.05	2.1	69	0.49	16	0R	2H	1W	
246.89	249.94	3.05	2.77	91	0.38	12	1R	2H	1W	Rubbly. Lots of graphitic surfaces.
249.94	252.98	3.04	2.22	73	0.00	0	0R	2H	1W	Rubble zone
252.98	256.03	3.05	2.72	89	1.20	39	0R	2H	1W	Rubble zone. Run becomes more competant at the end of the run.
256.03	259.08	3.05	3.04	100	2.12	70	0R	3H	1W	Joint set are planar, smooth with polished graphitic surfaces.
259.08	260.60	1.52	1.41	93	0.00	0	0R	2H	1W	Rubble zone

BDO-18-010

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
0.00	0.00	0.00	-QC-	0.00	0	V767138	☐	O18-025	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V767142	☐	O18-025	Core	SR5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V767160	☐	O18-025	Core	SR5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V767171	☐	O18-026	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V767183	☐	O18-026	Core	SR5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V767200	☐	O18-026	Core	SR5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V767208	☐	O18-028	Core	SR5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V767114	☐	O18-022	core	OX6	☐	☐	☐
6.10	9.14	3.04	NSP, OVB	1.30	43	V767110	☐	O18-022	core		☐	☐	☐
9.14	12.19	3.05	OVB	1.85	61	V767111	☐	O18-022	core		☐	☐	☐
12.19	15.24	3.05	OVB	2.72	89	V767112	☐	O18-022	core		☐	☐	☐
15.24	18.29	3.05	CMS	2.95	97	V767113	☐	O18-022	core		☐	☐	☐
18.29	21.34	3.05	CMS	2.46	81	V767115	☐	O18-022	core		☐	☐	☐
18.29	21.34	3.05	CMS	2.46	81	V767116	☐	O18-022	core		☐	☐	☑
21.34	24.38	3.04	CMS	2.32	76	V767117	☐	O18-022	core		☐	☐	☐
24.38	27.43	3.05	CMS	2.05	67	V767118	☐	O18-022	core		☐	☐	☐
27.43	30.48	3.05	CMS	2.51	82	V767119	☐	O18-022	core		☐	☐	☐
27.43	30.48	3.05	CMS	2.51	82	V767120	☐	O18-022	core		☐	☑	☐
30.48	33.53	3.05	CMS	1.90	62	V767121	☐	O18-025	Core		☐	☐	☐
33.53	36.58	3.05	CMS	2.54	83	V767122	☐	O18-025	Core		☐	☐	☐
36.58	39.62	3.04	CMS	2.68	88	V767123	☐	O18-025	Core		☐	☐	☐
39.62	42.67	3.05	CMS	1.75	57	V767124	☐	O18-025	Core		☐	☐	☐
42.67	45.72	3.05	CMS	2.66	87	V767125	☐	O18-025	Core		☐	☐	☐
45.72	48.77	3.05	CMS	2.61	86	V767126	☐	O18-025	Core		☐	☐	☐
48.77	51.82	3.05	CMS	2.74	90	V767127	☐	O18-025	Core		☐	☐	☐
51.82	54.86	3.04	CMS	2.18	72	V767128	☐	O18-025	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
54.86	57.91	3.05	CMS	2.60	85	V767129	☐	O18-025	Core		☐	☐	☐
57.91	60.96	3.05	CMS	2.43	80	V767130	☐	O18-025	Core		☐	☐	☐
60.96	64.00	3.04	CMS	3.04	100	V767131	☐	O18-025	Core		☐	☐	☐
64.00	67.06	3.06	CMS	2.98	97	V767132	☐	O18-025	Core		☐	☐	☐
67.06	70.10	3.04	CMS	2.86	94	V767133	☐	O18-025	Core		☐	☐	☐
67.06	70.10	3.04	CMS	2.86	94	V767134	☐	O18-025	Core		☐	☑	☐
70.10	73.15	3.05	CMS	2.80	92	V767135	☐	O18-025	Core		☐	☐	☐
73.15	76.20	3.05	CMS	3.05	100	V767136	☐	O18-025	Core		☐	☐	☐
76.20	79.25	3.05	CMS	2.68	88	V767137	☐	O18-025	Core		☐	☐	☐
79.25	82.30	3.05	CMS	2.93	96	V767139	☐	O18-025	Core		☐	☐	☐
82.30	85.34	3.04	CMS	2.99	98	V767140	☐	O18-025	Core		☐	☐	☐
85.34	88.39	3.05	CMS	2.93	96	V767141	☐	O18-025	Core		☐	☐	☐
88.39	91.44	3.05	CMS	2.86	94	V767143	☐	O18-025	Core		☐	☐	☐
91.44	94.49	3.05	CMS	2.63	86	V767144	☐	O18-025	Core		☐	☐	☐
94.49	97.54	3.05	CMS	2.34	77	V767145	☐	O18-025	Core		☐	☐	☐
97.54	100.58	3.04	CMS	2.47	81	V767146	☐	O18-025	Core		☐	☐	☐
100.58	103.63	3.05	CMS	2.58	85	V767147	☐	O18-025	Core		☐	☐	☐
103.63	106.68	3.05	CMS	1.13	37	V767148	☐	O18-025	Core		☐	☐	☐
106.68	109.73	3.05	CMS	2.76	90	V767149	☐	O18-025	Core		☐	☐	☐
106.68	109.73	3.05	CMS	2.76	90	V767150	☐	O18-025	Core		☐	☐	☑
109.73	112.78	3.05	CMS	2.26	74	V767151	☐	O18-025	Core		☐	☐	☐
112.78	115.82	3.04	CMS	2.41	79	V767152	☐	O18-025	Core		☐	☐	☐
115.82	118.87	3.05	CMS	2.87	94	V767153	☐	O18-025	Core		☐	☐	☐
118.87	121.92	3.05	CMS	2.90	95	V767154	☐	O18-025	Core		☐	☐	☐
121.92	124.97	3.05	CMS	2.87	94	V767155	☐	O18-025	Core		☐	☐	☐
124.97	128.02	3.05	CMS	2.73	90	V767156	☐	O18-025	Core		☐	☐	☐
128.02	131.06	3.04	CMS	2.76	91	V767157	☐	O18-025	Core		☐	☐	☐
131.06	134.11	3.05	CMS	2.78	91	V767158	☐	O18-025	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
134.11	137.16	3.05	CMS	2.76	90	V767159	☐	O18-025	Core		☐	☐	☐
137.16	140.21	3.05	CMS	2.87	94	V767161	☐	O18-026	Core		☐	☐	☐
140.21	143.26	3.05	CMS	2.67	88	V767162	☐	O18-026	Core		☐	☐	☐
143.26	146.30	3.04	CMS	2.32	76	V767163	☐	O18-026	Core		☐	☐	☐
146.30	149.35	3.05	CMS	2.71	89	V767164	☐	O18-026	Core		☐	☐	☐
149.35	152.40	3.05	CMS	2.84	93	V767165	☐	O18-026	Core		☐	☐	☐
152.40	155.45	3.05	CMS	2.83	93	V767166	☐	O18-026	Core		☐	☐	☐
155.45	158.50	3.05	CMS	2.82	92	V767167	☐	O18-026	Core		☐	☐	☐
158.50	161.54	3.04	CMS	2.80	92	V767168	☐	O18-026	Core		☐	☐	☐
161.54	164.59	3.05	CMS	2.77	91	V767169	☐	O18-026	Core		☐	☐	☐
164.59	167.64	3.05	CMS	2.78	91	V767170	☐	O18-026	Core		☐	☐	☐
167.64	170.69	3.05	CMS	2.83	93	V767172	☐	O18-026	Core		☐	☐	☐
170.69	173.74	3.05	CMS	2.87	94	V767173	☐	O18-026	Core		☐	☐	☐
173.74	176.78	3.04	CMS	2.90	95	V767174	☐	O18-026	Core		☐	☐	☐
176.78	179.83	3.05	CMS	2.95	97	V767175	☐	O18-026	Core		☐	☐	☐
179.83	182.88	3.05	CMS	2.49	82	V767176	☐	O18-026	Core		☐	☐	☐
182.88	185.93	3.05	CMS	2.89	95	V767177	☐	O18-026	Core		☐	☐	☐
185.93	188.98	3.05	CMS	3.02	99	V767178	☐	O18-026	Core		☐	☐	☐
188.98	192.02	3.04	CMS	3.03	100	V767179	☐	O18-026	Core		☐	☐	☐
188.98	192.02	3.04	CMS	3.03	100	V767180	☐	O18-026	Core		☐	☑	☐
192.02	195.07	3.05	CMS	2.43	80	V767181	☐	O18-026	Core		☐	☐	☐
195.07	198.12	3.05	CMS	2.93	96	V767182	☐	O18-026	Core		☐	☐	☐
198.12	201.17	3.05	CMS	2.95	97	V767184	☐	O18-026	Core		☐	☐	☐
201.17	204.22	3.05	CMS	2.82	92	V767185	☐	O18-026	Core		☐	☐	☐
204.22	207.26	3.04	CMS	2.98	98	V767186	☐	O18-026	Core		☐	☐	☐
207.26	210.31	3.05	CMS	2.96	97	V767187	☐	O18-026	Core		☐	☐	☐
210.31	213.36	3.05	CMS	3.01	99	V767188	☐	O18-026	Core		☐	☐	☐
213.36	216.41	3.05	CMS	2.72	89	V767189	☐	O18-026	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
216.41	219.46	3.05	CMS	2.77	91	V767190	☐	O18-026	Core		☐	☐	☐
219.46	222.50	3.04	CMS	2.95	97	V767191	☐	O18-026	Core		☐	☐	☐
222.50	225.55	3.05	CMS	2.90	95	V767192	☐	O18-026	Core		☐	☐	☐
225.55	228.60	3.05	CMS	2.92	96	V767193	☐	O18-026	Core		☐	☐	☐
228.60	231.65	3.05	CMS	2.83	93	V767194	☐	O18-026	Core		☐	☐	☐
228.60	231.65	3.05	CMS	2.83	93	V767195	☐	O18-026	Core		☐	☐	☑
231.65	234.70	3.05	CMS	3.02	99	V767196	☐	O18-026	Core		☐	☐	☐
234.70	235.50	0.80	CMS	0.76	95	V767197	☐	O18-026	Core		☐	☐	☐
235.50	237.74	2.24	CMS, SMS	2.14	96	V767198	☐	O18-026	Core		☐	☐	☐
237.74	240.79	3.05	SMS	2.35	77	V767199	☐	O18-026	Core		☐	☐	☐
240.79	243.84	3.05	SMS	2.33	76	V767201	☐	O18-028	Core		☐	☐	☐
243.84	246.89	3.05	SMS	2.10	69	V767202	☐	O18-028	Core		☐	☐	☐
246.89	249.94	3.05	SMS	2.77	91	V767203	☐	O18-028	Core		☐	☐	☐
249.94	252.98	3.04	SMS	2.22	73	V767204	☐	O18-028	Core		☐	☐	☐
252.98	256.03	3.05	SMS	2.72	89	V767205	☐	O18-028	Core		☐	☐	☐
256.03	259.08	3.05	SMS	3.04	100	V767206	☐	O18-028	Core		☐	☐	☐
259.08	260.60	1.52	SMS	1.41	93	V767207	☐	O18-028	Core		☐	☐	☐

BDO-18-011

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
0.00	5.85	5.85	NSP	--	no recovery							
5.85	137.24	131.39	CMS	MG	Thinly bedded calcareous mudstone interbedded with bioclastic debris flows. Two hole crinoids contained within debris flow sections.							
137.24	493.14	355.90	LST	FG	Alternating dark grey to black very fine- fine grained mudstone interbedded with light grey limestone beds (turbidites). Local siltstone, calc arenite, thinly laminated mudstone and debris flow beds occur. Fossil fragments in this sections are really fragmented. Soft sediment deformation structures also observed.							
						LT	GY					
						DK	BK	DB				
						DK	GY	BD				
493.14	529.36	36.22	LST	MG	Bioclastic debris flow with thin interbedded calcareous mudstone.							
								SD				
								DB				
						DK	GY	BX				
						LT	GY	BD	DCA	W		
529.36	569.63	40.27	LST	FG	light to medium grey, fine-medium grained limestone with local thinly bedded calcareous mudstone, local debris flows and abundant calcite veining							
								FR				
						MD	GY	BX				
						LT	GY	BD	DCA	W		
569.63	592.98	23.35	MST	VF	Medium to dark black carbonaceous shale. Minor to moderate quartz and calcite veins. Pyrite occurs as blebs, specks and is disseminated in the rock.							
						DK	BK	FR	SIL	M		
						DK	GY	BD	CLY	W		

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From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
0.00	5.85	5.85	0	0	0.00	0	--	--	3W	TOH - No recovery.
5.85	7.62	1.77	1.34	76	0.35	20	1R	3H	2W	
7.62	10.67	3.05	2.3	75	0.29	10	2R	3H	2W	
10.67	13.72	3.05	2.19	72	1.60	52	2R	3H	2W	TOH - Lack of recovery.
13.72	16.76	3.04	2.82	93	1.09	36	3R	3H	2W	
16.76	19.81	3.05	2.52	83	0.58	19	2R	2H	3W	
19.81	22.86	3.05	2.79	91	1.32	43	2R	2H	2W	
22.86	25.91	3.05	2.44	80	1.19	39	3R	3H	3W	
25.91	28.96	3.05	2.91	95	0.91	30	3R	2H	3W	Decreased reactivity and strength due to moderate to locally observed strong decalcification of limestone.
28.96	32.00	3.04	2.64	87	1.36	45	2R	3H	4W	
32.00	35.05	3.05	2.95	97	2.65	87	3R	3H	2W	
35.05	38.10	3.05	3.02	99	2.15	70	2R	3H	1W	Weak to moderate slickenside and minor remobilized carbon common on surfaces.
38.10	41.15	3.05	2.85	93	2.01	66	2R	3H	1W	
41.15	44.19	3.04	2.99	98	2.17	71	2R	3H	1W	
44.19	47.24	3.05	2.94	96	2.37	78	2R	3H	1W	
47.24	50.29	3.05	3.04	100	2.80	92	2R	3H	1W	
50.29	53.34	3.05	3	98	2.69	88	2R	3H	1W	
53.34	56.39	3.05	2.9	95	2.75	90	2R	3H	1W	
56.39	59.44	3.05	3.04	100	2.35	77	3R	3H	1W	multiple single joint sets.
59.44	62.48	3.04	3	99	2.34	77	2R	3H	1W	multiple single joionts.
62.48	65.53	3.05	3.04	100	1.81	59	3R	3H	1W	
65.53	68.58	3.05	2.93	96	2.63	86	3R	3H	1W	
68.58	71.63	3.05	2.93	96	2.58	85	4R	3H	1W	
71.63	74.68	3.05	2.97	97	2.07	68	4R	3H	1W	
74.68	77.72	3.04	2.63	87	1.82	60	4R	3H	1W	
77.72	80.77	3.05	2.82	92	2.52	83	4R	3H	1W	
80.77	83.82	3.05	3	98	2.19	72	4R	3H	1W	Multiple singe joints.

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
83.82	86.86	3.04	2.97	98	2.39	79	4R	3H	1W	
86.86	89.92	3.06	2.83	92	1.19	39	1R	3H	1W	Multiple single joints.
89.92	92.96	3.04	2.86	94	1.18	39	1R	3H	1W	
92.96	96.01	3.05	2.89	95	1.53	50	2R	3H	1W	Small highly fractured zone and small gougey zone.
96.01	99.06	3.05	3.02	99	1.66	54	3R	3H	1W	
99.06	102.11	3.05	3.03	99	2.22	73	4R	3H	1W	
102.11	105.16	3.05	2.72	89	2.23	73	4R	3H	1W	
105.16	108.20	3.04	3	99	2.56	84	4R	3H	1W	
108.20	111.25	3.05	2.94	96	2.07	68	4R	3H	1W	
111.25	114.30	3.05	2.84	93	2.54	83	4R	3H	1W	
114.30	117.35	3.05	2.99	98	2.41	79	4R	3H	1W	
117.35	120.40	3.05	2.81	92	1.85	61	4R	3H	1W	Multiple single joints.
120.40	123.44	3.04	3.01	99	2.48	82	4R	3H	1W	
123.44	126.49	3.05	3.05	100	2.86	94	4R	4H	1W	2-3R on locally observed (~20-30cm) calcareous mudstone beds.
126.49	129.54	3.05	3.02	99	2.95	97	3R	4H	1W	Decreased overall reactivity due to ~60cm of calcareous mudstone.
129.54	132.59	3.05	2.9	95	2.60	85	4R	4H	1W	
132.59	135.64	3.05	2.69	88	2.54	83	4R	4H	1W	
135.64	138.68	3.04	3.03	100	2.22	73	3R	3H	1W	
138.68	141.73	3.05	2.97	97	2.35	77	3R	3H	1W	Remobilized carbon/graphitic surfaces common on joint and fractured surfaces.
141.73	144.78	3.05	2.94	96	2.12	70	3R	3H	1W	Multiple single joint sets.
144.78	147.83	3.05	3.01	99	2.76	90	3R	3H	1W	
147.83	150.88	3.05	3.02	99	2.66	87	3R	3H	1W	2R along calcareous mudstone, 4R on bioclastic debris flows.
150.88	153.92	3.04	2.93	96	1.45	48	3R	3H	1W	
153.92	156.97	3.05	3.04	100	2.14	70	2R	3H	1W	
156.97	160.02	3.05	2.96	97	2.13	70	2R	3H	1W	Multiple single joints.
160.02	163.07	3.05	2.84	93	2.33	76	3R	3H	1W	
163.07	166.12	3.05	3.05	100	2.49	82	3R	3H	1W	
166.12	169.16	3.04	2.96	97	2.42	80	4R	4H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
169.16	172.21	3.05	2.94	96	2.17	71	3R	3H	1W	
172.21	175.26	3.05	2.85	93	1.45	48	3R	3H	1W	Small rbz.
175.26	178.31	3.05	2.69	88	1.88	62	2R	3H	1W	Multiple single joints
178.31	181.36	3.05	3.03	99	2.32	76	3R	3H	1W	
181.36	184.40	3.04	3.04	100	1.86	61	4R	3H	1W	
184.40	187.45	3.05	3.05	100	2.06	68	4R	3H	1W	Multiple single joints at low angles TCA.
187.45	190.50	3.05	2.99	98	1.61	53	3R	2H	1W	
190.50	193.55	3.05	2.98	98	1.90	62	4R	3H	1W	
193.55	196.60	3.05	2.94	96	2.59	85	4R	3H	1W	
196.60	199.64	3.04	2.92	96	1.87	62	3R	3H	1W	
199.64	202.69	3.05	2.71	89	1.90	62	3R	3H	1W	
202.69	205.74	3.05	3.04	100	3.04	100	3R	3H	1W	
205.74	208.79	3.05	2.98	98	2.51	82	3R	3H	1W	Shearing, including a 15 cm wide shear zone of fine black material.
208.79	211.84	3.05	3.05	100	3.02	99	3R	3H	1W	Shearing with thin dark bands. Competent compared to the previous interval. No ground up clays.
211.84	214.88	3.04	2.99	98	2.86	94	3R	3H	1W	
214.88	217.93	3.05	2.94	96	2.65	87	3R	3H	1W	Short section of oxidized, rubbly rock with calcite.
217.93	220.98	3.05	3.05	100	2.82	92	3R	3H	1W	Transition to dolostone with a pervasive single joint set.
220.98	224.03	3.05	2.94	96	2.14	70	4R	3H	1W	
224.03	227.08	3.05	2.72	89	2.12	70	4R	3H	1W	interbedded limey mudstone and limestone.
227.08	230.12	3.04	2.59	85	1.54	51	4R	3H	1W	
230.12	233.17	3.05	2.91	95	1.10	36	3R	3H	1W	
233.17	236.22	3.05	2.81	92	0.87	29	3R	3H	1W	high fracture density due to limey mudstone fracturing
236.22	239.27	3.05	2.91	95	2.16	71	3R	3H	1W	
239.27	242.32	3.05	2.91	95	1.03	34	2R	3H	1W	low rqd as rock has fracture parallel TCA.
242.32	245.36	3.04	2.93	96	2.42	80	2R	2H	1W	
245.36	248.41	3.05	2.63	86	0.86	28	3R	2H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
248.41	251.46	3.05	2.89	95	1.68	55	3R	2H	1W	overall rock quality is good, but 251.15-251.30m gouge rock.
251.46	254.41	2.95	2.63	89	1.65	56	2R	2H	1W	
254.41	257.56	3.15	2.77	88	2.24	71	3R	3H	1W	Lithology change in this interval
257.56	260.60	3.04	1.83	60	0.37	12	4R	2H	1W	Oxidized rubble zone with gouge seam
260.60	263.65	3.05	1.81	59	0.24	8	4R	2H	1W	Oxidized rubble zone with gouge seams
263.65	266.70	3.05	2.13	70	0.54	18	4R	2H	1W	Oxidized rubble zone with gouge seams
266.70	269.75	3.05	2.54	83	1.02	33	4R	3H	1W	Oxidized rubble zone
269.75	272.80	3.05	2.62	86	1.93	63	4R	3H	1W	Oxidized with somerubble. More competent than previous.
272.80	275.84	3.04	2.34	77	2.01	66	4R	3H	1W	Many pieces of core are drill-spun. Weak-moderate oxidization.
275.84	278.89	3.05	2.88	94	2.01	66	4R	3H	1W	
278.89	281.94	3.05	2.88	94	2.37	78	4R	3H	1W	
281.94	284.99	3.05	2.68	88	2.01	66	4R	3H	1W	Clay within fractures.
284.99	288.04	3.05	2.83	93	1.75	57	4R	3H	1W	Low RQD as fractures present along CA.
288.04	291.08	3.04	2.91	96	1.02	34	4R	3H	1W	
291.08	294.13	3.05	3.03	99	1.40	46	4R	3H	1W	
294.13	297.18	3.05	2.49	82	2.06	68	4R	3H	1W	
297.18	300.23	3.05	3.04	100	2.89	95	4R	3H	1W	
300.23	303.28	3.05	2.78	91	0.52	17	4R	3H	1W	
303.28	306.32	3.04	2.74	90	2.42	80	4R	2H	1W	
306.32	309.37	3.05	2.64	87	1.75	57	4R	3H	1W	
309.37	312.42	3.05	2.91	95	2.86	94	4R	4H	1W	
312.42	315.47	3.05	2.68	88	2.38	78	4R	4H	1W	
315.47	318.52	3.05	2.1	69	1.84	60	4R	4H	1W	
318.52	321.56	3.04	3.04	100	3.04	100	4R	4H	1W	
321.56	324.61	3.05	3	98	3.00	98	4R	4H	1W	
324.61	327.66	3.05	2.99	98	2.68	88	4R	4H	1W	
327.66	330.71	3.05	2.88	94	2.27	74	4R	4H	1W	
330.71	333.76	3.05	2.75	90	1.41	46	4R	4H	1W	
333.76	336.80	3.04	2.93	96	2.19	72	4R	4H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
336.80	339.85	3.05	3	98	2.64	87	4R	4H	1W	
339.85	342.90	3.05	3.05	100	2.98	98	4R	4H	1W	
342.90	345.95	3.05	2.93	96	2.93	96	2R	4H	1W	
345.95	349.00	3.05	3.01	99	2.99	98	2R	4H	1W	
349.00	352.04	3.04	2.76	91	1.89	62	4R	4H	1W	
352.04	355.09	3.05	3.01	99	2.92	96	4R	4H	1W	
355.09	358.14	3.05	3.04	100	2.79	91	4R	4H	1W	
358.14	361.19	3.05	3.02	99	3.02	99	4R	4H	1W	
361.19	364.24	3.05	2.96	97	2.69	88	4R	4H	1W	
364.24	367.28	3.04	2.98	98	2.84	93	3R	4H	1W	
367.28	370.33	3.05	2.96	97	1.87	61	2R	3H	1W	Reactivity varies from nonreactive to very strongly reactive, depending on the lithology
370.33	373.38	3.05	2.71	89	1.83	60	3R	2H	1W	Clay-rich section from 372.73-373.06m with very weak hardness and strength.
373.38	376.43	3.05	3.05	100	2.79	91	4R	4H	1W	
376.43	379.48	3.05	2.89	95	2.68	88	4R	4H	1W	
379.48	382.52	3.04	2.94	97	2.28	75	4R	4H	1W	
382.52	385.57	3.05	2.94	96	1.13	37	4R	4H	1W	RBZ through zone of bedding that nearly parallels core axis.
385.57	388.62	3.05	3.05	100	2.15	70	4R	3H	1W	
388.62	391.67	3.05	3.02	99	2.00	66	4R	3H	1W	
391.67	394.72	3.05	2.96	97	2.69	88	3R	3H	1W	
394.72	397.76	3.04	2.83	93	2.35	77	4R	3H	1W	
397.76	400.81	3.05	2.76	90	1.69	55	4R	3H	1W	
400.81	403.86	3.05	2.73	90	1.79	59	4R	3H	1W	
403.86	406.91	3.05	2.43	80	1.11	36	4R	3H	1W	Short gouge seam
406.91	409.96	3.05	2.39	78	0.96	31	3R	2H	1W	
409.96	413.00	3.04	3.04	100	2.53	83	4R	3H	1W	
413.00	416.05	3.05	3.05	100	3.00	98	4R	4H	1W	
416.05	419.10	3.05	2.79	91	2.74	90	4R	4H	1W	Short re-drilled interval.
419.10	422.15	3.05	3.05	100	3.05	100	4R	4H	1W	
422.15	425.20	3.05	2.93	96	2.83	93	3R	4H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
425.20	428.24	3.04	3.04	100	2.98	98	4R	4H	1W	
428.24	431.29	3.05	2.87	94	2.24	73	4R	4H	1W	multiple single joint
431.29	434.34	3.05	2.84	93	2.69	88	4R	4H	1W	
434.34	437.39	3.05	3.04	100	2.93	96	4R	4H	1W	
437.39	440.44	3.05	3.01	99	2.82	92	3R	4H	1W	
440.44	443.48	3.04	3.04	100	2.19	72	4R	4H	1W	
443.48	446.53	3.05	3.04	100	1.31	43	3R	4H	1W	rbz from 445.65 - 446.17
446.53	449.58	3.05	3.04	100	3.00	98	4R	4H	1W	
449.58	452.63	3.05	3.04	100	2.15	70	3R	4H	1W	
452.63	455.68	3.05	2.86	94	1.93	63	3R	4H	1W	
455.68	458.72	3.04	2.91	96	2.16	71	4R	4H	1W	
458.72	461.77	3.05	2.82	92	2.60	85	3R	4H	1W	
461.77	464.82	3.05	3.04	100	2.00	66	4R	4H	1W	
464.82	467.87	3.05	3.04	100	2.25	74	4R	4H	1W	
467.87	470.92	3.05	2.9	95	2.08	68	4R	3H	1W	
470.92	473.96	3.04	3.04	100	1.62	53	4R	3H	1W	
473.96	477.01	3.05	3	98	2.45	80	3R	4H	1W	
477.01	480.06	3.05	3.04	100	2.77	91	4R	4H	1W	
480.06	483.11	3.05	2.85	93	2.27	74	4R	3H	1W	
483.11	486.16	3.05	3.04	100	2.70	89	4R	3H	1W	
486.16	489.20	3.04	3.04	100	2.47	81	3R	3H	1W	
489.20	492.25	3.05	2.97	97	2.72	89	3R	3H	1W	multiple single joints
492.25	495.30	3.05	2.81	92	1.94	64	3R	3H	1W	multiple single joints
495.30	498.35	3.05	3	98	2.26	74	3R	3H	1W	
498.35	501.39	3.04	3.03	100	2.36	78	3R	3H	1W	multiple single joints
501.39	504.44	3.05	2.9	95	1.96	64	3R	3H	1W	
504.44	507.49	3.05	3.04	100	2.01	66	3R	3H	1W	
507.49	510.54	3.05	2.95	97	2.36	77	3R	3H	1W	
510.54	513.59	3.05	3.04	100	1.91	63	3R	3H	1W	
513.59	516.64	3.05	3.04	100	1.88	62	3R	3H	1W	
516.64	519.68	3.04	3.04	100	2.30	76	4R	4H	1W	multiple single joints

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
519.68	522.73	3.05	2.95	97	2.45	80	4R	4H	1W	
522.73	525.78	3.05	3	98	2.34	77	4R	3H	1W	
525.78	528.83	3.05	2.36	77	1.98	65	3R	2H	1W	short run.
528.83	531.88	3.05	3.05	100	2.30	75	3R	2H	1W	run longer than 3.05m. Multiple single joints.
531.88	534.92	3.04	2.98	98	2.04	67	3R	2H	1W	
534.92	537.97	3.05	1.7	56	0.49	16	3R	2H	1W	
537.97	541.02	3.05	1.73	57	0.85	28	4R	4H	1W	
541.02	544.07	3.05	2.18	71	0.30	10	4R	4H	1W	
544.07	547.12	3.05	2.4	79	0.64	21	4R	3H	1W	rbz.
547.12	550.16	3.04	2.98	98	2.44	80	4R	4H	1W	multiple single joints.
550.16	553.21	3.05	2.16	71	0.93	30	3R	2H	1W	
553.21	556.26	3.05	2.44	80	0.66	22	4R	2H	1W	
556.26	559.31	3.05	2.82	92	1.53	50	4R	2H	1W	
559.31	562.36	3.05	2.63	86	1.46	48	4R	2H	1W	
562.36	565.40	3.04	3.04	100	1.83	60	4R	2H	1W	
565.40	568.45	3.05	2.96	97	1.84	60	4R	3H	1W	multiple sing joints.
568.45	571.50	3.05	2.58	85	1.51	50	4R	2H	1W	local gouge.
571.50	574.55	3.05	2.43	80	1.11	36	2R	2H	1W	localized gouge zone within run from 572.20-572.55m
574.55	577.60	3.05	2.04	67	0.63	21	1R	2H	1W	
577.60	580.64	3.04	2.78	91	1.28	42	1R	3H	1W	
580.64	583.61	2.97	2.32	78	1.19	40	1R	2H	1W	
583.61	586.74	3.13	2.15	69	0.87	28	1R	2H	1W	
586.74	589.79	3.05	1.73	57	0.60	20	1R	2H	1W	
589.79	592.84	3.05	3	98	0.46	15	1R	2H	1W	
592.84	592.98	0.14	0.14	100	0.00	0	1R	2H	1W	

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From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
0.00	0.00	0.00	-QC-	0.00	0	V766582	☐	O18-048	Core	OX6	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V766639	☐	O18-050	Core	OX6	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V766626	☐	O18-050	Core	SR5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V766621	☐	O18-050	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V766329	☐	O18-021	CORE		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V766595	☐	O18-048	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V766569	☐	O18-046	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V766542	☐	O18-046	Core	OX7	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V766537	☐	O18-046	Core	SR5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V766527	☐	O18-043	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V766347	☐	O18-021	CORE	SR5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V766446	☐	O18-043	Core	SR5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V766433	☐	O18-033		SR5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V766414	☐	O18-033		SR5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V766409	☐	O18-033			☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V766603	☐	O18-048	Core	SR5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V766396	☐	O18-031	core	SR5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V766384	☐	O18-031	core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V766377	☐	O18-031	core	SR5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V766357	☐	O18-021	CORE	SR5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V766505	☐	O18-043	Core	OX6	☐	☐	☐
5.85	7.62	1.77	NSP, CMS	1.34	76	V766323	☐	O18-021	CORE		☐	☐	☐
7.62	9.14	1.52	CMS	0.75	49	V766324	☐	O18-021	CORE		☐	☐	☐
9.14	10.67	1.53	CMS	1.11	73	V766325	☐	O18-021	CORE		☐	☐	☐
10.67	13.72	3.05	CMS	2.19	72	V766326	☐	O18-021	CORE		☐	☐	☐
13.72	16.76	3.04	CMS	2.82	93	V766327	☐	O18-021	CORE		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
16.76	19.81	3.05	CMS	2.52	83	V766328	☐	O18-021	CORE		☐	☐	☐
19.81	22.86	3.05	CMS	2.79	91	V766330	☐	O18-021	CORE		☐	☐	☐
22.86	25.91	3.05	CMS	2.44	80	V766331	☐	O18-021	CORE		☐	☐	☐
25.91	28.96	3.05	CMS	2.91	95	V766332	☐	O18-021	CORE		☐	☐	☐
28.96	32.00	3.04	CMS	2.64	87	V766333	☐	O18-021	CORE		☐	☐	☐
32.00	35.05	3.05	CMS	2.95	97	V766334	☐	O18-021	CORE		☐	☐	☐
35.05	38.10	3.05	CMS	3.02	99	V766335	☐	O18-021	CORE		☐	☐	☐
38.10	41.15	3.05	CMS	2.85	93	V766336	☐	O18-021	CORE		☐	☐	☐
41.15	44.19	3.04	CMS	2.99	98	V766337	☐	O18-021	CORE		☐	☐	☐
41.15	44.19	3.04	CMS	2.99	98	V766338	☐	O18-021	CORE		☐	☐	☑
44.19	47.24	3.05	CMS	2.94	96	V766339	☐	O18-021	CORE		☐	☐	☐
47.24	50.29	3.05	CMS	3.04	100	V766340	☐	O18-021	CORE		☐	☐	☐
50.29	53.34	3.05	CMS	3.00	98	V766341	☐	O18-021	CORE		☐	☐	☐
53.34	56.39	3.05	CMS	2.90	95	V766342	☐	O18-021	CORE		☐	☐	☐
56.39	59.44	3.05	CMS	3.04	100	V766343	☐	O18-021	CORE		☐	☐	☐
59.44	62.48	3.04	CMS	3.00	99	V766344	☐	O18-021	CORE		☐	☐	☐
59.44	62.48	3.04	CMS	3.00	99	V766345	☐	O18-021	CORE		☐	☑	☐
62.48	65.53	3.05	CMS	3.04	100	V766346	☐	O18-021	CORE		☐	☐	☐
65.53	68.58	3.05	CMS	2.93	96	V766348	☐	O18-021	CORE		☐	☐	☐
68.58	71.63	3.05	CMS	2.93	96	V766349	☐	O18-021	CORE		☐	☐	☐
71.63	74.68	3.05	CMS	2.97	97	V766350	☐	O18-021	CORE		☐	☐	☐
74.68	77.72	3.04	CMS	2.63	87	V766351	☐	O18-021	CORE		☐	☐	☐
77.72	80.77	3.05	CMS	2.82	92	V766352	☐	O18-021	CORE		☐	☐	☐
80.77	83.82	3.05	CMS	3.00	98	V766353	☐	O18-021	CORE		☐	☐	☐
83.82	86.86	3.04	CMS	2.97	98	V766354	☐	O18-021	CORE		☐	☐	☐
86.86	89.92	3.06	CMS	2.83	92	V766355	☐	O18-021	CORE		☐	☐	☐
89.92	92.96	3.04	CMS	2.86	94	V766356	☐	O18-021	CORE		☐	☐	☐
92.96	96.01	3.05	CMS	2.89	95	V766358	☐	O18-021	CORE		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
96.01	99.06	3.05	CMS	3.02	99	V766359	☐	O18-021	CORE		☐	☐	☐
99.06	102.11	3.05	CMS	3.03	99	V766360	☐	O18-021	CORE		☐	☐	☐
102.11	105.16	3.05	CMS	2.72	89	V766361	☐	O18-031	core		☐	☐	☐
105.16	108.20	3.04	CMS	3.00	99	V766362	☐	O18-031	core		☐	☐	☐
108.20	111.25	3.05	CMS	2.94	96	V766363	☐	O18-031	core		☐	☐	☐
111.25	114.30	3.05	CMS	2.84	93	V766364	☐	O18-031	core		☐	☐	☐
114.30	117.35	3.05	CMS	2.99	98	V766365	☐	O18-031	core		☐	☐	☐
117.35	120.40	3.05	CMS	2.81	92	V766366	☐	O18-031	core		☐	☐	☐
120.40	123.44	3.04	CMS	3.01	99	V766367	☐	O18-031	core		☐	☐	☐
123.44	126.49	3.05	CMS	3.05	100	V766368	☐	O18-031	core		☐	☐	☐
126.49	129.54	3.05	CMS	3.02	99	V766369	☐	O18-031	core		☐	☐	☐
129.54	132.59	3.05	CMS	2.90	95	V766370	☐	O18-031	core		☐	☐	☐
132.59	135.64	3.05	CMS	2.69	88	V766371	☐	O18-031	core		☐	☐	☐
135.64	138.68	3.04	CMS	3.03	100	V766372	☐	O18-031	core		☐	☐	☐
138.68	141.73	3.05	LST	2.97	97	V766373	☐	O18-031	core		☐	☐	☐
138.68	141.73	3.05	LST	2.97	97	V766374	☐	O18-031	core		☐	☑	☐
141.73	144.78	3.05	LST	2.94	96	V766375	☐	O18-031	core		☐	☐	☐
144.78	147.83	3.05	LST	3.01	99	V766376	☐	O18-031	core		☐	☐	☐
147.83	150.88	3.05	LST	3.02	99	V766378	☐	O18-031	core		☐	☐	☐
150.88	153.92	3.04	LST	2.93	96	V766379	☐	O18-031	core		☐	☐	☐
153.92	156.97	3.05	LST	3.04	100	V766380	☐	O18-031	core		☐	☐	☐
156.97	160.02	3.05	LST	2.96	97	V766381	☐	O18-031	core		☐	☐	☐
160.02	163.07	3.05	LST	2.84	93	V766382	☐	O18-031	core		☐	☐	☐
163.07	166.12	3.05	LST	3.05	100	V766383	☐	O18-031	core		☐	☐	☐
166.12	169.16	3.04	LST	2.96	97	V766385	☐	O18-031	core		☐	☐	☐
169.16	172.21	3.05	LST	2.94	96	V766386	☐	O18-031	core		☐	☐	☐
172.21	175.26	3.05	LST	2.85	93	V766387	☐	O18-031	core		☐	☐	☐
175.26	178.31	3.05	LST	2.69	88	V766388	☐	O18-031	core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
178.31	181.36	3.05	LST	3.03	99	V766389	☐	O18-031	core		☐	☐	☐
181.36	184.40	3.04	LST	3.04	100	V766390	☐	O18-031	core		☐	☐	☐
181.36	184.40	3.04	LST	3.04	100	V766391	☐	O18-031	core		☐	☐	☑
184.40	187.45	3.05	LST	3.05	100	V766392	☐	O18-031	core		☐	☐	☐
187.45	190.50	3.05	LST	2.99	98	V766393	☐	O18-031	core		☐	☐	☐
190.50	193.55	3.05	LST	2.98	98	V766394	☐	O18-031	core		☐	☐	☐
193.55	196.60	3.05	LST	2.94	96	V766395	☐	O18-031	core		☐	☐	☐
196.60	199.64	3.04	LST	2.92	96	V766397	☐	O18-031	core		☐	☐	☐
199.64	202.69	3.05	LST	2.71	89	V766398	☐	O18-031	core		☐	☐	☐
202.69	205.74	3.05	LST	3.04	100	V766399	☐	O18-031	core		☐	☐	☐
205.74	208.79	3.05	LST	2.98	98	V766400	☐	O18-031	core		☐	☐	☐
208.79	211.84	3.05	LST	3.05	100	V766401	☐	O18-033			☐	☐	☐
211.84	214.88	3.04	LST	2.99	98	V766402	☐	O18-033			☐	☐	☐
214.88	217.93	3.05	LST	2.94	96	V766403	☐	O18-033			☐	☐	☐
217.93	220.98	3.05	LST	3.05	100	V766404	☐	O18-033			☐	☐	☐
220.98	224.03	3.05	LST	2.94	96	V766405	☐	O18-033			☐	☐	☐
224.03	227.08	3.05	LST	2.72	89	V766406	☐	O18-033			☐	☐	☐
227.08	230.35	3.27	LST	2.86	87	V766407	☐	O18-033			☐	☐	☐
230.35	233.17	2.82	LST	2.80	99	V766408	☐	O18-033			☐	☐	☐
233.17	236.22	3.05	LST	2.81	92	V766410	☐	O18-033			☐	☐	☐
236.22	239.27	3.05	LST	2.91	95	V766411	☐	O18-033			☐	☐	☐
239.27	240.79	1.52	LST	1.41	93	V766412	☐	O18-033			☐	☐	☐
240.79	242.32	1.53	LST	1.52	99	V766413	☐	O18-033			☐	☐	☐
242.32	243.84	1.52	LST	1.46	96	V766415	☐	O18-033			☐	☐	☐
243.84	246.89	3.05	LST	2.89	95	V766416	☐	O18-033			☐	☐	☐
246.89	247.84	0.95	LST	0.75	79	V766417	☐	O18-033			☐	☐	☐
247.84	249.94	2.10	LST	1.88	90	V766418	☐	O18-033			☐	☐	☐
249.94	251.46	1.52	LST	1.42	93	V766419	☐	O18-033			☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
251.46	252.66	1.20	LST	0.87	73	V766420	☐	O18-033			☐	☐	☐
252.66	254.51	1.85	LST	1.71	92	V766421	☐	O18-033			☐	☐	☐
254.51	257.40	2.89	LST	2.54	88	V766422	☐	O18-033			☐	☐	☐
257.40	259.80	2.40	LST	1.36	57	V766423	☐	O18-033			☐	☐	☐
257.40	259.80	2.40	LST	1.36	57	V766424	☐	O18-033			☐	☐	☑
259.80	260.60	0.80	LST	0.65	81	V766425	☐	O18-033			☐	☐	☐
260.60	263.65	3.05	LST	1.81	59	V766426	☐	O18-033			☐	☐	☐
263.65	266.70	3.05	LST	2.13	70	V766427	☐	O18-033			☐	☐	☐
266.70	269.75	3.05	LST	2.54	83	V766428	☐	O18-033			☐	☐	☐
266.70	269.75	3.05	LST	2.54	83	V766429	☐	O18-033			☐	☑	☐
269.75	272.80	3.05	LST	2.62	86	V766430	☐	O18-033			☐	☐	☐
272.80	275.84	3.04	LST	2.34	77	V766431	☐	O18-033			☐	☐	☐
275.84	278.89	3.05	LST	2.88	94	V766432	☐	O18-033			☐	☐	☐
278.89	281.94	3.05	LST	2.88	94	V766434	☐	O18-033			☐	☐	☐
281.94	284.99	3.05	LST	2.68	88	V766435	☐	O18-033			☐	☐	☐
284.99	288.04	3.05	LST	2.83	93	V766436	☐	O18-033			☐	☐	☐
288.04	291.08	3.04	LST	2.91	96	V766437	☐	O18-033			☐	☐	☐
291.08	294.13	3.05	LST	3.03	99	V766438	☐	O18-033			☐	☐	☐
294.13	297.18	3.05	LST	2.49	82	V766439	☐	O18-033			☐	☐	☐
297.18	300.23	3.05	LST	3.04	100	V766440	☐	O18-033			☐	☐	☐
300.23	303.28	3.05	LST	2.78	91	V766441	☐	O18-043	Core		☐	☐	☐
303.28	306.32	3.04	LST	2.74	90	V766442	☐	O18-043	Core		☐	☐	☐
306.32	309.37	3.05	LST	2.64	87	V766443	☐	O18-043	Core		☐	☐	☐
309.37	312.42	3.05	LST	2.91	95	V766444	☐	O18-043	Core		☐	☐	☐
312.42	315.47	3.05	LST	2.68	88	V766445	☐	O18-043	Core		☐	☐	☐
315.47	318.52	3.05	LST	2.10	69	V766447	☐	O18-043	Core		☐	☐	☐
318.52	321.56	3.04	LST	3.04	100	V766448	☐	O18-043	Core		☐	☐	☐
321.56	324.61	3.05	LST	3.00	98	V766449	☐	O18-043	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
324.61	327.66	3.05	LST	2.99	98	V766450	☐	O18-043	Core		☐	☐	☐
324.61	327.66	3.05	LST	2.99	98	V766501	☐	O18-043	Core		☐	☑	☐
327.66	330.71	3.05	LST	2.88	94	V766502	☐	O18-043	Core		☐	☐	☐
330.71	333.76	3.05	LST	2.75	90	V766503	☐	O18-043	Core		☐	☐	☐
333.76	336.80	3.04	LST	2.93	96	V766504	☐	O18-043	Core		☐	☐	☐
336.80	339.85	3.05	LST	3.00	98	V766506	☐	O18-043	Core		☐	☐	☐
339.85	342.90	3.05	LST	3.05	100	V766507	☐	O18-043	Core		☐	☐	☐
342.90	345.95	3.05	LST	2.93	96	V766508	☐	O18-043	Core		☐	☐	☐
345.95	349.00	3.05	LST	3.01	99	V766509	☐	O18-043	Core		☐	☐	☐
349.00	352.04	3.04	LST	2.76	91	V766510	☐	O18-043	Core		☐	☐	☐
352.04	355.09	3.05	LST	3.01	99	V766511	☐	O18-043	Core		☐	☐	☐
355.09	358.14	3.05	LST	3.04	100	V766512	☐	O18-043	Core		☐	☐	☐
358.14	361.19	3.05	LST	3.02	99	V766513	☐	O18-043	Core		☐	☐	☐
361.19	364.24	3.05	LST	2.96	97	V766514	☐	O18-043	Core		☐	☐	☐
364.24	367.28	3.04	LST	2.98	98	V766515	☐	O18-043	Core		☐	☐	☐
367.28	370.33	3.05	LST	2.96	97	V766516	☐	O18-043	Core		☐	☐	☐
370.33	373.38	3.05	LST	2.71	89	V766517	☐	O18-043	Core		☐	☐	☐
370.33	373.38	3.05	LST	2.71	89	V766518	☐	O18-043	Core		☐	☐	☑
373.38	376.43	3.05	LST	3.05	100	V766519	☐	O18-043	Core		☐	☐	☐
376.43	379.48	3.05	LST	2.89	95	V766520	☐	O18-043	Core		☐	☐	☐
379.48	382.52	3.04	LST	2.94	97	V766521	☐	O18-043	Core		☐	☐	☐
382.52	385.57	3.05	LST	2.94	96	V766522	☐	O18-043	Core		☐	☐	☐
385.57	388.62	3.05	LST	3.05	100	V766523	☐	O18-043	Core		☐	☐	☐
388.62	391.67	3.05	LST	3.02	99	V766524	☐	O18-043	Core		☐	☐	☐
391.67	394.72	3.05	LST	2.96	97	V766525	☐	O18-043	Core		☐	☐	☐
394.72	397.76	3.04	LST	2.83	93	V766526	☐	O18-043	Core		☐	☐	☐
397.76	400.81	3.05	LST	2.76	90	V766528	☐	O18-043	Core		☐	☐	☐
400.81	403.86	3.05	LST	2.73	90	V766529	☐	O18-043	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
403.86	406.91	3.05	LST	2.43	80	V766530	☐	O18-043	Core		☐	☐	☐
406.91	409.96	3.05	LST	2.39	78	V766531	☐	O18-046	Core		☐	☐	☐
409.96	413.00	3.04	LST	3.04	100	V766532	☐	O18-046	Core		☐	☐	☐
413.00	416.05	3.05	LST	3.05	100	V766533	☐	O18-046	Core		☐	☐	☐
416.05	419.10	3.05	LST	2.79	91	V766534	☐	O18-046	Core		☐	☐	☐
419.10	422.15	3.05	LST	3.05	100	V766535	☐	O18-046	Core		☐	☐	☐
422.15	425.20	3.05	LST	2.93	96	V766536	☐	O18-046	Core		☐	☐	☐
425.20	428.24	3.04	LST	3.04	100	V766538	☐	O18-046	Core		☐	☐	☐
428.24	431.29	3.05	LST	2.87	94	V766539	☐	O18-046	Core		☐	☐	☐
431.29	434.34	3.05	LST	2.84	93	V766540	☐	O18-046	Core		☐	☐	☐
434.34	437.39	3.05	LST	3.04	100	V766541	☐	O18-046	Core		☐	☐	☐
437.39	440.44	3.05	LST	3.01	99	V766543	☐	O18-046	Core		☐	☐	☐
440.44	443.48	3.04	LST	3.04	100	V766544	☐	O18-046	Core		☐	☐	☐
443.48	446.53	3.05	LST	3.04	100	V766545	☐	O18-046	Core		☐	☐	☐
446.53	449.58	3.05	LST	3.04	100	V766546	☐	O18-046	Core		☐	☐	☐
449.58	452.63	3.05	LST	3.04	100	V766547	☐	O18-046	Core		☐	☐	☐
452.63	455.68	3.05	LST	2.86	94	V766548	☐	O18-046	Core		☐	☐	☐
455.68	458.72	3.04	LST	2.91	96	V766549	☐	O18-046	Core		☐	☐	☐
458.72	461.77	3.05	LST	2.82	92	V766550	☐	O18-046	Core		☐	☐	☐
461.77	464.82	3.05	LST	3.04	100	V766551	☐	O18-046	Core		☐	☐	☐
464.82	467.87	3.05	LST	3.04	100	V766552	☐	O18-046	Core		☐	☐	☐
467.87	470.92	3.05	LST	2.90	95	V766553	☐	O18-046	Core		☐	☐	☐
470.92	473.96	3.04	LST	3.04	100	V766554	☐	O18-046	Core		☐	☐	☐
473.96	477.01	3.05	LST	3.00	98	V766555	☐	O18-046	Core		☐	☐	☐
473.96	477.01	3.05	LST	3.00	98	V766556	☐	O18-046	Core		☐	☑	☐
477.01	480.06	3.05	LST	3.04	100	V766557	☐	O18-046	Core		☐	☐	☐
480.06	483.11	3.05	LST	2.85	93	V766558	☐	O18-046	Core		☐	☐	☐
483.11	486.16	3.05	LST	3.04	100	V766559	☐	O18-046	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
486.16	489.20	3.04	LST	3.04	100	V766560	☐	O18-046	Core		☐	☐	☐
489.20	492.25	3.05	LST	2.97	97	V766561	☐	O18-046	Core		☐	☐	☐
492.25	493.77	1.52	LST	1.44	95	V766562	☐	O18-046	Core		☐	☐	☐
492.25	493.77	1.52	LST	1.44	95	V766563	☐	O18-046	Core		☐	☐	☑
493.77	495.30	1.53	LST	1.29	84	V766564	☐	O18-046	Core		☐	☐	☐
495.30	496.82	1.52	LST	1.45	95	V766565	☐	O18-046	Core		☐	☐	☐
496.82	498.35	1.53	LST	1.39	91	V766566	☐	O18-046	Core		☐	☐	☐
498.35	499.87	1.52	LST	0.78	51	V766567	☐	O18-046	Core		☐	☐	☐
499.87	501.39	1.52	LST	1.47	97	V766568	☐	O18-046	Core		☐	☐	☐
501.39	502.91	1.52	LST	1.09	72	V766570	☐	O18-046	Core		☐	☐	☐
502.91	504.44	1.53	LST	1.40	92	V766571	☐	O18-048	Core		☐	☐	☐
504.44	505.97	1.53	LST	1.37	90	V766572	☐	O18-048	Core		☐	☐	☐
505.97	507.49	1.52	LST	1.41	93	V766573	☐	O18-048	Core		☐	☐	☐
507.49	509.01	1.52	LST	1.41	93	V766574	☐	O18-048	Core		☐	☐	☐
509.01	510.54	1.53	LST	1.40	92	V766575	☐	O18-048	Core		☐	☐	☐
510.54	512.06	1.52	LST	1.52	100	V766576	☐	O18-048	Core		☐	☐	☐
512.06	513.59	1.53	LST	1.52	99	V766577	☐	O18-048	Core		☐	☐	☐
513.59	515.10	1.51	LST	1.50	99	V766578	☐	O18-048	Core		☐	☐	☐
515.10	516.64	1.54	LST	1.42	92	V766579	☐	O18-048	Core		☐	☐	☐
516.64	518.16	1.52	LST	1.50	99	V766580	☐	O18-048	Core		☐	☐	☐
518.16	519.68	1.52	LST	1.52	100	V766581	☐	O18-048	Core		☐	☐	☐
519.68	521.20	1.52	LST	1.48	97	V766583	☐	O18-048	Core		☐	☐	☐
521.20	522.73	1.53	LST	1.45	95	V766584	☐	O18-048	Core		☐	☐	☐
522.73	524.25	1.52	LST	1.50	99	V766585	☐	O18-048	Core		☐	☐	☐
524.25	525.78	1.53	LST	1.52	99	V766586	☐	O18-048	Core		☐	☐	☐
525.78	527.30	1.52	LST	1.20	79	V766587	☐	O18-048	Core		☐	☐	☐
527.30	528.59	1.29	LST	0.96	74	V766588	☐	O18-048	Core		☐	☐	☐
528.59	530.80	2.21	LST	2.14	97	V766589	☐	O18-048	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
530.80	531.88	1.08	LST	1.08	100	V766590	☐	O18-048	Core		☐	☐	☐
530.80	531.88	1.08	LST	1.08	100	V766591	☐	O18-048	Core		☐	☑	☐
531.88	533.40	1.52	LST	1.41	93	V766592	☐	O18-048	Core		☐	☐	☐
533.40	535.35	1.95	LST	1.70	87	V766593	☐	O18-048	Core		☐	☐	☐
535.35	537.97	2.62	LST	1.24	47	V766594	☐	O18-048	Core		☐	☐	☐
537.97	539.49	1.52	LST	1.13	74	V766596	☐	O18-048	Core		☐	☐	☐
539.49	541.02	1.53	LST	0.40	26	V766597	☐	O18-048	Core		☐	☐	☐
541.02	542.54	1.52	LST	0.58	38	V766598	☐	O18-048	Core		☐	☐	☐
542.54	544.07	1.53	LST	1.21	79	V766599	☐	O18-048	Core		☐	☐	☐
544.07	545.59	1.52	LST	1.04	68	V766600	☐	O18-048	Core		☐	☐	☐
545.59	547.12	1.53	LST	1.00	65	V766601	☐	O18-048	Core		☐	☐	☐
547.12	548.64	1.52	LST	1.50	99	V766602	☐	O18-048	Core		☐	☐	☐
548.64	550.16	1.52	LST	1.52	100	V766604	☐	O18-048	Core		☐	☐	☐
550.16	551.68	1.52	LST	1.19	78	V766605	☐	O18-048	Core		☐	☐	☐
551.68	553.21	1.53	LST	1.07	70	V766606	☐	O18-048	Core		☐	☐	☐
553.21	554.73	1.52	LST	1.03	68	V766607	☐	O18-048	Core		☐	☐	☐
553.21	554.73	1.52	LST	1.03	68	V766608	☐	O18-048	Core		☐	☐	☑
554.73	556.26	1.53	LST	1.22	80	V766609	☐	O18-048	Core		☐	☐	☐
556.26	557.78	1.52	LST	1.32	87	V766610	☐	O18-048	Core		☐	☐	☐
557.78	559.31	1.53	LST	1.30	85	V766611	☐	O18-050	Core		☐	☐	☐
559.31	560.83	1.52	LST	1.50	99	V766612	☐	O18-050	Core		☐	☐	☐
560.83	562.36	1.53	LST	1.20	78	V766613	☐	O18-050	Core		☐	☐	☐
562.36	563.88	1.52	LST	1.50	99	V766614	☐	O18-050	Core		☐	☐	☐
563.88	565.40	1.52	LST	1.50	99	V766615	☐	O18-050	Core		☐	☐	☐
565.40	566.92	1.52	LST	1.52	100	V766616	☐	O18-050	Core		☐	☐	☐
566.92	568.45	1.53	LST	1.45	95	V766617	☐	O18-050	Core		☐	☐	☐
568.45	569.63	1.18	LST	1.10	93	V766618	☐	O18-050	Core		☐	☐	☐
569.63	570.70	1.07	LST, MST	0.91	85	V766619	☐	O18-050	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
570.70	572.22	1.52	MST	1.12	74	V766620	☐	O18-050	Core		☐	☐	☐
572.22	573.40	1.18	MST	0.96	81	V766622	☐	O18-050	Core		☐	☐	☐
573.40	574.55	1.15	MST	0.88	77	V766623	☐	O18-050	Core		☐	☐	☐
574.55	576.07	1.52	MST	0.73	48	V766624	☐	O18-050	Core		☐	☐	☐
576.07	577.60	1.53	MST	1.31	86	V766625	☐	O18-050	Core		☐	☐	☐
577.60	579.12	1.52	MST	1.48	97	V766627	☐	O18-050	Core		☐	☐	☐
579.12	580.64	1.52	MST	1.23	81	V766628	☐	O18-050	Core		☐	☐	☐
580.64	582.16	1.52	MST	1.33	88	V766629	☐	O18-050	Core		☐	☐	☐
582.16	583.69	1.53	MST	1.30	85	V766630	☐	O18-050	Core		☐	☐	☐
583.69	585.21	1.52	MST	1.15	76	V766631	☐	O18-050	Core		☐	☐	☐
585.21	586.74	1.53	MST	1.12	73	V766632	☐	O18-050	Core		☐	☐	☐
586.74	588.26	1.52	MST	1.35	89	V766633	☐	O18-050	Core		☐	☐	☐
588.26	589.79	1.53	MST	1.28	84	V766634	☐	O18-050	Core		☐	☐	☐
589.79	591.31	1.52	MST	1.43	94	V766635	☐	O18-050	Core		☐	☐	☐
589.79	591.31	1.52	MST	1.43	94	V766636	☐	O18-050	Core		☐	☑	☐
591.31	592.98	1.67	MST	1.54	92	V766637	☐	O18-050	Core		☐	☐	☐
591.31	592.98	1.67	MST	1.54	92	V766638	☐	O18-050	Core		☐	☐	☑

BDO-18-012

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
0.00	5.18	5.18	NSP	--	no recovery							
5.18	23.47	18.29	OVB	--	ovb							
23.47	332.23	308.76	MST	FG	Black, fine-grained, thinly laminated, non-calcareous mudstone interbeddded with,dark-grey, medium-grained silstone.							

BDO-18-012

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
0.00	2.88	2.88	0	0	0.00	0	0R	--	--	
2.88	5.18	2.30	2.08	90	0.00	0	0R	1H	5W	ovb
5.18	8.23	3.05	0.36	12	0.00	0	1R	1H	5W	ovb
8.23	11.28	3.05	0.57	19	0.00	0	1R	1H	5W	ovb
11.28	14.33	3.05	2.5	82	0.00	0	1R	1H	4W	ovb
14.33	17.37	3.04	2.57	85	0.00	0	1R	1H	4W	ovb
17.37	20.42	3.05	1.5	49	0.00	0	1R	1H	4W	ovb
20.42	23.47	3.05	0.68	22	0.00	0	1R	1H	4W	ovb
23.47	26.52	3.05	0.7	23	0.00	0	3R	1H	3W	
26.52	29.57	3.05	0.83	27	0.28	9	3R	1H	2W	
29.57	32.61	3.04	0.7	23	0.00	0	3R	1H	2W	
32.61	35.66	3.05	2.1	69	0.00	0	2R	1H	2W	
35.66	38.71	3.05	2.84	93	0.41	13	0R	1H	2W	
38.71	41.76	3.05	2.17	71	0.12	4	0R	1H	2W	
41.76	44.81	3.05	1.46	48	0.11	4	0R	1H	2W	
44.81	47.85	3.04	1.86	61	0.25	8	0R	1H	2W	
47.85	50.90	3.05	0.86	28	0.16	5	0R	1H	2W	
50.90	53.95	3.05	1.68	55	0.17	6	0R	1H	2W	
53.95	57.00	3.05	1.56	51	0.00	0	0R	1H	2W	
57.00	60.05	3.05	1.81	59	0.26	9	0R	1H	2W	
60.05	63.09	3.04	1.96	64	0.12	4	0R	1H	2W	
63.09	66.14	3.05	2.25	74	0.39	13	0R	1H	2W	
66.14	69.19	3.05	2.55	84	0.48	16	0R	2H	2W	
69.19	72.24	3.05	1.13	37	0.10	3	0R	1H	2W	
72.24	75.29	3.05	1.7	56	0.37	12	0R	1H	2W	
75.29	78.33	3.04	1.39	46	0.15	5	0R	1H	2W	
78.33	81.38	3.05	0.96	31	0.11	4	0R	2H	2W	
81.38	84.43	3.05	1.71	56	0.35	11	0R	2H	2W	
84.43	87.48	3.05	2.02	66	0.78	26	0R	1H	2W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
87.48	90.53	3.05	1.85	61	0.46	15	0R	1H	1W	
90.53	93.57	3.04	1.78	59	0.81	27	0R	1H	1W	
93.57	96.62	3.05	2	66	0.58	19	0R	1H	1W	
96.62	99.67	3.05	2.35	77	1.36	45	0R	1H	1W	
99.67	102.72	3.05	2.56	84	1.02	33	0R	1H	1W	
102.72	105.77	3.05	2.5	82	1.48	49	0R	1H	1W	
105.77	108.81	3.04	2.52	83	0.30	10	0R	1H	1W	
108.81	111.86	3.05	1.1	36	0.27	9	0R	1H	1W	
111.86	114.91	3.05	2.05	67	0.60	20	0R	1H	1W	
114.91	117.96	3.05	2.8	92	1.76	58	0R	3H	1W	
117.96	121.01	3.05	1.58	52	0.48	16	0R	2H	1W	
121.01	124.05	3.04	1.82	60	0.38	13	0R	2H	1W	
124.05	127.10	3.05	2.3	75	0.35	11	0R	3H	1W	
127.10	130.15	3.05	1.95	64	0.35	11	0R	2H	1W	
130.15	133.20	3.05	2.42	79	0.12	4	0R	2H	1W	
133.20	136.25	3.05	1.92	63	0.94	31	0R	2H	1W	
136.25	139.29	3.04	2.68	88	0.21	7	0R	2H	1W	
139.29	142.34	3.05	2	66	0.66	22	0R	2H	1W	
142.34	145.39	3.05	2.25	74	0.51	17	0R	2H	1W	
145.39	148.44	3.05	0.89	29	0.00	0	0R	2H	1W	
148.44	151.49	3.05	1.38	45	0.00	0	0R	2H	1W	
151.49	154.53	3.04	1.65	54	0.22	7	0R	2H	1W	
154.53	157.58	3.05	1.85	61	0.25	8	0R	2H	1W	
157.58	160.63	3.05	1.55	51	0.14	5	0R	2H	1W	
160.63	163.68	3.05	1.99	65	0.15	5	0R	2H	1W	
163.68	166.73	3.05	2.73	90	0.49	16	0R	2H	1W	
166.73	169.77	3.04	1.91	63	0.00	0	0R	2H	1W	
169.77	172.82	3.05	2.55	84	0.67	22	0R	2H	1W	
172.82	175.87	3.05	1.5	49	0.20	7	0R	2H	1W	
175.87	178.92	3.05	1.75	57	0.12	4	0R	2H	1W	
178.92	181.97	3.05	1.88	62	0.39	13	0R	2H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
181.97	185.01	3.04	1.55	51	0.17	6	0R	2H	1W	
185.01	188.06	3.05	1.4	46	0.22	7	0R	2H	1W	
188.06	191.11	3.05	1.88	62	0.00	0	0R	2H	1W	
191.11	194.16	3.05	2.85	93	0.65	21	0R	2H	1W	
194.16	197.21	3.05	2.76	90	0.73	24	0R	2H	1W	
197.21	200.25	3.04	1.52	50	0.00	0	0R	2H	1W	
200.25	203.30	3.05	2.25	74	0.28	9	0R	2H	1W	
203.30	206.35	3.05	2.9	95	1.07	35	0R	3H	1W	
206.35	209.40	3.05	1.48	49	0.43	14	0R	3H	1W	
209.40	212.45	3.05	2.35	77	0.00	0	0R	2H	1W	
212.45	215.49	3.04	1.5	49	0.00	0	0R	2H	1W	
215.49	218.54	3.05	2.55	84	0.00	0	0R	2H	1W	
218.54	221.59	3.05	2.6	85	0.00	0	0R	2H	1W	
221.59	224.64	3.05	0.88	29	0.00	0	0R	2H	1W	
224.64	227.69	3.05	1.05	34	0.15	5	0R	3H	1W	
227.69	230.73	3.04	2.1	69	0.00	0	0R	2H	1W	
230.73	233.78	3.05	2.88	94	0.43	14	0R	2H	1W	
233.78	236.83	3.05	2.25	74	0.00	0	0R	2H	1W	
236.83	239.88	3.05	2.65	87	0.00	0	0R	2H	1W	
239.88	242.93	3.05	1.7	56	0.00	0	0R	2H	1W	
242.93	245.97	3.04	2.82	93	0.17	6	0R	2H	1W	
245.97	249.02	3.05	2.3	75	0.36	12	0R	2H	1W	
249.02	252.07	3.05	1.8	59	0.31	10	0R	3H	1W	
252.07	255.12	3.05	2.2	72	0.39	13	0R	3H	1W	
255.12	258.17	3.05	2.25	74	0.49	16	0R	3H	1W	
258.17	261.21	3.04	1.75	58	0.00	0	0R	3H	1W	
261.21	264.26	3.05	1.17	38	0.26	9	0R	3H	1W	
264.26	267.31	3.05	1.54	50	0.36	12	0R	3H	1W	
267.31	270.36	3.05	1.22	40	0.15	5	0R	3H	1W	
270.36	273.41	3.05	1.88	62	0.10	3	0R	3H	1W	
273.41	276.45	3.04	1.34	44	0.13	4	0R	3H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
276.45	279.50	3.05	1.86	61	0.78	26	0R	3H	1W	
279.50	282.55	3.05	0.57	19	0.10	3	0R	3H	1W	
282.55	285.60	3.05	2.17	71	0.83	27	0R	3H	1W	
285.60	288.65	3.05	2.69	88	2.54	83	0R	3H	1W	
288.65	291.69	3.04	1.87	62	0.75	25	0R	3H	1W	
291.69	294.74	3.05	1.81	59	0.75	25	0R	3H	1W	
294.74	297.79	3.05	1.27	42	0.39	13	0R	3H	1W	
297.79	300.84	3.05	1.43	47	0.00	0	0R	3H	1W	
300.84	303.89	3.05	2.03	67	0.79	26	0R	3H	1W	
303.89	306.93	3.04	1.5	49	0.00	0	0R	3H	1W	
306.93	309.98	3.05	1.75	57	0.00	0	0R	2H	1W	
309.98	313.03	3.05	0.88	29	0.00	0	0R	1H	1W	
313.03	316.08	3.05	2.3	75	0.00	0	0R	1H	1W	
316.08	319.13	3.05	2.25	74	0.00	0	0R	1H	1W	
319.13	322.17	3.04	0.17	6	0.00	0	0R	1H	1W	
322.17	325.22	3.05	1.08	35	0.00	0	0R	1H	1W	
325.22	328.27	3.05	1.1	36	0.00	0	0R	1H	1W	
328.27	331.32	3.05	1.75	57	0.00	0	0R	1H	1W	
331.32	332.23	0.91	0.65	71	0.00	0	0R	1H	1W	

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
0.00	0.00	0.00	-QC-	0.00	0	V765708	☐	O18-027	CORE		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V765717	☐	O18-027	CORE	SR5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V765731	☐	O18-029	core	SR5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V765742	☐	O18-029	core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V765760	☐	O18-029	core	SR5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V765763	☐	O18-035			☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V765768	☐	O18-035		SR5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V765789	☐	O18-035		SR5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V765695	☐	O18-027	CORE	SR5	☐	☐	☐
2.88	5.18	2.30	NSP	2.08	90	V765682	☐	O18-027	CORE		☐	☐	☐
5.18	8.23	3.05	NSP, OVB	0.36	12	V765683	☐	O18-027	CORE		☐	☐	☐
8.23	11.28	3.05	OVB	0.57	19	V765684	☐	O18-027	CORE		☐	☐	☐
11.28	14.33	3.05	OVB	2.50	82	V765685	☐	O18-027	CORE		☐	☐	☐
14.33	17.37	3.04	OVB	2.57	85	V765686	☐	O18-027	CORE		☐	☐	☐
17.37	20.42	3.05	OVB	1.50	49	V765687	☐	O18-027	CORE		☐	☐	☐
20.42	23.47	3.05	OVB	0.68	22	V765688	☐	O18-027	CORE		☐	☐	☐
23.47	26.52	3.05	MST, OVB	0.70	23	V765689	☐	O18-027	CORE		☐	☐	☐
26.52	29.57	3.05	MST	0.83	27	V765690	☐	O18-027	CORE		☐	☐	☐
29.57	32.61	3.04	MST	0.70	23	V765691	☐	O18-027	CORE		☐	☐	☐
32.61	35.66	3.05	MST	2.10	69	V765692	☐	O18-027	CORE		☐	☐	☐
35.66	38.71	3.05	MST	2.84	93	V765693	☐	O18-027	CORE		☐	☐	☐
38.71	41.76	3.05	MST	2.17	71	V765694	☐	O18-027	CORE		☐	☐	☐
41.76	44.81	3.05	MST	1.46	48	V765696	☐	O18-027	CORE		☐	☐	☐
44.81	47.85	3.04	MST	1.86	61	V765697	☐	O18-027	CORE		☐	☐	☐
47.85	50.90	3.05	MST	0.86	28	V765698	☐	O18-027	CORE		☐	☐	☐
50.90	53.95	3.05	MST	1.68	55	V765699	☐	O18-027	CORE		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
50.90	53.95	3.05	MST	1.68	55	V765700	☐	O18-027	CORE		☐	☐	☑
53.95	57.00	3.05	MST	1.56	51	V765701	☐	O18-027	CORE		☐	☐	☐
57.00	60.05	3.05	MST	1.81	59	V765702	☐	O18-027	CORE		☐	☐	☐
60.05	63.09	3.04	MST	1.96	64	V765703	☐	O18-027	CORE		☐	☐	☐
63.09	66.14	3.05	MST	2.25	74	V765704	☐	O18-027	CORE		☐	☐	☐
66.14	69.19	3.05	MST	2.55	84	V765705	☐	O18-027	CORE		☐	☐	☐
69.19	72.24	3.05	MST	1.13	37	V765706	☐	O18-027	CORE		☐	☐	☐
72.24	75.29	3.05	MST	1.70	56	V765707	☐	O18-027	CORE		☐	☐	☐
75.29	78.33	3.04	MST	1.39	46	V765709	☐	O18-027	CORE		☐	☐	☐
78.33	81.38	3.05	MST	0.96	31	V765710	☐	O18-027	CORE		☐	☐	☐
81.38	84.43	3.05	MST	1.71	56	V765711	☐	O18-027	CORE		☐	☐	☐
84.43	87.48	3.05	MST	2.02	66	V765712	☐	O18-027	CORE		☐	☐	☐
84.43	87.48	3.05	MST	2.02	66	V765713	☐	O18-027	CORE		☐	☑	☐
87.48	90.53	3.05	MST	1.85	61	V765714	☐	O18-027	CORE		☐	☐	☐
90.53	93.57	3.04	MST	1.78	59	V765715	☐	O18-027	CORE		☐	☐	☐
93.57	96.62	3.05	MST	2.00	66	V765716	☐	O18-027	CORE		☐	☐	☐
96.62	99.67	3.05	MST	2.35	77	V765718	☐	O18-027	CORE		☐	☐	☐
99.67	102.72	3.05	MST	2.56	84	V765719	☐	O18-027	CORE		☐	☐	☐
102.72	105.77	3.05	MST	2.50	82	V765720	☐	O18-027	CORE		☐	☐	☐
105.77	108.81	3.04	MST	2.52	83	V765721	☐	O18-029	core		☐	☐	☐
108.81	111.86	3.05	MST	1.10	36	V765722	☐	O18-029	core		☐	☐	☐
111.86	114.91	3.05	MST	2.05	67	V765723	☐	O18-029	core		☐	☐	☐
114.91	117.96	3.05	MST	2.80	92	V765724	☐	O18-029	core		☐	☐	☐
117.96	121.01	3.05	MST	1.58	52	V765725	☐	O18-029	core		☐	☐	☐
121.01	124.05	3.04	MST	1.82	60	V765726	☐	O18-029	core		☐	☐	☐
124.05	127.10	3.05	MST	2.30	75	V765727	☐	O18-029	core		☐	☐	☐
127.10	130.15	3.05	MST	1.95	64	V765728	☐	O18-029	core		☐	☐	☐
130.15	133.20	3.05	MST	2.42	79	V765729	☐	O18-029	core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
133.20	136.25	3.05	MST	1.92	63	V765730	☐	O18-029	core		☐	☐	☐
136.25	139.29	3.04	MST	2.68	88	V765732	☐	O18-029	core		☐	☐	☐
139.29	142.34	3.05	MST	2.00	66	V765733	☐	O18-029	core		☐	☐	☐
142.34	145.39	3.05	MST	2.25	74	V765734	☐	O18-029	core		☐	☐	☐
145.39	148.44	3.05	MST	0.89	29	V765735	☐	O18-029	core		☐	☐	☐
148.44	151.49	3.05	MST	1.38	45	V765736	☐	O18-029	core		☐	☐	☐
151.49	154.53	3.04	MST	1.65	54	V765737	☐	O18-029	core		☐	☐	☐
154.53	157.58	3.05	MST	1.85	61	V765738	☐	O18-029	core		☐	☐	☐
157.58	160.63	3.05	MST	1.55	51	V765739	☐	O18-029	core		☐	☐	☐
160.63	163.68	3.05	MST	1.99	65	V765740	☐	O18-029	core		☐	☐	☐
163.68	166.73	3.05	MST	2.73	90	V765741	☐	O18-029	core		☐	☐	☐
166.73	169.77	3.04	MST	1.91	63	V765743	☐	O18-029	core		☐	☐	☐
169.77	172.82	3.05	MST	2.55	84	V765744	☐	O18-029	core		☐	☐	☐
169.77	172.82	3.05	MST	2.55	84	V765745	☐	O18-029	core		☐	☑	☐
172.82	175.87	3.05	MST	1.50	49	V765746	☐	O18-029	core		☐	☐	☐
175.87	178.92	3.05	MST	1.75	57	V765747	☐	O18-029	core		☐	☐	☐
178.92	181.97	3.05	MST	1.88	62	V765748	☐	O18-029	core		☐	☐	☐
181.97	185.01	3.04	MST	1.55	51	V765749	☐	O18-029	core		☐	☐	☐
185.01	188.06	3.05	MST	1.40	46	V765750	☐	O18-029	core		☐	☐	☐
188.06	191.11	3.05	MST	1.88	62	V765751	☐	O18-029	core		☐	☐	☐
191.11	194.16	3.05	MST	2.85	93	V765752	☐	O18-029	core		☐	☐	☐
194.16	197.21	3.05	MST	2.76	90	V765753	☐	O18-029	core		☐	☐	☐
197.21	200.25	3.04	MST	1.52	50	V765754	☐	O18-029	core		☐	☐	☐
197.21	200.25	3.04	MST	1.52	50	V765755	☐	O18-029	core		☐	☐	☑
200.25	203.30	3.05	MST	2.25	74	V765756	☐	O18-029	core		☐	☐	☐
203.30	206.35	3.05	MST	2.90	95	V765757	☐	O18-029	core		☐	☐	☐
206.35	209.40	3.05	MST	1.48	49	V765758	☐	O18-029	core		☐	☐	☐
209.40	212.45	3.05	MST	2.35	77	V765759	☐	O18-029	core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
212.45	215.49	3.04	MST	1.50	49	V765761	☐	O18-035			☐	☐	☐
215.49	218.54	3.05	MST	2.55	84	V765762	☐	O18-035			☐	☐	☐
218.54	221.59	3.05	MST	2.60	85	V765764	☐	O18-035			☐	☐	☐
221.59	224.64	3.05	MST	0.88	29	V765765	☐	O18-035			☐	☐	☐
224.64	227.69	3.05	MST	1.05	34	V765766	☐	O18-035			☐	☐	☐
227.69	230.73	3.04	MST	2.10	69	V765767	☐	O18-035			☐	☐	☐
230.73	233.78	3.05	MST	2.88	94	V765769	☐	O18-035			☐	☐	☐
233.78	236.83	3.05	MST	2.25	74	V765770	☐	O18-035			☐	☐	☐
236.83	239.88	3.05	MST	2.65	87	V765771	☐	O18-035			☐	☐	☐
239.88	242.93	3.05	MST	1.70	56	V765772	☐	O18-035			☐	☐	☐
242.93	245.97	3.04	MST	2.82	93	V765773	☐	O18-035			☐	☐	☐
245.97	249.02	3.05	MST	2.30	75	V765774	☐	O18-035			☐	☐	☐
249.02	252.07	3.05	MST	1.80	59	V765775	☐	O18-035			☐	☐	☐
252.07	255.12	3.05	MST	2.20	72	V765776	☐	O18-035			☐	☐	☐
255.12	258.17	3.05	MST	2.25	74	V765777	☐	O18-035			☐	☐	☐
255.12	258.17	3.05	MST	2.25	74	V765778	☐	O18-035			☐	☐	☑
258.17	261.21	3.04	MST	1.75	58	V765779	☐	O18-035			☐	☐	☐
261.21	264.26	3.05	MST	1.17	38	V765780	☐	O18-035			☐	☐	☐
264.26	267.31	3.05	MST	1.54	50	V765781	☐	O18-035			☐	☐	☐
267.31	270.36	3.05	MST	1.22	40	V765782	☐	O18-035			☐	☐	☐
270.36	273.41	3.05	MST	1.88	62	V765783	☐	O18-035			☐	☐	☐
273.41	276.45	3.04	MST	1.34	44	V765784	☐	O18-035			☐	☐	☐
276.45	279.50	3.05	MST	1.86	61	V765785	☐	O18-035			☐	☐	☐
276.45	279.50	3.05	MST	1.86	61	V765786	☐	O18-035			☐	☑	☐
279.50	282.55	3.05	MST	0.57	19	V765787	☐	O18-035			☐	☐	☐
282.55	285.60	3.05	MST	2.17	71	V765788	☐	O18-035			☐	☐	☐
285.60	288.65	3.05	MST	2.69	88	V765790	☐	O18-035			☐	☐	☐
288.65	291.69	3.04	MST	1.87	62	V765791	☐	O18-035			☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
291.69	294.74	3.05	MST	1.81	59	V765792	☐	O18-035			☐	☐	☐
294.74	297.79	3.05	MST	1.27	42	V765793	☐	O18-035			☐	☐	☐
297.79	300.84	3.05	MST	1.43	47	V765794	☐	O18-035			☐	☐	☐
300.84	303.89	3.05	MST	1.43	47	V765795	☐	O18-035			☐	☐	☐
303.89	306.93	3.04	MST	2.03	67	V765796	☐	O18-035			☐	☐	☐
306.93	309.98	3.05	MST	1.75	57	V765797	☐	O18-035			☐	☐	☐
309.98	313.03	3.05	MST	0.88	29	V765798	☐	O18-035			☐	☐	☐
313.03	316.08	3.05	MST	2.30	75	V765799	☐	O18-035			☐	☐	☐
316.08	319.13	3.05	MST	2.25	74	V765800	☐	O18-035			☐	☐	☐
319.13	322.17	3.04	MST	0.17	6	V765801	☐	O18-039	core		☐	☐	☐
322.17	325.22	3.05	MST	1.08	35	V765802	☐	O18-039	core		☐	☐	☐
325.22	328.27	3.05	MST	1.10	36	V765803	☐	O18-039	core		☐	☐	☐
328.27	331.32	3.05	MST	1.75	57	V765804	☐	O18-039	core		☐	☐	☐
331.32	332.23	0.91	MST	0.65	71	V765805	☐	O18-039	core		☐	☐	☐

BDO-18-013

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
0.00	3.77	3.77	OVB	--	Overburden. No recovery							
3.77	6.93	3.16	OVB	--	Overburden							
6.93	118.16	111.23	CMS	FG	Dark grey/black, fine-grained, non-moderately calcareous, carbonaceous mudstone with locally observed light grey, medium-grained limestone interbeds (minor debris flows). Minor, discontinuous <1mm calcite veining throughout with locally observed planar (wider) calcite veins, shear surfaces and faults.							
118.16	170.83	52.67	MST	FG	Finely laminated (<2mm; locally massive), non-calcareous, locally carbonaceous dark grey/black, fine-grained mudstone and medium grey, fine-grained silty mudstone. Rare calcite veinlets throughout. Minor-locally moderate pyrite is observed and present as both bedding layers and lenses and as elongate blebs. Both quartz and dolomitic veins are observed.							
170.83	274.62	103.79	LST	FG	Light to medium grey, fine-grained limestone with locally observed crackled texture (minor dolomitization), calcite veining +/- realgar, brecciation and shearing (possibly within the damage zone of the Anubis fault?). The unit exhibits clast-rich beds (debris flows), fine-grained realgar (<1mm) observed within 1-3mm continuous calcite veins and <1mm stylolites.							

BDO-18-013

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
0.00	3.77	3.77	0	0	0.00	0	--	--	--	
3.77	4.57	0.80	0.73	91	0.00	0	0R	1H	2W	RBZ with gouge.
4.57	7.62	3.05	1.37	45	0.00	0	0R	1H	2W	rubble zone with gouge.
7.62	10.67	3.05	1.87	61	0.17	6	1R	1H	2W	RBZ with gouge.
10.67	13.72	3.05	2.7	89	0.23	8	2R	1H	1W	RBZ with gouge.
13.72	16.76	3.04	2.53	83	0.72	24	2R	1H	1W	RBZ.
16.76	19.81	3.05	2.57	84	0.54	18	3R	1H	1W	RBZ.
19.81	22.86	3.05	2.71	89	1.05	34	1R	1H	1W	RBZ.
22.86	25.91	3.05	2.22	73	0.48	16	0R	1H	1W	RBZ with gouge.
25.91	28.96	3.05	2.3	75	0.33	11	0R	2H	1W	rubble zone with local gouge.
28.96	32.00	3.04	3.04	100	2.65	87	2R	3H	1W	
32.00	35.05	3.05	1.73	57	0.57	19	2R	2H	1W	rubble zone with local gouge.
35.05	38.10	3.05	2.33	76	1.12	37	3R	2H	1W	rubble area with local gouge.
38.10	41.15	3.05	2.72	89	1.39	46	3R	3H	1W	
41.15	44.20	3.05	2.71	89	1.53	50	3R	3H	1W	
44.20	47.24	3.04	2.92	96	1.48	49	3R	3H	1W	
47.24	50.29	3.05	2.73	90	1.10	36	2R	2H	1W	competent rock with local gouge.
50.29	53.34	3.05	2.22	73	1.27	42	2R	2H	1W	mix of rubble and competent rock with local gouge.
53.34	56.39	3.05	2.65	87	1.00	33	0R	2H	1W	rubble zone with local gouge.
56.39	59.44	3.05	2.22	73	1.02	33	0R	2H	1W	
59.44	62.48	3.04	2.61	86	1.60	53	0R	3H	1W	
62.48	65.53	3.05	2.39	78	1.04	34	0R	3H	1W	competent rock with local rubble areas.
65.53	68.58	3.05	2.81	92	2.01	66	0R	2H	1W	competent rock with local gouge areas.
68.58	71.63	3.05	2.88	94	1.55	51	0R	2H	1W	
71.63	74.68	3.05	2.75	90	2.38	78	3R	3H	1W	
74.68	77.72	3.04	2.65	87	1.08	36	2R	2H	1W	competent rock with gouge.
77.72	80.77	3.05	2.98	98	2.40	79	1R	2H	1W	
80.77	83.82	3.05	2.68	88	1.02	33	0R	2H	1W	
83.82	86.87	3.05	2.92	96	1.77	58	0R	3H	1W	competent rock with local rubble areas.

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
86.87	89.92	3.05	2.95	97	2.40	79	2R	3H	1W	
89.92	92.96	3.04	2.8	92	0.88	29	1R	2H	1W	rubbly area with some competent rock and gouge.
92.96	96.01	3.05	2.95	97	2.25	74	0R	2H	1W	
96.01	99.06	3.05	3	98	1.85	61	2R	3H	1W	
99.06	102.11	3.05	3.05	100	2.71	89	2R	3H	1W	
102.11	105.16	3.05	3.04	100	2.17	71	1R	3H	1W	
105.16	108.20	3.04	3.04	100	3.04	100	0R	3H	1W	
108.20	111.25	3.05	2.96	97	2.88	94	0R	3H	1W	
111.25	114.30	3.05	2.65	87	1.93	63	0R	3H	1W	FROM 113.30-113.55 SMALL RBZ.
114.30	117.35	3.05	3.04	100	1.33	44	2R	1H	1W	RBZ
117.35	120.40	3.05	3.04	100	0.41	13	0R	1H	1W	RBZ
120.40	123.44	3.04	3.04	100	0.82	27	0R	3H	1W	
123.44	126.49	3.05	3.04	100	2.10	69	0R	3H	1W	multiple single joints.
126.49	129.54	3.05	3.04	100	1.79	59	0R	3H	1W	
129.54	132.59	3.05	2.83	93	2.03	67	0R	3H	1W	
132.59	135.64	3.05	2.99	98	1.37	45	0R	3H	1W	
135.64	138.68	3.04	3.04	100	2.48	82	0R	3H	1W	
138.68	141.73	3.05	3.04	100	1.38	45	0R	3H	1W	
141.73	144.78	3.05	3.04	100	2.22	73	0R	3H	1W	competent rock with small rbz
144.78	147.83	3.05	3.04	100	2.63	86	0R	3H	1W	
147.83	150.88	3.05	3.02	99	2.27	74	0R	3H	1W	
150.88	153.92	3.04	3.04	100	1.64	54	1R	2H	1W	
153.92	156.97	3.05	2.94	96	1.73	57	0R	3H	1W	HCl reactivity along calcite vein in this interval
156.97	160.02	3.05	2.98	98	2.25	74	0R	3H	1W	HCl reactivity along calcite veins in this interval.
160.02	163.07	3.05	2.92	96	2.29	75	0R	3H	1W	multiple single joints.
163.07	166.12	3.05	2.88	94	1.97	65	0R	3H	1W	
166.12	169.16	3.04	2.99	98	1.95	64	0R	2H	1W	
169.16	172.21	3.05	3.04	100	1.58	52	0R	2H	1W	RBZ,from 170.89 - 172.21 limestone unit reacts moderately with HCL.
172.21	175.26	3.05	2.71	89	0.91	30	2R	2H	1W	RBZ

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
175.26	178.31	3.05	3.04	100	1.32	43	3R	2H	1W	RBZ
178.31	181.36	3.05	2.07	68	0.96	31	3R	2H	1W	
181.36	184.40	3.04	2.4	79	0.42	14	3R	3H	1W	RBZ
184.40	187.45	3.05	3.04	100	2.10	69	4R	3H	1W	
187.45	190.50	3.05	3.04	100	2.27	74	4R	3H	1W	small rbz from188.09-188.31m.
190.50	193.55	3.05	2.82	92	2.29	75	4R	3H	1W	small rbz from 190.78-190.92m and from 193.13- 193.21m. Multiple single joints in this interval.
193.55	196.60	3.05	2.76	90	2.36	77	3R	3H	1W	
196.60	199.64	3.04	3.04	100	2.72	89	2R	3H	1W	small rbz from 197.56-198m
199.64	202.69	3.05	3.04	100	2.67	88	2R	3H	1W	
202.69	205.74	3.05	2.97	97	1.93	63	3R	3H	1W	small rbz from 105.18-105.33m.
205.74	208.79	3.05	2.63	86	2.12	70	2R	3H	1W	multiple single joints.
208.79	211.84	3.05	2	66	1.22	40	3R	2H	1W	rbz. Competent rock from208.79- 210.00m.
211.84	214.88	3.04	2.67	88	1.52	50	2R	2H	1W	rbz
214.88	217.93	3.05	3.02	99	2.50	82	2R	3H	1W	multiple single joints
217.93	220.98	3.05	3.04	100	2.67	88	2R	3H	1W	
220.98	224.03	3.05	3.04	100	2.40	79	2R	3H	1W	
224.03	227.08	3.05	2.94	96	2.69	88	3R	3H	1W	
227.08	230.12	3.04	3.04	100	2.34	77	3R	3H	1W	multiple single joints
230.12	233.17	3.05	2.9	95	2.08	68	4R	3H	1W	small rbz from 272.76-273.00.
233.17	236.22	3.05	2.9	95	2.71	89	4R	3H	1W	
236.22	239.27	3.05	3	98	2.84	93	4R	3H	1W	
239.27	242.32	3.05	2.9	95	2.46	81	3R	3H	1W	
242.32	245.36	3.04	3.04	100	2.75	90	2R	3H	1W	
245.36	248.41	3.05	2.55	84	1.94	64	3R	2H	1W	half of run competent half rubble.
248.41	251.46	3.05	1.95	64	1.25	41	4R	3H	1W	rbz with some competent rock.
251.46	254.51	3.05	2.7	89	1.86	61	4R	2H	1W	competent rock with 4 local rubble areas.
254.51	257.56	3.05	2.06	68	1.77	58	4R	2H	1W	competent rock with local rubble areas.

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
257.56	260.60	3.04	2.98	98	2.75	90	3R	3H	1W	
260.60	263.65	3.05	3.05	100	2.60	85	4R	3H	1W	competent rock with one rubble area.
263.65	266.70	3.05	2.87	94	2.54	83	3R	3H	1W	
266.70	269.75	3.05	2.84	93	2.18	71	3R	3H	1W	competent rock with 2 local rubble areas.
269.75	272.80	3.05	2.66	87	2.32	76	4R	3H	1W	competent rock with local rubble areas.
272.80	274.62	1.82	1.11	61	1.09	60	4R	3H	1W	

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From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
0.00	0.00	0.00	-QC-	0.00	0	V767233	☐	O18-028	Core	SR5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V767251	☐	O18-030	core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V767264	☐	O18-030	core	SR5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V767280	☐	O18-030	core	SR5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V767288	☐	O18-032	core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V767293	☐	O18-032	core	SR5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V767303	☐	O18-032	core	SR5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V767213	☐	O18-028	Core		☑	☐	☐
4.57	7.62	3.05	OVB	1.37	45	V767209	☐	O18-028	Core		☐	☐	☐
7.62	10.67	3.05	CMS	1.87	61	V767210	☐	O18-028	Core		☐	☐	☐
10.67	13.72	3.05	CMS	2.70	89	V767211	☐	O18-028	Core		☐	☐	☐
13.72	16.76	3.04	CMS	2.53	83	V767212	☐	O18-028	Core		☐	☐	☐
16.76	19.81	3.05	CMS	2.57	84	V767214	☐	O18-028	Core		☐	☐	☐
19.81	22.86	3.05	CMS	2.71	89	V767215	☐	O18-028	Core		☐	☐	☐
22.86	25.91	3.05	CMS	2.22	73	V767216	☐	O18-028	Core		☐	☐	☐
25.91	28.96	3.05	CMS	2.30	75	V767217	☐	O18-028	Core		☐	☐	☐
28.96	32.00	3.04	CMS	3.04	100	V767218	☐	O18-028	Core		☐	☐	☐
32.00	35.05	3.05	CMS	1.73	57	V767219	☐	O18-028	Core		☐	☐	☐
35.05	38.10	3.05	CMS	2.33	76	V767220	☐	O18-028	Core		☐	☐	☐
38.10	41.15	3.05	CMS	2.72	89	V767221	☐	O18-028	Core		☐	☐	☐
41.15	44.20	3.05	CMS	2.71	89	V767222	☐	O18-028	Core		☐	☐	☐
44.20	47.24	3.04	CMS	2.92	96	V767223	☐	O18-028	Core		☐	☐	☐
47.24	50.29	3.05	CMS	2.73	90	V767224	☐	O18-028	Core		☐	☐	☐
50.29	53.34	3.05	CMS	2.22	73	V767225	☐	O18-028	Core		☐	☐	☐
50.29	53.34	3.05	CMS	2.22	73	V767226	☐	O18-028	Core		☐	☐	☑
53.34	56.39	3.05	CMS	2.65	87	V767227	☐	O18-028	Core		☐	☐	☐
56.39	59.44	3.05	CMS	2.22	73	V767228	☐	O18-028	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
59.44	62.48	3.04	CMS	2.61	86	V767229	☐	O18-028	Core		☐	☐	☐
62.48	65.53	3.05	CMS	2.39	78	V767230	☐	O18-028	Core		☐	☐	☐
65.53	68.58	3.05	CMS	2.81	92	V767231	☐	O18-028	Core		☐	☐	☐
68.58	71.63	3.05	CMS	2.88	94	V767232	☐	O18-028	Core		☐	☐	☐
71.63	74.68	3.05	CMS	2.75	90	V767234	☐	O18-028	Core		☐	☐	☐
74.68	77.72	3.04	CMS	2.65	87	V767235	☐	O18-028	Core		☐	☐	☐
77.72	80.77	3.05	CMS	2.98	98	V767236	☐	O18-028	Core		☐	☐	☐
77.72	80.77	3.05	CMS	2.98	98	V767237	☐	O18-028	Core		☐	☑	☐
80.77	83.82	3.05	CMS	2.68	88	V767238	☐	O18-028	Core		☐	☐	☐
83.82	86.87	3.05	CMS	2.92	96	V767239	☐	O18-028	Core		☐	☐	☐
86.87	89.92	3.05	CMS	2.95	97	V767240	☐	O18-028	Core		☐	☐	☐
89.92	92.96	3.04	CMS	2.80	92	V767241	☐	O18-030	core		☐	☐	☐
92.96	96.01	3.05	CMS	2.95	97	V767242	☐	O18-030	core		☐	☐	☐
96.01	99.06	3.05	CMS	3.00	98	V767243	☐	O18-030	core		☐	☐	☐
99.06	102.11	3.05	CMS	3.05	100	V767244	☐	O18-030	core		☐	☐	☐
102.11	105.16	3.05	CMS	3.04	100	V767245	☐	O18-030	core		☐	☐	☐
105.16	108.20	3.04	CMS	3.04	100	V767246	☐	O18-030	core		☐	☐	☐
108.20	111.25	3.05	CMS	2.96	97	V767247	☐	O18-030	core		☐	☐	☐
111.25	114.30	3.05	CMS	2.65	87	V767248	☐	O18-030	core		☐	☐	☐
114.30	117.35	3.05	CMS	3.04	100	V767249	☐	O18-030	core		☐	☐	☐
117.35	118.16	0.81	CMS	0.81	100	V767250	☐	O18-030	core		☐	☐	☐
118.16	120.40	2.24	MST, CMS	1.74	78	V767252	☐	O18-030	core		☐	☐	☐
120.40	123.44	3.04	MST	3.04	100	V767253	☐	O18-030	core		☐	☐	☐
123.44	126.49	3.05	MST	3.04	100	V767254	☐	O18-030	core		☐	☐	☐
123.44	126.49	3.05	MST	3.04	100	V767255	☐	O18-030	core		☐	☑	☐
126.49	129.54	3.05	MST	3.04	100	V767256	☐	O18-030	core		☐	☐	☐
129.54	132.59	3.05	MST	2.83	93	V767257	☐	O18-030	core		☐	☐	☐
132.59	135.64	3.05	MST	2.99	98	V767258	☐	O18-030	core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
135.64	138.68	3.04	MST	3.04	100	V767259	☐	O18-030	core		☐	☐	☐
138.68	141.73	3.05	MST	3.04	100	V767260	☐	O18-030	core		☐	☐	☐
141.73	144.78	3.05	MST	3.04	100	V767261	☐	O18-030	core		☐	☐	☐
144.78	147.83	3.05	MST	3.04	100	V767262	☐	O18-030	core		☐	☐	☐
147.83	150.88	3.05	MST	3.02	99	V767263	☐	O18-030	core		☐	☐	☐
150.88	153.92	3.04	MST	3.04	100	V767265	☐	O18-030	core		☐	☐	☐
153.92	156.97	3.05	MST	2.94	96	V767266	☐	O18-030	core		☐	☐	☐
156.97	160.02	3.05	MST	2.98	98	V767267	☐	O18-030	core		☐	☐	☐
160.02	163.07	3.05	MST	2.92	96	V767268	☐	O18-030	core		☐	☐	☐
163.07	166.12	3.05	MST	2.88	94	V767269	☐	O18-030	core		☐	☐	☐
166.12	169.16	3.04	MST	2.99	98	V767270	☐	O18-030	core		☐	☐	☐
169.16	170.83	1.67	MST	1.67	100	V767271	☐	O18-030	core		☐	☐	☐
170.83	172.21	1.38	MST, LST	1.08	78	V767272	☐	O18-030	core		☐	☐	☐
172.21	175.26	3.05	LST	2.71	89	V767273	☐	O18-030	core		☐	☐	☐
175.26	178.31	3.05	LST	3.04	100	V767274	☐	O18-030	core		☐	☐	☐
175.26	178.31	3.05	LST	3.04	100	V767275	☐	O18-030	core		☐	☐	☑
178.31	181.36	3.05	LST	2.07	68	V767276	☐	O18-030	core		☐	☐	☐
181.36	184.40	3.04	LST	2.40	79	V767277	☐	O18-030	core		☐	☐	☐
184.40	187.45	3.05	LST	3.04	100	V767278	☐	O18-030	core		☐	☐	☐
187.45	190.50	3.05	LST	3.04	100	V767279	☐	O18-030	core		☐	☐	☐
190.50	193.55	3.05	LST	2.82	92	V767281	☐	O18-032	core		☐	☐	☐
193.55	196.60	3.05	LST	2.76	90	V767282	☐	O18-032	core		☐	☐	☐
196.60	199.64	3.04	LST	3.04	100	V767283	☐	O18-032	core		☐	☐	☐
199.64	202.69	3.05	LST	3.04	100	V767284	☐	O18-032	core		☐	☐	☐
202.69	205.74	3.05	LST	2.97	97	V767285	☐	O18-032	core		☐	☐	☐
205.74	208.79	3.05	LST	2.63	86	V767286	☐	O18-032	core		☐	☐	☐
208.79	211.84	3.05	LST	2.00	66	V767287	☐	O18-032	core		☐	☐	☐
211.84	214.88	3.04	LST	2.67	88	V767289	☐	O18-032	core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
214.88	217.93	3.05	LST	3.02	99	V767290	☐	O18-032	core		☐	☐	☐
217.93	220.98	3.05	LST	3.04	100	V767291	☐	O18-032	core		☐	☐	☐
220.98	224.03	3.05	LST	3.04	100	V767292	☐	O18-032	core		☐	☐	☐
224.03	227.08	3.05	LST	2.94	96	V767294	☐	O18-032	core		☐	☐	☐
227.08	230.12	3.04	LST	3.04	100	V767295	☐	O18-032	core		☐	☐	☐
230.12	233.17	3.05	LST	2.90	95	V767296	☐	O18-032	core		☐	☐	☐
233.17	236.22	3.05	LST	2.90	95	V767297	☐	O18-032	core		☐	☐	☐
236.22	239.27	3.05	LST	3.00	98	V767298	☐	O18-032	core		☐	☐	☐
239.27	242.32	3.05	LST	2.90	95	V767299	☐	O18-032	core		☐	☐	☐
242.32	245.36	3.04	LST	3.04	100	V767300	☐	O18-032	core		☐	☐	☐
245.36	248.41	3.05	LST	2.55	84	V767301	☐	O18-032	core		☐	☐	☐
248.41	251.46	3.05	LST	1.95	64	V767302	☐	O18-032	core		☐	☐	☐
251.46	254.51	3.05	LST	2.70	89	V767304	☐	O18-032	core		☐	☐	☐
254.51	257.56	3.05	LST	2.06	68	V767305	☐	O18-032	core		☐	☐	☐
257.56	260.60	3.04	LST	2.98	98	V767306	☐	O18-032	core		☐	☐	☐
260.60	263.65	3.05	LST	3.05	100	V767307	☐	O18-032	core		☐	☐	☐
263.65	266.70	3.05	LST	2.87	94	V767308	☐	O18-032	core		☐	☐	☐
266.70	269.75	3.05	LST	2.84	93	V767309	☐	O18-032	core		☐	☐	☐
269.75	272.80	3.05	LST	2.66	87	V767310	☐	O18-032	core		☐	☐	☐
272.80	274.62	1.82	LST	1.11	61	V767311	☐	O18-032	core		☐	☐	☐
272.80	274.62	1.82	LST	1.11	61	V767312	☐	O18-032	core		☐	☑	☐

BDO-18-014

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
0.00	3.05	3.05	OVB	--	No Recovery							
3.05	622.13	619.08	DST	FG	Variably crackled and/or mottled dolomitic limestone with local brecciation, locally preserved bedding and realgar, orpiment and sphalerite mineralization (present within <1mm veinlets and on fracture surfaces).							
622.13	666.83	44.70	MST	FG	Dark grey-black and medium-dark grey, finely laminated, highly sheared, relatively competant, locally clastic, fine-grained silty mudstone.							
666.83	798.58	131.75	DST	FG	Variably crackled and/or mottled dolomitic limestone with local brecciation, locally preserved bedding and realgar mineralization (present within <1mm veinlets and on fracture surfaces).							

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
0.00	3.05	3.05	0	0	0.00	0	--	--	--	Casing
3.05	6.10	3.05	2.13	70	1.20	39	3R	3H	4W	
6.10	9.14	3.04	2.85	94	2.09	69	3R	4H	3W	
9.14	12.19	3.05	2.74	90	1.87	61	3R	2H	3W	Gouge b/w 10.28 t 10.62
12.19	15.24	3.05	2.78	91	1.85	61	2R	2H	3W	Gouge b/w 14.47-52
15.24	18.29	3.05	2.5	82	2.16	71	3R	3H	3W	
18.29	21.34	3.05	2.11	69	0.72	24	2R	2H	4W	unconsolidated rock fragments present hence rqdis low
21.34	24.38	3.04	3.04	100	2.82	93	4R	4H	2W	
24.38	27.43	3.05	2.83	93	2.60	85	4R	3H	3W	Gouge b/w 26.21-26.23
27.43	30.48	3.05	2.25	74	1.86	61	4R	3H	2W	
30.48	33.53	3.05	1.16	38	0.10	3	0R	1H	5W	Low recovery and RQD. Clay and submillimeter to centimeter sized limestone pieces present.
33.53	36.58	3.05	2.1	69	0.81	27	2R	1H	5W	Low RQD. Clay and submillimeter to centimeter sized limestone pieces present.
36.58	39.62	3.04	2.05	67	0.51	17	3R	1H	4W	
39.62	42.67	3.05	2.57	84	1.93	63	4R	4H	3W	
42.67	45.72	3.05	2.48	81	2.37	78	2R	4H	1W	significant change in rock competence
45.72	48.77	3.05	3.05	100	2.78	91	3R	4H	1W	
48.77	51.82	3.05	3.02	99	2.88	94	2R	4H	1W	gouge b/w 50.42-50.49
51.82	54.86	3.04	3	99	1.83	60	2R	4H	1W	
54.86	57.91	3.05	2.99	98	2.27	74	2R	4H	1W	
57.91	60.96	3.05	2.74	90	2.33	76	2R	4H	1W	
60.96	64.01	3.05	3.02	99	3.02	99	2R	4H	1W	
64.01	67.06	3.05	2.42	79	0.73	24	2R	2H	1W	Low recovery and RQD. Clay and submillimeter to centimeter sized limestone pieces present.
67.06	70.10	3.04	2.4	79	0.90	30	2R	2H	1W	Low recovery and RQD. Clay and submillimeter to centimeter sized limestonegranules to pebbles present.

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
70.10	73.15	3.05	2.22	73	1.30	43	2R	2H	1W	Low recovery and RQD. Clay and submillimeter to centimeter sized limestone pieces present. Gouge present b/w 7.10-7.23 .
73.15	76.20	3.05	2.5	82	1.66	54	2R	3H	1W	Gouge b/w 74.96-75
76.20	79.25	3.05	2.69	88	2.11	69	2R	3H	1W	gouge b/w 76.98-77. clay filled fracture at 77.18
79.25	82.30	3.05	2.65	87	1.75	57	3R	3H	1W	rubble zone between 79.95-80.00, 81.12-81.32, and 81.50-81.65
82.30	85.34	3.04	3.04	100	2.10	69	3R	3H	1W	Realgar bearing fracture at 83.46m. Highly fractured interval
85.34	88.39	3.05	2.84	93	2.29	75	3R	3H	1W	Realgar bearing fractures at 86.76 and 87.45m
88.39	91.44	3.05	2.56	84	1.90	62	3R	4H	1W	Rubble zone b/w 89.80-90.07 m
91.44	94.49	3.05	2.54	83	0.92	30	2R	3H	1W	Rubble zone b/w 92.90-94.0 m
94.49	97.54	3.05	2.84	93	2.41	79	3R	4H	1W	
97.54	100.58	3.04	2.75	90	2.47	81	3R	4H	1W	
100.58	103.63	3.05	3.05	100	3.00	98	2R	4H	1W	
103.63	106.68	3.05	3.05	100	1.96	64	2R	4H	1W	
106.68	109.73	3.05	2.72	89	1.55	51	3R	4H	1W	
109.73	112.78	3.05	2.7	89	1.97	65	2R	4H	1W	
112.78	115.82	3.04	2.94	97	2.13	70	2R	4H	1W	rubble zone b/w 113.20-113.25.
115.82	118.87	3.05	2.37	78	1.28	42	2R	3H	1W	Rubble zone b/w 116.26- 16.84
118.87	121.92	3.05	2.49	82	1.24	41	1R	3H	1W	
121.92	124.97	3.05	2.43	80	0.65	21	2R	3H	1W	Highly fractured rock.
124.97	128.02	3.05	2.56	84	1.59	52	2R	3H	1W	
128.02	131.06	3.04	2.23	73	1.72	57	2R	3H	1W	competent rock b/w 128.02 -130 but following section contains gouge and fractured rock.
131.06	134.11	3.05	2.84	93	1.05	34	2R	2H	1W	highly fractured rock consiting of clay and ganule to pebble sized dolomite.
134.11	137.16	3.05	2.14	70	0.27	9	1R	2H	1W	highly fracture zone with clay and granule to pebble sized dolomite.
137.16	140.21	3.05	2.87	94	0.38	12	2R	1H	1W	
140.21	143.26	3.05	2.85	93	2.28	75	2R	4H	1W	Change in rock competeny in this interval. Highly competent rock.

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
143.26	146.30	3.04	2.9	95	2.84	93	2R	4H	1W	
146.30	149.35	3.05	2.95	97	2.12	70	3R	4H	1W	Real bearing fractures at 147.03 and 147.71. Gouge present between 148.88-148.90
149.35	152.40	3.05	2.81	92	2.81	92	3R	4H	1W	Realgar bearing fractures at 149.75, 149.92, 150.68, 151.02, 151.45 .
152.40	155.45	3.05	2.61	86	2.03	67	3R	4H	1W	orpiment and realgar bearing fracture at 143.77 m
155.45	158.50	3.05	3.05	100	2.76	90	3R	4H	1W	
158.50	161.54	3.04	3	99	1.60	53	2R	3H	1W	highly fractured zone with clay and granule to pebble sized dolomite.
161.54	164.59	3.05	2.77	91	0.57	19	2R	3H	1W	highly fractured zone with clay and granule to pebble sized dolomite.
164.59	167.64	3.05	2.81	92	1.20	39	2R	3H	1W	highly fractured zone with clay and granule to pebble sized dolomite.
167.64	170.69	3.05	2.87	94	1.92	63	3R	3H	1W	
170.69	173.74	3.05	2.19	72	0.70	23	2R	2H	1W	fault gouge b/w 170.69-171.09m
173.74	176.78	3.04	2.7	89	1.74	57	3R	3H	1W	Gouge present b/w 176.12-176.15m
176.78	179.83	3.05	2.76	90	1.42	47	2R	3H	1W	
179.83	182.88	3.05	2.78	91	1.96	64	2R	3H	1W	
182.88	185.93	3.05	3.03	99	0.96	31	3R	2H	1W	highly fractured zone with clay and granule to pebble sized dolomite between 183.17-183.57m
185.93	188.98	3.05	2.6	85	1.22	40	3R	3H	1W	highly fractured zone with clay and granule to pebble sized dolomite between 186.30-186.42 and 186.62-186.78 .
188.98	192.02	3.04	2.88	95	1.82	60	3R	3H	1W	
192.02	195.07	3.05	3.04	100	2.56	84	3R	3H	1W	
195.07	198.12	3.05	2.83	93	2.60	85	4R	4H	1W	Reagar bearing fractures at 196.0 , 196.45 , 197.63 m
198.12	201.17	3.05	2.37	78	0.48	16	3R	4H	1W	highly fractured zone with granule to pebble sized dolomite
201.17	204.22	3.05	2.6	85	1.37	45	3R	3H	1W	highly fractured zone withgranule to pebble sized dolomite
204.22	207.26	3.04	2.23	73	2.10	69	3R	4H	1W	
207.26	210.31	3.05	2.3	75	1.51	50	2R	4H	1W	Rubble zone

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
210.31	213.36	3.05	2.52	83	2.46	81	2R	4H	1W	
213.36	216.41	3.05	2.4	79	0.94	31	2R	4H	1W	Rubble zone
216.41	219.46	3.05	2.87	94	2.61	86	3R	4H	1W	
219.46	222.50	3.04	2.93	96	2.86	94	3R	4H	1W	
222.50	225.55	3.05	2.39	78	1.83	60	3R	4H	1W	
225.55	228.60	3.05	2.53	83	1.60	52	3R	4H	1W	Fractured and rubbly
228.60	231.65	3.05	2.48	81	1.59	52	3R	4H	1W	first section of interval is highly fractured.
231.65	234.70	3.05	2.63	86	1.79	59	2R	4H	1W	Intensely fractured
234.70	237.74	3.04	2.81	92	2.21	73	2R	4H	1W	
237.74	240.79	3.05	2.81	92	2.56	84	2R	4H	1W	
240.79	243.84	3.05	2.34	77	1.48	49	2R	3H	1W	
243.84	246.89	3.05	1.47	48	0.36	12	2R	3H	1W	Intensely fractured
246.89	249.94	3.05	2.73	90	2.26	74	2R	4H	1W	
249.94	252.98	3.04	2.76	91	2.44	80	2R	4H	1W	
252.98	256.03	3.05	2.57	84	2.21	72	2R	4H	1W	
256.03	259.08	3.05	3.05	100	2.91	95	2R	4H	1W	
259.08	262.13	3.05	2.9	95	2.01	66	3R	4H	1W	local rubble zone.
262.13	265.18	3.05	3.05	100	3.05	100	3R	4H	1W	realgar within fractures.
265.18	268.22	3.04	3.01	99	2.90	95	3R	4H	1W	
268.22	271.27	3.05	3.05	100	2.40	79	3R	2H	1W	
271.27	274.32	3.05	2.92	96	1.80	59	3R	4H	1W	
274.32	277.37	3.05	3.05	100	3.05	100	3R	4H	1W	
277.37	280.42	3.05	3	98	1.61	53	3R	4H	1W	Highly fractured zone.
280.42	283.46	3.04	3.04	100	3.04	100	3R	4H	1W	
283.46	286.51	3.05	2.95	97	2.15	70	3R	4H	1W	1m of rubble within competent rock.
286.51	289.56	3.05	2.82	92	2.34	77	2R	4H	1W	rubbly section @287.50
289.56	292.61	3.05	2.93	96	2.50	82	2R	4H	1W	
292.61	295.66	3.05	2.35	77	0.60	20	3R	4H	1W	rubbly section from 292.61-294.40m
295.66	298.70	3.04	2.8	92	1.81	60	3R	4H	1W	rubbly section @ 298.51
298.70	301.75	3.05	2.7	89	1.28	42	3R	4H	1W	rubbly section from 298.70-299
301.75	304.80	3.05	2.97	97	2.23	73	2R	4H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
304.80	307.85	3.05	2.98	98	2.84	93	3R	4H	1W	
307.85	310.90	3.05	2.77	91	2.08	68	3R	4H	1W	
310.90	313.94	3.04	2.91	96	2.35	77	4R	4H	1W	
313.94	316.99	3.05	2.95	97	2.69	88	3R	4H	1W	
316.99	320.04	3.05	2.81	92	1.89	62	2R	4H	1W	
320.04	323.09	3.05	2.95	97	2.15	70	3R	4H	1W	
323.09	326.14	3.05	2.65	87	1.73	57	3R	4H	1W	
326.14	329.18	3.04	3.04	100	2.74	90	3R	4H	1W	
329.18	332.23	3.05	2.87	94	2.13	70	2R	4H	1W	
332.23	335.28	3.05	3.05	100	2.59	85	3R	4H	1W	
335.28	338.33	3.05	2.81	92	2.46	81	4R	4H	1W	
338.33	341.38	3.05	2.79	91	2.20	72	3R	4H	1W	
341.38	344.42	3.04	3.03	100	2.15	71	3R	4H	1W	
344.42	347.47	3.05	3.02	99	2.55	84	4R	3H	1W	
347.47	350.52	3.05	2.75	90	1.91	63	3R	3H	1W	
350.52	353.57	3.05	2.9	95	2.60	85	3R	4H	1W	
353.57	356.62	3.05	3.05	100	2.22	73	3R	4H	1W	
356.62	359.66	3.04	3.04	100	3.04	100	1R	4H	1W	
359.66	362.71	3.05	2.42	79	2.11	69	2R	4H	1W	
362.71	365.76	3.05	2.73	90	1.77	58	3R	4H	1W	rubble zone b/w 362.71- 363.44 m.
365.76	368.81	3.05	2.93	96	2.48	81	2R	4H	1W	
368.81	371.86	3.05	3	98	2.31	76	3R	4H	1W	
371.86	374.90	3.04	3.04	100	2.87	94	2R	4H	1W	gouge present in a fracture at 373.84m. ~1mm wide gouge
374.90	377.95	3.05	3.05	100	2.55	84	2R	4H	1W	
377.95	381.00	3.05	2.7	89	2.38	78	2R	4H	1W	
381.00	384.05	3.05	3.02	99	2.25	74	2R	4H	1W	realgar veinlet at 383.43m .
384.05	387.10	3.05	3	98	0.00	0	1R	4H	1W	Highly fractured dolomitic rubble interval.
387.10	390.14	3.04	3.01	99	2.10	69	1R	4H	1W	Highly fracture zone between 387.44 to 388.0 m
390.14	393.19	3.05	3	98	2.54	83	1R	4H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
393.19	396.24	3.05	3	98	1.48	49	1R	3H	1W	highly fractured granule to pebble sized dolomitic limestone along with clay b/w 394.55 - 395 m
396.24	399.29	3.05	2.86	94	2.03	67	2R	4H	1W	~1mm gouge present 397m.
399.29	402.34	3.05	2.99	98	2.15	70	3R	3H	1W	Netted realgar present b/w 377.71-377.77m. Realgar veinlet present at 401.11m .
402.34	405.38	3.04	2.87	94	2.07	68	2R	4H	1W	~30cm wide calcite vein present b/w 403.40- 403.70. sub mm scale realgar veins present at ~403.34m
405.38	408.43	3.05	3.05	100	2.95	97	2R	4H	1W	Sub mm to mm scale discountinous realgar veinlets present in this interval. Realgar is also associated with limestone veins within this interval
408.43	411.48	3.05	3.05	100	2.11	69	3R	4H	1W	
411.48	414.53	3.05	2.71	89	1.51	50	3R	4H	1W	
414.53	417.58	3.05	3.05	100	1.61	53	3R	4H	1W	Rubble zone containing upto pebble sized dolomitic limestone b/w 414.79-414.94 m.
417.58	420.62	3.04	2.71	89	1.76	58	2R	4H	1W	
420.62	423.67	3.05	2.97	97	2.19	72	2R	4H	1W	rubble zone b/w 422.03- 422.34m
423.67	426.72	3.05	2.62	86	0.99	32	2R	4H	1W	
426.72	429.77	3.05	3.05	100	1.77	58	2R	4H	1W	
429.77	432.82	3.05	2.92	96	1.26	41	2R	3H	1W	Highly fractured zone of dolomitic limestone b/w 432.10-432.82. Granule to pebble sized.
432.82	435.86	3.04	3.04	100	1.99	65	3R	3H	1W	highly fractured zone b/w 432.82- 433.40 bearing granule to pebble sized dolomitic limestone, limestone, and clay.
435.86	438.91	3.05	3	98	2.56	84	3R	4H	1W	highly competent interval.
438.91	441.96	3.05	2.92	96	2.08	68	3R	4H	1W	
441.96	445.00	3.04	2.89	95	2.43	80	2R	4H	1W	
445.00	448.06	3.06	2.98	97	2.29	75	3R	4H	1W	
448.06	451.10	3.04	3.02	99	1.71	56	2R	4H	1W	
451.10	454.15	3.05	2.63	86	2.39	78	2R	4H	1W	
454.15	457.20	3.05	2.8	92	1.66	54	3R	4H	1W	
457.20	460.25	3.05	2.94	96	1.16	38	3R	4H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
460.25	463.30	3.05	2.85	93	1.13	37	3R	4H	1W	
463.30	466.34	3.04	3.04	100	2.72	89	3R	4H	1W	
466.34	469.39	3.05	2.82	92	2.12	70	3R	4H	1W	
469.39	472.44	3.05	2.83	93	1.81	59	3R	4H	1W	
472.44	475.49	3.05	2.75	90	1.28	42	4R	3H	1W	
475.49	478.54	3.05	3	98	1.73	57	3R	3H	1W	
478.54	481.58	3.04	2.92	96	2.54	84	3R	3H	1W	
481.58	484.63	3.05	2.78	91	1.20	39	4R	3H	1W	
484.63	487.68	3.05	2.93	96	1.97	65	4R	3H	1W	
487.68	490.73	3.05	2.88	94	1.92	63	3R	3H	1W	
490.73	493.78	3.05	3.05	100	1.93	63	3R	4H	1W	
493.78	496.82	3.04	2.55	84	1.21	40	3R	3H	1W	
496.82	499.87	3.05	3.01	99	2.29	75	3R	4H	1W	
499.87	502.92	3.05	3	98	2.05	67	3R	4H	1W	
502.92	505.97	3.05	3.05	100	2.78	91	3R	4H	1W	
505.97	509.02	3.05	3.04	100	2.73	90	3R	3H	1W	
509.02	512.06	3.04	3.04	100	2.90	95	4R	4H	1W	
512.06	515.11	3.05	2.87	94	2.64	87	3R	4H	1W	
515.11	518.16	3.05	2.95	97	2.59	85	2R	4H	1W	
518.16	521.21	3.05	3.02	99	2.62	86	2R	4H	1W	
521.21	524.26	3.05	3.04	100	1.74	57	1R	4H	1W	small rbz from 521.58-521.70m.
524.26	527.30	3.04	2.93	96	1.98	65	1R	4H	1W	
527.30	530.35	3.05	3.04	100	2.08	68	1R	4H	1W	
530.35	533.40	3.05	3.04	100	1.43	47	1R	4H	1W	rbz
533.40	536.45	3.05	3.04	100	2.61	86	1R	4H	1W	
536.45	539.50	3.05	2.74	90	2.08	68	1R	4H	1W	small rbz from 538.93m - 539.50
539.50	542.54	3.04	1.27	42	0.34	11	1R	3H	1W	rbz
542.54	545.59	3.05	2.07	68	1.23	40	1R	4H	1W	small rbz from 542.54-542.70m
545.59	548.64	3.05	2.95	97	1.68	55	1R	4H	1W	
548.64	551.69	3.05	3.04	100	2.20	72	1R	4H	1W	
551.69	554.74	3.05	3.04	100	3.02	99	1R	4H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
554.74	557.78	3.04	2.95	97	2.52	83	1R	4H	1W	
557.78	560.83	3.05	2.54	83	1.78	58	1R	4H	1W	
560.83	563.88	3.05	3.04	100	2.48	81	1R	4H	1W	
563.88	566.93	3.05	2.89	95	2.66	87	1R	4H	1W	
566.93	569.98	3.05	2.05	67	0.90	30	3R	4H	1W	
569.98	573.02	3.04	2.99	98	2.13	70	3R	3H	1W	
573.02	576.07	3.05	2.91	95	2.38	78	3R	3H	1W	
576.07	579.12	3.05	2.88	94	2.29	75	3R	4H	1W	
579.12	582.17	3.05	2.75	90	2.40	79	3R	4H	1W	
582.17	585.22	3.05	2.92	96	2.58	85	3R	4H	1W	
585.22	588.26	3.04	3.04	100	2.72	89	3R	4H	1W	
588.26	591.31	3.05	3.01	99	2.75	90	3R	4H	1W	
591.31	594.36	3.05	2.91	95	2.69	88	3R	3H	1W	
594.36	597.41	3.05	2.93	96	2.33	76	3R	4H	1W	
597.41	600.46	3.05	2.94	96	2.35	77	3R	4H	1W	
600.46	603.50	3.04	2.84	93	2.10	69	3R	4H	1W	
603.50	606.55	3.05	2.99	98	2.30	75	3R	4H	1W	
606.55	609.60	3.05	2.88	94	2.56	84	3R	4H	1W	
609.60	612.65	3.05	2.98	98	2.93	96	3R	4H	1W	
612.65	615.70	3.05	2.84	93	1.87	61	3R	4H	1W	
615.70	618.74	3.04	3.03	100	2.95	97	3R	4H	1W	
618.74	621.79	3.05	2.8	92	2.60	85	2R	3H	1W	
621.79	624.84	3.05	2.55	84	0.66	22	1R	2H	1W	
624.84	627.89	3.05	2.53	83	0.00	0	1R	2H	1W	
627.89	630.94	3.05	2.81	92	0.20	7	1R	2H	1W	
630.94	633.98	3.04	3.04	100	1.81	60	1R	3H	1W	
633.98	637.03	3.05	3.03	99	0.96	31	1R	2H	1W	
637.03	640.08	3.05	2.78	91	0.30	10	1R	2H	1W	
640.08	643.13	3.05	2.85	93	0.71	23	1R	2H	1W	
643.13	646.18	3.05	3.04	100	0.78	26	0R	2H	1W	
646.18	649.22	3.04	3.04	100	1.10	36	2R	2H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
649.22	652.27	3.05	2.83	93	0.80	26	1R	3H	1W	
652.27	655.32	3.05	2.8	92	1.00	33	1R	3H	1W	
655.32	658.37	3.05	2.55	84	0.70	23	3R	3H	1W	
658.37	661.42	3.05	2.73	90	1.41	46	4R	3H	1W	
661.42	664.46	3.04	2.2	72	0.87	29	2R	2H	1W	
664.46	667.51	3.05	2.68	88	0.33	11	3R	2H	1W	
667.51	670.56	3.05	3	98	2.48	81	3R	4H	1W	
670.56	673.61	3.05	2.76	90	2.68	88	3R	4H	1W	
673.61	676.66	3.05	2.68	88	2.44	80	2R	4H	1W	
676.66	679.70	3.04	3.04	100	2.46	81	3R	4H	1W	
679.70	682.75	3.05	2.65	87	1.65	54	3R	3H	1W	
682.75	685.80	3.05	2.52	83	1.27	42	3R	3H	1W	
685.80	688.85	3.05	2.43	80	1.28	42	3R	3H	1W	
688.85	691.90	3.05	3.03	99	2.84	93	3R	4H	1W	
691.90	694.94	3.04	2.31	76	1.89	62	3R	4H	1W	
694.94	697.99	3.05	2.35	77	1.73	57	4R	4H	1W	
697.99	701.04	3.05	2.47	81	1.38	45	4R	3H	1W	
701.04	704.09	3.05	2.99	98	2.31	76	3R	3H	1W	
704.09	707.14	3.05	2.28	75	0.73	24	3R	3H	1W	
707.14	710.18	3.04	2.81	92	1.68	55	3R	3H	1W	
710.18	713.23	3.05	2.45	80	0.84	28	3R	3H	1W	
713.23	716.28	3.05	2.46	81	0.91	30	3R	3H	1W	
716.28	719.33	3.05	2.7	89	1.99	65	3R	4H	1W	
719.33	722.38	3.05	2.42	79	1.56	51	3R	4H	1W	
722.38	725.42	3.04	1.98	65	1.11	37	3R	3H	1W	
725.42	728.47	3.05	2.66	87	0.49	16	3R	3H	1W	
728.47	731.52	3.05	2.43	80	1.18	39	3R	3H	1W	
731.52	734.57	3.05	2.69	88	2.28	75	3R	4H	1W	
734.57	737.62	3.05	2.78	91	2.19	72	3R	4H	1W	
737.62	740.66	3.04	3.04	100	2.01	66	3R	4H	1W	
740.66	743.71	3.05	2.93	96	2.38	78	4R	3H	1W	rbz

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
743.71	746.76	3.05	2.85	93	2.60	85	3R	3H	1W	
746.76	749.81	3.05	2.77	91	2.70	89	2R	4H	1W	carbon rich infill joint set.
749.81	752.86	3.05	3.04	100	3.00	98	2R	2H	1W	clay from fracture
752.86	755.90	3.04	2.9	95	2.79	92	2R	2H	1W	rbz
755.90	758.95	3.05	2.82	92	1.73	57	2R	4H	1W	
758.95	762.00	3.05	2.8	92	1.89	62	2R	2H	1W	rbz
762.00	765.05	3.05	2.79	91	1.87	61	3R	3H	1W	
765.05	768.10	3.05	2.94	96	1.79	59	4R	2H	1W	
768.10	771.14	3.04	2.82	93	1.80	59	3R	2H	1W	variable HCl reactivity
771.14	774.19	3.05	2.89	95	1.69	55	3R	2H	1W	Variable HCL reactivity
774.19	777.24	3.05	3.05	100	2.50	82	3R	3H	1W	
777.24	780.29	3.05	2.08	68	0.99	32	3R	2H	1W	
780.29	783.34	3.05	2.69	88	1.63	53	2R	2H	1W	
783.34	786.38	3.04	3.04	100	2.42	80	2R	3H	1W	
786.38	789.43	3.05	2.85	93	2.16	71	2R	3H	1W	
789.43	792.48	3.05	3.05	100	1.77	58	3R	3H	1W	
792.48	795.53	3.05	3.05	100	2.13	70	2R	3H	1W	
795.53	798.58	3.05	2.29	75	0.85	28	2R	2H	1W	

BDO-18-014

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
0.00	0.00	0.00	-QC-	0.00	0	V767514	☐	O18-042	Core	SR5	☐	☐	☐
0.00	0.00	0.00	-QC-	2.81	0	V767395	☐	O18-038	core	SR5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V767563	☐	O18-044	core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V767559	☐	O18-044	core	SR5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V766460	☐	O18-034		OX7	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V767518	☐	O18-042	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V767506	☐	O18-041	core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V767498	☐	O18-041	core	SR5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V767488	☐	O18-041	core	SR5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V767467	☐	O18-040	core	SR5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V767443	☐	O18-040	core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V767439	☐	O18-040	core	SR5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V767412	☐	O18-038	core	SR5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V767379	☐	O18-037	core	SR5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V767368	☐	O18-037	core	SR5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V767359	☐	O18-037	core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V767344	☐	O18-034		OX7	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V767546	☐	O18-042	Core	SR5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V767327	☐	O18-034			☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V767325	☐	O18-034		OX6	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V766484	☐	O18-036		OX7	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V766469	☐	O18-036		OX6	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V766467	☐	O18-036			☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V767418	☐	O18-038	core		☑	☐	☐
3.05	6.10	3.05	DST, OVB	2.13	70	V767313	☐	O18-032	core		☐	☐	☐
6.10	9.14	3.04	DST	2.85	94	V767314	☐	O18-032	core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
9.14	12.19	3.05	DST	2.74	90	V767315	☐	O18-032	core		☐	☐	☐
12.19	15.24	3.05	DST	2.78	91	V767316	☐	O18-032	core		☐	☐	☐
12.19	15.24	3.05	DST	2.78	91	V767317	☐	O18-032	core		☐	☐	☑
15.24	18.29	3.05	DST	2.50	82	V767318	☐	O18-032	core		☐	☐	☐
18.29	21.34	3.05	DST	2.11	69	V767319	☐	O18-032	core		☐	☐	☐
21.34	24.38	3.04	DST	3.04	100	V767320	☐	O18-032	core		☐	☐	☐
24.38	27.43	3.05	DST	2.83	93	V767321	☐	O18-034			☐	☐	☐
27.43	30.40	2.97	DST	2.30	77	V767322	☐	O18-034			☐	☐	☐
30.40	32.60	2.20	DST	0.40	18	V767323	☐	O18-034			☐	☐	☐
32.60	34.54	1.94	DST	1.09	56	V767324	☐	O18-034			☐	☐	☐
34.54	36.47	1.93	DST	1.02	53	V767326	☐	O18-034			☐	☐	☐
36.47	39.62	3.15	DST	1.84	58	V767328	☐	O18-034			☐	☐	☐
39.62	42.67	3.05	DST	2.57	84	V767329	☐	O18-034			☐	☐	☐
42.67	45.72	3.05	DST	2.48	81	V767330	☐	O18-034			☐	☐	☐
45.72	48.77	3.05	DST	3.05	100	V767331	☐	O18-034			☐	☐	☐
48.77	51.82	3.05	DST	3.02	99	V767332	☐	O18-034			☐	☐	☐
51.82	54.86	3.04	DST	3.00	99	V767333	☐	O18-034			☐	☐	☐
54.86	57.91	3.05	DST	2.99	98	V767334	☐	O18-034			☐	☐	☐
57.91	60.96	3.05	DST	2.74	90	V767335	☐	O18-034			☐	☐	☐
60.96	64.01	3.05	DST	3.02	99	V767336	☐	O18-034			☐	☐	☐
64.01	67.06	3.05	DST	2.42	79	V767337	☐	O18-034			☐	☐	☐
67.06	68.35	1.29	DST	1.27	98	V767338	☐	O18-034			☐	☐	☐
67.06	68.35	1.29	DST	1.27	98	V767339	☐	O18-034			☐	☐	☑
68.35	71.36	3.01	DST	1.91	63	V767340	☐	O18-034			☐	☐	☐
71.36	73.15	1.79	DST	1.77	99	V767341	☐	O18-034			☐	☐	☐
73.15	74.21	1.06	DST	1.06	100	V767342	☐	O18-034			☐	☐	☐
74.21	76.20	1.99	DST	1.44	72	V767343	☐	O18-034			☐	☐	☐
76.20	77.91	1.71	DST	1.24	73	V767345	☐	O18-034			☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
76.20	77.91	1.71	DST	1.24	73	V767346	☐	O18-034			☐	☑	☐
77.91	79.25	1.34	DST	1.32	99	V767347	☐	O18-034			☐	☐	☐
79.25	82.30	3.05	DST	2.65	87	V767348	☐	O18-034			☐	☐	☐
82.30	85.34	3.04	DST	3.04	100	V767349	☐	O18-034			☐	☐	☐
85.34	88.39	3.05	DST	2.84	93	V767350	☐	O18-034			☐	☐	☐
88.39	91.44	3.05	DST	2.56	84	V766451	☐	O18-034			☐	☐	☐
91.44	94.49	3.05	DST	2.54	83	V766452	☐	O18-034			☐	☐	☐
94.49	97.54	3.05	DST	2.84	93	V766453	☐	O18-034			☐	☐	☐
97.54	100.58	3.04	DST	2.75	90	V766454	☐	O18-034			☐	☐	☐
100.58	103.63	3.05	DST	3.05	100	V766455	☐	O18-034			☐	☐	☐
103.63	106.68	3.05	DST	3.05	100	V766456	☐	O18-034			☐	☐	☐
106.68	109.73	3.05	DST	2.72	89	V766457	☐	O18-034			☐	☐	☐
109.73	112.78	3.05	DST	2.70	89	V766458	☐	O18-034			☐	☐	☐
112.78	115.82	3.04	DST	2.94	97	V766459	☐	O18-034			☐	☐	☐
115.82	118.87	3.05	DST	2.37	78	V766461	☐	O18-036			☐	☐	☐
118.87	121.92	3.05	DST	2.49	82	V766462	☐	O18-036			☐	☐	☐
121.92	124.97	3.05	DST	2.43	80	V766463	☐	O18-036			☐	☐	☐
124.97	128.02	3.05	DST	2.56	84	V766464	☐	O18-036			☐	☐	☐
128.02	131.06	3.04	DST	2.23	73	V766465	☐	O18-036			☐	☐	☐
131.06	134.11	3.05	DST	2.84	93	V766466	☐	O18-036			☐	☐	☐
134.11	137.16	3.05	DST	2.14	70	V766468	☐	O18-036			☐	☐	☐
137.16	140.21	3.05	DST	2.87	94	V766470	☐	O18-036			☐	☐	☐
140.21	143.26	3.05	DST	2.85	93	V766471	☐	O18-036			☐	☐	☐
143.26	146.30	3.04	DST	2.90	95	V766472	☐	O18-036			☐	☐	☐
146.30	149.35	3.05	DST	2.95	97	V766473	☐	O18-036			☐	☐	☐
146.30	149.35	3.05	DST	2.95	97	V766474	☐	O18-036			☐	☐	☑
149.35	152.40	3.05	DST	2.81	92	V766475	☐	O18-036			☐	☐	☐
152.40	155.45	3.05	DST	2.61	86	V766476	☐	O18-036			☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
155.45	158.50	3.05	DST	3.05	100	V766477	☐	O18-036			☐	☐	☐
158.50	161.54	3.04	DST	3.00	99	V766478	☐	O18-036			☐	☐	☐
161.54	164.59	3.05	DST	2.77	91	V766479	☐	O18-036			☐	☐	☐
164.59	167.64	3.05	DST	2.81	92	V766480	☐	O18-036			☐	☐	☐
164.59	167.64	3.05	DST	2.81	92	V766481	☐	O18-036			☐	☑	☐
167.64	170.69	3.05	DST	2.87	94	V766482	☐	O18-036			☐	☐	☐
170.69	173.74	3.05	DST	2.19	72	V766483	☐	O18-036			☐	☐	☐
173.74	176.78	3.04	DST	2.70	89	V766485	☐	O18-036			☐	☐	☐
176.78	179.83	3.05	DST	2.76	90	V766486	☐	O18-036			☐	☐	☐
179.83	182.88	3.05	DST	2.78	91	V766487	☐	O18-036			☐	☐	☐
182.88	185.93	3.05	DST	3.03	99	V766488	☐	O18-036			☐	☐	☐
185.93	188.98	3.05	DST	2.60	85	V766489	☐	O18-036			☐	☐	☐
188.98	192.02	3.04	DST	2.88	95	V766490	☐	O18-036			☐	☐	☐
192.02	195.07	3.05	DST	3.04	100	V766491	☐	O18-036			☐	☐	☐
195.07	198.12	3.05	DST	2.83	93	V766492	☐	O18-036			☐	☐	☐
198.12	201.17	3.05	DST	2.37	78	V766493	☐	O18-036			☐	☐	☐
201.17	204.22	3.05	DST	2.60	85	V766494	☐	O18-036			☐	☐	☐
204.22	207.26	3.04	DST	2.23	73	V766495	☐	O18-036			☐	☐	☐
207.26	210.31	3.05	DST	2.30	75	V766496	☐	O18-036			☐	☐	☐
210.31	213.36	3.05	DST	2.52	83	V766497	☐	O18-036			☐	☐	☐
213.36	216.41	3.05	DST	2.40	79	V766498	☐	O18-036			☐	☐	☐
216.41	219.46	3.05	DST	2.87	94	V766499	☐	O18-036			☐	☐	☐
219.46	222.50	3.04	DST	2.93	96	V766500	☐	O18-036			☐	☐	☐
222.50	225.55	3.05	DST	2.39	78	V767351	☐	O18-037	core		☐	☐	☐
225.55	228.60	3.05	DST	2.53	83	V767352	☐	O18-037	core		☐	☐	☐
228.60	231.65	3.05	DST	2.48	81	V767353	☐	O18-037	core		☐	☐	☐
231.65	234.70	3.05	DST	2.63	86	V767354	☐	O18-037	core		☐	☐	☐
234.70	237.74	3.04	DST	2.81	92	V767355	☐	O18-037	core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
237.74	240.79	3.05	DST	2.81	92	V767356	☐	O18-037	core		☐	☐	☐
240.79	243.84	3.05	DST	2.34	77	V767357	☐	O18-037	core		☐	☐	☐
243.84	246.89	3.05	DST	1.47	48	V767358	☐	O18-037	core		☐	☐	☐
246.89	249.94	3.05	DST	2.73	90	V767360	☐	O18-037	core		☐	☐	☐
249.94	252.98	3.04	DST	2.76	91	V767361	☐	O18-037	core		☐	☐	☐
252.98	256.03	3.05	DST	2.57	84	V767362	☐	O18-037	core		☐	☐	☐
252.98	256.03	3.05	DST	2.57	84	V767363	☐	O18-037	core		☐	☑	☐
256.03	259.08	3.05	DST	3.05	100	V767364	☐	O18-037	core		☐	☐	☐
259.08	262.13	3.05	DST	2.90	95	V767365	☐	O18-037	core		☐	☐	☐
262.13	265.18	3.05	DST	3.05	100	V767366	☐	O18-037	core		☐	☐	☐
265.18	268.22	3.04	DST	3.01	99	V767367	☐	O18-037	core		☐	☐	☐
268.22	271.27	3.05	DST	3.05	100	V767369	☐	O18-037	core		☐	☐	☐
271.27	274.32	3.05	DST	2.92	96	V767370	☐	O18-037	core		☐	☐	☐
274.32	277.37	3.05	DST	3.05	100	V767371	☐	O18-037	core		☐	☐	☐
277.37	280.42	3.05	DST	3.00	98	V767372	☐	O18-037	core		☐	☐	☐
280.42	283.46	3.04	DST	3.04	100	V767373	☐	O18-037	core		☐	☐	☐
283.46	286.51	3.05	DST	2.95	97	V767374	☐	O18-037	core		☐	☐	☐
286.51	289.56	3.05	DST	2.82	92	V767375	☐	O18-037	core		☐	☐	☐
289.56	292.61	3.05	DST	2.93	96	V767376	☐	O18-037	core		☐	☐	☐
292.61	295.66	3.05	DST	2.35	77	V767377	☐	O18-037	core		☐	☐	☐
295.66	298.70	3.04	DST	2.80	92	V767378	☐	O18-037	core		☐	☐	☐
298.70	301.75	3.05	DST	2.70	89	V767380	☐	O18-037	core		☐	☐	☐
301.75	304.80	3.05	DST	2.97	97	V767381	☐	O18-037	core		☐	☐	☐
304.80	307.85	3.05	DST	2.98	98	V767382	☐	O18-037	core		☐	☐	☐
307.85	310.90	3.05	DST	2.77	91	V767383	☐	O18-037	core		☐	☐	☐
310.90	313.94	3.04	DST	2.91	96	V767384	☐	O18-037	core		☐	☐	☐
313.94	316.99	3.05	DST	2.95	97	V767385	☐	O18-037	core		☐	☐	☐
316.99	320.04	3.05	DST	2.81	92	V767386	☐	O18-037	core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
320.04	323.09	3.05	DST	2.95	97	V767387	☐	O18-037	core		☐	☐	☐
320.04	323.09	3.05	DST	2.95	97	V767388	☐	O18-037	core		☐	☐	☑
323.09	326.14	3.05	DST	2.65	87	V767389	☐	O18-037	core		☐	☐	☐
326.14	329.18	3.04	DST	3.04	100	V767390	☐	O18-037	core		☐	☐	☐
329.18	332.23	3.05	DST	2.87	94	V767391	☐	O18-038	core		☐	☐	☐
329.18	332.23	3.05	DST	2.87	94	V767392	☐	O18-038	core		☐	☐	☑
332.23	335.28	3.05	DST	3.05	100	V767393	☐	O18-038	core		☐	☐	☐
335.28	338.33	3.05	DST	2.81	92	V767394	☐	O18-038	core		☐	☐	☐
338.33	341.38	3.05	DST	2.79	91	V767396	☐	O18-038	core		☐	☐	☐
341.38	344.42	3.04	DST	3.03	100	V767397	☐	O18-038	core		☐	☐	☐
344.42	347.47	3.05	DST	3.02	99	V767398	☐	O18-038	core		☐	☐	☐
347.47	350.52	3.05	DST	2.75	90	V767399	☐	O18-038	core		☐	☐	☐
350.52	353.57	3.05	DST	2.90	95	V767400	☐	O18-038	core		☐	☐	☐
353.57	356.62	3.05	DST	3.05	100	V767401	☐	O18-038	core		☐	☐	☐
356.62	359.66	3.04	DST	3.04	100	V767402	☐	O18-038	core		☐	☐	☐
359.66	362.71	3.05	DST	2.42	79	V767403	☐	O18-038	core		☐	☐	☐
362.71	365.76	3.05	DST	2.73	90	V767404	☐	O18-038	core		☐	☐	☐
365.76	368.81	3.05	DST	2.93	96	V767405	☐	O18-038	core		☐	☐	☐
368.81	371.86	3.05	DST	3.00	98	V767406	☐	O18-038	core		☐	☐	☐
371.86	374.90	3.04	DST	3.04	100	V767407	☐	O18-038	core		☐	☐	☐
374.90	377.95	3.05	DST	3.05	100	V767408	☐	O18-038	core		☐	☐	☐
377.95	381.00	3.05	DST	2.70	89	V767409	☐	O18-038	core		☐	☐	☐
381.00	384.05	3.05	DST	3.02	99	V767410	☐	O18-038	core		☐	☐	☐
384.05	387.10	3.05	DST	3.00	98	V767411	☐	O18-038	core		☐	☐	☐
387.10	390.14	3.04	DST	3.01	99	V767413	☐	O18-038	core		☐	☐	☐
390.14	393.19	3.05	DST	3.00	98	V767414	☐	O18-038	core		☐	☐	☐
393.19	396.24	3.05	DST	3.00	98	V767415	☐	O18-038	core		☐	☐	☐
396.24	399.29	3.05	DST	2.86	94	V767416	☐	O18-038	core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
399.29	402.34	3.05	DST	2.99	98	V767417	☐	O18-038	core		☐	☐	☐
402.34	405.38	3.04	DST	2.87	94	V767419	☐	O18-038	core		☐	☐	☐
405.38	408.43	3.05	DST	3.05	100	V767420	☐	O18-038	core		☐	☐	☐
408.43	411.48	3.05	DST	3.05	100	V767421	☐	O18-038	core		☐	☐	☐
411.48	414.53	3.05	DST	2.71	89	V767422	☐	O18-038	core		☐	☐	☐
414.53	417.58	3.05	DST	3.05	100	V767423	☐	O18-038	core		☐	☐	☐
417.58	420.62	3.04	DST	2.71	89	V767424	☐	O18-038	core		☐	☐	☐
420.62	423.67	3.05	DST	2.97	97	V767425	☐	O18-038	core		☐	☐	☐
423.67	426.72	3.05	DST	2.62	86	V767426	☐	O18-038	core		☐	☐	☐
426.72	429.77	3.05	DST	3.05	100	V767427	☐	O18-038	core		☐	☐	☐
429.77	432.82	3.05	DST	2.92	96	V767428	☐	O18-038	core		☐	☐	☐
432.82	435.86	3.04	DST	3.04	100	V767429	☐	O18-038	core		☐	☐	☐
432.82	435.86	3.04	DST	3.04	100	V767430	☐	O18-038	core		☐	☑	☐
435.86	438.91	3.05	DST	3.00	98	V767431	☐	O18-040	core		☐	☐	☐
438.91	441.96	3.05	DST	2.92	96	V767432	☐	O18-040	core		☐	☐	☐
441.96	445.00	3.04	DST	2.89	95	V767433	☐	O18-040	core		☐	☐	☐
445.00	448.06	3.06	DST	2.98	97	V767434	☐	O18-040	core		☐	☐	☐
448.06	451.10	3.04	DST	3.02	99	V767435	☐	O18-040	core		☐	☐	☐
451.10	454.15	3.05	DST	2.63	86	V767436	☐	O18-040	core		☐	☐	☐
454.15	457.20	3.05	DST	2.80	92	V767437	☐	O18-040	core		☐	☐	☐
457.20	460.25	3.05	DST	2.94	96	V767438	☐	O18-040	core		☐	☐	☐
460.25	463.30	3.05	DST	2.85	93	V767440	☐	O18-040	core		☐	☐	☐
463.30	466.34	3.04	DST	3.04	100	V767441	☐	O18-040	core		☐	☐	☐
466.34	469.39	3.05	DST	2.82	92	V767442	☐	O18-040	core		☐	☐	☐
469.39	472.44	3.05	DST	2.83	93	V767444	☐	O18-040	core		☐	☐	☐
472.44	475.49	3.05	DST	2.75	90	V767445	☐	O18-040	core		☐	☐	☐
475.49	478.54	3.05	DST	3.00	98	V767446	☐	O18-040	core		☐	☐	☐
478.54	481.58	3.04	DST	2.92	96	V767447	☐	O18-040	core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
481.58	484.63	3.05	DST	2.78	91	V767448	☐	O18-040	core		☐	☐	☐
484.63	487.68	3.05	DST	2.93	96	V767449	☐	O18-040	core		☐	☐	☐
484.63	487.68	3.05	DST	2.93	96	V767450	☐	O18-040	core		☐	☐	☑
487.68	490.73	3.05	DST	2.88	94	V767451	☐	O18-040	core		☐	☐	☐
490.73	493.78	3.05	DST	3.05	100	V767452	☐	O18-040	core		☐	☐	☐
493.78	496.82	3.04	DST	2.55	84	V767453	☐	O18-040	core		☐	☐	☐
496.82	499.87	3.05	DST	3.01	99	V767454	☐	O18-040	core		☐	☐	☐
496.82	499.87	3.05	DST	3.01	99	V767455	☐	O18-040	core		☐	☑	☐
499.87	502.92	3.05	DST	3.00	98	V767456	☐	O18-040	core		☐	☐	☐
502.92	505.97	3.05	DST	3.05	100	V767457	☐	O18-040	core		☐	☐	☐
505.97	509.02	3.05	DST	3.04	100	V767458	☐	O18-040	core		☐	☐	☐
509.02	512.06	3.04	DST	3.04	100	V767459	☐	O18-040	core		☐	☐	☐
512.06	515.11	3.05	DST	2.87	94	V767460	☐	O18-040	core		☐	☐	☐
515.11	518.16	3.05	DST	2.95	97	V767461	☐	O18-040	core		☐	☐	☐
518.16	521.21	3.05	DST	3.02	99	V767462	☐	O18-040	core		☐	☐	☐
521.21	524.26	3.05	DST	3.04	100	V767463	☐	O18-040	core		☐	☐	☐
524.26	527.30	3.04	DST	2.93	96	V767464	☐	O18-040	core		☐	☐	☐
527.30	530.35	3.05	DST	3.04	100	V767465	☐	O18-040	core		☐	☐	☐
530.35	533.40	3.05	DST	3.04	100	V767466	☐	O18-040	core		☐	☐	☐
533.40	536.45	3.05	DST	3.04	100	V767468	☐	O18-040	core		☐	☐	☐
536.45	539.50	3.05	DST	2.74	90	V767469	☐	O18-040	core		☐	☐	☐
539.50	542.54	3.04	DST	1.27	42	V767470	☐	O18-040	core		☐	☐	☐
542.54	545.59	3.05	DST	2.07	68	V767471	☐	O18-041	core		☐	☐	☐
545.59	548.64	3.05	DST	2.95	97	V767472	☐	O18-041	core		☐	☐	☐
548.64	551.69	3.05	DST	3.04	100	V767473	☐	O18-041	core		☐	☐	☐
551.69	554.74	3.05	DST	3.04	100	V767474	☐	O18-041	core		☐	☐	☐
551.69	554.74	3.05	DST	3.04	100	V767475	☐	O18-041	core		☐	☑	☐
554.74	557.78	3.04	DST	2.95	97	V767476	☐	O18-041	core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
557.78	560.83	3.05	DST	2.54	83	V767477	☐	O18-041	core		☐	☐	☐
560.83	563.88	3.05	DST	3.04	100	V767478	☐	O18-041	core		☐	☐	☐
563.88	566.93	3.05	DST	2.89	95	V767479	☐	O18-041	core		☐	☐	☐
566.93	569.98	3.05	DST	2.05	67	V767480	☐	O18-041	core		☐	☐	☐
569.98	573.02	3.04	DST	2.99	98	V767481	☐	O18-041	core		☐	☐	☐
573.02	576.07	3.05	DST	2.91	95	V767482	☐	O18-041	core		☐	☐	☐
576.07	579.12	3.05	DST	2.88	94	V767483	☐	O18-041	core		☐	☐	☐
579.12	582.17	3.05	DST	2.75	90	V767484	☐	O18-041	core		☐	☐	☐
582.17	585.22	3.05	DST	2.92	96	V767485	☐	O18-041	core		☐	☐	☐
585.22	588.26	3.04	DST	3.04	100	V767486	☐	O18-041	core		☐	☐	☐
588.26	591.00	2.74	DST	2.62	96	V767487	☐	O18-041	core		☐	☐	☐
591.00	592.34	1.34	DST	1.34	100	V767489	☐	O18-041	core		☐	☐	☐
592.34	594.36	2.02	DST	1.90	94	V767490	☐	O18-041	core		☐	☐	☐
594.36	597.41	3.05	DST	2.93	96	V767491	☐	O18-041	core		☐	☐	☐
597.41	600.46	3.05	DST	2.94	96	V767492	☐	O18-041	core		☐	☐	☐
600.46	603.50	3.04	DST	2.84	93	V767493	☐	O18-041	core		☐	☐	☐
603.50	606.55	3.05	DST	2.99	98	V767494	☐	O18-041	core		☐	☐	☐
606.55	609.60	3.05	DST	2.88	94	V767495	☐	O18-041	core		☐	☐	☐
609.60	612.65	3.05	DST	2.98	98	V767496	☐	O18-041	core		☐	☐	☐
612.65	615.70	3.05	DST	2.84	93	V767497	☐	O18-041	core		☐	☐	☐
615.70	618.74	3.04	DST	3.03	100	V767499	☐	O18-041	core		☐	☐	☐
618.74	620.53	1.79	DST	1.58	88	V767500	☐	O18-041	core		☐	☐	☐
620.53	622.13	1.60	DST	1.43	89	V767501	☐	O18-041	core		☐	☐	☐
622.13	624.05	1.92	DST, MST	1.72	90	V767502	☐	O18-041	core		☐	☐	☐
622.13	624.05	1.92	DST, MST	1.72	90	V767503	☐	O18-041	core		☐	☐	☑
624.05	625.85	1.80	MST	1.65	92	V767504	☐	O18-041	core		☐	☐	☐
625.85	627.89	2.04	MST	1.77	87	V767505	☐	O18-041	core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
627.89	629.77	1.88	MST	1.80	96	V767507	☐	O18-041	core		☐	☐	☐
629.77	630.94	1.17	MST	1.15	98	V767508	☐	O18-041	core		☐	☐	☐
630.94	633.98	3.04	MST	3.04	100	V767509	☐	O18-041	core		☐	☐	☐
633.98	637.03	3.05	MST	3.03	99	V767510	☐	O18-041	core		☐	☐	☐
637.03	640.08	3.05	MST	2.78	91	V767511	☐	O18-042	Core		☐	☐	☐
640.08	643.13	3.05	MST	2.85	93	V767512	☐	O18-042	Core		☐	☐	☐
643.13	646.18	3.05	MST	3.04	100	V767513	☐	O18-042	Core		☐	☐	☐
646.18	649.22	3.04	MST	3.04	100	V767515	☐	O18-042	Core		☐	☐	☐
649.22	652.27	3.05	MST	2.83	93	V767516	☐	O18-042	Core		☐	☐	☐
652.27	655.32	3.05	MST	2.80	92	V767517	☐	O18-042	Core		☐	☐	☐
655.32	658.37	3.05	MST	2.55	84	V767519	☐	O18-042	Core		☐	☐	☐
658.37	661.42	3.05	MST	2.73	90	V767520	☐	O18-042	Core		☐	☐	☐
661.42	664.46	3.04	MST	2.20	72	V767521	☐	O18-042	Core		☐	☐	☐
664.46	666.83	2.37	MST	2.33	98	V767522	☐	O18-042	Core		☐	☐	☐
666.83	669.00	2.17	DST, MST	2.09	96	V767523	☐	O18-042	Core		☐	☐	☐
669.00	670.56	1.56	DST	1.56	100	V767524	☐	O18-042	Core		☐	☐	☐
669.00	670.56	1.56	DST	1.56	100	V767525	☐	O18-042	Core		☐	☑	☐
670.56	673.61	3.05	DST	2.76	90	V767526	☐	O18-042	Core		☐	☐	☐
673.61	676.66	3.05	DST	2.68	88	V767527	☐	O18-042	Core		☐	☐	☐
676.66	679.70	3.04	DST	3.04	100	V767528	☐	O18-042	Core		☐	☐	☐
679.70	682.75	3.05	DST	2.65	87	V767529	☐	O18-042	Core		☐	☐	☐
682.75	685.80	3.05	DST	2.52	83	V767530	☐	O18-042	Core		☐	☐	☐
685.80	688.85	3.05	DST	2.43	80	V767531	☐	O18-042	Core		☐	☐	☐
688.85	691.90	3.05	DST	3.03	99	V767532	☐	O18-042	Core		☐	☐	☐
691.90	694.94	3.04	DST	2.31	76	V767533	☐	O18-042	Core		☐	☐	☐
694.94	697.99	3.05	DST	2.35	77	V767534	☐	O18-042	Core		☐	☐	☐
697.99	701.04	3.05	DST	2.47	81	V767535	☐	O18-042	Core		☐	☐	☐
701.04	704.09	3.05	DST	2.99	98	V767536	☐	O18-042	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
704.09	707.14	3.05	DST	2.28	75	V767537	☐	O18-042	Core		☐	☐	☐
707.14	710.18	3.04	DST	2.81	92	V767538	☐	O18-042	Core		☐	☐	☐
710.18	713.23	3.05	DST	2.45	80	V767539	☐	O18-042	Core		☐	☐	☐
710.18	713.23	3.05	DST	2.45	80	V767540	☐	O18-042	Core		☐	☐	☑
713.23	716.28	3.05	DST	2.46	81	V767541	☐	O18-042	Core		☐	☐	☐
716.28	719.33	3.05	DST	2.70	89	V767542	☐	O18-042	Core		☐	☐	☐
719.33	722.38	3.05	DST	2.42	79	V767543	☐	O18-042	Core		☐	☐	☐
722.38	725.42	3.04	DST	1.98	65	V767544	☐	O18-042	Core		☐	☐	☐
725.42	728.47	3.05	DST	2.66	87	V767545	☐	O18-042	Core		☐	☐	☐
728.47	731.52	3.05	DST	2.43	80	V767547	☐	O18-042	Core		☐	☐	☐
731.52	734.57	3.05	DST	2.69	88	V767548	☐	O18-042	Core		☐	☐	☐
734.57	737.62	3.05	DST	2.78	91	V767549	☐	O18-042	Core		☐	☐	☐
737.62	740.66	3.04	DST	3.04	100	V767550	☐	O18-042	Core		☐	☐	☐
740.66	743.71	3.05	DST	2.93	96	V767551	☐	O18-044	core		☐	☐	☐
743.71	746.76	3.05	DST	2.85	93	V767552	☐	O18-044	core		☐	☐	☐
746.76	749.81	3.05	DST	2.77	91	V767553	☐	O18-044	core		☐	☐	☐
749.81	752.86	3.05	DST	3.04	100	V767554	☐	O18-044	core		☐	☐	☐
752.86	755.90	3.04	DST	2.90	95	V767555	☐	O18-044	core		☐	☐	☐
755.90	758.95	3.05	DST	2.82	92	V767556	☐	O18-044	core		☐	☐	☐
758.95	762.00	3.05	DST	2.80	92	V767557	☐	O18-044	core		☐	☐	☐
762.00	764.00	2.00	DST	1.93	97	V767558	☐	O18-044	core		☐	☐	☐
764.00	765.44	1.44	DST	1.35	94	V767560	☐	O18-044	core		☐	☐	☐
765.44	767.46	2.02	DST	1.79	89	V767561	☐	O18-044	core		☐	☐	☐
767.46	769.56	2.10	DST	2.10	100	V767562	☐	O18-044	core		☐	☐	☐
769.56	771.14	1.58	DST	1.53	97	V767564	☐	O18-044	core		☐	☐	☐
771.14	774.19	3.05	DST	2.89	95	V767565	☐	O18-044	core		☐	☐	☐
774.19	777.24	3.05	DST	3.05	100	V767566	☐	O18-044	core		☐	☐	☐
777.24	780.29	3.05	DST	2.08	68	V767567	☐	O18-044	core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
780.29	783.34	3.05	DST	2.69	88	V767568	☐	O18-044	core		☐	☐	☐
783.34	786.38	3.04	DST	3.04	100	V767569	☐	O18-044	core		☐	☐	☐
786.38	789.43	3.05	DST	2.85	93	V767570	☐	O18-044	core		☐	☐	☐
789.43	792.48	3.05	DST	3.05	100	V767571	☐	O18-044	core		☐	☐	☐
792.48	795.53	3.05	DST	3.05	100	V767572	☐	O18-044	core		☐	☐	☐
792.48	795.53	3.05	DST	3.05	100	V767573	☐	O18-044	core		☐	☑	☐
795.53	798.58	3.05	DST	2.29	75	V767574	☐	O18-044	core		☐	☐	☐

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From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
0.00	1.22	1.22	NSP	--	no recovery							
1.22	475.41	474.19	LST	CG	Light-medium grey, coarse grained, crinoid packstone package with locally oxidized sections. Light-grey limestone sections appear more compacted (lithified (?)) than dark-grey packstone sections.							
								BX	DCA	W		
						MD	GY	PK	OXI	W		
						LT	GY	MA	SIL	W		
475.41	663.38	187.97	MST	VF	Dark grey to black with traces of fine grained medium grey limestone beds. Weak bedding through formation.							
								BX				
						DK	BK	FR				
						MD	GY	BD				

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From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
0.00	1.22	1.22	0	0	0.00	0	0R	--	--	no recovery
1.22	3.05	1.83	1.7	93	0.41	22	4R	3H	2W	
3.05	6.10	3.05	2.75	90	0.68	22	4R	3H	2W	
6.10	9.14	3.04	2.95	97	2.20	72	4R	3H	1W	
9.14	12.19	3.05	3	98	2.10	69	4R	3H	1W	
12.19	15.24	3.05	2.51	82	1.17	38	4R	3H	1W	
15.24	18.29	3.05	2.51	82	1.21	40	4R	3H	1W	
18.29	21.34	3.05	2.42	79	0.75	25	4R	2H	1W	sections of weak, rubbly, clay rich material from 19.15-19.39m and 18.68-18.81m.
21.34	24.37	3.03	2.86	94	2.05	68	4R	4H	3W	
24.37	26.21	1.84	1.61	88	0.67	36	4R	4H	2W	Transition from PQ to HQ at 25.91 m
26.21	29.26	3.05	2.59	85	1.61	53	4R	4H	1W	
29.26	32.31	3.05	3	98	1.95	64	4R	4H	1W	
32.31	35.36	3.05	2.87	94	2.71	89	3R	4H	1W	
35.36	38.40	3.04	3.04	100	2.21	73	3R	4H	1W	
38.40	41.45	3.05	3.03	99	1.74	57	4R	4H	1W	
41.45	44.50	3.05	2.93	96	2.43	80	4R	4H	1W	
44.50	47.55	3.05	2.94	96	2.53	83	4R	4H	1W	
47.55	50.60	3.05	2.8	92	2.38	78	4R	4H	1W	
50.60	53.65	3.05	2.96	97	2.50	82	4R	4H	1W	
53.65	56.69	3.04	2.97	98	2.35	77	4R	4H	1W	
56.69	59.74	3.05	3.05	100	2.13	70	4R	4H	1W	
59.74	62.79	3.05	2.89	95	2.36	77	4R	4H	1W	
62.79	65.84	3.05	3.05	100	3.05	100	4R	4H	1W	
65.84	68.88	3.04	3.03	100	2.21	73	4R	4H	1W	
68.88	71.93	3.05	3.05	100	2.91	95	4R	4H	1W	
71.93	74.98	3.05	2.92	96	2.22	73	3R	4H	1W	
74.98	78.03	3.05	3.04	100	2.56	84	3R	3H	1W	
78.03	81.08	3.05	3.04	100	3.04	100	3R	4H	1W	
81.08	84.12	3.04	3.04	100	2.37	78	3R	3H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
84.12	87.17	3.05	2.97	97	2.42	79	3R	3H	1W	
87.17	90.22	3.05	2.95	97	2.63	86	3R	3H	1W	
90.22	93.27	3.05	2.94	96	2.52	83	3R	3H	1W	
93.27	96.32	3.05	3.04	100	2.51	82	3R	3H	1W	
96.32	99.36	3.04	2.95	97	2.75	90	4R	3H	1W	
99.36	102.41	3.05	3.04	100	2.54	83	3R	4H	1W	
102.41	105.46	3.05	3.04	100	1.61	53	3R	4H	1W	multiple single joints.
105.46	108.51	3.05	3	98	2.45	80	3R	4H	1W	
108.51	111.56	3.05	3.04	100	2.48	81	4R	4H	1W	
111.56	114.60	3.04	3.04	100	2.54	84	4R	4H	1W	
114.60	117.65	3.05	2.99	98	2.74	90	4R	4H	1W	
117.65	120.70	3.05	3.04	100	2.64	87	4R	4H	1W	
120.70	123.75	3.05	3	98	2.48	81	4R	4H	1W	
123.75	126.80	3.05	2.92	96	2.56	84	4R	4H	1W	
126.80	129.85	3.05	3.04	100	2.54	83	4R	4H	1W	
129.85	132.89	3.04	2.9	95	1.85	61	4R	4H	1W	
132.89	135.94	3.05	2.91	95	1.77	58	4R	4H	1W	
135.94	138.99	3.05	3.01	99	2.41	79	4R	4H	1W	
138.99	142.04	3.05	2.8	92	2.08	68	4R	4H	1W	
142.04	145.08	3.04	2.8	92	2.53	83	4R	4H	1W	
145.08	148.13	3.05	2.95	97	1.86	61	4R	3H	1W	
148.13	151.18	3.05	3.04	100	1.85	61	4R	4H	1W	
151.18	154.23	3.05	2.8	92	1.40	46	4R	3H	1W	
154.23	157.28	3.05	3.04	100	2.51	82	4R	4H	1W	
157.28	160.32	3.04	3.04	100	1.53	50	4R	3H	1W	
160.32	163.37	3.05	2.94	96	1.45	48	4R	4H	1W	
163.37	166.42	3.05	3	98	2.40	79	4R	4H	1W	
166.42	169.47	3.05	3.02	99	1.62	53	4R	3H	1W	
169.47	172.52	3.05	2.75	90	0.58	19	4R	4H	1W	
172.52	175.56	3.04	2.8	92	1.44	47	4R	4H	1W	
175.56	178.61	3.05	2.9	95	0.82	27	4R	3H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
178.61	181.66	3.05	2.84	93	1.34	44	4R	4H	1W	
181.66	184.71	3.05	3.01	99	1.73	57	4R	4H	1W	
184.71	187.76	3.05	2.9	95	1.53	50	4R	4H	1W	
187.76	190.80	3.04	2.51	83	0.35	12	4R	2H	1W	
190.80	193.85	3.05	2.98	98	1.90	62	4R	3H	1W	
193.85	196.90	3.05	2.65	87	2.05	67	3R	4H	1W	
196.90	199.95	3.05	2.69	88	1.31	43	3R	4H	1W	
199.95	203.00	3.05	2.79	91	1.15	38	3R	4H	1W	
203.00	206.05	3.05	2.99	98	1.02	33	3R	2H	1W	
206.05	209.09	3.04	3	99	1.92	63	2R	3H	1W	small rbz from 206.87m-207.14m.
209.09	212.14	3.05	3.04	100	2.30	75	2R	3H	1W	
212.14	215.19	3.05	2.96	97	1.90	62	3R	3H	1W	
215.19	218.24	3.05	2.68	88	1.32	43	3R	3H	1W	
218.24	221.28	3.04	2.62	86	1.19	39	4R	4H	1W	
221.28	224.33	3.05	2.87	94	1.80	59	4R	4H	1W	
224.33	227.38	3.05	2.51	82	1.35	44	3R	5H	1W	
227.38	230.43	3.05	3.03	99	2.37	78	4R	4H	1W	
230.43	233.48	3.05	2.95	97	1.70	56	4R	4H	1W	
233.48	236.52	3.04	2.88	95	1.63	54	4R	4H	1W	
236.52	239.57	3.05	2.72	89	1.26	41	4R	4H	1W	
239.57	242.62	3.05	2.87	94	1.50	49	3R	2H	1W	
242.62	245.67	3.05	2.95	97	2.22	73	3R	4H	1W	
245.67	248.72	3.05	2.73	90	1.49	49	2R	3H	1W	
248.72	251.76	3.04	2.83	93	1.88	62	3R	4H	1W	
251.76	254.81	3.05	2.49	82	0.76	25	3R	3H	1W	
254.81	257.86	3.05	2.58	85	1.34	44	4R	3H	1W	
257.86	260.91	3.05	2.6	85	0.63	21	4R	3H	1W	
260.91	263.96	3.05	2.88	94	1.08	35	4R	3H	1W	
263.96	267.00	3.04	2.6	86	0.82	27	3R	3H	1W	
267.00	270.05	3.05	2.77	91	1.24	41	3R	3H	1W	
270.05	273.10	3.05	2.81	92	0.70	23	4R	3H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
273.10	276.15	3.05	2.92	96	1.35	44	4R	2H	1W	
276.15	279.20	3.05	2.24	73	0.96	31	4R	2H	1W	RBZ from 278.28-278.74m and 278.91-279.00m. AsO alteration along fractured surfaces
279.20	282.24	3.04	2.05	67	0.44	14	3R	2H	1W	RBZ from 279.2-279.67m and 280.29-281.00m. Decreasing HCL reactivity throughout run.
282.24	285.29	3.05	2.44	80	0.72	24	3R	3H	1W	
285.29	288.34	3.05	2.83	93	0.92	30	3R	3H	1W	RBZ from 285.29-285.52
288.34	291.39	3.05	2.78	91	0.83	27	3R	4H	1W	
291.39	294.44	3.05	3.02	99	0.95	31	3R	4H	1W	
294.44	297.49	3.05	2.83	93	0.46	15	3R	3H	1W	rbz from 296-297.40
297.49	300.53	3.04	2.58	85	1.06	35	3R	2H	1W	
300.53	303.58	3.05	1.94	64	0.35	11	3R	2H	1W	
303.58	306.63	3.05	2.05	67	0.97	32	3R	3H	1W	
306.63	309.68	3.05	1.32	43	0.51	17	3R	2H	1W	
309.68	312.73	3.05	1.87	61	0.50	16	3R	2H	1W	gouge within rubble zone.
312.73	315.77	3.04	2.71	89	1.47	48	3R	4H	1W	Multiple single joints.
315.77	318.82	3.05	2.63	86	1.35	44	4R	4H	1W	multiple single joints.
318.82	321.87	3.05	2.69	88	1.28	42	4R	4H	1W	multiple fractures and rubble zone from 321.00m-321.50m
321.87	324.92	3.05	2.9	95	1.99	65	4R	4H	1W	
324.92	327.96	3.04	2.83	93	1.76	58	4R	4H	1W	multiple single joints.
327.96	331.01	3.05	2.31	76	1.18	39	4R	4H	1W	
331.01	334.06	3.05	2.97	97	1.81	59	4R	4H	1W	
334.06	337.11	3.05	2.87	94	2.30	75	4R	4H	1W	
337.11	340.16	3.05	2.9	95	1.35	44	4R	4H	1W	
340.16	343.20	3.04	2.92	96	2.02	66	4R	4H	1W	
343.20	346.25	3.05	3.05	100	2.75	90	4R	4H	1W	
346.25	349.30	3.05	3	98	2.77	91	4R	4H	1W	
349.30	352.35	3.05	3.05	100	2.76	90	4R	4H	1W	
352.35	355.40	3.05	3.05	100	2.57	84	4R	4H	1W	
355.40	358.44	3.04	3.04	100	2.41	79	4R	4H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
358.44	361.49	3.05	3.05	100	2.66	87	4R	4H	1W	
361.49	364.54	3.05	3.05	100	2.83	93	4R	4H	1W	
364.54	367.59	3.05	3.05	100	2.95	97	4R	4H	1W	
367.59	370.64	3.05	3.04	100	2.94	96	4R	4H	1W	
370.64	373.68	3.04	3.03	100	2.67	88	4R	4H	1W	
373.68	376.73	3.05	2.97	97	2.81	92	4R	4H	1W	
376.73	379.78	3.05	3.04	100	3.01	99	4R	4H	1W	
379.78	382.83	3.05	3.05	100	2.47	81	4R	4H	1W	
382.83	385.88	3.05	3	98	2.71	89	4R	4H	1W	
385.88	388.92	3.04	2.92	96	1.80	59	4R	4H	1W	
388.92	391.97	3.05	2.98	98	1.99	65	4R	3H	1W	
391.97	395.02	3.05	3	98	2.24	73	4R	3H	1W	
395.02	398.07	3.05	3.02	99	2.73	90	4R	3H	1W	
398.07	401.11	3.04	3.04	100	2.56	84	4R	4H	1W	
401.11	404.16	3.05	3.03	99	2.43	80	4R	4H	1W	
404.16	407.21	3.05	3.04	100	2.34	77	4R	3H	1W	
407.21	410.26	3.05	2.94	96	1.88	62	4R	3H	1W	
410.26	413.31	3.05	3.01	99	2.00	66	4R	3H	1W	
413.31	416.36	3.05	2.99	98	2.81	92	4R	4H	1W	
416.36	419.40	3.04	3.04	100	2.89	95	4R	4H	1W	
419.40	422.45	3.05	3.01	99	2.78	91	4R	4H	1W	
422.45	425.50	3.05	3.05	100	2.83	93	4R	4H	1W	
425.50	428.55	3.05	2.73	90	2.36	77	4R	3H	1W	
428.55	431.60	3.05	3	98	2.37	78	4R	3H	1W	
431.60	434.64	3.04	3.01	99	2.60	86	4R	3H	1W	
434.64	437.69	3.05	2.99	98	2.77	91	4R	4H	1W	
437.69	440.74	3.05	2.94	96	2.36	77	4R	4H	1W	graphitic fracture surfaces
440.74	443.79	3.05	2.99	98	2.74	90	3R	4H	1W	
443.79	446.84	3.05	2.78	91	1.19	39	3R	3H	1W	
446.84	449.88	3.04	2.93	96	1.15	38	3R	3H	1W	
449.88	452.93	3.05	3.05	100	2.88	94	4R	4H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
452.93	455.98	3.05	2.9	95	1.33	44	4R	4H	1W	
455.98	459.03	3.05	3.05	100	2.75	90	4R	4H	1W	
459.03	462.08	3.05	3	98	2.61	86	3R	2H	1W	
462.08	465.12	3.04	2.94	97	2.49	82	2R	3H	1W	
465.12	468.17	3.05	3.05	100	2.91	95	3R	3H	1W	
468.17	471.22	3.05	2.92	96	2.70	89	3R	3H	1W	
471.22	474.27	3.05	2.86	94	2.70	89	4R	4H	1W	
474.27	477.32	3.05	2.04	67	1.30	43	3R	3H	1W	rubble from 475.30 until end of run.
477.32	480.36	3.04	2.8	92	1.05	35	3R	2H	1W	
480.36	483.41	3.05	2.39	78	0.87	29	2R	2H	1W	
483.41	486.46	3.05	2.58	85	0.87	29	3R	2H	1W	
486.46	489.51	3.05	2.83	93	1.84	60	1R	2H	1W	
489.51	492.56	3.05	2.69	88	0.79	26	1R	2H	1W	
492.56	495.61	3.05	3.04	100	1.44	47	1R	3H	1W	
495.61	498.65	3.04	3.04	100	2.71	89	1R	4H	1W	
498.65	501.70	3.05	3.04	100	2.21	72	1R	4H	1W	
501.70	504.75	3.05	2.92	96	1.79	59	1R	3H	1W	
504.75	507.80	3.05	3	98	2.45	80	2R	4H	1W	rbz
507.80	510.85	3.05	3	98	2.54	83	1R	3H	1W	
510.85	513.89	3.04	3.03	100	1.48	49	0R	3H	1W	rbz from 512.12-512.46m, Hcl fizz with calcite veins in this interval.
513.89	516.94	3.05	3.04	100	1.55	51	0R	3H	1W	
516.94	519.99	3.05	3.04	100	2.09	69	1R	3H	1W	
519.99	523.04	3.05	2.71	89	2.14	70	1R	3H	1W	
523.04	526.09	3.05	3.04	100	3.04	100	1R	3H	1W	
526.09	529.13	3.04	3.04	100	2.84	93	0R	3H	1W	
529.13	532.18	3.05	3	98	2.18	71	1R	3H	1W	
532.18	535.23	3.05	2.61	86	1.64	54	1R	3H	1W	
535.23	538.28	3.05	2.74	90	2.05	67	1R	3H	1W	
538.28	541.32	3.04	2.88	95	1.68	55	1R	3H	1W	
541.32	544.37	3.05	3.05	100	1.96	64	1R	3H	1W	
544.37	547.42	3.05	2.99	98	1.64	54	1R	3H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
547.42	550.47	3.05	2.73	90	2.17	71	1R	3H	1W	
550.47	553.52	3.05	2.81	92	2.12	70	1R	3H	1W	
553.52	556.57	3.05	3.05	100	2.21	72	1R	3H	1W	
556.57	559.61	3.04	3	99	1.50	49	1R	2H	1W	multiple single joints.
559.61	561.75	2.14	2.12	99	1.18	55	1R	2H	1W	becomes rubbly around 561. run contains multiple single joints.
561.75	564.79	3.04	2.68	88	2.03	67	0R	3H	1W	
564.79	567.84	3.05	2.93	96	1.26	41	0R	2H	1W	
567.84	570.89	3.05	2.59	85	2.18	71	1R	2H	1W	
570.89	573.94	3.05	2.37	78	1.21	40	2R	2H	1W	
573.94	576.99	3.05	2.48	81	0.71	23	1R	2H	1W	
576.99	580.03	3.04	1.89	62	0.90	30	1R	2H	1W	
580.03	583.08	3.05	2.14	70	0.25	8	1R	2H	1W	
583.08	586.13	3.05	1.6	52	0.24	8	1R	2H	1W	
586.13	589.18	3.05	2.31	76	0.64	21	1R	2H	1W	carbonaceous "polished" surfaces along some joints
589.18	592.23	3.05	2.61	86	0.74	24	1R	2H	1W	carbonaceous "polished" joint surfaces
592.23	595.27	3.04	2.8	92	1.47	48	1R	2H	1W	
595.27	598.32	3.05	2.7	89	1.23	40	1R	3H	1W	
598.32	601.37	3.05	2.45	80	0.25	8	1R	3H	1W	
601.37	604.42	3.05	2.25	74	0.65	21	1R	3H	1W	
604.42	607.47	3.05	2.6	85	0.63	21	3R	2H	1W	RBZ
607.47	610.51	3.04	2.34	77	0.28	9	1R	2H	1W	RBZ
610.51	613.56	3.05	3.04	100	1.35	44	1R	2H	1W	RBZ
613.56	616.61	3.05	3.04	100	1.36	45	1R	2H	1W	RBZ
616.61	619.66	3.05	3.04	100	1.08	35	1R	2H	1W	
619.66	622.71	3.05	2.63	86	0.66	22	1R	3H	1W	Intense fracturing
622.71	625.75	3.04	1.94	64	0.38	13	1R	3H	1W	RBZ
625.75	628.80	3.05	2.56	84	1.52	50	2R	3H	1W	Moderate fracturing
628.80	631.85	3.05	2.97	97	2.18	71	3R	3H	1W	Becomes calcareous
631.85	634.90	3.05	2.67	88	0.76	25	3R	3H	1W	Intensely fractured
634.90	637.95	3.05	2.35	77	0.93	30	3R	3H	1W	Minor RBZ

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
637.95	640.99	3.04	2.13	70	0.66	22	3R	3H	1W	RBZ
640.99	644.04	3.05	2.6	85	0.86	28	2R	3H	1W	
644.04	647.09	3.05	2.3	75	0.60	20	2R	3H	1W	
647.09	650.14	3.05	2.71	89	0.91	30	2R	3H	1W	
650.14	653.19	3.05	2.7	89	1.06	35	2R	2H	1W	
653.19	656.23	3.04	2.78	91	1.54	51	2R	2H	1W	
656.23	659.28	3.05	2.13	70	0.62	20	2R	2H	1W	
659.28	662.33	3.05	2.86	94	1.45	48	3R	2H	1W	
662.33	665.38	3.05	2.05	67	0.77	25	2R	2H	1W	EOH

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
0.00	0.00	0.00	-QC-	0.00	0	V765995	☐	O18-053	Core	SR5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W842046	☐	O18-060	Core	OX7	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W842039	☐	O18-057	Core	OX7	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W842034	☐	O18-057	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V765814	☐	O18-039	core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W231504	☐	O18-060	Core	SR5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V765980	☐	O18-053	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V765971	☐	O18-053	Core	SR5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V765960	☐	O18-051	Core	OX6	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V765946	☐	O18-051	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V765822	☐	O18-039	core	SR5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V765912	☐	O18-047	core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V765909	☐	O18-047	core	OX6	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V765892	☐	O18-047	core	SR5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W842008	☐	O18-057	Core	SR5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V765875	☐	O18-045	core	SR5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V765852	☐	O18-045	core	SR5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V765848	☐	O18-045	core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V765834	☐	O18-039	core	SR5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V765930	☐	O18-051	Core	SR5	☐	☐	☐
1.22	3.05	1.83	LST, NSP	1.70	93	V765806	☐	O18-039	core		☐	☐	☐
3.05	6.10	3.05	LST	2.75	90	V765807	☐	O18-039	core		☐	☐	☐
6.10	9.14	3.04	LST	2.95	97	V765808	☐	O18-039	core		☐	☐	☐
9.14	12.19	3.05	LST	3.00	98	V765809	☐	O18-039	core		☐	☐	☐
12.19	15.24	3.05	LST	2.51	82	V765810	☐	O18-039	core		☐	☐	☐
15.24	18.29	3.05	LST	2.51	82	V765811	☐	O18-039	core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
18.29	21.34	3.05	LST	2.42	79	V765812	☐	O18-039	core		☐	☐	☐
21.34	24.38	3.04	LST	2.86	94	V765813	☐	O18-039	core		☐	☐	☐
24.38	26.21	1.83	LST	1.61	88	V765815	☐	O18-039	core		☐	☐	☐
26.21	29.26	3.05	LST	2.59	85	V765816	☐	O18-039	core		☐	☐	☐
29.26	32.31	3.05	LST	3.00	98	V765817	☐	O18-039	core		☐	☐	☐
32.31	35.36	3.05	LST	2.87	94	V765818	☐	O18-039	core		☐	☐	☐
35.36	38.40	3.04	LST	3.04	100	V765819	☐	O18-039	core		☐	☐	☐
38.40	41.45	3.05	LST	3.03	99	V765820	☐	O18-039	core		☐	☐	☐
41.45	44.50	3.05	LST	2.93	96	V765821	☐	O18-039	core		☐	☐	☐
44.50	47.55	3.05	LST	2.94	96	V765823	☐	O18-039	core		☐	☐	☐
47.55	50.60	3.05	LST	2.80	92	V765824	☐	O18-039	core		☐	☐	☐
50.60	53.65	3.05	LST	2.96	97	V765825	☐	O18-039	core		☐	☐	☐
50.60	53.65	3.05	LST	2.96	97	V765826	☐	O18-039	core		☐	☑	☐
53.65	56.69	3.04	LST	2.97	98	V765827	☐	O18-039	core		☐	☐	☐
56.69	59.74	3.05	LST	3.05	100	V765828	☐	O18-039	core		☐	☐	☐
59.74	62.79	3.05	LST	2.89	95	V765829	☐	O18-039	core		☐	☐	☐
62.79	65.84	3.05	LST	3.05	100	V765830	☐	O18-039	core		☐	☐	☐
65.84	68.88	3.04	LST	3.03	100	V765831	☐	O18-039	core		☐	☐	☐
68.88	71.93	3.05	LST	3.05	100	V765832	☐	O18-039	core		☐	☐	☐
71.93	74.98	3.05	LST	2.92	96	V765833	☐	O18-039	core		☐	☐	☐
74.98	78.03	3.05	LST	3.04	100	V765835	☐	O18-039	core		☐	☐	☐
78.03	81.08	3.05	LST	3.04	100	V765836	☐	O18-039	core		☐	☐	☐
78.03	81.08	3.05	LST	3.04	100	V765837	☐	O18-039	core		☐	☐	☑
81.08	84.12	3.04	LST	3.04	100	V765838	☐	O18-039	core		☐	☐	☐
84.12	87.17	3.05	LST	2.97	97	V765839	☐	O18-039	core		☐	☐	☐
87.17	90.22	3.05	LST	2.95	97	V765840	☐	O18-039	core		☐	☐	☐
90.22	93.27	3.05	LST	2.94	96	V765841	☐	O18-045	core		☐	☐	☐
93.27	96.32	3.05	LST	3.04	100	V765842	☐	O18-045	core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
96.32	99.36	3.04	LST	2.95	97	V765843	☐	O18-045	core		☐	☐	☐
99.36	102.41	3.05	LST	3.04	100	V765844	☐	O18-045	core		☐	☐	☐
102.41	105.46	3.05	LST	3.04	100	V765845	☐	O18-045	core		☐	☐	☐
105.46	108.51	3.05	LST	3.00	98	V765846	☐	O18-045	core		☐	☐	☐
108.51	111.56	3.05	LST	3.04	100	V765847	☐	O18-045	core		☐	☐	☐
111.56	114.60	3.04	LST	3.04	100	V765849	☐	O18-045	core		☐	☐	☐
114.60	117.65	3.05	LST	2.99	98	V765850	☐	O18-045	core		☐	☐	☐
117.65	120.70	3.05	LST	3.04	100	V765851	☐	O18-045	core		☐	☐	☐
120.70	123.75	3.05	LST	3.00	98	V765853	☐	O18-045	core		☐	☐	☐
123.75	126.80	3.05	LST	2.92	96	V765854	☐	O18-045	core		☐	☐	☐
126.80	129.85	3.05	LST	3.04	100	V765855	☐	O18-045	core		☐	☐	☐
129.85	132.89	3.04	LST	2.90	95	V765856	☐	O18-045	core		☐	☐	☐
132.89	135.94	3.05	LST	2.91	95	V765857	☐	O18-045	core		☐	☐	☐
135.94	138.99	3.05	LST	3.01	99	V765858	☐	O18-045	core		☐	☐	☐
135.94	138.99	3.05	LST	3.01	99	V765859	☐	O18-045	core		☐	☐	☑
138.99	142.04	3.05	LST	2.80	92	V765860	☐	O18-045	core		☐	☐	☐
142.04	145.08	3.04	LST	2.80	92	V765861	☐	O18-045	core		☐	☐	☐
142.04	145.08	3.04	LST	2.80	92	V765862	☐	O18-045	core		☐	☑	☐
145.08	148.13	3.05	LST	2.95	97	V765863	☐	O18-045	core		☐	☐	☐
148.13	151.18	3.05	LST	3.04	100	V765864	☐	O18-045	core		☐	☐	☐
151.18	154.23	3.05	LST	2.80	92	V765865	☐	O18-045	core		☐	☐	☐
154.23	157.28	3.05	LST	3.04	100	V765866	☐	O18-045	core		☐	☐	☐
157.28	160.32	3.04	LST	3.04	100	V765867	☐	O18-045	core		☐	☐	☐
160.32	163.37	3.05	LST	2.94	96	V765868	☐	O18-045	core		☐	☐	☐
163.37	166.42	3.05	LST	3.00	98	V765869	☐	O18-045	core		☐	☐	☐
166.42	169.47	3.05	LST	3.02	99	V765870	☐	O18-045	core		☐	☐	☐
169.47	172.52	3.05	LST	2.75	90	V765871	☐	O18-045	core		☐	☐	☐
172.52	175.56	3.04	LST	2.80	92	V765872	☐	O18-045	core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
175.56	178.61	3.05	LST	2.90	95	V765873	☐	O18-045	core		☐	☐	☐
178.61	181.66	3.05	LST	2.84	93	V765874	☐	O18-045	core		☐	☐	☐
181.66	184.71	3.05	LST	3.01	99	V765876	☐	O18-045	core		☐	☐	☐
184.71	187.76	3.05	LST	2.90	95	V765877	☐	O18-045	core		☐	☐	☐
187.76	190.80	3.04	LST	2.51	83	V765878	☐	O18-045	core		☐	☐	☐
190.80	193.85	3.05	LST	2.98	98	V765879	☐	O18-045	core		☐	☐	☐
193.85	196.90	3.05	LST	2.65	87	V765880	☐	O18-045	core		☐	☐	☐
196.90	199.95	3.05	LST	2.69	88	V765881	☐	O18-047	core		☐	☐	☐
199.95	203.00	3.05	LST	2.79	91	V765882	☐	O18-047	core		☐	☐	☐
203.00	206.05	3.05	LST	2.99	98	V765883	☐	O18-047	core		☐	☐	☐
206.05	209.09	3.04	LST	3.00	99	V765884	☐	O18-047	core		☐	☐	☐
206.05	209.09	3.04	LST	3.00	99	V765885	☐	O18-047	core		☐	☐	☑
209.09	212.14	3.05	LST	3.04	100	V765886	☐	O18-047	core		☐	☐	☐
212.14	215.19	3.05	LST	2.96	97	V765887	☐	O18-047	core		☐	☐	☐
215.19	218.24	3.05	LST	2.68	88	V765888	☐	O18-047	core		☐	☐	☐
218.24	221.28	3.04	LST	2.62	86	V765889	☐	O18-047	core		☐	☐	☐
221.28	224.33	3.05	LST	2.87	94	V765890	☐	O18-047	core		☐	☐	☐
224.33	227.38	3.05	LST	2.51	82	V765891	☐	O18-047	core		☐	☐	☐
227.38	230.43	3.05	LST	3.03	99	V765893	☐	O18-047	core		☐	☐	☐
230.43	233.48	3.05	LST	2.95	97	V765894	☐	O18-047	core		☐	☐	☐
233.48	236.52	3.04	LST	2.88	95	V765895	☐	O18-047	core		☐	☐	☐
236.52	239.57	3.05	LST	2.72	89	V765896	☐	O18-047	core		☐	☐	☐
239.57	242.62	3.05	LST	2.87	94	V765897	☐	O18-047	core		☐	☐	☐
242.62	245.67	3.05	LST	2.95	97	V765898	☐	O18-047	core		☐	☐	☐
242.62	245.67	3.05	LST	2.95	97	V765899	☐	O18-047	core		☐	☑	☐
245.67	248.72	3.05	LST	2.73	90	V765900	☐	O18-047	core		☐	☐	☐
248.72	251.76	3.04	LST	2.83	93	V765901	☐	O18-047	core		☐	☐	☐
251.76	254.81	3.05	LST	2.49	82	V765902	☐	O18-047	core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
254.81	257.86	3.05	LST	2.58	85	V765903	☐	O18-047	core		☐	☐	☐
257.86	260.91	3.05	LST	2.60	85	V765904	☐	O18-047	core		☐	☐	☐
260.91	263.96	3.05	LST	2.88	94	V765905	☐	O18-047	core		☐	☐	☐
263.96	267.00	3.04	LST	2.60	86	V765906	☐	O18-047	core		☐	☐	☐
267.00	270.05	3.05	LST	2.77	91	V765907	☐	O18-047	core		☐	☐	☐
270.05	273.10	3.05	LST	2.81	92	V765908	☐	O18-047	core		☐	☐	☐
273.10	276.15	3.05	LST	2.92	96	V765910	☐	O18-047	core		☐	☐	☐
276.15	279.20	3.05	LST	2.24	73	V765911	☐	O18-047	core		☐	☐	☐
279.20	282.24	3.04	LST	2.05	67	V765913	☐	O18-047	core		☐	☐	☐
282.24	285.29	3.05	LST	2.44	80	V765914	☐	O18-047	core		☐	☐	☐
285.29	288.34	3.05	LST	2.83	93	V765915	☐	O18-047	core		☐	☐	☐
288.34	291.39	3.05	LST	2.78	91	V765916	☐	O18-047	core		☐	☐	☐
291.39	294.44	3.05	LST	3.02	99	V765917	☐	O18-047	core		☐	☐	☐
294.44	297.49	3.05	LST	2.83	93	V765918	☐	O18-047	core		☐	☐	☐
297.49	300.53	3.04	LST	2.58	85	V765919	☐	O18-047	core		☐	☐	☐
300.53	303.58	3.05	LST	1.94	64	V765920	☐	O18-047	core		☐	☐	☐
303.58	306.63	3.05	LST	2.05	67	V765921	☐	O18-051	Core		☐	☐	☐
306.63	309.68	3.05	LST	1.32	43	V765922	☐	O18-051	Core		☐	☐	☐
309.68	312.73	3.05	LST	1.87	61	V765923	☐	O18-051	Core		☐	☐	☐
312.73	315.77	3.04	LST	2.71	89	V765924	☐	O18-051	Core		☐	☐	☐
315.77	318.82	3.05	LST	2.63	86	V765925	☐	O18-051	Core		☐	☐	☐
318.82	321.87	3.05	LST	2.69	88	V765926	☐	O18-051	Core		☐	☐	☐
321.87	324.92	3.05	LST	2.90	95	V765927	☐	O18-051	Core		☐	☐	☐
324.92	327.96	3.04	LST	2.83	93	V765928	☐	O18-051	Core		☐	☐	☐
327.96	331.01	3.05	LST	2.31	76	V765929	☐	O18-051	Core		☐	☐	☐
331.01	334.06	3.05	LST	2.97	97	V765931	☐	O18-051	Core		☐	☐	☐
334.06	337.11	3.05	LST	2.87	94	V765932	☐	O18-051	Core		☐	☐	☐
337.11	340.16	3.05	LST	2.90	95	V765933	☐	O18-051	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
340.16	343.20	3.04	LST	2.92	96	V765934	☐	O18-051	Core		☐	☐	☐
343.20	346.25	3.05	LST	3.05	100	V765935	☐	O18-051	Core		☐	☐	☐
346.25	349.30	3.05	LST	3.00	98	V765936	☐	O18-051	Core		☐	☐	☐
346.25	349.30	3.05	LST	3.00	98	V765937	☐	O18-051	Core		☐	☐	☑
349.30	352.35	3.05	LST	3.05	100	V765938	☐	O18-051	Core		☐	☐	☐
352.35	355.40	3.05	LST	3.05	100	V765939	☐	O18-051	Core		☐	☐	☐
355.40	358.44	3.04	LST	3.04	100	V765940	☐	O18-051	Core		☐	☐	☐
358.44	361.49	3.05	LST	3.05	100	V765941	☐	O18-051	Core		☐	☐	☐
361.49	364.54	3.05	LST	3.05	100	V765942	☐	O18-051	Core		☐	☐	☐
364.54	367.59	3.05	LST	3.05	100	V765943	☐	O18-051	Core		☐	☐	☐
367.59	370.64	3.05	LST	3.04	100	V765944	☐	O18-051	Core		☐	☐	☐
370.64	373.68	3.04	LST	3.03	100	V765945	☐	O18-051	Core		☐	☐	☐
373.68	376.73	3.05	LST	2.97	97	V765947	☐	O18-051	Core		☐	☐	☐
376.73	379.78	3.05	LST	3.04	100	V765948	☐	O18-051	Core		☐	☐	☐
379.78	382.83	3.05	LST	3.05	100	V765949	☐	O18-051	Core		☐	☐	☐
382.83	385.88	3.05	LST	3.00	98	V765950	☐	O18-051	Core		☐	☐	☐
385.88	388.92	3.04	LST	2.92	96	V765951	☐	O18-051	Core		☐	☐	☐
388.92	391.97	3.05	LST	2.98	98	V765952	☐	O18-051	Core		☐	☐	☐
391.97	395.02	3.05	LST	3.00	98	V765953	☐	O18-051	Core		☐	☐	☐
391.97	395.02	3.05	LST	3.00	98	V765954	☐	O18-051	Core		☐	☑	☐
395.02	398.07	3.05	LST	3.02	99	V765955	☐	O18-051	Core		☐	☐	☐
398.07	401.11	3.04	LST	3.04	100	V765956	☐	O18-051	Core		☐	☐	☐
401.11	404.16	3.05	LST	3.03	99	V765957	☐	O18-051	Core		☐	☐	☐
404.16	407.21	3.05	LST	3.04	100	V765958	☐	O18-051	Core		☐	☐	☐
407.21	410.26	3.05	LST	2.94	96	V765959	☐	O18-051	Core		☐	☐	☐
410.26	413.31	3.05	LST	3.01	99	V765961	☐	O18-053	Core		☐	☐	☐
413.31	416.36	3.05	LST	2.99	98	V765962	☐	O18-053	Core		☐	☐	☐
416.36	419.40	3.04	LST	3.04	100	V765963	☐	O18-053	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
419.40	422.45	3.05	LST	3.01	99	V765964	☐	O18-053	Core		☐	☐	☐
422.45	425.50	3.05	LST	3.05	100	V765965	☐	O18-053	Core		☐	☐	☐
425.50	428.55	3.05	LST	2.73	90	V765966	☐	O18-053	Core		☐	☐	☐
428.55	431.60	3.05	LST	3.00	98	V765967	☐	O18-053	Core		☐	☐	☐
431.60	434.64	3.04	LST	3.01	99	V765968	☐	O18-053	Core		☐	☐	☐
434.64	437.69	3.05	LST	2.99	98	V765969	☐	O18-053	Core		☐	☐	☐
437.69	440.74	3.05	LST	2.94	96	V765970	☐	O18-053	Core		☐	☐	☐
440.74	443.79	3.05	LST	2.99	98	V765972	☐	O18-053	Core		☐	☐	☐
443.79	446.84	3.05	LST	2.78	91	V765973	☐	O18-053	Core		☐	☐	☐
446.84	449.88	3.04	LST	2.93	96	V765974	☐	O18-053	Core		☐	☐	☐
449.88	452.93	3.05	LST	3.05	100	V765975	☐	O18-053	Core		☐	☐	☐
449.88	452.93	3.05	LST	3.05	100	V765976	☐	O18-053	Core		☐	☑	☐
452.93	455.98	3.05	LST	2.90	95	V765977	☐	O18-053	Core		☐	☐	☐
455.98	459.03	3.05	LST	3.05	100	V765978	☐	O18-053	Core		☐	☐	☐
459.03	462.08	3.05	LST	3.00	98	V765979	☐	O18-053	Core		☐	☐	☐
462.08	465.12	3.04	LST	2.94	97	V765981	☐	O18-053	Core		☐	☐	☐
465.12	468.17	3.05	LST	3.05	100	V765982	☐	O18-053	Core		☐	☐	☐
468.17	471.22	3.05	LST	2.92	96	V765983	☐	O18-053	Core		☐	☐	☐
471.22	473.32	2.10	LST	2.06	98	V765984	☐	O18-053	Core		☐	☐	☐
473.32	475.41	2.09	LST	1.77	85	V765985	☐	O18-053	Core		☐	☐	☐
475.41	477.32	1.91	LST, MST	1.26	66	V765986	☐	O18-053	Core		☐	☐	☐
477.32	480.36	3.04	MST	2.80	92	V765987	☐	O18-053	Core		☐	☐	☐
480.36	483.41	3.05	MST	2.39	78	V765988	☐	O18-053	Core		☐	☐	☐
480.36	483.41	3.05	MST	2.39	78	V765989	☐	O18-053	Core		☐	☐	☑
483.41	486.46	3.05	MST	2.58	85	V765990	☐	O18-053	Core		☐	☐	☐
486.46	489.51	3.05	MST	2.83	93	V765991	☐	O18-053	Core		☐	☐	☐
489.51	492.56	3.05	MST	2.69	88	V765992	☐	O18-053	Core		☐	☐	☐
492.56	495.61	3.05	MST	3.04	100	V765993	☐	O18-053	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
495.61	498.65	3.04	MST	3.04	100	V765994	☐	O18-053	Core		☐	☐	☐
498.65	501.70	3.05	MST	3.04	100	V765996	☐	O18-053	Core		☐	☐	☐
501.70	504.75	3.05	MST	2.92	96	V765997	☐	O18-053	Core		☐	☐	☐
504.75	507.80	3.05	MST	3.00	98	V765998	☐	O18-053	Core		☐	☐	☐
507.80	510.85	3.05	MST	3.00	98	V765999	☐	O18-053	Core		☐	☐	☐
510.85	513.89	3.04	MST	3.04	100	V766000	☐	O18-053	Core		☐	☐	☐
513.89	516.94	3.05	MST	3.04	100	W842001	☐	O18-057	Core		☐	☐	☐
516.94	519.99	3.05	MST	3.04	100	W842002	☐	O18-057	Core		☐	☐	☐
519.99	523.04	3.05	MST	2.71	89	W842003	☐	O18-057	Core		☐	☐	☐
523.04	526.09	3.05	MST	3.04	100	W842004	☐	O18-057	Core		☐	☐	☐
526.09	529.13	3.04	MST	3.04	100	W842005	☐	O18-057	Core		☐	☐	☐
529.13	532.18	3.05	MST	3.00	98	W842006	☐	O18-057	Core		☐	☐	☐
532.18	535.23	3.05	MST	2.61	86	W842007	☐	O18-057	Core		☐	☐	☐
535.23	538.28	3.05	MST	2.74	90	W842009	☐	O18-057	Core		☐	☐	☐
538.28	541.32	3.04	MST	2.88	95	W842010	☐	O18-057	Core		☐	☐	☐
541.32	544.37	3.05	MST	3.05	100	W842011	☐	O18-057	Core		☐	☐	☐
544.37	547.42	3.05	MST	2.99	98	W842012	☐	O18-057	Core		☐	☐	☐
547.42	550.47	3.05	MST	2.73	90	W842013	☐	O18-057	Core		☐	☐	☐
550.47	553.52	3.05	MST	2.81	92	W842014	☐	O18-057	Core		☐	☐	☐
553.52	556.57	3.05	MST	3.05	100	W842015	☐	O18-057	Core		☐	☐	☐
556.57	559.61	3.04	MST	3.00	99	W842016	☐	O18-057	Core		☐	☐	☐
559.61	561.75	2.14	MST	2.12	99	W842017	☐	O18-057	Core		☐	☐	☐
561.75	564.79	3.04	MST	2.68	88	W842018	☐	O18-057	Core		☐	☐	☐
561.75	564.79	3.04	MST	2.68	88	W842019	☐	O18-057	Core		☐	☑	☐
564.79	567.84	3.05	MST	2.93	96	W842020	☐	O18-057	Core		☐	☐	☐
567.84	570.89	3.05	MST	2.59	85	W842021	☐	O18-057	Core		☐	☐	☐
570.89	573.94	3.05	MST	2.37	78	W842022	☐	O18-057	Core		☐	☐	☐
573.94	576.99	3.05	MST	2.48	81	W842023	☐	O18-057	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
576.99	580.03	3.04	MST	1.89	62	W842024	☐	O18-057	Core		☐	☐	☐
580.03	583.08	3.05	MST	2.14	70	W842025	☐	O18-057	Core		☐	☐	☐
583.08	586.13	3.05	MST	1.60	52	W842026	☐	O18-057	Core		☐	☐	☐
586.13	589.18	3.05	MST	2.31	76	W842027	☐	O18-057	Core		☐	☐	☐
589.18	592.23	3.05	MST	2.61	86	W842028	☐	O18-057	Core		☐	☐	☐
592.23	595.27	3.04	MST	2.80	92	W842029	☐	O18-057	Core		☐	☐	☐
595.27	598.32	3.05	MST	2.70	89	W842030	☐	O18-057	Core		☐	☐	☐
598.32	601.37	3.05	MST	2.45	80	W842031	☐	O18-057	Core		☐	☐	☐
601.37	604.42	3.05	MST	2.25	74	W842032	☐	O18-057	Core		☐	☐	☐
604.42	607.47	3.05	MST	2.60	85	W842033	☐	O18-057	Core		☐	☐	☐
607.47	610.51	3.04	MST	2.34	77	W842035	☐	O18-057	Core		☐	☐	☐
610.51	613.56	3.05	MST	3.04	100	W842036	☐	O18-057	Core		☐	☐	☐
610.51	613.56	3.05	MST	3.04	100	W842037	☐	O18-057	Core		☐	☐	☑
613.56	616.61	3.05	MST	3.04	100	W842038	☐	O18-057	Core		☐	☐	☐
616.61	619.66	3.05	MST	3.04	100	W842040	☐	O18-057	Core		☐	☐	☐
619.66	622.71	3.05	MST	2.63	86	W842041	☐	O18-060	Core		☐	☐	☐
622.71	625.75	3.04	MST	1.94	64	W842042	☐	O18-060	Core		☐	☐	☐
625.75	628.80	3.05	MST	2.56	84	W842043	☐	O18-060	Core		☐	☐	☐
628.80	631.85	3.05	MST	2.97	97	W842044	☐	O18-060	Core		☐	☐	☐
631.85	634.90	3.05	MST	2.67	88	W842045	☐	O18-060	Core		☐	☐	☐
634.90	637.95	3.05	MST	2.35	77	W842047	☐	O18-060	Core		☐	☐	☐
637.95	640.99	3.04	MST	2.13	70	W842048	☐	O18-060	Core		☐	☐	☐
640.99	644.04	3.05	MST	2.60	85	W842049	☐	O18-060	Core		☐	☐	☐
640.99	644.04	3.05	MST	2.60	85	W842050	☐	O18-060	Core		☐	☑	☐
644.04	647.09	3.05	MST	2.30	75	W231501	☐	O18-060	Core		☐	☐	☐
647.09	650.14	3.05	MST	2.71	89	W231502	☐	O18-060	Core		☐	☐	☐
650.14	653.19	3.05	MST	2.70	89	W231503	☐	O18-060	Core		☐	☐	☐
653.19	656.23	3.04	MST	2.78	91	W231505	☐	O18-060	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
656.23	659.28	3.05	MST	2.13	70	W231506	☐	O18-060	Core		☐	☐	☐
659.28	662.33	3.05	MST	2.86	94	W231507	☐	O18-060	Core		☐	☐	☐
662.33	665.38	3.05	MST	2.05	67	W231508	☐	O18-060	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
0.00	0.47	0.47	NSP	--	No recovery in this section.							
0.47	141.00	140.53	LST	MG	Alternating dark grey to black very fine- fine grained mudstone interbedded with medium grained, medium grey limestone beds (turbidites). Local siltstone, calc arenite, thinly laminated mudstone and debris flow beds occur. Fossil fragments in this sections are really fragmented. Soft sediment deformation structures also observed.							
						DK	GY					
						DK	BK					
						MD	GY					
141.00	159.81	18.81	LST	FG	Moderately sheared, weakly brecciated, crumbly, greenish-grey-taupe, fine to medium grey limestone with local clasts of light grey, fine grained limestone and dark black, fine grained calcareous mudstone.							
159.81	161.54	1.73	FLT	FG	Strongly sheared, rubbly, moderately gougey, crush breccia fault. The fault is composed of volcanoclastics or limestone and dark black, fine grained siliceous mudstone. Upper and lower contacts are destroyed. Moderate calcite veins and infills. Carbonate staining reveals the presence of ferroan calcite and calcite. Pyrite occurs as specks and blebs.							
						LT	GY					
						LT	GN					
						DK	BK					
						LT	TP					

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
161.54	167.20	5.66	SMS	FG	Fault zone. Strongly sheared, brecciated, rubbly, weakly gougey, dark grey to black, fine grained siliceous mudstone with a small clast of limestone from 164.49 m -164.88 m that sits along core axis (~5 deg TCA). Bedding angles where visible range from 5-10 deg TCA. The limestone reacts strongly and the mudstone does not react at all to 10% HCl. Strong carbon. Remobilized carbon, graphite and/or slickenlines occur along fractures. Some fractures have graphite and/or slickenlines occur along fractures. Some fractures have graptolites along them. Moderate calcite veins and infills. Most of the beds have bedding perpendicular veins. Tension gashes infilled with calcite are also observed. Carbonate staining reveals the presence of ferroan calcite and calcite. Strong pyrite occurs as specks, blebs, veins, infills, and along bedding planes.							
						LT	GY					
						DK	GY					
						DK	BK	SH				
167.20	171.77	4.57	LST	FG	Weakly to moderately sheared, weakly rubbly and crumbly, greenish-grey-taupe, fine to medium grained volcanoclastic or limestone (aphanitic flow) with local really fine clasts of dark black, fine grained mudstone (or black volcanic glass). Flow beds are also observed. Local fault/shear zones. It reacts moderately to strongly to 10% HCl. Minor calcite veins and infills. Carbonate staining reveals the presence of ferroan calcite. Moderate greenish-yellow pyrite is boudinaged, folded, sheared and occurs as blebs, specks, flow beds and lenses. Slickenlines occur on some fractures.							
						LT	TP					
						LT	GY					
						LT	GN	SH				
171.77	187.82	16.05	LST	MG	Alternating fine to medium grained, light grey volcanoclastics and/or limestone with fine grained mudstone (some sections are calcareous). Soft sediment deformation is abundant. Local fault/shear zones are also observed.							

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
187.82	218.43	30.61	CMS	FG	Alternating fine to medium grained, light grey volcanoclastics and/or limestone with fine grained mudstone and dark grey limey siltstone. Soft sediment deformation is abundant. Local like grey sandy beds, debris flow beds and fault/shear zones are also observed. A bioturbated bed occurs at 187.82 m. Drop stones are observed in some sections. Soft sediment deformation structures include slumped beds, convoluted beds, irregular beds, synsedimentary faults, folded beds, detached pseudonodules, attached pseudonodules and simple load casts. The limestone, the limey siltstone and/or volcanoclastics react moderately to strongly and the mudstone does not react at all to 10% HCl. The debris flow beds are composed of fossil hash and fossil fragments (crinoids). Some mudstone and limey siltstone beds may be bioturbated (?) and may have radiolarians (?). Minor stylolites occur. Moderate to locally strong carbon. Remobilized carbon and/or slickenlines occur on some fractures. Minor to locally moderate veins and infills. Bedding restricted veins and tension gashes infilled with calcite are also observed. Carbonate staining reveals the presence of ferroan calcite. Pyrite occurs as blebs, specks and along some bedding planes. From 207. 50 m - 207.57 m there is a clast that has pyrite beds curving around it and radial fractures normal to bedding (?) infilled with calcite. pXRF indicates Mn values up to 471 ppm, Ti values up to 17462 ppm, K values up to 29059 ppm, Si values up to 279086 ppm and Al values up to 78379 ppm.							
						DK	BK	SD				
						LT	GY	SH				
						DK	GY	BD				

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
218.43	224.17	5.74	LST	FG	Weakly sheared, weakly crumbly, greenish-grey-taupe volcanoclastics (aphanitic flow) with clasts of light to medium grey, fine grained limestone. Flow beds are also observed. Minor to locally moderate calcite veins and infills. Carbonate staining reveals the presence of ferroan calcite. Moderate greenish-yellow pyrite and brighter yellowish pyrite appears to be boudinages, sheared and occur as blebs, specks and lenses. Slickenlines occur on some fractures. pXRF indicates Ti values up to 11440 ppm, Al value sup to 31948 ppm, Si values up to 112482 ppm, K values up to 23523 ppm, V values up to 207 ppm, Cr values up to 199 ppm and Mn values up to 407 ppm.							
						LT	TP					
						LT	GN					
						LT	GY					
224.17	227.50	3.33	MST	FG	Dark grey to black, very fine to fine grained mudstone interbedded with light to medium grey, fine to medium grained limestone. The mudstone has calcareous and non-calcareous sections. Some of the mudstone is a siliceous mudstone and the calcareous mudstone is weakly to moderately silicified. Graptolites are observed on some bedding fractures and chert granules are also observed along some fractures. The limestone reacts strongly, the calcareous mudstone reacts moderately and the siliceous mudstone does not react at all to 10% HCl. The limestone has some fossil hash beds. Moderate to locally strong carbon. Remobilized carbon, graphite and/or slickenlines occur on some fractures. Moderate calcite veins and infills. Bedding restricted veins and several generations of chaotic veins are also observed. Carbonate staining reveals the presence of calcite. Pyrite occurs as specks, blebs and occurs along a few bedding planes. pXRF indicates Mn values up to 288 ppm, K values up to 10367 ppm and Si values up to 249334 ppm.							
						LT	GY					
						DK	GY					
						DK	BK					

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
227.50	261.00	33.50	LST	MG	Altnerating dark grey to black, very fine to fine grained calcareous mudstone interbedded with light grey, medium grained limestone. Local light grey calc arenite, fossil hash beds are also observed.							
261.00	264.14	3.14	FLR	FG	Fault zone. Strongly sheared, crackled, rotated breccia composed of very fine to fine, dark grey to black mudstone and fine grained, light to medium grey limestone. Moderately silicified. The limestone reacts strongly and the mudstone and does not react at all to 10% HCl. Remobilized carbon occufrs on all fractures. Moderate calcite veins and infills. Several generations of chaotic veins and infills. Carbonate staining reveals the presence of calcite.							
264.14	264.32	0.18	FLT	FG	Strongly sheared, fine crush breccia fault. It is strongly carbonaceous and gougey. Upper and lower contacts destroyed.							
264.32	266.30	1.98	LST	MG	Strongly sheared and brecciated, heterogeneous sequence of medium to dark grey, fine to medium grained limestone with dark grey to black, fine grained non-calcareous mudstone and possible volcanoclastics. The limestone reacts strongly and the mudstone does not react at all. The limestone may be weakly decalcified. This section may be a part of the fault zone. Moderate to locally strong carbon in the mudstone and along most fractures. Remobilized carbon, graphite and/or slickenlines occur on most fractures. Moderate calcite veins and infills. Carbonate staining reveals the presence of calcite and ferroan calcite. Pyrite occurs as blebs and specks. Pxrf indicates Ti values up to 8333 ppm, Al values up to 50417 ppmm K values up to 19218 ppm and Si values up to 192426 ppm.							
						DK	GY					
						DK	BK					
						MD	GY	SH	DCA	W		

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
266.30	278.35	12.05	LST	MG	Strongly sheared, weakly brecciated and strongly bioturbated heterogeneous section of light to medium grey, fine grained limestone, possible volcanoclastics and light to tan calc arenite. Lots of local shear/fault zones are also observed. Weak to mdoerate reaction to 10% HCl. Weakly to moderately decalcified sections. Remobilized carbon, graphite and/or slickenlines observed. Minor calcite veins and infills. Carbonate staining reveals the presence of ferroan calcite. Minor to moderate pyrite. There are three tpes of pyrite, greenish yellow pyrite (as observed in the volcanoclastics above), dark green/army green sooty sulfides and yellowish pyrite. Pyrite occurs as blebs, specks and lenses. pXRF indicates Al values up to 98041 ppm, Si value sup to 228262 ppm, K values up to 33773 ppm, Au values up to 146 ppm and Ti value sup to 15081 ppm.							
						MD	GY	BX				
						LT	TN					
						LT	GY	SH	DCA	W		

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
278.35	292.61	14.26	CMS	MG	mudstone dominant heterogeneous unit composed of black, fine grained, thinly bedded, non-calcareous mudstone, light grey, medium grained, limestone, light grey, coarse grained fossiliferous limestone and tan/beige, coarse grained cald-arenite. Fracture induced bedding offset is locally observed throughout interval. Bioturbated beds are locally observed (i.e.280.65m) and are less abundant than in previous unit. Larger fossil fragments of bivalves and possible corals (?) (2-4 mm), are locally observed @ 279.28m. Sub-mm, fragments of one-hole crinoids are also present in fossiliferous limestone beds (i.e. 279.25m). Convolute bedding, elongated and possible foleded (i.e. 282.63m) limestone clasts are locally observed @ 283m (soft sed (?)). Lower portion of unit (from 290.15m) interval is moderately sheared (~40 degrees TCA shear fabric) expressed as soft, clary rich, bed disrupted shearing and shear brecciation. 1mm-2cm (286.65m), calcite veins perpendicular and parallel to bedding are commonly observed throught intercal. Veins perpendicular to bedding appear to crosscut parallel bedding ones. Very fine grained pyrite, and 1-3 mm blebby pyrite is locally observed in unit. Bedding parallel stylolites are commonly observed. Weakly magnetic sections occur proximal to pyrite bearing areas(i.e. 279.8-280m; pyrrhotite (?)). Joint surfaces contain soft, clayey, remobilized carbon seams.							
						LT	GY	TB			3P	2
						--	BK	BD			1P	2
						--	TN	SH				

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
292.61	304.70	12.09	LST	CG	limestone and calc-arenite dominant section of heteregoenous unit composed of thinly laminated light grey, medium grained, limestone interbedded with light grey/tan, coarse grained, calc-arenite beds and black, fine grained, variably weakly to non-calcareous mudstone. Scoured calc-arenite ,beds are locally obseved in unit (i.e. 294.66m). Bioturbated beds are no longer discernable in interval. Crossbedding is locally observed in calc-arenite beds (i.e. 298.73m). Soft sed, folding and concolute beds occur @ 293.61m also exhibiting vein brecciation locally. Graded bedding is locally observed @ 295.05m (turbidites(?)) with sub-mm fossil fragments of brachiopods and vivales being contained in coarser beds within turbidite sequence. Beds are locally offset by fractures and stlolites. Very fine grained, brassy green, disseminated/blebby pyrite is present in mudstone section @ 296.22m. Local weakly sheared, weakly decalcified limestone beds displayed as soft, rapid drying, weakly reactive to HCL are locally observed @ 296, 294.75, 300m. 1-5 mm, bedding parallel and prependicular calcite veins are commonly observed throughout unit and occasionally occur as vuggy calcite veins (i.e. 301.65m). Minor, bed-restricted calcite veinlets within mudstone beds are present in unit.							
						--	TN	SH				
						--	BK					
						LT	GY	TB			3P	2
						MD	GY	BD			1P	2

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
304.70	311.88	7.18	LST	MG	moderately sheared section of black, fine grained, thinly bedded mudstone interbedded with medium grey, medium grained limestone. Interval is moderately decalcified; soft, absorbs HCL rapidly and is weakly to non reactive to HCL. Shear brecciation of mudstone host and pyrite grains is observed @ 308m. Rubbly sections @ 305.65-307.95m are present in interval. 1-3 cm blebby and 3-4 mm, undulating/deformed pyrite bands are locally observed in section (i.e. 307.47m). Minor oxidation of blebby pyrite is observed in interval. Elongated limestone clasts (echelon -like) occur @ 307.50. From 311-312m, light grey, limestone appears to brecciate mudstone host with fine grained, banded pyrite rimming the outer edges of brecciated clasts (i.e. 311.62m). Soft, remobilized carbon is commonly observed along joint surfaces. As values as per pXR (500-1500ppm); higher values from approximately 311m. 1-3 cm angular clasts of calcite are observed @ ~ 312m.							
						--	BK	BD	SER	W	1P	2
						MD	GY	SH			3P	2
								BX				
311.88	317.10	5.22	LST	FG	possible fault rock section comprised of medium grey, fine grained, calcareous mudstone interbedded with light grey, coarse grained calcarenite. mm - 7 cm, sub-angular to subrounded clasts of mudstone, limestone and calc-arenite are commonly observed throughout interval (fault breccia (?) or entrained clasts (?)). @ 316.47, possible entrained section of previous interval; black non calcareous mudstone with banded pyrite is observed. Very fine grained pyrite, cm-sized blebby pyrite and banded pyrite (only on entrained clast section(?) is locally observed throughout unit. Overall unit is soft, clay rich and moderately competent. As values as per pXRF reach up to 1500ppm. 2-6mm calcite veins are locally observed in interval; predominantly in non-brecciated sections. Pyrite halos (late stage pyrite after calcite veins (?)) are also observed around calcite veinlets (i.e. 312.82m) (high As values in pyrite halos).							
						--	BK	SH	CLY	M	1P	2
						LT	GY	BX	DCA	M		

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
317.10	320.04	2.94	FLT	MG	faulted contact between O40 and S20 (?) assemblage. Unit displays soft, clay rich, highly fractured, shear brecciation, medium grey, calcareous mudstone with light grey, coarse grained fossiliferous limestone (i.e. 318.40m).							
						--	BK	SH				
320.04	340.70	20.66	LST	MG	Alternating sequence of black, fine grained, thinly laminated calcareous/limey mudstone interbedded with medium grey, limey siltstone and light grey, medium-coarse grained limestone (turbidites (?)). Sub-mm fossil fragments locally occur within mudstone beds. Bed-restricted calcite veins are locally observed @ 321m. Very fine grained, pyrite blebs elongated along bedding occur within mudstone laminations. Black, thinly laminated calcareous/limey mudstone beds are more abundant in this interval. 1-4 mm bedding parallel and perpendicular calcite veins are locally observed throughout interval (veins less prominent in upper interval section 321-326m). Calcite vein brecciation is observed @ 326.50, 333.60m. Greenish calcite occurs as cm-sized euhedral crystals (i.e. 332,339.60m). Mm-sized, euhdral crystals of white calcite are commonly observed along frature surfaces. Discordant calcite veins appear to crosscut bedding and stylolites locally, often exhibiting slight bedding offset. Locally moderate shear zones expressed as soft, rubbly zones, shear brecciation are observed @ 326-326.44m, 329m,331.75-332.23m. Graphitic surfaces are commonly observed along joints. Soft, clay rich, gougey seams yield As values >1000 ppm as per pXRF.							
						LT	GY	BX				
						MD	GY	RB				
						--	BK	BD			1P	2

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
340.70	359.66	18.96	LST	MG	Turbidite sequence comprised of alternating laminations of black, fine grained, calcareous/limey mudstone, medium grey, medium grained, limey siltstone, light grey, coarse grained limestone and bioclastic debris flows beds (5cm-1m) (rudstone (?)). Fossil fragments include; one-hole crinoids,star-crinoids, brachiopods, coral fragments (favocytis, amphypora, rugose) and possible 2-hole crinoids (?). Bedding appears slightly undulating (i.e. 341m). 1-3 cm, sub-angular limestone and mudstone clasts are locally observed in bioclastic debris flow beds (rudstone) (i.e. 351-352) and appear to be folded. Fossil fragments appear to be prefferentially aligned (flow)?)). 1mm-8 cm parallel and perpendicular to bedding calcite veins are commonly observed throughout unit. Calcite veins display greenish hue (impurity in calcite (?); still remaining strongly reactive to HCL). Minor bed restricted veins occur within limey mudstone beds. Stylolites both parallel and perpendicular to bedding are locally observed, often containing remobilized carbon along stylolitic seams. Bedding discordant stylolites appear to offset bedding locally (i.e. 347.82m). Very fine grained, disseminated pyrite is present within mudstone laminations locally. Local moderately sheared (shear fabric ~ 40 degrees TCA) zones expressed as shear brecciation, soft, rich zones are present @ 341.80, 350.60m. Remobilized carbon, soft seams are locally observed along joints and fracture surfaces. Interval exhibits increased calcite veinining and chaotic calcite veining (i.e. 349.80m) compared to last unit. As pXRF values on soft, clay rich gougey seams reach up to 2000 ppm (i.e. 341.75m).							
						LT	GY					
						MD	GY	DB				
						--	BK	TB			1P	2

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
359.66	372.05	12.39	LST	MG	Turbidite sequence comprised of alternating laminations of black, fine grained, calcareous/limey mudstone, medium grey, limey siltstone, light grey, coarse grained, limestone, blueish/grey, fine grained,moderately silicified fossiliferous mudstone beds and bioclastic debris flow beds. Undulating and scoured beds are locally observed in interval (i.e 360.60m). Interval exhibits increased chaotic calcite veinning locally (i.e. 371m).Local moderately sheared zones are locally observed often expressed as bed-disrupted shearing, shear brecciation (363.10m) and soft, clay rich, gougey seams (363.40m). Bedding offset is more prominent than previous intervals.Very fine grained disseminated and 1-3 mm banded pyrite (i.e. 370.45m) is locally observed within mudstone beds and appear to be elongated along bedding. Remobilized carbon surfaces are often observed along joints. 3-5 cm calcite veins composed of euhdral calcite crystals (recrystallize (?) are present @ 364m, 366.70m.Minor bed-restriced calcite veins occur throughout interval within mudstone beds.							
						LT	GY					
						MD	GY	SH			3P	2
						--	BK	BD	SIL	M	1P	2

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
372.05	385.57	13.52	LST	MG	Moderately sheared unit comprised of alternating thinly laminated, calcareous/limey mudstone, light grey, medium grained limestone, medium grey, medium grained, limey siltstone and intermittent blueish/grey moderately silicified mudstone (turbidite). Bedding is locally offset by veins and fractures. Upper portion of unit (from 374-379m) is composed of sub-mm laminations of mudstone and limestone with typical turbidite bedding being more prominent in the lower portion of the unit. Bedding in upper portion of interval appears shallower (~ 20 degrees TCA), slightly undulating displaying bed scouring as well. Shear in unit is expressed as 10-30 cm, soft, clay rich, carbonaceous seams (i.e. 372-385m). As values for clay rich sections range 200-500 ppm as per pXRF (not continuous; some clay seams do not containg significant As.Graphitic surfaces are commonly present along joints. Very fine grained disseminated pyrite is locally observed within mudstone beds. 1-2 cm calcite veins occur throughout interval and beome chaotic and brecciated from 379.65-381.50m.							
						LT	GY					
						MD	GY	BD				
						--	BK	SH	SIL	M	1P	2
						DK	BL					

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
385.57	402.40	16.83	LST	MG	Unit is predominantly composed of bioclastic debris flows, polymictic breccias, black, fine grained, thinly laminated calcareous mudstone and medium grey, medium grained, limey siltstone. Turbidite assemblage is no longer discernable with interval being dominated by soft, clay rich mudstone and massive debris flows (30-80cm). Fossil fragments in bioclastic debris flows include; one-hole crinoids, star-crinoids, brachiopods and coral fragments. Fossil fragments appear to be preferentially oriented along bedding (?) or flow (?). Fossil fragments range in size from sub-mm to 2 cm. Polymictic breccia sections contain sub-mm to 5 cm , sub-angular clasts of limestone and mudstone within a matrix of beige, medium grained, calc-arenite(?). Larger clasts within breccias are folded and appear to be locally offset by fractures (I.e. 387.17m, 385.85m). Minor, 1-4 mm fossil fragments of brachiopods and crinoids are observed in breccia matrix and within folded clasts. Convolute bedding is locally observed @ 388-388.40m. Randomly sorted, fossil fragments and brecciation within dark, mudstone matrix occurs @ 386m. Thinly laminated mudstone sections are soft, clay rich and remain moderately reactive to HCL. Slightly undulating bedding is locally observed @ 392.30m. Mudstone clasts locally brecciating debris flow is observed @ 391.70m. mm- 2 cm calcite veins parallel and perpendicular to bedding are commonly present throughout unit. Veining becomes less prominent in soft, clay rich mudstone sections. Fine grained, blebby and disseminated pyrite occurs predominantly in mudstone sections; also present in clay-rich, soft mudstone beds.							
						LT	GY	DB				
						MD	GY	BD				
						--	BK					

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
402.40	410.98	8.58	LST	MG	Unit dominated by soft, clay rich, brecciated, calcareous mudstone and weakly-moderately silicified, monomictic breccias composed of 1-5 cm, sub-angular lime mudstone within a medium grey, medium grained limestone matrix (i.e. 408.20-410.60m). Mudstone section @ 402.50-405m contains trace fossil fragments (crinoids, possible coral fragments) and 1-3 mm pyrite blebs. Overall, unit weakly to moderately shear and is devoid of calcite veins with trace calcite veinlets occasionally observed as inclusions within the mudstone unit. Local, weakly oxidized mudstone sections are observed throughout unit (i.e. 406.45m; brownish than typical black mudstone).			SH				
						MD	GY	BX				
						--	BK	BD	SIL	M	3P	2
410.98	436.24	25.26	LST	MG	Unit is composed of massive bioclastic debris flows with intermittent thinly laminated lime mudstone beds and is moderately oxidized locally, expressed as brownish soft, alteration within massive debris flows. Soft, gougey seams are locally observed @ 419.85, 421,422m and are moderately reactive to HCL. Clay rich, oxidized zone is observed @ 411.40-412.20m. Oxidized debris flow sections appear slightly less reactive to HCL than un-oxidized ones (due to oxidation or minor decalcification as well (?)). Fossil fragments in bioclastic debris flows include; one-hole crinoids, brachiopods, bivalves(?),coral fragments (rugose, amphypora, favocytis) and possible trilobites (i.e. 413.65m). Joint and fracture surfaces exhibit brown/yellow oxidation. Debris flow section @ 4170.60-420m contains larger coral fragments (rugose, amphypora) within a dark, fine grained, lime mudstone matrix. Minor calcite veining is locally observed throughout interval, becoming more prominent from 420.70m onwards. 1-3 mm blebby pyrite occurs within mudstone beds (i.e. 422m). Stylolitic seams containing remobilized carbon are locally observed throughout unit (i.e. 422.30m).Oxidation becomes less prevalent after 417.58m, displayed locally along fractures and joint surfaces only as brown/orange, clayey oxidation. Greenish oxidation is locally observed along joint surfaces as well (AsO(?)) (i.e. 435m).							

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
						--	BK					
						LT	GY	DB	OXI	M	3P	2
						MD	BN					
						MD	GY					
436.24	445.95	9.71	LST	CG	Massive bioclastic debris flow beds containing fragments of one-hole crinoids, star-crinoids(?) brachiopods, bivalves (?) and coral fragments (rugose, favocytis). Black, soft, fine grained, calcareous mudstone possible sheared beds are present @ 440.40-440.70m.Debris flow @441m contains more brachiopod and bivalves fragments that appear to be preferentially oriented along flow direction (?). This section appears more carbonaceous displaying a darker, black, fine grained mudstone matrix. Mm-1 cm, sub angular clasts of soft, black, mudstone clasts are locally observed within this interval. Overall interval is unaltered compared to previous oxidized interval.1-2 cm calcite veins are commonly observed throughout interval. Remobilized carbon stylolitic seams are locally observed throughout unit. Polished graphitic surface within soft, mudstone section is present along joints. Joints in debris flows contain remobilized carbon seams and euhedral calcite grains (if joint breakage along calcite vein).							
						LT	GY					
						MD	GY	DB				
						--	BK					

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
445.95	454.50	8.55	LST	CG	weakly to moderately oxidized interval comprised of dark grey, thinly laminated, lime mudstone, light grey limestone and massive bioclastic debris flows. Oxidation is more pervasive within debris flows (i.e. 448.25). Oxidation is present as mustard yellow, orange oxidation occurring interstitially within debri flows, clay rich oxidized seams and along joints and fracture surfaces. Oxidized stylolitic seams are locally observed in unit (i.e. 449.85m). Oxidized zones remain strongly reactive to HCL excep clay rich seams @ 448.70m which is weakly reactive. 2-5 mm calcite veins are commonly observed throughout unit and appear to crosscut each other locally. Fossil fragments within debris flows include one-hole crinoids, brachiopods, bivalves(?) and coral fragments (rugose, amphypora, favocytis). Cm-10 cm, angular limestone clasts are occassionally observed within debris flow beds (i.e. 452.40m). Limestone clast brecciation is locally observed @ 449.80m. 2 cm-sized calcite inclusions are also present within debris flow interval (i.e. 446.60m).							
						--	YW					
						--	OR					
						LT	GY					
						--	BR	DB	OXI	M		
454.50	460.95	6.45	LST	CG	Massive bioclastic debris flow with intermittent brown, moderately decalcified, calcareous mudstone clasts (i.e. 456.80m). Debris flows contain sub-mm to 10 cm fragments of one-hole crinoids, coral fragments (rugose, favocytis), brachiopods. Slickenlines are commonly observed along joint surfaces. Bioclastic fragments in debris flows appear poorly sorted within a dark grey, fine grained, limestone matrix. 1-4 mm calcite veins are commonly observed throughout interval							
						LT	GY	DB				

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
460.95	475.49	14.54	LST	CG	Locally low-moderately oxidized interval comprised of light-medium grey, coarse grained, bioclastic debris flows and intermittent, black, fine grained, thinly laminated lime mudstone and medium grey, medium grained limestone. Fossil fragments within debri flows include; one-hole crinoids, coral fragments, brachiopods and bivalves. Mm-sized, sub-angular mudstone and limestone clasts also occur within debris flow. Debris flow in interval appear to be recrystallized compared to previous interval (overall coarser grained matrix and fossil fragments become less discernable). Fossil fragments in debris flow @ 469.05m appear more discernable, less recrystallized (?). Oxidation occurs interstitially within debri flows as brownish/yellow oxide, orange/brown/reddish surfaces along joints and fracrues and orange/ red clayey, local rubbly zones. Slickenlines and polished graphitic surfaces are locally observed along joint surfaces as well. 2-4 mm calcite veins are locally observed within debris flows and mudstone beds. Stylolitic seams containing remobilized carbon are present in debris flows and are locally oxidized (i.e. 466.10). Bioclastic debris flow clasts contained within mudstone are observed @ 471.20m. Rubbly zones occur @ 463.40m,467,471,472 and 475m.							
						MD	GY	BD				
						--	YW					
						--	OR					
						--	RD					
						--	BK	RB				
						LT	GY	DB				
						--	BN					

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
475.49	484.63	9.14	LST	CG	Unit consists of massive, matrix supported bioclastic debris flows containing one-hole crinoids, coral fragments, bivalves, brachiopods and star crinoids. Unit is more competent than previous interval exhibitting locally oxidized sections within debris flows expressed as yellow interstitial matrix oxidation. Fracture surfaces and joints are moderately oxidized containing orange/yellow oxide coating. Minor, 2-3 mm calcite veins are locally observed in unit. Overall unit lacks lime mudstone beds as in previous intevals							
						LT	GY	DB	OXI	W		
						--	YW					
						--	OR					
484.63	505.97	21.34	LST	CG	Rubbly, broken, moderately oxidized bioclastic debris flows containing one-hole crinoids, coral fragments, brachiopods. Mm-sized, angular, black, calcareous mudstone clasts occur within debris flows. Oxidation occurs as interstial brownish/yellow matrix oxidation with debris flows. Oxidized (orange/yellow) clay rich seams are locally observed throughout interval (i.e. 486,491.10,494.50m).Oxidized clay seams remain strongly reactive to HCL. Oxidation in the lower part of the interval occurs as brown oxidation compared to yellow/orange oxide coating in the upper interval portion. Oxidized seams in fractures and joints are commonly observed throughout unit. Minor, 3 mm-1 cm calcite veins are present within debris flows (veins are larges than in previous interval). Oxidized stylolitic seams are commonly observed in oxidized interval.Rubbly intervals occur @ 500.50m-505.90m. No significant As values obained from pXRF (mostly FeO).							
						LT	GY	DB	OXI	M		
						--	OR	RB				
						--	BN					
						--	YW					
						--	BL					

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
505.97	519.23	13.26	CMS	MG	Black, fine grained, thinly-laminated, limey mudstone interbedded with light grey, medium-coarse grained limestone. Unit is moderately competent with local rubbly zones from 507-515m. Overall interval is moderately oxidized exhibiting brown/reddish oxidation along joints fractures and limey mudstone beds (i.e. 516m) (oxidized mudstone beds remain strongly reactive to HCL). Greenish coating on joint surfaces is locally observed as well (AsO(?); As values as per pXRF ~2000ppm). Moderately chaotic calcite veins are commonly observed throughout interval both parallel and perpendicular to bedding. Lower portion of the interval is less oxidized, more competent and appears weakly to moderately sheared, exhibiting bed disrupted shearing @ 518.80m. Lower portion of the interval (i.e. 517.70-519m contains blue/black, moderately silicified, calcareous mudstone beds. Moderately silicified beds exhibit bed-restricted veining. Polished graphitic surfaces are present in lower portion of the interval. Sub-angular, 2-3 cm black, mudstone clasts appear to brecciate limestone beds locally @ 514.70m (proximal to rubbly section (possibly approaching faulted section (?)).							
						DK	GN					
						LT	GY	SH				
						DK	BL					
						--	BN					
						DK	RD					
						--	BK	BD	SIL	W	He	2

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
519.23	530.35	11.12	LST	MG	Possible faulted contact between S20 and D10 assemblage (?) Light grey, weakly crackled, limestone and matrix supported bioclastic debris flows containing large 10-15 cm, angular, crackled limestone clasts (bioclastic wackestone (?)). Fossil species in debris flows include: two-hole crinoids (common and more abundant than one-hole crinoids), one-hole crinoids, brachiopods and possible coral fragments. Large, crackled limestone clasts contain smaller, sub-rounded, mm-sized mudstone fragments. Limestone clasts boundaries are rimmed by sub-mm calcite containing black, fine grained remobilized (Ca?). Rock unit is strongly reactive to HCL. Green/reddish oxide coating surfaces are locally observed along joints and fractures. Small fault expressed as black, fine grained, rubbly, calcareous mudstone containing entrained clasts (i.e. 525.50m) is observed @ 524.26-526.12m. Carbon bearing stylolites and oxidize stylolitic seams are commonly observed throughout unit, being more prominent proximal to fault @ 524.26m.							
						LT	GY	DB				
530.35	549.66	19.31	MST	FG	Rubbly, highly fractured, moderately-highly sheared, black, fine grained, weakly laminated, non-calcareous (only calcareous ~ 20cm from D40 contact (i.e. 530.35m and 539-539.50 gouge, remaining of mudstone unit remains uniformly, non-calcareous) mudstone containing very fine grained disseminated pyrite, banded and 1-3 cm blebby pyrite. Polished graphitic surfaces and slickenlines are comonly observed along joints. Shear fabric ~ 30 degrees TCA (i.e. 546m). ~ 900 ppm As obtained at gougy seam @ 539.50m only (rest of unit shows little to no As signature as per PXRF).Unit is similar to MD 20 package (or possibly Anubis fault and faulted contact between D40 and S20 unit (?); with non-calcareous mudstone representing faulted, entrained part of MD20 (?)). Trace 1-2 mm, calcite and quartz/dolomite veins are present in interval, characteristic of MD20.							
						--	BK	SH				
								RB				

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
549.66	553.40	3.74	CMS	MG	Dark grey, fine grained, thinly-laminated, lime mudstone interbedded with medium grey, medium grained, limestone. Interval exhibits chaotic calcite veinning throughout with realgar present within calcite veins. Realgar appears to be partially replacing existing calcite veins (i.e. 550.24,550.30m). Vein brecciation is locally observed a well throughout interval (i.e. 550.55m). 2-3 mm carbon bearing, stylolitic seams are commonly observed in unit. Joint surfaces appear light green and resulted in hight ~1000ppm As values as per PXRF (AsO(?)). Realgar is less abundant past 551m. Black, soft gougy section @ 553 resulted in high As values as per pXRf (~1000ppm).							
						DK	GY	BD			RI	5
						LT	GY					
553.40	570.88	17.48	LST	CG	Light grey, medium/coarse grained, clast supported (recrystallized(?), packstone(?)), weakly-mderately silicified, bioclastic debris flow with intermittent medium grey, fine grained, lime mudstone and matrix supported bioclastic debri flow beds within calcareous mudstone.Bioclastic debris flow contain 4-6 cm, light grey, weakly crackled limestone clasts. Mudstone-supported debris flow beds are moderately silicified compared to limestone debris flow beds (i.e. 570.45m). Overall, fossil fragments are less discernable and appear more compacted, possibly recrystallized than interval @ 519.23m. Fossil species identified include, one-hole crinoids, brachiopods,bivalves and coral fragments (no 2-hole crinoids as in 519.23 m interval yet limestone clasts appear crackled , typical of D40(?)). Interval is strongly reactive to HCL (mostly limestone). Undulating lime mudstone beds are locally observed throughout interval (i.e. 561.20m). Carbon-bearing stylolitic seams (2-4mm) are commonly occuring in interval and appear to surround crackled limestone clasts within debris flows (i.e. 564.30m). Interval exhibits moderate chaotic veinning (mm-2 cm) and becomes less prominent in the lower part of the interval (564-570.88m). Polished graphitic surfaces occur along joint places with mudstone beds (i.e. 569.60m). Bed restricted veining is locally observed in some mudstone beds (i.e. 568.95m).							

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
						LT	GY	DB	SIL	M		
						MD	GY	CR				
570.88	578.00	7.12	CMS	FG	Dark grey, fine grained, thinly bedded lime mudstone interbedded with light grey, medium grained, limestone, black, fine grained, non-calcareous mudstone and sub-mm, fossiliferous mudstone beds (death beds) containing predominantly brachiopods, bivalves and trace one-hole crinoids. Brachiopod and bivalve fragments appear to be prefferentially aligned along bedding planes (death beds (?)). 1-3 cm, limestone rip up clasts are locally observed in the bottom part of the interval (i.e. 575.50m). Slightly undulating beds, vein induced, local bed offset and soft sed folding is locally observed throughout interval (i.e. soft sed fold @ 571-572; oblate beding dipping opposite (transect through soft sed fold (?)). Non-calcareous mudstone beds are moderately silicified and exhibit bed-restricted calcite veinning (i.e. 573.80m). Lower portion of the interval is fractured, and moderately sheared; with shear expressed as bed disrupted shearing (i.e. 577.80m). Polished graphitic surfaces are commonly occuring along joints with slickenlines being less common but are observed along some joint surfaces. 2mm-1 cm calcite veins pespendicular to bedding are observed throughout interval.							
						DK	GY	BD	SIL	M		
						--	BK	DB				
						MD	GY	SH				
								SD				

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
578.00	582.17	4.17	LST	MG	Clastic debris flow comprised of medium grey, coarse grained, weakly crackled limestone clasts, medium grey, medium grained lime mudstone and black,fine grained, moderately silicified, calcareous mudstone clasts . Clastic debris flows contain sub-mm fargments of one-hole crinoids and possibly brachiopod shells. Clasts in interval appear deformed (sutured clasts boundaries (i.e. 581m) (?), elongated and undulating clasts) (soft sed deformation (?)). Interval exhibits moderate chaotic veinning with some clast-restricted veinlets occuring locally as well. Calcite vein brecciation is locally observed throughout interval. Proximal to fault @ 581.50-582 interval is weakly sheared exhibiting more deformed and softer clasts. 1-3 mm carbon bearing, stylolitic seams are commonly occuring in clastic debris flow.							
582.17	591.31	9.14	FLT	FG	Faulted contact between D40 and MD20 unit. Faulted section comprised of black, highly fractured, gougy, non calcareous mudstone containing 2-4 mm lenticular and banded pyrite. Trace quartz/dolomite veins are locally observed in interval. Polished graphitic surfaces and slickenlines are commonly observed along joint surfaces.							
						--	BK	FR			3P	5
								RB			3P	5

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
591.31	644.85	53.54	MST	FG	Moderate to highly sheared interval comprised of black, fine grained, weakly laminated, non-calcareous mudstone containing mm-1 cm lenticular pyrite and mm-sized banded pyrite interbedded with light grey, medium grained siltstone. Shearing is exhivited as soft, gougy seams (i.e. 592m) and bed disrupted shearing (i.e. 595.60-597.41m). Bed-restricted quartz/dolomite veining in mudstone beds is locally observed in interval. Mm-2 cm quartz/ferrous dolomite veins are locally observed throughout interval sometimes microbrecciating mudstone host (i.e. 595.35m). Sub-mm quartz veins restricted to lenticular pyrite grains are observed throughout interval. Polished graphitic surfaces are commonly observed in interval.Rubbly sections are observed @ 610.10,615-617. Bed disrupted shearing (bedding still discernable ~ 40 degrees TCA) is observed proximal to gradational contact between MD20 and D40 units (i.e. 638-641m).							
								SH			3P	2
						--	BK	BD			1P	5

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
644.85	738.83	93.98	LST	CG	Gradational contact between MD20 and D40 units. Past 644.85m unit is comprised of massive to locally bedded (I.e. 646-648m), weakly to moderately crackled light grey limestone and occassional black, fine grained, limestone beds (i.e. 727.10m); ~10% Ca as per pXRF, black limestone contains sub-mm light grey limestone clasts). Weakly sheared beds are observed locally in interval (i.e. 708.60,735.80m; ~ 30 degrees TCA shear fabric(?)). Local weakly silicified sections are observed in interval (i.e. 650m; harder to scratch than surrounding rock). Some sections contain 3-8 cm light grey crackled limestone, tan limestone clasts (dolomite (?) and dark grey dolomite clasts within a dark grey, slightly less reactive, limestone matrix. Bedding in locally bedded section is undulating (weakly sheared (?)). Dark grey clasts are weakly reactive to HCL and XRF values of Mg ~ 5% (dolomite (?). Limestone clasts contain very fine grained, black linear inclusions of remobilized (Ca(?) or C(?) locally exhibiting sutured grained boundaries between limestone clasts. Limestone in upper portion of the interval (644.85-655m) appears less crackled and more homogeneous than the rest (not as many crackled , fractured limestone clasts and appears more compacted (?)). Calcium values for interval range from 20-38 % and 5-8% Mg as per pXRF (sections with 20% Ca have 5-7% Mg; partially dolomitized zones (?) yet entire unit remains reactive to HCL and stains red). Mm-2 cm calcite veins are locally observed throughout interval sometimes brecciating the limestone host (i.e. 649.91m,689.60m). 1-2 mm stylolites containing remobilized carbon are commonly occurring throughout unit. Polished graphitic surfaces are occasionally observed in interval (i.e. 649m). Trace, sub-mm realgar within calcite vein is observed @ 723.75m (only High As 2000ppm; realgar only observed in this small vein throughout entire interval).							
						--	TN					
						LT	GY	CR			RI	0.5
						MD	GY	BD				

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
0.00	0.47	0.47	0	0	0.00	0	0R	--	--	no recovery
0.47	1.83	1.36	1.31	96	0.40	29	4R	2H	2W	
1.83	3.35	1.52	1.35	89	0.39	26	4R	2H	2W	
3.35	6.40	3.05	2.8	92	1.31	43	4R	2H	2W	
6.40	9.45	3.05	2.92	96	2.46	81	4R	3H	2W	
9.45	12.50	3.05	3.03	99	2.50	82	4R	2H	2W	
12.50	15.54	3.04	2.76	91	1.73	57	4R	1H	3W	Large amounts of oxidied clay material between fractured blocks of more competent rock.
15.54	18.59	3.05	2.94	96	2.77	91	4R	3H	2W	
18.59	21.64	3.05	2.93	96	1.67	55	3R	3H	2W	Oxidized material common on fractured surfaces.
21.64	24.69	3.05	2.89	95	2.28	75	3R	3H	2W	
24.69	27.74	3.05	3.05	100	2.55	84	3R	3H	1W	
27.74	30.78	3.04	2.86	94	2.13	70	3R	3H	1W	
30.78	33.83	3.05	2.88	94	2.24	73	3R	1H	1W	Clay-rich, soft material with some angular rubble from 33.64-33.78m.
33.83	36.88	3.05	2.96	97	0.94	31	3R	1H	4W	Oxidized, clay-rich material abundant along fractures, as well as through some beds.
36.88	39.93	3.05	2.89	95	1.77	58	3R	1H	3W	Highly weathered, soft, clay-rich material from 36.87-37.30m.
39.93	42.98	3.05	3.05	100	2.28	75	3R	3H	1W	
42.98	46.02	3.04	3.04	100	2.92	96	3R	3H	1W	
46.02	49.07	3.05	3	98	2.55	84	3R	3H	1W	
49.07	52.12	3.05	2.97	97	2.71	89	3R	3H	1W	
52.12	55.17	3.05	3.04	100	2.80	92	3R	3H	1W	
55.17	58.22	3.05	2.75	90	2.24	73	3R	3H	1W	
58.22	61.26	3.04	3.04	100	2.95	97	3R	3H	1W	
61.26	64.31	3.05	3.04	100	2.82	92	3R	3H	1W	
64.31	67.36	3.05	3.05	100	2.54	83	3R	3H	1W	
67.36	70.41	3.05	3.05	100	2.65	87	2R	3H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
70.41	73.46	3.05	3	98	2.57	84	3R	3H	1W	
73.46	76.50	3.04	2.7	89	2.29	75	3R	1H	1W	Clay-rich fractured material from 74.28-74.72m.
76.50	79.55	3.05	3.05	100	2.48	81	3R	3H	1W	
79.55	82.60	3.05	2.93	96	2.10	69	2R	3H	1W	
82.60	85.65	3.05	2.88	94	2.31	76	3R	3H	1W	
85.65	88.70	3.05	2.96	97	2.38	78	3R	3H	1W	
88.70	91.74	3.04	3.01	99	2.55	84	3R	3H	1W	
91.74	94.79	3.05	2.98	98	2.93	96	3R	3H	1W	
94.79	97.84	3.05	3	98	2.86	94	3R	3H	1W	
97.84	100.89	3.05	3.04	100	2.62	86	3R	3H	1W	
100.89	103.94	3.05	3	98	2.83	93	3R	3H	1W	
103.94	106.98	3.04	3.04	100	2.66	88	3R	3H	1W	
106.98	110.03	3.05	3.04	100	2.98	98	3R	3H	1W	
110.03	113.08	3.05	2.95	97	2.21	72	2R	3H	1W	
113.08	116.13	3.05	2.33	76	1.27	42	3R	2H	1W	
116.13	119.18	3.05	3	98	1.98	65	0R	3H	1W	
119.18	122.22	3.04	3.04	100	2.83	93	0R	2H	1W	
122.22	125.27	3.05	2.99	98	2.85	93	3R	3H	1W	
125.27	128.32	3.05	3.04	100	2.67	88	3R	3H	1W	
128.32	131.37	3.05	2.9	95	2.65	87	3R	3H	1W	
131.37	134.42	3.05	3.02	99	1.74	57	3R	3H	1W	
134.42	137.46	3.04	3.04	100	2.45	81	2R	3H	1W	multiple single joints
137.46	140.51	3.05	2.82	92	2.19	72	3R	3H	1W	multiple single joints
140.51	143.56	3.05	3.04	100	2.00	66	2R	3H	1W	
143.56	146.61	3.05	3.04	100	2.66	87	2R	3H	1W	
146.61	149.66	3.05	2.99	98	2.95	97	2R	3H	1W	
149.66	152.71	3.05	3.04	100	2.58	85	2R	3H	1W	
152.71	153.31	0.60	0.6	100	0.60	100	2R	3H	1W	
153.31	155.45	2.14	1.91	89	1.68	79	2R	3H	1W	
155.45	158.50	3.05	2.62	86	1.70	56	2R	3H	1W	
158.50	161.54	3.04	2.32	76	0.66	22	2R	1H	1W	Rubble from 159.81-161.54m.

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
161.54	164.59	3.05	2.77	91	0.88	29	1R	1H	1W	Largely non-weakly reactive, rubbly rock.
164.59	167.64	3.05	1.92	63	0.26	9	2R	2H	1W	
167.64	170.69	3.05	2.74	90	1.51	50	3R	2H	1W	
170.69	173.74	3.05	2.57	84	1.60	52	3R	2H	1W	
173.74	176.78	3.04	2.89	95	2.00	66	3R	3H	1W	
176.78	179.83	3.05	2.85	93	2.09	69	3R	2H	1W	
179.83	182.88	3.05	2.82	92	1.34	44	3R	3H	1W	
182.88	185.93	3.05	2.9	95	0.90	30	3R	1H	1W	Rubble from 184.22-184.62m.
185.93	188.98	3.05	2.9	95	1.98	65	3R	2H	1W	
188.98	192.02	3.04	2.99	98	2.14	70	3R	3H	1W	
192.02	195.07	3.05	2.95	97	2.04	67	2R	3H	1W	
195.07	198.12	3.05	3.05	100	2.48	81	2R	1H	1W	
198.12	201.17	3.05	3.05	100	2.29	75	3R	3H	1W	
201.17	204.22	3.05	2.9	95	2.54	83	2R	3H	1W	
204.22	207.26	3.04	2.85	94	1.80	59	2R	3H	1W	
207.26	210.31	3.05	3.03	99	1.77	58	2R	2H	1W	
210.31	213.36	3.05	2.98	98	2.31	76	2R	3H	1W	
213.36	216.41	3.05	3	98	1.92	63	2R	3H	1W	
216.41	219.46	3.05	3.01	99	1.93	63	2R	3H	1W	
219.46	222.50	3.04	2.91	96	2.27	75	3R	3H	1W	
222.50	225.55	3.05	2.98	98	2.11	69	3R	2H	1W	
225.55	228.60	3.05	2.73	90	0.72	24	3R	2H	1W	
228.60	231.65	3.05	2.87	94	1.78	58	3R	3H	1W	
231.65	234.70	3.05	3.05	100	1.76	58	3R	3H	1W	
234.70	237.74	3.04	3.02	99	1.96	64	4R	3H	1W	
237.74	240.79	3.05	2.36	77	1.08	35	4R	2H	1W	
240.79	243.84	3.05	2.8	92	1.94	64	4R	2H	1W	
243.84	246.89	3.05	2.61	86	1.34	44	4R	3H	1W	
246.89	249.94	3.05	2.89	95	1.85	61	4R	3H	1W	
249.94	252.98	3.04	2.88	95	2.42	80	4R	3H	1W	
252.98	256.03	3.05	3.05	100	2.69	88	4R	3H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
256.03	259.08	3.05	2.91	95	2.12	70	4R	3H	1W	
259.08	262.13	3.05	2.61	86	1.40	46	4R	2H	1W	
262.13	265.18	3.05	2.54	83	0.83	27	4R	1H	1W	clay-rich rbz from 264-264.37m
265.18	268.22	3.04	2.75	90	1.34	44	2R	1H	1W	
268.22	271.27	3.05	2.93	96	1.07	35	2R	1H	1W	Clay-rich interval
271.27	274.32	3.05	2.97	97	1.73	57	3R	2H	1W	
274.32	277.37	3.05	3.05	100	2.38	78	2R	2H	1W	
277.37	280.41	3.04	3.02	99	2.42	80	2R	3H	1W	
280.41	283.46	3.05	2.94	96	1.78	58	2R	3H	1W	
283.46	286.51	3.05	2.56	84	1.36	45	2R	2H	1W	
286.51	289.56	3.05	2.35	77	0.60	20	2R	3H	1W	
289.56	292.61	3.05	2.8	92	0.97	32	2R	2H	1W	
292.61	295.66	3.05	2.93	96	1.98	65	2R	2H	1W	
295.66	298.70	3.04	2.81	92	1.09	36	1R	2H	1W	
298.70	301.75	3.05	2.96	97	1.72	56	2R	2H	1W	
301.75	304.80	3.05	3.05	100	1.82	60	2R	2H	1W	
304.80	307.85	3.05	2.53	83	0.13	4	1R	1H	1W	largely altered, soft rock
307.85	310.90	3.05	3.05	100	0.26	9	1R	1H	1W	Largely altered, soft rock with crumbly texture.
310.90	313.94	3.04	2.82	93	1.73	57	1R	1H	1W	Largely altered, soft rock
313.94	316.99	3.05	2.98	98	0.74	24	1R	1H	1W	Soft, clay-rich altered rock throughout
316.99	320.04	3.05	1.96	64	0.23	8	2R	1H	1W	Soft, clay-rich, altered rock
320.04	323.09	3.05	2.96	97	1.33	44	2R	2H	1W	
323.09	326.14	3.05	2.54	83	1.11	36	2R	1H	1W	
326.14	329.18	3.04	2.71	89	1.86	61	3R	1H	1W	Rubble zone from 326.14-326.33m.
329.18	332.23	3.05	2.88	94	1.96	64	3R	1H	1W	Rubble from 331.63-332.23m
332.23	335.28	3.05	2.62	86	1.25	41	3R	2H	1W	Very broken up rock
335.28	338.33	3.05	2.8	92	1.57	51	3R	3H	1W	
338.33	341.38	3.05	2.54	83	0.92	30	3R	2H	1W	
341.38	344.42	3.04	2.93	96	1.22	40	4R	1H	1W	Clay-rich interval
344.42	347.47	3.05	2.94	96	1.31	43	3R	1H	1W	
347.47	350.52	3.05	2.85	93	1.59	52	3R	1H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
350.52	353.57	3.05	3.05	100	1.75	57	3R	1H	1W	
353.57	356.62	3.05	2.89	95	1.71	56	4R	3H	1W	
356.62	359.66	3.04	2.93	96	1.93	63	4R	3H	1W	
359.66	362.71	3.05	3	98	2.48	81	4R	3H	1W	
362.71	365.76	3.05	2.93	96	1.45	48	4R	2H	1W	
365.76	368.81	3.05	2.77	91	1.31	43	4R	1H	1W	
368.81	371.86	3.05	2.92	96	1.17	38	4R	2H	1W	
371.86	374.90	3.04	2.66	88	0.82	27	3R	1H	1W	largely clay-altered rock
374.90	377.95	3.05	2.69	88	2.06	68	3R	2H	1W	
377.95	381.00	3.05	2.91	95	1.33	44	2R	1H	1W	Clay-rich interval
381.00	384.05	3.05	2.82	92	0.46	15	3R	1H	1W	clay-rich interval
384.05	387.10	3.05	3.03	99	1.78	58	3R	1H	1W	Clay rich zone 384.41-385.08m.
387.10	390.14	3.04	2.81	92	1.84	61	3R	1H	1W	Clay-rich from 387.68-387.91m, 390.00-390.14m.
390.14	393.19	3.05	2.97	97	0.53	17	2R	1H	1W	Clay-rich interval throughout
393.19	396.24	3.05	3.05	100	1.69	55	3R	1H	1W	Clay-rich interval throughout
396.24	399.29	3.05	3	98	1.10	36	2R	1H	1W	Clay-rich interval throughout
399.29	402.34	3.05	2.8	92	1.14	37	3R	1H	1W	Clay-rich from 399.29-400m, 432.29m
402.34	405.38	3.04	2.98	98	0.90	30	1R	1H	1W	Clay material with limestone clasts thorughout interval
405.38	408.43	3.05	2.84	93	0.29	10	2R	1H	1W	
408.43	411.48	3.05	2.83	93	0.89	29	3R	1H	2W	Crackle texture in clay-rich rock throughout. Oxidation weathering
411.48	414.53	3.05	2.53	83	0.95	31	3R	1H	1W	Clay-rich rock and rubble with intermittent competent limestone
414.53	417.58	3.05	2.61	86	0.32	10	3R	1H	1W	
417.58	420.62	3.04	3.04	100	2.54	84	4R	4H	1W	
420.62	423.67	3.05	2.67	88	1.65	54	4R	3H	1W	
423.67	426.72	3.05	2.45	80	1.16	38	4R	2H	1W	
426.72	429.77	3.05	2.97	97	1.84	60	4R	3H	1W	
429.77	432.82	3.05	2.88	94	1.99	65	4R	3H	1W	
432.82	435.86	3.04	2.77	91	1.11	37	4R	2H	1W	
435.86	438.91	3.05	2.72	89	2.49	82	4R	3H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
438.91	441.96	3.05	2.98	98	1.90	62	4R	1H	1W	Dark black, clay material from 440.33-440.64m. Some polished graphitic fracture surface.
441.96	445.01	3.05	3.05	100	2.96	97	4R	4H	1W	
445.01	448.06	3.05	2.72	89	1.99	65	3R	3H	1W	
448.06	451.10	3.04	2.85	94	1.48	49	4R	2H	1W	rbz from 448.6-449.18m. Oxidation alteration present.
451.10	454.15	3.05	2.91	95	1.87	61	4R	3H	1W	Oxidation alteration present
454.15	457.20	3.05	2.95	97	2.81	92	4R	3H	1W	
457.20	460.25	3.05	3.05	100	3.05	100	4R	4H	1W	
460.25	463.30	3.05	2.53	83	2.12	70	4R	4H	1W	
463.30	466.34	3.04	2.55	84	0.48	16	4R	3H	1W	
466.34	469.39	3.05	2.65	87	0.74	24	4R	3H	1W	
469.39	472.44	3.05	2.28	75	0.21	7	3R	2H	1W	
472.44	475.49	3.05	1.84	60	0.20	7	4R	2H	1W	
475.49	478.54	3.05	2.76	90	1.96	64	4R	3H	1W	
478.54	481.58	3.04	2.97	98	2.22	73	4R	3H	1W	
481.58	484.63	3.05	3.05	100	1.60	52	4R	3H	1W	
484.63	487.68	3.05	1.45	48	0.00	0	4R	2H	1W	rbz 485.30-486,486-487
487.68	490.73	3.05	1.4	46	0.00	0	4R	2H	1W	rbz 491-492
490.73	493.78	3.05	1.88	62	0.22	7	4R	2H	1W	
493.78	496.82	3.04	2.08	68	0.58	19	4R	2H	1W	
496.82	499.87	3.05	2.41	79	0.97	32	4R	2H	1W	
499.87	502.92	3.05	1.72	56	0.20	7	4R	2H	1W	rbz 500.55-502.97
502.92	505.97	3.05	0.66	22	0.00	0	4R	2H	1W	rbz 502.92-505.97
505.97	509.02	3.05	1.15	38	0.00	0	4R	2H	1W	rbz 505.97-509.02
509.02	512.06	3.04	1.35	44	0.12	4	4R	2H	1W	rbz 509.02-512.06
512.06	515.12	3.06	1.84	60	0.41	13	4R	2H	1W	rbz 514-515.12m
515.12	518.16	3.04	3.04	100	1.70	56	3R	3H	1W	
518.16	521.21	3.05	2.6	85	0.95	31	4R	2H	1W	
521.21	524.26	3.05	1.93	63	0.30	10	4R	2H	1W	
524.26	527.30	3.04	2.65	87	0.65	21	4R	2H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
527.30	530.35	3.05	2.07	68	0.92	30	4R	3H	1W	rbz 529.60-530.35
530.35	533.40	3.05	0.65	21	0.00	0	1R	2H	1W	rbz 530.35-533.40
533.40	536.45	3.05	1.3	43	0.00	0	0R	2H	1W	rbz 533.40-536.45
536.45	539.50	3.05	1.5	49	0.00	0	2R	2H	1W	rbz 538.60-539.50
539.50	542.54	3.04	1.33	44	0.00	0	0R	2H	1W	rbz 539.50-542.54
542.54	545.59	3.05	2.1	69	0.37	12	0R	2H	1W	rbz 544-545.59
545.59	548.64	3.05	1.75	57	0.65	21	0R	2H	1W	rbz 548-549.70
548.64	551.69	3.05	2.92	96	0.88	29	3R	2H	1W	
551.69	554.74	3.05	3.04	100	1.26	41	3R	1H	1W	cly zone 553.00-553.37m
554.74	557.78	3.04	2.85	94	1.69	56	3R	3H	1W	
557.78	560.83	3.05	1.86	61	0.92	30	3R	3H	1W	
560.83	563.88	3.05	3.04	100	2.38	78	3R	3H	1W	
563.88	566.93	3.05	2.99	98	2.95	97	3R	3H	1W	
566.93	569.98	3.05	2.94	96	2.60	85	3R	3H	1W	
569.98	573.02	3.04	2.95	97	2.00	66	3R	3H	1W	
573.02	576.07	3.05	2.84	93	1.69	55	2R	3H	1W	
576.07	579.12	3.05	2.47	81	1.62	53	2R	3H	1W	Polished graphitic surfaces within mudstone sections
579.12	582.17	3.05	2.94	96	2.74	90	3R	3H	1W	Polished graphitic surfaces
582.17	585.22	3.05	1	33	0.00	0	1R	2H	1W	
585.22	588.26	3.04	1.76	58	0.00	0	0R	2H	1W	
588.26	591.31	3.05	1.42	47	0.14	5	0R	2H	1W	
591.31	594.36	3.05	3.04	100	0.64	21	0R	3H	1W	
594.36	597.41	3.05	2.71	89	1.12	37	0R	2H	1W	
597.41	600.46	3.05	2.98	98	1.43	47	0R	3H	1W	
600.46	603.50	3.04	2.64	87	0.94	31	0R	3H	1W	
603.50	606.55	3.05	2.9	95	1.38	45	0R	3H	1W	
606.55	609.60	3.05	2.45	80	0.30	10	0R	3H	1W	
609.60	612.65	3.05	1.8	59	0.10	3	0R	3H	1W	rbz 607.10-611.10
612.65	615.70	3.05	2.65	87	0.40	13	0R	2H	1W	
615.70	618.74	3.04	2.7	89	0.00	0	0R	2H	1W	rbz 615.70-618.74
618.74	621.79	3.05	2.31	76	1.58	52	1R	3H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
621.79	624.84	3.05	2.6	85	2.33	76	0R	3H	1W	
624.84	627.89	3.05	2.62	86	1.47	48	0R	3H	1W	
627.89	630.94	3.05	1.85	61	0.00	0	0R	3H	1W	
630.94	633.98	3.04	2.9	95	0.82	27	0R	2H	1W	
633.98	637.03	3.05	3.05	100	1.97	65	0R	3H	1W	
637.03	640.08	3.05	2.8	92	1.49	49	0R	3H	1W	
640.08	643.13	3.05	3.04	100	2.06	68	0R	3H	1W	
643.13	646.18	3.05	3	98	1.97	65	3R	4H	1W	
646.18	649.22	3.04	3.04	100	2.88	95	3R	3H	1W	
649.22	652.27	3.05	3	98	2.68	88	4R	3H	1W	
652.27	655.32	3.05	3.05	100	2.88	94	4R	3H	1W	
655.32	658.37	3.05	3.05	100	2.97	97	4R	4H	1W	
658.37	661.42	3.05	3.04	100	2.88	94	4R	4H	1W	
661.42	664.46	3.04	3.03	100	2.57	85	4R	4H	1W	
664.46	667.51	3.05	3	98	2.31	76	4R	4H	1W	
667.51	670.56	3.05	2.95	97	2.86	94	4R	4H	1W	
670.56	673.61	3.05	2.98	98	2.84	93	4R	4H	1W	
673.61	676.66	3.05	3.05	100	2.23	73	4R	4H	1W	
676.66	679.70	3.04	3	99	2.87	94	4R	4H	1W	
679.70	682.75	3.05	2.92	96	2.66	87	4R	4H	1W	
682.75	685.80	3.05	3.05	100	2.50	82	4R	4H	1W	
685.80	688.85	3.05	3.04	100	2.40	79	4R	4H	1W	
688.85	691.90	3.05	2.94	96	2.63	86	4R	4H	1W	
691.90	694.94	3.04	3.04	100	2.80	92	4R	4H	1W	
694.94	697.99	3.05	2.95	97	1.02	33	4R	3H	1W	
697.99	701.04	3.05	3.05	100	1.34	44	4R	3H	1W	
701.04	704.09	3.05	3	98	2.59	85	4R	4H	1W	
704.09	707.14	3.05	2.99	98	2.68	88	4R	4H	1W	
707.14	710.18	3.04	3.02	99	2.29	75	4R	4H	1W	
710.18	713.23	3.05	3	98	2.75	90	4R	4H	1W	
713.23	716.28	3.05	3.05	100	2.96	97	4R	4H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
716.28	719.33	3.05	3	98	2.83	93	4R	4H	1W	
719.33	722.38	3.05	2.99	98	2.72	89	4R	4H	1W	
722.38	725.42	3.04	3.04	100	3.00	99	4R	4H	1W	
725.42	728.47	3.05	3.05	100	2.79	91	4R	4H	1W	
728.47	731.52	3.05	3.01	99	2.92	96	4R	4H	1W	
731.52	734.57	3.05	3.05	100	2.62	86	4R	4H	1W	
734.57	737.62	3.05	3.05	100	2.53	83	4R	3H	1W	
737.62	738.83	1.21	1.08	89	1.08	89	4R	3H	1W	

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From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
0.00	0.00	0.00	-QC-	0.00	0	V766891	☐	O18-074	core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V766958	☐	O18-077	core	SR5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V766933	☐	O18-077	core	SR5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V766663	☐	O18-055	core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V766913	☐	O18-074	core	SR5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V766888	☐	O18-074	core	SR5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V766877	☐	O18-069	core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V766873	☐	O18-069	core	SR5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V766844	☐	O18-069	core	SR5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V766828	☐	O18-068	Core	15B	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V766824	☐	O18-068	Core	4C	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V766803	☐	O18-068	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V766781	☐	O18-067	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V766772	☐	O18-067	Core	4C	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V766756	☐	O18-064	core	4C	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V766752	☐	O18-064	core	15B	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V766732	☐	O18-064	core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V766699	☐	O18-062	core	OX7	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V766927	☐	O18-077	core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V766695	☐	O18-062	core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V766692	☐	O18-062	core	SR5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V766674	☐	O18-055	core	OX7	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V766670	☐	O18-055	core	SR5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V766798	☐	O18-067	Core	4C	☐	☐	☐
0.47	1.83	1.36	NSP, LST	1.31	96	V766640	☐	O18-055	core		☐	☐	☐
1.83	3.35	1.52	LST	1.35	89	V766641	☐	O18-055	core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
3.35	6.40	3.05	LST	2.80	92	V766642	☐	O18-055	core		☐	☐	☐
6.40	9.45	3.05	LST	2.92	96	V766643	☐	O18-055	core		☐	☐	☐
9.45	12.50	3.05	LST	3.03	99	V766644	☐	O18-055	core		☐	☐	☐
12.50	15.54	3.04	LST	2.76	91	V766645	☐	O18-055	core		☐	☐	☐
15.54	18.59	3.05	LST	2.94	96	V766646	☐	O18-055	core		☐	☐	☐
18.59	21.64	3.05	LST	2.93	96	V766647	☐	O18-055	core		☐	☐	☐
21.64	24.69	3.05	LST	2.89	95	V766648	☐	O18-055	core		☐	☐	☐
24.69	27.74	3.05	LST	3.05	100	V766649	☐	O18-055	core		☐	☐	☐
27.74	30.78	3.04	LST	2.86	94	V766650	☐	O18-055	core		☐	☐	☐
30.78	33.83	3.05	LST	2.88	94	V766651	☐	O18-055	core		☐	☐	☐
33.83	36.88	3.05	LST	2.96	97	V766652	☐	O18-055	core		☐	☐	☐
36.88	39.93	3.05	LST	2.89	95	V766653	☐	O18-055	core		☐	☐	☐
39.93	42.98	3.05	LST	3.05	100	V766654	☐	O18-055	core		☐	☐	☐
42.98	46.02	3.04	LST	3.04	100	V766655	☐	O18-055	core		☐	☐	☐
42.98	46.02	3.04	LST	3.04	100	V766656	☐	O18-055	core		☐	☑	☐
46.02	49.07	3.05	LST	3.00	98	V766657	☐	O18-055	core		☐	☐	☐
49.07	52.12	3.05	LST	2.97	97	V766658	☐	O18-055	core		☐	☐	☐
52.12	55.17	3.05	LST	3.04	100	V766659	☐	O18-055	core		☐	☐	☐
52.12	55.17	3.05	LST	3.04	100	V766660	☐	O18-055	core		☐	☐	☑
55.17	58.22	3.05	LST	2.75	90	V766661	☐	O18-055	core		☐	☐	☐
58.22	61.26	3.04	LST	3.04	100	V766662	☐	O18-055	core		☐	☐	☐
61.26	64.31	3.05	LST	3.04	100	V766664	☐	O18-055	core		☐	☐	☐
64.31	67.36	3.05	LST	3.05	100	V766665	☐	O18-055	core		☐	☐	☐
67.36	70.41	3.05	LST	3.05	100	V766666	☐	O18-055	core		☐	☐	☐
70.41	73.46	3.05	LST	3.00	98	V766667	☐	O18-055	core		☐	☐	☐
73.46	76.50	3.04	LST	2.70	89	V766668	☐	O18-055	core		☐	☐	☐
76.50	79.55	3.05	LST	3.05	100	V766669	☐	O18-055	core		☐	☐	☐
79.55	82.60	3.05	LST	2.93	96	V766671	☐	O18-055	core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
82.60	85.65	3.05	LST	2.88	94	V766672	☐	O18-055	core		☐	☐	☐
85.65	88.70	3.05	LST	2.96	97	V766673	☐	O18-055	core		☐	☐	☐
88.70	91.74	3.04	LST	3.01	99	V766675	☐	O18-055	core		☐	☐	☐
91.74	94.79	3.05	LST	2.98	98	V766676	☐	O18-055	core		☐	☐	☐
94.79	97.84	3.05	LST	3.00	98	V766677	☐	O18-055	core		☐	☐	☐
97.84	100.89	3.05	LST	3.04	100	V766678	☐	O18-055	core		☐	☐	☐
100.89	103.94	3.05	LST	3.00	98	V766679	☐	O18-055	core		☐	☐	☐
103.94	106.98	3.04	LST	3.04	100	V766680	☐	O18-062	core		☐	☐	☐
106.98	110.03	3.05	LST	3.04	100	V766681	☐	O18-062	core		☐	☐	☐
110.03	113.08	3.05	LST	2.95	97	V766682	☐	O18-062	core		☐	☐	☐
113.08	116.13	3.05	LST	2.33	76	V766683	☐	O18-062	core		☐	☐	☐
116.13	119.18	3.05	LST	3.00	98	V766684	☐	O18-062	core		☐	☐	☐
119.18	122.22	3.04	LST	3.04	100	V766685	☐	O18-062	core		☐	☐	☐
122.22	125.27	3.05	LST	2.99	98	V766686	☐	O18-062	core		☐	☐	☐
125.27	128.32	3.05	LST	3.04	100	V766687	☐	O18-062	core		☐	☐	☐
128.32	131.37	3.05	LST	2.90	95	V766688	☐	O18-062	core		☐	☐	☐
131.37	134.42	3.05	LST	3.02	99	V766689	☐	O18-062	core		☐	☐	☐
134.42	137.46	3.04	LST	3.04	100	V766690	☐	O18-062	core		☐	☐	☐
137.46	140.14	2.68	LST	2.28	85	V766691	☐	O18-062	core		☐	☐	☐
140.14	141.00	0.86	LST	0.84	98	V766693	☐	O18-062	core		☐	☐	☐
141.00	143.56	2.56	LST, LST	2.55	100	V766694	☐	O18-062	core		☐	☐	☐
143.56	146.61	3.05	LST	3.04	100	V766696	☐	O18-062	core		☐	☐	☐
146.61	149.66	3.05	LST	2.99	98	V766697	☐	O18-062	core		☐	☐	☐
149.66	152.71	3.05	LST	3.04	100	V766698	☐	O18-062	core		☐	☐	☐
152.71	155.45	2.74	LST	2.71	99	V766700	☐	O18-062	core		☐	☐	☐
155.45	158.50	3.05	LST	2.62	86	V766701	☐	O18-062	core		☐	☐	☐
158.50	159.81	1.31	LST	1.20	92	V766702	☐	O18-062	core		☐	☐	☐
158.50	159.81	1.31	LST	1.20	92	V766703	☐	O18-062	core		☐	☑	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
159.81	162.45	2.64	LST, FLT	1.90	72	V766704	☐	O18-062	core		☐	☐	☐
162.45	164.76	2.31	SMS	1.95	84	V766705	☐	O18-062	core		☐	☐	☐
164.76	167.17	2.41	SMS	1.33	55	V766706	☐	O18-062	core		☐	☐	☐
167.17	170.00	2.83	SMS	2.47	87	V766707	☐	O18-062	core		☐	☐	☐
167.17	170.00	2.83	SMS	2.47	87	V766708	☐	O18-062	core		☐	☐	☑
170.00	173.00	3.00	LST	2.57	86	V766709	☐	O18-062	core		☐	☐	☐
173.00	176.04	3.04	LST	2.95	97	V766710	☐	O18-062	core		☐	☐	☐
176.04	179.02	2.98	LST	2.76	93	V766711	☐	O18-062	core		☐	☐	☐
179.02	182.00	2.98	LST	2.91	98	V766712	☐	O18-062	core		☐	☐	☐
182.00	184.62	2.62	LST	2.23	85	V766713	☐	O18-062	core		☐	☐	☐
184.62	187.32	2.70	LST	2.50	93	V766714	☐	O18-062	core		☐	☐	☐
187.32	188.98	1.66	LST	1.57	95	V766715	☐	O18-062	core		☐	☐	☐
188.98	192.02	3.04	CMS	2.99	98	V766716	☐	O18-062	core		☐	☐	☐
192.02	195.07	3.05	CMS	2.95	97	V766717	☐	O18-062	core		☐	☐	☐
195.07	198.12	3.05	CMS	3.05	100	V766718	☐	O18-062	core		☐	☐	☐
198.12	201.17	3.05	CMS	3.05	100	V766719	☐	O18-062	core		☐	☐	☐
201.17	204.22	3.05	CMS	2.90	95	V766720	☐	O18-064	core		☐	☐	☐
204.22	207.26	3.04	CMS	2.85	94	V766721	☐	O18-064	core		☐	☐	☐
207.26	210.31	3.05	CMS	3.03	99	V766722	☐	O18-064	core		☐	☐	☐
210.31	213.36	3.05	CMS	2.98	98	V766723	☐	O18-064	core		☐	☐	☐
213.36	216.41	3.05	CMS	3.00	98	V766724	☐	O18-064	core		☐	☐	☐
213.36	216.41	3.05	CMS	3.00	98	V766725	☐	O18-064	core		☐	☑	☐
216.41	218.42	2.01	CMS	2.01	100	V766726	☐	O18-064	core		☐	☐	☐
218.42	219.46	1.04	CMS	1.04	100	V766727	☐	O18-064	core		☐	☐	☐
219.46	222.50	3.04	LST	2.91	96	V766728	☐	O18-064	core		☐	☐	☐
222.50	224.17	1.67	LST	1.67	100	V766729	☐	O18-064	core		☐	☐	☐
224.17	225.55	1.38	LST, MST	1.37	99	V766730	☐	O18-064	core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
225.55	227.50	1.95	MST	1.70	87	V766731	☐	O18-064	core		☐	☐	☐
227.50	228.60	1.10	MST, LST	1.10	100	V766733	☐	O18-064	core		☐	☐	☐
228.60	231.65	3.05	LST	2.87	94	V766734	☐	O18-064	core		☐	☐	☐
231.65	234.70	3.05	LST	3.05	100	V766735	☐	O18-064	core		☐	☐	☐
234.70	237.74	3.04	LST	3.02	99	V766736	☐	O18-064	core		☐	☐	☐
237.74	240.79	3.05	LST	2.36	77	V766737	☐	O18-064	core		☐	☐	☐
240.79	243.84	3.05	LST	2.80	92	V766738	☐	O18-064	core		☐	☐	☐
243.84	246.89	3.05	LST	2.61	86	V766739	☐	O18-064	core		☐	☐	☐
246.89	249.94	3.05	LST	2.89	95	V766740	☐	O18-064	core		☐	☐	☐
249.94	252.98	3.04	LST	2.88	95	V766741	☐	O18-064	core		☐	☐	☐
252.98	256.03	3.05	LST	3.05	100	V766742	☐	O18-064	core		☐	☐	☐
256.03	259.08	3.05	LST	2.91	95	V766743	☐	O18-064	core		☐	☐	☐
259.08	260.60	1.52	LST	1.47	97	V766744	☐	O18-064	core		☐	☐	☐
260.60	262.13	1.53	LST	1.31	86	V766745	☐	O18-064	core		☐	☐	☐
262.13	263.40	1.27	FLR	1.15	91	V766746	☐	O18-064	core		☐	☐	☐
263.40	264.32	0.92	FLR	0.70	76	V766747	☐	O18-064	core		☐	☐	☐
264.32	265.18	0.86	FLT, LST	0.86	100	V766748	☐	O18-064	core		☐	☐	☐
265.18	266.70	1.52	LST	1.52	100	V766749	☐	O18-064	core		☐	☐	☐
266.70	268.22	1.52	LST	1.28	84	V766750	☐	O18-064	core		☐	☐	☐
268.22	269.75	1.53	LST	1.51	99	V766751	☐	O18-064	core		☐	☐	☐
269.75	271.27	1.52	LST	1.43	94	V766753	☐	O18-064	core		☐	☐	☐
271.27	272.79	1.52	LST	1.52	100	V766754	☐	O18-064	core		☐	☐	☐
272.79	274.32	1.53	LST	1.52	99	V766755	☐	O18-064	core		☐	☐	☐
274.32	275.84	1.52	LST	1.50	99	V766757	☐	O18-064	core		☐	☐	☐
275.84	277.37	1.53	LST	1.50	98	V766758	☐	O18-064	core		☐	☐	☐
275.84	277.37	1.53	LST	1.50	98	V766759	☐	O18-064	core		☐	☐	☑
277.37	280.41	3.04	LST	3.02	99	V766760	☐	O18-067	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
280.41	283.46	3.05	CMS	2.94	96	V766761	☐	O18-067	Core		☐	☐	☐
283.46	286.51	3.05	CMS	2.56	84	V766762	☐	O18-067	Core		☐	☐	☐
286.51	289.56	3.05	CMS	2.35	77	V766763	☐	O18-067	Core		☐	☐	☐
289.56	292.61	3.05	CMS	2.80	92	V766764	☐	O18-067	Core		☐	☐	☐
292.61	295.66	3.05	LST, CMS	2.93	96	V766765	☐	O18-067	Core		☐	☐	☐
295.66	298.70	3.04	LST	2.81	92	V766766	☐	O18-067	Core		☐	☐	☐
295.66	298.70	3.04	LST	2.81	92	V766767	☐	O18-067	Core		☐	☑	☐
298.70	300.17	1.47	LST	1.47	100	V766768	☐	O18-067	Core		☐	☐	☐
300.17	301.75	1.58	LST	1.56	99	V766769	☐	O18-067	Core		☐	☐	☐
301.75	303.34	1.59	LST	1.59	100	V766770	☐	O18-067	Core		☐	☐	☐
303.34	304.80	1.46	LST	1.40	96	V766771	☐	O18-067	Core		☐	☐	☐
304.80	306.36	1.56	LST	1.29	83	V766773	☐	O18-067	Core		☐	☐	☐
306.36	307.85	1.49	LST	1.15	77	V766774	☐	O18-067	Core		☐	☐	☐
307.85	309.39	1.54	LST	1.54	100	V766775	☐	O18-067	Core		☐	☐	☐
309.39	310.90	1.51	LST	1.48	98	V766776	☐	O18-067	Core		☐	☐	☐
310.90	312.42	1.52	LST	1.50	99	V766777	☐	O18-067	Core		☐	☐	☐
312.42	313.94	1.52	LST	1.42	93	V766778	☐	O18-067	Core		☐	☐	☐
313.94	315.46	1.52	LST	1.51	99	V766779	☐	O18-067	Core		☐	☐	☐
315.46	316.99	1.53	LST	1.51	99	V766780	☐	O18-067	Core		☐	☐	☐
316.99	320.04	3.05	LST	1.96	64	V766782	☐	O18-067	Core		☐	☐	☐
320.04	323.09	3.05	FLT, LST	2.96	97	V766783	☐	O18-067	Core		☐	☐	☐
323.09	326.14	3.05	LST	2.54	83	V766784	☐	O18-067	Core		☐	☐	☐
323.09	326.14	3.05	LST	2.54	83	V766785	☐	O18-067	Core		☐	☐	☑
326.14	329.18	3.04	LST	2.71	89	V766786	☐	O18-067	Core		☐	☐	☐
329.18	332.23	3.05	LST	2.88	94	V766787	☐	O18-067	Core		☐	☐	☐
332.23	335.28	3.05	LST	2.62	86	V766788	☐	O18-067	Core		☐	☐	☐
335.28	338.33	3.05	LST	2.80	92	V766789	☐	O18-067	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
338.33	341.38	3.05	LST	2.54	83	V766790	☐	O18-067	Core		☐	☐	☐
341.38	344.42	3.04	LST	2.93	96	V766791	☐	O18-067	Core		☐	☐	☐
344.42	347.47	3.05	LST	2.94	96	V766792	☐	O18-067	Core		☐	☐	☐
347.47	350.52	3.05	LST	2.85	93	V766793	☐	O18-067	Core		☐	☐	☐
350.52	353.57	3.05	LST	3.05	100	V766794	☐	O18-067	Core		☐	☐	☐
353.57	356.62	3.05	LST	2.89	95	V766795	☐	O18-067	Core		☐	☐	☐
356.62	359.66	3.04	LST	2.93	96	V766796	☐	O18-067	Core		☐	☐	☐
359.66	362.71	3.05	LST, LST	3.00	98	V766797	☐	O18-067	Core		☐	☐	☐
362.71	365.76	3.05	LST	2.93	96	V766799	☐	O18-067	Core		☐	☐	☐
365.76	368.81	3.05	LST	2.77	91	V766800	☐	O18-068	Core		☐	☐	☐
368.81	371.86	3.05	LST	2.92	96	V766801	☐	O18-068	Core		☐	☐	☐
371.86	373.90	2.04	LST	1.79	88	V766802	☐	O18-068	Core		☐	☐	☐
373.90	374.91	1.01	LST	1.01	100	V766804	☐	O18-068	Core		☐	☐	☐
374.91	376.43	1.52	LST	1.52	100	V766805	☐	O18-068	Core		☐	☐	☐
376.43	377.95	1.52	LST	1.04	68	V766806	☐	O18-068	Core		☐	☐	☐
377.95	379.42	1.47	LST	1.38	94	V766807	☐	O18-068	Core		☐	☐	☐
377.95	379.42	1.47	LST	1.38	94	V766808	☐	O18-068	Core		☐	☑	☐
379.42	381.00	1.58	LST	1.47	93	V766809	☐	O18-068	Core		☐	☐	☐
381.00	382.52	1.52	LST	1.50	99	V766810	☐	O18-068	Core		☐	☐	☐
382.52	384.05	1.53	LST	1.48	97	V766811	☐	O18-068	Core		☐	☐	☐
384.05	385.57	1.52	LST	1.42	93	V766812	☐	O18-068	Core		☐	☐	☐
385.57	387.10	1.53	LST, LST	1.52	99	V766813	☐	O18-068	Core		☐	☐	☐
387.10	388.62	1.52	LST	1.28	84	V766814	☐	O18-068	Core		☐	☐	☐
388.62	390.00	1.38	LST	1.31	95	V766815	☐	O18-068	Core		☐	☐	☐
390.00	391.66	1.66	LST	1.66	100	V766816	☐	O18-068	Core		☐	☐	☐
390.00	391.66	1.66	LST	1.66	100	V766817	☐	O18-068	Core		☐	☐	☑
391.66	393.19	1.53	LST	1.52	99	V766818	☐	O18-068	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
393.19	394.71	1.52	LST	1.47	97	V766819	☐	O18-068	Core		☐	☐	☐
394.71	396.24	1.53	LST	1.52	99	V766820	☐	O18-068	Core		☐	☐	☐
396.24	397.76	1.52	LST	1.52	100	V766821	☐	O18-068	Core		☐	☐	☐
397.76	399.29	1.53	LST	1.44	94	V766822	☐	O18-068	Core		☐	☐	☐
399.29	400.81	1.52	LST	1.45	95	V766823	☐	O18-068	Core		☐	☐	☐
400.81	402.34	1.53	LST	1.51	99	V766825	☐	O18-068	Core		☐	☐	☐
402.34	403.86	1.52	LST	1.52	100	V766826	☐	O18-068	Core		☐	☐	☐
403.86	405.38	1.52	LST	1.52	100	V766827	☐	O18-068	Core		☐	☐	☐
405.38	406.90	1.52	LST	1.52	100	V766829	☐	O18-068	Core		☐	☐	☐
406.90	408.43	1.53	LST	1.42	93	V766830	☐	O18-068	Core		☐	☐	☐
408.43	409.95	1.52	LST	1.50	99	V766831	☐	O18-068	Core		☐	☐	☐
409.95	411.48	1.53	LST	1.43	93	V766832	☐	O18-068	Core		☐	☐	☐
411.48	413.00	1.52	LST	1.52	100	V766833	☐	O18-068	Core		☐	☐	☐
413.00	414.53	1.53	LST	1.32	86	V766834	☐	O18-068	Core		☐	☐	☐
414.53	416.05	1.52	LST	1.48	97	V766835	☐	O18-068	Core		☐	☐	☐
416.05	417.58	1.53	LST	1.13	74	V766836	☐	O18-068	Core		☐	☐	☐
417.58	420.62	3.04	LST	3.04	100	V766837	☐	O18-068	Core		☐	☐	☐
420.62	423.67	3.05	LST	2.67	88	V766838	☐	O18-068	Core		☐	☐	☐
423.67	426.72	3.05	LST	2.45	80	V766839	☐	O18-068	Core		☐	☐	☐
426.72	429.77	3.05	LST	2.97	97	V766840	☐	O18-069	core		☐	☐	☐
429.77	432.82	3.05	LST	2.88	94	V766841	☐	O18-069	core		☐	☐	☐
432.82	435.86	3.04	LST	2.77	91	V766842	☐	O18-069	core		☐	☐	☐
435.86	438.91	3.05	LST	2.72	89	V766843	☐	O18-069	core		☐	☐	☐
438.91	441.96	3.05	LST	2.98	98	V766845	☐	O18-069	core		☐	☐	☐
441.96	445.01	3.05	LST	3.05	100	V766846	☐	O18-069	core		☐	☐	☐
445.01	448.06	3.05	LST	2.72	89	V766847	☐	O18-069	core		☐	☐	☐
448.06	451.10	3.04	LST	2.85	94	V766848	☐	O18-069	core		☐	☐	☐
451.10	454.15	3.05	LST	2.91	95	V766849	☐	O18-069	core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
454.15	457.20	3.05	LST	2.95	97	V766850	☐	O18-069	core		☐	☐	☐
457.20	460.25	3.05	LST	3.05	100	V766851	☐	O18-069	core		☐	☐	☐
460.25	463.30	3.05	LST	2.53	83	V766852	☐	O18-069	core		☐	☐	☐
463.30	466.34	3.04	LST	2.55	84	V766853	☐	O18-069	core		☐	☐	☐
466.34	469.39	3.05	LST	2.65	87	V766854	☐	O18-069	core		☐	☐	☐
469.39	472.44	3.05	LST	2.28	75	V766855	☐	O18-069	core		☐	☐	☐
472.44	475.49	3.05	LST	1.84	60	V766856	☐	O18-069	core		☐	☐	☐
475.49	478.54	3.05	LST, LST	2.76	90	V766857	☐	O18-069	core		☐	☐	☐
478.54	481.58	3.04	LST	2.97	98	V766858	☐	O18-069	core		☐	☐	☐
478.54	481.58	3.04	LST	2.97	98	V766859	☐	O18-069	core		☐	☑	☐
481.58	484.63	3.05	LST	3.05	100	V766860	☐	O18-069	core		☐	☐	☐
484.63	487.68	3.05	LST, LST	1.45	48	V766861	☐	O18-069	core		☐	☐	☐
487.68	490.73	3.05	LST	1.40	46	V766862	☐	O18-069	core		☐	☐	☐
490.73	493.78	3.05	LST	1.88	62	V766863	☐	O18-069	core		☐	☐	☐
490.73	493.78	3.05	LST	1.88	62	V766864	☐	O18-069	core		☐	☐	☑
493.78	496.82	3.04	LST	2.08	68	V766865	☐	O18-069	core		☐	☐	☐
496.82	499.87	3.05	LST	2.41	79	V766866	☐	O18-069	core		☐	☐	☐
499.87	502.92	3.05	LST	1.72	56	V766867	☐	O18-069	core		☐	☐	☐
502.92	505.97	3.05	LST	0.66	22	V766868	☐	O18-069	core		☐	☐	☐
505.97	509.02	3.05	LST, CMS	1.15	38	V766869	☐	O18-069	core		☐	☐	☐
509.02	512.06	3.04	CMS	1.35	44	V766870	☐	O18-069	core		☐	☐	☐
512.06	515.12	3.06	CMS	1.84	60	V766871	☐	O18-069	core		☐	☐	☐
515.12	518.16	3.04	CMS	3.04	100	V766872	☐	O18-069	core		☐	☐	☐
518.16	521.21	3.05	CMS	2.60	85	V766874	☐	O18-069	core		☐	☐	☐
521.21	524.26	3.05	LST	2.65	87	V766875	☐	O18-069	core		☐	☐	☐
524.26	526.13	1.87	LST	1.23	66	V766876	☐	O18-069	core		☐	☐	☐
526.13	527.30	1.17	LST	0.92	79	V766878	☐	O18-069	core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
527.30	530.35	3.05	LST	2.07	68	V766879	☐	O18-069	core		☐	☐	☐
530.35	533.40	3.05	LST, MST	0.65	21	V766880	☐	O18-074	core		☐	☐	☐
533.40	536.45	3.05	MST	1.30	43	V766881	☐	O18-074	core		☐	☐	☐
536.45	539.50	3.05	MST	1.50	49	V766882	☐	O18-074	core		☐	☐	☐
539.50	542.54	3.04	MST	1.33	44	V766883	☐	O18-074	core		☐	☐	☐
542.54	545.59	3.05	MST	2.10	69	V766884	☐	O18-074	core		☐	☐	☐
545.59	548.64	3.05	MST	1.75	57	V766885	☐	O18-074	core		☐	☐	☐
548.64	549.70	1.06	MST	1.05	99	V766886	☐	O18-074	core		☐	☐	☐
549.70	551.20	1.50	CMS	1.43	95	V766887	☐	O18-074	core		☐	☐	☐
551.20	552.70	1.50	CMS	1.50	100	V766889	☐	O18-074	core		☐	☐	☐
552.70	553.40	0.70	CMS	0.70	100	V766890	☐	O18-074	core		☐	☐	☐
553.40	554.74	1.34	LST, CMS	1.30	97	V766892	☐	O18-074	core		☐	☐	☐
554.74	557.78	3.04	LST	2.85	94	V766893	☐	O18-074	core		☐	☐	☐
557.78	560.83	3.05	LST	1.86	61	V766894	☐	O18-074	core		☐	☐	☐
560.83	563.88	3.05	LST	3.04	100	V766895	☐	O18-074	core		☐	☐	☐
563.88	566.93	3.05	LST	2.99	98	V766896	☐	O18-074	core		☐	☐	☐
563.88	566.93	3.05	LST	2.99	98	V766897	☐	O18-074	core		☐	☑	☐
566.93	569.98	3.05	LST	2.94	96	V766898	☐	O18-074	core		☐	☐	☐
569.98	573.02	3.04	LST	2.95	97	V766899	☐	O18-074	core		☐	☐	☐
573.02	576.07	3.05	CMS	2.84	93	V766900	☐	O18-074	core		☐	☐	☐
576.07	579.12	3.05	CMS	2.47	81	V766901	☐	O18-074	core		☐	☐	☐
579.12	582.17	3.05	LST	2.94	96	V766902	☐	O18-074	core		☐	☐	☐
582.17	585.22	3.05	FLT, LST	1.00	33	V766903	☐	O18-074	core		☐	☐	☐
585.22	588.26	3.04	FLT	1.76	58	V766904	☐	O18-074	core		☐	☐	☐
588.26	591.31	3.05	FLT	1.42	47	V766905	☐	O18-074	core		☐	☐	☐
591.31	594.36	3.05	FLT, MST	3.04	100	V766906	☐	O18-074	core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
591.31	594.36	3.05	FLT, MST	3.04	100	V766907	☐	O18-074	core		☐	☐	☑
594.36	597.41	3.05	MST	2.71	89	V766908	☐	O18-074	core		☐	☐	☐
597.41	600.46	3.05	MST	2.98	98	V766909	☐	O18-074	core		☐	☐	☐
600.46	603.50	3.04	MST	2.64	87	V766910	☐	O18-074	core		☐	☐	☐
603.50	606.55	3.05	MST	2.90	95	V766911	☐	O18-074	core		☐	☐	☐
606.55	609.60	3.05	MST	2.45	80	V766912	☐	O18-074	core		☐	☐	☐
609.60	612.65	3.05	MST	1.80	59	V766914	☐	O18-074	core		☐	☐	☐
612.65	615.70	3.05	MST	2.65	87	V766915	☐	O18-074	core		☐	☐	☐
615.70	618.74	3.04	MST	2.70	89	V766916	☐	O18-074	core		☐	☐	☐
618.74	621.79	3.05	MST	2.31	76	V766917	☐	O18-074	core		☐	☐	☐
621.79	624.84	3.05	MST	2.60	85	V766918	☐	O18-074	core		☐	☐	☐
624.84	627.89	3.05	MST	2.62	86	V766919	☐	O18-074	core		☐	☐	☐
627.89	630.94	3.05	MST	1.85	61	V766920	☐	O18-077	core		☐	☐	☐
630.94	633.98	3.04	MST	2.90	95	V766921	☐	O18-077	core		☐	☐	☐
633.98	637.03	3.05	MST	3.05	100	V766922	☐	O18-077	core		☐	☐	☐
637.03	640.08	3.05	MST	2.80	92	V766923	☐	O18-077	core		☐	☐	☐
640.08	643.13	3.05	MST	3.04	100	V766924	☐	O18-077	core		☐	☐	☐
643.13	644.85	1.72	MST	1.72	100	V766925	☐	O18-077	core		☐	☐	☐
644.85	646.18	1.33	MST, LST	1.27	95	V766926	☐	O18-077	core		☐	☐	☐
646.18	649.22	3.04	LST	3.04	100	V766928	☐	O18-077	core		☐	☐	☐
649.22	652.27	3.05	LST	3.00	98	V766929	☐	O18-077	core		☐	☐	☐
649.22	652.27	3.05	LST	3.00	98	V766930	☐	O18-077	core		☐	☑	☐
652.27	655.32	3.05	LST	3.05	100	V766931	☐	O18-077	core		☐	☐	☐
655.32	658.37	3.05	LST	3.05	100	V766932	☐	O18-077	core		☐	☐	☐
658.37	661.42	3.05	LST	3.04	100	V766934	☐	O18-077	core		☐	☐	☐
661.42	664.46	3.04	LST	3.03	100	V766935	☐	O18-077	core		☐	☐	☐
664.46	667.51	3.05	LST	3.00	98	V766936	☐	O18-077	core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
667.51	670.56	3.05	LST	2.95	97	V766937	☐	O18-077	core		☐	☐	☐
670.56	673.61	3.05	LST	2.98	98	V766938	☐	O18-077	core		☐	☐	☐
673.61	676.66	3.05	LST	3.05	100	V766939	☐	O18-077	core		☐	☐	☐
676.66	679.70	3.04	LST	3.00	99	V766940	☐	O18-077	core		☐	☐	☐
679.70	682.75	3.05	LST	2.92	96	V766941	☐	O18-077	core		☐	☐	☐
682.75	685.80	3.05	LST	3.05	100	V766942	☐	O18-077	core		☐	☐	☐
685.80	688.85	3.05	LST	3.04	100	V766943	☐	O18-077	core		☐	☐	☐
688.85	691.90	3.05	LST	2.94	96	V766944	☐	O18-077	core		☐	☐	☐
691.90	694.94	3.04	LST	3.04	100	V766945	☐	O18-077	core		☐	☐	☐
694.94	697.99	3.05	LST	2.95	97	V766946	☐	O18-077	core		☐	☐	☐
694.94	697.99	3.05	LST	2.95	97	V766947	☐	O18-077	core		☐	☐	☑
697.99	701.04	3.05	LST	3.05	100	V766948	☐	O18-077	core		☐	☐	☐
701.04	704.09	3.05	LST	3.00	98	V766949	☐	O18-077	core		☐	☐	☐
704.09	707.14	3.05	LST	2.99	98	V766950	☐	O18-077	core		☐	☐	☐
707.14	710.18	3.04	LST	3.02	99	V766951	☐	O18-077	core		☐	☐	☐
710.18	713.23	3.05	LST	3.00	98	V766952	☐	O18-077	core		☐	☐	☐
713.23	716.28	3.05	LST	3.05	100	V766953	☐	O18-077	core		☐	☐	☐
716.28	719.33	3.05	LST	3.00	98	V766954	☐	O18-077	core		☐	☐	☐
719.33	722.38	3.05	LST	2.99	98	V766955	☐	O18-077	core		☐	☐	☐
722.38	725.42	3.04	LST	3.04	100	V766956	☐	O18-077	core		☐	☐	☐
725.42	728.47	3.05	LST	3.05	100	V766957	☐	O18-077	core		☐	☐	☐
728.47	731.52	3.05	LST	3.01	99	V766959	☐	O18-077	core		☐	☐	☐
731.52	734.57	3.05	LST	3.05	100	W231722	☐	O18-076	core		☐	☐	☐
734.57	737.62	3.05	LST	3.05	100	W231723	☐	O18-076	core		☐	☐	☐
737.62	738.83	1.21	LST	1.08	89	W231724	☐	O18-076	core		☐	☐	☐

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From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
0.00	4.87	4.87	OVB	--	Overburden. No recovery							
4.87	8.23	3.36	OVB	--	Broken, clay-rich, oxidised overburden with clasts of MD20.							
8.23	414.34	406.11	MST	FG	Dark grey/black, weakly siliceous, thinly laminated dark grey/black, fine-grained mudstone and medium grey, fine-medium grained, silty/sandy mudstone (MD20) with locally observed bedding parallel and <20mm blebby pyrite.							
414.34	431.90	17.56	LST	FG	Finely crackled, grey-blue to whitish pink, fine-grained limestone (D40?) with fine network of <1mm discontinuos calcite veinlets.							

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From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
0.00	4.87	4.87	0	0	0.00	0	0R	--	--	No recovery.
4.87	5.18	0.31	0.26	84	0.00	0	0R	2H	3W	Ovb rubble
5.18	8.23	3.05	0.47	15	0.00	0	0R	2H	3W	ovb rubble
8.23	11.28	3.05	2.33	76	0.67	22	0R	2H	2W	Rubble from 8.23-9.01m.
11.28	14.33	3.05	2.78	91	0.79	26	0R	3H	2W	
14.33	17.37	3.04	3.02	99	1.23	40	0R	2H	3W	Oxidized rubble from 15.50-15.74m and 16-16.2m.
17.37	20.42	3.05	3.05	100	2.32	76	0R	3H	2W	
20.42	23.47	3.05	2.53	83	1.74	57	0R	3H	2W	
23.47	26.52	3.05	2.37	78	0.90	30	0R	3H	2W	
26.52	29.57	3.05	2.34	77	0.65	21	0R	3H	2W	Rubble from 26.52-26.87m.
29.57	32.61	3.04	2.53	83	0.92	30	0R	2H	2W	Oxidized rubble from 29.68-30.34m.
32.61	35.66	3.05	2.62	86	1.11	36	0R	2H	2W	
35.66	38.71	3.05	3.05	100	2.14	70	0R	3H	1W	
38.71	41.76	3.05	2.87	94	1.52	50	0R	3H	1W	
41.76	44.81	3.05	2.7	89	1.39	46	0R	2H	1W	Rubble from 44-44.27m.
44.81	47.85	3.04	2.99	98	0.96	32	0R	2H	1W	
47.85	50.90	3.05	2.96	97	1.86	61	0R	3H	1W	
50.90	53.95	3.05	2.92	96	1.74	57	0R	3H	1W	
53.95	57.00	3.05	2.94	96	1.34	44	0R	3H	1W	
57.00	60.05	3.05	2.47	81	1.18	39	0R	2H	1W	Rubble from 59-60.05m.
60.05	63.09	3.04	3.03	100	2.03	67	0R	3H	1W	
63.09	66.14	3.05	2.9	95	2.09	69	0R	3H	1W	
66.14	69.19	3.05	3.05	100	2.42	79	0R	3H	1W	
69.19	72.24	3.05	2.92	96	1.92	63	0R	3H	1W	
72.24	75.29	3.05	3.01	99	1.71	56	0R	3H	1W	
75.29	78.33	3.04	3.04	100	2.82	93	0R	3H	1W	
78.33	81.38	3.05	3.03	99	2.32	76	0R	3H	1W	
81.38	84.43	3.05	2.61	86	1.19	39	0R	2H	1W	rubble from 83.6-84.05 and 84.16-84.36m.
84.43	87.48	3.05	3.05	100	1.71	56	0R	3H	1W	highly fractured from 84.75-85.45m.

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
87.48	90.53	3.05	2.83	93	2.40	79	0R	3H	1W	
90.53	93.57	3.04	2.76	91	1.55	51	0R	2H	1W	rubble from 92.65-93m
93.57	96.62	3.05	2.7	89	0.99	32	0R	3H	1W	highly fractured from 93.57-93.69m and 95.06-95.45m.
96.62	99.67	3.05	2.88	94	2.34	77	0R	3H	1W	
99.67	102.72	3.05	3.04	100	2.54	83	0R	3H	1W	
102.72	105.77	3.05	3.02	99	3.00	98	0R	3H	1W	
105.77	108.81	3.04	2.74	90	1.73	57	0R	3H	1W	
108.81	111.86	3.05	3.04	100	1.96	64	0R	3H	1W	
111.86	114.91	3.05	3.04	100	3.03	99	0R	3H	1W	
114.91	117.96	3.05	3.03	99	2.78	91	0R	3H	1W	
117.96	121.00	3.04	3.04	100	2.34	77	0R	3H	1W	multiple single joints
121.00	124.05	3.05	3.04	100	1.81	59	0R	3H	1W	multiple single joints
124.05	127.10	3.05	3.04	100	2.49	82	0R	3H	1W	
127.10	130.15	3.05	3.04	100	2.65	87	0R	3H	1W	
130.15	133.20	3.05	3.04	100	2.74	90	0R	3H	1W	
133.20	136.25	3.05	3.04	100	3.02	99	0R	3H	1W	
136.25	139.29	3.04	3.02	99	2.04	67	0R	3H	1W	
139.29	142.34	3.05	3.04	100	2.09	69	0R	3H	1W	
142.34	145.39	3.05	3.04	100	1.90	62	0R	3H	1W	small rbz from 143.37-143.78m
145.39	148.44	3.05	2.99	98	2.05	67	0R	2H	1W	rbz
148.44	151.49	3.05	3.04	100	2.74	90	0R	3H	1W	
151.49	154.53	3.04	3.04	100	1.50	49	0R	3H	1W	
154.53	157.58	3.05	3.04	100	2.62	86	0R	3H	1W	
157.58	160.63	3.05	2.83	93	1.61	53	0R	3H	1W	
160.63	163.68	3.05	2.95	97	2.22	73	0R	3H	1W	
163.68	166.73	3.05	2.9	95	1.94	64	0R	3H	1W	
166.73	169.77	3.04	2.85	94	1.16	38	0R	2H	1W	
169.77	172.82	3.05	2.9	95	1.79	59	0R	2H	1W	
172.82	175.87	3.05	2.8	92	1.89	62	0R	3H	1W	
175.87	178.92	3.05	2.92	96	1.96	64	0R	3H	1W	
178.92	181.97	3.05	2.81	92	1.70	56	0R	3H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
181.97	185.01	3.04	2.69	88	1.17	38	0R	3H	1W	
185.01	188.06	3.05	2.91	95	1.36	45	0R	3H	1W	
188.06	191.11	3.05	2.86	94	1.60	52	0R	3H	1W	
191.11	194.16	3.05	3	98	2.24	73	0R	3H	1W	
194.16	197.21	3.05	2.91	95	1.31	43	0R	2H	1W	
197.21	200.25	3.04	2.99	98	1.57	52	0R	2H	1W	
200.25	203.30	3.05	2.47	81	0.65	21	0R	2H	1W	Rubbly section between 201.3-202.66m.
203.30	206.35	3.05	2.97	97	1.67	55	0R	2H	1W	
206.35	209.40	3.05	2.92	96	2.14	70	0R	2H	1W	
209.40	212.45	3.05	2.67	88	0.48	16	0R	2H	1W	Intermittent small sections of rubble
212.45	215.49	3.04	2.74	90	1.74	57	0R	2H	1W	
215.49	218.54	3.05	3.04	100	1.87	61	0R	3H	1W	
218.54	221.59	3.05	3.04	100	1.42	47	0R	2H	1W	rbz
221.59	224.64	3.05	3.04	100	1.55	51	0R	2H	1W	rbz
224.64	227.69	3.05	3.04	100	2.09	69	0R	2H	1W	
227.69	230.73	3.04	3.04	100	2.64	87	0R	3H	1W	
230.73	233.78	3.05	3	98	1.84	60	0R	3H	1W	
233.78	236.83	3.05	3.04	100	1.76	58	0R	3H	1W	
236.83	239.88	3.05	3.04	100	1.14	37	0R	3H	1W	
239.88	242.93	3.05	3.04	100	2.08	68	0R	2H	1W	
242.93	245.97	3.04	3.04	100	2.48	82	0R	3H	1W	
245.97	249.02	3.05	3.04	100	3.00	98	0R	3H	1W	
249.02	252.07	3.05	3.04	100	2.66	87	0R	3H	1W	
252.07	255.12	3.05	2.85	93	2.31	76	0R	3H	1W	
255.12	258.17	3.05	3.04	100	0.87	29	0R	2H	1W	rbz
258.17	261.21	3.04	2.99	98	2.67	88	0R	3H	1W	
261.21	264.26	3.05	3.04	100	1.19	39	0R	3H	1W	
264.26	267.31	3.05	3.04	100	1.88	62	0R	3H	1W	
267.31	270.36	3.05	3.04	100	1.36	45	0R	3H	1W	
270.36	273.41	3.05	3.04	100	2.89	95	0R	3H	1W	
273.41	276.45	3.04	3.03	100	2.23	73	0R	3H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
276.45	279.50	3.05	3.04	100	2.20	72	0R	3H	1W	
279.50	282.55	3.05	3.04	100	2.26	74	0R	3H	1W	
282.55	285.60	3.05	3.04	100	1.53	50	0R	3H	1W	
285.60	288.65	3.05	2.3	75	2.24	73	0R	3H	1W	
288.65	291.69	3.04	2.95	97	2.49	82	0R	3H	1W	
291.69	294.74	3.05	3.04	100	2.53	83	0R	3H	1W	multiple single joints
294.74	297.79	3.05	2.78	91	1.15	38	0R	3H	1W	
297.79	300.84	3.05	3.04	100	0.96	31	0R	2H	1W	rbz
300.84	303.89	3.05	3.04	100	1.62	53	0R	2H	1W	rbz from 30.84-301.56m
303.89	306.93	3.04	3.04	100	2.28	75	0R	2H	1W	
306.93	309.98	3.05	2.93	96	0.82	27	0R	3H	1W	rbz from 308.65-309.51m
309.98	313.03	3.05	3.03	99	0.77	25	0R	3H	1W	multiple single joint
313.03	316.08	3.05	3.04	100	1.34	44	0R	3H	1W	
316.08	319.13	3.05	3.04	100	1.89	62	0R	3H	1W	
319.13	322.17	3.04	3.04	100	1.41	46	0R	3H	1W	
322.17	325.22	3.05	2.94	96	2.19	72	0R	3H	1W	
325.22	328.27	3.05	2.92	96	1.99	65	0R	3H	1W	Multiple single joints
328.27	331.32	3.05	2.68	88	0.86	28	0R	3H	1W	
331.32	334.37	3.05	3	98	1.73	57	0R	3H	1W	
334.37	337.41	3.04	2.75	90	1.70	56	0R	3H	1W	
337.41	340.46	3.05	2.98	98	1.63	53	0R	2H	1W	Multiple single joints.
340.46	343.51	3.05	2.89	95	0.85	28	0R	1H	1W	RBZ from 342.14-342.44m.Gouge from 342.44-343.51m.
343.51	346.57	3.06	2.77	91	0.84	27	0R	1H	1W	Multiple single joints. Multiple small RBZs. Gouge from 343.51-343.85m.
346.57	349.61	3.04	2.92	96	1.24	41	0R	2H	1W	Small fractured zone and small gouge zone.
349.61	352.65	3.04	2.88	95	1.77	58	0R	3H	1W	
352.65	355.70	3.05	3.04	100	1.89	62	0R	3H	1W	Small rbz from 355.10 - 355.42m.
355.70	358.75	3.05	2.96	97	0.98	32	0R	2H	1W	rbz
358.75	361.80	3.05	3	98	1.64	54	0R	3H	1W	RBZ
361.80	364.85	3.05	3.04	100	1.37	45	0R	2H	1W	rbz

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
364.85	367.89	3.04	3.04	100	1.60	53	0R	2H	1W	rbz
367.89	370.94	3.05	3.02	99	1.16	38	0R	2H	1W	RBZ
370.94	373.99	3.05	3.04	100	0.26	9	0R	2H	1W	RBZ
373.99	377.04	3.05	3.02	99	0.18	6	0R	2H	1W	RBZ
377.04	380.09	3.05	2.59	85	0.46	15	0R	2H	1W	rbz
380.09	383.13	3.04	3.04	100	0.91	30	0R	2H	1W	rbz
383.13	386.18	3.05	3.04	100	0.68	22	0R	2H	1W	rbz
386.18	389.23	3.05	3.04	100	0.69	23	0R	2H	1W	rbz
389.23	392.28	3.05	2.95	97	0.10	3	0R	2H	1W	rbz
392.28	395.33	3.05	2.6	85	0.40	13	0R	2H	1W	rbz
395.33	398.37	3.04	2.77	91	1.27	42	0R	3H	1W	rbz
398.37	401.42	3.05	2.82	92	0.18	6	0R	3H	1W	rbz
401.42	404.47	3.05	2.67	88	0.46	15	0R	3H	1W	rbz
404.47	407.52	3.05	2.75	90	0.38	12	0R	1H	1W	rbz with large abundance of clay alteration
407.52	410.57	3.05	2.21	72	0.10	3	0R	1H	1W	rbz with shear texture and abundance of clay\
410.57	413.62	3.05	2.22	73	0.49	16	1R	1H	1W	No HCl reactivity until 412.35m, where it becomes intensely reactive, due to a lithology change near the end of the run.
413.62	416.66	3.04	3.04	100	1.83	60	3R	3H	1W	
416.66	419.71	3.05	2.83	93	1.16	38	3R	3H	1W	
419.71	422.76	3.05	2.82	92	1.42	47	2R	3H	1W	
422.76	425.81	3.05	2.81	92	1.88	62	3R	3H	1W	
425.81	428.85	3.04	2.95	97	1.01	33	3R	3H	1W	
428.85	431.90	3.05	3.05	100	1.98	65	3R	3H	1W	

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From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
0.00	0.00	0.00	-QC-	0.00	0	V767729	☐	O18-056	Core	4C	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V767763	☐	O18-058	Core	OX6	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V767755	☐	O18-058	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V767587	☐	O18-044	core	OX6	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V767747	☐	O18-056	Core	15B	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V767725	☐	O18-056	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V767706	☐	O18-054	Core	4C	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V767685	☐	O18-054	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V767604	☐	O18-049	core	SR5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V767668	☐	O18-052	Core	SR5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V767649	☐	O18-052	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V767753	☐	O18-058	Core	15B	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V767641	☐	O18-052	Core	SR5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V767627	☐	O18-049	core	SR5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V767623	☐	O18-049	core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V767682	☐	O18-054	Core	SR5	☐	☐	☐
5.18	8.23	3.05	OVB	0.47	15	V767575	☐	O18-044	core		☐	☐	☐
8.23	11.28	3.05	OVB, MST	2.33	76	V767576	☐	O18-044	core		☐	☐	☐
11.28	14.33	3.05	MST	2.78	91	V767577	☐	O18-044	core		☐	☐	☐
14.33	17.37	3.04	MST	3.02	99	V767578	☐	O18-044	core		☐	☐	☐
17.37	20.42	3.05	MST	3.05	100	V767579	☐	O18-044	core		☐	☐	☐
20.42	23.47	3.05	MST	2.53	83	V767580	☐	O18-044	core		☐	☐	☐
23.47	26.52	3.05	MST	2.37	78	V767581	☐	O18-044	core		☐	☐	☐
23.47	26.52	3.05	MST	2.37	78	V767582	☐	O18-044	core		☐	☐	☑
26.52	29.57	3.05	MST	2.34	77	V767583	☐	O18-044	core		☐	☐	☐
29.57	32.61	3.04	MST	2.53	83	V767584	☐	O18-044	core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
32.61	35.66	3.05	MST	2.62	86	V767585	☐	O18-044	core		☐	☐	☐
35.66	38.71	3.05	MST	3.05	100	V767586	☐	O18-044	core		☐	☐	☐
38.71	41.76	3.05	MST	2.87	94	V767588	☐	O18-044	core		☐	☐	☐
41.76	44.81	3.05	MST	2.70	89	V767589	☐	O18-044	core		☐	☐	☐
44.81	47.85	3.04	MST	2.99	98	V767590	☐	O18-044	core		☐	☐	☐
47.85	50.90	3.05	MST	2.96	97	V767591	☐	O18-049	core		☐	☐	☐
50.90	53.95	3.05	MST	2.92	96	V767592	☐	O18-049	core		☐	☐	☐
53.95	57.00	3.05	MST	2.94	96	V767593	☐	O18-049	core		☐	☐	☐
57.00	60.05	3.05	MST	2.47	81	V767594	☐	O18-049	core		☐	☐	☐
60.05	63.09	3.04	MST	3.03	100	V767595	☐	O18-049	core		☐	☐	☐
63.09	66.14	3.05	MST	2.90	95	V767596	☐	O18-049	core		☐	☐	☐
66.14	69.19	3.05	MST	3.05	100	V767597	☐	O18-049	core		☐	☐	☐
66.14	69.19	3.05	MST	3.05	100	V767598	☐	O18-049	core		☐	☑	☐
69.19	72.24	3.05	MST	2.92	96	V767599	☐	O18-049	core		☐	☐	☐
72.24	75.29	3.05	MST	3.01	99	V767600	☐	O18-049	core		☐	☐	☐
75.29	78.33	3.04	MST	3.04	100	V767601	☐	O18-049	core		☐	☐	☐
78.33	81.38	3.05	MST	3.03	99	V767602	☐	O18-049	core		☐	☐	☐
81.38	84.43	3.05	MST	2.61	86	V767603	☐	O18-049	core		☐	☐	☐
84.43	87.48	3.05	MST	3.05	100	V767605	☐	O18-049	core		☐	☐	☐
87.48	90.53	3.05	MST	2.83	93	V767606	☐	O18-049	core		☐	☐	☐
90.53	93.57	3.04	MST	2.76	91	V767607	☐	O18-049	core		☐	☐	☐
93.57	96.62	3.05	MST	2.70	89	V767608	☐	O18-049	core		☐	☐	☐
96.62	99.67	3.05	MST	2.88	94	V767609	☐	O18-049	core		☐	☐	☐
99.67	102.72	3.05	MST	3.04	100	V767610	☐	O18-049	core		☐	☐	☐
102.72	105.77	3.05	MST	3.02	99	V767611	☐	O18-049	core		☐	☐	☐
105.77	108.81	3.04	MST	2.74	90	V767612	☐	O18-049	core		☐	☐	☐
108.81	111.86	3.05	MST	3.04	100	V767613	☐	O18-049	core		☐	☐	☐
111.86	114.91	3.05	MST	3.04	100	V767614	☐	O18-049	core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
111.86	114.91	3.05	MST	3.04	100	V767615	☐	O18-049	core		☐	☐	☑
114.91	117.96	3.05	MST	3.03	99	V767616	☐	O18-049	core		☐	☐	☐
117.96	121.00	3.04	MST	3.04	100	V767617	☐	O18-049	core		☐	☐	☐
121.00	124.05	3.05	MST	3.04	100	V767618	☐	O18-049	core		☐	☐	☐
124.05	127.10	3.05	MST	3.04	100	V767619	☐	O18-049	core		☐	☐	☐
127.10	130.15	3.05	MST	3.04	100	V767620	☐	O18-049	core		☐	☐	☐
130.15	133.20	3.05	MST	3.04	100	V767621	☐	O18-049	core		☐	☐	☐
133.20	136.25	3.05	MST	3.04	100	V767622	☐	O18-049	core		☐	☐	☐
136.25	139.29	3.04	MST	3.02	99	V767624	☐	O18-049	core		☐	☐	☐
139.29	142.34	3.05	MST	3.04	100	V767625	☐	O18-049	core		☐	☐	☐
142.34	145.39	3.05	MST	3.04	100	V767626	☐	O18-049	core		☐	☐	☐
145.39	148.44	3.05	MST	2.99	98	V767628	☐	O18-049	core		☐	☐	☐
148.44	151.49	3.05	MST	3.04	100	V767629	☐	O18-049	core		☐	☐	☐
151.49	154.53	3.04	MST	3.04	100	V767630	☐	O18-049	core		☐	☐	☐
154.53	157.58	3.05	MST	3.04	100	V767631	☐	O18-052	Core		☐	☐	☐
157.58	160.63	3.05	MST	2.83	93	V767632	☐	O18-052	Core		☐	☐	☐
160.63	163.68	3.05	MST	2.95	97	V767633	☐	O18-052	Core		☐	☐	☐
163.68	166.73	3.05	MST	2.90	95	V767634	☐	O18-052	Core		☐	☐	☐
166.73	169.77	3.04	MST	2.85	94	V767635	☐	O18-052	Core		☐	☐	☐
169.77	172.82	3.05	MST	2.90	95	V767636	☐	O18-052	Core		☐	☐	☐
172.82	175.87	3.05	MST	2.80	92	V767637	☐	O18-052	Core		☐	☐	☐
175.87	178.92	3.05	MST	2.92	96	V767638	☐	O18-052	Core		☐	☐	☐
178.92	181.97	3.05	MST	2.81	92	V767639	☐	O18-052	Core		☐	☐	☐
181.97	185.01	3.04	MST	2.69	88	V767640	☐	O18-052	Core		☐	☐	☐
185.01	188.06	3.05	MST	2.91	95	V767642	☐	O18-052	Core		☐	☐	☐
188.06	191.11	3.05	MST	2.86	94	V767643	☐	O18-052	Core		☐	☐	☐
191.11	194.16	3.05	MST	3.00	98	V767644	☐	O18-052	Core		☐	☐	☐
194.16	197.21	3.05	MST	2.91	95	V767645	☐	O18-052	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
194.16	197.21	3.05	MST	2.91	95	V767646	☐	O18-052	Core		☐	☐	☑
197.21	200.25	3.04	MST	2.99	98	V767647	☐	O18-052	Core		☐	☐	☐
200.25	203.30	3.05	MST	2.47	81	V767648	☐	O18-052	Core		☐	☐	☐
203.30	206.35	3.05	MST	2.97	97	V767650	☐	O18-052	Core		☐	☐	☐
206.35	209.40	3.05	MST	2.92	96	V767651	☐	O18-052	Core		☐	☐	☐
209.40	212.45	3.05	MST	2.67	88	V767652	☐	O18-052	Core		☐	☐	☐
212.45	215.49	3.04	MST	2.74	90	V767653	☐	O18-052	Core		☐	☐	☐
215.49	218.54	3.05	MST	3.04	100	V767654	☐	O18-052	Core		☐	☐	☐
218.54	221.59	3.05	MST	3.04	100	V767655	☐	O18-052	Core		☐	☐	☐
221.59	224.64	3.05	MST	3.04	100	V767656	☐	O18-052	Core		☐	☐	☐
224.64	227.69	3.05	MST	3.04	100	V767657	☐	O18-052	Core		☐	☐	☐
227.69	230.73	3.04	MST	3.04	100	V767658	☐	O18-052	Core		☐	☐	☐
230.73	233.78	3.05	MST	3.00	98	V767659	☐	O18-052	Core		☐	☐	☐
233.78	236.83	3.05	MST	3.04	100	V767660	☐	O18-052	Core		☐	☐	☐
236.83	239.88	3.05	MST	3.04	100	V767661	☐	O18-052	Core		☐	☐	☐
239.88	242.93	3.05	MST	3.04	100	V767662	☐	O18-052	Core		☐	☐	☐
242.93	245.97	3.04	MST	3.04	100	V767663	☐	O18-052	Core		☐	☐	☐
242.93	245.97	3.04	MST	3.04	100	V767664	☐	O18-052	Core		☐	☑	☐
245.97	249.02	3.05	MST	3.04	100	V767665	☐	O18-052	Core		☐	☐	☐
249.02	252.07	3.05	MST	3.04	100	V767666	☐	O18-052	Core		☐	☐	☐
252.07	255.12	3.05	MST	2.85	93	V767667	☐	O18-052	Core		☐	☐	☐
255.12	258.17	3.05	MST	3.04	100	V767669	☐	O18-052	Core		☐	☐	☐
258.17	261.21	3.04	MST	2.99	98	V767670	☐	O18-052	Core		☐	☐	☐
261.21	264.26	3.05	MST	3.04	100	V767671	☐	O18-054	Core		☐	☐	☐
264.26	267.31	3.05	MST	3.04	100	V767672	☐	O18-054	Core		☐	☐	☐
267.31	270.36	3.05	MST	3.04	100	V767673	☐	O18-054	Core		☐	☐	☐
270.36	273.41	3.05	MST	3.04	100	V767674	☐	O18-054	Core		☐	☐	☐
273.41	276.45	3.04	MST	3.03	100	V767675	☐	O18-054	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
276.45	279.50	3.05	MST	3.04	100	V767676	☐	O18-054	Core		☐	☐	☐
279.50	282.55	3.05	MST	3.04	100	V767677	☐	O18-054	Core		☐	☐	☐
282.55	285.60	3.05	MST	3.04	100	V767678	☐	O18-054	Core		☐	☐	☐
285.60	288.65	3.05	MST	2.30	75	V767679	☐	O18-054	Core		☐	☐	☐
288.65	291.69	3.04	MST	2.95	97	V767680	☐	O18-054	Core		☐	☐	☐
291.69	294.74	3.05	MST	3.04	100	V767681	☐	O18-054	Core		☐	☐	☐
294.74	297.79	3.05	MST	2.78	91	V767683	☐	O18-054	Core		☐	☐	☐
297.79	300.84	3.05	MST	3.04	100	V767684	☐	O18-054	Core		☐	☐	☐
300.84	303.89	3.05	MST	3.04	100	V767686	☐	O18-054	Core		☐	☐	☐
303.89	306.93	3.04	MST	3.04	100	V767687	☐	O18-054	Core		☐	☐	☐
306.93	309.98	3.05	MST	2.93	96	V767688	☐	O18-054	Core		☐	☐	☐
309.98	313.03	3.05	MST	3.03	99	V767689	☐	O18-054	Core		☐	☐	☐
313.03	316.08	3.05	MST	3.04	100	V767690	☐	O18-054	Core		☐	☐	☐
316.08	319.13	3.05	MST	3.04	100	V767691	☐	O18-054	Core		☐	☐	☐
319.13	322.17	3.04	MST	3.04	100	V767692	☐	O18-054	Core		☐	☐	☐
322.17	325.22	3.05	MST	2.94	96	V767693	☐	O18-054	Core		☐	☐	☐
325.22	328.27	3.05	MST	2.92	96	V767694	☐	O18-054	Core		☐	☐	☐
328.27	331.32	3.05	MST	2.68	88	V767695	☐	O18-054	Core		☐	☐	☐
331.32	334.37	3.05	MST	3.00	98	V767696	☐	O18-054	Core		☐	☐	☐
331.32	334.37	3.05	MST	3.00	98	V767697	☐	O18-054	Core		☐	☑	☐
334.37	337.41	3.04	MST	2.75	90	V767698	☐	O18-054	Core		☐	☐	☐
337.41	340.46	3.05	MST	2.98	98	V767699	☐	O18-054	Core		☐	☐	☐
340.46	341.79	1.33	MST	1.33	100	V767700	☐	O18-054	Core		☐	☐	☐
341.79	344.72	2.93	MST	2.72	93	V767701	☐	O18-054	Core		☐	☐	☐
341.79	344.72	2.93	MST	2.72	93	V767702	☐	O18-054	Core		☐	☐	☑
344.72	346.57	1.85	MST	1.77	96	V767703	☐	O18-054	Core		☐	☐	☐
346.57	348.09	1.52	MST	1.49	98	V767704	☐	O18-054	Core		☐	☐	☐
348.09	349.61	1.52	MST	1.52	100	V767705	☐	O18-054	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
349.61	351.13	1.52	MST	1.50	99	V767707	☐	O18-054	Core		☐	☐	☐
351.13	352.65	1.52	MST	1.41	93	V767708	☐	O18-054	Core		☐	☐	☐
352.65	354.17	1.52	MST	1.51	99	V767709	☐	O18-054	Core		☐	☐	☐
354.17	355.70	1.53	MST	1.52	99	V767710	☐	O18-054	Core		☐	☐	☐
355.70	357.22	1.52	MST	1.44	95	V767711	☐	O18-056	Core		☐	☐	☐
357.22	358.75	1.53	MST	1.41	92	V767712	☐	O18-056	Core		☐	☐	☐
358.75	360.27	1.52	MST	1.37	90	V767713	☐	O18-056	Core		☐	☐	☐
360.27	361.80	1.53	MST	1.52	99	V767714	☐	O18-056	Core		☐	☐	☐
361.80	363.32	1.52	MST	1.42	93	V767715	☐	O18-056	Core		☐	☐	☐
363.32	364.85	1.53	MST	1.52	99	V767716	☐	O18-056	Core		☐	☐	☐
364.85	366.37	1.52	MST	1.46	96	V767717	☐	O18-056	Core		☐	☐	☐
366.37	367.89	1.52	MST	1.52	100	V767718	☐	O18-056	Core		☐	☐	☐
367.89	369.41	1.52	MST	1.52	100	V767719	☐	O18-056	Core		☐	☐	☐
369.41	370.94	1.53	MST	1.49	97	V767720	☐	O18-056	Core		☐	☐	☐
369.41	370.94	1.53	MST	1.49	97	V767721	☐	O18-056	Core		☐	☐	☑
370.94	372.46	1.52	MST	1.49	98	V767722	☐	O18-056	Core		☐	☐	☐
372.46	373.99	1.53	MST	1.50	98	V767723	☐	O18-056	Core		☐	☐	☐
373.99	375.51	1.52	MST	1.48	97	V767724	☐	O18-056	Core		☐	☐	☐
375.51	377.04	1.53	MST	1.50	98	V767726	☐	O18-056	Core		☐	☐	☐
377.04	378.56	1.52	MST	1.43	94	V767727	☐	O18-056	Core		☐	☐	☐
378.56	380.09	1.53	MST	1.36	89	V767728	☐	O18-056	Core		☐	☐	☐
380.09	381.61	1.52	MST	1.52	100	V767730	☐	O18-056	Core		☐	☐	☐
381.61	383.13	1.52	MST	1.35	89	V767731	☐	O18-056	Core		☐	☐	☐
383.13	384.65	1.52	MST	1.50	99	V767732	☐	O18-056	Core		☐	☐	☐
384.65	386.18	1.53	MST	1.50	98	V767733	☐	O18-056	Core		☐	☐	☐
386.18	387.70	1.52	MST	1.35	89	V767734	☐	O18-056	Core		☐	☐	☐
387.70	389.23	1.53	MST	1.47	96	V767735	☐	O18-056	Core		☐	☐	☐
389.23	390.75	1.52	MST	1.52	100	V767736	☐	O18-056	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
390.75	392.28	1.53	MST	1.50	98	V767737	☐	O18-056	Core		☐	☐	☐
390.75	392.28	1.53	MST	1.50	98	V767738	☐	O18-056	Core		☐	☑	☐
392.28	393.80	1.52	MST	1.46	96	V767739	☐	O18-056	Core		☐	☐	☐
393.80	395.33	1.53	MST	1.36	89	V767740	☐	O18-056	Core		☐	☐	☐
395.33	396.85	1.52	MST	1.52	100	V767741	☐	O18-056	Core		☐	☐	☐
396.85	398.37	1.52	MST	1.42	93	V767742	☐	O18-056	Core		☐	☐	☐
398.37	399.89	1.52	MST	1.52	100	V767743	☐	O18-056	Core		☐	☐	☐
399.89	401.42	1.53	MST	1.52	99	V767744	☐	O18-056	Core		☐	☐	☐
401.42	402.94	1.52	MST	1.52	100	V767745	☐	O18-056	Core		☐	☐	☐
402.94	404.47	1.53	MST	1.40	92	V767746	☐	O18-056	Core		☐	☐	☐
404.47	405.99	1.52	MST	1.52	100	V767748	☐	O18-056	Core		☐	☐	☐
405.99	407.52	1.53	MST	1.46	95	V767749	☐	O18-056	Core		☐	☐	☐
407.52	409.04	1.52	MST	1.52	100	V767750	☐	O18-056	Core		☐	☐	☐
409.04	410.57	1.53	MST	1.24	81	V767751	☐	O18-058	Core		☐	☐	☐
410.57	411.75	1.18	MST	0.92	78	V767752	☐	O18-058	Core		☐	☐	☐
411.75	412.82	1.07	MST	0.94	88	V767754	☐	O18-058	Core		☐	☐	☐
412.82	413.46	0.64	MST	0.64	100	V767756	☐	O18-058	Core		☐	☐	☐
413.46	414.34	0.88	MST	0.88	100	V767757	☐	O18-058	Core		☐	☐	☐
414.34	416.66	2.32	LST, MST	2.31	100	V767758	☐	O18-058	Core		☐	☐	☐
416.66	419.71	3.05	LST	2.83	93	V767759	☐	O18-058	Core		☐	☐	☐
416.66	419.71	3.05	LST	2.83	93	V767760	☐	O18-058	Core		☐	☑	☐
419.71	422.76	3.05	LST	2.82	92	V767761	☐	O18-058	Core		☐	☐	☐
422.76	425.81	3.05	LST	2.81	92	V767762	☐	O18-058	Core		☐	☐	☐
425.81	428.85	3.04	LST	2.95	97	V767764	☐	O18-058	Core		☐	☐	☐
428.85	431.90	3.05	LST	3.05	100	V767765	☐	O18-058	Core		☐	☐	☐
428.85	431.90	3.05	LST	3.05	100	V767766	☐	O18-058	Core		☐	☐	☑

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From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
0.00	4.89	4.89	OVB	--	ovb							
4.89	81.65	76.76	MST	FG	Black, fine grained, non calcareous mudstone interbedded with thinly bedded siltstone. Graded bedding is locally observed in unit.							
						DK	GY				Po	0.5
						MD	GY				1P	1
						DK	BK	BD	OXI	W	1P	2
81.65	85.25	3.60	FLT	FG	Faulted contact between MD20 and MD30 units. Fault is expressed as soft, gougy highly fractured and sheared black, fine grained , non-calcareous mudstone. Shear brecciation is locally observed. Lower portion of fault interval (84.43m) is moderately compentent but exhibits bed disrupted shearing and shear brecciation. Fault rock is possibly MD 20 non calcareous mudstone and contains blebby pyrite typical of the MD20 assemblage. Dolomite (as per carbonate staining) vein microbreccias also occur within fault interval. Weak oxidation occurs along fractures and joint surfaces.							
						MD	GY					
						--	BK	BD				
85.25	270.36	185.11	CMS	FG	Black, fine grained, thinly bedded, calcareous mudstone interbedded with medium grey, medium grained, fossiliferous limestone.							
						MD	GY	DB				
						--	BK	BD				
270.36	330.10	59.74	MST	FG	black, fine grained, thinly bedded non calcareous mudstone interbedded with medium grey, medium grained siltstone.							
						MD	GY				3P	2
						--	BK	BD			1P	2
330.10	346.56	16.46	CMS	FG	dark grey, fine grained, thinly bedded, siliceous mudstone interbedded with light grey, fine grained mudstone, tan, coarse grained sandstone.							
						--	TN					
						LT	GY					
						DK	GY					

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From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
0.00	4.89	4.89	0	0	0.00	0	--	--	--	no recovery
4.89	5.18	0.29	0.29	100	0.00	0	0R	3H	1W	rbz
5.18	8.23	3.05	0.78	26	0.13	4	0R	3H	1W	rbz
8.23	11.28	3.05	2.51	82	0.29	10	0R	3H	1W	rbz
11.28	14.33	3.05	2.75	90	1.45	48	0R	3H	1W	rbz
14.33	17.37	3.04	2.74	90	1.68	55	0R	3H	1W	rbz
17.37	20.42	3.05	3	98	2.04	67	0R	3H	1W	multiple single joints
20.42	23.47	3.05	3	98	2.05	67	0R	3H	1W	
23.47	26.52	3.05	2.86	94	1.82	60	0R	3H	1W	
26.52	29.57	3.05	2.62	86	0.79	26	0R	3H	1W	
29.57	32.61	3.04	2.85	94	1.67	55	0R	3H	1W	
32.61	35.66	3.05	2.94	96	1.40	46	0R	3H	1W	
35.66	38.71	3.05	2.83	93	1.52	50	0R	3H	1W	
38.71	41.76	3.05	2.87	94	2.47	81	0R	3H	1W	
41.76	44.81	3.05	2.85	93	1.23	40	0R	2H	1W	Rubble from 43.46-43.67m, 43.82-43.92m with weak oxidation and clay alteration
44.81	47.85	3.04	2.79	92	1.43	47	0R	2H	1W	
47.85	50.90	3.05	2.52	83	1.23	40	0R	3H	1W	
50.90	53.95	3.05	2.9	95	1.69	55	0R	3H	1W	
53.95	57.00	3.05	1.87	61	0.48	16	0R	3H	1W	
57.00	60.05	3.05	2.24	73	0.97	32	0R	2H	1W	
60.05	63.09	3.04	3.04	100	1.53	50	0R	3H	1W	
63.09	66.14	3.05	2.23	73	0.51	17	0R	2H	1W	
66.14	69.19	3.05	2.85	93	1.25	41	0R	2H	1W	
69.19	72.24	3.05	2.74	90	1.39	46	0R	3H	1W	
72.24	75.29	3.05	2.76	90	1.66	54	0R	3H	1W	
75.29	78.33	3.04	2.97	98	2.13	70	0R	3H	1W	
78.33	81.38	3.05	2.76	90	1.15	38	0R	3H	1W	
81.38	84.43	3.05	1.73	57	0.13	4	0R	1H	1W	very rubbly, clay-rich interval
84.43	87.48	3.05	2.48	81	0.63	21	2R	2H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
87.48	90.53	3.05	2.6	85	1.00	33	2R	3H	1W	many joint surfaces polished with carbonaceous alteration
90.53	93.57	3.04	2.84	93	2.15	71	3R	3H	1W	
93.57	96.62	3.05	2.94	96	2.28	75	3R	3H	1W	
96.62	99.67	3.05	2.93	96	2.32	76	3R	3H	1W	
99.67	102.72	3.05	2.35	77	1.12	37	0R	1H	1W	Rubbly, clay-rich sections from 99.88-100.04m, 101.93-102.10m. Moderate-high clay alteration throughout run.
102.72	105.77	3.05	2.89	95	0.67	22	0R	1H	1W	
105.77	108.81	3.04	1.46	48	0.17	6	0R	1H	1W	rubbly gougey sections in interval
108.81	111.86	3.05	2.58	85	0.83	27	0R	1H	1W	rubbly zome from 111-111.86
111.86	114.91	3.05	2.25	74	0.00	0	0R	1H	1W	rubbly interval with local gougey zones
114.91	117.96	3.05	2.75	90	0.98	32	1R	3H	1W	
117.96	121.01	3.05	2.82	92	0.80	26	1R	3H	1W	rubbly interval from 119-119.70m
121.01	124.05	3.04	2.77	91	0.66	22	1R	3H	1W	
124.05	127.10	3.05	2.88	94	1.10	36	0R	3H	1W	rubble zone @ 125.50-125.70
127.10	130.15	3.05	2.65	87	0.39	13	1R	2H	1W	rubble zone from 127.65-130.15
130.15	133.20	3.05	2.7	89	0.00	0	2R	2H	1W	
133.20	136.25	3.05	2.82	92	1.08	35	3R	3H	1W	
136.25	139.29	3.04	1.9	63	1.01	33	2R	3H	1W	rubble zone from 138.75-139.29
139.29	142.34	3.05	2.25	74	0.00	0	2R	2H	1W	highly fractured interval
142.34	145.39	3.05	2.61	86	0.00	0	2R	3H	1W	highly frature zones within interval
145.39	148.44	3.05	2.82	92	2.14	70	3R	3H	1W	
148.44	151.49	3.05	2.62	86	0.98	32	2R	3H	1W	
151.49	154.53	3.04	2.1	69	0.00	0	0R	2H	1W	
154.53	157.58	3.05	2.94	96	0.83	27	0R	2H	1W	
157.58	160.63	3.05	2.78	91	1.13	37	1R	2H	1W	
160.63	163.68	3.05	2.81	92	1.26	41	1R	2H	1W	Polished planar joint surfaces. Noted as a slickenslide but does not have slicks ("polished" is being added to database)
163.68	166.73	3.05	2.65	87	1.05	34	1R	2H	1W	
166.73	169.77	3.04	3.01	99	1.13	37	0R	2H	1W	<1mm realgar blebs present along high-angle TCA fractures/joints

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
169.77	172.82	3.05	2.9	95	0.39	13	0R	2H	1W	Graphitic, polished surfaces present throught out the interval. Labelled as slickenslide ("polished" is being added to the database)
172.82	175.87	3.05	3.04	100	1.40	46	0R	1H	1W	
175.87	178.92	3.05	2.98	98	2.23	73	0R	3H	1W	
178.92	181.97	3.05	2.89	95	1.00	33	0R	3H	1W	
181.97	185.01	3.04	2.92	96	0.98	32	1R	2H	1W	
185.01	188.06	3.05	2.77	91	0.95	31	2R	2H	1W	Polished graphitic surfaces throughout interval
188.06	191.11	3.05	2.72	89	0.39	13	1R	3H	1W	
191.11	194.16	3.05	2.58	85	0.00	0	0R	2H	1W	interval highly fractured
194.16	197.21	3.05	2.1	69	0.74	24	1R	3H	1W	
197.21	200.25	3.04	2.8	92	0.47	15	2R	3H	1W	rubble zone @ 199.30-199.50
200.25	203.30	3.05	3.02	99	0.89	29	2R	3H	1W	
203.30	206.35	3.05	3.04	100	1.76	58	2R	2H	1W	rbz from 205.0m -206.0m
206.35	209.40	3.05	3.04	100	2.05	67	1R	3H	1W	multiple single joints
209.40	212.45	3.05	2.9	95	1.95	64	1R	3H	1W	
212.45	215.49	3.04	2.99	98	1.44	47	0R	2H	1W	
215.49	218.54	3.05	3.04	100	0.75	25	3R	2H	1W	
218.54	221.59	3.05	2.87	94	1.37	45	0R	2H	1W	
221.59	224.64	3.05	2.69	88	0.89	29	0R	2H	1W	rbz
224.64	227.69	3.05	2.84	93	0.93	30	0R	2H	1W	rbz
227.69	230.73	3.04	3	99	1.80	59	0R	2H	1W	rbz
230.73	233.78	3.05	2.95	97	0.62	20	1R	3H	1W	
233.78	236.83	3.05	3.03	99	0.79	26	0R	3H	1W	rbz 236.60-236.80
236.83	239.88	3.05	1.85	61	0.00	0	1R	2H	1W	rbz 237.10-239
239.88	242.93	3.05	2.96	97	0.55	18	1R	3H	1W	rbz 242.75-242.93
242.93	245.97	3.04	3.01	99	1.70	56	3R	4H	1W	
245.97	249.02	3.05	2.98	98	1.86	61	3R	4H	1W	
249.02	252.07	3.05	1.74	57	0.52	17	2R	3H	1W	
252.07	255.12	3.05	2.85	93	0.90	30	2R	3H	1W	
255.12	258.17	3.05	2.32	76	0.00	0	0R	3H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
258.17	261.21	3.04	2.76	91	0.00	0	1R	3H	1W	rbz 259.90-260.20
261.21	264.26	3.05	3.03	99	0.00	0	1R	2H	1W	
264.26	267.31	3.05	2.65	87	0.27	9	0R	2H	1W	
267.31	270.36	3.05	1.93	63	0.00	0	0R	2H	1W	rbz 267.73-270.36
270.36	273.41	3.05	3.04	100	2.20	72	0R	3H	1W	
273.41	276.45	3.04	2.38	78	0.95	31	0R	3H	1W	rbz @ 275.61
276.45	279.50	3.05	3.03	99	1.37	45	0R	3H	1W	
279.50	282.55	3.05	3.05	100	2.38	78	0R	3H	1W	
282.55	285.60	3.05	2.97	97	2.67	88	0R	3H	1W	
285.60	288.65	3.05	3.02	99	2.22	73	0R	3H	1W	
288.65	291.69	3.04	2.89	95	2.49	82	0R	3H	1W	
291.69	294.74	3.05	2.93	96	2.37	78	0R	3H	1W	
294.74	297.79	3.05	2.79	91	0.00	0	0R	2H	1W	
297.79	300.84	3.05	2.16	71	0.00	0	1R	2H	1W	
300.84	303.89	3.05	3.04	100	0.95	31	3R	3H	1W	
303.89	306.93	3.04	2.52	83	0.43	14	3R	3H	1W	
306.93	309.98	3.05	2.35	77	0.00	0	2R	2H	1W	
309.98	313.03	3.05	2.64	87	0.15	5	2R	2H	1W	
313.03	316.09	3.06	2.95	96	0.92	30	1R	3H	1W	
316.09	319.13	3.04	2.77	91	0.81	27	1R	3H	1W	
319.13	322.17	3.04	2.93	96	0.89	29	1R	3H	1W	
322.17	325.22	3.05	2.45	80	0.00	0	1R	3H	1W	
325.22	328.27	3.05	2.98	98	0.00	0	0R	2H	1W	
328.27	331.32	3.05	2.93	96	0.74	24	1R	2H	1W	
331.32	334.37	3.05	2.65	87	1.43	47	3R	3H	1W	
334.37	337.41	3.04	2.92	96	0.00	0	2R	2H	1W	
337.41	340.46	3.05	2.85	93	0.00	0	2R	4H	1W	
340.46	343.51	3.05	2.72	89	1.61	53	2R	4H	1W	
343.51	346.56	3.05	2.57	84	1.28	42	2R	4H	1W	

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From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
0.00	0.00	0.00	-QC-	0.00	0	V767872	☐	O18-063	Core	4C	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V767902	☐	O18-066	core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V767775	☐	O18-059	core	SR5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V767874	☐	O18-063	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V767852	☐	O18-063	Core	SR5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V767843	☐	O18-061	core	SR5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V767837	☐	O18-061	core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V767827	☐	O18-061	core	SR5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V767806	☐	O18-059	core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V767793	☐	O18-059	core	SR5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V767893	☐	O18-066	core	SR5	☐	☐	☐
5.18	8.23	3.05	MST	0.78	26	V767767	☐	O18-059	core		☐	☐	☐
8.23	11.28	3.05	MST	2.51	82	V767768	☐	O18-059	core		☐	☐	☐
11.28	14.33	3.05	MST	2.75	90	V767769	☐	O18-059	core		☐	☐	☐
14.33	17.37	3.04	MST	2.74	90	V767770	☐	O18-059	core		☐	☐	☐
17.37	20.42	3.05	MST	3.00	98	V767771	☐	O18-059	core		☐	☐	☐
20.42	23.47	3.05	MST	3.00	98	V767772	☐	O18-059	core		☐	☐	☐
23.47	26.52	3.05	MST	2.86	94	V767773	☐	O18-059	core		☐	☐	☐
26.52	29.57	3.05	MST	2.62	86	V767774	☐	O18-059	core		☐	☐	☐
29.57	32.61	3.04	MST	2.85	94	V767776	☐	O18-059	core		☐	☐	☐
32.61	35.66	3.05	MST	2.94	96	V767777	☐	O18-059	core		☐	☐	☐
35.66	38.71	3.05	MST	2.83	93	V767778	☐	O18-059	core		☐	☐	☐
38.71	41.76	3.05	MST	2.87	94	V767779	☐	O18-059	core		☐	☐	☐
41.76	44.81	3.05	MST	2.85	93	V767780	☐	O18-059	core		☐	☐	☐
44.81	47.85	3.04	MST	2.79	92	V767781	☐	O18-059	core		☐	☐	☐
47.85	50.90	3.05	MST	2.52	83	V767782	☐	O18-059	core		☐	☐	☐
50.90	53.95	3.05	MST	2.90	95	V767783	☐	O18-059	core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
53.95	57.00	3.05	MST	1.87	61	V767784	☐	O18-059	core		☐	☐	☐
53.95	57.00	3.05	MST	1.87	61	V767785	☐	O18-059	core		☐	☐	☑
57.00	60.05	3.05	MST	2.24	73	V767786	☐	O18-059	core		☐	☐	☐
60.05	63.09	3.04	MST	3.04	100	V767787	☐	O18-059	core		☐	☐	☐
63.09	66.14	3.05	MST	2.23	73	V767788	☐	O18-059	core		☐	☐	☐
66.14	69.19	3.05	MST	2.85	93	V767789	☐	O18-059	core		☐	☐	☐
69.19	72.24	3.05	MST	2.74	90	V767790	☐	O18-059	core		☐	☐	☐
72.24	75.29	3.05	MST	2.76	90	V767791	☐	O18-059	core		☐	☐	☐
75.29	78.33	3.04	MST	2.97	98	V767792	☐	O18-059	core		☐	☐	☐
78.33	81.38	3.05	MST	2.76	90	V767794	☐	O18-059	core		☐	☐	☐
81.38	84.43	3.05	MST	1.73	57	V767795	☐	O18-059	core		☐	☐	☐
84.43	87.48	3.05	FLT	2.48	81	V767796	☐	O18-059	core		☐	☐	☐
87.48	90.53	3.05	CMS	2.60	85	V767797	☐	O18-059	core		☐	☐	☐
90.53	93.57	3.04	CMS	2.84	93	V767798	☐	O18-059	core		☐	☐	☐
93.57	96.62	3.05	CMS	2.94	96	V767799	☐	O18-059	core		☐	☐	☐
93.57	96.62	3.05	CMS	2.94	96	V767800	☐	O18-059	core		☐	☑	☐
96.62	99.67	3.05	CMS	2.93	96	V767801	☐	O18-059	core		☐	☐	☐
99.67	102.72	3.05	CMS	2.35	77	V767802	☐	O18-059	core		☐	☐	☐
102.72	105.77	3.05	CMS	2.89	95	V767803	☐	O18-059	core		☐	☐	☐
105.77	108.81	3.04	CMS	1.46	48	V767804	☐	O18-059	core		☐	☐	☐
108.81	111.86	3.05	CMS	2.58	85	V767805	☐	O18-059	core		☐	☐	☐
111.86	114.91	3.05	CMS	2.25	74	V767807	☐	O18-061	core		☐	☐	☐
114.91	117.96	3.05	CMS	2.75	90	V767808	☐	O18-061	core		☐	☐	☐
117.96	121.02	3.06	CMS	2.82	92	V767809	☐	O18-061	core		☐	☐	☐
121.02	124.05	3.03	CMS	2.77	91	V767810	☐	O18-061	core		☐	☐	☐
124.05	127.10	3.05	CMS	2.88	94	V767811	☐	O18-061	core		☐	☐	☐
127.10	130.15	3.05	CMS	2.65	87	V767812	☐	O18-061	core		☐	☐	☐
127.10	130.15	3.05	CMS	2.65	87	V767813	☐	O18-061	core		☐	☑	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
130.15	133.20	3.05	CMS	2.70	89	V767814	☐	O18-061	core		☐	☐	☐
133.20	136.25	3.05	CMS	2.82	92	V767815	☐	O18-061	core		☐	☐	☐
136.25	139.29	3.04	CMS	1.90	63	V767816	☐	O18-061	core		☐	☐	☐
139.29	142.34	3.05	CMS	2.25	74	V767817	☐	O18-061	core		☐	☐	☐
142.34	145.39	3.05	CMS	2.61	86	V767818	☐	O18-061	core		☐	☐	☐
145.39	148.44	3.05	CMS	2.82	92	V767819	☐	O18-061	core		☐	☐	☐
148.44	151.49	3.05	CMS	2.62	86	V767820	☐	O18-061	core		☐	☐	☐
151.49	154.53	3.04	CMS	2.10	69	V767821	☐	O18-061	core		☐	☐	☐
154.53	157.58	3.05	CMS	2.94	96	V767822	☐	O18-061	core		☐	☐	☐
157.58	159.10	1.52	CMS	1.39	91	V767823	☐	O18-061	core		☐	☐	☐
159.10	160.63	1.53	CMS	1.11	73	V767824	☐	O18-061	core		☐	☐	☐
160.63	161.88	1.25	CMS	1.25	100	V767825	☐	O18-061	core		☐	☐	☐
161.88	163.68	1.80	CMS	1.44	80	V767826	☐	O18-061	core		☐	☐	☐
163.68	165.20	1.52	CMS	1.30	86	V767828	☐	O18-061	core		☐	☐	☐
165.20	166.73	1.53	CMS	1.46	95	V767829	☐	O18-061	core		☐	☐	☐
166.73	168.30	1.57	CMS	1.51	96	V767830	☐	O18-061	core		☐	☐	☐
168.30	169.77	1.47	CMS	1.34	91	V767831	☐	O18-061	core		☐	☐	☐
169.77	171.50	1.73	CMS	1.52	88	V767832	☐	O18-061	core		☐	☐	☐
171.50	172.82	1.32	CMS	1.17	89	V767833	☐	O18-061	core		☐	☐	☐
172.82	174.52	1.70	CMS	1.70	100	V767834	☐	O18-061	core		☐	☐	☐
174.52	175.87	1.35	CMS	1.28	95	V767835	☐	O18-061	core		☐	☐	☐
175.87	177.46	1.59	CMS	1.43	90	V767836	☐	O18-061	core		☐	☐	☐
177.46	178.92	1.46	CMS	1.45	99	V767838	☐	O18-061	core		☐	☐	☐
178.92	181.97	3.05	CMS	2.89	95	V767839	☐	O18-061	core		☐	☐	☐
178.92	181.97	3.05	CMS	2.89	95	V767840	☐	O18-061	core		☐	☐	☑
181.97	185.01	3.04	CMS	2.92	96	V767841	☐	O18-061	core		☐	☐	☐
185.01	188.06	3.05	CMS	2.77	91	V767842	☐	O18-061	core		☐	☐	☐
188.06	191.11	3.05	CMS	2.72	89	V767844	☐	O18-061	core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
191.11	194.16	3.05	CMS	2.58	85	V767845	☐	O18-061	core		☐	☐	☐
194.16	197.21	3.05	CMS	2.10	69	V767846	☐	O18-061	core		☐	☐	☐
197.21	200.25	3.04	CMS	2.80	92	V767847	☐	O18-063	Core		☐	☐	☐
200.25	203.30	3.05	CMS	3.02	99	V767848	☐	O18-063	Core		☐	☐	☐
203.30	206.35	3.05	CMS	3.04	100	V767849	☐	O18-063	Core		☐	☐	☐
206.35	209.40	3.05	CMS	3.04	100	V767850	☐	O18-063	Core		☐	☐	☐
209.40	212.45	3.05	CMS	2.90	95	V767851	☐	O18-063	Core		☐	☐	☐
212.45	215.49	3.04	CMS	2.99	98	V767853	☐	O18-063	Core		☐	☐	☐
215.49	218.54	3.05	CMS	3.04	100	V767854	☐	O18-063	Core		☐	☐	☐
218.54	221.59	3.05	CMS	2.87	94	V767855	☐	O18-063	Core		☐	☐	☐
221.59	224.64	3.05	CMS	2.69	88	V767856	☐	O18-063	Core		☐	☐	☐
224.64	227.69	3.05	CMS	2.84	93	V767857	☐	O18-063	Core		☐	☐	☐
227.69	230.73	3.04	CMS	3.00	99	V767858	☐	O18-063	Core		☐	☐	☐
230.73	233.78	3.05	CMS	2.95	97	V767859	☐	O18-063	Core		☐	☐	☐
233.78	236.83	3.05	CMS	3.03	99	V767860	☐	O18-063	Core		☐	☐	☐
236.83	239.88	3.05	CMS	1.85	61	V767861	☐	O18-063	Core		☐	☐	☐
239.88	242.93	3.05	CMS	2.96	97	V767862	☐	O18-063	Core		☐	☐	☐
242.93	245.97	3.04	CMS	3.01	99	V767863	☐	O18-063	Core		☐	☐	☐
245.97	249.02	3.05	CMS	2.98	98	V767864	☐	O18-063	Core		☐	☐	☐
249.02	252.07	3.05	CMS	1.74	57	V767865	☐	O18-063	Core		☐	☐	☐
252.07	255.12	3.05	CMS	2.85	93	V767866	☐	O18-063	Core		☐	☐	☐
255.12	258.17	3.05	CMS	2.32	76	V767867	☐	O18-063	Core		☐	☐	☐
258.17	261.21	3.04	CMS	2.76	91	V767868	☐	O18-063	Core		☐	☐	☐
258.17	261.21	3.04	CMS	2.76	91	V767869	☐	O18-063	Core		☐	☑	☐
261.21	264.26	3.05	CMS	3.03	99	V767870	☐	O18-063	Core		☐	☐	☐
264.26	267.31	3.05	CMS	2.65	87	V767871	☐	O18-063	Core		☐	☐	☐
267.31	270.36	3.05	CMS	1.93	63	V767873	☐	O18-063	Core		☐	☐	☐
270.36	273.41	3.05	MST, CMS	3.04	100	V767875	☐	O18-063	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
273.41	276.45	3.04	MST	2.38	78	V767876	☐	O18-063	Core		☐	☐	☐
276.45	279.50	3.05	MST	3.03	99	V767877	☐	O18-063	Core		☐	☐	☐
279.50	282.55	3.05	MST	3.05	100	V767878	☐	O18-063	Core		☐	☐	☐
282.55	285.60	3.05	MST	2.97	97	V767879	☐	O18-063	Core		☐	☐	☐
285.60	288.65	3.05	MST	3.02	99	V767880	☐	O18-063	Core		☐	☐	☐
288.65	291.69	3.04	MST	2.89	95	V767881	☐	O18-063	Core		☐	☐	☐
291.69	294.74	3.05	MST	2.93	96	V767882	☐	O18-063	Core		☐	☐	☐
294.74	297.79	3.05	MST	2.79	91	V767883	☐	O18-063	Core		☐	☐	☐
297.79	300.84	3.05	MST	2.16	71	V767884	☐	O18-063	Core		☐	☐	☐
297.79	300.84	3.05	MST	2.16	71	V767885	☐	O18-063	Core		☐	☐	☑
300.84	303.89	3.05	MST	3.04	100	V767886	☐	O18-063	Core		☐	☐	☐
303.89	306.93	3.04	MST	2.52	83	V767887	☐	O18-066	core		☐	☐	☐
306.93	309.98	3.05	MST	2.35	77	V767888	☐	O18-066	core		☐	☐	☐
309.98	313.03	3.05	MST	2.64	87	V767889	☐	O18-066	core		☐	☐	☐
313.03	316.09	3.06	MST	2.95	96	V767890	☐	O18-066	core		☐	☐	☐
316.09	319.13	3.04	MST	2.77	91	V767891	☐	O18-066	core		☐	☐	☐
319.13	322.17	3.04	MST	2.93	96	V767892	☐	O18-066	core		☐	☐	☐
322.17	325.22	3.05	MST	2.45	80	V767894	☐	O18-066	core		☐	☐	☐
325.22	328.27	3.05	MST	2.98	98	V767895	☐	O18-066	core		☐	☐	☐
328.27	331.32	3.05	MST	2.93	96	V767896	☐	O18-066	core		☐	☐	☐
331.32	334.37	3.05	CMS	2.65	87	V767897	☐	O18-066	core		☐	☐	☐
331.32	334.37	3.05	CMS	2.65	87	V767898	☐	O18-066	core		☐	☑	☐
334.37	337.41	3.04	CMS	2.92	96	V767899	☐	O18-066	core		☐	☐	☐
337.41	340.46	3.05	CMS	2.85	93	V767900	☐	O18-066	core		☐	☐	☐
340.46	343.51	3.05	CMS	2.72	89	V767901	☐	O18-066	core		☐	☐	☐
343.51	346.56	3.05	CMS	2.57	84	V767903	☐	O18-066	core		☐	☐	☐

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From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
0.00	4.22	4.22	OVB	--	Overburden. No Recovery							
4.22	7.92	3.70	OVB	--	Overburden							
7.92	138.72	130.80	MST	FG	Dark grey, fine-grained mudstone with regular <1mm medium grey, fine-grained silty laminations (MD20) with locally observed gritstone interbeds and trace quartz-dolomite veining.							
						DK	BK					
						DK	GY					
138.72	151.18	12.46	DST	FG	Crackled, locally brecciated, light to medium-grey, fine-grained, dolostone. Weak reaction 10% HCL. Trace <1mm stylolites.							
						MD	GY					
						LT	GY	CR				

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From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
0.00	4.22	4.22	0	0	0.00	0	0R	--	--	No recovery
4.22	4.88	0.66	0.54	82	0.00	0	3R	1H	2W	ovb
4.88	7.92	3.04	1.23	40	0.23	8	2R	1H	2W	ovb
7.92	10.97	3.05	1.34	44	0.00	0	0R	1H	2W	rbz
10.97	14.02	3.05	1.64	54	0.00	0	0R	1H	2W	rbz
14.02	17.07	3.05	1.33	44	0.00	0	0R	1H	2W	rbz
17.07	20.12	3.05	0.94	31	0.00	0	0R	1H	2W	rbz
20.12	23.16	3.04	2.11	69	0.23	8	0R	2H	2W	rbz
23.16	26.21	3.05	2.33	76	0.13	4	0R	2H	3W	
26.21	29.26	3.05	2.78	91	0.11	4	0R	2H	2W	
29.26	32.31	3.05	2.61	86	0.78	26	0R	2H	2W	
32.31	35.36	3.05	2.56	84	0.35	11	0R	1H	2W	
35.36	38.41	3.05	2.3	75	0.40	13	0R	1H	2W	rbz from 35.61-36.67m
38.41	41.45	3.04	2.6	86	0.67	22	0R	1H	1W	
41.45	44.50	3.05	2.25	74	0.13	4	0R	1H	1W	rbz from 43.74-44.39m
44.50	47.55	3.05	2.74	90	0.77	25	0R	2H	1W	
47.55	50.60	3.05	2.94	96	0.84	28	0R	3H	1W	
50.60	53.64	3.04	2.81	92	0.22	7	0R	2H	1W	
53.64	56.69	3.05	2.28	75	0.23	8	0R	2H	1W	
56.69	59.74	3.05	2.42	79	0.39	13	0R	2H	1W	
59.74	62.79	3.05	2.51	82	0.41	13	0R	2H	1W	
62.79	65.84	3.05	2.03	67	0.25	8	0R	1H	1W	
65.84	68.88	3.04	2.29	75	0.00	0	0R	1H	1W	
68.88	71.93	3.05	2.36	77	0.56	18	0R	1H	1W	
71.93	74.98	3.05	3	98	2.36	77	0R	2H	1W	
74.98	78.03	3.05	2.58	85	0.70	23	0R	1H	1W	
78.03	81.08	3.05	3	98	2.26	74	0R	2H	1W	graphitic joint surfaces
81.08	84.12	3.04	2.95	97	1.71	56	0R	3H	1W	
84.12	87.17	3.05	3.01	99	1.94	64	0R	3H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
87.17	90.22	3.05	3.03	99	2.87	94	0R	3H	1W	
90.22	93.27	3.05	3.05	100	2.16	71	0R	3H	1W	
93.27	96.32	3.05	3.02	99	2.51	82	0R	3H	1W	
96.32	99.36	3.04	3	99	2.22	73	0R	3H	1W	
99.36	102.41	3.05	3.04	100	2.95	97	0R	3H	1W	
102.41	105.46	3.05	3	98	2.63	86	0R	3H	1W	
105.46	108.51	3.05	2.84	93	2.47	81	0R	3H	1W	
108.51	111.56	3.05	3.01	99	2.84	93	1R	3H	1W	
111.56	114.60	3.04	2.96	97	2.55	84	0R	3H	1W	
114.60	117.65	3.05	3.04	100	1.36	45	0R	3H	1W	
117.65	120.70	3.05	3	98	2.34	77	0R	3H	1W	
120.70	123.75	3.05	2.85	93	2.08	68	0R	3H	1W	multiple single joints
123.75	126.80	3.05	2.77	91	1.81	59	0R	3H	1W	rbz
126.80	129.85	3.05	2.85	93	0.79	26	0R	2H	1W	rbz
129.85	132.89	3.04	2.92	96	1.75	58	0R	2H	1W	gougy zone from 132.41-132.41m
132.89	135.94	3.05	3.04	100	2.57	84	0R	2H	1W	
135.94	138.99	3.05	2.95	97	2.64	87	0R	2H	1W	
138.99	142.04	3.05	3.04	100	3.04	100	2R	3H	1W	multiple single joints
142.04	145.08	3.04	3.04	100	3.04	100	2R	3H	1W	
145.08	148.13	3.05	3.04	100	3.04	100	2R	3H	1W	
148.13	151.18	3.05	3.04	100	3.04	100	3R	3H	1W	

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From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
0.00	0.00	0.00	-QC-	0.00	0	W231555	☐	O18-065	Core	SR5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W231558	☐	O18-065	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W231564	☐	O18-065	Core	4C	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W231516	☐	O18-060	Core		☑	☐	☐
4.22	4.88	0.66	OVB, OVB	0.54	82	W231509	☐	O18-060	Core		☐	☐	☐
4.88	7.92	3.04	OVB	1.23	40	W231510	☐	O18-060	Core		☐	☐	☐
7.92	10.97	3.05	OVB, MST	1.34	44	W231511	☐	O18-060	Core		☐	☐	☐
10.97	14.02	3.05	MST	1.64	54	W231512	☐	O18-060	Core		☐	☐	☐
14.02	17.07	3.05	MST	1.33	44	W231513	☐	O18-060	Core		☐	☐	☐
17.07	20.12	3.05	MST	0.94	31	W231514	☐	O18-060	Core		☐	☐	☐
20.12	23.16	3.04	MST	2.11	69	W231515	☐	O18-060	Core		☐	☐	☐
23.16	26.21	3.05	MST	2.33	76	W231517	☐	O18-060	Core		☐	☐	☐
26.21	29.26	3.05	MST	2.78	91	W231518	☐	O18-060	Core		☐	☐	☐
26.21	29.26	3.05	MST	2.78	91	W231519	☐	O18-060	Core		☐	☐	☑
29.26	32.31	3.05	MST	2.61	86	W231520	☐	O18-060	Core		☐	☐	☐
32.31	35.36	3.05	MST	2.56	84	W231521	☐	O18-060	Core		☐	☐	☐
35.36	38.41	3.05	MST	2.30	75	W231522	☐	O18-060	Core		☐	☐	☐
38.41	41.45	3.04	MST	2.60	86	W231523	☐	O18-060	Core		☐	☐	☐
41.45	44.50	3.05	MST	2.25	74	W231524	☐	O18-060	Core		☐	☐	☐
44.50	47.55	3.05	MST	2.74	90	W231525	☐	O18-060	Core		☐	☐	☐
47.55	50.60	3.05	MST	2.94	96	W231526	☐	O18-060	Core		☐	☐	☐
50.60	53.64	3.04	MST	2.81	92	W231527	☐	O18-060	Core		☐	☐	☐
53.64	56.69	3.05	MST	2.28	75	W231528	☐	O18-060	Core		☐	☐	☐
56.69	59.74	3.05	MST	2.42	79	W231529	☐	O18-060	Core		☐	☐	☐
59.74	62.79	3.05	MST	2.51	82	W231530	☐	O18-060	Core		☐	☐	☐
62.79	65.84	3.05	MST	2.03	67	W231531	☐	O18-065	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
65.84	68.88	3.04	MST	2.29	75	W231532	☐	O18-065	Core		☐	☐	☐
68.88	71.93	3.05	MST	2.36	77	W231533	☐	O18-065	Core		☐	☐	☐
71.93	74.98	3.05	MST	3.00	98	W231534	☐	O18-065	Core		☐	☐	☐
74.98	78.03	3.05	MST	2.58	85	W231535	☐	O18-065	Core		☐	☐	☐
78.03	81.08	3.05	MST	3.00	98	W231536	☐	O18-065	Core		☐	☐	☐
78.03	81.08	3.05	MST	3.00	98	W231537	☐	O18-065	Core		☐	☑	☐
81.08	84.12	3.04	MST	2.95	97	W231538	☐	O18-065	Core		☐	☐	☐
84.12	87.17	3.05	MST	3.01	99	W231539	☐	O18-065	Core		☐	☐	☐
87.17	90.22	3.05	MST	3.03	99	W231540	☐	O18-065	Core		☐	☐	☐
90.22	93.27	3.05	MST	3.05	100	W231541	☐	O18-065	Core		☐	☐	☐
93.27	96.32	3.05	MST	3.02	99	W231542	☐	O18-065	Core		☐	☐	☐
96.32	99.36	3.04	MST	3.00	99	W231543	☐	O18-065	Core		☐	☐	☐
99.36	102.41	3.05	MST	3.04	100	W231544	☐	O18-065	Core		☐	☐	☐
102.41	105.46	3.05	MST	3.00	98	W231545	☐	O18-065	Core		☐	☐	☐
105.46	108.51	3.05	MST	2.84	93	W231546	☐	O18-065	Core		☐	☐	☐
108.51	111.56	3.05	MST	3.01	99	W231547	☐	O18-065	Core		☐	☐	☐
111.56	114.60	3.04	MST	2.96	97	W231548	☐	O18-065	Core		☐	☐	☐
114.60	117.65	3.05	MST	3.04	100	W231549	☐	O18-065	Core		☐	☐	☐
117.65	120.70	3.05	MST	3.00	98	W231550	☐	O18-065	Core		☐	☐	☐
120.70	123.75	3.05	MST	2.85	93	W231551	☐	O18-065	Core		☐	☐	☐
123.75	126.80	3.05	MST	2.77	91	W231552	☐	O18-065	Core		☐	☐	☐
126.80	128.32	1.52	MST	1.52	100	W231553	☐	O18-065	Core		☐	☐	☐
128.32	129.85	1.53	MST	1.05	69	W231554	☐	O18-065	Core		☐	☐	☐
129.85	131.37	1.52	MST	1.36	89	W231556	☐	O18-065	Core		☐	☐	☐
131.37	132.89	1.52	MST	1.52	100	W231557	☐	O18-065	Core		☐	☐	☐
132.89	134.41	1.52	MST	1.52	100	W231559	☐	O18-065	Core		☐	☐	☐
134.41	135.94	1.53	MST	1.48	97	W231560	☐	O18-065	Core		☐	☐	☐
134.41	135.94	1.53	MST	1.48	97	W231561	☐	O18-065	Core		☐	☐	☑

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
135.94	137.46	1.52	MST	1.52	100	W231562	☐	O18-065	Core		☐	☐	☐
137.46	138.72	1.26	MST	1.23	98	W231563	☐	O18-065	Core		☐	☐	☐
138.72	140.51	1.79	MST, DST	1.79	100	W231565	☐	O18-065	Core		☐	☐	☐
140.51	142.04	1.53	DST	1.51	99	W231566	☐	O18-065	Core		☐	☐	☐
142.04	145.08	3.04	DST	3.04	100	W231567	☐	O18-065	Core		☐	☐	☐
145.08	148.13	3.05	DST	3.04	100	W231568	☐	O18-065	Core		☐	☐	☐
148.13	151.18	3.05	DST	3.04	100	W231569	☐	O18-065	Core		☐	☐	☐

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From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
0.00	1.22	1.22	OVB	--	Overburden. No recovery							
1.22	1.52	0.30	OVB	--	Overburden. Broken, medium-gark grey limestone clasts with clay							
						MD	GY					
1.52	151.49	149.97	LST	MG	Finely bedded, light-medium grey, fine-medium grained limestone and medium-dark grey, fine grained calcareous mudstone (turbidite sequence). Limestone dominant/calcareous mudstone dominant intervals alternate throughout the unit. Minor calcite throughout. Minor bedding paralled (~80%) and crosscutting <1mm stylolites (~20).							
						DK	GY					
						MD	GY					
151.49	289.08	137.59	LST	FG	Interbedded coarse-grained bioclast- and lithic-rich debris flows and dark grey/black, weak-moderately laminated calcareous mudstone.							
								BD				
								FS				
								DB				
289.08	656.84	367.76	MST	FG	Black, fine grained, variably silicified, weakly to non- calcareous mudstone interbedded with limestone, and bioclastic debris flows. Mudstone is less reactive to HCL and darker than previous S10 assemblage.							

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
0.00	1.22	1.22	0	0	0.00	0	0R	--	--	TOH - no recovery.
1.22	1.52	0.30	0.3	100	0.00	0	3R	3H	3W	
1.52	3.05	1.53	0.69	45	0.23	15	3R	2H	3W	
3.05	4.57	1.52	0.78	51	0.58	38	3R	2H	4W	
4.57	6.10	1.53	1.05	69	0.45	29	3R	2H	4W	
6.10	7.62	1.52	1.48	97	0.45	30	3R	2H	4W	
7.62	9.14	1.52	1.52	100	1.26	83	3R	3H	3W	
9.14	12.19	3.05	3.01	99	1.86	61	3R	3H	1W	
12.19	15.24	3.05	3.04	100	2.74	90	3R	3H	1W	Minor joints are breaking along <1mm calcite veinlets
15.24	18.29	3.05	2.97	97	2.39	78	3R	3H	1W	Lot of mechanical breaks along bedding.
18.29	21.34	3.05	3.03	99	1.88	62	3R	3H	1W	Mechanical breaks along bedding. Locally observed clay filled joints.
21.34	24.38	3.04	2.98	98	2.93	96	3R	3H	1W	
24.38	27.43	3.05	3.05	100	2.98	98	3R	3H	1W	
27.43	30.48	3.05	3.05	100	2.84	93	3R	2H	1W	
30.48	33.53	3.05	3.05	100	2.78	91	3R	2H	1W	Locally gougey
33.53	36.58	3.05	2.94	96	2.86	94	3R	3H	1W	
36.58	39.62	3.04	3.04	100	2.96	97	3R	3H	1W	Lots of mechanical breaks paralleel to bedding.
39.62	41.15	1.53	0.84	55	0.62	41	3R	3H	1W	
41.15	44.20	3.05	2.93	96	2.57	84	2R	3H	1W	
44.20	47.24	3.04	2.96	97	1.99	65	2R	2H	1W	
47.24	50.29	3.05	2.79	91	1.58	52	2R	2H	1W	
50.29	53.34	3.05	3.04	100	1.83	60	2R	3H	1W	
53.34	56.39	3.05	3.04	100	2.62	86	3R	3H	1W	Interval is becoming visually more competant.
56.39	59.44	3.05	3.04	100	2.78	91	3R	3H	1W	
59.44	62.48	3.04	2.99	98	2.10	69	2R	3H	1W	
62.48	65.53	3.05	2.87	94	1.72	56	2R	2H	1W	
65.53	68.58	3.05	3.02	99	2.68	88	2R	3H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
68.58	71.63	3.05	3	98	2.60	85	2R	3H	1W	
71.63	74.68	3.05	3.04	100	2.62	86	2R	3H	1W	
74.68	77.72	3.04	3.03	100	2.92	96	3R	3H	1W	
77.72	80.77	3.05	3.03	99	2.83	93	3R	3H	1W	
80.77	83.82	3.05	3.05	100	2.11	69	3R	3H	1W	
83.82	86.87	3.05	3.05	100	2.46	81	2R	3H	1W	
86.87	89.92	3.05	2.95	97	2.61	86	2R	3H	1W	
89.92	92.96	3.04	3.02	99	1.85	61	3R	3H	1W	
92.96	96.01	3.05	3.01	99	2.13	70	3R	3H	1W	
96.01	99.06	3.05	2.84	93	2.42	79	3R	3H	1W	
99.06	102.11	3.05	3.05	100	2.46	81	3R	3H	1W	
102.11	105.16	3.05	2.81	92	1.91	63	3R	3H	1W	
105.16	108.20	3.04	2.98	98	1.90	63	3R	3H	1W	
108.20	111.25	3.05	3.05	100	2.00	66	3R	3H	1W	
111.25	114.30	3.05	3.01	99	2.49	82	2R	3H	1W	
114.30	117.35	3.05	2.9	95	2.64	87	3R	4H	1W	
117.35	120.40	3.05	3.05	100	2.63	86	3R	3H	1W	
120.40	123.44	3.04	2.93	96	2.19	72	3R	3H	1W	
123.44	126.49	3.05	3.04	100	2.51	82	3R	3H	1W	
126.49	129.54	3.05	3.02	99	2.23	73	4R	3H	1W	
129.54	132.59	3.05	3.05	100	2.16	71	3R	3H	1W	
132.59	135.64	3.05	3.04	100	2.49	82	3R	3H	1W	
135.64	138.68	3.04	3.04	100	2.54	84	3R	3H	1W	
138.68	141.73	3.05	3.04	100	2.14	70	3R	3H	1W	Increase in low-angle (~5 degrees), bedding-parallel? polished graphitic surfaces
141.73	144.78	3.05	3.04	100	2.58	85	3R	3H	1W	Low-angle, bedding parallel polished surfaces
144.78	147.83	3.05	2.84	93	2.62	86	3R	3H	1W	
147.83	150.88	3.05	3.04	100	2.36	77	3R	2H	1W	
150.88	153.92	3.04	2.96	97	2.78	91	3R	3H	1W	
153.92	156.97	3.05	3	98	2.97	97	4R	3H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
156.97	160.02	3.05	3.04	100	2.95	97	4R	3H	1W	
160.02	163.07	3.05	2.98	98	2.74	90	4R	3H	1W	
163.07	166.12	3.05	3	98	2.45	80	1R	3H	1W	
166.12	169.16	3.04	2.85	94	2.15	71	1R	3H	1W	Low-angle polished graphtic surfaces
169.16	172.21	3.05	3.05	100	2.98	98	1R	3H	1W	
172.21	175.26	3.05	2.99	98	2.99	98	3R	3H	1W	Low- angle polished, graphitic surfaces
175.26	178.31	3.05	3.01	99	3.01	99	4R	3H	1W	
178.31	181.36	3.05	3.05	100	2.25	74	4R	3H	1W	Low angle, vuggy fractures
181.36	184.40	3.04	3.04	100	2.87	94	3R	3H	1W	Vuggy joints with euhedral bladed calcite
184.40	187.45	3.05	2.98	98	2.02	66	3R	3H	1W	
187.45	190.50	3.05	3.02	99	2.03	67	4R	3H	1W	
190.50	193.55	3.05	3.04	100	2.10	69	3R	3H	1W	
193.55	196.60	3.05	3.05	100	2.21	72	2R	3H	1W	
196.60	199.64	3.04	3.04	100	2.97	98	2R	3H	1W	
199.64	202.69	3.05	2.93	96	2.44	80	3R	3H	1W	
202.69	205.74	3.05	3.02	99	2.52	83	3R	3H	1W	
205.74	208.79	3.05	3.05	100	2.01	66	2R	3H	1W	
208.79	211.84	3.05	3.01	99	2.18	71	2R	3H	1W	
211.84	214.88	3.04	2.72	89	1.65	54	4R	3H	1W	
214.88	217.93	3.05	2.7	89	1.63	53	4R	3H	1W	
217.93	220.98	3.05	2.75	90	1.31	43	4R	3H	1W	
220.98	224.03	3.05	2.95	97	2.85	93	4R	3H	1W	
224.03	227.08	3.05	2.63	86	2.36	77	4R	3H	1W	
227.08	230.12	3.04	3.04	100	2.86	94	4R	4H	1W	
230.12	233.17	3.05	2.84	93	2.10	69	4R	4H	1W	
233.17	236.22	3.05	2.94	96	1.96	64	4R	4H	1W	
236.22	239.27	3.05	2.37	78	1.70	56	4R	4H	1W	
239.27	242.32	3.05	2.1	69	1.10	36	4R	4H	1W	
242.32	245.36	3.04	2.71	89	0.85	28	4R	4H	1W	
245.36	248.41	3.05	2.97	97	2.10	69	4R	4H	1W	
248.41	251.46	3.05	2.95	97	1.90	62	4R	4H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
251.46	254.51	3.05	2.65	87	0.45	15	3R	2H	1W	
254.51	257.56	3.05	2.95	97	1.84	60	3R	3H	1W	
257.56	260.60	3.04	2.75	90	1.11	37	3R	2H	1W	
260.60	263.65	3.05	2.72	89	0.86	28	3R	2H	1W	
263.65	266.70	3.05	2.91	95	2.13	70	3R	4H	1W	
266.70	269.75	3.05	3.05	100	1.58	52	3R	4H	1W	
269.75	272.80	3.05	3.05	100	1.26	41	3R	4H	1W	
272.80	275.84	3.04	3.03	100	0.46	15	3R	3H	1W	
275.84	278.89	3.05	2.68	88	0.58	19	3R	3H	1W	
278.89	281.94	3.05	2.69	88	0.15	5	2R	3H	1W	
281.94	284.99	3.05	2.61	86	0.29	10	2R	3H	1W	
284.99	288.04	3.05	2.57	84	0.96	31	3R	1H	1W	
288.04	291.08	3.04	3	99	1.14	38	0R	1H	1W	
291.08	294.13	3.05	3.01	99	1.13	37	2R	4H	1W	
294.13	297.18	3.05	2.98	98	1.19	39	2R	4H	1W	
297.18	300.23	3.05	3.05	100	2.05	67	2R	4H	1W	
300.23	303.28	3.05	2.96	97	2.53	83	2R	4H	1W	
303.28	306.32	3.04	3.04	100	2.50	82	2R	4H	1W	
306.32	309.37	3.05	3.05	100	1.95	64	3R	4H	1W	
309.37	312.42	3.05	3.01	99	2.05	67	3R	4H	1W	
312.42	315.47	3.05	3.02	99	2.69	88	3R	4H	1W	
315.47	318.52	3.05	2.83	93	2.59	85	3R	4H	1W	
318.52	321.56	3.04	3.04	100	2.61	86	3R	3H	1W	
321.56	324.61	3.05	3.03	99	2.83	93	3R	4H	1W	
324.61	327.66	3.05	3	98	2.68	88	3R	4H	1W	
327.66	330.71	3.05	3.05	100	2.90	95	2R	4H	1W	
330.71	333.76	3.05	2.72	89	1.25	41	2R	3H	1W	
333.76	336.80	3.04	2.96	97	2.04	67	1R	3H	1W	
336.80	339.85	3.05	3.01	99	2.05	67	1R	3H	1W	
339.85	342.90	3.05	3.05	100	2.58	85	3R	3H	1W	
342.90	345.95	3.05	3	98	2.39	78	0R	3H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
345.95	349.00	3.05	3.05	100	2.45	80	3R	3H	1W	
349.00	352.04	3.04	2.99	98	2.95	97	3R	3H	1W	
352.04	355.09	3.05	3.04	100	2.77	91	3R	4H	1W	
355.09	358.14	3.05	3.01	99	2.67	88	1R	3H	1W	
358.14	361.19	3.05	2.99	98	2.05	67	0R	3H	1W	
361.19	364.24	3.05	2.92	96	2.50	82	0R	3H	1W	
364.24	367.28	3.04	3.03	100	2.63	87	0R	3H	1W	
367.28	370.33	3.05	2.98	98	2.22	73	0R	3H	1W	
370.33	373.38	3.05	3.05	100	2.11	69	0R	3H	1W	
373.38	376.43	3.05	2.75	90	1.00	33	0R	3H	1W	
376.43	379.48	3.05	2.61	86	0.94	31	0R	3H	1W	
379.48	382.52	3.04	2.78	91	1.12	37	1R	3H	1W	
382.52	385.57	3.05	2.45	80	0.98	32	3R	3H	1W	
385.57	388.62	3.05	2.98	98	0.85	28	3R	3H	1W	
388.62	391.67	3.05	2.78	91	1.57	51	3R	4H	1W	
391.67	394.72	3.05	2.77	91	1.21	40	3R	3H	1W	
394.72	397.76	3.04	3	99	1.97	65	3R	3H	1W	
397.76	400.81	3.05	2.93	96	1.49	49	3R	3H	1W	
400.81	403.86	3.05	3.05	100	2.95	97	2R	3H	1W	
403.86	406.91	3.05	3.03	99	0.72	24	3R	3H	1W	
406.91	409.96	3.05	2.9	95	1.01	33	3R	3H	1W	
409.96	413.00	3.04	3.04	100	1.46	48	2R	3H	1W	
413.00	416.05	3.05	3	98	1.68	55	3R	3H	1W	
416.05	419.10	3.05	3.04	100	2.03	67	3R	4H	1W	
419.10	422.15	3.05	3.05	100	1.36	45	4R	4H	1W	
422.15	425.20	3.05	3.05	100	2.30	75	3R	4H	1W	
425.20	428.24	3.04	2.55	84	1.02	34	3R	3H	1W	
428.24	431.29	3.05	2.92	96	1.10	36	3R	3H	1W	
431.29	434.34	3.05	2.88	94	1.00	33	3R	3H	1W	
434.34	437.39	3.05	2.62	86	0.70	23	3R	3H	1W	
437.39	440.44	3.05	3.01	99	1.99	65	3R	3H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
440.44	443.48	3.04	2.96	97	0.50	16	2R	3H	1W	
443.48	446.53	3.05	3.03	99	1.28	42	3R	3H	1W	
446.53	449.58	3.05	3.02	99	1.68	55	3R	3H	1W	
449.58	452.63	3.05	3	98	1.77	58	3R	3H	1W	
452.63	455.68	3.05	3.05	100	2.40	79	3R	3H	1W	
455.68	458.72	3.04	3.03	100	2.37	78	3R	3H	1W	
458.72	461.77	3.05	3.04	100	2.36	77	3R	3H	1W	
461.77	464.82	3.05	2.99	98	1.94	64	3R	3H	1W	
464.82	467.87	3.05	3.02	99	2.54	83	3R	3H	1W	
467.87	470.92	3.05	2.22	73	1.01	33	2R	3H	1W	
470.92	473.96	3.04	2.82	93	1.86	61	3R	3H	1W	
473.96	477.01	3.05	2.89	95	2.19	72	3R	3H	1W	Local moderately polished fracture surfaces
477.01	480.06	3.05	3.04	100	1.89	62	3R	3H	1W	
480.06	483.11	3.05	3.04	100	2.65	87	3R	3H	1W	
483.11	486.16	3.05	3.01	99	1.97	65	3R	3H	1W	
486.16	489.20	3.04	2.45	81	1.60	53	2R	3H	1W	Increase in polished graphitic shear surfaces
489.20	492.25	3.05	2.69	88	1.55	51	2R	3H	1W	Polished graphitic surfaces
492.25	495.30	3.05	2.92	96	1.72	56	3R	3H	1W	minor polished surfaces
495.30	498.35	3.05	3.04	100	1.69	55	2R	3H	1W	
498.35	501.40	3.05	2.74	90	0.67	22	2R	3H	1W	Polished graphitic surfaces +/- slickenslides.
501.40	504.44	3.04	2.94	97	2.30	76	2R	3H	1W	
504.44	507.49	3.05	2.79	91	1.97	65	2R	3H	1W	
507.49	510.54	3.05	2.93	96	1.88	62	2R	3H	1W	
510.54	513.59	3.05	3.02	99	2.66	87	3R	3H	1W	
513.59	516.64	3.05	2.85	93	1.94	64	2R	3H	1W	
516.64	519.68	3.04	2.99	98	1.68	55	3R	3H	1W	
519.68	522.73	3.05	3.04	100	2.41	79	2R	3H	1W	
522.73	525.78	3.05	2.98	98	1.83	60	2R	3H	1W	
525.78	528.83	3.05	3.05	100	2.69	88	2R	3H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
528.83	531.88	3.05	2.97	97	2.29	75	2R	3H	1W	
531.88	534.92	3.04	2.83	93	2.27	75	2R	3H	1W	
534.92	537.97	3.05	2.69	88	0.71	23	1R	2H	1W	
537.97	541.02	3.05	2.94	96	0.73	24	2R	3H	1W	
541.02	544.07	3.05	3.03	99	1.93	63	2R	3H	1W	
544.07	547.12	3.05	3.05	100	1.94	64	3R	4H	1W	
547.12	550.16	3.04	3	99	1.20	39	3R	3H	1W	
550.16	553.21	3.05	3.05	100	1.54	50	2R	3H	1W	
553.21	556.26	3.05	3.05	100	3.02	99	3R	4H	1W	
556.26	559.31	3.05	3.01	99	2.94	96	2R	3H	1W	
559.31	562.36	3.05	3.05	100	2.95	97	2R	3H	1W	
562.36	565.40	3.04	3	99	2.85	94	2R	3H	1W	
565.40	568.45	3.05	3.05	100	3.00	98	2R	3H	1W	
568.45	571.50	3.05	2.99	98	2.84	93	2R	3H	1W	
571.50	574.55	3.05	3.05	100	2.90	95	2R	3H	1W	
574.55	577.60	3.05	3.03	99	2.94	96	2R	3H	1W	
577.60	580.64	3.04	3.04	100	2.80	92	2R	3H	1W	
580.64	583.69	3.05	3	98	2.59	85	2R	3H	1W	
583.69	586.74	3.05	3.04	100	2.72	89	2R	3H	1W	
586.74	589.79	3.05	3.05	100	2.26	74	1R	3H	1W	
589.79	592.84	3.05	3.04	100	2.79	91	2R	3H	1W	
592.84	595.88	3.04	2.98	98	2.32	76	3R	3H	1W	
595.88	598.93	3.05	3	98	2.58	85	2R	3H	1W	
598.93	601.98	3.05	3	98	2.59	85	1R	3H	1W	
601.98	605.03	3.05	2.92	96	2.59	85	2R	3H	1W	
605.03	608.08	3.05	3.04	100	2.81	92	2R	3H	1W	
608.08	611.12	3.04	3.03	100	2.78	91	2R	3H	1W	
611.12	614.17	3.05	3.01	99	2.08	68	3R	3H	1W	
614.17	617.22	3.05	2.98	98	1.98	65	2R	3H	1W	
617.22	620.27	3.05	3.04	100	2.93	96	2R	3H	1W	
620.27	623.32	3.05	3.01	99	2.52	83	2R	3H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
623.32	626.36	3.04	2.87	94	2.48	82	2R	3H	1W	
626.36	629.41	3.05	3.02	99	1.52	50	2R	3H	1W	Occurrence of slickenslides.
629.41	632.46	3.05	3.04	100	2.95	97	2R	3H	1W	
632.46	635.51	3.05	2.95	97	2.54	83	2R	3H	1W	
635.51	638.56	3.05	3.04	100	2.34	77	2R	3H	1W	
638.56	641.60	3.04	2.98	98	2.33	77	2R	3H	1W	
641.60	644.65	3.05	2.88	94	2.17	71	2R	3H	1W	
644.65	647.70	3.05	3.04	100	2.63	86	2R	3H	1W	
647.70	650.75	3.05	2.75	90	1.91	63	2R	3H	1W	
650.75	653.80	3.05	3	98	2.61	86	2R	3H	1W	
653.80	656.84	3.04	2.86	94	2.64	87	2R	3H	1W	

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From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
0.00	0.00	0.00	-QC-	0.00	0	W231678	☐	O18-075	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W231721	☐	O18-076	core	SR5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W231717	☐	O18-076	core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V767910	☐	O18-066	core	SR5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W231696	☐	O18-075	Core	SR5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W231664	☐	O18-075	Core	SR5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W231648	☐	O18-073	core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W231640	☐	O18-073	core	SR5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W231622	☐	O18-073	core	SR5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W231598	☐	O18-072	core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W231590	☐	O18-072	core	SR5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V768000	☐	O18-071	core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V767995	☐	O18-071	core	SR5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W231711	☐	O18-076	core	SR5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V767971	☐	O18-071	core	SR5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V767964	☐	O18-070	Core	SR5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V767948	☐	O18-070	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	V767937	☐	O18-070	Core	SR5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W231607	☐	O18-072	core	SR5	☐	☐	☐
1.22	3.05	1.83	OVB, OVB	0.88	48	W231570	☐	O18-065	Core		☐	☐	☐
3.05	6.10	3.05	LST	1.83	60	V767904	☐	O18-066	core		☐	☐	☐
6.10	9.14	3.04	LST	3.00	99	V767905	☐	O18-066	core		☐	☐	☐
9.14	12.19	3.05	LST	3.01	99	V767906	☐	O18-066	core		☐	☐	☐
12.19	15.24	3.05	LST	3.04	100	V767907	☐	O18-066	core		☐	☐	☐
15.24	18.29	3.05	LST	2.97	97	V767908	☐	O18-066	core		☐	☐	☐
18.29	21.34	3.05	LST	3.03	99	V767909	☐	O18-066	core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
21.34	24.38	3.04	LST	2.98	98	V767911	☐	O18-066	core		☐	☐	☐
24.38	27.43	3.05	LST	3.05	100	V767912	☐	O18-066	core		☐	☐	☐
27.43	30.48	3.05	LST	3.05	100	V767913	☐	O18-066	core		☐	☐	☐
30.48	33.53	3.05	LST	3.05	100	V767914	☐	O18-066	core		☐	☐	☐
33.53	36.58	3.05	LST	2.94	96	V767915	☐	O18-066	core		☐	☐	☐
36.58	39.62	3.04	LST	3.04	100	V767916	☐	O18-066	core		☐	☐	☐
39.62	41.15	1.53	LST	0.84	55	V767917	☐	O18-066	core		☐	☐	☐
41.15	44.20	3.05	LST	2.93	96	V767918	☐	O18-066	core		☐	☐	☐
44.20	47.24	3.04	LST	2.96	97	V767919	☐	O18-066	core		☐	☐	☐
47.24	50.29	3.05	LST	2.79	91	V767920	☐	O18-066	core		☐	☐	☐
47.24	50.29	3.05	LST	2.79	91	V767921	☐	O18-066	core		☐	☐	☑
50.29	53.34	3.05	LST	3.04	100	V767922	☐	O18-066	core		☐	☐	☐
53.34	56.39	3.05	LST	3.04	100	V767923	☐	O18-066	core		☐	☐	☐
56.39	59.44	3.05	LST	3.04	100	V767924	☐	O18-066	core		☐	☐	☐
59.44	62.48	3.04	LST	2.99	98	V767925	☐	O18-066	core		☐	☐	☐
62.48	65.53	3.05	LST	2.87	94	V767926	☐	O18-066	core		☐	☐	☐
65.53	68.58	3.05	LST	3.02	99	V767927	☐	O18-070	Core		☐	☐	☐
68.58	71.63	3.05	LST	3.00	98	V767928	☐	O18-070	Core		☐	☐	☐
71.63	74.68	3.05	LST	3.04	100	V767929	☐	O18-070	Core		☐	☐	☐
74.68	77.72	3.04	LST	3.03	100	V767930	☐	O18-070	Core		☐	☐	☐
77.72	80.77	3.05	LST	3.03	99	V767931	☐	O18-070	Core		☐	☐	☐
80.77	83.82	3.05	LST	3.05	100	V767932	☐	O18-070	Core		☐	☐	☐
83.82	86.87	3.05	LST	3.05	100	V767933	☐	O18-070	Core		☐	☐	☐
86.87	89.92	3.05	LST	2.95	97	V767934	☐	O18-070	Core		☐	☐	☐
89.92	92.96	3.04	LST	3.02	99	V767935	☐	O18-070	Core		☐	☐	☐
92.96	96.01	3.05	LST	3.01	99	V767936	☐	O18-070	Core		☐	☐	☐
96.01	99.06	3.05	LST	2.84	93	V767938	☐	O18-070	Core		☐	☐	☐
99.06	102.11	3.05	LST	3.05	100	V767939	☐	O18-070	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
102.11	105.16	3.05	LST	2.81	92	V767940	☐	O18-070	Core		☐	☐	☐
102.11	105.16	3.05	LST	2.81	92	V767941	☐	O18-070	Core		☐	☐	☑
105.16	108.20	3.04	LST	2.98	98	V767942	☐	O18-070	Core		☐	☐	☐
108.20	111.25	3.05	LST	3.05	100	V767943	☐	O18-070	Core		☐	☐	☐
111.25	114.30	3.05	LST	3.01	99	V767944	☐	O18-070	Core		☐	☐	☐
114.30	117.35	3.05	LST	2.90	95	V767945	☐	O18-070	Core		☐	☐	☐
117.35	120.40	3.05	LST	3.05	100	V767946	☐	O18-070	Core		☐	☐	☐
120.40	123.44	3.04	LST	2.93	96	V767947	☐	O18-070	Core		☐	☐	☐
123.44	126.49	3.05	LST	3.04	100	V767949	☐	O18-070	Core		☐	☐	☐
126.49	129.54	3.05	LST	3.02	99	V767950	☐	O18-070	Core		☐	☐	☐
129.54	132.59	3.05	LST	3.05	100	V767951	☐	O18-070	Core		☐	☐	☐
132.59	135.64	3.05	LST	3.04	100	V767952	☐	O18-070	Core		☐	☐	☐
135.64	138.68	3.04	LST	3.04	100	V767953	☐	O18-070	Core		☐	☐	☐
138.68	141.73	3.05	LST	3.04	100	V767954	☐	O18-070	Core		☐	☐	☐
141.73	144.78	3.05	LST	3.04	100	V767955	☐	O18-070	Core		☐	☐	☐
144.78	147.83	3.05	LST	2.84	93	V767956	☐	O18-070	Core		☐	☐	☐
147.83	149.35	1.52	LST	1.52	100	V767957	☐	O18-070	Core		☐	☐	☐
147.83	149.35	1.52	LST	1.52	100	V767958	☐	O18-070	Core		☐	☑	☐
149.35	151.49	2.14	LST	2.06	96	V767959	☐	O18-070	Core		☐	☐	☐
151.49	153.92	2.43	LST, LST	2.41	99	V767960	☐	O18-070	Core		☐	☐	☐
153.92	156.97	3.05	LST	3.00	98	V767961	☐	O18-070	Core		☐	☐	☐
156.97	160.02	3.05	LST	3.04	100	V767962	☐	O18-070	Core		☐	☐	☐
160.02	163.07	3.05	LST	2.98	98	V767963	☐	O18-070	Core		☐	☐	☐
163.07	166.12	3.05	LST	3.00	98	V767965	☐	O18-070	Core		☐	☐	☐
166.12	169.16	3.04	LST	2.85	94	V767966	☐	O18-070	Core		☐	☐	☐
169.16	172.21	3.05	LST	3.05	100	V767967	☐	O18-071	core		☐	☐	☐
172.21	175.26	3.05	LST	2.99	98	V767968	☐	O18-071	core		☐	☐	☐
175.26	178.31	3.05	LST	3.01	99	V767969	☐	O18-071	core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
178.31	181.36	3.05	LST	3.05	100	V767970	☐	O18-071	core		☐	☐	☐
181.36	184.40	3.04	LST	3.04	100	V767972	☐	O18-071	core		☐	☐	☐
184.40	187.45	3.05	LST	2.98	98	V767973	☐	O18-071	core		☐	☐	☐
187.45	190.50	3.05	LST	3.02	99	V767974	☐	O18-071	core		☐	☐	☐
190.50	193.55	3.05	LST	3.04	100	V767975	☐	O18-071	core		☐	☐	☐
193.55	196.60	3.05	LST	3.05	100	V767976	☐	O18-071	core		☐	☐	☐
196.60	199.64	3.04	LST	3.04	100	V767977	☐	O18-071	core		☐	☐	☐
196.60	199.64	3.04	LST	3.04	100	V767978	☐	O18-071	core		☐	☑	☐
199.64	202.69	3.05	LST	2.93	96	V767979	☐	O18-071	core		☐	☐	☐
202.69	205.74	3.05	LST	3.02	99	V767980	☐	O18-071	core		☐	☐	☐
205.74	208.79	3.05	LST	3.05	100	V767981	☐	O18-071	core		☐	☐	☐
208.79	211.84	3.05	LST	3.01	99	V767982	☐	O18-071	core		☐	☐	☐
211.84	214.88	3.04	LST	2.72	89	V767983	☐	O18-071	core		☐	☐	☐
214.88	217.93	3.05	LST	2.70	89	V767984	☐	O18-071	core		☐	☐	☐
217.93	220.98	3.05	LST	2.75	90	V767985	☐	O18-071	core		☐	☐	☐
217.93	220.98	3.05	LST	2.75	90	V767986	☐	O18-071	core		☐	☐	☑
220.98	224.03	3.05	LST	2.95	97	V767987	☐	O18-071	core		☐	☐	☐
224.03	227.08	3.05	LST	2.63	86	V767988	☐	O18-071	core		☐	☐	☐
227.08	230.12	3.04	LST	3.04	100	V767989	☐	O18-071	core		☐	☐	☐
230.12	233.17	3.05	LST	2.84	93	V767990	☐	O18-071	core		☐	☐	☐
233.17	236.22	3.05	LST	2.94	96	V767991	☐	O18-071	core		☐	☐	☐
236.22	239.27	3.05	LST	2.37	78	V767992	☐	O18-071	core		☐	☐	☐
239.27	242.32	3.05	LST	2.10	69	V767993	☐	O18-071	core		☐	☐	☐
242.32	245.36	3.04	LST	2.71	89	V767994	☐	O18-071	core		☐	☐	☐
245.36	248.41	3.05	LST	2.97	97	V767996	☐	O18-071	core		☐	☐	☐
248.41	251.46	3.05	LST	2.95	97	V767997	☐	O18-071	core		☐	☐	☐
251.46	254.51	3.05	LST	2.65	87	V767998	☐	O18-071	core		☐	☐	☐
254.51	257.56	3.05	LST	2.95	97	V767999	☐	O18-071	core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
257.56	260.60	3.04	LST	2.75	90	W231571	☐	O18-071	core		☐	☐	☐
260.60	263.65	3.05	LST	2.72	89	W231572	☐	O18-071	core		☐	☐	☐
263.65	266.70	3.05	LST	2.91	95	W231573	☐	O18-071	core		☐	☐	☐
266.70	269.75	3.05	LST	3.05	100	W231574	☐	O18-071	core		☐	☐	☐
269.75	272.80	3.05	LST	3.05	100	W231575	☐	O18-071	core		☐	☐	☐
272.80	275.84	3.04	LST	3.03	100	W231576	☐	O18-071	core		☐	☐	☐
275.84	278.89	3.05	LST	2.68	88	W231577	☐	O18-072	core		☐	☐	☐
278.89	281.94	3.05	LST	2.69	88	W231578	☐	O18-072	core		☐	☐	☐
281.94	284.99	3.05	LST	2.61	86	W231579	☐	O18-072	core		☐	☐	☐
284.99	288.04	3.05	LST	2.57	84	W231580	☐	O18-072	core		☐	☐	☐
288.04	291.08	3.04	LST	3.00	99	W231581	☐	O18-072	core		☐	☐	☐
291.08	294.13	3.05	MST	3.01	99	W231582	☐	O18-072	core		☐	☐	☐
294.13	297.18	3.05	MST	2.98	98	W231583	☐	O18-072	core		☐	☐	☐
297.18	300.23	3.05	MST	3.05	100	W231584	☐	O18-072	core		☐	☐	☐
300.23	303.28	3.05	MST	2.96	97	W231585	☐	O18-072	core		☐	☐	☐
300.23	303.28	3.05	MST	2.96	97	W231586	☐	O18-072	core		☐	☑	☐
303.28	306.32	3.04	MST	3.04	100	W231587	☐	O18-072	core		☐	☐	☐
306.32	309.37	3.05	MST	3.05	100	W231588	☐	O18-072	core		☐	☐	☐
309.37	312.42	3.05	MST	3.01	99	W231589	☐	O18-072	core		☐	☐	☐
312.42	315.47	3.05	MST	3.02	99	W231591	☐	O18-072	core		☐	☐	☐
315.47	318.52	3.05	MST	2.83	93	W231592	☐	O18-072	core		☐	☐	☐
318.52	321.56	3.04	MST	3.04	100	W231593	☐	O18-072	core		☐	☐	☐
321.56	324.61	3.05	MST	3.03	99	W231594	☐	O18-072	core		☐	☐	☐
324.61	327.66	3.05	MST	3.00	98	W231595	☐	O18-072	core		☐	☐	☐
327.66	330.71	3.05	MST	3.05	100	W231596	☐	O18-072	core		☐	☐	☐
330.71	333.76	3.05	MST	2.72	89	W231597	☐	O18-072	core		☐	☐	☐
333.76	336.80	3.04	MST	2.96	97	W231599	☐	O18-072	core		☐	☐	☐
336.80	339.85	3.05	MST	3.01	99	W231600	☐	O18-072	core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
339.85	342.90	3.05	MST	3.05	100	W231601	☐	O18-072	core		☐	☐	☐
342.90	345.95	3.05	MST	3.00	98	W231602	☐	O18-072	core		☐	☐	☐
345.95	349.00	3.05	MST	3.05	100	W231603	☐	O18-072	core		☐	☐	☐
349.00	352.04	3.04	MST	2.99	98	W231604	☐	O18-072	core		☐	☐	☐
352.04	355.09	3.05	MST	3.04	100	W231605	☐	O18-072	core		☐	☐	☐
355.09	358.14	3.05	MST	3.01	99	W231606	☐	O18-072	core		☐	☐	☐
358.14	361.19	3.05	MST	2.99	98	W231608	☐	O18-072	core		☐	☐	☐
361.19	364.24	3.05	MST	2.92	96	W231609	☐	O18-072	core		☐	☐	☐
361.19	364.24	3.05	MST	2.92	96	W231610	☐	O18-072	core		☐	☐	☑
364.24	367.28	3.04	MST	3.03	100	W231611	☐	O18-072	core		☐	☐	☐
367.28	370.33	3.05	MST	2.98	98	W231612	☐	O18-072	core		☐	☐	☐
370.33	373.38	3.05	MST	3.05	100	W231613	☐	O18-072	core		☐	☐	☐
373.38	376.43	3.05	MST	2.97	97	W231614	☐	O18-072	core		☐	☐	☐
376.43	379.48	3.05	MST	2.61	86	W231615	☐	O18-072	core		☐	☐	☐
379.48	382.52	3.04	MST	2.78	91	W231616	☐	O18-072	core		☐	☐	☐
382.52	385.57	3.05	MST	2.45	80	W231617	☐	O18-073	core		☐	☐	☐
385.57	388.62	3.05	MST	2.98	98	W231618	☐	O18-073	core		☐	☐	☐
388.62	391.67	3.05	MST	2.78	91	W231619	☐	O18-073	core		☐	☐	☐
391.67	394.72	3.05	MST	2.77	91	W231620	☐	O18-073	core		☐	☐	☐
394.72	397.76	3.04	MST	3.00	99	W231621	☐	O18-073	core		☐	☐	☐
397.76	400.81	3.05	MST	2.93	96	W231623	☐	O18-073	core		☐	☐	☐
400.81	403.86	3.05	MST	3.05	100	W231624	☐	O18-073	core		☐	☐	☐
400.81	403.86	3.05	MST	3.05	100	W231625	☐	O18-073	core		☐	☑	☐
403.86	406.91	3.05	MST	3.03	99	W231626	☐	O18-073	core		☐	☐	☐
406.91	409.96	3.05	MST	2.90	95	W231627	☐	O18-073	core		☐	☐	☐
409.96	413.00	3.04	MST	3.04	100	W231628	☐	O18-073	core		☐	☐	☐
413.00	416.05	3.05	MST	3.00	98	W231629	☐	O18-073	core		☐	☐	☐
416.05	419.10	3.05	MST	3.04	100	W231630	☐	O18-073	core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
419.10	422.15	3.05	MST	3.05	100	W231631	☐	O18-073	core		☐	☐	☐
422.15	425.20	3.05	MST	3.05	100	W231632	☐	O18-073	core		☐	☐	☐
425.20	428.24	3.04	MST	2.55	84	W231633	☐	O18-073	core		☐	☐	☐
428.24	431.29	3.05	MST	2.92	96	W231634	☐	O18-073	core		☐	☐	☐
431.29	434.34	3.05	MST	2.88	94	W231635	☐	O18-073	core		☐	☐	☐
434.34	437.39	3.05	MST	2.62	86	W231636	☐	O18-073	core		☐	☐	☐
437.39	440.44	3.05	MST	3.01	99	W231637	☐	O18-073	core		☐	☐	☐
440.44	443.48	3.04	MST	2.96	97	W231638	☐	O18-073	core		☐	☐	☐
443.48	446.53	3.05	MST	3.03	99	W231639	☐	O18-073	core		☐	☐	☐
446.53	449.58	3.05	MST	3.02	99	W231641	☐	O18-073	core		☐	☐	☐
449.58	452.63	3.05	MST	3.00	98	W231642	☐	O18-073	core		☐	☐	☐
452.63	455.68	3.05	MST	3.05	100	W231643	☐	O18-073	core		☐	☐	☐
455.68	458.72	3.04	MST	3.03	100	W231644	☐	O18-073	core		☐	☐	☐
458.72	461.77	3.05	MST	3.04	100	W231645	☐	O18-073	core		☐	☐	☐
461.77	464.82	3.05	MST	2.99	98	W231646	☐	O18-073	core		☐	☐	☐
464.82	467.87	3.05	MST	3.02	99	W231647	☐	O18-073	core		☐	☐	☐
467.87	470.92	3.05	MST	2.22	73	W231649	☐	O18-073	core		☐	☐	☐
470.92	473.96	3.04	MST	2.82	93	W231650	☐	O18-073	core		☐	☐	☐
473.96	477.01	3.05	MST	2.89	95	W231651	☐	O18-073	core		☐	☐	☐
477.01	480.06	3.05	MST	3.04	100	W231652	☐	O18-073	core		☐	☐	☐
480.06	483.11	3.05	MST	3.04	100	W231653	☐	O18-073	core		☐	☐	☐
483.11	486.16	3.05	MST	3.01	99	W231654	☐	O18-073	core		☐	☐	☐
486.16	489.20	3.04	MST	2.45	81	W231655	☐	O18-073	core		☐	☐	☐
486.16	489.20	3.04	MST	2.45	81	W231656	☐	O18-073	core		☐	☐	☑
489.20	492.25	3.05	MST	2.69	88	W231657	☐	O18-075	Core		☐	☐	☐
492.25	495.30	3.05	MST	2.92	96	W231658	☐	O18-075	Core		☐	☐	☐
495.30	498.35	3.05	MST	3.04	100	W231659	☐	O18-075	Core		☐	☐	☐
498.35	501.40	3.05	MST	2.74	90	W231660	☐	O18-075	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
501.40	504.44	3.04	MST	2.94	97	W231661	☐	O18-075	Core		☐	☐	☐
504.44	507.49	3.05	MST	2.79	91	W231662	☐	O18-075	Core		☐	☐	☐
507.49	510.54	3.05	MST	2.93	96	W231663	☐	O18-075	Core		☐	☐	☐
510.54	513.59	3.05	MST	3.02	99	W231665	☐	O18-075	Core		☐	☐	☐
513.59	516.64	3.05	MST	2.85	93	W231666	☐	O18-075	Core		☐	☐	☐
516.64	519.68	3.04	MST	2.99	98	W231667	☐	O18-075	Core		☐	☐	☐
519.68	522.73	3.05	MST	3.04	100	W231668	☐	O18-075	Core		☐	☐	☐
522.73	525.78	3.05	MST	2.98	98	W231669	☐	O18-075	Core		☐	☐	☐
525.78	528.83	3.05	MST	3.05	100	W231670	☐	O18-075	Core		☐	☐	☐
528.83	531.88	3.05	MST	2.97	97	W231671	☐	O18-075	Core		☐	☐	☐
531.88	534.92	3.04	MST	2.83	93	W231672	☐	O18-075	Core		☐	☐	☐
531.88	534.92	3.04	MST	2.83	93	W231673	☐	O18-075	Core		☐	☑	☐
534.92	537.97	3.05	MST	2.69	88	W231674	☐	O18-075	Core		☐	☐	☐
537.97	541.02	3.05	MST	2.94	96	W231675	☐	O18-075	Core		☐	☐	☐
541.02	544.07	3.05	MST	3.03	99	W231676	☐	O18-075	Core		☐	☐	☐
544.07	547.12	3.05	MST	3.05	100	W231677	☐	O18-075	Core		☐	☐	☐
547.12	550.16	3.04	MST	3.00	99	W231679	☐	O18-075	Core		☐	☐	☐
550.16	553.21	3.05	MST	3.05	100	W231680	☐	O18-075	Core		☐	☐	☐
553.21	556.26	3.05	MST	3.05	100	W231681	☐	O18-075	Core		☐	☐	☐
556.26	559.31	3.05	MST	3.01	99	W231682	☐	O18-075	Core		☐	☐	☐
559.31	562.36	3.05	MST	3.05	100	W231683	☐	O18-075	Core		☐	☐	☐
562.36	565.40	3.04	MST	3.00	99	W231684	☐	O18-075	Core		☐	☐	☐
565.40	568.45	3.05	MST	3.05	100	W231685	☐	O18-075	Core		☐	☐	☐
568.45	571.50	3.05	MST	2.99	98	W231686	☐	O18-075	Core		☐	☐	☐
571.50	574.55	3.05	MST	3.05	100	W231687	☐	O18-075	Core		☐	☐	☐
574.55	577.60	3.05	MST	3.03	99	W231688	☐	O18-075	Core		☐	☐	☐
577.60	580.64	3.04	MST	3.04	100	W231689	☐	O18-075	Core		☐	☐	☐
577.60	580.64	3.04	MST	3.04	100	W231690	☐	O18-075	Core		☐	☐	☑

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
580.64	583.69	3.05	MST	3.00	98	W231691	☐	O18-075	Core		☐	☐	☐
583.69	586.74	3.05	MST	3.04	100	W231692	☐	O18-075	Core		☐	☐	☐
586.74	589.79	3.05	MST	3.05	100	W231693	☐	O18-075	Core		☐	☐	☐
589.79	592.84	3.05	MST	3.04	100	W231694	☐	O18-075	Core		☐	☐	☐
592.84	595.88	3.04	MST	2.98	98	W231695	☐	O18-075	Core		☐	☐	☐
595.88	598.93	3.05	MST	3.00	98	W231697	☐	O18-076	core		☐	☐	☐
598.93	601.98	3.05	MST	3.00	98	W231698	☐	O18-076	core		☐	☐	☐
601.98	605.03	3.05	MST	2.92	96	W231699	☐	O18-076	core		☐	☐	☐
605.03	608.08	3.05	MST	3.04	100	W231700	☐	O18-076	core		☐	☐	☐
608.08	611.12	3.04	MST	3.03	100	W231701	☐	O18-076	core		☐	☐	☐
608.08	611.12	3.04	MST	3.03	100	W231702	☐	O18-076	core		☐	☑	☐
611.12	614.17	3.05	MST	3.01	99	W231703	☐	O18-076	core		☐	☐	☐
614.17	617.22	3.05	MST	2.98	98	W231704	☐	O18-076	core		☐	☐	☐
617.22	620.27	3.05	MST	3.04	100	W231705	☐	O18-076	core		☐	☐	☐
620.27	623.32	3.05	MST	3.01	99	W231706	☐	O18-076	core		☐	☐	☐
623.32	626.36	3.04	MST	2.87	94	W231707	☐	O18-076	core		☐	☐	☐
626.36	629.41	3.05	MST	3.02	99	W231708	☐	O18-076	core		☐	☐	☐
629.41	632.46	3.05	MST	3.04	100	W231709	☐	O18-076	core		☐	☐	☐
632.46	635.51	3.05	MST	2.95	97	W231710	☐	O18-076	core		☐	☐	☐
635.51	638.56	3.05	MST	3.04	100	W231712	☐	O18-076	core		☐	☐	☐
638.56	641.60	3.04	MST	2.98	98	W231713	☐	O18-076	core		☐	☐	☐
641.60	644.65	3.05	MST	2.88	94	W231714	☐	O18-076	core		☐	☐	☐
644.65	647.70	3.05	MST	3.04	100	W231715	☐	O18-076	core		☐	☐	☐
647.70	650.75	3.05	MST	2.75	90	W231716	☐	O18-076	core		☐	☐	☐
650.75	653.80	3.05	MST	3.00	98	W231718	☐	O18-076	core		☐	☐	☐
650.75	653.80	3.05	MST	3.00	98	W231719	☐	O18-076	core		☐	☐	☑
653.80	656.84	3.04	MST	2.86	94	W231720	☐	O18-076	core		☐	☐	☐

OS -18-261

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
0.00	21.00	21.00	OVB	--	0-13.67m no recovery. From 13.67 to 17.07m loose gravel (2-6cm diameter). Mostly composed of medium grained, grey limestone rock fragments, with some siliciclastic fragments. From 17.07 to 20.12m, silt and clay soil. From 20.12 to 21.00m, loose gravel(0.5-5cm diameter). Mostly composed of medium grained gray to brown limestone rock fragments.							
21.00	47.65	26.65	LST	MG	Interlayed mudstone, limestone, with minor Realgar mineralization.							
								FR				
								BX	DCA	3I		
								SH	OXI	2I		
						MD	GY	BD	ASO	1I	Re	0.1

OS -18-261

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
0.00	13.67	13.67	0	0	0.00	0	--	--	--	no recovery
13.67	14.02	0.35	0.35	100	0.00	0	2R	1H	4W	ovb
14.02	17.07	3.05	0.5	16	0.00	0	1R	1H	4W	ovb
17.07	20.12	3.05	0.35	11	0.00	0	1R	1H	6W	ovb
20.12	23.16	3.04	0.68	22	0.00	0	4R	2H	4W	ovb
23.16	26.21	3.05	2.42	79	0.97	32	3R	1H	5W	
26.21	29.26	3.05	2.43	80	0.11	4	4R	2H	5W	
29.26	32.31	3.05	1.36	45	0.28	9	4R	1H	5W	
32.31	35.36	3.05	0.77	25	0.22	7	2R	1H	5W	HCl reactivity varies from weak to strong in this area.
35.36	38.40	3.04	1.18	39	0.00	0	1R	1H	5W	Mostly weak reactivity, although there are a few places that produce a stronger reaction.
38.40	41.45	3.05	2.52	83	0.60	20	3R	1H	5W	Mostly pretty strong reactivity but it varies to weak in areas ofdarker coloured, softer rock. Joint infill is graphitic
41.45	44.50	3.05	2.7	89	0.33	11	1R	1H	6W	HCl reactivity variant by lithology, although mostly pretty weak in this area. It is stronger in limestone that is lighter in colour and more competent with a larger number of veins. In some of the darker, softer rock, a reaction is nearly nonexistent. This interval is largely soft, dark, soily material.
44.50	47.55	3.05	1.48	49	0.10	3	3R	1H	6W	HCl reactivity is variant although generally strong here. Patches of darker rock produce weaker reactions. This interval is mostly composed of crumbly rock.
47.55	47.65	0.10	0.1	100	0.00	0	1R	2H	5W	EOH, HCl reaction is very weak to nonexistent.

OS -18-261

Nadaleen
Conrad Zone

Archer,Cathro & Associates (1981) Limited

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
0.00	0.00	0.00	-QC-	0.00	0	S048261	☐	N18-001	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S048265	☐	N18-001	Core	CS2	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S048256	☐	N18-001	Core	CS10	☐	☐	☐
13.67	14.02	0.35	OVB	0.35	100	S048251	☐	N18-001	Core		☐	☐	☐
14.02	17.07	3.05	OVB	0.50	16	S048252	☐	N18-001	Core		☐	☐	☐
17.07	20.12	3.05	OVB	0.35	11	S048253	☐	N18-001	Core		☐	☐	☐
20.12	23.16	3.04	OVB	0.68	22	S048254	☐	N18-001	Core		☐	☐	☐
23.16	24.08	0.92	LST	0.85	92	S048255	☐	N18-001	Core		☐	☐	☐
24.08	26.21	2.13	LST	1.84	86	S048257	☐	N18-001	Core		☐	☐	☐
26.21	29.26	3.05	LST	2.43	80	S048258	☐	N18-001	Core		☐	☐	☐
29.26	32.31	3.05	LST	1.36	45	S048259	☐	N18-001	Core		☐	☐	☐
32.31	35.36	3.05	LST	0.77	25	S048260	☐	N18-001	Core		☐	☐	☐
35.36	38.40	3.04	LST	1.18	39	S048262	☐	N18-001	Core		☐	☐	☐
38.40	41.45	3.05	LST	2.52	83	S048263	☐	N18-001	Core		☐	☐	☐
41.45	44.50	3.05	LST	2.70	89	S048264	☐	N18-001	Core		☐	☐	☐
44.50	46.50	2.00	LST	0.78	39	S048266	☐	N18-001	Core		☐	☐	☐
46.50	47.65	1.15	LST	0.59	51	S048267	☐	N18-001	Core		☐	☐	☐

OS -18-262

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
0.00	3.20	3.20	OVB	--	0.00-2.87 --> NO RECOVERY							
						LT	GY	FR	---	--	--	0
3.20	26.16	22.96	MST	VF	Light to medium grey brown mudstone. Highly oxidized and weathered. Fe oxidation. Highly fractured. Traces of calcite veining. NONAD or C-SLC?							
						MD	BN	SH				
						MD	GY	BX				
						LT	GY	BD	OXI	4I	Re	0.1
26.16	203.60	177.44	SLC	MG	Unit is largely composed of a grey pyritic, bedded/laminated siltstone and mudstone with dolomite veins and veinlets. The most significant interval in this siliciclastic unit is from 65.70-80.00m --> fine grained, bedded mudstone, moderate to highly altered and realgar mineralized. Also worth mentioning, from 114.06-118.67m the mudstone is fractured and gouged, possibly indicating hydrothermal alteration, but no realgar is observed. Interval from 80.00-92.01m is made up of mud to fine grained sand turbidites. Interval from 92.01-96.61m is made up of a clast supported conglomerate with muds rip up clasts interpreted as a debris flow. Interval from 201.20-203.60 is a fault zone. Dolomite veins and soft sediment deformation are common throughout the siliciclastic unit							
						DK	GY					
						MD	GY	SD			Py	3
						LT	GY	BD	---	--	Re	0.1

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
203.60	520.29	316.69	LST	MG	Light to dark grey, fine-medium grained, calcite veined, sheared, brecciated, locally bedded, locally realgar mineralized and decalcified Conrad limestone. Interval is mostly composed of non-mineralized Conrad limestone. Noteworthy sections of significantly realgar mineralized and moderate-strong decalcification are: 208.10-209.66m; 363.69-367.79m; and 376.85-401.90m. The above mentioned intervals are often sheared, altered and contain thick (aprox 5.0mm) stylolites. Sections with trace realgar mineralization and weak decalcification are: 297.61-300.28m; 351.00-363.69m; and 367.79-376.85m.							
						DK	GY					
						MD	GY	BX			Re	0.2
						LT	GY	BD	DCA	2I	Re	2

OS -18-262

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
0.00	2.87	2.87	0	0	0.00	0	--	--	--	No Recovery
2.87	3.05	0.18	0.18	100	0.00	0	0R	3H	2W	
3.05	4.58	1.53	0.5	33	0.00	0	0R	1H	4W	
4.58	6.10	1.52	0.33	22	0.00	0	0R	1H	4W	
6.10	9.14	3.04	1.14	38	0.00	0	0R	1H	5W	
9.14	10.67	1.53	0.33	22	0.00	0	0R	1H	4W	
10.67	12.19	1.52	0.12	8	0.00	0	0R	1H	3W	
12.19	13.72	1.53	0.15	10	0.00	0	0R	1H	3W	
13.72	15.24	1.52	0.91	60	0.00	0	0R	1H	4W	
15.24	16.76	1.52	0.13	9	0.00	0	0R	1H	3W	
16.76	18.29	1.53	0.65	42	0.00	0	0R	1H	4W	
18.29	19.81	1.52	0.73	48	0.00	0	0R	1H	4W	
19.81	21.34	1.53	0.41	27	0.00	0	0R	1H	4W	
21.34	22.86	1.52	0.37	24	0.00	0	0R	1H	4W	
22.86	24.38	1.52	1.3	86	0.00	0	0R	1H	3W	
24.38	25.91	1.53	1.53	100	0.10	7	0R	1H	3W	
25.91	27.43	1.52	0.68	45	0.00	0	0R	1H	2W	
27.43	28.96	1.53	1.02	67	0.00	0	0R	3H	2W	
28.96	30.48	1.52	1.52	100	0.34	22	0R	3H	2W	
30.48	32.00	1.52	1.08	71	0.00	0	0R	1H	4W	
32.00	33.53	1.53	1.29	84	0.34	22	0R	3H	2W	
33.53	35.05	1.52	1.37	90	0.00	0	0R	3H	1W	
35.05	36.58	1.53	1.24	81	0.32	21	0R	3H	1W	
36.58	38.10	1.52	1.4	92	0.00	0	0R	1H	1W	
38.10	39.62	1.52	1.41	93	0.11	7	0R	1H	1W	
39.62	41.15	1.53	1.36	89	0.00	0	0R	1H	1W	
41.15	42.67	1.52	1.18	78	0.24	16	0R	2H	1W	
42.67	44.20	1.53	1.2	78	0.00	0	0R	2H	1W	
44.20	45.72	1.52	0.52	34	0.00	0	0R	1H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
45.72	47.24	1.52	0.6	39	0.00	0	0R	1H	1W	
47.24	48.77	1.53	1.22	80	0.32	21	0R	1H	1W	
48.77	50.29	1.52	1.45	95	0.60	39	0R	1H	1W	
50.29	51.82	1.53	1.02	67	0.00	0	0R	3H	1W	
51.82	53.34	1.52	0.47	31	0.00	0	0R	3H	1W	
53.34	54.86	1.52	1.52	100	0.42	28	0R	2H	1W	
54.86	56.39	1.53	1.39	91	0.44	29	0R	1H	1W	
56.39	57.91	1.52	1.42	93	0.36	24	0R	1H	1W	
57.91	59.44	1.53	1.38	90	0.82	54	0R	2H	1W	
59.44	60.96	1.52	1.24	82	0.22	14	0R	1H	1W	
60.96	62.48	1.52	1.23	81	0.13	9	0R	1H	1W	
62.48	64.01	1.53	1.33	87	0.00	0	0R	2H	1W	
64.01	65.53	1.52	1.07	70	0.00	0	0R	2H	1W	
65.53	67.06	1.53	1.13	74	0.39	25	0R	1H	1W	
67.06	68.58	1.52	0.58	38	0.10	7	0R	1H	1W	
68.58	70.10	1.52	1.4	92	0.51	34	0R	2H	1W	
70.10	71.63	1.53	1.5	98	0.90	59	0R	3H	1W	
71.63	73.15	1.52	1.26	83	0.56	37	0R	2H	1W	
73.15	74.68	1.53	1.26	82	0.11	7	0R	1H	1W	
74.68	76.20	1.52	1.44	95	0.99	65	0R	2H	1W	
76.20	77.72	1.52	1.39	91	0.88	58	0R	3H	1W	
77.72	79.25	1.53	1.11	73	0.11	7	0R	1H	1W	
79.25	80.77	1.52	1.13	74	0.15	10	0R	1H	1W	
80.77	82.30	1.53	1.5	98	0.38	25	0R	2H	1W	
82.30	83.82	1.52	1.34	88	0.59	39	0R	3H	1W	
83.82	85.34	1.52	1.52	100	1.10	72	0R	3H	1W	
85.34	86.87	1.53	1.44	94	0.62	41	0R	3H	1W	
86.87	88.39	1.52	1.51	99	1.02	67	0R	3H	1W	
88.39	89.92	1.53	1.45	95	1.45	95	0R	3H	1W	
89.92	91.44	1.52	1.52	100	0.64	42	0R	2H	1W	
91.44	92.96	1.52	1	66	0.69	45	0R	3H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
92.96	94.49	1.53	1.52	99	1.45	95	0R	3H	1W	
94.49	96.01	1.52	1.52	100	1.25	82	0R	3H	1W	
96.01	97.54	1.53	1.37	90	1.10	72	0R	2H	1W	
97.54	99.06	1.52	1.25	82	0.63	41	0R	3H	1W	
99.06	100.58	1.52	1.52	100	1.31	86	0R	3H	1W	
100.58	102.11	1.53	1.44	94	1.15	75	0R	4H	1W	
102.11	103.63	1.52	1.47	97	0.83	55	0R	3H	1W	
103.63	105.16	1.53	1.52	99	0.91	59	0R	3H	1W	
105.16	106.69	1.53	1.45	95	0.75	49	0R	1H	1W	
106.69	109.73	3.04	2.98	98	2.24	74	0R	3H	1W	
109.73	112.78	3.05	3.05	100	2.37	78	0R	2H	1W	
112.78	115.82	3.04	2.92	96	1.63	54	0R	1H	1W	
115.82	118.87	3.05	2.92	96	0.94	31	0R	1H	1W	
118.87	121.92	3.05	2.81	92	2.18	71	0R	1H	1W	
121.92	124.97	3.05	2.99	98	2.10	69	0R	1H	1W	
124.97	128.02	3.05	2.76	90	1.78	58	0R	2H	1W	
128.02	131.06	3.04	2.73	90	2.20	72	0R	2H	1W	
131.06	134.11	3.05	3.05	100	1.14	37	0R	3H	1W	
134.11	137.16	3.05	2.99	98	2.65	87	0R	3H	1W	
137.16	140.21	3.05	2.99	98	2.95	97	0R	2H	1W	
140.21	143.26	3.05	2.72	89	1.98	65	0R	3H	1W	
143.26	146.30	3.04	2.73	90	1.66	55	0R	2H	1W	
146.30	149.35	3.05	2.67	88	1.52	50	0R	2H	1W	
149.35	152.40	3.05	2.82	92	2.30	75	0R	3H	1W	
152.40	153.93	1.53	1.5	98	1.49	97	0R	3H	1W	rock is non reactive with HCL and has silica veins in it
153.93	155.45	1.52	1.5	99	1.49	98	0R	3H	1W	
155.45	156.97	1.52	1.41	93	1.32	87	0R	3H	1W	
156.97	158.50	1.53	1.32	86	1.01	66	0R	3H	1W	
158.50	160.02	1.52	1.33	88	1.27	84	0R	3H	1W	
160.02	161.54	1.52	1.48	97	1.17	77	0R	3H	1W	
161.54	163.07	1.53	1.32	86	1.22	80	0R	3H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
163.07	166.12	3.05	2.55	84	1.65	54	0R	3H	1W	
166.12	169.16	3.04	2.65	87	2.51	83	0R	3H	1W	
169.16	172.21	3.05	2.51	82	2.16	71	0R	2H	1W	
172.21	175.26	3.05	2.87	94	2.54	83	0R	2H	1W	
175.26	178.31	3.05	2.79	91	2.25	74	0R	2H	1W	
178.31	181.36	3.05	2.81	92	2.40	79	0R	2H	1W	
181.36	184.40	3.04	2.63	87	1.81	60	0R	2H	1W	
184.40	187.45	3.05	2.76	90	2.45	80	0R	2H	1W	
187.45	190.50	3.05	2.67	88	1.60	52	0R	2H	1W	
190.50	193.55	3.05	2.61	86	2.18	71	0R	2H	1W	
193.55	196.60	3.05	2.7	89	1.74	57	0R	2H	1W	
196.60	199.64	3.04	2.7	89	0.93	31	0R	2H	1W	
199.64	202.69	3.05	2.59	85	2.03	67	0R	1H	2W	
202.69	205.74	3.05	2.26	74	0.68	22	2R	1H	2W	
205.74	208.79	3.05	2.47	81	1.75	57	2R	1H	4W	Realgar present at the end of the interval
208.79	211.84	3.05	2.79	91	2.19	72	2R	1H	4W	realgar is present in this inetrval
211.84	214.88	3.04	2.6	86	1.67	55	3R	2H	2W	limestone reacts with HCL
214.88	216.41	1.53	1.26	82	0.82	54	3R	1H	1W	Limestone
216.41	218.54	2.13	2.13	100	2.05	96	3R	3H	1W	Limestone
218.54	221.59	3.05	3	98	2.58	85	2R	2H	1W	
221.59	224.64	3.05	2.61	86	2.06	68	2R	2H	1W	
224.64	227.69	3.05	2.68	88	1.70	56	3R	1H	2W	
227.69	230.73	3.04	2.83	93	1.81	60	3R	3H	1W	limestone
230.73	233.78	3.05	2.94	96	2.47	81	3R	3H	1W	
233.78	236.83	3.05	2.73	90	1.92	63	3R	2H	1W	limestone
236.83	239.88	3.05	2.67	88	1.07	35	3R	3H	1W	limestone
239.88	242.93	3.05	2.85	93	2.04	67	3R	3H	1W	limestone
242.93	245.97	3.04	2.72	89	2.01	66	3R	3H	1W	limestone
245.97	249.02	3.05	2.85	93	2.32	76	3R	3H	1W	limestone
249.02	252.07	3.05	2.6	85	1.89	62	3R	2H	2W	
252.07	255.12	3.05	2.79	91	1.79	59	3R	2H	1W	limestone

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
255.12	258.17	3.05	2.84	93	2.02	66	3R	2H	1W	limestone
258.17	261.21	3.04	2.65	87	1.83	60	3R	3H	1W	limestone
261.21	264.26	3.05	2.8	92	2.09	69	3R	3H	1W	limestone
264.26	267.31	3.05	2.83	93	2.39	78	3R	3H	1W	limestone
267.31	270.36	3.05	2.59	85	1.93	63	3R	3H	1W	limestone
270.36	273.41	3.05	2.6	85	2.18	71	3R	3H	1W	limestone
273.41	276.45	3.04	2.7	89	2.64	87	3R	3H	1W	limestone
276.45	279.50	3.05	2.65	87	2.25	74	3R	3H	1W	limestone
279.50	282.55	3.05	2.98	98	2.75	90	3R	3H	1W	limestone
282.55	285.60	3.05	2.69	88	2.18	71	3R	2H	2W	limestone
285.60	288.65	3.05	2.81	92	1.63	53	3R	1H	2W	limestone
288.65	291.70	3.05	2.71	89	1.68	55	2R	1H	2W	
291.70	294.74	3.04	2.84	93	1.66	55	3R	2H	2W	limestone
294.74	297.79	3.05	2.91	95	2.88	94	2R	2H	3W	presence of decalcified zone and realgar in limestone.
297.79	300.84	3.05	2.83	93	2.03	67	2R	1H	3W	presence of sulphide in shear plane and presence of real gar in this interval.
300.84	303.89	3.05	2.89	95	2.51	82	3R	2H	3W	limestone
303.89	306.93	3.04	2.64	87	2.26	74	2R	2H	2W	limestone
306.93	309.98	3.05	2.94	96	2.76	90	2R	1H	2W	
309.98	313.03	3.05	2.77	91	2.55	84	2R	1H	2W	limestone
313.03	316.08	3.05	2.93	96	2.39	78	2R	3H	2W	limestone
316.08	319.13	3.05	2.96	97	2.85	93	3R	3H	2W	limestone
319.13	322.17	3.04	2.61	86	2.25	74	3R	3H	2W	limestone
322.17	325.22	3.05	2.97	97	2.18	71	3R	1H	3W	realgar is present in limestone unit.
325.22	328.27	3.05	2.96	97	2.20	72	3R	1H	2W	limestone
328.27	331.32	3.05	2.94	96	2.46	81	3R	3H	1W	limestone
331.32	334.37	3.05	1.62	53	0.38	12	2R	1H	4W	RBZ
334.37	337.41	3.04	2.56	84	1.42	47	2R	1H	3W	RBZ
337.41	340.46	3.05	2.92	96	1.95	64	3R	2H	2W	limestone
340.46	343.51	3.05	2.93	96	2.39	78	2R	3H	1W	limestone
343.51	346.56	3.05	2.85	93	2.22	73	2R	2H	2W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
346.56	349.61	3.05	2.38	78	1.49	49	2R	2H	2W	
349.61	352.65	3.04	2.3	76	1.26	41	2R	2H	3W	realgar is present in this interval.
352.65	355.70	3.05	2.9	95	2.57	84	2R	2H	3W	realgar is present in this interval
355.70	358.75	3.05	2.87	94	2.34	77	3R	3H	1W	realgar present in limestone unit
358.75	361.80	3.05	2.92	96	2.36	77	3R	3H	1W	realgar present in limestone.
361.80	364.85	3.05	2.3	75	1.21	40	2R	2H	2W	limestone
364.85	367.89	3.04	2.9	95	2.57	85	1R	2H	4W	realgar in limestone.\
367.89	370.94	3.05	2.86	94	1.49	49	2R	3H	1W	limestone
370.94	373.99	3.05	2.97	97	2.96	97	3R	3H	1W	limestone
373.99	377.04	3.05	2.95	97	2.64	87	3R	3H	1W	limestone
377.04	380.09	3.05	2.81	92	2.12	70	3R	2H	3W	
380.09	383.13	3.04	2.64	87	2.16	71	1R	2H	3W	presence of realgar.
383.13	386.18	3.05	2.78	91	2.17	71	1R	2H	3W	realgar is present in this interva
386.18	389.23	3.05	2.84	93	1.62	53	2R	3H	2W	realgar is present in limestone
389.23	392.28	3.05	2.97	97	2.67	88	3R	3H	3W	limestone
392.28	395.33	3.05	2.7	89	0.98	32	3R	2H	3W	
395.33	398.37	3.04	2.9	95	2.11	69	3R	3H	1W	limestone
398.37	401.42	3.05	2.83	93	1.97	65	2R	2H	3W	realgar is present in this interval
401.42	404.47	3.05	2.82	92	2.01	66	2R	3H	1W	
404.47	407.52	3.05	2.99	98	2.82	92	2R	3H	1W	
407.52	410.57	3.05	2.99	98	2.90	95	2R	3H	1W	limestone
410.57	413.61	3.04	2.85	94	1.08	36	3R	3H	1W	limestone
413.61	416.66	3.05	2.92	96	2.08	68	3R	3H	2W	limestone
416.66	419.71	3.05	2.58	85	1.43	47	3R	2H	2W	limestone
419.71	422.76	3.05	2.95	97	2.12	70	3R	3H	1W	limestone
422.76	425.81	3.05	2.99	98	2.66	87	3R	3H	1W	limestone
425.81	428.85	3.04	2.99	98	1.73	57	2R	2H	1W	limestone
428.85	431.90	3.05	2.95	97	2.35	77	3R	3H	1W	limestone
431.90	434.95	3.05	2.97	97	2.56	84	3R	3H	1W	limestone
434.95	438.00	3.05	2.99	98	2.97	97	3R	3H	1W	limestone
438.00	441.05	3.05	3	98	2.51	82	3R	3H	1W	limestone

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
441.05	444.09	3.04	2.88	95	2.46	81	3R	3H	1W	limestone
444.09	447.14	3.05	2.44	80	1.48	49	3R	3H	1W	.limestone
447.14	450.19	3.05	2.53	83	2.16	71	3R	3H	1W	limestone
450.19	453.24	3.05	2.89	95	2.21	72	3R	3H	1W	limestone
453.24	456.29	3.05	2.79	91	1.35	44	3R	2H	2W	limestone
456.29	459.33	3.04	2.85	94	2.68	88	3R	3H	1W	limestone
459.33	462.38	3.05	2.95	97	2.75	90	3R	3H	1W	Limestone
462.38	465.43	3.05	2.96	97	2.82	92	3R	3H	1W	limestone
465.43	468.48	3.05	2.98	98	2.27	74	3R	3H	1W	limestone
468.48	471.53	3.05	3.03	99	2.99	98	2R	3H	1W	Reactivity 4H along calcite veins.
471.53	474.57	3.04	2.72	89	0.98	32	2R	3H	2W	Fractures occuring along weak planes of continuous styolites.
474.57	477.62	3.05	3.05	100	2.63	86	2R	3H	1W	Reactivity 4H along calcite veins.
477.62	480.67	3.05	2.95	97	2.53	83	2R	3H	1W	Fractures primarily occuring along styolites.
480.67	483.72	3.05	2.94	96	2.32	76	3R	3H	1W	Overall higher reactivity due to increased calcite veins along this interval. Fractures occuring along styolites and clay/sulfide infills.
483.72	486.77	3.05	2.72	89	2.21	72	2R	3H	1W	Intervals of 3R where calcite veins are more abundant.
486.77	489.81	3.04	2.92	96	2.76	91	2R	3H	1W	Minor amount of clay present along joint surface.
489.81	492.86	3.05	3.01	99	2.41	79	3R	3H	2W	Sulfides also present along joint surfaces, in minor abundance.
492.86	495.91	3.05	2.95	97	2.30	75	3R	3H	2W	Joint surface infill clay/sulfides.
495.91	498.96	3.05	2.93	96	2.19	72	2R	3H	1W	3R along zone with higher calcite vein content.
498.96	502.01	3.05	3.01	99	2.49	82	3R	3H	1W	Multiple joints with out a set.
502.01	505.05	3.04	2.96	97	2.36	78	3R	3H	1W	Consistent, discontinuous calcite veins along interval.
505.05	508.10	3.05	2.96	97	2.47	81	3R	3H	2W	Joints primarily occuring along continuous styolites.
508.10	511.15	3.05	3.04	100	2.21	72	2R	3H	2W	Minimal amount of weathering along joint surfaces.

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
511.15	514.20	3.05	2.72	89	2.57	84	2R	3H	2W	Joint infill has ~2mm sized calcite crystals as well as ~1mm of clay on surfaces.
514.20	517.25	3.05	3.04	100	3.04	100	3R	3H	1W	Few joints with traces soft clay infill
517.25	520.29	3.04	2.94	97	2.92	96	3R	3H	1W	(EOH) Abundant calcite veining

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From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
0.00	0.00	0.00	-QC-	0.00	0	S049668	☐	N18-008	Core	CS4	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S049708	☐	N18-010	Core	CS10	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S049505	☐	N18-002	Core	CS5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S049670	☐	N18-008	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S049660	☐	N18-007	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S049646	☐	N18-007	Core	CS7	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S049631	☐	N18-007	Core	CS5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S049620	☐	N18-006	Core	CS9	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S049592	☐	N18-006	Core	CS5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S049577	☐	N18-003	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S049557	☐	N18-003	Core	CS5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S049680	☐	N18-008	Core	CS9	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S049550	☐	N18-003	Core	CS9	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S049527	☐	N18-002	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S049519	☐	N18-002	Core	CS2	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S049618	☐	N18-006	Core		☑	☐	☐
2.87	3.05	0.18	OVB	0.18	100	S049501	☐	N18-002	Core		☐	☐	☐
3.05	6.10	3.05	OVB	0.83	27	S049502	☐	N18-002	Core		☐	☐	☐
6.10	9.14	3.04	MST	1.14	38	S049503	☐	N18-002	Core		☐	☐	☐
9.14	12.19	3.05	MST	0.45	15	S049504	☐	N18-002	Core		☐	☐	☐
12.19	15.24	3.05	MST	1.06	35	S049506	☐	N18-002	Core		☐	☐	☐
15.24	18.29	3.05	MST	0.78	26	S049507	☐	N18-002	Core		☐	☐	☐
18.29	21.34	3.05	MST	1.14	37	S049508	☐	N18-002	Core		☐	☐	☐
21.34	24.38	3.04	MST	1.67	55	S049509	☐	N18-002	Core		☐	☐	☐
24.38	27.43	3.05	MST	2.21	72	S049510	☐	N18-002	Core		☐	☐	☐
27.43	30.48	3.05	SLC	2.54	83	S049511	☐	N18-002	Core		☐	☐	☐
30.48	33.53	3.05	SLC	2.37	78	S049512	☐	N18-002	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
33.53	36.58	3.05	SLC	2.61	86	S049513	☐	N18-002	Core		☐	☐	☐
36.58	39.62	3.04	SLC	2.81	92	S049514	☐	N18-002	Core		☐	☐	☐
36.58	39.62	3.04	SLC	2.81	92	S049515	☐	N18-002	Core		☐	☐	☑
39.62	42.67	3.05	SLC	2.54	83	S049516	☐	N18-002	Core		☐	☐	☐
42.67	45.72	3.05	SLC	1.72	56	S049517	☐	N18-002	Core		☐	☐	☐
45.72	48.77	3.05	SLC	1.82	60	S049518	☐	N18-002	Core		☐	☐	☐
48.77	51.82	3.05	SLC	2.47	81	S049520	☐	N18-002	Core		☐	☐	☐
51.82	54.86	3.04	SLC	1.99	65	S049521	☐	N18-002	Core		☐	☐	☐
54.86	57.91	3.05	SLC	2.81	92	S049522	☐	N18-002	Core		☐	☐	☐
57.91	60.96	3.05	SLC	2.62	86	S049523	☐	N18-002	Core		☐	☐	☐
60.96	64.01	3.05	SLC	2.56	84	S049524	☐	N18-002	Core		☐	☐	☐
64.01	66.11	2.10	SLC	1.57	75	S049525	☐	N18-002	Core		☐	☐	☐
66.11	68.00	1.89	SLC	0.81	43	S049526	☐	N18-002	Core		☐	☐	☐
68.00	70.10	2.10	SLC	1.39	66	S049528	☐	N18-002	Core		☐	☐	☐
70.10	73.15	3.05	SLC	2.76	90	S049529	☐	N18-002	Core		☐	☐	☐
73.15	76.20	3.05	SLC	2.70	89	S049530	☐	N18-002	Core		☐	☐	☐
73.15	76.20	3.05	SLC	2.70	89	S049531	☐	N18-002	Core		☐	☑	☐
76.20	78.10	1.90	SLC	1.75	92	S049532	☐	N18-002	Core		☐	☐	☐
78.10	80.00	1.90	SLC	1.84	97	S049533	☐	N18-002	Core		☐	☐	☐
80.00	82.30	2.30	SLC	1.81	79	S049534	☐	N18-002	Core		☐	☐	☐
82.30	85.34	3.04	SLC	2.86	94	S049535	☐	N18-002	Core		☐	☐	☐
85.34	88.39	3.05	SLC	2.95	97	S049536	☐	N18-002	Core		☐	☐	☐
88.39	91.44	3.05	SLC	2.98	98	S049537	☐	N18-002	Core		☐	☐	☐
91.44	94.49	3.05	SLC	2.52	83	S049538	☐	N18-002	Core		☐	☐	☐
94.49	97.54	3.05	SLC	2.89	95	S049539	☐	N18-002	Core		☐	☐	☐
97.54	100.58	3.04	SLC	2.77	91	S049540	☐	N18-002	Core		☐	☐	☐
100.58	103.63	3.05	SLC	2.91	95	S049541	☐	N18-003	Core		☐	☐	☐
103.63	106.69	3.06	SLC	2.97	97	S049542	☐	N18-003	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
106.69	109.73	3.04	SLC	2.98	98	S049543	☐	N18-003	Core		☐	☐	☐
109.73	112.78	3.05	SLC	3.05	100	S049544	☐	N18-003	Core		☐	☐	☐
112.78	115.82	3.04	SLC	2.92	96	S049545	☐	N18-003	Core		☐	☐	☐
112.78	115.82	3.04	SLC	2.92	96	S049546	☐	N18-003	Core		☐	☐	☑
115.82	118.87	3.05	SLC	2.92	96	S049547	☐	N18-003	Core		☐	☐	☐
118.87	121.92	3.05	SLC	2.81	92	S049548	☐	N18-003	Core		☐	☐	☐
121.92	124.97	3.05	SLC	2.99	98	S049549	☐	N18-003	Core		☐	☐	☐
124.97	128.02	3.05	SLC	2.76	90	S049551	☐	N18-003	Core		☐	☐	☐
128.02	131.06	3.04	SLC	2.73	90	S049552	☐	N18-003	Core		☐	☐	☐
131.06	134.11	3.05	SLC	3.05	100	S049553	☐	N18-003	Core		☐	☐	☐
134.11	137.16	3.05	SLC	2.99	98	S049554	☐	N18-003	Core		☐	☐	☐
137.16	140.21	3.05	SLC	2.99	98	S049555	☐	N18-003	Core		☐	☐	☐
140.21	143.26	3.05	SLC	2.72	89	S049556	☐	N18-003	Core		☐	☐	☐
143.26	146.30	3.04	SLC	2.73	90	S049558	☐	N18-003	Core		☐	☐	☐
146.30	149.35	3.05	SLC	2.67	88	S049559	☐	N18-003	Core		☐	☐	☐
149.35	152.40	3.05	SLC	2.82	92	S049560	☐	N18-003	Core		☐	☐	☐
152.40	155.45	3.05	SLC	3.00	98	S049561	☐	N18-003	Core		☐	☐	☐
155.45	158.50	3.05	SLC	2.73	90	S049562	☐	N18-003	Core		☐	☐	☐
158.50	161.54	3.04	SLC	2.81	92	S049563	☐	N18-003	Core		☐	☐	☐
161.54	163.07	1.53	SLC	1.32	86	S049564	☐	N18-003	Core		☐	☐	☐
163.07	166.12	3.05	SLC	2.55	84	S049565	☐	N18-003	Core		☐	☐	☐
166.12	169.16	3.04	SLC	2.65	87	S049566	☐	N18-003	Core		☐	☐	☐
166.12	169.16	3.04	SLC	2.65	87	S049567	☐	N18-003	Core		☐	☑	☐
169.16	172.21	3.05	SLC	2.51	82	S049568	☐	N18-003	Core		☐	☐	☐
172.21	175.26	3.05	SLC	2.87	94	S049569	☐	N18-003	Core		☐	☐	☐
175.26	178.31	3.05	SLC	2.79	91	S049570	☐	N18-003	Core		☐	☐	☐
178.31	181.36	3.05	SLC	2.81	92	S049571	☐	N18-003	Core		☐	☐	☐
181.36	184.40	3.04	SLC	2.63	87	S049572	☐	N18-003	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
184.40	187.45	3.05	SLC	2.76	90	S049573	☐	N18-003	Core		☐	☐	☐
187.45	190.50	3.05	SLC	2.67	88	S049574	☐	N18-003	Core		☐	☐	☐
190.50	193.55	3.05	SLC	2.61	86	S049575	☐	N18-003	Core		☐	☐	☐
193.55	196.60	3.05	SLC	2.70	89	S049576	☐	N18-003	Core		☐	☐	☐
196.60	199.64	3.04	SLC	2.70	89	S049578	☐	N18-003	Core		☐	☐	☐
199.64	201.17	1.53	SLC	1.40	92	S049579	☐	N18-003	Core		☐	☐	☐
201.17	203.48	2.31	SLC	2.13	92	S049580	☐	N18-003	Core		☐	☐	☐
203.48	205.74	2.26	SLC	2.26	100	S049581	☐	N18-006	Core		☐	☐	☐
205.74	208.55	2.81	LST	2.63	94	S049582	☐	N18-006	Core		☐	☐	☐
208.55	209.68	1.13	LST	1.09	96	S049583	☐	N18-006	Core		☐	☐	☐
208.55	209.68	1.13	LST	1.09	96	S049584	☐	N18-006	Core		☐	☑	☐
209.68	211.84	2.16	LST	1.96	91	S049585	☐	N18-006	Core		☐	☐	☐
211.84	213.36	1.52	LST	1.52	100	S049586	☐	N18-006	Core		☐	☐	☐
213.36	216.41	3.05	LST	2.80	92	S049587	☐	N18-006	Core		☐	☐	☐
216.41	218.54	2.13	LST	2.13	100	S049588	☐	N18-006	Core		☐	☐	☐
218.54	221.59	3.05	LST	3.00	98	S049589	☐	N18-006	Core		☐	☐	☐
221.59	224.64	3.05	LST	2.61	86	S049590	☐	N18-006	Core		☐	☐	☐
224.64	227.69	3.05	LST	2.68	88	S049591	☐	N18-006	Core		☐	☐	☐
227.69	230.73	3.04	LST	2.83	93	S049593	☐	N18-006	Core		☐	☐	☐
230.73	233.78	3.05	LST	2.94	96	S049594	☐	N18-006	Core		☐	☐	☐
233.78	236.83	3.05	LST	2.73	90	S049595	☐	N18-006	Core		☐	☐	☐
236.83	239.88	3.05	LST	2.67	88	S049596	☐	N18-006	Core		☐	☐	☐
239.88	242.93	3.05	LST	2.85	93	S049597	☐	N18-006	Core		☐	☐	☐
242.93	245.97	3.04	LST	2.72	89	S049598	☐	N18-006	Core		☐	☐	☐
245.97	249.02	3.05	LST	2.85	93	S049599	☐	N18-006	Core		☐	☐	☐
249.02	252.07	3.05	LST	2.60	85	S049600	☐	N18-006	Core		☐	☐	☐
252.07	255.12	3.05	LST	2.79	91	S049601	☐	N18-006	Core		☐	☐	☐
255.12	258.17	3.05	LST	2.84	93	S049602	☐	N18-006	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
258.17	261.21	3.04	LST	2.65	87	S049603	☐	N18-006	Core		☐	☐	☐
258.17	261.21	3.04	LST	2.65	87	S049604	☐	N18-006	Core		☐	☐	☑
261.21	264.26	3.05	LST	2.80	92	S049605	☐	N18-006	Core		☐	☐	☐
264.26	267.31	3.05	LST	2.83	93	S049606	☐	N18-006	Core		☐	☐	☐
267.31	270.36	3.05	LST	2.59	85	S049607	☐	N18-006	Core		☐	☐	☐
270.36	273.41	3.05	LST	2.60	85	S049608	☐	N18-006	Core		☐	☐	☐
273.41	276.45	3.04	LST	2.70	89	S049609	☐	N18-006	Core		☐	☐	☐
276.45	279.50	3.05	LST	2.65	87	S049610	☐	N18-006	Core		☐	☐	☐
279.50	282.55	3.05	LST	2.98	98	S049611	☐	N18-006	Core		☐	☐	☐
282.55	285.60	3.05	LST	2.69	88	S049612	☐	N18-006	Core		☐	☐	☐
285.60	288.65	3.05	LST	2.81	92	S049613	☐	N18-006	Core		☐	☐	☐
288.65	291.70	3.05	LST	2.71	89	S049614	☐	N18-006	Core		☐	☐	☐
291.70	294.74	3.04	LST	2.84	93	S049615	☐	N18-006	Core		☐	☐	☐
294.74	297.79	3.05	LST	2.78	91	S049616	☐	N18-006	Core		☐	☐	☐
297.79	300.84	3.05	LST	2.83	93	S049617	☐	N18-006	Core		☐	☐	☐
300.84	303.89	3.05	LST	2.89	95	S049619	☐	N18-006	Core		☐	☐	☐
303.89	306.93	3.04	LST	2.64	87	S049621	☐	N18-007	Core		☐	☐	☐
306.93	309.98	3.05	LST	2.94	96	S049622	☐	N18-007	Core		☐	☐	☐
309.98	313.03	3.05	LST	2.77	91	S049623	☐	N18-007	Core		☐	☐	☐
313.03	316.08	3.05	LST	2.93	96	S049624	☐	N18-007	Core		☐	☐	☐
316.08	319.13	3.05	LST	2.96	97	S049625	☐	N18-007	Core		☐	☐	☐
319.13	322.17	3.04	LST	2.61	86	S049626	☐	N18-007	Core		☐	☐	☐
322.17	325.22	3.05	LST	2.97	97	S049627	☐	N18-007	Core		☐	☐	☐
325.22	328.27	3.05	LST	2.96	97	S049628	☐	N18-007	Core		☐	☐	☐
328.27	331.32	3.05	LST	2.94	96	S049629	☐	N18-007	Core		☐	☐	☐
331.32	334.37	3.05	LST	1.62	53	S049630	☐	N18-007	Core		☐	☐	☐
334.37	337.41	3.04	LST	2.56	84	S049632	☐	N18-007	Core		☐	☐	☐
337.41	340.46	3.05	LST	2.92	96	S049633	☐	N18-007	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
340.46	343.51	3.05	LST	2.93	96	S049634	☐	N18-007	Core		☐	☐	☐
343.51	346.56	3.05	LST	2.85	93	S049635	☐	N18-007	Core		☐	☐	☐
346.56	349.61	3.05	LST	2.38	78	S049636	☐	N18-007	Core		☐	☐	☐
349.61	350.90	1.29	LST	1.29	100	S049637	☐	N18-007	Core		☐	☐	☐
350.90	353.32	2.42	LST	2.27	94	S049638	☐	N18-007	Core		☐	☐	☐
350.90	353.32	2.42	LST	2.27	94	S049639	☐	N18-007	Core		☐	☑	☐
353.32	355.70	2.38	LST	2.30	97	S049640	☐	N18-007	Core		☐	☐	☐
355.70	358.75	3.05	LST	2.87	94	S049641	☐	N18-007	Core		☐	☐	☐
358.75	361.80	3.05	LST	2.92	96	S049642	☐	N18-007	Core		☐	☐	☐
361.80	363.71	1.91	LST	1.87	98	S049643	☐	N18-007	Core		☐	☐	☐
363.71	365.72	2.01	LST	2.00	100	S049644	☐	N18-007	Core		☐	☐	☐
365.72	367.30	1.58	LST	1.53	97	S049645	☐	N18-007	Core		☐	☐	☐
367.30	370.20	2.90	LST	2.81	97	S049647	☐	N18-007	Core		☐	☐	☐
370.20	372.40	2.20	LST	2.20	100	S049648	☐	N18-007	Core		☐	☐	☐
372.40	374.60	2.20	LST	2.10	95	S049649	☐	N18-007	Core		☐	☐	☐
374.60	376.80	2.20	LST	2.20	100	S049650	☐	N18-007	Core		☐	☐	☐
376.80	378.30	1.50	LST	1.40	93	S049651	☐	N18-007	Core		☐	☐	☐
378.30	379.80	1.50	LST	1.42	95	S049652	☐	N18-007	Core		☐	☐	☐
379.80	381.30	1.50	LST	1.50	100	S049653	☐	N18-007	Core		☐	☐	☐
379.80	381.30	1.50	LST	1.50	100	S049654	☐	N18-007	Core		☐	☐	☑
381.30	382.80	1.50	LST	1.36	91	S049655	☐	N18-007	Core		☐	☐	☐
382.80	384.30	1.50	LST	1.50	100	S049656	☐	N18-007	Core		☐	☐	☐
384.30	385.80	1.50	LST	1.50	100	S049657	☐	N18-007	Core		☐	☐	☐
385.80	387.30	1.50	LST	1.48	99	S049658	☐	N18-007	Core		☐	☐	☐
387.30	388.90	1.60	LST	1.50	94	S049659	☐	N18-007	Core		☐	☐	☐
388.90	390.40	1.50	LST	1.43	95	S049661	☐	N18-008	Core		☐	☐	☐
390.40	391.85	1.45	LST	1.41	97	S049662	☐	N18-008	Core		☐	☐	☐
391.85	393.61	1.76	LST	1.40	80	S049663	☐	N18-008	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
393.61	395.33	1.72	LST	1.72	100	S049664	☐	N18-008	Core		☐	☐	☐
395.33	398.37	3.04	LST	1.34	44	S049665	☐	N18-008	Core		☐	☐	☐
398.37	399.69	1.32	LST	1.06	80	S049666	☐	N18-008	Core		☐	☐	☐
399.69	400.72	1.03	LST	1.03	100	S049667	☐	N18-008	Core		☐	☐	☐
400.72	401.77	1.05	LST	1.05	100	S049669	☐	N18-008	Core		☐	☐	☐
401.77	404.47	2.70	LST	2.50	93	S049671	☐	N18-008	Core		☐	☐	☐
404.47	407.52	3.05	LST	2.99	98	S049672	☐	N18-008	Core		☐	☐	☐
407.52	410.57	3.05	LST	2.99	98	S049673	☐	N18-008	Core		☐	☐	☐
410.57	413.61	3.04	LST	2.85	94	S049674	☐	N18-008	Core		☐	☐	☐
413.61	416.66	3.05	LST	2.92	96	S049675	☐	N18-008	Core		☐	☐	☐
416.66	419.71	3.05	LST	2.58	85	S049676	☐	N18-008	Core		☐	☐	☐
419.71	422.76	3.05	LST	2.95	97	S049677	☐	N18-008	Core		☐	☐	☐
422.76	425.81	3.05	LST	2.99	98	S049678	☐	N18-008	Core		☐	☐	☐
425.81	428.85	3.04	LST	2.99	98	S049679	☐	N18-008	Core		☐	☐	☐
428.85	431.90	3.05	LST	2.95	97	S049681	☐	N18-008	Core		☐	☐	☐
431.90	434.95	3.05	LST	2.97	97	S049682	☐	N18-008	Core		☐	☐	☐
434.95	438.00	3.05	LST	2.99	98	S049683	☐	N18-008	Core		☐	☐	☐
438.00	441.05	3.05	LST	3.00	98	S049684	☐	N18-008	Core		☐	☐	☐
441.05	444.09	3.04	LST	2.88	95	S049685	☐	N18-008	Core		☐	☐	☐
444.09	447.14	3.05	LST	2.44	80	S049686	☐	N18-008	Core		☐	☐	☐
447.14	450.19	3.05	LST	2.53	83	S049687	☐	N18-008	Core		☐	☐	☐
450.19	453.24	3.05	LST	2.89	95	S049688	☐	N18-008	Core		☐	☐	☐
453.24	456.29	3.05	LST	2.79	91	S049689	☐	N18-008	Core		☐	☐	☐
456.29	459.33	3.04	LST	2.85	94	S049690	☐	N18-008	Core		☐	☐	☐
456.29	459.33	3.04	LST	2.85	94	S049691	☐	N18-008	Core		☐	☐	☑
459.33	462.38	3.05	LST	2.95	97	S049692	☐	N18-008	Core		☐	☐	☐
462.38	465.43	3.05	LST	2.96	97	S049693	☐	N18-008	Core		☐	☐	☐
465.43	468.48	3.05	LST	2.98	98	S049694	☐	N18-008	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
468.48	471.53	3.05	LST	3.03	99	S049695	☐	N18-008	Core		☐	☐	☐
468.48	471.53	3.05	LST	3.03	99	S049696	☐	N18-008	Core		☐	☑	☐
471.53	474.57	3.04	LST	2.72	89	S049697	☐	N18-008	Core		☐	☐	☐
474.57	477.62	3.05	LST	3.05	100	S049698	☐	N18-008	Core		☐	☐	☐
477.62	480.67	3.05	LST	2.95	97	S049699	☐	N18-008	Core		☐	☐	☐
480.67	483.72	3.05	LST	2.94	96	S049700	☐	N18-008	Core		☐	☐	☐
483.72	486.77	3.05	LST	2.72	89	S049701	☐	N18-010	Core		☐	☐	☐
486.77	489.81	3.04	LST	2.92	96	S049702	☐	N18-010	Core		☐	☐	☐
489.81	492.86	3.05	LST	3.01	99	S049703	☐	N18-010	Core		☐	☐	☐
492.86	495.91	3.05	LST	2.95	97	S049704	☐	N18-010	Core		☐	☐	☐
495.91	498.96	3.05	LST	2.93	96	S049705	☐	N18-010	Core		☐	☐	☐
498.96	502.01	3.05	LST	3.01	99	S049706	☐	N18-010	Core		☐	☐	☐
502.01	505.05	3.04	LST	2.96	97	S049707	☐	N18-010	Core		☐	☐	☐
505.05	508.10	3.05	LST	2.96	97	S049709	☐	N18-010	Core		☐	☐	☐
508.10	511.15	3.05	LST	3.04	100	S049710	☐	N18-010	Core		☐	☐	☐
511.15	514.20	3.05	LST	2.72	89	S049711	☐	N18-010	Core		☐	☐	☐
514.20	517.25	3.05	LST	3.04	100	S049712	☐	N18-010	Core		☐	☐	☐
517.25	520.29	3.04	LST	2.94	97	S049713	☐	N18-010	Core		☐	☐	☐

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From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
0.00	1.52	1.52	OVB	--	Overburden 0-3.99m.							
1.52	105.16	103.64	FLR	FG	Very fine grained NONAD mudstone with intense oxidation near surface overlaying Conrad Siliciclastic interbedded siltstone and fine sandstone with local shearing and brecciation. Oxidation decreases downhole. Below 8.80m, oxidation is trace along fracture surfaces. Very fine to fine grained pyrite (0.2-0.4%) hosted as fine disseminations and bedding parallel blebs in both NONAD and C-SLC. C-SLC displays discrete intervals of black pitted siltstone between 24.38 to 27.43m. Realgar content varies between 34.80 and 82m with the highest concentrations at: 34.82 to 35.05m hosted as infill within breccia, 74.5 to 76.8m as veinlets (with or without silica) and 79.25 to 79.60 as infill within breccia along with sooty material and silicified wallrock. Elsewhere, realgar is seen as patchy growths on fracture surfaces. Silicification is locally weak to moderate and proximal to realgar/silica veins or realgar bearing breccias. Lower contact between NFZ and C-SLC is gradational from 88.90 and 105.16m. Over this interval there is a decrease in shear fabrics and an increase in core competency.							
						DK	GY	SH	SIL	1I	Py	0.4
						LT	GY	FR	OXI	1I	Py	0.2
								BD			Re	0.4
						MD	BN	BX	ARG	1I	Py	0.4

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
105.16	309.37	204.21	SLC	MG	Interbedded finely laminated siltstones and mudstones with wavy bedding and soft sediment deformation overlying matrix supported, quartz granule to pebble conglomerates, fine couplets of sandstone and mudstone (turbidite beds) and clast or matrix supported lithic/quartz clastic conglomerates (debrites?). Interbedded mudstone with conglomerate beds could possbly be large boulder sized clasts of mudstone hosted within the conglomerates. Debris flow units are generally small (<50cm) and can be weakly sheared. Localized shearing, faulting and brecciation are present between 121.92 and 137.0m. Weak to moderate realgar veining within 123.44 to 126.49m is proximal to small shear zones and a small gouge filled fault. This same interval displays CPT (black, pitted to vuggy silty material) and weak silicification. Realgar can be seen as patchy growths within vugs and on fracture surfaces throughout unit. Fine, diagenetic pyrite is disseminated through-out mudstone and sandstone units as well as discrete bands/blebs. Within conglomerate/debris flow units fine diagenetic pyrite appears as rounded clasts (replacing?) or within matrix. From 269.03 to 293.25m, three discrete shear/breccia zones of similar orientation (15-20 degrees TCA) were noted. The largest being from 269.03 to 271.27. Shear/breccia zones are clay fill and contain rock fragments. From 291.71 to 293.25m, shearing fabrics are associated with black, pitted, argillic (?) and weakly silicified rocks. Rare/trace realgar is associated/proximal to these shear/breccia zones.							
								FR			As	0.1
						MD	GY	VU	SIL	1I	Py	4
						LT	GY	BD	ARG	1I	Re	0.5
								BX				
								SH				
								SD				
								DB				

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
309.37	320.47	11.10	LST	FG	Light grey, fine to medium grained silty limestone with interbedded silt rich beds/laminations and local laminated siltstone (minor/trace sandysiltstone) and coarse silty limestone. Veining increases in intensity from 317.30 to 317.86m, with the most intense veining near a brecciated/mineralized lower contact between C-LST1 and C-SLC. Realgar mineralization is locally moderate to intense. Most notably at the upper and lower contacts as well as a sheared/faulted siltstone bed between 311.84 and 312.03m. The lower contact is a pervasively brecciated interval with ~30% realgar infill (or replacement?). Trace mm scale styolitic seams are locally present, most notably at the contact with mineralized breccia zone near the base of the interval.								
								SH				
						MD	OR	BX	SIL	2I		
						LT	GY	BD	DCA	1I	Re	3.5
320.47	363.24	42.77	SLC	MG	Interbedded dark and light grey, strongly bedded siltstones and mudstones with local floating, rounded quartz granules and (cm to m scale) beds of matrix supported, massive, quartz granule (to minor pebble) conglomerate (Starry Night). Beds of conglomerate contain moderate amounts of cobble (and rare boulder) sized lithic clasts of interbedded siltstone and mudstone. Locally, heavily sheared and brecciated near upper contact. Brecciation at upper contact is associated with abundant Realgar infill and arsenic oxidation. The intensity of shear fabrics and breccia textures gradually decreases away from upper contact with overlying limestones. Lower contact with Conrad Limestone is very sharp and associated with dolomitization of Limestone.								

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
363.24	463.91	100.67	LST	FG	Light grey, fine grained, massive to laminated, silty limestone with medium grained, well-sorted calcareous arenite and local (minor) thin interbeds of dark grey/black calcareous mudstone. Calc arenite beds can be 0.5-1m thick and massive to strongly bedded with wavy to planar bedding. Calcareous mudstone beds are mm to cm scale, wavy and locally weakly sheared. Bedding for all lithologies is generally at shallow to very shallow angles TCA, at times becoming nearly parallel TCA. Calcite veining greatly varies throughout interval from trace/weak veining to strong. Two significant zones of calcite veining (from 377.30 to 378.23m and 398.51 to 398.60m) appear to be associated with brecciation and calcite/minor realgar infill. Breccia zone between 377.30 to 378.23m contained significant Arsenopyrite mineralization as well as strong dolomitization (or decalcification?) of surrounding limestone. XRF data on sooty black seam within breccia at 398.59m showed 640ppm Au. It is also important to note the upper most contact with Conrad Siliciclastic was dolomitized for roughly 1m.							
						LT	GY	BD	DOL	2I	As	0.1
											Re	0.1
						MD	GY		DCA	2I	Re	0.2

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
0.00	0.40	0.40	0	0	0.00	0	--	--	--	no recovery
0.40	1.52	1.12	0.98	88	0.00	0	0R	1H	2W	ovb
1.52	3.05	1.53	0.48	31	0.00	0	0R	1H	4W	ovb
3.05	4.57	1.52	0.55	36	0.00	0	0R	1H	4W	ovb
4.57	6.10	1.53	0.94	61	0.10	7	0R	1H	4W	ovb
6.10	7.62	1.52	0.81	53	0.13	9	1R	1H	4W	ovb
7.62	9.14	1.52	1.16	76	0.49	32	0R	1H	3W	joint infill is dark grey and graphitic
9.14	10.67	1.53	1.18	77	0.31	20	0R	1H	2W	
10.67	12.19	1.52	1.29	85	0.48	32	0R	2H	3W	joint infill is dark grey, graphitic
12.19	13.72	1.53	1.26	82	0.58	38	0R	1H	4W	
13.72	15.24	1.52	1.28	84	0.00	0	0R	1H	4W	oxidation weathering with some greasy grey, graphitic weathering
15.24	16.76	1.52	1.36	89	0.00	0	0R	1H	4W	oxidation and graphitic weathering present
16.76	18.29	1.53	0.82	54	0.12	8	0R	1H	4W	oxidation and graphitic weathering present. Reaction mostly nonexistent; a few small areas weakly react
18.29	19.81	1.52	1.15	76	0.15	10	1R	1H	3W	hcl reaction is generally very weak to nonexistent in this interval. Most of the weathering here is clay/graphite weathering
19.81	21.33	1.52	1.09	72	0.00	0	0R	1H	4W	oxidation weathering and clay and darkly coloured graphitic weathering
21.33	22.86	1.53	1.31	86	0.48	31	0R	1H	4W	very dark and somewhat greasy weathering. Rock here is very crumbly and soft
22.86	24.38	1.52	0.89	59	0.10	7	0R	1H	4W	
24.38	25.91	1.53	1.25	82	0.39	25	0R	1H	4W	Competence of the rock is variable from somewhat coherent clay material to moderately soft rock, with the majority between these. Joint and fracture surfaces are infilled with dark graphitic material.

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
25.91	27.43	1.52	1.09	72	0.54	36	0R	1H	4W	HCl reactivity is mostly nonexistent but locally a few small areas weakly react. Rock here is very soft and crumbly with a couple of sections of more competent rock.
27.43	28.96	1.53	1.04	68	0.00	0	0R	1H	4W	
28.96	30.48	1.52	0.69	45	0.00	0	0R	1H	4W	This rock transitions from very soft, crumbly material to a more competent rock.
30.48	32.00	1.52	1.29	85	0.46	30	0R	3H	3W	hardness varies from moderate to moderately soft.
32.00	33.53	1.53	0.98	64	0.16	10	0R	3H	2W	
33.53	35.05	1.52	1.46	96	0.43	28	0R	3H	2W	
35.05	36.58	1.53	1.37	90	1.12	73	0R	1H	3W	mostly quite competent, but with very soft clay sections. Some very weak reactivity in areas
36.58	38.10	1.52	0.59	39	0.18	12	0R	1H	4W	dark, soft clay weathering abundant.
38.10	39.62	1.52	0.17	11	0.00	0	0R	1H	4W	
39.62	41.15	1.53	1.27	83	0.90	59	0R	2H	4W	Abundant dark, soft clay weathering
41.15	42.67	1.52	1.26	83	0.72	47	0R	1H	4W	
42.67	44.20	1.53	1.02	67	0.30	20	0R	1H	4W	
44.20	45.72	1.52	0.88	58	0.10	7	0R	2H	4W	
45.72	47.24	1.52	1.12	74	0.28	18	0R	2H	4W	
47.24	48.77	1.53	0.93	61	0.00	0	0R	1H	4W	
48.77	50.29	1.52	1.18	78	0.62	41	0R	3H	3W	
50.29	51.82	1.53	0.99	65	0.28	18	0R	1H	4W	soft mostly incompetent rock, with dark, graphitic clay weathering infilling joints and fractures
51.82	53.34	1.52	1.18	78	0.23	15	0R	1H	4W	sections of competent rock, but largely crumbly, soft material. Clay weathering abundant in soft, dark rock
53.34	54.86	1.52	1.23	81	1.11	73	0R	2H	3W	Very sharp,brittle fractures. General high competence and lower weathering
54.86	56.39	1.53	1.24	81	0.41	27	0R	1H	3W	the end of this interval is very soft, clay weathered material

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
56.39	59.44	3.05	1.99	65	0.93	30	0R	1H	3W	This interval goes from soft crumbling rock to higher hardness, stronger rock toward the end.
59.44	62.48	3.04	2.14	70	0.69	23	0R	2H	4W	
62.48	65.53	3.05	2.45	80	1.26	41	0R	2H	3W	realgar occuring along fractured surfaces, as well as soft dark clay material
65.53	68.58	3.05	2.24	73	1.07	35	0R	1H	3W	Range from very soft to very hard material present in different layers of this interval. Joint infill composed of graphitic clay and fragments of host rock
68.58	71.63	3.05	2.72	89	1.19	39	0R	1H	3W	High fracture frequency due to the section of crumbly and soft clay material; the rest of this interval contains large sections of competent rock
71.63	74.68	3.05	2.58	85	1.14	37	0R	1H	3W	mostly competent material with zones of soft, rubbly material and clay sections
74.68	77.72	3.04	2.25	74	0.84	28	0R	1H	3W	realgar common along structures, as well as some soft black sulphide material. Soft clay material also present in fractured surface
77.72	80.77	3.05	2.16	71	0.76	25	0R	1H	4W	realgar common along structures
80.77	83.82	3.05	2.53	83	1.55	51	0R	2H	3W	
83.82	86.87	3.05	2.69	88	1.44	47	0R	2H	3W	Fractured surfaces contain soft clay material and perhaps soft black sulphides. Carbonate also found on some joints
86.87	89.92	3.05	2.48	81	1.31	43	0R	2H	2W	Arsenic oxidation weathering on fractured surfaces
89.92	92.96	3.04	2.71	89	1.95	64	0R	2H	3W	sections of rock and clay fragments within competent host rock. Fractured surfaces filled with clay material and soft, dark sulphide
92.96	96.01	3.05	2.93	96	2.38	78	0R	3H	2W	This rock is largely nonreactive with HCl, but some occasional fractures and veinlets react moderately. It is largely competent with graphitic weathering along fractured surfaces
96.01	99.06	3.05	2.59	85	1.90	62	0R	3H	2W	This interval is pretty hard and strong overall, with some rock and clay between fractured surfaces, as well as graphitic weathering.

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
99.06	102.11	3.05	2.98	98	2.55	84	0R	3H	1W	Nonreactive, strong, hard rock. Majority of fractures occur roughly parallel to bedding. A small amount of calcite and light grey cla material can be found on fractured surfaces.
102.11	105.16	3.05	2.69	88	1.96	64	0R	3H	1W	Interval is mostly quite strong and hard, and doesn't react with HCl. Weak amount of clay and graphitic weathering where the rock has fractured.
105.16	108.20	3.04	2.96	97	2.63	87	0R	3H	1W	interval is competent with few fractures and slightly clay weathered.
108.20	111.25	3.05	2.88	94	2.44	80	0R	3H	1W	interval is competent with fresh, rough fractures. Very minor clay present on some fractured surfaces.
111.25	114.30	3.05	2.86	94	2.54	83	0R	3H	2W	interval is competent with some soft light grey clay alteration along fractured surfaces. Breaks are relatively smooth and planar
114.30	117.35	3.05	2.71	89	1.16	38	0R	3H	2W	HCl reactivity mostly nonexistent, but some weak reactivity around veinlets at 115.17m. Rock is mostly quite competent. Moderate clay weathering at joints and fractures
117.35	120.40	3.05	2.75	90	2.61	86	0R	3H	1W	Interval is competent with very little to nonexistent weathering. Most fracturing appears to be mechanical, and not jointing; it has a very good "puzzle" fit and fresh surfaces.
120.40	123.44	3.04	2.9	95	2.33	77	0R	3H	2W	most of the interval is competent with no weathering. Right near the end of the interval, a section of moderate weathering and softer rock is present.
123.44	126.49	3.05	2.74	90	1.51	50	0R	3H	3W	This interval is mostly quite competent rock, with two sections of highly weathered, crumbly rock. All of this section doesn't react with HCl. There is a large amount of realgar in fractured surfaces
126.49	129.54	3.05	2	66	0.90	30	0R	2H	3W	most of this interval is moderately weathered and fractured. The end of the interval has more competent rock. The 30tca joint set is quite abundant

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
129.54	132.59	3.05	2.86	94	1.49	49	0R	2H	3W	The main joint set here ranges from 50-60tca attitudes. Weathering is clay and graphitic
132.59	135.64	3.05	2.67	88	1.52	50	0R	3H	3W	This rock is mostly competent with two sections of weathered, crumbly rock. Weathering is dark grey clay material.
135.64	138.68	3.04	2.9	95	1.95	64	0R	3H	2W	The majority is competent with only one 0.3m section that is crumbly and soft (with relatively low hardness and strength).
138.68	141.73	3.05	2.79	91	2.03	67	0R	3H	2W	competent rock with a short zone of rock and clay weathering. Joint sets parallel/subparallel to bedding
141.73	144.78	3.05	2.8	92	2.31	76	0R	2H	2W	Debris flow. Joint set w attitude of 50 contains pyrite on joint surface.
144.78	147.83	3.05	3.01	99	2.13	70	0R	3H	2W	Decalcified veins and realgar present on joint surfaces.
147.83	150.88	3.05	2.87	94	2.22	73	0R	3H	2W	Pyrite visible along full interval as blebs (>5mm) and specled in silt stone beds.
150.88	153.92	3.04	2.89	95	1.75	58	0R	3H	2W	Veins present, no reactivity.
153.92	156.97	3.05	2.86	94	1.91	63	0R	3H	3W	Pyrite crystals present in siltstone layers.
156.97	160.02	3.05	2.91	95	2.47	81	0R	3H	3W	Sulfides present along length of run.
160.02	163.07	3.05	2.9	95	2.71	89	0R	3H	1W	Competent run with no reactivity and few veinlets. Pyrite visible in bedding.
163.07	166.12	3.05	2.86	94	2.29	75	0R	3H	1W	Competent run. Change in the lithology occurs toward the end. A large amount of quartz occurs between the two lithologies, giving the rock a higher hardness at that area. Jointing is subparallel to bedding in the bedded unit present.
166.12	169.16	3.04	2.81	92	2.43	80	0R	3H	1W	Competent, not reactive. No veins.
169.16	172.21	3.05	3.05	100	2.42	79	0R	3H	2W	Cave present at 170.6m. The rest is competent material with slight weathering at joints
172.21	175.26	3.05	2.91	95	2.44	80	0R	3H	1W	competent, with a number of prominent quartz veins and pyrite beds. Arsenopyrite present in vein. Some graphitic weathering at fractures

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
175.26	178.31	3.05	3.05	100	1.85	61	0R	3H	1W	competent, with one large prominent quartz dolomite vein, which is vuggy in a fractured surface
178.31	181.36	3.05	2.76	90	1.71	56	0R	3H	2W	Competent rock with a small section of moderate-high weathering of rock and clay. Numerous disorganized veinlets.
181.36	184.40	3.04	2.56	84	1.32	43	0R	3H	3W	Moderately weathered, highly fractured, and softer in the centre of the run, but hard and strong otherwise. Prominent quartz dolomite vein at approximately 182.85.
184.40	187.45	3.05	2.72	89	1.63	53	0R	3H	3W	Rock is very fractured with soft clay material and rock fragments in joint gouge
187.45	190.50	3.05	2.84	93	2.44	80	0R	3H	2W	Rock has few fractures. Dark clay and rock weathering occur in fractures. A couple of larger vein structures present with quartz infill
190.50	193.55	3.05	2.85	93	2.20	72	0R	3H	2W	Quite small rubbly section in the middle of the interval, but otherwise the rock is very competent. Joint sets oblique to bedding
193.55	196.60	3.05	2.84	93	2.43	80	0R	3H	2W	mostly competent rock, with small section of moderate weathering and higher fracture count. 1.5cm quartz dolomite vein at 193.55
196.60	199.64	3.04	2.99	98	2.74	90	0R	3H	1W	Very competent rock. 3.5cm quartz dolomite vein at 199.02.
199.64	202.69	3.05	2.97	97	2.73	90	0R	3H	1W	Competent run with abundant veinlets. 70tca joint filled with vuggy dolomite with euhedral bladed texture.
202.69	205.74	3.05	2.97	97	2.92	96	0R	3H	1W	Very competent run with abundant discontinunous veinlets (<1mm). Breaks are all mechanical - no joint sets in this interval.
205.74	208.79	3.05	2.88	94	2.20	72	0R	3H	1W	Competent. Clay and rock material in fractures, as well as some pyrite (probably from original deposition - also present in bedding). Joints are subparallel to bedding.
208.79	211.84	3.05	2.82	92	1.59	52	0R	3H	3W	Fractured zone along contact between silisiclastic and mudstone.
211.84	214.88	3.04	2.81	92	2.13	70	0R	3H	2W	competent interval, with fractures along the siliciclastic/mudstone contact. Joints contain a soft, dark clay material

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
214.88	217.93	3.05	3.05	100	2.57	84	0R	3H	1W	competent with quartz-rich veins common throughout. Pyrite abundant in beds
217.93	220.98	3.05	2.84	93	2.51	82	0R	3H	1W	Competent, bedded rock with some quartz-rich veins
220.98	224.03	3.05	2.95	97	2.51	82	0R	3H	1W	Competent, bedded rock with quartz and quartz carbonate veins. Very minor clay weathering at fractures. Pyrite occurs in bedding
224.03	227.08	3.05	2.84	93	2.54	83	0R	3H	1W	Competent, bedded rocks with some minr clay weathering at fractured surfaces
227.08	230.12	3.04	2.78	91	2.50	82	0R	3H	1W	Competent, bedded material with a small amount of quartz dolomite veinlets and minr clay weathering
230.12	233.17	3.05	2.96	97	2.06	68	0R	2H	2W	Mostly competent with a section of moderately weathered, soft rock.
233.17	236.22	3.05	2.92	96	2.23	73	0R	3H	1W	competent with slight clay weathering on fractured/ jointed surfaces. Quartz carbonate infilling on some of the joints
236.22	239.27	3.05	2.95	97	2.52	83	0R	3H	1W	competent, bedded mudstone
239.27	242.32	3.05	2.77	91	2.28	75	0R	3H	1W	competent rock with clay gouge in jointed surface. Some very minor realgar spotted in jointed surfaces as well
242.32	245.36	3.04	2.95	97	2.57	85	0R	3H	1W	competent mudstone unit. Joint occuring along quartz vein.
245.36	248.41	3.05	2.91	95	2.25	74	0R	3H	2W	Small amount of rock and clay weathering in joint area, which seems to separate the massive siliciclastic and bedded mudstone units. Some quartz-rich veins are present in this interval
248.41	251.46	3.05	2.98	98	2.50	82	0R	3H	1W	competent, bedded mudstone. Some rock and clay gouge in joints
251.46	254.51	3.05	2.7	89	1.20	39	0R	3H	1W	Competent rock with fairly planar, fresh jointed surfaces.
254.51	257.56	3.05	2.69	88	2.18	71	0R	3H	1W	Competent rock with very slight rock and clay weathering in fractured surfaces
257.56	260.60	3.04	2.96	97	2.60	86	0R	3H	1W	fractures here contain slight-moderate amounts of rock and clay weathering. Pyrite seen in fractured surfaces.

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
260.60	263.65	3.05	2.9	95	2.64	87	0R	3H	1W	fractures occuring in a coupe of places on quartz carbonate veins, otherwise joints and fractures contain slight rock and clay weathering
263.65	266.70	3.05	2.84	93	2.67	88	0R	3H	1W	slight weathering of joints with rock and clay material, but fractures are generally pretty fresh
266.70	269.75	3.05	2.73	90	2.05	67	0R	2H	3W	Quite weathered rock with dark grey, soft clay in fractures. Contains a zone of rubbly rock and clay.
269.75	272.80	3.05	2.8	92	1.54	50	0R	2H	3W	The entire interval is slightly weathered with sections of very soft, highly weathered rock. There is realgar found in some of the fractures, particularly toward the end of the run.
272.80	275.84	3.04	2.81	92	2.31	76	0R	2H	3W	This section is moderately weathered throughout, with only a few, short, slightly to unaltered sections. There is realgar
275.84	278.89	3.05	2.8	92	2.63	86	0R	2H	2W	section is slightly weathered overall with a small section of moderate-highly weathered rock. Hardness varies from soft to moderately hard.
278.89	281.94	3.05	2.94	96	1.76	58	0R	2H	3W	moderately weathered run with sections of highly weathered material
281.94	284.99	3.05	2.69	88	2.44	80	0R	2H	2W	Rough fractures filled with rock and clay weathering. Variable hardness, from soft to moderately hard, depending on local weathering
284.99	288.04	3.05	2.99	98	2.37	78	0R	3H	2W	Planar fractures in generally competent rock. Slight clay weathering thruoghout run.
288.04	291.08	3.04	2.92	96	2.55	84	0R	3H	1W	Mostly fresh, with very slight clay weathering in fractures. Rock is competent.
291.08	294.13	3.05	2.79	91	1.87	61	0R	2H	3W	large area in the middle of this run has fairly moderate-high weathering. The remainder of the interval is mostly competent with a slight amount of clay weathering. Pyrite seen in some fractures.
294.13	297.18	3.05	2.75	90	1.80	59	0R	3H	1W	Slightly clay weathered but mostly fresh. Moderate weathering found on some joint sets. Rock is competent.

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
297.18	300.23	3.05	2.65	87	2.24	73	0R	3H	2W	Slight clay weathering at fractures, but largely competent rock
300.23	303.28	3.05	2.94	96	2.37	78	0R	3H	2W	Locally moderate weathering, but overall the run is slightly weathered. Rock is largely competent with soft clay material in fractures
303.28	306.32	3.04	2.92	96	2.23	73	0R	3H	2W	Joint gouge is dark clay with some rock fragments.
306.32	309.37	3.05	2.51	82	1.50	49	0R	3H	2W	HCl reactivity is nonexistent in host rock, but there is weak reactivity in the veins lower in the interval. The rock is fresh for most of the interval, but at the end there is a section of soft clay material with rock fragments.
309.37	312.42	3.05	2.4	79	1.80	59	0R	2H	3W	Run is locally moderate-highly weathered, containing dark clay material, and both realgarand orpiment.
312.42	315.47	3.05	2.73	90	2.03	67	3R	3H	2W	Strongly reactive with HCl apart from the small siliclastic section at the start of the run. Joint sets containing black sulphides and realgar common. Overall only slightly weathered run. Some clay weathering also present in joints and fractures
315.47	318.52	3.05	2.93	96	2.60	85	3R	3H	1W	joints containing realgar and orpiment present, as well as containing clay material. Increasing calcite vein chaos throughout the run.
318.52	321.56	3.04	2.92	96	2.88	95	3R	1H	3W	Top of the run is competent, but the rock becomes very soft clay (like gouge) after the limestone/siliciclastic contact. Large sections in this interval are largely realgar (~65cm total), and realgar is also found in some fractures higher in the run.
321.56	324.61	3.05	2.87	94	2.21	72	0R	1H	3W	The top of the run is softest due to some moderate-high clay weathering. Harder rock lower in the run is more heavily fractured.
324.61	326.75	2.14	2.02	94	1.02	48	0R	3H	2W	Clay weathering throughout, with locally moderately weathered material
326.75	329.79	3.04	2.4	79	1.18	39	0R	3H	2W	Locally moderately clay weathered.
329.79	332.84	3.05	2.85	93	1.83	60	0R	2H	3W	Highly weathered from 331.49-332.06m, but otherwise moderately weathered.

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
332.84	335.89	3.05	2.69	88	1.16	38	0R	2H	3W	Soft, highly weathered clay section from 333.33-333.78m. Otherwise competent rock
335.89	338.94	3.05	2.89	95	2.04	67	0R	3H	2W	Competent run with soft, clay gouge in joints, which are smooth and planar surfaces
338.94	341.99	3.05	2.87	94	2.21	72	0R	2H	3W	moderately clay weathered rock
341.99	345.03	3.04	2.99	98	2.10	69	0R	2H	3W	moderately clay weathered rock
345.03	348.08	3.05	2.75	90	1.76	58	0R	2H	3W	Moderately clay weathered material. Fracture count increases significantly toward the end of the run
348.08	351.13	3.05	2.06	68	0.47	15	0R	3H	3W	Moderately rock and clay weathered material
351.13	354.18	3.05	2.88	94	0.61	20	0R	1H	4W	highly weathered rock with crackle breccia present sporadically throughout
354.18	357.23	3.05	3.04	100	1.75	57	0R	3H	2W	
357.23	360.27	3.04	2.78	91	1.83	60	0R	2H	3W	Fractures have clay weathering and occasional slight shear texture\
360.27	363.32	3.05	2.02	66	0.94	31	0R	1H	3W	361.47-361.57m section of cohesive clay material. Elsewhere is fairly moderate hardness.
363.32	366.37	3.05	1.81	59	0.68	22	2R	2H	3W	Fracture count increases down the interval. The last 10cm is dominantly clay with some rock fragments. HCl reactivity is moderate with scratching from 363.32-366.29m (perhaps dolomitized material). HCl reactivity is strong from 366.29-366.37m; this contact is sharp.
366.37	369.42	3.05	2.29	75	1.70	56	3R	3H	2W	competent, HCl-reactive material. Joints are smooth and planar.
369.42	372.47	3.05	3.04	100	2.66	87	3R	3H	1W	
372.47	375.51	3.04	3.02	99	2.69	88	3R	3H	1W	HCl reactivity weak from 375-375.51m.
375.51	378.56	3.05	2.89	95	2.25	74	2R	3H	1W	HCl reactivity variable from weak-strong, Although most commonly strong.
378.56	381.61	3.05	3.04	100	1.97	65	2R	3H	1W	HCl reactivity varies. From 378.56-379.75m, there is a strong reaction. From 379.75-380.69m, there is variable weak-moderate reaction. From 380.69-381.61m there is no HCl reactivity.

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
381.61	384.66	3.05	2.94	96	1.99	65	2R	3H	1W	HCl reactivity varies. 381.61-382.30m is weakly to nonreactive. 382.30-382.75m is weakly-moderately reactive. 382.75-383.00m is strongly reactive. 383.00-383.66m is nonreactive, and the remainder of the run is strongly reactive. Joints are smooth and planar and relatively unweathered
384.66	387.71	3.05	3.03	99	2.73	90	3R	3H	1W	
387.71	390.75	3.04	3	99	2.56	84	3R	3H	1W	
390.75	393.80	3.05	2.93	96	2.87	94	3R	3H	1W	
393.80	396.85	3.05	2.96	97	1.95	64	3R	3H	1W	
396.85	399.90	3.05	2.99	98	2.19	72	3R	2H	3W	Locally, highly weathered material.
399.90	402.95	3.05	2.93	96	2.58	85	3R	3H	2W	
402.95	405.99	3.04	3.04	100	2.92	96	3R	3H	1W	
405.99	409.04	3.05	3.04	100	2.71	89	3R	3H	1W	
409.04	412.09	3.05	2.97	97	2.40	79	3R	3H	1W	
412.09	415.14	3.05	2.94	96	2.04	67	3R	3H	1W	
415.14	418.19	3.05	2.97	97	2.46	81	3R	3H	1W	
418.19	421.23	3.04	2.99	98	1.94	64	3R	3H	1W	
421.23	424.28	3.05	3.04	100	2.80	92	3R	3H	1W	
424.28	427.33	3.05	3.03	99	2.75	90	3R	3H	1W	
427.33	430.38	3.05	3.02	99	2.76	90	3R	3H	1W	
430.38	433.43	3.05	2.99	98	2.77	91	3R	3H	1W	
433.43	436.47	3.04	2.96	97	2.25	74	3R	3H	1W	
436.47	439.52	3.05	3	98	2.54	83	3R	3H	1W	
439.52	442.57	3.05	2.94	96	2.81	92	3R	3H	1W	
442.57	445.62	3.05	3.04	100	2.54	83	3R	3H	1W	
445.62	448.66	3.04	3.03	100	2.54	84	3R	3H	1W	
448.66	451.71	3.05	2.97	97	2.58	85	3R	3H	1W	
451.71	454.76	3.05	3.03	99	2.84	93	3R	3H	1W	
454.76	457.81	3.05	2.9	95	2.37	78	3R	3H	1W	
457.81	460.86	3.05	3.01	99	1.74	57	3R	3H	1W	
460.86	463.91	3.05	2.96	97	2.24	73	3R	3H	1W	

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From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
0.00	0.00	0.00	-QC-	0.00	0	S048433	☐	N18-011	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S048303	☐	N18-004	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S048442	☐	N18-011	Core	CS12	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S048420	☐	N18-011	Core	CS10	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S048403	☐	N18-009	Core	CS8	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S048390	☐	N18-009	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S048366	☐	N18-005	core	CS5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S048361	☐	N18-005	core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S048345	☐	N18-005	core	CS9	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S048323	☐	N18-004	Core	CS6	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S048308	☐	N18-004	Core	CS2	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S048378	☐	N18-009	Core	CS9	☐	☐	☐
0.40	1.52	1.12	OVB	0.98	88	S048268	☐	N18-001	Core		☐	☐	☐
1.52	4.57	3.05	OVB, FLR	1.03	34	S048269	☐	N18-001	Core		☐	☐	☐
4.57	7.62	3.05	FLR	1.75	57	S048270	☐	N18-001	Core		☐	☐	☐
7.62	9.35	1.73	FLR	1.43	83	S048271	☐	N18-001	Core		☐	☐	☐
9.35	10.67	1.32	FLR	1.26	95	S048272	☐	N18-001	Core		☐	☐	☐
10.67	13.72	3.05	FLR	2.55	84	S048273	☐	N18-001	Core		☐	☐	☐
13.72	16.76	3.04	FLR	2.64	87	S048274	☐	N18-001	Core		☐	☐	☐
13.72	16.76	3.04	FLR	2.64	87	S048275	☐	N18-001	Core		☐	☐	☑
16.76	19.81	3.05	FLR	1.97	65	S048276	☐	N18-001	Core		☐	☐	☐
19.81	22.86	3.05	FLR	2.40	79	S048277	☐	N18-001	Core		☐	☐	☐
22.86	24.65	1.79	FLR	1.09	61	S048278	☐	N18-001	Core		☐	☐	☐
24.65	25.91	1.26	FLR	0.99	79	S048279	☐	N18-001	Core		☐	☐	☐
25.91	27.43	1.52	FLR	1.09	72	S048280	☐	N18-001	Core		☐	☐	☐
27.43	30.00	2.57	FLR	1.23	48	S048281	☐	N18-001	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
30.00	32.00	2.00	FLR	1.61	81	S048282	☐	N18-001	Core		☐	☐	☐
32.00	35.05	3.05	FLR	2.14	70	S048283	☐	N18-001	Core		☐	☐	☐
35.05	38.10	3.05	FLR	1.74	57	S048284	☐	N18-001	Core		☐	☐	☐
35.05	38.10	3.05	FLR	1.74	57	S048285	☐	N18-001	Core		☐	☑	☐
38.10	41.15	3.05	FLR	1.44	47	S048286	☐	N18-001	Core		☐	☐	☐
41.15	42.33	1.18	FLR	0.95	81	S048287	☐	N18-001	Core		☐	☐	☐
42.33	44.20	1.87	FLR	1.19	64	S048288	☐	N18-001	Core		☐	☐	☐
44.20	47.24	3.04	FLR	2.00	66	S048289	☐	N18-001	Core		☐	☐	☐
47.24	50.29	3.05	FLR	2.11	69	S048290	☐	N18-001	Core		☐	☐	☐
50.29	53.34	3.05	FLR	2.17	71	S048291	☐	N18-004	Core		☐	☐	☐
53.34	56.39	3.05	FLR	2.47	81	S048292	☐	N18-004	Core		☐	☐	☐
56.39	59.44	3.05	FLR	1.99	65	S048293	☐	N18-004	Core		☐	☐	☐
59.44	60.96	1.52	FLR	1.33	88	S048294	☐	N18-004	Core		☐	☐	☐
60.96	62.48	1.52	FLR	1.04	68	S048295	☐	N18-004	Core		☐	☐	☐
60.96	62.48	1.52	FLR	1.04	68	S048296	☐	N18-004	Core		☐	☐	☑
62.48	65.53	3.05	FLR	2.45	80	S048297	☐	N18-004	Core		☐	☐	☐
65.53	68.58	3.05	FLR	2.24	73	S048298	☐	N18-004	Core		☐	☐	☐
68.58	71.63	3.05	FLR	2.72	89	S048299	☐	N18-004	Core		☐	☐	☐
71.63	74.68	3.05	FLR	2.58	85	S048300	☐	N18-004	Core		☐	☐	☐
74.68	77.72	3.04	FLR	2.25	74	S048301	☐	N18-004	Core		☐	☐	☐
77.72	79.25	1.53	FLR	1.22	80	S048302	☐	N18-004	Core		☐	☐	☐
79.25	80.77	1.52	FLR	1.49	98	S048304	☐	N18-004	Core		☐	☐	☐
80.77	83.82	3.05	FLR	2.53	83	S048305	☐	N18-004	Core		☐	☐	☐
83.82	86.87	3.05	FLR	2.69	88	S048306	☐	N18-004	Core		☐	☐	☐
86.87	89.92	3.05	FLR	2.48	81	S048307	☐	N18-004	Core		☐	☐	☐
89.92	92.96	3.04	FLR	2.71	89	S048309	☐	N18-004	Core		☐	☐	☐
92.96	96.01	3.05	FLR	2.93	96	S048310	☐	N18-004	Core		☐	☐	☐
96.01	99.06	3.05	FLR	2.59	85	S048311	☐	N18-004	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
99.06	102.11	3.05	FLR	2.98	98	S048312	☐	N18-004	Core		☐	☐	☐
102.11	105.16	3.05	FLR	2.69	88	S048313	☐	N18-004	Core		☐	☐	☐
105.16	108.20	3.04	SLC, FLR	2.96	97	S048314	☐	N18-004	Core		☐	☐	☐
108.20	111.25	3.05	SLC	2.88	94	S048315	☐	N18-004	Core		☐	☐	☐
111.25	114.30	3.05	SLC	2.86	94	S048316	☐	N18-004	Core		☐	☐	☐
114.30	117.35	3.05	SLC	2.71	89	S048317	☐	N18-004	Core		☐	☐	☐
117.35	120.40	3.05	SLC	2.75	90	S048318	☐	N18-004	Core		☐	☐	☐
120.40	123.44	3.04	SLC	2.90	95	S048319	☐	N18-004	Core		☐	☐	☐
123.44	124.97	1.53	SLC	1.52	99	S048320	☐	N18-004	Core		☐	☐	☐
123.44	124.97	1.53	SLC	1.52	99	S048321	☐	N18-004	Core		☐	☑	☐
124.97	126.49	1.52	SLC	1.52	100	S048322	☐	N18-004	Core		☐	☐	☐
126.49	129.54	3.05	SLC	2.00	66	S048324	☐	N18-004	Core		☐	☐	☐
129.54	132.59	3.05	SLC	2.86	94	S048325	☐	N18-004	Core		☐	☐	☐
132.59	135.64	3.05	SLC	2.67	88	S048326	☐	N18-004	Core		☐	☐	☐
135.64	138.68	3.04	SLC	2.90	95	S048327	☐	N18-004	Core		☐	☐	☐
138.68	141.73	3.05	SLC	2.79	91	S048328	☐	N18-004	Core		☐	☐	☐
141.73	144.78	3.05	SLC	2.80	92	S048329	☐	N18-004	Core		☐	☐	☐
144.78	147.83	3.05	SLC	3.01	99	S048330	☐	N18-004	Core		☐	☐	☐
147.83	150.88	3.05	SLC	2.87	94	S048331	☐	N18-005	core		☐	☐	☐
150.88	153.92	3.04	SLC	2.89	95	S048332	☐	N18-005	core		☐	☐	☐
153.92	156.97	3.05	SLC	2.86	94	S048333	☐	N18-005	core		☐	☐	☐
156.97	160.02	3.05	SLC	2.91	95	S048334	☐	N18-005	core		☐	☐	☐
160.02	163.07	3.05	SLC	2.90	95	S048335	☐	N18-005	core		☐	☐	☐
163.07	166.12	3.05	SLC	2.86	94	S048336	☐	N18-005	core		☐	☐	☐
166.12	169.16	3.04	SLC	2.81	92	S048337	☐	N18-005	core		☐	☐	☐
169.16	172.21	3.05	SLC	3.05	100	S048338	☐	N18-005	core		☐	☐	☐
172.21	175.26	3.05	SLC	2.91	95	S048339	☐	N18-005	core		☐	☐	☐
175.26	178.31	3.05	SLC	3.05	100	S048340	☐	N18-005	core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
178.31	181.36	3.05	SLC	2.76	90	S048341	☐	N18-005	core		☐	☐	☐
181.36	184.40	3.04	SLC	2.56	84	S048342	☐	N18-005	core		☐	☐	☐
184.40	187.45	3.05	SLC	2.72	89	S048343	☐	N18-005	core		☐	☐	☐
187.45	190.50	3.05	SLC	2.84	93	S048344	☐	N18-005	core		☐	☐	☐
190.50	193.55	3.05	SLC	2.85	93	S048346	☐	N18-005	core		☐	☐	☐
193.55	196.60	3.05	SLC	2.84	93	S048347	☐	N18-005	core		☐	☐	☐
196.60	199.64	3.04	SLC	2.99	98	S048348	☐	N18-005	core		☐	☐	☐
199.64	202.69	3.05	SLC	2.97	97	S048349	☐	N18-005	core		☐	☐	☐
199.64	202.69	3.05	SLC	2.97	97	S048350	☐	N18-005	core		☐	☐	☑
202.69	205.74	3.05	SLC	2.97	97	S048351	☐	N18-005	core		☐	☐	☐
205.74	208.79	3.05	SLC	2.88	94	S048352	☐	N18-005	core		☐	☐	☐
208.79	211.84	3.05	SLC	2.82	92	S048353	☐	N18-005	core		☐	☐	☐
211.84	214.88	3.04	SLC	2.81	92	S048354	☐	N18-005	core		☐	☐	☐
214.88	217.93	3.05	SLC	3.05	100	S048355	☐	N18-005	core		☐	☐	☐
217.93	220.98	3.05	SLC	2.84	93	S048356	☐	N18-005	core		☐	☐	☐
220.98	224.03	3.05	SLC	2.95	97	S048357	☐	N18-005	core		☐	☐	☐
224.03	227.08	3.05	SLC	2.84	93	S048358	☐	N18-005	core		☐	☐	☐
227.08	230.12	3.04	SLC	2.78	91	S048359	☐	N18-005	core		☐	☐	☐
230.12	233.17	3.05	SLC	2.96	97	S048360	☐	N18-005	core		☐	☐	☐
233.17	236.22	3.05	SLC	2.92	96	S048362	☐	N18-005	core		☐	☐	☐
236.22	239.27	3.05	SLC	2.95	97	S048363	☐	N18-005	core		☐	☐	☐
239.27	242.32	3.05	SLC	2.77	91	S048364	☐	N18-005	core		☐	☐	☐
242.32	245.36	3.04	SLC	2.95	97	S048365	☐	N18-005	core		☐	☐	☐
245.36	248.41	3.05	SLC	2.91	95	S048367	☐	N18-005	core		☐	☐	☐
248.41	251.46	3.05	SLC	2.98	98	S048368	☐	N18-005	core		☐	☐	☐
251.46	254.51	3.05	SLC	2.70	89	S048369	☐	N18-005	core		☐	☐	☐
251.46	254.51	3.05	SLC	2.70	89	S048370	☐	N18-005	core		☐	☑	☐
254.51	257.56	3.05	SLC	2.69	88	S048371	☐	N18-009	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
257.56	260.60	3.04	SLC	2.96	97	S048372	☐	N18-009	Core		☐	☐	☐
260.60	263.65	3.05	SLC	2.90	95	S048373	☐	N18-009	Core		☐	☐	☐
263.65	266.70	3.05	SLC	2.84	93	S048374	☐	N18-009	Core		☐	☐	☐
266.70	268.22	1.52	SLC	1.52	100	S048375	☐	N18-009	Core		☐	☐	☐
268.22	269.75	1.53	SLC	1.41	92	S048376	☐	N18-009	Core		☐	☐	☐
269.75	271.27	1.52	SLC	1.38	91	S048377	☐	N18-009	Core		☐	☐	☐
271.27	272.80	1.53	SLC	1.53	100	S048379	☐	N18-009	Core		☐	☐	☐
272.80	275.84	3.04	SLC	2.81	92	S048380	☐	N18-009	Core		☐	☐	☐
275.84	278.89	3.05	SLC	2.80	92	S048381	☐	N18-009	Core		☐	☐	☐
278.89	281.94	3.05	SLC	2.94	96	S048382	☐	N18-009	Core		☐	☐	☐
281.94	284.99	3.05	SLC	2.69	88	S048383	☐	N18-009	Core		☐	☐	☐
284.99	288.04	3.05	SLC	2.99	98	S048384	☐	N18-009	Core		☐	☐	☐
288.04	291.08	3.04	SLC	2.92	96	S048385	☐	N18-009	Core		☐	☐	☐
291.08	292.61	1.53	SLC	1.53	100	S048386	☐	N18-009	Core		☐	☐	☐
292.61	294.13	1.52	SLC	1.50	99	S048387	☐	N18-009	Core		☐	☐	☐
292.61	294.13	1.52	SLC	1.50	99	S048388	☐	N18-009	Core		☐	☑	☐
294.13	295.66	1.53	SLC	1.30	85	S048389	☐	N18-009	Core		☐	☐	☐
295.66	297.18	1.52	SLC	1.35	89	S048391	☐	N18-009	Core		☐	☐	☐
297.18	300.23	3.05	SLC	2.65	87	S048392	☐	N18-009	Core		☐	☐	☐
300.23	303.28	3.05	SLC	2.94	96	S048393	☐	N18-009	Core		☐	☐	☐
303.28	306.32	3.04	SLC	2.92	96	S048394	☐	N18-009	Core		☐	☐	☐
306.32	309.37	3.05	SLC	2.51	82	S048395	☐	N18-009	Core		☐	☐	☐
309.37	312.42	3.05	SLC, LST	2.40	79	S048396	☐	N18-009	Core		☐	☐	☐
312.42	315.47	3.05	LST	2.73	90	S048397	☐	N18-009	Core		☐	☐	☐
315.47	318.52	3.05	LST	2.93	96	S048398	☐	N18-009	Core		☐	☐	☐
318.52	319.52	1.00	LST	0.92	92	S048399	☐	N18-009	Core		☐	☐	☐
319.52	320.42	0.90	LST	0.90	100	S048400	☐	N18-009	Core		☐	☐	☐
319.52	320.42	0.90	LST	0.90	100	S048401	☐	N18-009	Core		☐	☐	☑

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
320.42	321.56	1.14	LST	1.12	98	S048402	☐	N18-009	Core		☐	☐	☐
321.56	324.61	3.05	SLC	2.87	94	S048404	☐	N18-009	Core		☐	☐	☐
324.61	326.75	2.14	SLC	2.02	94	S048405	☐	N18-009	Core		☐	☐	☐
326.75	329.79	3.04	SLC	2.40	79	S048406	☐	N18-009	Core		☐	☐	☐
329.79	332.84	3.05	SLC	2.85	93	S048407	☐	N18-009	Core		☐	☐	☐
332.84	335.89	3.05	SLC	2.69	88	S048408	☐	N18-009	Core		☐	☐	☐
335.89	338.94	3.05	SLC	2.89	95	S048409	☐	N18-009	Core		☐	☐	☐
338.94	341.99	3.05	SLC	2.87	94	S048410	☐	N18-009	Core		☐	☐	☐
341.99	345.03	3.04	SLC	2.99	98	S048411	☐	N18-011	Core		☐	☐	☐
345.03	348.08	3.05	SLC	2.75	90	S048412	☐	N18-011	Core		☐	☐	☐
348.08	351.13	3.05	SLC	2.06	68	S048413	☐	N18-011	Core		☐	☐	☐
351.13	354.18	3.05	SLC	2.88	94	S048414	☐	N18-011	Core		☐	☐	☐
354.18	357.23	3.05	SLC	3.05	100	S048415	☐	N18-011	Core		☐	☐	☐
357.23	360.27	3.04	SLC	2.78	91	S048416	☐	N18-011	Core		☐	☐	☐
360.27	363.24	2.97	SLC	1.93	65	S048417	☐	N18-011	Core		☐	☐	☐
363.24	365.00	1.76	LST, SLC	1.19	68	S048418	☐	N18-011	Core		☐	☐	☐
365.00	366.37	1.37	LST	0.69	50	S048419	☐	N18-011	Core		☐	☐	☐
366.37	369.42	3.05	LST	2.29	75	S048421	☐	N18-011	Core		☐	☐	☐
369.42	372.47	3.05	LST	3.05	100	S048422	☐	N18-011	Core		☐	☐	☐
372.47	375.51	3.04	LST	3.02	99	S048423	☐	N18-011	Core		☐	☐	☐
375.51	378.56	3.05	LST	2.89	95	S048424	☐	N18-011	Core		☐	☐	☐
375.51	378.56	3.05	LST	2.89	95	S048425	☐	N18-011	Core		☐	☐	☑
378.56	381.61	3.05	LST	3.05	100	S048426	☐	N18-011	Core		☐	☐	☐
381.61	384.66	3.05	LST	2.94	96	S048427	☐	N18-011	Core		☐	☐	☐
384.66	387.71	3.05	LST	3.03	99	S048428	☐	N18-011	Core		☐	☐	☐
387.71	390.75	3.04	LST	3.00	99	S048429	☐	N18-011	Core		☐	☐	☐
390.75	393.80	3.05	LST	2.93	96	S048430	☐	N18-011	Core		☐	☐	☐
393.80	396.85	3.05	LST	2.96	97	S048431	☐	N18-011	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
396.85	398.38	1.53	LST	1.53	100	S048432	☐	N18-011	Core		☐	☐	☐
398.38	399.90	1.52	LST	1.52	100	S048434	☐	N18-011	Core		☐	☐	☐
398.38	399.90	1.52	LST	1.52	100	S048435	☐	N18-011	Core		☐	☑	☐
399.90	402.95	3.05	LST	2.93	96	S048436	☐	N18-011	Core		☐	☐	☐
402.95	405.99	3.04	LST	3.04	100	S048437	☐	N18-011	Core		☐	☐	☐
405.99	409.04	3.05	LST	3.05	100	S048438	☐	N18-011	Core		☐	☐	☐
409.04	412.09	3.05	LST	2.97	97	S048439	☐	N18-011	Core		☐	☐	☐
412.09	415.14	3.05	LST	2.94	96	S048440	☐	N18-011	Core		☐	☐	☐
415.14	418.19	3.05	LST	2.97	97	S048441	☐	N18-011	Core		☐	☐	☐
418.19	421.23	3.04	LST	2.99	98	S048443	☐	N18-011	Core		☐	☐	☐
421.23	424.28	3.05	LST	3.05	100	S048444	☐	N18-011	Core		☐	☐	☐
424.28	427.33	3.05	LST	3.03	99	S048445	☐	N18-011	Core		☐	☐	☐
427.33	430.38	3.05	LST	3.02	99	S048446	☐	N18-011	Core		☐	☐	☐
430.38	433.43	3.05	LST	2.99	98	S048447	☐	N18-011	Core		☐	☐	☐
433.43	436.47	3.04	LST	2.96	97	S048448	☐	N18-011	Core		☐	☐	☐
436.47	439.52	3.05	LST	3.00	98	S048449	☐	N18-011	Core		☐	☐	☐
439.52	442.57	3.05	LST	2.94	96	S048450	☐	N18-011	Core		☐	☐	☐
442.57	445.62	3.05	LST	3.05	100	S048451	☐	N18-013	Core		☐	☐	☐
445.62	448.66	3.04	LST	3.03	100	S048452	☐	N18-013	Core		☐	☐	☐
448.66	451.71	3.05	LST	2.97	97	S048453	☐	N18-013	Core		☐	☐	☐
451.71	454.76	3.05	LST	3.03	99	S048454	☐	N18-013	Core		☐	☐	☐
454.76	457.81	3.05	LST	2.90	95	S048455	☐	N18-013	Core		☐	☐	☐
457.81	460.86	3.05	LST	3.01	99	S048456	☐	N18-013	Core		☐	☐	☐
460.86	463.91	3.05	LST	2.96	97	S048457	☐	N18-013	Core		☐	☐	☐

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From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
0.00	4.50	4.50	OVB	--	No recovery 0-0.61m. Overburdden - medium brown, highly weathered and fractured, clay rich overburden with angular rock fragments.							
								RB				
						MD	BN	FR	OXI	4I	--	0
4.50	472.44	467.94	SLC	--	Conrad Siliciclastics - interval is composed of two main lithologies. Primary lithology is a pyritic, soft sediment deformed, 0.5-4cm thick, fining upwards sequence of sand-silt-mud beds which can be interpreted as turbidtes. The second most abundant lithology is a granule-pebble, matrix-to-clast supported, sub-rounded to rounded, polymitic (quartz clast dominant), conglomerate with mud rip-up clats which can be interpreted as a debris flow. There are two significant intervals in terms of mineralization. From 98.49-100.67m: realgar mineralized, sheared, gougy, pitted mudstone and sandstone 125.50-145.39m: gougy, fractured, pitted, sooty, mudstone. Interval is likely mineralized due to evidence of hydrothermal alteration, however, no realgar mineralization observed.							
								BU				
								SH				
								SD				
								RB				
								MA				
								FR				
								DB				
								CR			Re	0.3
						MD	GY	BX	SIL	1I	Py	2
						LT	GY	BD	ARG	1I	Py	2

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
0.00	0.61	0.61	0	0	0.00	0	--	--	--	TOH. OVB.
0.61	3.66	3.05	1.78	58	0.40	13	0R	1H	6W	RBZ.
3.66	6.71	3.05	0.75	25	0.18	6	0R	2H	5W	RBZ.
6.71	9.75	3.04	1.94	64	0.10	3	0R	3H	4W	Highly oxidized.
9.75	12.80	3.05	2.41	79	0.54	18	0R	3H	5W	Highly oxidized along joint and fracture surfaces.
12.80	15.85	3.05	2.37	78	0.56	18	0R	3H	4W	Highly oxidized.
15.85	18.90	3.05	1.47	48	0.81	27	0R	3H	5W	Highly oxidized.
18.90	21.95	3.05	2.39	78	0.41	13	0R	3H	4W	Extreme weathering along joint and fracture surfaces.
21.95	24.99	3.04	2.09	69	0.55	18	0R	3H	4W	
24.99	28.04	3.05	1.77	58	0.11	4	0R	2H	4W	Joint sets not discernable.
28.04	31.09	3.05	1.92	63	0.30	10	0R	3H	5W	Joint set with 50 degree attitude (tca) also has clay and rock fragments along joint surface.
31.09	34.14	3.05	2.23	73	0.42	14	0R	3H	4W	
34.14	37.19	3.05	2.56	84	0.55	18	0R	4H	3W	
37.19	40.23	3.04	2.73	90	0.71	23	0R	3H	1W	~1mm clay infill along fractures.
40.23	43.28	3.05	2.66	87	0.57	19	0R	3H	3W	Multiple half joint sets.
43.28	46.33	3.05	2.61	86	1.41	46	0R	3H	3W	RBZ from 45.80-46.33m.
46.33	49.38	3.05	2.7	89	1.58	52	0R	3H	2W	Small rubble zone from 48.85-48.93m.
49.38	52.43	3.05	2.67	88	0.86	28	0R	4H	2W	
52.43	55.47	3.04	2.51	83	0.95	31	0R	3H	3W	Multiple fractures roughly parallel TCA.
55.47	58.52	3.05	2.35	77	0.82	27	0R	3H	3W	Small RBZ from 55.47-55.68m.
58.52	61.57	3.05	2.18	71	0.54	18	0R	2H	2W	RBZ
61.57	64.62	3.05	2.02	66	0.18	6	0R	1H	2W	RBZ
64.62	67.67	3.05	2.14	70	0.30	10	0R	1H	3W	RBZ
67.67	70.71	3.04	1.9	63	0.12	4	0R	1H	3W	RBZ
70.71	73.76	3.05	1.55	51	0.23	8	0R	1H	3W	RBZ
73.76	76.81	3.05	2.24	73	0.93	30	0R	1H	3W	RBZ
76.81	79.86	3.05	2.7	89	1.35	44	0R	1H	3W	RBZ

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
79.86	82.91	3.05	2.08	68	0.30	10	0R	1H	3W	RBZ
82.91	85.95	3.04	1.95	64	0.54	18	0R	1H	3W	RBZ
85.95	89.00	3.05	2.09	69	0.41	13	0R	1H	3W	RBZ
89.00	92.05	3.05	2.22	73	1.11	36	0R	1H	3W	RBZ
92.05	95.10	3.05	2.61	86	1.24	41	0R	1H	3W	RBZ
95.10	98.15	3.05	2.28	75	0.53	17	0R	2H	1W	RBZ
98.15	101.19	3.04	2.35	77	1.43	47	0R	1H	1W	RBZ
101.19	104.24	3.05	2.8	92	1.45	48	0R	1H	1W	
104.24	107.29	3.05	2.9	95	1.59	52	0R	1H	1W	
107.29	110.34	3.05	2.61	86	1.71	56	0R	2H	1W	
110.34	113.38	3.04	2.65	87	2.18	72	0R	3H	1W	
113.38	116.43	3.05	2.67	88	1.21	40	0R	3H	1W	
116.43	119.48	3.05	2.63	86	1.43	47	0R	3H	1W	
119.48	122.53	3.05	2.8	92	2.10	69	0R	3H	1W	
122.53	125.58	3.05	2.72	89	1.72	56	0R	3H	1W	
125.58	128.63	3.05	2.56	84	2.09	69	0R	3H	1W	
128.63	131.67	3.04	2.83	93	2.24	74	0R	3H	1W	
131.67	134.72	3.05	2.78	91	1.52	50	0R	2H	1W	
134.72	137.77	3.05	2.84	93	1.17	38	0R	1H	2W	Altered mudstone at 134.72 to 134.93
137.77	140.82	3.05	2.42	79	1.37	45	0R	1H	1W	
140.82	143.87	3.05	2.93	96	1.97	65	0R	2H	1W	
143.87	146.91	3.04	2.9	95	1.87	62	0R	3H	1W	
146.91	149.96	3.05	2.96	97	1.81	59	0R	2H	1W	
149.96	153.01	3.05	2.65	87	1.69	55	0R	2H	2W	Section of sort of rubbly clay-weathered material: 152.81-153.01m.
153.01	156.06	3.05	2.35	77	1.12	37	0R	2H	3W	
156.06	159.11	3.05	2.34	77	0.40	13	0R	2H	3W	Clay-weathered interval with locally high weathering
159.11	162.15	3.04	2.48	82	0.36	12	0R	1H	--	Soft clay abundant in this section with competent rock intermittent. Large orpiment fractured surface.

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
162.15	165.20	3.05	2.79	91	1.41	46	0R	2H	--	162.6-162.63m is a rubbly clay zone, but elsewhere is largely competent. Realgar sporadically on fractured surfaces.
165.20	168.25	3.05	2.74	90	2.02	66	0R	2H	--	Slight clay weathering across the run, with particularly soft, gougey joints throughout.
168.25	171.30	3.05	2.47	81	1.54	50	0R	2H	--	
171.30	174.35	3.05	2.99	98	2.40	79	0R	2H	--	
174.35	177.39	3.04	2.92	96	2.18	72	0R	3H	1W	
177.39	180.44	3.05	2.85	93	2.65	87	0R	3H	1W	
180.44	183.49	3.05	3.05	100	2.40	79	0R	3H	1W	
183.49	186.54	3.05	2.98	98	2.72	89	0R	3H	1W	
186.54	189.59	3.05	2.93	96	2.52	83	0R	3H	1W	
189.59	192.63	3.04	2.99	98	1.97	65	0R	3H	1W	Small RBZ from 191.58-191.89m.
192.63	195.68	3.05	2.95	97	2.62	86	0R	4H	1W	
195.68	198.73	3.05	2.79	91	2.13	70	0R	3H	1W	
198.73	201.78	3.05	2.76	90	2.13	70	0R	3H	1W	
201.78	204.83	3.05	2.78	91	1.75	57	0R	4H	1W	
204.83	207.87	3.04	2.62	86	1.68	55	0R	3H	1W	
207.87	210.92	3.05	2.42	79	2.02	66	0R	3H	1W	
210.92	213.97	3.05	2.56	84	1.64	54	0R	3H	1W	
213.97	217.02	3.05	2.04	67	0.56	18	0R	3H	1W	Primarily fresh fracture surfaces. 216.58-216.72m.
217.02	220.07	3.05	2.31	76	0.64	21	0R	3H	1W	Small RBZ from 219.74-219.82m.
220.07	223.11	3.04	2.26	74	0.89	29	0R	3H	1W	Fracture zone.
223.11	226.16	3.05	2.26	74	0.98	32	0R	3H	1W	
226.16	229.21	3.05	2.83	93	1.34	44	0R	3H	1W	competent rock with 3 rubble areas
229.21	232.26	3.05	2.83	93	1.89	62	0R	3H	1W	competent rock with 3 rubble sections
232.26	235.31	3.05	2.84	93	2.39	78	0R	3H	1W	competent rock with 1 rubble area.
235.31	238.35	3.04	2.93	96	2.68	88	0R	3H	1W	competent rock with 1 rubble area.
238.35	241.40	3.05	3.03	99	3.03	99	0R	3H	1W	very competent rock
241.40	244.45	3.05	3.02	99	2.93	96	0R	3H	1W	competent rock
244.45	247.50	3.05	2.77	91	1.90	62	0R	3H	1W	competent rock with 4 rubble areas
247.50	250.55	3.05	2.43	80	1.77	58	0R	2H	1W	competent rock with 2 rubble areas.

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
250.55	253.59	3.04	2.91	96	2.17	71	0R	2H	1W	competent rock with 2 rubble areas.
253.59	256.64	3.05	3.05	100	2.91	95	0R	3H	1W	competent rock. Over 3.05m.
256.64	259.69	3.05	3.05	100	3.05	100	0R	3H	1W	competent rock a little over 3.05m
259.69	262.74	3.05	3.05	100	3.03	99	0R	4H	1W	competent rock
262.74	265.79	3.05	3.05	100	2.94	96	0R	4H	1W	competent rock.
265.79	268.83	3.04	3.04	100	3.04	100	0R	3H	1W	competent rock a little over 3.05m
268.83	271.88	3.05	3.05	100	3.05	100	0R	3H	1W	competent rock over 3.05m
271.88	274.93	3.05	3.05	100	3.05	100	0R	3H	1W	competent rock
274.93	277.98	3.05	3.05	100	2.98	98	0R	3H	1W	
277.98	281.03	3.05	2.9	95	2.73	90	0R	3H	1W	
281.03	284.07	3.04	3	99	2.97	98	0R	3H	1W	
284.07	287.12	3.05	3.05	100	2.94	96	0R	2H	1W	
287.12	290.17	3.05	2.94	96	2.94	96	0R	3H	1W	
290.17	293.22	3.05	3	98	3.00	98	0R	3H	1W	
293.22	296.27	3.05	3.02	99	2.93	96	0R	3H	1W	
296.27	299.31	3.04	2.83	93	2.35	77	0R	3H	1W	
299.31	302.36	3.05	2.93	96	0.92	30	0R	1H	1W	RBZ
302.36	305.41	3.05	2.46	81	1.25	41	0R	2H	1W	RBZ
305.41	308.46	3.05	2.51	82	1.92	63	0R	1H	1W	RBZ
308.46	311.51	3.05	3	98	2.72	89	0R	3H	1W	
311.51	314.55	3.04	3.03	100	2.17	71	0R	2H	1W	RBZ
314.55	317.60	3.05	2.96	97	2.70	89	0R	3H	1W	
317.60	320.65	3.05	3.02	99	2.54	83	0R	3H	1W	
320.65	323.70	3.05	3	98	2.56	84	0R	3H	1W	
323.70	326.75	3.05	3.05	100	2.60	85	0R	3H	1W	
326.75	329.79	3.04	3.04	100	3.04	100	0R	3H	1W	
329.79	332.84	3.05	3.05	100	2.80	92	0R	3H	1W	
332.84	335.89	3.05	2.81	92	2.62	86	0R	3H	1W	
335.89	338.94	3.05	3.01	99	3.01	99	0R	3H	1W	
338.94	341.99	3.05	3.05	100	3.05	100	0R	3H	1W	
341.99	345.03	3.04	3.04	100	2.89	95	0R	3H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
345.03	348.08	3.05	2.99	98	2.99	98	0R	3H	1W	
348.08	351.13	3.05	2.96	97	2.95	97	0R	3H	1W	
351.13	354.18	3.05	3.01	99	2.82	92	0R	3H	1W	competent rock.
354.18	357.23	3.05	3	98	2.75	90	0R	3H	1W	competent rock
357.23	360.27	3.04	3.04	100	2.93	96	0R	3H	1W	competent rock
360.27	363.32	3.05	3.05	100	2.79	91	0R	3H	1W	competent rock
363.32	366.37	3.05	3.05	100	3.05	100	0R	2H	1W	competent rock.
366.37	369.42	3.05	3.05	100	3.00	98	0R	2H	1W	competent rock.
369.42	372.47	3.05	2.94	96	2.54	83	0R	3H	1W	competent rock.
372.47	375.51	3.04	3	99	3.00	99	0R	3H	1W	competent rock.
375.51	378.56	3.05	3.01	99	2.84	93	0R	3H	1W	competent rock.
378.56	381.61	3.05	3.05	100	2.57	84	0R	3H	1W	competent rock.
381.61	384.66	3.05	3.05	100	3.05	100	0R	3H	1W	competent rock.
384.66	387.71	3.05	3.05	100	2.27	74	0R	3H	1W	competent rock
387.71	390.75	3.04	3	99	2.87	94	0R	3H	1W	competent rock
390.75	393.80	3.05	3.05	100	2.91	95	0R	3H	1W	competent rock.
393.80	396.85	3.05	3.01	99	3.01	99	0R	3H	1W	competent rock.
396.85	399.90	3.05	3	98	2.87	94	0R	3H	1W	competent rock.
399.90	402.95	3.05	2.96	97	2.55	84	0R	3H	1W	competent rock.
402.95	405.99	3.04	3.04	100	2.98	98	0R	3H	1W	competent rock.
405.99	409.04	3.05	3.05	100	2.67	88	0R	2H	1W	competent rock.
409.04	412.09	3.05	3.05	100	2.07	68	0R	2H	1W	competent rock with local rubble zones
412.09	415.14	3.05	2.98	98	1.52	50	0R	2H	1W	competent rock with local rubble zones
415.14	418.19	3.05	3	98	2.00	66	0R	3H	1W	competent rock.
418.19	421.23	3.04	3	99	2.08	68	0R	3H	1W	competent rock.
421.23	424.28	3.05	2.98	98	2.32	76	0R	3H	1W	competent rock.
424.28	427.33	3.05	3	98	2.29	75	0R	3H	1W	competent rock
427.33	430.38	3.05	3	98	2.28	75	0R	3H	1W	competent rock.
430.38	433.43	3.05	3.02	99	2.42	79	0R	3H	1W	competent rock
433.43	436.47	3.04	2.77	91	2.23	73	0R	3H	1W	competent rock with local rubble zones.
436.47	439.52	3.05	2.92	96	2.54	83	0R	3H	1W	competent rock.

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
439.52	442.57	3.05	2.99	98	2.77	91	0R	3H	1W	competent rock
442.57	445.62	3.05	3.05	100	2.87	94	0R	3H	1W	competent rock.
445.62	448.67	3.05	2.96	97	2.81	92	0R	3H	1W	competent rock.
448.67	451.71	3.04	2.9	95	2.61	86	0R	3H	1W	competent rock.
451.71	454.76	3.05	2.65	87	1.52	50	0R	2H	1W	mainly rubble with some competent rock and 1 gouge zone.
454.76	457.81	3.05	2.79	91	1.91	63	0R	3H	1W	competent rock with local rubble zones.
457.81	460.86	3.05	2.98	98	1.38	45	0R	3H	1W	
460.86	463.91	3.05	3	98	2.60	85	0R	3H	1W	
463.91	466.95	3.04	3.04	100	2.58	85	0R	3H	1W	
466.95	470.00	3.05	2.36	77	2.36	77	0R	3H	1W	
470.00	472.44	2.44	2.34	96	2.34	96	0R	3H	1W	EOH

OS -18-264

Nadaleen
Conrad Zone

Archer,Cathro & Associates (1981) Limited

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
0.00	0.00	0.00	-QC-	0.00	0	S049824	☐	N18-015	Core	CS3	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S049882	☐	N18-018	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S049881	☐	N18-018	Core	CS11	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S049864	☐	N18-018	Core	CS11	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	R613208	☐	N18-066	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S049826	☐	N18-015	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S049807	☐	N18-014	Core	CS5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S049798	☐	N18-014	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S049740	☐	N18-010	Core	CS3	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	s049842	☐	N18-015	Core	CS5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S049734	☐	N18-010	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S049789	☐	N18-014	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S049749	☐	N18-012	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S049764	☐	N18-012	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S049766	☐	N18-012	Core	CS7	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S049775	☐	N18-012	Core	CS3	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S049785	☐	N18-014	Core	CS12	☐	☐	☐
0.61	3.66	3.05	OVB	1.78	58	S049714	☐	N18-010	Core		☐	☐	☐
3.66	6.71	3.05	OVB	0.75	25	S049715	☐	N18-010	Core		☐	☐	☐
6.71	9.75	3.04	SLC	1.94	64	S049716	☐	N18-010	Core		☐	☐	☐
9.75	12.80	3.05	SLC	2.41	79	S049717	☐	N18-010	Core		☐	☐	☐
12.80	15.85	3.05	SLC	2.37	78	S049718	☐	N18-010	Core		☐	☐	☐
15.85	18.90	3.05	SLC	1.47	48	S049719	☐	N18-010	Core		☐	☐	☐
18.90	21.95	3.05	SLC	2.39	78	S049720	☐	N18-010	Core		☐	☐	☐
21.95	24.99	3.04	SLC	2.09	69	S049721	☐	N18-010	Core		☐	☐	☐
24.99	28.04	3.05	SLC	1.77	58	S049722	☐	N18-010	Core		☐	☐	☐
28.04	31.09	3.05	SLC	1.92	63	S049723	☐	N18-010	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
31.09	34.14	3.05	SLC	2.23	73	S049724	☐	N18-010	Core		☐	☐	☐
34.14	37.19	3.05	SLC	2.56	84	S049725	☐	N18-010	Core		☐	☐	☐
37.19	40.23	3.04	SLC	2.73	90	S049726	☐	N18-010	Core		☐	☐	☐
40.23	43.28	3.05	SLC	2.66	87	S049727	☐	N18-010	Core		☐	☐	☐
43.28	46.33	3.05	SLC	2.61	86	S049728	☐	N18-010	Core		☐	☐	☐
43.28	46.33	3.05	SLC	2.61	86	S049729	☐	N18-010	Core		☐	☐	☑
46.33	49.38	3.05	SLC	2.70	89	S049730	☐	N18-010	Core		☐	☐	☐
49.38	52.43	3.05	SLC	2.67	88	S049731	☐	N18-010	Core		☐	☐	☐
52.43	55.47	3.04	SLC	2.51	83	S049732	☐	N18-010	Core		☐	☐	☐
55.47	58.52	3.05	SLC	2.35	77	S049733	☐	N18-010	Core		☐	☐	☐
58.52	61.57	3.05	SLC	2.18	71	S049735	☐	N18-010	Core		☐	☐	☐
61.57	64.62	3.05	SLC	2.02	66	S049736	☐	N18-010	Core		☐	☐	☐
64.62	66.14	1.52	SLC	0.85	56	S049737	☐	N18-010	Core		☐	☐	☐
64.62	66.14	1.52	SLC	0.85	56	S049738	☐	N18-010	Core		☐	☑	☐
66.14	67.67	1.53	SLC	1.10	72	S049739	☐	N18-010	Core		☐	☐	☐
67.67	69.39	1.72	SLC	0.96	56	S049741	☐	N18-012	Core		☐	☐	☐
69.39	70.71	1.32	SLC	0.90	68	S049742	☐	N18-012	Core		☐	☐	☐
70.71	72.24	1.53	SLC	0.81	53	S049743	☐	N18-012	Core		☐	☐	☐
72.24	73.76	1.52	SLC	0.75	49	S049744	☐	N18-012	Core		☐	☐	☐
73.76	75.29	1.53	SLC	1.21	79	S049745	☐	N18-012	Core		☐	☐	☐
75.29	76.81	1.52	SLC	1.27	84	S049746	☐	N18-012	Core		☐	☐	☐
76.81	78.33	1.52	SLC	1.52	100	S049747	☐	N18-012	Core		☐	☐	☐
78.33	79.86	1.53	SLC	1.30	85	S049748	☐	N18-012	Core		☐	☐	☐
79.86	81.38	1.52	SLC	1.40	92	S049750	☐	N18-012	Core		☐	☐	☐
81.38	82.91	1.53	SLC	0.65	42	S049751	☐	N18-012	Core		☐	☐	☐
82.91	84.43	1.52	SLC	0.88	58	S049752	☐	N18-012	Core		☐	☐	☐
84.43	85.95	1.52	SLC	1.13	74	S049753	☐	N18-012	Core		☐	☐	☐
85.95	87.48	1.53	SLC	1.25	82	S049754	☐	N18-012	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
87.48	89.00	1.52	SLC	1.01	66	S049755	☐	N18-012	Core		☐	☐	☐
89.00	90.53	1.53	SLC	1.50	98	S049756	☐	N18-012	Core		☐	☐	☐
90.53	92.05	1.52	SLC	0.63	41	S049757	☐	N18-012	Core		☐	☐	☐
92.05	93.57	1.52	SLC	1.45	95	S049758	☐	N18-012	Core		☐	☐	☐
93.57	95.10	1.53	SLC	1.49	97	S049759	☐	N18-012	Core		☐	☐	☐
95.10	96.62	1.52	SLC	1.46	96	S049760	☐	N18-012	Core		☐	☐	☐
96.62	98.15	1.53	SLC	1.40	92	S049761	☐	N18-012	Core		☐	☐	☐
98.15	99.67	1.52	SLC	1.45	95	S049762	☐	N18-012	Core		☐	☐	☐
99.67	101.19	1.52	SLC	1.13	74	S049763	☐	N18-012	Core		☐	☐	☐
101.19	102.72	1.53	SLC	1.46	95	S049765	☐	N18-012	Core		☐	☐	☐
102.72	105.77	3.05	SLC	3.03	99	S049767	☐	N18-012	Core		☐	☐	☐
105.77	107.29	1.52	SLC	1.50	99	S049768	☐	N18-012	Core		☐	☐	☐
105.77	107.29	1.52	SLC	1.50	99	S049769	☐	N18-012	Core		☐	☐	☑
107.29	110.34	3.05	SLC	2.61	86	S049770	☐	N18-012	Core		☐	☐	☐
110.34	113.38	3.04	SLC	2.65	87	S049771	☐	N18-012	Core		☐	☐	☐
113.38	116.43	3.05	SLC	2.67	88	S049772	☐	N18-012	Core		☐	☐	☐
113.38	116.43	3.05	SLC	2.67	88	S049773	☐	N18-012	Core		☐	☑	☐
116.43	117.96	1.53	SLC	1.45	95	S049774	☐	N18-012	Core		☐	☐	☐
117.96	119.48	1.52	SLC	1.52	100	S049776	☐	N18-012	Core		☐	☐	☐
119.48	121.01	1.53	SLC	1.42	93	S049777	☐	N18-012	Core		☐	☐	☐
121.01	122.53	1.52	SLC	1.52	100	S049778	☐	N18-012	Core		☐	☐	☐
122.53	124.05	1.52	SLC	1.46	96	S049779	☐	N18-012	Core		☐	☐	☐
124.05	125.58	1.53	SLC	1.45	95	S049780	☐	N18-012	Core		☐	☐	☐
125.58	127.10	1.52	SLC	1.45	95	S049781	☐	N18-014	Core		☐	☐	☐
127.10	130.15	3.05	SLC	3.00	98	S049782	☐	N18-014	Core		☐	☐	☐
130.15	133.20	3.05	SLC	2.85	93	S049783	☐	N18-014	Core		☐	☐	☐
133.20	134.72	1.52	SLC	1.36	89	S049784	☐	N18-014	Core		☐	☐	☐
134.72	136.25	1.53	SLC	1.46	95	S049786	☐	N18-014	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
136.25	137.77	1.52	SLC	1.49	98	S049787	☐	N18-014	Core		☐	☐	☐
137.77	139.29	1.52	SLC	1.51	99	S049788	☐	N18-014	Core		☐	☐	☐
139.29	142.34	3.05	SLC	2.60	85	S049790	☐	N18-014	Core		☐	☐	☐
142.34	145.39	3.05	SLC	2.89	95	S049791	☐	N18-014	Core		☐	☐	☐
145.39	148.44	3.05	SLC	2.90	95	S049792	☐	N18-014	Core		☐	☐	☐
148.44	149.96	1.52	SLC	1.47	97	S049793	☐	N18-014	Core		☐	☐	☐
149.96	153.01	3.05	SLC	2.65	87	S049794	☐	N18-014	Core		☐	☐	☐
153.01	156.06	3.05	SLC	2.35	77	S049795	☐	N18-014	Core		☐	☐	☐
156.06	159.11	3.05	SLC	2.34	77	S049796	☐	N18-014	Core		☐	☐	☐
159.11	160.63	1.52	SLC	1.30	86	S049797	☐	N18-014	Core		☐	☐	☐
160.63	162.15	1.52	SLC	1.50	99	S049799	☐	N18-014	Core		☐	☐	☐
160.63	162.15	1.52	SLC	1.50	99	S049800	☐	N18-014	Core		☐	☑	☐
162.15	165.20	3.05	SLC	2.79	91	S049801	☐	N18-014	Core		☐	☐	☐
165.20	168.25	3.05	SLC	2.74	90	S049802	☐	N18-014	Core		☐	☐	☐
168.25	171.30	3.05	SLC	2.47	81	S049803	☐	N18-014	Core		☐	☐	☐
171.30	174.35	3.05	SLC	2.99	98	S049804	☐	N18-014	Core		☐	☐	☐
174.35	177.39	3.04	SLC	2.92	96	S049805	☐	N18-014	Core		☐	☐	☐
177.39	180.44	3.05	SLC	2.85	93	S049806	☐	N18-014	Core		☐	☐	☐
180.44	183.49	3.05	SLC	3.05	100	S049808	☐	N18-014	Core		☐	☐	☐
183.49	186.54	3.05	SLC	2.98	98	S049809	☐	N18-014	Core		☐	☐	☐
186.54	189.59	3.05	SLC	2.93	96	S049810	☐	N18-014	Core		☐	☐	☐
189.59	192.63	3.04	SLC	2.99	98	S049811	☐	N18-014	Core		☐	☐	☐
192.63	195.68	3.05	SLC	2.95	97	S049812	☐	N18-014	Core		☐	☐	☐
195.68	198.73	3.05	SLC	2.79	91	S049813	☐	N18-014	Core		☐	☐	☐
195.68	198.73	3.05	SLC	2.79	91	S049814	☐	N18-014	Core		☐	☐	☑
198.73	201.78	3.05	SLC	2.76	90	S049815	☐	N18-014	Core		☐	☐	☐
201.78	204.83	3.05	SLC	2.78	91	S049816	☐	N18-014	Core		☐	☐	☐
204.83	207.87	3.04	SLC	2.62	86	S049817	☐	N18-014	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
207.87	210.92	3.05	SLC	2.42	79	S049818	☐	N18-014	Core		☐	☐	☐
210.92	213.97	3.05	SLC	2.56	84	S049819	☐	N18-014	Core		☐	☐	☐
213.97	217.02	3.05	SLC	2.04	67	S049820	☐	N18-014	Core		☐	☐	☐
217.02	218.54	1.52	SLC	1.45	95	S049821	☐	N18-015	Core		☐	☐	☐
218.54	220.07	1.53	SLC	1.30	85	S049822	☐	N18-015	Core		☐	☐	☐
220.07	221.59	1.52	SLC	1.48	97	S049823	☐	N18-015	Core		☐	☐	☐
221.59	223.11	1.52	SLC	1.47	97	S049825	☐	N18-015	Core		☐	☐	☐
223.11	226.16	3.05	SLC	2.26	74	S049827	☐	N18-015	Core		☐	☐	☐
226.16	229.21	3.05	SLC	2.83	93	S049828	☐	N18-015	Core		☐	☐	☐
229.21	232.26	3.05	SLC	2.83	93	S049829	☐	N18-015	Core		☐	☐	☐
232.26	235.31	3.05	SLC	2.84	93	S049830	☐	N18-015	Core		☐	☐	☐
235.31	238.35	3.04	SLC	2.93	96	S049831	☐	N18-015	Core		☐	☐	☐
238.35	241.40	3.05	SLC	3.03	99	S049832	☐	N18-015	Core		☐	☐	☐
241.40	244.45	3.05	SLC	3.02	99	S049833	☐	N18-015	Core		☐	☐	☐
244.45	247.50	3.05	SLC	2.77	91	S049834	☐	N18-015	Core		☐	☐	☐
247.50	250.55	3.05	SLC	2.43	80	S049835	☐	N18-015	Core		☐	☐	☐
250.55	253.59	3.04	SLC	2.91	96	S049836	☐	N18-015	Core		☐	☐	☐
253.59	256.64	3.05	SLC	3.05	100	S049837	☐	N18-015	Core		☐	☐	☐
256.64	259.69	3.05	SLC	3.05	100	S049838	☐	N18-015	Core		☐	☐	☐
259.69	262.74	3.05	SLC	3.05	100	S049839	☐	N18-015	Core		☐	☐	☐
262.74	265.79	3.05	SLC	3.05	100	S049840	☐	N18-015	Core		☐	☐	☐
265.79	268.83	3.04	SLC	3.04	100	S049841	☐	N18-015	Core		☐	☐	☐
268.83	271.88	3.05	SLC	3.05	100	S049843	☐	N18-015	Core		☐	☐	☐
271.88	274.93	3.05	SLC	3.05	100	S049844	☐	N18-015	Core		☐	☐	☐
274.93	281.03	6.10	SLC	5.95	98	W233004	☐	N18-C01	Chip		☐	☐	☐
281.03	287.12	6.09	SLC	6.05	99	W233005	☐	N18-C01	Chip		☐	☐	☐
287.12	293.22	6.10	SLC	5.94	97	W233006	☐	N18-C01	Chip		☐	☐	☐
293.22	296.27	3.05	SLC	3.05	100	s049845	☐	N18-015	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
296.27	299.31	3.04	SLC	2.97	98	s049846	☐	N18-015	Core		☐	☐	☐
299.31	300.60	1.29	SLC	1.20	93	s049847	☐	N18-015	Core		☐	☐	☐
300.60	302.26	1.66	SLC	1.64	99	s049848	☐	N18-015	Core		☐	☐	☐
300.60	302.26	1.66	SLC	1.64	99	s049849	☐	N18-015	Core		☐	☑	☐
302.26	304.00	1.74	SLC	1.54	89	s049850	☐	N18-015	Core		☐	☐	☐
304.00	305.41	1.41	SLC	1.40	99	s049851	☐	N18-015	Core		☐	☐	☐
305.41	308.46	3.05	SLC	2.51	82	s049852	☐	N18-015	Core		☐	☐	☐
308.46	311.51	3.05	SLC	3.00	98	s049853	☐	N18-015	Core		☐	☐	☐
311.51	314.55	3.04	SLC	3.03	100	s049854	☐	N18-015	Core		☐	☐	☐
314.55	317.60	3.05	SLC	2.96	97	s049855	☐	N18-015	Core		☐	☐	☐
317.60	320.65	3.05	SLC	3.02	99	s049856	☐	N18-015	Core		☐	☐	☐
317.60	320.65	3.05	SLC	3.02	99	s049857	☐	N18-015	Core		☐	☐	☑
320.65	323.70	3.05	SLC	3.00	98	R613206	☐	N18-066	Core		☐	☐	☐
320.65	326.75	6.10	SLC	6.05	99	W233007	☐	N18-C01	Chip		☐	☐	☐
323.70	326.75	3.05	SLC	3.05	100	R613207	☐	N18-066	Core		☐	☐	☐
326.75	329.79	3.04	SLC	3.04	100	R613209	☐	N18-066	Core		☐	☐	☐
326.75	332.84	6.09	SLC	6.09	100	W233008	☐	N18-C01	Chip		☐	☐	☐
329.79	332.84	3.05	SLC	3.05	100	R613210	☐	N18-066	Core		☐	☐	☐
332.84	338.94	6.10	SLC	5.82	95	W233009	☐	N18-C01	Chip		☐	☐	☐
332.84	335.89	3.05	SLC	2.81	92	R613211	☐	N18-066	Core		☐	☐	☐
338.94	345.03	6.09	SLC	6.09	100	W233010	☐	N18-C01	Chip		☐	☐	☐
345.03	351.13	6.10	SLC	5.95	98	W233015	☐	N18-C01	Chip		☐	☐	☐
351.13	357.23	6.10	SLC	6.01	99	W233016	☐	N18-C01	Chip		☐	☐	☐
357.23	363.32	6.09	SLC	6.09	100	W233017	☐	N18-C01	Chip		☐	☐	☐
363.32	369.42	6.10	SLC	6.10	100	W233018	☐	N18-C01	Chip		☐	☐	☐
369.42	375.51	6.09	SLC	5.94	98	W233019	☐	N18-C01	Chip		☐	☐	☐
375.51	381.61	6.10	SLC	6.06	99	W233020	☐	N18-C01	Chip		☐	☐	☐
381.61	387.71	6.10	SLC	6.10	100	W233021	☐	N18-C01	Chip		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
387.71	393.80	6.09	SLC	6.05	99	W233022	☐	N18-C01	Chip		☐	☐	☐
393.80	396.85	3.05	SLC	3.01	99	S049858	☐	N18-015	Core		☐	☐	☐
396.85	399.90	3.05	SLC	3.00	98	S049859	☐	N18-015	Core		☐	☐	☐
399.90	402.95	3.05	SLC	2.96	97	S049860	☐	N18-015	Core		☐	☐	☐
402.95	405.00	2.05	SLC	2.05	100	S049861	☐	N18-018	Core		☐	☐	☐
405.00	406.99	1.99	SLC	1.98	99	S049862	☐	N18-018	Core		☐	☐	☐
406.99	408.38	1.39	SLC	1.38	99	S049863	☐	N18-018	Core		☐	☐	☐
408.38	411.00	2.62	SLC	2.52	96	S049865	☐	N18-018	Core		☐	☐	☐
411.00	414.05	3.05	SLC	2.97	97	S049866	☐	N18-018	Core		☐	☐	☐
414.05	417.00	2.95	SLC	2.90	98	S049867	☐	N18-018	Core		☐	☐	☐
417.00	420.00	3.00	SLC	2.95	98	S049868	☐	N18-018	Core		☐	☐	☐
420.00	423.00	3.00	SLC	2.98	99	S049869	☐	N18-018	Core		☐	☐	☐
423.00	425.00	2.00	SLC	1.90	95	S049870	☐	N18-018	Core		☐	☐	☐
425.00	427.33	2.33	SLC	2.26	97	S049871	☐	N18-018	Core		☐	☐	☐
427.33	430.38	3.05	SLC	3.00	98	S049872	☐	N18-018	Core		☐	☐	☐
430.38	433.43	3.05	SLC	3.02	99	S049873	☐	N18-018	Core		☐	☐	☐
433.43	436.47	3.04	SLC	2.77	91	S049874	☐	N18-018	Core		☐	☐	☐
436.47	439.52	3.05	SLC	2.92	96	S049875	☐	N18-018	Core		☐	☐	☐
439.52	442.57	3.05	SLC	2.99	98	S049876	☐	N18-018	Core		☐	☐	☐
442.57	445.62	3.05	SLC	3.05	100	S049877	☐	N18-018	Core		☐	☐	☐
445.62	448.67	3.05	SLC	2.96	97	S049878	☐	N18-018	Core		☐	☐	☐
448.67	451.71	3.04	SLC	2.90	95	S049879	☐	N18-018	Core		☐	☐	☐
451.71	454.76	3.05	SLC	2.65	87	S049880	☐	N18-018	Core	SR5	☐	☐	☐
454.76	457.81	3.05	SLC	2.79	91	S049883	☐	N18-018	Core		☐	☐	☐
457.81	460.86	3.05	SLC	2.98	98	S049884	☐	N18-018	Core		☐	☐	☐
460.86	463.91	3.05	SLC	3.00	98	S049885	☐	N18-018	Core		☐	☐	☐
463.91	466.95	3.04	SLC	3.04	100	S049886	☐	N18-018	Core		☐	☐	☐
466.95	470.00	3.05	SLC	2.36	77	S049887	☐	N18-018	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
470.00	472.44	2.44	SLC	2.34	96	S049888	☐	N18-018	Core		☐	☐	☐

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From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
0.00	6.52	6.52	OVB	--	Overburden from 0 to 6.52m. No recovery from 0 to 2.62m.							
						MD	BR					
						LT	GY	RB	OXI	4I		
6.52	102.62	96.10	FLR	FG	Dark grey, finely laminated and abundantly sheared mudstones with interbedded fine grained sandstone, dark grey, laminated calcareous mudstone and grey-green very fine grained mudstone. Interval is strongly to locally intensely sheared. Thin intense shear zones are surrounded on either side by strong shearing, breccia zones and local blocks of consistant bedding. Upper portion of the interval is intensely/strongly oxidized, with decreasing intensity downhole. Calcite and quartz (carbonate?) veins and veinlets are weakly present thorughout interval as discontinuous, sheared bands. Locally, thicker quartz carbonate veins are parallel to shear zone and breccia zone margins. Diagenetic pyrite (1%) is present as fine bedding parallel bands or as rounded pebble sized blebs. Towards lower contact (between 74.68 and 82.30m) with limestone rich fault rock fracture surfaces have moderate light green arsenic oxidation (scorodite?). At 80.77m, fracture surface has significant Realgar, minor orpiment and arsenic oxide.							
								BD			Py	0.5
						DK	GY	BX	OXI	1I	Re	0.05
						MD	GY	SH	ASO	1I	Py	0.5

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
102.62	484.86	382.24	SLC	MG	Interbedded (?) thick deposits of dark grey, finely laminated mudstone/siltstone (turbidites?) and ligher grey, coarse grained, matrix-supported quartz/lithic fragment granule to pebble (minor boulder) conglomerate with local beds (1-2cm up to 1.5m) of silty sandstone. Mudstone has local floating quartz pebble clasts. Conglomerates have local, clast dominated beds with fine sand matrix and discrete zones with limestone/silty limestone clasts. Major contacts between mudstone and conglomerate beds can be sheared and weakly to moderately vein filled. Shearing along contact at 130.42m is spatially associated with realgar mineralization, within shear zone (~3-4cm) as well as surrounding fracture surfaces and veins. Shearing and mineralization are also noted from 304.80 to 308.25m where weak realgar/orpiment and up to 177 ppm Au are spatially associated with shear fabrics and gouge zones. Faulted lower contact with limestone body is heavily brecciated and is associated with orpiment, realgar, arsenic oxide and Au up to 90ppm.							
								PB				
								SD	ASO	1I		
						DK	GY	BX	SIL	1I	Re	0.3
						DK	GY	SH	DOL	1I	Om	0.1
						MD	GY	BD	ARG	1I	Py	2

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
484.86	580.03	95.17	LST	FG	Locally sheared, light to medium grey, fine to medium grained, silty limestone with thin laminations of medium grey mudstone, beds of medium grained calcareous arenite and moderate to strong calcite veining. Silty limestone is locally massive to well bedded (well bedded below 572.78m). Mudstone and calc arenite beds are wavy/undulating, parallel and 0.5 to 15cm thick. Where visible, bedding is at low angles tca (~15 to 25 degrees tca). Thin, black, irregular (pitted?) styolitic seams weakly present throughout (most notably near the upper contact). Local shearing is noted within calcite veins and mudstone laminations. More intense shearing noted near the upper contact, where shear fabrics are oriented at ~15 degrees tca. Calcite veining is moderate to locally intense throughout. Intense veining most notably from 484.86 to 485.65m and 508.73 to 527.73m. Veins consist of massive calcite with local vuggy texture and locally form 1-10cm wide vein breccias.							
								SH				
						LT	GY	BD	---	--	--	0

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
0.00	2.62	2.62	0	0	0.00	0	--	--	--	No recovery 0-2.62m.
2.62	3.05	0.43	0.43	100	0.00	0	1R	4H	4W	rbz
3.05	6.10	3.05	0.37	12	0.00	0	3R	1H	5W	rbz
6.10	9.14	3.04	2.4	79	0.58	19	2R	1H	4W	rbz with gouge.
9.14	12.19	3.05	2.02	66	0.60	20	4R	1H	3W	RBZ with gouge.
12.19	15.24	3.05	2.05	67	0.40	13	2R	1H	2W	rbz with gouge
15.24	18.29	3.05	2.23	73	0.30	10	1R	1H	1W	rbz with gouge.
18.29	21.34	3.05	2.58	85	0.98	32	1R	1H	1W	RBZ with gouge
21.34	24.38	3.04	2.65	87	0.73	24	3R	3H	1W	rbz
24.38	27.43	3.05	2.8	92	0.80	26	2R	2H	1W	Moderate rubble.
27.43	30.48	3.05	2.98	98	1.77	58	1R	2H	1W	Three observed weak sections within the run
30.48	33.53	3.05	2.75	90	0.79	26	1R	2H	1W	rubble zone with some gouge
33.53	36.58	3.05	2.96	97	0.99	32	0R	2H	1W	local rubble zones
36.58	39.62	3.04	2.98	98	2.06	68	1R	3H	1W	competent rock with small cm thick rubble.
39.62	42.67	3.05	3	98	2.87	94	0R	3H	1W	competent rock with 1 rubble zone.
42.67	45.72	3.05	2.99	98	2.67	88	0R	2H	2W	competent rock with gouge at beginning
45.72	48.77	3.05	2.95	97	2.47	81	0R	4H	1W	competent rock.
48.77	51.82	3.05	2.88	94	2.19	72	0R	2H	1W	competent rock with 2 gouge areas
51.82	54.86	3.04	2.85	94	2.56	84	0R	3H	1W	competent rock with 2 gouge section and 2 rubble sections.
54.86	57.91	3.05	2.9	95	2.14	70	0R	3H	1W	Competent rock with two small RBZ.
57.91	60.96	3.05	3.03	99	2.94	96	0R	4H	1W	competent rock
60.96	64.01	3.05	3	98	2.97	97	0R	4H	1W	1cm very soft clay seam.
64.01	67.06	3.05	2.82	92	2.75	90	0R	3H	1W	
67.06	70.10	3.04	2.93	96	0.93	31	0R	3H	1W	
70.10	73.15	3.05	2.83	93	1.26	41	0R	3H	1W	Clay on fractured surfaces. Joints are dominantly subparallel-parallel 40 degree TCA structures.

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
73.15	76.20	3.05	2.62	86	1.04	34	0R	2H	2W	Clay present throughout. Arsenic oxide weathering present on fractured surfaces.
76.20	79.25	3.05	2.38	78	0.72	24	0R	2H	1W	clay on fractured surfaces.
79.25	82.30	3.05	2.65	87	1.04	34	0R	2H	1W	Largely competent rock, with some rubbly sections and soft clay fracture surfaces. Realgar abundant on one fracture at 80.76m.
82.30	85.34	3.04	2.15	71	0.22	7	1R	1H	1W	Weak rock with soft, dark clay weathering abundant.
85.34	88.39	3.05	2.4	79	0.73	24	1R	1H	1W	
88.39	91.44	3.05	2.78	91	1.34	44	2R	3H	1W	Clay weathering in fractured surface. Variable HCl reactivity from none to strong depending on lithology.
91.44	94.49	3.05	2.61	86	1.16	38	2R	2H	1W	Planar, smooth fractures abundant. Consistent moderate reactivity and calcite veining present.
94.49	97.54	3.05	2.72	89	1.20	39	2R	3H	1W	Shear fabric on some joints. Clay weathering present throughout. Strong reactivity from 94.49-94.94m, but no reactivity after this point.
97.54	100.58	3.04	2.76	91	1.90	63	0R	3H	1W	
100.58	103.63	3.05	2.87	94	2.38	78	0R	3H	1W	
103.63	106.68	3.05	3	98	2.80	92	0R	3H	1W	
106.68	109.73	3.05	2.8	92	1.89	62	0R	3H	1W	
109.73	112.78	3.05	2.76	90	1.76	58	0R	2H	1W	
112.78	115.82	3.04	3.04	100	2.81	92	0R	3H	1W	
115.82	118.87	3.05	2.9	95	2.90	95	0R	3H	1W	Very competent rock with few veinlets
118.87	121.92	3.05	3.02	99	2.15	70	0R	3H	1W	
121.92	124.97	3.05	2.97	97	2.12	70	0R	3H	1W	
124.97	128.02	3.05	3	98	2.71	89	0R	3H	1W	
128.02	131.06	3.04	2.83	93	1.34	44	0R	2H	1W	Locally, high amounts of clay weathering. Some small conenctrations of realgar near/along fractures
131.06	134.11	3.05	2.9	95	2.33	76	0R	3H	1W	
134.11	137.16	3.05	2.94	96	2.58	85	0R	3H	1W	
137.16	140.21	3.05	2.82	92	2.11	69	0R	3H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
140.21	143.26	3.05	2.9	95	2.60	85	0R	3H	1W	
143.26	146.30	3.04	3.04	100	2.61	86	0R	3H	1W	
146.30	149.35	3.05	2.92	96	2.60	85	0R	3H	1W	
149.35	152.40	3.05	3.05	100	2.62	86	0R	3H	1W	
152.40	155.45	3.05	2.93	96	2.58	85	0R	3H	1W	
155.45	158.50	3.05	3.02	99	2.97	97	0R	3H	1W	very competent with very few fractures
158.50	161.54	3.04	3.04	100	2.62	86	0R	3H	1W	
161.54	164.59	3.05	3	98	2.46	81	0R	3H	1W	
164.59	167.64	3.05	2.47	81	1.55	51	0R	2H	1W	At 165.60m, the rock begins to become more clay-rich and rubbly in sections and along fractures
167.64	170.69	3.05	3.03	99	1.83	60	0R	2H	1W	
170.69	173.74	3.05	2.94	96	2.32	76	0R	3H	1W	
173.74	176.78	3.04	3	99	2.58	85	0R	3H	1W	
176.78	179.83	3.05	2.82	92	2.54	83	0R	3H	1W	
179.83	182.88	3.05	3	98	2.75	90	0R	3H	1W	Competent rock
182.88	185.93	3.05	3.05	100	2.36	77	0R	2H	1W	Competent rock until 185.71-185.93m, which is more clay-rich and gougey.
185.93	188.98	3.05	2.96	97	2.55	84	0R	3H	1W	Apart from some clay-rich fractures, this rock is dominantly competent.
188.98	192.02	3.04	2.87	94	1.40	46	0R	2H	1W	Increasing degree of alteration going down the run.
192.02	195.07	3.05	3.01	99	2.28	75	0R	2H	1W	Some clay-rich fracture surfaces decreasing hardness on the rock, but dominantly still competent
195.07	198.12	3.05	2.85	93	1.57	51	0R	2H	1W	
198.12	201.17	3.05	2.83	93	1.16	38	0R	1H	1W	Clay-dominant section from 99.52-199.67m. Other heavily fractured sections contain high amounts of clay as well.
201.17	204.22	3.05	2.62	86	2.03	67	0R	2H	1W	
204.22	207.26	3.04	2.83	93	2.50	82	0R	3H	1W	
207.26	210.31	3.05	3	98	2.76	90	0R	3H	1W	very competent rock
210.31	213.36	3.05	2.86	94	2.13	70	0R	3H	1W	
213.36	216.41	3.05	3.05	100	2.04	67	0R	3H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
216.41	219.46	3.05	2.76	90	1.72	56	0R	2H	1W	very soft near fractures due to clay-rich material
219.46	222.50	3.04	3.01	99	2.77	91	0R	3H	1W	Competent, bedded rock, with low clay abundance.
222.50	225.55	3.05	2.72	89	2.18	71	0R	2H	1W	Dominantly competeny rock with soft, sheared section from 225.13-225.22m.
225.55	228.60	3.05	2.97	97	2.15	70	0R	2H	1W	Fractures moderately-highly clay altered
228.60	231.65	3.05	2.9	95	2.39	78	0R	2H	1W	clay-rich fractures and shear
231.65	234.70	3.05	2.72	89	1.30	43	0R	2H	1W	clay-rich with shear textures
234.70	237.74	3.04	3.01	99	1.90	63	0R	3H	1W	
237.74	240.79	3.05	3.03	99	2.93	96	0R	3H	1W	Competent rock
240.79	243.84	3.05	2.9	95	2.30	75	0R	2H	1W	Dominantly competent with section of softer, sheared material from 241.63-242.19m
243.84	246.89	3.05	2.94	96	2.47	81	0R	3H	1W	
246.89	249.94	3.05	2.96	97	2.39	78	0R	3H	1W	
249.94	252.98	3.04	2.87	94	1.84	61	0R	3H	1W	
252.98	256.03	3.05	2.98	98	2.50	82	0R	3H	1W	
256.03	259.08	3.05	2.94	96	2.73	90	0R	3H	1W	
259.08	262.13	3.05	2.93	96	2.59	85	0R	3H	1W	
262.13	265.18	3.05	2.95	97	2.25	74	0R	3H	1W	
265.18	268.22	3.04	2.92	96	2.86	94	0R	3H	1W	very competent
268.22	271.27	3.05	2.9	95	1.93	63	0R	3H	1W	small section of clay-rich fracture from 269.38-269.57m. Otherwise competent
271.27	274.32	3.05	3.02	99	3.02	99	0R	3H	1W	competent rock.
274.32	277.37	3.05	3.05	100	2.96	97	0R	3H	1W	competent rock.
277.37	280.42	3.05	3	98	2.87	94	0R	3H	1W	competent rock.
280.42	283.46	3.04	2.96	97	2.47	81	0R	3H	1W	competent rock.
283.46	286.51	3.05	3.02	99	2.86	94	0R	3H	1W	competnt rock.
286.51	289.56	3.05	3	98	2.53	83	0R	3H	1W	competent rock.
289.56	292.61	3.05	3.04	100	2.82	92	0R	3H	1W	competent rock
292.61	295.66	3.05	3.04	100	2.93	96	0R	3H	1W	competent rock.
295.66	298.70	3.04	3.04	100	2.96	97	0R	3H	1W	competent rock.

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
298.70	301.75	3.05	2.99	98	2.54	83	0R	3H	1W	competent rock.
301.75	304.80	3.05	3	98	2.43	80	0R	3H	1W	competent rock with local rubble zones.
304.80	307.85	3.05	2.48	81	1.33	44	0R	2H	2W	mostly rubble with gouge and shear zones.
307.85	310.90	3.05	3.05	100	3.05	100	0R	3H	1W	Competent rock.
310.90	313.94	3.04	3.04	100	2.56	84	0R	3H	1W	competent rock.
313.94	316.99	3.05	3.02	99	2.98	98	0R	3H	1W	competent rock.
316.99	320.04	3.05	3	98	2.79	91	0R	3H	1W	competent rock.
320.04	323.09	3.05	3.02	99	2.86	94	0R	3H	1W	competent rock.
323.09	327.05	3.96	3.56	90	3.28	83	0R	3H	1W	
327.05	330.10	3.05	2.95	97	2.42	79	0R	3H	1W	
330.10	333.15	3.05	2.85	93	2.51	82	0R	3H	1W	
333.15	336.19	3.04	2.97	98	2.51	83	0R	3H	1W	
336.19	339.24	3.05	2.99	98	2.69	88	0R	3H	1W	
339.24	342.29	3.05	2.81	92	2.69	88	0R	3H	1W	
342.29	345.34	3.05	2.93	96	2.74	90	0R	3H	1W	
345.34	348.39	3.05	2.89	95	2.39	78	0R	3H	1W	
348.39	351.43	3.04	2.97	98	2.90	95	0R	3H	1W	
351.43	354.48	3.05	3	98	2.94	96	0R	3H	1W	
354.48	357.53	3.05	2.94	96	2.90	95	0R	3H	1W	
357.53	360.58	3.05	3.01	99	2.96	97	0R	3H	1W	
360.58	363.63	3.05	2.97	97	2.85	93	0R	3H	1W	
363.63	366.67	3.04	2.98	98	2.75	90	0R	3H	1W	
366.67	369.72	3.05	3.05	100	2.92	96	0R	3H	1W	
369.72	372.77	3.05	3.05	100	3.05	100	0R	3H	1W	
372.77	375.82	3.05	3.05	100	2.90	95	0R	3H	1W	
375.82	378.87	3.05	2.96	97	2.87	94	0R	3H	1W	
378.87	381.91	3.04	2.96	97	2.78	91	0R	3H	1W	
381.91	384.96	3.05	2.91	95	2.86	94	0R	3H	1W	
384.96	388.01	3.05	3.05	100	2.85	93	0R	3H	1W	
388.01	391.06	3.05	2.79	91	2.66	87	0R	3H	1W	
391.06	394.11	3.05	2.96	97	2.85	93	0R	3H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
394.11	397.15	3.04	2.98	98	2.56	84	0R	3H	1W	
397.15	400.20	3.05	2.86	94	2.78	91	0R	3H	1W	
400.20	403.25	3.05	3.05	100	2.90	95	0R	3H	1W	
403.25	406.30	3.05	2.99	98	2.49	82	0R	3H	1W	
406.30	409.35	3.05	2.85	93	2.59	85	0R	3H	1W	
409.35	412.39	3.04	2.98	98	1.83	60	0R	3H	1W	
412.39	415.44	3.05	2.98	98	2.07	68	0R	3H	1W	
415.44	418.49	3.05	3.01	99	2.14	70	0R	3H	1W	
418.49	421.54	3.05	2.98	98	2.95	97	0R	3H	1W	
421.54	424.59	3.05	3.02	99	2.45	80	0R	3H	1W	
424.59	427.63	3.04	2.74	90	1.63	54	0R	3H	1W	
427.63	430.68	3.05	2.94	96	2.44	80	0R	3H	1W	
430.68	433.73	3.05	2.83	93	2.46	81	0R	3H	1W	
433.73	436.78	3.05	2.8	92	1.53	50	0R	3H	1W	
436.78	439.83	3.05	3.05	100	2.92	96	0R	3H	4W	
439.83	442.87	3.04	2.68	88	1.78	59	0R	3H	1W	
442.87	445.92	3.05	2.85	93	2.18	71	0R	2H	1W	
445.92	448.97	3.05	3	98	2.59	85	0R	2H	1W	
448.97	452.02	3.05	3.04	100	2.84	93	0R	2H	1W	
452.02	455.07	3.05	2.96	97	2.22	73	0R	3H	1W	
455.07	458.11	3.04	3	99	2.13	70	0R	2H	1W	rubble zones with local competent rock.
458.11	461.16	3.05	2.7	89	1.20	39	0R	2H	1W	rubble zone
461.16	464.21	3.05	2.85	93	1.74	57	0R	2H	1W	competent rock with local rubble zones.
464.21	467.26	3.05	2.92	96	1.35	44	0R	2H	1W	competent rock with local rubble zones,
467.26	470.31	3.05	2.93	96	1.71	56	0R	3H	1W	competent rock with local rubble zones
470.31	473.35	3.04	2.62	86	1.36	45	0R	2H	1W	rubble zone with clay fractures
473.35	476.40	3.05	2.66	87	1.01	33	0R	2H	1W	Highly fractured, rubbly rock with clay in fractured areas
476.40	479.45	3.05	2.51	82	0.14	5	0R	2H	1W	Highly fractured with local competent rock.
479.45	482.50	3.05	2.7	89	0.10	3	0R	2H	1W	faulted area with many fractures. Rbz with gouge.

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
482.50	485.55	3.05	2.98	98	0.64	21	2R	1H	1W	gouge area.
485.55	488.59	3.04	2.97	98	2.79	92	3R	1H	1W	competent rock with thin gouge seams.
488.59	491.64	3.05	3.05	100	2.97	97	4R	2H	1W	
491.64	494.69	3.05	3.05	100	2.79	91	4R	3H	1W	
494.69	497.74	3.05	3.05	100	3.05	100	4R	3H	1W	Competent rock slightly longer than 3.05m
497.74	500.79	3.05	3.05	100	3.05	100	4R	3H	1W	Competent rock slightly over 3.05m
500.79	503.83	3.04	3.02	99	2.98	98	4R	3H	1W	
503.83	506.88	3.05	2.99	98	2.97	97	4R	3H	1W	
506.88	509.93	3.05	3.05	100	2.98	98	4R	3H	1W	
509.93	512.98	3.05	3.05	100	2.92	96	4R	3H	1W	competent rock slightly over 3.05m
512.98	516.03	3.05	3.05	100	2.84	93	4R	2H	1W	competent rock with gouge.
516.03	519.07	3.04	3.04	100	2.96	97	4R	3H	1W	
519.07	522.12	3.05	3.05	100	2.97	97	4R	3H	1W	
522.12	525.17	3.05	2.99	98	2.41	79	4R	2H	1W	Competent rock with local rubble areas.
525.17	528.22	3.05	2.99	98	2.99	98	4R	2H	1W	
528.22	531.27	3.05	3.05	100	3.05	100	4R	3H	1W	
531.27	534.31	3.04	3.04	100	3.04	100	4R	3H	1W	
534.31	537.36	3.05	3.05	100	2.92	96	4R	2H	1W	
537.36	540.41	3.05	3	98	2.95	97	4R	2H	1W	
540.41	543.46	3.05	3.05	100	2.76	90	4R	2H	1W	
543.46	546.51	3.05	3.04	100	3.04	100	4R	3H	1W	
546.51	549.55	3.04	2.98	98	2.91	96	4R	3H	1W	
549.55	552.60	3.05	2.99	98	2.87	94	4R	3H	1W	
552.60	555.65	3.05	3.01	99	3.01	99	4R	3H	1W	
555.65	558.70	3.05	2.94	96	2.84	93	4R	3H	1W	
558.70	561.75	3.05	3.05	100	3.05	100	4R	3H	1W	
561.75	564.79	3.04	3.04	100	2.97	98	4R	3H	1W	
564.79	567.84	3.05	3.05	100	2.94	96	4R	3H	1W	
567.84	570.89	3.05	2.86	94	2.55	84	4R	3H	1W	
570.89	573.94	3.05	2.86	94	2.57	84	4R	3H	1W	Competent rock with local rubble zones
573.94	576.99	3.05	2.9	95	2.70	89	4R	3H	1W	run is less than 3.05m.

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
576.99	580.03	3.04	2.45	81	2.03	67	4R	3H	1W	shorter run due to eoh.

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From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
0.00	0.00	0.00	-QC-	0.00	0	S048594	☐	N18-019	Core	CS8	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	R613217	☐	N18-066	Core	CS6	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S048603	☐	N18-019	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S048577	☐	N18-019	Core	CS2	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S048567	☐	N18-017	core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S048565	☐	N18-017	core	CS7	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S048539	☐	N18-017	core	CS10	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S048515	☐	N18-016	core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S048509	☐	N18-016	core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S048502	☐	N18-016	core	CS10	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S048482	☐	N18-013	Core	CS9	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S048616	☐	N18-021	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S048475	☐	N18-013	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S048470	☐	N18-013	Core	CS5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S048528	☐	N18-016	core	CS9	☐	☐	☐
2.62	3.05	0.43	OVB	0.43	100	S048458	☐	N18-013	Core		☐	☐	☐
3.05	6.10	3.05	OVB	0.37	12	S048459	☐	N18-013	Core		☐	☐	☐
6.10	9.14	3.04	OVB	2.40	79	S048460	☐	N18-013	Core		☐	☐	☐
9.14	12.19	3.05	FLR	2.02	66	S048461	☐	N18-013	Core		☐	☐	☐
12.19	15.24	3.05	FLR	2.05	67	S048462	☐	N18-013	Core		☐	☐	☐
15.24	18.29	3.05	FLR	2.23	73	S048463	☐	N18-013	Core		☐	☐	☐
18.29	21.34	3.05	FLR	2.58	85	S048464	☐	N18-013	Core		☐	☐	☐
18.29	21.34	3.05	FLR	2.58	85	S048465	☐	N18-013	Core		☐	☐	☑
21.34	24.38	3.04	FLR	2.65	87	S048466	☐	N18-013	Core		☐	☐	☐
24.38	27.43	3.05	FLR	2.80	92	S048467	☐	N18-013	Core		☐	☐	☐
27.43	30.48	3.05	FLR	2.98	98	S048468	☐	N18-013	Core		☐	☐	☐
30.48	33.53	3.05	FLR	2.75	90	S048469	☐	N18-013	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
33.53	36.58	3.05	FLR	2.96	97	S048471	☐	N18-013	Core		☐	☐	☐
36.58	39.62	3.04	FLR	2.98	98	S048472	☐	N18-013	Core		☐	☐	☐
39.62	42.67	3.05	FLR	3.00	98	S048473	☐	N18-013	Core		☐	☐	☐
42.67	45.72	3.05	FLR	2.99	98	S048474	☐	N18-013	Core		☐	☐	☐
45.72	48.77	3.05	FLR	2.95	97	S048476	☐	N18-013	Core		☐	☐	☐
48.77	51.82	3.05	FLR	2.88	94	S048477	☐	N18-013	Core		☐	☐	☐
51.82	54.86	3.04	FLR	2.85	94	S048478	☐	N18-013	Core		☐	☐	☐
54.86	57.91	3.05	FLR	2.90	95	S048479	☐	N18-013	Core		☐	☐	☐
57.91	60.96	3.05	FLR	3.03	99	S048480	☐	N18-013	Core		☐	☐	☐
60.96	64.01	3.05	FLR	3.00	98	S048481	☐	N18-013	Core		☐	☐	☐
64.01	67.06	3.05	FLR	2.82	92	S048483	☐	N18-013	Core		☐	☐	☐
67.06	70.10	3.04	FLR	2.93	96	S048484	☐	N18-013	Core		☐	☐	☐
70.10	73.15	3.05	FLR	2.83	93	S048485	☐	N18-013	Core		☐	☐	☐
73.15	76.20	3.05	FLR	2.62	86	S048486	☐	N18-013	Core		☐	☐	☐
73.15	76.20	3.05	FLR	2.62	86	S048487	☐	N18-013	Core		☐	☑	☐
76.20	79.25	3.05	FLR	2.38	78	S048488	☐	N18-013	Core		☐	☐	☐
79.25	82.30	3.05	FLR	2.65	87	S048489	☐	N18-013	Core		☐	☐	☐
82.30	85.34	3.04	FLR	2.15	71	S048490	☐	N18-013	Core		☐	☐	☐
85.34	88.39	3.05	FLR	2.40	79	S048491	☐	N18-016	core		☐	☐	☐
88.39	91.44	3.05	FLR	2.78	91	S048492	☐	N18-016	core		☐	☐	☐
91.44	94.49	3.05	FLR	2.61	86	S048493	☐	N18-016	core		☐	☐	☐
94.49	97.54	3.05	FLR	2.72	89	S048494	☐	N18-016	core		☐	☐	☐
97.54	100.58	3.04	FLR	2.76	91	S048495	☐	N18-016	core		☐	☐	☐
100.58	103.63	3.05	FLR	2.87	94	S048496	☐	N18-016	core		☐	☐	☐
103.63	106.68	3.05	SLC	3.00	98	S048497	☐	N18-016	core		☐	☐	☐
106.68	109.73	3.05	SLC	2.80	92	S048498	☐	N18-016	core		☐	☐	☐
109.73	112.78	3.05	SLC	2.76	90	S048499	☐	N18-016	core		☐	☐	☐
112.78	115.82	3.04	SLC	3.04	100	S048500	☐	N18-016	core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
115.82	118.87	3.05	SLC	2.90	95	S048501	☐	N18-016	core		☐	☐	☐
118.87	121.92	3.05	SLC	3.02	99	S048503	☐	N18-016	core		☐	☐	☐
121.92	124.97	3.05	SLC	2.97	97	S048504	☐	N18-016	core		☐	☐	☐
124.97	128.02	3.05	SLC	3.00	98	S048505	☐	N18-016	core		☐	☐	☐
128.02	129.93	1.91	SLC	1.79	94	S048506	☐	N18-016	core		☐	☐	☐
129.93	131.06	1.13	SLC	1.06	94	S048507	☐	N18-016	core		☐	☐	☐
131.06	132.59	1.53	SLC	1.32	86	S048508	☐	N18-016	core		☐	☐	☐
132.59	134.11	1.52	SLC	1.52	100	S048510	☐	N18-016	core		☐	☐	☐
134.11	137.16	3.05	SLC	2.94	96	S048511	☐	N18-016	core		☐	☐	☐
137.16	140.21	3.05	SLC	2.82	92	R613201	☐	N18-066	Core		☐	☐	☐
137.16	143.26	6.10	SLC	5.72	94	W233011	☐	N18-C01	Chip		☐	☐	☐
140.21	143.26	3.05	SLC	2.90	95	R613202	☐	N18-066	Core		☐	☐	☐
143.26	146.30	3.04	SLC	3.04	100	R613203	☐	N18-066	Core		☐	☐	☐
143.26	149.35	6.09	SLC	5.96	98	W233012	☐	N18-C01	Chip		☐	☐	☐
146.30	149.35	3.05	SLC	2.92	96	R613204	☐	N18-066	Core		☐	☐	☐
149.35	152.40	3.05	SLC	3.05	100	R613205	☐	N18-066	Core		☐	☐	☐
149.35	155.45	6.10	SLC	5.98	98	W233013	☐	N18-C01	Chip		☐	☐	☐
155.45	160.02	4.57	SLC	4.52	99	W233014	☐	N18-C01	Chip		☐	☐	☐
160.02	163.07	3.05	SLC	3.04	100	S048512	☐	N18-016	core		☐	☐	☐
163.07	164.59	1.52	SLC	1.40	92	S048513	☐	N18-016	core		☐	☐	☐
164.59	167.64	3.05	SLC	2.47	81	S048514	☐	N18-016	core		☐	☐	☐
167.64	170.69	3.05	SLC	3.03	99	S048516	☐	N18-016	core		☐	☐	☐
170.69	173.74	3.05	SLC	2.94	96	S048517	☐	N18-016	core		☐	☐	☐
173.74	176.78	3.04	SLC	3.00	99	S048518	☐	N18-016	core		☐	☐	☐
176.78	179.83	3.05	SLC	2.82	92	S048519	☐	N18-016	core		☐	☐	☐
176.78	179.83	3.05	SLC	2.82	92	S048520	☐	N18-016	core		☐	☑	☐
179.83	182.88	3.05	SLC	3.00	98	S048521	☐	N18-016	core		☐	☐	☐
182.88	185.93	3.05	SLC	3.05	100	S048522	☐	N18-016	core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
185.93	188.98	3.05	SLC	2.96	97	S048523	☐	N18-016	core		☐	☐	☐
188.98	192.02	3.04	SLC	2.87	94	S048524	☐	N18-016	core		☐	☐	☐
188.98	192.02	3.04	SLC	2.87	94	S048525	☐	N18-016	core		☐	☐	☑
192.02	195.07	3.05	SLC	3.01	99	S048526	☐	N18-016	core		☐	☐	☐
195.07	198.12	3.05	SLC	2.85	93	S048527	☐	N18-016	core	CS9	☐	☐	☐
198.12	201.17	3.05	SLC	2.83	93	S048529	☐	N18-016	core		☐	☐	☐
201.17	204.22	3.05	SLC	2.62	86	S048530	☐	N18-016	core		☐	☐	☐
204.22	207.26	3.04	SLC	2.83	93	S048531	☐	N18-017	core		☐	☐	☐
207.26	210.31	3.05	SLC	3.00	98	S048532	☐	N18-017	core		☐	☐	☐
210.31	213.36	3.05	SLC	2.86	94	S048533	☐	N18-017	core		☐	☐	☐
213.36	216.41	3.05	SLC	3.05	100	S048534	☐	N18-017	core		☐	☐	☐
216.41	219.46	3.05	SLC	2.76	90	S048535	☐	N18-017	core		☐	☐	☐
219.46	222.50	3.04	SLC	3.01	99	S048536	☐	N18-017	core		☐	☐	☐
222.50	225.55	3.05	SLC	2.72	89	S048537	☐	N18-017	core		☐	☐	☐
225.55	228.60	3.05	SLC	2.97	97	S048538	☐	N18-017	core		☐	☐	☐
228.60	231.65	3.05	SLC	2.90	95	S048540	☐	N18-017	core		☐	☐	☐
231.65	234.70	3.05	SLC	2.72	89	S048541	☐	N18-017	core		☐	☐	☐
234.70	237.74	3.04	SLC	3.01	99	S048542	☐	N18-017	core		☐	☐	☐
237.74	240.79	3.05	SLC	3.03	99	S048543	☐	N18-017	core		☐	☐	☐
240.79	243.84	3.05	SLC	2.90	95	S048544	☐	N18-017	core		☐	☐	☐
240.79	243.84	3.05	SLC	2.90	95	S048545	☐	N18-017	core		☐	☐	☑
243.84	246.89	3.05	SLC	2.94	96	S048546	☐	N18-017	core		☐	☐	☐
246.89	249.94	3.05	SLC	2.96	97	S048547	☐	N18-017	core		☐	☐	☐
249.94	252.98	3.04	SLC	2.87	94	S048548	☐	N18-017	core		☐	☐	☐
252.98	259.08	6.10	SLC	5.92	97	W233023	☐	N18-C01	Chip		☐	☐	☐
259.08	265.18	6.10	SLC	5.88	96	W233024	☐	N18-C01	Chip		☐	☐	☐
265.18	268.22	3.04	SLC	2.92	96	S048549	☐	N18-017	core		☐	☐	☐
268.22	271.27	3.05	SLC	2.90	95	S048550	☐	N18-017	core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
271.27	274.32	3.05	SLC	3.02	99	S048551	☐	N18-017	core		☐	☐	☐
274.32	277.37	3.05	SLC	3.05	100	S048552	☐	N18-017	core		☐	☐	☐
274.32	277.37	3.05	SLC	3.05	100	S048553	☐	N18-017	core		☐	☑	☐
277.37	280.42	3.05	SLC	3.00	98	S048554	☐	N18-017	core		☐	☐	☐
280.42	283.46	3.04	SLC	2.96	97	S048555	☐	N18-017	core		☐	☐	☐
283.46	286.51	3.05	SLC	3.02	99	S048556	☐	N18-017	core		☐	☐	☐
286.51	289.56	3.05	SLC	3.00	98	S048557	☐	N18-017	core		☐	☐	☐
289.56	292.61	3.05	SLC	3.04	100	S048558	☐	N18-017	core		☐	☐	☐
292.61	295.66	3.05	SLC	3.04	100	S048559	☐	N18-017	core		☐	☐	☐
295.66	298.70	3.04	SLC	3.04	100	S048560	☐	N18-017	core		☐	☐	☐
298.70	301.75	3.05	SLC	2.99	98	S048561	☐	N18-017	core		☐	☐	☐
301.75	303.28	1.53	SLC	1.52	99	S048562	☐	N18-017	core		☐	☐	☐
303.28	304.80	1.52	SLC	1.46	96	S048563	☐	N18-017	core		☐	☐	☐
304.80	306.32	1.52	SLC	1.48	97	S048564	☐	N18-017	core		☐	☐	☐
306.32	308.17	1.85	SLC	1.53	83	S048566	☐	N18-017	core		☐	☐	☐
308.17	310.90	2.73	SLC	2.64	97	S048568	☐	N18-017	core		☐	☐	☐
310.90	313.94	3.04	SLC	3.04	100	S048569	☐	N18-017	core		☐	☐	☐
313.94	316.99	3.05	SLC	3.02	99	S048570	☐	N18-017	core		☐	☐	☐
316.99	320.04	3.05	SLC	3.00	98	S048571	☐	N18-019	Core		☐	☐	☐
320.04	323.09	3.05	SLC	3.02	99	S048572	☐	N18-019	Core		☐	☐	☐
323.09	327.05	3.96	SLC	3.56	90	W233025	☐	N18-C01	Chip		☐	☐	☐
327.05	333.15	6.10	SLC	5.80	95	W233026	☐	N18-C01	Chip		☐	☐	☐
333.15	339.24	6.09	SLC	5.96	98	W233027	☐	N18-C01	Chip		☐	☐	☐
339.24	345.34	6.10	SLC	5.74	94	W233028	☐	N18-C01	Chip		☐	☐	☐
345.34	351.43	6.09	SLC	5.86	96	W233029	☐	N18-C01	Chip		☐	☐	☐
351.43	357.53	6.10	SLC	5.94	97	W233030	☐	N18-C01	Chip		☐	☐	☐
357.53	363.63	6.10	SLC	5.98	98	W233031	☐	N18-C01	Chip		☐	☐	☐
363.63	369.72	6.09	SLC	6.03	99	W233032	☐	N18-C01	Chip		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
369.72	375.82	6.10	SLC	6.10	100	W233033	☐	N18-C01	Chip		☐	☐	☐
375.82	381.91	6.09	SLC	5.92	97	W233034	☐	N18-C01	Chip		☐	☐	☐
381.91	388.01	6.10	SLC	5.96	98	W233035	☐	N18-C01	Chip		☐	☐	☐
388.01	394.11	6.10	SLC	5.75	94	W233036	☐	N18-C01	Chip		☐	☐	☐
394.11	400.20	6.09	SLC	5.84	96	W233037	☐	N18-C01	Chip		☐	☐	☐
400.20	406.30	6.10	SLC	6.04	99	W233038	☐	N18-C01	Chip		☐	☐	☐
406.30	412.39	6.09	SLC	5.83	96	W233039	☐	N18-C01	Chip		☐	☐	☐
412.39	418.49	6.10	SLC	5.99	98	W233040	☐	N18-C01	Chip		☐	☐	☐
418.49	424.59	6.10	SLC	6.00	98	W233041	☐	N18-C01	Chip		☐	☐	☐
421.54	424.59	3.05	SLC	3.02	99	R613212	☐	N18-066	Core		☐	☐	☐
424.59	427.63	3.04	SLC	2.74	90	R613213	☐	N18-066	Core		☐	☐	☐
424.59	430.68	6.09	SLC	5.68	93	W233042	☐	N18-C01	Chip		☐	☐	☐
427.63	430.68	3.05	SLC	2.94	96	R613214	☐	N18-066	Core		☐	☐	☐
430.68	433.73	3.05	SLC	2.83	93	R613215	☐	N18-066	Core		☐	☐	☐
430.68	436.78	6.10	SLC	5.63	92	W233043	☐	N18-C01	Chip		☐	☐	☐
433.73	436.78	3.05	SLC	2.80	92	R613216	☐	N18-066	Core		☐	☐	☐
436.78	439.83	3.05	SLC	3.05	100	S048573	☐	N18-019	Core		☐	☐	☐
439.83	442.87	3.04	SLC	2.68	88	S048574	☐	N18-019	Core		☐	☐	☐
442.87	445.92	3.05	SLC	2.85	93	S048575	☐	N18-019	Core		☐	☐	☐
445.92	448.97	3.05	SLC	3.00	98	S048576	☐	N18-019	Core		☐	☐	☐
448.97	452.02	3.05	SLC	3.04	100	S048578	☐	N18-019	Core		☐	☐	☐
452.02	455.07	3.05	SLC	2.96	97	S048579	☐	N18-019	Core		☐	☐	☐
455.07	458.11	3.04	SLC	3.00	99	S048580	☐	N18-019	Core		☐	☐	☐
458.11	461.16	3.05	SLC	2.70	89	S048581	☐	N18-019	Core		☐	☐	☐
461.16	464.21	3.05	SLC	2.85	93	S048582	☐	N18-019	Core		☐	☐	☐
464.21	467.26	3.05	SLC	2.92	96	S048583	☐	N18-019	Core		☐	☐	☐
467.26	470.31	3.05	SLC	2.93	96	S048584	☐	N18-019	Core		☐	☐	☐
470.31	473.35	3.04	SLC	2.62	86	S048585	☐	N18-019	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
473.35	475.00	1.65	SLC	1.60	97	S048586	☐	N18-019	Core		☐	☐	☐
475.00	477.06	2.06	SLC	1.80	87	S048587	☐	N18-019	Core		☐	☐	☐
477.06	479.07	2.01	SLC	1.71	85	S048588	☐	N18-019	Core		☐	☐	☐
479.07	480.75	1.68	SLC	1.65	98	S048589	☐	N18-019	Core		☐	☐	☐
480.75	482.10	1.35	SLC	1.34	99	S048590	☐	N18-019	Core		☐	☐	☐
480.75	482.10	1.35	SLC	1.34	99	S048591	☐	N18-019	Core		☐	☑	☐
482.10	483.49	1.39	SLC	1.34	96	S048592	☐	N18-019	Core		☐	☐	☐
483.49	484.86	1.37	SLC	1.29	94	S048593	☐	N18-019	Core		☐	☐	☐
484.86	486.33	1.47	SLC, LST	1.47	100	S048595	☐	N18-019	Core		☐	☐	☐
486.33	488.59	2.26	LST	2.17	96	S048596	☐	N18-019	Core		☐	☐	☐
488.59	491.64	3.05	LST	3.05	100	S048597	☐	N18-019	Core		☐	☐	☐
491.64	494.69	3.05	LST	3.05	100	S048598	☐	N18-019	Core		☐	☐	☐
494.69	497.74	3.05	LST	3.05	100	S048599	☐	N18-019	Core		☐	☐	☐
497.74	500.79	3.05	LST	3.05	100	S048600	☐	N18-019	Core		☐	☐	☐
500.79	503.83	3.04	LST	3.02	99	S048601	☐	N18-019	Core		☐	☐	☐
503.83	506.88	3.05	LST	2.99	98	S048602	☐	N18-019	Core		☐	☐	☐
506.88	509.93	3.05	LST	3.05	100	S048604	☐	N18-019	Core		☐	☐	☐
509.93	512.98	3.05	LST	3.05	100	S048605	☐	N18-019	Core		☐	☐	☐
512.98	516.03	3.05	LST	3.05	100	S048606	☐	N18-019	Core		☐	☐	☐
516.03	519.07	3.04	LST	3.04	100	S048607	☐	N18-019	Core		☐	☐	☐
519.07	522.12	3.05	LST	3.05	100	S048608	☐	N18-019	Core		☐	☐	☐
522.12	525.17	3.05	LST	2.99	98	S048609	☐	N18-019	Core		☐	☐	☐
522.12	525.17	3.05	LST	2.99	98	S048610	☐	N18-019	Core		☐	☐	☑
525.17	528.22	3.05	LST	2.99	98	S048611	☐	N18-021	Core		☐	☐	☐
528.22	531.27	3.05	LST	3.05	100	S048612	☐	N18-021	Core		☐	☐	☐
531.27	534.31	3.04	LST	3.04	100	S048613	☐	N18-021	Core		☐	☐	☐
534.31	537.36	3.05	LST	3.05	100	S048614	☐	N18-021	Core		☐	☐	☐
537.36	540.41	3.05	LST	3.00	98	S048615	☐	N18-021	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
540.41	543.46	3.05	LST	3.05	100	S048617	☐	N18-021	Core		☐	☐	☐
543.46	546.51	3.05	LST	3.04	100	S048618	☐	N18-021	Core		☐	☐	☐
546.51	549.55	3.04	LST	2.98	98	S048619	☐	N18-021	Core		☐	☐	☐
549.55	552.60	3.05	LST	2.99	98	S048620	☐	N18-021	Core		☐	☐	☐
552.60	555.65	3.05	LST	3.01	99	S048621	☐	N18-021	Core		☐	☐	☐
555.65	558.70	3.05	LST	2.94	96	S048622	☐	N18-021	Core		☐	☐	☐
558.70	561.75	3.05	LST	3.05	100	S048623	☐	N18-021	Core		☐	☐	☐
561.75	564.79	3.04	LST	3.04	100	S048624	☐	N18-021	Core		☐	☐	☐
561.75	564.79	3.04	LST	3.04	100	S048625	☐	N18-021	Core		☐	☐	☑
564.79	567.84	3.05	LST	3.05	100	S048626	☐	N18-021	Core		☐	☐	☐
567.84	570.89	3.05	LST	2.86	94	S048627	☐	N18-021	Core		☐	☐	☐
570.89	573.94	3.05	LST	2.86	94	S048628	☐	N18-021	Core		☐	☐	☐
573.94	576.99	3.05	LST	2.90	95	S048629	☐	N18-021	Core		☐	☐	☐
576.99	580.03	3.04	LST	2.45	81	S048630	☐	N18-021	Core		☐	☐	☐

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From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
0.00	4.85	4.85	OVB	--	No recovery 0-3.10m. OVB - lose, sub-angular to angular pebbles and rock fragments.							
4.85	135.94	131.09	FLR	MG	Fault zone, primarily composed of sheared, pyritic mudstone. Lesser sandstone and conglomerates. There are 3 significantly mineralized intervals within this fault zone: 47.55-67.15: rubbly, altered, gougy, pitted mudstone. pXRF results as high as 55ppm Au. 91.36-107.19: sheared, gougy, altered, siltstone with pXRF results varying from 0-10ppm Au. 120.60-135.94: altered, brecciated, gougy, rubbly, realgar mineralized siliciclatics (mudstone, sandstone, conglomerate). Realgar mainly found replacing quartz veins.							
						LT	GY	FR	CLY	5I	--	0
								RB				
								SH				

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
135.94	205.52	69.58	SLC	MG	Interval is largely composed of matrix to clast supported conglometrate, with lesser mudstone and sandstone intervals. Most significant intervals of mineralization are: 148.64-167.00: granule-through boulder conglomerate grading into a well sorted sandstone. Realgar heavily coats fracture and joint surfaces and replaces quartz-calcite veins. Realgar aprox 2-4% of interval. 167.00-176.10: Clast supported, granule-pebble conglomerate. Trace realgar primarily replacing quartz veins, along healed fractures and interstial to clasts. 176.10-179.84: Realgar mineralized turbidite sequences. Realgar found on fracture surfaces, infilling healed fractures, and replacing quartz veinlets. Most significant pXRF results are 400ppm Au at 178.89m and 78ppm Au at 178.73m. Realgar occupies aproximately 2-3% of interval. Most of the realgar is concentrated from 178.61-179.51m.							
						MD	GY					
						LT	GY					
205.52	207.32	1.80	INT	FG	light grey, fine grained, plagioclase and pyroxene phyric, massive gabroic dyke with trace biotite. 85-90% of rock is composed of a grey, fine grained groundmass which is inferered to be primarily composed of plagioclase. Groundmass is moderately sericitized. 1mm wide euhedral plagioclase laths are common. Rare euhedral 1mm wide pyroxene grains - some of which are partially chloritized. Chilled margin where the dyke comes into contact with the surrounding siliciclastics. Very fine grained grained at the chilled margin. Grain size increases slightly towards the centre of the dyke. Trace disseminated pyrite. Trace quartz veinlets. Trace mudstone xenoliths. Upper contact at 40 TCA, and lower contact at 45TCA							
								MA				
						LT	GY	PO	SER	3I	Py	1

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
207.32	213.66	6.34	MST	FG	light grey, soft sediment deformed, 1-4cm thick, fining upwards (from fine sand to mud) turbidite sequences. Laminations at 50 TCA. Trace quartz veinlets. Pyrite common laminated and disseminated. Rare flame structures							
213.66	215.32	1.66	INT	FG	same dyke as interval 205.52-207.32m, except trace fuchsite observed, and more abundant mudstone xenoliths present. Upper contact is 42TCA and lower contact is 45 TCA							
						LT	GY	MA	SER	3I	Py	2
								PO			Py	0.5
215.32	239.70	24.38	SLC	MG	Upper section of interval - light to medium gray, poorly sorted, matrix supported, granule-through-boulder conglomerate. Lower section of interval - medium to dark grey, thinly laminated, soft sediment deformed, pyritic mudstone.							
								SD				
						LT	GY	BD	---	--	Py	2
								MA			Py	2
						MD	GY	DB			Py	2
239.70	244.01	4.31	LST	FG	light to medium grey, fine to medium grained, chaotically veined limestone. Calcite veining is chaotic, moderate, and varying from 45-90TCA, . Intermittent bedding at 45TCA. Common black, soft coating on joint surfaces - remobilized carbon? Seams of the same black mineral common varying from 1-10mm thick. 10cm thick calcite/dolomite vein at 241.61m at 40 TCA. Limestone reacts strongly to HCl.							
						MD	GY					
						LT	GY	BD	---	--	--	0

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
244.01	245.67	1.66	INT	FG	light grey, fine grained, massive, plag-phyric gabbro dyke. Plagioclase phenocrysts are 1-2mm wide. Groundmass inferred to be mainly composed of plagioclase as well. Moderately sericitized. Trace fuchsite. Trace quartz veinlets 45-90 TCA. Upper contact is 45TCA, lower contact is undulating. Chilled margin where the dyke comes into contact with the surrounding siliciclastics. Very fine grained grained at the chilled margin. Grain size increases slightly towards the centre of the dyke. Trace disseminated pyrite.							
245.67	249.53	3.86	LST	FG	light to medium grey, fine to medium grained, chaotically veined limestone. Calcite veining is chaotic and moderate. Intermittent bedding at 40TCA. Common black, soft coating on joint surfaces - remobilized carbon? Seams of the same black mineral common varying from 1-10mm thick. Minor, 1mm thin stylolites along bedding planes							
249.53	249.67	0.14	INT	FG	light grey, fine grained, massive, plag-phyric gabbro dyke. Plagioclase phenocrysts are 1-2mm wide. Groundmass inferred to be mainly composed of plagioclase as well. Moderately sericitized. Trace fuchsite. Trace quartz veinlets. Chilled margin where the dyke comes into contact with the surrounding siliciclastics. Very fine grained grained at the chilled margin. Grain size increases slightly towards the centre of the dyke. Trace disseminated pyrite.							
249.67	250.60	0.93	LST	FG	light to medium grey, fine to medium grained, chaotically veined limestone. Calcite veining is chaotic and moderate. Common black, soft coating on joint surfaces - remobilized carbon? Seams of the same black mineral common varying from 1-10mm thick.							

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
250.60	251.35	0.75	INT	FG	light grey, fine grained, massive, plag-phyric gabbro dyke. Plagioclase phenocrysts are 1-2mm wide. Groundmass inferred to be mainly composed of plagioclase as well. Moderately sericitized. Trace fuchsite. Trace quartz veinlets. Chilled margin where the dyke comes into contact with the surrounding siliciclastics. Very fine grained grained at the chilled margin. Grain size increases slightly towards the centre of the dyke. Trace disseminated pyrite.							
251.35	264.42	13.07	LST	FG	light to medium grey, fine to medium grained, chaotically veined limestone. Calcite veining is chaotic and moderate. Intermittent bedding at 50TCA. Common black, soft coating on joint surfaces - remobilized carbon? Seams of the same black mineral common varying from 1-10mm thick. Minor, 1mm thin stylolites along bedding planes							
264.42	264.77	0.35	INT	FG	light grey, fine grained, massive, plag-phyric gabbro dyke. Plagioclase phenocrysts are 1-2mm wide. Groundmass inferred to be mainly composed of plagioclase as well. Moderately sericitized. Trace fuchsite. Trace quartz veinlets. Chilled margin where the dyke comes into contact with the surrounding siliciclastics. Very fine grained grained at the chilled margin. Grain size increases slightly towards the centre of the dyke. Trace disseminated pyrite.							
264.77	265.49	0.72	LST	FG	light to medium grey, fine to medium grained, chaotically veined limestone. Calcite veining is chaotic and moderate. Intermittent bedding at 40TCA. Common black, soft coating on joint surfaces - remobilized carbon? Seams of the same black mineral common varying from 1-10mm thick.							

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
265.49	265.67	0.18	INT	FG	light grey, fine grained, massive, plag-phyric gabbro dyke. Plagioclase phenocrysts are 1-2mm wide. Groundmass inferred to be mainly composed of plagioclase as well. Moderately sericitized. Trace fuchsite. Trace quartz veinlets. Chilled margin where the dyke comes into contact with the surrounding siliciclastics. Very fine grained grained at the chilled margin. Grain size increases slightly towards the centre of the dyke. Trace disseminated pyrite.							
265.67	268.00	2.33	LST	FG	light to medium grey, fine to medium grained, chaotically veined limestone. Calcite veining is chaotic and moderate. Intermittent bedding at 40TCA. Common black, soft coating on joint surfaces - remobilized carbon? Seams of the same black mineral common varying from 1-10mm thick. Minor, 1mm thin stylolites along bedding planes. Sporadic vuggy porosity, infilled with euhedral calcite crystals							
268.00	269.65	1.65	INT	FG	light grey, fine grained, massive, plag-phyric gabbro dyke. Plagioclase phenocrysts are 1-2mm wide. Groundmass inferred to be mainly composed of plagioclase as well. Moderately sericitized. Trace fuchsite. Trace quartz veinlets. Chilled margin where the dyke comes into contact with the surrounding siliciclastics. Very fine grained grained at the chilled margin. Grain size increases slightly towards the centre of the dyke. Trace disseminated pyrite. About 5-10% of the interval is composed of sporadic limestone clasts							
269.65	321.87	52.22	LST	FG	light to medium grey, fine to medium grained, chaotically veined limestone. Calcite veining is chaotic and moderate. Intermittent bedding at 40-50TCA. Common black, soft coating on joint surfaces - remobilized carbon? Seams of the same black mineral common varying from 1-10mm thick. Minor, 1mm thin stylolites along bedding planes. Realgar coated fracture at 285.50m. Sporadic vuggy porosity, infilled with euhedral calcite crystals							

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
0.00	3.10	3.10	0	0	0.00	0	--	--	--	TOH - no recovery.
3.10	3.35	0.25	0.2	80	0.00	0	0R	4H	3W	OVB with organic material.
3.35	6.40	3.05	1.24	41	0.10	3	0R	2H	5W	RBZ
6.40	9.45	3.05	1.1	36	0.18	6	0R	1H	4W	RBZ
9.45	12.50	3.05	1.93	63	0.44	14	0R	3H	5W	RBZ
12.50	15.55	3.05	2.24	73	0.35	11	0R	2H	5W	RBZ, strong oxidation.
15.55	18.59	3.04	2.19	72	0.00	0	0R	3H	4W	Strong oxidation on fractured surfaces.
18.59	21.64	3.05	2.36	77	0.45	15	0R	3H	5W	RBZ, strong oxidation on fractured surfaces.
21.64	23.16	1.52	1.02	67	0.13	9	0R	3H	5W	RBZ, strong oxidation.
23.16	24.69	1.53	0.8	52	0.14	9	0R	3H	5W	
24.69	26.21	1.52	0.42	28	0.00	0	0R	2H	5W	
26.21	27.74	1.53	0.68	44	0.35	23	0R	2H	5W	
27.74	30.78	3.04	2.17	71	0.28	9	0R	2H	5W	6W from 30.35-30.55m. Moderate oxidation.
30.78	33.83	3.05	2.37	78	0.70	23	0R	3H	5W	
33.83	36.88	3.05	2.78	91	0.44	14	0R	3H	4W	
36.88	39.93	3.05	1.44	47	0.28	9	0R	3H	3W	
39.93	42.98	3.05	1.58	52	0.10	3	0R	3H	2W	
42.98	44.50	1.52	1.44	95	0.65	43	0R	3H	1W	
44.50	46.02	1.52	0.75	49	0.00	0	0R	3H	1W	
46.02	47.55	1.53	0.06	4	0.00	0	0R	3H	1W	Redrill, not to be sampled.
47.55	49.07	1.52	0.16	11	0.00	0	0R	1H	1W	Drill cave/redrill.
49.07	50.60	1.53	0.44	29	0.00	0	0R	2H	1W	
50.60	52.12	1.52	0.72	47	0.00	0	0R	2H	1W	Rubbly, gougey.
52.12	53.64	1.52	1.16	76	0.32	21	0R	3H	1W	
53.64	55.17	1.53	1.07	70	0.25	16	0R	3H	1W	
55.17	56.69	1.52	1.24	82	0.22	14	0R	3H	1W	
56.69	58.22	1.53	1.16	76	0.10	7	0R	3H	1W	
58.22	59.74	1.52	1.08	71	0.00	0	0R	2H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
59.74	61.26	1.52	0.73	48	0.00	0	0R	2H	1W	Very rubbly interval
61.26	62.79	1.53	0.66	43	0.00	0	0R	2H	1W	Moderately gougey, highly rubbly.
62.79	64.31	1.52	1.05	69	0.00	0	1R	2H	1W	Moderately gougey.
64.31	65.84	1.53	0.91	59	0.00	0	1R	3H	1W	Highly rubbly.
65.84	68.88	3.04	1.16	38	0.00	0	2R	3H	1W	
68.88	71.93	3.05	2.38	78	0.11	4	1R	3H	1W	
71.93	74.98	3.05	2.55	84	0.60	20	0R	3H	1W	
74.98	78.03	3.05	2.4	79	0.65	21	0R	3H	1W	
78.03	81.08	3.05	3.04	100	2.69	88	0R	3H	1W	
81.08	84.12	3.04	2.83	93	1.64	54	0R	2H	1W	
84.12	87.17	3.05	3.05	100	2.14	70	0R	3H	1W	
87.17	90.22	3.05	2.99	98	2.67	88	0R	3H	1W	
90.22	93.27	3.05	2.87	94	1.66	54	0R	3H	1W	
93.27	96.32	3.05	3.04	100	1.85	61	0R	1H	1W	rbz
96.32	99.36	3.04	2.9	95	1.17	38	0R	2H	1W	rbz
99.36	102.41	3.05	3.04	100	1.93	63	0R	3H	1W	
102.41	105.46	3.05	3.04	100	1.53	50	0R	1H	1W	
105.46	108.51	3.05	3.02	99	2.20	72	0R	3H	1W	
108.51	111.56	3.05	3.04	100	2.19	72	0R	4H	1W	
111.56	114.60	3.04	3.04	100	1.99	65	0R	1H	1W	rbz
114.60	117.65	3.05	3.04	100	2.39	78	0R	3H	1W	small rbz
117.65	120.70	3.05	2.97	97	2.73	90	0R	5H	1W	
120.70	123.75	3.05	2.76	90	0.47	15	0R	2H	1W	rbz
123.75	126.80	3.05	3.02	99	1.74	57	0R	2H	1W	small rbz
126.80	129.84	3.04	3	99	1.66	55	0R	3H	1W	
129.84	132.89	3.05	3.02	99	2.52	83	0R	3H	1W	
132.89	135.94	3.05	3.01	99	2.90	95	0R	4H	1W	
135.94	138.99	3.05	3	98	2.86	94	0R	4H	1W	
138.99	142.04	3.05	3.04	100	2.93	96	0R	3H	1W	
142.04	145.08	3.04	2.92	96	2.25	74	0R	3H	1W	
145.08	148.13	3.05	3.04	100	2.70	89	0R	3H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
148.13	151.18	3.05	2.73	90	1.91	63	0R	3H	1W	
151.18	154.23	3.05	3.01	99	2.63	86	0R	4H	1W	
154.23	157.28	3.05	3.04	100	2.06	68	0R	3H	1W	
157.28	160.32	3.04	2.75	90	2.26	74	0R	3H	1W	
160.32	163.37	3.05	3.04	100	2.91	95	0R	3H	1W	Small RBZ
163.37	166.42	3.05	2.93	96	2.74	90	0R	3H	1W	
166.42	169.47	3.05	3.04	100	1.99	65	0R	2H	1W	Small RBZ
169.47	172.52	3.05	2.9	95	1.45	48	0R	3H	1W	RBZ
172.52	175.56	3.04	2.1	69	1.07	35	0R	3H	1W	RBZ
175.56	178.61	3.05	2.87	94	2.32	76	0R	3H	1W	
178.61	181.66	3.05	3.04	100	1.77	58	0R	4H	1W	
181.66	184.71	3.05	3.04	100	2.79	91	0R	3H	1W	
184.71	187.76	3.05	3.04	100	2.88	94	0R	3H	1W	
187.76	190.80	3.04	3.04	100	2.90	95	0R	3H	1W	
190.80	193.85	3.05	2.91	95	2.78	91	0R	3H	1W	
193.85	196.90	3.05	2.88	94	1.98	65	0R	4H	1W	Joint set has trace massive realgar on joint surfaces.
196.90	199.95	3.05	3	98	2.66	87	0R	3H	1W	
199.95	203.00	3.05	3.03	99	2.64	87	0R	4H	1W	
203.00	206.04	3.04	2.91	96	1.99	65	0R	4H	1W	
206.04	209.09	3.05	2.95	97	2.24	73	0R	4H	1W	
209.09	212.14	3.05	3.05	100	2.91	95	0R	3H	1W	
212.14	215.19	3.05	2.88	94	2.58	85	0R	4H	1W	
215.19	218.24	3.05	2.98	98	2.39	78	0R	3H	1W	
218.24	221.28	3.04	2.96	97	2.88	95	0R	3H	1W	
221.28	224.33	3.05	2.98	98	2.95	97	0R	3H	1W	
224.33	227.38	3.05	2.77	91	1.68	55	0R	3H	1W	Reduction to NQ at 225.25m
227.38	230.43	3.05	3	98	2.36	77	0R	3H	1W	
230.43	233.48	3.05	2.9	95	2.57	84	0R	3H	1W	
233.48	236.52	3.04	3.04	100	2.57	85	0R	3H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
236.52	239.57	3.05	2.89	95	2.29	75	0R	3H	1W	Weak to moderately sheared. 15cm of weakly gougey zone from 238.90-239.02m.
239.57	242.62	3.05	3.01	99	2.18	71	3R	3H	1W	Contact between silisiclastic and limestone at 239.70m. Remobilized carbon common along fracture surfaces.
242.62	245.67	3.05	2.78	91	2.05	67	2R	4H	1W	Reactivity lesser due to presence of hihgly altered gabbro dike. Multiple joints with no set.
245.67	248.72	3.05	2.79	91	1.97	65	3R	3H	1W	
248.72	251.76	3.04	2.97	98	2.26	74	3R	3H	1W	
251.76	254.81	3.05	2.89	95	2.07	68	3R	4H	1W	Small moderately gougey zone and multiple single joints.
254.81	257.86	3.05	2.92	96	2.06	68	4R	3H	1W	Highly fracturted interval from 257-257.86m.
257.86	260.91	3.05	2.94	96	2.52	83	3R	3H	1W	
260.91	263.96	3.05	2.93	96	2.18	71	3R	3H	1W	
263.96	267.00	3.04	2.93	96	2.47	81	2R	3H	1W	
267.00	270.05	3.05	2.9	95	2.07	68	2R	3H	1W	Lesser reactivity due to presence of highly altered gabbro dike.
270.05	273.10	3.05	2.92	96	2.63	86	3R	3H	1W	
273.10	276.15	3.05	3.02	99	2.51	82	3R	3H	1W	
276.15	279.20	3.05	2.78	91	1.67	55	4R	3H	1W	
279.20	282.24	3.04	2.92	96	2.42	80	3R	3H	1W	
282.24	285.29	3.05	2.85	93	2.56	84	3R	4H	1W	Multiple single joints.
285.29	288.34	3.05	2.79	91	1.74	57	3R	4H	1W	Remobilized carbon common on fractured surfaces.
288.34	291.39	3.05	2.81	92	2.12	70	3R	3H	1W	Highly fractured zone from 288.54-289.10m.
291.39	294.44	3.05	3	98	2.14	70	3R	3H	1W	
294.44	297.48	3.04	3.03	100	2.99	98	3R	3H	1W	
297.48	300.53	3.05	3.04	100	2.84	93	3R	3H	1W	
300.53	303.58	3.05	3	98	2.54	83	3R	3H	1W	
303.58	306.63	3.05	3.04	100	2.84	93	3R	3H	1W	
306.63	309.68	3.05	3.01	99	2.56	84	3R	3H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
309.68	312.72	3.04	3.04	100	3.04	100	3R	3H	1W	
312.72	315.77	3.05	2.99	98	2.99	98	3R	3H	1W	
315.77	318.82	3.05	3.04	100	2.88	94	4R	3H	1W	
318.82	321.87	3.05	3.03	99	2.97	97	3R	3H	1W	

OS -18-266

Nadaleen
Conrad Zone

Archer,Cathro & Associates (1981) Limited

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
0.00	0.00	0.00	-QC-	0.00	0	s050016	☐	N18-023	core	CS9	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	s049912	☐	N18-020	Core	CS3	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	s050030	☐	N18-024	core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	s050012	☐	N18-023	core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	s049994	☐	N18-023	core	CS10	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	s049976	☐	N18-022	Core	CS8	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	s049952	☐	N18-022	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	s049949	☐	N18-022	Core	CS7	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	s049931	☐	N18-020	Core	CS12	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	s049918	☐	N18-020	Core		☑	☐	☐
3.10	6.40	3.30	OVB	1.44	44	s049889	☐	N18-018	Core		☐	☐	☐
6.40	9.45	3.05	FLR	1.10	36	s049890	☐	N18-018	Core		☐	☐	☐
9.45	12.50	3.05	FLR	1.93	63	s049891	☐	N18-018	Core		☐	☐	☐
12.50	15.55	3.05	FLR	2.24	73	s049892	☐	N18-018	Core		☐	☐	☐
15.55	18.59	3.04	FLR	2.19	72	s049893	☐	N18-018	Core		☐	☐	☐
15.55	18.59	3.04	FLR	2.19	72	s049894	☐	N18-018	Core		☐	☑	☐
18.59	21.64	3.05	FLR	2.36	77	s049895	☐	N18-018	Core		☐	☐	☐
21.64	24.69	3.05	FLR	1.82	60	s049896	☐	N18-018	Core		☐	☐	☐
21.64	24.69	3.05	FLR	1.82	60	s049897	☐	N18-018	Core		☐	☐	☑
24.69	27.74	3.05	FLR	1.10	36	s049898	☐	N18-018	Core		☐	☐	☐
27.74	30.78	3.04	FLR	2.17	71	s049899	☐	N18-018	Core		☐	☐	☐
30.78	33.83	3.05	FLR	2.37	78	s049900	☐	N18-018	Core		☐	☐	☐
33.83	36.88	3.05	FLR	2.78	91	s049901	☐	N18-020	Core		☐	☐	☐
36.88	39.93	3.05	FLR	1.44	47	s049902	☐	N18-020	Core		☐	☐	☐
39.93	42.98	3.05	FLR	1.58	52	s049903	☐	N18-020	Core		☐	☐	☐
42.98	44.50	1.52	FLR	1.44	95	s049904	☐	N18-020	Core		☐	☐	☐
44.50	46.02	1.52	FLR	0.75	49	s049905	☐	N18-020	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
49.07	50.60	1.53	FLR	0.44	29	s049906	☐	N18-020	Core		☐	☐	☐
50.60	52.12	1.52	FLR	0.72	47	s049907	☐	N18-020	Core		☐	☐	☐
52.12	53.64	1.52	FLR	1.16	76	s049908	☐	N18-020	Core		☐	☐	☐
53.64	55.17	1.53	FLR	1.07	70	s049909	☐	N18-020	Core		☐	☐	☐
55.17	56.69	1.52	FLR	1.24	82	s049910	☐	N18-020	Core		☐	☐	☐
56.69	58.22	1.53	FLR	1.16	76	s049911	☐	N18-020	Core		☐	☐	☐
58.22	59.74	1.52	FLR	1.08	71	s049913	☐	N18-020	Core		☐	☐	☐
59.74	61.26	1.52	FLR	0.73	48	s049914	☐	N18-020	Core		☐	☐	☐
59.74	61.26	1.52	FLR	0.73	48	s049915	☐	N18-020	Core		☐	☑	☐
61.26	62.79	1.53	FLR	0.66	43	s049916	☐	N18-020	Core		☐	☐	☐
62.79	64.31	1.52	FLR	1.05	69	s049917	☐	N18-020	Core		☐	☐	☐
64.31	65.84	1.53	FLR	0.91	59	s049919	☐	N18-020	Core		☐	☐	☐
65.84	68.88	3.04	FLR	1.16	38	s049920	☐	N18-020	Core		☐	☐	☐
68.88	71.93	3.05	FLR	2.38	78	s049921	☐	N18-020	Core		☐	☐	☐
71.93	74.98	3.05	FLR	2.55	84	s049922	☐	N18-020	Core		☐	☐	☐
74.98	78.03	3.05	FLR	2.40	79	s049923	☐	N18-020	Core		☐	☐	☐
78.03	81.08	3.05	FLR	3.04	100	s049924	☐	N18-020	Core		☐	☐	☐
81.08	84.12	3.04	FLR	2.83	93	s049925	☐	N18-020	Core		☐	☐	☐
84.12	87.17	3.05	FLR	3.05	100	s049926	☐	N18-020	Core		☐	☐	☐
87.17	90.22	3.05	FLR	2.99	98	s049927	☐	N18-020	Core		☐	☐	☐
90.22	93.27	3.05	FLR	2.87	94	s049928	☐	N18-020	Core		☐	☐	☐
93.27	94.79	1.52	FLR	1.52	100	s049929	☐	N18-020	Core		☐	☐	☐
94.79	96.32	1.53	FLR	1.52	99	s049930	☐	N18-020	Core		☐	☐	☐
96.32	97.84	1.52	FLR	1.52	100	s049932	☐	N18-020	Core		☐	☐	☐
97.84	100.89	3.05	FLR	3.04	100	s049933	☐	N18-020	Core		☐	☐	☐
100.89	103.94	3.05	FLR	3.04	100	s049934	☐	N18-020	Core		☐	☐	☐
103.94	106.98	3.04	FLR	3.04	100	s049935	☐	N18-020	Core		☐	☐	☐
106.98	110.03	3.05	FLR	3.04	100	s049936	☐	N18-020	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
106.98	110.03	3.05	FLR	3.04	100	s049937	☐	N18-020	Core		☐	☐	☑
110.03	113.08	3.05	FLR	3.04	100	s049938	☐	N18-020	Core		☐	☐	☐
113.08	116.13	3.05	FLR	3.04	100	s049939	☐	N18-020	Core		☐	☐	☐
116.13	119.18	3.05	FLR	3.04	100	s049940	☐	N18-020	Core		☐	☐	☐
119.18	120.60	1.42	FLR	1.41	99	s049941	☐	N18-022	Core		☐	☐	☐
120.60	122.22	1.62	FLR	1.52	94	s049942	☐	N18-022	Core		☐	☐	☐
122.22	123.75	1.53	FLR	1.37	90	s049943	☐	N18-022	Core		☐	☐	☐
123.75	125.27	1.52	FLR	1.52	100	s049944	☐	N18-022	Core		☐	☐	☐
125.27	126.62	1.35	FLR	1.33	99	s049945	☐	N18-022	Core		☐	☐	☐
126.62	127.90	1.28	FLR	1.09	85	s049946	☐	N18-022	Core		☐	☐	☐
127.90	129.84	1.94	FLR	1.94	100	s049947	☐	N18-022	Core		☐	☐	☐
129.84	132.05	2.21	FLR	2.04	92	s049948	☐	N18-022	Core		☐	☐	☐
132.05	134.00	1.95	FLR	1.81	93	s049950	☐	N18-022	Core		☐	☐	☐
134.00	135.61	1.61	FLR	1.61	100	s049951	☐	N18-022	Core		☐	☐	☐
135.61	138.99	3.38	FLR	3.10	92	s049953	☐	N18-022	Core		☐	☐	☐
138.99	142.04	3.05	SLC	3.04	100	s049954	☐	N18-022	Core		☐	☐	☐
142.04	145.08	3.04	SLC	2.92	96	s049955	☐	N18-022	Core		☐	☐	☐
145.08	146.61	1.53	SLC	1.45	95	s049956	☐	N18-022	Core		☐	☐	☐
146.61	148.64	2.03	SLC	2.03	100	s049957	☐	N18-022	Core		☐	☐	☐
148.64	150.77	2.13	SLC	1.79	84	s049958	☐	N18-022	Core		☐	☐	☐
150.77	153.44	2.67	SLC	2.65	99	s049959	☐	N18-022	Core		☐	☐	☐
153.44	155.05	1.61	SLC	1.61	100	s049960	☐	N18-022	Core		☐	☐	☐
155.05	156.18	1.13	SLC	1.00	88	s049961	☐	N18-022	Core		☐	☐	☐
156.18	157.75	1.57	SLC	1.49	95	s049962	☐	N18-022	Core		☐	☐	☐
156.18	157.75	1.57	SLC	1.49	95	s049963	☐	N18-022	Core		☐	☑	☐
157.75	159.40	1.65	SLC	1.58	96	s049964	☐	N18-022	Core		☐	☐	☐
159.40	162.00	2.60	SLC	2.60	100	s049965	☐	N18-022	Core		☐	☐	☐
162.00	164.07	2.07	SLC	1.78	86	s049966	☐	N18-022	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
164.07	167.00	2.93	SLC	2.66	91	s049967	☐	N18-022	Core		☐	☐	☐
167.00	168.38	1.38	SLC	1.27	92	s049968	☐	N18-022	Core		☐	☐	☐
168.38	169.94	1.56	SLC	1.49	96	s049969	☐	N18-022	Core		☐	☐	☐
169.94	171.38	1.44	SLC	1.27	88	s049970	☐	N18-022	Core		☐	☐	☐
171.38	174.29	2.91	SLC	1.49	51	s049971	☐	N18-022	Core		☐	☐	☐
174.29	176.10	1.81	SLC	1.41	78	s049972	☐	N18-022	Core		☐	☐	☐
176.10	178.61	2.51	SLC	2.22	88	s049973	☐	N18-022	Core		☐	☐	☐
176.10	178.61	2.51	SLC	2.22	88	s049974	☐	N18-022	Core		☐	☐	☑
178.61	179.53	0.92	SLC	0.86	93	s049975	☐	N18-022	Core		☐	☐	☐
179.53	181.66	2.13	SLC	2.02	95	s049977	☐	N18-022	Core		☐	☐	☐
181.66	184.71	3.05	SLC	3.04	100	s049978	☐	N18-022	Core		☐	☐	☐
184.71	187.76	3.05	SLC	3.04	100	s049979	☐	N18-022	Core		☐	☐	☐
187.76	190.80	3.04	SLC	3.04	100	s049980	☐	N18-022	Core		☐	☐	☐
190.80	193.85	3.05	SLC	2.91	95	s049981	☐	N18-023	core		☐	☐	☐
193.85	196.90	3.05	SLC	2.88	94	s049982	☐	N18-023	core		☐	☐	☐
196.90	199.95	3.05	SLC	3.00	98	s049983	☐	N18-023	core		☐	☐	☐
199.95	203.00	3.05	SLC	3.03	99	s049984	☐	N18-023	core		☐	☐	☐
203.00	205.52	2.52	SLC	2.40	95	s049985	☐	N18-023	core		☐	☐	☐
205.52	207.32	1.80	INT, SLC	1.77	98	s049986	☐	N18-023	core		☐	☐	☐
207.32	209.09	1.77	INT, MST	1.73	98	s049987	☐	N18-023	core		☐	☐	☐
209.09	212.14	3.05	MST	3.05	100	s049988	☐	N18-023	core		☐	☐	☐
212.14	213.66	1.52	MST	1.37	90	s049989	☐	N18-023	core		☐	☐	☐
213.66	215.32	1.66	MST, INT	1.63	98	s049990	☐	N18-023	core		☐	☐	☐
215.32	218.24	2.92	SLC, INT	2.92	100	s049991	☐	N18-023	core		☐	☐	☐
218.24	221.28	3.04	SLC	2.96	97	s049992	☐	N18-023	core		☐	☐	☐
221.28	224.33	3.05	SLC	2.98	98	s049993	☐	N18-023	core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
224.33	227.38	3.05	SLC	2.77	91	s049995	☐	N18-023	core		☐	☐	☐
227.38	230.43	3.05	SLC	3.00	98	s049996	☐	N18-023	core		☐	☐	☐
230.43	233.48	3.05	SLC	2.90	95	s049997	☐	N18-023	core		☐	☐	☐
230.43	233.48	3.05	SLC	2.90	95	s049998	☐	N18-023	core		☐	☑	☐
233.48	236.52	3.04	SLC	3.04	100	s049999	☐	N18-023	core		☐	☐	☐
236.52	238.00	1.48	SLC	1.48	100	s050000	☐	N18-023	core		☐	☐	☐
238.00	239.70	1.70	SLC	1.61	95	s050001	☐	N18-023	core		☐	☐	☐
239.70	242.62	2.92	SLC, LST	2.92	100	s050002	☐	N18-023	core		☐	☐	☐
242.62	244.01	1.39	LST	1.39	100	s050003	☐	N18-023	core		☐	☐	☐
244.01	245.67	1.66	INT, LST	1.52	92	s050004	☐	N18-023	core		☐	☐	☐
244.01	245.67	1.66	INT, LST	1.52	92	s050005	☐	N18-023	core		☐	☐	☑
245.67	248.72	3.05	INT, LST	2.79	91	s050006	☐	N18-023	core		☐	☐	☐
248.72	250.60	1.88	LST	1.88	100	s050007	☐	N18-023	core		☐	☐	☐
250.60	251.35	0.75	INT, LST	0.75	100	s050008	☐	N18-023	core		☐	☐	☐
251.35	254.35	3.00	INT, LST	2.92	97	s050009	☐	N18-023	core		☐	☐	☐
254.35	257.35	3.00	LST	3.00	100	s050010	☐	N18-023	core		☐	☐	☐
257.35	260.35	3.00	LST	3.00	100	s050011	☐	N18-023	core		☐	☐	☐
260.35	262.42	2.07	LST	1.99	96	s050013	☐	N18-023	core		☐	☐	☐
262.42	264.42	2.00	LST	1.85	93	s050014	☐	N18-023	core		☐	☐	☐
264.42	265.67	1.25	LST, INT	1.25	100	s050015	☐	N18-023	core		☐	☐	☐
265.67	268.00	2.33	LST, INT	2.01	86	s050017	☐	N18-023	core		☐	☐	☐
268.00	269.65	1.65	INT, LST	1.65	100	s050018	☐	N18-023	core		☐	☐	☐
269.65	271.30	1.65	LST, INT	1.48	90	s050019	☐	N18-023	core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
271.30	273.10	1.80	LST	1.80	100	s050020	☐	N18-023	core		☐	☐	☐
273.10	276.15	3.05	LST	3.02	99	s050021	☐	N18-024	core		☐	☐	☐
276.15	279.20	3.05	LST	2.78	91	s050022	☐	N18-024	core		☐	☐	☐
279.20	282.24	3.04	LST	2.92	96	s050023	☐	N18-024	core		☐	☐	☐
282.24	285.29	3.05	LST	2.85	93	s050024	☐	N18-024	core		☐	☐	☐
285.29	288.34	3.05	LST	2.79	91	s050025	☐	N18-024	core		☐	☐	☐
288.34	291.39	3.05	LST	2.81	92	s050026	☐	N18-024	core		☐	☐	☐
291.39	294.44	3.05	LST	3.00	98	s050027	☐	N18-024	core		☐	☐	☐
294.44	297.48	3.04	LST	3.03	100	s050028	☐	N18-024	core		☐	☐	☐
297.48	300.53	3.05	LST	3.04	100	s050029	☐	N18-024	core		☐	☐	☐
300.53	303.58	3.05	LST	3.00	98	s050031	☐	N18-024	core		☐	☐	☐
303.58	306.63	3.05	LST	3.04	100	s050032	☐	N18-024	core		☐	☐	☐
306.63	309.68	3.05	LST	3.01	99	s050033	☐	N18-024	core		☐	☐	☐
309.68	312.72	3.04	LST	3.04	100	s050034	☐	N18-024	core		☐	☐	☐
312.72	315.77	3.05	LST	2.99	98	s050035	☐	N18-024	core		☐	☐	☐
315.77	318.82	3.05	LST	3.04	100	s050036	☐	N18-024	core		☐	☐	☐
318.82	321.87	3.05	LST	3.03	99	s050037	☐	N18-024	core		☐	☐	☐

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From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
0.00	8.65	8.65	OVB	--	No recovery from 0 to 5.79m. Overburden from 0 to 8.65m.							
						MD	BN					
						LT	OR					
						LT	GY	RB	OXI	4I	--	0
8.65	21.83	13.18	MST	VF	Very fine grained, light grey-green, well laminated, weakly dolomitized (?) mudstone with strong, near surface, oxidation, thin medium grey laminations of silty mudstone and local, 1-5cm thick light grey dolostone layers. Bedding within mudstone is planar parallel between 10 and 45 degrees tca. Where present layers of massive, fractured/crackle breccia dolostone are parallel with sharp contacts to mudstone beds. Thin, black, planar veinlets of fine dolomite (?) are weakly present throughout, becoming more abundant at lower contact. Near surface oxidation is strong to locally intense within interval. Intense oxidation is present within rubbly/gougey zones along fracture surfaces and within fine clays. Mudstones are weakly to moderately dolomitized (reacts when powdered, also slightly harder then surrounding mudstone) towards lower contact with dolostone. Trace, fine realgar on fractured surfaces in dolostone layers near lower contact.							
						LT	GY	CR	OXI	4I	Re	0.1
						LT	GN	BD	DOL	2I		
						MD	GY	BN				
								RB				

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
21.83	36.19	14.36	DST	FG	Fine grained, light to medium grey, intensely (crackle) brecciated dolostone with localized oxidation, trace realgar near upper and lower contacts and very fine grained, light green laminated mudstone near lower contact. Crackle breccia consists of angular dolostone clasts 1-3cm wide. Clasts are surrounded by thin, black seams of very fine grained dolomite and local, small blebs of fine grained pyrite. Local, quartz/dolomite veins and breccia fill present throughout. Interval is strongly oxidized from 22.37 to 22.85 and 24.08 to 25.75m along with rubbly rock and gouge zones. Interval is moderately silicified throughout. Trace realgar, orpiment and arsenic oxide are present on fracture surfaces as fine, patchy growths. (Is this an intensely dolomizied bed of limestone? Local, heavily altered primary bedding structure noted).							
									ASO	1I		
						LT	GY	CR	OXI	2I	Om	0.05
									DOL	5I	Py	3
						MD	GY	BX	SIL	3I	Re	0.2
36.19	371.23	335.04	SLC	FG	Light grey-green to dark grey, poorly to well bedded, very fine to fine grained, interbedded siltstones, mudstones and sandstone with local beds of light grey, dolomicitic sandstone, dark to medium grey, medium (to locally coarse) grained lithic arenite and matrix-supported, quartz granule and lithic cobble conglomerate. Local, strong to intense shearing present (71.50 to 106m) as gouge/rubble zones and discrete, clay/rock fragment filled breccias. Shearing between 71.50 and 106m is associated with realgar, orpiment, Au mineralization (up to 312ppm Au - XRF) and local moderately to intensely pitted, black rock. Trace, thin, white quartz veinlets and black dolomite veinlets cross cut bedding. Quartz veining is locally moderate up hole from fault (at 71.50m). Realgar and trace arsenic oxidation or present throughout, along fracture surfaces within rubbly zones. Lower contact with limestone is sheared and brittlely deformed. Near lower contact, around 365.0 to 371.0m compotent blocks of dolostone or dolomitized limestone are hosted within sheared fine grained siliciclastics.							
						LT	GY	BD	ASO	1I	Py	1

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
						MD	GY	BX	DOL	1I	Re	0.15
						DK	GY	SD	ARG	2I	Om	0.1
						LT	GN	RB				
371.23	564.49	193.26	LST	FG	Locally sheared, variably calcite veined, light grey, fine to medium grained, well bedded (locally massive) silty limestone with interbedded thin beds/lenses of dark grey/black, very fine grained non-calcareous to moderately calcareous mudstone and light grey, medium grained, calcareous arenite. Unit is strongly to intensely sheared from 390.08 to 405.80m, with the most significant shearing/faulting occuring from 403.56 to 405.80m. Intensely sheared/faulted zone is associated with realgar, Au mineralization (242, 336 and 350 ppm Au - XRF), arsenic oxidation, moderate to strong decalcification and weak silicification. Calcite veining is strong/intense uphole from fault zone and decrease in intensity towards upper contact. Below fault zone, calcite veining decreases significantly to weak/moderate (veins concentrated within hanging wall of mineralized fault?). A similar correlation is noted with styolite intensity. Local dolomitized breccia zones with light grey calcite vein fill and very angular wallrock clasts are present below ~515m.							
								SN	SIL	1I		
						LT	GY	BD	DOL	1I	Re	0.5
						MD	GY	SH	ASO	1I		
						DK	GY	BX	DCA	2I		

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
0.00	5.79	5.79	0	0	0.00	0	0R	--	--	
5.79	8.84	3.05	1.35	44	0.00	0	0R	1H	4W	rbz with gouge.
8.84	11.89	3.05	2.25	74	0.00	0	0R	1H	4W	rbz with gouge.
11.89	14.94	3.05	2.43	80	0.21	7	0R	1H	4W	rbz with gouge.
14.94	17.98	3.04	2.4	79	0.32	11	0R	1H	4W	rbz. With gouge
17.98	21.03	3.05	2.34	77	0.53	17	0R	1H	4W	rbz. With gouge.
21.03	24.08	3.05	2.98	98	1.52	50	0R	1H	4W	rbz with gouge and some competent rock.
24.08	27.13	3.05	2.91	95	1.48	49	0R	1H	2W	competent rock with local gouge and rubble.
27.13	30.17	3.04	3.03	100	2.68	88	0R	3H	1W	competent rock.
30.17	33.22	3.05	2.88	94	2.71	89	0R	3H	1W	
33.22	36.27	3.05	2.45	80	1.26	41	0R	1H	1W	rbz with local gouge and competent rock.
36.27	39.32	3.05	2.7	89	1.61	53	0R	1H	1W	mix of competent rock and rubble with gouge.
39.32	42.37	3.05	2.74	90	1.81	59	0R	3H	1W	competent rock with local rubble areas.
42.37	45.42	3.05	2.9	95	2.34	77	0R	3H	1W	competent rock with gouge.
45.42	48.46	3.04	2.29	75	0.78	26	0R	2H	1W	rbz with intermittent competent rock.
48.46	51.51	3.05	2.59	85	1.19	39	0R	1H	1W	Mix of competent and rubbly rock and gouge.
51.51	54.56	3.05	2.31	76	0.76	25	0R	1H	1W	
54.56	57.61	3.05	2.81	92	1.47	48	0R	1H	1W	Rbz and gougey from 54.56-56.08m. Competent rock from 56.08-57.61m.
57.61	60.66	3.05	2.73	90	1.14	37	0R	1H	1W	
60.66	63.70	3.04	2.9	95	1.79	59	0R	3H	1W	
63.70	66.75	3.05	2.45	80	0.93	30	0R	3H	1W	Three small rbz's.
66.75	69.80	3.05	2.26	74	0.47	15	0R	2H	1W	Multiple realgar fractures in interval.
69.80	72.85	3.05	2.13	70	0.74	24	0R	1H	1W	Competent rock from 70.00-71.32m. Rubbly and gougey from 72.00-72.85m. Trace massive realgar common along fractured surfaces and parallel to bedding.

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
72.85	75.90	3.05	2.37	78	0.82	27	0R	2H	1W	Rubbly and gougey from 72.85-73.42m. Highly brecciated from 73.82-74.52m. Trace massive realgar on fractured surfaces.
75.90	78.94	3.04	2.39	79	0.78	26	0R	3H	1W	Trace to moderate massive realgar on fractured surfaces and in veins/veinlets.
78.94	81.99	3.05	2.78	91	0.21	7	0R	3H	1W	Trace to moderate realgar and orpiment on fracutred surfaces. Trace massive realgar parallel to bedding.
81.99	85.04	3.05	2.69	88	0.94	31	0R	3H	1W	Moderately brecciated from 84.00-84.57m.
85.04	88.09	3.05	2.8	92	0.95	31	0R	3H	1W	
88.09	91.14	3.05	2.71	89	1.16	38	0R	3H	1W	
91.14	94.18	3.04	2.85	94	1.32	43	0R	3H	1W	Gouge from 94.10-94.18m. Trace massive orpiment and realgar common on fractured surfaces.
94.18	97.23	3.05	2.83	93	1.05	34	0R	3H	1W	Moderate to highly brecciated from 95.71-96.16m
97.23	100.28	3.05	2.3	75	1.09	36	0R	1H	1W	Competent rock from 97.23-98.00m, rubbly and highly brecciated to gougey rock from 98.00-100.28m. Trace to moderate massive realgar common in gougey rock. RBZ from 99.05-99.50m
100.28	103.33	3.05	2.84	93	0.36	12	0R	3H	1W	Trace to moderate massive realgar and orpiment on fractured surfaces.
103.33	106.38	3.05	2.65	87	0.96	31	0R	3H	1W	Highly brecciated to gougey from 103.93-104.49m, trace massive realgar in this interval.
106.38	109.42	3.04	2.99	98	1.84	61	0R	3H	1W	Competent rock.
109.42	112.47	3.05	2.94	96	1.84	60	0R	3H	1W	
112.47	115.52	3.05	2.9	95	2.30	75	0R	3H	1W	Competent rock.
115.52	118.57	3.05	2.83	93	1.87	61	0R	3H	1W	
118.57	121.61	3.04	3.02	99	2.88	95	0R	3H	1W	
121.61	124.66	3.05	3.04	100	2.93	96	0R	2H	1W	
124.66	127.71	3.05	3.01	99	3.00	98	0R	2H	1W	
127.71	130.76	3.05	3.04	100	2.32	76	0R	3H	1W	
130.76	133.81	3.05	3.04	100	2.87	94	0R	3H	1W	small RBZ from 131.19-131.31

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
133.81	136.86	3.05	3.04	100	2.92	96	0R	2H	1W	
136.86	139.90	3.04	3.04	100	2.94	97	0R	3H	1W	
139.90	142.95	3.05	3.03	99	2.95	97	0R	3H	1W	
142.95	146.00	3.05	3.04	100	3.04	100	0R	3H	1W	
146.00	149.05	3.05	2.99	98	2.99	98	0R	3H	1W	
149.05	152.10	3.05	3.04	100	2.88	94	0R	3H	1W	this interval has both mudstone and sandstone. Limestone has hardnessof 3H and sandstone has hardness 6H.
152.10	155.14	3.04	3	99	2.56	84	0R	3H	1W	this interval has both mudstone and sandstone. Limestone has hardnessof 3H and sandstone has hardness 6H.
155.14	158.19	3.05	3.04	100	2.13	70	0R	2H	1W	
158.19	161.24	3.05	2.95	97	2.81	92	0R	3H	1W	
161.24	164.29	3.05	3.04	100	2.43	80	0R	3H	1W	
164.29	167.34	3.05	2.77	91	2.25	74	0R	3H	1W	
167.34	170.38	3.04	3	99	2.89	95	0R	3H	1W	
170.38	173.43	3.05	2.95	97	2.48	81	0R	3H	1W	
173.43	176.48	3.05	2.81	92	2.67	88	0R	3H	1W	
176.48	179.53	3.05	2.88	94	2.61	86	0R	3H	1W	
179.53	182.58	3.05	2.95	97	2.49	82	0R	3H	1W	
182.58	185.62	3.04	3.04	100	2.99	98	0R	3H	1W	
185.62	188.67	3.05	3.04	100	2.81	92	0R	3H	1W	
188.67	191.72	3.05	3.04	100	3.04	100	0R	3H	1W	
191.72	194.77	3.05	3.04	100	2.91	95	0R	3H	1W	
194.77	197.82	3.05	3.04	100	2.73	90	0R	3H	1W	
197.82	200.86	3.04	3.04	100	3.04	100	0R	3H	1W	
200.86	203.91	3.05	2.84	93	2.37	78	0R	3H	1W	competent rock with local rubble area.
203.91	206.96	3.05	2.9	95	2.50	82	0R	2H	1W	
206.96	210.01	3.05	2.91	95	2.67	88	0R	2H	1W	
210.01	213.06	3.05	3.04	100	3.04	100	0R	3H	1W	
213.06	216.10	3.04	3.04	100	2.91	96	0R	3H	1W	
216.10	219.15	3.05	3.04	100	3.04	100	0R	3H	1W	
219.15	222.20	3.05	3.05	100	2.99	98	0R	2H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
222.20	225.25	3.05	2.85	93	2.63	86	0R	2H	1W	competent rock with local gouge.
225.25	228.30	3.05	2.92	96	2.74	90	0R	2H	1W	competent rock with gouge.
228.30	231.34	3.04	3.04	100	2.52	83	0R	2H	1W	competent rock with local gouge.
231.34	234.39	3.05	2.93	96	2.69	88	0R	3H	1W	
234.39	237.44	3.05	3	98	2.92	96	0R	2H	1W	
237.44	240.49	3.05	2.93	96	2.77	91	0R	2H	1W	
240.49	243.54	3.05	3	98	3.00	98	0R	3H	1W	
243.54	246.58	3.04	2.94	97	1.95	64	0R	3H	1W	competent rock with local rubble areas.
246.58	249.63	3.05	2.86	94	2.64	87	0R	3H	1W	
249.63	252.68	3.05	2.98	98	2.48	81	0R	3H	1W	competent rock with gouge.
252.68	255.73	3.05	3.05	100	3.04	100	0R	3H	1W	
255.73	258.78	3.05	2.9	95	2.80	92	0R	3H	1W	competent rock with local rubble areas.
258.78	261.82	3.04	2.88	95	2.58	85	0R	3H	1W	
261.82	264.87	3.05	2.87	94	2.42	79	0R	3H	1W	
264.87	267.92	3.05	3.04	100	2.58	85	0R	3H	1W	
267.92	270.97	3.05	3	98	2.39	78	0R	3H	1W	
270.97	274.02	3.05	2.75	90	1.96	64	0R	2H	1W	competent rock with local gouge.
274.02	277.06	3.04	3	99	2.32	76	0R	3H	1W	
277.06	280.11	3.05	3.05	100	2.55	84	0R	2H	1W	competent rock with local gouge.
280.11	283.16	3.05	3.05	100	2.53	83	0R	2H	1W	competent rock with local gouge.
283.16	286.21	3.05	2.97	97	2.46	81	0R	3H	1W	
286.21	289.26	3.05	2.97	97	2.74	90	0R	3H	1W	
289.26	292.30	3.04	2.94	97	2.85	94	0R	3H	1W	
292.30	295.35	3.05	2.92	96	1.87	61	0R	2H	1W	competent rock with gouge.
295.35	298.40	3.05	3	98	1.78	58	0R	2H	1W	competent rock with local rubble and gouge areas.
298.40	301.45	3.05	2.84	93	2.29	75	0R	2H	1W	competent rock with gouge
301.45	304.50	3.05	2.85	93	2.60	85	0R	2H	1W	
304.50	307.54	3.04	2.87	94	2.68	88	0R	2H	1W	competent rock with local gouge.
307.54	310.59	3.05	3	98	2.85	93	0R	2H	1W	competent rock with local gouge and rubble areas.
310.59	313.64	3.05	2.93	96	2.40	79	0R	2H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
313.64	316.69	3.05	2.88	94	2.51	82	0R	2H	1W	competent rock with local gouge.
316.69	319.74	3.05	2.82	92	1.94	64	0R	2H	1W	competent rock with lcoal rubble and gouge areas.
319.74	322.78	3.04	2.7	89	1.68	55	0R	2H	1W	rubble zone.
322.78	325.83	3.05	2.9	95	2.77	91	1R	2H	1W	competent rock with local rubble areas.
325.83	328.88	3.05	2.69	88	2.07	68	0R	2H	1W	competent rock with gouge.
328.88	330.40	1.52	1.51	99	1.17	77	0R	2H	1W	
330.40	331.92	1.52	1.18	78	0.79	52	0R	2H	1W	
331.92	333.45	1.53	0.9	59	0.75	49	0R	3H	1W	
333.45	334.98	1.53	1.38	90	1.22	80	0R	3H	1W	
334.98	338.02	3.04	2.69	88	1.45	48	0R	2H	1W	competent rock with gouge.
338.02	341.07	3.05	3	98	2.33	76	0R	2H	1W	competent rock with gouge.
341.07	344.12	3.05	2.98	98	2.65	87	0R	3H	1W	
344.12	347.17	3.05	2.82	92	2.13	70	0R	3H	1W	
347.17	350.22	3.05	3	98	2.72	89	0R	3H	1W	
350.22	353.27	3.05	2.87	94	2.78	91	0R	3H	1W	
353.27	356.31	3.04	3.03	100	2.70	89	0R	3H	1W	
356.31	359.36	3.05	2.91	95	2.76	90	0R	3H	1W	
359.36	362.41	3.05	3	98	2.68	88	0R	3H	1W	
362.41	365.46	3.05	2.77	91	2.10	69	1R	3H	1W	
365.46	368.50	3.04	2.8	92	1.80	59	1R	2H	1W	competent rock with gouge.
368.50	371.55	3.05	3.01	99	2.55	84	2R	2H	1W	
371.55	374.60	3.05	3	98	2.49	82	4R	3H	1W	
374.60	377.65	3.05	3.05	100	2.49	82	4R	3H	1W	
377.65	380.70	3.05	3.05	100	2.62	86	4R	3H	1W	
380.70	383.74	3.04	3.02	99	2.70	89	4R	3H	1W	
383.74	386.79	3.05	2.97	97	2.35	77	2R	3H	1W	
386.79	389.83	3.04	3.04	100	1.91	63	3R	3H	1W	competent rock with low RQD b/c fracture along CA
389.83	392.89	3.06	3.02	99	2.50	82	4R	3H	1W	
392.89	395.94	3.05	2.93	96	2.49	82	4R	3H	1W	
395.94	398.98	3.04	3.04	100	2.50	82	4R	3H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
398.98	402.03	3.05	2.91	95	2.40	79	3R	3H	1W	
402.03	405.08	3.05	2.86	94	1.60	52	2R	2H	1W	
405.08	408.13	3.05	2.97	97	1.93	63	3R	3H	1W	
408.13	411.18	3.05	2.87	94	1.96	64	4R	3H	1W	competent rock but multiple fractures alng bedding planes.
411.18	414.22	3.04	3.04	100	2.51	83	4R	4H	1W	
414.22	417.27	3.05	2.99	98	2.84	93	4R	4H	1W	
417.27	420.32	3.05	3.05	100	2.29	75	4R	4H	1W	
420.32	423.37	3.05	3	98	2.52	83	4R	4H	1W	
423.37	426.42	3.05	2.98	98	2.86	94	4R	4H	1W	
426.42	429.46	3.04	3.04	100	2.73	90	3R	4H	1W	
429.46	432.51	3.05	3.05	100	3.01	99	4R	4H	1W	
432.51	435.56	3.05	3.05	100	3.05	100	4R	4H	1W	
435.56	438.61	3.05	2.93	96	2.83	93	4R	4H	1W	
438.61	441.66	3.05	3.05	100	2.96	97	4R	3H	1W	
441.66	444.70	3.04	3.04	100	3.04	100	4R	3H	1W	
444.70	447.75	3.05	3.05	100	2.95	97	4R	3H	1W	
447.75	450.80	3.05	3	98	2.55	84	4R	3H	1W	fracture subparallel to CA hence RQD is low. The rock is competent.
450.80	453.85	3.05	2.91	95	2.35	77	4R	4H	1W	
453.85	456.90	3.05	2.49	82	2.39	78	4R	4H	1W	
456.90	458.42	1.52	1.36	89	1.23	81	4R	3H	1W	
458.42	460.85	2.43	2.43	100	2.26	93	4R	4H	1W	reduction to nq
460.85	463.91	3.06	3.04	99	2.93	96	4R	4H	1W	
463.91	466.95	3.04	2.92	96	1.88	62	4R	4H	1W	
466.95	470.00	3.05	2.99	98	2.66	87	4R	4H	1W	
470.00	473.05	3.05	2.66	87	2.33	76	4R	4H	1W	
473.05	476.10	3.05	2.97	97	2.32	76	4R	4H	1W	
476.10	479.15	3.05	2.96	97	2.80	92	4R	4H	1W	
479.15	482.19	3.04	3.04	100	2.81	92	4R	4H	1W	
482.19	485.24	3.05	2.96	97	2.86	94	4R	4H	1W	
485.24	488.29	3.05	3	98	2.72	89	4R	4H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
488.29	491.34	3.05	3.05	100	2.74	90	4R	4H	1W	
491.34	494.39	3.05	3.05	100	2.77	91	4R	4H	1W	
494.39	497.43	3.04	3.04	100	2.89	95	4R	4H	1W	
497.43	500.48	3.05	3.05	100	2.46	81	1R	3H	1W	mudstone/slt stone section with low reactivity
500.48	503.53	3.05	3.04	100	2.77	91	4R	4H	1W	
503.53	506.58	3.05	2.8	92	2.49	82	4R	4H	1W	limey mudstone beds within limstone unit. Continous stylolites are observed between 504.6-504.7
506.58	509.63	3.05	3.05	100	3.05	100	4R	4H	1W	
509.63	512.67	3.04	2.93	96	2.64	87	4R	3H	1W	
512.67	515.72	3.05	2.95	97	2.15	70	3R	3H	1W	
515.72	518.77	3.05	2.94	96	2.66	87	4R	2H	1W	gouge present b/w 517.58-517.63
518.77	521.82	3.05	3.04	100	2.83	93	4R	3H	1W	carbon present at fracture surface at 521.11
521.82	524.87	3.05	3.05	100	2.92	96	4R	3H	1W	
524.87	527.91	3.04	2.96	97	2.84	93	3R	3H	1W	
527.91	530.96	3.05	2.87	94	2.80	92	4R	3H	1W	
530.96	534.00	3.04	2.85	94	2.83	93	4R	3H	1W	
534.00	537.05	3.05	2.71	89	2.37	78	4R	3H	1W	
537.05	540.11	3.06	2.89	94	2.89	94	3R	3H	1W	
540.11	543.15	3.04	3	99	2.93	96	4R	3H	1W	
543.15	546.20	3.05	3.02	99	2.95	97	4R	3H	1W	
546.20	549.25	3.05	3.03	99	3.00	98	4R	3H	1W	
549.25	552.29	3.04	3.04	100	3.04	100	4R	3H	1W	
552.29	555.35	3.06	3.03	99	3.03	99	4R	3H	1W	
555.35	558.39	3.04	2.99	98	2.99	98	4R	3H	1W	
558.39	561.44	3.05	2.98	98	2.98	98	4R	3H	1W	
561.44	564.49	3.05	3.05	100	3.00	98	4R	3H	1W	

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From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
0.00	0.00	0.00	-QC-	0.00	0	S048793	☐	N18-032	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S048637	☐	N18-021	Core	CS5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S048808	☐	N18-032	Core	CS9	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S048781	☐	N18-032	Core	CS9	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S048764	☐	N18-030	Core	CS4	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S048759	☐	N18-030	Core	CS6	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S048745	☐	N18-030	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S048708	☐	N18-027	Core	CS9	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S048702	☐	N18-027	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S048681	☐	N18-025	core	CS9	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S048672	☐	N18-025	core	CS7	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S048818	☐	N18-033	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S048660	☐	N18-025	core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S048645	☐	N18-021	Core	CS10	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S048725	☐	N18-027	Core	CS10	☐	☐	☐
5.79	8.65	2.86	OVB	1.66	58	S048631	☐	N18-021	Core		☐	☐	☐
8.65	10.36	1.71	MST, OVB	1.42	83	S048632	☐	N18-021	Core		☐	☐	☐
10.36	11.89	1.53	MST	1.36	89	S048633	☐	N18-021	Core		☐	☐	☐
11.89	14.94	3.05	MST	2.43	80	S048634	☐	N18-021	Core		☐	☐	☐
14.94	17.03	2.09	MST	1.91	91	S048635	☐	N18-021	Core		☐	☐	☐
17.03	20.05	3.02	MST	1.75	58	S048636	☐	N18-021	Core		☐	☐	☐
20.05	22.88	2.83	MST	2.80	99	S048638	☐	N18-021	Core		☐	☐	☐
20.05	22.88	2.83	MST	2.80	99	S048639	☐	N18-021	Core		☐	☑	☐
22.88	24.08	1.20	DST	1.20	100	S048640	☐	N18-021	Core		☐	☐	☐
24.08	27.13	3.05	DST	2.91	95	S048641	☐	N18-021	Core		☐	☐	☐
27.13	30.17	3.04	DST	3.03	100	S048642	☐	N18-021	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
30.17	33.22	3.05	DST	2.88	94	S048643	☐	N18-021	Core		☐	☐	☐
33.22	36.27	3.05	DST	2.45	80	S048644	☐	N18-021	Core		☐	☐	☐
36.27	39.32	3.05	SLC	2.70	89	S048646	☐	N18-021	Core		☐	☐	☐
39.32	42.37	3.05	SLC	2.74	90	S048647	☐	N18-021	Core		☐	☐	☐
42.37	45.42	3.05	SLC	2.90	95	S048648	☐	N18-021	Core		☐	☐	☐
45.42	48.46	3.04	SLC	2.29	75	S048649	☐	N18-021	Core		☐	☐	☐
48.46	51.51	3.05	SLC	2.59	85	S048650	☐	N18-021	Core		☐	☐	☐
51.51	54.56	3.05	SLC	2.31	76	S048651	☐	N18-025	core		☐	☐	☐
54.56	57.61	3.05	SLC	2.81	92	S048652	☐	N18-025	core		☐	☐	☐
57.61	60.66	3.05	SLC	2.73	90	S048653	☐	N18-025	core		☐	☐	☐
60.66	63.70	3.04	SLC	2.90	95	S048654	☐	N18-025	core		☐	☐	☐
63.70	66.75	3.05	SLC	2.45	80	S048655	☐	N18-025	core		☐	☐	☐
66.75	69.80	3.05	SLC	2.26	74	S048656	☐	N18-025	core		☐	☐	☐
69.80	72.85	3.05	SLC	2.13	70	S048657	☐	N18-025	core		☐	☐	☐
72.85	74.37	1.52	SLC	1.37	90	S048658	☐	N18-025	core		☐	☐	☐
74.37	75.69	1.32	SLC	1.15	87	S048659	☐	N18-025	core		☐	☐	☐
75.69	77.42	1.73	SLC	1.52	88	S048661	☐	N18-025	core		☐	☐	☐
77.42	80.47	3.05	SLC	2.77	91	S048662	☐	N18-025	core		☐	☐	☐
80.47	83.52	3.05	SLC	3.05	100	S048663	☐	N18-025	core		☐	☐	☐
83.52	86.56	3.04	SLC	2.99	98	S048664	☐	N18-025	core		☐	☐	☐
86.56	89.61	3.05	SLC	2.84	93	S048665	☐	N18-025	core		☐	☐	☐
89.61	92.66	3.05	SLC	2.99	98	S048666	☐	N18-025	core		☐	☐	☐
92.66	94.98	2.32	SLC	2.30	99	S048667	☐	N18-025	core		☐	☐	☐
92.66	94.98	2.32	SLC	2.30	99	S048668	☐	N18-025	core		☐	☑	☐
94.98	96.48	1.50	SLC	1.38	92	S048669	☐	N18-025	core		☐	☐	☐
96.48	98.76	2.28	SLC	2.13	93	S048670	☐	N18-025	core		☐	☐	☐
98.76	100.37	1.61	SLC	1.31	81	S048671	☐	N18-025	core		☐	☐	☐
100.37	103.33	2.96	SLC	2.84	96	S048673	☐	N18-025	core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
103.33	104.85	1.52	SLC	1.33	88	S048674	☐	N18-025	core		☐	☐	☐
103.33	104.85	1.52	SLC	1.33	88	S048675	☐	N18-025	core		☐	☐	☑
104.85	107.90	3.05	SLC	2.97	97	S048676	☐	N18-025	core		☐	☐	☐
107.90	110.95	3.05	SLC	3.04	100	S048677	☐	N18-025	core		☐	☐	☐
110.95	114.00	3.05	SLC	2.94	96	S048678	☐	N18-025	core		☐	☐	☐
114.00	117.04	3.04	SLC	3.04	100	S048679	☐	N18-025	core		☐	☐	☐
117.04	120.09	3.05	SLC	2.79	91	S048680	☐	N18-025	core		☐	☐	☐
120.09	123.14	3.05	SLC	3.05	100	S048682	☐	N18-025	core		☐	☐	☐
123.14	126.19	3.05	SLC	3.05	100	S048683	☐	N18-025	core		☐	☐	☐
126.19	129.24	3.05	SLC	3.04	100	S048684	☐	N18-025	core		☐	☐	☐
129.24	132.28	3.04	SLC	3.04	100	S048685	☐	N18-025	core		☐	☐	☐
132.28	135.33	3.05	SLC	2.97	97	S048686	☐	N18-025	core		☐	☐	☐
135.33	138.38	3.05	SLC	3.00	98	S048687	☐	N18-025	core		☐	☐	☐
138.38	141.43	3.05	SLC	3.05	100	S048688	☐	N18-025	core		☐	☐	☐
141.43	144.48	3.05	SLC	3.02	99	S048689	☐	N18-025	core		☐	☐	☐
144.48	147.52	3.04	SLC	3.04	100	S048690	☐	N18-025	core		☐	☐	☐
147.52	150.57	3.05	SLC	3.05	100	S048691	☐	N18-027	Core		☐	☐	☐
150.57	153.62	3.05	SLC	2.81	92	S048692	☐	N18-027	Core		☐	☐	☐
153.62	156.66	3.04	SLC	2.91	96	S048693	☐	N18-027	Core		☐	☐	☐
156.66	159.72	3.06	SLC	3.01	98	S048694	☐	N18-027	Core		☐	☐	☐
159.72	162.76	3.04	SLC	3.04	100	S048695	☐	N18-027	Core		☐	☐	☐
162.76	165.81	3.05	SLC	2.62	86	S048696	☐	N18-027	Core		☐	☐	☐
165.81	168.86	3.05	SLC	2.63	86	S048697	☐	N18-027	Core		☐	☐	☐
168.86	171.91	3.05	SLC	2.85	93	S048698	☐	N18-027	Core		☐	☐	☐
171.91	174.96	3.05	SLC	3.05	100	S048699	☐	N18-027	Core		☐	☐	☐
174.96	178.00	3.04	SLC	2.79	92	S048700	☐	N18-027	Core		☐	☐	☐
178.00	184.10	6.10	SLC	6.10	100	W233044	☐	N18-C02	Chip		☐	☐	☐
184.10	190.20	6.10	SLC	6.10	100	W233045	☐	N18-C02	Chip		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
190.20	196.29	6.09	SLC	6.09	100	W233046	☐	N18-C02	Chip		☐	☐	☐
196.29	202.39	6.10	SLC	6.10	100	W233047	☐	N18-C02	Chip		☐	☐	☐
202.39	208.48	6.09	SLC	5.70	94	W233048	☐	N18-C02	Chip		☐	☐	☐
208.48	214.58	6.10	SLC	6.10	100	W233049	☐	N18-C02	Chip		☐	☐	☐
214.58	220.68	6.10	SLC	6.10	100	W233050	☐	N18-C02	Chip		☐	☐	☐
220.68	223.72	3.04	SLC	3.00	99	S048701	☐	N18-027	Core		☐	☐	☐
223.72	226.77	3.05	SLC	3.02	99	S048703	☐	N18-027	Core		☐	☐	☐
226.77	229.82	3.05	SLC	3.05	100	S048704	☐	N18-027	Core		☐	☐	☐
229.82	232.87	3.05	SLC	3.05	100	S048705	☐	N18-027	Core		☐	☐	☐
232.87	235.92	3.05	SLC	3.05	100	R613218	☐	N18-066	Core		☐	☐	☐
232.87	238.96	6.09	SLC	6.05	99	W233054	☐	N18-C02	Chip		☐	☐	☐
235.92	238.96	3.04	SLC	3.04	100	R613219	☐	N18-066	Core		☐	☐	☐
238.96	245.06	6.10	SLC	6.10	100	W233055	☐	N18-C02	Chip		☐	☐	☐
245.06	251.16	6.10	SLC	6.05	99	W233060	☐	N18-C02	Chip		☐	☐	☐
251.16	257.25	6.09	SLC	6.09	100	W233061	☐	N18-C02	Chip		☐	☐	☐
257.25	263.35	6.10	SLC	5.88	96	W233062	☐	N18-C02	Chip		☐	☐	☐
263.35	269.44	6.09	SLC	6.05	99	W233063	☐	N18-C02	Chip		☐	☐	☐
269.44	272.49	3.05	SLC	3.00	98	S048706	☐	N18-027	Core		☐	☐	☐
272.49	275.54	3.05	SLC	2.91	95	S048707	☐	N18-027	Core		☐	☐	☐
275.54	278.59	3.05	SLC	2.90	95	S048709	☐	N18-027	Core		☐	☐	☐
278.59	281.64	3.05	SLC	3.05	100	S048710	☐	N18-027	Core		☐	☐	☐
278.59	281.64	3.05	SLC	3.05	100	S048711	☐	N18-027	Core		☐	☐	☑
281.64	284.68	3.04	SLC	3.03	100	S048712	☐	N18-027	Core		☐	☐	☐
284.68	287.73	3.05	SLC	3.00	98	S048713	☐	N18-027	Core		☐	☐	☐
287.73	290.78	3.05	SLC	3.05	100	S048714	☐	N18-027	Core		☐	☐	☐
290.78	293.83	3.05	SLC	2.93	96	S048715	☐	N18-027	Core		☐	☐	☐
293.83	296.88	3.05	SLC	2.94	96	S048716	☐	N18-027	Core		☐	☐	☐
296.88	299.92	3.04	SLC	2.91	96	S048717	☐	N18-027	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
299.92	302.97	3.05	SLC	2.80	92	S048718	☐	N18-027	Core		☐	☐	☐
302.97	306.02	3.05	SLC	2.74	90	S048719	☐	N18-027	Core		☐	☐	☐
306.02	309.07	3.05	SLC	3.05	100	S048720	☐	N18-027	Core		☐	☐	☐
309.07	312.12	3.05	SLC	2.88	94	S048721	☐	N18-027	Core		☐	☐	☐
312.12	315.16	3.04	SLC	2.93	96	S048722	☐	N18-027	Core		☐	☐	☐
315.16	318.21	3.05	SLC	2.78	91	S048723	☐	N18-027	Core		☐	☐	☐
318.21	321.26	3.05	SLC	2.68	88	S048724	☐	N18-027	Core		☐	☐	☐
321.26	324.31	3.05	SLC	3.05	100	S048726	☐	N18-027	Core		☐	☐	☐
321.26	324.31	3.05	SLC	3.05	100	S048727	☐	N18-027	Core		☐	☑	☐
324.31	327.36	3.05	SLC	3.00	98	S048728	☐	N18-027	Core		☐	☐	☐
327.36	330.40	3.04	SLC	2.89	95	S048729	☐	N18-027	Core		☐	☐	☐
330.40	333.45	3.05	SLC	3.05	100	S048730	☐	N18-027	Core		☐	☐	☐
333.45	336.50	3.05	SLC	2.88	94	S048731	☐	N18-030	Core		☐	☐	☐
336.50	339.55	3.05	SLC	3.00	98	S048732	☐	N18-030	Core		☐	☐	☐
339.55	342.60	3.05	SLC	3.05	100	S048733	☐	N18-030	Core		☐	☐	☐
342.60	345.64	3.04	SLC	2.95	97	S048734	☐	N18-030	Core		☐	☐	☐
345.64	348.69	3.05	SLC	3.02	99	S048735	☐	N18-030	Core		☐	☐	☐
348.69	351.74	3.05	SLC	2.92	96	S048736	☐	N18-030	Core		☐	☐	☐
351.74	354.79	3.05	SLC	3.05	100	S048737	☐	N18-030	Core		☐	☐	☐
354.79	357.84	3.05	SLC	2.93	96	S048738	☐	N18-030	Core		☐	☐	☐
357.84	360.88	3.04	SLC	3.04	100	S048739	☐	N18-030	Core		☐	☐	☐
360.88	363.93	3.05	SLC	3.05	100	S048740	☐	N18-030	Core		☐	☐	☐
363.93	365.46	1.53	SLC	1.48	97	S048741	☐	N18-030	Core		☐	☐	☐
365.46	367.55	2.09	SLC	2.04	98	S048742	☐	N18-030	Core		☐	☐	☐
365.46	367.55	2.09	SLC	2.04	98	S048743	☐	N18-030	Core		☐	☐	☑
367.55	369.54	1.99	SLC	1.71	86	S048744	☐	N18-030	Core		☐	☐	☐
369.54	371.25	1.71	SLC	1.71	100	S048746	☐	N18-030	Core		☐	☐	☐
371.25	373.08	1.83	LST	1.83	100	S048747	☐	N18-030	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
373.08	376.12	3.04	LST	3.04	100	S048748	☐	N18-030	Core		☐	☐	☐
376.12	379.17	3.05	LST	3.05	100	S048749	☐	N18-030	Core		☐	☐	☐
379.17	382.22	3.05	LST	3.05	100	S048750	☐	N18-030	Core		☐	☐	☐
382.22	385.27	3.05	LST	3.05	100	S048751	☐	N18-030	Core		☐	☐	☐
385.27	388.32	3.05	LST	3.02	99	S048752	☐	N18-030	Core		☐	☐	☐
388.32	390.44	2.12	LST	2.12	100	S048753	☐	N18-030	Core		☐	☐	☐
390.44	392.03	1.59	LST	1.59	100	S048754	☐	N18-030	Core		☐	☐	☐
390.44	392.03	1.59	LST	1.59	100	S048755	☐	N18-030	Core		☐	☑	☐
392.03	394.41	2.38	LST	2.37	100	S048756	☐	N18-030	Core		☐	☐	☐
394.41	395.94	1.53	LST	1.47	96	S048757	☐	N18-030	Core		☐	☐	☐
395.94	397.52	1.58	LST	1.58	100	S048758	☐	N18-030	Core		☐	☐	☐
397.52	398.98	1.46	LST	1.44	99	S048760	☐	N18-030	Core		☐	☐	☐
398.98	402.03	3.05	LST	2.91	95	S048761	☐	N18-030	Core		☐	☐	☐
402.03	404.36	2.33	LST	2.28	98	S048762	☐	N18-030	Core		☐	☐	☐
404.36	405.65	1.29	LST	1.23	95	S048763	☐	N18-030	Core		☐	☐	☐
405.65	408.13	2.48	LST	2.44	98	S048765	☐	N18-030	Core		☐	☐	☐
408.13	411.18	3.05	LST	2.87	94	S048766	☐	N18-030	Core		☐	☐	☐
411.18	414.22	3.04	LST	3.04	100	S048767	☐	N18-030	Core		☐	☐	☐
414.22	417.27	3.05	LST	2.99	98	S048768	☐	N18-030	Core		☐	☐	☐
417.27	420.32	3.05	LST	3.05	100	S048769	☐	N18-030	Core		☐	☐	☐
420.32	423.37	3.05	LST	3.00	98	S048770	☐	N18-030	Core		☐	☐	☐
423.37	426.42	3.05	LST	2.98	98	S048771	☐	N18-032	Core		☐	☐	☐
426.42	429.46	3.04	LST	3.04	100	S048772	☐	N18-032	Core		☐	☐	☐
429.46	432.51	3.05	LST	3.05	100	S048773	☐	N18-032	Core		☐	☐	☐
432.51	435.56	3.05	LST	3.05	100	S048774	☐	N18-032	Core		☐	☐	☐
435.56	438.61	3.05	LST	2.93	96	S048775	☐	N18-032	Core		☐	☐	☐
438.61	441.66	3.05	LST	3.05	100	S048776	☐	N18-032	Core		☐	☐	☐
441.66	444.70	3.04	LST	3.04	100	S048777	☐	N18-032	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
444.70	447.75	3.05	LST	3.05	100	S048778	☐	N18-032	Core		☐	☐	☐
447.75	450.80	3.05	LST	3.00	98	S048779	☐	N18-032	Core		☐	☐	☐
450.80	453.85	3.05	LST	2.91	95	S048780	☐	N18-032	Core		☐	☐	☐
453.85	456.90	3.05	LST	2.49	82	S048782	☐	N18-032	Core		☐	☐	☐
456.90	458.42	1.52	LST	1.36	89	S048783	☐	N18-032	Core		☐	☐	☐
456.90	458.42	1.52	LST	1.36	89	S048784	☐	N18-032	Core		☐	☑	☐
458.42	460.85	2.43	LST	2.43	100	S048785	☐	N18-032	Core		☐	☐	☐
460.85	463.91	3.06	LST	3.04	99	S048786	☐	N18-032	Core		☐	☐	☐
463.91	466.95	3.04	LST	2.92	96	S048787	☐	N18-032	Core		☐	☐	☐
466.95	470.00	3.05	LST	2.99	98	S048788	☐	N18-032	Core		☐	☐	☐
470.00	473.05	3.05	LST	2.66	87	S048789	☐	N18-032	Core		☐	☐	☐
473.05	476.10	3.05	LST	2.97	97	S048790	☐	N18-032	Core		☐	☐	☐
476.10	479.15	3.05	LST	2.96	97	S048791	☐	N18-032	Core		☐	☐	☐
479.15	482.19	3.04	LST	3.04	100	S048792	☐	N18-032	Core		☐	☐	☐
482.19	485.24	3.05	LST	2.96	97	S048794	☐	N18-032	Core		☐	☐	☐
485.24	488.29	3.05	LST	3.00	98	S048795	☐	N18-032	Core		☐	☐	☐
488.29	491.34	3.05	LST	3.05	100	S048796	☐	N18-032	Core		☐	☐	☐
491.34	494.39	3.05	LST	3.05	100	S048797	☐	N18-032	Core		☐	☐	☐
494.39	497.43	3.04	LST	3.04	100	S048798	☐	N18-032	Core		☐	☐	☐
497.43	500.48	3.05	LST	3.05	100	S048799	☐	N18-032	Core		☐	☐	☐
500.48	503.53	3.05	LST	3.04	100	S048800	☐	N18-032	Core		☐	☐	☐
503.53	506.58	3.05	LST	2.80	92	S048801	☐	N18-032	Core		☐	☐	☐
506.58	509.63	3.05	LST	3.05	100	S048802	☐	N18-032	Core		☐	☐	☐
506.58	509.63	3.05	LST	3.05	100	S048803	☐	N18-032	Core		☐	☐	☑
509.63	512.67	3.04	LST	2.93	96	S048804	☐	N18-032	Core		☐	☐	☐
512.67	515.72	3.05	LST	2.95	97	S048805	☐	N18-032	Core		☐	☐	☐
515.72	518.77	3.05	LST	2.94	96	S048806	☐	N18-032	Core		☐	☐	☐
518.77	521.82	3.05	LST	3.04	100	S048807	☐	N18-032	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
521.82	524.87	3.05	LST	3.05	100	S048809	☐	N18-032	Core		☐	☐	☐
524.87	527.91	3.04	LST	2.96	97	S048810	☐	N18-032	Core		☐	☐	☐
527.91	530.96	3.05	LST	2.87	94	S048811	☐	N18-033	Core		☐	☐	☐
530.96	534.00	3.04	LST	2.85	94	S048812	☐	N18-033	Core		☐	☐	☐
534.00	537.05	3.05	LST	2.71	89	S048813	☐	N18-033	Core		☐	☐	☐
537.05	540.11	3.06	LST	2.89	94	S048814	☐	N18-033	Core		☐	☐	☐
540.11	543.15	3.04	LST	3.00	99	S048815	☐	N18-033	Core		☐	☐	☐
543.15	546.20	3.05	LST	3.02	99	S048816	☐	N18-033	Core		☐	☐	☐
546.20	549.25	3.05	LST	3.03	99	S048817	☐	N18-033	Core		☐	☐	☐
549.25	552.29	3.04	LST	3.04	100	S048819	☐	N18-033	Core		☐	☐	☐
552.29	555.35	3.06	LST	3.03	99	S048820	☐	N18-033	Core		☐	☐	☐
555.35	558.39	3.04	LST	2.99	98	S048821	☐	N18-033	Core		☐	☐	☐
558.39	561.44	3.05	LST	2.98	98	S048822	☐	N18-033	Core		☐	☐	☐
561.44	564.49	3.05	LST	3.05	100	S048823	☐	N18-033	Core		☐	☐	☐

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From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
0.00	5.79	5.79	OVB	--	No recovery 0-2.65m and 2.74-5.79m							
						--	--	---	---	--	--	0
5.79	105.67	99.88	FLR	FG	largely light to medium grey, thinly laminated, moderate-highly sheared, mudstone with disseminated and laminated pyrite. 36.4 - 65.20m -- Mineralized - medium to dark grey, laminated, sheared, mudstone. Intermittently fractured and gougy. Overall, realgar is trace (0.5% of interval). However, pXRF results show varied Au mineralization. 77.80-85.82 -- dark grey, fine grained, sheared, limey mudstone with intermittent beds of limestone. 85.82 - 98.20m -- Trace Au Mineralization - black, sheared, veiny, laminated mudstone.							
								SD			Py	2
								FR			Re	0.3
								SH			Py	1
						MD	GY	BD	---	--	Py	2

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
105.67	297.90	192.23	SLC	--	Main lithology in this interval is laminated mudstone (turbidites) with intermittent matrix to clast supportted conglomerate and sandstone lenses. Theres are a few mineralized intersections in the C-SLC in this drill hole: 154.20-157.49m -- Au mineralized - medium grey, massive, 'pitted', coarse grained siltstone, with sub rounded quartz granules and pebbles. No realgar observed, however, pXRF results indicate Au mineralization. 157.49-171.90 -- Re/Au mineralized - medium gray, medium grained, well sorted, 'pitted', massive, mineralized, lithic arenite. Realgar mainly observed coating fracture surfaces. Au mineralization observed adjacent to realgar coated fractures and adjacent to 'pitted' rock. 271.88 - 283.7m -- Re-Om-Au Mineralization - dark grey, laminated, sheared, gougy, fractured, altered, 'pitted', Au-Re mineralized mudstone. trace realgar (1%) mineralization - realgar primarily found within quartz veins and veinlets. Au mineralization is strongest adjacent to realgar, adjacent 'pitted' rock, and within gouge rock. orpiment and arsenic sulphide mineralization from 272.15-274.90m - orpiment found on open fracture surfaces and infilling healed fracturtes. 283.70 - 293.22m -- Trace Re-Au mineralization - medium to dark grey, laminated, sheared, soft sediment deformed, pyritic mudstone. Similar lithology to overlying interval, however, alteration and mineralization is significantly weaker. 293.22 - 297.20m -- Re-Au Mineralized - medium to dark grey, altered, gougy, mudstone. Realgar is primarily observed disseminated within gouge rock, and within quartz veinlets. Au mineralization (pXRF) within quartz/Re veins, gouge rock, and lesser in weakly-moderately altered wall rock.			BU				

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
								SD			Re	0.5
								MA			Py	1
						MD	GY	DB			Py	1
						LT	GY	BD	---	--	Py	1
297.90	301.15	3.25	INT	FG	Mineralized - light grey, plag-phyric, massive anorthosite dyke. Previously described in OS-18-266 as a gabbro dyke, the proper term for this rock is anorthosite due to high plag content. Fine grained groundmass is largely composed of sericite-after plagioclase. About 15% of rock volume is composed of 1mm wide anehedral plagioclase phenocrysts. Chilled margin where the dyke comes into contact with the surrounding wall rock. Very fine grained grained at the chilled margin. Grain size increases slightly towards the centre of the dyke. Trace disseminated pyrite. Moderate calcite veining. pXRF indicates trace Au mineralization. Moderately altered and rubbly from 297.9-298.5m							
								RB				
								PO			Py	2
						LT	GY	MA	SER	3I	Re	0.3

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
301.15	393.80	92.65	LST	FG	Interval mainly composed of light grey, fine-medium grained, massive limestone. Moderate chaotic calcite veining. Commom 1mm thick stylolites. 2 main mineralized intersection in the C-LST1. 314.74 - 316.11m -- Realgar mineralization - Light grey, fine-medium grained, massive limestone. 0.5cm thick styolites at low angle to core axis. Calcite vein breccia from 314.83-315.85m. Local massive realgar primarily within calcite vein breccia, lesser on fracture surfaces. 319.00 - 320.66m -- Realgar mineralized - light grey, massive, realgar mineralized limestone with 40cm thick calcite vein. Realgar is massive within the calcite vein. About 20% of calcite vein is replaced with realgar. pXRF shows results as high as 420ppm Au adjacent to realgar in vein.							
								MA				
						LT	GY	BD	---	--	Re	0.1

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From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
0.00	2.65	2.65	0	0	0.00	0	--	--	--	0-2.65m no recovery
2.65	2.74	0.09	0.09	100	0.00	0	0R	3H	3W	OVB
2.74	5.79	3.05	0	0	0.00	0	--	--	1W	2.74-5.79m no recovery
5.79	8.84	3.05	1.46	48	0.89	29	0R	1H	5W	
8.84	11.89	3.05	2.1	69	1.28	42	0R	3H	2W	
11.89	14.94	3.05	2.14	70	0.44	14	0R	3H	3W	
14.94	17.98	3.04	2.6	86	0.69	23	0R	2H	2W	
17.98	21.03	3.05	2.8	92	1.82	60	0R	3H	1W	
21.03	24.08	3.05	0.53	17	0.14	5	0R	2H	1W	low recovery between 22.56-24.08m
24.08	27.13	3.05	1.06	35	0.21	7	1R	1H	1W	low recovery between 24.08- 25.60
27.13	30.18	3.05	2.82	92	1.37	45	2R	1H	1W	
30.18	33.22	3.04	2.42	80	0.49	16	2R	1H	1W	
33.22	36.27	3.05	1.52	50	0.25	8	2R	3H	1W	
36.27	39.32	3.05	1.99	65	0.40	13	1R	3H	1W	
39.32	42.37	3.05	1.84	60	0.72	24	0R	2H	1W	
42.37	45.42	3.05	2.91	95	2.04	67	1R	3H	1W	
45.42	48.46	3.04	2.52	83	0.88	29	1R	3H	1W	
48.46	51.51	3.05	2.72	89	1.15	38	0R	3H	1W	
51.51	54.56	3.05	2.8	92	1.63	53	1R	3H	1W	
54.56	57.61	3.05	2.87	94	0.57	19	0R	3H	1W	gouge with realgar between 55.07-55.24
57.61	60.66	3.05	2.85	93	1.70	56	1R	3H	1W	
60.66	63.70	3.04	2.45	81	0.81	27	0R	3H	1W	
63.70	66.75	3.05	2.62	86	0.72	24	0R	3H	1W	Weak to moderate gougey zone from 64.83-65.10m.
66.75	69.80	3.05	2.9	95	1.96	64	0R	3H	1W	More competent rock.
69.80	72.85	3.05	2.84	93	1.78	58	0R	3H	1W	
72.85	75.90	3.05	2.99	98	2.61	86	0R	3H	1W	
75.90	78.94	3.04	2.64	87	2.06	68	1R	3H	1W	
78.94	81.99	3.05	2.94	96	2.14	70	2R	3H	1W	
81.99	85.04	3.05	2.78	91	1.92	63	2R	3H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
85.04	88.09	3.05	2.89	95	2.31	76	1R	3H	1W	
88.09	91.14	3.05	2.97	97	2.59	85	0R	3H	1W	Competent rock.
91.14	94.18	3.04	2.83	93	1.48	49	0R	3H	1W	Gouge form 92.42-92.44m.
94.18	97.23	3.05	2.89	95	2.33	76	0R	3H	1W	
97.23	100.28	3.05	2.85	93	2.15	70	0R	3H	1W	Competent rock.
100.28	103.33	3.05	2.95	97	2.39	78	0R	3H	1W	Competent rock.
103.33	106.38	3.05	2.85	93	1.87	61	0R	3H	1W	
106.38	109.42	3.04	2.57	85	1.81	60	0R	4H	1W	
109.42	112.47	3.05	2.89	95	1.98	65	0R	4H	1W	
112.47	115.52	3.05	2.83	93	1.87	61	0R	4H	1W	
115.52	118.57	3.05	2.79	91	2.26	74	0R	4H	1W	
118.57	121.62	3.05	2.66	87	1.39	46	0R	4H	1W	Multiple single joints.
121.62	124.66	3.04	2.89	95	2.49	82	0R	3H	1W	multiple single joints
124.66	127.71	3.05	2.91	95	2.38	78	0R	3H	1W	
127.71	130.76	3.05	3.04	100	2.57	84	0R	3H	1W	
130.76	133.81	3.05	3.04	100	2.71	89	0R	3H	1W	
133.81	136.86	3.05	3	98	2.99	98	0R	3H	1W	
136.86	139.90	3.04	3	99	2.99	98	0R	4H	1W	
139.90	142.95	3.05	3.02	99	2.69	88	0R	4H	1W	
142.95	145.99	3.04	3.04	100	2.97	98	0R	4H	1W	
145.99	149.05	3.06	3.04	99	2.63	86	0R	4H	1W	
149.05	152.10	3.05	3.04	100	2.96	97	0R	4H	1W	
152.10	155.14	3.04	3.03	100	3.00	99	0R	3H	1W	
155.14	158.19	3.05	3.04	100	2.40	79	0R	3H	1W	multiple single joints
158.19	161.24	3.05	3.04	100	2.92	96	0R	4H	1W	
161.24	164.29	3.05	3.04	100	2.40	79	0R	4H	1W	
164.29	167.34	3.05	3.01	99	2.63	86	0R	3H	1W	
167.34	170.38	3.04	3.04	100	2.25	74	0R	3H	1W	multiple single joints.
170.38	173.43	3.05	3.04	100	2.46	81	0R	4H	1W	
173.43	176.48	3.05	3.04	100	3.04	100	0R	4H	1W	
176.48	179.53	3.05	3.04	100	3.00	98	0R	4H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
179.53	182.58	3.05	3.04	100	2.24	73	0R	4H	1W	
182.58	185.62	3.04	3.02	99	1.59	52	0R	4H	1W	RBZ
185.62	188.67	3.05	3.04	100	2.81	92	0R	4H	1W	
188.67	191.72	3.05	3.04	100	1.58	52	0R	4H	1W	rbz
191.72	194.77	3.05	3.04	100	2.81	92	0R	4H	1W	
194.77	197.81	3.04	2.86	94	2.86	94	0R	3H	1W	
197.81	200.86	3.05	3.04	100	3.01	99	0R	3H	1W	
200.86	203.91	3.05	3.02	99	3.02	99	0R	3H	1W	
203.91	206.96	3.05	3.04	100	3.00	98	0R	4H	1W	
206.96	210.01	3.05	3.02	99	3.02	99	0R	4H	1W	
210.01	213.06	3.05	3.04	100	3.04	100	0R	4H	1W	
213.06	216.10	3.04	2.93	96	2.58	85	0R	4H	1W	
216.10	219.15	3.05	2.93	96	2.87	94	0R	4H	1W	
219.15	222.20	3.05	3.04	100	3.04	100	0R	5H	1W	
222.20	223.72	1.52	1.52	100	1.51	99	0R	4H	1W	
223.72	224.64	0.92	0.82	89	0.56	61	0R	4H	1W	
224.64	226.16	1.52	1.52	100	1.52	100	0R	4H	1W	
226.16	229.21	3.05	3.02	99	1.70	56	0R	3H	1W	
229.21	232.26	3.05	3	98	2.99	98	0R	4H	1W	
232.26	235.31	3.05	3.04	100	3.04	100	0R	4H	1W	
235.31	238.35	3.04	3.02	99	3.02	99	0R	3H	1W	
238.35	241.40	3.05	2.94	96	2.22	73	0R	3H	1W	
241.40	244.45	3.05	3.04	100	2.58	85	0R	3H	1W	
244.45	247.50	3.05	2.96	97	2.72	89	0R	4H	1W	
247.50	250.55	3.05	3.04	100	2.63	86	0R	3H	1W	multiple single joints
250.55	253.59	3.04	3.01	99	2.56	84	0R	3H	1W	multiple single joints
253.59	256.64	3.05	3	98	2.37	78	0R	3H	1W	multiple single joints
256.64	259.69	3.05	3	98	2.68	88	0R	4H	1W	multiple single joints
259.69	262.74	3.05	1.83	60	0.57	19	0R	3H	1W	RBZ
262.74	265.79	3.05	3.02	99	1.82	60	0R	3H	1W	
265.79	268.83	3.04	3.04	100	1.55	51	0R	3H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
268.83	271.88	3.05	2.9	95	1.62	53	0R	3H	1W	multiple single joints
271.88	274.93	3.05	2.96	97	1.13	37	0R	3H	1W	
274.93	277.98	3.05	3.04	100	2.56	84	0R	3H	1W	RBZ
277.98	281.03	3.05	2.44	80	0.79	26	0R	2H	1W	gouge b/w 280.6-280.9
281.03	284.07	3.04	2.9	95	0.44	14	0R	2H	1W	gouge between 281.63-282.09
284.07	287.12	3.05	3	98	2.70	89	0R	4H	1W	
287.12	290.17	3.05	3	98	1.95	64	0R	3H	1W	mutltiple single joints
290.17	293.22	3.05	3	98	1.23	40	0R	3H	1W	
293.22	296.27	3.05	2.95	97	0.91	30	0R	1H	1W	gouge b/w 294.0-294.4 containing realgar
296.27	299.31	3.04	2.6	86	0.81	27	1R	1H	1W	
299.31	302.36	3.05	2.69	88	1.59	52	2R	3H	1W	
302.36	305.41	3.05	3	98	1.89	62	3R	3H	1W	
305.41	308.46	3.05	2.84	93	1.60	52	2R	3H	1W	
308.46	311.51	3.05	2.89	95	1.68	55	3R	3H	1W	
311.51	314.55	3.04	3	99	2.21	73	3R	3H	1W	
314.55	317.60	3.05	3	98	2.08	68	3R	3H	1W	
317.60	320.65	3.05	2.84	93	1.59	52	4R	3H	1W	
320.65	323.70	3.05	2.85	93	2.38	78	4R	3H	1W	
323.70	326.75	3.05	3	98	2.24	73	4R	3H	1W	
326.75	329.80	3.05	3	98	2.29	75	4R	3H	1W	
329.80	332.84	3.04	2.96	97	2.53	83	4R	4H	1W	beginning of competent rock.
332.84	335.89	3.05	3	98	2.59	85	4R	4H	1W	
335.89	338.94	3.05	3	98	2.51	82	4R	4H	1W	
338.94	341.99	3.05	2.96	97	1.69	55	4R	4H	1W	Rock competent b/w 340.27 to 341.14 but fracture running through the core axis. Therefore, RQD is low.
341.99	345.03	3.04	3	99	2.66	88	2R	3H	1W	Reactivity is high in the limestone section of the interval and non existant within the mud/siltstone unit.
345.03	348.08	3.05	3	98	2.63	86	2R	4H	1W	
348.08	351.13	3.05	3	98	2.47	81	3R	4H	1W	
351.13	354.18	3.05	2.97	97	2.17	71	3R	4H	1W	
354.18	357.23	3.05	3	98	1.64	54	2R	3H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
357.23	360.27	3.04	2.93	96	1.15	38	2R	3H	1W	
360.27	363.32	3.05	3	98	2.93	96	3R	3H	1W	
363.32	366.37	3.05	2.97	97	2.57	84	4R	3H	1W	
366.37	369.42	3.05	3	98	3.00	98	4R	4H	1W	
369.42	372.47	3.05	3	98	3.00	98	4R	4H	1W	
372.47	375.51	3.04	3.04	100	3.04	100	4R	4H	1W	
375.51	378.56	3.05	3.05	100	2.81	92	4R	4H	1W	
378.56	381.61	3.05	3.05	100	2.59	85	4R	4H	1W	
381.61	384.66	3.05	2.99	98	2.89	95	4R	4H	1W	
384.66	387.71	3.05	3.01	99	2.80	92	4R	4H	1W	
387.71	390.75	3.04	3.04	100	2.92	96	4R	3H	1W	
390.75	393.80	3.05	3.04	100	2.94	96	4R	4H	1W	

OS -18-268

Nadaleen
Conrad Zone

Archer,Cathro & Associates (1981) Limited

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
0.00	0.00	0.00	-QC-	0.00	0	s050160	☐	N18-029	core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	R613236	☐	N18-066	Core	CS9	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	s050180	☐	N18-029	core	CS9	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	s050146	☐	N18-029	core	CS7	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	s050140	☐	N18-028	core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	s050132	☐	N18-028	core	CS8	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S050082	☐	N18-026	Core	CS2	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S050068	☐	N18-026	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S050066	☐	N18-026	Core	CS4	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S050059	☐	N18-024	core	CS12	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S050048	☐	N18-024	core	CS2	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	s050104	☐	N18-028	core	CS7	☐	☐	☐
5.79	8.84	3.05	OVB, FLR	1.46	48	S050038	☐	N18-024	core		☐	☐	☐
8.84	11.89	3.05	FLR	2.10	69	S050039	☐	N18-024	core		☐	☐	☐
11.89	14.94	3.05	FLR	2.14	70	S050040	☐	N18-024	core		☐	☐	☐
14.94	17.98	3.04	FLR	2.60	86	S050041	☐	N18-024	core		☐	☐	☐
17.98	21.03	3.05	FLR	2.80	92	S050042	☐	N18-024	core		☐	☐	☐
21.03	24.08	3.05	FLR	0.53	17	S050043	☐	N18-024	core		☐	☐	☐
24.08	27.13	3.05	FLR	1.06	35	S050044	☐	N18-024	core		☐	☐	☐
27.13	30.18	3.05	FLR	2.82	92	S050045	☐	N18-024	core		☐	☐	☐
30.18	33.22	3.04	FLR	2.42	80	S050046	☐	N18-024	core		☐	☐	☐
33.22	34.75	1.53	FLR	0.84	55	S050047	☐	N18-024	core		☐	☐	☐
34.75	36.00	1.25	FLR	0.68	54	S050049	☐	N18-024	core		☐	☐	☐
36.00	37.74	1.74	FLR	1.15	66	S050050	☐	N18-024	core		☐	☐	☐
37.74	39.29	1.55	FLR	1.09	70	S050051	☐	N18-024	core		☐	☐	☐
37.74	39.29	1.55	FLR	1.09	70	S050052	☐	N18-024	core		☐	☑	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
39.29	41.18	1.89	FLR	1.18	62	S050053	☐	N18-024	core		☐	☐	☐
41.18	42.56	1.38	FLR	1.02	74	S050054	☐	N18-024	core		☐	☐	☐
42.56	44.04	1.48	FLR	1.40	95	S050055	☐	N18-024	core		☐	☐	☐
42.56	44.04	1.48	FLR	1.40	95	S050056	☐	N18-024	core		☐	☐	☑
44.04	45.79	1.75	FLR	1.64	94	S050057	☐	N18-024	core		☐	☐	☐
45.79	47.03	1.24	FLR	0.89	72	S050058	☐	N18-024	core		☐	☐	☐
47.03	48.46	1.43	FLR	1.17	82	S050060	☐	N18-024	core		☐	☐	☐
48.46	49.99	1.53	FLR	1.27	83	S050061	☐	N18-026	Core		☐	☐	☐
49.99	51.96	1.97	FLR	1.91	97	S050062	☐	N18-026	Core		☐	☐	☐
51.96	53.04	1.08	FLR	1.08	100	S050063	☐	N18-026	Core		☐	☐	☐
53.04	54.67	1.63	FLR	1.43	88	S050064	☐	N18-026	Core		☐	☐	☐
54.67	56.08	1.41	FLR	1.40	99	S050065	☐	N18-026	Core		☐	☐	☐
56.08	57.61	1.53	FLR	1.26	82	S050067	☐	N18-026	Core		☐	☐	☐
57.61	60.66	3.05	FLR	2.85	93	S050069	☐	N18-026	Core		☐	☐	☐
60.66	63.70	3.04	FLR	2.45	81	S050070	☐	N18-026	Core		☐	☐	☐
63.70	65.23	1.53	FLR	1.18	77	S050071	☐	N18-026	Core		☐	☐	☐
65.23	66.75	1.52	FLR	1.48	97	S050072	☐	N18-026	Core		☐	☐	☐
66.75	69.80	3.05	FLR	2.90	95	S050073	☐	N18-026	Core		☐	☐	☐
69.80	72.85	3.05	FLR	2.84	93	S050074	☐	N18-026	Core		☐	☐	☐
72.85	75.90	3.05	FLR	2.99	98	S050075	☐	N18-026	Core		☐	☐	☐
75.90	78.94	3.04	FLR	2.64	87	S050076	☐	N18-026	Core		☐	☐	☐
75.90	78.94	3.04	FLR	2.64	87	S050077	☐	N18-026	Core		☐	☐	☑
78.94	81.99	3.05	FLR	2.94	96	S050078	☐	N18-026	Core		☐	☐	☐
81.99	85.04	3.05	FLR	2.78	91	S050079	☐	N18-026	Core		☐	☐	☐
85.04	88.68	3.64	FLR	3.60	99	S050081	☐	N18-026	Core		☐	☐	☐
88.68	91.14	2.46	FLR	2.46	100	S050083	☐	N18-026	Core		☐	☐	☐
91.14	92.51	1.37	FLR	1.37	100	S050084	☐	N18-026	Core		☐	☐	☐
92.51	95.50	2.99	FLR	2.79	93	S050085	☐	N18-026	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
95.50	98.52	3.02	FLR	2.90	96	S050086	☐	N18-026	Core		☐	☐	☐
98.52	101.50	2.98	FLR	2.98	100	S050087	☐	N18-026	Core		☐	☐	☐
101.50	107.47	5.97	FLR	5.88	98	w233051	☐	N18-C02	Chip		☐	☐	☐
107.47	109.42	1.95	SLC	1.75	90	R613220	☐	N18-066	Core		☐	☐	☐
107.47	113.48	6.01	SLC	6.01	100	w233052	☐	N18-C02	Chip		☐	☐	☐
109.42	112.47	3.05	SLC	2.89	95	R613221	☐	N18-066	Core		☐	☐	☐
112.47	115.52	3.05	SLC	2.83	93	R613222	☐	N18-066	Core		☐	☐	☐
113.48	119.50	6.02	SLC	5.90	98	w233053	☐	N18-C02	Chip		☐	☐	☐
115.52	118.57	3.05	SLC	2.79	91	R613223	☐	N18-066	Core		☐	☐	☐
118.57	119.50	0.93	SLC	0.93	100	R613224	☐	N18-066	Core		☐	☐	☐
118.57	119.50	0.93	SLC	0.93	100	R613225	☐	N18-066	Core		☐	☑	☐
119.50	122.50	3.00	SLC	2.80	93	s050088	☐	N18-026	Core		☐	☐	☐
122.50	125.54	3.04	SLC	2.54	84	s050089	☐	N18-026	Core		☐	☐	☐
125.54	128.47	2.93	SLC	2.69	92	s050090	☐	N18-026	Core		☐	☐	☐
128.47	131.46	2.99	SLC	2.99	100	s050091	☐	N18-026	Core		☐	☐	☐
131.46	134.48	3.02	SLC	2.93	97	s050092	☐	N18-026	Core		☐	☐	☐
134.48	137.47	2.99	SLC	2.98	100	s050093	☐	N18-026	Core		☐	☐	☐
137.47	140.49	3.02	SLC	2.94	97	s050094	☐	N18-026	Core		☐	☐	☐
140.49	143.52	3.03	SLC	3.03	100	s050095	☐	N18-026	Core		☐	☐	☐
143.52	146.50	2.98	SLC	2.93	98	s050096	☐	N18-026	Core		☐	☐	☐
146.50	149.47	2.97	SLC	2.96	100	s050097	☐	N18-026	Core		☐	☐	☐
149.47	152.45	2.98	SLC	2.93	98	s050098	☐	N18-026	Core		☐	☐	☐
152.45	154.23	1.78	SLC	1.38	78	s050099	☐	N18-026	Core		☐	☐	☐
152.45	154.23	1.78	SLC	1.38	78	s050100	☐	N18-026	Core		☐	☑	☐
154.23	155.14	0.91	SLC	0.91	100	s050101	☐	N18-028	core		☐	☐	☐
155.14	157.44	2.30	SLC	2.24	97	s050102	☐	N18-028	core		☐	☐	☐
157.44	158.83	1.39	SLC	1.10	79	s050103	☐	N18-028	core		☐	☐	☐
158.83	160.30	1.47	SLC	1.47	100	s050105	☐	N18-028	core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
160.30	162.35	2.05	SLC	1.96	96	s050106	☐	N18-028	core		☐	☐	☐
162.35	163.35	1.00	SLC	0.95	95	s050107	☐	N18-028	core		☐	☐	☐
162.35	163.35	1.00	SLC	0.95	95	s050108	☐	N18-028	core		☐	☑	☐
163.35	165.27	1.92	SLC	1.80	94	s050109	☐	N18-028	core		☐	☐	☐
165.27	166.80	1.53	SLC	1.52	99	s050110	☐	N18-028	core		☐	☐	☐
166.80	168.00	1.20	SLC	1.13	94	s050111	☐	N18-028	core		☐	☐	☐
168.00	169.00	1.00	SLC	0.87	87	s050112	☐	N18-028	core		☐	☐	☐
169.00	171.00	2.00	SLC	2.00	100	s050113	☐	N18-028	core		☐	☐	☐
171.00	174.00	3.00	SLC	2.95	98	s050114	☐	N18-028	core		☐	☐	☐
174.00	176.48	2.48	SLC	2.30	93	s050115	☐	N18-028	core		☐	☐	☐
176.48	179.53	3.05	SLC	3.04	100	s050116	☐	N18-028	core		☐	☐	☐
179.53	182.58	3.05	SLC	3.04	100	s050117	☐	N18-028	core		☐	☐	☐
182.58	185.62	3.04	SLC	3.02	99	s050118	☐	N18-028	core		☐	☐	☐
185.62	188.67	3.05	SLC	3.04	100	s050119	☐	N18-028	core		☐	☐	☐
188.67	191.72	3.05	SLC	3.04	100	s050120	☐	N18-028	core		☐	☐	☐
191.72	194.77	3.05	SLC	3.04	100	s050121	☐	N18-028	core		☐	☐	☐
194.77	200.86	6.09	SLC	5.90	97	W233056	☐	N18-C02	Chip		☐	☐	☐
200.86	206.96	6.10	SLC	6.06	99	W233057	☐	N18-C02	Chip		☐	☐	☐
206.96	213.06	6.10	SLC	6.06	99	W233058	☐	N18-C02	Chip		☐	☐	☐
213.06	219.15	6.09	SLC	5.86	96	W233059	☐	N18-C02	Chip		☐	☐	☐
219.15	225.25	6.10	SLC	6.05	99	W233064	☐	N18-C02	Chip		☐	☐	☐
225.25	226.16	0.91	SLC	0.90	99	R613226	☐	N18-066	Core		☐	☐	☐
225.25	231.35	6.10	SLC	6.00	98	W233065	☐	N18-C02	Chip		☐	☐	☐
226.16	229.21	3.05	SLC	3.02	99	R613227	☐	N18-066	Core		☐	☐	☐
226.16	229.21	3.05	SLC	3.02	99	R613228	☐	N18-066	Core		☐	☐	☑
229.21	232.26	3.05	SLC	3.00	98	R613229	☐	N18-066	Core		☐	☐	☐
231.35	237.45	6.10	SLC	6.05	99	W233066	☐	N18-C02	Chip		☐	☐	☐
232.26	235.31	3.05	SLC	3.04	100	R613230	☐	N18-066	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
235.31	238.35	3.04	SLC	3.02	99	R613231	☐	N18-066	Core		☐	☐	☐
237.45	243.55	6.10	SLC	5.98	98	W233067	☐	N18-C02	Chip		☐	☐	☐
238.35	241.40	3.05	SLC	2.94	96	R613232	☐	N18-066	Core		☐	☐	☐
241.40	244.45	3.05	SLC	3.04	100	R613233	☐	N18-066	Core		☐	☐	☐
243.55	249.65	6.10	SLC	6.02	99	W233068	☐	N18-C02	Chip		☐	☐	☐
244.45	247.50	3.05	SLC	2.96	97	R613234	☐	N18-066	Core		☐	☐	☐
247.50	249.65	2.15	SLC	2.05	95	R613235	☐	N18-066	Core		☐	☐	☐
249.65	252.70	3.05	SLC	3.05	100	s050122	☐	N18-028	core		☐	☐	☐
252.70	255.75	3.05	SLC	3.03	99	s050123	☐	N18-028	core		☐	☐	☐
255.75	258.80	3.05	SLC	3.05	100	s050124	☐	N18-028	core		☐	☐	☐
258.80	261.85	3.05	SLC	2.04	67	s050125	☐	N18-028	core		☐	☐	☐
261.85	264.90	3.05	SLC	2.72	89	s050126	☐	N18-028	core		☐	☐	☐
264.90	267.90	3.00	SLC	3.00	100	s050127	☐	N18-028	core		☐	☐	☐
267.90	269.82	1.92	SLC	1.89	98	s050128	☐	N18-028	core		☐	☐	☐
269.82	271.88	2.06	SLC	1.70	83	s050129	☐	N18-028	core		☐	☐	☐
271.88	272.96	1.08	SLC	0.92	85	s050130	☐	N18-028	core		☐	☐	☐
272.96	274.00	1.04	SLC	1.01	97	s050131	☐	N18-028	core		☐	☐	☐
274.00	274.93	0.93	SLC	0.74	80	s050133	☐	N18-028	core		☐	☐	☐
274.93	277.00	2.07	SLC	2.02	98	s050134	☐	N18-028	core		☐	☐	☐
277.00	279.15	2.15	SLC	1.80	84	s050135	☐	N18-028	core		☐	☐	☐
277.00	279.15	2.15	SLC	1.80	84	s050136	☐	N18-028	core		☐	☐	☑
279.15	281.03	1.88	SLC	1.33	71	s050137	☐	N18-028	core		☐	☐	☐
281.03	282.50	1.47	SLC	1.40	95	s050138	☐	N18-028	core		☐	☐	☐
282.50	284.00	1.50	SLC	1.35	90	s050139	☐	N18-028	core		☐	☐	☐
284.00	285.50	1.50	SLC	1.39	93	s050141	☐	N18-029	core		☐	☐	☐
285.50	288.51	3.01	SLC	2.79	93	s050142	☐	N18-029	core		☐	☐	☐
288.51	291.50	2.99	SLC	2.99	100	s050143	☐	N18-029	core		☐	☐	☐
291.50	293.22	1.72	SLC	1.46	85	s050144	☐	N18-029	core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
293.22	294.70	1.48	SLC	1.48	100	s050145	☐	N18-029	core		☐	☐	☐
294.70	295.75	1.05	SLC	0.75	71	s050147	☐	N18-029	core		☐	☐	☐
295.75	297.00	1.25	SLC	1.25	100	s050148	☐	N18-029	core		☐	☐	☐
297.00	299.10	2.10	SLC	1.79	85	s050149	☐	N18-029	core		☐	☐	☐
299.10	301.15	2.05	INT	1.89	92	s050150	☐	N18-029	core		☐	☐	☐
301.15	302.85	1.70	LST, INT	1.43	84	s050151	☐	N18-029	core		☐	☐	☐
302.85	304.63	1.78	LST	1.78	100	s050152	☐	N18-029	core		☐	☐	☐
304.63	307.60	2.97	LST	2.97	100	s050153	☐	N18-029	core		☐	☐	☐
307.60	309.00	1.40	LST	1.29	92	s050154	☐	N18-029	core		☐	☐	☐
309.00	312.05	3.05	LST	3.02	99	s050155	☐	N18-029	core		☐	☐	☐
312.05	315.10	3.05	LST	2.92	96	s050156	☐	N18-029	core		☐	☐	☐
315.10	316.10	1.00	LST	0.97	97	s050157	☐	N18-029	core		☐	☐	☐
316.10	319.00	2.90	LST	2.80	97	s050158	☐	N18-029	core		☐	☐	☐
319.00	320.65	1.65	LST	1.63	99	s050159	☐	N18-029	core		☐	☐	☐
320.65	323.70	3.05	LST	2.85	93	s050161	☐	N18-029	core		☐	☐	☐
323.70	326.75	3.05	LST	3.00	98	s050162	☐	N18-029	core		☐	☐	☐
326.75	329.80	3.05	LST	3.00	98	s050163	☐	N18-029	core		☐	☐	☐
329.80	332.84	3.04	LST	2.96	97	s050164	☐	N18-029	core		☐	☐	☐
332.84	335.89	3.05	LST	3.00	98	s050165	☐	N18-029	core		☐	☐	☐
335.89	338.94	3.05	LST	3.00	98	s050166	☐	N18-029	core		☐	☐	☐
338.94	341.99	3.05	LST	2.96	97	s050167	☐	N18-029	core		☐	☐	☐
341.99	345.03	3.04	LST	3.00	99	s050168	☐	N18-029	core		☐	☐	☐
341.99	345.03	3.04	LST	3.00	99	s050169	☐	N18-029	core		☐	☐	☑
345.03	348.08	3.05	LST	3.00	98	s050170	☐	N18-029	core		☐	☐	☐
348.08	351.13	3.05	LST	3.00	98	s050171	☐	N18-029	core		☐	☐	☐
351.13	354.18	3.05	LST	2.97	97	s050172	☐	N18-029	core		☐	☐	☐
354.18	357.23	3.05	LST	3.00	98	s050173	☐	N18-029	core		☐	☐	☐
354.18	357.23	3.05	LST	3.00	98	s050174	☐	N18-029	core		☐	☑	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
357.23	360.27	3.04	LST	2.93	96	s050175	☐	N18-029	core		☐	☐	☐
360.27	363.32	3.05	LST	3.00	98	s050176	☐	N18-029	core		☐	☐	☐
363.32	366.37	3.05	LST	2.97	97	s050177	☐	N18-029	core		☐	☐	☐
366.37	369.42	3.05	LST	3.00	98	s050178	☐	N18-029	core		☐	☐	☐
369.42	372.47	3.05	LST	3.00	98	s050179	☐	N18-029	core		☐	☐	☐
372.47	375.51	3.04	LST	3.04	100	s050181	☐	N18-031	core		☐	☐	☐
375.51	378.56	3.05	LST	3.05	100	s050182	☐	N18-031	core		☐	☐	☐
378.56	381.61	3.05	LST	3.05	100	s050183	☐	N18-031	core		☐	☐	☐
381.61	384.66	3.05	LST	2.99	98	s050184	☐	N18-031	core		☐	☐	☐
384.66	387.71	3.05	LST	3.01	99	s050185	☐	N18-031	core		☐	☐	☐
387.71	390.75	3.04	LST	3.04	100	s050186	☐	N18-031	core		☐	☐	☐
390.75	393.80	3.05	LST	3.04	100	s050187	☐	N18-031	core		☐	☐	☐

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From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
0.00	1.48	1.48	-?-	--	No Recovery							
						--	--	---	---	--	--	0
1.48	1.52	0.04	LST	FG	light grey and light brown, fine grained, massive moderately weathered limestone. Reacts moderately to HCL.							
						LT	GY	MA	OXI	2I	--	0
						LT	BN					
1.52	127.97	126.45	MST	FG	Light bluish grey, bedded, fractured mudstone. Moderately to highly oxidized near surface, where oxidization penetrates wall rock. Oxidization weakens with depth, occurring primarily on fracture surfaces. Sporadic fine-medium grained quartz rich sand laminations. Intermittently gouged.							
						LT	GY					
						LT	GN	BD	OXI	3I	--	0
127.97	135.58	7.61	LST	FG	Light to medium gray, planar laminated/bedded mudstone interbedded with limestone. About 50% of interval is composed of O-MST 1. Limestone varies between high carbonate limestone and mud rich limestone. Limestone is fine-medium grained. Bedding at 45TCA. Intermittent moderately gouged rock. Trace calcite veins and veinlets Trace blebby pyrite.							
						LT	GY	BD	CLY	2I	Py	0.5
						MD	GY	FR				
135.58	138.02	2.44	DMT	MG	medium gray, matrix supported, sub-angular to angular, calcite diamictite. matrix makes up about 70% of volume and is composed of fine to medium grained carbonate grains. Clasts are granule-pebble sized with a few cobbles, imbricated at 50TCA, carbonate and siliciclastic in composition.							
						MD	GY	DB	---	--	Py	0.5
								PB				

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
138.02	202.18	64.16	LST	FG	From 138.02-142.20m laminated, pyritic O-MST1 with bedding parallel calcite veins. From 142.20 - 155.40m light grey, fine-medium grained bedded limestone interbedded with calcareous conglomerate. The remainder of the interval is made up of a light grey limestone interbedded with black mudstone. Folded from 155.40-158.70m and sheared from 190.45-202.18m.							
						MD	GY					
202.18	279.88	77.70	MST	FG	Interval is largely composed of green and maroon mudstone, with trace dolomite and quartz veinlets. Sporadic, thin, crystaline quartz laminations along shear plane. From 243.81-245.00m and 277.72-278.40m - light grey, fine grained dolostone with abundant 1mm thick, black lines.							
						LT	GY	SH	---	--	--	0
279.88	338.45	58.57	LST	FG	planar laminated, calcareous mudstone interlayered with clast supported limestone debrite.							
						LT	GY	BD	---	--	--	0
						MD	GY	SD				
338.45	359.36	20.91	MST	FG	Tan, maroom, and dark grey, bedded, mudstone. Quartz vein from 345.10-345.37m and from 346.33-346.79m. Trace bedding parallel quartz veinlets. Bedding at 40TCA. Common, thin (1-3mm thick), quartz rich, folioform sandstone laminations Silicified mudstome from 355.75-356.62m. Dominantly tan from 338.45-343.90m. Dark grey from 343.90-348.50m. Tan from 343.50-351.30m. Maroon from 351.30-359.36m.							
						MD	RD					
						DK	GY					
						LT	TN	BD	SIL	1I	--	0

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From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
0.00	1.48	1.48	0	0	0.00	0	--	--	--	No Recovery
1.48	1.52	0.04	0.04	100	0.00	0	4R	3H	4W	limestone
1.52	3.05	1.53	0.69	45	0.00	0	0R	4H	3W	
3.05	6.10	3.05	2.11	69	0.14	5	0R	3H	3W	
6.10	9.14	3.04	2.39	79	0.81	27	0R	3H	3W	rubble zone 6.38 - 6.80, joints outwith rubble zones are all bedding-parallel
9.14	12.19	3.05	2.51	82	0.59	19	0R	3H	3W	rubble zone 9.65 - 9.91 and 11.3 - 11.75. joints outwith rubble zones are bedding-parallel
12.19	15.24	3.05	2.84	93	0.64	21	0R	3H	3W	rubble zone 12.27 - 12.55 and 13.20 - 13.42. Joints outwith rubble zones are bedding-parallel
15.24	18.29	3.05	2.53	83	0.86	28	0R	3H	3W	rubble zone 15.38 - 16.48. joints outwith rubble zone largely vedding-parallel with some randomly oriented fractures.
18.29	21.34	3.05	2.56	84	0.97	32	0R	1H	3W	rubble zone 18.29 - 19.36 with some blocks up to 10cm. No systematic jointing outwith rubble zones. Soft gouge zone 19.81 - 21.34
21.34	22.86	1.52	1.4	92	0.24	16	0R	2H	3W	rubble zone 22.08 - 22.86 and 23.67 - 23.95. joints outwith rubble zone are bedding-parallel with additional non-systematic fratures
22.86	25.91	3.05	2.43	80	0.59	19	0R	3H	3W	rubble zone 23.70 - 23.94. fractures outwith rubble zone are dominantly bedding-parallel with addiotional randomly oriented fractures
25.91	28.96	3.05	2.46	81	0.22	7	0R	3H	3W	rubble zone 26.00 - 27.10. fractures outwith rubble zone are bedding-parallel
28.96	32.00	3.04	2.61	86	0.00	0	0R	3H	3W	essentially all fractures are bedding-parallel with bedding changing relative tca down the run.
32.00	35.05	3.05	1.97	65	0.34	11	0R	3H	3W	rubble zone 33.16 - 33.42. fractures outwith rubble zone are dominantly bedding-parallel

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
35.05	38.10	3.05	2.4	79	0.28	9	0R	3H	2W	rubble zone 36.93 - 97.30. Fractures outwith damage zone are dominantly bedding-parallel. Change in joint angle tca reflects change in bedding angle relative tca
38.10	41.15	3.05	2.37	78	0.86	28	0R	2H	2W	softer cataclasite at 40.20
41.15	44.20	3.05	2.46	81	0.11	4	0R	1H	2W	gouge rubble zone 41.65 - 42.00
44.20	47.24	3.04	2.1	69	0.93	31	0R	1H	2W	gouge rubble zone 47.0 - 47.24
47.24	50.29	3.05	1.72	56	0.70	23	0R	1H	2W	gouge rubble zone 48.47 - 48.77
50.29	53.34	3.05	2.18	71	0.78	26	0R	1H	2W	gouge zone at 52.52 - 52.79. core outwith gouge zone much mnore competent with bedding-parallel fractures.
53.34	56.39	3.05	3	98	1.70	56	0R	3H	2W	much more competent, fractures are dominantly bedding-parallel
56.39	59.44	3.05	2.8	92	1.00	33	0R	2H	2W	bedding-parallel fractures
59.44	62.48	3.04	2.88	95	1.25	41	0R	2H	2W	
62.48	65.53	3.05	2.3	75	0.96	31	0R	2H	2W	almost-gouge zone 62.52 - 63.85 and 64.85 - 65.55. fracture set bedding-parallel, clay rich
65.53	68.58	3.05	2.93	96	0.63	21	0R	2H	2W	rubble zone 66.69 -67.26. very few fractures outwith this zone
68.58	71.63	3.05	2.84	93	1.58	52	0R	2H	1W	
71.63	74.67	3.04	2.17	71	0.71	23	0R	2H	1W	
74.67	77.72	3.05	2.83	93	0.88	29	0R	2H	1W	
77.72	80.77	3.05	2.57	84	1.04	34	0R	1H	1W	rubble gouge zone at 78m
80.77	83.82	3.05	1.84	60	0.90	30	0R	1H	1W	rubble gouge zone.
83.82	86.87	3.05	2.4	79	1.13	37	0R	1H	1W	rubble gouge zone.
86.87	89.92	3.05	2.66	87	1.51	50	0R	1H	1W	
89.92	92.96	3.04	2.97	98	1.62	53	0R	1H	1W	
92.96	96.01	3.05	2.75	90	1.40	46	0R	2H	1W	
96.01	99.06	3.05	2.11	69	0.65	21	0R	1H	1W	rubble gouge zone.
99.06	102.11	3.05	2.87	94	1.43	47	0R	1H	1W	Rubble gouge area.
102.11	105.16	3.05	3	98	2.49	82	0R	2H	1W	
105.16	108.20	3.04	2.71	89	1.30	43	0R	2H	1W	rubble gouge zone.
108.20	111.25	3.05	2.77	91	2.08	68	0R	2H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
111.25	114.30	3.05	2.85	93	2.22	73	0R	1H	1W	Competent rock with local gouge.
114.30	117.35	3.05	2.78	91	1.29	42	0R	1H	1W	
117.35	120.40	3.05	2.79	91	2.30	75	0R	2H	1W	
120.40	123.44	3.04	2.93	96	1.87	62	0R	2H	1W	
123.44	126.49	3.05	2.8	92	0.85	28	0R	1H	1W	
126.49	129.54	3.05	2.7	89	0.82	27	2R	1H	1W	
129.54	132.59	3.05	2.36	77	0.49	16	2R	1H	1W	
132.59	135.64	3.05	2.97	97	1.71	56	0R	1H	1W	
135.64	138.68	3.04	2.68	88	1.99	65	0R	2H	1W	
138.68	141.73	3.05	2.66	87	1.77	58	2R	2H	1W	
141.73	144.78	3.05	2.8	92	1.19	39	3R	2H	1W	
144.78	147.83	3.05	2.26	74	0.60	20	3R	2H	1W	rubble zone with local gouge.
147.83	150.88	3.05	2.94	96	2.32	76	3R	2H	1W	competent rock with local gouge.
150.88	153.92	3.04	3	99	2.37	78	4R	2H	1W	
153.92	156.97	3.05	3.04	100	2.01	66	3R	2H	1W	multiple single joints
156.97	160.02	3.05	3.04	100	1.05	34	3R	3H	1W	rbz
160.02	163.07	3.05	3.02	99	1.01	33	3R	3H	1W	
163.07	166.12	3.05	2.77	91	0.62	20	3R	3H	1W	RBZ
166.12	169.16	3.04	3.04	100	1.92	63	3R	3H	1W	
169.16	172.21	3.05	2.97	97	1.85	61	3R	3H	1W	
172.21	175.26	3.05	3.04	100	1.36	45	3R	3H	1W	
175.26	178.31	3.05	3.04	100	2.06	68	3R	3H	1W	
178.31	181.36	3.05	2.97	97	1.89	62	3R	3H	1W	
181.36	184.40	3.04	3.04	100	2.24	74	3R	3H	1W	
184.40	187.45	3.05	3.04	100	1.99	65	4R	3H	1W	
187.45	190.50	3.05	3.04	100	1.55	51	4R	3H	1W	
190.50	193.55	3.05	3.04	100	1.68	55	3R	3H	1W	
193.55	196.60	3.05	3.04	100	1.31	43	3R	3H	1W	
196.60	199.64	3.04	2.74	90	1.70	56	3R	2H	1W	competent rock with gouge.
199.64	202.69	3.05	2.7	89	1.01	33	3R	2H	1W	competent rock with gouge.
202.69	205.74	3.05	2.95	97	2.57	84	0R	2H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
205.74	208.79	3.05	2.85	93	2.71	89	0R	3H	1W	
208.79	211.84	3.05	2.89	95	2.52	83	0R	2H	1W	
211.84	214.88	3.04	3.01	99	2.88	95	0R	3H	1W	
214.88	217.93	3.05	3.05	100	2.87	94	0R	3H	1W	
217.93	220.98	3.05	3	98	1.86	61	0R	2H	1W	
220.98	222.20	1.22	0.93	76	0.87	71	0R	3H	1W	
222.20	225.25	3.05	2.83	93	2.50	82	0R	3H	1W	
225.25	228.30	3.05	2.47	81	2.17	71	0R	2H	1W	competent rock with gouge.
228.30	231.34	3.04	2.41	79	1.69	56	0R	2H	1W	
231.34	234.39	3.05	3.02	99	2.96	97	0R	3H	1W	
234.39	237.44	3.05	3.04	100	2.19	72	0R	3H	1W	
237.44	240.49	3.05	3.02	99	1.41	46	0R	3H	1W	
240.49	243.54	3.05	3.01	99	2.42	79	0R	3H	1W	
243.54	246.58	3.04	2.9	95	1.18	39	1R	3H	1W	RBZ
246.58	249.63	3.05	2.87	94	2.39	78	0R	3H	1W	
249.63	252.68	3.05	2.86	94	2.56	84	0R	3H	1W	
252.68	255.73	3.05	3.04	100	1.63	53	0R	3H	1W	RBZ
255.73	258.78	3.05	2.98	98	2.02	66	0R	3H	1W	
258.78	261.82	3.04	3.04	100	2.40	79	0R	3H	1W	
261.82	264.87	3.05	2.76	90	1.36	45	0R	3H	1W	
264.87	267.92	3.05	2.97	97	1.97	65	0R	3H	1W	
267.92	270.97	3.05	2.97	97	2.17	71	0R	3H	1W	
270.97	274.02	3.05	2.93	96	2.49	82	3R	3H	1W	
274.02	277.06	3.04	2.91	96	2.74	90	4R	3H	1W	
277.06	280.11	3.05	2.58	85	1.16	38	3R	3H	1W	Tightly spaced fractures with clay-rich sections of shearing.
280.11	283.16	3.05	2.62	86	1.08	35	3R	3H	1W	Rubble zone
283.16	286.21	3.05	2.19	72	0.41	13	3R	3H	1W	Rubble zone
286.21	289.26	3.05	2.81	92	1.70	56	3R	3H	1W	Rubble zone
289.26	292.30	3.04	2.89	95	2.81	92	3R	3H	1W	
292.30	295.35	3.05	2.57	84	1.24	41	3R	3H	1W	
295.35	298.40	3.05	3	98	2.20	72	3R	3H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
298.40	301.45	3.05	2.86	94	2.24	73	1R	3H	1W	
301.45	304.50	3.05	2.89	95	1.27	42	2R	3H	1W	
304.50	307.54	3.04	2.73	90	1.36	45	3R	3H	1W	
307.54	310.59	3.05	3.05	100	2.45	80	4R	3H	1W	
310.59	313.64	3.05	3	98	2.04	67	4R	3H	1W	
313.64	316.69	3.05	3	98	2.70	89	4R	3H	1W	
316.69	319.74	3.05	2.97	97	2.21	72	4R	3H	1W	
319.74	322.78	3.04	3	99	2.90	95	4R	3H	1W	
322.78	325.83	3.05	3.02	99	2.95	97	3R	3H	1W	
325.83	328.88	3.05	2.98	98	2.80	92	3R	3H	1W	
328.88	331.93	3.05	2.82	92	1.64	54	3R	3H	1W	rbz
331.93	334.98	3.05	2.97	97	1.35	44	3R	3H	1W	
334.98	338.02	3.04	2.93	96	0.81	27	2R	3H	1W	rbz
338.02	341.07	3.05	3	98	2.52	83	2R	2H	1W	small rbz from 338.29-338.52.
341.07	344.12	3.05	2.84	93	1.85	61	0R	2H	1W	
344.12	347.17	3.05	3.04	100	3.00	98	0R	2H	1W	
347.17	350.22	3.05	2.98	98	2.98	98	0R	2H	1W	
350.22	353.26	3.04	3.03	100	3.03	100	0R	2H	1W	
353.26	356.31	3.05	2.97	97	2.55	84	0R	2H	1W	
356.31	359.36	3.05	2.95	97	0.94	31	0R	2H	1W	

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From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
0.00	0.00	0.00	-QC-	0.00	0	S050207	☐	N18-031	core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S050211	☐	N18-031	core	CS10	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S050242	☐	N18-034	Core	CS9	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S050252	☐	N18-034	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S050259	☐	N18-034	Core	CS10	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S050193	☐	N18-031	core	CS9	☐	☐	☐
1.48	1.52	0.04	-?-, LST	0.04	100	S050195	☐	N18-031	core		☐	☐	☐
1.52	4.57	3.05	MST, LST	1.77	58	S050188	☐	N18-031	core		☐	☐	☐
4.57	7.62	3.05	MST	2.70	89	S050189	☐	N18-031	core		☐	☐	☐
7.62	10.67	3.05	MST	2.62	86	S050190	☐	N18-031	core		☐	☐	☐
10.67	13.72	3.05	MST	2.90	95	S050191	☐	N18-031	core		☐	☐	☐
13.72	16.76	3.04	MST	2.78	91	S050192	☐	N18-031	core		☐	☐	☐
16.76	19.81	3.05	MST	2.89	95	S050194	☐	N18-031	core		☐	☐	☐
19.81	25.91	6.10	MST	5.10	84	W233069	☐	N18-C02	Chip		☐	☐	☐
25.91	32.00	6.09	MST	5.07	83	W233070	☐	N18-C02	Chip		☐	☐	☐
32.00	38.10	6.10	MST	4.37	72	W233071	☐	N18-C02	Chip		☐	☐	☐
38.10	44.20	6.10	MST	4.83	79	W233072	☐	N18-C02	Chip		☐	☐	☐
44.20	50.29	6.09	MST	3.82	63	W233073	☐	N18-C02	Chip		☐	☐	☐
50.29	56.39	6.10	MST	5.18	85	W233074	☐	N18-C02	Chip		☐	☐	☐
56.39	62.48	6.09	MST	5.68	93	W233075	☐	N18-C02	Chip		☐	☐	☐
62.48	68.58	6.10	MST	5.23	86	W233076	☐	N18-C02	Chip		☐	☐	☐
68.58	74.67	6.09	MST	5.01	82	W233077	☐	N18-C02	Chip		☐	☐	☐
74.67	80.77	6.10	MST	5.40	89	W233078	☐	N18-C02	Chip		☐	☐	☐
80.77	83.82	3.05	MST	1.84	60	S050196	☐	N18-031	core		☐	☐	☐
83.82	86.87	3.05	MST	2.40	79	S050197	☐	N18-031	core		☐	☐	☐
86.87	89.92	3.05	MST	2.66	87	S050198	☐	N18-031	core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
89.92	92.96	3.04	MST	2.97	98	S050199	☐	N18-031	core		☐	☐	☐
92.96	96.01	3.05	MST	2.75	90	S050200	☐	N18-031	core		☐	☐	☐
92.96	96.01	3.05	MST	2.75	90	S050201	☐	N18-031	core		☐	☐	☑
96.01	99.06	3.05	MST	2.11	69	S050202	☐	N18-031	core		☐	☐	☐
99.06	102.11	3.05	MST	2.87	94	S050203	☐	N18-031	core		☐	☐	☐
102.11	108.20	6.09	MST	5.71	94	W233079	☐	N18-C02	Chip		☐	☐	☐
108.20	114.30	6.10	MST	5.62	92	W233080	☐	N18-C02	Chip		☐	☐	☐
114.30	120.40	6.10	MST	5.57	91	W233081	☐	N18-C02	Chip		☐	☐	☐
120.40	123.44	3.04	MST	2.93	96	S050204	☐	N18-031	core		☐	☐	☐
123.44	126.49	3.05	MST	2.80	92	S050205	☐	N18-031	core		☐	☐	☐
126.49	127.97	1.48	MST	1.48	100	S050206	☐	N18-031	core		☐	☐	☐
127.97	129.54	1.57	LST, MST	1.32	84	S050208	☐	N18-031	core		☐	☐	☐
129.54	132.59	3.05	LST	1.36	45	S050209	☐	N18-031	core		☐	☐	☐
132.59	135.64	3.05	LST	2.97	97	S050210	☐	N18-031	core		☐	☐	☐
135.64	138.02	2.38	DMT	2.14	90	S050212	☐	N18-031	core		☐	☐	☐
138.02	140.21	2.19	LST, DMT	1.85	84	S050213	☐	N18-031	core		☐	☐	☐
140.21	142.20	1.99	LST	1.73	87	S050214	☐	N18-031	core		☐	☐	☐
142.20	144.78	2.58	LST	2.33	90	S050215	☐	N18-031	core		☐	☐	☐
144.78	147.83	3.05	LST	2.26	74	S050216	☐	N18-031	core		☐	☐	☐
147.83	150.88	3.05	LST	2.94	96	S050217	☐	N18-031	core		☐	☐	☐
150.88	153.92	3.04	LST	3.00	99	S050218	☐	N18-031	core		☐	☐	☐
153.92	156.97	3.05	LST	3.04	100	S050219	☐	N18-031	core		☐	☐	☐
153.92	156.97	3.05	LST	3.04	100	S050220	☐	N18-031	core		☐	☑	☐
156.97	160.02	3.05	LST	3.04	100	S050221	☐	N18-034	Core		☐	☐	☐
160.02	163.07	3.05	LST	3.02	99	S050222	☐	N18-034	Core		☐	☐	☐
163.07	166.12	3.05	LST	2.77	91	S050223	☐	N18-034	Core		☐	☐	☐
166.12	169.16	3.04	LST	3.04	100	S050224	☐	N18-034	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
169.16	175.26	6.10	LST	6.01	99	W233082	☐	N18-C02	Chip		☐	☐	☐
175.26	181.36	6.10	LST	6.01	99	W233083	☐	N18-C02	Chip		☐	☐	☐
181.36	187.45	6.09	LST	6.08	100	W233084	☐	N18-C02	Chip		☐	☐	☐
187.45	190.50	3.05	LST	3.04	100	S050225	☐	N18-034	Core		☐	☐	☐
190.50	193.55	3.05	LST	3.04	100	S050226	☐	N18-034	Core		☐	☐	☐
190.50	193.55	3.05	LST	3.04	100	S050227	☐	N18-034	Core		☐	☐	☑
193.55	196.60	3.05	LST	3.04	100	S050228	☐	N18-034	Core		☐	☐	☐
196.60	199.64	3.04	LST	2.74	90	S050229	☐	N18-034	Core		☐	☐	☐
199.64	202.69	3.05	LST	2.70	89	S050230	☐	N18-034	Core		☐	☐	☐
202.69	205.74	3.05	MST	2.95	97	S050231	☐	N18-034	Core		☐	☐	☐
205.74	208.79	3.05	MST	2.85	93	S050232	☐	N18-034	Core		☐	☐	☐
208.79	214.88	6.09	MST	5.90	97	W233085	☐	N18-C03	Chip		☐	☐	☐
214.88	220.98	6.10	MST	6.05	99	W233086	☐	N18-C03	Chip		☐	☐	☐
220.98	227.08	6.10	MST	6.04	99	W233087	☐	N18-C03	Chip		☐	☐	☐
227.08	233.18	6.10	MST	4.96	81	W233088	☐	N18-C03	Chip		☐	☐	☐
233.18	239.28	6.10	MST	6.01	99	W233089	☐	N18-C03	Chip		☐	☐	☐
239.28	243.81	4.53	MST	4.34	96	W233090	☐	N18-C03	Chip		☐	☐	☐
243.81	245.00	1.19	MST	0.92	77	S050233	☐	N18-034	Core		☐	☐	☐
245.00	249.63	4.63	MST	4.31	93	W233091	☐	N18-C03	Chip		☐	☐	☐
249.63	255.73	6.10	MST	5.90	97	W233092	☐	N18-C03	Chip		☐	☐	☐
255.73	258.78	3.05	MST	2.98	98	S050234	☐	N18-034	Core		☐	☐	☐
258.78	261.82	3.04	MST	3.04	100	S050235	☐	N18-034	Core		☐	☐	☐
261.82	264.87	3.05	MST	2.76	90	S050236	☐	N18-034	Core		☐	☐	☐
264.87	267.92	3.05	MST	2.97	97	S050237	☐	N18-034	Core		☐	☐	☐
267.92	270.97	3.05	MST	2.97	97	S050238	☐	N18-034	Core		☐	☐	☐
270.97	274.02	3.05	MST	2.93	96	S050239	☐	N18-034	Core		☐	☐	☐
274.02	277.06	3.04	MST	2.91	96	S050240	☐	N18-034	Core		☐	☐	☐
277.06	279.88	2.82	MST	2.44	87	S050241	☐	N18-034	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
279.88	281.55	1.67	LST, MST	1.65	99	S050243	☐	N18-034	Core		☐	☐	☐
281.55	283.16	1.61	LST	1.47	91	S050244	☐	N18-034	Core		☐	☐	☐
283.16	286.21	3.05	LST	2.19	72	S050245	☐	N18-034	Core		☐	☐	☐
286.21	289.26	3.05	LST	2.81	92	S050246	☐	N18-034	Core		☐	☐	☐
286.21	289.26	3.05	LST	2.81	92	S050247	☐	N18-034	Core		☐	☑	☐
289.26	292.30	3.04	LST	2.89	95	S050248	☐	N18-034	Core		☐	☐	☐
292.30	295.35	3.05	LST	2.57	84	S050249	☐	N18-034	Core		☐	☐	☐
295.35	298.40	3.05	LST	3.00	98	S050250	☐	N18-034	Core		☐	☐	☐
298.40	301.45	3.05	LST	2.86	94	S050251	☐	N18-034	Core		☐	☐	☐
301.45	304.50	3.05	LST	2.89	95	S050253	☐	N18-034	Core		☐	☐	☐
304.50	307.54	3.04	LST	2.73	90	S050254	☐	N18-034	Core		☐	☐	☐
307.54	310.59	3.05	LST	3.05	100	S050255	☐	N18-034	Core		☐	☐	☐
310.59	313.64	3.05	LST	3.00	98	S050256	☐	N18-034	Core		☐	☐	☐
313.64	316.69	3.05	LST	3.00	98	S050257	☐	N18-034	Core		☐	☐	☐
316.69	319.74	3.05	LST	2.97	97	S050258	☐	N18-034	Core		☐	☐	☐
319.74	322.78	3.04	LST	3.00	99	S050260	☐	N18-034	Core		☐	☐	☐
322.78	325.83	3.05	LST	3.02	99	S050261	☐	N18-035	Core		☐	☐	☐
325.83	328.88	3.05	LST	2.98	98	S050262	☐	N18-035	Core		☐	☐	☐
328.88	331.93	3.05	LST	2.82	92	S050263	☐	N18-035	Core		☐	☐	☐
331.93	334.98	3.05	LST	2.97	97	S050264	☐	N18-035	Core		☐	☐	☐
334.98	337.00	2.02	LST	1.80	89	S050265	☐	N18-035	Core		☐	☐	☐
337.00	338.45	1.45	LST	1.40	97	S050266	☐	N18-035	Core		☐	☐	☐
338.45	341.07	2.62	MST, LST	2.10	80	S050267	☐	N18-035	Core		☐	☐	☐
341.07	344.12	3.05	MST	2.84	93	S050268	☐	N18-035	Core		☐	☐	☐
344.12	347.17	3.05	MST	3.04	100	S050269	☐	N18-035	Core		☐	☐	☐
347.17	350.22	3.05	MST	2.98	98	S050270	☐	N18-035	Core		☐	☐	☐
350.22	353.26	3.04	MST	3.03	100	S050271	☐	N18-035	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
353.26	356.31	3.05	MST	2.97	97	S050272	☐	N18-035	Core		☐	☐	☐
356.31	359.36	3.05	MST	2.95	97	S050273	☐	N18-035	Core		☐	☐	☐

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From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
0.00	9.14	9.14	OVB	--	No recovery from 0 to 3.05m and 4.56 to 6.10m. Bedrock begins at 13.18m.							
						DK	GY					
						MD	BR	RB	OXI	3I	--	0
9.14	35.26	26.12	SLT	FG	Strongly sheared/faulted, strongly oxidized (near surface/fault related?), light to dark grey, very fine to fine grained siltstone and light grey-green, very fine grained mudstone with rare fine grained, light grey dolomitic siltstone beds towards lower contact. Shearing/faulting are most intense from 13.18 to 27.27m and are associated with higher intensities of oxidation. Below 27.27m, interval is less sheared (although still rubbly) and less oxidized with moderate to strong oxidation on fracture surfaces.							
						LT	GN	SH				
						LT	GY	RB				
						DK	GY	CR				
						LT	OR	BX				
						MD	BR	BD	OXI	4I		
35.26	39.11	3.85	DST	FG	Light to medium grey, very fine to fine grained, locally bedded, intensely brecciated (crackle breccia) dolostone with distinctive black fractures overlain by light grey, fine grained, well bedded, dolomitic siltstone (dolomitized conrad shale?). Dolostone bed is massive with local preserved wavy, parallel primary bedding. Dolomitic siltstone beds are thinly laminated, planar and parallel. Dolostone beds are intensely crackle brecciated (associated with dolomitization?), clasts are surrounded by very thin, very fine grained (remobilized?), black dolomite. Trace, ~2-5cm thick undulating, biege dolomite veins are also present within dolostone beds. Minor to moderate diagenetic pyrite present as large, fine grained blebs and as very fine grained bands within fractures in brecciated dolostone.							
								RB				
						MD	GY	CR			Py	0.5
						LT	GY	BD	DOL	4I	Py	3

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
39.11	251.46	212.35	SLC	FG	Interbedded, medium grey, fine to medium grained, massive to well bedded sandstone and rhythmically interbedded light to medium grey, fine grained (sandy?) siltstone with medium (to locally dark) grey fine/very fine grained mudstone. Unit is very rubbly/faulted between 51.82 to 77.72m. Rubble zones consist of angular wallrock fragments, gouge seams, local competent blocks of Siliciclastic and strong mineralization between 60.86 to 65.86m. Mineralized interval is rubbly and contains fine black gouge material along fractures surfaces, ~10% realgar (as fracture fill, blebs within veins and fine disseminations) and competent blocks of breccia. Breccia blocks consist of angular clasts of wallrock in sheared fine grain realgar fill (contains Au mineralization). Mineralization is also noted from 108.36 to 110.50m and 120.4 to 128.91m where Au and As mineralization is contained within sheared/brecciated/fractured intervals along with pitted textures and trace/weak silicification. Minor oxidation is present along fracture surfaces above 44m depth. Diagenetic pyrite present as very fine grained, brass/brown coloured bands within silty beds.							
								SD				
								MA				
								SH	ARG	2I	Py	5
						MD	GY	BD	DOL	1I	Re	0.5

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
0.00	3.05	3.05	0	0	0.00	0	0R	--	--	no recovery top of hole.
3.05	6.10	3.05	1	33	0.00	0	0R	1H	5W	
6.10	9.14	3.04	2.25	74	0.00	0	0R	1H	5W	
9.14	12.19	3.05	1.43	47	0.00	0	0R	1H	5W	
12.19	15.24	3.05	2.72	89	1.33	44	0R	1H	4W	
15.24	18.29	3.05	2.6	85	1.75	57	0R	1H	4W	
18.29	21.33	3.04	2.8	92	1.99	65	0R	1H	4W	
21.33	24.38	3.05	2.68	88	0.90	30	0R	1H	4W	
24.38	27.43	3.05	1.13	37	0.00	0	0R	1H	4W	
27.43	30.48	3.05	1.74	57	0.14	5	0R	1H	3W	
30.48	33.53	3.05	2.66	87	0.58	19	0R	2H	2W	
33.53	36.58	3.05	1.88	62	0.15	5	0R	2H	2W	
36.58	39.62	3.04	2.55	84	1.04	34	0R	1H	2W	
39.62	42.67	3.05	2.87	94	1.42	47	0R	1H	2W	
42.67	45.72	3.05	2.3	75	0.82	27	0R	1H	1W	
45.72	48.77	3.05	1.95	64	0.90	30	0R	2H	1W	
48.77	51.82	3.05	2.66	87	1.02	33	0R	1H	2W	
51.82	54.86	3.04	2.15	71	0.66	22	0R	1H	2W	
54.86	56.39	1.53	0.76	50	0.00	0	0R	1H	1W	Rbz with gouge.
56.39	59.44	3.05	1.9	62	0.00	0	0R	1H	1W	local gouge among rbz.
59.44	62.48	3.04	1.98	65	0.00	0	0R	1H	1W	rubble gouge zone with realgar.
62.48	65.53	3.05	2.32	76	0.62	20	0R	1H	1W	rubble gouge zone with realgar along fractures.
65.53	68.58	3.05	2.45	80	0.64	21	0R	1H	1W	local competent rock and gouge.
68.58	71.63	3.05	2.68	88	1.70	56	0R	1H	1W	large gouge area between rbz and competent rock
71.63	74.68	3.05	2.68	88	1.17	38	0R	1H	1W	
74.68	77.72	3.04	2.53	83	0.89	29	0R	1H	1W	
77.72	80.77	3.05	2.87	94	2.17	71	0R	2H	1W	
80.77	83.82	3.05	2.9	95	1.86	61	0R	2H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
83.82	86.87	3.05	3	98	2.42	79	0R	2H	1W	
86.87	89.92	3.05	2.85	93	1.62	53	0R	2H	1W	
89.92	92.96	3.04	3	99	2.69	88	0R	2H	1W	
92.96	96.01	3.05	2.82	92	1.57	51	0R	2H	1W	
96.01	99.06	3.05	2.87	94	1.36	45	0R	3H	1W	
99.06	102.11	3.05	3.04	100	1.58	52	0R	2H	1W	overall competent but with 10cm wide gouge rock
102.11	105.16	3.05	2.9	95	2.06	68	0R	3H	1W	
105.16	108.20	3.04	3.02	99	1.74	57	0R	3H	1W	
108.20	111.25	3.05	2.8	92	0.78	26	0R	2H	1W	highly fractured
111.25	114.30	3.05	3.04	100	1.40	46	0R	3H	1W	
114.30	117.35	3.05	3.05	100	2.03	67	0R	3H	1W	
117.35	120.40	3.05	3.05	100	1.87	61	0R	3H	1W	
120.40	123.44	3.04	2.9	95	0.79	26	0R	1H	1W	highly fractured and weakly gouged
123.44	126.49	3.05	3	98	1.76	58	0R	1H	1W	modetrately gouged rock 124.5-125.3m
126.49	129.54	3.05	2.96	97	1.49	49	0R	1H	1W	intermittent gouge. Highly fractured
129.54	132.59	3.05	2.99	98	1.95	64	0R	3H	1W	
132.59	135.64	3.05	2.91	95	0.59	19	0R	3H	1W	
135.64	138.68	3.04	2.98	98	1.90	63	0R	3H	1W	
138.68	141.73	3.05	2.97	97	1.92	63	0R	3H	1W	fractured along bedding plane
141.73	144.78	3.05	2.98	98	1.86	61	0R	3H	1W	fractured along bedding plane
144.78	147.83	3.05	2.81	92	2.15	70	0R	1H	1W	fractured along bedding
147.83	150.88	3.05	2.95	97	0.00	0	0R	3H	1W	highly fractured
150.88	153.92	3.04	3.03	100	2.05	67	0R	3H	1W	rubly bet 152-152.26
153.92	156.97	3.05	3.04	100	1.28	42	0R	2H	1W	
156.97	160.02	3.05	2.99	98	2.07	68	0R	3H	1W	
160.02	163.07	3.05	2.99	98	1.82	60	0R	2H	1W	
163.07	166.12	3.05	2.78	91	1.55	51	0R	2H	1W	
166.12	169.16	3.04	2.71	89	1.33	44	0R	2H	1W	
169.16	172.21	3.05	3.05	100	1.86	61	0R	3H	1W	
172.21	175.26	3.05	2.85	93	1.21	40	0R	2H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
175.26	178.31	3.05	2.85	93	1.40	46	0R	2H	1W	intermittent competent rock within rubble zone.
178.31	181.36	3.05	2.13	70	0.52	17	0R	2H	1W	rubble zone.
181.36	184.40	3.04	2.87	94	1.29	42	0R	2H	1W	intermittent competent rock among rubble zone.
184.40	187.45	3.05	2.47	81	0.67	22	0R	2H	1W	Rubble zone with local gouge.
187.45	190.50	3.05	2.86	94	0.96	31	0R	3H	1W	
190.50	193.55	3.05	2.89	95	2.11	69	0R	2H	1W	
193.55	196.60	3.05	2.46	81	0.88	29	0R	2H	1W	
196.60	199.64	3.04	3.04	100	2.54	84	0R	3H	1W	
199.64	202.69	3.05	3.05	100	3.05	100	0R	3H	1W	
202.69	205.74	3.05	3	98	2.40	79	0R	3H	1W	
205.74	208.79	3.05	2.83	93	0.94	31	0R	2H	1W	Rubble zone.
208.79	211.84	3.05	3	98	2.90	95	0R	2H	1W	
211.84	214.88	3.04	3.04	100	3.04	100	0R	3H	1W	
214.88	217.93	3.05	2.87	94	2.70	89	0R	3H	1W	
217.93	220.98	3.05	2.95	97	2.04	67	0R	3H	1W	
220.98	224.03	3.05	3.05	100	2.94	96	0R	3H	1W	
224.03	227.08	3.05	3.05	100	2.05	67	0R	3H	1W	
227.08	230.12	3.04	3.04	100	2.70	89	0R	3H	1W	
230.12	233.17	3.05	3.05	100	3.05	100	0R	3H	1W	
233.17	236.22	3.05	3.05	100	2.66	87	0R	3H	1W	
236.22	239.27	3.05	2.93	96	2.17	71	0R	3H	1W	
239.27	242.32	3.05	3.05	100	2.86	94	0R	3H	1W	
242.32	245.36	3.04	2.96	97	2.50	82	0R	3H	1W	
245.36	248.41	3.05	2.98	98	2.66	87	0R	3H	1W	
248.41	251.46	3.05	3.05	100	3.05	100	0R	3H	1W	

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From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
0.00	0.00	0.00	-QC-	0.00	0	S048850	☐	N18-033	Core	CS7	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S048862	☐	N18-036	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S048872	☐	N18-036	Core	CS12	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S048889	☐	N18-036	Core	CS6	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S048904	☐	N18-037	Core	CS9	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S048913	☐	N18-037	Core	CS10	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S048833	☐	N18-033	Core	CS10	☐	☐	☐
3.05	4.57	1.52	OVB	1.05	69	S048824	☐	N18-033	Core		☐	☐	☐
6.10	9.14	3.04	OVB	2.25	74	S048825	☐	N18-033	Core		☐	☐	☐
9.14	12.19	3.05	SLT, OVB	1.43	47	S048826	☐	N18-033	Core		☐	☐	☐
12.19	15.24	3.05	SLT	2.72	89	S048827	☐	N18-033	Core		☐	☐	☐
15.24	18.29	3.05	SLT	2.60	85	S048828	☐	N18-033	Core		☐	☐	☐
18.29	21.33	3.04	SLT	2.80	92	S048829	☐	N18-033	Core		☐	☐	☐
18.29	21.33	3.04	SLT	2.80	92	S048830	☐	N18-033	Core		☐	☐	☑
21.33	24.38	3.05	SLT	2.68	88	S048831	☐	N18-033	Core		☐	☐	☐
24.38	27.43	3.05	SLT	1.13	37	S048832	☐	N18-033	Core		☐	☐	☐
27.43	30.48	3.05	SLT	1.74	57	S048834	☐	N18-033	Core		☐	☐	☐
30.48	33.53	3.05	SLT	2.66	87	S048835	☐	N18-033	Core		☐	☐	☐
33.53	35.26	1.73	SLT	1.04	60	S048836	☐	N18-033	Core		☐	☐	☐
35.26	36.95	1.69	SLT, DST	1.44	85	S048837	☐	N18-033	Core		☐	☐	☐
36.95	39.11	2.16	DST	1.68	78	S048838	☐	N18-033	Core		☐	☐	☐
39.11	41.15	2.04	SLC, DST	2.04	100	S048839	☐	N18-033	Core		☐	☐	☐
41.15	44.20	3.05	SLC	2.96	97	S048840	☐	N18-033	Core		☐	☐	☐
44.20	47.24	3.04	SLC	2.50	82	S048841	☐	N18-033	Core		☐	☐	☐
47.24	50.29	3.05	SLC	2.80	92	S048842	☐	N18-033	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
50.29	53.34	3.05	SLC	2.40	79	S048843	☐	N18-033	Core		☐	☐	☐
53.34	56.39	3.05	SLC	2.36	77	S048844	☐	N18-033	Core		☐	☐	☐
56.39	59.44	3.05	SLC	1.90	62	S048845	☐	N18-033	Core		☐	☐	☐
59.44	60.86	1.42	SLC	1.42	100	S048846	☐	N18-033	Core		☐	☐	☐
60.86	63.22	2.36	SLC	2.21	94	S048847	☐	N18-033	Core		☐	☐	☐
60.86	63.22	2.36	SLC	2.21	94	S048848	☐	N18-033	Core		☐	☑	☐
63.22	65.63	2.41	SLC	2.40	100	S048849	☐	N18-033	Core		☐	☐	☐
65.63	68.58	2.95	SLC	2.91	99	S048851	☐	N18-036	Core		☐	☐	☐
68.58	71.63	3.05	SLC	2.68	88	S048852	☐	N18-036	Core		☐	☐	☐
71.63	74.68	3.05	SLC	2.68	88	S048853	☐	N18-036	Core		☐	☐	☐
74.68	77.72	3.04	SLC	2.53	83	S048854	☐	N18-036	Core		☐	☐	☐
77.72	80.77	3.05	SLC	2.87	94	S048855	☐	N18-036	Core		☐	☐	☐
80.77	83.82	3.05	SLC	2.90	95	S048856	☐	N18-036	Core		☐	☐	☐
83.82	86.87	3.05	SLC	3.00	98	S048857	☐	N18-036	Core		☐	☐	☐
86.87	89.92	3.05	SLC	2.85	93	S048858	☐	N18-036	Core		☐	☐	☐
89.92	92.96	3.04	SLC	3.00	99	S048859	☐	N18-036	Core		☐	☐	☐
92.96	96.01	3.05	SLC	2.82	92	S048860	☐	N18-036	Core		☐	☐	☐
96.01	99.06	3.05	SLC	2.87	94	S048861	☐	N18-036	Core		☐	☐	☐
99.06	102.11	3.05	SLC	3.04	100	S048863	☐	N18-036	Core		☐	☐	☐
102.11	105.16	3.05	SLC	2.90	95	S048864	☐	N18-036	Core		☐	☐	☐
105.16	108.20	3.04	SLC	3.02	99	S048865	☐	N18-036	Core		☐	☐	☐
108.20	111.25	3.05	SLC	2.80	92	S048866	☐	N18-036	Core		☐	☐	☐
108.20	111.25	3.05	SLC	2.80	92	S048867	☐	N18-036	Core		☐	☑	☐
111.25	114.30	3.05	SLC	3.04	100	S048868	☐	N18-036	Core		☐	☐	☐
114.30	117.35	3.05	SLC	3.05	100	S048869	☐	N18-036	Core		☐	☐	☐
117.35	120.40	3.05	SLC	3.05	100	S048870	☐	N18-036	Core		☐	☐	☐
120.40	122.50	2.10	SLC	2.08	99	S048871	☐	N18-036	Core		☐	☐	☐
122.50	124.95	2.45	SLC	2.43	99	S048873	☐	N18-036	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
124.95	127.48	2.53	SLC	2.44	96	S048874	☐	N18-036	Core		☐	☐	☐
124.95	127.48	2.53	SLC	2.44	96	S048875	☐	N18-036	Core		☐	☐	☑
127.48	129.54	2.06	SLC	1.96	95	S048876	☐	N18-036	Core		☐	☐	☐
129.54	132.59	3.05	SLC	2.99	98	S048877	☐	N18-036	Core		☐	☐	☐
132.59	135.64	3.05	SLC	2.91	95	S048878	☐	N18-036	Core		☐	☐	☐
135.64	138.68	3.04	SLC	2.98	98	S048879	☐	N18-036	Core		☐	☐	☐
138.68	141.73	3.05	SLC	2.97	97	S048880	☐	N18-036	Core		☐	☐	☐
141.73	144.78	3.05	SLC	2.98	98	S048881	☐	N18-036	Core		☐	☐	☐
144.78	147.83	3.05	SLC	2.81	92	S048882	☐	N18-036	Core		☐	☐	☐
147.83	150.88	3.05	SLC	2.95	97	S048883	☐	N18-036	Core		☐	☐	☐
150.88	153.92	3.04	SLC	3.03	100	S048884	☐	N18-036	Core		☐	☐	☐
153.92	156.97	3.05	SLC	3.04	100	S048885	☐	N18-036	Core		☐	☐	☐
156.97	160.02	3.05	SLC	2.99	98	S048886	☐	N18-036	Core		☐	☐	☐
160.02	163.07	3.05	SLC	2.99	98	S048887	☐	N18-036	Core		☐	☐	☐
163.07	166.12	3.05	SLC	2.78	91	S048888	☐	N18-036	Core		☐	☐	☐
166.12	169.16	3.04	SLC	2.71	89	S048890	☐	N18-036	Core		☐	☐	☐
169.16	172.21	3.05	SLC	3.05	100	S048891	☐	N18-037	Core		☐	☐	☐
172.21	175.26	3.05	SLC	2.85	93	S048892	☐	N18-037	Core		☐	☐	☐
175.26	178.31	3.05	SLC	2.85	93	S048893	☐	N18-037	Core		☐	☐	☐
178.31	181.36	3.05	SLC	2.13	70	S048894	☐	N18-037	Core		☐	☐	☐
181.36	184.40	3.04	SLC	2.87	94	S048895	☐	N18-037	Core		☐	☐	☐
184.40	187.45	3.05	SLC	2.47	81	S048896	☐	N18-037	Core		☐	☐	☐
187.45	190.50	3.05	SLC	2.86	94	S048897	☐	N18-037	Core		☐	☐	☐
190.50	193.55	3.05	SLC	2.89	95	S048898	☐	N18-037	Core		☐	☐	☐
193.55	196.60	3.05	SLC	2.46	81	S048899	☐	N18-037	Core		☐	☐	☐
196.60	199.64	3.04	SLC	3.04	100	S048900	☐	N18-037	Core		☐	☐	☐
199.64	202.69	3.05	SLC	3.05	100	S048901	☐	N18-037	Core		☐	☐	☐
202.69	205.74	3.05	SLC	3.00	98	S048902	☐	N18-037	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
205.74	208.79	3.05	SLC	2.83	93	S048903	☐	N18-037	Core		☐	☐	☐
208.79	211.84	3.05	SLC	3.00	98	S048905	☐	N18-037	Core		☐	☐	☐
211.84	214.88	3.04	SLC	3.04	100	S048906	☐	N18-037	Core		☐	☐	☐
214.88	217.93	3.05	SLC	2.87	94	S048907	☐	N18-037	Core		☐	☐	☐
217.93	220.98	3.05	SLC	2.95	97	S048908	☐	N18-037	Core		☐	☐	☐
220.98	224.03	3.05	SLC	3.05	100	S048909	☐	N18-037	Core		☐	☐	☐
224.03	227.08	3.05	SLC	3.05	100	S048910	☐	N18-037	Core		☐	☐	☐
227.08	230.12	3.04	SLC	3.04	100	S048911	☐	N18-037	Core		☐	☐	☐
230.12	233.17	3.05	SLC	3.05	100	S048912	☐	N18-037	Core		☐	☐	☐
233.17	236.22	3.05	SLC	3.05	100	S048914	☐	N18-037	Core		☐	☐	☐
236.22	239.27	3.05	SLC	2.93	96	S048915	☐	N18-037	Core		☐	☐	☐
239.27	242.32	3.05	SLC	3.05	100	S048916	☐	N18-037	Core		☐	☐	☐
242.32	245.36	3.04	SLC	2.96	97	S048917	☐	N18-037	Core		☐	☐	☐
245.36	248.41	3.05	SLC	2.98	98	S048918	☐	N18-037	Core		☐	☐	☐
248.41	251.46	3.05	SLC	3.05	100	S048919	☐	N18-037	Core		☐	☐	☐

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From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
0.00	2.24	2.24	OVB	--	No recovery from 0-1.96m. OVB from 1.96-2.24m.							
2.24	51.32	49.08	LST	MG	The C-LST2 unit in this drill hole is largely composed of bedded, weakly oxidized, moderately veined limestone with intermittent limey mudstone beds. From 42.06 to 49.26m granule-cobble, angular, polymitic, poorly sorted, clast supported debris flow breccia. From 49.25-51.32m weakly gouged, highly sheared, brecciated limestone with trace mudstone interbeds.							
								SH				
						MD	GY	BX				
						LT	GY	BD	OXI	2I	--	0
51.32	56.94	5.62	MST	FG	Light grey, light green and tan, fine grained, pyritic, sheared, gougy mudstone. Moderately to highly sheared. Shearing is strongest at the upper section of the interval, adjacent to the Sunrise Fault. Gouging is also strongest adjacent to Sunrise fault. From 53.80- 56.94 rock is not gouged. Pyrite is commonly disseminated and forming bands of euhedral pyrite. Shear is at 35TCA. 5cm thick calcite/dolomite vein at 54.17 paralel to shear plane. Micro faulting is common, displacing laminations aprox 5mm. Abundant crystaline quartz lenses parallel to shear plane.							
						LT	TN					
						LT	GN				Py	1
						LT	GY	SH	---	--	Py	3
56.94	156.95	100.01	LST	MG	O-LST1 in this drill hole is composed of bedded calcareous mudstone interlayered with clast supported, moderately sorted, limestone debrite.							

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
156.95	171.60	14.65	MST	FG	light grey, medium grey, tan and maroon, planar bedded mudstone. Bedding at 50TCA. color is light and medium grey adjacent to the overlying contact with limestone, changing to a tan color in the middle of the interval, finally changing to a marron interbedded with light green towards the end of the interval. common quartz rich, bedding parallel sand laminations throughout the interval.							
						LT	RD					
						LT	TN					
						LT	GN					
						LT	GY	BD	---	--	--	0

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From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
0.00	1.96	1.96	0	0	0.00	0	--	--	--	No recovery
1.96	3.96	2.00	2	100	0.13	7	4R	2H	3W	rbz
3.96	7.01	3.05	2.42	79	0.52	17	3R	3H	2W	rbz
7.01	10.06	3.05	2.05	67	0.43	14	3R	3H	2W	rbz
10.06	13.11	3.05	3.04	100	1.65	54	3R	3H	2W	
13.11	16.15	3.04	2.55	84	0.79	26	3R	3H	2W	
16.15	19.20	3.05	2.91	95	1.42	47	3R	3H	2W	
19.20	22.25	3.05	2.97	97	1.72	56	3R	3H	2W	
22.25	25.29	3.04	3	99	0.59	19	3R	3H	2W	
25.29	28.35	3.06	2.7	88	0.82	27	3R	3H	2W	
28.35	31.39	3.04	2.98	98	1.62	53	3R	3H	2W	
31.39	34.44	3.05	3.04	100	1.94	64	3R	3H	2W	
34.44	37.49	3.05	2.86	94	1.41	46	3R	3H	2W	
37.49	40.54	3.05	3.04	100	1.17	38	3R	3H	2W	
40.54	43.59	3.05	3.02	99	1.45	48	3R	3H	2W	
43.59	46.63	3.04	2.98	98	2.04	67	2R	2H	1W	Overall rock is good, but 5cm thick soft rock at 44.50m.
46.63	49.68	3.05	2.95	97	2.44	80	2R	4H	1W	
49.68	52.73	3.05	2.44	80	2.05	67	2R	2H	1W	rbz
52.73	55.78	3.05	2.94	96	2.64	87	0R	2H	1W	
55.78	58.83	3.05	2.92	96	2.14	70	1R	3H	1W	
58.83	61.87	3.04	3.04	100	0.52	17	1R	2H	1W	rbz
61.87	64.92	3.05	3.04	100	1.33	44	1R	2H	1W	
64.92	67.97	3.05	2.93	96	0.72	24	1R	2H	1W	
67.97	71.02	3.05	2.87	94	2.87	94	2R	4H	1W	
71.02	74.07	3.05	3.04	100	2.01	66	1R	3H	1W	
74.07	77.11	3.04	2.58	85	0.64	21	1R	2H	1W	rbz
77.11	80.16	3.05	2.77	91	1.02	33	1R	2H	1W	
80.16	83.21	3.05	2.82	92	0.89	29	1R	2H	1W	RBZ
83.21	86.26	3.05	2.56	84	1.26	41	2R	3H	1W	RBZ

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
86.26	89.31	3.05	3	98	1.53	50	2R	3H	1W	
89.31	92.35	3.04	2.69	88	1.20	39	3R	3H	1W	
92.35	95.40	3.05	3.04	100	2.85	93	4R	4H	1W	
95.40	98.45	3.05	3.04	100	2.50	82	3R	4H	1W	
98.45	101.50	3.05	2.52	83	1.65	54	1R	2H	1W	rbz
101.50	104.55	3.05	2.98	98	2.54	83	2R	2H	1W	rbz
104.55	107.59	3.04	3.04	100	3.04	100	4R	4H	1W	
107.59	110.64	3.05	2.99	98	2.99	98	4R	3H	1W	
110.64	113.69	3.05	2.88	94	2.50	82	4R	2H	1W	
113.69	116.74	3.05	2.97	97	2.07	68	2R	2H	1W	Local gouge and rubble zones.
116.74	119.79	3.05	3.05	100	2.08	68	1R	2H	1W	Rubbly with gouge seams
119.79	122.83	3.04	2.74	90	2.04	67	2R	2H	1W	Fracturing with some gouge seams.
122.83	125.88	3.05	2.94	96	2.81	92	3R	2H	1W	
125.88	128.93	3.05	3.05	100	2.75	90	4R	3H	1W	
128.93	131.98	3.05	3.05	100	2.12	70	4R	3H	1W	
131.98	135.02	3.04	2.9	95	1.36	45	4R	2H	1W	highly fractured area with gouge.
135.02	138.07	3.05	2.95	97	1.34	44	4R	3H	1W	
138.07	141.12	3.05	2.77	91	2.08	68	3R	3H	1W	competent rock with gouge.
141.12	144.17	3.05	2.85	93	1.80	59	4R	3H	1W	competent rock with gouge.
144.17	147.22	3.05	2.6	85	0.00	0	4R	3H	1W	rubble zone.
147.22	150.27	3.05	2.65	87	0.55	18	4R	3H	1W	rubble zone.
150.27	153.31	3.04	2.96	97	1.66	55	3R	2H	1W	rubble zone with local gouge.
153.31	156.36	3.05	2.5	82	0.60	20	4R	2H	1W	rubble zone.
156.36	159.41	3.05	2.37	78	0.64	21	2R	2H	1W	rubble zone.
159.41	162.46	3.05	2.97	97	2.25	74	0R	2H	1W	
162.46	165.51	3.05	3.05	100	2.96	97	0R	3H	1W	
165.51	168.55	3.04	3.04	100	2.40	79	0R	3H	1W	
168.55	171.60	3.05	2.64	87	2.09	69	0R	3H	1W	competent rock with gouge. Eoh

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Nadaleen
Sunrise Zone

Archer,Cathro & Associates (1981) Limited

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
0.00	0.00	0.00	-QC-	0.00	0	S050291	☐	N18-035	Core	CS10	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S050300	☐	N18-035	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S050318	☐	N18-038	Core	CS9	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S050326	☐	N18-038	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S050329	☐	N18-038	Core	CS10	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S050284	☐	N18-035	Core	CS9	☐	☐	☐
1.96	3.96	2.00	OVB	2.00	100	S050274	☐	N18-035	Core		☐	☐	☐
3.96	7.01	3.05	LST	2.42	79	S050275	☐	N18-035	Core		☐	☐	☐
7.01	10.06	3.05	LST	2.05	67	S050276	☐	N18-035	Core		☐	☐	☐
10.06	13.11	3.05	LST	3.04	100	S050277	☐	N18-035	Core		☐	☐	☐
13.11	16.15	3.04	LST	2.55	84	S050278	☐	N18-035	Core		☐	☐	☐
16.15	19.20	3.05	LST	2.91	95	S050279	☐	N18-035	Core		☐	☐	☐
19.20	22.25	3.05	LST	2.97	97	S050280	☐	N18-035	Core		☐	☐	☐
19.20	22.25	3.05	LST	2.97	97	S050281	☐	N18-035	Core		☐	☑	☐
22.25	25.29	3.04	LST	3.00	99	S050282	☐	N18-035	Core		☐	☐	☐
25.29	28.35	3.06	LST	2.70	88	S050283	☐	N18-035	Core		☐	☐	☐
28.35	31.39	3.04	LST	2.98	98	S050285	☐	N18-035	Core		☐	☐	☐
31.39	34.44	3.05	LST	3.04	100	S050286	☐	N18-035	Core		☐	☐	☐
34.44	37.49	3.05	LST	2.86	94	S050287	☐	N18-035	Core		☐	☐	☐
37.49	40.54	3.05	LST	3.04	100	S050288	☐	N18-035	Core		☐	☐	☐
40.54	43.59	3.05	LST	3.02	99	S050289	☐	N18-035	Core		☐	☐	☐
43.59	46.63	3.04	LST	2.98	98	S050290	☐	N18-035	Core		☐	☐	☐
46.63	49.68	3.05	LST	2.95	97	S050292	☐	N18-035	Core		☐	☐	☐
49.68	51.32	1.64	LST	1.61	98	S050293	☐	N18-035	Core		☐	☐	☐
51.32	54.15	2.83	MST, LST	2.00	71	S050294	☐	N18-035	Core		☐	☐	☐
54.15	56.94	2.79	MST	2.75	99	S050295	☐	N18-035	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
56.94	59.99	3.05	LST, MST	3.03	99	S050296	☐	N18-035	Core		☐	☐	☐
59.99	61.87	1.88	LST	1.56	83	S050297	☐	N18-035	Core		☐	☐	☐
59.99	61.87	1.88	LST	1.56	83	S050298	☐	N18-035	Core		☐	☐	☑
61.87	64.92	3.05	LST	3.04	100	S050299	☐	N18-035	Core		☐	☐	☐
64.92	67.97	3.05	LST	2.93	96	S050301	☐	N18-038	Core		☐	☐	☐
67.97	71.02	3.05	LST	2.87	94	S050302	☐	N18-038	Core		☐	☐	☐
71.02	74.07	3.05	LST	3.04	100	S050303	☐	N18-038	Core		☐	☐	☐
74.07	77.11	3.04	LST	2.58	85	S050304	☐	N18-038	Core		☐	☐	☐
77.11	80.16	3.05	LST	2.77	91	S050305	☐	N18-038	Core		☐	☐	☐
80.16	83.21	3.05	LST	2.82	92	S050306	☐	N18-038	Core		☐	☐	☐
83.21	86.26	3.05	LST	2.56	84	S050307	☐	N18-038	Core		☐	☐	☐
83.21	86.26	3.05	LST	2.56	84	S050308	☐	N18-038	Core		☐	☐	☑
86.26	89.31	3.05	LST	3.00	98	S050309	☐	N18-038	Core		☐	☐	☐
89.31	92.35	3.04	LST	2.69	88	S050310	☐	N18-038	Core		☐	☐	☐
92.35	95.40	3.05	LST	3.04	100	S050311	☐	N18-038	Core		☐	☐	☐
95.40	98.45	3.05	LST	3.04	100	S050312	☐	N18-038	Core		☐	☐	☐
98.45	101.50	3.05	LST	2.52	83	S050313	☐	N18-038	Core		☐	☐	☐
101.50	104.55	3.05	LST	2.98	98	S050314	☐	N18-038	Core		☐	☐	☐
104.55	107.59	3.04	LST	3.04	100	S050315	☐	N18-038	Core		☐	☐	☐
107.59	110.64	3.05	LST	2.99	98	S050316	☐	N18-038	Core		☐	☐	☐
110.64	113.69	3.05	LST	2.88	94	S050317	☐	N18-038	Core		☐	☐	☐
113.69	116.74	3.05	LST	2.97	97	S050319	☐	N18-038	Core		☐	☐	☐
116.74	119.79	3.05	LST	3.05	100	S050320	☐	N18-038	Core		☐	☐	☐
119.79	122.83	3.04	LST	2.74	90	S050321	☐	N18-038	Core		☐	☐	☐
122.83	125.88	3.05	LST	2.94	96	S050322	☐	N18-038	Core		☐	☐	☐
125.88	128.93	3.05	LST	3.05	100	S050323	☐	N18-038	Core		☐	☐	☐
128.93	131.98	3.05	LST	3.05	100	S050324	☐	N18-038	Core		☐	☐	☐
131.98	135.02	3.04	LST	2.90	95	S050325	☐	N18-038	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
135.02	138.07	3.05	LST	2.95	97	S050327	☐	N18-038	Core		☐	☐	☐
138.07	141.12	3.05	LST	2.77	91	S050328	☐	N18-038	Core		☐	☐	☐
141.12	144.17	3.05	LST	2.85	93	S050330	☐	N18-038	Core		☐	☐	☐
144.17	147.22	3.05	LST	2.60	85	S050331	☐	N18-038	Core		☐	☐	☐
147.22	150.27	3.05	LST	2.65	87	S050332	☐	N18-038	Core		☐	☐	☐
150.27	153.31	3.04	LST	2.96	97	S050333	☐	N18-038	Core		☐	☐	☐
153.31	155.50	2.19	LST	1.63	74	S050334	☐	N18-038	Core		☐	☐	☐
155.50	156.95	1.45	LST	1.41	97	S050335	☐	N18-038	Core		☐	☐	☐
156.95	159.41	2.46	LST, MST	1.93	78	S050336	☐	N18-038	Core		☐	☐	☐
159.41	162.46	3.05	MST	2.97	97	S050337	☐	N18-038	Core		☐	☐	☐
159.41	162.46	3.05	MST	2.97	97	S050338	☐	N18-038	Core		☐	☑	☐
162.46	165.51	3.05	MST	3.05	100	S050339	☐	N18-038	Core		☐	☐	☐
165.51	168.55	3.04	MST	3.04	100	S050340	☐	N18-038	Core		☐	☐	☐
168.55	171.60	3.05	MST	2.64	87	S050341	☐	N18-039	Core		☐	☐	☐

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From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
0.00	9.89	9.89	OVB	--	No recovery from 0 to 9.14m. Bedrock begins at 9.89m.							
						MD	BN					
						MD	GY	RB	OXI	2I	--	0
9.89	83.69	73.80	FLR	FG	Strongly sheared and faulted, interbedded (?) medium to locally dark grey, fine to medium grained, silty limestone and rhythmically bedded dark grey, very fine grained (locally calcareous) mudstone and medium to dark grey, fine to very fine grained siltstone with thin laminations of light to medium grey, fine grained sandstone. Bedding is locally visible as wavy/undulating (deformed), parallel cm-scale beds. Throughout interval bedding is distrupted or destroyed by shearing, brecciation and fracturing. Shear fabrics are chaotically oriented. Breccia zones consist of angular wallrock clasts and locally fractured quartz/dolomite veins (with very rare, fine grained realgar). Calcite veining is weak proximal to limestone bodies and locally moderate within. Quartz/dolomite veins are weak throughout (possibly concentrated within sheared intervals).							
						MD	GY	BX			Re	0.01
								CR				
								RB				
								BD				
						DK	GY	SH	---	--	Py	4

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
83.69	302.64	218.95	SLC	FG	Interbedded dark grey, poorly sorted, matrix-supported, quartz granule, lithic cobble to boulder conglomerate with rhythmically interbedded light to medium grey, fine to medium grained sandstone and medium to dark grey (locally brown), fine grained siltstone (with trace mudstone laminations) all overlain by moderately sheared, interbedded dark grey very fine grained mudstone and grey-green (locally biege), very fine grained mudstone. Between interbedded mudstones and conglomerates/siltstones a m-scale bed of light grey, crackled, fine grained dolostone is present. Surrounding mudstone beds are moderately dolomitized and silicified. Brecciation within siltstone/conglomerate bed contains minor realgar, Au mineralization (up to 79ppm Au - XRF), moderate silicification and local moderate pitted texture.							
						LT	GN	BD	SIL	2I	Re	0.1
						LT	GY	BX	DOL	2I	Re	0.1
								RB				
						MD	GY	SH	ARG	1I		
						DK	GY	SD				
302.64	351.13	48.49	LST	FG	Locally moderately to strongly veined, light grey, well bedded, fine grained silty limestone interbedded with light grey, medium grained silty limestone (calc arenite?) and local ~5-30cm thick, rhythmically bedded dark grey/black, very fine grained mudstone and medium to dark grey, fine grained siltstone. Limestone packs are separted by a thick interbed of light greym very fine grained mudstone overlaying a poorly sorted, matrix supported lithic (mudstone) cobble conglomerate. Bedding within limestone is wavy/planar, parallel and locally displays loading structures where calc arenite beds overlie mudstone beds. Trace, bedding parallel, very thin, black styolitic seams present. Styolitic seams are concentrated towards the lower contact. Veining within interval consists of local thick, irregularly shaped calcite veins, vein breccia zones, trace thin sheared veins and chaotic vein networks.							

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
351.13	380.39	29.26	SLT	FG	Strongly sheared/brecciated, rhythmically interbedded dark grey, fine to very fine grained siltstones and mudstone with light grey, fine to medium grained sandstone. Bedding throughout interval is planar, parallel between 30-40 degrees tca and abundantly/chaotically slump folded. Bedding is frequently deformed or destroyed by shearing and brecciation. Breccation and shearing are concentrated near upper contact with limestone and below 375.11m. Breccias consist of angular wallrock fragments and fractured quartz/dolomite veins within fine dark grey gouge fill. Trace (locally minor) quartz/dolomite veinlets present forming, small chaotic (locally sheared) vein networks. Diagenetic pyrite present as rounded blebs and fine deformed bands within non-brecciated intervals.								
								RB				
								BX				
								SH				
						MD	GY	FO			Py	0.5
						DK	GY	BD	---	--	Py	0.5

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
0.00	9.14	9.14	0	0	0.00	0	0R	--	--	no recovery
9.14	11.58	2.44	1.68	69	0.00	0	3R	3H	1W	OVB until 9.91m. Mostly strong reactivity with small areas of clay-rich, weakly reactive material
11.58	14.63	3.05	2.48	81	0.52	17	2R	3H	1W	Reactivity varies by lithology from nonreactive to strongly reactive.
14.63	17.68	3.05	2.5	82	0.22	7	1R	3H	1W	Largely nonreactive with short sections of strongly reactive rock
17.68	20.73	3.05	1.75	57	0.00	0	0R	2H	1W	Highly fractured, generally nonreactive (sporadically weakly reactive).
20.73	23.77	3.04	2.56	84	0.71	23	2R	2H	1W	Nonreactive until 22.21m, where the rock is strongly reactive with HCl for the remainder of the interval. Clay weathering on fractured surfaces
23.77	26.82	3.05	2.2	72	0.22	7	0R	2H	1W	Generally nonreactive, with some sections of stronger reactivity nearer to the beginning of the interval.
26.82	29.87	3.05	1.61	53	0.13	4	0R	2H	1W	
29.87	32.92	3.05	2.72	89	1.12	37	0R	2H	1W	
32.92	35.97	3.05	2.83	93	1.87	61	0R	3H	1W	
35.97	39.01	3.04	2.68	88	1.00	33	2R	2H	1W	
39.01	42.06	3.05	2.95	97	2.08	68	0R	3H	1W	
42.06	45.11	3.05	3	98	1.27	42	2R	2H	1W	variable reactivity from weak-strong
45.11	48.16	3.05	3.02	99	2.04	67	3R	3H	1W	
48.16	51.21	3.05	3.04	100	1.52	50	3R	3H	1W	
51.21	54.25	3.04	3	99	2.32	76	1R	3H	1W	
54.25	57.30	3.05	3.04	100	1.09	36	1R	2H	1W	rbz
57.30	60.35	3.05	3.04	100	0.30	10	1R	2H	1W	rbz
60.35	63.40	3.05	3.02	99	1.85	61	0R	3H	1W	
63.40	66.45	3.05	2.9	95	2.29	75	0R	3H	1W	
66.45	69.49	3.04	3.04	100	2.57	85	0R	3H	1W	
69.49	72.54	3.05	3.04	100	1.86	61	0R	3H	1W	
72.54	75.59	3.05	2.81	92	2.28	75	0R	3H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
75.59	78.64	3.05	3.04	100	2.68	88	0R	3H	1W	
78.64	81.69	3.05	3.04	100	2.24	73	1R	3H	1W	
81.69	84.73	3.04	3.04	100	2.05	67	1R	3H	1W	
84.73	87.78	3.05	3.02	99	2.76	90	0R	3H	1W	
87.78	90.83	3.05	3.02	99	2.46	81	0R	3H	1W	multiple single joints
90.83	93.88	3.05	3.04	100	2.29	75	0R	3H	1W	
93.88	96.93	3.05	3	98	2.52	83	0R	3H	1W	
96.93	99.97	3.04	3	99	2.86	94	0R	3H	1W	
99.97	103.02	3.05	3.02	99	2.94	96	0R	3H	1W	
103.02	106.07	3.05	3.04	100	2.61	86	0R	3H	1W	
106.07	109.12	3.05	3.04	100	3.04	100	0R	3H	1W	
109.12	112.17	3.05	2.9	95	2.83	93	0R	3H	1W	
112.17	115.21	3.04	3.04	100	2.31	76	0R	3H	1W	
115.21	118.26	3.05	3.04	100	1.76	58	0R	2H	1W	rbz from 117.87- 118m
118.26	121.31	3.05	3.01	99	2.53	83	0R	3H	1W	
121.31	124.36	3.05	2.9	95	2.46	81	0R	3H	1W	
124.36	127.41	3.05	2.63	86	1.10	36	0R	3H	1W	rbz
127.41	130.45	3.04	2.93	96	2.09	69	0R	3H	1W	
130.45	133.50	3.05	3.03	99	2.73	90	0R	3H	1W	
133.50	136.55	3.05	3.03	99	2.83	93	0R	3H	1W	
136.55	139.60	3.05	2.64	87	1.96	64	0R	4H	1W	
139.60	142.65	3.05	3.05	100	2.85	93	0R	3H	1W	
142.65	145.69	3.04	2.89	95	2.50	82	0R	3H	1W	
145.69	148.74	3.05	3.05	100	2.85	93	0R	3H	1W	
148.74	151.79	3.05	2.97	97	2.91	95	0R	3H	1W	
151.79	154.84	3.05	3.05	100	3.05	100	0R	3H	1W	
154.84	157.89	3.05	2.93	96	2.83	93	0R	3H	1W	
157.89	160.93	3.04	2.53	83	2.13	70	0R	3H	1W	
160.93	163.98	3.05	3.05	100	2.83	93	0R	3H	1W	
163.98	167.03	3.05	3.05	100	2.66	87	0R	3H	1W	
167.03	170.08	3.05	3.05	100	2.75	90	0R	3H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
170.08	173.13	3.05	2.58	85	1.80	59	0R	3H	1W	
173.13	176.17	3.04	2.64	87	1.37	45	0R	2H	1W	
176.17	179.22	3.05	3.05	100	3.00	98	0R	4H	1W	
179.22	182.27	3.05	3.03	99	3.03	99	0R	3H	1W	
182.27	185.32	3.05	3.05	100	2.99	98	0R	3H	1W	
185.32	188.37	3.05	3.02	99	3.02	99	0R	3H	1W	
188.37	191.41	3.04	3.04	100	2.83	93	0R	3H	1W	
191.41	194.46	3.05	3.03	99	3.03	99	0R	3H	1W	
194.46	197.51	3.05	2.73	90	2.52	83	0R	3H	1W	
197.51	200.56	3.05	3.05	100	2.85	93	0R	3H	1W	
200.56	203.61	3.05	3	98	2.81	92	0R	3H	1W	
203.61	206.65	3.04	2.94	97	2.94	97	0R	3H	1W	
206.65	209.71	3.06	3.06	100	3.06	100	0R	3H	1W	
209.71	212.75	3.04	3	99	3.00	99	0R	3H	1W	
212.75	215.80	3.05	2.96	97	2.96	97	0R	3H	1W	
215.80	218.85	3.05	3.05	100	3.05	100	0R	3H	1W	
218.85	221.89	3.04	3.04	100	2.61	86	0R	3H	1W	
221.89	224.94	3.05	3.05	100	1.88	62	0R	3H	1W	
224.94	227.99	3.05	3.05	100	2.83	93	0R	3H	1W	
227.99	231.04	3.05	3.05	100	3.05	100	0R	3H	1W	
231.04	234.09	3.05	2.95	97	2.95	97	0R	3H	1W	
234.09	237.13	3.04	3.04	100	3.04	100	0R	3H	1W	
237.13	240.18	3.05	2.99	98	2.85	93	0R	3H	1W	
240.18	242.93	2.75	2.54	92	1.94	71	0R	3H	1W	
242.93	245.97	3.04	3.04	100	1.99	65	0R	3H	1W	
245.97	249.02	3.05	2.92	96	2.75	90	0R	3H	1W	
249.02	252.07	3.05	3	98	2.27	74	0R	3H	1W	
252.07	255.12	3.05	3.03	99	1.82	60	0R	3H	1W	
255.12	258.17	3.05	2.7	89	0.96	31	0R	3H	1W	RBZ from 256.5-256.80m
258.17	261.21	3.04	3.04	100	2.59	85	0R	3H	1W	
261.21	264.26	3.05	3.05	100	2.82	92	0R	3H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
264.26	267.31	3.05	2.98	98	2.41	79	0R	3H	1W	
267.31	270.36	3.05	2.98	98	2.69	88	0R	3H	1W	
270.36	273.41	3.05	2.98	98	2.33	76	0R	4H	1W	
273.41	276.45	3.04	2.93	96	2.61	86	0R	4H	1W	
276.45	279.50	3.05	2.85	93	1.40	46	0R	1H	1W	RBZ bet 278.0-279.50m
279.50	282.85	3.35	1.55	46	0.00	0	0R	2H	1W	RBZ
282.85	285.90	3.05	2.82	92	2.07	68	0R	3H	1W	
285.90	288.95	3.05	3.05	100	2.74	90	0R	3H	1W	
288.95	291.99	3.04	2.74	90	2.54	84	0R	3H	1W	
291.99	295.04	3.05	2.84	93	2.28	75	0R	3H	1W	
295.04	298.09	3.05	2.96	97	2.67	88	0R	3H	1W	
298.09	301.14	3.05	2.87	94	2.22	73	0R	3H	1W	
301.14	304.19	3.05	3.05	100	2.94	96	1R	3H	1W	
304.19	307.24	3.05	3.05	100	2.59	85	3R	3H	1W	
307.24	310.29	3.05	3.05	100	3.05	100	3R	3H	1W	
310.29	313.33	3.04	2.97	98	2.85	94	3R	3H	1W	
313.33	316.38	3.05	3.03	99	2.93	96	3R	3H	1W	
316.38	319.43	3.05	3.05	100	2.97	97	3R	3H	1W	
319.43	322.48	3.05	2.96	97	2.86	94	3R	3H	1W	
322.48	325.53	3.05	3.05	100	2.60	85	3R	3H	1W	
325.53	328.57	3.04	2.94	97	2.71	89	3R	3H	1W	
328.57	331.62	3.05	3.05	100	2.98	98	3R	3H	1W	
331.62	334.67	3.05	3.05	100	3.05	100	3R	3H	1W	
334.67	337.72	3.05	3.05	100	2.77	91	3R	3H	1W	
337.72	340.77	3.05	2.97	97	2.61	86	3R	3H	1W	
340.77	343.81	3.04	3.04	100	3.04	100	3R	3H	1W	
343.81	346.86	3.05	3.05	100	3.05	100	3R	3H	1W	
346.86	349.91	3.05	2.76	90	2.54	83	3R	2H	1W	
349.91	352.96	3.05	2.44	80	0.75	25	2R	2H	1W	
352.96	356.01	3.05	2.6	85	1.37	45	1R	2H	1W	RBZ
356.01	359.05	3.04	2.77	91	1.72	57	0R	2H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
359.05	362.10	3.05	3.05	100	2.91	95	0R	3H	1W	
362.10	365.15	3.05	3.05	100	2.96	97	0R	3H	1W	
365.15	368.20	3.05	3.05	100	3.00	98	0R	3H	1W	
368.20	371.25	3.05	2.92	96	2.60	85	0R	3H	1W	
371.25	374.29	3.04	2.99	98	2.90	95	0R	3H	1W	
374.29	377.34	3.05	2.75	90	1.78	58	0R	1H	1W	
377.34	380.39	3.05	2.68	88	0.00	0	0R	1H	1W	

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From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
0.00	0.00	0.00	-QC-	0.00	0	S049030	☐	N18-042	core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S048921	☐	N18-037	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S049037	☐	N18-042	core	CS10	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S049014	☐	N18-042	core	CS9	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S048992	☐	N18-041	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S048985	☐	N18-041	Core	CS10	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S048973	☐	N18-041	Core	CS9	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S048960	☐	N18-040	Core	CS10	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S048942	☐	N18-040	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S048933	☐	N18-040	Core	CS9	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S049060	☐	N18-043	Core	CS9	☐	☐	☐
9.14	10.89	1.75	OVB	0.38	22	S048920	☐	N18-037	Core		☐	☐	☐
10.89	11.58	0.69	FLR	0.60	87	S048922	☐	N18-037	Core		☐	☐	☐
11.58	14.63	3.05	FLR	2.48	81	S048923	☐	N18-037	Core		☐	☐	☐
14.63	17.68	3.05	FLR	2.50	82	S048924	☐	N18-037	Core		☐	☐	☐
17.68	20.73	3.05	FLR	1.75	57	S048925	☐	N18-037	Core		☐	☐	☐
17.68	20.73	3.05	FLR	1.75	57	S048926	☐	N18-037	Core		☐	☑	☐
20.73	23.77	3.04	FLR	2.56	84	S048927	☐	N18-037	Core		☐	☐	☐
23.77	26.82	3.05	FLR	2.20	72	S048928	☐	N18-037	Core		☐	☐	☐
26.82	29.87	3.05	FLR	1.61	53	S048929	☐	N18-037	Core		☐	☐	☐
26.82	29.87	3.05	FLR	1.61	53	S048930	☐	N18-037	Core		☐	☐	☑
29.87	32.92	3.05	FLR	2.72	89	S048931	☐	N18-040	Core		☐	☐	☐
32.92	35.97	3.05	FLR	2.83	93	S048932	☐	N18-040	Core		☐	☐	☐
35.97	39.01	3.04	FLR	2.68	88	S048934	☐	N18-040	Core		☐	☐	☐
39.01	42.06	3.05	FLR	2.95	97	S048935	☐	N18-040	Core		☐	☐	☐
42.06	45.11	3.05	FLR	3.00	98	S048936	☐	N18-040	Core		☐	☐	☐
45.11	48.16	3.05	FLR	3.02	99	S048937	☐	N18-040	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
48.16	50.78	2.62	FLR	2.62	100	S048938	☐	N18-040	Core		☐	☐	☐
50.78	53.24	2.46	FLR	2.44	99	S048939	☐	N18-040	Core		☐	☐	☐
53.24	55.21	1.97	FLR	1.86	94	S048940	☐	N18-040	Core		☐	☐	☐
55.21	57.30	2.09	FLR	1.80	86	S048941	☐	N18-040	Core		☐	☐	☐
57.30	60.00	2.70	FLR	2.67	99	S048943	☐	N18-040	Core		☐	☐	☐
60.00	61.82	1.82	FLR	1.71	94	S048944	☐	N18-040	Core		☐	☐	☐
60.00	61.82	1.82	FLR	1.71	94	S048945	☐	N18-040	Core		☐	☐	☑
61.82	63.94	2.12	FLR	2.12	100	S048946	☐	N18-040	Core		☐	☐	☐
63.94	66.45	2.51	FLR	2.41	96	S048947	☐	N18-040	Core		☐	☐	☐
66.45	69.49	3.04	FLR	3.04	100	S048948	☐	N18-040	Core		☐	☐	☐
69.49	72.54	3.05	FLR	3.04	100	S048949	☐	N18-040	Core		☐	☐	☐
72.54	75.59	3.05	FLR	2.81	92	S048950	☐	N18-040	Core		☐	☐	☐
75.59	78.64	3.05	FLR	3.04	100	S048951	☐	N18-040	Core		☐	☐	☐
78.64	81.69	3.05	FLR	3.04	100	S048952	☐	N18-040	Core		☐	☐	☐
81.69	84.73	3.04	FLR	3.04	100	S048953	☐	N18-040	Core		☐	☐	☐
84.73	87.78	3.05	SLC	3.02	99	S048954	☐	N18-040	Core		☐	☐	☐
87.78	90.83	3.05	SLC	3.02	99	S048955	☐	N18-040	Core		☐	☐	☐
90.83	93.88	3.05	SLC	3.04	100	S048956	☐	N18-040	Core		☐	☐	☐
93.88	96.93	3.05	SLC	3.00	98	S048957	☐	N18-040	Core		☐	☐	☐
96.93	99.97	3.04	SLC	3.00	99	S048958	☐	N18-040	Core		☐	☐	☐
99.97	103.02	3.05	SLC	3.02	99	S048959	☐	N18-040	Core		☐	☐	☐
103.02	106.07	3.05	SLC	3.04	100	S048961	☐	N18-040	Core		☐	☐	☐
106.07	109.12	3.05	SLC	3.04	100	S048962	☐	N18-040	Core		☐	☐	☐
109.12	112.17	3.05	SLC	2.90	95	S048963	☐	N18-040	Core		☐	☐	☐
112.17	115.21	3.04	SLC	3.04	100	S048964	☐	N18-040	Core		☐	☐	☐
112.17	115.21	3.04	SLC	3.04	100	S048965	☐	N18-040	Core		☐	☑	☐
115.21	118.26	3.05	SLC	3.04	100	S048966	☐	N18-040	Core		☐	☐	☐
118.26	121.31	3.05	SLC	3.01	99	S048967	☐	N18-040	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
121.31	124.36	3.05	SLC	2.90	95	S048968	☐	N18-040	Core		☐	☐	☐
124.36	127.41	3.05	SLC	2.63	86	S048969	☐	N18-040	Core		☐	☐	☐
127.41	130.45	3.04	SLC	2.93	96	S048970	☐	N18-040	Core		☐	☐	☐
130.45	133.50	3.05	SLC	3.03	99	S048971	☐	N18-041	Core		☐	☐	☐
133.50	136.55	3.05	SLC	3.03	99	S048972	☐	N18-041	Core		☐	☐	☐
136.55	139.60	3.05	SLC	2.64	87	S048974	☐	N18-041	Core		☐	☐	☐
139.60	142.00	2.40	SLC	1.65	69	S048975	☐	N18-041	Core		☐	☐	☐
142.00	143.92	1.92	SLC	1.86	97	S048976	☐	N18-041	Core		☐	☐	☐
143.92	146.11	2.19	SLC	2.12	97	S048977	☐	N18-041	Core		☐	☐	☐
143.92	146.11	2.19	SLC	2.12	97	S048978	☐	N18-041	Core		☐	☑	☐
146.11	148.74	2.63	SLC	2.63	100	S048979	☐	N18-041	Core		☐	☐	☐
148.74	151.79	3.05	SLC	2.97	97	S048980	☐	N18-041	Core		☐	☐	☐
151.79	154.84	3.05	SLC	3.05	100	S048981	☐	N18-041	Core		☐	☐	☐
154.84	157.89	3.05	SLC	2.93	96	S048982	☐	N18-041	Core		☐	☐	☐
157.89	160.93	3.04	SLC	2.53	83	S048983	☐	N18-041	Core		☐	☐	☐
160.93	163.98	3.05	SLC	3.05	100	S048984	☐	N18-041	Core		☐	☐	☐
163.98	167.03	3.05	SLC	3.05	100	S048986	☐	N18-041	Core		☐	☐	☐
167.03	170.08	3.05	SLC	3.05	100	S048987	☐	N18-041	Core		☐	☐	☐
170.08	171.25	1.17	SLC	1.12	96	S048988	☐	N18-041	Core		☐	☐	☐
171.25	173.48	2.23	SLC	2.02	91	S048989	☐	N18-041	Core		☐	☐	☐
171.25	173.48	2.23	SLC	2.02	91	S048990	☐	N18-041	Core		☐	☐	☑
173.48	175.17	1.69	SLC	1.67	99	S048991	☐	N18-041	Core		☐	☐	☐
175.17	177.42	2.25	SLC	2.17	96	S048993	☐	N18-041	Core		☐	☐	☐
177.42	179.22	1.80	SLC	1.80	100	S048994	☐	N18-041	Core		☐	☐	☐
179.22	182.27	3.05	SLC	3.03	99	S048995	☐	N18-041	Core		☐	☐	☐
182.27	185.32	3.05	SLC	3.05	100	S048996	☐	N18-041	Core		☐	☐	☐
185.32	188.37	3.05	SLC	3.02	99	S048997	☐	N18-041	Core		☐	☐	☐
188.37	191.41	3.04	SLC	3.04	100	S048998	☐	N18-041	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
191.41	194.46	3.05	SLC	3.03	99	S048999	☐	N18-041	Core		☐	☐	☐
194.46	197.51	3.05	SLC	2.73	90	S049000	☐	N18-041	Core		☐	☐	☐
197.51	200.56	3.05	SLC	3.05	100	S049001	☐	N18-041	Core		☐	☐	☐
200.56	203.61	3.05	SLC	3.00	98	S049002	☐	N18-041	Core		☐	☐	☐
203.61	206.65	3.04	SLC	2.94	97	S049003	☐	N18-041	Core		☐	☐	☐
206.65	209.71	3.06	SLC	3.06	100	S049004	☐	N18-041	Core		☐	☐	☐
209.71	212.75	3.04	SLC	3.00	99	S049005	☐	N18-041	Core		☐	☐	☐
212.75	215.80	3.05	SLC	2.96	97	S049006	☐	N18-041	Core		☐	☐	☐
215.80	218.85	3.05	SLC	3.04	100	S049007	☐	N18-041	Core		☐	☐	☐
218.85	221.89	3.04	SLC	3.04	100	S049008	☐	N18-041	Core		☐	☐	☐
221.89	224.94	3.05	SLC	3.05	100	S049009	☐	N18-041	Core		☐	☐	☐
224.94	227.99	3.05	SLC	3.05	100	S049010	☐	N18-041	Core		☐	☐	☐
227.99	231.04	3.05	SLC	3.05	100	S049011	☐	N18-042	core		☐	☐	☐
231.04	234.09	3.05	SLC	2.95	97	S049012	☐	N18-042	core		☐	☐	☐
234.09	237.13	3.04	SLC	3.04	100	S049013	☐	N18-042	core		☐	☐	☐
237.13	240.18	3.05	SLC	2.99	98	S049015	☐	N18-042	core		☐	☐	☐
240.18	242.93	2.75	SLC	2.54	92	S049016	☐	N18-042	core		☐	☐	☐
242.93	245.97	3.04	SLC	3.04	100	S049017	☐	N18-042	core		☐	☐	☐
245.97	249.02	3.05	SLC	2.92	96	S049018	☐	N18-042	core		☐	☐	☐
249.02	252.07	3.05	SLC	3.00	98	S049019	☐	N18-042	core		☐	☐	☐
252.07	255.12	3.05	SLC	3.03	99	S049020	☐	N18-042	core		☐	☐	☐
255.12	258.17	3.05	SLC	2.70	89	S049021	☐	N18-042	core		☐	☐	☐
255.12	258.17	3.05	SLC	2.70	89	S049022	☐	N18-042	core		☐	☐	☑
258.17	261.21	3.04	SLC	3.04	100	S049023	☐	N18-042	core		☐	☐	☐
261.21	264.26	3.05	SLC	3.05	100	S049024	☐	N18-042	core		☐	☐	☐
264.26	267.31	3.05	SLC	2.98	98	S049025	☐	N18-042	core		☐	☐	☐
267.31	270.36	3.05	SLC	2.98	98	S049026	☐	N18-042	core		☐	☐	☐
270.36	273.41	3.05	SLC	2.98	98	S049027	☐	N18-042	core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
273.41	276.45	3.04	SLC	2.93	96	S049028	☐	N18-042	core		☐	☐	☐
276.45	279.50	3.05	SLC	2.85	93	S049029	☐	N18-042	core		☐	☐	☐
279.50	282.55	3.05	SLC	1.94	64	S049031	☐	N18-042	core		☐	☐	☐
282.55	285.20	2.65	SLC	2.53	95	S049032	☐	N18-042	core		☐	☐	☐
285.20	288.15	2.95	SLC	2.85	97	S049033	☐	N18-042	core		☐	☐	☐
288.15	290.64	2.49	SLC	2.43	98	S049034	☐	N18-042	core		☐	☐	☐
290.64	293.15	2.51	SLC	2.47	98	S049035	☐	N18-042	core		☐	☐	☐
293.15	295.28	2.13	SLC	1.94	91	S049036	☐	N18-042	core		☐	☐	☐
295.28	297.33	2.05	SLC	2.05	100	S049038	☐	N18-042	core		☐	☐	☐
297.33	299.92	2.59	SLC	2.48	96	S049039	☐	N18-042	core		☐	☐	☐
299.92	302.64	2.72	SLC	2.63	97	S049040	☐	N18-042	core		☐	☐	☐
302.64	304.19	1.55	SLC, LST	1.55	100	S049041	☐	N18-042	core		☐	☐	☐
304.19	307.24	3.05	LST	3.05	100	S049042	☐	N18-042	core		☐	☐	☐
307.24	310.29	3.05	LST	3.05	100	S049043	☐	N18-042	core		☐	☐	☐
310.29	313.33	3.04	LST	2.97	98	S049044	☐	N18-042	core		☐	☐	☐
313.33	316.38	3.05	LST	3.03	99	S049045	☐	N18-042	core		☐	☐	☐
313.33	316.38	3.05	LST	3.03	99	S049046	☐	N18-042	core		☐	☑	☐
316.38	319.43	3.05	LST	3.05	100	S049047	☐	N18-042	core		☐	☐	☐
319.43	322.48	3.05	LST	2.96	97	S049048	☐	N18-042	core		☐	☐	☐
322.48	325.53	3.05	LST	3.05	100	S049049	☐	N18-042	core		☐	☐	☐
325.53	328.57	3.04	LST	2.94	97	S049050	☐	N18-042	core		☐	☐	☐
328.57	331.62	3.05	LST	3.05	100	S049051	☐	N18-043	Core		☐	☐	☐
331.62	334.67	3.05	LST	3.05	100	S049052	☐	N18-043	Core		☐	☐	☐
334.67	337.72	3.05	LST	3.05	100	S049053	☐	N18-043	Core		☐	☐	☐
337.72	340.77	3.05	LST	2.97	97	S049054	☐	N18-043	Core		☐	☐	☐
340.77	343.81	3.04	LST	3.04	100	S049055	☐	N18-043	Core		☐	☐	☐
343.81	346.86	3.05	LST	3.05	100	S049056	☐	N18-043	Core		☐	☐	☐
346.86	349.36	2.50	LST	2.23	89	S049057	☐	N18-043	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
349.36	351.13	1.77	LST	1.66	94	S049058	☐	N18-043	Core		☐	☐	☐
351.13	353.66	2.53	LST, SLT	1.98	78	S049059	☐	N18-043	Core		☐	☐	☐
353.66	356.01	2.35	SLT	1.96	83	S049061	☐	N18-043	Core		☐	☐	☐
356.01	359.05	3.04	SLT	2.77	91	S049062	☐	N18-043	Core		☐	☐	☐
359.05	362.10	3.05	SLT	3.05	100	S049063	☐	N18-043	Core		☐	☐	☐
362.10	365.15	3.05	SLT	3.05	100	S049064	☐	N18-043	Core		☐	☐	☐
365.15	368.20	3.05	SLT	3.05	100	S049065	☐	N18-043	Core		☐	☐	☐
368.20	371.25	3.05	SLT	2.92	96	S049066	☐	N18-043	Core		☐	☐	☐
371.25	374.29	3.04	SLT	2.99	98	S049067	☐	N18-043	Core		☐	☐	☐
374.29	377.34	3.05	SLT	2.75	90	S049068	☐	N18-043	Core		☐	☐	☐
374.29	377.34	3.05	SLT	2.75	90	S049069	☐	N18-043	Core		☐	☐	☑
377.34	380.39	3.05	SLT	2.68	88	S049070	☐	N18-043	Core		☐	☐	☐

OS -18-273

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
0.00	0.84	0.84	-?-	--	NO RECOVERY from 0.00-0.77m. Overburden from 0.77-0.84m. Overburden is composed of clay with some angular rock fragments.							
						MD	BN	---	---	--	--	0
0.84	130.23	129.39	MST	FG	Interval almost entirely composed of light green and maroon, plannar bedded, trace oxidized, mudstone with quartz arenite laminations. There are 3 sections within this interval which are brecciated, gougy, rubbly, sheared and have been interpreted as fault zones. The most significant fault zone was intersected from 3.90- 19.25m.							
						MD	RD					
						MD	GN	BD	---	--	--	0
130.23	305.77	175.54	LST	FG	Interval mainly composed of light and medium gray, very fine grained, planar bedded, weakly veined, locally brecciated, calcareous mudstone. Trace to weakly oxidized, primarily on fracture surfaces, from 130.23-199.64m. There are 2 intervals which intersected significant Re-Au mineralization. 272.0-274.15m --> Re-Au mineralization - Medium and dark grey, laminated, strongly decalcified, moderately sheared, silicified, soft sediment deformed, laminated, Re-Au mineralized, calcareous mudstone. Realgar makes up 15-20% of the interval 275.84 - 285.68 --> Re-Om-Au Mineralization - Dark grey and orange, Re-Au-Om mineralized, moderately sheared, decalcified, silicified, calcareous mudstone. Realgar makes up about 10% of interval. Trace mineralization intersected in the following intervals: 213.36-236.45m; 274.15-275.84m; 285.68-298.10m; and 303.08-305.77m.							

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
305.77	329.18	23.41	MST	FG	Maroon and green, planar bedded, mudstone with thin laminations of quartz arenite. Bedding at 15-25TCA. Maroon (dominant) mudstone interbedded with green mudstone. Disseminated pyrite from 305.77-308.70m Medium grained quartz arenite laminations (5mm thick), every 10-20cm. Upper contact with O-LST1. No discernible signs of alteration.							
						MD	RD					
						MD	GN	BD	---	--	Py	3

OS -18-273

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
0.00	0.77	0.77	0	0	0.00	0	--	--	--	NO RECOVERY
0.77	3.05	2.28	2.28	100	0.00	0	0R	2H	2W	highly fractured
3.05	6.10	3.05	2.72	89	0.00	0	0R	1H	4W	core is coherent and held together - but highly gouged, therefore RQD = 0
6.10	9.14	3.04	2.11	69	0.00	0	0R	1H	4W	core is coherent and held together - but highly gouged, therefore RQD = 0
9.14	12.19	3.05	2.69	88	0.00	0	0R	1H	4W	core is coherent and held together - but highly gouged, therefore RQD = 0
12.19	15.24	3.05	2.39	78	0.00	0	0R	1H	4W	core is coherent and held together - but highly gouged, therefore RQD = 0
15.24	18.29	3.05	2.46	81	0.53	17	0R	1H	2W	
18.29	21.34	3.05	2.04	67	0.84	28	0R	1H	2W	
21.34	24.38	3.04	2.95	97	2.39	79	0R	3H	2W	
24.38	27.43	3.05	2.9	95	2.58	85	0R	3H	2W	
27.43	30.48	3.05	2.99	98	2.61	86	0R	3H	1W	
30.48	33.53	3.05	3.05	100	2.77	91	0R	2H	1W	
33.53	36.58	3.05	2.67	88	2.25	74	0R	2H	1W	
36.58	39.62	3.04	2.83	93	1.98	65	0R	1H	1W	
39.62	42.67	3.05	2.84	93	2.26	74	0R	2H	1W	
42.67	45.72	3.05	3.05	100	2.70	89	0R	3H	1W	
45.72	48.77	3.05	2.84	93	1.98	65	0R	3H	1W	
48.77	51.82	3.05	2.36	77	1.62	53	0R	1H	1W	
51.82	54.86	3.04	3.04	100	1.53	50	0R	1H	1W	
54.86	57.91	3.05	2.9	95	1.88	62	0R	1H	1W	
57.91	60.96	3.05	2.95	97	2.39	78	0R	2H	1W	
60.96	64.01	3.05	3	98	2.72	89	0R	2H	1W	
64.01	67.06	3.05	2.95	97	2.90	95	0R	3H	1W	
67.06	70.10	3.04	2.94	97	2.61	86	0R	3H	1W	
70.10	73.15	3.05	3.04	100	2.87	94	0R	3H	1W	
73.15	76.20	3.05	3.04	100	3.04	100	0R	3H	1W	
76.20	79.25	3.05	3	98	3.00	98	0R	3H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
79.25	82.30	3.05	3.04	100	3.04	100	0R	3H	1W	
82.30	85.34	3.04	2.57	85	2.31	76	0R	3H	1W	
85.34	88.39	3.05	3	98	2.91	95	0R	3H	1W	
88.39	91.44	3.05	3.04	100	2.07	68	0R	2H	1W	RBZ 91.00-91.44m
91.44	94.49	3.05	2.74	90	2.09	69	0R	2H	1W	RBZ/Gouge 91.44-92.30m
94.49	97.54	3.05	3.04	100	2.08	68	0R	2H	1W	RBZ 96.00-96.15m.
97.54	100.58	3.04	2.68	88	1.62	53	0R	2H	1W	RBZ 97.70-98.50m. Moderately fractured 99.20-100m.
100.58	103.63	3.05	2.84	93	2.48	81	0R	2H	1W	Moderately fractured 101.50-101.90m.
103.63	106.68	3.05	2.96	97	2.59	85	0R	3H	1W	
106.68	109.73	3.05	3.04	100	2.65	87	0R	3H	1W	Moderately fractured 107.30-108.20m.
109.73	112.78	3.05	2.87	94	2.63	86	0R	3H	1W	
112.78	115.82	3.04	3.04	100	2.91	96	0R	3H	1W	
115.82	118.87	3.05	2.91	95	2.37	78	0R	2H	1W	
118.87	121.92	3.05	2.95	97	2.13	70	0R	2H	1W	Moderately fractured 118.87-120.60m. Moderately to highly fractured 121.50-121.92m.
121.92	124.97	3.05	2.96	97	2.23	73	0R	3H	1W	
124.97	128.02	3.05	3.03	99	2.33	76	0R	3H	1W	
128.02	131.06	3.04	2.86	94	1.55	51	2R	3H	1W	reactivity increases throughout rnu
131.06	134.11	3.05	3.05	100	1.34	44	4R	2H	1W	moderately to highly fractured from 131.31-131.46m and 131.80-131.89m
134.11	137.16	3.05	2.65	87	1.35	44	3R	3H	1W	
137.16	140.21	3.05	3.05	100	1.09	36	0R	2H	1W	moderate-highly fractured from 138.4-138.54m.
140.21	143.26	3.05	2.67	88	1.07	35	2R	2H	1W	Rubbly from 142.53-142.96m
143.26	146.30	3.04	2.82	93	1.08	36	4R	2H	1W	Sections of high fracture count include 143.52-143.6m, 144.18-144.28m, and 144.44-144.62m.
146.30	149.35	3.05	2.93	96	1.72	56	4R	2H	1W	Moderate-high fracture count from 148.19-148.79m.
149.35	152.40	3.05	2.21	72	0.44	14	3R	2H	1W	Moderate to high fracture count throughout interval
152.40	155.45	3.05	2.53	83	0.68	22	3R	2H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
155.45	158.50	3.05	2.57	84	0.67	22	4R	2H	1W	Rubble zone from 156.00-156.79 and 156.90-157.41m.
158.50	161.54	3.04	2.69	88	1.13	37	3R	2H	1W	
161.54	164.59	3.05	3.03	99	2.47	81	3R	3H	1W	
164.59	167.64	3.05	2.83	93	2.39	78	3R	3H	1W	
167.64	170.69	3.05	2.92	96	2.35	77	3R	3H	1W	
170.69	173.74	3.05	2.67	88	1.29	42	4R	3H	1W	highly fractured from 172.21-172.86m and 173.24-173.74m.
173.74	176.78	3.04	2.91	96	1.87	62	4R	2H	1W	highly fractured from 173.74-174.18m
176.78	179.83	3.05	2.61	86	1.06	35	4R	2H	1W	highly fractured from 178.88-178.38m
179.83	182.88	3.05	3.05	100	1.96	64	4R	3H	1W	
182.88	185.93	3.05	2.07	68	0.88	29	3R	2H	2W	Moderate-intensely fractured from 183.27-184.7m.
185.93	188.98	3.05	3.05	100	1.60	52	3R	2H	2W	
188.98	192.02	3.04	2.71	89	1.73	57	3R	2H	2W	
192.02	195.07	3.05	2.91	95	2.38	78	3R	3H	2W	
195.07	198.12	3.05	2.95	97	1.44	47	2R	3H	2W	
198.12	201.17	3.05	2.84	93	1.73	57	1R	3H	1W	HCl reactivity varies from non-moderately reactive
201.17	204.22	3.05	2.76	90	1.06	35	1R	2H	1W	202.48-202.69m and 202.96-203.38m are highly fractured sections
204.22	207.26	3.04	2.54	84	0.56	18	2R	2H	1W	HCl reactivity variable from moderate to intense
207.26	210.31	3.05	2.76	90	1.34	44	3R	2H	1W	Rubble from 207.26-207.42m
210.31	213.36	3.05	2.79	91	0.63	21	3R	2H	1W	rbz from 212.1-212.3m
213.36	216.41	3.05	2.69	88	1.18	39	4R	3H	1W	Yellow-green AsO alteration along some fracture surfaces.
216.41	219.46	3.05	2.93	96	0.32	10	4R	2H	1W	
219.46	222.50	3.04	3	99	0.47	15	4R	3H	1W	
222.50	225.55	3.05	1.98	65	0.32	10	4R	3H	1W	Highly fractured zone with granule ot pebble sized limestone.
225.55	228.60	3.05	2.7	89	0.83	27	4R	3H	1W	
228.60	231.65	3.05	2.8	92	1.37	45	3R	3H	1W	
231.65	234.70	3.05	3.05	100	2.26	74	2R	3H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
234.70	237.74	3.04	2.98	98	2.16	71	2R	3H	1W	
237.74	240.79	3.05	2.9	95	2.10	69	2R	3H	1W	
240.79	243.84	3.05	2.59	85	2.07	68	4R	3H	1W	Gouge present b/w 240.79-240.89
243.84	246.89	3.05	3.05	100	2.19	72	2R	3H	1W	
246.89	249.94	3.05	2.77	91	1.16	38	4R	3H	1W	Rubble zone present between 249.52-249.94m
249.94	252.98	3.04	2.5	82	1.56	51	2R	3H	1W	High density of bedding parallel fractures
252.98	256.03	3.05	2.83	93	2.29	75	2R	3H	1W	High density of bedding parallel fractures.
256.03	259.08	3.05	2.85	93	1.42	47	2R	3H	1W	
259.08	262.13	3.05	2.97	97	1.98	65	2R	3H	1W	
262.13	265.18	3.05	2.81	92	2.38	78	1R	3H	1W	
265.18	268.22	3.04	3.04	100	1.80	59	2R	3H	1W	
268.22	271.27	3.05	3.02	99	2.94	96	1R	3H	1W	
271.27	274.32	3.05	3.04	100	2.34	77	1R	3H	1W	
274.32	277.37	3.05	3.04	100	2.33	76	1R	3H	1W	
277.37	280.42	3.05	3.03	99	2.83	93	0R	3H	1W	
280.42	283.46	3.04	3.04	100	2.36	78	0R	3H	1W	
283.46	286.51	3.05	3.04	100	2.96	97	0R	3H	1W	
286.51	289.56	3.05	3.04	100	1.51	50	4R	3H	1W	
289.56	292.61	3.05	3.05	100	2.31	76	4R	3H	1W	
292.61	295.66	3.05	2.81	92	2.15	70	4R	2H	1W	Locally decalcified.
295.66	298.70	3.04	3.04	100	2.41	79	4R	3H	1W	
298.70	301.75	3.05	2.97	97	2.70	89	2R	3H	1W	
301.75	304.80	3.05	2.95	97	2.48	81	1R	3H	1W	Locally abundant realgar filled fractures.
304.80	307.85	3.05	3.05	100	3.00	98	0R	3H	1W	
307.85	310.90	3.05	3.05	100	2.67	88	0R	2H	1W	
310.90	313.94	3.04	2.99	98	2.99	98	0R	3H	1W	
313.94	316.99	3.05	3.05	100	3.00	98	0R	3H	1W	
316.99	320.04	3.05	2.94	96	2.69	88	0R	3H	1W	
320.04	323.09	3.05	3.05	100	2.29	75	0R	3H	1W	
323.09	326.14	3.05	3.04	100	2.71	89	0R	3H	1W	
326.14	329.18	3.04	2.8	92	2.80	92	0R	3H	1W	

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From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
0.00	0.00	0.00	-QC-	0.00	0	S050372	☐	N18-039	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S050376	☐	N18-039	Core	CS10	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S050388	☐	N18-044	Core	CS9	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S050394	☐	N18-044	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S050418	☐	N18-044	Core	CS8	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S050425	☐	N18-045	Core	CS6	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S050366	☐	N18-039	Core	CS9	☐	☐	☐
0.77	3.05	2.28	-?-	2.27	100	S050342	☐	N18-039	Core		☐	☐	☐
3.05	6.10	3.05	MST	2.72	89	S050343	☐	N18-039	Core		☐	☐	☐
6.10	9.14	3.04	MST	2.11	69	S050344	☐	N18-039	Core		☐	☐	☐
9.14	12.19	3.05	MST	2.69	88	S050345	☐	N18-039	Core		☐	☐	☐
12.19	15.24	3.05	MST	2.39	78	S050346	☐	N18-039	Core		☐	☐	☐
15.24	18.29	3.05	MST	2.46	81	S050347	☐	N18-039	Core		☐	☐	☐
18.29	21.34	3.05	MST	2.04	67	S050348	☐	N18-039	Core		☐	☐	☐
21.34	24.38	3.04	MST	2.95	97	S050349	☐	N18-039	Core		☐	☐	☐
24.38	27.43	3.05	MST	2.90	95	S050350	☐	N18-039	Core		☐	☐	☐
27.43	33.53	6.10	MST	6.04	99	W233093	☐	N18-C03	Chip		☐	☐	☐
33.53	39.62	6.09	MST	5.50	90	W233094	☐	N18-C03	Chip		☐	☐	☐
39.62	45.72	6.10	MST	5.89	97	W233095	☐	N18-C03	Chip		☐	☐	☐
45.72	51.82	6.10	MST	5.20	85	W233096	☐	N18-C03	Chip		☐	☐	☐
51.82	57.91	6.09	MST	5.95	98	W233097	☐	N18-C03	Chip		☐	☐	☐
57.91	64.01	6.10	MST	5.95	98	W233098	☐	N18-C03	Chip		☐	☐	☐
64.01	70.10	6.09	MST	5.89	97	W233099	☐	N18-C03	Chip		☐	☐	☐
70.10	76.20	6.10	MST	6.08	100	W233100	☐	N18-C03	Chip		☐	☐	☐
76.20	82.30	6.10	MST	6.04	99	W233101	☐	N18-C03	Chip		☐	☐	☐
82.30	88.39	6.09	MST	5.57	91	W233102	☐	N18-C03	Chip		☐	☐	☐
88.39	94.49	6.10	MST	5.78	95	W233103	☐	N18-C03	Chip		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
94.49	100.58	6.09	MST	5.72	94	W233104	☐	N18-C03	Chip		☐	☐	☐
100.58	106.68	6.10	MST	5.80	95	W233105	☐	N18-C03	Chip		☐	☐	☐
106.68	112.78	6.10	MST	5.91	97	W233106	☐	N18-C03	Chip		☐	☐	☐
112.78	118.87	6.09	MST	5.95	98	W233107	☐	N18-C03	Chip		☐	☐	☐
118.87	123.44	4.57	MST	4.40	96	W233108	☐	N18-C03	Chip		☐	☐	☐
123.44	126.49	3.05	MST	2.63	86	S050351	☐	N18-039	Core		☐	☐	☐
126.49	128.48	1.99	MST	1.87	94	S050352	☐	N18-039	Core		☐	☐	☐
128.48	130.23	1.75	MST	1.25	71	S050353	☐	N18-039	Core		☐	☐	☐
130.23	132.23	2.00	LST, MST	1.85	93	S050354	☐	N18-039	Core		☐	☐	☐
132.23	134.11	1.88	LST	1.88	100	S050355	☐	N18-039	Core		☐	☐	☐
134.11	137.16	3.05	LST	2.65	87	S050356	☐	N18-039	Core		☐	☐	☐
137.16	140.21	3.05	LST	3.05	100	S050357	☐	N18-039	Core		☐	☐	☐
140.21	143.26	3.05	LST	2.67	88	S050358	☐	N18-039	Core		☐	☐	☐
143.26	146.30	3.04	LST	2.82	93	S050359	☐	N18-039	Core		☐	☐	☐
146.30	149.35	3.05	LST	2.93	96	S050360	☐	N18-039	Core		☐	☐	☐
149.35	152.40	3.05	LST	2.21	72	S050361	☐	N18-039	Core		☐	☐	☐
149.35	152.40	3.05	LST	2.21	72	S050362	☐	N18-039	Core		☐	☑	☐
152.40	155.45	3.05	LST	2.53	83	S050363	☐	N18-039	Core		☐	☐	☐
155.45	158.50	3.05	LST	2.57	84	S050364	☐	N18-039	Core		☐	☐	☐
158.50	161.54	3.04	LST	2.69	88	S050365	☐	N18-039	Core		☐	☐	☐
161.54	164.59	3.05	LST	3.03	99	S050367	☐	N18-039	Core		☐	☐	☐
164.59	167.64	3.05	LST	2.83	93	S050368	☐	N18-039	Core		☐	☐	☐
164.59	167.64	3.05	LST	2.83	93	S050369	☐	N18-039	Core		☐	☐	☑
167.64	170.69	3.05	LST	2.92	96	S050370	☐	N18-039	Core		☐	☐	☐
170.69	173.74	3.05	LST	2.67	88	S050371	☐	N18-039	Core		☐	☐	☐
173.74	176.78	3.04	LST	2.91	96	S050373	☐	N18-039	Core		☐	☐	☐
176.78	179.83	3.05	LST	2.61	86	S050374	☐	N18-039	Core		☐	☐	☐
179.83	182.88	3.05	LST	3.05	100	S050375	☐	N18-039	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
182.88	185.93	3.05	LST	2.07	68	S050377	☐	N18-039	Core		☐	☐	☐
185.93	188.98	3.05	LST	3.05	100	S050378	☐	N18-039	Core		☐	☐	☐
188.98	192.02	3.04	LST	2.71	89	S050379	☐	N18-039	Core		☐	☐	☐
192.02	195.07	3.05	LST	2.91	95	S050380	☐	N18-039	Core		☐	☐	☐
195.07	198.12	3.05	LST	2.95	97	S050381	☐	N18-044	Core		☐	☐	☐
198.12	201.17	3.05	LST	2.84	93	S050382	☐	N18-044	Core		☐	☐	☐
201.17	204.22	3.05	LST	2.76	90	S050383	☐	N18-044	Core		☐	☐	☐
204.22	207.26	3.04	LST	2.54	84	S050384	☐	N18-044	Core		☐	☐	☐
207.26	210.31	3.05	LST	2.76	90	S050385	☐	N18-044	Core		☐	☐	☐
210.31	213.36	3.05	LST	2.79	91	S050386	☐	N18-044	Core		☐	☐	☐
213.36	216.41	3.05	LST	2.69	88	S050387	☐	N18-044	Core		☐	☐	☐
216.41	219.46	3.05	LST	2.93	96	S050389	☐	N18-044	Core		☐	☐	☐
219.46	222.50	3.04	LST	3.00	99	S050390	☐	N18-044	Core		☐	☐	☐
222.50	225.55	3.05	LST	1.98	65	S050391	☐	N18-044	Core		☐	☐	☐
222.50	225.55	3.05	LST	1.98	65	S050392	☐	N18-044	Core		☐	☐	☑
225.55	228.60	3.05	LST	2.70	89	S050393	☐	N18-044	Core		☐	☐	☐
228.60	231.65	3.05	LST	2.80	92	S050395	☐	N18-044	Core		☐	☐	☐
231.65	234.70	3.05	LST	3.05	100	S050396	☐	N18-044	Core		☐	☐	☐
231.65	234.70	3.05	LST	3.05	100	S050397	☐	N18-044	Core		☐	☑	☐
234.70	237.74	3.04	LST	2.98	98	S050398	☐	N18-044	Core		☐	☐	☐
237.74	240.79	3.05	LST	2.90	95	S050399	☐	N18-044	Core		☐	☐	☐
240.79	243.84	3.05	LST	2.59	85	S050400	☐	N18-044	Core		☐	☐	☐
243.84	246.89	3.05	LST	3.05	100	S050401	☐	N18-044	Core		☐	☐	☐
246.89	249.94	3.05	LST	2.77	91	S050402	☐	N18-044	Core		☐	☐	☐
249.94	252.98	3.04	LST	2.50	82	S050403	☐	N18-044	Core		☐	☐	☐
252.98	256.03	3.05	LST	2.83	93	S050404	☐	N18-044	Core		☐	☐	☐
256.03	259.08	3.05	LST	2.85	93	S050405	☐	N18-044	Core		☐	☐	☐
259.08	262.13	3.05	LST	2.97	97	S050406	☐	N18-044	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
262.13	265.18	3.05	LST	2.81	92	S050407	☐	N18-044	Core		☐	☐	☐
265.18	268.22	3.04	LST	3.04	100	S050408	☐	N18-044	Core		☐	☐	☐
268.22	270.17	1.95	LST	1.84	94	S050409	☐	N18-044	Core		☐	☐	☐
270.17	272.00	1.83	LST	1.83	100	S050410	☐	N18-044	Core		☐	☐	☐
272.00	274.15	2.15	LST	2.10	98	S050411	☐	N18-044	Core		☐	☐	☐
274.15	275.84	1.69	LST	1.69	100	S050412	☐	N18-044	Core		☐	☐	☐
275.84	278.12	2.28	LST	2.27	100	S050413	☐	N18-044	Core		☐	☐	☐
275.84	278.12	2.28	LST	2.27	100	S050414	☐	N18-044	Core		☐	☑	☐
278.12	280.74	2.62	LST	2.59	99	S050415	☐	N18-044	Core		☐	☐	☐
280.74	282.13	1.39	LST	1.39	100	S050416	☐	N18-044	Core		☐	☐	☐
282.13	284.99	2.86	LST	2.83	99	S050417	☐	N18-044	Core		☐	☐	☐
284.99	287.48	2.49	LST	2.41	97	S050419	☐	N18-044	Core		☐	☐	☐
287.48	290.53	3.05	LST	2.80	92	S050420	☐	N18-044	Core		☐	☐	☐
290.53	293.10	2.57	LST	2.22	86	S050421	☐	N18-045	Core		☐	☐	☐
293.10	295.66	2.56	LST	2.33	91	S050422	☐	N18-045	Core		☐	☐	☐
293.10	295.66	2.56	LST	2.33	91	S050423	☐	N18-045	Core		☐	☑	☐
295.66	298.70	3.04	LST	3.04	100	S050424	☐	N18-045	Core		☐	☐	☐
298.70	301.75	3.05	LST	2.97	97	S050426	☐	N18-045	Core		☐	☐	☐
301.75	303.76	2.01	LST	2.00	100	S050427	☐	N18-045	Core		☐	☐	☐
303.76	305.77	2.01	LST	2.01	100	S050428	☐	N18-045	Core		☐	☐	☐
305.77	307.85	2.08	MST, LST	2.07	100	S050429	☐	N18-045	Core		☐	☐	☐
307.85	310.90	3.05	MST	3.05	100	S050430	☐	N18-045	Core		☐	☐	☐
310.90	313.94	3.04	MST	2.99	98	S050431	☐	N18-045	Core		☐	☐	☐
313.94	316.99	3.05	MST	3.05	100	S050432	☐	N18-045	Core		☐	☐	☐
316.99	320.04	3.05	MST	2.94	96	S050433	☐	N18-045	Core		☐	☐	☐
320.04	323.09	3.05	MST	3.05	100	S050434	☐	N18-045	Core		☐	☐	☐
323.09	326.14	3.05	MST	3.04	100	S050435	☐	N18-045	Core		☐	☐	☐
326.14	329.18	3.04	MST	2.80	92	S050436	☐	N18-045	Core		☐	☐	☐

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From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
0.00	0.85	0.85	-?-	--	No Recovery							
						--	--	---	---	--	--	0
0.85	92.00	91.15	MST	FG	Light greenish grey and maroon, planar bedded, intermittently gougy, oxidized, mudstone with quartz arenite laminations. Bedding at 15-30TCA. Rock is moderately oxidized - observed on fracture surfaces as well as moderately pervasive in the rock. 1mm thick, bedding parallel, quartz arenite laminations every few centimeters.							
						LT	GN					
						MD	RD	BD	OXI	2I	--	0

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
92.00	356.42	264.42	LST	FG	O-LST1 in this drill hole in mainly made up of medium grey calcareous mudstone interbedded with light grey, fine grained limestone. Intermittently, limestone is the dominant lithology, containing thin laminations of calcareous mudstone. Soft sediment deformation is common throughout. Fe-oxidization is commonly observed on fracture surfaces and weakly penetrating wall rock from 92.00-268.78m. As-oxidization is commonly observed on fracture surfaces from 92.00-160.10m. There are 2 significant mineralized intervals intersected in this drill hole: 188.23-191.50m - Light grey, trace Re-Om mineralized, bedded, fine grained limestone with sporadic thin silty laminations. Realgar and orpiment heavily coating fracture surfaces - mineralization restricted to fracture surfaces. Realgar and Orpiment make up 1-2% of interval. 251.7-253.62m - Highly mineralized light to medium grey, weakly oxidized, moderately fractured, locally strongly brecciated, locally decalcified fine grained limestone with traces thin carbonaceous mudstone beds. From 348.72 to 352.06m - Medium grey calcareous debrite							
						MD	GY	SD	ASO	2I		
						LT	GY	BD	OXI	1I	Py	0.01

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
356.42	376.43	20.01	MST	FG	Light grey-green fine grained planar bedded mudstone. Bedding is at 10-40 degrees TCA, with an average bedding of 25 degrees. Some weak deformation is shown by centimetre-scale offsets of beds and minor folding of few beds. Some beds have slightly sandier or siltier compositions, and sandier beds tend to show cracks perpendicular to bedding orientations. These cracks can fill with thin (less than 1 mm wide) white quartz-carbonate that show infrequent weak effevescence. Bedding colours range from light grey, light green, light tan, and pale maroon debedding on individual composition. Siltier beds show the growth of fine blebby pyrite. At the top of the unit, bedding is weakly sheared and somewhat convuluted, with discontinuous bands of dark grey soft shear clay. White quartz-dolomite veins (3mm to 2 cm wide) crosscut bedding from 357.18-357.94m. These veins vend to be discontinuous and have irregular-undulating trends and no defined orientations. Vein composition is white-clear crystalline quartz along the vein selvedges with white quartz-dolomite along the centres. Some pink carbonate (rhodochrosite? rhodonite?) is present intergrown with white quartz-dolomite in vein centres. Another minor shear is present at 362.54m and it contains significant light grey clay and fracturing. Weak light brown staining is found in the clay. Maroon bedding is seen from 371.48-372.41m, and the overall mudstone bedding at this point is 10 degrees TCA.							
						MD	PU	SD				
						LT	GN	SH				
						LT	GY	BD	---	--	Py	0.1

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From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
0.00	0.85	0.85	0	0	0.00	0	0R	--	--	top of hole.
0.85	3.05	2.20	0.58	26	0.00	0	0R	2H	3W	RBZ.
3.05	6.10	3.05	2	66	0.81	27	0R	2H	3W	
6.10	9.14	3.04	2.05	67	0.32	11	0R	2H	3W	
9.14	12.19	3.05	2.75	90	0.50	16	0R	2H	3W	
12.19	15.24	3.05	1.54	50	0.23	8	0R	2H	2W	
15.24	18.29	3.05	2.68	88	2.12	70	0R	2H	2W	
18.29	21.34	3.05	2.52	83	2.20	72	0R	3H	2W	
21.34	24.38	3.04	2.76	91	1.93	63	0R	3H	2W	
24.38	27.43	3.05	2.98	98	1.91	63	0R	3H	2W	
27.43	30.48	3.05	3.05	100	2.58	85	0R	3H	2W	
30.48	33.53	3.05	2.57	84	1.89	62	0R	2H	2W	
33.53	36.58	3.05	2.3	75	1.23	40	0R	2H	2W	
36.58	39.62	3.04	3	99	2.06	68	0R	2H	2W	
39.62	42.67	3.05	3.05	100	2.60	85	0R	3H	2W	
42.67	45.72	3.05	2.48	81	1.83	60	0R	2H	2W	
45.72	48.77	3.05	3	98	2.57	84	0R	2H	2W	
48.77	51.82	3.05	2.9	95	2.61	86	0R	3H	2W	
51.82	54.86	3.04	3.04	100	3.04	100	0R	3H	2W	
54.86	57.91	3.05	2.7	89	2.53	83	0R	3H	2W	
57.91	60.96	3.05	2.95	97	2.42	79	0R	3H	2W	
60.96	64.01	3.05	3.05	100	2.75	90	0R	3H	2W	
64.01	67.06	3.05	2.94	96	2.62	86	0R	2H	1W	
67.06	70.10	3.04	2.82	93	1.98	65	0R	2H	1W	
70.10	73.15	3.05	2.66	87	1.51	50	0R	2H	1W	
73.15	76.20	3.05	2.41	79	1.64	54	0R	2H	1W	
76.20	79.25	3.05	2.95	97	2.62	86	0R	3H	1W	
79.25	82.30	3.05	2.43	80	0.76	25	0R	3H	1W	
82.30	85.34	3.04	2.7	89	1.03	34	0R	1H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
85.34	88.39	3.05	3.05	100	0.26	9	0R	2H	1W	
88.39	91.44	3.05	2.59	85	1.21	40	0R	2H	1W	Rubble from 89.65-90.1m.
91.44	94.49	3.05	2.52	83	0.30	10	3R	2H	1W	
94.49	97.54	3.05	2.17	71	0.60	20	4R	3H	1W	
97.54	100.58	3.04	2.06	68	0.15	5	4R	3H	1W	
100.58	103.63	3.05	1.54	50	0.14	5	4R	2H	1W	highly fractured interval
103.63	106.68	3.05	1.8	59	0.12	4	3R	2H	1W	highly fractured interval
106.68	109.73	3.05	1.77	58	0.17	6	2R	2H	1W	
109.73	112.78	3.05	2.18	71	0.76	25	3R	3H	1W	
112.78	115.82	3.04	2.16	71	0.12	4	3R	2H	1W	highly fractured run.
115.82	118.87	3.05	2.2	72	0.91	30	3R	2H	1W	
118.87	121.92	3.05	2.75	90	1.47	48	3R	3H	1W	
121.92	124.97	3.05	2.74	90	1.36	45	4R	3H	1W	
124.97	128.02	3.05	2.65	87	1.83	60	3R	3H	1W	
128.02	131.06	3.04	2	66	0.48	16	4R	3H	1W	
131.06	134.11	3.05	1.92	63	0.86	28	2R	3H	1W	
134.11	137.16	3.05	2.84	93	2.34	77	0R	3H	1W	
137.16	140.21	3.05	2.58	85	1.49	49	2R	2H	1W	
140.21	143.26	3.05	2.48	81	1.84	60	2R	3H	1W	
143.26	146.30	3.04	2.6	86	1.60	53	3R	3H	1W	
146.30	149.35	3.05	2.77	91	0.68	22	4R	2H	1W	
149.35	152.40	3.05	2.04	67	1.30	43	3R	2H	1W	
152.40	155.45	3.05	3	98	1.09	36	4R	2H	1W	
155.45	158.50	3.05	2.77	91	1.80	59	3R	2H	1W	
158.50	161.54	3.04	2.83	93	1.83	60	3R	3H	1W	Multiple single joints.
161.54	164.59	3.05	3.05	100	2.45	80	3R	3H	1W	
164.59	167.64	3.05	3.05	100	2.92	96	3R	3H	1W	Multiple single joints.
167.64	170.69	3.05	3.05	100	3.05	100	3R	3H	1W	
170.69	173.74	3.05	3.05	100	2.95	97	3R	3H	1W	
173.74	176.78	3.04	3.04	100	3.00	99	3R	3H	1W	
176.78	179.83	3.05	2.96	97	2.88	94	3R	3H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
179.83	182.88	3.05	3.05	100	2.51	82	4R	3H	1W	multiple single joints.
182.88	185.93	3.05	2.86	94	1.40	46	4R	3H	1W	Highly fractured interval.
185.93	188.98	3.05	2.7	89	1.54	50	4R	3H	1W	
188.98	192.02	3.04	2.95	97	0.86	28	4R	2H	1W	
192.02	195.07	3.05	3.05	100	2.96	97	3R	3H	1W	
195.07	198.12	3.05	2.79	91	2.25	74	3R	3H	1W	
198.12	201.17	3.05	2.27	74	1.75	57	3R	3H	1W	
201.17	204.22	3.05	2.99	98	2.81	92	3R	3H	1W	
204.22	207.26	3.04	2.92	96	1.93	63	4R	3H	1W	
207.26	210.31	3.05	3.01	99	2.71	89	3R	3H	1W	
210.31	213.36	3.05	2.96	97	2.96	97	3R	3H	1W	
213.36	216.41	3.05	2.93	96	2.84	93	3R	3H	1W	
216.41	219.46	3.05	3.04	100	2.96	97	3R	3H	1W	
219.46	222.50	3.04	2.94	97	2.81	92	4R	3H	1W	
222.50	225.55	3.05	3.04	100	3.00	98	3R	3H	1W	
225.55	228.60	3.05	3.03	99	3.00	98	3R	3H	1W	
228.60	231.65	3.05	3.05	100	2.44	80	4R	3H	1W	
231.65	234.70	3.05	2.94	96	2.23	73	4R	3H	1W	
234.70	237.74	3.04	3	99	2.65	87	4R	3H	1W	
237.74	240.79	3.05	2.74	90	2.29	75	4R	3H	1W	
240.79	243.84	3.05	2.83	93	2.24	73	4R	3H	1W	
243.84	246.89	3.05	2.84	93	2.16	71	2R	3H	1W	
246.89	249.94	3.05	2.29	75	1.19	39	3R	3H	1W	
249.94	252.98	3.04	2.51	83	1.87	62	3R	3H	1W	many realgar fractures.
252.98	256.03	3.05	3.05	100	1.44	47	4R	3H	1W	realgar bearing calcite veins.
256.03	259.08	3.05	2.65	87	1.43	47	1R	3H	1W	
259.08	262.13	3.05	3.05	100	1.65	54	3R	3H	1W	
262.13	265.18	3.05	2.95	97	1.52	50	3R	3H	1W	
265.18	268.22	3.04	2.72	89	2.41	79	3R	3H	1W	
268.22	271.27	3.05	3	98	2.51	82	4R	3H	1W	
271.27	274.32	3.05	3.05	100	2.95	97	4R	3H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
274.32	277.37	3.05	3.05	100	2.98	98	4R	3H	1W	
277.37	280.42	3.05	3	98	2.64	87	4R	3H	1W	
280.42	283.46	3.04	2.98	98	2.56	84	4R	3H	1W	
283.46	286.51	3.05	3.04	100	2.98	98	2R	3H	1W	
286.51	289.56	3.05	3.04	100	1.95	64	3R	3H	1W	
289.56	292.61	3.05	3.04	100	2.50	82	3R	3H	1W	
292.61	295.66	3.05	3.04	100	2.87	94	3R	3H	1W	
295.66	298.70	3.04	3.04	100	2.48	82	3R	3H	1W	
298.70	301.75	3.05	2.99	98	2.83	93	3R	3H	1W	
301.75	304.80	3.05	3	98	2.92	96	3R	3H	1W	
304.80	307.85	3.05	3.04	100	3.04	100	3R	3H	1W	
307.85	310.90	3.05	3.02	99	3.00	98	3R	3H	1W	
310.90	313.94	3.04	3.04	100	3.04	100	3R	3H	1W	
313.94	316.99	3.05	3.04	100	3.00	98	3R	3H	1W	
316.99	320.04	3.05	2.9	95	2.65	87	3R	3H	1W	
320.04	323.09	3.05	3.01	99	2.89	95	3R	3H	1W	
323.09	326.14	3.05	3.04	100	2.85	93	3R	3H	1W	
326.14	329.18	3.04	3.04	100	2.93	96	3R	3H	1W	
329.18	332.23	3.05	3.05	100	2.74	90	3R	3H	1W	
332.23	335.28	3.05	3	98	2.79	91	4R	3H	1W	
335.28	338.33	3.05	3.05	100	2.96	97	3R	3H	1W	
338.33	341.38	3.05	3.05	100	2.44	80	2R	3H	1W	
341.38	344.42	3.04	3.04	100	2.23	73	3R	3H	1W	
344.42	347.47	3.05	3.04	100	2.20	72	1R	3H	1W	
347.47	350.52	3.05	2.5	82	1.56	51	3R	3H	1W	small rbz from 349.22-349.41m
350.52	353.57	3.05	3.04	100	2.92	96	3R	3H	1W	
353.57	356.62	3.05	2.95	97	2.67	88	3R	3H	1W	
356.62	359.66	3.04	2.95	97	2.51	83	0R	3H	1W	
359.66	362.71	3.05	3.04	100	2.73	90	0R	3H	1W	
362.71	365.76	3.05	2.8	92	2.20	72	0R	3H	1W	
365.76	368.81	3.05	3.04	100	3.04	100	0R	3H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
368.81	371.86	3.05	3.02	99	3.00	98	0R	3H	1W	
371.86	374.90	3.04	3.04	100	2.81	92	0R	3H	1W	
374.90	376.43	1.53	1.39	91	1.24	81	0R	3H	1W	

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From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
0.00	0.00	0.00	-QC-	0.00	0	S050543	☐	N18-048	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S050576	☐	N18-048	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S050442	☐	N18-045	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S050547	☐	N18-048	Core	CS9	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S050535	☐	N18-047	Core	CS12	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S050526	☐	N18-047	Core	CS10	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S050509	☐	N18-047	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S050495	☐	N18-046	core	CS10	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S050482	☐	N18-046	core	CS9	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S050476	☐	N18-046	core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S050449	☐	N18-045	Core	CS9	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S050551	☐	N18-048	Core	CS10	☐	☐	☐
0.85	3.05	2.20	MST, -?-	0.58	26	S050437	☐	N18-045	Core		☐	☐	☐
3.05	6.10	3.05	MST	2.00	66	S050438	☐	N18-045	Core		☐	☐	☐
6.10	9.14	3.04	MST	2.05	67	S050439	☐	N18-045	Core		☐	☐	☐
9.14	12.19	3.05	MST	2.75	90	S050440	☐	N18-045	Core		☐	☐	☐
12.19	15.24	3.05	MST	1.54	50	S050441	☐	N18-045	Core		☐	☐	☐
15.24	18.29	3.05	MST	2.68	88	S050443	☐	N18-045	Core		☐	☐	☐
18.29	21.34	3.05	MST	2.52	83	S050444	☐	N18-045	Core		☐	☐	☐
21.34	24.38	3.04	MST	2.76	91	S050445	☐	N18-045	Core		☐	☐	☐
24.38	27.43	3.05	MST	2.98	98	S050446	☐	N18-045	Core		☐	☐	☐
27.43	30.48	3.05	MST	3.05	100	S050447	☐	N18-045	Core		☐	☐	☐
30.48	33.53	3.05	MST	2.57	84	S050448	☐	N18-045	Core		☐	☐	☐
33.53	36.58	3.05	MST	2.30	75	S050450	☐	N18-045	Core		☐	☐	☐
36.58	39.62	3.04	MST	3.00	99	S050451	☐	N18-045	Core		☐	☐	☐
39.62	42.67	3.05	MST	3.05	100	S050452	☐	N18-045	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
42.67	45.72	3.05	MST	2.48	81	S050453	☐	N18-045	Core		☐	☐	☐
45.72	48.77	3.05	MST	3.00	98	S050454	☐	N18-045	Core		☐	☐	☐
45.72	48.77	3.05	MST	3.00	98	S050455	☐	N18-045	Core		☐	☐	☑
48.77	51.82	3.05	MST	2.90	95	S050456	☐	N18-045	Core		☐	☐	☐
51.82	54.86	3.04	MST	3.04	100	S050457	☐	N18-045	Core		☐	☐	☐
54.86	57.91	3.05	MST	2.70	89	S050458	☐	N18-045	Core		☐	☐	☐
57.91	60.96	3.05	MST	2.95	97	S050459	☐	N18-045	Core		☐	☐	☐
60.96	64.01	3.05	MST	3.05	100	S050460	☐	N18-045	Core		☐	☐	☐
64.01	67.06	3.05	MST	2.94	96	S050461	☐	N18-046	core		☐	☐	☐
67.06	70.10	3.04	MST	2.82	93	S050462	☐	N18-046	core		☐	☐	☐
70.10	73.15	3.05	MST	2.66	87	S050463	☐	N18-046	core		☐	☐	☐
73.15	76.20	3.05	MST	2.41	79	S050464	☐	N18-046	core		☐	☐	☐
76.20	79.25	3.05	MST	2.95	97	S050465	☐	N18-046	core		☐	☐	☐
79.25	82.30	3.05	MST	2.43	80	S050466	☐	N18-046	core		☐	☐	☐
82.30	85.34	3.04	MST	2.70	89	S050467	☐	N18-046	core		☐	☐	☐
85.34	88.39	3.05	MST	3.05	100	S050468	☐	N18-046	core		☐	☐	☐
88.39	90.20	1.81	MST	1.50	83	S050469	☐	N18-046	core		☐	☐	☐
90.20	92.00	1.80	MST	1.45	81	S050470	☐	N18-046	core		☐	☐	☐
92.00	94.49	2.49	MST, LST	2.40	96	S050471	☐	N18-046	core		☐	☐	☐
94.49	97.54	3.05	LST	2.17	71	S050472	☐	N18-046	core		☐	☐	☐
97.54	100.58	3.04	LST	2.06	68	S050473	☐	N18-046	core		☐	☐	☐
100.58	103.63	3.05	LST	1.54	50	S050474	☐	N18-046	core		☐	☐	☐
103.63	106.68	3.05	LST	1.80	59	S050475	☐	N18-046	core		☐	☐	☐
106.68	109.73	3.05	LST	1.77	58	S050477	☐	N18-046	core		☐	☐	☐
109.73	112.78	3.05	LST	2.18	71	S050478	☐	N18-046	core		☐	☐	☐
112.78	115.82	3.04	LST	2.16	71	S050479	☐	N18-046	core		☐	☐	☐
115.82	118.87	3.05	LST	2.20	72	S050480	☐	N18-046	core		☐	☐	☐
118.87	121.92	3.05	LST	2.75	90	S050481	☐	N18-046	core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
121.92	124.97	3.05	LST	2.74	90	S050483	☐	N18-046	core		☐	☐	☐
124.97	128.02	3.05	LST	2.65	87	S050484	☐	N18-046	core		☐	☐	☐
128.02	131.06	3.04	LST	2.00	66	S050485	☐	N18-046	core		☐	☐	☐
131.06	134.11	3.05	LST	1.92	63	S050486	☐	N18-046	core		☐	☐	☐
134.11	137.16	3.05	LST	2.84	93	S050487	☐	N18-046	core		☐	☐	☐
134.11	137.16	3.05	LST	2.84	93	S050488	☐	N18-046	core		☐	☐	☑
137.16	140.21	3.05	LST	2.58	85	S050489	☐	N18-046	core		☐	☐	☐
140.21	143.26	3.05	LST	2.48	81	S050490	☐	N18-046	core		☐	☐	☐
143.26	146.30	3.04	LST	2.60	86	S050491	☐	N18-046	core		☐	☐	☐
146.30	149.35	3.05	LST	2.77	91	S050492	☐	N18-046	core		☐	☐	☐
149.35	152.40	3.05	LST	2.04	67	S050493	☐	N18-046	core		☐	☐	☐
152.40	155.45	3.05	LST	3.00	98	S050494	☐	N18-046	core		☐	☐	☐
155.45	158.50	3.05	LST	2.77	91	S050496	☐	N18-046	core		☐	☐	☐
155.45	158.50	3.05	LST	2.77	91	S050497	☐	N18-046	core		☐	☑	☐
158.50	161.54	3.04	LST	2.83	93	S050498	☐	N18-046	core		☐	☐	☐
161.54	164.59	3.05	LST	3.05	100	S050499	☐	N18-046	core		☐	☐	☐
164.59	167.64	3.05	LST	3.05	100	S050500	☐	N18-046	core		☐	☐	☐
167.64	170.69	3.05	LST	3.05	100	S050501	☐	N18-047	Core		☐	☐	☐
170.69	173.74	3.05	LST	3.05	100	S050502	☐	N18-047	Core		☐	☐	☐
173.74	176.78	3.04	LST	3.04	100	S050503	☐	N18-047	Core		☐	☐	☐
176.78	179.83	3.05	LST	2.96	97	S050504	☐	N18-047	Core		☐	☐	☐
179.83	182.88	3.05	LST	3.05	100	S050505	☐	N18-047	Core		☐	☐	☐
182.88	185.93	3.05	LST	2.86	94	S050506	☐	N18-047	Core		☐	☐	☐
185.93	188.23	2.30	LST	1.95	85	S050507	☐	N18-047	Core		☐	☐	☐
188.23	190.50	2.27	LST	2.27	100	S050508	☐	N18-047	Core		☐	☐	☐
190.50	192.02	1.52	LST	1.50	99	S050510	☐	N18-047	Core		☐	☐	☐
192.02	195.07	3.05	LST	3.05	100	S050511	☐	N18-047	Core		☐	☐	☐
195.07	198.12	3.05	LST	2.79	91	S050512	☐	N18-047	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
198.12	201.17	3.05	LST	2.27	74	S050513	☐	N18-047	Core		☐	☐	☐
201.17	204.22	3.05	LST	2.99	98	S050514	☐	N18-047	Core		☐	☐	☐
204.22	207.26	3.04	LST	2.92	96	S050515	☐	N18-047	Core		☐	☐	☐
207.26	210.31	3.05	LST	3.01	99	S050516	☐	N18-047	Core		☐	☐	☐
207.26	210.31	3.05	LST	3.01	99	S050517	☐	N18-047	Core		☐	☑	☐
210.31	213.36	3.05	LST	2.96	97	S050518	☐	N18-047	Core		☐	☐	☐
213.36	216.41	3.05	LST	2.93	96	S050519	☐	N18-047	Core		☐	☐	☐
216.41	219.46	3.05	LST	3.04	100	S050520	☐	N18-047	Core		☐	☐	☐
219.46	222.50	3.04	LST	2.94	97	S050521	☐	N18-047	Core		☐	☐	☐
222.50	225.55	3.05	LST	3.04	100	S050522	☐	N18-047	Core		☐	☐	☐
222.50	225.55	3.05	LST	3.04	100	S050523	☐	N18-047	Core		☐	☐	☑
225.55	228.60	3.05	LST	3.03	99	S050524	☐	N18-047	Core		☐	☐	☐
228.60	231.65	3.05	LST	3.05	100	S050525	☐	N18-047	Core		☐	☐	☐
231.65	234.70	3.05	LST	2.94	96	S050527	☐	N18-047	Core		☐	☐	☐
234.70	237.74	3.04	LST	3.00	99	S050528	☐	N18-047	Core		☐	☐	☐
237.74	240.79	3.05	LST	2.74	90	S050529	☐	N18-047	Core		☐	☐	☐
240.79	243.84	3.05	LST	2.83	93	S050530	☐	N18-047	Core		☐	☐	☐
243.84	246.89	3.05	LST	2.84	93	S050531	☐	N18-047	Core		☐	☐	☐
246.89	249.24	2.35	LST	1.96	83	S050532	☐	N18-047	Core		☐	☐	☐
249.24	251.59	2.35	LST	2.15	91	S050533	☐	N18-047	Core		☐	☐	☐
251.59	253.47	1.88	LST	1.88	100	S050534	☐	N18-047	Core		☐	☐	☐
253.47	256.03	2.56	LST	2.55	100	S050536	☐	N18-047	Core		☐	☐	☐
256.03	259.08	3.05	LST	2.65	87	S050537	☐	N18-047	Core		☐	☐	☐
259.08	262.13	3.05	LST	3.05	100	S050538	☐	N18-047	Core		☐	☐	☐
262.13	265.18	3.05	LST	2.95	97	S050539	☐	N18-047	Core		☐	☐	☐
265.18	268.22	3.04	LST	2.72	89	S050540	☐	N18-047	Core		☐	☐	☐
268.22	269.75	1.53	LST	1.25	82	S050541	☐	N18-048	Core		☐	☐	☐
269.75	271.27	1.52	LST	1.50	99	S050542	☐	N18-048	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
271.27	274.32	3.05	LST	3.05	100	S050544	☐	N18-048	Core		☐	☐	☐
274.32	277.37	3.05	LST	3.05	100	S050545	☐	N18-048	Core		☐	☐	☐
277.37	280.42	3.05	LST	3.00	98	S050546	☐	N18-048	Core		☐	☐	☐
280.42	283.46	3.04	LST	2.98	98	S050548	☐	N18-048	Core		☐	☐	☐
283.46	286.51	3.05	LST	3.04	100	S050549	☐	N18-048	Core		☐	☐	☐
286.51	289.56	3.05	LST	3.04	100	S050550	☐	N18-048	Core		☐	☐	☐
289.56	292.61	3.05	LST	3.04	100	S050552	☐	N18-048	Core		☐	☐	☐
292.61	295.66	3.05	LST	3.04	100	S050553	☐	N18-048	Core		☐	☐	☐
295.66	298.70	3.04	LST	3.04	100	S050554	☐	N18-048	Core		☐	☐	☐
298.70	301.75	3.05	LST	2.99	98	S050555	☐	N18-048	Core		☐	☐	☐
301.75	304.80	3.05	LST	3.00	98	S050556	☐	N18-048	Core		☐	☐	☐
304.80	307.85	3.05	LST	3.04	100	S050557	☐	N18-048	Core		☐	☐	☐
307.85	310.90	3.05	LST	3.02	99	S050558	☐	N18-048	Core		☐	☐	☐
310.90	313.94	3.04	LST	3.04	100	S050559	☐	N18-048	Core		☐	☐	☐
310.90	313.94	3.04	LST	3.04	100	S050560	☐	N18-048	Core		☐	☑	☐
313.94	316.99	3.05	LST	3.04	100	S050561	☐	N18-048	Core		☐	☐	☐
316.99	320.04	3.05	LST	2.90	95	S050562	☐	N18-048	Core		☐	☐	☐
320.04	323.09	3.05	LST	3.01	99	S050563	☐	N18-048	Core		☐	☐	☐
323.09	326.14	3.05	LST	3.04	100	S050564	☐	N18-048	Core		☐	☐	☐
326.14	329.18	3.04	LST	3.04	100	S050565	☐	N18-048	Core		☐	☐	☐
329.18	332.23	3.05	LST	3.05	100	S050566	☐	N18-048	Core		☐	☐	☐
332.23	335.28	3.05	LST	3.00	98	S050567	☐	N18-048	Core		☐	☐	☐
335.28	338.33	3.05	LST	3.05	100	S050568	☐	N18-048	Core		☐	☐	☐
338.33	341.38	3.05	LST	3.05	100	S050569	☐	N18-048	Core		☐	☐	☐
341.38	344.42	3.04	LST	3.04	100	S050570	☐	N18-048	Core		☐	☐	☐
344.42	347.47	3.05	LST	3.04	100	S050571	☐	N18-048	Core		☐	☐	☐
347.47	350.52	3.05	LST	2.50	82	S050572	☐	N18-048	Core		☐	☐	☐
347.47	350.52	3.05	LST	3.04	100	S050573	☐	N18-048	Core		☐	☐	☑

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
350.52	353.57	3.05	LST	2.95	97	S050574	☐	N18-048	Core		☐	☐	☐
353.57	356.62	3.05	LST	1.52	50	S050575	☐	N18-048	Core		☐	☐	☐
356.62	358.14	1.52	MST	1.48	97	S050577	☐	N18-048	Core		☐	☐	☐
358.14	361.19	3.05	MST	2.95	97	S050578	☐	N18-048	Core		☐	☐	☐
361.19	367.28	6.09	MST	5.74	94	W233109	☐	N18-C03	Chip		☐	☐	☐
367.28	371.86	4.58	MST	4.54	99	W233110	☐	N18-C03	Chip		☐	☐	☐
371.86	376.43	4.57	MST	4.45	97	W233111	☐	N18-C03	Chip		☐	☐	☐

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From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
0.00	56.00	56.00	OVB	--	0-4.76m no recovery. Overburden material is extremely weathered to residual soil, red/maroon, fine grained mud to chipped (angular to sub-rounded) very coarse sand to cobble sized mudstone with varying talus rock types and sizes. The main talus clast type is light-medium grey to pale green, angular to sub-rounded, fine grained, granule to pebble sized, massive to weakly bedded limestone. Bedding can be parallel to wavy. Multiple generations of trace to weak calcite veinlets occur in limestone clasts, ranging from parallel to perpendicular TCA. Lesser abundant clast: Red/maroon to lesser pale green, fine grained, angular to sub-rounded, granule to pebble sized mudstone clasts. Locally observed: Light grey to pale blue/grey, fine grained, matrix supported silty mudstone diamictite with mm to cm sized, sub-rounded to sub-angular clasts. Clasts include limestone, mudstone and lesser calcite.							
56.00	124.81	68.81	MST	FG	Maroon to light-green grey, very fine grained mudstone with minor oxidation isolated to fracture surfaces and thinly interbedded fine grained, light grey to maroon quartz arenite beds and thin laminations of very fine grained, maroon to light green siltstone. Unit is well bedded and locally displays softs sediment deformation. White, coarse grained quartz/dolomite veins and thin, fine grained black dolomite (?) veinlets present at verying intensities and textures. Unit is locally gougey and brecciated.						Re	0.01
									SIL	1I	Py	1

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
124.81	258.63	133.82	LST	FG	Light-medium grey, fine grained limestone interbedded with dark grey, very fine grained, (variably) calcareous mudstone with ~5-75cm thick interbeds of coarse grained, moderately sorted, clast supported rudstone. Bedding is planar to wavy with locally observed convolute bedding. Unit is locally altered. Alteration includes dolomitization, oxidization (iron and weak green As-oxidization) on fractured surfaces and decalcification associated with mineralization. Realgar mineralization is observed towards lower contact of the unit. Re-mineralization is pervasive into limestone bedding, along fractured surfaces, along quartz-calcite veins and in healed fractures due to local brecciation.							
						LT	GY	BD	DOL	2I	Re	0.5
						MD	GY	RD	OXI	1I		
						DK	GY	BX	DCA	2I		
								CR	ASO	1I		
								SD				
258.63	346.03	87.40	DST	FG	Thinly interbedded, light-medium grey, fine grained dolostone and dark grey-black, very fine grained (dolomitized) calcareous mudstone with local beds of poorly sorted, clast supported (dolomitized) rudstone. Unit is locally fault brecciated, hydrothermally brecciated and crackle brecciated to varying degrees. Breccias are infilled dominantly by fine grained, white or black dolomite and locally by fine grained realgar.Fault breccias are concentrated towards the lower, sheared contact with underlaying diamictite and consist of subrounded to angular clasts of wallrock within fine dark grey-black gouge. Locally thin, gougey seams contain (>1000ppm As and trace Hg/Tl). Realgar fractures are common throughout interval, cross cutting bedding (at high angles), clasts within breccias and breccia infill.							
						MD	GY	BX			Py	0.5
						LT	GY	BD	ASO	1I	Re	1
						DK	GY	CR			Om	0.3
								RD			Sp	0.05
								FR				

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
346.03	366.30	20.27	DMT	CG	Locally sheared, poorly sorted, matrix supported polymictic diamictite with rare realgar within calcite veining. Clasts within diamictite consist of granule to cobble (locally boulder?) sized, subrounded to angular fine grained limestone, fine grained dolostone and elongated clasts of fine grained silty/muddy limestone (or calc mudstone). Large cobble/boulder clasts of limestone show wavy interbeds of silty limestone. Elongated pebbly clasts of silty limestone preserve original bedding structures. Unit is moderately to strongly sheared towards upper contact with dolostone. Shear fabrics appear to be primarily oriented from 50-60 degrees tca. Trace to minor calcite veining throughout interval, locally containing minor, fine grained massive realgar. Limestone clasts contain fine grained blebs of (diagenetic pyrite?) as well as very fine grained disseminations.								
366.30	413.61	47.31	LST	FG	Locally sheared and weakly mineralized, interbedded dark grey, very fine grained variably calcareous (more calcareous towards base of unit) mudstone, and fine to medium grained limestone (calcareous sandstone) with local (more abundant towards base of interval) thick interbedded light to medium grey, coarse grained quartz grit limestone. Unit is strongly sheared near upper contact with overlaying diamictite. Shear zones are locally associated with realgar (and rare Au mineralization - XRF) along fracture surfaces and within fine grained gougey seams. Shear zones may be locally decalcified (or present within weakly/non-calcareous mudstone?).								
						MD	GY	BD	DCA	1I	Re	0.5
						DK	GY	SH			Py	1
						LT	GY	BX				
								SD				

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
0.00	4.76	4.76	0	0	0.00	0	--	--	--	TOH - no recovery.
4.76	5.18	0.42	0.42	100	0.00	0	3R	3H	4W	OVB.talus limestone
5.18	8.23	3.05	1.25	41	0.00	0	0R	2H	5W	OVB
8.23	11.28	3.05	1.09	36	0.00	0	0R	1H	6W	OVB
11.28	14.33	3.05	2.57	84	0.00	0	1R	1H	6W	OVB. Reactivity due to increased limestone in this interval.
14.33	17.37	3.04	1.61	53	0.00	0	0R	1H	5W	OVB
17.37	20.42	3.05	1.02	33	0.00	0	0R	1H	5W	OVB
20.42	23.47	3.05	0.54	18	0.00	0	0R	2H	5W	OVB
23.47	26.52	3.05	0.47	15	0.00	0	0R	2H	5W	OVB
26.52	29.57	3.05	0.39	13	0.00	0	1R	1H	6W	OVB
29.57	32.61	3.04	1.48	49	0.00	0	0R	1H	6W	OVB
32.61	35.66	3.05	0.76	25	0.00	0	1R	1H	5W	OVB
35.66	38.71	3.05	1.6	52	0.00	0	0R	1H	5W	OVB
38.71	41.76	3.05	1.1	36	0.11	4	0R	1H	5W	OVB
41.76	44.81	3.05	0.24	8	0.00	0	0R	1H	5W	OVB
44.81	47.85	3.04	1.96	64	0.00	0	0R	1H	5W	OVB
47.85	50.90	3.05	2.06	68	0.00	0	0R	1H	6W	OVB
50.90	53.95	3.05	0.96	31	0.00	0	0R	1H	6W	OVB
53.95	57.00	3.05	0.72	24	0.00	0	0R	2H	4W	OVB
57.00	60.05	3.05	1.59	52	0.10	3	0R	2H	4W	RBZ
60.05	63.09	3.04	2.58	85	0.10	3	0R	2H	4W	RBZ
63.09	66.14	3.05	2.57	84	0.98	32	0R	2H	4W	RBZ
66.14	69.19	3.05	2.1	69	0.28	9	0R	2H	4W	Significant clay and gouge
69.19	72.24	3.05	2.11	69	0.14	5	0R	2H	4W	RBZ
72.24	75.29	3.05	1.51	50	0.93	30	0R	2H	3W	
75.29	78.33	3.04	3.04	100	2.25	74	0R	2H	2W	
78.33	81.38	3.05	3.05	100	2.49	82	0R	2H	1W	
81.38	84.43	3.05	2.78	91	1.95	64	0R	3H	1W	
84.43	87.48	3.05	3.05	100	2.00	66	0R	3H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
87.48	90.53	3.05	2.66	87	1.92	63	0R	2H	1W	
90.53	93.57	3.04	2.72	89	2.39	79	0R	3H	1W	
93.57	96.62	3.05	2.8	92	1.45	48	0R	3H	1W	
96.62	99.67	3.05	2.9	95	2.00	66	0R	3H	1W	
99.67	102.72	3.05	3.05	100	2.26	74	0R	2H	1W	
102.72	105.77	3.05	2.93	96	2.27	74	0R	2H	1W	
105.77	108.81	3.04	2.92	96	2.11	69	0R	3H	1W	Multiple single joints.
108.81	111.86	3.05	3.03	99	1.98	65	0R	3H	1W	
111.86	114.91	3.05	3.05	100	2.09	69	0R	3H	1W	Multiple single joints.
114.91	117.96	3.05	3.02	99	2.20	72	0R	3H	1W	
117.96	121.01	3.05	2.99	98	1.58	52	0R	3H	1W	
121.01	124.05	3.04	2.94	97	1.66	55	0R	3H	1W	Multiple single joints.
124.05	127.10	3.05	2.65	87	0.39	13	0R	3H	1W	Rock reacts weakly with HCL when scratched. Potential contact between mudstone and limestone.
127.10	130.15	3.05	2.84	93	1.42	47	1R	3H	1W	Multiple single joints.
130.15	133.20	3.05	3.05	100	1.81	59	3R	3H	1W	
133.20	136.25	3.05	2.93	96	1.63	53	2R	3H	1W	Multiple single joints.
136.25	139.29	3.04	3.04	100	2.00	66	3R	4H	1W	
139.29	142.34	3.05	3	98	1.69	55	3R	4H	1W	
142.34	145.39	3.05	3.05	100	1.87	61	2R	3H	1W	
145.39	148.44	3.05	3.05	100	1.64	54	3R	3H	1W	
148.44	151.49	3.05	2.97	97	2.52	83	2R	3H	1W	Multiple single joints.
151.49	154.53	3.04	2.94	97	1.76	58	3R	3H	1W	
154.53	157.58	3.05	2.79	91	1.52	50	3R	3H	1W	
157.58	160.63	3.05	3.05	100	1.45	48	4R	3H	1W	
160.63	163.68	3.05	2.91	95	1.92	63	3R	3H	1W	
163.68	166.73	3.05	3.01	99	2.72	89	4R	4H	1W	
166.73	169.77	3.04	3.04	100	2.86	94	2R	3H	1W	
169.77	172.82	3.05	3.03	99	2.85	93	1R	3H	1W	
172.82	175.87	3.05	3.02	99	2.61	86	1R	4H	1W	
175.87	178.92	3.05	2.96	97	2.43	80	2R	3H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
178.92	181.97	3.05	3.01	99	2.50	82	2R	3H	1W	
181.97	185.01	3.04	2.89	95	2.29	75	3R	3H	1W	
185.01	188.06	3.05	3.04	100	2.13	70	3R	3H	1W	
188.06	191.11	3.05	3	98	2.24	73	3R	3H	1W	Green and orange oxidiztion common on fracture and joint surfaces.
191.11	194.16	3.05	3.05	100	2.21	72	3R	3H	1W	
194.16	197.21	3.05	3.05	100	2.35	77	3R	3H	1W	
197.21	200.25	3.04	2.88	95	1.63	54	3R	4H	1W	
200.25	203.30	3.05	2.93	96	2.25	74	2R	3H	1W	
203.30	206.35	3.05	3.05	100	1.92	63	1R	3H	1W	
206.35	209.40	3.05	3.04	100	2.18	71	3R	3H	1W	
209.40	212.45	3.05	3.02	99	1.75	57	2R	4H	1W	
212.45	215.49	3.04	3.04	100	1.70	56	4R	4H	1W	
215.49	218.54	3.05	2.9	95	1.68	55	3R	4H	1W	
218.54	221.59	3.05	3.05	100	2.61	86	3R	4H	1W	
221.59	224.64	3.05	3.05	100	2.73	90	3R	4H	1W	
224.64	227.69	3.05	2.74	90	1.52	50	3R	3H	1W	
227.69	230.73	3.04	3.04	100	2.96	97	3R	3H	1W	
230.73	233.78	3.05	3.04	100	2.13	70	3R	3H	1W	
233.78	236.83	3.05	3.04	100	2.74	90	3R	3H	1W	
236.83	239.88	3.05	2.94	96	2.60	85	3R	3H	1W	
239.88	242.93	3.05	2.99	98	2.85	93	3R	3H	1W	
242.93	245.97	3.04	2.93	96	2.62	86	1R	3H	1W	
245.97	249.02	3.05	3.04	100	2.94	96	2R	3H	1W	
249.02	252.07	3.05	3.04	100	2.70	89	3R	3H	1W	
252.07	255.12	3.05	3.04	100	2.45	80	1R	3H	1W	
255.12	258.17	3.05	3.04	100	2.78	91	3R	3H	1W	
258.17	261.21	3.04	3	99	2.99	98	0R	3H	1W	
261.21	264.26	3.05	3.04	100	2.91	95	1R	3H	1W	
264.26	267.31	3.05	2.96	97	1.86	61	1R	3H	1W	
267.31	270.36	3.05	3.01	99	2.50	82	1R	3H	1W	
270.36	273.41	3.05	2.98	98	2.93	96	1R	3H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
273.41	276.45	3.04	3.04	100	3.00	99	0R	3H	1W	
276.45	279.50	3.05	2.86	94	2.55	84	0R	3H	1W	
279.50	282.55	3.05	3.03	99	2.79	91	0R	3H	1W	
282.55	285.60	3.05	3	98	2.50	82	0R	3H	1W	
285.60	288.65	3.05	2.83	93	0.47	15	0R	2H	1W	Abundant realgar mineralization along fracture surfaces
288.65	291.69	3.04	2.9	95	1.88	62	0R	3H	1W	Realgar through brecciation and along fracture surfaces
291.69	294.74	3.05	2.92	96	2.18	71	0R	4H	1W	Minor realgar along fracture surfaces
294.74	297.79	3.05	2.8	92	1.88	62	0R	4H	1W	Realgar along fracture surfaces
297.79	300.84	3.05	2.83	93	1.39	46	0R	3H	1W	Realgar along fracture surfaces. Traces realgar through brecciation
300.84	303.88	3.04	2.56	84	1.64	54	0R	3H	1W	Traces realgar through dolomite veins
303.88	306.93	3.05	2.97	97	1.59	52	0R	3H	1W	Traces realgar through dolomite veins
306.93	309.98	3.05	2.4	79	0.44	14	0R	3H	1W	RBZ with realgar along fracture surfaces
309.98	313.03	3.05	2.67	88	0.00	0	0R	2H	1W	RBZ
313.03	316.08	3.05	2.49	82	0.18	6	0R	2H	1W	RBZ
316.08	319.13	3.05	2.63	86	1.44	47	0R	2H	1W	Traces realgar along fracture surfaces
319.13	322.17	3.04	2.85	94	2.22	73	0R	3H	1W	
322.17	325.22	3.05	2.97	97	2.25	74	0R	3H	1W	Trace realgar along healed fractures.
325.22	328.27	3.05	2.94	96	1.56	51	0R	3H	1W	Multiple single joints.
328.27	331.32	3.05	3.02	99	2.27	74	0R	3H	1W	
331.32	334.37	3.05	3.03	99	1.65	54	0R	3H	1W	Multiple single joints.
334.37	337.41	3.04	2.56	84	0.95	31	0R	3H	1W	Multiple single joints.
337.41	340.46	3.05	2.74	90	1.11	36	1R	2H	1W	Small rubble zone included in interval.
340.46	343.51	3.05	2.82	92	2.09	69	2R	2H	1W	Re-Om weakly occuring on fractured surfaces. Small rubble zone included in interval.
343.51	346.56	3.05	2.8	92	1.65	54	1R	2H	1W	
346.56	349.61	3.05	2.74	90	1.71	56	0R	3H	1W	Multiple single joints.
349.61	352.65	3.04	2.94	97	1.78	59	1R	3H	1W	
352.65	355.70	3.05	3.04	100	2.09	69	1R	3H	1W	Multiple single joints.
355.70	358.75	3.05	3.01	99	2.35	77	1R	3H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
358.75	361.80	3.05	2.95	97	2.41	79	1R	3H	1W	
361.80	364.85	3.05	3	98	1.86	61	1R	3H	1W	Multiple single joints.
364.85	367.89	3.04	2.99	98	1.71	56	1R	3H	1W	
367.89	370.94	3.05	3	98	1.17	38	1R	3H	1W	Multiple bedding parallel breaks.
370.94	373.99	3.05	3.01	99	0.92	30	1R	3H	1W	Multiple bedding parallel breaks.
373.99	377.04	3.05	2.9	95	1.68	55	1R	3H	1W	Multiple single joints - slickensides and gougey infill common.
377.04	380.09	3.05	3.05	100	2.57	84	1R	3H	1W	
380.09	383.13	3.04	3.04	100	2.54	84	2R	3H	1W	
383.13	386.18	3.05	2.53	83	0.94	31	1R	2H	1W	
386.18	389.23	3.05	2.83	93	0.45	15	1R	3H	1W	Multiple bedding parallel breaks.
389.23	392.28	3.05	2.65	87	0.42	14	1R	3H	1W	
392.28	395.33	3.05	2.89	95	0.75	25	1R	3H	1W	Multiple bedding parallel breaks.
395.33	398.37	3.04	2.84	93	0.68	22	1R	3H	1W	Multiple bedding parallel breaks.
398.37	401.42	3.05	2.82	92	0.26	9	0R	3H	1W	
401.42	404.47	3.05	2.95	97	0.22	7	1R	2H	1W	
404.47	407.52	3.05	2.93	96	2.09	69	2R	3H	1W	
407.52	410.57	3.05	3.05	100	2.03	67	3R	3H	1W	multiple bedding fractures.
410.57	413.61	3.04	2.89	95	1.27	42	3R	3H	1W	multiple bedding fractures.

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From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
0.00	0.00	0.00	-QC-	0.00	0	S049178	☐	N18-053	Core	CS9	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S049077	☐	N18-043	Core	CS2	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S049196	☐	N18-053	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S049165	☐	N18-052	CORE	CS11	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S049147	☐	N18-052	CORE	CS3	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S049143	☐	N18-052	CORE		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S049123	☐	N18-050	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S049118	☐	N18-050	Core	CS9	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S049097	☐	N18-050	Core	CS10	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S049090	☐	N18-043	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S049204	☐	N18-053	Core	CS6	☐	☐	☐
4.76	5.18	0.42	OVB	0.42	100	S049071	☐	N18-043	Core		☐	☐	☐
5.18	8.23	3.05	OVB	1.25	41	S049072	☐	N18-043	Core		☐	☐	☐
8.23	11.28	3.05	OVB	1.09	36	S049073	☐	N18-043	Core		☐	☐	☐
11.28	14.33	3.05	OVB	2.57	84	S049074	☐	N18-043	Core		☐	☐	☐
14.33	17.37	3.04	OVB	1.61	53	S049075	☐	N18-043	Core		☐	☐	☐
17.37	20.42	3.05	OVB	1.02	33	S049076	☐	N18-043	Core		☐	☐	☐
20.42	23.47	3.05	OVB	0.54	18	S049078	☐	N18-043	Core		☐	☐	☐
23.47	26.52	3.05	OVB	0.47	15	S049079	☐	N18-043	Core		☐	☐	☐
26.52	29.57	3.05	OVB	0.39	13	S049080	☐	N18-043	Core		☐	☐	☐
29.57	32.61	3.04	OVB	1.48	49	S049081	☐	N18-043	Core		☐	☐	☐
32.61	35.66	3.05	OVB	0.76	25	S049082	☐	N18-043	Core		☐	☐	☐
35.66	38.71	3.05	OVB	1.60	52	S049083	☐	N18-043	Core		☐	☐	☐
38.71	41.76	3.05	OVB	1.10	36	S049084	☐	N18-043	Core		☐	☐	☐
38.71	41.76	3.05	OVB	1.10	36	S049085	☐	N18-043	Core		☐	☑	☐
41.76	44.81	3.05	OVB	0.24	8	S049086	☐	N18-043	Core		☐	☐	☐
44.81	47.85	3.04	OVB	1.96	64	S049087	☐	N18-043	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
47.85	50.90	3.05	OVB	2.06	68	S049088	☐	N18-043	Core		☐	☐	☐
50.90	53.95	3.05	OVB	0.96	31	S049089	☐	N18-043	Core		☐	☐	☐
53.95	60.05	6.10	OVB	2.31	38	W233112	☐	N18-C03	Chip		☐	☐	☐
60.05	66.14	6.09	MST	5.15	85	W233113	☐	N18-C03	Chip		☐	☐	☐
66.14	72.24	6.10	MST	4.21	69	W233114	☐	N18-C03	Chip		☐	☐	☐
72.24	78.33	6.09	MST	4.55	75	W233130	☐	N18-C04	chip		☐	☐	☐
78.33	84.43	6.10	MST	5.83	96	W233131	☐	N18-C04	chip		☐	☐	☐
84.43	90.53	6.10	MST	5.71	94	W233132	☐	N18-C04	chip		☐	☐	☐
90.53	96.62	6.09	MST	5.52	91	W233133	☐	N18-C04	chip		☐	☐	☐
96.62	102.72	6.10	MST	5.95	98	W233134	☐	N18-C04	chip		☐	☐	☐
102.72	108.81	6.09	MST	5.85	96	W233135	☐	N18-C04	chip		☐	☐	☐
108.81	111.86	3.05	MST	3.03	99	S049091	☐	N18-050	Core		☐	☐	☐
111.86	114.91	3.05	MST	3.05	100	S049092	☐	N18-050	Core		☐	☐	☐
114.91	117.96	3.05	MST	3.02	99	S049093	☐	N18-050	Core		☐	☐	☐
117.96	120.54	2.58	MST	2.53	98	S049094	☐	N18-050	Core		☐	☐	☐
120.54	122.72	2.18	MST	1.99	91	S049095	☐	N18-050	Core		☐	☐	☐
122.72	124.81	2.09	MST	1.95	93	S049096	☐	N18-050	Core		☐	☐	☐
124.81	127.10	2.29	LST, MST	1.79	78	S049098	☐	N18-050	Core		☐	☐	☐
127.10	130.15	3.05	LST	2.84	93	S049099	☐	N18-050	Core		☐	☐	☐
130.15	133.20	3.05	LST	3.05	100	S049100	☐	N18-050	Core		☐	☐	☐
133.20	136.25	3.05	LST	2.93	96	S049101	☐	N18-050	Core		☐	☐	☐
136.25	139.29	3.04	LST	3.04	100	S049102	☐	N18-050	Core		☐	☐	☐
139.29	142.34	3.05	LST	3.00	98	S049103	☐	N18-050	Core		☐	☐	☐
142.34	145.39	3.05	LST	3.05	100	S049104	☐	N18-050	Core		☐	☐	☐
145.39	148.44	3.05	LST	3.05	100	S049105	☐	N18-050	Core		☐	☐	☐
148.44	151.49	3.05	LST	2.97	97	S049106	☐	N18-050	Core		☐	☐	☐
151.49	154.53	3.04	LST	2.94	97	S049107	☐	N18-050	Core		☐	☐	☐
154.53	157.58	3.05	LST	2.79	91	S049108	☐	N18-050	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
154.53	157.58	3.05	LST	2.79	91	S049109	☐	N18-050	Core		☐	☑	☐
157.58	160.63	3.05	LST	3.05	100	S049110	☐	N18-050	Core		☐	☐	☐
160.63	163.68	3.05	LST	2.91	95	S049111	☐	N18-050	Core		☐	☐	☐
163.68	166.73	3.05	LST	3.01	99	S049112	☐	N18-050	Core		☐	☐	☐
166.73	169.77	3.04	LST	3.04	100	S049113	☐	N18-050	Core		☐	☐	☐
169.77	172.82	3.05	LST	3.03	99	S049114	☐	N18-050	Core		☐	☐	☐
172.82	175.87	3.05	LST	3.02	99	S049115	☐	N18-050	Core		☐	☐	☐
175.87	178.92	3.05	LST	2.96	97	S049116	☐	N18-050	Core		☐	☐	☐
178.92	181.97	3.05	LST	3.01	99	S049117	☐	N18-050	Core		☐	☐	☐
181.97	185.01	3.04	LST	2.89	95	S049119	☐	N18-050	Core		☐	☐	☐
185.01	188.06	3.05	LST	3.04	100	S049120	☐	N18-050	Core		☐	☐	☐
188.06	191.11	3.05	LST	3.00	98	S049121	☐	N18-050	Core		☐	☐	☐
191.11	194.16	3.05	LST	3.05	100	S049122	☐	N18-050	Core		☐	☐	☐
194.16	197.21	3.05	LST	3.05	100	S049124	☐	N18-050	Core		☐	☐	☐
197.21	200.25	3.04	LST	2.88	95	S049125	☐	N18-050	Core		☐	☐	☐
200.25	203.30	3.05	LST	2.93	96	S049126	☐	N18-050	Core		☐	☐	☐
203.30	206.35	3.05	LST	3.05	100	S049127	☐	N18-050	Core		☐	☐	☐
206.35	209.40	3.05	LST	3.04	100	S049128	☐	N18-050	Core		☐	☐	☐
206.35	209.40	3.05	LST	3.04	100	S049129	☐	N18-050	Core		☐	☐	☑
209.40	212.45	3.05	LST	3.02	99	S049130	☐	N18-050	Core		☐	☐	☐
212.45	215.49	3.04	LST	3.04	100	S049131	☐	N18-052	CORE		☐	☐	☐
215.49	218.54	3.05	LST	2.90	95	S049132	☐	N18-052	CORE		☐	☐	☐
218.54	221.59	3.05	LST	3.05	100	S049133	☐	N18-052	CORE		☐	☐	☐
221.59	224.64	3.05	LST	3.05	100	S049134	☐	N18-052	CORE		☐	☐	☐
224.64	227.69	3.05	LST	2.74	90	S049135	☐	N18-052	CORE		☐	☐	☐
227.69	230.73	3.04	LST	3.04	100	S049136	☐	N18-052	CORE		☐	☐	☐
230.73	233.78	3.05	LST	3.04	100	S049137	☐	N18-052	CORE		☐	☐	☐
233.78	236.83	3.05	LST	3.04	100	S049138	☐	N18-052	CORE		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
236.83	239.88	3.05	LST	2.94	96	S049139	☐	N18-052	CORE		☐	☐	☐
239.88	242.00	2.12	LST	2.12	100	S049140	☐	N18-052	CORE		☐	☐	☐
242.00	244.10	2.10	LST	2.00	95	S049141	☐	N18-052	CORE		☐	☐	☐
244.10	245.97	1.87	LST	1.77	95	S049142	☐	N18-052	CORE		☐	☐	☐
245.97	248.00	2.03	LST	2.03	100	S049144	☐	N18-052	CORE		☐	☐	☐
248.00	250.67	2.67	LST	2.65	99	S049145	☐	N18-052	CORE		☐	☐	☐
250.67	252.73	2.06	LST	1.70	83	S049146	☐	N18-052	CORE		☐	☐	☐
252.73	255.12	2.39	LST	2.31	97	S049148	☐	N18-052	CORE		☐	☐	☐
255.12	257.14	2.02	LST	1.98	98	S049149	☐	N18-052	CORE		☐	☐	☐
257.14	258.63	1.49	LST	1.40	94	S049150	☐	N18-052	CORE		☐	☐	☐
257.14	258.63	1.49	LST	1.40	94	S049151	☐	N18-052	CORE		☐	☐	☑
258.63	261.21	2.58	LST, DST	2.50	97	S049152	☐	N18-052	CORE		☐	☐	☐
261.21	264.26	3.05	DST	3.04	100	S049153	☐	N18-052	CORE		☐	☐	☐
264.26	267.31	3.05	DST	2.96	97	S049154	☐	N18-052	CORE		☐	☐	☐
267.31	270.36	3.05	DST	3.01	99	S049155	☐	N18-052	CORE		☐	☐	☐
270.36	273.41	3.05	DST	2.98	98	S049156	☐	N18-052	CORE		☐	☐	☐
270.36	273.41	3.05	DST	2.98	98	S049157	☐	N18-052	CORE		☐	☑	☐
273.41	276.45	3.04	DST	3.04	100	S049158	☐	N18-052	CORE		☐	☐	☐
276.45	279.50	3.05	DST	2.86	94	S049159	☐	N18-052	CORE		☐	☐	☐
279.50	282.55	3.05	DST	3.03	99	S049160	☐	N18-052	CORE		☐	☐	☐
282.55	285.60	3.05	DST	3.00	98	S049161	☐	N18-052	CORE		☐	☐	☐
285.60	288.22	2.62	DST	2.62	100	S049162	☐	N18-052	CORE		☐	☐	☐
288.22	290.40	2.18	DST	1.99	91	S049163	☐	N18-052	CORE		☐	☐	☐
290.40	292.56	2.16	DST	2.16	100	S049164	☐	N18-052	CORE		☐	☐	☐
292.56	295.31	2.75	DST	2.74	100	S049166	☐	N18-052	CORE		☐	☐	☐
295.31	297.79	2.48	DST	2.34	94	S049167	☐	N18-052	CORE		☐	☐	☐
297.79	300.84	3.05	DST	2.83	93	S049168	☐	N18-052	CORE		☐	☐	☐
300.84	303.88	3.04	DST	2.56	84	S049169	☐	N18-052	CORE		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
303.88	306.93	3.05	DST	2.97	97	S049170	☐	N18-052	CORE		☐	☐	☐
306.93	309.98	3.05	DST	2.40	79	S049171	☐	N18-053	Core		☐	☐	☐
309.98	313.03	3.05	DST	2.67	88	S049172	☐	N18-053	Core		☐	☐	☐
313.03	316.08	3.05	DST	2.49	82	S049173	☐	N18-053	Core		☐	☐	☐
316.08	319.13	3.05	DST	2.63	86	S049174	☐	N18-053	Core		☐	☐	☐
319.13	322.17	3.04	DST	2.85	94	S049175	☐	N18-053	Core		☐	☐	☐
322.17	325.22	3.05	DST	2.97	97	S049176	☐	N18-053	Core		☐	☐	☐
325.22	328.27	3.05	DST	2.94	96	S049177	☐	N18-053	Core		☐	☐	☐
328.27	331.00	2.73	DST	2.73	100	S049179	☐	N18-053	Core		☐	☐	☐
331.00	333.52	2.52	DST	2.43	96	S049180	☐	N18-053	Core		☐	☐	☐
331.00	333.52	2.52	DST	2.43	96	S049181	☐	N18-053	Core		☐	☑	☐
333.52	335.66	2.14	DST	2.06	96	S049182	☐	N18-053	Core		☐	☐	☐
335.66	337.80	2.14	DST	1.76	82	S049183	☐	N18-053	Core		☐	☐	☐
337.80	340.46	2.66	DST	2.06	77	S049184	☐	N18-053	Core		☐	☐	☐
340.46	343.51	3.05	DST	2.82	92	S049185	☐	N18-053	Core		☐	☐	☐
343.51	346.03	2.52	DST	2.49	99	S049186	☐	N18-053	Core		☐	☐	☐
346.03	348.51	2.48	DST, DMT	2.41	97	S049187	☐	N18-053	Core		☐	☐	☐
348.51	350.58	2.07	DMT	2.07	100	S049188	☐	N18-053	Core		☐	☐	☐
350.58	352.65	2.07	DMT	2.07	100	S049189	☐	N18-053	Core		☐	☐	☐
352.65	355.70	3.05	DMT	3.04	100	S049190	☐	N18-053	Core		☐	☐	☐
355.70	358.75	3.05	DMT	3.01	99	S049191	☐	N18-053	Core		☐	☐	☐
358.75	361.80	3.05	DMT	2.95	97	S049192	☐	N18-053	Core		☐	☐	☐
361.80	364.85	3.05	DMT	3.00	98	S049193	☐	N18-053	Core		☐	☐	☐
364.85	366.30	1.45	DMT	1.45	100	S049194	☐	N18-053	Core		☐	☐	☐
366.30	368.43	2.13	LST, DMT	2.09	98	S049195	☐	N18-053	Core		☐	☐	☐
368.43	370.94	2.51	LST	2.48	99	S049197	☐	N18-053	Core		☐	☐	☐
370.94	373.99	3.05	LST	3.01	99	S049198	☐	N18-053	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
373.99	377.04	3.05	LST	3.01	99	S049199	☐	N18-053	Core		☐	☐	☐
373.99	377.04	3.05	LST	3.01	99	S049200	☐	N18-053	Core		☐	☐	☑
377.04	380.09	3.05	LST	3.05	100	S049201	☐	N18-053	Core		☐	☐	☐
380.09	383.13	3.04	LST	3.04	100	S049202	☐	N18-053	Core		☐	☐	☐
383.13	386.18	3.05	LST	2.53	83	S049203	☐	N18-053	Core		☐	☐	☐
386.18	389.23	3.05	LST	2.83	93	S049205	☐	N18-053	Core		☐	☐	☐
389.23	392.28	3.05	LST	2.65	87	S049206	☐	N18-053	Core		☐	☐	☐
392.28	395.33	3.05	LST	2.89	95	S049207	☐	N18-053	Core		☐	☐	☐
395.33	398.37	3.04	LST	2.84	93	S049208	☐	N18-053	Core		☐	☐	☐
398.37	401.42	3.05	LST	2.82	92	S049209	☐	N18-053	Core		☐	☐	☐
401.42	404.47	3.05	LST	2.95	97	S049210	☐	N18-053	Core		☐	☐	☐
404.47	407.52	3.05	LST	2.93	96	S049211	☐	N18-056	Core		☐	☐	☐
407.52	410.57	3.05	LST	3.05	100	S049212	☐	N18-056	Core		☐	☐	☐
410.57	413.61	3.04	LST	2.89	95	S049213	☐	N18-056	Core		☐	☐	☐

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From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
0.00	3.41	3.41	OVB	--	No recovery from 0.0-3.05m. Overburden from 3.05-3.41m.							
						--	--	---	---	--	--	0
3.41	113.41	110.00	MST	FG	Interval largely composed of maroon and light greenish grey, trace oxidized, planar bedded mudstone with intermittent quartz arenite laminations. Interval is intermittently gougy and sheared. 96.20-98.95m - Light grey and light tan, fine grained, crackle brecciated, massive, veined dolostone.							
113.41	516.64	403.23	LST	VF	Light and medium grey, very fine-fine grained, planar bedded limestone interbedded with calcareous mudstone. Moderate Fe and As oxidization. Oxidization is commonly observed on fracture surfaces and weakly pervasive in rock - often penetrating wall rock through bedding planes and healed fractures. As-oxide last observed at 171.75m. Fe-oxide last observed at 167.5m. 137.40 - 141.00m - Re-Om Mineralized interval - moderately calcite veined, mineralized, limestone with calcareous mudstone interbeds. Realgar and Orpiment are commonly found within calcite veins, and coating fracture surfaces. Very little realgar or orpiment observed on wall rock. Intermittent, soft, dark grey sooty sulphides coating joint surfaces.							

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
0.00	3.05	3.05	0	0	0.00	0	0R	--	--	No Recovery
3.05	6.10	3.05	2.06	68	0.00	0	0R	2H	2W	
6.10	9.14	3.04	2.22	73	0.42	14	0R	2H	2W	
9.14	12.19	3.05	2.84	93	1.43	47	0R	2H	1W	
12.19	15.24	3.05	2.99	98	0.82	27	0R	2H	1W	
15.24	18.29	3.05	3.05	100	2.00	66	0R	2H	1W	higher fracture density b/w 15.24-15.42m
18.29	21.34	3.05	3.05	100	1.48	49	0R	2H	1W	high fracture density b/w 20.90- 21.24
21.34	24.38	3.04	3.04	100	2.34	77	0R	2H	1W	
24.38	27.43	3.05	2.78	91	2.26	74	0R	2H	1W	
27.43	30.48	3.05	2.24	73	0.88	29	0R	2H	1W	
30.48	33.53	3.05	2.22	73	0.93	30	0R	2H	1W	
33.53	36.58	3.05	2.73	90	1.65	54	0R	3H	1W	
36.58	39.62	3.04	2.33	77	1.51	50	0R	2H	1W	rubble/gouge zone from 39.4 until end of run
39.62	42.67	3.05	2.73	90	1.41	46	0R	2H	1W	
42.67	45.72	3.05	2.4	79	0.94	31	0R	2H	1W	
45.72	48.77	3.05	2.96	97	2.47	81	0R	2H	1W	
48.77	51.82	3.05	3.02	99	2.84	93	0R	3H	1W	
51.82	54.86	3.04	2.7	89	2.54	84	0R	3H	1W	
54.86	57.91	3.05	2.95	97	2.85	93	0R	3H	1W	
57.91	60.96	3.05	2.78	91	1.72	56	0R	3H	1W	
60.96	64.01	3.05	2.48	81	2.00	66	0R	2H	1W	
64.01	67.06	3.05	3	98	2.40	79	0R	2H	1W	multiple single joints.
67.06	70.10	3.04	2.94	97	2.94	97	0R	3H	1W	
70.10	73.15	3.05	3.05	100	2.12	70	0R	2H	1W	
73.15	76.20	3.05	2.92	96	1.58	52	0R	2H	1W	multiple single joints.
76.20	79.25	3.05	3.05	100	2.98	98	0R	3H	1W	
79.25	82.30	3.05	3.05	100	2.60	85	0R	3H	1W	
82.30	85.34	3.04	3.04	100	2.93	96	0R	3H	1W	
85.34	88.39	3.05	3	98	2.45	80	0R	3H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
88.39	91.44	3.05	2.8	92	1.12	37	0R	2H	1W	rubbly gouge zone from 89.92 until end of run.
91.44	94.49	3.05	2.96	97	1.80	59	0R	3H	1W	
94.49	97.54	3.05	2.97	97	1.80	59	0R	2H	1W	
97.54	100.58	3.04	1.96	64	0.95	31	0R	2H	1W	rubble zone
100.58	103.63	3.05	2.96	97	2.30	75	0R	3H	1W	
103.63	106.68	3.05	2.56	84	2.00	66	0R	2H	1W	
106.68	109.73	3.05	2.55	84	2.00	66	0R	2H	1W	
109.73	112.78	3.05	2.95	97	1.61	53	0R	3H	1W	
112.78	115.82	3.04	1.9	63	0.39	13	0R	3H	1W	Rubble zone.
115.82	118.87	3.05	2.58	85	0.26	9	2R	3H	1W	
118.87	121.92	3.05	2.82	92	0.29	10	2R	3H	1W	Weak to moderate oxidization.
121.92	124.97	3.05	2.23	73	0.31	10	3R	3H	1W	Rubble zone.
124.97	128.02	3.05	2.68	88	0.72	24	3R	2H	1W	Rubbly with trace gouge.
128.02	131.06	3.04	2.9	95	0.37	12	1R	3H	1W	
131.06	134.11	3.05	2.57	84	0.12	4	2R	3H	1W	Moderate As-oxidization.
134.11	137.16	3.05	2.91	95	0.68	22	3R	3H	1W	Moderate Fe and As oxidization on fracture and joint surfaces.Multiple single joints.
137.16	140.21	3.05	2.95	97	1.98	65	3R	3H	1W	orpiment and realgar along fractures and veins. Multiple single joints.
140.21	143.26	3.05	2.62	86	0.92	30	3R	2H	1W	
143.26	146.30	3.04	2.96	97	2.05	67	3R	3H	1W	
146.30	149.35	3.05	3.05	100	2.26	74	3R	3H	1W	
149.35	152.40	3.05	3	98	2.33	76	3R	3H	1W	
152.40	155.45	3.05	2.82	92	1.58	52	3R	2H	1W	
155.45	158.50	3.05	2.98	98	2.46	81	3R	3H	1W	
158.50	161.54	3.04	3.02	99	1.25	41	3R	3H	1W	
161.54	164.59	3.05	2.93	96	2.37	78	3R	3H	1W	
164.59	167.64	3.05	3.05	100	3.05	100	3R	3H	1W	
167.64	170.69	3.05	2.62	86	1.38	45	3R	3H	1W	rubble zone from 169.38m- 170.69m
170.69	173.74	3.05	2.5	82	1.43	47	3R	2H	1W	
173.74	176.78	3.04	3.04	100	2.86	94	2R	3H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
176.78	179.83	3.05	3.05	100	3.05	100	2R	3H	1W	
179.83	182.88	3.05	3.05	100	1.98	65	2R	3H	1W	
182.88	185.93	3.05	2.92	96	2.75	90	2R	3H	1W	
185.93	188.98	3.05	3	98	3.00	98	2R	3H	1W	
188.98	192.02	3.04	3.04	100	3.04	100	2R	3H	1W	
192.02	195.07	3.05	3.02	99	3.02	99	2R	3H	1W	
195.07	198.12	3.05	3.05	100	2.98	98	1R	3H	1W	
198.12	201.17	3.05	3.04	100	2.78	91	1R	3H	1W	
201.17	204.22	3.05	2.99	98	2.99	98	1R	3H	1W	
204.22	207.26	3.04	3.03	100	3.03	100	2R	3H	1W	
207.26	210.31	3.05	2.82	92	2.82	92	2R	3H	1W	
210.31	211.84	1.53	1.48	97	1.48	97	1R	3H	1W	
211.84	214.88	3.04	3.02	99	3.02	99	2R	3H	1W	
214.88	217.93	3.05	3	98	3.00	98	2R	3H	1W	
217.93	220.98	3.05	2.9	95	2.79	91	1R	3H	1W	
220.98	224.03	3.05	3.02	99	3.02	99	2R	3H	1W	
224.03	227.08	3.05	2.8	92	2.69	88	2R	3H	1W	
227.08	230.12	3.04	3.04	100	2.93	96	2R	3H	1W	
230.12	233.17	3.05	2.89	95	2.89	95	1R	3H	1W	
233.17	236.22	3.05	3	98	3.00	98	1R	3H	1W	
236.22	239.27	3.05	2.97	97	2.97	97	2R	3H	1W	
239.27	242.32	3.05	2.85	93	1.85	61	3R	3H	1W	
242.32	245.36	3.04	2.88	95	2.22	73	3R	3H	1W	
245.36	248.41	3.05	3.04	100	2.91	95	3R	3H	1W	
248.41	251.46	3.05	3.04	100	3.00	98	3R	3H	1W	
251.46	254.51	3.05	2.95	97	2.39	78	3R	3H	1W	
254.51	257.56	3.05	3.04	100	2.83	93	3R	3H	1W	
257.56	260.60	3.04	3	99	2.24	74	3R	3H	1W	
260.60	263.65	3.05	3.02	99	2.80	92	1R	3H	1W	
263.65	266.70	3.05	3.04	100	2.70	89	2R	3H	1W	
266.70	269.75	3.05	3	98	3.00	98	2R	3H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
269.75	272.80	3.05	2.9	95	2.87	94	3R	3H	1W	
272.80	275.84	3.04	2.95	97	1.89	62	3R	3H	1W	
275.84	278.89	3.05	2.97	97	2.79	91	3R	3H	1W	
278.89	281.94	3.05	3.05	100	2.95	97	1R	3H	1W	
281.94	284.99	3.05	3.05	100	3.05	100	2R	3H	1W	
284.99	288.04	3.05	3.05	100	2.84	93	3R	3H	1W	
288.04	291.08	3.04	3.04	100	2.80	92	3R	3H	1W	
291.08	294.13	3.05	2.96	97	2.75	90	4R	3H	1W	
294.13	297.18	3.05	2.92	96	2.86	94	4R	3H	1W	
297.18	300.23	3.05	3.05	100	2.92	96	4R	3H	1W	
300.23	303.28	3.05	3.05	100	3.05	100	4R	3H	1W	
303.28	306.32	3.04	2.68	88	1.83	60	4R	3H	1W	
306.32	309.37	3.05	3.05	100	2.00	66	4R	3H	1W	multiple single joints.
309.37	312.42	3.05	2.65	87	2.02	66	3R	3H	1W	multiple single joints.
312.42	315.47	3.05	3.05	100	3.00	98	3R	3H	1W	
315.47	318.52	3.05	3.05	100	2.50	82	3R	3H	1W	
318.52	321.56	3.04	3.03	100	1.66	55	3R	3H	1W	
321.56	324.61	3.05	3.05	100	1.53	50	3R	3H	1W	
324.61	327.66	3.05	2.92	96	1.38	45	4R	2H	1W	
327.66	330.71	3.05	2.85	93	1.90	62	3R	2H	1W	
330.71	333.76	3.05	2.76	90	1.98	65	1R	2H	1W	
333.76	336.80	3.04	3.04	100	2.40	79	0R	3H	1W	
336.80	339.85	3.05	2.91	95	2.53	83	2R	3H	1W	
339.85	342.90	3.05	3	98	2.33	76	4R	3H	1W	
342.90	345.95	3.05	3.05	100	3.05	100	4R	3H	1W	
345.95	349.00	3.05	3	98	2.90	95	4R	3H	1W	
349.00	352.04	3.04	3.02	99	3.02	99	4R	3H	1W	
352.04	355.09	3.05	3	98	2.46	81	4R	3H	1W	
355.09	358.14	3.05	3.02	99	3.02	99	4R	3H	1W	
358.14	361.19	3.05	3.05	100	3.05	100	4R	3H	1W	
361.19	364.24	3.05	2.63	86	2.50	82	4R	3H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
364.24	367.28	3.04	2.84	93	2.48	82	1R	3H	1W	
367.28	370.33	3.05	3.05	100	3.00	98	2R	3H	1W	
370.33	373.38	3.05	3.05	100	2.93	96	2R	3H	1W	
373.38	376.43	3.05	2.9	95	2.84	93	2R	3H	1W	
376.43	379.48	3.05	3.05	100	3.05	100	2R	3H	1W	
379.48	382.52	3.04	3	99	3.00	99	2R	3H	1W	
382.52	385.57	3.05	3.05	100	3.00	98	3R	3H	1W	
385.57	388.62	3.05	3.05	100	2.99	98	2R	3H	1W	
388.62	391.67	3.05	3.05	100	2.91	95	1R	3H	1W	
391.67	394.72	3.05	3	98	2.86	94	0R	3H	1W	
394.72	397.76	3.04	3.04	100	3.04	100	0R	3H	1W	
397.76	400.81	3.05	3.05	100	3.05	100	0R	3H	1W	
400.81	403.86	3.05	3.05	100	3.05	100	2R	3H	1W	
403.86	406.91	3.05	3.05	100	2.54	83	3R	3H	1W	
406.91	409.96	3.05	2.97	97	2.97	97	3R	3H	1W	
409.96	413.00	3.04	3.04	100	3.04	100	3R	3H	1W	
413.00	416.05	3.05	3.05	100	2.95	97	3R	3H	1W	
416.05	419.10	3.05	3	98	3.00	98	3R	3H	1W	
419.10	422.15	3.05	2.99	98	2.92	96	2R	3H	1W	
422.15	425.20	3.05	3	98	2.74	90	3R	3H	1W	
425.20	428.24	3.04	3.04	100	2.87	94	3R	3H	1W	
428.24	431.29	3.05	3.05	100	3.05	100	3R	3H	1W	
431.29	434.34	3.05	2.96	97	2.93	96	3R	3H	1W	
434.34	437.39	3.05	3.05	100	3.05	100	3R	3H	1W	
437.39	440.44	3.05	3.05	100	3.05	100	1R	3H	1W	
440.44	443.48	3.04	2.95	97	2.95	97	1R	3H	1W	
443.48	446.53	3.05	3.05	100	3.05	100	2R	3H	1W	
446.53	449.58	3.05	3.05	100	2.73	90	2R	3H	1W	
449.58	452.63	3.05	3.05	100	3.01	99	2R	3H	1W	
452.63	455.68	3.05	3.05	100	3.01	99	1R	3H	1W	
455.68	458.72	3.04	2.86	94	2.58	85	1R	3H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
458.72	461.77	3.05	3	98	3.00	98	0R	3H	1W	
461.77	464.82	3.05	3.05	100	2.78	91	0R	3H	1W	
464.82	467.87	3.05	2.84	93	2.40	79	0R	3H	1W	
467.87	470.92	3.05	3.05	100	2.94	96	2R	3H	1W	
470.92	473.96	3.04	3.04	100	3.04	100	3R	3H	1W	
473.96	477.01	3.05	3	98	2.58	85	4R	3H	1W	
477.01	480.06	3.05	3.05	100	3.05	100	4R	3H	1W	
480.06	483.11	3.05	2.97	97	2.82	92	1R	3H	1W	
483.11	486.16	3.05	3.05	100	2.59	85	3R	3H	1W	Multiple single joints.
486.16	489.20	3.04	2.93	96	2.84	93	2R	3H	1W	
489.20	492.25	3.05	3.05	100	2.83	93	3R	3H	1W	
492.25	495.30	3.05	2.94	96	2.68	88	3R	3H	1W	multiple single joints.
495.30	498.35	3.05	2.97	97	2.69	88	1R	3H	1W	
498.35	501.40	3.05	3.04	100	2.73	90	1R	3H	1W	
501.40	504.44	3.04	3.04	100	2.99	98	3R	3H	1W	
504.44	507.49	3.05	3.04	100	2.98	98	3R	3H	1W	
507.49	510.54	3.05	3.02	99	2.90	95	2R	3H	1W	multiple single joints
510.54	513.59	3.05	2.95	97	2.86	94	1R	3H	1W	
513.59	516.64	3.05	2.99	98	2.31	76	2R	3H	1W	

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From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
0.00	0.00	0.00	-QC-	0.00	0	S050719	☐	N18-055	core	CS9	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S050588	☐	N18-049	CORE	CS10	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S050726	☐	N18-055	core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S050697	☐	N18-054	core	CS10	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S050684	☐	N18-054	core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S050673	☐	N18-054	core	CS9	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S050656	☐	N18-051	Core	CS9	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S050647	☐	N18-051	Core	CS10	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S050642	☐	N18-051	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S050598	☐	N18-049	CORE		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S050596	☐	N18-049	CORE	CS12	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S050733	☐	N18-055	core	CS9	☐	☐	☐
3.05	9.14	6.09	OVB	4.28	70	W233115	☐	N18-C03	Chip		☐	☐	☐
9.14	15.24	6.10	MST	5.83	96	W233116	☐	N18-C03	Chip		☐	☐	☐
15.24	21.34	6.10	MST	6.10	100	W233117	☐	N18-C03	Chip		☐	☐	☐
21.34	27.43	6.09	MST	5.82	96	W233118	☐	N18-C03	Chip		☐	☐	☐
27.43	33.53	6.10	MST	4.46	73	W233119	☐	N18-C03	Chip		☐	☐	☐
33.53	39.62	6.09	MST	5.06	83	W233120	☐	N18-C03	Chip		☐	☐	☐
39.62	45.72	6.10	MST	5.13	84	W233121	☐	N18-C03	Chip		☐	☐	☐
45.72	51.82	6.10	MST	5.98	98	W233122	☐	N18-C03	Chip		☐	☐	☐
51.82	57.91	6.09	MST	5.65	93	W233123	☐	N18-C03	Chip		☐	☐	☐
57.91	64.01	6.10	MST	5.26	86	W233124	☐	N18-C03	Chip		☐	☐	☐
64.01	70.10	6.09	MST	5.94	98	W233125	☐	N18-C03	Chip		☐	☐	☐
70.10	76.20	6.10	MST	5.97	98	W233126	☐	N18-C03	Chip		☐	☐	☐
76.20	82.30	6.10	MST	6.10	100	W233127	☐	N18-C03	Chip		☐	☐	☐
82.30	88.39	6.09	MST	6.04	99	W233128	☐	N18-C03	Chip		☐	☐	☐
88.39	94.49	6.10	MST	5.76	94	W233129	☐	N18-C04	chip		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
94.49	96.20	1.71	MST	1.70	99	S050579	☐	N18-048	Core		☐	☐	☐
96.20	99.06	2.86	MST	2.32	81	S050580	☐	N18-048	Core		☐	☐	☐
99.06	102.11	3.05	MST	2.40	79	S050581	☐	N18-049	CORE		☐	☐	☐
102.11	105.16	3.05	MST	2.80	92	S050582	☐	N18-049	CORE		☐	☐	☐
105.16	108.20	3.04	MST	2.88	95	S050583	☐	N18-049	CORE		☐	☐	☐
108.20	110.73	2.53	MST	2.42	96	S050584	☐	N18-049	CORE		☐	☐	☐
110.73	113.41	2.68	MST	2.68	100	S050585	☐	N18-049	CORE		☐	☐	☐
113.41	115.82	2.41	MST, LST	2.28	95	S050586	☐	N18-049	CORE		☐	☐	☐
115.82	118.87	3.05	LST	2.58	85	S050587	☐	N18-049	CORE		☐	☐	☐
118.87	121.92	3.05	LST	2.82	92	S050589	☐	N18-049	CORE		☐	☐	☐
121.92	124.97	3.05	LST	2.23	73	S050590	☐	N18-049	CORE		☐	☐	☐
124.97	127.45	2.48	LST	2.48	100	S050591	☐	N18-049	CORE		☐	☐	☐
127.45	129.92	2.47	LST	2.37	96	S050592	☐	N18-049	CORE		☐	☐	☐
129.92	134.11	4.19	LST	3.06	73	S050593	☐	N18-049	CORE		☐	☐	☐
134.11	137.16	3.05	LST	2.91	95	S050594	☐	N18-049	CORE		☐	☐	☐
137.16	138.68	1.52	LST	1.49	98	S050595	☐	N18-049	CORE		☐	☐	☐
138.68	141.73	3.05	LST	2.71	89	S050597	☐	N18-049	CORE		☐	☐	☐
141.73	144.78	3.05	LST	2.63	86	S050599	☐	N18-049	CORE		☐	☐	☐
144.78	147.83	3.05	LST	3.05	100	S050600	☐	N18-049	CORE		☐	☐	☐
147.83	150.88	3.05	LST	3.00	98	S050601	☐	N18-049	CORE		☐	☐	☐
150.88	153.92	3.04	LST	3.02	99	S050602	☐	N18-049	CORE		☐	☐	☐
153.92	156.97	3.05	LST	2.75	90	S050603	☐	N18-049	CORE		☐	☐	☐
156.97	160.02	3.05	LST	2.90	95	S050604	☐	N18-049	CORE		☐	☐	☐
160.02	163.07	3.05	LST	2.77	91	S050605	☐	N18-049	CORE		☐	☐	☐
163.07	166.12	3.05	LST	3.05	100	S050606	☐	N18-049	CORE		☐	☐	☐
166.12	169.16	3.04	LST	2.98	98	S050607	☐	N18-049	CORE		☐	☐	☐
169.16	172.21	3.05	LST	2.18	71	S050608	☐	N18-049	CORE		☐	☐	☐
172.21	175.26	3.05	LST	3.00	98	S050609	☐	N18-049	CORE		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
175.26	178.31	3.05	LST	3.03	99	S050610	☐	N18-049	CORE		☐	☐	☐
175.26	178.31	3.05	LST	3.03	99	S050611	☐	N18-049	CORE		☐	☑	☐
178.31	181.36	3.05	LST	3.04	100	S050612	☐	N18-049	CORE		☐	☐	☐
181.36	184.40	3.04	LST	3.04	100	S050613	☐	N18-049	CORE		☐	☐	☐
184.40	187.45	3.05	LST	3.03	99	S050614	☐	N18-049	CORE		☐	☐	☐
187.45	190.50	3.05	LST	3.01	99	S050615	☐	N18-049	CORE		☐	☐	☐
190.50	193.55	3.05	LST	2.98	98	S050616	☐	N18-049	CORE		☐	☐	☐
193.55	196.60	3.05	LST	3.03	99	S050617	☐	N18-049	CORE		☐	☐	☐
196.60	199.64	3.04	LST	3.01	99	S050618	☐	N18-049	CORE		☐	☐	☐
196.60	199.64	3.04	LST	3.01	99	S050619	☐	N18-049	CORE		☐	☐	☑
199.64	202.69	3.05	LST	3.00	98	S050620	☐	N18-049	CORE		☐	☐	☐
202.69	205.74	3.05	LST	3.01	99	S050621	☐	N18-051	Core		☐	☐	☐
205.74	208.79	3.05	LST	3.03	99	S050622	☐	N18-051	Core		☐	☐	☐
208.79	211.84	3.05	LST	2.99	98	S050623	☐	N18-051	Core		☐	☐	☐
211.84	214.88	3.04	LST	3.02	99	S050624	☐	N18-051	Core		☐	☐	☐
214.88	217.93	3.05	LST	3.00	98	S050625	☐	N18-051	Core		☐	☐	☐
217.93	220.98	3.05	LST	2.90	95	S050626	☐	N18-051	Core		☐	☐	☐
220.98	224.03	3.05	LST	3.02	99	S050627	☐	N18-051	Core		☐	☐	☐
220.98	224.03	3.05	LST	3.02	99	S050628	☐	N18-051	Core		☐	☑	☐
224.03	227.08	3.05	LST	2.80	92	S050629	☐	N18-051	Core		☐	☐	☐
227.08	230.12	3.04	LST	3.04	100	S050630	☐	N18-051	Core		☐	☐	☐
230.12	233.17	3.05	LST	2.89	95	S050631	☐	N18-051	Core		☐	☐	☐
233.17	236.22	3.05	LST	3.00	98	S050632	☐	N18-051	Core		☐	☐	☐
236.22	239.27	3.05	LST	2.97	97	S050633	☐	N18-051	Core		☐	☐	☐
239.27	242.32	3.05	LST	2.85	93	S050634	☐	N18-051	Core		☐	☐	☐
239.27	242.32	3.05	LST	2.85	93	S050635	☐	N18-051	Core		☐	☐	☑
242.32	245.36	3.04	LST	2.88	95	S050636	☐	N18-051	Core		☐	☐	☐
245.36	248.41	3.05	LST	3.04	100	S050637	☐	N18-051	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
248.41	251.46	3.05	LST	3.04	100	S050638	☐	N18-051	Core		☐	☐	☐
251.46	254.51	3.05	LST	2.95	97	S050639	☐	N18-051	Core		☐	☐	☐
254.51	257.56	3.05	LST	3.04	100	S050640	☐	N18-051	Core		☐	☐	☐
257.56	260.60	3.04	LST	3.00	99	S050641	☐	N18-051	Core		☐	☐	☐
260.60	263.65	3.05	LST	3.02	99	S050643	☐	N18-051	Core		☐	☐	☐
263.65	266.70	3.05	LST	3.04	100	S050644	☐	N18-051	Core		☐	☐	☐
266.70	269.75	3.05	LST	3.00	98	S050645	☐	N18-051	Core		☐	☐	☐
269.75	272.80	3.05	LST	2.90	95	S050646	☐	N18-051	Core		☐	☐	☐
272.80	275.84	3.04	LST	2.95	97	S050648	☐	N18-051	Core		☐	☐	☐
275.84	278.89	3.05	LST	2.97	97	S050649	☐	N18-051	Core		☐	☐	☐
278.89	281.94	3.05	LST	3.05	100	S050650	☐	N18-051	Core		☐	☐	☐
281.94	284.99	3.05	LST	3.05	100	S050651	☐	N18-051	Core		☐	☐	☐
284.99	288.04	3.05	LST	3.05	100	S050652	☐	N18-051	Core		☐	☐	☐
288.04	291.08	3.04	LST	3.04	100	S050653	☐	N18-051	Core		☐	☐	☐
291.08	294.13	3.05	LST	2.96	97	S050654	☐	N18-051	Core		☐	☐	☐
294.13	297.18	3.05	LST	2.92	96	S050655	☐	N18-051	Core		☐	☐	☐
297.18	300.23	3.05	LST	3.05	100	S050657	☐	N18-051	Core		☐	☐	☐
300.23	303.28	3.05	LST	3.05	100	S050658	☐	N18-051	Core		☐	☐	☐
303.28	306.32	3.04	LST	2.68	88	S050659	☐	N18-051	Core		☐	☐	☐
306.32	309.37	3.05	LST	3.05	100	S050660	☐	N18-051	Core		☐	☐	☐
309.37	312.42	3.05	LST	2.65	87	S050661	☐	N18-054	core		☐	☐	☐
312.42	315.47	3.05	LST	3.05	100	S050662	☐	N18-054	core		☐	☐	☐
315.47	318.52	3.05	LST	3.05	100	S050663	☐	N18-054	core		☐	☐	☐
318.52	321.56	3.04	LST	3.03	100	S050664	☐	N18-054	core		☐	☐	☐
321.56	324.61	3.05	LST	3.05	100	S050665	☐	N18-054	core		☐	☐	☐
324.61	327.66	3.05	LST	2.92	96	S050666	☐	N18-054	core		☐	☐	☐
327.66	330.71	3.05	LST	2.85	93	S050667	☐	N18-054	core		☐	☐	☐
330.71	333.76	3.05	LST	2.76	90	S050668	☐	N18-054	core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
333.76	336.80	3.04	LST	3.04	100	S050669	☐	N18-054	core		☐	☐	☐
336.80	339.85	3.05	LST	2.91	95	S050670	☐	N18-054	core		☐	☐	☐
339.85	342.90	3.05	LST	3.00	98	S050671	☐	N18-054	core		☐	☐	☐
342.90	345.95	3.05	LST	3.05	100	S050672	☐	N18-054	core		☐	☐	☐
345.95	349.00	3.05	LST	3.00	98	S050674	☐	N18-054	core		☐	☐	☐
349.00	352.04	3.04	LST	3.02	99	S050675	☐	N18-054	core		☐	☐	☐
352.04	355.09	3.05	LST	3.00	98	S050676	☐	N18-054	core		☐	☐	☐
355.09	358.14	3.05	LST	3.02	99	S050677	☐	N18-054	core		☐	☐	☐
358.14	361.19	3.05	LST	3.05	100	S050678	☐	N18-054	core		☐	☐	☐
358.14	361.19	3.05	LST	3.05	100	S050679	☐	N18-054	core		☐	☑	☐
361.19	364.24	3.05	LST	2.63	86	S050680	☐	N18-054	core		☐	☐	☐
364.24	367.28	3.04	LST	2.84	93	S050681	☐	N18-054	core		☐	☐	☐
367.28	370.33	3.05	LST	3.05	100	S050682	☐	N18-054	core		☐	☐	☐
370.33	373.38	3.05	LST	3.05	100	S050683	☐	N18-054	core		☐	☐	☐
373.38	376.43	3.05	LST	2.90	95	S050685	☐	N18-054	core		☐	☐	☐
376.43	379.48	3.05	LST	3.05	100	S050686	☐	N18-054	core		☐	☐	☐
379.48	382.52	3.04	LST	3.00	99	S050687	☐	N18-054	core		☐	☐	☐
382.52	385.57	3.05	LST	3.05	100	S050688	☐	N18-054	core		☐	☐	☐
385.57	388.62	3.05	LST	3.05	100	S050689	☐	N18-054	core		☐	☐	☐
385.57	388.62	3.05	LST	3.05	100	S050690	☐	N18-054	core		☐	☐	☑
388.62	391.67	3.05	LST	3.05	100	S050691	☐	N18-054	core		☐	☐	☐
391.67	394.72	3.05	LST	3.00	98	S050692	☐	N18-054	core		☐	☐	☐
394.72	397.76	3.04	LST	3.04	100	S050693	☐	N18-054	core		☐	☐	☐
397.76	400.81	3.05	LST	3.05	100	S050694	☐	N18-054	core		☐	☐	☐
400.81	403.86	3.05	LST	3.05	100	S050695	☐	N18-054	core		☐	☐	☐
403.86	406.91	3.05	LST	3.05	100	S050696	☐	N18-054	core		☐	☐	☐
406.91	409.96	3.05	LST	2.97	97	S050698	☐	N18-054	core		☐	☐	☐
409.96	413.00	3.04	LST	3.04	100	S050699	☐	N18-054	core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
413.00	416.05	3.05	LST	3.05	100	S050700	☐	N18-054	core		☐	☐	☐
416.05	419.10	3.05	LST	3.00	98	S050701	☐	N18-055	core		☐	☐	☐
419.10	422.15	3.05	LST	2.99	98	S050702	☐	N18-055	core		☐	☐	☐
422.15	425.20	3.05	LST	3.00	98	S050703	☐	N18-055	core		☐	☐	☐
425.20	428.24	3.04	LST	3.04	100	S050704	☐	N18-055	core		☐	☐	☐
428.24	431.29	3.05	LST	3.05	100	S050705	☐	N18-055	core		☐	☐	☐
431.29	434.34	3.05	LST	2.96	97	S050706	☐	N18-055	core		☐	☐	☐
434.34	437.39	3.05	LST	3.05	100	S050707	☐	N18-055	core		☐	☐	☐
437.39	440.44	3.05	LST	3.05	100	S050708	☐	N18-055	core		☐	☐	☐
440.44	443.48	3.04	LST	2.95	97	S050709	☐	N18-055	core		☐	☐	☐
440.44	443.48	3.04	LST	2.95	97	S050710	☐	N18-055	core		☐	☐	☑
443.48	446.53	3.05	LST	3.05	100	S050711	☐	N18-055	core		☐	☐	☐
446.53	449.58	3.05	LST	3.05	100	S050712	☐	N18-055	core		☐	☐	☐
449.58	452.63	3.05	LST	3.05	100	S050713	☐	N18-055	core		☐	☐	☐
452.63	455.68	3.05	LST	3.05	100	S050714	☐	N18-055	core		☐	☐	☐
455.68	458.72	3.04	LST	2.86	94	S050715	☐	N18-055	core		☐	☐	☐
458.72	461.77	3.05	LST	3.00	98	S050716	☐	N18-055	core		☐	☐	☐
461.77	464.82	3.05	LST	3.05	100	S050717	☐	N18-055	core		☐	☐	☐
464.82	467.87	3.05	LST	2.84	93	S050718	☐	N18-055	core		☐	☐	☐
467.87	470.92	3.05	LST	3.05	100	S050720	☐	N18-055	core		☐	☐	☐
470.92	473.96	3.04	LST	3.04	100	S050721	☐	N18-055	core		☐	☐	☐
473.96	477.01	3.05	LST	3.00	98	S050722	☐	N18-055	core		☐	☐	☐
477.01	480.06	3.05	LST	3.05	100	S050723	☐	N18-055	core		☐	☐	☐
480.06	483.11	3.05	LST	2.97	97	S050724	☐	N18-055	core		☐	☐	☐
483.11	486.16	3.05	LST	3.05	100	S050725	☐	N18-055	core		☐	☐	☐
486.16	489.20	3.04	LST	2.93	96	S050727	☐	N18-055	core		☐	☐	☐
489.20	492.25	3.05	LST	3.05	100	S050728	☐	N18-055	core		☐	☐	☐
492.25	495.30	3.05	LST	2.94	96	S050729	☐	N18-055	core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
495.30	498.35	3.05	LST	2.97	97	S050730	☐	N18-055	core		☐	☐	☐
498.35	501.40	3.05	LST	3.04	100	S050731	☐	N18-055	core		☐	☐	☐
501.40	504.44	3.04	LST	3.04	100	S050732	☐	N18-055	core		☐	☐	☐
504.44	507.49	3.05	LST	3.04	100	S050734	☐	N18-055	core		☐	☐	☐
507.49	510.54	3.05	LST	3.02	99	S050735	☐	N18-055	core		☐	☐	☐
510.54	513.59	3.05	LST	2.95	97	S050736	☐	N18-055	core		☐	☐	☐
513.59	516.64	3.05	LST	2.99	98	S050737	☐	N18-055	core		☐	☐	☐

OS -18-277

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
0.00	9.21	9.21	OVB	--	No recovery from 0 to 1.95m. Overburden from 1.95 to 9.21m.							
						MD	BR	RB	OXI	4I	--	0
9.21	67.98	58.77	LST	FG	Locally oxidized, interbedded, greenish-grey, very fine grained non-calcareous (locally weakly calcareous) mudstone and dark grey, very fine grained calcareous mudstone (locally calcareous siltstone) with frequently interbedded medium-dark grey, fine to medium grained calc arenite consisting of localized beds with floating granule quartz clasts (quartz grit limestone). Trace interbeds of medium grey, coarse grained, clast supported, carbonate-lithic granule conglomerate and dark grey/greenish-grey matrix supported, soft sediment deformed mudstone pebble breccias. Conglomerate consists of subrounded, granule (locally pebble) sized clasts of light grey, fine grained limestone and greenish-grey, very fine grained mudstone clasts. Breccias consist of elongated, chaotically deformed mudstone clasts within dark grey/black limey mud matrix. Bedding throughout interval is planar, locally undulating and locally convoluted. Trace ~0.5-1cm thick calcite veining cross cuts bedding (locally parallel to bedding - weakly sheared?) at high angles. Strong oxidation is present along fracture surfaces throughout interval. Locally entire mudstone beds are moderately to strongly oxidized. Diagenetic (?) pyrite present as rounded blebs within conglmerates and as local fine grained bands (soft sed. Deformed?).							
						MD	GN	BX				
						MD	GY	SD			Py	0.5
						DK	GY	BD	OXI	3I	Py	0.05

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
67.98	108.81	40.83	DMT	CG	Locally oxidized/dolomitized, poorly sorted, matrix supported, lithic-carbonate bearing, polymictic diamictite with local, thick interbeds of dark grey/green-grey, very fine grained, laminated mudstone and medium grey, very fine grained, locally calcareous siltstone. Bedding is planar throughout the unit, locally destroyed by soft sediment deformation. Clasts within diamictite beds consist of blocky, fine grained limestone and irregular/deformed, laminated mudstones, hosted within dark grey, silty matrix. Unit is strongly dolomitized proximal to lower contact with underlaying dolostone beds. Oxidation occurs throughout unit along fracture surfaces at varying intensities. Oxidation is often associtaed with arsenic oxide stains. Trace realgar and orpiment are present along fractures and within calcite veins (just Realgar).							
						DK	GY	MA	OXI	1I	Py	1
						MD	GY	BD	DOL	2I	Re	0.05
						LT	GY	SD	ASO	1I	Om	0.02
								BX				
108.81	195.79	86.98	DST	FG	Locally brecciated, realgar bearing, thinly interbedded, light grey, fine grained dolostone and dark grey, very fine grained silty dolostone with local thick beds of massive, fine grained, variably cracked dolostone and clast supported, poorly to moderately sorted rudstones (with elongated clasts). Bedding displays abundant, soft sediment deformation at varying degrees is present throughout unit. Locally brecciation may be associated with soft sed. deformation. Unit is dolomite vein brecciated from 162 to 164.62m consists of angular, pyrite replaced clasts of dolostone and realgar brecciation from 175 to 176m. Realgar is also locally abundant along fracture surfaces (associated with trace orpiment and arsenic oxide). Locally rubbly zones are associated with minor realgar and localized black, gougey seams.							
								RB				
						DK	GY	BD	ASO	1I	Re	0.5
						MD	GY	BX			Re	0.05
						LT	GY	CR			Om	0.05
								SD			Py	1

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
195.79	370.94	175.15	LST	FG	Locally mineralized, most commonly light to medium grey, very fine to fine grained bedded limestone. Wavy and convoluted beds are common through interval. Traces of decalcification. Weak to moderate Calcite veining commonly cross cutting bedding though found in part running along bedding planes. Minor mm scale stylolites showing no clear orientation. Local sections of full replacment with massive realgar. Minor realgar mineralization common through formation.							
						MD	GY	SD			Om	0.2
								BX				
								FR				
						LT	GY	BD	OXI	2I	Re	1
370.94	386.18	15.24	MST	FG	Maroon to green-grey, very fine grained, laminated mudstone with local, thin beds (<1cm thick) of light-medium grey, fine grained siltstone. Bedding is consistant throughout unit as planar, parallel laminations oriented at 40-45 degrees tca. Weak quartz/dolomite veining throughout interval. Locally thin, dark grey, fine grained veinlets have small (<0.5cm) dark grey or greenish grey alteration halos. Calcite veining at upper contact with limestone beds are associated with abundant massive realgar (within vein). Veins near contact are irregularly shaped and chaotically cross cut bedding. Realgar bearing calcite veins are also present along the sharp contact with limestone bedding. Locally bedding is cross cut by very thin, undulating oxidized veinlets.							
						LT	GY					
						MD	RD	BD	SIL	1I	Re	0.5
						LT	GN					

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
0.00	1.95	1.95	0	0	0.00	0	--	--	--	TOH - No reovery.
1.95	2.13	0.18	0.12	67	0.00	0	3R	3H	4W	
2.13	5.18	3.05	0.39	13	0.00	0	2R	3H	4W	
5.18	8.23	3.05	0.79	26	0.00	0	3R	2H	5W	
8.23	11.28	3.05	1.89	62	0.00	0	2R	2H	5W	
11.28	14.33	3.05	2.32	76	0.00	0	3R	2H	5W	
14.33	17.37	3.04	2.49	82	0.47	15	2R	3H	4W	
17.37	20.42	3.05	2.53	83	0.82	27	2R	3H	3W	
20.42	23.47	3.05	1.78	58	0.00	0	2R	2H	4W	
23.47	26.52	3.05	2.96	97	2.04	67	3R	3H	3W	More competent and less oxidized.
26.52	29.57	3.05	3.05	100	1.77	58	3R	3H	1W	
29.57	32.61	3.04	2.88	95	2.09	69	2R	3H	1W	
32.61	35.66	3.05	2.92	96	2.61	86	0R	3H	1W	
35.66	38.71	3.05	2.98	98	2.36	77	2R	3H	1W	
38.71	41.76	3.05	2.94	96	1.63	53	3R	3H	1W	Multiple single joints.
41.76	44.81	3.05	2.91	95	1.88	62	3R	3H	1W	
44.81	47.85	3.04	2.72	89	1.11	37	3R	3H	1W	
47.85	50.90	3.05	2.92	96	1.69	55	2R	4H	1W	
50.90	53.95	3.05	2.88	94	1.56	51	1R	3H	1W	
53.95	57.00	3.05	2.82	92	2.60	85	0R	3H	1W	
57.00	60.05	3.05	2.73	90	1.62	53	1R	3H	1W	Multiple single joints.
60.05	63.09	3.04	3	99	2.45	81	0R	3H	1W	
63.09	66.14	3.05	2.88	94	2.18	71	0R	3H	1W	
66.14	69.19	3.05	3.04	100	2.35	77	1R	3H	1W	Small rubble zone at 67.80-68.00m. Multiple single joints.
69.19	72.24	3.05	3.05	100	2.69	88	1R	3H	1W	
72.24	75.29	3.05	3.01	99	2.26	74	1R	3H	1W	Fe and As oxidation on fracture and joint surfaces.
75.29	78.33	3.04	3	99	2.85	94	1R	4H	1W	
78.33	81.38	3.05	3.05	100	2.18	71	2R	4H	1W	Multiple single joints.

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
81.38	84.43	3.05	2.9	95	1.94	64	2R	3H	1W	
84.43	87.48	3.05	2.89	95	1.75	57	2R	3H	1W	
87.48	90.53	3.05	2.96	97	1.92	63	0R	4H	1W	
90.53	93.57	3.04	2.99	98	2.53	83	1R	4H	1W	
93.57	96.62	3.05	3.05	100	2.70	89	1R	3H	1W	
96.62	99.67	3.05	3.01	99	2.89	95	1R	3H	1W	
99.67	102.72	3.05	3.03	99	2.82	92	2R	4H	1W	
102.72	105.77	3.05	3.02	99	1.89	62	0R	4H	1W	Multiple single joints.
105.77	108.81	3.04	2.8	92	2.02	66	0R	4H	1W	
108.81	111.86	3.05	2.37	78	0.76	25	0R	2H	1W	Highly fractured with small rubble zone.
111.86	114.91	3.05	2.89	95	1.76	58	0R	3H	1W	
114.91	117.96	3.05	2.95	97	1.30	43	0R	2H	1W	
117.96	121.01	3.05	2.94	96	1.11	36	0R	4H	1W	Strong Re/Om on fracture and joint surfaces.
121.01	124.05	3.04	2.69	88	0.70	23	0R	3H	1W	
124.05	127.10	3.05	2.4	79	0.48	16	0R	2H	1W	
127.10	130.15	3.05	2.83	93	0.70	23	0R	2H	1W	
130.15	133.20	3.05	2.78	91	1.55	51	0R	4H	1W	Multiple single joints.
133.20	136.25	3.05	2.91	95	2.40	79	1R	4H	1W	
136.25	139.29	3.04	2.76	91	1.18	39	0R	4H	1W	
139.29	142.34	3.05	2.92	96	1.19	39	1R	4H	1W	
142.34	145.39	3.05	3.03	99	2.60	85	1R	4H	1W	
145.39	148.44	3.05	2.96	97	2.28	75	0R	4H	1W	
148.44	151.49	3.05	2.99	98	2.38	78	1R	4H	1W	
151.49	154.53	3.04	2.79	92	1.96	64	0R	4H	1W	Multiple single joints.
154.53	157.58	3.05	2.78	91	1.51	50	0R	4H	1W	Multiple single joints.
157.58	160.63	3.05	2.43	80	0.63	21	0R	3H	1W	Rubbly and highly fractured zone.
160.63	163.68	3.05	2.79	91	1.29	42	1R	3H	1W	Multiple single joints.
163.68	166.73	3.05	2.48	81	1.51	50	1R	4H	1W	Two small rubble/highly fractured zones in this interval.
166.73	169.77	3.04	2.94	97	2.21	73	0R	4H	1W	
169.77	172.82	3.05	3.05	100	2.61	86	0R	3H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
172.82	175.87	3.05	2.98	98	2.31	76	0R	3H	1W	
175.87	178.92	3.05	2.97	97	1.91	63	0R	4H	1W	
178.92	181.97	3.05	3	98	1.62	53	0R	3H	1W	Two small rubble zones.
181.97	185.01	3.04	2.02	66	0.43	14	0R	2H	1W	Very fractured and rubbly.
185.01	188.06	3.05	2.47	81	0.27	9	0R	2H	1W	Highly fractured, rubbly and locally observed gouge.
188.06	191.11	3.05	2.73	90	1.17	38	0R	3H	1W	Multiple single joints.
191.11	194.16	3.05	2.82	92	1.32	43	0R	4H	1W	
194.16	197.21	3.05	2.94	96	2.13	70	2R	3H	1W	
197.21	200.25	3.04	2.78	91	2.15	71	3R	3H	1W	
200.25	203.30	3.05	2.81	92	2.44	80	3R	4H	1W	
203.30	206.35	3.05	2.85	93	2.19	72	4R	4H	1W	
206.35	209.40	3.05	2.97	97	2.63	86	4R	4H	1W	
209.40	212.45	3.05	2.87	94	2.87	94	3R	4H	1W	
212.45	215.49	3.04	3.02	99	2.73	90	4R	4H	1W	
215.49	218.54	3.05	3.03	99	2.28	75	4R	4H	1W	
218.54	221.59	3.05	2.99	98	2.72	89	4R	4H	1W	
221.59	224.64	3.05	3.05	100	2.88	94	4R	4H	1W	
224.64	227.69	3.05	2.01	66	1.76	58	4R	2H	1W	10cm RBZ. Drillers wrote "hit a void and core was washed away"
227.69	230.73	3.04	2.98	98	2.43	80	4R	4H	1W	
230.73	233.78	3.05	3.05	100	2.86	94	4R	4H	1W	
233.78	236.83	3.05	3.01	99	2.62	86	4R	4H	1W	
236.83	239.88	3.05	3.01	99	2.54	83	4R	4H	1W	
239.88	242.93	3.05	2.87	94	1.65	54	4R	4H	1W	
242.93	245.97	3.04	3.04	100	2.44	80	4R	4H	1W	20cm RBZ
245.97	249.02	3.05	2.97	97	1.88	62	4R	4H	1W	30cm and 10cm RBZ
249.02	252.07	3.05	2.79	91	2.30	75	4R	4H	1W	
252.07	255.12	3.05	2.77	91	1.84	60	4R	4H	1W	50cm blocky RBZ
255.12	258.17	3.05	2.84	93	2.12	70	3R	2H	1W	2 x ~20cm mineralized RBZ
258.17	261.21	3.04	3.04	100	2.46	81	4R	4H	1W	
261.21	264.26	3.05	3.02	99	2.57	84	4R	4H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
264.26	267.31	3.05	2.73	90	2.39	78	4R	4H	1W	
267.31	270.36	3.05	3.05	100	2.57	84	4R	4H	1W	
270.36	273.41	3.05	2.73	90	1.81	59	4R	4H	1W	
273.41	276.45	3.04	3.04	100	2.57	85	4R	4H	1W	
276.45	279.50	3.05	2.99	98	2.50	82	4R	4H	1W	
279.50	282.55	3.05	3.05	100	2.90	95	4R	4H	1W	
282.55	285.60	3.05	2.93	96	2.35	77	4R	4H	1W	
285.60	288.65	3.05	3.01	99	1.80	59	3R	4H	1W	
288.65	291.69	3.04	2.79	92	2.25	74	2R	4H	1W	
291.69	294.74	3.05	2.94	96	1.94	64	3R	4H	1W	
294.74	297.79	3.05	2.95	97	2.53	83	2R	4H	1W	
297.79	300.84	3.05	3.05	100	2.30	75	2R	4H	1W	
300.84	303.89	3.05	3.05	100	2.23	73	3R	4H	1W	
303.89	306.93	3.04	3.04	100	2.00	66	4R	4H	1W	
306.93	309.98	3.05	3	98	2.39	78	4R	4H	1W	
309.98	313.03	3.05	3.03	99	1.93	63	3R	4H	1W	
313.03	316.08	3.05	2.86	94	2.00	66	2R	4H	1W	
316.08	319.13	3.05	3.05	100	2.39	78	4R	4H	1W	
319.13	322.17	3.04	2.95	97	2.59	85	2R	4H	1W	
322.17	325.22	3.05	3.05	100	2.72	89	4R	4H	1W	
325.22	328.27	3.05	3.05	100	2.46	81	4R	4H	1W	
328.27	331.32	3.05	2.93	96	1.67	55	4R	3H	1W	
331.32	334.37	3.05	3.03	99	2.55	84	4R	4H	1W	
334.37	337.41	3.04	2.89	95	1.82	60	4R	3H	1W	
337.41	340.46	3.05	2.93	96	2.89	95	3R	3H	1W	
340.46	343.51	3.05	3.05	100	3.05	100	4R	4H	1W	
343.51	346.56	3.05	3	98	3.00	98	4R	4H	1W	
346.56	349.61	3.05	2.95	97	2.91	95	4R	4H	1W	
349.61	352.65	3.04	2.54	84	2.17	71	4R	2H	1W	
352.65	355.70	3.05	2.29	75	2.00	66	4R	2H	1W	
355.70	358.75	3.05	3.05	100	3.00	98	4R	4H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
358.75	361.80	3.05	2.97	97	2.95	97	4R	4H	1W	
361.80	364.85	3.05	3.05	100	2.98	98	3R	4H	1W	
364.85	367.89	3.04	3.04	100	3.04	100	4R	4H	1W	
367.89	370.94	3.05	2.94	96	2.78	91	4R	4H	1W	
370.94	373.99	3.05	3.03	99	2.70	89	0R	2H	1W	Lots of bedding parallel breaks.
373.99	377.04	3.05	3.05	100	2.97	97	0R	3H	1W	
377.04	380.09	3.05	3.02	99	3.00	98	0R	3H	1W	
380.09	383.13	3.04	3.02	99	3.00	99	0R	3H	1W	
383.13	386.18	3.05	2.82	92	2.75	90	0R	3H	1W	

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From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
0.00	0.00	0.00	-QC-	0.00	0	S049326	☐	N18-059	Core	CS2	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S049358	☐	N18-061	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S049220	☐	N18-056	Core	CS10	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S049338	☐	N18-061	Core	CS3	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S049314	☐	N18-059	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S049304	☐	N18-059	Core	CS10	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S049285	☐	N18-058	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S049281	☐	N18-058	Core	CS10	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S049260	☐	N18-058	Core	CS11	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S049248	☐	N18-056	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S049245	☐	N18-056	Core	CS9	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S049352	☐	N18-061	Core	CS6	☐	☐	☐
1.95	5.18	3.23	OVB	0.51	16	S049214	☐	N18-056	Core		☐	☐	☐
5.18	8.23	3.05	OVB	0.79	26	S049215	☐	N18-056	Core		☐	☐	☐
8.23	11.28	3.05	OVB	1.89	62	S049216	☐	N18-056	Core		☐	☐	☐
11.28	14.33	3.05	LST	2.32	76	S049217	☐	N18-056	Core		☐	☐	☐
14.33	17.37	3.04	LST	2.49	82	S049218	☐	N18-056	Core		☐	☐	☐
17.37	20.42	3.05	LST	2.53	83	S049219	☐	N18-056	Core		☐	☐	☐
20.42	23.47	3.05	LST	1.78	58	S049221	☐	N18-056	Core		☐	☐	☐
23.47	26.52	3.05	LST	2.96	97	S049222	☐	N18-056	Core		☐	☐	☐
26.52	29.57	3.05	LST	3.05	100	S049223	☐	N18-056	Core		☐	☐	☐
29.57	32.61	3.04	LST	2.88	95	S049224	☐	N18-056	Core		☐	☐	☐
29.57	32.61	3.04	LST	2.88	95	S049225	☐	N18-056	Core		☐	☐	☑
32.61	35.66	3.05	LST	2.92	96	S049226	☐	N18-056	Core		☐	☐	☐
35.66	38.71	3.05	LST	2.98	98	S049227	☐	N18-056	Core		☐	☐	☐
38.71	41.76	3.05	LST	2.94	96	S049228	☐	N18-056	Core		☐	☐	☐
41.76	44.81	3.05	LST	2.91	95	S049229	☐	N18-056	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
44.81	47.85	3.04	LST	2.72	89	S049230	☐	N18-056	Core		☐	☐	☐
47.85	50.90	3.05	LST	2.92	96	S049231	☐	N18-056	Core		☐	☐	☐
50.90	52.82	1.92	LST	1.92	100	S049232	☐	N18-056	Core		☐	☐	☐
52.82	54.95	2.13	LST	2.05	96	S049233	☐	N18-056	Core		☐	☐	☐
54.95	57.00	2.05	LST	1.89	92	S049234	☐	N18-056	Core		☐	☐	☐
57.00	60.05	3.05	LST	2.73	90	S049235	☐	N18-056	Core		☐	☐	☐
60.05	63.09	3.04	LST	3.00	99	S049236	☐	N18-056	Core		☐	☐	☐
63.09	66.14	3.05	LST	2.88	94	S049237	☐	N18-056	Core		☐	☐	☐
66.14	69.19	3.05	LST	3.04	100	S049238	☐	N18-056	Core		☐	☐	☐
66.14	69.19	3.05	LST	3.04	100	S049239	☐	N18-056	Core		☐	☑	☐
69.19	72.24	3.05	DMT	3.05	100	S049240	☐	N18-056	Core		☐	☐	☐
72.24	75.29	3.05	DMT	3.01	99	S049241	☐	N18-056	Core		☐	☐	☐
75.29	78.33	3.04	DMT	3.00	99	S049242	☐	N18-056	Core		☐	☐	☐
78.33	81.38	3.05	DMT	3.05	100	S049243	☐	N18-056	Core		☐	☐	☐
81.38	84.43	3.05	DMT	2.90	95	S049244	☐	N18-056	Core		☐	☐	☐
84.43	87.48	3.05	DMT	2.89	95	S049246	☐	N18-056	Core		☐	☐	☐
87.48	90.53	3.05	DMT	2.96	97	S049247	☐	N18-056	Core		☐	☐	☐
90.53	93.57	3.04	DMT	2.99	98	S049249	☐	N18-056	Core		☐	☐	☐
93.57	96.62	3.05	DMT	3.05	100	S049250	☐	N18-056	Core		☐	☐	☐
96.62	99.67	3.05	DMT	3.01	99	S049251	☐	N18-058	Core		☐	☐	☐
99.67	102.72	3.05	DMT	3.03	99	S049252	☐	N18-058	Core		☐	☐	☐
102.72	105.77	3.05	DMT	3.02	99	S049253	☐	N18-058	Core		☐	☐	☐
105.77	108.81	3.04	DMT	2.80	92	S049254	☐	N18-058	Core		☐	☐	☐
108.81	111.86	3.05	DST, DMT	2.37	78	S049255	☐	N18-058	Core		☐	☐	☐
108.81	111.86	3.05	DST, DMT	2.37	78	S049256	☐	N18-058	Core		☐	☑	☐
111.86	114.91	3.05	DST	2.89	95	S049257	☐	N18-058	Core		☐	☐	☐
114.91	117.96	3.05	DST	2.95	97	S049258	☐	N18-058	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
117.96	121.01	3.05	DST	2.94	96	S049259	☐	N18-058	Core		☐	☐	☐
121.01	124.05	3.04	DST	2.69	88	S049261	☐	N18-058	Core		☐	☐	☐
124.05	127.10	3.05	DST	2.40	79	S049262	☐	N18-058	Core		☐	☐	☐
127.10	130.15	3.05	DST	2.83	93	S049263	☐	N18-058	Core		☐	☐	☐
130.15	133.20	3.05	DST	2.78	91	S049264	☐	N18-058	Core		☐	☐	☐
133.20	136.25	3.05	DST	2.91	95	S049265	☐	N18-058	Core		☐	☐	☐
136.25	139.29	3.04	DST	2.76	91	S049266	☐	N18-058	Core		☐	☐	☐
139.29	142.34	3.05	DST	2.92	96	S049267	☐	N18-058	Core		☐	☐	☐
142.34	145.39	3.05	DST	3.03	99	S049268	☐	N18-058	Core		☐	☐	☐
145.39	148.44	3.05	DST	2.96	97	S049269	☐	N18-058	Core		☐	☐	☐
148.44	151.49	3.05	DST	2.99	98	S049270	☐	N18-058	Core		☐	☐	☐
151.49	154.53	3.04	DST	2.79	92	S049271	☐	N18-058	Core		☐	☐	☐
154.53	157.58	3.05	DST	2.78	91	S049272	☐	N18-058	Core		☐	☐	☐
157.58	159.38	1.80	DST	1.68	93	S049273	☐	N18-058	Core		☐	☐	☐
159.38	161.89	2.51	DST	2.00	80	S049274	☐	N18-058	Core		☐	☐	☐
161.89	164.92	3.03	DST	2.62	86	S049275	☐	N18-058	Core		☐	☐	☐
161.89	164.92	3.03	DST	2.62	86	S049276	☐	N18-058	Core		☐	☐	☑
164.92	167.42	2.50	DST	2.17	87	S049277	☐	N18-058	Core		☐	☐	☐
167.42	170.34	2.92	DST	2.86	98	S049278	☐	N18-058	Core		☐	☐	☐
170.34	173.26	2.92	DST	2.91	100	S049279	☐	N18-058	Core		☐	☐	☐
173.26	176.21	2.95	DST	2.94	100	S049280	☐	N18-058	Core		☐	☐	☐
176.21	179.21	3.00	DST	3.00	100	S049282	☐	N18-058	Core		☐	☐	☐
179.21	182.25	3.04	DST	2.93	96	S049283	☐	N18-058	Core		☐	☐	☐
182.25	185.20	2.95	DST	1.82	62	S049284	☐	N18-058	Core		☐	☐	☐
185.20	188.19	2.99	DST	2.55	85	S049286	☐	N18-058	Core		☐	☐	☐
188.19	191.11	2.92	DST	2.77	95	S049287	☐	N18-058	Core		☐	☐	☐
191.11	194.16	3.05	DST	2.82	92	S049288	☐	N18-058	Core		☐	☐	☐
194.16	195.79	1.63	DST	1.51	93	S049289	☐	N18-058	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
195.79	198.10	2.31	LST, DST	2.31	100	S049290	☐	N18-058	Core		☐	☐	☐
198.10	200.25	2.15	LST	1.92	89	S049291	☐	N18-059	Core		☐	☐	☐
200.25	203.30	3.05	LST	2.81	92	S049292	☐	N18-059	Core		☐	☐	☐
203.30	206.35	3.05	LST	2.85	93	S049293	☐	N18-059	Core		☐	☐	☐
206.35	209.40	3.05	LST	2.97	97	S049294	☐	N18-059	Core		☐	☐	☐
209.40	212.45	3.05	LST	2.87	94	S049295	☐	N18-059	Core		☐	☐	☐
212.45	215.49	3.04	LST	3.02	99	S049296	☐	N18-059	Core		☐	☐	☐
215.49	218.54	3.05	LST	3.03	99	S049297	☐	N18-059	Core		☐	☐	☐
218.54	221.59	3.05	LST	2.99	98	S049298	☐	N18-059	Core		☐	☐	☐
221.59	224.64	3.05	LST	3.05	100	S049299	☐	N18-059	Core		☐	☐	☐
224.64	227.69	3.05	LST	2.01	66	S049300	☐	N18-059	Core		☐	☐	☐
224.64	227.69	3.05	LST	2.01	66	S049301	☐	N18-059	Core		☐	☐	☑
227.69	230.73	3.04	LST	2.98	98	S049302	☐	N18-059	Core		☐	☐	☐
230.73	233.78	3.05	LST	3.05	100	S049303	☐	N18-059	Core		☐	☐	☐
233.78	236.83	3.05	LST	3.01	99	S049305	☐	N18-059	Core		☐	☐	☐
236.83	239.88	3.05	LST	3.01	99	S049306	☐	N18-059	Core		☐	☐	☐
239.88	242.93	3.05	LST	2.87	94	S049307	☐	N18-059	Core		☐	☐	☐
242.93	245.97	3.04	LST	3.04	100	S049308	☐	N18-059	Core		☐	☐	☐
245.97	249.02	3.05	LST	2.97	97	S049309	☐	N18-059	Core		☐	☐	☐
249.02	251.60	2.58	LST	2.28	88	S049310	☐	N18-059	Core		☐	☐	☐
251.60	253.62	2.02	LST	1.89	94	S049311	☐	N18-059	Core		☐	☐	☐
253.62	255.74	2.12	LST	2.11	100	S049312	☐	N18-059	Core		☐	☐	☐
255.74	256.90	1.16	LST	1.16	100	S049313	☐	N18-059	Core		☐	☐	☐
256.90	258.17	1.27	LST	1.27	100	S049315	☐	N18-059	Core		☐	☐	☐
258.17	261.21	3.04	LST	3.04	100	S049316	☐	N18-059	Core		☐	☐	☐
261.21	264.26	3.05	LST	3.02	99	S049318	☐	N18-059	Core		☐	☐	☐
261.21	264.26	3.05	LST	3.02	99	S049317	☐	N18-059	Core		☐	☑	☐
264.26	267.31	3.05	LST	2.73	90	S049319	☐	N18-059	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
267.31	270.36	3.05	LST	3.05	100	S049320	☐	N18-059	Core		☐	☐	☐
270.36	273.41	3.05	LST	2.73	90	S049321	☐	N18-059	Core		☐	☐	☐
273.41	276.45	3.04	LST	3.04	100	S049322	☐	N18-059	Core		☐	☐	☐
276.45	279.50	3.05	LST	2.99	98	S049323	☐	N18-059	Core		☐	☐	☐
279.50	282.55	3.05	LST	3.05	100	S049324	☐	N18-059	Core		☐	☐	☐
282.55	285.60	3.05	LST	2.93	96	S049325	☐	N18-059	Core		☐	☐	☐
285.60	288.65	3.05	LST	3.01	99	S049327	☐	N18-059	Core		☐	☐	☐
288.65	291.69	3.04	LST	2.79	92	S049328	☐	N18-059	Core		☐	☐	☐
291.69	294.74	3.05	LST	2.94	96	S049329	☐	N18-059	Core		☐	☐	☐
294.74	297.79	3.05	LST	2.95	97	S049330	☐	N18-059	Core		☐	☐	☐
297.79	300.84	3.05	LST	3.05	100	S049331	☐	N18-061	Core		☐	☐	☐
300.84	303.89	3.05	LST	3.05	100	S049332	☐	N18-061	Core		☐	☐	☐
303.89	306.93	3.04	LST	3.04	100	S049333	☐	N18-061	Core		☐	☐	☐
306.93	309.98	3.05	LST	3.00	98	S049334	☐	N18-061	Core		☐	☐	☐
309.98	313.03	3.05	LST	3.03	99	S049335	☐	N18-061	Core		☐	☐	☐
313.03	316.08	3.05	LST	2.86	94	S049336	☐	N18-061	Core		☐	☐	☐
316.08	319.13	3.05	LST	3.05	100	S049337	☐	N18-061	Core		☐	☐	☐
319.13	322.17	3.04	LST	2.95	97	S049339	☐	N18-061	Core		☐	☐	☐
322.17	325.22	3.05	LST	3.05	100	S049340	☐	N18-061	Core		☐	☐	☐
325.22	328.27	3.05	LST	3.05	100	S049341	☐	N18-061	Core		☐	☐	☐
328.27	331.32	3.05	LST	2.93	96	S049342	☐	N18-061	Core		☐	☐	☐
331.32	334.37	3.05	LST	3.03	99	S049343	☐	N18-061	Core		☐	☐	☐
334.37	337.41	3.04	LST	2.89	95	S049344	☐	N18-061	Core		☐	☐	☐
334.37	337.41	3.04	LST	2.89	95	S049345	☐	N18-061	Core		☐	☑	☐
337.41	340.46	3.05	LST	2.93	96	S049346	☐	N18-061	Core		☐	☐	☐
340.46	343.51	3.05	LST	3.05	100	S049347	☐	N18-061	Core		☐	☐	☐
343.51	346.56	3.05	LST	3.00	98	S049348	☐	N18-061	Core		☐	☐	☐
346.56	349.61	3.05	LST	2.95	97	S049349	☐	N18-061	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
349.61	352.65	3.04	LST	2.54	84	S049350	☐	N18-061	Core		☐	☐	☐
352.65	355.70	3.05	LST	2.29	75	S049351	☐	N18-061	Core		☐	☐	☐
355.70	358.75	3.05	LST	3.05	100	S049353	☐	N18-061	Core		☐	☐	☐
358.75	361.80	3.05	LST	2.97	97	S049354	☐	N18-061	Core		☐	☐	☐
361.80	364.85	3.05	LST	3.05	100	S049355	☐	N18-061	Core		☐	☐	☐
364.85	367.89	3.04	LST	3.04	100	S049356	☐	N18-061	Core		☐	☐	☐
367.89	370.94	3.05	LST	2.94	96	S049357	☐	N18-061	Core		☐	☐	☐
370.94	373.99	3.05	MST, LST	3.03	99	S049359	☐	N18-061	Core		☐	☐	☐
373.99	377.04	3.05	MST	3.05	100	S049360	☐	N18-061	Core		☐	☐	☐
377.04	380.09	3.05	MST	3.02	99	S049361	☐	N18-061	Core		☐	☐	☐
380.09	383.13	3.04	MST	3.02	99	S049362	☐	N18-061	Core		☐	☐	☐
383.13	386.18	3.05	MST	2.82	92	S049363	☐	N18-061	Core		☐	☐	☐

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From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
0.00	6.10	6.10	-?-	--	No recovery from 0.00-5.87m. Overburden from 5.87-6.10m. Overburden is mostly made up of pebbles and angular rock fragments which are likely derived from the underlying lithology - Nadaleen Fault rock. Moderately oxidized.							
						MD	GY	SH	OXI	3I	--	0

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
6.10	264.19	258.09	FLR	FG	C-NFZ in this drill hole mainly intersects two lithologies: The dominant lithology is a light and medium grey, sheared, weakly veined, intermittently gougy mudstone. Both, bedding and veins in this interval are moderate-strongly sheared. Mudstone units vary widely - from 2-100 meters in thickness. A second lithology observed is a silt/sand matrix supported, sub-rounded, quartz granule-pebble conglomerate with laminated mud rip up clasts. The conglomerate has been interpreted as a debris flow. Conglomerate varies from 2-20m in thickness. There are 3 significant mineralization intersects in the C-NFZ in this drill hole: 172.90-182.20m. Light and medium grey, sheared, Re-Au mineralized, intermittently gougy, moderately veined, conglomerate interbedded with mudstone. Trace (2%) realgar mineralization is observed within quartz dolomite veinlets, fracture surfaces, and infilling healed fractures. pXRF indicates Au mineralization throughout interval - mineralization is strongest in gougy mudstone. 210.79-214.07m. Medium gray, laminated, soft sediment deformed, mineralized, weakly veined, sheared, pyritic, mudstone. From 210.79-213.00m - Trace (2%) Re-mineralization, observed coating fracture surfaces and within quartz and dolomite veinlets. pXRF indicates Au values varying from 10-30ppm. From 213.00-214.07m - Moderate (10%) Re-mineralization, observed coating fracture surfaces, infilling healed fractures, fully replacing pre-existing veins, and moderately replacing host rock. pXRF indicates Au values varying from 64-210ppm. Mineralization is strongest from 213.67-214.07m where crackle breccia texture is observed with realgar infilling fractures. Moderate silicification. Dark grey, fine grained sooty sulphides on joint							

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
6.10	264.19	258.09			surfaces. 214.07 - 219.55 Dark grey, Re-Au mineralized, laminated, pyritic, sheared, gougy, brecciated mudstone. Trace (1%) realgar observed within quartz veins (disseminated) and infilling healed fractures, where realgar is crystaline. pXRF indicates consistent Au values throughout interval varying from 20-60ppm.							
								SD			Py	0.5
								DB			Re	0.3
						MD	GY	BX			Py	0.5
						DK	GY	SH	---	--	Py	0.5
264.19	314.47	50.28	SLC	MG	C-SLC in this drill hole intersects 3 lithologies. 264.19 - 277.86m - Medium grey, matrix supported, massive, sub-rounded, trace veined, moderately sorted quartz granule conglomerate with mud rip up clasts. 277.86 - 312.35m - Light and medium grey, weakly veined, soft sediment deformed, alternating beds of siltstone and sandstone with trace mudstone laminations. And lastly, a mineralized interval from 312.35 to 314.47m: Light and medium grey, bedded, soft sediment deformed, Re-Au-mineralized, altered, moderately veined, intermittently gougy siliciclastics. Rock is composed of rhymically bedded sandstone and siltstone from 312.35 to 313.50m. Starting at 313.50m, rock changes from an interbedded siltstone/sandstone to a black mustone with siltstone laminations. Trace (2%) realgar observed lower in the interval (314.00-314.47m). Realgar observed replacing qtz/dol/cal veins, coating fracture surfaces, and infilling healed fractures. pXRF indicates Au values from 10-18ppm. Au values increase with depth.							
								SD			Re	0.2
								PB			Py	0.5
						LT	GY	DB			Py	0.5

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
						MD	GY	BD	---	--	Py	0.5
314.47	391.36	76.89	LST	MG	C-LST 1 in this drill hole is mainly composed of a light grey, medium grained, moderately calcite veined, soft sediment deformed limestone with beds of calcareous mudstone and and black mudstone. Significant Re-Au mineralization from 314.47-319.41m: Light grey, black and orange, Re-Au mineralized, altered, decalcified, silicified, porous, intermittently brecciated, moderately veined limestone. Interval is least altered from 314.47-316.10m, where primary structures can be observed. Limestone is light grey, fine grained with trace, silty laminations. Realgar in this section is trace (2%) and mainly found within calcite veins and infilling healed fractures. Some decalcification observed. From 316.10 to 319.41m rock is mostly black and orange. Realgar is abundant (25%) and commonly seen replacing calcite veins, as infill, replacing host rock, and forming euhedral crystal on fracture surfaces. Rock is strongly silicified and decalcified - No reaction or weak reaction to HCl. Rock is commonly porous - likely due to decalcification.							
						MD	GY	BD				
						LT	GY	SD	---	--	Re	0.5

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From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
0.00	5.87	5.87	0	0	0.00	0	--	--	--	No Recovery
5.87	6.10	0.23	0.2	87	0.00	0	0R	2H	4W	Overburden
6.10	9.14	3.04	1.8	59	0.00	0	0R	2H	3W	rbz from 6.10-7.62
9.14	12.19	3.05	2.44	80	0.11	4	0R	2H	2W	
12.19	15.24	3.05	2.12	70	0.12	4	0R	2H	1W	
15.24	18.29	3.05	1.91	63	0.00	0	0R	2H	1W	
18.29	21.34	3.05	2.55	84	0.42	14	0R	2H	1W	
21.34	22.86	1.52	1.42	93	0.84	55	0R	3H	1W	
22.86	25.91	3.05	3	98	1.25	41	0R	3H	1W	
25.91	28.96	3.05	2.9	95	1.91	63	0R	3H	1W	multiple single joints
28.96	32.00	3.04	2.99	98	1.73	57	0R	3H	1W	multiple single joints
32.00	35.05	3.05	2.85	93	0.99	32	0R	2H	1W	rbz
35.05	38.10	3.05	2.98	98	2.39	78	0R	3H	1W	
38.10	41.15	3.05	2.65	87	2.44	80	0R	3H	1W	
41.15	44.20	3.05	3.01	99	2.12	70	0R	3H	1W	
44.20	47.24	3.04	2.93	96	1.95	64	0R	3H	1W	multiple single joints
47.24	50.29	3.05	2.9	95	2.22	73	0R	3H	1W	
50.29	53.34	3.05	2.7	89	2.23	73	0R	3H	1W	
53.34	56.39	3.05	2.49	82	1.71	56	0R	3H	1W	
56.39	59.44	3.05	2.79	91	2.14	70	0R	2H	1W	gougy RBZ from 58.72-59.44m
59.44	62.48	3.04	2.7	89	1.82	60	0R	2H	1W	
62.48	65.53	3.05	3.04	100	1.87	61	0R	2H	1W	gougy, RBZ from 63.80-64.55m
65.53	68.58	3.05	3.02	99	2.43	80	0R	3H	1W	
68.58	71.63	3.05	3.02	99	2.81	92	0R	3H	1W	
71.63	74.68	3.05	2.9	95	2.34	77	0R	3H	1W	
74.68	77.72	3.04	3.04	100	1.26	41	0R	2H	1W	rbz
77.72	80.77	3.05	2.92	96	1.89	62	0R	2H	1W	
80.77	83.82	3.05	3.04	100	2.71	89	0R	3H	1W	
83.82	86.87	3.05	2.75	90	1.96	64	0R	3H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
86.87	89.92	3.05	3.02	99	2.36	77	0R	2H	1W	
89.92	92.96	3.04	2.98	98	2.05	67	0R	2H	1W	gougy zone from 91.78-91.87m and RBZ from 92.12-92.53m.
92.96	96.01	3.05	3.04	100	1.81	59	0R	3H	1W	
96.01	99.06	3.05	2.94	96	2.59	85	0R	3H	1W	multiple single joints
99.06	102.11	3.05	2.93	96	2.83	93	0R	3H	1W	
102.11	105.16	3.05	2.8	92	2.37	78	0R	3H	1W	
105.16	108.20	3.04	3.02	99	3.00	99	0R	3H	1W	
108.20	111.25	3.05	3.01	99	2.95	97	0R	3H	1W	
111.25	114.30	3.05	3.04	100	3.00	98	0R	3H	1W	
114.30	117.35	3.05	2.89	95	2.49	82	0R	3H	1W	
117.35	120.40	3.05	2.97	97	2.50	82	0R	3H	1W	multiple single joints
120.40	123.44	3.04	2.92	96	2.78	91	0R	3H	1W	
123.44	126.49	3.05	3.05	100	2.90	95	0R	4H	1W	
126.49	129.54	3.05	3.02	99	2.91	95	0R	4H	1W	
129.54	132.59	3.05	2.92	96	2.45	80	0R	4H	1W	multiple single joints
132.59	135.64	3.05	2.97	97	2.72	89	0R	4H	1W	
135.64	138.68	3.04	2.9	95	1.94	64	0R	3H	1W	rbz from 137.29-137.73m
138.68	141.73	3.05	3.04	100	2.76	90	0R	3H	1W	multiple single joints
141.73	144.78	3.05	3.04	100	2.98	98	0R	3H	1W	
144.78	147.83	3.05	3.05	100	3.05	100	0R	4H	1W	
147.83	150.88	3.05	3.02	99	2.82	92	0R	4H	1W	
150.88	153.92	3.04	2.9	95	2.73	90	0R	4H	1W	
153.92	156.97	3.05	3	98	3.00	98	0R	4H	1W	
156.97	160.02	3.05	3.01	99	2.61	86	0R	4H	1W	
160.02	163.07	3.05	2.98	98	2.85	93	0R	4H	1W	
163.07	166.12	3.05	3.05	100	2.93	96	0R	4H	1W	
166.12	169.16	3.04	2.73	90	2.04	67	0R	4H	1W	
169.16	172.21	3.05	2.84	93	1.68	55	0R	4H	1W	
172.21	175.26	3.05	2.91	95	2.12	70	0R	4H	1W	
175.26	178.31	3.05	2.93	96	2.33	76	0R	2H	1W	softer in MXN
178.31	181.36	3.05	2.6	85	1.60	52	0R	4H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
181.36	184.40	3.04	3.04	100	2.89	95	0R	4H	1W	
184.40	187.45	3.05	3.05	100	2.96	97	0R	4H	1W	
187.45	190.50	3.05	2.95	97	2.33	76	0R	4H	1W	
190.50	193.55	3.05	2.93	96	2.53	83	0R	4H	1W	
193.55	196.60	3.05	3.05	100	2.69	88	0R	4H	1W	
196.60	199.64	3.04	2.96	97	2.72	89	0R	4H	1W	
199.64	202.69	3.05	2.98	98	2.86	94	0R	4H	1W	
202.69	205.74	3.05	2.78	91	1.56	51	0R	3H	1W	
205.74	208.79	3.05	3	98	2.34	77	0R	4H	1W	
208.79	211.84	3.05	3.01	99	2.73	90	0R	3H	1W	
211.84	214.88	3.04	2.92	96	1.73	57	0R	2H	1W	Fault zone with realgar mineralization - sheared and brecciated.
214.88	217.93	3.05	2.87	94	0.20	7	0R	2H	1W	Strong shear and brecciation with moderate gouge.
217.93	219.46	1.53	1.47	96	0.00	0	0R	2H	1W	Strong shearing and brecciation with moderate gouge and multiple single joints.
219.46	222.50	3.04	2.42	80	1.00	33	0R	2H	1W	
222.50	225.55	3.05	2.49	82	1.20	39	0R	3H	1W	
225.55	228.60	3.05	2.58	85	1.05	34	0R	3H	1W	
228.60	231.65	3.05	2.84	93	1.54	50	0R	3H	1W	
231.65	234.70	3.05	2.78	91	1.51	50	0R	3H	1W	
234.70	237.74	3.04	3	99	1.35	44	0R	2H	1W	
237.74	240.79	3.05	2.77	91	1.84	60	0R	3H	1W	
240.79	243.84	3.05	3.04	100	2.22	73	0R	3H	1W	
243.84	246.89	3.05	2.97	97	2.34	77	0R	2H	1W	
246.89	249.94	3.05	3.05	100	2.68	88	0R	3H	1W	
249.94	252.98	3.04	3.04	100	2.90	95	0R	3H	1W	
252.98	256.03	3.05	3.02	99	2.92	96	0R	3H	1W	
256.03	259.08	3.05	2.91	95	2.27	74	0R	2H	1W	
259.08	262.13	3.05	3.02	99	2.74	90	0R	2H	1W	
262.13	265.18	3.05	2.93	96	2.82	92	0R	2H	1W	
265.18	268.22	3.04	2.76	91	2.54	84	0R	2H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
268.22	271.27	3.05	3.05	100	2.85	93	0R	3H	1W	
271.27	274.32	3.05	2.93	96	2.71	89	0R	4H	1W	
274.32	277.37	3.05	2.85	93	1.72	56	0R	2H	1W	
277.37	279.50	2.13	2.1	99	0.60	28	0R	2H	1W	Reduced from HQ-NQ.
279.50	281.64	2.14	1.74	81	1.21	57	0R	3H	1W	Reduced from HQ-NQ.
281.64	284.68	3.04	2.68	88	2.02	66	0R	3H	1W	
284.68	287.73	3.05	2.96	97	2.62	86	0R	3H	1W	
287.73	290.78	3.05	2.41	79	0.71	23	0R	3H	1W	Rubble zone from 288.82-290.78m
290.78	293.83	3.05	2.7	89	1.30	43	0R	3H	1W	Two small rubble zones at 290.78-290.85m and 292.90-293.40m.
293.83	296.88	3.05	2.89	95	1.69	55	0R	3H	1W	Multiple single joints.
296.88	299.92	3.04	2.77	91	1.48	49	0R	3H	1W	
299.92	302.97	3.05	3.01	99	2.32	76	0R	3H	1W	
302.97	306.02	3.05	2.87	94	1.27	42	0R	3H	1W	
306.02	309.07	3.05	2.82	92	1.55	51	0R	3H	1W	Multiple single joints.
309.07	312.12	3.05	2.94	96	1.60	52	0R	3H	1W	
312.12	315.16	3.04	2.92	96	0.75	25	1R	2H	1W	Multiple rubbly/gougey sections in mineralized zone.
315.16	318.21	3.05	2.88	94	1.78	58	2R	2H	1W	
318.21	321.26	3.05	2.98	98	2.11	69	3R	3H	1W	
321.26	324.31	3.05	3.05	100	2.84	93	4R	4H	1W	
324.31	327.36	3.05	3.04	100	2.49	82	3R	3H	1W	
327.36	330.40	3.04	3.04	100	2.76	91	4R	4H	1W	
330.40	333.45	3.05	2.96	97	2.23	73	3R	4H	1W	Multiple single joints.
333.45	336.50	3.05	2.71	89	1.35	44	3R	3H	1W	
336.50	339.55	3.05	2.79	91	1.78	58	3R	3H	1W	Multiple single joints.
339.55	342.60	3.05	3.03	99	2.82	92	3R	3H	1W	
342.60	345.64	3.04	2.98	98	2.32	76	3R	3H	1W	
345.64	348.69	3.05	2.9	95	1.21	40	3R	3H	1W	Multiple single joints.
348.69	351.74	3.05	2.88	94	1.70	56	3R	3H	1W	
351.74	354.79	3.05	2.91	95	1.82	60	3R	3H	1W	
354.79	357.84	3.05	2.96	97	2.90	95	3R	3H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
357.84	360.88	3.04	3.03	100	2.59	85	3R	3H	1W	
360.88	363.93	3.05	2.86	94	2.36	77	3R	3H	1W	
363.93	366.98	3.05	3.05	100	2.01	66	3R	3H	1W	
366.98	370.03	3.05	3	98	2.83	93	3R	3H	1W	
370.03	373.08	3.05	3.03	99	2.39	78	3R	4H	1W	
373.08	376.12	3.04	3.04	100	2.96	97	3R	4H	1W	
376.12	379.17	3.05	3.04	100	2.60	85	3R	4H	1W	
379.17	382.22	3.05	2.95	97	2.56	84	3R	4H	1W	
382.22	385.27	3.05	3.04	100	2.75	90	3R	4H	1W	
385.27	388.32	3.05	3.05	100	2.90	95	3R	4H	1W	
388.32	391.36	3.04	3	99	2.74	90	3R	4H	1W	EOH

OS -18-278

Nadaleen
Conrad Zone

Archer,Cathro & Associates (1981) Limited

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
0.00	0.00	0.00	-QC-	0.00	0	S050860	☐	N18-062	core	CS11	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S050757	☐	N18-057	core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S050862	☐	N18-063	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S050836	☐	N18-062	core	CS3	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S050822	☐	N18-062	core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S050818	☐	N18-060	core	CS8	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S050805	☐	N18-060	core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S050801	☐	N18-060	core	CS12	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S050776	☐	N18-057	core	CS9	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S050761	☐	N18-057	core	CS9	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S050878	☐	N18-063	Core	CS11	☐	☐	☐
5.87	7.62	1.75	-?-	1.50	86	S050738	☐	N18-055	core		☐	☐	☐
7.62	10.67	3.05	FLR	1.80	59	S050739	☐	N18-055	core		☐	☐	☐
7.62	10.67	3.05	FLR	1.80	59	S050740	☐	N18-055	core		☐	☑	☐
10.67	13.72	3.05	FLR	2.20	72	S050741	☐	N18-057	core		☐	☐	☐
13.72	16.76	3.04	FLR	2.01	66	S050742	☐	N18-057	core		☐	☐	☐
16.76	19.81	3.05	FLR	2.25	74	S050743	☐	N18-057	core		☐	☐	☐
19.81	22.86	3.05	FLR	2.30	75	S050744	☐	N18-057	core		☐	☐	☐
22.86	25.91	3.05	FLR	3.00	98	S050745	☐	N18-057	core		☐	☐	☐
25.91	28.96	3.05	FLR	2.90	95	S050746	☐	N18-057	core		☐	☐	☐
28.96	32.00	3.04	FLR	2.99	98	S050747	☐	N18-057	core		☐	☐	☐
32.00	35.05	3.05	FLR	2.85	93	S050748	☐	N18-057	core		☐	☐	☐
35.05	38.10	3.05	FLR	2.98	98	S050749	☐	N18-057	core		☐	☐	☐
35.05	38.10	3.05	FLR	2.98	98	S050750	☐	N18-057	core		☐	☐	☑
38.10	41.15	3.05	FLR	2.65	87	S050751	☐	N18-057	core		☐	☐	☐
41.15	44.20	3.05	FLR	3.01	99	S050752	☐	N18-057	core		☐	☐	☐
44.20	47.24	3.04	FLR	2.93	96	S050753	☐	N18-057	core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
47.24	50.29	3.05	FLR	2.90	95	S050754	☐	N18-057	core		☐	☐	☐
50.29	53.34	3.05	FLR	2.70	89	S050755	☐	N18-057	core		☐	☐	☐
53.34	56.39	3.05	FLR	2.49	82	S050756	☐	N18-057	core		☐	☐	☐
56.39	59.44	3.05	FLR	2.79	91	S050758	☐	N18-057	core		☐	☐	☐
59.44	62.48	3.04	FLR	2.70	89	S050759	☐	N18-057	core		☐	☐	☐
62.48	65.53	3.05	FLR	3.04	100	S050760	☐	N18-057	core		☐	☐	☐
65.53	68.58	3.05	FLR	3.02	99	S050762	☐	N18-057	core		☐	☐	☐
68.58	71.63	3.05	FLR	3.02	99	S050763	☐	N18-057	core		☐	☐	☐
71.63	74.68	3.05	FLR	2.90	95	S050764	☐	N18-057	core		☐	☐	☐
74.68	77.72	3.04	FLR	3.04	100	S050765	☐	N18-057	core		☐	☐	☐
77.72	80.77	3.05	FLR	2.92	96	S050766	☐	N18-057	core		☐	☐	☐
80.77	83.82	3.05	FLR	3.04	100	S050767	☐	N18-057	core		☐	☐	☐
83.82	86.87	3.05	FLR	2.75	90	S050768	☐	N18-057	core		☐	☐	☐
86.87	89.92	3.05	FLR	3.02	99	S050769	☐	N18-057	core		☐	☐	☐
89.92	92.96	3.04	FLR	2.98	98	S050770	☐	N18-057	core		☐	☐	☐
92.96	96.01	3.05	FLR	3.04	100	S050771	☐	N18-057	core		☐	☐	☐
96.01	99.06	3.05	FLR	2.94	96	S050772	☐	N18-057	core		☐	☐	☐
96.01	99.06	3.05	FLR	2.94	96	S050773	☐	N18-057	core		☐	☑	☐
99.06	102.11	3.05	FLR	2.93	96	S050774	☐	N18-057	core		☐	☐	☐
102.11	105.16	3.05	FLR	2.80	92	S050775	☐	N18-057	core		☐	☐	☐
105.16	108.20	3.04	FLR	3.02	99	S050777	☐	N18-057	core		☐	☐	☐
108.20	111.25	3.05	FLR	3.01	99	S050778	☐	N18-057	core		☐	☐	☐
111.25	114.30	3.05	FLR	3.04	100	S050779	☐	N18-057	core		☐	☐	☐
114.30	117.35	3.05	FLR	2.89	95	S050780	☐	N18-057	core		☐	☐	☐
117.35	120.40	3.05	FLR	2.97	97	S050781	☐	N18-060	core		☐	☐	☐
120.40	123.44	3.04	FLR	2.92	96	S050782	☐	N18-060	core		☐	☐	☐
123.44	126.49	3.05	FLR	3.05	100	S050783	☐	N18-060	core		☐	☐	☐
126.49	129.54	3.05	FLR	3.02	99	S050784	☐	N18-060	core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
129.54	132.59	3.05	FLR	2.92	96	S050785	☐	N18-060	core		☐	☐	☐
132.59	135.64	3.05	FLR	2.97	97	S050786	☐	N18-060	core		☐	☐	☐
135.64	138.68	3.04	FLR	2.90	95	S050787	☐	N18-060	core		☐	☐	☐
138.68	141.73	3.05	FLR	3.04	100	S050788	☐	N18-060	core		☐	☐	☐
141.73	144.78	3.05	FLR	3.04	100	S050789	☐	N18-060	core		☐	☐	☐
144.78	147.83	3.05	FLR	3.05	100	S050790	☐	N18-060	core		☐	☐	☐
147.83	150.88	3.05	FLR	3.02	99	S050791	☐	N18-060	core		☐	☐	☐
150.88	153.92	3.04	FLR	2.90	95	S050792	☐	N18-060	core		☐	☐	☐
153.92	156.97	3.05	FLR	3.00	98	S050793	☐	N18-060	core		☐	☐	☐
156.97	160.02	3.05	FLR	3.01	99	S050794	☐	N18-060	core		☐	☐	☐
160.02	163.07	3.05	FLR	2.98	98	S050795	☐	N18-060	core		☐	☐	☐
163.07	166.12	3.05	FLR	3.05	100	S050796	☐	N18-060	core		☐	☐	☐
166.12	169.16	3.04	FLR	2.73	90	S050797	☐	N18-060	core		☐	☐	☐
169.16	172.21	3.05	FLR	2.84	93	S050798	☐	N18-060	core		☐	☐	☐
172.21	174.95	2.74	FLR	2.45	89	S050799	☐	N18-060	core		☐	☐	☐
174.95	177.00	2.05	FLR	1.79	87	S050800	☐	N18-060	core		☐	☐	☐
177.00	179.01	2.01	FLR	1.79	89	S050802	☐	N18-060	core		☐	☐	☐
177.00	179.01	2.01	FLR	1.79	89	S050803	☐	N18-060	core		☐	☑	☐
179.01	181.36	2.35	FLR	1.61	69	S050804	☐	N18-060	core		☐	☐	☐
181.36	184.40	3.04	FLR	3.04	100	S050806	☐	N18-060	core		☐	☐	☐
184.40	187.45	3.05	FLR	3.05	100	S050807	☐	N18-060	core		☐	☐	☐
187.45	190.50	3.05	FLR	2.95	97	S050808	☐	N18-060	core		☐	☐	☐
190.50	193.55	3.05	FLR	2.93	96	S050809	☐	N18-060	core		☐	☐	☐
193.55	196.60	3.05	FLR	3.05	100	S050810	☐	N18-060	core		☐	☐	☐
196.60	199.64	3.04	FLR	2.96	97	S050811	☐	N18-060	core		☐	☐	☐
199.64	202.69	3.05	FLR	2.98	98	S050812	☐	N18-060	core		☐	☐	☐
202.69	205.74	3.05	FLR	2.78	91	S050813	☐	N18-060	core		☐	☐	☐
205.74	208.79	3.05	FLR	3.00	98	S050814	☐	N18-060	core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
208.79	210.79	2.00	FLR	1.91	96	S050815	☐	N18-060	core		☐	☐	☐
210.79	212.30	1.51	FLR	1.51	100	S050816	☐	N18-060	core		☐	☐	☐
212.30	214.07	1.77	FLR	1.72	97	S050817	☐	N18-060	core		☐	☐	☐
214.07	216.61	2.54	FLR	2.45	96	S050819	☐	N18-060	core		☐	☐	☐
214.07	216.61	2.54	FLR	2.45	96	S050820	☐	N18-060	core		☐	☐	☑
216.61	219.56	2.95	FLR	2.89	98	S050821	☐	N18-062	core		☐	☐	☐
219.56	222.50	2.94	FLR	2.42	82	S050823	☐	N18-062	core		☐	☐	☐
222.50	225.55	3.05	FLR	2.49	82	S050824	☐	N18-062	core		☐	☐	☐
225.55	228.60	3.05	FLR	2.58	85	S050825	☐	N18-062	core		☐	☐	☐
228.60	231.65	3.05	FLR	2.84	93	S050826	☐	N18-062	core		☐	☐	☐
231.65	234.70	3.05	FLR	2.78	91	S050827	☐	N18-062	core		☐	☐	☐
234.70	237.74	3.04	FLR	3.00	99	S050828	☐	N18-062	core		☐	☐	☐
237.74	240.79	3.05	FLR	2.77	91	S050829	☐	N18-062	core		☐	☐	☐
240.79	243.84	3.05	FLR	3.04	100	S050830	☐	N18-062	core		☐	☐	☐
243.84	246.89	3.05	FLR	2.97	97	S050831	☐	N18-062	core		☐	☐	☐
246.89	249.94	3.05	FLR	3.05	100	S050832	☐	N18-062	core		☐	☐	☐
249.94	252.98	3.04	FLR	3.04	100	S050833	☐	N18-062	core		☐	☐	☐
252.98	256.03	3.05	FLR	3.02	99	S050834	☐	N18-062	core		☐	☐	☐
256.03	259.08	3.05	FLR	2.91	95	S050835	☐	N18-062	core		☐	☐	☐
259.08	262.13	3.05	FLR	3.02	99	S050837	☐	N18-062	core		☐	☐	☐
262.13	265.18	3.05	FLR	2.93	96	S050838	☐	N18-062	core		☐	☐	☐
262.13	265.18	3.05	FLR	2.93	96	S050839	☐	N18-062	core		☐	☑	☐
265.18	268.22	3.04	SLC	2.76	91	S050840	☐	N18-062	core		☐	☐	☐
268.22	271.27	3.05	SLC	3.05	100	S050841	☐	N18-062	core		☐	☐	☐
271.27	274.32	3.05	SLC	2.93	96	S050842	☐	N18-062	core		☐	☐	☐
274.32	277.37	3.05	SLC	2.85	93	S050843	☐	N18-062	core		☐	☐	☐
277.37	279.50	2.13	SLC	2.10	99	S050844	☐	N18-062	core		☐	☐	☐
279.50	281.64	2.14	SLC	1.74	81	S050845	☐	N18-062	core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
281.64	284.68	3.04	SLC	2.68	88	S050846	☐	N18-062	core		☐	☐	☐
284.68	287.73	3.05	SLC	2.96	97	S050847	☐	N18-062	core		☐	☐	☐
287.73	290.78	3.05	SLC	2.41	79	S050848	☐	N18-062	core		☐	☐	☐
290.78	293.83	3.05	SLC	2.70	89	S050849	☐	N18-062	core		☐	☐	☐
293.83	296.88	3.05	SLC	2.89	95	S050850	☐	N18-062	core		☐	☐	☐
296.88	299.92	3.04	SLC	2.77	91	S050851	☐	N18-062	core		☐	☐	☐
299.92	302.97	3.05	SLC	3.01	99	S050852	☐	N18-062	core		☐	☐	☐
302.97	306.02	3.05	SLC	2.87	94	S050853	☐	N18-062	core		☐	☐	☐
306.02	309.07	3.05	SLC	2.82	92	S050854	☐	N18-062	core		☐	☐	☐
309.07	312.12	3.05	SLC	2.94	96	S050855	☐	N18-062	core		☐	☐	☐
312.12	314.47	2.35	SLC	2.25	96	S050856	☐	N18-062	core		☐	☐	☐
314.47	316.34	1.87	SLC, LST	1.85	99	S050857	☐	N18-062	core		☐	☐	☐
314.47	316.34	1.87	SLC, LST	1.85	99	S050858	☐	N18-062	core		☐	☐	☑
316.34	317.87	1.53	LST	1.39	91	S050859	☐	N18-062	core		☐	☐	☐
317.87	319.41	1.54	LST	1.50	97	S050861	☐	N18-063	Core		☐	☐	☐
319.41	321.26	1.85	LST	1.70	92	S050863	☐	N18-063	Core		☐	☐	☐
321.26	324.31	3.05	LST	3.05	100	S050864	☐	N18-063	Core		☐	☐	☐
324.31	327.36	3.05	LST	3.04	100	S050865	☐	N18-063	Core		☐	☐	☐
327.36	330.40	3.04	LST	3.04	100	S050866	☐	N18-063	Core		☐	☐	☐
330.40	333.45	3.05	LST	2.96	97	S050867	☐	N18-063	Core		☐	☐	☐
333.45	336.50	3.05	LST	2.71	89	S050868	☐	N18-063	Core		☐	☐	☐
336.50	339.55	3.05	LST	2.79	91	S050869	☐	N18-063	Core		☐	☐	☐
339.55	342.60	3.05	LST	3.03	99	S050870	☐	N18-063	Core		☐	☐	☐
342.60	345.64	3.04	LST	2.98	98	S050871	☐	N18-063	Core		☐	☐	☐
345.64	348.69	3.05	LST	2.90	95	S050872	☐	N18-063	Core		☐	☐	☐
348.69	351.74	3.05	LST	2.88	94	S050873	☐	N18-063	Core		☐	☐	☐
351.74	354.79	3.05	LST	2.91	95	S050874	☐	N18-063	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
354.79	357.84	3.05	LST	2.96	97	S050875	☐	N18-063	Core		☐	☐	☐
357.84	359.62	1.78	LST	1.76	99	S050876	☐	N18-063	Core		☐	☐	☐
359.62	362.44	2.82	LST	2.73	97	S050877	☐	N18-063	Core		☐	☐	☐
362.44	364.85	2.41	LST	2.13	88	S050879	☐	N18-063	Core		☐	☐	☐
364.85	366.98	2.13	LST	2.13	100	S050880	☐	N18-063	Core		☐	☐	☐
366.98	370.03	3.05	LST	3.00	98	S050881	☐	N18-063	Core		☐	☐	☐
370.03	373.08	3.05	LST	3.03	99	S050882	☐	N18-063	Core		☐	☐	☐
373.08	376.12	3.04	LST	3.04	100	S050883	☐	N18-063	Core		☐	☐	☐
376.12	379.17	3.05	LST	3.04	100	S050884	☐	N18-063	Core		☐	☐	☐
379.17	382.22	3.05	LST	2.95	97	S050885	☐	N18-063	Core		☐	☐	☐
379.17	382.22	3.05	LST	2.95	97	S050886	☐	N18-063	Core		☐	☑	☐
382.22	385.27	3.05	LST	3.04	100	S050887	☐	N18-063	Core		☐	☐	☐
385.27	388.32	3.05	LST	3.05	100	S050888	☐	N18-063	Core		☐	☐	☐
388.32	391.36	3.04	LST	3.00	99	S050889	☐	N18-063	Core		☐	☐	☐
388.32	391.36	3.04	LST	3.00	99	S050890	☐	N18-063	Core		☐	☐	☑

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From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
0.00	16.23	16.23	OVB	--	No recovery from 0 to 1.69m. Overburden ends at 16.23m. Abundant Packestone boulders in OVB.							
						LT	GY					
						MD	BR					
						MD	GY	RB	OXI	3I	--	0
16.23	185.92	169.69	MST	VF	Medium green-grey/maroon, very fine grained, well bedded mudstone with trace thin interbeds of medium grey, fine grained quartz arenite. Bedding throughout interval is planar, parallel and locally folded or convoluted. Shear fabrics and strongly brecciated intervals are present towards the top of the unit. Breccias consist of angular/fractured mudstone clasts within medium grey, fine grained gouge fill. Minor quartz/dolomite veining present throughout interval. Veining near lower contact with limestone contains minor, massive realgar. Realgar is also present near lower contact as bedding parallel patchy growths.							
						MD	GN	SD			Re	0.05
						MD	RD	BX				
								SH				
						MD	GY	BD	---	--	Re	0.01
185.92	326.22	140.30	LST	FG	Interbedded, well bedded, medium grey, fine grained limestone and dark grey, fine to very fine grained silty limestone with local brecciation, decalcification and realgar replaced beds. Mineralization near the upper contact with mudstone consists of angular, often realgar replaced, decalcified limestone clasts within massive realgar and euhedral fluorite fill. Surrounding bedded limestone is prevasively realgar replaced and strongly decalcified. Local fractures filled with massive realgar cross cut bedding at high angles. Bedding proximal to these beds has been pervasively replaced by realgar.							
						LT	GY	SD				
						MD	GY	BD	DCA	1I	Re	0.5
						DK	GY	BX				
						MD	OR	CR				

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
326.22	375.82	49.60	DST	FG	Locally faulted, light grey, fine to medium grained, dolostone with thin interbeds of dark grey, very fine grained silty (muddy) dolostone. Wavy/fractured bedding is often destroyed by realgar fracturing, brecciation or faulting. Unit is strongly/intensely brecciated/faulted 349.15 to 358.10m as well as near the upper and lower contact. Moderate realgar is present throughout interval as massive fracture fill.							
						MD	GY	BX	---	--	Re	0.5
						LT	GY	CR				
						DK	GY	BD				
375.82	402.97	27.15	DMT	FG	Locally realgar fractured, dolomitized, poorly sorted, matrix-supported, polymictic to monomicitic diamictite. Clasts within diamictite consist of subrounded to subangular, granule to pebble sized grains of light grey, dolomitized limestone, black chert(?) and brassy, fine grained blebs of pyrite. Lower portion of unit is monomictic and contains well bedded, boulders of limestone. Matrix consists of (locally foliated), dark grey/black siltstone.							
						MD	GY	MA	DOL	2I	Re	0.1
						DK	GY					
402.97	418.49	15.52	LST	MG	Well bedded, dark green-grey, very fine grained mudstone with laminations dark-grey/black, very fine grained mudstone with rare interbeds of poorly sorted, matrix supported diamictite. Mudstone is locally interbedded, below 413.47m, with medium grey, fine grained silty limestone. Rare beds of medium grained, light grey, dolostone cross cut by very thin, black dolomite veinlets. Trace, weakly sheared, quratz/dolomite veins cross cut bedding at high angles. Bedding within interval is consistently oriented, planar and parallel.							
						MD	GY	BD	DOL	1I	--	0
						DK	GY					
						MD	GN					

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
0.00	1.69	1.69	0	0	0.00	0	--	--	--	No recovery.
1.69	3.96	2.27	2.27	100	1.53	67	4R	3H	2W	Abundant competent boulders?
3.96	7.01	3.05	1.16	38	0.73	24	4R	3H	2W	
7.01	10.06	3.05	0.2	7	0.00	0	2R	2H	3W	Very poor recovery.
10.06	13.11	3.05	0.65	21	0.00	0	0R	1H	3W	
13.11	16.15	3.04	0.58	19	0.00	0	0R	1H	3W	
16.15	19.20	3.05	1.9	62	0.37	12	0R	1H	4W	
19.20	22.25	3.05	2.49	82	1.36	45	0R	2H	4W	
22.25	25.30	3.05	1.22	40	0.25	8	0R	1H	4W	
25.30	28.35	3.05	2.57	84	0.54	18	0R	1H	4W	
28.35	31.39	3.04	1.68	55	0.23	8	0R	2H	4W	
31.39	34.44	3.05	1.7	56	0.26	9	0R	2H	4W	
34.44	37.49	3.05	2.22	73	0.31	10	0R	1H	4W	
37.49	40.54	3.05	1.55	51	0.22	7	0R	1H	4W	
40.54	43.59	3.05	2.76	90	1.70	56	0R	2H	1W	End of highly weathered, rubbly rock.
43.59	46.63	3.04	2.99	98	1.72	57	0R	3H	1W	Multiple single joints.
46.63	49.68	3.05	2.71	89	1.39	46	0R	2H	1W	
49.68	52.73	3.05	2.52	83	1.22	40	0R	2H	1W	
52.73	55.78	3.05	2.72	89	0.33	11	0R	2H	1W	Shearing occuring throughout interval.
55.78	58.83	3.05	2.86	94	1.12	37	0R	2H	1W	
58.83	61.87	3.04	2.84	93	0.81	27	0R	2H	1W	
61.87	64.92	3.05	2.62	86	0.92	30	0R	3H	1W	Small rubble zone.
64.92	67.97	3.05	2.85	93	0.40	13	0R	3H	1W	
67.97	71.02	3.05	2.84	93	1.66	54	0R	3H	1W	Multiple single joints.
71.02	74.07	3.05	2.79	91	0.35	11	0R	2H	1W	
74.07	77.11	3.04	2.68	88	0.78	26	0R	2H	1W	
77.11	80.16	3.05	2.45	80	0.42	14	0R	2H	1W	Small rubbly zone.
80.16	83.21	3.05	2.2	72	0.65	21	0R	3H	1W	
83.21	86.26	3.05	1.73	57	0.00	0	0R	2H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
86.26	89.31	3.05	2.97	97	0.23	8	0R	2H	1W	Highly brecciated
89.31	92.35	3.04	2.9	95	0.00	0	0R	2H	1W	
92.35	95.40	3.05	3.02	99	1.09	36	0R	2H	1W	
95.40	98.45	3.05	2.77	91	0.90	30	0R	2H	1W	
98.45	101.50	3.05	2.47	81	1.23	40	0R	2H	1W	
101.50	104.55	3.05	2.93	96	0.52	17	0R	2H	1W	Multiple single joints.
104.55	107.59	3.04	2.89	95	1.71	56	0R	3H	1W	
107.59	110.64	3.05	2.91	95	2.69	88	0R	3H	1W	
110.64	113.69	3.05	3.03	99	2.94	96	0R	3H	1W	
113.69	116.74	3.05	2.94	96	2.47	81	0R	3H	1W	
116.74	119.79	3.05	3.05	100	2.88	94	0R	3H	1W	
119.79	122.83	3.04	2.99	98	2.69	88	0R	3H	1W	
122.83	125.88	3.05	2.98	98	2.46	81	0R	3H	1W	
125.88	128.93	3.05	3	98	2.83	93	0R	3H	1W	
128.93	131.98	3.05	2.97	97	2.81	92	0R	3H	1W	
131.98	135.03	3.05	2.98	98	2.73	90	0R	3H	1W	
135.03	138.07	3.04	2.97	98	2.76	91	0R	3H	1W	
138.07	141.12	3.05	2.99	98	2.35	77	0R	3H	1W	
141.12	144.17	3.05	3.02	99	2.75	90	0R	3H	1W	
144.17	147.22	3.05	3.03	99	2.72	89	0R	3H	1W	
147.22	150.27	3.05	3.05	100	2.63	86	0R	3H	1W	
150.27	153.31	3.04	3.04	100	2.68	88	0R	3H	1W	Multiple single joints.
153.31	156.36	3.05	3.03	99	2.49	82	0R	3H	1W	
156.36	159.41	3.05	2.96	97	2.58	85	0R	3H	1W	
159.41	162.46	3.05	3.04	100	2.62	86	0R	3H	1W	
162.46	165.51	3.05	3	98	2.14	70	0R	3H	1W	
165.51	168.55	3.04	3.04	100	2.67	88	0R	3H	1W	
168.55	171.60	3.05	2.88	94	2.70	89	0R	3H	1W	
171.60	174.65	3.05	3.05	100	3.00	98	0R	3H	1W	
174.65	177.70	3.05	2.9	95	1.76	58	0R	3H	1W	
177.70	180.75	3.05	2.78	91	2.21	72	0R	3H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
180.75	183.79	3.04	2.93	96	2.92	96	0R	3H	1W	
183.79	186.84	3.05	2.76	90	2.04	67	1R	3H	1W	End on interval marks rubbly contact between O-MST and O-LST1.
186.84	189.89	3.05	2.76	90	1.69	55	2R	3H	1W	Decalcified from 188.85-189.89m
189.89	192.94	3.05	2.92	96	1.79	59	1R	3H	1W	
192.94	195.99	3.05	3.05	100	2.53	83	3R	3H	1W	
195.99	199.03	3.04	2.99	98	1.53	50	3R	3H	1W	
199.03	202.08	3.05	3.05	100	1.82	60	3R	3H	1W	
202.08	205.13	3.05	3.03	99	2.04	67	3R	3H	1W	Multiple single joints.
205.13	208.18	3.05	2.9	95	2.58	85	2R	3H	1W	Multiple single joints.
208.18	211.23	3.05	3.05	100	2.46	81	3R	3H	1W	
211.23	214.27	3.04	2.94	97	1.87	62	2R	3H	1W	Small rubble zone.
214.27	217.32	3.05	3.05	100	2.50	82	3R	3H	1W	Locally 2R HCL reactivity.
217.32	220.37	3.05	3.05	100	2.33	76	3R	3H	1W	
220.37	223.42	3.05	2.92	96	2.34	77	3R	3H	1W	
223.42	226.47	3.05	3.05	100	2.57	84	3R	3H	1W	
226.47	229.51	3.04	3.02	99	2.27	75	3R	3H	1W	
229.51	232.56	3.05	3.04	100	2.28	75	2R	3H	1W	
232.56	235.61	3.05	3.05	100	2.68	88	3R	3H	1W	
235.61	238.66	3.05	2.75	90	1.42	47	3R	3H	1W	
238.66	241.71	3.05	3.04	100	2.32	76	3R	3H	1W	
241.71	244.75	3.04	3.01	99	2.41	79	3R	3H	1W	Locally 2R in mud/siltstone. Multiple single joints.
244.75	247.80	3.05	2.97	97	2.51	82	1R	3H	1W	Multiple single joints.
247.80	250.85	3.05	3.03	99	2.73	90	2R	3H	1W	
250.85	253.90	3.05	2.86	94	2.49	82	2R	3H	1W	
253.90	256.95	3.05	3.05	100	2.92	96	3R	3H	1W	Multiple single joints.
256.95	260.00	3.05	2.88	94	2.13	70	2R	4H	1W	
260.00	263.04	3.04	3.03	100	2.51	83	1R	4H	1W	Multiple single joints.
263.04	266.09	3.05	3.02	99	2.81	92	3R	3H	1W	
266.09	269.14	3.05	3.05	100	2.39	78	3R	4H	1W	
269.14	272.19	3.05	2.97	97	2.28	75	3R	3H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
272.19	275.23	3.04	2.93	96	2.58	85	3R	3H	1W	
275.23	278.28	3.05	3.05	100	2.20	72	2R	3H	1W	
278.28	281.33	3.05	3	98	2.27	74	2R	3H	1W	
281.33	284.38	3.05	2.89	95	2.06	68	3R	3H	1W	
284.38	287.43	3.05	2.99	98	2.10	69	2R	3H	1W	
287.43	290.47	3.04	3.02	99	2.38	78	3R	3H	1W	Multiple single joints.
290.47	293.52	3.05	3.03	99	2.31	76	3R	3H	1W	
293.52	296.57	3.05	3.04	100	2.81	92	3R	3H	1W	
296.57	299.61	3.04	3.04	100	2.76	91	3R	3H	1W	
299.61	302.67	3.06	2.94	96	2.58	84	3R	3H	1W	Multiple single joints.
302.67	305.71	3.04	2.65	87	1.85	61	3R	3H	1W	Small rubble zone from ~305.20-305.60m.
305.71	308.76	3.05	2.81	92	1.64	54	2R	3H	1W	Two small rubble zones.
308.76	311.81	3.05	2.97	97	2.44	80	2R	3H	1W	
311.81	314.86	3.05	2.87	94	2.02	66	1R	3H	1W	
314.86	317.91	3.05	3.04	100	2.57	84	3R	3H	1W	
317.91	320.95	3.04	2.96	97	2.48	82	3R	3H	1W	Multiple single joints.
320.95	324.00	3.05	2.95	97	2.77	91	3R	3H	1W	
324.00	327.05	3.05	2.82	92	2.41	79	2R	3H	1W	
327.05	330.10	3.05	2.65	87	1.17	38	0R	3H	1W	
330.10	333.15	3.05	2.52	83	1.05	34	0R	2H	1W	
333.15	336.19	3.04	2.81	92	1.28	42	0R	2H	1W	
336.19	339.24	3.05	2.68	88	1.27	42	0R	3H	1W	
339.24	342.29	3.05	2.96	97	2.48	81	0R	4H	1W	
342.29	345.34	3.05	2.9	95	2.54	83	0R	4H	1W	Multiple single joints.
345.34	348.39	3.05	3.01	99	2.47	81	0R	4H	1W	
348.39	351.43	3.04	1.78	59	0.30	10	0R	2H	1W	Fault zone
351.43	354.48	3.05	2.23	73	0.00	0	0R	2H	1W	Fault zone
354.48	357.53	3.05	1.62	53	0.00	0	0R	2H	1W	Fault zone
357.53	360.58	3.05	2.37	78	0.58	19	0R	2H	1W	
360.58	363.63	3.05	1.65	54	0.65	21	0R	4H	1W	Multiple single joints.
363.63	366.67	3.04	2.52	83	0.46	15	0R	4H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
366.67	369.72	3.05	2.67	88	0.70	23	0R	3H	1W	
369.72	372.77	3.05	2.81	92	1.95	64	0R	4H	1W	Two small rubble zones.
372.77	375.82	3.05	2.7	89	1.40	46	0R	4H	1W	
375.82	378.87	3.05	2.89	95	2.34	77	1R	3H	1W	Multiple single joints.
378.87	381.92	3.05	2.88	94	2.36	77	2R	3H	1W	
381.92	384.97	3.05	3.05	100	2.92	96	2R	3H	1W	
384.97	388.01	3.04	3.04	100	2.92	96	2R	3H	1W	
388.01	391.06	3.05	2.98	98	2.83	93	2R	3H	1W	Multiple single joints.
391.06	394.11	3.05	2.94	96	2.23	73	2R	3H	1W	Small rubble zone with weak gouge ~15cm.
394.11	397.15	3.04	2.86	94	2.37	78	1R	3H	1W	Multiple single joints.
397.15	400.20	3.05	3.05	100	3.05	100	2R	3H	1W	
400.20	403.25	3.05	2.89	95	2.78	91	1R	3H	1W	
403.25	406.30	3.05	3.05	100	2.45	80	0R	3H	1W	Multiple single joints.
406.30	409.35	3.05	3.05	100	3.00	98	0R	3H	1W	
409.35	412.39	3.04	2.97	98	2.84	93	0R	3H	1W	
412.39	415.44	3.05	3.01	99	2.67	88	1R	3H	1W	
415.44	418.49	3.05	3.03	99	3.02	99	1R	3H	1W	

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From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
0.00	0.00	0.00	-QC-	0.00	0	S049389	☐	N18-064	Core	CS9	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S049406	☐	N18-064	Core	CS10	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S049425	☐	N18-065	Core	CS9	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S049431	☐	N18-065	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S049446	☐	N18-065	Core	CS10	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S049376	☐	N18-064	Core		☑	☐	☐
1.69	3.96	2.27	OVB	2.27	100	S049364	☐	N18-061	Core		☐	☐	☐
3.96	7.01	3.05	OVB	1.16	38	S049365	☐	N18-061	Core		☐	☐	☐
7.01	10.06	3.05	OVB	0.20	7	S049366	☐	N18-061	Core		☐	☐	☐
10.06	13.11	3.05	OVB	0.65	21	S049367	☐	N18-061	Core		☐	☐	☐
13.11	16.15	3.04	OVB	0.58	19	S049368	☐	N18-061	Core		☐	☐	☐
16.15	19.20	3.05	OVB	1.90	62	S049369	☐	N18-061	Core		☐	☐	☐
16.15	19.20	3.05	OVB	1.90	62	S049370	☐	N18-061	Core		☐	☐	☑
19.20	25.30	6.10	MST	3.71	61	W233136	☐	N18-C04	chip		☐	☐	☐
25.30	31.39	6.09	MST	4.25	70	W233137	☐	N18-C04	chip		☐	☐	☐
31.39	37.49	6.10	MST	3.92	64	W233138	☐	N18-C04	chip		☐	☐	☐
37.49	43.59	6.10	MST	4.31	71	W233139	☐	N18-C04	chip		☐	☐	☐
43.59	49.68	6.09	MST	5.70	94	W233140	☐	N18-C04	chip		☐	☐	☐
49.68	55.78	6.10	MST	5.24	86	W233141	☐	N18-C04	chip		☐	☐	☐
55.78	61.87	6.09	MST	5.70	94	W233142	☐	N18-C04	chip		☐	☐	☐
61.87	67.97	6.10	MST	5.47	90	W233143	☐	N18-C04	chip		☐	☐	☐
67.97	74.07	6.10	MST	5.63	92	W233144	☐	N18-C04	chip		☐	☐	☐
74.07	80.16	6.09	MST	5.13	84	W233145	☐	N18-C04	chip		☐	☐	☐
80.16	86.26	6.10	MST	3.93	64	W233146	☐	N18-C04	chip		☐	☐	☐
86.26	92.35	6.09	MST	5.87	96	W233147	☐	N18-C04	chip		☐	☐	☐
92.35	98.45	6.10	MST	5.79	95	W233148	☐	N18-C04	chip		☐	☐	☐
98.45	104.55	6.10	MST	5.40	89	W233149	☐	N18-C04	chip		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
104.55	110.64	6.09	MST	5.80	95	W233150	☐	N18-C04	chip		☐	☐	☐
110.64	116.74	6.10	MST	5.97	98	W233151	☐	N18-C04	chip		☐	☐	☐
116.74	122.83	6.09	MST	6.04	99	W233152	☐	N18-C04	chip		☐	☐	☐
122.83	128.93	6.10	MST	5.98	98	W233153	☐	N18-C04	chip		☐	☐	☐
128.93	135.03	6.10	MST	5.95	98	W233154	☐	N18-C04	chip		☐	☐	☐
135.03	141.12	6.09	MST	5.96	98	W233155	☐	N18-C04	chip		☐	☐	☐
141.12	147.22	6.10	MST	6.05	99	W233156	☐	N18-C04	chip		☐	☐	☐
147.22	153.31	6.09	MST	6.09	100	W233157	☐	N18-C04	chip		☐	☐	☐
153.31	159.41	6.10	MST	5.99	98	W233158	☐	N18-C04	chip		☐	☐	☐
159.41	165.51	6.10	MST	6.04	99	W233159	☐	N18-C04	chip		☐	☐	☐
165.51	171.60	6.09	MST	5.92	97	W233160	☐	N18-C04	chip		☐	☐	☐
171.60	177.70	6.10	MST	5.95	98	W233161	☐	N18-C04	chip		☐	☐	☐
177.70	180.75	3.05	MST	2.78	91	S049371	☐	N18-064	Core		☐	☐	☐
180.75	183.79	3.04	MST	2.93	96	S049372	☐	N18-064	Core		☐	☐	☐
183.79	185.92	2.13	MST	2.12	100	S049373	☐	N18-064	Core		☐	☐	☐
185.92	188.93	3.01	MST, LST	2.87	95	S049374	☐	N18-064	Core		☐	☐	☐
188.93	190.98	2.05	LST	2.05	100	S049375	☐	N18-064	Core		☐	☐	☐
190.98	192.94	1.96	LST	1.93	98	S049377	☐	N18-064	Core		☐	☐	☐
190.98	192.94	1.96	LST	1.93	98	S049378	☐	N18-064	Core		☐	☑	☐
192.94	195.99	3.05	LST	3.05	100	S049379	☐	N18-064	Core		☐	☐	☐
195.99	199.03	3.04	LST	2.99	98	S049380	☐	N18-064	Core		☐	☐	☐
199.03	202.08	3.05	LST	3.05	100	S049381	☐	N18-064	Core		☐	☐	☐
202.08	205.13	3.05	LST	3.03	99	S049382	☐	N18-064	Core		☐	☐	☐
205.13	208.18	3.05	LST	2.90	95	S049383	☐	N18-064	Core		☐	☐	☐
208.18	211.23	3.05	LST	3.05	100	S049384	☐	N18-064	Core		☐	☐	☐
211.23	214.27	3.04	LST	2.94	97	S049385	☐	N18-064	Core		☐	☐	☐
214.27	217.32	3.05	LST	3.05	100	S049386	☐	N18-064	Core		☐	☐	☐
217.32	220.37	3.05	LST	3.05	100	S049387	☐	N18-064	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
220.37	223.42	3.05	LST	2.92	96	S049388	☐	N18-064	Core		☐	☐	☐
223.42	226.47	3.05	LST	3.05	100	S049390	☐	N18-064	Core		☐	☐	☐
226.47	229.51	3.04	LST	3.02	99	S049391	☐	N18-064	Core		☐	☐	☐
229.51	232.56	3.05	LST	3.04	100	S049392	☐	N18-064	Core		☐	☐	☐
232.56	235.61	3.05	LST	3.05	100	S049393	☐	N18-064	Core		☐	☐	☐
235.61	238.66	3.05	LST	2.75	90	S049394	☐	N18-064	Core		☐	☐	☐
238.66	241.71	3.05	LST	3.04	100	S049395	☐	N18-064	Core		☐	☐	☐
241.71	244.75	3.04	LST	3.01	99	S049396	☐	N18-064	Core		☐	☐	☐
244.75	247.80	3.05	LST	2.97	97	S049397	☐	N18-064	Core		☐	☐	☐
247.80	250.85	3.05	LST	3.03	99	S049398	☐	N18-064	Core		☐	☐	☐
250.85	253.90	3.05	LST	2.86	94	S049399	☐	N18-064	Core		☐	☐	☐
253.90	256.95	3.05	LST	3.05	100	S049400	☐	N18-064	Core		☐	☐	☐
256.95	260.00	3.05	LST	2.88	94	S049401	☐	N18-064	Core		☐	☐	☐
256.95	260.00	3.05	LST	2.88	94	S049402	☐	N18-064	Core		☐	☐	☑
260.00	263.04	3.04	LST	3.03	100	S049403	☐	N18-064	Core		☐	☐	☐
263.04	266.09	3.05	LST	3.02	99	S049404	☐	N18-064	Core		☐	☐	☐
266.09	269.14	3.05	LST	3.05	100	S049405	☐	N18-064	Core		☐	☐	☐
269.14	272.19	3.05	LST	2.97	97	S049407	☐	N18-064	Core		☐	☐	☐
272.19	275.23	3.04	LST	2.93	96	S049408	☐	N18-064	Core		☐	☐	☐
275.23	278.28	3.05	LST	3.05	100	S049409	☐	N18-064	Core		☐	☐	☐
278.28	281.33	3.05	LST	3.00	98	S049410	☐	N18-064	Core		☐	☐	☐
281.33	284.38	3.05	LST	2.89	95	S049411	☐	N18-065	Core		☐	☐	☐
284.38	287.43	3.05	LST	2.99	98	S049412	☐	N18-065	Core		☐	☐	☐
287.43	290.47	3.04	LST	3.02	99	S049413	☐	N18-065	Core		☐	☐	☐
287.43	290.47	3.04	LST	3.02	99	S049414	☐	N18-065	Core		☐	☑	☐
290.47	293.52	3.05	LST	3.03	99	S049415	☐	N18-065	Core		☐	☐	☐
293.52	296.57	3.05	LST	3.04	100	S049416	☐	N18-065	Core		☐	☐	☐
296.57	299.61	3.04	LST	3.04	100	S049417	☐	N18-065	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
299.61	302.67	3.06	LST	2.94	96	S049418	☐	N18-065	Core		☐	☐	☐
302.67	305.71	3.04	LST	2.65	87	S049419	☐	N18-065	Core		☐	☐	☐
305.71	308.76	3.05	LST	2.81	92	S049420	☐	N18-065	Core		☐	☐	☐
308.76	311.81	3.05	LST	2.97	97	S049421	☐	N18-065	Core		☐	☐	☐
311.81	314.86	3.05	LST	2.87	94	S049422	☐	N18-065	Core		☐	☐	☐
314.86	317.91	3.05	LST	3.04	100	S049423	☐	N18-065	Core		☐	☐	☐
317.91	320.95	3.04	LST	2.96	97	S049424	☐	N18-065	Core		☐	☐	☐
320.95	324.00	3.05	LST	2.95	97	S049426	☐	N18-065	Core		☐	☐	☐
324.00	326.22	2.22	LST	2.14	96	S049427	☐	N18-065	Core		☐	☐	☐
326.22	328.18	1.96	DST, LST	1.89	96	S049428	☐	N18-065	Core		☐	☐	☐
328.18	330.10	1.92	DST	1.71	89	S049429	☐	N18-065	Core		☐	☐	☐
330.10	333.15	3.05	DST	2.52	83	S049430	☐	N18-065	Core		☐	☐	☐
333.15	336.19	3.04	DST	2.81	92	S049432	☐	N18-065	Core		☐	☐	☐
336.19	339.24	3.05	DST	2.68	88	S049433	☐	N18-065	Core		☐	☐	☐
339.24	342.29	3.05	DST	2.96	97	S049434	☐	N18-065	Core		☐	☐	☐
342.29	345.34	3.05	DST	2.90	95	S049435	☐	N18-065	Core		☐	☐	☐
345.34	348.39	3.05	DST	3.01	99	S049436	☐	N18-065	Core		☐	☐	☐
348.39	351.43	3.04	DST	1.78	59	S049437	☐	N18-065	Core		☐	☐	☐
348.39	351.43	3.04	DST	1.78	59	S049438	☐	N18-065	Core		☐	☐	☑
351.43	354.48	3.05	DST	2.23	73	S049439	☐	N18-065	Core		☐	☐	☐
354.48	357.53	3.05	DST	1.62	53	S049440	☐	N18-065	Core		☐	☐	☐
357.53	360.58	3.05	DST	2.37	78	S049441	☐	N18-065	Core		☐	☐	☐
360.58	363.63	3.05	DST	1.65	54	S049442	☐	N18-065	Core		☐	☐	☐
363.63	366.67	3.04	DST	2.52	83	S049443	☐	N18-065	Core		☐	☐	☐
366.67	369.72	3.05	DST	2.67	88	S049444	☐	N18-065	Core		☐	☐	☐
369.72	372.77	3.05	DST	2.81	92	S049445	☐	N18-065	Core		☐	☐	☐
372.77	375.82	3.05	DST	2.70	89	S049447	☐	N18-065	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
375.82	378.87	3.05	DST, DMT	2.89	95	S049448	☐	N18-065	Core		☐	☐	☐
378.87	381.92	3.05	DMT	2.88	94	S049449	☐	N18-065	Core		☐	☐	☐
381.92	384.97	3.05	DMT	3.05	100	S049450	☐	N18-065	Core		☐	☐	☐
384.97	388.01	3.04	DMT	3.04	100	S049451	☐	N18-068	Core		☐	☐	☐
388.01	391.06	3.05	DMT	2.98	98	S049452	☐	N18-068	Core		☐	☐	☐
391.06	394.11	3.05	DMT	2.94	96	S049453	☐	N18-068	Core		☐	☐	☐
394.11	397.15	3.04	DMT	2.86	94	S049454	☐	N18-068	Core		☐	☐	☐
397.15	400.20	3.05	DMT	3.05	100	S049455	☐	N18-068	Core		☐	☐	☐
400.20	403.25	3.05	DMT	2.89	95	S049456	☐	N18-068	Core		☐	☐	☐
400.20	403.25	3.05	DMT	2.89	95	S049457	☐	N18-068	Core		☐	☑	☐
403.25	406.30	3.05	LST	3.00	98	S049458	☐	N18-068	Core		☐	☐	☐
406.30	409.35	3.05	LST	3.05	100	S049459	☐	N18-068	Core		☐	☐	☐
409.35	412.39	3.04	LST	2.97	98	S049460	☐	N18-068	Core		☐	☐	☐
412.39	415.44	3.05	LST	3.01	99	S049461	☐	N18-068	Core		☐	☐	☐
415.44	418.49	3.05	LST	3.03	99	S049462	☐	N18-068	Core		☐	☐	☐

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From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
0.00	3.15	3.15	OVB	--	Overburden							
3.15	113.70	110.55	LST	FG	O-LST2 in this drill hole is mainly composed of interbedded siliciclastic rocks: siltstones, mudstones and sandstones, with calcareous mudstone beds Trace realgar mineralized from 102.79-113.70m							
113.70	142.95	29.25	DMT	CG	O-DMT in this drill hole is mainly composed of a light green and grey, matrix supported, polymitic, poorly sorted, locally imbricated, sub rounded to angular, weakly veined, granule-through-boulder diamictite. Except from 137.95 to 140.54m - Light and medium grey, soft sediment deformed, weakly veined limestone interlaminated with calcareous mudstone.							
						MD	GY	PB				
						LT	GY	DB	---	--	--	0
142.95	217.38	74.43	DST	MG	O-DST in this drill hole is composed of 3 main lithologies: a dolomitic diamictite, dolomitic fault rock and a massive dolostone. Dimaictite - Light grey, matrix supported, poorly sorted, sub rounded to angular, imbricated, granule-boulder dolomitized diamictite. Fault Rock - Light grey, fine-medium grained, moderately fractured, locally brecciated, sheared, moderately veined, dolostone with moderate stylolites. Massive Dolostone - Light to medium gray, fine-medium grained, locally brecciated, locally bedded, massive, dolostone with trace stylolites. All three lithologies are realgar mineralized. Realgar is commonly observed coating fracture surfaces, infilling healed fractures and replacing calcite/dolomite veins.							

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
217.38	416.45	199.07	LST	MG	O-LST1 in this drill hole is light and medium grey, very fine to fine grained, soft sediment deformed, weakly calcite veined, planar bedded limestone rhythmically interbedded with calcareous mudstone with intermittemt beds of Light and medium gray, clast supported, imbricated, weakly calcite veined, granule-pebble limestone debrite. There are 4 significantly mineralized intervals: 270.80-275.26 Light grey, fine grained, breciatted, moderately veined, locally bedded Re-Om-mineralized limestone. Weak (2%) Realgar mineralization. Trace (0.2%) Orpiment mineralization. Late Realgar and orpiment are primarily observed replacing pre-existing calcite veinlets. These Re-mineralized veinlets cross cut non-mineralized calcite veinlets. About 50% of calcite veinlets are Re-mineralized. Realgar also observed on fracture surfaces. Dark grey-black sooty sulphides coating joint surfaces. 334.20-337.39 Strong Re-mineralization - Bright orange, clast supported, imbricated, strongly Re-mineralized, granule-pebble limestone debrite. From 334.20-335.47m --> Realgar is observed preferentially mineralizing along bedding planes, mineralizing within calcite veins, and infilling healed fractures. Weak calcite vein brecciation in this section. Some decalcification. From 335.47-337.39m --> Clast supported, imbricated, granule-pebble debrite. Massive realgar mineralization. Nearly entire rock, clasts and matrix, replaced by realgar. Realgar makes up ~90% of rock. Rock is locally crackle brecciated, with realgar infilling cracks. Decalcified. Overall, realgar makes up ~85% of interval. 337.39 - 338.6 Weak Re-Mineralization Light and medium gray, very fine to fine grained, soft sediment deformed, weakly Re-mineralized, moderately decalcified, rhythmically interbedded limestone and calcareous mudstone. Realgar makes up ~3% of rock. Realgar observed							

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
217.38	416.45	199.07			within calcite veins, infilling healed fractures, coating fracture surfaces, and also weakly penetrating wall rock along sporadic bedding planes. 342.95-354.40 Weak Re-mineralization Medium and dark grey, fine grained, sheared, brecciated, Re-mineralized, weakly veined, weakly decalcified rhythically interbedded limestone and calcareous mudstone. Realgar makes up ~3% of interval. Realgar is observed, replacing calcite veins, coating fracture surfaces, infilling healed fractures, infilling brecciation fractures, preferentially mineralizing along bedding planes, and penetrating rock (pervasive) adjacent to bedding planes and joint surfaces.						Om	0.2
						MD	GY	BD			Re	2
						LT	GN	SD	DCA	2I	Py	1
416.45	420.62	4.17	MST	FG	Light green with some light red, bedded, soft sediment deformed, sheared mudstone with quartz arenite laminations. Bedding at 45TCA. Bedding thickness is usually from 2.0-3.0cm. Trace dolomite infill and veinlets. Rock is moderately sheared - observed as sheared bedding planes and shered dolomite veinlets. Trace (1%) disseminated and blebby pyrite. Quartz arenite laminations are abundant and usually 1mm thick. Moderately soft sediment deformed - observed as wavy bedding planes. Gradational upper contact with O-LST1.							
								SD				
						LT	RD	BD			Py	0.5
						LT	GY	SH	---	--	Py	0.5

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
0.00	2.47	2.47	0	0	0.00	0	--	--	--	No recovery
2.47	3.05	0.58	0.51	88	0.00	0	3R	3H	2W	Overburden
3.05	6.10	3.05	1.11	36	0.00	0	3R	3H	2W	
6.10	9.14	3.04	0.93	31	0.00	0	3R	3H	2W	
9.14	12.19	3.05	1.92	63	0.00	0	3R	3H	2W	
12.19	15.24	3.05	2.68	88	0.84	28	2R	3H	1W	
15.24	18.29	3.05	2.01	66	0.00	0	2R	3H	2W	
18.29	21.34	3.05	1.83	60	0.28	9	1R	3H	2W	
21.34	24.38	3.04	2.11	69	0.72	24	1R	3H	2W	
24.38	27.43	3.05	2.56	84	0.37	12	2R	3H	2W	
27.43	30.48	3.05	2.66	87	0.99	32	1R	3H	2W	
30.48	33.53	3.05	2.26	74	0.88	29	1R	3H	1W	
33.53	36.58	3.05	2.21	72	0.71	23	1R	3H	1W	
36.58	39.62	3.04	2.48	82	1.69	56	1R	3H	1W	
39.62	42.67	3.05	2.9	95	2.30	75	1R	2H	1W	Multiple small rubble zones.
42.67	45.72	3.05	2.71	89	1.78	58	1R	4H	1W	Multiple single joints
45.72	48.77	3.05	2.98	98	2.63	86	1R	3H	1W	
48.77	51.82	3.05	2.93	96	1.88	62	1R	2H	1W	Rubbly zone with minor gouge.
51.82	54.86	3.04	2.77	91	1.96	64	1R	3H	1W	
54.86	57.91	3.05	2.66	87	2.56	84	1R	3H	1W	
57.91	60.96	3.05	3.05	100	2.84	93	1R	3H	1W	Multiple single joints.
60.96	62.48	1.52	1.44	95	1.04	68	3R	3H	1W	
62.48	65.53	3.05	2.98	98	2.68	88	1R	3H	1W	
65.53	68.58	3.05	2.86	94	2.51	82	2R	3H	1W	
68.58	71.63	3.05	2.62	86	1.60	52	2R	3H	1W	
71.63	74.68	3.05	2.91	95	1.81	59	2R	3H	1W	
74.68	77.72	3.04	2.73	90	1.11	37	2R	3H	1W	
77.72	80.77	3.05	2.66	87	1.36	45	2R	3H	1W	
80.77	83.82	3.05	2.65	87	0.84	28	2R	3H	1W	Multiple single joints.

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
83.82	86.87	3.05	2.67	88	1.30	43	2R	3H	1W	
86.87	89.92	3.05	2.86	94	1.85	61	2R	3H	1W	
89.92	92.96	3.04	2.78	91	1.28	42	2R	3H	1W	
92.96	96.01	3.05	2.78	91	0.64	21	2R	3H	1W	
96.01	99.06	3.05	2.25	74	0.79	26	2R	3H	1W	
99.06	102.11	3.05	3.05	100	1.71	56	1R	3H	1W	
102.11	105.16	3.05	2.92	96	1.25	41	0R	3H	1W	
105.16	108.20	3.04	2.87	94	1.54	51	0R	2H	1W	
108.20	111.25	3.05	2.73	90	2.12	70	0R	3H	1W	
111.25	114.30	3.05	3	98	2.08	68	1R	3H	1W	
114.30	117.35	3.05	2.93	96	2.66	87	2R	2H	1W	
117.35	120.40	3.05	2.94	96	2.31	76	1R	3H	1W	
120.40	123.44	3.04	3.04	100	2.66	88	2R	3H	1W	
123.44	126.49	3.05	3.05	100	2.56	84	2R	3H	1W	
126.49	129.54	3.05	2.95	97	2.87	94	2R	3H	1W	
129.54	132.59	3.05	3.05	100	2.98	98	2R	3H	1W	
132.59	135.64	3.05	3.05	100	3.05	100	2R	3H	1W	
135.64	138.68	3.04	2.95	97	2.95	97	2R	3H	1W	
138.68	141.73	3.05	3.05	100	3.05	100	2R	3H	1W	
141.73	144.78	3.05	3	98	2.67	88	2R	2H	1W	
144.78	147.83	3.05	2.98	98	2.23	73	1R	2H	1W	
147.83	150.88	3.05	3.05	100	1.22	40	0R	2H	1W	
150.88	153.92	3.04	3.04	100	2.25	74	0R	2H	1W	
153.92	156.97	3.05	2.88	94	2.61	86	0R	2H	1W	
156.97	160.02	3.05	2.99	98	2.44	80	0R	3H	1W	
160.02	163.07	3.05	3.05	100	2.30	75	0R	2H	1W	
163.07	166.12	3.05	2.94	96	2.09	69	0R	2H	1W	
166.12	169.16	3.04	3.01	99	2.62	86	0R	3H	1W	
169.16	172.21	3.05	3.05	100	2.38	78	0R	2H	1W	
172.21	175.26	3.05	2.93	96	2.86	94	0R	3H	1W	Lots of bedding parallel breaks
175.26	178.31	3.05	2.79	91	2.57	84	0R	2H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
178.31	181.36	3.05	2.48	81	1.91	63	0R	3H	1W	
181.36	184.40	3.04	1.68	55	0.21	7	0R	3H	1W	
184.40	187.45	3.05	2.12	70	0.10	3	0R	3H	1W	
187.45	190.50	3.05	2.06	68	0.35	11	0R	3H	1W	
190.50	193.55	3.05	1.72	56	0.31	10	0R	3H	1W	
193.55	196.60	3.05	0.71	23	0.00	0	0R	3H	1W	
196.60	199.64	3.04	1.68	55	0.00	0	0R	3H	1W	
199.64	202.69	3.05	2.32	76	0.10	3	0R	3H	1W	Realgar along fracture surfaces
202.69	205.74	3.05	3.05	100	0.97	32	0R	3H	1W	Realgar through veinlets and along fracture surfaces
205.74	208.79	3.05	2.86	94	2.34	77	0R	3H	1W	
208.79	211.84	3.05	3.05	100	2.75	90	1R	3H	1W	
211.84	214.88	3.04	2.73	90	1.07	35	1R	2H	1W	
214.88	217.93	3.05	3.05	100	1.79	59	1R	3H	1W	
217.93	219.46	1.53	1.53	100	0.64	42	3R	3H	1W	
219.46	222.50	3.04	2.65	87	2.26	74	4R	3H	1W	
222.50	225.55	3.05	3.05	100	2.58	85	3R	3H	1W	
225.55	228.60	3.05	2.98	98	2.54	83	4R	3H	1W	
228.60	231.65	3.05	2.92	96	2.16	71	3R	3H	1W	
231.65	234.70	3.05	2.83	93	2.29	75	2R	3H	1W	
234.70	237.74	3.04	3	99	2.87	94	2R	3H	1W	
237.74	240.79	3.05	3.05	100	2.77	91	3R	3H	1W	
240.79	243.84	3.05	3	98	3.00	98	3R	3H	1W	
243.84	246.89	3.05	2.93	96	2.93	96	3R	3H	1W	
246.89	249.94	3.05	3.05	100	2.08	68	3R	3H	1W	
249.94	252.98	3.04	2.93	96	2.90	95	2R	3H	1W	
252.98	256.03	3.05	3.02	99	2.92	96	3R	4H	1W	
256.03	259.08	3.05	3.05	100	3.05	100	3R	4H	1W	
259.08	262.13	3.05	2.94	96	2.94	96	2R	4H	1W	
262.13	265.18	3.05	3.05	100	2.55	84	2R	3H	1W	
265.18	268.22	3.04	2.93	96	2.93	96	2R	4H	1W	
268.22	271.27	3.05	2.98	98	2.98	98	2R	4H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
271.27	274.32	3.05	3.05	100	2.95	97	2R	4H	1W	
274.32	277.37	3.05	2.83	93	2.51	82	2R	3H	1W	
277.37	280.42	3.05	3.04	100	2.79	91	3R	3H	1W	
280.42	283.46	3.04	3.04	100	3.01	99	3R	4H	1W	
283.46	286.51	3.05	3.05	100	3.05	100	3R	4H	1W	
286.51	289.56	3.05	2.98	98	2.92	96	3R	4H	1W	
289.56	292.61	3.05	2.92	96	2.70	89	3R	2H	1W	
292.61	295.66	3.05	3.03	99	2.61	86	2R	2H	1W	
295.66	298.70	3.04	3.04	100	3.04	100	3R	2H	1W	
298.70	301.75	3.05	3.04	100	3.04	100	3R	4H	1W	
301.75	304.80	3.05	3.02	99	2.51	82	3R	4H	1W	
304.80	307.85	3.05	3.05	100	3.01	99	3R	4H	1W	
307.85	310.90	3.05	2.97	97	2.97	97	3R	4H	1W	
310.90	313.94	3.04	3.04	100	3.00	99	3R	4H	1W	
313.94	316.99	3.05	3.05	100	2.63	86	2R	4H	1W	
316.99	320.04	3.05	3.05	100	2.47	81	3R	3H	1W	
320.04	323.09	3.05	2.85	93	1.77	58	3R	3H	1W	
323.09	326.14	3.05	3.03	99	2.65	87	2R	3H	1W	
326.14	329.18	3.04	2.89	95	2.20	72	3R	3H	1W	
329.18	332.23	3.05	2.83	93	1.93	63	3R	3H	1W	
332.23	335.28	3.05	2.95	97	1.92	63	2R	3H	1W	
335.28	338.33	3.05	3.05	100	2.56	84	2R	3H	1W	
338.33	341.38	3.05	3	98	2.57	84	3R	3H	1W	
341.38	344.42	3.04	3.04	100	2.72	89	3R	3H	1W	
344.42	347.47	3.05	2.98	98	2.43	80	3R	3H	1W	
347.47	350.52	3.05	2.95	97	2.55	84	3R	3H	1W	
350.52	353.57	3.05	2.97	97	2.16	71	3R	3H	1W	
353.57	356.62	3.05	2.96	97	0.88	29	3R	3H	1W	
356.62	359.66	3.04	3.03	100	0.94	31	3R	3H	1W	
359.66	362.71	3.05	2.85	93	1.31	43	3R	3H	1W	
362.71	365.76	3.05	3	98	2.13	70	3R	3H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
365.76	368.81	3.05	2.97	97	2.28	75	3R	3H	1W	
368.81	371.86	3.05	3.05	100	1.96	64	2R	3H	1W	
371.86	374.90	3.04	3.03	100	1.95	64	3R	3H	1W	
374.90	377.95	3.05	3	98	1.85	61	3R	3H	1W	
377.95	381.00	3.05	3.02	99	1.43	47	3R	3H	1W	
381.00	384.05	3.05	3.03	99	0.41	13	3R	3H	1W	
384.05	387.10	3.05	3.01	99	1.42	47	2R	3H	1W	
387.10	390.14	3.04	2.98	98	2.58	85	2R	3H	1W	
390.14	393.19	3.05	3.05	100	2.37	78	2R	3H	1W	
393.19	396.24	3.05	3.02	99	1.85	61	3R	3H	1W	
396.24	399.29	3.05	2.89	95	1.65	54	3R	3H	1W	
399.29	402.34	3.05	2.87	94	1.67	55	3R	3H	1W	
402.34	405.38	3.04	2.88	95	1.91	63	3R	3H	1W	
405.38	408.43	3.05	2.74	90	1.99	65	3R	3H	1W	
408.43	411.48	3.05	2.89	95	1.27	42	3R	3H	1W	
411.48	414.53	3.05	2.85	93	1.84	60	3R	3H	1W	
414.53	417.58	3.05	3.05	100	2.23	73	3R	3H	1W	
417.58	420.62	3.04	2.89	95	2.49	82	0R	3H	1W	EOH -EOS

OS -18-280

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
0.00	0.00	0.00	-QC-	0.00	0	S050989	☐	N18-070	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S051174	☐	N18-071	core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S051167	☐	N18-071	core	CS10	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S050900	☐	N18-063	Core	CS9	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S051152	☐	N18-070	Core	CS6	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S050981	☐	N18-070	Core	CS9	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S050966	☐	N18-068	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S050961	☐	N18-068	Core	CS6	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S050956	☐	N18-068	Core	CS9	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S050936	☐	N18-067	core	CS6	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S050925	☐	N18-067	core	CS10	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S050916	☐	N18-067	core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	S051163	☐	N18-071	core	CS6	☐	☐	☐
2.47	4.00	1.53	OVB	1.01	66	S050891	☐	N18-063	Core		☐	☐	☐
4.00	6.10	2.10	LST	0.80	38	S050892	☐	N18-063	Core		☐	☐	☐
6.10	9.14	3.04	LST	0.93	31	S050893	☐	N18-063	Core		☐	☐	☐
9.14	12.19	3.05	LST	1.92	63	S050894	☐	N18-063	Core		☐	☐	☐
12.19	15.24	3.05	LST	2.68	88	S050895	☐	N18-063	Core		☐	☐	☐
15.24	21.34	6.10	LST	3.84	63	W233162	☐	N18-C04	chip		☐	☐	☐
21.34	27.43	6.09	LST	4.67	77	W233163	☐	N18-C04	chip		☐	☐	☐
27.43	33.53	6.10	LST	4.92	81	W233164	☐	N18-C04	chip		☐	☐	☐
33.53	39.62	6.09	LST	4.69	77	W233165	☐	N18-C04	chip		☐	☐	☐
39.62	45.72	6.10	LST	5.61	92	W233166	☐	N18-C04	chip		☐	☐	☐
45.72	51.82	6.10	LST	5.91	97	W233167	☐	N18-C04	chip		☐	☐	☐
51.82	57.91	6.09	LST	5.43	89	W233168	☐	N18-C04	chip		☐	☐	☐
57.91	62.48	4.57	LST	4.49	98	W233169	☐	N18-C05	Chip		☐	☐	☐
62.48	68.58	6.10	LST	5.84	96	W233170	☐	N18-C05	Chip		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
68.58	74.68	6.10	LST	5.53	91	W233171	☐	N18-C05	Chip		☐	☐	☐
74.68	80.77	6.09	LST	5.39	89	W233172	☐	N18-C05	Chip		☐	☐	☐
80.77	86.87	6.10	LST	5.32	87	W233173	☐	N18-C05	Chip		☐	☐	☐
86.87	92.96	6.09	LST	5.64	93	W233174	☐	N18-C05	Chip		☐	☐	☐
92.96	96.01	3.05	LST	2.78	91	S050896	☐	N18-063	Core		☐	☐	☐
96.01	99.06	3.05	LST	2.25	74	S050897	☐	N18-063	Core		☐	☐	☐
99.06	102.11	3.05	LST	3.05	100	S050898	☐	N18-063	Core		☐	☐	☐
102.11	105.16	3.05	LST	2.92	96	S050899	☐	N18-063	Core		☐	☐	☐
105.16	108.20	3.04	LST	2.87	94	S050901	☐	N18-067	core		☐	☐	☐
108.20	111.25	3.05	LST	2.73	90	S050902	☐	N18-067	core		☐	☐	☐
111.25	114.30	3.05	LST	3.00	98	S050903	☐	N18-067	core		☐	☐	☐
114.30	117.35	3.05	DMT	2.93	96	S050904	☐	N18-067	core		☐	☐	☐
117.35	120.40	3.05	DMT	2.94	96	S050905	☐	N18-067	core		☐	☐	☐
120.40	123.44	3.04	DMT	3.04	100	S050906	☐	N18-067	core		☐	☐	☐
123.44	126.49	3.05	DMT	3.05	100	S050907	☐	N18-067	core		☐	☐	☐
123.44	126.49	3.05	DMT	3.05	100	S050908	☐	N18-067	core		☐	☐	☑
126.49	129.54	3.05	DMT	2.95	97	S050909	☐	N18-067	core		☐	☐	☐
129.54	132.59	3.05	DMT	3.05	100	S050910	☐	N18-067	core		☐	☐	☐
132.59	135.64	3.05	DMT	3.05	100	S050911	☐	N18-067	core		☐	☐	☐
135.64	138.68	3.04	DMT	2.95	97	S050912	☐	N18-067	core		☐	☐	☐
138.68	140.73	2.05	DMT	1.90	93	S050913	☐	N18-067	core		☐	☐	☐
140.73	142.95	2.22	DMT	2.10	95	S050914	☐	N18-067	core		☐	☐	☐
142.95	144.78	1.83	DST, DMT	1.70	93	S050915	☐	N18-067	core		☐	☐	☐
144.78	147.83	3.05	DST	2.98	98	S050917	☐	N18-067	core		☐	☐	☐
144.78	147.83	3.05	DST	2.98	98	S050918	☐	N18-067	core		☐	☑	☐
147.83	150.88	3.05	DST	3.05	100	S050919	☐	N18-067	core		☐	☐	☐
150.88	153.92	3.04	DST	3.04	100	S050920	☐	N18-067	core		☐	☐	☐
153.92	156.97	3.05	DST	2.88	94	S050921	☐	N18-067	core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
156.97	160.02	3.05	DST	2.99	98	S050922	☐	N18-067	core		☐	☐	☐
160.02	163.07	3.05	DST	3.05	100	S050923	☐	N18-067	core		☐	☐	☐
163.07	166.12	3.05	DST	2.94	96	S050924	☐	N18-067	core		☐	☐	☐
166.12	169.16	3.04	DST	3.01	99	S050926	☐	N18-067	core		☐	☐	☐
169.16	172.21	3.05	DST	3.05	100	S050927	☐	N18-067	core		☐	☐	☐
172.21	175.26	3.05	DST	2.93	96	S050928	☐	N18-067	core		☐	☐	☐
175.26	178.31	3.05	DST	2.79	91	S050929	☐	N18-067	core		☐	☐	☐
178.31	181.36	3.05	DST	2.48	81	S050930	☐	N18-067	core		☐	☐	☐
181.36	184.40	3.04	DST	1.68	55	S050931	☐	N18-067	core		☐	☐	☐
184.40	187.45	3.05	DST	2.12	70	S050932	☐	N18-067	core		☐	☐	☐
187.45	190.50	3.05	DST	2.06	68	S050933	☐	N18-067	core		☐	☐	☐
190.50	193.55	3.05	DST	1.72	56	S050934	☐	N18-067	core		☐	☐	☐
193.55	196.60	3.05	DST	0.71	23	S050935	☐	N18-067	core		☐	☐	☐
196.60	199.64	3.04	DST	1.68	55	S050937	☐	N18-067	core		☐	☐	☐
199.64	202.69	3.05	DST	2.32	76	S050938	☐	N18-067	core		☐	☐	☐
202.69	205.74	3.05	DST	3.05	100	S050939	☐	N18-067	core		☐	☐	☐
205.74	208.79	3.05	DST	2.86	94	S050940	☐	N18-067	core		☐	☐	☐
208.79	211.84	3.05	DST	3.05	100	S050941	☐	N18-068	Core		☐	☐	☐
211.84	214.88	3.04	DST	2.73	90	S050942	☐	N18-068	Core		☐	☐	☐
214.88	217.38	2.50	DST	2.45	98	S050943	☐	N18-068	Core		☐	☐	☐
217.38	219.46	2.08	DST, LST	2.05	99	S050944	☐	N18-068	Core		☐	☐	☐
219.46	222.50	3.04	LST	2.65	87	S050945	☐	N18-068	Core		☐	☐	☐
222.50	225.55	3.05	LST	3.05	100	S050946	☐	N18-068	Core		☐	☐	☐
225.55	228.60	3.05	LST	2.98	98	S050947	☐	N18-068	Core		☐	☐	☐
228.60	231.65	3.05	LST	2.92	96	S050948	☐	N18-068	Core		☐	☐	☐
231.65	234.70	3.05	LST	2.83	93	S050949	☐	N18-068	Core		☐	☐	☐
231.65	234.70	3.05	LST	2.83	93	S050950	☐	N18-068	Core		☐	☐	☑
234.70	237.74	3.04	LST	3.00	99	S050951	☐	N18-068	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
237.74	240.79	3.05	LST	3.05	100	S050952	☐	N18-068	Core		☐	☐	☐
240.79	243.84	3.05	LST	3.00	98	S050953	☐	N18-068	Core		☐	☐	☐
243.84	246.89	3.05	LST	2.93	96	S050954	☐	N18-068	Core		☐	☐	☐
246.89	249.94	3.05	LST	3.05	100	S050955	☐	N18-068	Core		☐	☐	☐
249.94	252.98	3.04	LST	2.93	96	S050957	☐	N18-068	Core		☐	☐	☐
252.98	256.03	3.05	LST	3.02	99	S050958	☐	N18-068	Core		☐	☐	☐
256.03	259.08	3.05	LST	3.05	100	S050959	☐	N18-068	Core		☐	☐	☐
259.08	262.13	3.05	LST	2.94	96	S050960	☐	N18-068	Core		☐	☐	☐
262.13	265.18	3.05	LST	3.05	100	S050962	☐	N18-068	Core		☐	☐	☐
265.18	268.22	3.04	LST	2.93	96	S050963	☐	N18-068	Core		☐	☐	☐
268.22	271.27	3.05	LST	2.98	98	S050964	☐	N18-068	Core		☐	☐	☐
271.27	274.32	3.05	LST	3.05	100	S050965	☐	N18-068	Core		☐	☐	☐
274.32	277.37	3.05	LST	2.83	93	S050967	☐	N18-068	Core		☐	☐	☐
277.37	280.42	3.05	LST	3.04	100	S050968	☐	N18-068	Core		☐	☐	☐
280.42	283.46	3.04	LST	3.04	100	S050969	☐	N18-070	Core		☐	☐	☐
283.46	286.51	3.05	LST	3.05	100	S050970	☐	N18-070	Core		☐	☐	☐
286.51	289.56	3.05	LST	2.98	98	S050971	☐	N18-070	Core		☐	☐	☐
289.56	292.61	3.05	LST	2.92	96	S050972	☐	N18-070	Core		☐	☐	☐
292.61	295.66	3.05	LST	3.03	99	S050973	☐	N18-070	Core		☐	☐	☐
295.66	298.70	3.04	LST	3.04	100	S050974	☐	N18-070	Core		☐	☐	☐
298.70	301.75	3.05	LST	3.04	100	S050975	☐	N18-070	Core		☐	☐	☐
301.75	304.80	3.05	LST	3.02	99	S050976	☐	N18-070	Core		☐	☐	☐
304.80	307.85	3.05	LST	3.05	100	S050977	☐	N18-070	Core		☐	☐	☐
307.85	310.90	3.05	LST	2.97	97	S050978	☐	N18-070	Core		☐	☐	☐
310.90	313.94	3.04	LST	3.04	100	S050979	☐	N18-070	Core		☐	☐	☐
313.94	316.99	3.05	LST	3.05	100	S050980	☐	N18-070	Core		☐	☐	☐
316.99	320.04	3.05	LST	3.05	100	S050982	☐	N18-070	Core		☐	☐	☐
320.04	323.09	3.05	LST	2.85	93	S050983	☐	N18-070	Core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
323.09	326.14	3.05	LST	3.03	99	S050984	☐	N18-070	Core		☐	☐	☐
326.14	329.18	3.04	LST	2.89	95	S050985	☐	N18-070	Core		☐	☐	☐
329.18	332.23	3.05	LST	2.83	93	S050986	☐	N18-070	Core		☐	☐	☐
332.23	334.43	2.20	LST	2.20	100	S050987	☐	N18-070	Core		☐	☐	☐
334.43	337.38	2.95	LST	2.75	93	S050988	☐	N18-070	Core		☐	☐	☐
337.38	338.89	1.51	LST	1.43	95	S050990	☐	N18-070	Core		☐	☐	☐
337.38	338.89	1.51	LST	1.43	95	S050991	☐	N18-070	Core		☐	☑	☐
338.89	341.38	2.49	LST	2.49	100	S050992	☐	N18-070	Core		☐	☐	☐
341.38	344.42	3.04	LST	3.04	100	S050993	☐	N18-070	Core		☐	☐	☐
344.42	347.47	3.05	LST	2.98	98	S050994	☐	N18-070	Core		☐	☐	☐
344.42	347.47	3.05	LST	2.98	98	S050995	☐	N18-070	Core		☐	☑	☐
347.47	350.52	3.05	LST	2.95	97	S050996	☐	N18-070	Core		☐	☐	☐
350.52	353.57	3.05	LST	2.97	97	S050997	☐	N18-070	Core		☐	☐	☐
353.57	356.62	3.05	LST	2.96	97	S050998	☐	N18-070	Core		☐	☐	☐
356.62	359.66	3.04	LST	3.03	100	S050999	☐	N18-070	Core		☐	☐	☐
359.66	362.71	3.05	LST	2.85	93	S051000	☐	N18-070	Core		☐	☐	☐
362.71	365.76	3.05	LST	3.00	98	S051151	☐	N18-070	Core		☐	☐	☐
365.76	368.81	3.05	LST	2.97	97	S051153	☐	N18-070	Core		☐	☐	☐
368.81	371.86	3.05	LST	3.05	100	S051154	☐	N18-070	Core		☐	☐	☐
371.86	374.90	3.04	LST	3.03	100	S051155	☐	N18-070	Core		☐	☐	☐
374.90	377.95	3.05	LST	3.00	98	S051156	☐	N18-070	Core		☐	☐	☐
377.95	381.00	3.05	LST	3.02	99	S051157	☐	N18-070	Core		☐	☐	☐
381.00	384.05	3.05	LST	3.03	99	S051158	☐	N18-070	Core		☐	☐	☐
384.05	387.10	3.05	LST	3.01	99	S051159	☐	N18-071	core		☐	☐	☐
387.10	390.14	3.04	LST	2.98	98	S051160	☐	N18-071	core		☐	☐	☐
390.14	393.19	3.05	LST	3.05	100	S051161	☐	N18-071	core		☐	☐	☐
393.19	396.24	3.05	LST	3.02	99	S051162	☐	N18-071	core		☐	☐	☐
396.24	399.29	3.05	LST	2.89	95	S051164	☐	N18-071	core		☐	☐	☐

From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
399.29	402.34	3.05	LST	2.87	94	S051165	☐	N18-071	core		☐	☐	☐
402.34	405.38	3.04	LST	2.88	95	S051166	☐	N18-071	core		☐	☐	☐
405.38	408.43	3.05	LST	2.74	90	S051168	☐	N18-071	core		☐	☐	☐
405.38	408.43	3.05	LST	2.74	90	S051169	☐	N18-071	core		☐	☐	☑
408.43	411.48	3.05	LST	2.89	95	S051170	☐	N18-071	core		☐	☐	☐
408.43	411.48	3.05	LST	2.89	95	S051171	☐	N18-071	core		☐	☑	☐
411.48	414.53	3.05	LST	2.85	93	S051172	☐	N18-071	core		☐	☐	☐
414.53	416.45	1.92	LST	1.90	99	S051173	☐	N18-071	core		☐	☐	☐
416.45	417.58	1.13	MST, LST	1.05	93	S051175	☐	N18-071	core		☐	☐	☐
417.58	420.62	3.04	MST	2.89	95	S051176	☐	N18-071	core		☐	☐	☐

APPENDIX V

DIAMOND DRILLING - CERTIFICATES OF ANALYSIS

ALS Canada Ltd.

2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 (604) 984 0221 Fax: +1 (604) 984 0218
www.alsglobal.com/geochemistry

To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016 - 510 W HASTINGS STREET
VANCOUVER BC V6B 1L8

Finalized Date: 24-JUN-2018
Account: ARCHORI

CERTIFICATE WH18139271

Project: Orion

P.O. No.: 18-005

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 13-JUN-2018.

The following have access to data associated with this certificate:

GLENN ASCH	MARK BRADLEY	KEVIN CREEL
PAUL DOBAK	NATHAN ECK	VLADIMIR ISPOLATOV
JULIA LANE	KARL MARLOWE	LEE SCHOLL
LIZ STOCK	JEREMY VAUGHAN	

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
PUL-31	Pulverize split to 85% <75 um
LOG-23	Pulp Login - Rcvd with Barcode
LOG-21d	Sample logging - ClientBarCode Dup
SPL-21d	Split sample - duplicate
PUL-31d	Pulverize Split - duplicate

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-ICP21	Au 30g FA ICP-AES Finish	ICP-AES
ME-MS61	48 element four acid ICP-MS	
Hg-MS42	Trace Hg by ICPMS	ICP-MS

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:

Colin Ramshaw, Vancouver Laboratory Manager

ALS Canada Ltd.

2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 (604) 984 0221 Fax: +1 (604) 984 0218
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1016 - 510 W HASTINGS STREET
VANCOUVER BC V6B 1L8

Finalized Date: 24-JUN-2018
Account: ARCHORI

Project: Orion

CERTIFICATE OF ANALYSIS WH18139271

Sample Description	Method	WEI-21	Au-ICP21	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Recvd Wt.	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu
	Units	kg	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.02	0.001	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2
V762681		10.59	<0.001	0.07	0.31	59.1	80	0.16	0.01	32.0	4.62	5.80	1.3	4	0.36	2.7
V762682		10.72	<0.001	0.08	0.48	97.9	90	0.32	0.02	34.2	1.48	8.63	1.6	5	0.62	3.4
V762683		10.73	<0.001	0.09	2.62	424	160	1.01	0.08	28.2	0.47	35.4	6.5	33	4.39	12.2
V762684		5.96	<0.001	0.51	1.89	306	110	0.75	0.05	27.9	8.30	24.1	4.6	35	3.09	14.6
V762685		8.85	<0.001	0.99	1.41	235	110	0.67	0.04	23.9	19.45	24.4	2.8	41	2.47	19.1
V762686		9.60	<0.001	1.54	1.61	306	120	0.68	0.06	18.30	21.9	26.1	4.1	57	2.98	27.5
V762687		8.58	<0.001	0.68	1.39	201	130	0.56	0.05	19.45	23.9	22.8	3.5	39	2.14	17.3
V762688		9.66	<0.001	0.48	1.12	166.0	120	0.47	0.04	28.4	13.85	21.7	3.0	32	1.76	16.1
V762689		10.34	0.001	0.35	0.88	291	80	0.43	0.03	28.4	6.33	19.35	3.9	25	1.45	11.4
V762690		2.98	<0.001	0.02	0.07	85.6	20	0.14	0.01	35.0	0.45	5.25	0.6	3	0.09	1.5
V762691		6.71	<0.001	0.04	0.30	802	50	0.40	0.02	30.4	32.1	9.38	31.4	8	0.65	6.5
V762692		7.07	<0.001	0.01	0.04	1.7	40	0.06	0.02	21.0	0.11	0.97	0.9	<1	0.09	1.9
V762693		9.70	<0.001	0.05	0.43	227	100	0.27	0.02	34.1	5.09	11.30	4.6	9	0.62	8.6
V762694		11.43	<0.001	0.04	0.05	98.3	40	0.10	<0.01	35.0	4.70	3.01	2.0	2	0.06	2.0
V762695		10.50	<0.001	0.18	0.04	204	30	0.12	0.01	36.9	5.19	2.70	3.6	2	0.06	2.1
V762696		11.09	<0.001	0.03	0.06	127.5	30	0.10	0.01	38.0	9.95	5.36	3.8	4	0.13	4.2
V762697		5.88	<0.001	1.53	2.42	947	320	1.07	0.11	4.15	32.6	47.1	8.7	93	5.11	108.0
V762698		3.75	<0.001	1.97	2.89	201	440	1.05	0.15	0.28	23.8	55.9	4.4	142	6.37	227
V762699		1.64	<0.001	1.23	2.08	1110	210	1.23	0.11	0.30	25.9	33.9	14.8	125	4.75	550
V762700		1.46	<0.001	1.05	1.56	243	370	1.06	0.07	0.58	59.1	19.40	3.5	73	3.51	49.5
V762701		6.76	<0.001	1.09	2.95	333	250	1.29	0.12	0.17	20.0	26.3	6.4	86	6.35	64.8
V762702		6.17	0.001	1.35	2.22	169.0	420	0.91	0.10	0.12	13.15	19.40	3.9	57	4.84	58.5
V762703		0.11	0.292	0.32	6.51	571	100	0.63	0.30	0.53	0.16	145.5	2.8	243	3.18	23.7
V762704		11.07	0.002	1.89	2.66	324	230	1.08	0.12	0.12	17.85	22.5	4.7	73	5.98	71.8
V762705		7.36	0.001	1.49	2.75	159.5	190	1.16	0.13	0.15	12.05	26.9	4.7	64	6.45	63.4
V762706		9.24	<0.001	0.79	2.00	109.0	160	0.91	0.09	8.55	6.90	17.35	3.6	42	3.96	41.8
V762707		5.95	0.003	1.51	3.15	282	160	1.17	0.15	0.11	9.59	27.6	5.5	66	6.88	68.3
V762708		7.35	0.002	1.41	4.38	171.0	280	1.73	0.18	0.81	8.71	44.3	7.0	95	11.95	75.6
V762709		10.37	0.009	0.52	5.43	150.5	330	1.96	0.21	1.39	2.20	59.9	9.2	91	17.45	74.9
V762710		10.65	0.004	0.47	5.60	138.5	490	1.96	0.23	1.33	1.72	61.3	9.5	91	18.80	71.7
V762711		9.90	0.004	0.50	5.70	101.0	580	2.02	0.23	1.65	1.91	63.4	9.8	93	18.55	71.8
V762712		11.31	0.004	0.45	5.35	71.0	720	1.82	0.22	2.19	1.93	58.9	9.1	81	18.20	66.8
V762713		11.26	0.005	0.45	5.71	54.0	520	2.13	0.24	1.52	1.88	62.4	9.8	92	20.6	72.2
V762714		4.74	0.004	0.48	5.64	46.8	460	1.89	0.23	1.98	1.88	62.3	9.8	90	19.30	70.3
V762715		4.64	0.004	0.49	5.62	47.9	480	1.91	0.23	1.62	2.03	64.3	9.9	89	19.30	70.8
V762716		9.12	0.004	0.43	5.42	52.9	480	1.74	0.22	1.60	1.69	61.7	9.5	86	19.80	69.7
V762717		<0.02	0.006	0.46	5.65	54.5	400	1.85	0.22	1.65	1.76	62.7	9.8	90	20.0	71.4
V762718		9.32	0.004	0.43	5.79	38.8	400	1.97	0.24	1.42	1.43	64.1	9.5	88	19.45	72.2
V762719		0.11	2.09	0.52	2.45	435	520	0.68	0.37	10.50	0.89	39.6	8.0	41	3.10	23.8
V762720		8.78	0.005	0.40	5.86	45.8	490	2.10	0.25	1.21	1.39	65.4	10.0	90	20.8	71.6

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016 - 510 W HASTINGS STREET
VANCOUVER BC V6B 1L8

Finalized Date: 24-JUN-2018
Account: ARCHORI

Project: Orion

CERTIFICATE OF ANALYSIS WH18139271

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Hg-MS42	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni
	Units	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2
V762681		0.31	0.85	0.10	0.1	0.046	<0.005	0.14	4.9	1.6	2.99	104	5.23	0.01	0.5	18.8
V762682		0.42	1.21	0.11	0.2	0.068	<0.005	0.22	6.6	2.1	2.42	123	4.35	0.01	0.7	23.9
V762683		1.31	6.33	0.11	1.0	0.217	0.021	1.13	24.1	8.8	0.89	274	5.38	0.02	4.2	51.0
V762684		0.93	4.69	0.11	0.6	0.239	0.017	0.83	20.7	6.8	0.62	182	8.20	0.01	3.0	74.3
V762685		0.85	3.75	0.12	0.6	0.183	0.013	0.59	24.9	8.3	1.76	113	22.5	0.02	2.6	67.6
V762686		1.01	4.22	0.18	0.7	0.160	0.012	0.60	24.9	10.1	0.66	102	19.30	0.02	3.0	94.8
V762687		0.95	3.70	0.13	0.5	0.142	0.013	0.55	20.0	8.4	1.91	141	18.25	0.02	2.5	69.0
V762688		0.69	2.99	0.11	0.5	0.273	0.011	0.46	20.8	6.1	0.36	150	19.50	0.01	2.0	61.7
V762689		0.91	2.34	0.11	0.4	0.170	0.008	0.35	18.2	5.4	0.83	141	22.5	0.01	1.7	89.6
V762690		0.07	0.22	0.09	<0.1	0.045	<0.005	0.03	5.5	0.6	0.78	109	8.89	<0.01	0.1	13.4
V762691		3.84	0.77	0.05	0.1	0.116	0.005	0.10	10.1	1.7	2.36	507	51.9	0.01	0.6	548
V762692		0.45	0.20	0.11	<0.1	<0.005	0.005	0.02	0.5	0.9	13.00	201	0.17	<0.01	0.1	2.2
V762693		0.82	1.01	0.07	0.2	0.200	0.005	0.16	11.5	2.1	2.16	121	21.9	0.01	0.9	110.0
V762694		0.27	0.18	0.09	<0.1	0.092	<0.005	0.01	3.9	0.4	1.94	62	4.59	<0.01	0.1	42.0
V762695		0.54	0.17	0.07	<0.1	0.169	<0.005	0.01	3.7	0.4	0.76	129	5.67	<0.01	0.1	71.2
V762696		0.33	0.28	0.10	<0.1	0.076	<0.005	0.02	7.0	0.5	0.17	126	8.80	<0.01	0.1	58.2
V762697		2.99	6.47	0.10	1.0	0.921	0.033	0.78	53.5	18.8	0.39	151	68.0	0.02	3.8	311
V762698		1.17	8.02	0.19	1.3	0.501	0.030	0.99	69.0	20.2	0.23	52	33.0	0.02	4.8	178.5
V762699		1.64	7.10	0.11	1.1	1.330	0.067	0.73	40.1	8.8	0.15	61	119.5	0.01	5.2	417
V762700		0.99	3.88	0.06	0.7	0.543	0.031	0.50	21.8	5.2	0.10	50	62.7	0.01	3.3	193.5
V762701		1.68	7.95	0.08	1.1	0.501	0.033	1.02	22.1	9.2	0.22	49	60.9	0.02	5.1	201
V762702		1.14	5.97	0.07	0.8	0.260	0.024	0.80	13.0	9.1	0.17	42	49.4	0.02	3.3	117.0
V762703		6.39	19.60	0.10	4.2	7.63	0.052	1.41	69.7	17.8	0.16	54	5.98	0.46	10.4	16.7
V762704		1.50	7.63	0.07	1.0	0.215	0.029	0.94	14.9	10.5	0.20	44	49.4	0.03	4.1	126.5
V762705		1.65	8.32	0.08	1.1	0.297	0.033	0.98	16.7	11.1	0.21	47	55.7	0.03	4.4	117.5
V762706		1.46	5.80	<0.05	0.8	0.293	0.021	0.64	10.8	10.1	5.16	548	29.7	0.03	3.4	73.7
V762707		2.12	8.91	0.09	1.2	0.389	0.033	1.16	17.3	10.7	0.24	40	44.4	0.02	5.5	116.0
V762708		3.13	12.20	0.09	1.8	0.380	0.048	1.69	24.9	13.8	0.65	95	22.0	0.03	12.6	95.4
V762709		2.49	15.50	0.11	2.5	0.237	0.054	2.24	32.5	14.9	0.94	185	9.27	0.03	19.6	71.0
V762710		2.75	15.40	0.09	2.5	0.241	0.059	2.30	33.0	16.0	1.00	227	8.44	0.04	18.6	65.6
V762711		2.85	15.90	0.12	2.5	0.204	0.054	2.34	34.3	16.7	1.09	261	8.09	0.04	19.8	66.2
V762712		3.52	14.55	0.09	2.4	0.166	0.050	2.21	32.6	16.2	1.48	383	6.51	0.04	18.5	59.0
V762713		2.92	15.70	0.09	2.6	0.210	0.051	2.25	33.6	18.8	1.14	276	6.62	0.04	19.9	63.0
V762714		2.97	15.15	0.09	2.6	0.191	0.054	2.26	33.7	18.6	1.22	288	6.80	0.04	20.3	63.6
V762715		2.82	15.35	0.09	2.6	0.224	0.054	2.27	34.1	18.5	1.08	252	6.92	0.04	20.0	63.6
V762716		2.94	14.85	0.08	2.5	0.226	0.053	2.14	32.9	18.3	1.06	266	6.82	0.03	19.1	60.2
V762717		3.05	15.25	0.09	2.5	0.226	0.055	2.27	33.7	18.6	1.10	277	6.95	0.04	19.4	62.1
V762718		2.95	15.70	0.08	2.6	0.219	0.055	2.31	34.6	20.6	1.14	259	5.83	0.04	19.9	58.7
V762719		1.51	6.15	0.06	1.3	3.10	0.022	0.92	24.1	35.3	3.22	249	15.40	0.03	5.0	38.0
V762720		2.90	16.35	0.12	2.6	0.246	0.062	2.36	35.3	19.3	1.06	237	5.44	0.04	20.5	57.4

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1016 - 510 W HASTINGS STREET
VANCOUVER BC V6B 1L8

Finalized Date: 24-JUN-2018
Account: ARCHORI

Project: Orion

CERTIFICATE OF ANALYSIS WH18139271

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl
	Units	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
	LOD	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.01	0.005	0.02
V762681		130	3.0	5.3	0.010	0.05	0.87	0.9	2	<0.2	262	<0.05	<0.05	0.47	0.016	0.98
V762682		250	3.5	8.6	0.010	0.11	0.99	1.4	2	0.2	286	0.05	<0.05	0.75	0.025	1.13
V762683		560	9.8	49.1	0.006	1.19	2.65	7.5	2	0.8	100.0	0.28	<0.05	3.70	0.141	6.47
V762684		310	13.0	36.0	0.012	0.04	3.52	5.7	5	0.6	162.0	0.20	<0.05	2.42	0.100	3.69
V762685		460	7.0	26.7	0.066	0.23	8.65	3.1	10	0.5	221	0.16	<0.05	2.03	0.080	4.94
V762686		430	6.6	29.0	0.071	0.17	7.34	3.7	26	0.6	158.5	0.19	0.06	2.35	0.090	6.08
V762687		360	5.6	25.2	0.062	0.30	6.85	3.4	17	0.5	166.0	0.16	<0.05	2.06	0.077	4.61
V762688		350	7.1	18.4	0.035	0.19	7.98	4.7	8	0.4	218	0.13	<0.05	1.71	0.063	3.31
V762689		590	4.6	14.1	0.027	0.40	6.95	3.8	5	0.3	137.5	0.11	<0.05	1.34	0.047	2.85
V762690		1010	1.4	1.0	0.042	0.04	1.31	2.4	1	<0.2	107.5	<0.05	<0.05	0.21	<0.005	1.28
V762691		420	2.7	3.9	0.015	0.03	2.37	2.6	10	<0.2	119.5	<0.05	<0.05	0.52	0.016	2.10
V762692		190	1.3	0.7	<0.002	0.01	0.09	0.2	1	<0.2	47.4	<0.05	<0.05	0.06	<0.005	<0.02
V762693		420	3.2	5.8	0.026	0.05	1.50	1.8	5	0.2	162.0	0.05	<0.05	0.76	0.025	2.31
V762694		190	9.1	0.5	0.011	0.03	0.43	0.4	2	<0.2	148.5	<0.05	<0.05	0.08	<0.005	0.85
V762695		280	41.1	0.4	0.017	0.04	1.08	0.5	6	<0.2	103.5	<0.05	<0.05	0.08	<0.005	1.30
V762696		480	1.5	0.8	0.020	0.03	0.65	0.8	9	<0.2	144.0	<0.05	<0.05	0.16	<0.005	1.04
V762697		1120	59.1	36.1	0.114	1.25	28.5	3.0	21	1.1	74.2	0.23	0.12	3.82	0.125	8.83
V762698		1270	16.1	47.8	0.170	1.31	21.7	3.6	40	1.3	92.8	0.31	0.12	5.01	0.159	5.33
V762699		2120	75.0	32.5	0.104	1.88	12.20	4.6	22	1.0	119.5	0.24	0.23	3.44	0.111	11.20
V762700		3130	85.3	23.1	0.042	0.98	5.38	2.9	6	0.5	79.2	0.18	0.11	2.03	0.083	3.41
V762701		850	37.5	48.2	0.066	1.86	19.70	4.9	16	1.0	40.2	0.31	0.16	3.58	0.155	4.35
V762702		450	27.1	37.8	0.046	1.24	22.8	3.9	18	0.8	36.5	0.22	0.16	2.76	0.117	2.12
V762703		1050	14.5	43.9	0.003	3.17	108.5	17.0	1	2.4	565	0.71	0.13	9.26	0.584	6.77
V762704		480	59.7	46.2	0.048	1.67	24.5	4.9	22	0.8	34.8	0.27	0.19	3.30	0.143	2.44
V762705		640	81.0	49.0	0.040	1.80	18.60	5.6	18	0.9	34.8	0.28	0.15	3.45	0.147	2.82
V762706		620	30.8	30.7	0.029	1.41	10.75	4.7	10	0.7	603	0.21	0.10	2.42	0.107	1.88
V762707		430	57.4	53.7	0.037	2.33	25.7	5.9	19	1.0	35.4	0.35	0.14	3.89	0.171	3.53
V762708		1170	15.3	78.7	0.021	3.28	14.70	9.0	13	1.4	87.7	0.70	0.14	5.97	0.276	2.34
V762709		1190	14.8	103.0	0.009	1.88	5.09	10.7	5	1.8	122.0	1.09	0.10	8.37	0.368	1.64
V762710		1100	15.4	105.0	0.008	1.58	4.14	10.7	5	1.8	103.0	1.03	0.10	8.75	0.372	1.55
V762711		1160	16.8	106.5	0.008	1.51	4.37	11.0	5	1.8	134.5	1.08	0.09	9.06	0.385	1.40
V762712		1130	18.5	99.6	0.009	1.39	4.23	10.5	4	1.6	170.0	1.03	0.09	8.29	0.363	1.28
V762713		1210	15.1	104.5	0.008	1.44	4.24	11.1	5	1.8	133.0	1.12	0.10	8.94	0.387	1.33
V762714		1260	16.0	102.5	0.006	1.54	4.59	10.6	5	1.8	135.0	1.15	0.07	8.92	0.390	1.42
V762715		1210	16.3	103.0	0.007	1.52	4.62	10.6	5	1.8	116.0	1.16	0.09	8.90	0.385	1.48
V762716		1150	15.5	98.5	0.006	1.53	4.24	10.5	4	1.7	109.0	1.06	0.07	8.67	0.365	1.46
V762717		1200	16.0	102.0	0.006	1.58	4.35	10.7	5	1.8	111.0	1.10	0.10	8.74	0.385	1.48
V762718		1170	17.1	106.0	0.009	1.54	3.80	10.9	4	1.8	118.0	1.12	0.07	8.99	0.389	1.44
V762719		590	6.7	38.9	0.014	1.25	76.6	4.2	2	0.9	81.1	0.32	0.23	4.96	0.142	2.76
V762720		1110	14.8	112.0	0.007	1.51	3.91	11.2	4	1.9	99.8	1.16	0.10	9.18	0.387	1.51

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CERTIFICATE OF ANALYSIS WH18139271

Sample Description	Method Analyte Units LOD	ME-MS61 U ppm 0.1	ME-MS61 V ppm 1	ME-MS61 W ppm 0.1	ME-MS61 Y ppm 0.1	ME-MS61 Zn ppm 2	ME-MS61 Zr ppm 0.5
V762681		3.3	32	0.1	6.3	297	4.3
V762682		3.2	23	0.2	8.5	271	6.9
V762683		5.3	119	1.3	24.4	278	38.8
V762684		5.2	259	0.8	25.8	702	28.3
V762685		7.3	614	0.5	25.8	698	23.8
V762686		6.9	774	0.9	26.2	810	30.2
V762687		6.6	495	0.5	22.9	955	22.2
V762688		6.9	448	0.5	22.0	677	18.9
V762689		8.7	287	0.5	19.3	825	15.1
V762690		13.9	69	0.1	9.8	53	1.7
V762691		8.9	103	0.3	31.1	6660	6.2
V762692		0.6	3	0.1	0.8	29	<0.5
V762693		9.5	72	0.5	11.8	659	9.1
V762694		4.7	34	0.1	5.0	312	1.2
V762695		5.3	40	0.1	6.4	815	1.2
V762696		8.0	54	0.1	8.7	1200	2.0
V762697		20.0	1860	1.9	40.4	4320	44.2
V762698		23.0	3140	2.2	37.6	867	55.1
V762699		32.6	1880	1.3	30.0	649	62.5
V762700		26.1	719	1.0	25.6	511	37.2
V762701		11.6	1060	1.3	29.1	1200	49.4
V762702		6.6	1120	1.0	14.9	1520	44.7
V762703		7.4	177	24.3	16.1	43	181.5
V762704		7.1	1060	1.1	19.3	1850	40.5
V762705		8.2	822	1.2	26.0	1300	43.0
V762706		3.9	385	0.8	13.5	696	34.7
V762707		5.8	731	1.5	21.1	1080	50.1
V762708		5.8	738	1.4	30.0	827	75.8
V762709		4.5	448	2.5	26.0	358	102.5
V762710		4.2	404	1.4	24.3	309	101.5
V762711		4.3	400	1.5	25.6	339	105.0
V762712		3.8	374	1.3	25.1	340	103.5
V762713		4.2	393	1.4	25.5	340	107.0
V762714		4.2	381	1.5	25.0	334	107.0
V762715		4.2	377	1.5	24.2	365	104.0
V762716		4.0	355	1.4	24.3	299	101.0
V762717		4.1	371	1.5	24.7	313	101.5
V762718		4.1	362	1.4	24.9	271	103.5
V762719		7.0	161	65.0	18.0	91	52.4
V762720		4.1	359	1.5	24.8	257	108.5

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016 - 510 W HASTINGS STREET
VANCOUVER BC V6B 1L8

Project: Orion

Finalized Date: 24-JUN-2018
Account: ARCHORI

CERTIFICATE OF ANALYSIS WH18139271

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Applies to Method: REE's may not be totally soluble in this method.
ME-MS61

LABORATORY ADDRESSES

Applies to Method: Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.

CRU-31	CRU-QC	LOG-21	LOG-21d
LOG-23	PUL-31	PUL-31d	PUL-QC
SPL-21	SPL-21d	WEI-21	

Applies to Method: Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Au-ICP21	Hg-MS42	ME-MS61

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To: **ATAC RESOURCES LTD.**
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1016 - 510 W HASTINGS STREET
VANCOUVER BC V6B 1L8

Finalized Date: 29-JUN-2018
Account: ARCHORI

CERTIFICATE WH18143314

Project: Orion

P.O. No.: O18-006

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 18-JUN-2018.

The following have access to data associated with this certificate:

GLENN ASCH	MARK BRADLEY	KEVIN CREEL
PAUL DOBAK	NATHAN ECK	VLADIMIR ISPOLATOV
JULIA LANE	KARL MARLOWE	LEE SCHOLL
LIZ STOCK	JEREMY VAUGHAN	

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
PUL-31	Pulverize split to 85% <75 um
LOG-23	Pulp Login - Rcvd with Barcode
LOG-21d	Sample logging - ClientBarCode Dup
SPL-21d	Split sample - duplicate
PUL-31d	Pulverize Split - duplicate

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-ICP21	Au 30g FA ICP-AES Finish	ICP-AES
ME-MS61	48 element four acid ICP-MS	
Hg-MS42	Trace Hg by ICPMS	ICP-MS

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:

Colin Ramshaw, Vancouver Laboratory Manager

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VANCOUVER BC V6B 1L8

Finalized Date: 29-JUN-2018
Account: ARCHORI

Project: Orion

CERTIFICATE OF ANALYSIS WH18143314

Sample Description	Method	WEI-21	Au-ICP21	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Recvd Wt.	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu
	Units	kg	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.02	0.001	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2
V762721		10.33	0.004	0.51	5.74	44.7	520	2.03	0.23	1.33	3.82	60.9	9.4	82	22.5	75.5
V762722		10.59	0.003	0.55	6.02	197.5	680	2.15	0.24	1.43	3.53	63.8	9.7	85	25.4	76.0
V762723		11.13	0.009	0.41	5.75	110.5	780	2.03	0.22	1.87	1.53	64.1	9.5	74	24.6	64.6
V762724		12.09	0.005	0.48	5.41	76.4	390	1.95	0.20	2.00	2.26	61.2	9.4	75	24.3	68.3
V762725		11.45	0.005	0.45	5.86	47.9	550	2.12	0.21	1.70	2.36	66.3	10.1	81	28.2	76.2
V762726		4.16	0.004	0.40	5.75	37.7	580	2.11	0.21	1.56	1.52	64.0	9.4	77	26.2	71.4
V762727		1.02	0.004	0.44	5.54	29.5	700	1.93	0.19	1.61	1.83	62.9	9.8	74	26.1	66.1
V762728		5.06	0.004	0.44	5.80	34.5	500	2.16	0.24	2.59	1.37	64.1	9.5	81	28.4	71.1
V762729		4.31	0.004	0.46	5.92	35.5	570	2.15	0.23	1.31	1.62	63.0	9.3	83	27.8	75.4
V762730		6.21	0.005	0.51	5.72	43.4	630	2.06	0.22	1.44	1.57	60.3	9.1	79	26.7	73.9
V762731		2.85	0.005	0.50	5.86	32.9	690	2.30	0.23	1.17	1.78	62.8	9.6	82	24.7	78.0
V762732		2.53	0.003	0.48	6.20	39.3	1450	2.41	0.25	0.78	1.38	63.5	9.3	86	23.7	76.9
V762733		0.11	2.15	0.51	2.51	433	540	0.74	0.38	10.65	0.93	37.8	7.9	43	3.11	23.9
V762734		4.47	0.004	0.99	6.00	773	530	2.30	0.27	0.96	1.30	68.5	9.5	80	21.6	78.1
V762735		5.43	0.005	0.52	5.60	101.5	830	2.05	0.25	1.08	1.62	63.9	9.2	77	23.8	75.8
V762736		3.14	0.004	0.50	5.98	229	1160	2.33	0.26	1.03	1.64	69.5	9.7	81	27.0	82.2
V762737		4.23	0.004	0.49	5.88	268	1230	2.28	0.27	1.20	1.35	70.1	9.5	80	25.5	76.2
V762738		3.95	0.005	0.61	5.82	289	960	2.24	0.27	1.42	1.29	69.7	9.7	90	21.0	83.9
V762739		5.29	0.004	0.64	6.21	182.0	1020	2.50	0.29	0.97	1.65	71.0	9.7	88	23.2	90.0
V762740		1.66	0.009	0.65	6.36	534	670	3.09	0.30	0.78	1.52	72.2	10.6	90	23.2	90.5
V762741		1.86	0.024	1.06	5.74	1490	600	2.03	0.26	1.85	3.10	61.6	8.5	83	28.3	82.9
V762742		5.05	<0.001	0.01	0.06	1.8	30	<0.05	0.02	20.6	0.07	1.18	0.7	1	0.16	2.2
V762743		2.44	0.009	0.70	5.73	186.0	450	2.37	0.25	0.87	1.21	64.8	9.3	83	19.30	87.6
V762744		5.35	0.006	0.65	6.12	79.8	1400	2.17	0.28	0.75	1.53	69.2	9.7	86	29.6	91.4
V762745		5.22	0.004	0.59	6.11	77.5	1380	2.15	0.28	0.98	1.70	69.8	9.4	86	29.8	91.7
V762746		2.58	0.004	0.55	6.12	62.6	1440	2.00	0.28	0.91	1.48	64.4	9.0	88	28.8	87.8
V762747		6.05	0.006	0.58	6.26	35.9	1480	2.17	0.27	0.78	1.44	69.6	9.6	90	29.8	92.7
V762748		6.82	0.004	0.56	6.05	58.7	1300	2.07	0.27	1.12	1.51	67.9	9.5	87	26.3	86.8
V762749		5.23	0.011	0.95	5.63	220	530	2.21	0.26	1.57	1.52	67.3	9.4	81	23.8	85.4
V762750		6.55	0.007	1.26	5.66	1275	340	1.97	0.26	1.50	2.29	62.3	9.5	81	19.30	86.6
V762751		<0.02	0.007	1.33	5.77	1300	440	1.91	0.27	1.50	2.22	62.4	9.6	83	20.0	89.1
V762752		6.45	0.004	0.60	6.09	58.8	1440	2.13	0.27	0.71	1.42	64.8	8.9	90	27.5	86.5
V762753		6.02	0.005	0.58	5.93	51.4	1220	2.05	0.26	1.00	1.47	67.7	9.1	90	30.5	87.2
V762754		5.87	0.006	0.57	6.13	87.7	1500	2.20	0.28	0.92	1.40	69.9	9.9	89	30.6	89.9
V762755		5.60	0.008	0.65	5.80	72.1	910	2.07	0.27	0.89	1.49	66.5	9.4	89	28.5	87.1
V762756		5.01	0.006	0.70	5.96	49.5	970	2.19	0.27	1.21	1.68	67.7	9.4	93	27.4	89.5
V762757		6.56	0.006	0.70	6.11	127.0	1320	2.22	0.27	1.25	1.65	68.2	9.6	92	26.3	90.5
V762758		0.11	2.11	0.59	2.59	460	540	0.79	0.45	11.00	1.00	45.0	8.7	42	3.33	27.2
V762759		6.28	0.007	0.70	6.14	125.5	950	2.04	0.28	1.26	1.35	69.5	9.5	90	27.2	90.2
V762760		5.53	0.005	0.77	6.00	239	590	2.09	0.27	0.94	1.87	65.1	8.8	95	21.7	90.3

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
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1016 - 510 W HASTINGS STREET
VANCOUVER BC V6B 1L8

Finalized Date: 29-JUN-2018
Account: ARCHORI

Project: Orion

CERTIFICATE OF ANALYSIS WH18143314

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Hg-MS42	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni
	Units	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2
V762721		2.84	14.85	0.05	2.6	0.256	0.051	2.27	32.8	18.2	1.05	229	6.07	0.04	19.4	57.8
V762722		2.85	15.50	<0.05	2.8	0.167	0.056	2.42	35.4	18.5	1.08	225	6.24	0.04	20.6	60.7
V762723		3.22	14.60	<0.05	2.7	0.144	0.051	2.35	34.4	16.3	1.29	319	5.04	0.04	19.9	55.2
V762724		3.70	14.45	<0.05	2.5	0.172	0.050	2.22	33.7	17.0	1.34	323	5.27	0.04	19.4	59.4
V762725		2.96	15.75	<0.05	2.9	0.180	0.056	2.40	36.3	18.3	1.09	240	6.00	0.04	21.5	61.6
V762726		3.30	14.90	0.05	2.7	0.171	0.055	2.35	34.4	17.1	1.20	293	5.71	0.04	19.8	56.4
V762727		3.22	14.30	<0.05	2.5	0.183	0.049	2.25	33.9	17.2	1.17	302	5.85	0.04	18.9	58.9
V762728		3.30	15.30	<0.05	2.6	0.217	0.056	2.38	34.2	18.1	1.66	297	6.34	0.04	18.2	56.0
V762729		3.23	15.45	<0.05	2.7	0.215	0.055	2.41	34.4	21.4	1.13	259	6.33	0.04	19.1	56.2
V762730		3.09	14.80	<0.05	2.6	0.209	0.049	2.30	33.7	19.5	1.14	263	5.71	0.04	18.1	56.1
V762731		3.41	15.40	<0.05	2.7	0.212	0.058	2.33	34.7	21.4	1.17	287	5.90	0.04	19.5	58.9
V762732		3.95	16.35	<0.05	2.6	0.181	0.052	2.52	35.0	20.1	1.20	324	4.91	0.04	16.6	52.2
V762733		1.54	5.84	<0.05	1.3	2.84	0.021	0.92	23.7	34.5	3.25	244	15.30	0.04	4.7	37.6
V762734		3.23	17.10	0.15	2.8	0.298	0.050	2.65	36.9	13.8	0.95	232	5.87	0.04	18.5	56.1
V762735		3.28	15.45	0.15	2.5	0.343	0.053	2.37	34.6	19.8	1.07	245	6.32	0.04	17.7	57.6
V762736		2.81	16.60	0.15	2.8	0.252	0.056	2.59	37.3	17.4	1.02	207	5.23	0.04	19.1	53.9
V762737		3.35	16.85	0.17	2.8	0.235	0.059	2.56	37.5	17.0	1.18	295	4.89	0.04	18.8	52.6
V762738		2.55	17.15	0.16	2.8	0.320	0.057	2.54	37.1	20.8	0.99	213	4.75	0.03	18.2	54.1
V762739		2.79	17.55	0.16	2.8	0.358	0.057	2.79	38.4	16.6	0.96	200	5.28	0.04	18.3	56.8
V762740		2.47	18.20	0.16	3.0	0.424	0.060	2.87	39.2	17.5	0.72	121	5.27	0.04	19.4	64.7
V762741		2.73	15.40	0.15	2.4	0.934	0.062	2.28	33.7	41.4	0.91	246	4.42	0.02	16.0	48.8
V762742		0.44	0.22	0.07	<0.1	<0.005	0.005	0.02	0.6	1.0	13.05	197	0.11	0.01	0.1	1.1
V762743		3.99	16.25	0.15	2.6	0.315	0.056	2.63	34.7	11.1	0.91	239	4.20	0.03	16.2	53.6
V762744		2.63	17.35	0.17	2.9	0.278	0.058	2.78	37.8	15.3	0.97	165	4.98	0.04	18.3	57.7
V762745		2.83	17.50	0.16	2.9	0.192	0.060	2.62	38.3	21.4	1.05	197	4.92	0.04	18.8	55.0
V762746		3.21	16.65	0.15	2.7	0.167	0.056	2.66	35.9	19.9	1.11	241	4.66	0.04	17.5	51.5
V762747		2.81	17.70	0.14	2.9	0.175	0.058	2.70	38.2	21.3	1.00	186	5.00	0.04	18.4	56.0
V762748		3.92	17.05	0.14	2.8	0.215	0.061	2.69	37.1	17.8	1.26	331	4.74	0.04	18.6	55.6
V762749		3.04	16.80	0.15	2.7	0.276	0.056	2.60	35.9	16.3	1.12	247	4.86	0.03	17.7	56.6
V762750		3.68	16.30	0.15	2.4	0.407	0.054	2.50	32.4	15.4	0.96	246	4.33	0.03	15.8	56.3
V762751		3.77	16.70	0.14	2.6	0.400	0.054	2.57	32.8	15.3	0.97	248	4.40	0.03	15.9	56.9
V762752		2.97	16.85	0.15	2.7	0.192	0.057	2.62	36.0	21.8	0.97	197	4.78	0.04	17.4	53.5
V762753		3.53	17.05	0.15	2.7	0.153	0.053	2.63	36.8	22.8	1.09	253	4.50	0.04	18.2	54.7
V762754		3.21	17.70	0.16	2.7	0.121	0.063	2.74	37.6	18.6	1.01	221	4.52	0.04	17.0	57.0
V762755		3.56	16.85	0.15	2.6	0.130	0.056	2.56	35.9	18.7	1.00	247	4.71	0.04	17.2	58.9
V762756		3.56	17.25	0.16	2.7	0.162	0.063	2.61	37.5	26.3	1.10	259	5.01	0.04	18.1	59.6
V762757		3.22	17.45	0.15	2.7	0.182	0.058	2.72	37.8	19.6	1.02	221	5.33	0.04	17.8	61.7
V762758		1.59	6.87	0.11	1.6	2.90	0.023	0.94	27.5	40.3	3.37	251	17.90	0.04	5.3	40.2
V762759		3.20	17.60	0.16	2.7	0.190	0.061	2.69	38.1	18.3	1.04	215	5.22	0.04	17.1	57.1
V762760		2.91	16.90	0.15	2.6	0.310	0.055	2.59	36.0	21.3	0.80	140	5.88	0.04	17.4	58.2

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Finalized Date: 29-JUN-2018
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Project: Orion

CERTIFICATE OF ANALYSIS WH18143314

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl
	Units	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
	LOD	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.01	0.005	0.02
V762721		1180	14.9	110.5	0.006	1.52	5.84	9.8	6	1.8	107.0	1.12	0.11	9.12	0.378	1.58
V762722		1200	21.3	116.5	0.007	1.56	6.07	10.2	6	1.8	105.5	1.21	0.09	9.57	0.394	1.60
V762723		1230	15.8	108.5	0.006	1.38	3.74	9.8	4	1.7	112.5	1.11	0.07	9.25	0.395	1.40
V762724		1170	16.6	105.5	0.005	1.72	5.10	9.9	5	1.7	139.0	1.08	0.06	8.75	0.365	1.40
V762725		1230	16.9	119.0	0.005	1.53	4.89	10.1	5	1.8	106.0	1.22	0.10	9.74	0.392	1.60
V762726		1200	15.3	112.5	0.005	1.40	3.70	9.6	5	1.7	106.5	1.12	0.09	9.16	0.381	1.37
V762727		1230	15.8	107.0	0.006	1.37	3.47	9.8	4	1.6	108.0	1.07	0.06	8.97	0.366	1.43
V762728		1050	15.4	117.0	0.007	1.33	3.16	10.0	4	1.8	184.5	1.03	0.08	9.01	0.366	1.63
V762729		1190	14.7	119.0	0.006	1.34	3.48	10.3	5	1.7	102.0	1.09	0.11	9.23	0.383	1.62
V762730		1170	14.6	112.5	0.005	1.24	3.54	9.9	3	1.7	100.0	1.02	0.08	8.91	0.365	1.38
V762731		1240	15.2	116.0	0.006	1.26	3.72	10.6	4	1.7	97.0	1.13	0.09	9.39	0.379	1.48
V762732		910	14.7	119.5	0.005	0.99	3.19	11.3	4	1.8	118.0	0.96	0.11	9.22	0.371	1.38
V762733		560	6.7	40.9	0.012	1.27	78.0	3.7	2	0.8	82.1	0.32	0.28	4.96	0.142	2.82
V762734		940	24.5	121.5	0.006	1.53	5.26	11.1	5	1.8	89.3	1.10	0.09	9.49	0.376	1.43
V762735		1080	18.7	115.0	0.005	1.37	4.73	10.4	5	1.7	104.5	1.03	0.09	9.08	0.354	1.45
V762736		1100	14.6	126.0	0.006	1.10	4.35	11.0	5	1.8	83.8	1.10	0.08	9.70	0.378	1.33
V762737		990	15.4	125.5	0.007	1.05	4.06	11.3	4	1.8	103.0	1.11	0.08	9.92	0.367	1.44
V762738		1040	16.7	120.5	0.007	1.26	5.31	11.3	5	1.8	193.5	1.07	0.09	9.76	0.360	1.46
V762739		1010	15.0	129.0	0.007	0.90	4.87	11.8	5	1.9	102.0	1.07	0.11	10.10	0.382	1.25
V762740		960	20.5	135.5	0.005	1.82	7.05	11.5	6	2.0	93.2	1.14	0.10	10.30	0.391	1.92
V762741		1030	34.7	93.9	0.005	1.99	10.55	10.2	5	2.4	336	0.93	0.09	8.71	0.350	1.57
V762742		190	1.1	1.0	<0.002	0.01	<0.05	0.2	1	<0.2	50.7	<0.05	<0.05	0.09	<0.005	<0.02
V762743		940	19.1	119.0	0.006	2.46	8.13	11.1	6	1.9	82.1	0.95	0.13	9.14	0.343	1.51
V762744		1030	16.7	133.0	0.007	0.94	5.05	11.5	5	1.9	90.8	1.09	0.10	9.88	0.379	1.42
V762745		1100	16.1	130.5	0.005	0.95	4.67	11.5	5	1.9	110.5	1.12	0.11	9.73	0.381	1.54
V762746		1020	14.8	127.0	0.005	0.89	4.33	11.1	4	2.1	104.0	1.05	0.12	9.19	0.379	1.40
V762747		1030	15.2	132.5	0.006	0.91	4.41	11.9	5	1.9	105.0	1.06	0.11	9.65	0.388	1.53
V762748		1080	16.0	127.0	0.007	1.05	4.80	12.0	5	1.9	119.5	1.10	0.09	9.77	0.374	1.55
V762749		950	33.7	125.0	0.007	1.81	10.90	11.6	6	1.9	123.5	1.08	0.08	9.24	0.347	1.40
V762750		890	28.4	113.5	0.007	2.53	8.76	11.5	6	1.8	113.5	0.91	0.09	8.47	0.335	1.37
V762751		910	38.9	116.0	0.005	2.62	9.28	11.7	7	1.9	115.5	0.98	0.15	8.76	0.342	1.38
V762752		990	15.8	125.5	0.005	0.87	4.47	11.2	5	1.8	102.0	1.02	0.10	9.48	0.371	1.48
V762753		1010	16.0	130.5	0.005	0.89	4.70	11.5	6	1.8	121.5	1.04	0.12	9.23	0.360	1.42
V762754		940	17.1	133.5	0.005	0.85	4.42	12.4	6	1.9	107.5	1.02	0.09	9.99	0.364	1.47
V762755		950	16.3	125.5	0.005	0.99	5.21	11.3	6	1.8	107.5	1.01	0.10	9.28	0.350	1.44
V762756		1030	16.3	130.5	0.004	1.07	5.31	11.8	7	1.8	129.0	1.05	0.13	9.52	0.365	1.57
V762757		960	20.8	131.0	0.007	1.03	5.34	11.7	6	1.9	133.0	1.02	0.12	9.79	0.369	1.45
V762758		580	7.1	45.0	0.015	1.30	88.2	4.4	2	0.9	90.9	0.36	0.26	5.79	0.146	3.02
V762759		960	16.6	130.5	0.006	1.03	4.90	11.7	6	1.9	138.5	1.00	0.12	9.73	0.364	1.51
V762760		960	17.9	121.0	0.008	1.81	5.88	11.2	7	1.8	135.5	1.00	0.12	9.22	0.362	1.39

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016 - 510 W HASTINGS STREET
VANCOUVER BC V6B 1L8

Finalized Date: 29-JUN-2018
Account: ARCHORI

Project: Orion

CERTIFICATE OF ANALYSIS WH18143314

Sample Description	Method Analyte Units LOD	ME-MS61 U ppm 0.1	ME-MS61 V ppm 1	ME-MS61 W ppm 0.1	ME-MS61 Y ppm 0.1	ME-MS61 Zn ppm 2	ME-MS61 Zr ppm 0.5
V762721		4.1	397	1.4	24.7	451	105.5
V762722		4.3	405	2.0	25.5	419	113.0
V762723		4.1	338	1.5	24.8	272	115.5
V762724		4.1	347	1.3	25.2	304	107.5
V762725		4.3	372	1.4	26.6	354	115.0
V762726		4.0	340	1.3	24.9	262	109.0
V762727		4.2	316	1.3	25.7	304	106.5
V762728		3.9	318	1.3	23.7	242	106.5
V762729		4.3	380	1.4	25.1	291	110.0
V762730		4.2	363	1.3	24.6	278	104.0
V762731		4.4	395	1.4	26.1	312	112.0
V762732		3.6	358	1.6	24.0	263	108.0
V762733		6.8	161	70.0	17.5	89	52.4
V762734		4.3	376	3.2	24.2	225	114.0
V762735		4.2	361	1.5	23.8	278	104.0
V762736		4.4	373	1.8	25.6	294	118.5
V762737		4.2	359	2.2	25.6	245	116.0
V762738		4.0	352	3.5	23.3	229	110.5
V762739		4.3	382	3.5	28.6	282	117.0
V762740		4.3	381	7.1	25.4	292	117.0
V762741		3.7	345	12.6	21.8	444	98.4
V762742		0.7	3	0.1	0.8	16	0.9
V762743		4.1	334	3.7	24.5	240	105.0
V762744		4.3	378	2.6	24.7	291	116.0
V762745		4.3	401	2.2	26.9	310	117.5
V762746		4.0	391	2.1	24.0	291	109.0
V762747		4.3	402	2.2	25.5	283	117.0
V762748		4.4	411	2.2	26.6	289	113.0
V762749		4.1	363	3.4	25.5	270	108.0
V762750		3.7	333	3.4	23.3	365	101.0
V762751		3.9	339	3.6	24.2	346	103.5
V762752		4.1	391	1.8	23.6	282	108.0
V762753		4.1	387	1.5	25.4	286	108.5
V762754		4.1	364	1.6	25.1	278	109.0
V762755		4.0	383	1.6	25.1	287	104.5
V762756		4.4	417	1.6	26.3	316	110.5
V762757		4.3	411	1.7	25.5	311	110.0
V762758		8.1	166	84.6	19.8	93	62.1
V762759		4.1	383	1.6	25.8	273	108.0
V762760		4.4	428	1.9	25.1	348	108.0

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VANCOUVER BC V6B 1L8

Project: Orion

Finalized Date: 29-JUN-2018
Account: ARCHORI

CERTIFICATE OF ANALYSIS WH18143314

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Applies to Method: REE's may not be totally soluble in this method.
ME-MS61

LABORATORY ADDRESSES

Applies to Method: Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.

CRU-31	CRU-QC	LOG-21	LOG-21d
LOG-23	PUL-31	PUL-31d	PUL-QC
SPL-21	SPL-21d	WEI-21	

Applies to Method: Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Au-ICP21	Hg-MS42	ME-MS61

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VANCOUVER BC V6B 1L8

Finalized Date: 30-JUN-2018
Account: ARCHORI

CERTIFICATE WH18143317

Project: Orion

P.O. No.: O18-007

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 18-JUN-2018.

The following have access to data associated with this certificate:

GLENN ASCH	MARK BRADLEY	KEVIN CREEL
PAUL DOBAK	NATHAN ECK	VLADIMIR ISPOLATOV
JULIA LANE	KARL MARLOWE	LEE SCHOLL
LIZ STOCK	JEREMY VAUGHAN	

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
PUL-31	Pulverize split to 85% <75 um
LOG-23	Pulp Login - Rcvd with Barcode
LOG-21d	Sample logging - ClientBarCode Dup
SPL-21d	Split sample - duplicate
PUL-31d	Pulverize Split - duplicate

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-ICP21	Au 30g FA ICP-AES Finish	ICP-AES
ME-MS61	48 element four acid ICP-MS	
Hg-MS42	Trace Hg by ICPMS	ICP-MS

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:

Colin Ramshaw, Vancouver Laboratory Manager

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Project: Orion

CERTIFICATE OF ANALYSIS WH18143317

Sample Description	Method	WEI-21	Au-ICP21	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Recvd Wt.	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu
	Units	kg	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.02	0.001	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2
V766081		7.15	0.001	2.55	2.30	157.5	500	0.98	0.07	25.1	3.42	28.1	4.4	37	4.35	19.0
V766082		5.74	<0.001	0.31	2.98	54.0	390	1.15	0.08	20.6	0.66	33.3	5.0	43	4.74	17.7
V766083		6.15	<0.001	0.17	4.92	17.2	450	1.45	0.16	16.20	0.31	53.7	7.6	60	12.05	17.1
V766084		3.31	<0.001	0.09	0.96	82.6	550	0.37	0.03	28.5	0.52	16.05	1.7	16	1.42	6.4
V766085		4.93	<0.001	0.13	1.04	201	270	0.43	0.03	31.1	0.96	13.35	1.3	17	1.59	6.6
V766086		6.72	<0.001	0.43	0.55	65.9	160	0.28	0.02	33.3	5.83	8.99	2.0	8	1.02	5.2
V766087		9.87	<0.001	0.29	0.52	83.3	140	0.35	0.02	32.8	4.01	9.11	1.6	8	1.75	5.2
V766088		12.04	0.001	<0.01	0.15	<0.2	110	<0.05	<0.01	34.7	<0.02	<0.01	<0.1	3	<0.05	<0.2
V766089		4.15	0.001	0.21	0.38	83.3	130	0.29	0.02	30.0	2.68	10.70	1.3	7	0.87	5.3
V766090		10.20	<0.001	1.62	2.49	251	540	1.12	0.07	14.60	11.00	32.7	3.7	88	8.63	38.3
V766091		12.39	<0.001	1.72	2.73	31.5	570	1.27	0.08	13.45	7.73	34.9	4.9	115	9.80	42.9
V766092		0.11	2.05	0.56	2.44	430	520	0.70	0.32	10.50	0.92	39.5	8.0	42	3.04	24.5
V766093		10.94	<0.001	0.75	2.57	42.1	360	1.06	0.07	18.05	11.25	32.0	4.6	60	8.85	23.2
V766094		9.47	<0.001	0.60	2.81	63.0	290	1.22	0.09	14.55	10.00	40.3	5.5	53	8.92	24.6
V766095		12.83	0.009	0.05	0.05	17.4	60	0.09	<0.01	37.0	0.83	2.79	0.6	2	0.14	2.4
V766096		10.05	<0.001	0.24	0.15	61.1	90	0.21	0.01	36.1	2.51	5.43	0.9	5	0.43	4.4
V766097		12.02	0.003	0.18	0.14	67.0	110	0.15	0.01	33.7	2.03	4.56	0.8	4	0.31	3.9
V766098		12.10	<0.001	0.30	0.50	61.2	120	0.31	0.02	30.5	1.08	11.05	1.5	8	0.95	4.7
V766099		8.57	<0.001	0.98	3.31	195.5	270	1.54	0.10	13.70	3.25	42.8	6.3	47	7.24	19.6
V766100		3.88	0.001	1.88	3.99	229	280	1.58	0.11	13.40	6.07	50.8	8.4	59	7.30	24.2
V766101		4.81	0.001	1.84	4.47	288	420	1.88	0.13	12.90	6.93	57.6	8.9	60	8.80	25.4
V766102		1.29	0.003	1.93	3.80	342	410	1.37	0.10	14.40	9.03	47.3	7.4	62	6.83	29.7
V766103		1.23	0.003	2.20	4.22	354	470	1.53	0.10	12.95	9.95	51.4	7.2	73	7.62	31.9
V766104		4.45	0.004	2.45	2.02	247	420	0.90	0.08	20.7	10.35	29.0	2.9	47	4.42	26.2
V766105		7.48	0.002	0.32	0.42	153.0	210	0.38	0.02	33.0	5.77	5.83	2.5	7	1.01	4.9
V766106		9.24	0.006	1.42	2.63	800	480	1.24	0.09	23.3	14.05	34.2	9.2	40	7.89	28.4
V766107		10.60	0.004	0.63	0.75	251	360	0.39	0.03	31.6	7.76	10.95	3.2	10	2.17	7.4
V766108		8.24	0.003	0.91	2.86	359	750	1.16	0.07	23.2	11.55	34.5	4.0	40	6.23	15.5
V766109		7.09	0.001	0.01	0.15	2.2	20	0.08	0.01	33.4	0.05	0.98	0.7	1	0.05	1.4
V766110		9.74	0.001	0.40	1.86	62.1	480	0.73	0.04	29.3	3.95	23.5	3.1	25	5.12	9.1
V766111		11.28	<0.001	0.18	0.29	29.0	370	0.16	0.01	33.9	1.92	6.89	0.9	6	0.52	2.9
V766112		4.62	<0.001	0.17	0.39	88.5	310	0.17	0.02	34.4	2.55	7.39	1.2	7	0.95	4.3
V766113		7.04	0.002	0.35	1.06	29.3	440	0.42	0.03	31.2	1.45	16.80	2.3	17	1.58	6.8
V766114		<0.02	<0.001	0.36	1.05	28.7	430	0.39	0.03	31.3	1.50	17.20	2.2	16	1.60	6.9
V766115		10.50	<0.001	0.47	2.45	12.7	510	0.88	0.06	24.4	4.72	26.2	4.5	30	4.16	11.6
V766116		10.83	<0.001	0.49	2.81	65.9	580	1.05	0.06	23.4	4.33	27.9	4.9	34	4.72	12.0
V766117		8.90	0.003	0.20	0.77	113.0	250	0.34	0.02	32.4	2.42	11.30	1.9	10	1.29	4.1
V766118		9.58	<0.001	0.21	0.37	90.6	150	0.19	0.01	29.2	1.65	7.19	1.1	6	0.60	2.6
V766119		8.45	<0.001	0.40	1.77	185.5	600	0.62	0.05	26.0	5.77	20.0	3.0	21	2.60	8.4
V766120		0.11	2.03	0.55	2.49	435	520	0.76	0.34	10.65	0.91	39.6	8.0	43	3.09	23.8

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Finalized Date: 30-JUN-2018
Account: ARCHORI

Project: Orion

CERTIFICATE OF ANALYSIS WH18143317

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Hg-MS42	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni
	Units	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2
V766081		1.27	6.38	0.10	1.0	0.169	0.027	1.23	21.5	8.5	1.82	132	2.59	0.02	3.9	34.8
V766082		1.45	8.07	0.11	1.3	0.085	0.032	1.61	22.7	10.0	2.98	179	2.15	0.03	4.9	35.2
V766083		2.05	12.45	0.15	2.0	0.156	0.052	2.58	30.4	15.1	1.89	142	1.71	0.04	7.5	38.8
V766084		0.61	2.75	0.11	0.4	0.031	0.009	0.52	12.5	5.0	1.28	119	0.73	0.02	1.5	12.6
V766085		0.47	2.93	0.11	0.4	0.031	0.012	0.56	9.8	4.7	1.22	71	0.65	0.01	1.6	14.0
V766086		0.33	1.54	0.14	0.3	0.553	0.006	0.20	7.4	5.0	0.48	110	0.95	0.04	0.9	11.6
V766087		0.25	1.22	0.16	0.2	0.179	0.006	0.23	7.9	2.9	2.49	88	7.08	0.01	1.0	18.4
V766088		0.10	<0.05	<0.05	<0.1	0.059	<0.005	0.07	<0.5	<0.2	1.90	64	<0.05	0.01	<0.1	<0.2
V766089		0.25	1.11	0.15	0.2	0.068	0.005	0.18	10.7	1.9	4.53	81	7.13	0.01	0.7	15.8
V766090		1.22	6.45	0.27	0.9	0.167	0.022	1.24	27.1	9.9	2.63	105	11.45	0.02	4.5	74.0
V766091		1.44	7.14	0.17	1.1	0.193	0.024	1.28	27.3	12.0	2.36	128	12.00	0.03	5.0	82.3
V766092		1.50	6.11	0.13	1.3	3.01	0.017	0.89	24.4	37.3	3.16	236	15.70	0.03	5.0	38.5
V766093		1.31	6.52	0.14	0.9	0.232	0.025	1.22	23.3	9.5	2.56	137	19.85	0.03	4.7	60.9
V766094		1.43	7.75	0.15	1.1	0.314	0.027	1.32	28.7	10.3	4.40	130	37.9	0.03	5.6	77.9
V766095		0.04	0.19	0.12	<0.1	0.029	<0.005	0.02	4.1	0.5	0.40	41	0.95	0.01	0.1	3.4
V766096		0.10	0.48	0.12	0.1	0.161	<0.005	0.06	7.3	1.2	0.41	46	1.31	0.01	0.3	9.4
V766097		0.09	0.40	0.17	0.1	0.072	<0.005	0.06	4.7	1.0	2.53	51	2.16	0.01	0.3	7.6
V766098		0.27	1.11	0.16	0.2	0.082	<0.005	0.23	9.6	2.2	3.57	81	8.73	0.01	0.9	16.9
V766099		1.64	8.42	0.22	1.3	0.348	0.020	1.54	27.4	13.0	7.30	159	34.1	0.03	5.8	76.6
V766100		2.04	10.55	0.21	1.5	0.723	0.029	1.85	34.2	14.3	6.19	255	46.5	0.03	7.6	102.0
V766101		2.11	11.40	0.20	1.7	0.650	0.035	2.08	36.2	14.5	6.51	203	48.5	0.03	8.1	107.0
V766102		1.92	9.60	0.19	1.4	1.215	0.031	1.77	32.9	11.2	4.56	338	34.9	0.03	6.9	94.4
V766103		2.02	10.85	0.17	1.6	1.195	0.031	1.98	35.4	12.1	4.68	269	39.7	0.03	7.7	101.0
V766104		1.04	5.48	0.14	0.8	1.150	0.021	0.90	23.1	7.3	1.11	137	17.20	0.02	3.8	65.5
V766105		0.29	1.13	0.11	0.2	0.267	<0.005	0.18	4.4	2.0	0.48	104	1.57	0.01	0.7	18.4
V766106		1.47	6.81	0.16	1.0	1.635	0.023	1.10	25.8	11.5	1.17	181	10.50	0.02	4.1	129.0
V766107		0.52	2.05	0.13	0.3	0.536	0.006	0.32	8.4	3.6	1.00	103	2.61	0.01	1.2	35.5
V766108		1.42	7.42	0.18	1.0	0.212	0.027	1.42	23.3	10.4	2.78	123	5.16	0.03	4.4	59.6
V766109		0.13	0.49	0.13	0.1	<0.005	<0.005	0.05	1.1	1.0	2.16	134	0.07	0.08	0.2	0.2
V766110		0.96	4.77	0.17	0.7	0.050	0.016	0.95	17.0	7.8	1.22	89	5.30	0.02	2.9	26.3
V766111		0.25	0.81	0.11	0.1	0.028	<0.005	0.15	7.0	1.4	0.72	62	1.26	0.01	0.5	7.9
V766112		0.32	1.03	0.11	0.1	0.120	<0.005	0.19	5.7	2.0	0.44	70	1.35	0.01	0.6	14.2
V766113		1.11	2.79	0.12	0.4	0.034	0.009	0.55	12.5	3.6	1.24	85	2.99	0.01	1.7	13.9
V766114		1.09	2.75	0.11	0.4	0.040	0.009	0.54	13.6	3.5	1.22	85	2.99	0.01	1.8	13.9
V766115		1.26	6.55	0.13	0.9	0.050	0.021	1.30	18.0	8.1	2.70	118	4.78	0.02	4.0	24.5
V766116		1.34	7.11	0.17	0.9	0.050	0.022	1.50	18.2	8.9	2.62	134	5.13	0.03	4.4	30.4
V766117		0.46	2.10	0.13	0.3	0.045	0.008	0.40	8.0	3.0	1.14	82	1.13	0.01	1.3	13.6
V766118		0.33	1.04	0.12	0.1	0.075	0.005	0.19	6.0	2.2	0.73	60	0.57	0.01	0.6	9.6
V766119		0.93	4.46	0.12	0.6	0.130	0.014	0.92	13.0	5.6	0.85	109	2.65	0.02	2.8	28.4
V766120		1.53	6.11	0.15	1.3	3.11	0.020	0.91	24.6	41.7	3.22	240	15.75	0.03	5.0	38.2

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016 - 510 W HASTINGS STREET
VANCOUVER BC V6B 1L8

Finalized Date: 30-JUN-2018
Account: ARCHORI

Project: Orion

CERTIFICATE OF ANALYSIS WH18143317

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl
	Units	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
	LOD	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.01	0.005	0.02
V766081		1040	8.2	53.7	0.023	0.61	1.39	4.6	4	0.8	278	0.27	<0.05	3.26	0.136	1.31
V766082		1230	5.2	67.5	0.024	0.68	1.06	5.5	4	1.0	221	0.36	<0.05	4.11	0.172	1.23
V766083		3270	8.1	114.5	0.009	1.63	1.07	8.4	3	1.5	220	0.53	<0.05	6.70	0.266	2.58
V766084		1870	2.1	21.6	0.015	0.22	0.41	1.9	2	0.4	407	0.10	<0.05	1.40	0.049	0.67
V766085		460	2.5	22.8	0.009	0.04	0.56	2.0	2	0.4	345	0.11	<0.05	1.50	0.053	0.87
V766086		240	12.5	8.5	0.002	0.01	1.22	1.1	1	0.2	240	0.07	<0.05	1.12	0.030	0.69
V766087		240	7.7	8.9	0.004	0.01	1.51	1.0	5	0.2	284	0.06	<0.05	0.89	0.029	1.12
V766088		350	<0.5	<0.1	<0.002	0.03	<0.05	<0.1	<1	<0.2	<0.2	<0.05	<0.05	<0.01	0.009	<0.02
V766089		320	5.8	7.1	0.015	0.05	2.03	0.8	6	0.2	238	0.05	<0.05	0.71	0.022	0.70
V766090		840	10.4	54.6	0.241	0.77	7.08	4.6	70	0.8	184.0	0.28	0.06	3.25	0.138	3.45
V766091		1440	7.7	59.9	0.049	1.57	10.70	5.0	11	0.9	199.0	0.33	0.09	3.59	0.154	0.93
V766092		550	7.0	41.5	0.011	1.24	77.9	4.0	2	0.8	84.0	0.32	0.23	4.71	0.138	2.87
V766093		570	7.4	55.2	0.039	1.35	11.45	4.3	7	0.9	249	0.29	0.06	3.33	0.144	1.03
V766094		440	12.2	59.4	0.051	1.34	11.75	5.0	7	1.0	156.5	0.35	0.05	4.05	0.158	1.48
V766095		130	2.1	0.9	0.005	0.02	0.42	0.2	1	<0.2	201	<0.05	<0.05	0.09	<0.005	0.11
V766096		190	22.7	2.7	0.002	0.01	1.80	0.5	2	<0.2	229	<0.05	<0.05	0.23	0.007	0.35
V766097		290	3.8	2.5	0.010	0.02	0.92	0.4	1	<0.2	240	<0.05	<0.05	0.25	0.008	0.27
V766098		490	12.1	8.7	0.011	0.12	1.54	1.0	2	0.2	200	0.05	<0.05	0.84	0.028	0.51
V766099		450	42.1	64.4	0.022	0.45	7.52	5.8	10	1.1	120.0	0.38	<0.05	4.89	0.185	2.24
V766100		410	75.3	78.2	<0.002	0.04	12.50	7.0	5	1.4	124.5	0.51	0.05	6.02	0.222	1.93
V766101		550	94.3	84.9	<0.002	0.04	14.20	7.4	4	1.6	126.5	0.53	<0.05	6.66	0.250	3.14
V766102		470	243	70.1	<0.002	0.03	18.65	6.2	3	1.2	175.5	0.46	0.08	5.28	0.211	3.52
V766103		510	217	79.0	<0.002	0.03	20.9	6.6	3	1.4	165.5	0.52	0.06	5.78	0.235	3.71
V766104		510	143.0	40.5	0.004	0.06	13.10	3.9	3	1.0	247	0.25	<0.05	2.88	0.109	3.13
V766105		270	18.8	7.5	0.002	0.01	1.45	0.9	2	0.2	324	0.05	<0.05	0.62	0.022	0.96
V766106		870	75.1	49.9	<0.002	0.04	8.03	4.4	4	1.3	284	0.27	0.05	3.73	0.128	7.46
V766107		580	16.0	14.0	0.003	0.03	2.34	1.5	2	0.3	319	0.08	<0.05	1.13	0.036	2.13
V766108		420	8.0	62.5	0.007	0.11	7.08	5.2	4	1.0	281	0.29	<0.05	3.72	0.153	3.87
V766109		50	0.6	1.1	<0.002	0.01	0.07	0.4	1	<0.2	79.9	<0.05	<0.05	0.07	0.009	0.03
V766110		290	4.6	43.2	0.012	0.33	4.31	3.4	3	0.6	371	0.19	<0.05	2.46	0.101	1.52
V766111		500	1.5	5.8	0.003	0.06	0.87	0.7	1	<0.2	445	<0.05	<0.05	0.47	0.016	0.40
V766112		220	3.7	7.3	0.005	0.08	0.87	0.9	2	<0.2	543	<0.05	<0.05	0.55	0.019	0.87
V766113		1330	2.8	22.0	0.004	0.98	1.98	2.0	3	0.4	485	0.11	<0.05	1.48	0.059	0.70
V766114		1290	2.8	22.8	0.006	0.97	2.03	2.0	3	0.3	492	0.12	<0.05	1.48	0.058	0.68
V766115		250	5.5	54.3	0.009	0.81	4.05	4.4	4	0.8	530	0.25	<0.05	3.30	0.133	1.17
V766116		200	6.0	60.3	0.012	0.58	4.34	4.8	3	0.9	476	0.28	<0.05	3.59	0.153	1.75
V766117		140	2.3	15.7	<0.002	0.06	0.91	1.6	2	0.3	789	0.08	<0.05	1.13	0.043	1.03
V766118		120	1.4	7.3	<0.002	0.02	0.60	0.8	1	<0.2	651	<0.05	<0.05	0.59	0.021	0.70
V766119		190	5.7	37.9	0.006	0.25	2.21	3.2	2	0.6	1275	0.17	<0.05	2.32	0.096	1.73
V766120		570	6.9	41.8	0.011	1.25	80.8	4.0	2	0.8	85.9	0.32	0.21	5.09	0.140	2.96

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
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1016 - 510 W HASTINGS STREET
VANCOUVER BC V6B 1L8

Finalized Date: 30-JUN-2018
Account: ARCHORI

Project: Orion

CERTIFICATE OF ANALYSIS WH18143317

Sample Description	Method Analyte Units LOD	ME-MS61 U ppm 0.1	ME-MS61 V ppm 1	ME-MS61 W ppm 0.1	ME-MS61 Y ppm 0.1	ME-MS61 Zn ppm 2	ME-MS61 Zr ppm 0.5
V766081		3.5	121	9.5	18.3	249	38.8
V766082		3.4	122	0.6	19.4	176	54.3
V766083		3.6	102	0.9	25.2	126	75.2
V766084		1.9	33	0.2	12.2	147	13.8
V766085		1.9	55	0.2	9.3	184	15.2
V766086		4.2	50	1.2	7.0	157	11.7
V766087		5.4	58	0.3	7.3	233	9.2
V766088		<0.1	22	<0.1	<0.1	96	<0.5
V766089		8.1	89	0.1	9.0	187	6.8
V766090		6.3	994	0.5	29.4	586	44.1
V766091		7.7	967	0.7	30.5	440	50.4
V766092		6.8	160	66.3	17.6	87	54.0
V766093		8.1	870	0.6	21.8	751	41.1
V766094		9.0	909	0.7	22.1	805	47.9
V766095		5.9	45	<0.1	4.0	40	1.7
V766096		7.9	79	0.1	7.0	117	3.6
V766097		4.9	48	0.1	4.0	79	3.2
V766098		7.6	37	0.4	7.6	126	8.4
V766099		8.2	597	2.0	18.6	497	52.1
V766100		8.4	851	4.4	21.7	1120	66.4
V766101		8.5	795	4.0	22.4	1010	70.3
V766102		7.6	1220	3.8	26.5	1470	58.7
V766103		8.2	1300	4.1	23.1	1550	65.1
V766104		5.3	781	2.1	20.4	893	36.0
V766105		1.4	63	0.3	5.9	244	6.9
V766106		4.8	385	1.0	21.1	1220	41.5
V766107		3.1	95	0.3	8.2	437	11.2
V766108		5.2	407	0.6	20.0	936	41.8
V766109		0.2	4	<0.1	2.2	6	1.7
V766110		3.9	231	0.4	13.9	301	28.2
V766111		2.0	55	0.1	7.5	123	4.3
V766112		1.5	47	0.1	6.3	185	5.8
V766113		3.4	93	0.3	12.7	98	15.0
V766114		3.4	90	0.2	12.9	98	14.6
V766115		4.4	237	0.5	14.3	224	46.4
V766116		4.3	267	0.5	14.3	291	39.0
V766117		1.7	56	0.2	9.3	200	11.2
V766118		1.3	36	0.3	8.0	157	6.0
V766119		2.5	143	0.4	11.9	419	25.7
V766120		7.2	159	73.2	17.8	88	55.4

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1016 - 510 W HASTINGS STREET
VANCOUVER BC V6B 1L8

Project: Orion

Finalized Date: 30-JUN-2018
Account: ARCHORI

CERTIFICATE OF ANALYSIS WH18143317

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Applies to Method: REE's may not be totally soluble in this method.
ME-MS61

LABORATORY ADDRESSES

Applies to Method: Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.

CRU-31	CRU-QC	LOG-21	LOG-21d
LOG-23	PUL-31	PUL-31d	PUL-QC
SPL-21	SPL-21d	WEI-21	

Applies to Method: Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Au-ICP21	Hg-MS42	ME-MS61

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VANCOUVER BC V6B 1L8

Finalized Date: 29-JUN-2018
Account: ARCHORI

CERTIFICATE WH18142133

Project: Orion

P.O. No.: O18-008

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 16-JUN-2018.

The following have access to data associated with this certificate:

GLENN ASCH	MARK BRADLEY	KEVIN CREEL
PAUL DOBAK	NATHAN ECK	VLADIMIR ISPOLATOV
JULIA LANE	KARL MARLOWE	LEE SCHOLL
LIZ STOCK	JEREMY VAUGHAN	

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
PUL-31	Pulverize split to 85% <75 um
LOG-23	Pulp Login - Rcvd with Barcode
LOG-21d	Sample logging - ClientBarCode Dup
SPL-21d	Split sample - duplicate
PUL-31d	Pulverize Split - duplicate

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-ICP21	Au 30g FA ICP-AES Finish	ICP-AES
ME-MS61	48 element four acid ICP-MS	
Hg-MS42	Trace Hg by ICPMS	ICP-MS

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:

Colin Ramshaw, Vancouver Laboratory Manager

ALS Canada Ltd.

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Finalized Date: 29-JUN-2018
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CERTIFICATE OF ANALYSIS WH18142133

Sample Description	Method	WEI-21	Au-ICP21	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Recvd Wt.	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu
	Units	kg	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.02	0.001	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2
V762761		5.77	0.009	0.70	5.69	219	250	1.98	0.24	0.90	1.49	52.6	8.3	98	19.60	93.5
V762762		5.46	0.009	1.05	5.41	175.0	410	1.84	0.22	1.45	2.04	62.1	7.7	104	16.85	86.7
V762763		5.46	0.004	0.88	5.57	125.0	440	2.00	0.24	1.25	2.16	63.8	8.9	96	19.75	90.1
V762764		5.83	0.003	0.94	5.35	109.0	520	1.96	0.24	1.08	2.31	62.2	7.8	100	18.70	91.3
V762765		3.64	0.013	1.18	5.09	256	420	1.60	0.23	1.07	2.23	60.9	7.0	110	10.55	87.9
V762766		4.90	0.005	1.53	4.76	99.9	630	1.98	0.20	0.52	2.77	55.7	5.9	128	12.90	98.3
V762767		3.45	0.006	1.50	4.88	110.0	350	1.96	0.23	0.40	2.64	56.7	6.1	133	13.25	103.0
V762768		4.89	0.005	1.57	4.47	312	290	1.65	0.21	1.36	2.72	53.6	6.0	112	10.80	96.4
V762769		1.24	0.014	20.6	3.78	992	200	1.40	0.23	3.58	160.0	40.7	7.0	774	11.60	175.5
V762770		4.97	0.001	0.02	0.04	1.2	30	0.05	0.03	20.3	0.21	1.01	0.6	1	0.12	3.3
V762771		7.00	0.001	4.99	2.54	75.6	190	1.07	0.11	14.00	6.72	25.9	3.1	240	7.44	67.4
V762772		5.88	0.001	1.86	1.81	36.7	270	0.82	0.11	13.75	1.22	20.1	2.2	148	5.38	56.9
V762773		7.02	0.005	2.76	3.63	147.5	380	1.21	0.16	5.82	3.68	34.1	6.6	184	9.20	78.3
V762774		5.82	0.007	11.95	3.53	162.0	270	1.66	0.20	8.33	93.0	31.9	7.3	384	11.75	126.0
V762775		5.50	0.003	10.40	2.31	70.2	140	1.17	0.11	13.05	25.9	24.2	2.7	407	7.10	93.7
V762776		5.47	0.004	6.84	3.17	43.8	490	1.20	0.15	4.94	1.92	30.0	3.8	351	9.85	109.0
V762777		5.68	0.005	1.91	3.92	35.8	390	1.38	0.21	0.87	0.99	35.5	4.9	255	12.20	121.0
V762778		4.96	0.004	1.37	4.62	36.3	210	1.54	0.22	0.26	0.66	40.1	6.0	207	14.65	103.5
V762779		0.11	2.05	0.50	2.49	439	530	0.75	0.33	10.60	0.89	41.5	8.0	43	3.15	26.3
V762780		5.59	<0.001	1.13	3.56	43.7	170	1.14	0.15	10.10	0.70	32.1	4.4	148	8.48	60.4
V762781		6.14	<0.001	0.38	1.53	17.6	790	0.57	0.08	19.95	0.44	14.55	1.9	59	3.23	20.3
V762782		5.76	<0.001	0.46	0.74	16.2	1450	0.33	0.05	24.2	0.97	8.90	1.3	35	0.72	10.6
V762783		6.35	<0.001	1.02	1.03	11.8	430	0.55	0.06	26.3	1.42	10.65	1.7	60	1.16	18.3
V762784		4.85	<0.001	1.45	3.50	62.2	260	1.23	0.14	9.71	0.90	31.2	4.5	138	7.94	47.4
V762785		4.40	<0.001	2.00	2.74	100.5	330	1.06	0.12	12.90	1.11	27.5	3.5	147	6.30	43.2
V762786		4.72	0.001	1.11	3.23	155.5	540	1.13	0.13	11.10	0.68	30.3	3.6	129	8.01	44.3
V762787		2.69	<0.001	1.92	4.34	188.5	1980	1.60	0.17	6.19	0.76	41.8	3.6	214	11.75	70.1
V762788		3.19	<0.001	0.39	0.71	82.9	4860	0.32	0.05	20.0	0.84	9.26	1.4	26	1.03	9.7
V762789		1.10	0.002	1.85	4.88	807	1560	1.29	0.20	0.96	0.31	50.5	1.4	119	11.95	43.3
V762790		<0.02	0.002	1.53	4.72	766	1310	1.28	0.19	0.97	0.32	48.7	1.4	118	11.85	41.3
V762791		0.44	0.017	0.96	4.75	1335	850	1.12	0.21	0.22	0.05	50.2	0.5	114	14.70	20.4
V762792		0.77	0.125	0.09	0.45	146.5	530	0.32	0.03	34.0	0.18	4.22	0.5	16	1.57	7.9
V762793		4.83	0.008	0.01	0.11	24.8	110	0.20	0.02	35.2	0.19	1.06	0.4	4	0.34	3.4
V762794		1.08	0.002	0.01	0.02	11.9	110	0.25	0.02	37.5	0.08	1.04	0.3	1	<0.05	2.3
V762795		1.83	0.005	0.54	2.52	563	430	1.33	0.10	19.20	0.63	26.4	3.4	52	7.08	33.4
V762796		4.88	<0.001	<0.01	0.13	1.4	30	0.12	0.03	32.0	<0.02	1.15	0.5	1	<0.05	4.0
V762797		1.54	<0.001	0.62	3.03	782	490	1.32	0.13	15.45	0.37	32.2	3.5	64	9.39	37.3
V762798		0.11	2.48	1.62	4.05	161.5	660	1.27	0.17	0.40	0.19	59.4	2.3	50	7.72	47.6
V762799		1.12	0.001	0.06	0.21	403	130	0.30	0.03	35.9	0.35	2.66	0.4	5	0.71	4.5
V762800		1.31	0.001	0.05	0.25	175.5	240	0.26	0.02	35.8	0.36	3.23	0.5	6	1.33	4.6

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016 - 510 W HASTINGS STREET
VANCOUVER BC V6B 1L8

Finalized Date: 29-JUN-2018
Account: ARCHORI

Project: Orion

CERTIFICATE OF ANALYSIS WH18142133

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Hg-MS42	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni
	Units	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2
V762761		2.52	14.90	0.11	2.7	0.327	0.061	2.52	20.6	13.6	0.70	111	5.65	0.03	17.8	52.0
V762762		2.87	13.95	0.12	2.5	0.479	0.059	2.46	35.3	11.7	0.90	144	6.88	0.03	17.7	59.9
V762763		3.11	14.85	0.10	2.7	0.396	0.057	2.48	35.1	14.9	0.81	149	6.83	0.03	18.1	62.7
V762764		2.95	14.50	0.11	2.7	0.429	0.062	2.37	35.1	14.1	0.75	118	7.77	0.03	18.3	65.3
V762765		2.54	13.60	0.09	2.6	0.712	0.054	2.27	35.3	14.1	0.61	100	7.73	0.02	18.5	66.6
V762766		2.42	13.40	0.10	2.7	0.430	0.054	1.96	32.4	15.4	0.50	74	10.50	0.03	18.8	76.4
V762767		2.63	13.75	0.10	2.7	0.482	0.060	1.97	32.2	18.4	0.44	59	9.88	0.03	18.7	76.0
V762768		2.89	13.20	0.12	2.5	0.488	0.055	1.83	31.3	12.7	0.79	99	8.93	0.03	18.0	72.0
V762769		4.22	10.20	0.32	2.3	2.03	0.058	1.41	40.6	12.6	0.38	87	184.5	0.02	8.5	593
V762770		0.46	0.15	0.09	<0.1	<0.005	0.007	0.01	0.5	0.7	12.70	196	0.30	<0.01	0.1	2.1
V762771		2.30	7.01	0.13	1.4	0.641	0.032	0.87	29.3	12.8	0.87	95	31.7	0.03	4.7	113.5
V762772		1.67	5.15	0.12	1.0	0.218	0.026	0.58	27.2	11.8	0.92	61	12.35	0.02	3.2	73.9
V762773		2.60	9.08	0.13	1.8	0.523	0.042	1.25	26.8	13.1	0.38	58	31.1	0.03	6.7	173.5
V762774		2.74	9.29	0.26	1.6	0.476	0.041	1.26	26.7	15.5	0.35	62	131.5	0.04	5.7	639
V762775		1.74	6.36	0.18	1.3	0.382	0.032	0.75	32.4	14.6	0.44	55	45.7	0.02	4.6	198.5
V762776		2.14	8.56	0.14	1.8	0.332	0.038	0.97	27.1	12.7	0.29	49	26.8	0.03	6.5	170.5
V762777		2.31	10.45	0.14	2.2	0.364	0.045	1.20	26.8	14.8	0.33	51	16.95	0.04	7.8	129.0
V762778		2.62	12.15	0.13	2.2	0.349	0.054	1.44	25.2	15.4	0.30	46	14.95	0.04	9.0	102.5
V762779		1.52	5.86	0.06	1.4	2.84	0.021	0.91	25.5	36.7	3.21	241	16.70	0.03	5.2	37.7
V762780		2.29	8.71	0.09	1.6	0.392	0.039	1.09	22.2	10.8	0.98	108	8.88	0.03	6.3	81.0
V762781		1.06	3.58	0.05	0.7	0.114	0.018	0.42	10.0	6.2	4.62	132	2.29	0.03	2.6	29.6
V762782		0.63	1.96	0.05	0.5	0.061	0.009	0.13	6.5	5.4	1.46	128	2.46	0.01	1.6	16.0
V762783		0.82	2.50	0.05	0.8	0.051	0.015	0.17	8.6	8.5	0.56	86	3.87	0.01	2.0	33.0
V762784		2.45	8.48	0.09	1.5	0.287	0.034	1.06	20.6	12.8	0.43	86	5.69	0.03	6.2	77.4
V762785		2.43	6.66	0.09	1.4	0.279	0.030	0.81	22.2	12.0	0.36	90	8.10	0.02	5.2	74.4
V762786		2.22	8.16	0.08	1.5	0.486	0.034	0.97	19.3	13.3	0.25	85	4.56	0.03	5.8	67.5
V762787		2.80	11.15	0.12	2.0	0.666	0.042	1.34	31.8	15.3	0.26	52	8.19	0.04	7.6	81.3
V762788		0.75	1.69	<0.05	0.5	0.557	0.010	0.17	6.7	5.0	3.94	216	2.64	0.01	1.6	19.5
V762789		2.96	13.60	0.11	2.4	3.60	0.048	1.74	34.1	16.4	0.39	30	5.50	0.04	9.5	27.6
V762790		2.84	13.40	0.11	2.3	3.71	0.046	1.69	34.0	15.7	0.40	29	5.47	0.04	9.5	27.5
V762791		2.91	17.70	0.11	2.4	1.785	0.085	1.99	32.3	15.9	0.22	12	5.36	0.04	9.8	9.3
V762792		0.23	1.36	0.05	0.2	0.222	0.007	0.13	3.2	2.5	0.13	117	2.15	<0.01	0.7	9.7
V762793		0.05	0.29	0.05	0.1	0.122	<0.005	0.04	0.7	0.7	0.22	47	0.95	<0.01	0.2	2.5
V762794		0.02	0.06	0.06	<0.1	0.176	<0.005	<0.01	1.1	0.3	0.11	79	0.12	<0.01	<0.1	1.3
V762795		1.39	6.87	0.08	1.3	0.617	0.030	0.80	18.3	6.5	0.16	204	8.44	0.02	5.0	57.0
V762796		0.11	0.41	0.06	<0.1	<0.005	<0.005	0.03	1.3	0.9	1.53	105	0.07	0.07	0.2	0.9
V762797		1.47	8.05	0.10	1.5	0.701	0.033	0.94	23.0	8.1	0.18	173	6.25	0.02	5.9	56.1
V762798		1.66	9.44	0.11	2.4	2.06	0.045	1.37	31.4	25.5	0.21	73	24.6	0.06	6.8	23.5
V762799		0.11	0.58	0.06	0.1	0.078	0.005	0.07	2.0	0.9	0.13	81	0.81	<0.01	0.4	3.4
V762800		0.13	0.67	0.07	0.1	0.546	<0.005	0.08	2.3	1.3	0.12	83	0.84	<0.01	0.5	4.6

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016 - 510 W HASTINGS STREET
VANCOUVER BC V6B 1L8

Finalized Date: 29-JUN-2018
Account: ARCHORI

Project: Orion

CERTIFICATE OF ANALYSIS WH18142133

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl
	Units	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
	LOD	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.01	0.005	0.02
V762761		970	14.8	110.5	0.004	2.14	9.58	10.5	5	3.5	104.0	1.03	0.08	8.40	0.343	1.46
V762762		1080	19.7	101.5	0.004	2.52	15.45	9.9	8	2.2	130.0	0.98	0.11	8.94	0.333	1.50
V762763		1040	17.2	110.0	0.007	2.67	6.97	10.6	7	2.7	135.5	1.07	0.12	9.37	0.331	1.87
V762764		1040	17.0	106.5	0.005	2.59	7.17	10.4	7	2.1	121.5	1.03	0.12	8.79	0.334	1.46
V762765		1150	29.2	89.1	0.006	2.31	8.27	9.3	7	1.9	122.5	1.05	0.12	8.73	0.324	1.51
V762766		1000	19.2	88.7	0.006	2.22	8.16	9.1	9	2.0	204	1.06	0.11	8.08	0.315	1.46
V762767		890	15.5	90.5	0.007	2.49	8.28	9.3	9	2.0	161.5	1.04	0.17	8.17	0.314	1.61
V762768		990	17.4	85.3	0.006	2.47	9.96	9.7	9	1.9	293	1.01	0.15	7.54	0.298	1.78
V762769		7780	98.6	68.9	0.647	4.89	48.1	9.2	114	1.5	382	0.49	0.27	5.99	0.215	11.40
V762770		170	1.3	0.8	0.002	0.01	0.13	0.1	<1	<0.2	46.4	<0.05	<0.05	0.07	<0.005	0.02
V762771		5320	6.8	44.6	0.093	2.52	5.02	7.7	23	1.1	661	0.29	0.07	3.95	0.153	1.92
V762772		6780	8.0	31.9	0.056	1.73	2.42	5.7	14	1.1	795	0.24	0.05	3.72	0.095	0.89
V762773		2140	10.6	64.9	0.094	2.89	11.10	8.3	30	1.6	443	0.42	0.10	4.91	0.208	4.55
V762774		>10000	14.1	71.0	0.558	3.23	44.2	8.2	88	1.2	495	0.35	0.18	4.87	0.176	8.99
V762775		3390	7.0	42.5	0.175	1.99	13.30	7.5	53	0.9	872	0.28	0.09	3.60	0.135	3.57
V762776		1920	8.0	55.1	0.074	2.40	3.74	8.8	32	1.0	480	0.42	0.07	4.51	0.201	0.90
V762777		1700	9.8	68.5	0.044	2.43	2.72	12.8	22	1.3	249	0.49	0.09	5.30	0.238	0.76
V762778		810	11.3	83.4	0.029	2.73	2.30	12.1	16	1.5	124.5	0.54	0.12	6.04	0.264	0.88
V762779		590	7.0	39.8	0.012	1.22	81.9	4.1	2	0.9	80.2	0.32	0.15	5.51	0.137	2.94
V762780		1030	8.2	57.1	0.019	2.29	2.36	9.6	13	1.2	599	0.37	0.07	4.60	0.199	0.69
V762781		1610	3.6	21.5	0.008	0.89	1.04	3.7	5	0.5	1380	0.16	<0.05	2.22	0.083	0.23
V762782		1730	2.5	7.4	0.008	0.43	0.78	2.0	3	0.3	1425	0.10	<0.05	1.34	0.039	0.14
V762783		2550	3.5	10.3	0.021	0.68	1.24	3.2	6	0.5	1855	0.12	<0.05	1.58	0.050	0.19
V762784		1560	9.1	59.5	0.014	2.54	2.40	8.7	13	1.3	673	0.39	0.05	4.43	0.195	0.53
V762785		1330	7.4	46.3	0.022	1.43	1.81	7.6	15	1.1	878	0.32	0.06	3.82	0.156	0.47
V762786		1240	8.3	57.4	0.006	1.06	2.04	9.5	10	1.3	628	0.35	0.05	4.54	0.179	0.67
V762787		800	10.9	80.8	0.011	0.45	2.48	11.7	18	1.5	344	0.47	0.09	6.17	0.238	0.81
V762788		990	2.7	8.8	0.004	0.10	0.90	3.0	4	0.5	1135	0.10	<0.05	1.32	0.039	0.10
V762789		1380	13.1	96.6	<0.002	0.53	2.27	8.1	7	3.1	522	0.58	0.15	7.64	0.302	0.86
V762790		1340	13.2	94.6	<0.002	0.50	2.20	7.8	7	3.1	508	0.58	0.11	7.60	0.292	0.88
V762791		1450	14.5	101.0	0.002	0.91	2.17	10.7	5	2.1	536	0.60	0.09	8.61	0.321	1.28
V762792		90	1.8	6.6	0.004	0.05	2.00	2.1	2	0.3	233	<0.05	<0.05	0.59	0.021	0.19
V762793		20	<0.5	1.8	0.003	0.02	0.48	0.5	2	0.2	271	<0.05	<0.05	0.15	0.006	0.09
V762794		10	0.5	0.2	<0.002	0.01	0.31	0.9	1	0.2	409	<0.05	<0.05	0.03	<0.005	0.05
V762795		510	6.9	47.2	<0.002	0.01	8.36	5.3	5	1.1	72.3	0.30	0.06	3.62	0.145	1.61
V762796		70	0.5	0.7	<0.002	0.01	0.09	0.3	1	0.3	79.9	<0.05	<0.05	0.08	0.010	<0.02
V762797		690	7.5	55.8	<0.002	0.01	2.69	4.4	2	1.3	81.1	0.37	<0.05	4.39	0.175	1.94
V762798		540	33.8	53.4	<0.002	0.76	155.5	7.3	1	2.1	174.0	0.43	0.29	7.47	0.192	13.75
V762799		50	0.8	3.5	0.002	0.01	0.40	1.1	1	0.3	185.0	<0.05	<0.05	0.30	0.011	0.22
V762800		50	0.9	4.2	0.002	0.01	0.35	1.2	1	0.3	173.5	<0.05	<0.05	0.37	0.014	0.21

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016 - 510 W HASTINGS STREET
VANCOUVER BC V6B 1L8

Finalized Date: 29-JUN-2018
Account: ARCHORI

Project: Orion

CERTIFICATE OF ANALYSIS WH18142133

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	U	V	W	Y	Zn	Zr
	Units	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.1	1	0.1	0.1	2	0.5
V762761		4.6	432	2.8	26.1	282	100.0
V762762		4.8	493	4.7	26.3	360	96.2
V762763		4.9	473	1.8	27.4	391	99.6
V762764		5.1	532	2.2	27.4	399	104.0
V762765		5.3	545	5.3	27.2	376	100.0
V762766		5.8	626	3.6	25.9	463	106.0
V762767		5.8	621	2.8	28.7	453	107.0
V762768		5.6	558	2.9	31.1	437	101.5
V762769		40.8	2390	3.3	83.5	4440	96.3
V762770		0.6	6	0.1	0.8	21	0.5
V762771		20.0	222	1.0	46.2	471	57.1
V762772		14.1	124	0.6	36.8	277	40.5
V762773		15.7	312	1.1	37.1	573	66.1
V762774		27.1	1890	1.0	53.1	3200	64.3
V762775		20.2	679	0.8	49.5	899	54.5
V762776		17.0	234	1.0	33.5	546	72.1
V762777		12.7	236	1.1	36.0	446	81.9
V762778		10.2	239	1.2	36.7	313	84.8
V762779		7.6	163	66.6	18.1	89	55.0
V762780		6.0	195	1.1	24.4	267	63.8
V762781		2.8	100	0.4	12.0	114	27.4
V762782		3.1	79	0.2	9.7	74	26.6
V762783		3.8	102	0.3	16.0	132	46.3
V762784		5.1	218	1.0	24.9	258	61.8
V762785		6.2	188	0.8	32.4	231	59.5
V762786		6.2	195	1.0	41.7	235	62.3
V762787		6.7	245	1.2	36.3	258	74.4
V762788		2.4	83	0.3	12.3	82	22.3
V762789		5.3	247	4.4	23.1	137	93.9
V762790		5.2	241	3.6	23.0	140	91.2
V762791		4.5	218	2.6	18.0	40	91.0
V762792		3.8	38	0.5	7.3	20	7.2
V762793		2.4	12	0.2	2.1	10	2.1
V762794		0.8	12	0.1	6.2	6	0.7
V762795		4.4	181	1.7	20.1	253	49.9
V762796		0.2	3	0.1	2.3	4	1.9
V762797		5.0	173	1.8	20.4	255	59.4
V762798		5.4	173	12.6	14.0	67	84.7
V762799		3.4	16	0.2	3.6	17	4.6
V762800		3.8	19	0.2	3.9	18	5.1

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016 - 510 W HASTINGS STREET
VANCOUVER BC V6B 1L8

Project: Orion

Finalized Date: 29-JUN-2018
Account: ARCHORI

CERTIFICATE OF ANALYSIS WH18142133

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Applies to Method: REE's may not be totally soluble in this method.
ME-MS61

LABORATORY ADDRESSES

Applies to Method: Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.

CRU-31	CRU-QC	LOG-21	LOG-21d
LOG-23	PUL-31	PUL-31d	PUL-QC
SPL-21	SPL-21d	WEI-21	

Applies to Method: Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Au-ICP21	Hg-MS42	ME-MS61

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To: **ATAC RESOURCES LTD.**
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1016 - 510 W HASTINGS STREET
VANCOUVER BC V6B 1L8

Finalized Date: 4-JUL-2018
Account: ARCHORI

CERTIFICATE WH18145901

Project: Orion

P.O. No.: O18-009

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 20-JUN-2018.

The following have access to data associated with this certificate:

GLENN ASCH	MARK BRADLEY	KEVIN CREEL
PAUL DOBAK	NATHAN ECK	VLADIMIR ISPOLATOV
JULIA LANE	KARL MARLOWE	LEE SCHOLL
LIZ STOCK	JEREMY VAUGHAN	

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
PUL-31	Pulverize split to 85% <75 um
LOG-23	Pulp Login - Rcvd with Barcode
LOG-21d	Sample logging - ClientBarCode Dup
SPL-21d	Split sample - duplicate
PUL-31d	Pulverize Split - duplicate

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-ICP21	Au 30g FA ICP-AES Finish	ICP-AES
ME-MS61	48 element four acid ICP-MS	
Hg-MS42	Trace Hg by ICPMS	ICP-MS

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:

Colin Ramshaw, Vancouver Laboratory Manager

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Finalized Date: 4-JUL-2018
Account: ARCHORI

Project: Orion

CERTIFICATE OF ANALYSIS WH18145901

Sample Description	Method	WEI-21	Au-ICP21	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Recvd Wt.	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu
	Units	kg	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.02	0.001	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2
V766121		10.34	<0.001	0.32	1.85	83.1	330	0.63	0.06	27.0	3.08	21.5	3.8	21	3.09	8.8
V766122		11.30	<0.001	0.55	1.81	293	540	0.57	0.05	24.5	5.72	20.1	2.7	20	3.06	10.1
V766123		12.50	<0.001	0.19	1.66	5.9	360	0.55	0.05	29.5	1.29	19.90	3.3	19	3.02	8.3
V766124		11.31	<0.001	0.56	2.06	14.9	330	0.69	0.06	27.2	2.91	23.0	3.6	27	3.59	11.2
V766125		12.02	<0.001	0.45	2.45	12.4	290	0.87	0.07	22.1	1.82	27.1	4.4	31	4.34	10.7
V766126		10.97	<0.001	0.22	0.90	17.7	240	0.34	0.03	31.4	0.89	13.60	2.0	13	1.39	5.4
V766127		11.00	<0.001	0.18	0.77	24.2	370	0.27	0.02	31.8	0.76	11.30	1.8	11	1.11	4.7
V766128		11.51	<0.001	0.56	2.02	43.1	310	0.71	0.05	26.3	2.12	23.2	3.8	25	2.51	10.2
V766129		11.64	<0.001	0.16	0.73	22.2	160	0.32	0.03	30.8	0.91	11.45	1.7	11	0.99	3.9
V766130		10.32	<0.001	0.60	2.85	114.5	850	0.92	0.07	23.5	3.30	29.4	5.3	45	3.35	17.3
V766131		4.21	<0.001	1.05	2.20	213	360	0.86	0.06	13.45	3.70	20.7	3.1	50	2.84	20.0
V766132		0.11	2.59	1.69	4.27	172.0	1070	1.23	0.17	0.44	0.19	56.5	2.3	53	7.40	48.9
V766133		4.73	<0.001	1.26	2.45	54.5	320	1.05	0.06	7.85	4.83	19.65	4.0	55	3.70	20.3
V766134		9.05	<0.001	0.52	2.40	51.8	450	1.02	0.07	9.06	2.13	22.0	4.2	62	3.75	26.4
V766135		9.87	<0.001	1.05	2.30	46.7	300	1.02	0.06	15.45	8.80	26.1	4.2	62	3.34	27.0
V766136		10.79	<0.001	0.57	1.52	50.8	250	0.66	0.05	6.62	2.12	11.95	2.1	34	2.47	11.7
V766137		10.72	<0.001	0.52	1.49	55.5	370	0.63	0.05	10.95	4.33	14.85	2.6	34	2.48	11.7
V766138		12.88	<0.001	0.77	2.14	206	660	0.87	0.06	10.40	2.39	17.15	3.4	52	3.62	18.5
V766139		8.65	<0.001	0.58	1.96	136.5	540	0.80	0.05	7.03	1.66	18.30	3.0	50	3.60	17.0
V766140		7.44	<0.001	0.70	2.53	256	700	1.08	0.06	2.39	2.47	22.7	3.6	68	4.93	25.1
V766141		5.85	<0.001	1.55	3.10	120.0	540	1.30	0.08	5.60	4.38	21.6	5.3	72	6.20	26.7
V766142		6.00	<0.001	1.57	3.07	167.5	570	1.30	0.08	6.26	5.30	23.9	5.6	72	6.35	26.8
V766143		5.66	<0.001	1.56	2.94	87.2	480	1.22	0.09	2.84	7.48	19.30	5.0	63	6.08	25.7
V766144		6.07	<0.001	3.41	2.31	157.5	550	0.95	0.06	8.30	5.19	22.3	3.2	52	5.01	22.8
V766145		5.47	<0.001	0.90	1.44	126.5	430	0.68	0.05	26.4	4.31	18.55	3.0	31	2.91	13.6
V766146		6.28	<0.001	1.45	2.74	183.0	710	1.09	0.06	9.54	6.79	25.7	3.6	60	5.56	24.7
V766147		7.04	<0.001	0.01	0.46	0.5	30	0.18	0.02	31.7	0.02	1.55	1.4	3	0.06	2.0
V766148		5.92	<0.001	1.51	2.65	323	860	1.09	0.07	3.66	5.86	20.7	3.1	59	5.03	25.8
V766149		7.37	<0.001	1.82	3.32	306	990	1.40	0.09	1.18	4.12	22.4	3.6	74	6.67	30.6
V766150		5.60	<0.001	1.82	3.27	128.0	640	1.28	0.10	2.84	8.26	22.2	4.3	75	6.50	29.8
V766151		6.72	<0.001	1.70	3.25	49.0	470	1.12	0.09	4.44	6.75	20.8	4.7	74	6.31	29.1
V766152		5.95	<0.001	1.51	2.94	396	680	0.97	0.09	3.68	3.83	32.2	3.7	70	6.19	31.1
V766153		5.60	<0.001	1.20	3.23	53.7	650	1.29	0.08	8.36	2.42	42.2	3.8	77	6.48	29.9
V766154		6.16	<0.001	1.06	2.56	443	800	1.19	0.07	19.50	4.83	28.8	3.2	46	5.52	22.3
V766155		0.09	0.296	0.35	6.52	577	840	0.59	0.29	0.56	0.17	152.5	2.9	239	3.24	119.5
V766156		5.87	<0.001	0.08	0.86	88.2	270	0.41	0.03	33.5	1.28	15.90	1.6	12	1.55	6.3
V766157		5.66	<0.001	0.04	0.53	16.5	130	0.21	0.02	33.9	0.41	11.95	1.4	7	0.94	3.5
V766158		5.13	<0.001	0.08	1.23	124.5	300	0.51	0.04	33.1	1.31	18.75	2.3	16	2.26	7.3
V766159		4.31	<0.001	0.15	0.68	244	160	0.28	0.02	34.2	1.16	13.70	1.9	8	1.42	5.0
V766160		<0.02	<0.001	0.14	0.67	238	150	0.31	0.02	33.7	1.15	13.60	1.9	8	1.40	4.8

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VANCOUVER BC V6B 1L8

Finalized Date: 4-JUL-2018
Account: ARCHORI

Project: Orion

CERTIFICATE OF ANALYSIS WH18145901

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Hg-MS42	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni
	Units	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2
V766121		0.96	4.97	<0.05	0.7	0.042	0.019	0.97	15.1	5.8	1.14	102	3.87	0.02	3.2	21.1
V766122		0.94	4.85	0.05	0.6	0.109	0.019	0.94	13.9	5.7	0.99	100	3.47	0.02	3.1	32.7
V766123		0.89	4.51	0.07	0.6	0.020	0.017	0.90	13.3	5.2	1.78	94	4.22	0.02	2.8	15.5
V766124		1.01	5.49	0.08	0.8	0.034	0.022	1.09	16.5	6.6	1.78	93	4.87	0.02	3.5	19.3
V766125		1.34	6.54	0.08	1.0	0.038	0.026	1.34	16.9	7.7	3.97	132	2.91	0.02	4.1	18.9
V766126		0.64	2.50	0.06	0.3	0.029	0.011	0.48	9.8	2.8	1.34	85	1.81	0.01	1.5	9.6
V766127		0.52	2.07	0.05	0.3	0.023	0.009	0.40	8.5	2.5	0.93	79	1.63	0.01	1.3	8.9
V766128		1.08	5.33	0.07	0.7	0.051	0.021	1.05	15.7	5.4	2.67	116	2.66	0.02	3.4	18.8
V766129		0.49	2.03	0.07	0.3	0.020	0.008	0.37	8.6	2.3	0.83	74	1.20	0.01	1.3	7.7
V766130		1.43	7.46	0.08	1.0	0.231	0.029	1.38	19.2	7.0	1.27	153	4.64	0.02	5.3	36.8
V766131		1.09	5.72	0.10	1.0	0.228	0.028	1.03	15.2	5.1	0.24	99	4.78	0.01	7.0	43.0
V766132		1.76	10.35	0.14	2.3	2.12	0.045	1.43	28.5	27.0	0.22	72	25.0	0.06	7.0	24.3
V766133		1.27	6.48	0.07	1.2	0.161	0.029	1.11	14.4	6.1	0.39	82	7.87	0.02	9.5	46.9
V766134		1.33	6.13	0.08	1.1	0.138	0.030	1.03	16.8	7.1	0.31	95	5.41	0.02	10.3	48.4
V766135		1.47	5.75	0.08	1.1	0.817	0.028	1.06	21.0	4.2	0.45	155	3.99	0.02	10.3	45.2
V766136		0.84	3.92	0.06	0.7	0.047	0.017	0.67	8.5	6.0	0.35	72	7.56	0.02	5.1	28.3
V766137		1.18	3.90	0.06	0.7	0.094	0.019	0.73	11.1	5.8	0.36	97	7.30	0.02	5.3	31.1
V766138		1.42	5.39	0.06	1.1	0.092	0.026	1.06	13.3	7.0	0.25	98	7.05	0.02	9.6	66.0
V766139		1.06	5.11	0.08	1.0	0.099	0.022	1.04	14.6	9.7	0.27	81	3.74	0.03	7.5	44.9
V766140		1.20	6.46	0.11	1.2	0.109	0.025	1.35	18.2	12.3	0.24	50	2.86	0.03	9.6	61.0
V766141		1.72	7.90	0.08	1.5	0.146	0.033	1.70	15.5	11.6	0.34	76	8.72	0.03	12.0	72.7
V766142		1.53	7.93	0.09	1.5	0.147	0.034	1.64	17.3	11.6	0.34	75	8.27	0.03	12.5	73.8
V766143		1.26	7.59	0.11	1.4	0.122	0.033	1.61	12.4	12.6	0.28	61	7.06	0.03	10.3	66.1
V766144		1.06	6.15	0.10	1.1	0.094	0.031	1.22	16.0	13.1	0.26	70	5.65	0.03	7.3	48.5
V766145		0.96	3.84	0.10	0.8	0.061	0.020	0.75	14.9	6.3	0.27	168	4.64	0.02	4.8	40.7
V766146		1.32	7.21	0.13	1.3	0.106	0.033	1.45	18.6	13.0	0.30	86	5.75	0.03	8.6	62.9
V766147		0.27	1.35	0.07	0.2	<0.005	0.009	0.15	1.4	1.4	2.31	146	0.05	0.19	0.6	1.2
V766148		1.23	6.48	0.10	1.3	0.122	0.032	1.40	13.8	16.1	0.27	55	4.83	0.03	8.0	61.3
V766149		1.47	8.33	0.11	1.6	0.144	0.033	1.79	13.9	16.2	0.32	39	6.14	0.04	10.2	74.8
V766150		1.41	8.30	0.13	1.6	0.128	0.042	1.76	13.7	14.7	0.31	55	9.20	0.03	10.4	67.8
V766151		1.64	8.18	0.13	1.6	0.131	0.037	1.77	13.3	13.3	0.34	67	13.00	0.03	10.9	59.6
V766152		1.24	7.62	0.12	1.5	0.130	0.042	1.57	20.7	15.8	0.41	56	3.80	0.04	8.1	67.0
V766153		1.49	8.11	0.14	1.6	0.111	0.032	1.75	32.2	15.3	1.11	94	4.12	0.04	7.8	59.0
V766154		1.28	6.52	0.14	1.2	0.107	0.029	1.35	20.6	10.4	0.38	115	5.36	0.03	6.7	56.7
V766155		6.35	19.15	0.18	4.3	7.55	0.052	1.38	70.0	17.2	0.17	57	6.48	0.46	9.5	15.8
V766156		0.48	2.19	0.06	0.4	0.046	0.008	0.47	12.1	3.8	0.51	98	4.35	0.01	1.8	15.4
V766157		0.33	1.41	0.06	0.3	0.031	0.008	0.30	9.5	3.9	0.75	88	3.16	0.01	1.2	10.1
V766158		0.63	3.43	0.09	0.7	0.045	0.013	0.67	12.9	5.9	0.78	86	4.64	0.01	3.0	24.3
V766159		0.37	1.86	0.07	0.4	0.059	0.005	0.35	10.6	4.7	0.34	90	1.05	0.01	1.3	15.6
V766160		0.37	1.85	0.08	0.3	0.066	0.005	0.34	10.4	5.0	0.33	88	1.09	0.01	1.3	15.1

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016 - 510 W HASTINGS STREET
VANCOUVER BC V6B 1L8

Project: Orion

Finalized Date: 4-JUL-2018
Account: ARCHORI

CERTIFICATE OF ANALYSIS WH18145901

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl
	Units	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
	LOD	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.01	0.005	0.02
V766121		190	4.5	38.5	0.007	0.43	2.92	3.5	3	0.6	1540	0.20	<0.05	2.65	0.102	1.11
V766122		270	4.9	36.7	0.008	0.13	2.47	3.4	2	0.6	1020	0.20	<0.05	2.54	0.097	1.78
V766123		180	4.0	34.9	0.003	0.54	1.96	3.1	2	0.7	1230	0.19	<0.05	2.37	0.092	0.49
V766124		560	5.3	43.5	0.004	0.55	2.74	3.8	3	0.7	1150	0.23	<0.05	2.98	0.111	0.48
V766125		780	5.7	53.9	0.003	0.65	1.71	4.6	2	0.9	732	0.28	<0.05	3.71	0.130	0.48
V766126		800	3.0	19.0	0.004	0.38	1.04	1.8	2	0.3	703	0.10	<0.05	1.42	0.048	0.30
V766127		500	2.6	15.4	0.003	0.31	0.87	1.5	2	0.3	655	0.08	<0.05	1.14	0.041	0.38
V766128		680	7.1	39.0	0.006	0.58	1.89	3.8	3	0.7	819	0.22	<0.05	2.97	0.109	0.65
V766129		290	2.5	14.6	0.003	0.21	0.84	1.5	2	0.3	521	0.08	<0.05	1.23	0.040	0.30
V766130		790	9.5	51.3	0.009	0.89	3.35	5.6	4	1.0	529	0.33	<0.05	4.06	0.166	1.38
V766131		500	17.2	35.7	0.039	0.21	3.15	4.9	5	0.8	171.5	0.43	0.06	3.22	0.192	0.98
V766132		580	34.3	50.6	0.002	0.83	161.5	7.8	1	2.1	179.5	0.46	0.32	7.67	0.204	13.05
V766133		350	7.7	41.2	0.031	0.81	3.39	5.1	5	0.9	144.0	0.54	0.09	3.39	0.239	0.72
V766134		1600	7.9	36.2	0.017	1.02	2.26	5.1	4	0.8	205	0.59	0.06	3.60	0.237	0.52
V766135		2310	30.5	35.8	0.016	1.40	2.33	5.3	3	0.7	222	0.58	0.05	3.54	0.231	0.46
V766136		210	6.4	25.0	0.014	0.50	1.97	3.1	3	0.5	122.5	0.29	0.05	2.18	0.141	0.37
V766137		330	5.1	25.0	0.017	0.77	2.06	3.3	3	0.5	174.0	0.28	0.05	2.11	0.142	0.38
V766138		680	6.2	34.7	0.014	0.11	3.68	4.5	2	0.9	171.0	0.56	0.07	3.01	0.234	0.71
V766139		1250	4.7	34.5	0.022	0.30	2.38	4.3	4	0.6	118.5	0.43	0.06	2.69	0.193	0.88
V766140		1880	5.8	44.0	0.023	0.03	2.52	5.1	4	0.8	66.6	0.55	0.08	3.41	0.242	2.11
V766141		540	8.3	54.6	0.064	0.79	4.02	6.2	10	1.1	94.4	0.67	0.10	4.17	0.309	2.32
V766142		610	8.8	55.5	0.049	0.45	4.12	6.6	10	1.1	97.3	0.71	0.11	4.32	0.310	2.34
V766143		140	8.4	54.4	0.087	0.22	3.55	5.7	14	1.1	53.5	0.59	0.12	4.41	0.266	2.70
V766144		130	6.6	48.9	0.024	0.29	3.01	4.6	4	0.9	101.0	0.44	0.09	3.70	0.211	2.00
V766145		100	4.9	28.6	0.031	0.15	2.20	3.3	6	0.5	244	0.28	<0.05	2.44	0.136	1.02
V766146		170	7.9	58.3	0.026	0.19	3.72	5.6	3	1.0	104.0	0.54	0.11	4.57	0.250	2.88
V766147		70	0.5	3.4	<0.002	0.02	0.09	0.7	<1	<0.2	72.9	0.06	<0.05	0.45	0.015	0.04
V766148		140	7.7	53.0	0.027	0.04	3.16	4.9	3	1.2	59.8	0.54	0.09	4.18	0.248	3.16
V766149		140	9.6	70.0	0.048	0.04	4.03	6.4	5	1.1	38.7	0.64	0.13	5.37	0.304	3.87
V766150		160	10.9	67.9	0.092	0.28	3.78	6.6	12	1.1	57.4	0.65	0.11	5.00	0.306	3.29
V766151		180	11.2	66.2	0.076	0.99	3.91	6.2	12	1.1	79.1	0.66	0.13	5.00	0.320	2.34
V766152		1260	8.5	63.3	0.023	0.19	3.15	5.7	4	1.0	80.5	0.53	0.10	4.86	0.246	3.12
V766153		2620	6.3	70.8	0.018	0.95	3.51	6.3	6	1.1	138.5	0.50	0.10	5.35	0.243	2.19
V766154		440	8.1	56.7	0.031	0.07	2.99	5.0	4	0.9	223	0.42	0.07	4.25	0.197	2.53
V766155		1060	14.5	46.5	<0.002	3.19	114.5	14.6	1	2.6	551	0.73	0.15	10.15	0.581	6.82
V766156		150	2.6	17.7	0.009	0.29	0.99	1.7	1	0.3	332	0.12	<0.05	1.50	0.057	0.67
V766157		90	1.8	11.1	0.004	0.14	0.61	1.1	1	0.2	294	0.08	<0.05	1.03	0.038	0.48
V766158		170	3.5	26.7	0.010	0.11	1.31	2.5	1	0.5	328	0.21	<0.05	2.35	0.090	0.96
V766159		110	2.7	13.8	<0.002	0.04	0.72	1.5	<1	0.3	309	0.09	<0.05	1.35	0.042	0.89
V766160		110	2.7	13.6	0.003	0.03	0.71	1.4	1	0.3	305	0.10	<0.05	1.28	0.041	0.84

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016 - 510 W HASTINGS STREET
VANCOUVER BC V6B 1L8

Finalized Date: 4-JUL-2018
Account: ARCHORI

Project: Orion

CERTIFICATE OF ANALYSIS WH18145901

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	U	V	W	Y	Zn	Zr
	Units	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.1	1	0.1	0.1	2	0.5
V766121		3.1	154	0.4	11.1	211	26.7
V766122		2.9	158	0.4	12.5	467	25.8
V766123		4.0	113	0.4	10.8	81	23.6
V766124		3.9	187	0.4	14.2	132	29.8
V766125		3.0	118	0.5	15.4	104	34.1
V766126		2.3	55	0.2	9.8	65	13.0
V766127		1.9	49	0.2	8.8	59	10.7
V766128		3.3	133	0.5	14.5	124	28.9
V766129		1.7	38	0.2	9.4	66	10.5
V766130		3.9	252	1.0	18.5	255	40.8
V766131		4.4	314	1.1	18.0	257	39.2
V766132		5.6	175	11.9	14.4	69	85.7
V766133		4.8	426	0.7	13.3	181	48.8
V766134		4.3	172	0.6	16.2	185	44.6
V766135		5.1	113	2.3	19.6	1060	41.8
V766136		3.1	216	0.6	8.0	161	28.2
V766137		3.5	197	0.3	10.7	234	28.1
V766138		4.5	225	0.7	13.8	433	43.3
V766139		4.2	192	0.5	16.6	189	38.7
V766140		5.0	234	0.6	22.2	288	46.6
V766141		5.2	530	0.6	15.7	200	58.1
V766142		5.7	511	0.7	17.4	238	58.9
V766143		4.4	582	0.6	10.1	233	54.8
V766144		3.8	439	8.8	12.6	237	39.6
V766145		4.7	269	0.6	12.4	240	26.4
V766146		4.4	505	0.6	13.3	414	50.6
V766147		0.3	5	0.1	2.9	5	6.1
V766148		3.7	515	0.7	10.3	442	45.1
V766149		4.2	645	0.6	9.3	453	58.4
V766150		4.1	643	0.7	9.4	354	60.1
V766151		4.1	616	0.7	9.5	184	58.2
V766152		4.7	511	0.6	18.0	422	52.6
V766153		6.2	375	0.7	28.4	230	56.8
V766154		4.1	415	0.5	14.5	557	46.2
V766155		7.5	175	24.2	14.2	45	174.0
V766156		2.2	86	0.2	8.4	106	15.0
V766157		1.6	44	0.1	6.6	52	10.7
V766158		2.2	97	0.3	8.2	240	24.0
V766159		1.7	61	0.3	7.0	161	11.7
V766160		1.7	59	0.3	7.1	158	11.4

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016 - 510 W HASTINGS STREET
VANCOUVER BC V6B 1L8

Project: Orion

Finalized Date: 4-JUL-2018
Account: ARCHORI

CERTIFICATE OF ANALYSIS WH18145901

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Applies to Method: REE's may not be totally soluble in this method.
ME-MS61

LABORATORY ADDRESSES

Applies to Method: Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.

CRU-31	CRU-QC	LOG-21	LOG-21d
LOG-23	PUL-31	PUL-31d	PUL-QC
SPL-21	SPL-21d	WEI-21	

Applies to Method: Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Au-ICP21	Hg-MS42	ME-MS61

ALS Canada Ltd.

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To: **ATAC RESOURCES LTD.**
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1016 - 510 W HASTINGS STREET
VANCOUVER BC V6B 1L8

Finalized Date: 8-JUL-2018
Account: ARCHORI

CERTIFICATE WH18147017

Project: Orion

P.O. No.: O18-010

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 21-JUN-2018.

The following have access to data associated with this certificate:

GLENN ASCH	MARK BRADLEY	KEVIN CREEL
PAUL DOBAK	NATHAN ECK	VLADIMIR ISPOLATOV
JULIA LANE	KARL MARLOWE	LEE SCHOLL
LIZ STOCK	JEREMY VAUGHAN	

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
PUL-31	Pulverize split to 85% <75 um
LOG-23	Pulp Login - Rcvd with Barcode
LOG-21d	Sample logging - ClientBarCode Dup
SPL-21d	Split sample - duplicate
PUL-31d	Pulverize Split - duplicate

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-ICP21	Au 30g FA ICP-AES Finish	ICP-AES
ME-MS61	48 element four acid ICP-MS	
Hg-MS42	Trace Hg by ICPMS	ICP-MS

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:

Colin Ramshaw, Vancouver Laboratory Manager

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VANCOUVER BC V6B 1L8

Finalized Date: 8-JUL-2018
Account: ARCHORI

Project: Orion

CERTIFICATE OF ANALYSIS WH18147017

Sample Description	Method	WEI-21	Au-ICP21	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Recvd Wt.	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu
	Units	kg	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.02	0.001	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2
V766161		4.75	0.001	0.24	1.32	355	250	0.58	0.44	28.8	1.29	17.05	2.5	19	2.15	9.2
V766162		5.34	0.001	0.57	4.20	97.6	470	1.39	0.23	17.50	1.85	43.6	5.2	66	6.48	30.5
V766163		5.54	0.004	0.48	2.61	45.4	310	0.94	0.13	26.4	0.98	30.9	3.3	45	3.75	22.2
V766164		5.91	0.001	0.53	1.90	198.5	410	0.67	0.09	28.7	2.06	24.2	2.2	40	3.15	20.7
V766165		4.83	<0.001	0.05	0.14	32.3	130	0.11	0.03	35.2	0.36	3.84	0.5	2	0.14	2.1
V766166		5.50	<0.001	0.12	0.64	12.3	140	0.27	0.04	32.3	0.47	9.48	1.2	10	0.76	4.8
V766167		5.81	<0.001	0.26	1.33	151.0	160	0.55	0.06	26.6	0.94	19.80	2.8	22	1.84	9.3
V766168		4.44	<0.001	0.30	1.25	87.0	170	0.51	0.14	30.2	1.06	19.40	1.8	19	2.02	8.7
V766169		5.25	<0.001	0.06	0.17	63.9	80	0.10	0.03	34.3	0.59	4.27	0.6	3	0.17	2.2
V766170		5.65	<0.001	0.04	0.17	34.7	100	0.11	0.02	31.3	0.30	3.63	0.6	3	0.14	1.6
V766171		<0.02	<0.001	0.05	0.17	36.5	90	0.10	0.02	32.4	0.36	3.75	0.6	3	0.14	1.6
V766172		5.21	0.003	0.07	0.44	56.1	110	0.19	0.03	33.6	0.45	7.13	0.8	6	0.49	2.7
V766173		5.65	<0.001	0.32	1.32	190.0	240	0.48	0.05	31.4	1.69	20.0	2.9	18	1.66	8.0
V766174		6.27	<0.001	0.13	0.52	5.6	120	0.22	0.03	32.2	0.69	8.89	1.2	8	0.57	3.8
V766175		10.56	<0.001	0.17	0.67	33.6	290	0.28	0.04	34.2	1.06	11.05	1.3	9	0.76	4.6
V766176		5.22	<0.001	0.21	1.70	131.0	260	0.67	0.06	24.4	0.76	20.2	3.2	20	2.21	8.0
V766177		11.25	<0.001	0.23	2.04	4.0	270	0.77	0.06	22.8	0.45	24.3	3.5	26	2.60	9.6
V766178		11.35	<0.001	0.41	3.25	4.0	310	1.20	0.08	19.65	0.91	37.6	5.1	51	5.32	20.6
V766179		6.18	<0.001	0.17	5.13	16.9	630	1.51	0.17	15.35	0.19	54.9	7.7	62	12.65	16.4
V766180		5.47	<0.001	0.13	0.82	186.0	190	0.34	0.04	31.9	0.95	11.30	1.9	13	1.38	5.6
V766181		0.11	2.03	0.55	2.52	446	520	0.67	0.37	11.15	0.92	43.3	8.0	40	3.19	23.5
V766182		2.12	0.001	0.07	0.51	22.7	130	0.23	0.02	35.9	0.29	7.17	1.0	8	0.64	3.0
V766183		2.30	<0.001	0.06	0.36	21.6	120	0.19	0.02	36.6	0.28	6.59	0.8	5	0.45	2.3
V766184		6.65	<0.001	0.07	0.48	92.7	120	0.18	0.02	35.6	0.55	6.80	0.9	7	0.79	4.1
V766185		6.25	<0.001	0.10	0.77	62.9	140	0.30	0.03	35.7	0.51	9.60	1.0	12	1.29	6.4
V766186		6.25	<0.001	0.12	0.81	81.1	150	0.30	0.06	35.2	0.72	10.30	1.5	12	1.24	5.8
V766187		5.28	<0.001	0.23	0.63	18.3	90	0.30	0.04	34.7	0.52	8.41	1.3	10	0.85	4.6
V766188		5.60	<0.001	0.42	0.33	83.0	50	0.24	0.03	36.5	0.76	6.46	0.7	5	0.34	2.5
V766189		6.87	<0.001	<0.01	0.10	0.4	20	0.07	0.05	34.3	0.02	0.97	0.5	1	<0.05	1.2
V766190		9.98	<0.001	0.18	0.78	41.8	90	0.37	0.03	33.4	0.52	10.55	1.3	11	0.97	4.2
V766191		11.39	<0.001	0.31	0.60	62.5	100	0.35	0.02	31.4	0.76	7.91	1.2	9	0.62	3.6
V766192		10.93	<0.001	0.04	0.13	29.7	40	0.11	0.01	36.2	0.24	3.18	0.5	2	0.13	1.8
V766193		11.54	<0.001	0.13	0.29	74.7	60	0.16	0.02	32.8	0.56	4.85	0.7	5	0.39	2.4
V766194		10.81	0.001	0.20	0.44	47.5	80	0.29	0.02	32.0	0.52	7.17	0.9	7	0.55	3.6
V766195		10.00	<0.001	0.11	0.19	25.1	260	0.19	0.02	35.3	0.40	4.41	0.6	3	0.20	1.4
V766196		10.81	0.002	0.29	0.38	80.2	60	0.29	0.03	32.8	2.22	5.80	1.1	5	0.43	2.4
V766197		4.51	<0.001	0.10	0.15	54.8	40	0.14	0.01	36.3	0.71	3.23	0.7	3	0.16	1.3
V766198		5.40	<0.001	0.25	0.23	46.6	50	0.24	0.01	33.2	0.94	5.92	0.7	4	0.25	1.7
V766199		5.04	0.001	0.84	0.79	121.5	100	0.52	0.02	32.4	2.59	8.78	1.6	11	0.86	3.9
V766200		0.11	0.284	0.34	6.48	578	80	0.64	0.27	0.56	0.16	142.5	2.7	229	3.17	23.1

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016 - 510 W HASTINGS STREET
VANCOUVER BC V6B 1L8

Finalized Date: 8-JUL-2018
Account: ARCHORI

Project: Orion

CERTIFICATE OF ANALYSIS WH18147017

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Hg-MS42	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni
	Units	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2
V766161		0.70	3.35	0.07	0.5	0.060	0.028	0.72	12.6	5.6	1.07	94	1.01	0.02	2.2	25.8
V766162		1.50	10.25	0.15	1.6	0.136	0.045	2.39	29.4	12.5	2.47	121	3.10	0.04	7.0	52.5
V766163		1.03	6.48	0.13	1.0	0.102	0.026	1.45	24.6	8.2	1.89	106	2.55	0.03	4.4	36.2
V766164		0.78	4.65	0.15	0.7	0.090	0.021	1.06	20.9	6.5	1.05	92	1.97	0.02	3.2	29.8
V766165		0.12	0.37	0.16	<0.1	0.015	<0.005	0.08	4.5	2.5	0.54	72	0.27	0.01	0.2	3.2
V766166		0.32	1.60	0.12	0.2	0.031	0.007	0.35	8.4	3.8	1.09	73	0.73	0.01	1.0	7.7
V766167		0.67	3.38	0.17	0.5	0.056	0.015	0.72	15.3	5.6	1.84	85	1.28	0.02	2.2	23.4
V766168		0.64	3.20	0.15	0.5	0.063	0.016	0.67	15.2	4.8	1.04	84	1.19	0.02	2.0	20.1
V766169		0.28	0.44	0.18	0.1	0.024	<0.005	0.08	4.2	1.6	1.70	77	0.48	0.01	0.2	4.9
V766170		0.21	0.44	0.20	0.1	0.016	<0.005	0.08	3.4	1.4	3.39	75	0.39	0.01	0.2	4.0
V766171		0.21	0.46	0.24	0.1	0.019	<0.005	0.08	3.6	1.5	3.45	76	0.38	0.01	0.2	4.0
V766172		0.33	1.14	0.21	0.2	0.033	<0.005	0.22	5.6	2.1	2.16	74	0.65	0.01	0.7	8.0
V766173		0.62	3.38	0.21	0.5	0.078	0.015	0.69	13.5	4.8	1.73	81	2.45	0.01	2.1	20.7
V766174		0.30	1.34	0.21	0.2	0.031	<0.005	0.28	7.2	2.7	2.40	69	1.65	0.01	0.8	7.1
V766175		0.32	1.72	0.19	0.3	0.040	0.006	0.36	8.9	3.8	1.33	69	1.86	0.01	1.1	10.0
V766176		0.82	4.37	0.21	0.7	0.063	0.015	0.94	11.4	7.0	4.08	106	1.36	0.02	2.7	21.1
V766177		0.96	5.05	0.21	0.7	0.055	0.022	1.13	14.7	8.2	5.69	122	1.73	0.02	3.2	19.1
V766178		1.52	8.10	0.23	1.3	0.075	0.033	1.80	26.3	12.6	4.62	150	2.34	0.03	5.5	35.1
V766179		2.20	11.90	0.24	1.8	0.223	0.054	2.74	30.7	16.8	2.99	143	1.60	0.04	7.8	40.8
V766180		0.43	2.13	0.21	0.3	0.040	0.010	0.43	8.9	3.6	1.34	87	0.57	0.01	1.2	14.6
V766181		1.55	5.91	0.18	1.3	3.12	0.022	0.92	26.1	39.9	3.22	248	16.25	0.03	5.0	38.6
V766182		0.25	1.24	0.19	0.2	0.022	<0.005	0.26	5.7	2.3	1.31	69	0.66	0.01	0.7	6.0
V766183		0.19	0.89	0.19	0.1	0.014	<0.005	0.18	5.3	1.8	1.03	66	0.49	0.01	0.5	4.6
V766184		0.22	1.24	0.12	0.2	0.035	0.008	0.25	5.8	2.1	0.99	66	0.67	0.01	0.7	8.0
V766185		0.31	1.95	0.16	0.3	0.032	0.008	0.41	7.6	2.7	0.87	64	0.81	0.01	1.1	9.3
V766186		0.32	1.99	0.15	0.3	0.046	0.011	0.42	8.9	2.9	0.75	67	1.32	0.01	1.1	11.5
V766187		0.28	1.64	0.16	0.2	0.064	0.007	0.33	7.5	2.3	1.48	70	1.37	0.01	0.9	7.0
V766188		0.18	0.86	0.15	0.1	0.151	0.005	0.16	5.4	1.4	0.56	296	0.83	0.01	0.4	4.9
V766189		0.13	0.35	0.18	<0.1	<0.005	<0.005	0.03	1.1	1.1	2.33	141	0.06	0.05	0.1	0.2
V766190		0.38	1.99	0.17	0.3	0.060	0.009	0.41	8.4	3.0	1.47	70	1.26	0.01	1.2	8.9
V766191		0.33	1.54	0.18	0.2	0.119	0.006	0.31	6.6	2.5	2.72	102	0.85	0.01	0.8	7.9
V766192		0.11	0.33	0.19	<0.1	0.016	<0.005	0.06	3.5	0.9	2.27	60	0.22	0.01	0.1	2.6
V766193		0.19	0.76	0.19	0.1	0.055	<0.005	0.14	4.9	1.7	1.87	69	0.47	0.01	0.4	5.6
V766194		0.25	1.18	0.18	0.2	0.054	0.005	0.23	7.1	2.8	1.00	65	1.42	0.01	0.6	8.1
V766195		0.14	0.48	0.17	0.1	0.070	<0.005	0.09	4.1	1.3	2.44	100	0.33	0.01	0.3	3.2
V766196		0.25	1.08	0.18	0.1	0.480	0.005	0.20	5.2	1.9	2.48	236	0.58	0.01	0.5	5.7
V766197		0.11	0.44	0.19	0.1	0.085	<0.005	0.07	3.6	1.0	1.89	249	0.18	0.01	0.2	2.8
V766198		0.16	0.66	0.18	0.1	0.112	0.005	0.12	5.4	1.4	2.50	132	0.68	0.01	0.3	4.0
V766199		0.42	2.09	0.21	0.3	0.616	0.010	0.41	6.7	3.0	2.53	283	1.26	0.01	1.1	11.0
V766200		6.36	18.60	0.18	4.2	7.39	0.056	1.38	65.3	16.9	0.16	51	6.44	0.47	9.2	16.1

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016 - 510 W HASTINGS STREET
VANCOUVER BC V6B 1L8

Finalized Date: 8-JUL-2018
Account: ARCHORI

Project: Orion

CERTIFICATE OF ANALYSIS WH18147017

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl
	Units	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
	LOD	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.01	0.005	0.02
V766161		540	8.3	27.8	0.004	0.03	2.64	2.6	2	1.0	305	0.14	<0.05	1.83	0.074	1.01
V766162		880	11.0	84.6	0.020	0.75	2.33	7.5	7	1.6	213	0.47	<0.05	5.57	0.240	2.66
V766163		560	6.3	54.2	0.052	0.49	1.45	4.9	7	1.0	307	0.28	<0.05	3.42	0.151	1.49
V766164		1070	5.1	38.9	0.015	0.32	1.33	3.7	3	0.8	315	0.20	<0.05	2.45	0.112	1.45
V766165		160	0.8	2.4	0.003	0.01	0.21	0.3	1	<0.2	271	<0.05	<0.05	0.19	0.007	0.16
V766166		350	1.6	11.8	0.005	0.21	0.44	1.2	1	0.3	328	0.07	<0.05	0.85	0.036	0.39
V766167		220	3.2	28.6	0.009	0.28	0.93	2.6	2	0.6	293	0.14	<0.05	1.84	0.077	1.03
V766168		290	3.1	25.8	0.006	0.03	0.79	2.5	1	0.5	291	0.13	<0.05	1.65	0.070	1.26
V766169		390	2.0	2.7	0.003	0.04	0.32	0.4	1	<0.2	318	<0.05	<0.05	0.25	0.008	0.20
V766170		560	1.5	2.8	0.004	0.05	0.22	0.4	1	<0.2	296	<0.05	<0.05	0.29	0.007	0.15
V766171		580	1.6	2.8	0.004	0.04	0.22	0.4	<1	<0.2	303	<0.05	<0.05	0.27	0.007	0.15
V766172		320	2.7	7.6	0.003	0.09	0.41	0.9	1	0.2	306	<0.05	<0.05	0.63	0.023	0.36
V766173		480	6.0	26.9	0.011	0.32	1.26	2.5	2	0.6	299	0.14	<0.05	1.81	0.074	0.92
V766174		240	1.7	9.8	0.004	0.20	0.57	1.0	1	0.2	280	0.05	<0.05	0.70	0.029	0.32
V766175		120	2.3	12.5	0.010	0.15	0.70	1.3	1	0.3	339	0.07	<0.05	0.90	0.037	0.41
V766176		690	4.3	38.7	0.016	0.40	0.80	3.0	2	0.6	250	0.17	<0.05	2.31	0.093	0.88
V766177		1030	4.6	43.8	0.004	0.64	0.70	3.5	1	0.8	226	0.21	<0.05	2.65	0.111	0.48
V766178		1460	5.8	71.8	0.010	0.99	1.11	5.9	3	1.2	178.5	0.36	<0.05	3.91	0.197	0.38
V766179		1700	8.9	119.0	0.006	1.87	0.97	8.3	2	1.6	163.0	0.53	<0.05	6.52	0.279	1.54
V766180		670	4.1	16.1	0.006	0.04	0.59	1.6	1	0.4	305	0.08	<0.05	1.07	0.041	0.93
V766181		580	6.9	41.3	0.013	1.28	79.4	3.9	2	1.0	84.2	0.33	0.23	4.92	0.142	3.08
V766182		170	2.1	8.9	0.008	0.10	0.28	0.9	1	0.2	292	0.05	<0.05	0.65	0.025	0.37
V766183		140	1.6	6.3	0.007	0.07	0.20	0.8	1	0.2	292	<0.05	<0.05	0.48	0.016	0.27
V766184		210	3.6	9.0	0.005	0.02	0.31	0.9	1	0.2	282	0.05	<0.05	0.69	0.024	0.49
V766185		230	2.8	14.7	0.006	0.03	0.38	1.4	1	0.5	297	0.08	<0.05	1.07	0.039	0.65
V766186		280	3.3	15.1	0.012	0.12	0.48	1.4	2	0.3	314	0.08	<0.05	1.07	0.040	0.66
V766187		460	10.9	12.1	0.008	0.17	0.42	1.1	2	0.3	309	0.06	<0.05	0.85	0.031	0.42
V766188		590	186.0	5.8	0.002	0.03	0.60	0.6	1	<0.2	263	<0.05	<0.05	0.42	0.015	0.24
V766189		70	0.9	0.8	<0.002	<0.01	0.07	0.1	1	<0.2	78.1	<0.05	<0.05	0.09	<0.005	0.02
V766190		210	14.1	15.2	0.005	0.19	0.63	1.4	2	0.3	283	0.08	<0.05	1.10	0.039	0.33
V766191		350	22.9	11.0	0.011	0.13	0.95	1.1	2	0.3	275	0.06	<0.05	0.87	0.029	0.32
V766192		150	2.3	2.1	0.007	0.01	0.17	0.3	1	0.2	257	<0.05	<0.05	0.17	0.005	0.13
V766193		150	7.2	5.1	0.005	0.01	0.35	0.5	1	0.2	260	<0.05	<0.05	0.41	0.014	0.29
V766194		220	8.0	8.5	0.013	0.06	0.55	0.8	2	0.3	336	<0.05	<0.05	0.62	0.022	0.35
V766195		370	5.0	3.3	0.006	0.03	0.22	0.4	1	<0.2	277	<0.05	<0.05	0.28	0.009	0.16
V766196		160	32.9	7.4	0.003	0.02	0.46	0.7	1	0.2	226	<0.05	<0.05	0.54	0.018	0.36
V766197		150	6.3	2.7	0.004	<0.01	0.25	0.3	1	<0.2	227	<0.05	<0.05	0.24	0.007	0.12
V766198		360	22.4	4.2	0.007	0.03	0.35	0.5	1	<0.2	247	<0.05	<0.05	0.35	0.011	0.17
V766199		290	79.7	14.8	0.006	0.03	0.86	1.5	2	0.3	244	0.07	<0.05	1.16	0.038	0.45
V766200		1030	14.5	45.4	<0.002	3.18	111.5	14.3	1	2.6	545	0.72	0.13	8.81	0.588	7.21

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To: **ATAC RESOURCES LTD.**
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VANCOUVER BC V6B 1L8

Finalized Date: 8-JUL-2018
Account: ARCHORI

Project: Orion

CERTIFICATE OF ANALYSIS WH18147017

Sample Description	Method Analyte Units LOD	ME-MS61 U ppm 0.1	ME-MS61 V ppm 1	ME-MS61 W ppm 0.1	ME-MS61 Y ppm 0.1	ME-MS61 Zn ppm 2	ME-MS61 Zr ppm 0.5
V766161		2.3	80	0.3	11.1	287	20.8
V766162		4.5	209	0.8	24.8	281	67.1
V766163		4.3	141	0.6	21.2	169	43.3
V766164		3.6	150	0.4	19.3	225	30.1
V766165		1.7	13	<0.1	4.4	43	2.3
V766166		2.0	36	0.2	7.8	43	9.9
V766167		2.4	85	0.3	12.4	148	20.5
V766168		2.4	71	0.3	14.3	177	18.1
V766169		1.4	21	<0.1	4.9	67	2.9
V766170		1.1	17	<0.1	4.0	38	2.7
V766171		1.2	17	<0.1	4.2	40	2.7
V766172		1.6	27	0.1	5.8	88	6.5
V766173		3.0	113	0.3	12.9	161	19.2
V766174		2.0	43	0.1	7.4	54	7.7
V766175		2.2	60	0.1	8.6	84	10.1
V766176		2.2	74	0.4	10.2	138	24.6
V766177		2.6	75	0.4	12.1	53	30.8
V766178		4.0	137	0.6	23.5	133	50.2
V766179		3.3	97	0.9	24.2	116	73.4
V766180		1.9	55	0.2	9.0	186	11.7
V766181		7.4	160	75.0	18.6	91	54.3
V766182		1.3	28	0.1	6.1	58	7.0
V766183		1.2	22	0.1	6.1	53	4.7
V766184		1.4	32	0.1	6.4	101	7.0
V766185		1.7	45	0.2	7.8	108	10.3
V766186		2.2	59	0.2	8.7	108	10.8
V766187		2.1	47	0.3	7.6	66	8.7
V766188		1.6	29	0.4	6.7	82	4.3
V766189		0.1	1	1.0	2.2	4	1.5
V766190		1.7	51	0.3	8.3	110	10.2
V766191		1.4	48	0.4	7.0	135	7.8
V766192		1.1	16	0.1	4.1	36	1.6
V766193		1.3	38	0.2	5.4	78	4.0
V766194		1.9	65	0.3	7.4	88	6.4
V766195		1.2	19	0.1	4.8	63	2.4
V766196		1.2	39	0.6	6.5	151	5.2
V766197		1.0	22	0.2	5.5	48	2.2
V766198		1.2	25	0.4	6.2	77	3.3
V766199		1.5	66	1.3	8.1	269	10.1
V766200		7.3	174	25.4	15.9	42	178.5

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Project: Orion

Finalized Date: 8-JUL-2018
Account: ARCHORI

CERTIFICATE OF ANALYSIS WH18147017

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Applies to Method: REE's may not be totally soluble in this method.
ME-MS61

LABORATORY ADDRESSES

Applies to Method: Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.

CRU-31	CRU-QC	LOG-21	LOG-21d
LOG-23	PUL-31	PUL-31d	PUL-QC
SPL-21	SPL-21d	WEI-21	

Applies to Method: Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Au-ICP21	Hg-MS42	ME-MS61

ALS Canada Ltd.

2103 Dollarton Hwy
North Vancouver BC V7H 0A7
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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016 - 510 W HASTINGS STREET
VANCOUVER BC V6B 1L8

Finalized Date: 8-JUL-2018
Account: ARCHORI

CERTIFICATE WH18148004

Project: Orion

P.O. No.: O18-011

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 22-JUN-2018.

The following have access to data associated with this certificate:

GLENN ASCH	MARK BRADLEY	KEVIN CREEL
PAUL DOBAK	NATHAN ECK	VLADIMIR ISPOLATOV
JULIA LANE	KARL MARLOWE	LEE SCHOLL
LIZ STOCK	JEREMY VAUGHAN	

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
PUL-31	Pulverize split to 85% <75 um
LOG-23	Pulp Login - Rcvd with Barcode
LOG-21d	Sample logging - ClientBarCode Dup
SPL-21d	Split sample - duplicate
PUL-31d	Pulverize Split - duplicate

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-ICP21	Au 30g FA ICP-AES Finish	ICP-AES
ME-MS61	48 element four acid ICP-MS	
Hg-MS42	Trace Hg by ICPMS	ICP-MS

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:

Colin Ramshaw, Vancouver Laboratory Manager

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Sample Description	Method	WEI-21	Au-ICP21	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Recvd Wt.	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu
	Units	kg	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.02	0.001	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2
V762801		5.99	<0.001	0.02	0.09	46.6	130	0.16	0.02	35.9	0.13	0.83	0.5	2	0.36	2.3
V762802		5.47	0.001	<0.01	0.02	37.1	350	0.55	0.01	37.6	0.17	0.56	0.5	1	0.08	2.1
V762803		4.84	<0.001	<0.01	0.01	53.1	3680	0.52	0.01	38.5	0.24	0.87	0.5	1	<0.05	1.3
V762804		2.09	0.004	<0.01	0.01	155.0	3660	0.83	0.01	38.3	0.19	0.88	0.5	1	<0.05	1.4
V762805		1.86	0.001	0.08	0.27	3560	180	0.38	0.01	37.5	1.02	3.32	0.8	13	0.33	5.7
V762806		2.24	<0.001	0.01	0.11	775	20	0.71	0.01	38.6	0.16	0.93	0.5	2	<0.05	1.7
V762807		2.14	0.002	0.17	0.49	3910	110	0.70	0.02	36.9	0.93	5.56	1.1	13	0.29	21.8
V762808		4.82	<0.001	<0.01	0.08	9.1	30	0.06	0.02	34.2	0.02	1.05	0.6	1	<0.05	2.7
V762809		3.22	0.001	0.01	0.02	66.0	10	0.72	0.01	40.2	0.05	0.85	0.5	1	<0.05	1.3
V762810		3.36	0.004	0.10	0.39	893	80	0.73	0.02	36.3	0.59	3.32	1.1	9	0.59	5.4
V762811		0.11	0.288	0.35	6.66	592	100	0.69	0.31	0.58	0.16	134.0	3.2	250	3.34	26.1
V762812		2.33	<0.001	0.01	0.02	57.8	20	1.03	0.01	38.7	0.02	0.48	0.5	1	<0.05	1.5
V762813		3.61	0.003	0.04	0.14	144.5	30	1.19	0.01	38.0	0.10	1.15	0.7	4	0.27	2.3
V762814		2.11	0.001	0.05	0.17	135.0	70	0.21	0.01	37.3	0.07	1.63	0.8	2	0.45	2.8
V762815		4.48	0.004	0.05	0.22	169.5	50	0.23	0.01	38.1	0.13	1.20	0.9	3	0.37	3.2
V762816		5.57	0.003	0.02	0.11	77.7	60	0.17	0.01	38.3	0.05	0.94	0.7	2	0.20	2.0
V762817		5.97	0.005	0.07	0.20	234	110	0.29	0.02	37.4	0.16	1.52	0.8	4	0.48	3.1
V762818		5.45	<0.001	0.01	0.02	16.8	60	0.19	0.01	39.1	0.08	1.02	0.5	2	0.05	1.2
V762819		4.90	0.003	0.01	0.01	26.6	1750	0.13	<0.01	39.5	0.17	1.24	0.6	2	<0.05	1.2
V762820		2.73	0.005	0.01	0.01	18.5	150	0.11	0.01	39.2	0.13	1.02	0.5	2	<0.05	1.1
V762821		3.03	0.005	0.01	0.02	17.6	390	0.11	<0.01	39.6	0.15	1.04	0.5	2	<0.05	1.1
V762822		3.53	0.001	0.01	0.02	16.7	360	0.10	0.01	39.1	0.39	1.16	0.5	2	0.05	1.3
V762823		3.05	0.002	0.01	0.02	10.2	220	0.08	0.01	37.6	0.91	1.05	0.5	3	0.05	1.3
V762824		5.33	0.001	0.25	0.03	234	2590	0.18	0.01	38.6	0.82	1.22	1.7	2	0.10	1.6
V762825		5.58	0.002	0.01	0.02	127.5	1080	0.11	<0.01	39.3	0.07	1.11	0.6	2	0.09	1.2
V762826		5.36	0.009	0.03	0.03	364	170	0.12	0.01	39.0	0.18	1.03	0.6	2	0.12	1.4
V762827		4.90	0.045	0.29	0.12	460	2630	0.29	0.01	37.8	0.39	1.33	0.8	2	0.35	2.2
V762828		<0.02	0.047	0.28	0.12	459	2290	0.29	0.01	37.3	0.41	1.34	0.8	2	0.35	2.1
V762829		5.63	0.020	0.06	0.08	140.0	60	0.28	0.01	37.9	0.10	0.76	0.6	1	0.16	1.4
V762830		5.28	0.005	0.06	0.07	31.1	100	0.27	0.01	38.9	0.16	0.82	0.6	2	0.21	1.5
V762831		3.91	0.001	0.12	0.11	51.3	150	0.32	0.03	37.1	0.60	1.11	1.6	2	0.41	4.4
V762832		1.10	<0.001	0.02	0.09	30.7	70	0.28	0.01	37.9	0.06	0.95	1.4	2	0.37	2.7
V762833		1.71	0.003	0.03	0.13	64.6	110	0.25	0.08	37.6	1.04	1.36	1.8	2	0.53	2.8
V762834		3.67	0.002	0.04	0.08	45.0	70	0.33	0.01	37.5	0.31	0.80	1.5	2	0.19	2.3
V762835		2.46	0.012	0.04	0.06	35.9	90	0.28	<0.01	37.9	0.17	0.67	1.5	2	0.16	2.2
V762836		3.80	0.075	0.14	0.14	67.1	110	0.16	0.01	36.0	0.29	1.44	1.6	2	0.48	3.3
V762837		5.66	0.001	<0.01	0.09	14.0	100	0.14	0.01	37.4	0.03	0.98	1.4	2	0.16	2.2
V762838		5.47	0.002	<0.01	0.13	22.0	90	0.21	0.01	37.6	0.05	1.23	1.5	2	0.24	2.0
V762839		0.11	2.10	0.52	2.56	457	540	0.78	0.36	11.05	0.95	41.5	8.6	42	3.15	25.7
V762840		5.58	<0.001	0.01	0.09	14.0	70	0.18	0.01	38.8	0.02	0.91	1.4	2	0.15	2.1

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Finalized Date: 8-JUL-2018
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Project: Orion

CERTIFICATE OF ANALYSIS WH18148004

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Hg-MS42	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni
	Units	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2
V762801		0.05	0.28	0.09	<0.1	0.446	0.008	0.03	0.5	1.9	0.16	40	1.27	<0.01	0.1	3.3
V762802		0.03	0.13	0.10	<0.1	0.634	0.005	0.01	<0.5	0.4	0.07	292	0.14	<0.01	<0.1	0.8
V762803		0.03	0.09	0.11	<0.1	1.410	<0.005	<0.01	0.8	<0.2	0.06	362	0.11	<0.01	<0.1	0.4
V762804		0.07	0.10	0.12	<0.1	1.000	<0.005	<0.01	0.8	<0.2	0.08	424	0.38	<0.01	<0.1	1.4
V762805		0.50	0.72	0.06	0.1	0.469	0.007	0.06	3.0	1.7	0.08	336	5.48	<0.01	0.4	14.9
V762806		0.11	0.18	0.07	<0.1	0.221	<0.005	0.01	0.8	0.7	0.09	458	1.26	<0.01	<0.1	1.6
V762807		0.37	0.92	0.06	0.1	1.150	<0.005	0.04	6.3	3.0	0.09	391	5.88	<0.01	0.4	9.2
V762808		0.13	0.26	0.10	<0.1	<0.005	0.006	0.02	1.2	1.0	1.77	133	0.07	0.04	0.2	0.3
V762809		0.02	0.09	0.09	<0.1	0.211	<0.005	<0.01	0.7	<0.2	0.13	405	0.28	<0.01	<0.1	0.6
V762810		0.27	0.91	0.08	0.1	2.31	0.006	0.09	2.8	2.1	0.09	339	5.76	<0.01	0.6	13.1
V762811		6.48	20.5	0.17	4.6	7.10	0.057	1.42	62.1	19.9	0.16	55	6.47	0.47	10.5	17.3
V762812		0.05	0.11	0.07	<0.1	0.096	<0.005	<0.01	<0.5	<0.2	0.09	315	0.26	<0.01	<0.1	0.3
V762813		0.12	0.41	0.07	0.1	0.738	<0.005	0.05	0.9	0.7	0.12	359	2.72	<0.01	0.3	4.9
V762814		0.09	0.47	0.08	0.1	0.407	<0.005	0.06	0.8	1.1	0.18	80	3.42	<0.01	0.3	2.9
V762815		0.15	0.58	0.08	0.1	0.847	<0.005	0.08	0.8	1.2	0.11	174	4.25	<0.01	0.4	5.6
V762816		0.06	0.32	0.10	<0.1	0.243	<0.005	0.04	0.5	0.7	0.17	62	3.18	<0.01	0.2	2.8
V762817		0.15	0.57	0.08	0.1	1.515	0.005	0.07	1.2	1.2	0.11	159	6.18	<0.01	0.4	8.7
V762818		0.03	0.09	0.09	<0.1	0.313	<0.005	0.01	1.9	0.2	0.12	114	0.34	<0.01	<0.1	1.1
V762819		0.04	0.09	0.11	<0.1	0.481	<0.005	<0.01	2.0	0.3	0.13	162	0.51	<0.01	<0.1	2.8
V762820		0.03	0.09	0.13	<0.1	0.227	<0.005	<0.01	1.7	0.3	0.14	107	0.59	<0.01	<0.1	2.2
V762821		0.03	0.10	0.13	<0.1	0.225	<0.005	<0.01	1.8	0.3	0.15	104	0.60	<0.01	<0.1	2.0
V762822		0.04	0.10	0.13	<0.1	0.669	<0.005	<0.01	2.1	0.3	0.16	97	1.19	<0.01	<0.1	3.3
V762823		0.01	0.11	0.11	<0.1	0.385	<0.005	0.01	2.0	0.3	0.16	66	0.37	<0.01	<0.1	2.6
V762824		0.46	0.16	0.08	<0.1	0.347	<0.005	0.01	1.9	0.3	0.15	241	7.55	<0.01	<0.1	119.5
V762825		0.04	0.12	0.10	<0.1	0.630	<0.005	0.01	1.9	0.3	0.18	117	4.10	<0.01	<0.1	10.8
V762826		0.04	0.15	0.11	<0.1	0.951	<0.005	0.01	1.9	0.3	0.16	108	2.75	<0.01	0.1	8.4
V762827		0.12	0.38	0.10	0.1	>100	<0.005	0.05	1.2	0.9	0.19	206	4.77	<0.01	0.2	9.0
V762828		0.11	0.40	0.09	0.1	>100	<0.005	0.04	1.2	0.9	0.19	205	4.63	<0.01	0.2	8.7
V762829		0.06	0.21	0.09	<0.1	1.370	<0.005	0.03	0.5	0.4	0.36	194	1.89	<0.01	0.1	4.0
V762830		0.05	0.21	0.10	<0.1	0.836	<0.005	0.03	0.5	0.4	0.24	219	1.11	<0.01	0.1	5.1
V762831		0.05	0.33	0.09	<0.1	0.661	<0.005	0.04	0.6	0.7	0.22	59	1.54	<0.01	0.2	16.2
V762832		0.04	0.29	0.12	<0.1	0.363	<0.005	0.04	0.5	0.7	0.22	25	0.56	<0.01	0.2	8.4
V762833		0.08	0.41	0.09	0.1	0.948	<0.005	0.05	0.8	0.9	0.23	63	3.08	<0.01	0.2	15.1
V762834		0.04	0.26	0.13	<0.1	0.436	<0.005	0.03	<0.5	0.6	0.20	29	1.10	<0.01	0.2	6.9
V762835		0.04	0.23	0.13	<0.1	0.512	<0.005	0.02	<0.5	0.7	0.18	72	1.20	<0.01	0.1	10.5
V762836		0.07	0.42	0.11	0.1	4.48	<0.005	0.06	0.9	1.7	0.21	254	1.52	<0.01	0.2	11.7
V762837		0.05	0.29	0.11	<0.1	0.134	<0.005	0.04	0.6	0.7	0.24	17	0.93	<0.01	0.1	2.1
V762838		0.07	0.39	0.15	0.1	0.103	<0.005	0.06	0.6	0.9	0.26	16	1.07	0.01	0.2	2.7
V762839		1.54	6.89	0.15	1.4	2.79	0.019	0.94	25.4	42.7	3.24	250	16.25	0.03	5.4	37.3
V762840		0.05	0.30	0.10	<0.1	0.046	<0.005	0.04	0.5	0.7	0.24	17	0.91	<0.01	0.2	1.6

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Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl
	Units	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
	LOD	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.01	0.005	0.02
V762801		20	0.5	3.2	0.004	0.02	1.07	0.6	1	<0.2	215	<0.05	<0.05	0.10	<0.005	0.22
V762802		10	<0.5	0.7	<0.002	0.02	0.34	1.7	<1	<0.2	42.2	<0.05	<0.05	0.05	<0.005	0.28
V762803		20	<0.5	0.2	<0.002	0.10	0.42	2.3	1	<0.2	46.0	<0.05	<0.05	0.02	<0.005	0.35
V762804		20	<0.5	0.2	<0.002	0.10	1.76	2.0	1	<0.2	24.5	<0.05	<0.05	0.01	<0.005	0.47
V762805		140	1.4	2.4	<0.002	0.01	14.05	9.4	1	0.2	72.3	<0.05	<0.05	0.33	0.011	2.73
V762806		20	<0.5	0.2	<0.002	<0.01	2.18	2.9	<1	<0.2	17.7	<0.05	<0.05	0.04	<0.005	0.64
V762807		110	2.5	1.8	<0.002	0.01	6.05	8.4	1	1.4	52.6	<0.05	<0.05	0.31	0.010	3.67
V762808		70	<0.5	0.5	<0.002	0.01	0.08	0.2	<1	<0.2	81.9	<0.05	<0.05	0.06	0.005	0.02
V762809		20	<0.5	0.2	0.002	0.01	0.22	4.2	1	<0.2	16.8	<0.05	<0.05	0.02	<0.005	0.15
V762810		110	1.9	4.1	0.007	0.05	5.04	5.1	3	0.2	39.1	<0.05	<0.05	0.32	0.018	2.78
V762811		1080	15.0	46.0	0.003	3.20	109.5	17.2	1	2.4	559	0.80	0.12	8.41	0.597	7.13
V762812		30	<0.5	0.2	<0.002	0.01	0.39	2.9	<1	<0.2	13.2	<0.05	<0.05	0.02	<0.005	0.19
V762813		80	0.7	2.0	0.010	0.13	0.94	4.4	1	<0.2	23.4	<0.05	<0.05	0.12	0.008	1.43
V762814		30	0.8	2.5	0.005	0.12	1.14	0.8	1	<0.2	212	<0.05	<0.05	0.20	0.009	0.32
V762815		40	1.0	3.2	0.006	0.19	1.36	2.4	1	<0.2	108.5	<0.05	<0.05	0.23	0.012	1.02
V762816		20	<0.5	1.8	0.004	0.09	0.84	0.8	1	<0.2	227	<0.05	<0.05	0.13	0.006	0.35
V762817		40	2.0	3.1	0.013	0.09	2.63	2.6	1	<0.2	166.0	<0.05	<0.05	0.24	0.011	0.90
V762818		80	1.2	0.2	0.003	0.01	0.30	1.5	1	<0.2	146.0	<0.05	<0.05	0.04	<0.005	0.27
V762819		100	<0.5	0.2	0.012	0.06	0.44	0.8	1	<0.2	171.0	<0.05	<0.05	0.04	<0.005	1.08
V762820		80	0.5	0.2	0.009	0.02	0.37	0.6	1	<0.2	179.0	<0.05	<0.05	0.04	<0.005	0.71
V762821		90	0.6	0.2	0.009	0.02	0.39	0.6	1	<0.2	177.0	<0.05	<0.05	0.03	<0.005	0.75
V762822		130	1.6	0.2	0.015	0.02	1.13	0.4	1	<0.2	218	<0.05	<0.05	0.04	<0.005	0.63
V762823		150	1.0	0.2	0.008	0.02	0.91	0.2	1	<0.2	226	<0.05	<0.05	0.04	<0.005	0.51
V762824		140	0.6	0.4	0.021	0.09	7.87	0.7	1	<0.2	139.0	<0.05	<0.05	0.07	<0.005	2.34
V762825		160	0.8	0.3	0.025	0.05	0.56	0.4	1	<0.2	182.5	<0.05	<0.05	0.06	<0.005	2.96
V762826		140	1.2	0.5	0.016	0.02	0.35	0.3	2	<0.2	182.5	<0.05	<0.05	0.07	<0.005	1.09
V762827		70	8.0	2.0	0.012	0.20	2.32	0.8	2	<0.2	229	<0.05	<0.05	0.14	0.006	3.86
V762828		70	7.9	1.9	0.014	0.19	2.30	0.8	2	<0.2	224	<0.05	<0.05	0.15	0.006	3.87
V762829		20	2.1	1.3	0.003	0.07	0.62	0.2	1	<0.2	269	<0.05	<0.05	0.09	<0.005	1.35
V762830		10	7.5	1.2	0.007	0.03	0.76	0.3	1	<0.2	294	<0.05	<0.05	0.09	<0.005	0.63
V762831		20	14.5	1.7	0.014	0.03	2.90	0.4	1	<0.2	274	<0.05	<0.05	0.15	0.005	1.66
V762832		20	0.8	1.6	0.003	0.02	1.11	0.4	1	<0.2	256	<0.05	<0.05	0.12	0.005	1.00
V762833		20	4.4	2.2	0.029	0.05	4.04	0.6	2	<0.2	255	<0.05	<0.05	0.17	0.007	2.58
V762834		10	3.0	1.4	0.002	0.02	1.39	0.4	1	<0.2	229	<0.05	<0.05	0.11	0.005	1.47
V762835		10	3.8	1.1	0.005	0.02	1.89	0.3	1	<0.2	257	<0.05	<0.05	0.08	<0.005	1.25
V762836		20	1.2	2.5	0.006	0.04	3.01	0.6	2	<0.2	248	<0.05	<0.05	0.17	0.007	2.33
V762837		20	<0.5	1.6	0.002	0.03	0.40	0.4	1	<0.2	295	<0.05	<0.05	0.13	0.005	0.29
V762838		10	<0.5	2.4	<0.002	0.05	0.44	0.4	1	<0.2	256	<0.05	<0.05	0.16	0.007	0.34
V762839		600	6.9	39.1	0.016	1.27	85.5	4.2	3	1.0	85.9	0.35	0.27	5.08	0.144	2.98
V762840		10	<0.5	1.5	0.002	0.05	0.35	0.3	1	<0.2	273	<0.05	<0.05	0.10	0.005	0.34

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.
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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016 - 510 W HASTINGS STREET
VANCOUVER BC V6B 1L8

Finalized Date: 8-JUL-2018
Account: ARCHORI

Project: Orion

CERTIFICATE OF ANALYSIS WH18148004

Sample Description	Method Analyte Units LOD	ME-MS61 U ppm 0.1	ME-MS61 V ppm 1	ME-MS61 W ppm 0.1	ME-MS61 Y ppm 0.1	ME-MS61 Zn ppm 2	ME-MS61 Zr ppm 0.5
V762801		1.9	11	0.1	1.5	13	1.6
V762802		1.6	18	0.1	6.6	6	1.2
V762803		1.8	31	<0.1	12.1	11	2.1
V762804		1.5	31	0.1	12.3	17	2.0
V762805		5.4	124	0.4	20.0	121	5.4
V762806		1.9	46	0.1	13.9	21	2.0
V762807		6.4	128	0.6	22.9	92	6.1
V762808		0.2	2	<0.1	2.1	4	1.5
V762809		1.9	54	0.1	17.1	3	1.6
V762810		4.5	75	0.4	13.3	81	6.8
V762811		7.6	180	25.1	15.5	41	185.0
V762812		1.2	33	0.1	9.2	3	1.8
V762813		2.9	59	0.3	15.4	9	3.9
V762814		2.1	11	0.3	3.1	4	3.0
V762815		2.7	30	0.3	6.2	8	4.6
V762816		2.3	11	0.2	2.3	3	2.2
V762817		3.8	31	0.4	7.0	16	4.2
V762818		4.9	23	0.1	8.0	11	1.1
V762819		6.6	18	0.1	7.1	19	1.0
V762820		5.7	17	0.1	5.8	17	0.9
V762821		5.9	18	0.1	5.8	19	0.9
V762822		5.2	14	0.1	6.4	39	0.7
V762823		4.4	12	0.1	5.3	135	0.8
V762824		8.0	21	0.2	7.1	1640	1.7
V762825		7.1	14	0.1	6.2	45	1.0
V762826		5.3	12	0.1	4.7	46	1.0
V762827		3.2	14	0.6	3.3	74	2.5
V762828		3.2	14	0.6	3.3	67	2.4
V762829		1.4	5	0.4	0.7	21	1.3
V762830		1.8	8	0.2	1.2	51	1.4
V762831		1.7	8	0.3	1.0	278	1.6
V762832		1.3	6	0.2	0.8	152	1.6
V762833		2.5	13	0.3	1.5	610	2.0
V762834		1.0	5	0.3	0.7	169	1.3
V762835		1.1	5	0.3	0.6	98	1.0
V762836		2.5	11	0.3	1.5	106	2.2
V762837		0.9	4	0.1	0.6	9	1.5
V762838		0.9	5	0.2	0.7	18	2.1
V762839		7.0	166	75.6	16.9	90	52.6
V762840		0.9	4	0.3	0.6	7	1.4

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To: **ATAC RESOURCES LTD.**
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1016 - 510 W HASTINGS STREET
VANCOUVER BC V6B 1L8

Project: Orion

Finalized Date: 8-JUL-2018
Account: ARCHORI

CERTIFICATE OF ANALYSIS WH18148004

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Applies to Method: REE's may not be totally soluble in this method.
ME-MS61

LABORATORY ADDRESSES

Applies to Method: Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.

CRU-31	CRU-QC	LOG-21	LOG-21d
LOG-23	PUL-31	PUL-31d	PUL-QC
SPL-21	SPL-21d	WEI-21	

Applies to Method: Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Au-ICP21	Hg-MS42	ME-MS61

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To: **ATAC RESOURCES LTD.**
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1016 - 510 W HASTINGS STREET
VANCOUVER BC V6B 1L8

Finalized Date: 16-JUL-2018
Account: ARCHORI

CERTIFICATE WH18152431

Project: Orion

P.O. No.: O18-012

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 27-JUN-2018.

The following have access to data associated with this certificate:

GLENN ASCH	MARK BRADLEY	KEVIN CREEL
PAUL DOBAK	NATHAN ECK	VLADIMIR ISPOLATOV
JULIA LANE	KARL MARLOWE	LEE SCHOLL
LIZ STOCK	JEREMY VAUGHAN	

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
WSH-22x	Wash pulv bowls and save material
PUL-31	Pulverize split to 85% <75 um
BAG-01u	Bag wash material for pulv bowl
LOG-23	Pulp Login - Rcvd with Barcode
LOG-21d	Sample logging - ClientBarCode Dup
SPL-21d	Split sample - duplicate
PUL-31d	Pulverize Split - duplicate

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-ICP21	Au 30g FA ICP-AES Finish	ICP-AES
ME-MS61	48 element four acid ICP-MS	
Hg-MS42	Trace Hg by ICPMS	ICP-MS
Ag-OG62	Ore Grade Ag - Four Acid	ICP-AES
ME-OG62	Ore Grade Elements - Four Acid	ICP-AES
Pb-OG62	Ore Grade Pb - Four Acid	ICP-AES
As-OG62	Ore Grade As - Four Acid	ICP-AES
S-IR08	Total Sulphur (Leco)	LECO

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:

Colin Ramshaw, Vancouver Laboratory Manager

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Finalized Date: 16-JUL-2018
Account: ARCHORI

Project: Orion

CERTIFICATE OF ANALYSIS WH18152431

Sample Description	Method	WEI-21	Ag-OG62	Pb-OG62	As-OG62	Au-ICP21	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Recvd Wt.	Ag	Pb	As	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co
	Units	kg	ppm	%	%	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
	LOD	0.02	1	0.001	0.001	0.001	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1
V766201		5.14				0.001	0.41	0.41	37.2	70	0.35	<0.01	32.6	1.37	7.84	1.2
V766202		5.22				<0.001	0.55	1.67	29.4	200	0.86	0.04	24.3	0.71	19.90	2.7
V766203		4.24				0.001	1.03	2.51	55.0	270	1.10	0.05	23.6	5.07	25.6	3.6
V766204		4.65				0.003	0.99	3.37	254	380	1.55	0.09	24.3	1.99	35.8	5.7
V766205		4.84				0.001	2.60	2.07	179.5	250	0.99	0.05	27.3	9.87	24.5	2.7
V766206		3.81				0.006	0.44	1.42	35.5	550	0.66	0.04	28.9	2.82	19.70	2.3
V766207		5.00				<0.001	0.10	1.60	30.7	200	0.60	0.04	29.4	1.80	19.25	2.9
V766208		5.07				<0.001	0.56	2.00	29.9	250	0.66	0.05	25.9	2.41	24.7	3.5
V766209		5.02				<0.001	0.70	1.84	57.1	440	0.70	0.04	26.5	4.28	22.3	3.4
V766210		1.12				0.001	0.20	0.29	13.2	130	0.31	<0.01	30.6	0.67	6.61	0.7
V766211		1.95	227	12.40		0.001	>100	0.30	150.5	70	0.23	0.03	26.1	7.40	5.61	0.6
V766212		2.41				0.002	0.14	0.17	0.3	30	0.13	0.01	34.7	0.02	1.24	0.5
V766213		2.49				<0.001	0.77	0.66	49.7	170	0.54	0.01	34.0	3.03	12.15	1.2
V766214		4.92				<0.001	14.85	0.34	286	60	0.32	0.01	34.2	4.70	6.77	0.7
V766215		4.61				0.002	2.62	0.56	220	80	0.38	0.01	34.2	7.48	10.55	1.0
V766216		4.60				0.003	2.31	0.24	98.7	50	0.22	<0.01	32.6	11.85	5.21	0.8
V766217		3.66				0.002	0.50	0.74	68.6	90	0.46	0.01	32.3	3.35	11.00	1.2
V766218		0.11				0.338	0.33	6.60	558	150	0.70	0.30	0.56	0.16	148.0	3.2
V766219		5.30				0.002	0.32	0.51	29.6	90	0.47	0.01	31.7	1.00	10.15	1.3
V766220		3.89				0.001	0.67	0.62	84.0	70	0.57	0.01	33.0	2.89	11.35	1.2
V766221		4.80				0.002	0.58	0.68	67.6	100	0.52	0.01	30.7	1.50	11.55	1.4
V766222		3.32				0.001	0.48	0.52	56.0	280	0.38	0.01	31.6	0.66	7.95	1.4
V766223		3.14				0.001	0.57	0.49	94.4	240	0.37	0.01	35.3	3.46	10.60	1.0
V766224		3.46				<0.001	0.17	0.42	55.9	110	0.36	0.01	35.0	2.46	11.45	1.1
V766225		<0.02				<0.001	0.18	0.43	57.7	110	0.42	0.01	34.7	2.52	11.25	1.0
V766226		4.40				0.001	0.36	1.79	65.5	240	0.97	0.05	20.4	4.67	30.8	3.7
V766227		4.80				0.003	1.24	2.53	98.6	160	1.11	0.08	18.25	7.39	36.6	5.4
V766228		2.55				0.004	0.31	0.11	64.5	50	0.15	0.01	35.9	4.91	7.13	0.9
V766229		3.00				0.009	0.62	0.20	122.0	60	0.21	0.03	37.7	2.03	13.50	1.5
V766230		5.17				0.014	2.33	0.44	83.6	80	0.23	0.02	33.9	20.4	10.90	2.5
V766231		1.44				0.003	0.16	0.05	59.6	750	0.10	0.01	35.3	0.46	4.16	1.0
V766232		4.69			1.185	0.035	0.99	0.27	>10000	70	0.19	0.01	35.8	3.87	8.35	7.3
V766233		1.28			13.20	0.072	1.02	0.31	>10000	40	0.19	0.03	25.5	5.97	10.55	3.3
V766234		1.26			13.40	0.088	1.41	0.40	>10000	60	0.17	0.04	25.3	7.33	13.95	4.2
V766235		3.91				0.008	0.04	0.01	824	20	0.14	0.01	39.8	0.18	0.99	0.6
V766236		3.43				0.007	0.02	0.01	206	10	0.31	0.01	37.5	0.08	2.08	0.4
V766237		2.06				0.023	0.45	0.09	322	30	0.12	0.02	34.1	1.37	6.74	0.7
V766238		0.11				2.66	1.65	4.17	158.0	390	1.07	0.16	0.42	0.19	55.5	2.4
V766239		3.31				0.004	0.02	0.02	128.5	70	0.20	0.01	38.3	0.33	2.68	0.8
V766240		3.09				0.029	0.27	0.11	890	70	0.21	0.02	35.2	0.96	5.30	2.3

***** See Appendix Page for comments regarding this certificate *****

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Finalized Date: 16-JUL-2018
Account: ARCHORI

Project: Orion

CERTIFICATE OF ANALYSIS WH18152431

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Hg-MS42	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Cr	Cs	Cu	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo
	Units	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm
	LOD	1	0.05	0.2	0.01	0.05	0.05	0.1	0.005	0.005	0.01	0.5	0.2	0.01	5	0.05
V766201		7	0.48	2.9	0.25	1.23	0.13	0.2	0.233	<0.005	0.20	7.3	2.0	1.86	192	1.14
V766202		26	2.04	11.2	0.82	4.84	0.17	0.7	0.153	0.016	0.88	15.9	5.3	5.02	134	1.73
V766203		32	2.86	11.9	1.17	7.03	0.15	1.1	0.714	0.022	1.31	16.7	6.8	2.80	245	2.36
V766204		40	4.37	12.5	1.62	9.43	0.18	1.4	0.376	0.032	1.78	21.1	7.4	1.19	250	2.00
V766205		25	2.77	17.0	1.11	5.93	0.16	0.9	2.07	0.021	1.07	15.9	5.6	2.20	286	2.41
V766206		16	2.06	6.1	0.75	4.08	0.16	0.6	0.294	0.015	0.71	13.9	4.8	1.08	114	3.25
V766207		18	2.96	6.3	0.89	4.56	0.15	0.7	0.109	0.015	0.81	13.2	6.0	1.47	124	3.13
V766208		27	3.81	12.1	0.95	5.98	0.16	0.8	0.109	0.024	1.02	17.9	6.5	0.89	98	2.99
V766209		25	3.12	11.3	1.03	5.36	0.16	0.8	0.184	0.014	0.91	16.9	5.1	0.83	95	4.45
V766210		5	0.42	2.2	0.29	0.83	0.13	0.2	0.043	<0.005	0.14	6.9	1.3	0.57	98	0.93
V766211		6	0.39	500	0.28	0.91	0.13	0.1	5.34	<0.005	0.15	5.7	2.6	0.39	301	6.05
V766212		1	<0.05	2.2	0.13	0.61	0.13	0.1	0.019	<0.005	0.04	1.4	1.0	1.86	133	0.07
V766213		9	0.80	9.0	0.46	1.97	0.14	0.3	0.576	0.008	0.32	11.0	2.1	0.60	243	2.02
V766214		6	0.39	20.3	0.24	1.01	0.13	0.1	4.97	0.006	0.16	6.2	2.3	0.74	443	4.04
V766215		10	0.77	9.5	0.40	1.54	0.14	0.2	1.855	0.006	0.27	9.8	1.6	2.85	454	2.10
V766216		4	0.28	5.4	0.36	0.69	0.13	0.1	4.22	0.005	0.11	4.2	2.1	3.42	1060	1.41
V766217		12	1.61	6.2	0.37	2.09	0.15	0.3	0.327	0.009	0.35	8.9	2.9	3.61	112	3.85
V766218		244	3.26	26.7	6.45	22.1	0.25	5.0	7.88	0.048	1.43	71.8	18.1	0.16	52	6.45
V766219		10	1.09	5.4	0.28	1.47	0.12	0.2	0.128	0.007	0.23	9.7	2.5	2.33	72	5.77
V766220		12	1.17	5.6	0.32	1.74	0.12	0.3	0.374	0.006	0.29	10.7	2.6	2.21	184	6.57
V766221		12	1.35	5.7	0.37	1.96	0.14	0.3	0.219	0.006	0.32	10.0	2.8	3.71	133	7.12
V766222		9	0.81	4.0	0.42	1.47	0.12	0.2	0.168	<0.005	0.24	7.0	1.8	3.98	381	4.86
V766223		14	0.94	7.3	0.25	1.42	0.14	0.2	0.513	0.008	0.22	10.8	1.6	0.64	125	6.54
V766224		8	1.03	3.8	0.22	1.31	0.14	0.2	0.299	0.006	0.20	10.8	1.7	1.30	206	4.55
V766225		8	1.05	3.8	0.23	1.34	0.13	0.2	0.286	0.007	0.20	10.5	1.7	1.32	206	4.51
V766226		31	4.15	14.1	0.83	5.13	0.18	0.8	0.429	0.013	0.84	25.1	7.4	8.68	98	13.25
V766227		46	6.03	25.6	1.23	6.34	0.10	1.0	0.758	0.021	1.19	29.6	8.5	8.05	210	20.2
V766228		2	0.19	1.8	0.10	0.29	0.05	<0.1	0.978	<0.005	0.05	8.4	0.5	1.83	190	3.07
V766229		5	0.76	4.2	0.16	0.61	0.06	0.1	0.732	0.007	0.08	14.7	0.7	0.70	123	27.5
V766230		7	0.90	6.6	0.29	1.04	0.05	0.2	7.21	<0.005	0.18	10.6	1.7	2.38	367	22.2
V766231		2	0.10	1.3	0.05	0.14	0.05	<0.1	1.015	<0.005	0.02	5.1	0.3	2.95	89	4.22
V766232		7	1.48	5.8	0.50	0.76	0.05	0.1	>100	<0.005	0.11	9.8	1.2	1.42	265	62.8
V766233		9	2.99	8.0	1.35	1.01	0.14	0.1	>100	0.023	0.13	13.0	2.3	0.14	264	161.5
V766234		11	3.16	10.0	1.44	1.32	0.11	0.2	>100	0.020	0.16	18.5	2.6	0.16	287	174.0
V766235		1	0.08	0.7	0.09	0.06	<0.05	<0.1	3.01	<0.005	<0.01	1.1	<0.2	0.10	225	1.00
V766236		1	<0.05	0.4	0.05	0.08	<0.05	<0.1	2.39	<0.005	<0.01	2.2	0.2	0.09	340	0.62
V766237		3	0.22	3.0	0.25	0.34	<0.05	<0.1	17.35	<0.005	0.03	7.4	3.7	0.12	305	9.82
V766238		51	7.44	50.2	1.71	10.40	0.09	2.3	1.985	0.041	1.41	30.4	25.3	0.21	72	25.5
V766239		1	0.05	0.6	0.04	0.09	<0.05	<0.1	2.82	<0.005	0.01	3.1	0.3	0.12	233	0.87
V766240		3	0.61	3.1	0.16	0.38	0.05	0.1	8.85	<0.005	0.04	6.5	0.8	1.41	248	7.78

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
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1016 - 510 W HASTINGS STREET
VANCOUVER BC V6B 1L8

Finalized Date: 16-JUL-2018
Account: ARCHORI

Project: Orion

CERTIFICATE OF ANALYSIS WH18152431

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Na	Nb	Ni	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te
	Units	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.01	0.1	0.2	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05
V766201		0.01	0.7	6.2	190	42.8	8.8	0.004	0.11	1.22	0.9	1	0.2	279	<0.05	<0.05
V766202		0.02	2.8	18.5	1390	33.8	35.3	0.026	0.30	1.50	3.1	5	0.6	231	0.12	<0.05
V766203		0.02	4.0	22.5	460	50.2	52.6	0.044	0.33	2.31	4.5	6	0.8	517	0.20	<0.05
V766204		0.02	5.6	31.3	370	60.7	72.2	0.035	0.61	2.95	6.2	4	1.1	570	0.30	<0.05
V766205		0.02	3.6	20.6	310	655	43.3	0.022	0.13	18.55	4.1	3	0.9	660	0.17	<0.05
V766206		0.02	2.6	17.6	150	91.8	29.3	0.028	0.26	2.42	2.9	1	0.5	1055	0.11	<0.05
V766207		0.02	3.0	22.9	140	36.8	32.8	0.033	0.26	1.86	3.2	2	0.6	768	0.13	<0.05
V766208		0.02	3.7	25.3	390	7.6	41.8	0.017	0.53	2.71	4.0	2	0.7	624	0.18	<0.05
V766209		0.02	3.4	24.7	180	40.5	36.3	0.011	0.79	4.11	3.6	2	0.7	701	0.16	<0.05
V766210		0.01	0.5	4.1	90	12.6	5.7	0.017	0.15	0.76	0.6	1	<0.2	1240	<0.05	<0.05
V766211		0.01	0.6	6.3	70	>10000	5.5	0.004	1.57	508	0.8	5	0.2	843	<0.05	<0.05
V766212		0.09	0.4	<0.2	80	75.3	1.0	<0.002	0.01	0.65	0.2	<1	<0.2	83.2	<0.05	<0.05
V766213		0.01	1.2	12.4	130	140.0	13.1	0.020	0.16	9.33	1.4	2	0.3	1145	<0.05	<0.05
V766214		0.01	0.6	7.4	190	2290	6.3	0.012	0.06	20.4	0.9	1	0.2	545	<0.05	<0.05
V766215		0.01	0.9	18.0	160	207	11.0	0.006	0.03	6.46	1.3	1	0.2	318	<0.05	<0.05
V766216		0.01	0.4	9.9	240	415	4.5	0.021	0.13	10.30	0.8	2	<0.2	187.5	<0.05	<0.05
V766217		0.01	1.3	17.2	340	49.1	15.5	0.045	0.12	2.42	1.5	3	0.2	262	<0.05	<0.05
V766218		0.47	11.0	17.8	1050	17.4	45.8	0.002	3.17	109.5	17.2	1	2.5	573	0.72	0.14
V766219		0.01	1.0	18.9	320	15.6	10.8	0.006	0.27	2.35	1.1	1	0.2	269	<0.05	<0.05
V766220		0.01	1.2	22.8	390	95.5	12.7	0.014	0.17	3.43	1.4	1	0.2	283	<0.05	<0.05
V766221		0.01	1.3	21.1	380	37.8	14.5	0.024	0.28	2.81	1.4	2	0.2	247	<0.05	<0.05
V766222		0.01	1.0	14.3	320	33.4	10.5	0.020	0.26	2.16	1.1	2	0.2	192.0	<0.05	<0.05
V766223		0.01	1.0	15.4	770	39.4	9.6	0.035	0.09	2.33	1.3	2	0.2	210	<0.05	<0.05
V766224		0.01	0.8	12.0	390	34.5	8.9	0.022	0.13	2.71	1.0	1	0.2	252	<0.05	<0.05
V766225		0.01	0.9	12.3	400	37.5	8.9	0.022	0.13	3.02	1.0	1	0.2	246	<0.05	<0.05
V766226		0.02	3.5	37.3	340	9.1	34.2	0.029	0.82	6.78	3.6	4	0.6	165.0	0.16	<0.05
V766227		0.03	4.9	66.2	410	174.0	46.2	0.043	1.34	9.73	4.3	4	0.9	144.5	0.31	0.05
V766228		0.01	0.2	14.1	320	75.2	1.9	0.037	0.04	1.93	0.7	<1	<0.2	214	<0.05	<0.05
V766229		0.01	0.5	36.7	430	175.0	3.5	0.138	0.07	5.68	0.9	2	0.2	189.5	<0.05	<0.05
V766230		0.01	0.9	43.2	870	364	7.1	0.130	0.48	3.45	0.9	1	0.2	173.5	0.05	<0.05
V766231		<0.01	0.1	24.4	2300	29.5	0.7	0.021	0.12	1.05	0.6	1	<0.2	161.5	<0.05	<0.05
V766232		<0.01	0.5	425	860	206	4.5	0.062	1.73	18.20	1.7	1	<0.2	151.5	<0.05	<0.05
V766233		<0.01	0.7	122.0	760	190.0	5.4	0.161	>10.0	14.30	1.9	2	0.3	126.0	<0.05	<0.05
V766234		<0.01	0.9	168.5	820	213	6.7	0.188	>10.0	16.15	2.1	3	0.4	154.5	0.05	<0.05
V766235		<0.01	<0.1	10.2	50	9.2	0.1	0.005	0.08	1.08	1.0	1	<0.2	201	<0.05	<0.05
V766236		<0.01	<0.1	5.1	40	3.5	0.2	0.003	0.03	0.45	1.7	<1	<0.2	250	<0.05	<0.05
V766237		<0.01	0.2	18.3	440	20.8	1.4	0.003	0.03	2.30	3.2	1	<0.2	115.5	<0.05	<0.05
V766238		0.06	7.3	24.5	530	34.6	50.6	0.002	0.78	148.5	7.5	1	2.0	177.0	0.45	0.30
V766239		<0.01	0.1	4.2	100	4.7	0.3	0.005	0.01	0.44	1.1	1	<0.2	242	<0.05	<0.05
V766240		<0.01	0.2	23.0	460	33.3	1.8	0.058	0.11	1.01	1.2	3	<0.2	181.0	<0.05	<0.05

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To: **ATAC RESOURCES LTD.**
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1016 - 510 W HASTINGS STREET
VANCOUVER BC V6B 1L8

Finalized Date: 16-JUL-2018
Account: ARCHORI

Project: Orion

CERTIFICATE OF ANALYSIS WH18152431

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	S-IR08
	Analyte	Th	Ti	Tl	U	V	W	Y	Zn	Zr	S
	Units	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%
	LOD	0.01	0.005	0.02	0.1	1	0.1	0.1	2	0.5	0.01
V766201		0.67	0.020	0.25	1.6	42	0.7	8.1	193	6.6	
V766202		2.54	0.084	0.65	2.5	94	1.4	14.7	213	25.0	
V766203		3.83	0.124	1.01	2.8	149	2.1	15.2	603	33.5	
V766204		5.31	0.172	1.51	2.7	110	2.6	17.1	478	45.0	
V766205		3.34	0.108	1.17	2.6	101	2.0	14.8	1280	29.4	
V766206		2.41	0.078	1.21	2.8	87	0.5	12.1	400	20.8	
V766207		2.64	0.087	1.98	3.0	65	0.4	11.6	491	22.9	
V766208		3.36	0.110	1.61	3.6	165	0.4	15.8	276	28.7	
V766209		3.02	0.101	2.06	4.2	184	0.5	16.0	302	26.9	
V766210		0.51	0.016	0.65	1.2	24	0.3	8.9	91	5.2	
V766211		0.52	0.017	0.89	2.0	27	0.9	9.8	412	4.5	
V766212		0.16	<0.005	0.03	0.3	1	<0.1	3.5	4	2.7	
V766213		1.15	0.035	1.34	2.0	47	1.2	12.9	339	9.8	
V766214		0.61	0.018	0.91	2.4	41	0.9	8.7	415	5.4	
V766215		0.94	0.029	1.52	2.5	66	1.0	10.5	535	8.5	
V766216		0.44	0.012	0.81	1.5	29	0.7	9.7	1650	4.0	
V766217		1.14	0.039	2.50	2.7	81	0.6	11.1	337	10.4	
V766218		10.95	0.579	7.45	6.8	177	27.9	16.2	42	179.0	
V766219		0.82	0.027	0.83	3.6	108	0.5	11.7	190	8.5	
V766220		1.00	0.033	1.59	3.8	127	0.9	13.7	370	10.3	
V766221		1.09	0.035	1.84	3.6	110	0.6	12.0	288	10.2	
V766222		0.87	0.028	1.19	2.8	60	0.6	8.7	234	8.4	
V766223		0.80	0.025	1.59	3.2	170	0.5	9.9	285	7.8	
V766224		0.78	0.023	1.23	3.5	96	0.4	13.5	303	6.9	
V766225		0.76	0.023	1.26	3.3	97	0.5	13.1	316	6.9	
V766226		3.13	0.097	1.53	7.1	388	0.9	20.0	437	27.0	
V766227		4.12	0.139	5.12	8.7	561	1.6	22.1	795	35.7	
V766228		0.20	0.006	0.44	4.7	30	0.2	9.9	632	2.8	
V766229		0.41	0.011	1.66	5.6	66	0.5	12.0	376	4.4	
V766230		0.79	0.023	6.13	6.6	95	1.2	12.4	3680	7.3	
V766231		0.10	<0.005	1.26	7.5	37	0.2	9.6	392	1.1	
V766232		0.51	0.013	30.1	9.2	96	1.9	15.2	4090	5.8	
V766233		0.62	0.017	53.0	9.7	86	3.0	15.0	1180	6.6	10.65
V766234		0.80	0.023	43.9	10.9	103	3.8	16.3	1310	8.5	10.60
V766235		0.02	<0.005	6.16	1.1	42	2.1	19.8	634	1.0	
V766236		0.03	<0.005	0.84	1.9	56	3.9	28.7	201	1.7	
V766237		0.25	<0.005	0.84	9.0	69	0.8	24.3	146	2.3	
V766238		7.59	0.193	13.10	5.1	174	12.8	14.8	68	83.0	
V766239		0.09	<0.005	1.16	1.3	26	1.1	15.6	49	1.1	
V766240		0.26	0.005	4.26	5.3	58	1.1	17.7	311	3.0	

***** See Appendix Page for comments regarding this certificate *****

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VANCOUVER BC V6B 1L8

Project: Orion

Finalized Date: 16-JUL-2018
Account: ARCHORI

CERTIFICATE OF ANALYSIS WH18152431

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Applies to Method: REE's may not be totally soluble in this method.
ME-MS61

LABORATORY ADDRESSES

Applies to Method: Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.

BAG-01u	CRU-31	CRU-QC	LOG-21
LOG-21d	LOG-23	PUL-31	PUL-31d
PUL-QC	SPL-21	SPL-21d	WEI-21
WSH-22x			

Applies to Method: Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Ag-OG62	As-OG62	Au-ICP21	Hg-MS42
ME-MS61	ME-OG62	Pb-OG62	S-IR08

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Finalized Date: 15-JUL-2018
Account: ARCHORI

CERTIFICATE WH18152427

Project: Orion

P.O. No.: O18-013

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 27-JUN-2018.

The following have access to data associated with this certificate:

GLENN ASCH	MARK BRADLEY	KEVIN CREEL
PAUL DOBAK	NATHAN ECK	VLADIMIR ISPOLATOV
JULIA LANE	KARL MARLOWE	LEE SCHOLL
LIZ STOCK	JEREMY VAUGHAN	

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
PUL-31	Pulverize split to 85% <75 um
WSH-22x	Wash pulv bowls and save material
BAG-01u	Bag wash material for pulv bowl
LOG-23	Pulp Login - Rcvd with Barcode
LOG-21d	Sample logging - ClientBarCode Dup
SPL-21d	Split sample - duplicate
PUL-31d	Pulverize Split - duplicate

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-ICP21	Au 30g FA ICP-AES Finish	ICP-AES
ME-MS61	48 element four acid ICP-MS	
Hg-MS42	Trace Hg by ICPMS	ICP-MS

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:

Colin Ramshaw, Vancouver Laboratory Manager

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CERTIFICATE OF ANALYSIS WH18152427

Sample Description	Method	WEI-21	Au-ICP21	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Recvd Wt.	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu
	Units	kg	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.02	0.001	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2
V762841		5.59	0.001	0.01	0.10	14.9	50	0.10	0.04	37.9	0.02	1.14	0.4	2	0.17	1.8
V762842		5.67	0.001	0.11	0.08	15.9	50	0.06	0.07	36.5	0.04	0.92	0.4	2	0.13	3.5
V762843		5.59	0.002	0.01	0.13	7.4	80	0.07	0.02	37.6	0.05	1.56	0.5	2	0.28	2.2
V762844		5.48	0.002	0.02	0.08	14.3	80	0.05	0.02	38.4	0.03	0.91	0.4	2	0.16	2.0
V762845		5.49	0.002	0.03	0.17	36.8	180	0.08	0.02	37.4	0.08	1.85	0.7	2	0.41	3.6
V762846		5.16	0.001	0.01	0.08	8.0	80	<0.05	0.01	38.0	0.04	0.92	0.4	2	0.16	1.8
V762847		5.32	0.001	0.01	0.07	12.5	140	0.05	0.01	37.6	0.03	0.86	0.4	2	0.14	1.5
V762848		5.05	0.002	0.01	0.08	9.0	90	0.05	0.01	37.5	0.04	0.99	0.5	2	0.16	1.7
V762849		5.34	<0.001	0.01	0.06	6.3	70	<0.05	0.01	37.5	0.04	0.76	0.4	1	0.14	1.2
V762850		0.11	2.11	0.60	2.53	459	540	0.79	0.39	11.20	0.98	41.6	9.6	43	3.35	28.0
V762851		4.85	0.001	74.1	0.10	7.6	110	0.07	0.01	37.8	0.05	1.28	0.5	2	0.25	2.0
V762852		5.24	0.001	0.01	0.06	1.9	70	0.05	0.01	37.7	0.04	0.69	0.4	1	0.13	1.5
V762853		5.54	0.001	0.01	0.06	2.0	80	<0.05	0.01	38.5	0.04	0.64	0.4	1	0.11	1.2
V762854		5.36	0.001	0.01	0.11	7.3	90	<0.05	0.01	38.7	0.05	1.22	0.5	2	0.28	1.9
V762855		4.98	0.002	0.01	0.07	5.0	100	<0.05	0.01	36.7	0.06	0.86	0.4	2	0.15	1.4
V762856		5.44	0.002	0.01	0.09	4.3	120	0.05	0.01	37.2	0.04	1.09	0.5	1	0.17	1.3
V762857		5.84	0.001	0.01	0.12	12.1	210	0.08	0.01	36.9	0.04	1.33	0.5	2	0.24	1.3
V762858		6.71	0.001	0.10	0.95	5.3	220	0.43	0.03	29.3	0.31	12.75	1.8	13	0.75	5.3
V762859		8.51	<0.001	0.11	0.92	21.8	220	0.46	0.03	30.6	0.41	13.70	1.8	12	0.75	5.6
V762860		9.85	<0.001	0.13	1.64	187.0	410	0.69	0.06	28.2	0.88	19.20	3.3	25	2.16	10.7
V762861		9.40	<0.001	0.18	1.28	76.8	440	0.66	0.04	26.8	0.69	15.90	2.5	28	1.02	14.3
V762862		8.57	<0.001	0.06	4.45	27.4	140	1.35	0.06	12.30	0.13	61.0	10.1	129	2.75	18.8
V762863		3.71	0.001	0.06	1.90	45.2	320	0.74	0.07	24.2	0.18	27.5	4.0	54	1.23	19.8
V762864		8.89	<0.001	0.06	0.87	72.2	1670	0.49	0.03	28.3	0.30	12.55	1.9	24	0.64	11.3
V762865		6.67	<0.001	0.26	3.60	27.9	850	1.90	0.11	8.74	0.38	36.7	6.5	109	2.83	67.5
V762866		8.58	0.002	0.32	3.82	89.0	840	2.04	0.11	8.75	0.25	40.4	7.0	107	3.12	75.6
V762867		9.75	0.002	0.27	3.08	36.3	830	1.68	0.09	13.70	0.13	33.6	5.5	82	2.53	52.7
V762868		<0.02	0.001	0.25	3.04	36.1	830	1.48	0.09	13.50	0.16	35.0	5.3	81	2.46	50.1
V762869		9.13	0.004	0.26	2.90	58.6	530	1.66	0.08	17.10	0.13	29.0	4.7	72	2.40	40.6
V762870		9.28	0.011	0.21	2.71	90.0	1150	1.31	0.07	14.95	0.33	26.4	4.7	71	2.17	30.9
V762871		3.04	0.001	0.41	2.47	11.3	390	0.98	0.06	23.0	1.07	28.1	4.2	41	2.22	21.2
V762872		3.59	<0.001	0.45	2.64	9.7	370	1.00	0.06	23.3	1.10	28.9	4.4	44	2.27	21.9
V762873		10.19	<0.001	0.09	0.25	75.8	90	0.14	0.01	32.1	0.81	7.08	0.6	6	0.35	2.5
V762874		0.12	0.296	0.39	6.37	537	130	0.61	0.30	0.54	0.13	149.5	3.1	234	3.29	25.5
V762875		8.32	0.001	0.20	0.92	58.4	270	0.44	0.02	30.1	1.38	15.30	1.5	17	1.22	7.6
V762876		6.90	0.001	0.01	0.22	0.7	20	0.16	0.01	33.1	<0.02	1.30	0.4	2	0.05	1.2
V762877		9.68	0.001	0.31	1.61	16.7	230	0.73	0.04	27.0	0.82	20.8	2.8	30	1.81	14.4
V762878		10.05	0.001	0.22	0.73	34.0	150	0.32	0.01	31.0	0.89	12.30	1.3	15	0.83	8.5
V762879		9.40	0.001	0.17	0.43	45.2	150	0.20	0.01	32.8	0.79	10.80	0.9	9	0.43	6.0
V762880		8.65	0.002	0.09	0.24	12.2	100	0.13	<0.01	33.6	0.43	7.55	0.7	6	0.30	3.3

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016 - 510 W HASTINGS STREET
VANCOUVER BC V6B 1L8

Finalized Date: 15-JUL-2018
Account: ARCHORI

Project: Orion

CERTIFICATE OF ANALYSIS WH18152427

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Hg-MS42	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni
	Units	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2
V762841		0.05	0.25	0.08	<0.1	0.031	<0.005	0.04	0.6	0.6	0.28	16	1.17	0.01	0.2	3.0
V762842		0.04	0.19	0.07	<0.1	0.025	0.010	0.03	0.6	0.5	0.39	13	1.14	0.01	0.1	2.3
V762843		0.07	0.35	0.06	0.1	0.030	0.007	0.06	0.9	0.8	0.33	17	1.93	0.01	0.2	2.7
V762844		0.05	0.21	0.05	<0.1	0.021	0.006	0.04	0.5	0.5	0.27	18	1.39	0.01	0.2	3.0
V762845		0.11	0.45	0.06	0.1	0.115	0.007	0.08	1.0	1.1	0.30	20	6.42	0.01	0.4	11.0
V762846		0.05	0.20	0.07	<0.1	0.028	0.011	0.03	0.5	0.6	0.29	21	2.33	0.01	0.2	1.7
V762847		0.05	0.20	0.05	<0.1	0.026	0.007	0.03	0.5	0.6	0.35	19	1.96	0.01	0.1	1.6
V762848		0.06	0.22	0.06	<0.1	0.029	0.009	0.03	0.6	0.6	0.35	16	2.08	0.01	0.2	2.2
V762849		0.03	0.16	0.07	<0.1	0.012	0.009	0.03	0.5	0.5	0.25	16	1.42	0.01	0.1	2.2
V762850		1.60	6.61	0.09	1.4	2.88	0.034	0.96	27.0	41.6	3.37	260	18.35	0.04	6.1	40.7
V762851		0.06	0.28	0.06	<0.1	0.037	0.008	0.04	0.7	0.8	0.34	18	2.92	0.01	0.2	2.2
V762852		0.04	0.16	0.05	<0.1	0.022	<0.005	0.03	0.5	0.5	0.34	13	1.49	0.01	0.1	1.6
V762853		0.03	0.15	0.06	<0.1	0.021	0.006	0.03	0.5	0.5	0.32	14	1.38	0.01	0.1	2.1
V762854		0.07	0.31	0.06	0.1	0.055	0.006	0.05	0.7	0.8	0.41	15	3.34	0.01	0.2	2.1
V762855		0.04	0.21	0.06	<0.1	0.034	0.005	0.03	0.6	0.6	0.36	12	2.18	0.01	0.1	3.4
V762856		0.05	0.25	0.07	<0.1	0.022	0.006	0.04	0.6	0.6	0.36	13	1.77	0.01	0.2	1.8
V762857		0.07	0.33	0.05	0.1	0.069	0.006	0.05	0.8	0.9	0.36	13	2.39	0.01	0.2	2.1
V762858		0.55	2.66	0.07	0.4	0.023	0.012	0.54	10.0	5.3	1.78	90	1.25	0.01	1.7	8.9
V762859		0.45	2.62	0.07	0.4	0.030	0.013	0.51	9.9	4.2	1.63	86	1.42	0.01	1.7	9.4
V762860		0.85	4.47	0.08	0.8	0.026	0.022	0.89	15.1	6.9	1.47	128	2.34	0.01	3.2	23.0
V762861		0.73	3.72	0.09	0.7	0.032	0.019	0.68	14.0	5.2	0.73	104	1.56	0.02	4.1	25.0
V762862		5.25	12.55	0.11	2.7	0.059	0.054	2.57	35.4	6.4	0.61	237	1.62	0.29	46.6	54.0
V762863		1.62	4.82	0.07	0.9	0.053	0.024	0.80	22.9	5.2	0.32	185	1.69	0.27	9.9	39.9
V762864		0.99	2.34	<0.05	0.4	0.025	0.014	0.41	11.8	4.7	0.60	201	1.07	0.03	3.6	20.8
V762865		1.74	9.78	0.10	1.7	0.125	0.044	1.82	29.9	9.9	0.45	114	2.28	0.12	15.9	85.8
V762866		1.79	10.50	0.12	1.8	0.109	0.044	1.89	33.0	11.1	0.74	127	2.24	0.15	15.1	96.6
V762867		1.96	8.46	0.12	1.5	0.105	0.039	1.48	26.9	10.1	0.62	139	2.24	0.09	11.8	75.7
V762868		1.89	8.14	0.11	1.4	0.086	0.039	1.50	26.1	9.6	0.60	137	2.10	0.09	11.4	74.2
V762869		1.29	7.76	0.10	1.4	0.066	0.033	1.40	23.5	8.9	0.38	167	1.63	0.07	10.8	68.5
V762870		1.39	7.23	0.08	1.2	0.079	0.035	1.40	20.9	8.9	0.60	137	3.19	0.04	11.1	55.7
V762871		1.18	7.07	0.16	1.2	0.067	0.027	1.29	21.3	6.3	2.79	136	2.58	0.03	4.8	30.1
V762872		1.24	7.40	0.17	1.4	0.072	0.028	1.38	21.9	6.9	2.89	139	2.75	0.03	5.0	31.6
V762873		0.25	0.77	0.13	0.1	0.030	<0.005	0.12	6.2	2.2	0.85	74	0.51	0.01	0.4	5.5
V762874		6.23	21.5	0.25	4.8	7.58	0.051	1.36	72.4	16.3	0.15	52	6.50	0.45	10.8	17.3
V762875		0.54	2.73	0.13	0.4	0.046	0.013	0.49	13.4	3.6	1.01	96	1.54	0.01	1.8	12.8
V762876		0.12	0.80	0.11	0.1	<0.005	0.005	0.05	1.4	0.9	2.11	134	<0.05	0.13	0.6	<0.2
V762877		0.78	4.50	0.14	0.7	0.045	0.017	0.89	17.8	6.0	3.10	106	2.35	0.02	3.0	22.1
V762878		0.43	2.09	0.14	0.3	0.026	0.007	0.39	13.0	4.1	1.04	78	1.67	0.01	1.3	11.1
V762879		0.29	1.19	0.14	0.2	0.021	0.006	0.22	12.2	3.1	0.69	81	1.28	0.01	0.8	8.1
V762880		0.17	0.72	0.13	0.1	0.015	<0.005	0.12	9.0	2.3	0.71	76	0.60	0.01	0.4	4.1

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016 - 510 W HASTINGS STREET
VANCOUVER BC V6B 1L8

Finalized Date: 15-JUL-2018
Account: ARCHORI

Project: Orion

CERTIFICATE OF ANALYSIS WH18152427

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl
	Units	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
	LOD	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.01	0.005	0.02
V762841		20	1.1	1.8	0.003	0.04	0.44	0.2	2	<0.2	243	<0.05	<0.05	0.16	0.005	0.30
V762842		10	30.5	1.4	0.002	0.04	14.80	0.2	1	1.9	291	<0.05	<0.05	0.12	<0.005	0.24
V762843		20	0.9	2.4	0.004	0.09	0.45	0.3	<1	<0.2	287	<0.05	<0.05	0.19	0.007	0.55
V762844		10	4.1	1.5	0.003	0.04	1.87	0.2	1	0.3	262	<0.05	<0.05	0.12	<0.005	0.32
V762845		30	1.6	3.3	0.013	0.13	1.54	0.4	1	<0.2	297	<0.05	<0.05	0.26	0.009	0.90
V762846		20	0.8	1.4	0.003	0.07	0.48	0.2	1	<0.2	264	<0.05	<0.05	0.12	<0.005	0.15
V762847		20	1.8	1.3	0.002	0.07	0.91	0.2	1	0.2	317	<0.05	<0.05	0.11	<0.005	0.13
V762848		20	1.2	1.5	0.003	0.07	0.47	0.2	1	<0.2	309	<0.05	<0.05	0.12	<0.005	0.13
V762849		20	0.7	1.1	0.002	0.04	0.23	0.1	1	<0.2	272	<0.05	<0.05	0.09	<0.005	0.22
V762850		600	8.7	42.2	0.016	1.30	79.0	4.4	2	1.0	87.8	0.36	0.24	5.91	0.143	3.18
V762851		20	12.0	1.9	0.003	0.09	0.49	0.3	1	<0.2	294	<0.05	<0.05	0.14	0.005	0.17
V762852		10	1.0	1.2	0.002	0.06	0.38	0.2	1	<0.2	288	<0.05	<0.05	0.09	<0.005	0.12
V762853		10	0.5	1.6	<0.002	0.06	0.22	0.1	1	<0.2	311	<0.05	<0.05	0.08	<0.005	0.09
V762854		20	0.7	2.2	0.004	0.10	0.63	0.3	1	<0.2	310	<0.05	<0.05	0.16	0.006	0.20
V762855		10	0.6	1.3	0.006	0.06	0.34	0.2	<1	<0.2	340	<0.05	<0.05	0.12	<0.005	0.10
V762856		20	0.5	1.7	0.002	0.07	0.35	0.2	1	<0.2	326	<0.05	<0.05	0.13	0.005	0.13
V762857		10	0.6	2.2	0.002	0.09	0.40	0.3	<1	<0.2	305	<0.05	<0.05	0.18	0.007	0.24
V762858		230	2.9	21.5	0.002	0.08	0.53	1.8	1	0.3	453	0.10	<0.05	1.47	0.048	0.32
V762859		350	2.8	20.5	0.006	0.24	0.59	1.8	1	0.3	562	0.10	<0.05	1.43	0.048	0.45
V762860		640	4.6	35.0	0.004	0.26	0.94	3.2	1	0.6	337	0.19	<0.05	2.41	0.094	1.63
V762861		800	3.6	24.8	0.032	0.30	0.80	3.1	4	0.5	394	0.23	<0.05	2.07	0.092	0.80
V762862		1790	7.8	59.5	0.006	4.77	0.75	9.5	1	1.4	281	2.51	<0.05	6.02	0.682	1.41
V762863		2070	5.6	25.5	0.007	1.18	0.69	5.3	2	0.6	358	0.52	<0.05	2.48	0.198	0.89
V762864		880	2.5	14.1	0.009	0.56	0.39	2.4	1	0.3	413	0.19	<0.05	1.33	0.078	0.49
V762865		3370	10.9	58.7	0.019	1.26	1.69	8.3	5	1.3	206	0.91	0.10	5.80	0.339	1.01
V762866		4510	9.3	63.0	0.038	1.16	1.79	8.8	7	1.4	179.0	0.84	0.07	6.52	0.329	0.98
V762867		3580	8.2	51.6	0.020	1.60	1.60	7.6	4	1.1	275	0.67	0.06	5.32	0.263	0.48
V762868		3500	8.3	49.7	0.019	1.52	1.56	7.3	5	1.1	274	0.64	0.05	5.15	0.253	0.46
V762869		2990	7.6	48.7	0.025	0.62	1.41	6.7	4	1.1	233	0.62	<0.05	4.73	0.240	0.71
V762870		1800	6.8	44.7	0.012	0.51	1.67	6.2	2	1.0	235	0.60	<0.05	4.25	0.238	0.67
V762871		440	5.8	48.3	0.010	0.76	1.36	4.9	2	0.9	262	0.25	<0.05	4.01	0.143	0.85
V762872		490	7.3	50.5	0.009	0.83	1.39	5.2	2	0.9	274	0.27	<0.05	4.22	0.153	0.87
V762873		270	1.3	5.0	0.003	0.04	0.28	0.7	<1	<0.2	382	<0.05	<0.05	0.46	0.012	0.27
V762874		1010	15.6	44.4	0.002	3.04	112.0	16.4	<1	2.5	558	0.71	0.12	11.15	0.559	7.47
V762875		590	2.2	20.5	0.008	0.12	0.85	2.0	1	0.3	336	0.07	<0.05	1.50	0.052	0.59
V762876		70	0.7	1.5	<0.002	0.01	0.10	0.2	<1	<0.2	76.1	<0.05	<0.05	0.18	<0.005	0.04
V762877		810	3.8	33.2	0.010	0.43	1.32	3.3	2	0.6	297	0.14	<0.05	2.52	0.094	0.73
V762878		470	2.1	15.2	0.003	0.09	0.90	1.6	1	0.3	332	<0.05	<0.05	1.12	0.045	0.37
V762879		340	1.6	8.2	0.003	0.04	0.62	1.1	1	0.2	355	<0.05	<0.05	0.67	0.026	0.26
V762880		500	0.8	4.8	0.003	0.07	0.34	0.6	1	<0.2	363	<0.05	<0.05	0.42	0.014	0.14

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.
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www.alsglobal.com/geochemistry

To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016 - 510 W HASTINGS STREET
VANCOUVER BC V6B 1L8

Finalized Date: 15-JUL-2018
Account: ARCHORI

Project: Orion

CERTIFICATE OF ANALYSIS WH18152427

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	U	V	W	Y	Zn	Zr
	Units	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.1	1	0.1	0.1	2	0.5
V762841		1.3	4	0.1	0.6	14	1.7
V762842		1.2	3	0.1	0.7	3	1.3
V762843		1.9	5	0.1	0.9	5	2.4
V762844		1.1	4	0.1	0.6	13	1.4
V762845		2.3	7	0.1	1.3	25	2.8
V762846		1.3	4	0.1	0.7	2	1.3
V762847		1.0	3	0.1	0.6	2	1.1
V762848		1.4	4	0.1	1.1	2	1.4
V762849		1.1	3	0.1	1.0	8	1.1
V762850		7.7	164	67.6	18.6	92	57.1
V762851		1.6	4	0.1	1.0	4	1.9
V762852		1.0	3	0.1	0.8	2	1.2
V762853		1.0	3	<0.1	0.9	2	1.2
V762854		1.3	4	0.1	0.7	2	2.1
V762855		2.1	6	0.1	1.0	3	1.5
V762856		1.3	4	0.1	0.8	2	1.7
V762857		1.0	4	0.1	1.4	2	2.0
V762858		1.7	56	0.2	8.8	34	14.7
V762859		2.0	53	0.2	9.0	55	15.0
V762860		2.7	62	0.4	13.0	179	27.8
V762861		2.7	70	0.3	13.0	124	24.6
V762862		3.7	114	1.0	19.6	156	118.5
V762863		3.4	48	0.4	16.6	120	34.5
V762864		2.0	34	0.2	10.1	82	16.8
V762865		6.4	150	0.7	28.1	273	64.3
V762866		7.1	148	0.8	32.4	303	69.6
V762867		5.5	129	0.6	26.7	204	57.6
V762868		5.5	128	0.6	26.2	208	55.7
V762869		5.6	125	0.6	21.7	200	53.4
V762870		4.1	135	0.5	18.0	193	49.0
V762871		3.6	113	0.6	18.0	115	39.2
V762872		3.5	122	0.6	18.6	118	41.2
V762873		1.4	23	0.1	6.7	54	4.4
V762874		7.2	170	27.3	16.6	40	175.0
V762875		2.6	69	0.2	12.6	102	15.7
V762876		0.3	1	<0.1	3.3	4	2.5
V762877		3.0	119	0.3	17.1	82	26.3
V762878		2.2	68	0.2	11.4	82	12.1
V762879		1.9	41	0.1	10.9	76	7.0
V762880		1.8	28	0.1	8.2	34	4.3

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016 - 510 W HASTINGS STREET
VANCOUVER BC V6B 1L8

Project: Orion

Finalized Date: 15-JUL-2018
Account: ARCHORI

CERTIFICATE OF ANALYSIS WH18152427

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Applies to Method: REE's may not be totally soluble in this method.
ME-MS61

LABORATORY ADDRESSES

Applies to Method: Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.

BAG-01u	CRU-31	CRU-QC	LOG-21
LOG-21d	LOG-23	PUL-31	PUL-31d
PUL-QC	SPL-21	SPL-21d	WEI-21
WSH-22x			

Applies to Method: Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Au-ICP21	Hg-MS42	ME-MS61

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To: **ATAC RESOURCES LTD.**
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1016 - 510 W HASTINGS STREET
VANCOUVER BC V6B 1L8

Finalized Date: 8-JUL-2018
Account: ARCHORI

CERTIFICATE WH18148695

Project: Orion

P.O. No.: O18-014

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 23-JUN-2018.

The following have access to data associated with this certificate:

GLENN ASCH	MARK BRADLEY	KEVIN CREEL
PAUL DOBAK	NATHAN ECK	VLADIMIR ISPOLATOV
JULIA LANE	KARL MARLOWE	LEE SCHOLL
LIZ STOCK	JEREMY VAUGHAN	

SAMPLE PREPARATION

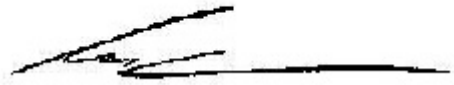
ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
PUL-31	Pulverize split to 85% <75 um
LOG-23	Pulp Login - Rcvd with Barcode
LOG-21d	Sample logging - ClientBarCode Dup
SPL-21d	Split sample - duplicate
PUL-31d	Pulverize Split - duplicate

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-ICP21	Au 30g FA ICP-AES Finish	ICP-AES
ME-MS61	48 element four acid ICP-MS	
Hg-MS42	Trace Hg by ICPMS	ICP-MS
ME-OG62	Ore Grade Elements - Four Acid	ICP-AES
Pb-OG62	Ore Grade Pb - Four Acid	ICP-AES
Zn-OG62	Ore Grade Zn - Four Acid	ICP-AES
As-OG62	Ore Grade As - Four Acid	ICP-AES

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature: 

Colin Ramshaw, Vancouver Laboratory Manager

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Finalized Date: 8-JUL-2018
Account: ARCHORI

Project: Orion

CERTIFICATE OF ANALYSIS WH18148695

Sample Description	Method Analyte Units LOD	WEI-21 Recvd Wt. kg 0.02	Pb-OG62 Pb % 0.001	Zn-OG62 Zn % 0.001	As-OG62 As % 0.001	Au-ICP21 Au ppm 0.001	ME-MS61 Ag ppm 0.01	ME-MS61 Al % 0.01	ME-MS61 As ppm 0.2	ME-MS61 Ba ppm 10	ME-MS61 Be ppm 0.05	ME-MS61 Bi ppm 0.01	ME-MS61 Ca % 0.01	ME-MS61 Cd ppm 0.02	ME-MS61 Ce ppm 0.01	ME-MS61 Co ppm 0.1
V766241		2.70				0.088	1.84	0.16	7050	110	0.25	0.01	36.2	10.20	9.21	2.1
V766242		2.18			1.290	0.016	0.49	0.03	>10000	30	0.14	<0.01	37.4	10.00	3.71	1.6
V766243		3.79				0.012	1.55	0.07	1170	20	0.11	0.01	38.1	14.90	5.42	1.6
V766244		4.31				0.035	4.47	0.18	3260	40	0.13	0.01	36.5	18.60	14.00	4.0
V766245		2.83				0.011	2.04	0.52	7420	40	0.32	0.04	34.7	4.87	59.5	12.2
V766246		3.35			2.55	0.003	0.23	0.09	>10000	30	0.12	0.01	36.7	0.46	9.14	1.5
V766247		6.03			2.87	0.004	0.13	0.07	>10000	30	0.08	0.01	37.3	0.57	8.07	1.3
V766248		3.54			2.85	0.005	0.11	0.06	>10000	30	0.10	0.01	37.0	0.41	5.90	1.4
V766249		2.05			1.750	0.014	0.04	0.04	>10000	20	0.11	<0.01	40.5	0.22	4.24	1.4
V766250		5.23			6.35	0.032	0.08	0.03	>10000	10	0.05	0.01	34.5	0.16	3.09	1.3
V766251		3.71			11.90	0.021	0.07	0.01	>10000	10	<0.05	0.01	32.3	0.06	1.10	1.1
V766252		4.88				0.002	<0.01	0.16	189.0	30	0.14	0.01	32.7	<0.02	1.11	1.4
V766253		4.04			1.520	0.038	0.03	0.01	>10000	10	0.24	<0.01	36.9	0.02	1.17	1.3
V766254		1.37			5.31	0.656	0.47	0.07	>10000	30	0.18	0.01	31.6	0.54	7.43	1.4
V766255		2.67			4.00	0.395	0.76	0.06	>10000	20	0.11	<0.01	34.3	0.43	6.72	1.3
V766256		2.70				0.096	0.12	0.01	1935	20	0.17	<0.01	38.6	0.05	2.26	1.3
V766257		3.56				0.243	0.60	0.05	8750	20	0.11	<0.01	37.4	0.68	5.72	1.7
V766258		0.24				4.23	0.79	2.76	477	630	0.65	0.55	10.10	0.52	42.6	5.1
V766259		5.28				0.226	0.11	0.02	147.5	30	0.09	<0.01	37.0	0.12	2.61	1.6
V766260		1.80				0.121	0.25	0.11	970	50	0.11	0.01	36.8	0.21	5.49	5.3
V766261		2.28				0.088	0.26	0.04	198.5	40	0.08	<0.01	38.4	0.22	3.65	2.5
V766262		<0.02				0.077	0.24	0.04	161.5	40	0.08	<0.01	37.3	0.21	3.45	2.4
V766263		2.91				1.145	7.54	0.10	965	60	0.12	0.01	33.3	21.7	7.47	2.3
V766264		2.21	1.360	3.04		0.082	67.5	0.03	1490	60	0.18	0.05	35.6	183.5	2.16	1.6
V766265		2.96		0.968		0.105	24.7	0.02	689	30	0.58	0.01	37.6	64.0	4.11	2.0
V766266		2.16				0.017	1.96	0.02	99.0	30	0.22	0.01	37.9	10.75	4.37	2.0
V766267		0.74				0.022	2.88	0.06	53.7	20	0.68	0.01	38.2	24.6	3.92	0.7
V766268		1.84				0.230	8.81	0.28	252	130	0.31	0.02	35.5	45.7	14.65	1.5
V766269		1.75				0.059	2.43	0.09	133.0	40	0.41	0.01	37.0	9.63	6.01	1.3
V766270		1.92				0.100	2.61	0.29	368	90	0.24	0.02	37.1	10.00	16.05	2.8
V766271		0.26				4.30	0.76	2.82	476	610	0.69	0.53	10.15	0.56	42.1	5.0
V766272		1.51				0.014	0.41	0.04	71.3	30	0.10	0.01	38.9	1.23	3.00	0.9
V766273		1.66				0.017	0.44	0.03	98.6	30	0.09	0.01	38.9	1.34	2.71	1.1
V766274		3.03				0.054	4.77	1.03	291	900	0.39	0.04	29.5	19.10	34.8	2.3
V766275		5.02				<0.001	0.01	0.07	4.2	20	0.09	0.01	34.2	0.05	1.23	0.6
V766276		4.99				0.008	0.26	0.22	144.0	140	0.20	0.01	35.3	1.72	11.80	1.2
V766277		5.28				0.001	0.23	0.22	57.7	280	0.22	0.01	35.2	2.37	12.20	0.8
V766278		3.37				<0.001	0.39	0.40	78.0	280	0.23	0.02	32.2	3.62	18.70	1.2
V766279		3.42				<0.001	0.82	0.62	159.0	280	0.31	0.04	31.4	4.37	24.7	1.9
V766280		5.74				<0.001	1.54	1.47	160.0	630	0.65	0.06	25.0	10.65	44.1	2.9

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VANCOUVER BC V6B 1L8

Finalized Date: 8-JUL-2018
Account: ARCHORI

Project: Orion

CERTIFICATE OF ANALYSIS WH18148695

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Hg-MS42	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Cr	Cs	Cu	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo
	Units	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm
	LOD	1	0.05	0.2	0.01	0.05	0.05	0.1	0.005	0.005	0.01	0.5	0.2	0.01	5	0.05
V766241		8	2.28	8.7	0.19	0.68	0.11	0.1	>100	<0.005	0.05	12.1	1.1	0.43	242	26.6
V766242		3	0.91	3.6	0.08	0.18	0.10	<0.1	91.4	<0.005	0.01	5.1	0.6	0.10	233	12.15
V766243		5	1.20	7.1	0.06	0.46	0.14	0.1	71.7	<0.005	0.03	6.7	0.7	0.11	224	18.15
V766244		11	4.48	12.7	0.28	0.95	0.12	0.1	>100	<0.005	0.07	18.4	1.5	0.11	278	26.5
V766245		31	7.35	27.4	0.64	2.62	0.18	0.3	>100	0.008	0.22	80.5	4.0	0.13	335	48.2
V766246		6	1.95	5.6	0.17	0.46	0.10	0.1	34.7	0.006	0.04	12.2	1.1	0.10	172	23.8
V766247		5	0.60	4.2	0.08	0.36	0.13	<0.1	19.10	0.005	0.02	11.3	0.7	0.12	126	14.70
V766248		4	0.59	3.9	0.06	0.31	0.11	<0.1	7.10	<0.005	0.02	8.1	0.7	0.14	82	13.15
V766249		3	1.04	2.9	0.30	0.27	0.09	<0.1	11.75	<0.005	0.01	5.2	0.5	0.12	369	28.1
V766250		3	0.66	3.4	0.07	0.25	0.10	<0.1	40.6	0.007	0.01	4.0	0.6	0.10	259	13.50
V766251		5	0.71	2.4	0.12	0.11	0.08	<0.1	50.6	0.016	<0.01	1.4	0.4	0.05	284	13.95
V766252		1	<0.05	3.5	0.12	0.67	0.10	0.1	0.175	0.005	0.05	1.2	1.1	1.75	124	0.12
V766253		5	0.16	1.9	0.02	0.14	0.11	<0.1	3.03	<0.005	<0.01	1.6	0.4	0.09	352	5.19
V766254		5	1.62	4.7	0.14	0.32	0.12	<0.1	73.8	0.008	0.02	10.1	3.0	0.18	221	30.5
V766255		6	2.12	3.7	0.09	0.32	0.10	<0.1	>100	0.005	0.02	9.0	1.5	0.10	449	13.10
V766256		1	0.37	1.9	0.02	0.14	0.11	<0.1	25.1	<0.005	<0.01	3.1	0.4	0.10	314	4.24
V766257		4	1.69	4.6	0.13	0.31	0.11	<0.1	58.7	<0.005	0.02	7.7	0.7	0.12	304	19.10
V766258		42	2.51	33.8	1.81	7.03	0.14	1.4	4.81	0.030	0.86	23.4	60.2	4.99	350	9.25
V766259		2	0.30	2.5	0.03	0.13	0.10	<0.1	13.05	<0.005	0.01	3.9	0.4	0.14	200	6.39
V766260		4	1.24	3.9	0.52	0.53	0.09	0.1	6.11	<0.005	0.04	7.3	0.7	0.16	169	85.0
V766261		3	0.74	3.1	0.12	0.23	0.11	<0.1	7.96	<0.005	0.01	5.3	0.6	0.14	174	11.10
V766262		3	0.71	3.1	0.11	0.20	0.11	<0.1	6.75	<0.005	0.01	4.8	0.5	0.14	164	11.05
V766263		6	7.56	15.2	0.26	0.58	0.13	<0.1	95.2	<0.005	0.03	9.9	2.1	0.16	178	16.90
V766264		2	21.9	82.6	0.10	0.73	0.11	<0.1	>100	0.005	0.01	3.0	0.6	0.15	214	5.89
V766265		4	0.30	20.3	0.17	0.41	0.15	<0.1	26.9	<0.005	0.01	5.2	0.5	0.13	380	1.40
V766266		3	0.28	4.4	0.20	0.21	0.08	<0.1	5.60	<0.005	0.01	5.6	0.3	0.14	234	1.77
V766267		4	0.26	7.6	0.09	0.33	0.25	<0.1	7.52	<0.005	0.02	4.9	0.6	0.15	388	1.78
V766268		19	3.03	33.6	0.24	1.14	0.17	0.1	41.1	0.008	0.10	18.2	1.8	0.13	307	13.85
V766269		6	0.47	6.5	0.10	0.38	0.17	0.1	7.65	<0.005	0.03	7.6	0.8	0.12	310	4.67
V766270		18	0.85	18.0	0.29	0.96	0.16	0.1	12.00	0.005	0.11	19.5	1.5	0.13	276	12.05
V766271		45	2.56	32.5	1.85	6.31	0.15	1.4	4.27	0.030	0.83	24.4	57.8	4.95	354	9.40
V766272		3	0.10	2.0	0.06	0.17	0.16	<0.1	1.670	<0.005	0.01	3.9	0.7	0.15	225	1.31
V766273		2	0.09	1.7	0.06	0.16	0.18	<0.1	2.28	<0.005	0.01	3.6	0.6	0.15	245	1.34
V766274		62	2.29	29.7	0.53	2.70	0.16	0.5	9.86	0.013	0.40	48.2	5.4	0.16	272	15.30
V766275		1	<0.05	1.3	0.13	0.27	0.15	<0.1	0.054	<0.005	0.01	1.3	1.3	2.00	141	0.07
V766276		18	0.46	7.4	0.15	0.75	0.15	0.1	3.89	<0.005	0.09	16.9	1.5	0.23	120	4.01
V766277		19	0.40	7.9	0.14	0.77	0.13	0.1	0.489	<0.005	0.08	18.1	1.4	0.22	95	2.91
V766278		32	0.83	11.5	0.23	1.20	0.14	0.2	1.175	0.006	0.15	26.1	2.0	0.21	92	4.32
V766279		59	1.57	22.1	0.41	1.52	0.14	0.3	0.912	0.007	0.24	34.4	3.5	0.39	61	8.52
V766280		108	3.46	43.8	0.70	3.83	0.19	0.6	0.418	0.016	0.57	51.9	8.2	1.43	74	13.55

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016 - 510 W HASTINGS STREET
VANCOUVER BC V6B 1L8

Finalized Date: 8-JUL-2018
Account: ARCHORI

Project: Orion

CERTIFICATE OF ANALYSIS WH18148695

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Na	Nb	Ni	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te
	Units	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.01	0.1	0.2	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05
V766241		0.01	0.4	64.3	320	440	2.0	0.058	0.74	10.85	1.3	2	0.2	358	<0.05	<0.05
V766242		<0.01	0.1	34.8	340	39.8	0.5	0.028	1.13	3.41	0.7	1	<0.2	238	<0.05	<0.05
V766243		<0.01	0.2	23.5	160	254	1.2	0.035	0.28	3.64	0.8	1	<0.2	305	<0.05	<0.05
V766244		<0.01	0.5	147.5	410	702	3.3	0.194	0.40	6.43	1.6	2	<0.2	252	<0.05	<0.05
V766245		0.01	1.4	838	1450	153.0	9.7	0.634	0.54	11.45	2.7	4	0.3	312	0.10	<0.05
V766246		<0.01	0.2	18.5	380	12.1	1.6	0.043	2.07	3.16	0.9	2	<0.2	240	<0.05	<0.05
V766247		<0.01	0.2	13.4	250	10.4	1.3	0.023	2.22	2.95	0.6	1	<0.2	257	<0.05	<0.05
V766248		0.01	0.1	12.4	270	16.7	1.0	0.024	2.14	2.89	0.4	2	<0.2	197.5	<0.05	<0.05
V766249		<0.01	0.1	7.2	110	3.8	0.7	0.034	1.54	1.79	0.5	1	<0.2	283	<0.05	<0.05
V766250		<0.01	0.1	8.5	130	3.6	0.7	0.021	4.23	1.57	0.6	1	<0.2	215	<0.05	<0.05
V766251		<0.01	0.1	17.0	30	3.4	0.3	0.020	6.97	12.50	1.9	1	<0.2	108.5	<0.05	<0.05
V766252		0.08	0.3	0.5	70	<0.5	1.4	<0.002	0.02	0.09	0.3	1	<0.2	82.7	<0.05	<0.05
V766253		<0.01	<0.1	19.9	40	1.1	0.2	0.016	1.13	4.21	2.4	1	<0.2	242	<0.05	<0.05
V766254		<0.01	0.2	26.4	540	9.1	1.3	0.066	3.56	11.00	1.3	2	0.2	157.0	<0.05	<0.05
V766255		<0.01	0.1	9.0	150	8.7	0.9	0.024	2.33	7.11	2.0	2	<0.2	137.5	<0.05	<0.05
V766256		<0.01	<0.1	7.2	70	0.9	0.3	0.012	0.12	1.50	0.8	1	<0.2	155.0	<0.05	<0.05
V766257		<0.01	0.1	41.7	170	63.4	1.0	0.062	0.68	5.63	1.2	1	<0.2	179.5	<0.05	<0.05
V766258		0.01	5.5	30.4	540	9.4	42.6	0.011	1.42	104.0	4.5	2	2.8	59.6	0.37	0.31
V766259		<0.01	<0.1	32.2	180	2.4	0.4	0.053	0.07	2.12	1.0	1	<0.2	149.0	<0.05	<0.05
V766260		<0.01	0.3	426	230	1.5	1.9	0.187	1.04	37.5	1.3	3	<0.2	150.5	<0.05	<0.05
V766261		<0.01	0.1	71.5	150	2.7	0.6	0.057	0.22	4.38	1.0	2	<0.2	141.5	<0.05	<0.05
V766262		<0.01	0.1	71.2	140	1.9	0.5	0.054	0.21	4.32	0.9	1	<0.2	140.0	<0.05	<0.05
V766263		<0.01	0.2	138.0	340	1365	1.4	0.140	0.62	41.3	1.7	21	0.2	143.5	<0.05	<0.05
V766264		<0.01	0.1	61.1	210	>10000	0.4	0.086	2.05	441	0.9	13	0.2	127.0	<0.05	0.05
V766265		<0.01	<0.1	41.5	150	2440	0.4	0.037	0.79	86.4	3.0	27	<0.2	67.9	<0.05	<0.05
V766266		<0.01	<0.1	19.4	180	471	0.3	0.028	0.38	13.90	2.6	2	<0.2	125.5	<0.05	<0.05
V766267		<0.01	0.1	11.5	190	764	1.0	0.040	0.32	22.6	2.3	2	<0.2	40.6	<0.05	<0.05
V766268		<0.01	0.6	59.0	960	2650	4.8	0.218	0.75	48.1	3.2	3	0.2	129.0	<0.05	<0.05
V766269		<0.01	0.2	43.9	270	628	1.6	0.062	0.22	23.1	2.7	2	<0.2	74.8	<0.05	<0.05
V766270		0.01	0.5	133.0	2000	565	4.8	0.166	0.51	19.55	2.7	3	<0.2	106.0	<0.05	<0.05
V766271		0.01	5.4	32.5	530	10.2	44.8	0.009	1.46	90.9	4.3	2	2.5	57.4	0.35	0.25
V766272		0.01	0.1	24.8	910	33.4	0.6	0.036	0.08	1.21	1.3	2	<0.2	129.5	<0.05	<0.05
V766273		0.01	<0.1	32.0	780	37.7	0.5	0.033	0.08	1.50	1.2	2	<0.2	127.5	<0.05	<0.05
V766274		0.01	1.8	127.5	2680	409	18.4	0.067	0.89	14.30	2.8	7	0.4	342	0.11	<0.05
V766275		0.03	0.1	0.4	80	1.7	0.5	<0.002	<0.01	0.09	0.2	1	<0.2	82.8	<0.05	<0.05
V766276		0.01	0.4	47.9	710	6.6	3.8	0.013	0.25	2.59	2.3	2	<0.2	294	<0.05	<0.05
V766277		0.01	0.4	28.8	630	3.3	3.5	0.020	0.18	1.16	1.8	2	<0.2	363	<0.05	<0.05
V766278		0.01	0.7	47.6	1060	5.7	6.4	0.042	0.28	1.77	2.5	3	0.2	355	<0.05	<0.05
V766279		0.01	1.1	85.3	800	4.6	10.4	0.035	0.46	3.17	1.9	5	0.2	367	0.06	<0.05
V766280		0.02	2.5	138.5	2260	7.3	26.1	0.051	0.87	5.38	3.2	10	0.6	419	0.15	0.06

***** See Appendix Page for comments regarding this certificate *****

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VANCOUVER BC V6B 1L8

Finalized Date: 8-JUL-2018
Account: ARCHORI

Project: Orion

CERTIFICATE OF ANALYSIS WH18148695

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Th	Ti	Tl	U	V	W	Y	Zn	Zr
	Units	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.01	0.005	0.02	0.1	1	0.1	0.1	2	0.5
V766241		0.29	0.008	68.7	9.6	84	1.5	11.1	2110	3.9
V766242		0.07	<0.005	4.22	8.7	39	0.8	13.1	1800	1.3
V766243		0.15	<0.005	11.50	5.5	59	1.2	16.6	2380	2.2
V766244		0.37	0.010	78.5	10.0	116	1.5	17.5	4620	4.5
V766245		1.24	0.026	81.7	27.6	315	3.1	32.6	8250	13.6
V766246		0.22	<0.005	3.47	9.9	77	0.8	13.9	106	2.8
V766247		0.16	<0.005	3.16	9.6	59	0.5	10.5	102	1.9
V766248		0.12	<0.005	7.96	9.6	44	0.4	7.6	69	1.8
V766249		0.07	<0.005	3.60	3.6	38	1.9	41.3	36	1.2
V766250		0.06	<0.005	2.93	5.9	37	0.9	13.9	23	1.1
V766251		0.02	<0.005	3.67	1.8	33	0.4	9.1	328	<0.5
V766252		0.09	0.005	0.04	0.2	2	<0.1	2.5	6	2.2
V766253		0.01	<0.005	8.01	2.2	50	2.4	17.6	200	0.9
V766254		0.14	<0.005	8.88	21.4	52	1.1	12.3	87	2.7
V766255		0.10	<0.005	9.66	7.2	47	0.9	13.0	53	1.7
V766256		0.02	<0.005	1.36	3.5	33	0.8	16.3	66	0.9
V766257		0.12	<0.005	54.4	7.1	47	0.8	11.1	807	1.9
V766258		5.54	0.151	2.62	5.1	95	76.7	14.1	72	50.7
V766259		0.04	<0.005	13.45	6.9	32	0.3	7.1	397	1.2
V766260		0.17	0.007	230	7.1	97	0.5	8.6	7380	2.8
V766261		0.07	<0.005	33.5	5.8	57	0.4	9.2	1380	1.6
V766262		0.07	<0.005	33.3	5.8	55	0.4	9.2	1360	1.5
V766263		0.19	<0.005	203	9.7	119	0.6	11.1	4940	2.5
V766264		0.04	<0.005	319	7.2	41	0.3	8.4	>10000	1.7
V766265		0.06	<0.005	30.3	6.3	134	0.3	16.7	>10000	1.4
V766266		0.05	<0.005	9.56	8.5	49	0.2	13.7	2760	1.1
V766267		0.11	<0.005	4.27	5.3	65	0.2	16.5	4330	1.7
V766268		0.53	0.015	20.5	11.2	217	0.8	24.2	7730	8.0
V766269		0.18	<0.005	13.95	7.1	110	0.3	18.1	1740	3.0
V766270		0.61	0.015	22.6	14.6	224	0.7	27.6	2440	7.5
V766271		5.95	0.154	2.56	5.3	95	70.4	15.6	75	52.2
V766272		0.09	<0.005	3.56	6.6	46	0.2	11.7	363	1.3
V766273		0.08	<0.005	5.57	6.3	47	0.2	11.3	411	0.9
V766274		1.91	0.052	10.65	15.6	345	1.6	37.4	3050	22.7
V766275		0.06	0.005	0.08	0.2	2	<0.1	2.8	14	1.6
V766276		0.41	0.012	11.95	6.0	119	0.2	22.1	591	5.7
V766277		0.40	0.011	2.93	5.7	131	0.2	22.4	219	5.5
V766278		0.70	0.020	4.58	7.3	194	0.2	29.6	296	8.7
V766279		1.15	0.032	9.91	7.9	271	0.3	30.4	464	14.2
V766280		2.70	0.076	10.85	13.7	521	0.6	53.2	829	32.3

***** See Appendix Page for comments regarding this certificate *****

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VANCOUVER BC V6B 1L8

Project: Orion

Finalized Date: 8-JUL-2018
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CERTIFICATE OF ANALYSIS WH18148695

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

REE's may not be totally soluble in this method.

Applies to Method: ME-MS61

LABORATORY ADDRESSES

Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.

Applies to Method:				
	CRU-31	CRU-QC	LOG-21	LOG-21d
	LOG-23	PUL-31	PUL-31d	PUL-QC
	SPL-21	SPL-21d	WEI-21	

Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Applies to Method:				
	As-OG62	Au-ICP21	Hg-MS42	ME-MS61
	ME-OG62	Pb-OG62	Zn-OG62	

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1016 - 510 W HASTINGS STREET
VANCOUVER BC V6B 1L8

Finalized Date: 16-JUL-2018
Account: ARCHORI

CERTIFICATE WH18154649

Project: Orion

P.O. No.: O18-015

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 29-JUN-2018.

The following have access to data associated with this certificate:

GLENN ASCH	MARK BRADLEY	KEVIN CREEL
PAUL DOBAK	NATHAN ECK	VLADIMIR ISPOLATOV
JULIA LANE	KARL MARLOWE	LEE SCHOLL
LIZ STOCK	JEREMY VAUGHAN	

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
WSH-22x	Wash pulv bowls and save material
PUL-31	Pulverize split to 85% <75 um
BAG-01u	Bag wash material for pulv bowl
LOG-23	Pulp Login - Rcvd with Barcode
LOG-21d	Sample logging - ClientBarCode Dup
SPL-21d	Split sample - duplicate
PUL-31d	Pulverize Split - duplicate

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-ICP21	Au 30g FA ICP-AES Finish	ICP-AES
ME-MS61	48 element four acid ICP-MS	
Hg-MS42	Trace Hg by ICPMS	ICP-MS
ME-OG62	Ore Grade Elements - Four Acid	ICP-AES
Zn-OG62	Ore Grade Zn - Four Acid	ICP-AES

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:

Colin Ramshaw, Vancouver Laboratory Manager

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Finalized Date: 16-JUL-2018
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Project: Orion

CERTIFICATE OF ANALYSIS WH18154649

Sample Description	Method	WEI-21	Zn-OG62	Au-ICP21	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Recvd Wt.	Zn	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs
	Units	kg	%	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm
	LOD	0.02	0.001	0.001	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05
V766281		5.84		<0.001	0.69	0.47	46.4	600	0.24	0.03	31.9	3.12	22.3	1.1	51	1.22
V766282		4.88		0.002	1.04	1.43	51.9	500	0.62	0.05	26.9	9.37	37.9	2.7	73	4.18
V766283		6.58		0.002	1.06	0.87	25.1	630	0.42	0.04	35.9	8.49	32.3	1.8	78	2.25
V766284		5.31		0.001	0.73	0.86	34.7	1280	0.36	0.04	35.3	9.81	26.6	2.3	45	2.76
V766285		6.31		<0.001	0.14	0.19	7.3	280	0.12	0.01	38.8	1.95	8.73	0.7	12	0.35
V766286		6.35		0.001	0.35	0.38	15.8	180	0.22	0.02	37.1	4.41	14.00	1.3	25	1.18
V766287		6.43		0.002	0.55	0.73	27.7	200	0.35	0.04	36.5	6.07	22.7	1.7	40	1.60
V766288		6.08		0.002	0.79	1.19	49.0	280	0.46	0.05	33.4	11.10	32.8	2.6	56	2.52
V766289		6.36		0.003	0.23	0.36	22.3	190	0.20	0.02	37.5	2.81	12.55	1.0	16	0.74
V766290		<0.02		<0.001	0.24	0.37	21.2	200	0.21	0.02	37.9	2.84	12.00	1.0	15	0.71
V766291		6.37		0.003	0.13	0.17	15.4	240	0.11	0.01	38.3	1.96	7.37	0.6	11	0.22
V766292		6.43		0.002	0.09	0.11	22.7	190	0.12	0.01	38.7	1.14	7.00	0.5	8	0.11
V766293		6.40		0.001	0.10	0.14	35.4	350	0.12	0.01	38.5	1.21	7.05	0.6	8	0.15
V766294		6.20		0.001	0.18	0.25	52.1	340	0.15	0.01	37.9	1.88	9.00	0.8	13	0.33
V766295		6.46		0.002	0.06	0.05	10.6	1370	0.09	<0.01	35.3	0.32	3.96	0.4	4	0.06
V766296		6.17		0.001	0.04	0.02	2.2	80	0.09	0.01	36.1	0.11	2.13	0.5	1	<0.05
V766297		6.48		<0.001	0.06	0.03	5.5	70	0.08	0.01	36.4	0.29	3.00	0.7	1	<0.05
V766298		0.11		0.282	0.33	6.26	519	100	0.64	0.28	0.53	0.17	136.5	3.1	217	3.14
V766299		6.42		0.001	0.05	0.02	5.3	80	0.06	0.01	36.4	0.23	1.83	0.3	1	<0.05
V766300		6.20		0.001	0.04	0.02	4.6	80	0.07	<0.01	37.1	0.31	1.83	0.3	1	<0.05
V766301		6.43		0.001	0.08	0.03	13.7	150	0.06	0.01	36.6	0.33	2.72	0.4	2	<0.05
V766302		6.28		0.006	0.55	0.73	45.5	240	0.39	0.04	35.0	8.17	23.4	1.9	35	1.80
V766303		6.34		<0.001	0.30	0.74	54.4	260	0.33	0.05	33.4	3.39	20.6	1.8	23	1.61
V766304		5.05		<0.001	0.26	0.81	271	190	0.32	0.04	27.4	3.97	21.0	1.8	23	1.57
V766305		6.13		<0.001	2.60	0.26	135.0	150	0.25	0.02	28.1	24.6	11.15	0.8	17	0.69
V766306		2.15	1.565	0.028	9.65	0.20	104.5	80	0.18	0.03	29.0	103.5	7.21	0.7	11	0.51
V766307		3.39		0.001	0.55	0.23	36.4	120	0.17	0.02	31.8	2.25	9.09	0.7	13	0.56
V766308		5.72		0.005	0.65	0.25	44.4	120	0.22	0.02	30.2	3.46	11.25	0.8	15	0.69
V766309		6.02		0.001	2.73	0.20	55.0	110	0.20	0.01	29.5	25.6	10.25	0.6	15	0.45
V766310		1.26		<0.001	2.19	0.15	45.9	40	0.30	0.01	18.10	17.90	4.11	0.6	11	0.49
V766311		0.11		2.05	0.57	2.54	420	550	0.63	0.36	10.85	0.91	40.2	8.0	41	3.07
V766312		2.69		0.003	2.51	1.41	371	300	0.64	0.05	20.6	3.53	14.60	3.6	39	5.25
V766313		4.92		<0.001	0.01	0.11	1.3	20	0.10	0.02	32.5	0.03	0.94	0.9	1	<0.05
V766314		1.77		0.004	3.17	2.19	388	450	0.77	0.10	0.93	3.83	19.75	3.6	55	3.89
V766315		2.94		0.003	2.68	2.74	411	340	0.96	0.10	0.38	23.4	25.0	5.1	92	6.26
V766316		2.24		0.006	3.47	2.45	261	300	0.87	0.11	0.21	10.80	19.55	5.3	68	4.78
V766317		4.33		0.002	1.76	2.20	277	440	0.82	0.10	0.14	10.30	15.25	5.0	50	4.09
V766318		1.30		0.024	4.30	3.00	274	260	0.84	0.11	0.68	18.10	24.4	6.4	65	5.55
V766319		1.40		0.009	4.91	3.61	240	320	1.18	0.14	0.72	32.5	35.5	7.4	73	8.91
V766320		3.17		0.004	1.02	5.80	157.0	440	2.01	0.22	1.39	3.72	61.3	9.2	97	14.40

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016 - 510 W HASTINGS STREET
VANCOUVER BC V6B 1L8

Finalized Date: 16-JUL-2018
Account: ARCHORI

Project: Orion

CERTIFICATE OF ANALYSIS WH18154649

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Hg-MS42	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Cu	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb
	Units	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm
	LOD	0.2	0.01	0.05	0.05	0.1	0.005	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1
V766281		18.2	0.36	1.25	0.09	0.2	0.106	0.005	0.19	35.5	2.6	0.74	48	5.54	0.01	0.9
V766282		35.4	0.63	3.53	0.13	0.6	0.187	0.015	0.58	49.2	7.9	5.14	87	10.45	0.02	2.5
V766283		35.4	0.39	2.43	0.12	0.4	0.152	0.012	0.37	45.3	4.7	0.81	50	10.75	0.02	1.7
V766284		29.6	0.43	2.46	0.09	0.4	0.141	0.013	0.39	36.8	4.9	1.15	55	18.55	0.01	1.7
V766285		8.1	0.09	0.55	0.06	0.1	0.049	<0.005	0.08	12.6	1.1	0.47	31	3.53	0.01	0.4
V766286		14.9	0.21	1.17	0.09	0.2	0.197	0.005	0.17	17.7	2.6	0.61	37	9.21	0.01	0.8
V766287		24.1	0.42	1.81	0.09	0.4	0.113	0.005	0.34	29.1	4.1	1.05	47	12.15	0.01	1.5
V766288		29.6	0.57	3.11	0.12	0.5	0.239	0.014	0.54	39.4	6.1	1.20	54	20.0	0.02	2.4
V766289		10.3	0.19	0.92	0.06	0.2	0.079	<0.005	0.15	17.5	2.1	0.58	38	5.56	0.01	0.8
V766290		9.8	0.19	0.93	0.07	0.2	0.096	<0.005	0.15	16.8	2.0	0.56	37	5.43	0.01	0.7
V766291		5.2	0.09	0.43	0.06	0.1	0.046	<0.005	0.06	12.1	1.1	0.48	33	3.68	0.01	0.3
V766292		4.3	0.07	0.28	0.07	0.1	0.036	<0.005	0.04	12.2	0.7	0.47	39	2.37	0.01	0.2
V766293		4.2	0.08	0.35	0.06	0.1	0.035	<0.005	0.05	12.0	0.8	0.45	32	3.09	0.01	0.3
V766294		8.9	0.13	0.58	0.06	0.1	0.079	<0.005	0.11	13.2	1.0	0.41	33	4.35	0.01	0.5
V766295		1.9	0.05	0.15	0.06	<0.1	0.040	<0.005	0.02	6.9	0.4	0.41	28	1.01	<0.01	0.1
V766296		0.9	0.04	0.07	0.06	<0.1	0.017	<0.005	0.01	3.4	0.3	0.26	44	0.55	0.01	0.1
V766297		1.5	0.03	0.10	0.06	<0.1	0.051	<0.005	0.01	4.8	0.3	0.28	46	0.50	0.01	0.1
V766298		25.3	6.14	20.8	0.17	4.4	7.47	0.047	1.36	69.4	18.3	0.15	47	6.49	0.44	10.9
V766299		0.7	0.03	0.07	<0.05	<0.1	0.059	<0.005	0.01	3.2	0.3	0.29	40	0.44	0.01	0.1
V766300		0.6	0.02	0.07	0.05	<0.1	0.075	<0.005	0.01	3.3	0.3	0.27	33	0.29	0.01	0.1
V766301		1.1	0.02	0.10	0.07	<0.1	0.040	<0.005	0.01	4.9	0.3	0.25	30	0.84	0.01	0.1
V766302		29.1	0.35	2.22	0.10	0.4	0.274	0.007	0.32	33.5	4.2	0.92	43	18.40	0.02	1.5
V766303		17.6	0.41	1.91	0.06	0.4	0.199	0.010	0.33	26.7	4.2	1.35	59	16.10	0.02	1.2
V766304		14.5	0.53	2.00	0.05	0.3	1.085	0.008	0.34	26.7	3.6	0.68	85	18.80	0.01	1.4
V766305		14.1	0.28	0.81	<0.05	0.1	4.39	0.021	0.12	21.8	1.7	0.37	107	12.65	0.01	0.5
V766306		23.3	0.30	0.82	<0.05	0.1	21.5	0.071	0.09	14.1	1.7	0.48	226	8.33	0.01	0.3
V766307		6.5	0.24	0.62	<0.05	0.1	0.292	0.006	0.10	18.7	1.3	0.39	89	8.35	0.01	0.4
V766308		7.9	0.31	0.71	<0.05	0.1	0.586	<0.005	0.11	20.7	1.5	0.40	62	9.92	0.01	0.4
V766309		13.8	0.23	0.66	<0.05	0.1	4.84	0.024	0.09	21.0	1.4	0.30	121	7.37	0.01	0.3
V766310		14.7	0.35	0.51	<0.05	0.1	3.85	0.020	0.06	7.6	1.1	0.08	185	5.74	<0.01	0.2
V766311		22.8	1.53	5.66	0.05	1.4	2.91	0.021	0.94	25.0	37.6	3.22	246	15.05	0.03	4.7
V766312		34.9	0.86	3.52	0.06	0.5	1.550	0.015	0.58	16.8	3.6	0.22	153	34.2	0.01	2.1
V766313		1.8	0.12	0.35	<0.05	0.1	0.006	<0.005	0.03	1.1	1.3	2.35	115	0.10	0.05	0.2
V766314		42.0	1.33	5.17	0.05	1.2	1.040	0.019	0.87	14.5	9.3	0.12	59	52.5	0.01	5.9
V766315		55.1	1.39	6.89	0.08	1.1	1.565	0.028	1.05	21.7	6.2	0.18	44	68.3	0.02	5.4
V766316		54.6	1.38	6.07	0.07	0.9	1.920	0.027	0.97	13.4	6.4	0.15	49	46.6	0.02	3.6
V766317		40.5	1.39	5.31	0.05	0.8	1.745	0.026	0.87	8.3	5.8	0.14	51	62.0	0.02	3.3
V766318		80.6	1.80	7.49	0.05	1.2	4.01	0.046	1.25	14.5	6.6	0.30	88	47.8	0.02	5.5
V766319		76.2	1.64	9.39	0.06	1.6	6.56	0.062	1.51	20.4	7.2	0.38	81	39.9	0.02	8.4
V766320		74.8	2.19	15.40	0.08	2.7	0.485	0.052	2.34	34.7	11.5	0.86	130	9.38	0.04	19.2

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
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1016 - 510 W HASTINGS STREET
VANCOUVER BC V6B 1L8

Finalized Date: 16-JUL-2018
Account: ARCHORI

Project: Orion

CERTIFICATE OF ANALYSIS WH18154649

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Ni	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti
	Units	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%
	LOD	0.2	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.01	0.005
V766281		52.9	580	3.2	8.5	0.025	0.37	2.14	1.5	3	0.2	435	0.05	<0.05	0.89	0.024
V766282		94.5	1060	7.4	24.7	0.047	0.79	5.67	3.5	7	0.5	347	0.14	0.05	2.49	0.073
V766283		88.1	990	5.2	16.4	0.039	0.58	3.47	2.6	6	0.3	468	0.10	0.05	1.72	0.045
V766284		78.4	560	7.5	17.0	0.045	0.62	4.38	2.3	7	0.4	371	0.10	0.05	1.64	0.047
V766285		16.5	440	2.3	3.3	0.010	0.14	1.01	0.7	2	<0.2	348	<0.05	<0.05	0.37	0.010
V766286		40.1	420	4.2	8.0	0.024	0.28	2.07	1.1	4	0.2	329	0.05	<0.05	0.73	0.021
V766287		55.3	900	6.2	14.8	0.023	0.56	3.59	1.9	5	0.3	315	0.09	0.05	1.50	0.041
V766288		91.7	1200	6.9	24.0	0.034	0.79	5.23	2.8	7	0.5	384	0.13	0.06	2.35	0.063
V766289		29.1	480	2.5	6.9	0.010	0.26	1.61	0.9	3	0.2	354	<0.05	<0.05	0.69	0.019
V766290		28.0	480	2.5	6.6	0.008	0.27	1.53	0.8	3	0.2	375	<0.05	<0.05	0.65	0.020
V766291		23.8	310	1.4	2.7	0.011	0.13	0.77	0.5	2	<0.2	324	<0.05	<0.05	0.35	0.009
V766292		14.8	360	1.5	1.5	0.006	0.11	0.64	0.4	1	<0.2	335	<0.05	<0.05	0.21	0.006
V766293		14.2	270	1.5	2.2	0.007	0.12	0.70	0.4	2	<0.2	314	<0.05	<0.05	0.27	0.008
V766294		24.9	340	2.1	4.3	0.010	0.21	1.02	0.6	2	<0.2	333	<0.05	<0.05	0.45	0.013
V766295		7.4	140	2.2	0.9	0.005	0.09	0.33	0.2	1	<0.2	354	<0.05	<0.05	0.10	<0.005
V766296		2.6	60	2.2	0.4	0.002	0.04	0.25	0.1	1	<0.2	227	<0.05	<0.05	0.06	<0.005
V766297		3.1	70	2.1	0.5	<0.002	0.03	0.24	0.2	1	<0.2	220	<0.05	<0.05	0.08	<0.005
V766298		17.0	980	16.4	44.0	<0.002	2.96	102.0	16.0	<1	2.5	538	0.72	0.18	9.96	0.538
V766299		1.6	70	2.7	0.3	<0.002	0.03	0.24	0.1	1	<0.2	220	<0.05	<0.05	0.06	<0.005
V766300		1.6	80	4.0	0.3	<0.002	0.02	0.21	0.1	1	<0.2	221	<0.05	<0.05	0.06	<0.005
V766301		5.3	100	8.9	0.5	0.002	0.03	0.56	0.1	1	<0.2	224	<0.05	<0.05	0.08	<0.005
V766302		75.4	530	6.3	15.7	0.027	0.51	6.76	2.1	5	0.3	473	0.09	<0.05	1.37	0.038
V766303		57.2	560	4.1	13.2	0.021	0.51	4.95	1.6	5	0.3	398	0.08	0.05	1.20	0.040
V766304		65.0	670	3.7	13.5	0.031	0.54	3.47	1.7	6	0.3	291	0.10	0.05	1.66	0.038
V766305		51.2	520	54.1	5.1	0.023	0.42	6.50	0.9	4	0.2	402	<0.05	<0.05	0.45	0.013
V766306		44.4	280	401	3.8	0.049	1.01	15.40	0.8	8	0.6	322	<0.05	<0.05	0.35	0.010
V766307		34.0	370	14.0	4.2	0.021	0.21	1.66	0.7	4	<0.2	393	<0.05	<0.05	0.40	0.012
V766308		41.6	390	20.4	4.9	0.018	0.22	2.70	0.8	4	<0.2	409	<0.05	<0.05	0.45	0.012
V766309		29.8	300	20.2	3.5	0.015	0.36	3.43	1.2	3	0.2	351	<0.05	<0.05	0.38	0.010
V766310		24.1	320	30.1	2.5	0.008	0.26	2.42	1.4	2	0.9	52.7	<0.05	<0.05	0.25	0.007
V766311		36.4	580	6.5	39.1	0.012	1.25	76.6	3.7	2	0.9	84.4	0.32	0.26	4.86	0.139
V766312		288	520	148.0	27.0	0.143	0.94	9.19	3.3	14	1.5	223	0.13	0.16	1.38	0.068
V766313		0.8	80	0.5	0.9	<0.002	0.01	0.10	0.1	1	<0.2	81.0	<0.05	<0.05	0.08	0.005
V766314		170.0	760	213	36.6	0.090	1.46	14.20	2.8	14	0.8	30.0	0.36	0.18	2.71	0.136
V766315		205	1380	30.5	50.4	0.094	1.68	25.7	3.4	23	1.0	26.1	0.32	0.23	3.11	0.152
V766316		143.0	750	85.0	42.8	0.045	1.54	18.80	4.2	22	1.1	20.5	0.23	0.28	2.78	0.127
V766317		139.0	230	49.4	39.2	0.057	1.52	17.30	4.0	17	1.0	15.8	0.22	0.22	2.60	0.118
V766318		113.5	530	310	51.7	0.037	1.99	28.7	5.6	15	1.5	47.7	0.36	0.16	3.53	0.163
V766319		105.5	720	383	65.8	0.028	1.88	28.2	6.7	14	1.9	57.9	0.52	0.12	4.76	0.208
V766320		78.8	1180	17.5	107.5	0.011	2.03	7.06	10.2	7	1.8	88.1	1.09	0.11	8.49	0.363

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Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Tl	U	V	W	Y	Zn	Zr
	Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.02	0.1	1	0.1	0.1	2	0.5
V766281		3.49	5.8	211	0.2	26.5	276	13.5
V766282		8.60	7.5	668	0.4	37.5	629	27.7
V766283		3.32	7.3	677	0.2	37.7	476	22.2
V766284		6.59	6.7	692	0.2	27.5	716	18.2
V766285		0.90	3.5	154	0.1	12.0	156	4.5
V766286		2.99	4.5	336	0.2	15.6	311	9.3
V766287		0.73	7.2	474	0.3	26.7	376	17.3
V766288		2.28	11.4	758	0.3	35.3	747	25.6
V766289		0.92	5.8	231	0.1	15.9	219	8.7
V766290		0.89	5.6	229	0.1	14.8	219	8.1
V766291		0.25	4.5	106	0.1	11.1	126	4.4
V766292		0.30	5.2	91	0.1	10.6	93	2.7
V766293		0.15	3.8	98	0.1	10.3	77	3.7
V766294		1.02	4.7	160	0.1	11.6	175	5.7
V766295		0.36	2.6	38	<0.1	7.0	54	1.8
V766296		0.14	3.7	11	<0.1	4.8	42	0.8
V766297		0.12	3.4	12	0.1	6.4	36	0.8
V766298		6.88	7.5	163	25.2	15.9	38	177.0
V766299		0.13	3.4	12	0.1	4.4	30	1.0
V766300		0.12	3.5	8	0.1	4.5	52	0.8
V766301		0.28	4.5	16	0.1	6.5	69	0.9
V766302		0.93	10.0	580	0.3	27.1	550	17.9
V766303		0.86	5.4	436	0.2	21.4	316	14.0
V766304		1.91	6.1	525	0.3	20.9	420	14.0
V766305		0.64	4.4	503	0.3	21.4	3650	6.4
V766306		2.02	2.5	312	0.4	14.8	>10000	4.5
V766307		1.29	3.1	360	0.4	17.7	333	5.0
V766308		1.43	3.9	382	0.4	16.8	456	5.6
V766309		1.56	3.7	256	0.4	18.5	3920	4.4
V766310		1.39	2.4	141	0.2	9.0	2820	3.5
V766311		2.78	6.5	158	69.5	17.3	92	53.0
V766312		8.33	7.5	709	1.6	19.2	800	22.4
V766313		0.03	0.2	2	<0.1	2.0	7	1.6
V766314		8.29	7.5	860	3.4	14.5	865	47.7
V766315		2.91	11.4	1220	1.2	23.8	1580	47.3
V766316		2.10	7.6	992	2.2	20.2	1420	35.7
V766317		2.70	8.7	1080	1.8	8.1	950	32.7
V766318		2.20	6.1	951	3.8	15.1	2730	44.3
V766319		1.99	6.3	903	3.6	19.0	4590	59.2
V766320		1.73	4.8	579	1.6	27.4	504	101.5

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.

2103 Dollarton Hwy
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Phone: +1 (604) 984 0221 Fax: +1 (604) 984 0218
www.alsglobal.com/geochemistry

To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016 - 510 W HASTINGS STREET
VANCOUVER BC V6B 1L8

Project: Orion

Finalized Date: 16-JUL-2018
Account: ARCHORI

CERTIFICATE OF ANALYSIS WH18154649

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Applies to Method: REE's may not be totally soluble in this method.
ME-MS61

LABORATORY ADDRESSES

Applies to Method: Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.

BAG-01u	CRU-31	CRU-QC	LOG-21
LOG-21d	LOG-23	PUL-31	PUL-31d
PUL-QC	SPL-21	SPL-21d	WEI-21
WSH-22x			

Applies to Method: Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Au-ICP21	Hg-MS42	ME-MS61	ME-OG62
Zn-OG62			

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CERTIFICATE WH18154654

Project: Orion

P.O. No.: O18-016

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 29-JUN-2018.

The following have access to data associated with this certificate:

GLENN ASCH	MARK BRADLEY	KEVIN CREEL
PAUL DOBAK	NATHAN ECK	VLADIMIR ISPOLATOV
JULIA LANE	KARL MARLOWE	LEE SCHOLL
LIZ STOCK	JEREMY VAUGHAN	

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
PUL-31	Pulverize split to 85% <75 um
WSH-22x	Wash pulv bowls and save material
BAG-01u	Bag wash material for pulv bowl
LOG-23	Pulp Login - Rcvd with Barcode
LOG-21d	Sample logging - ClientBarCode Dup
SPL-21d	Split sample - duplicate
PUL-31d	Pulverize Split - duplicate

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-ICP21	Au 30g FA ICP-AES Finish	ICP-AES
ME-MS61	48 element four acid ICP-MS	
Hg-MS42	Trace Hg by ICPMS	ICP-MS

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:

Colin Ramshaw, Vancouver Laboratory Manager

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Account: ARCHORI

Project: Orion

CERTIFICATE OF ANALYSIS WH18154654

Sample Description	Method	WEI-21	Au-ICP21	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Recvd Wt.	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu
	Units	kg	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.02	0.001	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2
V762881		9.59	<0.001	0.22	1.53	5.0	210	0.56	0.05	26.3	0.57	21.5	2.6	23	2.47	9.8
V762882		10.38	0.001	0.22	1.45	54.6	240	0.54	0.04	27.6	0.64	18.00	2.0	22	1.96	10.0
V762883		9.58	<0.001	0.25	1.43	8.7	200	0.53	0.03	28.3	0.62	16.95	2.2	23	1.79	11.4
V762884		9.16	<0.001	0.21	1.09	58.4	210	0.44	0.03	28.8	0.53	15.30	1.7	18	1.23	8.7
V762885		9.28	0.001	0.26	1.44	38.9	200	0.51	0.04	27.2	0.86	18.35	2.4	20	1.76	8.8
V762886		9.93	0.001	0.11	0.36	58.7	90	0.18	0.01	33.7	1.26	5.29	0.7	6	0.44	3.3
V762887		7.00	<0.001	0.11	0.26	105.5	100	0.18	0.01	31.4	2.03	4.66	0.7	4	0.32	2.1
V762888		9.38	<0.001	0.10	0.99	173.5	160	0.37	0.03	32.1	0.63	11.85	1.5	10	1.67	4.1
V762889		6.97	<0.001	0.01	0.29	0.8	30	0.19	0.02	32.5	0.03	1.11	0.9	1	<0.05	2.2
V762890		9.61	<0.001	0.20	1.84	79.4	270	0.71	0.04	29.0	0.73	24.8	3.0	24	2.51	8.3
V762891		10.46	<0.001	0.11	1.22	24.4	220	0.46	0.03	31.1	0.65	17.80	2.2	16	1.85	5.8
V762892		9.42	0.001	0.14	1.11	19.2	190	0.37	0.03	30.9	0.62	15.30	1.8	15	1.25	5.5
V762893		10.10	<0.001	0.10	1.04	15.3	200	0.38	0.02	31.7	0.68	16.60	1.8	14	1.26	5.0
V762894		9.87	0.001	0.14	1.31	22.0	230	0.45	0.03	31.9	0.64	17.70	2.1	17	1.64	6.1
V762895		4.76	0.001	0.13	1.50	7.5	310	0.61	0.04	30.3	0.55	19.65	2.5	19	1.75	6.5
V762896		5.14	0.002	0.13	1.42	8.0	290	0.54	0.04	30.7	0.73	19.35	2.3	19	1.67	6.5
V762897		7.59	0.001	0.28	1.58	100.0	310	0.51	0.04	30.8	0.91	20.3	2.1	21	1.83	8.6
V762898		9.55	0.001	0.27	1.47	29.8	330	0.54	0.03	32.0	0.81	17.30	2.3	21	1.36	7.8
V762899		8.39	0.001	0.23	1.23	152.0	160	0.41	0.04	30.6	0.75	16.55	2.0	17	1.18	9.7
V762900		8.23	0.002	0.21	1.08	190.5	150	0.45	0.03	32.3	1.23	16.85	1.2	14	1.09	5.9
V762901		8.35	0.003	0.32	0.82	216	130	0.36	0.02	32.4	2.33	13.10	1.2	10	1.05	4.6
V762902		9.47	0.002	0.16	0.84	59.9	140	0.39	0.02	33.4	0.89	12.20	1.5	11	1.14	4.2
V762903		9.86	0.002	0.18	0.54	152.5	100	0.34	0.02	34.9	1.58	9.90	1.2	8	0.91	2.7
V762904		9.55	0.002	0.10	0.58	59.1	140	0.22	0.02	33.5	0.85	9.38	1.2	8	0.70	3.3
V762905		9.65	0.001	0.04	0.71	24.9	120	0.30	0.02	32.7	0.39	10.65	1.4	8	1.04	3.0
V762906		10.19	0.001	0.14	1.41	59.8	240	0.52	0.03	30.4	0.88	20.6	2.3	19	2.05	6.7
V762907		0.11	0.258	0.35	6.34	530	120	0.53	0.29	0.53	0.15	143.0	2.8	229	3.15	23.5
V762908		8.97	0.002	0.19	1.90	215	290	0.71	0.05	28.6	1.26	24.7	3.2	24	2.34	8.7
V762909		<0.02	0.001	0.20	1.90	218	280	0.72	0.06	28.9	1.30	25.0	3.3	24	2.41	9.1
V762910		9.85	0.001	0.09	1.05	225	220	0.48	0.03	32.5	1.02	17.10	2.3	13	1.26	5.4
V762911		0.11	2.63	1.58	4.28	160.0	450	1.21	0.15	0.43	0.17	57.1	2.2	54	7.36	49.2
V762912		9.95	0.003	0.04	1.02	114.5	200	0.35	0.03	31.6	0.43	12.45	1.7	11	1.31	3.8
V762913		9.51	0.002	0.05	0.63	125.0	180	0.25	0.02	32.6	0.45	8.60	1.0	8	0.67	3.0
V762914		8.90	<0.001	0.14	1.54	35.7	250	0.48	0.04	26.4	0.64	22.4	2.5	20	1.90	7.3
V762915		9.52	0.001	0.10	0.94	171.0	220	0.43	0.03	31.6	0.82	12.65	1.9	12	1.02	5.0
V762916		9.11	0.001	0.21	1.23	83.3	250	0.57	0.03	29.3	0.99	14.40	2.0	20	1.58	9.5
V762917		10.04	0.001	0.16	1.29	22.3	230	0.54	0.03	28.7	0.59	16.35	2.0	19	1.47	8.6
V762918		9.78	0.001	0.09	0.96	46.2	190	0.46	0.03	28.9	0.37	11.25	1.5	12	1.10	5.2
V762919		9.25	0.003	0.17	1.25	125.5	230	0.42	0.03	32.5	0.74	16.05	2.2	20	1.25	10.1
V762920		10.47	0.001	0.11	0.78	14.2	160	0.32	0.02	30.6	0.47	9.93	1.6	11	1.05	5.0

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VANCOUVER BC V6B 1L8

Finalized Date: 16-JUL-2018
Account: ARCHORI

Project: Orion

CERTIFICATE OF ANALYSIS WH18154654

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Hg-MS42	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni
	Units	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2
V762881		0.75	3.76	<0.05	0.6	0.046	0.016	0.83	16.9	6.3	2.08	109	2.33	0.03	2.4	15.9
V762882		0.66	3.64	<0.05	0.6	0.045	0.013	0.81	14.1	5.9	1.97	90	1.65	0.02	2.0	15.0
V762883		0.64	3.53	<0.05	0.6	0.041	0.014	0.79	13.9	6.1	1.99	85	1.85	0.02	2.0	16.9
V762884		0.52	2.83	<0.05	0.4	0.048	0.011	0.61	12.7	4.8	1.16	81	1.70	0.01	1.6	14.1
V762885		0.68	3.57	<0.05	0.6	0.063	0.014	0.80	13.9	6.2	1.72	86	2.02	0.02	2.1	16.2
V762886		0.28	0.90	<0.05	0.1	0.049	<0.005	0.19	4.9	2.0	1.26	62	0.89	0.01	0.5	7.5
V762887		0.17	0.58	<0.05	0.1	0.061	<0.005	0.12	4.2	2.1	0.41	94	0.30	0.01	0.3	5.6
V762888		0.43	2.33	<0.05	0.4	0.050	0.010	0.53	8.7	5.1	0.72	77	1.29	0.01	1.4	12.2
V762889		0.11	0.91	<0.05	0.2	<0.005	<0.005	0.07	1.1	1.1	1.84	110	0.06	0.17	0.4	0.3
V762890		0.83	4.46	0.05	0.7	0.052	0.017	1.01	17.5	8.2	1.69	91	1.94	0.02	2.6	17.7
V762891		0.61	3.05	<0.05	0.5	0.045	0.012	0.68	13.4	6.3	1.31	76	2.34	0.02	1.8	12.7
V762892		0.56	2.67	<0.05	0.5	0.041	0.009	0.61	11.6	5.8	1.02	68	2.16	0.01	1.6	11.6
V762893		0.53	2.59	<0.05	0.4	0.023	0.011	0.57	12.2	5.6	1.03	67	2.11	0.01	1.5	9.6
V762894		0.66	3.10	<0.05	0.5	0.031	0.014	0.73	13.5	6.6	1.11	83	2.33	0.01	1.9	12.2
V762895		0.72	3.55	<0.05	0.6	0.038	0.014	0.84	14.2	7.3	1.60	84	2.01	0.02	2.2	12.0
V762896		0.69	3.42	<0.05	0.6	0.042	0.013	0.79	13.3	6.9	1.55	85	2.00	0.02	2.1	11.7
V762897		0.74	3.72	<0.05	0.6	0.068	0.017	0.85	15.9	5.8	0.75	88	2.19	0.02	2.2	20.6
V762898		0.69	3.45	<0.05	0.6	0.054	0.012	0.79	13.4	5.1	1.11	86	2.23	0.02	2.1	14.3
V762899		0.60	3.21	0.12	0.5	0.075	0.011	0.63	12.1	4.2	0.74	97	2.39	0.01	1.8	18.3
V762900		0.52	2.86	0.14	0.4	0.092	0.008	0.55	12.4	3.4	0.47	91	1.98	0.01	1.6	14.2
V762901		0.41	2.19	0.14	0.3	0.143	0.007	0.42	9.9	3.2	0.37	95	1.13	0.01	1.2	12.0
V762902		0.39	2.25	0.14	0.3	0.048	0.006	0.44	8.7	3.4	0.70	63	1.62	0.01	1.3	9.0
V762903		0.28	1.37	0.13	0.2	0.084	<0.005	0.27	7.1	2.9	0.31	84	0.71	0.01	0.7	9.6
V762904		0.31	1.61	0.13	0.2	0.056	<0.005	0.30	7.1	3.3	0.56	63	1.22	0.01	0.9	8.8
V762905		0.37	1.89	0.13	0.3	0.026	0.006	0.38	7.4	3.5	0.87	58	1.14	0.01	1.1	6.8
V762906		0.68	3.79	0.14	0.6	0.036	0.012	0.79	14.5	6.3	1.16	75	2.38	0.02	2.1	16.0
V762907		6.24	19.35	0.18	4.3	7.22	0.050	1.36	66.0	16.9	0.15	50	6.08	0.45	9.2	15.7
V762908		0.92	4.82	0.11	0.7	0.100	0.020	1.05	15.8	6.8	1.35	122	2.12	0.02	2.6	21.9
V762909		0.92	4.90	0.12	0.7	0.096	0.018	1.04	15.6	7.3	1.32	122	2.08	0.02	2.7	22.3
V762910		0.56	2.79	0.11	0.4	0.058	0.010	0.57	12.3	4.8	0.36	84	1.59	0.01	1.5	16.2
V762911		1.76	10.15	0.12	2.4	2.14	0.044	1.46	28.5	25.8	0.22	76	24.0	0.06	6.3	24.1
V762912		0.50	2.55	0.12	0.4	0.049	0.010	0.56	7.8	4.9	1.08	79	1.26	0.01	1.4	12.4
V762913		0.42	1.70	0.11	0.2	0.030	0.008	0.33	6.0	4.8	1.72	77	0.70	0.01	0.8	11.7
V762914		0.79	3.99	0.13	0.6	0.038	0.015	0.86	14.7	7.0	2.42	88	1.46	0.02	2.2	15.3
V762915		0.47	2.45	0.15	0.4	0.074	0.005	0.52	8.7	5.0	0.48	76	1.01	0.01	1.4	13.2
V762916		0.57	3.27	0.13	0.5	0.043	0.014	0.68	11.7	5.8	1.28	75	2.04	0.01	1.7	15.8
V762917		0.61	3.38	0.14	0.5	0.046	0.013	0.72	12.2	5.7	1.80	75	2.16	0.01	1.8	14.2
V762918		0.50	2.49	0.13	0.4	0.024	0.008	0.52	8.1	6.0	2.12	77	1.43	0.01	1.3	12.7
V762919		0.56	3.27	0.15	0.5	0.049	0.014	0.68	11.9	5.1	0.80	85	1.76	0.01	1.8	19.8
V762920		0.41	2.11	0.12	0.3	0.019	0.005	0.43	7.5	5.0	2.39	76	1.76	0.01	1.1	9.4

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CERTIFICATE OF ANALYSIS WH18154654

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl
	Units	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
	LOD	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.01	0.005	0.02
V762881		1030	3.6	32.3	0.005	0.55	0.77	2.8	3	0.5	290	0.15	<0.05	1.93	0.086	0.27
V762882		970	3.4	30.8	0.004	0.34	0.80	2.5	3	0.5	307	0.14	<0.05	1.86	0.070	0.70
V762883		790	3.0	30.1	0.004	0.46	0.87	2.5	3	0.5	424	0.13	<0.05	1.81	0.070	0.27
V762884		680	2.5	23.2	0.006	0.25	0.71	1.9	3	0.4	471	0.10	<0.05	1.37	0.054	0.53
V762885		650	3.1	31.2	0.007	0.46	0.84	2.5	2	0.5	418	0.13	<0.05	1.81	0.070	0.66
V762886		180	2.2	6.8	0.004	0.15	0.38	0.7	2	<0.2	402	<0.05	<0.05	0.51	0.018	0.32
V762887		140	3.3	4.1	<0.002	0.01	0.26	0.5	2	<0.2	410	<0.05	<0.05	0.36	0.010	0.39
V762888		160	2.7	20.7	0.004	0.05	0.50	1.6	2	0.3	375	0.09	<0.05	1.30	0.051	1.11
V762889		70	0.9	1.8	<0.002	<0.01	0.10	0.2	1	<0.2	82.0	<0.05	<0.05	0.32	0.005	0.03
V762890		1040	3.8	38.9	0.007	0.47	0.97	3.1	2	0.6	386	0.18	<0.05	2.45	0.093	0.89
V762891		340	3.2	27.4	0.006	0.35	0.91	2.1	2	0.4	438	0.11	<0.05	1.71	0.064	0.54
V762892		430	2.7	23.0	0.004	0.25	0.89	1.9	2	0.4	454	0.11	<0.05	1.57	0.058	0.39
V762893		370	2.6	22.0	0.003	0.28	0.79	1.9	2	0.4	435	0.10	<0.05	1.49	0.055	0.23
V762894		390	3.0	26.4	0.003	0.35	0.90	2.2	3	0.4	409	0.13	<0.05	1.85	0.069	0.31
V762895		540	3.3	32.0	0.003	0.39	0.78	2.6	2	0.5	391	0.15	<0.05	2.05	0.078	0.28
V762896		550	3.4	30.7	0.004	0.37	0.80	2.5	2	0.5	395	0.13	<0.05	1.93	0.074	0.27
V762897		610	3.9	31.1	0.005	0.14	0.96	2.6	3	0.5	547	0.15	<0.05	2.10	0.082	0.83
V762898		500	4.1	29.7	0.004	0.39	0.81	2.3	3	0.5	592	0.14	<0.05	1.91	0.076	0.51
V762899		750	10.7	23.7	0.003	0.08	0.86	2.2	2	0.5	393	0.12	<0.05	1.69	0.063	0.78
V762900		240	8.0	20.6	<0.002	0.02	0.86	2.1	1	0.4	450	0.11	<0.05	1.57	0.057	0.80
V762901		240	13.4	15.7	<0.002	0.03	0.63	1.6	1	0.3	478	0.08	<0.05	1.17	0.042	0.74
V762902		140	9.3	16.7	0.003	0.20	0.51	1.6	1	0.3	453	0.09	<0.05	1.22	0.043	0.55
V762903		120	15.9	9.9	0.005	0.04	0.36	1.0	1	0.2	426	0.06	<0.05	0.75	0.027	0.64
V762904		360	3.9	11.0	0.003	0.15	0.37	1.1	1	0.2	409	0.05	<0.05	0.85	0.030	0.41
V762905		160	2.6	14.3	<0.002	0.24	0.25	1.4	1	0.2	384	0.07	<0.05	1.03	0.037	0.51
V762906		280	4.1	30.7	0.006	0.32	0.94	2.7	1	0.5	453	0.14	<0.05	2.02	0.075	0.79
V762907		1000	14.0	43.0	<0.002	3.00	108.5	15.2	1	2.5	557	0.70	0.14	8.69	0.551	6.75
V762908		900	5.0	39.1	0.006	0.29	1.01	3.3	1	0.6	407	0.19	<0.05	2.52	0.097	0.80
V762909		860	5.2	39.5	0.003	0.29	0.98	3.4	1	0.6	413	0.19	<0.05	2.62	0.097	0.85
V762910		270	2.9	20.6	0.003	0.10	0.70	2.0	1	0.4	491	0.10	<0.05	1.52	0.054	0.73
V762911		550	32.5	51.9	0.002	0.80	155.0	7.6	1	1.9	181.5	0.45	0.28	6.99	0.201	13.15
V762912		110	2.3	19.8	0.002	0.17	0.39	1.8	1	0.3	374	0.10	<0.05	1.39	0.053	0.64
V762913		270	1.7	11.7	0.002	0.06	0.24	1.2	1	0.2	319	0.05	<0.05	0.88	0.031	0.42
V762914		790	3.4	33.4	0.002	0.49	0.55	2.8	1	0.5	293	0.15	<0.05	2.04	0.077	0.49
V762915		490	2.4	18.8	0.005	0.12	0.39	1.8	1	0.3	474	0.09	<0.05	1.26	0.048	0.43
V762916		370	3.1	24.7	0.008	0.33	0.86	2.3	1	0.4	374	0.12	<0.05	1.58	0.061	0.57
V762917		750	3.0	24.7	0.004	0.44	0.76	2.3	2	0.4	350	0.12	<0.05	1.64	0.065	0.54
V762918		390	2.2	18.2	0.005	0.28	0.46	1.7	1	0.3	350	0.08	<0.05	1.18	0.046	0.28
V762919		990	2.8	24.1	0.008	0.19	0.77	2.3	1	0.4	337	0.12	<0.05	1.69	0.061	0.41
V762920		220	2.0	16.2	0.003	0.26	0.62	1.4	2	0.3	268	0.07	<0.05	1.03	0.038	0.25

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016 - 510 W HASTINGS STREET
VANCOUVER BC V6B 1L8

Finalized Date: 16-JUL-2018
Account: ARCHORI

Project: Orion

CERTIFICATE OF ANALYSIS WH18154654

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	U	V	W	Y	Zn	Zr
	Units	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.1	1	0.1	0.1	2	0.5
V762881		2.8	72	0.3	14.2	52	21.7
V762882		2.3	86	0.3	12.8	93	18.8
V762883		2.6	105	0.3	12.5	56	19.2
V762884		2.2	91	0.2	12.0	78	15.2
V762885		2.3	110	0.3	12.7	85	20.1
V762886		1.1	42	0.1	5.3	53	5.0
V762887		0.8	23	0.2	4.6	71	3.4
V762888		1.5	54	0.2	7.3	143	13.6
V762889		0.3	2	<0.1	2.5	6	3.1
V762890		2.5	93	0.4	14.3	96	26.8
V762891		2.2	78	0.3	10.4	67	17.8
V762892		1.9	75	0.2	9.4	68	15.1
V762893		2.0	69	0.2	10.3	49	14.8
V762894		2.1	82	0.3	10.7	58	18.1
V762895		2.1	80	0.3	11.1	44	20.3
V762896		2.1	76	0.3	11.0	57	18.8
V762897		2.4	116	0.3	12.6	149	20.9
V762898		2.4	102	0.4	10.0	79	19.5
V762899		1.9	83	0.4	10.2	138	17.2
V762900		2.0	80	0.3	10.5	167	14.5
V762901		1.8	67	0.4	8.7	147	11.3
V762902		1.7	54	0.2	7.6	91	12.3
V762903		1.4	38	0.4	6.7	111	7.8
V762904		1.8	45	0.1	6.6	73	8.5
V762905		1.6	33	0.2	6.4	41	9.8
V762906		2.3	91	0.3	11.9	108	19.4
V762907		7.2	171	24.0	15.0	39	171.0
V762908		2.6	107	0.3	12.7	165	25.1
V762909		2.5	106	0.4	13.1	164	26.0
V762910		2.0	70	0.2	10.6	158	14.8
V762911		5.2	181	12.8	13.2	71	79.3
V762912		1.6	43	0.2	6.8	111	13.1
V762913		1.4	34	0.1	5.8	124	8.2
V762914		2.5	78	0.3	12.8	77	19.7
V762915		1.6	52	0.2	8.0	119	12.8
V762916		2.3	96	0.2	10.8	99	16.1
V762917		2.5	92	0.3	11.7	60	16.8
V762918		1.8	78	0.2	7.6	55	12.1
V762919		2.5	73	0.3	12.1	130	16.3
V762920		2.0	79	0.2	7.2	39	10.3

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To: **ATAC RESOURCES LTD.**
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1016 - 510 W HASTINGS STREET
VANCOUVER BC V6B 1L8

Project: Orion

Finalized Date: 16-JUL-2018
Account: ARCHORI

CERTIFICATE OF ANALYSIS WH18154654

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Applies to Method: REE's may not be totally soluble in this method.
ME-MS61

LABORATORY ADDRESSES

Applies to Method: Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.

BAG-01u	CRU-31	CRU-QC	LOG-21
LOG-21d	LOG-23	PUL-31	PUL-31d
PUL-QC	SPL-21	SPL-21d	WEI-21
WSH-22x			

Applies to Method: Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Au-ICP21	Hg-MS42	ME-MS61

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Finalized Date: 16-JUL-2018
Account: ARCHORI

CERTIFICATE WH18157184

Project: Orion

P.O. No.: O18-017

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 2-JUL-2018.

The following have access to data associated with this certificate:

GLENN ASCH	MARK BRADLEY	KEVIN CREEL
PAUL DOBAK	NATHAN ECK	VLADIMIR ISPOLATOV
JULIA LANE	KARL MARLOWE	LEE SCHOLL
LIZ STOCK	JEREMY VAUGHAN	

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
PUL-31	Pulverize split to 85% <75 um
LOG-23	Pulp Login - Rcvd with Barcode
LOG-21d	Sample logging - ClientBarCode Dup
SPL-21d	Split sample - duplicate
PUL-31d	Pulverize Split - duplicate

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-ICP21	Au 30g FA ICP-AES Finish	ICP-AES
ME-MS61	48 element four acid ICP-MS	
Hg-MS42	Trace Hg by ICPMS	ICP-MS

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:

Colin Ramshaw, Vancouver Laboratory Manager

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Project: Orion

CERTIFICATE OF ANALYSIS WH18157184

Sample Description	Method	WEI-21	Au-ICP21	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Recvd Wt.	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu
	Units	kg	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.02	0.001	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2
V762921		9.90	0.004	0.12	0.56	37.0	110	0.23	0.03	31.0	0.62	7.37	1.1	11	0.62	4.4
V762922		9.85	0.002	0.13	0.74	15.3	140	0.28	0.16	30.8	0.55	9.87	1.3	12	0.73	5.0
V762923		9.83	0.002	0.07	0.44	28.9	150	0.17	0.03	31.3	0.43	7.33	0.9	7	0.50	3.5
V762924		8.41	0.003	0.34	2.68	140.0	280	0.80	0.31	24.1	0.90	27.6	5.0	39	4.12	14.1
V762925		10.30	0.002	0.24	1.88	51.2	200	0.72	0.05	27.2	0.70	20.4	3.0	28	2.22	11.0
V762926		9.82	0.002	0.12	0.60	143.5	80	0.24	0.11	27.9	0.53	7.64	1.1	11	0.64	4.6
V762927		0.11	2.06	0.53	2.46	430	510	0.62	0.39	10.50	0.87	38.2	8.3	42	3.02	25.1
V762928		9.09	0.005	0.31	1.62	240	180	0.64	0.04	25.2	1.27	17.65	2.5	27	1.83	11.2
V762929		10.09	0.001	0.22	1.98	86.8	210	0.68	0.07	25.6	0.87	21.1	3.4	28	2.39	10.6
V762930		9.02	0.001	0.23	0.91	91.5	150	0.34	0.03	30.1	0.91	10.75	1.4	16	1.10	6.9
V762931		10.24	0.001	0.13	1.24	54.7	210	0.44	0.06	25.0	0.56	14.75	2.1	17	2.19	6.4
V762932		8.90	0.002	0.11	1.07	22.9	250	0.41	0.03	28.3	0.38	13.60	2.0	15	1.53	6.1
V762933		9.88	0.002	0.13	1.73	88.0	250	0.51	0.07	26.0	0.55	19.00	2.9	22	2.48	7.1
V762934		10.27	0.001	0.14	1.13	75.1	240	0.49	0.04	28.7	0.44	15.75	2.1	16	1.85	5.9
V762935		10.68	0.001	0.15	1.51	88.3	300	0.57	0.06	28.4	0.69	18.55	3.0	20	2.35	7.2
V762936		4.65	<0.001	0.14	1.77	67.2	220	0.65	0.05	28.7	0.68	20.7	3.5	23	2.57	7.6
V762937		5.09	0.002	0.15	1.61	61.4	220	0.59	0.07	28.7	0.59	19.90	3.2	21	2.36	7.1
V762938		7.85	0.003	0.58	2.01	353	250	0.79	0.07	26.9	3.49	25.4	4.1	23	2.39	8.0
V762939		8.94	0.002	0.77	1.16	242	220	0.47	0.04	28.4	5.86	15.45	1.9	17	1.66	6.1
V762940		6.75	<0.001	<0.01	0.17	1.4	20	0.12	0.02	32.0	0.02	1.01	0.4	1	0.05	2.9
V762941		7.81	<0.001	0.18	2.13	31.1	980	0.75	0.08	25.6	0.99	24.7	3.8	28	3.36	8.7
V762942		10.13	<0.001	0.14	2.30	55.2	450	0.83	0.08	26.1	1.20	25.4	4.3	27	3.67	8.4
V762943		9.77	0.001	0.18	1.70	37.1	410	0.53	0.05	27.8	0.69	19.25	3.2	22	2.92	7.7
V762944		10.06	<0.001	0.21	2.80	36.8	1750	0.86	0.09	19.40	1.70	30.9	5.1	37	5.04	11.3
V762945		10.49	0.001	0.24	4.18	26.9	700	1.42	0.11	18.25	0.60	39.7	6.8	53	9.11	13.5
V762946		10.23	<0.001	0.49	3.86	29.5	1560	1.25	0.10	17.50	0.93	37.7	6.2	58	7.82	18.6
V762947		10.37	0.002	0.29	4.01	153.0	880	1.43	0.09	18.35	0.87	41.9	6.8	56	7.75	16.6
V762948		10.16	0.001	0.50	4.09	37.3	660	1.38	0.10	17.80	1.79	44.3	6.9	61	8.33	18.0
V762949		10.65	0.001	0.35	1.85	52.7	760	0.63	0.06	24.8	1.97	21.8	3.3	28	3.36	9.9
V762950		<0.02	0.001	0.37	1.89	52.7	750	0.70	0.06	25.3	2.25	21.9	3.2	28	3.43	10.1
V762951		10.00	0.001	0.27	1.13	21.9	280	0.43	0.04	25.5	1.43	16.55	2.1	19	1.65	6.6
V762952		9.37	<0.001	0.40	1.44	98.2	280	0.47	0.06	24.6	1.69	15.85	2.3	24	2.38	9.2
V762953		8.99	<0.001	0.64	1.82	204	380	0.73	0.05	23.5	3.69	20.5	3.0	29	3.03	12.2
V762954		9.68	<0.001	0.48	2.64	85.9	370	0.98	0.08	20.4	1.52	26.3	4.4	37	4.52	12.8
V762955		10.77	<0.001	0.43	2.60	62.2	370	0.95	0.08	22.8	1.72	26.5	4.6	34	5.54	11.9
V762956		0.11	2.05	0.56	2.55	441	510	0.74	0.37	10.75	0.85	39.8	8.1	43	3.12	26.8
V762957		9.89	0.001	0.25	1.19	28.2	240	0.57	0.06	27.4	1.24	16.05	2.2	18	2.12	6.1
V762958		7.30	<0.001	0.27	1.99	133.0	340	0.74	0.07	24.6	2.36	25.9	3.6	28	4.70	9.1
V762959		9.62	0.001	0.38	2.47	183.5	350	0.90	0.07	21.7	2.43	27.9	4.4	35	5.38	12.5
V762960		9.10	<0.001	0.67	2.96	339	570	1.03	0.08	20.2	3.93	33.0	5.3	47	6.15	16.8

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Finalized Date: 16-JUL-2018
Account: ARCHORI

Project: Orion

CERTIFICATE OF ANALYSIS WH18157184

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Hg-MS42	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni
	Units	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2
V762921		0.31	1.60	<0.05	0.2	0.032	0.007	0.29	7.2	2.6	0.69	61	2.54	0.01	0.9	11.0
V762922		0.40	2.08	<0.05	0.3	0.045	0.008	0.39	8.7	3.3	0.94	64	2.66	0.01	1.1	11.6
V762923		0.26	1.25	<0.05	0.2	0.045	0.007	0.22	7.0	2.7	0.69	66	1.98	0.01	0.7	7.8
V762924		1.05	7.15	0.06	1.1	0.238	0.034	1.32	17.6	7.4	1.96	150	2.19	0.02	4.2	30.1
V762925		0.75	5.20	<0.05	0.8	0.115	0.019	0.95	15.2	4.7	2.41	111	2.31	0.02	2.8	19.8
V762926		0.33	1.73	<0.05	0.3	0.094	0.007	0.30	6.6	3.1	1.09	80	1.95	0.01	0.9	9.7
V762927		1.50	6.17	0.08	1.4	2.93	0.018	0.89	21.9	33.8	3.15	236	16.35	0.03	4.9	39.7
V762928		0.81	4.56	<0.05	0.7	0.714	0.016	0.83	14.4	5.2	3.45	112	1.89	0.02	2.4	22.8
V762929		0.85	5.38	0.05	0.7	0.116	0.018	1.02	14.7	6.4	1.97	121	1.90	0.02	3.0	21.8
V762930		0.44	2.41	0.05	0.4	0.086	0.013	0.47	9.6	4.4	0.66	77	1.73	0.01	1.3	14.9
V762931		0.65	3.47	0.05	0.5	0.041	0.012	0.68	10.3	7.5	2.59	88	1.47	0.02	1.9	14.5
V762932		0.49	3.09	<0.05	0.5	0.046	0.010	0.57	10.0	6.6	1.75	73	1.89	0.02	1.8	12.7
V762933		0.75	4.80	0.05	0.7	0.068	0.018	0.94	12.2	8.4	2.61	109	1.88	0.02	2.6	20.4
V762934		0.54	3.16	0.05	0.5	0.046	0.014	0.59	11.7	6.4	1.18	79	2.09	0.01	1.8	16.8
V762935		0.71	4.17	0.07	0.7	0.060	0.015	0.80	13.5	6.7	1.39	94	2.86	0.01	2.4	20.0
V762936		0.81	4.94	0.05	0.8	0.116	0.015	0.92	14.1	6.2	1.47	106	2.56	0.02	2.8	20.2
V762937		0.77	4.34	0.06	0.7	0.143	0.013	0.84	13.5	6.0	1.40	103	2.33	0.02	2.5	18.4
V762938		1.07	5.55	0.07	0.9	1.555	0.017	1.03	16.4	6.2	1.53	183	2.16	0.02	3.3	30.0
V762939		0.63	3.12	0.06	0.5	1.510	0.013	0.60	11.1	4.8	1.00	93	1.51	0.01	1.8	17.7
V762940		0.16	0.57	0.05	0.1	0.006	0.006	0.07	1.1	1.2	2.56	145	<0.05	0.08	0.3	<0.2
V762941		1.02	5.47	0.06	0.9	0.115	0.023	1.12	15.9	8.2	2.07	125	2.23	0.02	3.2	20.8
V762942		1.08	6.02	0.09	1.0	0.192	0.025	1.23	15.1	9.4	1.85	151	1.97	0.02	3.6	21.5
V762943		0.80	4.51	0.06	0.7	0.070	0.016	0.92	12.0	8.3	0.98	128	2.08	0.02	2.6	19.1
V762944		1.55	7.57	0.07	1.1	0.051	0.031	1.56	17.3	13.4	3.21	216	1.82	0.02	4.3	27.1
V762945		1.87	10.95	0.07	1.6	0.054	0.037	2.31	21.1	18.0	1.78	202	1.52	0.03	6.1	30.4
V762946		1.80	10.15	0.10	1.4	0.046	0.030	2.17	22.3	16.1	1.36	184	1.80	0.03	5.6	34.2
V762947		1.82	11.05	0.08	1.6	0.103	0.035	2.21	25.1	17.8	1.38	222	1.75	0.04	6.2	44.2
V762948		1.89	10.75	0.09	1.6	0.051	0.040	2.26	28.5	17.2	1.41	190	2.00	0.04	6.1	38.5
V762949		0.86	5.01	0.06	0.7	0.038	0.023	1.01	16.3	9.3	0.64	114	2.88	0.02	2.9	22.9
V762950		0.88	5.00	0.06	0.8	0.041	0.016	1.04	16.4	9.5	0.66	116	2.89	0.02	2.9	22.6
V762951		0.53	3.12	0.06	0.4	0.029	0.012	0.61	13.9	7.2	0.60	70	2.33	0.02	1.8	14.0
V762952		0.64	3.85	0.06	0.6	0.049	0.017	0.77	12.3	7.8	0.94	88	2.41	0.02	2.2	19.8
V762953		0.90	4.76	0.07	0.7	0.058	0.020	0.97	16.0	8.9	0.62	123	3.70	0.02	2.8	31.2
V762954		1.27	6.79	0.07	1.0	0.050	0.024	1.41	17.7	12.1	1.49	155	2.46	0.03	3.9	29.6
V762955		1.29	7.08	0.10	1.0	0.040	0.027	1.42	17.4	13.0	1.41	147	2.62	0.03	3.9	27.0
V762956		1.54	6.35	0.08	1.5	2.76	0.022	0.92	23.3	39.6	3.26	245	16.75	0.03	5.0	37.9
V762957		0.68	3.13	0.07	0.5	0.026	0.012	0.64	12.3	6.7	0.81	100	1.45	0.02	1.9	13.9
V762958		1.05	5.22	0.08	0.8	0.041	0.019	1.07	18.0	10.8	0.95	134	2.46	0.02	3.2	30.3
V762959		1.23	6.64	0.08	1.0	0.059	0.025	1.33	19.4	13.0	0.76	157	2.98	0.03	4.1	35.3
V762960		1.51	7.74	0.08	1.1	0.106	0.030	1.58	21.5	13.6	0.72	164	3.97	0.03	4.8	61.9

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016 - 510 W HASTINGS STREET
VANCOUVER BC V6B 1L8

Finalized Date: 16-JUL-2018
Account: ARCHORI

Project: Orion

CERTIFICATE OF ANALYSIS WH18157184

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl
	Units	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
	LOD	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.01	0.005	0.02
V762921		190	2.8	11.5	0.002	0.16	0.71	1.1	2	0.4	374	0.06	<0.05	0.90	0.029	0.27
V762922		220	3.3	14.9	0.006	0.27	0.84	1.4	2	0.4	361	0.07	<0.05	1.04	0.037	0.21
V762923		300	5.3	8.7	0.002	0.15	0.66	0.8	<1	0.3	428	<0.05	<0.05	0.65	0.022	0.22
V762924		840	29.0	57.9	0.005	0.80	4.41	4.6	1	1.0	339	0.26	<0.05	3.77	0.137	1.73
V762925		1020	4.8	37.5	0.002	0.57	1.45	3.3	1	0.8	417	0.18	<0.05	2.62	0.089	0.31
V762926		330	6.0	11.9	0.003	0.21	1.85	1.2	2	0.4	340	0.05	<0.05	0.87	0.029	0.20
V762927		570	7.3	39.6	0.012	1.20	71.4	3.9	2	1.0	80.7	0.31	0.27	5.42	0.135	3.05
V762928		1140	22.5	32.5	0.005	0.39	3.38	2.9	2	0.7	317	0.16	<0.05	2.29	0.079	0.41
V762929		770	4.4	40.3	0.003	0.50	1.28	3.4	1	0.8	431	0.18	<0.05	2.69	0.097	0.58
V762930		260	3.2	18.4	0.013	0.19	0.83	1.6	1	0.5	526	0.08	<0.05	1.35	0.045	0.46
V762931		210	3.7	27.4	0.006	0.35	0.73	2.2	1	0.6	297	0.13	<0.05	1.90	0.062	0.63
V762932		700	2.9	22.9	0.005	0.29	0.61	2.0	<1	0.6	457	0.11	0.05	1.63	0.054	0.39
V762933		480	4.1	36.9	0.004	0.39	0.78	3.0	1	0.8	389	0.17	<0.05	2.55	0.086	0.86
V762934		640	3.0	24.4	0.010	0.25	0.73	2.1	1	0.6	524	0.12	<0.05	1.77	0.058	0.44
V762935		420	4.0	32.8	0.008	0.36	1.17	2.8	1	0.7	598	0.15	<0.05	2.46	0.080	0.72
V762936		420	4.7	37.8	0.007	0.50	1.09	3.1	1	0.8	462	0.19	<0.05	2.75	0.093	0.81
V762937		520	4.7	35.0	0.007	0.48	1.01	2.9	1	0.7	461	0.16	<0.05	2.59	0.084	0.82
V762938		250	53.0	42.5	0.012	0.43	1.75	3.6	2	0.9	413	0.20	0.06	3.04	0.105	0.84
V762939		260	70.3	24.8	0.004	0.17	1.20	2.1	1	0.6	435	0.12	<0.05	1.93	0.060	0.52
V762940		60	0.8	1.9	<0.002	<0.01	<0.05	0.2	<1	0.3	71.3	<0.05	0.07	0.11	<0.005	0.03
V762941		290	6.8	45.8	0.004	0.67	1.14	3.6	2	0.9	403	0.21	<0.05	3.25	0.112	0.99
V762942		360	6.5	50.5	0.004	0.56	0.96	4.0	1	1.0	480	0.24	<0.05	3.70	0.118	1.01
V762943		320	4.3	37.9	0.006	0.43	0.90	2.9	1	0.7	456	0.17	<0.05	2.55	0.087	1.03
V762944		490	6.1	68.3	0.010	0.71	1.08	4.7	2	1.2	274	0.28	<0.05	4.25	0.144	1.14
V762945		590	7.7	103.0	0.005	0.76	0.77	6.6	1	1.5	300	0.41	<0.05	5.71	0.205	0.80
V762946		530	6.5	93.0	0.007	0.79	1.10	6.4	2	1.4	322	0.37	<0.05	5.36	0.186	0.82
V762947		640	6.5	98.3	0.012	0.64	1.44	7.0	1	1.6	341	0.41	<0.05	6.01	0.200	1.53
V762948		1220	7.1	99.7	0.010	0.80	1.27	6.9	3	1.6	328	0.41	<0.05	5.97	0.200	1.26
V762949		390	4.5	42.1	0.010	0.41	1.72	3.3	1	0.9	520	0.18	<0.05	2.87	0.092	0.81
V762950		390	4.6	42.3	0.010	0.41	1.70	3.3	1	0.8	530	0.18	<0.05	2.86	0.095	0.78
V762951		210	3.5	25.1	0.004	0.26	1.57	2.1	1	0.6	706	0.11	<0.05	1.90	0.058	0.50
V762952		360	4.3	30.0	0.015	0.28	1.44	2.7	3	0.7	790	0.14	0.07	1.96	0.071	1.10
V762953		260	6.9	38.8	0.015	0.33	3.04	3.3	4	0.9	762	0.18	0.06	2.55	0.091	1.64
V762954		680	6.3	60.0	0.015	0.51	2.44	4.6	3	1.0	593	0.26	0.07	3.36	0.129	2.40
V762955		220	6.8	61.6	0.012	0.56	1.99	4.7	2	1.1	665	0.27	0.06	3.45	0.130	1.97
V762956		590	7.5	40.2	0.015	1.24	76.0	4.1	2	1.1	83.0	0.33	0.25	5.03	0.140	3.23
V762957		330	4.1	25.8	0.007	0.28	1.34	2.2	1	0.6	661	0.12	0.07	1.68	0.061	1.02
V762958		270	10.7	45.2	0.014	0.37	4.17	3.6	2	0.9	458	0.21	<0.05	2.89	0.102	3.26
V762959		260	9.4	57.1	0.028	0.39	2.74	4.4	3	1.1	447	0.26	<0.05	3.25	0.132	2.81
V762960		790	19.8	67.6	0.042	0.48	6.52	5.3	7	1.2	432	0.33	<0.05	3.81	0.159	3.89

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.
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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016 - 510 W HASTINGS STREET
VANCOUVER BC V6B 1L8

Finalized Date: 16-JUL-2018
Account: ARCHORI

Project: Orion

CERTIFICATE OF ANALYSIS WH18157184

Sample Description	Method Analyte Units LOD	ME-MS61 U ppm 0.1	ME-MS61 V ppm 1	ME-MS61 W ppm 0.1	ME-MS61 Y ppm 0.1	ME-MS61 Zn ppm 2	ME-MS61 Zr ppm 0.5
V762921		2.0	80	0.2	7.7	55	8.6
V762922		2.0	86	0.1	9.0	55	11.2
V762923		1.7	59	0.1	8.0	44	7.1
V762924		3.2	101	2.7	16.3	184	40.5
V762925		2.9	114	0.7	15.3	68	26.6
V762926		1.7	64	0.9	7.1	66	10.5
V762927		6.8	158	67.6	16.6	88	50.8
V762928		2.3	86	1.5	13.5	181	22.8
V762929		2.4	92	0.4	12.9	128	27.6
V762930		1.9	86	0.2	9.5	120	13.2
V762931		1.7	62	0.3	9.0	87	17.6
V762932		2.1	63	0.2	9.2	53	16.7
V762933		2.1	79	0.3	10.4	129	24.4
V762934		2.1	70	0.3	10.6	93	17.6
V762935		2.5	96	0.3	11.3	109	23.4
V762936		2.3	96	0.4	11.0	98	26.5
V762937		2.3	87	0.4	10.5	93	24.2
V762938		2.5	94	1.4	13.2	336	30.9
V762939		1.6	68	0.8	9.8	270	17.3
V762940		0.2	1	<0.1	2.5	5	1.7
V762941		2.3	111	0.6	12.9	139	31.4
V762942		2.6	87	0.4	12.3	146	33.5
V762943		2.1	84	0.4	10.7	124	24.4
V762944		2.5	93	0.6	14.8	244	38.0
V762945		2.7	106	0.8	16.8	106	52.4
V762946		3.5	123	0.7	18.9	152	51.3
V762947		3.4	82	0.8	19.0	353	55.7
V762948		3.7	118	0.8	21.2	286	53.2
V762949		2.8	134	0.3	14.1	223	25.4
V762950		2.8	136	0.4	14.3	250	25.4
V762951		2.3	104	0.2	12.3	96	16.8
V762952		2.2	115	0.3	11.3	182	19.2
V762953		2.7	239	0.4	13.6	295	24.4
V762954		2.6	153	0.5	15.3	234	32.2
V762955		2.7	185	0.5	14.9	189	36.9
V762956		6.8	159	69.1	16.7	90	52.4
V762957		2.1	78	0.3	11.5	136	18.0
V762958		2.6	139	0.5	16.1	299	26.1
V762959		2.6	195	0.5	16.8	346	33.0
V762960		3.2	222	0.7	18.6	625	37.1

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VANCOUVER BC V6B 1L8

Project: Orion

Finalized Date: 16-JUL-2018
Account: ARCHORI

CERTIFICATE OF ANALYSIS WH18157184

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Applies to Method: REE's may not be totally soluble in this method.
ME-MS61

LABORATORY ADDRESSES

Applies to Method: Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.

CRU-31	CRU-QC	LOG-21	LOG-21d
LOG-23	PUL-31	PUL-31d	PUL-QC
SPL-21	SPL-21d	WEI-21	

Applies to Method: Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Au-ICP21	Hg-MS42	ME-MS61

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To: **ATAC RESOURCES LTD.**
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VANCOUVER BC V6B 1L8

Finalized Date: 21-JUL-2018
Account: ARCHORI

CERTIFICATE WH18159566

Project: Orion

P.O. No.: 018-018

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 4-JUL-2018.

The following have access to data associated with this certificate:

GLENN ASCH	MARK BRADLEY	KEVIN CREEL
PAUL DOBAK	NATHAN ECK	VLADIMIR ISPOLATOV
JULIA LANE	KARL MARLOWE	LEE SCHOLL
LIZ STOCK	JEREMY VAUGHAN	

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
PUL-31	Pulverize split to 85% <75 um
LOG-23	Pulp Login - Rcvd with Barcode
LOG-21d	Sample logging - ClientBarCode Dup
SPL-21d	Split sample - duplicate
PUL-31d	Pulverize Split - duplicate

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-ICP21	Au 30g FA ICP-AES Finish	ICP-AES
ME-MS61	48 element four acid ICP-MS	
Hg-MS42	Trace Hg by ICPMS	ICP-MS

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:

Colin Ramshaw, Vancouver Laboratory Manager

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Finalized Date: 21-JUL-2018
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CERTIFICATE OF ANALYSIS WH18159566

Sample Description	Method	WEI-21	Au-ICP21	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Recvd Wt.	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu
	Units	kg	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.02	0.001	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2
V767001		2.61	0.001	0.71	3.82	20.2	1090	0.91	0.12	9.42	0.28	39.0	9.5	58	3.44	38.7
V767002		8.13	<0.001	0.14	2.57	7.2	690	0.62	0.07	9.34	0.15	34.0	4.9	30	2.00	13.0
V767003		5.04	<0.001	0.12	2.57	5.3	5300	0.69	0.08	15.20	0.25	32.9	4.9	34	1.58	17.5
V767004		3.45	0.001	0.23	3.44	16.8	1170	0.80	0.09	13.45	0.53	40.1	9.0	39	4.79	22.4
V767005		2.75	0.001	0.22	0.54	11.3	1730	0.25	0.02	25.4	0.44	7.18	1.6	16	0.80	7.0
V767006		2.49	0.002	0.31	0.67	15.7	1070	0.25	0.04	19.50	0.47	9.47	1.7	19	1.25	7.2
V767007		2.42	0.002	1.12	1.69	33.6	2630	0.64	0.07	19.15	0.67	17.45	3.3	67	2.85	26.0
V767008		1.53	0.003	1.55	4.03	50.3	1110	1.26	0.15	5.90	1.46	41.0	5.8	135	7.47	58.5
V767009		6.18	0.003	2.13	3.89	41.7	1090	1.20	0.14	10.30	0.94	36.5	5.2	106	10.15	50.4
V767010		0.11	2.02	0.55	2.52	452	540	0.71	0.39	11.20	0.93	42.3	8.1	44	3.36	26.1
V767011		7.87	0.004	1.07	4.80	37.8	150	1.51	0.18	3.09	0.63	43.9	6.8	126	9.04	55.8
V767012		7.50	0.008	1.61	4.38	44.2	220	1.30	0.16	5.59	0.83	41.8	5.5	129	7.65	52.8
V767013		7.03	0.001	0.01	0.11	<0.2	20	0.08	0.01	33.6	<0.02	1.19	0.6	2	<0.05	1.6
V767014		9.31	0.005	1.40	4.51	26.1	180	1.35	0.17	4.08	0.61	40.6	4.6	169	9.36	77.8
V767015		9.85	0.007	1.35	4.76	32.3	200	1.36	0.18	4.44	0.56	43.0	5.0	164	9.67	74.1
V767016		11.17	0.003	0.74	4.65	32.7	320	1.21	0.17	6.83	0.50	42.6	5.4	109	9.70	45.9
V767017		10.93	0.005	1.11	4.15	36.9	270	1.24	0.14	8.81	0.81	38.5	4.9	98	7.36	44.2
V767018		11.52	0.007	1.05	4.13	36.6	200	1.30	0.15	6.27	0.48	38.5	4.8	119	7.39	53.3
V767019		11.26	0.006	0.37	3.82	14.4	200	1.02	0.17	0.61	0.16	35.1	6.1	72	5.87	46.4
V767020		7.13	0.004	0.65	4.07	11.6	170	1.11	0.16	2.28	0.27	39.3	5.6	83	6.10	48.9
V767021		9.19	0.005	1.26	4.01	15.3	290	1.16	0.16	4.97	0.61	38.5	5.3	123	7.73	58.9
V767022		10.89	0.003	0.64	6.15	12.2	240	1.61	0.22	1.78	0.24	53.9	8.4	127	13.55	53.8
V767023		10.53	0.004	0.64	4.72	9.6	170	1.40	0.20	1.52	0.20	45.2	6.6	106	8.81	51.0
V767024		8.76	0.006	0.74	4.21	9.6	200	1.16	0.19	1.87	0.21	40.0	5.9	104	7.82	53.4
V767025		11.74	0.004	0.70	4.60	12.4	120	1.31	0.20	3.17	0.35	43.3	6.8	114	9.30	64.2
V767026		10.02	0.005	1.21	3.97	17.0	230	1.17	0.16	8.20	0.60	38.3	4.4	157	8.09	69.5
V767027		10.97	0.006	1.29	3.67	20.4	140	1.04	0.15	9.54	0.58	35.1	4.1	154	7.24	65.5
V767028		<0.02	0.003	1.28	3.64	20.1	170	1.07	0.15	9.36	0.56	35.3	4.1	152	7.19	64.9
V767029		9.76	0.003	0.77	4.80	17.5	140	1.27	0.18	4.64	0.41	46.0	6.0	120	8.05	51.8
V767030		9.76	0.005	1.45	4.80	46.0	120	1.39	0.18	2.81	0.70	44.7	5.8	156	8.54	69.8
V767031		0.12	2.03	0.52	2.46	440	520	0.61	0.39	11.00	0.91	41.9	7.8	42	3.24	25.0
V767032		13.25	0.005	1.06	4.58	69.3	100	1.25	0.18	1.45	0.76	43.6	5.4	151	7.06	66.0
V767033		11.37	0.005	0.92	4.71	50.1	150	1.53	0.18	4.29	0.52	45.3	6.8	115	6.12	50.5
V767034		13.21	0.004	0.97	5.41	30.5	180	1.81	0.19	1.55	0.52	50.8	7.6	116	8.33	47.7
V767035		5.13	0.009	1.29	4.64	31.9	200	1.60	0.17	3.25	0.75	41.3	5.5	142	8.24	63.0
V767036		5.27	0.001	1.32	4.77	31.2	140	1.60	0.18	2.72	0.75	42.0	5.7	145	8.60	63.0
V767037		12.93	<0.001	1.62	4.05	27.1	260	1.25	0.16	6.43	0.90	37.0	4.8	149	8.53	53.9
V767038		12.14	0.004	1.16	5.05	21.8	120	1.61	0.17	3.44	0.76	44.2	6.2	136	10.30	54.4
V767039		12.34	0.007	0.96	4.36	20.6	220	1.33	0.16	7.63	0.62	40.4	5.3	126	8.68	50.2
V767040		10.17	0.003	1.01	3.51	21.2	230	1.10	0.12	9.51	0.73	32.7	4.2	117	6.64	45.4

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To: **ATAC RESOURCES LTD.**
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Finalized Date: 21-JUL-2018
Account: ARCHORI

Project: Orion

CERTIFICATE OF ANALYSIS WH18159566

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Hg-MS42	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni
	Units	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2
V767001		2.87	9.54	0.08	1.7	0.061	0.037	0.95	22.0	33.6	1.42	465	1.03	0.59	6.6	29.7
V767002		1.78	5.96	0.06	1.5	0.047	0.017	0.77	17.9	20.1	0.64	421	0.49	0.46	3.5	13.5
V767003		1.92	6.12	0.06	1.4	0.040	0.025	0.78	17.5	27.5	1.52	341	0.82	0.29	4.2	15.7
V767004		2.65	8.11	0.07	1.7	0.056	0.032	1.16	21.7	33.0	1.12	433	1.19	0.38	9.5	32.7
V767005		0.70	1.28	<0.05	0.3	0.029	0.007	0.20	7.3	4.8	0.36	227	0.82	0.02	1.2	9.8
V767006		1.03	1.68	<0.05	0.4	0.041	0.009	0.25	9.6	7.1	0.25	228	1.49	0.02	1.4	12.9
V767007		1.66	4.09	0.06	0.8	0.076	0.020	0.55	15.6	7.4	0.24	168	4.18	0.02	3.0	48.3
V767008		3.31	9.56	0.11	1.8	0.166	0.043	1.32	31.4	22.8	0.40	109	8.59	0.03	7.2	101.0
V767009		2.45	9.33	0.11	1.6	0.158	0.044	1.32	29.6	13.2	0.53	103	6.05	0.04	6.8	95.1
V767010		1.55	5.98	0.07	1.4	3.05	0.022	0.94	26.3	37.8	3.28	252	16.70	0.03	5.2	38.5
V767011		2.93	11.55	0.11	2.0	0.240	0.047	1.59	30.1	22.2	0.47	98	4.45	0.04	8.0	97.4
V767012		3.23	10.15	0.12	1.9	0.239	0.038	1.46	30.8	15.6	0.50	97	5.74	0.04	7.6	92.0
V767013		0.13	0.37	<0.05	0.1	<0.005	<0.005	0.02	1.2	1.0	1.90	117	0.05	0.05	0.2	0.6
V767014		3.22	10.95	0.12	1.9	0.161	0.046	1.49	30.7	12.9	0.52	74	3.98	0.04	7.8	128.5
V767015		2.89	11.25	0.12	2.0	0.229	0.049	1.62	32.3	12.7	0.55	72	3.35	0.05	8.2	121.5
V767016		2.46	10.95	0.10	1.9	0.213	0.045	1.58	30.1	9.8	0.60	84	2.84	0.05	8.0	68.3
V767017		2.53	9.69	0.11	1.8	0.294	0.043	1.40	28.6	8.9	1.09	126	3.57	0.05	7.1	76.7
V767018		2.66	9.76	0.10	1.9	0.259	0.043	1.40	28.5	12.1	1.49	167	3.74	0.05	7.6	83.2
V767019		1.78	10.10	0.07	1.6	0.131	0.047	1.22	20.1	15.8	0.30	146	6.27	0.04	6.7	34.5
V767020		2.82	10.00	0.09	1.7	0.164	0.044	1.27	23.7	13.2	0.62	161	4.73	0.04	6.7	43.4
V767021		2.39	9.43	0.10	1.8	0.186	0.042	1.31	27.5	10.6	0.68	86	9.02	0.04	6.8	90.1
V767022		3.36	14.55	0.10	2.3	0.189	0.058	2.00	33.1	13.9	0.65	149	1.79	0.06	10.0	67.9
V767023		2.73	11.80	0.10	2.0	0.157	0.053	1.55	27.7	13.6	0.59	156	1.96	0.05	8.6	54.5
V767024		2.41	10.60	0.09	1.9	0.183	0.045	1.36	25.7	12.7	0.59	137	3.15	0.04	7.9	50.6
V767025		2.70	11.80	0.10	2.2	0.191	0.055	1.54	27.3	12.4	0.58	140	4.65	0.05	8.7	76.4
V767026		2.38	9.54	0.11	1.9	0.143	0.043	1.30	31.7	11.4	0.58	85	6.35	0.04	7.4	117.0
V767027		2.67	8.92	0.10	1.7	0.159	0.039	1.22	29.0	11.8	0.65	89	4.74	0.04	6.8	112.0
V767028		2.68	8.84	0.11	1.8	0.158	0.040	1.20	29.3	11.6	0.65	88	4.84	0.04	6.7	110.0
V767029		2.81	11.55	0.10	2.2	0.207	0.048	1.61	30.0	13.2	0.71	111	2.69	0.04	8.6	67.8
V767030		2.66	11.80	0.13	2.2	0.285	0.050	1.60	30.5	11.9	0.48	99	8.29	0.04	8.3	124.0
V767031		1.51	5.79	0.06	1.4	3.15	0.021	0.92	25.8	32.4	3.20	246	16.05	0.03	5.1	37.5
V767032		2.83	10.90	0.11	2.2	0.436	0.050	1.57	30.5	12.1	0.53	78	7.88	0.04	8.2	105.5
V767033		2.80	12.90	0.18	2.4	0.278	0.050	1.59	28.8	14.2	0.60	122	8.00	0.04	8.4	77.3
V767034		2.56	14.50	0.17	2.5	0.214	0.058	1.83	31.3	17.7	0.51	165	7.67	0.05	9.3	72.1
V767035		2.50	12.25	0.21	2.2	0.205	0.045	1.49	29.7	16.2	0.46	69	7.83	0.05	7.8	120.0
V767036		2.47	12.65	0.20	2.2	0.202	0.051	1.55	29.5	15.0	0.45	64	6.85	0.05	8.0	122.5
V767037		2.67	10.45	0.23	1.9	0.181	0.037	1.33	28.4	12.0	0.52	70	10.90	0.05	6.8	122.0
V767038		2.95	13.00	0.19	2.2	0.188	0.048	1.66	29.7	14.5	0.52	75	7.13	0.06	8.2	106.5
V767039		2.47	11.40	0.18	2.0	0.157	0.044	1.42	28.0	12.6	0.53	84	6.65	0.05	7.3	76.1
V767040		2.17	9.31	0.15	1.6	0.145	0.039	1.15	23.5	10.4	0.47	59	8.26	0.04	5.8	80.9

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To: **ATAC RESOURCES LTD.**
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Finalized Date: 21-JUL-2018
Account: ARCHORI

Project: Orion

CERTIFICATE OF ANALYSIS WH18159566

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl
	Units	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
	LOD	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.01	0.005	0.02
V767001		630	9.5	50.3	0.002	0.11	0.52	9.4	1	1.0	311	0.41	0.05	5.35	0.283	0.36
V767002		260	9.3	35.5	<0.002	0.08	0.46	3.8	<1	0.7	325	0.25	<0.05	5.88	0.132	0.22
V767003		370	7.6	36.9	0.002	0.22	0.24	5.0	1	0.8	433	0.29	<0.05	5.47	0.168	0.25
V767004		710	8.8	48.2	0.002	0.08	0.48	6.7	1	0.9	397	0.60	<0.05	4.91	0.309	0.33
V767005		460	2.0	8.9	0.005	0.12	0.20	1.6	1	0.2	613	0.07	<0.05	0.84	0.036	0.09
V767006		460	2.7	12.3	0.005	0.08	0.30	1.9	1	0.2	355	0.08	<0.05	1.21	0.040	0.13
V767007		770	4.5	29.8	0.002	0.12	0.88	3.9	4	0.5	531	0.18	0.05	2.42	0.101	0.48
V767008		1360	9.9	70.4	0.004	0.37	2.39	9.3	11	1.1	415	0.45	0.09	5.60	0.238	1.26
V767009		710	9.3	69.9	0.019	0.95	2.58	8.5	12	1.2	383	0.42	0.11	5.13	0.230	1.62
V767010		600	7.4	41.5	0.014	1.26	80.2	3.9	2	0.9	82.3	0.33	0.23	5.28	0.144	2.98
V767011		1540	11.5	83.2	0.013	1.98	2.35	9.2	10	1.4	273	0.50	0.11	6.10	0.285	1.47
V767012		1120	10.6	75.5	0.011	2.69	2.23	9.2	11	1.3	358	0.47	0.11	5.74	0.259	1.68
V767013		80	0.6	0.7	<0.002	0.01	<0.05	0.2	1	<0.2	76.9	<0.05	<0.05	0.11	0.007	<0.02
V767014		630	10.2	81.8	0.008	2.99	1.73	9.4	13	1.3	237	0.48	0.10	5.64	0.279	1.27
V767015		770	10.5	86.7	0.007	2.64	1.72	9.6	12	1.3	289	0.51	0.11	6.07	0.300	1.53
V767016		710	11.2	84.6	0.008	2.10	1.51	9.4	6	1.4	383	0.49	0.11	5.88	0.284	1.44
V767017		1630	9.5	72.5	0.012	1.93	1.86	8.4	8	1.2	501	0.44	0.09	5.00	0.244	1.42
V767018		1220	9.4	73.9	0.010	1.88	1.30	9.8	7	1.2	397	0.47	0.08	5.21	0.254	0.97
V767019		390	8.6	65.6	0.008	1.39	1.03	6.7	1	1.1	114.0	0.41	0.10	4.49	0.232	0.46
V767020		1810	9.7	66.9	0.010	2.11	1.52	9.5	4	1.2	243	0.42	0.10	5.06	0.235	0.49
V767021		420	9.4	69.5	0.024	1.80	1.63	8.7	10	1.1	323	0.42	0.08	5.12	0.248	0.61
V767022		510	13.8	111.0	0.004	2.15	1.58	12.9	4	1.8	192.5	0.61	0.12	7.68	0.343	0.62
V767023		1150	11.9	83.6	0.005	1.69	1.45	10.0	3	1.4	217	0.53	0.12	6.01	0.290	0.45
V767024		570	10.6	73.3	0.007	1.59	1.61	9.2	3	1.2	209	0.48	0.14	5.37	0.264	0.47
V767025		920	11.6	83.1	0.010	2.10	2.18	12.0	6	1.5	291	0.53	0.15	5.44	0.286	0.62
V767026		660	8.8	71.8	0.016	2.01	1.52	9.5	12	1.2	520	0.44	0.08	5.13	0.248	0.61
V767027		770	8.6	67.6	0.013	2.29	1.44	8.5	12	1.1	576	0.42	0.09	4.70	0.227	0.60
V767028		760	8.5	66.1	0.011	2.30	1.43	8.4	13	1.1	570	0.42	0.07	4.70	0.226	0.62
V767029		760	11.3	85.3	0.007	2.21	1.51	10.5	6	1.5	387	0.54	0.08	6.35	0.294	0.87
V767030		1050	11.2	88.1	0.021	2.46	2.21	10.8	14	1.5	267	0.53	0.09	5.93	0.290	1.22
V767031		590	7.2	40.5	0.012	1.24	79.2	3.6	2	0.9	80.0	0.32	0.21	5.13	0.141	2.92
V767032		1400	10.9	80.5	0.017	2.58	2.05	10.0	10	1.5	178.5	0.50	0.09	5.84	0.281	1.36
V767033		800	11.9	86.2	0.019	2.43	1.97	12.2	8	1.5	293	0.54	0.08	6.02	0.296	1.45
V767034		770	12.6	100.0	0.020	2.20	2.14	12.3	6	1.7	194.5	0.59	0.08	6.80	0.328	1.25
V767035		1220	10.2	83.9	0.021	2.47	2.35	11.7	16	1.6	351	0.51	0.10	5.85	0.277	1.18
V767036		1210	10.3	86.4	0.015	2.42	2.39	11.4	15	1.5	335	0.52	0.08	5.82	0.283	1.14
V767037		1950	9.6	72.9	0.028	2.65	2.48	10.5	17	1.3	527	0.44	0.10	5.03	0.237	0.75
V767038		1340	11.6	91.9	0.019	2.84	2.57	10.8	12	1.5	309	0.53	0.13	6.40	0.291	0.82
V767039		1540	10.0	80.2	0.017	2.26	2.12	10.0	9	2.1	462	0.48	0.08	5.35	0.259	0.58
V767040		1100	7.7	62.7	0.025	2.06	2.19	8.4	13	1.1	561	0.37	0.06	4.51	0.202	0.52

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Account: ARCHORI

Project: Orion

CERTIFICATE OF ANALYSIS WH18159566

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	U	V	W	Y	Zn	Zr
	Units	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.1	1	0.1	0.1	2	0.5
V767001		2.2	106	3.9	15.7	90	62.6
V767002		1.4	38	0.8	8.5	41	55.6
V767003		2.2	56	0.8	10.7	53	50.5
V767004		2.4	74	1.3	14.0	81	65.3
V767005		1.3	33	0.8	11.0	37	16.2
V767006		1.6	35	0.7	15.1	47	15.1
V767007		2.5	90	1.0	18.3	181	33.7
V767008		4.9	229	1.2	38.6	385	71.5
V767009		5.5	210	2.3	29.4	289	62.9
V767010		7.4	165	66.4	17.7	91	54.2
V767011		4.7	267	1.4	24.5	297	71.9
V767012		4.9	242	1.2	27.4	265	72.9
V767013		0.3	2	<0.1	2.1	5	1.9
V767014		4.8	231	1.0	26.4	352	72.3
V767015		4.7	238	1.1	27.4	352	74.5
V767016		4.9	225	1.0	26.6	228	71.8
V767017		4.9	225	0.9	28.3	239	66.9
V767018		4.7	207	1.2	26.4	243	70.6
V767019		3.6	164	1.2	15.5	122	58.2
V767020		4.9	187	1.1	22.1	146	63.4
V767021		7.0	181	0.9	24.8	250	72.1
V767022		3.9	207	1.3	24.1	190	82.4
V767023		3.8	211	1.3	22.6	171	73.8
V767024		4.1	212	1.2	21.0	169	69.7
V767025		5.1	228	1.2	27.5	221	79.9
V767026		6.9	197	0.9	34.1	324	75.1
V767027		5.8	186	0.9	31.3	302	70.2
V767028		5.8	185	0.9	31.5	297	68.8
V767029		4.7	223	1.2	26.5	223	80.4
V767030		7.8	242	1.3	29.3	385	78.7
V767031		7.2	163	64.9	17.1	87	50.6
V767032		7.6	249	1.4	28.7	321	83.7
V767033		6.2	221	1.4	27.6	216	85.5
V767034		6.8	249	1.4	27.9	203	87.5
V767035		7.3	236	1.2	29.8	367	78.1
V767036		7.0	241	1.3	28.5	384	77.8
V767037		8.5	216	0.9	31.6	369	70.0
V767038		6.8	254	1.0	28.5	330	75.2
V767039		7.1	227	1.0	31.9	238	72.5
V767040		8.1	184	0.8	25.0	253	60.0

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016 - 510 W HASTINGS STREET
VANCOUVER BC V6B 1L8

Project: Orion

Finalized Date: 21-JUL-2018
Account: ARCHORI

CERTIFICATE OF ANALYSIS WH18159566

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

REE's may not be totally soluble in this method.
Applies to Method: ME-MS61

LABORATORY ADDRESSES

Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.

Applies to Method:				
	CRU-31	CRU-QC	LOG-21	LOG-21d
	LOG-23	PUL-31	PUL-31d	PUL-QC
	SPL-21	SPL-21d	WEI-21	

Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Applies to Method:			
	Au-ICP21	Hg-MS42	ME-MS61

ALS Canada Ltd.

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 24-JUN-2018
Account: RCM

CERTIFICATE WH18137003

Project: Nadaleen

P.O. No.: N18-001

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 11-JUN-2018.

The following have access to data associated with this certificate:

ANDREW CARNE	JULIA LANE	

SAMPLE PREPARATION

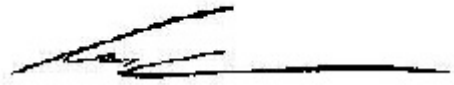
ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
BAG-06	Double Bagging Coarse Rejects
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
LOG-23	Pulp Login - Rcvd with Barcode
LOG-21d	Sample logging - ClientBarCode Dup
SPL-21d	Split sample - duplicate

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid ICP-MS	
Hg-MS42	Trace Hg by ICPMS	ICP-MS
ME-OG62	Ore Grade Elements - Four Acid	ICP-AES
As-OG62	Ore Grade As - Four Acid	ICP-AES

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature: 

Colin Ramshaw, Vancouver Laboratory Manager

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To: **ATAC RESOURCES LTD.**
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1016-510 W HASTINGS ST
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Finalized Date: 24-JUN-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18137003

Sample Description	Method	WEI-21	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Recvd Wt.	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu	Fe
	Units	kg	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%
	LOD	0.02	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2	0.01
S048251		1.30	0.43	5.58	132.5	310	1.29	0.18	7.80	0.07	57.3	10.6	49	16.05	40.3	3.71
S048252		0.98	0.04	10.15	101.0	360	2.32	0.34	0.15	<0.02	96.1	5.3	77	32.0	50.7	3.15
S048253		1.34	0.54	10.05	120.0	310	2.20	0.39	0.24	0.02	105.0	13.0	80	35.0	70.6	4.27
S048254		1.68	0.03	4.50	78.0	160	1.67	0.15	20.0	0.06	54.5	12.4	30	21.0	22.3	2.95
S048255		3.21	0.07	8.21	49.3	270	2.53	0.28	5.48	0.05	93.2	18.4	68	35.8	31.3	4.19
S048256		0.26	0.83	2.98	>10000	190	0.76	0.10	16.90	0.31	33.2	8.0	39	8.88	25.3	2.10
S048257		4.89	0.05	7.07	60.4	250	2.12	0.22	9.65	0.03	76.9	14.2	49	27.4	24.4	3.98
S048258		6.74	0.04	4.40	279	190	1.24	0.13	21.4	0.02	48.8	9.0	29	13.70	15.4	2.48
S048259		3.23	0.04	2.21	541	90	0.69	0.06	25.6	0.04	30.0	6.0	17	5.13	8.9	2.03
S048260		3.33	0.07	5.90	6520	190	1.16	0.18	8.23	0.18	63.5	11.1	41	14.35	21.4	3.86
S048261		6.85	0.01	0.09	7.8	40	0.05	0.01	20.6	0.06	1.29	0.9	1	0.19	3.8	0.49
S048262		3.11	0.24	6.81	216	280	2.07	0.24	7.56	0.05	75.0	15.1	52	22.3	22.6	4.01
S048263		9.90	3.23	5.11	74.7	250	1.43	0.18	15.00	0.04	53.3	11.8	36	18.00	26.3	3.04
S048264		11.21	16.20	6.48	680	280	1.80	0.22	9.40	0.05	69.6	13.7	54	23.3	40.6	3.74
S048265		0.26	0.18	3.85	6320	200	0.93	0.12	12.10	0.12	38.4	11.7	45	10.60	35.9	2.94
S048266		3.89	0.14	3.05	88.7	170	1.10	0.10	18.45	0.03	37.1	6.3	23	10.45	11.0	2.93
S048267		3.21	3.39	6.14	372	330	1.40	0.21	8.01	0.09	65.9	12.5	50	17.00	27.3	4.27
S048268		2.39	2.78	7.27	65.1	700	2.02	0.26	0.88	0.18	69.6	25.9	77	10.20	86.2	6.23
S048269		2.99	0.11	9.77	115.5	320	2.32	0.38	0.12	<0.02	97.7	9.7	73	36.0	19.6	3.35
S048270		7.03	0.06	8.56	47.7	290	2.91	0.34	2.20	<0.02	80.1	15.3	70	30.0	47.4	4.79
S048271		4.55	0.06	10.00	127.5	310	1.88	0.41	0.03	<0.02	101.5	5.9	72	25.9	16.3	3.12
S048272		4.91	0.03	9.90	70.6	340	1.76	0.40	0.01	<0.02	100.5	15.5	70	31.8	67.6	3.91
S048273		10.67	0.06	9.56	126.5	290	2.44	0.37	0.07	0.02	103.5	18.9	73	44.8	134.0	4.35
S048274		8.83	0.07	8.80	1070	290	2.81	0.33	2.01	0.04	99.3	22.5	60	32.0	53.3	5.38
S048275		<0.02	0.06	8.62	1060	290	2.70	0.31	2.00	0.04	96.1	22.4	59	31.0	51.4	5.37
S048276		7.04	0.10	9.48	686	300	2.76	0.36	1.35	0.05	102.5	22.1	63	36.0	37.5	4.52
S048277		9.23	0.12	7.42	4450	310	1.40	0.27	1.44	0.29	80.5	15.6	55	20.0	27.2	4.28
S048278		4.25	0.29	8.51	8030	260	1.80	0.33	0.26	0.31	87.0	18.8	69	26.1	37.7	4.83
S048279		4.52	0.14	7.40	3860	320	1.52	0.27	0.28	0.46	85.3	20.2	63	20.9	28.0	4.18
S048280		4.58	0.20	6.69	>10000	200	1.35	0.28	0.28	0.38	81.0	16.6	60	17.55	27.8	4.83
S048281		5.38	0.14	7.02	5130	290	1.40	0.25	0.29	0.17	79.7	20.7	57	17.30	25.7	3.54
S048282		6.46	0.10	8.70	5880	300	1.66	0.32	0.19	0.22	98.0	22.9	64	22.7	34.1	4.18
S048283		9.07	0.06	9.44	>10000	310	2.31	0.35	0.19	0.08	99.4	21.9	70	31.8	33.3	4.27
S048284		3.65	1.05	8.25	4270	300	1.80	0.30	0.15	0.15	88.5	17.5	67	24.1	31.9	4.83
S048285		3.88	0.53	7.57	5060	290	1.74	0.29	0.16	0.12	90.0	17.1	60	22.5	29.7	4.37
S048286		5.73	0.08	7.57	4470	270	1.46	0.28	0.20	0.12	82.7	15.7	59	21.4	31.8	4.80
S048287		3.83	0.07	7.08	3060	280	1.38	0.26	0.17	0.13	76.5	13.9	58	19.25	33.3	4.53
S048288		4.71	0.07	6.33	5690	230	1.26	0.22	0.29	0.12	68.3	12.5	50	18.05	40.4	3.48
S048289		6.55	0.08	8.64	1310	260	2.72	0.31	0.90	0.18	99.3	18.4	68	30.9	39.5	4.54
S048290		7.83	0.07	9.19	1375	270	2.74	0.29	0.37	0.17	100.0	18.3	75	33.3	38.6	4.62

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
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Finalized Date: 24-JUN-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18137003

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	Hg-MS42	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P
	Units	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm
	LOD	0.05	0.05	0.1	0.005	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
S048251		13.85	0.19	2.0	0.288	0.051	2.03	28.5	38.6	1.00	378	0.18	0.32	8.6	21.7	680
S048252		27.8	0.22	2.7	0.485	0.071	4.63	49.3	19.2	0.46	120	0.14	0.10	13.1	17.7	580
S048253		26.8	0.24	2.6	0.856	0.074	4.38	54.5	24.3	0.43	478	0.57	0.10	13.1	27.5	740
S048254		10.30	0.25	1.3	0.301	0.032	1.95	27.2	22.9	0.45	926	0.13	0.04	5.4	26.2	510
S048255		22.0	0.28	2.2	1.785	0.057	3.87	48.4	15.0	1.12	862	0.35	0.08	10.4	42.1	470
S048256		7.32	0.17	1.3	4.70	0.031	1.35	16.6	11.9	2.17	1240	1.19	0.10	4.0	18.3	410
S048257		17.70	0.22	1.8	1.255	0.051	3.18	40.0	11.9	1.53	1010	0.23	0.06	8.5	26.2	390
S048258		9.59	0.19	1.1	1.330	0.028	2.00	24.9	6.9	0.78	660	0.20	0.04	4.5	17.3	510
S048259		5.15	0.16	0.6	1.750	0.022	1.02	15.6	3.4	0.49	773	0.27	0.02	2.4	14.3	640
S048260		13.30	0.18	1.6	13.25	0.039	2.64	32.5	9.2	1.43	2640	0.67	0.04	7.2	23.9	730
S048261		0.39	0.20	<0.1	0.011	<0.005	0.03	0.6	1.2	13.05	208	<0.05	0.01	0.2	1.8	160
S048262		16.85	0.24	2.1	1.325	0.050	3.14	38.2	10.3	2.93	1080	0.29	0.05	8.8	34.2	470
S048263		11.05	0.18	1.3	1.795	0.036	2.32	28.6	7.6	2.19	949	0.42	0.04	5.7	22.4	540
S048264		16.15	0.17	1.8	3.60	0.046	2.96	37.4	12.3	2.32	876	0.78	0.05	8.0	28.0	460
S048265		8.95	0.13	1.7	15.45	0.035	1.80	20.2	11.3	2.59	1170	1.76	0.02	5.9	22.5	450
S048266		6.85	0.11	1.0	2.000	0.024	1.43	19.7	5.1	3.72	1240	0.33	0.03	3.5	12.0	520
S048267		13.25	0.14	2.1	3.43	0.044	2.82	34.6	15.1	3.28	1180	1.22	0.05	8.0	25.3	580
S048268		19.95	0.21	2.3	0.418	0.076	2.20	32.9	62.5	1.02	915	0.87	0.40	11.8	48.1	530
S048269		26.0	0.26	3.1	0.622	0.063	4.34	48.7	28.8	0.44	466	0.26	0.10	13.5	20.7	470
S048270		23.7	0.26	2.7	0.279	0.082	4.08	37.2	19.0	0.57	1270	0.23	0.09	12.1	25.8	670
S048271		26.7	0.28	3.2	0.464	0.049	4.52	53.1	20.1	0.41	29	0.17	0.09	14.2	16.7	240
S048272		27.7	0.27	3.0	0.525	0.054	4.45	53.3	23.6	0.40	25	0.15	0.09	13.3	31.8	190
S048273		28.8	0.26	3.0	0.937	0.181	4.37	51.9	20.2	0.40	64	0.16	0.08	13.1	40.2	360
S048274		23.7	0.27	2.7	2.80	0.096	3.89	51.6	14.2	1.17	1420	0.19	0.07	11.6	45.8	630
S048275		22.8	0.26	2.6	2.89	0.093	3.78	49.6	14.0	1.16	1420	0.19	0.07	11.2	45.4	630
S048276		24.9	0.25	2.7	3.43	0.062	4.16	53.8	18.1	0.81	1360	0.23	0.10	12.7	47.2	380
S048277		19.85	0.22	2.3	29.6	0.051	3.22	42.4	12.8	0.76	1480	0.99	0.07	9.6	31.5	910
S048278		22.4	0.24	2.5	41.5	0.054	3.76	47.0	12.6	0.36	226	0.71	0.09	10.8	37.3	980
S048279		19.65	0.23	2.3	36.9	0.045	3.16	43.8	14.7	0.31	201	1.52	0.07	9.5	37.3	1200
S048280		17.90	0.20	2.0	39.4	0.048	2.85	40.5	16.4	0.28	228	1.41	0.06	8.4	35.6	1200
S048281		18.30	0.19	2.1	18.20	0.036	3.04	40.2	14.5	0.29	263	0.57	0.07	8.6	42.0	1100
S048282		22.8	0.23	2.4	29.2	0.049	3.86	49.6	14.7	0.41	307	0.34	0.08	10.9	45.0	500
S048283		24.6	0.23	2.7	5.65	0.065	4.16	51.8	16.9	0.48	356	0.29	0.09	12.1	43.7	420
S048284		21.7	0.24	2.5	8.90	0.054	3.70	47.1	20.2	0.44	206	0.59	0.06	10.3	33.3	520
S048285		20.4	0.22	2.3	8.09	0.048	3.33	45.8	21.8	0.41	198	0.54	0.05	9.6	32.8	570
S048286		19.45	0.22	2.0	9.56	0.043	3.39	43.8	17.4	0.41	231	0.44	0.05	9.1	30.5	650
S048287		18.55	0.20	2.2	9.37	0.048	3.25	40.0	20.4	0.40	196	0.62	0.04	8.9	29.2	630
S048288		16.95	0.19	1.9	9.92	0.044	2.84	35.9	20.9	0.41	270	0.50	0.03	8.0	23.6	710
S048289		24.3	0.22	2.8	6.69	0.062	4.01	49.7	15.8	0.78	713	2.75	0.04	12.4	41.5	830
S048290		24.9	0.22	2.8	7.60	0.064	4.33	50.0	15.6	0.61	267	2.99	0.04	12.9	38.8	690

***** See Appendix Page for comments regarding this certificate *****

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Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18137003

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U
	Units	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm
	LOD	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.01	0.005	0.02	0.1
S048251		8.2	90.2	0.002	0.09	0.39	13.0	1	1.4	505	0.56	<0.05	7.72	0.377	1.37	1.5
S048252		17.2	203	0.002	0.14	1.25	17.4	1	2.5	128.5	0.91	0.05	15.05	0.402	3.33	2.2
S048253		29.7	195.0	<0.002	0.20	1.69	18.0	1	2.5	122.5	0.90	0.05	15.90	0.397	3.17	2.6
S048254		7.8	84.3	<0.002	0.19	0.23	8.7	1	1.1	354	0.39	<0.05	6.77	0.187	1.18	2.0
S048255		19.1	158.0	0.002	2.67	0.46	14.3	1	1.9	139.5	0.71	<0.05	12.20	0.334	10.40	3.1
S048256		14.4	56.9	<0.002	2.28	52.5	6.8	3	0.9	793	0.29	<0.05	4.28	0.179	13.80	3.5
S048257		15.0	136.5	0.002	0.49	0.44	12.1	2	1.6	174.5	0.57	<0.05	10.15	0.278	4.93	2.6
S048258		9.6	75.2	0.002	0.41	0.60	6.9	1	1.0	379	0.34	<0.05	6.12	0.166	2.70	2.2
S048259		5.2	38.3	<0.002	0.63	0.87	4.0	2	0.6	437	0.18	<0.05	3.25	0.087	2.36	1.3
S048260		17.0	107.0	0.002	3.28	45.6	15.0	2	1.4	222	0.48	<0.05	8.12	0.232	50.1	2.5
S048261		1.2	1.1	<0.002	0.01	0.11	0.2	1	<0.2	47.0	<0.05	<0.05	0.09	0.007	0.06	0.5
S048262		16.0	135.0	<0.002	2.04	2.07	12.5	1	1.7	173.0	0.57	<0.05	9.41	0.292	7.61	2.5
S048263		10.9	95.8	0.002	1.68	1.54	7.9	1	1.2	338	0.38	<0.05	6.71	0.188	7.14	2.0
S048264		14.2	124.5	0.003	2.50	2.87	10.9	2	1.6	259	0.52	<0.05	8.91	0.251	8.38	2.4
S048265		9.6	81.4	0.002	2.59	22.7	9.7	2	1.5	324	0.38	<0.05	5.05	0.261	41.0	5.7
S048266		7.1	57.7	<0.002	1.18	0.90	4.8	1	0.8	519	0.25	<0.05	4.40	0.125	4.22	1.5
S048267		13.6	110.0	<0.002	2.16	3.29	10.4	1	1.6	187.5	0.54	<0.05	8.98	0.257	7.13	2.7
S048268		15.6	108.5	<0.002	0.05	0.85	21.0	1	2.1	119.5	0.74	0.05	8.53	0.541	0.85	1.8
S048269		17.7	204	<0.002	0.04	0.64	15.3	1	2.6	94.9	0.89	<0.05	13.70	0.421	2.87	2.7
S048270		14.1	169.5	0.002	0.20	0.50	17.0	1	2.4	94.3	0.80	<0.05	12.50	0.394	2.02	2.6
S048271		16.6	208	<0.002	1.72	1.05	13.2	1	2.8	77.3	0.94	<0.05	16.85	0.444	1.98	2.6
S048272		16.3	208	<0.002	3.84	0.34	19.4	1	2.6	75.8	0.87	<0.05	14.15	0.415	2.67	2.5
S048273		29.9	204	<0.002	4.50	0.52	34.4	1	2.5	73.0	0.87	<0.05	29.6	0.409	3.24	2.9
S048274		17.7	192.5	<0.002	4.09	2.80	26.3	1	2.3	89.6	0.75	<0.05	17.40	0.366	8.14	3.3
S048275		17.9	188.5	<0.002	4.11	2.76	26.0	1	2.3	86.5	0.75	<0.05	17.35	0.357	8.16	3.2
S048276		18.4	201	<0.002	3.82	3.97	16.9	1	2.4	85.9	0.82	<0.05	13.95	0.397	11.10	2.7
S048277		25.9	160.0	0.003	3.99	42.5	15.2	2	2.1	83.6	0.63	<0.05	11.25	0.302	104.0	3.3
S048278		22.8	181.0	0.002	4.87	86.1	9.9	2	2.5	61.4	0.72	<0.05	12.80	0.347	167.5	4.0
S048279		26.2	157.0	0.004	4.25	79.6	9.0	2	2.2	110.0	0.65	<0.05	11.15	0.304	153.5	3.7
S048280		28.0	139.0	0.005	4.45	64.5	8.7	2	2.2	131.0	0.55	<0.05	9.80	0.270	146.0	3.4
S048281		18.0	146.0	0.002	3.40	26.3	10.3	1	1.8	111.5	0.58	<0.05	10.45	0.278	58.1	3.7
S048282		21.9	184.5	<0.002	4.18	50.1	13.2	1	2.3	87.8	0.71	<0.05	12.60	0.351	103.5	3.3
S048283		20.2	200	<0.002	4.90	20.9	18.7	1	2.3	65.3	0.78	<0.05	13.75	0.394	12.90	3.1
S048284		20.4	178.0	0.002	5.22	15.40	14.9	2	2.2	92.2	0.67	<0.05	11.95	0.328	22.4	3.1
S048285		19.0	166.0	0.002	4.74	15.60	13.8	2	2.0	102.5	0.63	<0.05	11.25	0.296	20.6	3.0
S048286		19.1	159.5	0.002	5.18	16.95	12.9	1	1.9	72.6	0.59	<0.05	10.65	0.287	23.5	2.8
S048287		18.9	154.0	0.002	4.83	16.00	11.2	2	1.9	74.3	0.59	<0.05	10.40	0.293	24.1	3.1
S048288		14.8	140.0	0.002	3.62	18.80	12.2	2	3.1	73.8	0.52	<0.05	8.96	0.246	25.3	2.6
S048289		18.1	187.0	0.007	4.38	9.04	21.2	1	2.8	85.2	0.84	<0.05	16.00	0.358	17.35	3.8
S048290		18.1	193.0	0.013	4.74	8.50	18.6	1	3.0	72.0	0.88	<0.05	16.15	0.377	16.75	3.3

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 24-JUN-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18137003

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	As-OG62	Au-AA25
	Analyte	V	W	Y	Zn	Zr	As	Au
	Units	ppm	ppm	ppm	ppm	ppm	%	ppm
	LOD	1	0.1	0.1	2	0.5	0.001	0.01
S048251		97	3.6	14.0	56	79.8		<0.01
S048252		88	3.5	18.1	45	102.0		<0.01
S048253		88	4.1	17.8	80	101.5		<0.01
S048254		40	0.8	15.8	85	51.1		<0.01
S048255		75	1.3	19.5	109	83.7		<0.01
S048256		54	5.9	14.6	55	49.6	1.495	1.41
S048257		60	1.1	18.3	96	68.8		<0.01
S048258		36	1.1	12.2	53	42.5		<0.01
S048259		21	2.9	10.4	42	26.1		<0.01
S048260		54	5.5	15.8	82	60.6		10.50
S048261		3	0.1	0.8	17	0.6		<0.01
S048262		62	4.2	17.8	89	79.0		0.03
S048263		46	21.5	13.2	64	50.6		<0.01
S048264		57	73.3	15.2	76	67.0		0.11
S048265		84	6.9	17.1	48	67.7		2.56
S048266		28	2.2	10.8	43	39.6		<0.01
S048267		57	53.7	15.6	112	75.8		0.01
S048268		168	8.1	20.9	109	92.8		<0.01
S048269		96	2.8	20.3	51	115.5		<0.01
S048270		90	2.2	19.7	77	101.5		<0.01
S048271		92	5.8	18.4	23	120.0		<0.01
S048272		92	2.7	18.2	45	112.0		<0.01
S048273		89	4.2	19.2	67	114.0		<0.01
S048274		81	10.9	24.5	111	99.9		<0.01
S048275		79	10.9	23.8	110	98.0		<0.01
S048276		88	6.9	20.6	121	105.0		0.17
S048277		69	5.6	16.8	158	86.1		1.53
S048278		79	6.8	17.3	135	94.1		2.32
S048279		76	6.0	17.0	219	86.8		2.66
S048280		69	5.2	18.9	158	76.3	1.510	2.55
S048281		63	5.5	17.3	89	77.8		2.19
S048282		75	6.9	19.2	118	88.6		2.56
S048283		84	7.1	19.6	120	102.0	1.235	0.24
S048284		77	10.2	18.6	129	91.0		0.72
S048285		70	8.4	18.2	108	85.6		0.59
S048286		69	7.0	19.1	84	78.0		0.54
S048287		71	6.9	15.8	73	80.7		0.80
S048288		60	6.1	16.7	76	69.8		1.07
S048289		140	9.4	26.4	101	105.5		0.35
S048290		166	8.6	24.5	92	105.0		0.63

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Project: Nadaleen

Finalized Date: 24-JUN-2018
Account: RCM

CERTIFICATE OF ANALYSIS WH18137003

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Applies to Method: REE's may not be totally soluble in this method.
ME-MS61

LABORATORY ADDRESSES

Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.

Applies to Method:				
	BAG-06	CRU-31	CRU-QC	LOG-21
	LOG-21d	LOG-23	PUL-31	PUL-QC
	SPL-21	SPL-21d	WEI-21	

Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Applies to Method:				
	As-OG62	Au-AA25	Hg-MS42	ME-MS61
	ME-OG62			

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CERTIFICATE WH18135167

Project: Nadaleen

P.O. No.: N18-002

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 8-JUN-2018.

The following have access to data associated with this certificate:

ANDREW CARNE	JULIA LANE	

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
BAG-06	Double Bagging Coarse Rejects
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
LOG-23	Pulp Login - Rcvd with Barcode
LOG-21d	Sample logging - ClientBarCode Dup
SPL-21d	Split sample - duplicate
PUL-31d	Pulverize Split - duplicate

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid ICP-MS	
Hg-MS42	Trace Hg by ICPMS	ICP-MS
ME-OG62	Ore Grade Elements - Four Acid	ICP-AES
As-OG62	Ore Grade As - Four Acid	ICP-AES

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:

Colin Ramshaw, Vancouver Laboratory Manager

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Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18135167

Sample Description	Method	WEI-21	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Recvd Wt.	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu	Fe
	Units	kg	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%
	LOD	0.02	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2	0.01
S049501		0.62	0.13	1.40	10.5	70	0.32	0.05	6.65	0.04	17.80	2.7	28	0.65	10.1	1.44
S049502		2.25	0.20	7.67	1075	280	1.19	0.38	0.14	<0.02	61.9	2.6	74	25.5	14.7	1.95
S049503		2.88	0.06	8.18	9080	360	2.15	0.46	0.40	0.18	69.4	19.2	79	23.5	87.6	5.86
S049504		1.25	0.44	2.42	>10000	340	0.31	0.23	0.34	0.04	21.2	0.5	32	6.96	15.2	1.69
S049505		0.28	0.63	7.05	509	240	2.47	0.23	2.28	0.35	58.6	23.2	102	38.5	69.0	6.54
S049506		3.30	0.23	7.70	3570	310	2.03	0.43	0.59	0.41	66.7	14.5	78	23.8	93.5	3.16
S049507		2.67	0.13	7.92	1700	310	2.60	0.51	1.98	0.27	70.1	16.6	79	34.5	82.5	4.59
S049508		3.74	0.09	6.18	4430	260	2.02	0.37	2.72	0.34	56.3	20.4	58	18.85	79.1	4.06
S049509		6.20	0.05	5.77	470	210	2.04	0.32	6.65	0.31	48.8	25.5	50	17.10	76.1	4.77
S049510		7.70	0.07	4.44	448	170	1.63	0.24	6.12	0.48	37.9	18.1	40	12.50	60.4	4.19
S049511		9.32	0.04	1.14	102.0	50	0.43	0.05	6.55	0.16	11.25	7.1	24	2.65	15.7	2.39
S049512		7.61	0.04	1.45	116.5	70	0.38	0.07	5.48	0.11	15.15	7.8	25	3.91	21.6	2.76
S049513		8.99	0.07	1.18	143.0	50	0.36	0.05	4.90	0.17	16.05	7.6	28	3.84	16.4	3.04
S049514		9.28	0.06	6.62	108.5	240	2.32	0.26	3.20	0.13	55.5	29.2	80	35.0	89.1	5.39
S049515		<0.02	0.04	6.59	107.5	240	2.35	0.26	3.25	0.11	54.9	28.4	80	34.3	87.5	5.31
S049516		8.24	0.03	4.89	62.1	210	1.34	0.16	4.59	0.13	36.1	18.4	53	21.2	49.0	4.13
S049517		5.89	0.09	1.86	205	230	0.52	0.07	4.00	0.08	20.7	9.5	31	6.40	17.7	2.95
S049518		6.58	0.08	1.58	86.0	210	0.44	0.07	3.25	0.07	20.5	11.2	35	5.82	18.6	3.04
S049519		0.26	0.21	3.76	6200	200	1.04	0.13	12.05	0.14	40.4	12.4	44	11.10	34.1	2.89
S049520		10.59	0.50	1.86	123.5	180	0.51	0.11	3.14	0.10	25.1	12.5	36	6.16	25.7	3.36
S049521		5.90	0.03	6.35	77.1	270	1.80	0.34	5.28	0.05	57.5	20.7	54	26.4	72.4	4.95
S049522		10.29	0.31	6.12	122.5	320	1.78	0.31	4.66	0.19	57.1	18.2	56	25.9	61.3	4.71
S049523		9.11	0.06	5.22	192.0	310	1.75	0.24	5.18	0.18	45.9	16.3	52	21.1	58.1	4.42
S049524		7.72	0.23	3.87	109.5	170	1.19	0.18	6.39	0.05	33.7	12.5	41	14.85	39.9	3.66
S049525		5.88	0.18	6.00	210	230	2.00	0.25	3.88	0.37	51.4	18.9	63	24.6	68.3	4.93
S049526		3.41	0.12	5.81	5160	250	1.62	0.24	1.09	0.32	56.7	13.8	62	17.20	51.3	5.41
S049527		7.12	<0.01	0.06	90.5	40	0.06	0.01	20.2	0.06	1.07	0.8	1	0.30	1.9	0.47
S049528		5.18	0.09	6.76	>10000	140	1.59	0.26	1.11	0.41	61.0	19.5	80	17.40	60.6	5.29
S049529		8.95	0.07	6.44	1595	280	1.48	0.24	1.60	0.23	59.7	19.0	73	16.10	56.1	4.62
S049530		5.35	0.09	6.82	4380	280	1.66	0.26	1.65	0.25	66.6	18.5	70	16.70	57.3	4.65
S049531		4.70	0.09	7.12	3000	300	1.61	0.28	1.54	0.25	70.4	19.7	73	17.25	60.7	4.87
S049532		6.41	0.05	5.53	980	200	1.34	0.20	1.85	0.15	52.1	15.7	63	14.65	46.0	4.13
S049533		6.50	0.10	6.34	2410	220	1.56	0.25	1.40	0.24	57.6	19.9	80	16.95	63.1	6.35
S049534		6.76	0.17	5.30	421	180	1.53	0.17	3.93	0.12	51.0	15.8	59	18.15	47.2	4.63
S049535		11.09	0.06	6.13	128.0	220	1.77	0.21	3.03	0.16	59.1	18.8	70	26.4	54.7	4.59
S049536		11.41	0.06	5.63	126.5	210	1.52	0.18	2.70	0.12	53.4	17.1	71	23.4	51.0	4.84
S049537		11.26	0.07	5.89	370	210	1.67	0.18	2.47	0.10	52.9	19.9	70	22.5	55.9	4.90
S049538		11.02	0.06	3.44	128.0	170	0.76	0.10	2.18	0.08	34.5	12.3	59	12.55	31.7	3.55
S049539		10.53	0.07	3.77	91.7	160	0.89	0.13	2.53	0.09	38.1	12.9	54	16.10	31.6	3.89
S049540		10.32	0.11	6.98	307	270	2.06	0.26	2.93	0.05	70.7	23.0	73	25.3	62.9	5.52

***** See Appendix Page for comments regarding this certificate *****

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Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18135167

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	Hg-MS42	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P
	Units	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm
	LOD	0.05	0.05	0.1	0.005	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
S049501		3.40	0.08	0.8	0.079	0.012	0.34	8.4	11.5	0.14	368	0.36	0.18	1.8	8.0	130
S049502		22.4	0.20	3.4	8.99	0.039	3.77	31.1	15.6	0.59	55	1.34	0.07	12.1	5.1	230
S049503		24.5	0.26	3.6	4.44	0.085	3.98	34.3	13.4	0.59	906	2.31	0.04	12.5	47.7	730
S049504		7.47	0.13	1.1	19.50	0.053	1.11	10.1	34.7	0.16	114	1.29	0.01	3.8	1.8	450
S049505		19.60	0.19	2.6	3.41	0.067	3.39	28.5	21.5	0.82	651	5.00	0.03	8.7	52.1	250
S049506		22.0	0.21	3.3	3.69	0.098	3.47	33.1	21.8	0.65	482	1.64	0.03	12.1	49.9	700
S049507		22.6	0.25	3.4	3.41	0.098	3.73	34.5	16.3	1.40	717	1.50	0.04	13.0	44.8	690
S049508		17.15	0.20	2.6	27.8	0.068	2.80	27.3	15.6	1.56	976	1.40	0.03	9.5	56.9	470
S049509		15.50	0.17	2.6	2.99	0.072	2.76	24.3	12.2	3.74	1400	1.58	0.03	8.7	75.2	530
S049510		11.70	0.16	2.0	2.12	0.052	2.02	18.4	9.6	3.28	1040	1.50	0.02	6.8	69.5	430
S049511		2.70	0.08	0.6	0.732	0.012	0.50	5.1	11.6	3.12	806	0.54	0.01	1.3	18.0	220
S049512		3.63	0.08	0.8	0.840	0.018	0.65	7.1	9.9	2.57	777	0.52	0.01	2.0	19.3	240
S049513		3.10	0.06	0.8	1.170	0.019	0.54	7.7	7.7	2.16	729	0.63	0.01	1.9	17.3	140
S049514		19.75	0.18	2.9	1.530	0.071	3.23	27.1	16.1	1.88	522	1.33	0.03	10.1	67.7	490
S049515		19.05	0.16	2.9	1.580	0.065	3.27	26.7	16.0	1.89	530	1.32	0.03	10.0	66.2	490
S049516		11.05	0.07	1.8	0.486	0.053	2.29	17.3	12.2	2.43	690	0.86	0.02	7.0	43.2	390
S049517		4.11	0.06	0.8	0.763	0.025	0.83	9.8	8.3	1.77	607	0.84	0.01	2.5	21.7	150
S049518		3.67	0.07	0.7	0.415	0.018	0.72	10.0	8.4	1.43	485	0.99	0.01	2.5	24.6	150
S049519		9.40	0.12	1.7	15.35	0.034	1.76	20.8	12.4	2.56	1150	1.78	0.02	5.5	26.7	440
S049520		4.34	0.09	0.9	1.085	0.022	0.87	12.3	7.6	1.43	582	0.78	0.01	2.9	25.6	170
S049521		17.10	0.13	2.6	0.444	0.078	3.18	27.9	10.7	3.08	1300	1.34	0.03	10.8	79.6	560
S049522		16.20	0.12	2.4	1.475	0.073	3.01	27.6	10.3	2.66	783	1.40	0.03	10.2	50.1	500
S049523		12.60	0.15	2.0	3.03	0.057	2.54	22.3	10.6	2.79	766	2.00	0.03	8.2	43.5	430
S049524		8.96	0.12	1.4	1.615	0.043	1.84	16.3	10.4	3.30	883	0.68	0.02	5.8	30.4	400
S049525		16.40	0.14	2.2	2.52	0.066	2.92	25.4	11.2	2.15	585	2.33	0.03	9.2	47.5	450
S049526		13.65	0.13	2.6	11.35	0.056	2.80	27.5	13.1	0.82	266	3.37	0.03	9.0	39.7	270
S049527		0.37	0.25	<0.1	0.074	<0.005	0.03	0.5	1.2	12.80	198	<0.05	<0.01	0.2	1.5	160
S049528		18.75	0.20	2.7	11.55	0.072	3.22	29.1	11.4	0.79	460	1.10	0.03	10.8	47.8	490
S049529		17.35	0.17	2.6	6.54	0.058	3.02	28.2	11.5	0.91	607	0.56	0.03	10.4	45.7	620
S049530		18.75	0.17	2.8	8.82	0.063	3.20	31.7	13.1	1.01	754	0.68	0.03	11.3	41.3	630
S049531		19.55	0.18	2.9	9.16	0.063	3.36	32.8	13.3	0.97	731	0.87	0.03	12.0	44.6	700
S049532		13.15	0.15	2.3	3.55	0.054	2.57	25.2	12.4	0.98	545	0.33	0.03	9.2	32.1	390
S049533		16.00	0.17	2.6	7.19	0.062	3.00	27.8	12.0	0.88	563	0.76	0.03	10.6	52.4	420
S049534		12.50	0.15	2.3	2.30	0.054	2.51	24.1	21.8	1.93	913	0.82	0.03	9.2	31.5	450
S049535		15.70	0.19	2.5	0.688	0.062	2.88	28.0	69.8	2.08	700	0.18	0.03	10.9	35.8	620
S049536		13.35	0.18	2.3	0.376	0.057	2.56	25.2	75.1	2.14	619	0.23	0.03	9.5	33.3	410
S049537		14.40	0.18	2.5	0.657	0.062	2.69	25.3	41.4	1.44	583	0.26	0.02	10.0	38.9	380
S049538		8.17	0.14	1.7	0.186	0.035	1.45	17.0	58.2	1.16	492	0.66	0.08	5.2	22.9	250
S049539		8.83	0.15	1.7	0.118	0.040	1.62	18.7	63.9	1.54	563	0.43	0.22	5.6	24.0	310
S049540		17.40	0.20	3.0	0.355	0.073	3.33	34.3	35.3	2.33	686	0.27	0.03	12.7	42.1	580

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 24-JUN-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18135167

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U
	Units	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm
	LOD	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.01	0.005	0.02	0.1
S049501		6.5	14.5	<0.002	0.03	0.41	2.8	<1	0.4	408	0.13	<0.05	2.89	0.089	0.13	0.7
S049502		23.6	148.0	<0.002	0.12	17.85	10.6	<1	2.4	91.9	0.86	0.16	9.54	0.572	19.50	1.9
S049503		29.0	156.0	<0.002	0.04	25.5	18.0	1	2.5	92.7	0.84	0.15	11.70	0.489	32.8	2.6
S049504		28.5	46.1	0.003	0.13	20.3	8.5	1	1.2	197.0	0.27	0.09	3.82	0.147	16.55	2.6
S049505		50.7	160.5	0.002	4.69	5.68	20.6	1	2.8	90.0	0.62	<0.05	8.75	0.401	13.15	1.7
S049506		24.2	133.5	0.004	1.28	13.65	25.9	3	2.3	110.5	0.84	0.15	11.20	0.517	21.0	2.4
S049507		27.0	153.0	<0.002	1.77	7.24	23.8	<1	2.6	217	0.86	0.19	11.95	0.531	14.95	2.3
S049508		21.9	110.5	0.004	2.56	18.00	17.9	1	1.8	169.0	0.64	0.13	8.24	0.406	24.0	2.0
S049509		20.1	102.0	0.007	2.51	2.44	17.1	1	1.7	204	0.60	0.07	7.88	0.381	6.04	1.9
S049510		20.5	75.1	0.007	2.84	2.81	13.2	1	1.5	210	0.46	0.07	6.55	0.294	4.73	1.9
S049511		9.2	17.7	0.002	0.79	1.52	3.4	1	0.4	178.5	0.10	<0.05	1.70	0.064	2.12	0.6
S049512		11.2	23.0	0.003	1.34	1.88	4.7	<1	0.5	173.5	0.13	<0.05	2.23	0.101	3.00	0.7
S049513		14.7	20.6	0.002	1.48	2.11	3.7	<1	0.4	132.0	0.14	<0.05	2.07	0.114	3.74	0.6
S049514		34.1	127.0	<0.002	4.89	1.18	22.0	1	2.0	86.3	0.68	0.08	7.62	0.565	9.59	1.7
S049515		33.8	124.0	0.003	4.79	1.20	21.7	1	1.9	86.7	0.67	0.10	7.47	0.572	9.69	1.6
S049516		20.4	82.9	0.002	3.10	0.71	16.3	1	1.2	105.5	0.45	0.07	5.15	0.417	4.84	1.2
S049517		13.4	29.9	0.002	1.58	1.10	4.8	1	0.5	129.5	0.19	<0.05	2.52	0.142	2.54	0.7
S049518		14.0	27.1	0.002	2.03	0.59	3.9	1	0.5	125.0	0.18	0.05	2.59	0.135	3.40	0.6
S049519		10.7	76.5	0.002	2.57	22.7	10.7	2	1.5	318	0.41	<0.05	5.49	0.258	39.3	6.0
S049520		17.0	31.9	0.002	2.41	1.03	4.4	1	0.7	116.5	0.22	<0.05	3.35	0.159	3.86	0.7
S049521		16.9	119.5	0.003	4.22	0.63	16.8	1	1.8	204	0.69	0.19	8.01	0.448	2.38	1.8
S049522		20.3	116.5	0.004	3.94	0.58	16.9	1	1.8	208	0.66	0.09	7.81	0.457	3.63	1.7
S049523		19.4	96.3	0.004	3.38	1.46	14.4	1	1.5	173.5	0.55	0.05	6.41	0.389	4.03	1.5
S049524		13.4	67.7	<0.002	2.27	0.59	9.9	1	1.1	150.5	0.38	<0.05	4.59	0.294	2.68	0.9
S049525		19.9	114.0	0.005	4.24	3.30	17.7	2	1.7	137.0	0.57	<0.05	6.92	0.440	5.50	1.8
S049526		21.7	107.5	0.008	5.18	26.1	13.7	2	1.7	85.4	0.60	<0.05	8.07	0.401	36.3	2.3
S049527		1.2	1.5	<0.002	0.02	0.15	0.2	2	<0.2	48.3	<0.05	<0.05	0.09	<0.005	0.24	0.7
S049528		20.1	126.0	0.002	6.21	69.7	16.7	2	1.9	67.1	0.70	<0.05	8.72	0.514	30.3	2.0
S049529		16.5	117.0	0.003	4.44	15.90	17.6	1	1.8	102.5	0.71	<0.05	8.43	0.525	18.65	1.8
S049530		23.9	130.5	0.002	4.39	36.3	19.7	1	2.0	99.2	0.75	<0.05	9.21	0.518	28.7	1.9
S049531		26.0	137.5	0.002	4.67	34.2	20.0	1	2.1	95.7	0.79	<0.05	9.62	0.540	29.8	2.0
S049532		13.7	104.0	<0.002	3.62	7.55	16.1	2	1.5	97.7	0.61	<0.05	7.25	0.464	9.79	1.5
S049533		24.4	124.0	0.002	6.36	23.0	17.2	2	1.8	82.0	0.69	<0.05	8.52	0.498	23.0	1.9
S049534		15.3	102.0	<0.002	3.43	3.06	15.4	1	1.5	198.5	0.59	<0.05	6.78	0.455	5.17	1.4
S049535		16.2	123.5	<0.002	1.39	0.48	17.9	1	1.7	175.0	0.68	<0.05	7.79	0.503	1.95	1.6
S049536		15.8	112.0	<0.002	0.67	0.51	16.9	1	1.5	208	0.61	<0.05	6.97	0.481	1.24	1.4
S049537		18.5	121.0	<0.002	3.73	1.64	18.3	1	1.6	152.0	0.64	<0.05	7.16	0.514	2.84	1.4
S049538		8.1	65.6	<0.002	1.45	0.59	10.2	1	1.0	123.0	0.39	<0.05	4.83	0.385	0.98	1.0
S049539		11.0	73.4	<0.002	0.69	0.45	10.4	1	1.0	147.5	0.41	<0.05	5.47	0.354	0.66	1.1
S049540		23.0	155.0	<0.002	1.95	0.84	19.9	1	2.1	178.0	0.82	<0.05	9.73	0.548	1.65	1.9

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To: **ATAC RESOURCES LTD.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 24-JUN-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18135167

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	As-OG62	Au-AA25
	Analyte	V	W	Y	Zn	Zr	As	Au
	Units	ppm	ppm	ppm	ppm	ppm	%	ppm
	LOD	1	0.1	0.1	2	0.5	0.001	0.01
S049501		21	1.0	4.7	19	26.1		<0.01
S049502		161	13.6	16.4	22	117.0		2.30
S049503		181	11.5	21.2	69	121.5		1.18
S049504		71	7.0	6.0	6	39.0	0.994	3.41
S049505		145	12.5	18.1	105	84.2		0.56
S049506		153	10.1	18.7	51	110.5		1.20
S049507		161	9.1	22.8	69	121.0		0.37
S049508		129	6.6	18.5	61	89.1		1.97
S049509		109	4.4	18.9	96	85.7		0.02
S049510		82	3.4	14.6	99	69.2		0.02
S049511		21	0.8	6.8	42	19.1		0.02
S049512		31	1.5	7.7	39	25.8		0.04
S049513		33	1.4	7.0	77	26.3		0.09
S049514		179	2.2	19.5	47	99.5		<0.01
S049515		180	2.2	19.2	48	105.0		0.01
S049516		116	1.2	15.7	79	73.6		<0.01
S049517		40	1.4	8.3	51	30.1		0.07
S049518		31	0.9	7.3	56	29.9		<0.01
S049519		83	7.3	17.8	48	67.7		2.56
S049520		38	2.5	8.0	51	34.5		0.08
S049521		127	1.4	20.9	45	102.5		<0.01
S049522		129	2.2	18.9	92	96.3		<0.01
S049523		112	2.3	16.0	77	78.8		0.01
S049524		81	1.8	13.1	37	56.1		<0.01
S049525		134	3.1	18.0	154	86.7		<0.01
S049526		122	4.4	17.6	79	97.8		8.44
S049527		2	0.1	0.7	16	0.5		0.01
S049528		153	8.6	19.4	147	105.0	2.63	5.84
S049529		152	7.8	19.7	91	99.7		1.88
S049530		149	10.0	21.7	92	106.5		5.79
S049531		156	10.6	23.0	96	111.5		5.89
S049532		122	8.0	16.6	87	88.9		0.27
S049533		141	8.7	18.3	106	99.3		2.84
S049534		120	4.1	17.6	83	87.1		0.30
S049535		132	1.5	20.3	124	98.3		0.02
S049536		130	1.4	17.3	96	90.3		<0.01
S049537		144	3.4	18.0	83	96.4		0.08
S049538		108	1.8	11.1	62	64.1		<0.01
S049539		96	0.8	12.8	64	66.5		<0.01
S049540		141	2.1	23.2	75	115.5		<0.01

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
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VANCOUVER BC V6B 1L8

Project: Nadaleen

Finalized Date: 24-JUN-2018
Account: RCM

CERTIFICATE OF ANALYSIS WH18135167

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Applies to Method: REE's may not be totally soluble in this method.
ME-MS61

LABORATORY ADDRESSES

Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.

Applies to Method:				
	BAG-06	CRU-31	CRU-QC	LOG-21
	LOG-21d	LOG-23	PUL-31	PUL-31d
	PUL-QC	SPL-21	SPL-21d	WEI-21

Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Applies to Method:				
	As-OG62	Au-AA25	Hg-MS42	ME-MS61
	ME-OG62			

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To: **ATAC RESOURCES LTD.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 27-JUN-2018
Account: RCM

CERTIFICATE WH18140284

Project: Nadaleen

P.O. No.: N18-003

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 14-JUN-2018.

The following have access to data associated with this certificate:

ANDREW CARNE	JULIA LANE	

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
BAG-06	Double Bagging Coarse Rejects
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
LOG-23	Pulp Login - Rcvd with Barcode
LOG-21d	Sample logging - ClientBarCode Dup
SPL-21d	Split sample - duplicate
PUL-31d	Pulverize Split - duplicate

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid ICP-MS	
Hg-MS42	Trace Hg by ICPMS	ICP-MS

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:

Colin Ramshaw, Vancouver Laboratory Manager

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 27-JUN-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18140284

Sample Description	Method	WEI-21	Au-AA25	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Recvd Wt.	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu
	Units	kg	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.02	0.01	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2
S049541		10.70	<0.01	0.09	5.30	85.9	170	1.27	0.18	2.55	0.11	50.7	21.0	71	20.7	51.8
S049542		11.70	0.18	0.07	4.20	844	280	0.93	0.16	3.85	0.16	42.5	14.3	55	12.80	36.2
S049543		11.16	<0.01	0.06	6.74	157.5	210	1.91	0.24	1.98	0.12	67.4	24.4	78	31.9	62.1
S049544		11.09	0.02	0.07	6.72	137.5	260	1.74	0.25	1.93	0.08	65.2	24.1	78	28.7	60.1
S049545		13.03	0.11	0.05	5.80	1160	180	1.44	0.22	3.79	0.08	58.9	21.2	63	20.1	50.3
S049546		<0.02	0.12	0.05	5.82	1135	180	1.44	0.21	3.74	0.05	57.6	22.5	63	19.80	50.0
S049547		15.47	0.23	0.07	6.06	548	230	1.16	0.23	2.36	0.09	59.5	24.6	63	15.00	50.1
S049548		11.22	1.05	0.05	6.97	1875	290	1.42	0.26	2.20	0.14	66.6	21.2	69	18.70	55.8
S049549		11.66	<0.01	0.08	7.93	497	270	2.04	0.30	2.48	0.17	75.7	22.1	70	27.1	58.4
S049550		0.26	1.08	1.36	1.56	863	200	0.35	0.12	27.5	0.72	19.65	5.5	27	3.57	48.7
S049551		10.96	0.01	0.09	8.55	112.5	280	2.04	0.31	1.70	0.16	81.4	20.7	72	33.1	60.5
S049552		10.76	0.08	0.06	7.27	367	330	1.73	0.29	2.92	0.09	66.6	19.6	64	23.6	53.1
S049553		11.38	<0.01	0.04	6.08	163.0	290	1.47	0.23	3.29	0.02	57.6	19.0	65	27.7	49.7
S049554		10.32	<0.01	0.05	6.33	121.5	350	1.50	0.23	3.39	0.02	60.8	18.5	67	30.3	50.5
S049555		10.14	<0.01	0.08	6.35	125.0	360	1.60	0.23	3.59	0.17	62.3	20.8	69	26.6	53.2
S049556		9.42	<0.01	0.05	6.04	138.5	240	1.56	0.21	2.81	0.03	57.3	20.3	71	21.2	51.4
S049557		0.26	0.59	0.71	6.85	458	230	2.12	0.22	2.23	0.35	63.2	24.0	96	39.6	67.5
S049558		11.03	0.03	0.08	7.25	655	310	1.91	0.29	2.46	0.04	71.8	27.5	68	21.7	64.9
S049559		10.32	<0.01	0.05	6.71	195.5	250	1.81	0.26	2.38	0.10	65.9	22.2	76	20.6	61.9
S049560		10.84	<0.01	0.05	6.37	71.4	390	1.62	0.23	2.31	0.04	61.6	23.4	75	22.8	60.6
S049561		10.96	<0.01	0.05	6.51	81.6	250	1.74	0.25	2.04	0.15	63.8	23.5	77	22.8	61.0
S049562		10.40	<0.01	0.05	6.10	83.2	230	1.51	0.23	2.54	0.10	59.4	20.8	72	20.5	56.9
S049563		10.20	0.01	0.05	6.69	96.9	260	1.65	0.27	2.00	0.04	65.0	22.0	75	28.9	59.1
S049564		5.48	<0.01	0.05	6.39	132.5	270	1.71	0.25	2.20	0.34	62.8	20.5	73	23.5	57.5
S049565		9.99	0.01	0.04	6.63	67.9	280	1.69	0.24	1.74	0.84	63.2	21.1	78	25.9	59.8
S049566		4.47	<0.01	0.07	6.12	127.0	260	1.51	0.21	2.79	0.05	59.4	21.3	72	21.3	53.1
S049567		5.33	<0.01	0.08	6.01	112.0	250	1.44	0.23	2.73	0.08	58.6	20.7	71	20.9	54.5
S049568		10.82	<0.01	0.04	6.84	163.5	240	1.79	0.27	2.54	0.02	67.2	21.2	74	29.1	57.2
S049569		10.33	0.06	0.04	7.03	276	260	1.72	0.27	2.43	0.02	69.6	22.9	73	30.7	58.5
S049570		9.94	<0.01	0.04	7.07	88.8	370	1.87	0.28	2.47	0.02	69.0	21.8	75	27.2	59.8
S049571		10.75	<0.01	0.07	4.99	681	380	1.21	0.19	4.64	0.05	50.9	16.6	56	18.10	41.6
S049572		10.78	0.01	0.03	7.04	91.7	260	1.81	0.27	2.26	0.09	68.7	20.0	78	33.2	59.3
S049573		10.38	<0.01	0.15	6.54	102.5	240	1.70	0.30	2.73	0.06	66.1	19.4	69	25.4	59.0
S049574		11.05	<0.01	0.06	6.15	95.1	240	1.69	0.24	2.60	0.03	60.7	18.7	69	21.9	51.2
S049575		11.07	<0.01	0.05	6.62	320	260	1.78	0.25	3.50	0.10	66.8	21.3	68	23.5	59.3
S049576		10.97	0.01	0.06	6.22	120.0	410	1.56	0.25	2.76	0.06	63.5	18.4	66	25.8	50.5
S049577		6.96	<0.01	0.01	0.06	7.7	20	0.05	0.02	21.4	0.05	1.21	1.5	1	0.15	4.3
S049578		11.21	<0.01	0.08	6.51	121.5	240	1.66	0.26	2.31	0.04	63.9	22.9	68	30.2	55.5
S049579		5.89	<0.01	0.05	7.44	193.0	220	2.03	0.28	2.93	0.04	71.8	22.2	68	28.4	62.2
S049580		11.90	0.15	0.05	8.21	465	260	2.34	0.24	2.30	0.03	75.2	26.9	81	29.2	58.5

***** See Appendix Page for comments regarding this certificate *****

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CERTIFICATE OF ANALYSIS WH18140284

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Hg-MS42	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni
	Units	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2
S049541		4.78	13.70	0.11	2.5	0.581	0.052	2.35	23.2	55.6	1.90	565	0.52	0.03	8.6	38.9
S049542		4.25	11.25	0.12	2.1	0.928	0.048	1.88	20.1	41.1	2.02	977	0.37	0.02	7.0	27.2
S049543		5.42	18.05	0.15	3.1	0.261	0.073	3.09	30.6	103.5	2.18	594	0.60	0.03	11.7	40.1
S049544		5.28	18.00	0.15	3.1	0.242	0.072	3.15	30.4	58.9	2.08	577	0.39	0.03	11.4	40.8
S049545		4.98	15.75	0.14	3.0	0.796	0.062	2.74	27.1	26.2	2.07	999	0.31	0.02	10.3	35.9
S049546		5.04	15.70	0.15	3.0	0.824	0.064	2.73	26.8	25.7	2.06	982	0.31	0.02	10.2	36.7
S049547		5.46	16.35	0.15	2.8	2.11	0.058	2.51	27.6	23.7	1.28	726	0.43	0.02	9.7	40.5
S049548		4.99	18.70	0.15	3.1	3.75	0.060	3.30	31.2	14.1	1.26	542	0.64	0.03	10.9	38.6
S049549		5.40	21.6	0.17	3.7	1.495	0.086	3.88	35.9	13.4	1.67	473	0.83	0.03	12.0	41.7
S049550		1.16	4.19	0.06	0.8	2.11	0.021	0.68	9.2	6.0	1.22	4650	1.32	0.10	2.1	13.2
S049551		5.90	23.2	0.17	3.9	2.66	0.084	4.18	38.0	12.0	2.05	295	1.26	0.04	12.7	43.5
S049552		5.43	19.50	0.17	3.2	1.185	0.071	3.55	31.4	15.3	1.77	530	0.74	0.03	11.0	37.8
S049553		4.63	16.10	0.15	2.8	0.126	0.058	2.94	27.0	61.9	2.62	642	0.32	0.03	9.9	35.1
S049554		4.71	16.30	0.14	3.1	0.111	0.062	2.99	26.8	60.6	2.79	662	0.30	0.07	10.2	34.0
S049555		4.51	17.35	0.14	3.0	0.211	0.067	3.08	28.7	50.4	2.69	658	0.46	0.03	10.7	37.1
S049556		4.82	16.10	0.15	3.0	0.138	0.065	2.88	26.7	50.3	2.22	595	0.43	0.03	10.2	35.6
S049557		6.29	19.00	0.17	2.5	3.12	0.068	3.38	30.4	17.5	0.80	638	5.06	0.03	9.0	50.1
S049558		5.83	19.85	0.17	3.2	0.566	0.077	3.46	32.4	30.6	1.63	692	0.55	0.03	12.7	44.4
S049559		5.05	18.00	0.15	3.1	0.282	0.077	3.20	30.7	37.3	1.93	659	0.48	0.03	11.6	39.4
S049560		5.69	17.40	0.15	3.0	0.219	0.071	2.87	28.4	107.5	2.23	632	0.55	0.03	11.0	40.8
S049561		5.26	17.50	0.16	3.1	0.164	0.072	3.05	29.6	96.0	2.20	620	0.56	0.03	11.3	40.0
S049562		5.07	16.25	0.16	3.0	0.141	0.056	2.86	27.6	86.2	2.25	743	0.50	0.03	10.2	35.6
S049563		5.40	18.05	0.15	3.0	0.112	0.073	3.13	30.6	104.0	2.33	616	0.46	0.03	11.6	40.2
S049564		5.04	17.40	0.15	3.1	0.309	0.071	3.06	29.1	61.0	2.19	590	0.76	0.03	11.2	37.1
S049565		4.99	17.75	0.16	3.1	0.358	0.065	3.16	29.1	84.9	2.08	533	0.96	0.03	11.2	37.7
S049566		4.98	16.05	0.13	2.8	0.119	0.065	2.94	27.4	48.0	2.39	688	0.57	0.04	10.4	36.8
S049567		4.92	16.10	0.15	2.8	0.133	0.058	2.88	27.1	47.9	2.33	683	0.51	0.03	10.1	36.3
S049568		5.16	18.25	0.14	3.1	0.109	0.077	3.29	31.2	48.4	2.38	618	0.25	0.04	11.6	37.8
S049569		5.50	19.15	0.17	3.2	0.307	0.076	3.36	32.1	69.4	2.15	670	0.33	0.03	11.9	38.4
S049570		5.26	19.00	0.18	3.2	0.134	0.069	3.39	32.5	57.0	2.42	683	0.26	0.04	11.8	40.2
S049571		4.62	13.35	0.14	2.3	0.217	0.052	2.36	23.7	45.0	2.41	848	0.30	0.03	8.2	29.0
S049572		4.93	18.65	0.15	3.3	0.206	0.073	3.28	31.8	116.5	2.26	558	0.62	0.04	11.6	39.4
S049573		4.85	17.30	0.16	3.1	0.151	0.073	3.08	30.3	89.0	2.35	649	0.33	0.04	11.0	37.7
S049574		4.64	16.50	0.14	2.8	0.192	0.064	2.85	27.8	76.2	2.10	504	0.30	0.03	10.1	34.3
S049575		5.10	17.85	0.15	3.1	0.201	0.071	3.16	30.0	54.5	2.51	755	0.31	0.03	11.5	37.8
S049576		4.91	16.35	0.16	2.9	0.210	0.062	2.87	28.9	124.5	2.09	729	0.28	0.03	10.5	32.1
S049577		0.48	0.21	<0.05	<0.1	<0.005	0.006	0.03	0.5	1.1	13.30	205	0.17	<0.01	0.2	1.3
S049578		4.93	17.75	0.13	3.1	0.299	0.062	2.90	29.7	151.5	2.02	544	0.42	0.04	10.6	39.6
S049579		5.04	20.3	0.17	3.6	0.463	0.080	3.52	33.8	63.1	1.87	627	0.40	0.03	12.2	39.0
S049580		5.39	23.1	0.18	3.2	1.065	0.077	3.97	35.1	26.5	1.30	606	0.25	0.03	11.0	39.1

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	Analyte	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl
	Units	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
	LOD	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.01	0.005	0.02
S049541		430	30.8	114.0	<0.002	0.98	1.03	15.8	1	1.9	138.0	0.61	<0.05	7.08	0.493	1.32
S049542		350	24.5	91.8	<0.002	2.58	2.28	12.0	1	1.4	182.5	0.52	<0.05	5.87	0.394	3.38
S049543		600	15.2	161.0	<0.002	0.89	0.78	20.3	1	2.3	126.0	0.83	0.08	9.33	0.585	1.65
S049544		510	17.4	163.5	<0.002	1.53	0.68	19.6	1	2.3	174.0	0.82	0.05	9.25	0.582	1.82
S049545		500	16.7	140.5	<0.002	4.51	3.41	17.8	1	1.9	164.0	0.73	0.07	8.50	0.525	5.89
S049546		500	17.0	137.5	<0.002	4.61	3.38	17.7	1	1.9	159.5	0.71	0.05	8.37	0.527	5.66
S049547		590	26.6	119.5	<0.002	5.41	6.18	17.3	1	2.0	131.5	0.69	<0.05	8.94	0.484	9.35
S049548		530	17.1	150.0	0.002	4.61	8.29	18.8	1	2.3	142.0	0.78	0.05	9.96	0.529	12.80
S049549		630	21.4	182.5	0.002	4.61	4.48	21.9	1	2.7	145.5	0.90	<0.05	11.35	0.521	4.43
S049550		390	61.7	30.6	0.002	0.71	8.27	6.0	1	0.7	1145	0.16	0.06	2.46	0.080	6.20
S049551		580	21.3	203	0.003	3.16	0.96	23.3	1	2.8	145.5	0.89	0.05	12.10	0.505	4.40
S049552		520	20.5	166.5	0.002	4.85	3.91	19.4	1	2.4	183.0	0.80	<0.05	10.45	0.484	5.40
S049553		470	15.5	138.5	<0.002	0.42	0.57	16.7	1	1.9	144.5	0.71	0.05	8.78	0.481	1.03
S049554		500	15.3	149.5	<0.002	0.17	0.42	16.9	1	2.0	164.5	0.73	0.07	9.01	0.498	1.00
S049555		490	23.6	148.5	<0.002	0.43	0.69	17.7	1	2.1	159.5	0.75	0.06	9.30	0.519	1.14
S049556		470	14.3	136.0	<0.002	0.54	0.92	17.6	1	1.9	136.0	0.75	<0.05	8.84	0.519	1.03
S049557		230	49.3	176.0	0.003	4.59	5.63	21.1	1	2.9	90.1	0.64	<0.05	8.69	0.404	13.05
S049558		620	25.3	164.5	0.002	4.78	2.51	21.1	1	2.5	210	0.91	0.05	10.25	0.584	3.22
S049559		530	13.7	152.5	<0.002	1.69	1.53	20.3	1	2.4	142.5	0.83	0.07	9.46	0.573	1.75
S049560		480	13.9	145.0	<0.002	1.42	0.64	19.3	<1	2.1	137.0	0.79	0.07	8.76	0.561	1.74
S049561		510	18.2	148.5	<0.002	0.27	0.71	19.6	1	2.2	107.0	0.78	0.06	9.05	0.573	1.04
S049562		550	14.5	135.5	<0.002	0.12	0.81	18.1	1	2.2	125.0	0.74	0.05	8.47	0.539	0.95
S049563		500	15.5	157.5	<0.002	0.15	0.60	19.7	1	2.2	130.5	0.79	0.05	9.39	0.569	0.99
S049564		490	27.7	145.0	<0.002	0.15	1.00	19.1	1	2.1	159.5	0.80	0.07	9.00	0.547	1.01
S049565		480	28.8	151.5	<0.002	0.16	0.73	19.3	1	2.1	109.5	0.81	0.06	9.06	0.573	1.02
S049566		510	15.8	137.5	<0.002	0.50	1.13	17.9	1	1.9	123.5	0.73	0.05	8.47	0.523	0.95
S049567		500	19.4	136.5	0.002	0.51	1.21	17.8	1	1.9	124.5	0.71	0.05	8.29	0.522	0.94
S049568		530	14.0	164.0	<0.002	0.57	0.60	19.7	1	2.2	129.0	0.79	0.05	9.68	0.555	1.11
S049569		580	17.5	165.0	<0.002	1.66	1.18	19.9	1	2.3	142.5	0.84	0.05	10.05	0.550	1.92
S049570		570	15.3	160.5	<0.002	0.19	1.01	20.1	1	2.2	188.0	0.85	0.07	9.79	0.556	1.00
S049571		500	14.3	109.0	<0.002	0.50	2.19	14.3	1	1.7	257	0.58	<0.05	7.29	0.413	0.99
S049572		570	13.4	163.0	<0.002	0.23	0.43	20.1	1	2.1	115.0	0.81	0.07	9.93	0.579	0.97
S049573		650	10.9	137.5	<0.002	0.21	0.41	19.8	1	2.1	171.5	0.77	0.09	9.28	0.534	0.91
S049574		450	16.6	123.5	<0.002	0.44	1.05	17.9	<1	2.0	196.5	0.72	0.05	8.57	0.496	1.30
S049575		540	15.6	136.0	<0.002	0.42	1.29	19.1	1	2.5	206	0.77	0.07	9.36	0.530	1.04
S049576		740	16.7	127.5	<0.002	0.44	0.60	17.2	1	2.5	161.0	0.75	0.05	9.20	0.483	0.96
S049577		290	1.3	1.1	<0.002	<0.01	0.10	0.4	1	<0.2	50.1	<0.05	<0.05	0.09	<0.005	<0.02
S049578		520	22.3	139.0	<0.002	0.63	0.66	18.5	1	2.4	136.5	0.74	0.07	9.39	0.496	1.23
S049579		590	16.9	165.5	<0.002	3.31	0.92	21.8	1	3.0	158.5	0.87	0.06	10.65	0.547	2.92
S049580		270	17.2	180.5	0.002	4.45	2.64	25.0	1	3.0	151.0	0.78	<0.05	10.75	0.487	6.09

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 27-JUN-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18140284

Sample Description	Method Analyte Units LOD	ME-MS61 U ppm 0.1	ME-MS61 V ppm 1	ME-MS61 W ppm 0.1	ME-MS61 Y ppm 0.1	ME-MS61 Zn ppm 2	ME-MS61 Zr ppm 0.5
S049541		1.5	137	1.5	16.9	78	86.1
S049542		1.2	109	2.6	13.3	86	70.6
S049543		1.9	156	2.4	23.4	93	110.5
S049544		1.9	154	2.7	21.2	81	108.0
S049545		1.8	137	6.1	21.1	72	106.0
S049546		1.8	137	6.0	20.4	72	100.5
S049547		1.8	130	10.2	20.4	79	94.7
S049548		2.0	144	11.5	21.2	81	108.0
S049549		2.3	145	7.5	24.2	94	117.0
S049550		3.8	26	5.3	15.1	124	26.3
S049551		2.5	152	1.9	25.8	103	124.5
S049552		2.1	133	5.8	22.0	86	107.0
S049553		1.8	123	1.8	19.5	51	99.9
S049554		1.8	126	1.6	19.9	54	99.5
S049555		1.9	130	2.0	20.6	115	105.5
S049556		1.7	135	3.8	19.2	52	99.0
S049557		1.7	141	11.8	18.9	103	84.4
S049558		2.1	151	9.6	23.7	68	112.0
S049559		1.9	152	8.5	21.8	85	105.0
S049560		1.8	149	3.2	20.5	69	103.5
S049561		1.9	152	2.1	22.5	91	106.5
S049562		1.8	143	3.2	20.8	80	97.9
S049563		1.9	150	1.6	22.2	69	107.5
S049564		1.8	143	3.0	21.8	173	104.5
S049565		1.9	152	2.0	21.3	299	107.0
S049566		1.7	138	2.9	19.7	63	97.9
S049567		1.7	137	2.9	19.2	69	97.4
S049568		1.9	142	1.5	22.6	69	110.0
S049569		2.0	142	3.5	22.4	76	110.5
S049570		2.0	142	2.3	22.6	80	122.5
S049571		1.5	109	5.8	18.7	56	80.3
S049572		2.0	150	1.5	34.1	95	113.5
S049573		2.0	136	1.6	23.2	80	107.0
S049574		1.8	134	3.9	19.7	74	100.5
S049575		1.9	134	5.9	23.1	78	111.0
S049576		2.0	123	2.2	21.9	74	102.5
S049577		0.6	2	0.1	0.8	15	0.5
S049578		1.9	134	2.0	22.8	78	107.0
S049579		2.1	147	4.8	25.1	79	121.0
S049580		2.0	162	8.5	22.4	83	106.0

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Project: Nadaleen

Finalized Date: 27-JUN-2018
Account: RCM

CERTIFICATE OF ANALYSIS WH18140284

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Applies to Method: REE's may not be totally soluble in this method.
ME-MS61

LABORATORY ADDRESSES

Applies to Method: Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.

BAG-06	CRU-31	CRU-QC	LOG-21
LOG-21d	LOG-23	PUL-31	PUL-31d
PUL-QC	SPL-21	SPL-21d	WEI-21

Applies to Method: Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Au-AA25	Hg-MS42	ME-MS61

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 24-JUN-2018
Account: RCM

CERTIFICATE WH18137009

Project: Nadaleen

P.O. No.: N18-004

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 11-JUN-2018.

The following have access to data associated with this certificate:

ANDREW CARNE	JULIA LANE	

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
BAG-06	Double Bagging Coarse Rejects
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
LOG-23	Pulp Login - Rcvd with Barcode
LOG-21d	Sample logging - ClientBarCode Dup
SPL-21d	Split sample - duplicate
PUL-31d	Pulverize Split - duplicate

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid ICP-MS	
Hg-MS42	Trace Hg by ICPMS	ICP-MS
ME-OG62	Ore Grade Elements - Four Acid	ICP-AES
As-OG62	Ore Grade As - Four Acid	ICP-AES

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:

Colin Ramshaw, Vancouver Laboratory Manager

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Finalized Date: 24-JUN-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18137009

Sample Description	Method Analyte Units LOD	WEI-21 Recvd Wt. kg 0.02	ME-MS61 Ag ppm 0.01	ME-MS61 Al % 0.01	ME-MS61 As ppm 0.2	ME-MS61 Ba ppm 10	ME-MS61 Be ppm 0.05	ME-MS61 Bi ppm 0.01	ME-MS61 Ca % 0.01	ME-MS61 Cd ppm 0.02	ME-MS61 Ce ppm 0.01	ME-MS61 Co ppm 0.1	ME-MS61 Cr ppm 1	ME-MS61 Cs ppm 0.05	ME-MS61 Cu ppm 0.2	ME-MS61 Fe % 0.01
S048291		12.06	0.15	8.92	3080	320	2.08	0.32	0.19	0.20	98.0	17.4	68	30.2	38.0	3.89
S048292		11.15	0.12	6.94	3980	350	1.41	0.28	0.27	0.19	73.1	13.6	54	20.1	27.2	2.83
S048293		8.36	0.12	9.64	419	330	3.85	0.25	1.47	0.26	121.0	18.0	70	46.7	40.1	4.55
S048294		5.94	0.07	8.91	246	340	3.39	0.27	1.96	0.20	103.0	16.7	68	34.5	37.7	4.45
S048295		5.64	0.14	7.38	2210	270	1.95	0.38	0.32	0.93	73.4	17.9	76	25.6	58.6	4.89
S048296		<0.02	0.14	7.49	2260	270	1.96	0.37	0.33	0.90	71.5	17.6	78	25.0	57.9	4.98
S048297		11.00	0.11	5.64	1900	190	1.46	0.23	2.56	1.27	54.4	15.2	63	18.45	49.3	4.86
S048298		10.48	0.08	5.74	696	180	1.97	0.23	2.05	0.18	60.5	14.3	65	20.7	52.9	4.55
S048299		12.40	0.29	6.93	354	240	2.57	0.30	1.75	0.34	71.9	20.9	78	24.7	57.3	4.91
S048300		12.64	0.12	6.16	2970	240	1.92	0.26	2.41	0.22	64.2	18.6	70	18.85	53.5	4.80
S048301		11.82	0.11	6.09	9270	220	1.42	0.23	0.16	0.28	64.2	19.9	77	15.00	56.7	4.88
S048302		5.66	0.12	4.89	>10000	190	1.00	0.17	0.17	0.24	49.9	17.0	71	11.05	52.8	4.55
S048303		7.17	<0.01	0.05	25.2	30	0.06	<0.01	18.85	0.06	1.12	0.8	1	0.14	1.8	0.42
S048304		7.54	0.41	5.21	>10000	160	1.04	0.23	0.10	0.35	54.1	14.8	67	12.35	50.0	4.78
S048305		11.76	0.29	6.84	2480	240	1.71	0.28	0.38	0.32	65.2	19.6	83	19.55	54.3	5.01
S048306		11.87	0.10	7.48	873	260	2.23	0.30	1.02	0.25	89.4	19.0	87	27.7	61.6	5.25
S048307		11.69	0.08	6.81	785	220	1.82	0.25	1.35	0.17	66.2	19.4	75	23.2	59.3	4.90
S048308		0.26	0.17	3.85	6460	210	1.05	0.11	11.90	0.13	41.8	11.7	47	10.75	37.9	2.85
S048309		11.13	0.10	7.24	408	320	2.14	0.28	1.19	0.18	69.7	18.7	83	25.7	57.9	4.95
S048310		10.11	0.11	7.80	399	270	2.49	0.30	0.99	0.22	71.7	20.4	87	32.8	55.6	5.52
S048311		10.03	0.12	8.03	298	300	2.88	0.33	1.49	0.25	76.8	20.1	86	36.7	55.8	5.28
S048312		10.53	0.05	5.13	91.5	240	1.62	0.16	4.00	0.11	48.7	15.7	61	24.6	46.7	4.13
S048313		10.02	0.08	6.52	166.0	300	2.17	0.26	2.46	0.21	66.8	19.2	71	30.2	52.7	4.60
S048314		9.61	0.08	7.05	33.9	270	2.12	0.28	2.17	0.28	71.0	15.7	80	38.4	49.1	4.45
S048315		10.39	0.11	7.33	53.8	310	2.17	0.29	1.97	0.19	74.9	17.9	84	37.8	60.2	5.20
S048316		9.94	0.10	6.98	124.0	260	2.32	0.28	2.70	0.23	73.0	17.0	78	40.5	59.7	5.05
S048317		9.99	0.14	6.02	114.5	230	1.77	0.23	3.42	0.37	62.8	15.4	69	30.2	52.3	5.01
S048318		10.34	0.07	5.83	81.3	250	1.71	0.20	3.85	0.31	57.3	16.2	61	28.0	49.5	4.82
S048319		10.55	0.21	6.20	525	240	1.82	0.23	2.69	0.10	62.3	18.5	71	24.6	54.0	4.57
S048320		5.79	0.48	6.01	7060	270	1.70	0.24	3.21	0.20	63.0	14.7	63	18.75	47.0	3.96
S048321		3.17	0.50	5.81	6980	280	1.56	0.21	3.55	0.18	60.2	14.0	62	16.15	43.5	3.99
S048322		6.17	0.17	5.70	4070	330	1.75	0.20	5.37	0.19	56.0	13.0	63	19.55	41.1	4.51
S048323		0.26	0.62	1.82	>10000	140	0.55	2.87	24.4	0.14	26.6	4.6	26	5.83	16.3	1.32
S048324		9.09	0.12	5.86	486	220	1.77	0.23	4.13	0.31	56.7	14.1	66	21.1	46.0	4.52
S048325		12.37	0.08	5.94	237	250	1.64	0.21	3.12	0.09	57.7	15.4	64	22.2	45.7	4.03
S048326		10.94	0.05	6.00	148.5	220	1.75	0.21	2.11	<0.02	57.9	17.8	71	25.6	51.5	4.35
S048327		12.46	0.08	5.49	182.0	420	1.47	0.19	3.21	0.12	54.4	16.2	61	20.6	48.3	4.70
S048328		10.58	0.07	5.53	95.3	250	1.50	0.17	2.26	0.11	50.6	18.5	76	23.7	50.2	4.17
S048329		10.21	0.05	5.07	130.0	270	1.39	0.18	3.26	0.12	47.9	11.3	56	20.7	43.6	4.09
S048330		11.44	0.12	5.91	233	240	1.68	0.19	3.39	0.10	56.9	16.4	71	25.1	57.5	4.90

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Finalized Date: 24-JUN-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18137009

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	Hg-MS42	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P
	Units	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm
	LOD	0.05	0.05	0.1	0.005	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
S048291		24.1	0.21	2.5	13.55	0.050	4.03	50.4	18.8	0.46	175	1.02	0.06	11.4	37.0	640
S048292		18.70	0.19	2.0	16.50	0.037	3.16	39.1	17.5	0.42	235	0.52	0.03	8.7	25.4	830
S048293		27.4	0.26	3.1	3.75	0.072	4.46	60.0	16.6	1.06	553	3.64	0.04	14.0	37.6	700
S048294		24.5	0.24	2.8	3.54	0.072	4.21	51.7	14.0	1.23	583	3.25	0.04	12.4	36.7	660
S048295		20.8	0.22	3.2	14.95	0.067	3.50	36.0	15.1	0.57	285	4.21	0.03	12.2	45.6	400
S048296		20.4	0.22	3.1	14.75	0.071	3.53	35.1	14.7	0.58	289	4.20	0.03	12.0	45.2	400
S048297		13.85	0.19	2.5	9.74	0.056	2.61	26.7	18.4	1.46	1600	2.20	0.03	9.4	30.5	370
S048298		14.90	0.15	2.8	3.00	0.068	2.62	29.9	33.9	1.13	712	1.02	0.03	9.6	33.8	430
S048299		17.90	0.19	3.3	5.61	0.090	3.30	36.1	20.7	1.13	446	1.49	0.03	10.9	41.8	380
S048300		16.05	0.19	3.1	6.88	0.072	2.88	32.0	17.2	1.35	911	1.16	0.03	10.2	38.5	360
S048301		16.60	0.20	3.0	6.02	0.065	2.82	30.6	16.1	0.33	45	0.55	0.02	10.5	38.7	620
S048302		13.15	0.15	2.3	14.90	0.048	2.26	24.6	16.2	0.27	61	0.50	0.02	8.1	32.1	600
S048303		0.19	0.17	<0.1	0.014	0.008	0.02	0.5	1.0	11.90	193	0.13	<0.01	0.1	1.4	150
S048304		13.85	0.18	2.4	13.30	0.058	2.41	25.9	19.1	0.31	85	1.87	0.02	7.6	41.0	210
S048305		18.00	0.18	3.2	10.40	0.068	3.21	32.2	15.8	0.54	373	1.70	0.03	10.6	44.8	300
S048306		18.85	0.18	3.5	12.35	0.080	3.50	34.9	16.3	0.84	506	1.54	0.03	11.1	45.3	430
S048307		16.80	0.18	3.2	6.34	0.062	3.16	32.6	18.1	0.93	588	0.59	0.03	10.7	38.2	520
S048308		10.10	0.16	1.9	15.65	0.038	1.77	21.7	13.4	2.52	1200	1.79	0.02	5.9	26.5	450
S048309		18.70	0.21	3.5	8.05	0.078	3.42	34.2	16.2	0.88	372	1.30	0.03	11.4	42.1	400
S048310		19.95	0.21	3.7	11.15	0.083	3.69	35.7	19.2	0.80	266	1.43	0.03	11.5	42.7	350
S048311		20.8	0.22	3.8	8.09	0.094	3.76	38.2	18.6	1.07	329	1.88	0.04	12.4	43.8	330
S048312		12.55	0.16	2.4	1.640	0.057	2.40	23.5	35.2	1.91	559	0.43	0.03	7.8	29.7	420
S048313		17.05	0.20	3.1	3.29	0.081	3.11	32.4	22.1	1.33	303	0.79	0.03	10.1	38.0	400
S048314		18.10	0.22	3.4	2.22	0.079	3.44	35.3	19.6	1.47	255	1.22	0.03	10.6	37.5	410
S048315		18.85	0.20	3.5	2.69	0.088	3.54	35.6	18.5	1.50	265	1.32	0.03	10.8	42.5	470
S048316		17.90	0.23	3.3	4.14	0.086	3.42	34.8	18.8	1.63	339	1.16	0.03	10.7	42.2	510
S048317		15.40	0.22	2.9	4.61	0.074	2.92	30.2	16.6	1.78	477	1.26	0.03	9.2	37.3	550
S048318		14.85	0.19	2.8	1.725	0.065	2.76	27.8	20.5	1.98	645	0.81	0.03	9.3	35.1	590
S048319		16.15	0.19	3.0	2.64	0.071	2.91	30.8	21.9	1.51	543	0.67	0.03	10.1	36.3	500
S048320		15.85	0.21	2.9	13.25	0.058	2.86	31.8	11.9	1.60	1510	0.91	0.02	9.4	32.5	520
S048321		14.95	0.24	2.8	12.80	0.064	2.78	29.9	12.0	1.71	1700	0.86	0.02	9.1	31.3	530
S048322		14.55	0.20	2.7	5.50	0.058	2.76	28.3	11.3	2.21	1320	1.46	0.03	8.6	31.9	1850
S048323		4.64	0.13	0.9	6.93	0.027	0.88	12.9	9.0	0.86	2230	1.74	0.01	2.4	12.2	340
S048324		15.15	0.18	2.8	3.27	0.071	2.81	28.1	11.3	1.84	731	1.41	0.03	9.1	33.8	750
S048325		15.65	0.18	2.8	1.770	0.067	2.79	29.0	18.7	1.58	470	0.62	0.03	9.5	33.7	470
S048326		15.60	0.18	2.8	0.223	0.065	2.74	28.6	36.8	1.90	505	0.25	0.03	9.7	34.0	500
S048327		14.15	0.17	2.6	0.505	0.063	2.53	26.7	31.8	1.87	725	0.54	0.02	9.0	32.0	510
S048328		13.80	0.17	2.5	0.487	0.057	2.48	24.4	54.9	1.72	553	0.29	0.02	8.7	33.7	440
S048329		12.75	0.15	2.6	0.530	0.054	2.33	23.6	33.4	1.50	679	0.48	0.02	7.8	23.9	420
S048330		14.95	0.18	2.8	0.289	0.063	2.72	27.8	31.3	2.17	765	0.40	0.02	9.6	32.9	550

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 24-JUN-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18137009

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U
	Units	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm
	LOD	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.01	0.005	0.02	0.1
S048291		20.5	184.0	0.004	3.90	13.75	16.4	1	2.5	86.2	0.76	<0.05	13.75	0.359	33.7	3.1
S048292		18.2	147.0	0.002	2.72	20.9	10.4	2	1.9	86.1	0.58	<0.05	10.00	0.273	47.4	3.0
S048293		19.1	195.0	0.011	4.21	2.73	18.5	2	3.0	112.0	0.94	<0.05	20.6	0.373	8.79	4.1
S048294		16.9	181.0	0.013	3.99	1.38	16.6	1	3.0	125.5	0.87	<0.05	16.90	0.351	7.42	3.6
S048295		42.5	162.0	0.013	5.13	24.7	18.4	2	2.4	61.8	0.77	0.06	10.45	0.470	45.5	3.0
S048296		41.6	159.0	0.015	5.22	24.4	18.0	2	2.4	60.1	0.75	<0.05	10.25	0.480	45.3	2.9
S048297		38.5	118.0	0.006	4.68	13.20	17.7	2	1.9	99.5	0.58	<0.05	7.58	0.440	27.1	2.1
S048298		20.3	120.5	<0.002	4.19	2.80	16.3	1	2.1	85.1	0.67	0.06	8.61	0.482	7.87	1.8
S048299		30.3	147.0	0.003	4.72	1.40	18.3	1	2.7	95.2	0.76	0.08	10.95	0.517	14.40	2.8
S048300		32.9	129.5	0.004	4.49	11.40	17.0	2	2.3	114.5	0.70	0.08	9.94	0.461	17.75	2.4
S048301		15.3	123.5	<0.002	5.49	23.0	11.8	1	2.4	52.4	0.72	0.07	9.25	0.513	20.0	1.9
S048302		14.8	97.7	<0.002	4.62	25.8	8.3	1	1.8	53.7	0.55	0.09	7.06	0.447	40.7	1.5
S048303		1.2	1.0	<0.002	0.01	0.16	0.2	1	<0.2	44.6	<0.05	<0.05	0.09	<0.005	0.08	0.8
S048304		26.9	103.0	0.007	5.69	54.7	9.2	2	1.9	44.9	0.54	0.08	7.74	0.355	35.1	2.3
S048305		27.8	139.5	0.007	5.27	19.15	17.4	1	2.4	49.6	0.70	0.08	10.20	0.487	22.0	2.6
S048306		25.0	156.5	0.005	5.28	10.45	20.4	1	2.9	62.8	0.79	0.08	11.15	0.528	24.0	2.8
S048307		15.8	136.5	0.002	4.87	6.32	18.1	1	2.4	61.9	0.73	0.05	9.76	0.537	14.70	2.1
S048308		10.8	82.4	0.002	2.56	23.1	10.2	1	1.7	317	0.40	<0.05	5.87	0.267	43.5	6.1
S048309		24.5	154.5	0.005	4.85	1.87	20.2	1	2.5	70.3	0.78	0.08	10.75	0.539	19.70	2.6
S048310		22.4	161.5	0.004	5.60	1.88	21.8	1	2.9	66.7	0.81	0.07	11.20	0.544	22.9	2.8
S048311		26.4	173.5	0.005	5.12	11.25	22.1	2	2.9	79.6	0.84	0.07	11.75	0.551	19.85	3.0
S048312		12.9	106.5	<0.002	3.08	0.52	15.4	1	1.6	159.0	0.54	0.06	6.63	0.429	3.18	1.4
S048313		21.4	143.0	0.003	3.95	2.22	18.3	1	2.6	112.0	0.67	0.08	9.56	0.464	8.46	2.1
S048314		20.3	162.0	0.005	2.75	0.69	18.9	1	2.5	100.0	0.73	0.09	10.55	0.489	6.27	2.5
S048315		20.1	166.0	0.007	3.99	0.84	20.6	2	2.7	128.5	0.76	0.07	10.80	0.516	10.55	2.8
S048316		19.0	163.0	0.007	4.56	0.81	19.8	2	2.6	110.0	0.71	0.07	10.20	0.513	13.95	2.6
S048317		18.0	137.0	0.006	4.18	0.88	17.3	2	2.1	130.5	0.62	0.06	9.22	0.462	14.35	2.3
S048318		24.4	130.0	<0.002	3.51	0.63	16.6	1	1.9	164.0	0.65	<0.05	8.49	0.463	4.50	1.8
S048319		18.7	133.0	0.002	3.76	6.71	18.0	1	2.1	105.5	0.68	<0.05	9.04	0.490	6.73	2.0
S048320		18.4	134.0	0.003	3.20	23.9	18.4	1	2.5	125.5	0.65	0.08	9.22	0.421	14.80	2.1
S048321		17.5	126.0	0.002	3.00	22.2	18.6	1	2.2	138.5	0.65	0.07	8.82	0.418	14.60	2.0
S048322		19.4	121.0	0.005	2.89	10.70	16.6	2	2.1	158.5	0.59	0.08	8.53	0.392	12.75	2.3
S048323		6.9	39.0	<0.002	1.36	42.6	5.4	2	0.7	999	0.17	0.06	3.12	0.084	22.8	5.8
S048324		21.5	126.0	0.005	3.08	2.63	15.2	1	2.2	123.5	0.63	0.06	8.55	0.422	9.97	2.1
S048325		22.7	130.5	0.002	2.68	1.35	15.4	1	2.3	129.0	0.66	<0.05	8.52	0.425	5.02	1.8
S048326		14.0	136.5	<0.002	0.74	0.68	17.7	1	2.0	135.5	0.68	0.05	8.74	0.489	1.61	1.8
S048327		16.5	119.0	<0.002	2.03	1.35	16.2	1	1.9	202	0.61	<0.05	7.80	0.429	2.38	1.7
S048328		16.0	119.5	<0.002	0.95	0.61	16.8	<1	1.8	159.0	0.59	<0.05	7.26	0.489	2.01	1.4
S048329		14.6	108.5	<0.002	2.81	0.83	12.7	1	1.8	194.5	0.57	<0.05	7.23	0.421	2.06	1.5
S048330		14.3	138.5	<0.002	1.96	0.79	17.9	1	2.2	188.5	0.66	<0.05	8.13	0.496	2.76	1.6

***** See Appendix Page for comments regarding this certificate *****

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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 24-JUN-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18137009

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	As-OG62	Au-AA25
	Analyte	V	W	Y	Zn	Zr	As	Au
	Units	ppm	ppm	ppm	ppm	ppm	%	ppm
	LOD	1	0.1	0.1	2	0.5	0.001	0.01
S048291		102	7.8	18.4	106	96.3		2.09
S048292		67	5.5	13.9	92	76.3		2.89
S048293		172	5.7	26.9	105	118.5		0.15
S048294		153	5.9	25.1	107	103.5		0.01
S048295		151	9.6	21.0	381	119.5		3.96
S048296		154	9.4	20.8	386	117.0		4.07
S048297		131	6.9	17.2	551	97.0		3.57
S048298		127	5.4	18.9	107	96.8		0.19
S048299		153	4.2	21.1	189	120.0		0.04
S048300		139	7.7	19.5	116	105.0		0.59
S048301		141	11.5	24.8	99	103.0		3.29
S048302		121	10.7	20.9	73	81.4	1.155	3.82
S048303		2	0.1	0.7	15	0.5		<0.01
S048304		116	12.2	18.5	78	81.8	2.42	4.71
S048305		147	13.5	21.2	84	110.0		1.16
S048306		162	11.3	21.6	100	117.0		0.17
S048307		152	10.4	20.8	86	105.5		0.17
S048308		85	7.5	18.7	49	71.1		2.40
S048309		157	6.3	21.1	84	120.0		0.13
S048310		161	5.1	22.4	97	130.5		0.09
S048311		163	7.6	23.2	99	135.5		0.02
S048312		120	2.3	16.5	73	82.3		<0.01
S048313		133	3.0	20.0	118	107.5		<0.01
S048314		144	1.3	20.5	137	113.5		<0.01
S048315		162	1.4	21.8	109	118.5		<0.01
S048316		155	1.9	21.9	121	115.5		<0.01
S048317		137	4.0	20.6	181	102.0		0.01
S048318		126	1.3	20.3	134	105.0		<0.01
S048319		137	4.8	20.7	70	104.5		0.19
S048320		118	7.4	18.5	92	101.5		2.45
S048321		115	7.7	17.9	86	95.8		2.48
S048322		116	4.0	22.3	74	93.9		0.79
S048323		32	16.4	14.7	24	31.0	1.375	2.61
S048324		121	3.8	19.8	199	97.6		0.24
S048325		117	3.9	18.5	67	97.9		0.09
S048326		131	3.8	19.6	54	97.1		<0.01
S048327		118	2.6	19.3	93	90.2		0.02
S048328		138	1.5	17.3	83	89.9		0.01
S048329		120	2.3	16.4	89	85.2		0.02
S048330		135	2.9	20.2	85	96.0		0.01

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Project: Nadaleen

Finalized Date: 24-JUN-2018
Account: RCM

CERTIFICATE OF ANALYSIS WH18137009

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Applies to Method: REE's may not be totally soluble in this method.
ME-MS61

LABORATORY ADDRESSES

Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.

Applies to Method:				
	BAG-06	CRU-31	CRU-QC	LOG-21
	LOG-21d	LOG-23	PUL-31	PUL-31d
	PUL-QC	SPL-21	SPL-21d	WEI-21

Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Applies to Method:				
	As-OG62	Au-AA25	Hg-MS42	ME-MS61
	ME-OG62			

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VANCOUVER BC V6B 1L8

Finalized Date: 29-JUN-2018
Account: RCM

CERTIFICATE WH18141294

Project: Nadaleen

P.O. No.: N18-005

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 15-JUN-2018.

The following have access to data associated with this certificate:

ANDREW CARNE	JULIA LANE	

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
BAG-06	Double Bagging Coarse Rejects
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
LOG-23	Pulp Login - Rcvd with Barcode
LOG-21d	Sample logging - ClientBarCode Dup
SPL-21d	Split sample - duplicate
PUL-31d	Pulverize Split - duplicate

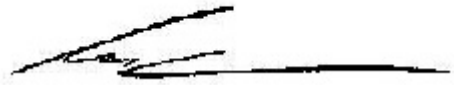
ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid ICP-MS	
Hg-MS42	Trace Hg by ICPMS	ICP-MS

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:



Colin Ramshaw, Vancouver Laboratory Manager

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Finalized Date: 29-JUN-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18141294

Sample Description	Method	WEI-21	Au-AA25	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Recvd Wt.	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu
	Units	kg	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.02	0.01	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2
S048331		10.64	<0.01	0.06	4.17	159.5	170	0.99	0.14	2.75	0.08	42.5	16.0	61	16.50	50.2
S048332		10.46	0.01	0.06	2.89	158.0	140	0.58	0.08	2.48	0.09	31.1	12.2	55	8.33	37.5
S048333		12.62	0.21	0.06	4.63	1045	220	0.94	0.16	3.67	0.18	46.3	16.3	54	12.55	50.7
S048334		11.27	0.22	0.07	6.53	687	220	1.75	0.23	2.07	0.22	65.5	20.6	72	23.0	68.3
S048335		10.12	0.01	0.05	6.78	107.5	230	1.91	0.26	1.58	0.11	67.8	20.2	70	36.2	63.2
S048336		10.36	<0.01	0.07	3.55	178.5	170	0.78	0.12	1.77	0.04	34.6	12.9	52	11.60	39.0
S048337		9.65	0.01	0.04	1.75	30.4	170	0.26	0.08	1.93	0.02	19.60	4.7	35	4.86	15.5
S048338		11.13	<0.01	0.09	4.00	62.3	540	0.98	0.15	1.77	0.04	40.2	11.8	54	15.65	40.9
S048339		10.98	0.01	0.08	7.04	384	290	1.93	0.26	1.73	0.11	67.7	18.4	73	25.4	59.2
S048340		11.27	0.01	0.06	7.25	1115	440	2.03	0.27	2.44	0.20	70.6	16.9	67	26.4	56.3
S048341		11.90	0.02	0.05	6.41	256	310	1.54	0.24	3.83	0.02	63.2	18.0	63	18.90	58.2
S048342		11.37	0.78	0.08	5.40	1775	450	1.13	0.19	4.30	0.10	55.5	16.3	55	13.55	50.3
S048343		11.20	3.00	0.12	2.89	1835	290	0.52	0.11	4.45	0.31	29.8	9.4	41	6.50	29.0
S048344		10.98	0.12	0.07	6.52	487	390	1.64	0.24	1.98	0.18	65.7	19.1	74	22.0	71.5
S048345		0.28	1.15	1.37	1.58	893	200	0.39	0.11	28.5	0.66	20.3	5.7	30	3.41	49.0
S048346		11.59	0.01	0.05	6.69	78.1	300	1.62	0.21	2.23	0.18	61.2	21.8	84	27.7	70.7
S048347		11.11	0.01	0.07	6.60	69.7	510	1.58	0.23	2.35	0.16	66.7	22.7	75	23.5	66.6
S048348		10.82	0.40	0.06	6.51	755	280	1.58	0.25	2.77	0.05	66.0	20.4	67	22.2	63.5
S048349		10.90	0.01	0.04	6.35	64.9	410	1.46	0.22	2.28	0.07	61.4	20.2	74	21.4	63.8
S048350		<0.02	0.01	0.05	6.36	66.2	410	1.68	0.22	2.28	0.08	62.2	21.4	74	22.0	65.3
S048351		11.00	0.01	0.07	6.70	64.5	380	1.76	0.27	2.38	0.06	67.8	21.0	73	24.9	60.7
S048352		11.17	0.14	0.07	7.43	367	310	1.86	0.31	2.15	0.16	77.0	20.0	69	22.0	63.6
S048353		11.62	3.94	0.13	5.19	1130	210	1.14	0.22	3.30	0.06	52.8	17.2	57	11.95	51.6
S048354		10.36	0.01	0.08	5.74	201	210	1.41	0.23	2.05	<0.02	58.5	19.0	63	14.90	55.0
S048355		11.45	0.05	0.06	6.80	286	240	1.77	0.27	2.71	<0.02	69.0	21.5	66	20.5	60.8
S048356		10.58	0.14	0.08	6.93	250	370	1.87	0.27	2.81	0.10	69.9	22.3	72	25.6	67.6
S048357		10.94	0.04	0.05	5.89	223	260	1.34	0.22	2.75	0.10	59.0	16.7	67	21.7	56.7
S048358		10.78	0.01	0.05	6.12	110.5	310	1.32	0.21	2.75	0.20	60.3	17.1	72	22.6	54.2
S048359		10.88	0.01	0.05	5.71	351	280	1.35	0.21	3.34	0.09	61.8	18.2	66	24.4	55.1
S048360		11.34	0.28	0.07	6.16	1085	280	1.44	0.23	3.63	0.21	64.9	18.8	65	26.1	51.8
S048361		7.01	0.01	<0.01	0.18	1.6	20	0.09	0.04	30.9	0.02	1.25	0.7	1	0.11	3.7
S048362		11.33	<0.01	0.06	5.34	29.8	240	1.29	0.21	2.56	0.03	55.8	15.1	64	27.4	47.9
S048363		11.40	<0.01	0.04	6.93	38.7	310	1.79	0.27	2.12	0.03	71.2	19.4	74	35.6	58.5
S048364		10.64	<0.01	0.04	7.37	68.7	280	1.97	0.26	1.54	0.07	75.3	19.2	79	34.1	66.2
S048365		11.66	<0.01	0.05	5.79	52.3	230	1.52	0.22	1.92	0.03	59.3	15.9	67	30.3	53.1
S048366		0.26	0.55	0.65	6.59	463	230	2.08	0.24	2.19	0.35	58.9	20.8	101	37.7	64.1
S048367		11.93	<0.01	0.05	5.26	43.0	290	1.35	0.20	2.42	0.11	56.1	16.3	69	24.3	50.2
S048368		11.51	<0.01	0.05	5.84	63.5	240	1.41	0.21	2.47	0.17	56.3	18.1	74	28.1	56.0
S048369		5.34	<0.01	0.06	6.19	67.6	390	1.47	0.23	2.40	0.11	61.9	21.0	78	22.3	62.1
S048370		6.00	<0.01	0.07	6.46	148.0	380	1.56	0.23	2.61	0.10	61.9	24.1	80	23.1	61.7

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
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Finalized Date: 29-JUN-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18141294

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Hg-MS42	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni
	Units	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2
S048331		4.18	11.25	0.12	2.0	0.301	0.044	1.81	20.4	39.1	1.61	522	0.39	0.02	7.0	30.7
S048332		2.98	7.60	0.09	1.6	0.280	0.030	1.26	14.7	22.3	1.11	505	0.43	0.01	4.8	20.8
S048333		4.65	12.25	0.12	2.2	2.39	0.040	1.95	21.9	15.7	1.66	1100	0.50	0.02	7.8	30.6
S048334		5.31	17.80	0.16	3.1	1.375	0.064	3.14	30.7	13.9	1.22	682	0.55	0.02	11.0	38.4
S048335		5.18	18.20	0.18	3.2	0.293	0.065	3.21	32.9	48.9	1.61	449	0.31	0.03	11.5	36.9
S048336		3.43	9.35	0.10	1.9	0.076	0.035	1.58	17.1	62.1	1.26	373	0.36	0.02	5.6	24.9
S048337		1.78	3.94	0.07	1.0	0.030	0.013	0.91	9.5	20.2	0.83	422	0.29	0.12	2.4	8.6
S048338		3.07	10.25	0.10	1.9	0.106	0.037	1.88	19.6	53.8	1.21	409	0.39	0.04	6.0	21.9
S048339		4.80	18.70	0.17	3.0	0.402	0.070	3.43	32.9	40.7	1.80	338	0.57	0.03	10.5	34.5
S048340		5.09	19.45	0.17	3.0	1.085	0.074	3.57	34.6	25.3	1.92	413	0.74	0.03	10.9	34.8
S048341		4.72	17.00	0.17	3.1	0.590	0.058	3.04	30.3	29.8	2.08	889	0.24	0.02	10.5	33.9
S048342		4.18	14.40	0.14	2.6	2.000	0.056	2.56	26.5	18.1	2.39	1450	0.43	0.02	9.1	30.1
S048343		3.20	7.55	0.10	1.5	1.895	0.028	1.32	13.9	12.8	1.93	1540	0.36	0.01	4.6	17.8
S048344		4.40	17.70	0.16	3.0	0.762	0.066	3.00	32.2	28.3	1.17	615	0.54	0.02	11.3	36.7
S048345		1.20	4.17	0.07	0.7	2.17	0.020	0.68	9.8	6.4	1.29	4890	1.31	0.10	2.1	13.3
S048346		5.33	17.60	0.14	2.9	0.168	0.068	3.06	29.7	79.3	2.14	603	0.50	0.03	10.9	40.7
S048347		5.24	17.65	0.15	2.9	0.403	0.061	2.95	30.7	78.0	1.74	657	0.49	0.03	10.9	40.1
S048348		5.30	17.95	0.16	2.9	0.591	0.062	3.07	31.8	33.7	1.53	1100	0.33	0.02	11.4	37.3
S048349		5.19	16.80	0.16	2.8	0.334	0.061	2.85	29.7	69.4	1.86	668	0.38	0.03	10.5	37.4
S048350		5.21	17.25	0.15	2.9	0.328	0.064	2.87	30.2	69.8	1.87	664	0.37	0.03	10.6	38.4
S048351		5.08	18.10	0.19	3.2	0.328	0.071	3.14	32.1	50.8	1.83	749	0.60	0.03	11.5	39.5
S048352		5.34	21.0	0.17	3.4	0.799	0.075	3.61	36.9	18.6	1.36	680	0.59	0.03	12.6	38.1
S048353		4.80	14.25	0.14	2.3	2.67	0.053	2.52	25.8	12.2	1.67	1040	0.23	0.02	8.8	32.9
S048354		5.01	15.90	0.16	2.6	0.677	0.060	2.74	28.2	17.9	1.16	702	0.23	0.02	10.0	36.8
S048355		5.66	18.60	0.18	3.0	0.502	0.071	3.26	33.9	20.1	1.48	1020	0.27	0.03	11.8	39.3
S048356		5.46	18.90	0.18	3.2	0.372	0.072	3.26	33.6	47.9	1.84	869	0.49	0.03	12.0	39.6
S048357		4.96	14.15	0.08	2.7	0.306	0.062	2.71	28.6	50.6	1.55	868	0.66	0.03	9.8	33.5
S048358		5.20	13.80	0.09	2.9	0.321	0.063	2.77	28.5	59.4	1.43	783	0.48	0.03	10.1	33.8
S048359		4.85	13.95	0.09	2.8	0.289	0.065	2.64	29.2	47.0	1.58	1100	0.43	0.03	10.1	34.1
S048360		5.35	15.05	0.11	2.9	0.388	0.071	2.86	31.8	26.5	1.78	1360	0.66	0.03	10.2	34.5
S048361		0.18	0.52	0.06	0.1	<0.005	0.006	0.07	1.2	1.0	2.41	139	0.11	0.08	0.2	0.9
S048362		4.87	12.60	0.09	2.5	0.138	0.055	2.44	26.7	74.6	1.86	681	0.30	0.03	8.7	28.4
S048363		5.38	16.95	0.12	3.3	0.071	0.073	3.22	34.9	59.8	2.13	600	0.37	0.04	11.9	37.0
S048364		5.28	18.10	0.11	3.3	0.078	0.076	3.48	37.5	48.7	2.03	442	0.35	0.04	12.5	36.7
S048365		4.82	14.25	0.09	2.8	0.059	0.065	2.62	29.2	75.3	1.90	553	0.48	0.06	9.9	31.4
S048366		6.19	16.85	0.10	2.5	3.49	0.070	3.26	28.3	16.0	0.77	641	4.93	0.03	8.7	45.7
S048367		4.67	12.80	0.09	2.6	0.092	0.059	2.35	26.7	84.8	1.94	668	0.33	0.05	9.1	31.7
S048368		4.94	14.00	0.10	2.8	0.147	0.066	2.62	27.8	106.5	2.04	673	0.43	0.03	9.9	33.9
S048369		4.88	15.30	0.09	3.1	0.161	0.067	2.90	29.8	68.9	2.03	635	0.47	0.04	10.6	37.3
S048370		5.20	15.50	0.09	3.1	0.206	0.067	3.02	30.1	64.2	2.16	653	0.53	0.04	10.9	38.3

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Finalized Date: 29-JUN-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18141294

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl
	Units	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
	LOD	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.01	0.005	0.02
S048331		380	13.4	92.2	<0.002	1.65	0.66	12.7	<1	2.5	168.5	0.46	<0.05	5.84	0.412	2.16
S048332		270	10.4	60.4	<0.002	1.49	0.70	8.9	<1	2.0	124.0	0.33	<0.05	4.08	0.332	1.33
S048333		400	15.0	93.7	<0.002	3.75	5.35	16.3	<1	2.4	186.0	0.51	<0.05	6.65	0.424	8.26
S048334		500	20.6	155.0	0.002	5.24	3.58	19.7	<1	2.6	107.5	0.76	<0.05	9.65	0.567	6.44
S048335		550	15.8	170.0	<0.002	2.59	0.51	18.9	1	2.6	105.0	0.79	0.06	10.40	0.545	3.07
S048336		320	14.6	78.0	<0.002	0.85	0.43	9.3	<1	1.8	121.5	0.39	<0.05	5.51	0.340	0.75
S048337		160	7.4	49.4	<0.002	0.08	0.22	3.4	<1	1.0	96.9	0.20	<0.05	3.57	0.136	0.72
S048338		350	12.2	83.3	<0.002	0.50	0.34	9.6	1	2.5	122.5	0.42	<0.05	6.70	0.314	0.79
S048339		530	12.6	152.0	<0.002	1.75	0.67	19.0	<1	2.8	156.0	0.71	<0.05	10.25	0.500	1.82
S048340		590	14.6	156.0	0.002	2.98	4.12	19.3	1	2.7	143.5	0.73	<0.05	10.65	0.473	2.74
S048341		530	10.2	130.5	0.002	4.05	1.29	17.3	1	2.3	179.0	0.74	0.05	9.87	0.527	3.64
S048342		430	16.7	114.5	<0.002	3.53	9.80	15.8	<1	2.1	203	0.62	<0.05	8.57	0.457	9.10
S048343		270	7.9	57.3	0.002	1.71	8.85	9.6	1	1.4	193.0	0.33	<0.05	4.45	0.274	9.14
S048344		590	12.4	145.5	0.002	3.92	2.04	19.3	1	3.4	164.0	0.76	<0.05	9.97	0.573	4.61
S048345		410	55.8	28.0	<0.002	0.73	7.93	5.9	1	0.7	1185	0.15	0.05	2.43	0.083	5.91
S048346		560	12.9	157.5	<0.002	0.73	0.45	19.8	<1	2.6	113.5	0.74	0.06	9.19	0.611	1.58
S048347		530	16.1	151.5	<0.002	2.97	0.70	19.8	1	2.2	189.0	0.74	<0.05	9.31	0.598	3.97
S048348		530	14.7	156.0	<0.002	4.91	1.87	20.1	1	2.6	199.0	0.77	<0.05	9.47	0.552	5.05
S048349		520	14.8	137.5	0.002	2.19	0.68	18.8	<1	2.5	227	0.71	<0.05	8.94	0.560	2.75
S048350		510	12.9	138.5	<0.002	2.22	0.75	18.5	1	2.5	231	0.75	0.06	8.98	0.557	2.91
S048351		550	19.7	147.0	0.002	2.54	0.61	20.1	1	2.2	184.5	0.79	<0.05	10.10	0.570	2.94
S048352		580	18.0	163.5	<0.002	5.22	2.79	21.9	<1	2.7	134.0	0.88	0.05	11.35	0.556	3.97
S048353		440	17.1	110.0	<0.002	4.16	15.85	15.9	<1	2.1	131.0	0.59	<0.05	7.85	0.441	15.90
S048354		440	14.3	126.5	<0.002	4.90	1.01	17.0	<1	2.2	111.0	0.66	<0.05	8.87	0.493	2.91
S048355		630	16.1	153.0	<0.002	5.34	1.69	19.6	<1	2.4	124.5	0.79	<0.05	10.25	0.544	2.46
S048356		560	17.8	155.5	<0.002	3.18	1.36	20.9	1	2.6	133.0	0.79	0.06	10.50	0.586	2.64
S048357		470	15.2	117.5	<0.002	3.54	1.40	15.5	<1	2.5	174.5	0.66	<0.05	8.90	0.521	3.60
S048358		490	14.6	121.0	<0.002	4.61	0.89	15.6	<1	2.1	243	0.71	<0.05	9.02	0.556	4.23
S048359		540	16.2	124.5	<0.002	3.92	2.20	15.8	<1	2.3	202	0.66	<0.05	8.66	0.523	3.64
S048360		470	22.0	135.5	0.002	4.40	4.62	16.2	<1	2.5	165.0	0.69	0.05	9.79	0.495	3.95
S048361		80	0.6	1.7	<0.002	0.06	0.13	0.2	1	0.3	70.9	<0.05	<0.05	0.12	0.005	0.03
S048362		550	13.2	113.5	<0.002	1.14	0.51	13.3	<1	2.1	131.0	0.59	<0.05	8.18	0.447	1.59
S048363		550	15.5	157.5	<0.002	0.34	0.51	18.7	<1	2.5	132.0	0.83	0.05	10.90	0.535	1.06
S048364		550	17.2	163.5	<0.002	0.31	0.45	19.7	<1	2.8	107.5	0.85	<0.05	11.05	0.573	1.02
S048365		440	12.3	127.5	<0.002	0.26	0.45	15.3	<1	2.1	105.5	0.65	<0.05	9.12	0.477	0.87
S048366		230	49.2	151.0	0.003	4.38	5.53	19.2	<1	3.0	84.8	0.60	<0.05	8.76	0.388	13.10
S048367		420	13.3	110.0	<0.002	0.11	0.49	14.7	<1	2.1	147.0	0.62	<0.05	8.13	0.479	0.79
S048368		470	14.9	120.0	<0.002	0.12	0.51	16.5	<1	2.0	111.5	0.68	<0.05	8.36	0.533	0.89
S048369		460	16.9	123.5	<0.002	0.15	0.87	17.4	<1	2.6	138.0	0.72	<0.05	9.18	0.555	0.86
S048370		490	19.3	125.5	<0.002	0.21	1.12	17.5	<1	2.3	139.5	0.73	0.05	9.30	0.587	0.95

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Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18141294

Sample Description	Method Analyte Units LOD	ME-MS61 U ppm 0.1	ME-MS61 V ppm 1	ME-MS61 W ppm 0.1	ME-MS61 Y ppm 0.1	ME-MS61 Zn ppm 2	ME-MS61 Zr ppm 0.5
S048331		1.1	119	1.7	14.0	62	71.2
S048332		0.8	95	1.9	9.0	62	53.9
S048333		1.3	115	10.6	16.3	112	81.4
S048334		1.9	155	9.5	21.2	133	105.0
S048335		2.0	145	1.5	24.2	83	113.0
S048336		1.0	93	1.2	10.8	48	64.4
S048337		0.8	37	0.5	6.0	16	34.2
S048338		1.3	83	1.2	12.4	47	66.3
S048339		1.9	140	3.2	21.5	90	106.0
S048340		2.0	135	6.7	21.4	105	109.0
S048341		1.9	132	3.5	19.9	64	105.5
S048342		1.7	113	4.6	17.9	71	92.0
S048343		0.9	73	3.0	10.1	124	51.8
S048344		1.9	157	3.7	20.8	218	108.0
S048345		3.6	27	11.6	14.5	129	26.3
S048346		1.8	168	2.3	20.1	136	107.0
S048347		1.8	165	2.4	20.0	104	106.0
S048348		1.9	146	3.6	21.2	78	105.0
S048349		1.7	152	2.2	19.2	84	113.5
S048350		1.7	151	2.2	19.7	92	103.5
S048351		1.9	151	1.2	22.3	75	110.0
S048352		2.2	152	5.6	23.8	108	118.0
S048353		1.5	119	8.5	17.6	53	86.8
S048354		1.8	134	4.8	18.4	59	95.7
S048355		2.0	143	3.7	24.0	66	110.0
S048356		2.0	157	2.7	23.1	84	113.5
S048357		1.8	148	2.1	18.9	81	94.8
S048358		1.9	159	2.1	19.3	98	104.0
S048359		1.8	149	3.9	20.5	76	97.4
S048360		2.1	140	5.3	21.0	99	99.3
S048361		0.2	1	0.1	2.5	4	1.6
S048362		1.7	123	1.1	18.4	55	86.1
S048363		2.3	143	1.4	23.7	73	111.5
S048364		2.3	155	1.4	23.6	89	117.0
S048365		1.9	131	1.1	19.7	63	98.3
S048366		1.8	140	12.6	17.6	102	84.4
S048367		1.7	136	1.2	18.1	71	95.9
S048368		1.8	149	1.2	19.3	97	94.5
S048369		1.9	155	1.9	19.7	89	105.5
S048370		1.9	162	1.7	19.9	89	104.5

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Phone: +1 (604) 984 0221 Fax: +1 (604) 984 0218
www.alsglobal.com/geochemistry

To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Project: Nadaleen

Finalized Date: 29-JUN-2018
Account: RCM

CERTIFICATE OF ANALYSIS WH18141294

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Applies to Method: REE's may not be totally soluble in this method.
ME-MS61

LABORATORY ADDRESSES

Applies to Method: Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.

BAG-06	CRU-31	CRU-QC	LOG-21
LOG-21d	LOG-23	PUL-31	PUL-31d
PUL-QC	SPL-21	SPL-21d	WEI-21

Applies to Method: Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Au-AA25	Hg-MS42	ME-MS61

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Finalized Date: 27-JUN-2018
Account: RCM

CERTIFICATE WH18139290

Project: Nadaleen

P.O. No.: N18-006

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 13-JUN-2018.

The following have access to data associated with this certificate:

ANDREW CARNE	JULIA LANE	

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
BAG-06	Double Bagging Coarse Rejects
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
LOG-23	Pulp Login - Rcvd with Barcode
LOG-21d	Sample logging - ClientBarCode Dup
SPL-21d	Split sample - duplicate
PUL-31d	Pulverize Split - duplicate

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid ICP-MS	
Hg-MS42	Trace Hg by ICPMS	ICP-MS
ME-OG62	Ore Grade Elements - Four Acid	ICP-AES
As-OG62	Ore Grade As - Four Acid	ICP-AES

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:

Colin Ramshaw, Vancouver Laboratory Manager

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CERTIFICATE OF ANALYSIS WH18139290

Sample Description	Method	WEI-21	Au-AA25	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Recvd Wt.	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu
	Units	kg	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.02	0.01	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2
S049581		9.75	0.01	0.04	4.11	75.9	170	1.38	0.14	16.10	<0.02	38.5	11.7	41	13.95	33.2
S049582		10.32	0.03	0.07	2.59	196.0	280	0.90	0.11	25.2	0.07	27.7	10.9	24	8.90	19.2
S049583		2.62	5.73	0.86	5.01	>10000	180	1.14	0.22	11.20	0.31	55.3	21.8	44	11.35	97.7
S049584		2.93	5.06	0.66	4.55	>10000	200	1.04	0.18	10.60	0.28	49.6	18.1	41	10.25	48.4
S049585		7.64	0.04	<0.01	2.63	466	150	0.88	0.10	26.7	0.05	32.5	11.2	22	9.45	24.9
S049586		5.47	<0.01	0.01	3.77	180.5	150	1.08	0.14	17.50	0.06	48.2	13.8	33	14.80	27.1
S049587		10.11	<0.01	<0.01	2.01	71.8	130	0.56	0.07	29.2	0.03	26.7	7.7	17	6.34	18.3
S049588		6.65	0.03	0.01	1.60	49.2	150	0.47	0.05	29.8	0.02	20.6	5.7	14	4.64	13.8
S049589		6.88	<0.01	<0.01	1.20	22.1	190	0.40	0.03	32.7	<0.02	15.60	4.6	11	3.95	11.4
S049590		7.29	<0.01	<0.01	0.91	20.6	130	0.33	0.02	34.0	<0.02	13.65	3.7	9	2.94	13.7
S049591		6.74	<0.01	<0.01	1.71	19.4	170	0.51	0.06	32.2	0.04	21.6	6.1	16	5.45	16.7
S049592		0.26	0.58	0.59	6.97	481	230	2.43	0.23	2.24	0.31	65.8	23.3	97	39.8	69.7
S049593		6.83	<0.01	<0.01	0.86	20.9	140	0.35	0.01	37.3	<0.02	11.65	3.5	8	2.45	8.5
S049594		6.74	<0.01	<0.01	0.47	17.9	110	0.19	<0.01	36.0	<0.02	7.55	2.4	5	1.42	5.8
S049595		6.91	0.02	<0.01	0.46	17.3	100	0.18	<0.01	36.7	<0.02	7.89	2.3	5	1.25	5.3
S049596		6.92	<0.01	<0.01	0.85	27.5	150	0.30	0.02	36.0	0.11	12.30	3.5	8	2.53	8.6
S049597		6.74	0.01	<0.01	0.56	18.2	130	0.23	<0.01	37.1	0.02	9.65	2.6	6	1.61	6.2
S049598		6.76	0.02	<0.01	0.62	27.7	120	0.19	<0.01	36.0	0.03	10.70	2.6	7	1.52	8.8
S049599		6.39	<0.01	<0.01	0.21	16.5	90	0.15	<0.01	36.8	<0.02	4.54	1.3	3	0.48	2.8
S049600		6.95	<0.01	<0.01	1.31	60.7	110	0.38	0.03	34.4	0.09	20.6	4.7	13	3.63	12.5
S049601		6.88	0.03	<0.01	0.79	56.5	100	0.23	0.02	35.0	<0.02	13.25	3.1	8	1.90	8.5
S049602		6.79	<0.01	<0.01	0.74	59.5	120	0.25	0.01	35.6	0.04	13.05	2.9	8	2.37	8.5
S049603		6.91	0.05	<0.01	1.35	127.0	110	0.38	0.04	33.2	0.09	20.5	5.2	14	3.40	14.5
S049604		<0.02	0.05	0.02	1.31	125.0	110	0.37	0.04	33.5	0.05	20.1	5.1	14	3.37	14.4
S049605		7.16	0.01	<0.01	0.50	52.5	90	0.21	<0.01	36.4	0.03	9.59	2.4	6	1.09	5.6
S049606		6.79	<0.01	<0.01	0.35	31.4	90	0.20	<0.01	37.5	<0.02	6.81	1.8	4	0.84	4.1
S049607		6.80	<0.01	<0.01	1.19	51.6	120	0.35	0.03	34.3	0.04	20.6	4.4	12	3.97	11.9
S049608		6.95	<0.01	<0.01	0.38	28.6	90	0.19	<0.01	38.6	0.04	7.89	1.9	5	0.88	4.9
S049609		6.65	<0.01	<0.01	0.52	18.4	100	0.18	<0.01	36.6	<0.02	9.51	2.4	6	1.58	6.0
S049610		7.19	<0.01	<0.01	0.49	19.0	70	0.16	<0.01	34.7	<0.02	9.25	2.3	5	1.36	5.5
S049611		6.92	0.01	<0.01	0.69	26.8	140	0.26	<0.01	36.7	0.11	12.30	2.8	7	2.19	7.3
S049612		7.06	<0.01	<0.01	1.05	62.5	340	0.32	0.02	33.8	0.09	16.20	4.7	12	3.44	10.9
S049613		7.95	0.02	<0.01	2.72	72.9	650	0.65	0.10	26.4	0.22	34.6	9.0	25	9.02	25.5
S049614		8.70	<0.01	0.01	4.63	105.5	250	1.14	0.19	17.25	0.13	57.2	14.5	41	17.00	40.6
S049615		7.34	<0.01	<0.01	1.16	32.2	630	0.27	0.03	33.9	0.08	15.25	4.6	12	4.58	12.1
S049616		7.02	0.43	0.03	0.97	860	290	0.28	0.02	35.0	0.03	14.45	3.9	10	2.14	11.4
S049617		7.47	0.15	0.05	2.20	1175	200	0.42	0.09	29.1	0.07	29.9	7.4	23	4.84	23.1
S049618		4.80	<0.01	<0.01	0.05	2.8	30	0.05	<0.01	22.1	0.04	1.20	0.9	1	0.34	2.7
S049619		6.51	0.01	<0.01	0.75	81.8	120	0.28	0.01	35.3	<0.02	12.50	3.1	9	2.01	8.1
S049620		0.26	1.10	1.38	1.51	833	190	0.48	0.10	28.5	0.64	18.75	4.5	35	3.40	45.1

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Finalized Date: 27-JUN-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18139290

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Hg-MS42	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni
	Units	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2
S049581		3.11	10.45	0.10	1.9	0.228	0.037	2.05	21.0	8.9	1.85	1040	0.17	0.03	5.2	20.1
S049582		2.33	6.58	0.05	1.0	0.902	0.027	1.27	16.0	5.7	1.58	802	1.04	0.02	3.4	17.5
S049583		3.41	13.85	0.42	2.4	7.73	0.076	2.42	29.9	12.8	1.45	1780	1.54	0.02	7.3	32.3
S049584		3.01	12.65	0.42	2.2	7.10	0.077	2.16	26.3	12.5	1.30	1280	1.50	0.02	6.6	27.5
S049585		1.90	7.17	0.11	1.3	0.803	0.024	1.29	17.0	9.1	0.80	770	0.64	0.02	3.7	16.0
S049586		2.24	10.20	0.15	2.3	0.592	0.038	1.88	23.7	12.9	0.87	531	0.88	0.03	6.4	18.1
S049587		1.49	5.44	0.12	1.0	0.337	0.021	1.01	14.0	6.9	0.90	308	1.21	0.02	2.8	11.1
S049588		1.19	4.29	0.13	0.9	0.226	0.019	0.80	10.3	6.3	0.94	318	0.48	0.02	2.2	8.7
S049589		0.87	3.37	0.10	0.6	0.149	0.015	0.62	7.8	4.9	0.64	149	0.31	0.01	1.8	6.7
S049590		0.72	2.55	0.08	0.5	0.109	0.012	0.46	7.0	4.0	0.62	198	0.22	0.01	1.3	4.9
S049591		1.11	4.66	0.09	0.9	0.219	0.017	0.87	10.6	6.9	0.58	227	0.21	0.02	2.4	9.2
S049592		6.61	20.1	0.18	2.6	3.03	0.068	3.41	30.4	22.8	0.82	655	5.22	0.04	9.0	53.2
S049593		0.73	2.43	0.07	0.4	0.141	0.007	0.43	5.8	4.3	0.42	288	0.13	0.01	1.2	4.5
S049594		0.37	1.36	0.08	0.3	0.088	0.005	0.23	3.7	2.6	0.35	121	0.10	0.01	0.7	2.5
S049595		0.38	1.30	0.07	0.3	0.125	<0.005	0.22	3.9	2.1	0.42	141	0.12	0.01	0.7	2.5
S049596		0.57	2.31	0.08	0.5	0.141	0.010	0.42	6.1	3.7	0.39	120	0.56	0.01	1.2	4.8
S049597		0.43	1.61	0.08	0.3	0.094	0.007	0.28	4.6	2.7	0.38	137	0.35	0.01	0.8	3.2
S049598		0.47	1.64	0.08	0.3	0.209	0.008	0.31	5.1	2.8	0.50	170	0.35	0.01	0.9	3.4
S049599		0.21	0.64	0.05	0.1	0.032	<0.005	0.10	1.9	1.4	0.87	138	0.11	0.01	0.3	1.1
S049600		0.89	3.48	0.09	0.6	0.254	0.009	0.66	10.1	5.4	0.86	200	0.56	0.02	1.8	7.3
S049601		0.56	2.16	0.08	0.4	0.511	0.009	0.40	6.5	3.5	0.50	123	0.38	0.01	1.1	4.4
S049602		0.61	2.08	0.09	0.4	0.216	0.006	0.37	6.4	3.4	0.59	137	0.43	0.01	1.1	4.3
S049603		1.03	3.67	0.08	0.7	0.984	0.014	0.69	10.1	4.3	1.18	236	1.10	0.01	2.0	8.3
S049604		1.00	3.64	0.10	0.7	0.957	0.013	0.66	10.0	4.1	1.14	235	1.03	0.01	2.0	8.3
S049605		0.44	1.39	0.08	0.3	0.227	<0.005	0.25	4.6	2.0	0.88	228	0.23	0.01	0.7	2.8
S049606		0.33	1.00	0.06	0.2	0.091	<0.005	0.17	3.2	1.8	0.83	219	0.13	0.01	0.5	1.9
S049607		0.84	3.14	0.10	0.6	0.170	0.011	0.60	10.0	5.0	0.92	159	0.63	0.01	1.8	6.9
S049608		0.40	1.05	0.08	0.2	0.125	<0.005	0.19	3.5	1.6	1.02	193	0.20	0.01	0.5	2.1
S049609		0.41	1.47	0.08	0.3	0.168	0.005	0.26	4.6	2.4	0.54	192	0.29	0.01	0.8	3.0
S049610		0.66	1.33	0.09	0.3	0.131	0.008	0.24	4.4	2.0	2.29	259	0.23	0.01	0.7	2.8
S049611		0.54	1.84	0.08	0.4	0.283	0.007	0.34	6.1	2.9	0.67	193	0.41	0.01	0.9	3.6
S049612		0.92	2.77	0.10	0.5	0.366	0.013	0.52	7.9	3.7	0.86	247	0.60	0.01	1.5	7.1
S049613		1.95	7.22	0.14	1.3	0.883	0.027	1.36	18.8	7.7	1.03	379	1.09	0.02	3.7	15.4
S049614		3.26	12.25	0.18	2.3	0.887	0.049	2.32	29.9	15.4	1.44	463	2.62	0.03	6.5	26.1
S049615		1.62	3.11	0.07	0.6	0.334	0.009	0.57	7.8	4.1	0.66	250	1.11	0.01	1.6	7.3
S049616		1.14	2.62	0.09	0.5	2.45	0.011	0.48	7.3	2.7	0.67	284	0.42	0.01	1.4	5.5
S049617		1.91	5.89	0.09	1.0	3.89	0.023	1.08	14.3	4.8	0.93	376	1.21	0.02	3.2	12.1
S049618		0.49	0.21	0.05	<0.1	0.006	<0.005	0.02	0.5	0.9	13.80	207	0.15	0.01	0.2	1.9
S049619		0.66	2.10	0.07	0.4	1.200	0.010	0.37	5.9	2.0	0.65	257	0.43	0.01	1.1	4.2
S049620		1.19	4.09	0.08	0.7	2.22	0.023	0.67	8.6	5.8	1.27	4680	1.30	0.10	2.1	12.9

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Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl
	Units	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
	LOD	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.01	0.005	0.02
S049581		470	5.9	91.1	<0.002	0.83	0.63	10.6	1	1.7	343	0.38	<0.05	5.57	0.229	1.08
S049582		220	11.2	53.9	0.004	1.18	1.53	6.9	1	0.9	964	0.24	0.05	3.63	0.137	2.73
S049583		420	17.6	107.0	0.006	6.42	161.5	11.5	4	7.2	399	0.51	0.13	7.69	0.295	44.6
S049584		340	16.2	97.8	0.006	6.27	165.5	9.9	5	2.2	402	0.45	0.10	7.24	0.263	39.3
S049585		150	8.6	57.2	<0.002	1.52	1.30	7.0	2	0.9	1165	0.25	0.05	4.09	0.153	2.81
S049586		160	12.5	85.4	<0.002	1.82	0.65	9.0	1	1.2	626	0.46	0.06	6.53	0.261	2.32
S049587		150	6.8	43.8	<0.002	1.22	0.20	5.2	1	0.6	1245	0.19	<0.05	3.29	0.115	3.02
S049588		150	5.4	34.0	<0.002	0.95	0.23	4.4	2	0.5	1270	0.15	<0.05	2.48	0.094	2.53
S049589		150	3.9	25.7	<0.002	0.77	0.08	3.3	2	0.4	1420	0.13	<0.05	2.03	0.070	1.58
S049590		130	2.9	19.0	<0.002	0.60	0.05	2.8	2	0.8	1420	0.09	<0.05	1.54	0.053	0.78
S049591		180	5.7	36.9	<0.002	1.07	0.13	4.1	1	0.6	1550	0.16	<0.05	2.80	0.100	0.60
S049592		220	52.3	172.0	<0.002	4.68	5.57	20.9	1	2.9	92.2	0.61	<0.05	9.08	0.412	13.30
S049593		170	2.8	17.6	<0.002	0.60	0.05	2.4	1	0.3	1835	0.08	<0.05	1.40	0.049	0.26
S049594		220	1.4	9.6	<0.002	0.33	<0.05	1.5	1	0.3	1555	0.05	<0.05	0.82	0.028	0.20
S049595		290	1.6	9.0	<0.002	0.33	<0.05	1.4	1	0.2	1700	0.05	<0.05	0.83	0.027	0.24
S049596		210	2.9	16.9	<0.002	0.54	0.07	2.2	1	0.3	1960	0.09	<0.05	1.50	0.048	0.52
S049597		310	1.8	11.6	<0.002	0.38	0.06	1.8	1	0.2	2140	0.06	<0.05	1.00	0.031	0.33
S049598		270	2.1	11.9	<0.002	0.43	0.17	1.7	1	0.5	1805	0.06	<0.05	1.16	0.037	0.59
S049599		920	0.5	4.1	<0.002	0.14	<0.05	0.9	1	<0.2	1535	<0.05	<0.05	0.39	0.012	0.14
S049600		190	4.5	26.1	<0.002	0.87	0.27	3.1	2	0.4	1430	0.13	<0.05	2.35	0.074	1.59
S049601		150	2.5	16.1	<0.002	0.51	0.34	2.0	1	0.3	1440	0.08	<0.05	1.45	0.044	1.38
S049602		120	2.7	15.0	<0.002	0.54	0.20	2.2	1	0.3	1920	0.08	<0.05	1.30	0.042	1.42
S049603		210	5.4	27.8	0.004	0.94	0.53	3.1	2	0.5	1560	0.15	<0.05	2.58	0.080	3.19
S049604		210	5.4	27.2	0.004	0.94	0.54	3.1	2	0.5	1560	0.14	0.07	2.54	0.077	3.06
S049605		230	1.9	9.8	<0.002	0.34	0.19	1.5	1	0.2	1730	0.05	<0.05	0.95	0.029	0.80
S049606		410	1.0	6.7	0.002	0.24	0.07	1.3	1	<0.2	1625	<0.05	<0.05	0.65	0.021	0.44
S049607		140	4.5	24.2	0.002	0.77	0.32	2.9	2	0.4	1775	0.13	<0.05	2.15	0.070	1.28
S049608		680	1.1	7.4	<0.002	0.25	0.09	1.3	1	0.2	1705	<0.05	<0.05	0.73	0.021	0.32
S049609		110	1.8	10.2	<0.002	0.35	0.09	1.5	1	0.2	1875	0.06	<0.05	1.02	0.031	0.32
S049610		110	1.9	9.3	<0.002	0.33	0.07	1.6	1	0.2	1360	0.05	<0.05	0.94	0.029	0.29
S049611		130	2.2	13.6	0.002	0.48	0.22	2.0	1	0.2	2030	0.07	<0.05	1.24	0.039	0.72
S049612		280	6.2	20.2	0.003	0.77	0.34	2.9	1	0.4	1740	0.11	<0.05	1.87	0.062	1.06
S049613		320	12.9	54.3	0.003	1.87	1.25	6.4	1	1.1	1290	0.28	0.06	4.38	0.154	2.95
S049614		320	16.6	96.1	0.008	3.21	1.07	10.5	2	1.6	942	0.47	0.06	7.57	0.267	5.22
S049615		340	6.7	21.9	0.003	1.59	0.27	3.0	2	0.5	1665	0.12	<0.05	1.89	0.064	1.80
S049616		430	7.6	18.9	0.003	1.04	8.50	2.8	1	0.4	1560	0.10	<0.05	1.65	0.055	7.24
S049617		280	18.0	43.4	0.005	1.83	10.45	4.3	2	0.8	1520	0.23	0.07	3.53	0.124	8.17
S049618		180	0.8	1.3	<0.002	0.01	<0.05	0.3	1	<0.2	51.8	<0.05	<0.05	0.09	<0.005	0.03
S049619		490	4.4	13.6	0.002	0.53	2.62	2.0	1	0.3	1750	0.08	<0.05	1.36	0.043	2.08
S049620		370	59.3	27.2	0.002	0.70	8.49	5.2	2	0.7	1160	0.14	<0.05	2.42	0.081	6.12

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.
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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 27-JUN-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18139290

Sample Description	Method Analyte Units LOD	ME-MS61 U ppm 0.1	ME-MS61 V ppm 1	ME-MS61 W ppm 0.1	ME-MS61 Y ppm 0.1	ME-MS61 Zn ppm 2	ME-MS61 Zr ppm 0.5	As-OG62 As % 0.001
S049581		2.2	71	2.6	15.9	45	59.8	
S049582		1.8	42	1.0	14.2	59	38.5	
S049583		4.5	86	4.4	20.2	77	84.2	7.51
S049584		3.7	78	3.9	15.5	87	74.4	8.21
S049585		2.6	42	1.2	15.6	37	49.1	
S049586		1.8	61	1.3	16.1	44	78.4	
S049587		2.4	32	0.5	13.3	24	32.4	
S049588		1.9	26	0.7	12.2	23	26.2	
S049589		2.0	19	0.3	9.8	13	21.2	
S049590		2.0	15	0.3	10.5	23	16.2	
S049591		2.5	26	0.4	11.4	47	28.5	
S049592		1.7	141	12.7	19.5	103	84.3	
S049593		1.6	13	0.2	8.6	15	14.8	
S049594		1.6	7	0.2	6.5	9	8.7	
S049595		2.0	7	0.3	6.6	10	8.5	
S049596		2.0	14	0.5	8.4	67	14.6	
S049597		2.1	10	0.2	9.2	7	9.8	
S049598		2.2	11	0.3	10.9	10	10.2	
S049599		1.6	5	0.1	6.7	4	5.3	
S049600		3.1	21	0.6	16.1	24	20.7	
S049601		2.1	13	0.7	11.9	7	13.2	
S049602		2.3	13	0.6	12.9	10	13.3	
S049603		3.0	23	1.3	13.5	19	22.6	
S049604		3.0	23	1.3	13.4	12	21.8	
S049605		1.8	10	0.5	10.4	6	9.4	
S049606		1.6	7	0.3	9.3	2	7.1	
S049607		3.1	20	0.8	15.2	13	19.8	
S049608		1.8	8	0.4	9.4	10	7.7	
S049609		1.8	9	0.6	8.9	4	9.1	
S049610		1.7	9	0.6	9.1	2	8.3	
S049611		2.1	12	0.8	11.4	25	11.4	
S049612		3.0	18	1.1	14.3	29	17.5	
S049613		3.2	43	1.8	17.2	63	44.3	
S049614		3.2	76	2.4	18.0	83	92.8	
S049615		2.9	19	0.4	8.7	25	20.4	
S049616		2.1	16	1.6	9.1	12	16.9	
S049617		3.5	35	3.6	12.6	27	34.7	
S049618		0.6	2	0.1	0.8	17	0.6	
S049619		2.7	13	1.2	9.6	7	13.4	
S049620		3.7	25	6.9	13.6	124	24.7	

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To: **ATAC RESOURCES LTD.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Project: Nadaleen

Finalized Date: 27-JUN-2018
Account: RCM

CERTIFICATE OF ANALYSIS WH18139290

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Applies to Method: REE's may not be totally soluble in this method.
ME-MS61

LABORATORY ADDRESSES

Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.

Applies to Method:				
	BAG-06	CRU-31	CRU-QC	LOG-21
	LOG-21d	LOG-23	PUL-31	PUL-31d
	PUL-QC	SPL-21	SPL-21d	WEI-21

Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Applies to Method:				
	As-OG62	Au-AA25	Hg-MS42	ME-MS61
	ME-OG62			

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Finalized Date: 28-JUN-2018
Account: RCM

CERTIFICATE WH18139278

Project: Nadaleen

P.O. No.: N18-007

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 13-JUN-2018.

The following have access to data associated with this certificate:

ANDREW CARNE	JULIA LANE	

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
BAG-06	Double Bagging Coarse Rejects
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
LOG-23	Pulp Login - Rcvd with Barcode
LOG-21d	Sample logging - ClientBarCode Dup
SPL-21d	Split sample - duplicate
PUL-31d	Pulverize Split - duplicate

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid ICP-MS	
Hg-MS42	Trace Hg by ICPMS	ICP-MS
ME-OG62	Ore Grade Elements - Four Acid	ICP-AES
As-OG62	Ore Grade As - Four Acid	ICP-AES
S-IR08	Total Sulphur (Leco)	LECO

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:

Colin Ramshaw, Vancouver Laboratory Manager

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Finalized Date: 28-JUN-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18139278

Sample Description	Method	WEI-21	Au-AA25	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Recvd Wt.	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu
	Units	kg	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.02	0.01	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2
S049621		8.06	<0.01	0.07	0.77	32.1	120	0.24	0.04	34.1	0.08	13.20	3.2	8	1.73	8.3
S049622		7.94	<0.01	0.06	0.64	32.9	90	0.24	0.03	33.5	0.08	9.89	2.7	7	1.53	7.2
S049623		8.19	<0.01	0.03	1.64	96.0	130	0.43	0.08	30.9	0.08	21.9	5.7	16	4.19	14.2
S049624		7.84	0.01	0.04	2.04	154.0	120	0.52	0.10	23.2	0.09	27.4	6.5	20	4.88	14.1
S049625		8.03	0.04	0.02	0.69	125.0	80	0.22	0.03	29.6	0.03	10.50	2.8	7	1.44	6.5
S049626		8.06	0.01	0.02	0.75	84.4	90	0.24	0.04	32.2	0.02	11.45	2.8	8	1.57	7.0
S049627		7.90	0.03	0.04	0.65	397	70	0.21	0.04	33.9	0.05	8.68	2.7	7	1.49	9.7
S049628		7.84	0.10	0.04	0.74	156.5	90	0.23	0.04	34.8	0.07	10.55	2.9	7	1.72	7.8
S049629		7.60	0.06	0.02	0.27	78.4	40	0.09	0.02	36.0	0.02	4.12	1.0	3	0.66	3.3
S049630		5.36	0.13	0.06	1.80	1070	130	0.55	0.09	26.5	0.15	23.9	5.9	19	7.21	18.0
S049631		0.26	0.57	0.65	6.81	431	230	2.35	0.25	2.22	0.33	61.5	23.1	104	39.5	68.1
S049632		7.52	<0.01	0.01	0.87	101.5	120	0.29	0.05	32.7	0.07	14.95	2.8	8	1.76	9.8
S049633		7.94	<0.01	0.02	1.35	80.5	150	0.43	0.06	29.8	0.07	20.2	4.6	13	3.18	14.4
S049634		7.82	0.03	0.02	1.23	70.7	100	0.40	0.05	31.2	0.09	19.95	4.1	12	3.17	12.9
S049635		7.16	0.03	0.06	2.81	157.5	130	0.83	0.12	20.7	0.09	35.2	10.1	29	9.88	30.2
S049636		7.86	0.15	0.05	2.22	291	100	0.60	0.10	22.8	0.14	29.9	7.3	23	6.02	22.2
S049637		3.47	0.05	0.03	1.68	186.0	100	0.56	0.08	27.2	0.14	24.9	5.9	17	5.03	17.1
S049638		3.07	1.44	0.27	1.92	>10000	90	0.54	0.09	23.8	0.14	24.8	6.5	20	5.94	19.5
S049639		3.29	1.41	0.31	2.04	>10000	90	0.49	0.09	23.9	0.15	26.7	6.7	21	6.51	20.1
S049640		6.10	0.59	0.04	0.93	250	70	0.43	0.05	33.4	0.08	13.45	3.4	9	2.21	9.4
S049641		8.03	0.30	0.05	0.72	700	70	0.27	0.04	33.3	0.06	11.80	2.8	7	1.51	8.5
S049642		8.24	0.54	0.02	1.03	2200	100	0.40	0.05	31.3	0.07	16.40	3.7	11	3.26	10.9
S049643		5.21	0.87	0.03	0.95	3420	80	0.33	0.04	31.4	0.14	12.70	3.5	10	2.17	9.9
S049644		5.26	1.34	0.63	1.80	323	90	0.53	0.07	22.4	0.52	21.0	6.8	17	5.99	18.6
S049645		4.62	19.50	11.05	1.60	>10000	80	0.29	0.11	8.15	11.15	40.5	5.3	19	3.71	27.6
S049646		0.26	8.01	1.74	1.86	>10000	100	0.25	0.53	7.05	0.84	28.2	6.7	47	3.21	28.4
S049647		7.30	1.71	0.90	0.85	422	70	0.24	0.04	32.1	0.56	11.00	3.0	9	1.56	9.0
S049648		5.81	1.20	0.80	0.88	724	90	0.34	0.04	25.9	0.12	14.30	3.3	9	1.95	8.9
S049649		6.04	0.77	0.10	0.16	494	20	0.14	0.01	24.6	0.03	5.52	1.0	1	0.21	2.3
S049650		5.95	0.90	0.11	0.29	245	30	0.16	0.02	28.6	0.04	7.00	1.8	5	0.41	4.1
S049651		4.40	2.13	0.08	2.06	443	150	0.66	0.08	26.3	0.14	26.0	6.9	21	4.53	19.8
S049652		3.60	2.99	0.62	1.90	759	170	0.55	0.08	28.6	0.25	25.4	6.6	20	4.65	19.3
S049653		3.92	35.6	8.29	3.77	>10000	130	0.72	0.21	7.78	1.79	50.7	11.7	38	7.26	40.7
S049654		<0.02	34.2	8.21	3.68	>10000	130	0.67	0.21	7.56	1.82	49.2	11.5	38	7.10	39.9
S049655		3.43	33.5	2.61	5.16	5680	220	0.99	0.27	5.74	1.33	65.0	17.0	48	11.15	46.9
S049656		3.62	17.35	0.21	5.60	6830	260	0.93	0.26	4.29	0.86	60.2	18.7	56	12.20	53.8
S049657		3.73	7.21	0.10	1.53	>10000	140	0.30	0.07	26.8	0.33	21.0	5.2	17	2.66	14.9
S049658		4.27	20.7	0.09	1.53	8490	120	0.30	0.08	21.5	0.81	35.3	6.1	18	2.39	16.2
S049659		3.78	0.59	0.19	2.00	515	200	0.43	0.09	24.2	0.12	29.9	8.3	22	3.99	23.1
S049660		4.93	0.02	<0.01	0.06	13.0	40	0.08	0.02	20.9	0.05	1.05	0.6	1	0.23	2.7

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Finalized Date: 28-JUN-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18139278

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Hg-MS42	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni
	Units	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2
S049621		0.60	2.05	0.05	0.4	0.606	0.007	0.38	6.6	2.6	0.57	154	0.43	0.01	1.1	4.6
S049622		0.61	1.81	0.05	0.3	0.284	0.008	0.31	5.3	2.1	0.70	197	0.30	0.01	0.9	3.6
S049623		1.14	4.20	0.07	0.8	1.025	0.016	0.81	13.7	4.7	0.66	270	1.32	0.01	2.2	8.2
S049624		1.62	5.11	0.06	1.2	1.135	0.024	0.98	14.8	5.7	2.11	578	0.51	0.01	3.3	8.7
S049625		0.93	1.89	<0.05	0.3	0.606	0.011	0.32	5.1	2.0	3.06	560	0.30	0.01	0.9	4.1
S049626		0.60	1.97	0.05	0.4	0.889	0.010	0.34	5.7	2.1	0.54	407	0.16	0.01	1.1	3.6
S049627		0.49	1.67	0.10	0.3	0.832	0.009	0.30	4.6	1.7	0.39	870	0.65	0.01	0.9	6.4
S049628		0.55	1.94	0.09	0.4	1.030	0.008	0.35	5.2	2.2	0.38	1310	0.27	0.01	1.0	4.2
S049629		0.28	0.71	0.09	0.1	0.400	0.005	0.12	2.2	0.8	0.21	1600	0.08	<0.01	0.4	0.8
S049630		1.32	4.56	0.11	0.8	1.800	0.020	0.86	12.4	6.0	0.91	1260	0.95	0.01	2.5	10.5
S049631		6.30	17.45	0.13	2.3	3.13	0.071	3.35	30.0	18.2	0.81	654	4.68	0.03	9.1	49.2
S049632		0.78	2.31	0.10	0.4	0.541	0.008	0.41	7.8	2.8	1.55	406	0.50	0.01	1.2	4.6
S049633		1.20	3.50	0.09	0.7	0.847	0.011	0.65	10.3	4.2	1.35	387	0.54	0.01	1.9	7.6
S049634		0.89	3.10	0.11	0.6	0.929	0.013	0.58	9.5	3.6	0.61	399	0.44	0.01	1.8	6.6
S049635		2.14	7.08	0.10	1.2	1.940	0.030	1.36	18.2	9.0	3.35	457	0.98	0.02	3.7	18.1
S049636		1.85	5.60	0.09	1.0	3.51	0.026	1.07	15.9	6.8	4.10	742	0.93	0.01	3.0	13.2
S049637		1.42	4.32	0.10	0.8	2.61	0.019	0.80	13.2	6.0	1.33	570	0.86	0.01	2.3	9.7
S049638		1.63	4.94	0.09	0.9	4.59	0.028	0.93	12.6	5.7	1.84	2190	1.02	0.01	2.6	11.1
S049639		1.62	5.27	0.09	0.9	4.71	0.028	0.99	14.3	6.5	1.57	2090	0.93	0.01	2.7	11.8
S049640		0.65	2.42	0.08	0.4	2.18	0.020	0.45	6.9	2.9	0.30	1700	0.47	0.01	1.3	4.8
S049641		0.49	1.93	0.08	0.4	1.325	0.012	0.35	5.7	2.2	0.33	964	0.40	0.01	1.0	3.7
S049642		0.76	2.69	0.10	0.5	2.10	0.013	0.50	7.5	3.6	0.91	719	0.57	0.01	1.4	5.7
S049643		0.68	2.57	0.10	0.4	2.31	0.015	0.45	6.2	5.2	0.65	2100	0.37	0.01	1.3	5.0
S049644		1.77	4.93	0.09	0.8	3.63	0.019	0.87	11.5	4.9	5.83	1600	0.46	0.01	2.4	11.1
S049645		1.68	5.81	0.08	0.7	22.4	0.077	0.74	18.3	20.8	0.17	6010	0.61	0.01	2.0	10.0
S049646		2.56	5.12	0.05	0.8	16.35	0.026	0.85	14.2	24.9	0.17	351	5.74	0.01	2.5	19.7
S049647		0.59	2.20	<0.05	0.4	2.49	0.014	0.40	5.3	6.3	0.24	7720	0.30	0.01	1.1	4.0
S049648		1.35	2.28	0.05	0.4	2.75	0.013	0.36	6.5	3.5	5.55	2660	0.55	0.01	1.2	4.9
S049649		1.26	0.51	0.07	0.1	0.650	0.005	0.07	2.2	0.9	10.05	1720	0.06	0.01	0.2	0.6
S049650		1.21	0.85	0.08	0.1	1.620	0.008	0.13	3.1	1.0	7.86	2170	0.19	0.01	0.4	3.1
S049651		1.71	5.07	0.08	0.9	3.17	0.022	0.94	12.3	5.8	3.59	1410	0.88	0.01	2.6	11.8
S049652		1.33	4.85	0.08	0.9	5.45	0.028	0.86	13.4	6.6	0.80	3170	0.90	0.01	2.7	11.1
S049653		3.46	9.78	0.08	1.6	33.6	0.030	1.80	26.8	24.5	0.33	4990	1.87	0.01	5.0	22.8
S049654		3.39	9.55	0.07	1.6	33.4	0.029	1.74	26.5	23.6	0.31	4900	1.83	0.01	4.8	22.2
S049655		4.22	13.50	0.09	2.4	33.9	0.033	2.54	36.6	23.3	0.47	4530	2.90	0.02	7.1	28.9
S049656		4.05	14.30	0.09	2.4	28.6	0.034	2.73	32.6	25.3	0.47	1180	2.74	0.02	7.3	32.7
S049657		1.27	3.86	<0.05	0.7	13.95	0.026	0.70	11.1	8.0	0.31	2530	0.76	0.01	2.0	8.6
S049658		2.85	3.94	0.05	0.7	36.8	0.026	0.72	16.2	8.6	4.43	1640	0.68	0.01	2.1	10.1
S049659		2.20	4.78	0.05	0.9	4.58	0.020	0.97	14.7	4.6	6.05	1060	0.75	0.01	2.8	13.6
S049660		0.48	0.19	0.10	<0.1	0.027	<0.005	0.03	0.6	1.1	12.85	202	0.07	0.01	0.2	1.3

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 28-JUN-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18139278

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl
	Units	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
	LOD	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.01	0.005	0.02
S049621		150	8.0	14.8	0.002	0.53	1.04	1.9	1	0.3	1760	0.07	<0.05	1.29	0.043	1.31
S049622		150	5.1	11.4	<0.002	0.47	0.38	1.9	1	0.2	1620	0.06	<0.05	1.03	0.036	1.02
S049623		130	6.1	31.3	0.004	0.96	0.51	4.3	1	0.5	1195	0.15	<0.05	2.57	0.092	3.22
S049624		180	7.9	39.4	<0.002	1.18	0.79	5.1	1	0.6	710	0.24	<0.05	3.51	0.135	2.14
S049625		200	4.6	13.1	<0.002	0.56	0.96	2.0	1	0.2	1025	0.06	<0.05	1.02	0.034	1.79
S049626		150	3.9	14.3	<0.002	0.51	0.62	2.2	1	0.3	994	0.07	<0.05	1.19	0.042	1.86
S049627		200	5.4	12.2	<0.002	0.46	1.45	2.0	1	0.2	907	0.06	<0.05	1.02	0.036	2.04
S049628		230	3.7	14.6	<0.002	0.53	1.28	2.2	1	0.3	1060	0.07	<0.05	1.15	0.042	3.01
S049629		200	1.2	5.2	<0.002	0.20	0.98	1.1	<1	<0.2	739	<0.05	<0.05	0.52	0.015	1.47
S049630		220	6.3	37.0	0.004	1.07	4.40	5.1	1	0.6	1390	0.18	<0.05	2.74	0.100	5.10
S049631		220	51.1	166.5	0.003	4.59	5.45	21.3	<1	2.6	90.9	0.59	<0.05	8.38	0.408	12.35
S049632		570	3.5	17.7	0.002	0.55	0.31	2.6	1	0.3	1810	0.09	<0.05	1.58	0.048	2.31
S049633		190	4.9	29.0	<0.002	0.80	0.34	3.8	<1	0.5	1620	0.14	<0.05	2.32	0.081	3.20
S049634		160	5.0	25.8	0.002	0.77	0.76	3.4	<1	0.4	1620	0.13	<0.05	2.04	0.079	3.75
S049635		220	12.1	55.3	0.004	1.80	0.97	7.6	1	1.0	853	0.26	0.06	3.93	0.173	7.64
S049636		210	9.9	43.6	0.004	1.55	3.09	6.2	1	0.6	735	0.21	0.05	3.34	0.131	9.75
S049637		150	7.5	34.8	0.003	1.24	1.55	5.3	1	0.5	1150	0.16	<0.05	2.54	0.093	6.25
S049638		210	8.9	40.3	0.004	2.66	55.4	5.3	3	0.6	751	0.18	0.07	2.81	0.106	15.75
S049639		200	9.0	43.0	0.005	2.67	54.9	5.3	3	0.7	839	0.19	0.08	3.03	0.114	16.35
S049640		210	3.4	20.9	0.002	0.70	2.83	3.0	1	0.3	788	0.09	<0.05	1.49	0.051	7.35
S049641		180	2.7	16.0	<0.002	0.56	2.69	1.9	1	0.2	1120	0.07	<0.05	1.14	0.040	4.51
S049642		540	4.1	22.8	0.002	0.82	7.38	3.2	1	0.3	1500	0.10	<0.05	1.62	0.056	6.52
S049643		320	3.6	20.7	0.002	0.86	10.95	2.7	1	0.3	1115	0.09	<0.05	1.44	0.050	6.87
S049644		230	8.6	38.8	0.002	1.35	10.45	5.3	1	0.5	620	0.16	0.05	2.37	0.101	11.85
S049645		460	17.8	33.8	0.002	>10.0	910	1.5	16	0.8	126.0	0.14	0.45	2.36	0.085	30.0
S049646		510	10.0	39.8	0.004	4.79	163.5	3.3	1	1.2	353	0.17	0.13	2.89	0.102	42.7
S049647		320	3.3	17.6	<0.002	0.68	6.91	2.0	1	0.3	956	0.08	<0.05	1.20	0.045	5.55
S049648		280	3.9	16.4	0.003	0.81	11.20	2.5	1	0.3	917	0.08	<0.05	1.34	0.047	10.55
S049649		60	0.9	3.0	<0.002	0.18	4.84	1.2	1	<0.2	569	<0.05	<0.05	0.24	0.006	3.48
S049650		120	1.8	5.4	<0.002	0.33	7.12	1.6	1	<0.2	513	<0.05	<0.05	0.51	0.017	9.27
S049651		220	7.5	39.9	0.003	1.43	7.24	6.2	1	0.6	1125	0.18	0.06	2.80	0.115	12.45
S049652		550	6.5	41.9	0.003	1.44	15.40	6.4	1	0.5	1010	0.18	0.05	2.84	0.112	20.6
S049653		760	19.2	82.5	0.006	4.69	130.5	4.4	2	1.2	194.0	0.34	0.18	6.00	0.214	104.5
S049654		740	18.8	82.4	0.008	4.46	124.5	4.3	2	1.2	185.5	0.33	0.17	5.83	0.209	103.5
S049655		440	19.6	114.0	0.008	5.01	105.5	6.2	1	1.6	174.5	0.49	0.18	8.08	0.292	107.0
S049656		780	19.3	123.0	0.010	4.76	73.2	5.8	2	1.7	300	0.50	0.17	8.11	0.324	91.4
S049657		560	5.9	32.9	0.003	2.56	54.7	3.2	3	0.6	1045	0.14	0.12	2.34	0.084	32.1
S049658		400	9.2	31.7	0.003	3.02	60.5	2.8	1	1.1	647	0.14	0.14	2.45	0.091	112.0
S049659		430	13.5	37.5	0.003	1.82	9.17	5.9	1	0.6	858	0.19	<0.05	3.13	0.133	15.60
S049660		180	1.2	1.4	<0.002	0.03	0.10	0.2	<1	<0.2	48.5	<0.05	<0.05	0.07	<0.005	0.11

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 28-JUN-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18139278

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	As-OG62	S-IR08
	Analyte	U	V	W	Y	Zn	Zr	As	S
	Units	ppm	ppm	ppm	ppm	ppm	ppm	%	%
	LOD	0.1	1	0.1	0.1	2	0.5	0.001	0.01
S049621		1.9	13	0.8	10.4	11	12.5		
S049622		1.6	11	0.4	9.6	13	10.9		
S049623		2.2	27	0.9	12.8	29	28.0		
S049624		1.9	33	2.0	14.6	26	45.4		
S049625		1.4	12	0.5	10.6	5	11.3		
S049626		1.7	12	1.0	10.0	6	13.0		
S049627		1.5	12	0.9	9.9	21	11.2		
S049628		1.8	13	1.0	10.8	32	13.0		
S049629		2.0	7	0.4	11.2	5	5.5		
S049630		2.2	32	1.4	17.4	26	31.2		
S049631		1.8	141	11.1	19.0	105	83.4		
S049632		2.5	16	0.7	12.4	10	17.1		
S049633		2.4	25	0.9	13.6	11	23.2		
S049634		2.2	23	0.7	15.5	14	21.7		
S049635		2.7	53	2.1	19.6	15	44.9		
S049636		2.4	41	2.9	17.3	23	37.3		
S049637		1.7	29	2.1	15.3	26	29.8		
S049638		2.0	33	2.7	15.4	16	32.2	2.70	
S049639		2.2	36	2.9	15.5	19	33.8	2.61	
S049640		1.9	15	1.6	12.8	20	15.0		
S049641		2.0	12	1.1	10.8	10	12.3		
S049642		2.5	18	1.1	13.7	8	19.5		
S049643		2.5	17	1.4	13.3	17	16.3		
S049644		2.1	34	2.2	15.1	76	29.4		
S049645		2.5	29	2.3	5.3	692	26.4	24.2	12.65
S049646		4.4	37	8.6	16.7	70	30.5	6.87	
S049647		2.2	13	1.1	9.0	71	14.3		
S049648		1.7	16	1.7	9.8	19	15.7		
S049649		0.6	4	0.1	7.4	3	2.5		
S049650		1.0	7	0.4	9.8	5	5.6		
S049651		2.3	38	2.9	20.1	22	34.1		
S049652		2.8	33	2.9	18.4	36	35.8		
S049653		5.7	72	4.5	12.9	188	60.4	1.895	
S049654		5.5	71	4.3	12.7	188	60.6	1.790	
S049655		5.1	93	5.4	14.7	166	83.8		
S049656		7.0	104	6.0	16.6	117	87.5		
S049657		3.8	26	2.3	13.3	34	26.7	2.40	
S049658		3.3	30	2.5	14.0	61	27.8		
S049659		4.3	38	2.1	19.2	13	33.4		
S049660		0.5	3	0.1	0.8	17	<0.5		

***** See Appendix Page for comments regarding this certificate *****

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VANCOUVER BC V6B 1L8

Project: Nadaleen

Finalized Date: 28-JUN-2018
Account: RCM

CERTIFICATE OF ANALYSIS WH18139278

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Applies to Method: REE's may not be totally soluble in this method.
ME-MS61

LABORATORY ADDRESSES

Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.

Applies to Method:				
	BAG-06	CRU-31	CRU-QC	LOG-21
	LOG-21d	LOG-23	PUL-31	PUL-31d
	PUL-QC	SPL-21	SPL-21d	WEI-21

Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Applies to Method:				
	As-OG62	Au-AA25	Hg-MS42	ME-MS61
	ME-OG62	S-IR08		

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Finalized Date: 2-JUL-2018
Account: RCM

CERTIFICATE WH18140287

Project: Nadaleen

P.O. No.: N18-008

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 14-JUN-2018.

The following have access to data associated with this certificate:

ANDREW CARNE	JULIA LANE	

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
BAG-06	Double Bagging Coarse Rejects
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um
DRY-21	High Temperature Drying
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
LOG-23	Pulp Login - Rcvd with Barcode
LOG-21d	Sample logging - ClientBarCode Dup
SPL-21d	Split sample - duplicate
PUL-31d	Pulverize Split - duplicate

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid ICP-MS	
Hg-MS42	Trace Hg by ICPMS	ICP-MS
ME-OG62	Ore Grade Elements - Four Acid	ICP-AES
As-OG62	Ore Grade As - Four Acid	ICP-AES
S-IR08	Total Sulphur (Leco)	LECO

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:

Colin Ramshaw, Vancouver Laboratory Manager

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Finalized Date: 2-JUL-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18140287

Sample Description	Method	WEI-21	Au-AA25	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Recvd Wt.	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu
	Units	kg	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.02	0.01	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2
S049661		3.84	0.01	0.04	0.92	3810	90	0.21	0.04	28.2	0.08	13.00	4.9	9	2.00	12.6
S049662		4.18	0.02	0.05	1.34	201	80	0.29	0.06	26.7	0.03	16.30	6.0	12	3.30	15.5
S049663		4.74	0.05	0.11	1.64	1120	110	0.38	0.07	28.6	0.05	18.20	7.9	15	3.95	17.6
S049664		4.57	0.05	0.01	0.26	150.0	40	0.11	0.02	29.7	<0.02	7.36	2.7	2	0.41	5.1
S049665		8.23	<0.01	0.03	0.79	65.0	90	0.23	0.04	29.6	0.12	14.10	4.1	7	2.70	10.7
S049666		3.55	0.14	0.11	0.73	8620	100	0.18	0.04	33.9	0.06	12.75	4.2	8	2.02	11.5
S049667		2.49	4.15	1.59	1.98	>10000	50	0.36	0.09	5.04	0.76	24.4	5.9	22	4.23	19.1
S049668		0.26	13.05	0.72	4.76	9880	330	0.84	0.24	3.83	0.56	53.5	15.2	63	12.70	69.5
S049669		3.00	1.60	0.86	2.01	7480	190	0.34	0.09	22.3	0.56	28.5	7.7	21	4.50	21.7
S049670		4.93	0.01	0.02	0.06	153.5	40	0.06	0.05	20.8	0.06	1.28	1.5	1	0.17	11.0
S049671		7.34	0.13	0.04	0.49	190.5	40	0.14	0.03	25.0	0.03	11.55	2.9	5	1.28	7.2
S049672		8.22	0.02	0.02	0.65	47.6	90	0.22	0.03	31.7	0.07	10.50	3.7	6	1.84	9.3
S049673		8.08	<0.01	0.01	0.56	27.5	130	0.25	0.03	35.8	0.08	9.63	3.9	5	1.82	8.6
S049674		7.55	0.09	0.02	0.85	50.3	130	0.27	0.04	33.9	0.09	13.90	4.4	9	2.92	10.8
S049675		7.89	0.14	0.03	1.06	71.2	140	0.40	0.05	33.8	0.14	19.45	5.1	11	3.84	12.9
S049676		7.73	0.01	0.02	0.77	48.6	150	0.30	0.04	34.4	0.09	15.20	4.2	9	2.67	10.0
S049677		7.93	0.01	0.02	1.01	50.6	120	0.40	0.04	32.8	0.08	17.00	4.8	11	3.80	12.6
S049678		7.74	0.02	0.04	0.99	43.4	130	0.33	0.05	32.5	0.09	18.95	4.8	10	3.70	12.2
S049679		7.88	0.04	0.03	0.89	56.5	130	0.30	0.05	33.7	0.14	17.55	4.6	9	2.94	11.2
S049680		0.26	1.09	1.47	1.60	902	200	0.37	0.13	28.3	0.69	20.7	5.7	28	3.68	55.3
S049681		8.18	0.04	0.04	0.99	37.5	120	0.31	0.03	33.0	0.12	13.80	5.2	9	3.75	12.5
S049682		7.43	0.01	0.02	0.73	36.1	120	0.27	0.04	31.9	0.14	13.55	4.1	8	2.94	9.9
S049683		8.12	0.01	0.02	0.66	32.3	120	0.23	0.04	33.5	0.13	13.40	3.9	7	2.19	9.5
S049684		7.76	0.01	0.01	0.35	16.2	100	0.17	0.02	35.2	0.08	7.31	2.8	4	0.89	6.1
S049685		7.48	0.01	0.04	0.89	37.4	150	0.25	0.04	33.0	0.14	16.80	4.5	8	3.64	11.3
S049686		7.68	0.02	0.04	1.76	103.0	220	0.40	0.09	27.3	0.10	28.1	7.4	19	6.86	20.5
S049687		8.39	<0.01	0.01	0.48	33.0	100	0.22	0.03	34.8	0.08	8.55	3.3	5	1.38	7.5
S049688		8.25	0.01	0.01	0.54	133.0	90	0.22	0.03	33.9	0.07	9.36	3.4	6	1.27	7.7
S049689		8.00	<0.01	0.01	0.51	31.3	120	0.19	0.03	33.7	0.09	10.15	2.1	5	1.25	6.4
S049690		7.89	0.01	0.01	0.33	32.2	110	0.16	0.02	34.9	0.08	5.90	1.6	4	0.88	4.3
S049691		<0.02	<0.01	0.01	0.33	30.6	110	0.16	0.02	34.7	0.06	5.69	1.6	4	0.84	4.2
S049692		8.05	<0.01	<0.01	0.20	26.7	80	0.15	0.01	35.6	0.05	3.99	1.2	2	0.43	3.0
S049693		8.08	<0.01	0.01	0.37	23.0	100	0.18	0.02	34.6	0.07	6.80	1.7	4	0.81	4.9
S049694		7.79	0.01	0.02	0.81	77.6	160	0.24	0.04	32.6	0.11	14.80	3.1	9	1.79	9.5
S049695		4.13	<0.01	0.01	0.64	31.6	200	0.23	0.03	33.1	0.12	12.30	2.6	6	2.23	7.5
S049696		3.76	<0.01	0.01	0.51	25.2	180	0.18	0.02	34.7	0.11	11.00	2.2	5	1.84	6.0
S049697		7.99	0.01	0.03	1.73	83.6	170	0.52	0.08	27.7	0.16	26.8	6.2	18	6.07	19.8
S049698		8.23	0.01	0.01	0.33	24.2	110	0.18	0.02	35.2	0.04	6.74	1.6	4	0.70	4.3
S049699		8.11	<0.01	0.02	0.70	40.8	130	0.25	0.03	33.9	0.10	12.75	2.7	7	1.78	8.3
S049700		8.21	<0.01	0.01	0.45	22.1	120	0.20	0.02	34.1	0.06	7.93	2.1	5	1.34	5.3

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 2-JUL-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18140287

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Hg-MS42	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni
	Units	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2
S049661		1.19	2.53	0.06	0.5	1.425	0.014	0.44	5.5	2.6	3.41	598	0.29	0.01	1.4	5.9
S049662		1.43	3.72	0.08	0.6	1.610	0.018	0.64	6.9	3.8	3.46	622	0.41	0.01	1.8	7.9
S049663		1.38	4.53	0.07	0.7	2.13	0.014	0.80	8.2	5.1	3.34	727	0.62	0.01	2.3	10.1
S049664		0.89	0.77	<0.05	0.1	0.642	0.007	0.12	3.0	1.0	5.83	713	0.11	0.01	0.4	1.3
S049665		1.06	2.17	0.06	0.4	0.756	0.013	0.38	6.2	3.0	4.18	506	0.42	0.01	1.1	4.7
S049666		0.57	2.14	0.08	0.4	1.260	0.013	0.35	5.7	2.6	0.58	655	0.47	0.01	1.1	4.6
S049667		1.53	5.72	0.34	1.0	6.68	0.055	0.93	11.2	20.8	0.61	569	0.90	0.01	3.0	11.0
S049668		4.72	13.40	0.12	2.3	24.1	0.030	2.22	28.4	17.3	0.35	632	5.77	0.02	6.5	37.0
S049669		1.69	5.62	0.07	1.0	4.79	0.021	0.97	12.7	8.5	3.58	2020	0.72	0.01	3.1	11.3
S049670		0.47	0.22	<0.05	<0.1	0.015	0.005	0.03	0.6	1.1	13.00	209	0.39	0.01	0.2	1.3
S049671		0.86	1.41	0.07	0.3	0.682	0.006	0.24	5.0	2.4	8.00	732	0.23	0.01	0.7	2.9
S049672		0.56	1.89	0.06	0.3	0.571	0.006	0.31	4.9	2.8	2.66	227	0.28	0.01	1.0	3.6
S049673		0.42	1.58	0.08	0.3	0.299	0.009	0.27	4.5	3.1	0.61	81	0.21	0.01	0.8	3.3
S049674		0.56	2.35	0.07	0.4	0.701	0.011	0.41	6.4	4.3	0.62	341	0.27	0.01	1.2	4.4
S049675		0.71	2.93	0.08	0.5	0.805	0.011	0.51	8.9	5.3	0.65	437	0.36	0.01	1.6	5.9
S049676		0.55	2.08	0.08	0.4	0.235	0.009	0.37	6.6	4.2	0.78	103	0.27	0.01	1.1	4.3
S049677		0.74	2.82	0.08	0.6	0.253	0.013	0.49	7.2	5.0	0.79	126	0.30	0.01	1.5	5.4
S049678		0.64	2.68	0.07	0.5	0.442	0.009	0.48	8.5	4.3	0.60	124	0.35	0.01	1.4	5.4
S049679		0.57	2.42	0.08	0.5	0.462	0.012	0.43	8.0	4.0	0.50	260	0.32	0.01	1.3	5.0
S049680		1.19	4.35	0.08	0.8	2.18	0.023	0.69	9.6	7.0	1.27	4770	1.35	0.10	2.3	13.9
S049681		0.70	2.72	0.06	0.6	0.457	0.012	0.48	6.4	5.3	0.48	218	0.22	0.01	1.5	6.0
S049682		0.51	2.01	0.08	0.4	0.209	0.007	0.34	6.0	3.8	0.71	265	0.27	0.01	1.1	4.1
S049683		0.47	1.88	0.07	0.3	0.178	0.007	0.32	6.0	3.5	0.81	271	0.24	0.01	0.9	3.6
S049684		0.29	0.99	0.07	0.2	0.078	<0.005	0.16	3.3	2.0	0.77	159	0.15	0.01	0.6	1.6
S049685		0.57	2.44	0.10	0.5	0.214	0.010	0.42	7.6	4.1	0.62	98	0.30	0.01	1.3	5.0
S049686		1.32	4.68	0.11	0.8	1.495	0.021	0.83	12.4	7.2	2.27	324	0.65	0.01	2.5	10.4
S049687		0.36	1.35	0.05	0.3	0.467	<0.005	0.22	3.8	2.3	0.71	170	0.20	0.01	0.7	2.7
S049688		0.44	1.50	0.07	0.3	0.761	0.007	0.24	4.2	2.0	1.42	241	0.23	0.01	0.7	2.8
S049689		0.35	1.39	0.07	0.2	0.423	0.005	0.23	4.4	2.1	0.56	82	0.26	0.01	0.7	3.2
S049690		0.26	0.92	<0.05	0.2	0.161	<0.005	0.14	2.8	1.6	0.54	88	0.22	0.01	0.5	2.0
S049691		0.26	0.87	<0.05	0.2	0.187	<0.005	0.14	2.7	1.5	0.54	88	0.23	0.01	0.5	1.8
S049692		0.22	0.54	<0.05	0.1	0.102	<0.005	0.08	1.9	1.0	0.54	120	0.14	0.01	0.3	1.2
S049693		0.29	1.05	<0.05	0.2	0.319	<0.005	0.17	3.3	1.7	0.57	196	0.19	0.01	0.5	2.0
S049694		0.54	2.14	<0.05	0.4	1.370	0.009	0.38	6.8	3.0	0.57	210	0.25	0.01	1.1	4.9
S049695		0.45	1.71	0.05	0.3	0.539	0.007	0.31	5.6	2.7	0.43	65	0.29	0.01	0.9	3.9
S049696		0.38	1.35	<0.05	0.2	0.279	0.005	0.24	5.0	2.3	0.44	58	0.23	0.01	0.7	2.8
S049697		1.19	4.59	0.06	0.8	0.628	0.020	0.83	13.4	7.7	0.90	152	0.71	0.02	2.4	10.8
S049698		0.27	0.94	<0.05	0.2	0.320	<0.005	0.15	3.2	1.5	0.51	119	0.19	0.01	0.5	1.7
S049699		0.48	1.88	<0.05	0.3	0.658	0.008	0.32	5.8	3.0	0.67	193	0.30	0.01	1.0	4.0
S049700		0.34	1.21	<0.05	0.2	0.235	<0.005	0.20	3.8	2.4	0.59	206	0.15	0.01	0.6	2.4

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 2-JUL-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18140287

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl
	Units	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
	LOD	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.01	0.005	0.02
S049661		260	7.7	18.2	<0.002	1.04	9.16	2.9	2	0.3	1155	0.09	<0.05	1.47	0.061	4.74
S049662		380	9.9	26.9	<0.002	0.94	3.07	4.1	1	0.4	1460	0.13	<0.05	1.98	0.073	5.35
S049663		230	10.4	33.6	<0.002	1.09	9.04	4.9	1	0.5	1250	0.16	0.08	2.51	0.091	7.55
S049664		90	2.2	4.8	<0.002	0.22	1.63	1.7	1	<0.2	1040	<0.05	<0.05	0.49	0.017	2.24
S049665		400	5.9	16.1	<0.002	0.56	0.99	2.8	1	0.3	1410	0.08	0.05	1.27	0.045	2.93
S049666		720	5.8	15.6	0.002	0.98	20.2	2.6	2	0.3	1715	0.08	0.08	1.34	0.042	4.30
S049667		1230	10.2	42.1	0.003	>10.0	532	2.5	27	0.7	453	0.21	0.65	3.05	0.112	24.6
S049668		480	17.9	102.0	0.005	4.68	105.5	8.1	1	2.2	260	0.49	0.11	7.39	0.326	105.5
S049669		340	9.9	43.2	<0.002	1.91	30.2	6.5	2	0.7	990	0.21	0.14	3.36	0.122	17.30
S049670		210	1.3	1.2	<0.002	0.01	0.41	0.3	<1	<0.2	53.1	<0.05	<0.05	0.10	<0.005	0.06
S049671		150	3.1	10.1	<0.002	0.37	1.95	1.9	1	0.2	771	0.05	<0.05	0.83	0.029	2.49
S049672		280	3.9	13.9	<0.002	0.44	0.65	2.0	1	0.2	1775	0.06	<0.05	1.10	0.038	2.38
S049673		150	2.3	12.1	<0.002	0.42	0.45	1.8	1	0.2	2380	0.06	<0.05	0.94	0.033	1.81
S049674		410	3.1	17.9	<0.002	0.59	0.89	2.7	1	0.3	2270	0.10	0.06	1.38	0.051	3.17
S049675		170	4.7	23.6	<0.002	0.76	1.27	3.1	1	0.4	2210	0.11	<0.05	1.88	0.064	3.49
S049676		1420	3.1	16.0	<0.002	0.54	0.30	2.7	1	0.3	2260	0.08	0.06	1.32	0.050	2.25
S049677		1170	5.7	21.8	<0.002	0.77	0.36	3.2	1	0.3	1835	0.10	0.06	1.62	0.070	1.99
S049678		140	3.8	21.2	0.002	0.65	0.60	2.8	1	0.3	2230	0.11	0.05	1.73	0.058	3.26
S049679		180	3.2	19.1	0.002	0.61	0.73	2.7	1	0.3	2350	0.09	<0.05	1.61	0.051	2.69
S049680		410	62.6	30.1	0.002	0.73	8.24	6.2	1	0.7	1190	0.16	0.05	2.56	0.083	6.36
S049681		130	3.0	21.5	0.002	0.78	0.71	3.0	1	0.3	2030	0.11	<0.05	1.48	0.076	2.44
S049682		350	2.6	15.1	<0.002	0.53	0.33	2.3	1	0.2	2020	0.07	<0.05	1.26	0.044	1.65
S049683		300	2.4	13.6	<0.002	0.46	0.38	2.2	1	0.2	2050	0.06	0.07	1.11	0.038	0.90
S049684		510	1.4	6.8	<0.002	0.25	0.24	1.4	<1	<0.2	2060	<0.05	<0.05	0.68	0.021	0.44
S049685		150	3.2	18.8	<0.002	0.59	0.38	2.5	1	0.3	2240	0.09	<0.05	1.58	0.048	0.94
S049686		310	8.1	35.4	0.003	1.31	0.92	5.1	1	0.6	1590	0.18	0.05	2.93	0.109	2.78
S049687		320	2.1	9.6	<0.002	0.36	0.47	1.7	1	0.2	1880	0.05	<0.05	0.83	0.030	0.83
S049688		430	2.5	10.3	<0.002	0.37	0.89	1.7	1	0.2	1785	0.05	<0.05	0.92	0.029	1.11
S049689		340	2.7	9.4	<0.002	0.35	0.23	1.4	2	0.2	2090	0.05	<0.05	0.86	0.029	0.54
S049690		300	1.3	5.9	<0.002	0.24	0.20	1.2	2	<0.2	2050	<0.05	<0.05	0.54	0.019	0.35
S049691		300	1.3	5.7	<0.002	0.24	0.20	1.1	2	<0.2	2050	<0.05	<0.05	0.53	0.018	0.35
S049692		360	0.9	3.2	<0.002	0.19	0.19	0.6	2	<0.2	1780	<0.05	<0.05	0.34	0.011	0.26
S049693		500	1.4	7.1	<0.002	0.28	0.22	1.1	2	<0.2	1925	<0.05	<0.05	0.61	0.021	0.52
S049694		250	2.9	16.2	<0.002	0.58	0.99	2.1	2	0.3	1970	0.07	<0.05	1.25	0.043	1.82
S049695		110	2.3	11.9	<0.002	0.48	0.31	1.7	2	0.2	2550	0.06	0.05	0.99	0.036	1.28
S049696		100	1.8	9.6	<0.002	0.38	0.23	1.6	2	0.2	2690	0.05	0.05	0.80	0.028	0.86
S049697		160	6.2	35.8	0.004	1.29	0.53	3.9	2	0.5	1920	0.17	0.05	2.68	0.106	3.04
S049698		510	1.5	6.0	<0.002	0.25	0.28	0.9	2	<0.2	2080	<0.05	<0.05	0.57	0.019	0.52
S049699		730	2.7	13.0	<0.002	0.49	0.37	1.7	2	0.2	2080	0.07	<0.05	1.12	0.039	0.95
S049700		490	1.6	8.2	<0.002	0.34	0.15	1.1	2	<0.2	2060	<0.05	<0.05	0.70	0.025	0.58

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Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18140287

Sample Description	Method Analyte Units LOD	ME-MS61 U ppm 0.1	ME-MS61 V ppm 1	ME-MS61 W ppm 0.1	ME-MS61 Y ppm 0.1	ME-MS61 Zn ppm 2	ME-MS61 Zr ppm 0.5	As-OG62 As % 0.001	S-IR08 S % 0.01
S049661		2.4	17	0.9	14.6	11	16.0		
S049662		2.5	23	0.9	16.9	3	21.8		
S049663		3.0	30	1.4	14.6	4	25.6		
S049664		0.9	6	0.2	8.2	2	5.5		
S049665		2.3	15	0.5	13.1	16	13.4		
S049666		2.4	14	0.5	13.5	6	15.0		
S049667		4.9	36	1.5	21.1	67	34.8	21.1	11.70
S049668		4.3	93	5.8	19.3	81	83.7		
S049669		4.2	36	1.4	22.4	70	35.3		
S049670		0.8	2	0.1	0.8	17	<0.5		
S049671		1.7	10	0.3	12.5	3	8.8		
S049672		2.1	13	0.4	9.1	6	12.0		
S049673		1.4	11	0.3	7.4	9	10.1		
S049674		2.1	15	0.5	12.5	11	15.6		
S049675		2.3	18	1.2	14.4	18	18.6		
S049676		2.6	15	0.3	15.6	10	18.4		
S049677		2.4	19	0.3	14.7	8	21.3		
S049678		2.3	18	0.4	14.3	13	16.9		
S049679		2.4	15	0.6	14.6	13	15.6		
S049680		4.0	27	5.8	15.8	131	29.5		
S049681		1.4	18	0.6	10.2	16	18.2		
S049682		1.9	14	0.3	12.8	12	13.9		
S049683		1.9	13	0.2	12.2	11	11.8		
S049684		1.5	8	0.1	7.6	7	9.4		
S049685		2.3	14	0.4	12.8	14	15.3		
S049686		3.1	32	2.0	19.9	11	29.2		
S049687		1.5	9	0.6	7.5	7	9.9		
S049688		1.7	10	0.7	8.8	6	9.6		
S049689		1.8	9	0.4	8.7	8	8.9		
S049690		1.5	7	0.3	7.3	6	7.2		
S049691		1.5	7	0.3	7.1	5	7.1		
S049692		1.2	4	0.2	4.7	4	4.1		
S049693		1.3	8	0.4	6.3	6	7.4		
S049694		1.9	15	1.0	12.1	12	12.6		
S049695		2.0	12	0.5	11.8	11	10.7		
S049696		1.8	10	0.4	11.5	9	8.7		
S049697		2.5	32	0.8	14.9	22	29.4		
S049698		1.4	7	0.3	6.5	3	7.7		
S049699		1.9	13	0.6	9.3	7	12.9		
S049700		1.3	9	0.3	7.0	5	8.7		

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Project: Nadaleen

Finalized Date: 2-JUL-2018
Account: RCM

CERTIFICATE OF ANALYSIS WH18140287

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Applies to Method: REE's may not be totally soluble in this method.
ME-MS61

LABORATORY ADDRESSES

Applies to Method: Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.

BAG-06	CRU-31	CRU-QC	DRY-21
LOG-21	LOG-21d	LOG-23	PUL-31
PUL-31d	PUL-QC	SPL-21	SPL-21d
WEI-21			

Applies to Method: Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

As-OG62	Au-AA25	Hg-MS42	ME-MS61
ME-OG62	S-IR08		

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CERTIFICATE WH18143293

Project: Nadaleen

P.O. No.: N18-009

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 18-JUN-2018.

The following have access to data associated with this certificate:

ANDREW CARNE	JULIA LANE	

SAMPLE PREPARATION

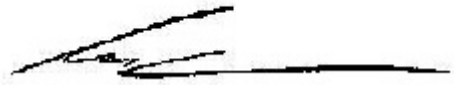
ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
BAG-06	Double Bagging Coarse Rejects
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
LOG-23	Pulp Login - Rcvd with Barcode
LOG-21d	Sample logging - ClientBarCode Dup
SPL-21d	Split sample - duplicate
PUL-31d	Pulverize Split - duplicate

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid ICP-MS	
Hg-MS42	Trace Hg by ICPMS	ICP-MS
ME-OG62	Ore Grade Elements - Four Acid	ICP-AES
As-OG62	Ore Grade As - Four Acid	ICP-AES
S-IR08	Total Sulphur (Leco)	LECO

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature: 

Colin Ramshaw, Vancouver Laboratory Manager

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CERTIFICATE OF ANALYSIS WH18143293

Sample Description	Method	WEI-21	Au-AA25	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Recvd Wt.	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu
	Units	kg	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.02	0.01	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2
S048371		10.55	<0.01	0.08	5.96	367	270	1.99	0.26	2.94	0.14	56.2	20.5	76	22.3	62.5
S048372		11.75	<0.01	0.06	6.21	614	250	2.05	0.24	3.44	0.21	58.8	20.5	70	20.4	60.3
S048373		10.88	<0.01	0.05	6.00	87.7	310	2.16	0.24	3.30	0.13	55.2	20.5	75	20.5	60.8
S048374		10.85	<0.01	0.05	5.46	217	300	1.15	0.19	3.71	0.09	52.9	18.4	65	19.15	56.1
S048375		5.66	0.02	0.04	5.51	740	230	1.29	0.21	3.74	0.12	62.2	20.6	67	19.65	58.6
S048376		5.93	0.38	0.04	5.27	1670	330	1.09	0.20	4.04	0.19	52.7	18.8	59	14.50	57.3
S048377		5.59	<0.01	0.09	5.58	191.5	470	1.29	0.21	3.30	0.12	56.2	20.9	57	18.60	59.7
S048378		0.26	1.13	1.45	1.46	800	200	0.37	0.12	26.5	0.64	18.35	4.1	25	3.48	44.9
S048379		6.12	<0.01	0.04	6.44	200	260	1.57	0.26	1.92	0.05	67.1	17.6	69	29.2	50.9
S048380		11.76	<0.01	0.06	5.75	95.2	590	1.60	0.21	2.29	0.04	56.5	19.2	65	26.2	47.6
S048381		11.25	<0.01	0.06	7.21	116.5	270	2.23	0.23	1.14	<0.02	67.7	23.3	83	37.7	56.8
S048382		11.47	<0.01	0.07	7.59	115.0	280	2.70	0.23	1.11	0.03	71.8	23.6	90	37.5	61.8
S048383		10.90	<0.01	0.05	5.81	79.3	230	1.47	0.23	1.68	0.13	64.2	15.6	65	22.8	47.7
S048384		11.84	0.01	0.06	6.30	153.5	250	1.59	0.23	2.00	0.07	63.3	17.8	67	25.7	50.2
S048385		11.20	0.05	0.11	6.41	438	270	1.85	0.28	2.08	0.05	63.5	25.9	64	20.7	56.8
S048386		6.55	0.17	0.07	6.16	494	210	1.75	0.24	2.50	0.09	64.8	18.4	60	17.85	51.3
S048387		3.43	0.51	0.06	5.56	2640	290	1.57	0.18	2.73	0.03	54.4	16.4	59	17.55	56.2
S048388		3.23	0.53	0.06	5.70	2940	280	1.63	0.22	2.54	0.06	59.0	17.3	62	19.25	55.5
S048389		5.69	0.02	0.04	5.70	421	240	1.91	0.21	2.10	0.03	56.3	14.6	61	22.1	57.5
S048390		7.92	<0.01	<0.01	0.18	3.7	20	0.15	<0.01	30.8	<0.02	1.19	0.6	2	0.08	4.9
S048391		6.93	0.03	0.05	6.10	336	260	1.55	0.24	2.12	0.03	64.4	18.4	63	17.50	52.3
S048392		11.35	0.01	0.09	6.00	189.0	270	1.63	0.22	2.21	<0.02	61.2	17.7	61	19.35	54.5
S048393		11.82	<0.01	0.07	5.25	122.5	250	1.67	0.20	2.58	<0.02	55.1	18.4	55	17.15	46.9
S048394		12.08	0.01	0.05	5.71	176.5	200	1.63	0.22	1.93	0.02	59.2	15.5	62	15.00	53.1
S048395		10.65	0.33	0.05	5.15	2000	290	1.35	0.19	2.70	0.09	53.3	16.2	58	12.55	46.2
S048396		10.14	7.61	0.20	3.69	>10000	160	0.71	0.16	15.95	0.22	45.7	15.2	36	8.25	32.4
S048397		11.57	7.55	0.06	2.66	3770	130	0.62	0.09	21.3	0.18	35.5	12.9	26	6.40	23.5
S048398		11.48	2.91	0.01	0.81	310	80	0.21	0.03	33.1	0.05	11.10	3.1	8	1.77	11.6
S048399		3.60	2.73	0.18	0.72	>10000	60	0.19	0.04	29.5	0.10	13.25	2.8	8	1.51	12.9
S048400		3.61	3.75	0.39	1.29	>10000	50	0.27	0.08	14.60	0.30	22.4	4.8	14	2.27	19.4
S048401		<0.02	3.78	0.37	1.25	>10000	50	0.27	0.07	14.60	0.28	21.9	4.6	14	2.24	18.6
S048402		4.82	2.64	0.22	4.48	>10000	90	0.86	0.20	6.98	0.43	50.0	11.9	45	24.7	42.0
S048403		0.26	13.15	1.53	3.04	>10000	120	0.44	0.25	7.78	0.77	43.8	10.7	44	8.92	33.8
S048404		12.34	0.01	0.05	6.49	661	430	1.37	0.26	2.19	0.21	66.3	18.2	63	21.3	55.4
S048405		7.01	0.03	0.06	6.24	356	230	1.70	0.24	1.83	0.18	63.6	18.2	69	25.8	56.2
S048406		6.99	<0.01	0.21	6.04	246	380	1.84	0.22	1.64	0.03	63.7	18.3	65	28.5	53.8
S048407		9.05	0.18	0.07	6.53	566	260	1.94	0.25	1.59	0.05	67.2	17.5	68	37.3	54.7
S048408		7.84	<0.01	0.08	6.36	121.0	320	1.89	0.21	1.46	0.05	65.1	21.9	75	33.5	54.0
S048409		7.66	<0.01	0.06	6.38	120.5	310	1.69	0.24	1.43	0.04	63.9	20.7	72	38.7	52.4
S048410		8.17	<0.01	0.16	7.00	148.0	310	2.11	0.27	1.17	0.10	70.3	22.4	77	39.3	58.0

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CERTIFICATE OF ANALYSIS WH18143293

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Hg-MS42	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni
	Units	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2
S048371		5.11	16.65	0.09	2.9	0.308	0.064	2.77	26.5	85.9	1.91	643	0.44	0.04	10.2	39.7
S048372		5.05	17.25	0.10	3.0	0.543	0.069	2.96	28.0	47.8	1.77	651	0.43	0.03	10.8	41.2
S048373		5.31	17.10	0.09	2.9	0.285	0.066	2.89	27.3	38.5	1.96	734	0.41	0.03	10.5	39.3
S048374		4.73	13.65	0.09	2.6	0.292	0.063	2.63	24.5	18.2	1.83	759	0.30	0.03	8.8	31.9
S048375		4.80	13.75	0.09	2.6	0.545	0.068	2.67	27.4	17.7	1.62	799	0.62	0.03	8.9	33.3
S048376		5.17	13.45	0.09	2.6	0.875	0.060	2.52	23.8	15.8	1.71	1020	0.62	0.02	8.5	32.0
S048377		4.87	14.75	0.10	2.5	0.379	0.067	2.67	26.2	25.4	1.59	855	0.65	0.02	8.0	35.3
S048378		1.11	3.63	0.05	0.7	2.16	0.021	0.63	9.3	5.5	1.16	4390	1.23	0.10	1.9	12.6
S048379		5.02	16.10	0.10	2.7	0.199	0.070	3.11	31.0	42.5	1.87	519	0.37	0.03	9.7	32.4
S048380		4.52	14.75	0.08	2.3	0.302	0.058	2.72	26.4	43.1	1.65	716	0.39	0.02	7.8	32.8
S048381		4.77	17.95	0.11	2.7	0.414	0.071	3.54	31.8	47.2	1.41	417	0.29	0.03	8.7	38.4
S048382		4.27	20.4	0.10	2.9	0.266	0.082	3.74	34.9	39.5	1.34	409	0.25	0.03	9.7	37.7
S048383		4.56	14.90	0.09	2.7	0.236	0.070	2.80	28.5	52.1	1.64	499	0.42	0.03	8.5	29.3
S048384		4.84	16.10	0.11	2.6	0.389	0.069	2.99	29.9	46.2	1.67	511	0.45	0.03	9.0	34.5
S048385		4.60	16.25	0.09	2.8	0.864	0.077	3.11	31.0	17.8	1.27	555	0.54	0.03	9.3	48.0
S048386		4.83	15.95	0.11	2.6	1.415	0.061	2.94	30.5	13.2	1.38	818	0.41	0.03	9.1	34.2
S048387		4.64	13.90	0.10	2.3	1.305	0.067	2.50	25.7	29.1	1.44	788	0.27	0.02	7.6	30.0
S048388		4.74	14.80	0.09	2.4	1.425	0.065	2.53	27.5	30.0	1.36	869	0.29	0.02	8.2	31.7
S048389		4.56	14.85	0.15	2.5	0.709	0.052	2.70	27.7	31.3	1.22	534	0.64	0.02	8.6	30.1
S048390		0.12	0.55	<0.05	0.1	<0.005	<0.005	0.04	1.3	1.1	1.93	129	0.16	0.10	0.2	0.3
S048391		4.42	16.00	0.15	2.9	0.650	0.055	2.99	31.9	17.2	1.23	551	0.34	0.02	9.5	33.1
S048392		5.20	15.90	0.16	2.8	0.788	0.053	2.82	29.6	35.5	1.20	554	0.40	0.02	9.8	34.6
S048393		4.01	14.40	0.13	2.5	0.513	0.049	2.52	27.3	21.3	1.50	641	0.47	0.03	8.2	32.3
S048394		4.34	15.40	0.15	2.8	0.538	0.051	2.73	28.6	21.3	1.12	443	0.41	0.02	9.5	29.2
S048395		4.03	13.95	0.13	2.5	1.730	0.043	2.51	26.1	9.9	1.39	709	0.31	0.02	8.4	30.3
S048396		2.32	9.85	0.13	2.2	6.35	0.028	1.84	25.8	8.6	0.54	3290	1.39	0.02	6.0	21.7
S048397		1.65	7.33	0.10	1.6	5.45	0.018	1.29	20.5	7.6	0.34	1920	1.48	0.01	4.3	17.3
S048398		0.62	2.22	<0.05	0.4	2.04	0.005	0.39	6.2	2.4	0.44	1720	0.42	0.01	1.2	4.0
S048399		0.57	2.15	0.06	0.4	2.09	0.015	0.33	7.1	3.6	0.35	3630	0.28	0.01	1.2	3.8
S048400		1.08	3.83	0.32	0.6	4.46	0.053	0.58	11.2	7.9	0.18	6180	0.34	0.01	1.9	7.4
S048401		1.08	3.81	0.32	0.6	4.60	0.057	0.57	10.8	7.4	0.18	6300	0.35	0.01	2.0	7.1
S048402		2.79	12.65	0.40	2.1	4.39	0.098	1.68	25.0	21.9	0.58	2460	0.76	0.02	7.1	23.8
S048403		2.99	8.27	0.22	1.8	23.3	0.035	1.41	23.7	13.7	1.91	1060	4.13	0.02	4.8	22.9
S048404		4.52	17.05	0.12	3.0	0.942	0.060	2.94	32.2	22.4	1.20	500	1.30	0.03	9.7	33.8
S048405		4.59	16.70	0.12	3.0	0.896	0.060	2.84	30.4	38.8	1.08	380	0.42	0.03	9.9	34.5
S048406		3.79	16.25	0.12	2.9	0.662	0.059	2.78	31.9	32.8	1.06	405	0.41	0.02	9.4	32.5
S048407		4.54	17.40	0.14	3.1	0.683	0.062	2.90	32.1	37.4	1.05	514	0.45	0.03	10.2	32.2
S048408		4.48	17.30	0.13	2.9	0.232	0.057	3.06	31.7	63.6	1.43	463	0.38	0.03	9.8	37.6
S048409		4.67	17.00	0.14	2.9	0.229	0.064	3.03	31.6	85.7	1.41	501	0.34	0.03	9.9	36.4
S048410		4.38	19.00	0.15	3.0	0.237	0.068	3.38	35.0	57.3	1.32	363	0.60	0.03	10.1	38.4

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 2-JUL-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18143293

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl
	Units	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
	LOD	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.01	0.005	0.02
S048371		500	15.5	109.5	<0.002	1.53	1.30	17.2	1	2.2	141.5	0.73	<0.05	8.16	0.557	1.39
S048372		580	13.7	111.0	<0.002	2.90	2.61	17.5	1	2.2	149.5	0.74	<0.05	8.42	0.575	1.66
S048373		440	12.3	109.5	<0.002	1.87	1.00	17.0	1	2.3	134.5	0.72	0.06	8.38	0.578	1.25
S048374		470	11.0	116.5	<0.002	2.39	1.14	15.0	<1	2.2	151.5	0.57	0.06	8.71	0.530	1.49
S048375		900	8.3	123.5	<0.002	3.60	1.24	18.0	<1	2.4	155.0	0.60	<0.05	8.96	0.518	3.26
S048376		450	7.6	115.0	<0.002	3.92	2.17	15.7	<1	2.7	196.5	0.56	<0.05	8.22	0.499	5.54
S048377		390	18.2	127.0	<0.002	3.04	1.24	15.4	<1	3.3	208	0.55	<0.05	9.34	0.404	6.18
S048378		370	55.8	27.3	0.004	0.66	7.73	5.2	1	0.6	1095	0.12	0.05	2.68	0.075	6.42
S048379		630	12.6	151.5	<0.002	0.52	0.54	16.1	<1	2.1	117.5	0.69	0.05	11.10	0.473	1.26
S048380		300	16.1	135.5	<0.002	0.91	0.59	15.3	1	1.8	142.5	0.54	<0.05	9.02	0.411	1.86
S048381		260	20.3	172.5	<0.002	1.43	0.59	20.0	<1	2.1	85.6	0.62	0.06	10.80	0.442	2.41
S048382		250	17.2	187.0	<0.002	1.25	0.55	22.7	1	2.5	90.9	0.66	<0.05	11.35	0.471	2.19
S048383		420	9.1	136.0	<0.002	0.67	0.35	15.8	<1	1.9	109.5	0.62	0.06	9.90	0.429	1.38
S048384		430	12.7	147.5	<0.002	1.74	0.58	16.5	<1	2.0	161.5	0.64	0.05	10.35	0.456	2.53
S048385		440	20.4	142.5	<0.002	4.24	1.99	16.8	1	2.1	121.0	0.67	0.06	10.50	0.450	3.75
S048386		430	12.6	140.0	<0.002	4.45	3.25	16.6	1	2.1	108.5	0.62	<0.05	9.89	0.436	5.65
S048387		380	12.0	118.0	<0.002	4.18	2.62	15.5	1	2.4	136.5	0.54	0.05	8.63	0.414	5.35
S048388		380	13.8	127.0	<0.002	4.34	2.95	16.5	<1	2.4	131.0	0.58	0.06	9.49	0.422	5.94
S048389		330	14.8	128.0	<0.002	4.24	0.96	17.5	1	2.0	105.5	0.60	<0.05	8.20	0.408	3.26
S048390		80	0.6	1.0	<0.002	<0.01	0.11	0.2	1	<0.2	71.3	<0.05	<0.05	0.14	0.005	0.02
S048391		370	15.5	134.5	<0.002	4.01	1.24	17.5	1	2.1	98.9	0.69	<0.05	9.11	0.434	3.59
S048392		420	13.6	129.0	<0.002	4.83	0.66	17.7	1	2.1	135.5	0.65	<0.05	8.60	0.456	7.09
S048393		330	18.0	115.0	<0.002	2.04	0.62	15.4	<1	1.9	107.0	0.59	<0.05	7.57	0.371	3.00
S048394		420	12.5	121.0	<0.002	3.93	0.67	17.2	1	2.0	90.5	0.66	<0.05	8.65	0.459	3.34
S048395		350	14.1	110.5	<0.002	3.39	5.54	15.2	<1	1.7	93.0	0.58	<0.05	7.70	0.406	7.76
S048396		190	12.4	81.9	<0.002	2.90	39.0	7.5	1	1.2	478	0.42	0.05	6.37	0.235	21.1
S048397		170	8.2	62.3	<0.002	1.93	11.00	5.7	1	0.9	620	0.31	0.07	4.40	0.168	17.10
S048398		130	2.6	17.3	<0.002	0.63	2.07	2.5	1	0.3	1095	0.08	<0.05	1.30	0.045	5.52
S048399		180	2.9	16.0	<0.002	1.13	27.8	2.0	1	0.3	840	0.08	<0.05	1.25	0.040	7.04
S048400		200	6.5	29.1	<0.002	8.21	328	4.1	8	0.4	220	0.14	0.12	2.20	0.074	15.65
S048401		190	6.2	28.9	<0.002	8.23	325	4.0	8	0.4	214	0.13	0.12	2.09	0.073	15.35
S048402		400	13.1	85.1	<0.002	>10.0	311	12.1	9	2.1	209	0.47	0.21	6.58	0.278	17.80
S048403		340	18.6	66.5	<0.002	5.10	203	5.8	3	1.4	187.0	0.33	0.16	5.11	0.180	75.8
S048404		450	16.8	136.5	<0.002	4.05	3.00	17.6	1	2.7	147.0	0.67	<0.05	9.25	0.445	4.03
S048405		450	16.0	132.0	<0.002	4.24	1.32	18.2	1	2.3	245	0.74	0.05	8.93	0.490	8.19
S048406		330	17.6	136.5	<0.002	3.50	1.09	17.5	1	2.1	146.0	0.66	<0.05	9.06	0.427	6.58
S048407		610	16.1	144.0	<0.002	3.84	1.62	18.9	1	2.6	225	0.71	<0.05	9.54	0.462	5.12
S048408		370	17.3	146.0	<0.002	0.86	0.72	18.4	1	2.2	94.8	0.70	<0.05	8.91	0.445	1.77
S048409		350	20.7	147.5	<0.002	0.92	0.65	18.6	1	2.2	95.0	0.69	<0.05	9.39	0.427	1.20
S048410		320	24.1	166.0	<0.002	1.24	0.83	20.5	1	2.8	91.5	0.71	<0.05	10.35	0.431	1.65

***** See Appendix Page for comments regarding this certificate *****

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VANCOUVER BC V6B 1L8

Finalized Date: 2-JUL-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18143293

Sample Description	Method Analyte Units LOD	ME-MS61 U ppm 0.1	ME-MS61 V ppm 1	ME-MS61 W ppm 0.1	ME-MS61 Y ppm 0.1	ME-MS61 Zn ppm 2	ME-MS61 Zr ppm 0.5	As-OG62 As % 0.001	S-IR08 S % 0.01
S048371		1.7	152	5.3	20.2	90	103.5		
S048372		1.7	154	10.3	22.1	111	106.5		
S048373		1.7	156	3.5	20.0	89	107.0		
S048374		1.7	140	5.7	20.2	75	89.7		
S048375		1.9	140	5.6	25.8	68	92.6		
S048376		1.7	133	9.3	19.9	121	86.6		
S048377		1.7	112	3.4	18.5	106	83.4		
S048378		3.9	24	5.9	14.6	121	23.8		
S048379		2.1	125	1.8	22.4	70	101.0		
S048380		1.8	117	2.1	17.5	60	84.0		
S048381		1.9	143	1.2	18.4	57	91.3		
S048382		1.8	157	2.0	19.8	53	102.5		
S048383		1.9	118	1.3	19.1	86	88.5		
S048384		2.1	123	1.6	19.4	78	92.5		
S048385		2.1	124	5.7	20.0	80	93.8		
S048386		2.0	118	8.9	20.3	79	91.7		
S048387		1.6	116	6.3	18.1	60	78.3		
S048388		1.7	118	6.7	18.8	65	83.1		
S048389		1.6	115	4.1	17.2	64	83.9		
S048390		0.2	1	0.1	2.4	4	2.0		
S048391		1.8	120	5.1	18.2	60	94.3		
S048392		1.7	124	2.8	19.1	61	97.2		
S048393		1.6	105	2.0	16.5	46	84.5		
S048394		1.7	123	2.9	18.5	55	93.2		
S048395		1.6	115	8.7	16.8	63	83.9		
S048396		3.2	61	6.2	16.9	57	73.6	1.115	
S048397		2.6	45	4.4	14.9	45	54.4		
S048398		1.7	13	1.2	9.2	25	15.1		
S048399		2.1	12	1.4	10.1	16	15.2	1.290	
S048400		1.8	22	3.1	19.9	39	23.1	18.20	
S048401		1.7	21	3.1	19.8	33	22.1	14.45	
S048402		1.9	81	7.6	20.5	100	72.5	19.00	11.55
S048403		6.2	52	6.1	19.4	114	58.7	7.76	
S048404		2.0	127	4.7	19.5	123	98.4		
S048405		1.9	135	2.5	19.4	131	98.4		
S048406		1.9	124	3.7	18.2	54	96.7		
S048407		1.9	129	6.4	19.9	75	99.5		
S048408		1.8	130	1.9	18.6	70	97.9		
S048409		1.9	123	1.2	19.3	58	98.6		
S048410		2.1	136	2.0	19.2	78	103.5		

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Project: Nadaleen

Finalized Date: 2-JUL-2018
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CERTIFICATE OF ANALYSIS WH18143293

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

REE's may not be totally soluble in this method.

Applies to Method: ME-MS61

LABORATORY ADDRESSES

Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.

Applies to Method:				
	BAG-06	CRU-31	CRU-QC	LOG-21
	LOG-21d	LOG-23	PUL-31	PUL-31d
	PUL-QC	SPL-21	SPL-21d	WEI-21

Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Applies to Method:				
	As-OG62	Au-AA25	Hg-MS42	ME-MS61
	ME-OG62	S-IR08		

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To: **ATAC RESOURCES LTD.**
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VANCOUVER BC V6B 1L8

Finalized Date: 1-JUL-2018
Account: RCM

CERTIFICATE WH18143302

Project: Nadaleen

P.O. No.: N18-010

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 18-JUN-2018.

The following have access to data associated with this certificate:

ANDREW CARNE	JULIA LANE	

SAMPLE PREPARATION

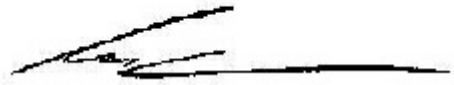
ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
BAG-06	Double Bagging Coarse Rejects
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
LOG-23	Pulp Login - Rcvd with Barcode
LOG-21d	Sample logging - ClientBarCode Dup
SPL-21d	Split sample - duplicate
PUL-31d	Pulverize Split - duplicate

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid ICP-MS	
Hg-MS42	Trace Hg by ICPMS	ICP-MS
ME-OG62	Ore Grade Elements - Four Acid	ICP-AES
As-OG62	Ore Grade As - Four Acid	ICP-AES

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature: 

Colin Ramshaw, Vancouver Laboratory Manager

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Finalized Date: 1-JUL-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18143302

Sample Description	Method Analyte Units LOD	WEI-21 Recvd Wt. kg 0.02	Au-AA25 Au ppm 0.01	ME-MS61 Ag ppm 0.01	ME-MS61 Al % 0.01	ME-MS61 As ppm 0.2	ME-MS61 Ba ppm 10	ME-MS61 Be ppm 0.05	ME-MS61 Bi ppm 0.01	ME-MS61 Ca % 0.01	ME-MS61 Cd ppm 0.02	ME-MS61 Ce ppm 0.01	ME-MS61 Co ppm 0.1	ME-MS61 Cr ppm 1	ME-MS61 Cs ppm 0.05	ME-MS61 Cu ppm 0.2
S049701		7.91	<0.01	0.01	0.34	32.1	130	0.18	0.04	37.6	0.04	7.06	1.6	3	1.07	13.9
S049702		7.65	<0.01	0.01	0.55	28.6	120	0.20	0.04	36.9	0.06	9.63	2.2	6	1.64	9.9
S049703		8.11	<0.01	0.01	0.52	18.5	110	0.19	0.03	36.2	0.07	8.44	2.5	5	1.37	9.1
S049704		8.04	<0.01	0.01	0.50	22.3	260	0.17	0.03	36.7	0.08	8.85	2.7	5	1.29	8.0
S049705		8.01	<0.01	0.01	0.29	12.9	110	0.13	0.02	37.3	0.05	5.32	2.0	3	0.71	5.9
S049706		8.00	<0.01	0.02	0.70	32.7	280	0.21	0.04	35.4	0.17	11.50	3.2	7	2.12	9.7
S049707		7.83	<0.01	0.02	0.56	25.3	110	0.21	0.04	36.9	0.11	9.23	2.8	5	1.47	8.4
S049708		0.26	1.45	0.87	2.94	>10000	190	0.75	0.13	17.35	0.38	31.8	7.5	40	8.57	27.6
S049709		8.03	<0.01	0.01	0.57	35.4	110	0.25	0.03	38.1	0.07	8.95	2.8	6	1.72	8.0
S049710		7.88	<0.01	0.01	0.51	25.8	170	0.22	0.02	35.1	0.06	8.73	2.7	5	1.44	7.5
S049711		7.31	0.01	0.02	0.79	42.5	120	0.26	0.04	35.2	0.04	10.40	3.8	8	1.63	10.4
S049712		8.18	<0.01	0.01	0.43	27.4	80	0.19	0.02	34.9	0.03	7.16	2.6	5	1.18	7.1
S049713		8.36	<0.01	0.02	0.72	38.7	80	0.29	0.03	34.7	0.04	8.66	3.4	7	2.30	10.4
S049714		4.84	0.01	0.41	8.00	99.2	350	2.64	0.42	0.57	0.10	72.2	16.9	84	35.6	74.6
S049715		2.40	0.01	0.12	8.19	44.2	320	2.29	0.56	0.29	0.04	80.5	10.1	81	36.6	60.9
S049716		5.68	<0.01	0.09	6.46	46.1	290	1.81	0.27	0.99	0.24	62.9	11.4	73	31.1	45.0
S049717		9.09	<0.01	0.07	6.33	32.5	290	2.42	0.26	2.21	0.45	57.5	14.5	68	36.9	75.7
S049718		8.70	<0.01	0.14	4.10	47.7	260	1.11	0.14	1.59	0.09	38.1	10.9	66	20.6	40.2
S049719		10.09	<0.01	0.07	4.41	85.4	220	1.44	0.16	0.91	0.15	39.4	17.9	62	23.5	54.0
S049720		9.36	<0.01	0.12	5.11	116.0	240	1.82	0.17	0.45	0.30	44.6	22.4	69	22.9	52.0
S049721		7.18	<0.01	0.13	6.88	190.5	310	2.34	0.27	1.69	0.35	62.1	30.1	79	27.0	73.2
S049722		6.32	0.01	0.15	6.89	88.0	280	1.95	0.27	2.13	0.10	59.9	20.7	77	30.0	65.8
S049723		8.70	<0.01	0.25	4.33	83.4	280	1.27	0.15	3.74	0.21	40.1	11.6	53	17.15	38.8
S049724		9.04	<0.01	0.07	7.23	151.0	270	2.44	0.28	2.14	0.26	65.1	19.3	74	32.0	64.0
S049725		10.17	0.01	0.11	2.84	176.5	130	0.70	0.10	4.45	0.22	27.7	10.5	44	9.61	27.3
S049726		11.82	<0.01	0.42	6.35	114.0	250	1.74	0.23	3.70	0.15	57.6	19.2	70	34.2	61.2
S049727		10.79	<0.01	0.06	4.29	20.9	170	1.15	0.16	3.49	0.14	41.0	12.9	52	20.9	36.9
S049728		10.95	<0.01	0.11	6.46	19.2	250	1.86	0.28	1.84	0.17	60.4	16.9	68	32.0	53.5
S049729		<0.02	<0.01	0.11	6.66	20.2	260	1.79	0.26	1.90	0.21	62.5	17.2	70	32.4	55.2
S049730		11.64	<0.01	0.08	6.29	25.3	370	1.86	0.26	1.85	0.20	58.3	16.8	69	32.2	49.0
S049731		11.04	<0.01	0.09	7.08	25.3	610	2.05	0.31	1.57	0.18	63.8	18.4	72	44.2	49.3
S049732		11.53	<0.01	0.07	5.83	21.2	390	1.59	0.23	2.14	0.19	53.5	15.2	66	36.2	47.1
S049733		11.11	<0.01	0.09	6.63	30.8	460	1.86	0.27	2.35	0.13	59.4	24.0	71	44.2	57.5
S049734		5.00	0.01	<0.01	0.17	0.2	20	0.18	0.48	34.8	<0.02	1.18	1.2	1	0.18	4.4
S049735		11.57	<0.01	0.07	6.21	70.8	330	1.61	0.24	3.12	0.13	56.8	17.5	68	40.1	55.6
S049736		8.47	<0.01	0.17	6.63	263	350	1.79	0.27	2.38	0.14	64.7	18.9	71	22.6	55.1
S049737		1.68	0.62	0.11	5.60	3680	200	1.31	0.21	0.43	0.16	46.6	17.5	74	15.20	51.7
S049738		2.04	0.61	0.10	5.86	3040	200	1.38	0.21	0.37	0.19	46.6	24.1	75	15.30	57.9
S049739		4.89	0.45	0.11	5.47	1675	340	1.29	0.21	2.15	0.13	50.9	17.2	65	18.30	53.8
S049740		0.26	8.05	0.30	3.85	>10000	180	0.65	0.17	10.50	0.60	44.5	11.1	48	9.31	55.5

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 1-JUL-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18143302

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Hg-MS42	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni
	Units	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2
S049701		0.25	0.82	0.06	0.2	0.251	0.005	0.14	3.2	1.9	0.50	82	0.34	0.02	0.4	1.5
S049702		0.40	1.27	0.05	0.2	0.239	0.006	0.25	4.3	2.1	0.56	87	0.32	0.01	0.8	2.7
S049703		0.35	1.42	0.14	0.3	0.345	0.005	0.25	3.9	2.8	0.48	79	0.63	0.01	0.7	5.0
S049704		0.36	1.45	0.20	0.2	0.500	0.007	0.23	4.1	2.3	0.57	97	0.30	0.01	0.7	3.4
S049705		0.23	0.82	0.18	0.2	0.222	<0.005	0.13	2.5	1.7	0.41	71	0.22	0.01	0.4	2.2
S049706		0.47	1.83	0.20	0.4	0.395	0.010	0.32	5.3	3.6	0.49	73	0.38	0.02	1.0	4.1
S049707		0.41	1.49	0.16	0.3	0.226	0.007	0.26	4.4	2.6	0.57	155	0.33	0.01	0.8	3.3
S049708		2.07	7.57	0.20	1.5	4.81	0.033	1.33	14.9	11.8	2.10	1240	1.37	0.10	4.2	17.9
S049709		0.43	1.46	0.12	0.2	0.150	0.010	0.27	4.1	3.1	0.61	201	0.17	0.01	0.8	3.1
S049710		0.39	1.37	0.11	0.3	0.465	0.005	0.24	3.9	2.3	0.69	100	0.19	0.01	0.7	2.9
S049711		0.60	2.09	0.12	0.5	0.990	0.007	0.37	4.7	3.0	0.92	130	0.24	0.01	1.2	5.1
S049712		0.48	1.22	0.11	0.2	0.313	0.006	0.20	3.3	2.0	2.64	237	0.17	0.01	0.6	2.7
S049713		0.62	1.92	0.11	0.3	0.610	0.008	0.34	3.9	3.5	1.73	150	0.22	0.01	1.0	4.2
S049714		5.24	21.2	0.16	3.3	0.827	0.099	3.68	34.5	25.0	0.68	519	1.37	0.06	12.6	37.5
S049715		3.36	21.6	0.20	3.9	1.435	0.070	3.89	38.0	22.1	0.63	184	1.22	0.04	13.6	21.8
S049716		4.15	17.30	0.17	3.2	0.979	0.063	3.12	29.5	22.6	0.89	368	0.79	0.04	10.4	23.5
S049717		4.96	16.75	0.17	3.0	0.621	0.085	3.09	27.3	18.4	1.45	334	0.81	0.04	9.8	32.8
S049718		4.38	10.65	0.13	1.9	1.025	0.038	1.98	17.9	16.8	0.97	437	0.46	0.03	6.5	21.8
S049719		5.81	11.40	0.11	2.0	0.352	0.047	2.21	18.3	20.6	0.63	401	0.65	0.03	6.4	38.3
S049720		4.84	13.65	0.11	2.5	0.643	0.054	2.44	21.0	24.6	0.48	345	0.59	0.03	7.7	42.6
S049721		5.19	18.55	0.14	3.1	1.255	0.076	3.12	28.6	46.1	1.11	527	0.60	0.03	10.5	52.8
S049722		5.77	17.90	0.13	3.2	0.695	0.065	3.17	28.5	69.8	1.64	411	0.75	0.03	10.5	41.4
S049723		4.58	10.75	0.11	2.1	0.353	0.047	1.95	18.4	38.8	1.89	700	0.45	0.03	6.9	26.8
S049724		4.41	19.45	0.14	3.4	0.313	0.080	3.39	30.5	33.1	1.70	421	0.43	0.03	12.0	42.8
S049725		4.01	7.34	0.09	1.4	0.412	0.033	1.29	12.6	14.5	1.75	867	0.42	0.01	4.6	20.4
S049726		5.21	16.45	0.15	3.0	0.244	0.070	2.97	26.1	39.8	2.32	667	0.43	0.03	10.4	39.6
S049727		4.23	10.90	0.09	2.0	0.091	0.047	1.94	18.8	35.2	1.99	657	0.36	0.02	7.0	25.3
S049728		4.73	17.10	0.12	3.0	0.206	0.072	3.12	29.1	39.1	1.74	375	0.44	0.03	10.7	34.1
S049729		4.93	17.65	0.13	3.1	0.215	0.075	3.18	29.3	40.4	1.80	393	0.50	0.03	11.0	34.8
S049730		4.87	16.05	0.12	3.0	0.456	0.074	3.05	27.3	35.7	1.68	440	0.62	0.03	10.1	34.7
S049731		5.74	18.70	0.14	3.3	0.364	0.078	3.47	30.3	49.7	1.59	430	0.78	0.07	11.2	35.9
S049732		4.28	14.95	0.11	2.9	0.125	0.056	2.77	25.0	52.9	1.69	471	0.47	0.08	9.3	31.5
S049733		4.38	17.05	0.13	3.2	0.257	0.069	3.18	27.1	59.6	1.90	491	0.36	0.11	11.0	44.8
S049734		0.14	0.55	0.08	0.1	<0.005	<0.005	0.05	1.2	1.3	1.89	127	0.05	0.08	0.2	<0.2
S049735		4.76	16.35	0.12	3.2	0.936	0.067	2.94	26.1	47.1	1.92	531	0.55	0.15	10.4	35.1
S049736		4.89	17.70	0.14	3.3	3.76	0.068	3.21	29.9	18.8	1.26	477	1.02	0.03	11.0	40.8
S049737		4.74	14.15	0.11	2.7	8.09	0.046	2.67	21.1	16.6	0.50	155	0.53	0.02	9.2	32.4
S049738		5.62	14.75	0.11	2.7	8.00	0.049	2.80	21.5	15.1	0.49	149	0.51	0.02	9.2	47.4
S049739		5.02	12.85	0.12	2.4	5.68	0.050	2.64	23.9	12.5	1.21	1100	0.35	0.02	8.5	33.2
S049740		3.02	9.88	0.09	1.7	29.4	0.038	1.77	24.3	13.7	0.36	771	3.53	0.02	5.5	24.5

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To: **ATAC RESOURCES LTD.**
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1016-510 W HASTINGS ST
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Finalized Date: 1-JUL-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18143302

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl
	Units	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
	LOD	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.01	0.005	0.02
S049701		190	1.3	6.3	<0.002	0.23	0.13	1.3	1	<0.2	2080	<0.05	<0.05	0.59	0.018	0.39
S049702		520	2.1	11.7	<0.002	0.41	0.10	1.5	1	0.2	2100	0.06	<0.05	0.93	0.033	0.31
S049703		310	3.9	9.5	<0.002	0.36	0.17	1.6	1	0.2	1900	0.06	<0.05	0.90	0.031	0.27
S049704		330	2.4	8.8	<0.002	0.36	0.31	1.6	1	0.2	1915	0.05	<0.05	0.90	0.028	0.31
S049705		180	1.6	5.1	<0.002	0.21	0.15	1.0	<1	<0.2	2020	<0.05	<0.05	0.50	0.016	0.23
S049706		560	2.6	12.4	0.002	0.48	0.25	1.9	1	0.2	2710	0.07	<0.05	1.18	0.040	0.71
S049707		250	2.2	9.7	<0.002	0.40	0.20	1.6	1	0.2	2030	0.06	<0.05	0.98	0.033	0.60
S049708		410	15.0	54.6	0.003	2.30	51.6	6.2	2	1.0	771	0.30	<0.05	4.63	0.186	15.35
S049709		220	2.2	10.1	<0.002	0.43	0.25	1.6	<1	0.2	1995	0.06	<0.05	0.90	0.033	0.55
S049710		550	2.5	9.1	<0.002	0.39	0.28	1.6	<1	0.2	2110	0.08	<0.05	0.87	0.032	0.48
S049711		210	4.0	14.0	<0.002	0.63	1.01	2.0	1	0.2	1880	0.09	<0.05	1.26	0.057	0.71
S049712		340	2.1	7.6	0.002	0.36	0.22	1.6	1	<0.2	1830	0.05	<0.05	0.69	0.027	0.64
S049713		250	2.9	13.1	<0.002	0.60	0.33	2.3	<1	0.2	1410	0.07	<0.05	0.96	0.047	1.07
S049714		570	24.8	151.5	<0.002	0.04	0.84	20.2	1	2.5	81.5	0.89	0.12	10.90	0.599	3.10
S049715		350	46.8	169.5	0.006	0.08	0.99	18.6	1	2.8	74.6	0.98	0.19	12.10	0.602	4.28
S049716		440	29.1	135.0	0.002	1.11	0.64	17.1	1	2.3	71.1	0.78	<0.05	9.77	0.534	3.46
S049717		390	19.6	140.0	0.003	2.19	0.54	17.4	1	2.1	84.5	0.72	<0.05	9.07	0.484	4.95
S049718		330	12.6	84.8	0.002	1.41	0.46	11.9	<1	1.5	76.0	0.46	<0.05	5.37	0.462	2.58
S049719		300	13.0	95.9	0.002	3.59	0.36	14.0	<1	1.3	64.0	0.46	<0.05	5.70	0.436	1.92
S049720		330	14.8	106.0	0.002	2.67	0.40	15.2	1	1.6	47.6	0.57	<0.05	6.69	0.489	2.16
S049721		460	24.0	132.5	0.002	1.43	0.63	19.7	<1	2.3	104.0	0.79	<0.05	9.52	0.555	4.59
S049722		480	20.4	127.5	0.002	2.76	0.53	18.6	1	2.0	116.5	0.79	<0.05	9.07	0.595	2.40
S049723		330	12.8	82.0	<0.002	1.07	0.42	11.1	<1	1.3	158.5	0.50	<0.05	5.98	0.377	1.75
S049724		580	14.0	153.0	0.003	1.80	0.60	19.4	<1	2.3	100.5	0.86	<0.05	10.05	0.590	2.11
S049725		310	6.3	56.5	<0.002	2.27	0.80	7.7	<1	0.9	131.0	0.33	<0.05	4.08	0.287	1.75
S049726		610	13.3	137.5	<0.002	1.84	0.52	17.4	<1	1.9	124.0	0.75	<0.05	8.50	0.552	1.59
S049727		410	9.9	88.0	<0.002	0.38	0.32	11.0	<1	1.3	105.5	0.53	<0.05	5.95	0.390	0.69
S049728		460	20.1	146.0	<0.002	1.21	0.50	15.5	1	2.1	95.1	0.76	<0.05	9.59	0.508	1.41
S049729		480	19.8	147.5	<0.002	1.27	0.51	16.1	1	2.2	98.5	0.78	0.05	9.51	0.513	1.45
S049730		440	19.4	141.0	0.002	1.66	0.50	15.3	1	2.0	101.5	0.75	<0.05	9.09	0.514	2.09
S049731		380	25.0	159.0	0.002	2.84	0.56	17.1	1	2.2	103.0	0.82	0.06	9.92	0.529	3.45
S049732		490	16.1	129.5	0.002	0.74	0.36	14.6	<1	1.7	131.0	0.71	<0.05	8.38	0.489	1.58
S049733		590	22.1	148.0	0.002	0.60	0.58	16.4	<1	2.0	149.0	0.82	<0.05	9.42	0.555	1.56
S049734		60	0.6	1.3	<0.002	<0.01	0.09	0.3	1	<0.2	79.2	<0.05	<0.05	0.14	0.006	0.03
S049735		540	16.2	130.5	<0.002	2.64	0.73	16.5	1	1.8	167.0	0.77	<0.05	8.63	0.538	2.59
S049736		570	22.2	130.0	<0.002	4.35	3.91	17.5	<1	2.2	127.0	0.82	0.05	9.89	0.552	7.93
S049737		510	15.5	108.5	<0.002	5.12	8.80	11.3	1	1.6	98.2	0.65	<0.05	7.34	0.553	18.70
S049738		590	16.1	115.0	<0.002	6.12	7.53	12.7	1	1.6	122.0	0.66	<0.05	7.10	0.556	18.55
S049739		690	15.9	115.0	<0.002	5.15	5.03	13.9	<1	1.6	114.0	0.58	0.07	7.47	0.507	13.25
S049740		530	17.3	81.1	0.004	3.59	107.5	7.8	2	1.9	438	0.38	0.17	6.66	0.228	66.0

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1016-510 W HASTINGS ST
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Finalized Date: 1-JUL-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18143302

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	As-OG62
	Analyte	U	V	W	Y	Zn	Zr	As
	Units	ppm	ppm	ppm	ppm	ppm	ppm	%
	LOD	0.1	1	0.1	0.1	2	0.5	0.001
S049701		1.4	6	0.3	8.6	3	6.4	
S049702		1.6	10	0.3	8.2	4	9.0	
S049703		1.6	10	0.5	7.2	8	8.8	
S049704		1.8	10	0.6	8.1	7	8.7	
S049705		1.3	6	0.2	6.0	4	5.4	
S049706		2.2	13	0.3	9.4	13	12.3	
S049707		1.7	11	0.2	7.3	10	9.1	
S049708		4.0	53	4.4	15.3	60	48.7	1.475
S049709		1.5	11	0.2	6.9	7	8.7	
S049710		1.9	10	0.5	7.8	3	9.6	
S049711		1.7	14	1.3	7.8	4	14.4	
S049712		1.4	9	0.4	6.5	4	7.7	
S049713		1.4	13	0.8	6.6	5	11.2	
S049714		2.4	161	3.9	22.7	75	122.0	
S049715		2.8	161	2.2	21.3	40	134.0	
S049716		2.3	134	1.8	20.2	100	109.0	
S049717		2.3	138	1.1	18.1	153	104.5	
S049718		1.2	129	2.3	11.9	53	69.5	
S049719		1.2	129	0.9	13.3	85	70.3	
S049720		1.5	144	2.2	16.0	87	84.8	
S049721		2.1	158	4.7	22.5	204	104.0	
S049722		2.0	162	1.9	20.6	93	107.5	
S049723		1.4	95	2.4	14.1	101	72.3	
S049724		2.3	154	2.1	22.9	127	117.5	
S049725		0.9	73	4.0	10.6	112	48.9	
S049726		1.8	146	3.3	21.3	102	104.5	
S049727		1.3	97	0.9	14.5	76	70.6	
S049728		2.1	133	1.3	20.0	112	106.0	
S049729		2.1	137	1.4	20.3	117	109.5	
S049730		2.0	137	1.2	19.1	124	103.0	
S049731		2.2	144	1.3	20.6	107	116.0	
S049732		1.8	128	1.2	18.7	119	95.6	
S049733		2.1	142	1.5	21.2	98	113.0	
S049734		0.2	2	3.6	2.5	3	2.5	
S049735		1.9	144	1.4	20.3	89	106.5	
S049736		2.2	158	10.6	22.1	91	111.0	
S049737		1.6	142	10.1	17.3	87	92.6	
S049738		1.6	147	9.7	18.6	108	91.9	
S049739		1.6	133	9.0	17.1	82	85.8	
S049740		4.1	63	8.2	21.4	135	60.8	3.52

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
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VANCOUVER BC V6B 1L8

Project: Nadaleen

Finalized Date: 1-JUL-2018
Account: RCM

CERTIFICATE OF ANALYSIS WH18143302

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

REE's may not be totally soluble in this method.
Applies to Method: ME-MS61

LABORATORY ADDRESSES

Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.

Applies to Method:				
	BAG-06	CRU-31	CRU-QC	LOG-21
	LOG-21d	LOG-23	PUL-31	PUL-31d
	PUL-QC	SPL-21	SPL-21d	WEI-21

Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Applies to Method:				
	As-OG62	Au-AA25	Hg-MS42	ME-MS61
	ME-OG62			

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To: **ATAC RESOURCES LTD.**
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1016-510 W HASTINGS ST
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Finalized Date: 4-JUL-2018
Account: RCM

CERTIFICATE WH18143309

Project: Nadaleen

P.O. No.: N18-011

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 18-JUN-2018.

The following have access to data associated with this certificate:

ANDREW CARNE	JULIA LANE	

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
BAG-06	Double Bagging Coarse Rejects
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
LOG-23	Pulp Login - Rcvd with Barcode
LOG-21d	Sample logging - ClientBarCode Dup
SPL-21d	Split sample - duplicate
PUL-31d	Pulverize Split - duplicate

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid ICP-MS	
Hg-MS42	Trace Hg by ICPMS	ICP-MS
ME-OG62	Ore Grade Elements - Four Acid	ICP-AES
As-OG62	Ore Grade As - Four Acid	ICP-AES

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:

Colin Ramshaw, Vancouver Laboratory Manager

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 4-JUL-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18143309

Sample Description	Method	WEI-21	Au-AA25	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Recvd Wt.	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu
	Units	kg	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.02	0.01	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2
S048411		7.96	<0.01	0.06	5.43	104.5	320	1.22	0.19	2.10	0.07	55.2	16.0	65	30.9	48.8
S048412		8.17	<0.01	0.04	3.50	108.0	200	0.83	0.10	3.99	0.06	38.2	13.6	43	24.4	32.8
S048413		6.42	<0.01	0.05	3.57	56.1	170	0.81	0.12	2.93	0.08	39.6	12.4	45	19.40	34.8
S048414		9.52	<0.01	0.06	8.06	112.0	300	2.45	0.33	1.09	0.10	83.3	22.1	79	41.7	64.0
S048415		10.09	<0.01	0.04	6.82	98.2	270	2.06	0.28	1.65	0.13	71.0	17.8	67	33.4	56.1
S048416		8.12	<0.01	0.05	5.16	143.0	420	1.41	0.20	2.37	0.11	54.6	14.6	51	22.4	43.9
S048417		6.27	<0.01	0.04	7.32	436	280	2.37	0.24	2.22	0.02	72.9	22.7	78	39.1	56.6
S048418		4.01	<0.01	0.01	1.45	70.9	100	0.42	0.06	17.85	0.02	19.45	6.7	13	6.76	18.8
S048419		2.46	0.03	0.07	1.62	194.5	100	0.53	0.06	16.65	0.04	20.9	6.5	15	5.04	14.8
S048420		0.26	1.43	0.88	3.01	>10000	200	0.62	0.11	17.10	0.35	35.7	7.8	40	9.14	30.0
S048421		5.75	<0.01	0.04	1.45	94.0	110	0.44	0.07	27.7	0.06	23.9	5.0	12	5.18	14.8
S048422		7.56	<0.01	0.01	0.83	53.8	130	0.32	0.03	31.4	0.04	14.45	3.3	7	2.82	12.4
S048423		8.60	0.11	0.01	1.34	835	110	0.45	0.05	26.7	<0.02	15.80	4.7	11	3.88	16.7
S048424		7.88	0.35	0.02	1.12	>10000	110	0.39	0.04	19.05	0.02	14.45	5.7	10	3.40	17.2
S048425		<0.02	0.35	0.02	1.13	>10000	110	0.53	0.05	19.10	0.03	11.25	6.0	12	3.08	13.2
S048426		7.59	0.06	0.03	2.54	347	190	1.01	0.10	15.80	0.06	28.2	12.2	24	8.87	23.7
S048427		8.01	<0.01	0.04	4.37	47.2	200	1.12	0.20	13.35	0.05	57.4	13.9	38	18.40	39.2
S048428		7.76	<0.01	0.02	1.71	23.5	120	0.48	0.09	27.1	0.04	23.7	5.2	15	5.42	12.5
S048429		7.46	<0.01	0.01	0.74	7.3	140	0.26	0.04	34.9	<0.02	10.35	2.6	7	3.18	7.6
S048430		7.56	<0.01	0.01	0.59	3.7	120	0.28	0.03	35.6	<0.02	9.25	2.2	6	2.21	6.2
S048431		7.59	0.01	0.02	1.90	32.3	200	0.47	0.10	30.0	0.05	25.2	5.8	18	6.26	16.5
S048432		3.89	0.03	0.01	0.87	59.8	240	0.30	0.04	34.9	2.30	13.30	3.1	9	2.19	8.8
S048433		4.86	<0.01	<0.01	0.14	0.7	20	0.09	0.01	33.7	<0.02	0.95	0.6	1	<0.05	1.8
S048434		1.85	0.45	0.14	1.09	>10000	150	0.36	0.06	30.2	0.08	15.25	4.3	12	2.63	11.6
S048435		1.99	0.49	0.13	0.92	>10000	130	0.31	0.05	30.4	0.12	12.10	3.7	11	2.16	9.9
S048436		7.47	<0.01	0.03	0.90	35.1	360	0.28	0.05	34.5	0.06	15.50	3.0	10	4.13	9.6
S048437		7.79	<0.01	<0.01	0.33	21.8	140	0.15	0.02	36.5	0.02	6.94	1.3	4	0.85	3.9
S048438		7.89	<0.01	0.02	0.73	12.1	820	0.25	0.04	34.8	0.06	13.30	2.7	8	2.42	7.4
S048439		8.34	<0.01	0.02	1.25	27.1	170	0.38	0.05	32.9	0.09	18.90	3.8	13	4.43	11.6
S048440		7.41	<0.01	0.01	1.25	37.5	150	0.43	0.06	34.1	0.09	19.55	4.0	13	4.38	12.2
S048441		7.53	0.10	0.04	0.69	1365	140	0.32	0.03	33.9	0.04	11.90	2.8	8	2.07	7.6
S048442		0.26	5.20	1.60	3.74	>10000	170	0.78	0.14	10.85	1.06	35.5	10.8	47	9.71	34.2
S048443		7.90	0.01	0.04	2.28	142.5	200	0.72	0.09	26.6	0.20	29.8	7.9	23	7.87	23.9
S048444		7.47	<0.01	0.01	1.40	26.7	170	0.43	0.06	32.4	0.14	19.60	4.5	15	6.06	14.8
S048445		7.35	<0.01	0.02	1.26	12.0	180	0.37	0.05	34.1	0.10	17.95	4.1	14	5.52	12.8
S048446		7.33	<0.01	0.01	1.15	14.9	130	0.33	0.05	32.7	0.09	14.50	4.0	14	3.77	11.9
S048447		7.26	<0.01	0.01	0.64	8.0	170	0.19	0.04	34.9	0.07	11.10	2.1	8	2.17	6.8
S048448		7.52	<0.01	0.04	1.60	38.3	140	0.40	0.08	30.5	0.15	22.2	4.8	18	4.32	15.3
S048449		7.49	<0.01	0.02	0.95	11.9	250	0.29	0.06	35.1	0.14	19.50	3.2	10	3.25	10.9
S048450		6.87	<0.01	0.02	0.91	2.4	180	0.30	0.06	35.1	0.12	16.20	3.0	10	4.59	9.4

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
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1016-510 W HASTINGS ST
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Finalized Date: 4-JUL-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18143309

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Hg-MS42	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni
	Units	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2
S048411		4.40	14.30	0.14	2.4	0.112	0.047	2.60	26.7	75.4	1.43	515	0.79	0.03	7.9	29.1
S048412		2.96	9.62	0.09	1.7	0.172	0.024	1.68	19.1	34.2	1.13	607	0.52	0.02	5.0	21.3
S048413		3.57	9.82	0.09	1.7	0.173	0.029	1.65	19.7	47.1	1.24	644	0.54	0.02	5.2	23.0
S048414		5.77	21.5	0.15	3.7	0.309	0.077	3.73	40.5	102.0	1.52	364	0.68	0.04	12.8	42.6
S048415		4.58	18.85	0.16	3.2	0.195	0.070	3.17	35.1	102.5	1.52	404	1.31	0.04	11.1	33.5
S048416		4.06	13.90	0.13	2.5	0.291	0.051	2.33	26.5	104.0	1.37	495	0.81	0.03	8.5	26.3
S048417		4.31	19.55	0.15	3.2	0.419	0.069	3.48	35.9	46.9	1.34	473	0.34	0.03	10.3	35.6
S048418		3.79	4.05	0.07	0.7	0.186	0.011	0.72	10.1	6.3	8.06	1800	0.54	0.02	2.1	10.2
S048419		2.55	4.36	0.06	0.9	0.560	0.011	0.79	10.7	5.4	7.24	1180	0.66	0.02	2.5	8.5
S048420		2.06	7.92	0.10	1.6	4.54	0.023	1.39	18.0	10.9	2.13	1240	1.43	0.10	4.6	18.1
S048421		1.10	3.81	0.07	0.9	0.337	0.008	0.65	13.6	5.1	0.70	326	0.86	0.01	2.4	6.7
S048422		0.78	2.26	0.05	0.4	0.271	<0.005	0.39	8.8	3.4	1.03	313	1.14	0.01	1.2	4.1
S048423		1.82	3.39	0.05	0.5	0.707	0.006	0.63	8.5	3.7	2.94	932	0.45	0.01	1.7	6.7
S048424		3.63	3.08	0.07	0.5	4.22	0.010	0.52	7.9	3.9	6.54	1920	0.60	0.01	1.6	9.2
S048425		3.68	3.14	0.10	0.5	3.90	0.018	0.52	6.1	5.4	6.54	1940	0.53	0.01	1.5	10.9
S048426		3.48	7.17	0.11	1.5	0.654	0.031	1.25	13.6	8.5	4.45	1330	0.77	0.02	4.1	16.4
S048427		2.92	11.05	0.13	2.4	0.217	0.045	2.19	29.4	10.9	1.33	686	0.93	0.03	6.8	20.0
S048428		1.35	4.26	0.09	1.2	0.173	0.019	0.85	13.3	5.1	0.81	362	0.79	0.02	2.8	6.8
S048429		0.57	1.97	0.12	0.4	0.103	0.008	0.36	5.7	3.2	0.38	112	0.16	0.01	1.1	3.8
S048430		0.49	1.50	0.12	0.3	0.073	0.010	0.29	5.0	2.3	0.36	103	0.11	0.01	0.8	3.5
S048431		1.28	4.82	0.12	0.9	0.403	0.026	0.93	13.9	6.4	0.55	179	8.28	0.02	2.6	30.9
S048432		0.63	2.36	0.12	0.4	0.788	0.012	0.42	7.2	2.3	0.38	1680	0.14	0.01	1.2	4.6
S048433		0.13	0.46	0.10	0.1	<0.005	0.008	0.02	1.2	0.5	1.71	122	<0.05	0.06	0.2	<0.2
S048434		0.78	3.07	0.10	0.5	0.851	0.018	0.50	7.8	5.1	0.59	2520	0.68	0.01	1.5	6.3
S048435		0.70	2.60	0.10	0.5	0.816	0.020	0.42	6.4	4.6	0.54	2960	0.56	0.01	1.3	5.4
S048436		0.68	2.38	0.15	0.4	0.324	0.010	0.44	8.2	3.4	0.68	177	0.56	0.01	1.2	4.9
S048437		0.28	0.93	0.16	0.2	0.050	<0.005	0.15	3.3	1.0	0.52	121	0.12	0.01	0.5	1.7
S048438		0.53	1.92	0.12	0.4	0.106	<0.005	0.35	6.8	2.1	0.71	141	0.27	0.01	1.0	4.3
S048439		0.87	3.33	0.14	0.6	0.244	0.018	0.61	10.2	4.0	0.73	175	0.71	0.01	1.7	6.3
S048440		0.86	3.39	0.12	0.6	0.429	0.016	0.61	10.3	3.8	0.76	258	0.75	0.01	1.7	6.9
S048441		0.53	1.90	0.10	0.4	0.622	0.010	0.31	6.1	3.0	0.39	1130	0.37	0.01	1.0	4.0
S048442		2.95	9.63	0.09	1.7	9.45	0.046	1.60	17.7	14.9	0.54	996	1.98	0.12	5.4	23.2
S048443		1.46	6.06	0.11	1.1	1.100	0.027	1.07	14.9	7.8	0.80	330	0.98	0.02	3.3	13.7
S048444		1.09	3.49	0.10	0.7	0.285	0.014	0.67	9.4	5.5	0.62	317	0.45	0.02	1.9	7.8
S048445		0.95	3.23	0.12	0.6	0.119	0.012	0.58	8.4	5.7	0.60	302	0.32	0.02	1.8	7.2
S048446		0.94	2.72	0.10	0.6	0.114	0.012	0.55	6.7	4.0	0.52	279	0.28	0.02	1.6	6.7
S048447		0.56	1.60	0.13	0.4	0.073	0.008	0.30	5.1	2.1	0.53	166	0.22	0.01	0.9	3.7
S048448		1.17	3.93	0.12	0.8	0.205	0.015	0.77	10.6	4.6	1.06	322	0.69	0.02	2.2	8.7
S048449		0.72	2.48	0.10	0.5	0.091	0.009	0.45	9.4	3.3	0.59	130	0.44	0.02	1.3	5.4
S048450		0.72	2.44	0.13	0.4	0.075	0.007	0.43	8.1	3.8	0.60	313	0.48	0.02	1.3	4.8

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Finalized Date: 4-JUL-2018
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CERTIFICATE OF ANALYSIS WH18143309

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl
	Units	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
	LOD	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.01	0.005	0.02
S048411		370	12.9	123.0	<0.002	0.82	0.58	15.6	1	2.1	99.2	0.55	<0.05	7.48	0.366	1.10
S048412		160	11.2	82.1	<0.002	0.86	0.54	10.4	<1	1.4	121.0	0.35	<0.05	4.81	0.215	0.81
S048413		240	11.2	77.5	<0.002	0.80	0.51	10.4	1	1.7	116.0	0.37	<0.05	4.87	0.232	0.97
S048414		540	20.7	178.5	<0.002	1.88	0.63	22.9	1	2.7	105.5	0.89	0.05	12.55	0.550	1.78
S048415		480	9.4	151.5	<0.002	0.96	0.64	19.3	1	2.5	141.0	0.81	<0.05	11.00	0.455	1.31
S048416		470	8.4	109.5	<0.002	1.73	0.49	14.1	1	2.2	233	0.59	<0.05	8.47	0.359	1.97
S048417		310	15.2	161.0	<0.002	2.99	0.63	22.3	1	2.4	128.5	0.72	<0.05	10.25	0.453	2.63
S048418		320	5.7	32.9	<0.002	0.89	0.44	4.2	1	0.5	511	0.15	<0.05	2.23	0.080	0.49
S048419		260	4.4	34.9	<0.002	0.85	0.90	4.3	1	0.5	496	0.17	<0.05	2.57	0.100	0.79
S048420		410	15.5	63.0	<0.002	2.30	54.2	7.0	2	1.1	791	0.34	0.05	4.97	0.188	16.40
S048421		140	5.2	30.9	<0.002	1.01	1.57	4.0	1	0.5	1025	0.17	<0.05	2.70	0.087	1.39
S048422		130	2.9	17.6	<0.002	0.64	0.24	2.4	1	0.3	1325	0.09	<0.05	1.43	0.045	1.04
S048423		170	3.8	27.4	<0.002	0.75	2.14	3.2	1	0.5	854	0.12	<0.05	2.12	0.059	1.39
S048424		260	4.4	23.8	<0.002	0.71	24.6	3.1	1	0.5	556	0.11	<0.05	1.78	0.059	3.32
S048425		250	4.7	20.6	<0.002	0.74	21.8	3.7	2	0.5	555	0.09	<0.05	1.63	0.062	3.17
S048426		240	8.4	51.5	<0.002	1.60	1.49	7.9	1	0.9	505	0.29	0.05	4.06	0.171	2.00
S048427		180	14.8	103.0	<0.002	2.56	0.42	10.3	<1	1.5	402	0.49	0.10	8.33	0.304	1.64
S048428		120	6.8	36.9	<0.002	1.14	0.35	4.0	<1	0.6	1035	0.20	<0.05	3.57	0.120	1.46
S048429		160	2.7	15.9	<0.002	0.52	0.16	2.1	1	0.2	1895	0.08	0.05	1.38	0.045	0.77
S048430		170	2.3	12.4	<0.002	0.43	0.09	1.8	1	0.2	1740	0.06	<0.05	1.10	0.036	0.71
S048431		140	6.4	39.6	0.019	1.34	1.27	4.7	2	0.6	1660	0.19	<0.05	3.37	0.110	3.23
S048432		230	3.9	17.2	<0.002	0.64	0.62	2.5	<1	0.3	1530	0.08	<0.05	1.68	0.049	1.49
S048433		60	0.5	0.6	<0.002	0.02	0.08	0.2	<1	<0.2	76.2	<0.05	<0.05	0.08	0.005	<0.02
S048434		310	5.6	20.4	0.003	1.28	30.5	3.1	2	0.4	1430	0.11	<0.05	1.89	0.061	2.73
S048435		290	4.7	16.6	<0.002	1.38	41.3	2.8	2	0.3	1420	0.09	0.05	1.58	0.052	2.68
S048436		220	3.8	18.7	0.002	0.65	0.31	2.3	<1	0.3	1540	0.09	0.05	1.73	0.054	1.20
S048437		610	1.8	6.4	<0.002	0.23	0.17	1.2	1	<0.2	1665	<0.05	<0.05	0.68	0.020	0.26
S048438		250	4.6	14.5	0.002	0.47	0.24	1.8	<1	0.3	1670	0.08	<0.05	1.47	0.043	0.35
S048439		200	6.2	25.2	<0.002	0.80	0.43	3.0	<1	0.5	1565	0.13	<0.05	2.41	0.071	0.91
S048440		450	6.1	24.7	0.002	0.79	0.56	2.9	<1	0.5	1660	0.13	<0.05	2.39	0.072	1.90
S048441		150	3.1	12.3	0.002	0.53	4.19	2.5	2	0.2	1765	0.07	0.05	1.22	0.040	1.43
S048442		500	17.2	62.1	0.002	4.83	127.0	9.0	3	1.3	415	0.38	0.12	5.31	0.272	32.4
S048443		740	7.5	42.0	0.005	1.32	0.61	5.6	2	0.8	1750	0.22	0.08	3.64	0.138	1.93
S048444		350	4.4	28.1	0.002	0.90	0.24	3.6	1	0.4	1950	0.14	0.05	2.39	0.098	0.70
S048445		840	3.9	26.2	<0.002	0.79	0.17	3.4	1	0.5	2030	0.13	<0.05	2.22	0.091	0.28
S048446		540	3.3	23.3	<0.002	0.75	0.11	2.9	<1	0.4	1885	0.12	<0.05	1.89	0.096	0.20
S048447		1860	2.5	13.0	<0.002	0.38	0.10	2.0	<1	0.2	2550	0.07	<0.05	1.24	0.040	0.13
S048448		400	5.8	31.2	0.003	0.89	0.21	3.6	1	0.5	1650	0.15	<0.05	2.91	0.101	0.34
S048449		660	3.8	19.7	0.002	0.57	0.16	2.7	<1	0.3	2800	0.09	0.05	2.00	0.057	0.20
S048450		230	3.3	19.7	<0.002	0.51	0.15	2.1	1	0.3	2110	0.09	<0.05	1.85	0.054	0.10

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.
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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 4-JUL-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18143309

Sample Description	Method Analyte Units LOD	ME-MS61 U ppm 0.1	ME-MS61 V ppm 1	ME-MS61 W ppm 0.1	ME-MS61 Y ppm 0.1	ME-MS61 Zn ppm 2	ME-MS61 Zr ppm 0.5	As-OG62 As % 0.001
S048411		1.8	114	1.0	17.1	68	83.6	
S048412		1.2	73	0.7	12.0	48	58.0	
S048413		1.3	75	0.9	12.8	63	58.8	
S048414		2.4	149	1.8	24.8	103	124.5	
S048415		2.1	125	1.6	22.6	123	107.5	
S048416		1.7	97	1.8	17.2	70	84.2	
S048417		1.8	142	6.4	22.9	58	102.0	
S048418		1.5	24	1.1	11.1	38	25.0	
S048419		1.5	27	1.8	10.1	36	32.0	
S048420		4.0	54	5.5	15.9	54	54.8	1.505
S048421		2.0	22	1.7	14.0	30	30.1	
S048422		2.3	14	0.3	11.8	14	14.9	
S048423		1.3	17	0.7	8.2	10	18.2	
S048424		1.3	19	0.8	11.3	11	19.1	1.530
S048425		1.2	19	0.8	9.8	12	17.6	1.290
S048426		1.6	43	1.0	13.2	44	52.5	
S048427		2.5	70	0.9	18.7	53	84.7	
S048428		1.9	27	1.0	11.6	20	38.1	
S048429		1.4	12	0.3	8.1	6	14.9	
S048430		1.3	10	0.1	8.6	6	11.3	
S048431		2.6	34	0.5	15.1	36	30.5	
S048432		2.3	13	0.5	9.8	455	14.5	
S048433		0.2	1	<0.1	2.3	3	1.7	
S048434		2.8	19	1.0	11.4	15	18.9	1.060
S048435		2.3	17	0.9	10.5	22	16.7	1.545
S048436		2.6	15	0.5	13.6	8	15.1	
S048437		1.8	6	0.1	9.0	2	7.4	
S048438		2.7	12	0.2	11.6	5	13.1	
S048439		2.8	21	0.3	14.0	12	20.6	
S048440		3.0	22	0.4	12.6	10	21.1	
S048441		2.1	12	0.8	12.6	8	12.4	
S048442		2.4	74	9.7	18.2	130	60.6	4.46
S048443		3.0	40	2.0	15.9	34	41.0	
S048444		2.5	26	0.3	13.9	20	22.8	
S048445		2.5	23	0.3	13.3	12	24.1	
S048446		1.7	22	0.3	10.3	13	22.1	
S048447		2.5	13	0.2	10.6	5	16.0	
S048448		3.1	28	0.4	15.4	18	26.1	
S048449		3.2	17	0.2	17.5	14	19.0	
S048450		2.1	17	0.2	11.0	10	15.7	

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Project: Nadaleen

Finalized Date: 4-JUL-2018
Account: RCM

CERTIFICATE OF ANALYSIS WH18143309

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Applies to Method: REE's may not be totally soluble in this method.
ME-MS61

LABORATORY ADDRESSES

Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.

Applies to Method:				
	BAG-06	CRU-31	CRU-QC	LOG-21
	LOG-21d	LOG-23	PUL-31	PUL-31d
	PUL-QC	SPL-21	SPL-21d	WEI-21

Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Applies to Method:				
	As-OG62	Au-AA25	Hg-MS42	ME-MS61
	ME-OG62			

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VANCOUVER BC V6B 1L8

Finalized Date: 4-JUL-2018
Account: RCM

CERTIFICATE WH18143312

Project: Nadaleen

P.O. No.: N18-012

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 18-JUN-2018.

The following have access to data associated with this certificate:

ANDREW CARNE	JULIA LANE	

SAMPLE PREPARATION

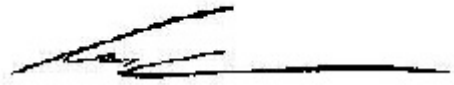
ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
BAG-06	Double Bagging Coarse Rejects
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
LOG-23	Pulp Login - Rcvd with Barcode
LOG-21d	Sample logging - ClientBarCode Dup
SPL-21d	Split sample - duplicate
PUL-31d	Pulverize Split - duplicate

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid ICP-MS	
Hg-MS42	Trace Hg by ICPMS	ICP-MS
ME-OG62	Ore Grade Elements - Four Acid	ICP-AES
As-OG62	Ore Grade As - Four Acid	ICP-AES

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature: 

Colin Ramshaw, Vancouver Laboratory Manager

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VANCOUVER BC V6B 1L8

Finalized Date: 4-JUL-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18143312

Sample Description	Method Analyte Units LOD	WEI-21 Recvd Wt. kg 0.02	Au-AA25 Au ppm 0.01	ME-MS61 Ag ppm 0.01	ME-MS61 Al % 0.01	ME-MS61 As ppm 0.2	ME-MS61 Ba ppm 10	ME-MS61 Be ppm 0.05	ME-MS61 Bi ppm 0.01	ME-MS61 Ca % 0.01	ME-MS61 Cd ppm 0.02	ME-MS61 Ce ppm 0.01	ME-MS61 Co ppm 0.1	ME-MS61 Cr ppm 1	ME-MS61 Cs ppm 0.05	ME-MS61 Cu ppm 0.2
S049741		4.09	0.47	0.15	6.30	1730	220	1.57	0.23	2.29	0.14	51.0	22.3	69	20.2	59.6
S049742		3.49	1.07	1.12	5.56	3840	140	1.38	0.21	0.36	0.21	47.8	20.8	75	17.20	58.5
S049743		3.50	0.77	0.45	6.76	1165	190	1.68	0.24	1.30	0.22	54.3	22.5	76	21.6	60.9
S049744		2.74	2.70	0.43	7.47	4230	210	1.84	0.28	0.37	0.23	63.4	25.9	86	22.8	67.8
S049745		3.84	0.91	0.15	4.90	1790	280	1.12	0.17	1.18	0.14	40.0	15.1	62	12.75	40.7
S049746		4.97	0.02	0.06	5.00	137.5	200	1.36	0.18	3.32	0.15	43.5	16.6	56	14.95	47.6
S049747		6.17	0.29	0.06	4.77	267	240	1.50	0.15	6.78	0.09	39.0	18.3	52	19.15	46.7
S049748		4.99	0.27	0.07	6.51	300	230	2.01	0.22	2.09	0.11	51.7	23.4	74	27.5	61.3
S049749		6.95	<0.01	<0.01	0.11	0.9	20	0.08	0.01	34.6	0.02	1.07	0.6	1	0.06	2.6
S049750		5.15	0.04	0.15	5.34	350	240	1.52	0.20	4.87	0.19	49.1	17.2	60	23.7	51.3
S049751		2.52	0.01	0.15	5.56	252	140	1.05	0.25	2.93	0.14	54.3	16.2	64	18.30	59.3
S049752		3.61	<0.01	0.10	5.22	132.5	330	1.02	0.22	2.95	0.12	49.4	14.2	59	19.90	47.9
S049753		4.71	<0.01	0.10	6.44	165.0	350	1.42	0.26	1.62	0.19	59.1	19.1	73	25.3	54.5
S049754		3.67	0.01	0.11	7.40	202	350	1.98	0.30	2.07	0.16	73.9	21.5	77	28.4	64.8
S049755		4.23	0.48	0.14	5.74	743	300	1.32	0.23	5.76	0.13	57.1	16.1	57	14.50	49.2
S049756		6.27	0.41	0.09	6.63	1425	350	1.46	0.27	3.74	0.30	67.8	16.7	66	15.50	48.5
S049757		2.42	0.04	0.07	5.74	409	290	1.37	0.22	2.64	0.35	57.2	17.0	66	14.55	47.6
S049758		5.39	0.02	0.45	7.17	534	300	1.86	0.30	1.76	0.17	71.9	20.1	72	21.3	57.9
S049759		6.22	<0.01	0.09	6.55	157.0	300	1.85	0.28	1.62	0.16	72.2	18.9	69	23.0	54.4
S049760		5.43	<0.01	0.10	7.45	258	210	2.24	0.31	2.59	0.16	70.5	19.2	73	23.2	61.4
S049761		3.64	1.42	0.45	6.25	1210	350	1.34	0.24	2.10	0.26	61.2	20.4	65	15.15	53.6
S049762		5.33	2.29	0.08	6.88	4690	330	1.47	0.28	1.28	0.23	65.6	18.3	79	16.00	64.1
S049763		5.21	2.29	0.07	7.23	9880	230	1.58	0.29	0.39	0.26	70.0	17.6	83	17.45	58.6
S049764		6.95	<0.01	<0.01	0.16	20.7	20	0.08	0.01	34.7	<0.02	1.30	0.5	1	0.11	1.9
S049765		6.07	0.12	0.07	6.90	287	290	1.68	0.29	1.56	0.25	72.1	18.8	70	23.6	49.7
S049766		0.26	8.42	1.56	1.87	>10000	100	0.18	0.52	7.10	0.85	28.1	6.3	46	3.10	27.8
S049767		12.30	0.02	0.07	6.70	231	300	1.82	0.30	4.27	0.15	70.6	16.4	59	28.4	48.0
S049768		6.26	0.16	0.09	7.71	605	280	2.00	0.35	2.13	0.23	78.9	20.0	73	25.5	60.2
S049769		<0.02	0.15	0.08	7.48	579	270	2.03	0.31	2.08	0.21	77.5	19.9	73	25.0	58.8
S049770		10.84	<0.01	0.07	5.92	151.5	320	1.59	0.25	3.47	0.18	58.4	17.7	62	22.1	54.3
S049771		10.60	0.01	0.05	5.54	157.0	210	1.20	0.19	3.24	0.11	47.0	16.9	75	21.5	51.6
S049772		5.29	0.22	0.04	3.35	792	120	0.64	0.09	5.40	0.04	30.4	11.7	52	9.32	31.1
S049773		5.05	0.12	0.04	3.31	669	120	0.59	0.10	5.18	0.05	30.4	11.8	54	8.67	29.7
S049774		5.56	0.53	0.04	2.90	1260	110	0.47	0.08	6.73	0.07	25.5	10.8	50	7.24	25.5
S049775		0.26	8.02	0.26	3.90	>10000	190	0.55	0.19	10.15	0.75	44.8	11.4	45	8.94	54.6
S049776		5.70	0.85	0.04	2.41	4310	70	0.32	0.09	0.43	0.06	22.6	9.2	59	4.36	25.0
S049777		5.35	0.99	0.03	2.17	3760	80	0.35	0.07	0.34	0.04	21.4	8.0	58	3.73	21.1
S049778		5.80	0.84	0.05	3.96	1180	120	0.63	0.11	5.14	0.10	33.9	12.6	60	9.98	33.7
S049779		5.20	1.20	0.05	5.39	1890	180	0.73	0.15	0.89	0.12	40.9	18.6	81	11.45	47.0
S049780		5.32	0.94	0.05	4.99	1700	150	0.92	0.14	2.45	0.09	41.2	14.1	76	13.15	44.5

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VANCOUVER BC V6B 1L8

Finalized Date: 4-JUL-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18143312

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Hg-MS42	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni
	Units	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2
S049741		5.75	15.95	0.12	2.9	6.35	0.058	3.11	24.7	12.2	1.39	1120	0.56	0.03	10.1	42.2
S049742		6.04	14.60	0.12	2.8	10.90	0.062	2.66	23.3	13.7	0.46	192	1.04	0.02	9.0	44.7
S049743		5.50	17.60	0.12	3.3	7.83	0.066	3.26	27.0	14.5	0.89	814	1.37	0.03	10.9	46.7
S049744		5.16	19.85	0.14	3.6	10.35	0.072	3.59	30.8	16.7	0.58	182	1.09	0.03	12.5	48.7
S049745		4.06	12.30	0.10	2.2	6.07	0.041	2.33	19.9	12.8	0.75	453	0.39	0.02	7.8	33.4
S049746		4.70	13.05	0.10	2.4	2.45	0.062	2.42	21.1	16.3	1.52	637	0.38	0.02	8.3	35.4
S049747		4.64	12.05	0.09	2.3	2.59	0.051	2.32	19.2	20.5	3.52	1030	0.44	0.03	7.7	34.9
S049748		5.59	17.00	0.12	3.1	2.52	0.071	3.15	25.3	26.5	1.31	551	0.43	0.03	10.7	44.7
S049749		0.13	0.34	0.11	<0.1	0.011	<0.005	0.05	1.3	<0.2	1.97	133	<0.05	0.04	0.2	0.2
S049750		5.74	13.75	0.11	2.6	2.94	0.065	2.58	23.7	24.2	2.44	692	1.10	0.03	8.5	40.4
S049751		7.86	13.15	0.07	2.4	2.89	0.059	2.78	24.9	11.9	1.61	536	1.86	0.03	7.8	44.2
S049752		5.48	12.20	0.06	2.3	2.28	0.055	2.50	22.5	35.0	1.52	551	1.03	0.02	7.3	35.5
S049753		4.94	14.85	0.07	2.8	1.490	0.064	3.13	28.1	48.8	1.55	430	0.73	0.03	8.8	40.4
S049754		5.37	17.90	0.09	3.1	2.88	0.080	3.69	36.3	40.7	1.44	424	0.92	0.04	10.8	48.3
S049755		4.67	13.75	0.06	2.6	3.80	0.062	2.84	26.3	12.7	3.12	702	0.70	0.03	8.5	34.6
S049756		5.49	16.20	0.09	2.9	3.62	0.069	3.28	32.3	14.5	1.99	912	0.95	0.03	9.6	38.3
S049757		4.89	13.95	0.08	2.5	1.710	0.065	2.80	26.6	16.8	1.40	486	0.51	0.02	8.5	35.4
S049758		5.70	17.85	0.09	3.0	3.10	0.082	3.53	34.2	22.4	1.12	412	0.75	0.03	10.4	43.6
S049759		5.13	15.50	0.08	2.9	2.92	0.066	3.23	29.9	36.5	1.01	374	0.55	0.03	9.3	40.6
S049760		6.21	18.10	0.08	3.2	4.41	0.083	3.74	35.0	20.5	1.46	598	1.10	0.03	10.4	44.9
S049761		4.36	15.55	0.08	2.5	4.68	0.051	3.09	28.3	15.0	1.13	1020	0.53	0.03	9.0	41.1
S049762		4.86	17.05	0.09	2.9	6.78	0.058	3.35	31.6	14.9	0.88	597	0.38	0.03	10.4	41.4
S049763		5.74	17.60	0.10	3.0	7.27	0.066	3.57	33.7	15.3	0.58	169	0.66	0.03	10.5	39.8
S049764		0.15	0.42	0.07	0.1	0.015	<0.005	0.05	1.3	0.9	2.30	143	<0.05	0.06	0.3	0.4
S049765		5.24	16.50	0.07	2.8	3.66	0.077	3.42	34.9	20.1	1.05	456	0.61	0.03	10.0	37.1
S049766		2.58	4.81	0.06	0.9	15.35	0.026	0.85	14.0	20.7	0.17	341	5.78	0.01	2.3	19.8
S049767		5.20	16.05	0.07	3.0	2.50	0.075	3.27	34.4	27.1	2.46	636	0.40	0.04	10.7	32.8
S049768		5.27	18.90	0.08	3.4	3.18	0.083	3.82	39.1	19.8	1.35	705	0.59	0.03	11.9	42.2
S049769		5.16	18.35	0.09	3.1	3.09	0.085	3.71	37.2	20.5	1.31	684	0.56	0.03	11.3	41.5
S049770		5.48	14.60	0.07	2.6	1.480	0.072	2.87	27.4	29.6	1.64	640	0.58	0.03	8.9	38.4
S049771		4.49	12.65	0.08	2.1	0.569	0.059	2.50	21.4	60.0	1.64	547	0.43	0.03	7.1	34.9
S049772		3.91	7.77	0.05	1.4	1.830	0.036	1.59	14.6	14.0	2.19	1060	0.33	0.02	4.5	23.5
S049773		3.75	7.34	<0.05	1.3	1.590	0.029	1.56	14.8	12.4	2.09	997	0.35	0.02	4.3	22.7
S049774		3.35	6.30	<0.05	1.3	2.71	0.026	1.37	12.4	9.7	3.05	1390	0.38	0.02	3.8	20.2
S049775		3.08	9.82	0.06	1.8	29.0	0.037	1.82	23.7	11.6	0.37	767	3.36	0.02	5.1	27.1
S049776		2.34	5.50	0.05	1.2	4.93	0.017	1.12	11.1	6.9	0.27	341	0.36	0.01	3.6	18.5
S049777		1.91	4.98	<0.05	1.2	4.54	0.011	1.03	10.4	7.0	0.22	243	0.29	0.01	3.3	16.7
S049778		3.71	8.90	<0.05	1.7	3.41	0.038	1.87	16.5	10.1	2.22	1740	0.46	0.02	5.0	26.5
S049779		3.41	12.25	0.07	2.3	4.15	0.030	2.60	19.3	9.6	0.63	537	0.52	0.02	6.4	36.9
S049780		3.09	11.55	0.05	2.1	3.54	0.037	2.43	19.7	12.2	1.17	677	0.52	0.02	6.4	33.0

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 4-JUL-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18143312

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl
	Units	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
	LOD	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.01	0.005	0.02
S049741		580	22.6	120.0	<0.002	5.99	5.20	21.4	1	1.9	97.7	0.70	<0.05	8.73	0.540	16.30
S049742		390	23.9	106.0	0.002	6.83	11.10	13.3	1	1.8	77.2	0.60	0.06	8.04	0.502	26.6
S049743		410	25.9	129.0	<0.002	5.87	7.74	19.3	1	2.1	63.2	0.74	0.06	9.85	0.565	19.75
S049744		350	22.0	146.0	0.002	5.70	13.50	19.4	1	2.2	75.1	0.85	0.07	10.95	0.618	27.8
S049745		400	9.1	85.1	<0.002	4.15	6.36	11.4	1	1.5	64.4	0.52	<0.05	6.75	0.467	19.35
S049746		430	13.0	91.5	<0.002	3.93	1.24	15.7	<1	1.5	163.5	0.56	0.08	6.88	0.471	4.71
S049747		660	15.5	89.4	<0.002	3.75	1.61	14.6	1	1.4	163.5	0.52	0.05	6.39	0.437	5.29
S049748		530	19.1	125.5	<0.002	5.84	1.45	20.6	1	2.0	104.0	0.70	0.05	9.09	0.587	4.85
S049749		50	0.6	1.4	<0.002	0.01	0.06	0.2	<1	<0.2	79.2	<0.05	<0.05	0.12	0.005	<0.02
S049750		410	19.2	98.6	0.004	5.13	0.99	18.1	2	1.6	236	0.59	0.07	7.75	0.444	6.61
S049751		390	24.5	109.0	0.004	7.78	0.88	14.0	1	1.6	144.0	0.56	0.07	8.36	0.441	7.00
S049752		360	18.7	104.0	0.002	4.28	0.58	13.1	1	1.5	148.5	0.52	0.05	7.96	0.429	8.21
S049753		490	20.7	132.0	0.003	2.28	0.53	16.8	<1	1.8	146.0	0.65	0.07	9.66	0.514	5.28
S049754		990	24.2	156.0	0.002	4.48	0.69	20.6	1	2.1	170.0	0.75	0.07	11.00	0.561	10.80
S049755		690	17.4	114.5	0.002	3.76	5.69	14.8	<1	1.7	239	0.61	0.06	8.49	0.454	12.25
S049756		840	26.0	135.5	<0.002	4.76	6.40	18.8	1	2.0	185.5	0.68	0.08	10.00	0.505	10.50
S049757		430	17.8	116.0	<0.002	4.34	2.45	15.0	<1	1.7	180.5	0.60	0.06	8.55	0.495	4.78
S049758		410	29.3	149.5	0.003	5.50	2.85	19.8	1	2.2	137.0	0.75	0.08	10.90	0.518	9.74
S049759		370	23.6	136.5	<0.002	4.97	0.69	16.6	1	1.9	112.5	0.71	0.07	10.15	0.492	10.75
S049760		390	31.8	155.0	0.002	5.63	2.46	20.8	<1	2.3	121.0	0.76	0.06	11.05	0.527	14.10
S049761		700	18.6	124.0	<0.002	3.82	8.70	17.2	1	1.8	147.5	0.64	0.06	8.89	0.506	17.70
S049762		550	16.1	136.5	0.002	4.81	13.55	16.7	<1	1.9	103.5	0.71	<0.05	10.20	0.600	21.6
S049763		460	22.8	145.0	<0.002	5.90	19.85	15.6	<1	2.2	84.1	0.75	0.08	10.65	0.579	25.9
S049764		60	0.6	1.4	<0.002	0.02	0.16	0.2	1	<0.2	83.8	<0.05	<0.05	0.14	0.008	0.07
S049765		390	26.0	148.0	0.002	5.18	2.81	17.9	<1	2.2	96.0	0.68	0.08	11.00	0.511	10.10
S049766		510	10.3	38.5	0.003	4.85	158.5	3.0	2	1.1	351	0.17	0.10	3.31	0.101	43.4
S049767		520	23.0	151.0	0.002	4.63	1.39	16.2	1	2.1	139.0	0.74	0.06	11.65	0.488	8.36
S049768		480	33.6	169.5	<0.002	5.03	2.82	19.7	<1	2.4	114.5	0.82	0.07	12.50	0.572	14.15
S049769		470	32.6	165.0	<0.002	4.90	2.65	19.4	1	2.3	112.5	0.77	0.07	12.15	0.547	13.95
S049770		440	27.6	130.0	<0.002	4.45	0.70	16.6	1	1.8	129.0	0.63	<0.05	9.14	0.478	5.87
S049771		470	10.0	106.5	<0.002	2.56	0.47	16.7	<1	1.4	110.5	0.52	0.06	6.79	0.503	2.68
S049772		300	5.3	65.0	<0.002	1.84	1.82	10.1	<1	0.9	143.0	0.32	0.05	4.03	0.340	6.53
S049773		320	5.3	61.8	<0.002	1.68	1.45	9.5	<1	0.9	132.0	0.30	<0.05	4.09	0.344	5.11
S049774		310	4.4	52.7	<0.002	1.41	3.11	8.5	<1	0.7	154.5	0.27	<0.05	3.65	0.312	11.95
S049775		540	17.1	80.5	0.002	3.66	105.5	8.2	1	1.8	446	0.37	0.21	7.28	0.225	68.5
S049776		310	3.8	43.7	<0.002	2.13	3.58	4.5	<1	0.7	26.0	0.25	<0.05	3.50	0.336	14.20
S049777		300	2.6	38.1	<0.002	1.62	3.43	4.0	<1	0.6	26.6	0.24	<0.05	3.18	0.336	14.90
S049778		350	5.5	73.2	<0.002	2.04	3.09	13.4	<1	1.1	121.5	0.34	0.05	4.70	0.372	11.70
S049779		430	7.0	95.4	<0.002	3.29	2.65	11.4	<1	1.3	47.9	0.49	<0.05	6.36	0.491	12.85
S049780		400	5.4	90.8	<0.002	2.14	2.64	12.5	<1	1.2	72.7	0.47	0.05	6.20	0.484	10.40

***** See Appendix Page for comments regarding this certificate *****

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VANCOUVER BC V6B 1L8

Finalized Date: 4-JUL-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18143312

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	As-OG62
	Analyte	U	V	W	Y	Zn	Zr	As
	Units	ppm	ppm	ppm	ppm	ppm	ppm	%
	LOD	0.1	1	0.1	0.1	2	0.5	0.001
S049741		1.9	139	8.7	17.2	86	99.2	
S049742		1.8	132	10.0	14.7	116	96.8	
S049743		2.1	152	9.2	16.6	114	114.5	
S049744		2.3	170	12.9	21.5	107	122.0	
S049745		1.4	123	7.7	13.3	77	77.0	
S049746		1.4	120	5.2	15.0	97	82.4	
S049747		1.4	117	3.5	15.1	70	82.6	
S049748		1.9	155	4.2	16.8	79	105.5	
S049749		0.1	1	<0.1	2.2	4	1.4	
S049750		2.2	123	2.6	17.5	122	91.4	
S049751		2.1	121	2.7	17.1	86	89.1	
S049752		1.8	116	2.1	15.8	79	87.0	
S049753		2.1	144	2.3	17.9	103	103.5	
S049754		2.5	157	2.6	26.1	99	123.0	
S049755		1.9	121	7.6	18.5	80	97.7	
S049756		2.2	144	7.5	24.5	140	109.5	
S049757		1.8	130	6.6	16.8	201	98.1	
S049758		2.3	143	8.2	20.9	110	117.0	
S049759		2.2	136	2.0	18.4	94	108.5	
S049760		2.4	153	1.9	21.2	97	118.0	
S049761		1.9	141	8.5	20.4	118	98.5	
S049762		2.1	159	9.4	20.4	115	111.5	
S049763		2.3	152	11.1	21.2	144	114.5	
S049764		0.3	2	0.1	2.5	4	2.3	
S049765		2.2	134	6.0	20.4	165	111.5	
S049766		4.8	36	7.2	15.3	67	30.3	6.80
S049767		2.4	124	3.7	21.5	109	118.0	
S049768		2.6	146	5.5	22.9	148	128.5	
S049769		2.5	141	5.2	22.5	127	121.5	
S049770		1.9	126	2.4	19.6	148	99.1	
S049771		1.4	145	2.3	15.8	88	83.6	
S049772		0.8	96	3.7	11.6	45	53.8	
S049773		0.8	95	3.6	11.2	46	52.0	
S049774		0.8	95	3.2	9.3	44	48.3	
S049775		4.5	64	8.1	21.0	138	66.8	3.26
S049776		0.7	95	4.7	8.5	34	45.6	
S049777		0.7	89	4.8	8.8	28	42.0	
S049778		1.0	126	4.3	11.9	80	63.2	
S049779		1.3	174	6.7	12.4	86	82.7	
S049780		1.3	160	5.4	13.2	68	82.4	

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To: **ATAC RESOURCES LTD.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Project: Nadaleen

Finalized Date: 4-JUL-2018
Account: RCM

CERTIFICATE OF ANALYSIS WH18143312

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Applies to Method: REE's may not be totally soluble in this method.
ME-MS61

LABORATORY ADDRESSES

Applies to Method: Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.

BAG-06	CRU-31	CRU-QC	LOG-21
LOG-21d	LOG-23	PUL-31	PUL-31d
PUL-QC	SPL-21	SPL-21d	WEI-21

Applies to Method: Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

As-OG62	Au-AA25	Hg-MS42	ME-MS61
ME-OG62			

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Finalized Date: 4-JUL-2018
Account: RCM

CERTIFICATE WH18145757

Project: Nadaleen

P.O. No.: N18-013

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 20-JUN-2018.

The following have access to data associated with this certificate:

ANDREW CARNE	JULIA LANE	

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
BAG-06	Double Bagging Coarse Rejects
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
LOG-23	Pulp Login - Rcvd with Barcode
LOG-21d	Sample logging - ClientBarCode Dup
SPL-21d	Split sample - duplicate
PUL-31d	Pulverize Split - duplicate

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid ICP-MS	
Hg-MS42	Trace Hg by ICPMS	ICP-MS

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:

Colin Ramshaw, Vancouver Laboratory Manager

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Finalized Date: 4-JUL-2018
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CERTIFICATE OF ANALYSIS WH18145757

Sample Description	Method Analyte Units LOD	WEI-21 Recvd Wt. kg 0.02	Au-AA25 Au ppm 0.01	ME-MS61 Ag ppm 0.01	ME-MS61 Al % 0.01	ME-MS61 As ppm 0.2	ME-MS61 Ba ppm 10	ME-MS61 Be ppm 0.05	ME-MS61 Bi ppm 0.01	ME-MS61 Ca % 0.01	ME-MS61 Cd ppm 0.02	ME-MS61 Ce ppm 0.01	ME-MS61 Co ppm 0.1	ME-MS61 Cr ppm 1	ME-MS61 Cs ppm 0.05	ME-MS61 Cu ppm 0.2
S048451		7.70	<0.01	0.03	0.88	14.0	210	0.35	0.06	35.1	0.11	15.10	3.4	10	3.22	9.9
S048452		7.64	<0.01	0.05	1.68	36.9	220	0.48	0.10	31.4	0.24	28.5	6.3	17	6.00	18.7
S048453		7.30	<0.01	0.05	1.48	17.5	200	0.48	0.08	32.8	0.18	27.1	5.4	15	5.40	16.6
S048454		7.66	0.01	0.03	0.34	4.5	200	0.21	0.03	36.9	0.06	7.42	1.6	3	0.96	4.1
S048455		6.99	<0.01	0.03	0.32	6.5	190	0.20	0.03	36.7	0.05	7.80	1.5	4	0.84	3.7
S048456		7.51	<0.01	0.05	1.56	26.3	230	0.48	0.11	31.5	0.22	27.2	5.5	16	5.82	16.3
S048457		7.29	<0.01	0.05	1.48	17.7	180	0.54	0.08	31.5	0.12	23.2	5.3	15	6.44	15.0
S048458		1.89	<0.01	0.24	4.69	16.6	250	1.06	0.15	8.87	0.28	43.0	16.5	53	4.78	67.1
S048459		1.79	<0.01	0.38	3.20	187.0	180	0.93	0.12	20.2	0.20	43.6	10.4	32	7.91	33.2
S048460		9.95	<0.01	0.10	7.35	348	280	1.88	0.28	11.55	0.04	84.0	18.8	57	27.5	27.1
S048461		8.55	<0.01	0.11	4.61	40.4	190	1.23	0.18	19.15	0.02	55.3	11.3	32	18.25	17.5
S048462		9.60	<0.01	0.16	7.79	29.9	360	2.23	0.34	6.25	0.04	95.9	18.6	65	38.2	32.9
S048463		10.39	0.01	0.08	7.32	27.1	280	2.06	0.28	6.78	0.02	86.9	14.8	50	32.5	26.0
S048464		10.65	<0.01	0.08	5.23	41.5	300	1.40	0.21	15.40	0.03	63.9	10.1	37	21.3	19.5
S048465		<0.02	<0.01	0.08	5.53	42.8	290	1.46	0.22	14.65	0.05	65.9	10.4	39	22.5	20.0
S048466		8.96	0.01	0.07	3.22	147.0	130	1.05	0.12	20.8	0.07	42.3	5.6	24	10.90	11.4
S048467		10.18	0.36	0.09	6.07	546	240	1.58	0.24	11.80	0.08	70.5	10.9	47	22.2	22.9
S048468		11.18	0.01	0.16	6.37	234	250	2.25	0.38	7.88	0.41	78.4	17.2	55	22.3	36.4
S048469		11.30	<0.01	0.23	7.37	190.5	820	2.12	0.30	7.51	0.03	88.7	14.6	49	26.4	27.5
S048470		0.26	0.57	0.61	6.73	464	230	2.34	0.25	2.28	0.35	63.1	23.0	96	39.2	68.3
S048471		12.23	0.03	0.07	7.45	68.1	280	2.05	0.30	8.52	0.03	83.3	16.2	52	30.0	30.2
S048472		11.38	0.37	0.08	7.22	403	250	2.20	0.31	8.14	0.11	86.2	15.2	55	26.4	30.7
S048473		11.27	0.02	0.07	8.93	115.5	360	3.30	0.39	2.69	0.23	113.0	18.0	67	39.7	37.7
S048474		11.19	0.02	0.08	8.40	132.5	320	3.31	0.38	2.39	0.31	105.0	17.5	65	41.3	38.1
S048475		6.78	<0.01	0.02	0.41	0.8	40	0.21	0.04	32.1	<0.02	1.75	0.8	1	0.17	2.2
S048476		10.99	0.01	0.10	8.82	66.2	790	3.06	0.32	1.75	0.27	106.5	16.7	68	47.5	39.7
S048477		10.89	0.01	0.12	9.18	83.1	540	3.31	0.30	1.61	0.30	119.0	16.4	69	47.3	37.4
S048478		11.54	<0.01	0.11	8.78	190.5	310	3.83	0.29	1.96	0.23	109.0	17.3	64	42.9	42.2
S048479		10.80	0.03	0.10	8.81	185.5	340	3.53	0.31	2.75	0.35	105.0	16.7	63	35.7	37.1
S048480		11.02	0.01	0.07	8.87	107.5	310	3.79	0.34	2.10	0.17	104.5	17.6	69	42.2	39.5
S048481		11.10	<0.01	0.08	9.22	69.2	350	3.55	0.30	2.10	0.14	102.0	17.1	72	47.3	41.3
S048482		0.26	1.10	1.43	1.57	871	190	0.42	0.13	28.5	0.69	18.85	4.6	29	3.37	44.5
S048483		11.12	0.01	0.08	8.77	113.0	300	3.31	0.32	1.51	0.18	96.3	15.7	66	42.9	39.7
S048484		10.78	<0.01	0.08	4.50	112.0	210	1.28	0.17	2.81	0.11	40.6	15.8	61	21.2	43.0
S048485		11.55	0.12	0.07	3.48	179.0	120	0.83	0.12	2.44	0.10	33.5	11.1	56	12.05	34.0
S048486		5.10	0.29	0.16	6.57	619	200	1.79	0.26	2.08	0.20	61.4	21.4	77	26.0	60.6
S048487		5.72	0.27	0.15	6.31	555	190	1.72	0.25	1.98	0.17	58.5	19.9	75	24.7	58.9
S048488		9.33	0.03	0.10	6.72	499	220	2.07	0.27	2.71	0.15	62.3	21.6	77	26.0	63.0
S048489		9.99	0.32	0.05	5.52	2240	180	1.41	0.21	2.87	0.09	52.8	14.9	62	18.10	50.6
S048490		9.40	0.24	0.09	6.68	1410	240	1.65	0.27	6.41	0.15	66.2	15.2	53	21.2	39.6

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 4-JUL-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18145757

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Hg-MS42	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni
	Units	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2
S048451		0.72	2.43	0.08	0.5	0.088	0.010	0.42	6.9	5.0	0.59	279	0.41	0.02	1.3	4.6
S048452		1.09	4.71	0.08	0.7	0.194	0.021	0.81	14.4	8.0	0.55	132	0.88	0.02	2.5	9.9
S048453		1.02	4.11	0.08	0.7	0.140	0.018	0.70	14.0	7.1	0.57	134	0.76	0.02	2.2	8.6
S048454		0.35	0.95	0.08	0.2	0.033	0.005	0.16	3.7	2.2	0.53	95	0.18	0.01	0.5	1.3
S048455		0.33	0.88	0.08	0.2	0.035	0.005	0.15	3.8	1.7	0.49	91	0.17	0.01	0.5	1.4
S048456		1.03	4.11	0.08	0.8	0.163	0.019	0.74	14.2	7.3	0.59	143	0.69	0.02	2.4	8.8
S048457		1.10	3.89	0.10	0.7	0.124	0.017	0.70	12.0	7.0	0.77	443	0.67	0.02	2.2	8.2
S048458		4.69	11.80	0.08	1.9	0.126	0.057	1.15	20.2	52.7	1.72	794	0.44	0.63	7.0	32.2
S048459		2.99	7.69	0.07	1.2	0.153	0.030	1.09	20.5	21.7	0.83	756	0.79	0.26	4.7	21.1
S048460		3.38	17.25	0.12	2.0	0.087	0.056	3.27	45.0	15.4	0.78	825	0.49	0.09	8.3	33.2
S048461		2.51	11.00	0.09	1.4	0.070	0.033	2.11	28.2	11.5	1.36	743	0.29	0.06	5.5	22.4
S048462		3.74	21.3	0.19	2.5	0.108	0.065	3.84	49.3	21.8	1.43	614	0.40	0.10	11.5	39.1
S048463		3.80	18.15	0.13	2.4	0.097	0.061	3.35	44.5	19.5	2.31	1140	0.27	0.09	10.0	30.1
S048464		2.79	12.95	0.08	1.9	0.556	0.043	2.47	32.8	11.5	1.86	630	0.39	0.05	7.1	20.3
S048465		2.94	13.45	0.09	2.0	0.544	0.044	2.59	33.9	11.7	1.96	636	0.41	0.06	7.3	20.9
S048466		2.31	7.66	0.07	1.2	1.575	0.028	1.55	21.6	5.4	2.83	872	0.33	0.03	4.3	11.1
S048467		2.88	15.10	0.09	2.1	4.42	0.050	2.93	36.7	11.9	1.73	1540	0.38	0.04	8.0	21.3
S048468		4.80	16.55	0.10	2.3	2.36	0.064	3.00	38.3	12.0	3.55	1100	5.73	0.04	9.2	39.4
S048469		3.20	18.80	0.15	2.3	1.350	0.057	3.45	45.8	20.5	1.64	642	0.35	0.07	9.8	26.5
S048470		6.29	17.75	0.12	2.4	3.18	0.070	3.28	31.1	18.9	0.79	643	4.79	0.03	9.3	49.5
S048471		3.25	18.30	0.13	2.3	1.670	0.054	3.48	45.2	19.5	1.38	571	0.44	0.07	9.6	31.3
S048472		3.82	18.25	0.12	2.4	3.61	0.060	3.40	43.3	14.5	1.81	2000	1.54	0.05	10.2	32.6
S048473		4.23	23.9	0.20	3.1	1.310	0.079	4.11	55.2	35.7	1.53	529	2.82	0.05	12.9	38.3
S048474		4.36	23.8	0.18	3.0	1.040	0.076	4.06	51.8	27.5	1.53	524	2.99	0.05	12.5	38.7
S048475		0.13	1.33	0.10	0.2	<0.005	<0.005	0.15	1.4	1.3	1.79	108	0.07	0.21	1.0	<0.2
S048476		4.72	22.9	0.18	3.3	0.428	0.080	4.29	52.7	29.5	1.72	543	3.38	0.05	13.1	37.3
S048477		4.37	25.6	0.19	3.3	0.376	0.071	4.40	58.3	28.1	1.62	439	3.19	0.05	13.5	37.0
S048478		4.24	26.5	0.16	3.4	0.815	0.076	4.27	52.2	24.1	1.27	392	3.63	0.05	13.7	42.8
S048479		4.24	26.6	0.16	3.2	1.200	0.074	4.45	50.0	19.6	1.43	639	2.54	0.06	13.3	37.3
S048480		4.54	27.2	0.17	3.3	0.715	0.080	4.42	48.0	25.4	1.43	431	3.12	0.05	13.8	39.9
S048481		4.77	26.2	0.17	3.4	0.923	0.079	4.54	49.8	28.3	1.83	571	3.13	0.05	13.5	38.4
S048482		1.19	4.10	<0.05	0.7	2.17	0.022	0.68	9.4	6.3	1.24	4520	1.37	0.10	2.2	13.4
S048483		4.39	25.5	0.15	3.3	0.641	0.077	4.41	46.4	29.8	1.48	393	2.21	0.05	13.0	36.1
S048484		3.68	12.45	0.08	2.3	1.415	0.049	2.08	19.3	61.9	1.26	472	0.53	0.02	7.2	32.2
S048485		3.17	9.25	0.07	1.7	1.715	0.039	1.60	16.3	19.9	1.03	537	0.49	0.02	5.6	22.5
S048486		5.35	18.20	0.10	3.3	6.08	0.069	3.19	29.1	19.1	1.14	542	0.88	0.03	11.7	43.9
S048487		5.04	17.30	0.09	3.0	5.65	0.061	3.09	27.4	18.7	1.08	585	0.87	0.03	11.1	41.0
S048488		5.47	18.00	0.11	3.2	3.81	0.077	3.26	29.4	22.2	1.45	503	0.62	0.03	11.9	44.8
S048489		4.39	14.80	0.10	2.7	3.52	0.053	2.67	24.5	15.9	1.45	702	0.45	0.03	10.0	28.5
S048490		4.49	17.35	0.11	2.6	6.90	0.062	3.24	33.0	12.0	2.18	1520	0.91	0.04	10.2	33.0

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 4-JUL-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18145757

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl
	Units	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
	LOD	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.01	0.005	0.02
S048451		2330	3.2	19.6	0.002	0.53	0.21	2.8	2	0.3	2340	0.09	<0.05	1.61	0.055	0.13
S048452		160	5.9	37.1	0.004	0.91	0.31	4.6	2	0.5	2320	0.16	0.05	3.05	0.100	0.31
S048453		180	5.3	32.9	0.003	0.86	0.27	4.4	2	0.5	2340	0.15	<0.05	2.69	0.089	0.29
S048454		140	1.4	7.0	<0.002	0.20	0.13	1.2	2	<0.2	2520	<0.05	<0.05	0.69	0.020	0.06
S048455		140	1.3	6.4	<0.002	0.18	0.13	1.1	1	<0.2	2430	<0.05	<0.05	0.69	0.019	0.06
S048456		180	5.5	33.1	0.003	0.88	0.35	4.1	2	0.5	2220	0.17	0.05	2.93	0.096	0.40
S048457		230	6.1	30.8	0.003	0.80	0.38	4.0	2	0.5	1790	0.15	<0.05	2.69	0.088	0.31
S048458		450	9.8	52.2	<0.002	0.15	0.49	15.5	1	1.3	346	0.48	0.07	5.93	0.450	0.44
S048459		750	6.9	52.5	<0.002	0.17	0.58	8.7	1	0.9	447	0.31	0.07	4.84	0.239	1.08
S048460		740	15.6	151.5	<0.002	0.68	0.64	12.4	1	1.8	295	0.59	0.05	13.20	0.297	2.12
S048461		580	11.0	97.7	<0.002	1.08	0.36	7.5	1	1.2	418	0.40	<0.05	7.85	0.192	1.93
S048462		380	21.0	153.5	<0.002	1.98	0.54	15.7	1	2.3	159.0	0.77	0.05	15.25	0.371	2.64
S048463		390	16.9	160.0	<0.002	1.82	0.47	13.0	1	2.0	164.0	0.68	0.05	13.45	0.334	2.12
S048464		500	13.4	114.0	<0.002	1.74	0.41	9.3	1	1.4	296	0.49	<0.05	9.50	0.246	4.13
S048465		490	14.0	120.0	<0.002	1.87	0.40	9.5	1	1.5	283	0.53	<0.05	9.95	0.255	4.46
S048466		560	7.9	67.4	<0.002	1.02	0.75	5.8	1	0.9	335	0.31	<0.05	5.61	0.149	4.57
S048467		490	13.0	133.5	<0.002	2.08	4.72	10.6	1	1.7	236	0.59	<0.05	11.25	0.278	13.95
S048468		800	22.9	132.0	0.006	3.11	2.71	12.5	2	2.6	187.5	0.67	0.08	11.70	0.287	8.38
S048469		340	16.2	151.5	<0.002	2.11	1.71	13.3	1	2.2	198.5	0.68	0.05	13.70	0.328	3.99
S048470		220	48.6	162.5	0.002	4.70	5.53	21.1	1	2.7	90.4	0.60	<0.05	9.21	0.411	12.55
S048471		290	19.3	150.0	<0.002	2.40	0.90	12.5	1	2.1	181.0	0.66	0.06	13.95	0.326	7.53
S048472		560	19.1	149.5	0.004	2.97	3.93	13.5	1	2.4	181.0	0.71	0.06	14.50	0.322	11.45
S048473		690	20.1	184.5	0.005	3.79	1.42	17.0	1	3.5	185.5	0.94	0.06	19.00	0.386	9.18
S048474		670	19.0	179.0	0.009	3.25	1.42	16.7	1	3.3	173.5	0.89	0.06	18.00	0.373	5.00
S048475		60	0.8	4.5	<0.002	0.01	0.11	0.3	1	0.2	80.3	0.09	<0.05	0.30	0.006	0.06
S048476		660	18.9	192.5	0.014	1.96	0.97	16.2	2	3.2	143.0	0.94	<0.05	18.80	0.379	1.94
S048477		740	19.3	190.0	0.011	1.54	0.86	16.1	1	3.0	146.0	0.96	0.05	21.5	0.377	2.35
S048478		660	35.4	167.5	0.010	3.52	1.11	17.4	1	3.1	135.0	0.98	<0.05	19.90	0.375	3.55
S048479		560	20.5	162.0	0.007	3.59	1.44	17.5	1	2.9	150.5	0.95	<0.05	18.95	0.378	4.60
S048480		820	20.0	165.5	0.011	3.28	1.06	18.4	1	3.4	139.0	1.01	<0.05	19.05	0.382	3.97
S048481		560	17.5	176.5	0.011	1.93	0.86	18.7	2	3.1	143.0	0.96	<0.05	18.95	0.403	2.63
S048482		400	61.4	27.3	0.002	0.72	8.35	6.1	2	0.7	1175	0.16	<0.05	2.51	0.081	5.80
S048483		550	15.8	164.5	0.010	2.24	2.52	17.7	1	3.0	133.5	0.94	<0.05	17.90	0.389	3.09
S048484		380	13.5	86.2	<0.002	2.85	1.32	14.9	1	1.6	111.5	0.52	<0.05	6.67	0.415	3.35
S048485		310	9.4	63.3	<0.002	2.22	2.11	10.4	1	1.6	91.8	0.39	<0.05	5.23	0.354	3.16
S048486		470	22.8	133.5	0.002	5.19	10.15	20.5	1	2.3	93.3	0.78	0.06	9.94	0.565	14.20
S048487		470	21.0	127.0	0.002	4.80	8.95	20.3	1	2.1	85.3	0.73	0.06	9.05	0.553	12.95
S048488		550	22.7	133.0	0.002	5.08	9.82	21.4	1	2.1	104.5	0.78	0.05	10.35	0.584	8.84
S048489		480	10.3	109.0	<0.002	3.73	6.29	17.1	<1	1.7	94.1	0.67	<0.05	8.46	0.502	9.57
S048490		570	21.9	133.5	0.004	4.19	9.11	14.8	1	2.0	133.0	0.77	0.06	10.95	0.400	16.20

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Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	U	V	W	Y	Zn	Zr
	Units	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.1	1	0.1	0.1	2	0.5
S048451		2.5	16	0.2	14.7	10	23.7
S048452		3.2	30	0.3	20.4	30	27.0
S048453		3.2	27	0.3	21.4	22	25.1
S048454		1.8	7	0.1	9.4	5	7.5
S048455		1.9	7	0.1	9.2	4	6.9
S048456		2.8	28	0.6	16.5	25	26.5
S048457		2.2	26	0.4	15.9	18	26.6
S048458		1.5	122	1.6	15.4	84	63.5
S048459		1.7	55	3.2	15.4	51	45.9
S048460		2.9	60	1.4	17.1	91	70.2
S048461		2.4	38	1.2	13.5	56	46.6
S048462		3.5	76	1.8	17.9	123	85.0
S048463		2.8	65	1.4	19.2	77	81.1
S048464		2.6	48	1.0	14.1	55	66.0
S048465		2.6	51	1.1	14.5	63	68.9
S048466		1.7	32	1.3	12.0	67	43.0
S048467		2.9	57	2.9	16.5	77	75.9
S048468		4.0	106	4.3	23.9	146	81.7
S048469		2.8	64	7.6	17.6	83	79.2
S048470		1.8	139	11.1	18.7	103	81.0
S048471		3.3	64	2.3	15.8	76	79.5
S048472		3.5	95	3.6	20.3	81	87.3
S048473		4.2	148	3.4	25.5	111	103.0
S048474		4.1	150	2.7	24.4	123	101.5
S048475		0.6	1	<0.1	3.2	4	4.0
S048476		4.2	164	1.8	26.0	107	113.5
S048477		4.6	172	2.1	27.0	107	109.5
S048478		4.3	164	1.9	24.6	89	119.5
S048479		4.2	149	5.0	22.8	128	114.0
S048480		4.4	166	2.4	25.6	89	118.0
S048481		4.1	165	1.7	23.2	83	119.5
S048482		3.8	26	9.0	14.1	123	27.7
S048483		3.6	156	3.3	22.7	94	113.0
S048484		1.5	125	2.4	13.9	64	80.0
S048485		1.1	98	3.6	11.0	55	63.7
S048486		2.2	164	10.3	20.5	94	120.5
S048487		2.0	157	9.8	19.3	78	112.0
S048488		2.1	163	11.4	20.6	86	127.5
S048489		1.8	130	10.8	17.9	57	97.4
S048490		2.7	104	10.2	17.7	79	101.0

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.

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www.alsglobal.com/geochemistry

To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Project: Nadaleen

Finalized Date: 4-JUL-2018
Account: RCM

CERTIFICATE OF ANALYSIS WH18145757

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Applies to Method: REE's may not be totally soluble in this method.
ME-MS61

LABORATORY ADDRESSES

Applies to Method: Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.

BAG-06	CRU-31	CRU-QC	LOG-21
LOG-21d	LOG-23	PUL-31	PUL-31d
PUL-QC	SPL-21	SPL-21d	WEI-21

Applies to Method: Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Au-AA25	Hg-MS42	ME-MS61

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 12-JUL-2018
Account: RCM

CERTIFICATE WH18145754

Project: Nadaleen

P.O. No.: N18-014

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 20-JUN-2018.

The following have access to data associated with this certificate:

ANDREW CARNE	JULIA LANE	

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
BAG-06	Double Bagging Coarse Rejects
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
LOG-23	Pulp Login - Rcvd with Barcode
LOG-21d	Sample logging - ClientBarCode Dup
SPL-21d	Split sample - duplicate
PUL-31d	Pulverize Split - duplicate

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid ICP-MS	
Hg-MS42	Trace Hg by ICPMS	ICP-MS
ME-OG62	Ore Grade Elements - Four Acid	ICP-AES
As-OG62	Ore Grade As - Four Acid	ICP-AES

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:

Colin Ramshaw, Vancouver Laboratory Manager

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Finalized Date: 12-JUL-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18145754

Sample Description	Method	WEI-21	Au-AA25	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Recvd Wt.	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu
	Units	kg	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.02	0.01	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2
S049781		5.43	0.20	0.57	5.66	799	180	1.89	0.23	2.45	0.14	53.0	14.7	68	20.9	48.1
S049782		11.52	<0.01	0.08	6.10	144.5	250	2.24	0.25	2.50	0.16	59.7	16.2	71	25.0	52.5
S049783		11.21	<0.01	0.08	6.12	199.0	230	2.15	0.25	2.59	0.14	58.7	16.1	68	20.1	51.2
S049784		5.06	1.50	0.11	5.72	859	210	1.78	0.23	1.96	0.21	55.2	15.4	68	16.10	50.1
S049785		0.26	5.43	1.61	3.66	>10000	170	0.91	0.15	10.70	1.13	41.0	10.7	48	10.40	36.5
S049786		5.14	3.14	0.21	6.38	4480	250	1.65	0.28	0.09	0.31	64.1	16.1	80	17.20	56.7
S049787		5.98	1.02	0.12	6.44	2950	240	1.87	0.27	0.53	0.26	63.3	15.6	84	19.55	55.9
S049788		5.18	1.84	0.42	6.52	657	240	2.12	0.28	1.42	0.31	63.9	15.8	79	22.9	59.3
S049789		6.90	<0.01	0.01	0.18	4.4	30	0.11	0.02	33.1	<0.02	1.42	0.5	1	0.12	1.9
S049790		10.47	0.03	0.09	6.00	196.5	320	1.71	0.24	2.13	0.18	60.1	14.8	64	24.8	48.9
S049791		11.38	0.19	0.13	7.33	208	240	2.19	0.32	1.47	0.30	74.8	16.8	81	32.0	57.0
S049792		11.96	<0.01	0.06	5.82	224	200	1.65	0.20	3.01	0.09	55.2	16.9	70	24.8	51.1
S049793		6.43	0.45	0.06	4.70	1465	140	1.30	0.15	2.83	0.10	44.8	14.1	60	15.00	42.1
S049794		10.93	0.55	0.06	2.34	1165	80	0.44	0.08	1.83	0.06	26.1	7.9	40	5.39	19.4
S049795		10.04	0.17	0.07	3.99	344	230	0.88	0.16	3.87	0.13	38.6	10.7	49	10.00	38.9
S049796		9.56	0.28	0.07	5.43	722	190	1.31	0.20	3.10	0.14	50.3	15.7	59	15.35	56.0
S049797		3.78	0.08	0.07	2.84	222	100	0.63	0.10	3.25	0.09	27.8	7.2	37	6.41	24.5
S049798		6.97	<0.01	<0.01	0.20	2.1	20	0.14	0.02	31.9	<0.02	1.20	0.4	1	0.08	1.8
S049799		2.96	0.47	0.08	5.61	1825	200	1.15	0.21	2.40	0.16	52.8	15.2	63	14.95	56.9
S049800		2.98	0.53	0.10	5.47	1820	200	1.14	0.20	2.35	0.20	52.6	16.1	64	15.05	54.8
S049801		10.99	<0.01	0.05	6.51	203	250	1.57	0.24	2.87	0.37	65.1	18.0	68	21.6	60.5
S049802		11.25	<0.01	0.05	7.47	152.0	260	1.90	0.29	1.40	0.05	74.0	21.9	81	30.0	64.5
S049803		10.93	0.01	0.05	6.05	336	280	1.55	0.23	2.52	0.20	60.2	19.4	70	21.5	59.3
S049804		11.82	0.16	0.07	5.50	353	220	1.42	0.21	2.74	0.03	54.7	16.1	63	17.75	48.3
S049805		12.30	<0.01	0.05	5.75	110.5	260	1.43	0.20	1.71	<0.02	58.0	17.0	70	24.3	50.2
S049806		11.67	0.02	0.06	6.32	153.0	350	1.73	0.24	1.69	0.07	62.9	21.6	77	25.7	57.5
S049807		0.26	0.55	0.64	6.97	479	230	2.29	0.24	2.30	0.35	62.9	22.9	104	39.3	69.3
S049808		12.54	<0.01	0.05	5.44	56.3	220	1.41	0.19	1.77	0.06	51.7	17.9	74	27.0	53.2
S049809		12.29	<0.01	0.07	7.41	52.8	290	2.41	0.29	1.38	0.11	74.2	21.3	84	43.5	67.1
S049810		11.55	<0.01	0.04	4.48	33.8	250	1.16	0.14	2.14	0.06	43.2	15.1	67	23.7	42.8
S049811		12.91	0.02	0.09	4.03	183.0	200	1.19	0.15	2.44	0.07	40.8	13.4	53	18.10	35.0
S049812		12.32	<0.01	0.06	4.33	150.0	240	1.20	0.22	2.14	0.08	41.1	13.2	57	17.65	36.0
S049813		12.32	<0.01	0.04	6.38	93.1	320	1.94	0.24	1.61	0.10	62.7	18.6	79	37.2	63.3
S049814		<0.02	<0.01	0.05	6.57	92.2	380	1.83	0.25	1.68	0.08	63.1	18.6	81	38.0	64.4
S049815		12.05	<0.01	0.05	4.35	32.6	420	1.21	0.18	2.24	0.04	41.5	11.0	53	22.7	36.8
S049816		11.50	<0.01	0.07	4.02	35.3	390	1.13	0.17	2.46	0.06	37.3	12.1	48	17.90	30.5
S049817		12.40	<0.01	0.07	6.14	203	230	1.69	0.25	2.37	0.09	57.3	18.5	71	22.3	52.5
S049818		11.03	<0.01	0.06	7.04	76.2	270	1.99	0.29	1.91	0.10	70.4	19.8	76	28.8	61.2
S049819		12.66	<0.01	0.09	8.03	79.0	270	2.59	0.35	1.45	0.08	75.9	21.9	77	36.6	62.4
S049820		10.48	0.01	0.09	5.30	42.1	210	1.63	0.22	2.52	0.04	51.1	13.8	51	17.90	39.6

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
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1016-510 W HASTINGS ST
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Finalized Date: 12-JUL-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18145754

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Hg-MS42	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni
	Units	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2
S049781		4.25	14.30	0.12	2.7	4.12	0.063	2.71	26.6	26.7	1.20	664	0.54	0.03	8.8	31.2
S049782		4.60	15.35	0.14	2.8	2.44	0.070	2.91	29.6	40.5	1.29	497	0.88	0.03	9.5	35.6
S049783		4.64	15.35	0.12	2.9	4.01	0.066	2.93	29.3	22.5	1.30	534	0.84	0.03	9.5	35.7
S049784		4.63	14.80	0.11	2.6	7.38	0.060	2.72	27.7	15.4	1.02	748	0.88	0.03	8.8	35.9
S049785		2.88	9.68	0.12	1.7	10.15	0.044	1.58	20.7	18.1	0.53	971	2.06	0.12	5.3	22.5
S049786		4.69	16.75	0.13	3.0	12.00	0.060	3.07	31.6	14.9	0.41	70	1.55	0.03	9.9	39.2
S049787		4.75	16.75	0.12	3.0	9.66	0.062	3.13	31.1	14.7	0.60	274	1.72	0.03	9.5	40.8
S049788		4.78	16.70	0.12	3.0	8.41	0.068	3.21	30.5	15.1	0.95	543	1.95	0.03	11.1	42.6
S049789		0.13	0.60	0.15	0.1	0.025	0.008	0.07	1.4	1.1	1.82	125	0.05	0.08	0.4	0.4
S049790		4.30	15.60	0.10	2.8	1.775	0.067	2.93	28.6	22.7	1.50	380	1.18	0.03	10.5	33.3
S049791		5.21	19.10	0.12	3.3	3.25	0.077	3.54	36.9	20.0	1.17	393	2.18	0.03	11.3	44.4
S049792		4.47	14.20	0.11	2.5	0.841	0.061	2.74	26.8	42.6	1.77	641	0.28	0.03	8.7	32.2
S049793		4.20	11.45	0.10	2.1	2.53	0.047	2.20	21.9	16.0	1.28	811	0.29	0.02	6.9	29.5
S049794		2.50	5.96	0.07	1.4	2.52	0.023	0.98	12.9	23.6	0.72	524	0.36	0.02	3.4	14.5
S049795		4.73	9.97	0.08	1.9	1.950	0.041	1.86	19.1	16.3	1.64	906	0.99	0.02	5.9	23.9
S049796		5.27	13.70	0.10	2.4	2.51	0.061	2.55	24.7	15.6	1.44	902	1.40	0.02	7.9	31.8
S049797		3.14	6.89	0.07	1.5	0.941	0.026	1.29	14.0	12.8	1.27	764	0.47	0.01	3.9	15.5
S049798		0.14	0.68	0.07	0.1	0.008	0.005	0.07	1.2	0.9	2.09	140	<0.05	0.09	0.3	<0.2
S049799		4.49	14.15	0.08	2.5	2.31	0.052	2.61	26.2	9.6	1.22	751	0.48	0.02	8.5	30.0
S049800		4.64	13.90	0.09	2.5	2.85	0.058	2.49	26.7	9.9	1.19	746	0.53	0.02	8.5	30.4
S049801		5.18	16.80	0.10	3.0	0.366	0.069	3.06	31.6	16.0	1.83	940	0.34	0.03	10.6	36.0
S049802		5.31	19.75	0.12	3.3	0.101	0.077	3.62	36.2	20.6	2.13	489	0.48	0.03	12.8	40.3
S049803		5.30	15.80	0.10	2.8	0.348	0.064	2.89	29.2	21.4	1.74	735	0.42	0.02	10.5	36.1
S049804		4.50	14.25	0.10	2.6	0.554	0.057	2.62	27.0	12.3	1.42	856	0.23	0.02	8.6	32.4
S049805		4.46	14.50	0.10	2.6	0.091	0.061	2.75	28.0	38.5	1.84	489	0.26	0.03	9.5	33.3
S049806		4.79	16.05	0.10	2.9	0.088	0.064	3.04	29.3	43.1	2.02	450	0.36	0.03	11.2	37.1
S049807		6.37	18.50	0.10	2.5	3.37	0.069	3.35	31.5	18.5	0.81	664	4.96	0.03	8.5	49.9
S049808		4.54	13.85	0.10	2.6	0.045	0.055	2.47	25.4	80.3	1.81	510	0.43	0.08	8.4	32.6
S049809		4.85	19.80	0.12	3.4	0.031	0.079	3.39	36.0	98.3	2.12	356	0.44	0.06	13.4	41.4
S049810		4.07	11.35	0.09	2.3	0.025	0.043	1.81	21.2	63.9	1.77	593	0.51	0.11	6.9	28.5
S049811		3.50	10.15	0.08	2.0	0.354	0.039	1.80	20.0	95.6	1.45	515	0.60	0.07	6.0	24.9
S049812		3.27	11.35	0.15	2.0	0.026	0.043	2.03	20.4	103.5	1.47	541	0.67	0.04	6.9	26.2
S049813		4.47	17.50	0.15	2.9	0.024	0.064	2.97	30.1	116.5	1.92	349	0.69	0.13	11.8	39.9
S049814		4.59	17.45	0.16	3.0	0.024	0.063	3.10	30.8	116.0	1.99	361	0.67	0.14	11.8	40.6
S049815		3.41	11.20	0.13	2.1	0.024	0.043	2.05	20.4	82.7	1.55	559	0.55	0.19	7.0	22.9
S049816		3.40	10.45	0.13	1.8	0.070	0.039	1.95	18.5	85.8	1.51	632	0.45	0.03	6.1	22.0
S049817		4.55	16.80	0.15	2.7	0.125	0.062	2.90	28.4	127.5	2.04	466	0.59	0.03	10.2	35.7
S049818		5.01	18.80	0.18	2.8	0.175	0.071	3.39	33.9	88.0	2.08	406	0.57	0.03	11.7	39.2
S049819		5.53	21.9	0.17	3.4	1.650	0.087	4.02	37.6	32.5	2.03	305	1.04	0.04	13.0	45.2
S049820		4.15	14.35	0.14	2.2	1.170	0.058	2.61	25.6	34.4	1.72	549	0.85	0.03	8.0	29.8

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Finalized Date: 12-JUL-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18145754

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl
	Units	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
	LOD	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.01	0.005	0.02
S049781		440	13.8	119.5	0.002	3.63	3.28	15.5	1	1.6	97.4	0.61	0.05	8.44	0.503	10.30
S049782		510	17.5	133.5	0.002	4.01	0.49	16.7	1	1.8	120.0	0.66	0.05	8.99	0.521	5.93
S049783		510	19.0	129.0	0.002	4.06	0.67	15.7	1	1.8	112.0	0.67	0.05	9.22	0.502	8.67
S049784		450	18.4	117.5	0.002	4.29	6.86	15.0	1	1.7	92.6	0.61	<0.05	8.48	0.473	17.10
S049785		490	17.3	72.5	<0.002	4.50	123.5	8.6	3	1.3	407	0.37	0.12	5.47	0.257	31.0
S049786		290	24.1	136.5	0.004	4.88	15.10	13.2	1	2.0	56.4	0.71	0.07	9.85	0.491	24.9
S049787		330	19.7	140.0	0.005	4.81	4.69	16.1	2	1.8	69.3	0.67	0.06	9.69	0.512	20.2
S049788		330	20.2	143.5	0.006	4.58	4.47	16.1	2	1.9	101.5	0.68	0.09	9.67	0.498	16.40
S049789		70	0.6	2.6	<0.002	0.01	0.11	0.2	1	<0.2	81.4	<0.05	<0.05	0.17	0.006	0.06
S049790		450	19.3	131.0	0.003	2.34	3.85	16.5	1	1.9	149.0	0.65	0.06	8.87	0.460	4.18
S049791		360	23.8	161.5	0.007	4.54	0.78	20.2	2	2.2	112.0	0.78	0.07	11.45	0.512	7.91
S049792		580	16.1	123.0	<0.002	2.01	0.46	15.5	<1	1.6	171.0	0.63	0.06	7.85	0.507	2.30
S049793		360	14.9	94.9	<0.002	3.33	3.28	13.8	1	1.3	140.0	0.52	<0.05	6.36	0.449	7.45
S049794		230	7.7	44.1	<0.002	1.71	2.24	5.2	<1	0.7	77.0	0.25	<0.05	3.91	0.275	7.14
S049795		340	13.0	80.8	<0.002	3.49	2.80	11.0	1	1.3	199.5	0.42	<0.05	5.70	0.349	4.85
S049796		390	30.1	113.0	<0.002	4.51	3.10	14.7	1	1.7	153.0	0.57	0.05	7.41	0.444	7.46
S049797		260	12.1	56.2	<0.002	1.83	1.45	7.0	1	0.8	121.5	0.29	<0.05	4.22	0.266	2.42
S049798		60	0.6	1.9	<0.002	0.01	0.07	0.2	2	<0.2	73.4	<0.05	<0.05	0.15	0.005	0.03
S049799		440	15.0	118.5	<0.002	4.09	3.25	15.5	<1	2.0	111.0	0.62	0.06	7.81	0.499	7.74
S049800		430	16.0	115.5	<0.002	4.21	3.56	14.5	1	1.9	109.5	0.60	<0.05	7.69	0.489	9.24
S049801		620	17.5	151.5	<0.002	3.06	0.67	18.3	<1	2.0	139.5	0.73	<0.05	9.06	0.546	2.06
S049802		540	18.2	184.0	<0.002	0.49	0.48	20.9	<1	2.4	88.0	0.83	0.05	10.70	0.577	1.25
S049803		560	17.3	143.5	<0.002	2.91	0.97	18.1	1	1.9	123.5	0.67	0.05	8.35	0.537	2.05
S049804		490	14.1	135.0	<0.002	3.92	1.61	14.6	1	1.7	155.0	0.61	0.05	7.87	0.465	3.26
S049805		500	13.2	150.5	<0.002	0.44	0.40	15.0	1	1.7	96.1	0.62	0.06	8.14	0.495	0.99
S049806		480	16.1	173.0	<0.002	0.26	0.61	17.1	1	1.9	135.5	0.71	0.05	8.90	0.551	1.17
S049807		220	51.7	171.0	0.002	4.59	5.35	20.7	1	2.7	91.7	0.60	<0.05	9.04	0.418	12.60
S049808		460	13.5	148.5	<0.002	0.19	0.39	14.9	<1	1.7	81.4	0.61	0.05	7.59	0.505	1.00
S049809		530	15.0	211	<0.002	0.15	0.51	22.0	1	2.3	82.1	0.86	0.06	10.65	0.599	1.26
S049810		380	12.3	104.0	<0.002	0.13	0.37	12.1	<1	1.2	96.4	0.49	<0.05	6.32	0.439	0.67
S049811		510	16.6	98.9	<0.002	0.77	0.74	9.7	<1	1.2	115.0	0.44	<0.05	6.21	0.343	1.25
S049812		340	10.9	119.5	<0.002	0.12	0.43	12.4	1	1.3	130.0	0.47	<0.05	6.84	0.374	0.83
S049813		610	9.9	188.0	<0.002	0.09	0.41	20.7	1	1.9	97.1	0.73	<0.05	9.53	0.575	1.15
S049814		640	11.1	190.0	<0.002	0.10	0.39	20.9	1	1.9	101.5	0.76	<0.05	9.92	0.608	1.22
S049815		350	8.8	120.5	<0.002	0.24	0.34	12.3	1	1.3	106.5	0.50	<0.05	7.15	0.363	0.78
S049816		340	10.8	102.0	<0.002	0.44	0.48	10.8	1	1.2	122.5	0.43	<0.05	6.55	0.303	0.74
S049817		510	13.7	141.0	<0.002	1.00	0.50	19.2	1	1.9	187.0	0.68	<0.05	9.25	0.492	1.04
S049818		1110	13.1	169.5	<0.002	0.75	0.53	21.7	1	2.1	151.5	0.74	0.05	10.45	0.521	1.18
S049819		580	21.7	204	0.003	2.24	0.70	24.4	1	2.5	117.5	0.83	0.05	12.20	0.528	2.66
S049820		410	17.3	122.0	<0.002	2.01	1.86	15.5	1	1.6	138.0	0.54	<0.05	8.08	0.355	2.69

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 12-JUL-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18145754

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	As-OG62
	Analyte	U	V	W	Y	Zn	Zr	As
	Units	ppm	ppm	ppm	ppm	ppm	ppm	%
	LOD	0.1	1	0.1	0.1	2	0.5	0.001
S049781		1.7	133	7.0	18.2	84	98.9	
S049782		1.9	143	2.0	20.2	84	101.5	
S049783		2.1	136	2.9	19.7	90	101.0	
S049784		1.8	130	6.2	18.3	95	92.9	
S049785		2.5	72	13.2	20.9	119	62.3	4.50
S049786		2.3	143	9.6	21.5	88	107.0	
S049787		2.5	155	8.2	21.3	88	106.0	
S049788		2.8	153	6.6	20.8	95	106.0	
S049789		0.2	1	0.1	2.6	3	2.7	
S049790		2.0	129	3.0	19.0	88	98.4	
S049791		3.2	156	2.7	22.9	125	117.0	
S049792		1.6	136	1.9	19.7	83	89.7	
S049793		1.3	121	6.4	16.0	75	75.6	
S049794		0.8	78	2.1	8.2	39	46.7	
S049795		1.2	96	4.7	14.1	73	65.9	
S049796		1.5	122	6.9	17.7	89	83.2	
S049797		0.9	71	3.1	10.4	56	50.7	
S049798		0.2	1	<0.1	2.6	3	2.0	
S049799		1.6	137	8.2	19.3	86	89.5	
S049800		1.6	132	8.3	19.1	106	89.0	
S049801		1.9	144	3.9	23.2	197	101.0	
S049802		2.2	153	2.9	24.9	78	119.5	
S049803		1.7	148	3.8	21.1	113	99.2	
S049804		1.6	123	5.2	19.8	55	91.5	
S049805		1.6	132	2.1	20.2	56	95.7	
S049806		1.8	146	1.6	21.3	75	105.0	
S049807		1.7	143	12.2	20.3	103	88.7	
S049808		1.5	137	1.2	18.7	62	91.8	
S049809		2.2	159	1.3	24.7	95	124.0	
S049810		1.3	120	0.8	15.5	58	80.7	
S049811		1.3	93	0.9	15.3	61	69.3	
S049812		1.4	94	0.9	14.9	67	74.1	
S049813		1.9	147	1.0	21.6	85	107.0	
S049814		2.0	151	1.1	21.5	90	109.5	
S049815		1.4	90	0.7	14.7	51	72.7	
S049816		1.3	77	0.7	13.7	52	63.1	
S049817		1.8	125	3.0	19.7	82	96.7	
S049818		2.1	136	1.2	26.9	96	114.0	
S049819		2.6	149	1.4	25.5	74	123.0	
S049820		1.7	98	1.7	16.4	44	78.9	

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Project: Nadaleen

Finalized Date: 12-JUL-2018
Account: RCM

CERTIFICATE OF ANALYSIS WH18145754

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Applies to Method: REE's may not be totally soluble in this method.
ME-MS61

LABORATORY ADDRESSES

Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.

Applies to Method:				
	BAG-06	CRU-31	CRU-QC	LOG-21
	LOG-21d	LOG-23	PUL-31	PUL-31d
	PUL-QC	SPL-21	SPL-21d	WEI-21

Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Applies to Method:				
	As-OG62	Au-AA25	Hg-MS42	ME-MS61
	ME-OG62			

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 8-JUL-2018
Account: RCM

CERTIFICATE WH18147024

Project: Nadaleen

P.O. No.: N18-015

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 21-JUN-2018.

The following have access to data associated with this certificate:

ANDREW CARNE	JULIA LANE	

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
BAG-06	Double Bagging Coarse Rejects
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
LOG-23	Pulp Login - Rcvd with Barcode
LOG-21d	Sample logging - ClientBarCode Dup
SPL-21d	Split sample - duplicate
PUL-31d	Pulverize Split - duplicate

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid ICP-MS	
Hg-MS42	Trace Hg by ICPMS	ICP-MS
ME-OG62	Ore Grade Elements - Four Acid	ICP-AES
As-OG62	Ore Grade As - Four Acid	ICP-AES

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:

Colin Ramshaw, Vancouver Laboratory Manager

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Finalized Date: 8-JUL-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18147024

Sample Description	Method Analyte Units LOD	WEI-21 Recvd Wt. kg 0.02	Au-AA25 Au ppm 0.01	ME-MS61 Ag ppm 0.01	ME-MS61 Al % 0.01	ME-MS61 As ppm 0.2	ME-MS61 Ba ppm 10	ME-MS61 Be ppm 0.05	ME-MS61 Bi ppm 0.01	ME-MS61 Ca % 0.01	ME-MS61 Cd ppm 0.02	ME-MS61 Ce ppm 0.01	ME-MS61 Co ppm 0.1	ME-MS61 Cr ppm 1	ME-MS61 Cs ppm 0.05	ME-MS61 Cu ppm 0.2
S049821		5.35	0.01	0.06	6.48	194.0	360	1.74	0.26	3.38	0.09	63.9	14.3	57	20.3	45.5
S049822		4.72	0.01	0.08	7.47	278	320	2.15	0.35	3.10	0.19	74.7	16.8	66	22.7	53.5
S049823		4.93	0.28	0.09	8.27	1695	170	2.24	0.34	1.84	0.11	80.7	21.9	73	28.1	59.8
S049824		0.26	7.87	0.25	3.82	>10000	180	0.60	0.18	10.30	0.68	43.8	10.8	43	8.74	52.3
S049825		5.68	0.30	0.08	7.90	1130	180	1.90	0.36	2.07	0.20	77.8	21.8	70	24.9	57.6
S049826		6.84	0.02	<0.01	0.07	4.9	20	0.07	0.04	25.1	0.05	1.16	0.7	<1	0.17	1.8
S049827		11.29	0.08	0.04	5.45	439	210	1.31	0.19	4.15	0.08	53.1	14.2	56	18.70	45.8
S049828		11.60	0.01	0.06	5.72	189.5	240	1.41	0.23	4.00	0.08	56.1	16.2	61	23.2	47.4
S049829		11.28	0.01	0.07	5.92	67.4	200	1.51	0.21	3.13	0.03	59.3	17.3	67	25.4	50.6
S049830		12.37	0.01	0.04	4.26	67.2	160	0.88	0.18	2.48	0.07	42.3	12.7	56	12.20	36.3
S049831		10.02	0.01	0.05	4.59	91.0	170	0.98	0.16	2.46	0.06	47.7	13.9	58	21.1	39.7
S049832		8.83	<0.01	0.05	4.49	8.6	210	0.99	0.17	2.38	0.08	45.1	13.7	56	29.7	40.3
S049833		8.81	0.01	0.04	2.77	9.1	220	0.46	0.10	2.45	0.06	29.8	7.9	43	12.55	24.4
S049834		7.94	<0.01	0.06	3.73	21.6	390	0.84	0.16	2.24	0.35	36.2	11.1	50	14.45	30.7
S049835		6.90	<0.01	0.05	5.84	19.9	280	1.51	0.21	3.40	0.12	57.9	16.4	62	33.6	49.1
S049836		8.05	0.01	0.05	6.39	28.7	360	1.65	0.26	2.94	0.02	61.6	17.0	63	34.8	50.9
S049837		9.01	0.01	0.05	7.21	30.2	370	1.91	0.29	2.31	0.02	72.0	18.4	67	44.1	54.9
S049838		8.96	<0.01	0.05	5.88	6.3	470	1.41	0.23	3.25	<0.02	57.4	15.4	57	40.5	45.0
S049839		9.08	0.01	0.05	6.63	36.0	410	1.70	0.26	2.41	0.02	64.0	17.8	65	45.9	50.5
S049840		8.89	0.01	0.07	7.77	14.4	340	2.33	0.34	2.30	0.39	78.6	19.1	73	52.2	50.6
S049841		9.27	<0.01	0.08	7.59	9.3	310	2.37	0.32	2.76	0.47	78.4	23.5	74	50.6	44.5
S049842		0.26	0.53	0.68	7.09	477	240	2.40	0.27	2.37	0.36	64.4	24.4	103	40.7	71.5
S049843		9.17	<0.01	0.06	6.37	5.7	250	1.75	0.26	2.01	0.31	64.0	17.1	69	43.9	46.8
S049844		8.87	0.01	0.08	6.65	18.0	290	1.92	0.27	1.91	0.21	66.4	19.7	71	40.6	45.3
S049845		8.01	<0.01	0.07	5.99	32.7	220	1.56	0.23	2.36	0.03	61.9	17.7	66	28.8	46.0
S049846		7.30	0.01	0.07	6.42	114.5	210	2.23	0.22	2.00	0.10	60.2	19.9	70	31.4	46.6
S049847		3.15	0.02	0.06	8.33	248	270	3.03	0.27	1.21	0.04	76.4	29.3	88	35.7	54.4
S049848		1.77	0.02	0.07	4.86	586	310	0.98	0.19	3.74	0.10	47.2	15.0	53	11.90	43.5
S049849		1.80	0.04	0.08	4.91	721	320	1.00	0.18	3.63	0.08	46.1	15.5	53	11.65	44.3
S049850		3.72	0.56	0.13	6.09	2660	270	1.76	0.22	3.38	0.10	56.6	23.3	68	21.7	52.9
S049851		3.46	0.03	0.07	6.16	1930	260	1.81	0.22	4.13	0.08	60.4	20.8	67	21.3	46.2
S049852		6.65	0.74	0.06	6.76	1855	360	1.47	0.27	3.07	0.14	66.1	23.1	73	16.95	60.1
S049853		7.89	0.01	0.05	6.85	236	320	1.65	0.27	2.39	0.19	66.0	21.2	77	21.8	64.5
S049854		7.79	0.08	0.06	7.01	552	260	1.80	0.27	2.73	0.34	67.5	21.4	74	24.2	62.5
S049855		7.66	0.01	0.06	7.73	124.0	230	2.28	0.31	1.86	0.09	76.8	24.6	78	34.3	63.9
S049856		8.13	<0.01	0.08	7.45	69.0	230	2.01	0.29	2.01	0.02	73.9	22.3	80	37.1	66.6
S049857		<0.02	0.01	0.08	7.41	67.2	230	2.06	0.29	2.02	0.03	73.1	22.0	80	36.7	66.2
S049858		7.90	0.01	0.06	6.87	6.3	260	1.76	0.28	2.56	<0.02	69.1	19.6	73	42.0	62.1
S049859		8.21	0.01	0.07	6.02	32.8	230	1.55	0.23	2.24	<0.02	60.0	16.3	69	35.1	51.1
S049860		7.69	0.01	0.07	5.80	21.5	250	1.45	0.22	1.77	0.05	56.3	16.5	67	32.6	44.0

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Finalized Date: 8-JUL-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18147024

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Hg-MS42	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni
	Units	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2
S049821		4.64	16.00	0.15	2.5	0.734	0.072	3.17	31.6	23.0	1.81	608	0.70	0.03	8.8	30.2
S049822		5.12	19.15	0.17	2.9	0.990	0.084	3.87	36.2	12.5	1.76	560	1.04	0.03	10.5	37.8
S049823		6.25	21.5	0.15	3.1	1.725	0.087	4.12	38.5	15.3	1.34	558	1.25	0.03	11.5	47.2
S049824		2.98	9.53	0.11	1.7	30.5	0.040	1.75	24.1	12.6	0.35	764	3.56	0.02	5.2	25.2
S049825		5.93	19.45	0.14	3.0	0.879	0.094	3.85	36.5	24.6	1.39	574	0.75	0.03	11.4	47.3
S049826		0.36	0.24	0.09	<0.1	0.007	0.005	0.03	0.8	0.9	9.40	174	0.12	0.01	0.2	1.1
S049827		5.10	13.15	0.11	2.4	0.323	0.055	2.49	25.1	63.8	2.08	957	0.39	0.02	8.4	31.5
S049828		4.51	13.80	0.12	2.5	0.166	0.054	2.68	27.2	49.0	2.40	746	0.36	0.03	8.8	32.5
S049829		4.50	14.50	0.13	2.7	0.052	0.064	2.79	28.9	74.6	2.50	532	0.38	0.03	9.2	34.2
S049830		3.97	10.10	0.09	2.0	0.027	0.041	1.68	20.3	59.9	1.82	465	0.49	0.03	6.3	25.8
S049831		4.11	10.95	0.12	2.2	0.052	0.043	1.69	22.8	62.3	1.91	438	0.46	0.13	6.9	28.3
S049832		3.77	10.95	0.12	2.2	0.022	0.047	1.73	21.8	69.1	1.77	403	0.58	0.40	6.7	28.6
S049833		2.82	6.64	0.09	1.6	0.009	0.029	0.96	14.9	82.3	1.31	430	0.48	0.31	4.2	17.0
S049834		3.27	8.70	0.10	1.9	0.026	0.036	1.37	17.3	211	1.51	385	1.20	0.05	5.3	22.2
S049835		4.21	14.30	0.13	2.6	0.019	0.059	2.38	28.1	181.0	2.57	600	0.70	0.18	8.9	33.2
S049836		4.24	15.95	0.15	2.8	0.017	0.069	2.73	30.2	212	2.51	573	0.38	0.05	9.7	34.4
S049837		4.97	17.85	0.14	3.0	0.031	0.079	3.17	34.8	111.5	2.32	601	0.27	0.21	10.8	36.6
S049838		4.61	14.20	0.12	2.6	0.023	0.064	2.49	28.0	69.4	2.37	831	0.21	0.32	8.9	30.7
S049839		5.03	16.30	0.14	2.8	0.023	0.067	2.82	31.2	84.5	2.12	657	0.28	0.36	9.9	35.2
S049840		5.05	20.3	0.15	3.3	0.045	0.085	3.63	38.3	97.1	1.86	432	1.28	0.14	12.4	36.8
S049841		5.06	19.65	0.18	3.2	0.059	0.077	3.64	38.2	71.2	1.87	603	1.19	0.08	10.7	34.8
S049842		6.63	19.05	0.16	2.5	3.27	0.073	3.43	31.9	20.5	0.82	666	5.07	0.03	9.0	52.3
S049843		5.05	16.30	0.15	2.8	0.047	0.067	2.90	31.2	91.3	1.77	509	0.57	0.21	9.6	33.2
S049844		4.78	16.65	0.15	2.7	0.087	0.070	3.06	32.3	102.0	1.72	451	0.77	0.13	10.3	33.2
S049845		4.90	15.25	0.14	2.7	0.196	0.061	2.81	29.6	93.9	1.84	617	0.39	0.04	9.1	33.8
S049846		4.62	16.70	0.14	2.5	0.617	0.066	3.12	29.7	49.4	1.39	581	0.44	0.03	8.1	32.1
S049847		5.11	22.1	0.17	3.0	1.340	0.083	4.10	37.6	23.0	1.09	317	0.22	0.03	10.9	40.2
S049848		5.02	12.50	0.12	2.2	1.670	0.052	2.06	22.7	21.8	1.80	883	0.40	0.02	7.2	27.8
S049849		4.83	12.10	0.13	2.2	2.01	0.051	2.07	23.0	20.1	1.74	882	0.41	0.02	7.0	26.8
S049850		5.82	15.80	0.13	2.5	3.10	0.069	2.90	27.4	20.2	1.85	855	0.61	0.02	7.9	39.8
S049851		5.10	15.85	0.14	2.5	1.755	0.066	3.00	28.6	15.6	1.98	997	0.33	0.03	8.0	32.4
S049852		5.39	17.70	0.14	3.1	2.64	0.072	3.30	31.9	14.4	1.67	680	0.68	0.03	12.1	39.0
S049853		5.55	17.65	0.16	3.2	0.507	0.078	3.30	32.1	22.4	1.36	581	0.66	0.03	12.0	39.0
S049854		5.41	17.50	0.15	3.1	0.532	0.072	3.35	33.2	24.8	1.56	704	0.64	0.03	12.1	38.9
S049855		5.47	20.0	0.16	3.4	0.141	0.081	3.73	37.3	39.0	1.94	534	0.75	0.04	13.5	42.3
S049856		5.74	19.20	0.16	3.3	0.070	0.080	3.51	35.3	82.8	2.33	575	0.27	0.04	13.2	41.5
S049857		5.74	19.10	0.17	3.4	0.062	0.084	3.49	35.0	79.5	2.32	579	0.26	0.04	12.7	41.4
S049858		5.57	17.50	0.15	3.2	0.028	0.076	2.93	40.0	106.5	2.49	594	0.21	0.26	12.3	37.2
S049859		5.07	15.10	0.15	2.7	0.049	0.063	2.60	29.5	115.5	2.13	551	0.24	0.15	9.5	32.6
S049860		4.37	13.75	0.13	2.5	0.109	0.059	2.62	27.7	103.5	1.75	430	0.24	0.08	8.5	29.8

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 8-JUL-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18147024

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl
	Units	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
	LOD	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.01	0.005	0.02
S049821		560	12.9	140.0	0.002	3.71	2.82	14.7	1	2.2	195.0	0.66	<0.05	9.16	0.419	3.68
S049822		530	17.1	161.5	0.002	4.49	5.68	17.7	1	2.6	137.0	0.77	<0.05	10.40	0.500	4.12
S049823		500	30.3	182.0	0.002	6.20	5.56	20.4	1	3.2	153.0	0.84	0.05	11.40	0.518	6.79
S049824		530	16.4	80.0	0.003	3.57	106.0	7.6	2	1.9	437	0.37	0.14	6.31	0.221	72.6
S049825		610	24.0	175.5	0.002	5.68	3.09	18.6	1	2.8	324	0.83	0.05	10.70	0.548	7.73
S049826		160	1.2	1.2	<0.002	0.01	0.06	0.2	1	<0.2	58.8	<0.05	<0.05	0.11	0.005	0.03
S049827		500	13.0	115.5	<0.002	4.52	1.25	12.9	<1	1.8	296	0.59	<0.05	7.65	0.470	3.36
S049828		480	15.8	135.5	<0.002	1.90	0.71	13.5	1	1.9	189.5	0.65	<0.05	8.23	0.496	1.88
S049829		500	13.9	149.5	<0.002	0.14	0.43	14.7	<1	1.9	146.5	0.65	0.05	9.08	0.523	1.01
S049830		360	11.1	90.0	<0.002	0.07	0.30	10.3	1	1.4	105.5	0.46	<0.05	6.32	0.419	0.91
S049831		360	12.5	92.6	<0.002	0.10	0.26	11.2	1	1.4	103.5	0.49	<0.05	7.23	0.432	0.70
S049832		350	15.9	95.0	<0.002	0.07	0.31	10.9	1	1.4	106.0	0.49	0.05	6.72	0.424	0.59
S049833		230	9.2	50.6	<0.002	0.03	0.16	6.3	<1	0.9	103.0	0.31	<0.05	4.79	0.272	0.33
S049834		330	22.1	68.3	<0.002	0.11	0.29	8.3	1	1.3	172.0	0.40	<0.05	5.79	0.342	0.48
S049835		540	13.1	124.0	<0.002	0.14	0.32	13.6	1	1.9	161.0	0.66	0.05	8.61	0.483	0.75
S049836		510	14.5	146.0	<0.002	0.15	0.38	15.2	1	2.2	187.0	0.71	0.05	9.25	0.495	0.84
S049837		530	15.3	179.5	<0.002	0.15	0.45	16.6	1	2.5	133.0	0.78	0.07	10.70	0.511	1.07
S049838		460	15.4	135.0	<0.002	0.11	0.35	13.2	1	2.0	141.0	0.63	0.05	8.61	0.437	0.80
S049839		510	16.1	155.5	<0.002	0.20	0.43	15.2	1	2.3	124.0	0.73	0.06	9.63	0.498	0.95
S049840		560	32.2	199.5	0.002	0.46	0.56	20.2	1	2.5	125.0	0.78	0.07	11.30	0.459	1.19
S049841		640	50.2	198.5	0.002	0.81	0.67	19.1	1	2.4	135.5	0.77	0.07	11.20	0.438	1.19
S049842		220	53.3	169.5	0.004	4.67	5.53	21.3	1	2.8	93.9	0.64	<0.05	8.68	0.422	12.20
S049843		490	16.8	156.5	<0.002	0.32	0.44	17.2	1	1.9	116.5	0.67	0.07	9.36	0.464	0.94
S049844		580	18.5	158.0	<0.002	0.54	0.65	17.4	1	2.0	109.5	0.68	0.07	9.49	0.450	1.01
S049845		600	14.6	129.5	<0.002	0.54	0.56	15.7	1	1.7	118.0	0.65	<0.05	8.69	0.448	1.05
S049846		280	13.9	141.5	0.002	2.33	0.65	19.2	1	1.7	94.9	0.58	<0.05	8.11	0.404	2.68
S049847		160	19.0	180.5	0.003	4.76	2.03	23.7	1	2.3	76.8	0.72	<0.05	10.75	0.481	5.20
S049848		290	19.5	85.0	<0.002	4.21	4.03	14.1	1	2.0	193.5	0.49	<0.05	6.53	0.361	5.09
S049849		250	19.5	83.0	<0.002	3.93	4.16	13.2	1	2.2	181.5	0.51	<0.05	6.42	0.359	5.76
S049850		270	25.8	124.0	0.002	5.03	5.59	19.2	1	1.8	230	0.57	0.05	7.68	0.400	7.51
S049851		350	14.3	125.5	<0.002	3.46	10.30	18.3	1	1.8	169.5	0.56	0.05	7.66	0.406	4.04
S049852		480	17.0	134.5	<0.002	4.64	17.30	19.3	<1	2.1	186.5	0.78	0.07	9.27	0.573	9.11
S049853		610	17.8	139.0	<0.002	5.12	1.23	20.4	<1	2.1	267	0.80	0.06	9.27	0.604	3.24
S049854		590	19.6	148.5	<0.002	4.64	2.90	20.2	<1	2.1	139.5	0.78	0.06	9.66	0.593	2.67
S049855		570	24.4	173.5	<0.002	1.50	0.81	21.7	1	2.4	135.5	0.89	0.06	11.10	0.591	1.93
S049856		610	15.4	170.0	<0.002	0.26	0.40	21.4	<1	2.2	135.0	0.84	0.05	10.20	0.587	0.94
S049857		610	15.8	169.0	0.002	0.26	0.41	20.9	1	2.2	135.0	0.84	0.09	10.30	0.591	0.95
S049858		540	12.5	159.0	<0.002	0.17	0.37	19.5	1	2.0	137.5	0.78	0.06	9.70	0.548	0.89
S049859		450	10.7	138.0	<0.002	0.21	0.37	16.8	<1	1.7	136.0	0.66	0.05	8.42	0.501	0.81
S049860		410	15.2	126.5	<0.002	0.42	0.46	15.0	1	1.7	111.5	0.60	<0.05	8.03	0.447	0.91

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 8-JUL-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18147024

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	As-OG62
	Analyte	U	V	W	Y	Zn	Zr	As
	Units	ppm	ppm	ppm	ppm	ppm	ppm	%
	LOD	0.1	1	0.1	0.1	2	0.5	0.001
S049821		1.8	120	7.5	20.0	57	93.3	
S049822		2.2	143	8.9	22.3	95	107.5	
S049823		2.4	151	7.8	25.0	80	117.0	
S049824		4.0	63	8.2	21.9	137	63.1	3.37
S049825		2.2	147	5.5	23.4	148	115.5	
S049826		0.4	2	0.1	1.2	13	1.0	
S049827		1.6	121	3.3	17.4	77	89.7	
S049828		1.7	126	2.0	18.7	75	95.8	
S049829		1.8	130	1.5	19.8	54	101.0	
S049830		1.3	109	1.0	14.0	61	79.0	
S049831		1.3	114	1.0	15.3	70	82.7	
S049832		1.3	112	0.8	14.8	66	82.7	
S049833		1.0	73	0.5	9.8	42	58.7	
S049834		1.2	92	0.7	10.8	173	68.0	
S049835		1.7	123	1.2	19.4	94	98.3	
S049836		1.9	125	1.2	20.7	58	105.5	
S049837		2.1	130	1.4	23.5	84	113.5	
S049838		1.7	109	1.1	19.6	71	96.3	
S049839		1.9	126	1.3	21.3	97	106.0	
S049840		2.6	127	1.3	25.4	146	113.0	
S049841		2.6	122	1.3	24.6	206	107.0	
S049842		1.8	144	11.7	19.4	109	87.8	
S049843		2.0	123	1.1	20.5	163	99.8	
S049844		2.1	123	1.1	21.4	112	95.4	
S049845		1.9	117	1.2	20.0	60	92.6	
S049846		1.8	132	2.6	19.3	100	88.7	
S049847		1.8	158	6.9	21.8	67	106.5	
S049848		1.4	100	5.1	14.2	74	101.0	
S049849		1.4	100	5.1	16.4	72	74.1	
S049850		1.7	125	6.3	17.3	94	85.9	
S049851		1.9	127	7.5	18.9	70	85.5	
S049852		1.9	154	11.8	21.1	82	107.0	
S049853		1.9	160	4.6	23.3	131	106.5	
S049854		2.0	156	5.9	23.8	177	111.0	
S049855		2.3	151	2.1	26.4	95	120.0	
S049856		2.2	152	1.4	25.4	65	115.0	
S049857		2.2	152	1.4	25.1	66	116.5	
S049858		2.1	137	1.2	23.5	69	114.0	
S049859		1.8	129	1.0	22.3	60	95.4	
S049860		1.7	117	1.0	18.2	60	87.3	

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Project: Nadaleen

Finalized Date: 8-JUL-2018
Account: RCM

CERTIFICATE OF ANALYSIS WH18147024

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Applies to Method: REE's may not be totally soluble in this method.
ME-MS61

LABORATORY ADDRESSES

Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.

Applies to Method:				
	BAG-06	CRU-31	CRU-QC	LOG-21
	LOG-21d	LOG-23	PUL-31	PUL-31d
	PUL-QC	SPL-21	SPL-21d	WEI-21

Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Applies to Method:				
	As-OG62	Au-AA25	Hg-MS42	ME-MS61
	ME-OG62			

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Finalized Date: 8-JUL-2018
Account: RCM

CERTIFICATE WH18148697

Project: Nadaleen

P.O. No.: N18-016

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 23-JUN-2018.

The following have access to data associated with this certificate:

ANDREW CARNE	JULIA LANE	

SAMPLE PREPARATION

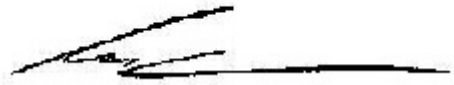
ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
BAG-06	Double Bagging Coarse Rejects
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
LOG-23	Pulp Login - Rcvd with Barcode
LOG-21d	Sample logging - ClientBarCode Dup
SPL-21d	Split sample - duplicate
PUL-31d	Pulverize Split - duplicate

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid ICP-MS	
Hg-MS42	Trace Hg by ICPMS	ICP-MS
ME-OG62	Ore Grade Elements - Four Acid	ICP-AES
As-OG62	Ore Grade As - Four Acid	ICP-AES

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature: 

Colin Ramshaw, Vancouver Laboratory Manager

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Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18148697

Sample Description	Method Analyte Units LOD	WEI-21 Recvd Wt. kg 0.02	Au-AA25 Au ppm 0.01	ME-MS61 Ag ppm 0.01	ME-MS61 Al % 0.01	ME-MS61 As ppm 0.2	ME-MS61 Ba ppm 10	ME-MS61 Be ppm 0.05	ME-MS61 Bi ppm 0.01	ME-MS61 Ca % 0.01	ME-MS61 Cd ppm 0.02	ME-MS61 Ce ppm 0.01	ME-MS61 Co ppm 0.1	ME-MS61 Cr ppm 1	ME-MS61 Cs ppm 0.05	ME-MS61 Cu ppm 0.2
S048491		10.43	0.07	0.06	7.12	305	290	1.97	0.26	10.35	0.06	84.4	12.9	55	32.7	26.7
S048492		11.47	<0.01	0.05	7.02	18.5	290	1.87	0.25	11.90	0.06	76.9	11.8	53	37.3	25.4
S048493		10.82	<0.01	0.04	4.06	21.4	170	1.21	0.14	20.7	0.03	46.4	6.7	32	15.30	13.8
S048494		11.93	0.03	0.08	7.78	155.5	340	3.33	0.24	5.46	0.13	108.5	16.9	67	44.7	31.7
S048495		11.23	<0.01	0.09	8.33	15.1	1020	3.33	0.33	3.19	0.10	105.5	21.3	60	42.9	46.7
S048496		11.65	<0.01	0.09	7.89	24.4	310	2.69	0.30	2.07	0.33	91.9	18.8	71	42.5	51.2
S048497		11.90	<0.01	0.09	7.38	27.0	230	2.06	0.31	2.15	0.20	77.4	18.2	82	42.3	51.9
S048498		11.28	<0.01	0.14	7.62	42.7	240	2.10	0.34	1.87	0.21	80.6	20.7	86	48.3	64.6
S048499		10.84	<0.01	0.11	5.97	87.7	190	1.69	0.22	4.51	0.20	64.5	16.7	72	36.3	50.5
S048500		12.30	<0.01	0.06	6.24	13.5	260	1.64	0.23	2.78	0.09	62.3	18.1	70	48.9	50.0
S048501		11.41	<0.01	0.08	6.59	7.2	240	1.75	0.24	3.02	0.20	66.3	21.4	71	44.7	54.2
S048502		0.26	1.45	1.06	3.13	>10000	210	0.68	0.12	17.25	0.48	36.3	7.8	44	9.13	26.9
S048503		11.80	<0.01	0.11	6.39	110.5	300	1.66	0.26	3.34	0.22	66.2	16.9	72	43.3	51.1
S048504		11.96	<0.01	0.12	8.35	302	230	2.37	0.37	1.91	0.17	83.5	20.2	91	50.8	64.2
S048505		11.92	0.02	0.12	8.23	291	220	2.39	0.35	2.03	0.18	80.2	21.4	92	44.9	68.4
S048506		7.26	1.00	0.77	8.38	790	290	2.36	0.34	1.88	0.27	81.7	21.5	98	35.9	68.7
S048507		3.68	7.02	2.10	6.71	8130	240	1.75	0.28	1.87	0.27	64.2	18.9	80	22.9	57.6
S048508		5.76	0.80	0.24	5.86	2420	200	1.56	0.21	2.68	0.05	56.7	18.3	65	23.2	46.2
S048509		6.97	<0.01	0.01	0.18	19.7	30	0.11	0.01	33.9	<0.02	1.34	0.6	1	0.15	1.4
S048510		5.86	0.22	0.12	5.70	645	170	1.54	0.20	2.70	0.03	55.7	19.6	63	24.3	46.0
S048511		11.45	0.14	0.07	4.88	315	210	1.41	0.18	2.30	0.05	44.7	14.1	51	18.40	36.9
S048512		6.57	<0.01	0.06	6.45	119.0	230	1.89	0.25	1.57	0.15	57.9	22.3	81	38.0	59.9
S048513		5.62	0.01	0.04	5.93	238	230	1.77	0.22	2.81	0.13	53.3	19.2	68	23.3	55.6
S048514		9.58	0.22	0.07	5.56	463	200	1.47	0.21	3.02	0.14	50.2	17.3	56	14.70	47.1
S048515		6.81	<0.01	<0.01	0.15	1.6	20	0.20	<0.01	32.5	<0.02	1.15	0.5	1	0.12	0.6
S048516		11.96	<0.01	0.06	5.90	198.5	210	1.76	0.23	2.91	0.02	53.7	18.5	63	24.5	48.6
S048517		11.62	<0.01	0.04	5.85	131.5	220	1.66	0.23	3.06	<0.02	55.5	15.8	66	21.2	49.4
S048518		12.02	0.02	0.05	5.90	197.5	230	1.54	0.22	3.03	<0.02	52.0	18.0	67	21.2	47.5
S048519		5.33	0.08	0.06	6.15	921	270	1.76	0.24	3.35	0.02	56.7	17.7	58	15.85	51.6
S048520		5.42	0.10	0.06	6.15	925	270	1.70	0.23	3.29	0.03	57.2	17.8	60	16.30	52.6
S048521		11.67	0.01	0.06	6.25	297	250	1.98	0.24	3.08	<0.02	56.8	18.5	64	18.35	53.3
S048522		12.14	0.59	0.07	5.95	1105	230	1.62	0.23	2.70	0.03	55.3	17.0	61	13.95	55.2
S048523		11.79	0.49	0.07	5.54	1505	260	1.32	0.21	2.52	0.06	50.7	16.4	56	11.60	47.4
S048524		10.89	0.62	0.12	5.37	3000	290	1.24	0.24	5.40	0.12	51.3	14.8	65	10.70	45.9
S048525		<0.02	0.62	0.12	5.66	3160	300	1.42	0.22	5.56	0.14	53.5	15.1	70	11.30	47.8
S048526		11.86	0.04	0.06	4.01	296	190	0.75	0.15	2.02	0.08	37.5	13.0	53	7.89	34.6
S048527		10.71	0.33	0.10	4.87	1065	310	1.16	0.20	2.41	0.11	40.5	13.3	56	9.21	43.7
S048528		0.26	1.11	1.54	1.57	869	200	0.44	0.13	27.4	0.64	17.75	4.6	27	3.50	44.5
S048529		11.93	1.48	0.06	5.87	2990	260	1.27	0.20	3.18	0.13	50.4	17.8	67	11.95	51.5
S048530		11.21	0.10	0.04	4.96	450	200	1.31	0.17	3.28	0.06	43.2	16.1	60	12.25	42.8

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
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1016-510 W HASTINGS ST
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Project: Nadaleen

Finalized Date: 8-JUL-2018
Account: RCM

CERTIFICATE OF ANALYSIS WH18148697

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Hg-MS42	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni
	Units	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2
S048491		3.34	16.45	0.18	2.0	3.72	0.057	3.18	43.2	15.0	1.94	1220	0.71	0.05	8.1	27.7
S048492		3.13	16.25	0.16	2.1	1.460	0.052	3.25	41.1	11.7	2.39	554	0.60	0.06	8.0	25.3
S048493		2.23	9.10	0.14	1.4	1.085	0.032	1.84	24.2	6.7	2.31	548	0.33	0.04	4.8	14.0
S048494		4.00	21.8	0.20	2.9	0.368	0.069	3.90	51.1	17.7	1.32	505	1.99	0.04	11.7	35.4
S048495		4.50	21.9	0.19	2.8	0.103	0.072	3.95	52.0	21.0	2.26	1280	3.61	0.04	12.4	43.2
S048496		4.83	20.2	0.16	3.1	0.794	0.082	3.60	45.4	19.9	1.56	470	1.61	0.04	11.9	41.2
S048497		4.82	19.05	0.15	3.3	0.527	0.082	3.42	37.3	17.4	1.50	268	1.13	0.04	11.9	39.0
S048498		5.73	20.0	0.16	3.6	0.941	0.093	3.56	37.9	20.8	1.70	276	1.68	0.04	12.5	47.7
S048499		5.15	15.55	0.13	2.8	1.370	0.069	2.75	30.7	21.1	2.04	627	1.37	0.03	9.7	37.1
S048500		4.60	15.80	0.14	2.8	0.155	0.069	2.90	30.6	48.9	2.14	574	0.29	0.05	10.7	34.1
S048501		5.11	16.85	0.14	3.0	0.243	0.072	3.11	31.9	23.7	2.24	564	0.46	0.04	11.4	40.2
S048502		2.14	7.91	0.10	1.5	4.24	0.033	1.36	18.2	11.6	2.11	1270	1.43	0.10	4.5	18.6
S048503		5.35	16.30	0.13	2.9	1.685	0.070	3.10	31.4	21.3	1.89	566	1.37	0.04	9.9	36.3
S048504		6.10	21.5	0.16	3.8	4.42	0.099	3.94	39.4	18.1	1.38	300	1.43	0.04	12.8	46.8
S048505		5.98	21.3	0.15	3.5	5.44	0.099	3.91	37.6	17.2	1.39	308	1.36	0.03	12.6	49.0
S048506		5.74	21.9	0.16	3.7	7.38	0.086	3.96	39.4	16.0	1.32	482	1.22	0.03	13.1	48.9
S048507		5.32	17.50	0.13	3.0	5.87	0.072	3.07	31.5	15.6	1.13	906	0.87	0.02	10.6	39.2
S048508		4.85	15.00	0.13	2.7	2.10	0.062	2.70	27.3	15.3	1.38	887	0.27	0.02	9.5	32.1
S048509		0.12	0.53	0.09	0.1	0.016	<0.005	0.07	1.3	1.0	1.58	112	<0.05	0.07	0.3	<0.2
S048510		4.57	14.45	0.11	2.6	1.160	0.064	2.60	27.3	15.9	1.35	684	0.22	0.02	9.2	32.0
S048511		3.61	12.15	0.10	2.5	0.671	0.049	2.19	20.1	25.0	1.15	510	0.30	0.02	7.6	25.2
S048512		5.20	17.20	0.11	3.1	0.082	0.072	2.88	27.7	75.2	1.99	408	0.43	0.03	10.6	41.2
S048513		5.34	15.55	0.11	3.0	0.276	0.065	2.67	26.5	30.1	1.62	751	0.30	0.02	9.6	36.7
S048514		4.78	14.50	0.11	2.6	1.420	0.057	2.52	24.6	15.1	1.42	937	0.40	0.02	8.7	33.5
S048515		0.14	0.48	0.10	0.1	0.006	<0.005	0.04	1.2	1.2	1.77	123	<0.05	0.06	0.4	<0.2
S048516		4.63	14.90	0.10	2.6	0.431	0.055	2.71	26.2	26.0	1.76	625	0.22	0.02	9.3	33.6
S048517		4.73	15.25	0.11	2.7	0.116	0.064	2.71	26.5	26.3	2.15	707	0.20	0.03	9.5	31.5
S048518		4.46	15.25	0.11	2.8	0.375	0.064	2.74	25.8	26.8	1.87	732	0.18	0.03	9.4	34.1
S048519		4.55	16.60	0.10	2.9	0.872	0.062	2.84	28.1	19.7	1.65	726	0.19	0.03	10.3	33.7
S048520		4.96	16.50	0.11	3.0	0.983	0.070	2.84	27.9	19.0	1.63	728	0.21	0.03	10.3	34.5
S048521		4.48	16.15	0.11	3.0	0.696	0.066	2.89	27.7	20.8	1.59	705	0.16	0.03	10.0	34.6
S048522		5.03	16.15	0.09	3.0	2.98	0.058	2.80	26.9	13.3	1.41	1290	0.20	0.02	9.8	34.3
S048523		4.36	14.85	0.10	2.7	2.51	0.055	2.56	24.9	12.5	1.28	1290	0.25	0.02	9.1	33.0
S048524		5.17	14.70	0.09	2.7	2.46	0.061	2.52	25.4	11.4	2.30	1370	1.17	0.02	8.6	33.9
S048525		5.41	15.55	0.10	2.8	2.46	0.066	2.63	26.8	11.4	2.38	1410	1.17	0.02	9.0	34.6
S048526		3.36	10.95	0.07	2.0	1.155	0.043	1.76	18.5	17.4	0.88	516	0.94	0.03	6.2	27.4
S048527		4.04	12.65	0.08	2.2	1.985	0.048	2.25	20.3	17.0	1.15	582	1.16	0.02	6.9	28.4
S048528		1.15	4.00	0.06	0.7	2.21	0.026	0.65	9.3	6.9	1.17	4600	1.31	0.10	2.0	12.8
S048529		4.95	14.80	0.08	2.6	4.00	0.055	2.69	24.1	12.2	1.55	928	0.39	0.02	8.8	35.2
S048530		4.48	12.70	0.08	2.2	1.035	0.054	2.25	20.2	14.2	1.52	824	0.27	0.02	7.7	30.5

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
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Finalized Date: 8-JUL-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18148697

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl
	Units	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
	LOD	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.01	0.005	0.02
S048491		540	16.4	142.5	0.002	2.26	1.71	11.1	2	1.8	272	0.58	0.06	11.65	0.278	13.50
S048492		540	15.1	150.5	0.003	2.29	0.43	10.4	1	1.8	323	0.56	<0.05	11.35	0.275	10.55
S048493		780	9.6	80.5	<0.002	1.41	0.26	6.1	1	1.0	489	0.35	<0.05	6.75	0.170	6.84
S048494		490	18.5	110.0	0.006	2.53	0.79	14.9	1	2.6	172.0	0.82	<0.05	17.60	0.345	3.21
S048495		440	19.6	145.0	0.014	1.71	0.65	15.1	1	2.6	165.0	0.86	<0.05	16.75	0.357	1.39
S048496		430	24.9	165.5	0.008	2.57	0.65	17.9	1	2.4	125.0	0.80	0.06	14.15	0.452	4.39
S048497		410	21.7	168.0	0.003	2.87	0.65	18.9	1	2.4	105.5	0.77	0.07	11.85	0.522	5.43
S048498		470	22.5	187.0	0.006	3.55	0.78	21.5	2	2.5	114.0	0.83	0.09	12.20	0.555	10.20
S048499		460	25.6	145.0	0.005	3.35	0.74	16.6	2	2.0	153.0	0.63	0.05	9.22	0.466	8.23
S048500		610	16.2	164.5	<0.002	0.92	0.45	16.8	1	1.9	152.0	0.69	<0.05	9.34	0.498	1.30
S048501		600	28.2	171.0	<0.002	1.87	0.62	17.8	1	2.1	166.0	0.74	0.06	9.88	0.522	1.90
S048502		400	24.6	64.1	0.003	2.35	56.1	6.7	2	1.0	790	0.32	0.09	5.12	0.192	16.70
S048503		610	30.4	166.0	0.003	3.60	0.69	17.2	2	2.0	152.0	0.68	0.08	9.68	0.473	7.30
S048504		480	22.7	200	0.006	5.97	1.30	23.1	2	2.6	87.8	0.86	0.09	12.65	0.563	17.30
S048505		500	22.1	196.0	0.006	5.92	1.23	23.1	2	2.5	98.0	0.84	0.07	12.30	0.578	17.35
S048506		510	21.8	197.5	0.005	5.57	4.01	24.0	2	2.6	85.3	0.87	0.08	12.05	0.607	22.9
S048507		420	16.4	157.5	0.003	5.44	10.70	18.5	1	2.1	84.9	0.72	0.07	9.91	0.542	21.8
S048508		560	12.6	142.0	<0.002	4.57	4.96	16.3	1	1.8	96.2	0.67	<0.05	8.89	0.498	6.34
S048509		70	0.5	2.2	<0.002	0.01	0.09	0.2	1	<0.2	84.2	<0.05	<0.05	0.16	0.007	0.08
S048510		450	14.2	141.0	<0.002	4.17	1.77	15.2	<1	1.7	94.2	0.62	0.05	8.38	0.493	4.82
S048511		390	14.6	111.5	<0.002	3.02	0.87	11.6	<1	1.5	75.3	0.55	<0.05	7.08	0.423	2.50
S048512		460	16.9	167.5	<0.002	0.22	0.37	18.4	1	1.9	114.5	0.75	<0.05	9.02	0.602	1.16
S048513		470	13.8	142.5	<0.002	3.53	0.43	17.0	1	1.9	136.0	0.69	<0.05	8.23	0.573	2.45
S048514		430	15.4	125.0	<0.002	4.00	2.17	15.7	<1	1.7	133.0	0.63	<0.05	7.68	0.472	5.24
S048515		60	<0.5	1.2	<0.002	0.01	0.06	0.3	1	<0.2	80.0	<0.05	<0.05	0.12	0.010	0.03
S048516		460	16.8	132.5	<0.002	2.46	1.39	15.0	1	1.9	113.5	0.66	<0.05	8.50	0.491	3.20
S048517		680	12.6	127.0	<0.002	0.67	0.73	16.1	<1	1.8	152.0	0.65	<0.05	8.18	0.492	1.19
S048518		450	14.4	128.0	<0.002	1.41	1.01	15.3	1	1.8	131.0	0.67	0.05	8.11	0.504	2.26
S048519		560	12.9	128.5	<0.002	3.62	3.93	16.7	1	2.0	168.5	0.71	<0.05	8.94	0.516	3.79
S048520		560	13.2	129.0	<0.002	4.16	3.86	17.0	1	2.0	168.5	0.72	<0.05	9.03	0.515	4.31
S048521		470	12.1	130.0	<0.002	3.80	1.56	16.4	<1	2.1	137.5	0.72	<0.05	8.86	0.535	3.46
S048522		440	14.6	132.5	<0.002	4.64	2.82	17.4	1	2.0	115.0	0.71	<0.05	8.68	0.505	9.48
S048523		430	14.0	112.5	<0.002	3.84	5.22	17.0	<1	1.8	114.5	0.63	<0.05	8.04	0.489	9.69
S048524		330	18.6	110.0	0.002	3.05	13.10	15.8	1	1.9	244	0.61	<0.05	7.92	0.456	7.11
S048525		360	19.4	114.5	0.003	3.19	13.50	16.9	1	1.9	253	0.65	<0.05	8.43	0.470	7.45
S048526		420	12.6	77.9	<0.002	2.53	4.18	10.1	<1	1.3	106.5	0.42	<0.05	6.06	0.394	3.45
S048527		410	27.5	92.5	<0.002	3.17	7.12	12.1	1	1.7	133.5	0.49	<0.05	6.99	0.418	5.32
S048528		370	60.0	28.2	0.003	0.70	8.61	5.6	2	0.7	1130	0.15	<0.05	2.53	0.079	6.30
S048529		520	17.3	114.5	<0.002	4.10	6.99	14.4	1	1.8	230	0.64	<0.05	7.65	0.519	13.60
S048530		430	14.3	104.0	<0.002	3.62	2.37	13.7	<1	1.6	150.0	0.53	<0.05	6.68	0.465	4.98

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.
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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 8-JUL-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18148697

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	As-OG62
	Analyte	U	V	W	Y	Zn	Zr	As
	Units	ppm	ppm	ppm	ppm	ppm	ppm	%
	LOD	0.1	1	0.1	0.1	2	0.5	0.001
S048491		3.0	63	2.8	17.9	82	85.3	
S048492		2.9	61	1.1	15.9	79	73.7	
S048493		2.1	37	0.8	12.0	47	49.7	
S048494		3.8	140	2.2	23.5	88	101.5	
S048495		3.4	117	1.7	22.5	68	99.0	
S048496		3.1	142	1.5	22.1	128	112.0	
S048497		2.6	148	1.4	20.9	106	120.5	
S048498		3.0	168	1.5	24.3	105	126.0	
S048499		2.3	133	1.6	20.8	107	101.5	
S048500		1.9	132	1.2	21.5	76	101.0	
S048501		2.0	138	1.2	23.2	102	108.0	
S048502		4.1	55	4.6	16.3	76	54.3	1.465
S048503		2.2	135	1.3	22.2	96	104.5	
S048504		3.0	172	1.9	25.8	103	134.0	
S048505		2.9	173	2.2	25.2	102	128.0	
S048506		2.9	186	8.7	25.5	104	133.0	
S048507		2.2	153	9.0	20.6	84	107.0	
S048508		1.7	129	5.7	20.2	59	95.6	
S048509		0.3	2	0.1	2.5	5	2.5	
S048510		1.6	128	3.4	19.3	53	95.1	
S048511		1.6	108	2.6	14.6	44	83.3	
S048512		1.9	161	1.2	20.1	100	107.5	
S048513		1.8	152	3.0	20.4	86	98.1	
S048514		1.6	126	8.7	17.8	122	85.1	
S048515		0.2	2	<0.1	2.4	4	2.8	
S048516		1.9	129	3.2	18.0	54	92.2	
S048517		1.8	128	2.1	20.4	53	92.8	
S048518		1.7	130	2.0	17.3	55	93.2	
S048519		1.9	133	8.1	19.6	47	99.1	
S048520		1.9	134	8.3	20.2	56	102.0	
S048521		1.9	139	4.5	19.3	62	103.5	
S048522		1.8	132	8.3	18.3	54	95.5	
S048523		1.8	130	9.8	17.8	48	89.8	
S048524		2.1	132	9.8	17.5	55	91.6	
S048525		2.2	139	10.2	18.5	58	96.4	
S048526		1.4	116	5.3	12.4	58	69.5	
S048527		1.5	120	6.3	13.1	65	76.2	
S048528		4.0	25	11.2	14.0	124	26.1	
S048529		1.6	143	9.5	16.0	85	84.5	
S048530		1.3	126	6.1	14.8	72	74.7	

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Project: Nadaleen

Finalized Date: 8-JUL-2018
Account: RCM

CERTIFICATE OF ANALYSIS WH18148697

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Applies to Method: REE's may not be totally soluble in this method.
ME-MS61

LABORATORY ADDRESSES

Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.

Applies to Method:				
	BAG-06	CRU-31	CRU-QC	LOG-21
	LOG-21d	LOG-23	PUL-31	PUL-31d
	PUL-QC	SPL-21	SPL-21d	WEI-21

Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Applies to Method:				
	As-OG62	Au-AA25	Hg-MS42	ME-MS61
	ME-OG62			

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To: **ATAC RESOURCES LTD.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 13-JUL-2018
Account: RCM

CERTIFICATE WH18152409

Project: Nadaleen

P.O. No.: N18-017

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 27-JUN-2018.

The following have access to data associated with this certificate:

ANDREW CARNE	JULIA LANE	

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
BAG-06	Double Bagging Coarse Rejects
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
LOG-23	Pulp Login - Rcvd with Barcode
LOG-21d	Sample logging - ClientBarCode Dup
SPL-21d	Split sample - duplicate
PUL-31d	Pulverize Split - duplicate

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid ICP-MS	
Hg-MS42	Trace Hg by ICPMS	ICP-MS
ME-OG62	Ore Grade Elements - Four Acid	ICP-AES
As-OG62	Ore Grade As - Four Acid	ICP-AES

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:

Colin Ramshaw, Vancouver Laboratory Manager

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Finalized Date: 13-JUL-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18152409

Sample Description	Method	WEI-21	Au-AA25	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Recvd Wt.	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu
	Units	kg	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.02	0.01	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2
S048531		10.34	0.04	0.06	6.56	214	200	1.86	0.26	3.18	0.03	61.1	17.5	59	22.0	51.0
S048532		10.32	0.02	0.05	5.90	323	180	1.73	0.23	2.46	0.04	53.4	15.8	59	22.5	48.9
S048533		10.68	<0.01	0.07	6.12	41.5	210	1.77	0.23	1.56	0.03	54.8	18.8	66	27.5	50.6
S048534		10.58	0.01	0.05	5.50	37.5	210	1.45	0.22	1.81	<0.02	53.1	16.6	64	27.2	48.7
S048535		10.72	<0.01	0.06	6.13	66.6	260	1.61	0.21	2.70	0.08	55.5	17.0	68	25.7	53.0
S048536		10.94	<0.01	0.06	5.70	45.0	280	1.87	0.19	3.11	0.08	49.9	17.2	65	25.3	48.8
S048537		11.30	0.07	0.07	4.39	535	140	1.06	0.13	2.81	0.05	39.0	13.4	52	13.45	36.8
S048538		10.49	0.21	0.11	2.74	705	130	0.45	0.10	2.12	0.04	26.3	6.6	31	5.58	18.8
S048539		0.26	1.40	0.90	3.05	>10000	200	0.69	0.12	17.90	0.32	32.8	7.2	38	8.81	25.6
S048540		10.83	0.02	0.08	4.64	128.0	160	1.07	0.19	1.93	0.03	41.9	15.4	48	15.10	34.8
S048541		11.12	0.28	0.07	3.39	524	170	0.69	0.14	1.95	0.03	33.1	8.4	39	8.82	24.9
S048542		11.23	<0.01	0.11	6.81	64.5	330	1.90	0.26	1.04	0.08	57.7	17.2	69	33.6	44.5
S048543		11.91	<0.01	0.08	8.58	38.8	340	2.49	0.32	1.21	0.05	73.7	17.4	71	45.7	58.1
S048544		11.57	0.04	0.08	8.03	319	310	2.53	0.32	2.27	0.10	71.3	19.8	68	32.8	57.5
S048545		<0.02	0.04	0.09	8.21	317	310	2.55	0.33	2.31	0.12	67.4	19.5	69	33.0	55.5
S048546		11.47	<0.01	0.04	5.86	57.7	260	1.49	0.20	4.04	0.12	52.8	15.4	60	25.6	48.7
S048547		12.01	<0.01	0.05	5.31	48.7	510	1.30	0.17	3.28	0.07	49.7	14.7	60	19.75	44.7
S048548		11.19	<0.01	0.04	5.55	51.0	210	1.38	0.18	3.37	0.07	47.9	14.6	61	23.6	45.6
S048549		11.21	<0.01	0.07	7.29	37.4	250	1.91	0.27	2.15	<0.02	68.6	17.3	72	41.9	59.4
S048550		12.11	<0.01	0.09	6.96	46.6	410	1.87	0.28	2.48	<0.02	65.8	19.4	71	29.1	55.8
S048551		11.97	<0.01	0.07	6.22	49.3	250	1.49	1.40	1.86	0.02	55.8	15.6	67	32.9	50.3
S048552		5.66	<0.01	0.04	5.98	21.8	240	1.49	0.20	2.26	0.02	53.6	15.2	67	37.3	48.0
S048553		5.57	<0.01	0.05	5.81	20.2	250	1.39	0.22	2.24	0.02	53.4	14.3	61	37.2	50.1
S048554		11.79	<0.01	0.03	6.08	20.3	220	1.61	0.22	2.55	0.02	57.5	15.6	58	41.1	46.2
S048555		11.97	<0.01	0.06	5.42	36.0	450	1.28	0.20	3.33	<0.02	48.0	14.7	52	32.8	39.1
S048556		11.96	0.03	0.05	6.52	14.7	230	1.68	0.26	2.68	0.02	57.9	17.1	62	38.3	48.5
S048557		12.16	<0.01	0.09	6.52	49.5	270	1.93	0.24	3.02	0.12	61.1	19.9	62	29.2	49.3
S048558		12.23	<0.01	0.07	6.23	35.7	280	1.85	0.24	2.74	0.08	62.0	18.1	69	35.5	51.6
S048559		11.97	<0.01	0.05	4.85	39.8	190	1.42	0.18	4.83	0.06	49.8	12.9	52	17.50	39.0
S048560		12.46	<0.01	0.04	5.82	120.0	310	1.53	0.23	3.57	0.05	57.5	15.9	57	20.9	48.5
S048561		11.23	0.80	0.07	8.33	982	290	3.11	0.26	1.32	0.09	77.5	26.4	85	34.5	54.6
S048562		6.33	0.03	0.07	7.96	4090	260	2.65	0.24	1.22	0.03	70.6	26.4	82	29.8	52.5
S048563		6.02	0.10	0.06	8.65	4850	280	3.10	0.25	1.65	0.06	73.7	24.3	86	36.3	53.9
S048564		5.85	2.05	0.09	7.03	6400	260	2.35	0.23	1.66	0.15	61.4	21.5	73	22.2	55.1
S048565		0.26	8.27	1.71	1.83	>10000	90	0.27	0.50	7.19	0.82	29.2	6.7	44	3.09	27.9
S048566		6.32	4.38	0.07	5.87	>10000	280	1.21	0.20	0.84	0.19	58.1	19.0	64	13.40	49.1
S048567		7.05	<0.01	<0.01	0.11	22.7	20	0.09	0.01	34.1	<0.02	1.27	0.8	2	0.10	2.0
S048568		11.01	0.34	0.06	6.04	2120	260	1.42	0.22	2.99	0.24	61.2	18.3	63	14.20	52.3
S048569		11.70	0.01	0.03	7.01	169.5	310	1.84	0.28	2.09	0.72	73.8	21.5	71	21.1	62.8
S048570		12.23	<0.01	0.08	7.13	91.7	310	1.90	0.30	2.23	0.13	75.5	23.4	72	28.3	63.1

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Finalized Date: 13-JUL-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18152409

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Hg-MS42	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni
	Units	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2
S048531		5.17	16.50	0.11	2.8	0.529	0.060	3.13	29.4	19.3	1.69	819	0.23	0.03	10.1	33.3
S048532		4.87	14.95	0.10	2.8	0.354	0.051	2.84	26.5	29.2	1.54	792	0.21	0.03	8.9	31.2
S048533		4.69	15.55	0.10	2.8	0.145	0.059	2.93	26.5	57.2	1.92	418	0.23	0.03	8.8	32.5
S048534		4.73	14.25	0.11	2.7	0.061	0.060	2.62	25.3	58.4	1.96	474	0.25	0.05	8.5	31.9
S048535		4.81	15.40	0.09	2.8	0.074	0.056	2.95	27.2	56.0	2.23	638	0.39	0.03	9.1	33.9
S048536		4.63	14.40	0.11	2.7	0.132	0.050	2.67	24.3	43.7	1.89	670	0.46	0.03	8.4	33.8
S048537		4.23	10.80	0.07	2.2	0.324	0.041	2.02	18.3	26.4	1.17	584	0.40	0.02	6.3	26.2
S048538		2.78	6.78	0.05	1.4	1.005	0.018	0.98	12.3	15.0	0.75	745	0.45	0.01	3.6	13.8
S048539		2.14	7.83	0.08	1.6	4.84	0.029	1.37	15.8	11.3	2.21	1290	1.36	0.10	4.1	17.2
S048540		3.57	11.25	0.09	2.0	0.577	0.040	2.08	19.7	15.9	0.92	475	0.39	0.02	6.5	26.9
S048541		3.09	8.29	0.06	1.8	0.647	0.028	1.53	15.8	21.2	0.87	549	0.29	0.02	4.7	19.0
S048542		4.29	16.55	0.08	3.0	0.456	0.061	3.27	28.7	48.2	1.45	247	0.70	0.04	8.6	34.6
S048543		5.72	21.8	0.12	3.3	2.21	0.082	4.17	36.0	37.7	1.77	249	1.14	0.04	11.2	39.1
S048544		6.26	21.2	0.12	3.4	0.823	0.077	3.85	34.7	56.1	1.58	478	0.83	0.03	10.7	42.8
S048545		6.33	20.1	0.13	3.3	0.827	0.076	3.92	34.5	54.5	1.62	484	0.87	0.03	10.5	42.4
S048546		4.72	14.50	0.10	2.8	0.084	0.055	2.74	25.2	71.3	2.85	775	0.27	0.03	8.8	31.3
S048547		4.39	13.40	0.11	2.6	0.117	0.052	2.48	22.0	45.1	2.40	561	0.30	0.03	8.0	29.5
S048548		4.48	13.40	0.09	2.6	0.055	0.052	2.64	23.5	45.9	2.47	602	0.39	0.03	7.9	31.0
S048549		5.44	18.35	0.11	3.1	0.073	0.075	3.48	32.2	64.9	2.36	514	0.29	0.06	10.8	35.2
S048550		5.22	17.90	0.12	3.3	0.090	0.071	3.28	31.4	69.7	2.42	509	0.40	0.04	10.6	36.5
S048551		5.00	15.30	0.10	2.8	0.044	0.061	2.79	26.6	83.6	2.08	454	0.25	0.09	9.0	32.1
S048552		4.87	14.75	0.10	2.9	0.024	0.052	2.54	25.9	105.0	2.10	541	0.20	0.23	8.8	31.4
S048553		4.75	14.30	0.10	2.7	0.018	0.051	2.51	25.8	102.5	2.07	517	0.18	0.23	8.5	30.1
S048554		4.74	15.15	0.10	2.7	0.039	0.059	2.84	27.4	121.0	2.24	651	0.22	0.07	8.9	29.9
S048555		4.48	12.95	0.08	2.5	0.043	0.042	2.45	23.2	106.0	2.33	809	0.15	0.05	7.8	26.9
S048556		4.70	16.00	0.10	2.8	0.064	0.062	2.97	28.5	118.5	2.33	655	0.32	0.08	9.4	31.9
S048557		4.67	17.10	0.12	3.1	0.162	0.056	3.10	29.4	77.1	2.31	711	0.35	0.03	9.5	35.0
S048558		4.48	16.10	0.11	2.7	0.177	0.073	2.97	29.7	65.9	1.86	586	0.79	0.03	9.0	35.9
S048559		4.73	11.85	0.10	2.2	0.187	0.044	2.22	23.3	40.0	2.38	867	0.65	0.03	6.9	24.7
S048560		5.72	14.55	0.11	2.5	0.534	0.051	2.64	27.2	40.8	1.80	1020	0.32	0.03	8.4	30.2
S048561		4.92	22.2	0.11	3.2	2.02	0.085	4.03	38.1	19.2	0.99	529	0.36	0.03	9.4	40.9
S048562		5.32	19.75	0.11	2.9	1.420	0.070	3.78	33.8	18.5	0.88	466	0.36	0.03	8.5	39.3
S048563		5.01	21.3	0.11	3.0	1.705	0.075	4.13	36.1	20.1	1.11	607	0.24	0.03	9.4	37.6
S048564		5.56	17.85	0.10	2.3	7.98	0.058	3.16	30.2	27.7	0.94	717	0.43	0.02	7.6	35.8
S048565		2.50	5.05	0.08	0.8	15.00	0.023	0.81	13.5	25.4	0.17	338	5.96	0.01	2.4	19.3
S048566		4.73	14.75	0.09	2.7	13.25	0.041	2.60	26.9	17.5	0.60	265	0.32	0.02	8.1	34.2
S048567		0.12	0.34	0.06	0.1	0.021	<0.005	0.03	1.3	0.9	1.68	112	0.05	0.04	0.2	0.6
S048568		4.97	14.70	0.10	2.7	1.435	0.064	2.80	27.7	19.6	1.59	871	0.51	0.02	9.2	34.2
S048569		4.82	17.85	0.10	3.2	0.538	0.075	3.20	33.3	46.6	1.32	514	1.27	0.03	11.3	36.1
S048570		5.25	18.35	0.11	3.3	0.201	0.075	3.31	35.9	54.1	1.91	591	0.43	0.03	11.5	43.0

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 13-JUL-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18152409

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl
	Units	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
	LOD	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.01	0.005	0.02
S048531		650	14.2	151.5	<0.002	4.48	1.30	16.6	<1	2.0	144.5	0.67	<0.05	9.02	0.507	4.26
S048532		470	14.5	150.0	<0.002	3.61	1.22	15.3	<1	1.9	106.5	0.64	<0.05	8.38	0.502	3.53
S048533		450	16.6	159.5	<0.002	0.40	0.54	15.1	<1	2.1	81.8	0.61	<0.05	8.39	0.488	1.30
S048534		480	14.1	157.0	<0.002	0.22	0.49	14.8	<1	1.8	92.8	0.61	<0.05	7.90	0.479	1.08
S048535		680	13.4	157.0	<0.002	0.38	0.79	16.1	<1	2.0	117.5	0.66	<0.05	8.65	0.521	2.17
S048536		470	15.3	134.5	<0.002	2.03	0.42	14.9	<1	1.7	102.0	0.63	<0.05	7.59	0.509	1.48
S048537		360	11.5	92.3	<0.002	3.60	0.70	11.1	<1	1.4	82.8	0.47	<0.05	6.07	0.414	1.92
S048538		230	8.3	45.4	<0.002	2.07	2.25	6.5	<1	0.9	80.0	0.29	<0.05	4.83	0.227	4.25
S048539		400	15.5	62.6	0.003	2.31	53.7	6.6	3	1.1	803	0.30	0.05	4.54	0.190	16.30
S048540		410	20.2	93.4	<0.002	2.77	0.96	10.8	<1	1.4	83.3	0.49	<0.05	6.95	0.362	2.18
S048541		280	10.1	65.3	<0.002	2.32	1.97	7.6	<1	1.1	107.0	0.35	<0.05	5.62	0.277	2.64
S048542		470	15.3	145.0	0.002	1.12	0.56	15.7	<1	2.1	92.8	0.65	<0.05	9.63	0.446	1.25
S048543		550	19.7	192.5	0.003	3.09	0.60	21.0	1	2.7	95.2	0.75	<0.05	11.50	0.493	3.87
S048544		490	29.3	180.0	0.002	5.59	1.57	20.1	<1	2.8	156.5	0.80	0.06	11.40	0.510	3.64
S048545		520	27.8	181.5	0.002	5.65	1.48	19.6	<1	2.6	157.5	0.77	<0.05	11.20	0.524	3.65
S048546		510	12.5	126.5	<0.002	0.12	0.50	15.0	<1	1.8	183.0	0.62	<0.05	7.85	0.498	0.88
S048547		440	12.9	119.0	<0.002	0.52	0.64	13.7	<1	1.6	204	0.54	<0.05	7.28	0.459	1.16
S048548		450	13.8	132.0	<0.002	0.12	0.38	13.5	<1	1.6	108.5	0.59	<0.05	7.78	0.484	0.97
S048549		650	15.5	201	<0.002	0.34	0.51	18.5	<1	2.3	107.0	0.75	<0.05	9.96	0.556	1.39
S048550		510	16.3	185.0	<0.002	0.44	0.65	18.1	<1	2.3	138.5	0.77	0.07	9.84	0.543	1.63
S048551		480	12.5	149.5	<0.002	0.26	0.42	15.6	<1	1.8	90.8	0.64	0.05	8.27	0.514	1.22
S048552		510	11.6	137.5	<0.002	0.10	0.31	15.0	<1	1.8	113.5	0.68	<0.05	8.38	0.499	0.94
S048553		560	12.0	131.0	<0.002	0.11	0.28	14.5	<1	1.8	109.5	0.62	<0.05	8.15	0.485	0.90
S048554		640	10.9	150.5	<0.002	0.10	0.33	14.6	<1	1.9	126.0	0.66	<0.05	8.62	0.470	1.00
S048555		410	13.8	119.5	<0.002	0.16	0.41	12.5	<1	1.6	146.5	0.56	<0.05	7.58	0.411	0.90
S048556		470	12.5	141.0	<0.002	0.14	0.44	15.5	1	2.0	121.5	0.69	<0.05	9.13	0.486	0.85
S048557		450	19.9	143.0	<0.002	0.46	0.74	16.2	<1	2.1	157.5	0.70	0.05	9.28	0.465	1.25
S048558		440	19.6	138.0	<0.002	0.53	0.56	16.5	1	1.9	112.5	0.68	<0.05	8.80	0.447	0.97
S048559		390	13.8	97.8	<0.002	0.61	0.42	12.1	1	1.5	144.0	0.51	<0.05	7.19	0.365	0.99
S048560		410	12.0	118.0	<0.002	3.74	0.79	15.1	1	1.8	120.5	0.60	<0.05	8.39	0.436	3.39
S048561		210	17.2	183.0	0.002	4.34	9.04	23.8	1	2.4	96.9	0.70	0.05	11.50	0.459	6.03
S048562		180	18.8	163.5	0.002	4.74	16.40	21.7	1	2.2	82.9	0.65	<0.05	10.60	0.438	4.68
S048563		200	15.1	180.5	0.003	4.09	22.5	23.7	1	2.4	94.0	0.71	<0.05	10.95	0.476	4.90
S048564		170	16.4	135.0	0.003	4.88	33.1	18.9	1	2.1	107.0	0.54	<0.05	9.03	0.377	29.5
S048565		480	10.0	38.3	0.002	4.62	161.0	2.9	3	1.1	346	0.18	0.08	3.17	0.099	41.1
S048566		370	13.2	107.5	<0.002	4.52	50.9	12.4	1	1.9	93.9	0.58	0.05	8.36	0.433	47.8
S048567		70	0.9	0.9	<0.002	0.03	0.63	0.2	1	<0.2	82.5	<0.05	<0.05	0.13	0.007	0.14
S048568		470	17.7	116.0	<0.002	4.49	3.78	15.8	1	1.8	139.5	0.65	0.06	8.75	0.521	5.56
S048569		550	31.6	147.0	<0.002	4.20	0.64	19.8	1	2.2	202	0.79	0.07	10.40	0.599	3.58
S048570		530	25.6	155.5	<0.002	1.85	0.90	20.0	1	2.3	147.0	0.81	0.08	11.10	0.590	1.98

***** See Appendix Page for comments regarding this certificate *****

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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 13-JUL-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18152409

Sample Description	Method Analyte Units LOD	ME-MS61 U ppm 0.1	ME-MS61 V ppm 1	ME-MS61 W ppm 0.1	ME-MS61 Y ppm 0.1	ME-MS61 Zn ppm 2	ME-MS61 Zr ppm 0.5	As-OG62 As % 0.001
S048531		1.9	136	3.3	20.2	69	100.5	
S048532		1.9	133	3.0	17.7	66	91.6	
S048533		1.8	132	1.2	16.7	62	93.9	
S048534		1.8	128	1.0	17.3	62	89.7	
S048535		1.8	137	1.6	19.4	79	94.6	
S048536		1.6	135	1.2	16.2	79	89.4	
S048537		1.3	114	2.2	12.9	67	69.9	
S048538		1.1	62	5.7	8.3	33	43.7	
S048539		4.1	56	8.0	14.1	58	47.5	1.495
S048540		1.5	96	2.9	13.0	54	67.5	
S048541		1.3	76	5.0	9.6	35	57.7	
S048542		2.1	127	1.3	16.6	72	94.8	
S048543		2.5	152	1.4	21.8	69	115.0	
S048544		2.4	149	3.9	21.8	109	113.0	
S048545		2.3	152	3.6	21.4	119	111.0	
S048546		1.7	126	1.6	17.3	80	94.1	
S048547		1.6	118	1.7	15.1	69	87.2	
S048548		1.6	123	1.1	16.0	73	85.2	
S048549		2.3	145	1.3	21.7	70	113.5	
S048550		2.2	141	1.5	20.3	72	111.5	
S048551		1.8	137	1.1	17.5	63	94.6	
S048552		1.9	130	1.1	18.2	65	93.4	
S048553		1.8	128	1.1	18.4	65	91.5	
S048554		1.9	118	1.2	19.0	70	91.0	
S048555		1.7	107	1.0	16.2	67	81.3	
S048556		2.0	124	1.2	18.2	70	96.1	
S048557		1.9	122	1.4	18.4	91	96.2	
S048558		1.9	127	1.1	18.0	74	90.2	
S048559		1.6	98	0.9	15.5	59	73.5	
S048560		1.8	122	2.8	18.4	71	82.3	
S048561		2.3	167	11.3	21.0	93	106.5	
S048562		1.9	159	14.5	18.5	64	95.6	
S048563		1.9	172	19.6	19.7	56	98.5	
S048564		1.6	141	13.7	15.9	75	80.5	
S048565		4.6	36	6.6	15.1	65	27.0	7.20
S048566		1.6	125	11.8	16.8	67	87.5	1.035
S048567		0.1	2	0.1	2.1	4	1.9	
S048568		1.8	138	7.8	19.5	124	91.1	
S048569		2.2	161	3.1	22.5	253	113.0	
S048570		2.3	151	2.5	23.0	106	115.5	

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.

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To: **ATAC RESOURCES LTD.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Project: Nadaleen

Finalized Date: 13-JUL-2018
Account: RCM

CERTIFICATE OF ANALYSIS WH18152409

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Applies to Method: REE's may not be totally soluble in this method.
ME-MS61

LABORATORY ADDRESSES

Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.

Applies to Method:				
	BAG-06	CRU-31	CRU-QC	LOG-21
	LOG-21d	LOG-23	PUL-31	PUL-31d
	PUL-QC	SPL-21	SPL-21d	WEI-21

Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Applies to Method:				
	As-OG62	Au-AA25	Hg-MS42	ME-MS61
	ME-OG62			

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VANCOUVER BC V6B 1L8

Finalized Date: 13-JUL-2018
This copy reported on 20-JUL-2018
Account: RCM

CERTIFICATE WH18152412

Project: Nadaleen

P.O. No.: N18-018

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 27-JUN-2018.

The following have access to data associated with this certificate:

ANDREW CARNE	JULIA LANE	

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
BAG-06	Double Bagging Coarse Rejects
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
LOG-23	Pulp Login - Rcvd with Barcode
LOG-21d	Sample logging - ClientBarCode Dup
SPL-21d	Split sample - duplicate
PUL-31d	Pulverize Split - duplicate

ANALYTICAL PROCEDURES

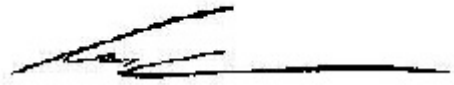
ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid ICP-MS	
Hg-MS42	Trace Hg by ICPMS	ICP-MS
ME-OG62	Ore Grade Elements - Four Acid	ICP-AES
As-OG62	Ore Grade As - Four Acid	ICP-AES

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Comments: **Corrected Copy on all samples for method Au-AA25**

Signature:



Colin Ramshaw, Vancouver Laboratory Manager

ALS Canada Ltd.

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Finalized Date: 13-JUL-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18152412

Sample Description	Method	WEI-21	Au-AA25	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Recvd Wt.	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu
	Units	kg	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.02	0.01	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2
S049861		4.92	<0.01	0.09	5.91	10.8	900	1.75	0.22	1.95	0.06	62.4	17.6	65	37.1	48.2
S049862		4.52	<0.01	0.06	5.29	26.2	220	1.49	0.20	2.35	0.09	55.6	15.1	59	29.9	44.5
S049863		5.15	0.13	0.08	7.26	1585	150	1.87	0.31	3.89	0.13	70.7	30.5	61	23.9	59.1
S049864		0.26	2.82	3.00	2.24	>10000	140	0.51	0.10	18.25	0.66	30.4	5.6	32	4.82	30.2
S049865		7.40	0.01	0.05	8.17	166.0	260	2.60	0.35	2.05	0.45	80.6	18.7	72	42.2	63.2
S049866		7.31	0.01	0.11	7.98	213	360	2.35	0.32	2.22	0.35	80.3	23.3	68	39.9	60.2
S049867		7.26	<0.01	0.07	7.58	9.4	360	2.26	0.32	2.41	0.99	78.0	21.8	71	43.7	60.7
S049868		7.01	<0.01	0.06	7.85	11.8	280	2.21	0.30	1.52	<0.02	77.5	20.7	73	44.0	61.4
S049869		6.71	<0.01	0.06	7.90	20.0	490	2.24	0.33	1.96	0.05	82.3	22.0	74	39.3	63.7
S049870		5.34	<0.01	0.07	8.07	16.8	310	2.28	0.31	1.40	0.21	80.8	23.1	75	36.9	62.8
S049871		5.55	<0.01	0.05	7.68	15.6	270	2.27	0.29	1.75	<0.02	75.9	21.5	71	32.9	59.3
S049872		7.17	<0.01	0.08	7.86	11.3	270	2.37	0.30	1.82	<0.02	76.2	19.6	73	36.1	61.8
S049873		7.23	<0.01	0.06	7.37	23.7	260	2.28	0.29	1.97	<0.02	72.5	19.1	70	32.7	57.9
S049874		6.97	<0.01	0.06	7.38	40.3	280	2.20	0.28	1.88	0.09	71.7	20.9	70	27.8	59.7
S049875		7.15	<0.01	0.06	7.18	16.4	240	2.03	0.30	2.51	0.11	74.0	21.8	70	33.3	61.1
S049876		6.98	0.01	0.07	7.06	6.6	220	2.05	0.27	2.31	0.02	69.7	19.8	71	31.0	58.3
S049877		6.42	0.01	0.04	7.02	20.2	310	2.21	0.27	2.58	<0.02	70.0	20.0	70	27.5	62.1
S049878		6.80	<0.01	0.05	6.95	23.5	230	2.07	0.27	2.43	0.02	68.2	19.9	71	25.0	59.7
S049879		7.38	<0.01	0.08	5.39	84.0	470	1.35	0.20	2.00	0.06	52.6	16.2	62	17.60	43.5
S049880		6.87	<0.01	0.02	1.38	5.7	680	0.36	0.05	5.21	<0.02	17.40	4.2	23	3.45	10.4
S049881		0.26	2.90	2.73	2.10	>10000	130	0.49	0.09	17.25	0.61	27.9	5.3	30	4.41	26.6
S049882		4.82	<0.01	0.01	0.07	44.3	30	0.06	0.01	33.1	0.02	1.12	0.5	1	0.08	2.9
S049883		6.89	<0.01	0.08	6.35	38.3	500	1.96	0.24	2.68	0.13	65.2	15.1	63	21.8	48.5
S049884		6.65	<0.01	0.04	7.36	28.2	250	2.11	0.27	3.04	0.30	67.5	16.3	69	28.5	55.7
S049885		6.97	<0.01	0.08	6.15	44.0	220	1.55	0.23	2.22	0.05	57.7	19.2	62	22.3	45.3
S049886		6.97	0.01	0.06	6.09	148.5	220	1.66	0.24	2.29	0.04	62.4	17.2	63	24.3	47.6
S049887		7.17	<0.01	0.07	6.28	67.0	240	1.76	0.25	2.63	0.25	66.4	15.5	56	21.5	37.8
S049888		5.71	<0.01	0.05	5.76	143.5	220	1.62	0.25	2.99	0.30	62.0	13.1	52	18.90	34.1
S049889		3.98	<0.01	0.09	8.66	169.5	300	2.66	0.32	0.30	0.12	79.8	11.8	74	27.5	37.9
S049890		3.11	<0.01	0.09	9.37	131.5	360	2.47	0.52	0.85	<0.02	92.5	7.3	80	40.5	27.0
S049891		4.92	<0.01	0.07	9.17	85.1	290	2.15	0.51	1.83	0.02	89.6	9.8	73	42.6	32.0
S049892		4.91	<0.01	0.05	10.40	159.0	300	2.82	0.41	0.13	0.02	106.0	19.5	72	49.9	40.6
S049893		2.29	<0.01	0.05	9.06	140.0	430	3.04	0.34	0.33	0.04	97.5	22.0	68	52.2	52.6
S049894		2.33	<0.01	0.07	8.92	182.5	370	2.83	0.31	0.31	0.05	96.8	25.3	66	49.8	47.5
S049895		5.82	<0.01	0.14	8.00	110.0	280	2.33	0.35	0.22	0.06	84.3	16.4	64	38.7	43.9
S049896		5.53	<0.01	0.06	9.83	69.0	340	2.92	0.38	0.23	0.05	102.0	18.3	71	50.8	48.2
S049897		<0.02	<0.01	0.06	9.72	69.3	330	2.90	0.38	0.23	0.05	102.0	18.5	71	50.6	47.5
S049898		2.93	0.01	0.12	9.86	247	350	1.96	0.41	0.75	0.02	106.0	10.7	72	31.5	33.6
S049899		4.96	<0.01	0.16	10.75	239	460	2.10	0.40	0.04	0.02	111.0	17.6	79	38.5	41.9
S049900		7.10	<0.01	0.06	10.75	492	400	2.83	0.41	0.10	0.04	105.0	15.5	76	41.2	86.1

Comments: **Corrected Copy on all samples for method Au-AA25**

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 13-JUL-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18152412

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Hg-MS42	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni
	Units	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2
S049861		4.43	14.50	0.11	2.6	0.222	0.067	2.70	29.9	119.0	1.84	509	0.38	0.03	8.6	35.2
S049862		4.24	13.55	0.11	2.5	0.095	0.052	2.33	26.1	124.5	1.78	679	0.73	0.03	8.1	29.6
S049863		6.33	19.30	0.10	2.8	0.647	0.076	3.27	33.5	18.8	2.25	682	1.08	0.04	9.9	53.5
S049864		1.45	5.84	0.08	1.1	5.67	0.029	1.05	14.6	14.3	1.43	1010	1.55	0.06	3.0	13.8
S049865		5.41	20.4	0.12	3.7	0.410	0.094	3.82	39.2	35.9	1.33	517	2.00	0.03	11.3	34.7
S049866		5.70	20.4	0.13	3.4	0.297	0.081	3.71	39.0	51.7	1.78	588	1.92	0.03	10.8	41.1
S049867		5.74	19.65	0.11	3.3	0.107	0.083	3.45	39.1	118.5	2.39	799	0.57	0.04	11.6	39.3
S049868		5.44	19.50	0.11	3.4	0.072	0.077	3.53	38.0	133.5	2.21	461	0.33	0.04	11.9	39.0
S049869		5.60	20.3	0.12	3.4	0.142	0.078	3.61	39.0	125.5	2.38	536	0.51	0.04	12.4	41.0
S049870		5.83	20.6	0.10	3.5	0.100	0.080	3.64	38.2	122.0	2.19	438	0.49	0.04	12.3	42.3
S049871		5.62	19.70	0.11	3.2	0.057	0.076	3.48	36.2	129.0	2.26	558	0.40	0.04	11.8	39.6
S049872		5.54	19.45	0.12	3.4	0.068	0.079	3.57	36.2	167.0	2.37	582	0.36	0.05	11.7	37.6
S049873		5.27	18.10	0.13	3.1	0.071	0.071	3.36	34.9	167.5	2.32	611	0.39	0.04	11.2	37.2
S049874		5.28	18.10	0.10	3.0	0.090	0.067	3.32	34.3	146.5	2.19	558	0.36	0.04	11.0	38.3
S049875		5.30	18.60	0.13	3.1	0.086	0.078	3.25	36.1	123.0	2.45	703	0.29	0.04	11.4	39.8
S049876		5.29	17.80	0.10	3.2	0.087	0.072	3.21	33.2	116.0	2.34	643	0.34	0.04	10.9	36.7
S049877		5.26	17.75	0.12	3.1	0.058	0.061	3.21	32.8	128.5	2.44	714	0.23	0.05	10.9	37.8
S049878		5.12	17.75	0.12	3.1	0.052	0.074	3.18	32.3	119.5	2.39	585	0.26	0.04	10.8	37.0
S049879		3.83	13.50	0.11	2.3	0.291	0.051	2.41	24.9	79.0	1.51	404	0.26	0.03	7.8	29.2
S049880		2.66	3.14	0.07	0.8	0.027	0.010	0.58	8.6	14.7	1.74	1320	0.19	0.02	2.0	7.6
S049881		1.37	5.50	0.11	1.0	6.09	0.028	0.98	13.4	14.2	1.35	958	1.48	0.06	2.8	13.2
S049882		0.15	0.23	0.11	<0.1	<0.005	<0.005	0.02	1.2	1.2	1.69	129	0.12	0.03	0.2	0.4
S049883		3.89	16.00	0.12	2.8	0.129	0.062	2.98	31.2	33.5	1.87	527	0.86	0.04	9.4	28.9
S049884		4.96	18.80	0.14	3.1	0.171	0.073	3.54	34.2	37.9	2.34	638	1.19	0.04	11.7	35.7
S049885		4.62	14.65	0.12	2.5	0.213	0.058	2.92	28.8	42.0	1.85	450	0.46	0.04	9.1	38.5
S049886		4.57	15.55	0.16	2.6	0.271	0.060	2.88	31.0	42.0	1.65	424	0.28	0.03	9.3	33.3
S049887		4.17	15.15	0.13	2.8	0.419	0.063	2.95	33.1	29.7	1.32	433	1.27	0.03	10.2	31.2
S049888		4.13	13.95	0.13	2.6	0.536	0.057	2.72	30.8	24.1	1.37	512	0.92	0.03	9.6	25.8
S049889		3.70	22.5	0.16	2.9	2.31	0.059	3.68	41.0	33.0	0.71	518	1.65	0.18	11.4	26.5
S049890		4.15	25.0	0.17	3.0	2.19	0.063	4.39	48.2	21.5	0.60	223	2.11	0.06	12.6	16.6
S049891		4.39	23.8	0.16	2.8	1.130	0.063	4.37	44.9	25.1	0.99	440	1.20	0.06	12.0	17.1
S049892		4.86	25.3	0.16	3.0	0.169	0.069	4.72	55.3	29.4	0.50	513	0.30	0.08	12.6	36.0
S049893		3.98	22.4	0.16	2.6	0.319	0.068	4.06	49.0	34.3	0.56	879	0.47	0.09	11.0	48.6
S049894		4.36	21.5	0.17	2.6	0.420	0.062	3.98	48.5	33.5	0.56	1420	0.59	0.09	10.3	59.8
S049895		3.92	19.25	0.14	2.6	0.438	0.060	3.52	44.9	32.3	0.39	557	0.50	0.07	9.6	28.8
S049896		3.60	23.8	0.15	3.0	0.428	0.072	4.37	53.2	54.6	0.52	387	0.46	0.09	12.0	36.7
S049897		3.60	24.1	0.15	3.0	0.445	0.070	4.33	52.9	56.3	0.51	381	0.52	0.09	12.0	37.1
S049898		4.97	24.8	0.15	3.1	0.615	0.065	4.40	56.3	34.8	0.54	102	0.36	0.14	12.5	22.5
S049899		5.57	26.3	0.17	3.1	0.745	0.082	4.82	58.9	77.0	0.48	543	0.37	0.09	13.3	15.3
S049900		7.86	25.6	0.19	2.8	0.880	0.089	4.85	53.3	29.3	0.45	228	0.28	0.08	12.2	31.5

Comments: **Corrected Copy on all samples for method Au-AA25**

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
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VANCOUVER BC V6B 1L8

Finalized Date: 13-JUL-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18152412

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl
	Units	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
	LOD	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.01	0.005	0.02
S049861		410	24.5	135.5	<0.002	0.51	0.68	14.9	<1	1.8	120.5	0.62	<0.05	9.31	0.437	1.05
S049862		500	12.1	123.0	<0.002	0.91	0.46	14.8	<1	1.7	137.0	0.57	<0.05	8.19	0.429	0.96
S049863		430	48.7	164.5	<0.002	5.82	2.94	19.5	1	2.5	268	0.69	<0.05	10.35	0.455	3.34
S049864		390	24.3	41.3	<0.002	3.30	145.0	5.9	3	0.9	616	0.22	0.05	4.30	0.109	18.40
S049865		540	14.7	188.5	<0.002	5.06	0.96	21.1	<1	2.7	117.5	0.84	<0.05	12.55	0.555	4.93
S049866		560	38.0	183.0	<0.002	3.24	1.27	20.6	1	2.7	172.0	0.83	<0.05	12.15	0.517	2.79
S049867		620	24.8	189.5	<0.002	0.63	0.62	19.6	<1	2.6	167.5	0.86	<0.05	11.85	0.527	1.13
S049868		590	17.5	198.5	<0.002	0.52	0.42	19.7	<1	2.6	96.5	0.89	<0.05	11.65	0.559	1.31
S049869		620	21.7	214	<0.002	0.98	0.64	20.7	<1	2.7	149.0	0.88	0.05	11.80	0.562	1.58
S049870		600	23.6	211	<0.002	1.01	0.68	20.6	<1	2.6	106.0	0.88	0.06	12.00	0.566	1.41
S049871		600	22.8	198.5	<0.002	0.83	0.60	19.4	1	2.4	126.0	0.85	<0.05	11.25	0.546	1.23
S049872		590	18.2	197.0	<0.002	0.42	0.57	19.2	<1	2.6	121.5	0.85	<0.05	11.50	0.558	1.27
S049873		630	18.4	181.5	<0.002	0.35	0.55	18.3	1	2.4	150.5	0.82	<0.05	11.25	0.544	1.18
S049874		550	19.2	166.0	<0.002	0.58	0.66	18.0	<1	2.3	138.0	0.81	<0.05	10.65	0.543	1.05
S049875		570	16.3	172.5	<0.002	0.25	0.50	18.9	<1	2.4	153.5	0.76	<0.05	10.60	0.545	1.01
S049876		530	15.3	156.5	<0.002	0.30	0.50	17.7	1	2.3	146.0	0.80	<0.05	10.45	0.545	0.98
S049877		570	14.8	155.5	<0.002	0.22	0.45	18.2	<1	2.2	171.5	0.79	0.05	10.65	0.546	0.88
S049878		560	12.8	150.5	<0.002	0.14	0.41	18.3	<1	2.2	160.0	0.79	0.08	10.20	0.554	0.87
S049879		440	17.7	114.0	<0.002	1.18	0.63	13.3	<1	1.6	185.0	0.57	<0.05	7.96	0.408	1.57
S049880		140	5.0	26.3	<0.002	0.12	0.16	3.2	1	0.4	187.5	0.16	<0.05	2.71	0.138	0.26
S049881		380	21.4	38.8	<0.002	3.10	141.0	5.5	3	0.8	580	0.20	0.06	3.99	0.103	17.05
S049882		70	0.6	0.6	<0.002	0.01	0.30	0.2	1	<0.2	78.1	<0.05	<0.05	0.08	0.006	0.02
S049883		520	13.2	142.0	<0.002	0.49	0.41	15.2	<1	2.2	142.5	0.72	0.06	10.05	0.455	1.03
S049884		550	13.2	169.0	<0.002	0.77	0.45	18.8	<1	2.4	150.5	0.82	0.05	10.40	0.514	1.05
S049885		430	25.2	133.5	<0.002	0.82	0.63	15.0	<1	1.9	126.5	0.65	0.07	8.95	0.442	1.02
S049886		420	19.5	134.5	<0.002	1.56	0.58	15.7	<1	1.9	122.5	0.67	<0.05	9.14	0.429	1.59
S049887		510	24.1	135.5	<0.002	3.10	0.62	13.9	1	2.0	138.5	0.72	0.05	10.05	0.426	2.26
S049888		460	19.4	125.0	<0.002	2.90	0.61	12.8	1	1.9	138.0	0.69	0.06	9.45	0.403	2.15
S049889		630	16.9	176.5	0.002	0.10	1.17	16.6	1	3.2	80.2	0.86	0.06	11.50	0.441	5.76
S049890		700	20.3	209	0.009	0.26	1.13	15.0	1	3.4	109.5	0.92	0.08	13.85	0.411	4.11
S049891		460	22.3	183.0	0.006	0.41	0.82	13.7	1	3.0	118.0	0.88	0.07	13.60	0.388	4.74
S049892		500	19.8	218	0.004	0.11	0.42	17.4	<1	2.9	101.0	0.93	0.08	18.30	0.429	2.06
S049893		870	17.5	190.0	0.002	0.10	0.96	17.1	<1	2.5	109.0	0.80	0.12	14.05	0.381	1.86
S049894		880	24.3	185.5	0.002	0.18	1.29	16.0	<1	2.4	110.0	0.77	0.08	13.40	0.370	2.01
S049895		940	17.5	161.5	<0.002	0.37	0.62	14.1	1	2.5	96.2	0.70	0.07	12.90	0.350	1.94
S049896		900	18.0	203	0.002	1.46	0.82	16.8	1	2.6	103.0	0.86	0.07	15.25	0.413	2.77
S049897		890	18.5	204	<0.002	1.41	0.85	16.8	1	2.6	103.5	0.92	0.08	15.25	0.408	2.74
S049898		480	21.7	199.5	<0.002	1.66	1.20	16.8	<1	2.7	159.0	0.92	0.05	18.15	0.442	2.46
S049899		590	25.5	212	<0.002	0.52	1.96	14.7	<1	2.9	153.5	0.96	0.07	19.45	0.453	7.07
S049900		660	16.4	206	<0.002	2.16	2.06	16.2	<1	2.8	118.5	0.89	0.07	18.35	0.410	4.27

Comments: **Corrected Copy on all samples for method Au-AA25**

***** See Appendix Page for comments regarding this certificate *****

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Finalized Date: 13-JUL-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18152412

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	As-OG62
	Analyte	U	V	W	Y	Zn	Zr	As
	Units	ppm	ppm	ppm	ppm	ppm	ppm	%
	LOD	0.1	1	0.1	0.1	2	0.5	0.001
S049861		2.0	119	1.1	17.1	58	91.3	
S049862		1.7	118	1.5	17.5	81	86.7	
S049863		2.0	139	9.7	18.3	90	94.7	
S049864		4.9	39	4.5	15.5	72	35.4	4.93
S049865		2.6	157	3.4	23.7	316	119.5	
S049866		2.4	150	3.7	22.7	200	115.0	
S049867		2.4	139	1.5	23.4	282	112.0	
S049868		2.4	146	1.5	23.6	77	115.0	
S049869		2.4	147	1.5	23.9	87	118.5	
S049870		2.5	150	1.5	24.7	113	118.5	
S049871		2.3	141	1.5	22.8	81	109.5	
S049872		2.3	144	1.6	25.4	85	111.5	
S049873		2.3	140	1.4	23.8	82	106.0	
S049874		2.2	140	1.4	21.3	91	105.5	
S049875		2.1	141	1.4	22.8	96	111.0	
S049876		2.1	139	1.3	21.4	84	105.5	
S049877		2.2	139	1.4	23.7	76	105.0	
S049878		2.0	142	1.4	21.2	77	104.5	
S049879		1.6	114	1.1	15.7	60	80.4	
S049880		0.6	36	0.3	6.5	15	24.9	
S049881		4.5	37	4.3	14.8	65	33.6	4.93
S049882		0.1	2	<0.1	2.1	3	1.6	
S049883		2.1	120	1.2	17.9	98	96.2	
S049884		2.1	134	1.3	20.8	159	115.0	
S049885		1.9	120	1.0	16.8	70	93.6	
S049886		1.9	116	1.8	18.0	57	95.1	
S049887		2.2	107	1.8	19.1	167	99.7	
S049888		2.0	98	2.0	18.0	167	95.5	
S049889		3.1	155	3.7	19.6	68	102.5	
S049890		3.7	150	4.8	18.0	71	110.0	
S049891		2.9	108	2.0	17.9	93	102.0	
S049892		2.9	96	2.0	20.5	92	110.0	
S049893		2.5	87	1.8	22.7	93	96.3	
S049894		2.6	87	1.7	22.6	97	91.2	
S049895		2.6	88	1.5	19.6	91	97.6	
S049896		3.0	98	1.7	21.3	71	109.0	
S049897		2.9	97	1.8	21.2	69	108.5	
S049898		2.9	103	5.0	17.1	44	109.5	
S049899		2.7	100	5.1	19.0	60	115.5	
S049900		3.0	96	7.5	20.4	104	102.5	

Comments: **Corrected Copy on all samples for method Au-AA25**

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.

2103 Dollarton Hwy
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www.alsglobal.com/geochemistry

To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Project: Nadaleen

Finalized Date: 13-JUL-2018
Account: RCM

CERTIFICATE OF ANALYSIS WH18152412

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Applies to Method: REE's may not be totally soluble in this method.
ME-MS61

LABORATORY ADDRESSES

Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.

Applies to Method:				
	BAG-06	CRU-31	CRU-QC	LOG-21
	LOG-21d	LOG-23	PUL-31	PUL-31d
	PUL-QC	SPL-21	SPL-21d	WEI-21

Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Applies to Method:				
	As-OG62	Au-AA25	Hg-MS42	ME-MS61
	ME-OG62			

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 19-JUL-2018
Account: RCM

CERTIFICATE WH18154668

Project: Nadaleen

P.O. No.: N18-019

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 29-JUN-2018.

The following have access to data associated with this certificate:

ANDREW CARNE	JULIA LANE	

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
BAG-06	Double Bagging Coarse Rejects
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
LOG-23	Pulp Login - Rcvd with Barcode
LOG-21d	Sample logging - ClientBarCode Dup
SPL-21d	Split sample - duplicate
PUL-31d	Pulverize Split - duplicate

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid ICP-MS	
Hg-MS42	Trace Hg by ICPMS	ICP-MS
ME-OG62	Ore Grade Elements - Four Acid	ICP-AES
As-OG62	Ore Grade As - Four Acid	ICP-AES

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:

Colin Ramshaw, Vancouver Laboratory Manager

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Finalized Date: 19-JUL-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18154668

Sample Description	Method Analyte Units LOD	WEI-21 Recvd Wt. kg 0.02	Au-AA25 Au ppm 0.01	ME-MS61 Ag ppm 0.01	ME-MS61 Al % 0.01	ME-MS61 As ppm 0.2	ME-MS61 Ba ppm 10	ME-MS61 Be ppm 0.05	ME-MS61 Bi ppm 0.01	ME-MS61 Ca % 0.01	ME-MS61 Cd ppm 0.02	ME-MS61 Ce ppm 0.01	ME-MS61 Co ppm 0.1	ME-MS61 Cr ppm 1	ME-MS61 Cs ppm 0.05	ME-MS61 Cu ppm 0.2
S048571		11.96	<0.01	0.07	7.03	106.5	350	2.02	0.29	1.90	0.02	69.2	23.6	72	29.9	63.5
S048572		11.87	<0.01	0.07	6.84	59.3	220	1.89	0.29	1.82	0.02	68.8	24.5	87	40.1	63.4
S048573		8.54	0.02	0.05	6.59	144.0	240	1.97	0.25	2.82	0.02	63.2	20.0	69	31.6	55.0
S048574		8.25	0.08	0.07	6.70	446	210	1.93	0.28	2.83	0.03	68.2	22.7	64	25.9	58.1
S048575		7.18	0.26	0.07	3.14	571	350	0.75	0.12	4.73	0.09	34.2	11.1	40	8.14	27.9
S048576		8.22	0.05	0.06	6.30	314	310	1.90	0.24	2.95	0.18	62.2	19.7	68	23.5	51.8
S048577		0.26	2.61	0.18	3.80	6350	200	0.93	0.14	12.35	0.14	41.5	12.1	44	11.05	34.8
S048578		7.69	0.04	0.05	5.27	194.0	270	1.41	0.21	2.70	0.08	53.8	14.5	60	26.2	44.4
S048579		8.26	0.01	0.05	6.91	37.1	240	2.23	0.27	2.13	<0.02	66.2	19.1	71	26.6	53.9
S048580		7.61	<0.01	0.11	7.46	116.0	250	2.17	0.31	1.83	0.17	72.3	20.7	68	30.3	55.6
S048581		7.05	0.01	0.06	7.86	31.2	280	2.23	0.31	1.48	0.31	74.8	23.6	75	26.8	61.7
S048582		7.72	<0.01	0.05	7.64	45.0	260	2.10	0.33	1.68	0.02	75.3	21.0	72	27.7	62.0
S048583		7.74	0.01	0.06	7.42	31.5	250	2.22	0.32	2.11	0.27	72.6	20.7	72	29.7	63.1
S048584		7.81	<0.01	0.06	7.96	46.9	260	2.44	0.34	1.50	0.02	74.9	22.0	76	30.6	64.9
S048585		7.84	<0.01	0.06	7.56	20.6	290	2.38	0.32	1.89	0.02	73.9	21.9	73	22.9	61.6
S048586		4.43	<0.01	0.05	7.77	63.8	520	2.34	0.34	1.71	<0.02	77.5	22.4	75	22.8	63.9
S048587		5.30	<0.01	0.06	6.63	1810	220	1.87	0.30	3.89	<0.02	66.0	19.9	59	20.7	54.7
S048588		3.78	<0.01	0.06	7.32	991	230	1.85	0.32	2.55	<0.02	73.7	21.6	70	19.45	62.1
S048589		3.95	1.04	0.19	5.49	3340	190	1.31	0.25	7.86	0.29	57.7	18.8	42	12.80	42.7
S048590		0.99	2.67	0.74	3.29	5710	150	0.73	0.17	13.30	0.12	38.3	11.6	27	7.45	28.6
S048591		1.24	2.66	1.11	4.10	7630	160	0.90	0.19	11.45	0.18	46.8	14.9	34	9.52	33.5
S048592		3.34	1.70	0.44	8.08	2460	290	1.76	0.40	3.34	0.17	95.3	22.6	67	29.2	55.8
S048593		2.93	1.64	0.44	6.52	>10000	290	1.35	0.31	6.05	0.24	83.0	18.3	55	16.00	51.8
S048594		0.26	12.75	1.54	2.96	>10000	120	0.54	0.28	7.84	0.79	41.7	10.9	43	8.68	31.3
S048595		3.94	0.01	0.02	0.69	465	90	0.25	0.04	33.2	0.05	16.50	2.8	7	1.90	7.4
S048596		5.68	<0.01	0.05	1.98	291	180	0.57	0.10	28.9	0.13	28.4	7.4	20	4.90	20.4
S048597		7.70	<0.01	0.03	1.17	110.0	110	0.47	0.06	31.1	0.10	19.85	3.8	12	3.18	8.9
S048598		8.10	<0.01	0.02	1.00	53.5	130	0.36	0.05	33.2	0.04	17.25	3.4	10	2.82	7.5
S048599		8.58	0.01	0.01	0.75	63.7	130	0.29	0.04	33.5	0.05	11.15	2.7	7	1.83	6.9
S048600		8.34	<0.01	0.02	1.16	53.8	140	0.31	0.06	31.8	0.08	16.75	4.4	12	3.29	11.3
S048601		8.08	0.01	0.01	0.86	42.4	150	0.28	0.04	33.2	0.06	13.70	3.4	9	2.38	8.2
S048602		7.84	<0.01	0.02	0.96	54.0	190	0.29	0.05	33.5	0.06	16.55	3.6	10	2.59	8.9
S048603		4.86	<0.01	<0.01	0.11	0.7	20	0.06	0.01	34.3	0.02	0.93	0.5	1	0.05	2.0
S048604		8.22	<0.01	0.01	0.21	24.3	120	0.10	0.01	37.3	0.02	4.07	1.0	3	0.37	2.8
S048605		8.11	<0.01	0.01	0.47	37.0	150	0.19	0.03	36.8	0.05	8.09	1.9	5	1.12	5.7
S048606		8.05	<0.01	0.01	0.40	21.9	140	0.15	0.03	36.0	0.06	6.69	1.6	5	0.89	5.0
S048607		8.38	<0.01	0.01	0.60	24.3	130	0.14	0.03	35.2	0.07	9.96	2.0	7	1.38	6.7
S048608		8.18	<0.01	0.01	0.40	11.4	80	0.18	0.02	35.6	0.03	6.55	1.5	4	0.77	4.5
S048609		7.57	<0.01	0.02	1.19	38.0	140	0.30	0.06	33.1	0.15	18.20	4.1	11	2.76	10.7
S048610		<0.02	<0.01	0.02	1.15	38.2	140	0.32	0.06	32.0	0.10	17.95	4.0	11	2.77	10.4

***** See Appendix Page for comments regarding this certificate *****

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VANCOUVER BC V6B 1L8

Finalized Date: 19-JUL-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18154668

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Hg-MS42	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni
	Units	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2
S048571		5.30	19.10	0.19	3.2	0.129	0.079	3.36	33.5	97.4	2.13	636	0.39	0.03	12.6	40.4
S048572		5.48	18.85	0.20	3.3	0.089	0.070	3.17	33.3	151.5	2.22	582	0.49	0.04	12.4	46.7
S048573		4.89	17.25	0.16	2.9	0.222	0.063	3.23	30.2	25.7	2.12	627	0.30	0.03	11.0	36.0
S048574		5.20	18.35	0.18	3.1	0.432	0.068	3.29	32.3	22.5	1.70	595	0.30	0.03	11.7	40.6
S048575		3.65	8.50	0.12	1.7	0.453	0.032	1.49	16.7	12.4	1.87	1420	0.50	0.01	5.5	21.2
S048576		4.25	16.95	0.17	2.9	0.369	0.063	3.13	29.6	18.4	1.56	531	1.26	0.03	10.5	35.7
S048577		2.88	10.35	0.11	2.0	15.65	0.035	1.86	21.7	12.4	2.58	1170	1.93	0.02	6.1	26.8
S048578		4.36	14.05	0.14	2.5	0.301	0.052	2.50	26.3	27.9	1.68	709	0.41	0.02	8.9	29.2
S048579		4.78	18.20	0.19	3.0	0.115	0.067	3.39	31.6	24.5	1.96	543	0.25	0.03	11.1	35.2
S048580		5.51	20.7	0.21	3.1	0.229	0.072	3.64	35.4	27.3	1.78	547	1.08	0.03	11.1	39.0
S048581		5.47	20.9	0.19	3.4	0.102	0.078	3.80	36.5	20.0	2.02	377	0.61	0.04	13.2	42.5
S048582		5.30	20.6	0.22	3.5	0.078	0.079	3.68	35.9	22.4	2.10	438	0.33	0.04	13.1	39.5
S048583		5.28	19.65	0.22	3.2	0.081	0.080	3.56	35.2	38.1	2.21	640	0.44	0.04	12.5	38.8
S048584		5.23	20.5	0.23	3.4	0.084	0.080	3.87	36.3	38.8	2.06	405	0.39	0.04	13.4	41.5
S048585		5.26	20.3	0.21	3.2	0.091	0.077	3.65	36.3	29.0	2.06	555	0.42	0.04	13.1	40.2
S048586		5.18	20.8	0.22	3.5	0.154	0.077	3.66	37.4	29.9	2.06	465	0.39	0.04	13.5	39.6
S048587		6.29	17.55	0.20	2.8	0.624	0.074	2.99	32.2	27.9	2.31	729	0.48	0.03	11.4	37.8
S048588		5.34	19.60	0.19	3.5	0.513	0.076	3.50	36.0	23.5	1.52	456	0.30	0.03	13.2	40.0
S048589		4.29	14.40	0.16	2.1	3.09	0.051	2.66	31.0	11.9	3.86	1660	1.10	0.02	7.8	30.7
S048590		4.16	8.87	0.11	1.5	5.41	0.034	1.39	21.1	9.3	6.24	3070	1.22	0.02	4.5	17.4
S048591		4.19	11.25	0.11	1.8	4.28	0.039	1.80	25.5	10.5	5.30	2850	1.12	0.02	5.5	21.5
S048592		3.87	22.7	0.22	3.1	3.12	0.068	3.76	48.8	19.0	1.84	1280	0.92	0.03	11.6	42.4
S048593		3.63	17.10	0.21	2.6	3.75	0.062	2.82	43.1	17.6	2.43	1550	1.57	0.03	8.7	34.5
S048594		2.93	8.30	0.13	1.7	23.5	0.035	1.39	22.8	15.8	1.89	1060	4.09	0.02	4.7	23.8
S048595		0.51	1.90	0.08	0.4	0.429	0.011	0.29	7.7	2.8	0.49	699	0.33	0.01	1.0	3.8
S048596		1.22	5.50	0.11	1.0	1.070	0.019	0.94	15.5	7.1	0.61	251	1.20	0.01	3.0	12.1
S048597		0.69	3.08	0.14	0.6	0.706	0.013	0.54	9.5	5.4	0.67	442	0.28	0.01	1.8	5.2
S048598		0.69	2.72	0.15	0.6	0.545	0.010	0.46	8.2	4.6	0.53	180	0.26	0.01	1.6	4.5
S048599		0.60	2.00	0.13	0.4	0.468	0.007	0.33	5.9	3.6	0.41	172	0.42	0.01	1.1	4.1
S048600		0.81	3.05	0.12	0.6	0.644	0.011	0.55	8.4	4.3	0.42	275	0.82	0.01	1.6	6.6
S048601		0.56	2.34	0.13	0.5	0.389	0.009	0.40	7.2	3.3	0.33	112	0.48	0.01	1.3	5.0
S048602		0.64	2.57	0.17	0.5	0.384	0.010	0.44	8.2	3.7	0.39	99	0.56	0.01	1.4	5.3
S048603		0.13	0.29	0.11	0.1	<0.005	<0.005	0.03	1.1	1.2	1.78	124	0.05	0.05	0.2	0.5
S048604		0.21	0.50	0.12	0.1	0.049	<0.005	0.09	2.0	1.0	0.35	312	0.15	0.01	0.3	1.4
S048605		0.36	1.24	0.11	0.3	0.161	<0.005	0.18	4.0	1.9	0.33	147	0.25	0.01	0.7	2.9
S048606		0.33	1.14	0.13	0.2	0.119	<0.005	0.17	3.3	1.6	0.39	70	0.30	0.01	0.6	2.3
S048607		0.46	1.59	0.13	0.3	0.183	0.009	0.27	4.9	2.3	0.42	84	0.42	0.01	0.8	3.6
S048608		0.31	1.03	0.13	0.2	0.105	0.005	0.18	3.1	1.3	0.30	124	0.18	0.01	0.5	2.4
S048609		0.83	3.18	0.17	0.6	0.376	0.015	0.55	9.1	4.0	0.54	136	0.66	0.01	1.6	6.5
S048610		0.80	3.21	0.18	0.6	0.386	0.013	0.53	9.1	4.0	0.52	133	0.67	0.01	1.6	6.4

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Finalized Date: 19-JUL-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18154668

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl
	Units	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
	LOD	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.01	0.005	0.02
S048571		570	17.4	147.0	<0.002	0.39	0.69	20.7	<1	2.6	125.5	0.89	0.06	10.40	0.545	1.07
S048572		530	20.4	153.5	<0.002	0.39	0.77	20.3	<1	2.3	94.2	0.87	0.05	10.50	0.556	1.11
S048573		530	13.2	142.5	<0.002	1.57	0.54	18.1	<1	2.1	148.5	0.78	0.06	9.45	0.535	1.52
S048574		520	15.7	147.0	<0.002	4.20	1.41	20.2	<1	2.2	107.5	0.82	0.07	10.00	0.540	2.91
S048575		290	13.0	64.2	<0.002	2.03	1.48	8.8	<1	1.2	207	0.38	<0.05	5.36	0.309	1.76
S048576		620	15.1	135.0	<0.002	3.49	0.70	18.0	<1	2.0	128.0	0.72	0.05	9.63	0.511	1.58
S048577		450	11.3	76.8	<0.002	2.59	24.5	10.4	1	1.7	319	0.45	0.06	6.23	0.263	44.9
S048578		400	11.6	114.0	<0.002	1.83	0.71	14.4	<1	1.7	137.0	0.65	<0.05	7.99	0.443	1.60
S048579		500	13.3	148.0	<0.002	0.56	0.50	18.9	1	2.2	107.0	0.78	0.05	10.10	0.500	1.10
S048580		570	23.2	164.0	<0.002	1.96	0.67	20.8	<1	2.5	106.5	0.81	0.05	10.90	0.461	1.75
S048581		620	23.7	170.0	<0.002	1.13	0.69	21.3	1	2.6	131.0	0.90	0.06	11.55	0.530	1.22
S048582		600	20.2	164.5	<0.002	0.75	0.55	21.3	1	2.6	107.5	0.92	0.06	11.30	0.538	1.36
S048583		580	17.0	159.0	<0.002	0.38	0.41	19.6	<1	2.4	127.5	0.81	0.05	10.95	0.533	1.04
S048584		640	15.8	167.0	<0.002	0.52	0.54	21.3	<1	2.5	101.5	0.86	0.06	11.70	0.563	1.13
S048585		590	16.5	157.5	<0.002	0.65	0.55	20.9	<1	2.5	120.0	0.83	0.06	11.30	0.533	1.13
S048586		630	32.5	158.5	<0.002	0.95	0.57	21.8	<1	2.6	160.0	0.88	0.07	11.75	0.540	1.47
S048587		790	15.0	130.0	<0.002	5.21	2.03	18.7	<1	2.3	271	0.77	0.06	9.80	0.475	13.05
S048588		610	15.5	147.0	<0.002	5.14	1.04	19.9	<1	2.4	131.0	0.85	0.06	11.25	0.546	4.25
S048589		310	21.2	105.0	0.003	3.06	10.55	13.0	1	1.8	290	0.53	0.08	8.38	0.306	7.68
S048590		460	14.8	57.5	0.003	2.46	33.2	8.9	1	1.0	490	0.30	0.10	5.20	0.172	16.35
S048591		470	13.7	73.4	0.002	2.96	33.5	10.2	2	1.2	436	0.37	0.11	6.49	0.202	15.60
S048592		450	17.3	143.0	0.003	3.66	17.15	17.5	1	2.4	429	0.82	0.09	14.45	0.383	10.50
S048593		920	17.6	113.0	0.005	4.31	61.0	12.5	2	1.9	1055	0.61	0.12	11.05	0.320	12.65
S048594		340	19.1	61.9	0.003	5.00	199.0	5.7	3	1.3	187.0	0.32	0.20	5.36	0.176	72.8
S048595		460	3.4	12.1	<0.002	0.49	2.53	2.4	1	0.2	1430	0.07	<0.05	1.32	0.038	1.51
S048596		190	7.2	39.5	0.003	1.30	1.66	4.8	1	0.7	1485	0.21	0.06	3.43	0.110	4.04
S048597		250	4.9	23.4	0.003	0.64	0.72	3.1	1	0.4	1405	0.12	<0.05	2.18	0.065	1.76
S048598		160	4.5	19.3	<0.002	0.65	0.42	2.5	1	0.4	1490	0.11	<0.05	1.87	0.058	1.67
S048599		110	3.2	13.5	<0.002	0.56	0.50	1.8	1	0.2	1500	0.08	<0.05	1.29	0.041	1.32
S048600		140	4.7	21.0	0.004	0.82	0.39	2.7	1	0.4	1645	0.11	<0.05	1.81	0.068	1.84
S048601		100	3.4	15.9	0.002	0.54	0.35	2.1	1	0.3	1810	0.09	<0.05	1.53	0.050	0.88
S048602		160	3.9	17.6	<0.002	0.62	0.39	2.4	1	0.3	1935	0.09	<0.05	1.70	0.053	0.89
S048603		60	0.6	0.7	<0.002	0.01	0.07	0.2	1	<0.2	84.3	<0.05	<0.05	0.09	0.005	0.02
S048604		100	1.0	3.7	<0.002	0.14	0.08	0.7	1	<0.2	1640	<0.05	<0.05	0.41	0.011	0.09
S048605		280	2.6	7.7	<0.002	0.31	0.20	1.4	1	0.2	1500	0.05	<0.05	0.93	0.026	0.25
S048606		110	2.0	7.3	<0.002	0.28	0.15	1.1	1	0.2	1945	<0.05	<0.05	0.75	0.022	0.22
S048607		140	2.3	11.1	0.002	0.42	0.16	1.7	1	0.2	2010	0.06	<0.05	1.07	0.033	0.32
S048608		180	1.6	7.1	<0.002	0.25	0.12	1.1	1	<0.2	2070	<0.05	<0.05	0.72	0.020	0.19
S048609		120	4.2	21.6	0.003	0.80	0.30	3.0	1	0.4	2140	0.11	<0.05	2.03	0.064	0.99
S048610		120	4.2	21.7	0.003	0.78	0.31	3.1	1	0.4	2110	0.11	0.06	2.05	0.062	0.99

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.
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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 19-JUL-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18154668

Sample Description	Method Analyte Units LOD	ME-MS61 U ppm 0.1	ME-MS61 V ppm 1	ME-MS61 W ppm 0.1	ME-MS61 Y ppm 0.1	ME-MS61 Zn ppm 2	ME-MS61 Zr ppm 0.5	As-OG62 As % 0.001
S048571		2.2	146	1.9	24.4	64	113.5	
S048572		2.2	146	1.6	23.7	67	115.5	
S048573		1.9	142	2.7	21.1	60	102.5	
S048574		2.1	142	5.3	23.1	64	110.5	
S048575		1.1	84	4.7	12.4	46	59.1	
S048576		2.0	138	4.9	21.3	187	104.5	
S048577		6.9	85	8.2	19.1	50	70.9	
S048578		1.6	120	2.7	17.6	86	89.3	
S048579		2.1	137	2.2	21.3	65	106.5	
S048580		2.3	138	3.9	23.6	110	109.5	
S048581		2.4	146	2.5	24.4	143	118.5	
S048582		2.3	144	2.4	24.4	75	116.0	
S048583		2.3	140	1.8	23.4	152	111.0	
S048584		2.4	148	1.5	25.0	79	120.5	
S048585		2.4	141	1.9	23.7	73	111.5	
S048586		2.4	144	1.8	24.4	75	120.0	
S048587		2.1	127	3.1	23.1	65	100.0	
S048588		2.3	141	5.3	24.9	68	119.5	
S048589		2.1	86	6.9	17.5	107	76.7	
S048590		2.4	55	5.0	14.8	41	52.2	
S048591		2.8	64	5.3	16.1	50	61.2	
S048592		4.0	93	8.7	21.1	59	101.5	
S048593		6.6	83	6.6	18.1	54	86.5	2.18
S048594		6.5	52	5.5	19.7	113	57.4	7.81
S048595		3.8	13	0.8	14.3	5	13.3	
S048596		3.6	33	1.2	15.8	20	33.2	
S048597		3.5	20	0.7	17.5	17	20.7	
S048598		2.5	17	0.5	13.7	9	18.9	
S048599		1.4	12	0.5	8.8	8	14.2	
S048600		2.3	20	0.8	11.2	11	18.6	
S048601		1.8	15	0.5	10.6	10	15.4	
S048602		2.6	17	0.6	11.8	10	16.5	
S048603		0.2	1	<0.1	2.0	3	1.5	
S048604		1.2	4	0.1	6.5	3	4.2	
S048605		2.2	9	0.3	8.6	7	10.4	
S048606		1.9	8	0.2	7.1	5	6.8	
S048607		2.2	11	0.3	9.8	9	10.0	
S048608		1.8	6	0.2	8.0	4	7.1	
S048609		2.6	19	0.5	13.3	26	20.4	
S048610		2.6	19	0.5	13.7	19	20.4	

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.

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To: **ATAC RESOURCES LTD.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Project: Nadaleen

Finalized Date: 19-JUL-2018
Account: RCM

CERTIFICATE OF ANALYSIS WH18154668

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

REE's may not be totally soluble in this method.

Applies to Method: ME-MS61

LABORATORY ADDRESSES

Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.

Applies to Method:				
	BAG-06	CRU-31	CRU-QC	LOG-21
	LOG-21d	LOG-23	PUL-31	PUL-31d
	PUL-QC	SPL-21	SPL-21d	WEI-21

Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Applies to Method:				
	As-OG62	Au-AA25	Hg-MS42	ME-MS61
	ME-OG62			

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VANCOUVER BC V6B 1L8

Finalized Date: 15-JUL-2018
This copy reported on 20-JUL-2018
Account: RCM

CERTIFICATE WH18157120

Project: Nadaleen

P.O. No.: N18-020

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 2-JUL-2018.

The following have access to data associated with this certificate:

ANDREW CARNE	JULIA LANE	

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
BAG-06	Double Bagging Coarse Rejects
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
LOG-23	Pulp Login - Rcvd with Barcode
LOG-21d	Sample logging - ClientBarCode Dup
SPL-21d	Split sample - duplicate
PUL-31d	Pulverize Split - duplicate

ANALYTICAL PROCEDURES

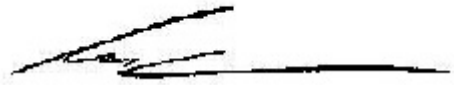
ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid ICP-MS	
Hg-MS42	Trace Hg by ICPMS	ICP-MS
ME-OG62	Ore Grade Elements - Four Acid	ICP-AES
As-OG62	Ore Grade As - Four Acid	ICP-AES

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Comments: **Corrected copy for all samples for method Au-AA25**

Signature:



Colin Ramshaw, Vancouver Laboratory Manager

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VANCOUVER BC V6B 1L8

Finalized Date: 15-JUL-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18157120

Sample Description	Method	WEI-21	Au-AA25	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Recvd Wt.	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu
	Units	kg	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.02	0.01	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2
S049901		9.68	<0.01	0.06	9.43	89.5	290	4.23	0.42	0.58	0.15	110.0	23.8	67	40.7	39.1
S049902		4.60	<0.01	0.37	7.62	113.0	250	2.89	0.41	3.41	0.13	91.9	20.5	58	32.3	36.6
S049903		5.71	0.01	0.07	9.05	195.0	300	2.91	0.35	1.12	0.12	101.0	22.2	64	34.0	34.3
S049904		4.98	0.01	0.04	8.97	153.0	330	2.43	0.40	0.95	0.03	109.0	19.4	63	28.9	32.6
S049905		2.68	0.03	0.09	8.49	446	370	2.28	0.36	2.56	0.15	101.5	28.4	64	26.9	38.1
S049906		1.09	0.24	0.11	7.22	543	350	2.18	0.31	3.63	0.16	71.7	19.7	56	26.6	36.2
S049907		2.17	0.19	0.17	8.29	559	430	2.26	0.32	2.22	0.25	80.5	24.0	73	26.9	43.0
S049908		5.20	0.03	0.08	8.40	208	370	3.10	0.33	2.40	0.08	84.0	23.6	69	30.9	41.9
S049909		4.61	0.05	0.14	8.12	470	360	2.62	0.33	2.02	0.31	77.8	21.9	70	29.3	40.9
S049910		5.91	0.24	0.04	8.76	578	360	2.77	0.43	1.05	0.15	94.2	19.8	73	32.3	44.8
S049911		5.06	1.18	0.07	7.03	1035	390	2.08	0.30	4.84	0.17	67.8	17.0	58	23.6	34.2
S049912		0.26	7.81	0.27	3.71	>10000	180	0.78	0.19	10.05	0.69	41.6	12.5	45	9.29	55.6
S049913		5.99	1.12	0.08	8.41	1275	360	2.17	0.35	3.34	0.54	88.3	20.3	66	29.9	38.8
S049914		1.31	1.24	0.08	8.26	1210	350	2.26	0.34	2.89	0.19	84.6	24.4	61	28.6	37.9
S049915		1.30	0.91	0.08	8.62	1025	370	2.37	0.36	2.61	0.21	86.3	23.1	63	29.0	38.1
S049916		2.12	0.32	0.10	8.51	1115	380	2.42	0.39	3.03	0.26	106.5	22.5	65	28.3	39.1
S049917		3.20	7.38	0.10	5.76	2880	230	1.35	0.22	6.09	0.49	58.8	15.7	48	13.65	22.5
S049918		7.08	0.01	0.01	0.11	8.6	10	0.10	0.01	31.5	0.02	1.26	0.9	1	0.13	2.2
S049919		2.34	0.01	0.17	5.71	313	330	2.01	0.22	8.73	0.18	61.0	17.8	49	19.45	24.8
S049920		9.47	0.19	0.26	4.05	357	170	1.37	0.15	14.30	0.07	47.9	10.3	32	13.75	15.4
S049921		9.88	6.31	0.09	5.72	1330	270	1.24	0.22	7.74	0.19	60.4	12.5	47	16.15	22.7
S049922		10.40	0.08	0.14	7.78	465	360	2.16	0.31	4.70	0.09	87.5	16.1	60	29.3	33.7
S049923		9.51	0.01	0.10	8.72	247	320	3.76	0.31	1.70	0.16	101.5	18.7	67	36.0	44.3
S049924		12.34	<0.01	0.08	9.32	115.5	300	3.97	0.30	1.67	0.21	106.5	17.5	69	43.8	38.9
S049925		9.68	0.07	0.14	8.88	1535	310	3.75	0.32	1.93	0.05	109.5	18.4	63	38.7	47.7
S049926		12.33	<0.01	0.06	6.68	116.5	430	1.99	0.28	3.66	0.12	65.0	20.3	66	29.6	57.9
S049927		11.97	0.01	0.05	7.79	46.9	290	2.51	0.34	1.81	0.13	73.0	22.8	76	45.6	72.4
S049928		10.79	<0.01	0.07	7.45	152.5	310	2.19	0.33	2.03	0.16	67.1	18.7	76	34.8	61.2
S049929		5.14	0.02	0.08	5.27	206	240	1.54	0.22	2.30	0.19	49.5	15.7	61	17.55	41.8
S049930		5.58	0.01	0.06	4.93	172.0	260	1.21	0.20	2.38	0.12	48.1	15.8	60	17.95	42.9
S049931		0.26	5.34	1.64	3.58	>10000	170	0.82	0.16	10.50	1.12	40.3	11.3	46	10.35	35.1
S049932		5.21	0.01	0.07	5.27	410	230	1.45	0.22	3.79	0.13	50.0	15.9	66	20.3	44.5
S049933		10.87	0.01	0.21	5.99	227	230	1.98	0.26	4.91	0.08	59.3	15.7	68	21.1	41.5
S049934		12.31	0.01	0.28	6.53	297	320	2.05	0.28	3.80	0.62	61.4	18.5	70	24.6	59.5
S049935		11.40	0.01	0.07	6.12	75.3	350	1.89	0.25	3.34	0.25	58.7	18.1	69	24.5	52.7
S049936		11.75	<0.01	0.05	5.98	148.0	240	1.69	0.22	2.87	<0.02	55.7	18.8	70	31.9	50.8
S049937		<0.02	<0.01	0.06	5.94	148.0	240	1.80	0.24	2.89	0.02	55.3	18.3	72	32.1	52.6
S049938		11.70	<0.01	0.14	6.00	145.0	250	1.93	0.23	2.46	<0.02	56.6	19.9	71	27.1	53.0
S049939		9.89	<0.01	1.36	5.02	221	320	1.23	0.19	3.19	<0.02	47.4	16.9	56	14.60	44.3
S049940		11.54	<0.01	0.06	5.35	179.0	190	1.53	0.20	2.49	0.02	49.9	17.2	62	19.95	47.9

Comments: **Corrected copy for all samples for method Au-AA25**

***** See Appendix Page for comments regarding this certificate *****

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Finalized Date: 15-JUL-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18157120

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Hg-MS42	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni
	Units	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2
S049901		4.83	24.2	0.27	3.3	0.932	0.080	4.41	55.5	26.4	0.59	310	0.31	0.07	12.5	47.3
S049902		5.11	20.7	0.23	2.8	2.00	0.070	3.65	46.0	18.4	1.62	904	1.17	0.06	10.8	38.8
S049903		4.14	23.2	0.25	3.3	1.830	0.068	4.31	50.9	15.2	0.81	705	0.30	0.07	12.3	42.1
S049904		4.38	23.7	0.25	3.2	1.715	0.064	4.34	57.2	12.9	0.72	811	0.25	0.06	12.5	40.6
S049905		4.49	23.4	0.25	3.1	2.32	0.064	4.10	52.3	12.6	1.24	1760	2.31	0.05	12.3	50.7
S049906		4.64	19.60	0.21	2.6	3.76	0.067	3.46	36.6	17.6	1.66	1090	1.27	0.04	9.7	42.8
S049907		4.73	22.6	0.22	2.9	3.23	0.068	3.94	41.0	20.3	1.10	763	3.71	0.04	11.4	50.6
S049908		4.31	23.5	0.22	3.0	1.785	0.073	4.12	43.2	14.6	1.26	669	2.59	0.04	11.6	44.3
S049909		4.38	23.0	0.26	3.0	3.41	0.065	3.86	40.5	16.5	1.12	673	3.90	0.04	11.2	52.6
S049910		3.70	25.0	0.28	3.0	2.76	0.071	4.24	46.2	13.9	0.77	429	0.85	0.04	12.1	41.6
S049911		3.60	19.35	0.24	2.4	5.58	0.051	3.36	34.9	14.8	2.32	1960	1.18	0.04	9.2	34.5
S049912		2.90	10.60	0.13	1.9	25.5	0.042	1.75	22.8	14.5	0.35	754	3.72	0.02	5.6	28.2
S049913		4.01	21.0	0.23	2.6	6.02	0.059	4.00	46.0	14.5	1.70	1460	1.96	0.04	10.0	48.1
S049914		4.39	22.3	0.23	2.6	6.60	0.061	4.04	45.2	19.9	1.33	1600	1.67	0.05	10.4	46.2
S049915		4.13	23.2	0.26	2.7	5.71	0.065	4.21	46.2	17.7	1.28	1420	1.75	0.05	10.9	45.1
S049916		3.74	24.7	0.29	2.9	4.61	0.063	4.14	52.2	16.3	1.36	1120	1.91	0.05	11.3	46.4
S049917		4.48	14.70	0.20	2.0	15.35	0.048	2.72	30.3	14.7	2.52	4440	2.81	0.03	7.2	34.9
S049918		0.15	0.36	0.12	0.1	0.021	<0.005	0.03	1.3	1.1	2.17	139	0.09	0.04	0.2	1.2
S049919		4.46	15.30	0.17	2.1	2.07	0.052	2.71	30.7	12.4	3.56	1600	1.42	0.04	7.6	28.4
S049920		3.06	10.15	0.16	1.5	4.67	0.031	1.97	24.8	8.9	3.11	1690	0.36	0.03	5.1	19.0
S049921		3.20	14.65	0.17	2.0	12.15	0.040	2.74	31.9	9.3	2.26	2620	0.73	0.03	7.1	26.4
S049922		3.67	20.0	0.24	2.3	3.80	0.058	3.73	45.5	13.1	1.82	882	1.08	0.05	9.6	35.4
S049923		4.80	24.1	0.25	3.2	1.320	0.074	4.22	49.8	15.4	1.09	443	2.97	0.04	12.2	44.3
S049924		4.37	24.6	0.27	3.3	0.852	0.076	4.50	52.5	16.9	1.16	524	3.07	0.04	12.6	39.9
S049925		4.15	25.0	0.27	3.1	1.135	0.081	4.33	52.3	16.8	1.17	666	1.93	0.03	12.3	41.6
S049926		4.83	17.70	0.21	3.2	0.735	0.074	3.25	31.4	25.8	2.12	549	0.55	0.04	11.1	37.4
S049927		5.13	21.0	0.22	3.8	0.581	0.091	3.84	35.0	41.7	1.81	385	0.52	0.04	14.0	41.7
S049928		5.47	19.55	0.21	3.5	2.12	0.087	3.66	32.6	36.1	1.54	357	1.14	0.04	12.2	42.5
S049929		4.51	13.95	0.16	2.5	1.915	0.055	2.57	24.3	20.0	1.18	364	1.00	0.03	8.5	35.4
S049930		4.09	12.85	0.16	2.5	1.665	0.057	2.32	23.6	21.8	1.14	364	0.47	0.02	8.2	32.5
S049931		2.83	9.69	0.13	1.8	9.42	0.037	1.59	19.9	14.4	0.52	952	2.07	0.12	5.6	23.7
S049932		4.29	13.95	0.15	2.6	1.450	0.058	2.42	24.6	52.4	1.70	418	1.06	0.03	8.6	33.9
S049933		4.02	16.20	0.15	2.9	2.28	0.067	2.97	29.0	11.9	2.08	348	0.86	0.03	9.7	34.2
S049934		5.87	17.10	0.17	3.0	2.62	0.071	3.24	29.0	20.4	1.86	557	2.07	0.03	10.2	44.9
S049935		4.57	16.25	0.18	3.0	0.441	0.070	3.07	28.0	22.8	2.16	610	0.61	0.03	10.5	36.0
S049936		4.73	15.45	0.17	2.9	0.217	0.058	2.89	26.8	68.9	2.22	580	0.25	0.03	10.0	36.1
S049937		4.70	15.65	0.20	3.0	0.253	0.061	2.85	26.7	69.6	2.22	585	0.23	0.03	10.1	35.9
S049938		4.64	15.95	0.20	3.0	0.462	0.061	2.74	27.5	70.6	1.89	485	0.32	0.03	10.2	38.6
S049939		4.44	13.00	0.15	2.4	0.819	0.056	2.18	22.9	29.8	1.66	513	0.28	0.02	8.4	32.9
S049940		4.60	13.75	0.15	2.6	0.676	0.061	2.38	24.2	47.7	1.32	439	0.30	0.02	8.9	33.1

Comments: **Corrected copy for all samples for method Au-AA25**

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 15-JUL-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18157120

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl
	Units	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
	LOD	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.01	0.005	0.02
S049901		540	24.8	188.0	<0.002	4.95	0.83	16.6	1	2.7	106.0	0.90	0.05	17.45	0.414	4.57
S049902		620	25.3	154.5	0.004	4.30	1.61	14.5	1	2.6	132.0	0.78	0.07	14.20	0.345	5.26
S049903		500	22.3	181.0	<0.002	3.95	2.41	15.4	<1	2.5	89.9	0.88	0.07	16.60	0.403	5.97
S049904		380	20.3	187.0	<0.002	4.25	3.46	15.5	<1	2.7	80.5	0.88	0.07	17.60	0.393	6.98
S049905		1520	32.7	169.0	0.005	3.87	8.43	16.2	1	2.7	103.0	0.86	0.07	16.00	0.397	12.50
S049906		780	15.0	144.0	0.004	3.10	8.15	14.5	1	2.9	256	0.72	0.05	11.80	0.309	11.05
S049907		2000	19.6	158.0	0.011	4.32	8.84	16.7	1	3.1	178.5	0.83	0.07	13.25	0.390	11.20
S049908		1030	14.6	163.5	0.007	3.73	3.22	15.9	1	3.4	124.0	0.85	0.07	14.60	0.366	6.05
S049909		840	20.5	159.0	0.007	3.98	8.04	15.9	1	3.3	125.0	0.87	<0.05	13.40	0.346	12.35
S049910		880	12.8	171.0	0.004	3.62	6.93	18.0	1	3.7	88.6	0.92	0.05	14.80	0.377	11.45
S049911		1070	11.8	130.5	0.004	2.49	11.85	17.6	1	2.7	201	0.71	0.05	10.75	0.301	20.4
S049912		530	17.0	76.8	0.002	3.45	106.0	8.9	2	1.8	430	0.42	0.11	6.63	0.213	65.6
S049913		560	24.5	155.0	0.003	3.18	14.15	17.4	2	2.4	130.0	0.76	0.08	13.45	0.333	21.0
S049914		890	22.4	151.0	0.002	3.41	15.85	16.4	1	2.3	126.5	0.78	0.06	13.50	0.320	23.1
S049915		910	21.3	159.0	0.003	3.15	13.80	16.4	1	2.5	119.5	0.80	0.05	14.25	0.334	19.15
S049916		1770	21.8	155.5	<0.002	2.75	13.05	16.4	1	2.6	143.5	0.84	0.06	14.50	0.338	13.35
S049917		620	13.7	101.0	0.002	2.69	47.7	15.7	1	2.0	162.5	0.55	0.05	9.19	0.230	76.3
S049918		70	0.7	1.0	<0.002	0.02	0.16	0.3	1	<0.2	77.2	<0.05	<0.05	0.12	0.006	0.19
S049919		710	12.4	104.0	0.002	1.38	10.00	11.0	1	2.1	342	0.58	<0.05	9.21	0.246	5.74
S049920		570	12.3	75.6	<0.002	1.69	9.79	7.3	1	1.2	265	0.38	<0.05	6.77	0.172	13.75
S049921		660	14.3	105.0	0.003	2.69	25.6	11.8	1	1.6	189.0	0.52	<0.05	9.36	0.235	45.4
S049922		480	19.3	145.0	0.003	2.60	6.15	13.6	1	2.3	136.0	0.73	0.06	13.30	0.293	9.90
S049923		540	23.1	160.0	0.012	4.47	5.19	15.9	1	3.2	108.0	0.93	<0.05	17.85	0.336	6.01
S049924		580	20.0	170.5	0.011	3.82	2.47	16.5	1	3.1	126.0	0.96	<0.05	18.95	0.362	5.74
S049925		440	17.1	159.0	0.006	3.50	9.20	17.0	1	2.8	138.0	0.93	<0.05	18.60	0.339	3.86
S049926		690	16.6	129.0	<0.002	2.47	2.58	19.6	1	2.1	169.0	0.82	0.07	10.05	0.503	2.37
S049927		500	20.1	162.5	<0.002	2.45	0.65	22.5	1	2.5	108.5	0.95	0.08	11.95	0.574	1.49
S049928		620	20.7	150.5	0.004	4.01	2.09	21.4	1	2.4	112.0	0.88	0.06	11.00	0.534	7.84
S049929		330	18.2	100.0	0.003	4.08	4.14	14.6	1	1.7	119.5	0.60	<0.05	7.67	0.410	7.06
S049930		350	15.4	90.7	<0.002	3.42	4.54	13.8	1	1.7	124.0	0.58	<0.05	7.47	0.415	4.97
S049931		490	17.6	67.5	0.002	4.42	123.5	9.0	3	1.4	403	0.40	0.12	5.68	0.249	32.6
S049932		390	16.9	99.7	<0.002	2.27	3.25	14.4	1	1.7	142.0	0.62	<0.05	7.59	0.405	6.55
S049933		500	17.4	124.0	0.003	2.23	3.72	16.7	1	2.1	147.0	0.69	0.05	9.19	0.417	6.02
S049934		490	36.3	137.5	0.004	4.84	2.84	19.4	2	2.0	165.5	0.71	<0.05	9.49	0.481	9.33
S049935		700	19.0	132.5	<0.002	1.53	0.64	17.6	<1	1.9	214	0.75	<0.05	9.05	0.490	2.42
S049936		530	13.2	134.5	<0.002	0.80	0.42	17.6	1	1.9	133.5	0.71	<0.05	8.46	0.498	1.30
S049937		520	13.3	135.0	<0.002	0.76	0.39	17.4	1	1.9	134.0	0.72	<0.05	8.53	0.502	1.29
S049938		450	15.6	129.5	<0.002	1.69	0.53	17.3	<1	1.9	134.5	0.70	<0.05	8.69	0.509	1.94
S049939		430	15.2	94.2	<0.002	3.76	0.97	14.5	1	1.6	203	0.59	<0.05	7.08	0.417	4.32
S049940		420	13.7	105.0	<0.002	4.16	0.52	15.2	1	1.6	125.5	0.63	<0.05	7.54	0.457	2.81

Comments: **Corrected copy for all samples for method Au-AA25**

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.
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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 15-JUL-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18157120

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	As-OG62
	Analyte	U	V	W	Y	Zn	Zr	As
	Units	ppm	ppm	ppm	ppm	ppm	ppm	%
	LOD	0.1	1	0.1	0.1	2	0.5	0.001
S049901		3.7	91	2.5	29.7	88	109.0	
S049902		3.3	97	6.1	25.9	97	93.9	
S049903		3.6	88	7.4	22.3	135	108.5	
S049904		3.2	86	7.6	22.3	100	108.5	
S049905		5.1	111	8.9	30.5	149	106.5	
S049906		3.4	129	6.3	25.0	105	88.1	
S049907		5.5	159	9.1	31.0	119	100.5	
S049908		3.4	145	4.6	25.8	73	101.0	
S049909		4.8	159	8.0	25.7	107	103.5	
S049910		2.7	131	8.8	28.5	92	103.5	
S049911		4.1	125	8.4	25.0	73	84.8	
S049912		4.1	63	8.2	22.7	131	64.8	3.46
S049913		3.6	93	8.0	19.7	177	92.4	
S049914		3.3	91	9.1	29.6	137	90.5	
S049915		3.5	98	8.9	30.3	152	95.2	
S049916		4.1	100	9.3	35.4	184	99.6	
S049917		3.1	77	8.8	19.6	169	70.2	
S049918		0.1	2	0.1	2.3	4	2.1	
S049919		2.7	89	7.8	23.9	120	71.7	
S049920		2.1	38	4.1	14.7	57	51.1	
S049921		2.8	55	4.3	13.9	70	67.9	
S049922		3.3	83	8.3	18.7	90	80.6	
S049923		3.8	153	5.2	25.3	82	109.0	
S049924		4.2	164	2.4	25.7	95	111.5	
S049925		4.3	147	7.4	24.4	75	105.0	
S049926		2.0	138	3.7	25.0	82	111.5	
S049927		2.4	153	1.5	23.6	95	132.0	
S049928		2.6	152	1.8	22.7	94	121.5	
S049929		1.8	116	3.1	16.5	91	90.1	
S049930		1.5	114	3.9	15.6	83	87.6	
S049931		2.6	72	12.4	21.3	115	62.6	4.69
S049932		1.7	112	3.6	17.6	83	90.8	
S049933		2.2	117	4.5	20.7	54	103.5	
S049934		2.4	143	3.0	21.2	187	107.0	
S049935		2.0	131	2.5	21.7	110	105.5	
S049936		1.8	134	1.7	20.8	57	103.0	
S049937		1.8	135	1.8	21.3	58	105.5	
S049938		1.8	136	2.9	20.5	58	107.0	
S049939		1.5	113	8.1	17.2	47	88.0	
S049940		1.6	126	1.7	18.5	49	91.2	

Comments: **Corrected copy for all samples for method Au-AA25**

***** See Appendix Page for comments regarding this certificate *****

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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Project: Nadaleen

Finalized Date: 15-JUL-2018
Account: RCM

CERTIFICATE OF ANALYSIS WH18157120

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Applies to Method: REE's may not be totally soluble in this method.
ME-MS61

LABORATORY ADDRESSES

Applies to Method: Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.

BAG-06	CRU-31	CRU-QC	LOG-21
LOG-21d	LOG-23	PUL-31	PUL-31d
PUL-QC	SPL-21	SPL-21d	WEI-21

Applies to Method: Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

As-OG62	Au-AA25	Hg-MS42	ME-MS61
ME-OG62			

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To: **ATAC RESOURCES LTD.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 23-JUL-2018
Account: RCM

CERTIFICATE WH18159616

Project: Nadaleen

P.O. No.: N18-021

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 4-JUL-2018.

The following have access to data associated with this certificate:

ANDREW CARNE	JULIA LANE	

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
BAG-06	Double Bagging Coarse Rejects
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
WSH-22	"Wash" pulverizers
LOG-23	Pulp Login - Rcvd with Barcode
LOG-21d	Sample logging - ClientBarCode Dup
SPL-21d	Split sample - duplicate
PUL-31d	Pulverize Split - duplicate

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid ICP-MS	
Hg-MS42	Trace Hg by ICPMS	ICP-MS

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:

Colin Ramshaw, Vancouver Laboratory Manager

ALS Canada Ltd.

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Finalized Date: 23-JUL-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18159616

Sample Description	Method / Analyte / Units / LOD	WEI-21 Recvd Wt. kg 0.02	Au-AA25 Au ppm 0.01	ME-MS61 Ag ppm 0.01	ME-MS61 Al % 0.01	ME-MS61 As ppm 0.2	ME-MS61 Ba ppm 10	ME-MS61 Be ppm 0.05	ME-MS61 Bi ppm 0.01	ME-MS61 Ca % 0.01	ME-MS61 Cd ppm 0.02	ME-MS61 Ce ppm 0.01	ME-MS61 Co ppm 0.1	ME-MS61 Cr ppm 1	ME-MS61 Cs ppm 0.05	ME-MS61 Cu ppm 0.2
S048611		7.19	<0.01	0.02	0.44	14.4	90	0.13	0.03	34.5	0.03	8.83	1.7	5	0.81	4.7
S048612		7.46	<0.01	0.01	0.41	15.3	110	0.18	0.03	35.7	0.03	9.36	1.7	5	0.84	4.8
S048613		7.05	<0.01	0.01	0.63	25.8	100	0.29	0.04	35.2	0.07	15.05	2.6	7	1.72	7.3
S048614		6.95	<0.01	0.01	0.58	23.1	130	0.23	0.04	34.9	0.07	12.70	2.5	7	1.68	7.0
S048615		7.31	0.01	0.02	0.56	20.1	140	0.29	0.04	34.5	0.04	10.75	2.2	6	1.24	6.2
S048616		4.98	<0.01	<0.01	0.11	0.3	20	0.09	0.02	33.3	<0.02	1.25	0.6	1	<0.05	1.8
S048617		6.91	<0.01	0.04	1.94	42.5	270	0.61	0.11	29.3	0.15	26.8	6.9	18	6.95	20.0
S048618		6.74	0.01	0.11	1.47	28.8	240	0.50	0.12	29.9	0.17	22.4	5.3	16	4.56	19.7
S048619		6.51	0.06	0.05	0.46	8.9	140	0.28	0.05	35.1	0.07	9.53	1.9	5	0.94	7.2
S048620		6.98	<0.01	0.01	0.38	5.1	100	0.22	0.03	35.4	0.06	7.17	1.6	5	0.73	4.9
S048621		7.09	<0.01	0.01	0.46	6.4	110	0.25	0.03	35.5	0.07	9.06	1.9	5	1.21	5.5
S048622		6.62	<0.01	0.01	0.47	5.4	140	0.27	0.03	35.8	0.07	9.00	1.9	6	1.27	6.0
S048623		7.18	<0.01	0.01	0.45	3.2	120	0.25	0.03	35.1	0.07	10.40	1.8	6	1.31	5.7
S048624		7.03	<0.01	0.01	0.51	7.7	140	0.31	0.03	35.4	0.07	9.84	2.1	6	1.56	6.3
S048625		<0.02	<0.01	0.01	0.51	7.2	130	0.31	0.01	34.6	0.08	8.77	2.0	8	1.43	5.9
S048626		7.27	<0.01	0.02	1.05	21.3	180	0.41	0.04	30.0	0.08	16.30	3.8	14	3.27	10.7
S048627		6.95	<0.01	0.04	2.30	52.7	200	0.68	0.10	25.6	0.17	34.0	8.9	25	7.21	26.8
S048628		7.31	<0.01	0.04	1.92	43.4	230	0.72	0.08	28.4	0.18	28.6	7.4	23	7.62	22.8
S048629		7.20	<0.01	0.03	2.62	23.9	240	1.04	0.10	23.1	0.18	34.7	10.1	27	9.00	27.9
S048630		5.66	<0.01	0.04	2.80	25.5	210	1.16	0.12	22.2	0.19	38.3	9.5	31	8.14	26.6
S048631		4.60	0.01	0.19	9.01	652	410	2.86	0.36	0.15	0.02	86.1	3.9	81	55.4	20.0
S048632		3.89	<0.01	0.05	9.47	278	350	4.30	0.40	0.06	0.41	114.5	13.7	76	50.7	69.4
S048633		3.63	<0.01	0.09	8.04	183.0	270	6.88	0.33	0.36	1.78	92.0	24.9	58	47.0	197.0
S048634		6.19	<0.01	0.01	7.45	133.5	270	3.39	0.32	4.60	0.31	97.0	21.7	49	37.4	51.0
S048635		5.67	<0.01	0.41	3.08	93.3	130	1.38	0.14	13.20	0.40	44.5	10.4	22	14.00	25.3
S048636		4.75	<0.01	0.11	1.66	505	180	1.00	0.06	15.35	0.31	21.9	8.4	13	6.58	19.6
S048637		0.26	0.57	0.62	6.61	452	230	2.42	0.23	2.25	0.33	62.8	23.6	101	39.3	65.5
S048638		4.59	<0.01	0.04	1.83	82.1	250	0.77	0.07	15.15	0.20	24.2	6.6	13	7.30	15.4
S048639		4.19	<0.01	0.04	1.96	117.5	220	0.79	0.08	15.15	0.17	25.9	6.5	13	7.55	15.6
S048640		4.25	0.02	0.08	1.53	56.2	950	0.69	0.07	15.70	0.21	21.1	6.2	13	6.14	15.7
S048641		10.66	<0.01	0.18	1.10	108.5	450	0.51	0.04	17.40	0.99	14.90	4.4	9	4.11	10.2
S048642		12.48	0.01	0.16	0.52	23.1	50	0.28	0.01	18.70	0.06	10.10	3.0	7	1.53	6.5
S048643		11.98	0.01	0.13	0.47	20.1	50	0.33	0.01	18.45	0.03	7.42	2.4	6	1.28	4.8
S048644		10.05	0.01	0.17	1.82	43.0	170	0.83	0.07	15.80	0.20	24.8	6.4	14	6.71	14.3
S048645		0.26	1.47	0.85	2.85	>10000	180	0.76	0.10	16.65	0.36	34.8	8.0	41	8.79	25.4
S048646		11.52	<0.01	0.09	6.54	44.0	290	2.24	0.29	6.99	0.26	84.4	17.3	38	29.1	39.6
S048647		10.52	<0.01	0.01	8.38	37.0	330	3.21	0.38	1.89	0.12	97.0	21.4	61	41.8	52.9
S048648		11.46	0.01	0.04	8.79	37.6	330	3.58	0.40	1.41	0.09	105.0	20.9	83	42.9	59.0
S048649		10.50	<0.01	0.07	7.95	35.1	330	3.50	0.35	3.04	0.28	106.0	19.8	59	34.5	44.3
S048650		10.47	<0.01	0.46	8.35	62.9	330	3.94	0.33	1.93	0.62	109.5	22.8	63	33.3	51.5

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 23-JUL-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18159616

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Hg-MS42	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni
	Units	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2
S048611		0.35	1.14	0.09	0.2	0.157	0.007	0.20	4.5	1.5	0.29	126	0.16	0.01	0.7	2.2
S048612		0.35	1.08	0.07	0.2	0.161	0.007	0.19	4.7	2.0	0.32	124	0.14	0.01	0.7	2.1
S048613		0.44	1.80	0.08	0.4	0.238	0.008	0.26	7.3	2.9	0.35	91	0.21	0.01	1.1	3.4
S048614		0.44	1.66	0.09	0.3	0.185	0.007	0.26	6.3	2.7	0.38	225	0.40	0.01	1.0	3.2
S048615		0.45	1.52	0.08	0.3	0.163	0.007	0.23	5.3	2.8	0.45	253	0.32	0.01	0.9	3.2
S048616		0.10	0.33	0.09	0.1	<0.005	<0.005	0.03	1.3	1.1	1.47	109	0.05	0.06	0.2	0.3
S048617		1.25	5.51	0.11	1.0	0.445	0.020	0.91	13.9	8.8	0.87	174	1.38	0.02	3.2	11.2
S048618		1.00	4.19	0.10	0.8	0.255	0.017	0.66	12.3	6.7	0.87	339	1.04	0.02	2.5	8.8
S048619		0.40	1.39	0.08	0.3	0.082	0.007	0.21	4.6	2.3	0.55	309	0.28	0.01	0.8	2.7
S048620		0.32	1.05	0.06	0.2	0.067	<0.005	0.18	3.5	2.2	0.48	238	0.24	0.01	0.6	2.1
S048621		0.38	1.41	0.08	0.2	0.074	0.005	0.22	4.3	2.7	0.47	269	0.29	0.01	0.7	2.6
S048622		0.38	1.37	0.08	0.2	0.080	<0.005	0.22	4.3	2.7	0.46	252	0.28	0.01	0.8	2.6
S048623		0.41	1.32	0.08	0.3	0.067	<0.005	0.21	4.7	2.8	0.57	271	0.22	0.02	0.7	2.5
S048624		0.43	1.49	0.08	0.3	0.116	0.005	0.24	4.8	3.4	0.58	353	0.29	0.01	0.8	2.8
S048625		0.43	1.42	<0.05	0.2	0.116	0.009	0.23	4.1	3.0	0.59	371	0.28	0.01	0.7	<0.2
S048626		0.86	2.99	0.07	0.5	0.314	0.013	0.47	8.2	4.7	0.96	408	0.76	0.01	1.5	4.0
S048627		1.57	6.68	0.10	1.1	0.465	0.028	1.10	16.4	9.4	0.91	227	1.73	0.02	3.4	13.6
S048628		1.37	5.41	0.08	1.0	0.346	0.020	0.88	13.5	7.6	0.86	267	1.21	0.05	2.8	10.4
S048629		1.92	7.53	0.09	1.3	0.180	0.031	1.23	17.0	12.4	0.98	374	1.59	0.03	3.9	15.8
S048630		1.85	8.08	0.09	1.3	0.174	0.033	1.35	20.2	11.5	1.33	833	1.13	0.03	4.3	15.2
S048631		3.52	29.6	0.19	3.4	1.650	0.092	4.50	38.4	17.7	0.57	44	1.52	0.04	13.7	15.5
S048632		4.37	29.6	0.18	3.3	0.742	0.184	4.64	55.3	22.3	0.61	71	0.64	0.05	13.7	38.0
S048633		8.46	23.2	0.16	2.6	0.322	0.075	3.75	44.0	23.4	0.60	317	0.54	0.04	11.1	73.7
S048634		4.32	21.7	0.15	2.8	0.424	0.078	3.62	50.7	13.6	2.65	1170	2.88	0.04	11.0	44.0
S048635		2.75	9.41	0.10	1.4	0.193	0.037	1.50	22.7	5.4	7.44	2440	4.86	0.02	6.1	22.1
S048636		3.11	4.96	0.06	0.7	0.333	0.022	0.80	10.2	3.8	8.89	2470	3.75	0.01	3.2	20.7
S048637		6.19	19.60	0.12	2.5	3.10	0.066	3.24	31.1	19.0	0.78	642	5.29	0.03	8.8	51.9
S048638		2.07	5.54	0.06	0.8	0.142	0.020	0.89	11.7	3.8	8.75	2150	2.61	0.01	3.6	14.6
S048639		2.11	5.67	0.06	0.9	0.152	0.018	0.94	12.5	3.9	8.77	2050	2.78	0.01	3.8	14.3
S048640		2.08	4.50	0.06	0.8	0.169	0.015	0.75	10.2	3.9	8.95	2400	3.06	0.01	3.4	15.5
S048641		1.91	3.04	0.07	0.5	0.506	0.013	0.53	7.2	2.9	9.96	2350	5.86	0.01	2.3	13.0
S048642		2.37	1.41	0.05	0.3	0.245	0.005	0.24	4.3	2.1	10.85	2100	8.94	0.01	1.3	9.5
S048643		1.55	1.27	<0.05	0.2	0.175	0.007	0.22	3.5	2.0	10.80	2000	8.75	0.01	1.1	6.5
S048644		2.23	5.17	0.06	1.0	0.175	0.018	0.89	12.2	3.8	9.14	2040	6.01	0.01	3.6	15.5
S048645		2.00	8.26	0.07	1.5	4.53	0.029	1.34	17.1	12.4	2.08	1220	1.54	0.10	4.5	17.6
S048646		3.23	18.70	0.15	2.6	0.338	0.056	3.19	43.7	9.4	3.93	1220	3.82	0.04	10.2	34.2
S048647		3.83	26.2	0.17	3.2	0.397	0.080	4.30	46.9	13.4	1.33	852	2.72	0.05	13.1	49.4
S048648		3.54	27.1	0.19	3.2	0.241	0.079	4.38	50.0	14.5	1.15	692	1.81	0.05	13.4	44.1
S048649		4.00	24.4	0.19	2.9	0.229	0.071	4.07	52.7	12.6	1.83	1440	0.98	0.04	12.0	41.6
S048650		3.97	25.9	0.19	2.9	0.699	0.076	4.28	51.6	15.4	1.25	1000	0.82	0.04	12.5	49.1

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 23-JUL-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18159616

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl
	Units	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
	LOD	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.01	0.005	0.02
S048611		180	2.9	9.8	<0.002	0.26	0.25	1.3	1	0.2	2310	<0.05	<0.05	0.80	0.021	0.35
S048612		170	2.5	9.9	<0.002	0.28	0.18	1.3	1	0.2	2010	0.05	<0.05	0.83	0.024	0.37
S048613		630	3.4	14.1	<0.002	0.38	0.18	2.1	1	0.2	2110	0.08	0.05	1.31	0.036	0.53
S048614		490	2.7	13.4	<0.002	0.42	0.19	1.9	1	0.2	1835	0.07	<0.05	1.17	0.034	0.38
S048615		640	2.4	12.2	<0.002	0.36	0.17	1.8	1	0.2	2100	0.06	<0.05	1.05	0.031	0.32
S048616		60	0.6	1.0	<0.002	0.01	0.08	0.2	1	<0.2	83.5	<0.05	<0.05	0.09	0.007	<0.02
S048617		130	6.9	43.5	0.003	1.13	0.41	5.3	1	0.7	1800	0.22	0.06	3.36	0.104	1.00
S048618		510	6.5	32.0	0.006	0.92	0.29	4.0	1	0.5	1790	0.17	0.07	2.81	0.078	0.70
S048619		640	2.4	11.1	<0.002	0.32	0.13	1.5	1	0.2	1695	0.05	<0.05	0.96	0.025	0.20
S048620		370	1.7	9.2	<0.002	0.26	0.08	1.1	<1	<0.2	1540	<0.05	<0.05	0.76	0.020	0.13
S048621		200	1.9	11.5	<0.002	0.31	0.09	1.3	1	0.2	1675	0.05	<0.05	0.93	0.025	0.17
S048622		800	2.2	11.3	0.002	0.32	0.10	1.4	1	0.2	1720	0.05	<0.05	0.94	0.025	0.15
S048623		2030	2.2	10.8	<0.002	0.31	0.09	1.5	1	0.2	1990	0.05	<0.05	0.93	0.024	0.10
S048624		850	2.3	12.4	<0.002	0.34	0.11	1.6	<1	0.2	1895	0.06	<0.05	1.04	0.027	0.17
S048625		830	1.4	10.5	<0.002	0.34	0.14	1.5	1	0.2	1890	0.05	<0.05	0.84	0.026	0.15
S048626		1150	3.2	21.4	0.004	0.70	0.23	3.3	1	0.3	2080	0.11	<0.05	1.76	0.056	0.44
S048627		250	7.3	53.9	0.006	1.42	0.49	7.0	1	0.7	1930	0.23	0.06	3.69	0.128	1.32
S048628		280	6.0	43.0	0.005	1.10	0.33	5.5	1	0.7	2360	0.21	<0.05	3.04	0.113	0.94
S048629		250	8.1	60.7	0.007	1.52	0.37	7.3	2	0.8	2070	0.27	0.05	4.05	0.161	1.03
S048630		250	8.3	65.6	0.004	1.33	0.38	7.9	1	0.9	1255	0.31	<0.05	4.49	0.164	0.87
S048631		760	47.7	165.5	0.003	0.17	0.97	20.7	1	3.0	133.5	1.04	<0.05	21.5	0.394	3.25
S048632		700	15.2	174.5	0.005	2.91	0.67	40.1	1	3.3	103.0	1.01	<0.05	21.2	0.399	2.75
S048633		490	15.2	144.0	<0.002	8.24	0.65	17.5	1	2.6	92.4	0.81	<0.05	15.25	0.317	3.00
S048634		460	16.2	142.0	0.002	3.00	0.94	15.7	<1	2.3	144.0	0.82	0.05	15.40	0.306	2.18
S048635		370	9.0	61.7	0.009	1.06	0.79	7.4	1	1.0	187.5	0.44	<0.05	6.49	0.141	1.30
S048636		260	9.1	30.3	0.011	1.14	1.36	4.9	2	0.5	231	0.22	<0.05	3.19	0.075	0.79
S048637		220	50.0	166.0	0.004	4.46	5.61	20.2	1	2.9	89.5	0.62	<0.05	8.87	0.393	13.30
S048638		260	5.2	36.4	0.006	0.93	0.48	4.3	1	0.6	295	0.24	<0.05	3.42	0.085	0.95
S048639		280	5.1	37.5	0.006	0.93	0.48	4.3	1	0.6	306	0.27	<0.05	3.67	0.090	0.77
S048640		260	6.4	29.2	0.009	0.97	0.35	3.3	1	0.6	338	0.23	<0.05	3.12	0.078	0.92
S048641		200	33.0	19.8	0.018	1.15	0.48	2.5	2	0.4	347	0.15	<0.05	1.99	0.053	1.10
S048642		120	52.1	9.6	0.037	2.03	0.58	1.3	2	0.3	273	0.08	<0.05	1.05	0.031	1.66
S048643		140	29.5	8.5	0.042	1.10	0.41	1.1	2	0.3	294	0.08	<0.05	0.95	0.028	1.18
S048644		270	14.2	34.0	0.018	1.39	0.66	3.9	1	0.6	301	0.26	<0.05	3.60	0.090	1.24
S048645		410	15.1	63.4	0.002	2.21	52.1	7.0	2	1.0	767	0.32	0.08	4.71	0.179	16.15
S048646		440	17.0	122.0	0.005	2.52	1.58	12.4	<1	1.9	171.0	0.75	0.05	13.30	0.279	1.67
S048647		480	19.6	138.5	<0.002	3.68	1.05	18.0	1	3.0	128.0	0.96	0.10	15.50	0.373	1.60
S048648		500	16.4	154.0	0.002	3.37	0.77	18.4	<1	3.0	138.5	0.99	0.05	17.40	0.378	1.50
S048649		450	12.4	139.0	0.002	3.73	0.73	16.6	<1	2.6	178.0	0.91	<0.05	16.55	0.346	1.45
S048650		500	25.5	141.5	<0.002	3.65	1.08	17.5	1	2.8	158.5	0.94	<0.05	16.95	0.363	2.05

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 23-JUL-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18159616

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	U	V	W	Y	Zn	Zr
	Units	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.1	1	0.1	0.1	2	0.5
S048611		1.3	7	0.2	9.4	4	10.2
S048612		1.6	7	0.2	10.6	4	10.2
S048613		3.1	11	0.3	16.7	9	17.6
S048614		2.7	10	0.2	13.0	7	14.2
S048615		2.0	10	0.3	10.5	4	14.7
S048616		0.2	1	<0.1	2.4	3	2.6
S048617		2.7	33	0.8	16.8	28	35.1
S048618		2.5	26	0.5	14.5	28	30.4
S048619		1.7	9	0.2	9.0	7	12.5
S048620		1.3	7	0.2	6.4	4	8.6
S048621		1.6	9	0.2	8.1	7	9.8
S048622		1.7	9	0.2	8.3	7	11.4
S048623		2.5	9	0.1	11.0	8	14.7
S048624		2.1	10	0.3	9.1	6	13.2
S048625		1.8	10	0.2	8.2	9	10.4
S048626		2.4	20	0.5	12.9	14	22.0
S048627		3.3	42	0.8	23.2	35	40.0
S048628		3.1	36	0.4	17.4	29	33.5
S048629		2.6	50	0.5	16.3	41	47.5
S048630		2.3	50	0.7	19.9	43	50.1
S048631		2.5	141	3.4	17.7	56	110.5
S048632		3.0	95	2.7	25.7	69	111.5
S048633		2.4	82	1.9	26.5	162	90.8
S048634		3.0	74	1.6	25.0	75	100.0
S048635		2.7	45	2.9	14.6	37	51.4
S048636		1.3	22	1.9	9.5	90	26.4
S048637		1.8	136	12.6	18.5	102	83.8
S048638		1.4	24	0.9	8.7	21	29.6
S048639		1.5	26	0.9	9.1	21	31.1
S048640		1.4	24	0.7	8.2	36	27.0
S048641		4.0	34	1.0	5.5	473	18.8
S048642		6.0	44	0.4	3.4	6	11.5
S048643		6.9	39	0.4	3.0	7	10.0
S048644		2.9	37	2.2	8.5	31	30.6
S048645		4.0	53	4.9	15.4	55	52.2
S048646		3.2	66	2.0	20.0	44	88.3
S048647		2.7	90	1.9	24.6	60	110.5
S048648		2.7	98	2.1	25.9	54	114.0
S048649		2.2	83	2.1	24.9	97	98.7
S048650		2.1	99	3.8	25.0	322	97.6

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Project: Nadaleen

Finalized Date: 23-JUL-2018
Account: RCM

CERTIFICATE OF ANALYSIS WH18159616

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Applies to Method: REE's may not be totally soluble in this method.
ME-MS61

LABORATORY ADDRESSES

Applies to Method: Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.

BAG-06	CRU-31	CRU-QC	LOG-21
LOG-21d	LOG-23	PUL-31	PUL-31d
PUL-QC	SPL-21	SPL-21d	WEI-21
WSH-22			

Applies to Method: Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Au-AA25	Hg-MS42	ME-MS61

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To: **ATAC RESOURCES LTD.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 19-JUL-2018
Account: RCM

CERTIFICATE WH18157124

Project: Nadaleen

P.O. No.: N18-022

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 2-JUL-2018.

The following have access to data associated with this certificate:

ANDREW CARNE	JULIA LANE	

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
BAG-06	Double Bagging Coarse Rejects
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
LOG-23	Pulp Login - Rcvd with Barcode
LOG-21d	Sample logging - ClientBarCode Dup
SPL-21d	Split sample - duplicate
PUL-31d	Pulverize Split - duplicate

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid ICP-MS	
Hg-MS42	Trace Hg by ICPMS	ICP-MS
ME-OG62	Ore Grade Elements - Four Acid	ICP-AES
As-OG62	Ore Grade As - Four Acid	ICP-AES

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:

Colin Ramshaw, Vancouver Laboratory Manager

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Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18157124

Sample Description	Method Analyte Units LOD	WEI-21 Recvd Wt. kg 0.02	Au-AA25 Au ppm 0.01	ME-MS61 Ag ppm 0.01	ME-MS61 Al % 0.01	ME-MS61 As ppm 0.2	ME-MS61 Ba ppm 10	ME-MS61 Be ppm 0.05	ME-MS61 Bi ppm 0.01	ME-MS61 Ca % 0.01	ME-MS61 Cd ppm 0.02	ME-MS61 Ce ppm 0.01	ME-MS61 Co ppm 0.1	ME-MS61 Cr ppm 1	ME-MS61 Cs ppm 0.05	ME-MS61 Cu ppm 0.2
S049941		5.47	<0.01	0.07	5.52	158.0	350	1.47	0.19	2.75	0.03	54.0	16.2	59	21.4	48.3
S049942		5.65	0.10	0.12	3.62	563	180	0.68	0.13	2.63	0.27	37.5	14.2	44	8.11	30.7
S049943		3.70	0.13	0.06	2.84	454	160	0.47	0.10	5.36	0.07	31.0	9.6	31	5.80	20.6
S049944		4.80	0.17	1.23	6.47	556	280	1.46	0.22	3.60	0.15	59.6	25.5	76	16.80	65.8
S049945		4.88	0.48	0.47	6.60	1190	190	1.31	0.21	1.61	0.24	58.3	26.3	86	16.10	72.5
S049946		3.67	7.08	1.33	4.02	>10000	120	0.69	0.17	0.13	0.44	42.4	15.2	61	12.20	54.0
S049947		7.50	3.48	0.95	2.38	>10000	130	0.29	0.12	0.12	0.23	28.6	11.1	36	4.24	28.7
S049948		8.14	4.32	0.90	4.97	>10000	200	0.73	0.21	0.17	0.26	49.2	14.0	56	12.40	47.2
S049949		0.26	8.37	1.63	1.88	>10000	100	0.24	0.51	7.07	0.82	28.9	6.0	44	3.15	27.4
S049950		7.27	2.75	0.24	6.28	6220	210	0.93	0.26	0.45	0.23	62.3	16.8	72	18.45	52.1
S049951		6.84	6.06	0.85	6.47	>10000	210	1.15	0.27	1.18	0.55	63.2	15.5	67	19.60	49.8
S049952		6.73	0.01	0.01	0.10	34.4	20	0.09	0.02	33.0	0.02	1.13	0.5	1	0.09	3.2
S049953		12.68	0.65	0.20	5.18	549	160	1.28	0.19	2.18	0.07	55.1	17.0	61	19.95	44.9
S049954		12.11	0.08	0.07	6.02	295	190	1.72	0.23	2.54	0.07	62.9	17.3	64	26.4	53.2
S049955		11.55	0.17	0.09	5.48	724	240	1.12	0.22	2.45	0.04	53.7	14.1	58	18.50	47.7
S049956		5.82	0.01	0.52	5.30	176.5	240	1.11	0.22	2.11	0.04	53.1	14.8	58	17.50	45.7
S049957		8.45	0.03	0.06	5.40	220	180	1.07	0.22	3.07	0.03	52.6	16.3	57	19.55	49.2
S049958		6.89	0.26	0.24	6.01	1245	200	1.44	0.22	1.75	0.24	57.2	19.2	65	26.5	46.9
S049959		10.43	1.04	0.10	5.80	494	160	1.43	0.23	2.11	0.13	57.6	17.7	63	23.7	48.3
S049960		6.30	2.41	0.34	4.50	6950	110	0.78	0.18	0.78	0.21	44.1	14.6	57	12.55	41.9
S049961		3.96	2.70	0.29	6.53	3310	180	1.23	0.28	0.54	0.21	64.3	18.3	68	18.50	62.3
S049962		2.77	3.93	0.84	6.08	>10000	170	1.17	0.25	0.30	0.30	59.9	17.8	67	16.55	49.2
S049963		2.90	3.48	0.80	5.91	>10000	170	1.03	0.23	0.19	0.30	56.8	16.3	67	15.55	44.5
S049964		6.09	1.73	0.15	5.84	7120	190	1.10	0.23	1.23	0.14	57.7	16.3	66	14.30	47.5
S049965		11.04	3.38	0.21	2.92	2810	150	0.49	0.11	2.71	0.16	31.9	8.5	46	6.24	22.7
S049966		7.30	5.78	0.60	1.43	>10000	50	0.17	0.05	1.35	0.20	17.95	5.0	35	2.22	12.6
S049967		10.92	3.80	0.16	1.25	2880	40	0.23	0.04	1.92	0.12	15.30	4.6	36	1.90	10.0
S049968		4.79	7.09	1.11	3.60	8870	180	0.59	0.14	3.09	0.25	34.1	10.5	43	7.28	33.6
S049969		5.65	4.98	0.20	4.27	4780	190	0.76	0.18	3.03	0.22	40.9	9.6	43	8.29	37.5
S049970		4.70	2.95	0.12	2.39	1455	90	0.36	0.08	3.88	0.11	25.7	5.9	32	3.95	19.7
S049971		7.02	2.61	0.06	1.77	1455	70	0.23	0.06	3.61	0.11	18.10	4.2	30	3.02	14.6
S049972		5.38	1.22	0.09	3.01	497	100	0.58	0.11	3.19	0.15	30.1	8.3	36	7.55	25.6
S049973		9.60	0.17	0.07	6.67	937	220	1.36	0.26	3.33	0.12	65.5	20.4	69	18.05	58.7
S049974		<0.02	0.17	0.05	6.62	921	220	1.53	0.27	3.33	0.16	65.7	18.9	69	17.85	59.2
S049975		3.94	25.1	0.19	4.80	>10000	260	0.89	0.17	2.38	0.58	42.3	16.0	64	8.35	55.4
S049976		0.26	13.25	1.37	2.84	>10000	110	0.39	0.25	7.56	0.69	39.2	9.3	41	7.82	29.1
S049977		8.50	0.78	0.04	1.96	1060	90	0.24	0.06	2.81	0.07	20.6	5.8	41	3.02	15.4
S049978		12.03	0.04	0.06	5.60	306	260	1.37	0.22	2.24	0.09	55.2	15.8	64	20.7	45.3
S049979		11.94	<0.01	0.06	5.40	133.5	380	1.26	0.20	2.83	0.09	52.4	15.9	68	22.1	47.0
S049980		12.32	<0.01	0.05	5.78	117.5	320	1.37	0.22	2.00	0.03	57.8	16.5	70	25.9	50.6

***** See Appendix Page for comments regarding this certificate *****

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Finalized Date: 19-JUL-2018
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Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18157124

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Hg-MS42	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni
	Units	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2
S049941		4.74	14.40	0.11	2.6	0.710	0.052	2.44	24.5	58.7	1.45	517	0.24	0.02	8.7	31.7
S049942		4.00	9.36	0.10	1.9	1.370	0.036	1.56	17.7	15.2	1.14	644	0.59	0.02	5.4	26.9
S049943		4.09	6.70	0.06	1.3	0.823	0.024	1.24	13.2	10.6	2.16	1320	0.46	0.02	3.7	17.0
S049944		5.77	16.85	0.10	2.9	2.68	0.057	2.81	27.9	17.8	1.69	965	0.95	0.02	9.8	43.0
S049945		6.44	16.90	0.12	2.9	4.16	0.057	2.77	26.6	17.4	0.87	566	0.68	0.02	9.8	49.2
S049946		4.34	10.10	0.09	2.1	19.00	0.052	1.28	19.3	29.8	0.16	39	0.52	0.01	6.7	27.6
S049947		3.44	5.80	0.07	1.3	5.84	0.022	1.01	11.9	8.9	0.13	43	0.49	0.01	3.4	17.0
S049948		4.69	12.80	0.10	2.2	6.10	0.041	2.31	22.9	10.5	0.29	38	0.43	0.02	7.3	26.4
S049949		2.53	5.06	0.08	0.9	16.20	0.022	0.85	13.1	20.2	0.16	344	5.84	0.01	2.3	18.0
S049950		5.74	16.10	0.11	2.8	7.07	0.045	3.03	29.0	8.9	0.51	146	0.30	0.02	9.4	35.0
S049951		5.44	17.00	0.13	2.8	8.81	0.055	3.10	29.8	10.2	0.82	591	0.60	0.02	9.1	31.8
S049952		0.11	0.29	0.08	0.1	0.017	<0.005	0.02	1.2	1.1	1.69	119	0.34	0.04	0.2	1.2
S049953		4.31	13.50	0.10	2.6	3.22	0.053	2.44	26.3	12.3	1.19	836	0.45	0.02	8.4	30.9
S049954		4.55	15.85	0.10	2.9	1.375	0.057	2.87	30.5	16.0	1.42	747	0.23	0.02	9.3	32.1
S049955		4.60	14.25	0.09	2.6	1.365	0.056	2.62	24.7	10.6	1.36	706	0.21	0.02	8.8	28.9
S049956		4.53	14.20	0.10	2.7	1.300	0.056	2.48	24.7	12.8	1.15	549	0.24	0.02	8.4	29.8
S049957		4.84	14.25	0.09	2.5	0.801	0.057	2.53	24.1	14.0	1.51	859	0.24	0.02	8.7	31.4
S049958		4.03	16.25	0.09	2.6	2.04	0.049	2.95	26.0	12.3	1.13	808	0.22	0.02	8.4	32.6
S049959		4.39	16.30	0.10	2.8	4.10	0.050	2.79	26.3	10.0	1.15	770	0.23	0.02	8.7	32.2
S049960		4.41	12.20	0.10	2.3	7.22	0.036	2.09	20.2	7.7	0.52	379	0.21	0.01	7.3	27.4
S049961		5.41	18.20	0.11	3.0	7.61	0.045	3.18	29.7	10.5	0.46	251	0.25	0.02	10.2	35.7
S049962		5.04	17.35	0.10	2.7	8.41	0.054	2.96	27.0	10.1	0.38	108	0.31	0.02	9.3	33.5
S049963		4.79	16.60	0.10	2.7	7.61	0.047	2.87	26.7	9.6	0.36	57	0.32	0.02	8.8	31.7
S049964		4.11	16.45	0.11	2.8	7.20	0.048	2.80	27.1	10.5	0.55	718	0.26	0.02	9.3	31.0
S049965		2.55	7.52	0.07	1.5	5.23	0.021	1.37	14.3	7.6	1.03	637	0.33	0.01	4.6	15.9
S049966		2.20	3.70	0.05	0.9	8.77	0.015	0.64	8.1	5.9	0.51	410	0.17	0.01	2.3	8.8
S049967		1.94	2.99	0.05	0.8	6.34	0.010	0.56	7.2	3.8	0.71	515	0.13	0.01	2.0	8.2
S049968		3.54	9.64	0.08	1.7	8.02	0.036	1.65	15.0	14.6	1.34	751	1.75	0.01	5.3	21.7
S049969		3.86	11.40	0.08	2.0	7.21	0.037	1.91	19.0	16.7	1.29	727	0.65	0.02	6.5	18.4
S049970		3.03	5.98	0.06	1.3	4.18	0.019	1.03	11.6	10.6	1.48	1020	0.30	0.01	3.4	12.1
S049971		2.56	3.76	<0.05	0.9	4.13	0.018	0.77	8.0	10.7	1.34	712	0.68	0.01	2.3	8.0
S049972		3.17	7.76	0.05	1.6	1.835	0.026	1.39	13.3	18.7	1.30	859	0.65	0.01	4.3	14.8
S049973		4.98	17.60	0.13	2.9	1.955	0.065	3.25	30.0	12.8	1.75	681	0.50	0.03	11.0	37.3
S049974		4.87	17.60	0.11	3.0	2.04	0.053	3.24	29.1	13.3	1.75	674	0.47	0.03	10.8	35.8
S049975		4.48	13.30	0.09	2.0	19.75	0.042	2.26	19.0	12.1	1.13	1440	0.36	0.02	7.2	31.1
S049976		2.81	8.04	0.10	1.5	23.1	0.035	1.32	19.7	12.3	1.80	1020	3.86	0.01	4.1	21.0
S049977		1.96	4.78	0.05	1.1	1.145	0.015	0.89	9.2	6.8	1.05	667	0.24	0.01	2.9	11.5
S049978		4.55	15.10	0.09	2.7	0.461	0.054	2.60	25.7	53.6	1.67	460	0.38	0.02	9.0	30.2
S049979		4.61	14.60	0.09	2.5	0.165	0.055	2.51	23.8	74.4	2.13	763	0.34	0.02	8.7	32.0
S049980		4.71	15.60	0.09	2.9	0.160	0.052	2.69	25.5	77.2	2.09	493	0.18	0.03	9.2	32.3

***** See Appendix Page for comments regarding this certificate *****

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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 19-JUL-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18157124

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl
	Units	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
	LOD	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.01	0.005	0.02
S049941		430	13.8	113.5	<0.002	4.29	0.72	15.3	<1	1.7	155.0	0.59	<0.05	7.36	0.478	4.02
S049942		290	20.3	63.9	0.002	3.34	5.44	10.5	<1	1.3	91.9	0.42	0.05	5.29	0.353	6.37
S049943		340	12.3	47.6	<0.002	2.15	3.43	7.7	<1	0.9	167.5	0.29	<0.05	3.90	0.259	3.65
S049944		530	12.3	121.0	<0.002	4.94	6.07	19.5	<1	2.2	155.0	0.68	0.05	8.12	0.600	11.20
S049945		450	19.7	118.0	<0.002	6.46	16.75	18.1	<1	2.3	103.0	0.71	<0.05	8.14	0.625	17.55
S049946		370	16.9	56.4	<0.002	6.20	133.5	5.6	2	1.9	73.3	0.48	0.16	5.84	0.444	51.9
S049947		270	28.5	43.6	<0.002	4.21	37.0	2.7	<1	1.0	32.9	0.28	0.06	3.87	0.230	21.3
S049948		520	21.7	99.4	<0.002	5.85	60.5	8.1	1	1.6	54.3	0.55	0.10	6.87	0.388	22.4
S049949		500	10.0	38.6	0.003	4.65	161.5	2.8	2	1.1	355	0.18	0.12	2.88	0.100	42.0
S049950		510	17.6	133.5	<0.002	6.21	22.1	14.2	<1	1.9	51.7	0.66	<0.05	8.44	0.510	24.0
S049951		580	17.6	141.0	<0.002	5.80	43.6	15.2	1	2.0	76.4	0.67	0.14	9.02	0.467	32.0
S049952		70	1.0	0.8	<0.002	<0.01	0.22	0.2	1	<0.2	83.6	<0.05	<0.05	0.10	0.006	0.09
S049953		430	16.4	120.0	<0.002	4.13	7.15	13.5	<1	1.7	75.6	0.60	0.10	7.83	0.429	8.33
S049954		470	14.4	140.5	<0.002	4.19	1.96	15.5	1	1.9	92.2	0.66	0.06	9.18	0.468	4.11
S049955		480	13.8	123.0	<0.002	4.28	2.32	12.8	<1	1.8	99.2	0.62	<0.05	7.66	0.465	4.04
S049956		450	12.3	121.5	<0.002	4.24	1.19	12.6	<1	1.7	128.5	0.60	0.05	7.41	0.458	3.82
S049957		450	14.4	127.0	<0.002	4.30	1.42	13.4	<1	1.7	121.0	0.60	0.05	7.49	0.472	2.64
S049958		330	24.4	139.5	<0.002	3.76	6.19	15.3	<1	1.8	76.9	0.58	0.05	7.85	0.425	6.06
S049959		610	17.8	137.0	<0.002	4.14	10.15	14.3	<1	1.8	100.0	0.64	0.06	7.97	0.447	12.65
S049960		380	12.7	100.0	<0.002	4.86	31.1	9.4	<1	1.4	51.8	0.49	0.09	6.42	0.412	21.5
S049961		630	16.7	148.5	<0.002	5.82	28.0	14.1	<1	2.0	52.9	0.72	0.10	9.28	0.487	28.6
S049962		530	15.6	138.5	<0.002	6.53	96.9	11.8	1	1.9	50.2	0.66	0.13	8.44	0.453	31.9
S049963		510	13.5	130.5	<0.002	6.24	98.1	11.1	1	1.8	47.3	0.63	0.15	8.16	0.454	28.3
S049964		470	14.1	125.0	<0.002	4.46	35.3	12.7	1	1.8	68.4	0.66	0.05	8.14	0.489	27.9
S049965		290	7.4	57.6	<0.002	1.68	26.0	6.7	<1	1.0	83.1	0.32	0.07	4.36	0.259	21.7
S049966		170	4.8	25.2	<0.002	1.98	54.3	2.6	<1	0.5	44.4	0.17	0.08	2.40	0.174	34.8
S049967		140	3.5	20.6	<0.002	1.08	23.6	2.6	<1	0.5	52.2	0.14	0.05	1.95	0.161	27.5
S049968		330	21.1	67.1	<0.002	2.96	52.2	8.1	1	1.3	166.5	0.38	0.09	5.17	0.291	38.8
S049969		400	10.6	74.9	<0.002	2.98	42.1	9.8	1	1.7	163.0	0.47	0.06	6.25	0.345	35.1
S049970		250	10.4	41.4	<0.002	1.54	20.8	5.3	<1	0.8	160.0	0.25	<0.05	3.73	0.224	20.6
S049971		190	11.7	31.8	<0.002	1.05	19.30	3.5	<1	0.7	137.5	0.17	<0.05	2.79	0.184	20.1
S049972		250	12.0	59.6	<0.002	2.11	4.78	7.0	<1	0.9	125.5	0.35	<0.05	4.38	0.264	5.46
S049973		550	16.8	134.0	<0.002	4.28	5.13	16.6	<1	2.1	141.0	0.72	<0.05	8.99	0.535	3.97
S049974		540	16.2	137.5	<0.002	4.14	4.87	16.8	<1	2.0	141.5	0.76	0.06	8.99	0.532	3.88
S049975		540	16.2	89.8	<0.002	5.03	169.0	11.6	1	1.6	119.5	0.52	0.11	5.78	0.446	121.0
S049976		330	16.6	61.2	0.004	4.75	192.0	4.9	3	1.2	175.0	0.29	0.15	4.51	0.167	67.1
S049977		200	3.9	32.7	<0.002	0.72	5.83	4.8	<1	0.6	114.5	0.18	<0.05	2.62	0.223	4.41
S049978		470	15.3	116.0	<0.002	2.11	0.99	13.9	<1	1.7	143.5	0.65	0.05	7.84	0.472	3.10
S049979		470	11.3	117.0	<0.002	0.78	0.38	14.3	<1	1.7	192.0	0.63	<0.05	7.21	0.480	1.22
S049980		460	13.7	132.5	<0.002	0.27	0.34	14.7	1	1.8	116.5	0.64	0.05	7.71	0.490	1.07

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 19-JUL-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18157124

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	As-OG62
	Analyte	U	V	W	Y	Zn	Zr	As
	Units	ppm	ppm	ppm	ppm	ppm	ppm	%
	LOD	0.1	1	0.1	0.1	2	0.5	0.001
S049941		1.6	130	2.7	18.0	53	90.6	
S049942		1.1	102	4.1	11.1	209	61.9	
S049943		0.9	76	2.6	10.7	58	46.9	
S049944		1.6	171	12.7	19.5	115	102.0	
S049945		1.7	182	13.6	19.1	152	102.5	
S049946		1.4	115	15.0	15.5	104	74.4	5.11
S049947		0.8	68	10.1	9.1	90	41.9	1.410
S049948		1.4	107	10.6	19.2	123	75.1	2.24
S049949		4.3	37	7.4	15.0	67	29.1	6.89
S049950		1.8	138	12.1	21.4	82	98.4	
S049951		1.9	135	11.0	21.4	233	95.1	1.110
S049952		0.1	2	0.1	2.1	5	1.9	
S049953		1.7	117	6.9	16.8	62	89.1	
S049954		1.9	128	4.4	18.8	71	97.7	
S049955		1.5	127	5.8	17.3	67	85.5	
S049956		1.5	125	6.4	16.3	74	85.2	
S049957		1.5	128	4.2	17.5	67	86.2	
S049958		1.7	131	5.8	16.6	74	90.5	
S049959		1.6	129	8.8	19.3	67	89.1	
S049960		1.3	117	10.2	15.3	55	77.2	
S049961		1.9	134	12.5	22.6	78	99.9	
S049962		1.7	132	12.6	21.1	78	90.9	3.11
S049963		1.7	131	11.9	20.0	78	89.1	3.12
S049964		1.6	138	10.0	18.9	61	95.4	
S049965		0.9	71	3.5	9.5	42	52.6	
S049966		0.5	52	2.5	6.0	39	29.3	1.175
S049967		0.4	47	2.0	4.7	19	24.8	
S049968		1.0	83	3.7	11.0	83	60.9	
S049969		1.3	93	3.7	13.0	57	72.4	
S049970		0.8	61	2.8	8.3	28	43.8	
S049971		0.6	49	1.7	6.4	27	33.5	
S049972		0.9	73	2.6	9.9	72	52.0	
S049973		1.8	143	9.1	21.2	137	104.5	
S049974		1.8	144	9.6	20.8	149	148.0	
S049975		1.1	127	11.9	15.1	70	70.4	3.60
S049976		5.5	51	5.2	17.3	107	52.2	7.37
S049977		0.6	66	2.9	6.2	37	37.0	
S049978		1.7	128	1.8	17.3	77	90.2	
S049979		1.5	134	1.6	17.7	72	88.3	
S049980		1.6	132	1.5	18.2	63	92.5	

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
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VANCOUVER BC V6B 1L8

Project: Nadaleen

Finalized Date: 19-JUL-2018
Account: RCM

CERTIFICATE OF ANALYSIS WH18157124

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Applies to Method: REE's may not be totally soluble in this method.
ME-MS61

LABORATORY ADDRESSES

Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.

Applies to Method:				
	BAG-06	CRU-31	CRU-QC	LOG-21
	LOG-21d	LOG-23	PUL-31	PUL-31d
	PUL-QC	SPL-21	SPL-21d	WEI-21

Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Applies to Method:				
	As-OG62	Au-AA25	Hg-MS42	ME-MS61
	ME-OG62			

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To: **ATAC RESOURCES LTD.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 22-JUL-2018
Account: RCM

CERTIFICATE WH18159576

Project: Nadaleen

P.O. No.: N18-023

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 4-JUL-2018.

The following have access to data associated with this certificate:

ANDREW CARNE	JULIA LANE	

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
BAG-06	Double Bagging Coarse Rejects
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
LOG-23	Pulp Login - Rcvd with Barcode
LOG-21d	Sample logging - ClientBarCode Dup
SPL-21d	Split sample - duplicate
PUL-31d	Pulverize Split - duplicate

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid ICP-MS	
Hg-MS42	Trace Hg by ICPMS	ICP-MS

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:

Colin Ramshaw, Vancouver Laboratory Manager

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Finalized Date: 22-JUL-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18159576

Sample Description	Method Analyte Units LOD	WEI-21 Recvd Wt. kg 0.02	Au-AA25 Au ppm 0.01	ME-MS61 Ag ppm 0.01	ME-MS61 Al % 0.01	ME-MS61 As ppm 0.2	ME-MS61 Ba ppm 10	ME-MS61 Be ppm 0.05	ME-MS61 Bi ppm 0.01	ME-MS61 Ca % 0.01	ME-MS61 Cd ppm 0.02	ME-MS61 Ce ppm 0.01	ME-MS61 Co ppm 0.1	ME-MS61 Cr ppm 1	ME-MS61 Cs ppm 0.05	ME-MS61 Cu ppm 0.2
S049981		11.95	0.01	0.15	5.20	141.5	250	1.37	0.18	2.35	0.07	51.3	15.5	63	17.40	41.6
S049982		11.06	2.29	0.17	5.92	900	320	1.20	0.23	2.29	0.34	56.7	15.9	64	12.50	45.2
S049983		12.51	1.21	0.11	6.57	719	270	1.49	0.22	2.98	0.14	61.2	18.9	74	21.9	48.1
S049984		12.73	1.15	0.16	6.12	1515	270	1.43	0.23	2.78	0.17	58.9	16.8	67	15.95	46.2
S049985		10.48	0.01	0.07	6.60	131.0	430	1.88	0.23	2.57	0.12	62.9	16.8	73	22.1	52.6
S049986		7.36	0.01	0.15	7.03	20.0	350	0.93	0.02	4.93	0.14	141.0	30.8	9	24.5	10.1
S049987		7.47	<0.01	0.07	5.70	156.5	400	1.78	0.21	2.57	0.07	57.9	16.5	69	24.7	45.3
S049988		13.64	<0.01	0.08	6.69	35.6	330	1.95	0.24	2.47	0.13	64.7	21.6	77	36.2	56.3
S049989		4.98	<0.01	0.07	6.79	20.3	300	1.85	0.24	1.76	0.03	65.6	20.7	80	45.5	57.9
S049990		7.28	<0.01	0.10	6.91	30.6	370	0.91	0.05	5.37	0.10	133.0	31.1	11	23.7	11.7
S049991		12.23	<0.01	0.07	6.16	263	270	1.76	0.23	2.59	0.08	59.8	19.8	76	22.1	52.7
S049992		12.14	<0.01	0.06	5.67	40.6	330	1.53	0.20	2.72	0.12	56.0	18.3	71	30.8	47.8
S049993		12.54	<0.01	0.08	6.26	22.0	280	1.67	0.22	2.17	0.07	60.0	16.6	71	28.7	45.6
S049994		0.26	1.45	0.93	3.04	>10000	200	0.73	0.11	17.70	0.37	35.2	7.8	43	8.71	25.5
S049995		8.91	<0.01	0.07	7.41	19.7	250	2.21	0.27	2.19	0.14	71.9	17.8	78	37.1	53.9
S049996		8.37	0.01	0.09	8.19	160.5	270	2.34	0.32	2.58	0.16	79.0	18.3	76	27.9	56.2
S049997		4.00	<0.01	0.05	6.33	14.4	250	1.75	0.23	4.03	0.11	61.1	15.4	66	31.2	45.8
S049998		4.09	<0.01	0.06	6.62	14.4	270	1.83	0.23	4.03	0.08	62.0	15.9	68	31.9	47.3
S049999		8.83	<0.01	0.09	6.02	10.0	440	1.61	0.21	4.09	0.10	57.3	21.0	63	33.9	47.2
S050000		4.34	<0.01	0.06	7.15	24.1	340	2.17	0.21	2.11	0.03	65.2	22.2	82	41.5	49.8
S050001		4.23	<0.01	0.08	6.50	53.2	430	1.87	0.22	3.69	0.02	60.6	20.7	74	30.3	48.1
S050002		7.71	0.01	0.01	0.57	23.6	140	0.29	0.03	32.3	0.03	9.26	2.1	6	1.69	5.9
S050003		3.79	0.02	0.03	1.91	79.2	140	0.61	0.10	27.1	0.03	25.4	6.2	18	4.17	15.6
S050004		4.42	<0.01	0.04	6.49	139.5	250	0.87	0.03	10.80	0.15	120.5	21.9	12	37.1	11.8
S050005		<0.02	<0.01	0.04	6.40	135.5	240	0.74	0.03	10.45	0.14	113.0	21.1	12	34.8	10.9
S050006		8.02	0.01	0.02	1.13	46.1	110	0.28	0.04	34.1	0.07	19.95	3.7	7	2.66	7.1
S050007		5.32	0.02	0.01	1.09	68.0	120	0.29	0.03	33.0	0.03	20.5	4.4	6	2.82	6.2
S050008		1.87	0.01	0.04	5.00	139.5	210	0.71	0.03	18.90	0.15	86.2	15.7	10	22.8	9.0
S050009		8.01	0.10	0.03	0.95	112.0	110	0.26	0.05	33.1	0.08	18.20	3.6	9	2.47	11.6
S050010		7.73	0.20	0.03	1.27	129.0	150	0.30	0.06	32.1	0.10	16.50	4.1	12	2.94	12.8
S050011		8.32	0.06	0.03	1.78	107.0	200	0.47	0.08	29.3	0.13	25.7	6.4	18	4.54	18.9
S050012		4.72	<0.01	<0.01	0.06	0.5	30	0.06	0.01	33.8	0.02	0.88	0.4	3	<0.05	1.9
S050013		5.60	0.01	0.03	1.76	35.6	150	0.57	0.09	29.0	0.09	29.8	6.4	16	5.38	18.5
S050014		4.99	<0.01	0.02	1.23	14.8	880	0.35	0.04	31.0	0.14	20.6	3.6	8	4.74	8.8
S050015		3.96	<0.01	0.02	3.17	72.0	250	0.49	0.05	24.1	0.14	56.7	11.7	9	15.85	10.8
S050016		0.26	1.09	1.30	1.50	827	190	0.39	0.12	28.3	0.63	17.50	4.1	26	3.30	43.3
S050017		5.62	<0.01	0.02	0.88	23.7	160	0.31	0.04	34.7	0.07	13.75	3.1	8	2.59	8.2
S050018		4.66	0.68	0.03	6.42	1820	250	0.87	0.04	11.00	0.19	112.0	27.8	10	28.9	11.7
S050019		4.06	2.44	0.24	1.95	3820	270	0.30	0.03	29.6	0.13	36.4	9.0	5	4.57	6.1
S050020		4.41	0.05	0.02	0.47	74.1	90	0.17	0.02	38.2	0.04	7.81	1.8	5	1.37	4.5

***** See Appendix Page for comments regarding this certificate *****

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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 22-JUL-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18159576

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Hg-MS42	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni
	Units	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2
S049981		4.70	13.50	0.14	2.5	0.364	0.052	2.47	25.2	43.2	1.60	554	0.26	0.02	8.0	31.6
S049982		4.82	15.90	0.19	2.7	3.02	0.052	2.89	27.9	14.9	1.29	833	0.70	0.02	8.6	33.4
S049983		5.00	17.90	0.20	3.0	1.855	0.059	3.28	30.1	27.5	1.57	827	0.49	0.02	9.1	35.4
S049984		4.54	16.30	0.17	3.1	1.830	0.057	3.06	29.2	18.0	1.48	723	0.97	0.02	9.1	33.0
S049985		4.73	17.60	0.20	3.0	0.296	0.065	3.21	30.9	37.5	1.61	676	0.53	0.03	10.3	34.4
S049986		8.31	18.40	0.28	3.3	0.084	0.074	0.91	69.2	106.0	2.27	1480	1.89	2.91	62.8	10.3
S049987		4.78	15.25	0.18	2.9	0.143	0.061	2.69	27.9	55.0	1.80	588	0.37	0.03	9.4	34.1
S049988		5.54	17.45	0.20	3.1	0.091	0.065	3.11	31.3	101.0	2.29	764	0.42	0.06	10.6	39.2
S049989		5.48	17.75	0.21	3.1	0.056	0.069	2.98	32.0	113.5	2.12	522	0.32	0.24	10.9	41.1
S049990		7.38	16.55	0.28	3.0	0.102	0.075	1.12	64.0	79.6	2.28	1480	1.81	2.76	58.0	12.1
S049991		5.32	16.55	0.20	2.8	0.276	0.067	2.89	28.4	95.1	1.94	675	0.42	0.03	9.9	39.2
S049992		4.77	15.10	0.19	2.8	0.047	0.062	2.59	27.1	105.5	2.23	676	0.37	0.07	9.3	36.1
S049993		4.79	16.25	0.20	2.8	0.113	0.067	2.99	29.3	64.7	2.00	520	0.63	0.03	8.9	34.2
S049994		2.10	8.14	0.13	1.6	4.54	0.027	1.41	17.9	12.5	2.17	1270	1.49	0.10	4.3	18.7
S049995		5.17	19.45	0.21	3.2	0.126	0.077	3.64	35.5	37.2	2.13	465	0.64	0.04	10.6	37.8
S049996		6.13	21.5	0.21	3.5	0.644	0.078	4.04	38.5	20.5	1.74	409	1.11	0.03	11.2	40.7
S049997		4.65	16.55	0.20	2.9	0.153	0.064	3.14	29.9	38.4	2.47	545	0.42	0.06	9.0	32.8
S049998		4.76	17.05	0.20	3.0	0.166	0.068	3.24	30.4	40.2	2.53	547	0.43	0.06	9.4	33.6
S049999		4.54	15.65	0.21	2.9	0.084	0.059	3.02	27.7	60.4	2.57	571	0.41	0.04	9.2	34.6
S050000		4.89	19.10	0.23	2.8	0.247	0.067	3.44	31.9	98.3	1.73	366	0.36	0.04	9.0	37.4
S050001		4.72	17.50	0.24	2.5	0.368	0.061	3.14	30.3	60.4	2.04	586	1.71	0.03	8.1	39.8
S050002		1.23	1.62	0.07	0.3	0.117	0.006	0.27	4.5	2.9	1.43	555	0.40	0.01	0.7	2.9
S050003		1.71	5.14	0.11	0.9	0.894	0.020	0.95	14.3	4.9	1.28	556	0.88	0.02	2.9	10.2
S050004		5.21	15.65	0.21	3.2	0.377	0.072	3.19	57.5	50.3	2.01	872	2.08	0.43	55.6	9.1
S050005		5.13	14.50	0.22	3.0	0.437	0.071	3.15	54.0	47.1	1.98	858	1.95	0.42	51.6	8.4
S050006		0.86	2.52	0.10	0.6	0.421	0.010	0.53	9.3	2.9	0.70	269	0.57	0.01	5.2	3.5
S050007		0.78	2.86	0.11	0.6	0.609	0.009	0.52	9.6	2.9	0.62	326	0.54	0.01	5.7	3.2
S050008		2.36	11.65	0.22	2.5	0.740	0.053	2.30	40.3	7.6	1.78	782	1.51	0.02	41.2	5.8
S050009		0.82	2.59	<0.05	0.6	1.195	0.012	0.46	8.0	1.8	0.66	515	0.88	0.01	2.2	7.3
S050010		0.90	3.32	0.05	0.6	1.515	0.025	0.61	8.1	3.0	0.50	997	0.46	0.01	2.0	7.2
S050011		1.36	4.61	0.07	1.0	1.520	0.018	0.86	13.5	4.2	0.77	507	0.66	0.02	2.7	11.2
S050012		0.12	0.20	0.06	<0.1	<0.005	<0.005	0.01	1.1	0.8	2.06	123	0.11	0.03	0.1	1.5
S050013		1.38	4.80	0.08	0.9	0.625	0.018	0.86	14.2	5.6	0.98	499	0.59	0.02	2.8	11.0
S050014		1.15	2.91	0.06	0.7	0.143	0.014	0.61	12.2	4.7	1.23	462	0.41	0.02	5.0	4.7
S050015		3.13	7.55	0.08	1.6	0.158	0.035	1.59	28.8	35.3	1.54	587	0.86	0.04	23.8	7.2
S050016		1.16	3.58	0.05	0.7	2.17	0.020	0.65	9.2	5.1	1.25	4720	1.21	0.10	2.0	12.9
S050017		0.84	2.26	0.05	0.4	0.061	0.009	0.41	6.4	3.0	0.75	293	0.40	0.01	1.8	4.8
S050018		6.59	14.70	0.13	3.1	2.73	0.060	2.78	55.6	31.5	1.55	897	1.76	0.04	56.3	8.9
S050019		2.33	4.83	0.05	1.1	4.40	0.020	0.85	18.3	3.5	0.55	3420	0.62	0.01	16.2	3.9
S050020		0.43	1.22	<0.05	0.2	0.216	<0.005	0.22	3.9	1.7	0.58	233	0.28	0.01	0.8	2.5

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 22-JUL-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18159576

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl
	Units	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
	LOD	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.01	0.005	0.02
S049981		460	13.9	113.5	<0.002	2.79	0.70	13.7	1	1.6	131.0	0.58	<0.05	7.39	0.470	2.51
S049982		480	19.3	124.5	<0.002	4.52	15.35	16.1	1	2.0	125.5	0.61	0.05	8.64	0.446	14.90
S049983		410	14.8	146.0	0.002	4.36	6.99	18.5	1	2.0	144.5	0.64	<0.05	9.23	0.478	10.15
S049984		470	16.3	129.0	<0.002	3.94	6.88	16.3	1	2.0	118.5	0.67	0.07	9.08	0.493	7.68
S049985		520	16.6	142.0	<0.002	2.26	1.10	17.8	1	2.1	167.5	0.72	<0.05	9.14	0.540	2.77
S049986		4800	5.7	50.6	0.002	0.38	0.40	14.4	1	1.4	373	3.23	<0.05	5.73	1.555	0.68
S049987		490	12.3	129.5	<0.002	0.76	0.54	15.3	<1	1.8	172.5	0.66	0.05	8.16	0.494	1.27
S049988		630	16.7	165.5	<0.002	0.28	0.52	18.6	<1	2.1	125.5	0.78	0.05	9.35	0.572	1.17
S049989		530	13.8	169.0	<0.002	0.15	0.40	19.9	1	2.1	91.3	0.77	0.05	9.34	0.606	1.06
S049990		4570	7.9	63.8	<0.002	0.65	0.45	13.7	1	1.3	328	2.97	<0.05	5.76	1.470	0.73
S049991		510	15.7	147.0	<0.002	1.94	0.81	18.0	1	2.0	160.0	0.71	0.05	8.44	0.572	2.58
S049992		460	17.1	144.5	<0.002	0.20	0.43	16.2	1	1.8	160.5	0.65	<0.05	7.90	0.523	0.94
S049993		500	16.9	157.5	<0.002	0.68	0.61	16.1	1	2.0	129.5	0.63	<0.05	8.93	0.483	1.12
S049994		430	15.1	63.6	0.002	2.36	57.6	6.7	3	1.1	798	0.31	0.10	4.89	0.191	16.95
S049995		730	15.1	188.0	<0.002	0.87	0.55	19.1	1	2.4	121.0	0.75	0.05	10.50	0.525	1.36
S049996		620	19.6	196.0	0.002	5.02	1.24	21.7	1	2.7	132.0	0.82	0.07	11.70	0.510	4.67
S049997		490	12.0	154.0	<0.002	0.66	0.34	16.3	1	2.0	206	0.65	0.06	9.18	0.469	1.18
S049998		510	13.5	159.0	<0.002	0.68	0.34	17.7	1	2.1	208	0.67	0.05	9.62	0.488	1.19
S049999		480	25.4	147.5	<0.002	0.34	0.49	15.3	1	1.9	206	0.66	0.06	8.84	0.478	1.03
S050000		290	17.1	159.5	0.002	1.07	0.58	20.5	1	2.1	137.5	0.67	0.06	9.42	0.464	1.77
S050001		320	17.6	137.5	0.002	1.53	0.74	17.0	1	2.1	180.5	0.57	<0.05	8.62	0.401	2.51
S050002		480	1.3	10.6	<0.002	0.37	0.18	1.7	1	0.2	1270	0.05	<0.05	0.86	0.031	0.47
S050003		220	5.7	40.2	<0.002	1.17	1.02	4.8	1	0.6	1190	0.20	<0.05	2.93	0.115	2.57
S050004		4340	2.5	162.0	0.002	2.53	0.28	12.8	1	1.3	416	2.83	<0.05	5.54	1.410	3.28
S050005		4270	2.4	154.5	0.003	2.51	0.29	12.0	1	1.2	407	2.71	<0.05	5.18	1.375	3.08
S050006		590	2.2	23.2	0.002	0.52	0.35	2.6	2	0.3	1555	0.29	<0.05	1.56	0.153	1.68
S050007		650	1.8	22.1	<0.002	0.43	0.36	2.6	1	0.3	1525	0.32	<0.05	1.38	0.164	2.04
S050008		3440	2.1	99.0	0.003	0.80	0.58	10.8	2	1.0	867	2.12	<0.05	4.26	1.085	2.72
S050009		360	5.3	21.2	0.002	0.62	1.00	2.9	2	0.3	1520	0.13	0.08	1.48	0.072	3.31
S050010		210	4.2	28.6	0.002	0.74	0.90	3.6	2	0.4	1705	0.13	0.06	1.87	0.085	3.55
S050011		460	6.2	36.6	0.003	1.10	1.49	5.2	2	0.6	1800	0.18	0.08	2.70	0.117	3.75
S050012		50	0.5	0.4	<0.002	0.01	0.09	0.2	2	<0.2	80.2	<0.05	<0.05	0.06	0.005	0.02
S050013		420	6.1	39.7	0.002	1.18	0.43	5.5	2	0.6	1640	0.18	0.09	2.74	0.114	2.73
S050014		520	3.2	27.7	<0.002	0.64	0.20	3.6	2	0.3	1590	0.27	0.06	1.70	0.154	1.44
S050015		1960	3.4	82.9	0.002	1.10	0.33	6.9	2	0.7	1255	1.18	0.07	3.08	0.587	1.86
S050016		380	58.7	26.8	0.002	0.70	7.56	5.6	2	0.6	1135	0.14	0.05	2.14	0.080	5.48
S050017		650	2.3	17.9	<0.002	0.43	0.19	2.3	2	0.3	2200	0.11	0.07	1.28	0.068	0.38
S050018		4640	3.0	135.0	0.002	5.33	2.90	12.7	1	1.3	633	2.82	<0.05	4.81	1.495	10.70
S050019		1670	2.1	36.8	<0.002	2.33	5.15	4.1	2	0.4	1135	0.80	0.10	1.74	0.439	14.95
S050020		310	1.6	9.0	<0.002	0.25	0.25	1.3	2	0.2	1610	0.05	0.05	0.77	0.030	0.82

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 22-JUL-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18159576

Sample Description	Method Analyte Units LOD	ME-MS61 U ppm 0.1	ME-MS61 V ppm 1	ME-MS61 W ppm 0.1	ME-MS61 Y ppm 0.1	ME-MS61 Zn ppm 2	ME-MS61 Zr ppm 0.5
S049981		1.5	123	1.6	17.1	63	82.0
S049982		1.7	123	6.7	18.7	108	90.9
S049983		1.8	139	5.4	20.6	96	97.9
S049984		1.8	132	5.3	19.2	102	97.0
S049985		1.9	143	1.9	20.8	91	104.5
S049986		1.2	198	1.1	33.6	104	137.5
S049987		1.6	126	2.5	19.3	70	89.4
S049988		1.9	149	1.2	23.1	101	106.0
S049989		1.9	158	1.2	22.4	65	109.0
S049990		1.2	189	1.0	33.0	105	133.5
S049991		1.7	153	2.7	25.0	86	100.5
S049992		1.7	137	1.0	19.6	94	96.7
S049993		1.8	133	1.1	20.4	73	96.3
S049994		4.0	55	9.5	15.8	57	52.4
S049995		2.0	143	1.2	24.2	108	107.0
S049996		2.3	148	2.7	24.1	105	116.5
S049997		1.8	125	1.1	21.1	89	109.5
S049998		1.9	129	1.2	21.2	85	100.5
S049999		1.7	119	1.1	20.3	91	103.5
S050000		1.7	143	1.7	18.9	53	93.6
S050001		2.1	132	3.9	19.4	53	87.5
S050002		1.4	11	0.3	7.5	10	10.1
S050003		1.9	33	1.2	16.1	21	32.9
S050004		1.5	183	2.5	33.0	97	138.0
S050005		1.4	179	2.3	30.9	98	135.0
S050006		2.2	23	1.1	14.5	17	24.9
S050007		1.6	26	1.4	11.0	15	25.0
S050008		1.9	144	3.6	27.8	71	111.0
S050009		2.3	18	0.9	12.4	15	23.2
S050010		2.0	24	1.7	11.6	20	22.3
S050011		2.3	34	2.1	17.2	25	37.2
S050012		0.1	1	<0.1	2.1	4	1.4
S050013		2.2	33	0.5	17.8	17	36.8
S050014		1.8	28	0.2	16.0	22	25.1
S050015		1.7	80	1.0	21.2	50	71.7
S050016		3.5	25	7.7	13.5	124	25.6
S050017		1.9	18	0.3	11.0	12	16.6
S050018		1.5	202	17.1	30.3	86	140.0
S050019		1.5	62	10.7	15.9	26	47.6
S050020		1.7	9	0.3	7.5	3	8.6

***** See Appendix Page for comments regarding this certificate *****

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VANCOUVER BC V6B 1L8

Project: Nadaleen

Finalized Date: 22-JUL-2018
Account: RCM

CERTIFICATE OF ANALYSIS WH18159576

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Applies to Method: REE's may not be totally soluble in this method.
ME-MS61

LABORATORY ADDRESSES

Applies to Method: Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.

BAG-06	CRU-31	CRU-QC	LOG-21
LOG-21d	LOG-23	PUL-31	PUL-31d
PUL-QC	SPL-21	SPL-21d	WEI-21

Applies to Method: Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Au-AA25	Hg-MS42	ME-MS61

ALS Canada Ltd.

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 25-JUL-2018
Account: RCM

CERTIFICATE WH18161458

Project: Nadaleen

P.O. No.: N18-024

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 6-JUL-2018.

The following have access to data associated with this certificate:

ANDREW CARNE	JULIA LANE	

SAMPLE PREPARATION

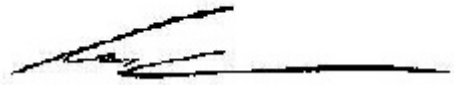
ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
BAG-06	Double Bagging Coarse Rejects
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
WSH-22	"Wash" pulverizers
LOG-23	Pulp Login - Rcvd with Barcode
LOG-21d	Sample logging - ClientBarCode Dup
SPL-21d	Split sample - duplicate
PUL-31d	Pulverize Split - duplicate

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid ICP-MS	
Hg-MS42	Trace Hg by ICPMS	ICP-MS
ME-OG62	Ore Grade Elements - Four Acid	ICP-AES
As-OG62	Ore Grade As - Four Acid	ICP-AES

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature: 

Colin Ramshaw, Vancouver Laboratory Manager

ALS Canada Ltd.

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 25-JUL-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18161458

Sample Description	Method Analyte Units LOD	WEI-21 Recvd Wt. kg 0.02	Au-AA25 Au ppm 0.01	ME-MS61 Ag ppm 0.01	ME-MS61 Al % 0.01	ME-MS61 As ppm 0.2	ME-MS61 Ba ppm 10	ME-MS61 Be ppm 0.05	ME-MS61 Bi ppm 0.01	ME-MS61 Ca % 0.01	ME-MS61 Cd ppm 0.02	ME-MS61 Ce ppm 0.01	ME-MS61 Co ppm 0.1	ME-MS61 Cr ppm 1	ME-MS61 Cs ppm 0.05	ME-MS61 Cu ppm 0.2
S050021		7.92	<0.01	0.05	0.64	26.1	100	0.22	0.05	34.6	0.10	11.95	2.2	7	1.73	10.1
S050022		7.86	0.01	0.05	0.59	92.4	90	0.19	0.04	35.2	0.07	9.79	2.1	7	1.39	7.7
S050023		7.81	0.02	0.07	0.33	67.8	70	0.16	0.05	35.3	0.03	5.64	1.3	4	0.67	5.2
S050024		7.83	0.03	0.04	0.54	51.2	90	0.27	0.04	34.5	0.05	9.71	2.0	6	1.31	7.2
S050025		8.33	0.23	0.11	1.09	517	140	0.42	0.06	30.5	0.06	18.40	3.6	11	2.69	12.1
S050026		7.81	0.05	0.04	1.17	77.9	140	0.46	0.06	32.2	0.06	19.60	4.3	13	2.95	12.5
S050027		8.40	0.05	0.09	1.41	70.6	130	0.50	0.09	30.5	0.19	23.1	5.2	16	5.18	16.5
S050028		7.99	<0.01	0.01	0.24	20.8	50	0.12	0.02	34.9	0.02	5.72	0.9	2	0.42	2.8
S050029		8.12	0.02	0.02	0.79	40.6	130	0.22	0.04	33.9	0.05	15.50	2.7	9	1.60	8.4
S050030		4.84	<0.01	<0.01	0.08	0.3	30	0.06	0.29	32.8	<0.02	1.03	0.6	1	<0.05	2.4
S050031		8.04	0.01	0.03	1.11	59.2	170	0.36	0.05	33.8	0.12	20.1	3.4	12	2.84	10.9
S050032		8.29	0.07	0.03	0.69	41.6	120	0.29	0.04	33.7	0.08	13.20	2.3	7	1.89	7.4
S050033		8.51	0.01	0.03	1.06	49.8	180	0.36	0.05	31.1	0.14	18.50	3.7	12	3.61	11.9
S050034		8.29	0.05	0.03	0.87	50.6	150	0.28	0.05	34.4	0.11	14.85	2.9	9	2.50	9.5
S050035		7.99	<0.01	0.01	0.22	15.1	80	0.11	0.01	35.1	0.04	4.53	0.9	3	0.47	2.8
S050036		8.21	<0.01	0.02	0.50	23.9	100	0.22	0.03	33.9	0.06	8.90	1.8	6	1.30	5.8
S050037		8.52	0.01	0.02	0.59	30.0	100	0.26	0.03	33.4	0.07	10.85	2.0	7	1.47	6.7
S050038		5.40	<0.01	0.04	9.18	37.8	320	3.45	0.38	0.58	<0.02	104.0	10.7	68	34.2	18.4
S050039		7.80	<0.01	0.05	7.77	33.0	300	3.49	0.30	3.23	<0.02	93.3	25.4	59	32.6	32.6
S050040		9.33	<0.01	0.04	10.10	19.6	330	2.98	0.37	0.67	<0.02	99.4	23.4	74	39.6	31.8
S050041		10.72	<0.01	0.03	9.26	31.6	300	2.66	0.34	1.44	<0.02	102.0	18.2	67	41.9	30.8
S050042		10.26	<0.01	0.03	9.39	30.9	310	2.76	0.35	1.70	0.02	104.5	16.0	68	39.7	30.4
S050043		2.35	<0.01	0.11	9.30	43.5	310	2.83	0.34	2.33	0.03	104.5	28.0	67	37.0	33.2
S050044		6.00	<0.01	0.52	4.90	201	190	1.33	0.18	10.15	0.06	57.3	15.0	40	14.30	21.2
S050045		11.11	<0.01	0.06	4.12	39.5	150	1.30	0.15	18.70	0.04	48.6	7.5	33	14.60	15.0
S050046		9.64	<0.01	0.29	3.60	23.7	180	1.06	0.13	19.60	0.02	43.9	8.6	30	14.55	13.6
S050047		3.30	<0.01	0.10	2.92	47.8	120	1.00	0.09	24.6	0.05	35.5	5.6	25	11.80	11.1
S050048		0.27	2.55	0.18	3.86	6520	210	0.98	0.14	12.25	0.14	41.5	11.6	45	11.35	35.4
S050049		2.47	<0.01	0.08	3.76	191.0	130	1.07	0.13	21.3	0.03	46.3	6.2	31	13.20	14.0
S050050		5.47	<0.01	0.07	8.71	107.5	290	2.78	0.34	2.89	0.03	82.6	18.2	63	38.4	34.2
S050051		2.09	0.01	0.05	6.32	273	250	1.75	0.22	13.70	0.04	75.1	11.9	48	25.2	23.7
S050052		1.92	0.02	0.05	6.42	282	200	1.74	0.22	12.40	0.03	71.9	11.5	49	25.4	23.1
S050053		6.19	0.67	0.08	9.61	699	360	2.12	0.34	1.95	0.07	100.5	15.8	67	35.6	33.7
S050054		4.89	1.42	0.06	6.99	1435	460	1.53	0.24	5.64	0.12	82.4	11.7	47	22.5	24.5
S050055		5.38	0.20	0.06	8.58	1200	330	2.11	0.31	3.22	0.06	85.9	15.9	60	34.1	30.5
S050056		<0.02	0.22	0.05	8.12	1100	310	1.92	0.29	2.93	0.05	87.0	15.0	55	33.1	28.8
S050057		6.22	0.06	0.05	8.64	728	310	2.10	0.31	2.01	0.04	91.9	15.4	60	32.8	29.2
S050058		4.08	1.66	0.11	7.05	>10000	280	1.44	0.27	3.99	0.15	83.1	12.5	49	23.1	28.0
S050059		0.28	5.18	1.66	3.82	>10000	190	0.79	0.16	11.00	1.15	42.6	10.5	51	10.70	34.7
S050060		4.45	1.68	0.10	3.13	>10000	140	0.70	0.14	9.59	0.16	52.3	5.6	26	7.27	16.3

***** See Appendix Page for comments regarding this certificate *****

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VANCOUVER BC V6B 1L8

Finalized Date: 25-JUL-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18161458

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Hg-MS42	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni
	Units	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2
S050021		0.47	1.68	0.05	0.3	0.145	0.009	0.31	5.3	3.1	0.59	107	0.30	0.01	0.9	3.5
S050022		0.42	1.53	0.05	0.3	0.673	0.006	0.29	4.3	2.8	0.58	181	0.18	0.01	0.8	3.3
S050023		0.36	0.87	0.06	0.2	0.456	<0.005	0.16	2.7	1.6	0.87	289	0.18	0.01	0.4	1.9
S050024		0.41	1.37	0.06	0.2	0.563	0.006	0.26	4.2	2.8	0.57	175	0.27	0.01	0.7	3.2
S050025		0.91	2.81	0.06	0.5	0.809	0.011	0.53	9.3	4.8	1.94	371	0.42	0.01	1.5	6.2
S050026		0.95	3.03	0.06	0.6	1.025	0.012	0.58	9.7	5.4	0.87	240	0.40	0.01	1.8	7.0
S050027		1.10	3.59	0.08	0.6	1.620	0.016	0.69	11.8	6.7	2.10	280	0.61	0.01	2.0	8.9
S050028		0.30	0.65	0.07	0.1	0.127	<0.005	0.11	2.5	0.8	1.19	206	0.13	0.01	0.3	1.2
S050029		0.62	1.97	0.09	0.4	0.484	0.008	0.38	7.2	2.5	0.80	203	0.29	0.01	1.1	4.5
S050030		0.10	0.22	0.09	<0.1	<0.005	<0.005	0.03	1.1	1.0	1.36	110	<0.05	0.03	0.1	0.3
S050031		0.75	2.70	0.09	0.5	0.746	0.012	0.55	10.4	4.5	0.68	129	0.38	0.01	1.5	5.9
S050032		0.48	1.72	0.09	0.4	0.845	0.007	0.34	6.1	3.0	0.69	213	0.31	0.01	0.9	3.9
S050033		0.74	2.66	0.10	0.5	1.110	0.011	0.52	9.0	5.0	0.53	105	0.45	0.01	1.5	6.5
S050034		0.58	2.21	0.10	0.4	0.945	0.009	0.43	7.2	3.2	0.53	165	0.43	0.01	1.2	5.1
S050035		0.21	0.60	0.09	0.1	0.206	<0.005	0.10	2.0	1.0	0.45	90	0.11	0.01	0.3	1.2
S050036		0.37	1.26	0.10	0.2	0.505	0.006	0.23	4.0	1.9	0.44	120	0.24	0.01	0.7	2.9
S050037		0.45	1.51	0.12	0.3	0.793	0.007	0.28	4.8	2.1	0.72	144	0.31	0.01	0.8	3.8
S050038		3.75	23.2	0.19	2.9	0.296	0.063	4.19	53.3	31.7	0.63	305	0.21	0.10	12.1	32.2
S050039		5.89	18.95	0.17	2.8	0.167	0.067	3.53	47.3	24.9	1.81	1780	0.25	0.07	10.3	45.9
S050040		5.48	23.9	0.20	2.7	0.075	0.070	4.62	50.2	38.3	1.19	788	0.26	0.10	11.6	43.0
S050041		4.91	22.0	0.20	3.0	0.070	0.067	4.24	53.3	47.5	1.42	943	0.22	0.08	11.8	39.8
S050042		4.24	22.1	0.22	2.9	0.041	0.065	4.24	54.7	35.6	1.38	864	0.18	0.09	11.7	36.4
S050043		4.97	22.4	0.21	3.0	0.244	0.068	4.28	53.9	30.1	1.46	1210	0.34	0.09	11.8	45.1
S050044		5.05	11.80	0.12	1.5	1.090	0.037	2.26	29.9	10.6	3.24	2140	0.70	0.05	5.9	30.3
S050045		2.80	10.20	0.11	1.3	0.682	0.032	1.89	25.6	8.5	1.69	967	0.61	0.04	5.2	17.8
S050046		2.58	8.59	0.11	1.2	0.478	0.027	1.66	22.7	9.6	1.59	771	0.53	0.04	4.4	17.8
S050047		1.96	6.82	0.10	0.9	1.425	0.022	1.36	18.1	6.4	1.18	723	0.50	0.03	3.4	12.3
S050048		2.95	9.99	0.10	1.9	17.30	0.036	1.88	21.6	12.7	2.57	1200	1.82	0.02	5.8	27.0
S050049		2.29	8.75	0.10	1.1	2.74	0.030	1.75	24.0	7.3	1.37	928	0.61	0.04	4.3	15.2
S050050		3.50	24.5	0.20	2.6	2.80	0.062	4.33	40.6	18.1	1.02	426	0.66	0.07	11.9	39.3
S050051		3.26	14.55	0.12	1.7	4.76	0.042	2.95	38.3	12.8	1.91	1620	0.49	0.05	7.0	26.4
S050052		3.29	14.65	0.13	1.6	5.08	0.043	2.97	37.3	12.0	1.94	1520	0.48	0.05	6.8	25.5
S050053		3.66	24.3	0.21	2.7	7.48	0.061	4.51	52.5	16.5	1.13	1190	0.55	0.07	11.9	35.5
S050054		2.93	16.90	0.19	1.8	13.15	0.042	3.13	43.2	15.3	2.45	3300	0.32	0.07	8.0	25.9
S050055		4.13	21.8	0.19	2.7	6.56	0.069	4.05	43.0	17.3	1.35	1560	0.45	0.08	11.6	35.9
S050056		3.80	20.4	0.18	2.5	6.25	0.061	3.78	44.9	16.0	1.26	1440	0.41	0.08	10.6	33.4
S050057		3.78	21.1	0.20	2.6	4.04	0.064	4.05	47.3	17.3	1.11	1160	0.31	0.08	10.9	33.4
S050058		5.04	17.55	0.18	2.4	21.8	0.061	3.24	42.5	12.2	1.82	2500	0.47	0.06	9.3	29.1
S050059		3.05	9.58	0.12	1.7	9.39	0.040	1.70	21.0	15.0	0.54	1030	2.03	0.12	5.4	23.1
S050060		4.89	7.37	0.12	1.0	25.4	0.030	1.43	23.9	6.1	3.82	6850	0.30	0.03	3.5	13.0

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CERTIFICATE OF ANALYSIS WH18161458

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl
	Units	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
	LOD	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.01	0.005	0.02
S050021		540	6.2	14.8	<0.002	0.44	0.40	1.7	2	0.2	1720	0.06	<0.05	1.10	0.037	2.10
S050022		330	3.0	13.4	<0.002	0.41	1.61	1.5	2	0.2	1610	0.06	<0.05	0.97	0.035	2.17
S050023		290	4.8	6.7	<0.002	0.25	1.41	0.9	1	<0.2	1600	<0.05	<0.05	0.54	0.017	1.47
S050024		450	3.3	11.1	<0.002	0.40	0.77	1.4	1	0.2	1510	0.05	<0.05	0.93	0.030	1.84
S050025		610	5.4	23.6	0.003	0.77	1.98	2.8	1	0.4	1560	0.10	<0.05	1.92	0.059	3.01
S050026		470	5.6	26.3	0.002	0.84	1.50	3.0	2	0.4	1700	0.12	<0.05	2.11	0.071	3.19
S050027		160	8.0	30.7	0.002	0.97	1.40	3.2	1	0.5	1680	0.14	0.05	2.53	0.085	4.11
S050028		150	1.8	4.8	<0.002	0.15	0.19	0.7	1	<0.2	1570	<0.05	<0.05	0.40	0.012	0.41
S050029		250	4.1	16.6	<0.002	0.55	0.30	2.1	1	0.3	1990	0.08	<0.05	1.39	0.046	1.38
S050030		60	<0.5	0.7	<0.002	0.01	0.08	0.2	1	<0.2	80.2	<0.05	<0.05	0.10	0.005	<0.02
S050031		190	4.2	23.4	0.002	0.77	0.38	2.9	1	0.4	2300	0.10	<0.05	1.81	0.067	1.90
S050032		130	2.9	14.8	<0.002	0.48	0.27	1.8	1	0.2	1990	0.07	<0.05	1.19	0.039	1.57
S050033		480	3.5	23.4	0.002	0.78	0.35	2.9	2	0.3	2320	0.10	0.05	1.70	0.067	2.91
S050034		400	3.5	18.9	<0.002	0.60	0.34	2.1	1	0.3	2100	0.09	<0.05	1.48	0.050	1.86
S050035		1010	0.9	4.2	<0.002	0.16	0.12	0.9	1	<0.2	2040	<0.05	<0.05	0.37	0.013	0.36
S050036		320	2.0	9.9	<0.002	0.37	0.35	1.3	1	0.2	1890	0.05	<0.05	0.83	0.031	0.80
S050037		890	2.7	11.9	<0.002	0.39	1.08	1.6	1	0.2	1870	0.06	<0.05	0.99	0.033	1.29
S050038		500	23.7	195.0	<0.002	1.50	0.40	16.7	<1	2.5	134.0	0.85	0.05	17.30	0.409	3.09
S050039		630	16.6	174.0	<0.002	1.55	0.43	15.6	1	2.1	132.5	0.71	<0.05	14.75	0.358	1.30
S050040		610	21.2	195.0	<0.002	1.61	0.32	16.9	<1	2.4	95.9	0.82	0.06	15.45	0.421	1.39
S050041		420	17.1	206	<0.002	0.77	0.29	16.4	1	2.3	93.3	0.82	0.05	16.25	0.402	1.26
S050042		450	16.4	205	<0.002	0.47	0.25	16.6	<1	2.3	93.6	0.81	0.06	16.45	0.389	1.16
S050043		450	26.5	205	0.002	1.73	0.83	16.7	1	2.3	96.8	0.81	0.05	16.45	0.396	2.05
S050044		910	25.9	105.0	0.002	2.57	1.11	8.7	1	1.3	163.5	0.42	<0.05	7.85	0.208	4.56
S050045		660	13.1	89.2	0.002	1.45	0.34	6.9	2	1.1	324	0.37	<0.05	6.80	0.180	4.29
S050046		790	11.9	77.5	<0.002	1.22	0.32	6.2	1	0.9	290	0.32	<0.05	5.86	0.160	3.64
S050047		650	6.9	61.8	0.002	1.17	0.26	5.1	1	0.8	315	0.24	<0.05	4.51	0.123	4.10
S050048		470	10.5	87.0	0.002	2.66	24.0	10.5	1	1.5	327	0.41	<0.05	5.92	0.276	44.9
S050049		830	9.6	79.2	0.002	1.37	1.46	6.2	2	1.0	277	0.31	<0.05	5.94	0.152	6.49
S050050		390	22.4	149.0	0.003	3.08	0.65	15.1	1	2.3	95.7	0.82	0.06	13.00	0.369	7.86
S050051		710	15.3	134.0	<0.002	2.02	1.75	9.8	1	1.4	230	0.50	0.05	10.40	0.248	9.72
S050052		650	14.8	134.0	0.002	2.04	1.90	9.9	1	1.4	215	0.50	<0.05	10.40	0.245	10.05
S050053		530	19.9	207	0.002	3.31	8.08	16.9	1	2.3	87.6	0.82	0.07	15.80	0.395	18.00
S050054		670	14.3	149.5	<0.002	2.42	17.85	15.0	1	1.7	129.5	0.57	0.05	11.65	0.269	37.8
S050055		530	21.1	156.5	0.002	3.75	5.95	15.3	1	2.3	90.6	0.79	0.05	13.25	0.383	16.45
S050056		480	19.5	172.5	0.002	3.47	5.54	15.1	1	2.2	83.8	0.73	0.06	13.55	0.350	15.15
S050057		330	20.5	189.0	<0.002	3.51	3.56	15.3	1	2.2	74.5	0.76	<0.05	14.60	0.381	11.75
S050058		490	22.6	160.0	<0.002	4.22	28.2	17.1	1	2.0	90.7	0.63	0.05	12.35	0.308	77.6
S050059		550	18.0	76.4	0.003	4.73	130.0	9.0	3	1.3	431	0.38	0.12	5.54	0.271	33.5
S050060		900	12.0	66.9	<0.002	3.63	30.4	18.5	1	0.9	94.2	0.27	0.06	5.25	0.131	80.3

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 25-JUL-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18161458

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	As-OG62
	Analyte	U	V	W	Y	Zn	Zr	As
	Units	ppm	ppm	ppm	ppm	ppm	ppm	%
	LOD	0.1	1	0.1	0.1	2	0.5	0.001
S050021		2.0	12	0.3	9.3	10	11.2	
S050022		1.8	11	0.5	7.4	8	10.3	
S050023		1.5	7	0.3	5.4	5	5.8	
S050024		2.1	10	0.6	7.8	9	9.3	
S050025		2.7	19	1.2	14.8	8	20.2	
S050026		2.8	22	1.5	15.2	5	22.9	
S050027		3.1	27	1.4	14.7	11	23.5	
S050028		1.1	6	0.2	6.6	2	6.3	
S050029		2.0	15	0.8	12.9	4	15.4	
S050030		0.2	1	<0.1	2.1	3	1.4	
S050031		2.8	20	1.0	15.3	14	18.4	
S050032		2.1	13	0.6	10.5	8	12.3	
S050033		2.3	21	1.1	12.7	17	18.6	
S050034		2.3	16	1.0	9.9	12	14.2	
S050035		1.0	6	0.2	4.9	3	6.1	
S050036		1.5	11	0.5	6.5	5	9.1	
S050037		2.2	12	0.6	9.5	6	11.5	
S050038		3.2	90	1.7	20.6	67	103.5	
S050039		3.4	81	1.6	25.6	129	117.0	
S050040		3.0	96	1.8	21.0	109	96.9	
S050041		2.9	89	1.4	20.6	96	104.0	
S050042		3.0	85	1.4	20.5	84	102.5	
S050043		4.3	88	1.6	21.6	97	106.5	
S050044		2.7	49	6.8	15.4	122	55.5	
S050045		2.5	40	1.8	12.1	59	49.1	
S050046		2.4	35	2.6	11.2	46	43.1	
S050047		2.2	30	1.2	10.1	42	33.9	
S050048		6.9	87	7.3	18.8	50	72.0	
S050049		2.5	36	2.3	12.2	40	39.8	
S050050		2.9	83	4.0	15.3	92	94.4	
S050051		3.3	53	2.7	16.8	69	60.9	
S050052		3.2	54	2.6	15.8	69	58.8	
S050053		3.5	87	6.9	18.1	94	96.7	
S050054		3.6	58	5.5	13.6	73	68.4	
S050055		3.0	84	6.9	17.9	93	95.7	
S050056		2.9	76	6.4	17.5	83	89.1	
S050057		3.0	82	6.6	16.8	90	94.4	
S050058		3.0	69	5.7	19.1	85	83.6	1.435
S050059		2.7	79	9.5	21.7	133	65.3	
S050060		2.0	33	2.6	16.1	49	38.1	1.460

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Project: Nadaleen

Finalized Date: 25-JUL-2018
Account: RCM

CERTIFICATE OF ANALYSIS WH18161458

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Applies to Method: REE's may not be totally soluble in this method.
ME-MS61

LABORATORY ADDRESSES

Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.

Applies to Method:				
	BAG-06	CRU-31	CRU-QC	LOG-21
	LOG-21d	LOG-23	PUL-31	PUL-31d
	PUL-QC	SPL-21	SPL-21d	WEI-21

Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Applies to Method:				
	As-OG62	Au-AA25	Hg-MS42	ME-MS61
	ME-OG62			

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VANCOUVER BC V6B 1L8

Finalized Date: 25-JUL-2018
Account: RCM

CERTIFICATE WH18161467

Project: Nadaleen

P.O. No.: N18-025

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 6-JUL-2018.

The following have access to data associated with this certificate:

ANDREW CARNE	JULIA LANE	

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
BAG-06	Double Bagging Coarse Rejects
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
LOG-23	Pulp Login - Rcvd with Barcode
LOG-21d	Sample logging - ClientBarCode Dup
SPL-21d	Split sample - duplicate
PUL-31d	Pulverize Split - duplicate

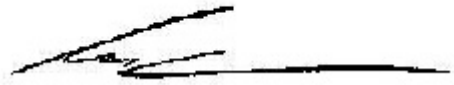
ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid ICP-MS	
Hg-MS42	Trace Hg by ICPMS	ICP-MS
ME-OG62	Ore Grade Elements - Four Acid	ICP-AES
As-OG62	Ore Grade As - Four Acid	ICP-AES

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:



Colin Ramshaw, Vancouver Laboratory Manager

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VANCOUVER BC V6B 1L8

Finalized Date: 25-JUL-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18161467

Sample Description	Method Analyte Units LOD	WEI-21 Recvd Wt. kg 0.02	Au-AA25 Au ppm 0.01	ME-MS61 Ag ppm 0.01	ME-MS61 Al % 0.01	ME-MS61 As ppm 0.2	ME-MS61 Ba ppm 10	ME-MS61 Be ppm 0.05	ME-MS61 Bi ppm 0.01	ME-MS61 Ca % 0.01	ME-MS61 Cd ppm 0.02	ME-MS61 Ce ppm 0.01	ME-MS61 Co ppm 0.1	ME-MS61 Cr ppm 1	ME-MS61 Cs ppm 0.05	ME-MS61 Cu ppm 0.2
S048651		9.64	0.01	0.27	9.15	159.0	410	2.98	0.42	1.72	0.11	99.8	24.5	62	28.9	64.0
S048652		10.14	<0.01	0.05	6.40	91.8	280	2.09	0.41	6.08	0.06	67.1	20.6	52	25.1	71.9
S048653		11.49	<0.01	0.12	6.61	73.0	290	1.83	0.41	4.53	0.06	67.5	18.8	59	31.4	66.3
S048654		12.47	<0.01	0.04	6.29	48.5	230	1.48	0.32	5.04	0.08	58.0	17.8	58	33.1	65.1
S048655		10.43	<0.01	0.05	3.96	117.0	220	0.91	0.19	5.83	0.04	36.4	11.9	40	16.95	39.3
S048656		10.93	<0.01	0.05	4.47	128.0	230	1.10	0.22	6.79	0.06	44.5	12.1	45	20.0	39.6
S048657		8.36	<0.01	0.65	5.44	249	260	1.25	0.24	6.76	0.26	51.9	13.2	53	21.9	47.1
S048658		5.41	0.41	1.66	7.49	1215	350	1.53	0.31	2.30	0.42	72.6	16.7	86	21.1	61.0
S048659		4.60	0.10	0.30	6.42	1690	280	1.51	0.28	1.98	0.47	64.4	14.6	82	18.90	58.6
S048660		6.98	<0.01	0.01	0.14	4.1	30	0.10	0.01	34.0	<0.02	1.26	0.6	1	0.11	2.1
S048661		6.69	0.33	0.08	5.57	3510	220	1.02	0.22	1.43	0.23	53.8	15.5	72	12.50	45.6
S048662		10.50	0.15	0.08	5.49	1205	200	1.14	0.20	5.14	0.39	55.2	14.8	59	14.65	44.7
S048663		11.11	0.06	0.08	6.99	532	220	1.48	0.25	2.36	0.16	69.2	18.6	75	18.35	57.5
S048664		12.51	0.24	0.10	5.59	2280	210	1.09	0.20	2.91	0.13	51.5	15.2	64	15.05	49.3
S048665		11.43	<0.01	0.06	5.67	177.0	170	1.19	0.19	3.19	0.13	53.4	16.7	66	19.25	49.2
S048666		11.96	0.16	0.07	4.98	772	150	1.03	0.16	2.16	0.11	46.6	15.9	66	14.90	43.3
S048667		4.31	0.95	0.11	6.62	1980	230	1.47	0.26	1.47	0.31	62.1	18.1	79	15.50	60.3
S048668		4.23	1.16	0.11	7.03	2740	240	1.58	0.26	1.06	0.32	65.0	19.6	86	17.10	63.2
S048669		5.57	2.56	0.22	7.23	9340	230	1.78	0.30	0.15	0.50	70.8	18.7	99	17.85	68.0
S048670		8.51	2.34	0.53	6.47	8240	200	1.43	0.26	0.15	0.35	60.6	20.2	105	15.00	73.8
S048671		4.59	1.95	0.50	3.76	>10000	110	0.66	0.12	1.90	0.17	35.4	10.9	49	6.78	34.0
S048672		0.29	8.14	1.58	1.83	>10000	100	0.24	0.42	7.20	0.86	28.1	6.5	46	3.10	27.7
S048673		11.79	0.04	0.10	7.05	6290	240	1.67	0.29	3.92	0.31	71.4	19.2	69	18.75	60.2
S048674		5.41	0.75	0.12	6.14	>10000	210	1.27	0.27	5.08	0.28	64.7	13.8	60	13.80	63.6
S048675		<0.02	0.77	0.11	6.20	>10000	210	1.22	0.25	4.97	0.25	63.5	13.3	60	13.75	61.9
S048676		12.02	0.29	0.06	7.21	455	230	1.78	0.29	3.06	0.09	70.5	17.9	70	18.30	61.4
S048677		12.50	0.12	0.08	5.85	619	180	1.36	0.20	3.31	0.12	58.3	19.9	66	14.45	52.2
S048678		12.59	<0.01	0.06	7.01	411	190	1.95	0.27	2.42	0.05	67.3	21.5	75	20.4	64.2
S048679		12.89	0.02	0.06	6.99	277	200	2.04	0.27	2.39	0.12	66.1	21.5	72	23.2	60.7
S048680		11.10	0.25	0.06	7.42	789	200	2.03	0.29	2.16	0.05	73.2	22.6	75	21.2	61.7
S048681		0.30	1.08	1.25	1.51	845	190	0.38	0.13	28.0	0.67	18.80	4.2	30	3.38	44.3
S048682		12.01	<0.01	0.04	5.42	80.2	170	1.26	0.19	1.96	<0.02	52.2	15.5	66	19.15	44.7
S048683		12.78	<0.01	0.07	5.29	70.7	200	1.19	0.18	2.09	0.02	49.3	16.9	66	21.2	44.6
S048684		12.02	<0.01	0.08	5.87	142.5	200	1.47	0.21	2.09	0.08	57.7	18.1	70	24.7	50.1
S048685		12.08	<0.01	0.06	6.51	231	210	1.63	0.24	2.06	0.14	63.2	20.3	79	24.5	57.8
S048686		12.73	<0.01	0.05	6.49	144.5	210	1.64	0.24	1.98	0.21	59.5	21.4	81	28.2	59.2
S048687		12.19	<0.01	0.06	6.55	120.0	200	1.66	0.24	2.05	0.12	62.6	21.3	79	31.8	59.5
S048688		12.40	<0.01	0.06	6.84	114.0	260	1.79	0.25	2.13	0.07	66.0	20.9	79	25.2	59.5
S048689		12.07	<0.01	0.06	7.40	112.5	300	2.16	0.28	1.58	0.02	71.5	21.1	77	33.8	62.4
S048690		12.49	<0.01	0.05	5.27	66.1	200	1.35	0.20	2.20	0.09	56.6	16.9	65	24.3	46.6

***** See Appendix Page for comments regarding this certificate *****

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VANCOUVER BC V6B 1L8

Finalized Date: 25-JUL-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18161467

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Hg-MS42	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni
	Units	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2
S048651		4.70	26.1	0.20	3.1	0.801	0.081	4.55	48.0	10.3	1.24	835	1.22	0.05	13.4	52.3
S048652		4.59	16.50	0.15	3.1	1.300	0.086	3.23	32.8	11.3	3.48	1290	1.57	0.03	11.3	70.5
S048653		4.58	16.95	0.16	3.0	1.270	0.080	3.31	33.4	13.4	2.61	880	1.16	0.03	11.5	57.7
S048654		4.86	15.90	0.12	2.9	1.115	0.075	3.07	28.8	13.2	2.99	841	1.54	0.03	9.9	53.4
S048655		3.92	9.81	0.09	1.8	0.880	0.044	1.94	18.1	8.9	3.10	763	0.88	0.02	5.7	27.8
S048656		4.20	11.00	0.10	2.1	0.660	0.054	2.20	22.2	9.6	3.56	768	0.62	0.03	6.9	26.5
S048657		4.63	13.40	0.12	2.4	1.495	0.056	2.70	25.5	11.3	3.49	750	1.56	0.03	8.2	31.6
S048658		5.66	18.70	0.16	3.6	4.91	0.073	3.61	35.6	13.4	1.38	448	4.10	0.03	11.6	47.6
S048659		5.38	16.20	0.15	3.1	6.55	0.070	3.10	32.5	12.9	1.26	594	3.57	0.03	9.6	47.4
S048660		0.14	0.43	0.05	0.1	0.020	<0.005	0.05	1.3	1.1	2.06	125	0.05	0.06	0.3	0.3
S048661		4.53	13.80	0.11	2.7	6.52	0.050	2.59	25.9	13.3	0.87	603	0.68	0.02	8.6	34.9
S048662		5.34	13.30	0.11	2.6	4.72	0.058	2.64	26.4	10.8	2.80	953	0.66	0.03	8.9	30.7
S048663		4.80	17.50	0.14	3.3	3.59	0.071	3.36	32.9	12.8	1.41	692	0.40	0.03	11.4	36.8
S048664		5.28	13.55	0.10	2.6	4.36	0.060	2.62	26.4	13.0	1.44	746	0.39	0.02	9.0	31.9
S048665		5.15	14.05	0.11	2.7	1.860	0.063	2.65	26.0	20.3	1.60	657	0.36	0.02	9.0	33.0
S048666		4.55	12.15	0.11	2.3	2.12	0.053	2.26	23.0	27.0	1.13	561	0.53	0.02	7.7	31.0
S048667		6.08	16.80	0.13	3.2	6.54	0.056	3.18	30.7	13.5	0.96	413	1.17	0.03	10.1	40.3
S048668		5.94	17.65	0.14	3.3	7.76	0.064	3.38	32.1	14.2	0.83	319	0.87	0.03	10.7	42.5
S048669		6.60	18.95	0.16	3.7	10.70	0.075	3.52	34.2	13.3	0.49	56	1.27	0.03	11.3	46.0
S048670		6.70	16.55	0.15	3.3	11.15	0.061	3.04	29.7	14.1	0.41	73	1.68	0.02	9.8	48.3
S048671		3.75	9.34	0.08	1.9	9.28	0.033	1.64	17.5	16.6	0.88	730	0.74	0.01	5.5	22.5
S048672		2.59	5.09	0.11	0.9	16.95	0.029	0.81	14.0	23.6	0.17	335	6.04	0.01	2.5	19.3
S048673		5.02	18.05	0.14	3.4	2.90	0.083	3.36	34.8	15.3	1.99	780	0.61	0.03	11.8	39.2
S048674		5.49	15.50	0.14	3.0	6.29	0.077	2.95	30.7	11.6	2.63	1190	0.49	0.03	10.4	30.1
S048675		5.60	15.45	0.13	3.0	6.09	0.077	2.93	30.7	11.5	2.56	1180	0.49	0.03	10.4	29.4
S048676		5.40	18.05	0.16	3.4	1.720	0.070	3.53	35.0	14.8	1.78	825	0.56	0.03	11.9	37.5
S048677		5.38	14.60	0.13	3.1	1.235	0.057	2.78	27.5	21.1	1.77	967	0.50	0.02	9.4	38.0
S048678		5.78	17.80	0.13	3.4	0.585	0.073	3.31	33.0	21.6	1.44	731	0.52	0.03	11.7	40.4
S048679		5.43	17.80	0.15	3.5	0.738	0.072	3.32	32.2	17.2	1.45	727	0.44	0.03	11.4	39.4
S048680		5.80	18.90	0.16	3.6	1.285	0.070	3.59	34.6	14.8	1.44	751	0.42	0.03	12.0	41.7
S048681		1.19	3.78	0.08	0.7	2.56	0.023	0.65	9.3	5.7	1.28	4580	1.25	0.10	2.0	13.1
S048682		4.67	13.20	0.11	2.6	0.172	0.053	2.55	25.6	19.1	1.82	588	0.30	0.02	8.5	31.1
S048683		4.81	12.90	0.11	2.5	0.117	0.050	2.54	24.2	28.5	2.08	578	0.27	0.03	8.2	32.2
S048684		5.07	14.45	0.12	2.8	0.164	0.052	2.86	28.1	32.7	2.01	640	0.43	0.03	9.4	34.5
S048685		5.44	16.50	0.13	3.0	0.129	0.070	3.10	30.0	63.3	2.28	695	0.39	0.03	10.8	37.8
S048686		5.34	16.10	0.12	3.2	0.052	0.066	3.02	29.0	93.9	2.46	664	0.40	0.04	10.6	39.1
S048687		5.41	16.35	0.14	3.2	0.056	0.067	2.98	30.9	88.1	2.44	634	0.39	0.04	10.9	39.6
S048688		5.60	17.10	0.14	3.1	0.062	0.068	3.24	32.2	84.1	2.50	594	0.39	0.04	11.2	40.5
S048689		5.82	18.55	0.15	3.3	0.049	0.073	3.60	34.3	51.1	2.36	516	0.28	0.05	12.1	40.0
S048690		4.78	13.15	0.10	2.5	0.062	0.051	2.36	27.4	103.5	2.11	675	0.55	0.06	8.7	31.6

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 25-JUL-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18161467

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl
	Units	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
	LOD	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.01	0.005	0.02
S048651		510	19.1	146.0	<0.002	4.58	1.85	18.0	1	2.9	127.0	0.94	0.05	16.90	0.392	2.45
S048652		550	20.7	137.5	0.003	3.88	2.65	17.0	1	2.0	168.0	0.75	0.23	10.35	0.457	3.52
S048653		580	23.0	145.0	0.002	3.96	0.60	17.3	1	2.2	142.0	0.75	0.20	10.85	0.489	3.65
S048654		560	23.5	132.0	0.002	4.04	0.49	16.3	1	2.0	134.0	0.67	0.13	8.62	0.502	3.68
S048655		380	14.3	78.7	<0.002	2.64	0.35	9.7	<1	1.2	138.5	0.42	0.06	5.21	0.306	3.01
S048656		410	16.5	92.1	<0.002	2.81	0.35	10.9	1	1.4	175.0	0.49	0.09	6.06	0.360	2.60
S048657		420	20.2	114.0	0.003	3.38	0.79	13.5	1	1.7	180.0	0.57	0.09	7.39	0.418	3.75
S048658		400	30.7	152.0	0.009	5.01	12.30	18.2	2	2.8	153.0	0.84	0.08	11.00	0.584	14.20
S048659		370	21.9	133.0	0.012	5.01	9.32	18.7	2	2.2	122.5	0.70	0.07	9.88	0.497	14.85
S048660		80	0.6	1.3	<0.002	0.02	0.08	0.3	1	<0.2	79.4	<0.05	<0.05	0.14	0.009	0.06
S048661		490	15.2	107.5	0.003	4.28	11.90	14.5	1	1.6	84.1	0.61	0.08	8.10	0.521	21.0
S048662		610	17.6	109.5	<0.002	4.69	5.77	15.5	1	1.7	189.5	0.63	0.05	7.72	0.480	12.35
S048663		500	20.1	151.5	<0.002	4.21	3.83	19.1	1	2.2	136.0	0.81	0.05	10.20	0.610	9.25
S048664		420	18.5	118.5	<0.002	4.32	4.21	16.3	<1	1.7	210	0.63	<0.05	7.61	0.537	11.80
S048665		410	16.8	123.5	<0.002	4.17	0.64	15.7	<1	1.7	176.0	0.64	0.06	7.59	0.549	4.27
S048666		360	15.4	99.7	<0.002	3.77	2.93	13.7	<1	1.5	102.5	0.54	<0.05	6.81	0.525	5.56
S048667		480	29.9	137.0	0.002	5.82	14.35	17.2	1	2.1	96.6	0.73	0.08	9.25	0.573	19.70
S048668		520	31.1	145.0	0.002	5.95	15.60	18.7	1	2.2	77.2	0.78	0.08	9.70	0.611	21.5
S048669		540	22.2	156.0	0.005	6.79	15.80	17.2	1	2.3	49.6	0.80	0.10	10.45	0.632	32.6
S048670		450	31.6	137.0	0.004	6.93	14.50	13.8	1	2.1	52.0	0.69	0.11	9.41	0.645	34.9
S048671		300	10.8	65.6	<0.002	3.14	25.7	10.4	1	1.2	85.4	0.39	<0.05	5.21	0.401	18.80
S048672		520	9.8	40.9	0.003	4.71	159.0	3.0	2	1.1	345	0.19	0.12	2.94	0.106	41.6
S048673		720	15.9	141.0	<0.002	3.77	19.65	20.2	<1	2.2	196.5	0.84	0.06	10.50	0.598	5.26
S048674		660	26.7	127.0	<0.002	3.87	59.4	19.5	1	2.0	203	0.75	0.05	9.10	0.527	12.70
S048675		650	27.8	125.5	<0.002	3.80	57.0	18.1	1	2.0	195.0	0.73	<0.05	8.98	0.524	12.65
S048676		680	18.3	156.0	<0.002	4.69	2.73	19.7	1	2.2	153.5	0.86	<0.05	10.60	0.610	5.80
S048677		540	21.5	121.5	<0.002	4.56	2.41	16.9	1	1.7	149.5	0.66	<0.05	8.10	0.544	3.43
S048678		540	15.2	159.0	<0.002	5.56	0.91	20.9	1	2.2	117.5	0.84	0.06	10.05	0.630	3.00
S048679		500	18.1	165.0	<0.002	4.97	1.21	20.2	<1	2.2	113.0	0.82	0.06	9.90	0.619	3.79
S048680		550	15.8	173.5	<0.002	5.66	2.83	21.7	1	2.3	115.5	0.87	0.05	10.70	0.638	6.71
S048681		390	60.9	28.6	0.002	0.70	7.58	5.5	1	0.7	1135	0.14	<0.05	2.28	0.084	5.87
S048682		430	12.5	129.0	<0.002	1.42	0.43	13.9	<1	1.6	112.5	0.61	0.05	7.69	0.490	1.42
S048683		410	14.6	139.0	<0.002	0.36	0.56	13.6	<1	1.6	106.0	0.59	0.05	7.28	0.493	1.00
S048684		500	17.5	160.5	<0.002	1.31	0.81	15.8	<1	1.8	123.0	0.66	0.05	8.13	0.528	1.53
S048685		500	19.4	177.0	<0.002	0.66	0.73	19.2	1	2.0	117.5	0.74	0.05	9.01	0.608	1.47
S048686		500	17.0	184.0	<0.002	0.13	0.43	19.1	<1	2.0	92.0	0.73	0.07	8.82	0.624	1.21
S048687		540	17.5	186.5	<0.002	0.13	0.51	19.4	<1	2.0	130.5	0.74	0.06	9.12	0.623	1.26
S048688		510	17.0	187.5	<0.002	0.19	0.69	19.7	1	2.1	138.5	0.77	0.07	9.43	0.612	1.28
S048689		540	19.5	231	<0.002	0.23	0.53	20.1	1	2.3	86.2	0.84	0.06	10.20	0.609	1.48
S048690		490	16.3	150.0	<0.002	0.17	0.42	15.3	<1	1.6	109.5	0.59	<0.05	8.46	0.498	0.90

***** See Appendix Page for comments regarding this certificate *****

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1016-510 W HASTINGS ST
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Finalized Date: 25-JUL-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18161467

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	As-OG62
	Analyte	U	V	W	Y	Zn	Zr	As
	Units	ppm	ppm	ppm	ppm	ppm	ppm	%
	LOD	0.1	1	0.1	0.1	2	0.5	0.001
S048651		2.4	96	6.7	23.1	64	108.5	
S048652		2.1	127	2.9	23.0	37	118.0	
S048653		2.0	129	1.8	21.7	40	116.0	
S048654		1.6	131	1.2	21.2	47	105.5	
S048655		1.1	81	1.2	14.0	25	62.7	
S048656		1.3	91	1.6	15.7	46	76.6	
S048657		1.9	111	4.7	18.3	114	96.8	
S048658		3.3	166	20.3	21.9	136	130.5	
S048659		3.6	149	10.1	20.3	163	115.0	
S048660		0.2	2	0.2	2.5	5	2.3	
S048661		1.8	136	8.9	18.8	81	96.4	
S048662		1.7	121	6.6	19.9	211	98.5	
S048663		2.2	154	8.4	23.0	99	118.5	
S048664		1.6	134	8.0	18.7	92	94.7	
S048665		1.6	141	4.5	20.6	103	97.4	
S048666		1.4	139	3.8	16.0	74	86.4	
S048667		2.1	158	8.3	21.5	151	115.5	
S048668		2.2	167	8.7	22.6	147	117.5	
S048669		2.6	187	9.7	27.0	261	124.0	
S048670		2.2	187	10.0	22.7	111	114.5	
S048671		1.1	112	9.0	11.5	72	75.0	1.445
S048672		4.3	37	6.9	15.9	66	29.4	
S048673		2.2	146	13.7	25.8	257	127.5	
S048674		1.9	126	14.8	24.2	139	107.0	2.37
S048675		2.0	126	14.4	23.6	106	110.5	2.32
S048676		2.2	147	8.1	26.0	86	126.0	
S048677		1.7	140	8.1	19.9	87	98.3	
S048678		2.1	158	5.6	24.5	73	121.0	
S048679		2.0	157	5.4	23.3	90	117.5	
S048680		2.2	164	10.3	26.9	75	125.0	
S048681		3.6	25	5.4	14.3	125	24.2	
S048682		1.6	123	2.0	17.9	55	92.2	
S048683		1.5	124	1.6	17.2	57	88.1	
S048684		1.8	131	1.7	21.2	71	100.0	
S048685		1.9	157	3.0	21.9	108	110.5	
S048686		1.9	160	1.7	26.1	123	122.5	
S048687		2.0	157	1.2	23.1	96	114.0	
S048688		2.0	156	2.7	23.3	79	114.5	
S048689		2.3	148	1.5	25.9	71	121.0	
S048690		1.8	124	1.0	19.2	76	87.5	

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To: **ATAC RESOURCES LTD.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Project: Nadaleen

Finalized Date: 25-JUL-2018
Account: RCM

CERTIFICATE OF ANALYSIS WH18161467

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Applies to Method: REE's may not be totally soluble in this method.
ME-MS61

LABORATORY ADDRESSES

Applies to Method: Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.

BAG-06	CRU-31	CRU-QC	LOG-21
LOG-21d	LOG-23	PUL-31	PUL-31d
PUL-QC	SPL-21	SPL-21d	WEI-21

Applies to Method: Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

As-OG62	Au-AA25	Hg-MS42	ME-MS61
ME-OG62			

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Finalized Date: 25-JUL-2018
Account: RCM

CERTIFICATE WH18163781

Project: Nadaleen

P.O. No.: N18-026

This report is for 39 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 9-JUL-2018.

The following have access to data associated with this certificate:

ANDREW CARNE	JULIA LANE	

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
BAG-06	Double Bagging Coarse Rejects
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
LOG-23	Pulp Login - Rcvd with Barcode
LOG-21d	Sample logging - ClientBarCode Dup
SPL-21d	Split sample - duplicate
PUL-31d	Pulverize Split - duplicate

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid ICP-MS	
Hg-MS42	Trace Hg by ICPMS	ICP-MS

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:

Colin Ramshaw, Vancouver Laboratory Manager

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CERTIFICATE OF ANALYSIS WH18163781

Sample Description	Method	WEI-21	Au-AA25	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Recvd Wt.	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu
	Units	kg	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.02	0.01	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2
S050061		5.11	0.56	0.06	7.37	884	250	1.72	0.29	4.45	0.08	87.7	14.2	52	24.4	26.4
S050062		7.94	<0.01	0.06	7.29	160.0	280	1.85	0.29	7.42	0.04	85.0	13.9	60	28.9	27.2
S050063		4.34	0.03	0.06	6.75	677	260	1.38	0.28	8.74	0.07	80.9	12.1	55	20.3	26.9
S050064		5.58	1.32	0.03	4.94	1125	220	0.89	0.17	11.60	0.11	60.6	8.3	40	11.30	17.6
S050065		5.21	1.93	0.06	5.72	3580	230	0.92	0.26	6.09	0.18	75.0	9.7	48	14.35	22.2
S050066		0.28	12.90	0.64	4.63	9190	290	0.63	0.22	3.69	0.55	55.2	13.8	61	12.15	58.2
S050067		4.92	1.35	0.05	7.44	945	300	1.41	0.26	4.38	0.11	89.0	12.6	54	20.1	27.1
S050068		6.83	<0.01	<0.01	0.15	4.8	30	0.08	0.01	33.1	<0.02	1.33	0.5	1	0.08	2.3
S050069		11.60	0.02	0.08	7.56	136.5	260	1.90	0.29	8.09	0.06	88.6	13.1	59	25.3	27.9
S050070		10.28	<0.01	0.10	8.65	123.0	670	3.10	0.33	2.32	0.27	104.0	14.8	63	39.9	35.3
S050071		4.61	0.35	0.10	8.29	1405	300	2.34	0.32	3.79	0.30	102.5	14.3	60	31.3	37.1
S050072		6.08	0.23	0.10	7.86	1120	350	1.67	0.48	4.17	0.28	87.9	16.1	64	20.9	43.4
S050073		12.30	0.30	0.11	8.27	952	330	1.88	0.48	2.75	0.32	86.9	16.1	69	22.2	47.9
S050074		12.10	0.02	0.11	8.10	182.0	320	2.49	0.41	2.41	0.30	82.9	17.7	72	25.7	45.2
S050075		12.50	<0.01	0.10	8.49	52.7	350	2.89	0.36	2.24	0.15	84.9	17.2	70	34.7	42.2
S050076		11.14	<0.01	0.08	7.91	23.6	320	2.72	0.32	4.38	0.08	84.4	15.3	63	32.8	33.2
S050077		<0.02	<0.01	0.07	7.80	22.1	320	2.61	0.30	4.17	0.11	82.4	15.4	64	32.8	32.9
S050078		12.29	<0.01	0.07	6.25	20.0	380	1.36	0.23	9.03	0.13	75.8	10.6	53	27.5	22.5
S050079		12.37	<0.01	0.05	4.64	20.5	490	1.13	0.17	14.25	0.08	53.9	7.5	37	20.4	16.4
S050081		14.62	0.03	0.09	8.36	515	370	2.11	0.35	4.27	0.15	98.1	14.7	65	29.0	32.7
S050082		0.26	2.62	0.19	3.84	6380	200	0.79	0.15	12.55	0.14	44.1	11.5	47	10.50	35.4
S050083		10.01	<0.01	0.06	8.81	154.0	350	2.59	0.33	1.95	0.16	96.2	15.6	71	34.2	33.5
S050084		5.81	0.11	0.08	8.68	481	310	2.80	0.31	2.54	0.17	104.0	15.7	67	35.5	36.5
S050085		11.57	<0.01	0.06	8.75	76.6	290	3.73	0.27	2.27	0.02	110.5	15.7	65	56.6	39.9
S050086		12.08	<0.01	0.07	9.19	9.6	240	3.68	0.36	0.76	0.13	92.5	17.2	77	59.2	47.2
S050087		12.49	<0.01	0.10	7.05	16.3	280	2.11	0.31	1.56	0.17	73.5	17.4	74	38.9	52.2
S050088		12.10	0.01	0.12	6.46	155.0	200	2.16	0.28	2.35	0.21	68.4	18.0	68	32.5	50.1
S050089		10.65	<0.01	0.10	6.05	82.7	240	1.83	0.27	1.98	0.16	65.4	16.4	74	31.8	48.4
S050090		11.01	<0.01	0.18	5.33	77.2	390	1.38	0.23	2.04	0.30	58.7	15.4	67	26.4	45.7
S050091		12.77	0.01	0.10	7.45	179.5	220	2.26	0.32	2.33	0.18	79.4	16.3	76	36.6	60.3
S050092		11.82	0.07	0.08	6.95	256	200	2.09	0.29	2.68	0.39	72.6	20.9	74	37.7	62.7
S050093		11.90	0.11	0.09	6.50	182.5	250	1.72	0.27	2.86	0.22	67.5	18.2	74	30.2	55.4
S050094		11.39	<0.01	0.06	5.30	62.4	210	1.23	0.23	2.53	0.26	58.3	12.9	61	23.6	41.8
S050095		11.63	<0.01	0.05	6.13	27.1	280	1.55	0.25	2.18	0.46	66.2	12.0	72	35.4	48.4
S050096		11.64	<0.01	0.10	6.48	58.4	270	1.74	0.26	1.91	0.54	66.9	18.8	76	35.6	50.2
S050097		11.71	<0.01	0.08	5.93	113.0	280	1.74	0.22	2.50	0.18	59.9	18.7	64	25.3	48.2
S050098		11.74	0.46	0.06	5.51	719	200	1.49	0.21	2.55	0.08	53.9	17.2	62	13.20	44.9
S050099		3.56	0.03	0.06	5.14	193.0	170	1.36	0.17	1.88	<0.02	54.1	15.3	62	13.80	43.4
S050100		3.49	0.03	0.06	5.17	200	170	1.39	0.18	1.96	0.02	51.2	15.9	62	14.00	43.4

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 25-JUL-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18163781

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Hg-MS42	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni
	Units	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2
S050061		3.79	17.80	0.15	2.5	9.37	0.050	3.38	44.7	13.5	1.97	2960	0.43	0.07	9.6	29.3
S050062		3.54	17.45	0.15	2.3	4.93	0.056	3.37	44.0	14.7	1.46	852	0.72	0.07	9.1	29.6
S050063		3.70	16.10	0.13	2.2	7.78	0.055	3.08	42.2	9.8	2.08	1420	0.74	0.05	8.2	26.7
S050064		3.13	12.25	0.09	1.7	11.65	0.034	2.29	32.4	5.8	3.46	6240	0.47	0.04	6.4	18.1
S050065		3.29	13.95	0.11	1.9	23.5	0.038	2.60	39.5	8.1	2.78	4750	0.44	0.04	7.3	21.9
S050066		4.48	12.25	0.12	2.2	26.5	0.027	2.10	29.5	13.7	0.34	585	5.46	0.02	6.8	34.5
S050067		3.37	17.80	0.13	2.4	8.61	0.040	3.45	47.2	9.9	1.33	1730	0.47	0.05	9.3	28.1
S050068		0.13	0.45	0.06	0.1	0.022	<0.005	0.05	1.3	1.0	2.32	131	<0.05	0.07	0.3	0.3
S050069		3.56	17.80	0.14	2.5	3.15	0.055	3.50	46.4	9.5	2.13	719	1.07	0.06	9.0	28.6
S050070		4.74	21.9	0.16	3.3	1.780	0.074	4.04	52.3	16.3	1.40	537	3.35	0.04	11.6	35.1
S050071		4.56	20.9	0.17	3.0	5.57	0.069	3.86	51.7	12.3	1.79	1280	3.07	0.04	11.2	32.6
S050072		4.77	19.80	0.15	2.8	4.22	0.070	3.65	43.9	9.8	1.79	963	4.17	0.05	10.8	37.2
S050073		4.82	21.0	0.15	2.8	4.65	0.062	3.87	43.2	10.7	1.34	899	3.72	0.05	11.5	38.9
S050074		4.71	20.7	0.15	2.8	2.03	0.074	3.77	42.3	12.4	1.30	450	3.25	0.05	10.9	40.7
S050075		4.59	22.2	0.15	2.9	1.075	0.079	3.97	42.6	14.6	1.84	799	2.29	0.05	11.0	40.0
S050076		4.13	19.85	0.16	2.9	0.702	0.069	3.76	43.6	13.2	2.15	707	1.98	0.05	10.3	34.5
S050077		4.05	19.65	0.16	3.0	0.723	0.065	3.70	43.8	13.4	2.05	676	1.99	0.05	10.1	33.9
S050078		3.33	14.85	0.14	2.2	0.875	0.044	3.45	40.4	8.1	2.19	685	1.13	0.13	8.1	24.5
S050079		3.31	10.90	0.10	1.6	1.180	0.039	2.35	28.5	5.7	4.35	975	0.81	0.05	5.8	16.4
S050081		4.32	21.0	0.15	2.9	1.735	0.067	3.91	49.5	8.8	1.97	464	2.99	0.05	10.9	35.2
S050082		3.01	9.89	0.09	2.0	16.50	0.039	1.82	22.9	9.3	2.73	1170	1.83	0.02	6.0	25.4
S050083		4.40	23.4	0.15	3.1	0.852	0.073	4.29	46.7	9.5	1.56	394	2.87	0.05	12.4	36.5
S050084		4.61	22.4	0.16	3.4	0.719	0.072	4.09	52.1	15.0	1.73	624	2.55	0.04	11.9	35.3
S050085		4.45	23.6	0.17	3.0	0.251	0.073	4.34	52.1	22.1	1.79	898	1.32	0.04	12.0	36.1
S050086		4.01	25.2	0.18	3.2	0.384	0.081	4.62	43.7	28.5	1.43	243	0.82	0.04	13.5	43.1
S050087		4.83	17.70	0.16	3.4	1.940	0.071	3.35	36.4	23.5	1.46	290	1.20	0.04	11.2	40.5
S050088		5.18	16.45	0.14	3.1	2.86	0.067	3.04	33.4	32.1	1.41	499	2.26	0.03	10.2	35.9
S050089		5.20	15.20	0.12	2.9	1.610	0.061	2.86	32.5	29.4	1.62	450	1.24	0.03	9.5	34.0
S050090		4.62	13.75	0.12	2.6	0.626	0.057	2.47	28.1	27.5	1.68	439	0.69	0.03	8.8	29.4
S050091		5.21	19.40	0.14	3.5	0.977	0.079	3.56	38.9	24.3	1.57	443	0.70	0.03	12.4	33.4
S050092		5.19	17.70	0.14	3.3	1.025	0.080	3.29	34.9	28.2	1.60	591	1.17	0.03	11.3	39.4
S050093		5.30	16.40	0.15	3.1	1.385	0.067	3.08	32.5	19.2	1.56	649	1.24	0.03	10.4	39.1
S050094		5.06	13.60	0.12	2.6	0.262	0.050	2.53	28.6	22.3	1.80	556	1.13	0.03	8.9	26.5
S050095		4.24	15.80	0.13	2.9	0.239	0.059	2.95	31.6	25.2	2.05	438	2.13	0.03	10.0	25.3
S050096		4.62	16.50	0.14	3.0	0.257	0.059	3.12	33.1	25.5	2.01	408	1.80	0.03	10.2	36.6
S050097		4.88	14.80	0.13	2.9	0.508	0.063	2.83	29.1	25.9	1.76	537	1.28	0.03	9.2	36.4
S050098		4.89	13.85	0.13	2.6	1.680	0.052	2.63	25.7	13.2	1.40	789	0.34	0.02	8.9	33.4
S050099		4.40	12.80	0.13	2.5	1.375	0.047	2.40	24.3	13.4	1.05	574	0.44	0.02	8.4	28.9
S050100		4.52	13.10	0.13	2.5	1.415	0.052	2.43	25.4	13.2	1.07	598	0.42	0.02	8.6	29.4

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To: **ATAC RESOURCES LTD.**
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Finalized Date: 25-JUL-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18163781

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl
	Units	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
	LOD	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.01	0.005	0.02
S050061		460	17.9	165.0	<0.002	3.11	8.07	14.6	1	2.0	85.0	0.69	<0.05	13.55	0.355	24.5
S050062		440	17.3	154.0	0.002	2.57	0.74	12.4	1	1.8	177.5	0.67	<0.05	12.65	0.332	9.69
S050063		540	16.1	150.0	0.002	2.95	3.74	12.2	1	1.8	167.0	0.58	<0.05	11.80	0.296	16.90
S050064		790	10.6	111.5	<0.002	2.37	13.75	9.4	1	1.4	135.0	0.45	<0.05	8.93	0.227	32.6
S050065		750	16.3	127.0	<0.002	2.88	39.5	24.5	1	1.7	78.5	0.52	<0.05	10.35	0.261	75.3
S050066		460	15.4	103.0	0.003	4.31	99.9	7.7	1	2.2	247	0.47	0.12	7.74	0.320	100.5
S050067		660	16.4	161.0	<0.002	2.74	9.63	14.6	1	2.0	109.0	0.67	<0.05	13.30	0.330	21.5
S050068		80	0.5	1.7	<0.002	0.01	0.12	0.2	1	<0.2	75.5	0.08	<0.05	0.19	0.006	0.09
S050069		560	16.5	157.5	0.004	2.43	0.71	12.0	<1	2.0	203	0.64	0.05	12.95	0.314	7.76
S050070		650	18.8	184.0	0.015	4.15	0.98	15.1	1	3.0	142.0	0.85	<0.05	17.60	0.377	6.84
S050071		740	18.2	170.5	0.012	3.18	5.57	14.5	1	2.8	182.0	0.82	<0.05	17.45	0.353	15.60
S050072		910	17.4	158.0	0.007	3.55	7.84	14.1	1	2.7	170.5	0.78	0.06	14.20	0.386	10.65
S050073		1460	19.1	159.0	0.008	4.41	8.18	16.7	2	2.9	111.0	0.82	0.05	14.40	0.402	12.05
S050074		2060	17.7	172.0	0.008	4.34	3.79	16.4	1	3.2	115.5	0.81	<0.05	14.15	0.411	5.68
S050075		750	18.3	166.0	0.006	1.68	1.24	15.9	1	3.3	110.5	0.82	0.07	14.15	0.387	3.82
S050076		860	16.2	172.5	0.006	1.53	0.88	14.2	1	2.8	146.0	0.76	0.05	14.25	0.370	3.39
S050077		820	15.6	172.5	0.005	1.49	0.83	14.3	1	2.8	139.5	0.75	<0.05	13.95	0.363	3.28
S050078		600	16.0	177.5	0.002	1.99	0.43	10.5	1	1.7	283	0.57	<0.05	11.10	0.293	5.91
S050079		560	11.7	109.5	<0.002	1.30	0.49	7.4	1	1.3	391	0.40	<0.05	7.99	0.211	3.88
S050081		650	22.9	166.5	0.007	2.94	12.65	14.0	1	2.9	211	0.82	0.06	16.10	0.368	4.48
S050082		430	10.8	89.6	0.003	2.62	22.6	10.3	1	1.6	322	0.43	<0.05	6.77	0.288	45.1
S050083		750	17.6	156.5	0.014	2.46	5.99	15.2	1	3.3	129.5	0.92	<0.05	16.40	0.403	3.53
S050084		740	17.5	182.0	0.011	2.83	2.94	15.9	1	3.1	147.5	0.88	<0.05	17.45	0.398	4.29
S050085		460	12.4	159.0	0.005	1.69	1.11	15.7	1	2.7	117.5	0.86	<0.05	17.55	0.374	1.86
S050086		490	13.7	163.0	0.005	0.73	0.43	17.8	1	2.8	99.4	0.95	<0.05	15.95	0.432	2.07
S050087		480	21.3	156.5	0.004	2.54	0.66	19.3	1	2.1	120.5	0.77	0.07	11.80	0.555	7.21
S050088		490	72.6	150.5	<0.002	4.75	1.29	18.3	1	2.0	98.7	0.70	0.05	10.65	0.528	7.57
S050089		460	46.5	141.5	0.002	2.71	0.65	16.6	1	1.8	133.5	0.66	<0.05	10.10	0.499	4.21
S050090		460	18.4	123.0	<0.002	1.31	0.49	15.5	1	1.7	141.0	0.59	0.05	8.69	0.483	1.39
S050091		600	21.4	179.0	<0.002	4.15	0.72	22.0	1	2.4	129.0	0.86	0.05	12.10	0.615	3.91
S050092		530	15.6	173.0	<0.002	4.65	0.84	21.6	1	2.1	124.0	0.77	0.05	11.15	0.610	3.90
S050093		480	23.7	154.5	<0.002	4.60	1.65	20.0	1	1.9	116.0	0.70	0.05	10.10	0.572	6.02
S050094		440	20.8	125.5	<0.002	2.39	0.58	15.3	1	1.7	152.5	0.59	<0.05	8.82	0.474	3.65
S050095		520	14.3	151.0	<0.002	0.60	0.47	17.3	1	1.8	142.0	0.67	<0.05	9.89	0.508	1.27
S050096		490	20.3	159.0	<0.002	1.04	0.67	18.1	1	2.0	101.0	0.68	0.05	10.50	0.537	1.23
S050097		500	28.0	134.5	<0.002	2.55	1.05	16.5	1	1.8	141.5	0.64	0.06	9.77	0.490	2.07
S050098		480	14.4	116.5	<0.002	4.32	4.15	14.9	<1	1.7	111.5	0.62	0.05	8.84	0.498	7.46
S050099		410	11.9	103.5	<0.002	3.96	1.69	14.2	1	1.5	93.4	0.59	<0.05	8.13	0.492	4.43
S050100		420	11.7	108.0	<0.002	4.11	1.79	14.7	<1	1.6	93.6	0.60	0.06	8.33	0.495	4.60

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CERTIFICATE OF ANALYSIS WH18163781

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	U	V	W	Y	Zn	Zr
	Units	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.1	1	0.1	0.1	2	0.5
S050061		3.1	69	5.7	16.6	86	82.2
S050062		3.2	68	2.3	17.9	80	76.9
S050063		3.4	64	4.7	17.6	88	69.9
S050064		2.8	46	3.7	12.7	61	57.6
S050065		3.3	54	4.7	12.4	81	65.1
S050066		4.5	86	5.7	20.6	74	72.7
S050067		3.7	66	5.2	16.0	79	77.9
S050068		0.2	1	0.1	2.3	3	2.0
S050069		3.4	79	2.6	19.4	83	72.4
S050070		4.5	171	1.8	26.1	110	107.0
S050071		4.3	156	5.8	26.0	103	100.5
S050072		4.3	143	11.0	24.3	100	93.6
S050073		5.0	150	9.6	27.4	106	93.8
S050074		5.6	177	4.3	29.7	109	99.0
S050075		4.2	151	1.9	22.6	85	96.1
S050076		4.2	125	1.7	22.1	87	97.0
S050077		4.2	122	1.8	21.4	95	95.1
S050078		3.1	61	1.1	18.0	131	74.8
S050079		2.4	50	0.9	13.8	80	53.7
S050081		4.1	133	8.4	22.6	71	98.2
S050082		7.4	85	7.9	18.8	48	68.0
S050083		4.0	155	4.4	23.2	91	101.5
S050084		4.1	157	2.9	25.1	86	104.5
S050085		4.3	134	2.2	25.8	68	98.4
S050086		4.3	147	1.7	22.1	91	108.0
S050087		3.0	150	1.3	24.5	93	112.5
S050088		2.5	142	2.4	21.8	147	106.0
S050089		2.3	135	1.5	21.3	99	101.0
S050090		1.9	124	1.5	19.1	152	85.8
S050091		2.6	155	2.6	26.2	108	136.5
S050092		2.4	154	2.9	24.2	149	134.5
S050093		2.2	149	6.8	21.9	96	104.5
S050094		1.9	125	1.1	18.8	100	118.0
S050095		2.2	129	1.1	20.5	170	101.5
S050096		2.3	138	1.2	20.1	215	102.5
S050097		2.0	127	1.7	20.1	99	109.5
S050098		1.8	126	7.3	18.6	54	90.8
S050099		1.7	125	4.8	17.1	56	86.3
S050100		1.8	126	5.0	17.7	50	89.4

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CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Applies to Method: REE's may not be totally soluble in this method.
ME-MS61

LABORATORY ADDRESSES

Applies to Method: Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.

BAG-06	CRU-31	CRU-QC	LOG-21
LOG-21d	LOG-23	PUL-31	PUL-31d
PUL-QC	SPL-21	SPL-21d	WEI-21

Applies to Method: Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Au-AA25	Hg-MS42	ME-MS61

ALS Canada Ltd.

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www.alsglobal.com/geochemistry

To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 26-JUL-2018
Account: RCM

CERTIFICATE WH18163788

Project: Nadaleen

P.O. No.: N18-027

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 9-JUL-2018.

The following have access to data associated with this certificate:

ANDREW CARNE	JULIA LANE	

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
BAG-06	Double Bagging Coarse Rejects
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
LOG-23	Pulp Login - Rcvd with Barcode
LOG-21d	Sample logging - ClientBarCode Dup
SPL-21d	Split sample - duplicate
PUL-31d	Pulverize Split - duplicate

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid ICP-MS	
Hg-MS42	Trace Hg by ICPMS	ICP-MS

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:

Colin Ramshaw, Vancouver Laboratory Manager

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CERTIFICATE OF ANALYSIS WH18163788

Sample Description	Method	WEI-21	Au-AA25	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Recvd Wt.	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu
	Units	kg	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.02	0.01	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2
S048691		12.06	<0.01	0.09	4.81	75.0	220	1.32	0.17	2.19	0.16	50.5	17.4	67	19.65	38.8
S048692		12.08	<0.01	0.07	5.64	76.3	200	1.53	0.17	2.68	0.07	53.5	21.0	76	26.4	52.0
S048693		11.67	0.07	0.04	4.57	173.0	250	1.13	0.15	3.81	0.07	46.1	14.2	56	14.15	40.6
S048694		12.00	<0.01	0.09	7.91	106.5	260	2.30	0.32	2.07	0.18	75.4	18.9	75	39.5	57.0
S048695		12.95	<0.01	0.07	7.28	64.6	280	2.06	0.30	1.60	0.19	70.3	17.6	74	37.9	55.3
S048696		11.36	<0.01	0.08	7.91	39.3	470	2.36	0.31	2.25	0.16	76.0	20.0	77	33.0	59.4
S048697		12.38	0.09	0.09	8.03	299	380	2.23	0.32	2.31	0.12	74.5	18.0	75	30.8	56.4
S048698		13.08	<0.01	0.03	6.40	74.5	460	1.74	0.25	3.28	0.04	61.0	15.9	64	26.5	50.2
S048699		11.86	<0.01	0.05	6.21	71.6	290	1.63	0.22	3.68	0.06	60.3	16.9	61	19.80	50.8
S048700		11.76	<0.01	0.05	6.10	1100	310	1.54	0.23	4.56	0.08	59.5	16.9	58	19.35	48.9
S048701		12.03	<0.01	0.07	5.67	24.2	350	1.44	0.20	2.60	0.13	56.9	16.7	70	37.6	46.1
S048702		6.99	<0.01	<0.01	0.10	1.0	30	0.07	0.06	34.0	<0.02	1.27	0.5	1	0.13	1.4
S048703		11.89	<0.01	0.12	5.81	2530	420	1.19	0.21	3.59	0.14	63.0	20.8	57	25.6	46.0
S048704		13.15	<0.01	0.07	5.77	92.5	1110	1.28	0.22	2.42	0.21	59.2	16.5	64	19.05	47.0
S048705		12.22	<0.01	0.07	6.37	26.4	360	1.44	0.25	2.75	0.19	61.6	17.1	67	23.6	51.1
S048706		12.67	<0.01	0.06	4.53	269	470	0.98	0.16	5.26	0.02	47.1	13.3	54	15.05	35.4
S048707		11.63	0.23	0.05	6.17	861	410	1.42	0.24	2.86	0.06	61.5	16.6	64	21.6	48.1
S048708		0.26	1.12	1.40	1.51	836	190	0.37	0.16	28.0	0.63	19.30	4.1	29	3.41	44.2
S048709		11.55	<0.01	0.07	6.15	56.4	240	1.59	0.22	2.09	0.03	61.4	16.6	70	31.5	50.7
S048710		12.31	0.04	0.11	5.93	170.5	220	1.44	0.22	2.71	0.09	56.9	15.8	65	24.2	49.4
S048711		<0.02	0.04	0.12	6.13	172.5	230	1.48	0.23	2.79	0.10	59.0	16.3	67	25.1	50.3
S048712		11.87	<0.01	0.07	6.15	42.7	200	1.55	0.22	2.15	0.03	60.1	18.6	72	31.7	50.5
S048713		12.33	<0.01	0.04	6.23	41.7	240	1.66	0.25	2.64	0.04	64.6	15.3	69	28.9	45.2
S048714		12.69	<0.01	0.07	5.87	64.5	270	1.70	0.22	2.05	0.03	60.0	16.9	71	27.9	48.9
S048715		12.11	0.17	0.07	6.01	462	210	1.68	0.25	2.04	0.04	58.3	17.1	62	24.8	47.4
S048716		11.20	0.05	0.07	6.71	511	290	2.51	0.23	1.54	0.03	63.6	23.0	75	32.9	49.4
S048717		11.24	0.08	0.06	5.41	473	300	1.56	0.19	3.20	0.32	53.3	15.1	56	20.5	41.3
S048718		13.72	0.17	0.06	7.41	848	360	2.12	0.28	3.33	0.24	69.4	19.5	70	23.4	58.5
S048719		12.51	<0.01	0.10	8.08	155.5	250	2.48	0.32	1.45	0.37	67.8	27.9	77	29.7	61.8
S048720		11.83	<0.01	0.06	8.05	56.1	420	2.48	0.30	1.63	0.48	76.8	19.8	77	31.9	58.9
S048721		11.90	<0.01	0.08	7.84	52.4	390	2.36	0.30	1.94	0.38	74.1	20.8	78	33.2	60.9
S048722		11.64	<0.01	0.08	7.75	52.9	390	2.19	0.31	2.00	0.09	74.2	23.3	76	30.8	62.8
S048723		11.10	<0.01	0.09	6.89	39.7	390	1.74	0.27	2.54	0.34	64.0	20.4	68	25.1	54.0
S048724		11.53	<0.01	0.08	6.77	25.1	390	1.73	0.25	2.93	0.04	60.8	18.9	66	24.3	52.8
S048725		0.26	1.44	0.88	3.09	>10000	200	0.77	0.12	17.90	0.29	33.7	7.5	37	8.41	27.1
S048726		5.66	<0.01	0.06	6.96	36.8	460	1.62	0.26	2.98	<0.02	62.5	18.2	69	31.0	52.5
S048727		6.12	<0.01	0.07	6.97	31.6	890	1.87	0.27	3.22	0.02	66.3	19.2	68	32.0	55.5
S048728		11.81	<0.01	0.06	6.70	53.2	250	1.60	0.25	2.84	0.02	61.3	18.7	68	28.4	53.8
S048729		11.21	<0.01	0.06	6.82	40.2	250	1.71	0.27	2.49	0.02	64.5	18.9	68	29.6	55.4
S048730		12.07	<0.01	0.06	7.09	26.9	260	1.74	0.27	2.36	0.07	71.3	20.8	72	33.6	55.6

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Finalized Date: 26-JUL-2018
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Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18163788

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Hg-MS42	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni
	Units	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2
S048691		3.86	11.95	0.12	2.6	0.085	0.049	2.15	23.4	68.8	1.77	556	0.80	0.10	7.6	28.4
S048692		4.83	14.20	0.13	2.8	0.081	0.058	2.71	25.3	53.1	2.29	577	0.45	0.03	9.1	37.8
S048693		4.39	11.65	0.12	2.3	0.511	0.047	2.10	22.3	39.4	1.87	856	0.53	0.02	7.3	28.5
S048694		5.44	21.6	0.16	3.5	1.875	0.077	3.88	37.8	29.2	1.90	396	0.86	0.04	11.3	41.1
S048695		5.06	19.85	0.14	3.2	0.369	0.072	3.57	34.5	38.7	1.91	400	0.50	0.04	10.7	36.1
S048696		5.25	21.8	0.14	3.5	0.936	0.078	3.86	38.0	28.2	1.56	413	0.83	0.03	11.6	40.9
S048697		5.75	21.6	0.16	3.3	1.990	0.085	3.92	36.2	20.9	1.57	533	1.05	0.03	11.2	39.4
S048698		4.50	17.20	0.13	3.0	0.309	0.067	3.06	29.0	36.6	1.88	705	0.24	0.03	9.9	31.7
S048699		5.30	15.65	0.15	2.8	0.450	0.067	2.88	28.9	42.1	2.14	717	0.34	0.02	10.1	34.4
S048700		5.10	15.55	0.15	2.8	2.50	0.059	2.78	28.1	50.7	2.79	716	0.29	0.02	9.9	32.9
S048701		4.66	14.15	0.13	2.7	0.205	0.058	2.33	27.4	190.0	2.04	613	0.45	0.10	8.6	30.2
S048702		0.13	0.34	0.06	0.1	<0.005	<0.005	0.03	1.2	1.6	2.01	114	<0.05	0.04	0.2	0.3
S048703		4.95	15.05	0.13	2.8	1.225	0.060	2.27	30.5	153.5	2.12	614	0.55	0.03	9.4	37.8
S048704		4.40	14.65	0.12	2.6	0.349	0.061	2.39	28.6	140.0	1.86	551	0.99	0.03	9.3	30.1
S048705		4.97	15.85	0.13	2.9	0.238	0.065	2.74	30.7	78.4	2.19	578	1.19	0.03	9.8	33.2
S048706		5.22	11.20	0.12	2.3	0.385	0.049	2.12	22.8	16.3	2.37	1200	0.26	0.02	7.6	25.5
S048707		4.92	15.55	0.13	2.8	0.797	0.063	2.90	30.0	14.1	1.70	619	0.26	0.03	10.1	32.3
S048708		1.19	3.76	0.07	0.7	2.10	0.021	0.65	9.4	5.5	1.28	4580	1.24	0.10	2.0	12.6
S048709		5.20	15.40	0.12	2.8	0.156	0.066	2.89	29.6	24.4	2.12	474	0.30	0.03	9.9	32.3
S048710		4.90	14.55	0.13	2.7	0.181	0.057	2.82	27.8	18.2	1.91	573	0.31	0.03	9.5	31.2
S048711		5.03	15.00	0.12	2.9	0.200	0.063	2.90	28.9	18.6	1.97	591	0.30	0.03	10.0	32.2
S048712		5.11	15.25	0.14	3.0	0.109	0.058	2.89	29.2	32.2	2.28	528	0.36	0.03	10.0	36.2
S048713		4.59	15.75	0.12	3.2	0.081	0.067	2.99	31.8	27.4	2.28	701	0.46	0.03	10.5	31.4
S048714		4.82	15.00	0.13	2.8	0.107	0.059	2.81	28.7	29.0	2.06	499	0.26	0.03	9.4	32.5
S048715		4.82	15.30	0.14	2.7	0.393	0.058	2.81	28.2	21.3	1.40	618	0.28	0.02	9.0	31.7
S048716		4.46	17.35	0.15	2.8	0.484	0.065	3.21	31.2	20.9	1.16	450	0.25	0.02	9.0	35.8
S048717		4.81	13.85	0.13	2.4	0.285	0.059	2.43	26.0	24.6	1.59	1020	0.51	0.02	7.9	29.7
S048718		5.54	19.05	0.17	3.3	0.451	0.075	3.38	33.7	19.1	1.96	845	0.67	0.03	11.1	39.3
S048719		6.23	21.1	0.15	3.2	0.412	0.084	3.93	32.5	22.2	1.14	384	1.44	0.03	11.6	50.6
S048720		5.56	20.8	0.16	3.4	0.340	0.082	3.79	40.8	51.1	1.90	484	1.67	0.04	11.8	39.1
S048721		5.78	19.75	0.16	3.4	0.152	0.079	3.55	36.7	101.0	2.35	591	0.69	0.04	12.2	39.3
S048722		5.79	19.50	0.17	3.5	0.063	0.078	3.49	35.6	123.5	2.45	615	0.54	0.04	12.4	42.4
S048723		4.92	16.80	0.10	3.0	0.048	0.065	3.05	31.0	84.2	2.31	691	0.48	0.04	10.7	36.4
S048724		5.24	16.10	0.11	2.9	0.051	0.066	2.90	29.9	77.7	2.51	702	0.28	0.03	10.3	35.6
S048725		2.13	7.65	0.08	1.5	4.35	0.031	1.39	17.0	12.4	2.19	1260	1.33	0.10	4.4	18.3
S048726		5.24	16.55	0.11	2.9	0.031	0.065	2.97	29.6	76.6	2.49	732	0.25	0.04	10.5	35.1
S048727		5.29	17.15	0.11	3.0	0.036	0.069	2.97	31.4	80.5	2.58	809	0.29	0.04	11.1	36.5
S048728		5.17	16.10	0.11	2.9	0.035	0.068	2.84	29.5	83.6	2.44	694	0.22	0.04	10.4	35.6
S048729		5.17	17.05	0.11	3.0	0.027	0.072	2.83	30.8	90.4	2.30	624	0.28	0.04	10.7	35.9
S048730		5.39	17.90	0.12	3.1	0.035	0.070	3.04	32.6	94.8	2.29	553	0.35	0.05	11.2	38.8

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Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl
	Units	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
	LOD	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.01	0.005	0.02
S048691		430	23.9	111.0	<0.002	0.26	0.55	12.8	<1	1.5	102.0	0.53	0.05	8.18	0.459	0.80
S048692		500	17.4	133.5	<0.002	0.15	0.41	16.4	<1	1.6	126.5	0.63	<0.05	8.81	0.558	0.89
S048693		420	11.1	94.5	<0.002	2.78	1.63	13.2	<1	1.5	177.0	0.49	0.05	7.57	0.437	3.06
S048694		600	21.4	188.5	<0.002	3.17	0.95	20.4	1	2.7	105.0	0.85	<0.05	11.85	0.510	5.51
S048695		560	16.1	182.5	<0.002	1.44	0.52	18.3	<1	2.4	106.5	0.82	<0.05	11.05	0.487	1.57
S048696		650	17.8	206	0.002	4.62	0.54	20.9	1	2.6	189.0	0.90	<0.05	11.80	0.513	4.17
S048697		620	20.5	201	0.002	5.41	1.66	20.6	1	2.6	194.0	0.83	<0.05	11.55	0.497	7.41
S048698		510	11.7	162.0	<0.002	3.79	0.52	16.1	<1	2.1	215	0.74	0.06	9.59	0.488	4.25
S048699		630	14.3	166.5	<0.002	4.38	0.47	16.5	<1	2.1	325	0.71	0.06	9.84	0.515	4.49
S048700		470	12.5	162.5	<0.002	4.23	1.55	16.0	<1	2.0	205	0.69	0.07	9.85	0.511	13.25
S048701		460	13.1	109.0	<0.002	0.58	0.43	15.6	<1	1.7	183.0	0.61	0.05	9.00	0.489	0.94
S048702		70	0.5	1.1	<0.002	0.01	0.06	0.2	1	<0.2	80.2	<0.05	<0.05	0.15	0.006	0.03
S048703		490	22.6	113.0	0.002	3.49	2.44	15.8	1	1.9	445	0.64	0.06	9.57	0.451	4.34
S048704		790	14.4	114.0	<0.002	1.50	0.48	14.9	<1	1.8	407	0.64	0.05	9.34	0.482	1.32
S048705		810	17.8	134.0	<0.002	1.21	0.79	15.3	<1	2.0	180.0	0.70	0.05	10.10	0.508	1.17
S048706		350	13.2	92.3	<0.002	2.38	1.54	11.7	<1	1.4	180.0	0.51	<0.05	7.37	0.410	1.47
S048707		510	13.7	131.0	<0.002	3.81	4.52	16.1	<1	2.0	177.0	0.69	0.06	10.00	0.530	4.85
S048708		370	59.3	28.2	0.002	0.69	7.78	5.4	1	0.7	1145	0.15	0.05	2.62	0.083	6.06
S048709		480	14.3	138.5	<0.002	0.84	0.67	16.0	<1	2.0	120.5	0.65	0.07	9.56	0.529	1.06
S048710		460	14.2	128.0	<0.002	2.34	1.10	15.4	<1	1.9	132.5	0.67	0.05	9.53	0.520	1.62
S048711		460	13.9	134.5	<0.002	2.35	1.16	15.9	<1	1.9	136.5	0.69	0.05	9.74	0.532	1.60
S048712		460	15.5	142.0	<0.002	0.37	0.53	16.6	<1	1.8	105.5	0.68	0.07	9.74	0.553	0.95
S048713		480	13.3	145.5	<0.002	0.32	0.39	16.2	<1	2.0	121.5	0.72	<0.05	10.20	0.524	0.90
S048714		460	16.2	142.0	<0.002	0.42	0.48	15.7	1	1.8	107.0	0.64	0.05	9.68	0.493	0.97
S048715		410	15.2	142.0	<0.002	3.61	1.55	15.8	<1	1.9	99.6	0.65	0.05	9.65	0.480	3.24
S048716		310	21.1	158.0	0.002	3.80	1.85	20.0	1	2.0	114.5	0.63	<0.05	10.05	0.460	3.15
S048717		390	17.4	122.0	<0.002	3.65	1.06	14.1	<1	1.8	171.0	0.58	<0.05	8.55	0.410	2.14
S048718		630	24.2	167.5	<0.002	4.87	2.34	20.1	<1	2.3	171.0	0.82	0.05	11.85	0.564	2.75
S048719		540	45.2	174.0	<0.002	6.19	1.74	22.2	1	2.6	160.0	0.81	<0.05	11.45	0.552	3.36
S048720		550	25.8	195.0	<0.002	2.10	0.74	22.7	<1	2.6	171.0	0.79	0.05	12.60	0.557	1.84
S048721		580	20.7	188.0	<0.002	0.85	0.60	21.9	<1	2.5	171.0	0.87	<0.05	12.50	0.576	1.34
S048722		580	21.0	184.5	<0.002	0.64	0.73	20.0	<1	2.5	177.5	0.87	0.09	12.50	0.606	1.27
S048723		550	22.2	159.0	<0.002	0.42	0.47	17.0	<1	2.1	187.0	0.76	0.06	9.74	0.538	1.00
S048724		540	14.9	146.5	<0.002	0.39	0.52	16.3	<1	1.9	204	0.72	0.07	9.30	0.532	1.02
S048725		440	15.0	62.1	<0.002	2.36	53.1	6.6	2	1.0	819	0.31	0.08	4.76	0.192	15.55
S048726		540	15.1	153.0	<0.002	0.22	0.45	16.6	1	2.0	176.5	0.73	0.05	9.37	0.535	0.89
S048727		540	16.8	156.5	<0.002	0.24	0.46	17.5	1	2.1	193.5	0.76	0.06	9.87	0.546	0.93
S048728		540	14.0	148.5	<0.002	0.23	0.43	16.8	<1	2.0	166.0	0.75	0.07	9.33	0.537	0.88
S048729		530	14.2	153.0	<0.002	0.16	0.41	17.5	1	2.1	185.5	0.77	0.08	9.89	0.529	0.88
S048730		540	16.2	164.0	<0.002	0.30	0.50	18.3	<1	2.1	160.5	0.80	0.07	10.20	0.554	0.96

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 26-JUL-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18163788

Sample Description	Method Analyte Units LOD	ME-MS61 U ppm 0.1	ME-MS61 V ppm 1	ME-MS61 W ppm 0.1	ME-MS61 Y ppm 0.1	ME-MS61 Zn ppm 2	ME-MS61 Zr ppm 0.5
S048691		1.7	117	1.0	17.6	112	84.4
S048692		1.8	141	1.0	18.1	75	97.4
S048693		1.5	114	3.1	16.3	58	81.9
S048694		2.5	148	2.9	24.3	107	126.5
S048695		2.3	133	1.5	24.2	103	117.0
S048696		2.5	145	1.5	25.8	101	124.0
S048697		2.5	145	3.5	24.3	88	121.0
S048698		2.0	126	2.3	20.9	71	108.5
S048699		2.1	122	2.3	20.0	69	98.5
S048700		2.0	122	2.5	20.1	81	97.7
S048701		1.9	129	1.0	21.1	75	94.6
S048702		0.2	2	<0.1	2.2	4	2.4
S048703		2.1	117	2.5	19.5	82	99.4
S048704		2.0	121	1.5	19.3	128	101.0
S048705		2.1	127	1.2	23.0	138	99.2
S048706		1.5	101	3.4	18.5	53	78.1
S048707		2.0	131	6.7	22.0	63	104.5
S048708		4.2	25	4.6	14.4	119	25.7
S048709		2.0	130	2.5	22.2	64	100.5
S048710		1.9	131	4.0	19.0	67	95.9
S048711		2.0	133	4.1	20.2	74	101.5
S048712		2.1	138	1.2	23.7	64	104.0
S048713		2.2	130	1.2	23.2	69	107.0
S048714		2.0	126	1.2	19.9	61	96.2
S048715		2.0	127	3.2	20.0	63	93.3
S048716		2.0	140	2.9	18.4	55	98.8
S048717		1.7	111	2.4	18.9	143	82.0
S048718		2.5	147	6.6	24.8	122	113.5
S048719		2.5	156	3.6	23.3	159	111.5
S048720		2.6	153	1.4	25.9	153	128.0
S048721		2.6	146	1.5	26.2	126	120.0
S048722		2.7	146	1.7	25.1	96	120.5
S048723		2.0	138	1.3	21.6	136	108.0
S048724		1.9	136	1.4	21.0	79	106.5
S048725		3.9	57	4.4	15.5	56	53.7
S048726		1.9	140	1.3	21.3	74	108.0
S048727		2.0	140	1.4	22.7	76	115.0
S048728		1.9	138	1.3	24.5	76	129.5
S048729		2.1	140	1.4	26.8	80	110.0
S048730		2.1	145	1.3	23.1	80	114.5

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Project: Nadaleen

Finalized Date: 26-JUL-2018
Account: RCM

CERTIFICATE OF ANALYSIS WH18163788

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Applies to Method: REE's may not be totally soluble in this method.
ME-MS61

LABORATORY ADDRESSES

Applies to Method: Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.

BAG-06	CRU-31	CRU-QC	LOG-21
LOG-21d	LOG-23	PUL-31	PUL-31d
PUL-QC	SPL-21	SPL-21d	WEI-21

Applies to Method: Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Au-AA25	Hg-MS42	ME-MS61

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To: **ATAC RESOURCES LTD.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 29-JUL-2018
Account: RCM

CERTIFICATE WH18166115

Project: Nadaleen

P.O. No.: N18-028

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 11-JUL-2018.

The following have access to data associated with this certificate:

ANDREW CARNE	JULIA LANE	

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
LOG-23	Pulp Login - Rcvd with Barcode
LOG-21d	Sample logging - ClientBarCode Dup
SPL-21d	Split sample - duplicate
PUL-31d	Pulverize Split - duplicate

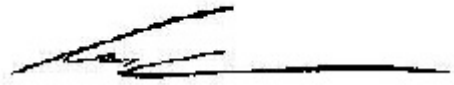
ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid ICP-MS	
Hg-MS42	Trace Hg by ICPMS	ICP-MS
ME-OG62	Ore Grade Elements - Four Acid	ICP-AES
As-OG62	Ore Grade As - Four Acid	

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:



Colin Ramshaw, Vancouver Laboratory Manager

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Finalized Date: 29-JUL-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18166115

Sample Description	Method	WEI-21	Au-AA25	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Recvd Wt.	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu
	Units	kg	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.02	0.01	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2
S050101		3.57	2.86	0.09	5.97	4610	360	1.46	0.23	0.84	0.09	59.2	18.1	63	12.10	52.3
S050102		8.57	0.87	0.08	6.51	3820	310	1.43	0.25	1.35	0.04	63.5	19.6	70	13.40	52.5
S050103		4.65	0.95	0.09	4.77	3430	130	0.91	0.14	0.17	0.08	54.3	20.9	86	9.78	43.2
S050104		0.26	8.25	1.74	1.89	>10000	110	0.28	0.46	7.22	0.81	30.1	6.9	46	3.34	29.1
S050105		6.68	0.21	0.05	2.08	854	60	0.45	0.06	2.21	0.04	23.6	9.5	44	4.83	17.8
S050106		7.20	0.54	0.03	1.92	1120	100	0.37	0.05	1.24	0.07	22.3	7.6	45	4.05	16.1
S050107		1.87	0.44	0.04	1.77	1730	90	0.32	0.05	2.01	0.07	20.6	7.5	42	4.03	14.3
S050108		1.86	0.59	0.03	1.67	4550	60	0.27	0.05	1.90	0.05	19.40	7.0	43	3.64	12.9
S050109		7.04	0.60	0.04	1.96	1860	70	0.38	0.05	0.96	0.07	21.8	7.2	47	4.07	16.4
S050110		5.87	0.56	0.04	1.93	1515	80	0.42	0.06	1.48	0.08	22.1	8.0	57	3.78	16.0
S050111		4.39	2.11	0.07	2.52	4200	120	0.58	0.09	1.11	0.18	25.9	8.0	40	4.46	22.4
S050112		3.32	0.23	0.04	6.02	750	210	1.61	0.20	3.56	0.16	54.6	18.9	74	13.60	54.5
S050113		7.67	0.02	0.04	5.25	242	180	1.47	0.20	3.51	0.17	51.3	16.0	67	14.55	48.8
S050114		11.47	0.04	0.03	5.59	319	220	1.63	0.21	4.09	0.22	56.3	14.3	66	18.25	50.2
S050115		9.86	<0.01	0.05	6.48	26.8	240	1.74	0.26	3.16	0.07	69.6	17.8	72	39.6	56.7
S050116		11.99	<0.01	0.04	6.50	70.3	270	1.87	0.25	2.85	0.10	63.5	17.2	75	36.3	57.8
S050117		11.92	<0.01	0.05	5.78	108.5	180	1.63	0.21	3.59	0.11	54.5	17.9	75	20.6	52.2
S050118		10.59	0.05	0.06	3.82	1690	180	0.91	0.11	3.13	0.08	34.8	13.9	62	9.97	35.1
S050119		11.89	0.02	0.03	1.77	441	110	0.34	0.05	1.97	0.03	20.5	7.0	43	4.05	15.1
S050120		12.50	0.02	0.04	2.89	542	170	0.65	0.10	2.62	0.04	30.6	9.8	49	6.46	23.5
S050121		11.98	<0.01	0.08	5.78	169.5	220	1.61	0.22	2.33	0.26	57.1	19.0	70	25.2	47.8
S050122		7.99	<0.01	0.05	5.92	135.0	410	1.72	0.20	1.72	0.04	55.1	17.9	71	37.5	43.9
S050123		7.74	<0.01	0.04	5.98	105.0	270	1.54	0.21	1.45	0.05	56.5	15.9	73	31.9	47.8
S050124		8.02	<0.01	0.05	5.16	314	250	1.20	0.20	2.53	0.02	49.7	15.5	66	16.95	41.1
S050125		4.54	0.06	0.07	5.56	730	240	1.60	0.18	2.54	0.14	48.2	17.1	69	18.25	41.1
S050126		6.41	<0.01	0.06	6.89	141.0	270	2.13	0.26	2.17	0.08	62.2	21.8	82	27.3	47.9
S050127		6.91	0.01	0.04	6.97	71.3	280	2.04	0.23	1.36	0.09	59.9	21.5	88	36.5	48.6
S050128		4.53	<0.01	0.03	7.48	186.5	280	2.24	0.23	2.17	<0.02	61.6	23.4	86	30.5	48.9
S050129		5.16	0.35	0.08	8.32	1930	280	2.90	0.25	1.07	0.13	67.9	31.9	98	30.9	54.6
S050130		3.34	4.93	0.08	4.56	>10000	170	1.02	0.17	1.46	0.34	41.5	14.2	58	11.55	39.0
S050131		2.96	2.58	0.08	7.39	>10000	230	1.90	0.24	0.06	0.88	73.5	24.3	98	16.65	44.9
S050132		0.26	12.90	1.42	3.09	>10000	120	0.58	0.30	8.19	0.78	42.1	10.7	48	8.33	32.0
S050133		2.38	1.75	0.04	4.67	>10000	130	0.86	0.16	1.78	0.21	41.8	15.3	58	10.25	34.6
S050134		5.60	0.20	0.05	8.43	5000	260	2.67	0.25	0.64	0.11	71.3	26.3	98	33.1	55.7
S050135		5.36	0.44	0.02	8.11	2510	290	2.41	0.24	1.21	0.11	68.3	23.8	90	26.2	54.9
S050136		<0.02	0.41	0.02	7.95	2430	290	2.24	0.22	1.21	0.09	65.7	23.4	88	25.7	54.4
S050137		4.68	5.90	0.08	7.12	>10000	280	1.57	0.24	0.65	0.25	60.7	20.8	91	20.3	51.1
S050138		4.25	3.13	0.05	7.82	>10000	330	1.86	0.27	0.78	0.16	77.7	23.7	92	19.70	54.1
S050139		3.99	4.54	0.06	7.00	8640	270	1.78	0.23	0.43	0.13	63.3	23.6	88	20.3	49.2
S050140		5.03	<0.01	<0.01	0.10	26.5	30	0.07	0.01	33.8	<0.02	1.16	0.6	4	0.11	2.3

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Finalized Date: 29-JUL-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18166115

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Hg-MS42	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni
	Units	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2
S050101		5.13	17.45	0.19	3.0	8.71	0.044	2.88	28.1	12.0	0.61	310	0.71	0.02	10.2	34.0
S050102		5.35	18.25	0.18	3.4	4.71	0.053	3.19	30.7	11.3	0.89	560	0.39	0.02	11.0	38.7
S050103		4.55	14.25	0.16	3.1	6.61	0.038	2.21	26.2	12.8	0.25	68	0.56	0.02	8.3	36.9
S050104		2.57	6.13	0.12	0.9	16.30	0.018	0.85	14.5	27.5	0.17	341	6.92	0.01	2.7	20.5
S050105		2.52	5.69	0.07	1.3	1.310	0.020	0.93	11.0	12.0	0.81	460	0.33	0.01	3.5	16.3
S050106		1.85	5.51	0.08	1.3	1.880	0.015	0.87	10.4	9.0	0.50	397	0.38	0.01	3.2	14.3
S050107		2.27	4.93	0.08	1.2	1.890	0.015	0.76	9.7	14.1	0.73	413	0.32	0.01	2.9	14.0
S050108		2.26	4.76	0.08	1.1	2.45	0.014	0.73	9.2	11.7	0.68	393	0.26	0.01	2.8	13.0
S050109		2.01	4.90	0.09	1.2	2.64	0.017	0.90	10.1	10.0	0.41	319	0.36	0.01	3.0	13.9
S050110		2.13	5.02	0.09	1.1	2.12	0.014	0.89	10.4	9.6	0.58	485	0.38	0.01	3.0	13.9
S050111		3.64	6.56	0.09	1.2	8.53	0.025	1.18	12.1	10.5	0.51	443	0.75	0.01	3.7	15.4
S050112		5.16	15.30	0.16	2.8	2.07	0.053	2.86	26.2	14.4	1.62	830	0.50	0.02	9.4	36.9
S050113		4.94	13.25	0.15	2.6	0.680	0.058	2.46	24.5	27.2	1.61	695	0.51	0.02	8.6	30.5
S050114		4.82	14.10	0.15	2.6	0.510	0.059	2.72	26.8	22.0	2.09	753	0.42	0.03	9.3	29.7
S050115		5.06	16.80	0.21	3.1	0.110	0.068	3.16	32.0	60.7	2.56	634	0.36	0.04	10.9	36.5
S050116		5.12	16.45	0.21	3.1	0.111	0.069	3.10	31.0	85.9	2.49	589	0.42	0.03	10.7	35.4
S050117		5.00	14.65	0.16	2.6	0.148	0.063	2.74	26.5	68.0	2.42	834	0.48	0.03	9.1	35.6
S050118		4.12	9.70	0.14	1.8	0.530	0.039	1.72	16.3	58.1	1.36	639	0.41	0.02	5.8	27.4
S050119		2.12	4.36	0.11	1.1	0.187	0.017	0.76	9.6	40.7	0.74	368	0.30	0.01	2.9	12.6
S050120		2.98	7.23	0.12	1.6	0.197	0.031	1.33	14.3	27.1	1.23	482	0.47	0.02	4.6	18.1
S050121		4.53	14.80	0.20	2.7	0.132	0.063	2.68	28.0	89.0	2.07	680	0.63	0.03	9.4	34.0
S050122		4.51	15.10	0.17	2.5	0.260	0.054	2.77	27.3	93.6	1.45	360	0.29	0.03	8.1	32.0
S050123		4.64	14.85	0.17	2.5	0.256	0.055	2.71	27.9	155.5	1.59	360	0.21	0.03	8.4	30.4
S050124		4.73	13.20	0.16	2.4	0.222	0.047	2.34	24.6	115.5	1.73	551	0.25	0.03	7.9	29.6
S050125		5.01	14.10	0.15	2.3	1.010	0.052	2.57	24.2	61.5	1.24	717	0.48	0.02	7.4	32.7
S050126		4.83	18.05	0.18	2.6	0.614	0.069	3.36	31.2	47.7	1.25	794	1.06	0.03	8.3	35.5
S050127		4.68	18.15	0.18	2.5	0.471	0.059	3.35	29.9	76.7	1.25	732	0.44	0.03	8.0	34.2
S050128		6.47	19.80	0.18	2.5	0.546	0.074	3.55	30.2	90.9	1.41	1110	0.21	0.03	7.9	40.0
S050129		5.28	21.7	0.19	2.7	2.09	0.075	4.08	34.6	17.4	0.95	666	0.42	0.03	9.3	46.6
S050130		3.87	12.40	0.16	2.0	11.15	0.036	2.14	20.7	12.0	0.85	1410	0.84	0.02	5.3	24.5
S050131		4.33	19.75	0.19	2.6	19.00	0.060	3.53	36.6	21.0	0.44	55	0.47	0.03	8.5	38.5
S050132		3.14	8.13	0.14	1.6	22.6	0.027	1.44	22.4	15.6	2.02	1120	4.23	0.02	4.5	23.2
S050133		4.50	11.80	0.13	2.0	8.12	0.039	2.14	21.1	17.5	0.86	1160	0.47	0.02	5.6	25.3
S050134		4.85	21.9	0.20	2.7	3.61	0.080	4.09	35.9	27.0	0.77	271	0.29	0.03	9.2	40.6
S050135		5.84	21.4	0.18	2.7	4.98	0.068	3.87	33.2	23.0	0.91	536	0.29	0.03	9.1	36.6
S050136		5.73	20.8	0.17	2.5	4.79	0.073	3.82	32.2	22.9	0.90	534	0.27	0.03	8.9	36.7
S050137		5.05	18.60	0.18	2.6	38.1	0.055	3.21	30.6	21.7	0.69	155	1.10	0.02	8.6	39.6
S050138		4.48	19.85	0.19	3.1	44.7	0.064	3.60	35.1	24.1	0.80	185	0.35	0.03	10.3	39.6
S050139		4.95	18.20	0.18	2.6	37.5	0.056	3.34	31.4	22.5	0.62	142	0.31	0.03	9.0	36.9
S050140		0.12	0.34	0.06	0.1	0.049	<0.005	0.04	1.2	1.1	1.68	108	0.07	0.04	0.2	0.4

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 29-JUL-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18166115

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl
	Units	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
	LOD	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.01	0.005	0.02
S050101		510	17.0	120.5	<0.002	5.10	7.49	11.5	1	2.1	104.5	0.70	0.05	8.94	0.485	30.9
S050102		500	17.9	128.5	<0.002	5.16	8.68	15.6	1	2.1	102.0	0.75	0.07	9.54	0.561	14.90
S050103		260	17.7	87.3	<0.002	4.81	4.87	9.8	1	1.5	34.9	0.59	<0.05	7.18	0.560	19.05
S050104		510	10.4	42.9	0.003	4.78	169.5	3.3	2	1.3	358	0.18	0.12	3.22	0.102	44.6
S050105		190	8.4	38.6	<0.002	1.34	1.34	5.8	<1	0.7	69.2	0.21	<0.05	3.11	0.256	4.47
S050106		200	5.0	37.6	<0.002	1.09	1.61	5.0	1	0.6	47.3	0.21	<0.05	2.94	0.232	7.10
S050107		180	4.9	32.6	<0.002	1.19	1.40	4.9	1	0.6	66.5	0.19	<0.05	2.77	0.219	6.33
S050108		150	5.1	30.1	<0.002	1.33	3.06	4.4	<1	0.7	62.3	0.20	<0.05	2.51	0.210	7.31
S050109		180	5.3	38.3	<0.002	1.47	1.69	4.7	<1	0.6	40.5	0.22	<0.05	3.09	0.236	8.05
S050110		190	7.4	38.9	<0.002	1.30	1.67	5.5	<1	0.7	50.8	0.20	<0.05	3.07	0.233	7.69
S050111		210	13.0	50.7	<0.002	3.21	6.31	5.9	<1	0.9	48.4	0.27	<0.05	4.04	0.241	19.80
S050112		540	12.8	122.0	<0.002	4.02	2.93	18.2	<1	1.7	170.0	0.65	<0.05	8.74	0.534	7.33
S050113		550	8.1	112.0	<0.002	3.94	1.07	15.4	1	1.6	160.5	0.59	<0.05	7.79	0.511	2.32
S050114		520	14.0	125.0	<0.002	2.76	2.48	14.8	<1	1.7	191.5	0.64	0.06	8.66	0.493	2.30
S050115		670	16.3	169.0	<0.002	0.41	0.39	18.1	<1	2.1	191.0	0.77	0.05	10.50	0.539	1.05
S050116		570	16.0	165.0	<0.002	0.43	0.36	17.9	1	2.0	161.0	0.74	0.05	10.30	0.539	1.01
S050117		580	14.9	138.0	<0.002	0.93	0.61	16.9	<1	1.8	178.0	0.66	<0.05	8.61	0.512	1.49
S050118		350	10.2	82.0	<0.002	3.04	1.90	12.4	<1	1.1	171.0	0.39	<0.05	5.04	0.417	4.47
S050119		200	5.6	34.8	<0.002	1.10	0.92	5.2	<1	0.6	83.2	0.19	<0.05	2.94	0.235	1.17
S050120		270	7.4	59.2	<0.002	0.99	1.46	8.2	1	0.9	123.0	0.33	<0.05	4.60	0.299	1.28
S050121		450	17.7	138.5	<0.002	0.45	0.65	15.8	1	1.9	133.0	0.65	<0.05	9.02	0.499	1.01
S050122		400	16.8	134.5	<0.002	0.83	1.23	16.3	<1	1.7	110.0	0.58	<0.05	8.63	0.411	1.17
S050123		360	14.1	128.0	<0.002	0.45	0.43	16.0	<1	1.7	89.0	0.61	<0.05	9.19	0.455	0.90
S050124		400	10.6	105.0	<0.002	0.71	0.76	13.7	1	1.5	143.0	0.57	<0.05	8.12	0.428	0.96
S050125		240	16.4	113.0	0.002	4.21	4.21	15.3	1	1.6	159.0	0.52	<0.05	7.84	0.383	3.21
S050126		200	16.8	151.5	0.003	2.11	1.66	19.5	1	1.9	138.5	0.59	<0.05	9.75	0.395	2.01
S050127		170	12.4	157.0	0.002	0.83	0.52	20.1	1	1.9	101.5	0.57	<0.05	9.57	0.388	1.15
S050128		190	12.9	164.5	<0.002	3.53	0.72	22.7	1	2.0	113.0	0.57	<0.05	9.81	0.394	2.17
S050129		220	22.5	185.0	0.004	4.84	4.32	23.6	1	2.3	79.8	0.67	<0.05	10.85	0.445	5.07
S050130		170	14.9	95.6	0.002	3.56	21.1	14.8	1	1.3	48.7	0.39	<0.05	6.10	0.258	36.4
S050131		150	27.0	151.5	0.002	4.54	33.3	13.3	1	2.0	59.4	0.61	<0.05	10.15	0.407	47.6
S050132		370	19.9	71.0	0.003	5.31	211	5.8	3	1.3	193.5	0.32	0.17	5.56	0.183	75.6
S050133		120	15.8	88.0	<0.002	4.32	29.6	11.8	1	1.3	61.9	0.43	<0.05	6.61	0.268	23.1
S050134		210	14.7	180.0	0.003	4.30	4.79	22.7	<1	2.3	72.2	0.66	<0.05	11.00	0.453	6.23
S050135		200	8.8	168.0	<0.002	5.49	3.29	22.9	1	2.2	93.4	0.66	<0.05	10.60	0.438	6.69
S050136		200	8.7	165.5	0.002	5.37	3.13	22.1	<1	2.1	92.7	0.62	<0.05	10.15	0.422	6.36
S050137		310	17.1	141.0	0.003	5.74	4.93	13.5	1	2.7	111.5	0.63	<0.05	9.75	0.423	33.5
S050138		330	16.4	152.0	0.002	4.44	5.00	17.0	<1	3.0	96.3	0.75	<0.05	11.50	0.515	36.6
S050139		290	18.8	142.5	0.002	5.01	3.95	15.1	1	2.7	75.1	0.65	<0.05	9.92	0.452	26.0
S050140		80	<0.5	1.3	<0.002	0.02	0.06	0.2	1	<0.2	77.7	<0.05	<0.05	0.09	0.007	0.12

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 29-JUL-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18166115

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	As-OG62
	Analyte	U	V	W	Y	Zn	Zr	As
	Units	ppm	ppm	ppm	ppm	ppm	ppm	%
	LOD	0.1	1	0.1	0.1	2	0.5	0.001
S050101		1.9	135	10.3	20.1	55	108.5	
S050102		2.1	150	11.5	21.3	58	113.5	
S050103		1.6	168	6.5	14.7	46	102.0	
S050104		4.8	37	7.4	17.2	67	32.0	
S050105		0.7	74	1.9	7.4	32	46.6	
S050106		0.7	66	2.0	6.7	57	44.4	
S050107		0.6	63	1.6	6.5	50	38.2	
S050108		0.6	60	1.5	6.5	33	35.8	
S050109		0.7	71	2.1	7.2	35	38.5	
S050110		0.6	69	2.2	6.7	36	40.0	
S050111		0.8	70	4.2	8.3	69	44.1	
S050112		1.7	144	8.6	18.6	86	96.9	
S050113		1.5	141	3.5	20.0	142	88.4	
S050114		1.7	124	3.3	18.8	183	101.0	
S050115		2.0	137	1.2	24.5	74	109.0	
S050116		2.0	141	1.1	21.9	82	107.5	
S050117		1.6	139	3.0	19.8	81	91.2	
S050118		1.0	121	4.9	11.9	71	65.5	
S050119		0.6	66	1.9	6.0	32	39.6	
S050120		0.9	84	3.4	9.5	45	53.0	
S050121		1.8	135	1.5	19.0	109	105.5	
S050122		1.7	123	2.6	16.8	65	88.9	
S050123		1.7	131	1.3	17.0	72	88.6	
S050124		1.7	115	2.9	15.8	58	84.0	
S050125		1.7	124	7.9	15.1	86	81.6	
S050126		2.0	145	3.6	16.9	82	91.5	
S050127		1.8	145	2.1	15.8	98	87.8	
S050128		1.6	151	3.5	19.1	62	88.8	
S050129		2.1	174	10.9	18.8	113	92.9	
S050130		1.3	98	8.1	10.6	110	60.7	2.28
S050131		2.0	152	12.2	14.0	199	90.9	2.08
S050132		6.4	54	5.4	18.8	118	54.6	
S050133		1.3	87	6.3	10.9	56	66.1	1.485
S050134		1.9	169	13.2	19.0	83	89.9	
S050135		1.7	157	11.9	18.7	94	91.0	
S050136		1.6	155	11.5	18.2	93	86.0	
S050137		2.2	151	12.3	19.0	92	88.8	2.31
S050138		2.1	156	14.4	18.4	60	108.5	0.975
S050139		1.9	142	9.8	18.9	56	92.8	
S050140		0.1	1	0.1	2.1	4	1.8	

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Project: Nadaleen

Finalized Date: 29-JUL-2018
Account: RCM

CERTIFICATE OF ANALYSIS WH18166115

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Applies to Method: REE's may not be totally soluble in this method.
ME-MS61

LABORATORY ADDRESSES

Applies to Method: Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.

CRU-31	CRU-QC	LOG-21	LOG-21d
LOG-23	PUL-31	PUL-31d	PUL-QC
SPL-21	SPL-21d	WEI-21	

Applies to Method: Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

As-OG62	Au-AA25	Hg-MS42	ME-MS61
ME-OG62			

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To: **ATAC RESOURCES LTD.**
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1016-510 W HASTINGS ST
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Finalized Date: 30-JUL-2018
Account: RCM

CERTIFICATE WH18163802

Project: Nadaleen

P.O. No.: N18-029

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 9-JUL-2018.

The following have access to data associated with this certificate:

ANDREW CARNE	JULIA LANE	

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
BAG-06	Double Bagging Coarse Rejects
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
LOG-23	Pulp Login - Rcvd with Barcode
LOG-21d	Sample logging - ClientBarCode Dup
SPL-21d	Split sample - duplicate
PUL-31d	Pulverize Split - duplicate

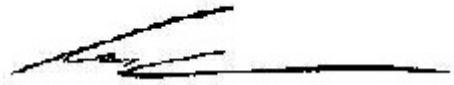
ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid ICP-MS	
Hg-MS42	Trace Hg by ICPMS	ICP-MS
ME-OG62	Ore Grade Elements - Four Acid	ICP-AES
As-OG62	Ore Grade As - Four Acid	

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:



Colin Ramshaw, Vancouver Laboratory Manager

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Finalized Date: 30-JUL-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18163802

Sample Description	Method	WEI-21	Au-AA25	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Recvd Wt.	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu
	Units	kg	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.02	0.01	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2
S050141		3.53	0.40	0.05	7.31	3330	270	1.90	0.25	1.27	0.02	64.6	20.8	81	25.6	52.2
S050142		7.51	0.02	0.04	7.48	2940	280	2.23	0.22	2.04	<0.02	65.3	19.5	80	31.7	45.9
S050143		7.30	<0.01	0.03	8.67	1830	360	2.70	0.27	1.04	0.04	72.6	22.3	85	33.3	53.3
S050144		3.92	0.13	0.08	7.24	2030	330	1.57	0.28	2.04	0.04	64.9	22.4	72	18.35	48.4
S050145		4.81	4.68	0.60	7.44	>10000	350	1.42	0.26	0.84	0.22	65.0	20.9	84	18.15	53.1
S050146		0.26	8.34	1.71	1.95	>10000	100	0.28	0.46	7.36	0.87	28.3	6.5	46	3.10	27.8
S050147		2.99	19.35	2.94	3.90	>10000	170	0.70	0.18	4.34	0.62	35.4	12.5	54	7.74	40.4
S050148		4.12	0.41	0.07	6.63	2270	250	1.42	0.22	1.65	0.19	55.5	17.6	73	16.45	45.8
S050149		5.30	3.20	0.21	5.91	9100	280	0.93	0.11	7.80	0.13	79.0	19.8	43	26.9	26.9
S050150		5.67	0.01	<0.01	5.81	2930	230	0.71	0.02	10.80	0.09	107.0	22.2	12	8.83	9.3
S050151		3.14	<0.01	0.02	1.80	297	140	0.50	0.08	29.2	0.24	23.6	3.7	18	3.00	14.7
S050152		4.80	0.42	0.02	1.72	1905	130	0.35	0.08	29.6	0.04	20.0	4.9	17	2.07	11.0
S050153		7.15	0.69	0.03	2.85	853	170	0.65	0.13	22.3	0.10	32.0	8.9	26	5.06	21.3
S050154		3.84	1.95	0.06	4.96	1415	300	1.00	0.24	16.85	0.14	62.4	15.5	45	9.31	43.7
S050155		7.11	0.06	0.03	1.70	574	130	0.44	0.08	28.7	0.06	21.1	5.8	17	2.83	14.7
S050156		6.63	0.49	0.01	0.94	594	80	0.26	0.05	33.1	0.07	13.05	3.2	10	1.41	8.4
S050157		2.52	4.01	0.13	1.92	>10000	120	0.38	0.09	25.0	0.15	20.8	5.6	21	2.53	14.4
S050158		6.28	0.20	0.02	0.77	196.5	70	0.23	0.04	35.9	0.03	10.55	2.8	8	1.30	7.2
S050159		4.08	0.58	0.20	0.68	>10000	70	0.25	0.04	33.6	0.12	8.82	2.2	8	1.33	6.9
S050160		4.97	<0.01	<0.01	0.09	86.9	20	0.07	0.01	34.0	<0.02	1.14	0.6	3	<0.05	1.2
S050161		6.92	<0.01	0.03	2.13	168.5	130	0.62	0.11	28.8	0.09	27.4	6.6	20	5.50	19.8
S050162		6.89	<0.01	0.02	1.03	95.8	100	0.37	0.05	32.7	0.08	16.35	3.4	12	2.11	10.1
S050163		7.21	0.16	0.05	1.60	141.5	140	0.50	0.08	30.6	0.17	23.2	4.9	16	3.01	15.6
S050164		7.12	<0.01	0.02	1.09	50.3	180	0.39	0.06	33.5	0.23	17.60	3.7	12	2.36	11.1
S050165		6.76	0.05	0.02	1.71	83.7	150	0.51	0.09	30.4	0.15	23.8	5.6	17	4.41	16.6
S050166		7.44	<0.01	0.04	2.37	77.8	330	0.66	0.12	27.7	0.31	30.1	7.6	23	8.92	23.0
S050167		6.76	<0.01	0.02	1.01	22.1	390	0.38	0.05	33.0	0.09	17.00	3.6	11	3.06	10.4
S050168		7.73	<0.01	0.06	3.50	52.6	480	1.13	0.17	21.7	0.40	46.1	12.0	33	13.15	36.1
S050169		<0.02	<0.01	0.07	3.58	53.2	480	0.87	0.17	21.8	0.31	44.6	12.9	35	13.75	41.2
S050170		7.26	<0.01	0.02	1.14	17.4	300	0.40	0.06	31.7	0.10	22.2	4.6	12	4.27	12.8
S050171		7.42	<0.01	0.05	2.91	35.8	450	0.83	0.13	24.5	0.22	33.9	9.8	29	14.05	28.5
S050172		7.10	<0.01	0.02	1.34	22.2	250	0.48	0.07	32.5	0.12	21.6	4.9	14	4.56	14.6
S050173		3.38	<0.01	0.06	3.91	39.4	360	1.14	0.20	19.20	0.29	51.1	14.4	38	13.30	42.6
S050174		3.55	<0.01	0.06	3.83	38.5	370	1.15	0.19	19.50	0.34	51.3	13.9	38	13.30	41.9
S050175		7.64	<0.01	0.07	4.98	44.8	300	1.49	0.22	15.10	0.29	54.8	17.7	51	21.4	48.6
S050176		7.11	<0.01	0.03	3.06	9.6	220	1.01	0.16	23.1	0.20	37.3	9.6	29	14.30	29.0
S050177		6.83	<0.01	0.06	4.24	13.3	310	1.27	0.20	18.50	0.31	51.7	13.1	41	21.2	40.4
S050178		7.28	<0.01	0.05	2.80	19.1	260	0.88	0.15	27.4	0.20	34.6	8.7	26	11.90	26.3
S050179		6.91	<0.01	0.02	1.27	13.2	210	0.45	0.08	33.3	0.15	21.8	4.3	13	5.78	13.0
S050180		0.26	1.09	1.39	1.56	868	200	0.43	0.13	28.8	0.68	19.55	4.4	26	3.58	48.3

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 30-JUL-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18163802

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Hg-MS42	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni
	Units	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2
S050141		5.37	18.65	0.12	2.9	8.36	0.066	3.55	32.4	32.3	0.96	359	0.31	0.03	9.5	35.8
S050142		5.82	19.25	0.13	2.7	4.11	0.071	3.61	31.4	40.6	1.19	790	0.21	0.03	9.0	30.7
S050143		5.06	22.3	0.15	2.8	3.78	0.082	4.19	35.5	23.6	0.95	338	0.20	0.03	10.3	34.7
S050144		5.02	17.70	0.11	3.2	4.13	0.071	3.51	32.2	15.0	1.22	327	0.28	0.03	9.9	39.5
S050145		4.62	18.65	0.11	2.7	21.4	0.067	3.62	32.4	15.5	0.77	220	0.40	0.02	9.0	39.7
S050146		2.63	5.28	0.07	0.9	16.00	0.029	0.87	14.4	24.8	0.17	346	5.99	0.01	2.5	19.4
S050147		3.72	10.25	0.09	1.5	59.5	0.046	1.79	16.9	12.1	0.28	849	0.61	0.01	4.4	23.0
S050148		4.25	17.05	0.09	2.6	3.90	0.059	3.15	27.7	14.5	0.72	519	0.66	0.02	7.5	32.3
S050149		5.67	14.50	0.12	2.3	9.26	0.060	2.61	38.4	17.5	1.78	1490	1.17	0.03	28.3	19.2
S050150		6.58	13.40	0.15	2.5	4.35	0.064	2.54	51.3	33.8	3.03	1440	1.53	0.04	49.4	7.8
S050151		1.27	4.70	0.06	0.8	2.28	0.021	0.87	12.4	3.4	0.88	546	0.99	0.02	2.6	5.1
S050152		1.81	4.31	<0.05	0.8	4.75	0.016	0.82	9.5	2.6	1.18	709	0.66	0.01	2.1	6.6
S050153		2.35	7.01	0.07	1.2	8.36	0.028	1.36	17.4	4.7	2.18	640	0.99	0.02	3.7	15.1
S050154		3.58	12.90	0.13	2.1	17.65	0.041	2.38	35.7	9.4	1.56	640	2.76	0.02	6.7	27.1
S050155		1.54	4.24	0.06	0.9	4.80	0.018	0.80	10.7	3.0	0.80	412	0.59	0.01	2.4	8.6
S050156		0.87	2.44	<0.05	0.5	3.97	0.014	0.45	6.9	2.2	0.69	319	0.21	0.01	1.3	4.6
S050157		1.39	4.90	0.06	0.9	9.78	0.023	0.90	10.7	6.9	0.22	454	0.32	0.01	2.3	9.3
S050158		0.58	1.98	<0.05	0.4	1.730	0.010	0.36	5.5	1.9	0.43	333	0.13	0.01	1.1	3.9
S050159		0.52	1.83	<0.05	0.3	1.720	0.025	0.32	4.5	2.5	0.29	2970	0.44	0.01	1.0	3.7
S050160		0.13	0.30	0.05	<0.1	0.013	<0.005	0.03	1.2	1.0	2.13	159	<0.05	0.04	0.1	0.6
S050161		1.40	5.55	0.08	1.0	3.52	0.021	1.05	15.0	6.0	1.03	313	1.55	0.02	3.1	12.1
S050162		0.77	2.61	0.06	0.5	1.635	0.009	0.50	7.9	2.9	0.81	291	0.75	0.01	1.4	6.0
S050163		1.13	4.14	0.07	0.7	2.36	0.016	0.78	11.5	4.0	1.19	482	1.32	0.01	2.1	9.2
S050164		0.84	2.91	0.05	0.5	1.690	0.011	0.53	8.3	3.6	0.93	342	0.80	0.01	1.5	6.4
S050165		1.19	4.32	0.06	0.8	2.75	0.020	0.83	11.4	5.2	0.83	290	1.28	0.02	2.3	9.8
S050166		1.60	5.81	0.08	1.1	0.821	0.028	1.17	15.3	8.0	1.00	184	1.57	0.02	3.2	13.7
S050167		0.82	2.55	0.06	0.5	0.091	0.011	0.49	7.4	4.1	0.59	389	0.76	0.01	1.4	5.7
S050168		2.44	8.98	0.10	1.6	0.298	0.036	1.66	24.1	12.3	1.31	529	2.50	0.11	4.9	21.4
S050169		2.50	9.08	0.12	1.6	0.293	0.037	1.69	22.7	8.1	1.38	546	2.90	0.11	4.9	26.7
S050170		1.21	2.91	0.10	0.6	0.062	0.012	0.55	10.8	3.2	0.74	347	0.97	0.02	1.5	8.6
S050171		2.30	7.17	0.12	1.4	0.201	0.029	1.37	17.7	8.9	1.30	401	1.68	0.07	4.1	18.6
S050172		1.04	3.34	0.11	0.6	0.107	0.014	0.59	10.4	4.4	0.71	458	1.12	0.13	1.9	8.7
S050173		2.93	9.77	0.14	1.8	0.312	0.038	1.85	26.6	11.9	2.17	404	2.53	0.12	5.2	25.9
S050174		2.87	9.67	0.14	1.8	0.291	0.039	1.82	26.7	12.2	2.01	393	2.42	0.11	5.2	25.2
S050175		3.53	12.45	0.14	2.4	0.310	0.051	2.31	29.8	16.9	1.23	430	2.43	0.14	6.9	31.1
S050176		2.12	7.58	0.11	1.4	0.192	0.030	1.42	21.3	11.5	1.53	776	1.37	0.13	4.2	17.9
S050177		2.81	10.70	0.14	2.0	0.316	0.049	1.94	28.4	17.3	1.59	386	2.12	0.23	5.8	24.6
S050178		1.81	7.34	0.13	1.3	0.206	0.028	1.33	19.8	12.0	1.07	358	1.25	0.06	4.0	15.9
S050179		0.94	3.23	0.11	0.6	0.092	0.012	0.61	11.0	6.0	0.56	197	0.60	0.03	1.8	7.5
S050180		1.18	3.92	0.10	0.7	2.08	0.020	0.68	9.8	6.5	1.26	4730	1.28	0.10	2.1	14.1

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
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Finalized Date: 30-JUL-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18163802

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl
	Units	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
	LOD	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.01	0.005	0.02
S050141		320	15.5	146.0	<0.002	5.05	1.77	19.4	<1	2.3	95.6	0.67	<0.05	9.87	0.477	6.53
S050142		240	13.5	154.5	0.002	5.01	1.12	21.1	1	2.3	135.5	0.66	<0.05	9.62	0.430	5.39
S050143		250	12.8	179.5	0.002	4.50	3.56	24.5	<1	2.5	80.7	0.71	<0.05	10.75	0.490	4.62
S050144		400	18.4	138.5	0.002	4.35	3.50	17.8	<1	2.2	125.5	0.71	0.06	10.35	0.484	6.25
S050145		290	17.3	141.5	<0.002	4.68	6.91	16.1	1	2.6	87.1	0.65	0.05	10.10	0.429	42.1
S050146		530	9.7	41.1	0.003	4.87	166.0	3.1	2	1.1	370	0.17	0.13	3.08	0.105	40.5
S050147		120	10.6	76.2	0.003	5.01	50.4	9.9	1	2.3	51.5	0.32	0.05	4.91	0.217	149.5
S050148		240	13.8	137.0	0.003	4.15	4.38	19.7	1	1.8	70.0	0.55	<0.05	8.24	0.361	8.14
S050149		2080	8.3	104.0	0.003	3.96	6.93	14.3	1	1.4	287	1.52	<0.05	6.05	0.781	20.4
S050150		4000	3.8	80.8	<0.002	2.60	3.02	11.9	1	1.1	485	2.57	<0.05	4.49	1.285	5.32
S050151		250	3.1	33.8	0.002	0.58	1.02	4.4	1	0.6	1325	0.17	<0.05	2.73	0.100	0.94
S050152		370	5.6	30.5	0.002	0.97	1.57	3.8	1	0.5	1265	0.15	0.05	2.46	0.087	4.89
S050153		250	9.6	52.8	0.002	1.79	2.12	6.8	1	1.0	821	0.25	<0.05	4.16	0.151	6.98
S050154		290	23.6	94.8	0.005	3.56	5.96	11.8	2	1.7	683	0.45	0.08	7.60	0.277	13.85
S050155		220	8.2	32.7	0.002	1.25	1.94	4.1	1	0.5	1005	0.17	<0.05	2.78	0.093	2.98
S050156		140	3.0	17.7	<0.002	0.82	0.71	2.7	1	0.3	1055	0.08	<0.05	1.47	0.051	2.70
S050157		370	5.6	37.4	0.002	2.14	11.45	5.3	1	0.7	606	0.17	<0.05	2.71	0.094	10.30
S050158		230	2.6	14.7	<0.002	0.57	0.57	2.1	1	0.3	1125	0.08	<0.05	1.24	0.042	2.58
S050159		280	2.4	13.4	<0.002	2.21	13.75	4.0	2	0.2	682	0.06	<0.05	1.12	0.038	3.26
S050160		90	<0.5	0.7	<0.002	0.01	0.08	0.2	1	<0.2	83.9	<0.05	<0.05	0.08	0.006	0.03
S050161		330	6.8	44.4	0.006	1.30	0.59	4.7	2	0.7	1075	0.21	0.06	3.35	0.117	5.59
S050162		1090	3.3	20.0	0.002	0.66	0.29	2.7	1	0.3	1460	0.10	<0.05	1.62	0.055	2.56
S050163		400	5.2	32.3	0.006	0.98	0.60	4.1	1	0.5	1330	0.14	0.07	2.54	0.081	3.53
S050164		620	3.7	21.5	0.003	0.77	0.31	2.9	1	0.3	1515	0.11	0.05	1.80	0.059	2.00
S050165		210	5.3	35.4	0.005	1.13	0.45	4.0	1	0.5	1560	0.16	<0.05	2.74	0.094	2.29
S050166		200	7.3	50.3	0.005	1.47	0.42	5.4	1	0.7	1650	0.23	<0.05	3.67	0.132	2.48
S050167		1450	3.4	21.3	0.002	0.67	0.19	2.8	1	0.3	1770	0.09	<0.05	1.69	0.058	0.42
S050168		280	10.8	76.7	0.010	2.09	0.62	8.5	1	1.0	1315	0.35	0.08	5.45	0.205	0.93
S050169		290	13.8	76.3	0.010	2.12	0.72	8.9	2	1.0	1330	0.35	0.06	5.53	0.213	0.92
S050170		300	4.5	24.8	0.004	0.78	0.44	3.7	1	0.4	2720	0.12	<0.05	1.98	0.066	0.24
S050171		370	9.2	61.2	0.007	1.83	0.55	7.5	1	0.8	1390	0.29	0.07	4.46	0.184	0.63
S050172		720	4.8	27.1	0.004	0.86	0.29	3.8	1	0.4	2080	0.14	<0.05	2.28	0.077	0.36
S050173		310	13.1	84.0	0.011	2.29	0.58	11.0	1	1.1	1275	0.39	0.07	6.21	0.227	1.55
S050174		310	12.6	81.7	0.011	2.32	0.56	10.8	1	1.1	1345	0.39	0.09	6.23	0.224	1.51
S050175		310	15.6	102.5	0.012	3.09	0.64	12.7	1	1.4	995	0.51	0.08	7.87	0.327	1.21
S050176		290	10.0	63.6	0.005	1.54	0.38	7.9	1	0.9	1225	0.32	0.06	5.01	0.183	0.65
S050177		290	14.0	87.4	0.009	2.33	0.52	10.4	2	1.2	1115	0.44	0.08	6.87	0.250	0.81
S050178		200	8.9	60.5	0.006	1.40	0.34	6.9	1	0.9	1785	0.30	0.07	4.54	0.161	0.54
S050179		280	4.5	27.8	0.003	0.69	0.20	3.4	1	0.4	1920	0.14	<0.05	2.32	0.074	0.21
S050180		390	62.1	28.5	0.002	0.70	8.22	5.9	1	0.7	1195	0.16	<0.05	2.57	0.083	6.16

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Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18163802

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	As-OG62
	Analyte	U	V	W	Y	Zn	Zr	As
	Units	ppm	ppm	ppm	ppm	ppm	ppm	%
	LOD	0.1	1	0.1	0.1	2	0.5	0.001
S050141		1.9	149	9.8	20.4	52	105.5	
S050142		1.7	145	9.1	21.8	51	99.4	
S050143		1.9	167	12.1	22.0	68	107.0	
S050144		2.0	138	9.8	19.7	61	110.5	
S050145		2.1	140	10.2	17.1	75	95.8	0.970
S050146		4.5	38	6.3	16.3	69	31.0	
S050147		1.3	85	6.1	9.5	43	59.0	4.05
S050148		2.2	141	8.8	16.7	99	112.5	
S050149		1.4	146	21.3	22.6	65	100.5	
S050150		1.0	172	30.4	28.0	69	115.5	
S050151		1.8	31	2.3	11.0	264	31.0	
S050152		2.0	28	1.9	11.6	19	26.8	
S050153		2.2	46	3.1	15.5	70	45.1	
S050154		3.6	86	6.2	22.0	74	80.0	
S050155		2.1	27	2.2	12.5	29	31.0	
S050156		1.8	15	1.1	10.8	52	16.0	
S050157		2.8	30	2.1	17.1	25	31.1	1.400
S050158		2.0	12	0.9	9.0	19	13.4	
S050159		2.1	12	1.1	9.2	76	12.6	3.06
S050160		0.1	1	<0.1	2.2	4	1.6	
S050161		2.6	37	1.9	14.1	25	37.7	
S050162		2.6	20	0.9	12.4	13	20.5	
S050163		3.0	29	1.1	16.3	29	25.1	
S050164		2.8	20	0.7	13.5	36	19.6	
S050165		2.9	32	1.1	13.4	25	27.7	
S050166		3.1	43	0.6	16.0	44	38.2	
S050167		2.8	20	0.2	13.1	12	22.5	
S050168		4.1	68	0.6	22.5	69	58.1	
S050169		4.1	68	0.7	22.1	59	57.1	
S050170		2.0	23	0.2	15.2	19	19.5	
S050171		3.0	56	0.6	16.7	49	48.6	
S050172		3.1	26	0.3	15.3	19	25.0	
S050173		4.4	77	0.7	27.9	57	59.8	
S050174		4.4	76	0.7	27.5	63	61.9	
S050175		3.8	95	1.0	22.4	78	81.4	
S050176		2.7	57	0.6	20.9	46	49.6	
S050177		4.2	79	0.8	30.1	67	66.8	
S050178		2.4	49	0.6	17.7	45	46.9	
S050179		2.6	22	0.3	16.3	22	23.2	
S050180		4.1	26	5.1	14.7	124	26.5	

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Project: Nadaleen

Finalized Date: 30-JUL-2018
Account: RCM

CERTIFICATE OF ANALYSIS WH18163802

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Applies to Method: REE's may not be totally soluble in this method.
ME-MS61

LABORATORY ADDRESSES

Applies to Method: Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.

BAG-06	CRU-31	CRU-QC	LOG-21
LOG-21d	LOG-23	PUL-31	PUL-31d
PUL-QC	SPL-21	SPL-21d	WEI-21

Applies to Method: Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

As-OG62	Au-AA25	Hg-MS42	ME-MS61
ME-OG62			

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To: **ATAC RESOURCES LTD.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 29-JUL-2018
Account: RCM

CERTIFICATE WH18166104

Project: Nadaleen

P.O. No.: N18-030

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 11-JUL-2018.

The following have access to data associated with this certificate:

ANDREW CARNE	JULIA LANE	

SAMPLE PREPARATION

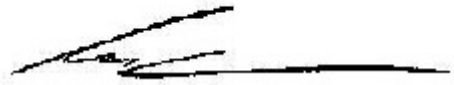
ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
LOG-23	Pulp Login - Rcvd with Barcode
LOG-21d	Sample logging - ClientBarCode Dup
SPL-21d	Split sample - duplicate
PUL-31d	Pulverize Split - duplicate

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid ICP-MS	
Hg-MS42	Trace Hg by ICPMS	ICP-MS
ME-OG62	Ore Grade Elements - Four Acid	ICP-AES
As-OG62	Ore Grade As - Four Acid	

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature: 

Colin Ramshaw, Vancouver Laboratory Manager

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To: **ATAC RESOURCES LTD.**
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Finalized Date: 29-JUL-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18166104

Sample Description	Method Analyte Units LOD	WEI-21 Recvd Wt. kg 0.02	Au-AA25 Au ppm 0.01	ME-MS61 Ag ppm 0.01	ME-MS61 Al % 0.01	ME-MS61 As ppm 0.2	ME-MS61 Ba ppm 10	ME-MS61 Be ppm 0.05	ME-MS61 Bi ppm 0.01	ME-MS61 Ca % 0.01	ME-MS61 Cd ppm 0.02	ME-MS61 Ce ppm 0.01	ME-MS61 Co ppm 0.1	ME-MS61 Cr ppm 1	ME-MS61 Cs ppm 0.05	ME-MS61 Cu ppm 0.2
S048731		10.92	<0.01	0.07	6.76	36.6	270	1.83	0.27	2.59	0.03	68.3	21.4	75	35.9	58.3
S048732		11.65	<0.01	0.08	5.93	24.1	240	1.48	0.23	1.90	0.08	62.8	17.4	66	27.0	46.8
S048733		13.19	<0.01	0.07	6.21	34.1	230	1.72	0.24	1.86	0.08	66.4	16.7	68	37.4	45.4
S048734		11.34	<0.01	0.06	5.92	23.6	280	1.73	0.24	1.74	0.20	68.7	14.5	63	29.5	36.0
S048735		11.34	<0.01	0.07	5.49	43.7	300	1.54	0.22	2.20	0.07	61.2	16.1	63	26.1	44.5
S048736		11.85	<0.01	0.05	6.02	56.2	250	1.61	0.24	2.63	0.10	63.6	14.7	67	25.4	43.1
S048737		11.99	<0.01	0.05	6.20	47.0	260	1.75	0.26	2.32	0.31	63.9	15.3	67	25.7	43.5
S048738		11.81	<0.01	0.06	5.79	33.8	240	1.60	0.24	4.77	0.10	60.6	19.5	61	25.3	47.8
S048739		12.11	<0.01	0.04	7.73	31.7	310	2.26	0.25	3.85	0.03	78.5	22.4	82	44.9	48.3
S048740		12.53	<0.01	0.07	7.21	80.1	280	2.31	0.23	2.78	0.05	71.6	21.1	81	44.4	44.0
S048741		5.84	<0.01	0.08	7.90	107.5	310	2.55	0.26	2.01	0.02	78.3	28.1	88	46.3	51.2
S048742		8.46	<0.01	0.03	4.28	267	270	1.41	0.15	10.45	0.08	46.7	12.6	42	20.7	36.0
S048743		<0.02	0.01	0.04	4.42	273	300	1.52	0.15	10.75	0.11	46.1	13.2	39	20.3	38.2
S048744		7.97	0.22	0.17	7.25	717	310	2.34	0.22	3.50	0.04	70.4	20.5	71	35.0	47.4
S048745		6.92	<0.01	0.03	0.10	2.8	20	0.07	0.01	35.0	0.02	1.24	0.8	1	0.11	4.3
S048746		6.44	<0.01	0.02	3.30	141.5	620	1.32	0.12	15.80	0.07	35.2	9.5	28	10.80	25.7
S048747		6.72	0.01	0.01	1.04	90.4	100	0.46	0.05	34.2	0.10	14.00	4.6	9	2.81	10.5
S048748		11.80	<0.01	0.04	1.66	33.3	150	0.58	0.07	32.5	0.05	21.8	6.9	14	4.73	18.0
S048749		12.54	<0.01	0.02	1.23	29.9	140	0.42	0.06	33.2	0.03	17.20	5.4	11	3.91	13.9
S048750		11.02	<0.01	0.02	1.79	23.1	150	0.53	0.09	31.2	0.03	22.9	6.3	16	6.31	16.8
S048751		11.62	<0.01	0.02	0.98	18.5	160	0.37	0.05	34.3	0.05	14.70	3.4	10	3.19	9.9
S048752		12.28	0.12	0.11	4.66	720	220	1.25	0.23	14.60	0.11	60.7	15.3	39	15.60	42.5
S048753		7.91	0.06	0.06	2.86	112.5	160	0.70	0.14	25.3	0.09	40.2	9.6	24	9.49	26.0
S048754		3.15	0.10	0.05	1.30	5580	120	0.41	0.07	33.7	0.05	18.90	4.5	13	3.10	13.0
S048755		3.08	0.10	0.05	1.21	8200	120	0.39	0.05	35.1	0.05	17.25	4.2	13	2.91	12.4
S048756		9.64	<0.01	0.02	1.24	55.5	150	0.50	0.05	33.8	0.08	20.8	4.5	15	4.69	13.5
S048757		5.86	<0.01	0.02	1.77	61.5	180	0.61	0.06	32.3	0.07	23.9	6.8	19	5.86	19.5
S048758		6.17	0.32	0.05	1.04	2750	100	0.40	0.05	34.6	0.08	17.10	4.1	12	2.10	12.6
S048759		0.26	2.69	0.68	1.95	>10000	150	0.57	2.88	27.4	0.15	28.6	5.1	26	6.30	17.0
S048760		6.15	<0.01	0.03	1.64	166.0	150	0.60	0.09	32.6	0.16	24.9	6.1	18	4.09	18.5
S048761		10.83	0.02	0.04	2.67	249	180	0.69	0.12	28.1	0.24	38.4	9.9	27	5.72	29.8
S048762		9.09	0.22	0.16	3.10	465	210	0.78	0.09	22.5	0.22	33.4	13.0	42	8.40	38.9
S048763		4.91	13.30	2.23	5.12	>10000	250	1.10	0.27	5.94	1.02	59.9	15.9	51	31.5	45.4
S048764		0.26	12.80	0.71	4.94	9840	310	0.92	0.24	3.87	0.57	56.6	15.8	62	13.60	64.6
S048765		9.66	0.01	0.03	1.94	123.5	120	0.72	0.10	30.7	0.05	25.2	7.2	16	4.75	16.4
S048766		10.80	0.01	0.03	3.43	85.1	260	1.06	0.15	22.2	0.12	43.6	15.0	31	8.60	31.3
S048767		12.10	<0.01	0.02	1.48	12.9	150	0.50	0.08	31.6	0.04	22.1	5.1	14	3.88	12.4
S048768		11.77	<0.01	0.01	0.85	8.7	130	0.28	0.05	35.1	<0.02	12.25	3.1	8	2.32	7.6
S048769		11.66	<0.01	0.01	1.10	6.5	200	0.42	0.06	34.8	<0.02	15.75	3.9	10	3.43	10.2
S048770		10.45	<0.01	0.01	0.60	6.0	120	0.24	0.03	36.2	0.06	10.00	2.3	6	1.87	5.8

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Finalized Date: 29-JUL-2018
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Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18166104

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Hg-MS42	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni
	Units	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2
S048731		5.33	17.75	0.18	3.1	0.047	0.070	2.86	33.1	91.8	2.28	658	0.34	0.08	11.2	40.3
S048732		4.71	15.05	0.18	2.8	0.078	0.056	2.63	30.3	96.2	1.75	475	0.50	0.03	9.6	32.8
S048733		4.56	15.30	0.17	2.9	0.054	0.060	2.78	31.9	115.0	1.76	483	0.33	0.15	10.3	32.0
S048734		4.17	14.65	0.17	2.9	0.070	0.053	2.68	33.0	127.5	1.52	484	0.44	0.04	10.3	28.1
S048735		4.32	14.50	0.17	2.7	0.198	0.054	2.47	29.5	124.5	1.71	445	0.27	0.03	9.0	32.0
S048736		4.37	15.40	0.17	2.8	0.211	0.060	2.74	30.5	108.0	1.93	521	0.40	0.04	9.7	30.5
S048737		4.29	16.10	0.15	2.8	0.282	0.061	2.95	31.2	82.0	1.82	508	0.93	0.04	9.7	30.4
S048738		4.74	14.95	0.18	2.7	0.224	0.056	2.74	30.3	81.2	2.57	863	1.02	0.04	9.1	35.5
S048739		5.05	21.0	0.21	2.9	0.178	0.083	3.75	38.7	55.0	2.36	1040	0.19	0.04	10.2	41.2
S048740		4.54	19.50	0.19	2.9	0.205	0.074	3.52	35.1	55.9	1.57	487	0.21	0.03	9.6	35.2
S048741		4.36	20.8	0.18	3.2	0.333	0.071	3.89	38.4	42.7	1.48	389	0.27	0.04	10.9	43.1
S048742		3.82	10.95	0.12	1.9	0.218	0.042	2.09	23.7	21.4	4.45	1460	0.19	0.03	5.8	25.1
S048743		3.93	12.50	0.14	1.9	0.207	0.040	2.18	22.6	22.8	4.59	1500	0.24	0.03	6.3	26.0
S048744		4.52	21.2	0.21	3.4	0.841	0.073	3.44	34.7	25.9	1.49	748	0.34	0.03	10.4	34.7
S048745		0.13	0.35	0.08	0.1	<0.005	<0.005	0.03	1.3	1.2	1.88	120	0.06	0.04	0.2	1.0
S048746		3.60	9.49	0.11	1.4	0.149	0.034	1.65	17.9	7.8	6.85	1670	0.15	0.02	4.7	22.0
S048747		1.16	2.90	0.06	0.5	0.347	0.016	0.51	7.7	2.3	1.07	493	0.43	0.01	1.5	6.6
S048748		1.15	4.69	0.11	0.8	0.385	0.017	0.82	11.6	4.2	0.96	394	0.71	0.02	2.4	10.4
S048749		0.95	3.67	0.10	0.7	0.250	0.014	0.61	9.3	4.0	0.71	403	0.36	0.01	1.9	7.5
S048750		1.16	5.12	0.10	1.0	0.377	0.019	0.90	11.7	6.2	0.63	183	0.37	0.01	2.8	10.0
S048751		0.87	2.84	0.08	0.5	0.254	0.009	0.49	7.7	4.1	0.65	252	0.73	0.01	1.6	5.8
S048752		3.28	13.65	0.15	2.3	1.955	0.047	2.29	35.0	14.6	1.79	945	2.51	0.02	6.9	27.1
S048753		1.97	8.16	0.13	1.4	1.515	0.031	1.42	23.0	8.1	1.09	666	1.22	0.02	4.2	16.5
S048754		0.93	3.73	0.13	0.7	0.965	0.015	0.63	9.3	3.9	0.69	582	0.60	0.01	1.9	7.8
S048755		0.95	3.48	0.12	0.6	0.865	0.015	0.59	8.6	3.6	0.67	655	0.55	0.01	1.8	7.2
S048756		0.91	3.62	0.09	0.8	0.640	0.010	0.58	8.6	4.3	0.64	276	0.37	0.01	2.0	7.5
S048757		1.30	5.06	0.10	1.0	1.065	0.017	0.82	10.3	6.0	0.91	300	0.40	0.02	2.8	11.4
S048758		0.92	3.15	0.10	0.6	1.930	0.017	0.48	7.7	2.9	0.77	883	0.53	0.01	1.6	6.8
S048759		1.45	5.65	0.10	0.9	7.09	0.019	0.99	13.8	9.6	0.97	2370	2.01	0.01	2.8	14.2
S048760		1.09	4.89	0.12	0.8	2.09	0.014	0.76	11.6	5.0	0.64	326	0.76	0.01	2.5	10.4
S048761		1.93	7.93	0.13	1.4	2.85	0.028	1.23	17.1	6.5	0.97	574	1.02	0.02	4.0	17.8
S048762		2.40	8.89	0.16	1.5	3.24	0.027	1.45	16.1	10.0	0.84	657	0.60	0.02	4.5	22.6
S048763		3.51	15.20	0.22	2.2	24.6	0.061	2.22	31.3	18.2	0.85	1220	1.30	0.02	7.3	28.6
S048764		4.71	15.05	0.14	2.6	26.2	0.032	2.27	29.5	19.1	0.34	616	6.56	0.02	7.7	38.8
S048765		1.49	5.40	0.09	0.9	1.150	0.022	0.96	13.8	4.6	1.17	589	1.16	0.02	2.8	10.1
S048766		2.25	9.87	0.15	2.0	0.471	0.035	1.72	23.7	8.8	1.11	542	1.28	0.02	5.6	20.9
S048767		1.08	4.12	0.14	0.9	0.138	0.016	0.75	11.8	4.6	0.82	322	0.91	0.02	2.5	7.1
S048768		0.64	2.50	0.17	0.4	0.112	0.007	0.43	6.6	4.0	0.52	177	0.23	0.01	1.4	4.7
S048769		0.90	3.25	0.14	0.6	0.130	0.012	0.56	8.4	5.1	0.50	186	0.21	0.02	1.7	6.0
S048770		0.46	1.85	0.15	0.3	0.092	0.009	0.30	5.2	3.4	0.43	142	0.15	0.01	1.0	3.3

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 29-JUL-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18166104

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl
	Units	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
	LOD	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.01	0.005	0.02
S048731		550	17.1	162.5	<0.002	0.29	0.53	18.9	1	2.1	162.5	0.77	0.05	10.25	0.551	1.03
S048732		470	16.4	143.5	<0.002	0.47	0.58	15.0	<1	1.8	136.5	0.66	0.06	9.38	0.454	0.99
S048733		510	15.5	149.0	<0.002	0.21	0.43	15.0	1	1.9	123.0	0.72	<0.05	10.10	0.479	0.85
S048734		580	16.0	137.5	<0.002	0.40	0.45	13.5	1	1.9	120.0	0.73	0.06	10.50	0.436	0.92
S048735		510	16.8	128.5	<0.002	0.77	0.49	15.2	1	1.8	177.0	0.66	<0.05	8.95	0.420	1.19
S048736		460	15.4	138.0	<0.002	0.78	0.43	15.3	1	1.8	156.0	0.68	0.06	9.95	0.452	1.59
S048737		440	16.3	145.5	<0.002	0.88	0.42	16.0	1	2.0	153.0	0.71	0.07	9.89	0.451	1.33
S048738		430	22.2	136.0	0.002	0.82	0.49	15.1	1	1.8	207	0.65	0.08	9.22	0.413	1.10
S048739		340	25.2	187.0	0.002	0.53	0.40	22.0	1	2.3	148.5	0.73	<0.05	11.20	0.429	1.38
S048740		270	16.4	174.5	<0.002	0.80	0.46	20.9	1	2.3	135.0	0.68	<0.05	10.50	0.424	1.47
S048741		390	20.4	184.5	0.002	1.22	0.59	21.5	1	2.4	112.5	0.78	<0.05	11.30	0.484	1.64
S048742		640	6.1	96.0	<0.002	1.58	0.81	10.5	1	1.4	334	0.40	<0.05	6.15	0.250	1.43
S048743		670	6.8	93.1	<0.002	1.62	0.91	11.2	<1	1.5	340	0.43	0.05	6.00	0.258	1.44
S048744		410	13.8	156.0	0.002	3.08	4.24	19.9	1	2.3	194.0	0.70	0.06	9.97	0.439	4.28
S048745		70	0.6	0.8	<0.002	0.01	0.07	0.4	1	<0.2	84.6	<0.05	<0.05	0.08	0.009	0.03
S048746		420	6.1	69.4	<0.002	0.40	0.54	8.3	1	1.1	418	0.33	<0.05	4.83	0.173	0.56
S048747		190	4.3	20.8	0.002	0.72	0.31	3.1	1	0.4	1340	0.09	<0.05	1.65	0.055	0.54
S048748		190	6.7	33.9	0.003	0.84	0.23	4.6	1	0.5	1395	0.15	0.05	2.58	0.095	1.14
S048749		150	4.3	26.5	<0.002	0.71	0.25	3.9	1	0.5	1585	0.12	0.05	1.97	0.072	1.21
S048750		190	6.1	39.0	0.002	1.12	0.27	4.4	1	0.6	1655	0.19	0.06	2.96	0.104	2.83
S048751		460	3.5	21.0	0.003	0.82	0.17	3.2	1	0.4	1730	0.10	<0.05	1.64	0.056	1.37
S048752		240	14.7	99.4	0.006	3.17	5.04	12.3	1	1.6	875	0.47	0.09	7.43	0.258	6.38
S048753		200	9.0	60.6	0.003	1.88	1.99	7.9	1	1.0	1500	0.30	0.08	4.59	0.158	4.25
S048754		300	4.7	26.5	0.003	1.12	13.45	3.6	1	0.4	1760	0.13	<0.05	2.14	0.074	3.05
S048755		290	4.5	24.8	0.002	1.24	18.05	3.5	1	0.4	1850	0.12	<0.05	1.93	0.072	2.92
S048756		5440	4.1	24.2	<0.002	0.74	0.37	4.8	1	0.4	2020	0.12	0.05	2.00	0.084	2.42
S048757		1660	5.0	34.9	<0.002	1.16	0.57	5.6	1	0.6	2150	0.19	0.05	2.62	0.138	3.37
S048758		550	4.4	20.2	0.002	0.85	7.96	3.4	1	0.4	1460	0.11	0.05	1.77	0.064	4.55
S048759		350	7.3	42.1	<0.002	1.48	47.2	6.1	1	0.7	1105	0.20	<0.05	3.50	0.091	25.2
S048760		210	6.0	33.0	0.004	0.88	1.25	4.4	1	0.6	1840	0.18	0.06	2.74	0.098	5.02
S048761		590	9.3	53.2	0.003	1.74	2.17	7.1	1	0.9	1465	0.28	<0.05	4.18	0.177	7.28
S048762		300	8.9	60.7	0.002	2.44	3.96	9.7	1	1.0	1335	0.31	0.05	3.65	0.279	6.71
S048763		570	17.3	106.0	0.005	8.23	320	9.9	8	2.0	741	0.51	0.30	8.21	0.277	73.1
S048764		480	17.2	104.5	0.003	4.54	112.5	8.5	1	2.6	268	0.54	0.18	7.82	0.318	107.5
S048765		180	6.1	40.8	0.005	1.07	0.98	4.9	1	0.6	1125	0.19	0.07	3.03	0.106	3.05
S048766		220	11.0	77.6	0.005	1.81	0.63	8.9	<1	1.2	773	0.38	0.08	5.54	0.216	2.92
S048767		140	5.7	33.0	0.002	0.88	0.20	3.8	1	0.5	1290	0.17	<0.05	2.62	0.093	1.56
S048768		140	3.0	18.9	<0.002	0.54	0.11	2.3	1	0.3	1720	0.08	<0.05	1.36	0.049	0.39
S048769		160	3.9	24.5	<0.002	0.84	0.12	3.1	1	0.4	1685	0.11	<0.05	1.84	0.064	0.30
S048770		310	2.4	12.7	<0.002	0.44	0.09	1.7	1	0.2	1630	0.07	<0.05	1.06	0.035	0.13

***** See Appendix Page for comments regarding this certificate *****

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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 29-JUL-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18166104

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	As-OG62
	Analyte	U	V	W	Y	Zn	Zr	As
	Units	ppm	ppm	ppm	ppm	ppm	ppm	%
	LOD	0.1	1	0.1	0.1	2	0.5	0.001
S048731		2.2	141	1.2	22.7	76	114.5	
S048732		2.0	115	1.1	19.2	82	102.0	
S048733		2.1	118	1.1	19.3	84	104.5	
S048734		2.3	101	1.2	19.9	99	107.0	
S048735		1.9	110	1.0	19.1	65	94.6	
S048736		2.0	116	1.1	18.9	72	101.5	
S048737		2.0	119	1.1	18.3	159	106.0	
S048738		2.2	107	1.1	19.2	85	95.6	
S048739		2.0	120	1.3	21.7	68	104.0	
S048740		2.2	134	1.3	20.4	92	101.0	
S048741		2.1	147	1.5	21.7	77	114.5	
S048742		2.6	73	2.0	17.0	48	66.0	
S048743		2.6	74	2.4	18.3	48	72.9	
S048744		2.5	131	8.3	23.8	78	109.5	
S048745		0.1	2	0.1	2.5	4	2.5	
S048746		1.3	51	2.4	13.2	42	47.7	
S048747		1.7	17	0.6	8.8	101	17.5	
S048748		2.7	29	0.6	11.8	18	28.6	
S048749		2.2	21	0.4	12.6	15	24.5	
S048750		2.4	28	0.4	11.0	22	32.9	
S048751		2.3	17	0.3	9.6	21	19.9	
S048752		3.1	78	3.9	22.7	56	76.9	
S048753		2.6	46	3.1	19.2	55	49.0	
S048754		2.6	21	1.7	14.5	13	23.4	
S048755		2.5	21	1.6	14.1	14	21.9	
S048756		3.7	24	1.1	22.4	13	40.7	
S048757		3.0	34	3.2	18.4	10	40.3	
S048758		2.0	19	1.7	15.4	12	21.4	
S048759		6.6	34	19.1	15.5	26	32.6	
S048760		2.8	31	2.5	14.3	22	28.6	
S048761		3.6	52	4.3	20.6	38	56.2	
S048762		2.4	75	4.5	18.9	47	52.3	
S048763		2.9	84	7.8	22.8	245	79.3	11.25
S048764		4.6	91	6.8	22.3	81	89.9	
S048765		2.7	32	1.1	13.5	23	32.9	
S048766		3.3	59	0.9	19.0	62	69.0	
S048767		2.4	24	0.4	12.7	21	31.1	
S048768		1.7	14	0.2	9.0	8	16.1	
S048769		2.0	17	0.3	11.4	14	20.5	
S048770		2.0	10	0.2	7.2	28	12.0	

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Project: Nadaleen

Finalized Date: 29-JUL-2018
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CERTIFICATE OF ANALYSIS WH18166104

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

REE's may not be totally soluble in this method.
Applies to Method: ME-MS61

LABORATORY ADDRESSES

Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.

Applies to Method:				
	CRU-31	CRU-QC	LOG-21	LOG-21d
	LOG-23	PUL-31	PUL-31d	PUL-QC
	SPL-21	SPL-21d	WEI-21	

Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Applies to Method:				
	As-OG62	Au-AA25	Hg-MS42	ME-MS61
	ME-OG62			

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VANCOUVER BC V6B 1L8

Finalized Date: 7-AUG-2018
Account: RCM

CERTIFICATE WH18170251

Project: Nadaleen

P.O. No.: N18-031

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 16-JUL-2018.

The following have access to data associated with this certificate:

ANDREW CARNE	JULIA LANE	

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
WSH-22	"Wash" pulverizers
LOG-23	Pulp Login - Rcvd with Barcode
LOG-21d	Sample logging - ClientBarCode Dup
SPL-21d	Split sample - duplicate
PUL-31d	Pulverize Split - duplicate

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid ICP-MS	
Hg-MS42	Trace Hg by ICPMS	ICP-MS
ME-OG62	Ore Grade Elements - Four Acid	ICP-AES

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:

Colin Ramshaw, Vancouver Laboratory Manager

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Finalized Date: 7-AUG-2018
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CERTIFICATE OF ANALYSIS WH18170251

Sample Description	Method	WEI-21	Au-AA25	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Recvd Wt.	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu
	Units	kg	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.02	0.01	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2
S050181		8.59	<0.01	0.03	1.01	10.1	140	0.40	0.07	30.2	0.25	17.90	3.4	10	4.02	11.6
S050182		8.37	<0.01	0.03	1.42	14.7	180	0.48	0.07	29.4	0.17	24.8	4.9	14	5.84	16.6
S050183		8.26	<0.01	0.02	1.26	18.2	150	0.36	0.06	29.3	0.15	19.65	4.2	13	4.41	14.2
S050184		8.36	<0.01	0.02	1.31	15.3	140	0.44	0.06	28.8	0.14	18.20	4.5	14	5.75	14.5
S050185		8.24	<0.01	0.02	1.24	15.0	140	0.34	0.04	29.2	0.15	19.15	4.7	14	5.51	14.6
S050186		8.42	<0.01	0.03	1.30	14.0	160	0.41	0.08	32.3	0.17	20.5	4.4	15	5.21	20.8
S050187		8.34	<0.01	0.03	1.50	12.7	310	0.47	0.09	31.0	0.16	25.9	4.9	16	6.77	17.6
S050188		5.30	<0.01	0.07	7.76	1.5	400	2.05	0.33	1.20	0.02	79.0	14.1	63	9.83	42.8
S050189		10.24	<0.01	0.43	8.25	2.1	430	2.37	0.28	1.41	0.02	87.3	15.5	68	8.80	30.7
S050190		10.27	<0.01	0.06	8.22	1.8	400	2.60	0.27	1.17	0.02	89.6	15.8	67	9.08	52.5
S050191		10.53	<0.01	0.11	8.32	2.6	350	2.80	0.30	0.81	<0.02	80.6	15.6	71	10.65	53.1
S050192		10.70	<0.01	0.09	8.54	4.0	380	2.67	0.32	0.84	0.02	85.2	14.7	75	10.05	43.9
S050193		0.26	1.10	1.36	1.55	870	200	0.45	0.15	28.3	0.65	20.5	4.3	29	3.53	47.9
S050194		11.32	<0.01	0.04	8.59	5.9	350	2.75	0.31	0.71	<0.02	90.2	14.9	74	9.34	34.2
S050195		0.32	<0.01	0.06	3.62	2.6	150	0.95	0.11	18.95	0.12	45.5	6.1	27	4.37	32.9
S050196		7.68	<0.01	0.11	8.97	13.3	500	2.58	0.36	0.54	0.06	97.7	18.2	68	9.49	40.3
S050197		10.37	<0.01	0.37	9.40	24.0	440	2.57	0.39	0.33	0.03	92.2	21.7	73	9.20	41.5
S050198		11.39	<0.01	0.04	9.27	10.6	320	2.75	0.38	0.21	0.03	74.0	19.4	73	13.20	52.9
S050199		12.21	<0.01	0.06	8.91	7.5	310	2.50	0.36	0.37	0.02	100.5	18.4	69	13.40	44.2
S050200		11.19	<0.01	0.05	9.06	11.2	330	2.76	0.38	0.27	0.02	81.4	20.1	73	13.95	41.5
S050201		<0.02	<0.01	0.05	9.24	18.6	340	2.79	0.39	0.30	0.02	94.4	21.1	73	14.40	41.4
S050202		9.00	<0.01	0.08	8.89	11.7	350	2.47	0.38	0.45	<0.02	87.5	17.2	71	13.40	38.5
S050203		11.58	0.01	0.12	9.26	12.6	330	2.65	0.39	0.28	<0.02	103.5	18.6	74	14.85	45.2
S050204		11.48	<0.01	0.05	8.69	11.1	300	2.34	0.38	0.58	<0.02	103.0	17.5	70	15.35	37.0
S050205		11.29	<0.01	0.05	8.22	14.0	290	2.43	0.37	0.85	0.05	91.0	18.3	70	14.00	34.8
S050206		5.59	<0.01	0.04	7.92	27.9	440	2.34	0.34	1.87	<0.02	84.4	13.5	66	10.35	32.6
S050207		6.93	<0.01	0.01	0.21	0.6	30	0.15	0.02	32.9	0.02	1.74	0.4	2	0.08	1.6
S050208		4.99	<0.01	0.03	5.39	27.0	240	1.57	0.20	14.55	0.03	67.8	10.0	41	8.69	18.9
S050209		9.54	<0.01	0.04	4.99	12.0	210	1.33	0.19	14.50	0.02	63.5	9.2	38	9.13	19.1
S050210		10.79	<0.01	0.08	7.27	20.7	300	2.21	0.33	1.63	0.05	94.3	14.5	60	14.85	29.0
S050211		0.26	1.45	0.86	3.05	>10000	190	0.76	0.13	17.50	0.40	36.7	7.5	46	8.70	26.7
S050212		8.19	<0.01	0.03	5.22	24.7	230	1.46	0.20	13.60	0.06	64.0	9.5	42	11.15	19.4
S050213		7.43	<0.01	0.05	6.74	16.5	300	1.76	0.27	9.55	0.06	77.9	11.6	59	13.15	26.7
S050214		6.65	0.01	0.06	7.46	20.7	300	2.16	0.38	4.07	0.03	89.9	16.5	61	17.70	35.7
S050215		8.69	<0.01	0.04	3.19	11.4	170	0.85	0.11	20.5	0.04	46.5	6.5	28	6.52	12.1
S050216		9.99	<0.01	0.05	3.49	11.9	330	0.95	0.12	18.30	0.07	51.9	5.3	31	6.38	11.9
S050217		11.21	<0.01	0.04	4.22	11.8	170	1.18	0.15	19.00	0.08	49.6	7.0	34	9.46	14.3
S050218		11.43	<0.01	0.02	2.53	7.9	140	0.68	0.09	26.1	0.07	34.3	3.9	23	4.95	8.7
S050219		5.64	<0.01	0.03	2.74	8.4	180	0.81	0.11	23.3	0.03	37.0	4.4	24	4.91	10.0
S050220		4.75	<0.01	0.04	2.80	9.7	170	0.79	0.10	22.9	0.05	41.3	4.5	24	4.86	10.1

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 7-AUG-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18170251

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Hg-MS42	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni
	Units	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2
S050181		0.78	2.64	0.13	0.6	0.081	0.014	0.47	8.7	5.6	0.64	363	0.49	0.04	1.5	6.3
S050182		0.99	3.69	0.15	0.7	0.176	0.022	0.66	11.9	7.1	0.59	161	0.70	0.04	2.0	8.9
S050183		0.89	3.22	0.15	0.7	0.268	0.015	0.56	8.7	5.4	0.53	263	0.61	0.08	1.8	7.7
S050184		0.97	3.48	0.14	0.7	0.090	0.016	0.58	8.6	6.5	0.65	295	0.66	0.09	1.9	8.3
S050185		0.97	3.11	0.13	0.7	0.119	0.019	0.54	8.6	5.8	0.51	203	0.42	0.11	1.8	8.3
S050186		0.91	3.27	0.13	0.7	0.100	0.015	0.56	9.7	6.2	0.66	247	1.29	0.13	1.8	13.6
S050187		1.07	3.82	0.15	0.8	0.089	0.017	0.66	12.8	7.0	0.82	254	0.77	0.12	2.1	10.7
S050188		3.94	20.4	0.20	3.6	<0.005	0.075	3.01	41.5	64.3	1.43	791	0.29	0.24	11.3	34.1
S050189		4.35	20.9	0.20	3.5	0.008	0.073	3.07	47.3	72.0	1.47	852	0.28	0.19	11.4	34.3
S050190		4.24	21.8	0.20	3.5	<0.005	0.072	3.12	48.8	73.3	1.50	914	0.17	0.19	11.6	35.5
S050191		4.18	22.9	0.19	3.7	<0.005	0.070	3.32	41.3	71.9	1.41	610	0.14	0.19	12.2	36.9
S050192		4.11	22.5	0.20	3.6	<0.005	0.073	3.37	44.6	71.5	1.42	831	0.24	0.20	12.1	37.8
S050193		1.17	3.95	0.13	0.8	2.21	0.024	0.66	10.5	6.4	1.25	4680	1.31	0.10	2.0	14.4
S050194		4.04	23.4	0.20	3.4	0.010	0.079	3.37	46.9	76.6	1.36	706	0.15	0.17	12.3	37.0
S050195		1.91	8.70	0.17	1.7	0.017	0.029	1.40	24.3	26.6	1.56	315	0.15	0.12	5.0	14.4
S050196		4.30	22.9	0.21	2.9	0.047	0.066	2.85	50.6	127.0	1.38	3070	0.30	0.19	10.9	47.5
S050197		4.39	24.0	0.22	3.3	0.036	0.074	2.99	47.4	125.0	1.35	3570	0.94	0.22	11.9	48.2
S050198		4.95	25.6	0.18	3.2	0.035	0.074	3.11	34.5	139.0	1.38	2750	0.46	0.32	12.2	55.5
S050199		4.62	23.4	0.21	3.3	0.016	0.075	2.92	50.4	104.0	1.38	2620	0.22	0.31	11.5	51.2
S050200		4.50	24.2	0.20	3.2	0.010	0.076	3.01	40.2	98.8	1.37	1640	0.27	0.35	12.1	46.4
S050201		4.51	24.7	0.19	3.7	0.013	0.080	3.05	47.0	100.0	1.39	1600	0.29	0.35	12.2	47.1
S050202		4.55	23.3	0.20	3.3	0.008	0.071	2.88	44.9	99.1	1.45	868	0.24	0.32	11.8	39.9
S050203		5.09	24.4	0.23	3.4	0.018	0.076	3.08	54.1	95.4	1.44	1740	0.35	0.32	12.2	41.6
S050204		4.48	22.5	0.22	3.1	0.025	0.073	3.00	56.0	167.0	1.30	538	0.20	0.19	11.0	36.3
S050205		4.33	22.2	0.20	3.4	0.035	0.064	2.82	47.5	170.5	1.28	616	0.30	0.18	11.6	36.6
S050206		3.99	20.5	0.18	3.0	0.061	0.068	2.41	43.9	145.5	1.25	552	0.38	0.19	10.9	31.0
S050207		0.12	0.69	0.13	0.1	<0.005	0.006	0.07	1.6	1.6	1.91	118	0.05	0.09	0.4	0.9
S050208		3.02	13.15	0.20	2.4	0.065	0.045	1.70	35.7	87.8	0.89	453	0.23	0.14	7.2	20.5
S050209		2.49	12.10	0.18	2.1	0.042	0.038	1.68	34.4	87.0	0.82	349	0.20	0.13	6.6	18.2
S050210		3.65	18.95	0.20	3.2	0.158	0.066	2.72	50.2	111.5	0.96	325	0.50	0.16	10.5	30.2
S050211		2.10	7.66	0.16	1.7	4.89	0.027	1.38	18.1	11.5	2.20	1280	1.35	0.10	4.4	18.3
S050212		2.62	12.55	0.16	2.1	0.063	0.042	1.96	33.6	55.2	1.78	443	0.25	0.15	6.7	19.2
S050213		3.19	17.10	0.21	2.7	0.107	0.055	2.55	42.5	73.7	1.76	450	0.46	0.17	9.0	25.4
S050214		3.43	20.8	0.20	3.1	0.031	0.068	3.08	49.3	102.0	0.97	341	0.46	0.27	11.0	32.4
S050215		1.94	7.75	0.17	1.4	0.076	0.027	1.19	24.0	30.3	0.78	355	0.38	0.14	4.2	14.8
S050216		1.76	8.47	0.17	1.8	0.053	0.033	1.25	26.9	35.6	0.73	198	0.44	0.19	5.1	12.4
S050217		1.84	10.20	0.21	1.5	0.041	0.032	1.47	27.5	55.0	1.38	252	0.37	0.19	5.1	14.7
S050218		1.26	6.10	0.16	1.1	0.040	0.020	0.86	16.9	31.7	0.58	153	0.26	0.17	3.5	9.2
S050219		1.45	6.64	0.15	1.1	0.032	0.021	0.93	19.3	40.5	0.67	415	0.32	0.09	3.5	10.2
S050220		1.46	6.70	0.19	1.1	0.019	0.018	0.94	20.8	42.0	0.67	341	0.34	0.10	3.5	10.3

***** See Appendix Page for comments regarding this certificate *****

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VANCOUVER BC V6B 1L8

Finalized Date: 7-AUG-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18170251

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl
	Units	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
	LOD	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.01	0.005	0.02
S050181		1180	3.8	21.8	0.002	0.59	0.22	2.6	<1	0.3	1570	0.10	<0.05	1.76	0.058	0.17
S050182		170	4.9	32.5	0.004	0.82	0.25	3.6	1	0.5	2070	0.15	<0.05	2.34	0.083	0.24
S050183		310	4.0	26.7	0.004	0.71	0.22	3.3	<1	0.4	1550	0.15	<0.05	2.02	0.080	0.21
S050184		190	3.8	28.8	0.002	0.74	0.22	3.6	<1	0.4	1240	0.13	0.07	1.95	0.089	0.21
S050185		400	3.7	26.3	0.003	0.84	0.24	3.6	<1	0.4	1470	0.12	<0.05	1.85	0.093	0.20
S050186		260	9.5	26.4	0.004	0.69	0.27	3.2	1	0.4	1465	0.13	<0.05	2.22	0.079	0.18
S050187		210	7.0	33.1	<0.002	0.83	0.25	3.9	1	0.5	1485	0.16	<0.05	2.61	0.090	0.25
S050188		600	12.1	130.5	<0.002	0.01	0.33	14.7	<1	2.4	87.0	0.86	0.05	12.50	0.426	0.68
S050189		1090	11.7	141.5	<0.002	0.01	0.32	15.1	1	2.6	106.5	0.86	0.06	13.70	0.435	0.68
S050190		1540	9.5	147.0	<0.002	0.01	0.31	16.1	<1	2.5	98.5	0.86	<0.05	13.75	0.437	0.72
S050191		1340	9.9	137.0	<0.002	0.01	0.35	17.2	<1	2.8	98.9	0.90	0.05	13.40	0.440	0.80
S050192		1310	12.7	145.5	<0.002	0.01	0.34	16.7	<1	2.7	98.0	0.91	<0.05	14.05	0.437	0.78
S050193		390	65.5	28.7	0.003	0.69	8.04	5.7	1	0.7	1175	0.15	<0.05	2.51	0.081	6.42
S050194		1280	15.2	144.5	<0.002	0.01	0.33	17.9	1	2.8	105.5	0.87	<0.05	14.85	0.438	0.76
S050195		320	6.8	58.2	<0.002	0.01	0.22	6.0	1	1.1	342	0.40	<0.05	6.37	0.167	0.31
S050196		840	26.6	129.5	<0.002	0.15	1.45	15.0	1	2.5	253	0.86	0.07	13.35	0.367	0.72
S050197		540	21.0	134.0	<0.002	0.27	2.48	16.4	<1	2.8	162.0	0.93	0.08	13.70	0.417	0.75
S050198		750	25.2	118.5	<0.002	0.09	1.25	18.5	<1	2.8	118.5	0.94	0.06	11.85	0.419	0.82
S050199		910	22.5	135.5	<0.002	0.06	1.14	16.8	1	2.5	113.0	0.87	0.08	13.90	0.409	0.74
S050200		670	21.9	124.0	<0.002	0.08	0.98	17.4	<1	2.7	111.5	0.93	0.06	13.15	0.426	0.78
S050201		700	20.4	131.0	<0.002	0.08	1.02	18.1	1	2.8	114.0	0.92	0.05	14.25	0.427	0.80
S050202		590	21.5	125.5	<0.002	0.07	0.82	16.0	1	2.6	110.5	0.89	0.08	14.15	0.420	0.73
S050203		600	19.1	142.5	<0.002	0.11	1.10	18.7	1	2.8	113.0	0.92	0.07	15.80	0.450	0.73
S050204		570	20.4	141.0	<0.002	0.15	0.45	16.2	<1	2.5	130.5	0.86	0.05	15.45	0.394	0.79
S050205		550	27.9	128.0	<0.002	0.34	0.67	15.4	1	2.5	150.5	0.87	0.05	13.80	0.404	0.75
S050206		470	23.4	95.7	<0.002	0.98	0.54	13.9	<1	2.5	296	0.81	<0.05	13.25	0.384	0.93
S050207		60	0.8	2.0	<0.002	<0.01	0.09	0.2	1	<0.2	79.9	<0.05	<0.05	0.21	0.008	0.02
S050208		590	15.1	82.5	<0.002	1.10	0.31	9.1	1	1.6	471	0.54	<0.05	9.70	0.261	0.58
S050209		360	13.5	80.2	<0.002	0.84	0.24	8.2	1	1.4	557	0.51	<0.05	8.37	0.236	0.46
S050210		620	26.3	131.0	<0.002	2.20	0.48	13.1	1	2.3	198.5	0.79	0.05	13.75	0.365	0.89
S050211		410	16.0	62.8	0.002	2.31	51.8	6.7	2	1.1	805	0.33	0.08	4.98	0.193	17.20
S050212		790	12.8	94.4	<0.002	1.09	0.34	8.7	1	1.5	388	0.52	<0.05	8.63	0.240	0.51
S050213		1290	19.1	127.0	<0.002	1.78	0.38	11.6	1	2.0	315	0.67	<0.05	11.65	0.318	0.87
S050214		570	19.1	137.0	0.002	1.31	0.46	13.8	<1	2.3	169.0	0.83	<0.05	13.75	0.382	0.67
S050215		1130	12.1	59.2	<0.002	1.29	0.29	5.6	1	1.0	787	0.34	<0.05	5.60	0.152	0.48
S050216		850	10.0	63.0	<0.002	1.33	0.25	5.9	1	1.1	780	0.40	<0.05	6.62	0.179	0.50
S050217		690	10.3	74.2	<0.002	1.18	0.24	6.3	1	1.1	624	0.37	<0.05	6.82	0.170	0.47
S050218		710	7.3	44.0	<0.002	0.90	0.15	4.1	1	0.7	1030	0.26	<0.05	4.63	0.123	0.35
S050219		800	7.1	48.2	<0.002	1.11	0.18	4.4	1	0.8	750	0.25	<0.05	4.63	0.126	0.38
S050220		810	7.4	49.2	<0.002	1.14	0.19	4.6	1	0.8	781	0.26	<0.05	4.86	0.126	0.34

***** See Appendix Page for comments regarding this certificate *****

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Finalized Date: 7-AUG-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18170251

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	U	V	W	Y	Zn	Zr
	Units	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.1	1	0.1	0.1	2	0.5
S050181		2.3	19	0.5	13.5	21	21.3
S050182		2.2	26	0.3	14.7	21	22.9
S050183		2.2	23	0.3	12.7	21	21.6
S050184		1.9	25	0.3	11.9	22	21.7
S050185		2.3	23	0.3	13.3	21	21.2
S050186		2.5	23	0.2	12.4	25	22.4
S050187		2.2	27	0.3	13.1	25	26.2
S050188		2.1	90	1.6	20.7	89	118.0
S050189		2.4	92	2.6	21.9	100	115.0
S050190		2.5	100	1.6	24.5	97	117.5
S050191		2.7	99	1.7	21.3	98	118.5
S050192		2.7	99	1.7	22.2	95	118.0
S050193		3.9	26	7.8	13.8	124	26.7
S050194		2.5	98	1.7	23.3	100	114.5
S050195		3.4	39	0.8	11.4	47	56.9
S050196		2.8	82	2.1	21.6	108	94.7
S050197		3.1	98	2.1	20.2	99	107.0
S050198		3.0	101	2.1	19.8	105	105.5
S050199		3.2	98	2.0	24.9	107	108.0
S050200		3.1	102	1.7	19.9	94	109.5
S050201		3.1	102	1.8	22.0	93	110.5
S050202		2.9	96	1.7	20.3	103	108.5
S050203		3.2	104	1.8	23.0	100	112.5
S050204		2.7	91	1.4	21.1	85	97.5
S050205		3.0	88	1.5	20.3	113	113.0
S050206		2.7	82	1.6	17.8	79	102.0
S050207		0.2	1	0.1	2.7	6	3.0
S050208		2.4	51	1.1	15.3	51	78.4
S050209		2.3	47	0.9	13.2	56	70.7
S050210		2.9	78	1.4	20.0	65	106.5
S050211		4.2	54	4.5	15.5	58	54.8
S050212		2.6	51	1.0	16.5	100	85.0
S050213		3.0	71	1.3	19.5	81	95.4
S050214		2.8	78	1.5	20.0	86	104.5
S050215		2.2	32	0.7	11.4	36	49.8
S050216		2.4	36	0.8	12.6	45	62.6
S050217		2.3	36	0.8	9.9	52	48.1
S050218		2.0	23	0.5	8.0	49	39.3
S050219		1.7	27	0.5	8.8	41	40.4
S050220		1.8	26	0.5	9.4	31	41.1

***** See Appendix Page for comments regarding this certificate *****

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Project: Nadaleen

Finalized Date: 7-AUG-2018
Account: RCM

CERTIFICATE OF ANALYSIS WH18170251

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Applies to Method: REE's may not be totally soluble in this method.
ME-MS61

LABORATORY ADDRESSES

Applies to Method: Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.

CRU-31	CRU-QC	LOG-21	LOG-21d
LOG-23	PUL-31	PUL-31d	PUL-QC
SPL-21	SPL-21d	WEI-21	WSH-22

Applies to Method: Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Au-AA25	Hg-MS42	ME-MS61	ME-OG62

ALS Canada Ltd.

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To: **ATAC RESOURCES LTD.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 29-JUL-2018
Account: RCM

CERTIFICATE WH18168135

Project: Nadaleen

P.O. No.: N18-032

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 13-JUL-2018.

The following have access to data associated with this certificate:

ANDREW CARNE	JULIA LANE	

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
LOG-23	Pulp Login - Rcvd with Barcode
LOG-21d	Sample logging - ClientBarCode Dup
SPL-21d	Split sample - duplicate
PUL-31d	Pulverize Split - duplicate

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid ICP-MS	
Hg-MS42	Trace Hg by ICPMS	ICP-MS

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:

Colin Ramshaw, Vancouver Laboratory Manager

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 29-JUL-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18168135

Sample Description	Method	WEI-21	Au-AA25	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Recvd Wt.	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu
	Units	kg	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.02	0.01	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2
S048771		11.97	<0.01	0.02	1.15	5.0	230	0.45	0.06	33.0	0.03	17.50	4.0	13	4.14	10.7
S048772		12.35	0.01	0.04	3.26	17.4	240	1.00	0.18	21.6	0.07	44.4	11.1	32	11.00	27.6
S048773		12.19	<0.01	0.02	1.76	14.5	190	0.70	0.10	31.4	0.05	26.3	6.0	18	6.54	14.9
S048774		12.44	<0.01	0.02	0.75	10.0	140	0.33	0.04	36.0	0.03	12.60	3.0	8	2.14	7.1
S048775		11.65	<0.01	0.01	0.68	14.3	140	0.25	0.04	35.3	0.12	12.55	2.9	7	1.97	7.1
S048776		11.62	<0.01	0.01	0.44	20.7	110	0.21	0.03	36.8	0.08	9.31	2.0	5	0.91	4.8
S048777		12.42	<0.01	0.01	0.60	28.1	120	0.26	0.04	36.5	0.05	12.90	2.6	7	1.51	6.6
S048778		12.26	<0.01	0.02	0.68	29.4	120	0.19	0.04	35.3	0.07	12.05	2.8	7	1.74	10.4
S048779		12.19	<0.01	0.02	0.78	33.2	110	0.21	0.04	34.7	0.09	14.70	3.2	8	2.09	8.9
S048780		11.68	0.02	0.01	0.97	67.3	130	0.28	0.05	32.5	0.05	15.25	3.5	10	2.19	8.9
S048781		0.28	1.06	1.28	1.45	839	190	0.32	0.13	26.9	0.65	18.70	4.4	25	3.45	46.9
S048782		9.80	0.02	0.01	0.49	47.2	120	0.16	0.03	34.5	0.04	9.46	2.2	5	1.02	6.2
S048783		2.63	0.08	0.01	0.48	160.0	110	0.22	0.03	33.3	0.04	9.79	2.1	5	0.88	5.5
S048784		2.60	0.07	0.03	0.47	114.5	120	0.17	0.02	36.0	0.04	9.29	2.0	5	0.83	5.3
S048785		8.80	0.03	0.01	0.74	44.9	100	0.21	0.04	35.5	0.09	13.35	3.0	8	1.38	7.9
S048786		7.64	<0.01	0.06	0.47	20.8	90	0.18	0.03	35.6	0.06	9.55	2.3	5	0.96	5.8
S048787		7.70	<0.01	0.03	1.05	33.0	110	0.38	0.05	33.0	0.11	17.30	3.9	10	3.06	11.3
S048788		8.17	<0.01	0.01	0.65	30.2	100	0.27	0.04	33.7	0.04	12.40	2.7	6	1.57	7.1
S048789		7.04	0.02	0.01	0.75	117.5	120	0.28	0.04	33.4	0.05	12.60	3.1	8	1.95	8.1
S048790		8.40	0.04	0.03	1.43	75.5	180	0.47	0.08	31.2	0.10	21.4	5.2	15	3.61	14.7
S048791		7.78	0.08	0.02	0.53	50.8	100	0.25	0.03	33.6	0.03	9.75	2.3	5	1.15	6.2
S048792		8.09	0.05	0.02	0.91	49.6	100	0.33	0.05	32.2	0.05	15.75	3.7	9	2.45	10.1
S048793		5.00	<0.01	<0.01	0.08	0.3	20	0.07	0.01	33.0	<0.02	1.07	0.7	1	<0.05	2.0
S048794		7.80	0.02	0.01	0.67	26.1	100	0.29	0.03	32.2	0.04	10.20	2.9	7	2.22	7.9
S048795		7.80	0.02	0.01	0.61	20.1	140	0.26	0.03	34.6	0.06	11.95	2.6	6	1.84	6.6
S048796		7.93	0.01	0.01	0.73	41.3	250	0.28	0.04	34.9	0.07	12.50	3.1	8	2.37	8.2
S048797		8.21	<0.01	0.02	0.93	22.0	160	0.32	0.05	33.8	0.16	16.80	3.8	10	3.02	10.2
S048798		8.36	<0.01	0.02	0.87	25.4	100	0.37	0.05	33.2	0.05	14.70	3.4	9	2.65	9.3
S048799		7.82	<0.01	0.06	3.65	105.0	180	1.00	0.18	23.0	0.31	45.4	11.9	34	10.10	36.8
S048800		7.95	0.01	0.03	2.07	96.6	130	0.56	0.11	28.3	0.14	32.9	7.1	21	6.27	22.1
S048801		7.72	0.07	0.05	1.49	204	110	0.42	0.07	29.6	0.11	21.9	5.5	16	3.30	16.2
S048802		8.10	0.11	0.05	0.67	151.0	80	0.24	0.04	31.2	0.07	12.10	2.7	7	1.66	7.6
S048803		<0.02	0.11	0.06	0.73	165.5	90	0.32	0.04	34.1	0.08	13.20	3.0	7	1.83	8.3
S048804		7.59	<0.01	0.02	1.34	56.2	150	0.49	0.07	31.0	0.07	18.90	5.1	15	3.59	14.9
S048805		7.79	<0.01	0.05	2.67	88.9	160	0.74	0.13	24.5	0.22	37.3	10.2	28	7.15	30.0
S048806		8.10	0.01	0.02	1.38	108.5	110	0.45	0.07	26.3	0.17	22.9	5.3	15	2.90	15.4
S048807		8.16	<0.01	0.02	0.89	90.6	360	0.25	0.05	26.9	0.03	13.80	4.2	8	2.55	11.1
S048808		0.26	1.10	1.43	1.45	835	190	0.46	0.12	27.0	0.70	19.00	4.7	25	3.49	47.7
S048809		8.48	0.01	0.02	0.37	28.6	2080	0.19	0.02	30.7	0.04	6.73	1.9	4	1.10	5.6
S048810		8.22	0.01	0.01	0.31	25.0	120	0.13	0.02	30.6	0.04	6.44	1.8	3	1.45	5.1

***** See Appendix Page for comments regarding this certificate *****

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CERTIFICATE OF ANALYSIS WH18168135

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Hg-MS42	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni
	Units	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2
S048771		0.84	3.10	0.07	0.6	0.137	0.010	0.58	9.1	4.8	0.52	182	0.94	0.01	1.8	6.7
S048772		2.20	8.91	0.09	1.6	0.386	0.034	1.64	25.5	11.2	1.44	442	1.76	0.02	4.9	18.1
S048773		1.24	4.81	0.08	0.8	0.586	0.018	0.89	14.9	6.8	0.86	382	0.79	0.02	2.6	9.7
S048774		0.54	2.14	0.06	0.4	0.181	0.009	0.38	6.8	3.2	0.46	274	0.38	0.01	1.2	4.5
S048775		0.48	1.98	0.07	0.4	0.123	0.007	0.34	6.2	3.2	0.40	133	0.43	0.01	1.1	4.2
S048776		0.36	1.24	0.07	0.2	0.136	0.005	0.22	4.4	2.0	0.63	162	0.26	0.01	0.7	2.4
S048777		0.46	1.71	0.07	0.3	0.319	0.007	0.30	6.4	2.7	0.58	198	0.41	0.01	0.9	3.6
S048778		0.49	1.95	0.06	0.4	0.196	0.011	0.34	6.4	1.9	0.47	148	0.96	0.01	1.1	6.4
S048779		0.56	2.26	0.07	0.4	0.147	0.010	0.38	7.5	2.7	0.62	146	0.56	0.01	1.2	4.4
S048780		0.64	2.71	0.07	0.5	0.549	0.013	0.48	7.7	3.4	0.63	207	0.51	0.01	1.5	4.9
S048781		1.11	3.92	0.08	0.7	2.15	0.023	0.64	9.6	5.3	1.16	4390	1.29	0.10	2.1	12.6
S048782		0.37	1.42	0.06	0.3	0.401	0.008	0.24	4.6	1.8	0.33	160	0.27	0.01	0.8	2.7
S048783		0.36	1.44	0.07	0.3	0.579	0.007	0.23	4.9	2.0	0.30	145	0.18	0.01	0.8	2.3
S048784		0.36	1.38	0.07	0.3	0.571	0.007	0.23	4.6	2.1	0.33	176	0.20	0.01	0.7	2.3
S048785		0.54	1.99	0.08	0.4	0.734	0.009	0.36	6.5	3.0	0.44	161	0.43	0.01	1.1	4.0
S048786		0.34	1.37	0.06	0.3	0.274	0.006	0.22	4.7	2.3	0.34	83	0.28	0.01	0.7	2.7
S048787		0.76	3.06	0.07	0.5	0.266	0.014	0.51	9.0	5.0	0.58	123	0.59	0.01	1.6	5.9
S048788		0.46	1.88	0.07	0.4	0.251	0.008	0.32	6.2	3.0	0.39	148	0.28	0.01	1.0	3.5
S048789		0.57	2.13	0.07	0.4	0.526	0.009	0.36	6.3	3.5	0.64	167	0.42	0.01	1.1	4.3
S048790		0.95	4.06	0.08	0.8	0.903	0.015	0.70	11.0	6.0	0.75	252	0.97	0.01	2.2	8.5
S048791		0.53	1.49	0.06	0.3	0.485	0.009	0.25	4.8	2.3	1.11	287	0.29	0.01	0.8	2.8
S048792		0.66	2.65	0.07	0.5	0.811	0.010	0.43	7.7	4.0	0.77	188	0.54	0.01	1.4	5.3
S048793		0.11	0.28	0.09	0.1	<0.005	<0.005	0.02	1.3	1.0	1.67	118	<0.05	0.04	0.1	<0.2
S048794		0.54	1.91	0.08	0.4	0.365	0.008	0.32	5.0	3.6	0.59	231	0.30	0.01	1.1	3.9
S048795		0.43	1.78	0.07	0.3	0.319	0.008	0.29	5.9	3.6	0.32	205	0.26	0.01	1.0	3.3
S048796		0.51	2.11	0.08	0.4	0.212	0.009	0.35	6.3	4.3	0.35	77	0.37	0.01	1.1	4.2
S048797		0.72	2.61	0.09	0.5	0.186	0.011	0.45	8.7	5.2	0.49	102	0.64	0.01	1.5	5.6
S048798		0.70	2.55	0.07	0.5	0.261	0.010	0.42	7.5	5.1	0.55	275	0.40	0.01	1.4	5.1
S048799		2.12	10.20	0.12	1.8	1.615	0.040	1.76	24.9	16.2	1.14	214	2.82	0.02	5.5	21.6
S048800		1.37	5.86	0.10	1.1	1.505	0.024	1.00	17.4	7.4	0.95	218	1.33	0.01	3.2	12.9
S048801		1.10	4.21	0.08	0.8	1.890	0.015	0.70	11.6	4.3	0.77	544	1.17	0.01	2.3	8.9
S048802		0.61	1.89	0.08	0.4	1.385	0.009	0.32	6.0	2.5	0.68	928	0.49	0.01	1.0	4.1
S048803		0.67	2.04	0.06	0.4	1.375	0.010	0.35	6.6	2.8	0.75	1000	0.53	0.01	1.1	6.1
S048804		0.89	3.89	0.07	0.7	0.793	0.015	0.64	9.8	5.0	0.77	441	1.06	0.01	2.1	8.5
S048805		1.87	7.60	0.11	1.4	1.030	0.029	1.26	19.6	9.4	1.28	379	1.59	0.02	4.1	17.6
S048806		1.33	3.93	0.08	0.7	1.035	0.018	0.65	10.9	3.9	2.82	365	0.86	0.01	2.1	8.7
S048807		1.52	2.63	0.07	0.4	0.716	0.011	0.43	6.9	3.1	6.34	502	0.36	0.01	1.3	6.0
S048808		1.12	4.02	0.07	0.7	2.10	0.021	0.64	9.8	7.7	1.17	4380	1.36	0.10	2.1	13.5
S048809		0.85	1.07	0.06	0.2	0.253	0.006	0.17	3.1	2.1	4.12	303	0.16	<0.01	0.6	3.0
S048810		0.56	0.93	0.07	0.2	0.180	0.005	0.15	2.9	2.1	3.48	215	0.19	0.01	0.5	2.3

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	Analyte	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl
	Units	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
	LOD	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.01	0.005	0.02
S048771		180	3.9	26.2	0.002	0.74	0.23	2.8	2	0.4	1815	0.12	<0.05	1.90	0.068	0.64
S048772		200	10.3	73.4	0.005	2.00	0.34	7.7	2	1.0	1130	0.34	0.07	5.43	0.189	2.49
S048773		180	5.5	39.9	0.002	1.13	0.19	4.4	2	0.6	1575	0.18	<0.05	2.90	0.100	1.30
S048774		220	2.8	17.1	<0.002	0.49	0.11	2.0	2	0.3	1840	0.08	<0.05	1.31	0.045	0.31
S048775		170	2.5	15.7	0.002	0.47	0.13	1.8	2	0.2	1890	0.08	<0.05	1.20	0.040	0.27
S048776		530	1.8	8.8	<0.002	0.33	0.12	1.4	2	0.2	1665	0.05	<0.05	0.80	0.026	0.31
S048777		380	2.3	13.3	0.002	0.44	0.27	1.9	2	0.2	1655	0.06	0.05	1.13	0.036	0.63
S048778		320	5.2	14.5	0.002	0.46	0.26	2.0	2	0.3	1685	0.08	0.07	1.29	0.039	0.70
S048779		300	3.5	16.8	0.002	0.50	0.28	2.4	2	0.3	1660	0.09	<0.05	1.46	0.044	1.03
S048780		480	3.7	21.5	0.002	0.62	0.75	2.6	2	0.3	1665	0.11	0.06	1.74	0.055	1.31
S048781		370	56.3	28.2	0.002	0.67	7.72	5.8	2	0.7	1085	0.15	0.06	2.39	0.076	5.74
S048782		260	2.0	10.4	0.002	0.33	0.29	1.5	2	0.2	1930	0.05	0.05	0.93	0.028	0.82
S048783		440	1.9	10.2	<0.002	0.33	0.58	1.6	2	0.2	1835	0.05	0.06	0.88	0.027	0.96
S048784		490	1.8	9.7	<0.002	0.32	0.52	1.6	2	0.2	1905	0.05	0.06	0.86	0.027	0.93
S048785		520	2.8	14.8	0.002	0.51	0.51	2.1	2	0.3	1680	0.08	0.07	1.33	0.043	1.28
S048786		190	1.9	10.2	<0.002	0.31	0.10	1.5	2	0.2	1560	0.05	<0.05	0.92	0.026	0.52
S048787		150	3.8	23.1	0.002	0.74	0.17	2.9	2	0.4	1590	0.11	0.05	1.84	0.057	1.20
S048788		340	2.6	13.3	<0.002	0.42	0.17	2.0	2	0.2	1500	0.07	0.05	1.20	0.037	1.00
S048789		180	3.1	16.0	<0.002	0.53	0.55	2.3	2	0.3	1815	0.08	0.05	1.35	0.043	1.55
S048790		410	5.3	30.8	0.003	0.92	1.11	3.9	2	0.5	1890	0.16	0.05	2.55	0.080	2.47
S048791		480	2.5	11.0	<0.002	0.37	0.57	1.8	2	0.2	1640	0.05	0.05	0.97	0.029	1.15
S048792		530	4.0	19.9	0.002	0.62	0.74	2.7	2	0.3	1445	0.10	0.06	1.65	0.051	2.10
S048793		70	<0.5	0.6	<0.002	<0.01	0.06	0.2	2	<0.2	85.3	<0.05	<0.05	0.09	<0.005	0.02
S048794		210	2.5	14.8	<0.002	0.49	0.34	2.2	2	0.2	1525	0.07	0.06	1.08	0.042	1.38
S048795		400	2.3	13.3	<0.002	0.41	0.24	2.0	2	0.2	2150	0.07	0.06	1.14	0.035	0.89
S048796		90	2.6	16.1	<0.002	0.49	0.14	2.1	2	0.3	2160	0.08	0.05	1.33	0.042	0.68
S048797		170	3.3	20.7	<0.002	0.68	0.14	3.0	2	0.3	1725	0.10	0.05	1.68	0.053	0.51
S048798		420	3.1	19.1	<0.002	0.65	0.13	2.7	2	0.3	1485	0.09	<0.05	1.57	0.049	0.89
S048799		160	12.1	78.0	0.009	2.19	2.90	8.4	2	1.3	1035	0.39	0.08	6.09	0.199	4.48
S048800		200	8.9	44.6	0.005	1.33	3.00	6.0	3	0.7	1245	0.23	0.07	3.82	0.113	4.22
S048801		260	9.2	31.1	0.003	1.02	7.31	4.2	2	0.5	1240	0.16	0.08	2.51	0.081	6.86
S048802		520	3.1	14.1	0.002	0.51	7.98	2.4	2	0.2	1115	0.07	0.07	1.22	0.036	6.41
S048803		570	3.4	15.9	0.002	0.56	8.55	2.7	2	0.3	1240	0.08	0.08	1.34	0.039	6.91
S048804		560	4.5	29.0	0.004	0.76	1.16	3.6	2	0.5	1120	0.14	0.07	2.32	0.073	3.15
S048805		520	8.6	56.0	0.005	1.60	0.49	7.7	2	0.9	1145	0.28	0.08	4.41	0.158	5.81
S048806		230	5.0	29.5	0.003	0.88	0.50	4.3	2	0.5	1150	0.14	0.06	2.36	0.078	2.41
S048807		410	4.2	17.8	<0.002	0.65	0.36	2.9	2	0.3	1025	0.09	<0.05	1.39	0.045	1.56
S048808		370	57.7	28.2	0.002	0.67	8.05	6.0	2	0.7	1095	0.15	0.06	2.73	0.076	5.79
S048809		200	1.9	7.5	<0.002	0.31	0.19	1.5	2	<0.2	1105	<0.05	<0.05	0.65	0.022	0.64
S048810		400	1.7	6.4	<0.002	0.25	0.19	1.1	2	<0.2	1075	<0.05	<0.05	0.57	0.018	0.52

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 29-JUL-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18168135

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	U	V	W	Y	Zn	Zr
	Units	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.1	1	0.1	0.1	2	0.5
S048771		2.8	22	0.3	10.7	14	19.5
S048772		2.8	58	0.6	19.6	44	50.4
S048773		2.2	30	0.4	16.1	22	27.4
S048774		1.8	13	0.4	10.0	9	13.2
S048775		2.0	13	0.3	9.9	48	12.1
S048776		1.8	9	0.3	10.1	23	7.9
S048777		2.5	12	0.4	12.9	9	10.5
S048778		2.2	12	0.4	11.4	13	12.8
S048779		2.7	15	0.2	13.7	14	14.5
S048780		2.4	17	0.6	12.2	9	17.7
S048781		3.7	25	5.0	14.4	119	27.2
S048782		2.3	9	0.4	10.4	6	9.9
S048783		2.0	9	0.5	11.6	4	9.9
S048784		2.0	9	0.6	11.3	5	10.1
S048785		2.5	13	0.6	12.7	12	13.5
S048786		2.4	9	0.3	10.6	9	8.7
S048787		2.5	18	0.5	12.5	22	18.6
S048788		2.2	12	0.4	11.1	7	12.1
S048789		2.2	14	0.6	10.6	7	13.5
S048790		2.7	25	1.1	13.8	18	27.3
S048791		2.1	10	0.4	11.4	3	11.3
S048792		3.0	16	0.7	14.7	6	17.5
S048793		0.1	1	<0.1	2.3	3	1.7
S048794		1.8	13	0.4	9.8	7	12.0
S048795		2.5	12	0.4	12.8	9	12.2
S048796		2.1	14	0.3	10.8	8	12.9
S048797		2.9	18	0.3	13.5	26	16.4
S048798		2.2	16	0.4	12.8	9	16.4
S048799		3.6	64	2.7	17.9	60	59.4
S048800		3.7	37	1.7	18.2	22	37.9
S048801		2.7	28	1.3	14.0	15	26.5
S048802		1.8	13	0.4	9.6	8	13.8
S048803		2.0	14	0.5	10.9	10	15.0
S048804		2.3	25	0.8	12.8	12	26.3
S048805		3.3	53	0.9	21.0	41	48.6
S048806		1.9	27	1.5	17.8	27	24.6
S048807		1.8	16	0.7	12.0	5	13.7
S048808		3.9	25	7.8	14.8	124	25.7
S048809		1.4	8	0.3	6.9	7	7.1
S048810		1.6	6	0.2	6.6	5	6.5

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To: **ATAC RESOURCES LTD.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Project: Nadaleen

Finalized Date: 29-JUL-2018
Account: RCM

CERTIFICATE OF ANALYSIS WH18168135

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

REE's may not be totally soluble in this method.
Applies to Method: ME-MS61

LABORATORY ADDRESSES

Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.

Applies to Method:				
	CRU-31	CRU-QC	LOG-21	LOG-21d
	LOG-23	PUL-31	PUL-31d	PUL-QC
	SPL-21	SPL-21d	WEI-21	

Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Applies to Method:			
	Au-AA25	Hg-MS42	ME-MS61

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To: **ATAC RESOURCES LTD.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 7-AUG-2018
Account: RCM

CERTIFICATE WH18172550

Project: Nadaleen

P.O. No.: N18-033

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 18-JUL-2018.

The following have access to data associated with this certificate:

ANDREW CARNE	JULIA LANE	

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
LOG-23	Pulp Login - Rcvd with Barcode
LOG-21d	Sample logging - ClientBarCode Dup
SPL-21d	Split sample - duplicate
PUL-31d	Pulverize Split - duplicate

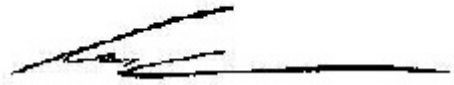
ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid ICP-MS	
Hg-MS42	Trace Hg by ICPMS	ICP-MS
ME-OG62	Ore Grade Elements - Four Acid	ICP-AES
As-OG62	Ore Grade As - Four Acid	

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:



Colin Ramshaw, Vancouver Laboratory Manager

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Finalized Date: 7-AUG-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18172550

Sample Description	Method	WEI-21	Au-AA25	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Recvd Wt.	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu
	Units	kg	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.02	0.01	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2
S048811		7.68	0.01	0.03	0.45	20.1	110	0.21	0.03	37.3	0.02	7.73	3.5	6	1.61	8.8
S048812		7.10	<0.01	0.03	0.77	29.4	110	0.25	0.04	32.6	0.02	10.90	4.4	9	2.48	12.5
S048813		6.77	<0.01	0.04	0.94	23.0	140	0.37	0.05	34.7	0.04	13.65	5.2	11	4.61	13.6
S048814		7.69	0.01	0.02	0.67	16.6	100	0.24	0.04	30.4	0.02	10.05	3.6	9	2.14	11.2
S048815		7.77	<0.01	0.03	1.12	26.2	180	0.34	0.06	33.7	0.08	17.35	5.5	15	3.29	15.9
S048816		7.36	<0.01	0.03	0.83	26.9	140	0.25	0.04	31.8	0.03	13.05	5.0	11	2.57	12.7
S048817		7.70	<0.01	0.01	0.33	13.2	120	0.13	0.02	32.2	0.02	6.40	2.9	5	0.93	6.3
S048818		5.08	<0.01	0.01	0.08	<0.2	30	0.07	0.83	34.0	<0.02	1.13	2.1	2	<0.05	3.1
S048819		7.65	<0.01	0.01	0.59	18.9	140	0.25	0.03	36.7	0.05	8.93	3.8	7	2.41	8.9
S048820		6.91	<0.01	0.02	0.75	29.1	180	0.28	0.04	35.6	0.08	11.75	4.4	9	2.60	11.0
S048821		7.55	<0.01	0.02	0.82	32.1	160	0.28	0.05	36.2	0.11	13.25	4.8	10	2.17	12.3
S048822		7.49	<0.01	0.02	0.66	25.0	130	0.26	0.04	35.1	0.05	11.35	3.9	7	1.75	9.7
S048823		7.88	0.01	0.02	0.65	20.5	110	0.23	0.03	34.5	0.04	10.90	4.0	8	1.68	9.7
S048824		3.65	<0.01	2.27	7.73	105.5	440	2.13	0.27	3.13	0.19	73.7	24.5	79	13.05	89.3
S048825		6.43	<0.01	2.78	7.62	224	450	1.64	0.31	1.09	0.07	79.6	6.5	83	26.4	39.4
S048826		4.27	<0.01	0.54	8.18	93.4	590	1.34	0.38	0.23	<0.02	86.4	2.5	90	26.7	9.7
S048827		8.33	<0.01	0.29	4.74	159.0	340	2.91	0.24	5.78	0.88	50.7	11.9	59	15.45	113.5
S048828		9.40	<0.01	0.11	3.95	74.9	220	2.30	0.20	9.95	0.92	41.0	11.2	44	16.55	66.3
S048829		8.81	<0.01	0.26	9.30	58.6	470	2.25	0.36	1.23	<0.02	122.0	6.9	75	39.0	49.7
S048830		<0.02	<0.01	0.23	9.18	55.5	450	2.30	0.37	1.16	0.03	121.5	6.8	74	37.8	47.6
S048831		8.51	<0.01	0.13	10.10	15.7	430	4.63	0.35	0.65	0.35	123.0	17.7	72	32.3	64.5
S048832		3.55	<0.01	0.29	10.15	115.5	600	3.83	0.40	0.60	0.66	135.5	17.0	80	27.6	46.8
S048833		0.26	1.44	0.89	3.06	>10000	210	0.74	0.12	17.80	0.33	35.2	8.2	44	8.72	26.8
S048834		8.74	<0.01	0.03	9.48	93.0	410	3.71	0.40	1.75	0.44	123.0	18.8	75	25.3	66.9
S048835		11.39	<0.01	0.01	8.62	39.2	390	3.17	0.45	2.88	0.18	103.5	23.8	58	26.5	57.8
S048836		3.24	<0.01	0.14	7.17	41.3	290	2.40	0.37	6.80	0.27	92.7	15.5	39	20.2	45.8
S048837		5.78	<0.01	0.03	3.94	46.3	160	1.31	0.20	12.05	0.39	52.8	9.7	22	10.05	27.5
S048838		6.60	<0.01	0.08	1.56	37.9	1220	0.62	0.08	17.05	0.41	19.65	6.1	12	4.57	13.7
S048839		8.17	<0.01	0.20	5.42	60.3	320	1.88	0.34	8.10	0.12	58.9	17.0	39	20.3	53.3
S048840		10.89	<0.01	0.11	5.41	44.5	270	1.90	0.33	6.98	0.12	55.2	18.2	46	22.8	56.5
S048841		9.14	<0.01	4.09	2.32	32.9	190	0.65	0.08	3.29	0.07	27.2	8.6	51	10.30	27.6
S048842		7.44	<0.01	0.10	6.90	86.5	270	2.22	0.39	4.05	0.09	64.8	22.1	66	32.9	68.7
S048843		8.18	0.05	1.58	5.81	645	360	1.73	0.30	3.28	0.08	54.6	18.5	60	20.1	64.8
S048844		7.59	0.09	0.23	5.81	974	330	1.68	0.31	4.03	0.11	56.1	17.1	56	16.05	52.5
S048845		6.59	0.02	0.09	6.12	202	230	1.63	0.25	1.64	0.12	61.0	17.5	68	17.55	48.5
S048846		4.05	0.01	1.56	6.42	479	260	1.66	0.25	1.69	0.34	59.8	15.5	72	18.85	44.1
S048847		3.48	0.02	0.12	6.22	>10000	240	1.63	0.28	2.21	0.60	60.6	16.9	66	17.20	56.7
S048848		3.35	0.02	0.11	6.11	>10000	200	1.58	0.28	1.96	0.62	58.7	17.1	66	18.00	57.2
S048849		6.99	0.02	0.07	6.37	8500	320	1.71	0.25	3.26	0.14	64.3	18.1	66	21.5	54.2
S048850		0.26	8.82	1.78	1.85	>10000	100	0.23	0.50	7.12	0.83	29.8	6.7	46	3.36	28.3

***** See Appendix Page for comments regarding this certificate *****

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Finalized Date: 7-AUG-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18172550

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Hg-MS42	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni
	Units	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2
S048811		0.37	1.25	<0.05	0.2	0.134	0.005	0.20	3.4	2.7	0.63	154	0.26	0.01	0.7	2.8
S048812		0.68	2.06	<0.05	0.4	0.148	0.007	0.36	4.7	3.9	3.08	309	0.54	0.01	1.1	5.4
S048813		0.73	2.54	0.05	0.5	0.077	0.010	0.45	6.1	5.7	0.71	171	0.47	0.01	1.4	6.2
S048814		0.66	1.83	<0.05	0.4	0.041	0.008	0.32	4.5	3.7	4.12	299	0.76	0.01	1.0	4.7
S048815		0.83	2.96	0.05	0.6	0.092	0.011	0.53	7.7	5.5	0.64	200	0.76	0.01	1.7	7.6
S048816		0.97	2.27	0.05	0.4	0.123	0.009	0.40	5.8	4.4	2.68	328	0.53	0.01	1.3	6.3
S048817		0.54	0.92	<0.05	0.2	0.046	<0.005	0.16	2.9	2.2	3.06	334	0.13	0.01	0.5	2.0
S048818		0.12	0.27	<0.05	<0.1	<0.005	<0.005	0.02	1.1	1.3	1.78	115	<0.05	0.04	0.1	0.2
S048819		0.43	1.61	0.05	0.3	0.057	0.010	0.28	4.2	4.2	0.53	118	0.17	0.01	0.9	3.4
S048820		0.52	2.10	0.06	0.4	0.075	0.008	0.36	5.6	4.9	0.60	76	0.28	0.02	1.1	4.7
S048821		0.61	2.17	<0.05	0.4	0.112	0.008	0.39	6.4	4.4	0.71	138	0.36	0.02	1.3	5.3
S048822		0.51	1.75	<0.05	0.3	0.080	0.007	0.32	5.4	3.6	1.06	159	0.28	0.01	1.0	3.9
S048823		0.54	1.73	0.06	0.3	0.125	0.010	0.31	5.1	3.3	1.44	153	0.27	0.01	1.0	3.9
S048824		5.90	21.3	0.17	3.1	0.426	0.082	2.53	36.0	77.6	1.05	782	2.39	0.39	12.0	45.7
S048825		4.15	20.0	0.17	3.5	1.355	0.074	3.52	38.5	24.5	0.60	270	2.84	0.07	12.1	13.5
S048826		3.47	21.8	0.18	4.0	1.275	0.068	3.87	42.0	22.7	0.56	57	4.77	0.05	13.5	6.4
S048827		7.94	13.45	0.14	2.2	0.532	0.107	2.08	23.9	14.7	1.03	536	2.91	0.03	7.3	33.8
S048828		5.02	10.50	0.10	1.9	0.193	0.066	1.79	19.8	15.1	3.50	979	1.25	0.03	6.2	27.3
S048829		4.37	25.1	0.21	3.4	0.348	0.074	4.36	61.4	21.0	0.63	69	1.72	0.05	13.1	17.3
S048830		4.17	25.2	0.22	3.2	0.338	0.072	4.29	60.3	20.6	0.62	69	1.65	0.05	13.0	17.1
S048831		3.75	28.1	0.23	3.2	0.095	0.089	4.84	57.2	18.0	0.64	203	1.43	0.06	14.2	37.9
S048832		3.95	28.8	0.28	3.5	0.270	0.079	4.99	64.9	16.0	0.84	314	5.23	0.06	14.3	39.6
S048833		2.15	7.89	0.13	1.5	4.75	0.029	1.38	17.5	13.3	2.24	1300	1.47	0.10	4.5	18.4
S048834		3.32	26.6	0.21	3.3	0.150	0.082	4.57	62.4	16.4	1.26	951	1.36	0.06	13.5	41.9
S048835		4.35	24.5	0.21	3.3	0.146	0.076	4.24	50.6	13.1	1.75	953	2.60	0.05	13.2	51.4
S048836		3.21	19.35	0.18	2.9	0.140	0.061	3.42	47.7	9.5	3.84	1280	2.93	0.05	11.9	34.2
S048837		2.61	10.20	0.12	1.7	0.133	0.037	1.87	26.7	5.1	6.70	2310	3.47	0.03	7.2	20.3
S048838		2.32	4.15	0.08	0.7	0.223	0.016	0.73	9.4	4.3	9.73	2580	3.55	0.01	3.0	14.2
S048839		3.94	14.40	0.16	2.8	1.000	0.073	2.60	28.6	11.7	4.72	1730	1.68	0.03	9.6	59.9
S048840		3.84	14.35	0.14	2.8	1.245	0.060	2.63	27.1	14.0	4.04	1070	3.00	0.03	9.1	63.4
S048841		3.06	5.86	0.09	1.3	0.661	0.029	1.04	12.4	31.7	1.46	472	3.21	0.02	4.1	17.0
S048842		5.20	18.55	0.18	3.1	1.195	0.085	3.31	32.7	34.1	2.43	712	1.29	0.03	11.7	65.4
S048843		5.28	15.20	0.15	2.4	1.805	0.063	2.76	27.1	15.7	1.81	758	0.96	0.03	8.9	43.7
S048844		4.83	15.25	0.16	2.6	2.02	0.058	2.72	27.5	14.8	2.20	940	1.63	0.03	9.5	38.9
S048845		4.80	15.60	0.16	3.1	2.76	0.062	2.91	28.8	18.2	1.08	528	0.67	0.03	10.2	36.3
S048846		4.74	16.25	0.13	2.9	3.15	0.076	3.03	27.6	16.8	1.12	364	1.03	0.03	9.7	33.8
S048847		4.82	16.85	0.15	3.1	6.87	0.095	2.91	27.6	16.8	1.41	718	0.60	0.03	10.4	34.1
S048848		4.59	16.15	0.14	2.9	7.83	0.092	2.80	26.2	18.3	1.28	724	0.61	0.03	10.3	34.0
S048849		4.74	17.15	0.13	3.0	5.10	0.072	2.98	29.7	19.5	2.01	1060	0.58	0.03	11.4	35.1
S048850		2.53	5.54	0.13	0.9	15.50	0.021	0.82	13.7	27.9	0.17	342	6.53	0.01	2.8	19.2

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 7-AUG-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18172550

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl
	Units	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
	LOD	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.01	0.005	0.02
S048811		690	1.9	9.0	0.002	0.35	0.22	1.5	1	0.2	1600	0.05	<0.05	0.69	0.028	0.79
S048812		880	4.3	15.7	0.002	0.61	0.22	2.3	1	0.2	1235	0.08	<0.05	1.13	0.049	0.87
S048813		780	3.5	19.9	0.002	0.73	0.17	2.8	1	0.3	1765	0.11	<0.05	1.44	0.062	0.65
S048814		1260	4.1	13.5	0.002	0.48	0.15	2.2	1	0.2	1335	0.07	<0.05	1.03	0.038	0.23
S048815		1140	4.4	22.9	0.004	0.81	0.30	3.4	1	0.4	1945	0.13	<0.05	1.75	0.071	0.34
S048816		920	4.8	16.8	0.003	0.67	0.26	2.7	1	0.3	1430	0.10	<0.05	1.37	0.057	0.21
S048817		300	2.3	6.6	0.002	0.26	0.12	1.1	1	<0.2	1385	<0.05	<0.05	0.57	0.022	0.08
S048818		70	0.6	0.7	<0.002	0.01	0.09	0.3	1	<0.2	82.9	<0.05	<0.05	0.09	0.005	<0.02
S048819		290	2.4	12.0	<0.002	0.43	0.15	1.7	1	0.2	1745	0.06	<0.05	0.89	0.037	0.13
S048820		390	2.8	15.7	0.002	0.53	0.21	2.0	1	0.3	2130	0.09	<0.05	1.19	0.045	0.20
S048821		660	3.7	16.0	<0.002	0.64	0.27	2.2	1	0.2	2190	0.10	<0.05	1.45	0.053	0.27
S048822		350	3.1	13.5	<0.002	0.49	0.28	1.8	1	0.2	1805	0.07	<0.05	1.13	0.039	0.19
S048823		450	3.5	12.9	<0.002	0.50	0.24	1.8	1	0.2	1815	0.07	<0.05	1.09	0.043	0.20
S048824		530	15.6	129.0	<0.002	0.08	1.13	23.4	1	2.4	202	0.88	0.09	10.10	0.538	1.53
S048825		450	31.4	162.5	0.003	0.04	0.96	15.8	<1	2.5	125.0	0.87	0.09	11.30	0.550	4.44
S048826		410	64.7	180.5	0.006	0.21	1.22	17.6	2	2.9	176.5	0.96	0.21	12.80	0.607	6.92
S048827		460	39.8	95.4	0.008	2.94	0.77	15.8	1	1.7	157.5	0.54	0.11	7.85	0.326	2.55
S048828		420	22.8	81.0	0.004	2.14	0.42	11.7	1	1.3	196.5	0.46	0.07	6.01	0.271	1.23
S048829		500	27.5	187.0	0.003	1.30	1.21	14.9	1	3.1	152.5	1.01	<0.05	17.85	0.423	1.53
S048830		490	25.9	189.5	0.002	1.22	1.22	14.9	1	3.1	149.0	1.01	<0.05	17.85	0.425	1.51
S048831		520	15.1	186.5	0.003	0.78	0.62	20.6	1	3.1	163.5	1.10	<0.05	19.60	0.412	1.21
S048832		540	40.6	187.0	0.008	2.16	1.09	19.4	3	3.2	237	1.09	<0.05	21.2	0.421	1.78
S048833		430	16.3	63.5	<0.002	2.34	55.3	6.5	3	1.1	815	0.33	0.07	4.88	0.192	17.10
S048834		510	12.3	178.0	0.002	2.77	0.71	19.8	<1	2.9	171.0	1.04	<0.05	19.45	0.401	1.71
S048835		500	20.4	137.0	0.002	4.09	0.89	18.2	<1	3.0	157.0	1.02	0.07	16.20	0.376	1.72
S048836		510	16.3	133.0	0.002	2.36	0.81	13.5	<1	2.3	165.0	0.91	0.07	14.80	0.324	1.44
S048837		400	8.6	70.8	<0.002	1.39	0.50	7.7	<1	1.2	173.5	0.53	<0.05	7.69	0.186	0.91
S048838		220	10.5	27.9	0.017	1.06	0.31	3.5	1	0.5	342	0.21	<0.05	2.88	0.077	0.86
S048839		470	37.2	113.0	0.005	3.43	0.77	12.2	1	1.8	193.5	0.69	0.17	8.91	0.355	2.35
S048840		420	26.4	113.0	0.009	3.25	0.65	13.1	1	1.8	157.5	0.68	0.13	8.31	0.395	2.54
S048841		200	11.5	45.9	<0.002	1.99	0.50	6.6	<1	0.8	156.0	0.29	<0.05	3.43	0.299	1.55
S048842		550	17.5	148.0	0.002	4.84	0.57	20.0	1	2.3	149.0	0.83	0.13	9.50	0.507	2.61
S048843		310	17.7	120.0	<0.002	4.86	1.69	16.3	<1	1.9	180.0	0.67	0.09	7.68	0.447	5.03
S048844		340	21.0	128.0	0.006	4.31	2.43	19.4	1	1.9	137.5	0.65	0.12	8.19	0.440	6.97
S048845		360	34.1	132.5	<0.002	4.78	1.46	15.2	<1	2.0	98.9	0.76	<0.05	8.84	0.505	6.59
S048846		260	29.8	130.0	0.003	4.59	2.03	14.7	1	2.0	102.0	0.68	0.06	9.34	0.479	6.85
S048847		340	41.5	132.0	0.002	6.17	27.9	16.5	2	2.2	160.5	0.76	0.07	9.42	0.461	13.45
S048848		620	41.0	128.5	<0.002	6.22	31.1	16.2	2	2.3	264	0.72	0.08	9.15	0.464	13.60
S048849		520	36.1	141.5	<0.002	4.99	8.57	18.3	1	2.5	146.5	0.74	0.06	9.71	0.494	10.90
S048850		500	10.7	41.7	<0.002	4.69	162.5	3.0	2	1.3	352	0.19	0.11	3.20	0.101	43.4

***** See Appendix Page for comments regarding this certificate *****

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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 7-AUG-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18172550

Sample Description	Method / Analyte / Units / LOD	ME-MS61 U ppm 0.1	ME-MS61 V ppm 1	ME-MS61 W ppm 0.1	ME-MS61 Y ppm 0.1	ME-MS61 Zn ppm 2	ME-MS61 Zr ppm 0.5	As-OG62 As % 0.001
S048811		1.7	9	0.3	6.5	6	8.0	
S048812		2.5	15	0.3	8.7	5	12.6	
S048813		2.5	18	0.4	9.6	15	16.0	
S048814		2.8	14	0.2	8.5	4	12.1	
S048815		2.9	24	0.3	13.3	19	19.5	
S048816		2.4	17	0.3	11.2	8	15.4	
S048817		1.4	7	0.1	5.8	3	6.5	
S048818		0.2	1	0.1	2.0	4	1.5	
S048819		1.5	11	0.2	6.5	6	10.9	
S048820		1.9	13	0.2	8.4	12	13.5	
S048821		2.1	15	0.4	8.5	9	14.5	
S048822		1.7	12	0.4	8.0	4	11.2	
S048823		1.9	13	0.3	8.6	3	11.2	
S048824		2.2	168	5.9	22.3	101	108.5	
S048825		2.7	161	8.2	19.7	82	139.5	
S048826		3.3	181	3.0	20.1	119	140.5	
S048827		2.0	107	2.3	16.9	290	80.0	
S048828		1.6	81	1.0	16.9	195	70.1	
S048829		3.0	148	2.1	20.9	131	113.0	
S048830		3.0	146	2.1	21.4	127	111.5	
S048831		2.3	119	2.4	23.7	226	109.5	
S048832		3.6	180	4.8	25.0	241	115.5	
S048833		4.2	57	5.3	15.7	58	53.0	
S048834		2.3	94	2.7	26.3	108	114.0	
S048835		2.6	87	2.0	23.8	56	110.5	
S048836		2.6	72	2.0	23.0	44	103.0	
S048837		1.8	44	1.8	15.8	51	60.0	
S048838		2.6	36	1.1	7.3	170	24.4	
S048839		2.2	94	1.7	18.7	47	96.7	
S048840		2.4	111	1.8	18.5	41	95.8	
S048841		0.8	68	7.9	7.8	43	46.4	
S048842		1.9	141	2.7	22.9	49	118.0	
S048843		1.5	124	33.0	17.0	51	86.2	
S048844		1.7	121	12.7	18.3	69	92.0	
S048845		1.9	129	7.9	19.0	102	101.0	
S048846		2.2	136	15.4	16.4	254	98.5	
S048847		2.2	130	12.8	17.5	325	96.5	3.71
S048848		2.2	125	13.9	17.4	332	93.7	4.53
S048849		2.2	129	12.1	21.8	117	104.0	
S048850		4.7	36	6.9	16.6	66	30.4	

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Project: Nadaleen

Finalized Date: 7-AUG-2018
Account: RCM

CERTIFICATE OF ANALYSIS WH18172550

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Applies to Method: REE's may not be totally soluble in this method.
ME-MS61

LABORATORY ADDRESSES

Applies to Method: Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.

CRU-31	CRU-QC	LOG-21	LOG-21d
LOG-23	PUL-31	PUL-31d	PUL-QC
SPL-21	SPL-21d	WEI-21	

Applies to Method: Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

As-OG62	Au-AA25	Hg-MS42	ME-MS61
ME-OG62			

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Finalized Date: 7-AUG-2018
Account: RCM

CERTIFICATE WH18171489

Project: Nadaleen

P.O. No.: N18-034

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 17-JUL-2018.

The following have access to data associated with this certificate:

ANDREW CARNE	JULIA LANE	

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
LOG-23	Pulp Login - Rcvd with Barcode
LOG-21d	Sample logging - ClientBarCode Dup
SPL-21d	Split sample - duplicate
PUL-31d	Pulverize Split - duplicate

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid ICP-MS	
Hg-MS42	Trace Hg by ICPMS	ICP-MS
ME-OG62	Ore Grade Elements - Four Acid	ICP-AES

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:

Colin Ramshaw, Vancouver Laboratory Manager

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Finalized Date: 7-AUG-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18171489

Sample Description	Method	WEI-21	Au-AA25	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Recvd Wt.	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu
	Units	kg	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.02	0.01	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2
S050221		12.02	<0.01	0.10	4.04	13.5	180	1.23	0.14	22.0	0.04	46.2	7.0	33	8.66	15.5
S050222		11.05	0.01	0.05	4.85	24.1	230	1.35	0.17	19.45	0.04	51.2	8.5	40	10.10	17.7
S050223		10.71	<0.01	0.04	3.63	24.4	210	1.14	0.12	21.1	0.03	41.5	6.8	30	8.87	13.9
S050224		10.71	<0.01	0.04	4.68	17.6	200	1.35	0.16	17.65	0.03	48.0	8.9	37	12.45	17.8
S050225		10.76	<0.01	0.04	3.18	40.8	160	0.91	0.11	23.8	0.03	35.2	5.8	27	6.01	12.1
S050226		11.71	<0.01	0.04	3.32	34.4	670	1.09	0.12	21.9	0.03	37.8	6.7	28	8.28	13.9
S050227		<0.02	<0.01	0.04	3.25	32.4	640	1.05	0.11	21.7	0.03	35.6	6.3	27	7.84	12.9
S050228		11.88	<0.01	0.06	4.05	18.8	210	1.29	0.14	20.0	0.02	44.4	8.5	33	9.43	16.3
S050229		10.63	<0.01	10.80	4.16	20.9	260	1.41	0.14	19.90	0.02	47.7	8.0	35	9.20	35.6
S050230		11.04	<0.01	0.08	4.88	37.6	300	1.40	0.16	14.20	0.03	50.7	9.0	41	9.01	20.3
S050231		10.73	<0.01	0.04	9.05	13.1	390	3.15	0.34	0.90	0.02	103.5	19.4	68	22.0	36.2
S050232		10.30	<0.01	<0.01	8.32	6.9	390	2.82	0.27	0.53	<0.02	90.2	17.7	65	25.9	39.3
S050233		3.00	<0.01	0.22	0.90	12.8	790	0.50	0.02	16.05	1.96	12.35	6.0	5	1.49	316
S050234		7.52	<0.01	<0.01	8.51	12.1	450	2.92	0.36	0.31	<0.02	87.7	17.5	66	29.0	19.0
S050235		7.50	<0.01	<0.01	8.58	20.4	510	2.91	0.32	0.33	<0.02	92.3	18.5	68	30.8	23.2
S050236		9.13	<0.01	<0.01	9.09	14.9	590	2.84	0.34	0.37	<0.02	97.8	18.1	65	32.2	13.4
S050237		7.39	<0.01	<0.01	9.11	15.7	650	2.81	0.34	0.36	<0.02	97.1	18.3	66	31.2	13.4
S050238		7.54	<0.01	<0.01	8.85	23.3	540	2.93	0.35	0.27	<0.02	99.4	19.0	66	33.0	13.2
S050239		7.68	<0.01	<0.01	8.82	26.2	620	3.21	0.35	0.24	<0.02	101.0	19.6	67	31.0	14.7
S050240		7.57	<0.01	<0.01	8.16	342	280	2.89	0.34	0.87	<0.02	84.2	17.9	60	25.7	23.6
S050241		7.04	<0.01	0.04	5.83	218	810	2.01	0.20	7.14	0.50	62.6	12.3	43	14.60	51.1
S050242		0.26	1.08	1.35	1.49	840	190	0.48	0.12	27.4	0.61	18.40	4.7	28	3.39	43.6
S050243		4.01	<0.01	0.03	3.30	45.5	280	1.21	0.10	19.70	0.10	33.7	5.7	33	5.51	23.9
S050244		3.78	0.01	0.10	3.82	36.4	180	1.36	0.11	13.85	0.09	43.0	8.2	42	7.05	33.4
S050245		7.51	<0.01	0.06	4.46	36.1	210	1.80	0.11	10.90	0.07	46.9	8.3	49	8.57	33.3
S050246		3.11	<0.01	0.06	4.41	24.3	180	1.67	0.11	12.60	0.08	46.6	7.8	50	8.58	30.6
S050247		3.87	<0.01	0.05	4.41	21.5	190	1.73	0.11	12.60	0.06	46.5	7.5	49	8.48	36.3
S050248		6.48	0.01	0.05	4.24	20.5	390	1.57	0.10	11.60	0.08	48.5	8.2	48	7.98	28.1
S050249		8.29	0.01	0.04	4.30	207	190	1.51	0.13	13.60	0.07	44.8	8.4	44	6.77	35.9
S050250		6.56	0.01	0.02	3.89	26.5	290	1.44	0.11	17.35	0.09	39.1	7.3	41	7.59	20.8
S050251		6.67	<0.01	0.05	4.56	13.6	170	1.54	0.11	12.00	0.08	51.3	8.3	51	8.78	38.1
S050252		4.85	<0.01	0.01	0.10	<0.2	20	0.10	0.01	33.9	0.02	1.18	1.4	1	0.06	5.5
S050253		7.09	<0.01	0.05	5.35	16.0	280	1.75	0.12	9.76	0.06	54.6	9.4	60	9.39	33.1
S050254		7.01	<0.01	0.04	3.10	8.0	140	1.13	0.07	19.00	0.07	38.2	5.7	34	4.72	21.7
S050255		7.02	<0.01	0.04	1.86	7.3	1330	0.78	0.05	26.8	1.05	21.6	4.3	23	2.96	12.0
S050256		7.10	<0.01	0.02	0.66	10.5	60	0.29	0.02	33.1	0.90	8.71	2.2	10	0.52	6.4
S050257		7.36	<0.01	0.02	0.51	4.2	60	0.29	0.02	34.9	0.78	7.79	2.0	8	0.36	4.7
S050258		6.86	0.01	0.04	1.31	19.6	90	0.56	0.04	29.7	0.44	15.65	3.4	17	2.05	10.1
S050259		0.25	1.41	0.93	3.02	>10000	190	0.70	0.11	17.05	0.38	34.6	7.7	43	8.45	27.5
S050260		6.94	<0.01	0.03	2.17	23.2	90	0.88	0.06	22.6	0.31	27.0	4.4	25	3.57	15.8

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 7-AUG-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18171489

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Hg-MS42	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni
	Units	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2
S050221		1.90	10.50	0.12	1.6	0.048	0.035	1.52	24.3	47.4	0.70	228	0.42	0.17	5.5	15.0
S050222		2.15	12.45	0.11	1.7	0.166	0.038	1.72	26.9	86.0	0.83	249	0.63	0.18	6.1	18.7
S050223		1.87	9.54	0.09	1.3	0.224	0.031	1.10	21.7	75.1	0.77	545	0.42	0.14	4.8	14.1
S050224		2.10	11.95	0.10	1.6	0.065	0.037	1.57	25.7	61.6	0.93	338	0.50	0.51	5.9	18.5
S050225		1.44	8.23	0.09	1.3	0.114	0.028	0.99	18.9	57.2	0.75	188	0.33	0.52	4.3	11.5
S050226		1.64	8.87	0.08	1.2	0.135	0.030	1.26	19.6	60.1	1.41	411	0.51	0.18	4.2	13.5
S050227		1.61	8.25	0.08	1.1	0.152	0.030	1.23	18.7	57.2	1.38	403	0.47	0.18	4.0	12.7
S050228		1.89	10.75	0.10	1.4	0.226	0.035	1.60	23.8	52.4	0.98	354	0.46	0.14	5.3	16.9
S050229		2.04	11.00	0.09	1.7	0.182	0.038	1.68	25.3	49.9	1.04	463	0.71	0.11	5.6	18.9
S050230		2.56	12.60	0.11	1.8	0.161	0.038	1.78	26.5	104.0	1.25	540	0.44	0.06	6.3	19.9
S050231		4.35	25.9	0.19	3.3	0.007	0.078	3.64	56.5	160.0	1.53	379	0.37	0.08	14.3	36.6
S050232		4.67	23.7	0.18	3.6	0.021	0.084	3.30	47.3	159.0	1.55	264	0.15	0.07	13.8	37.4
S050233		1.00	2.56	0.06	0.3	0.010	0.013	0.26	6.6	30.0	8.68	8630	0.71	0.02	1.3	8.0
S050234		5.04	23.4	0.18	3.2	<0.005	0.080	4.11	46.5	72.5	1.36	223	0.32	0.07	12.9	35.3
S050235		4.83	23.5	0.19	3.3	<0.005	0.077	4.09	49.8	86.8	1.39	229	0.33	0.06	13.1	35.0
S050236		4.79	24.6	0.20	2.9	0.019	0.077	4.42	54.1	69.9	1.36	221	0.33	0.07	12.9	34.3
S050237		4.73	25.3	0.22	3.1	0.010	0.079	4.46	53.0	61.0	1.33	171	0.31	0.07	13.5	33.9
S050238		5.41	24.9	0.21	3.1	0.089	0.080	4.34	53.2	51.1	1.32	162	0.36	0.07	13.5	34.4
S050239		4.46	25.1	0.21	3.1	0.592	0.079	4.40	55.2	38.4	1.29	152	0.30	0.07	13.7	37.7
S050240		5.21	22.9	0.21	3.2	0.677	0.073	4.02	43.9	31.2	1.00	236	0.26	0.06	12.8	37.4
S050241		2.94	16.30	0.16	2.3	0.630	0.051	2.74	33.4	29.5	3.74	2460	0.27	0.04	9.9	34.9
S050242		1.12	4.14	0.08	0.7	2.27	0.025	0.66	9.0	6.7	1.16	4300	1.25	0.10	2.1	12.7
S050243		1.46	9.15	0.09	1.4	0.218	0.031	1.51	18.6	36.4	2.47	396	0.17	0.03	5.6	15.9
S050244		1.89	10.85	0.10	1.8	0.309	0.034	1.83	22.8	48.9	2.99	296	0.36	0.03	6.7	20.9
S050245		2.08	12.70	0.12	2.0	0.118	0.041	2.23	24.6	57.0	3.93	280	0.50	0.04	7.6	22.7
S050246		2.01	12.25	0.12	1.9	0.048	0.036	1.99	24.6	104.5	3.69	285	0.50	0.05	7.4	21.8
S050247		1.98	12.35	0.12	1.9	0.046	0.040	1.99	24.3	105.5	3.69	285	0.43	0.05	7.4	20.8
S050248		1.93	12.00	0.11	2.1	0.052	0.037	1.67	25.1	75.2	3.45	275	0.38	0.11	7.7	21.2
S050249		2.13	12.30	0.11	1.9	0.037	0.042	1.51	23.6	58.8	2.81	285	0.30	0.05	7.4	22.9
S050250		1.87	10.85	0.11	1.6	0.017	0.034	1.50	21.6	81.1	2.47	299	0.18	0.10	6.6	19.0
S050251		1.90	11.55	0.18	2.1	0.043	0.037	2.07	27.2	133.5	3.78	306	0.32	0.05	7.5	20.7
S050252		0.12	0.35	0.12	0.1	<0.005	0.005	0.03	1.2	1.7	1.74	113	0.05	0.04	0.2	<0.2
S050253		2.17	13.60	0.18	2.2	0.043	0.046	2.51	28.6	151.0	4.25	294	0.30	0.05	8.4	22.4
S050254		1.41	7.92	0.18	1.5	0.032	0.025	1.29	20.3	149.5	3.06	314	0.24	0.03	5.1	13.2
S050255		0.81	4.78	0.15	1.0	0.040	0.015	0.72	11.1	55.6	1.93	332	0.96	0.03	3.1	8.0
S050256		0.30	1.73	0.12	0.4	0.020	0.006	0.20	5.1	17.5	0.89	352	0.27	0.01	1.1	2.8
S050257		0.25	1.35	0.11	0.3	0.013	<0.005	0.11	4.6	8.5	0.80	360	0.24	0.10	0.9	2.0
S050258		0.60	3.51	0.13	0.7	0.034	0.012	0.40	8.6	20.7	1.76	412	0.32	0.19	2.3	5.8
S050259		2.07	7.50	0.10	1.6	4.61	0.029	1.36	17.7	11.8	2.14	1250	1.31	0.10	4.3	16.7
S050260		1.07	5.47	0.12	1.2	0.019	0.018	0.64	13.7	39.5	2.91	556	0.30	0.26	3.6	9.5

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
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Finalized Date: 7-AUG-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18171489

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl
	Units	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
	LOD	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.01	0.005	0.02
S050221		700	10.2	70.5	0.002	1.43	0.24	7.0	1	1.1	662	0.41	<0.05	6.32	0.185	0.52
S050222		910	11.8	80.5	0.002	1.71	0.28	8.0	1	1.3	692	0.45	<0.05	7.19	0.203	0.59
S050223		660	9.0	55.1	<0.002	1.35	0.28	6.2	1	1.0	633	0.35	<0.05	5.73	0.159	0.41
S050224		520	11.2	74.9	0.002	1.46	0.32	7.5	1	1.2	674	0.43	<0.05	6.94	0.200	0.39
S050225		510	8.0	47.6	<0.002	1.01	0.26	5.3	1	0.9	1135	0.32	<0.05	4.86	0.144	0.24
S050226		590	8.3	57.6	0.002	1.07	0.30	5.7	1	0.9	853	0.30	<0.05	5.05	0.141	0.45
S050227		590	7.9	54.1	<0.002	1.05	0.28	5.4	1	0.8	852	0.28	<0.05	4.72	0.138	0.41
S050228		510	9.8	70.7	<0.002	1.36	0.32	6.9	1	1.1	834	0.38	<0.05	6.04	0.176	0.78
S050229		660	10.5	73.9	0.002	1.32	0.37	7.2	1	1.2	683	0.41	<0.05	6.75	0.182	1.26
S050230		630	15.5	72.4	<0.002	1.17	0.75	8.3	1	1.3	627	0.47	<0.05	7.42	0.221	1.50
S050231		450	31.4	165.5	<0.002	0.04	0.23	18.7	<1	2.8	267	1.01	0.06	16.75	0.439	0.74
S050232		420	9.5	159.5	<0.002	0.05	0.25	17.9	1	2.7	131.0	0.94	0.07	14.65	0.431	0.71
S050233		230	9.5	11.0	<0.002	0.07	0.07	1.8	1	0.3	195.0	0.09	<0.05	1.40	0.034	0.15
S050234		460	20.4	207	<0.002	0.01	0.67	17.3	<1	2.7	128.5	0.86	0.07	14.60	0.421	1.13
S050235		530	20.5	201	<0.002	0.01	0.58	17.9	1	2.6	145.5	0.90	0.08	14.80	0.450	1.10
S050236		430	21.7	205	<0.002	0.02	0.58	17.7	<1	2.6	175.0	0.91	0.06	15.85	0.429	1.20
S050237		410	20.8	215	<0.002	0.02	0.62	18.3	<1	2.7	183.5	0.93	0.06	15.90	0.431	1.19
S050238		450	20.4	218	<0.002	0.03	0.62	17.7	1	2.7	214	0.90	<0.05	15.85	0.425	1.24
S050239		420	23.3	213	<0.002	0.83	0.70	18.0	1	2.7	239	0.95	0.09	16.30	0.434	2.18
S050240		410	21.1	192.5	<0.002	4.51	1.35	16.9	<1	2.6	232	0.89	<0.05	14.05	0.413	2.98
S050241		400	11.4	125.0	<0.002	2.15	1.36	10.3	<1	1.8	326	0.70	<0.05	10.30	0.260	2.49
S050242		370	57.8	26.9	0.002	0.67	8.06	5.7	1	0.7	1095	0.15	<0.05	2.24	0.078	5.77
S050243		310	6.3	72.0	<0.002	0.24	0.54	5.5	1	1.2	518	0.40	<0.05	5.90	0.154	0.81
S050244		620	8.3	101.5	<0.002	0.33	0.54	6.5	1	1.3	379	0.50	<0.05	7.53	0.185	0.93
S050245		620	12.2	132.5	<0.002	0.25	0.49	7.6	3	1.5	350	0.57	<0.05	8.53	0.212	0.97
S050246		630	11.9	116.5	<0.002	0.16	0.42	7.4	3	1.5	375	0.54	<0.05	8.42	0.215	0.96
S050247		630	11.8	116.0	0.002	0.12	0.40	7.4	3	1.5	380	0.55	<0.05	8.28	0.214	0.92
S050248		800	10.7	91.1	<0.002	0.10	0.52	7.2	2	1.5	398	0.57	<0.05	8.75	0.215	0.75
S050249		600	8.2	76.6	<0.002	0.59	0.38	7.2	2	1.5	427	0.55	<0.05	8.00	0.206	0.60
S050250		420	5.9	79.4	<0.002	0.10	0.21	6.6	1	1.4	426	0.49	<0.05	7.00	0.186	0.58
S050251		680	10.9	117.5	<0.002	0.10	0.29	7.2	3	1.6	379	0.52	<0.05	9.28	0.218	0.93
S050252		70	<0.5	1.1	<0.002	0.01	0.06	0.3	1	<0.2	82.4	<0.05	<0.05	0.12	0.006	0.02
S050253		720	10.7	144.5	<0.002	0.10	0.34	8.4	3	1.9	376	0.58	<0.05	10.50	0.252	1.03
S050254		470	6.8	70.6	<0.002	0.07	0.22	5.0	2	1.1	558	0.36	<0.05	5.82	0.149	0.47
S050255		350	7.1	36.6	<0.002	0.13	0.36	3.1	1	0.7	927	0.22	<0.05	3.99	0.093	0.33
S050256		310	4.6	9.3	<0.002	0.08	0.15	1.1	2	0.2	1155	0.08	<0.05	1.43	0.033	0.15
S050257		330	5.2	5.2	<0.002	0.07	0.09	0.9	1	0.2	1110	0.06	<0.05	1.12	0.026	0.09
S050258		380	5.4	20.7	<0.002	0.11	0.20	2.2	1	0.5	947	0.15	<0.05	2.91	0.065	0.18
S050259		420	16.5	61.5	<0.002	2.29	56.3	6.4	3	1.0	797	0.30	0.09	4.73	0.187	15.80
S050260		390	6.0	32.2	<0.002	0.06	0.22	3.5	2	0.8	653	0.27	<0.05	4.64	0.105	0.24

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CERTIFICATE OF ANALYSIS WH18171489

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	U	V	W	Y	Zn	Zr
	Units	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.1	1	0.1	0.1	2	0.5
S050221		2.4	38	0.8	12.1	43	52.5
S050222		2.7	44	0.9	12.8	53	57.0
S050223		2.1	35	0.7	10.2	46	47.5
S050224		2.2	45	0.8	11.6	52	53.5
S050225		2.0	29	0.7	9.4	38	43.5
S050226		1.9	34	0.7	9.7	37	42.7
S050227		1.8	33	0.7	9.2	35	40.8
S050228		2.0	39	0.8	11.3	49	47.9
S050229		2.2	38	72.6	12.3	39	54.3
S050230		2.3	48	1.2	12.5	53	57.5
S050231		2.3	97	1.7	21.4	101	109.5
S050232		2.6	102	1.7	22.3	107	119.0
S050233		2.2	23	0.2	10.6	62	9.5
S050234		2.2	93	1.6	20.8	101	110.0
S050235		2.9	101	1.5	21.7	103	109.5
S050236		2.2	103	1.5	19.7	99	96.8
S050237		2.3	106	1.5	20.5	94	102.5
S050238		2.4	96	1.5	19.8	95	99.1
S050239		2.4	103	1.5	20.1	98	103.0
S050240		2.3	96	4.9	20.2	103	104.0
S050241		2.8	59	3.3	16.6	90	76.6
S050242		3.7	24	8.6	14.1	113	25.9
S050243		4.7	44	1.1	10.7	51	48.0
S050244		5.5	57	0.9	13.7	68	59.9
S050245		4.9	69	0.9	14.4	70	67.2
S050246		5.6	69	0.9	14.5	71	64.7
S050247		5.5	69	0.8	14.5	70	64.7
S050248		5.1	65	0.8	15.8	64	73.0
S050249		5.9	61	0.8	13.9	73	68.4
S050250		5.4	55	0.7	12.4	60	55.1
S050251		6.6	69	0.8	16.2	65	74.2
S050252		0.2	1	<0.1	2.0	4	3.3
S050253		4.6	76	0.9	16.6	64	75.7
S050254		6.9	47	0.6	10.5	49	50.8
S050255		5.3	28	0.4	6.8	49	35.9
S050256		4.8	11	0.2	3.5	17	14.7
S050257		4.8	10	0.1	3.3	15	11.5
S050258		5.4	22	0.3	5.5	23	27.4
S050259		4.1	55	4.2	15.3	59	52.6
S050260		5.1	34	0.4	8.4	39	42.4

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.

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www.alsglobal.com/geochemistry

To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Project: Nadaleen

Finalized Date: 7-AUG-2018
Account: RCM

CERTIFICATE OF ANALYSIS WH18171489

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Applies to Method: REE's may not be totally soluble in this method.
ME-MS61

LABORATORY ADDRESSES

Applies to Method: Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.

CRU-31	CRU-QC	LOG-21	LOG-21d
LOG-23	PUL-31	PUL-31d	PUL-QC
SPL-21	SPL-21d	WEI-21	

Applies to Method: Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Au-AA25	Hg-MS42	ME-MS61	ME-OG62

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 12-AUG-2018
Account: RCM

CERTIFICATE WH18177242

Project: Nadaleen

P.O. No.: N18-035

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 23-JUL-2018.

The following have access to data associated with this certificate:

ANDREW CARNE	JULIA LANE	

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
LOG-23	Pulp Login - Rcvd with Barcode
LOG-21d	Sample logging - ClientBarCode Dup
SPL-21d	Split sample - duplicate
PUL-31d	Pulverize Split - duplicate

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid ICP-MS	
Hg-MS42	Trace Hg by ICPMS	ICP-MS

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:

Colin Ramshaw, Vancouver Laboratory Manager

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Project: Nadaleen

Finalized Date: 12-AUG-2018
Account: RCM

CERTIFICATE OF ANALYSIS WH18177242

Sample Description	Method	WEI-21	Au-AA25	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Recvd Wt.	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu
	Units	kg	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.02	0.01	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2
S050261		8.40	<0.01	0.03	3.41	9.8	170	1.25	0.11	20.1	0.09	37.6	6.7	35	5.25	23.8
S050262		8.23	<0.01	0.04	3.02	15.1	220	1.21	0.10	21.5	0.08	34.5	6.0	32	4.41	22.3
S050263		7.35	<0.01	0.04	2.45	37.7	90	0.94	0.09	24.5	0.15	27.6	5.3	25	2.46	19.0
S050264		7.37	<0.01	0.06	2.16	30.1	70	0.91	0.07	25.4	0.24	24.7	4.8	24	1.72	15.9
S050265		4.38	0.01	0.06	3.33	42.2	110	1.08	0.11	19.55	0.46	37.7	6.9	34	2.18	26.8
S050266		3.66	0.02	0.16	5.13	71.9	170	1.66	0.19	13.40	0.37	53.5	13.4	48	4.43	47.5
S050267		6.46	<0.01	0.02	7.64	16.0	260	2.47	0.24	4.13	0.15	78.4	12.3	66	10.70	76.3
S050268		6.85	0.03	0.01	7.98	17.1	380	2.43	0.25	3.04	0.18	82.6	13.4	79	13.20	25.2
S050269		8.54	<0.01	0.11	6.14	10.2	560	1.35	0.31	1.44	0.06	62.0	15.0	53	5.80	284
S050270		8.38	<0.01	0.02	7.98	5.2	230	2.38	0.25	3.02	0.15	81.1	12.9	68	12.55	47.0
S050271		8.32	<0.01	0.01	7.95	9.9	310	2.26	0.28	2.91	0.15	82.0	13.4	73	15.15	39.3
S050272		8.41	<0.01	0.01	6.86	14.2	570	2.04	0.23	5.32	0.51	70.0	12.3	83	14.60	22.9
S050273		7.26	<0.01	0.04	7.77	13.8	690	2.54	0.33	2.23	0.15	81.7	14.6	57	14.10	40.7
S050274		7.58	0.05	0.14	2.76	57.4	190	0.90	0.10	26.5	0.03	36.4	6.5	22	5.28	12.4
S050275		8.00	<0.01	0.04	2.70	12.2	180	0.87	0.10	25.6	0.04	36.0	5.9	23	5.07	11.9
S050276		6.29	<0.01	0.10	6.05	16.1	280	1.65	0.23	14.45	0.05	63.3	12.3	44	14.45	24.0
S050277		11.24	<0.01	0.02	1.03	15.6	80	0.36	0.04	30.0	0.02	19.50	2.9	10	2.20	5.2
S050278		8.95	<0.01	0.63	2.05	38.7	200	0.67	0.09	28.1	0.04	28.5	4.4	16	4.86	8.6
S050279		10.38	<0.01	0.03	2.51	26.4	200	0.83	0.09	24.4	0.06	30.9	5.1	22	5.72	10.7
S050280		5.35	<0.01	0.03	1.83	13.3	100	0.67	0.07	28.8	0.03	22.8	4.2	15	4.80	8.0
S050281		4.96	<0.01	0.02	1.83	15.2	130	0.71	0.07	29.5	0.04	22.3	4.0	15	5.00	8.2
S050282		11.22	<0.01	0.05	2.38	31.4	140	0.86	0.08	22.9	0.07	29.2	4.6	21	5.64	10.1
S050283		10.38	<0.01	0.03	2.51	67.7	170	0.83	0.09	23.4	0.05	35.6	4.3	22	6.33	8.5
S050284		0.26	1.03	1.36	1.57	880	200	0.48	0.13	28.7	0.69	19.70	4.9	29	3.56	48.3
S050285		10.23	<0.01	0.03	2.26	134.5	170	0.65	0.08	26.6	0.04	28.3	4.5	19	5.60	8.8
S050286		11.73	<0.01	0.03	1.33	106.0	110	0.40	0.05	26.2	0.03	17.75	2.2	12	3.20	8.0
S050287		9.62	<0.01	0.02	1.75	171.0	390	0.62	0.07	27.5	0.03	23.4	3.2	15	4.67	6.2
S050288		11.09	<0.01	0.02	1.84	54.8	160	0.55	0.08	28.7	0.02	26.0	3.4	15	5.04	6.9
S050289		11.16	<0.01	0.02	1.25	61.4	140	0.42	0.06	29.8	0.02	19.50	2.6	11	3.29	5.1
S050290		11.58	<0.01	0.01	0.38	27.4	70	0.12	0.03	29.6	0.08	7.88	1.2	4	0.78	2.8
S050291		0.26	1.42	0.89	2.99	>10000	190	0.69	0.12	17.35	0.34	36.0	7.6	43	9.05	24.9
S050292		11.87	<0.01	0.01	0.55	33.3	50	0.21	0.03	26.1	0.09	8.28	1.5	5	1.29	3.5
S050293		6.65	<0.01	0.03	2.49	83.3	270	0.90	0.10	23.9	0.02	34.4	4.6	21	5.71	9.3
S050294		7.63	<0.01	0.03	7.96	611	480	2.31	0.34	2.27	<0.02	78.7	16.9	66	17.30	31.2
S050295		11.24	<0.01	0.02	8.58	80.2	390	2.64	0.35	1.90	0.03	88.1	16.2	69	19.85	23.8
S050296		12.49	<0.01	0.05	3.61	73.4	270	1.16	0.14	14.75	0.18	43.2	9.6	40	5.21	48.9
S050297		5.93	<0.01	0.02	1.65	16.8	290	0.66	0.06	24.2	0.36	27.0	3.8	18	2.62	16.5
S050298		<0.02	<0.01	0.02	1.69	17.6	280	0.67	0.07	24.9	0.39	27.6	4.0	18	2.68	17.5
S050299		11.48	<0.01	0.04	3.37	20.9	230	1.25	0.11	18.50	0.35	40.0	6.6	36	5.58	25.1
S050300		7.06	<0.01	<0.01	0.13	0.6	30	0.10	0.07	34.3	<0.02	1.31	0.6	1	0.05	2.5

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Finalized Date: 12-AUG-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18177242

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Hg-MS42	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni
	Units	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2
S050261		1.69	9.12	0.09	1.4	0.019	0.027	0.97	19.2	67.2	2.88	873	0.23	0.49	6.0	17.2
S050262		1.48	7.99	0.11	1.4	0.027	0.026	0.88	17.6	54.7	2.85	1120	0.33	0.43	5.3	15.0
S050263		1.07	6.59	0.08	1.1	0.022	0.020	0.66	14.7	31.7	1.82	1490	0.33	0.21	4.5	12.3
S050264		1.05	5.73	0.08	1.0	0.030	0.017	0.57	12.8	27.8	2.08	1660	0.47	0.08	3.7	10.8
S050265		1.49	9.10	0.10	1.4	0.062	0.027	0.97	19.7	27.8	3.01	1890	0.36	0.04	5.9	17.1
S050266		1.94	13.65	0.11	2.0	0.088	0.038	1.53	27.8	42.0	2.48	2160	0.36	0.05	8.8	29.4
S050267		3.35	20.4	0.18	2.9	<0.005	0.054	2.77	41.3	76.7	3.20	1260	0.21	0.06	13.4	49.3
S050268		3.74	21.2	0.17	2.9	0.005	0.050	2.79	42.6	79.3	2.79	884	0.11	0.06	13.6	50.9
S050269		6.27	16.00	0.14	2.3	<0.005	0.047	1.49	31.5	97.0	2.12	554	1.33	0.08	9.4	32.4
S050270		3.85	20.9	0.17	2.7	<0.005	0.052	2.74	42.6	75.7	2.99	948	0.52	0.30	13.6	53.4
S050271		3.75	20.6	0.17	2.8	0.009	0.056	2.91	41.7	67.5	2.83	879	0.11	0.27	13.5	51.6
S050272		3.37	18.10	0.16	2.4	<0.005	0.051	2.65	36.3	53.3	3.83	2100	0.12	0.18	11.4	42.0
S050273		4.30	20.8	0.18	3.2	0.028	0.063	3.26	40.1	60.6	2.21	1050	0.26	0.09	12.0	34.9
S050274		1.46	6.97	0.10	1.0	0.078	0.019	0.83	17.3	33.6	0.49	505	0.40	0.25	3.6	12.6
S050275		1.56	6.80	0.09	1.0	0.046	0.019	0.82	17.0	31.2	0.58	373	0.51	0.21	3.5	12.1
S050276		2.13	15.05	0.13	1.8	0.024	0.038	2.03	31.9	72.0	0.86	302	0.46	0.29	7.5	21.8
S050277		0.85	2.69	0.07	0.5	0.012	0.009	0.31	8.3	13.6	0.90	257	0.26	0.10	1.6	4.8
S050278		1.19	5.39	0.08	1.1	0.020	0.015	0.69	13.9	21.7	0.99	244	0.24	0.17	2.9	8.2
S050279		1.43	6.50	0.08	1.0	0.095	0.017	0.93	15.0	24.7	1.85	329	0.41	0.21	3.5	10.1
S050280		1.10	4.62	0.08	0.6	0.047	0.017	0.67	10.9	26.6	1.35	308	0.24	0.14	2.4	7.9
S050281		1.06	4.80	0.08	0.6	0.037	0.015	0.68	10.9	26.8	1.21	297	0.22	0.13	2.5	7.5
S050282		1.61	6.17	0.09	1.0	0.045	0.017	0.82	14.7	41.9	2.57	360	0.39	0.15	3.4	9.6
S050283		1.42	6.69	0.10	1.3	0.042	0.017	0.91	16.6	28.2	1.16	203	0.30	0.13	4.0	9.1
S050284		1.19	4.32	0.09	0.8	2.09	0.019	0.69	9.4	7.4	1.28	4740	1.47	0.10	2.2	14.2
S050285		1.11	5.72	0.09	1.0	0.059	0.016	0.82	13.4	20.1	1.03	221	0.36	0.04	3.3	8.2
S050286		0.76	3.23	0.08	0.6	0.049	0.011	0.46	8.4	15.3	1.76	157	0.76	0.03	1.8	6.7
S050287		0.93	4.18	0.11	0.8	0.049	0.015	0.65	11.5	17.1	0.79	138	0.23	0.04	2.4	5.7
S050288		1.00	4.35	0.12	0.8	0.048	0.012	0.75	13.0	17.3	0.76	154	0.18	0.04	2.5	6.2
S050289		0.80	3.01	0.11	0.5	0.067	0.008	0.51	9.1	11.1	1.05	215	0.20	0.03	1.7	4.5
S050290		0.38	0.98	0.15	0.2	0.044	<0.005	0.16	3.5	4.2	4.96	171	0.18	0.01	0.5	2.8
S050291		2.06	7.86	0.11	1.5	4.44	0.029	1.37	18.6	12.5	2.12	1220	1.42	0.10	4.5	18.0
S050292		0.38	1.44	0.13	0.3	0.163	0.006	0.24	4.1	2.3	6.49	171	0.12	0.01	0.7	3.3
S050293		1.38	6.22	0.12	1.1	0.408	0.018	1.02	17.3	12.7	1.34	599	0.31	0.03	3.3	9.6
S050294		4.24	21.9	0.13	3.3	0.625	0.078	3.49	40.0	49.6	0.93	378	0.25	0.06	12.0	35.5
S050295		4.20	22.5	0.13	3.2	0.228	0.064	4.06	46.6	64.3	1.29	523	0.41	0.06	12.7	39.0
S050296		1.71	9.43	0.10	1.6	0.042	0.027	1.61	22.9	24.3	3.98	1590	0.38	0.04	6.0	18.4
S050297		0.83	4.22	0.10	0.8	0.092	0.013	0.70	13.4	31.2	1.88	1620	0.59	0.02	2.7	8.1
S050298		0.84	4.37	0.10	0.8	0.089	0.013	0.72	13.7	31.6	1.92	1660	0.57	0.02	2.8	8.3
S050299		1.39	8.71	0.14	1.5	0.071	0.031	1.46	21.6	52.1	2.84	1170	0.29	0.03	5.7	16.7
S050300		0.17	0.43	0.12	0.1	<0.005	<0.005	0.05	1.4	1.2	1.84	138	0.10	0.06	0.3	<0.2

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Finalized Date: 12-AUG-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18177242

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl
	Units	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
	LOD	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.01	0.005	0.02
S050261		360	6.7	48.1	<0.002	0.05	0.19	5.7	2	1.3	437	0.41	<0.05	6.73	0.159	0.23
S050262		370	7.9	42.6	<0.002	0.10	0.21	5.0	1	1.1	481	0.38	<0.05	6.14	0.143	0.25
S050263		270	9.4	31.3	<0.002	0.14	0.19	4.2	1	0.9	602	0.31	<0.05	5.08	0.117	0.17
S050264		250	9.0	26.3	<0.002	0.20	0.19	3.6	1	0.8	660	0.27	<0.05	4.43	0.102	0.14
S050265		410	12.8	43.4	<0.002	0.16	0.22	5.6	1	1.2	548	0.41	<0.05	6.79	0.156	0.27
S050266		510	19.8	67.6	<0.002	0.57	0.37	8.5	1	1.9	340	0.62	<0.05	10.25	0.235	0.62
S050267		510	9.7	116.5	<0.002	0.05	0.29	12.4	<1	2.5	171.0	0.93	<0.05	15.20	0.340	0.60
S050268		500	5.5	123.0	<0.002	0.07	0.28	13.1	<1	2.5	148.0	0.94	<0.05	15.35	0.354	0.85
S050269		350	105.0	67.8	<0.002	0.06	0.34	10.9	1	1.9	153.5	0.66	0.06	10.35	0.292	0.30
S050270		510	8.3	116.5	<0.002	0.01	0.26	13.0	<1	2.5	115.5	0.96	<0.05	15.45	0.344	0.50
S050271		490	7.9	129.0	<0.002	0.01	0.32	12.8	<1	2.3	115.0	0.97	<0.05	15.45	0.345	0.61
S050272		440	11.1	111.0	<0.002	0.03	0.38	11.0	<1	2.1	144.0	0.81	<0.05	12.85	0.292	0.57
S050273		410	17.3	157.5	<0.002	0.04	0.75	15.1	1	2.5	157.5	0.86	0.08	13.05	0.398	0.85
S050274		430	6.8	42.0	<0.002	0.15	0.37	4.8	1	0.8	1100	0.24	<0.05	4.76	0.114	0.36
S050275		650	6.7	42.0	<0.002	0.17	0.29	4.9	1	0.8	939	0.24	<0.05	4.52	0.113	0.23
S050276		480	12.6	101.0	<0.002	0.16	0.50	9.2	1	1.6	493	0.52	<0.05	9.32	0.234	0.38
S050277		640	3.1	15.9	<0.002	0.10	0.20	2.0	1	0.3	1100	0.10	<0.05	2.11	0.048	0.09
S050278		470	5.6	36.2	<0.002	0.24	0.30	3.8	1	0.6	991	0.20	<0.05	3.68	0.091	0.18
S050279		680	6.4	47.7	0.002	0.63	0.27	4.6	1	0.7	861	0.25	<0.05	4.26	0.113	0.32
S050280		390	4.8	35.0	<0.002	0.48	0.18	3.3	1	0.5	942	0.17	<0.05	2.89	0.076	0.19
S050281		360	4.7	35.4	<0.002	0.46	0.18	3.2	1	0.5	1005	0.17	<0.05	2.95	0.076	0.20
S050282		630	6.2	42.2	<0.002	0.67	0.31	4.5	1	0.7	695	0.23	<0.05	3.98	0.108	0.24
S050283		770	7.2	47.5	<0.002	0.60	0.31	4.7	1	0.8	797	0.27	<0.05	4.82	0.127	0.22
S050284		390	61.6	29.6	0.003	0.71	8.54	6.0	1	0.7	1200	0.15	0.05	2.56	0.080	6.23
S050285		580	5.7	40.4	0.002	0.55	0.38	4.2	1	0.6	943	0.23	<0.05	3.90	0.106	0.22
S050286		440	6.0	23.0	0.002	0.30	0.38	2.3	1	0.4	840	0.14	<0.05	2.18	0.064	0.12
S050287		470	4.9	32.8	<0.002	0.39	0.57	3.0	1	0.5	843	0.18	<0.05	3.18	0.084	0.19
S050288		390	5.0	37.7	<0.002	0.56	0.28	3.3	1	0.5	1055	0.18	0.05	3.30	0.085	0.17
S050289		430	3.6	25.7	<0.002	0.45	0.26	2.3	2	0.4	1085	0.12	<0.05	2.20	0.056	0.30
S050290		1060	1.6	7.5	<0.002	0.24	0.19	1.0	1	<0.2	996	<0.05	<0.05	0.79	0.019	0.34
S050291		420	15.7	64.9	0.002	2.27	54.0	6.7	3	1.1	787	0.32	0.08	4.81	0.186	16.60
S050292		700	1.7	11.5	0.002	0.21	0.22	1.1	1	0.2	603	0.05	<0.05	0.97	0.025	0.50
S050293		490	10.3	50.9	<0.002	0.85	0.99	4.2	1	0.7	856	0.24	<0.05	4.40	0.110	1.57
S050294		530	11.7	135.5	<0.002	4.02	0.78	15.8	<1	2.7	276	0.89	<0.05	13.15	0.434	3.08
S050295		520	18.9	170.0	<0.002	2.96	0.34	15.7	1	2.7	187.5	0.93	0.08	14.70	0.425	1.87
S050296		470	16.2	71.1	<0.002	0.07	0.28	5.8	1	1.3	360	0.45	<0.05	7.46	0.174	0.51
S050297		270	9.0	34.2	<0.002	0.07	0.23	2.8	2	0.6	464	0.20	<0.05	3.46	0.077	0.31
S050298		280	9.6	34.7	<0.002	0.07	0.24	2.8	1	0.6	477	0.21	<0.05	3.54	0.079	0.30
S050299		360	14.2	69.3	<0.002	0.08	0.34	5.5	2	1.2	395	0.44	<0.05	7.00	0.160	0.54
S050300		70	0.5	1.3	<0.002	0.01	0.16	0.2	1	<0.2	84.7	<0.05	<0.05	0.13	0.006	<0.02

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 12-AUG-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18177242

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	U	V	W	Y	Zn	Zr
	Units	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.1	1	0.1	0.1	2	0.5
S050261		7.6	48	0.7	11.2	56	52.6
S050262		8.7	45	0.6	10.4	53	48.5
S050263		12.6	36	0.6	8.3	43	41.4
S050264		11.4	33	0.4	7.5	47	35.4
S050265		8.8	47	0.7	10.5	74	50.3
S050266		7.6	74	1.0	16.9	90	72.4
S050267		3.4	67	1.3	19.5	107	105.0
S050268		2.3	57	1.2	20.7	104	107.0
S050269		2.0	64	1.1	15.7	128	83.1
S050270		2.7	57	1.2	19.3	113	101.0
S050271		2.2	55	1.1	19.0	107	101.0
S050272		2.0	53	1.1	17.7	95	85.0
S050273		3.1	94	1.6	20.5	97	109.5
S050274		1.7	26	0.7	9.0	32	36.3
S050275		1.7	28	0.6	10.0	35	38.4
S050276		2.3	54	1.1	12.6	63	62.5
S050277		1.5	12	0.2	5.7	15	17.6
S050278		1.5	20	0.4	7.5	28	32.3
S050279		1.6	28	0.5	9.1	37	37.0
S050280		1.3	19	0.4	6.0	24	23.0
S050281		1.2	18	0.4	5.8	27	23.5
S050282		1.5	26	0.5	8.7	35	36.3
S050283		1.6	26	0.6	10.3	34	48.3
S050284		4.1	26	4.3	14.9	127	27.6
S050285		1.7	24	0.5	7.8	28	36.9
S050286		1.1	15	0.3	5.4	20	21.2
S050287		1.4	17	0.4	6.5	24	27.4
S050288		1.4	17	0.3	7.2	22	30.0
S050289		1.2	13	0.3	5.7	15	18.7
S050290		1.3	6	0.1	3.8	8	7.3
S050291		4.1	54	6.1	15.9	55	53.8
S050292		1.4	9	0.1	3.4	9	8.7
S050293		1.7	23	1.4	8.3	28	37.0
S050294		2.4	94	6.6	20.8	93	110.5
S050295		2.3	90	1.7	21.0	97	108.0
S050296		5.2	52	1.0	13.8	58	56.2
S050297		6.6	24	0.4	9.2	37	31.6
S050298		6.7	25	0.4	9.4	38	33.1
S050299		7.6	47	0.7	12.0	54	55.5
S050300		0.2	2	<0.1	2.5	4	2.2

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To: **ATAC RESOURCES LTD.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Project: Nadaleen

Finalized Date: 12-AUG-2018
Account: RCM

CERTIFICATE OF ANALYSIS WH18177242

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

REE's may not be totally soluble in this method.
Applies to Method: ME-MS61

LABORATORY ADDRESSES

Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.

Applies to Method:				
	CRU-31	CRU-QC	LOG-21	LOG-21d
	LOG-23	PUL-31	PUL-31d	PUL-QC
	SPL-21	SPL-21d	WEI-21	

Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Applies to Method:			
	Au-AA25	Hg-MS42	ME-MS61

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VANCOUVER BC V6B 1L8

Finalized Date: 12-AUG-2018
Account: RCM

CERTIFICATE WH18177275

Project: Nadaleen

P.O. No.: N18-036

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 23-JUL-2018.

The following have access to data associated with this certificate:

ANDREW CARNE	JULIA LANE	

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
LOG-23	Pulp Login - Rcvd with Barcode
LOG-21d	Sample logging - ClientBarCode Dup
SPL-21d	Split sample - duplicate
PUL-31d	Pulverize Split - duplicate

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid ICP-MS	
Hg-MS42	Trace Hg by ICPMS	ICP-MS
ME-OG62	Ore Grade Elements - Four Acid	ICP-AES
As-OG62	Ore Grade As - Four Acid	

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:

Colin Ramshaw, Vancouver Laboratory Manager

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Finalized Date: 12-AUG-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18177275

Sample Description	Method	WEI-21	Au-AA25	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Recvd Wt.	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu
	Units	kg	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.02	0.01	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2
S048851		9.13	<0.01	0.07	6.57	306	260	1.94	0.27	2.47	0.14	69.1	21.1	70	28.1	56.7
S048852		10.90	<0.01	0.49	7.17	192.5	250	2.04	0.31	2.45	0.17	72.5	17.2	78	32.2	58.3
S048853		11.88	<0.01	0.72	6.80	307	270	2.21	0.30	1.89	0.19	69.8	17.0	78	25.8	51.4
S048854		11.02	0.15	0.54	6.39	854	270	1.89	0.29	3.41	0.19	69.8	17.3	71	20.2	51.9
S048855		11.59	<0.01	0.10	6.45	151.5	310	1.87	0.28	2.23	0.17	67.6	18.4	68	26.5	46.6
S048856		12.33	<0.01	1.01	5.80	95.1	570	1.61	0.25	2.43	0.13	62.9	18.6	68	25.3	46.5
S048857		12.36	<0.01	0.11	7.08	170.0	310	2.12	0.31	2.84	0.13	82.4	18.1	71	30.9	49.6
S048858		11.27	<0.01	0.11	7.03	147.0	310	1.98	0.30	1.48	0.18	74.6	18.6	76	30.7	50.5
S048859		11.33	<0.01	0.08	7.49	117.0	320	2.11	0.30	1.55	0.16	77.9	20.1	78	35.0	55.1
S048860		11.59	0.09	0.08	7.41	1055	280	2.31	0.33	1.73	0.19	79.5	19.8	73	29.4	55.2
S048861		12.09	0.44	0.21	5.75	2090	250	1.68	0.25	2.48	0.17	61.7	17.3	64	18.25	51.4
S048862		7.21	<0.01	<0.01	0.16	5.5	20	0.09	0.49	32.6	<0.02	1.46	0.6	1	0.14	3.1
S048863		12.12	0.29	0.24	7.32	643	270	2.44	0.31	1.72	0.27	75.9	19.8	80	27.1	62.7
S048864		11.74	0.32	0.11	6.69	1425	220	2.01	0.28	0.63	0.24	69.3	19.0	83	27.0	59.7
S048865		12.01	0.05	0.11	7.28	691	250	2.19	0.32	0.83	0.21	72.9	19.5	85	33.3	58.8
S048866		6.36	0.32	0.22	7.04	9330	240	2.22	0.34	1.58	0.39	73.4	16.0	85	28.6	55.2
S048867		5.45	0.31	0.21	7.09	4880	250	2.33	0.34	1.48	0.34	74.4	15.8	85	28.0	55.7
S048868		11.83	0.27	0.16	7.09	1040	270	2.56	0.29	1.06	0.35	71.2	13.2	80	33.6	46.1
S048869		12.21	0.10	0.19	7.33	801	250	2.77	0.33	0.73	0.37	76.1	14.2	87	44.7	52.5
S048870		11.75	0.01	0.23	7.84	312	270	3.20	0.37	1.09	0.47	77.8	14.3	92	54.4	61.6
S048871		7.65	1.08	0.27	7.08	>10000	240	2.30	0.34	0.55	0.34	73.4	14.5	89	35.6	62.1
S048872		0.26	5.17	1.64	3.65	>10000	170	0.77	0.16	10.70	1.12	41.6	10.0	49	9.88	35.5
S048873		9.48	0.79	0.20	7.50	1740	260	1.82	0.34	1.13	0.35	73.0	16.0	90	30.5	54.8
S048874		9.55	2.67	0.18	5.19	7580	240	1.09	0.24	0.54	0.38	52.8	12.0	74	13.55	41.4
S048875		<0.02	2.59	0.17	5.35	7250	250	1.18	0.23	0.46	0.33	54.3	12.3	76	14.20	41.9
S048876		7.73	1.89	0.12	5.68	7590	180	1.13	0.25	0.48	0.42	54.7	13.4	78	16.05	45.7
S048877		11.96	0.02	0.09	6.21	287	240	1.78	0.25	1.73	0.19	60.9	16.6	77	24.9	53.6
S048878		10.62	<0.01	0.09	5.98	106.5	310	1.53	0.23	1.58	0.17	60.2	16.1	71	29.3	51.7
S048879		11.80	<0.01	0.09	6.05	83.3	400	1.47	0.23	1.43	0.16	57.7	17.3	75	31.2	55.7
S048880		12.26	<0.01	0.08	6.78	59.5	510	1.79	0.24	2.53	0.14	64.3	17.2	71	34.6	55.8
S048881		11.75	<0.01	0.08	6.16	58.7	420	1.66	0.23	1.42	0.33	57.5	17.0	78	28.1	53.7
S048882		11.67	<0.01	0.08	7.11	94.3	400	1.82	0.27	1.44	0.18	67.0	18.3	79	32.4	58.9
S048883		9.61	<0.01	0.08	6.22	95.1	410	1.63	0.25	1.49	0.17	60.6	17.1	72	24.9	54.2
S048884		10.90	0.01	0.08	6.46	135.0	320	1.74	0.25	1.87	0.17	64.5	16.8	75	25.1	54.5
S048885		12.34	<0.01	0.07	6.75	93.6	340	1.97	0.27	1.36	0.19	66.2	16.3	74	28.3	51.4
S048886		11.59	<0.01	0.07	6.56	83.8	270	1.91	0.28	0.99	0.17	65.0	16.2	72	29.7	48.6
S048887		12.46	0.13	0.12	7.28	197.5	260	2.22	0.31	1.60	0.31	71.0	18.2	87	27.6	65.8
S048888		11.60	<0.01	0.08	5.45	68.1	380	1.57	0.22	1.90	0.18	56.6	15.5	72	22.8	54.2
S048889		0.26	2.62	0.66	1.87	>10000	140	0.57	3.29	26.0	0.15	27.6	4.6	26	5.96	16.0
S048890		11.53	<0.01	0.08	5.89	105.5	280	1.57	0.23	2.25	0.23	59.2	15.4	70	23.5	50.5

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Finalized Date: 12-AUG-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18177275

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Hg-MS42	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni
	Units	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2
S048851		5.58	17.15	0.09	3.3	3.10	0.070	3.13	33.8	35.7	1.33	491	0.60	0.03	11.0	42.7
S048852		5.30	18.80	0.11	3.5	3.74	0.074	3.46	35.6	58.8	1.39	405	1.24	0.04	11.6	41.5
S048853		5.33	18.00	0.10	3.4	5.46	0.075	3.36	34.2	24.4	1.14	403	1.40	0.03	10.7	42.3
S048854		5.25	17.25	0.11	3.1	6.73	0.077	3.17	33.4	15.7	1.74	668	1.06	0.03	10.1	40.0
S048855		4.49	16.40	0.11	3.4	1.725	0.077	3.15	33.1	25.9	1.24	381	0.41	0.03	11.0	35.9
S048856		4.40	15.15	0.10	3.2	0.822	0.071	2.79	31.2	52.8	1.44	539	0.39	0.03	9.6	35.5
S048857		5.54	18.10	0.13	3.4	0.527	0.084	3.51	39.2	31.4	2.11	554	0.44	0.04	12.0	35.1
S048858		4.75	18.40	0.12	3.6	0.319	0.080	3.41	36.7	42.0	1.72	357	0.41	0.04	12.1	36.5
S048859		4.92	19.40	0.11	3.7	0.532	0.080	3.63	38.4	50.4	1.76	364	0.41	0.04	12.9	39.1
S048860		5.02	19.45	0.11	4.0	2.64	0.082	3.65	38.7	42.9	1.22	333	0.47	0.04	12.9	39.6
S048861		4.56	15.40	0.10	2.8	5.89	0.052	2.86	30.1	19.4	1.35	872	0.44	0.03	9.9	34.3
S048862		0.13	0.52	0.10	0.1	0.011	<0.005	0.06	1.4	1.2	1.89	128	<0.05	0.06	0.3	<0.2
S048863		5.39	19.65	0.12	3.9	8.59	0.078	3.63	36.7	20.4	1.18	575	1.50	0.04	12.3	43.5
S048864		5.17	17.70	0.11	3.3	11.60	0.071	3.29	34.1	20.0	0.66	212	1.25	0.03	10.9	43.6
S048865		5.24	19.35	0.11	3.7	10.05	0.076	3.65	36.0	23.5	0.80	261	1.39	0.04	11.8	44.3
S048866		4.93	18.80	0.12	3.6	11.20	0.072	3.52	39.5	17.5	1.11	574	2.70	0.03	11.1	47.7
S048867		4.98	19.00	0.12	3.5	10.40	0.071	3.59	37.7	17.0	1.10	536	2.87	0.03	11.2	47.8
S048868		4.73	17.00	0.22	3.9	10.80	0.069	3.57	35.4	16.6	0.95	512	2.63	0.03	11.3	41.0
S048869		4.73	18.20	0.23	4.0	12.35	0.078	3.70	37.8	21.2	0.84	259	3.59	0.04	11.8	47.8
S048870		5.01	19.40	0.23	4.3	12.40	0.086	3.97	39.1	21.4	1.04	229	3.74	0.04	12.3	49.6
S048871		5.11	17.80	0.22	3.8	13.10	0.070	3.48	36.8	17.3	0.68	195	2.73	0.03	10.5	49.6
S048872		2.89	9.31	0.08	1.7	10.65	0.033	1.63	21.0	13.1	0.54	961	2.29	0.12	5.4	23.8
S048873		5.16	19.10	0.12	3.8	11.80	0.069	3.84	36.0	13.3	1.01	584	3.04	0.03	11.2	51.0
S048874		4.63	13.50	0.09	2.7	15.40	0.050	2.58	26.9	12.8	0.52	323	3.00	0.02	7.6	39.3
S048875		4.64	13.95	0.11	2.7	15.25	0.049	2.65	27.2	13.1	0.50	275	3.00	0.02	7.9	41.0
S048876		4.71	14.60	0.10	2.8	12.50	0.058	2.83	27.1	16.2	0.54	223	2.72	0.02	8.7	40.1
S048877		4.74	16.05	0.09	3.1	4.87	0.061	3.09	30.0	21.1	1.08	405	1.05	0.03	9.8	39.7
S048878		4.43	15.15	0.10	2.9	1.350	0.062	2.96	30.0	34.7	1.26	321	1.31	0.03	9.3	39.7
S048879		4.80	15.55	0.10	3.3	0.683	0.062	3.02	28.5	25.5	1.34	304	1.36	0.03	9.6	42.5
S048880		4.93	17.00	0.10	3.2	0.597	0.072	3.43	32.0	22.1	1.87	440	0.84	0.04	10.8	39.0
S048881		4.64	15.00	0.10	2.9	0.611	0.069	3.11	28.0	23.4	1.32	323	0.88	0.03	9.4	40.7
S048882		4.75	17.70	0.13	3.6	0.903	0.075	3.60	32.8	21.1	1.46	347	0.86	0.04	11.2	42.1
S048883		4.73	15.70	0.11	3.0	1.050	0.065	3.10	29.1	22.4	1.52	354	0.95	0.03	9.8	39.9
S048884		4.67	16.15	0.10	3.1	0.482	0.075	3.22	31.3	24.6	1.72	411	0.88	0.03	10.2	38.5
S048885		4.83	16.55	0.11	3.2	0.478	0.069	3.33	32.5	25.0	1.56	358	1.10	0.04	10.5	39.5
S048886		4.73	16.45	0.11	3.1	0.884	0.063	3.32	32.5	23.7	1.22	270	1.52	0.03	10.1	36.5
S048887		5.47	18.80	0.12	3.6	2.03	0.078	3.61	34.8	18.0	1.15	361	2.26	0.03	11.2	50.5
S048888		4.55	14.00	0.10	2.7	0.732	0.056	2.63	27.6	33.7	1.30	462	1.46	0.03	8.7	37.4
S048889		1.36	4.69	0.08	0.9	6.94	0.020	0.94	13.7	8.3	0.89	2210	1.81	0.01	2.6	12.9
S048890		4.44	14.55	0.09	3.0	0.434	0.064	2.86	29.1	36.7	1.64	560	0.84	0.03	9.3	35.6

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 12-AUG-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18177275

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl
	Units	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
	LOD	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.01	0.005	0.02
S048851		490	17.9	147.0	<0.002	5.20	1.39	18.6	1	2.1	174.5	0.79	0.05	9.82	0.548	11.55
S048852		440	26.3	158.5	0.004	4.89	0.74	19.5	2	2.7	204	0.83	0.08	11.00	0.545	15.80
S048853		370	22.2	154.5	0.005	5.00	1.82	18.2	2	2.3	94.3	0.78	0.07	10.55	0.512	15.40
S048854		530	19.6	145.0	0.003	4.43	4.27	18.7	2	2.3	166.5	0.72	0.06	9.94	0.482	19.20
S048855		440	20.4	148.0	<0.002	4.02	0.69	16.1	1	2.2	113.5	0.81	<0.05	10.40	0.497	4.65
S048856		410	19.6	128.0	<0.002	1.97	0.54	14.8	1	1.8	129.5	0.71	0.05	9.14	0.463	3.68
S048857		750	28.2	165.0	<0.002	2.06	0.64	18.8	<1	2.3	151.5	0.87	0.07	11.80	0.510	1.73
S048858		460	23.6	165.0	<0.002	0.96	0.57	17.7	1	2.3	135.0	0.87	0.06	11.35	0.534	1.58
S048859		500	31.4	176.0	<0.002	1.09	0.65	18.8	1	2.4	140.0	0.92	0.09	12.30	0.558	2.00
S048860		520	30.3	171.0	<0.002	4.38	2.57	19.3	1	2.4	96.4	0.91	0.05	12.45	0.559	7.84
S048861		600	17.2	128.5	<0.002	4.20	4.26	16.8	<1	2.1	102.0	0.72	<0.05	9.00	0.503	15.50
S048862		70	0.5	1.9	<0.002	0.02	0.15	0.4	1	<0.2	79.9	<0.05	<0.05	0.15	0.012	0.06
S048863		510	21.9	167.0	0.002	5.39	3.44	21.0	1	2.4	92.3	0.87	0.08	11.45	0.580	20.2
S048864		470	22.8	156.0	0.003	5.45	5.73	17.2	1	2.2	61.9	0.78	0.06	10.45	0.549	25.5
S048865		450	23.9	168.0	0.003	5.42	3.36	19.8	1	2.5	66.1	0.84	<0.05	11.40	0.546	20.9
S048866		350	22.2	167.0	0.009	5.13	15.70	19.3	2	2.3	86.4	0.81	0.07	11.40	0.506	25.9
S048867		360	22.5	168.0	0.007	4.99	11.40	19.3	2	2.3	82.1	0.79	0.06	11.85	0.502	24.9
S048868		300	24.7	165.5	0.010	4.67	7.00	17.5	2	2.3	65.1	0.81	<0.05	12.90	0.515	22.4
S048869		300	26.6	177.0	0.013	4.74	5.04	18.8	3	2.5	60.9	0.84	0.08	14.10	0.539	26.5
S048870		310	26.1	189.5	0.013	4.85	1.87	20.3	3	2.6	70.6	0.85	0.06	14.40	0.583	23.0
S048871		480	22.4	161.0	0.010	5.66	26.5	17.8	4	2.3	61.4	0.77	0.06	12.60	0.500	28.7
S048872		510	18.2	72.1	0.002	4.57	124.5	8.1	3	1.4	411	0.40	0.13	5.65	0.261	32.0
S048873		340	22.4	167.5	0.008	5.18	12.85	20.5	2	2.4	69.6	0.83	0.09	11.60	0.531	26.2
S048874		830	16.4	113.0	0.009	4.65	19.65	12.5	2	1.6	49.0	0.57	0.06	8.31	0.398	42.4
S048875		730	16.5	115.0	0.012	4.66	19.60	12.6	2	1.6	47.2	0.59	0.07	8.31	0.404	41.4
S048876		610	18.1	118.5	0.010	4.58	15.60	12.6	2	1.7	71.3	0.65	0.07	8.55	0.440	31.5
S048877		390	18.5	137.5	0.002	4.57	1.46	16.7	1	2.0	104.5	0.73	0.06	9.26	0.528	13.85
S048878		350	18.9	134.5	0.004	3.24	0.57	15.6	1	1.9	125.5	0.68	0.05	10.00	0.493	8.05
S048879		370	19.6	138.0	0.005	3.32	0.59	16.3	1	2.0	166.5	0.68	0.06	9.06	0.512	7.08
S048880		1190	20.1	156.0	0.003	3.08	0.54	17.7	1	2.1	199.0	0.79	0.05	9.76	0.508	5.21
S048881		380	18.5	135.5	0.002	3.15	0.56	16.7	1	1.9	160.0	0.71	0.08	8.68	0.513	4.74
S048882		450	21.1	162.0	0.002	3.02	0.58	18.6	1	2.2	142.5	0.83	0.07	10.40	0.550	5.53
S048883		470	19.1	142.5	0.003	2.22	0.60	16.7	1	2.0	151.5	0.72	0.07	9.49	0.507	4.85
S048884		580	19.3	147.5	0.002	1.54	0.55	17.3	1	2.0	165.0	0.78	0.06	9.67	0.520	2.74
S048885		490	21.8	155.5	0.003	1.93	0.59	16.9	1	2.1	161.0	0.78	<0.05	10.35	0.521	3.56
S048886		360	20.3	156.0	0.002	2.70	0.57	16.8	2	2.2	104.5	0.76	0.05	10.10	0.496	3.45
S048887		420	23.3	169.0	0.004	5.15	2.14	19.9	1	2.7	141.0	0.84	0.05	11.20	0.551	8.76
S048888		400	18.8	120.0	0.003	2.69	0.55	14.5	2	2.2	152.0	0.65	0.07	8.52	0.476	3.06
S048889		330	7.3	40.8	0.002	1.44	43.9	5.4	1	0.7	1025	0.19	<0.05	3.30	0.088	23.3
S048890		470	19.3	136.0	0.003	1.95	0.61	14.9	1	2.0	152.0	0.70	0.06	8.63	0.501	3.01

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.
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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 12-AUG-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18177275

Sample Description	Method Analyte Units LOD	ME-MS61 U ppm 0.1	ME-MS61 V ppm 1	ME-MS61 W ppm 0.1	ME-MS61 Y ppm 0.1	ME-MS61 Zn ppm 2	ME-MS61 Zr ppm 0.5	As-OG62 As % 0.001
S048851		2.1	142	7.9	23.1	97	109.5	
S048852		2.9	156	6.3	23.4	103	121.5	
S048853		2.7	146	7.7	21.7	92	115.5	
S048854		2.5	135	9.5	22.2	94	107.5	
S048855		2.2	125	2.7	22.6	110	112.5	
S048856		1.9	128	5.9	19.2	97	100.5	
S048857		2.4	132	2.0	28.3	95	118.5	
S048858		2.4	133	3.1	23.3	132	119.5	
S048859		2.6	140	3.6	25.7	119	125.5	
S048860		2.6	140	5.2	26.3	118	129.0	
S048861		1.9	129	9.9	21.6	89	99.4	
S048862		0.2	3	0.1	2.8	3	2.7	
S048863		2.7	162	10.3	25.5	129	125.0	
S048864		2.5	149	11.4	23.9	108	113.5	
S048865		3.0	157	10.5	25.0	99	122.0	
S048866		3.9	151	11.0	22.6	108	121.5	
S048867		4.0	152	10.7	23.2	105	122.5	
S048868		2.9	144	12.0	21.3	105	124.5	
S048869		3.4	158	13.2	23.5	101	134.0	
S048870		3.9	166	6.9	23.1	140	138.0	
S048871		3.9	145	12.9	24.2	126	120.5	1.145
S048872		2.4	73	11.1	20.4	128	61.6	
S048873		4.1	167	11.4	22.3	104	128.5	
S048874		3.1	125	8.8	23.2	91	98.5	
S048875		3.1	128	9.1	22.9	80	95.5	
S048876		2.8	133	9.9	24.7	122	98.6	
S048877		2.1	149	5.4	19.4	94	104.5	
S048878		2.1	136	2.1	18.5	85	103.5	
S048879		2.0	142	1.4	17.6	89	104.0	
S048880		2.2	142	1.3	26.8	92	112.5	
S048881		1.9	145	1.2	18.6	190	100.5	
S048882		2.3	154	2.0	21.9	100	120.5	
S048883		2.0	147	2.5	18.8	96	102.5	
S048884		2.0	148	2.2	21.9	97	106.0	
S048885		2.3	144	2.4	20.9	99	110.0	
S048886		2.1	142	1.6	19.4	99	111.5	
S048887		3.1	166	5.5	22.3	115	121.0	
S048888		1.9	143	1.9	17.2	97	94.7	
S048889		6.0	32	18.3	15.1	23	31.1	
S048890		1.9	141	2.5	19.7	116	100.5	

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Project: Nadaleen

Finalized Date: 12-AUG-2018
Account: RCM

CERTIFICATE OF ANALYSIS WH18177275

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Applies to Method: REE's may not be totally soluble in this method.
ME-MS61

LABORATORY ADDRESSES

Applies to Method: Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.

CRU-31	CRU-QC	LOG-21	LOG-21d
LOG-23	PUL-31	PUL-31d	PUL-QC
SPL-21	SPL-21d	WEI-21	

Applies to Method: Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

As-OG62	Au-AA25	Hg-MS42	ME-MS61
ME-OG62			

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Finalized Date: 12-AUG-2018
Account: RCM

CERTIFICATE WH18177288

Project: Nadaleen

P.O. No.: N18-037

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 23-JUL-2018.

The following have access to data associated with this certificate:

ANDREW CARNE	JULIA LANE	

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
LOG-23	Pulp Login - Rcvd with Barcode
LOG-21d	Sample logging - ClientBarCode Dup
SPL-21d	Split sample - duplicate
PUL-31d	Pulverize Split - duplicate

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid ICP-MS	
Hg-MS42	Trace Hg by ICPMS	ICP-MS

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:

Colin Ramshaw, Vancouver Laboratory Manager

ALS Canada Ltd.

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Finalized Date: 12-AUG-2018
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Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18177288

Sample Description	Method	WEI-21	Au-AA25	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Recvd Wt.	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu
	Units	kg	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.02	0.01	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2
S048891		11.85	<0.01	0.05	6.77	51.9	230	1.94	0.25	2.27	0.09	61.0	19.0	76	33.9	55.7
S048892		11.65	0.02	0.05	5.84	44.1	200	1.52	0.19	2.88	0.13	54.2	18.1	73	25.8	50.3
S048893		12.50	<0.01	0.07	3.53	23.9	160	0.77	0.11	1.81	0.06	32.4	12.7	58	9.17	33.2
S048894		7.67	0.01	0.05	2.74	130.5	150	0.65	0.10	2.77	0.08	26.5	8.2	44	7.10	21.7
S048895		11.71	0.01	0.09	6.76	279	250	2.18	0.28	1.58	0.23	61.0	19.1	77	23.6	58.3
S048896		10.48	0.03	0.08	5.41	225	250	1.49	0.20	3.36	0.17	46.5	15.7	56	17.05	48.1
S048897		11.40	<0.01	0.07	6.96	38.8	250	2.34	0.27	3.47	0.23	66.0	21.2	69	25.8	59.3
S048898		11.25	<0.01	0.08	7.12	62.1	250	2.23	0.27	2.59	0.22	65.8	22.5	74	26.5	60.5
S048899		11.29	0.02	0.06	6.26	266	270	1.72	0.23	2.76	0.11	57.4	21.9	71	19.60	55.7
S048900		12.10	0.02	0.05	4.73	78.5	220	1.20	0.15	2.29	0.08	42.8	19.4	72	16.80	46.4
S048901		12.25	0.04	0.05	4.79	123.5	220	1.25	0.16	2.57	0.13	44.3	19.2	71	18.10	45.6
S048902		12.11	0.05	0.05	5.76	131.0	200	1.66	0.19	2.75	0.10	52.1	19.1	75	19.65	50.7
S048903		11.53	0.28	0.06	4.56	316	460	1.05	0.13	3.03	0.08	40.9	17.7	71	14.65	42.2
S048904		0.26	1.09	1.59	1.58	899	200	0.44	0.13	28.7	0.67	19.40	4.8	25	3.53	46.2
S048905		12.12	0.01	0.08	7.01	74.2	350	2.02	0.26	1.70	0.06	65.3	21.9	79	24.8	58.3
S048906		11.97	0.01	0.05	6.88	85.9	200	1.91	0.26	1.77	0.03	64.0	23.2	79	28.1	62.1
S048907		11.83	0.01	0.07	7.10	88.0	210	2.06	0.28	1.82	0.02	64.8	21.1	76	29.0	63.1
S048908		12.28	<0.01	0.05	6.80	104.0	220	2.16	0.27	1.85	0.10	65.5	19.7	77	26.2	60.3
S048909		12.26	<0.01	0.06	5.11	109.5	240	1.56	0.19	1.97	<0.02	49.5	17.5	63	23.8	46.3
S048910		11.91	<0.01	0.06	6.00	94.9	220	2.07	0.23	1.92	0.02	58.2	18.4	70	35.3	62.2
S048911		12.36	<0.01	0.06	5.68	97.1	220	1.95	0.21	1.85	0.02	53.5	19.1	68	25.9	52.4
S048912		12.21	<0.01	0.04	3.87	34.5	770	1.12	0.15	2.94	<0.02	36.9	11.6	48	21.0	29.7
S048913		0.26	1.44	0.97	3.18	>10000	210	0.91	0.13	18.20	0.38	35.0	8.5	40	8.75	28.2
S048914		12.43	0.13	0.09	4.97	373	320	1.76	0.20	3.14	0.03	47.2	16.0	52	21.2	39.4
S048915		11.71	<0.01	0.08	5.70	126.5	300	2.18	0.21	2.63	0.02	56.3	21.2	60	25.6	48.2
S048916		12.59	0.02	0.05	5.58	332	180	2.00	0.20	2.67	0.03	50.8	17.4	61	23.9	50.8
S048917		12.20	0.05	0.06	7.22	574	230	2.68	0.28	2.66	0.24	65.7	24.0	74	30.7	65.3
S048918		12.57	<0.01	0.07	6.97	277	260	2.51	0.25	2.70	0.06	63.1	24.5	74	27.4	66.1
S048919		12.16	<0.01	0.07	7.18	46.3	230	2.35	0.27	1.93	0.05	65.8	25.3	80	36.4	67.0
S048920		1.94	<0.01	0.68	4.98	12.7	200	1.20	0.14	16.35	0.13	46.2	18.3	50	12.40	55.6
S048921		6.94	<0.01	<0.01	0.11	0.5	40	0.10	0.02	33.8	<0.02	1.15	1.1	1	0.13	2.8
S048922		3.32	<0.01	0.05	6.27	20.7	230	1.79	0.23	16.90	<0.02	73.5	14.9	39	28.2	25.2
S048923		10.52	<0.01	0.05	7.60	17.5	270	2.16	0.28	12.20	0.02	79.2	15.1	53	32.6	28.9
S048924		11.13	0.01	0.13	8.05	18.5	310	2.44	0.28	7.81	0.02	84.7	16.2	61	42.1	28.0
S048925		3.07	<0.01	0.06	8.16	23.6	310	2.62	0.29	5.28	<0.02	90.3	17.5	59	32.3	29.0
S048926		3.11	<0.01	0.06	7.91	21.3	300	2.33	0.29	5.91	0.03	85.7	17.2	59	32.3	28.2
S048927		10.72	<0.01	0.06	7.30	33.7	280	2.25	0.27	10.05	0.03	79.7	15.2	48	33.1	26.3
S048928		8.00	<0.01	0.05	7.07	171.5	280	2.18	0.27	9.09	0.03	78.3	13.5	47	19.95	27.1
S048929		6.20	<0.01	0.12	8.21	50.1	310	2.94	0.32	4.11	0.02	90.4	16.9	58	30.0	33.1
S048930		<0.02	<0.01	0.14	8.37	56.2	310	3.04	0.32	4.12	<0.02	94.8	18.0	58	30.4	34.9

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
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Finalized Date: 12-AUG-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18177288

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Hg-MS42	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni
	Units	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2
S048891		4.98	16.95	0.28	2.9	0.202	0.072	3.35	29.6	52.4	2.10	580	0.47	0.04	11.0	37.1
S048892		4.99	14.95	0.17	2.8	0.176	0.063	2.85	25.6	55.3	2.17	703	0.41	0.03	9.4	35.0
S048893		3.57	9.15	0.06	1.8	0.097	0.033	1.40	16.4	71.2	1.22	435	0.50	0.02	5.4	29.5
S048894		3.18	7.04	<0.05	1.4	0.165	0.027	1.11	15.9	46.4	1.34	574	0.45	0.02	4.0	18.0
S048895		5.62	17.85	0.20	3.1	1.765	0.077	3.32	30.7	39.6	1.33	374	1.84	0.03	10.3	44.0
S048896		4.77	13.55	0.08	2.9	1.155	0.056	2.59	23.4	24.3	1.64	769	0.73	0.02	7.7	33.3
S048897		5.60	17.90	0.20	3.2	0.342	0.075	3.47	32.6	31.0	2.40	731	0.92	0.03	11.6	39.3
S048898		5.28	17.90	0.27	3.7	0.198	0.076	3.51	32.0	38.3	2.45	564	0.56	0.03	11.2	39.8
S048899		5.48	16.60	0.20	2.9	0.281	0.068	2.86	28.3	69.5	2.03	637	0.54	0.03	10.2	42.5
S048900		4.80	12.55	0.12	2.4	0.103	0.049	2.06	21.1	110.0	1.86	520	0.45	0.02	7.6	35.6
S048901		4.72	12.60	0.20	2.5	0.138	0.049	2.02	21.3	96.3	1.84	623	0.44	0.02	7.8	35.3
S048902		4.89	15.05	0.24	2.6	0.144	0.058	2.67	25.8	65.4	2.11	655	0.49	0.03	9.4	36.1
S048903		4.56	11.80	0.11	2.3	0.263	0.045	2.04	20.1	78.6	1.91	697	0.46	0.02	7.2	32.9
S048904		1.17	4.07	<0.05	0.7	2.08	0.020	0.69	10.0	7.1	1.24	4700	1.40	0.10	2.1	12.8
S048905		5.26	18.50	0.26	3.4	0.190	0.071	3.44	32.7	55.6	2.02	478	0.62	0.03	11.2	41.5
S048906		5.71	18.10	0.30	3.3	0.060	0.074	3.33	31.7	60.2	2.19	537	0.45	0.03	11.4	41.7
S048907		5.51	18.45	0.30	3.6	0.051	0.073	3.49	32.0	43.6	2.28	571	0.32	0.03	11.5	42.5
S048908		5.19	18.15	0.32	3.2	0.067	0.072	3.31	32.0	47.3	2.28	590	0.47	0.03	11.6	38.2
S048909		4.57	14.05	0.11	2.6	0.061	0.051	2.35	23.0	84.6	1.95	577	0.28	0.05	9.0	33.5
S048910		4.77	16.95	0.20	2.9	0.094	0.063	2.85	27.8	86.7	2.12	510	0.33	0.07	10.8	37.5
S048911		4.71	15.95	0.19	2.7	0.104	0.055	2.85	25.1	54.9	2.05	486	0.29	0.03	10.1	36.1
S048912		3.73	10.25	0.09	1.9	0.040	0.036	1.84	17.7	42.3	1.82	1140	0.26	0.19	6.4	21.2
S048913		2.18	8.47	<0.05	1.5	4.56	0.026	1.50	16.8	14.1	2.25	1310	1.53	0.11	4.9	19.4
S048914		4.23	13.60	<0.05	2.5	0.611	0.050	2.47	22.6	20.0	1.57	1120	0.33	0.02	7.9	29.0
S048915		4.53	15.65	0.16	2.8	0.327	0.060	2.85	26.6	26.9	1.66	655	0.32	0.03	10.3	35.2
S048916		4.88	14.75	0.07	2.9	0.253	0.056	2.75	24.2	24.0	1.54	699	0.27	0.03	9.6	34.4
S048917		5.87	19.75	0.19	3.4	0.334	0.077	3.51	31.3	38.2	1.53	761	0.55	0.03	13.4	44.4
S048918		5.37	19.35	0.11	3.2	0.134	0.070	3.40	29.8	48.6	2.03	833	0.41	0.03	12.7	41.9
S048919		5.73	19.95	0.18	3.3	0.065	0.074	3.50	30.8	91.3	2.47	664	0.43	0.04	13.3	46.1
S048920		4.53	11.90	<0.05	1.4	0.074	0.043	1.40	21.0	33.0	2.61	1100	0.54	0.76	5.7	32.7
S048921		0.17	0.35	<0.05	0.1	<0.005	<0.005	0.04	1.2	1.7	1.73	133	0.07	0.04	0.2	0.2
S048922		2.74	15.35	<0.05	1.5	0.108	0.039	2.81	37.1	36.7	1.39	806	0.24	0.08	7.2	27.4
S048923		3.16	18.60	<0.05	2.0	0.130	0.046	3.47	41.9	26.5	1.56	633	0.30	0.09	8.8	29.4
S048924		3.89	20.2	0.09	2.7	0.177	0.054	3.67	43.6	51.3	1.86	775	0.34	0.10	10.4	33.9
S048925		4.10	21.1	0.23	2.7	0.381	0.057	3.75	45.0	36.9	1.95	1020	0.40	0.09	11.5	35.0
S048926		3.95	20.4	0.26	2.8	0.346	0.060	3.73	42.3	36.9	1.90	1130	0.42	0.09	10.7	33.8
S048927		3.41	18.55	0.08	2.5	0.693	0.056	3.38	40.3	41.7	1.65	689	0.41	0.08	9.9	29.5
S048928		3.79	17.85	<0.05	2.4	0.823	0.048	3.31	39.7	17.0	1.84	651	0.33	0.07	9.6	27.4
S048929		5.11	22.2	0.26	3.1	0.203	0.066	3.85	45.1	63.3	1.85	1560	0.34	0.08	11.9	33.4
S048930		5.22	23.3	0.33	3.0	0.227	0.062	3.94	47.0	67.2	1.87	1580	0.32	0.08	12.6	34.9

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 12-AUG-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18177288

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl
	Units	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
	LOD	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.01	0.005	0.02
S048891		470	19.8	170.0	<0.002	0.88	0.51	18.0	1	2.0	131.5	0.77	0.06	9.27	0.542	1.17
S048892		460	16.4	147.0	<0.002	0.62	0.48	16.4	1	1.7	165.0	0.68	0.05	7.98	0.509	1.14
S048893		270	10.9	65.8	<0.002	0.35	0.31	9.4	1	1.0	101.5	0.40	<0.05	5.11	0.376	0.55
S048894		350	12.6	52.4	<0.002	0.76	0.43	6.5	1	0.8	153.5	0.30	<0.05	4.17	0.265	0.97
S048895		440	27.6	150.5	0.003	4.21	1.00	20.4	2	2.1	125.5	0.76	0.08	9.81	0.553	5.07
S048896		440	18.5	117.5	<0.002	3.63	1.35	14.6	1	1.6	180.0	0.68	0.05	8.05	0.439	4.25
S048897		760	15.9	157.5	<0.002	2.43	0.61	18.6	1	2.2	170.5	0.88	0.05	10.30	0.556	1.53
S048898		620	18.4	160.0	<0.002	0.80	0.53	18.8	1	2.2	149.5	0.92	0.08	10.30	0.554	0.96
S048899		480	17.1	132.5	<0.002	2.26	0.69	18.7	1	1.9	185.5	0.76	<0.05	8.68	0.530	1.73
S048900		380	13.7	97.6	<0.002	0.53	0.50	14.4	1	1.4	148.5	0.58	<0.05	6.23	0.497	0.89
S048901		400	11.9	94.6	<0.002	1.13	0.47	14.8	1	1.4	131.5	0.59	<0.05	6.73	0.487	0.97
S048902		440	12.7	125.5	<0.002	1.08	0.46	17.1	1	1.7	179.0	0.64	0.05	7.70	0.526	1.06
S048903		350	11.5	94.3	<0.002	0.87	0.69	14.6	1	1.3	250	0.52	<0.05	5.87	0.473	1.46
S048904		400	60.5	29.6	<0.002	0.71	8.20	5.8	2	0.7	1185	0.16	0.05	2.54	0.081	6.45
S048905		490	22.2	173.5	<0.002	0.87	0.81	20.0	<1	2.2	119.0	0.86	0.06	10.10	0.558	1.39
S048906		540	15.8	179.0	<0.002	0.34	0.53	19.8	1	2.1	111.5	0.87	0.08	9.96	0.582	1.15
S048907		540	12.4	186.5	<0.002	0.24	0.39	19.9	1	2.2	113.5	0.89	0.09	10.30	0.579	1.17
S048908		530	14.3	179.0	<0.002	0.17	0.41	20.9	1	2.1	116.0	0.81	0.07	9.97	0.587	1.09
S048909		580	17.2	121.5	<0.002	0.25	0.49	15.5	1	1.6	106.0	0.56	<0.05	7.45	0.451	0.83
S048910		470	16.2	156.5	<0.002	0.33	0.55	18.9	1	1.9	108.0	0.66	0.05	8.81	0.503	0.98
S048911		460	15.1	143.0	<0.002	0.37	0.51	17.5	1	1.8	128.0	0.62	0.05	8.03	0.493	1.00
S048912		360	8.7	88.6	<0.002	0.17	0.32	10.4	1	1.2	167.0	0.42	<0.05	6.27	0.305	0.59
S048913		440	17.8	64.0	0.002	2.43	53.6	7.6	3	1.1	846	0.32	0.09	5.00	0.195	17.95
S048914		360	14.5	119.5	<0.002	3.03	1.64	13.6	1	1.6	166.0	0.54	0.07	7.75	0.381	3.05
S048915		560	17.4	139.0	<0.002	3.00	0.93	17.5	1	1.8	147.5	0.61	0.07	8.51	0.474	2.27
S048916		490	13.9	129.5	<0.002	3.93	1.17	16.5	<1	1.7	118.0	0.64	0.05	8.31	0.493	2.25
S048917		530	23.2	164.5	<0.002	5.38	1.55	22.9	1	2.3	150.5	0.79	0.06	10.30	0.606	2.44
S048918		540	16.8	162.5	<0.002	2.74	0.98	22.0	<1	2.2	139.5	0.78	0.06	9.95	0.592	1.73
S048919		530	17.5	179.0	<0.002	0.21	0.54	23.1	1	2.3	108.0	0.81	0.08	10.10	0.611	1.13
S048920		440	8.7	61.2	<0.002	0.61	0.30	14.3	1	1.1	380	0.35	<0.05	5.06	0.370	0.75
S048921		60	<0.5	1.1	<0.002	0.02	0.08	0.3	2	<0.2	80.8	<0.05	<0.05	0.09	0.007	<0.02
S048922		280	13.9	122.5	<0.002	1.18	0.34	10.0	1	1.5	392	0.47	0.05	9.72	0.215	1.62
S048923		430	16.7	150.5	<0.002	1.51	0.41	11.5	1	1.9	306	0.58	0.05	11.85	0.267	2.06
S048924		440	19.1	168.5	<0.002	1.95	0.43	13.9	2	2.2	203	0.71	0.06	13.20	0.340	2.32
S048925		350	19.0	165.0	<0.002	2.24	0.47	15.6	1	2.4	146.0	0.69	0.06	13.00	0.362	2.41
S048926		330	18.7	150.5	<0.002	2.04	0.47	14.5	1	2.2	160.0	0.75	<0.05	13.50	0.359	2.40
S048927		350	17.6	150.5	0.002	2.15	0.83	13.2	1	2.0	266	0.66	<0.05	12.10	0.317	2.95
S048928		550	15.2	140.5	<0.002	3.02	1.82	12.5	1	1.9	251	0.63	0.07	11.60	0.307	3.01
S048929		670	17.3	154.5	<0.002	3.20	0.60	16.3	1	2.3	141.5	0.82	<0.05	14.35	0.388	2.17
S048930		690	17.7	163.5	<0.002	3.29	0.66	17.2	1	2.5	145.0	0.81	<0.05	13.80	0.393	2.16

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Finalized Date: 12-AUG-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18177288

Sample Description	Method Analyte Units LOD	ME-MS61 U ppm 0.1	ME-MS61 V ppm 1	ME-MS61 W ppm 0.1	ME-MS61 Y ppm 0.1	ME-MS61 Zn ppm 2	ME-MS61 Zr ppm 0.5
S048891		1.9	145	1.3	20.8	89	110.5
S048892		1.6	139	1.3	18.5	93	97.1
S048893		1.0	109	1.7	10.1	54	71.7
S048894		0.9	79	1.3	8.9	49	48.6
S048895		2.2	172	4.8	20.3	125	110.5
S048896		1.8	130	6.0	16.6	105	85.9
S048897		2.1	141	3.3	23.5	314	111.0
S048898		2.1	143	2.2	22.9	230	110.5
S048899		1.8	148	3.8	19.7	90	102.5
S048900		1.3	143	2.3	15.0	70	89.0
S048901		1.4	139	1.9	15.3	92	83.7
S048902		1.5	148	1.9	18.4	89	99.6
S048903		1.2	137	2.3	13.8	75	79.2
S048904		4.0	27	8.4	14.4	128	27.1
S048905		2.1	156	2.3	21.5	74	114.0
S048906		2.0	159	1.5	22.5	62	115.5
S048907		2.2	155	1.5	24.0	60	115.5
S048908		2.1	157	2.1	22.8	91	121.0
S048909		1.5	122	1.1	18.7	54	93.6
S048910		1.8	137	1.1	20.6	60	108.5
S048911		1.6	131	1.2	19.2	57	102.5
S048912		1.2	82	0.7	14.0	34	76.1
S048913		4.0	58	4.7	16.1	61	58.1
S048914		1.6	108	7.0	16.4	47	88.3
S048915		1.7	129	2.0	20.7	57	103.0
S048916		1.6	131	4.7	19.0	60	97.5
S048917		2.0	160	8.1	25.2	133	128.0
S048918		1.9	159	3.7	23.1	83	121.5
S048919		2.0	163	1.3	23.8	76	126.0
S048920		1.8	95	3.1	18.0	83	51.2
S048921		0.2	2	<0.1	2.3	4	1.9
S048922		2.6	47	0.9	15.8	68	56.4
S048923		2.9	59	1.1	16.0	76	71.7
S048924		2.8	71	1.6	18.0	83	91.1
S048925		2.6	75	1.4	18.4	91	101.5
S048926		2.8	75	1.5	17.2	90	96.7
S048927		2.8	66	1.5	16.1	76	89.9
S048928		2.2	66	5.2	17.2	64	88.7
S048929		2.8	85	2.5	23.5	70	109.5
S048930		2.7	86	2.5	24.6	72	115.0

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Project: Nadaleen

Finalized Date: 12-AUG-2018
Account: RCM

CERTIFICATE OF ANALYSIS WH18177288

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Applies to Method: REE's may not be totally soluble in this method.
ME-MS61

LABORATORY ADDRESSES

Applies to Method: Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.

CRU-31	CRU-QC	LOG-21	LOG-21d
LOG-23	PUL-31	PUL-31d	PUL-QC
SPL-21	SPL-21d	WEI-21	

Applies to Method: Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Au-AA25	Hg-MS42	ME-MS61

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VANCOUVER BC V6B 1L8

Finalized Date: 12-AUG-2018
Account: RCM

CERTIFICATE WH18177300

Project: Nadaleen

P.O. No.: N18-038

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 23-JUL-2018.

The following have access to data associated with this certificate:

ANDREW CARNE	JULIA LANE	

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
LOG-23	Pulp Login - Rcvd with Barcode
LOG-21d	Sample logging - ClientBarCode Dup
SPL-21d	Split sample - duplicate
PUL-31d	Pulverize Split - duplicate

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid ICP-MS	
Hg-MS42	Trace Hg by ICPMS	ICP-MS

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:

Colin Ramshaw, Vancouver Laboratory Manager

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Finalized Date: 12-AUG-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18177300

Sample Description	Method	WEI-21	Au-AA25	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Recvd Wt.	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu
	Units	kg	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.02	0.01	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2
S050301		11.85	<0.01	0.06	3.18	19.7	190	1.13	0.10	19.15	0.17	37.7	6.7	36	4.91	23.1
S050302		11.62	<0.01	0.03	0.87	6.8	70	0.33	0.03	32.7	0.44	12.25	1.5	12	1.85	5.0
S050303		12.78	<0.01	0.02	2.73	7.9	140	1.07	0.09	23.0	0.21	31.3	4.1	28	5.61	26.0
S050304		10.82	<0.01	0.01	4.10	13.0	280	1.46	0.11	13.05	0.15	46.8	6.0	45	8.92	18.0
S050305		11.09	<0.01	0.01	2.29	11.6	130	0.74	0.06	20.3	0.17	31.0	3.5	25	4.16	16.1
S050306		10.60	<0.01	0.03	2.89	13.5	190	1.00	0.08	17.25	0.11	33.9	4.8	32	5.64	19.2
S050307		8.88	<0.01	0.07	2.40	28.2	210	0.81	0.07	23.0	0.11	29.5	4.4	25	4.34	16.5
S050308		<0.02	<0.01	0.08	2.41	28.8	210	0.98	0.07	23.3	0.10	30.9	4.4	25	4.50	17.1
S050309		11.84	<0.01	0.03	2.74	14.5	170	0.99	0.08	21.9	0.07	33.0	4.8	29	5.55	15.3
S050310		11.36	<0.01	0.02	1.77	10.0	140	0.75	0.06	26.7	0.09	22.2	3.1	20	3.11	13.1
S050311		12.28	<0.01	0.01	1.29	6.4	110	0.55	0.04	28.6	0.05	17.50	2.2	16	2.39	11.7
S050312		12.35	<0.01	0.02	1.98	11.1	130	0.76	0.06	25.5	0.07	23.5	2.9	21	3.76	11.7
S050313		10.63	<0.01	0.03	2.80	22.3	220	1.03	0.08	19.95	0.05	31.7	4.3	32	5.05	12.4
S050314		12.06	<0.01	0.02	1.23	38.5	90	0.47	0.04	25.1	0.11	18.80	2.5	15	2.15	7.6
S050315		11.90	<0.01	0.03	0.59	6.0	70	0.33	0.02	32.3	0.26	9.67	1.3	9	1.04	8.5
S050316		11.70	<0.01	0.02	0.60	5.9	80	0.26	0.02	33.0	0.24	9.31	1.2	9	1.11	5.2
S050317		10.85	<0.01	0.02	2.02	18.3	90	0.85	0.07	26.0	0.16	24.3	2.6	23	4.40	18.2
S050318		0.26	1.06	1.50	1.52	845	190	0.37	0.11	27.7	0.68	19.10	3.9	30	3.30	45.6
S050319		11.29	<0.01	0.02	3.37	55.6	150	1.11	0.12	16.50	0.09	36.6	4.5	34	6.57	20.9
S050320		11.46	0.06	0.04	2.80	99.0	130	1.02	0.08	15.15	0.04	32.4	3.7	30	5.03	11.1
S050321		11.11	<0.01	0.01	1.92	35.5	100	0.68	0.06	20.1	0.04	27.3	3.4	20	3.36	9.8
S050322		12.11	<0.01	0.02	2.77	25.9	130	1.05	0.08	21.9	0.11	31.5	4.3	27	5.73	15.9
S050323		11.43	0.01	0.01	2.37	9.9	110	0.93	0.07	24.7	0.11	26.6	4.7	24	4.26	16.1
S050324		11.48	<0.01	0.03	2.31	14.1	120	0.93	0.06	22.6	0.07	27.8	4.2	24	3.91	14.4
S050325		11.92	<0.01	0.03	1.89	15.8	130	0.75	0.05	27.9	0.04	24.0	3.6	21	3.00	12.5
S050326		7.06	<0.01	0.01	0.08	<0.2	20	0.09	0.01	32.6	0.02	1.03	0.6	1	<0.05	1.2
S050327		11.27	<0.01	0.05	3.04	26.5	480	0.97	0.09	17.75	0.04	36.0	6.3	34	5.01	11.8
S050328		11.57	<0.01	0.03	2.00	17.1	150	0.65	0.07	24.7	0.11	21.2	4.0	21	3.00	12.2
S050329		0.26	1.46	0.94	3.10	>10000	200	0.71	0.11	17.70	0.36	34.8	7.3	44	8.73	26.5
S050330		11.85	<0.01	0.03	1.80	38.5	90	0.66	0.05	28.2	0.13	22.1	3.4	21	2.43	11.9
S050331		9.93	<0.01	0.06	3.57	49.8	160	1.03	0.09	14.65	0.08	43.6	6.1	43	4.06	19.8
S050332		10.31	<0.01	0.04	2.52	55.5	110	0.76	0.07	24.6	0.07	30.3	4.2	28	2.47	13.5
S050333		11.86	<0.01	0.05	3.88	57.9	170	1.17	0.12	17.15	0.08	43.5	6.8	42	4.80	25.7
S050334		5.57	<0.01	0.06	3.00	51.6	170	1.02	0.09	21.8	0.09	33.9	5.3	30	2.80	18.6
S050335		6.66	<0.01	0.10	1.97	31.8	150	0.73	0.06	25.4	0.29	25.8	5.2	23	1.48	16.2
S050336		8.41	<0.01	0.08	6.67	31.0	280	1.93	0.24	4.76	0.09	71.9	12.3	63	7.27	184.0
S050337		5.46	<0.01	0.01	7.93	21.0	260	2.17	0.31	2.83	0.11	84.3	12.5	71	10.20	38.0
S050338		5.17	<0.01	0.02	8.19	21.4	270	2.34	0.29	2.82	0.11	88.1	12.9	73	10.05	39.8
S050339		12.40	<0.01	0.03	7.76	19.6	290	2.27	0.32	3.05	0.16	83.4	12.5	73	11.00	40.7
S050340		12.11	<0.01	0.02	7.62	27.4	310	2.02	0.31	2.91	0.15	85.4	13.9	109	12.95	34.2

***** See Appendix Page for comments regarding this certificate *****

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VANCOUVER BC V6B 1L8

Finalized Date: 12-AUG-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18177300

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Hg-MS42	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni
	Units	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2
S050301		1.32	7.92	0.07	1.4	0.048	0.025	1.42	20.2	41.5	2.85	1360	0.39	0.03	5.2	16.1
S050302		0.34	2.19	0.10	0.5	0.032	0.008	0.41	6.7	7.5	1.01	493	0.19	0.01	1.5	2.4
S050303		1.28	6.81	0.13	1.3	0.049	0.019	1.31	16.6	28.5	2.34	425	0.25	0.03	4.5	12.4
S050304		2.12	10.30	0.13	1.9	0.039	0.030	1.98	25.1	44.5	4.53	451	0.37	0.04	6.6	19.5
S050305		1.12	5.84	0.12	1.4	0.028	0.018	1.10	16.1	22.6	3.89	403	0.36	0.03	3.8	10.3
S050306		1.40	7.21	0.15	1.5	0.035	0.021	1.38	18.0	24.6	4.67	401	0.42	0.03	4.8	13.5
S050307		1.18	5.85	0.11	1.2	0.042	0.018	1.11	16.2	27.7	2.11	280	0.19	0.03	3.9	11.8
S050308		1.19	5.99	0.13	1.2	0.037	0.017	1.11	16.9	28.1	2.12	278	0.22	0.03	4.1	11.9
S050309		1.27	6.94	0.14	1.3	0.031	0.022	1.32	17.9	29.0	2.45	248	0.31	0.03	4.5	13.0
S050310		0.84	4.43	0.13	0.8	0.018	0.013	0.87	12.2	11.9	1.90	231	0.23	0.02	2.9	8.7
S050311		0.67	3.38	0.14	0.6	0.016	0.010	0.65	9.6	7.0	1.60	220	0.15	0.01	2.2	5.3
S050312		0.82	5.02	0.12	0.9	0.022	0.013	1.00	12.8	9.6	2.18	242	0.45	0.02	3.3	7.6
S050313		1.22	7.15	0.17	1.5	0.041	0.023	1.34	17.4	12.3	3.69	509	0.45	0.03	4.6	9.3
S050314		1.32	3.08	0.11	0.8	0.055	0.010	0.61	9.6	5.0	3.74	1040	0.21	0.01	2.1	4.2
S050315		0.45	1.51	0.08	0.4	0.051	<0.005	0.29	5.3	2.6	1.39	726	0.17	0.01	1.0	1.6
S050316		0.35	1.59	0.11	0.4	0.044	<0.005	0.30	5.2	2.4	1.06	653	0.18	0.01	1.1	1.6
S050317		0.83	5.09	0.13	1.0	0.185	0.016	1.04	12.9	7.5	1.91	832	0.21	0.02	3.3	5.5
S050318		1.13	3.89	0.06	0.7	2.28	0.019	0.66	9.4	6.3	1.19	4500	1.37	0.10	2.0	13.0
S050319		1.22	8.70	0.13	1.5	0.243	0.025	1.72	19.7	13.0	4.91	727	0.31	0.02	5.5	9.5
S050320		1.67	7.33	0.15	1.4	0.274	0.025	1.45	16.7	11.5	6.64	698	0.35	0.02	4.6	8.6
S050321		1.40	4.84	0.11	0.9	0.185	0.014	1.02	14.1	7.8	5.17	428	0.30	0.01	3.0	8.6
S050322		1.02	7.09	0.14	1.1	0.154	0.022	1.50	17.1	12.3	1.63	246	0.14	0.02	4.4	12.9
S050323		0.85	6.01	0.15	1.0	0.107	0.018	1.30	14.2	10.3	1.95	253	0.18	0.02	3.8	12.7
S050324		0.99	6.01	0.15	1.2	0.054	0.016	1.25	14.6	12.3	2.60	251	0.51	0.02	3.8	10.7
S050325		0.76	4.97	0.15	0.8	0.044	0.017	0.99	12.7	10.2	1.39	264	0.36	0.02	3.0	9.9
S050326		0.11	0.25	0.15	0.1	<0.005	<0.005	0.02	1.1	0.9	1.59	108	<0.05	0.03	0.1	<0.2
S050327		1.78	7.79	0.14	1.4	0.109	0.029	1.60	19.0	22.7	4.30	375	0.46	0.02	4.9	14.8
S050328		1.40	5.06	0.12	0.8	0.066	0.015	0.95	11.0	17.8	2.66	397	0.25	0.02	3.1	10.4
S050329		2.11	8.05	0.10	1.6	5.10	0.029	1.43	17.9	13.2	2.18	1270	1.45	0.10	4.5	19.0
S050330		0.70	4.56	0.13	0.9	0.038	0.017	0.83	11.4	23.0	1.48	392	0.24	0.02	3.0	8.4
S050331		1.52	9.07	0.14	2.1	0.049	0.025	1.55	22.8	29.9	3.72	501	0.58	0.03	6.0	17.0
S050332		1.11	6.33	0.13	1.2	0.027	0.018	0.89	16.6	20.1	1.66	720	0.48	0.02	4.1	12.5
S050333		1.64	10.05	0.15	1.9	0.037	0.032	1.51	23.8	33.0	3.54	1100	0.41	0.04	6.5	18.9
S050334		1.31	7.58	0.14	1.5	0.033	0.021	1.07	18.6	24.7	2.60	1490	0.35	0.03	5.0	15.3
S050335		0.94	5.11	0.15	0.9	0.032	0.013	0.63	13.2	17.7	1.86	2150	0.74	0.02	3.3	11.8
S050336		2.98	16.85	0.15	2.6	0.014	0.043	2.49	39.7	116.5	2.90	1260	0.44	0.05	11.0	43.8
S050337		3.93	20.5	0.14	2.8	0.007	0.051	2.86	46.6	127.5	2.69	811	0.11	0.09	12.7	58.0
S050338		4.05	19.75	0.22	2.9	0.005	0.062	2.97	47.4	121.5	2.78	809	0.13	0.09	12.8	58.6
S050339		3.67	18.25	0.21	2.8	<0.005	0.055	2.91	43.8	69.6	2.74	924	0.11	0.14	12.1	52.3
S050340		3.86	18.65	0.24	2.8	<0.005	0.054	2.92	44.6	63.1	2.78	1060	0.08	0.07	12.4	52.4

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Finalized Date: 12-AUG-2018
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Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18177300

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl
	Units	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
	LOD	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.01	0.005	0.02
S050301		370	11.4	65.8	<0.002	0.09	0.34	4.9	2	1.2	436	0.39	<0.05	6.43	0.152	0.42
S050302		290	4.8	17.6	<0.002	0.07	0.19	1.5	2	0.3	941	0.11	<0.05	1.83	0.043	0.14
S050303		350	5.9	57.0	<0.002	0.06	0.21	4.3	2	1.0	503	0.35	<0.05	5.50	0.131	0.32
S050304		420	5.7	86.0	<0.002	0.06	0.25	6.5	1	1.5	238	0.51	<0.05	8.40	0.196	0.44
S050305		340	6.3	45.9	<0.002	0.05	0.22	3.6	2	0.8	535	0.29	<0.05	4.88	0.110	0.23
S050306		340	6.9	58.9	<0.002	0.05	0.23	4.5	2	1.0	306	0.36	<0.05	6.02	0.140	0.31
S050307		290	4.2	49.0	<0.002	0.12	0.28	3.8	2	0.8	454	0.29	<0.05	4.83	0.115	0.36
S050308		280	4.3	51.4	<0.002	0.12	0.24	3.9	1	0.9	453	0.31	<0.05	5.09	0.115	0.37
S050309		330	5.5	58.8	<0.002	0.06	0.22	4.4	2	1.0	460	0.33	<0.05	5.60	0.133	0.36
S050310		200	4.2	37.0	<0.002	0.04	0.19	2.9	1	0.6	542	0.23	<0.05	3.60	0.085	0.23
S050311		160	3.5	26.4	<0.002	0.02	0.16	2.1	1	0.5	643	0.17	<0.05	2.62	0.062	0.15
S050312		230	5.1	40.7	<0.002	0.07	0.22	3.2	2	0.7	548	0.24	<0.05	4.22	0.095	0.23
S050313		350	5.7	52.2	<0.002	0.11	0.30	4.5	2	1.0	404	0.36	<0.05	6.01	0.135	0.34
S050314		280	3.4	22.7	<0.002	0.13	0.29	2.1	2	0.5	413	0.15	<0.05	2.65	0.059	0.24
S050315		240	3.6	10.8	<0.002	0.07	0.16	1.0	1	0.2	781	0.08	<0.05	1.29	0.029	0.13
S050316		250	4.1	11.3	<0.002	0.07	0.17	1.0	2	0.3	734	0.08	<0.05	1.33	0.030	0.13
S050317		360	9.4	41.1	<0.002	0.29	0.31	3.3	2	0.8	493	0.26	<0.05	4.06	0.095	0.44
S050318		390	56.0	27.0	0.002	0.69	8.07	5.2	1	0.7	1140	0.15	<0.05	2.24	0.078	5.70
S050319		340	6.7	64.4	<0.002	0.39	0.55	5.2	1	1.3	265	0.42	<0.05	6.50	0.158	0.80
S050320		350	5.7	53.3	<0.002	0.35	1.07	4.4	1	1.0	227	0.34	<0.05	5.54	0.134	1.38
S050321		230	5.8	35.5	<0.002	0.45	0.38	3.0	2	0.7	353	0.22	<0.05	3.65	0.089	0.68
S050322		290	6.5	53.7	<0.002	0.57	0.35	4.4	1	1.0	459	0.33	<0.05	5.09	0.129	0.45
S050323		240	5.9	46.6	<0.002	0.18	0.21	3.7	1	0.8	487	0.28	<0.05	4.39	0.110	0.27
S050324		280	6.1	45.6	<0.002	0.11	0.25	3.6	2	0.8	496	0.29	<0.05	4.52	0.111	0.31
S050325		250	4.6	37.9	0.002	0.07	0.23	3.1	2	0.7	660	0.23	<0.05	3.65	0.087	0.30
S050326		70	<0.5	0.7	<0.002	0.01	0.09	0.2	1	<0.2	80.2	<0.05	<0.05	0.08	0.005	<0.02
S050327		450	7.6	61.8	<0.002	0.53	0.43	4.8	2	1.1	376	0.37	<0.05	5.84	0.144	0.47
S050328		300	3.6	38.5	<0.002	0.14	0.21	3.2	1	0.7	634	0.24	<0.05	3.66	0.092	0.24
S050329		430	15.2	62.4	0.002	2.36	56.3	6.7	2	1.1	818	0.33	0.10	4.73	0.193	16.00
S050330		300	4.7	33.1	<0.002	0.10	0.26	2.9	2	0.6	842	0.22	<0.05	3.56	0.087	0.21
S050331		490	8.9	61.4	<0.002	0.26	0.44	5.4	2	1.3	316	0.47	<0.05	7.68	0.181	0.38
S050332		340	7.1	35.8	<0.002	0.30	0.32	3.9	1	0.9	554	0.32	<0.05	4.90	0.120	0.25
S050333		420	8.7	61.5	<0.002	0.28	0.33	6.2	2	1.4	372	0.49	<0.05	7.71	0.189	0.28
S050334		340	7.8	42.6	<0.002	0.19	0.41	4.7	2	1.1	442	0.38	<0.05	5.97	0.141	0.35
S050335		260	18.2	24.6	<0.002	0.14	0.40	3.2	2	0.7	618	0.24	<0.05	4.10	0.094	0.28
S050336		500	43.9	94.6	<0.002	0.06	0.30	10.4	1	2.2	193.0	0.84	<0.05	12.90	0.294	0.51
S050337		490	5.4	114.0	<0.002	0.02	0.30	12.7	<1	2.6	288	0.95	<0.05	14.85	0.339	0.49
S050338		510	6.1	118.5	<0.002	0.02	0.28	13.0	<1	2.6	306	0.92	<0.05	16.60	0.351	0.57
S050339		490	11.4	115.0	<0.002	0.01	0.29	11.8	1	2.4	140.0	0.86	<0.05	15.45	0.337	0.54
S050340		480	6.8	126.5	<0.002	0.01	0.29	12.1	1	2.4	157.5	0.86	<0.05	15.35	0.334	0.60

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 12-AUG-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18177300

Sample Description	Method Analyte Units LOD	ME-MS61 U ppm 0.1	ME-MS61 V ppm 1	ME-MS61 W ppm 0.1	ME-MS61 Y ppm 0.1	ME-MS61 Zn ppm 2	ME-MS61 Zr ppm 0.5
S050301		7.0	46	0.8	11.2	51	51.1
S050302		5.4	15	0.2	4.8	15	17.8
S050303		4.7	38	0.6	9.4	28	44.9
S050304		3.2	51	0.9	14.0	41	66.5
S050305		6.4	38	0.6	9.9	24	50.1
S050306		6.3	50	0.6	11.0	30	55.5
S050307		6.1	35	0.6	9.4	29	45.3
S050308		6.3	34	0.6	9.8	31	49.1
S050309		7.4	42	0.5	9.8	31	43.8
S050310		7.5	28	0.4	7.0	16	30.2
S050311		8.3	24	0.3	5.5	11	21.6
S050312		10.8	31	0.4	6.9	12	34.5
S050313		8.5	42	0.7	9.9	10	53.0
S050314		4.1	20	0.4	6.4	8	29.0
S050315		5.1	10	0.2	3.5	14	13.0
S050316		5.3	10	0.2	3.5	13	13.1
S050317		5.2	28	0.7	7.1	17	34.1
S050318		3.6	25	5.0	13.8	123	24.7
S050319		5.2	45	1.5	10.3	20	53.1
S050320		5.4	42	1.4	10.1	11	49.6
S050321		6.6	29	0.7	8.4	10	34.1
S050322		4.5	35	0.6	9.5	32	44.8
S050323		5.8	33	0.5	8.1	35	36.8
S050324		9.2	34	0.4	8.5	24	45.4
S050325		11.6	32	0.4	7.0	15	29.1
S050326		0.1	2	<0.1	2.0	4	2.0
S050327		7.6	46	0.6	11.3	20	49.2
S050328		5.9	30	0.4	7.1	21	34.9
S050329		4.0	56	5.1	16.0	58	54.0
S050330		7.5	28	0.4	7.0	22	35.2
S050331		5.9	52	0.8	12.5	58	73.9
S050332		10.7	38	0.5	9.3	45	45.3
S050333		7.1	56	0.8	12.6	58	66.5
S050334		9.2	41	0.6	10.5	47	56.5
S050335		10.3	30	0.4	8.7	66	37.6
S050336		4.1	66	1.3	18.2	91	91.2
S050337		2.8	59	1.2	19.8	110	98.0
S050338		2.8	59	1.4	19.5	109	99.2
S050339		2.7	59	1.3	19.3	107	98.0
S050340		1.8	46	1.2	20.8	103	98.6

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Project: Nadaleen

Finalized Date: 12-AUG-2018
Account: RCM

CERTIFICATE OF ANALYSIS WH18177300

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Applies to Method: REE's may not be totally soluble in this method.
ME-MS61

LABORATORY ADDRESSES

Applies to Method: Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.

CRU-31	CRU-QC	LOG-21	LOG-21d
LOG-23	PUL-31	PUL-31d	PUL-QC
SPL-21	SPL-21d	WEI-21	

Applies to Method: Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Au-AA25	Hg-MS42	ME-MS61

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To: **ATAC RESOURCES LTD.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 23-AUG-2018
Account: RCM

CERTIFICATE WH18188906

Project: Nadaleen

P.O. No.: N18-039

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 3-AUG-2018.

The following have access to data associated with this certificate:

ANDREW CARNE	JULIA LANE	

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
LOG-23	Pulp Login - Rcvd with Barcode
LOG-21d	Sample logging - ClientBarCode Dup
SPL-21d	Split sample - duplicate
PUL-31d	Pulverize Split - duplicate

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid ICP-MS	
Hg-MS42	Trace Hg by ICPMS	ICP-MS
ME-OG62	Ore Grade Elements - Four Acid	ICP-AES

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:

Colin Ramshaw, Vancouver Laboratory Manager

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Finalized Date: 23-AUG-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18188906

Sample Description	Method	WEI-21	Au-AA25	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Recvd Wt.	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu
	Units	kg	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.02	0.01	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2
S050341		10.02	<0.01	0.02	8.28	22.1	720	2.55	0.22	2.37	0.16	98.6	14.5	70	15.80	32.8
S050342		7.73	<0.01	0.11	7.92	32.8	350	2.71	0.37	2.22	0.04	81.0	13.4	65	13.85	80.2
S050343		10.53	<0.01	0.11	9.34	4.3	610	2.86	0.38	0.29	<0.02	81.6	16.5	74	15.20	54.7
S050344		7.26	<0.01	0.06	9.19	6.1	920	2.62	0.35	0.84	<0.02	85.6	16.7	74	13.25	52.6
S050345		9.53	<0.01	0.09	9.09	2.1	1400	2.64	0.35	0.55	<0.02	68.8	19.7	76	10.90	49.4
S050346		8.32	<0.01	0.14	9.45	6.9	730	2.92	0.48	0.31	<0.02	87.7	15.4	73	14.10	44.3
S050347		9.15	<0.01	0.08	9.44	1.9	380	3.05	0.30	0.17	<0.02	45.0	15.2	79	15.05	38.5
S050348		10.18	<0.01	0.04	9.77	2.3	400	3.07	0.35	0.20	<0.02	59.7	16.3	79	17.95	27.1
S050349		13.75	0.03	0.02	9.12	19.1	400	2.92	0.31	0.32	<0.02	68.9	15.7	72	18.10	14.6
S050350		14.03	<0.01	0.02	8.21	5.5	510	2.65	0.27	0.72	<0.02	70.4	15.3	64	16.20	16.8
S050351		12.12	<0.01	0.18	7.97	40.5	460	2.53	0.37	2.95	0.12	95.8	14.3	69	11.10	171.0
S050352		7.56	<0.01	0.25	7.12	23.4	250	2.41	0.40	3.40	0.10	87.1	13.6	68	10.30	165.0
S050353		7.74	0.02	0.16	6.09	68.6	220	2.18	0.23	6.53	0.23	75.4	12.8	57	9.57	131.5
S050354		7.54	<0.01	0.14	2.95	103.5	170	1.26	0.08	21.2	0.45	41.3	7.0	33	3.01	21.2
S050355		8.93	0.01	0.09	1.62	52.8	100	0.72	0.05	27.2	0.42	25.3	3.8	19	1.59	13.8
S050356		10.64	0.01	0.10	3.74	70.5	170	1.55	0.11	16.60	0.43	49.6	8.6	39	5.15	30.4
S050357		11.40	<0.01	0.13	5.75	134.5	200	1.76	0.24	7.59	0.15	71.2	27.5	52	7.13	133.0
S050358		10.14	0.01	0.21	4.27	122.0	220	1.36	0.13	15.45	0.15	56.5	9.4	45	3.67	37.8
S050359		11.73	<0.01	0.08	2.05	82.8	130	0.62	0.10	24.9	0.56	25.9	4.1	21	1.23	19.2
S050360		11.92	0.01	0.04	3.51	110.5	120	1.07	0.13	18.65	0.08	38.4	6.4	35	3.41	31.2
S050361		4.46	<0.01	0.03	2.87	163.5	120	0.95	0.11	17.60	0.08	35.6	5.7	32	2.75	19.6
S050362		4.65	<0.01	0.04	2.95	190.0	120	0.99	0.12	17.75	0.08	36.4	6.5	31	2.74	20.8
S050363		10.29	<0.01	0.07	2.39	99.4	90	0.85	0.08	24.3	0.07	29.1	4.7	26	1.98	13.9
S050364		10.14	<0.01	0.07	2.05	82.4	120	0.73	0.08	24.4	0.14	26.7	4.3	22	1.68	12.2
S050365		11.41	<0.01	0.05	3.26	57.2	220	1.27	0.11	17.80	0.49	40.2	6.4	37	3.59	22.6
S050366		0.26	1.09	1.43	1.51	859	190	0.44	0.14	27.6	0.68	19.30	5.0	25	3.49	46.6
S050367		12.87	<0.01	0.07	4.18	24.8	170	1.60	0.12	10.85	0.10	50.5	8.3	51	7.87	26.2
S050368		11.90	<0.01	0.05	3.65	15.1	120	1.29	0.10	11.60	0.06	44.3	6.7	42	6.45	21.4
S050369		<0.02	<0.01	0.06	3.80	15.6	130	1.37	0.12	12.50	0.08	46.8	7.1	43	6.83	21.8
S050370		12.62	<0.01	0.06	3.53	63.0	140	1.39	0.10	14.35	0.07	44.5	7.2	40	5.94	19.4
S050371		10.35	<0.01	0.04	2.39	103.5	100	0.95	0.08	23.8	0.09	30.8	4.8	25	3.76	13.2
S050372		7.07	<0.01	0.01	0.15	<0.2	30	0.08	0.24	32.5	<0.02	1.27	0.8	1	0.06	2.7
S050373		11.86	<0.01	0.05	2.28	75.9	100	0.97	0.08	24.0	0.07	28.7	4.2	24	3.82	12.9
S050374		11.05	<0.01	0.06	3.20	79.7	330	1.16	0.11	19.25	0.11	39.8	6.8	36	4.82	23.1
S050375		14.30	<0.01	0.03	0.55	20.8	110	0.32	0.03	34.0	0.61	9.02	1.7	7	0.37	5.5
S050376		0.26	1.41	0.98	3.07	>10000	200	0.70	0.13	17.70	0.39	36.0	8.6	40	9.30	28.2
S050377		8.48	<0.01	0.06	2.50	175.0	100	0.91	0.08	23.0	0.13	33.4	5.8	29	2.42	19.6
S050378		12.13	<0.01	0.05	2.97	63.8	120	1.13	0.10	19.55	0.09	34.4	6.1	33	3.08	20.0
S050379		12.08	<0.01	0.03	2.28	78.7	90	0.96	0.08	23.8	0.09	28.6	5.0	22	3.23	17.9
S050380		12.61	<0.01	0.03	3.81	52.0	170	1.47	0.12	15.20	0.11	45.4	7.6	39	5.66	24.9

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Finalized Date: 23-AUG-2018
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Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18188906

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Hg-MS42	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni
	Units	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2
S050341		3.67	21.5	0.22	3.2	0.032	0.070	3.45	52.3	71.4	2.33	826	0.11	0.07	12.4	39.2
S050342		3.89	21.2	0.23	2.8	0.021	0.064	3.45	40.7	68.0	1.08	275	0.13	0.07	11.1	30.2
S050343		4.22	24.7	0.27	2.9	0.012	0.074	3.90	39.9	97.6	1.20	126	0.22	0.07	12.4	38.6
S050344		4.48	24.4	0.24	2.6	0.008	0.068	3.33	43.0	113.0	1.33	168	0.42	0.08	11.8	41.6
S050345		5.74	24.4	0.23	2.5	<0.005	0.066	3.50	32.9	68.2	1.55	251	0.37	0.13	11.6	41.9
S050346		3.86	24.4	0.23	3.0	<0.005	0.068	3.85	44.2	68.5	1.32	156	0.33	0.14	12.3	38.2
S050347		4.58	25.8	0.21	2.9	0.006	0.073	3.79	20.2	117.5	1.07	139	0.15	0.11	12.6	37.6
S050348		4.91	26.0	0.23	2.8	0.006	0.072	4.41	27.6	79.5	1.07	103	0.16	0.17	12.6	42.1
S050349		4.79	24.2	0.25	2.8	0.013	0.074	4.28	33.0	59.4	1.14	166	0.19	0.17	11.8	39.4
S050350		4.47	22.1	0.25	2.9	0.012	0.076	3.80	33.8	54.0	1.25	493	0.20	0.13	11.1	35.7
S050351		3.64	21.0	0.31	2.9	0.006	0.058	2.93	53.5	74.1	2.79	915	0.11	0.05	12.5	56.2
S050352		3.36	18.85	0.30	2.9	0.012	0.058	2.55	47.5	62.9	2.95	1080	0.09	0.05	12.0	52.2
S050353		2.47	16.40	0.30	2.6	0.036	0.045	2.33	41.7	45.0	3.23	1400	0.98	0.06	10.0	35.8
S050354		1.28	7.80	0.14	1.4	0.069	0.024	1.03	22.0	26.0	2.53	2090	0.60	0.03	4.9	15.5
S050355		0.78	4.49	0.16	0.7	0.059	0.016	0.55	12.8	15.7	1.72	1900	0.37	0.02	2.7	7.6
S050356		1.57	10.10	0.19	1.6	0.059	0.029	1.51	26.5	30.8	2.90	2050	0.50	0.03	6.1	19.7
S050357		2.22	15.40	0.19	2.6	0.057	0.047	2.10	39.2	55.7	3.69	2530	1.25	0.05	9.6	37.3
S050358		1.79	11.75	0.18	1.9	0.065	0.037	1.60	30.6	42.7	3.25	2880	0.74	0.04	7.3	20.6
S050359		0.98	5.48	0.10	0.8	0.049	0.019	0.58	13.8	43.9	1.65	2460	0.73	0.02	3.4	11.0
S050360		1.60	9.62	0.13	1.4	0.037	0.028	1.11	21.0	50.6	2.65	1510	0.23	0.03	6.1	17.7
S050361		1.41	7.80	0.14	1.5	0.090	0.025	0.97	18.8	41.4	3.53	1210	0.34	0.03	5.0	14.7
S050362		1.51	8.16	0.14	1.5	0.122	0.025	0.99	19.3	43.1	3.45	1200	0.34	0.03	5.2	15.8
S050363		1.17	6.56	0.12	1.2	0.049	0.018	0.74	15.8	41.2	2.11	917	0.43	0.02	4.2	11.0
S050364		1.02	5.47	0.12	1.0	0.043	0.016	0.67	14.0	47.2	2.28	882	0.33	0.02	3.5	9.3
S050365		1.46	9.20	0.14	1.8	0.054	0.027	1.12	21.7	50.9	3.11	625	0.45	0.03	5.9	16.5
S050366		1.14	4.22	0.11	0.8	2.30	0.023	0.66	9.8	7.0	1.20	4540	1.33	0.10	2.1	13.9
S050367		2.05	11.45	0.16	2.4	0.057	0.034	1.54	26.3	42.3	4.76	497	0.57	0.12	7.5	21.2
S050368		1.67	9.76	0.15	2.3	0.044	0.028	1.30	23.2	34.8	3.97	420	0.50	0.21	6.6	16.2
S050369		1.79	10.25	0.13	2.4	0.056	0.027	1.36	24.2	36.4	4.25	452	0.51	0.22	6.8	17.1
S050370		1.71	9.89	0.13	2.2	0.039	0.027	1.22	23.4	33.3	4.26	411	0.65	0.19	6.6	17.0
S050371		1.07	6.59	0.13	1.3	0.024	0.020	0.78	16.4	28.6	2.66	412	0.42	0.18	4.3	11.5
S050372		0.13	0.51	0.13	0.1	<0.005	<0.005	0.03	1.4	1.3	1.83	124	<0.05	0.07	0.4	0.2
S050373		0.96	6.35	0.11	1.3	0.024	0.019	0.71	15.7	30.1	2.21	407	0.28	0.17	4.3	10.6
S050374		1.42	8.90	0.15	1.6	0.125	0.026	1.07	21.3	46.5	2.54	395	0.28	0.08	5.8	16.6
S050375		0.32	1.58	0.12	0.3	0.030	0.005	0.15	5.3	16.3	0.93	362	0.44	0.02	1.0	2.5
S050376		2.12	8.50	0.13	1.6	5.06	0.032	1.42	18.4	13.0	2.21	1280	1.50	0.10	4.8	19.5
S050377		1.41	6.89	0.11	1.3	0.133	0.021	0.65	17.9	28.7	2.13	293	0.43	0.04	4.4	13.6
S050378		1.39	8.24	0.12	1.5	0.044	0.024	0.94	18.7	38.3	3.58	256	0.45	0.05	5.2	14.8
S050379		1.08	6.50	0.13	1.0	0.027	0.018	0.75	15.9	34.9	2.30	244	0.25	0.05	4.1	11.6
S050380		1.80	10.75	0.15	1.8	0.063	0.031	1.40	24.3	41.9	3.51	251	0.22	0.04	6.8	19.1

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 23-AUG-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18188906

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl
	Units	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
	LOD	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.01	0.005	0.02
S050341		460	8.6	168.5	<0.002	0.02	0.36	14.6	1	2.5	169.5	0.93	<0.05	15.85	0.392	0.70
S050342		890	15.4	150.0	<0.002	0.01	0.42	14.4	1	2.4	199.0	0.83	0.05	12.80	0.395	0.84
S050343		840	18.8	157.0	<0.002	0.02	0.31	16.0	1	2.7	188.0	0.91	<0.05	13.10	0.428	0.83
S050344		790	19.8	133.0	<0.002	0.03	0.76	15.5	<1	2.6	328	0.88	<0.05	13.00	0.419	0.76
S050345		620	20.3	114.5	<0.002	0.03	0.42	14.9	<1	2.5	166.0	0.87	0.05	11.20	0.403	0.75
S050346		810	22.3	165.5	<0.002	0.02	0.31	16.5	<1	2.8	122.0	0.94	0.07	14.40	0.434	0.81
S050347		640	17.7	123.5	<0.002	0.01	0.41	15.6	1	2.8	203	0.95	0.07	9.17	0.437	0.87
S050348		740	17.7	165.0	<0.002	0.01	0.61	16.4	<1	2.8	150.5	0.94	0.05	11.10	0.436	0.95
S050349		860	17.5	169.5	<0.002	0.01	0.72	15.8	1	2.6	131.0	0.88	<0.05	11.85	0.421	0.88
S050350		890	16.8	160.5	<0.002	0.01	0.68	15.6	1	2.6	121.5	0.83	<0.05	11.70	0.416	0.81
S050351		460	4.5	129.5	<0.002	0.04	0.21	13.3	<1	2.4	136.0	0.94	<0.05	16.75	0.338	0.55
S050352		490	5.0	113.0	<0.002	0.03	0.22	12.0	1	2.4	134.0	0.87	<0.05	15.50	0.318	0.46
S050353		540	36.3	101.5	<0.002	0.07	0.31	10.1	1	2.1	229	0.77	<0.05	13.45	0.277	0.45
S050354		350	20.7	46.4	<0.002	0.12	0.31	5.0	2	1.1	584	0.37	<0.05	6.82	0.142	0.25
S050355		200	16.5	23.7	<0.002	0.06	0.23	2.8	3	0.6	731	0.20	<0.05	3.81	0.076	0.14
S050356		440	15.0	63.2	<0.002	0.17	0.30	6.2	2	1.3	435	0.47	<0.05	8.41	0.180	0.31
S050357		490	15.2	88.8	<0.002	0.11	0.31	9.5	1	2.0	337	0.75	<0.05	12.60	0.271	0.54
S050358		490	22.5	69.6	<0.002	0.12	0.41	7.3	2	1.7	459	0.52	<0.05	9.81	0.208	0.41
S050359		250	17.8	24.1	<0.002	0.08	0.23	3.8	2	0.7	611	0.25	<0.05	4.54	0.092	0.21
S050360		350	8.1	48.0	<0.002	0.04	0.18	6.5	2	1.2	453	0.43	<0.05	7.53	0.166	0.25
S050361		340	7.5	41.5	<0.002	0.09	0.22	5.4	2	1.0	483	0.37	<0.05	6.84	0.139	0.25
S050362		340	7.5	41.5	<0.002	0.14	0.24	5.5	2	1.1	489	0.38	<0.05	6.98	0.144	0.29
S050363		290	7.4	31.8	<0.002	0.09	0.20	4.4	2	0.8	743	0.31	<0.05	5.43	0.117	0.17
S050364		240	6.5	28.6	<0.002	0.07	0.20	3.8	1	0.7	727	0.26	<0.05	4.58	0.097	0.16
S050365		640	12.6	51.9	<0.002	0.17	0.25	6.1	2	1.1	569	0.43	<0.05	8.01	0.161	0.31
S050366		380	61.8	29.2	0.002	0.69	8.31	6.4	2	0.6	1130	0.15	0.05	2.63	0.077	6.17
S050367		640	11.4	73.6	<0.002	0.22	0.36	7.6	3	1.5	333	0.57	<0.05	10.25	0.211	0.36
S050368		470	9.0	62.0	<0.002	0.14	0.27	6.3	2	1.3	301	0.48	<0.05	8.77	0.185	0.28
S050369		500	9.6	64.2	<0.002	0.15	0.31	6.7	3	1.3	325	0.50	<0.05	9.31	0.193	0.28
S050370		440	9.9	60.5	<0.002	0.17	0.30	6.5	2	1.3	397	0.49	<0.05	8.82	0.178	0.26
S050371		290	7.0	38.2	<0.002	0.12	0.22	4.4	2	0.8	686	0.32	<0.05	5.69	0.115	0.18
S050372		70	0.5	0.8	<0.002	<0.01	0.08	0.4	1	<0.2	83.0	<0.05	<0.05	0.17	0.012	<0.02
S050373		280	6.4	35.5	<0.002	0.06	0.17	4.2	2	0.8	565	0.32	<0.05	5.44	0.113	0.16
S050374		540	10.1	52.1	<0.002	0.32	0.27	6.0	2	1.2	692	0.43	<0.05	7.61	0.157	0.42
S050375		200	5.3	7.3	<0.002	0.06	0.14	1.1	2	0.2	1245	0.08	<0.05	1.44	0.025	0.07
S050376		430	16.7	66.3	<0.002	2.35	56.2	7.7	3	1.1	808	0.35	0.09	5.39	0.191	17.05
S050377		380	7.9	31.8	<0.002	0.56	0.34	4.6	2	0.9	755	0.33	<0.05	5.66	0.119	0.36
S050378		420	9.0	45.7	<0.002	0.12	0.31	5.4	2	1.1	681	0.38	<0.05	6.80	0.143	0.27
S050379		240	6.1	37.8	<0.002	0.05	0.23	4.4	2	0.8	613	0.30	<0.05	4.96	0.106	0.19
S050380		440	7.5	67.5	<0.002	0.12	0.26	7.0	2	1.4	456	0.50	<0.05	8.75	0.183	0.37

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 23-AUG-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18188906

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	U	V	W	Y	Zn	Zr
	Units	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.1	1	0.1	0.1	2	0.5
S050341		3.8	89	1.5	22.0	101	119.5
S050342		2.8	77	1.5	19.9	77	100.5
S050343		2.3	99	1.6	19.6	88	100.5
S050344		2.4	99	1.5	19.2	96	95.9
S050345		2.7	84	1.4	16.0	110	89.4
S050346		2.7	91	1.5	20.6	100	106.5
S050347		2.7	83	1.6	12.1	87	99.6
S050348		2.5	100	1.5	15.9	90	98.9
S050349		1.9	87	1.5	17.2	91	99.8
S050350		2.2	91	1.5	18.1	90	105.5
S050351		4.2	59	1.1	20.5	118	103.5
S050352		3.3	60	1.2	19.2	113	106.5
S050353		5.3	69	1.1	18.9	94	95.0
S050354		10.7	43	0.6	12.1	70	59.1
S050355		12.2	26	0.4	7.0	57	27.9
S050356		7.5	54	0.7	13.4	81	63.4
S050357		5.3	70	1.0	18.5	73	93.7
S050358		8.4	60	0.8	14.9	55	71.9
S050359		11.0	31	0.4	9.1	57	31.8
S050360		7.4	48	0.7	11.9	62	52.5
S050361		7.6	44	0.6	11.5	49	57.6
S050362		7.7	44	0.7	12.1	51	54.0
S050363		11.8	36	0.5	8.7	39	43.6
S050364		10.8	31	0.4	8.5	41	36.8
S050365		9.5	52	0.6	13.8	50	75.7
S050366		4.1	25	6.4	14.9	121	26.3
S050367		4.7	64	0.8	15.8	70	85.0
S050368		5.4	52	0.7	13.6	62	82.5
S050369		5.7	55	0.8	14.7	61	86.3
S050370		8.5	51	0.7	13.4	56	80.1
S050371		10.7	34	0.5	9.1	46	45.7
S050372		0.3	2	<0.1	2.6	4	3.4
S050373		11.0	35	0.5	8.9	37	45.6
S050374		8.1	49	0.6	12.7	48	58.8
S050375		7.9	12	0.1	4.0	17	16.2
S050376		4.5	56	4.6	16.5	56	56.5
S050377		11.2	39	0.5	10.0	49	56.6
S050378		8.7	44	0.6	10.9	51	53.7
S050379		7.9	33	0.5	8.7	41	37.5
S050380		5.4	52	0.8	13.8	60	67.0

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Project: Nadaleen

Finalized Date: 23-AUG-2018
Account: RCM

CERTIFICATE OF ANALYSIS WH18188906

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Applies to Method: REE's may not be totally soluble in this method.
ME-MS61

LABORATORY ADDRESSES

Applies to Method: Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.

CRU-31	CRU-QC	LOG-21	LOG-21d
LOG-23	PUL-31	PUL-31d	PUL-QC
SPL-21	SPL-21d	WEI-21	

Applies to Method: Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Au-AA25	Hg-MS42	ME-MS61	ME-OG62

ALS Canada Ltd.

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To: **ATAC RESOURCES LTD.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 13-AUG-2018
Account: RCM

CERTIFICATE WH18180702

Project: Nadaleen

P.O. No.: N18-040

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 26-JUL-2018.

The following have access to data associated with this certificate:

ANDREW CARNE	JULIA LANE	

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
LOG-23	Pulp Login - Rcvd with Barcode
LOG-21d	Sample logging - ClientBarCode Dup
SPL-21d	Split sample - duplicate
PUL-31d	Pulverize Split - duplicate

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid ICP-MS	
Hg-MS42	Trace Hg by ICPMS	ICP-MS

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:

Colin Ramshaw, Vancouver Laboratory Manager

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Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18180702

Sample Description	Method	WEI-21	Au-AA25	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Recvd Wt.	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu
	Units	kg	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.02	0.01	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2
S048931		10.36	<0.01	0.03	9.03	31.9	340	2.62	0.36	1.52	<0.02	102.0	15.7	72	39.2	33.0
S048932		11.61	<0.01	0.05	7.92	39.1	310	2.40	0.31	2.88	0.02	82.7	17.4	64	36.7	31.3
S048933		0.26	1.10	1.67	1.53	840	190	0.44	0.12	27.9	0.70	20.8	4.7	29	3.39	46.3
S048934		11.42	<0.01	0.05	5.91	25.3	230	1.35	0.21	13.95	0.03	68.9	10.8	42	23.1	21.8
S048935		11.84	<0.01	0.07	7.72	72.8	410	2.21	0.28	5.80	0.07	90.9	15.1	61	36.0	32.1
S048936		11.95	<0.01	0.07	6.75	58.6	290	1.85	0.24	10.20	0.04	77.7	12.0	55	27.6	25.1
S048937		11.85	<0.01	0.04	3.98	15.2	170	1.07	0.14	21.6	0.05	49.9	7.3	31	14.80	16.2
S048938		10.44	<0.01	0.05	5.53	18.2	250	1.48	0.20	12.40	0.04	64.4	10.5	42	24.9	22.2
S048939		9.40	<0.01	0.05	5.81	91.4	210	1.61	0.20	12.30	0.04	69.1	10.4	46	21.5	22.2
S048940		6.53	0.03	0.08	7.26	235	250	2.29	0.34	4.23	0.31	86.5	15.5	61	21.9	37.6
S048941		6.72	1.07	0.09	5.81	1290	680	1.38	0.23	7.27	0.11	73.8	9.3	48	18.95	26.6
S048942		7.11	<0.01	<0.01	0.11	2.9	30	0.06	0.01	33.4	<0.02	1.36	0.5	1	0.11	2.1
S048943		8.48	0.26	0.08	7.52	447	430	1.80	0.29	5.08	0.14	83.8	14.5	58	18.45	34.4
S048944		6.80	0.13	0.08	8.84	3080	460	2.20	0.35	2.41	0.22	87.6	18.5	74	23.9	45.5
S048945		<0.02	0.12	0.09	8.87	3050	450	2.10	0.34	2.47	0.26	89.3	18.0	74	23.6	45.7
S048946		8.16	0.11	0.05	9.01	305	400	2.26	0.37	0.70	0.05	97.9	19.3	68	26.4	40.2
S048947		8.97	0.03	0.03	9.46	452	390	2.62	0.37	0.27	0.02	105.5	14.2	70	34.9	35.8
S048948		13.27	0.01	0.05	8.23	88.1	420	2.55	0.33	2.06	0.03	90.0	17.4	61	34.1	31.8
S048949		11.76	0.01	0.05	7.93	170.5	310	2.44	0.33	2.02	0.02	82.1	17.2	59	36.4	30.6
S048950		11.36	<0.01	0.05	7.46	75.4	290	2.15	0.32	3.12	0.03	82.8	15.7	57	34.0	32.7
S048951		11.95	0.01	0.08	8.58	175.0	340	2.69	0.36	1.56	0.12	97.1	21.3	69	36.3	39.6
S048952		11.88	<0.01	0.05	7.16	59.8	370	2.05	0.27	6.81	0.03	78.6	14.3	50	24.3	29.1
S048953		12.09	0.04	0.10	6.99	136.5	320	2.32	0.34	5.57	0.26	74.8	14.4	64	27.1	39.4
S048954		12.13	<0.01	0.13	8.06	69.7	420	2.97	0.41	1.60	0.36	79.5	18.4	73	38.4	46.9
S048955		11.85	0.08	0.08	6.95	193.0	410	2.58	0.32	4.17	0.28	68.3	14.4	60	35.3	37.3
S048956		11.98	0.01	0.06	7.91	42.6	310	2.96	0.31	2.30	0.09	78.6	17.8	69	47.7	41.1
S048957		11.47	0.01	0.09	8.97	118.5	430	3.06	0.34	1.58	0.19	84.4	19.6	73	41.9	42.0
S048958		12.44	0.01	0.08	8.89	32.9	370	3.10	0.33	1.57	0.15	86.6	18.2	76	40.9	43.6
S048959		12.54	0.01	0.08	9.01	29.2	330	3.17	0.36	1.13	0.27	89.3	18.4	75	37.3	44.4
S048960		0.26	1.43	0.77	3.12	>10000	200	0.68	0.13	17.25	0.37	36.4	7.1	42	8.64	24.6
S048961		12.31	<0.01	0.08	8.76	28.6	310	3.07	0.32	1.79	0.27	88.8	18.3	70	35.4	42.9
S048962		12.21	<0.01	0.07	8.87	18.2	830	3.19	0.33	0.83	0.14	88.3	19.7	76	33.0	42.8
S048963		11.42	<0.01	0.08	9.16	52.4	370	3.62	0.35	1.08	0.04	92.2	22.0	75	31.8	48.5
S048964		5.69	0.14	0.09	8.78	350	460	2.80	0.32	3.29	0.12	93.7	16.5	65	24.0	44.7
S048965		5.90	0.12	0.09	8.19	352	420	2.68	0.31	2.92	0.17	83.2	15.6	66	22.5	40.7
S048966		10.74	0.08	0.06	7.92	1195	360	2.59	0.23	2.85	0.20	94.7	12.5	59	22.6	31.4
S048967		12.05	<0.01	0.06	9.25	143.0	340	3.62	0.26	1.93	0.32	111.5	15.3	67	33.1	37.9
S048968		12.55	<0.01	0.07	9.60	96.3	660	3.87	0.28	1.61	0.25	119.0	15.7	66	35.4	37.1
S048969		11.07	0.05	0.08	9.60	275	300	3.67	0.28	1.11	<0.02	120.5	17.4	68	34.6	41.4
S048970		11.86	<0.01	0.10	9.66	58.1	250	4.54	0.29	0.37	<0.02	116.0	20.2	73	58.2	45.6

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 13-AUG-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18180702

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Hg-MS42	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni
	Units	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2
S048931		4.21	23.6	0.20	3.2	0.071	0.070	4.20	49.4	95.4	1.37	548	0.23	0.09	12.2	36.1
S048932		4.01	21.2	0.17	2.9	0.102	0.065	3.90	39.3	57.4	1.26	671	0.25	0.09	11.3	34.7
S048933		1.14	3.97	0.10	0.8	2.15	0.023	0.68	9.2	6.4	1.21	4570	1.27	0.10	2.1	14.1
S048934		2.76	14.25	0.13	1.8	0.235	0.037	2.88	34.9	10.1	1.77	755	0.38	0.07	6.9	23.2
S048935		3.74	19.30	0.18	2.4	0.448	0.058	3.86	45.8	13.0	2.06	731	1.50	0.07	9.2	33.2
S048936		3.08	16.80	0.15	2.3	0.414	0.053	3.52	40.1	10.3	1.36	520	0.64	0.07	8.4	26.4
S048937		1.78	9.94	0.13	1.5	0.112	0.031	2.01	24.9	6.7	0.74	199	0.27	0.04	5.2	16.2
S048938		2.58	13.80	0.15	1.9	0.466	0.044	2.78	33.1	9.3	2.29	528	0.49	0.05	6.8	22.8
S048939		2.52	14.50	0.15	2.1	1.795	0.047	2.87	34.8	10.3	1.52	447	0.48	0.05	7.5	23.0
S048940		4.07	21.0	0.16	3.0	1.905	0.072	3.75	39.1	11.3	1.77	721	3.89	0.04	10.6	37.6
S048941		3.16	14.80	0.16	2.4	7.94	0.050	2.73	36.5	12.9	2.33	2670	0.54	0.04	7.9	22.1
S048942		0.12	0.33	0.08	0.1	0.010	<0.005	0.04	1.3	0.9	1.58	124	0.05	0.04	0.2	0.3
S048943		3.66	19.60	0.17	2.8	3.18	0.060	3.64	41.5	10.3	1.58	1250	1.35	0.05	9.8	33.9
S048944		3.81	24.1	0.19	3.2	3.48	0.076	4.31	41.5	15.9	1.17	800	2.15	0.05	12.4	42.1
S048945		3.80	23.7	0.19	3.1	3.37	0.071	4.33	42.0	16.3	1.20	819	2.09	0.05	12.0	40.7
S048946		4.25	23.9	0.18	3.0	1.720	0.063	4.54	47.6	12.3	0.64	315	0.31	0.06	11.8	39.5
S048947		4.70	23.9	0.21	3.0	0.981	0.070	4.60	53.2	17.7	0.51	136	0.15	0.06	12.0	38.9
S048948		4.66	21.7	0.18	3.0	0.473	0.062	3.99	42.9	25.1	1.22	778	0.36	0.06	11.2	35.1
S048949		4.46	21.0	0.17	3.0	0.294	0.063	3.94	38.5	28.1	1.19	642	0.23	0.06	11.1	35.3
S048950		4.38	19.55	0.18	2.6	0.450	0.060	3.64	40.2	26.7	1.68	1050	0.60	0.06	9.8	34.3
S048951		5.05	22.2	0.20	3.2	0.650	0.072	4.09	48.4	28.0	1.05	358	1.56	0.06	11.5	45.0
S048952		3.80	18.05	0.16	2.5	0.330	0.055	3.42	39.7	22.5	2.50	749	0.39	0.06	9.4	29.0
S048953		4.35	18.40	0.18	2.6	0.773	0.059	3.33	37.0	22.1	2.39	685	2.64	0.05	9.6	34.3
S048954		4.57	21.3	0.18	3.0	0.796	0.076	3.83	39.1	25.0	1.34	289	5.51	0.05	10.5	46.6
S048955		4.42	18.15	0.15	2.6	0.494	0.059	3.35	33.8	22.5	2.21	825	2.92	0.05	9.0	32.6
S048956		4.39	21.0	0.17	3.1	0.331	0.077	3.80	39.4	29.5	1.77	718	2.06	0.05	10.2	37.1
S048957		4.54	21.2	0.15	2.9	0.406	0.079	4.08	43.0	20.5	1.69	617	2.56	0.05	10.3	41.7
S048958		4.63	22.0	0.16	3.0	0.373	0.077	4.10	44.2	21.7	1.77	716	1.89	0.06	10.7	41.5
S048959		4.63	22.6	0.16	3.1	0.501	0.084	4.20	46.4	21.1	1.67	573	1.95	0.06	11.0	40.3
S048960		2.10	7.24	0.09	1.6	4.66	0.032	1.36	18.7	10.6	2.17	1260	1.36	0.10	4.2	18.1
S048961		4.63	21.8	0.15	2.9	0.655	0.077	4.06	45.2	16.1	1.80	992	2.40	0.06	10.9	41.2
S048962		4.87	21.6	0.15	2.9	0.494	0.085	4.13	44.0	33.2	1.66	416	1.61	0.05	10.5	41.6
S048963		4.75	22.3	0.16	3.1	0.564	0.087	4.28	46.9	22.2	1.48	526	1.71	0.05	10.9	46.5
S048964		4.51	21.7	0.17	3.0	0.833	0.080	4.07	47.5	12.0	1.73	1120	1.93	0.05	10.7	41.2
S048965		4.31	20.6	0.16	2.8	0.901	0.069	3.93	41.3	11.2	1.54	1020	1.88	0.04	10.0	38.3
S048966		3.96	21.4	0.16	3.1	0.669	0.067	3.94	43.8	10.0	1.49	555	2.61	0.04	11.3	32.6
S048967		4.46	23.8	0.16	3.4	0.682	0.075	4.46	52.5	13.3	1.22	611	3.15	0.04	13.2	38.3
S048968		4.27	23.5	0.19	3.3	0.523	0.073	4.53	58.4	14.3	1.33	507	2.85	0.04	12.6	36.4
S048969		4.54	24.8	0.19	3.4	0.528	0.077	4.70	57.5	16.6	1.02	487	1.59	0.04	13.4	38.1
S048970		4.45	24.7	0.17	3.6	0.201	0.083	4.78	56.1	29.0	1.43	276	1.03	0.04	12.9	41.5

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 13-AUG-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18180702

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl
	Units	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
	LOD	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.01	0.005	0.02
S048931		490	23.6	185.5	<0.002	0.77	0.32	15.7	<1	2.6	120.0	0.91	0.05	16.45	0.404	1.20
S048932		390	19.3	145.5	<0.002	1.00	0.40	13.9	1	2.5	127.0	0.81	0.05	13.65	0.376	1.56
S048933		390	61.7	29.9	0.002	0.69	8.36	5.8	2	0.7	1145	0.15	0.05	2.74	0.077	6.08
S048934		640	13.2	129.5	<0.002	1.24	0.32	9.0	1	1.5	345	0.52	0.05	10.25	0.222	1.80
S048935		610	19.3	184.0	0.003	2.19	0.83	12.8	1	2.1	251	0.66	0.05	13.70	0.297	4.46
S048936		430	16.2	173.5	0.002	2.14	0.53	11.0	2	1.8	296	0.60	<0.05	12.00	0.266	5.03
S048937		390	10.0	95.2	<0.002	1.19	0.24	6.7	2	1.1	426	0.38	<0.05	7.26	0.167	3.44
S048938		460	13.3	133.5	0.002	1.43	0.37	9.0	1	1.5	267	0.51	0.05	9.51	0.213	4.30
S048939		560	14.2	130.0	0.002	1.71	0.40	9.5	2	1.6	316	0.53	<0.05	10.20	0.233	5.53
S048940		660	18.8	126.5	0.006	3.24	2.02	13.9	2	2.9	195.5	0.79	0.06	13.75	0.313	5.61
S048941		770	14.6	120.5	<0.002	2.32	9.29	10.3	2	1.6	223	0.58	<0.05	10.95	0.265	15.25
S048942		70	0.5	1.2	<0.002	0.01	0.07	0.2	1	<0.2	81.2	<0.05	<0.05	0.12	0.006	0.08
S048943		770	16.7	154.5	0.003	3.05	5.47	13.4	2	2.6	179.0	0.73	0.05	13.50	0.318	8.87
S048944		1320	19.5	163.5	0.005	3.33	12.10	17.3	1	3.3	159.0	0.94	0.05	15.00	0.404	6.96
S048945		1330	19.0	169.0	0.006	3.30	12.10	17.2	1	3.1	157.5	0.90	0.05	15.00	0.406	6.85
S048946		440	22.8	186.0	<0.002	4.34	5.87	15.2	<1	2.8	83.1	0.85	0.06	15.90	0.380	7.34
S048947		450	17.7	201	<0.002	4.86	2.58	15.6	1	2.7	90.7	0.88	0.05	17.30	0.396	3.80
S048948		590	19.2	161.0	<0.002	3.93	1.18	14.6	1	2.4	110.5	0.81	0.05	14.90	0.375	3.20
S048949		340	19.3	146.5	<0.002	3.43	0.61	13.9	<1	2.4	110.0	0.81	<0.05	13.50	0.374	2.60
S048950		870	26.7	134.0	<0.002	2.30	1.36	13.2	1	2.1	143.5	0.73	0.05	12.70	0.324	2.65
S048951		1220	32.6	182.5	0.004	4.33	2.43	16.1	1	2.7	116.0	0.83	0.06	16.00	0.391	4.67
S048952		560	21.6	142.5	<0.002	1.85	0.50	11.6	1	2.0	145.0	0.70	0.05	12.50	0.312	1.92
S048953		2100	16.0	162.0	0.007	2.92	1.06	13.4	2	2.6	162.0	0.71	0.06	12.40	0.323	3.73
S048954		2280	21.9	187.0	0.010	2.48	1.35	15.5	2	3.4	106.0	0.80	0.07	13.75	0.347	4.08
S048955		2010	14.2	167.5	0.006	2.45	1.03	13.2	2	2.9	153.0	0.67	0.06	11.65	0.289	3.72
S048956		1350	13.9	195.5	0.005	1.55	0.86	15.1	1	3.2	129.0	0.78	0.07	13.40	0.338	2.46
S048957		930	18.5	195.5	0.005	1.67	1.02	16.3	1	3.3	130.5	0.83	0.06	14.55	0.386	2.69
S048958		850	17.3	194.0	0.005	1.25	1.01	16.7	1	3.5	151.0	0.84	0.06	14.90	0.387	2.09
S048959		680	18.3	197.5	0.007	1.25	1.20	16.5	1	3.6	108.5	0.88	0.09	15.95	0.394	2.41
S048960		430	15.3	62.2	0.002	2.34	53.8	6.7	2	1.1	816	0.30	0.08	5.41	0.185	16.00
S048961		760	20.4	183.0	0.007	1.46	1.31	17.5	1	3.5	117.5	0.80	0.08	15.45	0.370	2.43
S048962		900	15.3	181.0	0.005	0.98	0.96	16.4	1	3.4	111.5	0.85	0.06	15.55	0.380	2.07
S048963		1050	17.7	185.5	0.005	2.03	1.33	16.9	1	3.7	114.0	0.87	0.09	16.30	0.398	3.41
S048964		1310	18.1	176.0	0.007	3.75	3.86	16.6	1	3.5	227	0.83	0.07	15.95	0.372	4.23
S048965		1150	17.9	152.0	0.007	3.76	3.83	15.3	1	3.3	193.5	0.80	0.08	14.75	0.358	4.18
S048966		670	15.5	127.5	0.012	3.09	5.83	13.8	1	2.8	215	0.85	<0.05	17.25	0.328	3.10
S048967		600	20.8	165.5	0.009	4.17	1.93	16.9	1	3.1	162.0	0.96	<0.05	20.3	0.374	4.89
S048968		670	19.7	184.5	0.010	3.08	0.78	16.1	1	3.1	184.0	0.93	0.05	20.8	0.377	4.59
S048969		490	15.2	190.5	0.007	4.42	1.22	18.1	1	3.1	124.5	0.92	<0.05	21.0	0.383	4.43
S048970		480	13.9	194.5	0.006	0.80	0.68	18.1	1	3.0	108.5	0.95	<0.05	20.5	0.388	1.97

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.

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www.alsglobal.com/geochemistry

To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 13-AUG-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18180702

Sample Description	Method Analyte Units LOD	ME-MS61 U ppm 0.1	ME-MS61 V ppm 1	ME-MS61 W ppm 0.1	ME-MS61 Y ppm 0.1	ME-MS61 Zn ppm 2	ME-MS61 Zr ppm 0.5
S048931		2.6	88	1.8	20.6	81	111.0
S048932		2.7	79	1.5	17.6	83	101.0
S048933		3.8	26	11.9	15.4	121	28.0
S048934		2.8	49	1.0	15.3	61	61.2
S048935		3.2	73	1.5	19.3	97	82.3
S048936		2.7	62	1.2	17.0	76	79.5
S048937		2.2	37	0.8	11.3	50	52.6
S048938		2.4	52	0.9	15.0	58	64.0
S048939		2.5	54	1.1	16.1	64	74.4
S048940		3.7	131	5.3	21.7	115	98.1
S048941		2.5	58	5.5	15.9	70	84.5
S048942		0.2	2	0.1	2.3	3	2.1
S048943		3.5	108	6.1	21.4	76	96.1
S048944		3.8	153	13.7	26.0	88	107.5
S048945		3.8	153	13.5	26.3	106	106.5
S048946		3.1	89	15.9	18.8	73	103.0
S048947		2.5	86	7.6	20.6	83	101.5
S048948		2.9	83	2.2	20.6	67	103.0
S048949		2.2	82	3.4	17.8	73	98.0
S048950		2.5	77	2.9	18.9	68	90.0
S048951		3.7	111	4.0	25.5	122	109.0
S048952		2.6	69	1.9	16.8	73	85.2
S048953		4.8	137	3.1	28.2	99	91.1
S048954		5.5	189	1.7	33.1	112	105.0
S048955		4.6	150	2.7	29.1	96	88.5
S048956		4.0	144	2.5	27.6	88	103.5
S048957		3.9	160	2.9	21.4	89	97.1
S048958		4.2	161	2.1	22.8	97	100.5
S048959		3.9	163	2.2	21.6	122	102.0
S048960		4.4	56	7.5	15.9	57	53.7
S048961		4.0	156	2.0	21.8	104	98.8
S048962		3.5	154	2.2	21.9	98	95.1
S048963		4.0	163	2.3	23.4	91	102.0
S048964		4.4	161	7.1	25.3	75	103.5
S048965		4.0	158	7.0	22.0	88	93.4
S048966		3.8	158	9.4	20.2	79	100.5
S048967		4.3	171	3.2	23.6	109	110.0
S048968		4.4	177	2.2	24.5	111	112.0
S048969		4.0	159	5.8	25.7	69	113.0
S048970		5.1	154	2.2	24.9	91	114.5

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Project: Nadaleen

Finalized Date: 13-AUG-2018
Account: RCM

CERTIFICATE OF ANALYSIS WH18180702

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Applies to Method: REE's may not be totally soluble in this method.
ME-MS61

LABORATORY ADDRESSES

Applies to Method: Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.

CRU-31	CRU-QC	LOG-21	LOG-21d
LOG-23	PUL-31	PUL-31d	PUL-QC
SPL-21	SPL-21d	WEI-21	

Applies to Method: Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Au-AA25	Hg-MS42	ME-MS61

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To: **ATAC RESOURCES LTD.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 14-AUG-2018
Account: RCM

CERTIFICATE WH18180707

Project: Nadaleen

P.O. No.: N18-041

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 26-JUL-2018.

The following have access to data associated with this certificate:

ANDREW CARNE	JULIA LANE	

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
LOG-23	Pulp Login - Rcvd with Barcode
LOG-21d	Sample logging - ClientBarCode Dup
SPL-21d	Split sample - duplicate
PUL-31d	Pulverize Split - duplicate

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid ICP-MS	
Hg-MS42	Trace Hg by ICPMS	ICP-MS
ME-OG62	Ore Grade Elements - Four Acid	ICP-AES
As-OG62	Ore Grade As - Four Acid	

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:

Colin Ramshaw, Vancouver Laboratory Manager

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Finalized Date: 14-AUG-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18180707

Sample Description	Method	WEI-21	Au-AA25	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Recvd Wt.	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu
	Units	kg	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.02	0.01	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2
S048971		12.15	<0.01	0.09	9.22	28.2	230	4.27	0.29	0.40	0.02	110.0	16.3	71	58.7	46.0
S048972		12.14	<0.01	0.05	9.38	14.2	240	4.09	0.31	0.92	0.03	124.5	21.5	70	64.2	34.0
S048973		0.26	1.12	1.43	1.59	908	200	0.41	0.14	29.4	0.66	20.9	4.3	26	3.56	45.2
S048974		11.21	<0.01	0.06	9.13	36.2	240	3.90	0.41	1.58	0.09	110.0	29.1	60	56.3	59.9
S048975		10.55	0.01	0.05	7.44	90.6	230	2.54	0.35	7.05	0.88	95.8	15.5	41	37.5	38.2
S048976		8.18	0.04	0.08	2.17	35.1	240	0.77	0.11	15.90	0.62	26.9	6.1	16	8.21	15.4
S048977		4.26	0.12	0.19	1.82	49.8	300	0.82	0.10	17.25	4.63	23.5	4.8	14	5.29	15.8
S048978		3.88	0.14	0.24	2.10	53.6	400	0.88	0.13	15.70	9.73	26.6	5.8	17	6.09	19.9
S048979		10.29	0.03	0.06	6.79	139.5	220	1.89	0.27	2.48	0.12	67.5	19.8	72	42.1	55.2
S048980		12.23	<0.01	0.08	7.18	39.4	230	1.91	0.30	2.14	0.14	74.3	22.9	73	51.7	57.8
S048981		12.96	0.01	0.06	7.45	132.0	220	2.07	0.31	2.19	0.18	74.9	20.3	70	38.1	60.6
S048982		12.22	<0.01	0.07	5.93	84.7	200	1.63	0.24	2.00	0.12	62.5	17.3	67	27.1	47.3
S048983		10.62	0.10	0.10	5.72	228	190	1.40	0.24	2.57	0.03	59.5	16.2	58	15.25	45.9
S048984		12.91	0.52	0.10	5.94	1115	220	1.53	0.24	3.83	0.18	61.7	20.1	55	19.90	49.6
S048985		0.26	1.43	0.96	3.09	>10000	200	0.72	0.12	17.75	0.37	36.7	7.4	37	8.81	24.7
S048986		12.30	<0.01	0.07	5.39	88.3	220	1.29	0.20	4.00	0.10	53.4	16.9	59	19.35	43.0
S048987		12.92	<0.01	0.06	5.46	101.5	240	1.43	0.19	3.80	0.07	55.9	16.3	63	26.1	45.4
S048988		4.79	<0.01	0.07	5.76	140.5	210	1.59	0.22	4.10	0.07	58.2	17.3	63	28.9	47.1
S048989		7.79	0.73	0.12	5.75	531	210	1.52	0.27	3.60	0.13	60.3	17.5	58	24.9	47.6
S048990		<0.02	0.87	0.12	5.93	571	220	1.46	0.23	3.80	0.13	59.6	18.9	59	25.2	47.9
S048991		6.80	8.32	2.11	6.23	>10000	290	1.30	0.26	2.77	0.19	71.9	14.5	60	16.80	43.8
S048992		6.98	<0.01	0.01	0.09	21.6	20	0.06	0.01	33.9	<0.02	1.11	0.5	1	0.08	1.5
S048993		8.31	0.94	0.25	4.84	631	160	1.23	0.20	1.80	0.08	49.7	14.5	56	20.6	39.6
S048994		7.53	<0.01	0.09	5.08	70.0	250	1.19	0.20	1.83	0.03	52.3	20.1	63	31.4	41.3
S048995		12.17	<0.01	0.07	5.54	10.9	200	1.38	0.21	2.10	0.04	58.1	16.4	66	34.3	47.7
S048996		12.25	<0.01	0.05	5.14	10.7	190	1.15	0.19	1.80	0.04	53.5	16.5	66	29.4	44.6
S048997		12.00	<0.01	0.06	6.61	28.6	250	1.82	0.25	1.65	0.05	64.7	21.0	77	39.4	60.1
S048998		11.98	0.01	0.05	5.99	79.4	250	1.47	0.21	2.04	0.06	57.9	17.2	70	34.1	53.3
S048999		11.95	<0.01	0.05	6.30	35.2	220	1.74	0.24	1.91	0.04	60.5	15.3	70	36.8	53.4
S049000		11.33	<0.01	0.06	5.50	191.0	340	1.47	0.20	2.03	0.05	51.5	15.1	68	17.00	46.6
S049001		13.34	<0.01	0.08	5.86	100.5	250	1.55	0.22	2.66	0.04	55.3	19.6	66	26.4	49.8
S049002		12.42	0.01	0.06	6.01	36.6	350	1.51	0.21	2.19	0.13	57.1	16.1	68	31.1	51.3
S049003		11.99	<0.01	0.04	7.02	9.8	290	1.77	0.26	1.71	0.35	67.3	21.2	82	36.7	65.5
S049004		12.78	<0.01	0.05	5.76	9.1	270	1.34	0.20	2.08	0.16	56.7	15.6	68	27.9	49.4
S049005		12.24	<0.01	0.05	5.96	4.9	240	1.50	0.21	1.91	0.02	56.8	14.7	67	28.6	52.8
S049006		12.48	<0.01	0.06	5.34	35.8	260	1.28	0.19	2.18	0.04	54.1	15.1	62	23.8	48.1
S049007		12.33	<0.01	0.05	5.95	19.9	250	1.51	0.20	2.05	0.04	57.9	16.2	67	30.0	52.8
S049008		12.28	<0.01	0.06	5.80	47.9	260	1.39	0.22	2.02	0.02	56.6	16.1	67	28.7	50.4
S049009		12.07	<0.01	0.08	5.96	52.8	280	1.43	0.22	1.83	0.03	58.0	18.5	68	28.5	50.7
S049010		12.86	0.01	0.07	5.19	41.5	530	1.19	0.17	2.83	0.35	49.3	15.4	63	21.8	46.4

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Finalized Date: 14-AUG-2018
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Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18180707

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Hg-MS42	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni
	Units	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2
S048971		4.39	24.0	0.23	3.3	0.095	0.075	4.58	53.3	29.5	1.52	325	0.55	0.04	11.8	36.6
S048972		4.81	23.8	0.21	3.0	0.062	0.082	4.56	63.7	30.8	1.64	765	0.42	0.04	11.8	42.7
S048973		1.19	3.81	0.09	0.8	2.03	0.024	0.69	10.1	6.9	1.29	4750	1.28	0.10	2.0	13.5
S048974		5.07	23.7	0.18	3.2	0.155	0.081	4.58	55.0	18.2	1.48	1090	1.59	0.04	12.5	54.8
S048975		3.43	18.30	0.15	3.0	0.228	0.068	3.64	51.7	10.2	4.06	1820	2.34	0.04	10.8	34.8
S048976		2.17	5.29	0.08	1.0	0.321	0.023	1.05	12.5	3.3	9.21	3040	6.24	0.02	4.0	13.5
S048977		1.89	4.61	0.08	1.0	1.755	0.033	0.90	10.5	4.4	9.84	1740	7.55	0.02	3.2	19.0
S048978		2.13	5.51	0.08	1.2	3.24	0.040	1.03	11.9	4.9	9.11	1640	7.47	0.02	3.7	26.2
S048979		5.40	16.60	0.13	3.2	0.248	0.213	2.96	33.5	72.5	2.12	675	0.30	0.15	10.6	37.6
S048980		5.41	17.75	0.13	3.6	0.131	0.080	3.28	36.7	79.1	2.48	611	0.33	0.08	11.6	38.5
S048981		5.36	18.40	0.14	3.6	0.303	0.078	3.56	37.8	46.1	2.02	631	0.32	0.04	11.7	37.0
S048982		4.60	14.35	0.11	2.8	0.272	0.066	2.85	30.6	32.4	1.83	566	0.36	0.03	9.2	32.2
S048983		4.89	14.35	0.12	2.7	0.986	0.070	2.74	29.7	18.1	1.34	669	0.32	0.02	9.0	32.3
S048984		5.09	14.90	0.11	2.8	1.130	0.065	2.87	30.6	24.7	1.90	792	0.78	0.03	9.5	34.1
S048985		2.13	7.62	0.07	1.5	4.75	0.041	1.40	19.3	12.5	2.22	1260	1.42	0.10	4.4	17.9
S048986		4.46	12.65	0.10	2.6	0.176	0.054	2.62	26.7	42.3	2.58	768	1.12	0.03	8.2	29.3
S048987		4.52	13.30	0.11	2.7	0.104	0.062	2.69	26.9	54.0	2.64	664	0.44	0.03	8.5	31.7
S048988		4.59	14.15	0.11	2.9	0.190	0.055	2.83	28.3	38.9	2.46	663	0.44	0.03	9.2	32.7
S048989		4.42	14.35	0.10	2.9	1.275	0.058	2.76	29.1	19.4	1.73	859	0.31	0.02	9.2	32.5
S048990		4.58	14.60	0.11	2.9	1.355	0.060	2.85	29.9	20.0	1.83	911	0.33	0.02	9.2	33.1
S048991		5.14	15.45	0.12	2.8	4.71	0.056	2.97	31.1	15.5	1.46	900	0.29	0.02	9.1	29.9
S048992		0.13	0.27	0.09	0.1	0.008	<0.005	0.02	1.3	1.0	1.76	124	<0.05	0.04	0.1	<0.2
S048993		4.49	11.90	0.09	2.5	1.750	0.050	2.22	25.4	34.3	1.07	655	0.25	0.02	7.6	30.1
S048994		4.61	12.50	0.10	2.6	0.087	0.055	2.14	26.3	64.3	1.82	495	0.28	0.22	7.9	32.4
S048995		4.71	13.65	0.10	2.8	0.034	0.056	2.37	28.8	57.3	2.06	541	0.20	0.27	8.7	32.7
S048996		4.67	12.45	0.10	2.6	0.015	0.062	2.10	25.7	58.1	1.87	479	0.27	0.23	8.0	31.9
S048997		5.15	17.35	0.15	3.1	0.019	0.068	2.97	31.0	81.8	2.13	436	0.62	0.19	10.6	40.9
S048998		4.79	15.45	0.12	2.8	0.034	0.061	2.75	28.3	79.9	2.05	510	0.32	0.16	9.2	36.6
S048999		4.68	16.55	0.14	2.9	0.059	0.063	2.86	30.1	102.0	2.06	455	0.35	0.10	9.8	34.9
S049000		4.33	14.00	0.12	2.4	0.171	0.052	2.52	25.0	132.5	1.70	457	0.29	0.03	7.9	31.7
S049001		4.89	15.20	0.12	2.6	0.125	0.057	2.66	27.0	123.5	2.15	688	0.43	0.09	9.1	38.0
S049002		4.75	15.50	0.13	2.7	0.049	0.062	2.69	27.7	110.5	2.16	584	0.54	0.17	9.3	35.1
S049003		5.42	18.40	0.13	3.3	0.034	0.080	2.76	33.3	77.0	2.15	418	0.93	0.47	11.2	41.8
S049004		4.72	14.75	0.11	2.7	0.034	0.054	2.33	27.4	56.1	2.05	523	0.31	0.32	9.1	33.9
S049005		4.53	15.30	0.12	2.8	0.026	0.054	2.40	28.6	55.9	2.08	450	0.22	0.36	9.2	33.1
S049006		4.47	13.95	0.12	2.5	0.028	0.058	2.13	25.9	68.2	2.05	520	0.26	0.30	8.5	32.8
S049007		4.66	15.50	0.12	2.8	0.034	0.061	2.33	28.6	52.0	2.12	518	0.27	0.40	9.3	35.9
S049008		4.85	15.10	0.12	2.7	0.020	0.059	2.30	27.4	64.9	2.15	487	0.23	0.36	9.1	35.1
S049009		4.99	15.45	0.13	2.7	0.071	0.058	2.51	28.0	94.6	2.09	447	0.31	0.27	9.3	35.2
S049010		4.27	13.20	0.12	2.4	0.094	0.048	2.12	24.0	162.0	2.23	609	0.67	0.20	7.9	31.4

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 14-AUG-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18180707

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl
	Units	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
	LOD	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.01	0.005	0.02
S048971		480	12.3	178.0	0.005	0.24	0.36	16.0	1	2.9	99.9	0.89	<0.05	17.95	0.360	1.38
S048972		500	9.0	192.5	0.003	0.35	0.28	16.8	1	2.9	110.0	0.86	<0.05	19.10	0.372	1.41
S048973		400	64.7	29.4	0.002	0.71	8.25	5.8	2	0.7	1205	0.14	0.05	2.69	0.082	6.43
S048974		490	24.1	171.0	<0.002	3.93	0.79	16.8	1	2.9	112.0	0.91	0.06	18.00	0.380	2.16
S048975		500	19.9	146.0	<0.002	2.76	0.90	13.2	1	2.3	250	0.78	0.05	16.05	0.318	1.77
S048976		300	17.3	41.5	0.005	1.31	0.70	4.1	1	0.7	404	0.27	<0.05	4.23	0.103	0.86
S048977		230	24.7	38.0	0.014	1.42	1.08	4.4	2	0.7	416	0.22	<0.05	3.23	0.109	1.55
S048978		240	30.2	44.0	0.016	1.81	1.32	4.9	2	0.9	390	0.26	<0.05	3.77	0.131	1.95
S048979		550	15.0	160.0	<0.002	2.00	0.77	17.8	1	2.2	158.5	0.74	0.06	10.15	0.559	2.29
S048980		630	23.4	183.0	<0.002	0.21	0.55	20.5	<1	2.3	143.0	0.81	0.06	11.30	0.566	1.26
S048981		590	16.0	184.5	<0.002	2.36	0.50	21.1	<1	2.4	141.5	0.84	0.06	11.60	0.580	2.75
S048982		480	16.8	136.0	<0.002	1.18	0.59	15.7	1	1.9	125.5	0.64	0.05	9.20	0.494	1.55
S048983		460	16.3	124.0	<0.002	4.32	1.78	15.8	<1	1.8	152.0	0.64	0.05	9.23	0.481	5.07
S048984		510	20.0	130.5	<0.002	4.25	2.70	18.2	1	2.0	181.5	0.62	0.05	9.62	0.501	6.43
S048985		430	16.1	63.7	<0.002	2.35	56.8	6.8	2	1.1	815	0.31	0.10	5.23	0.188	17.15
S048986		480	19.0	117.5	<0.002	0.63	0.42	13.5	1	1.7	211	0.57	0.05	8.58	0.469	1.27
S048987		510	15.2	135.0	<0.002	0.21	0.32	14.7	1	1.7	232	0.58	0.06	8.24	0.474	1.12
S048988		480	14.6	141.5	<0.002	1.94	0.36	15.5	1	1.8	207	0.60	0.05	8.91	0.502	2.15
S048989		480	18.1	136.5	<0.002	3.67	2.07	15.6	1	1.9	170.0	0.63	0.06	9.19	0.474	6.06
S048990		490	17.9	137.5	<0.002	3.73	2.23	16.2	<1	2.0	178.5	0.64	0.06	9.43	0.494	6.52
S048991		540	13.2	131.0	<0.002	5.08	16.15	16.4	1	2.0	155.5	0.66	0.08	9.81	0.465	23.5
S048992		70	<0.5	0.6	<0.002	<0.01	0.07	0.2	1	<0.2	80.9	<0.05	<0.05	0.09	0.006	0.07
S048993		370	15.5	111.0	<0.002	3.43	2.05	13.1	1	1.6	91.5	0.53	<0.05	7.97	0.462	8.35
S048994		400	18.3	113.0	<0.002	0.34	0.53	13.5	1	1.6	115.0	0.55	0.06	7.91	0.460	0.95
S048995		440	13.9	128.5	<0.002	0.22	0.47	14.9	<1	1.7	109.0	0.60	0.06	8.54	0.498	0.94
S048996		530	14.4	117.5	<0.002	0.20	0.36	14.0	<1	1.6	88.1	0.55	<0.05	8.01	0.492	0.78
S048997		490	16.9	164.5	<0.002	0.25	0.47	19.2	<1	2.0	100.5	0.78	0.05	9.83	0.568	1.07
S048998		680	13.2	148.5	0.002	0.14	0.33	17.1	<1	1.8	115.0	0.66	<0.05	8.80	0.515	1.07
S048999		500	11.6	150.5	<0.002	0.21	0.37	17.4	1	2.0	101.0	0.72	<0.05	9.43	0.517	0.98
S049000		390	14.0	111.5	<0.002	0.78	0.87	14.1	<1	1.6	171.0	0.57	<0.05	7.89	0.453	1.24
S049001		680	19.5	126.0	<0.002	0.76	0.69	14.6	1	1.8	154.5	0.66	0.06	8.86	0.481	1.00
S049002		470	14.1	139.0	<0.002	0.18	0.38	15.4	1	1.8	132.5	0.64	<0.05	8.80	0.496	0.91
S049003		540	13.6	141.0	<0.002	0.10	0.30	20.5	<1	2.1	142.5	0.81	0.05	10.20	0.622	0.80
S049004		480	14.4	118.0	0.002	0.22	0.40	14.5	1	1.7	131.5	0.65	0.05	8.69	0.486	0.78
S049005		470	11.3	121.5	<0.002	0.11	0.31	15.8	<1	1.7	112.0	0.68	0.05	8.72	0.502	0.70
S049006		460	14.8	108.5	<0.002	0.17	0.37	14.3	<1	1.6	156.0	0.59	0.07	8.00	0.472	0.67
S049007		460	13.8	118.5	<0.002	0.17	0.35	16.5	1	1.8	121.5	0.67	<0.05	8.98	0.506	0.64
S049008		480	13.1	115.0	<0.002	0.19	0.35	15.2	1	1.7	127.5	0.63	0.05	8.78	0.494	0.69
S049009		470	14.6	119.0	<0.002	0.35	0.81	15.4	1	1.8	137.0	0.66	<0.05	8.92	0.506	0.81
S049010		460	17.7	94.7	<0.002	0.18	0.92	13.5	1	1.5	216	0.57	0.05	7.54	0.456	0.66

***** See Appendix Page for comments regarding this certificate *****

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VANCOUVER BC V6B 1L8

Finalized Date: 14-AUG-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18180707

Sample Description	Method Analyte Units LOD	ME-MS61 U ppm 0.1	ME-MS61 V ppm 1	ME-MS61 W ppm 0.1	ME-MS61 Y ppm 0.1	ME-MS61 Zn ppm 2	ME-MS61 Zr ppm 0.5	As-OG62 As % 0.001
S048971		4.1	142	2.0	24.0	83	104.0	
S048972		2.6	113	1.9	24.7	75	96.5	
S048973		4.0	26	5.8	15.2	131	26.1	
S048974		1.7	97	1.9	24.5	81	100.0	
S048975		2.2	73	3.2	24.5	376	97.7	
S048976		2.2	32	1.1	8.2	247	34.1	
S048977		4.9	51	1.9	7.7	1280	35.4	
S048978		4.6	56	2.3	8.3	2510	41.2	
S048979		1.9	147	2.0	22.6	99	109.5	
S048980		2.2	146	1.4	25.0	103	118.5	
S048981		2.3	151	2.5	24.6	119	121.5	
S048982		1.8	133	1.1	19.5	90	96.7	
S048983		1.7	132	7.5	19.3	65	92.7	
S048984		1.7	130	6.4	20.2	94	99.8	
S048985		4.2	56	4.3	16.0	57	52.0	
S048986		1.6	119	1.8	17.8	91	89.0	
S048987		1.6	123	1.1	19.2	72	93.7	
S048988		1.7	131	1.0	19.5	73	101.0	
S048989		1.8	124	5.5	20.4	87	96.3	
S048990		1.8	128	5.8	20.3	81	99.7	
S048991		1.9	126	10.2	20.5	66	92.9	1.235
S048992		0.1	2	0.1	2.0	4	1.4	
S048993		1.5	125	5.6	16.7	58	84.7	
S048994		1.6	124	1.0	17.3	64	87.8	
S048995		1.6	135	1.0	18.9	61	93.8	
S048996		1.6	133	1.0	19.2	66	86.6	
S048997		1.9	151	1.2	22.0	84	111.0	
S048998		1.7	138	1.1	20.9	70	99.1	
S048999		1.8	138	1.1	21.4	61	104.5	
S049000		1.5	127	2.6	16.0	68	85.0	
S049001		1.6	128	2.2	19.3	57	92.1	
S049002		1.6	135	1.2	19.3	126	98.0	
S049003		2.0	168	1.2	23.5	229	117.5	
S049004		1.7	130	1.0	19.3	98	95.8	
S049005		1.7	134	1.0	19.4	61	99.2	
S049006		1.5	124	1.0	18.7	63	89.5	
S049007		1.7	136	1.0	19.9	61	100.5	
S049008		1.7	130	1.2	19.9	61	97.2	
S049009		1.7	134	2.1	19.3	59	96.0	
S049010		1.5	121	1.5	17.0	146	85.4	

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Project: Nadaleen

Finalized Date: 14-AUG-2018
Account: RCM

CERTIFICATE OF ANALYSIS WH18180707

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Applies to Method: REE's may not be totally soluble in this method.
ME-MS61

LABORATORY ADDRESSES

Applies to Method: Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.

CRU-31	CRU-QC	LOG-21	LOG-21d
LOG-23	PUL-31	PUL-31d	PUL-QC
SPL-21	SPL-21d	WEI-21	

Applies to Method: Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

As-OG62	Au-AA25	Hg-MS42	ME-MS61
ME-OG62			

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VANCOUVER BC V6B 1L8

Finalized Date: 13-AUG-2018
Account: RCM

CERTIFICATE WH18181799

Project: Nadaleen

P.O. No.: N18-042

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 27-JUL-2018.

The following have access to data associated with this certificate:

ANDREW CARNE	JULIA LANE	

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
LOG-23	Pulp Login - Rcvd with Barcode
LOG-21d	Sample logging - ClientBarCode Dup
SPL-21d	Split sample - duplicate
PUL-31d	Pulverize Split - duplicate

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid ICP-MS	
Hg-MS42	Trace Hg by ICPMS	ICP-MS

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:

Colin Ramshaw, Vancouver Laboratory Manager

ALS Canada Ltd.

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Finalized Date: 13-AUG-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18181799

Sample Description	Method	WEI-21	Au-AA25	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Recvd Wt.	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu
	Units	kg	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.02	0.01	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2
S049011		12.82	<0.01	0.05	5.98	16.0	280	1.50	0.21	3.35	0.07	61.1	18.7	63	32.9	50.1
S049012		12.38	<0.01	0.05	5.97	3.6	250	1.36	0.19	3.31	0.04	59.7	16.6	63	32.2	48.9
S049013		12.46	<0.01	0.05	5.74	14.6	260	1.30	0.20	3.19	0.13	57.4	15.9	64	27.6	47.9
S049014		0.26	1.08	1.35	1.61	867	210	0.43	0.13	28.6	0.74	21.3	4.0	27	3.49	44.2
S049015		11.65	<0.01	0.05	4.41	17.3	310	0.86	0.17	1.94	0.06	44.2	11.5	54	18.60	34.0
S049016		8.32	<0.01	0.06	3.44	26.8	210	0.74	0.11	1.84	0.05	36.6	10.3	43	13.95	26.0
S049017		8.29	0.02	0.05	3.94	53.6	270	0.84	0.13	2.14	0.03	40.6	10.5	54	13.65	31.6
S049018		8.56	<0.01	0.06	4.80	72.9	200	1.14	0.17	2.33	0.08	49.7	12.1	54	22.9	37.1
S049019		8.62	<0.01	0.07	4.45	149.0	230	1.02	0.15	2.31	0.05	42.9	13.1	53	17.50	34.1
S049020		8.50	0.17	0.08	4.95	511	310	1.05	0.15	2.74	0.22	48.3	14.6	55	11.40	39.7
S049021		7.32	4.13	0.60	5.16	8830	230	0.97	0.17	3.19	0.21	52.5	12.5	55	9.45	44.4
S049022		<0.02	4.02	0.59	5.13	8620	230	0.93	0.17	3.19	0.19	52.4	12.5	55	9.39	44.5
S049023		8.50	0.01	0.04	7.12	353	280	1.70	0.25	2.23	0.02	68.8	19.3	70	22.5	57.3
S049024		9.00	0.01	0.21	6.48	293	240	1.74	0.22	1.96	0.02	63.4	18.7	72	23.0	51.2
S049025		8.39	0.01	0.05	6.31	241	300	1.55	0.23	1.88	0.02	62.3	16.7	70	21.3	48.7
S049026		8.47	0.01	0.04	6.09	198.0	270	1.51	0.20	2.16	<0.02	59.5	13.9	71	24.1	47.9
S049027		8.37	0.03	0.08	5.49	244	210	1.62	0.18	3.63	0.08	54.2	21.0	61	19.75	40.9
S049028		8.12	<0.01	0.07	8.06	327	290	2.38	0.21	1.55	0.09	68.1	25.6	86	31.2	53.2
S049029		8.31	1.30	0.12	7.02	605	290	2.09	0.22	1.32	0.15	62.1	20.0	80	23.4	51.5
S049030		5.05	<0.01	<0.01	0.15	2.7	20	0.07	0.02	34.0	0.02	1.35	0.5	<1	0.15	1.7
S049031		5.13	0.02	0.08	6.31	238	220	1.76	0.19	1.49	0.05	59.3	17.0	66	19.40	41.6
S049032		6.91	<0.01	0.06	7.89	169.5	290	2.01	0.22	1.27	0.07	70.0	24.0	82	34.8	52.3
S049033		7.90	<0.01	0.03	5.65	25.4	280	1.08	0.18	3.88	0.03	49.9	17.3	66	26.1	37.2
S049034		6.91	<0.01	0.04	7.87	30.8	480	1.73	0.22	1.49	0.03	65.6	23.7	93	43.9	52.9
S049035		6.74	<0.01	0.02	8.98	15.9	370	2.33	0.24	0.82	0.02	71.0	26.4	109	67.3	56.0
S049036		5.81	<0.01	0.08	7.23	15.1	1130	1.68	0.22	1.56	0.07	60.1	23.3	89	42.2	48.6
S049037		0.26	1.46	0.83	2.87	>10000	180	0.59	0.11	16.10	0.37	31.0	6.6	39	7.61	22.6
S049038		5.76	0.01	0.07	7.39	23.3	580	1.67	0.22	1.37	0.15	62.7	19.7	84	48.0	48.8
S049039		6.76	<0.01	0.07	6.82	17.2	450	1.71	0.23	1.73	0.05	62.7	21.9	74	40.1	48.1
S049040		7.58	0.01	0.06	5.82	10.2	420	1.65	0.20	7.10	0.09	63.1	17.4	63	35.6	41.5
S049041		4.21	<0.01	0.02	1.71	14.3	240	0.44	0.08	29.0	0.22	25.6	5.1	15	5.60	14.0
S049042		8.02	<0.01	0.05	3.07	25.0	240	0.79	0.15	22.1	0.27	41.6	9.3	28	13.15	29.1
S049043		7.97	<0.01	0.02	1.41	4.4	160	0.49	0.07	31.8	0.13	22.2	4.7	13	5.56	13.7
S049044		8.13	<0.01	0.02	2.21	11.2	210	0.57	0.11	28.1	0.17	29.8	7.0	21	7.82	20.8
S049045		3.86	<0.01	0.05	3.24	38.7	210	0.87	0.15	21.6	0.28	45.7	10.0	33	10.45	32.7
S049046		3.82	<0.01	0.04	3.19	38.5	200	0.78	0.15	22.1	0.26	42.9	9.8	33	10.15	31.4
S049047		8.19	<0.01	0.03	2.32	21.0	210	0.66	0.12	26.6	0.22	33.9	6.9	23	7.97	21.8
S049048		8.58	<0.01	0.05	4.98	19.8	260	1.33	0.23	14.15	0.26	64.0	15.2	49	25.8	47.2
S049049		8.46	<0.01	0.05	3.49	36.9	260	0.97	0.16	17.35	0.21	44.6	11.8	33	13.70	32.5
S049050		8.24	<0.01	0.01	4.21	3.7	260	1.11	0.15	14.60	0.15	42.8	9.8	36	17.05	33.1

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 13-AUG-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18181799

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Hg-MS42	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni
	Units	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2
S049011		4.51	14.05	0.13	2.9	0.032	0.059	2.30	29.2	109.0	2.69	661	0.39	0.55	9.0	34.4
S049012		4.55	13.90	0.12	2.9	0.023	0.054	2.23	29.2	73.7	2.67	632	0.35	0.61	8.8	33.6
S049013		4.45	13.45	0.14	2.8	0.017	0.056	2.11	27.6	64.9	2.53	597	0.31	0.56	8.6	33.2
S049014		1.17	3.66	0.06	0.8	2.24	0.026	0.68	9.8	6.0	1.24	4730	1.21	0.10	2.0	12.9
S049015		3.53	9.90	0.09	2.1	0.026	0.043	1.56	21.6	47.8	1.58	407	0.54	0.43	6.1	25.3
S049016		4.20	7.63	0.09	1.7	0.037	0.032	1.31	17.4	47.2	1.19	436	0.66	0.34	4.8	21.7
S049017		3.43	8.98	0.08	1.8	0.025	0.037	1.54	19.9	67.3	1.41	498	0.77	0.14	5.7	22.4
S049018		3.67	11.35	0.10	2.4	0.059	0.047	2.20	24.2	54.0	1.69	532	0.56	0.10	7.1	25.8
S049019		3.71	10.25	0.10	2.1	0.126	0.040	1.94	21.4	62.8	1.45	586	0.64	0.03	6.2	25.2
S049020		4.16	11.50	0.11	2.3	0.623	0.042	2.20	23.8	28.2	1.32	880	0.43	0.02	7.1	29.4
S049021		4.59	11.95	0.13	2.4	8.45	0.045	2.37	25.4	12.9	1.59	1240	0.28	0.02	7.6	27.6
S049022		4.63	12.00	0.12	2.4	8.42	0.046	2.37	25.2	12.5	1.60	1240	0.25	0.02	7.6	28.0
S049023		5.22	16.60	0.12	3.2	0.340	0.065	3.29	33.3	35.4	1.79	556	0.21	0.03	10.7	38.7
S049024		4.98	15.20	0.12	2.8	0.281	0.066	3.02	31.1	52.1	1.91	490	0.24	0.03	9.0	34.3
S049025		4.95	14.85	0.13	2.8	0.400	0.064	2.96	31.1	35.7	1.75	494	0.27	0.03	9.0	32.4
S049026		5.25	14.45	0.11	2.7	0.250	0.057	2.77	33.5	65.0	1.83	568	0.23	0.03	8.9	32.0
S049027		4.12	12.80	0.12	2.4	0.486	0.050	2.66	27.8	22.6	1.78	706	0.62	0.02	7.1	36.4
S049028		4.94	19.35	0.13	2.8	0.826	0.076	3.91	34.3	21.5	1.07	568	0.38	0.03	8.6	41.0
S049029		5.33	17.05	0.14	2.6	1.700	0.065	3.32	31.8	19.8	0.84	730	0.75	0.02	7.6	37.6
S049030		0.12	0.41	0.10	0.1	0.006	<0.005	0.06	1.4	1.0	1.57	112	<0.05	0.05	0.2	<0.2
S049031		4.79	14.75	0.11	2.4	0.834	0.058	2.99	29.4	20.1	0.81	578	0.83	0.02	6.7	31.0
S049032		4.82	18.85	0.14	2.9	0.538	0.074	3.76	35.2	28.5	1.00	454	0.52	0.03	8.1	36.2
S049033		4.49	14.25	0.12	1.8	0.121	0.053	2.63	24.0	32.9	1.49	680	0.31	0.02	6.0	25.3
S049034		5.38	20.5	0.15	2.6	0.221	0.078	3.73	32.2	41.8	1.46	655	0.37	0.03	8.2	36.5
S049035		5.72	24.0	0.13	2.8	0.153	0.087	4.23	34.0	65.0	1.46	589	0.19	0.03	9.1	42.8
S049036		4.97	18.95	0.14	2.4	0.250	0.066	3.38	29.4	46.8	1.24	416	0.66	0.03	7.5	39.3
S049037		1.94	7.33	0.09	1.3	4.69	0.032	1.29	15.7	9.9	1.98	1170	1.20	0.09	3.8	16.7
S049038		4.48	19.10	0.13	2.6	0.238	0.073	3.53	31.2	37.8	1.24	395	0.73	0.04	8.0	35.2
S049039		4.38	18.10	0.16	2.7	0.310	0.067	3.35	31.2	27.7	1.27	437	0.87	0.04	8.2	37.3
S049040		4.27	15.65	0.13	2.4	0.222	0.058	2.88	30.7	23.1	2.01	748	0.79	0.05	7.5	30.6
S049041		1.47	4.36	0.08	0.8	0.191	0.017	0.80	11.5	4.1	0.83	432	0.69	0.11	2.2	8.8
S049042		1.96	8.04	0.11	1.5	0.514	0.032	1.46	21.2	8.4	1.14	308	1.51	0.10	4.1	18.1
S049043		1.01	3.58	0.10	0.6	0.141	0.013	0.66	10.6	5.1	0.92	475	0.34	0.05	1.8	7.6
S049044		1.48	5.68	0.09	1.0	0.185	0.022	1.06	15.1	6.9	1.01	352	0.35	0.05	2.8	11.9
S049045		2.16	8.49	0.12	1.5	0.601	0.038	1.51	23.3	10.2	1.40	346	1.95	0.08	4.2	19.7
S049046		2.18	8.04	0.12	1.4	0.532	0.032	1.49	21.8	9.8	1.37	351	1.78	0.08	4.0	19.2
S049047		1.68	5.79	0.11	1.1	0.392	0.023	1.02	16.7	7.0	1.08	375	1.05	0.20	2.9	13.6
S049048		2.68	13.35	0.15	2.2	0.483	0.055	2.31	34.5	17.0	1.52	387	0.91	0.29	6.5	28.2
S049049		2.64	8.87	0.11	1.6	0.634	0.037	1.57	22.0	9.9	1.81	568	1.23	0.21	4.6	27.6
S049050		2.35	10.95	0.11	1.5	0.107	0.040	1.97	21.9	12.4	2.73	1080	0.49	0.10	5.3	29.3

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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 13-AUG-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18181799

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl
	Units	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
	LOD	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.01	0.005	0.02
S049011		500	14.5	119.5	<0.002	0.10	0.51	15.9	1	2.0	173.5	0.62	0.05	9.43	0.497	0.67
S049012		510	13.6	116.5	<0.002	0.09	0.35	15.8	<1	1.7	184.0	0.61	0.05	9.53	0.504	0.62
S049013		460	13.0	114.5	<0.002	0.08	0.27	15.3	<1	1.7	184.0	0.62	0.05	9.26	0.501	0.66
S049014		390	60.6	29.4	<0.002	0.71	7.82	5.7	1	0.7	1205	0.14	0.05	2.74	0.080	6.03
S049015		360	10.0	81.1	<0.002	0.06	0.23	10.9	<1	1.3	110.0	0.44	<0.05	7.00	0.375	0.51
S049016		360	22.2	68.4	<0.002	1.80	0.48	8.5	1	1.0	91.9	0.35	<0.05	5.77	0.298	0.59
S049017		350	8.0	77.4	<0.002	0.12	0.24	10.0	<1	1.2	115.5	0.40	<0.05	6.32	0.358	0.59
S049018		420	11.7	113.0	<0.002	0.14	0.31	12.5	<1	1.5	98.7	0.52	0.05	7.88	0.387	0.79
S049019		360	12.6	95.4	<0.002	0.79	0.40	10.5	<1	1.4	98.9	0.46	0.05	7.11	0.359	1.09
S049020		470	17.3	98.0	<0.002	3.52	1.14	13.0	1	1.5	141.5	0.50	<0.05	8.05	0.426	2.92
S049021		570	9.2	95.4	<0.002	4.06	18.35	13.9	1	1.6	123.5	0.55	0.05	8.03	0.446	26.8
S049022		570	10.0	95.7	<0.002	4.13	17.85	13.9	1	1.6	124.0	0.53	<0.05	8.25	0.445	26.7
S049023		540	11.8	143.5	<0.002	2.63	1.15	19.1	<1	2.2	131.5	0.79	0.06	11.30	0.583	2.64
S049024		440	14.4	138.0	<0.002	0.95	0.65	18.1	<1	1.9	110.5	0.62	0.06	10.00	0.493	1.73
S049025		460	18.8	138.0	<0.002	1.42	0.65	16.3	1	1.9	154.5	0.63	0.05	9.99	0.481	2.45
S049026		500	10.6	133.5	<0.002	1.36	0.45	16.6	<1	1.9	153.5	0.62	0.05	9.29	0.488	2.60
S049027		310	27.7	121.0	0.002	1.96	1.28	14.2	1	1.7	136.0	0.53	<0.05	8.33	0.369	2.56
S049028		230	19.8	182.0	0.005	4.04	2.11	24.6	1	2.2	89.8	0.61	<0.05	10.55	0.437	2.93
S049029		190	20.2	150.5	0.004	5.09	1.56	21.9	1	1.9	84.8	0.55	<0.05	9.53	0.389	7.00
S049030		70	1.4	1.8	<0.002	0.01	<0.05	0.2	1	<0.2	83.0	<0.05	<0.05	0.16	0.007	0.03
S049031		220	15.3	129.5	0.003	4.41	1.76	16.9	1	1.7	87.1	0.49	<0.05	8.68	0.337	3.42
S049032		190	15.9	169.0	0.003	3.01	1.51	23.5	1	2.2	89.8	0.60	0.05	10.80	0.406	3.02
S049033		170	8.3	117.5	<0.002	0.33	0.38	15.0	<1	1.4	165.0	0.46	<0.05	6.92	0.310	0.85
S049034		230	13.0	177.5	0.003	0.55	0.31	24.2	<1	2.0	107.0	0.62	<0.05	9.21	0.418	1.07
S049035		210	10.9	217	0.002	0.43	0.32	28.7	<1	2.4	93.9	0.68	<0.05	10.05	0.457	1.26
S049036		170	16.7	161.5	0.004	1.21	0.53	21.9	1	1.9	114.0	0.58	<0.05	8.67	0.375	1.30
S049037		390	13.7	57.2	0.002	2.15	49.2	6.2	2	1.0	753	0.29	0.09	4.32	0.173	14.50
S049038		180	15.0	172.5	0.004	1.09	0.61	21.7	1	2.0	106.5	0.60	<0.05	9.30	0.385	1.39
S049039		230	18.4	164.5	0.003	1.62	0.61	17.9	1	2.0	123.0	0.62	<0.05	9.12	0.382	2.18
S049040		340	14.3	142.0	0.005	1.83	0.48	15.4	1	1.8	332	0.56	0.05	8.34	0.329	1.60
S049041		930	4.8	36.2	<0.002	0.77	0.20	4.5	1	0.5	1425	0.16	<0.05	2.72	0.097	1.27
S049042		250	9.9	68.2	0.005	1.54	0.43	7.1	1	1.0	1015	0.32	0.08	5.12	0.174	1.19
S049043		220	4.3	31.0	<0.002	0.63	0.17	3.6	1	0.4	1200	0.13	<0.05	2.24	0.077	0.25
S049044		320	6.5	47.0	0.002	1.03	0.22	5.1	1	0.7	1195	0.24	0.06	3.57	0.123	0.35
S049045		220	10.2	69.2	0.007	1.58	2.59	8.4	1	1.1	1090	0.31	0.07	5.07	0.187	0.82
S049046		240	9.9	66.3	0.006	1.65	2.68	8.0	2	1.0	1090	0.31	0.06	4.98	0.192	0.78
S049047		240	7.1	44.8	0.004	1.17	0.62	5.8	1	0.7	1325	0.22	0.05	3.69	0.131	0.56
S049048		240	14.4	107.0	0.003	1.80	0.55	12.0	1	1.6	601	0.48	0.10	7.79	0.283	1.22
S049049		300	12.4	71.8	0.005	1.56	0.47	8.3	1	1.2	877	0.34	0.07	5.56	0.191	1.68
S049050		310	7.5	88.0	<0.002	0.93	0.31	8.8	1	1.4	707	0.41	<0.05	6.31	0.212	0.50

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Finalized Date: 13-AUG-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18181799

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	U	V	W	Y	Zn	Zr
	Units	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.1	1	0.1	0.1	2	0.5
S049011		1.8	132	1.1	19.4	74	100.5
S049012		1.8	134	0.9	18.8	55	99.0
S049013		1.8	134	1.0	18.5	85	102.5
S049014		4.1	27	5.6	15.0	130	27.0
S049015		1.4	106	0.7	13.7	64	72.7
S049016		1.1	82	0.6	11.7	43	57.6
S049017		1.2	98	0.8	12.7	49	66.1
S049018		1.5	102	0.9	15.9	67	78.8
S049019		1.4	98	1.4	13.7	55	71.3
S049020		1.5	119	4.0	15.8	112	77.1
S049021		1.5	121	6.9	17.0	79	80.6
S049022		1.5	121	6.7	17.2	72	81.1
S049023		2.0	152	2.9	20.7	68	110.5
S049024		1.9	138	3.0	18.9	70	103.0
S049025		1.9	135	1.8	18.2	63	95.2
S049026		1.8	136	1.7	18.9	60	92.5
S049027		2.1	117	1.4	16.5	57	80.5
S049028		2.1	169	2.8	19.3	82	93.3
S049029		2.1	156	6.6	16.8	97	87.1
S049030		0.2	2	0.3	2.1	7	2.0
S049031		1.8	130	5.9	16.1	71	77.7
S049032		2.0	158	5.0	18.6	78	95.0
S049033		1.2	109	1.3	15.1	63	67.5
S049034		1.6	159	1.1	19.7	82	89.4
S049035		1.7	181	1.2	20.9	97	97.3
S049036		1.8	150	1.0	17.7	81	84.1
S049037		3.5	52	4.3	14.5	51	47.0
S049038		2.0	151	1.1	18.4	126	93.2
S049039		2.0	132	1.2	18.7	86	93.0
S049040		2.3	107	1.1	23.2	76	86.0
S049041		2.4	32	0.4	16.3	32	33.0
S049042		3.3	56	0.8	19.9	48	51.8
S049043		1.9	25	0.3	16.3	23	23.5
S049044		2.7	38	0.4	15.7	31	37.0
S049045		3.1	63	1.5	23.2	53	53.1
S049046		3.2	63	1.6	23.1	55	50.5
S049047		3.3	42	0.6	19.0	38	38.1
S049048		3.1	91	0.9	24.9	75	77.9
S049049		3.5	61	1.0	21.5	51	55.2
S049050		1.4	57	1.0	15.8	55	56.5

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Project: Nadaleen

Finalized Date: 13-AUG-2018
Account: RCM

CERTIFICATE OF ANALYSIS WH18181799

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Applies to Method: REE's may not be totally soluble in this method.
ME-MS61

LABORATORY ADDRESSES

Applies to Method: Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.

CRU-31	CRU-QC	LOG-21	LOG-21d
LOG-23	PUL-31	PUL-31d	PUL-QC
SPL-21	SPL-21d	WEI-21	

Applies to Method: Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Au-AA25	Hg-MS42	ME-MS61

ALS Canada Ltd.

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Finalized Date: 7-SEP-2018
Account: RCM

CERTIFICATE WH18199691

Project: Nadaleen

P.O. No.: N18-043

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 15-AUG-2018.

The following have access to data associated with this certificate:

ANDREW CARNE	JULIA LANE	

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
LOG-23	Pulp Login - Rcvd with Barcode
LOG-21d	Sample logging - ClientBarCode Dup
SPL-21d	Split sample - duplicate
PUL-31d	Pulverize Split - duplicate

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid ICP-MS	
Hg-MS42	Trace Hg by ICPMS	ICP-MS

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:

Colin Ramshaw, Vancouver Laboratory Manager

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 7-SEP-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18199691

Sample Description	Method	WEI-21	Au-AA25	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Recvd Wt.	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu
	Units	kg	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.02	0.01	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2
S049051		8.17	<0.01	0.05	4.45	6.5	280	1.32	0.22	18.70	0.08	43.6	18.1	39	19.10	39.4
S049052		8.48	<0.01	0.04	2.95	12.6	220	0.96	0.15	25.4	0.07	32.5	13.4	28	10.25	25.5
S049053		8.38	<0.01	0.04	2.50	22.6	190	0.73	0.12	27.2	0.22	32.7	10.1	28	8.27	28.4
S049054		7.95	<0.01	0.03	1.96	25.1	330	0.62	0.09	30.8	0.16	31.6	7.7	18	7.89	21.2
S049055		8.29	<0.01	0.03	1.47	14.6	160	0.51	0.08	32.8	0.08	19.25	5.5	13	4.25	14.1
S049056		8.05	<0.01	0.03	1.03	16.0	140	0.31	0.05	34.6	0.10	16.25	4.3	11	2.58	12.1
S049057		6.51	0.01	0.02	1.29	38.9	290	0.47	0.05	32.3	0.06	16.00	4.8	13	4.12	12.0
S049058		4.86	<0.01	0.02	2.10	33.8	490	0.67	0.10	29.2	0.05	24.9	6.7	20	6.54	17.0
S049059		5.72	3.51	0.08	8.31	2640	400	2.81	0.25	1.45	0.14	60.4	29.9	92	31.9	62.8
S049060		0.26	1.03	1.38	1.52	843	190	0.48	0.12	28.0	0.70	18.60	4.8	28	3.36	48.2
S049061		5.28	5.32	0.11	7.22	9840	360	2.06	0.25	2.34	0.24	59.0	25.0	83	23.9	61.9
S049062		7.46	0.29	0.10	6.31	985	250	2.06	0.22	1.42	0.21	54.2	18.9	74	16.50	53.5
S049063		8.63	0.16	0.11	8.07	842	290	2.98	0.27	1.37	0.12	63.8	37.8	92	31.0	62.0
S049064		8.38	0.01	0.05	7.11	217	250	2.38	0.24	2.02	0.05	61.5	25.0	79	27.7	51.2
S049065		8.53	<0.01	0.04	7.96	45.2	270	2.19	0.23	0.78	0.02	65.8	22.9	92	38.5	54.9
S049066		8.44	<0.01	0.04	8.49	57.3	300	2.45	0.25	0.89	0.02	66.7	28.8	100	35.7	60.3
S049067		8.78	0.01	0.07	8.66	277	300	2.72	0.26	0.94	0.02	71.4	31.0	92	36.8	65.2
S049068		7.38	0.28	0.09	7.32	844	320	2.23	0.21	2.54	0.05	60.0	27.0	76	20.4	53.4
S049069		<0.02	0.28	0.08	7.20	853	340	2.03	0.23	2.49	0.08	59.9	27.5	78	20.4	52.8
S049070		6.80	0.03	0.06	7.68	1105	330	2.41	0.23	2.68	0.04	62.1	25.3	83	23.4	57.0
S049071		1.51	0.19	0.27	0.85	97.1	70	0.34	0.02	27.7	0.10	17.10	1.9	9	1.76	5.4
S049072		2.85	0.08	0.16	3.84	472	220	1.37	0.13	18.90	0.09	43.2	7.5	34	7.91	19.9
S049073		3.18	0.07	0.17	3.40	359	250	1.15	0.11	19.30	0.08	39.2	6.7	29	7.15	18.2
S049074		7.30	0.06	0.19	3.96	254	340	1.22	0.13	19.10	0.10	44.8	8.2	35	7.81	32.1
S049075		4.79	0.18	13.90	3.63	787	200	1.20	0.10	21.5	0.10	40.2	7.0	35	7.00	28.0
S049076		2.91	0.16	0.11	3.31	774	270	1.06	0.10	21.3	0.13	38.7	6.7	32	7.86	19.1
S049077		0.26	2.51	0.18	3.91	6560	210	1.03	0.14	12.25	0.15	40.8	13.1	46	10.60	39.6
S049078		2.14	0.09	0.12	3.97	516	250	1.29	0.13	18.05	0.13	47.3	7.8	36	7.95	36.1
S049079		1.23	0.10	0.13	4.24	546	210	1.46	0.13	12.30	0.09	46.4	8.7	39	7.84	24.5
S049080		1.17	0.12	2.84	4.52	537	220	1.39	0.16	14.15	0.10	50.7	9.6	45	9.17	30.9
S049081		3.85	0.13	0.46	5.24	474	260	1.75	0.16	11.40	0.10	56.0	10.2	44	11.60	30.1
S049082		2.41	0.06	0.08	3.62	377	270	1.03	0.11	15.15	0.24	43.5	10.6	34	6.80	29.6
S049083		4.37	0.08	0.10	6.25	221	320	1.85	0.22	8.89	0.07	67.9	12.6	49	14.80	35.0
S049084		1.67	0.01	1.29	3.15	171.5	230	1.24	0.10	19.90	0.10	36.9	5.8	28	6.52	19.7
S049085		1.74	0.01	0.99	3.39	170.5	250	1.18	0.10	19.20	0.10	39.8	6.7	32	6.90	18.3
S049086		0.75	0.01	1.00	3.40	95.3	210	1.03	0.10	19.10	0.12	42.5	6.1	33	7.47	35.6
S049087		5.78	0.03	2.64	4.06	191.5	730	1.25	0.13	17.75	0.09	45.1	8.7	36	9.50	24.6
S049088		5.59	0.03	0.17	5.89	241	340	1.65	0.21	11.15	0.06	64.9	12.0	44	14.65	27.1
S049089		2.86	0.04	0.44	6.44	465	420	1.94	0.23	9.45	0.06	66.3	12.7	53	20.2	29.5
S049090		6.98	<0.01	0.01	0.18	1.5	20	0.13	0.01	33.7	<0.02	1.27	0.8	1	0.11	1.5

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Finalized Date: 7-SEP-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18199691

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Hg-MS42	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni
	Units	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2
S049051		2.46	12.00	0.11	1.8	0.196	0.038	2.13	22.8	13.3	1.45	587	1.40	0.10	6.0	36.5
S049052		1.81	8.35	0.09	1.3	0.120	0.027	1.45	16.3	9.6	1.17	560	0.50	0.02	4.3	17.3
S049053		1.97	6.92	0.07	1.3	0.500	0.027	1.22	16.0	8.1	0.93	482	0.87	0.02	3.6	18.7
S049054		1.38	5.59	0.10	0.9	0.256	0.017	0.97	14.3	7.6	0.91	309	0.62	0.02	2.9	13.6
S049055		0.97	4.12	0.10	0.7	0.110	0.017	0.72	10.3	5.5	1.00	460	0.36	0.02	2.1	9.5
S049056		0.80	3.00	0.11	0.6	0.193	0.013	0.51	7.9	4.2	0.65	224	0.31	0.01	1.6	7.7
S049057		1.33	3.45	0.06	0.6	0.372	0.013	0.62	7.8	4.7	0.93	535	0.44	0.02	1.7	7.4
S049058		1.83	5.55	0.07	0.9	0.449	0.020	1.02	12.2	6.4	1.38	1000	0.49	0.02	2.8	11.7
S049059		4.84	23.8	0.14	2.7	5.28	0.074	4.16	28.8	27.8	0.82	437	0.48	0.03	9.2	45.9
S049060		1.14	4.14	0.05	0.7	1.955	0.020	0.67	9.4	6.8	1.20	4560	1.32	0.10	2.0	14.5
S049061		4.89	19.85	0.12	2.4	15.00	0.069	3.48	29.8	20.1	0.68	779	1.64	0.03	8.0	43.4
S049062		4.55	17.50	0.10	2.3	2.43	0.062	3.05	27.1	16.6	0.88	596	1.91	0.02	7.1	38.0
S049063		5.42	22.1	0.12	2.8	2.58	0.082	3.93	32.2	21.7	1.00	631	1.82	0.03	8.8	59.4
S049064		4.80	19.20	0.10	2.5	0.988	0.069	3.46	29.9	23.0	1.24	1060	0.54	0.03	7.8	37.7
S049065		5.73	21.1	0.14	2.5	0.184	0.070	3.80	32.4	32.4	1.40	795	0.22	0.03	8.1	38.3
S049066		6.03	21.8	0.11	2.5	0.338	0.078	4.13	33.3	39.1	1.39	849	0.22	0.03	8.7	46.2
S049067		5.70	22.9	0.12	2.8	0.987	0.083	4.24	35.4	32.1	1.03	657	0.28	0.03	9.1	46.5
S049068		5.57	19.10	0.11	2.3	2.02	0.062	3.48	29.8	31.5	1.22	1100	0.40	0.03	7.7	39.8
S049069		5.56	19.05	0.10	2.3	1.900	0.063	3.45	30.0	31.2	1.20	1080	0.43	0.03	7.7	40.1
S049070		5.10	20.7	0.12	2.7	1.350	0.069	3.60	31.3	43.2	1.32	682	0.30	0.03	8.3	39.3
S049071		0.57	2.24	0.06	0.8	0.366	0.008	0.44	8.6	11.2	2.15	328	0.35	0.01	1.3	4.1
S049072		1.97	10.20	0.09	1.8	0.402	0.030	1.88	22.9	28.6	2.34	452	0.43	0.03	5.6	18.7
S049073		1.78	8.98	0.09	1.7	0.327	0.025	1.59	21.0	27.9	2.65	395	0.35	0.03	4.9	16.2
S049074		2.01	10.40	0.10	1.8	0.416	0.029	1.78	24.2	43.2	1.99	759	0.38	0.03	5.7	18.9
S049075		1.77	9.18	0.09	1.6	0.859	0.028	1.76	21.1	27.8	2.45	658	0.43	0.03	5.2	18.2
S049076		1.63	8.52	0.09	1.5	0.720	0.027	1.63	20.6	22.4	2.21	650	0.48	0.02	5.0	15.7
S049077		2.97	10.70	0.08	2.0	15.20	0.035	1.92	21.1	12.5	2.64	1200	1.98	0.02	5.8	28.5
S049078		2.16	10.60	0.09	1.8	0.386	0.030	1.92	24.9	23.8	2.50	949	0.38	0.03	6.0	18.4
S049079		2.13	11.45	0.10	1.9	0.308	0.035	2.06	25.1	25.9	2.36	691	0.39	0.03	6.5	19.2
S049080		2.29	12.00	0.11	1.9	0.479	0.037	2.12	26.8	34.4	2.40	778	1.26	0.03	6.9	22.6
S049081		2.65	13.70	0.10	2.2	0.324	0.044	2.46	29.7	37.2	2.36	778	0.39	0.05	7.7	24.4
S049082		2.11	9.63	0.08	1.6	0.288	0.030	1.67	22.2	28.7	3.27	1560	0.43	0.03	5.5	20.0
S049083		3.26	16.55	0.10	2.6	0.469	0.051	2.78	35.7	53.3	1.96	756	0.34	0.05	9.0	28.1
S049084		1.58	8.33	0.07	1.5	0.283	0.024	1.43	19.6	44.6	2.41	440	0.36	0.03	4.9	14.2
S049085		1.70	8.78	0.09	1.6	1.040	0.024	1.53	20.9	44.5	2.54	406	0.42	0.03	5.1	16.1
S049086		1.62	8.74	0.10	1.7	0.260	0.024	1.47	22.3	52.2	2.47	434	0.22	0.03	5.4	16.3
S049087		2.49	10.65	0.10	1.7	0.679	0.032	1.81	24.3	48.1	1.98	473	0.29	0.03	5.9	20.2
S049088		3.02	15.30	0.11	2.4	0.485	0.046	2.63	34.6	53.7	1.57	433	0.35	0.04	8.4	26.3
S049089		3.21	16.75	0.11	2.5	0.449	0.048	2.90	36.0	53.2	1.85	510	0.44	0.05	9.1	30.2
S049090		0.12	0.68	0.09	0.1	<0.005	<0.005	0.05	1.3	1.3	1.79	120	<0.05	0.08	0.4	1.0

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Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl
	Units	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
	LOD	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.01	0.005	0.02
S049051		290	15.0	99.2	0.003	1.60	0.66	11.1	1	1.4	849	0.42	0.09	6.63	0.235	0.67
S049052		260	8.6	68.5	<0.002	1.15	0.41	8.6	1	0.9	1110	0.31	0.06	4.48	0.173	0.51
S049053		340	8.2	57.7	0.004	1.74	0.47	7.5	2	0.7	1280	0.25	0.06	3.72	0.173	2.00
S049054		260	6.5	46.6	0.002	1.18	0.26	5.6	2	0.6	1635	0.21	0.08	3.13	0.116	1.93
S049055		310	4.6	34.1	0.002	0.76	0.16	4.6	2	0.5	1715	0.14	0.06	2.30	0.079	0.97
S049056		690	3.7	23.3	<0.002	0.73	0.18	3.0	1	0.3	1960	0.11	0.06	1.82	0.063	1.40
S049057		240	4.1	25.6	<0.002	0.67	0.21	3.8	2	0.5	1305	0.12	0.08	1.98	0.069	0.83
S049058		230	6.6	43.3	<0.002	0.80	0.26	5.5	2	0.7	1000	0.20	0.06	3.22	0.113	0.74
S049059		180	19.0	174.5	0.004	4.54	1.03	22.7	1	2.2	86.9	0.67	<0.05	9.12	0.427	13.45
S049060		380	61.0	27.3	0.002	0.67	8.03	6.1	3	0.6	1125	0.15	<0.05	2.48	0.075	6.19
S049061		190	25.5	156.5	0.005	4.61	1.63	18.1	1	2.1	82.7	0.60	<0.05	8.86	0.383	21.7
S049062		180	21.1	138.0	0.005	4.37	1.07	19.6	1	1.7	77.2	0.51	<0.05	7.95	0.334	5.19
S049063		410	32.4	181.0	0.007	5.02	1.28	23.7	1	2.3	93.5	0.66	<0.05	10.05	0.427	4.45
S049064		320	17.7	159.0	<0.002	2.93	0.61	21.0	1	1.9	108.0	0.58	<0.05	8.74	0.373	1.89
S049065		240	10.2	178.5	0.002	0.45	0.40	23.0	1	2.0	84.4	0.61	<0.05	9.13	0.399	1.01
S049066		210	15.8	182.0	0.002	1.12	0.44	23.9	1	2.1	85.8	0.65	<0.05	9.53	0.438	1.17
S049067		210	16.1	190.5	0.002	4.05	0.48	25.4	1	2.2	79.0	0.67	<0.05	10.35	0.444	2.52
S049068		190	18.0	147.0	0.002	4.69	0.67	20.9	1	1.9	143.5	0.55	<0.05	8.43	0.379	4.96
S049069		190	18.1	149.0	0.002	4.75	0.68	20.8	1	1.9	141.0	0.57	<0.05	8.51	0.372	5.13
S049070		180	12.7	159.0	<0.002	4.18	0.78	22.9	1	2.0	142.0	0.62	<0.05	9.14	0.408	3.36
S049071		470	4.1	16.3	<0.002	0.05	0.45	1.7	2	0.3	800	0.09	<0.05	1.84	0.037	0.36
S049072		400	9.6	76.9	<0.002	0.03	1.61	7.2	2	1.2	553	0.42	<0.05	7.40	0.175	1.62
S049073		490	9.2	68.3	<0.002	0.03	1.26	6.3	2	1.0	496	0.36	<0.05	6.40	0.155	1.42
S049074		360	11.1	77.3	<0.002	0.05	1.09	7.1	2	1.2	585	0.43	<0.05	7.26	0.183	1.05
S049075		390	9.3	68.5	<0.002	0.08	3.25	6.3	3	1.1	552	0.39	<0.05	6.95	0.167	1.54
S049076		370	8.8	66.5	<0.002	0.05	3.79	6.0	2	1.0	519	0.36	<0.05	6.40	0.153	1.88
S049077		460	11.4	86.2	<0.002	2.64	23.8	11.1	2	1.7	326	0.42	<0.05	6.30	0.256	46.5
S049078		370	29.7	80.9	<0.002	0.04	1.79	7.4	2	1.3	455	0.46	<0.05	7.73	0.186	1.11
S049079		420	14.4	86.7	<0.002	0.04	1.65	7.7	1	1.4	326	0.49	<0.05	8.20	0.203	0.91
S049080		400	12.0	91.6	<0.002	0.05	2.63	8.3	2	1.4	348	0.50	<0.05	8.75	0.210	1.46
S049081		440	13.4	107.0	<0.002	0.04	1.52	9.6	1	1.7	320	0.57	<0.05	9.79	0.244	1.17
S049082		370	33.5	70.5	<0.002	0.05	0.78	6.5	2	1.2	361	0.41	<0.05	7.25	0.167	0.70
S049083		530	16.2	129.5	<0.002	0.03	0.95	11.9	1	1.9	283	0.68	0.06	11.45	0.300	1.02
S049084		310	10.0	65.6	<0.002	0.06	0.51	5.9	2	1.0	508	0.36	<0.05	6.24	0.146	0.84
S049085		350	10.7	69.6	<0.002	0.07	0.58	6.1	2	1.0	496	0.38	<0.05	6.81	0.159	0.86
S049086		470	8.1	69.2	<0.002	0.03	0.53	6.0	2	1.1	388	0.42	<0.05	7.21	0.163	0.70
S049087		400	22.4	81.6	<0.002	0.06	0.77	7.4	2	1.2	481	0.44	<0.05	7.47	0.192	0.86
S049088		440	16.1	122.0	<0.002	0.05	0.92	10.8	1	1.7	333	0.63	0.05	10.75	0.275	1.15
S049089		490	15.2	135.5	<0.002	0.05	1.19	11.5	2	2.0	295	0.70	0.05	11.75	0.302	1.75
S049090		70	<0.5	1.6	<0.002	0.01	0.08	0.3	2	<0.2	80.0	<0.05	<0.05	0.15	0.006	0.02

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.
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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 7-SEP-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18199691

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	U	V	W	Y	Zn	Zr
	Units	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.1	1	0.1	0.1	2	0.5
S049051		2.5	70	1.0	17.8	66	63.6
S049052		1.7	48	1.3	14.5	38	47.3
S049053		2.7	50	0.9	19.0	41	45.0
S049054		2.2	34	0.6	16.2	29	34.0
S049055		1.8	24	0.5	12.7	21	25.2
S049056		2.2	18	0.4	13.7	10	20.1
S049057		1.5	22	0.6	11.0	17	20.3
S049058		1.3	36	0.6	10.9	25	32.3
S049059		2.0	173	8.5	16.7	95	86.7
S049060		4.0	26	6.4	14.2	123	25.0
S049061		2.2	163	9.9	15.7	94	82.6
S049062		2.2	146	7.3	15.9	98	74.5
S049063		2.6	190	7.9	20.2	97	95.2
S049064		1.9	143	4.3	18.2	96	82.8
S049065		1.6	151	1.2	18.6	69	80.3
S049066		1.7	172	1.4	18.2	73	85.5
S049067		2.1	174	4.0	20.0	80	95.3
S049068		1.5	144	8.9	16.1	100	76.3
S049069		1.6	144	9.2	16.2	102	75.9
S049070		1.6	154	11.7	17.0	102	85.0
S049071		7.2	15	0.9	6.3	13	27.5
S049072		7.4	50	1.1	12.0	45	60.7
S049073		7.5	43	1.3	11.0	43	53.2
S049074		7.2	50	1.4	12.4	53	58.7
S049075		8.1	51	42.4	11.5	46	54.5
S049076		7.8	47	1.3	11.5	47	51.7
S049077		7.0	86	8.2	18.2	49	67.5
S049078		6.7	53	1.5	14.5	57	60.1
S049079		6.1	56	1.5	13.6	55	63.1
S049080		5.9	60	11.9	14.0	61	67.2
S049081		5.1	65	3.0	15.0	68	74.3
S049082		6.0	48	1.3	12.8	88	55.4
S049083		4.6	75	1.6	17.7	80	86.4
S049084		7.9	44	5.3	10.7	47	48.8
S049085		8.3	48	4.2	11.3	50	52.5
S049086		5.7	47	4.1	13.6	45	59.4
S049087		6.6	52	10.3	13.1	58	60.2
S049088		5.6	68	2.0	15.9	71	82.0
S049089		5.1	75	3.6	16.6	77	85.2
S049090		0.2	1	<0.1	2.7	3	2.1

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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Project: Nadaleen

Finalized Date: 7-SEP-2018
Account: RCM

CERTIFICATE OF ANALYSIS WH18199691

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Applies to Method: REE's may not be totally soluble in this method.
ME-MS61

LABORATORY ADDRESSES

Applies to Method: Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.

CRU-31	CRU-QC	LOG-21	LOG-21d
LOG-23	PUL-31	PUL-31d	PUL-QC
SPL-21	SPL-21d	WEI-21	

Applies to Method: Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Au-AA25	Hg-MS42	ME-MS61

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To: **ATAC RESOURCES LTD.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 26-AUG-2018
Account: RCM

CERTIFICATE WH18191017

Project: Nadaleen

P.O. No.: N18-044

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 6-AUG-2018.

The following have access to data associated with this certificate:

ANDREW CARNE	JULIA LANE	

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
LOG-23	Pulp Login - Rcvd with Barcode
LOG-21d	Sample logging - ClientBarCode Dup
SPL-21d	Split sample - duplicate
PUL-31d	Pulverize Split - duplicate

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid ICP-MS	
Hg-MS42	Trace Hg by ICPMS	ICP-MS
ME-OG62	Ore Grade Elements - Four Acid	ICP-AES
As-OG62	Ore Grade As - Four Acid	

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:

Colin Ramshaw, Vancouver Laboratory Manager

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Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18191017

Sample Description	Method	WEI-21	Au-AA25	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Recvd Wt.	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu
	Units	kg	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.02	0.01	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2
S050381		12.54	<0.01	0.07	4.26	38.6	230	1.33	0.10	12.15	0.09	50.9	8.2	46	6.84	35.0
S050382		11.95	<0.01	0.03	3.86	25.5	170	1.34	0.10	12.95	0.12	46.2	7.4	43	5.54	37.2
S050383		10.64	0.01	0.03	4.23	80.2	150	1.35	0.11	13.70	0.11	50.1	7.6	46	6.67	24.9
S050384		10.78	<0.01	0.06	2.70	71.8	180	0.85	0.07	20.2	0.10	37.7	5.7	27	3.59	20.1
S050385		11.17	<0.01	0.05	1.47	101.5	150	0.45	0.05	26.9	0.23	22.8	3.3	16	1.31	10.2
S050386		12.15	<0.01	0.06	1.98	134.5	140	0.68	0.06	25.6	0.10	26.3	3.8	21	2.26	14.4
S050387		10.91	<0.01	0.04	1.82	53.8	160	0.70	0.05	26.3	0.08	24.2	3.7	19	1.74	13.2
S050388		0.26	1.08	1.54	1.57	866	200	0.42	0.13	28.7	0.72	19.85	4.8	26	3.52	49.3
S050389		10.81	<0.01	0.04	1.57	135.5	90	0.60	0.05	26.8	0.09	21.7	3.1	17	1.53	12.9
S050390		9.99	<0.01	0.05	1.73	140.5	170	0.76	0.05	26.1	0.11	24.3	4.3	19	1.74	10.8
S050391		6.79	<0.01	0.07	1.83	911	90	0.70	0.06	25.0	0.08	25.3	4.0	20	2.22	11.1
S050392		<0.02	<0.01	0.07	1.88	957	90	0.73	0.06	25.3	0.07	25.9	4.1	20	2.27	12.1
S050393		9.88	<0.01	0.06	3.45	1620	140	1.08	0.09	17.35	0.08	40.6	6.3	36	4.79	25.5
S050394		6.89	<0.01	0.03	0.14	15.5	20	0.10	0.01	32.5	<0.02	1.39	1.0	1	0.07	2.7
S050395		10.42	<0.01	0.07	3.58	921	190	1.00	0.08	17.25	0.08	42.4	6.0	39	5.59	24.9
S050396		6.01	<0.01	0.07	4.07	89.3	150	1.28	0.25	12.70	0.07	48.3	7.4	43	9.27	29.9
S050397		5.69	<0.01	0.05	3.98	114.0	170	1.26	1.21	13.30	0.08	47.1	7.0	43	9.24	28.4
S050398		11.92	0.01	0.04	2.60	94.2	150	0.86	0.10	18.80	0.08	33.3	5.3	28	5.06	19.5
S050399		12.52	<0.01	0.05	3.37	49.6	240	1.05	0.46	17.30	0.07	37.1	6.1	38	6.07	21.6
S050400		10.69	<0.01	0.07	1.67	14.7	810	0.66	0.07	27.2	0.37	21.9	3.6	18	2.99	11.0
S050401		13.60	<0.01	0.05	3.69	32.5	270	1.36	0.33	14.95	0.30	45.0	6.8	41	7.57	23.4
S050402		11.93	<0.01	0.05	2.31	29.4	230	0.81	0.08	23.9	0.09	30.2	5.0	23	4.56	13.1
S050403		11.60	<0.01	0.06	3.35	17.2	140	1.17	0.25	17.90	0.07	39.4	6.4	35	6.69	20.0
S050404		12.30	<0.01	0.03	2.79	5.2	240	1.03	0.10	20.4	0.09	32.0	5.4	28	4.95	20.2
S050405		12.64	<0.01	0.02	3.74	11.8	450	1.47	0.29	14.90	0.17	45.1	6.5	39	7.19	15.9
S050406		11.81	<0.01	0.04	4.01	17.6	380	1.65	0.12	10.90	0.12	46.0	6.9	45	7.80	13.3
S050407		11.92	<0.01	0.04	4.06	20.4	300	1.71	0.28	11.05	0.10	47.3	7.1	45	7.80	26.6
S050408		13.23	<0.01	0.03	4.03	19.2	240	1.53	0.11	12.35	0.14	46.4	7.1	43	7.45	27.1
S050409		7.85	<0.01	0.03	4.00	34.4	120	1.52	0.20	14.10	0.11	43.5	7.4	42	7.66	14.2
S050410		8.12	0.05	0.03	4.22	468	110	1.49	0.12	12.15	0.11	46.4	7.4	44	8.55	13.8
S050411		9.83	22.5	14.95	3.98	>10000	280	0.74	0.48	5.59	1.04	39.0	7.0	47	4.91	29.7
S050412		7.53	9.83	2.73	4.35	3870	220	1.22	0.11	10.70	0.43	49.1	7.9	47	6.90	26.5
S050413		3.99	35.9	10.45	3.80	>10000	220	0.82	0.58	3.83	2.50	52.2	6.2	48	4.98	25.0
S050414		4.11	36.0	9.87	3.83	>10000	150	0.72	0.11	3.86	2.14	53.3	6.3	48	5.02	24.5
S050415		11.08	23.9	4.36	4.80	7360	150	1.16	0.24	6.45	0.47	58.2	8.5	60	7.73	30.7
S050416		5.80	21.0	9.15	4.07	>10000	210	0.89	0.14	5.12	0.83	37.7	6.8	46	6.26	32.0
S050417		11.84	24.7	12.10	3.05	>10000	70	0.56	0.34	1.15	3.07	33.5	6.1	47	5.08	24.8
S050418		0.26	12.95	1.60	3.11	>10000	120	0.62	0.24	8.13	0.76	41.9	10.7	46	8.28	32.5
S050419		10.52	7.13	2.29	4.60	8740	120	1.35	0.15	9.74	0.26	51.3	8.8	53	8.85	31.9
S050420		12.32	0.70	0.16	3.07	843	160	1.00	0.13	20.9	0.10	34.8	5.5	32	6.03	21.0

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Finalized Date: 26-AUG-2018
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Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18191017

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Hg-MS42	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni
	Units	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2
S050381		1.97	11.85	0.09	2.2	0.050	0.034	1.65	26.5	38.1	4.19	282	0.63	0.08	7.4	23.6
S050382		1.85	10.65	0.08	1.9	0.013	0.032	1.49	24.6	38.2	5.07	264	0.48	0.05	6.9	20.2
S050383		1.94	11.90	0.09	2.0	0.051	0.033	1.52	25.9	46.2	3.74	258	0.27	0.05	7.4	21.9
S050384		1.25	7.35	0.07	1.5	0.044	0.021	0.86	19.7	22.9	2.44	273	0.37	0.04	4.9	14.5
S050385		0.85	3.91	<0.05	0.8	0.092	0.010	0.32	12.4	18.6	2.19	198	0.72	0.02	2.6	7.8
S050386		0.96	5.43	0.06	1.0	0.049	0.015	0.55	14.6	18.1	2.14	208	0.62	0.03	3.5	10.4
S050387		0.84	5.03	0.05	0.8	0.036	0.012	0.51	13.3	14.1	2.05	207	0.42	0.03	3.0	8.9
S050388		1.16	4.37	0.05	0.7	2.23	0.020	0.68	9.6	6.5	1.21	4670	1.32	0.10	2.2	14.4
S050389		0.84	4.32	0.05	0.8	0.022	0.014	0.42	11.5	18.7	1.96	195	0.40	0.03	2.7	7.7
S050390		0.89	4.87	0.05	0.9	0.045	0.015	0.47	13.6	21.9	2.41	202	0.38	0.04	3.1	9.7
S050391		0.98	4.95	0.05	0.9	0.038	0.016	0.48	14.2	15.3	3.15	208	0.75	0.04	3.1	9.7
S050392		1.00	5.14	0.05	0.9	0.043	0.013	0.49	14.5	15.9	3.20	210	0.79	0.04	3.2	10.0
S050393		1.41	9.32	0.07	1.7	0.051	0.028	1.08	22.3	30.1	2.90	201	0.23	0.05	5.9	16.6
S050394		0.12	0.49	<0.05	0.1	0.006	<0.005	0.04	1.4	1.4	1.63	118	<0.05	0.06	0.2	0.7
S050395		1.46	9.56	0.08	1.8	0.045	0.027	1.17	22.5	38.8	2.60	210	0.28	0.04	6.1	16.1
S050396		1.86	11.10	0.08	2.0	0.066	0.034	1.92	25.7	105.0	3.73	205	0.46	0.04	7.1	20.1
S050397		1.86	10.75	0.10	1.9	0.069	0.031	1.86	25.3	105.0	3.53	205	0.89	0.04	6.9	20.0
S050398		1.34	7.06	0.06	1.2	0.085	0.017	1.20	18.2	82.9	3.65	239	0.35	0.02	4.6	13.7
S050399		1.53	8.82	0.08	1.7	0.099	0.026	1.60	19.9	72.2	3.76	200	0.37	0.03	5.6	16.3
S050400		0.83	4.50	0.05	0.8	0.055	0.012	0.79	11.7	31.0	2.02	177	0.51	0.02	2.9	8.9
S050401		1.65	10.20	0.09	2.0	0.075	0.029	1.81	23.9	57.5	4.32	212	0.57	0.03	6.6	18.5
S050402		1.13	6.08	0.07	1.2	0.052	0.018	1.06	16.4	47.9	2.03	203	0.19	0.02	4.3	11.9
S050403		1.52	8.99	0.08	1.6	0.060	0.028	1.63	21.3	32.5	3.22	223	0.37	0.03	5.9	17.2
S050404		1.27	7.38	0.06	1.3	0.081	0.024	1.41	17.7	15.1	2.91	229	0.20	0.02	4.7	14.0
S050405		1.84	10.10	0.09	1.9	0.070	0.028	1.96	24.0	16.7	3.90	256	0.30	0.03	6.5	18.1
S050406		2.20	11.05	0.07	1.8	0.087	0.027	2.08	24.1	17.6	4.85	254	0.36	0.03	7.0	19.9
S050407		1.89	11.55	0.08	2.1	0.115	0.031	2.10	24.4	17.8	4.72	264	0.46	0.03	7.1	20.2
S050408		1.90	11.35	0.08	2.0	0.191	0.035	2.04	24.5	16.6	4.07	272	0.31	0.03	7.0	20.4
S050409		2.04	11.25	0.08	1.8	0.255	0.030	2.06	23.3	14.3	4.16	276	0.39	0.03	6.9	20.2
S050410		2.15	11.70	0.07	1.9	0.707	0.030	2.17	24.5	15.7	4.20	330	0.26	0.03	7.2	21.3
S050411		1.95	11.50	0.09	1.8	10.40	0.038	1.86	21.6	17.3	1.35	815	0.44	0.02	6.8	20.9
S050412		2.06	12.55	0.08	1.9	3.76	0.030	2.12	27.0	15.3	2.88	575	0.84	0.03	7.5	22.2
S050413		2.03	11.30	0.08	2.3	16.15	0.030	1.73	27.6	17.7	1.77	811	0.79	0.02	7.0	18.7
S050414		1.96	11.05	0.08	2.3	15.40	0.031	1.76	28.3	17.1	1.85	848	0.74	0.02	7.0	18.6
S050415		2.42	13.80	0.08	2.6	7.28	0.021	2.36	30.6	14.1	3.66	1420	0.70	0.03	8.8	24.4
S050416		1.98	11.35	0.06	2.0	11.80	0.027	1.82	21.4	17.4	2.42	897	0.49	0.02	6.6	20.9
S050417		1.86	9.00	0.09	1.6	17.45	0.048	1.34	18.6	21.8	0.46	173	0.83	0.01	5.4	17.6
S050418		3.08	9.04	0.08	1.6	23.1	0.039	1.43	23.4	15.0	1.97	1100	4.43	0.02	4.9	24.8
S050419		2.20	13.30	0.09	2.3	3.35	0.035	2.24	27.9	12.6	4.68	986	0.47	0.03	8.2	23.8
S050420		1.55	8.57	0.06	1.3	1.095	0.026	1.47	18.9	8.7	2.67	807	0.28	0.03	5.3	15.6

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 26-AUG-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18191017

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl
	Units	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
	LOD	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.01	0.005	0.02
S050381		550	12.7	79.7	<0.002	0.15	0.33	7.2	3	1.5	390	0.56	<0.05	9.14	0.207	0.43
S050382		430	11.0	71.7	<0.002	0.06	0.23	6.4	3	1.4	452	0.49	<0.05	8.19	0.185	0.33
S050383		490	8.1	73.3	<0.002	0.22	0.36	7.2	2	1.5	671	0.54	<0.05	8.67	0.205	0.39
S050384		370	10.7	42.3	<0.002	0.28	0.25	4.6	2	0.9	734	0.36	<0.05	5.73	0.131	0.35
S050385		240	7.3	16.1	<0.002	0.32	0.23	2.4	2	0.5	986	0.18	<0.05	3.27	0.071	0.81
S050386		260	7.2	27.7	<0.002	0.22	0.23	3.3	2	0.7	912	0.25	<0.05	4.17	0.097	0.24
S050387		240	5.7	26.3	<0.002	0.15	0.22	3.1	2	0.7	1105	0.23	<0.05	3.66	0.083	0.23
S050388		380	61.3	30.1	0.003	0.70	8.09	5.9	1	0.7	1155	0.15	<0.05	2.43	0.080	6.11
S050389		240	5.3	21.0	<0.002	0.16	0.18	2.7	2	0.6	921	0.20	<0.05	3.26	0.073	0.27
S050390		260	5.8	23.7	<0.002	0.18	0.24	3.1	2	0.6	936	0.21	<0.05	3.68	0.081	0.29
S050391		210	6.4	23.4	<0.002	0.31	0.23	3.1	2	0.6	751	0.23	<0.05	3.76	0.085	0.26
S050392		210	6.7	24.7	<0.002	0.32	0.25	3.2	2	0.7	768	0.23	<0.05	3.83	0.087	0.26
S050393		400	6.7	54.0	<0.002	0.34	0.24	5.7	2	1.3	792	0.44	<0.05	7.10	0.166	0.47
S050394		80	1.6	1.1	<0.002	<0.01	0.09	0.2	1	<0.2	88.3	<0.05	<0.05	0.12	0.007	0.02
S050395		480	8.4	60.3	<0.002	0.43	0.30	5.7	1	1.2	954	0.45	<0.05	7.47	0.175	0.54
S050396		490	9.1	112.5	<0.002	0.12	0.30	6.7	2	1.5	721	0.51	<0.05	8.50	0.200	1.07
S050397		480	9.0	108.0	<0.002	0.16	0.32	6.4	2	1.4	705	0.51	<0.05	8.34	0.194	1.08
S050398		310	6.2	72.0	<0.002	0.12	0.30	4.4	2	0.9	699	0.32	<0.05	5.31	0.122	0.67
S050399		430	8.9	87.8	<0.002	0.14	0.30	5.3	2	1.2	811	0.41	<0.05	7.16	0.159	0.75
S050400		220	6.4	52.8	<0.002	0.12	0.19	2.8	1	0.6	1055	0.21	<0.05	3.53	0.079	0.46
S050401		480	10.5	106.5	<0.002	0.18	0.35	6.2	2	1.4	611	0.51	<0.05	8.22	0.180	0.83
S050402		290	5.8	75.1	<0.002	0.10	0.27	3.8	1	0.8	783	0.31	<0.05	4.73	0.112	0.66
S050403		410	8.3	101.5	<0.002	0.11	0.33	5.5	2	1.2	574	0.44	<0.05	7.11	0.161	0.78
S050404		300	5.6	83.3	<0.002	0.12	0.24	4.6	1	1.0	594	0.35	<0.05	5.67	0.131	0.65
S050405		410	8.1	113.0	<0.002	0.18	0.23	6.1	2	1.4	433	0.48	<0.05	7.90	0.180	0.86
S050406		430	6.8	121.5	<0.002	0.35	0.24	6.5	2	1.4	283	0.49	<0.05	7.72	0.193	0.97
S050407		480	10.0	121.0	<0.002	0.27	0.29	6.6	3	1.5	292	0.51	<0.05	7.95	0.195	0.97
S050408		500	9.4	118.5	<0.002	0.27	0.33	6.5	2	1.4	363	0.51	<0.05	7.85	0.193	1.00
S050409		390	6.8	121.5	<0.002	0.28	0.31	6.5	2	1.4	378	0.50	<0.05	7.69	0.193	0.97
S050410		460	8.8	121.5	<0.002	0.47	1.23	6.7	3	1.5	295	0.52	<0.05	7.96	0.206	3.08
S050411		400	13.3	105.0	<0.002	4.22	129.5	6.6	2	1.4	147.5	0.48	0.06	7.40	0.189	56.4
S050412		530	13.4	113.5	<0.002	1.48	20.5	7.1	3	1.5	362	0.53	<0.05	8.39	0.204	16.65
S050413		500	17.1	98.6	<0.002	3.96	150.5	6.9	3	1.5	111.5	0.51	<0.05	7.73	0.191	57.1
S050414		510	16.5	98.0	<0.002	3.85	144.0	7.0	3	1.5	113.5	0.51	<0.05	7.75	0.189	53.8
S050415		700	12.1	131.0	<0.002	2.35	52.0	9.7	3	1.7	131.5	0.62	<0.05	9.80	0.243	37.6
S050416		700	14.9	104.5	<0.002	2.26	106.0	6.3	2	1.4	100.5	0.49	<0.05	7.34	0.183	73.3
S050417		510	20.9	79.3	<0.002	7.13	407	3.2	2	1.2	61.3	0.39	0.12	6.06	0.151	56.1
S050418		350	18.6	68.6	0.004	5.26	206	5.7	4	1.4	193.5	0.34	0.15	4.78	0.184	78.8
S050419		500	11.1	127.5	<0.002	1.74	15.75	7.7	3	1.7	174.5	0.61	<0.05	9.27	0.224	17.45
S050420		320	6.7	89.4	<0.002	0.39	1.27	4.9	2	1.1	437	0.37	<0.05	5.61	0.142	5.21

***** See Appendix Page for comments regarding this certificate *****

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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 26-AUG-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18191017

Sample Description	Method Analyte Units LOD	ME-MS61 U ppm 0.1	ME-MS61 V ppm 1	ME-MS61 W ppm 0.1	ME-MS61 Y ppm 0.1	ME-MS61 Zn ppm 2	ME-MS61 Zr ppm 0.5	As-OG62 As % 0.001
S050381		5.7	64	0.8	15.2	71	80.7	
S050382		6.0	65	0.8	13.3	68	70.9	
S050383		4.5	65	0.9	14.5	74	75.7	
S050384		9.3	41	0.6	11.8	51	57.3	
S050385		16.2	23	0.3	6.8	34	30.2	
S050386		16.6	30	0.5	8.1	39	36.0	
S050387		11.9	27	0.4	7.2	35	30.8	
S050388		3.8	27	8.1	14.0	124	26.4	
S050389		12.8	26	0.3	7.2	30	27.5	
S050390		12.9	28	0.4	7.9	33	34.0	
S050391		19.1	33	0.5	7.9	41	33.3	
S050392		19.1	34	0.5	8.1	42	34.1	
S050393		10.5	53	0.8	11.2	58	60.5	
S050394		0.4	2	1.6	2.6	4	2.0	
S050395		9.6	54	0.8	11.9	56	68.4	
S050396		6.1	66	0.8	13.7	61	74.1	
S050397		6.1	66	0.8	13.7	61	74.4	
S050398		7.5	40	0.6	9.9	45	46.2	
S050399		8.7	51	0.7	11.0	52	62.0	
S050400		11.4	27	0.3	6.4	32	29.1	
S050401		7.5	55	0.9	12.9	60	72.5	
S050402		8.6	34	0.5	8.8	44	42.6	
S050403		7.0	52	0.7	11.2	55	59.4	
S050404		6.2	42	0.5	9.0	45	48.1	
S050405		3.4	47	0.8	12.8	59	66.8	
S050406		2.8	58	0.9	13.0	65	70.6	
S050407		6.0	65	0.9	13.7	64	80.6	
S050408		4.5	55	1.0	13.7	61	76.0	
S050409		2.7	50	1.7	12.3	60	68.4	
S050410		3.1	58	3.5	13.4	67	71.8	
S050411		8.3	60	5.2	10.4	112	66.7	5.66
S050412		8.8	69	4.2	12.8	85	75.0	
S050413		9.8	58	4.9	13.6	221	86.0	4.78
S050414		9.2	59	5.1	12.8	194	85.4	4.69
S050415		5.4	75	5.6	14.5	81	102.0	
S050416		10.3	62	4.8	11.8	86	75.9	1.435
S050417		16.9	53	5.3	9.7	242	55.3	12.70
S050418		6.2	55	6.3	20.6	114	61.7	
S050419		5.4	70	5.9	14.2	80	88.1	
S050420		8.4	43	2.3	10.2	48	48.7	

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To: **ATAC RESOURCES LTD.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Project: Nadaleen

Finalized Date: 26-AUG-2018
Account: RCM

CERTIFICATE OF ANALYSIS WH18191017

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Applies to Method: REE's may not be totally soluble in this method.
ME-MS61

LABORATORY ADDRESSES

Applies to Method: Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.

CRU-31	CRU-QC	LOG-21	LOG-21d
LOG-23	PUL-31	PUL-31d	PUL-QC
SPL-21	SPL-21d	WEI-21	

Applies to Method: Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

As-OG62	Au-AA25	Hg-MS42	ME-MS61
ME-OG62			

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Finalized Date: 29-AUG-2018
Account: RCM

CERTIFICATE WH18193064

Project: Nadaleen

P.O. No.: N18-045

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 8-AUG-2018.

The following have access to data associated with this certificate:

ANDREW CARNE	JULIA LANE	

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
LOG-23	Pulp Login - Rcvd with Barcode
LOG-21d	Sample logging - ClientBarCode Dup
SPL-21d	Split sample - duplicate
PUL-31d	Pulverize Split - duplicate

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid ICP-MS	
Hg-MS42	Trace Hg by ICPMS	ICP-MS
ME-OG62	Ore Grade Elements - Four Acid	ICP-AES
As-OG62	Ore Grade As - Four Acid	

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:

Colin Ramshaw, Vancouver Laboratory Manager

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Finalized Date: 29-AUG-2018
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Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18193064

Sample Description	Method	WEI-21	Au-AA25	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Recvd Wt.	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu
	Units	kg	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.02	0.01	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2
S050421		8.82	0.35	0.10	2.33	946	90	0.87	0.06	23.4	0.09	30.8	4.9	24	4.15	17.9
S050422		5.32	4.44	2.41	2.58	>10000	170	0.69	0.07	20.4	0.32	34.0	5.3	28	4.83	23.5
S050423		4.87	4.78	2.46	2.72	>10000	150	0.72	0.07	19.10	0.32	34.5	5.6	31	4.93	20.4
S050424		11.54	1.38	0.47	2.24	2110	90	0.89	0.06	23.9	0.42	27.8	4.8	24	5.03	17.0
S050425		0.26	2.77	0.65	1.85	>10000	140	0.55	2.77	26.4	0.16	28.3	5.2	28	6.04	16.4
S050426		12.23	0.36	0.08	3.92	664	140	1.17	0.12	16.10	0.40	47.0	8.2	40	8.54	32.1
S050427		8.95	0.20	0.40	5.14	745	220	1.51	0.15	11.45	0.69	58.8	15.4	52	10.45	42.0
S050428		8.61	0.80	0.35	3.75	3840	520	1.09	0.09	8.24	0.30	49.0	13.0	41	7.47	34.3
S050429		8.96	0.01	0.06	7.63	86.4	850	2.30	0.25	3.93	0.11	83.3	14.5	67	22.7	82.0
S050430		12.49	0.01	0.04	7.78	179.5	1070	2.36	0.29	2.96	0.09	83.7	14.1	66	23.7	123.5
S050431		12.19	<0.01	0.01	7.83	35.5	590	2.40	0.29	2.47	0.13	86.3	13.8	71	30.3	24.1
S050432		12.97	<0.01	0.02	7.86	28.4	480	2.25	0.29	2.65	0.14	87.5	14.1	69	34.6	12.5
S050433		12.43	0.01	0.02	7.74	27.8	350	2.15	0.30	2.60	0.15	81.7	15.5	66	33.2	18.7
S050434		12.04	0.01	0.01	9.03	17.7	780	2.69	0.33	0.30	<0.02	94.6	17.8	70	39.8	15.3
S050435		12.80	<0.01	0.01	8.95	16.5	530	2.56	0.33	0.33	<0.02	94.7	17.5	69	40.3	16.5
S050436		10.30	0.01	0.01	8.76	15.1	310	2.65	0.36	0.35	<0.02	81.5	18.9	69	42.5	17.8
S050437		2.33	<0.01	0.14	8.76	31.5	380	2.57	0.21	1.81	<0.02	64.4	14.0	72	17.35	51.0
S050438		6.30	0.01	0.17	9.62	2.3	370	2.81	0.41	0.25	<0.02	47.2	19.4	77	15.90	74.9
S050439		5.32	<0.01	0.08	9.87	1.8	340	2.85	0.20	0.21	<0.02	41.0	18.7	80	14.75	38.9
S050440		8.78	<0.01	0.08	9.54	2.5	560	2.71	0.23	0.88	<0.02	67.5	21.3	76	15.00	49.2
S050441		6.66	<0.01	0.07	9.66	2.5	370	2.75	0.33	0.20	<0.02	84.6	15.2	75	17.45	48.2
S050442		7.23	<0.01	<0.01	0.21	2.0	30	0.14	<0.01	32.3	<0.02	1.84	0.6	2	0.23	1.4
S050443		10.25	<0.01	0.03	9.17	1.2	390	2.75	0.28	0.25	<0.02	77.4	16.7	73	15.75	23.6
S050444		9.07	<0.01	0.03	8.98	2.3	470	2.65	0.28	0.33	<0.02	83.4	17.4	71	15.90	20.0
S050445		10.60	<0.01	0.10	8.75	4.1	390	2.56	0.26	0.45	<0.02	63.7	16.0	69	14.20	24.3
S050446		11.81	<0.01	0.03	8.61	6.9	360	2.71	0.29	0.49	<0.02	79.8	15.9	68	14.30	33.9
S050447		12.22	<0.01	0.09	8.55	8.6	300	2.49	0.33	0.52	<0.02	76.8	16.9	67	11.15	25.1
S050448		9.96	<0.01	0.09	8.17	11.3	640	2.35	0.26	0.60	<0.02	83.2	17.2	68	8.02	31.3
S050449		0.26	1.10	1.29	1.54	883	190	0.42	0.10	28.2	0.67	19.65	4.5	29	3.39	45.6
S050450		8.75	<0.01	0.06	8.25	5.2	500	2.36	0.32	0.79	0.02	80.9	15.8	67	7.57	36.3
S050451		11.70	<0.01	0.12	8.16	3.1	400	2.15	0.34	0.53	0.03	83.0	18.3	63	8.40	48.5
S050452		12.58	0.01	0.07	7.91	2.4	340	2.09	0.25	0.52	<0.02	80.8	17.6	62	9.14	51.0
S050453		10.68	<0.01	0.10	8.49	1.7	330	2.41	0.26	0.46	0.02	78.6	19.9	68	10.25	62.5
S050454		12.19	<0.01	0.03	8.74	1.6	350	2.33	0.27	0.33	<0.02	84.2	19.0	69	12.30	34.2
S050455		<0.02	<0.01	0.02	8.72	2.1	350	2.54	0.31	0.32	<0.02	77.2	19.6	68	12.50	36.7
S050456		11.44	<0.01	0.07	9.09	1.8	300	2.58	0.31	0.35	<0.02	92.4	19.7	72	13.35	43.3
S050457		13.12	0.01	0.02	8.72	20.1	400	2.72	0.35	0.39	<0.02	74.4	20.6	67	14.45	37.4
S050458		11.27	<0.01	0.01	9.38	13.8	340	2.89	0.35	0.33	<0.02	89.5	19.4	70	16.90	21.8
S050459		12.21	<0.01	0.02	8.99	7.5	410	2.74	0.32	0.32	<0.02	77.9	18.6	68	16.25	19.1
S050460		11.95	<0.01	0.01	9.05	6.6	480	2.79	0.34	0.39	<0.02	96.2	18.8	65	15.30	27.1

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 29-AUG-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18193064

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Hg-MS42	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni
	Units	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2
S050421		1.23	6.34	<0.05	1.0	0.528	0.022	1.10	15.6	6.5	2.39	893	0.27	0.03	4.1	12.4
S050422		1.26	6.94	<0.05	1.1	3.69	0.027	1.17	17.7	9.0	1.87	1520	0.26	0.02	4.5	13.9
S050423		1.29	7.24	0.06	1.2	3.80	0.030	1.23	17.7	8.9	1.90	1650	0.23	0.02	4.6	14.4
S050424		1.10	6.03	0.09	0.9	1.390	0.018	1.03	14.5	4.9	2.13	1700	0.52	0.02	3.8	12.1
S050425		1.37	5.00	0.06	0.8	7.13	0.025	0.94	13.6	8.0	0.93	2300	2.02	0.01	2.7	15.5
S050426		1.63	10.25	0.09	1.8	0.668	0.033	1.83	24.4	8.6	2.69	2240	0.25	0.04	6.5	20.6
S050427		1.82	13.20	0.09	2.0	0.916	0.041	2.38	31.5	10.3	3.28	2070	0.60	0.05	8.5	27.4
S050428		1.46	9.51	0.09	2.0	1.715	0.030	1.71	23.5	10.5	4.11	3010	1.99	0.04	6.2	18.3
S050429		3.31	19.65	0.11	2.7	0.165	0.060	3.56	46.1	18.3	2.28	1040	0.17	0.05	12.8	58.8
S050430		4.66	19.95	0.09	2.5	0.222	0.060	3.62	46.5	18.7	2.57	1050	0.14	0.05	12.4	61.7
S050431		4.18	20.2	0.12	2.6	0.238	0.060	3.65	47.8	31.8	2.69	887	0.15	0.06	13.0	57.6
S050432		4.19	20.4	0.11	2.6	0.136	0.060	3.72	46.8	52.7	2.56	907	0.16	0.06	13.3	54.3
S050433		4.26	20.7	0.12	2.7	0.016	0.063	3.66	43.4	83.2	2.48	1020	0.17	0.06	13.5	52.2
S050434		4.87	23.8	0.11	2.9	0.014	0.078	4.35	48.6	40.3	1.24	161	0.23	0.07	12.4	37.1
S050435		4.66	23.3	0.10	3.0	0.013	0.078	4.27	49.4	51.9	1.22	172	0.23	0.07	12.4	37.4
S050436		4.79	23.2	0.10	3.0	<0.005	0.079	4.13	41.9	63.0	1.28	202	0.26	0.08	12.4	39.8
S050437		3.55	24.1	0.09	2.8	0.012	0.070	3.76	31.0	68.9	0.90	120	0.13	0.12	12.7	37.2
S050438		5.05	25.1	0.07	3.0	<0.005	0.074	3.88	19.9	68.1	0.86	183	0.15	0.12	12.7	42.3
S050439		4.43	25.5	0.08	2.7	<0.005	0.072	3.90	17.0	67.6	0.77	167	0.18	0.13	12.8	43.8
S050440		5.56	24.2	0.09	2.5	<0.005	0.068	3.81	32.0	69.5	1.39	207	0.13	0.11	11.9	50.1
S050441		4.53	24.0	0.09	2.6	0.008	0.073	4.10	42.1	66.3	0.85	116	0.17	0.10	12.1	37.0
S050442		0.14	0.73	0.13	0.1	<0.005	0.006	0.08	1.6	1.6	1.69	119	<0.05	0.06	0.5	0.8
S050443		4.87	22.9	0.14	2.5	<0.005	0.069	3.92	38.0	67.4	1.07	120	0.17	0.12	11.6	40.0
S050444		4.81	22.7	0.12	2.7	<0.005	0.071	3.93	43.0	60.8	1.20	205	0.12	0.10	11.4	38.7
S050445		4.76	21.5	0.08	2.5	<0.005	0.067	3.84	29.8	63.6	1.21	309	0.12	0.08	11.0	35.7
S050446		4.59	22.2	0.09	2.8	0.009	0.077	3.73	39.6	78.9	1.26	359	0.10	0.08	11.6	33.8
S050447		4.55	20.6	0.08	2.7	0.018	0.067	3.42	38.1	106.0	1.43	397	0.10	0.06	11.0	36.1
S050448		4.10	20.5	0.08	2.9	0.008	0.070	3.21	42.8	116.5	1.56	434	0.34	0.06	11.4	38.4
S050449		1.17	3.82	0.05	0.7	2.51	0.023	0.68	9.6	7.0	1.25	4700	1.22	0.10	2.0	13.6
S050450		4.19	21.3	0.11	3.0	0.022	0.069	3.28	40.5	282	1.50	609	0.29	0.06	11.9	34.4
S050451		4.53	21.2	0.11	3.3	0.024	0.076	3.15	44.4	131.5	1.55	524	0.20	0.06	11.7	38.0
S050452		4.24	21.0	0.09	3.2	0.007	0.071	3.08	43.6	99.5	1.53	628	0.18	0.06	11.3	35.5
S050453		4.38	23.0	0.08	3.4	<0.005	0.077	3.39	39.5	89.9	1.57	488	5.50	0.06	12.4	40.8
S050454		5.13	21.7	0.09	3.1	0.034	0.069	3.64	44.2	76.4	1.44	292	0.15	0.06	11.8	39.7
S050455		5.12	22.4	0.09	3.2	0.030	0.073	3.60	39.4	86.8	1.43	288	0.15	0.06	12.1	41.0
S050456		4.72	23.6	0.11	3.2	0.073	0.072	3.78	49.9	82.4	1.41	254	0.30	0.07	12.5	40.0
S050457		4.66	23.9	0.10	3.2	0.093	0.071	3.91	36.6	78.1	1.31	208	0.38	0.07	12.7	41.9
S050458		5.24	24.9	0.11	3.1	0.047	0.079	4.32	47.2	64.6	1.24	160	0.29	0.07	13.0	40.2
S050459		5.03	23.4	0.11	3.1	0.041	0.081	4.15	37.6	58.9	1.22	158	0.27	0.07	12.3	39.2
S050460		4.91	23.6	0.12	3.0	0.200	0.073	3.96	52.6	67.6	1.39	215	0.29	0.06	12.4	40.0

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 29-AUG-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18193064

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl
	Units	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
	LOD	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.01	0.005	0.02
S050421		240	6.5	72.2	<0.002	0.26	3.40	4.3	2	0.9	531	0.29	<0.05	5.13	0.112	2.05
S050422		330	9.6	68.7	<0.002	1.35	63.4	4.7	2	1.0	394	0.32	<0.05	5.50	0.123	14.15
S050423		350	9.8	69.4	<0.002	1.50	69.8	4.9	1	1.0	370	0.34	<0.05	5.90	0.130	15.40
S050424		260	9.0	60.7	<0.002	0.60	2.96	4.4	2	0.8	594	0.27	<0.05	4.81	0.106	5.51
S050425		320	7.3	41.8	0.002	1.44	43.5	6.0	2	0.7	1025	0.19	0.05	3.45	0.088	24.4
S050426		480	13.7	96.3	<0.002	0.47	1.74	6.7	2	1.5	327	0.46	<0.05	8.26	0.187	1.85
S050427		540	19.8	121.5	0.002	0.55	5.72	8.8	1	1.8	224	0.62	<0.05	10.95	0.248	3.32
S050428		560	24.9	83.2	<0.002	0.60	15.45	6.4	2	1.3	148.5	0.47	<0.05	8.29	0.181	3.11
S050429		500	8.2	167.0	<0.002	2.63	1.38	13.2	<1	2.4	157.0	0.94	<0.05	15.50	0.341	1.62
S050430		440	17.8	188.5	<0.002	1.81	1.49	13.3	<1	2.4	204	0.90	<0.05	15.45	0.335	1.82
S050431		500	16.8	203	<0.002	0.20	1.01	13.6	<1	2.5	206	0.92	<0.05	16.00	0.346	1.56
S050432		500	14.2	201	<0.002	0.06	1.30	13.6	<1	2.5	182.5	0.96	<0.05	15.80	0.352	1.64
S050433		520	16.6	171.5	<0.002	0.02	0.85	13.6	<1	2.6	170.0	0.98	<0.05	14.70	0.360	1.31
S050434		480	20.6	215	<0.002	0.03	1.15	17.9	<1	2.8	167.0	0.89	0.07	15.10	0.423	1.41
S050435		510	22.8	214	<0.002	0.02	0.96	17.5	<1	2.7	143.0	0.92	0.08	15.40	0.430	1.37
S050436		530	24.5	202	<0.002	0.01	1.13	17.2	<1	2.7	118.0	0.90	0.11	14.15	0.432	1.34
S050437		840	11.8	140.0	<0.002	0.01	0.69	16.3	<1	2.7	140.0	0.93	0.05	11.50	0.437	0.91
S050438		940	36.2	138.5	<0.002	0.01	0.69	16.9	1	2.8	110.5	0.95	0.05	9.84	0.441	0.87
S050439		800	19.1	129.0	<0.002	0.01	0.52	16.7	<1	2.8	109.0	0.98	0.06	9.41	0.441	0.91
S050440		690	13.8	133.5	<0.002	0.02	0.85	15.9	<1	2.6	122.5	0.89	0.05	11.50	0.411	0.91
S050441		810	15.8	181.0	<0.002	0.01	0.70	17.0	<1	2.6	123.0	0.89	0.06	13.80	0.432	0.97
S050442		70	1.6	2.9	<0.002	<0.01	16.15	0.3	1	<0.2	76.4	0.07	<0.05	0.25	0.008	0.03
S050443		840	13.3	170.0	<0.002	0.01	0.78	15.9	<1	2.6	115.0	0.83	0.06	12.65	0.411	0.91
S050444		880	13.2	182.0	<0.002	0.01	0.95	16.3	1	2.6	117.5	0.86	0.07	13.70	0.417	0.92
S050445		960	10.9	148.5	<0.002	0.01	0.92	15.1	<1	2.5	115.0	0.79	0.07	10.40	0.412	0.90
S050446		1040	10.5	168.5	<0.002	0.01	0.79	16.8	<1	2.5	125.0	0.83	0.06	12.95	0.434	0.89
S050447		890	15.6	142.5	<0.002	0.02	0.63	15.8	<1	2.5	164.0	0.79	0.10	12.10	0.430	0.80
S050448		830	34.6	137.5	<0.002	0.11	0.74	16.5	<1	2.5	494	0.84	0.06	13.65	0.433	0.77
S050449		390	58.7	28.3	0.002	0.70	7.50	5.7	1	0.7	1170	0.15	0.06	2.44	0.081	6.06
S050450		550	19.4	128.0	<0.002	0.10	0.71	15.8	<1	2.6	513	0.83	0.05	13.00	0.434	1.11
S050451		480	23.8	143.0	<0.002	0.05	0.78	16.6	<1	2.4	306	0.86	0.08	14.10	0.430	0.74
S050452		440	19.5	143.5	<0.002	0.01	0.60	16.3	<1	2.4	148.0	0.83	0.05	13.65	0.411	0.72
S050453		580	12.5	141.0	<0.002	0.01	0.58	17.5	1	2.7	105.5	0.93	0.09	13.25	0.446	0.79
S050454		430	12.9	156.5	<0.002	0.01	0.60	17.3	1	2.5	107.5	0.86	0.07	14.05	0.453	0.80
S050455		420	12.7	152.5	<0.002	0.01	0.66	17.5	1	2.6	109.0	0.88	0.07	12.85	0.451	0.81
S050456		440	12.7	168.0	<0.002	0.01	0.62	17.8	<1	2.7	110.5	0.90	0.10	14.95	0.441	0.80
S050457		490	18.5	166.0	<0.002	0.01	0.99	17.3	<1	2.8	129.0	0.90	0.08	12.85	0.431	0.84
S050458		450	26.7	190.0	<0.002	0.01	0.97	17.9	<1	2.9	133.0	0.94	0.08	15.05	0.420	0.94
S050459		470	27.0	174.5	<0.002	0.01	1.09	16.9	<1	2.7	132.0	0.90	0.06	13.10	0.429	0.95
S050460		490	25.4	184.0	<0.002	0.08	0.99	17.5	1	2.8	229	0.91	0.09	15.70	0.424	0.88

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Finalized Date: 29-AUG-2018
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Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18193064

Sample Description	Method Analyte Units LOD	ME-MS61 U ppm 0.1	ME-MS61 V ppm 1	ME-MS61 W ppm 0.1	ME-MS61 Y ppm 0.1	ME-MS61 Zn ppm 2	ME-MS61 Zr ppm 0.5	As-OG62 As % 0.001
S050421		8.8	34	1.7	9.0	41	39.1	
S050422		10.8	40	2.9	11.4	52	45.7	1.490
S050423		10.6	42	3.1	11.1	52	44.7	1.725
S050424		10.9	35	2.5	8.7	50	36.0	
S050425		6.2	33	20.7	15.8	22	31.3	
S050426		6.5	57	2.9	13.7	82	61.0	
S050427		7.9	82	4.2	16.7	105	76.4	
S050428		6.9	59	3.9	16.1	66	74.1	
S050429		4.7	75	2.2	19.9	117	99.4	
S050430		3.6	58	1.9	20.3	113	93.0	
S050431		2.1	51	1.2	20.9	115	99.6	
S050432		2.1	58	1.2	20.6	111	100.0	
S050433		2.3	63	1.4	19.7	115	96.2	
S050434		3.0	112	1.6	21.2	92	108.0	
S050435		2.7	108	1.7	21.2	94	105.5	
S050436		2.9	109	1.7	20.9	100	108.0	
S050437		2.8	97	2.1	19.3	72	103.5	
S050438		2.7	104	1.8	17.1	113	104.0	
S050439		2.8	103	1.6	13.7	114	95.8	
S050440		2.4	92	1.4	16.9	122	88.6	
S050441		2.3	97	1.6	20.9	85	93.6	
S050442		0.3	2	<0.1	2.7	3	3.2	
S050443		2.1	91	1.5	18.3	97	90.5	
S050444		2.0	88	1.5	19.7	98	94.8	
S050445		1.6	95	1.6	16.9	91	91.6	
S050446		1.8	102	1.5	20.6	87	101.5	
S050447		1.9	100	1.5	19.2	97	98.1	
S050448		2.3	96	1.6	20.0	99	104.5	
S050449		3.6	26	7.6	14.5	120	24.5	
S050450		2.8	96	2.1	18.7	87	112.0	
S050451		2.5	92	1.7	20.5	103	112.5	
S050452		2.3	92	1.6	20.6	99	110.0	
S050453		2.8	108	1.7	22.1	108	116.5	
S050454		2.5	99	1.6	21.4	105	105.5	
S050455		2.5	99	1.6	20.4	104	109.0	
S050456		3.0	106	1.6	22.3	110	111.0	
S050457		2.3	94	1.6	20.2	107	111.5	
S050458		2.0	98	1.7	21.0	101	106.0	
S050459		2.1	100	1.7	19.4	100	105.0	
S050460		3.6	98	1.7	21.8	102	109.0	

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.

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www.alsglobal.com/geochemistry

To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Project: Nadaleen

Finalized Date: 29-AUG-2018
Account: RCM

CERTIFICATE OF ANALYSIS WH18193064

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Applies to Method: REE's may not be totally soluble in this method.
ME-MS61

LABORATORY ADDRESSES

Applies to Method: Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.

CRU-31	CRU-QC	LOG-21	LOG-21d
LOG-23	PUL-31	PUL-31d	PUL-QC
SPL-21	SPL-21d	WEI-21	

Applies to Method: Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

As-OG62	Au-AA25	Hg-MS42	ME-MS61
ME-OG62			

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 6-SEP-2018
Account: RCM

CERTIFICATE WH18197584

Project: Nadaleen

P.O. No.: N18-046

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 13-AUG-2018.

The following have access to data associated with this certificate:

ANDREW CARNE	JULIA LANE	

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
LOG-23	Pulp Login - Rcvd with Barcode
LOG-21d	Sample logging - ClientBarCode Dup
SPL-21d	Split sample - duplicate
PUL-31d	Pulverize Split - duplicate

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid ICP-MS	
Hg-MS42	Trace Hg by ICPMS	ICP-MS
ME-OG62	Ore Grade Elements - Four Acid	ICP-AES

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:

Colin Ramshaw, Vancouver Laboratory Manager

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Finalized Date: 6-SEP-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18197584

Sample Description	Method	WEI-21	Au-AA25	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Recvd Wt.	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu
	Units	kg	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.02	0.01	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2
S050461		13.31	<0.01	0.03	9.34	25.0	520	2.97	0.41	0.34	<0.02	92.7	19.6	68	17.80	29.9
S050462		12.59	<0.01	0.04	8.61	36.4	380	2.77	0.41	1.55	0.07	105.5	18.5	76	12.35	36.5
S050463		10.36	<0.01	0.14	7.28	31.6	1290	2.12	0.22	2.94	0.15	90.6	14.3	70	7.33	172.5
S050464		10.94	<0.01	0.03	7.96	34.2	320	2.64	0.24	2.99	0.15	94.6	12.9	72	9.84	164.5
S050465		11.31	<0.01	0.16	7.57	42.2	350	2.45	0.22	3.76	0.17	88.9	16.4	59	8.94	156.0
S050466		10.11	<0.01	0.84	5.60	167.0	410	1.73	0.24	6.82	0.16	69.9	37.5	49	5.76	818
S050467		11.94	<0.01	0.28	7.85	529	400	1.98	0.32	5.52	0.16	92.2	24.9	61	8.36	285
S050468		13.29	<0.01	0.03	7.69	1270	330	1.74	0.24	4.60	0.15	86.8	11.7	61	9.14	140.5
S050469		5.78	0.06	0.05	6.23	1230	340	1.54	0.33	6.48	0.15	71.7	10.3	50	8.00	184.5
S050470		6.34	0.05	0.07	4.36	734	200	1.16	0.12	10.20	0.14	53.0	15.9	45	5.85	36.0
S050471		11.37	<0.01	0.11	2.53	337	120	0.71	0.09	23.9	0.55	30.1	4.9	25	2.49	19.0
S050472		9.01	0.01	0.05	2.53	477	90	0.79	0.08	23.6	0.09	32.8	5.5	25	3.27	17.0
S050473		8.46	0.01	0.03	2.16	376	80	0.77	0.06	24.3	0.08	27.9	4.8	22	2.64	14.4
S050474		7.95	<0.01	0.12	3.56	283	120	1.12	0.11	15.95	0.09	47.2	7.2	37	5.39	25.4
S050475		9.42	<0.01	0.07	2.34	287	100	0.71	0.08	23.2	0.20	31.4	4.1	25	3.11	16.4
S050476		7.02	<0.01	0.01	0.09	0.9	20	0.07	0.01	33.5	0.02	1.12	0.4	1	<0.05	1.0
S050477		8.80	<0.01	0.08	3.89	274	160	1.31	0.10	11.45	0.14	50.8	7.7	43	5.61	21.9
S050478		9.52	0.01	0.05	2.86	289	120	0.90	0.08	19.25	0.09	35.2	4.8	31	3.55	17.1
S050479		10.90	0.01	0.06	3.02	404	160	0.97	0.10	20.4	0.09	35.9	5.0	31	4.65	17.6
S050480		9.14	0.01	0.05	3.60	356	200	1.29	0.10	17.80	0.08	44.2	5.3	35	5.98	19.4
S050481		11.27	0.02	0.07	4.17	214	210	1.40	0.11	14.35	0.08	48.7	7.3	44	7.03	30.2
S050482		0.26	1.06	1.30	1.48	859	190	0.42	0.12	27.8	0.68	19.40	4.4	28	3.42	44.1
S050483		10.89	0.01	0.05	2.31	204	120	0.97	0.06	25.1	0.32	28.0	4.6	27	2.72	14.6
S050484		10.14	0.01	0.04	2.77	167.0	160	1.07	0.08	23.2	0.11	32.4	5.5	31	3.74	19.9
S050485		9.58	0.01	0.04	3.50	395	140	1.20	0.11	18.75	0.08	41.4	6.6	37	5.00	22.6
S050486		9.76	0.01	0.05	4.39	447	190	1.39	0.12	13.20	0.07	50.4	8.0	47	7.44	27.4
S050487		10.74	<0.01	0.05	4.08	107.5	390	1.40	0.10	12.10	0.16	49.2	7.6	46	7.20	25.9
S050488		<0.02	<0.01	0.05	4.05	109.5	400	1.49	0.10	12.10	0.08	49.5	7.5	47	7.21	25.1
S050489		10.22	0.01	0.04	3.72	229	230	1.32	0.10	14.55	0.09	44.2	7.2	42	6.96	21.1
S050490		10.03	<0.01	0.02	3.15	80.8	160	1.16	0.08	14.40	0.13	38.3	5.8	35	7.50	8.9
S050491		10.93	<0.01	0.05	3.76	205	180	1.40	0.10	16.45	0.05	44.7	6.6	40	7.37	26.1
S050492		9.88	0.02	0.06	1.32	221	80	0.57	0.04	28.5	0.24	18.35	3.3	18	2.27	8.0
S050493		10.74	<0.01	0.05	3.60	144.5	210	1.51	0.09	17.10	0.09	43.1	5.4	38	7.99	24.2
S050494		11.54	0.04	0.06	1.89	297	110	0.84	0.06	24.9	0.30	23.9	4.0	23	3.91	9.3
S050495		0.26	1.39	1.13	3.10	>10000	200	0.79	0.13	18.15	0.39	36.1	8.0	46	9.12	26.2
S050496		4.75	<0.01	0.06	3.24	86.1	130	1.25	0.09	16.60	0.23	34.4	6.3	33	7.42	29.0
S050497		5.03	<0.01	0.06	3.20	91.5	130	1.37	0.09	17.55	0.24	35.2	6.3	33	7.28	22.7
S050498		11.69	<0.01	0.04	2.45	139.5	130	0.97	0.07	22.4	0.11	30.6	4.3	25	5.97	17.1
S050499		12.07	<0.01	0.06	3.35	100.5	220	1.38	0.08	17.80	0.05	37.9	6.0	36	6.79	18.2
S050500		11.74	0.01	0.05	3.87	72.8	700	1.42	0.10	14.20	0.06	46.7	6.3	39	7.78	24.0

***** See Appendix Page for comments regarding this certificate *****

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VANCOUVER BC V6B 1L8

Finalized Date: 6-SEP-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18197584

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Hg-MS42	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni
	Units	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2
S050461		4.90	25.0	0.15	3.1	0.112	0.084	4.03	47.3	74.8	1.44	211	0.29	0.07	13.1	46.9
S050462		4.24	23.2	0.15	3.0	0.111	0.073	3.41	56.7	104.5	2.12	785	0.29	0.06	13.0	46.2
S050463		3.75	19.65	0.15	2.7	0.052	0.060	2.55	48.8	120.5	2.75	1080	0.44	0.05	12.7	50.3
S050464		3.38	21.0	0.16	3.0	0.040	0.058	3.05	51.6	80.3	2.84	974	0.09	0.05	13.5	51.9
S050465		2.83	20.4	0.17	3.1	0.038	0.056	2.89	51.0	93.6	3.02	1290	0.21	0.05	13.1	51.5
S050466		2.71	15.15	0.12	2.4	0.165	0.045	2.05	37.3	68.0	3.91	2210	4.02	0.05	9.8	41.1
S050467		2.79	20.8	0.16	3.1	0.622	0.060	2.89	52.7	67.9	3.13	1960	0.49	0.06	13.4	51.4
S050468		3.45	19.80	0.12	2.9	2.13	0.057	2.86	48.9	60.0	2.72	1260	0.24	0.05	13.0	50.4
S050469		2.81	15.70	0.14	2.5	2.97	0.048	2.38	40.1	48.8	3.64	1520	0.56	0.05	10.1	35.7
S050470		2.17	11.45	0.07	2.4	1.405	0.039	1.80	26.5	33.8	5.31	2410	0.62	0.05	7.0	22.9
S050471		1.11	6.54	0.07	1.0	0.509	0.019	0.87	15.7	21.5	2.24	2120	0.81	0.03	4.1	10.0
S050472		1.27	6.62	0.07	1.6	0.849	0.019	0.92	16.4	29.5	2.46	1310	0.29	0.03	4.1	13.0
S050473		1.13	5.72	0.06	0.9	0.566	0.024	0.66	14.2	25.1	2.09	945	0.27	0.02	3.5	11.0
S050474		1.70	9.42	0.10	1.7	0.436	0.032	1.25	24.8	54.9	3.86	663	0.38	0.03	6.2	16.8
S050475		1.16	6.16	0.07	1.2	0.339	0.023	0.75	15.2	29.7	2.26	687	0.31	0.02	3.8	10.7
S050476		0.12	0.30	0.07	<0.1	<0.005	0.006	0.02	1.2	1.1	1.83	124	<0.05	0.04	0.1	0.4
S050477		1.92	10.15	0.08	2.1	0.261	0.030	1.47	26.0	49.4	4.49	493	0.58	0.04	6.8	18.8
S050478		1.39	7.40	0.06	1.5	0.487	0.018	1.05	17.4	39.7	3.39	489	0.45	0.03	4.7	12.5
S050479		1.45	7.81	0.10	1.2	0.136	0.023	0.97	18.3	45.5	2.19	412	0.34	0.02	4.7	11.4
S050480		1.74	9.68	0.09	1.6	0.092	0.027	1.32	21.7	81.0	2.78	338	0.37	0.03	5.8	13.8
S050481		2.02	11.30	0.14	1.9	0.114	0.035	1.42	26.0	61.1	3.27	335	0.47	0.03	7.2	20.2
S050482		1.14	3.92	0.09	0.7	2.22	0.019	0.64	9.5	6.9	1.23	4590	1.24	0.10	2.1	12.3
S050483		1.17	6.07	0.12	1.0	0.296	0.018	0.79	15.0	44.1	2.26	347	0.53	0.02	3.9	10.9
S050484		1.35	7.68	0.13	1.3	0.233	0.024	0.97	17.4	49.0	2.91	346	0.49	0.03	4.8	13.2
S050485		1.68	9.20	0.13	1.6	0.086	0.029	1.19	22.1	51.1	2.85	301	0.27	0.03	6.0	16.3
S050486		2.04	11.50	0.16	2.1	0.065	0.034	1.62	26.4	60.3	4.38	303	0.55	0.04	7.4	20.6
S050487		2.08	10.75	0.14	2.2	0.061	0.030	1.64	25.9	76.0	5.66	307	0.61	0.04	7.0	19.4
S050488		2.09	10.65	0.16	2.2	0.061	0.033	1.65	25.4	75.4	5.62	311	0.64	0.04	7.0	19.3
S050489		1.93	10.10	0.14	1.8	0.261	0.030	1.60	23.5	115.5	3.97	308	0.29	0.03	6.5	17.9
S050490		1.75	8.32	0.13	1.8	0.047	0.022	1.38	20.5	57.8	5.14	261	0.34	0.09	5.5	14.4
S050491		1.66	10.05	0.15	1.8	0.041	0.026	1.69	24.3	65.6	3.73	245	0.56	0.03	6.7	16.0
S050492		0.84	3.70	0.11	0.7	0.047	0.010	0.62	9.7	13.7	2.48	226	0.97	0.01	2.3	6.1
S050493		1.47	9.72	0.16	2.0	0.041	0.029	1.86	22.7	41.7	2.79	219	0.32	0.03	6.5	14.6
S050494		1.00	5.20	0.13	0.9	0.370	0.016	0.99	13.4	12.7	2.86	232	0.56	0.02	3.3	8.2
S050495		2.18	8.18	0.13	1.6	4.62	0.030	1.40	18.8	14.0	2.29	1320	1.40	0.10	4.8	18.5
S050496		1.32	8.49	0.10	1.6	0.128	0.026	1.81	18.6	26.2	4.38	216	0.56	0.03	5.3	15.8
S050497		1.32	8.48	0.12	1.6	0.106	0.024	1.81	19.2	25.7	4.42	221	0.76	0.03	5.3	15.5
S050498		1.16	6.55	0.11	1.2	0.029	0.019	1.21	17.0	47.2	2.83	197	0.39	0.04	4.1	11.1
S050499		1.45	8.72	0.12	1.7	0.042	0.023	1.52	20.3	39.5	2.75	203	0.39	0.06	5.6	15.3
S050500		1.69	10.20	0.13	2.2	0.039	0.027	1.73	24.6	43.1	2.62	199	0.32	0.16	6.8	17.8

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Finalized Date: 6-SEP-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18197584

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl
	Units	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
	LOD	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.01	0.005	0.02
S050461		440	21.3	170.0	<0.002	0.66	0.74	18.0	1	2.9	263	0.95	0.10	14.65	0.433	2.20
S050462		400	12.4	154.5	<0.002	0.27	0.46	16.5	<1	2.7	191.5	0.93	0.05	15.65	0.388	1.03
S050463		420	11.3	109.5	<0.002	0.29	0.27	13.0	<1	2.4	248	0.92	<0.05	14.85	0.314	0.59
S050464		480	6.3	131.5	<0.002	0.13	0.27	13.9	<1	2.6	255	1.01	<0.05	16.30	0.344	0.68
S050465		460	5.9	122.0	<0.002	0.11	0.36	13.4	1	2.5	289	0.98	<0.05	15.75	0.330	0.61
S050466		480	16.9	87.3	<0.002	0.42	0.47	9.4	2	2.0	541	0.73	<0.05	11.85	0.257	0.64
S050467		590	7.8	118.5	<0.002	1.38	0.55	13.2	1	2.7	718	0.99	<0.05	16.20	0.347	1.55
S050468		500	4.5	120.5	<0.002	2.57	1.60	12.9	<1	2.7	474	0.94	<0.05	15.30	0.339	4.48
S050469		510	28.3	98.9	<0.002	1.80	2.49	10.0	2	2.2	507	0.77	<0.05	12.25	0.277	4.46
S050470		490	21.9	81.7	<0.002	0.66	1.58	7.6	1	1.5	395	0.52	<0.05	10.30	0.212	2.57
S050471		280	24.1	37.9	<0.002	0.16	1.28	4.4	<1	1.0	614	0.29	<0.05	5.54	0.117	0.69
S050472		290	9.3	43.7	<0.002	0.26	0.89	4.5	1	0.9	512	0.30	<0.05	5.82	0.120	1.60
S050473		230	6.5	31.6	0.002	0.21	0.59	3.9	1	0.8	572	0.24	<0.05	4.68	0.099	1.05
S050474		390	8.8	60.5	<0.002	0.36	0.42	6.1	2	1.3	464	0.46	<0.05	7.92	0.170	0.93
S050475		380	8.6	36.4	<0.002	0.31	0.42	4.2	1	0.8	537	0.29	0.05	5.54	0.109	0.78
S050476		70	0.5	0.5	<0.002	<0.01	0.07	0.2	<1	<0.2	79.8	<0.05	<0.05	0.09	0.005	0.02
S050477		530	11.8	67.9	<0.002	0.65	0.48	6.5	2	1.5	394	0.50	<0.05	8.85	0.193	0.80
S050478		340	9.4	51.3	<0.002	0.38	0.65	5.0	1	1.0	563	0.36	0.06	6.80	0.140	0.76
S050479		380	6.0	49.3	<0.002	0.09	0.29	5.3	1	1.1	450	0.35	0.06	6.19	0.138	0.45
S050480		470	8.7	65.4	<0.002	0.10	0.28	6.4	1	1.3	487	0.41	<0.05	7.95	0.169	0.41
S050481		600	9.5	71.0	<0.002	0.19	0.30	7.1	2	1.5	386	0.52	<0.05	8.51	0.197	0.39
S050482		390	61.5	28.2	0.003	0.69	7.84	5.7	1	0.7	1135	0.16	<0.05	2.38	0.079	5.65
S050483		320	8.9	37.9	<0.002	0.34	0.56	4.0	2	0.8	713	0.29	<0.05	4.65	0.111	0.62
S050484		410	8.6	46.6	<0.002	0.37	0.38	4.8	2	1.0	639	0.36	<0.05	5.84	0.135	0.51
S050485		430	6.8	54.6	<0.002	0.13	0.27	5.9	2	1.2	474	0.44	<0.05	7.10	0.169	0.42
S050486		540	9.4	75.9	<0.002	0.08	0.37	7.3	2	1.5	337	0.53	<0.05	8.98	0.213	0.42
S050487		500	9.6	75.6	<0.002	0.09	0.39	6.7	3	1.3	334	0.52	<0.05	8.80	0.201	0.41
S050488		500	9.7	75.2	<0.002	0.10	0.37	6.7	3	1.3	331	0.52	<0.05	8.73	0.201	0.43
S050489		410	6.3	72.7	<0.002	0.34	0.39	6.4	2	1.3	455	0.48	<0.05	7.98	0.181	0.75
S050490		360	4.6	64.0	<0.002	0.06	0.15	5.2	1	1.1	288	0.42	<0.05	7.01	0.158	0.37
S050491		490	8.0	77.4	<0.002	0.13	0.34	6.4	2	1.3	434	0.49	<0.05	8.01	0.187	0.53
S050492		170	5.2	28.6	<0.002	0.15	0.59	2.3	2	0.5	772	0.17	<0.05	2.88	0.065	0.39
S050493		450	9.0	86.3	<0.002	0.08	0.28	6.2	1	1.3	516	0.48	<0.05	7.80	0.180	0.58
S050494		250	7.2	44.4	<0.002	0.32	1.57	3.4	2	0.7	780	0.25	<0.05	4.06	0.092	0.97
S050495		440	16.9	64.9	0.002	2.40	55.5	7.1	2	1.1	824	0.35	0.09	5.14	0.196	16.15
S050496		370	11.0	73.6	<0.002	0.30	0.47	5.3	2	1.0	486	0.40	<0.05	6.67	0.152	0.67
S050497		370	11.1	72.4	<0.002	0.30	0.49	5.3	2	1.0	512	0.40	<0.05	6.59	0.152	0.69
S050498		330	6.2	52.6	<0.002	0.04	0.18	4.1	2	0.8	603	0.30	<0.05	5.03	0.114	0.36
S050499		410	6.9	64.4	<0.002	0.09	0.24	5.5	2	1.0	458	0.41	<0.05	6.90	0.161	0.36
S050500		490	8.8	76.5	<0.002	0.08	0.19	6.4	2	1.3	436	0.52	<0.05	8.55	0.188	0.35

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 6-SEP-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18197584

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	U	V	W	Y	Zn	Zr
	Units	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.1	1	0.1	0.1	2	0.5
S050461		2.9	99	1.8	20.5	104	110.0
S050462		2.7	76	1.5	23.0	115	109.5
S050463		2.8	53	1.2	19.5	119	99.3
S050464		2.7	55	1.4	21.6	104	112.5
S050465		3.4	70	1.3	21.0	107	108.5
S050466		11.1	79	1.1	18.4	98	94.4
S050467		4.5	80	1.5	19.4	107	117.0
S050468		3.6	59	1.7	18.6	104	110.0
S050469		6.9	77	1.6	16.4	98	89.7
S050470		4.3	63	1.2	15.9	72	80.4
S050471		11.3	38	0.7	9.1	61	35.4
S050472		10.4	38	0.7	9.9	50	38.3
S050473		11.0	33	0.6	9.3	39	32.1
S050474		7.3	52	1.0	12.8	58	70.3
S050475		10.8	37	0.7	9.8	44	37.2
S050476		0.2	2	<0.1	2.3	5	1.6
S050477		5.6	57	1.1	13.4	66	82.5
S050478		8.8	41	0.8	10.0	46	54.5
S050479		9.4	47	0.6	11.1	43	43.7
S050480		8.1	55	0.8	13.5	52	55.0
S050481		6.2	64	0.8	14.7	70	66.9
S050482		3.8	26	5.0	14.5	130	26.9
S050483		10.8	40	0.5	8.7	47	36.7
S050484		9.7	45	0.6	10.1	47	47.0
S050485		6.9	51	0.7	12.7	56	59.1
S050486		5.4	63	0.8	15.1	76	75.4
S050487		5.0	65	0.7	15.0	74	78.4
S050488		5.2	65	0.8	15.1	75	78.6
S050489		4.1	55	0.9	13.5	61	65.3
S050490		3.6	44	0.7	11.8	52	69.9
S050491		6.5	58	0.7	12.8	47	70.8
S050492		12.8	23	0.4	5.9	33	25.8
S050493		7.5	54	0.7	12.9	37	69.2
S050494		12.4	33	0.5	7.6	61	36.7
S050495		4.3	58	4.3	16.6	61	57.0
S050496		7.9	51	0.6	10.4	81	58.9
S050497		9.0	51	0.6	10.5	86	59.5
S050498		7.7	40	0.5	9.9	31	46.0
S050499		6.8	53	0.6	11.6	44	63.9
S050500		5.6	55	0.7	14.4	63	79.2

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Project: Nadaleen

Page: Appendix 1
Total # Appendix Pages: 1
Finalized Date: 6-SEP-2018
Account: RCM

CERTIFICATE OF ANALYSIS WH18197584

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Applies to Method: REE's may not be totally soluble in this method.
ME-MS61

LABORATORY ADDRESSES

Applies to Method: Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.

CRU-31	CRU-QC	LOG-21	LOG-21d
LOG-23	PUL-31	PUL-31d	PUL-QC
SPL-21	SPL-21d	WEI-21	

Applies to Method: Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Au-AA25	Hg-MS42	ME-MS61	ME-OG62

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Finalized Date: 6-SEP-2018
Account: RCM

CERTIFICATE WH18199688

Project: Nadaleen

P.O. No.: N18-047

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 15-AUG-2018.

The following have access to data associated with this certificate:

ANDREW CARNE	JULIA LANE	

SAMPLE PREPARATION

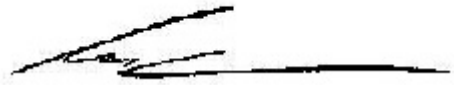
ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
WSH-22	"Wash" pulverizers
PUL-31	Pulverize split to 85% <75 um
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
LOG-23	Pulp Login - Rcvd with Barcode
LOG-21d	Sample logging - ClientBarCode Dup
SPL-21d	Split sample - duplicate
PUL-31d	Pulverize Split - duplicate

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid ICP-MS	
Hg-MS42	Trace Hg by ICPMS	ICP-MS
ME-OG62	Ore Grade Elements - Four Acid	ICP-AES
As-OG62	Ore Grade As - Four Acid	
S-IR08	Total Sulphur (Leco)	LECO

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature: 

Colin Ramshaw, Vancouver Laboratory Manager

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Finalized Date: 6-SEP-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18199688

Sample Description	Method	WEI-21	Au-AA25	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Recvd Wt.	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu
	Units	kg	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.02	0.01	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2
S050501		10.71	0.01	0.07	4.22	45.9	430	1.40	0.10	13.95	0.06	49.8	6.8	43	7.78	26.0
S050502		10.43	0.01	0.07	3.43	40.1	270	1.10	0.09	18.35	0.11	38.8	5.7	34	7.00	21.2
S050503		10.56	0.02	0.05	2.17	23.7	420	0.84	0.06	25.1	0.09	26.8	3.6	21	4.36	14.8
S050504		9.97	0.01	0.08	3.78	32.5	670	1.51	0.09	12.10	0.18	42.7	6.5	42	8.46	22.1
S050505		11.02	<0.01	0.06	1.80	27.9	1270	0.59	0.04	23.2	0.27	22.8	2.8	18	3.22	8.2
S050506		10.65	<0.01	0.06	1.38	108.0	390	0.47	0.04	28.4	0.16	18.80	2.6	15	2.42	7.4
S050507		6.69	<0.01	0.05	1.09	55.2	300	0.38	0.03	29.3	0.14	16.35	1.8	11	1.59	5.2
S050508		8.84	<0.01	0.04	0.91	141.5	440	0.32	0.02	28.5	0.11	13.15	1.4	9	1.16	4.1
S050509		6.94	<0.01	0.02	0.20	1.7	30	0.16	0.01	33.2	0.04	1.50	0.6	2	0.06	1.9
S050510		4.30	<0.01	0.08	1.56	213	380	0.49	0.05	29.9	0.15	20.8	3.0	16	2.56	15.1
S050511		11.30	0.01	0.13	2.73	82.0	820	0.97	0.08	20.6	0.14	37.7	4.6	31	4.86	21.9
S050512		10.64	<0.01	0.10	2.67	23.4	980	0.78	0.06	16.60	0.20	38.6	4.3	29	4.73	14.3
S050513		8.57	<0.01	0.12	2.34	19.2	210	0.90	0.06	21.1	0.15	29.4	4.9	24	4.32	17.8
S050514		11.71	0.01	0.08	2.84	21.2	210	1.03	0.07	17.55	0.21	33.0	5.5	28	6.19	18.4
S050515		10.61	0.01	0.05	1.54	16.1	280	0.66	0.05	30.1	0.14	19.45	3.5	17	2.77	10.8
S050516		5.39	<0.01	0.06	2.30	21.9	200	0.97	0.06	24.7	0.09	26.4	4.7	24	5.74	13.5
S050517		5.88	<0.01	0.06	2.11	21.5	190	0.96	0.05	26.0	0.08	26.0	4.5	22	5.27	12.5
S050518		11.33	<0.01	0.11	4.50	30.6	250	1.82	0.10	14.35	0.11	47.2	8.7	44	15.00	25.7
S050519		10.45	<0.01	0.05	1.87	16.5	200	0.85	0.05	28.0	0.07	23.4	4.2	20	4.55	11.5
S050520		11.32	0.02	0.05	2.40	16.8	280	0.98	0.06	23.6	0.06	27.7	4.6	24	7.37	12.8
S050521		10.79	0.01	0.05	2.14	17.9	560	0.87	0.06	26.0	0.05	24.5	4.6	22	6.74	13.3
S050522		11.39	0.01	0.07	2.29	16.2	910	0.86	0.06	25.4	0.18	28.5	4.9	23	6.66	23.3
S050523		<0.02	0.01	0.06	2.27	16.2	890	0.98	0.06	25.5	0.18	29.4	4.8	24	6.50	23.4
S050524		11.26	0.01	0.05	2.97	17.7	170	1.09	0.07	23.9	0.09	33.4	6.2	28	9.43	18.2
S050525		11.38	<0.01	0.04	1.61	13.9	300	0.77	0.04	28.7	0.03	18.05	3.5	16	3.99	10.1
S050526		0.26	1.39	0.94	3.10	>10000	200	0.81	0.12	17.95	0.37	33.3	8.7	41	8.80	28.3
S050527		10.75	<0.01	0.05	1.14	26.2	250	0.50	0.04	32.0	0.16	12.60	2.7	12	2.61	8.0
S050528		11.27	0.01	0.04	1.58	12.2	250	0.59	0.05	29.1	0.11	19.25	3.4	17	5.72	12.7
S050529		11.16	<0.01	0.05	2.01	13.7	160	0.89	0.06	28.0	0.04	22.4	4.3	18	6.26	12.6
S050530		10.62	<0.01	0.05	1.76	18.4	160	0.73	0.05	28.0	0.06	21.8	3.7	18	4.46	11.0
S050531		12.63	0.01	0.16	3.96	64.4	150	1.50	0.10	12.25	0.05	43.3	6.9	42	8.81	26.8
S050532		7.44	0.01	0.11	2.17	1135	130	0.87	0.05	24.9	0.12	27.3	4.2	24	4.01	12.1
S050533		8.73	0.06	0.12	1.23	479	400	0.45	0.04	31.5	0.30	15.85	2.7	14	2.58	9.5
S050534		6.99	5.67	1.95	1.86	>10000	120	0.54	0.12	15.60	0.58	10.30	3.9	23	3.42	17.7
S050535		0.26	5.36	1.66	3.73	>10000	170	0.83	0.15	10.70	1.21	40.0	11.5	49	9.76	35.1
S050536		10.36	0.19	0.07	1.34	267	270	0.60	0.04	31.7	0.21	18.35	2.8	15	4.38	9.3
S050537		11.22	0.01	0.13	4.60	90.7	370	1.97	0.10	11.75	0.04	50.7	8.0	48	15.00	28.4
S050538		10.99	0.01	0.05	3.35	33.3	170	1.24	0.09	17.35	0.06	37.1	6.0	32	11.25	19.4
S050539		11.35	<0.01	0.05	1.97	26.3	130	0.68	0.06	28.5	0.08	23.5	4.2	19	5.49	12.2
S050540		11.01	0.01	0.04	2.40	16.5	170	0.89	0.06	25.1	0.04	28.2	4.5	23	6.35	14.7

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Finalized Date: 6-SEP-2018
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Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18199688

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Hg-MS42	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni
	Units	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2
S050501		1.88	11.55	0.10	2.4	0.046	0.029	1.91	25.8	39.4	3.38	223	0.40	0.16	7.1	19.3
S050502		1.67	9.48	0.07	1.7	0.036	0.026	1.48	19.2	40.7	3.45	209	0.71	0.21	5.6	16.6
S050503		1.02	6.05	0.06	1.1	0.029	0.016	0.86	13.4	25.9	2.45	169	0.38	0.18	3.6	9.7
S050504		1.80	10.35	0.10	2.1	0.076	0.024	1.77	21.5	43.7	5.03	197	0.93	0.12	6.2	17.6
S050505		0.81	4.57	0.10	1.2	0.103	0.012	0.79	11.3	23.8	2.65	158	0.78	0.21	3.0	7.3
S050506		0.58	3.84	0.07	1.1	0.097	0.008	0.56	10.2	15.0	2.00	121	0.77	0.15	2.6	6.2
S050507		0.44	2.80	0.07	0.8	0.072	0.009	0.47	8.9	10.1	1.56	128	0.52	0.17	1.9	3.7
S050508		0.41	2.12	0.06	0.7	0.054	0.006	0.43	7.3	10.6	1.24	115	1.47	0.13	1.6	2.9
S050509		0.13	0.61	0.05	0.1	<0.005	<0.005	0.05	1.3	1.4	2.10	124	<0.05	0.08	0.5	0.5
S050510		0.63	4.15	0.06	1.0	0.090	0.013	0.61	11.6	21.8	1.08	139	0.39	0.22	2.8	7.7
S050511		1.30	7.37	0.08	1.8	0.163	0.016	1.19	19.6	60.3	3.20	171	0.81	0.25	4.9	13.2
S050512		1.22	7.03	0.10	2.1	0.114	0.017	1.26	18.5	60.6	4.39	199	1.05	0.24	5.0	11.2
S050513		1.04	6.49	0.10	1.7	0.098	0.017	1.08	14.5	59.6	3.73	180	1.68	0.27	4.0	14.8
S050514		1.33	8.02	0.13	1.9	0.105	0.024	1.29	16.0	82.2	4.59	195	0.92	0.27	4.8	14.6
S050515		0.78	4.51	0.11	0.9	0.073	0.014	0.58	9.7	42.1	2.49	157	0.74	0.22	2.6	10.2
S050516		1.10	6.61	0.11	1.3	0.065	0.018	1.01	13.4	59.6	2.59	149	0.70	0.22	3.9	11.8
S050517		1.03	6.10	0.10	1.1	0.062	0.016	0.91	13.2	56.6	2.41	147	0.67	0.21	3.6	11.0
S050518		1.97	12.70	0.13	2.3	0.114	0.030	2.22	23.7	107.5	3.55	184	1.12	0.37	7.1	22.7
S050519		0.95	5.33	0.09	0.9	0.078	0.015	0.75	12.3	49.9	1.70	133	0.62	0.20	3.0	10.2
S050520		1.07	6.65	0.11	1.5	0.045	0.016	1.12	14.0	57.1	2.43	150	0.51	0.22	3.8	11.6
S050521		1.01	6.27	0.10	1.1	0.061	0.018	0.95	12.4	50.5	2.14	148	0.58	0.20	3.5	11.5
S050522		1.21	6.63	0.13	0.9	0.084	0.019	0.98	15.0	55.4	2.33	188	0.49	0.21	3.6	13.1
S050523		1.21	6.47	0.11	1.0	0.089	0.020	0.99	15.0	54.7	2.34	190	0.47	0.21	3.5	13.2
S050524		1.38	8.23	0.10	1.2	0.086	0.018	1.31	17.1	75.0	2.29	164	0.59	0.26	4.4	15.6
S050525		0.82	4.55	0.10	0.7	0.048	0.012	0.63	9.4	44.5	1.76	129	0.51	0.19	2.4	8.6
S050526		2.13	8.80	0.09	1.6	4.17	0.034	1.43	16.9	14.3	2.22	1280	1.45	0.10	4.6	20.7
S050527		0.55	3.26	0.09	0.5	0.027	0.010	0.46	7.0	28.6	1.17	106	0.63	0.14	1.7	6.6
S050528		0.70	4.46	0.10	0.7	0.021	0.011	0.70	10.3	36.4	1.22	116	0.28	0.17	2.5	8.3
S050529		0.94	5.63	0.10	0.9	0.042	0.015	0.87	11.5	50.6	1.81	126	0.40	0.20	3.0	10.4
S050530		0.86	4.92	0.11	0.9	0.032	0.013	0.89	11.2	62.4	1.84	131	0.34	0.04	2.8	9.1
S050531		1.88	11.00	0.13	2.2	0.079	0.029	2.03	21.4	82.6	4.41	198	0.62	0.03	6.3	19.1
S050532		1.07	6.00	0.10	1.3	0.674	0.018	1.11	13.3	23.1	2.03	150	0.77	0.02	3.6	10.5
S050533		0.56	3.35	0.10	0.6	0.381	0.012	0.59	8.8	14.5	0.91	150	0.64	0.01	2.0	6.4
S050534		0.96	5.26	0.10	0.9	3.54	0.109	0.92	5.9	18.8	1.13	1070	0.61	0.01	3.2	10.1
S050535		2.94	10.50	0.11	1.8	8.85	0.056	1.64	19.2	15.2	0.55	994	2.03	0.12	5.5	23.2
S050536		0.67	3.71	0.08	0.7	0.270	0.010	0.70	9.7	17.9	1.20	347	0.62	0.04	2.3	6.7
S050537		2.14	12.40	0.11	2.2	0.225	0.036	2.62	24.9	54.1	3.98	210	1.00	0.04	7.1	21.8
S050538		1.52	9.21	0.12	1.7	0.088	0.023	1.85	18.6	49.0	3.88	196	0.44	0.03	5.4	15.1
S050539		0.91	5.38	0.08	1.0	0.049	0.014	1.09	12.0	20.6	1.95	144	0.21	0.03	3.2	10.3
S050540		1.15	6.58	0.09	1.2	0.057	0.018	1.27	14.1	22.5	2.42	152	0.35	0.02	3.9	11.8

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 6-SEP-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18199688

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl
	Units	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
	LOD	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.01	0.005	0.02
S050501		550	12.0	81.5	<0.002	0.10	1.18	6.4	2	1.5	479	0.52	<0.05	8.94	0.203	0.37
S050502		430	11.2	66.1	0.002	0.15	0.29	5.3	3	1.3	561	0.43	<0.05	6.92	0.159	0.27
S050503		310	6.7	38.0	<0.002	0.07	0.37	3.4	1	0.8	822	0.26	<0.05	4.43	0.098	0.17
S050504		490	10.8	76.0	<0.002	0.26	0.39	5.7	3	1.4	647	0.45	<0.05	8.02	0.179	0.38
S050505		300	8.2	30.2	<0.002	0.23	0.51	2.6	3	0.7	1345	0.22	<0.05	3.69	0.085	0.18
S050506		260	7.2	22.8	<0.002	0.21	0.42	2.2	3	0.5	2040	0.20	<0.05	3.29	0.069	0.18
S050507		190	6.6	17.1	<0.002	0.15	0.18	1.5	2	0.4	1430	0.14	<0.05	2.34	0.051	0.13
S050508		230	6.4	14.8	0.002	0.19	0.36	1.2	2	0.3	1230	0.11	<0.05	1.88	0.041	0.11
S050509		80	5.4	1.2	<0.002	0.01	0.22	0.4	1	0.2	93.3	<0.05	<0.05	0.16	0.014	0.02
S050510		410	7.3	23.5	<0.002	0.26	0.27	2.6	1	0.6	1385	0.20	<0.05	3.46	0.074	0.16
S050511		690	9.1	49.9	<0.002	0.41	0.36	4.2	3	1.0	1255	0.35	<0.05	6.31	0.132	0.37
S050512		460	10.5	50.9	<0.002	0.31	0.33	4.0	3	1.0	770	0.34	<0.05	6.12	0.132	0.34
S050513		360	12.6	45.5	<0.002	0.27	0.73	3.9	4	0.7	1110	0.28	0.05	5.23	0.112	0.28
S050514		450	10.2	55.0	<0.002	0.29	0.42	4.8	3	0.9	855	0.36	<0.05	6.30	0.135	0.33
S050515		240	8.4	24.8	<0.002	0.18	0.30	2.7	3	0.5	1725	0.19	<0.05	3.40	0.072	0.16
S050516		300	7.6	44.5	<0.002	0.21	0.26	4.0	3	0.8	1345	0.28	0.05	4.95	0.107	0.28
S050517		280	7.7	40.3	<0.002	0.20	0.22	3.7	3	0.7	1425	0.25	0.05	4.53	0.097	0.25
S050518		550	10.2	92.0	0.002	0.35	0.32	7.7	3	1.5	928	0.53	<0.05	9.23	0.207	0.48
S050519		270	6.5	33.1	<0.002	0.20	0.18	3.3	2	0.6	1655	0.22	0.05	3.83	0.083	0.19
S050520		370	7.3	47.0	<0.002	0.17	0.23	4.1	3	0.7	1495	0.28	0.05	5.01	0.107	0.25
S050521		280	6.3	41.5	<0.002	0.38	0.19	3.8	3	0.7	6410	0.24	0.19	4.27	0.094	0.23
S050522		510	7.2	43.0	<0.002	0.48	0.23	4.0	3	0.7	9930	0.26	0.26	4.60	0.096	0.26
S050523		520	7.1	42.5	<0.002	0.48	0.21	3.9	3	0.7	9950	0.26	0.30	4.54	0.096	0.25
S050524		450	8.0	55.9	<0.002	0.19	0.24	5.1	3	0.9	1650	0.31	0.05	5.67	0.122	0.33
S050525		220	6.1	26.1	<0.002	0.24	0.19	2.8	2	0.5	3750	0.17	0.13	3.07	0.067	0.16
S050526		430	16.6	65.6	<0.002	2.32	54.0	7.6	3	1.1	817	0.33	0.12	5.07	0.186	17.10
S050527		160	5.8	19.5	<0.002	0.20	0.21	2.0	3	0.4	3870	0.13	0.11	2.15	0.048	0.16
S050528		290	6.1	29.7	<0.002	0.13	0.15	2.8	2	0.5	2580	0.18	0.08	3.29	0.068	0.18
S050529		220	6.6	38.7	<0.002	0.16	0.18	3.5	3	0.6	1835	0.22	0.05	3.88	0.084	0.22
S050530		210	5.7	42.4	<0.002	0.09	0.15	3.1	2	0.6	1195	0.20	<0.05	3.57	0.077	0.31
S050531		480	9.4	89.8	<0.002	0.41	0.37	6.6	2	1.4	733	0.46	<0.05	8.31	0.179	0.61
S050532		320	8.5	52.5	<0.002	0.52	3.13	3.7	2	0.8	1305	0.26	<0.05	4.72	0.101	5.60
S050533		210	6.7	29.0	<0.002	0.32	2.06	2.2	2	0.4	1405	0.15	0.05	2.60	0.055	2.58
S050534		370	12.2	47.4	<0.002	>10.0	1345	2.9	5	0.9	920	0.24	0.17	3.69	0.088	19.15
S050535		520	17.7	72.1	0.002	4.63	126.0	9.1	3	1.4	418	0.39	0.18	5.64	0.250	33.2
S050536		250	7.1	36.0	<0.002	0.22	1.32	2.4	3	0.4	1190	0.16	0.05	2.93	0.061	1.19
S050537		620	10.9	123.5	<0.002	0.71	0.58	7.6	2	1.4	527	0.53	<0.05	9.54	0.209	0.91
S050538		390	8.0	88.5	<0.002	0.28	0.25	5.6	2	1.0	621	0.40	<0.05	7.02	0.150	0.63
S050539		240	6.2	54.1	<0.002	0.11	0.21	3.4	2	0.7	891	0.23	<0.05	3.98	0.087	0.40
S050540		270	6.1	60.7	<0.002	0.13	0.19	4.2	3	0.8	864	0.28	<0.05	4.87	0.108	0.47

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 6-SEP-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18199688

Sample Description	Method Analyte Units LOD	ME-MS61 U ppm 0.1	ME-MS61 V ppm 1	ME-MS61 W ppm 0.1	ME-MS61 Y ppm 0.1	ME-MS61 Zn ppm 2	ME-MS61 Zr ppm 0.5	As-OG62 As % 0.001	S-IR08 S % 0.01
S050501		4.8	65	0.8	14.5	67	84.6		
S050502		7.3	53	0.7	10.8	56	57.2		
S050503		8.9	35	0.4	7.8	35	34.1		
S050504		4.3	63	0.7	12.6	63	72.3		
S050505		8.0	29	0.4	6.7	33	39.4		
S050506		11.7	26	0.4	6.0	24	33.6		
S050507		9.4	18	0.3	5.0	19	26.6		
S050508		10.2	15	0.2	4.4	14	23.8		
S050509		0.3	3	<0.1	3.0	8	3.4		
S050510		10.5	27	0.3	7.2	27	30.9		
S050511		8.8	45	0.5	12.4	48	64.1		
S050512		5.6	43	0.5	10.6	49	69.8		
S050513		8.7	39	0.5	9.5	42	59.3		
S050514		6.5	46	0.5	11.1	52	65.1		
S050515		13.4	25	0.3	6.5	31	33.2		
S050516		12.1	39	0.5	8.6	36	44.9		
S050517		12.5	35	0.4	8.1	33	40.3		
S050518		7.6	75	0.8	14.1	63	80.0		
S050519		13.3	33	0.4	7.4	32	30.6		
S050520		10.6	40	0.5	9.1	32	52.7		
S050521		11.5	36	0.4	7.6	29	36.6		
S050522		12.2	40	0.4	10.0	41	32.4		
S050523		12.0	40	0.4	10.2	44	32.8		
S050524		11.3	47	0.5	9.5	44	43.3		
S050525		15.0	29	0.3	5.7	22	26.3		
S050526		4.3	56	6.9	15.7	56	54.7		
S050527		15.8	21	0.2	4.3	22	18.3		
S050528		12.9	26	0.3	6.4	25	24.4		
S050529		13.3	32	0.4	6.7	29	31.6		
S050530		13.2	30	0.4	6.7	29	30.7		
S050531		6.9	71	0.9	12.7	52	75.2		
S050532		14.2	39	1.2	8.0	36	43.0		
S050533		16.3	25	0.8	5.3	36	21.0		
S050534		18.8	34	2.7	4.0	58	29.5	17.05	10.80
S050535		2.6	74	11.6	21.0	132	60.7		
S050536		14.0	28	0.5	5.8	33	25.1		
S050537		7.5	84	1.0	14.2	58	77.8		
S050538		8.5	65	0.7	11.2	41	62.9		
S050539		12.3	34	0.4	7.2	27	34.1		
S050540		11.6	39	0.5	8.3	31	41.2		

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Project: Nadaleen

Finalized Date: 6-SEP-2018
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CERTIFICATE OF ANALYSIS WH18199688

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Applies to Method: REE's may not be totally soluble in this method.
ME-MS61

LABORATORY ADDRESSES

Applies to Method: Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.

CRU-31	CRU-QC	LOG-21	LOG-21d
LOG-23	PUL-31	PUL-31d	PUL-QC
SPL-21	SPL-21d	WEI-21	WSH-22

Applies to Method: Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

As-OG62	Au-AA25	Hg-MS42	ME-MS61
ME-OG62	S-IR08		

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To: **ATAC RESOURCES LTD.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 13-SEP-2018
Account: RCM

CERTIFICATE WH18201712

Project: Nadaleen

P.O. No.: N18-048

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 17-AUG-2018.

The following have access to data associated with this certificate:

ANDREW CARNE	JULIA LANE	

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
WSH-22	"Wash" pulverizers
PUL-31	Pulverize split to 85% <75 um
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
LOG-23	Pulp Login - Rcvd with Barcode
LOG-21d	Sample logging - ClientBarCode Dup
SPL-21d	Split sample - duplicate
PUL-31d	Pulverize Split - duplicate

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid ICP-MS	
Hg-MS42	Trace Hg by ICPMS	ICP-MS

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:

Colin Ramshaw, Vancouver Laboratory Manager

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Finalized Date: 13-SEP-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18201712

Sample Description	Method	WEI-21	Au-AA25	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Recvd Wt.	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu
	Units	kg	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.02	0.01	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2
S050541		6.05	1.58	0.15	1.26	477	230	0.45	0.05	29.3	0.14	16.00	2.4	14	3.60	9.6
S050542		6.07	2.30	0.17	3.41	512	170	1.32	0.09	18.70	0.09	41.0	5.9	36	12.85	18.7
S050543		7.23	<0.01	<0.01	0.15	1.7	20	0.11	0.01	33.5	<0.02	1.38	0.7	2	0.05	3.1
S050544		10.90	0.99	0.07	2.33	272	150	0.98	0.06	24.6	0.09	29.3	4.3	25	5.50	12.3
S050545		10.78	0.32	0.05	0.81	86.0	610	0.42	0.03	32.1	0.24	11.80	1.7	11	1.45	5.4
S050546		11.44	0.48	0.13	2.59	155.0	150	1.05	0.07	19.20	0.26	37.3	4.6	30	5.38	15.5
S050547		0.29	1.11	1.44	1.50	876	200	0.44	0.11	27.9	0.72	17.95	4.1	27	3.33	45.9
S050548		10.31	0.01	0.10	2.59	95.1	120	0.98	0.07	18.00	0.18	37.9	4.4	29	5.59	15.4
S050549		10.34	0.08	0.11	2.71	253	100	0.79	0.06	16.85	0.14	34.4	4.4	31	5.10	15.1
S050550		9.71	<0.01	0.11	2.76	48.1	100	0.95	0.07	15.75	0.12	40.2	4.7	33	6.66	15.7
S050551		0.26	1.45	0.90	3.07	>10000	200	0.76	0.12	18.00	0.41	36.6	7.6	40	8.73	26.5
S050552		12.08	<0.01	0.09	1.85	26.8	590	0.73	0.05	25.9	0.15	29.5	3.6	23	5.08	13.1
S050553		11.68	<0.01	0.08	1.06	14.8	570	0.42	0.04	31.9	0.17	16.45	2.2	13	3.21	8.0
S050554		10.87	<0.01	0.05	1.11	10.2	510	0.38	0.03	30.1	0.14	15.80	2.1	14	2.81	7.0
S050555		10.72	<0.01	0.07	1.27	10.4	230	0.48	0.04	28.1	0.29	16.55	2.3	15	2.63	7.1
S050556		10.89	<0.01	0.06	1.68	12.6	190	0.51	0.05	26.2	0.20	22.4	3.0	18	3.95	9.6
S050557		11.05	<0.01	0.06	2.03	11.4	270	0.75	0.05	22.8	0.27	27.5	3.3	23	4.41	10.2
S050558		10.77	<0.01	0.07	2.72	9.6	210	0.90	0.06	18.90	0.16	34.4	4.4	29	6.03	13.4
S050559		5.33	<0.01	0.06	3.70	8.1	330	1.23	0.09	12.00	0.12	44.4	5.7	40	8.53	22.6
S050560		5.25	<0.01	0.07	3.96	8.2	250	1.17	0.09	11.65	0.11	43.8	5.6	46	9.30	22.6
S050561		10.91	<0.01	0.05	2.15	9.4	620	0.77	0.07	24.4	0.25	27.3	4.1	25	5.17	12.4
S050562		10.02	<0.01	0.06	1.72	9.3	500	0.54	0.06	25.6	0.29	22.8	3.2	20	3.20	10.3
S050563		11.50	<0.01	0.06	1.49	18.4	120	0.51	0.04	28.0	0.22	21.7	2.9	19	2.83	9.1
S050564		11.20	<0.01	0.06	1.85	9.9	460	0.61	0.05	24.4	0.19	26.3	3.2	20	4.11	9.7
S050565		11.01	<0.01	0.06	3.03	7.6	570	1.12	0.07	17.25	0.15	40.6	5.3	34	7.97	17.9
S050566		10.45	<0.01	0.05	3.55	6.7	200	1.24	0.08	16.90	0.06	43.2	6.1	39	9.49	21.5
S050567		10.61	<0.01	0.05	2.17	6.9	300	0.82	0.06	23.5	0.12	28.6	4.2	23	5.18	15.0
S050568		11.06	<0.01	0.05	3.36	8.9	180	1.19	0.08	16.50	0.06	40.5	5.6	35	8.33	20.7
S050569		12.04	<0.01	0.06	3.61	15.8	210	1.33	0.09	14.95	0.12	43.0	6.5	38	7.86	24.3
S050570		10.61	<0.01	0.05	3.40	15.4	190	1.24	0.09	18.05	0.13	42.9	6.7	37	7.13	24.2
S050571		12.04	<0.01	0.08	3.97	17.6	300	1.46	0.11	13.05	0.11	48.3	5.9	43	9.49	27.6
S050572		10.52	<0.01	0.06	2.08	14.3	160	0.88	0.06	22.5	0.32	25.8	3.4	24	5.35	13.5
S050573		<0.02	<0.01	0.05	2.08	14.3	180	0.81	0.06	21.9	0.31	25.3	3.4	24	5.23	13.0
S050574		11.75	<0.01	0.05	2.12	11.9	260	0.85	0.06	24.7	0.32	26.1	4.3	24	3.18	13.6
S050575		10.88	0.07	0.07	5.23	329	210	1.24	0.18	12.20	0.17	59.1	8.7	48	8.34	46.7
S050576		7.09	<0.01	0.01	0.12	0.7	20	0.09	0.01	33.0	<0.02	1.04	0.8	1	<0.05	2.1
S050577		5.68	<0.01	0.03	8.85	6.8	250	2.31	0.20	1.00	<0.02	95.8	14.3	66	16.50	22.1
S050578		10.22	<0.01	0.04	8.69	9.8	310	2.37	0.30	0.43	<0.02	83.2	17.0	68	18.20	25.1
S050579		6.05	<0.01	0.05	8.12	22.5	360	2.20	0.37	3.27	0.22	87.9	14.5	98	10.55	48.3
S050580		9.48	<0.01	0.10	2.31	18.2	1130	0.72	0.06	13.75	1.77	27.6	7.8	20	2.29	65.8

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 13-SEP-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18201712

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Hg-MS42	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni
	Units	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2
S050541		0.72	3.31	0.13	0.5	0.924	0.012	0.61	9.2	9.8	1.48	561	0.37	0.01	1.8	6.5
S050542		1.61	8.95	0.16	1.9	1.545	0.026	1.73	21.9	20.4	2.32	805	0.73	0.02	5.1	16.3
S050543		0.14	0.47	0.08	0.1	0.005	0.006	0.05	1.3	1.4	1.95	136	<0.05	0.06	0.3	0.5
S050544		1.15	6.24	0.12	1.2	0.948	0.018	1.17	14.0	13.5	2.57	421	0.55	0.02	3.7	11.4
S050545		0.45	2.16	0.10	0.5	0.532	0.007	0.39	6.7	5.2	1.52	265	0.42	0.01	1.3	4.1
S050546		1.25	6.83	0.15	1.7	0.623	0.023	1.32	18.0	20.7	3.62	241	1.07	0.02	4.8	12.4
S050547		1.14	3.93	0.08	0.7	1.880	0.021	0.64	9.2	7.0	1.23	4660	1.35	0.10	1.9	13.5
S050548		1.25	6.81	0.12	1.9	0.256	0.020	1.31	18.6	23.5	3.84	202	1.23	0.02	4.9	12.2
S050549		1.41	6.67	0.12	1.9	0.609	0.023	1.33	16.2	20.2	4.59	272	1.62	0.02	4.6	12.2
S050550		1.43	7.15	0.13	1.9	0.222	0.025	1.37	19.8	35.2	4.55	194	1.03	0.03	5.2	12.9
S050551		2.14	8.15	0.11	1.6	4.85	0.025	1.39	17.0	13.0	2.24	1330	1.48	0.10	4.4	19.4
S050552		0.89	4.91	0.09	1.0	0.118	0.016	0.90	14.8	30.0	2.09	151	0.88	0.03	3.4	9.7
S050553		0.56	2.68	0.07	0.6	0.066	0.009	0.39	9.5	51.3	1.24	122	0.71	0.12	1.9	5.4
S050554		0.51	2.87	0.10	0.7	0.075	0.011	0.38	8.8	51.9	1.35	109	0.62	0.17	2.0	4.6
S050555		0.55	3.32	0.09	0.9	0.064	0.015	0.42	9.2	80.8	1.71	116	0.78	0.14	2.3	5.3
S050556		0.79	4.33	0.09	1.1	0.084	0.014	0.61	11.1	87.7	2.49	146	0.78	0.20	2.9	7.3
S050557		0.98	5.03	0.12	1.4	0.109	0.018	0.65	13.0	46.1	3.02	174	1.18	0.35	3.5	8.5
S050558		1.34	6.72	0.12	1.5	0.120	0.024	0.85	16.3	72.3	3.99	186	0.98	0.38	4.2	12.1
S050559		1.86	9.32	0.12	2.1	0.090	0.034	1.32	22.7	106.0	6.38	221	1.01	0.30	5.7	17.0
S050560		1.92	9.96	0.11	2.1	0.072	0.029	1.48	22.7	103.5	6.36	218	0.90	0.29	6.0	17.0
S050561		1.07	5.58	0.10	1.1	0.100	0.020	0.70	14.8	48.7	2.75	165	0.67	0.31	3.8	10.0
S050562		0.86	4.30	0.09	1.0	0.104	0.016	0.51	12.2	47.2	2.83	154	0.87	0.31	3.1	7.6
S050563		0.71	3.93	0.10	0.9	0.098	0.015	0.49	10.9	41.4	2.06	140	0.88	0.28	2.6	6.9
S050564		0.83	4.82	0.12	1.1	0.095	0.017	0.72	12.8	23.3	2.61	180	0.93	0.32	3.1	8.0
S050565		1.54	8.10	0.12	1.7	0.098	0.024	1.25	20.7	49.8	4.18	205	0.93	0.23	5.0	14.4
S050566		1.71	9.18	0.16	1.7	0.057	0.032	1.47	23.0	63.3	3.99	202	0.63	0.25	5.6	16.8
S050567		1.18	6.03	0.11	1.1	0.039	0.016	0.86	14.1	41.2	3.15	187	0.92	0.21	3.6	11.5
S050568		1.70	8.73	0.12	1.6	0.031	0.025	1.49	21.5	77.4	4.10	225	0.69	0.17	5.3	15.7
S050569		1.65	10.05	0.18	2.0	0.046	0.026	1.61	21.5	84.1	3.38	221	0.48	0.07	6.0	17.5
S050570		1.54	9.53	0.18	1.8	0.028	0.025	1.63	21.3	50.8	3.04	256	0.31	0.04	5.8	19.4
S050571		1.70	10.85	0.20	2.2	0.032	0.032	1.99	24.0	46.5	3.39	291	0.35	0.04	6.6	17.7
S050572		1.04	5.76	0.16	1.3	0.052	0.018	1.02	12.0	13.8	2.93	402	0.59	0.03	3.6	8.0
S050573		1.02	5.68	0.16	1.3	0.039	0.015	1.02	11.7	13.3	2.90	391	0.56	0.02	3.6	7.8
S050574		1.10	5.88	0.15	1.1	0.041	0.017	0.95	12.3	38.8	2.43	729	0.38	0.02	3.6	11.3
S050575		2.84	13.85	0.17	2.2	0.130	0.040	2.24	30.6	58.3	2.70	1450	0.42	0.04	8.3	26.0
S050576		0.13	0.37	0.14	<0.1	<0.005	0.007	0.03	1.1	1.2	1.66	120	<0.05	0.05	0.2	0.6
S050577		3.92	23.8	0.24	3.2	0.011	0.075	3.74	47.7	117.5	1.60	283	0.19	0.06	12.2	32.0
S050578		4.39	24.5	0.18	3.2	0.016	0.070	3.80	39.1	147.5	1.45	222	0.18	0.07	12.4	39.1
S050579		3.31	21.8	0.22	3.0	0.014	0.060	2.99	45.6	70.5	2.93	1230	0.11	0.05	12.9	52.1
S050580		1.59	6.11	0.13	0.9	<0.005	0.017	0.80	13.5	50.0	7.97	5610	0.85	0.02	3.4	15.5

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 13-SEP-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18201712

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl
	Units	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
	LOD	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.01	0.005	0.02
S050541		170	4.3	27.3	<0.002	0.30	1.75	2.1	1	0.4	1090	0.13	<0.05	2.36	0.056	3.51
S050542		440	8.3	90.3	<0.002	1.10	2.28	5.5	2	1.1	714	0.38	<0.05	6.81	0.159	6.78
S050543		60	0.5	1.5	<0.002	0.01	0.07	0.3	1	<0.2	79.8	<0.05	<0.05	0.09	0.007	0.03
S050544		290	8.3	62.1	<0.002	0.56	1.80	3.8	1	0.8	1135	0.28	<0.05	5.00	0.113	4.22
S050545		250	4.3	19.3	<0.002	0.21	0.88	1.4	2	0.3	1335	0.10	<0.05	1.83	0.040	1.54
S050546		450	9.4	69.9	<0.002	0.46	0.81	4.3	3	0.9	815	0.32	<0.05	6.11	0.135	2.29
S050547		390	64.6	26.5	<0.002	0.68	8.01	5.5	1	0.7	1140	0.13	0.05	2.32	0.079	6.18
S050548		450	9.1	68.7	<0.002	0.40	0.50	4.2	2	1.0	795	0.34	<0.05	5.96	0.135	0.91
S050549		410	9.9	71.3	<0.002	0.55	1.26	4.1	2	0.9	698	0.33	<0.05	5.78	0.141	1.98
S050550		480	10.1	79.2	<0.002	0.48	0.63	4.4	3	1.0	734	0.34	<0.05	6.33	0.142	0.84
S050551		420	16.3	66.0	<0.002	2.33	53.9	6.9	2	1.2	812	0.31	0.09	4.96	0.195	17.35
S050552		360	6.6	50.5	<0.002	0.27	0.27	3.1	2	0.7	1115	0.23	<0.05	4.17	0.094	0.54
S050553		250	6.9	20.4	<0.002	0.23	0.23	1.7	1	0.4	2700	0.13	0.05	2.41	0.054	0.23
S050554		220	6.1	20.1	<0.002	0.19	0.22	1.8	1	0.4	2170	0.14	<0.05	2.64	0.059	0.23
S050555		220	6.4	20.3	<0.002	0.16	0.21	2.1	1	0.5	1550	0.17	<0.05	2.91	0.067	0.24
S050556		270	7.4	29.7	<0.002	0.20	0.31	2.7	2	0.6	1500	0.21	<0.05	3.71	0.088	0.30
S050557		320	9.0	32.0	<0.002	0.23	0.29	3.1	3	0.7	1545	0.25	0.05	4.54	0.104	0.28
S050558		390	8.4	42.8	<0.002	0.25	0.32	4.1	2	0.9	879	0.31	<0.05	5.57	0.134	0.26
S050559		480	9.5	67.4	<0.002	0.23	0.29	5.7	3	1.2	541	0.43	<0.05	7.95	0.186	0.40
S050560		530	8.6	73.7	<0.002	0.23	0.30	5.9	2	1.3	473	0.45	<0.05	8.13	0.199	0.40
S050561		360	7.5	37.8	<0.002	0.26	0.32	3.5	2	0.7	1045	0.26	<0.05	4.80	0.107	0.21
S050562		290	8.2	27.7	<0.002	0.22	0.33	2.7	3	0.6	1290	0.22	<0.05	3.98	0.088	0.24
S050563		260	7.9	23.3	<0.002	0.21	0.29	2.5	2	0.5	1370	0.19	<0.05	3.45	0.078	0.26
S050564		290	7.9	33.0	<0.002	0.20	0.30	3.0	2	0.6	925	0.21	<0.05	3.95	0.092	0.23
S050565		460	8.4	65.0	<0.002	0.27	0.32	5.0	2	1.1	563	0.37	<0.05	6.56	0.151	0.30
S050566		440	7.5	77.7	<0.002	0.18	0.29	5.7	1	1.2	456	0.41	<0.05	7.37	0.175	0.37
S050567		270	6.4	47.1	<0.002	0.13	0.21	3.7	2	0.8	599	0.25	<0.05	4.68	0.103	0.25
S050568		410	8.0	73.2	<0.002	0.12	0.26	5.3	3	1.2	383	0.39	<0.05	6.81	0.162	0.37
S050569		480	8.2	74.6	<0.002	0.13	0.27	5.9	2	1.3	443	0.43	<0.05	7.44	0.174	0.51
S050570		490	6.3	71.4	<0.002	0.09	0.27	5.6	2	1.2	412	0.42	0.05	7.11	0.163	0.36
S050571		540	9.1	78.9	<0.002	0.22	0.29	6.3	2	1.4	254	0.50	<0.05	8.09	0.192	0.39
S050572		440	6.3	41.6	<0.002	0.23	0.34	3.5	1	0.8	586	0.25	<0.05	4.39	0.100	0.34
S050573		440	6.2	42.0	<0.002	0.22	0.34	3.4	2	0.8	560	0.26	<0.05	4.38	0.100	0.33
S050574		390	10.1	42.6	<0.002	0.11	0.26	3.5	2	0.8	714	0.26	<0.05	4.31	0.100	0.29
S050575		410	42.7	96.7	<0.002	1.18	0.62	8.5	1	1.7	477	0.62	<0.05	9.62	0.239	0.87
S050576		60	0.5	0.8	<0.002	0.01	0.08	0.2	1	<0.2	80.7	<0.05	<0.05	0.09	0.006	0.02
S050577		390	10.2	160.0	<0.002	0.02	0.29	16.2	1	2.6	113.0	0.90	0.10	14.15	0.441	0.83
S050578		460	9.1	149.5	<0.002	0.04	0.30	16.5	<1	2.8	108.5	0.92	0.09	13.00	0.454	0.91
S050579		490	6.5	127.0	<0.002	0.04	0.24	12.8	<1	2.4	133.0	0.92	<0.05	15.05	0.347	0.64
S050580		290	32.2	33.5	<0.002	0.16	0.25	3.8	1	0.7	426	0.24	0.05	3.95	0.098	0.18

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Finalized Date: 13-SEP-2018
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Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18201712

Sample Description	Method Analyte Units LOD	ME-MS61 U ppm 0.1	ME-MS61 V ppm 1	ME-MS61 W ppm 0.1	ME-MS61 Y ppm 0.1	ME-MS61 Zn ppm 2	ME-MS61 Zr ppm 0.5
S050541		9.8	26	0.9	5.3	31	17.5
S050542		7.5	55	3.8	11.2	47	57.4
S050543		0.1	2	<0.1	2.6	4	2.0
S050544		13.2	39	2.5	8.2	34	42.0
S050545		10.4	16	0.8	4.6	20	17.9
S050546		9.6	46	1.4	10.2	51	60.3
S050547		3.6	25	5.1	14.1	127	24.1
S050548		7.9	46	1.1	10.7	46	63.0
S050549		7.2	48	1.4	10.2	46	63.1
S050550		8.8	48	0.8	11.2	44	66.4
S050551		4.1	57	5.0	16.8	62	54.2
S050552		10.8	38	0.4	8.0	34	33.9
S050553		14.4	22	0.2	5.0	27	20.8
S050554		14.0	22	0.3	5.3	21	24.0
S050555		12.3	25	0.3	5.6	33	28.1
S050556		12.2	31	0.3	6.6	32	34.5
S050557		10.7	36	0.4	8.0	42	48.3
S050558		8.1	46	0.5	9.7	51	52.7
S050559		4.3	62	0.7	13.3	64	73.0
S050560		4.1	67	0.7	12.9	60	72.9
S050561		8.9	37	0.4	8.2	41	42.0
S050562		12.6	33	0.3	6.9	40	36.8
S050563		13.3	31	0.3	6.3	31	29.5
S050564		9.9	32	0.4	7.8	29	38.7
S050565		5.2	50	0.6	11.7	51	59.8
S050566		6.5	58	0.6	12.0	54	59.6
S050567		11.0	38	0.5	8.3	45	36.5
S050568		6.6	54	0.7	11.6	50	56.3
S050569		5.7	55	0.7	12.4	50	72.0
S050570		4.9	53	0.7	12.4	44	66.2
S050571		4.9	59	0.8	13.6	42	74.7
S050572		5.1	33	0.5	8.4	22	48.2
S050573		4.8	34	0.5	8.3	24	48.4
S050574		7.3	33	0.4	8.0	37	40.8
S050575		6.0	55	1.4	13.0	78	76.7
S050576		0.1	2	<0.1	2.0	5	1.6
S050577		2.4	100	1.6	17.1	85	111.5
S050578		2.1	96	1.7	18.7	93	111.5
S050579		2.5	65	1.3	19.9	123	104.0
S050580		1.1	40	0.6	9.9	68	27.5

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Project: Nadaleen

Finalized Date: 13-SEP-2018
Account: RCM

CERTIFICATE OF ANALYSIS WH18201712

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Applies to Method: REE's may not be totally soluble in this method.
ME-MS61

LABORATORY ADDRESSES

Applies to Method: Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.

CRU-31	CRU-QC	LOG-21	LOG-21d
LOG-23	PUL-31	PUL-31d	PUL-QC
SPL-21	SPL-21d	WEI-21	WSH-22

Applies to Method: Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Au-AA25	Hg-MS42	ME-MS61

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 28-SEP-2018
Account: RCM

CERTIFICATE WH18206234

Project: Nadaleen

P.O. No.: N18-049

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 22-AUG-2018.

The following have access to data associated with this certificate:

ANDREW CARNE	JULIA LANE	

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
LOG-23	Pulp Login - Rcvd with Barcode
LOG-21d	Sample logging - ClientBarCode Dup
SPL-21d	Split sample - duplicate
PUL-31d	Pulverize Split - duplicate

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid ICP-MS	
Hg-MS42	Trace Hg by ICPMS	ICP-MS

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:

Colin Ramshaw, Vancouver Laboratory Manager

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Project: Nadaleen

Finalized Date: 28-SEP-2018
Account: RCM

CERTIFICATE OF ANALYSIS WH18206234

Sample Description	Method Analyte Units LOD	WEI-21 Recvd Wt. kg 0.02	Au-AA25 Au ppm 0.01	ME-MS61 Ag ppm 0.01	ME-MS61 Al % 0.01	ME-MS61 As ppm 0.2	ME-MS61 Ba ppm 10	ME-MS61 Be ppm 0.05	ME-MS61 Bi ppm 0.01	ME-MS61 Ca % 0.01	ME-MS61 Cd ppm 0.02	ME-MS61 Ce ppm 0.01	ME-MS61 Co ppm 0.1	ME-MS61 Cr ppm 1	ME-MS61 Cs ppm 0.05	ME-MS61 Cu ppm 0.2
S050581		9.52	<0.01	0.15	8.29	30.8	390	2.10	0.23	2.86	0.22	99.1	14.5	114	17.35	18.3
S050582		10.24	<0.01	<0.01	7.95	53.6	540	2.05	0.27	2.86	0.17	97.2	12.8	82	14.95	11.5
S050583		12.32	<0.01	0.08	8.01	416	640	2.02	0.26	3.10	0.16	91.8	11.7	71	11.20	51.3
S050584		9.49	<0.01	0.10	7.72	58.2	330	2.06	0.32	3.66	0.17	88.6	11.1	62	10.65	168.5
S050585		9.67	<0.01	0.17	5.54	161.0	220	1.40	0.17	7.93	0.26	65.6	21.7	56	6.99	105.5
S050586		9.41	<0.01	0.11	3.26	145.5	120	1.07	0.10	19.00	0.61	37.7	6.0	34	2.90	23.2
S050587		11.19	0.01	0.06	2.12	217	80	0.81	0.07	24.9	0.35	26.6	4.4	23	2.13	15.8
S050588		0.26	1.46	0.85	3.01	>10000	190	0.73	0.11	16.90	0.34	33.9	7.4	42	8.00	27.0
S050589		10.14	0.01	0.07	3.36	358	120	1.26	0.10	18.35	0.07	38.7	5.6	35	4.09	22.9
S050590		8.50	0.01	0.05	3.32	775	130	1.14	0.11	19.30	0.07	37.4	5.1	33	3.69	25.3
S050591		8.85	0.01	0.04	2.43	537	130	0.92	0.08	23.2	0.06	28.2	4.3	24	2.70	17.2
S050592		9.84	<0.01	0.06	3.35	337	160	1.12	0.11	17.30	0.07	40.8	6.2	37	4.34	21.9
S050593		14.60	<0.01	0.05	3.12	356	190	1.06	0.09	18.30	0.09	35.8	5.5	34	3.53	18.3
S050594		11.80	0.01	0.05	3.38	306	150	1.14	0.09	16.80	0.22	40.7	6.0	39	4.23	26.7
S050595		5.81	0.04	0.05	3.42	1685	170	1.09	0.08	13.35	0.25	44.3	5.5	38	3.80	18.3
S050596		0.26	5.35	1.53	3.70	>10000	170	0.72	0.15	10.30	1.10	40.9	10.3	48	9.57	33.0
S050597		11.00	0.32	0.04	2.51	5240	170	0.79	0.07	21.5	0.16	27.6	4.6	26	2.95	14.2
S050598		7.09	<0.01	0.01	0.08	21.3	20	0.07	0.01	32.4	<0.02	1.02	0.5	1	<0.05	2.2
S050599		11.17	0.01	0.05	4.09	272	140	1.28	0.11	15.65	0.06	43.7	8.1	42	5.75	23.0
S050600		10.59	0.01	0.09	2.56	130.5	130	1.03	0.06	21.9	0.08	36.2	6.2	28	3.34	11.5
S050601		10.63	0.01	0.04	3.82	113.0	250	1.47	0.10	17.05	0.06	41.2	6.4	38	6.55	38.0
S050602		11.05	<0.01	0.03	3.34	65.5	190	1.19	0.08	19.25	0.09	39.9	6.3	36	6.20	18.6
S050603		11.32	<0.01	0.05	3.91	183.5	200	1.33	0.11	16.30	0.09	43.2	4.8	40	6.05	84.5
S050604		11.43	0.01	0.10	4.00	110.5	290	1.35	0.10	13.75	0.08	47.9	8.2	46	8.22	19.9
S050605		11.32	0.01	0.06	3.52	147.5	250	1.17	0.08	17.90	0.24	38.4	5.1	37	5.39	19.5
S050606		11.45	<0.01	0.04	1.73	35.3	130	0.62	0.04	27.1	0.19	20.7	3.3	19	2.47	9.8
S050607		11.42	<0.01	0.03	2.15	26.2	240	0.84	0.06	23.6	0.09	28.2	4.0	23	3.84	15.4
S050608		10.01	<0.01	0.04	2.21	264	90	0.92	0.05	23.5	0.09	27.2	3.8	23	3.36	12.8
S050609		10.59	<0.01	0.04	4.14	76.6	270	1.44	0.12	16.15	0.08	47.9	6.8	40	8.02	27.1
S050610		5.51	<0.01	0.04	3.53	5.5	150	1.38	0.09	16.30	0.10	43.9	6.8	35	7.76	21.7
S050611		5.65	<0.01	0.04	3.51	6.2	150	1.33	0.10	16.00	0.10	43.8	7.1	35	7.83	22.4
S050612		11.60	0.01	0.06	4.58	4.4	220	1.62	0.11	11.15	0.06	51.9	7.9	48	10.60	33.7
S050613		10.98	<0.01	0.06	4.23	4.8	240	1.46	0.10	10.25	0.06	50.0	7.1	45	8.47	27.1
S050614		10.04	0.01	0.06	3.72	4.0	180	1.34	0.08	13.85	0.08	47.0	6.7	39	7.09	24.2
S050615		10.97	<0.01	0.04	4.10	1.4	240	1.45	0.10	9.79	0.09	47.3	6.8	47	7.75	27.6
S050616		11.12	<0.01	0.05	3.71	3.7	340	1.35	0.10	14.55	0.10	44.2	7.0	37	6.92	19.9
S050617		11.10	<0.01	0.03	4.53	7.4	340	1.51	0.10	11.55	0.12	54.0	7.5	46	9.17	34.4
S050618		11.34	0.01	0.03	4.77	11.2	270	1.76	0.12	9.45	0.11	57.2	7.5	50	9.86	33.3
S050619		<0.02	0.01	0.03	4.61	11.1	260	1.65	0.11	9.17	0.11	54.2	7.3	51	9.93	30.7
S050620		10.70	<0.01	0.03	4.19	13.9	370	1.44	0.11	10.10	0.09	51.2	6.6	47	7.83	41.9

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 28-SEP-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18206234

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Hg-MS42	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni
	Units	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2
S050581		3.79	21.1	0.14	3.0	0.154	0.059	3.47	53.8	52.8	2.77	940	0.12	0.06	13.6	82.9
S050582		3.82	20.6	0.13	2.8	0.634	0.059	3.27	51.3	52.2	2.86	798	0.15	0.05	13.4	56.0
S050583		4.11	20.6	0.15	3.0	0.503	0.059	3.14	50.2	47.6	2.58	934	0.27	0.05	13.2	52.4
S050584		2.97	20.1	0.15	2.9	0.133	0.056	2.98	49.8	68.1	3.06	1260	0.24	0.05	13.3	49.5
S050585		2.55	14.10	0.12	2.4	0.169	0.043	2.08	35.0	43.1	4.42	2180	1.22	0.05	9.1	30.4
S050586		1.33	7.91	0.08	1.4	0.244	0.027	1.09	20.3	30.7	2.65	2100	0.47	0.04	4.7	14.7
S050587		0.95	5.30	0.07	0.8	0.223	0.018	0.65	14.4	25.1	1.69	1700	0.44	0.02	3.2	10.4
S050588		2.04	7.48	0.08	1.3	4.47	0.030	1.36	17.2	12.3	2.12	1240	1.39	0.10	3.8	18.4
S050589		1.49	8.56	0.10	1.4	0.104	0.028	1.13	20.8	42.3	3.01	1060	0.37	0.03	5.0	14.3
S050590		1.63	8.22	0.10	1.3	0.219	0.027	1.01	20.0	48.9	2.40	945	0.27	0.03	4.9	13.4
S050591		1.26	6.32	0.10	1.0	0.233	0.019	0.83	15.5	43.2	2.29	852	0.41	0.02	3.7	11.4
S050592		1.65	8.62	0.12	1.5	0.199	0.029	1.22	21.5	61.4	3.50	721	0.34	0.03	5.1	16.2
S050593		1.37	7.52	0.10	1.4	0.383	0.024	1.10	18.9	42.9	3.25	669	0.43	0.03	4.5	14.3
S050594		1.62	8.51	0.12	1.5	0.692	0.026	1.24	21.4	55.5	3.58	613	0.44	0.03	5.1	17.1
S050595		1.57	8.56	0.12	2.1	1.140	0.029	1.36	23.6	52.8	3.93	592	0.54	0.03	5.4	15.6
S050596		2.89	9.17	0.10	1.6	9.84	0.036	1.61	20.3	14.3	0.53	966	2.22	0.12	4.8	22.1
S050597		1.21	6.17	0.09	1.1	1.935	0.021	0.98	14.7	33.1	2.43	695	0.42	0.02	3.6	11.6
S050598		0.11	0.23	0.08	<0.1	<0.005	<0.005	0.02	1.1	1.2	1.70	120	<0.05	0.03	0.2	0.3
S050599		1.88	10.30	0.10	1.5	0.159	0.033	1.40	23.6	75.1	2.41	331	0.32	0.03	5.9	21.8
S050600		1.27	6.32	0.12	1.2	0.078	0.019	0.83	18.6	52.8	2.03	330	0.80	0.02	3.9	13.9
S050601		1.81	9.73	0.12	1.5	0.034	0.032	1.37	21.7	51.6	2.43	324	0.21	0.08	5.7	18.4
S050602		1.57	8.37	0.11	1.3	0.039	0.024	1.06	20.6	40.5	1.89	331	0.11	0.20	4.9	17.0
S050603		1.65	9.59	0.12	1.7	0.026	0.033	1.33	23.1	45.6	2.05	353	0.15	0.05	5.6	19.1
S050604		1.76	10.05	0.14	1.7	0.157	0.031	1.84	24.9	66.0	3.11	322	0.72	0.07	5.9	23.0
S050605		1.21	8.83	0.12	1.3	0.370	0.025	1.91	20.8	21.6	3.07	357	0.66	0.02	5.0	13.4
S050606		0.68	4.23	0.10	0.7	0.071	0.013	0.82	11.4	13.4	1.17	240	0.55	0.01	2.4	9.0
S050607		1.01	5.46	0.11	0.9	0.023	0.016	0.94	15.2	30.6	2.03	274	0.25	0.08	3.1	10.8
S050608		1.01	5.35	0.10	1.1	0.034	0.017	0.84	14.4	30.1	2.49	264	0.42	0.02	3.2	10.5
S050609		1.78	10.60	0.13	1.8	0.042	0.032	1.63	25.8	43.0	2.56	287	0.20	0.20	6.1	20.8
S050610		1.71	9.01	0.13	1.6	0.040	0.026	1.42	22.7	58.4	3.69	260	0.26	0.30	5.4	17.3
S050611		1.70	9.15	0.13	1.6	0.029	0.027	1.44	22.5	59.2	3.76	260	0.28	0.30	5.4	17.9
S050612		2.16	11.70	0.14	2.0	0.041	0.035	1.89	27.5	81.7	4.17	277	0.50	0.36	6.7	22.8
S050613		1.92	10.50	0.13	2.1	0.041	0.032	1.81	25.5	83.0	4.68	267	0.62	0.34	6.2	20.1
S050614		1.70	9.11	0.12	1.7	0.038	0.030	1.53	24.6	69.8	4.55	261	0.57	0.35	5.6	17.2
S050615		2.12	10.15	0.12	1.9	0.030	0.031	1.65	25.1	97.6	6.60	282	0.45	0.25	5.9	19.9
S050616		1.75	9.49	0.12	1.7	0.032	0.028	1.49	23.7	76.9	4.42	249	0.33	0.31	5.6	18.2
S050617		2.00	11.35	0.13	2.0	0.030	0.033	1.86	28.2	86.2	3.91	248	0.23	0.39	6.7	21.6
S050618		2.02	12.15	0.14	2.4	0.034	0.037	2.06	29.0	87.7	4.51	263	0.36	0.39	7.3	22.0
S050619		1.95	11.75	0.14	2.3	0.027	0.038	2.00	28.0	82.5	4.36	255	0.35	0.38	7.0	21.4
S050620		1.98	10.70	0.13	2.3	0.015	0.032	1.77	26.2	77.1	4.47	252	0.47	0.32	6.4	19.6

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Finalized Date: 28-SEP-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18206234

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl
	Units	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
	LOD	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.01	0.005	0.02
S050581		500	10.1	168.0	<0.002	0.09	0.41	14.3	<1	2.2	172.0	0.95	<0.05	15.20	0.348	1.21
S050582		480	12.1	161.0	<0.002	0.41	0.52	13.5	<1	2.3	198.5	0.92	<0.05	14.80	0.346	2.19
S050583		450	9.3	145.0	<0.002	1.06	0.66	13.5	<1	2.3	238	0.96	<0.05	14.70	0.353	1.49
S050584		470	5.0	135.5	<0.002	0.25	0.27	14.0	<1	2.3	169.5	0.92	<0.05	14.35	0.344	0.93
S050585		520	36.3	91.7	<0.002	0.22	0.34	9.0	2	1.9	250	0.68	<0.05	10.60	0.263	0.62
S050586		360	18.5	44.3	<0.002	0.13	0.36	5.1	1	1.2	517	0.36	<0.05	6.41	0.154	0.32
S050587		230	10.8	29.2	<0.002	0.17	0.46	3.5	1	0.8	654	0.24	<0.05	4.17	0.099	0.33
S050588		420	14.4	59.1	0.002	2.31	50.3	6.6	2	1.0	795	0.28	0.09	4.38	0.184	14.65
S050589		370	9.2	52.4	<0.002	0.06	0.40	5.5	1	1.2	419	0.37	<0.05	6.73	0.157	0.43
S050590		340	5.8	47.2	<0.002	0.08	0.60	5.4	1	1.2	435	0.37	<0.05	6.19	0.154	0.64
S050591		280	6.1	38.4	<0.002	0.09	0.65	4.1	1	0.9	453	0.28	<0.05	4.55	0.112	0.44
S050592		370	8.1	54.6	<0.002	0.23	0.54	5.4	1	1.2	446	0.39	<0.05	6.73	0.160	0.62
S050593		360	8.0	47.3	<0.002	0.22	0.50	4.8	1	1.1	516	0.34	<0.05	6.09	0.151	0.70
S050594		570	10.6	55.2	<0.002	0.44	0.81	5.3	2	1.2	510	0.38	<0.05	6.86	0.166	0.97
S050595		470	10.3	59.7	<0.002	0.43	6.14	5.4	1	1.2	487	0.42	<0.05	7.71	0.171	3.01
S050596		510	16.9	69.1	0.002	4.61	122.5	8.3	2	1.3	415	0.36	0.14	5.13	0.256	29.9
S050597		380	6.3	43.6	<0.002	0.47	11.45	3.9	1	0.9	699	0.28	<0.05	4.79	0.117	4.82
S050598		70	0.5	0.5	<0.002	0.01	0.12	0.2	1	<0.2	79.0	<0.05	<0.05	0.07	0.005	0.03
S050599		450	6.7	63.0	<0.002	0.26	0.40	6.5	1	1.5	480	0.44	<0.05	7.52	0.190	0.59
S050600		350	7.6	39.6	<0.002	0.17	0.38	4.1	2	0.9	622	0.28	<0.05	5.16	0.122	0.30
S050601		410	5.6	65.4	<0.002	0.03	0.25	6.1	1	1.4	395	0.42	<0.05	7.11	0.180	0.37
S050602		380	4.6	52.1	<0.002	0.04	0.19	5.4	1	1.2	417	0.37	<0.05	6.06	0.153	0.29
S050603		460	5.6	62.8	<0.002	0.02	0.24	6.2	1	1.4	365	0.42	<0.05	7.28	0.177	0.41
S050604		760	9.7	81.3	<0.002	0.32	0.47	6.2	2	1.4	414	0.44	<0.05	7.92	0.192	0.57
S050605		440	9.6	76.1	<0.002	0.46	0.81	5.6	2	1.2	549	0.38	<0.05	6.42	0.163	0.81
S050606		220	6.7	34.5	<0.002	0.16	0.20	2.7	1	0.6	868	0.19	<0.05	3.16	0.079	0.36
S050607		340	5.9	42.2	<0.002	0.05	0.19	3.5	1	0.8	681	0.23	<0.05	4.22	0.100	0.27
S050608		270	6.5	37.4	0.002	0.18	0.21	3.4	2	0.8	624	0.24	<0.05	4.25	0.103	0.23
S050609		510	8.0	73.7	<0.002	0.12	0.24	6.6	2	1.4	436	0.45	<0.05	8.19	0.196	0.38
S050610		390	6.7	66.4	<0.002	0.03	0.31	5.7	2	1.3	417	0.40	<0.05	7.25	0.170	0.31
S050611		370	6.9	67.4	<0.002	0.03	0.33	5.8	2	1.3	411	0.41	<0.05	7.30	0.169	0.30
S050612		590	11.1	84.6	0.002	0.10	0.36	7.2	2	1.6	329	0.51	<0.05	9.02	0.218	0.39
S050613		560	11.7	76.5	0.002	0.09	0.41	6.6	3	1.4	302	0.47	<0.05	8.92	0.202	0.35
S050614		410	8.3	65.7	<0.002	0.07	0.32	5.7	2	1.3	381	0.40	<0.05	7.33	0.176	0.28
S050615		500	7.6	69.9	<0.002	0.03	0.26	6.3	2	1.4	238	0.44	<0.05	8.00	0.197	0.29
S050616		360	6.4	65.7	<0.002	0.03	0.34	5.9	1	1.4	395	0.41	<0.05	7.41	0.176	0.29
S050617		570	9.1	80.9	<0.002	0.03	0.23	7.1	2	1.6	340	0.51	<0.05	8.82	0.214	0.36
S050618		570	13.2	89.4	<0.002	0.03	0.23	7.5	2	1.6	283	0.55	<0.05	10.65	0.231	0.37
S050619		560	12.8	86.7	<0.002	0.02	0.22	7.3	2	1.6	273	0.52	<0.05	10.30	0.222	0.37
S050620		590	11.1	76.5	<0.002	0.03	0.21	6.6	2	1.5	284	0.48	<0.05	8.77	0.208	0.31

***** See Appendix Page for comments regarding this certificate *****

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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 28-SEP-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18206234

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	U	V	W	Y	Zn	Zr
	Units	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.1	1	0.1	0.1	2	0.5
S050581		2.4	55	1.9	21.7	105	96.2
S050582		3.6	49	1.2	21.4	107	94.3
S050583		2.8	56	1.8	20.0	107	98.4
S050584		3.3	59	1.3	20.4	113	101.0
S050585		8.4	79	1.1	18.1	104	79.6
S050586		8.1	47	0.7	11.6	75	55.6
S050587		11.6	32	0.5	8.0	50	34.6
S050588		3.7	55	5.3	15.1	55	53.8
S050589		8.5	49	0.8	11.3	54	54.4
S050590		8.5	46	0.7	12.0	54	52.6
S050591		10.9	35	0.5	10.0	45	44.4
S050592		8.0	49	0.8	13.0	54	60.4
S050593		7.9	46	0.7	11.0	52	57.2
S050594		7.2	54	0.8	13.2	64	59.8
S050595		6.0	49	1.0	13.4	57	79.7
S050596		2.3	74	8.9	19.8	125	61.1
S050597		8.0	37	0.8	9.4	42	40.9
S050598		0.2	1	<0.1	2.1	3	1.5
S050599		5.4	61	0.8	12.5	67	58.7
S050600		13.0	43	0.5	11.5	44	46.6
S050601		3.3	54	0.7	12.5	64	61.1
S050602		3.0	44	0.7	11.8	60	51.3
S050603		3.9	54	0.7	13.7	62	60.9
S050604		7.6	59	0.7	15.1	45	65.6
S050605		8.1	56	1.0	10.9	52	51.5
S050606		14.2	31	0.3	5.8	49	24.6
S050607		9.3	33	0.4	8.8	33	35.9
S050608		10.5	33	0.4	8.4	33	43.7
S050609		6.7	58	0.7	13.8	63	68.1
S050610		4.5	49	0.7	13.7	67	62.4
S050611		4.5	49	0.7	13.9	60	62.6
S050612		5.2	66	0.8	15.4	80	74.6
S050613		4.3	64	0.7	14.7	68	78.4
S050614		5.3	58	0.7	13.2	67	64.4
S050615		3.8	63	0.7	13.6	81	72.4
S050616		4.4	58	0.7	13.2	64	62.2
S050617		4.1	65	0.8	16.1	74	72.1
S050618		7.8	75	0.8	17.7	74	89.1
S050619		7.6	72	0.8	16.7	71	86.2
S050620		4.0	69	0.8	16.2	65	88.5

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To: **ATAC RESOURCES LTD.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Project: Nadaleen

Finalized Date: 28-SEP-2018
Account: RCM

CERTIFICATE OF ANALYSIS WH18206234

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Applies to Method: REE's may not be totally soluble in this method.
ME-MS61

LABORATORY ADDRESSES

Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.

Applies to Method:				
	CRU-31	CRU-QC	LOG-21	LOG-21d
	LOG-23	PUL-31d	SPL-21	SPL-21d
	WEI-21			

Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Applies to Method:				
	Au-AA25	Hg-MS42	ME-MS61	PUL-31
	PUL-QC			

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Account: RCM

CERTIFICATE WH18206237

Project: Nadaleen

P.O. No.: N18-050

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 22-AUG-2018.

The following have access to data associated with this certificate:

ANDREW CARNE	JULIA LANE	

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
LOG-23	Pulp Login - Rcvd with Barcode
LOG-21d	Sample logging - ClientBarCode Dup
SPL-21d	Split sample - duplicate
PUL-31d	Pulverize Split - duplicate

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid ICP-MS	
Hg-MS42	Trace Hg by ICPMS	ICP-MS

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:

Colin Ramshaw, Vancouver Laboratory Manager

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Finalized Date: 28-SEP-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18206237

Sample Description	Method	WEI-21	Au-AA25	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Recvd Wt.	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu
	Units	kg	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.02	0.01	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2
S049091		11.26	<0.01	0.02	8.02	15.2	440	2.09	0.26	1.09	<0.02	81.2	13.7	62	35.6	12.2
S049092		12.18	<0.01	0.02	8.25	25.0	420	2.41	0.33	0.71	0.02	79.3	15.4	64	34.7	13.7
S049093		12.09	<0.01	0.01	8.59	16.3	570	2.56	0.37	0.41	<0.02	70.9	17.2	69	41.2	12.4
S049094		10.29	<0.01	0.01	9.11	30.8	360	2.48	0.34	0.54	<0.02	88.1	16.3	68	36.1	17.1
S049095		7.88	<0.01	0.02	8.15	844	260	2.45	0.33	1.57	<0.02	74.9	14.1	58	25.9	16.3
S049096		7.43	<0.01	0.04	8.52	868	430	2.70	0.32	2.28	0.03	87.1	14.5	63	23.7	80.6
S049097		0.26	1.43	0.85	2.98	>10000	190	0.70	0.13	16.90	0.35	31.8	7.7	38	8.47	27.1
S049098		8.13	0.05	0.20	4.76	1385	280	1.37	0.14	8.57	0.10	52.8	36.6	53	9.21	198.0
S049099		10.22	0.01	0.10	4.59	147.5	180	1.32	0.15	12.20	0.10	49.3	13.2	50	9.04	50.1
S049100		12.26	<0.01	0.08	3.29	53.4	160	1.13	0.11	19.30	0.07	36.6	6.9	34	9.35	19.9
S049101		10.37	<0.01	0.04	3.55	59.9	540	1.14	0.11	17.05	0.09	41.6	5.8	38	10.20	19.7
S049102		11.48	<0.01	0.06	2.17	46.9	150	0.75	0.09	25.8	0.18	24.6	3.3	23	5.38	16.8
S049103		11.19	<0.01	0.05	2.27	35.3	160	0.81	0.08	23.4	0.07	28.0	4.0	24	5.80	10.6
S049104		11.35	<0.01	0.04	3.36	48.8	270	1.13	0.11	19.70	0.07	36.3	5.3	35	10.25	20.8
S049105		11.26	<0.01	0.05	2.51	42.7	170	0.85	0.09	25.2	0.14	28.3	3.7	27	9.11	12.4
S049106		10.81	0.01	0.06	3.84	50.9	280	1.35	0.11	13.95	0.09	44.4	5.7	44	17.30	23.7
S049107		11.39	0.01	0.07	2.39	42.6	140	0.83	0.08	23.4	0.07	27.5	4.9	25	7.55	14.0
S049108		5.03	0.02	0.04	3.47	88.1	190	1.08	0.11	18.75	0.08	35.9	5.7	37	13.95	25.2
S049109		5.02	0.02	0.05	3.68	107.5	220	1.17	0.11	18.85	0.07	37.7	6.8	39	14.25	28.5
S049110		11.31	<0.01	0.05	1.83	32.1	180	0.59	0.06	28.2	0.11	20.7	3.4	21	8.52	11.9
S049111		11.33	<0.01	0.05	2.54	43.3	150	0.92	0.08	23.6	0.06	28.7	5.3	28	11.60	18.6
S049112		11.41	0.03	0.04	1.72	59.7	240	0.63	0.06	27.1	0.06	22.6	3.3	18	5.66	11.9
S049113		11.97	<0.01	0.04	4.16	29.1	320	1.35	0.11	14.10	0.06	45.2	7.0	41	25.1	29.9
S049114		10.95	<0.01	0.04	3.93	15.8	380	1.29	0.11	13.15	0.05	43.6	7.4	40	24.5	27.0
S049115		10.95	0.01	0.05	4.49	40.6	710	1.47	0.12	11.80	0.07	48.6	7.4	46	25.5	32.5
S049116		10.75	<0.01	0.04	3.28	37.6	270	1.18	0.10	19.25	0.07	38.2	5.7	34	19.00	15.8
S049117		11.14	<0.01	0.04	3.31	49.6	270	1.17	0.10	15.60	0.08	39.5	5.9	34	16.50	20.8
S049118		0.27	1.10	1.33	1.54	881	200	0.39	0.13	27.8	0.68	19.30	4.6	25	3.51	46.8
S049119		10.05	<0.01	0.05	2.97	41.1	260	1.02	0.08	19.15	0.10	33.5	5.4	30	20.1	17.9
S049120		10.69	<0.01	0.04	3.15	37.2	380	1.09	0.09	19.20	0.11	35.5	5.0	32	18.30	17.9
S049121		10.42	<0.01	0.03	2.70	37.1	160	1.03	0.08	21.7	0.11	31.7	5.2	28	14.50	18.8
S049122		10.87	0.02	0.05	1.98	40.6	350	0.75	0.06	25.7	0.12	24.3	4.3	21	7.59	12.0
S049123		7.09	<0.01	0.01	0.12	<0.2	30	0.09	0.02	32.2	<0.02	1.10	0.6	2	0.10	1.4
S049124		10.83	<0.01	0.04	2.57	34.0	300	0.85	0.08	22.0	0.06	29.3	4.5	26	12.45	16.8
S049125		10.42	<0.01	0.06	1.96	32.4	300	0.68	0.06	24.3	0.07	23.4	4.0	22	9.59	12.2
S049126		10.86	<0.01	0.05	2.54	47.8	350	0.99	0.07	21.3	0.10	30.1	4.6	24	12.00	15.3
S049127		11.18	<0.01	0.05	2.73	71.8	390	0.92	0.08	19.15	0.06	30.3	4.9	29	10.05	16.4
S049128		10.48	<0.01	0.05	2.31	44.7	290	0.99	0.07	21.1	0.06	27.3	4.4	25	10.35	13.7
S049129		<0.02	0.02	0.06	2.30	46.0	300	1.05	0.07	21.7	0.07	27.6	4.3	24	10.30	13.7
S049130		10.66	<0.01	0.05	2.80	47.8	280	1.14	0.08	18.35	0.04	33.7	5.3	30	12.70	15.8

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CERTIFICATE OF ANALYSIS WH18206237

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Hg-MS42	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni
	Units	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2
S049091		4.06	19.55	0.15	3.1	0.014	0.062	3.84	42.7	68.1	1.42	576	0.16	0.06	10.5	31.7
S049092		4.63	21.6	0.12	3.2	0.098	0.071	3.99	40.6	50.7	1.23	390	0.50	0.05	12.0	36.5
S049093		4.92	23.9	0.10	3.2	0.238	0.080	4.16	34.5	61.1	1.18	190	0.47	0.05	12.9	42.9
S049094		4.81	23.7	0.12	3.2	0.474	0.075	4.24	46.1	63.2	1.13	202	0.24	0.05	12.7	40.8
S049095		5.75	22.3	0.11	3.1	0.963	0.072	3.95	37.2	32.2	1.21	386	0.18	0.05	12.2	39.0
S049096		3.28	23.8	0.11	3.3	1.280	0.077	4.04	45.5	31.6	1.53	720	0.30	0.05	13.6	37.4
S049097		2.06	8.09	<0.05	1.5	4.63	0.033	1.33	15.8	12.5	2.15	1240	1.41	0.10	4.5	18.7
S049098		2.07	13.20	0.06	2.5	3.88	0.039	2.27	26.8	12.4	4.26	2870	1.61	0.03	8.9	28.3
S049099		1.59	12.75	0.06	2.0	0.544	0.037	2.21	25.8	11.8	3.44	2860	0.38	0.03	8.2	24.4
S049100		0.95	9.07	0.08	1.6	0.141	0.028	1.60	19.7	9.7	2.41	1840	0.54	0.02	5.9	13.5
S049101		0.94	9.75	0.12	1.8	0.103	0.028	1.74	22.1	11.1	2.91	1090	0.43	0.02	6.3	11.0
S049102		0.49	5.88	0.10	1.0	0.161	0.018	1.07	13.7	6.1	1.56	896	0.42	0.02	3.9	6.7
S049103		0.61	6.25	0.13	1.2	0.114	0.018	1.13	15.2	8.1	2.74	705	0.44	0.02	4.1	7.5
S049104		0.86	9.11	0.15	1.6	0.129	0.025	1.69	19.4	13.1	2.77	553	0.48	0.02	5.9	10.8
S049105		0.56	6.84	0.14	1.2	0.184	0.019	1.26	16.0	10.0	1.42	480	0.46	0.02	4.6	8.0
S049106		1.14	10.70	0.15	2.2	0.080	0.030	1.99	23.3	19.9	4.14	397	0.65	0.03	7.1	13.5
S049107		0.72	6.58	0.11	1.2	0.123	0.018	1.24	14.8	10.4	2.09	330	0.46	0.02	4.3	11.0
S049108		0.91	9.45	0.13	1.5	0.145	0.027	1.81	19.1	16.5	1.85	282	0.24	0.02	5.8	13.5
S049109		0.99	9.97	0.15	1.6	0.206	0.030	1.93	20.1	17.4	1.93	289	0.23	0.02	6.1	15.9
S049110		0.63	5.06	0.10	0.8	0.062	0.013	0.97	11.1	9.7	1.18	198	0.54	0.01	3.1	8.2
S049111		0.88	7.27	0.12	1.3	0.071	0.021	1.34	15.5	12.2	2.27	207	0.39	0.02	4.5	13.2
S049112		0.77	4.76	0.08	0.8	0.210	0.013	0.92	10.7	7.5	1.92	208	0.47	0.01	3.0	7.9
S049113		1.80	11.25	0.12	1.9	0.053	0.029	2.32	23.3	25.7	3.79	251	0.41	0.05	7.0	20.7
S049114		2.08	10.85	0.09	1.8	0.025	0.033	2.22	22.8	24.6	4.99	259	0.50	0.05	6.8	18.8
S049115		1.93	12.30	0.10	2.1	0.034	0.036	2.51	25.5	29.8	3.78	241	0.38	0.03	7.8	21.5
S049116		1.50	9.07	0.08	1.6	0.036	0.027	1.84	20.4	22.5	3.27	226	0.41	0.03	5.8	15.4
S049117		1.33	9.46	0.10	2.0	0.024	0.028	1.85	20.5	20.4	4.84	234	0.59	0.03	6.0	15.1
S049118		1.16	4.32	<0.05	0.8	2.20	0.019	0.66	9.6	7.4	1.25	4640	1.33	0.10	2.2	14.0
S049119		0.95	8.30	0.10	1.7	0.046	0.023	1.67	17.8	20.9	3.03	185	0.62	0.04	5.3	12.3
S049120		1.41	8.71	0.09	1.5	0.085	0.027	1.78	18.7	24.0	2.69	179	0.25	0.02	5.4	13.7
S049121		0.84	7.56	0.11	1.3	0.090	0.021	1.54	16.9	19.8	2.10	150	0.26	0.02	4.9	13.1
S049122		0.78	5.55	0.09	1.1	0.096	0.016	1.11	13.0	13.5	2.04	141	0.61	0.02	3.5	10.4
S049123		0.12	0.49	0.08	0.1	<0.005	0.005	0.05	1.2	1.3	2.24	125	<0.05	0.05	0.2	<0.2
S049124		1.10	6.99	0.07	1.4	0.032	0.018	1.46	15.7	24.7	2.83	159	0.44	0.02	4.5	11.9
S049125		0.91	5.41	0.07	1.1	0.041	0.015	1.07	12.7	24.8	2.48	143	0.38	0.02	3.5	9.5
S049126		1.17	7.10	0.08	1.4	0.044	0.019	1.41	15.8	37.8	3.27	162	0.63	0.02	4.5	11.7
S049127		1.31	7.38	0.09	1.5	0.060	0.020	1.54	15.9	26.6	3.95	178	0.69	0.02	4.7	13.1
S049128		1.15	6.35	0.10	1.3	0.040	0.018	1.29	15.1	23.9	3.55	164	0.65	0.02	4.1	11.3
S049129		1.15	6.30	0.13	1.3	0.057	0.018	1.29	15.2	24.0	3.52	167	0.79	0.02	4.2	11.2
S049130		1.32	7.81	0.15	1.5	0.056	0.022	1.57	17.8	26.8	3.47	176	0.57	0.02	5.1	13.7

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.

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To: **ATAC RESOURCES LTD.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 28-SEP-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18206237

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl
	Units	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
	LOD	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.01	0.005	0.02
S049091		530	12.1	179.5	<0.002	0.01	0.50	14.1	<1	2.3	112.0	0.73	0.05	14.25	0.379	0.87
S049092		600	16.8	185.0	<0.002	0.19	0.89	15.4	<1	2.4	144.0	0.84	0.08	14.35	0.433	1.14
S049093		560	19.8	180.0	<0.002	0.13	0.81	17.0	<1	2.6	163.0	0.90	0.10	13.40	0.436	1.43
S049094		430	18.8	187.0	<0.002	1.02	0.59	16.8	<1	2.5	208	0.91	0.08	15.50	0.441	1.67
S049095		530	15.2	166.5	<0.002	5.23	0.71	15.8	<1	2.5	545	0.84	0.09	13.30	0.413	3.14
S049096		500	13.2	170.5	<0.002	2.16	1.54	16.4	1	2.7	566	0.97	0.11	15.75	0.410	2.66
S049097		410	15.2	60.4	0.002	2.27	50.7	6.8	3	1.0	786	0.31	0.09	4.80	0.184	15.55
S049098		470	11.3	87.9	<0.002	0.45	4.99	8.1	2	1.7	369	0.64	<0.05	10.80	0.241	2.29
S049099		520	13.1	84.4	<0.002	0.20	0.72	7.6	2	1.7	307	0.59	<0.05	9.80	0.221	0.76
S049100		360	15.0	59.8	<0.002	0.25	0.35	5.5	2	1.2	478	0.43	<0.05	7.17	0.159	0.55
S049101		440	8.9	64.9	<0.002	0.18	0.28	5.9	2	1.3	353	0.45	<0.05	7.81	0.173	0.54
S049102		260	6.0	38.8	<0.002	0.13	0.24	3.7	2	0.8	647	0.28	<0.05	4.77	0.106	0.42
S049103		280	6.0	40.8	<0.002	0.13	0.22	3.9	2	0.8	554	0.30	<0.05	5.24	0.112	0.38
S049104		390	7.6	61.8	<0.002	0.22	0.30	5.6	3	1.2	427	0.42	<0.05	7.07	0.163	0.50
S049105		330	6.1	47.3	<0.002	0.21	0.28	4.3	2	0.9	843	0.32	<0.05	5.50	0.123	0.52
S049106		560	9.2	75.6	<0.002	0.27	0.34	6.6	3	1.4	346	0.50	<0.05	9.11	0.193	0.56
S049107		290	6.4	45.6	<0.002	0.23	0.24	4.0	2	0.9	749	0.30	<0.05	5.31	0.118	0.47
S049108		460	6.7	68.0	<0.002	0.22	0.37	5.8	2	1.2	336	0.43	<0.05	7.00	0.162	0.72
S049109		490	8.4	71.1	<0.002	0.28	0.46	6.0	2	1.3	338	0.45	<0.05	7.30	0.173	0.85
S049110		250	6.9	36.2	<0.002	0.26	0.24	3.1	3	0.6	835	0.22	<0.05	3.83	0.086	0.26
S049111		380	7.4	53.2	<0.002	0.23	0.25	4.5	3	0.9	530	0.32	<0.05	5.70	0.120	0.35
S049112		220	5.6	34.1	<0.002	0.15	0.67	2.9	2	0.6	610	0.21	<0.05	3.56	0.081	0.76
S049113		500	8.2	91.5	<0.002	0.13	0.29	6.8	3	1.4	275	0.51	<0.05	8.74	0.198	0.54
S049114		440	6.8	88.4	<0.002	0.07	0.29	6.5	3	1.4	238	0.48	<0.05	8.45	0.186	0.50
S049115		540	8.0	99.6	<0.002	0.09	0.29	7.5	3	1.6	243	0.57	<0.05	9.53	0.215	0.68
S049116		360	6.4	73.2	<0.002	0.09	0.29	5.5	2	1.2	415	0.42	<0.05	7.14	0.157	0.40
S049117		390	8.4	72.8	<0.002	0.13	0.29	5.8	3	1.3	310	0.44	<0.05	7.88	0.163	0.41
S049118		380	60.1	28.6	0.003	0.69	8.24	6.0	2	0.7	1165	0.15	0.06	2.59	0.079	6.23
S049119		370	8.4	65.2	<0.002	0.21	0.33	5.1	2	1.1	403	0.39	<0.05	6.70	0.144	0.35
S049120		410	6.1	69.5	<0.002	0.35	0.26	5.2	3	1.1	404	0.39	<0.05	6.57	0.148	0.34
S049121		320	5.8	59.7	<0.002	0.28	0.29	4.6	2	1.0	414	0.35	<0.05	5.86	0.130	0.32
S049122		270	8.0	42.5	<0.002	0.23	0.31	3.4	2	0.7	737	0.25	<0.05	4.45	0.096	0.43
S049123		70	0.6	1.7	<0.002	<0.01	0.09	0.2	2	<0.2	79.8	<0.05	<0.05	0.10	0.005	0.02
S049124		300	7.2	58.5	<0.002	0.09	0.22	4.3	3	1.0	543	0.31	<0.05	5.57	0.123	0.32
S049125		300	6.4	46.8	<0.002	0.09	0.22	3.3	2	0.7	600	0.25	<0.05	4.33	0.095	0.32
S049126		320	8.9	68.0	<0.002	0.14	0.23	4.3	3	0.9	555	0.33	<0.05	5.87	0.122	0.41
S049127		330	7.6	69.3	<0.002	0.18	0.25	4.4	3	1.0	418	0.34	<0.05	6.03	0.132	0.49
S049128		270	6.6	65.0	<0.002	0.15	0.20	4.1	2	0.8	523	0.30	<0.05	4.88	0.113	0.38
S049129		260	6.7	64.5	<0.002	0.16	0.21	4.0	2	0.8	542	0.30	<0.05	4.99	0.113	0.42
S049130		350	6.7	76.1	<0.002	0.12	0.22	4.9	2	1.0	475	0.36	<0.05	6.13	0.138	0.44

***** See Appendix Page for comments regarding this certificate *****

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VANCOUVER BC V6B 1L8

Finalized Date: 28-SEP-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18206237

Sample Description	Method Analyte Units LOD	ME-MS61 U ppm 0.1	ME-MS61 V ppm 1	ME-MS61 W ppm 0.1	ME-MS61 Y ppm 0.1	ME-MS61 Zn ppm 2	ME-MS61 Zr ppm 0.5
S049091		2.2	78	1.3	18.5	74	113.0
S049092		3.0	88	1.4	19.6	74	111.0
S049093		2.6	101	1.6	19.6	74	110.0
S049094		2.3	97	1.5	20.1	73	108.5
S049095		2.1	87	2.4	19.3	64	105.5
S049096		2.8	92	3.1	19.6	60	110.5
S049097		4.0	54	4.2	15.2	53	50.1
S049098		6.9	70	2.9	17.7	39	87.1
S049099		6.1	66	1.5	15.4	54	70.8
S049100		9.5	50	0.8	11.4	36	54.5
S049101		9.2	54	0.8	12.9	15	62.0
S049102		13.2	34	0.5	7.3	36	36.1
S049103		13.5	34	0.6	8.6	21	43.5
S049104		8.4	49	0.7	11.4	18	57.2
S049105		14.1	39	0.6	8.0	33	41.5
S049106		6.0	57	0.8	14.5	45	79.0
S049107		12.3	35	0.5	9.0	44	44.2
S049108		7.8	54	0.7	12.0	41	53.0
S049109		8.0	57	0.8	12.3	37	55.9
S049110		13.8	31	0.4	6.5	50	27.8
S049111		9.9	39	0.6	10.0	37	45.9
S049112		11.7	27	0.5	6.6	30	30.1
S049113		5.8	60	0.7	14.5	34	69.7
S049114		5.4	60	0.7	14.1	33	65.8
S049115		4.5	69	0.8	15.9	33	74.8
S049116		7.7	48	0.7	12.5	22	57.0
S049117		7.5	51	0.7	13.1	37	71.5
S049118		4.0	26	5.7	15.1	126	26.5
S049119		8.6	50	0.6	11.3	50	58.4
S049120		5.5	51	0.6	11.7	25	51.3
S049121		6.3	40	0.6	9.9	24	47.4
S049122		12.7	31	0.4	7.8	48	37.2
S049123		0.2	1	<0.1	2.4	3	1.7
S049124		10.0	39	0.5	9.7	33	48.1
S049125		11.0	36	0.4	7.7	35	38.6
S049126		12.5	39	0.5	9.9	46	50.6
S049127		11.9	44	0.6	10.2	44	53.4
S049128		11.5	38	0.5	9.1	41	46.0
S049129		11.5	39	0.5	8.9	41	45.3
S049130		10.3	44	0.6	10.7	38	54.3

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To: **ATAC RESOURCES LTD.**
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VANCOUVER BC V6B 1L8

Project: Nadaleen

Finalized Date: 28-SEP-2018
Account: RCM

CERTIFICATE OF ANALYSIS WH18206237

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Applies to Method: REE's may not be totally soluble in this method.
ME-MS61

LABORATORY ADDRESSES

Applies to Method: Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.

CRU-31	CRU-QC	LOG-21	LOG-21d
LOG-23	PUL-31d	SPL-21	SPL-21d
WEI-21			

Applies to Method: Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Au-AA25	Hg-MS42	ME-MS61	PUL-31
PUL-QC			

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VANCOUVER BC V6B 1L8

Finalized Date: 28-SEP-2018
Account: RCM

CERTIFICATE WH18208216

Project: NADALEEN

P.O. No.: N18-051

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 24-AUG-2018.

The following have access to data associated with this certificate:

ANDREW CARNE	JULIA LANE	

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
LOG-23	Pulp Login - Rcvd with Barcode
LOG-21d	Sample logging - ClientBarCode Dup
SPL-21d	Split sample - duplicate
PUL-31d	Pulverize Split - duplicate

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid ICP-MS	
Hg-MS42	Trace Hg by ICPMS	ICP-MS

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:

Colin Ramshaw, Vancouver Laboratory Manager

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Finalized Date: 28-SEP-2018
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Project: NADALEEN

CERTIFICATE OF ANALYSIS WH18208216

Sample Description	Method	WEI-21	Au-AA25	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Recvd Wt.	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu
	Units	kg	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.02	0.01	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2
S050621		11.55	<0.01	0.04	4.56	13.9	240	1.79	0.10	11.85	0.14	49.6	8.2	46	8.54	21.1
S050622		10.71	0.01	0.03	3.32	15.3	160	1.35	0.10	18.55	0.11	38.2	5.9	36	5.90	10.0
S050623		11.46	<0.01	0.02	4.81	11.5	260	1.84	0.11	11.85	0.11	54.2	7.9	50	10.60	15.3
S050624		11.56	<0.01	0.02	4.95	1.0	220	2.02	0.12	10.80	0.11	55.0	8.4	50	10.50	10.7
S050625		11.10	<0.01	0.02	3.80	1.6	400	1.33	0.10	11.00	0.14	45.1	6.8	41	6.84	9.0
S050626		10.95	<0.01	0.02	5.33	15.5	420	2.01	0.12	8.34	0.10	58.1	9.1	56	10.90	8.4
S050627		5.17	<0.01	0.02	4.24	9.6	510	1.60	0.13	11.40	0.14	50.2	7.7	45	8.19	11.6
S050628		5.50	<0.01	0.02	4.15	8.3	500	1.51	0.12	10.75	0.13	48.2	7.3	45	7.83	11.1
S050629		10.48	<0.01	0.02	3.41	7.4	170	1.32	0.09	14.50	0.14	37.5	6.2	35	5.55	14.8
S050630		10.76	<0.01	0.04	3.70	14.4	170	1.53	0.12	15.80	0.11	41.1	7.8	37	6.60	58.7
S050631		10.45	<0.01	0.05	2.44	13.2	170	0.95	0.07	22.7	0.09	32.8	5.3	25	3.45	17.4
S050632		11.60	<0.01	0.08	4.32	11.5	160	1.80	0.10	11.00	0.08	48.6	8.7	48	7.24	27.9
S050633		10.94	<0.01	0.06	4.07	11.2	180	1.52	0.11	14.10	0.17	44.8	6.9	41	6.28	25.7
S050634		9.68	<0.01	0.05	1.52	10.1	2030	0.59	0.05	26.9	0.63	21.3	3.5	17	1.47	8.8
S050635		<0.02	<0.01	0.05	1.47	9.2	2090	0.54	0.04	26.0	0.61	20.6	3.5	17	1.44	8.0
S050636		10.58	<0.01	0.07	1.09	8.0	2470	0.38	0.04	29.7	0.54	15.10	2.9	13	0.99	9.0
S050637		11.70	<0.01	0.05	3.38	18.7	310	1.20	0.10	18.35	0.13	39.4	6.9	36	6.72	24.8
S050638		10.18	<0.01	0.05	2.89	17.1	280	1.15	0.08	21.0	0.10	33.6	5.6	29	4.54	18.9
S050639		10.62	<0.01	0.04	1.69	8.3	1980	0.66	0.06	27.0	0.07	21.6	3.7	18	2.19	11.4
S050640		10.20	<0.01	0.05	2.79	15.9	190	1.04	0.08	18.20	0.07	31.2	5.3	31	4.82	19.5
S050641		10.39	<0.01	0.03	1.47	6.7	150	0.64	0.05	26.3	0.08	20.7	3.5	16	2.23	11.8
S050642		6.92	<0.01	0.01	0.14	<0.2	40	0.06	0.02	32.7	<0.02	1.23	1.0	2	0.06	3.8
S050643		11.48	0.01	0.06	4.75	24.1	230	1.64	0.12	9.88	0.06	48.9	8.4	46	8.58	31.1
S050644		11.84	<0.01	0.06	3.34	14.4	160	1.21	0.09	16.85	0.05	39.2	6.1	35	6.10	22.8
S050645		11.37	<0.01	0.06	3.63	16.3	260	1.28	0.10	13.30	0.08	43.1	6.8	37	7.12	21.5
S050646		10.87	0.01	0.06	3.39	14.6	390	1.33	0.09	16.90	0.10	37.4	6.6	35	8.31	21.6
S050647		0.26	1.49	0.88	3.10	>10000	200	0.72	0.12	17.30	0.36	33.2	8.1	41	8.93	27.5
S050648		11.03	<0.01	0.03	1.76	22.1	610	0.69	0.05	26.6	0.09	22.0	3.5	18	3.66	13.5
S050649		11.50	<0.01	0.07	4.07	20.2	190	1.58	0.10	12.70	0.08	44.3	8.5	43	12.05	26.8
S050650		11.02	<0.01	0.07	4.08	7.1	210	1.36	0.10	10.50	0.07	45.1	6.9	44	10.50	25.8
S050651		10.74	<0.01	0.07	3.68	19.1	420	1.34	0.09	13.75	0.16	40.9	6.7	38	9.91	21.9
S050652		10.96	<0.01	0.06	1.93	14.1	180	0.69	0.05	22.2	0.19	26.6	3.7	20	4.38	10.5
S050653		11.23	<0.01	0.06	1.18	14.4	540	0.47	0.04	27.7	0.41	17.80	2.4	14	2.51	7.9
S050654		10.45	<0.01	0.07	1.58	22.2	140	0.63	0.05	27.5	0.25	20.4	3.3	19	4.46	10.2
S050655		10.91	<0.01	0.04	1.29	14.8	160	0.50	0.04	26.4	0.17	18.25	2.3	14	2.59	6.5
S050656		0.26	1.10	1.42	1.52	862	190	0.42	0.12	27.3	0.65	18.80	4.6	31	3.54	48.4
S050657		10.64	0.01	0.04	1.23	19.1	710	0.45	0.04	26.9	0.22	17.50	2.3	14	2.14	6.5
S050658		10.75	<0.01	0.07	1.21	16.4	200	0.53	0.04	29.5	0.17	17.40	2.6	15	2.09	7.8
S050659		9.31	<0.01	0.05	0.83	16.0	280	0.38	0.03	33.3	0.14	14.25	1.9	10	1.55	6.4
S050660		12.11	<0.01	1.42	1.14	143.0	150	0.55	0.04	31.8	0.13	17.90	2.6	15	2.67	10.3

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 28-SEP-2018
Account: RCM

Project: NADALEEN

CERTIFICATE OF ANALYSIS WH18208216

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Hg-MS42	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni
	Units	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2
S050621		2.44	12.40	0.10	2.3	0.010	0.037	1.74	26.7	82.8	4.95	254	0.30	0.32	8.0	23.1
S050622		1.73	8.94	0.09	1.6	0.026	0.027	1.20	20.6	54.6	3.05	237	0.15	0.33	5.8	16.2
S050623		2.35	13.30	0.12	2.3	0.024	0.039	1.97	28.2	82.2	4.23	234	0.20	0.34	8.5	22.9
S050624		2.52	13.30	0.12	2.5	0.016	0.041	2.03	29.0	84.1	4.98	244	0.24	0.33	8.6	23.2
S050625		2.06	10.05	0.10	2.4	0.010	0.030	1.50	23.1	72.5	6.22	290	0.29	0.27	6.5	17.7
S050626		2.67	14.80	0.12	2.8	0.022	0.043	2.22	30.5	93.5	5.23	239	0.24	0.32	9.5	25.6
S050627		2.22	11.75	0.11	2.6	0.012	0.035	1.67	26.4	80.5	5.41	260	0.28	0.32	7.7	20.4
S050628		2.17	11.20	0.11	2.5	0.007	0.032	1.62	25.4	76.9	5.26	250	0.25	0.30	7.4	19.5
S050629		1.92	9.23	0.09	1.8	0.013	0.025	1.17	20.5	71.7	5.56	240	0.36	0.28	5.9	16.6
S050630		1.66	10.45	0.11	1.9	0.024	0.029	1.36	22.1	70.1	3.59	228	0.36	0.39	6.8	18.7
S050631		1.13	6.54	0.11	1.2	0.036	0.019	0.75	17.9	48.6	2.34	225	0.59	0.43	4.4	12.9
S050632		1.97	11.90	0.14	2.2	0.037	0.035	1.66	25.5	89.2	5.20	232	0.86	0.39	7.6	22.8
S050633		1.75	10.95	0.12	2.2	0.020	0.033	1.49	23.6	76.0	4.71	231	0.47	0.47	7.2	18.9
S050634		0.71	4.12	0.10	0.9	0.031	0.012	0.39	11.5	27.7	2.31	198	0.60	0.41	2.8	7.4
S050635		0.69	4.04	0.13	0.9	0.036	0.012	0.38	11.1	27.8	2.24	192	0.61	0.39	2.7	7.2
S050636		0.59	3.13	0.05	0.6	0.041	0.009	0.29	8.6	35.0	1.71	181	1.47	0.27	2.0	8.0
S050637		1.49	9.66	0.10	1.7	0.043	0.029	1.19	21.0	70.4	2.86	206	0.33	0.46	6.1	18.0
S050638		1.31	8.07	0.12	1.5	0.031	0.022	1.00	18.2	62.5	2.78	194	0.41	0.42	5.1	14.7
S050639		0.90	4.92	0.11	0.8	0.030	0.015	0.49	12.4	43.1	1.79	186	0.33	0.29	3.0	9.0
S050640		1.32	7.63	0.15	1.5	0.025	0.023	1.05	17.1	59.9	4.07	213	0.60	0.31	4.8	14.2
S050641		0.79	4.06	0.14	0.7	0.035	0.013	0.46	11.7	38.6	2.37	202	0.22	0.24	2.6	7.8
S050642		0.12	0.46	0.14	0.1	<0.005	<0.005	0.04	1.3	1.8	1.69	115	<0.05	0.06	0.2	0.9
S050643		2.13	12.75	0.16	2.5	0.055	0.037	1.98	26.0	110.5	4.46	212	0.51	0.37	7.9	22.9
S050644		1.54	9.09	0.15	1.8	0.038	0.025	1.29	20.8	78.2	3.11	195	0.36	0.33	5.9	16.2
S050645		1.71	10.15	0.15	2.4	0.046	0.028	1.48	22.3	92.7	4.31	222	0.66	0.27	6.6	18.2
S050646		1.63	9.39	0.15	1.6	0.050	0.028	1.31	20.1	99.8	3.89	195	0.57	0.34	5.7	17.2
S050647		2.13	8.38	0.10	1.6	4.48	0.031	1.39	17.1	13.7	2.24	1290	1.39	0.10	4.7	19.6
S050648		0.88	4.99	0.10	0.8	0.036	0.014	0.53	12.5	55.3	2.12	162	0.33	0.29	3.1	8.6
S050649		1.77	11.15	0.14	1.9	0.053	0.034	1.72	23.2	102.0	4.85	191	0.71	0.35	7.0	21.0
S050650		2.03	11.05	0.14	2.2	0.089	0.032	1.67	23.8	105.0	6.76	226	0.98	0.30	6.9	19.7
S050651		1.68	9.92	0.13	2.0	0.115	0.028	1.53	21.6	80.7	5.10	200	1.02	0.37	6.2	17.7
S050652		0.96	5.39	0.13	1.4	0.099	0.015	0.73	14.0	58.5	3.18	174	0.79	0.33	3.7	8.8
S050653		0.61	3.22	0.12	0.8	0.091	0.010	0.44	9.8	43.1	2.06	139	0.87	0.21	2.2	5.3
S050654		0.75	4.34	0.12	0.9	0.096	0.013	0.62	11.4	48.7	1.94	125	0.75	0.22	3.0	7.4
S050655		0.58	3.36	0.12	1.0	0.060	0.008	0.57	9.8	27.9	2.14	125	0.52	0.18	2.5	4.7
S050656		1.14	4.17	0.09	0.8	2.18	0.021	0.64	9.7	7.6	1.23	4590	1.29	0.10	2.1	15.4
S050657		0.55	3.25	0.10	0.9	0.067	0.010	0.62	9.4	17.0	1.89	122	1.22	0.07	2.4	4.7
S050658		0.57	3.32	0.12	0.8	0.082	0.011	0.63	9.8	10.1	1.49	116	0.73	0.02	2.4	5.4
S050659		0.42	2.26	0.12	0.5	0.080	0.007	0.44	8.2	6.9	0.80	107	0.60	0.01	1.6	3.8
S050660		0.61	3.20	0.11	0.6	0.141	0.010	0.61	10.4	9.4	1.01	120	0.74	0.01	2.1	6.0

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
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Finalized Date: 28-SEP-2018
Account: RCM

Project: NADALEEN

CERTIFICATE OF ANALYSIS WH18208216

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl
	Units	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
	LOD	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.01	0.005	0.02
S050621		490	7.8	80.1	<0.002	0.05	0.21	7.9	3	1.6	312	0.58	<0.05	9.57	0.220	0.36
S050622		300	8.1	56.5	<0.002	0.03	0.15	5.7	3	1.2	454	0.42	<0.05	6.56	0.156	0.26
S050623		610	5.6	92.4	<0.002	0.03	0.22	8.4	2	1.7	316	0.62	<0.05	10.40	0.230	0.39
S050624		530	4.9	93.1	<0.002	0.09	0.21	8.4	2	1.7	292	0.62	<0.05	10.75	0.240	0.41
S050625		450	5.4	66.6	<0.002	0.09	0.20	6.3	2	1.3	256	0.48	<0.05	8.20	0.188	0.30
S050626		590	5.1	104.0	<0.002	0.05	0.23	9.3	1	1.9	236	0.70	<0.05	12.10	0.260	0.48
S050627		450	5.2	78.0	<0.002	0.07	0.21	7.4	2	1.5	300	0.57	<0.05	9.43	0.211	0.34
S050628		450	4.9	73.2	<0.002	0.06	0.18	7.1	1	1.4	288	0.53	<0.05	9.19	0.203	0.33
S050629		390	5.4	53.2	<0.002	0.01	0.15	5.8	2	1.2	334	0.44	<0.05	7.03	0.162	0.23
S050630		420	8.7	66.0	<0.002	0.05	0.26	6.6	2	1.3	441	0.48	<0.05	7.62	0.176	0.38
S050631		390	8.7	36.6	<0.002	0.10	0.32	4.3	2	0.9	704	0.31	<0.05	5.17	0.118	0.23
S050632		620	12.0	77.2	<0.002	0.19	0.61	7.6	3	1.5	331	0.55	<0.05	9.30	0.210	0.43
S050633		490	10.8	68.3	<0.002	0.08	0.41	6.9	2	1.4	440	0.52	<0.05	8.73	0.198	0.38
S050634		210	6.7	19.1	<0.002	0.16	0.28	2.6	2	0.5	967	0.21	<0.05	3.48	0.074	0.14
S050635		220	6.6	18.5	<0.002	0.16	0.27	2.6	2	0.5	946	0.19	<0.05	3.37	0.073	0.14
S050636		150	8.9	13.7	<0.002	0.18	0.55	2.1	2	0.4	1215	0.14	<0.05	2.44	0.052	0.13
S050637		490	10.5	58.9	<0.002	0.09	0.36	6.2	2	1.2	608	0.45	<0.05	7.42	0.162	0.33
S050638		310	8.6	47.8	<0.002	0.10	0.29	5.2	2	1.0	643	0.38	<0.05	6.33	0.139	0.25
S050639		200	6.1	24.6	<0.002	0.14	0.23	3.1	2	0.6	1010	0.22	<0.05	3.67	0.080	0.15
S050640		350	7.8	48.3	<0.002	0.06	0.30	4.9	2	1.0	538	0.35	<0.05	6.00	0.133	0.30
S050641		180	4.5	21.9	<0.002	0.05	0.17	2.6	2	0.5	682	0.18	<0.05	3.05	0.069	0.13
S050642		70	0.8	1.2	<0.002	0.01	0.09	0.4	2	0.4	89.3	<0.05	<0.05	0.11	0.010	<0.02
S050643		580	9.6	88.3	<0.002	0.09	0.31	8.2	2	1.6	305	0.60	<0.05	10.10	0.228	0.46
S050644		440	8.0	58.8	<0.002	0.07	0.27	5.9	2	1.2	497	0.43	<0.05	7.24	0.164	0.34
S050645		470	9.0	67.6	<0.002	0.14	0.34	6.4	2	1.3	496	0.49	<0.05	8.49	0.179	0.40
S050646		410	8.1	61.5	<0.002	0.14	0.28	6.1	3	1.2	570	0.42	<0.05	7.02	0.158	0.34
S050647		430	15.3	63.3	<0.002	2.34	53.1	7.5	3	1.1	821	0.34	0.10	4.96	0.191	16.25
S050648		220	5.2	27.2	<0.002	0.07	0.18	3.3	2	0.6	851	0.22	<0.05	3.71	0.081	0.18
S050649		530	8.5	79.8	<0.002	0.19	0.34	7.1	3	1.4	426	0.50	<0.05	8.96	0.194	0.46
S050650		540	9.5	75.3	<0.002	0.25	0.35	7.1	3	1.4	312	0.52	<0.05	8.95	0.199	0.43
S050651		450	8.6	69.6	<0.002	0.31	0.40	6.4	3	1.2	469	0.45	<0.05	8.00	0.177	0.41
S050652		310	8.9	36.8	<0.002	0.21	0.34	3.5	4	0.7	1160	0.26	<0.05	4.63	0.094	0.28
S050653		220	7.0	22.5	<0.002	0.17	0.28	2.2	3	0.4	1685	0.16	0.05	2.89	0.058	0.24
S050654		270	7.7	31.8	<0.002	0.21	0.31	2.9	3	0.6	2010	0.20	0.05	3.80	0.079	0.27
S050655		200	6.7	29.3	<0.002	0.14	0.26	2.2	2	0.4	2210	0.17	<0.05	3.17	0.066	0.23
S050656		390	59.8	28.3	0.002	0.68	8.40	6.2	2	0.7	1155	0.15	0.06	2.49	0.079	6.08
S050657		230	6.9	29.9	<0.002	0.19	0.28	2.1	3	0.4	2140	0.17	0.05	2.94	0.063	0.28
S050658		210	6.7	30.0	<0.002	0.20	0.23	2.3	2	0.4	1260	0.17	<0.05	3.09	0.063	0.32
S050659		160	5.6	21.2	<0.002	0.18	0.19	1.6	2	0.3	1225	0.11	<0.05	1.96	0.041	0.22
S050660		220	8.7	27.0	<0.002	0.31	0.33	2.2	2	0.4	1140	0.15	<0.05	2.75	0.057	0.29

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 28-SEP-2018
Account: RCM

Project: NADALEEN

CERTIFICATE OF ANALYSIS WH18208216

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	U	V	W	Y	Zn	Zr
	Units	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.1	1	0.1	0.1	2	0.5
S050621		3.3	67	1.0	15.9	72	81.7
S050622		2.5	60	0.7	12.1	50	53.5
S050623		3.4	75	0.9	16.5	68	80.7
S050624		4.0	66	0.9	17.0	70	87.5
S050625		3.5	43	0.8	14.9	64	84.6
S050626		3.8	69	1.0	17.5	75	96.1
S050627		3.6	50	0.9	16.2	66	90.4
S050628		3.5	48	0.9	15.5	65	85.5
S050629		3.2	45	0.7	12.3	59	60.3
S050630		3.7	53	0.8	12.9	53	64.3
S050631		11.5	38	0.5	10.9	41	43.1
S050632		5.9	65	0.8	15.6	67	76.8
S050633		6.9	60	0.7	14.3	64	76.6
S050634		12.7	24	0.3	7.0	36	33.2
S050635		12.2	23	0.3	6.8	35	33.1
S050636		16.1	19	0.3	5.2	33	20.8
S050637		9.1	52	0.6	13.1	57	60.0
S050638		9.7	43	0.5	11.1	48	53.6
S050639		12.6	27	0.4	7.3	32	28.4
S050640		8.8	44	0.5	10.5	43	52.0
S050641		8.3	27	0.3	7.0	27	25.3
S050642		0.3	2	<0.1	2.5	3	2.5
S050643		5.9	74	0.8	15.7	68	84.4
S050644		7.1	53	0.6	12.6	54	62.5
S050645		5.6	58	0.7	14.8	52	84.0
S050646		7.9	53	0.6	11.9	53	56.3
S050647		4.2	57	4.9	16.0	58	56.1
S050648		11.6	30	0.3	7.2	34	28.1
S050649		5.5	63	0.7	14.0	51	69.1
S050650		4.4	68	0.7	14.6	56	76.2
S050651		6.9	61	0.7	13.2	61	69.5
S050652		10.2	31	0.4	8.7	34	49.2
S050653		13.2	22	0.3	6.2	34	28.8
S050654		15.0	30	0.3	6.6	33	32.2
S050655		12.1	21	0.3	6.4	25	36.6
S050656		3.9	26	5.2	14.8	120	26.7
S050657		12.9	20	0.3	6.1	28	34.6
S050658		14.7	26	0.3	5.7	25	27.4
S050659		13.7	17	0.2	4.5	23	16.5
S050660		17.2	24	4.0	5.5	25	20.9

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To: **ATAC RESOURCES LTD.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Project: NADALEEN

Finalized Date: 28-SEP-2018
Account: RCM

CERTIFICATE OF ANALYSIS WH18208216

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Applies to Method: REE's may not be totally soluble in this method.
ME-MS61

LABORATORY ADDRESSES

Applies to Method: Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.

CRU-31	CRU-QC	LOG-21	LOG-21d
LOG-23	PUL-31d	SPL-21	SPL-21d
WEI-21			

Applies to Method: Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Au-AA25	Hg-MS42	ME-MS61	PUL-31
PUL-QC			

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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 2-OCT-2018
Account: RCM

CERTIFICATE WH18208962

Project: NADALEEN

P.O. No.: N18-052

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 25-AUG-2018.

The following have access to data associated with this certificate:

ANDREW CARNE	JULIA LANE	

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
LOG-23	Pulp Login - Rcvd with Barcode
LOG-21d	Sample logging - ClientBarCode Dup
SPL-21d	Split sample - duplicate
PUL-31d	Pulverize Split - duplicate

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid ICP-MS	
Hg-MS42	Trace Hg by ICPMS	ICP-MS
ME-OG62	Ore Grade Elements - Four Acid	ICP-AES
As-OG62	Ore Grade As - Four Acid	

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:

Colin Ramshaw, Vancouver Laboratory Manager

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Finalized Date: 2-OCT-2018
Account: RCM

Project: NADALEEN

CERTIFICATE OF ANALYSIS WH18208962

Sample Description	Method	WEI-21	Au-AA25	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Recvd Wt.	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu
	Units	kg	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.02	0.01	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2
S049131		12.09	0.01	0.04	2.65	31.2	260	0.92	0.06	21.7	0.05	33.3	4.7	29	11.25	16.0
S049132		11.07	0.01	0.11	2.22	113.5	270	0.68	0.05	18.80	0.17	29.9	3.7	25	6.38	14.0
S049133		11.83	0.01	0.07	2.08	80.7	1020	0.70	0.05	19.50	0.08	28.5	3.4	23	5.13	11.9
S049134		11.94	0.01	0.05	1.61	62.2	150	0.62	0.05	26.7	0.07	20.5	3.2	18	4.42	10.5
S049135		10.78	0.01	0.08	2.96	77.7	410	1.07	0.07	19.70	0.06	36.2	5.2	33	12.45	18.3
S049136		11.60	0.01	0.06	2.40	43.0	190	0.87	0.06	22.2	0.03	31.4	4.4	25	11.05	14.2
S049137		11.17	0.01	0.06	2.51	82.0	200	0.98	0.07	25.2	0.05	25.9	5.0	25	8.56	16.3
S049138		12.41	0.01	0.05	3.00	154.5	680	0.96	0.07	15.75	0.04	36.0	4.9	30	13.30	15.8
S049139		12.07	0.01	0.04	2.46	128.0	220	0.96	0.07	23.2	0.05	27.6	3.8	28	9.98	12.8
S049140		8.67	<0.01	0.06	1.90	33.7	220	0.65	0.04	23.8	0.04	27.5	3.3	20	6.95	12.8
S049141		8.19	0.12	0.13	4.20	327	220	1.50	0.09	12.00	0.06	48.1	7.2	47	18.95	26.4
S049142		6.83	31.9	7.92	3.45	>10000	160	1.05	0.12	4.20	0.57	46.0	5.7	47	10.20	25.4
S049143		6.87	0.23	0.07	0.32	1065	30	0.18	0.03	31.1	0.02	1.70	1.4	5	0.16	5.2
S049144		8.12	0.65	0.28	3.83	312	220	1.51	0.09	13.85	0.08	47.2	5.5	43	15.85	29.3
S049145		10.54	1.04	0.19	2.35	537	180	0.88	0.06	20.1	0.11	28.0	4.1	24	7.51	13.2
S049146		7.43	18.15	2.98	1.51	>10000	90	0.39	0.06	12.15	0.30	19.75	3.1	16	3.41	12.4
S049147		0.26	8.09	0.29	3.81	>10000	180	0.71	0.17	9.83	0.64	43.3	11.9	46	8.61	53.9
S049148		9.64	0.04	0.09	4.00	271	360	1.45	0.09	15.55	0.04	46.3	7.3	37	19.45	19.8
S049149		7.65	0.03	0.04	3.97	318	290	1.60	0.10	19.00	0.02	47.1	7.4	32	22.9	15.2
S049150		5.71	0.01	0.06	3.64	104.5	200	1.51	0.08	16.95	0.06	42.2	5.2	34	20.9	17.3
S049151		<0.02	0.01	0.05	3.54	116.5	190	1.58	0.08	16.55	0.06	41.8	5.2	33	20.6	17.2
S049152		9.80	0.01	0.08	2.62	76.6	320	1.01	0.07	14.10	0.02	30.3	4.0	27	13.70	14.6
S049153		12.31	<0.01	0.04	1.56	60.8	180	0.61	0.04	16.50	<0.02	19.50	2.7	15	6.94	11.2
S049154		11.29	<0.01	0.10	1.81	53.6	120	0.63	0.05	13.45	0.02	22.4	2.8	18	5.63	10.3
S049155		11.57	0.01	0.04	1.17	567	90	0.52	0.04	18.65	0.02	15.40	2.2	12	3.80	10.0
S049156		5.45	0.01	0.09	1.37	52.8	90	0.62	0.04	16.60	0.03	18.90	2.4	12	6.03	8.2
S049157		5.41	<0.01	0.08	1.29	59.9	90	0.61	0.04	16.00	0.06	17.30	2.2	12	5.36	7.8
S049158		13.80	0.01	0.09	0.61	147.0	50	0.34	0.02	19.60	0.08	8.24	1.3	7	1.74	4.2
S049159		11.37	0.01	0.04	0.31	585	20	0.18	0.01	19.50	0.04	5.49	0.9	4	0.66	2.8
S049160		11.79	0.03	0.16	0.49	839	40	0.20	0.02	19.35	0.86	8.71	1.9	6	1.26	9.6
S049161		12.08	0.07	0.07	0.53	2010	40	0.27	0.02	19.15	0.06	8.33	1.7	5	1.07	6.3
S049162		10.21	0.08	0.08	0.36	8710	30	0.20	0.02	19.15	0.14	6.97	1.1	4	0.62	4.2
S049163		8.13	0.09	0.07	0.29	8910	30	0.15	0.01	19.35	1.13	9.61	1.0	4	0.38	4.5
S049164		8.44	0.01	0.07	0.27	4200	20	0.17	0.01	19.65	1.69	11.35	1.0	4	0.40	5.6
S049165		0.26	2.87	2.66	2.16	>10000	130	0.55	0.09	16.95	0.54	29.0	5.3	31	4.49	27.4
S049166		10.85	0.03	0.05	0.62	6590	40	0.30	0.02	20.2	0.03	8.16	1.5	5	1.50	5.8
S049167		9.04	0.03	0.06	0.82	6740	60	0.37	0.02	18.60	0.03	9.56	1.6	7	1.81	5.6
S049168		12.22	0.07	0.06	0.58	>10000	40	0.28	0.02	19.50	0.03	6.82	1.3	7	1.00	4.6
S049169		11.45	0.11	0.07	0.35	2220	30	0.20	0.01	20.4	0.06	5.21	1.2	4	0.45	4.7
S049170		11.96	0.33	0.07	0.58	3770	50	0.36	0.02	18.95	0.04	8.50	1.6	6	0.93	5.9

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CERTIFICATE OF ANALYSIS WH18208962

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Hg-MS42	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni
	Units	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2
S049131		1.21	6.73	<0.05	1.3	0.081	0.022	1.50	18.2	24.1	2.55	164	0.41	0.02	4.3	12.1
S049132		1.04	5.39	<0.05	1.4	0.449	0.016	1.30	15.7	16.2	2.89	170	0.87	0.02	3.6	9.3
S049133		0.92	5.19	<0.05	1.5	0.376	0.018	1.26	14.8	14.4	3.08	169	0.74	0.02	3.7	8.5
S049134		0.68	4.13	<0.05	1.0	0.337	0.013	0.94	11.1	11.4	2.23	125	0.63	0.01	2.7	7.4
S049135		1.46	7.58	0.07	1.4	0.198	0.023	1.75	19.1	22.9	3.48	203	0.95	0.02	4.7	13.4
S049136		1.11	6.04	0.06	1.3	0.115	0.018	1.45	16.4	18.2	2.44	167	0.60	0.02	3.8	11.7
S049137		0.89	6.40	0.07	1.2	0.049	0.020	1.46	14.7	16.1	1.74	149	0.52	0.02	4.0	12.2
S049138		1.41	7.33	0.08	1.9	0.318	0.021	1.79	18.5	18.3	4.45	223	0.69	0.02	4.8	12.6
S049139		1.20	6.26	0.07	1.1	0.227	0.020	1.41	15.3	14.5	2.50	190	0.69	0.02	4.0	10.7
S049140		1.04	4.81	0.06	1.1	0.102	0.014	1.13	14.0	11.4	2.55	183	0.39	0.02	3.2	7.9
S049141		1.90	11.00	0.09	2.3	0.958	0.031	2.54	25.6	25.1	4.26	255	0.94	0.03	7.1	18.0
S049142		2.37	9.13	0.09	2.4	22.8	0.071	1.86	23.8	21.5	1.56	304	1.16	0.01	6.0	16.9
S049143		0.16	0.80	0.06	0.1	0.183	<0.005	0.07	1.5	1.7	2.02	125	0.06	0.16	0.3	1.3
S049144		1.27	9.80	0.11	2.2	1.105	0.029	2.25	24.8	23.5	2.40	245	0.74	0.02	6.3	14.3
S049145		1.31	6.31	0.10	1.4	1.335	0.020	1.31	15.0	11.0	3.41	1120	0.97	0.01	3.5	11.4
S049146		1.62	4.22	0.06	0.9	8.22	0.032	0.77	11.5	11.0	4.81	4940	0.88	0.01	2.3	9.0
S049147		2.97	10.60	0.09	1.8	27.6	0.041	1.76	23.7	13.7	0.36	774	3.55	0.02	5.0	26.6
S049148		1.45	10.50	0.13	1.8	0.819	0.027	2.23	23.9	24.0	3.19	301	0.76	0.02	5.2	16.7
S049149		1.22	10.65	0.20	1.3	0.119	0.024	2.23	24.8	26.0	2.28	204	0.53	0.02	4.8	17.6
S049150		1.17	9.44	0.22	1.8	0.138	0.026	2.03	22.6	23.8	3.29	197	0.57	0.02	5.0	12.3
S049151		1.15	9.55	0.21	1.8	0.139	0.024	1.95	22.5	23.3	3.23	193	0.57	0.02	5.0	12.1
S049152		1.16	6.88	0.20	1.5	0.135	0.020	1.46	15.7	16.1	8.20	235	0.73	0.02	3.7	9.8
S049153		0.77	4.21	0.21	0.9	0.249	0.012	0.86	10.7	9.2	9.95	204	0.44	0.01	2.3	6.1
S049154		0.75	4.76	0.23	2.1	0.346	0.012	0.99	11.9	9.2	7.92	208	1.02	0.02	2.9	6.2
S049155		0.45	3.32	0.31	0.7	0.330	0.008	0.60	8.5	6.3	10.50	195	0.67	0.01	1.8	4.3
S049156		0.60	3.85	0.28	1.2	0.227	0.012	0.74	10.4	8.6	10.05	190	1.21	0.02	2.2	5.4
S049157		0.58	3.58	0.28	1.1	0.221	0.010	0.70	9.7	7.8	9.78	187	1.10	0.02	1.9	5.1
S049158		0.30	1.77	0.33	0.4	0.187	0.005	0.31	4.8	4.7	12.20	187	0.21	0.01	0.9	2.4
S049159		0.88	0.94	0.19	0.3	0.221	<0.005	0.15	3.2	2.4	11.70	583	0.42	0.02	0.5	1.8
S049160		3.74	1.33	0.05	0.2	0.957	0.006	0.25	5.4	3.1	11.10	745	0.54	0.01	0.7	7.1
S049161		1.38	1.32	0.06	0.3	0.720	0.005	0.26	5.1	3.4	11.25	726	0.45	0.02	0.7	4.7
S049162		1.05	0.99	0.11	0.2	0.612	0.007	0.18	4.8	2.3	11.40	819	0.35	0.02	0.5	2.3
S049163		1.10	0.94	0.11	0.1	1.390	0.007	0.14	6.3	1.6	11.40	869	0.29	0.01	0.4	2.2
S049164		1.19	0.90	0.11	0.1	0.724	0.006	0.13	8.1	1.9	11.80	832	0.28	0.01	0.4	2.4
S049165		1.38	6.01	0.10	1.1	5.57	0.033	1.01	14.8	15.5	1.38	970	1.53	0.06	2.8	13.5
S049166		0.88	1.73	0.18	0.3	0.465	0.008	0.30	4.7	4.3	12.05	715	0.29	0.02	0.9	3.5
S049167		0.72	2.25	0.18	0.7	0.553	0.008	0.40	4.9	5.5	11.20	592	0.38	0.02	1.2	3.6
S049168		0.68	1.62	0.20	0.4	1.130	0.008	0.27	3.8	3.6	11.60	644	0.44	0.02	0.8	3.0
S049169		1.15	0.93	0.13	0.2	2.96	0.005	0.15	3.3	2.2	11.90	900	0.30	0.02	0.5	2.6
S049170		1.07	1.66	0.13	0.4	4.45	0.007	0.26	4.9	3.6	11.05	919	0.36	0.01	0.9	3.8

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 2-OCT-2018
Account: RCM

Project: NADALEEN

CERTIFICATE OF ANALYSIS WH18208962

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl
	Units	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
	LOD	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.01	0.005	0.02
S049131		370	6.5	66.6	<0.002	0.12	0.18	4.3	1	0.8	566	0.33	<0.05	5.20	0.128	0.36
S049132		510	8.6	50.8	<0.002	0.34	0.47	3.4	2	0.7	478	0.26	<0.05	4.48	0.105	0.62
S049133		390	9.1	48.9	<0.002	0.33	0.51	3.4	2	0.6	752	0.26	<0.05	4.46	0.105	0.62
S049134		230	8.4	36.9	<0.002	0.24	0.52	2.8	1	0.5	1510	0.19	<0.05	3.49	0.078	0.61
S049135		430	7.0	66.2	0.002	0.30	0.31	4.9	2	0.9	468	0.33	<0.05	5.92	0.141	0.50
S049136		350	6.0	55.5	<0.002	0.18	0.17	3.9	2	0.7	566	0.26	<0.05	4.84	0.113	0.29
S049137		330	6.0	55.6	0.002	0.14	0.17	4.1	2	0.7	609	0.28	<0.05	4.76	0.116	0.38
S049138		340	6.8	65.6	0.002	0.34	0.42	4.6	2	0.9	341	0.34	<0.05	6.13	0.145	0.63
S049139		440	6.5	54.2	0.002	0.34	0.18	4.1	1	0.8	516	0.27	<0.05	4.77	0.116	0.73
S049140		260	5.4	42.5	<0.002	0.16	0.15	3.1	1	0.6	614	0.22	<0.05	4.01	0.093	0.31
S049141		570	9.0	96.1	<0.002	0.47	1.13	6.9	2	1.3	237	0.51	<0.05	8.59	0.210	2.11
S049142		650	10.5	76.3	0.002	6.37	175.0	4.8	3	1.3	102.0	0.43	0.14	7.82	0.176	95.2
S049143		90	1.2	1.8	<0.002	0.07	1.68	0.6	1	<0.2	77.2	<0.05	<0.05	0.33	0.018	0.65
S049144		720	7.4	84.2	<0.002	0.37	2.02	6.1	1	1.1	248	0.45	<0.05	7.90	0.184	2.04
S049145		350	6.9	47.6	<0.002	0.48	4.96	3.9	2	0.7	368	0.29	<0.05	4.40	0.111	4.07
S049146		310	6.6	29.9	<0.002	4.86	231	3.4	5	0.5	171.0	0.17	0.26	2.86	0.069	26.2
S049147		540	15.7	81.5	0.002	3.54	107.5	8.6	1	1.7	443	0.41	0.14	6.05	0.216	63.9
S049148		630	7.6	79.3	<0.002	0.51	2.30	6.2	1	1.1	336	0.43	<0.05	6.79	0.167	1.49
S049149		450	6.0	79.9	<0.002	0.31	0.75	6.4	1	1.0	581	0.39	<0.05	6.43	0.154	0.53
S049150		510	5.4	69.7	<0.002	0.23	0.25	5.9	2	1.1	517	0.40	<0.05	6.32	0.158	0.42
S049151		490	5.4	69.6	<0.002	0.23	0.27	5.8	1	1.1	506	0.40	<0.05	6.32	0.153	0.42
S049152		430	4.7	49.5	<0.002	0.25	0.22	4.1	2	0.8	121.5	0.29	<0.05	4.71	0.119	0.46
S049153		270	4.1	28.9	<0.002	0.30	0.37	2.6	2	0.5	84.6	0.18	<0.05	2.77	0.071	0.41
S049154		330	6.5	31.2	<0.002	0.37	0.49	2.8	2	0.6	107.0	0.24	<0.05	3.74	0.095	0.53
S049155		250	4.0	19.7	<0.002	0.27	1.25	1.9	2	0.4	117.5	0.15	<0.05	2.28	0.056	0.45
S049156		270	6.1	25.4	<0.002	0.29	0.24	2.3	2	0.5	114.0	0.18	<0.05	2.78	0.067	0.49
S049157		270	5.8	23.4	<0.002	0.28	0.28	2.1	2	0.4	107.0	0.16	<0.05	2.50	0.062	0.51
S049158		200	3.7	9.5	<0.002	0.19	0.58	1.0	1	0.2	76.8	0.07	<0.05	1.13	0.028	0.38
S049159		210	3.3	4.7	<0.002	0.35	1.47	0.6	1	<0.2	76.9	<0.05	<0.05	0.61	0.015	0.68
S049160		260	16.4	7.6	<0.002	3.77	2.96	0.8	1	0.2	95.2	0.06	<0.05	0.91	0.023	6.33
S049161		170	11.3	8.1	<0.002	0.87	5.37	0.9	1	0.2	94.1	0.06	<0.05	0.96	0.024	2.28
S049162		120	6.6	5.5	<0.002	0.67	14.05	0.6	2	<0.2	92.6	<0.05	<0.05	0.66	0.017	1.19
S049163		140	5.8	4.6	<0.002	0.72	15.35	0.5	2	<0.2	108.0	<0.05	<0.05	0.51	0.012	2.30
S049164		130	4.7	4.0	<0.002	0.62	6.02	0.5	1	<0.2	83.8	<0.05	<0.05	0.46	0.012	1.15
S049165		400	20.4	41.9	<0.002	3.20	139.5	5.8	3	0.9	601	0.23	0.11	3.51	0.105	16.65
S049166		180	6.3	10.1	<0.002	0.52	10.95	1.1	2	0.2	86.1	0.07	<0.05	1.03	0.028	1.25
S049167		140	6.5	13.0	<0.002	0.50	11.45	1.3	2	0.2	75.1	0.10	<0.05	1.50	0.038	1.59
S049168		140	6.3	8.7	<0.002	0.91	17.85	1.0	2	0.2	91.8	0.07	<0.05	1.06	0.027	2.49
S049169		120	6.7	4.8	<0.002	0.59	7.10	0.6	1	0.2	98.3	<0.05	<0.05	0.60	0.015	7.59
S049170		180	10.0	9.7	<0.002	0.81	11.10	1.1	1	0.2	122.5	0.07	<0.05	1.09	0.027	10.95

***** See Appendix Page for comments regarding this certificate *****

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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 2-OCT-2018
Account: RCM

Project: NADALEEN

CERTIFICATE OF ANALYSIS WH18208962

Sample Description	Method / Analyte / Units / LOD	ME-MS61 U ppm 0.1	ME-MS61 V ppm 1	ME-MS61 W ppm 0.1	ME-MS61 Y ppm 0.1	ME-MS61 Zn ppm 2	ME-MS61 Zr ppm 0.5	As-OG62 As % 0.001
S049131		9.6	42	0.6	9.4	38	48.4	
S049132		9.4	35	1.0	9.4	50	58.5	
S049133		7.9	31	1.0	8.3	37	58.2	
S049134		16.1	26	0.7	5.8	36	37.7	
S049135		10.6	52	0.7	9.8	36	53.9	
S049136		12.2	40	0.5	8.8	24	51.2	
S049137		18.6	40	0.6	7.3	30	47.6	
S049138		7.4	46	1.0	10.7	39	71.6	
S049139		13.8	42	0.6	8.4	29	45.8	
S049140		10.3	31	0.4	7.7	17	46.1	
S049141		7.0	71	1.3	16.4	34	90.4	
S049142		7.4	62	2.9	12.3	37	91.4	10.75
S049143		0.3	5	0.2	2.5	4	3.5	
S049144		6.4	69	1.7	14.9	17	86.6	
S049145		6.4	39	1.4	8.7	36	52.1	
S049146		11.1	29	1.4	5.9	33	31.5	8.12
S049147		4.0	64	8.0	21.4	137	65.6	
S049148		9.5	64	1.3	12.0	15	66.9	
S049149		8.8	56	0.7	10.9	10	51.2	
S049150		8.4	57	1.0	11.9	15	70.1	
S049151		8.7	55	1.0	12.1	14	70.7	
S049152		8.2	45	0.8	9.7	8	58.2	
S049153		9.1	28	0.5	5.9	4	34.4	
S049154		9.4	33	0.9	8.1	5	82.2	
S049155		13.3	25	0.8	4.7	4	29.5	
S049156		13.3	31	0.5	6.4	5	47.9	
S049157		11.6	29	0.5	5.9	15	43.5	
S049158		9.3	19	0.5	3.1	16	15.5	
S049159		5.9	9	0.4	2.2	6	9.3	
S049160		17.7	12	0.7	3.0	230	9.1	
S049161		16.7	11	0.8	2.7	14	9.5	
S049162		15.6	11	0.6	2.1	27	6.1	
S049163		13.9	11	0.5	2.7	184	4.6	
S049164		15.5	11	0.5	3.2	386	4.3	
S049165		4.2	38	4.5	16.0	66	40.3	
S049166		17.7	11	1.1	2.9	8	12.2	
S049167		17.1	15	1.5	3.3	8	30.4	
S049168		16.8	16	1.1	2.4	7	14.7	1.515
S049169		14.9	11	0.8	2.0	12	5.9	
S049170		12.2	14	1.3	3.2	9	14.4	

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To: **ATAC RESOURCES LTD.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Project: NADALEEN

Finalized Date: 2-OCT-2018
Account: RCM

CERTIFICATE OF ANALYSIS WH18208962

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Applies to Method: REE's may not be totally soluble in this method.
ME-MS61

LABORATORY ADDRESSES

Applies to Method: Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.

CRU-31	CRU-QC	LOG-21	LOG-21d
LOG-23	PUL-31	PUL-31d	PUL-QC
SPL-21	SPL-21d	WEI-21	

Applies to Method: Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

As-OG62	Au-AA25	Hg-MS42	ME-MS61
ME-OG62			

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Finalized Date: 2-OCT-2018
Account: RCM

CERTIFICATE WH18212662

Project: Nadaleen

P.O. No.: N18-053

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 29-AUG-2018.

The following have access to data associated with this certificate:

ANDREW CARNE	JULIA LANE	

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
LOG-23	Pulp Login - Rcvd with Barcode
LOG-21d	Sample logging - ClientBarCode Dup
SPL-21d	Split sample - duplicate
PUL-31d	Pulverize Split - duplicate

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid ICP-MS	
Hg-MS42	Trace Hg by ICPMS	ICP-MS
ME-OG62	Ore Grade Elements - Four Acid	ICP-AES
As-OG62	Ore Grade As - Four Acid	

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:

Colin Ramshaw, Vancouver Laboratory Manager

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Finalized Date: 2-OCT-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18212662

Sample Description	Method	WEI-21	Au-AA25	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Recvd Wt.	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu
	Units	kg	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.02	0.01	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2
S049171		12.08	0.05	0.07	0.58	2140	60	0.23	0.03	18.70	0.08	10.10	0.8	5	1.23	3.0
S049172		10.53	0.05	0.11	0.39	731	40	0.20	0.08	18.45	0.05	8.33	0.8	3	0.70	3.0
S049173		10.18	0.02	0.10	0.69	198.5	60	0.33	0.05	18.15	0.03	12.50	1.2	6	1.66	3.9
S049174		11.21	0.02	0.03	0.56	656	50	0.29	0.04	18.95	0.07	10.10	1.2	5	1.04	4.4
S049175		11.67	0.04	0.03	0.51	1070	70	0.29	0.04	18.10	0.06	9.35	1.3	4	0.96	4.8
S049176		11.68	0.01	0.01	0.31	170.5	200	0.22	0.03	19.80	0.10	6.91	1.0	4	0.44	4.0
S049177		12.11	0.01	0.05	1.17	148.0	480	0.51	0.08	18.90	0.49	18.65	2.3	10	3.14	9.5
S049178		0.26	1.06	1.29	1.44	803	180	0.49	0.14	26.0	0.62	18.25	4.1	29	3.36	46.6
S049179		11.00	<0.01	0.03	1.02	84.2	1430	0.53	0.07	19.95	0.28	13.65	1.8	9	3.01	6.6
S049180		4.65	0.01	0.06	2.77	237	240	0.98	0.12	15.60	0.07	30.4	6.1	22	6.35	19.3
S049181		5.09	0.01	0.07	2.67	219	190	0.90	0.12	16.85	0.06	30.7	6.1	21	6.20	23.5
S049182		8.67	<0.01	0.06	0.58	73.1	40	0.36	0.03	20.4	0.02	9.89	2.3	7	1.61	5.1
S049183		7.45	0.01	0.06	0.67	83.6	50	0.39	0.03	19.25	0.04	10.40	2.4	7	1.77	5.4
S049184		9.83	0.10	0.08	1.80	210	150	0.75	0.05	18.10	0.05	21.6	2.9	15	4.08	6.2
S049185		11.55	0.44	0.03	0.51	989	50	0.32	0.03	21.9	0.15	8.16	1.6	5	1.13	3.4
S049186		10.49	0.24	0.03	1.28	9450	90	0.54	0.04	17.55	0.02	13.25	1.9	13	2.72	4.1
S049187		9.32	0.19	0.05	3.79	218	310	1.29	0.15	14.25	0.04	40.5	6.1	33	11.25	11.8
S049188		7.67	0.01	0.03	3.35	149.0	240	1.40	0.11	15.15	0.05	39.7	6.2	29	10.30	15.4
S049189		7.68	0.01	0.06	5.18	149.5	270	1.97	0.23	14.80	0.08	56.4	10.5	46	16.25	15.5
S049190		12.79	0.01	0.04	2.86	66.6	190	1.08	0.12	16.60	0.08	31.0	5.8	25	7.87	10.3
S049191		11.13	<0.01	0.06	4.30	92.9	210	1.59	0.16	15.80	0.05	44.6	7.3	36	13.65	23.7
S049192		11.97	0.01	0.07	3.10	131.5	240	1.25	0.12	17.75	0.06	33.4	6.0	26	9.64	17.0
S049193		11.55	0.10	0.06	4.28	445	210	1.64	0.17	14.00	0.06	45.5	8.2	34	11.60	17.9
S049194		5.76	0.27	0.09	3.68	1730	190	1.22	0.14	14.10	0.09	40.8	13.2	31	10.20	12.7
S049195		7.29	7.27	0.05	6.27	>10000	270	1.90	0.29	11.55	0.06	69.5	9.6	46	17.70	23.8
S049196		6.99	0.01	<0.01	0.16	25.5	20	0.12	0.02	30.1	0.02	1.23	0.5	1	0.08	1.5
S049197		9.06	0.03	0.03	5.39	258	570	1.75	0.23	15.60	<0.02	60.0	9.3	38	19.05	19.4
S049198		11.44	0.02	0.02	6.00	266	220	1.92	0.27	14.10	<0.02	65.2	8.1	44	20.9	23.8
S049199		10.95	0.07	0.03	2.75	192.0	1950	0.92	0.14	15.80	<0.02	34.7	8.0	22	7.13	11.2
S049200		<0.02	0.07	0.02	2.90	204	2050	0.91	0.14	16.00	<0.02	36.3	8.2	23	7.58	11.6
S049201		10.72	0.01	0.02	7.34	562	330	2.04	0.32	8.37	<0.02	77.1	8.9	54	16.35	29.2
S049202		11.61	0.01	0.07	5.06	132.5	240	1.58	0.24	14.20	<0.02	63.5	10.3	41	10.90	25.1
S049203		10.41	0.15	0.08	3.52	1825	770	0.95	0.16	16.30	0.02	48.2	6.8	29	6.52	13.0
S049204		0.28	2.72	0.68	1.86	>10000	140	0.53	2.75	25.8	0.17	27.8	5.0	27	6.31	16.4
S049205		11.26	0.01	0.09	6.79	199.5	430	2.04	0.34	3.61	0.02	90.9	12.7	56	19.00	26.0
S049206		9.87	0.01	0.07	6.25	75.2	270	1.81	0.31	5.12	<0.02	80.8	10.5	48	17.60	21.8
S049207		10.40	0.01	0.06	7.07	87.8	320	1.98	0.34	2.87	<0.02	93.0	11.4	57	20.0	29.1
S049208		9.98	<0.01	0.05	6.90	34.2	300	1.91	0.32	5.69	<0.02	84.4	9.6	52	21.0	27.7
S049209		10.61	<0.01	0.11	6.94	59.0	280	1.90	0.34	2.33	0.02	95.3	12.7	63	17.75	29.1
S049210		12.27	0.01	0.08	6.25	75.7	280	1.82	0.28	5.30	<0.02	82.7	10.0	54	15.85	25.9

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 2-OCT-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18212662

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Hg-MS42	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni
	Units	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2
S049171		0.66	1.64	0.19	0.4	0.713	0.006	0.28	5.9	3.5	11.50	636	0.13	0.02	1.0	1.7
S049172		0.68	1.17	0.18	0.4	0.855	<0.005	0.19	4.8	2.6	11.10	629	0.17	0.01	0.7	1.7
S049173		0.63	2.02	0.22	0.6	0.579	0.006	0.35	6.8	4.5	11.15	490	0.14	0.01	1.2	2.8
S049174		0.70	1.70	0.20	0.5	0.459	0.006	0.28	5.5	3.6	11.30	544	0.12	0.01	1.1	2.4
S049175		0.86	1.52	0.16	0.4	1.005	0.005	0.25	5.2	3.3	10.90	552	0.13	0.01	0.9	3.1
S049176		0.55	0.98	0.24	0.3	0.398	0.005	0.15	3.6	2.1	11.60	538	0.07	0.01	0.6	1.7
S049177		1.25	3.28	0.17	0.6	1.735	0.013	0.57	10.1	5.2	10.95	740	0.10	0.01	2.1	7.4
S049178		1.08	3.88	0.18	0.7	2.01	0.022	0.61	9.2	7.2	1.18	4440	1.26	0.09	2.0	12.6
S049179		1.05	2.81	0.18	0.5	0.754	0.008	0.47	7.5	4.8	11.45	738	0.06	0.01	1.6	4.8
S049180		1.60	7.10	0.19	1.4	2.40	0.023	1.17	16.2	13.4	7.53	644	1.10	0.02	4.2	14.6
S049181		1.67	6.70	0.18	1.4	2.21	0.023	1.09	15.8	13.8	8.08	712	0.90	0.02	4.0	15.1
S049182		0.82	1.69	0.17	0.3	0.487	0.007	0.28	5.3	4.0	10.90	522	2.32	0.01	1.0	4.6
S049183		1.23	1.83	0.14	0.4	0.659	0.006	0.32	5.6	4.3	9.87	447	1.53	0.01	1.1	5.0
S049184		1.50	4.86	0.18	1.0	1.125	0.015	0.84	11.2	8.9	9.14	554	0.65	0.02	2.8	6.7
S049185		0.95	1.41	0.16	0.3	0.906	0.008	0.25	4.0	3.3	6.97	705	0.11	0.01	0.8	2.1
S049186		1.12	3.44	0.16	0.6	0.476	0.014	0.64	7.0	4.0	9.10	511	0.12	0.01	1.9	3.6
S049187		1.55	10.20	0.21	1.9	0.790	0.031	1.88	21.4	12.2	5.79	431	0.45	0.02	5.9	12.8
S049188		1.53	9.11	0.24	1.9	0.340	0.029	1.70	20.3	13.3	7.14	468	0.22	0.03	5.4	12.1
S049189		1.48	14.20	0.25	2.6	0.443	0.046	2.59	31.2	16.4	3.52	304	0.45	0.03	8.1	18.1
S049190		1.71	7.70	0.19	1.4	0.351	0.029	1.46	16.6	9.6	5.96	432	0.33	0.03	4.4	10.2
S049191		1.90	11.50	0.19	2.3	0.448	0.034	2.17	25.0	13.1	4.16	362	0.46	0.03	6.7	14.6
S049192		1.81	8.10	0.16	1.6	0.512	0.025	1.56	17.9	8.8	3.52	427	0.55	0.02	4.7	12.3
S049193		2.56	11.40	0.17	2.0	0.832	0.038	2.16	25.0	10.6	3.82	648	0.71	0.03	6.3	17.3
S049194		4.31	9.67	0.13	1.8	1.465	0.030	1.82	21.2	9.1	5.59	1160	0.99	0.03	5.5	19.3
S049195		4.05	16.35	0.17	1.9	6.08	0.047	3.09	39.3	9.9	2.46	1040	0.23	0.03	7.9	23.2
S049196		0.11	0.54	0.13	0.1	0.008	<0.005	0.05	1.3	0.9	1.52	112	<0.05	0.07	0.3	<0.2
S049197		2.83	13.50	0.18	1.7	0.804	0.035	2.65	33.1	10.4	1.27	639	0.22	0.03	6.7	22.2
S049198		2.61	15.35	0.18	2.1	0.788	0.045	2.97	36.6	12.1	1.75	537	0.23	0.03	7.9	19.0
S049199		5.36	7.23	0.11	1.0	0.935	0.032	1.37	17.9	5.3	5.11	918	0.22	0.02	3.8	15.3
S049200		5.63	7.64	0.11	1.1	0.930	0.029	1.46	18.6	5.9	5.20	933	0.26	0.02	3.9	16.1
S049201		3.71	19.00	0.14	2.4	1.020	0.057	3.69	44.0	12.7	2.78	600	0.14	0.03	9.5	21.5
S049202		2.43	13.00	0.14	2.4	0.801	0.043	2.58	34.2	10.3	1.29	361	0.26	0.03	7.7	22.9
S049203		3.52	8.77	0.08	1.7	1.840	0.036	1.80	24.8	7.3	3.35	813	0.61	0.02	5.2	17.7
S049204		1.39	5.15	0.09	0.9	6.51	0.019	0.93	14.5	8.7	0.94	2320	1.94	0.01	2.7	14.2
S049205		2.49	18.10	0.24	3.2	0.569	0.062	3.48	48.4	17.0	1.09	279	0.38	0.03	11.5	31.0
S049206		3.12	15.90	0.21	2.8	0.294	0.054	3.15	41.6	16.7	1.82	423	0.27	0.03	10.0	25.7
S049207		2.99	18.50	0.22	3.2	0.195	0.054	3.67	48.2	24.1	1.17	421	0.27	0.04	11.5	27.2
S049208		2.95	17.55	0.23	3.1	0.107	0.057	3.47	45.1	24.4	1.27	350	0.24	0.04	11.3	25.6
S049209		3.11	17.25	0.22	3.3	0.251	0.059	3.52	49.4	25.0	1.28	270	0.49	0.04	11.9	34.9
S049210		2.87	16.15	0.22	3.0	0.402	0.054	3.15	43.4	18.5	1.82	378	0.28	0.03	10.7	25.7

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 2-OCT-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18212662

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl
	Units	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
	LOD	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.01	0.005	0.02
S049171		280	3.1	9.5	<0.002	0.25	3.29	1.0	1	0.2	119.5	0.07	<0.05	1.31	0.029	1.60
S049172		290	445	6.3	<0.002	0.21	3.48	0.7	1	0.2	107.0	0.05	<0.05	0.88	0.019	1.42
S049173		390	4.8	11.8	<0.002	0.28	1.00	1.3	1	0.2	103.5	0.09	<0.05	1.65	0.035	1.41
S049174		400	10.5	9.6	<0.002	0.28	1.59	1.1	1	0.2	105.0	0.07	<0.05	1.36	0.029	0.96
S049175		470	5.6	8.5	<0.002	0.56	2.36	1.0	1	0.2	118.5	0.07	<0.05	1.17	0.026	2.19
S049176		660	2.7	5.1	<0.002	0.18	0.66	0.7	1	<0.2	114.0	<0.05	<0.05	0.71	0.017	0.71
S049177		570	25.9	20.4	<0.002	0.66	1.52	2.2	1	0.4	118.5	0.12	0.12	2.03	0.055	2.09
S049178		360	58.5	26.5	0.002	0.66	8.14	5.6	1	0.6	1090	0.14	<0.05	2.40	0.076	5.97
S049179		400	7.2	17.1	<0.002	0.36	0.71	1.9	1	0.3	112.0	0.10	0.05	1.75	0.046	1.72
S049180		590	12.3	43.1	<0.002	0.72	1.73	5.2	1	0.9	183.5	0.29	<0.05	4.82	0.128	5.54
S049181		610	11.7	41.3	<0.002	0.69	1.53	5.1	1	0.8	191.0	0.27	<0.05	4.55	0.121	4.73
S049182		430	7.7	9.1	<0.002	0.27	0.77	1.1	1	0.2	126.0	0.07	<0.05	1.23	0.027	1.06
S049183		260	8.5	10.2	<0.002	0.60	1.02	1.3	1	0.3	175.0	0.08	<0.05	1.49	0.033	1.56
S049184		580	8.4	31.4	<0.002	0.63	1.65	3.5	1	0.6	202	0.20	<0.05	3.31	0.086	3.17
S049185		520	2.9	9.0	<0.002	0.24	2.62	1.1	1	0.2	207	0.05	<0.05	1.07	0.025	2.98
S049186		340	2.8	22.7	<0.002	0.65	11.70	2.5	1	0.4	160.5	0.14	<0.05	2.30	0.061	1.69
S049187		560	10.2	73.4	<0.002	0.48	1.27	7.2	1	1.2	218	0.42	<0.05	6.83	0.182	2.97
S049188		610	8.5	66.1	<0.002	0.24	0.36	6.4	1	1.1	184.5	0.39	<0.05	6.42	0.173	1.55
S049189		840	13.6	103.5	0.002	0.53	0.43	10.2	<1	1.7	252	0.55	0.06	9.17	0.251	1.75
S049190		410	9.1	55.8	<0.002	0.58	0.25	5.7	1	1.0	255	0.30	<0.05	5.05	0.139	0.88
S049191		610	12.1	85.0	<0.002	0.81	0.41	7.9	1	1.4	407	0.48	<0.05	7.68	0.208	1.08
S049192		490	7.5	62.4	<0.002	0.60	0.54	5.6	1	1.0	537	0.34	<0.05	5.51	0.147	1.07
S049193		580	8.5	85.1	0.002	0.61	1.25	8.0	1	1.3	323	0.45	<0.05	7.37	0.201	1.77
S049194		670	13.1	70.3	0.002	0.51	3.03	6.9	1	1.2	231	0.39	<0.05	6.39	0.173	4.08
S049195		580	13.2	119.0	<0.002	1.94	25.6	10.0	1	1.9	219	0.56	0.12	10.40	0.241	25.5
S049196		60	<0.5	1.4	<0.002	<0.01	0.10	0.2	1	<0.2	76.5	<0.05	<0.05	0.14	0.005	0.10
S049197		730	10.9	101.5	<0.002	1.07	0.76	8.6	<1	1.4	396	0.48	0.05	9.07	0.208	2.39
S049198		430	11.1	116.5	<0.002	0.56	0.89	10.0	<1	1.7	326	0.53	0.06	9.96	0.246	1.94
S049199		270	8.3	52.7	<0.002	0.64	1.23	4.8	<1	0.8	234	0.26	<0.05	4.72	0.118	2.97
S049200		290	8.8	56.4	<0.002	0.67	1.26	5.0	<1	0.9	239	0.28	<0.05	4.92	0.123	3.20
S049201		450	8.8	140.0	<0.002	0.72	0.92	12.1	<1	2.0	164.0	0.66	0.05	12.25	0.297	2.27
S049202		380	19.6	103.5	<0.002	1.08	0.75	8.4	<1	1.5	389	0.55	0.05	9.45	0.240	1.80
S049203		710	15.9	68.0	<0.002	1.12	3.52	5.7	<1	1.1	361	0.38	0.05	6.35	0.166	3.63
S049204		340	7.9	40.5	0.003	1.43	47.9	5.6	1	0.7	1035	0.19	<0.05	3.30	0.087	24.4
S049205		200	23.4	143.5	<0.002	1.25	1.20	11.1	1	2.1	91.8	0.84	<0.05	13.85	0.346	2.07
S049206		450	15.8	128.0	<0.002	1.07	0.65	9.6	1	1.9	104.0	0.73	<0.05	12.10	0.307	1.59
S049207		500	13.6	144.0	<0.002	0.96	0.60	11.3	1	2.1	104.0	0.86	0.05	13.80	0.357	1.55
S049208		740	14.5	148.0	<0.002	0.34	0.59	10.6	1	2.0	169.0	0.82	<0.05	12.75	0.337	1.09
S049209		220	28.2	145.0	<0.002	1.17	0.97	11.2	<1	2.1	75.2	0.89	0.05	13.50	0.386	1.47
S049210		730	23.6	130.0	<0.002	1.15	1.04	10.2	1	1.9	126.5	0.78	<0.05	11.60	0.344	1.52

***** See Appendix Page for comments regarding this certificate *****

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Finalized Date: 2-OCT-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18212662

Sample Description	Method Analyte Units LOD	ME-MS61 U ppm 0.1	ME-MS61 V ppm 1	ME-MS61 W ppm 0.1	ME-MS61 Y ppm 0.1	ME-MS61 Zn ppm 2	ME-MS61 Zr ppm 0.5	As-OG62 As % 0.001
S049171		8.2	14	0.9	4.3	16	15.2	
S049172		7.2	8	0.5	3.9	8	12.6	
S049173		8.5	15	0.8	5.5	11	21.6	
S049174		6.7	12	0.7	4.4	19	20.1	
S049175		4.3	9	0.6	4.1	13	17.7	
S049176		4.0	6	0.4	3.6	22	11.6	
S049177		3.5	16	1.0	6.9	185	22.3	
S049178		3.8	24	4.6	14.0	115	25.0	
S049179		3.2	13	0.8	5.9	71	19.1	
S049180		10.6	38	2.6	9.5	21	53.0	
S049181		11.1	37	2.6	10.0	21	50.1	
S049182		9.4	11	0.5	4.2	3	11.9	
S049183		8.8	11	0.6	4.3	21	15.5	
S049184		9.3	27	1.6	8.8	13	35.7	
S049185		4.9	9	0.5	4.4	49	12.2	
S049186		3.7	19	0.9	5.4	7	23.0	
S049187		6.7	56	2.4	12.7	15	68.9	
S049188		5.6	52	1.4	12.7	16	67.6	
S049189		13.1	76	1.7	16.8	86	89.7	
S049190		5.3	43	0.9	10.6	46	52.1	
S049191		7.8	62	1.0	13.9	49	76.5	
S049192		9.9	46	1.3	10.9	38	54.9	
S049193		8.3	63	3.0	14.5	65	73.1	
S049194		10.1	54	3.2	14.9	65	62.6	
S049195		3.9	62	4.4	19.5	39	67.6	1.220
S049196		0.2	1	<0.1	2.5	6	2.3	
S049197		3.6	53	1.8	17.3	51	58.3	
S049198		3.1	63	1.8	17.9	35	72.6	
S049199		2.2	31	1.3	12.9	28	36.8	
S049200		2.2	32	1.4	13.3	27	39.0	
S049201		2.6	81	3.6	18.6	60	81.8	
S049202		3.2	58	1.4	17.4	31	81.4	
S049203		2.8	41	1.9	16.6	19	62.6	
S049204		6.3	33	18.1	15.8	33	32.8	
S049205		2.8	78	2.7	18.9	40	112.0	
S049206		2.8	70	1.8	18.7	34	99.2	
S049207		2.6	83	1.7	20.0	43	112.5	
S049208		3.1	79	1.5	20.8	49	107.5	
S049209		2.6	88	2.0	19.5	71	114.0	
S049210		2.8	80	2.2	21.0	26	109.5	

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Project: Nadaleen

Finalized Date: 2-OCT-2018
Account: RCM

CERTIFICATE OF ANALYSIS WH18212662

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Applies to Method: REE's may not be totally soluble in this method.
ME-MS61

LABORATORY ADDRESSES

Applies to Method: Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.

CRU-31	CRU-QC	LOG-21	LOG-21d
LOG-23	PUL-31	PUL-31d	PUL-QC
SPL-21	SPL-21d	WEI-21	

Applies to Method: Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

As-OG62	Au-AA25	Hg-MS42	ME-MS61
ME-OG62			

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Finalized Date: 2-OCT-2018
Account: RCM

CERTIFICATE WH18210425

Project: NADALEEN

P.O. No.: N18-054

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 27-AUG-2018.

The following have access to data associated with this certificate:

ANDREW CARNE	JULIA LANE	

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
DRY-21	High Temperature Drying
PUL-31	Pulverize split to 85% <75 um
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
LOG-23	Pulp Login - Rcvd with Barcode
LOG-21d	Sample logging - ClientBarCode Dup
SPL-21d	Split sample - duplicate
PUL-31d	Pulverize Split - duplicate

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid ICP-MS	
Hg-MS42	Trace Hg by ICPMS	ICP-MS

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:

Colin Ramshaw, Vancouver Laboratory Manager

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 2-OCT-2018
Account: RCM

Project: NADALEEN

CERTIFICATE OF ANALYSIS WH18210425

Sample Description	Method	WEI-21	Au-AA25	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Recvd Wt.	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu
	Units	kg	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.02	0.01	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2
S050661		11.22	0.01	0.11	1.48	36.6	90	0.53	0.05	30.8	0.20	27.0	3.5	18	3.59	13.4
S050662		10.89	0.01	0.05	0.86	21.5	90	0.36	0.03	32.7	0.13	18.00	2.4	12	1.79	8.1
S050663		11.39	0.01	0.12	1.56	359	130	0.53	0.06	30.8	0.17	19.85	3.9	21	3.65	14.8
S050664		11.44	0.01	0.06	0.84	27.4	90	0.34	0.03	33.4	0.13	16.65	2.8	12	1.58	8.0
S050665		11.78	0.01	0.05	1.01	39.8	80	0.44	0.03	31.0	0.13	21.2	3.0	14	2.08	8.1
S050666		10.96	0.03	0.13	1.77	73.0	80	0.71	0.05	24.3	0.06	23.2	3.6	19	3.61	12.2
S050667		11.76	0.01	0.08	1.30	69.2	60	0.56	0.04	28.2	0.04	18.70	3.1	15	2.54	7.3
S050668		11.71	0.02	0.04	3.04	65.3	110	1.17	0.07	14.75	0.02	33.0	3.9	33	6.39	18.5
S050669		11.97	0.06	0.09	3.57	85.6	160	1.26	0.08	12.85	0.05	39.3	7.9	38	6.27	30.2
S050670		12.00	0.01	0.03	2.84	53.3	110	1.21	0.08	19.55	0.07	33.5	5.7	31	5.72	19.1
S050671		11.33	0.01	0.05	1.34	41.6	160	0.64	0.04	28.2	0.04	19.80	3.0	15	2.54	7.3
S050672		11.41	0.01	0.04	1.01	45.1	170	0.52	0.03	26.5	0.02	16.25	4.2	12	1.96	8.4
S050673		0.26	1.08	1.49	1.52	860	200	0.44	0.13	27.5	0.70	19.50	4.4	27	3.44	48.2
S050674		11.28	0.02	0.04	3.17	103.0	150	1.23	0.08	18.75	0.07	36.9	5.5	35	8.01	17.4
S050675		11.77	0.03	0.03	2.41	161.0	140	1.09	0.06	25.7	0.06	26.8	4.4	25	5.27	12.4
S050676		11.22	0.06	0.03	2.61	403	180	1.04	0.06	21.7	0.05	30.8	4.9	28	5.62	16.3
S050677		11.88	0.07	0.02	2.55	489	90	1.12	0.06	20.8	0.06	30.1	4.4	28	4.69	14.9
S050678		6.15	0.04	0.03	1.51	332	80	0.87	0.05	27.3	0.07	20.8	3.6	17	2.52	10.7
S050679		5.92	0.03	0.03	1.70	260	110	0.96	0.06	26.5	0.06	21.0	4.1	19	2.89	12.9
S050680		10.39	0.03	0.03	3.83	679	190	1.69	0.11	17.25	0.08	46.2	7.1	39	11.60	26.6
S050681		11.13	0.03	0.04	5.29	606	250	2.25	0.14	8.05	0.06	57.2	8.4	52	16.70	36.7
S050682		11.63	0.04	0.04	5.36	1065	220	2.37	0.14	8.66	0.07	55.5	9.2	54	16.25	25.8
S050683		11.78	0.04	0.04	4.74	666	230	1.97	0.12	10.75	0.06	54.7	7.4	49	14.10	36.1
S050684		7.05	<0.01	<0.01	0.27	2.0	50	0.13	0.01	32.6	<0.02	1.56	1.0	3	0.11	1.7
S050685		11.27	0.07	0.08	3.54	951	130	1.56	0.06	14.60	0.06	41.0	6.2	42	8.22	19.6
S050686		11.37	0.09	0.08	4.05	1330	160	1.67	0.07	13.85	0.07	43.5	8.1	48	11.30	19.5
S050687		11.46	0.09	0.10	4.23	1055	180	1.78	0.07	13.90	0.08	41.8	10.2	49	12.50	21.2
S050688		11.46	0.02	0.05	2.54	140.5	170	1.24	0.03	20.9	0.35	31.8	5.1	30	7.58	16.0
S050689		11.91	0.03	0.07	3.93	248	210	1.59	0.07	11.35	0.14	44.6	6.8	49	11.65	29.8
S050690		<0.02	0.03	0.07	4.12	273	220	1.76	0.07	11.50	0.14	45.6	7.1	50	12.30	31.5
S050691		11.26	0.10	0.04	4.26	735	290	1.76	0.08	8.66	0.09	47.7	6.8	49	12.80	27.2
S050692		11.74	0.08	0.05	4.48	456	270	1.83	0.08	9.06	0.08	48.1	6.9	51	13.00	29.9
S050693		11.70	0.46	0.05	3.93	1165	200	1.60	0.06	9.81	0.11	46.0	5.9	47	10.20	26.1
S050694		10.78	0.17	0.04	4.07	556	240	1.58	0.08	11.40	0.07	47.9	8.0	45	10.85	24.8
S050695		11.01	0.38	0.04	1.45	927	130	0.84	0.01	26.0	0.13	26.7	3.9	18	3.43	8.9
S050696		11.16	0.39	0.05	1.56	887	160	0.89	0.02	27.3	0.08	22.6	4.0	19	3.34	17.2
S050697		0.26	1.41	0.97	2.98	>10000	190	0.83	0.08	16.95	0.32	33.9	8.1	44	8.66	27.0
S050698		11.33	0.08	0.03	1.76	307	70	1.03	0.02	24.2	0.05	24.0	3.4	19	3.93	10.5
S050699		11.12	0.07	0.03	2.04	283	90	1.16	0.03	24.2	0.06	27.7	3.6	22	4.44	13.8
S050700		11.08	0.04	0.05	2.22	139.0	290	1.11	0.04	20.5	0.06	29.8	4.9	25	5.01	10.9

***** See Appendix Page for comments regarding this certificate *****

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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 2-OCT-2018
Account: RCM

Project: NADALEEN

CERTIFICATE OF ANALYSIS WH18210425

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Hg-MS42	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni
	Units	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2
S050661		0.69	4.10	0.07	0.7	0.160	0.012	0.79	15.8	9.0	1.04	139	0.92	0.01	3.1	7.8
S050662		0.47	2.41	0.09	0.4	0.078	0.006	0.48	10.4	4.4	0.86	130	0.47	0.01	1.6	4.6
S050663		0.63	4.41	0.10	0.7	0.136	0.014	0.88	11.8	8.7	0.96	130	1.05	0.01	3.0	8.7
S050664		0.50	2.37	0.09	0.4	0.145	0.008	0.44	9.9	3.5	0.73	122	0.57	0.01	1.6	5.5
S050665		0.59	2.82	0.12	0.6	0.280	0.008	0.54	11.7	4.8	1.03	150	0.55	0.01	2.0	5.7
S050666		0.87	4.66	0.15	1.0	0.482	0.013	0.95	12.7	9.4	4.40	401	1.07	0.02	3.4	7.9
S050667		0.63	3.41	0.13	0.9	0.314	0.011	0.68	9.7	6.5	2.42	200	0.73	0.01	2.5	6.2
S050668		1.15	8.11	0.19	1.6	0.870	0.024	1.63	17.5	15.1	8.08	414	0.64	0.02	5.2	7.2
S050669		1.46	9.46	0.22	2.1	0.607	0.028	1.91	20.6	17.1	6.56	389	0.56	0.02	6.0	12.1
S050670		0.89	7.48	0.19	1.7	0.302	0.021	1.55	17.8	13.1	3.97	252	0.58	0.02	4.8	10.5
S050671		0.77	3.72	0.14	0.7	0.192	0.010	0.73	10.2	6.0	2.51	251	0.73	0.01	2.3	6.0
S050672		1.78	2.77	0.12	0.5	0.214	0.010	0.55	8.5	4.7	4.38	426	0.44	0.01	1.6	9.1
S050673		1.15	4.04	0.11	0.7	2.33	0.021	0.65	9.6	6.3	1.23	4700	1.33	0.10	2.0	13.1
S050674		1.21	8.20	0.14	1.6	0.276	0.024	1.79	19.6	16.3	2.51	234	0.29	0.02	5.3	13.2
S050675		0.92	6.39	0.12	1.1	0.187	0.020	1.35	15.1	11.8	1.97	248	0.31	0.02	4.0	10.6
S050676		1.37	6.85	0.13	1.5	0.362	0.020	1.47	16.6	14.9	3.53	338	0.39	0.02	4.2	11.8
S050677		1.16	6.75	0.14	1.2	0.314	0.021	1.41	16.5	14.0	3.80	382	0.54	0.02	4.2	11.5
S050678		0.82	4.08	0.12	0.7	0.225	0.012	0.81	11.9	6.9	2.34	286	0.20	0.01	2.6	7.9
S050679		0.88	4.84	<0.05	0.8	0.225	0.012	0.93	12.9	8.6	2.50	245	0.22	0.01	3.0	9.1
S050680		1.78	10.50	<0.05	1.8	1.170	0.033	2.20	24.8	24.7	2.74	278	0.18	0.03	6.6	19.3
S050681		2.25	14.65	0.07	2.8	1.355	0.042	3.12	29.9	35.5	3.55	236	0.35	0.04	9.3	24.8
S050682		2.29	14.60	0.06	2.8	1.895	0.043	3.14	29.2	30.8	3.80	277	0.39	0.03	9.2	24.3
S050683		2.10	13.00	0.07	2.6	1.180	0.039	2.77	28.3	28.1	3.80	250	0.49	0.03	8.4	22.5
S050684		0.19	0.83	<0.05	0.1	0.007	<0.005	0.09	1.5	1.6	1.91	132	<0.05	0.11	0.5	0.8
S050685		1.54	9.04	<0.05	1.8	1.055	0.029	1.92	21.7	20.5	3.47	328	1.16	0.03	5.8	18.7
S050686		1.78	10.75	<0.05	2.1	1.550	0.032	2.21	23.2	24.2	3.84	360	0.94	0.03	6.9	20.3
S050687		1.90	11.10	0.05	2.0	1.165	0.036	2.33	22.8	26.2	3.81	323	0.66	0.03	7.1	22.3
S050688		1.25	6.75	<0.05	1.4	0.276	0.020	1.39	18.0	16.7	2.98	216	0.53	0.02	4.3	13.0
S050689		1.71	10.30	0.06	2.2	0.533	0.030	2.21	23.3	24.7	4.26	247	0.73	0.04	6.6	19.1
S050690		1.79	10.85	0.06	2.3	0.505	0.034	2.32	23.8	26.0	4.48	257	0.71	0.04	6.9	20.0
S050691		1.74	11.25	0.07	2.3	1.020	0.035	2.39	24.9	26.0	3.72	274	0.36	0.03	7.2	20.2
S050692		1.93	11.55	0.07	2.4	0.754	0.036	2.48	24.0	26.2	4.39	295	0.78	0.04	7.3	21.2
S050693		1.72	10.25	0.06	2.4	1.495	0.030	2.16	23.2	22.4	4.14	409	0.45	0.03	6.6	17.9
S050694		1.81	11.05	0.07	1.9	0.819	0.034	2.21	24.7	22.5	3.51	295	0.30	0.03	6.8	20.8
S050695		0.89	3.94	<0.05	0.7	1.705	0.013	0.69	14.5	7.2	2.16	460	0.13	0.01	2.5	8.6
S050696		0.94	4.22	<0.05	0.7	1.180	0.014	0.76	13.0	7.9	2.62	465	0.17	0.01	2.6	8.8
S050697		2.07	7.78	<0.05	1.4	4.87	0.031	1.33	17.4	12.3	2.16	1280	1.33	0.10	4.3	19.4
S050698		0.94	4.75	<0.05	0.8	0.512	0.015	0.86	14.0	9.3	2.83	248	0.26	0.02	3.0	9.2
S050699		1.05	5.54	<0.05	0.9	0.535	0.017	1.01	15.9	11.1	3.19	274	0.57	0.02	3.6	10.5
S050700		1.18	6.00	0.05	1.1	0.331	0.018	1.11	16.2	12.9	4.08	234	0.99	0.02	3.7	12.2

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CERTIFICATE OF ANALYSIS WH18210425

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl
	Units	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
	LOD	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.01	0.005	0.02
S050661		260	7.6	35.2	<0.002	0.24	0.69	2.6	2	0.5	1020	0.20	<0.05	3.44	0.077	0.28
S050662		170	5.0	19.2	<0.002	0.14	0.23	1.5	2	0.3	998	0.11	<0.05	1.95	0.044	0.18
S050663		300	8.3	34.8	<0.002	0.27	0.30	2.8	2	0.6	1035	0.21	<0.05	3.67	0.083	0.34
S050664		190	8.1	16.6	<0.002	0.30	0.28	1.4	2	0.3	1160	0.11	<0.05	1.99	0.042	0.26
S050665		250	7.8	20.9	<0.002	0.34	0.70	1.7	2	0.3	882	0.13	<0.05	2.38	0.053	0.48
S050666		300	9.5	36.2	<0.002	0.40	1.22	2.8	2	0.6	958	0.22	<0.05	4.09	0.094	1.01
S050667		260	8.9	26.2	<0.002	0.31	1.35	2.1	3	0.4	1320	0.16	<0.05	3.08	0.069	1.06
S050668		390	4.9	62.4	<0.002	0.34	1.16	4.8	2	1.0	287	0.39	<0.05	6.31	0.151	0.79
S050669		460	9.7	71.1	<0.002	0.71	2.94	5.5	3	1.2	341	0.44	<0.05	7.58	0.177	0.70
S050670		360	8.9	57.8	<0.002	0.21	0.47	4.4	2	0.9	515	0.35	<0.05	6.03	0.140	0.44
S050671		180	7.3	28.8	<0.002	0.26	0.44	2.2	2	0.5	767	0.17	<0.05	2.94	0.067	0.30
S050672		130	4.2	20.2	<0.002	0.23	0.57	1.6	2	0.3	632	0.11	<0.05	2.00	0.048	0.26
S050673		380	69.7	28.8	0.002	0.70	8.21	5.4	2	0.6	1150	0.14	0.05	2.37	0.080	5.75
S050674		450	6.9	70.6	<0.002	0.50	1.31	4.8	2	1.0	497	0.39	<0.05	6.48	0.156	0.72
S050675		250	5.5	55.2	<0.002	0.24	1.33	3.7	2	0.8	640	0.29	<0.05	4.75	0.118	0.59
S050676		360	6.9	60.3	<0.002	0.28	2.60	4.1	2	0.8	508	0.31	<0.05	5.41	0.125	1.14
S050677		290	5.9	59.6	<0.002	0.19	2.84	3.9	2	0.9	476	0.30	<0.05	5.16	0.123	1.03
S050678		180	4.7	38.7	<0.002	0.15	1.23	2.4	2	0.5	679	0.19	<0.05	3.03	0.073	0.72
S050679		190	5.0	42.7	<0.002	0.16	1.42	2.8	1	0.6	700	0.21	<0.05	3.77	0.081	0.77
S050680		450	6.7	112.0	<0.002	1.09	3.31	6.3	1	1.4	417	0.50	<0.05	8.56	0.184	3.28
S050681		540	10.5	154.5	<0.002	1.44	2.69	8.5	2	1.9	243	0.65	<0.05	12.40	0.257	3.81
S050682		570	10.6	157.0	<0.002	1.45	3.73	8.6	2	1.9	198.0	0.68	<0.05	12.20	0.264	5.94
S050683		540	9.9	140.0	0.002	1.19	3.34	7.8	2	1.7	289	0.61	<0.05	11.00	0.233	3.46
S050684		70	0.5	2.8	<0.002	0.01	0.10	0.5	1	<0.2	81.7	0.05	<0.05	0.18	0.011	0.05
S050685		430	9.6	100.5	0.002	0.79	3.66	6.1	2	1.1	362	0.42	<0.05	7.79	0.172	2.99
S050686		480	9.8	117.5	0.002	1.08	4.45	7.1	2	1.4	334	0.50	<0.05	9.32	0.199	4.53
S050687		500	10.7	123.0	0.002	1.17	3.36	7.3	2	1.5	338	0.52	<0.05	9.65	0.206	3.73
S050688		390	6.8	74.3	0.002	0.55	0.95	4.6	2	0.8	511	0.32	<0.05	5.76	0.126	1.09
S050689		580	11.1	117.0	<0.002	0.83	1.56	6.9	3	1.3	278	0.49	<0.05	9.54	0.194	1.70
S050690		600	11.5	122.0	<0.002	0.86	1.66	7.3	3	1.3	285	0.51	<0.05	9.85	0.203	1.79
S050691		580	10.6	127.0	<0.002	0.79	3.37	7.4	2	1.4	239	0.52	<0.05	9.97	0.214	2.89
S050692		630	11.5	129.0	0.002	1.06	2.50	7.7	3	1.4	244	0.54	<0.05	10.45	0.221	2.54
S050693		600	11.7	112.0	<0.002	0.86	4.99	6.8	2	1.2	257	0.48	<0.05	9.53	0.199	4.00
S050694		450	9.4	120.5	<0.002	0.82	3.02	7.3	2	1.4	308	0.50	<0.05	9.26	0.199	2.44
S050695		180	3.5	41.2	<0.002	0.52	5.67	2.7	2	0.5	607	0.18	<0.05	3.07	0.069	5.30
S050696		190	4.7	44.4	<0.002	0.44	6.68	2.9	2	0.5	682	0.19	<0.05	3.26	0.074	5.17
S050697		410	15.8	63.2	<0.002	2.30	53.2	7.3	2	1.0	784	0.32	0.08	4.93	0.188	15.90
S050698		190	6.0	49.8	<0.002	0.34	2.29	3.2	2	0.6	674	0.20	<0.05	3.58	0.083	1.65
S050699		210	6.2	57.5	<0.002	0.40	2.36	3.8	2	0.7	648	0.24	<0.05	4.44	0.098	1.62
S050700		250	6.6	65.2	<0.002	0.33	1.05	4.1	2	0.8	594	0.27	<0.05	5.03	0.106	1.04

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 2-OCT-2018
Account: RCM

Project: NADALEEN

CERTIFICATE OF ANALYSIS WH18210425

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	U	V	W	Y	Zn	Zr
	Units	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.1	1	0.1	0.1	2	0.5
S050661		15.7	31	0.5	6.5	42	25.7
S050662		12.3	18	0.3	5.0	25	15.2
S050663		17.0	35	0.4	5.9	43	25.9
S050664		14.2	17	0.2	4.7	30	14.9
S050665		14.3	19	0.4	5.9	31	19.9
S050666		15.4	35	1.0	6.8	20	38.6
S050667		15.3	24	0.9	6.5	10	36.3
S050668		8.3	52	2.0	10.2	7	58.4
S050669		6.1	51	2.4	13.4	13	77.1
S050670		10.8	40	1.3	10.4	24	60.8
S050671		15.5	22	0.8	6.1	21	27.3
S050672		12.4	18	0.8	5.2	9	17.9
S050673		3.8	25	5.2	14.7	138	25.7
S050674		10.3	48	2.8	11.4	24	58.0
S050675		11.5	36	2.4	7.9	26	40.8
S050676		9.2	39	2.6	9.8	33	51.0
S050677		7.8	40	2.9	9.0	35	47.2
S050678		8.9	28	1.9	6.5	23	25.2
S050679		9.4	31	2.3	6.8	23	28.9
S050680		6.9	55	6.0	13.8	53	63.4
S050681		4.6	78	6.2	16.8	62	97.2
S050682		4.1	80	7.5	16.6	66	96.5
S050683		5.9	76	5.8	16.2	67	92.7
S050684		0.2	3	0.2	2.9	5	3.8
S050685		7.8	66	4.8	13.4	54	67.2
S050686		8.9	76	6.0	14.7	55	79.0
S050687		9.2	78	5.4	14.4	55	84.8
S050688		5.6	46	1.8	13.5	47	52.6
S050689		4.8	66	3.1	16.4	60	80.4
S050690		4.9	68	3.2	17.2	65	86.0
S050691		4.5	67	4.3	16.6	61	88.3
S050692		4.9	71	4.1	17.4	66	93.8
S050693		5.1	67	4.1	16.9	64	92.5
S050694		5.5	64	3.3	15.6	63	72.8
S050695		6.4	26	2.3	8.6	35	25.4
S050696		7.9	28	2.2	7.3	32	25.7
S050697		4.2	54	4.4	16.3	56	53.8
S050698		13.5	31	2.2	7.4	29	27.9
S050699		11.0	34	2.2	8.5	38	34.9
S050700		12.7	36	1.7	9.7	40	42.0

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Project: NADALEEN

Finalized Date: 2-OCT-2018
Account: RCM

CERTIFICATE OF ANALYSIS WH18210425

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Applies to Method: REE's may not be totally soluble in this method.
ME-MS61

LABORATORY ADDRESSES

Applies to Method: Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.

CRU-31	CRU-QC	DRY-21	LOG-21
LOG-21d	LOG-23	PUL-31	PUL-31d
PUL-QC	SPL-21	SPL-21d	WEI-21

Applies to Method: Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Au-AA25	Hg-MS42	ME-MS61

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To: **ATAC RESOURCES LTD.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 3-OCT-2018
Account: RCM

CERTIFICATE WH18215039

Project: Nadaleen

P.O. No.: N18-055

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 31-AUG-2018.

The following have access to data associated with this certificate:

ANDREW CARNE	JULIA LANE	

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
LOG-23	Pulp Login - Rcvd with Barcode
LOG-21d	Sample logging - ClientBarCode Dup
SPL-21d	Split sample - duplicate
PUL-31d	Pulverize Split - duplicate

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid ICP-MS	
Hg-MS42	Trace Hg by ICPMS	ICP-MS

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:

Colin Ramshaw, Vancouver Laboratory Manager

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Finalized Date: 3-OCT-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18215039

Sample Description	Method	WEI-21	Au-AA25	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Recvd Wt.	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu
	Units	kg	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.02	0.01	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2
S050701		11.59	0.01	0.10	3.44	119.5	100	1.27	0.10	14.90	0.09	35.7	5.7	31	6.59	21.9
S050702		12.05	0.22	0.09	3.90	397	150	1.41	0.10	13.05	0.11	42.8	6.8	38	7.39	22.3
S050703		12.33	0.35	0.06	2.06	381	470	0.78	0.06	27.6	0.16	21.8	3.8	19	3.16	12.3
S050704		11.74	0.06	0.05	2.60	116.5	360	0.97	0.08	24.4	0.16	29.7	4.7	24	4.06	14.4
S050705		11.46	0.02	0.05	3.05	86.0	200	1.20	0.08	21.5	0.09	35.3	5.7	30	5.86	15.8
S050706		11.08	0.01	0.04	2.57	15.1	200	0.89	0.08	23.7	0.10	28.1	4.5	23	5.68	16.8
S050707		12.17	<0.01	0.06	3.38	8.1	790	1.18	0.09	18.35	0.08	35.7	6.1	31	7.68	18.4
S050708		11.92	<0.01	0.05	3.53	3.1	150	1.20	0.09	18.05	0.08	39.4	5.7	32	9.09	19.8
S050709		10.95	<0.01	0.08	4.06	9.6	130	1.40	0.09	15.80	0.05	44.7	7.7	39	10.15	19.2
S050710		<0.02	0.01	0.08	3.94	9.3	120	1.28	0.09	15.35	0.05	43.8	7.5	37	9.85	17.6
S050711		11.48	<0.01	0.03	4.08	13.5	170	1.40	0.09	13.45	0.08	45.7	5.5	38	10.10	29.3
S050712		11.44	<0.01	0.04	4.82	26.2	190	1.52	0.12	11.55	0.07	49.9	6.9	46	9.73	27.5
S050713		11.35	<0.01	0.03	4.51	18.6	190	1.36	0.09	12.25	0.08	50.8	5.4	43	9.67	37.1
S050714		11.51	<0.01	0.03	5.01	29.4	120	1.57	0.12	11.50	0.06	51.8	7.1	48	10.90	30.1
S050715		12.20	0.01	0.05	4.72	60.6	160	1.53	0.11	11.85	0.06	50.0	7.1	44	9.38	26.1
S050716		11.39	<0.01	0.03	5.25	22.4	150	1.79	0.12	10.15	0.07	54.4	7.0	52	9.43	32.4
S050717		11.61	<0.01	0.04	5.13	36.4	270	1.62	0.12	10.60	0.07	52.8	7.0	46	7.79	36.9
S050718		11.17	<0.01	0.05	4.34	22.4	210	1.36	0.10	12.65	0.09	49.2	5.7	48	7.23	29.8
S050719		0.28	1.07	1.72	1.52	869	190	0.44	0.12	28.2	0.67	20.3	3.9	31	3.39	46.3
S050720		11.92	0.04	0.05	4.29	23.3	200	1.65	0.10	13.60	0.05	46.9	7.3	46	7.90	19.3
S050721		11.70	0.04	0.03	3.97	131.0	510	1.40	0.08	13.85	0.08	47.1	5.5	41	7.34	29.2
S050722		11.52	<0.01	0.04	3.28	48.1	540	1.21	0.08	19.25	0.07	38.4	5.4	36	5.54	17.8
S050723		11.17	<0.01	0.03	2.13	97.7	410	0.86	0.07	26.7	0.09	25.2	3.8	24	3.97	12.7
S050724		12.19	<0.01	0.04	2.69	26.7	750	1.06	0.07	23.0	0.09	32.0	4.6	31	5.08	18.5
S050725		10.96	<0.01	0.03	1.62	9.7	410	0.71	0.04	25.7	0.07	26.0	3.9	19	2.24	11.6
S050726		7.15	<0.01	<0.01	0.18	<0.2	40	0.17	0.02	33.7	<0.02	1.13	0.5	2	0.05	2.5
S050727		11.54	0.01	0.04	3.74	10.8	310	1.43	0.09	16.40	0.10	42.6	6.6	41	7.79	24.2
S050728		12.26	<0.01	0.03	2.10	11.4	410	0.83	0.05	25.4	0.09	30.3	3.8	24	3.52	14.8
S050729		11.44	0.01	0.05	3.60	13.9	260	1.32	0.10	18.55	0.08	38.6	6.8	39	7.09	23.7
S050730		11.21	<0.01	0.05	4.32	13.4	170	1.65	0.10	12.95	0.07	47.7	7.1	47	8.60	28.7
S050731		10.56	<0.01	0.06	3.00	12.2	190	1.18	0.07	18.95	0.13	36.2	5.2	34	5.90	18.0
S050732		10.82	<0.01	0.08	2.25	14.3	260	0.88	0.06	23.7	0.10	30.3	4.0	27	3.54	15.7
S050733		0.28	1.09	1.60	1.55	892	200	0.45	0.12	28.7	0.70	19.90	4.2	31	3.46	47.1
S050734		11.88	0.02	0.04	1.36	15.4	680	0.55	0.03	27.0	0.24	20.1	2.2	16	1.76	7.5
S050735		11.46	0.01	0.10	2.20	21.7	630	0.88	0.06	25.5	0.20	30.8	4.0	29	2.73	19.2
S050736		11.55	0.01	0.14	3.76	29.1	140	1.37	0.08	13.65	0.18	48.9	6.3	45	6.14	23.7
S050737		11.26	<0.01	0.08	2.93	20.6	90	1.22	0.08	18.10	0.15	41.1	5.0	35	5.64	17.4
S050738		4.39	<0.01	0.20	6.69	667	140	2.37	0.19	3.31	0.46	50.2	34.2	73	24.9	187.0
S050739		4.02	0.02	0.11	7.04	346	160	1.80	0.22	4.20	0.29	48.7	41.0	76	19.15	167.5
S050740		3.98	0.02	0.09	7.02	356	140	1.81	0.21	4.40	0.29	51.4	40.3	73	20.5	160.0

***** See Appendix Page for comments regarding this certificate *****

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Finalized Date: 3-OCT-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18215039

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Hg-MS42	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni
	Units	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2
S050701		1.58	8.71	0.19	1.6	0.338	0.028	1.75	17.6	18.4	5.06	240	0.33	0.03	5.1	15.4
S050702		1.87	9.89	0.17	2.2	0.772	0.033	1.97	21.2	23.0	5.91	373	0.36	0.03	6.0	18.5
S050703		0.98	5.15	0.19	0.9	1.025	0.018	0.98	12.1	11.1	2.12	290	0.32	0.02	3.1	9.6
S050704		1.19	6.63	0.24	1.2	0.235	0.022	1.24	14.9	13.6	2.45	204	0.40	0.03	3.9	12.0
S050705		1.36	7.68	0.22	1.3	0.138	0.023	1.46	17.6	17.6	2.70	203	0.37	0.03	4.7	13.9
S050706		1.17	6.63	0.24	1.1	0.073	0.024	1.24	14.6	16.4	2.31	173	0.36	0.03	3.8	11.8
S050707		1.45	8.71	0.26	1.6	0.085	0.028	1.67	18.3	19.7	2.82	178	0.54	0.04	5.3	15.2
S050708		1.47	8.81	0.26	2.0	0.068	0.024	1.78	19.3	32.1	2.99	188	0.23	0.06	5.4	15.5
S050709		1.73	10.15	0.22	2.1	0.078	0.030	2.03	23.6	43.1	3.49	198	0.40	0.06	6.4	18.3
S050710		1.69	9.80	0.22	1.9	0.080	0.028	2.00	21.8	41.3	3.40	194	0.40	0.06	6.1	17.8
S050711		1.75	9.78	0.23	2.1	0.070	0.030	2.03	23.5	47.4	3.74	194	0.27	0.08	6.3	17.4
S050712		2.03	11.95	0.22	2.2	0.059	0.038	2.37	26.2	39.7	4.18	204	0.31	0.04	7.3	20.3
S050713		1.88	10.70	0.22	2.3	0.073	0.030	2.17	26.0	59.5	3.78	195	0.21	0.04	7.0	16.5
S050714		2.04	12.20	0.21	2.6	0.098	0.036	2.38	26.9	56.8	3.87	198	0.19	0.04	7.5	20.3
S050715		2.00	11.95	0.20	2.2	0.085	0.035	2.22	26.2	60.0	3.98	196	0.31	0.03	7.3	20.5
S050716		2.14	13.30	0.21	2.4	0.084	0.035	2.49	28.9	44.4	4.55	196	0.22	0.04	8.2	21.5
S050717		2.00	13.15	0.21	2.4	0.068	0.040	2.45	27.9	29.5	4.01	183	0.21	0.03	8.0	21.0
S050718		1.88	10.55	0.10	2.1	0.091	0.029	2.15	26.5	26.2	3.99	191	0.74	0.03	6.9	20.2
S050719		1.15	3.76	0.06	0.7	2.09	0.020	0.66	9.6	6.8	1.24	4570	1.25	0.10	2.0	13.0
S050720		1.91	10.50	0.12	2.2	0.133	0.031	2.14	25.6	25.4	4.00	196	0.40	0.03	6.8	19.5
S050721		1.78	9.75	0.14	2.0	0.167	0.029	1.96	25.2	23.3	3.77	197	0.36	0.03	6.6	17.7
S050722		1.43	8.07	0.12	1.5	0.135	0.025	1.62	21.0	19.5	2.98	188	0.33	0.03	5.3	15.0
S050723		1.03	5.39	0.12	0.9	0.128	0.017	1.02	13.6	14.1	1.98	174	0.22	0.02	3.4	10.0
S050724		1.27	6.87	0.15	1.3	0.081	0.021	1.31	17.3	28.6	3.29	190	0.42	0.02	4.3	12.9
S050725		1.00	4.16	0.14	0.7	0.055	0.014	0.76	13.9	28.9	2.74	190	0.28	0.02	2.6	9.1
S050726		0.11	0.60	0.10	0.1	<0.005	<0.005	0.06	1.3	1.3	1.77	114	<0.05	0.09	0.5	0.3
S050727		1.64	9.15	0.15	1.6	0.084	0.028	1.78	24.2	101.5	3.32	178	0.26	0.03	5.9	17.7
S050728		1.08	5.32	0.13	1.2	0.055	0.018	0.85	16.6	123.5	2.25	179	0.18	0.06	3.6	10.1
S050729		1.71	8.92	0.15	1.6	0.085	0.029	1.42	21.6	171.5	3.10	189	0.20	0.08	5.8	17.9
S050730		2.03	10.65	0.16	1.8	0.100	0.029	1.83	26.3	156.5	4.64	197	0.63	0.07	6.7	20.8
S050731		1.49	7.50	0.14	1.3	0.082	0.021	1.32	19.6	105.0	4.06	192	0.72	0.08	4.8	14.1
S050732		1.17	5.54	0.11	1.1	0.095	0.018	0.98	16.3	103.0	3.49	172	0.72	0.03	3.6	11.5
S050733		1.18	3.84	0.08	0.8	2.24	0.021	0.67	9.9	7.1	1.26	4660	1.21	0.10	2.0	13.1
S050734		0.67	3.29	0.11	0.9	0.091	0.011	0.49	10.6	78.9	2.46	147	1.17	0.02	2.4	5.3
S050735		1.07	5.54	0.14	0.9	0.162	0.016	0.77	17.3	101.5	2.45	152	0.94	0.02	3.7	10.8
S050736		1.87	9.23	0.14	2.2	0.210	0.029	1.43	26.2	87.1	4.77	191	0.93	0.14	6.3	17.2
S050737		1.39	7.22	0.16	1.6	0.103	0.022	1.11	22.3	72.3	4.29	185	1.13	0.31	5.4	13.2
S050738		7.62	17.70	0.11	3.4	4.54	0.102	2.94	23.7	20.9	1.85	1330	0.49	0.07	11.9	61.5
S050739		7.54	19.50	0.11	2.5	4.54	0.092	3.31	22.8	12.4	2.10	1250	0.48	0.02	13.2	68.7
S050740		7.61	18.90	0.11	3.5	4.45	0.093	3.21	26.5	12.2	2.20	1350	0.69	0.02	12.7	65.3

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 3-OCT-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18215039

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl
	Units	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
	LOD	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.01	0.005	0.02
S050701		380	6.0	90.8	<0.002	0.32	1.64	5.2	2	1.1	374	0.38	<0.05	7.05	0.160	1.12
S050702		540	8.6	92.6	<0.002	0.62	4.48	6.0	2	1.3	372	0.45	<0.05	8.19	0.188	3.25
S050703		240	6.1	44.5	<0.002	0.27	6.35	3.2	1	0.7	924	0.24	<0.05	4.07	0.095	4.28
S050704		290	7.6	57.9	0.002	0.24	1.67	4.1	1	0.9	856	0.30	<0.05	5.49	0.121	1.13
S050705		320	7.8	72.3	<0.002	0.27	0.71	4.8	1	1.0	690	0.34	<0.05	6.28	0.143	0.80
S050706		250	6.3	67.1	<0.002	0.15	0.25	4.1	1	0.9	838	0.27	<0.05	5.16	0.118	0.58
S050707		330	8.2	95.4	<0.002	0.26	0.31	5.3	1	1.1	2220	0.38	<0.05	6.89	0.159	0.76
S050708		360	8.6	98.5	<0.002	0.06	0.28	5.4	1	1.1	635	0.41	<0.05	7.21	0.169	0.78
S050709		420	11.3	109.5	<0.002	0.13	0.34	6.2	2	1.3	548	0.46	<0.05	8.58	0.195	0.84
S050710		420	10.8	106.5	<0.002	0.13	0.35	6.0	2	1.2	531	0.45	<0.05	8.10	0.192	0.81
S050711		430	12.4	105.5	<0.002	0.11	0.29	6.0	2	1.2	489	0.46	<0.05	8.71	0.198	0.82
S050712		540	11.1	120.0	<0.002	0.11	0.27	7.4	2	1.5	441	0.55	<0.05	9.53	0.228	0.86
S050713		560	12.4	111.5	<0.002	0.05	0.21	6.7	2	1.4	483	0.50	<0.05	8.96	0.218	0.81
S050714		590	10.1	117.0	<0.002	0.23	0.34	7.5	2	1.6	447	0.58	<0.05	9.83	0.239	0.87
S050715		520	11.3	107.5	<0.002	0.24	0.48	7.3	2	1.5	449	0.53	<0.05	9.77	0.227	0.89
S050716		640	10.5	124.5	<0.002	0.11	0.27	8.3	2	1.7	402	0.63	<0.05	10.80	0.250	0.92
S050717		560	11.7	125.5	<0.002	0.24	0.31	8.1	2	1.7	418	0.60	<0.05	10.55	0.242	0.98
S050718		510	15.0	112.0	0.002	0.30	0.66	6.7	2	1.4	486	0.49	<0.05	9.45	0.217	0.92
S050719		370	62.5	28.6	0.002	0.68	7.75	5.7	1	0.7	1150	0.13	<0.05	2.55	0.080	5.99
S050720		440	11.9	113.0	<0.002	0.27	0.44	6.8	2	1.4	506	0.47	<0.05	9.22	0.214	1.05
S050721		440	11.2	98.0	<0.002	0.42	0.89	6.4	2	1.3	594	0.43	<0.05	9.15	0.203	1.03
S050722		350	9.0	83.1	<0.002	0.31	0.55	5.3	2	1.1	743	0.36	<0.05	7.13	0.161	0.78
S050723		230	5.6	55.0	0.002	0.34	0.74	3.5	1	0.8	881	0.22	<0.05	4.43	0.101	0.64
S050724		370	8.2	65.8	<0.002	0.27	0.32	4.5	2	1.0	809	0.29	<0.05	5.98	0.130	0.58
S050725		180	4.1	41.7	<0.002	0.09	0.21	2.7	1	0.6	819	0.17	<0.05	3.45	0.076	0.38
S050726		60	0.9	1.8	<0.002	0.01	0.08	0.2	1	<0.2	82.6	<0.05	<0.05	0.22	0.006	0.02
S050727		450	6.5	90.7	<0.002	0.17	0.29	6.0	1	1.3	599	0.41	<0.05	8.17	0.181	0.66
S050728		290	4.9	40.1	0.002	0.08	0.19	3.6	1	0.7	825	0.24	<0.05	4.70	0.104	0.26
S050729		460	6.1	65.5	<0.002	0.12	0.24	5.9	1	1.2	724	0.38	<0.05	7.56	0.172	0.44
S050730		620	10.1	86.5	0.002	0.18	0.29	7.0	2	1.4	550	0.45	<0.05	9.26	0.203	0.55
S050731		360	8.7	65.5	0.002	0.19	0.23	5.0	2	1.0	680	0.32	<0.05	6.61	0.146	0.43
S050732		330	8.2	46.3	0.002	0.18	0.26	3.8	2	0.8	842	0.25	<0.05	5.03	0.109	0.42
S050733		380	64.7	28.2	0.002	0.70	7.70	5.8	1	0.7	1180	0.13	0.06	2.55	0.082	6.14
S050734		220	8.4	24.1	<0.002	0.19	0.27	2.2	2	0.5	1590	0.16	<0.05	3.24	0.068	0.33
S050735		470	7.3	39.2	0.002	0.24	0.28	3.8	2	0.8	1115	0.23	<0.05	5.05	0.107	0.40
S050736		670	11.0	70.8	<0.002	0.40	0.47	6.1	3	1.3	777	0.43	<0.05	9.34	0.194	0.52
S050737		480	9.6	58.2	<0.002	0.31	0.34	4.9	2	1.0	666	0.33	<0.05	7.14	0.152	0.41
S050738		720	8.5	161.5	0.002	5.95	2.03	32.0	1	1.9	62.2	0.70	0.25	5.85	0.723	10.70
S050739		670	10.9	147.5	0.002	7.46	4.33	29.6	1	2.1	83.7	0.78	0.27	4.94	0.776	10.35
S050740		660	10.7	156.0	0.003	7.47	4.14	30.1	1	2.0	83.9	0.76	0.30	6.09	0.763	9.90

***** See Appendix Page for comments regarding this certificate *****

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VANCOUVER BC V6B 1L8

Finalized Date: 3-OCT-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18215039

Sample Description	Method Analyte Units LOD	ME-MS61 U ppm 0.1	ME-MS61 V ppm 1	ME-MS61 W ppm 0.1	ME-MS61 Y ppm 0.1	ME-MS61 Zn ppm 2	ME-MS61 Zr ppm 0.5
S050701		5.1	47	2.1	10.9	55	56.3
S050702		6.0	60	2.9	13.3	62	69.1
S050703		11.3	30	1.6	7.2	38	29.2
S050704		11.2	39	1.4	8.6	46	40.8
S050705		8.6	45	1.2	9.9	42	46.8
S050706		9.3	38	0.6	8.3	41	35.6
S050707		11.6	49	0.7	10.4	46	54.8
S050708		7.2	47	0.6	11.6	52	58.8
S050709		9.7	57	0.7	13.4	53	67.2
S050710		9.2	56	0.7	12.8	55	64.9
S050711		7.0	57	0.9	13.9	59	72.8
S050712		5.6	65	0.9	14.8	65	76.2
S050713		6.2	60	0.8	15.7	66	76.2
S050714		5.1	65	1.0	15.4	67	74.8
S050715		6.4	63	1.1	14.8	66	79.3
S050716		4.7	70	1.0	16.0	67	81.0
S050717		5.0	65	1.4	15.1	70	81.5
S050718		6.3	63	1.2	14.8	69	74.7
S050719		3.9	26	3.8	14.3	122	25.6
S050720		7.6	61	0.9	13.4	57	71.3
S050721		5.8	57	1.2	13.4	58	73.5
S050722		8.1	47	1.2	10.9	47	61.5
S050723		10.3	33	1.0	7.2	33	38.5
S050724		10.6	43	0.9	9.6	44	48.0
S050725		6.3	28	0.4	7.8	32	26.1
S050726		0.3	1	0.1	2.6	4	2.8
S050727		4.1	55	0.9	13.4	54	57.7
S050728		7.2	39	0.4	8.8	40	37.0
S050729		7.9	53	0.6	12.3	55	54.5
S050730		6.3	68	0.8	14.8	62	62.5
S050731		10.5	50	0.5	10.5	55	49.8
S050732		10.3	40	0.5	8.7	37	37.4
S050733		3.9	27	7.9	14.5	122	25.2
S050734		11.7	22	0.4	6.1	30	32.6
S050735		12.7	45	0.5	8.9	45	36.3
S050736		6.9	62	0.8	14.9	67	78.0
S050737		9.1	53	0.6	11.1	52	59.9
S050738		1.5	230	6.8	27.9	105	121.0
S050739		1.3	244	12.6	22.0	109	90.3
S050740		1.6	237	12.1	26.9	108	131.5

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Project: Nadaleen

Finalized Date: 3-OCT-2018
Account: RCM

CERTIFICATE OF ANALYSIS WH18215039

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Applies to Method: REE's may not be totally soluble in this method.
ME-MS61

LABORATORY ADDRESSES

Applies to Method: Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.

CRU-31	CRU-QC	LOG-21	LOG-21d
LOG-23	PUL-31	PUL-31d	PUL-QC
SPL-21	SPL-21d	WEI-21	

Applies to Method: Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Au-AA25	Hg-MS42	ME-MS61

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VANCOUVER BC V6B 1L8

Finalized Date: 3-OCT-2018
Account: RCM

CERTIFICATE WH18215042

Project: Nadaleen

P.O. No.: N18-056

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 31-AUG-2018.

The following have access to data associated with this certificate:

ANDREW CARNE	JULIA LANE	

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
LOG-23	Pulp Login - Rcvd with Barcode
LOG-21d	Sample logging - ClientBarCode Dup
SPL-21d	Split sample - duplicate
PUL-31d	Pulverize Split - duplicate

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid ICP-MS	
Hg-MS42	Trace Hg by ICPMS	ICP-MS

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:

Colin Ramshaw, Vancouver Laboratory Manager

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Finalized Date: 3-OCT-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18215042

Sample Description	Method	WEI-21	Au-AA25	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Recvd Wt.	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu
	Units	kg	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.02	0.01	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2
S049211		12.17	<0.01	0.06	4.21	63.6	170	1.09	0.17	14.45	0.03	62.9	6.3	36	10.30	17.9
S049212		11.58	<0.01	0.09	6.94	21.5	240	1.64	0.27	10.45	0.03	82.3	9.8	60	22.1	25.4
S049213		11.92	<0.01	0.07	5.70	12.7	220	1.48	0.21	13.60	0.02	68.3	8.9	48	17.05	21.0
S049214		2.96	<0.01	0.08	4.68	11.4	280	1.27	0.20	13.40	0.03	79.8	9.4	37	7.00	16.0
S049215		4.14	<0.01	0.51	6.15	13.8	290	1.70	0.26	8.58	0.02	80.7	12.3	48	10.15	20.4
S049216		10.96	<0.01	0.11	6.26	14.3	330	1.71	0.27	4.14	0.04	78.8	10.0	57	9.86	23.3
S049217		11.77	<0.01	0.08	6.55	14.1	290	1.72	0.30	4.82	0.06	89.1	10.1	57	10.15	22.9
S049218		10.74	<0.01	0.08	7.09	15.3	310	1.91	0.31	5.67	0.06	80.8	11.7	61	12.00	29.4
S049219		10.57	<0.01	0.03	6.78	15.7	310	1.77	0.29	5.64	<0.02	81.5	10.0	59	12.45	24.5
S049220		0.28	1.43	0.88	3.03	>10000	190	0.65	0.12	17.55	0.39	35.8	7.1	42	8.80	26.0
S049221		8.98	<0.01	0.04	6.07	31.2	350	1.46	0.23	12.60	<0.02	79.7	8.2	43	11.55	20.4
S049222		11.22	<0.01	0.03	6.41	23.7	290	1.53	0.25	11.70	<0.02	75.9	8.2	46	13.15	22.0
S049223		11.50	<0.01	0.05	6.17	21.4	230	1.44	0.24	16.55	0.03	67.5	9.6	43	14.05	22.4
S049224		10.83	<0.01	0.08	6.37	22.9	230	1.38	0.26	13.00	0.07	66.0	11.3	48	14.45	24.9
S049225		<0.02	<0.01	0.06	6.33	24.0	230	1.54	0.25	12.95	0.04	66.6	11.6	49	15.10	24.2
S049226		11.51	<0.01	0.03	8.88	10.9	310	2.40	0.44	1.07	0.02	49.6	12.4	78	21.3	34.8
S049227		10.83	<0.01	0.13	7.22	35.9	280	1.69	0.33	8.21	0.14	67.6	19.0	61	17.80	36.0
S049228		11.40	<0.01	0.03	4.34	15.0	220	1.04	0.17	20.5	0.04	48.9	7.6	33	11.30	11.9
S049229		11.45	<0.01	0.04	6.32	9.1	250	1.44	0.24	13.85	0.03	68.1	9.4	45	20.7	23.5
S049230		11.44	<0.01	0.04	5.73	8.4	210	1.17	0.22	16.70	0.02	58.8	8.1	39	21.3	20.0
S049231		11.35	<0.01	0.04	7.12	11.7	250	1.58	0.29	12.60	0.02	73.4	10.2	47	29.0	28.3
S049232		7.61	<0.01	0.03	7.28	18.3	310	1.88	0.30	7.10	<0.02	69.3	11.7	61	34.2	22.5
S049233		7.60	<0.01	0.04	8.21	49.7	360	2.58	0.38	2.64	0.02	68.7	15.1	71	37.3	25.5
S049234		8.14	0.01	0.05	9.59	106.5	370	2.84	0.45	0.85	<0.02	76.6	20.6	76	39.1	43.3
S049235		11.68	1.88	0.14	7.43	1600	450	2.27	0.37	4.43	0.19	67.2	22.5	58	26.3	28.6
S049236		12.30	<0.01	0.04	9.15	50.2	400	2.81	0.40	0.69	<0.02	74.1	16.1	71	41.3	32.3
S049237		10.97	<0.01	0.03	8.83	49.2	350	2.70	0.40	0.99	0.02	68.2	14.5	71	45.3	32.7
S049238		5.78	<0.01	0.04	7.05	254	380	2.27	0.35	4.12	0.02	60.9	11.5	62	32.3	66.4
S049239		6.18	0.01	0.03	7.34	330	380	2.02	0.37	4.26	0.02	65.1	13.2	61	33.6	41.1
S049240		11.90	<0.01	0.06	6.72	35.8	340	1.98	0.31	6.71	0.04	57.9	14.1	55	34.6	20.0
S049241		11.80	0.01	0.07	6.36	85.2	300	1.74	0.24	9.79	0.04	63.7	10.9	48	30.4	16.9
S049242		11.75	<0.01	0.05	4.52	28.3	210	1.21	0.17	15.55	0.04	47.3	7.9	35	19.70	23.4
S049243		11.84	<0.01	0.06	2.95	30.3	170	0.81	0.11	21.4	0.06	32.5	6.4	25	10.95	10.2
S049244		11.67	<0.01	0.05	4.91	72.6	360	1.32	0.12	11.90	0.04	52.2	9.2	47	22.0	21.6
S049245		0.30	1.10	1.51	1.56	882	200	0.41	0.12	29.2	0.69	19.70	4.4	30	3.40	44.7
S049246		11.93	<0.01	0.05	3.03	52.7	180	0.92	0.07	16.40	0.03	36.1	5.8	33	11.05	9.6
S049247		11.65	<0.01	0.05	2.95	40.5	230	0.92	0.06	14.55	0.04	34.1	5.3	32	11.40	11.9
S049248		7.05	<0.01	<0.01	0.13	0.3	30	0.09	0.01	35.7	<0.02	1.36	0.5	2	0.09	1.3
S049249		11.85	<0.01	0.09	4.74	65.8	250	1.38	0.15	13.35	0.07	47.9	7.5	39	21.1	30.1
S049250		12.45	0.02	0.05	3.27	57.6	190	0.99	0.11	20.8	0.05	37.7	5.6	27	12.25	11.4

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 3-OCT-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18215042

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Hg-MS42	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni
	Units	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2
S049211		3.53	9.64	0.08	1.8	0.318	0.031	2.10	32.4	9.5	2.87	488	0.30	0.03	6.2	17.1
S049212		2.82	15.90	0.12	2.8	0.268	0.051	3.40	45.5	15.6	1.50	278	0.38	0.04	9.8	25.6
S049213		2.63	13.05	0.12	2.5	0.076	0.047	2.78	37.1	17.9	1.20	296	0.25	0.03	8.4	23.3
S049214		3.33	10.75	0.13	2.3	0.027	0.044	2.15	36.4	27.4	0.71	525	0.25	0.03	7.4	21.5
S049215		3.27	14.70	0.12	2.9	0.032	0.051	2.86	40.7	30.5	0.62	471	0.33	0.04	9.2	26.1
S049216		3.13	15.75	0.13	2.9	0.017	0.058	3.03	39.6	34.5	0.67	464	0.27	0.04	10.2	24.6
S049217		3.09	15.80	0.15	3.0	0.043	0.055	3.12	46.5	47.1	0.87	431	0.30	0.04	10.4	23.9
S049218		3.40	17.95	0.14	2.8	0.106	0.052	3.44	42.0	60.2	0.98	353	0.38	0.04	10.7	30.3
S049219		3.87	16.50	0.13	3.1	0.023	0.053	3.27	42.8	42.8	1.13	509	0.23	0.04	10.9	26.0
S049220		2.10	7.41	0.07	1.7	4.74	0.028	1.38	18.2	10.5	2.19	1260	1.33	0.10	4.3	17.9
S049221		2.78	14.05	0.14	2.5	0.021	0.051	2.85	43.5	33.2	0.90	301	0.17	0.03	8.6	20.6
S049222		2.63	15.00	0.14	2.7	0.013	0.049	3.06	43.1	28.7	0.97	284	0.11	0.03	8.8	22.2
S049223		3.02	14.35	0.15	2.0	0.012	0.047	2.91	38.9	26.4	1.00	400	0.28	0.03	7.8	23.1
S049224		3.27	14.15	0.12	2.2	0.032	0.052	3.03	37.9	30.8	1.04	564	0.76	0.04	8.0	26.6
S049225		3.31	14.75	0.12	2.2	0.042	0.051	3.02	37.9	31.6	1.04	579	0.49	0.03	8.3	26.2
S049226		4.11	23.1	0.13	2.8	0.017	0.076	4.62	24.0	59.9	1.10	697	0.17	0.05	11.9	33.1
S049227		3.98	17.45	0.13	2.4	0.105	0.059	3.62	38.2	40.9	1.23	497	0.88	0.04	9.2	44.4
S049228		2.33	9.82	0.10	1.6	0.030	0.034	2.10	26.6	21.4	0.85	459	0.26	0.03	5.4	16.0
S049229		2.89	14.25	0.12	2.2	0.019	0.047	3.12	37.3	22.1	1.15	447	0.20	0.03	7.8	21.4
S049230		2.56	12.90	0.14	1.7	0.016	0.042	2.90	34.3	17.4	1.00	470	0.19	0.03	6.6	19.1
S049231		3.07	16.20	0.15	2.1	0.056	0.052	3.65	41.9	14.8	1.17	601	0.24	0.03	8.4	24.4
S049232		3.96	18.85	0.15	2.4	0.080	0.062	4.17	37.6	16.0	1.31	630	0.21	0.04	9.9	28.2
S049233		4.42	21.8	0.14	2.8	0.160	0.070	4.67	34.6	18.1	1.22	788	0.35	0.04	11.4	34.3
S049234		4.34	24.2	0.14	2.9	0.379	0.071	5.32	39.7	18.3	0.89	482	0.38	0.04	12.5	41.5
S049235		4.48	19.70	0.14	2.2	1.255	0.067	4.14	35.0	13.2	1.47	985	0.87	0.03	9.6	41.8
S049236		4.29	23.2	0.15	2.9	0.162	0.066	5.11	38.2	18.7	0.98	607	0.36	0.04	11.7	36.0
S049237		3.73	23.3	0.15	3.0	0.080	0.073	5.01	35.2	20.1	1.08	515	0.31	0.04	12.0	36.0
S049238		3.42	20.3	0.15	2.8	0.148	0.060	4.30	30.3	19.3	1.51	450	0.20	0.04	10.9	33.2
S049239		3.54	19.85	0.13	2.7	0.194	0.065	4.28	34.7	18.6	1.59	482	0.25	0.04	10.6	36.1
S049240		3.69	17.45	0.13	2.8	0.060	0.068	3.83	32.0	16.6	2.06	698	0.25	0.05	10.1	29.3
S049241		3.41	14.70	0.12	2.6	0.050	0.061	3.37	34.9	14.3	2.54	579	0.31	0.04	8.8	23.2
S049242		2.88	10.85	0.10	2.0	0.033	0.047	2.36	25.7	10.5	3.62	588	0.32	0.03	6.3	17.6
S049243		2.19	6.95	0.10	1.3	0.042	0.029	1.57	17.1	7.6	3.43	534	0.46	0.03	4.2	12.6
S049244		2.67	11.75	0.11	2.4	0.057	0.040	2.58	28.0	15.7	3.84	421	0.68	0.03	7.4	21.3
S049245		1.19	3.71	0.08	0.7	2.22	0.023	0.68	9.5	6.0	1.26	4710	1.22	0.10	2.0	12.8
S049246		2.73	7.40	0.08	1.8	0.050	0.023	1.58	19.5	10.8	5.24	466	0.76	0.02	4.7	13.8
S049247		2.52	7.11	0.09	2.1	0.041	0.023	1.56	18.0	11.2	6.66	475	0.69	0.03	4.8	12.6
S049248		0.14	0.39	0.11	0.1	<0.005	0.006	0.05	1.3	1.2	2.29	138	<0.05	0.06	0.2	0.3
S049249		1.84	11.35	0.16	2.3	0.088	0.034	2.46	26.6	15.3	4.86	316	0.61	0.03	6.9	16.8
S049250		1.47	8.05	0.15	1.5	0.088	0.032	1.73	20.5	10.8	4.26	357	0.37	0.03	4.8	12.8

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Finalized Date: 3-OCT-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18215042

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl
	Units	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
	LOD	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.01	0.005	0.02
S049211		530	27.8	81.6	<0.002	1.59	0.58	6.3	1	1.2	218	0.41	<0.05	8.45	0.217	1.21
S049212		530	30.5	128.5	<0.002	1.63	0.42	10.3	1	1.9	230	0.65	0.06	13.15	0.334	1.27
S049213		190	22.8	113.0	<0.002	1.28	0.49	8.3	1	1.6	298	0.56	<0.05	11.15	0.289	0.85
S049214		910	23.2	91.4	<0.002	0.47	0.59	9.2	<1	1.3	421	0.52	<0.05	9.78	0.266	0.44
S049215		560	26.1	117.0	<0.002	0.49	0.60	10.2	<1	1.7	268	0.63	0.06	12.40	0.303	0.61
S049216		300	22.5	104.0	0.002	0.27	0.47	10.0	<1	2.0	140.0	0.70	<0.05	12.10	0.352	0.64
S049217		330	24.6	113.0	<0.002	0.34	0.54	10.1	1	2.0	157.5	0.72	0.06	12.75	0.376	0.62
S049218		330	24.8	104.0	<0.002	0.42	0.52	10.4	1	2.1	205	0.72	0.06	12.05	0.358	0.75
S049219		250	12.2	115.0	<0.002	0.13	0.38	10.3	<1	2.1	184.5	0.73	0.06	12.80	0.367	0.66
S049220		420	17.0	61.7	0.003	2.29	52.1	6.6	2	1.0	798	0.29	0.08	4.98	0.191	16.20
S049221		270	12.0	118.0	<0.002	0.08	0.37	9.1	<1	1.7	390	0.58	0.05	11.50	0.309	0.56
S049222		220	11.0	127.0	<0.002	0.09	0.29	10.1	<1	1.8	359	0.59	0.05	12.10	0.315	0.59
S049223		620	17.7	117.5	<0.002	0.42	0.28	9.5	1	1.6	548	0.49	0.06	10.45	0.262	0.59
S049224		490	28.8	113.5	0.002	0.67	0.52	9.7	<1	1.7	416	0.54	0.05	9.76	0.293	0.64
S049225		480	25.2	117.5	0.002	0.69	0.35	9.9	<1	1.7	404	0.53	0.07	9.67	0.297	0.64
S049226		440	18.3	103.5	<0.002	0.20	0.27	14.4	<1	2.7	94.0	0.77	0.09	9.48	0.395	0.90
S049227		500	57.6	113.5	<0.002	1.31	0.68	10.9	1	2.1	248	0.61	0.11	10.75	0.319	1.02
S049228		460	13.7	79.8	0.002	0.31	0.22	6.6	<1	1.2	600	0.35	0.05	6.72	0.186	0.51
S049229		420	14.1	118.5	<0.002	0.24	0.25	9.7	<1	1.7	354	0.54	0.07	9.68	0.264	0.65
S049230		460	11.7	106.0	<0.002	0.21	0.19	8.1	<1	1.5	437	0.44	0.07	8.49	0.228	0.60
S049231		480	15.7	129.0	<0.002	0.27	0.25	9.9	<1	1.9	357	0.56	0.08	11.00	0.277	0.76
S049232		490	15.2	113.5	<0.002	0.20	0.29	11.0	<1	2.2	219	0.68	0.08	9.72	0.329	0.91
S049233		410	17.5	124.0	<0.002	1.88	0.33	13.6	<1	2.5	123.5	0.74	0.08	10.80	0.383	1.87
S049234		600	19.7	161.5	<0.002	3.37	0.59	14.4	<1	2.8	95.3	0.84	0.09	13.20	0.409	2.00
S049235		1670	41.3	94.0	<0.002	3.44	4.23	11.3	<1	2.2	208	0.67	0.09	10.05	0.324	5.75
S049236		440	16.6	150.5	0.002	1.19	0.35	14.6	<1	2.6	90.6	0.76	0.05	12.65	0.398	1.44
S049237		340	15.5	150.5	<0.002	0.40	0.37	15.0	<1	2.6	87.1	0.81	0.08	11.90	0.401	1.13
S049238		1060	12.3	95.7	<0.002	1.47	0.39	11.7	1	2.3	159.5	0.73	0.09	9.20	0.352	1.48
S049239		740	11.9	110.5	<0.002	1.56	0.51	11.9	<1	2.3	164.0	0.68	0.06	10.30	0.350	1.59
S049240		630	10.5	118.0	0.002	0.19	0.40	11.0	1	2.2	209	0.65	0.07	8.98	0.341	0.83
S049241		650	8.9	134.5	<0.002	0.16	0.37	11.0	<1	1.9	307	0.58	0.08	9.67	0.302	0.78
S049242		490	7.3	93.2	<0.002	0.11	0.24	7.4	1	1.5	422	0.41	<0.05	7.15	0.210	0.62
S049243		530	6.5	59.3	<0.002	0.11	0.23	5.0	1	0.9	705	0.28	<0.05	4.65	0.141	0.48
S049244		600	8.7	90.1	0.002	0.20	0.36	7.5	2	1.6	284	0.49	<0.05	8.76	0.233	0.68
S049245		380	59.3	28.2	0.003	0.70	7.75	5.4	1	0.7	1175	0.13	<0.05	2.30	0.083	6.13
S049246		330	5.7	53.9	0.002	0.16	0.32	4.6	1	1.0	309	0.32	<0.05	5.91	0.143	0.48
S049247		400	6.4	51.5	<0.002	0.16	0.25	4.4	1	1.0	252	0.32	<0.05	6.00	0.145	0.39
S049248		80	<0.5	1.1	<0.002	0.01	<0.05	0.2	1	<0.2	81.2	<0.05	<0.05	0.14	0.006	<0.02
S049249		650	8.1	90.0	0.002	0.18	0.37	7.8	1	1.5	310	0.45	<0.05	7.85	0.226	0.77
S049250		890	6.6	64.4	0.002	0.15	0.23	5.7	1	1.0	500	0.30	<0.05	5.43	0.157	0.55

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CERTIFICATE OF ANALYSIS WH18215042

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	U	V	W	Y	Zn	Zr
	Units	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.1	1	0.1	0.1	2	0.5
S049211		2.5	48	1.4	16.8	22	63.1
S049212		3.6	76	1.2	19.0	26	98.3
S049213		2.9	63	1.0	17.1	39	87.8
S049214		3.5	57	1.1	26.4	62	83.9
S049215		3.2	69	2.7	21.3	66	97.2
S049216		2.5	77	1.5	18.2	86	104.0
S049217		2.4	78	1.4	18.8	123	103.0
S049218		3.2	83	1.3	18.3	134	97.7
S049219		2.4	83	1.4	19.5	64	105.5
S049220		4.1	55	3.9	15.9	60	53.7
S049221		2.9	66	1.1	18.8	54	86.1
S049222		2.6	74	1.1	21.3	57	93.0
S049223		3.3	67	1.0	18.0	87	74.9
S049224		3.1	76	1.1	18.1	121	81.8
S049225		3.0	76	1.1	18.5	114	80.5
S049226		2.3	118	1.7	15.0	90	97.0
S049227		3.3	90	1.2	19.8	254	83.1
S049228		3.0	50	0.7	13.4	68	55.4
S049229		2.6	71	1.1	18.9	72	74.2
S049230		2.8	60	0.9	15.5	63	61.3
S049231		2.9	70	1.2	18.4	65	72.2
S049232		2.9	85	1.4	19.9	54	83.9
S049233		2.8	106	1.5	20.0	61	99.4
S049234		2.4	110	2.4	20.2	68	98.2
S049235		5.9	86	4.0	24.9	142	76.9
S049236		2.4	103	1.6	19.5	47	97.6
S049237		2.4	108	1.7	18.8	49	104.0
S049238		2.8	96	1.8	19.6	43	95.4
S049239		2.9	94	1.8	19.8	44	95.7
S049240		3.9	100	1.4	18.5	34	103.0
S049241		5.5	90	1.2	20.0	34	95.4
S049242		7.7	67	1.0	15.2	28	72.1
S049243		8.2	46	0.6	11.0	20	48.9
S049244		6.2	72	0.9	14.5	25	86.0
S049245		3.7	26	10.6	13.7	123	25.4
S049246		5.6	47	0.6	10.5	19	65.5
S049247		5.1	47	0.5	10.8	19	75.3
S049248		0.2	1	<0.1	2.3	4	2.4
S049249		7.1	72	0.9	13.4	42	85.1
S049250		7.5	48	0.6	12.1	34	55.4

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CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Applies to Method: REE's may not be totally soluble in this method.
ME-MS61

LABORATORY ADDRESSES

Applies to Method: Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.

CRU-31	CRU-QC	LOG-21	LOG-21d
LOG-23	PUL-31	PUL-31d	PUL-QC
SPL-21	SPL-21d	WEI-21	

Applies to Method: Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Au-AA25	Hg-MS42	ME-MS61

ALS Canada Ltd.

2103 Dollarton Hwy
North Vancouver BC V7H 0A7
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www.alsglobal.com/geochemistry

To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 11-OCT-2018
Account: RCM

CERTIFICATE WH18222641

Project: Nadaleen

P.O. No.: N18-057

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 7-SEP-2018.

The following have access to data associated with this certificate:

ANDREW CARNE	JULIA LANE	

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
LOG-23	Pulp Login - Rcvd with Barcode
LOG-21d	Sample logging - ClientBarCode Dup
SPL-21d	Split sample - duplicate
PUL-31d	Pulverize Split - duplicate

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid ICP-MS	
Hg-MS42	Trace Hg by ICPMS	ICP-MS

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:

Colin Ramshaw, Vancouver Laboratory Manager

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CERTIFICATE OF ANALYSIS WH18222641

Sample Description	Method	WEI-21	Au-AA25	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Recvd Wt.	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu
	Units	kg	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.02	0.01	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2
S050741		12.03	0.21	0.10	6.81	1270	170	1.89	0.20	4.39	0.34	48.2	36.2	68	15.55	153.5
S050742		7.98	0.14	0.21	6.88	936	140	1.97	0.21	4.05	0.25	47.2	36.3	69	20.6	147.5
S050743		12.24	0.06	0.09	6.73	643	120	1.92	0.19	3.89	0.26	43.8	35.0	70	22.1	152.5
S050744		11.40	0.01	0.12	7.06	106.0	180	2.21	0.21	3.60	0.26	50.5	35.1	68	27.8	150.5
S050745		12.26	0.01	0.08	6.67	91.7	240	1.92	0.22	4.39	0.24	59.5	27.3	60	23.8	104.5
S050746		11.34	0.01	0.11	6.61	223	260	1.76	0.20	3.64	0.23	52.7	29.7	60	19.90	120.5
S050747		12.65	0.01	0.08	7.70	288	250	2.30	0.24	2.77	0.16	57.0	32.7	70	24.3	159.0
S050748		12.97	0.03	0.08	4.22	222	170	1.23	0.16	9.13	0.16	40.2	17.2	38	13.50	53.1
S050749		11.75	0.03	0.08	7.50	269	210	2.12	0.22	3.24	0.25	53.6	28.1	72	26.5	151.5
S050750		<0.02	0.02	0.08	7.58	275	210	2.19	0.23	3.24	0.25	56.1	28.4	71	27.6	152.0
S050751		11.22	0.02	0.05	6.73	582	150	1.98	0.20	4.12	0.27	47.6	30.3	66	28.6	145.0
S050752		11.67	0.02	0.07	6.65	373	200	1.77	0.21	4.05	0.30	49.6	31.0	64	21.7	144.5
S050753		11.93	0.01	0.07	6.68	72.2	170	1.42	0.19	3.93	0.32	46.4	30.4	69	39.4	144.0
S050754		12.09	<0.01	0.07	6.47	56.7	170	1.25	0.18	3.96	0.28	47.8	29.6	67	51.0	138.0
S050755		11.09	0.01	0.08	6.79	90.6	260	1.72	0.23	4.56	0.28	54.3	28.3	67	41.0	127.0
S050756		10.71	0.18	0.09	5.48	541	230	1.56	0.22	7.62	0.27	56.0	20.9	57	15.35	89.2
S050757		6.96	0.01	0.01	0.15	1.3	30	0.11	0.02	32.4	<0.02	1.48	0.9	1	0.32	2.2
S050758		10.34	0.44	0.03	4.83	1485	300	1.24	0.18	8.20	0.20	65.5	9.3	45	16.40	28.7
S050759		10.46	0.02	0.08	8.75	349	400	2.85	0.30	1.89	0.08	102.5	17.6	66	25.8	45.5
S050760		12.18	<0.01	0.10	8.82	100.0	620	3.56	0.25	1.60	0.35	109.5	14.8	66	38.0	37.0
S050761		0.28	1.05	1.30	1.50	811	190	0.37	0.14	27.2	0.69	20.4	4.1	28	3.37	45.1
S050762		11.96	0.01	0.11	8.57	81.6	340	3.22	0.30	1.14	0.42	100.5	14.5	69	54.3	36.8
S050763		11.68	<0.01	0.09	8.74	49.4	410	3.08	0.35	1.58	0.26	99.9	15.9	70	46.5	37.9
S050764		11.70	<0.01	0.08	8.92	121.5	360	3.11	0.35	1.50	0.16	105.5	16.3	72	33.2	39.4
S050765		12.65	0.01	0.09	8.53	185.5	610	2.84	0.39	2.29	0.20	86.8	17.8	68	28.9	43.5
S050766		10.96	<0.01	0.10	8.60	110.5	390	3.48	0.37	1.33	0.25	84.7	19.2	76	35.4	46.9
S050767		11.89	0.02	0.09	8.74	86.3	380	3.03	0.42	2.06	0.29	87.7	18.9	72	28.7	47.2
S050768		10.98	0.01	0.09	8.65	189.5	390	2.74	0.39	2.85	0.13	78.5	18.1	72	27.8	42.6
S050769		11.55	0.01	0.07	8.42	116.5	380	2.89	0.46	3.21	0.16	90.1	16.1	71	27.8	43.1
S050770		11.12	<0.01	0.08	8.15	93.1	590	2.83	0.44	2.65	0.20	87.9	16.7	73	24.7	46.5
S050771		10.47	0.02	0.12	8.82	140.0	540	2.87	0.41	2.42	0.29	91.4	18.7	73	29.9	49.4
S050772		6.44	0.01	0.11	8.13	161.5	410	2.52	0.42	2.52	0.30	93.5	18.0	70	26.4	43.6
S050773		6.10	0.01	0.11	8.10	159.0	400	2.55	0.41	2.57	0.26	87.3	17.7	71	25.6	44.5
S050774		10.11	0.01	0.07	8.28	182.5	390	2.50	0.39	2.91	0.38	92.8	18.0	70	27.9	45.3
S050775		11.27	0.90	0.17	6.49	1575	380	1.82	0.25	5.16	0.23	77.5	14.3	60	18.20	36.5
S050776		0.28	1.10	1.33	1.54	836	190	0.41	0.12	27.7	0.71	19.90	4.3	29	3.45	45.6
S050777		11.70	0.24	0.11	7.48	572	280	1.80	0.31	2.29	0.15	75.1	19.3	74	21.1	56.7
S050778		12.04	0.05	0.09	8.61	268	300	2.66	0.36	1.40	0.13	82.7	20.7	81	31.7	63.1
S050779		11.72	0.02	0.07	7.94	188.5	240	2.35	0.35	2.10	0.07	84.3	20.3	74	27.8	65.3
S050780		11.85	0.79	0.33	6.38	3500	340	1.50	0.26	1.69	0.22	64.7	17.5	67	14.80	52.5

***** See Appendix Page for comments regarding this certificate *****

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Finalized Date: 11-OCT-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18222641

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Hg-MS42	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni
	Units	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2
S050741		7.25	19.70	0.13	3.2	4.68	0.092	3.14	22.1	12.1	2.18	2600	0.44	0.02	12.8	63.2
S050742		7.81	19.80	0.12	2.9	4.57	0.098	3.13	21.2	13.1	2.04	1980	0.28	0.02	12.7	60.2
S050743		7.63	19.65	0.11	2.7	3.03	0.095	3.07	20.3	17.6	1.99	1380	0.28	0.02	12.2	56.7
S050744		7.72	20.5	0.12	3.2	1.140	0.097	3.22	23.2	60.6	2.47	924	0.29	0.02	14.0	57.3
S050745		5.81	19.05	0.10	3.0	0.434	0.082	3.17	26.9	22.9	2.92	805	0.50	0.03	12.9	44.9
S050746		6.97	18.50	0.11	2.6	0.505	0.094	3.10	23.9	23.2	2.41	660	0.47	0.02	11.2	53.1
S050747		6.75	22.0	0.13	3.8	1.755	0.112	3.58	26.2	22.6	1.67	498	0.49	0.04	14.9	52.9
S050748		7.51	11.40	0.08	2.1	4.00	0.061	2.01	18.6	10.3	4.48	1260	3.71	0.02	8.0	32.2
S050749		6.94	20.9	0.10	2.5	3.21	0.098	3.54	24.2	15.7	1.79	657	0.39	0.02	13.4	48.2
S050750		7.01	21.6	0.11	2.6	3.03	0.104	3.58	25.3	16.6	1.79	661	0.42	0.03	13.8	49.3
S050751		7.37	18.90	0.10	3.2	3.39	0.101	3.00	21.7	30.1	1.98	1200	0.35	0.02	12.6	51.2
S050752		7.32	19.15	0.09	3.0	2.54	0.101	2.44	22.3	120.0	1.95	1080	0.32	0.02	13.1	51.8
S050753		7.45	18.55	0.09	2.8	0.361	0.090	1.84	20.7	183.0	3.34	1140	0.33	0.41	12.6	51.4
S050754		7.26	17.95	0.08	2.6	0.084	0.092	2.01	20.7	252	3.41	1100	0.34	0.38	12.1	48.0
S050755		6.47	18.50	0.10	2.8	0.506	0.093	2.74	25.4	215	2.88	916	1.64	0.06	12.5	47.4
S050756		5.02	14.95	0.11	2.8	4.63	0.065	2.56	23.8	12.9	3.67	1340	4.86	0.03	9.4	39.2
S050757		0.16	0.47	0.09	0.1	0.007	<0.005	0.05	1.3	2.2	1.87	124	0.12	0.04	0.2	1.1
S050758		2.62	13.35	0.11	2.6	3.03	0.040	2.26	30.6	11.1	4.07	1680	1.10	0.03	8.5	24.4
S050759		4.95	24.7	0.18	3.3	1.170	0.070	4.08	45.9	13.8	1.21	554	1.57	0.04	11.9	37.5
S050760		3.93	26.4	0.20	3.4	0.697	0.072	3.99	49.6	25.7	1.21	572	3.55	0.04	12.5	35.4
S050761		1.13	3.97	0.08	0.8	2.33	0.025	0.65	9.2	6.1	1.19	4560	1.35	0.10	2.1	12.7
S050762		4.30	24.7	0.19	3.8	0.587	0.070	3.96	45.3	36.4	1.58	428	3.05	0.05	12.6	33.0
S050763		4.67	24.1	0.16	3.5	0.610	0.079	4.08	46.2	30.2	1.81	583	3.43	0.05	12.2	36.2
S050764		4.39	25.6	0.18	3.3	0.656	0.078	3.95	47.9	16.0	1.67	556	3.19	0.05	12.7	37.3
S050765		4.72	23.8	0.16	3.0	1.005	0.082	3.78	39.2	23.8	1.43	795	3.13	0.05	11.5	39.3
S050766		4.57	25.0	0.16	3.1	0.721	0.078	3.85	39.1	22.6	1.61	718	2.64	0.05	11.8	41.5
S050767		4.93	24.0	0.17	3.2	0.824	0.071	3.94	40.7	13.7	1.94	910	4.84	0.05	11.4	41.6
S050768		4.64	23.3	0.18	3.0	0.804	0.071	3.95	36.1	15.0	1.90	706	1.97	0.05	11.6	39.8
S050769		4.44	23.8	0.18	3.0	0.573	0.070	4.01	42.6	13.6	2.17	522	1.74	0.05	11.8	34.6
S050770		4.39	23.3	0.18	3.1	0.502	0.077	3.84	39.6	15.0	1.86	415	2.19	0.05	11.6	35.9
S050771		5.01	24.5	0.17	3.4	0.808	0.079	4.11	42.3	15.0	1.94	692	3.02	0.05	12.1	43.1
S050772		4.60	22.9	0.19	3.2	1.055	0.070	3.83	42.5	14.5	1.91	597	4.31	0.04	11.2	40.3
S050773		4.58	22.4	0.17	3.1	1.095	0.076	3.65	39.8	15.0	1.91	589	4.28	0.04	11.2	41.1
S050774		4.67	23.4	0.15	3.5	1.420	0.080	3.78	42.0	12.8	1.87	530	3.57	0.04	12.1	42.0
S050775		4.20	18.00	0.16	2.9	3.91	0.057	3.11	35.7	10.2	2.63	1260	2.35	0.03	9.8	32.0
S050776		1.16	4.14	0.08	0.8	2.15	0.018	0.66	9.5	6.2	1.22	4650	1.36	0.10	2.1	12.7
S050777		5.28	21.4	0.13	3.4	2.22	0.072	3.57	34.2	14.8	1.29	789	1.78	0.03	11.6	41.9
S050778		5.96	24.5	0.16	3.9	1.335	0.090	4.01	37.4	20.6	1.08	454	1.64	0.04	12.6	44.0
S050779		5.82	22.4	0.18	4.0	1.260	0.086	3.76	38.5	25.8	1.34	614	0.49	0.03	13.5	40.5
S050780		4.54	17.40	0.13	3.1	5.58	0.055	3.05	28.1	13.2	1.02	660	1.02	0.03	9.7	33.0

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Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl
	Units	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
	LOD	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.01	0.005	0.02
S050741		630	10.2	149.5	0.002	7.05	6.92	29.2	1	2.1	93.2	0.82	0.24	5.26	0.726	12.95
S050742		680	11.4	167.5	<0.002	7.80	5.28	28.9	1	2.1	67.1	0.82	0.22	5.13	0.735	12.80
S050743		640	10.5	190.5	<0.002	7.61	3.08	28.8	1	1.9	57.0	0.77	0.24	4.92	0.735	10.10
S050744		700	12.2	196.5	<0.002	4.84	0.32	29.0	2	2.2	92.7	0.89	0.27	5.80	0.730	5.62
S050745		570	14.0	171.0	0.004	1.93	0.49	21.6	1	2.2	73.3	0.85	0.15	7.04	0.578	3.34
S050746		560	16.9	156.0	<0.002	4.52	1.11	23.3	1	2.1	76.9	0.75	0.14	6.12	0.625	6.71
S050747		680	12.6	177.0	0.003	6.59	1.69	28.3	1	2.5	78.8	0.98	0.22	6.86	0.770	6.73
S050748		330	10.9	91.6	0.006	6.55	1.92	11.9	1	1.5	124.0	0.53	0.11	5.30	0.354	13.25
S050749		670	11.0	164.5	<0.002	6.87	2.25	26.2	<1	2.4	63.3	0.88	0.19	5.64	0.738	7.85
S050750		680	11.0	172.0	<0.002	6.94	2.20	26.9	1	2.4	65.4	0.90	0.20	5.87	0.736	7.90
S050751		650	10.0	164.0	<0.002	7.16	3.71	25.6	1	2.0	106.5	0.84	0.23	4.88	0.709	9.70
S050752		670	10.3	143.0	<0.002	6.53	1.59	26.2	1	2.1	115.5	0.82	0.25	5.03	0.718	11.35
S050753		640	9.3	116.5	<0.002	0.65	0.36	25.4	2	2.0	84.5	0.80	0.24	4.82	0.725	2.42
S050754		650	6.7	129.0	0.002	0.31	0.19	24.3	1	1.9	100.5	0.78	0.24	4.71	0.688	1.15
S050755		630	10.6	151.5	0.005	2.40	0.36	23.4	1	2.1	133.0	0.81	0.24	6.37	0.641	5.80
S050756		460	16.5	116.5	0.010	3.59	3.77	15.3	1	1.6	152.5	0.63	0.13	7.19	0.426	15.85
S050757		70	0.7	1.8	<0.002	0.02	0.11	0.3	1	<0.2	78.2	<0.05	<0.05	0.13	0.010	0.08
S050758		600	10.4	99.0	0.002	1.37	6.38	10.2	1	1.7	246	0.61	<0.05	11.35	0.246	9.44
S050759		470	17.5	148.5	0.010	4.81	2.60	14.9	1	2.8	149.5	0.88	<0.05	17.35	0.361	5.11
S050760		570	18.8	161.0	0.007	3.23	1.71	15.1	1	3.0	163.0	0.94	<0.05	18.95	0.356	6.10
S050761		370	58.3	27.2	0.002	0.68	8.25	5.4	1	0.7	1125	0.14	0.06	2.66	0.078	6.06
S050762		640	20.4	162.0	0.010	1.65	0.82	13.9	1	3.1	127.5	0.93	<0.05	18.15	0.380	2.38
S050763		590	18.7	177.0	0.014	1.75	0.98	14.6	1	3.1	150.0	0.93	0.05	17.15	0.379	2.46
S050764		850	18.5	169.5	0.011	1.69	1.20	15.3	1	3.5	138.5	0.97	0.05	17.30	0.385	2.52
S050765		790	18.8	153.5	0.006	4.04	2.10	14.9	1	3.4	213	0.87	0.08	14.35	0.367	8.22
S050766		770	18.0	163.5	0.008	1.61	1.22	15.6	1	3.6	120.0	0.92	0.08	14.10	0.394	3.16
S050767		1070	21.9	169.0	0.008	1.66	1.34	15.7	2	3.6	139.5	0.90	0.09	14.60	0.381	3.58
S050768		770	22.1	147.5	0.006	2.95	1.54	14.6	2	3.1	163.5	0.84	0.07	12.80	0.390	5.55
S050769		720	19.6	174.0	0.004	2.15	2.58	15.0	2	3.0	162.5	0.83	0.08	14.60	0.388	3.41
S050770		1460	15.8	162.0	0.005	1.63	3.75	15.6	1	3.1	266	0.84	0.06	13.90	0.398	2.88
S050771		1220	21.2	172.5	0.012	2.54	2.15	15.9	1	3.6	223	0.89	0.05	15.35	0.404	5.35
S050772		700	26.1	159.5	0.004	2.48	1.31	14.9	1	3.2	176.0	0.88	0.05	15.00	0.383	4.69
S050773		690	28.0	145.5	0.006	2.64	1.34	14.6	1	3.3	176.5	0.82	0.09	14.60	0.379	5.13
S050774		670	35.7	155.0	0.008	3.47	1.82	16.3	1	3.3	173.0	0.89	0.07	15.20	0.416	5.74
S050775		700	20.0	132.0	0.005	3.31	8.22	14.8	1	2.3	215	0.71	0.07	12.25	0.366	12.00
S050776		390	60.6	27.5	0.004	0.69	8.22	5.5	2	0.7	1150	0.14	<0.05	2.72	0.081	6.38
S050777		580	24.5	158.0	0.003	4.93	4.41	20.0	<1	2.4	113.0	0.83	<0.05	11.80	0.541	7.93
S050778		610	26.3	188.0	0.003	6.14	1.60	22.6	1	2.9	78.8	0.88	0.07	13.00	0.549	4.40
S050779		650	18.7	179.0	<0.002	5.92	1.17	21.0	1	2.6	92.2	0.93	0.06	13.25	0.575	5.07
S050780		490	19.0	127.5	0.002	4.20	9.71	14.6	1	2.1	127.0	0.70	0.05	10.25	0.484	16.25

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.
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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 11-OCT-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18222641

Sample Description	Method Analyte Units LOD	ME-MS61 U ppm 0.1	ME-MS61 V ppm 1	ME-MS61 W ppm 0.1	ME-MS61 Y ppm 0.1	ME-MS61 Zn ppm 2	ME-MS61 Zr ppm 0.5
S050741		1.5	231	15.7	31.3	107	115.5
S050742		1.5	235	13.3	25.2	103	100.5
S050743		1.3	237	9.9	23.6	100	97.4
S050744		1.7	229	1.3	27.6	110	123.5
S050745		1.9	177	1.7	23.5	82	110.0
S050746		1.4	197	3.4	20.9	94	103.0
S050747		1.4	237	7.8	26.2	87	135.0
S050748		1.3	106	3.8	15.9	54	74.7
S050749		1.3	227	7.4	22.0	105	88.0
S050750		1.4	227	7.3	22.9	104	90.8
S050751		1.3	226	9.2	26.7	96	99.6
S050752		1.5	226	5.5	25.7	95	104.5
S050753		1.4	225	3.1	24.4	98	97.7
S050754		1.3	223	1.2	25.3	98	111.0
S050755		1.8	205	1.9	23.8	99	100.5
S050756		2.2	143	8.3	20.4	78	109.0
S050757		0.1	3	0.1	2.5	4	2.6
S050758		5.2	64	14.4	17.4	72	91.4
S050759		4.1	143	6.6	21.7	84	108.0
S050760		4.6	172	2.7	24.0	99	115.0
S050761		3.9	26	4.5	14.2	121	26.1
S050762		4.3	183	1.9	22.8	100	120.5
S050763		4.0	169	2.1	23.4	106	118.0
S050764		4.1	159	2.6	24.2	87	113.5
S050765		3.7	147	4.3	22.0	91	102.5
S050766		4.0	163	2.5	21.4	106	107.5
S050767		4.4	160	2.4	24.3	104	107.0
S050768		3.7	131	2.9	20.3	89	103.5
S050769		3.6	117	2.5	22.1	75	104.5
S050770		4.3	147	5.1	28.6	90	107.5
S050771		4.5	160	2.6	24.9	108	113.5
S050772		4.2	147	2.1	22.4	110	107.5
S050773		4.1	147	2.1	21.4	95	109.5
S050774		3.8	152	2.0	23.0	152	118.0
S050775		3.0	128	5.1	21.5	93	101.5
S050776		4.0	26	7.1	14.5	123	26.3
S050777		2.3	155	9.9	23.1	95	120.0
S050778		2.6	168	5.9	25.5	98	129.5
S050779		2.5	151	4.2	27.3	81	140.5
S050780		2.0	137	14.9	20.1	116	105.0

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Project: Nadaleen

Finalized Date: 11-OCT-2018
Account: RCM

CERTIFICATE OF ANALYSIS WH18222641

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Applies to Method: REE's may not be totally soluble in this method.
ME-MS61

LABORATORY ADDRESSES

Applies to Method: Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.

CRU-31	CRU-QC	LOG-21	LOG-21d
LOG-23	PUL-31	PUL-31d	PUL-QC
SPL-21	SPL-21d	WEI-21	

Applies to Method: Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Au-AA25	Hg-MS42	ME-MS61

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 7-OCT-2018
Account: RCM

CERTIFICATE WH18215048

Project: Nadaleen

P.O. No.: N18-058

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 31-AUG-2018.

The following have access to data associated with this certificate:

ANDREW CARNE	JULIA LANE	

SAMPLE PREPARATION

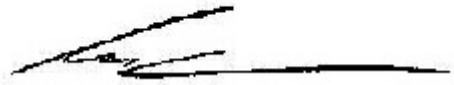
ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
WSH-22	"Wash" pulverizers
PUL-31	Pulverize split to 85% <75 um
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
LOG-23	Pulp Login - Rcvd with Barcode
LOG-21d	Sample logging - ClientBarCode Dup
SPL-21d	Split sample - duplicate
PUL-31d	Pulverize Split - duplicate

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid ICP-MS	
Hg-MS42	Trace Hg by ICPMS	ICP-MS
ME-OG62	Ore Grade Elements - Four Acid	ICP-AES
As-OG62	Ore Grade As - Four Acid	

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature: 

Colin Ramshaw, Vancouver Laboratory Manager

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To: **ATAC RESOURCES LTD.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 7-OCT-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18215048

Sample Description	Method	WEI-21	Au-AA25	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Recvd Wt.	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu
	Units	kg	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.02	0.01	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2
S049251		11.86	0.02	0.06	3.25	73.4	300	1.00	0.13	19.55	0.11	35.1	5.9	28	11.20	13.4
S049252		11.55	<0.01	0.03	2.72	45.2	160	0.94	0.12	17.90	0.07	30.4	3.4	23	9.13	8.2
S049253		11.70	0.01	0.01	2.00	160.5	120	0.79	0.10	16.35	0.05	24.1	3.4	18	5.79	45.8
S049254		11.47	0.01	0.06	4.02	721	220	1.43	0.18	11.70	0.07	40.2	9.4	32	13.05	19.4
S049255		4.73	0.01	0.02	0.76	924	70	0.39	0.06	19.05	0.16	14.00	2.0	9	2.12	6.9
S049256		5.20	0.01	0.03	1.15	1000	100	0.59	0.06	18.95	0.10	18.00	2.1	12	3.43	7.8
S049257		12.03	0.02	0.02	0.95	3970	630	0.49	0.06	18.80	0.06	15.85	1.5	8	2.38	7.4
S049258		11.04	0.01	0.01	0.57	4040	40	0.33	0.03	19.75	0.04	8.67	1.3	6	1.10	5.3
S049259		11.12	0.02	0.01	0.72	2630	70	0.43	0.05	20.0	0.04	13.10	1.5	6	1.72	4.8
S049260		0.26	2.88	2.72	2.14	>10000	140	0.43	0.09	17.40	0.62	29.6	5.8	34	4.76	27.7
S049261		10.71	0.01	0.02	0.73	501	40	0.39	0.03	19.35	0.07	13.95	1.5	6	2.16	6.1
S049262		12.73	0.01	0.01	0.90	127.0	60	0.39	0.04	18.30	0.06	16.50	1.3	7	2.74	4.9
S049263		12.50	<0.01	0.01	0.72	27.1	40	0.40	0.03	18.75	0.06	14.35	1.0	6	2.55	3.9
S049264		11.83	<0.01	0.02	0.68	257	50	0.44	0.02	19.50	0.05	12.50	1.1	6	1.57	3.4
S049265		11.98	0.01	0.19	0.75	69.5	60	0.43	0.03	21.5	0.16	13.30	1.8	10	2.47	10.1
S049266		11.81	0.01	0.17	0.88	71.3	60	0.46	0.03	19.40	0.10	12.90	2.2	9	2.95	7.1
S049267		11.93	<0.01	0.13	0.48	23.9	30	0.32	0.02	21.2	<0.02	7.15	1.0	5	1.92	3.5
S049268		12.01	<0.01	0.06	0.54	19.8	30	0.33	0.02	21.6	0.03	7.45	1.4	6	1.86	4.9
S049269		11.21	<0.01	0.13	0.56	76.0	40	0.33	0.03	22.1	0.03	7.27	1.5	8	2.04	8.2
S049270		12.02	<0.01	0.13	0.37	132.5	30	0.23	0.02	21.9	0.02	6.53	1.4	5	1.13	5.8
S049271		12.10	0.01	0.08	0.39	1135	30	0.21	0.02	20.7	0.02	7.38	1.5	5	0.97	5.0
S049272		12.34	0.01	0.11	1.76	451	130	0.74	0.06	18.25	0.02	20.2	2.8	15	6.74	11.2
S049273		9.73	0.01	0.09	0.43	350	40	0.22	0.02	20.2	<0.02	7.14	1.3	5	1.06	4.2
S049274		10.52	0.01	0.06	0.54	547	50	0.27	0.03	20.1	0.06	7.82	1.2	5	1.27	11.2
S049275		11.50	0.35	0.08	0.49	>10000	50	0.30	0.02	20.0	0.05	8.38	1.4	7	1.01	6.6
S049276		<0.02	0.32	0.08	0.48	>10000	50	0.34	0.02	20.3	0.06	8.24	1.4	7	0.99	6.3
S049277		8.92	0.52	0.15	0.77	>10000	50	0.28	0.03	16.60	0.07	11.50	3.6	10	1.44	12.6
S049278		11.91	0.44	0.13	0.66	>10000	50	0.24	0.03	18.50	0.15	10.75	3.3	9	1.38	8.8
S049279		11.75	0.24	0.15	1.13	>10000	60	0.39	0.03	17.30	0.09	13.65	3.5	14	2.67	13.2
S049280		11.82	0.33	0.14	1.97	>10000	70	0.62	0.06	13.75	0.05	21.4	3.3	24	5.46	13.5
S049281		0.26	1.47	0.93	3.02	>10000	190	0.79	0.11	17.65	0.39	35.2	7.9	42	9.22	27.2
S049282		11.52	0.04	0.08	0.70	7390	40	0.25	0.02	18.45	0.02	12.40	1.2	9	2.00	6.3
S049283		12.86	0.06	0.05	0.72	>10000	40	0.29	0.02	18.55	0.02	12.20	1.1	8	1.96	4.4
S049284		10.18	0.07	0.10	1.02	2390	50	0.32	0.03	17.80	<0.02	14.20	1.4	9	2.85	6.8
S049285		6.97	<0.01	0.01	0.06	20.3	20	0.07	0.01	33.8	<0.02	0.99	0.7	2	<0.05	4.6
S049286		11.59	0.05	0.10	1.46	4520	90	0.44	0.04	14.05	0.03	18.65	2.6	18	3.22	8.4
S049287		10.95	0.02	0.10	1.60	3170	70	0.58	0.04	15.35	0.04	21.0	2.6	19	4.16	7.2
S049288		11.29	0.05	0.07	1.63	5370	80	0.56	0.04	16.80	<0.02	19.85	3.1	19	4.41	10.3
S049289		5.56	0.15	0.12	2.22	>10000	90	0.86	0.06	14.40	0.04	30.0	4.2	25	7.16	14.8
S049290		8.54	0.38	0.09	3.49	8770	180	1.44	0.09	18.50	0.08	43.3	6.3	35	13.40	19.8

***** See Appendix Page for comments regarding this certificate *****

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VANCOUVER BC V6B 1L8

Finalized Date: 7-OCT-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18215048

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Hg-MS42	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni
	Units	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2
S049251		1.27	8.62	0.09	1.7	0.159	0.031	1.74	18.8	11.0	3.42	302	0.54	0.03	5.3	12.8
S049252		1.15	7.32	0.10	1.3	0.096	0.024	1.45	16.2	10.3	4.78	279	0.32	0.03	4.4	7.3
S049253		1.61	5.54	0.07	1.1	1.510	0.016	1.07	12.4	8.6	8.44	421	0.49	0.02	3.4	7.6
S049254		3.22	10.75	0.09	2.0	1.105	0.034	2.13	21.9	15.4	6.77	307	0.94	0.03	6.2	22.3
S049255		0.98	2.22	0.06	0.4	0.549	0.011	0.38	6.7	4.2	11.00	575	0.19	0.02	1.4	5.2
S049256		1.10	3.22	0.06	0.6	0.597	0.010	0.59	8.2	5.7	10.90	555	0.20	0.02	1.9	6.0
S049257		1.01	2.95	0.08	0.6	0.531	0.012	0.50	7.8	5.1	10.60	665	0.22	0.02	1.8	4.1
S049258		0.53	1.66	0.08	0.5	0.252	0.006	0.29	4.5	3.9	11.80	476	0.11	0.02	1.1	2.4
S049259		0.62	2.08	0.09	0.7	0.317	0.006	0.37	6.6	4.5	11.45	489	0.13	0.01	1.4	2.9
S049260		1.39	5.87	0.09	1.0	5.22	0.033	1.01	14.8	15.5	1.38	960	1.52	0.06	3.2	13.8
S049261		0.52	2.05	0.08	0.6	0.361	0.005	0.37	7.4	4.9	11.30	332	0.12	0.02	1.4	2.9
S049262		0.41	2.46	0.12	0.8	0.233	0.008	0.46	8.8	5.8	11.20	311	0.12	0.01	1.7	2.8
S049263		0.34	2.00	0.12	0.6	0.335	0.007	0.37	7.7	5.2	11.30	264	0.12	0.01	1.4	2.1
S049264		0.36	1.87	0.13	0.7	0.236	0.005	0.35	7.3	4.3	10.45	286	0.13	0.01	1.2	1.9
S049265		0.29	2.05	0.14	0.5	0.695	0.007	0.39	7.9	5.4	11.35	198	0.55	0.01	1.4	4.5
S049266		0.43	2.30	0.12	0.6	0.719	0.007	0.46	7.3	6.3	10.25	188	1.25	0.01	1.6	5.7
S049267		0.20	1.38	0.15	0.3	0.370	<0.005	0.25	4.3	4.2	11.10	186	0.24	0.01	0.9	2.5
S049268		0.24	1.51	0.17	0.3	0.481	<0.005	0.28	4.4	4.2	11.60	152	0.47	0.01	1.0	3.6
S049269		0.41	1.59	0.12	0.3	0.851	<0.005	0.29	4.6	4.0	12.15	246	0.52	0.01	1.0	4.1
S049270		0.85	1.05	0.08	0.2	0.610	<0.005	0.19	4.1	2.7	11.35	393	0.40	0.01	0.6	3.4
S049271		1.01	1.00	0.06	0.2	0.673	0.006	0.19	4.3	2.8	11.90	590	0.59	0.01	0.7	3.8
S049272		0.78	4.58	0.09	1.2	0.946	0.013	0.93	10.4	11.5	9.91	344	0.92	0.02	3.1	7.6
S049273		0.67	1.20	0.09	0.3	0.374	0.005	0.22	4.1	3.2	12.10	495	0.48	0.02	0.7	3.1
S049274		0.56	1.43	0.08	0.4	5.05	0.005	0.28	4.3	3.8	12.00	464	0.52	0.02	0.9	2.9
S049275		3.19	1.22	<0.05	0.5	7.45	0.009	0.21	5.0	2.8	9.61	805	0.37	0.01	0.8	8.2
S049276		2.89	1.17	<0.05	0.5	6.72	0.012	0.21	4.8	2.8	9.35	790	0.35	0.01	0.8	7.7
S049277		6.19	1.96	0.05	0.7	8.37	0.010	0.36	6.9	3.9	9.57	865	0.36	0.01	1.3	17.2
S049278		3.37	1.77	<0.05	0.4	6.22	0.011	0.33	6.6	3.7	11.10	920	0.52	0.01	1.1	10.8
S049279		2.53	2.96	<0.05	0.8	3.92	0.012	0.59	7.5	6.3	10.25	804	0.64	0.01	2.0	11.1
S049280		0.96	5.37	0.06	1.2	2.52	0.037	1.00	11.1	10.2	8.34	555	0.89	0.01	3.4	8.0
S049281		2.11	7.91	0.09	1.5	4.63	0.030	1.38	17.9	12.2	2.22	1270	1.39	0.10	4.7	18.8
S049282		0.43	1.89	0.09	0.5	0.568	0.010	0.36	6.4	4.0	11.45	408	0.26	0.01	1.3	2.5
S049283		0.39	1.98	0.09	0.5	0.985	0.010	0.37	6.6	4.3	11.75	413	0.17	0.01	1.2	2.4
S049284		0.46	2.70	0.12	0.9	1.105	0.008	0.52	7.5	5.2	11.05	360	0.77	0.01	1.7	3.3
S049285		0.13	0.25	0.09	<0.1	0.008	<0.005	0.01	1.2	1.1	1.84	126	<0.05	0.03	0.1	0.6
S049286		0.72	3.73	0.10	1.7	1.375	0.013	0.76	9.2	6.9	8.74	359	1.32	0.01	2.6	6.3
S049287		0.66	4.26	0.10	1.4	1.255	0.012	0.84	10.6	7.6	9.47	328	1.23	0.01	2.8	6.2
S049288		0.84	4.28	0.10	1.0	1.870	0.013	0.84	11.0	7.4	10.30	319	0.67	0.01	2.8	7.7
S049289		0.79	5.95	0.11	1.4	1.205	0.020	1.15	16.0	11.9	8.30	311	0.90	0.02	3.9	9.9
S049290		1.28	8.99	0.11	1.7	1.255	0.026	1.86	23.3	19.1	2.84	446	0.58	0.02	5.4	14.5

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 7-OCT-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18215048

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl
	Units	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
	LOD	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.01	0.005	0.02
S049251		490	6.6	66.1	<0.002	0.22	0.59	5.9	1	1.0	547	0.36	<0.05	5.94	0.156	1.28
S049252		570	5.9	55.9	<0.002	0.24	0.27	5.1	1	0.8	380	0.30	<0.05	4.92	0.130	0.44
S049253		430	4.1	39.2	<0.002	0.38	0.50	3.7	1	0.6	150.0	0.23	<0.05	3.90	0.096	0.62
S049254		430	17.1	81.8	<0.002	2.42	1.76	7.0	1	1.2	100.0	0.44	<0.05	6.95	0.194	1.91
S049255		850	5.7	14.2	<0.002	0.45	2.30	1.9	1	0.2	120.0	0.09	<0.05	1.61	0.036	1.06
S049256		820	6.5	21.7	<0.002	0.59	2.82	2.5	1	0.3	125.5	0.12	<0.05	2.25	0.053	1.30
S049257		1390	4.3	18.3	<0.002	0.63	3.84	1.9	1	0.3	109.0	0.11	0.05	1.94	0.047	1.01
S049258		390	2.7	10.0	<0.002	0.32	4.29	1.0	1	0.2	89.9	0.08	<0.05	1.31	0.030	0.55
S049259		490	4.2	12.8	<0.002	0.31	3.44	1.3	1	0.2	121.5	0.10	<0.05	1.81	0.038	0.97
S049260		380	21.5	42.7	<0.002	3.18	136.0	5.9	3	0.8	570	0.23	0.11	4.04	0.105	17.45
S049261		450	3.8	13.0	<0.002	0.36	1.17	1.4	<1	0.3	88.5	0.10	<0.05	1.80	0.037	0.59
S049262		460	3.8	15.7	<0.002	0.23	0.64	1.7	<1	0.3	82.0	0.12	<0.05	2.20	0.047	0.43
S049263		490	3.0	12.7	<0.002	0.16	0.32	1.4	<1	0.3	93.5	0.10	<0.05	1.84	0.037	0.40
S049264		540	2.5	11.8	<0.002	0.09	0.68	1.2	1	0.2	127.0	0.09	<0.05	1.71	0.033	0.43
S049265		580	5.4	13.2	0.003	0.18	0.76	1.4	1	0.3	128.0	0.11	<0.05	1.83	0.037	0.97
S049266		410	5.8	15.0	0.004	0.23	0.51	1.5	1	0.3	146.5	0.12	<0.05	1.97	0.043	0.99
S049267		100	3.8	8.5	0.002	0.13	0.23	0.9	1	0.2	106.0	0.06	<0.05	1.02	0.023	0.47
S049268		120	5.5	9.2	0.002	0.15	0.22	1.0	1	0.2	121.0	0.07	<0.05	1.10	0.026	0.67
S049269		220	8.0	9.8	<0.002	0.28	0.40	1.0	1	0.2	110.0	0.07	<0.05	1.07	0.025	0.93
S049270		150	8.0	6.3	<0.002	0.67	0.50	0.7	1	0.2	108.0	<0.05	<0.05	0.76	0.017	1.34
S049271		130	10.3	6.3	<0.002	0.69	2.22	0.7	1	0.2	93.3	0.05	<0.05	0.81	0.019	1.20
S049272		430	11.3	32.0	<0.002	0.53	1.20	2.9	1	0.5	121.5	0.22	<0.05	3.86	0.084	1.49
S049273		90	5.8	6.9	<0.002	0.26	0.93	0.8	<1	0.2	103.0	0.05	<0.05	0.90	0.020	0.64
S049274		100	28.9	9.0	<0.002	0.19	8.61	1.0	1	0.2	99.8	0.07	<0.05	1.18	0.025	0.79
S049275		100	19.0	7.6	<0.002	3.96	20.1	0.9	1	0.3	103.0	0.06	<0.05	1.08	0.024	18.00
S049276		110	18.3	7.6	<0.002	3.64	20.4	0.9	1	0.3	103.0	0.06	<0.05	1.11	0.024	17.20
S049277		140	38.5	13.0	<0.002	7.40	21.5	1.3	1	0.4	96.0	0.10	<0.05	1.73	0.037	23.8
S049278		160	23.9	11.5	<0.002	3.99	17.80	1.2	1	0.3	87.4	0.08	<0.05	1.39	0.031	17.15
S049279		320	21.6	19.9	<0.002	2.63	13.05	1.9	1	0.4	88.5	0.14	<0.05	2.49	0.054	9.99
S049280		320	9.4	37.5	0.002	4.64	96.6	3.3	5	0.6	66.8	0.24	0.07	4.37	0.092	6.67
S049281		410	14.6	64.2	0.002	2.32	54.2	6.9	2	1.0	767	0.33	0.11	4.99	0.189	15.90
S049282		260	2.6	12.6	<0.002	0.47	7.26	1.2	1	0.2	81.4	0.09	<0.05	1.54	0.033	0.96
S049283		200	2.6	12.9	<0.002	0.69	10.75	1.3	1	0.2	78.7	0.09	<0.05	1.57	0.034	1.25
S049284		150	4.0	17.4	0.002	0.35	2.90	1.8	1	0.3	84.1	0.12	<0.05	2.18	0.049	1.46
S049285		50	<0.5	0.3	<0.002	<0.01	0.06	0.2	1	<0.2	78.3	<0.05	<0.05	0.07	0.005	0.11
S049286		320	6.9	24.9	0.002	0.68	6.00	2.5	1	0.4	109.5	0.19	<0.05	3.57	0.071	1.51
S049287		340	4.8	27.7	0.003	0.44	4.12	2.8	1	0.5	80.9	0.21	<0.05	3.66	0.078	1.46
S049288		260	5.9	28.3	<0.002	0.68	6.23	2.9	1	0.5	79.2	0.21	<0.05	3.46	0.078	2.19
S049289		360	5.1	41.7	0.002	0.84	14.55	3.6	2	0.7	96.3	0.27	<0.05	4.81	0.105	1.24
S049290		450	6.6	69.8	<0.002	0.96	11.80	5.7	1	0.9	505	0.39	<0.05	7.14	0.149	2.38

***** See Appendix Page for comments regarding this certificate *****

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VANCOUVER BC V6B 1L8

Finalized Date: 7-OCT-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18215048

Sample Description	Method Analyte Units LOD	ME-MS61 U ppm 0.1	ME-MS61 V ppm 1	ME-MS61 W ppm 0.1	ME-MS61 Y ppm 0.1	ME-MS61 Zn ppm 2	ME-MS61 Zr ppm 0.5	As-OG62 As % 0.001
S049251		9.2	48	0.8	11.6	56	64.3	
S049252		5.3	40	0.6	10.2	25	58.4	
S049253		5.3	32	0.8	8.5	12	41.2	
S049254		5.2	52	2.5	12.2	35	68.6	
S049255		5.2	13	0.7	8.1	30	16.3	
S049256		6.1	17	1.0	8.6	19	22.6	
S049257		5.1	14	0.9	8.3	8	19.5	
S049258		7.3	10	0.6	4.1	4	17.7	
S049259		9.2	12	0.7	5.3	6	25.9	
S049260		4.6	37	7.0	16.4	67	38.9	
S049261		9.5	15	0.6	5.8	22	22.2	
S049262		7.3	17	0.7	6.5	12	29.9	
S049263		7.7	14	0.6	6.1	12	23.4	
S049264		9.8	10	0.6	6.6	7	26.3	
S049265		11.9	31	0.8	4.9	14	15.4	
S049266		17.2	20	0.7	4.7	10	21.0	
S049267		12.3	15	0.5	2.5	2	10.0	
S049268		16.1	11	0.5	2.7	4	10.6	
S049269		20.9	16	0.7	3.0	4	9.3	
S049270		16.2	15	0.5	2.5	5	6.3	
S049271		15.4	10	0.6	2.7	6	7.2	
S049272		19.1	33	1.2	6.8	8	43.1	
S049273		13.2	15	0.6	2.6	3	10.1	
S049274		13.5	15	0.7	3.0	8	14.9	
S049275		18.2	10	1.6	4.0	7	30.9	1.510
S049276		19.9	10	1.5	4.2	8	35.4	1.640
S049277		12.8	12	1.7	4.2	5	21.7	1.255
S049278		19.0	13	1.4	3.3	30	13.7	1.535
S049279		20.5	21	1.9	5.3	21	27.8	1.090
S049280		13.8	43	2.4	7.4	6	45.5	8.32
S049281		4.2	55	5.8	16.4	58	54.3	
S049282		10.2	21	0.7	4.6	2	16.8	
S049283		10.7	20	0.8	4.4	4	15.8	1.180
S049284		11.8	23	1.1	5.3	6	31.7	
S049285		0.1	1	<0.1	2.2	4	1.4	
S049286		11.8	29	1.5	7.4	10	60.0	
S049287		13.9	34	1.5	7.3	7	48.6	
S049288		15.4	31	1.7	6.7	8	36.4	
S049289		10.3	41	2.1	8.7	7	59.6	1.215
S049290		9.4	51	2.7	12.5	13	61.4	

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VANCOUVER BC V6B 1L8

Project: Nadaleen

Finalized Date: 7-OCT-2018
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CERTIFICATE OF ANALYSIS WH18215048

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

REE's may not be totally soluble in this method.

Applies to Method: ME-MS61

LABORATORY ADDRESSES

Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.

Applies to Method:				
	CRU-31	CRU-QC	LOG-21	LOG-21d
	LOG-23	PUL-31	PUL-31d	PUL-QC
	SPL-21	SPL-21d	WEI-21	WSH-22

Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Applies to Method:				
	As-OG62	Au-AA25	Hg-MS42	ME-MS61
	ME-OG62			

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To: **ATAC RESOURCES LTD.**
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1016-510 W HASTINGS ST
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Finalized Date: 14-OCT-2018
Account: RCM

CERTIFICATE WH18222644

Project: Nadaleen

P.O. No.: N18-059

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 7-SEP-2018.

The following have access to data associated with this certificate:

ANDREW CARNE	JULIA LANE	

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
LOG-23	Pulp Login - Rcvd with Barcode
LOG-21d	Sample logging - ClientBarCode Dup
SPL-21d	Split sample - duplicate
PUL-31d	Pulverize Split - duplicate

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid ICP-MS	
Hg-MS42	Trace Hg by ICPMS	ICP-MS
ME-OG62	Ore Grade Elements - Four Acid	ICP-AES
As-OG62	Ore Grade As - Four Acid	

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:

Colin Ramshaw, Vancouver Laboratory Manager

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CERTIFICATE OF ANALYSIS WH18222644

Sample Description	Method	WEI-21	Au-AA25	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Recvd Wt.	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu
	Units	kg	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.02	0.01	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2
S049291		7.17	0.01	0.05	3.60	71.7	170	1.44	0.09	18.75	0.07	40.8	6.7	31	19.10	16.2
S049292		10.68	0.11	0.07	2.52	854	190	0.99	0.07	17.50	0.04	32.3	4.6	24	10.15	11.8
S049293		12.29	0.06	0.06	2.96	84.5	230	1.14	0.08	20.2	0.11	34.1	5.7	30	15.50	17.1
S049294		11.72	0.01	0.09	1.72	64.0	160	0.62	0.05	24.7	0.11	22.1	3.8	19	7.75	9.6
S049295		12.39	0.02	0.11	5.07	56.0	370	1.74	0.13	9.47	0.06	57.8	8.9	50	28.5	25.2
S049296		12.16	0.01	0.07	2.54	30.6	330	0.88	0.08	20.3	0.06	30.8	4.6	26	11.60	12.3
S049297		11.54	0.01	0.10	3.71	45.5	530	1.24	0.09	14.95	0.06	44.5	6.9	38	19.60	23.5
S049298		11.18	0.01	0.04	2.11	18.7	340	0.73	0.06	22.4	0.04	26.0	4.1	20	11.65	12.4
S049299		10.97	0.01	0.04	2.01	45.0	400	0.77	0.06	26.7	0.04	24.2	4.4	20	12.25	14.1
S049300		7.84	0.29	0.10	1.36	>10000	80	0.52	0.05	25.9	0.05	15.20	2.9	16	4.27	9.6
S049301		<0.02	0.28	0.09	1.31	>10000	80	0.50	0.05	25.3	0.05	14.70	2.7	16	4.09	9.3
S049302		11.47	1.41	0.09	1.66	>10000	70	0.67	0.06	22.8	0.05	19.45	3.8	19	5.37	12.4
S049303		11.67	0.86	0.05	0.76	>10000	40	0.42	0.03	30.1	0.02	12.00	2.0	10	2.19	6.5
S049304		0.30	1.44	0.89	3.07	>10000	200	0.75	0.12	17.50	0.39	34.5	8.6	44	9.31	26.6
S049305		11.46	0.10	0.06	1.17	197.0	90	0.50	0.04	29.9	0.03	15.90	2.8	12	3.74	7.9
S049306		11.44	0.01	0.04	0.94	152.5	60	0.42	0.03	28.7	0.02	13.60	2.2	11	2.79	7.1
S049307		11.31	0.96	0.28	2.39	>10000	90	0.84	0.06	18.60	0.10	33.0	4.3	28	7.44	13.2
S049308		11.67	0.08	0.11	2.48	1275	160	0.73	0.05	13.50	0.05	33.1	3.9	26	7.63	11.4
S049309		11.05	0.04	0.09	1.91	143.0	100	0.65	0.05	15.45	0.06	23.5	3.0	21	5.70	9.4
S049310		9.10	0.01	0.06	1.83	79.8	80	0.84	0.05	23.3	0.11	22.9	3.3	20	5.52	10.1
S049311		7.83	0.03	0.06	2.57	134.5	120	1.12	0.06	16.50	0.04	29.6	3.8	28	9.74	11.8
S049312		8.11	0.05	0.12	3.97	2980	150	1.45	0.09	11.65	0.06	40.8	6.1	45	14.05	22.4
S049313		4.85	1.02	0.22	2.58	>10000	110	0.85	0.08	13.90	0.06	28.9	3.8	33	8.11	10.7
S049314		7.01	0.01	<0.01	0.09	63.4	20	0.07	0.01	31.9	<0.02	1.13	0.7	1	0.07	2.3
S049315		5.28	0.66	0.10	1.94	5640	70	0.78	0.04	15.65	0.03	24.3	2.8	23	6.88	7.7
S049316		5.54	0.75	0.08	1.96	>10000	80	0.78	0.05	18.65	0.03	24.6	2.5	23	6.67	8.5
S049317		5.61	0.85	0.09	2.04	>10000	80	0.79	0.06	19.05	0.03	24.9	2.4	24	6.91	8.1
S049318		11.34	0.05	0.05	1.56	207	100	0.66	0.04	26.4	0.06	24.9	2.5	18	4.50	9.8
S049319		10.44	<0.01	0.05	2.33	107.0	140	0.88	0.06	20.9	0.10	27.1	3.4	26	11.75	13.1
S049320		11.13	<0.01	0.06	3.04	68.3	190	1.04	0.07	19.75	0.07	36.9	6.1	33	13.90	18.2
S049321		10.02	<0.01	0.07	1.58	38.0	140	0.64	0.04	27.5	0.05	20.1	3.4	18	6.14	9.6
S049322		11.67	<0.01	0.05	1.71	49.3	240	0.63	0.05	26.2	0.05	21.8	3.6	19	5.58	11.2
S049323		11.54	<0.01	0.04	2.87	48.7	160	0.92	0.09	19.05	0.08	35.4	3.9	31	14.55	16.0
S049324		11.61	<0.01	0.02	2.52	29.5	220	0.88	0.09	21.4	0.09	32.0	3.9	25	9.91	16.6
S049325		10.70	0.01	0.05	2.63	72.3	120	0.91	0.08	19.90	0.10	32.3	5.2	28	9.59	14.8
S049326		0.28	2.65	0.18	3.65	6050	190	0.80	0.15	12.05	0.13	43.3	11.4	43	10.80	33.9
S049327		11.43	0.02	0.05	2.24	273	240	0.80	0.07	16.55	0.05	30.2	3.5	24	7.06	19.1
S049328		9.51	0.05	0.06	3.68	2500	130	1.17	0.12	12.65	0.09	47.1	6.7	41	13.60	19.4
S049329		10.27	<0.01	0.04	3.51	89.7	130	1.03	0.10	15.70	0.08	43.5	6.4	38	12.50	18.3
S049330		10.93	0.01	0.04	3.11	113.0	140	0.98	0.10	17.10	0.09	38.7	4.6	34	11.15	16.9

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 14-OCT-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18222644

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Hg-MS42	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni
	Units	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2
S049291		1.38	9.54	0.10	1.4	0.524	0.025	1.89	21.2	21.6	2.05	190	0.43	0.02	5.0	17.5
S049292		1.06	6.78	0.09	2.3	0.676	0.020	1.35	16.8	11.6	3.17	227	0.62	0.02	4.5	10.1
S049293		0.96	8.16	0.11	1.9	0.486	0.021	1.65	18.1	14.9	2.14	171	0.54	0.02	5.4	13.0
S049294		1.17	4.80	0.09	1.1	0.160	0.014	0.98	12.1	8.5	2.48	190	0.87	0.01	3.1	9.3
S049295		1.66	14.60	0.14	3.0	0.390	0.038	3.10	30.0	33.0	3.80	201	1.01	0.04	9.1	19.4
S049296		1.19	6.97	0.11	1.7	0.132	0.021	1.51	16.3	14.7	2.91	191	0.61	0.02	4.5	10.3
S049297		1.44	10.20	0.14	2.2	0.229	0.028	2.21	22.5	22.6	3.28	200	1.14	0.03	6.6	18.5
S049298		1.38	5.92	0.10	1.4	0.069	0.016	1.29	14.0	13.6	3.84	210	0.60	0.02	3.7	8.6
S049299		0.72	5.60	0.11	1.0	0.265	0.016	1.16	13.6	13.9	1.39	126	0.51	0.02	3.4	9.1
S049300		0.44	3.90	0.11	0.7	0.657	0.049	0.72	9.0	7.4	0.83	309	0.43	0.01	2.2	6.2
S049301		0.42	3.72	0.12	0.6	0.668	0.049	0.70	8.4	7.1	0.80	302	0.38	0.01	2.1	5.9
S049302		0.65	4.74	0.12	0.9	0.764	0.046	0.87	11.0	12.0	1.29	1500	0.55	0.01	2.8	8.7
S049303		0.35	2.17	0.10	0.5	0.377	0.022	0.40	7.2	4.7	0.89	581	0.43	0.01	1.4	4.2
S049304		2.13	8.29	0.13	1.6	4.73	0.033	1.37	17.5	12.2	2.20	1290	1.50	0.10	4.7	18.9
S049305		0.42	3.20	0.09	0.8	0.344	0.009	0.62	9.0	6.5	1.75	344	0.66	0.01	2.1	5.8
S049306		0.45	2.56	0.10	0.7	0.277	0.008	0.49	7.5	5.0	2.54	191	0.47	0.01	1.7	4.2
S049307		0.73	6.53	0.13	1.9	0.956	0.032	1.22	16.9	11.8	3.05	474	0.94	0.02	4.8	9.2
S049308		0.91	6.22	0.14	2.2	0.647	0.017	1.37	16.8	10.8	4.29	410	0.82	0.02	4.6	8.8
S049309		0.81	4.74	0.11	1.7	0.381	0.014	1.06	11.9	9.6	4.26	296	0.79	0.02	3.4	7.2
S049310		0.59	4.79	0.11	1.2	0.390	0.014	0.96	12.3	12.8	2.23	180	1.46	0.01	3.3	6.8
S049311		1.06	6.74	0.14	1.5	0.431	0.020	1.42	15.7	21.0	6.83	277	0.79	0.02	4.4	7.9
S049312		1.30	10.35	0.14	2.3	1.180	0.028	2.16	21.3	27.3	6.31	275	1.06	0.03	6.9	13.2
S049313		1.12	6.66	0.13	1.5	2.04	0.037	1.32	14.8	14.4	6.94	564	0.76	0.02	4.5	8.8
S049314		0.13	0.34	0.11	0.1	<0.005	<0.005	0.02	1.2	1.1	2.02	128	<0.05	0.04	0.2	<0.2
S049315		0.95	5.36	0.14	1.0	1.245	0.018	1.04	11.7	13.8	7.54	501	0.42	0.02	3.4	5.6
S049316		0.80	5.40	0.13	1.0	0.911	0.026	1.04	12.7	13.2	5.55	447	0.31	0.01	3.4	4.6
S049317		0.78	5.55	0.13	1.0	0.892	0.033	1.09	12.9	13.4	5.73	489	0.33	0.01	3.5	4.4
S049318		0.57	4.36	0.12	0.9	0.525	0.013	0.83	13.0	7.3	2.17	224	0.26	0.01	2.8	5.1
S049319		0.72	6.26	0.13	1.5	0.361	0.018	1.32	14.6	13.5	2.94	161	0.68	0.02	4.2	6.9
S049320		1.09	8.16	0.14	1.8	0.279	0.025	1.77	19.2	19.2	2.63	162	0.45	0.03	5.6	14.4
S049321		0.71	4.33	0.10	0.9	0.168	0.013	0.87	11.5	8.4	2.32	151	0.62	0.02	2.8	7.9
S049322		0.81	4.60	0.11	1.0	0.222	0.014	0.92	11.9	9.3	2.60	154	0.65	0.02	2.9	8.2
S049323		0.98	7.70	0.07	1.6	0.150	0.023	1.59	18.4	16.4	2.35	156	0.43	0.02	5.1	10.0
S049324		1.00	6.78	0.06	1.4	0.177	0.020	1.39	16.6	13.7	2.20	154	0.30	0.02	4.3	10.8
S049325		1.20	7.15	0.08	1.4	0.389	0.027	1.40	16.8	12.8	2.60	169	0.45	0.02	4.5	13.5
S049326		2.80	10.20	0.08	2.1	16.05	0.042	1.72	21.3	10.0	2.48	1100	1.91	0.02	5.7	25.7
S049327		1.28	5.95	0.08	1.4	1.040	0.023	1.22	15.1	8.3	5.46	261	0.61	0.02	3.8	8.3
S049328		1.60	10.10	0.09	2.1	0.832	0.038	2.00	23.8	14.9	4.65	256	0.45	0.03	6.3	15.4
S049329		1.50	9.25	0.08	1.9	0.385	0.032	1.89	21.6	14.7	3.33	187	0.32	0.03	5.7	15.6
S049330		1.13	8.28	0.08	1.6	0.476	0.032	1.64	19.6	12.8	2.99	190	0.43	0.02	5.3	10.6

***** See Appendix Page for comments regarding this certificate *****

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1016-510 W HASTINGS ST
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Finalized Date: 14-OCT-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18222644

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl
	Units	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
	LOD	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.01	0.005	0.02
S049291		440	6.6	74.7	<0.002	0.66	0.23	5.6	2	1.0	449	0.39	<0.05	6.60	0.140	0.64
S049292		350	7.3	52.4	<0.002	0.39	2.44	4.1	2	0.9	335	0.35	<0.05	5.69	0.122	1.20
S049293		410	8.1	64.8	<0.002	0.46	0.45	5.0	3	1.1	419	0.40	<0.05	6.58	0.139	0.85
S049294		250	7.9	35.9	<0.002	0.38	0.25	3.0	2	0.7	653	0.24	<0.05	3.84	0.082	0.64
S049295		680	10.2	121.0	<0.002	0.44	0.34	8.6	2	1.9	181.5	0.69	<0.05	11.40	0.246	0.81
S049296		340	6.6	57.4	<0.002	0.22	0.19	4.3	2	0.9	471	0.35	<0.05	5.63	0.123	0.42
S049297		530	8.2	86.6	0.002	0.36	0.28	6.0	2	1.3	330	0.49	<0.05	8.10	0.171	0.67
S049298		240	6.9	50.2	<0.002	0.23	0.16	3.6	2	0.8	533	0.28	<0.05	4.54	0.098	0.37
S049299		280	6.5	46.5	<0.002	0.28	0.40	3.4	2	0.7	667	0.25	<0.05	4.11	0.089	0.51
S049300		210	5.1	30.5	<0.002	3.82	229	2.3	10	0.5	532	0.17	0.12	2.73	0.059	1.43
S049301		210	4.7	28.9	<0.002	3.75	227	2.3	9	0.5	516	0.16	0.12	2.61	0.057	1.35
S049302		250	7.7	37.2	<0.002	3.44	173.0	2.9	7	0.6	585	0.21	0.10	3.54	0.074	2.82
S049303		130	7.0	16.5	<0.002	1.74	88.6	1.4	4	0.3	1330	0.10	0.07	1.79	0.036	1.57
S049304		430	16.8	66.4	0.002	2.32	57.0	7.1	3	1.2	810	0.36	0.08	4.91	0.188	16.55
S049305		190	8.6	24.3	<0.002	0.27	1.08	2.0	2	0.4	929	0.16	<0.05	2.70	0.056	1.32
S049306		160	7.1	19.3	<0.002	0.24	0.92	1.6	2	0.3	1310	0.12	<0.05	2.15	0.046	1.03
S049307		390	11.2	51.7	<0.002	1.64	64.5	3.9	5	0.9	539	0.35	0.05	5.70	0.123	3.30
S049308		540	10.9	51.9	<0.002	0.53	4.39	3.7	3	0.9	247	0.33	<0.05	5.62	0.116	2.04
S049309		500	8.6	38.9	<0.002	0.36	1.70	2.9	3	0.6	279	0.26	<0.05	4.34	0.088	1.14
S049310		300	7.0	37.2	<0.002	0.26	1.51	3.0	3	0.7	534	0.25	<0.05	4.12	0.087	1.10
S049311		330	6.0	55.9	<0.002	0.24	1.30	4.3	2	0.9	246	0.33	<0.05	5.41	0.123	0.99
S049312		540	8.1	84.6	<0.002	0.53	6.36	6.3	3	1.4	198.0	0.53	<0.05	9.30	0.192	1.49
S049313		370	6.7	53.4	<0.002	2.07	51.7	4.3	5	0.9	195.5	0.35	<0.05	5.62	0.125	4.44
S049314		80	0.7	0.6	<0.002	<0.01	0.14	0.2	1	<0.2	80.0	<0.05	<0.05	0.08	0.006	<0.02
S049315		280	4.5	42.1	<0.002	0.44	14.65	3.4	2	0.7	142.5	0.26	<0.05	4.25	0.092	1.91
S049316		270	4.1	42.0	<0.002	0.93	45.4	3.4	3	0.7	250	0.26	<0.05	4.17	0.093	2.55
S049317		290	4.5	43.3	<0.002	1.42	68.8	3.5	4	0.7	263	0.26	<0.05	4.36	0.096	2.68
S049318		250	4.0	32.3	<0.002	0.17	1.63	2.7	2	0.6	468	0.21	<0.05	3.40	0.074	1.08
S049319		300	6.8	53.2	<0.002	0.33	0.47	3.9	2	0.9	446	0.33	<0.05	5.22	0.112	0.58
S049320		430	9.8	72.5	<0.002	0.44	0.32	5.0	3	1.1	441	0.41	<0.05	7.11	0.149	0.51
S049321		240	6.3	35.7	0.002	0.22	0.26	2.7	2	0.6	650	0.22	<0.05	3.44	0.076	0.34
S049322		240	6.2	39.0	<0.002	0.28	0.38	2.8	2	0.6	610	0.22	<0.05	3.68	0.081	0.55
S049323		380	7.7	68.4	<0.002	0.34	0.45	4.6	2	1.1	436	0.38	<0.05	6.53	0.142	0.66
S049324		310	6.4	60.2	<0.002	0.33	0.32	4.1	1	0.9	466	0.34	<0.05	5.59	0.122	0.55
S049325		330	6.8	62.6	<0.002	0.46	0.63	4.2	2	1.0	408	0.34	<0.05	5.66	0.128	0.61
S049326		420	11.8	85.8	0.002	2.48	25.0	9.6	1	1.7	302	0.42	0.06	6.14	0.254	44.5
S049327		290	6.9	50.6	<0.002	0.31	2.15	3.6	2	0.8	272	0.29	<0.05	5.30	0.111	1.35
S049328		460	9.8	87.7	<0.002	0.76	8.33	5.9	2	1.4	186.5	0.47	<0.05	8.56	0.183	2.47
S049329		410	10.5	80.3	<0.002	0.72	0.96	5.5	2	1.3	312	0.45	<0.05	7.97	0.172	0.85
S049330		370	7.6	71.6	<0.002	0.37	1.07	5.0	1	1.2	349	0.40	<0.05	7.11	0.151	0.83

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CERTIFICATE OF ANALYSIS WH18222644

Sample Description	Method Analyte Units LOD	ME-MS61 U ppm 0.1	ME-MS61 V ppm 1	ME-MS61 W ppm 0.1	ME-MS61 Y ppm 0.1	ME-MS61 Zn ppm 2	ME-MS61 Zr ppm 0.5	As-OG62 As % 0.001
S049291		8.1	52	0.7	10.8	14	51.7	
S049292		8.5	37	1.4	11.2	9	83.8	
S049293		9.3	44	1.0	11.8	21	71.6	
S049294		13.5	33	0.6	7.8	25	40.7	
S049295		4.7	83	1.1	17.7	26	107.0	
S049296		8.7	44	0.6	10.4	17	63.1	
S049297		7.5	62	0.8	14.2	39	80.6	
S049298		11.1	34	0.5	8.9	13	46.0	
S049299		14.1	32	0.7	7.6	16	37.8	
S049300		17.8	26	1.3	5.8	10	27.0	7.98
S049301		17.1	24	1.2	5.5	10	25.6	7.83
S049302		17.8	30	2.1	7.2	7	34.2	6.39
S049303		17.3	13	1.0	4.2	3	19.8	3.23
S049304		4.2	55	5.7	16.2	54	57.1	
S049305		17.2	21	1.2	5.2	4	30.8	
S049306		13.8	16	0.8	4.7	2	28.4	
S049307		9.6	38	2.9	10.7	22	72.8	2.73
S049308		5.5	34	2.0	11.2	13	82.6	
S049309		6.7	27	1.6	9.2	7	62.1	
S049310		12.3	31	1.6	7.4	23	43.8	
S049311		8.7	43	1.8	9.7	9	53.1	
S049312		4.7	65	3.3	13.4	24	83.5	
S049313		3.7	44	2.7	9.9	22	53.5	3.83
S049314		0.2	1	<0.1	2.4	<2	1.9	
S049315		3.9	32	1.7	8.9	11	38.0	
S049316		7.9	34	1.7	8.5	11	37.5	1.770
S049317		8.2	35	1.7	8.7	10	37.4	2.78
S049318		10.0	27	1.3	7.9	24	34.1	
S049319		11.6	42	0.7	9.3	46	54.3	
S049320		9.1	46	0.6	12.1	40	66.3	
S049321		14.4	30	0.4	6.5	26	33.4	
S049322		12.2	28	0.5	7.2	29	35.5	
S049323		9.7	42	0.7	10.3	31	53.9	
S049324		6.5	38	0.5	9.4	31	43.4	
S049325		8.4	46	0.7	9.9	29	48.0	
S049326		7.0	81	7.8	18.2	47	67.3	
S049327		8.0	37	1.4	9.4	33	48.7	
S049328		5.6	54	2.5	13.9	47	76.4	
S049329		7.6	51	1.3	11.9	39	64.0	
S049330		10.2	49	1.9	11.0	52	55.4	

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Project: Nadaleen

Page: Appendix 1
Total # Appendix Pages: 1
Finalized Date: 14-OCT-2018
Account: RCM

CERTIFICATE OF ANALYSIS WH18222644

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Applies to Method: REE's may not be totally soluble in this method.
ME-MS61

LABORATORY ADDRESSES

Applies to Method: Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.

CRU-31	CRU-QC	LOG-21	LOG-21d
LOG-23	PUL-31	PUL-31d	PUL-QC
SPL-21	SPL-21d	WEI-21	

Applies to Method: Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

As-OG62	Au-AA25	Hg-MS42	ME-MS61
ME-OG62			

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 15-OCT-2018
Account: RCM

CERTIFICATE WH18225525

Project: Nadaleen

P.O. No.: N18-060

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 11-SEP-2018.

The following have access to data associated with this certificate:

ANDREW CARNE	JULIA LANE	

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
LOG-23	Pulp Login - Rcvd with Barcode
LOG-21d	Sample logging - ClientBarCode Dup
SPL-21d	Split sample - duplicate
PUL-31d	Pulverize Split - duplicate

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid ICP-MS	
Hg-MS42	Trace Hg by ICPMS	ICP-MS
ME-OG62	Ore Grade Elements - Four Acid	ICP-AES
As-OG62	Ore Grade As - Four Acid	

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:

Colin Ramshaw, Vancouver Laboratory Manager

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Finalized Date: 15-OCT-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18225525

Sample Description	Method Analyte Units LOD	WEI-21 Recvd Wt. kg 0.02	Au-AA25 Au ppm 0.01	ME-MS61 Ag ppm 0.01	ME-MS61 Al % 0.01	ME-MS61 As ppm 0.2	ME-MS61 Ba ppm 10	ME-MS61 Be ppm 0.05	ME-MS61 Bi ppm 0.01	ME-MS61 Ca % 0.01	ME-MS61 Cd ppm 0.02	ME-MS61 Ce ppm 0.01	ME-MS61 Co ppm 0.1	ME-MS61 Cr ppm 1	ME-MS61 Cs ppm 0.05	ME-MS61 Cu ppm 0.2
S050781		12.25	<0.01	0.12	6.35	158.5	240	1.91	0.27	2.06	0.19	64.0	18.6	69	21.8	57.6
S050782		11.97	0.01	0.05	5.22	67.2	190	1.60	0.22	2.69	0.15	53.3	13.1	60	20.6	47.0
S050783		11.79	0.23	0.12	3.70	270	140	1.04	0.20	2.16	0.07	39.8	12.2	41	10.85	33.8
S050784		11.78	0.03	0.10	3.79	117.0	110	1.00	0.18	2.55	0.04	39.6	12.0	38	12.20	27.1
S050785		11.90	0.06	0.13	4.43	194.5	130	1.25	0.20	2.47	0.06	46.6	14.3	41	15.60	28.6
S050786		11.90	0.02	0.04	4.21	122.5	120	1.20	0.19	2.90	0.06	43.6	9.2	41	16.35	36.4
S050787		12.02	0.07	0.18	7.01	212	200	2.28	0.28	1.77	0.18	71.7	26.1	75	26.6	63.1
S050788		13.41	<0.01	0.04	7.16	97.1	210	2.07	0.29	2.65	0.04	70.6	19.4	73	30.7	61.2
S050789		12.90	<0.01	0.05	7.10	45.7	230	1.91	0.27	2.74	0.02	69.2	19.8	70	39.6	60.8
S050790		12.41	<0.01	0.06	6.53	71.5	220	1.82	0.26	2.30	0.02	64.1	20.4	68	33.5	55.0
S050791		12.37	<0.01	0.05	5.77	59.8	230	1.48	0.22	2.04	0.06	56.6	17.2	64	32.8	52.0
S050792		11.74	<0.01	0.05	7.20	97.5	270	2.05	0.29	1.82	0.27	69.1	22.1	77	32.1	64.2
S050793		12.15	<0.01	0.05	7.08	103.5	250	2.03	0.27	2.34	0.03	68.0	19.8	71	26.9	62.4
S050794		12.36	6.79	0.10	6.41	2990	290	1.58	0.25	2.56	0.18	60.9	19.2	62	15.40	55.5
S050795		12.08	0.02	0.08	5.31	170.0	190	1.44	0.21	2.29	0.02	53.5	16.0	57	15.40	47.3
S050796		12.25	0.01	0.05	5.18	86.2	420	1.68	0.21	1.65	<0.02	52.7	16.5	63	20.7	45.7
S050797		11.19	0.01	0.06	6.46	146.5	280	1.85	0.26	2.76	0.10	67.3	17.0	63	20.6	55.1
S050798		11.98	0.04	0.06	3.84	332	140	0.92	0.15	2.52	0.11	38.1	12.1	57	9.98	30.3
S050799		10.72	0.91	0.10	3.40	4640	150	0.78	0.14	1.09	0.12	34.1	9.5	45	7.30	29.2
S050800		7.71	4.29	0.16	5.93	>10000	340	1.13	0.28	1.62	0.32	59.1	16.7	61	11.55	62.7
S050801		0.28	5.44	1.59	3.63	>10000	170	0.75	0.16	10.50	1.10	41.9	10.7	47	10.25	33.3
S050802		4.47	5.33	0.14	6.17	>10000	230	1.25	0.26	0.71	1.16	60.8	18.6	74	12.20	67.6
S050803		4.51	4.32	0.14	6.47	9870	290	1.31	0.28	0.80	0.30	63.4	23.6	74	12.55	63.8
S050804		7.54	1.94	0.08	2.96	4860	130	0.55	0.12	0.73	0.14	29.9	10.7	45	5.25	28.0
S050805		6.90	0.01	0.01	0.12	23.7	30	0.08	0.04	33.2	<0.02	1.17	0.6	1	0.07	14.0
S050806		12.26	0.90	0.09	6.61	1630	320	1.46	0.26	1.41	0.09	67.6	18.9	66	16.90	52.3
S050807		12.59	0.01	0.06	5.37	145.5	240	1.50	0.21	2.18	0.03	56.1	16.5	58	18.55	46.0
S050808		11.62	<0.01	0.06	5.71	73.9	270	1.47	0.22	1.47	0.02	57.6	16.9	65	29.3	49.3
S050809		11.13	<0.01	0.07	5.92	127.5	540	1.78	0.23	2.09	0.06	59.0	15.9	57	24.9	42.7
S050810		11.98	<0.01	0.05	6.12	107.0	340	1.77	0.23	4.06	0.13	59.8	16.9	65	29.8	48.5
S050811		11.52	<0.01	0.05	6.05	83.6	260	1.67	0.24	2.30	0.19	59.7	17.4	64	30.6	45.6
S050812		11.25	<0.01	0.06	5.75	79.7	410	1.73	0.22	2.04	0.08	56.4	17.3	60	23.9	46.0
S050813		12.09	<0.01	0.06	5.75	150.0	340	1.55	0.22	2.79	0.09	56.9	15.8	59	20.5	43.6
S050814		11.99	0.09	0.32	6.32	312	190	1.64	0.25	1.99	0.04	60.8	19.5	65	27.4	53.1
S050815		7.66	0.26	0.11	7.09	487	280	1.76	0.31	2.36	0.28	70.2	26.1	70	29.3	59.9
S050816		5.98	1.39	0.25	6.55	8720	270	1.62	0.26	2.18	0.19	62.9	22.8	70	25.3	54.5
S050817		7.07	4.92	0.61	6.06	>10000	170	1.28	0.24	0.39	0.67	57.9	21.9	73	17.25	57.7
S050818		0.28	13.05	1.52	3.08	>10000	120	0.54	0.31	8.04	0.83	44.6	11.2	46	9.03	32.4
S050819		10.30	3.87	0.11	8.54	3810	280	2.06	0.37	1.17	0.22	79.4	20.6	79	37.5	61.4
S050820		<0.02	3.91	0.09	8.80	3940	290	2.08	0.36	1.18	0.20	84.5	20.3	82	38.8	62.1

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
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Finalized Date: 15-OCT-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18225525

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Hg-MS42	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni
	Units	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2
S050781		5.04	16.75	0.11	3.0	2.85	0.064	3.07	30.3	31.9	1.30	429	0.98	0.03	10.2	41.0
S050782		4.31	13.50	0.10	2.5	1.270	0.053	2.45	24.9	41.3	1.61	552	0.95	0.03	8.6	26.5
S050783		3.51	9.29	0.08	1.9	2.49	0.040	1.75	19.0	20.0	0.99	557	0.57	0.02	5.7	24.0
S050784		3.36	9.89	0.07	2.0	0.705	0.039	1.65	19.0	45.5	1.05	512	0.36	0.02	5.8	21.1
S050785		3.60	11.85	0.08	2.3	0.766	0.042	1.98	21.7	37.1	1.07	514	0.36	0.02	6.7	26.1
S050786		3.40	10.35	0.07	2.0	0.707	0.045	1.88	20.0	28.6	1.25	566	0.40	0.02	6.7	17.2
S050787		4.82	18.25	0.11	3.4	2.03	0.070	3.38	33.8	17.7	1.07	398	1.09	0.03	11.3	51.1
S050788		4.92	18.55	0.11	3.2	0.111	0.073	3.41	33.1	28.6	2.25	646	0.27	0.03	12.0	39.9
S050789		5.26	18.20	0.11	3.2	0.073	0.068	3.47	32.3	33.1	2.55	704	0.26	0.04	12.1	39.6
S050790		4.96	16.90	0.12	3.1	0.095	0.067	3.22	30.2	34.8	2.28	572	0.34	0.03	10.7	39.0
S050791		4.69	14.60	0.10	2.8	0.087	0.057	2.70	26.2	67.7	2.03	544	0.28	0.06	9.4	35.3
S050792		5.30	18.65	0.11	3.3	0.181	0.078	3.47	32.2	45.4	2.23	531	0.40	0.04	12.7	41.6
S050793		5.38	18.30	0.12	3.1	0.191	0.071	3.42	31.2	28.5	2.08	683	0.28	0.03	11.4	38.6
S050794		5.21	16.40	0.11	2.9	5.47	0.057	3.09	28.0	13.9	1.48	744	0.29	0.03	10.3	37.1
S050795		4.44	14.50	0.10	2.6	0.595	0.055	2.51	26.2	25.9	1.23	516	0.52	0.02	9.0	31.8
S050796		4.25	13.85	0.11	2.4	0.193	0.054	2.47	25.9	36.6	1.71	412	0.63	0.03	8.8	30.1
S050797		4.09	17.85	0.13	3.1	0.491	0.071	3.06	33.2	24.2	1.59	570	0.52	0.03	11.4	32.9
S050798		3.49	10.30	0.09	1.9	1.520	0.040	1.83	18.9	11.1	1.11	503	0.49	0.02	6.3	25.2
S050799		3.28	8.77	0.08	1.8	5.74	0.037	1.62	17.0	10.9	0.55	382	1.12	0.01	5.1	20.1
S050800		5.00	16.15	0.12	2.8	20.5	0.066	2.64	28.7	16.2	0.94	542	0.61	0.02	10.0	33.8
S050801		2.89	10.05	0.08	1.7	9.94	0.041	1.58	21.0	13.8	0.53	964	2.14	0.12	5.6	22.1
S050802		5.79	17.45	0.13	2.9	20.7	0.069	2.72	29.3	17.7	0.57	377	0.56	0.02	10.5	38.8
S050803		5.10	18.10	0.10	3.1	13.20	0.054	2.87	30.5	17.4	0.63	395	0.60	0.02	10.8	41.4
S050804		2.61	8.06	0.07	1.6	7.44	0.020	1.35	14.5	10.2	0.39	342	0.60	0.01	4.7	20.1
S050805		0.12	0.42	0.07	0.1	0.027	<0.005	0.04	1.4	1.0	1.97	127	<0.05	0.05	0.2	0.4
S050806		4.81	18.20	0.12	3.1	4.49	0.055	3.18	32.8	11.9	0.93	483	0.40	0.02	11.3	37.2
S050807		4.46	14.70	0.11	2.8	0.431	0.056	2.49	27.3	59.8	1.46	528	0.32	0.02	9.5	31.9
S050808		4.67	15.10	0.09	2.8	0.115	0.060	2.58	28.2	115.0	1.84	379	0.24	0.03	9.7	34.2
S050809		4.39	16.05	0.10	2.7	0.437	0.053	2.79	28.6	70.0	1.69	409	0.46	0.03	9.1	31.6
S050810		4.90	15.95	0.13	2.9	0.157	0.060	2.85	28.7	105.5	2.73	801	0.46	0.03	10.0	33.2
S050811		4.60	16.10	0.11	2.9	0.264	0.058	2.86	29.8	63.7	1.91	544	0.46	0.03	9.6	32.0
S050812		4.53	15.70	0.12	2.7	0.655	0.056	2.66	27.8	35.3	1.35	459	0.31	0.02	9.0	32.5
S050813		4.39	15.60	0.08	2.6	0.773	0.063	2.64	27.9	25.9	1.58	557	0.43	0.02	9.2	31.3
S050814		4.89	17.20	0.12	2.8	0.951	0.069	3.01	30.0	18.2	1.20	631	0.31	0.02	10.0	36.4
S050815		5.43	19.55	0.12	3.4	1.280	0.075	3.38	37.7	15.8	1.43	943	0.57	0.03	12.6	43.8
S050816		5.34	17.90	0.11	3.0	3.79	0.055	3.07	30.4	13.5	1.36	1220	0.35	0.02	11.5	41.8
S050817		4.99	17.05	0.11	2.9	10.85	0.071	2.82	27.9	13.3	0.49	247	0.42	0.02	10.4	39.2
S050818		3.09	9.00	0.10	1.7	25.6	0.054	1.43	24.1	15.5	1.96	1100	4.64	0.02	4.9	24.5
S050819		5.99	24.6	0.14	3.6	9.15	0.084	4.01	38.1	20.8	1.00	393	1.31	0.03	13.0	46.1
S050820		6.09	25.3	0.14	3.7	9.27	0.088	4.09	41.2	21.4	1.02	397	1.31	0.03	13.3	45.6

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Finalized Date: 15-OCT-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18225525

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl
	Units	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
	LOD	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.01	0.005	0.02
S050781		490	26.0	130.5	0.002	4.32	1.81	18.0	1	2.4	106.0	0.69	0.06	8.99	0.522	7.88
S050782		460	16.7	109.0	<0.002	2.37	0.53	15.3	1	2.1	155.0	0.62	<0.05	7.65	0.453	3.52
S050783		330	32.1	74.5	0.002	2.81	2.28	10.3	1	1.7	99.1	0.42	<0.05	5.68	0.326	6.56
S050784		300	17.4	70.8	<0.002	2.20	0.71	9.0	<1	1.7	104.0	0.43	<0.05	6.18	0.339	1.98
S050785		320	19.6	87.1	<0.002	2.51	0.84	11.0	1	1.8	106.5	0.50	0.05	6.90	0.363	2.44
S050786		380	10.1	87.6	<0.002	2.15	0.60	10.3	1	1.7	110.0	0.49	<0.05	6.53	0.363	1.97
S050787		540	58.3	148.5	0.002	4.44	1.67	19.5	1	2.6	92.2	0.78	0.05	10.20	0.582	5.20
S050788		580	16.5	169.5	<0.002	0.89	0.49	19.7	1	2.6	162.5	0.82	<0.05	10.40	0.576	1.33
S050789		580	16.1	180.5	<0.002	0.43	0.49	20.0	<1	2.5	145.5	0.81	<0.05	10.30	0.562	1.07
S050790		540	18.4	164.5	<0.002	0.51	0.54	18.0	1	2.4	156.5	0.76	0.05	9.40	0.523	1.00
S050791		460	13.9	136.0	<0.002	0.27	0.39	16.3	1	2.2	113.5	0.67	0.05	8.19	0.506	0.86
S050792		550	22.4	163.0	<0.002	0.30	0.44	21.2	1	2.6	113.5	0.85	0.05	10.20	0.604	1.03
S050793		660	17.4	152.0	<0.002	1.57	0.55	19.5	1	2.6	145.0	0.82	<0.05	9.75	0.570	1.43
S050794		560	17.5	122.5	<0.002	5.00	34.8	16.9	<1	2.4	118.0	0.73	0.08	8.80	0.542	29.6
S050795		440	15.2	113.0	<0.002	4.03	1.88	14.9	1	1.5	136.5	0.64	0.06	7.97	0.467	2.84
S050796		420	13.3	112.5	<0.002	0.34	0.46	14.5	<1	1.3	106.0	0.60	0.06	7.54	0.459	0.97
S050797		530	14.5	136.5	<0.002	2.62	1.04	18.1	1	1.8	162.0	0.82	0.05	10.10	0.525	2.60
S050798		290	12.2	76.9	0.002	2.39	4.34	11.4	<1	1.0	96.0	0.44	<0.05	5.64	0.393	4.14
S050799		310	11.5	65.5	<0.002	2.94	11.70	8.1	1	0.8	66.6	0.39	<0.05	5.66	0.316	14.55
S050800		550	18.5	113.0	<0.002	4.41	33.0	14.1	1	1.9	161.0	0.73	0.06	8.84	0.485	57.7
S050801		510	17.5	73.7	<0.002	4.50	125.0	8.7	3	1.1	408	0.39	0.13	5.64	0.257	31.1
S050802		520	19.1	117.5	<0.002	6.02	34.4	13.9	1	1.8	102.0	0.74	0.07	9.00	0.531	62.0
S050803		540	19.6	123.5	<0.002	5.26	29.7	14.9	1	1.8	103.5	0.79	0.06	9.60	0.547	48.3
S050804		260	10.7	54.1	<0.002	2.37	11.45	6.6	1	0.7	49.7	0.34	<0.05	4.49	0.293	22.4
S050805		60	0.6	1.2	<0.002	<0.01	0.10	0.2	1	<0.2	79.5	<0.05	<0.05	0.12	0.006	0.20
S050806		520	17.0	140.0	<0.002	4.79	8.64	17.2	1	1.9	93.1	0.80	0.05	10.00	0.545	14.95
S050807		530	10.6	114.0	<0.002	2.52	0.83	15.3	<1	1.5	140.5	0.65	<0.05	8.07	0.489	2.07
S050808		430	11.4	121.0	<0.002	0.32	0.42	15.9	1	1.6	103.0	0.69	0.05	8.33	0.496	0.90
S050809		580	16.4	127.0	0.003	1.77	0.81	15.4	1	1.6	167.0	0.66	0.05	8.73	0.420	1.71
S050810		580	15.5	134.0	<0.002	0.52	0.34	16.5	<1	1.7	202	0.71	<0.05	8.94	0.480	1.12
S050811		420	14.2	142.0	<0.002	0.58	0.42	16.4	1	1.7	120.0	0.70	<0.05	9.20	0.443	1.13
S050812		450	14.5	133.0	<0.002	3.08	0.54	16.4	<1	1.6	160.0	0.63	0.05	8.28	0.436	4.20
S050813		500	12.8	136.0	<0.002	3.98	0.90	16.2	1	1.6	219	0.66	<0.05	8.43	0.431	5.72
S050814		420	16.8	154.0	<0.002	4.65	1.36	18.2	1	1.7	91.8	0.72	<0.05	9.28	0.487	4.93
S050815		530	25.1	180.0	<0.002	5.39	3.97	23.2	1	2.0	132.0	0.89	0.06	10.65	0.595	5.49
S050816		500	17.7	164.5	<0.002	5.82	28.0	25.7	1	1.7	128.5	0.81	0.06	9.28	0.580	13.15
S050817		450	21.2	141.0	<0.002	7.38	142.5	13.9	2	1.6	121.5	0.75	0.15	8.66	0.550	32.5
S050818		330	19.7	71.7	0.003	5.25	205	6.1	4	1.2	194.0	0.35	0.16	5.41	0.184	76.7
S050819		620	22.4	192.5	0.003	6.33	22.2	21.9	1	2.6	100.5	0.92	0.05	12.45	0.523	28.7
S050820		620	22.4	202	0.003	6.46	22.8	22.3	2	2.6	101.5	0.94	<0.05	13.10	0.531	29.0

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.
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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 15-OCT-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18225525

Sample Description	Method Analyte Units LOD	ME-MS61 U ppm 0.1	ME-MS61 V ppm 1	ME-MS61 W ppm 0.1	ME-MS61 Y ppm 0.1	ME-MS61 Zn ppm 2	ME-MS61 Zr ppm 0.5	As-OG62 As % 0.001
S050781		2.1	146	2.6	20.5	99	111.0	
S050782		1.7	120	1.0	19.0	123	97.5	
S050783		1.3	87	4.3	13.1	50	68.7	
S050784		1.3	92	1.5	12.6	37	75.1	
S050785		1.5	106	1.9	14.5	43	86.9	
S050786		1.4	87	1.5	15.1	50	77.6	
S050787		2.2	155	4.6	23.0	133	125.5	
S050788		2.2	143	2.1	24.3	78	123.5	
S050789		2.2	141	1.2	23.9	73	120.5	
S050790		2.0	134	1.2	22.0	69	118.0	
S050791		1.7	130	1.0	19.8	69	104.0	
S050792		2.1	156	1.3	24.0	140	123.0	
S050793		2.0	147	1.6	24.4	75	115.5	
S050794		1.9	143	11.1	21.1	72	107.0	
S050795		1.6	123	3.0	17.7	55	93.0	
S050796		1.6	118	1.0	17.5	60	89.2	
S050797		2.0	133	5.0	22.9	79	112.5	
S050798		1.2	108	4.5	11.7	63	70.0	
S050799		1.3	90	6.1	10.7	59	62.1	
S050800		1.8	125	11.1	19.3	170	96.7	1.580
S050801		2.5	70	9.3	20.9	120	61.8	
S050802		2.0	141	12.6	21.6	363	111.0	1.150
S050803		2.0	148	12.5	21.8	96	112.5	
S050804		0.9	83	5.3	10.0	52	55.2	
S050805		0.2	1	0.1	2.4	4	1.9	
S050806		2.0	141	12.3	21.8	56	107.5	
S050807		1.7	129	3.7	18.6	55	100.0	
S050808		1.7	128	1.2	18.5	62	98.1	
S050809		1.8	113	1.9	19.4	59	93.8	
S050810		1.8	119	1.3	21.5	87	104.0	
S050811		2.0	120	1.1	19.7	101	99.5	
S050812		1.8	122	1.9	18.3	66	93.7	
S050813		1.7	118	2.4	19.4	77	92.9	
S050814		1.9	134	4.5	20.9	62	100.5	
S050815		2.2	154	6.5	35.2	154	123.0	
S050816		1.9	154	8.1	22.2	87	109.0	
S050817		1.9	149	8.8	22.2	157	102.0	5.14
S050818		6.5	54	6.0	19.7	117	59.4	
S050819		2.7	155	8.8	26.1	86	123.5	
S050820		2.7	159	9.1	27.2	83	129.5	

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Project: Nadaleen

Finalized Date: 15-OCT-2018
Account: RCM

CERTIFICATE OF ANALYSIS WH18225525

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Applies to Method: REE's may not be totally soluble in this method.
ME-MS61

LABORATORY ADDRESSES

Applies to Method: Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.

CRU-31	CRU-QC	LOG-21	LOG-21d
LOG-23	PUL-31	PUL-31d	PUL-QC
SPL-21	SPL-21d	WEI-21	

Applies to Method: Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

As-OG62	Au-AA25	Hg-MS42	ME-MS61
ME-OG62			

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To: **ATAC RESOURCES LTD.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 14-OCT-2018
Account: RCM

CERTIFICATE WH18222648

Project: Nadaleen

P.O. No.: N18-061

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 7-SEP-2018.

The following have access to data associated with this certificate:

ANDREW CARNE	JULIA LANE	

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
LOG-23	Pulp Login - Rcvd with Barcode
LOG-21d	Sample logging - ClientBarCode Dup
SPL-21d	Split sample - duplicate
PUL-31d	Pulverize Split - duplicate

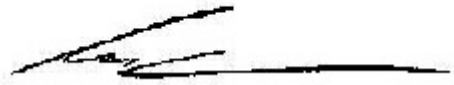
ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid ICP-MS	
Hg-MS42	Trace Hg by ICPMS	ICP-MS
ME-OG62	Ore Grade Elements - Four Acid	ICP-AES
As-OG62	Ore Grade As - Four Acid	

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:



Colin Ramshaw, Vancouver Laboratory Manager

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To: **ATAC RESOURCES LTD.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 14-OCT-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18222648

Sample Description	Method	WEI-21	Au-AA25	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Recvd Wt.	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu
	Units	kg	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.02	0.01	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2
S049331		12.11	0.01	0.03	3.16	48.3	530	0.96	0.10	13.75	0.05	38.1	4.4	33	12.50	13.6
S049332		11.80	0.03	0.05	1.86	42.7	1180	0.48	0.07	23.0	0.05	25.5	3.1	19	7.09	10.3
S049333		11.92	<0.01	0.06	1.30	42.0	440	0.45	0.04	31.0	0.07	17.95	2.7	17	2.73	7.6
S049334		12.10	0.79	0.39	2.26	>10000	170	0.65	0.07	21.3	0.08	27.6	4.4	29	5.52	15.6
S049335		11.13	0.25	0.08	2.62	145.5	170	0.73	0.08	20.8	0.05	35.3	4.5	30	7.12	12.6
S049336		11.18	0.03	0.05	2.25	131.5	130	0.68	0.08	21.6	0.04	30.3	4.0	25	5.38	11.0
S049337		11.00	0.01	0.06	2.91	152.0	120	0.97	0.10	17.35	0.06	41.2	4.7	32	8.66	12.5
S049338		0.26	8.00	0.26	3.65	>10000	170	0.52	0.20	9.97	0.66	44.7	11.0	44	8.72	49.6
S049339		10.88	0.13	0.12	3.90	1870	140	0.99	0.11	12.30	0.09	51.8	6.3	47	10.15	19.8
S049340		11.69	1.18	0.23	0.89	>10000	40	0.22	0.03	27.6	0.15	14.80	2.1	13	1.53	6.2
S049341		11.03	<0.01	0.07	1.69	85.9	100	0.54	0.07	26.3	0.24	21.8	3.1	21	2.96	10.6
S049342		11.17	0.03	0.12	1.38	356	90	0.48	0.06	26.2	0.04	21.2	6.5	18	2.24	28.4
S049343		11.08	0.02	0.05	1.31	42.5	140	0.52	0.04	28.5	0.05	18.40	2.8	17	2.32	7.3
S049344		5.31	0.01	0.05	2.64	251	240	0.82	0.08	20.9	0.12	33.4	4.8	33	4.78	16.3
S049345		5.21	0.01	0.05	2.54	181.0	200	0.82	0.08	20.9	0.08	30.0	4.5	32	4.54	14.6
S049346		11.43	0.02	0.04	2.79	161.0	300	0.87	0.08	19.90	0.14	36.6	4.6	36	4.11	19.3
S049347		11.20	0.08	0.03	1.20	107.5	280	0.55	0.05	28.8	0.09	18.30	2.5	15	1.70	9.3
S049348		11.33	0.03	0.05	1.65	113.0	120	0.63	0.06	27.8	0.13	23.3	3.4	21	2.93	10.8
S049349		11.30	0.07	0.05	1.52	98.6	150	0.67	0.05	27.3	0.06	22.9	3.0	19	3.42	8.6
S049350		9.63	0.01	0.04	1.50	70.0	90	0.56	0.06	26.3	0.08	19.90	3.0	19	3.41	8.4
S049351		8.93	0.13	0.41	1.44	262	70	0.42	0.05	19.90	2.64	20.3	3.9	18	2.74	17.5
S049352		0.28	2.71	0.64	1.78	>10000	140	0.52	3.40	25.4	0.15	26.6	4.8	26	5.93	14.7
S049353		11.47	0.02	0.03	1.91	75.0	220	0.66	0.06	23.5	0.13	24.1	3.3	21	2.66	10.5
S049354		11.93	<0.01	0.04	1.96	26.3	100	0.76	0.07	24.3	0.12	26.2	3.9	24	4.39	14.8
S049355		11.13	0.01	0.05	2.73	40.4	100	0.90	0.10	21.0	0.04	34.2	5.4	35	5.95	21.3
S049356		11.96	1.34	0.06	1.87	>10000	70	0.62	0.08	21.9	0.18	24.4	4.0	23	2.38	11.4
S049357		10.60	0.01	0.10	2.04	128.5	100	0.73	0.07	23.7	0.26	25.1	5.1	24	2.67	13.5
S049358		6.99	<0.01	<0.01	0.10	106.0	20	0.07	0.01	32.6	0.02	1.23	0.5	1	0.05	1.2
S049359		11.38	0.07	0.15	5.42	929	220	1.66	0.17	7.41	0.06	58.0	16.8	53	11.40	111.0
S049360		11.56	<0.01	0.04	8.88	30.2	400	2.60	0.35	0.76	<0.02	86.5	13.8	60	28.4	130.0
S049361		11.28	<0.01	<0.01	8.57	19.5	530	2.58	0.34	0.52	<0.02	85.1	16.1	76	27.8	22.5
S049362		11.38	<0.01	0.02	8.44	30.0	1320	2.44	0.32	0.68	<0.02	86.3	18.3	65	23.0	27.6
S049363		10.61	<0.01	0.01	8.56	8.8	450	2.54	0.34	0.43	<0.02	86.9	18.6	65	30.8	10.9
S049364		7.91	<0.01	0.03	0.86	61.1	90	0.36	0.03	30.8	0.13	11.60	2.4	7	1.19	4.6
S049365		3.82	<0.01	0.05	0.73	38.0	60	0.30	0.03	33.4	0.11	9.66	1.8	7	1.23	3.8
S049366		0.89	<0.01	0.05	6.28	23.4	310	1.81	0.20	11.75	0.03	61.6	12.0	39	6.29	17.0
S049367		2.47	0.01	0.05	9.17	70.2	590	2.74	0.33	0.77	0.04	89.9	19.5	67	8.30	37.7
S049368		1.79	<0.01	0.15	10.45	82.2	590	2.90	0.39	0.21	0.04	103.5	25.5	78	12.00	45.7
S049369		7.31	<0.01	0.05	10.45	21.3	490	2.82	0.39	0.62	0.04	100.0	20.6	76	10.80	45.2
S049370		<0.02	<0.01	0.11	10.25	21.8	500	2.85	0.40	0.52	0.23	93.6	21.0	79	10.80	46.4

***** See Appendix Page for comments regarding this certificate *****

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Finalized Date: 14-OCT-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18222648

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Hg-MS42	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni
	Units	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2
S049331		1.44	8.24	0.07	1.6	0.272	0.029	1.68	18.8	13.1	5.90	271	0.33	0.02	5.3	10.9
S049332		0.85	4.90	0.06	0.8	0.564	0.019	0.99	13.1	5.7	2.55	405	0.37	0.01	3.1	7.6
S049333		0.59	3.54	<0.05	0.6	0.370	0.013	0.67	9.7	3.5	0.97	215	0.54	0.01	2.2	7.6
S049334		1.00	6.08	0.06	1.1	1.440	0.023	1.14	14.2	7.2	1.68	331	0.48	0.02	3.8	11.9
S049335		1.15	7.03	0.06	1.4	0.283	0.025	1.32	16.9	8.0	1.88	315	0.49	0.02	4.5	12.4
S049336		1.13	5.98	0.05	1.3	0.219	0.021	1.12	14.8	6.2	2.92	453	0.37	0.02	3.9	10.2
S049337		1.20	7.67	0.06	2.0	0.372	0.026	1.47	19.8	8.4	3.35	474	0.56	0.03	5.2	13.2
S049338		2.87	10.35	0.08	1.9	27.8	0.041	1.65	22.9	10.5	0.35	727	3.46	0.02	5.4	24.9
S049339		1.45	10.35	0.08	2.4	1.265	0.033	1.95	25.3	9.9	3.71	611	0.73	0.03	6.9	15.7
S049340		0.61	2.58	<0.05	0.6	0.649	0.013	0.44	7.8	2.0	1.47	870	0.35	0.01	1.6	5.2
S049341		0.68	4.56	<0.05	1.0	0.401	0.017	0.83	12.5	3.4	1.72	1060	0.37	0.02	3.0	7.1
S049342		0.99	3.77	<0.05	0.7	1.250	0.015	0.70	10.7	2.8	2.06	860	0.75	0.01	2.4	8.2
S049343		0.61	3.52	<0.05	0.7	0.211	0.013	0.67	9.6	3.2	1.22	287	0.33	0.01	2.2	7.5
S049344		1.14	7.26	0.06	1.5	0.591	0.024	1.35	16.4	7.9	2.46	637	0.48	0.02	4.5	13.2
S049345		1.05	6.85	0.06	1.3	0.524	0.022	1.30	15.4	7.6	2.25	559	0.45	0.02	4.3	12.3
S049346		1.19	7.46	0.07	1.5	0.695	0.022	1.43	17.8	7.6	2.82	717	0.52	0.02	4.8	12.9
S049347		0.71	3.26	0.06	0.6	0.620	0.017	0.61	9.6	2.9	1.19	554	0.22	0.01	2.0	7.1
S049348		0.69	4.60	0.05	0.9	0.489	0.017	0.83	12.1	4.3	0.99	574	0.38	0.01	3.0	9.1
S049349		0.62	4.14	<0.05	0.9	0.491	0.016	0.76	11.7	4.4	0.96	606	0.34	0.01	2.8	8.6
S049350		0.75	4.14	0.05	0.8	0.376	0.017	0.75	10.4	5.0	1.66	599	0.50	0.01	2.6	7.9
S049351		5.78	3.95	0.05	0.8	2.11	0.016	0.71	10.4	4.1	3.47	1080	1.28	0.01	2.5	11.1
S049352		1.33	4.91	0.06	0.9	6.38	0.025	0.88	13.3	8.2	0.88	2140	1.70	0.01	2.6	14.0
S049353		0.73	5.11	<0.05	1.2	0.277	0.016	0.94	12.5	5.5	2.15	823	0.50	0.02	3.4	8.9
S049354		0.87	5.50	0.05	1.1	0.245	0.018	0.95	13.6	10.8	2.01	948	0.43	0.02	3.6	10.8
S049355		1.13	7.52	0.07	1.3	0.294	0.025	1.31	17.0	15.9	1.79	1140	0.28	0.03	4.8	14.7
S049356		0.94	5.32	0.06	1.0	1.645	0.025	0.88	12.6	4.7	2.03	1860	0.40	0.02	3.5	10.2
S049357		0.82	5.47	0.05	1.0	0.424	0.019	0.95	13.1	4.8	1.57	2330	0.39	0.02	3.5	12.1
S049358		0.11	0.31	<0.05	0.1	0.007	0.006	0.03	1.3	1.0	1.88	126	<0.05	0.04	0.2	1.6
S049359		2.18	14.35	0.14	2.6	0.596	0.044	2.54	31.8	29.5	3.63	2100	1.06	0.05	10.1	24.8
S049360		4.21	22.3	0.20	3.1	0.115	0.068	3.99	50.3	128.0	1.69	274	0.25	0.07	12.8	37.9
S049361		5.13	22.3	0.20	3.1	0.015	0.071	4.11	48.8	88.2	1.30	247	0.28	0.07	12.3	37.3
S049362		4.96	22.1	0.19	3.1	0.583	0.074	4.08	48.1	74.4	1.41	243	0.21	0.07	12.2	39.8
S049363		4.79	22.4	0.19	3.1	0.257	0.073	4.10	47.6	96.6	1.27	211	0.22	0.07	12.4	39.4
S049364		0.58	2.17	0.07	0.5	0.166	0.007	0.31	6.7	10.3	1.09	253	0.42	0.06	1.6	4.2
S049365		0.37	1.90	0.08	0.4	0.052	0.006	0.30	5.8	7.0	0.80	169	0.37	0.02	1.2	3.0
S049366		2.96	15.40	0.14	2.6	0.067	0.048	2.25	32.9	107.5	0.67	958	0.28	0.13	9.4	21.6
S049367		4.08	23.3	0.19	3.1	0.038	0.071	3.30	47.4	137.5	0.43	1740	0.23	0.15	12.3	45.5
S049368		4.70	26.8	0.20	3.5	0.239	0.078	3.57	56.2	166.0	0.44	1060	0.66	0.16	14.4	46.6
S049369		4.73	26.6	0.21	3.1	0.048	0.077	3.63	54.8	145.5	0.58	1360	0.43	0.17	13.9	42.9
S049370		4.80	26.9	0.19	3.3	0.069	0.077	3.68	49.0	149.5	0.55	1340	0.43	0.18	14.1	43.9

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 14-OCT-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18222648

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl
	Units	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
	LOD	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.01	0.005	0.02
S049331		390	6.4	72.3	<0.002	0.34	0.46	4.9	2	1.1	192.0	0.40	<0.05	7.09	0.153	0.57
S049332		220	5.3	42.0	<0.002	0.31	0.76	3.0	1	0.7	442	0.23	<0.05	3.95	0.088	1.05
S049333		220	10.7	27.3	<0.002	0.20	0.67	2.2	1	0.5	1095	0.17	<0.05	2.99	0.063	0.75
S049334		350	6.9	51.6	0.002	0.79	30.4	3.5	3	0.9	482	0.29	<0.05	4.88	0.109	5.00
S049335		350	6.9	59.7	<0.002	0.26	1.17	4.2	1	0.9	456	0.34	<0.05	5.79	0.129	0.90
S049336		310	7.8	49.8	<0.002	0.26	0.49	3.6	1	0.8	706	0.30	<0.05	5.40	0.111	0.69
S049337		380	9.4	64.0	<0.002	0.36	0.65	4.6	2	1.1	632	0.40	<0.05	7.46	0.152	0.94
S049338		520	17.1	84.1	0.003	3.37	108.0	8.1	1	1.8	417	0.39	0.12	6.67	0.210	65.5
S049339		580	11.9	86.4	<0.002	0.79	9.76	6.1	3	1.4	273	0.53	<0.05	9.55	0.202	4.61
S049340		400	5.7	18.6	<0.002	1.39	72.8	1.4	2	0.4	551	0.12	<0.05	2.18	0.045	3.36
S049341		310	21.6	32.1	<0.002	0.38	0.47	2.8	1	0.6	610	0.23	<0.05	4.25	0.084	0.87
S049342		220	26.7	27.3	<0.002	0.31	2.19	2.5	1	0.5	589	0.17	<0.05	3.23	0.068	1.32
S049343		190	5.3	27.1	0.002	0.15	0.32	2.2	1	0.5	781	0.17	<0.05	2.91	0.062	0.48
S049344		420	10.9	56.5	<0.002	0.38	0.44	4.5	3	0.9	441	0.35	<0.05	6.11	0.130	1.25
S049345		390	9.3	54.2	<0.002	0.34	0.33	4.4	2	0.9	431	0.33	<0.05	5.92	0.125	1.09
S049346		480	9.2	61.0	<0.002	0.33	1.11	4.9	2	1.0	446	0.36	<0.05	6.49	0.137	1.28
S049347		220	5.0	24.7	0.002	0.19	0.86	2.1	1	0.5	605	0.15	<0.05	2.73	0.058	1.50
S049348		270	7.1	35.3	<0.002	0.27	1.03	3.0	1	0.6	774	0.22	<0.05	4.00	0.082	1.76
S049349		220	6.1	33.2	<0.002	0.23	0.99	2.7	1	0.6	720	0.21	<0.05	3.69	0.077	1.17
S049350		190	9.2	32.6	<0.002	0.38	0.61	2.7	1	0.6	602	0.21	<0.05	3.51	0.074	0.72
S049351		180	241	29.7	<0.002	5.92	17.85	2.5	1	0.6	336	0.19	<0.05	3.21	0.070	8.75
S049352		320	7.2	40.6	0.003	1.38	44.7	5.7	2	0.6	981	0.20	<0.05	3.41	0.084	24.5
S049353		260	9.2	40.0	<0.002	0.16	0.57	3.3	2	0.7	573	0.25	<0.05	4.53	0.095	0.64
S049354		260	10.8	42.9	<0.002	0.19	0.23	3.6	2	0.7	793	0.27	<0.05	4.90	0.098	0.53
S049355		340	9.6	58.6	0.002	0.17	0.22	4.8	1	1.1	487	0.35	<0.05	6.15	0.132	0.57
S049356		230	11.6	39.6	<0.002	1.15	47.5	3.3	4	0.8	477	0.26	<0.05	4.42	0.093	4.96
S049357		270	22.2	40.4	<0.002	0.21	0.89	3.6	1	0.7	659	0.27	<0.05	4.55	0.097	0.77
S049358		70	<0.5	1.0	<0.002	<0.01	0.37	0.2	1	<0.2	81.9	<0.05	<0.05	0.10	0.006	0.03
S049359		470	22.1	106.5	<0.002	0.76	2.10	9.7	2	1.9	207	0.72	<0.05	12.00	0.275	1.45
S049360		460	7.9	183.0	<0.002	0.07	0.43	16.3	<1	2.6	161.0	0.92	0.09	16.25	0.416	1.16
S049361		510	15.3	189.5	<0.002	0.01	0.80	16.7	<1	2.6	189.0	0.87	0.10	15.85	0.405	1.18
S049362		550	19.6	185.0	<0.002	0.26	0.94	17.0	<1	2.5	434	0.85	0.11	15.40	0.407	1.22
S049363		510	16.9	184.5	<0.002	0.01	0.62	17.2	<1	2.6	221	0.89	0.08	15.45	0.411	1.10
S049364		260	4.3	13.2	<0.002	0.06	0.31	1.7	2	0.3	1255	0.11	<0.05	1.54	0.045	0.53
S049365		240	3.5	12.5	<0.002	0.02	0.18	1.4	2	0.2	1445	0.09	<0.05	1.36	0.033	0.21
S049366		720	10.1	102.5	<0.002	0.03	0.59	11.1	1	1.8	547	0.67	0.05	10.60	0.308	0.61
S049367		820	14.2	146.0	<0.002	0.03	1.16	16.4	1	2.6	234	0.87	0.09	14.70	0.397	0.87
S049368		630	48.5	159.5	<0.002	0.10	2.81	19.1	<1	3.1	233	1.03	0.09	17.60	0.452	1.21
S049369		620	23.9	154.5	<0.002	0.02	1.12	18.0	<1	2.9	315	1.00	0.10	17.00	0.425	0.98
S049370		630	54.7	151.5	<0.002	0.03	1.27	18.4	<1	3.0	304	1.03	0.10	16.60	0.434	1.04

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.
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To: **ATAC RESOURCES LTD.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 14-OCT-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18222648

Sample Description	Method Analyte Units LOD	ME-MS61 U ppm 0.1	ME-MS61 V ppm 1	ME-MS61 W ppm 0.1	ME-MS61 Y ppm 0.1	ME-MS61 Zn ppm 2	ME-MS61 Zr ppm 0.5	As-OG62 As % 0.001
S049331		5.9	46	1.3	11.3	41	57.0	
S049332		11.3	29	0.8	7.3	33	28.2	
S049333		15.9	24	0.5	5.4	37	21.4	
S049334		10.9	37	1.1	8.3	33	36.2	1.190
S049335		9.3	41	1.1	10.1	25	49.2	
S049336		11.2	33	0.9	8.9	21	47.6	
S049337		8.4	41	1.2	11.5	28	70.8	
S049338		4.3	61	8.3	21.3	127	62.8	
S049339		5.8	58	2.5	14.6	37	82.5	
S049340		6.5	16	0.7	4.9	9	19.6	2.01
S049341		10.9	26	0.7	7.2	44	35.4	
S049342		14.1	23	1.2	6.9	18	26.1	
S049343		13.9	23	0.7	5.6	21	22.2	
S049344		10.4	42	1.8	10.2	48	47.4	
S049345		10.4	41	1.7	9.2	42	43.6	
S049346		8.2	45	2.4	11.2	59	54.4	
S049347		11.8	21	1.0	6.0	34	21.8	
S049348		14.8	26	1.3	7.1	46	31.2	
S049349		13.7	23	1.2	7.0	25	30.8	
S049350		13.6	24	0.8	6.2	44	28.3	
S049351		11.2	22	1.4	6.1	580	24.8	
S049352		6.7	32	19.7	15.1	22	30.3	
S049353		11.7	28	1.0	7.7	49	43.0	
S049354		12.3	30	0.5	8.2	42	40.1	
S049355		10.4	41	0.6	10.0	37	45.2	
S049356		12.3	27	1.7	7.7	48	34.5	1.935
S049357		12.9	31	1.3	8.2	68	32.5	
S049358		0.2	1	<0.1	2.3	3	1.7	
S049359		4.7	80	2.4	17.5	61	89.2	
S049360		3.0	104	1.7	19.6	88	107.5	
S049361		2.1	84	1.6	19.3	76	104.0	
S049362		2.4	94	2.3	19.1	83	110.5	
S049363		2.2	95	1.6	19.4	85	103.0	
S049364		9.0	14	0.3	4.3	14	19.5	
S049365		9.8	13	0.3	3.7	10	14.6	
S049366		5.3	64	1.3	17.0	69	90.0	
S049367		3.2	91	2.0	22.6	112	103.5	
S049368		4.0	108	2.1	24.3	103	119.0	
S049369		3.4	100	1.8	21.7	95	105.5	
S049370		3.5	102	1.8	21.3	164	109.0	

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To: **ATAC RESOURCES LTD.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Project: Nadaleen

Finalized Date: 14-OCT-2018
Account: RCM

CERTIFICATE OF ANALYSIS WH18222648

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Applies to Method: REE's may not be totally soluble in this method.
ME-MS61

LABORATORY ADDRESSES

Applies to Method: Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.

CRU-31	CRU-QC	LOG-21	LOG-21d
LOG-23	PUL-31	PUL-31d	PUL-QC
SPL-21	SPL-21d	WEI-21	

Applies to Method: Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

As-OG62	Au-AA25	Hg-MS42	ME-MS61
ME-OG62			

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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 15-OCT-2018
Account: RCM

CERTIFICATE WH18225505

Project: Nadaleen

P.O. No.: N18-062

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 11-SEP-2018.

The following have access to data associated with this certificate:

ANDREW CARNE	JULIA LANE	

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
LOG-23	Pulp Login - Rcvd with Barcode
LOG-21d	Sample logging - ClientBarCode Dup
SPL-21d	Split sample - duplicate
PUL-31d	Pulverize Split - duplicate

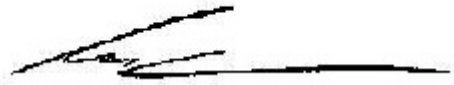
ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid ICP-MS	
Hg-MS42	Trace Hg by ICPMS	ICP-MS
ME-OG62	Ore Grade Elements - Four Acid	ICP-AES
As-OG62	Ore Grade As - Four Acid	

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:



Colin Ramshaw, Vancouver Laboratory Manager

ALS Canada Ltd.

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Finalized Date: 15-OCT-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18225505

Sample Description	Method	WEI-21	Au-AA25	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Recvd Wt.	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu
	Units	kg	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.02	0.01	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2
S050821		12.84	3.01	0.11	8.47	5240	300	2.27	0.38	0.73	0.25	83.8	21.5	92	29.0	66.3
S050822		6.90	<0.01	0.01	0.10	8.1	30	0.07	0.01	34.8	<0.02	1.17	1.2	2	0.08	5.0
S050823		10.34	0.49	0.06	5.45	483	260	1.52	0.21	1.98	0.22	54.7	14.8	62	15.70	42.3
S050824		10.52	0.04	0.08	6.49	175.0	230	2.24	0.26	2.25	0.15	65.0	15.2	62	24.2	45.6
S050825		11.20	<0.01	0.08	8.53	64.6	290	2.88	0.37	1.03	0.11	84.1	24.6	81	33.8	59.7
S050826		11.45	<0.01	0.05	6.83	75.3	290	2.06	0.29	2.59	0.10	68.3	16.2	75	27.1	53.2
S050827		10.81	<0.01	0.05	6.35	131.5	280	1.80	0.24	3.35	0.12	61.5	18.6	70	21.5	50.7
S050828		11.35	0.03	0.07	6.72	197.0	410	1.98	0.24	2.35	0.16	61.9	21.5	69	23.3	52.0
S050829		11.57	<0.01	0.07	6.37	122.0	240	2.16	0.24	1.53	0.02	64.1	20.6	75	33.2	52.3
S050830		12.43	<0.01	0.07	6.95	74.4	240	2.31	0.30	2.21	0.03	70.5	21.6	75	38.0	53.3
S050831		11.99	0.01	0.06	6.20	134.5	290	1.87	0.26	2.52	0.03	65.2	21.9	66	33.7	48.7
S050832		12.25	0.01	0.07	6.37	184.0	340	1.68	0.25	2.74	0.03	64.2	19.6	67	27.5	54.4
S050833		12.23	0.01	0.06	6.57	112.0	330	2.14	0.26	2.04	0.13	65.6	20.1	74	28.3	53.5
S050834		12.49	<0.01	0.07	6.08	121.5	240	2.03	0.23	2.20	0.10	58.7	21.0	70	28.0	51.4
S050835		12.15	0.03	0.04	5.75	142.5	260	1.61	0.22	5.61	0.02	58.9	17.5	59	19.55	49.8
S050836		0.27	7.90	0.27	3.81	>10000	180	0.71	0.19	10.50	0.66	45.1	12.4	48	9.53	55.3
S050837		12.26	0.23	0.05	5.56	438	270	1.55	0.21	4.71	0.11	55.9	15.8	58	21.7	46.8
S050838		5.18	0.01	0.07	6.47	67.3	290	2.33	0.25	1.42	0.12	63.6	22.3	72	31.8	50.1
S050839		5.56	0.01	0.08	6.61	62.7	310	2.33	0.24	1.49	0.09	64.2	22.1	75	32.8	50.9
S050840		10.81	0.01	0.06	5.77	40.4	270	1.74	0.23	2.11	0.05	60.2	18.5	67	27.5	48.4
S050841		11.58	0.01	0.07	5.78	63.3	230	1.62	0.21	1.51	0.02	55.0	16.9	67	32.7	44.2
S050842		11.95	0.01	0.04	5.72	26.6	200	1.46	0.20	1.75	0.02	54.6	16.8	65	33.0	42.9
S050843		11.03	0.01	0.08	6.84	58.5	260	1.96	0.27	1.42	0.07	68.3	20.0	73	30.5	47.0
S050844		8.62	<0.01	0.07	6.15	57.4	270	1.59	0.22	2.92	0.18	60.5	17.2	66	22.3	47.5
S050845		3.63	0.01	0.14	6.30	71.8	220	1.68	0.23	3.91	0.11	57.7	17.4	65	23.4	55.5
S050846		6.41	0.01	0.05	5.97	92.9	290	1.45	0.22	4.49	0.10	55.3	15.4	61	22.0	49.1
S050847		7.37	0.01	0.05	5.79	61.1	220	1.37	0.19	4.18	0.03	54.4	20.3	60	35.3	48.7
S050848		7.09	0.01	0.06	6.19	38.7	280	1.65	0.20	3.82	0.05	58.1	18.4	67	24.9	51.4
S050849		7.04	0.01	0.06	5.68	28.9	230	1.41	0.19	3.95	0.04	52.4	17.5	62	24.3	47.2
S050850		7.13	0.01	0.05	5.61	46.8	330	1.44	0.19	4.30	0.09	51.2	16.5	61	19.50	46.7
S050851		6.79	0.16	0.06	5.91	483	400	1.56	0.19	4.45	0.04	56.5	17.1	61	22.8	49.2
S050852		7.03	0.41	0.09	5.54	1250	300	1.29	0.18	4.26	0.04	51.4	17.4	56	18.65	46.9
S050853		8.03	0.01	0.06	6.04	170.5	330	1.59	0.21	4.06	0.06	57.5	19.1	62	21.3	51.0
S050854		7.32	0.04	0.05	6.00	209	240	1.50	0.21	4.56	0.06	56.2	17.8	58	20.6	49.8
S050855		7.12	0.04	0.03	5.71	407	200	1.36	0.18	4.01	0.04	53.9	17.5	60	18.40	49.2
S050856		5.20	5.97	2.55	6.10	4650	230	1.27	0.24	6.15	0.21	61.7	17.2	57	16.65	52.0
S050857		4.99	12.75	6.38	3.22	>10000	140	0.65	0.15	16.60	0.56	37.9	9.6	32	6.25	31.9
S050858		<0.02	12.85	6.81	3.39	>10000	150	0.65	0.16	17.35	0.58	39.9	10.1	34	6.49	33.3
S050859		3.24	10.35	3.67	1.24	>10000	150	0.20	0.10	3.85	3.53	22.3	3.8	16	1.94	14.7
S050860		0.28	2.99	3.09	2.18	>10000	130	0.44	0.10	17.25	0.56	28.6	5.6	34	4.77	27.5

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 15-OCT-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18225505

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Hg-MS42	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni
	Units	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2
S050821		6.00	23.9	0.18	3.7	8.39	0.079	4.12	40.5	17.5	0.80	341	1.51	0.03	12.9	47.6
S050822		0.14	0.40	0.09	0.1	0.007	<0.005	0.03	1.3	1.4	2.09	129	0.06	0.04	0.1	0.3
S050823		3.96	14.40	0.14	2.7	1.155	0.049	2.54	26.4	15.1	1.05	533	0.64	0.02	8.7	29.3
S050824		4.36	17.30	0.17	2.8	0.780	0.067	3.10	32.1	21.5	1.62	557	0.92	0.03	9.4	31.0
S050825		5.66	23.1	0.22	3.9	0.414	0.094	4.06	41.2	28.4	1.74	257	1.09	0.03	12.7	46.5
S050826		4.85	18.20	0.19	3.2	0.117	0.073	3.23	33.2	42.4	2.28	503	0.90	0.03	10.9	34.3
S050827		4.87	16.90	0.19	2.8	0.274	0.063	3.05	29.9	33.1	1.93	865	0.71	0.03	9.5	35.1
S050828		5.35	18.05	0.17	2.8	0.668	0.064	3.17	30.8	27.8	1.40	671	0.65	0.02	9.1	38.0
S050829		4.63	17.45	0.20	2.9	0.315	0.068	3.03	31.2	69.8	1.52	389	0.36	0.03	9.8	37.8
S050830		4.50	18.15	0.18	2.9	0.322	0.070	3.40	36.0	58.1	1.54	615	0.29	0.03	9.4	39.3
S050831		4.38	16.65	0.20	2.8	0.429	0.060	2.98	32.0	56.4	1.50	700	0.29	0.02	8.6	37.2
S050832		4.84	17.25	0.18	3.1	0.575	0.065	2.93	31.0	92.4	1.81	573	0.33	0.03	10.9	37.6
S050833		4.81	18.00	0.20	3.1	0.324	0.072	3.15	32.0	68.9	1.73	468	0.35	0.03	10.5	38.2
S050834		4.33	16.45	0.19	2.8	0.364	0.060	2.93	28.9	57.0	1.66	438	0.56	0.03	9.5	38.3
S050835		4.61	15.30	0.18	3.0	0.206	0.061	2.71	28.1	49.2	2.79	953	0.25	0.03	10.1	34.2
S050836		3.02	10.75	0.11	2.0	27.8	0.054	1.75	25.1	14.6	0.37	778	3.66	0.02	6.2	27.8
S050837		4.74	14.45	0.15	2.8	0.560	0.057	2.57	27.3	35.4	2.30	897	0.38	0.03	9.6	32.1
S050838		4.31	17.75	0.19	3.0	0.457	0.062	3.09	31.5	48.4	1.33	376	0.44	0.03	9.5	39.3
S050839		4.35	17.95	0.20	2.9	0.481	0.067	3.11	31.5	51.9	1.36	384	0.45	0.03	9.6	39.1
S050840		4.53	15.65	0.18	2.7	0.286	0.062	2.71	29.1	79.2	1.74	499	0.55	0.03	8.9	34.1
S050841		4.39	14.70	0.11	2.5	0.087	0.058	2.66	27.0	90.5	1.58	377	0.31	0.03	7.9	31.4
S050842		4.31	14.35	0.09	2.6	0.078	0.057	2.66	27.1	81.0	1.65	421	0.30	0.03	8.0	32.0
S050843		4.30	17.50	0.14	3.0	0.131	0.066	3.28	33.8	45.4	1.61	342	0.47	0.03	9.4	36.6
S050844		4.23	15.95	0.12	2.7	0.077	0.053	3.00	29.1	32.4	2.15	534	0.72	0.03	8.5	31.7
S050845		4.53	15.75	0.11	2.9	0.024	0.055	2.93	27.9	51.5	2.81	702	0.34	0.04	9.3	36.3
S050846		4.39	15.25	0.11	2.8	0.054	0.060	2.85	27.1	43.7	2.76	712	0.38	0.05	9.1	32.7
S050847		4.51	14.65	0.11	2.8	0.021	0.055	2.55	26.0	97.2	2.79	660	0.35	0.18	8.9	34.7
S050848		4.46	16.00	0.11	2.9	0.033	0.058	2.64	28.4	89.0	2.64	588	0.38	0.03	9.5	35.7
S050849		4.39	14.50	0.09	2.7	0.044	0.051	2.53	27.4	86.1	2.61	601	0.38	0.03	8.6	34.3
S050850		4.31	14.40	0.12	2.5	0.095	0.056	2.57	24.2	29.3	2.55	645	0.35	0.03	8.5	33.1
S050851		4.58	15.35	0.11	2.9	0.311	0.061	2.72	27.2	44.0	2.58	741	0.28	0.03	9.2	33.9
S050852		4.47	14.30	0.11	2.6	0.698	0.053	2.57	24.7	33.6	2.23	828	0.27	0.02	8.4	33.7
S050853		4.56	15.50	0.11	2.9	0.287	0.057	2.79	27.8	42.2	2.18	569	0.34	0.03	9.3	35.6
S050854		4.49	15.05	0.10	2.7	0.448	0.059	2.78	27.0	32.4	2.28	717	0.27	0.03	9.2	33.5
S050855		4.16	14.75	0.11	2.8	0.581	0.055	2.65	26.2	29.0	1.90	808	0.33	0.03	8.9	33.9
S050856		4.62	16.20	0.11	2.7	6.36	0.049	2.87	30.8	16.4	2.17	3690	0.79	0.02	8.6	35.8
S050857		2.66	8.68	0.09	1.6	6.20	0.028	1.53	20.7	10.3	0.91	5320	1.75	0.01	4.2	17.9
S050858		2.78	9.05	0.09	1.5	6.24	0.033	1.61	21.6	10.9	0.91	5720	1.87	0.02	4.4	18.8
S050859		1.28	3.66	0.08	0.6	10.85	0.055	0.54	10.2	38.7	0.10	2560	0.90	<0.01	1.5	7.4
S050860		1.40	5.97	0.08	1.1	5.90	0.038	1.01	14.2	14.8	1.39	987	1.46	0.06	2.9	13.4

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 15-OCT-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18225505

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl
	Units	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
	LOD	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.01	0.005	0.02
S050821		560	28.1	201	0.003	6.51	26.9	23.1	1	3.1	85.6	0.91	0.07	13.20	0.540	24.4
S050822		70	<0.5	0.9	<0.002	0.02	0.10	0.3	1	0.5	81.7	<0.05	<0.05	0.09	0.007	0.04
S050823		460	12.3	118.5	<0.002	3.49	5.31	15.2	1	2.2	126.5	0.60	0.05	8.26	0.433	5.77
S050824		490	16.5	150.5	0.002	2.45	0.89	17.5	1	2.5	122.0	0.67	<0.05	9.85	0.403	3.25
S050825		480	21.5	198.0	0.003	2.13	0.66	24.6	1	3.2	117.5	0.90	0.05	13.70	0.530	2.02
S050826		530	12.3	156.0	0.002	0.67	0.44	19.3	1	2.6	152.5	0.77	0.07	10.25	0.507	1.21
S050827		410	14.4	137.0	0.002	2.09	1.04	19.2	1	2.3	172.5	0.66	0.05	8.97	0.454	1.93
S050828		310	19.2	142.0	0.002	4.10	2.92	20.5	1	2.4	156.5	0.65	0.05	9.30	0.415	5.21
S050829		340	16.7	150.0	0.002	1.14	0.60	19.4	1	2.2	96.4	0.67	0.05	9.67	0.456	2.28
S050830		190	18.4	162.0	<0.002	1.59	0.61	19.5	1	2.3	122.0	0.65	0.06	11.25	0.387	2.14
S050831		820	17.1	144.0	<0.002	1.94	0.70	18.0	1	2.2	154.0	0.62	0.05	9.20	0.376	3.14
S050832		490	13.4	144.5	<0.002	2.25	0.80	18.7	1	2.3	237	0.75	0.05	9.58	0.502	5.41
S050833		490	17.3	151.5	<0.002	1.36	0.61	19.5	1	2.5	155.5	0.73	0.06	9.94	0.476	2.72
S050834		340	19.8	138.5	<0.002	1.33	0.75	18.0	1	2.2	111.5	0.65	<0.05	8.98	0.445	1.74
S050835		580	9.0	126.0	<0.002	2.29	0.70	16.1	1	2.2	210	0.70	0.06	8.94	0.491	1.71
S050836		530	16.7	83.4	0.003	3.54	111.0	9.3	1	2.3	443	0.42	0.15	6.94	0.223	66.9
S050837		490	9.1	120.0	<0.002	3.40	1.21	15.3	1	2.1	173.5	0.67	0.05	8.60	0.473	3.42
S050838		300	23.0	152.5	0.002	2.11	0.83	18.6	1	2.4	96.9	0.66	0.06	9.48	0.430	3.12
S050839		320	21.9	152.0	0.002	2.21	0.84	19.1	1	2.5	106.5	0.68	0.06	9.57	0.442	3.32
S050840		360	17.8	139.0	<0.002	1.09	0.58	16.9	1	2.1	101.0	0.62	<0.05	8.82	0.411	1.69
S050841		370	13.7	143.0	<0.002	0.61	0.43	15.6	<1	1.6	80.6	0.56	<0.05	8.37	0.433	0.92
S050842		370	14.8	145.0	<0.002	0.56	0.44	15.1	<1	1.5	83.1	0.58	<0.05	8.36	0.435	0.99
S050843		380	21.1	173.5	<0.002	0.82	0.57	17.7	<1	1.9	80.8	0.66	0.05	10.65	0.457	1.28
S050844		560	13.0	156.0	<0.002	0.62	0.45	16.1	<1	1.7	148.5	0.61	0.05	9.11	0.435	1.29
S050845		520	8.5	158.0	<0.002	0.15	0.21	16.3	<1	1.9	153.5	0.65	0.06	8.86	0.519	0.81
S050846		510	10.2	152.5	<0.002	0.48	0.33	16.0	<1	1.6	261	0.63	<0.05	8.82	0.488	0.87
S050847		500	19.6	145.0	<0.002	0.19	0.41	15.8	1	1.5	153.5	0.61	0.06	8.38	0.495	0.72
S050848		520	11.4	148.0	<0.002	0.18	0.37	17.1	<1	1.6	153.5	0.64	0.06	8.98	0.537	1.01
S050849		440	17.0	138.5	<0.002	0.22	0.37	15.7	1	1.5	157.5	0.61	0.06	8.25	0.492	0.84
S050850		470	15.9	136.5	<0.002	0.83	0.38	15.2	<1	1.4	223	0.59	0.05	8.14	0.480	1.24
S050851		510	9.9	145.5	<0.002	2.35	1.79	16.4	1	1.6	261	0.63	0.06	8.53	0.518	2.52
S050852		460	13.1	130.5	<0.002	3.70	6.89	15.1	<1	1.4	216	0.60	0.09	8.01	0.478	4.83
S050853		510	15.3	133.5	<0.002	2.59	0.49	16.4	1	1.6	219	0.65	0.05	8.79	0.519	2.32
S050854		500	14.0	128.0	<0.002	3.03	0.97	15.9	1	1.6	227	0.64	0.07	8.63	0.505	1.86
S050855		490	9.5	121.0	<0.002	3.19	1.36	15.7	<1	1.5	146.0	0.62	<0.05	8.39	0.499	2.51
S050856		360	13.6	128.5	0.003	3.95	34.0	15.8	1	1.6	197.0	0.62	0.21	9.07	0.444	26.5
S050857		850	11.9	70.6	0.005	3.88	87.1	5.7	2	0.7	419	0.30	0.26	5.15	0.183	24.1
S050858		840	12.8	74.7	0.004	4.13	95.5	6.0	3	0.8	435	0.31	0.26	5.44	0.191	25.7
S050859		680	5.9	24.9	0.003	6.93	701	0.9	10	0.3	177.5	0.11	0.47	2.12	0.065	12.30
S050860		400	21.5	44.0	<0.002	3.28	142.0	5.8	3	0.7	604	0.22	0.08	4.08	0.108	18.10

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.
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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 15-OCT-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18225505

Sample Description	Method Analyte Units LOD	ME-MS61 U ppm 0.1	ME-MS61 V ppm 1	ME-MS61 W ppm 0.1	ME-MS61 Y ppm 0.1	ME-MS61 Zn ppm 2	ME-MS61 Zr ppm 0.5	As-OG62 As % 0.001
S050821		2.7	164	10.9	27.1	87	126.0	
S050822		0.2	2	<0.1	2.4	4	1.8	
S050823		1.7	122	5.5	17.4	105	94.5	
S050824		2.1	118	2.7	20.6	86	98.2	
S050825		2.6	155	2.5	26.3	119	136.0	
S050826		2.1	137	2.0	23.7	105	112.5	
S050827		1.8	133	3.9	19.7	88	101.0	
S050828		1.9	140	3.8	20.8	96	98.3	
S050829		2.0	135	1.3	20.8	55	102.0	
S050830		2.0	108	1.4	18.4	65	102.5	
S050831		2.0	108	1.4	22.2	65	93.7	
S050832		2.0	132	2.6	22.2	68	110.5	
S050833		2.0	134	3.2	21.3	100	107.5	
S050834		2.0	128	1.5	18.7	83	99.9	
S050835		1.8	119	2.9	21.7	60	105.0	
S050836		4.3	64	8.3	23.5	140	70.6	
S050837		1.7	119	3.7	20.0	87	100.5	
S050838		2.0	131	2.0	19.1	79	101.0	
S050839		2.0	136	2.0	19.5	76	104.0	
S050840		1.9	117	1.1	20.4	67	93.1	
S050841		1.8	122	1.0	18.6	59	91.0	
S050842		1.8	119	1.0	17.9	54	94.7	
S050843		2.3	125	1.4	19.8	82	107.0	
S050844		2.0	116	1.7	20.5	121	97.8	
S050845		1.8	128	2.0	20.2	95	105.5	
S050846		1.8	119	2.7	20.3	88	102.5	
S050847		1.8	121	1.0	20.4	48	102.0	
S050848		1.9	133	1.5	21.2	62	108.5	
S050849		1.7	123	1.2	19.2	57	97.3	
S050850		1.6	119	1.3	18.7	85	90.9	
S050851		1.7	128	2.0	19.5	49	103.0	
S050852		1.6	122	3.6	18.2	50	97.6	
S050853		1.8	128	2.3	20.1	65	101.0	
S050854		1.7	123	3.3	19.6	73	99.7	
S050855		1.7	126	4.4	19.6	59	99.8	
S050856		2.0	118	7.6	19.2	82	94.5	
S050857		3.0	54	3.9	13.7	65	52.7	2.53
S050858		3.1	56	4.0	14.7	70	55.4	2.55
S050859		3.5	21	1.5	11.6	221	20.2	13.65
S050860		4.7	38	5.7	16.0	67	40.5	

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Project: Nadaleen

Finalized Date: 15-OCT-2018
Account: RCM

CERTIFICATE OF ANALYSIS WH18225505

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Applies to Method: REE's may not be totally soluble in this method.
ME-MS61

LABORATORY ADDRESSES

Applies to Method: Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.

CRU-31	CRU-QC	LOG-21	LOG-21d
LOG-23	PUL-31	PUL-31d	PUL-QC
SPL-21	SPL-21d	WEI-21	

Applies to Method: Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

As-OG62	Au-AA25	Hg-MS42	ME-MS61
ME-OG62			

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To: **ATAC RESOURCES LTD.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 19-OCT-2018
Account: RCM

CERTIFICATE WH18228631

Project: Nadaleen

P.O. No.: N18-063

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 14-SEP-2018.

The following have access to data associated with this certificate:

ANDREW CARNE	JULIA LANE	

SAMPLE PREPARATION

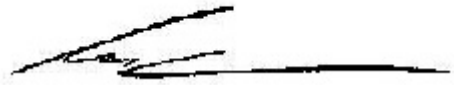
ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
WSH-22	"Wash" pulverizers
PUL-31	Pulverize split to 85% <75 um
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
LOG-23	Pulp Login - Rcvd with Barcode
LOG-21d	Sample logging - ClientBarCode Dup
SPL-21d	Split sample - duplicate
PUL-31d	Pulverize Split - duplicate

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid ICP-MS	
Hg-MS42	Trace Hg by ICPMS	ICP-MS
ME-OG62	Ore Grade Elements - Four Acid	ICP-AES
As-OG62	Ore Grade As - Four Acid	

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature: 

Colin Ramshaw, Vancouver Laboratory Manager

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VANCOUVER BC V6B 1L8

Finalized Date: 19-OCT-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18228631

Sample Description	Method	WEI-21	Au-AA25	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Recvd Wt.	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu
	Units	kg	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.02	0.01	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2
S050861		4.17	7.26	3.62	1.55	>10000	180	0.24	0.15	3.52	5.68	23.8	5.4	21	2.81	22.6
S050862		4.95	<0.01	0.03	0.11	296	30	0.07	0.08	33.6	0.02	1.11	0.5	2	<0.05	3.8
S050863		4.09	0.20	0.24	0.52	508	90	0.18	0.03	34.5	0.06	9.78	1.8	8	0.97	6.3
S050864		7.56	0.13	0.04	0.85	118.0	110	0.30	0.05	34.0	0.06	13.15	2.9	10	1.94	9.8
S050865		7.57	1.35	0.20	1.82	480	110	0.41	0.06	28.5	0.12	30.6	6.3	12	4.17	11.9
S050866		7.71	1.24	0.14	0.75	236	80	0.30	0.04	33.0	0.11	13.05	2.5	7	1.38	7.3
S050867		7.20	1.85	0.10	1.73	370	140	0.47	0.08	29.2	0.24	28.0	5.8	16	3.63	17.8
S050868		7.66	1.35	0.11	3.07	1680	220	0.69	0.15	22.1	0.24	40.3	9.6	31	7.39	31.4
S050869		7.22	1.54	0.10	2.45	354	190	0.58	0.12	25.4	0.21	32.7	7.9	24	6.71	25.3
S050870		7.17	0.45	0.06	1.54	148.0	180	0.40	0.08	31.0	0.14	22.6	5.0	16	3.36	17.6
S050871		7.91	0.48	0.09	2.14	521	190	0.60	0.10	28.4	0.22	31.6	7.3	22	5.05	22.6
S050872		7.22	0.11	0.09	4.83	1170	320	1.37	0.24	15.65	0.33	59.3	15.9	51	17.45	48.6
S050873		7.49	0.01	0.04	1.60	57.0	200	0.56	0.09	29.3	0.14	25.5	5.0	17	4.90	15.5
S050874		7.19	<0.01	0.05	3.17	41.4	250	0.97	0.16	23.7	0.27	43.9	9.9	32	10.10	31.9
S050875		7.32	0.01	0.04	2.23	25.4	190	0.64	0.12	28.3	0.14	29.5	7.2	23	6.83	21.5
S050876		4.39	<0.01	0.03	1.60	189.0	150	0.35	0.05	29.4	0.07	27.4	6.0	11	3.68	11.9
S050877		6.52	0.75	0.17	1.18	>10000	210	0.28	0.08	28.8	0.14	19.90	4.2	15	2.06	14.3
S050878		0.26	2.90	2.57	2.14	>10000	130	0.48	0.09	17.25	0.63	28.6	5.4	34	4.71	27.0
S050879		5.58	0.01	0.03	2.28	311	230	0.61	0.08	27.9	0.15	32.6	9.0	23	7.05	21.7
S050880		5.38	<0.01	0.03	2.47	185.0	340	0.51	0.11	25.5	0.18	31.1	9.2	23	6.25	24.7
S050881		7.22	0.01	0.01	1.04	31.2	100	0.28	0.05	32.6	0.13	15.85	4.3	10	2.52	10.9
S050882		7.07	<0.01	0.03	1.08	41.5	110	0.30	0.06	32.0	0.13	16.80	4.2	12	3.13	12.6
S050883		7.18	<0.01	0.02	0.82	21.0	110	0.28	0.05	33.4	0.12	13.00	3.2	9	2.51	9.6
S050884		7.06	<0.01	0.01	0.57	34.1	130	0.20	0.03	35.2	0.10	9.38	2.3	7	1.38	7.1
S050885		3.62	<0.01	0.02	0.52	31.5	170	0.17	0.04	35.8	0.10	8.53	2.1	6	1.54	7.1
S050886		3.16	<0.01	0.01	0.68	38.9	120	0.23	0.04	35.7	0.13	10.40	2.7	7	2.05	8.9
S050887		7.56	<0.01	0.01	0.26	10.0	130	0.13	0.02	37.3	0.07	5.08	1.4	4	0.61	3.9
S050888		7.33	<0.01	0.01	0.33	15.1	80	0.15	0.03	36.2	0.04	6.52	1.6	5	0.82	5.0
S050889		7.38	<0.01	0.01	0.20	10.3	80	0.12	0.02	37.4	0.04	4.39	1.1	3	0.40	3.0
S050890		<0.02	<0.01	0.01	0.19	10.4	80	0.09	0.02	36.9	0.03	4.37	1.1	3	0.40	2.9
S050891		3.32	<0.01	0.12	2.92	8.3	140	0.96	0.13	23.6	0.04	41.0	4.8	26	4.81	12.9
S050892		2.42	<0.01	0.22	3.37	13.6	290	1.00	0.15	21.2	0.03	45.5	6.4	29	6.14	16.9
S050893		3.68	<0.01	0.12	4.14	29.8	280	1.10	0.18	16.85	0.04	53.6	9.4	35	6.27	18.3
S050894		7.30	<0.01	0.62	4.35	20.0	230	1.19	0.19	17.90	0.04	57.5	9.2	34	5.98	18.6
S050895		10.20	0.01	0.13	6.52	13.7	270	1.57	0.27	9.90	0.57	79.1	12.1	53	10.30	28.3
S050896		10.72	<0.01	0.04	6.06	13.1	220	1.48	0.26	16.40	<0.02	62.1	11.2	38	25.1	23.4
S050897		10.37	0.01	0.03	7.47	18.0	300	1.82	0.31	11.20	<0.02	77.0	10.4	48	33.5	34.4
S050898		10.76	<0.01	0.12	7.23	168.0	310	2.41	0.35	7.19	0.11	79.4	23.9	61	36.3	31.6
S050899		10.62	<0.01	0.05	9.83	122.5	360	3.19	0.48	0.97	<0.02	102.0	18.1	73	43.9	42.8
S050900		0.26	1.07	1.42	1.48	784	190	0.40	0.14	27.4	0.66	18.10	4.6	27	3.54	48.8

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VANCOUVER BC V6B 1L8

Finalized Date: 19-OCT-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18228631

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Hg-MS42	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni
	Units	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2
S050861		1.41	4.94	0.12	0.7	14.30	0.035	0.70	11.2	42.1	0.12	1800	1.03	0.01	2.0	10.2
S050862		0.13	0.38	0.12	<0.1	0.008	<0.005	0.04	1.2	0.9	1.87	132	0.12	0.05	0.2	<0.2
S050863		0.44	1.45	0.07	0.3	0.719	0.007	0.26	4.9	1.6	0.39	1070	0.22	0.01	0.7	2.7
S050864		0.59	2.26	0.08	0.4	1.175	0.010	0.42	6.5	2.6	0.42	1640	0.39	0.01	1.3	4.6
S050865		1.58	4.81	0.07	0.9	3.28	0.020	0.86	15.0	4.8	0.63	9260	0.67	0.01	8.5	6.7
S050866		0.56	2.06	0.05	0.4	2.23	0.011	0.36	6.1	2.6	0.41	14650	0.42	0.01	1.8	3.8
S050867		1.15	4.58	0.07	0.8	3.10	0.020	0.82	12.9	5.1	0.53	12100	1.28	0.01	4.0	9.4
S050868		2.28	7.84	0.09	1.5	3.42	0.033	1.44	21.5	7.6	1.03	5280	1.65	0.02	4.4	19.2
S050869		1.72	6.46	0.09	1.2	3.02	0.027	1.16	16.4	7.1	0.84	9070	1.42	0.02	3.4	14.9
S050870		1.11	3.98	0.09	0.8	1.565	0.014	0.74	11.1	4.0	0.77	3200	1.04	0.01	2.2	9.7
S050871		1.53	5.67	0.10	1.0	1.375	0.020	1.01	15.7	6.1	0.83	1490	1.63	0.02	3.0	13.3
S050872		3.06	12.45	0.13	2.3	1.250	0.050	2.29	30.9	12.9	1.47	847	2.40	0.03	6.9	29.8
S050873		1.23	4.21	0.12	0.8	0.706	0.016	0.75	12.8	5.1	0.82	503	0.67	0.02	2.3	9.4
S050874		2.29	8.37	0.13	1.5	1.255	0.030	1.49	22.9	8.5	1.12	423	1.60	0.02	4.6	19.5
S050875		1.51	5.44	0.11	1.1	1.510	0.015	1.06	15.4	6.0	0.96	367	1.00	0.02	3.1	12.7
S050876		1.57	4.17	0.12	0.8	0.683	0.019	0.73	13.4	12.0	0.81	493	0.58	0.02	6.5	6.8
S050877		1.15	3.18	0.09	0.6	2.74	0.019	0.55	9.5	4.3	0.54	1740	0.44	0.01	1.8	7.5
S050878		1.37	5.70	0.11	1.0	6.01	0.024	1.00	14.5	15.2	1.37	971	1.45	0.06	3.0	13.4
S050879		1.92	5.91	0.12	1.1	1.165	0.028	1.05	15.9	11.1	0.85	494	0.59	0.02	5.8	13.7
S050880		2.11	7.29	0.11	1.3	0.789	0.028	1.17	16.2	4.2	1.22	425	0.73	0.02	5.6	13.7
S050881		0.99	3.33	0.07	0.6	0.213	0.012	0.50	7.8	2.0	0.96	352	0.39	0.01	3.1	5.3
S050882		0.87	3.24	0.10	0.6	0.228	0.013	0.52	8.3	2.7	0.99	403	0.40	0.01	1.7	6.9
S050883		0.64	2.46	0.10	0.4	0.143	0.011	0.39	6.4	2.6	0.85	255	0.27	0.01	1.3	4.9
S050884		0.54	1.70	0.10	0.3	0.182	0.007	0.27	4.7	1.9	0.82	191	0.26	0.01	0.8	3.5
S050885		0.42	1.65	0.11	0.3	0.126	0.008	0.25	4.2	2.3	0.68	101	0.37	0.01	0.8	3.4
S050886		0.51	2.08	0.13	0.4	0.205	0.008	0.33	5.1	3.0	0.68	108	0.42	0.01	1.0	4.5
S050887		0.26	0.81	0.13	0.1	0.072	<0.005	0.12	2.4	1.3	0.57	106	0.17	0.01	0.4	1.7
S050888		0.32	1.07	0.12	0.2	0.088	0.006	0.16	3.1	1.7	0.73	170	0.19	0.01	0.5	2.4
S050889		0.21	0.64	0.12	0.1	0.038	0.005	0.09	1.9	1.1	0.77	115	0.15	0.01	0.3	1.3
S050890		0.21	0.64	0.14	0.1	0.030	0.005	0.09	1.9	1.1	0.76	114	0.14	0.01	0.3	1.1
S050891		1.56	8.00	0.16	1.6	0.025	0.027	1.41	20.1	20.8	0.66	270	0.14	0.03	5.1	12.7
S050892		1.86	9.14	0.17	1.9	0.027	0.031	1.62	22.7	21.4	0.78	252	0.19	0.03	5.9	16.3
S050893		2.51	11.05	0.19	2.2	0.052	0.035	1.93	26.5	32.9	0.98	258	0.29	0.03	6.8	24.2
S050894		2.62	11.60	0.19	2.0	0.025	0.034	1.99	29.0	26.8	1.00	546	0.50	0.03	6.6	21.9
S050895		3.50	17.70	0.20	2.7	0.082	0.048	2.99	41.5	41.3	1.23	403	0.42	0.05	9.6	31.7
S050896		2.80	16.20	0.19	1.9	0.046	0.045	3.11	35.0	18.7	1.07	545	0.27	0.03	7.7	25.0
S050897		3.45	20.9	0.20	2.3	0.051	0.056	3.92	42.9	20.5	1.25	649	0.25	0.04	9.8	26.4
S050898		3.77	21.6	0.20	2.5	0.886	0.061	4.09	43.3	16.7	1.34	685	0.77	0.04	10.3	42.2
S050899		3.93	28.9	0.23	3.2	0.579	0.071	5.42	55.6	19.8	0.92	427	0.34	0.04	13.9	41.7
S050900		1.12	4.15	0.10	0.8	2.32	0.022	0.65	9.2	6.2	1.20	4380	1.32	0.10	2.1	13.9

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 19-OCT-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18228631

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl
	Units	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
	LOD	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.01	0.005	0.02
S050861		460	8.2	33.4	0.003	5.42	988	1.7	11	0.7	177.0	0.15	0.64	2.59	0.082	15.35
S050862		60	0.8	0.9	<0.002	0.02	2.53	0.2	1	<0.2	80.0	<0.05	<0.05	0.11	0.005	0.06
S050863		170	2.4	10.8	<0.002	0.39	6.68	1.7	1	0.2	1520	0.05	<0.05	0.88	0.028	2.63
S050864		280	3.3	18.0	0.002	0.56	2.61	2.2	1	0.3	1635	0.09	<0.05	1.45	0.049	3.77
S050865		1050	5.5	38.0	0.002	1.26	11.50	4.2	1	0.5	1035	0.48	0.05	2.42	0.230	15.95
S050866		580	2.8	15.3	0.002	0.44	9.50	2.4	<1	0.2	1110	0.12	<0.05	1.27	0.057	11.70
S050867		680	6.0	37.7	0.003	1.01	10.35	4.7	1	0.5	1160	0.25	0.05	2.81	0.131	15.35
S050868		230	10.1	65.2	0.004	1.98	13.10	8.2	1	0.9	1285	0.32	0.05	4.84	0.181	15.10
S050869		200	8.4	52.3	0.005	1.53	10.25	6.3	1	0.7	1320	0.27	0.08	3.93	0.140	13.05
S050870		270	5.5	34.0	0.003	0.93	3.83	4.0	1	0.5	2100	0.16	<0.05	2.58	0.088	5.92
S050871		570	7.6	46.2	0.006	1.34	5.28	5.5	1	0.7	1880	0.22	0.08	3.58	0.120	5.70
S050872		280	15.6	106.0	0.009	2.57	3.66	11.8	1	1.5	1025	0.50	0.08	7.61	0.291	6.71
S050873		210	5.3	34.9	0.002	0.84	0.45	4.7	1	0.5	2160	0.17	<0.05	2.76	0.092	1.63
S050874		240	10.7	65.7	0.007	2.00	0.50	8.2	1	1.0	1720	0.33	0.06	5.30	0.180	4.24
S050875		1180	8.5	44.2	0.004	1.22	0.73	4.8	1	0.7	1650	0.24	0.05	3.54	0.126	3.72
S050876		620	5.0	29.0	<0.002	0.86	2.89	3.8	1	0.4	1860	0.35	<0.05	2.10	0.192	1.17
S050877		270	7.6	24.7	<0.002	3.01	157.5	3.5	3	0.4	1710	0.12	0.10	2.08	0.074	9.98
S050878		370	21.8	42.4	0.002	3.17	136.0	5.7	4	0.8	591	0.22	0.10	3.94	0.104	18.30
S050879		620	8.6	44.5	0.002	1.44	4.23	5.7	1	0.7	1710	0.35	0.05	3.38	0.214	1.97
S050880		600	7.4	51.3	0.003	1.51	2.19	6.7	1	0.8	1470	0.34	<0.05	3.56	0.202	1.58
S050881		590	2.8	22.1	0.003	0.59	0.41	3.0	1	0.3	1625	0.19	<0.05	1.54	0.101	0.65
S050882		480	3.6	23.7	0.003	0.68	0.41	3.0	1	0.4	1575	0.12	<0.05	1.76	0.067	1.06
S050883		180	2.7	18.0	<0.002	0.58	0.28	2.5	1	0.3	1690	0.09	<0.05	1.35	0.049	0.73
S050884		380	2.0	11.4	<0.002	0.42	0.22	1.9	1	0.2	1975	0.06	<0.05	0.91	0.034	0.40
S050885		120	2.0	11.2	<0.002	0.36	0.24	1.6	1	0.2	1690	0.05	<0.05	0.88	0.029	0.23
S050886		100	2.5	14.8	<0.002	0.48	0.29	1.8	1	0.3	1630	0.06	<0.05	1.15	0.040	0.33
S050887		100	1.0	5.3	<0.002	0.18	0.16	0.8	1	<0.2	1635	<0.05	<0.05	0.45	0.015	0.09
S050888		350	1.6	6.7	<0.002	0.24	0.19	1.2	1	0.2	1405	<0.05	<0.05	0.66	0.020	0.11
S050889		460	0.7	4.1	<0.002	0.13	0.13	0.7	1	<0.2	1565	<0.05	<0.05	0.36	0.010	0.06
S050890		480	0.7	4.1	<0.002	0.13	0.12	0.7	1	<0.2	1540	<0.05	<0.05	0.33	0.010	0.05
S050891		810	10.3	63.7	<0.002	0.42	0.38	5.3	1	0.9	877	0.36	<0.05	6.01	0.156	0.36
S050892		280	14.5	73.1	<0.002	0.66	0.47	5.7	<1	1.1	792	0.42	<0.05	7.12	0.187	0.38
S050893		230	19.8	86.2	<0.002	0.97	0.52	7.0	1	1.2	506	0.48	<0.05	8.27	0.220	0.50
S050894		600	20.7	85.3	<0.002	0.63	0.52	7.2	<1	1.2	461	0.48	<0.05	8.08	0.223	0.41
S050895		190	75.9	126.5	<0.002	1.22	1.17	10.6	1	1.8	286	0.67	0.05	12.20	0.312	0.68
S050896		520	15.0	121.0	<0.002	0.27	0.30	9.8	<1	1.6	420	0.53	<0.05	9.78	0.239	0.63
S050897		600	14.9	157.5	<0.002	0.23	0.34	12.7	<1	2.1	306	0.68	0.07	12.70	0.298	0.82
S050898		440	42.5	155.0	0.002	1.84	1.22	13.7	1	2.2	238	0.71	0.09	13.00	0.328	2.65
S050899		480	17.5	190.0	<0.002	2.75	0.64	18.2	<1	2.9	97.4	0.95	0.11	18.85	0.413	2.36
S050900		370	60.9	29.2	0.002	0.68	8.23	5.9	1	0.6	1110	0.14	<0.05	2.40	0.078	5.80

***** See Appendix Page for comments regarding this certificate *****

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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 19-OCT-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18228631

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	As-OG62
	Analyte	U	V	W	Y	Zn	Zr	As
	Units	ppm	ppm	ppm	ppm	ppm	ppm	%
	LOD	0.1	1	0.1	0.1	2	0.5	0.001
S050861		3.7	27	1.9	14.2	301	25.8	9.84
S050862		0.2	1	0.1	2.4	4	1.6	
S050863		1.7	10	0.6	11.1	8	9.4	
S050864		2.4	14	1.1	12.5	10	15.6	
S050865		2.4	39	4.9	15.4	27	39.7	
S050866		2.1	15	1.2	11.3	15	16.0	
S050867		2.9	34	2.2	17.1	39	34.2	
S050868		3.1	57	2.9	24.7	52	52.9	
S050869		2.6	45	2.7	19.0	41	42.9	
S050870		2.5	28	1.4	14.6	20	27.9	
S050871		3.9	40	1.4	20.2	35	40.1	
S050872		3.4	90	1.4	26.0	75	82.0	
S050873		2.0	29	1.1	17.7	24	31.0	
S050874		3.1	55	1.4	23.6	52	56.5	
S050875		3.1	40	0.7	18.5	23	40.1	
S050876		1.9	35	4.1	16.5	21	31.8	
S050877		2.3	22	2.2	16.5	20	20.9	4.45
S050878		4.6	37	5.2	16.3	68	38.9	
S050879		3.1	47	4.2	19.8	33	46.8	
S050880		2.5	49	3.5	21.4	39	48.0	
S050881		1.5	22	1.3	12.0	18	23.1	
S050882		1.7	20	0.4	13.5	18	22.2	
S050883		1.6	15	0.2	11.5	14	15.1	
S050884		1.6	11	0.4	9.6	11	11.6	
S050885		1.7	10	0.3	8.4	8	9.8	
S050886		1.8	12	0.5	8.7	10	12.7	
S050887		1.2	6	0.2	5.6	5	5.7	
S050888		1.7	7	0.2	7.5	4	6.9	
S050889		1.4	4	0.1	6.1	3	4.6	
S050890		1.4	5	0.1	6.2	2	4.8	
S050891		2.8	34	0.7	13.6	38	69.0	
S050892		2.8	38	0.8	13.3	45	68.7	
S050893		2.8	46	1.0	14.9	55	75.2	
S050894		2.9	48	1.7	15.2	71	71.4	
S050895		3.3	69	1.2	20.1	732	95.7	
S050896		3.1	61	1.0	17.4	48	67.8	
S050897		3.2	74	1.3	20.7	48	84.9	
S050898		3.7	89	2.4	21.2	160	90.2	
S050899		3.0	113	2.4	22.7	51	109.0	
S050900		3.8	24	7.1	14.1	118	27.6	

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Project: Nadaleen

Finalized Date: 19-OCT-2018
Account: RCM

CERTIFICATE OF ANALYSIS WH18228631

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Applies to Method: REE's may not be totally soluble in this method.
ME-MS61

LABORATORY ADDRESSES

Applies to Method: Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.

CRU-31	CRU-QC	LOG-21	LOG-21d
LOG-23	PUL-31	PUL-31d	PUL-QC
SPL-21	SPL-21d	WEI-21	WSH-22

Applies to Method: Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

As-OG62	Au-AA25	Hg-MS42	ME-MS61
ME-OG62			

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1016-510 W HASTINGS ST
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Finalized Date: 15-OCT-2018
Account: RCM

CERTIFICATE WH18225517

Project: Nadaleen

P.O. No.: N18-064

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 11-SEP-2018.

The following have access to data associated with this certificate:

ANDREW CARNE	JULIA LANE	

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
WSH-22	"Wash" pulverizers
PUL-31	Pulverize split to 85% <75 um
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
LOG-23	Pulp Login - Rcvd with Barcode
LOG-21d	Sample logging - ClientBarCode Dup
SPL-21d	Split sample - duplicate
PUL-31d	Pulverize Split - duplicate

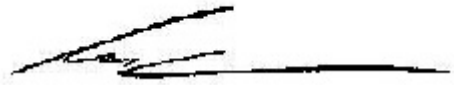
ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid ICP-MS	
Hg-MS42	Trace Hg by ICPMS	ICP-MS
ME-OG62	Ore Grade Elements - Four Acid	ICP-AES
As-OG62	Ore Grade As - Four Acid	
S-IR08	Total Sulphur (Leco)	LECO

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:



Colin Ramshaw, Vancouver Laboratory Manager

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Finalized Date: 15-OCT-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18225517

Sample Description	Method	WEI-21	Au-AA25	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Recvd Wt.	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu
	Units	kg	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.02	0.01	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2
S049371		10.23	0.41	0.04	8.72	1610	640	2.66	0.35	1.67	0.02	84.9	17.9	70	24.6	19.2
S049372		10.92	<0.01	0.01	9.47	99.5	830	3.25	0.41	0.35	<0.02	92.3	15.8	67	36.4	29.8
S049373		7.74	0.04	0.06	8.99	259	750	3.14	0.35	0.33	<0.02	91.8	13.7	66	27.3	94.4
S049374		11.25	4.48	0.55	3.84	1620	250	1.06	0.14	14.55	0.27	45.1	8.1	41	6.26	34.2
S049375		8.10	20.9	7.75	2.47	>10000	70	0.37	0.14	5.96	4.26	49.5	6.2	35	3.01	25.1
S049376		6.92	0.02	0.02	0.13	373	30	0.09	0.02	34.7	<0.02	1.36	0.7	2	0.08	1.6
S049377		3.47	19.15	4.90	4.17	>10000	130	0.85	0.12	7.00	0.76	60.5	7.2	46	5.34	21.8
S049378		3.20	18.10	5.00	4.26	>10000	130	0.75	0.13	7.21	1.13	60.0	8.0	47	5.36	23.3
S049379		11.25	0.37	0.18	1.96	512	100	0.73	0.07	25.9	0.14	25.6	3.5	20	3.44	9.5
S049380		11.25	0.03	0.09	2.90	207	120	1.13	0.09	23.9	0.06	34.8	5.3	32	7.69	16.8
S049381		10.51	3.07	1.13	3.00	>10000	120	0.69	0.09	18.00	1.36	35.6	5.4	35	5.79	18.6
S049382		10.46	0.13	0.15	2.04	119.5	250	0.73	0.06	27.9	0.08	25.6	4.0	24	5.35	12.9
S049383		10.47	0.01	0.04	3.79	155.5	140	1.19	0.11	15.90	0.09	42.0	6.4	39	10.40	21.9
S049384		10.63	0.11	0.04	3.17	171.5	200	1.06	0.09	21.3	0.09	38.3	5.6	34	7.92	17.8
S049385		10.51	0.22	0.05	3.56	535	160	1.12	0.10	18.65	0.07	41.9	6.1	38	7.40	19.2
S049386		10.58	0.05	0.04	2.50	194.0	100	0.85	0.08	21.3	0.07	30.1	4.5	27	5.03	14.3
S049387		12.07	0.09	0.04	2.88	227	130	0.95	0.08	22.9	0.12	34.5	4.9	30	6.77	18.3
S049388		10.34	<0.01	0.06	1.18	83.4	80	0.54	0.05	31.8	0.06	15.85	2.9	14	2.66	7.8
S049389		0.28	1.11	1.44	1.59	876	210	0.40	0.14	29.6	0.74	20.2	4.8	32	3.67	48.7
S049390		10.43	0.03	0.06	1.39	96.4	90	0.65	0.05	31.6	0.14	18.45	3.1	16	3.23	7.7
S049391		10.88	<0.01	0.04	2.48	69.1	150	0.86	0.07	25.7	0.07	30.1	4.3	26	11.35	12.3
S049392		11.02	<0.01	0.03	1.98	72.5	160	0.74	0.06	25.5	0.05	23.0	3.4	20	6.67	11.2
S049393		11.35	<0.01	0.11	1.38	22.7	110	0.41	0.05	29.1	0.07	18.05	2.9	15	5.58	18.0
S049394		10.74	<0.01	0.09	2.96	39.4	260	0.94	0.07	21.2	0.06	32.6	5.2	33	12.30	17.6
S049395		11.51	<0.01	0.06	2.71	62.6	300	0.87	0.07	22.5	0.06	28.0	4.8	28	12.55	15.4
S049396		11.57	<0.01	0.04	2.23	18.0	220	0.70	0.07	26.5	0.05	22.4	3.9	22	9.12	14.8
S049397		11.10	<0.01	0.06	3.59	40.8	320	1.25	0.09	14.85	0.07	38.6	6.2	41	17.90	21.2
S049398		11.38	<0.01	0.08	3.26	32.9	220	1.17	0.08	16.85	0.11	35.4	5.4	34	14.65	17.3
S049399		11.26	<0.01	0.05	1.79	18.5	170	0.66	0.05	26.5	0.14	21.5	3.3	19	8.16	10.2
S049400		11.80	0.10	0.10	1.56	3660	100	0.60	0.04	27.5	0.14	19.35	2.5	16	4.75	7.3
S049401		10.41	0.07	0.18	2.37	6510	100	0.77	0.06	21.5	0.08	28.2	3.9	26	9.31	14.7
S049402		<0.02	0.08	0.20	2.42	6610	100	0.86	0.07	21.6	0.08	28.5	3.8	26	9.60	14.8
S049403		11.63	0.06	0.10	2.59	462	270	0.67	0.07	14.25	0.05	31.6	3.4	26	8.37	10.4
S049404		10.97	<0.01	0.06	1.55	143.0	100	0.51	0.04	27.0	0.08	19.35	2.6	17	4.45	8.6
S049405		10.09	<0.01	0.02	0.61	32.8	520	0.28	0.02	35.2	0.28	9.41	1.3	8	1.64	4.2
S049406		0.28	1.50	1.00	3.24	>10000	210	0.75	0.12	18.85	0.38	34.2	7.9	40	8.80	26.8
S049407		11.49	<0.01	0.04	1.34	760	110	0.50	0.04	31.2	0.04	16.95	2.5	14	5.89	6.7
S049408		11.24	<0.01	0.07	1.11	62.7	140	0.43	0.04	34.5	0.12	13.05	2.2	12	3.83	6.9
S049409		10.36	<0.01	0.10	3.01	34.9	280	1.10	0.08	24.4	0.06	34.8	5.6	30	17.00	18.9
S049410		11.28	0.75	0.47	3.63	4140	470	1.29	0.09	17.90	0.13	38.9	5.7	35	16.60	19.1

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 15-OCT-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18225517

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Hg-MS42	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni
	Units	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2
S049371		5.15	24.2	0.15	2.9	1.225	0.068	4.25	44.7	20.4	1.26	464	0.27	0.07	12.8	38.4
S049372		5.73	26.4	0.15	3.2	1.310	0.075	4.77	48.7	23.3	1.11	222	0.17	0.07	14.0	40.5
S049373		4.99	25.6	0.17	3.7	0.452	0.080	4.53	48.4	23.1	0.93	123	0.23	0.07	14.2	40.6
S049374		1.87	10.40	0.08	1.8	2.22	0.024	1.84	24.1	9.7	3.97	3800	0.55	0.04	6.6	18.3
S049375		2.13	7.51	0.12	1.2	18.05	0.082	1.16	22.9	13.3	0.95	783	0.73	0.01	4.2	15.3
S049376		0.12	0.46	0.08	0.1	0.033	0.005	0.05	1.4	1.2	1.78	137	<0.05	0.05	0.4	0.5
S049377		2.20	11.85	0.11	2.6	4.09	0.028	2.07	29.6	12.4	3.57	2690	0.99	0.03	7.8	18.7
S049378		2.31	12.00	0.10	2.6	4.95	0.033	2.10	30.2	11.8	3.54	2550	1.08	0.03	7.9	19.6
S049379		0.72	5.24	0.08	1.2	0.401	0.015	1.01	13.0	6.0	2.30	784	0.40	0.02	3.7	7.6
S049380		1.19	7.79	0.11	1.3	0.320	0.027	1.45	18.6	11.1	1.82	483	0.39	0.03	5.2	13.2
S049381		1.37	8.35	0.08	1.4	5.12	0.026	1.50	18.4	14.0	1.85	1000	0.66	0.02	5.1	14.0
S049382		1.00	5.66	0.08	1.1	0.634	0.016	1.07	13.2	8.3	2.07	364	0.55	0.02	3.7	9.8
S049383		1.90	10.25	0.10	1.7	0.504	0.031	2.02	22.3	16.1	4.67	340	0.51	0.03	6.5	16.2
S049384		1.49	8.51	0.09	1.5	0.652	0.025	1.69	20.1	15.2	2.99	276	0.29	0.02	5.6	14.7
S049385		1.65	9.48	0.11	1.8	0.893	0.023	1.89	22.0	13.0	3.34	311	0.31	0.02	6.1	16.2
S049386		1.21	6.80	0.11	1.3	0.402	0.016	1.34	15.4	9.9	3.94	261	0.64	0.02	4.4	11.8
S049387		1.20	7.63	0.11	1.4	0.660	0.019	1.51	17.3	15.1	2.38	201	0.31	0.02	5.0	12.8
S049388		0.64	3.16	0.08	0.6	0.240	0.011	0.65	8.8	5.5	1.60	204	0.62	0.01	2.1	7.3
S049389		1.23	4.29	0.06	0.7	2.10	0.022	0.70	10.0	6.5	1.32	4940	1.38	0.10	2.3	14.5
S049390		0.67	3.75	0.07	0.7	0.400	0.012	0.75	10.1	5.9	1.59	220	0.67	0.01	2.4	7.2
S049391		0.89	6.65	0.09	1.2	0.257	0.020	1.41	16.1	15.4	1.76	182	0.36	0.02	4.4	10.4
S049392		0.99	5.41	0.08	0.9	0.331	0.017	1.11	12.4	10.4	3.33	239	0.62	0.02	3.4	7.0
S049393		0.79	3.59	0.09	0.7	0.114	0.013	0.80	10.2	8.1	3.30	222	1.83	0.02	2.3	11.4
S049394		1.35	7.56	0.15	1.5	0.131	0.021	1.74	19.3	21.6	3.20	184	0.68	0.03	4.9	13.2
S049395		1.27	6.89	0.14	1.3	0.062	0.022	1.56	15.8	23.4	3.05	188	0.56	0.03	4.4	12.2
S049396		1.09	5.57	0.13	0.9	0.047	0.017	1.26	13.0	16.8	2.53	169	0.38	0.02	3.5	10.0
S049397		1.75	9.26	0.18	1.8	0.215	0.027	2.17	21.2	31.6	5.13	220	0.81	0.04	5.9	17.1
S049398		1.55	8.27	0.14	1.7	0.246	0.026	1.99	19.6	28.0	5.32	213	0.84	0.04	5.4	14.3
S049399		0.88	4.71	0.14	0.9	0.185	0.013	1.06	12.3	12.4	2.87	146	0.72	0.02	3.1	8.0
S049400		0.56	3.91	0.14	1.1	0.376	0.010	0.88	10.3	8.2	2.11	195	1.10	0.02	2.8	5.5
S049401		1.03	5.95	0.15	1.6	0.618	0.017	1.31	15.4	11.6	2.49	246	0.98	0.02	4.0	10.0
S049402		1.02	6.07	0.13	1.6	0.673	0.015	1.33	15.6	11.8	2.52	248	0.92	0.02	4.1	9.6
S049403		1.09	6.03	0.17	2.2	0.616	0.016	1.57	16.3	12.0	4.27	267	0.76	0.03	4.7	8.3
S049404		0.67	3.91	0.14	1.2	0.300	0.013	0.90	11.0	8.0	2.72	144	0.65	0.02	2.8	6.0
S049405		0.36	1.65	0.15	0.4	0.177	0.006	0.35	5.6	3.9	1.32	106	0.34	0.01	1.0	2.3
S049406		2.27	8.30	0.14	1.5	4.47	0.029	1.49	18.0	12.4	2.37	1360	1.42	0.11	4.8	19.0
S049407		0.48	3.43	0.12	0.8	0.183	0.010	0.84	9.0	9.9	1.45	100	0.40	0.02	2.3	5.8
S049408		0.58	2.88	0.11	0.5	0.285	0.009	0.64	7.7	6.8	1.97	137	0.51	0.01	1.9	5.0
S049409		1.20	7.66	0.14	1.5	0.207	0.020	1.95	19.8	22.4	2.00	172	0.62	0.03	4.9	14.4
S049410		1.45	9.15	0.16	2.0	0.805	0.027	2.20	21.2	25.5	3.36	452	0.59	0.03	6.0	14.3

***** See Appendix Page for comments regarding this certificate *****

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Project: Nadaleen

Finalized Date: 15-OCT-2018
Account: RCM

CERTIFICATE OF ANALYSIS WH18225517

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl
	Units	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
	LOD	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.01	0.005	0.02
S049371		440	18.0	178.5	<0.002	4.55	4.62	16.9	<1	2.9	396	0.83	0.10	14.00	0.424	4.82
S049372		470	11.2	212	<0.002	2.65	0.71	18.7	<1	3.1	237	0.90	0.10	15.65	0.467	8.42
S049373		460	13.1	201	<0.002	3.25	1.07	18.8	1	3.0	171.5	0.91	0.07	16.00	0.480	3.11
S049374		530	31.7	73.6	<0.002	0.65	14.55	6.5	2	1.6	341	0.45	<0.05	8.21	0.189	9.58
S049375		390	20.7	51.1	<0.002	>10.0	444	2.4	8	1.4	57.6	0.28	0.19	5.93	0.120	23.3
S049376		60	<0.5	1.5	<0.002	0.03	0.82	0.2	1	0.4	84.3	<0.05	<0.05	0.13	0.006	0.09
S049377		570	16.7	87.7	<0.002	3.37	72.0	7.2	3	1.8	105.0	0.51	0.06	10.30	0.220	17.55
S049378		570	17.4	87.5	<0.002	3.92	84.4	7.1	4	1.9	116.5	0.51	<0.05	10.40	0.221	17.55
S049379		280	6.8	40.6	<0.002	0.33	1.75	3.3	1	0.9	1240	0.23	<0.05	4.67	0.102	1.33
S049380		370	6.6	66.4	<0.002	0.40	0.88	4.9	2	1.3	516	0.32	<0.05	6.07	0.143	1.46
S049381		440	9.8	69.5	<0.002	1.47	31.3	4.5	2	1.3	374	0.33	<0.05	6.11	0.144	8.59
S049382		320	8.6	46.8	<0.002	0.54	2.39	3.5	2	1.0	609	0.24	<0.05	4.45	0.102	2.65
S049383		450	8.9	83.3	<0.002	0.71	0.87	6.1	2	1.6	278	0.43	<0.05	7.84	0.184	1.63
S049384		380	6.1	72.4	<0.002	0.38	2.25	5.2	2	1.4	420	0.36	<0.05	6.61	0.156	3.19
S049385		430	6.7	76.6	0.002	0.35	3.73	5.9	2	1.5	383	0.41	<0.05	7.61	0.174	3.52
S049386		310	5.7	53.7	<0.002	0.24	1.16	4.1	1	1.1	427	0.29	<0.05	5.38	0.126	1.41
S049387		360	7.1	61.3	<0.002	0.44	1.26	4.7	2	1.2	469	0.32	<0.05	6.03	0.141	2.08
S049388		170	6.9	25.2	0.002	0.43	0.64	2.1	1	0.7	917	0.14	<0.05	2.64	0.059	1.08
S049389		410	65.6	29.1	0.004	0.73	8.03	6.1	1	0.9	1230	0.14	0.05	2.49	0.085	5.99
S049390		190	6.2	30.0	<0.002	0.48	0.70	2.4	2	0.8	801	0.16	<0.05	2.94	0.069	1.26
S049391		320	7.5	58.2	<0.002	0.49	0.29	4.2	1	1.1	518	0.28	<0.05	5.20	0.124	0.89
S049392		270	5.5	44.8	<0.002	0.24	0.43	3.3	1	0.9	498	0.22	<0.05	4.14	0.096	1.03
S049393		210	11.9	30.0	<0.002	0.12	0.96	2.0	1	0.5	703	0.16	<0.05	2.72	0.069	0.26
S049394		490	8.0	69.1	<0.002	0.36	0.29	4.4	2	1.0	486	0.37	<0.05	5.83	0.150	0.50
S049395		310	7.1	66.8	<0.002	0.25	0.22	4.0	2	0.9	524	0.33	<0.05	5.11	0.133	0.44
S049396		290	5.3	54.7	<0.002	0.12	0.13	3.3	1	0.8	630	0.26	<0.05	3.97	0.106	0.39
S049397		480	8.4	87.3	<0.002	0.54	0.32	5.4	3	1.2	390	0.45	<0.05	7.04	0.178	0.99
S049398		430	7.7	76.1	<0.002	0.46	0.31	4.8	2	1.1	533	0.40	<0.05	6.42	0.165	0.85
S049399		270	7.1	40.8	<0.002	0.27	0.22	2.8	2	0.6	961	0.23	<0.05	3.68	0.089	0.43
S049400		270	7.8	32.0	<0.002	0.42	9.42	2.3	2	0.5	977	0.20	<0.05	3.22	0.080	1.40
S049401		600	9.0	46.0	<0.002	0.95	13.55	3.4	3	0.8	451	0.30	<0.05	4.90	0.118	1.64
S049402		610	9.0	47.5	0.003	0.94	13.85	3.4	3	0.8	455	0.31	<0.05	5.10	0.120	1.64
S049403		560	9.0	51.8	<0.002	0.39	1.94	3.5	3	0.8	289	0.33	<0.05	5.55	0.128	1.57
S049404		270	6.8	29.7	<0.002	0.23	0.97	2.3	2	0.5	948	0.20	<0.05	3.16	0.079	0.64
S049405		200	3.8	11.2	<0.002	0.12	0.25	1.0	1	0.2	1275	0.07	<0.05	1.29	0.031	0.37
S049406		460	16.8	62.1	<0.002	2.47	57.8	6.8	2	1.1	867	0.35	0.09	4.85	0.206	16.15
S049407		190	7.4	28.5	<0.002	0.24	1.54	2.1	1	0.5	1565	0.16	<0.05	2.91	0.067	0.43
S049408		180	6.9	22.1	<0.002	0.23	0.53	1.8	1	0.4	1210	0.13	<0.05	2.29	0.054	0.65
S049409		520	7.3	65.8	0.002	0.45	0.24	4.6	2	1.0	628	0.37	<0.05	6.26	0.146	0.56
S049410		470	8.0	77.4	0.002	0.78	11.65	5.4	2	1.2	396	0.44	<0.05	7.46	0.180	3.06

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Finalized Date: 15-OCT-2018
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Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18225517

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	As-OG62	S-IR08
	Analyte	U	V	W	Y	Zn	Zr	As	S
	Units	ppm	ppm	ppm	ppm	ppm	ppm	%	%
	LOD	0.1	1	0.1	0.1	2	0.5	0.001	0.01
S049371		2.5	97	6.3	18.9	84	102.5		
S049372		2.3	83	1.6	22.0	85	109.5		
S049373		3.4	118	3.1	24.3	100	128.0		
S049374		8.9	59	2.4	13.6	96	64.6		
S049375		9.6	38	2.5	59.2	402	43.8	18.35	10.60
S049376		0.2	1	<0.1	2.7	4	2.1		
S049377		8.4	62	4.6	14.9	93	93.7	3.06	
S049378		8.6	63	4.7	15.2	130	94.6	3.84	
S049379		13.3	28	1.1	7.8	50	44.5		
S049380		10.2	45	0.9	10.6	31	51.4		
S049381		14.3	48	2.7	9.6	151	50.4	1.155	
S049382		14.1	33	1.2	8.1	47	38.2		
S049383		6.4	57	1.3	12.7	59	63.9		
S049384		8.6	48	1.4	11.8	37	56.2		
S049385		6.9	52	2.8	13.3	43	64.5		
S049386		8.7	42	1.7	9.7	31	52.1		
S049387		9.3	46	1.5	10.1	32	51.5		
S049388		16.7	20	0.7	4.9	28	23.3		
S049389		4.0	26	8.2	15.1	140	26.8		
S049390		15.3	23	1.0	5.7	51	27.5		
S049391		10.8	39	0.6	9.1	23	46.9		
S049392		13.1	32	0.6	7.4	23	34.7		
S049393		12.6	24	0.4	5.8	22	28.7		
S049394		9.6	50	0.6	11.7	39	56.4		
S049395		11.0	43	0.6	9.1	41	48.5		
S049396		12.2	35	0.4	7.5	34	33.5		
S049397		5.7	59	0.7	13.1	52	65.6		
S049398		6.6	53	0.6	12.0	52	61.0		
S049399		12.3	31	0.4	7.1	43	35.6		
S049400		11.7	27	1.1	6.5	26	40.9		
S049401		8.8	40	2.3	9.8	16	59.1		
S049402		9.1	40	2.3	10.7	15	61.8		
S049403		6.2	35	1.1	11.4	11	83.6		
S049404		12.1	25	0.6	6.4	18	42.5		
S049405		10.6	13	0.2	3.6	19	14.1		
S049406		4.4	58	5.1	16.7	63	55.6		
S049407		17.8	22	0.3	5.2	13	31.3		
S049408		19.0	22	0.3	4.4	33	20.3		
S049409		12.4	50	0.5	11.8	36	53.5		
S049410		7.7	61	1.1	13.0	32	80.1		

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CERTIFICATE OF ANALYSIS WH18225517

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

REE's may not be totally soluble in this method.

Applies to Method: ME-MS61

LABORATORY ADDRESSES

Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.

Applies to Method:				
	CRU-31	CRU-QC	LOG-21	LOG-21d
	LOG-23	PUL-31	PUL-31d	PUL-QC
	SPL-21	SPL-21d	WEI-21	WSH-22

Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Applies to Method:				
	As-OG62	Au-AA25	Hg-MS42	ME-MS61
	ME-OG62	S-IR08		

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 19-OCT-2018
Account: RCM

CERTIFICATE WH18228642

Project: Nadaleen

P.O. No.: N18-065

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 14-SEP-2018.

The following have access to data associated with this certificate:

ANDREW CARNE	JULIA LANE	

SAMPLE PREPARATION

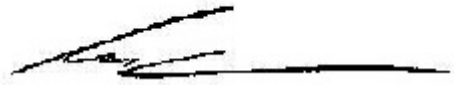
ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
WSH-22	"Wash" pulverizers
PUL-31	Pulverize split to 85% <75 um
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
LOG-23	Pulp Login - Rcvd with Barcode
LOG-21d	Sample logging - ClientBarCode Dup
SPL-21d	Split sample - duplicate
PUL-31d	Pulverize Split - duplicate

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid ICP-MS	
Hg-MS42	Trace Hg by ICPMS	ICP-MS
ME-OG62	Ore Grade Elements - Four Acid	ICP-AES
As-OG62	Ore Grade As - Four Acid	

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature: 

Colin Ramshaw, Vancouver Laboratory Manager

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CERTIFICATE OF ANALYSIS WH18228642

Sample Description	Method	WEI-21	Au-AA25	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Recvd Wt.	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu
	Units	kg	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.02	0.01	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2
S049411		10.22	0.17	0.10	1.70	62.9	300	0.59	0.05	25.8	0.04	20.4	3.3	16	6.87	8.5
S049412		11.19	0.08	0.25	4.58	335	260	1.69	0.12	11.00	0.04	52.4	8.8	45	23.6	35.3
S049413		5.16	2.54	1.30	4.45	>10000	200	1.53	0.11	13.25	0.25	45.6	7.3	44	18.85	24.7
S049414		5.49	2.56	1.57	4.39	>10000	200	1.43	0.11	11.35	0.37	45.8	7.1	45	18.45	23.6
S049415		11.32	0.43	0.26	1.14	1270	90	0.58	0.05	32.5	0.11	16.90	2.8	13	5.95	8.6
S049416		12.18	0.01	0.10	2.28	59.0	150	1.08	0.08	27.4	0.06	34.4	6.2	23	21.7	19.2
S049417		11.92	<0.01	0.05	2.29	54.8	140	1.01	0.06	25.3	0.06	26.8	3.9	24	11.10	12.3
S049418		11.88	3.60	0.88	1.74	>10000	130	0.56	0.06	24.9	0.76	22.1	3.3	21	5.98	12.1
S049419		10.12	0.38	0.12	1.44	897	890	0.57	0.05	27.3	0.11	23.4	2.7	17	6.99	11.5
S049420		11.57	0.03	0.06	2.08	154.5	1710	0.80	0.07	26.2	0.10	26.5	4.4	22	9.17	14.2
S049421		10.76	<0.01	0.05	2.77	67.2	540	0.86	0.07	16.05	0.04	35.9	4.7	25	13.40	12.8
S049422		9.65	0.01	0.07	3.01	59.0	330	1.05	0.08	13.95	0.07	37.4	5.0	30	13.30	14.5
S049423		11.33	<0.01	0.08	1.94	44.9	310	0.88	0.05	23.1	0.13	25.4	3.5	20	8.31	11.7
S049424		11.10	<0.01	0.06	0.77	27.0	240	0.41	0.03	32.3	0.11	12.60	1.7	10	2.99	5.4
S049425		0.26	1.11	1.36	1.49	791	190	0.43	0.12	28.4	0.68	18.55	4.3	27	3.59	45.4
S049426		11.22	<0.01	0.06	1.10	21.8	680	0.66	0.04	29.9	0.05	16.05	2.2	14	4.95	9.0
S049427		7.89	0.01	0.09	1.89	32.0	90	0.97	0.05	24.0	0.09	24.9	3.4	23	10.20	10.9
S049428		7.24	0.01	0.07	1.36	704	70	0.65	0.04	17.50	0.02	20.2	2.4	15	6.41	11.9
S049429		6.89	0.06	0.13	1.41	1370	80	0.63	0.05	17.25	0.04	18.70	2.4	15	3.65	11.9
S049430		9.97	0.06	0.09	0.60	>10000	40	0.30	0.03	18.45	0.02	9.65	1.3	10	1.16	4.5
S049431		7.02	0.01	<0.01	0.13	44.9	20	0.11	0.01	32.5	0.06	1.20	0.8	1	0.06	3.5
S049432		12.11	0.06	0.19	0.86	6220	50	0.41	0.03	18.65	0.04	12.50	1.7	11	2.35	6.0
S049433		11.08	0.10	0.29	0.42	>10000	30	0.19	0.02	19.45	0.06	7.31	1.9	7	0.85	6.5
S049434		12.19	0.09	0.11	0.73	>10000	60	0.30	0.03	17.70	0.03	10.65	3.3	10	1.34	12.2
S049435		11.38	0.06	0.09	0.54	9610	40	0.23	0.02	18.40	0.05	8.56	2.8	7	0.97	7.7
S049436		13.24	0.07	0.21	0.51	2560	40	0.22	0.03	18.20	0.10	8.36	3.7	7	0.82	12.8
S049437		8.17	0.22	0.13	0.44	3010	40	0.21	0.02	19.65	0.10	8.90	2.1	5	0.70	7.5
S049438		<0.02	0.20	0.13	0.45	2830	40	0.21	0.03	19.80	0.09	9.26	2.2	6	0.70	7.3
S049439		11.58	0.06	0.04	0.97	2650	80	0.48	0.04	18.50	0.06	15.70	1.5	8	2.19	5.3
S049440		7.06	<0.01	0.09	0.81	145.0	50	0.39	0.04	19.20	0.02	14.20	1.1	6	2.35	4.6
S049441		10.58	<0.01	0.02	0.67	106.0	40	0.33	0.04	19.40	0.02	11.65	1.3	5	1.63	3.7
S049442		6.40	0.02	0.02	1.43	95.0	80	0.60	0.06	17.30	0.02	18.75	2.1	12	4.21	6.0
S049443		10.57	0.02	0.08	0.61	223	80	0.24	0.05	20.1	0.09	14.45	1.6	5	1.28	9.0
S049444		11.04	0.01	0.08	0.43	1065	80	0.28	0.02	20.5	0.21	8.10	1.8	4	1.04	8.2
S049445		10.81	0.01	0.06	0.36	5230	80	0.20	0.02	19.25	0.15	6.93	1.5	5	0.54	5.5
S049446		0.26	1.47	0.84	2.92	>10000	190	0.73	0.12	17.40	0.35	34.5	7.2	38	8.66	24.9
S049447		10.49	0.01	0.04	2.81	472	140	0.94	0.12	15.55	0.24	32.8	4.2	20	8.23	12.1
S049448		11.51	0.01	0.03	3.51	1360	190	1.43	0.14	13.70	0.27	38.2	5.0	28	14.25	13.5
S049449		12.46	<0.01	0.06	2.70	582	190	1.01	0.11	18.30	0.24	30.8	5.5	21	8.82	15.3
S049450		11.85	0.01	0.06	3.31	43.8	200	1.21	0.12	19.10	0.06	37.0	5.8	26	15.10	18.0

***** See Appendix Page for comments regarding this certificate *****

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CERTIFICATE OF ANALYSIS WH18228642

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Hg-MS42	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni
	Units	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2
S049411		0.89	4.67	0.14	1.0	0.417	0.011	1.03	11.1	9.2	2.72	231	0.68	0.02	2.8	7.9
S049412		1.95	13.45	0.19	2.4	1.255	0.036	2.69	26.9	33.8	3.70	330	1.51	0.03	7.8	23.6
S049413		1.63	12.40	0.18	2.3	4.02	0.029	2.46	24.3	29.5	2.58	639	0.86	0.02	6.8	17.4
S049414		1.59	12.60	0.18	2.3	5.07	0.030	2.42	24.4	29.2	2.41	680	0.92	0.02	6.9	17.0
S049415		0.48	4.11	0.21	0.7	0.896	0.009	0.63	9.4	7.5	0.77	271	0.55	0.01	2.2	6.8
S049416		0.98	8.48	0.25	1.2	0.226	0.020	1.34	19.2	19.6	1.47	157	0.79	0.02	4.3	16.7
S049417		1.05	5.79	0.19	1.1	0.213	0.017	1.31	14.4	18.6	2.34	169	0.55	0.02	3.4	10.2
S049418		0.88	5.30	0.13	1.1	2.65	0.021	0.95	11.8	9.1	1.91	597	0.55	0.01	3.0	8.5
S049419		0.79	4.59	0.16	1.0	0.639	0.014	0.81	12.4	7.1	1.84	276	0.26	0.01	2.7	6.3
S049420		0.92	6.31	0.22	1.4	0.419	0.016	1.19	14.7	10.6	1.80	180	0.45	0.02	3.8	10.6
S049421		1.16	7.74	0.21	2.7	0.368	0.019	1.72	18.5	14.3	2.85	175	0.55	0.03	5.0	10.9
S049422		1.27	8.45	0.22	2.6	0.457	0.021	1.84	19.1	15.4	5.24	202	0.91	0.03	5.3	12.3
S049423		0.88	5.47	0.18	1.5	0.275	0.016	1.09	13.7	10.4	3.36	236	0.86	0.02	3.5	8.7
S049424		0.39	2.25	0.19	0.6	0.164	0.005	0.42	6.8	4.3	1.03	120	0.76	0.01	1.5	4.0
S049425		1.13	4.13	0.12	0.7	2.16	0.022	0.65	9.1	6.8	1.22	4550	1.29	0.10	2.0	13.6
S049426		0.49	3.01	0.13	0.7	0.199	0.010	0.59	8.5	7.3	1.52	146	0.71	0.01	1.9	5.4
S049427		0.78	5.00	0.14	1.3	0.246	0.013	1.03	12.9	14.7	2.55	127	0.90	0.02	3.3	8.4
S049428		0.60	3.64	0.18	1.0	2.19	0.011	0.72	10.4	9.8	9.87	208	0.51	0.01	2.3	5.0
S049429		0.83	3.73	0.19	1.4	3.56	0.014	0.69	9.5	8.3	9.83	294	1.41	0.02	2.5	6.2
S049430		0.44	1.71	0.20	0.4	1.080	0.009	0.27	5.5	3.8	11.00	321	0.40	0.01	1.0	3.1
S049431		0.12	0.45	0.17	0.1	<0.005	0.008	0.04	1.2	1.2	2.03	123	0.05	0.07	0.1	0.5
S049432		0.86	2.30	0.15	0.7	1.555	0.007	0.43	6.3	6.2	10.60	571	0.65	0.01	1.5	4.6
S049433		1.41	1.14	0.10	0.2	1.765	0.007	0.21	4.1	2.7	11.35	627	0.86	0.01	0.7	5.9
S049434		3.19	1.87	0.07	0.4	2.97	0.009	0.35	5.8	4.2	10.25	875	0.55	0.01	1.2	12.3
S049435		4.89	1.43	0.05	0.3	2.25	0.007	0.26	4.8	3.3	10.25	878	0.31	0.01	0.9	9.4
S049436		5.56	1.31	0.05	0.2	4.60	<0.005	0.24	4.8	2.5	10.40	738	0.57	0.01	0.8	14.3
S049437		2.92	1.09	<0.05	0.3	8.25	0.005	0.18	5.3	2.7	11.30	738	0.50	0.01	0.7	8.9
S049438		2.92	1.14	0.05	0.3	7.50	0.006	0.18	5.5	2.6	11.45	745	0.52	0.01	0.7	9.0
S049439		0.89	2.59	0.10	0.8	3.24	0.009	0.41	8.0	5.8	10.70	584	0.30	0.02	1.7	3.4
S049440		0.82	2.23	0.13	0.7	0.791	0.008	0.38	7.1	5.0	11.15	585	0.23	0.02	1.5	2.5
S049441		0.71	1.99	0.16	0.6	0.514	0.006	0.33	6.0	4.4	11.55	520	0.13	0.02	1.2	2.6
S049442		1.04	4.09	0.14	0.9	0.933	0.010	0.72	9.6	8.6	10.20	485	0.13	0.02	2.5	5.0
S049443		1.20	1.76	0.11	0.3	2.22	0.007	0.30	5.8	3.0	11.75	685	0.07	0.01	1.2	7.9
S049444		0.80	1.33	0.12	0.2	1.865	0.005	0.22	4.0	2.8	12.10	594	0.07	0.02	0.8	9.9
S049445		0.73	1.20	0.13	0.2	1.135	<0.005	0.18	3.6	2.7	11.35	577	0.08	0.01	0.6	7.3
S049446		2.04	7.75	0.11	1.5	4.57	0.029	1.33	17.1	12.4	2.14	1220	1.32	0.10	4.3	17.5
S049447		2.12	7.46	0.12	1.2	1.385	0.019	1.42	17.0	11.6	9.14	445	0.28	0.03	4.1	12.8
S049448		1.90	9.25	0.13	1.6	1.685	0.029	1.78	20.6	16.0	7.48	372	0.34	0.03	5.3	12.9
S049449		1.59	7.07	0.14	1.3	1.555	0.024	1.39	16.0	9.0	6.72	478	0.51	0.02	4.1	10.9
S049450		1.53	8.84	0.17	1.6	0.096	0.029	1.75	20.0	11.1	4.02	346	0.50	0.03	5.0	12.4

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	Analyte	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl
	Units	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
	LOD	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.01	0.005	0.02
S049411		200	5.2	38.3	<0.002	0.24	1.18	2.9	1	0.6	728	0.19	<0.05	3.51	0.080	1.20
S049412		650	11.0	117.0	0.002	0.64	3.12	8.2	2	1.6	233	0.55	<0.05	9.99	0.213	3.64
S049413		580	8.1	106.5	0.002	1.23	44.1	6.9	2	1.4	247	0.50	<0.05	8.66	0.202	16.65
S049414		580	8.1	107.0	<0.002	1.38	55.1	6.9	2	1.4	209	0.50	0.05	8.75	0.201	19.40
S049415		190	5.2	33.4	<0.002	0.27	7.90	2.5	1	0.5	844	0.15	<0.05	2.74	0.049	4.97
S049416		460	8.5	70.4	<0.002	0.24	0.50	5.1	2	0.9	857	0.31	<0.05	5.52	0.093	0.73
S049417		400	5.6	47.7	<0.002	0.24	0.38	3.5	1	0.7	693	0.23	<0.05	4.35	0.101	0.52
S049418		320	5.5	40.7	0.002	1.16	61.6	3.2	3	0.7	737	0.21	<0.05	3.66	0.082	5.30
S049419		300	4.6	36.9	<0.002	0.30	4.12	2.8	2	0.6	662	0.19	<0.05	3.47	0.070	2.16
S049420		310	5.3	48.8	<0.002	0.28	1.47	3.8	1	1.1	631	0.28	<0.05	4.81	0.101	1.25
S049421		370	7.4	64.3	<0.002	0.25	0.37	4.6	2	1.0	386	0.36	<0.05	6.55	0.137	0.66
S049422		420	7.3	65.5	<0.002	0.26	0.32	5.0	2	1.0	263	0.38	<0.05	7.01	0.151	0.59
S049423		330	7.0	39.5	<0.002	0.28	0.28	3.3	2	0.7	591	0.24	<0.05	4.36	0.096	0.50
S049424		160	6.9	14.6	<0.002	0.21	0.23	1.4	1	0.3	915	0.10	<0.05	1.79	0.039	0.37
S049425		380	60.5	29.0	0.002	0.68	8.40	5.8	1	0.7	1120	0.15	<0.05	2.40	0.078	5.91
S049426		230	5.2	20.7	<0.002	0.24	0.34	1.8	1	0.4	710	0.14	<0.05	2.32	0.054	0.30
S049427		390	6.5	35.4	<0.002	0.40	0.27	3.1	1	0.7	591	0.23	<0.05	4.10	0.094	0.49
S049428		290	3.8	24.3	<0.002	0.33	1.80	2.3	1	0.5	72.3	0.17	<0.05	2.95	0.066	0.67
S049429		260	8.7	22.8	<0.002	0.67	4.30	2.3	2	0.5	87.1	0.17	<0.05	3.23	0.071	3.14
S049430		160	4.5	9.4	0.002	1.41	34.9	1.0	2	0.2	78.3	0.08	<0.05	1.33	0.029	1.89
S049431		60	<0.5	0.9	<0.002	<0.01	0.16	0.3	1	<0.2	73.4	<0.05	<0.05	0.07	0.008	0.02
S049432		260	10.5	13.7	<0.002	0.78	10.60	1.4	1	0.3	95.9	0.11	<0.05	1.86	0.042	3.08
S049433		190	17.4	6.4	<0.002	1.71	21.9	0.7	1	0.2	69.0	0.05	<0.05	0.90	0.020	3.49
S049434		420	46.3	10.9	<0.002	3.82	27.0	1.2	2	0.3	94.1	0.09	<0.05	1.49	0.035	6.39
S049435		120	40.7	8.0	<0.002	5.65	16.75	0.9	1	0.2	79.3	0.06	<0.05	1.09	0.026	9.35
S049436		170	51.5	7.7	<0.002	6.38	13.75	0.8	1	0.2	79.0	0.06	<0.05	0.96	0.023	16.05
S049437		90	26.7	6.0	<0.002	3.04	12.90	0.7	1	0.2	111.0	0.05	0.05	0.85	0.021	15.30
S049438		90	25.5	6.1	<0.002	3.00	12.15	0.8	1	0.2	111.0	0.05	<0.05	0.88	0.021	14.75
S049439		300	4.8	13.9	<0.002	0.54	4.71	1.7	1	0.3	120.0	0.13	<0.05	2.12	0.050	3.42
S049440		430	3.2	12.4	<0.002	0.23	0.75	1.4	1	0.3	83.3	0.11	<0.05	1.96	0.045	1.00
S049441		410	2.5	10.9	<0.002	0.23	0.55	1.2	1	0.2	78.2	0.09	<0.05	1.55	0.036	0.53
S049442		950	5.3	25.7	<0.002	0.58	0.65	2.5	<1	0.5	79.8	0.18	<0.05	2.95	0.076	1.53
S049443		670	12.2	10.1	<0.002	0.63	2.07	1.2	1	0.2	106.5	0.07	0.21	1.17	0.030	2.62
S049444		700	11.7	7.4	<0.002	0.35	4.16	1.0	<1	0.2	81.9	<0.05	<0.05	0.78	0.020	2.04
S049445		730	6.5	6.1	<0.002	0.51	9.20	0.8	1	<0.2	89.5	<0.05	<0.05	0.68	0.017	1.74
S049446		420	15.4	58.7	0.002	2.25	53.3	6.4	2	1.0	769	0.32	0.08	4.57	0.185	15.20
S049447		1040	12.2	52.8	<0.002	1.85	2.18	4.7	<1	0.8	63.4	0.28	<0.05	4.55	0.135	2.01
S049448		530	10.8	68.2	<0.002	1.46	2.48	6.0	1	1.2	95.9	0.38	<0.05	5.95	0.170	1.88
S049449		620	14.7	51.5	<0.002	0.45	1.31	4.9	1	0.9	279	0.30	<0.05	4.71	0.129	1.17
S049450		530	9.5	66.1	0.003	0.50	0.34	5.7	1	1.1	482	0.37	0.05	5.48	0.157	0.62

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.
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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 19-OCT-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18228642

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	As-OG62
	Analyte	U	V	W	Y	Zn	Zr	As
	Units	ppm	ppm	ppm	ppm	ppm	ppm	%
	LOD	0.1	1	0.1	0.1	2	0.5	0.001
S049411		11.0	28	0.6	6.6	21	38.2	
S049412		5.7	80	1.9	15.9	29	86.0	
S049413		7.5	79	3.2	13.3	30	82.3	1.110
S049414		6.9	78	3.4	13.2	37	84.1	1.445
S049415		19.5	24	0.8	5.2	23	25.6	
S049416		20.3	40	0.5	10.5	25	45.2	
S049417		10.1	40	0.7	7.9	12	40.3	
S049418		8.6	32	1.7	7.4	64	45.6	1.665
S049419		9.3	25	0.9	8.4	20	38.7	
S049420		10.6	33	1.2	8.8	30	51.5	
S049421		6.6	37	0.7	11.5	20	93.5	
S049422		5.5	47	0.7	11.8	24	94.3	
S049423		8.5	34	0.8	7.8	23	53.0	
S049424		14.3	17	0.4	3.9	18	24.7	
S049425		3.8	25	4.3	14.1	119	27.5	
S049426		11.2	21	0.6	5.1	13	24.4	
S049427		10.0	36	0.4	7.9	15	48.5	
S049428		9.6	28	0.7	6.3	6	36.0	
S049429		14.5	32	1.5	6.8	9	50.8	
S049430		11.8	20	1.1	3.3	3	14.3	2.51
S049431		0.2	2	<0.1	2.2	26	1.9	
S049432		12.5	25	1.2	4.2	6	22.9	
S049433		14.3	16	0.9	2.6	13	7.8	1.300
S049434		21.3	12	1.3	4.0	3	13.2	1.300
S049435		12.7	9	0.9	2.9	11	10.2	
S049436		20.9	17	1.1	2.9	16	9.1	
S049437		12.7	11	1.3	2.8	12	10.0	
S049438		12.6	11	1.2	2.8	12	9.9	
S049439		12.5	18	1.2	5.6	21	30.3	
S049440		11.4	17	1.0	5.3	4	26.2	
S049441		7.9	11	0.6	4.7	4	21.4	
S049442		6.6	26	1.2	6.8	6	35.5	
S049443		3.7	9	0.7	5.8	24	10.4	
S049444		3.7	8	0.5	5.1	65	9.4	
S049445		2.9	7	0.4	4.7	53	7.9	
S049446		3.9	53	4.0	15.1	55	50.2	1.455
S049447		3.3	36	2.3	10.5	82	47.2	
S049448		5.0	49	1.9	12.4	129	57.2	
S049449		7.8	42	0.9	10.6	183	46.4	
S049450		6.5	49	0.7	11.5	34	55.9	

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Project: Nadaleen

Finalized Date: 19-OCT-2018
Account: RCM

CERTIFICATE OF ANALYSIS WH18228642

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Applies to Method: REE's may not be totally soluble in this method.
ME-MS61

LABORATORY ADDRESSES

Applies to Method: Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.

CRU-31	CRU-QC	LOG-21	LOG-21d
LOG-23	PUL-31	PUL-31d	PUL-QC
SPL-21	SPL-21d	WEI-21	WSH-22

Applies to Method: Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

As-OG62	Au-AA25	Hg-MS42	ME-MS61
ME-OG62			

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Finalized Date: 19-OCT-2018
Account: RCM

CERTIFICATE WH18228651

Project: Nadaleen

P.O. No.: N18-066

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 14-SEP-2018.

The following have access to data associated with this certificate:

ANDREW CARNE	JULIA LANE	

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um
PUL-QC	Pulverizing QC Test
CRU-QC	Crushing QC Test
LOG-23	Pulp Login - Rcvd with Barcode
LOG-21d	Sample logging - ClientBarCode Dup
SPL-21d	Split sample - duplicate
PUL-31d	Pulverize Split - duplicate

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid ICP-MS	
Hg-MS42	Trace Hg by ICPMS	ICP-MS
ME-OG62	Ore Grade Elements - Four Acid	ICP-AES

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:

Colin Ramshaw, Vancouver Laboratory Manager

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Finalized Date: 19-OCT-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18228651

Sample Description	Method	WEI-21	Au-AA25	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Recvd Wt.	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu
	Units	kg	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.02	0.01	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2
R613201		11.02	0.13	0.09	2.44	239	90	0.55	0.13	3.41	0.08	28.3	8.2	27	7.15	19.9
R613202		11.59	0.01	0.06	5.96	177.0	210	2.05	0.24	2.47	0.14	63.8	15.1	60	25.3	46.4
R613203		11.08	0.45	0.10	6.92	944	210	2.49	0.27	1.72	0.05	70.7	19.5	76	32.0	59.1
R613204		11.32	0.07	0.06	5.58	275	180	1.55	0.22	2.51	0.12	56.8	19.6	70	24.2	50.8
R613205		11.76	<0.01	0.04	5.35	115.0	360	1.40	0.20	2.87	0.03	55.3	17.6	63	24.8	46.5
R613206		7.73	<0.01	0.06	6.25	64.6	200	1.78	0.24	1.92	0.09	63.4	20.7	75	32.4	55.4
R613207		8.24	<0.01	0.05	6.25	152.5	220	1.65	0.24	2.04	0.15	63.1	21.4	75	30.9	55.5
R613208		7.02	<0.01	<0.01	0.13	1.4	20	0.09	0.05	33.2	<0.02	1.20	0.6	2	0.18	4.1
R613209		7.70	<0.01	0.04	6.20	12.8	210	1.58	0.24	1.95	0.37	63.9	19.2	72	40.5	54.3
R613210		7.27	0.01	0.06	6.32	220	230	1.69	0.24	2.13	0.02	63.8	18.9	69	29.9	51.5
R613211		7.98	0.01	0.05	6.66	64.5	230	1.87	0.26	1.78	0.02	69.4	20.0	73	34.2	55.0
R613212		6.84	<0.01	0.06	6.37	75.5	200	1.66	0.25	2.81	0.02	63.2	21.6	67	27.0	56.8
R613213		6.98	<0.01	0.05	6.34	75.5	210	1.77	0.25	2.87	0.02	64.5	20.8	69	27.0	58.7
R613214		7.51	0.01	0.05	6.57	185.0	200	1.92	0.26	3.22	0.02	65.5	23.0	63	29.7	60.2
R613215		7.14	0.47	0.07	6.54	835	210	1.97	0.26	3.79	0.05	65.6	21.3	61	26.4	57.9
R613216		7.07	0.36	0.07	6.81	685	200	2.10	0.27	3.38	0.06	71.0	23.5	64	26.7	60.6
R613217		0.26	2.75	0.70	1.94	>10000	140	0.48	2.71	26.8	0.17	28.5	5.0	26	6.27	16.7
R613218		10.71	0.01	0.09	5.32	41.2	290	1.33	0.22	2.95	0.03	58.6	15.3	56	23.1	44.4
R613219		10.66	0.01	0.10	4.08	216	280	0.95	0.16	4.20	0.07	42.6	17.6	52	16.20	37.0
R613220		7.21	0.01	0.05	3.32	106.5	160	0.72	0.14	3.46	0.09	35.6	10.0	40	12.05	28.8
R613221		10.97	0.01	0.08	3.35	60.0	110	0.83	0.14	1.43	0.09	35.8	9.3	46	16.25	25.6
R613222		10.47	0.08	0.07	2.21	252	80	0.39	0.11	2.10	0.12	25.1	7.4	31	4.96	18.0
R613223		10.17	0.05	0.07	2.48	186.0	90	0.42	0.11	1.70	0.05	25.2	8.9	31	6.45	19.0
R613224		2.03	0.05	0.08	4.06	150.5	170	0.95	0.17	2.74	0.13	60.5	9.6	39	13.55	28.4
R613225		2.15	0.15	0.08	4.24	217	170	1.10	0.18	2.76	0.10	69.6	9.0	45	14.00	25.3
R613226		2.24	<0.01	0.04	1.38	26.3	50	0.21	0.06	2.83	<0.02	16.10	3.8	20	2.14	7.7
R613227		7.10	0.01	0.10	6.44	196.0	360	1.79	0.25	1.44	0.05	64.8	15.4	67	24.5	49.7
R613228		<0.02	<0.01	0.09	6.58	200	360	1.77	0.26	1.44	0.04	64.4	15.4	67	24.5	48.3
R613229		7.81	0.01	0.07	6.13	65.1	300	1.68	0.25	1.61	0.19	60.2	14.8	60	28.0	45.0
R613230		7.07	<0.01	0.10	7.92	103.0	280	2.34	0.34	1.56	0.13	78.5	23.7	72	39.8	56.8
R613231		7.21	0.01	0.04	6.38	72.3	240	1.61	0.24	3.29	0.08	63.6	14.8	65	39.6	51.9
R613232		7.16	0.01	0.05	6.04	154.0	240	1.54	0.23	3.94	0.08	59.7	15.0	64	29.9	50.7
R613233		7.72	0.01	0.05	5.44	86.9	320	1.31	0.20	3.07	0.03	55.1	17.6	67	25.0	49.7
R613234		7.40	0.01	0.05	5.67	136.5	220	1.60	0.22	1.57	0.03	58.9	17.3	67	27.5	46.6
R613235		5.31	<0.01	0.06	5.74	111.5	530	1.84	0.18	1.08	0.06	54.6	21.6	66	36.8	43.5
R613236		0.26	1.04	1.46	1.52	870	200	0.41	0.12	28.8	0.72	20.2	4.4	30	3.57	46.9
R613237		7.71	0.27	0.08	6.40	507	270	1.71	0.28	2.40	0.23	74.4	15.9	63	29.1	46.5
R613238		8.01	1.49	0.09	6.54	2500	300	1.66	0.27	3.16	0.16	68.0	17.2	66	34.3	53.0
R613239		11.66	0.01	0.07	6.91	123.5	260	1.84	0.32	3.31	0.03	80.9	12.4	61	23.2	23.7
R613240		13.24	0.29	0.17	6.97	382	320	2.17	0.35	2.65	0.08	89.9	11.5	68	19.85	26.3

***** See Appendix Page for comments regarding this certificate *****

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Finalized Date: 19-OCT-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18228651

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Hg-MS42	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni
	Units	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2
R613201		3.05	5.58	0.08	1.4	0.807	0.023	1.11	13.4	14.5	1.24	856	0.48	0.02	3.6	13.4
R613202		4.60	16.15	0.14	2.7	0.472	0.063	2.87	30.1	21.0	1.38	511	0.53	0.03	10.0	30.4
R613203		5.05	18.60	0.15	3.4	1.230	0.072	3.33	33.6	31.7	1.37	501	0.45	0.03	12.1	38.2
R613204		5.05	14.70	0.13	2.6	0.266	0.058	2.63	26.5	39.4	1.65	758	0.35	0.02	9.4	34.0
R613205		4.93	14.50	0.14	2.6	0.055	0.052	2.57	26.0	43.0	2.21	872	0.27	0.03	9.2	31.1
R613206		5.18	16.65	0.15	2.9	0.065	0.066	2.84	29.9	116.0	2.11	538	0.54	0.04	10.5	35.5
R613207		5.09	16.60	0.13	2.9	0.109	0.063	2.82	29.7	111.5	1.95	526	0.64	0.05	11.1	36.0
R613208		0.13	0.44	0.12	0.1	<0.005	<0.005	0.04	1.3	1.4	1.76	122	<0.05	0.06	0.2	0.4
R613209		4.86	16.45	0.15	3.0	0.070	0.065	2.70	29.9	109.5	2.08	519	0.82	0.07	10.5	34.7
R613210		5.03	16.70	0.12	2.9	0.145	0.061	2.96	30.4	60.8	1.79	571	0.25	0.04	10.4	34.6
R613211		5.02	17.95	0.16	3.1	0.088	0.068	3.11	33.1	68.9	1.81	518	0.21	0.03	12.1	37.0
R613212		5.04	17.60	0.15	3.0	0.055	0.068	3.20	30.5	33.4	2.42	688	0.30	0.03	11.5	39.4
R613213		5.10	17.95	0.15	3.0	0.055	0.071	3.13	31.1	33.4	2.50	727	0.28	0.03	11.5	38.3
R613214		5.43	18.75	0.15	3.0	0.245	0.072	3.24	31.6	24.7	2.04	664	0.38	0.03	12.1	40.9
R613215		5.03	18.25	0.14	3.0	1.275	0.068	3.24	32.0	12.3	1.94	1030	0.25	0.03	11.5	37.9
R613216		4.78	19.50	0.17	3.2	0.816	0.065	3.43	33.9	13.2	1.85	802	0.30	0.03	12.9	40.2
R613217		1.45	5.31	0.09	0.9	6.89	0.024	1.01	14.4	8.9	0.93	2260	1.79	0.01	2.8	14.1
R613218		4.26	14.75	0.14	2.5	0.186	0.054	2.41	27.5	101.0	2.01	751	0.60	0.03	9.2	29.6
R613219		4.61	11.10	0.12	1.9	0.238	0.045	1.74	20.6	143.0	2.33	1160	0.71	0.03	7.0	31.1
R613220		3.23	8.65	0.11	2.0	0.209	0.034	1.49	17.4	55.5	1.35	629	0.54	0.02	5.5	18.9
R613221		2.83	9.72	0.10	1.9	0.204	0.028	1.45	17.4	49.7	0.80	326	0.35	0.12	5.4	17.9
R613222		2.61	5.42	0.08	1.3	0.833	0.020	1.03	12.3	10.0	0.79	518	0.36	0.01	3.4	12.5
R613223		2.48	5.82	0.08	1.3	0.834	0.020	1.05	12.4	25.0	0.66	421	0.41	0.01	3.6	14.8
R613224		3.59	11.80	0.15	2.3	1.045	0.042	1.90	26.3	26.2	1.06	610	0.44	0.02	6.5	16.5
R613225		3.50	12.65	0.17	2.4	1.020	0.045	2.00	29.5	22.3	1.08	630	0.39	0.02	7.0	15.8
R613226		1.59	2.48	0.05	0.8	0.024	0.008	0.27	7.8	11.9	0.95	674	0.27	0.40	1.6	6.1
R613227		4.41	18.75	0.14	3.0	0.305	0.065	3.10	32.0	52.1	1.59	358	0.76	0.07	10.2	33.2
R613228		4.43	18.45	0.15	2.9	0.295	0.063	3.17	31.9	54.1	1.59	364	0.80	0.08	10.1	32.7
R613229		4.60	16.90	0.15	2.6	0.179	0.058	3.03	29.6	61.6	1.73	392	0.77	0.06	9.0	32.2
R613230		6.53	21.9	0.17	3.3	0.238	0.084	3.94	38.7	83.3	2.15	329	1.33	0.04	11.8	47.0
R613231		4.78	17.35	0.15	2.9	0.072	0.065	2.81	30.6	98.2	2.55	649	0.36	0.11	10.7	33.0
R613232		4.66	16.55	0.14	2.9	0.120	0.061	2.85	28.6	96.8	2.60	668	0.43	0.04	9.9	32.1
R613233		4.90	15.10	0.14	2.7	0.101	0.054	2.43	26.3	134.5	2.42	670	0.21	0.05	9.2	34.3
R613234		4.58	15.45	0.15	2.6	0.195	0.055	2.55	29.1	110.5	1.77	388	0.21	0.03	9.2	31.8
R613235		4.04	15.55	0.13	2.3	0.262	0.059	2.65	26.4	80.3	1.26	371	0.32	0.03	7.6	32.6
R613236		1.19	4.11	0.08	0.8	2.02	0.019	0.68	10.0	6.8	1.25	4730	1.28	0.10	2.1	13.8
R613237		4.28	18.10	0.16	3.3	1.860	0.066	3.20	36.4	19.7	1.30	596	0.70	0.03	11.6	34.5
R613238		4.76	17.90	0.16	3.1	3.25	0.063	3.18	33.0	21.2	1.50	930	0.59	0.03	11.4	35.2
R613239		4.26	18.70	0.18	3.6	1.030	0.059	3.29	42.4	51.8	0.96	492	0.41	0.04	11.7	28.5
R613240		4.12	17.80	0.14	3.3	3.87	0.066	3.49	43.2	20.6	1.11	751	0.47	0.05	10.8	31.5

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 19-OCT-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18228651

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl
	Units	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
	LOD	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.01	0.005	0.02
R613201		240	15.4	52.3	<0.002	1.60	1.15	5.2	<1	0.8	104.5	0.28	<0.05	4.21	0.219	2.44
R613202		660	12.6	144.0	<0.002	3.50	0.66	16.7	1	1.9	109.5	0.71	<0.05	8.78	0.493	2.78
R613203		550	8.5	178.5	0.002	3.55	2.96	20.1	<1	2.1	87.6	0.86	0.07	9.69	0.605	4.13
R613204		470	14.3	143.0	<0.002	2.68	0.88	16.5	<1	1.7	113.5	0.65	0.05	7.59	0.534	2.01
R613205		410	20.9	150.0	<0.002	0.13	0.40	15.5	<1	1.6	140.0	0.65	0.06	7.49	0.469	0.97
R613206		520	14.5	147.0	<0.002	0.19	0.48	18.1	<1	1.9	110.5	0.73	0.05	8.67	0.553	0.91
R613207		490	19.2	144.5	<0.002	1.11	1.46	17.6	1	1.9	121.5	0.77	0.07	8.74	0.553	1.69
R613208		70	<0.5	1.2	<0.002	0.01	0.12	0.2	1	<0.2	75.0	<0.05	<0.05	0.10	0.007	<0.02
R613209		520	28.3	151.0	<0.002	0.10	0.40	18.0	1	1.9	88.8	0.74	0.07	8.66	0.542	0.84
R613210		470	16.1	156.5	<0.002	2.04	1.38	16.8	<1	1.9	104.0	0.74	<0.05	9.03	0.519	1.99
R613211		490	14.8	169.5	<0.002	1.51	0.68	18.6	<1	2.1	92.8	0.83	0.06	9.45	0.565	1.72
R613212		500	15.7	167.0	<0.002	0.23	0.56	18.4	<1	1.9	135.5	0.79	0.05	9.01	0.503	0.94
R613213		500	13.1	163.5	<0.002	0.17	0.43	19.3	1	1.9	134.0	0.77	<0.05	8.96	0.518	0.93
R613214		510	13.9	171.0	<0.002	3.32	0.78	19.1	<1	2.0	164.0	0.79	0.06	9.33	0.527	2.38
R613215		530	14.4	160.5	<0.002	4.29	2.79	20.0	1	2.1	162.5	0.78	0.05	9.35	0.519	4.96
R613216		530	19.2	173.0	<0.002	4.18	3.08	19.7	1	2.1	136.0	0.84	0.07	9.97	0.547	3.48
R613217		340	7.4	42.6	0.002	1.49	47.2	5.9	1	0.7	1030	0.20	0.05	3.32	0.091	24.2
R613218		600	15.6	118.0	<0.002	0.58	0.68	14.3	<1	1.7	169.0	0.64	<0.05	7.96	0.409	0.83
R613219		350	16.9	81.5	<0.002	1.02	0.99	11.5	<1	1.2	315	0.49	<0.05	5.57	0.363	0.86
R613220		330	10.1	67.9	<0.002	0.47	0.53	8.5	1	1.0	112.5	0.40	<0.05	5.12	0.306	1.09
R613221		330	13.3	69.3	<0.002	0.81	0.57	8.5	<1	1.1	77.6	0.40	<0.05	5.18	0.306	0.94
R613222		200	11.2	45.8	<0.002	1.52	1.10	5.4	<1	0.7	81.6	0.26	<0.05	3.69	0.221	2.25
R613223		220	16.2	49.0	<0.002	1.64	1.18	4.7	<1	0.8	70.2	0.29	<0.05	4.39	0.219	2.31
R613224		1390	22.3	89.6	<0.002	2.49	1.61	12.3	<1	1.2	122.0	0.50	<0.05	6.31	0.313	2.81
R613225		1650	20.3	93.2	<0.002	2.42	1.90	13.2	<1	1.3	124.5	0.48	<0.05	6.51	0.338	3.21
R613226		160	6.1	15.0	<0.002	0.14	0.46	2.1	<1	0.4	110.0	0.14	<0.05	2.99	0.078	0.20
R613227		480	18.2	159.5	<0.002	1.09	2.64	17.9	<1	2.1	110.0	0.72	<0.05	9.75	0.434	1.38
R613228		460	18.9	157.0	0.002	1.10	2.63	17.8	<1	2.0	109.5	0.69	<0.05	9.86	0.430	1.37
R613229		500	15.0	158.0	0.002	1.36	0.55	16.2	1	1.9	104.0	0.64	<0.05	9.08	0.379	1.00
R613230		620	39.8	199.5	0.003	2.72	0.88	21.7	1	2.5	111.0	0.82	<0.05	11.45	0.479	1.35
R613231		540	10.4	144.0	<0.002	0.35	0.41	17.7	<1	1.9	151.0	0.74	<0.05	9.23	0.470	0.76
R613232		530	11.1	140.0	<0.002	0.61	0.78	16.6	<1	1.8	208	0.72	<0.05	8.83	0.455	1.04
R613233		420	10.8	121.5	<0.002	0.29	0.69	15.9	1	1.6	141.5	0.62	<0.05	7.87	0.472	0.81
R613234		420	14.9	129.0	0.002	0.44	0.63	16.0	<1	1.7	90.3	0.63	<0.05	8.23	0.436	1.03
R613235		430	22.0	129.5	0.002	1.09	0.96	17.2	<1	1.6	91.7	0.52	<0.05	7.30	0.351	1.21
R613236		390	58.9	28.9	0.002	0.69	8.23	5.8	1	0.7	1105	0.15	<0.05	2.36	0.080	5.70
R613237		520	34.5	151.5	0.003	3.61	6.16	16.8	<1	2.1	87.5	0.81	0.07	11.00	0.444	5.63
R613238		480	24.0	149.0	<0.002	3.81	13.15	17.9	<1	2.1	129.5	0.78	0.06	10.15	0.475	8.38
R613239		830	19.8	153.5	<0.002	3.46	1.94	11.9	1	2.0	152.0	0.82	0.07	13.90	0.363	5.13
R613240		990	29.9	154.5	0.004	3.50	4.27	11.8	1	2.2	158.5	0.78	<0.05	15.05	0.352	10.05

***** See Appendix Page for comments regarding this certificate *****

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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 19-OCT-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18228651

Sample Description	Method Analyte Units LOD	ME-MS61 U ppm 0.1	ME-MS61 V ppm 1	ME-MS61 W ppm 0.1	ME-MS61 Y ppm 0.1	ME-MS61 Zn ppm 2	ME-MS61 Zr ppm 0.5
R613201		0.9	54	2.1	9.5	44	47.1
R613202		1.8	132	2.5	21.1	101	96.9
R613203		2.0	159	4.1	23.0	65	115.0
R613204		1.6	142	2.7	19.3	86	92.3
R613205		1.6	124	1.0	19.3	59	90.1
R613206		1.8	144	1.2	21.0	85	100.5
R613207		1.8	144	2.0	21.0	99	101.5
R613208		0.2	2	<0.1	2.1	3	1.9
R613209		1.8	140	1.2	21.4	140	103.0
R613210		1.8	135	2.3	19.9	60	99.0
R613211		2.0	142	1.3	22.3	66	107.0
R613212		1.9	133	1.2	22.0	63	108.5
R613213		1.9	137	1.4	22.0	67	107.0
R613214		1.9	140	2.1	22.4	68	110.0
R613215		1.9	138	9.1	22.8	63	108.5
R613216		2.0	144	9.2	23.2	62	117.5
R613217		6.2	34	19.9	15.9	24	33.0
R613218		1.7	109	1.1	20.3	53	90.3
R613219		1.2	99	0.9	15.5	59	74.9
R613220		1.2	83	0.8	11.7	59	61.4
R613221		1.2	84	0.8	11.9	66	68.7
R613222		0.8	58	1.8	7.8	54	45.9
R613223		0.9	58	1.5	7.6	25	48.1
R613224		2.1	90	2.5	26.3	74	78.4
R613225		2.4	100	2.7	30.2	60	84.9
R613226		0.7	21	0.3	5.7	10	26.8
R613227		2.1	127	2.2	20.3	58	108.0
R613228		2.1	126	2.1	19.8	55	106.5
R613229		1.9	112	1.1	19.2	101	92.3
R613230		2.4	143	1.3	24.9	94	120.0
R613231		1.9	123	1.1	21.7	79	106.5
R613232		1.8	121	2.4	20.1	77	101.0
R613233		1.6	126	2.0	18.0	62	96.3
R613234		1.7	121	1.8	18.7	63	93.7
R613235		1.6	114	1.3	18.4	68	82.1
R613236		3.8	25	5.2	15.1	130	27.6
R613237		2.4	118	4.7	22.4	106	116.5
R613238		2.1	127	6.6	21.5	80	114.5
R613239		2.8	95	3.2	22.8	67	132.5
R613240		3.0	95	3.6	21.9	115	120.5

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Project: Nadaleen

Finalized Date: 19-OCT-2018
Account: RCM

CERTIFICATE OF ANALYSIS WH18228651

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Applies to Method: REE's may not be totally soluble in this method.
ME-MS61

LABORATORY ADDRESSES

Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.

Applies to Method:				
	CRU-31	CRU-QC	LOG-21	LOG-21d
	LOG-23	PUL-31	PUL-31d	PUL-QC
	SPL-21	SPL-21d	WEI-21	

Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Applies to Method:				
	Au-AA25	Hg-MS42	ME-MS61	ME-OG62

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Finalized Date: 31-OCT-2018
Account: RCM

CERTIFICATE WH18232764

Project: Nadaleen

P.O. No.: N18-067

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 19-SEP-2018.

The following have access to data associated with this certificate:

ANDREW CARNE	JULIA LANE	

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
LOG-23	Pulp Login - Rcvd with Barcode
LOG-21d	Sample logging - ClientBarCode Dup
SPL-21d	Split sample - duplicate
PUL-31d	Pulverize Split - duplicate

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid ICP-MS	
Hg-MS42	Trace Hg by ICPMS	ICP-MS
ME-OG62	Ore Grade Elements - Four Acid	ICP-AES
As-OG62	Ore Grade As - Four Acid	

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:

Colin Ramshaw, Vancouver Laboratory Manager

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Finalized Date: 31-OCT-2018
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CERTIFICATE OF ANALYSIS WH18232764

Sample Description	Method	WEI-21	Au-AA25	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Recvd Wt.	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu
	Units	kg	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.02	0.01	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2
S050901		10.95	<0.01	0.05	10.35	155.0	400	3.37	0.50	0.68	<0.02	82.6	15.5	75	48.3	42.2
S050902		10.81	0.10	0.03	9.58	510	440	3.23	0.46	1.93	<0.02	93.7	16.0	63	40.7	28.5
S050903		11.07	0.33	0.04	8.56	1710	360	2.91	0.46	3.11	<0.02	72.4	13.5	63	36.6	27.2
S050904		10.87	<0.01	0.06	6.83	172.5	730	1.99	0.27	8.61	0.03	71.0	10.0	45	28.0	18.1
S050905		10.68	<0.01	0.06	7.76	183.5	370	2.54	0.35	6.33	0.03	80.6	12.6	59	33.8	20.1
S050906		11.03	<0.01	0.07	5.78	46.7	320	1.69	0.21	12.60	0.05	58.4	9.4	38	25.8	30.4
S050907		12.11	<0.01	0.05	5.04	12.9	260	1.34	0.21	12.85	0.03	51.3	9.8	35	19.70	22.1
S050908		<0.02	<0.01	0.07	5.31	10.9	270	1.50	0.22	13.40	0.04	52.8	10.0	37	20.2	22.1
S050909		10.92	<0.01	0.07	4.18	7.0	290	1.19	0.16	17.40	0.05	43.1	8.8	30	16.00	15.8
S050910		11.53	<0.01	0.06	4.33	11.0	310	1.32	0.18	17.20	0.06	44.5	6.3	33	16.50	17.6
S050911		11.34	<0.01	0.05	4.34	9.8	240	1.29	0.16	16.85	0.07	44.1	6.4	31	17.65	14.1
S050912		11.19	<0.01	0.08	3.21	11.9	210	1.02	0.12	19.20	0.04	35.9	5.9	24	13.05	11.4
S050913		7.22	<0.01	0.19	2.17	43.2	150	1.02	0.10	22.3	0.07	26.6	6.0	18	6.85	10.8
S050914		8.23	<0.01	0.01	4.50	371	210	1.46	0.18	16.20	0.15	46.1	5.7	34	15.50	22.1
S050915		6.57	0.68	0.03	3.27	>10000	270	1.21	0.12	14.70	0.09	37.8	6.1	24	10.55	12.1
S050916		6.90	<0.01	<0.01	0.14	120.5	30	0.13	0.03	33.3	0.02	1.20	0.6	1	0.06	1.2
S050917		5.75	0.02	0.05	2.06	3220	190	0.91	0.09	18.05	0.06	23.4	5.3	16	7.76	13.1
S050918		5.41	0.02	0.04	1.73	8510	240	0.66	0.08	17.95	0.08	20.8	5.6	14	6.35	12.5
S050919		11.90	<0.01	0.01	0.04	2770	10	0.06	0.01	22.1	0.07	3.39	0.5	1	0.09	3.0
S050920		11.79	0.02	0.10	0.34	9790	30	0.20	0.07	19.80	0.03	7.23	1.0	5	0.71	8.1
S050921		10.76	0.04	0.02	0.63	1895	40	0.30	0.03	19.60	<0.02	9.34	1.2	4	1.34	4.8
S050922		11.26	0.01	0.02	0.85	2630	50	0.41	0.04	19.80	<0.02	14.90	1.4	5	2.02	5.3
S050923		11.56	0.01	0.01	1.02	760	60	0.39	0.05	18.80	0.04	16.20	1.8	7	2.31	5.0
S050924		11.60	0.02	0.02	0.55	4400	50	0.29	0.03	20.5	0.05	10.30	1.4	6	0.98	4.5
S050925		0.26	1.44	0.90	3.05	>10000	190	0.61	0.11	17.75	0.33	34.3	8.0	42	8.89	26.2
S050926		11.50	0.01	0.06	1.44	2590	80	0.56	0.07	19.45	0.05	22.4	2.6	10	4.34	8.9
S050927		11.71	<0.01	0.02	0.50	261	50	0.31	0.03	20.8	0.03	9.74	1.2	4	1.00	5.4
S050928		11.12	<0.01	0.01	0.80	77.6	40	0.38	0.04	20.2	0.05	14.60	1.7	5	2.17	5.1
S050929		11.04	<0.01	0.01	0.92	71.8	50	0.51	0.04	20.4	0.05	15.15	1.5	5	2.23	5.1
S050930		10.03	0.02	0.08	1.15	636	70	0.43	0.04	19.95	0.10	18.15	2.7	9	2.71	6.4
S050931		6.24	0.05	0.10	0.83	264	50	0.39	0.03	20.3	0.17	12.40	3.6	6	2.06	8.2
S050932		10.69	<0.01	0.05	0.57	43.9	30	0.33	0.02	22.1	0.03	7.32	1.4	4	1.33	4.6
S050933		9.02	<0.01	0.05	0.36	167.0	20	0.24	0.02	20.9	0.12	5.43	1.1	5	0.71	4.1
S050934		7.05	<0.01	0.24	0.37	810	30	0.32	0.02	22.1	0.04	5.41	1.1	5	0.63	4.3
S050935		2.45	0.01	0.15	0.51	1475	20	0.24	0.02	20.4	0.03	7.54	1.3	5	0.78	4.4
S050936		0.26	2.72	0.75	1.91	>10000	150	0.59	2.85	27.3	0.15	29.5	5.1	27	6.28	15.9
S050937		6.86	0.01	0.16	0.49	1305	20	0.20	0.02	21.1	0.02	8.07	1.2	4	1.05	3.9
S050938		9.31	0.01	0.07	0.48	2410	30	0.23	0.02	20.9	0.05	5.78	1.2	5	1.07	5.3
S050939		11.43	0.04	0.07	0.85	>10000	110	0.37	0.03	18.30	0.10	11.75	2.3	9	1.53	6.9
S050940		11.12	0.02	0.15	3.38	4470	260	1.26	0.09	13.25	0.09	38.5	6.5	35	9.93	19.6

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 31-OCT-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18232764

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Hg-MS42	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni
	Units	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2
S050901		3.19	27.5	0.18	3.0	0.706	0.076	5.62	41.3	21.0	0.83	224	0.27	0.04	13.7	42.4
S050902		4.67	25.3	0.18	3.1	0.801	0.077	5.23	48.5	19.0	1.19	537	0.16	0.04	13.2	38.8
S050903		3.24	23.4	0.17	2.9	1.450	0.066	4.87	36.7	19.5	1.43	460	0.21	0.04	12.5	35.6
S050904		3.60	17.00	0.14	2.8	0.420	0.056	3.63	37.4	16.2	2.54	676	0.24	0.04	9.7	22.7
S050905		4.02	20.3	0.16	3.2	0.242	0.076	4.13	42.6	20.4	2.23	617	0.18	0.05	11.8	28.2
S050906		2.47	14.95	0.08	2.6	0.078	0.051	3.08	30.4	14.2	2.66	458	0.60	0.04	7.9	20.5
S050907		2.41	13.00	0.08	2.3	0.068	0.050	2.68	26.6	12.8	3.43	443	0.49	0.04	6.9	21.1
S050908		2.50	13.35	0.11	2.3	0.081	0.050	2.82	27.1	13.3	3.56	456	0.47	0.04	7.1	21.6
S050909		1.91	10.70	0.09	1.9	0.090	0.042	2.22	22.0	11.5	3.36	386	0.39	0.03	5.7	18.8
S050910		1.88	10.95	0.11	1.9	0.052	0.043	2.27	22.3	12.8	3.35	351	0.31	0.03	6.0	14.5
S050911		1.69	11.20	0.09	1.9	0.054	0.040	2.30	22.8	12.6	3.29	312	0.30	0.03	5.9	14.6
S050912		1.84	8.44	0.08	1.6	0.063	0.030	1.71	18.5	11.3	4.10	373	0.69	0.03	4.8	12.2
S050913		1.55	5.55	0.07	1.2	0.458	0.022	1.13	13.6	10.9	4.94	428	1.74	0.02	3.3	11.0
S050914		1.66	11.35	0.08	2.0	1.640	0.043	2.36	23.5	16.9	3.85	335	0.42	0.03	6.1	13.6
S050915		1.41	8.33	0.08	1.6	0.801	0.032	1.69	19.5	13.5	7.38	619	0.65	0.03	4.7	13.1
S050916		0.12	0.50	0.06	0.1	0.006	0.005	0.06	1.2	1.0	2.15	135	<0.05	0.07	0.3	<0.2
S050917		1.91	5.51	0.06	1.0	1.190	0.018	1.06	11.7	9.4	10.15	548	0.33	0.03	3.0	12.1
S050918		2.34	4.64	0.05	0.9	1.405	0.021	0.88	10.4	8.0	9.97	526	0.30	0.02	2.5	13.3
S050919		0.60	0.18	0.10	<0.1	0.217	<0.005	0.01	1.8	0.7	13.35	654	<0.05	0.01	0.1	0.5
S050920		0.57	1.04	0.06	0.2	0.607	0.010	0.16	3.7	2.7	11.60	580	0.07	0.01	0.6	2.4
S050921		0.67	1.87	0.09	0.5	0.917	0.009	0.32	4.7	3.9	11.40	616	<0.05	0.01	1.1	1.9
S050922		0.79	2.36	0.11	0.6	0.569	0.011	0.42	7.2	5.2	11.50	641	<0.05	0.02	1.4	2.6
S050923		1.02	2.90	0.09	0.8	0.521	0.011	0.53	7.9	5.7	11.05	574	0.05	0.02	1.7	3.7
S050924		0.78	1.57	0.11	0.4	0.969	0.012	0.28	5.2	2.9	11.90	644	<0.05	0.01	0.9	4.2
S050925		2.13	8.10	0.08	1.5	4.73	0.034	1.40	16.7	12.0	2.23	1310	1.34	0.10	4.4	18.2
S050926		1.62	3.97	0.07	0.7	1.155	0.012	0.75	10.0	6.5	10.85	616	0.06	0.02	2.3	8.9
S050927		0.65	1.53	0.11	0.4	0.415	0.011	0.26	4.7	3.5	12.00	521	<0.05	0.02	0.9	2.8
S050928		0.74	2.27	0.10	0.7	0.317	0.012	0.42	7.1	4.8	11.15	470	<0.05	0.02	1.4	3.4
S050929		0.62	2.58	0.10	0.8	0.309	0.012	0.47	7.9	5.1	10.80	415	0.05	0.01	1.5	2.9
S050930		1.29	3.17	0.08	0.9	1.190	0.017	0.58	9.1	5.0	10.90	625	0.08	0.01	1.8	5.8
S050931		1.51	2.27	0.07	0.5	1.970	0.013	0.42	6.6	3.8	11.60	711	0.33	0.01	1.2	8.0
S050932		0.28	1.59	0.15	0.4	1.460	0.006	0.28	4.0	3.6	12.30	169	0.26	0.01	0.9	2.9
S050933		0.29	1.09	0.14	0.2	0.985	<0.005	0.18	3.1	2.2	12.35	222	0.19	0.01	0.5	2.3
S050934		0.25	1.09	0.17	0.3	0.494	0.006	0.16	3.2	2.2	12.05	232	0.35	0.01	0.6	2.1
S050935		0.28	1.46	0.14	0.3	0.581	0.009	0.24	4.0	3.2	12.45	197	0.54	0.01	0.8	2.6
S050936		1.43	5.27	0.11	0.9	6.61	0.030	0.96	13.8	9.0	0.97	2370	1.84	0.01	2.6	13.8
S050937		0.28	1.42	0.13	0.3	0.433	0.007	0.24	4.3	4.0	12.90	154	0.30	0.01	0.8	2.5
S050938		0.30	1.41	0.16	0.3	0.773	0.009	0.23	3.5	3.7	12.60	189	0.36	0.01	0.7	2.7
S050939		1.01	2.28	0.11	0.5	1.265	0.019	0.41	6.3	4.9	9.86	450	0.56	0.01	1.3	5.8
S050940		1.28	9.20	0.12	2.4	2.14	0.029	1.76	19.4	20.5	5.64	317	1.24	0.02	5.3	16.0

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
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Finalized Date: 31-OCT-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18232764

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl
	Units	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
	LOD	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.01	0.005	0.02
S050901		330	20.0	182.0	<0.002	2.04	0.93	16.0	1	2.9	94.2	1.00	0.10	14.60	0.417	2.52
S050902		660	15.2	178.0	<0.002	3.29	1.17	16.5	<1	2.8	116.0	0.94	0.07	14.95	0.414	3.66
S050903		450	14.8	129.0	<0.002	1.61	3.00	14.2	1	2.6	116.0	0.90	0.11	12.05	0.391	3.93
S050904		880	8.6	148.0	<0.002	1.59	0.49	12.0	<1	2.0	244	0.69	0.07	10.95	0.318	1.95
S050905		760	9.6	173.0	<0.002	1.86	0.58	14.8	<1	2.5	178.0	0.81	0.07	12.55	0.378	2.30
S050906		700	9.8	126.0	<0.002	0.36	0.58	10.1	<1	1.8	357	0.58	0.06	9.57	0.272	0.78
S050907		550	8.1	105.5	<0.002	0.23	0.45	8.7	1	1.6	366	0.48	<0.05	8.37	0.233	0.61
S050908		580	8.5	110.0	<0.002	0.23	0.42	8.8	1	1.6	370	0.50	<0.05	8.73	0.246	0.63
S050909		610	8.4	86.7	<0.002	0.22	0.43	7.2	1	1.3	564	0.40	<0.05	6.96	0.196	0.49
S050910		560	8.5	87.9	<0.002	0.35	0.37	7.6	1	1.3	573	0.43	<0.05	7.24	0.208	0.52
S050911		510	7.6	90.8	<0.002	0.50	0.37	7.3	1	1.3	526	0.41	0.05	7.09	0.202	0.52
S050912		500	8.3	66.9	0.002	0.57	0.40	5.6	1	1.0	549	0.34	<0.05	5.70	0.151	0.63
S050913		620	12.6	39.4	0.002	0.36	0.54	3.5	2	0.7	832	0.24	<0.05	4.42	0.102	1.51
S050914		670	9.8	92.3	<0.002	0.86	0.87	7.6	1	1.4	444	0.43	0.07	7.49	0.210	1.61
S050915		570	10.1	63.6	<0.002	1.23	13.75	5.4	1	1.0	146.0	0.32	<0.05	5.93	0.156	3.03
S050916		70	<0.5	1.5	<0.002	0.01	0.24	0.2	1	<0.2	77.8	<0.05	<0.05	0.12	0.005	0.03
S050917		620	12.3	41.1	<0.002	1.59	3.91	3.6	1	0.6	97.2	0.20	<0.05	3.62	0.098	3.08
S050918		680	15.3	34.1	<0.002	2.42	8.93	3.1	1	0.5	94.3	0.17	<0.05	3.01	0.082	3.13
S050919		460	1.5	0.5	<0.002	0.22	2.57	0.1	1	<0.2	59.5	<0.05	<0.05	0.10	<0.005	0.24
S050920		680	3.8	5.6	<0.002	0.56	8.58	0.6	1	<0.2	66.3	<0.05	<0.05	0.73	0.018	1.33
S050921		380	3.5	10.8	<0.002	0.30	2.49	1.2	1	0.2	86.9	0.08	<0.05	1.41	0.033	2.06
S050922		450	3.4	13.9	<0.002	0.40	2.79	1.6	1	0.3	107.5	0.11	<0.05	1.92	0.043	1.15
S050923		410	4.7	17.2	<0.002	0.61	1.33	1.9	1	0.3	99.8	0.12	<0.05	2.37	0.052	1.26
S050924		540	9.9	9.1	<0.002	0.44	6.19	1.1	1	0.2	112.0	0.06	<0.05	1.18	0.028	2.02
S050925		420	15.3	63.5	0.002	2.32	54.4	6.9	3	1.0	809	0.31	0.07	4.99	0.193	15.50
S050926		1070	20.4	27.7	<0.002	1.35	3.86	2.6	1	0.4	106.5	0.14	0.12	2.65	0.068	3.19
S050927		780	4.9	8.5	<0.002	0.23	1.08	0.9	1	0.2	98.0	0.06	<0.05	1.15	0.027	0.82
S050928		440	5.5	13.6	<0.002	0.36	0.54	1.5	1	0.3	116.5	0.09	<0.05	1.82	0.041	0.81
S050929		490	4.8	15.3	<0.002	0.32	0.49	1.7	1	0.4	138.5	0.10	<0.05	2.09	0.045	0.63
S050930		520	7.4	18.9	<0.002	0.81	1.81	2.2	1	0.4	160.0	0.13	<0.05	2.44	0.055	2.76
S050931		230	13.3	13.7	<0.002	0.85	2.83	1.6	1	0.3	111.5	0.08	<0.05	1.46	0.037	2.78
S050932		140	5.0	8.6	<0.002	0.22	0.53	1.0	1	0.2	92.4	0.06	<0.05	1.03	0.026	1.04
S050933		140	4.3	5.7	<0.002	0.22	0.68	0.7	1	<0.2	98.7	<0.05	<0.05	0.65	0.017	0.68
S050934		130	4.3	5.3	<0.002	0.22	1.54	0.7	1	<0.2	88.3	<0.05	<0.05	0.71	0.017	0.64
S050935		110	6.0	7.7	<0.002	0.30	2.55	1.0	1	0.2	85.5	0.06	<0.05	1.07	0.025	0.74
S050936		330	7.5	43.1	0.002	1.47	46.4	5.9	2	0.7	1060	0.19	0.05	3.52	0.091	24.0
S050937		90	5.9	7.5	<0.002	0.30	2.22	1.0	2	0.2	84.4	0.06	<0.05	1.02	0.023	0.62
S050938		160	6.0	7.3	<0.002	0.32	3.91	0.9	2	0.2	95.5	0.05	<0.05	0.92	0.022	0.82
S050939		280	5.4	13.3	<0.002	0.99	17.15	1.5	2	0.3	138.5	0.09	<0.05	1.64	0.038	1.78
S050940		630	12.7	60.4	0.002	0.82	5.32	5.3	2	1.1	271	0.37	<0.05	7.00	0.157	3.72

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Finalized Date: 31-OCT-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18232764

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	As-OG62
	Analyte	U	V	W	Y	Zn	Zr	As
	Units	ppm	ppm	ppm	ppm	ppm	ppm	%
	LOD	0.1	1	0.1	0.1	2	0.5	0.001
S050901		2.5	112	4.4	18.7	49	108.5	
S050902		2.8	110	4.9	26.2	54	112.0	
S050903		3.2	106	5.5	19.2	46	109.5	
S050904		4.5	96	1.7	22.7	33	103.0	
S050905		5.3	113	2.1	24.1	34	121.0	
S050906		5.7	81	1.1	17.9	30	92.2	
S050907		6.5	72	1.0	16.0	22	82.0	
S050908		6.7	76	1.0	16.1	23	83.1	
S050909		8.1	61	0.8	13.3	17	70.9	
S050910		8.8	62	0.8	14.0	49	71.1	
S050911		6.6	62	0.8	12.7	53	71.3	
S050912		9.0	47	0.7	11.5	27	59.2	
S050913		13.6	40	0.7	9.3	20	44.0	
S050914		6.8	66	2.9	14.2	113	74.7	
S050915		5.6	59	2.9	11.3	20	60.6	1.245
S050916		0.3	1	<0.1	2.4	5	2.1	
S050917		4.4	31	1.4	8.7	13	37.8	
S050918		4.6	27	1.3	8.1	23	31.8	
S050919		2.0	2	<0.1	3.1	15	1.1	
S050920		3.1	7	0.4	4.4	5	9.2	
S050921		6.3	12	0.7	4.2	4	20.1	
S050922		7.5	16	1.0	5.6	4	23.8	
S050923		7.3	20	1.0	6.4	6	32.2	
S050924		5.5	8	0.6	5.5	10	15.6	
S050925		4.2	56	8.8	16.8	54	55.9	
S050926		3.9	18	1.5	8.5	12	24.0	
S050927		5.2	10	0.5	5.0	5	15.3	
S050928		7.3	15	0.6	5.7	7	25.2	
S050929		8.9	15	0.7	6.8	8	31.5	
S050930		10.1	20	1.3	7.3	14	31.6	
S050931		8.2	13	1.0	5.2	35	18.7	
S050932		14.7	11	0.5	3.1	4	15.9	
S050933		12.0	7	0.4	2.6	11	10.0	
S050934		19.9	10	1.0	3.0	5	14.3	
S050935		13.0	12	1.0	2.8	4	11.5	
S050936		6.6	34	18.1	15.7	25	33.0	
S050937		12.0	10	0.7	2.9	3	10.0	
S050938		14.0	9	0.5	2.8	7	8.6	
S050939		10.9	18	0.9	4.2	19	19.7	1.595
S050940		12.8	63	2.1	11.9	20	88.8	

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Project: Nadaleen

Page: Appendix 1
Total # Appendix Pages: 1
Finalized Date: 31-OCT-2018
Account: RCM

CERTIFICATE OF ANALYSIS WH18232764

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Applies to Method: REE's may not be totally soluble in this method.
ME-MS61

LABORATORY ADDRESSES

Applies to Method: Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.

CRU-31	CRU-QC	LOG-21	LOG-21d
LOG-23	PUL-31	PUL-31d	PUL-QC
SPL-21	SPL-21d	WEI-21	

Applies to Method: Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

As-OG62	Au-AA25	Hg-MS42	ME-MS61
ME-OG62			

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To: **ATAC RESOURCES LTD.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 25-OCT-2018
Account: RCM

CERTIFICATE WH18232759

Project: Nadaleen

P.O. No.: N18-068

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 19-SEP-2018.

The following have access to data associated with this certificate:

ANDREW CARNE	JULIA LANE	

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
LOG-23	Pulp Login - Rcvd with Barcode
LOG-21d	Sample logging - ClientBarCode Dup
SPL-21d	Split sample - duplicate
PUL-31d	Pulverize Split - duplicate

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid ICP-MS	
Hg-MS42	Trace Hg by ICPMS	ICP-MS

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:

Colin Ramshaw, Vancouver Laboratory Manager

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Finalized Date: 25-OCT-2018
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Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18232759

Sample Description	Method	WEI-21	Au-AA25	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Recvd Wt.	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu
	Units	kg	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.02	0.01	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2
S049451		12.31	<0.01	0.05	3.64	17.7	200	1.01	0.13	18.40	0.09	40.5	6.0	29	16.45	15.2
S049452		11.83	<0.01	0.06	3.53	18.8	210	0.94	0.13	18.40	0.07	39.1	5.4	27	11.15	14.4
S049453		10.88	<0.01	0.07	3.99	55.3	230	1.15	0.16	17.20	0.04	43.7	8.8	30	12.00	15.0
S049454		11.56	<0.01	0.07	4.74	52.6	260	1.37	0.19	15.65	0.04	50.3	10.9	34	19.25	22.1
S049455		12.12	<0.01	0.08	5.76	26.5	280	1.64	0.21	13.25	0.05	59.3	11.5	40	23.5	18.1
S049456		5.70	<0.01	0.06	5.96	14.8	300	1.66	0.26	10.95	0.04	65.5	11.5	39	25.7	19.2
S049457		5.80	<0.01	0.08	6.01	13.8	350	1.60	0.26	11.00	0.03	65.5	13.9	41	25.5	16.9
S049458		12.11	<0.01	0.02	9.47	6.8	410	2.78	0.45	1.27	<0.02	64.3	13.0	71	43.7	35.6
S049459		11.44	<0.01	0.03	9.88	8.7	420	2.77	0.47	1.34	<0.02	85.0	14.1	69	47.8	40.1
S049460		11.75	<0.01	0.09	10.20	17.3	360	2.84	0.46	0.77	0.02	76.3	18.7	74	48.8	47.7
S049461		12.09	<0.01	0.08	8.10	18.6	350	2.39	0.38	4.94	<0.02	69.9	16.7	67	38.6	38.7
S049462		11.39	<0.01	0.05	7.73	10.5	310	2.14	0.37	6.89	<0.02	70.5	13.5	58	38.8	39.7
S050941		11.41	0.01	0.07	2.03	2540	100	0.85	0.06	17.05	0.03	24.7	3.7	20	8.07	11.8
S050942		11.19	0.01	0.10	0.85	4820	40	0.34	0.03	19.70	0.05	12.20	1.9	8	2.35	8.1
S050943		10.82	0.02	0.09	1.54	928	60	0.67	0.04	18.05	0.12	20.3	2.9	16	4.61	11.4
S050944		8.70	0.03	0.04	1.00	58.1	170	0.45	0.03	31.9	0.18	13.30	1.8	11	3.39	6.9
S050945		9.02	<0.01	0.07	1.25	26.4	120	0.48	0.04	28.7	0.16	18.55	2.3	15	5.64	8.6
S050946		11.77	<0.01	0.07	2.61	39.8	200	0.86	0.06	24.5	0.10	30.8	4.6	24	19.10	12.6
S050947		11.03	<0.01	0.08	1.09	28.9	90	0.40	0.03	30.4	0.26	15.65	2.2	12	4.52	4.9
S050948		11.17	0.02	0.04	2.56	1795	160	0.84	0.06	15.20	0.10	32.4	3.4	25	8.53	10.0
S050949		10.04	<0.01	0.06	1.96	51.9	130	0.79	0.05	21.8	0.26	26.7	3.4	20	7.69	8.4
S050950		<0.02	<0.01	0.06	1.94	53.1	130	0.79	0.06	22.0	0.21	26.5	3.4	18	7.58	8.1
S050951		11.47	<0.01	0.07	3.11	9.9	380	0.99	0.08	13.85	0.11	38.9	5.0	33	20.2	14.2
S050952		11.93	<0.01	0.03	1.84	13.6	570	0.63	0.05	26.4	0.12	24.5	3.1	19	9.68	10.2
S050953		10.91	0.01	0.05	1.81	10.9	190	0.58	0.05	27.0	0.15	23.1	2.9	19	9.77	11.0
S050954		10.98	0.01	0.07	2.80	5.9	200	0.94	0.07	20.9	0.10	35.0	4.9	32	19.25	15.9
S050955		11.93	<0.01	0.05	1.91	45.2	150	0.66	0.06	26.2	0.08	24.7	3.5	20	9.53	12.2
S050956		0.26	1.08	1.35	1.52	816	200	0.38	0.12	28.1	0.64	19.85	4.2	28	3.37	44.4
S050957		11.22	0.03	0.06	2.41	74.8	130	1.01	0.07	25.3	0.08	27.5	4.2	25	12.75	11.4
S050958		12.22	<0.01	0.08	3.85	11.8	240	1.19	0.09	16.25	0.05	46.8	6.6	38	26.2	17.7
S050959		12.46	<0.01	0.09	2.83	13.6	200	1.01	0.06	22.3	0.04	34.8	4.8	31	16.55	12.8
S050960		11.55	0.01	0.12	4.72	9.2	320	1.70	0.10	9.56	0.04	54.0	7.8	50	31.5	22.7
S050961		0.27	2.73	0.67	1.89	>10000	150	0.57	2.81	26.9	0.18	28.6	4.8	27	6.18	15.8
S050962		11.69	<0.01	0.09	4.45	37.5	340	1.38	0.13	10.15	0.05	51.5	7.1	47	23.1	24.9
S050963		11.31	<0.01	0.06	3.96	25.2	250	1.27	0.11	11.95	0.04	48.1	5.4	44	20.4	20.5
S050964		12.08	<0.01	0.06	1.20	40.0	90	0.48	0.04	19.40	<0.02	17.85	2.7	12	5.50	7.0
S050965		12.64	0.08	0.09	1.20	8630	300	0.52	0.04	20.4	0.02	16.50	2.5	12	5.77	8.5
S050966		3.32	<0.01	<0.01	0.10	19.2	20	0.11	0.01	34.6	0.03	1.34	0.7	1	0.09	2.1
S050967		10.68	0.03	0.06	1.96	7460	90	0.71	0.05	17.50	0.03	22.2	3.4	21	6.67	11.0
S050968		11.54	<0.01	0.05	2.62	81.1	160	1.02	0.06	12.90	0.08	31.5	3.8	28	10.40	11.6

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 25-OCT-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18232759

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Hg-MS42	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni
	Units	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2
S049451		1.85	9.26	0.08	1.8	0.063	0.036	1.95	21.3	10.0	4.19	399	0.37	0.03	5.4	13.2
S049452		2.18	8.89	0.07	1.8	0.066	0.032	1.89	20.1	9.0	4.56	463	0.39	0.03	5.2	12.8
S049453		2.06	10.15	0.07	1.9	0.075	0.034	2.11	23.5	9.5	3.63	392	0.36	0.03	5.7	19.5
S049454		2.62	11.90	0.09	2.2	0.056	0.044	2.49	27.4	10.8	3.75	484	0.46	0.04	6.6	24.3
S049455		3.00	14.40	0.10	2.5	0.040	0.057	3.02	31.4	13.1	3.23	569	0.27	0.04	7.9	20.6
S049456		3.74	15.05	0.10	2.4	0.037	0.059	3.17	34.0	13.4	2.88	820	0.23	0.04	8.0	22.5
S049457		3.60	15.20	0.09	2.5	0.038	0.058	3.21	34.5	13.3	2.78	751	0.27	0.04	8.1	23.4
S049458		3.38	25.8	0.15	3.2	0.034	0.073	5.38	31.0	20.9	1.17	287	0.11	0.05	12.6	40.0
S049459		4.03	26.4	0.18	3.1	0.025	0.081	5.39	43.3	21.9	1.22	438	0.21	0.04	12.6	41.7
S049460		4.17	26.0	0.15	2.8	0.041	0.070	5.53	38.3	18.2	1.06	530	0.98	0.05	12.8	46.6
S049461		3.82	22.3	0.16	2.7	0.050	0.067	4.64	34.7	21.0	1.28	652	0.40	0.05	11.9	38.5
S049462		3.83	21.1	0.15	2.4	0.027	0.063	4.45	36.5	24.2	1.26	619	0.32	0.04	10.9	34.0
S050941		0.98	5.24	0.05	1.2	0.586	0.018	1.09	13.2	12.2	9.01	303	0.57	0.02	3.4	10.0
S050942		0.47	2.21	0.10	0.5	0.460	0.011	0.43	7.4	4.7	11.45	295	0.47	0.01	1.5	4.3
S050943		0.83	3.95	0.11	1.2	0.760	0.014	0.80	10.8	8.7	10.30	203	0.64	0.02	2.7	7.5
S050944		0.39	2.58	0.06	0.8	0.247	0.012	0.56	7.5	5.1	1.56	97	0.55	0.01	1.7	3.6
S050945		0.51	3.16	0.06	1.1	0.097	0.013	0.73	9.8	7.0	1.36	107	0.68	0.01	2.2	5.3
S050946		1.03	6.66	0.08	1.1	0.206	0.020	1.51	16.0	15.8	1.83	165	0.47	0.02	3.8	12.4
S050947		0.46	2.79	0.06	0.9	0.271	0.012	0.62	8.4	4.7	1.53	150	0.37	0.01	1.8	4.5
S050948		1.13	6.30	0.07	2.6	1.030	0.018	1.47	16.9	10.1	4.38	224	0.33	0.02	4.6	7.9
S050949		1.03	5.05	0.06	1.7	0.370	0.016	1.16	13.9	8.5	4.57	195	0.72	0.02	3.4	7.9
S050950		1.02	5.00	0.06	1.6	0.361	0.017	1.15	13.8	8.7	4.52	195	0.71	0.02	3.4	8.2
S050951		1.43	7.81	0.07	2.4	0.107	0.025	2.05	20.1	16.1	5.13	206	0.72	0.04	5.3	12.8
S050952		0.75	4.66	0.05	1.2	0.033	0.019	1.18	12.7	10.5	1.87	149	0.18	0.02	3.2	6.7
S050953		0.80	4.79	0.07	1.2	0.043	0.014	1.13	12.1	11.6	2.15	154	0.38	0.02	3.0	6.8
S050954		1.08	7.00	0.09	1.5	0.216	0.022	1.77	18.3	18.6	2.57	170	0.55	0.03	4.6	12.4
S050955		1.17	4.76	0.08	0.9	0.372	0.016	1.13	13.1	10.4	2.64	196	0.40	0.02	2.9	9.4
S050956		1.15	3.85	0.06	0.7	2.25	0.024	0.66	9.5	6.3	1.24	4730	1.15	0.10	2.1	13.0
S050957		1.22	6.08	0.07	1.1	0.480	0.017	1.44	14.7	18.5	2.25	223	0.48	0.02	3.5	9.7
S050958		1.71	9.75	0.09	2.2	0.262	0.030	2.47	24.2	30.3	3.79	224	0.72	0.03	6.6	16.4
S050959		1.38	7.17	0.07	1.7	0.151	0.027	1.82	18.0	21.0	2.74	214	0.82	0.03	4.7	12.5
S050960		2.13	12.15	0.10	2.7	0.216	0.039	3.10	27.5	41.3	4.13	247	1.17	0.04	7.6	22.2
S050961		1.41	4.93	0.07	0.9	6.95	0.028	0.95	14.1	8.5	0.95	2350	1.69	0.01	2.7	13.2
S050962		1.58	11.35	0.10	2.9	0.185	0.037	2.83	26.4	26.9	5.59	266	1.16	0.04	7.6	15.8
S050963		1.32	10.20	0.11	2.6	0.195	0.032	2.46	24.4	23.0	6.52	273	0.73	0.03	6.9	13.0
S050964		0.83	3.21	0.08	0.7	0.398	0.010	0.68	9.5	7.3	10.35	373	0.50	0.01	2.1	6.1
S050965		0.93	3.21	0.07	0.7	0.979	0.013	0.65	9.2	6.9	10.75	558	0.45	0.02	2.1	5.8
S050966		0.16	0.37	0.06	0.1	<0.005	0.005	0.03	1.4	0.9	2.12	143	<0.05	0.05	0.2	<0.2
S050967		1.15	5.06	0.09	1.3	0.702	0.018	1.09	11.3	12.3	9.74	521	0.50	0.02	3.4	7.9
S050968		1.20	6.56	0.09	2.1	0.479	0.025	1.59	15.9	17.1	6.89	232	0.52	0.03	4.5	9.1

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Project: Nadaleen

Finalized Date: 25-OCT-2018
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CERTIFICATE OF ANALYSIS WH18232759

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl
	Units	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
	LOD	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.01	0.005	0.02
S049451		680	9.6	75.0	<0.002	0.52	0.37	6.4	1	1.2	513	0.38	<0.05	6.59	0.176	0.57
S049452		560	8.9	70.4	<0.002	0.50	0.34	6.1	1	1.1	448	0.36	<0.05	6.56	0.171	0.49
S049453		660	9.1	81.7	<0.002	0.36	0.38	6.9	1	1.3	490	0.40	<0.05	6.85	0.189	0.57
S049454		600	8.6	96.6	<0.002	0.18	0.38	8.4	1	1.5	448	0.47	<0.05	7.91	0.226	0.57
S049455		590	10.4	121.5	<0.002	0.14	0.47	10.2	1	1.8	419	0.55	0.05	9.35	0.273	0.68
S049456		1060	10.3	128.0	<0.002	0.23	0.42	10.6	1	1.8	325	0.56	0.06	9.89	0.274	0.67
S049457		880	11.0	127.5	<0.002	0.31	0.49	10.5	1	1.8	333	0.57	0.07	10.20	0.281	0.71
S049458		290	12.8	151.5	<0.002	0.11	0.38	15.6	1	2.7	102.5	0.89	0.10	11.55	0.414	0.95
S049459		370	17.9	172.5	<0.002	0.18	0.47	16.2	1	2.7	117.5	0.90	0.09	14.10	0.420	0.95
S049460		490	22.6	169.5	<0.002	0.43	0.93	15.7	1	2.6	125.0	0.93	0.14	13.40	0.404	0.99
S049461		500	20.9	115.0	<0.002	0.70	0.57	13.5	<1	2.3	175.5	0.86	0.09	10.75	0.374	0.89
S049462		460	17.6	115.0	<0.002	0.27	0.54	12.2	1	2.2	212	0.78	0.08	10.40	0.339	0.78
S050941		350	9.2	36.7	0.002	0.57	4.04	3.3	1	0.6	141.5	0.25	<0.05	4.04	0.097	0.99
S050942		200	5.8	14.1	0.002	0.56	5.62	1.5	1	0.3	99.1	0.10	<0.05	1.74	0.041	0.85
S050943		300	7.9	26.1	<0.002	0.55	2.06	2.7	1	0.5	115.5	0.19	<0.05	3.26	0.077	1.43
S050944		200	4.5	18.3	0.002	0.17	0.25	1.8	1	0.4	819	0.12	<0.05	2.22	0.051	0.41
S050945		270	6.0	24.5	0.002	0.25	0.25	2.2	2	0.4	707	0.16	<0.05	2.77	0.063	0.23
S050946		390	6.9	54.4	<0.002	0.48	0.32	4.3	1	0.7	654	0.27	<0.05	4.84	0.108	0.52
S050947		280	4.5	20.2	0.002	0.20	0.34	1.8	1	0.3	1005	0.13	<0.05	2.30	0.052	0.48
S050948		370	7.1	50.7	<0.002	0.43	2.39	4.0	1	0.8	247	0.32	<0.05	5.76	0.130	1.00
S050949		260	6.8	39.9	0.002	0.26	0.50	3.1	2	0.6	444	0.24	<0.05	4.38	0.097	0.66
S050950		270	6.8	40.0	<0.002	0.25	0.48	3.2	2	0.6	444	0.25	<0.05	4.41	0.096	0.66
S050951		440	9.6	68.5	<0.002	0.39	0.30	5.0	2	1.0	281	0.39	<0.05	6.94	0.157	0.38
S050952		280	4.4	41.9	<0.002	0.09	0.23	3.1	2	0.6	727	0.22	<0.05	4.00	0.090	0.23
S050953		340	4.3	41.0	<0.002	0.11	0.22	3.0	1	0.6	924	0.22	<0.05	3.75	0.086	0.22
S050954		600	5.7	62.3	<0.002	0.24	0.26	4.5	2	0.9	601	0.32	<0.05	5.52	0.132	0.38
S050955		310	5.5	40.2	0.002	0.38	0.47	3.1	1	0.6	565	0.22	<0.05	3.70	0.086	0.57
S050956		390	59.3	27.7	0.002	0.69	8.10	5.7	1	0.7	1155	0.15	0.05	2.44	0.080	5.79
S050957		320	6.0	52.1	0.002	0.48	0.96	3.8	1	0.7	473	0.26	<0.05	4.49	0.102	1.13
S050958		480	9.2	87.7	0.002	0.51	0.33	6.2	1	1.3	401	0.47	<0.05	8.21	0.187	0.48
S050959		390	13.0	62.8	<0.002	0.50	0.36	4.5	2	0.9	1145	0.34	<0.05	6.07	0.137	0.46
S050960		580	14.7	109.0	<0.002	0.82	0.50	7.4	2	1.5	259	0.56	<0.05	9.87	0.224	0.75
S050961		340	8.3	41.3	0.002	1.46	45.1	5.7	2	0.7	1045	0.19	0.05	3.37	0.091	23.4
S050962		520	9.4	94.6	0.002	0.49	0.46	7.0	2	1.5	177.0	0.54	<0.05	9.78	0.220	0.72
S050963		560	8.5	81.0	<0.002	0.45	0.39	6.3	1	1.3	168.0	0.49	<0.05	8.88	0.199	0.72
S050964		190	6.8	22.1	<0.002	0.29	0.51	2.1	1	0.4	151.5	0.16	<0.05	2.71	0.060	0.70
S050965		180	7.1	21.5	<0.002	0.69	18.55	2.1	1	0.4	179.5	0.15	<0.05	2.71	0.059	1.71
S050966		50	<0.5	0.9	<0.002	0.02	0.18	0.2	1	<0.2	81.0	<0.05	<0.05	0.12	0.005	0.02
S050967		270	8.4	38.2	<0.002	0.71	19.95	3.2	2	0.6	133.5	0.24	<0.05	4.19	0.096	1.16
S050968		460	10.1	53.1	<0.002	0.57	0.91	4.0	1	0.8	132.0	0.32	<0.05	5.88	0.128	0.86

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 25-OCT-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18232759

Sample Description	Method Analyte Units LOD	ME-MS61 U ppm 0.1	ME-MS61 V ppm 1	ME-MS61 W ppm 0.1	ME-MS61 Y ppm 0.1	ME-MS61 Zn ppm 2	ME-MS61 Zr ppm 0.5
S049451		6.9	55	0.7	13.9	39	63.3
S049452		6.9	55	0.7	12.8	47	61.8
S049453		7.7	59	0.8	14.2	39	66.2
S049454		7.2	69	0.9	15.9	21	74.8
S049455		8.2	85	1.1	19.2	26	85.9
S049456		6.1	82	1.1	23.1	31	82.2
S049457		6.2	82	1.1	22.4	29	83.5
S049458		2.2	114	1.7	17.5	45	105.0
S049459		2.9	109	1.8	21.6	64	102.5
S049460		2.6	109	1.7	19.0	56	99.3
S049461		3.3	100	1.5	20.9	56	101.5
S049462		2.6	88	1.4	20.3	55	89.3
S050941		10.0	37	0.9	7.9	7	46.8
S050942		12.5	22	0.8	4.6	4	19.2
S050943		12.3	31	1.3	7.1	42	45.8
S050944		14.3	21	0.4	4.9	29	32.9
S050945		10.3	27	0.2	6.2	24	40.0
S050946		6.9	47	0.5	8.2	20	40.9
S050947		8.3	21	0.3	5.5	22	36.2
S050948		5.7	40	1.5	10.3	19	99.3
S050949		10.0	33	0.8	8.2	48	65.3
S050950		10.1	34	0.8	8.2	42	64.8
S050951		5.9	50	0.6	12.0	36	95.4
S050952		7.7	31	0.3	7.6	27	48.9
S050953		7.3	32	0.4	7.3	28	42.3
S050954		8.0	49	0.5	10.0	30	56.7
S050955		11.4	33	0.5	7.5	50	31.6
S050956		3.9	26	5.8	14.2	125	25.6
S050957		11.5	47	0.7	7.9	42	43.7
S050958		6.8	70	0.7	13.1	24	83.1
S050959		10.2	51	0.5	9.9	18	66.0
S050960		4.2	82	0.8	14.9	25	98.4
S050961		6.3	34	19.3	15.3	27	32.9
S050962		3.9	76	0.9	14.8	17	101.5
S050963		7.2	62	0.8	14.1	15	92.2
S050964		14.7	23	0.6	5.5	4	26.9
S050965		14.4	23	0.9	5.1	5	25.1
S050966		0.3	1	0.1	2.5	14	2.0
S050967		11.2	32	1.5	6.9	7	50.4
S050968		6.8	40	1.4	10.3	36	80.3

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To: **ATAC RESOURCES LTD.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Project: Nadaleen

Finalized Date: 25-OCT-2018
Account: RCM

CERTIFICATE OF ANALYSIS WH18232759

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

REE's may not be totally soluble in this method.
Applies to Method: ME-MS61

LABORATORY ADDRESSES

Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.

Applies to Method:				
	CRU-31	CRU-QC	LOG-21	LOG-21d
	LOG-23	PUL-31	PUL-31d	PUL-QC
	SPL-21	SPL-21d	WEI-21	

Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Applies to Method:			
	Au-AA25	Hg-MS42	ME-MS61

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Account: RCM

CERTIFICATE WH18232752

Project: Nadaleen

P.O. No.: N18-069

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 19-SEP-2018.

The following have access to data associated with this certificate:

ANDREW CARNE	JULIA LANE	

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
LOG-23	Pulp Login - Rcvd with Barcode
LOG-21d	Sample logging - ClientBarCode Dup
SPL-21d	Split sample - duplicate
PUL-31d	Pulverize Split - duplicate

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid ICP-MS	
Hg-MS42	Trace Hg by ICPMS	ICP-MS

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:

Colin Ramshaw, Vancouver Laboratory Manager

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Finalized Date: 25-OCT-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18232752

Sample Description	Method	WEI-21	Au-AA25	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Recvd Wt.	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu
	Units	kg	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.02	0.01	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2
R613241		10.87	0.01	0.07	3.71	21.6	200	1.03	0.14	19.40	0.08	39.4	8.0	30	10.25	17.6
R613242		11.85	0.01	0.08	3.63	24.3	190	0.96	0.15	19.05	0.11	39.2	7.1	29	10.15	21.2
R613243		11.83	0.01	0.08	3.59	26.9	170	0.96	0.15	19.75	0.10	39.1	7.1	29	9.80	17.4
R613244		10.83	0.01	0.07	3.36	94.5	210	0.95	0.13	21.4	0.08	37.1	6.3	27	9.85	16.4
R613245		11.90	0.01	0.06	2.52	33.4	150	0.76	0.10	19.35	0.09	31.5	5.0	19	7.29	17.5
R613246		12.28	0.01	0.06	3.05	41.6	170	0.93	0.12	20.9	0.07	34.2	5.2	24	9.62	14.3
R613247		12.68	0.02	0.09	2.52	18.4	140	0.79	0.10	23.6	0.07	28.3	4.8	22	7.63	11.4
R613248		7.01	0.01	<0.01	0.08	<0.2	40	0.07	0.01	35.0	<0.02	1.28	0.4	1	0.08	1.1
R613249		11.72	0.01	0.05	2.11	36.9	110	0.82	0.08	20.3	0.08	27.8	3.4	17	6.18	19.0
R613250		11.99	0.01	0.03	1.55	50.5	100	0.69	0.06	28.1	0.06	19.10	3.0	13	4.30	8.1
R613251		10.06	0.01	0.04	7.89	115.5	350	2.75	0.36	1.72	0.05	87.1	8.1	67	44.1	44.7
R613252		7.86	0.01	0.06	7.98	54.4	350	2.68	0.35	2.22	0.06	85.1	10.5	68	40.9	51.9
R613253		8.98	<0.01	0.07	7.93	85.0	360	3.07	0.30	1.80	0.03	87.3	11.8	69	40.8	48.6
R613254		<0.02	0.01	0.06	8.21	88.3	350	3.59	0.33	1.85	0.05	86.5	13.7	66	42.3	54.7
R613255		11.22	<0.01	0.05	8.77	30.1	370	3.23	0.38	1.60	0.04	88.6	20.9	67	63.5	54.8
R613256		11.65	0.02	0.08	7.61	39.3	300	2.68	0.33	5.79	0.11	86.8	16.5	58	54.2	41.3
R613257		14.79	<0.01	0.05	2.50	11.5	120	0.84	0.11	22.8	0.13	33.7	6.0	19	13.90	11.8
R613258		8.03	0.01	0.06	4.20	11.8	180	1.22	0.16	14.95	0.14	46.9	5.9	29	20.3	18.1
R613259		11.52	0.01	0.04	4.47	13.4	180	1.27	0.18	14.90	0.12	48.7	9.7	31	23.9	16.9
R613260		11.99	0.04	0.05	2.75	11.3	180	0.81	0.10	18.50	0.07	33.1	8.0	20	11.20	16.4
R613261		12.43	0.01	0.05	2.72	10.9	220	0.86	0.11	20.6	0.08	33.5	4.7	20	13.45	12.4
R613262		10.89	0.01	0.10	2.41	7.7	130	0.81	0.09	19.70	0.07	29.4	5.1	19	11.20	11.2
R613263		13.19	<0.01	0.08	3.43	16.3	350	1.00	0.14	17.85	0.10	39.9	5.8	26	16.40	13.6
R613264		8.77	<0.01	0.08	3.27	14.2	170	0.96	0.13	18.85	0.11	36.5	8.3	24	15.20	13.0
R613265		0.26	1.06	1.41	1.54	856	200	0.42	0.12	28.6	0.74	22.1	4.7	25	3.74	47.8
R613266		11.96	0.01	0.07	2.75	16.5	200	0.73	0.11	22.2	0.06	33.2	8.8	21	11.50	12.0
R613267		12.46	0.01	0.07	3.07	24.4	160	0.94	0.12	19.75	0.07	35.2	8.2	22	14.80	14.5
R613268		12.42	0.05	0.10	5.32	28.9	230	1.65	0.20	12.45	0.05	60.5	16.4	38	31.4	24.6
R613269		13.85	0.01	0.02	8.18	17.3	320	2.73	0.31	2.99	0.03	75.5	16.5	67	52.2	35.6
R613270		11.88	0.01	0.04	8.49	34.6	320	2.70	0.36	3.06	0.03	81.8	23.7	68	57.8	35.7
R613271		7.26	0.01	0.01	8.51	28.3	350	2.80	0.31	3.06	0.05	83.3	12.7	69	57.5	78.8
R613272		6.30	0.01	<0.01	8.27	27.3	340	2.69	0.29	3.06	0.05	73.3	12.6	68	53.4	82.6
R613273		11.51	0.01	0.01	8.66	34.9	470	2.83	0.36	2.45	0.03	79.6	13.2	70	51.2	29.8
R613274		10.00	0.01	0.02	8.67	17.9	840	3.15	0.32	2.35	0.03	68.7	10.7	73	52.7	14.5
R613275		12.49	0.02	<0.01	8.92	17.7	450	3.05	0.32	2.10	0.03	79.8	10.4	74	56.6	16.3
R613276		16.29	0.01	0.01	8.97	18.1	400	2.91	0.37	1.89	0.02	79.3	10.3	71	55.2	24.6
R613277		12.43	0.01	0.06	3.35	106.5	230	1.02	0.13	21.6	0.09	37.2	5.9	24	8.57	15.3
R613278		0.26	1.42	0.94	3.06	>10000	200	0.62	0.11	17.75	0.41	37.4	8.1	38	9.38	27.6
R613279		12.11	0.01	0.04	1.67	93.7	110	0.53	0.06	26.7	0.06	19.70	3.9	14	4.22	7.7
R613280		8.82	<0.01	0.06	2.87	59.8	160	0.98	0.11	21.8	0.08	34.3	5.5	21	8.13	12.7

***** See Appendix Page for comments regarding this certificate *****

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CERTIFICATE OF ANALYSIS WH18232752

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Hg-MS42	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni
	Units	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2
R613241		1.71	9.99	0.13	1.8	0.185	0.034	1.82	21.4	7.3	3.43	810	0.43	0.04	5.8	12.6
R613242		1.59	9.89	0.17	1.9	0.361	0.034	1.80	21.6	7.3	3.62	601	0.45	0.04	5.7	13.3
R613243		1.63	9.82	0.19	1.8	0.236	0.032	1.79	22.1	7.5	3.60	464	0.41	0.04	5.7	14.9
R613244		1.77	9.39	0.17	1.8	0.188	0.028	1.67	20.5	7.7	2.77	396	0.48	0.03	5.3	14.2
R613245		1.85	6.80	0.16	1.5	0.077	0.023	1.25	16.7	7.4	5.71	508	0.37	0.03	4.1	10.0
R613246		1.34	8.31	0.21	1.6	0.204	0.030	1.50	18.6	8.6	3.58	318	0.46	0.03	4.8	11.7
R613247		1.36	6.93	0.20	1.4	0.228	0.023	1.26	15.3	7.3	2.72	295	0.56	0.03	4.0	10.8
R613248		0.12	0.31	0.22	<0.1	<0.005	<0.005	0.02	1.4	1.0	2.13	135	0.06	0.03	0.1	1.0
R613249		1.57	5.62	0.16	1.1	0.971	0.020	1.05	15.3	7.3	6.03	410	0.29	0.03	3.4	7.3
R613250		0.89	4.25	0.17	0.8	0.691	0.016	0.76	9.5	5.2	2.98	326	0.25	0.03	2.4	6.4
R613251		1.90	23.1	0.27	3.9	0.457	0.077	4.39	45.3	29.8	1.38	129	0.16	0.06	13.6	21.6
R613252		1.83	22.4	0.26	4.0	0.566	0.083	4.26	42.9	27.2	1.54	148	0.35	0.07	13.1	21.3
R613253		1.94	23.7	0.21	3.9	1.470	0.082	4.33	44.9	31.8	1.35	118	0.38	0.06	13.3	23.2
R613254		1.96	25.2	0.16	4.1	1.445	0.089	4.30	42.6	35.0	1.31	117	0.35	0.06	14.4	28.6
R613255		2.31	26.1	0.17	4.2	0.108	0.087	4.59	44.8	42.9	1.31	138	0.50	0.07	14.9	36.5
R613256		2.77	22.0	0.20	3.6	0.107	0.076	3.90	45.4	35.9	2.08	209	0.51	0.06	12.2	38.3
R613257		1.57	6.96	0.08	1.3	0.113	0.031	1.27	16.9	9.5	3.78	451	0.20	0.03	4.0	13.0
R613258		1.78	11.40	0.09	2.2	0.104	0.037	2.09	25.1	12.4	4.85	397	0.39	0.04	6.5	12.5
R613259		3.08	11.80	0.09	1.9	0.111	0.039	2.22	27.2	14.3	4.53	461	0.27	0.03	6.5	17.8
R613260		3.23	7.35	0.07	1.4	0.078	0.029	1.39	17.6	7.8	5.73	573	0.37	0.03	4.2	14.6
R613261		1.64	7.21	0.07	1.4	0.083	0.029	1.40	17.8	7.9	5.09	431	0.33	0.03	4.2	10.8
R613262		2.07	6.32	0.07	1.6	0.092	0.022	1.23	15.2	7.7	5.83	512	0.65	0.03	3.8	11.6
R613263		1.83	9.13	0.07	1.9	0.149	0.032	1.74	21.2	9.9	4.99	390	0.56	0.03	5.2	12.9
R613264		2.58	8.63	0.06	1.6	0.094	0.031	1.65	19.5	8.9	4.22	478	0.55	0.03	4.9	15.4
R613265		1.18	4.25	0.06	0.8	2.15	0.028	0.68	10.7	6.6	1.26	4760	1.26	0.10	2.2	14.8
R613266		3.23	7.14	0.06	1.3	0.055	0.026	1.39	17.5	7.0	4.27	633	0.28	0.03	4.2	15.2
R613267		2.27	8.15	0.07	1.6	0.056	0.026	1.56	18.5	8.1	5.94	520	0.36	0.03	4.5	14.3
R613268		3.07	14.15	0.12	2.8	0.065	0.054	2.69	32.0	15.2	3.57	473	0.53	0.04	8.2	25.4
R613269		2.92	23.3	0.15	3.9	0.053	0.081	4.35	38.0	39.4	1.57	426	0.46	0.06	14.1	43.8
R613270		3.39	24.1	0.18	4.0	0.065	0.086	4.51	41.3	41.8	1.60	444	0.91	0.05	14.2	50.1
R613271		3.49	24.6	0.20	4.0	0.017	0.093	4.55	42.6	48.0	1.65	428	0.18	0.05	14.5	33.9
R613272		3.48	23.5	0.17	3.7	0.014	0.084	4.46	36.0	46.0	1.62	432	0.18	0.05	13.6	33.3
R613273		3.50	24.7	0.18	3.8	0.030	0.088	4.58	39.9	46.4	1.46	362	0.13	0.05	13.7	40.0
R613274		4.12	25.4	0.17	3.9	0.011	0.084	4.70	32.6	49.5	1.43	365	0.16	0.05	14.3	38.0
R613275		4.73	25.2	0.16	3.7	0.043	0.084	4.66	40.4	52.6	1.40	348	0.17	0.05	14.0	39.0
R613276		3.92	24.7	0.18	3.9	0.025	0.085	4.71	39.2	38.1	1.29	342	0.16	0.06	14.0	37.3
R613277		1.45	8.62	0.09	1.6	0.686	0.034	1.61	20.3	8.5	3.07	412	0.42	0.03	4.9	13.7
R613278		2.14	8.15	0.08	1.6	4.72	0.038	1.42	18.7	11.4	2.23	1310	1.37	0.10	4.6	19.2
R613279		1.73	4.26	<0.05	0.9	0.277	0.016	0.81	9.9	4.4	4.10	396	0.38	0.02	2.4	8.4
R613280		1.22	7.28	0.06	1.4	0.500	0.032	1.36	17.5	9.4	4.36	367	0.27	0.03	4.1	11.5

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 25-OCT-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18232752

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl
	Units	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
	LOD	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.01	0.005	0.02
R613241		530	11.5	77.3	<0.002	0.16	0.46	6.9	1	1.2	551	0.42	<0.05	6.81	0.182	0.58
R613242		570	13.4	76.0	<0.002	0.21	0.43	6.8	1	1.2	512	0.41	0.06	6.59	0.180	0.65
R613243		550	23.6	73.8	<0.002	0.55	0.42	6.8	<1	1.1	552	0.41	<0.05	6.62	0.177	0.66
R613244		540	22.9	69.5	<0.002	0.74	0.56	6.4	1	1.2	581	0.38	<0.05	6.22	0.166	0.81
R613245		500	19.6	49.0	<0.002	0.29	0.37	4.7	1	0.8	404	0.31	<0.05	5.00	0.124	0.59
R613246		500	12.8	62.1	<0.002	0.40	0.37	5.8	<1	1.0	507	0.33	0.06	5.53	0.149	0.59
R613247		450	14.2	52.4	<0.002	0.47	0.36	4.6	<1	0.9	834	0.27	<0.05	4.98	0.127	0.65
R613248		50	0.5	0.7	<0.002	<0.01	0.11	0.2	<1	<0.2	80.8	<0.05	<0.05	0.09	0.006	0.02
R613249		390	7.2	41.7	<0.002	0.33	0.34	3.8	<1	0.7	464	0.24	<0.05	4.23	0.103	0.87
R613250		670	8.8	31.0	<0.002	0.34	0.41	2.9	<1	0.6	319	0.18	<0.05	2.97	0.077	1.01
R613251		440	11.5	177.5	<0.002	0.64	0.48	16.9	<1	2.7	99.9	0.97	0.08	14.60	0.438	1.70
R613252		740	13.2	169.5	0.002	0.57	0.55	16.4	<1	2.7	105.0	0.96	0.14	14.80	0.444	1.56
R613253		560	14.7	178.5	<0.002	0.78	0.69	17.3	<1	2.8	91.7	0.94	0.08	14.80	0.440	2.17
R613254		570	16.3	175.0	0.003	0.78	0.72	18.7	1	2.8	99.4	0.98	0.09	14.95	0.436	2.24
R613255		530	19.3	194.0	0.002	1.18	0.57	18.9	1	3.0	114.5	0.98	0.15	15.70	0.447	1.86
R613256		800	29.4	172.0	<0.002	1.74	0.65	15.9	1	2.4	156.0	0.84	0.12	13.95	0.383	1.95
R613257		1140	14.2	55.9	<0.002	0.48	0.29	5.2	1	0.8	487	0.27	<0.05	4.69	0.121	0.45
R613258		690	10.1	88.9	0.002	0.21	0.31	7.8	1	1.4	362	0.45	<0.05	7.63	0.199	0.78
R613259		520	17.3	95.3	<0.002	0.35	0.32	7.7	1	1.4	249	0.47	<0.05	7.96	0.207	0.75
R613260		490	9.0	56.5	<0.002	0.35	0.31	5.2	1	0.9	334	0.29	<0.05	5.09	0.131	0.65
R613261		460	8.1	58.2	<0.002	0.30	0.27	5.2	1	0.9	528	0.29	<0.05	5.07	0.129	0.48
R613262		460	12.2	49.8	<0.002	0.55	0.30	4.4	1	0.8	399	0.26	<0.05	4.47	0.117	0.51
R613263		570	12.0	71.2	<0.002	0.47	0.36	6.3	1	1.1	441	0.37	<0.05	6.34	0.164	0.77
R613264		510	9.6	67.9	<0.002	0.84	0.42	6.1	1	1.1	409	0.34	0.06	5.86	0.158	0.79
R613265		380	65.4	31.0	0.003	0.70	8.55	6.2	2	0.7	1180	0.15	<0.05	2.56	0.083	6.16
R613266		510	6.9	57.9	<0.002	0.50	0.39	5.1	1	0.9	442	0.28	<0.05	4.89	0.133	0.60
R613267		530	7.6	65.1	<0.002	0.51	0.40	5.8	1	1.0	431	0.31	<0.05	5.43	0.148	0.63
R613268		860	15.8	116.5	0.002	0.99	0.86	10.1	1	1.8	334	0.58	<0.05	9.50	0.272	0.94
R613269		1510	10.0	150.5	<0.002	0.42	0.59	16.9	1	3.0	121.0	0.94	0.06	12.30	0.456	0.98
R613270		1570	10.1	165.5	<0.002	0.69	0.66	17.8	1	3.0	116.0	0.97	0.06	13.40	0.464	1.32
R613271		1730	8.0	163.0	<0.002	0.08	0.47	17.9	<1	3.0	120.0	0.96	0.06	13.55	0.459	0.96
R613272		1730	8.9	138.0	<0.002	0.08	0.45	16.5	1	2.9	116.5	0.93	0.05	11.90	0.442	0.94
R613273		1580	9.9	165.0	<0.002	0.21	0.55	17.6	1	3.1	118.5	0.95	0.05	13.25	0.453	1.31
R613274		1820	8.3	142.0	<0.002	0.10	0.36	17.5	<1	3.2	120.0	0.98	0.09	11.70	0.467	1.13
R613275		1730	8.4	175.0	<0.002	0.28	0.34	18.3	1	3.1	119.0	0.96	0.18	13.60	0.471	1.08
R613276		1210	9.2	177.5	<0.002	0.16	0.40	18.1	<1	3.0	113.5	0.96	0.14	13.40	0.465	1.10
R613277		550	14.6	67.8	<0.002	0.61	0.63	6.0	1	1.1	612	0.34	<0.05	5.77	0.161	2.07
R613278		430	16.5	66.1	0.002	2.34	54.9	7.0	3	1.1	814	0.32	0.09	5.04	0.196	15.95
R613279		870	8.1	33.2	<0.002	0.61	0.51	3.0	1	0.5	504	0.17	<0.05	2.90	0.080	1.10
R613280		730	9.9	56.0	<0.002	0.56	0.51	5.3	1	1.0	479	0.30	<0.05	4.90	0.138	1.57

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 25-OCT-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18232752

Sample Description	Method / Analyte / Units / LOD	ME-MS61 U ppm 0.1	ME-MS61 V ppm 1	ME-MS61 W ppm 0.1	ME-MS61 Y ppm 0.1	ME-MS61 Zn ppm 2	ME-MS61 Zr ppm 0.5
R613241		8.2	55	0.8	12.0	92	67.9
R613242		8.1	56	0.8	11.9	122	67.4
R613243		8.0	55	0.9	11.6	132	64.2
R613244		7.8	51	0.8	11.3	77	62.5
R613245		7.1	50	0.6	10.1	74	50.6
R613246		6.8	48	0.7	11.0	56	54.5
R613247		8.8	41	0.8	9.5	39	54.5
R613248		0.2	1	<0.1	2.2	3	1.6
R613249		6.8	39	1.0	9.3	29	41.0
R613250		9.7	26	1.1	6.4	31	29.4
R613251		2.7	114	2.1	23.2	58	133.5
R613252		4.1	123	1.8	26.2	54	137.5
R613253		2.6	123	2.2	24.7	38	134.5
R613254		2.9	121	2.3	26.0	37	139.5
R613255		3.8	119	1.9	25.8	74	139.5
R613256		5.3	104	1.6	26.1	118	121.5
R613257		7.5	39	0.5	14.8	88	47.7
R613258		8.0	60	0.9	15.1	125	74.1
R613259		6.2	59	0.8	14.3	158	67.2
R613260		8.3	42	0.6	12.2	77	48.6
R613261		7.8	43	0.7	12.3	42	48.4
R613262		7.1	40	0.5	9.9	60	54.8
R613263		8.2	50	0.7	13.2	114	66.2
R613264		9.6	48	0.7	11.4	159	55.0
R613265		4.2	26	4.9	16.0	130	27.2
R613266		6.3	41	0.6	10.9	61	47.0
R613267		7.4	46	0.6	10.9	36	53.0
R613268		7.2	77	1.1	20.3	25	94.1
R613269		3.1	124	2.0	27.1	29	132.5
R613270		3.2	125	2.5	29.2	32	133.5
R613271		3.2	119	2.1	29.6	36	133.5
R613272		3.1	117	2.0	27.4	35	127.0
R613273		3.5	123	2.0	27.8	39	127.5
R613274		3.6	129	2.1	27.4	42	131.0
R613275		3.1	137	2.2	28.4	43	125.5
R613276		3.0	138	1.9	27.2	40	130.0
R613277		9.2	50	1.1	11.7	63	58.6
R613278		4.3	57	8.8	16.9	57	54.3
R613279		7.8	25	0.6	7.4	30	30.7
R613280		9.3	43	1.2	11.3	37	48.6

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To: **ATAC RESOURCES LTD.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Project: Nadaleen

Finalized Date: 25-OCT-2018
Account: RCM

CERTIFICATE OF ANALYSIS WH18232752

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Applies to Method: REE's may not be totally soluble in this method.
ME-MS61

LABORATORY ADDRESSES

Applies to Method: Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.

CRU-31	CRU-QC	LOG-21	LOG-21d
LOG-23	PUL-31	PUL-31d	PUL-QC
SPL-21	SPL-21d	WEI-21	

Applies to Method: Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Au-AA25	Hg-MS42	ME-MS61

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To: **ATAC RESOURCES LTD.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 28-OCT-2018
Account: RCM

CERTIFICATE WH18235648

Project: Nadaleen

P.O. No.: N18-070

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 21-SEP-2018.

The following have access to data associated with this certificate:

ANDREW CARNE	JULIA LANE	

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
LOG-23	Pulp Login - Rcvd with Barcode
LOG-21d	Sample logging - ClientBarCode Dup
SPL-21d	Split sample - duplicate
PUL-31d	Pulverize Split - duplicate

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid ICP-MS	
Hg-MS42	Trace Hg by ICPMS	ICP-MS
ME-OG62	Ore Grade Elements - Four Acid	ICP-AES
As-OG62	Ore Grade As - Four Acid	
S-IR08	Total Sulphur (Leco)	LECO

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:

Colin Ramshaw, Vancouver Laboratory Manager

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Finalized Date: 28-OCT-2018
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Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18235648

Sample Description	Method	WEI-21	Au-AA25	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Recvd Wt.	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu
	Units	kg	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.02	0.01	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2
S050969		13.22	0.01	0.13	3.43	111.5	260	1.23	0.10	11.90	0.04	32.7	4.9	35	12.45	23.8
S050970		11.10	0.01	0.07	1.74	27.8	120	0.51	0.05	23.9	0.05	23.1	3.2	20	7.08	10.3
S050971		11.97	<0.01	0.05	2.54	24.5	180	0.83	0.08	16.20	0.04	28.9	3.9	24	12.20	12.9
S050972		12.47	0.12	0.13	2.52	6270	190	0.89	0.07	15.85	0.09	30.8	3.9	26	9.69	10.9
S050973		12.22	0.02	0.08	2.59	138.0	270	0.83	0.07	15.70	0.02	30.2	4.2	28	8.45	12.4
S050974		12.54	0.01	0.08	3.02	76.8	180	1.07	0.09	15.50	0.05	32.3	4.5	27	15.20	13.5
S050975		12.10	0.01	0.06	2.08	211	120	0.81	0.06	17.50	0.02	22.7	3.2	19	9.97	12.0
S050976		10.87	<0.01	0.05	2.42	38.0	190	0.99	0.07	19.70	0.04	27.6	4.0	24	12.10	11.5
S050977		12.82	0.01	0.09	3.20	11.3	210	1.15	0.08	18.85	0.06	37.8	5.1	33	17.15	14.4
S050978		10.30	<0.01	0.12	3.52	17.4	250	1.27	0.09	15.25	0.04	41.4	6.0	38	20.0	17.1
S050979		11.39	<0.01	0.10	3.91	5.3	290	1.34	0.10	12.85	0.06	46.5	6.4	41	23.1	19.9
S050980		12.57	0.01	0.07	2.89	8.3	220	0.99	0.08	16.00	0.06	36.0	4.4	31	16.65	13.7
S050981		0.26	1.07	1.26	1.54	872	200	0.44	0.13	28.3	0.63	19.35	4.3	30	3.51	43.4
S050982		10.53	0.01	0.05	1.10	16.0	120	0.41	0.04	31.7	0.12	15.75	1.9	13	4.53	5.5
S050983		11.02	<0.01	0.03	0.78	24.8	130	0.31	0.03	32.1	0.17	12.20	1.8	9	3.12	5.3
S050984		11.55	<0.01	0.04	2.00	160.0	330	0.69	0.05	25.5	0.11	24.2	3.4	22	8.38	10.4
S050985		10.80	0.01	0.04	1.00	80.2	130	0.42	0.04	32.2	0.21	13.10	1.9	13	3.84	7.7
S050986		12.15	<0.01	0.05	1.12	37.1	90	0.36	0.03	25.2	0.23	16.60	1.9	13	2.86	5.4
S050987		9.50	0.06	0.19	3.38	623	170	0.97	0.08	11.45	0.16	39.3	5.8	36	10.60	19.5
S050988		11.63	7.30	5.87	1.14	>10000	100	0.19	0.06	4.26	4.45	95.7	2.2	17	2.00	12.7
S050989		3.57	0.01	0.01	0.09	440	30	0.06	0.01	34.5	0.02	1.26	0.6	1	0.05	2.3
S050990		3.23	1.04	1.23	5.14	5460	210	1.32	0.12	8.81	0.16	56.0	9.0	55	14.50	25.2
S050991		3.00	1.19	1.26	5.36	7600	220	1.39	0.13	7.85	0.13	57.4	9.2	56	15.70	27.4
S050992		10.43	0.01	0.06	1.46	87.6	80	0.64	0.04	27.4	0.12	19.85	2.7	16	3.23	7.0
S050993		11.22	0.46	0.49	2.46	4410	140	0.81	0.07	22.1	0.16	29.9	4.4	26	5.55	13.8
S050994		12.29	4.55	3.98	3.67	>10000	140	0.89	0.10	14.30	0.20	41.7	6.3	43	7.49	21.9
S050995		<0.02	4.82	4.18	3.72	>10000	150	0.92	0.11	14.15	0.21	42.0	6.4	44	7.54	21.9
S050996		11.45	1.32	1.77	2.09	9210	140	0.68	0.07	24.3	0.07	26.4	3.6	24	3.62	11.0
S050997		11.68	0.10	0.11	2.74	1700	660	1.00	0.07	19.95	0.07	31.7	4.6	30	11.25	16.4
S050998		11.10	0.42	0.34	2.12	7930	250	0.82	0.06	24.5	0.10	25.1	3.6	24	7.54	12.9
S050999		11.13	<0.01	0.05	1.94	144.0	380	0.71	0.05	27.1	0.06	23.6	3.3	22	7.58	10.6
S051000		10.78	0.02	0.03	2.65	130.5	140	0.96	0.08	21.6	0.07	30.7	4.4	27	7.83	18.1
S051151		10.77	0.04	0.03	2.48	238	150	0.85	0.08	24.6	0.07	28.6	4.4	25	5.34	14.5
S051152		0.26	2.74	0.76	1.93	>10000	150	0.50	4.09	27.2	0.18	27.9	4.7	27	6.09	15.7
S051153		10.09	0.01	0.05	2.00	78.6	170	0.75	0.06	28.1	0.08	25.6	3.6	21	4.85	11.6
S051154		11.05	<0.01	0.05	2.76	46.8	210	0.93	0.09	21.6	0.06	31.4	4.7	28	7.79	16.3
S051155		10.54	<0.01	0.04	3.44	33.8	190	1.14	0.10	16.60	0.07	40.2	5.8	34	11.25	19.1
S051156		11.54	<0.01	0.03	3.89	21.7	210	1.29	0.11	15.75	0.09	44.0	6.2	40	11.65	22.9
S051157		10.87	<0.01	0.03	2.57	26.3	170	0.90	0.08	22.8	0.06	28.8	4.3	27	7.03	17.5
S051158		9.20	<0.01	0.05	1.38	18.5	180	0.49	0.04	29.8	0.12	18.55	2.7	15	3.28	7.8

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 28-OCT-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18235648

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Hg-MS42	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni
	Units	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2
S050969		1.25	8.57	0.13	2.4	0.612	0.023	1.97	18.0	20.2	6.23	312	0.84	0.03	5.6	12.1
S050970		0.68	4.23	0.12	1.3	0.151	0.013	1.04	12.3	8.9	2.87	229	0.89	0.02	3.0	7.5
S050971		0.92	6.46	0.12	1.7	0.176	0.019	1.45	16.4	14.6	8.28	249	0.49	0.02	4.2	9.0
S050972		1.05	6.43	0.13	1.7	0.564	0.023	1.39	16.8	14.2	7.51	414	0.49	0.02	4.2	9.0
S050973		1.18	6.64	0.12	1.7	0.754	0.014	1.37	16.1	11.9	7.70	361	0.53	0.02	4.1	10.4
S050974		1.04	7.60	0.13	1.1	0.566	0.015	1.64	18.3	17.6	8.04	247	0.68	0.02	3.9	11.6
S050975		0.65	5.27	0.15	0.8	0.326	0.013	1.15	12.9	12.6	10.20	182	0.70	0.02	2.7	7.5
S050976		1.08	6.19	0.16	1.1	0.191	0.015	1.46	15.2	18.4	5.62	179	0.53	0.02	3.5	10.6
S050977		1.47	8.13	0.15	1.7	0.101	0.023	1.99	20.7	23.8	3.18	185	0.77	0.03	5.3	14.4
S050978		1.71	8.93	0.12	2.0	0.119	0.023	2.29	22.4	38.8	3.52	198	0.96	0.03	5.6	17.4
S050979		1.58	10.00	0.15	2.3	0.109	0.027	2.55	25.2	37.0	3.90	200	0.99	0.04	6.4	15.8
S050980		1.09	7.35	0.14	2.0	0.080	0.020	1.84	20.0	19.0	3.65	176	0.71	0.03	5.1	9.9
S050981		1.14	3.93	0.08	0.7	1.970	0.019	0.66	10.0	6.7	1.22	4570	1.19	0.10	2.0	13.2
S050982		0.41	2.78	0.06	0.5	0.071	0.009	0.64	8.8	7.6	1.23	98	0.44	0.01	1.8	4.8
S050983		0.54	2.02	0.09	0.4	0.066	0.007	0.45	7.2	5.4	1.85	107	0.30	0.01	1.2	4.5
S050984		0.91	4.98	0.09	1.2	0.094	0.014	1.21	17.3	15.4	2.55	133	0.46	0.02	3.2	8.9
S050985		0.45	2.59	0.09	0.5	0.095	0.007	0.59	8.0	7.0	1.17	100	0.48	0.01	1.6	4.9
S050986		0.53	2.61	0.09	1.0	0.200	0.007	0.69	9.1	5.0	3.53	145	0.58	0.02	2.0	4.6
S050987		1.43	8.23	0.13	2.6	0.671	0.024	1.98	21.2	16.3	5.74	254	0.84	0.03	5.9	15.1
S050988		1.23	3.84	0.18	0.8	11.30	0.068	0.56	45.4	18.5	1.37	1230	0.65	0.01	1.9	5.9
S050989		0.12	0.30	0.08	0.1	0.008	<0.005	0.02	1.4	1.0	1.75	128	<0.05	0.04	0.1	0.6
S050990		2.11	13.30	0.13	3.3	1.700	0.034	2.82	31.6	24.4	4.50	1520	0.91	0.02	8.8	24.7
S050991		2.25	14.20	0.13	3.0	1.735	0.034	2.96	30.7	25.0	4.53	1440	0.91	0.03	9.2	26.3
S050992		1.03	3.86	0.05	0.8	0.384	0.012	0.78	10.6	6.1	3.30	184	0.49	0.01	2.5	7.4
S050993		1.18	6.48	0.10	1.3	0.880	0.019	1.34	16.7	9.9	3.22	664	0.58	0.02	4.3	12.8
S050994		1.68	9.83	0.10	2.0	3.33	0.026	2.02	23.1	14.9	4.71	1720	0.73	0.02	6.1	16.9
S050995		1.77	9.79	0.10	2.1	3.62	0.024	2.07	23.0	14.8	4.79	1830	0.73	0.02	6.2	17.3
S050996		1.06	5.47	0.08	1.1	2.17	0.017	1.15	14.6	7.6	3.14	696	0.68	0.01	3.4	9.6
S050997		1.23	7.16	0.11	1.5	0.638	0.021	1.54	17.0	14.8	3.14	271	0.32	0.02	4.6	12.1
S050998		0.99	5.51	0.11	1.1	1.310	0.014	1.15	13.7	12.8	2.30	330	0.40	0.02	3.6	9.9
S050999		0.98	5.06	0.09	1.0	0.203	0.013	1.08	13.0	11.6	2.57	155	0.48	0.02	3.3	8.9
S051000		1.25	6.87	0.09	1.4	0.270	0.023	1.42	16.7	16.8	2.81	170	0.25	0.02	4.5	12.1
S051151		1.13	6.51	0.12	1.1	0.223	0.019	1.32	15.8	12.9	2.39	167	0.23	0.02	4.3	11.9
S051152		1.40	5.10	0.07	0.9	6.18	0.023	0.96	14.4	8.8	0.92	2250	1.76	0.01	2.7	13.4
S051153		0.94	5.19	0.09	0.9	0.136	0.013	1.07	14.0	11.1	1.98	161	0.47	0.02	3.4	9.4
S051154		1.25	7.13	0.10	1.3	0.136	0.021	1.50	17.3	15.2	2.51	184	0.34	0.02	4.6	12.5
S051155		1.58	8.95	0.11	1.9	0.084	0.023	1.96	21.3	20.5	4.29	224	0.47	0.03	5.9	15.4
S051156		1.77	10.15	0.10	1.9	0.079	0.025	2.19	23.5	22.6	4.05	227	0.36	0.03	6.6	17.7
S051157		1.19	6.73	0.09	1.2	0.052	0.021	1.45	16.2	15.2	2.82	197	0.38	0.02	4.3	11.9
S051158		0.66	3.61	0.08	0.6	0.064	0.007	0.73	10.3	9.0	1.35	189	0.68	0.01	2.3	6.7

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
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Finalized Date: 28-OCT-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18235648

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl
	Units	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
	LOD	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.01	0.005	0.02
S050969		580	12.3	72.5	<0.002	0.66	1.37	5.3	2	1.0	160.0	0.43	<0.05	8.19	0.164	1.46
S050970		350	10.3	37.3	0.002	0.41	0.29	2.7	3	0.6	536	0.21	<0.05	4.19	0.088	0.61
S050971		290	8.0	52.2	<0.002	0.47	0.28	4.0	1	0.8	156.5	0.31	<0.05	5.78	0.123	0.66
S050972		350	6.9	51.1	0.002	0.78	21.6	4.0	2	0.8	186.0	0.31	<0.05	5.73	0.121	2.10
S050973		430	9.1	48.9	<0.002	0.63	0.96	4.0	1	0.8	198.0	0.31	<0.05	5.61	0.120	1.89
S050974		510	8.9	57.5	0.002	0.56	0.59	4.8	1	0.8	146.0	0.30	<0.05	5.54	0.117	1.32
S050975		340	6.1	40.5	<0.002	0.39	0.91	3.3	1	0.5	113.0	0.21	<0.05	3.84	0.083	0.70
S050976		330	6.5	53.4	<0.002	0.56	0.35	3.9	1	0.7	337	0.26	<0.05	4.91	0.103	0.50
S050977		420	10.4	73.5	<0.002	0.68	0.33	5.2	1	1.0	804	0.39	<0.05	7.16	0.155	0.42
S050978		460	12.5	85.1	<0.002	0.71	0.36	5.6	1	1.1	660	0.42	<0.05	7.83	0.167	0.55
S050979		490	8.6	96.1	<0.002	0.45	0.34	6.3	2	1.2	343	0.49	<0.05	9.15	0.187	0.54
S050980		400	6.3	69.2	<0.002	0.23	0.25	4.7	1	1.0	363	0.38	<0.05	7.13	0.143	0.38
S050981		400	61.1	31.7	0.002	0.69	7.87	5.8	1	0.7	1150	0.15	0.07	2.59	0.079	5.98
S050982		180	8.5	24.5	0.002	0.22	0.20	1.8	1	0.4	1760	0.14	<0.05	2.57	0.052	0.33
S050983		140	11.2	15.9	<0.002	0.37	0.22	1.3	1	0.3	1660	0.09	<0.05	1.80	0.036	0.30
S050984		290	14.0	44.0	<0.002	0.53	0.27	3.1	1	0.6	842	0.23	<0.05	4.59	0.095	0.37
S050985		280	9.0	20.7	0.002	0.30	0.22	1.6	1	0.3	1020	0.13	<0.05	2.39	0.049	0.28
S050986		350	7.8	23.9	<0.002	0.30	0.72	1.6	1	0.4	570	0.14	<0.05	2.67	0.055	0.57
S050987		600	19.9	74.7	<0.002	0.93	4.55	5.1	3	1.1	175.5	0.44	<0.05	8.32	0.167	2.16
S050988		400	11.4	25.3	0.002	>10.0	1315	1.8	17	0.8	175.5	0.14	0.35	2.92	0.054	10.50
S050989		80	<0.5	0.5	<0.002	0.03	1.84	0.4	<1	<0.2	82.7	<0.05	<0.05	0.08	0.011	0.03
S050990		660	17.4	118.0	0.002	1.85	33.2	8.4	2	1.9	216	0.69	0.05	12.45	0.258	6.94
S050991		670	18.5	115.0	0.002	2.09	45.3	8.3	2	1.8	197.5	0.68	<0.05	11.85	0.269	7.18
S050992		210	8.9	28.3	<0.002	0.35	1.90	2.3	1	0.5	770	0.18	<0.05	3.02	0.070	1.27
S050993		310	8.9	52.6	<0.002	0.90	19.20	3.9	1	0.8	523	0.29	<0.05	5.13	0.120	3.04
S050994		440	8.8	76.1	<0.002	1.77	94.3	6.0	3	1.3	262	0.46	0.08	7.80	0.179	18.30
S050995		450	9.4	77.2	0.002	2.02	110.5	5.9	4	1.3	260	0.47	0.09	8.08	0.184	18.65
S050996		260	5.6	44.1	0.002	0.86	47.3	3.3	1	0.7	590	0.26	<0.05	4.38	0.100	11.20
S050997		370	5.8	61.3	<0.002	0.27	6.46	4.2	1	0.9	542	0.33	<0.05	5.90	0.132	2.48
S050998		340	7.5	50.9	<0.002	0.60	24.0	3.3	2	0.8	729	0.26	<0.05	4.40	0.102	5.45
S050999		280	7.0	48.9	<0.002	0.27	0.40	3.0	1	0.7	919	0.24	<0.05	4.18	0.095	0.45
S051000		320	5.3	63.3	<0.002	0.21	0.80	4.1	1	0.9	502	0.34	<0.05	5.31	0.126	0.82
S051151		320	5.7	55.8	<0.002	0.24	1.03	3.9	1	0.9	582	0.30	<0.05	5.07	0.118	0.72
S051152		350	9.1	42.5	0.003	1.46	46.5	5.5	1	0.7	1060	0.20	0.05	3.49	0.090	25.1
S051153		280	6.7	45.5	<0.002	0.22	0.60	3.2	1	0.7	782	0.24	<0.05	4.17	0.096	0.37
S051154		320	6.5	61.2	0.002	0.20	0.38	4.3	1	1.0	560	0.35	<0.05	5.63	0.131	0.45
S051155		400	7.7	82.2	<0.002	0.33	0.37	5.3	2	1.2	390	0.43	<0.05	7.41	0.168	0.53
S051156		430	7.9	101.5	0.002	0.14	0.29	5.9	1	1.4	388	0.48	<0.05	8.20	0.189	0.65
S051157		290	6.8	70.7	<0.002	0.12	0.24	4.0	1	0.9	572	0.33	<0.05	5.27	0.123	0.57
S051158		210	6.3	36.7	<0.002	0.14	0.26	2.3	1	0.5	919	0.17	<0.05	2.85	0.066	0.36

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.
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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 28-OCT-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18235648

Sample Description	Method Analyte Units LOD	ME-MS61 U ppm 0.1	ME-MS61 V ppm 1	ME-MS61 W ppm 0.1	ME-MS61 Y ppm 0.1	ME-MS61 Zn ppm 2	ME-MS61 Zr ppm 0.5	As-OG62 As % 0.001	S-IR08 S % 0.01
S050969		8.0	52	2.2	11.3	10	88.3		
S050970		10.0	31	0.5	7.7	7	49.3		
S050971		9.6	40	0.6	8.9	11	64.7		
S050972		8.6	39	1.1	9.8	21	63.2		
S050973		9.0	44	1.3	9.0	7	59.7		
S050974		18.7	52	0.7	8.2	21	40.6		
S050975		13.7	37	0.6	6.3	5	30.3		
S050976		11.3	45	0.5	7.9	12	45.5		
S050977		8.9	56	0.6	11.1	21	65.1		
S050978		8.1	63	0.6	12.6	22	73.8		
S050979		6.0	66	0.7	14.2	31	83.5		
S050980		9.2	47	0.6	11.1	28	69.8		
S050981		4.1	26	7.5	15.7	123	28.2		
S050982		19.6	21	0.2	4.7	38	20.2		
S050983		20.0	15	0.2	4.3	34	15.1		
S050984		14.9	33	0.5	7.8	22	45.9		
S050985		14.9	20	0.3	5.4	27	20.4		
S050986		8.4	19	0.4	6.0	22	36.4		
S050987		6.5	52	1.4	13.4	50	95.3		
S050988		13.9	22	1.4	17.8	415	27.6	23.0	12.30
S050989		0.2	3	<0.1	2.4	3	1.9		
S050990		6.1	84	4.3	17.2	47	104.5		
S050991		5.2	85	4.4	16.9	46	108.0		
S050992		13.9	27	0.9	6.1	38	29.4		
S050993		11.9	41	1.8	9.5	46	49.6		
S050994		9.6	59	3.1	13.4	48	74.9	1.720	
S050995		10.0	60	3.2	13.3	45	75.9	2.03	
S050996		14.6	36	2.0	9.6	19	41.5		
S050997		7.5	41	1.4	9.8	20	57.8		
S050998		11.4	34	0.8	7.6	46	38.9		
S050999		14.4	30	0.5	7.1	38	37.4		
S051000		6.9	39	0.9	9.2	33	48.3		
S051151		9.0	39	1.2	8.5	30	42.1		
S051152		6.6	33	19.7	15.8	24	32.4		
S051153		14.2	33	0.8	7.5	30	33.9		
S051154		9.3	43	0.6	9.5	35	48.6		
S051155		7.6	51	0.7	11.9	40	67.6		
S051156		7.0	57	0.7	13.6	45	71.0		
S051157		10.4	39	0.5	8.6	31	44.3		
S051158		13.5	23	0.3	5.6	39	25.2		

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Project: Nadaleen

Finalized Date: 28-OCT-2018
Account: RCM

CERTIFICATE OF ANALYSIS WH18235648

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Applies to Method: REE's may not be totally soluble in this method.
ME-MS61

LABORATORY ADDRESSES

Applies to Method: Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.

CRU-31	CRU-QC	LOG-21	LOG-21d
LOG-23	PUL-31	PUL-31d	PUL-QC
SPL-21	SPL-21d	WEI-21	

Applies to Method: Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

As-OG62	Au-AA25	Hg-MS42	ME-MS61
ME-OG62	S-IR08		

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Finalized Date: 28-OCT-2018
Account: RCM

CERTIFICATE WH18235640

Project: Nadaleen

P.O. No.: N18-071

This report is for 18 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 21-SEP-2018.

The following have access to data associated with this certificate:

ANDREW CARNE	JULIA LANE	

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
WSH-22	"Wash" pulverizers
PUL-31	Pulverize split to 85% <75 um
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
LOG-23	Pulp Login - Rcvd with Barcode
LOG-21d	Sample logging - ClientBarCode Dup
SPL-21d	Split sample - duplicate
PUL-31d	Pulverize Split - duplicate

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid ICP-MS	
Hg-MS42	Trace Hg by ICPMS	ICP-MS

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:

Colin Ramshaw, Vancouver Laboratory Manager

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Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18235640

Sample Description	Method	WEI-21	Au-AA25	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Recvd Wt.	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu
	Units	kg	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.02	0.01	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2
S051159		11.22	<0.01	0.10	1.34	15.4	130	0.45	0.07	28.7	0.14	17.20	2.5	17	2.66	11.6
S051160		11.82	<0.01	0.07	3.17	22.2	160	0.90	0.09	16.70	0.06	38.6	5.6	37	9.68	21.8
S051161		12.62	0.01	0.05	2.89	13.6	230	0.82	0.09	20.7	0.07	32.9	5.1	33	10.95	19.3
S051162		12.12	<0.01	0.05	1.85	18.9	2000	0.58	0.07	22.9	0.11	24.4	3.3	21	5.81	14.3
S051163		0.28	2.72	0.67	1.90	>10000	150	0.55	2.82	26.6	0.17	26.8	4.9	26	5.94	18.4
S051164		10.98	<0.01	0.07	3.46	47.7	190	1.17	0.10	14.30	0.09	43.0	5.8	38	9.18	16.9
S051165		10.93	0.01	0.08	4.14	109.5	410	1.43	0.11	11.30	0.07	49.6	7.2	48	9.98	23.9
S051166		11.66	<0.01	0.05	1.99	25.1	210	0.72	0.06	26.5	0.10	24.9	3.8	22	4.92	13.6
S051167		0.28	1.44	0.88	2.98	>10000	190	0.68	0.12	17.10	0.37	32.6	7.4	42	8.41	25.8
S051168		11.44	0.01	0.04	1.85	43.2	230	0.71	0.06	26.5	0.15	23.6	3.5	21	4.18	10.1
S051169		<0.02	<0.01	0.04	1.87	23.2	240	0.71	0.06	27.3	0.14	23.5	3.6	21	4.21	10.3
S051170		5.71	<0.01	0.07	1.87	23.1	130	0.66	0.06	25.8	0.08	23.3	3.4	21	3.40	12.6
S051171		6.05	<0.01	0.06	1.34	15.0	60	0.47	0.05	28.3	0.05	18.50	2.4	16	2.66	8.5
S051172		11.31	0.01	0.12	2.70	31.4	120	0.90	0.08	21.9	0.09	35.0	4.9	31	4.61	23.1
S051173		8.35	0.01	0.10	2.05	81.0	80	0.66	0.08	26.1	0.33	23.6	4.4	18	2.46	55.7
S051174		3.06	<0.01	0.01	0.08	1.2	20	0.07	0.01	34.4	<0.02	0.99	0.4	<1	<0.05	2.1
S051175		4.72	<0.01	0.09	7.99	69.0	360	2.32	0.33	1.26	0.10	79.3	13.3	56	14.95	128.0
S051176		11.72	<0.01	0.06	8.68	35.4	370	2.57	0.33	0.42	0.02	84.2	11.6	61	18.60	113.0

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To: **ATAC RESOURCES LTD.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 28-OCT-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18235640

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Hg-MS42	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni
	Units	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2
S051159		0.67	3.61	0.12	0.6	0.084	0.013	0.67	9.3	11.7	1.30	206	0.56	0.01	2.3	5.3
S051160		1.44	8.64	0.17	1.8	0.075	0.024	1.56	20.6	43.0	2.83	265	0.59	0.03	5.5	14.5
S051161		1.23	7.90	0.20	1.3	0.045	0.023	1.42	17.9	41.0	1.90	323	0.34	0.05	5.1	13.1
S051162		0.92	5.07	0.21	1.1	0.078	0.015	0.97	12.8	10.5	2.76	459	0.50	0.02	3.4	7.4
S051163		1.38	4.83	0.05	0.9	6.39	0.022	0.95	14.1	9.1	0.91	2230	2.17	0.01	2.5	15.5
S051164		1.45	8.79	0.10	2.3	0.105	0.027	1.87	22.9	20.6	3.89	511	0.72	0.03	6.2	15.7
S051165		1.73	10.80	0.12	2.3	0.150	0.028	2.23	27.0	23.0	4.44	603	0.71	0.04	7.4	19.8
S051166		0.87	5.21	0.09	1.0	0.062	0.015	1.02	13.8	10.9	1.40	796	0.35	0.02	3.5	10.2
S051167		2.04	7.58	0.08	1.5	4.66	0.028	1.34	17.4	11.6	2.12	1210	1.31	0.10	4.3	17.9
S051168		1.04	4.66	0.07	1.0	0.048	0.014	0.94	13.3	9.5	1.72	929	0.36	0.02	3.2	8.9
S051169		1.03	4.70	0.09	1.0	0.041	0.015	0.95	12.9	9.7	1.75	945	0.34	0.02	3.1	9.0
S051170		0.95	4.81	0.08	1.0	0.063	0.012	0.94	12.7	7.5	2.33	1520	0.42	0.02	3.2	8.5
S051171		0.71	3.35	0.07	0.7	0.054	0.011	0.68	9.8	5.9	1.77	1300	0.43	0.02	2.3	6.4
S051172		1.07	6.87	0.09	1.5	0.104	0.020	1.33	18.3	10.0	2.40	2000	0.55	0.03	4.8	11.7
S051173		1.40	5.09	<0.05	1.0	0.409	0.014	0.97	13.0	6.0	1.94	3410	0.41	0.03	3.5	8.1
S051174		0.11	0.29	0.07	<0.1	<0.005	<0.005	0.02	1.2	1.0	1.65	121	0.05	0.03	0.1	0.3
S051175		3.87	21.2	0.14	3.1	0.260	0.066	3.89	43.4	52.6	1.56	390	0.91	0.07	11.9	34.7
S051176		3.97	23.1	0.13	3.0	0.030	0.073	4.15	44.5	110.0	1.58	174	0.37	0.08	12.8	36.9

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VANCOUVER BC V6B 1L8

Finalized Date: 28-OCT-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18235640

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl
	Units	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
	LOD	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.01	0.005	0.02
S051159		190	7.6	33.5	<0.002	0.17	0.32	2.2	1	0.5	1070	0.15	<0.05	2.83	0.063	0.30
S051160		540	9.8	79.0	<0.002	0.20	0.29	5.1	2	1.1	452	0.41	<0.05	7.04	0.153	0.53
S051161		340	7.3	70.4	<0.002	0.10	0.25	4.6	1	1.0	469	0.37	<0.05	5.89	0.139	0.44
S051162		260	7.8	40.4	<0.002	0.22	0.28	3.1	1	0.7	1245	0.25	<0.05	4.42	0.093	0.32
S051163		340	9.9	43.8	0.003	1.45	44.5	5.9	1	0.6	1040	0.19	0.06	3.50	0.089	23.3
S051164		450	11.4	79.4	<0.002	0.29	0.48	5.7	2	1.1	582	0.47	<0.05	8.73	0.184	0.54
S051165		630	11.1	92.5	<0.002	0.39	0.83	6.9	3	1.4	393	0.54	<0.05	9.92	0.218	0.65
S051166		310	6.9	43.2	<0.002	0.22	0.25	3.4	1	0.7	991	0.25	<0.05	4.51	0.097	0.31
S051167		430	15.5	65.9	0.003	2.26	51.7	6.7	2	1.0	783	0.32	0.10	4.96	0.186	15.60
S051168		310	7.7	39.8	<0.002	0.49	0.32	3.0	1	0.6	866	0.24	<0.05	4.36	0.092	0.30
S051169		300	7.4	39.4	<0.002	0.45	0.22	3.1	1	0.6	888	0.24	<0.05	4.43	0.093	0.29
S051170		260	8.7	38.7	<0.002	0.26	0.23	3.1	1	0.6	989	0.24	<0.05	4.50	0.093	0.35
S051171		190	6.8	27.4	<0.002	0.28	0.19	2.2	1	0.4	934	0.16	<0.05	3.11	0.065	0.21
S051172		390	12.9	53.9	<0.002	0.49	0.31	4.4	1	0.9	785	0.36	<0.05	6.79	0.139	0.51
S051173		230	62.5	41.2	<0.002	0.70	0.77	3.4	1	0.7	756	0.26	<0.05	4.71	0.100	0.65
S051174		70	0.8	0.5	<0.002	0.01	0.11	0.2	<1	<0.2	82.8	<0.05	<0.05	0.09	0.005	<0.02
S051175		430	19.3	149.5	<0.002	1.10	0.42	15.0	<1	2.4	117.0	0.90	0.07	13.95	0.408	1.31
S051176		460	9.4	163.0	<0.002	0.05	0.35	16.2	<1	2.6	102.0	0.95	0.12	14.50	0.431	1.13

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Finalized Date: 28-OCT-2018
Account: RCM

Project: Nadaleen

CERTIFICATE OF ANALYSIS WH18235640

Sample Description	Method Analyte Units LOD	ME-MS61 U ppm 0.1	ME-MS61 V ppm 1	ME-MS61 W ppm 0.1	ME-MS61 Y ppm 0.1	ME-MS61 Zn ppm 2	ME-MS61 Zr ppm 0.5
S051159		13.8	24	0.3	5.1	41	21.6
S051160		8.0	52	0.5	11.8	43	55.9
S051161		9.1	47	0.5	9.5	43	48.7
S051162		11.7	27	0.4	7.1	45	39.5
S051163		6.4	33	18.3	16.1	29	31.4
S051164		6.6	49	0.7	13.4	63	83.8
S051165		5.1	63	0.8	16.0	66	83.9
S051166		13.4	31	0.4	8.0	38	36.5
S051167		4.2	55	5.7	15.9	57	53.1
S051168		10.1	28	0.4	7.5	23	39.3
S051169		10.3	28	0.4	7.6	25	38.7
S051170		12.0	29	0.4	7.1	27	36.1
S051171		12.3	22	0.3	5.8	19	25.4
S051172		10.5	41	0.6	10.9	48	62.2
S051173		15.3	29	0.7	8.7	182	33.3
S051174		0.2	1	<0.1	2.3	4	1.4
S051175		3.8	109	1.6	19.8	113	106.5
S051176		2.4	92	1.5	19.8	93	106.5

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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Project: Nadaleen

Finalized Date: 28-OCT-2018
Account: RCM

CERTIFICATE OF ANALYSIS WH18235640

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Applies to Method: REE's may not be totally soluble in this method.
ME-MS61

LABORATORY ADDRESSES

Applies to Method: Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.

CRU-31	CRU-QC	LOG-21	LOG-21d
LOG-23	PUL-31	PUL-31d	PUL-QC
SPL-21	SPL-21d	WEI-21	WSH-22

Applies to Method: Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Au-AA25	Hg-MS42	ME-MS61

ALS Canada Ltd.

2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 (604) 984 0221 Fax: +1 (604) 984 0218
www.alsglobal.com/geochemistry

To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016 - 510 W HASTINGS STREET
VANCOUVER BC V6B 1L8

Finalized Date: 25-JUN-2018
Account: ARCHORI

CERTIFICATE WH18132677

Project: Orion

P.O. No.: O18-001

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 6-JUN-2018.

The following have access to data associated with this certificate:

GLENN ASCH	MARK BRADLEY	KEVIN CREEL
PAUL DOBAK	NATHAN ECK	VLADIMIR ISPOLATOV
JULIA LANE	KARL MARLOWE	LEE SCHOLL
LIZ STOCK	JEREMY VAUGHAN	

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
PUL-31	Pulverize split to 85% <75 um
LOG-23	Pulp Login - Rcvd with Barcode

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-ICP21	Au 30g FA ICP-AES Finish	ICP-AES
ME-MS61	48 element four acid ICP-MS	
Hg-MS42	Trace Hg by ICPMS	ICP-MS

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:

Colin Ramshaw, Vancouver Laboratory Manager

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CERTIFICATE OF ANALYSIS WH18132677

Sample Description	Method	WEI-21	Au-ICP21	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Recvd Wt.	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu
	Units	kg	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.02	0.001	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2
V762601		5.20	<0.001	0.09	1.82	10.0	260	0.52	0.02	24.4	0.12	30.2	10.6	81	1.12	9.5
V762602		4.70	<0.001	0.07	3.58	20.8	390	0.70	0.03	17.30	0.18	35.8	17.4	170	3.32	16.6
V762603		6.82	<0.001	0.19	3.47	23.6	450	0.61	0.02	14.85	0.18	29.8	14.8	171	4.27	16.2
V762604		0.11	0.275	0.34	6.39	564	90	0.66	0.28	0.52	0.11	140.5	2.9	231	3.14	24.4
V762605		6.47	<0.001	0.03	1.84	10.1	360	0.48	0.02	21.7	0.27	19.90	8.1	83	2.07	8.6
V762606		5.87	<0.001	0.07	2.15	8.1	490	0.59	0.03	17.20	0.25	22.6	8.1	94	2.51	9.8
V762607		7.67	0.001	0.04	2.44	10.5	370	0.70	0.03	17.80	0.33	30.6	8.6	95	3.18	10.4
V762608		5.90	<0.001	0.08	5.82	28.7	280	1.77	0.07	9.32	0.72	82.6	17.4	161	9.15	24.1
V762609		10.34	0.001	<0.01	4.68	21.2	610	1.09	0.03	16.20	0.06	62.2	13.8	191	7.02	11.4
V762610		9.85	<0.001	<0.01	5.26	29.3	810	1.31	0.04	14.90	0.04	73.8	13.8	173	7.65	11.5
V762611		10.00	<0.001	<0.01	5.40	22.5	800	1.35	0.05	13.70	0.03	72.2	13.7	192	8.10	12.6
V762612		4.95	<0.001	<0.01	5.25	21.6	860	1.47	0.05	13.10	0.02	71.7	13.2	191	7.92	12.7
V762613		10.88	<0.001	<0.01	5.10	21.4	790	1.32	0.04	14.50	0.02	67.7	13.2	189	7.96	12.6
V762614		11.28	<0.001	<0.01	5.45	13.5	830	1.41	0.05	13.20	0.04	69.2	12.3	176	8.34	12.2
V762615		11.15	<0.001	<0.01	5.48	10.6	840	1.43	0.06	13.50	0.02	72.7	11.7	159	8.82	11.7
V762616		11.45	<0.001	<0.01	5.57	24.7	900	1.39	0.06	13.75	0.03	72.8	12.5	151	9.49	12.2
V762617		10.11	<0.001	<0.01	6.02	64.3	660	1.65	0.07	12.50	0.03	80.5	14.5	165	8.07	13.9
V762618		10.07	<0.001	0.02	5.05	61.1	570	1.38	0.05	16.20	0.06	70.0	13.2	153	6.64	12.4
V762619		11.37	<0.001	0.05	5.13	81.2	560	1.49	0.07	16.05	0.06	70.3	10.4	125	7.79	12.6
V762620		9.70	<0.001	0.08	4.79	172.5	420	1.71	0.06	18.15	0.19	68.2	10.2	119	5.99	12.0
V762621		8.21	<0.001	<0.01	5.10	81.6	570	1.42	0.05	16.05	0.12	72.0	12.5	138	6.67	13.0
V762622		6.84	0.001	0.37	0.82	240	230	0.46	0.02	32.3	1.26	13.25	2.9	17	0.98	7.4
V762623		6.01	<0.001	0.17	0.26	122.0	100	0.15	0.01	30.6	0.45	6.45	1.9	7	0.55	3.7
V762624		6.65	<0.001	0.25	0.91	310	180	0.37	0.03	31.9	0.81	13.55	3.0	13	1.88	7.5
V762625		8.48	0.001	0.25	0.69	227	140	0.36	0.02	33.5	1.13	10.90	2.6	11	1.26	6.4
V762626		10.07	0.001	0.23	0.35	190.5	80	0.22	0.01	34.3	1.45	5.81	2.2	7	0.59	4.2
V762627		10.13	0.001	0.25	0.61	171.0	160	0.28	0.02	34.5	0.58	10.60	2.4	11	0.98	5.0
V762628		10.39	<0.001	0.53	2.74	238	240	1.15	0.08	23.1	0.74	27.0	5.8	42	3.48	16.2
V762629		11.57	0.002	0.39	1.66	57.8	230	0.79	0.04	27.6	0.81	20.1	3.9	23	1.85	8.6
V762630		11.59	<0.001	0.20	1.66	25.4	400	0.76	0.04	28.8	0.57	19.10	3.8	24	2.29	8.9
V762631		10.71	<0.001	0.18	0.74	25.3	160	0.37	0.02	29.6	0.74	9.99	2.5	12	0.97	6.4
V762632		10.48	0.001	0.09	1.21	12.3	220	0.48	0.03	29.8	0.49	14.35	3.1	13	1.59	5.9
V762633		10.51	<0.001	0.10	0.80	13.3	240	0.34	0.02	31.0	0.41	10.70	2.5	11	0.85	5.5
V762634		11.56	0.001	0.07	0.45	10.4	150	0.22	0.02	31.7	0.26	7.36	2.1	9	0.61	4.1
V762635		11.81	<0.001	0.15	1.37	4.8	190	0.58	0.03	27.0	0.47	16.05	3.2	21	1.99	7.2
V762636		11.85	0.010	0.27	2.16	5.6	350	0.86	0.05	26.5	0.81	23.1	4.4	32	2.93	11.7
V762637		11.65	<0.001	0.18	2.46	3.7	320	1.01	0.06	24.2	0.46	28.5	4.9	32	3.62	10.6
V762638		7.08	<0.001	<0.01	0.06	<0.2	30	<0.05	0.02	21.3	0.05	1.23	1.4	1	0.21	1.9
V762639		10.45	<0.001	0.25	1.72	20.9	390	0.74	0.04	26.5	0.71	19.45	3.7	27	2.11	10.5
V762640		10.94	0.001	0.27	3.12	31.8	380	1.26	0.08	21.5	0.65	34.7	6.0	46	4.32	14.8

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Project: Orion

CERTIFICATE OF ANALYSIS WH18132677

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Hg-MS42	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni
	Units	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2
V762601		3.13	4.61	0.06	0.9	0.019	0.019	0.52	13.7	14.8	0.41	730	0.67	0.11	11.6	30.0
V762602		4.67	9.02	0.06	1.6	0.020	0.041	1.16	17.4	21.2	0.50	546	1.23	0.14	23.7	52.6
V762603		4.18	8.39	0.09	1.8	0.055	0.036	1.25	15.8	17.8	0.50	429	1.22	0.19	22.5	51.6
V762604		6.28	19.90	0.13	4.6	7.94	0.046	1.36	65.7	18.0	0.16	51	6.71	0.45	9.9	16.3
V762605		2.47	4.32	0.07	1.0	0.038	0.022	0.65	11.4	18.5	0.27	356	1.22	0.17	12.5	31.4
V762606		2.58	4.99	0.11	1.2	0.042	0.027	0.80	13.8	26.3	0.27	274	1.47	0.23	13.9	33.4
V762607		2.90	5.52	0.13	1.4	0.047	0.022	0.97	17.5	16.8	0.43	349	1.41	0.29	17.7	34.1
V762608		5.50	15.10	0.20	4.4	0.149	0.062	2.31	46.0	8.8	0.88	354	7.72	1.03	59.0	98.7
V762609		4.58	12.05	0.14	3.2	0.011	0.047	1.84	32.9	28.7	1.06	491	0.97	0.68	52.3	34.8
V762610		5.09	13.40	0.18	3.4	0.007	0.048	2.23	38.7	36.1	1.11	495	0.82	0.58	59.4	41.4
V762611		5.40	13.65	0.18	3.3	0.008	0.046	2.47	37.1	43.6	1.18	474	0.79	0.47	58.3	44.0
V762612		5.30	13.60	0.17	3.3	0.007	0.050	2.40	37.4	44.3	1.12	459	0.76	0.46	56.6	42.7
V762613		5.29	12.90	0.19	3.0	0.013	0.049	2.36	35.2	32.2	1.10	467	0.68	0.47	53.8	42.1
V762614		5.22	13.35	0.19	3.3	0.015	0.052	2.57	36.4	14.8	1.07	424	0.64	0.48	55.8	42.8
V762615		5.00	13.80	0.19	3.5	0.025	0.053	2.60	38.3	16.4	1.09	420	0.55	0.50	57.4	38.6
V762616		4.99	14.30	0.19	3.5	0.052	0.051	2.66	38.5	22.3	1.04	411	0.56	0.46	56.8	41.8
V762617		4.96	15.80	0.20	3.8	0.109	0.062	2.90	42.0	15.3	1.05	374	0.58	0.17	61.3	48.7
V762618		4.85	13.15	0.17	3.2	0.077	0.045	2.36	36.2	18.6	0.98	435	0.60	0.13	53.0	40.4
V762619		4.21	13.35	0.16	3.3	0.080	0.053	2.49	36.7	9.2	0.84	389	0.58	0.11	51.0	38.6
V762620		3.45	12.45	0.16	3.0	0.103	0.045	2.31	36.1	5.4	0.56	428	0.94	0.03	49.4	45.5
V762621		3.72	13.45	0.18	3.6	0.292	0.052	2.50	38.0	6.8	0.59	318	0.77	0.04	54.8	37.9
V762622		0.61	2.26	0.10	0.4	0.130	0.009	0.38	12.0	3.2	0.28	126	1.00	0.01	3.1	10.6
V762623		0.31	0.84	0.08	0.1	0.033	<0.005	0.14	6.6	2.4	0.28	74	0.33	0.01	0.5	4.9
V762624		0.62	2.49	0.12	0.3	0.068	0.009	0.41	12.0	5.5	0.28	85	1.01	0.01	1.6	24.1
V762625		0.43	2.00	0.09	0.3	0.058	0.008	0.33	10.1	3.9	0.65	88	0.79	0.01	1.2	12.7
V762626		0.28	1.09	0.09	0.2	0.057	<0.005	0.18	5.6	2.2	1.04	93	0.42	0.01	0.6	8.6
V762627		0.41	1.75	0.10	0.2	0.063	0.007	0.31	8.3	2.6	1.18	104	1.08	0.01	1.1	9.3
V762628		1.30	7.05	0.12	1.1	0.123	0.024	1.41	17.5	8.9	2.90	154	2.58	0.02	4.6	36.5
V762629		0.79	4.62	0.13	0.6	0.094	0.017	0.88	13.0	7.7	1.98	121	1.77	0.02	2.6	13.9
V762630		0.77	4.65	0.12	0.7	0.054	0.013	0.90	13.1	8.3	1.40	111	1.94	0.02	2.7	10.8
V762631		0.37	2.13	0.11	0.3	0.037	0.005	0.40	8.8	5.7	1.39	54	2.76	0.02	1.2	8.2
V762632		0.55	3.33	0.11	0.4	0.043	0.011	0.66	9.0	7.6	2.30	84	2.23	0.02	1.9	6.4
V762633		0.39	2.27	0.10	0.3	0.027	0.006	0.45	8.4	5.1	0.98	58	1.90	0.01	1.3	4.4
V762634		0.28	1.32	0.11	0.2	0.014	<0.005	0.24	7.1	4.1	0.70	48	1.13	0.01	0.7	1.9
V762635		0.65	3.77	0.10	0.5	0.026	0.009	0.76	12.1	9.2	1.40	79	1.25	0.02	2.2	7.5
V762636		1.00	5.91	0.12	0.8	0.039	0.018	1.18	16.5	13.4	1.49	108	3.07	0.03	3.3	16.7
V762637		1.18	6.79	0.14	0.9	0.039	0.019	1.32	17.4	16.4	2.55	132	1.79	0.04	3.9	15.5
V762638		0.46	0.30	0.11	<0.1	<0.005	<0.005	0.03	0.6	1.1	13.50	201	0.19	<0.01	0.2	<0.2
V762639		0.84	4.72	0.12	0.7	0.029	0.013	0.92	14.2	11.3	1.17	97	2.19	0.02	2.7	13.3
V762640		1.44	8.74	0.13	1.2	0.038	0.028	1.71	22.6	17.3	1.82	155	2.44	0.03	5.0	24.6

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Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl
	Units	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
	LOD	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.01	0.005	0.02
V762601		630	1.9	14.2	<0.002	0.33	0.19	6.8	1	0.5	463	0.61	<0.05	1.42	0.381	0.14
V762602		760	3.0	33.0	0.002	0.18	0.24	10.5	1	0.7	519	1.29	<0.05	2.47	0.736	0.26
V762603		670	3.2	33.9	<0.002	0.56	0.28	9.7	1	0.7	316	1.25	<0.05	2.46	0.720	0.33
V762604		1020	14.4	43.8	0.002	3.08	112.0	14.7	2	2.5	559	0.78	0.13	9.11	0.575	6.70
V762605		380	2.1	18.3	<0.002	0.61	0.27	5.0	1	0.4	503	0.64	<0.05	1.60	0.357	0.38
V762606		430	2.8	23.4	<0.002	0.79	0.28	5.7	1	0.5	416	0.72	<0.05	1.84	0.354	0.43
V762607		420	2.8	27.1	<0.002	1.70	0.26	6.0	1	0.5	421	0.89	<0.05	2.24	0.402	0.43
V762608		1400	8.5	71.4	0.004	3.95	1.36	11.4	1	1.7	250	3.06	0.05	7.65	0.935	2.35
V762609		1320	4.6	51.7	<0.002	0.66	0.27	9.9	1	1.4	544	2.50	<0.05	5.59	1.035	0.20
V762610		1330	5.4	61.9	<0.002	0.51	0.23	10.2	1	1.5	503	2.82	<0.05	6.89	1.015	0.16
V762611		1350	5.7	69.0	<0.002	0.65	0.24	10.8	1	1.5	491	2.82	<0.05	6.72	1.030	0.20
V762612		1310	5.5	67.3	<0.002	0.60	0.21	10.6	1	1.5	470	2.82	<0.05	6.37	1.010	0.20
V762613		1290	5.3	67.1	<0.002	0.75	0.22	10.7	1	1.4	515	2.53	<0.05	6.05	0.981	0.21
V762614		1300	6.0	71.1	<0.002	1.07	0.22	10.5	<1	1.5	458	2.73	<0.05	6.61	0.964	0.24
V762615		1300	5.7	72.3	<0.002	0.71	0.23	10.5	1	1.6	472	2.78	<0.05	7.06	0.927	0.26
V762616		1330	6.1	76.2	<0.002	0.73	0.26	10.9	1	1.5	454	2.82	<0.05	7.35	0.913	0.30
V762617		1480	7.3	88.9	<0.002	0.79	0.80	12.2	<1	1.8	468	3.11	0.05	7.99	1.000	0.39
V762618		1270	6.4	73.3	<0.002	0.57	0.72	10.3	1	1.5	498	2.53	<0.05	6.26	0.908	0.38
V762619		1120	6.4	78.9	0.002	0.58	0.46	10.1	1	1.5	433	2.53	<0.05	6.96	0.790	0.40
V762620		1010	10.0	71.8	0.003	0.54	0.86	9.6	1	1.4	353	2.43	<0.05	6.45	0.750	0.43
V762621		1080	6.6	73.7	0.002	2.20	0.65	10.0	1	1.5	416	2.73	<0.05	6.90	0.831	0.59
V762622		730	5.1	13.6	0.003	0.04	0.84	1.9	2	0.3	450	0.17	<0.05	1.13	0.067	0.25
V762623		510	1.8	6.1	<0.002	0.02	0.36	0.6	1	<0.2	455	<0.05	<0.05	0.40	0.015	0.21
V762624		400	4.0	16.8	0.002	0.02	0.89	1.8	2	0.3	503	0.10	<0.05	1.20	0.049	0.60
V762625		560	2.6	14.3	0.005	0.08	0.72	1.5	2	0.2	430	0.07	<0.05	0.96	0.038	0.34
V762626		900	1.5	7.0	0.005	0.03	0.47	0.8	1	0.2	388	<0.05	<0.05	0.51	0.019	0.24
V762627		680	8.0	12.3	0.011	0.12	0.62	1.3	2	0.2	384	0.07	<0.05	0.83	0.036	0.28
V762628		1150	26.9	57.3	0.020	0.69	1.61	4.9	4	0.8	284	0.27	<0.05	3.61	0.149	1.27
V762629		530	15.0	37.1	0.006	0.44	1.34	3.1	2	0.6	861	0.15	<0.05	2.32	0.082	0.59
V762630		390	3.7	37.9	0.003	0.51	0.88	3.1	2	0.6	1000	0.16	<0.05	2.37	0.086	0.55
V762631		220	2.2	15.9	0.003	0.22	1.03	1.4	1	0.3	1335	0.07	<0.05	1.07	0.038	0.25
V762632		160	2.9	25.9	0.003	0.36	0.84	2.2	2	0.4	1375	0.11	<0.05	1.68	0.061	0.35
V762633		280	2.1	16.8	<0.002	0.30	0.72	1.6	2	0.3	999	0.08	<0.05	1.19	0.042	0.21
V762634		360	1.3	9.5	0.002	0.16	0.41	1.0	2	0.2	561	<0.05	<0.05	0.63	0.024	0.11
V762635		440	2.9	31.2	0.003	0.36	0.58	2.5	2	0.4	434	0.12	<0.05	1.92	0.070	0.19
V762636		450	4.2	48.9	0.007	0.58	1.33	3.8	2	0.7	554	0.20	<0.05	2.95	0.111	0.35
V762637		650	4.5	55.9	0.003	0.63	0.91	4.5	2	0.8	608	0.23	<0.05	3.40	0.124	0.32
V762638		190	1.1	1.4	<0.002	<0.01	0.07	0.2	1	<0.2	50.4	<0.05	<0.05	0.33	<0.005	<0.02
V762639		510	3.5	38.1	0.004	0.44	0.99	3.2	2	0.6	778	0.17	<0.05	2.45	0.089	0.30
V762640		1170	6.2	73.5	0.006	0.65	1.35	5.9	3	1.1	547	0.31	<0.05	4.51	0.162	0.44

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016 - 510 W HASTINGS STREET
VANCOUVER BC V6B 1L8

Finalized Date: 25-JUN-2018
Account: ARCHORI

Project: Orion

CERTIFICATE OF ANALYSIS WH18132677

Sample Description	Method Analyte Units LOD	ME-MS61 U ppm 0.1	ME-MS61 V ppm 1	ME-MS61 W ppm 0.1	ME-MS61 Y ppm 0.1	ME-MS61 Zn ppm 2	ME-MS61 Zr ppm 0.5
V762601		0.7	55	1.3	10.3	32	41.2
V762602		1.0	108	0.6	11.0	56	70.2
V762603		1.3	106	0.8	9.1	59	68.0
V762604		7.5	170	26.1	14.6	39	183.5
V762605		1.0	55	0.3	7.1	36	43.7
V762606		1.1	64	0.3	7.4	32	48.0
V762607		1.4	64	0.4	9.9	51	57.2
V762608		5.0	151	1.0	22.2	130	187.5
V762609		1.6	115	1.0	17.4	80	141.5
V762610		1.6	109	1.0	18.6	80	162.0
V762611		1.4	113	1.0	17.7	76	153.0
V762612		1.4	112	1.1	16.8	75	150.5
V762613		1.4	109	1.0	16.3	71	140.5
V762614		1.5	109	1.0	17.0	99	154.0
V762615		1.5	104	1.0	17.6	67	161.0
V762616		1.7	103	1.1	18.7	74	159.5
V762617		1.7	113	1.2	20.5	85	171.0
V762618		1.3	105	1.0	18.7	77	143.0
V762619		1.6	102	1.0	18.3	124	148.0
V762620		1.5	97	1.4	17.8	236	141.0
V762621		1.7	108	1.1	18.3	100	161.0
V762622		2.3	57	0.3	10.7	150	15.3
V762623		1.5	22	0.2	6.4	89	3.7
V762624		2.2	68	0.6	10.2	242	12.7
V762625		2.1	56	0.5	9.2	176	10.6
V762626		1.7	32	1.5	5.9	190	5.2
V762627		1.7	27	0.9	7.9	144	8.9
V762628		2.9	92	1.9	15.6	251	40.5
V762629		2.3	91	1.0	11.6	136	22.2
V762630		2.4	79	0.4	10.9	59	22.5
V762631		2.5	111	0.2	8.3	55	10.5
V762632		2.0	69	0.3	7.7	39	16.2
V762633		2.1	72	0.2	8.1	30	11.2
V762634		1.6	43	0.1	7.2	22	6.2
V762635		2.1	60	0.3	10.5	39	18.9
V762636		3.5	153	0.4	13.4	61	29.6
V762637		2.7	91	0.5	14.0	44	33.6
V762638		0.7	2	0.1	0.8	17	<0.5
V762639		3.1	114	0.4	12.1	51	24.5
V762640		3.4	149	0.6	18.7	60	48.8

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To: **ATAC RESOURCES LTD.**
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VANCOUVER BC V6B 1L8

Project: Orion

Finalized Date: 25-JUN-2018
Account: ARCHORI

CERTIFICATE OF ANALYSIS WH18132677

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Applies to Method: REE's may not be totally soluble in this method.
ME-MS61

LABORATORY ADDRESSES

Applies to Method: Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.

CRU-31	CRU-QC	LOG-21	LOG-23
PUL-31	PUL-QC	SPL-21	WEI-21

Applies to Method: Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Au-ICP21	Hg-MS42	ME-MS61

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VANCOUVER BC V6B 1L8

Finalized Date: 24-JUN-2018
Account: ARCHORI

CERTIFICATE WH18135100

Project: Orion

P.O. No.: 018-002

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 8-JUN-2018.

The following have access to data associated with this certificate:

GLENN ASCH	MARK BRADLEY	KEVIN CREEL
PAUL DOBAK	NATHAN ECK	VLADIMIR ISPOLATOV
JULIA LANE	KARL MARLOWE	LEE SCHOLL
LIZ STOCK	JEREMY VAUGHAN	

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
LOG-23	Pulp Login - Rcvd with Barcode

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-ICP21	Au 30g FA ICP-AES Finish	ICP-AES
ME-MS61	48 element four acid ICP-MS	
Hg-MS42	Trace Hg by ICPMS	ICP-MS

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:

Colin Ramshaw, Vancouver Laboratory Manager

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Finalized Date: 24-JUN-2018
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Project: Orion

CERTIFICATE OF ANALYSIS WH18135100

Sample Description	Method	WEI-21	Au-ICP21	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Recvd Wt.	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu
	Units	kg	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.02	0.001	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2
V762641		10.74	<0.001	0.31	2.42	15.7	410	0.83	0.03	20.9	2.00	28.0	3.9	39	3.71	14.2
V762642		11.21	0.002	0.28	2.80	16.5	400	0.89	0.04	20.8	1.46	31.5	4.4	39	4.65	13.5
V762643		11.30	<0.001	0.17	2.93	47.9	560	1.01	0.05	22.3	0.67	31.2	4.8	41	4.79	12.1
V762644		11.42	0.035	0.28	1.70	61.4	460	0.53	0.03	26.1	0.76	19.40	3.4	28	2.00	12.6
V762645		0.11	0.283	0.28	6.31	563	200	0.56	0.27	0.52	0.13	119.0	3.1	241	2.73	25.4
V762646		11.49	<0.001	0.12	2.37	27.9	290	0.76	0.05	24.3	0.27	23.1	4.7	30	3.44	10.4
V762647		11.48	<0.001	0.19	3.99	16.3	400	1.21	0.08	20.6	0.30	36.8	7.2	49	7.10	15.1
V762648		10.87	<0.001	0.28	3.87	8.6	480	1.19	0.07	19.50	0.43	33.9	6.8	50	6.02	15.9
V762649		10.58	<0.001	0.49	2.82	10.9	790	0.78	0.04	23.5	1.11	26.7	4.9	41	3.93	15.6
V762650		11.67	<0.001	0.49	4.18	15.7	880	1.31	0.07	17.60	0.78	37.5	7.3	57	6.12	18.2
V762651		10.86	<0.001	0.40	2.96	72.1	480	0.98	0.04	22.7	0.83	31.0	6.0	41	3.44	13.4
V762652		10.70	<0.001	0.56	3.50	184.5	300	1.39	0.06	19.60	1.61	36.6	6.8	48	4.41	17.5
V762653		9.49	<0.001	0.68	2.04	180.5	250	0.81	0.03	25.5	1.98	22.9	4.2	29	2.10	11.2
V762654		4.89	<0.001	0.16	1.47	16.0	210	0.57	0.03	27.0	0.58	17.40	3.2	22	2.17	6.4
V762655		5.47	<0.001	0.17	1.44	16.6	210	0.61	0.03	26.6	0.47	18.35	3.2	20	2.14	6.8
V762656		10.70	<0.001	0.19	1.86	17.1	260	0.66	0.04	24.4	0.71	22.1	3.9	25	2.82	8.3
V762657		10.64	<0.001	0.23	1.64	9.1	280	0.57	0.02	24.7	0.82	18.85	3.3	22	2.33	7.9
V762658		11.43	<0.001	0.18	1.24	7.6	160	0.47	0.02	27.0	0.74	17.55	2.8	17	2.11	6.7
V762659		11.06	<0.001	0.09	0.67	9.9	150	0.24	<0.01	27.5	1.00	13.95	1.9	11	1.11	4.3
V762660		11.03	<0.001	0.10	0.80	12.9	150	0.34	<0.01	30.8	0.84	11.75	2.2	12	1.15	4.6
V762661		11.10	<0.001	0.34	1.63	21.2	210	0.63	0.02	25.9	2.07	21.5	3.4	26	2.38	9.9
V762662		10.90	<0.001	0.57	2.05	36.1	230	0.79	0.03	22.1	2.92	25.9	4.2	34	2.90	13.5
V762663		10.84	<0.001	0.21	1.48	123.5	170	0.58	0.02	29.0	1.82	18.45	3.3	18	1.72	7.8
V762664		10.75	<0.001	0.08	1.26	34.5	150	0.45	0.02	30.5	0.63	15.75	2.8	14	1.39	5.4
V762665		10.21	<0.001	0.06	0.95	73.6	120	0.36	<0.01	30.2	0.58	12.15	2.4	12	1.06	4.7
V762666		10.41	<0.001	0.03	0.55	63.3	70	0.24	<0.01	32.5	0.46	7.80	2.0	7	0.59	3.4
V762667		9.17	<0.001	0.13	1.28	36.1	110	0.50	0.02	29.8	1.14	15.95	3.1	16	1.54	6.2
V762668		10.54	<0.001	0.16	0.86	48.6	140	0.40	<0.01	27.8	1.24	12.05	3.5	13	1.19	6.3
V762669		8.43	<0.001	0.83	1.83	111.5	170	0.88	0.03	24.6	4.45	22.9	4.7	23	2.27	9.1
V762670		11.45	<0.001	9.51	0.78	241	110	0.42	<0.01	28.3	11.15	11.20	5.6	10	1.20	27.7
V762671		7.27	<0.001	1.08	0.99	137.5	110	0.46	0.01	27.9	5.08	13.45	3.0	13	1.43	5.5
V762672		11.26	<0.001	0.32	1.18	113.0	130	0.47	0.01	28.0	2.40	17.60	3.1	16	1.65	7.0
V762673		10.18	<0.001	0.13	1.06	54.5	140	0.38	<0.01	29.9	1.17	15.35	2.8	14	1.46	5.5
V762674		9.77	<0.001	0.22	1.00	49.6	130	0.35	0.01	30.7	1.78	15.85	2.5	14	1.45	5.9
V762675		10.03	<0.001	0.47	1.72	142.0	180	0.63	0.02	26.4	3.03	22.4	3.6	25	2.50	10.5
V762676		6.96	<0.001	<0.01	0.04	<0.2	20	<0.05	<0.01	20.2	0.06	0.98	0.8	<1	0.10	1.6
V762677		10.15	<0.001	0.41	1.27	69.7	160	0.45	0.01	30.8	4.06	15.10	2.6	19	1.94	8.3
V762678		8.62	<0.001	0.21	0.61	56.4	150	0.26	<0.01	34.8	5.32	8.28	1.6	8	0.79	4.2
V762679		10.35	<0.001	0.14	0.89	77.9	120	0.40	<0.01	31.8	1.70	11.95	2.1	11	1.22	5.2
V762680		8.68	<0.001	0.05	0.28	122.5	60	0.23	0.03	34.2	6.89	6.96	2.8	4	0.59	10.2

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Finalized Date: 24-JUN-2018
Account: ARCHORI

Project: Orion

CERTIFICATE OF ANALYSIS WH18135100

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Hg-MS42	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni
	Units	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2
V762641		1.12	6.26	0.12	0.9	0.039	0.025	1.24	19.0	13.8	1.20	132	4.09	0.03	3.8	26.1
V762642		1.30	6.83	0.13	1.1	0.039	0.025	1.45	21.9	14.0	1.30	144	4.17	0.03	4.2	27.9
V762643		1.37	7.22	0.16	1.2	0.060	0.029	1.53	18.7	13.1	1.59	176	2.03	0.03	4.4	27.3
V762644		0.85	4.64	0.13	0.7	0.040	0.017	0.83	14.4	8.0	0.74	113	3.05	0.02	2.8	24.7
V762645		6.02	19.90	0.22	4.3	7.71	0.045	1.31	56.0	14.0	0.15	49	5.84	0.44	10.0	17.5
V762646		1.16	6.18	0.14	0.9	0.037	0.023	1.24	12.8	9.4	1.59	166	1.28	0.02	3.8	20.5
V762647		1.82	10.75	0.17	1.4	0.037	0.038	2.08	21.4	17.3	1.40	197	1.08	0.03	6.4	28.7
V762648		1.81	10.20	0.20	1.4	0.044	0.037	2.01	19.4	17.5	1.97	218	1.34	0.04	6.1	27.9
V762649		1.30	7.57	0.18	1.1	0.045	0.028	1.41	17.6	11.8	1.20	152	2.61	0.03	4.5	24.5
V762650		1.92	11.15	0.22	1.5	0.058	0.042	2.15	22.9	15.3	1.84	196	1.77	0.03	6.7	32.8
V762651		1.40	8.24	0.22	1.1	0.085	0.032	1.50	20.4	7.9	1.36	179	1.67	0.02	4.9	29.8
V762652		1.61	9.71	0.22	1.3	0.104	0.035	1.76	24.0	8.7	1.56	176	3.19	0.03	5.9	38.7
V762653		1.12	5.59	0.19	0.7	0.205	0.023	1.02	16.5	4.9	1.65	165	2.71	0.02	3.3	33.3
V762654		0.86	3.97	0.14	0.5	0.029	0.019	0.75	11.1	6.4	1.75	108	0.88	0.02	2.4	11.9
V762655		0.83	4.11	0.16	0.6	0.027	0.018	0.73	11.8	6.3	1.78	107	1.00	0.02	2.5	12.2
V762656		1.00	5.20	0.19	0.7	0.026	0.020	0.95	14.0	8.3	2.03	127	1.26	0.02	3.1	15.7
V762657		0.87	4.63	0.15	0.6	0.033	0.018	0.84	12.1	6.9	1.31	100	1.35	0.02	2.9	13.3
V762658		0.73	3.53	0.17	0.5	0.027	0.013	0.63	11.1	6.5	1.92	99	1.61	0.02	2.2	11.4
V762659		0.56	1.94	0.17	0.3	0.020	0.009	0.33	10.1	4.5	1.12	88	1.36	0.01	1.2	7.8
V762660		0.51	2.23	0.16	0.3	0.018	0.011	0.39	9.6	4.6	0.99	79	1.51	0.01	1.4	9.4
V762661		0.87	4.50	0.18	0.6	0.046	0.020	0.77	16.4	8.3	1.85	99	2.69	0.02	2.9	18.7
V762662		1.08	5.70	0.21	0.8	0.062	0.021	0.99	19.4	8.7	3.51	120	3.31	0.02	3.6	25.5
V762663		0.69	3.96	0.19	0.5	0.052	0.016	0.70	13.9	5.7	0.88	92	3.29	0.02	2.6	17.2
V762664		0.57	3.40	0.17	0.5	0.039	0.014	0.60	9.5	5.6	0.88	77	2.15	0.02	2.2	10.9
V762665		0.55	2.59	0.19	0.4	0.035	0.012	0.44	7.7	4.4	1.00	83	1.93	0.01	1.7	14.9
V762666		0.41	1.54	0.18	0.2	0.031	0.006	0.25	5.5	2.6	0.75	81	1.19	0.01	1.0	13.7
V762667		0.58	3.44	0.16	0.5	0.081	0.015	0.61	11.0	4.4	1.00	78	2.29	0.02	2.2	18.2
V762668		0.65	2.33	0.17	0.3	0.081	0.011	0.40	8.7	3.9	0.77	94	2.25	0.01	1.5	23.7
V762669		1.01	4.85	0.17	0.7	0.421	0.019	0.88	15.4	7.0	1.99	171	4.44	0.02	3.2	43.5
V762670		1.01	2.10	0.18	0.3	1.040	0.010	0.36	8.6	5.1	1.45	268	179.0	0.01	1.3	93.4
V762671		0.65	2.67	0.17	0.4	0.367	0.013	0.46	9.2	5.4	0.86	169	4.30	0.01	1.7	35.6
V762672		0.61	3.14	0.19	0.4	0.115	0.013	0.55	13.3	4.5	0.95	112	3.64	0.01	2.1	25.5
V762673		0.55	2.86	0.19	0.4	0.041	0.012	0.48	11.2	4.7	1.14	88	2.26	0.01	1.8	14.0
V762674		0.52	2.72	0.20	0.4	0.043	0.013	0.45	11.8	5.2	0.97	78	2.43	0.01	1.8	11.3
V762675		0.84	4.66	0.21	0.7	0.048	0.018	0.78	16.2	8.4	2.06	118	3.78	0.02	3.0	32.0
V762676		0.45	0.23	0.32	<0.1	<0.005	0.006	0.01	0.5	0.8	12.70	206	0.07	<0.01	0.1	1.4
V762677		0.61	3.18	0.25	0.4	0.040	0.014	0.57	11.7	6.2	2.05	95	3.90	0.02	2.0	27.3
V762678		0.35	1.55	0.19	0.2	0.075	0.008	0.27	7.0	3.2	1.22	78	4.05	0.01	1.0	16.5
V762679		0.44	2.29	0.19	0.4	0.030	0.010	0.38	8.3	4.5	1.59	93	8.38	0.01	1.4	25.4
V762680		0.40	0.84	0.11	0.1	0.054	0.005	0.13	5.5	1.7	1.41	125	7.85	0.01	0.4	40.4

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016 - 510 W HASTINGS STREET
VANCOUVER BC V6B 1L8

Finalized Date: 24-JUN-2018
Account: ARCHORI

Project: Orion

CERTIFICATE OF ANALYSIS WH18135100

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl
	Units	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
	LOD	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.01	0.005	0.02
V762641		850	4.9	55.3	0.007	0.54	2.10	4.4	2	0.9	639	0.24	<0.05	3.36	0.128	0.43
V762642		610	5.1	61.7	0.006	0.58	2.30	4.7	2	0.9	647	0.27	<0.05	3.57	0.146	0.73
V762643		570	5.7	65.9	0.007	0.56	1.25	5.1	3	1.0	673	0.30	<0.05	3.97	0.151	1.08
V762644		790	4.1	38.7	0.010	0.36	1.11	3.9	2	0.6	910	0.18	<0.05	2.15	0.089	0.45
V762645		1020	13.5	46.5	0.002	2.99	96.6	18.8	1	2.2	534	0.71	0.10	7.92	0.549	6.54
V762646		610	4.8	56.5	0.003	0.44	0.63	5.0	2	0.7	473	0.24	<0.05	2.97	0.122	0.35
V762647		640	6.7	100.5	0.003	0.72	0.70	8.4	2	1.2	477	0.40	<0.05	4.89	0.199	0.46
V762648		760	7.0	91.7	0.005	0.63	0.78	8.2	2	1.2	457	0.39	<0.05	4.71	0.193	0.42
V762649		870	4.8	62.6	0.005	0.55	0.89	6.0	2	0.9	619	0.28	<0.05	3.45	0.141	0.47
V762650		1340	6.4	96.9	0.008	0.71	0.89	8.8	2	1.3	480	0.41	<0.05	5.18	0.209	0.72
V762651		1160	6.2	68.6	0.011	0.51	0.80	6.5	2	1.0	540	0.31	<0.05	3.84	0.151	1.44
V762652		630	8.1	82.7	0.013	0.62	1.78	7.7	3	1.2	433	0.36	<0.05	4.64	0.174	1.65
V762653		650	33.2	44.8	0.009	0.33	1.73	4.6	3	0.7	380	0.21	<0.05	2.69	0.102	1.02
V762654		550	4.0	35.4	0.002	0.34	0.50	3.4	2	0.5	492	0.15	<0.05	2.02	0.074	0.27
V762655		510	4.0	36.0	0.004	0.33	0.54	3.4	2	0.6	465	0.16	<0.05	2.11	0.073	0.28
V762656		260	4.8	45.4	0.003	0.32	0.70	4.2	2	0.7	473	0.20	<0.05	2.59	0.093	0.34
V762657		390	3.5	39.0	0.004	0.37	0.76	3.6	2	0.6	581	0.18	<0.05	2.30	0.086	0.30
V762658		580	3.3	30.1	0.004	0.31	0.95	2.9	2	0.5	386	0.14	<0.05	1.84	0.065	0.28
V762659		390	2.6	14.7	0.002	0.23	0.86	1.8	1	0.3	398	0.07	<0.05	1.06	0.037	0.22
V762660		150	2.9	17.0	0.002	0.26	1.06	1.9	1	0.3	541	0.09	<0.05	1.15	0.043	0.22
V762661		370	4.4	36.0	0.005	0.40	2.19	3.6	3	0.6	321	0.18	<0.05	2.24	0.089	0.35
V762662		590	5.8	44.6	0.009	0.47	2.44	4.5	4	0.7	231	0.23	<0.05	2.75	0.112	0.82
V762663		160	5.0	30.6	0.003	0.50	1.83	3.4	2	0.5	779	0.17	<0.05	2.03	0.080	0.51
V762664		210	3.1	26.1	<0.002	0.36	0.88	2.7	1	0.5	1200	0.13	<0.05	1.72	0.067	0.34
V762665		130	2.5	19.1	0.003	0.22	0.85	2.1	2	0.4	624	0.11	<0.05	1.36	0.051	0.58
V762666		90	1.8	10.3	0.002	0.11	0.46	1.4	2	0.3	409	0.06	<0.05	0.79	0.029	0.65
V762667		140	7.9	25.7	0.004	0.12	1.19	2.7	1	0.6	435	0.15	<0.05	1.82	0.069	1.53
V762668		150	7.4	17.2	0.003	0.09	1.06	1.8	2	0.5	431	0.09	<0.05	1.21	0.047	0.99
V762669		310	98.5	36.8	0.007	0.11	3.76	3.7	4	0.7	375	0.20	<0.05	2.63	0.100	2.68
V762670		100	3240	14.6	0.004	0.05	16.15	1.8	5	0.4	442	0.09	<0.05	1.21	0.041	2.25
V762671		160	126.5	19.8	0.009	0.06	2.34	2.3	4	0.4	389	0.11	<0.05	1.44	0.053	2.89
V762672		170	15.0	23.3	0.006	0.08	1.81	2.6	4	0.5	481	0.13	<0.05	1.71	0.065	1.87
V762673		120	3.3	20.8	0.003	0.11	1.50	2.4	3	0.4	508	0.12	<0.05	1.53	0.057	0.95
V762674		130	3.1	19.7	0.006	0.12	1.73	2.2	3	0.4	554	0.11	<0.05	1.48	0.055	0.75
V762675		540	4.4	35.1	0.021	0.11	2.65	3.7	6	0.6	335	0.20	<0.05	2.50	0.093	3.14
V762676		180	1.3	0.7	<0.002	<0.01	0.09	0.1	1	<0.2	47.8	<0.05	<0.05	0.06	<0.005	<0.02
V762677		320	3.5	24.4	0.015	0.19	2.67	2.5	4	0.4	456	0.13	<0.05	1.66	0.067	3.73
V762678		240	2.0	10.4	0.010	0.09	1.10	1.3	3	0.2	599	0.06	<0.05	0.80	0.030	1.73
V762679		330	2.6	17.2	0.020	0.10	1.92	2.0	3	0.3	321	0.09	<0.05	1.17	0.047	2.61
V762680		210	9.2	5.2	0.010	0.04	0.85	1.6	4	0.2	210	<0.05	<0.05	0.46	0.014	1.78

***** See Appendix Page for comments regarding this certificate *****

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1016 - 510 W HASTINGS STREET
VANCOUVER BC V6B 1L8

Finalized Date: 24-JUN-2018
Account: ARCHORI

Project: Orion

CERTIFICATE OF ANALYSIS WH18135100

Sample Description	Method Analyte Units LOD	ME-MS61 U ppm 0.1	ME-MS61 V ppm 1	ME-MS61 W ppm 0.1	ME-MS61 Y ppm 0.1	ME-MS61 Zn ppm 2	ME-MS61 Zr ppm 0.5
V762641		3.3	226	0.5	16.5	116	35.4
V762642		3.6	204	0.5	16.6	134	39.8
V762643		2.7	129	0.6	15.2	183	40.9
V762644		3.0	138	0.3	13.9	139	25.3
V762645		6.5	168	23.3	15.8	39	177.5
V762646		2.0	72	0.5	12.6	58	35.1
V762647		2.5	96	0.7	19.6	65	56.4
V762648		2.7	106	0.7	19.4	64	51.0
V762649		3.2	105	0.5	16.4	86	41.0
V762650		3.6	119	0.7	21.4	98	62.3
V762651		2.8	84	0.6	19.0	192	48.3
V762652		3.6	184	1.0	21.7	223	50.6
V762653		2.8	113	1.2	17.1	322	29.9
V762654		1.9	53	0.4	12.8	53	19.8
V762655		1.9	54	0.4	12.9	47	20.1
V762656		1.9	76	0.4	14.3	69	26.0
V762657		2.1	69	0.3	13.1	56	23.7
V762658		2.1	73	0.2	11.8	51	17.9
V762659		1.7	53	0.1	12.2	78	9.8
V762660		1.7	56	0.2	10.3	61	11.3
V762661		2.8	148	0.3	15.9	124	25.4
V762662		3.3	203	0.5	18.4	211	30.5
V762663		3.4	105	0.4	11.2	143	23.4
V762664		2.3	51	0.3	8.2	52	17.9
V762665		2.0	49	0.3	7.9	110	13.5
V762666		1.2	25	0.2	6.8	120	8.0
V762667		2.1	69	0.4	10.6	198	18.0
V762668		1.8	60	0.5	9.6	252	12.1
V762669		2.6	114	1.9	14.1	718	26.3
V762670		1.6	52	0.8	13.3	3210	11.5
V762671		2.2	68	0.5	13.7	538	13.6
V762672		2.8	103	0.4	14.4	298	16.7
V762673		2.4	68	0.3	12.6	126	14.7
V762674		2.7	81	0.3	13.6	103	14.2
V762675		3.8	164	0.6	15.5	359	30.9
V762676		0.6	2	0.1	0.7	17	<0.5
V762677		3.3	133	0.3	11.4	351	17.0
V762678		2.9	56	0.2	8.4	259	8.3
V762679		4.6	82	0.3	9.1	290	12.7
V762680		4.3	39	0.2	8.6	505	4.2

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To: **ATAC RESOURCES LTD.**
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1016 - 510 W HASTINGS STREET
VANCOUVER BC V6B 1L8

Project: Orion

Finalized Date: 24-JUN-2018
Account: ARCHORI

CERTIFICATE OF ANALYSIS WH18135100

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Applies to Method: REE's may not be totally soluble in this method.
ME-MS61

LABORATORY ADDRESSES

Applies to Method: Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.

CRU-31	CRU-QC	LOG-21	LOG-23
PUL-31	PUL-QC	SPL-21	WEI-21

Applies to Method: Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Au-ICP21	Hg-MS42	ME-MS61

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Finalized Date: 24-JUN-2018
Account: ARCHORI

CERTIFICATE WH18135157

Project: Orion

P.O. No.: 018-003

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 8-JUN-2018.

The following have access to data associated with this certificate:

GLENN ASCH	MARK BRADLEY	KEVIN CREEL
PAUL DOBAK	NATHAN ECK	VLADIMIR ISPOLATOV
JULIA LANE	KARL MARLOWE	LEE SCHOLL
LIZ STOCK	JEREMY VAUGHAN	

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
LOG-23	Pulp Login - Rcvd with Barcode

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-ICP21	Au 30g FA ICP-AES Finish	ICP-AES
ME-MS61	48 element four acid ICP-MS	
Hg-MS42	Trace Hg by ICPMS	ICP-MS

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:

Colin Ramshaw, Vancouver Laboratory Manager

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Finalized Date: 24-JUN-2018
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CERTIFICATE OF ANALYSIS WH18135157

Sample Description	Method	WEI-21	Au-ICP21	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Recvd Wt.	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu
	Units	kg	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.02	0.001	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2
V766001		7.12	<0.001	0.39	0.08	23.6	130	0.17	0.01	36.7	6.59	3.38	1.4	2	0.13	4.5
V766002		9.83	<0.001	0.56	0.89	158.5	150	0.41	0.03	29.2	5.41	12.80	1.9	11	2.96	9.1
V766003		5.43	<0.001	0.19	0.57	110.5	180	0.30	0.03	31.4	2.64	11.60	1.4	8	1.46	7.0
V766004		8.69	<0.001	0.04	0.07	22.1	90	0.10	0.01	35.0	0.86	5.83	0.9	2	0.10	2.7
V766005		2.40	<0.001	0.80	2.64	138.5	360	1.29	0.08	17.45	16.40	36.9	4.1	52	8.65	28.1
V766006		10.26	<0.001	1.71	2.74	52.8	520	1.20	0.10	11.25	9.11	36.1	4.9	116	11.15	42.5
V766007		9.79	<0.001	0.72	2.42	57.7	360	1.06	0.08	16.65	12.60	32.4	4.4	54	9.02	25.7
V766008		0.11	0.298	0.30	6.39	567	150	0.70	0.30	0.54	0.16	140.0	2.9	235	3.24	24.0
V766009		11.45	<0.001	0.85	3.54	65.5	360	1.48	0.11	13.10	15.15	47.2	6.7	70	12.85	31.6
V766010		5.12	<0.001	0.30	3.30	93.1	320	1.40	0.11	14.60	4.11	44.4	6.3	51	8.96	22.5
V766011		6.16	<0.001	1.60	1.93	110.5	320	1.29	0.13	24.8	29.6	45.5	3.4	117	7.02	126.5
V766012		9.29	0.001	0.08	0.08	20.8	90	0.11	0.01	37.6	1.31	3.61	0.8	3	0.19	4.7
V766013		9.66	0.003	0.17	0.03	18.2	70	0.12	0.01	35.8	1.17	2.89	0.7	2	0.06	2.5
V766014		10.96	0.002	0.09	0.18	31.4	100	0.13	0.01	33.4	1.08	4.90	0.9	4	0.36	3.8
V766015		11.23	<0.001	0.32	0.70	57.0	140	0.35	0.03	29.2	1.01	14.00	1.8	10	1.31	6.2
V766016		5.80	<0.001	0.16	0.17	36.4	100	0.20	0.01	32.8	0.66	8.21	1.0	3	0.26	3.1
V766017		3.83	0.004	2.01	3.61	294	450	1.57	0.11	14.05	4.69	43.7	5.6	50	7.98	25.4
V766018		4.53	0.001	1.80	3.43	228	330	1.75	0.11	13.95	4.57	44.4	6.8	46	6.86	20.5
V766019		4.13	0.008	2.78	5.94	631	480	1.86	0.20	10.10	9.57	70.1	14.1	74	10.95	46.7
V766020		3.71	0.005	2.22	2.94	668	370	1.28	0.12	20.4	15.85	41.8	22.2	52	6.84	44.8
V766021		2.18	0.003	0.97	1.11	368	210	0.66	0.04	28.7	16.15	19.35	4.6	19	2.36	17.8
V766022		2.95	0.007	1.54	3.61	730	420	1.57	0.12	22.6	18.85	42.4	14.5	49	10.35	38.2
V766023		2.23	0.001	1.39	4.30	1085	610	1.98	0.14	21.1	18.05	50.7	15.0	60	13.75	45.4
V766024		4.03	0.014	1.51	7.08	2300	520	2.76	0.20	10.30	41.0	81.4	9.4	84	24.7	48.3
V766025		5.40	<0.001	1.03	2.40	1085	490	1.29	0.08	24.4	19.05	33.2	8.9	39	9.68	28.3
V766026		4.26	0.001	2.69	5.21	2790	740	2.12	0.17	9.83	42.0	72.1	22.2	83	20.0	65.5
V766027		4.97	0.010	0.59	1.19	353	380	0.48	0.03	32.3	10.65	14.50	2.6	15	3.46	8.7
V766028		3.63	0.009	0.91	4.03	934	660	1.40	0.09	21.3	20.9	45.0	7.1	47	10.90	22.5
V766029		4.47	0.009	0.63	3.33	478	590	1.19	0.09	24.2	9.52	35.2	5.9	42	10.00	16.8
V766030		6.96	<0.001	<0.01	0.05	2.0	80	<0.05	0.03	21.0	0.09	1.22	0.9	<1	0.13	2.2
V766031		11.09	<0.001	0.28	0.49	42.6	320	0.19	0.02	34.5	3.08	10.75	1.2	10	1.17	4.7
V766032		10.76	0.001	0.13	0.33	29.1	290	0.18	0.01	35.7	1.65	5.28	1.2	5	0.49	3.1
V766033		10.67	<0.001	0.16	0.48	62.2	440	0.20	0.02	35.4	1.76	6.77	1.3	8	0.72	3.7
V766034		5.35	<0.001	0.19	0.57	4.3	380	0.22	0.02	34.1	1.21	8.51	1.6	10	0.88	4.1
V766035		5.36	<0.001	0.16	0.51	3.4	360	0.26	0.03	34.3	0.94	8.05	1.5	8	0.80	3.7
V766036		10.69	0.001	0.43	2.23	49.1	410	0.76	0.06	26.2	3.84	23.3	4.4	28	3.66	11.6
V766037		9.47	0.001	0.21	0.84	100.5	270	0.28	0.02	31.4	2.41	11.05	2.4	11	1.29	5.2
V766038		9.87	<0.001	0.11	0.37	59.9	230	0.18	<0.01	30.3	1.36	6.32	1.2	7	0.65	3.3
V766039		11.08	<0.001	0.43	2.11	31.3	380	0.78	0.05	25.7	2.74	22.2	4.1	25	2.79	10.7
V766040		11.51	<0.001	0.44	1.95	24.7	380	0.77	0.05	24.6	2.97	23.1	3.8	26	2.68	11.4

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016 - 510 W HASTINGS STREET
VANCOUVER BC V6B 1L8

Finalized Date: 24-JUN-2018
Account: ARCHORI

Project: Orion

CERTIFICATE OF ANALYSIS WH18135157

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Hg-MS42	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni
	Units	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2
V766001		0.05	0.32	0.09	<0.1	0.521	<0.005	0.03	4.6	1.1	0.34	91	0.74	0.01	0.1	4.8
V766002		0.42	2.10	0.11	0.4	0.489	0.010	0.38	10.0	4.5	3.82	87	8.74	0.01	1.5	36.4
V766003		0.29	1.33	0.17	0.3	0.088	0.005	0.26	9.6	2.4	3.22	78	12.40	0.01	1.1	21.2
V766004		0.06	0.24	0.11	<0.1	0.026	<0.005	0.03	7.1	0.6	1.64	65	3.14	0.01	0.1	5.6
V766005		1.36	7.22	0.23	1.2	0.290	0.025	1.27	26.6	11.0	5.56	122	20.4	0.02	5.3	62.5
V766006		1.40	7.46	0.27	1.2	0.171	0.023	1.34	26.9	12.0	2.48	121	14.60	0.03	5.5	79.8
V766007		1.32	6.81	0.19	1.0	0.149	0.024	1.17	24.0	10.7	4.47	122	24.5	0.02	4.9	65.0
V766008		6.29	20.6	0.27	4.4	7.35	0.048	1.37	61.3	19.2	0.16	49	6.50	0.46	10.2	17.0
V766009		1.76	10.20	0.20	1.5	0.288	0.030	1.67	33.2	16.0	4.90	145	31.7	0.03	7.2	79.0
V766010		1.58	8.89	0.19	1.4	0.383	0.029	1.53	28.2	12.5	7.51	140	39.2	0.03	6.4	72.8
V766011		0.97	6.49	0.23	1.2	0.820	0.020	0.89	42.0	9.5	2.53	69	57.6	0.02	4.5	217
V766012		0.07	0.28	0.09	<0.1	0.051	<0.005	0.03	4.8	0.7	0.40	33	1.58	0.01	0.2	6.0
V766013		0.06	0.14	0.10	<0.1	0.077	<0.005	0.01	4.3	0.5	1.31	51	0.71	0.01	0.1	3.3
V766014		0.13	0.42	0.10	0.1	0.045	<0.005	0.08	4.7	1.1	2.59	53	4.29	0.01	0.4	9.2
V766015		0.36	1.50	0.13	0.3	0.119	0.006	0.32	10.7	3.1	4.14	82	11.80	0.01	1.3	23.4
V766016		0.12	0.47	0.07	0.1	0.056	<0.005	0.07	9.1	1.0	3.21	107	6.20	0.01	0.3	8.8
V766017		1.73	9.54	0.21	1.5	0.909	0.032	1.68	26.3	13.9	6.76	156	49.2	0.03	6.6	100.0
V766018		1.65	9.55	0.19	1.5	0.556	0.021	1.61	27.2	14.7	7.20	186	45.5	0.03	6.5	84.4
V766019		2.95	16.35	0.24	2.4	2.16	0.045	2.54	42.8	28.0	4.64	306	45.7	0.05	10.0	177.5
V766020		1.76	7.90	0.19	1.3	3.00	0.027	1.21	30.0	14.4	3.31	447	25.4	0.03	5.2	184.0
V766021		0.67	3.12	0.16	0.5	1.220	0.012	0.47	15.4	5.6	2.83	178	11.35	0.01	2.1	49.8
V766022		1.87	9.66	0.20	1.5	1.480	0.026	1.42	28.7	18.8	1.31	234	13.50	0.03	5.8	172.5
V766023		2.17	11.50	0.20	1.6	1.705	0.040	1.77	35.9	19.9	0.55	240	16.20	0.03	7.2	221
V766024		3.69	19.25	0.31	2.7	1.980	0.065	3.27	48.4	24.7	0.68	148	18.70	0.04	11.5	218
V766025		1.47	6.60	0.16	1.0	1.905	0.024	1.04	25.3	10.1	1.03	177	10.20	0.02	4.0	146.5
V766026		3.43	14.45	0.23	2.1	4.69	0.050	2.30	53.2	20.3	0.81	335	20.0	0.03	8.6	344
V766027		0.72	3.11	0.11	0.5	0.268	0.013	0.56	9.9	4.3	1.43	108	4.48	0.01	1.8	35.9
V766028		1.86	10.80	0.19	1.5	0.371	0.038	1.99	28.2	15.6	1.94	156	10.65	0.03	6.6	93.5
V766029		1.69	8.81	0.17	1.3	0.198	0.029	1.65	22.4	13.4	1.37	125	11.15	0.03	5.5	78.4
V766030		0.47	0.20	0.12	<0.1	<0.005	0.006	0.02	0.6	0.9	12.95	204	0.15	<0.01	0.1	1.7
V766031		0.32	1.42	0.13	0.2	0.029	0.005	0.25	10.0	2.4	0.36	64	1.85	0.01	0.8	11.1
V766032		0.30	0.87	0.10	0.1	0.029	<0.005	0.18	4.7	1.7	1.70	74	1.62	0.01	0.5	8.9
V766033		0.37	1.22	0.11	0.2	0.029	<0.005	0.25	5.1	1.9	0.82	75	1.52	0.01	0.7	11.4
V766034		0.41	1.51	0.10	0.2	0.019	<0.005	0.30	6.3	2.2	1.20	72	2.24	0.01	0.9	8.2
V766035		0.41	1.38	0.09	0.2	0.016	<0.005	0.27	6.1	2.2	1.18	71	2.04	0.01	0.8	7.3
V766036		1.18	6.22	0.08	0.9	0.048	0.023	1.17	14.6	7.4	2.45	109	4.34	0.02	3.7	27.3
V766037		0.52	2.41	0.09	0.3	0.070	0.009	0.43	8.0	3.4	1.80	76	1.17	0.01	1.4	12.7
V766038		0.37	1.13	0.21	0.1	0.035	<0.005	0.19	5.7	2.2	0.61	65	0.78	0.01	0.6	9.0
V766039		1.06	5.57	0.27	0.7	0.047	0.015	1.10	13.6	6.6	1.89	109	3.58	0.02	3.4	21.3
V766040		0.98	5.41	0.27	0.7	0.036	0.015	1.03	17.3	6.7	1.41	96	3.79	0.02	3.3	22.4

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016 - 510 W HASTINGS STREET
VANCOUVER BC V6B 1L8

Finalized Date: 24-JUN-2018
Account: ARCHORI

Project: Orion

CERTIFICATE OF ANALYSIS WH18135157

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl
	Units	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
	LOD	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.01	0.005	0.02
V766001		200	13.3	1.4	0.004	<0.01	0.60	0.5	1	<0.2	234	<0.05	<0.05	0.14	<0.005	0.15
V766002		530	14.4	15.5	0.003	0.01	2.64	1.8	2	0.3	243	0.09	<0.05	1.38	0.040	2.05
V766003		480	6.9	9.8	0.011	0.01	2.33	1.3	5	0.2	210	0.06	<0.05	1.04	0.031	1.13
V766004		400	2.8	1.1	0.019	0.02	0.80	0.4	2	<0.2	217	<0.05	<0.05	0.16	<0.005	0.21
V766005		520	93.8	54.7	0.050	0.62	17.40	4.8	17	1.0	186.0	0.33	<0.05	3.87	0.145	5.22
V766006		1310	9.4	60.5	0.085	1.31	10.55	5.2	27	1.0	157.5	0.35	0.11	4.04	0.150	1.86
V766007		430	9.1	52.1	0.088	1.05	14.15	4.5	12	0.9	208	0.31	<0.05	3.74	0.132	1.01
V766008		1040	15.5	45.8	<0.002	3.07	108.0	16.2	1	2.5	534	0.73	0.13	9.02	0.552	7.40
V766009		480	12.1	75.2	0.056	1.83	19.85	6.5	8	1.3	158.0	0.47	0.07	5.41	0.196	1.24
V766010		410	20.5	64.5	0.032	1.36	12.10	6.3	4	1.1	137.0	0.41	<0.05	5.21	0.183	1.15
V766011		1200	17.6	40.8	0.247	0.62	20.0	5.5	16	0.8	356	0.27	0.13	3.39	0.102	3.33
V766012		150	5.8	1.4	0.010	0.02	0.88	0.4	1	<0.2	265	<0.05	<0.05	0.13	<0.005	0.19
V766013		210	7.8	0.5	0.005	0.04	0.64	0.3	2	<0.2	202	<0.05	<0.05	0.08	<0.005	0.08
V766014		310	2.7	3.0	0.017	0.06	0.75	0.6	2	<0.2	187.5	<0.05	<0.05	0.33	0.010	0.34
V766015		510	15.0	12.2	0.017	0.13	2.53	1.5	3	0.2	185.5	0.08	<0.05	1.24	0.038	0.82
V766016		410	7.2	2.9	0.005	0.02	0.73	0.6	1	<0.2	188.5	<0.05	<0.05	0.34	0.009	0.22
V766017		460	90.2	68.0	<0.002	0.05	9.90	6.4	8	1.3	139.0	0.42	<0.05	5.55	0.197	3.92
V766018		530	153.5	65.7	<0.002	0.04	10.35	6.3	3	1.3	125.5	0.43	<0.05	5.53	0.184	3.01
V766019		920	367	105.5	<0.002	0.03	17.15	10.9	7	2.1	157.0	0.66	0.05	9.11	0.298	8.03
V766020		1190	370	52.3	<0.002	0.02	14.55	5.9	6	1.0	203	0.34	<0.05	4.81	0.146	6.94
V766021		670	160.5	19.6	<0.002	<0.01	5.95	2.8	7	0.5	231	0.14	<0.05	1.78	0.060	1.73
V766022		780	153.0	64.9	<0.002	0.01	8.89	6.8	16	1.2	237	0.38	0.05	5.31	0.163	9.47
V766023		1140	116.0	79.1	0.003	0.02	11.00	7.5	7	1.5	262	0.45	<0.05	6.32	0.204	12.75
V766024		1150	64.5	140.0	0.004	0.02	12.85	11.4	22	2.5	142.0	0.75	0.08	10.20	0.364	19.90
V766025		920	82.1	46.6	0.006	0.03	8.93	4.6	4	1.0	332	0.26	<0.05	3.54	0.115	9.15
V766026		2580	166.5	101.0	0.003	0.03	22.9	9.4	6	2.5	220	0.53	0.10	7.76	0.251	19.55
V766027		260	7.0	23.3	0.005	0.03	2.98	2.3	3	0.4	317	0.11	<0.05	1.60	0.059	3.12
V766028		410	13.3	87.0	0.002	0.03	10.30	7.3	9	1.5	242	0.42	<0.05	5.42	0.207	9.97
V766029		310	9.8	72.7	0.002	0.02	9.04	5.9	5	1.1	237	0.34	<0.05	4.56	0.175	8.61
V766030		190	1.4	0.8	<0.002	<0.01	0.09	0.2	<1	<0.2	51.9	<0.05	<0.05	0.09	<0.005	0.04
V766031		530	2.4	10.6	0.003	0.07	1.33	1.2	2	0.2	468	0.05	<0.05	0.82	0.025	0.93
V766032		180	1.7	6.2	0.004	0.08	0.98	0.8	1	<0.2	480	<0.05	<0.05	0.46	0.016	0.39
V766033		170	1.9	8.9	0.010	0.09	0.91	1.0	2	0.2	530	0.05	<0.05	0.67	0.025	0.66
V766034		440	1.9	11.1	0.004	0.26	0.94	1.2	2	0.2	574	0.06	<0.05	0.82	0.029	0.49
V766035		390	1.7	10.1	0.004	0.27	0.91	1.1	2	0.2	580	0.05	<0.05	0.72	0.026	0.46
V766036		330	5.5	46.8	0.004	0.69	3.85	4.3	3	0.8	605	0.24	<0.05	3.10	0.115	1.74
V766037		160	2.9	16.2	0.002	0.17	1.04	1.9	2	0.3	742	0.10	<0.05	1.26	0.045	0.71
V766038		150	1.8	7.3	0.002	0.06	0.67	1.0	1	0.2	693	<0.05	<0.05	0.61	0.021	0.58
V766039		220	5.7	44.6	<0.002	0.52	2.46	4.0	2	0.7	1495	0.21	<0.05	2.88	0.110	0.75
V766040		260	4.6	43.1	0.006	0.47	2.78	4.0	2	0.7	1360	0.21	<0.05	2.81	0.104	0.62

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CERTIFICATE OF ANALYSIS WH18135157

Sample Description	Method Analyte Units LOD	ME-MS61 U ppm 0.1	ME-MS61 V ppm 1	ME-MS61 W ppm 0.1	ME-MS61 Y ppm 0.1	ME-MS61 Zn ppm 2	ME-MS61 Zr ppm 0.5
V766001		5.0	23	0.1	5.8	50	1.8
V766002		7.2	72	0.8	9.7	473	13.9
V766003		8.6	44	0.2	8.9	237	10.1
V766004		7.6	18	<0.1	6.5	51	1.4
V766005		7.7	889	0.5	23.5	968	44.8
V766006		7.6	1090	0.6	32.1	467	50.2
V766007		7.9	962	0.5	19.9	870	40.7
V766008		7.7	174	25.0	15.4	40	176.5
V766009		12.0	1140	0.8	25.0	955	57.8
V766010		9.7	669	0.7	20.5	451	54.6
V766011		13.8	1840	0.5	48.2	1280	67.5
V766012		4.6	58	<0.1	5.3	61	2.4
V766013		5.0	25	0.1	4.7	45	0.8
V766014		5.0	29	0.1	4.1	87	3.7
V766015		8.2	38	0.6	8.8	185	12.0
V766016		8.8	37	0.3	8.5	78	3.4
V766017		8.4	727	4.0	20.6	1110	58.9
V766018		8.0	514	3.8	20.4	838	55.3
V766019		7.7	774	5.9	29.7	2090	90.2
V766020		9.2	594	2.6	32.6	1560	52.9
V766021		8.2	274	1.0	20.2	646	21.2
V766022		5.2	430	1.2	28.2	1640	55.4
V766023		5.6	505	1.5	31.6	1980	66.8
V766024		6.9	562	1.9	37.3	2560	99.1
V766025		5.0	418	1.1	23.1	1330	39.2
V766026		11.5	1020	2.7	45.5	2920	81.4
V766027		2.7	125	0.3	11.1	594	16.5
V766028		6.3	606	0.9	23.3	1400	59.0
V766029		5.6	509	0.7	16.5	1200	48.5
V766030		0.9	4	0.1	0.8	21	<0.5
V766031		2.3	78	0.1	10.7	186	7.3
V766032		1.8	45	0.1	4.9	108	4.7
V766033		1.4	50	0.1	5.5	166	6.7
V766034		1.9	51	0.1	6.9	88	8.1
V766035		1.8	46	0.1	6.7	56	7.4
V766036		4.0	207	0.4	12.3	266	29.3
V766037		1.7	59	0.2	9.2	141	11.8
V766038		1.0	37	0.1	7.7	124	5.3
V766039		3.0	145	0.5	12.0	171	28.1
V766040		3.2	175	0.4	12.8	154	27.2

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016 - 510 W HASTINGS STREET
VANCOUVER BC V6B 1L8

Project: Orion

Finalized Date: 24-JUN-2018
Account: ARCHORI

CERTIFICATE OF ANALYSIS WH18135157

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Applies to Method: REE's may not be totally soluble in this method.
ME-MS61

LABORATORY ADDRESSES

Applies to Method: Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.

CRU-31	CRU-QC	LOG-21	LOG-23
PUL-31	PUL-QC	SPL-21	WEI-21

Applies to Method: Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Au-ICP21	Hg-MS42	ME-MS61

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To: **ATAC RESOURCES LTD.**
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1016 - 510 W HASTINGS STREET
VANCOUVER BC V6B 1L8

Finalized Date: 27-JUN-2018
Account: ARCHORI

CERTIFICATE WH18139267

Project: Orion

P.O. No.: 018-004

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 13-JUN-2018.

The following have access to data associated with this certificate:

GLENN ASCH	MARK BRADLEY	KEVIN CREEL
PAUL DOBAK	NATHAN ECK	VLADIMIR ISPOLATOV
JULIA LANE	KARL MARLOWE	LEE SCHOLL
LIZ STOCK	JEREMY VAUGHAN	

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
PUL-31	Pulverize split to 85% <75 um
LOG-23	Pulp Login - Rcvd with Barcode
LOG-21d	Sample logging - ClientBarCode Dup
SPL-21d	Split sample - duplicate
PUL-31d	Pulverize Split - duplicate

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-ICP21	Au 30g FA ICP-AES Finish	ICP-AES
ME-MS61	48 element four acid ICP-MS	
Hg-MS42	Trace Hg by ICPMS	ICP-MS

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

***** See Appendix Page for comments regarding this certificate *****

Signature:

Colin Ramshaw, Vancouver Laboratory Manager

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Project: Orion

Finalized Date: 27-JUN-2018
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CERTIFICATE OF ANALYSIS WH18139267

Sample Description	Method	WEI-21	Au-ICP21	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Recvd Wt.	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu
	Units	kg	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.02	0.001	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2
V766041		11.61	<0.001	0.34	1.89	8.8	320	0.58	0.04	18.95	2.30	19.10	3.2	23	3.07	10.5
V766042		10.95	<0.001	0.06	1.19	8.2	260	0.35	0.03	24.7	0.40	12.85	2.2	12	1.89	5.0
V766043		11.27	<0.001	0.44	1.93	7.2	340	0.75	0.06	24.0	3.13	21.9	3.6	24	3.34	11.7
V766044		11.42	<0.001	0.35	1.84	8.3	480	0.62	0.05	25.4	2.20	20.6	3.3	21	3.15	9.9
V766045		11.18	<0.001	0.26	2.16	7.9	300	0.77	0.06	24.1	2.47	23.9	3.8	24	3.36	10.1
V766046		10.91	<0.001	0.10	0.75	9.6	140	0.32	0.02	29.3	0.65	11.90	1.7	10	1.18	4.3
V766047		11.60	<0.001	0.14	0.95	100.5	190	0.40	0.03	28.3	1.15	14.20	2.3	12	1.18	5.3
V766048		6.92	<0.001	0.02	0.04	0.3	30	0.05	0.02	20.9	0.06	1.02	0.5	1	0.12	10.8
V766049		10.92	<0.001	0.22	0.84	119.5	410	0.30	0.02	27.5	1.48	11.85	1.6	14	0.98	7.2
V766050		9.72	<0.001	0.97	2.50	53.2	390	1.06	0.08	15.05	7.35	27.1	3.7	45	3.79	23.4
V766051		9.81	<0.001	0.49	1.56	79.4	400	0.70	0.05	24.8	2.51	20.0	2.2	29	2.23	16.3
V766052		10.85	<0.001	0.22	0.63	93.1	250	0.30	0.02	28.8	1.52	10.15	1.0	14	1.03	7.9
V766053		11.25	<0.001	0.30	1.52	47.7	260	0.58	0.05	24.6	1.60	17.90	2.3	26	2.04	13.1
V766054		10.09	<0.001	0.52	2.30	196.5	280	0.97	0.06	24.7	2.23	28.9	3.1	35	3.26	17.3
V766055		11.23	<0.001	0.34	1.66	320	250	0.70	0.04	25.8	2.42	22.8	2.6	23	2.41	9.6
V766056		11.35	<0.001	0.47	3.16	223	340	1.31	0.08	22.2	1.34	33.4	3.2	52	5.49	22.5
V766057		11.43	<0.001	0.42	2.27	68.3	400	0.91	0.06	25.1	1.30	27.7	2.8	41	3.73	18.0
V766058		5.42	<0.001	0.39	1.65	298	540	0.64	0.05	28.7	2.61	22.3	1.6	28	2.88	14.1
V766059		4.52	<0.001	0.39	2.48	927	370	1.01	0.06	24.6	4.98	31.8	4.4	36	4.31	21.0
V766060		4.35	<0.001	0.42	2.31	829	480	0.99	0.05	26.6	4.51	30.2	4.5	35	4.51	18.5
V766061		4.83	<0.001	0.50	2.62	793	540	1.10	0.07	21.9	3.63	33.6	2.7	38	5.24	20.2
V766062		4.77	<0.001	0.31	2.12	639	320	0.94	0.05	22.7	2.77	26.2	2.7	28	4.62	15.1
V766063		4.28	<0.001	0.51	2.44	809	400	1.01	0.05	24.7	4.65	29.8	2.9	34	5.31	19.4
V766064		5.65	0.001	0.92	1.79	796	350	0.78	0.05	28.5	6.10	22.1	3.7	29	3.87	15.0
V766065		0.11	0.283	0.33	6.62	580	90	0.62	0.27	0.54	0.15	150.0	2.7	227	3.19	23.4
V766066		4.72	<0.001	0.19	1.10	295	220	0.55	0.03	31.6	2.64	17.00	1.6	15	1.83	8.7
V766067		4.84	<0.001	0.36	1.69	503	460	0.73	0.05	29.3	3.85	24.1	4.3	22	2.66	12.2
V766068		4.07	<0.001	0.31	1.45	431	250	0.62	0.04	31.9	2.47	19.95	2.1	17	2.66	8.7
V766069		5.05	<0.001	0.39	3.02	433	510	1.20	0.07	21.9	2.89	38.2	3.7	43	5.63	21.3
V766070		5.28	<0.001	0.19	1.09	404	150	0.51	0.03	31.1	3.21	14.70	2.0	14	2.10	8.1
V766071		5.34	<0.001	0.06	0.16	113.0	90	0.11	0.01	34.1	1.45	4.07	0.7	2	0.18	2.7
V766072		2.30	<0.001	0.06	0.16	111.0	90	0.14	0.01	33.8	1.12	3.71	0.7	3	0.12	2.9
V766073		2.63	0.001	0.06	0.17	110.5	100	0.12	0.01	32.8	0.94	3.63	0.7	3	0.15	2.8
V766074		5.76	0.003	2.46	0.18	120.0	110	0.11	0.01	34.8	1.63	4.93	0.6	3	0.27	3.9
V766075		5.08	<0.001	0.16	0.79	422	480	0.30	0.03	33.1	2.10	10.85	1.5	9	1.66	6.2
V766076		5.28	<0.001	0.20	1.98	221	320	0.82	0.05	27.7	0.89	23.1	3.3	19	4.32	8.7
V766077		5.30	0.002	0.17	0.74	137.5	230	0.33	0.03	31.8	1.24	9.86	1.2	10	1.71	5.9
V766078		0.09	2.08	0.53	2.54	449	520	0.77	0.36	10.20	0.87	41.2	8.1	38	3.25	25.0
V766079		6.01	<0.001	0.26	2.26	53.5	330	1.01	0.06	24.3	0.65	28.8	3.7	30	4.32	13.8
V766080		<0.02	<0.001	0.24	2.07	46.7	300	0.87	0.06	23.4	0.55	26.3	3.4	27	4.05	12.9

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016 - 510 W HASTINGS STREET
VANCOUVER BC V6B 1L8

Finalized Date: 27-JUN-2018
Account: ARCHORI

Project: Orion

CERTIFICATE OF ANALYSIS WH18139267

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Hg-MS42	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni
	Units	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2
V766041		0.96	5.01	0.10	0.7	0.043	0.015	1.02	13.6	5.5	2.06	97	4.14	0.02	3.1	18.8
V766042		0.68	3.06	0.10	0.4	0.035	0.010	0.64	8.9	4.1	1.91	87	3.18	0.02	1.9	11.2
V766043		1.01	5.25	0.11	0.7	0.031	0.016	1.03	15.9	6.4	1.76	98	4.54	0.02	3.3	20.3
V766044		0.94	4.96	0.13	0.7	0.049	0.015	0.98	14.2	5.8	2.10	102	3.21	0.02	3.0	16.9
V766045		1.14	5.72	0.12	0.8	0.049	0.018	1.15	15.9	6.5	2.16	117	3.67	0.02	3.6	19.3
V766046		0.50	2.00	0.11	0.3	0.019	0.011	0.39	9.4	3.2	0.97	82	0.97	0.01	1.3	7.9
V766047		0.63	2.52	0.11	0.4	0.046	0.009	0.49	10.9	3.1	0.90	103	1.36	0.01	1.6	14.1
V766048		0.45	0.15	0.10	<0.1	<0.005	<0.005	0.02	0.5	1.0	12.75	203	0.47	<0.01	0.1	1.2
V766049		0.54	2.20	0.10	0.4	0.078	0.008	0.39	10.0	2.3	0.58	102	2.11	0.01	1.6	15.7
V766050		1.17	6.41	0.15	1.3	0.186	0.029	1.17	22.2	7.1	0.68	103	12.10	0.02	7.0	47.1
V766051		0.84	4.02	0.13	0.7	0.074	0.017	0.74	17.7	4.9	1.27	100	4.30	0.01	3.1	25.2
V766052		0.41	1.65	0.11	0.3	0.060	0.006	0.30	10.4	2.6	0.52	78	1.11	0.01	1.1	11.2
V766053		0.84	3.89	0.13	0.7	0.091	0.016	0.75	15.0	5.2	1.25	92	2.81	0.02	2.6	20.2
V766054		1.06	6.15	0.14	1.0	0.112	0.022	1.16	23.2	7.1	2.53	121	1.87	0.02	4.0	30.1
V766055		0.84	4.26	0.08	0.7	0.061	0.019	0.85	19.2	5.5	2.63	100	1.27	0.02	2.8	24.1
V766056		1.30	7.80	0.11	1.2	0.102	0.029	1.71	25.0	10.3	3.65	109	1.89	0.03	5.3	44.0
V766057		0.98	5.68	0.14	0.9	0.065	0.022	1.24	22.7	7.3	2.95	107	2.11	0.02	3.8	30.2
V766058		0.73	4.19	0.10	0.7	0.055	0.017	0.87	19.4	5.7	1.34	100	1.51	0.02	2.8	29.0
V766059		1.09	6.37	0.12	1.0	0.115	0.022	1.33	27.4	7.8	1.64	107	1.82	0.02	4.1	43.1
V766060		0.97	5.89	0.12	0.9	0.111	0.023	1.24	25.5	7.6	1.20	110	1.44	0.02	3.8	39.2
V766061		1.14	6.57	0.13	1.1	0.068	0.027	1.42	26.9	8.8	3.25	99	1.39	0.02	4.4	42.8
V766062		1.01	5.47	0.11	0.8	0.050	0.022	1.16	20.8	8.6	4.16	100	0.91	0.02	3.5	37.0
V766063		1.05	5.98	0.11	1.0	0.096	0.022	1.35	22.8	9.0	3.18	111	1.35	0.02	3.9	44.7
V766064		0.93	4.56	0.10	0.7	0.237	0.017	0.95	17.2	7.0	1.54	112	2.33	0.02	2.9	42.8
V766065		6.50	19.35	0.16	4.1	7.47	0.047	1.41	72.0	17.4	0.16	50	6.04	0.47	9.8	16.2
V766066		0.49	2.80	0.08	0.5	0.059	0.012	0.60	13.4	4.0	0.80	85	0.80	0.01	1.8	20.0
V766067		0.77	4.21	0.10	0.7	0.102	0.017	0.91	18.4	5.5	0.89	106	1.31	0.02	2.7	31.1
V766068		0.65	3.63	0.10	0.6	0.065	0.017	0.79	14.9	4.7	0.83	83	0.84	0.02	2.3	25.8
V766069		1.24	7.83	0.14	1.2	0.101	0.028	1.68	28.5	10.4	3.21	112	1.82	0.03	5.0	45.0
V766070		0.49	2.71	0.09	0.4	0.060	0.010	0.59	11.0	4.8	1.18	88	0.59	0.01	1.8	20.4
V766071		0.16	0.38	0.10	0.1	0.038	<0.005	0.07	4.2	2.3	1.16	70	0.43	0.01	0.2	8.5
V766072		0.16	0.37	0.10	0.1	0.033	<0.005	0.07	3.8	3.6	1.79	69	0.34	0.01	0.2	7.6
V766073		0.18	0.43	0.09	0.1	0.023	<0.005	0.08	3.7	3.4	2.24	70	0.36	0.01	0.3	7.4
V766074		0.15	0.44	0.10	0.1	0.027	<0.005	0.09	5.1	2.5	0.83	64	0.42	0.01	0.3	8.3
V766075		0.49	2.01	0.09	0.3	0.046	0.007	0.41	8.6	3.8	0.56	86	0.59	0.01	1.3	16.2
V766076		0.81	4.91	0.10	0.8	0.047	0.019	1.09	13.5	8.4	2.32	103	1.27	0.02	3.2	27.5
V766077		0.37	1.93	0.10	0.3	0.029	0.007	0.41	7.1	3.8	0.38	86	0.76	0.01	1.2	14.1
V766078		1.53	6.05	0.12	1.4	2.95	0.019	0.93	25.2	38.8	3.23	244	16.15	0.03	5.2	39.4
V766079		1.01	5.61	0.13	0.9	0.051	0.023	1.26	19.7	9.7	2.63	118	1.55	0.02	3.8	27.2
V766080		0.92	5.29	0.12	0.9	0.050	0.023	1.14	17.9	8.8	2.40	111	1.48	0.02	3.5	24.8

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Finalized Date: 27-JUN-2018
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Project: Orion

CERTIFICATE OF ANALYSIS WH18139267

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl
	Units	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
	LOD	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.01	0.005	0.02
V766041		180	5.4	43.8	0.002	0.56	2.40	3.7	2	0.6	803	0.20	<0.05	2.83	0.106	0.52
V766042		120	2.6	26.8	0.002	0.37	0.80	2.4	1	0.4	965	0.12	<0.05	1.71	0.065	0.38
V766043		320	5.0	47.2	0.006	0.66	2.76	3.9	2	0.7	979	0.22	<0.05	2.76	0.108	0.49
V766044		430	4.4	43.7	0.004	0.58	2.37	3.6	2	0.6	1060	0.21	<0.05	2.65	0.101	0.48
V766045		220	5.2	51.4	0.002	0.62	2.65	4.2	1	0.8	1020	0.24	<0.05	3.22	0.120	0.55
V766046		520	2.8	17.4	0.003	0.19	0.79	1.6	1	0.2	461	0.08	<0.05	1.31	0.041	0.24
V766047		390	4.1	20.8	0.006	0.24	1.03	2.0	1	0.3	435	0.11	<0.05	1.52	0.053	0.67
V766048		190	1.3	0.9	<0.002	<0.01	<0.05	0.2	<1	<0.2	49.2	<0.05	<0.05	0.07	<0.005	<0.02
V766049		520	6.3	15.0	0.017	0.18	1.29	1.7	1	0.3	406	0.11	<0.05	1.38	0.053	0.55
V766050		530	9.3	50.7	0.037	0.98	4.22	5.0	4	0.8	253	0.44	0.07	3.86	0.204	0.87
V766051		370	4.7	32.5	0.018	0.39	1.84	3.2	3	0.5	322	0.20	<0.05	2.47	0.099	0.71
V766052		240	2.0	11.8	0.004	0.09	0.79	1.5	1	0.3	313	0.07	<0.05	0.93	0.036	0.48
V766053		320	4.0	31.1	0.006	0.51	1.44	3.0	2	0.6	309	0.17	<0.05	2.22	0.089	0.94
V766054		760	34.6	49.5	0.017	0.31	1.68	4.6	2	0.8	271	0.27	<0.05	3.54	0.136	1.41
V766055		210	6.0	33.6	0.014	0.27	1.19	3.2	3	0.6	320	0.19	<0.05	2.38	0.096	1.38
V766056		400	5.7	67.1	0.043	0.37	1.35	6.0	5	1.0	233	0.35	<0.05	4.20	0.185	2.54
V766057		1030	4.9	46.9	0.033	0.48	1.14	4.3	3	0.7	288	0.26	<0.05	3.15	0.135	1.80
V766058		1220	4.1	34.6	0.011	0.05	1.01	3.2	2	0.5	344	0.18	<0.05	2.24	0.095	1.67
V766059		1650	5.7	51.4	0.003	0.02	2.01	4.7	2	0.8	318	0.27	<0.05	3.34	0.142	3.38
V766060		1590	5.2	47.5	0.008	0.05	1.87	4.4	2	0.7	337	0.25	0.05	3.21	0.133	2.76
V766061		1440	5.9	54.6	0.006	0.03	1.81	5.0	2	0.8	252	0.29	<0.05	3.61	0.151	3.08
V766062		540	4.7	44.8	0.003	0.03	1.51	4.0	1	0.7	233	0.24	<0.05	2.99	0.120	2.56
V766063		1060	5.9	49.8	0.005	0.02	1.96	4.5	2	0.8	254	0.26	<0.05	3.28	0.138	3.27
V766064		530	12.6	36.1	0.003	0.01	2.62	3.5	1	0.6	310	0.19	<0.05	2.38	0.100	2.55
V766065		1050	14.8	44.9	0.003	3.19	108.5	15.4	1	2.4	580	0.71	0.16	9.19	0.592	7.14
V766066		470	3.2	22.4	0.002	0.02	0.97	2.2	1	0.4	312	0.12	<0.05	1.56	0.063	1.12
V766067		940	5.0	33.8	0.005	0.03	1.42	3.3	1	0.5	319	0.18	<0.05	2.25	0.095	1.84
V766068		980	4.6	29.2	0.003	0.03	1.20	2.8	2	0.4	346	0.16	<0.05	1.95	0.081	1.56
V766069		680	6.6	62.8	0.042	0.20	1.68	5.8	6	0.9	230	0.34	<0.05	4.11	0.175	2.76
V766070		310	3.0	22.6	0.002	0.01	0.90	2.2	1	0.4	266	0.11	<0.05	1.47	0.062	1.18
V766071		70	1.7	2.5	0.003	0.02	0.55	0.4	1	<0.2	326	<0.05	<0.05	0.25	0.008	0.22
V766072		140	1.4	2.3	0.002	0.02	0.42	0.4	1	<0.2	343	<0.05	<0.05	0.25	0.008	0.22
V766073		120	1.4	2.6	0.003	0.02	0.40	0.4	1	<0.2	342	<0.05	<0.05	0.28	0.009	0.25
V766074		310	2.3	3.0	0.003	0.02	0.50	0.5	1	<0.2	349	<0.05	<0.05	0.29	0.010	0.28
V766075		220	4.2	14.8	0.005	0.03	1.05	1.6	1	0.3	365	0.09	<0.05	1.16	0.044	0.98
V766076		430	5.5	42.9	0.032	0.19	0.88	3.6	2	0.6	328	0.21	<0.05	2.82	0.107	2.28
V766077		450	2.4	15.5	0.005	0.03	0.60	1.5	1	0.3	288	0.08	<0.05	1.05	0.042	0.90
V766078		600	7.3	42.2	0.014	1.27	79.3	4.1	2	0.9	83.7	0.34	0.24	5.25	0.145	3.02
V766079		1030	4.7	50.8	0.010	0.56	0.82	4.3	2	0.8	259	0.25	<0.05	3.17	0.131	1.37
V766080		920	4.3	47.3	0.013	0.51	0.77	3.9	2	0.7	246	0.23	<0.05	2.90	0.120	1.24

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 (604) 984 0221 Fax: +1 (604) 984 0218
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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016 - 510 W HASTINGS STREET
VANCOUVER BC V6B 1L8

Finalized Date: 27-JUN-2018
Account: ARCHORI

Project: Orion

CERTIFICATE OF ANALYSIS WH18139267

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	U	V	W	Y	Zn	Zr
	Units	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.1	1	0.1	0.1	2	0.5
V766041		3.7	159	0.4	11.3	141	24.8
V766042		2.8	57	0.3	7.7	41	15.8
V766043		4.4	205	0.4	13.5	153	26.6
V766044		3.4	129	0.4	11.6	120	24.9
V766045		3.5	152	0.5	12.6	146	30.0
V766046		2.1	47	0.2	10.2	58	10.4
V766047		2.2	64	0.2	11.2	141	13.1
V766048		0.5	2	0.1	0.8	18	<0.5
V766049		2.3	101	0.3	11.2	141	12.5
V766050		5.4	463	0.7	16.4	307	45.5
V766051		3.7	186	0.3	14.9	187	25.2
V766052		2.2	69	0.6	10.1	142	9.8
V766053		3.1	115	0.3	13.1	172	23.5
V766054		3.8	111	0.5	20.1	342	38.1
V766055		2.6	110	0.3	15.4	272	25.0
V766056		3.6	125	0.6	20.6	401	49.0
V766057		3.5	110	0.4	20.5	233	35.4
V766058		2.8	112	0.3	17.7	361	26.6
V766059		3.7	223	0.5	24.3	508	39.3
V766060		3.6	204	0.5	23.2	413	37.4
V766061		3.7	199	0.5	23.6	533	43.2
V766062		3.5	149	0.4	18.1	454	33.3
V766063		4.5	185	0.5	21.2	495	36.8
V766064		3.3	189	2.3	16.6	444	27.4
V766065		7.3	174	22.9	15.8	41	179.5
V766066		2.7	83	0.3	13.2	243	16.8
V766067		3.2	120	0.6	18.4	382	27.2
V766068		2.8	104	0.3	15.3	292	21.9
V766069		4.2	155	0.6	25.6	468	47.9
V766070		2.3	77	0.2	10.8	219	17.5
V766071		1.2	25	<0.1	4.8	94	2.6
V766072		1.2	24	0.1	4.4	82	2.7
V766073		1.2	25	<0.1	4.2	84	2.8
V766074		1.8	28	0.5	5.5	99	3.1
V766075		2.0	90	0.2	8.5	194	12.2
V766076		2.4	74	0.4	11.5	216	30.1
V766077		2.2	55	0.1	7.3	160	11.4
V766078		7.3	163	69.3	18.2	90	54.3
V766079		3.1	89	0.4	17.4	139	34.7
V766080		2.8	82	0.4	16.4	123	33.0

***** See Appendix Page for comments regarding this certificate *****

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016 - 510 W HASTINGS STREET
VANCOUVER BC V6B 1L8

Project: Orion

Finalized Date: 27-JUN-2018
Account: ARCHORI

CERTIFICATE OF ANALYSIS WH18139267

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

REE's may not be totally soluble in this method.
Applies to Method: ME-MS61

LABORATORY ADDRESSES

Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.

Applies to Method:				
	CRU-31	CRU-QC	LOG-21	LOG-21d
	LOG-23	PUL-31	PUL-31d	PUL-QC
	SPL-21	SPL-21d	WEI-21	

Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

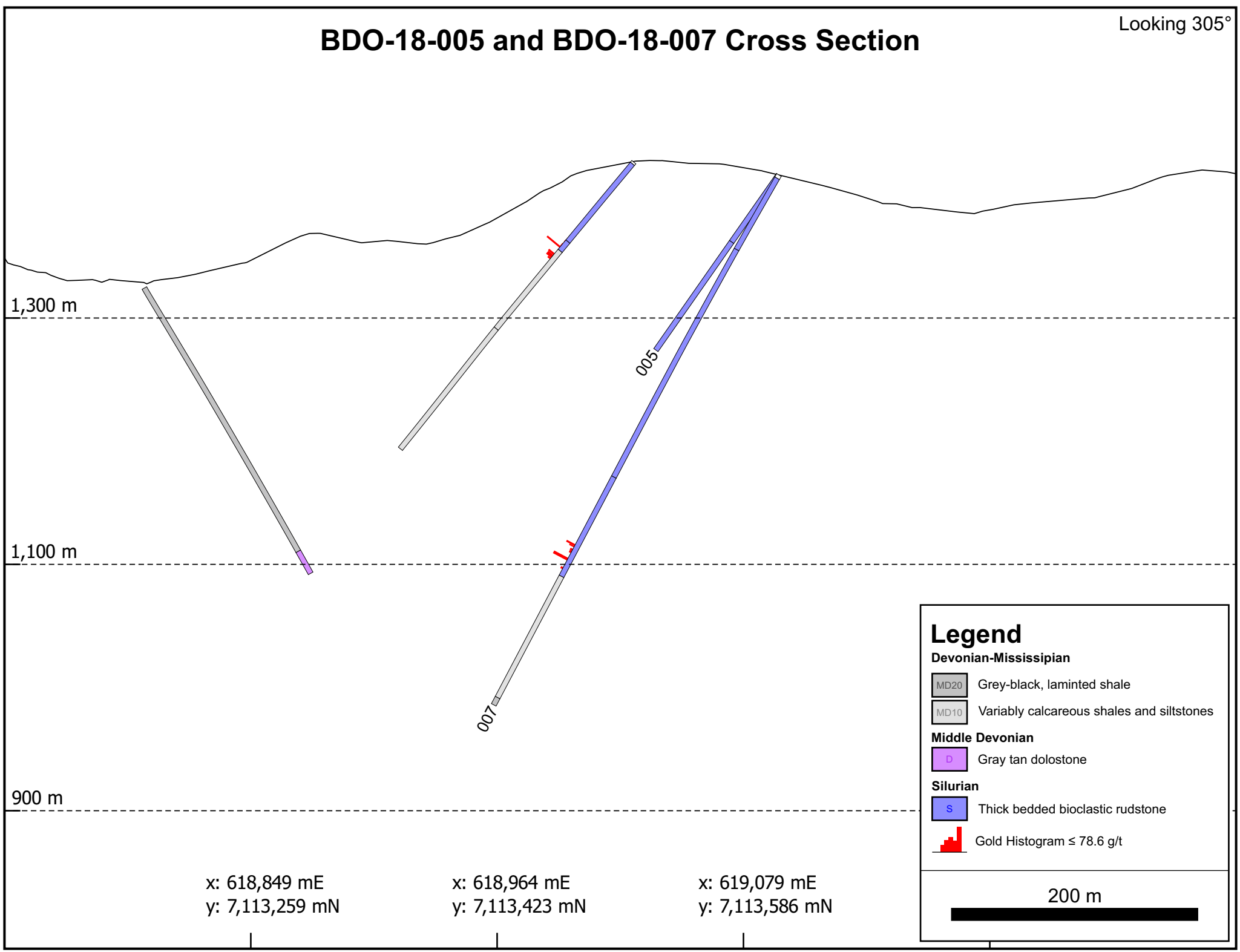
Applies to Method:			
	Au-ICP21	Hg-MS42	ME-MS61

APPENDIX V

DIAMOND DRILLING - CROSS SECTIONS

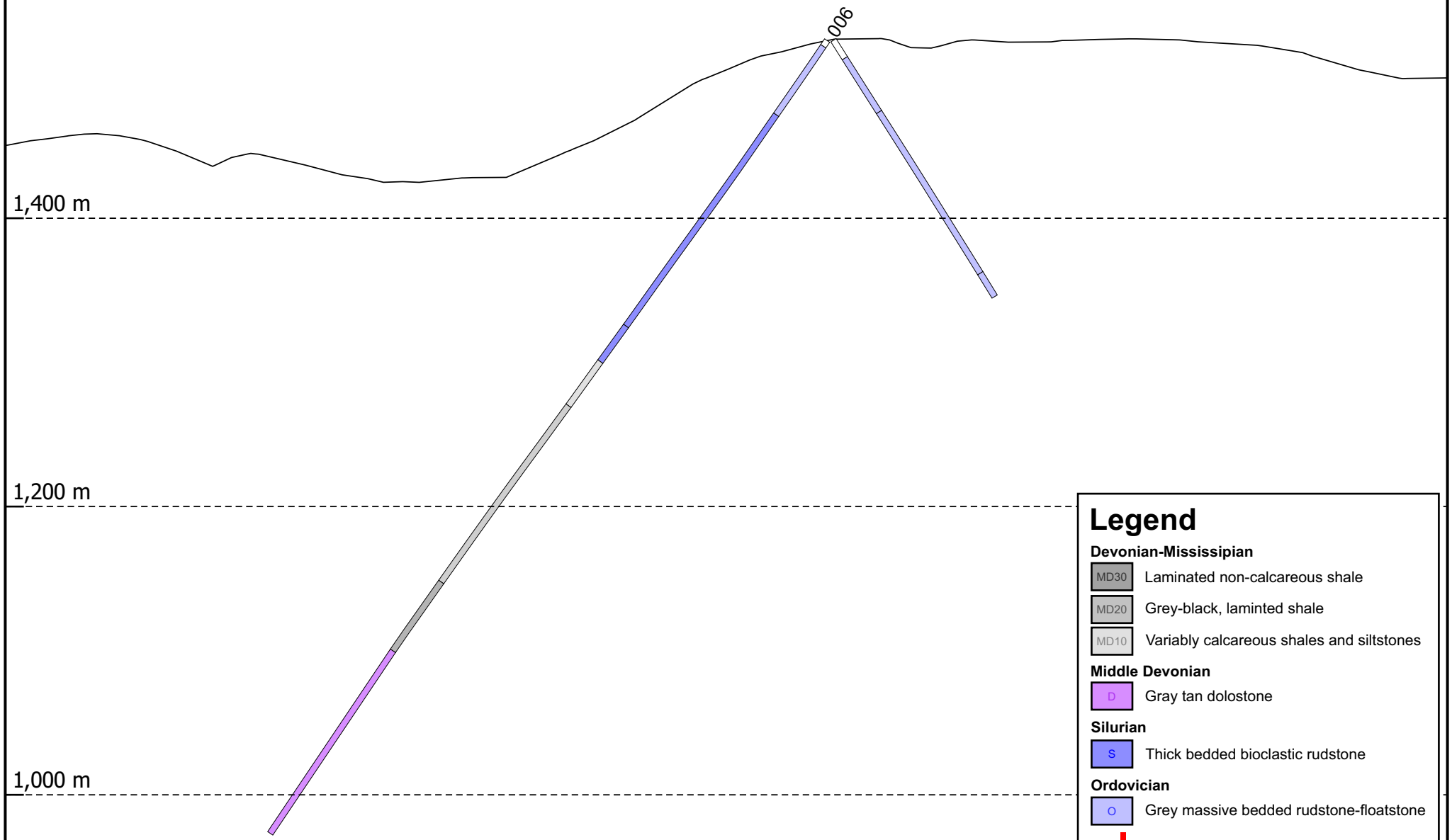
BDO-18-005 and BDO-18-007 Cross Section

Looking 305°



BDO-18-006 Cross Section

Looking 307°



Legend

Devonian-Mississipian

- MD30 — Laminated non-calcareous shale
- MD20 — Grey-black, laminted shale
- MD10 — Variably calcareous shales and siltstones

Middle Devonian

- D — Gray tan dolostone

Silurian

- S — Thick bedded bioclastic rudstone

Ordovician

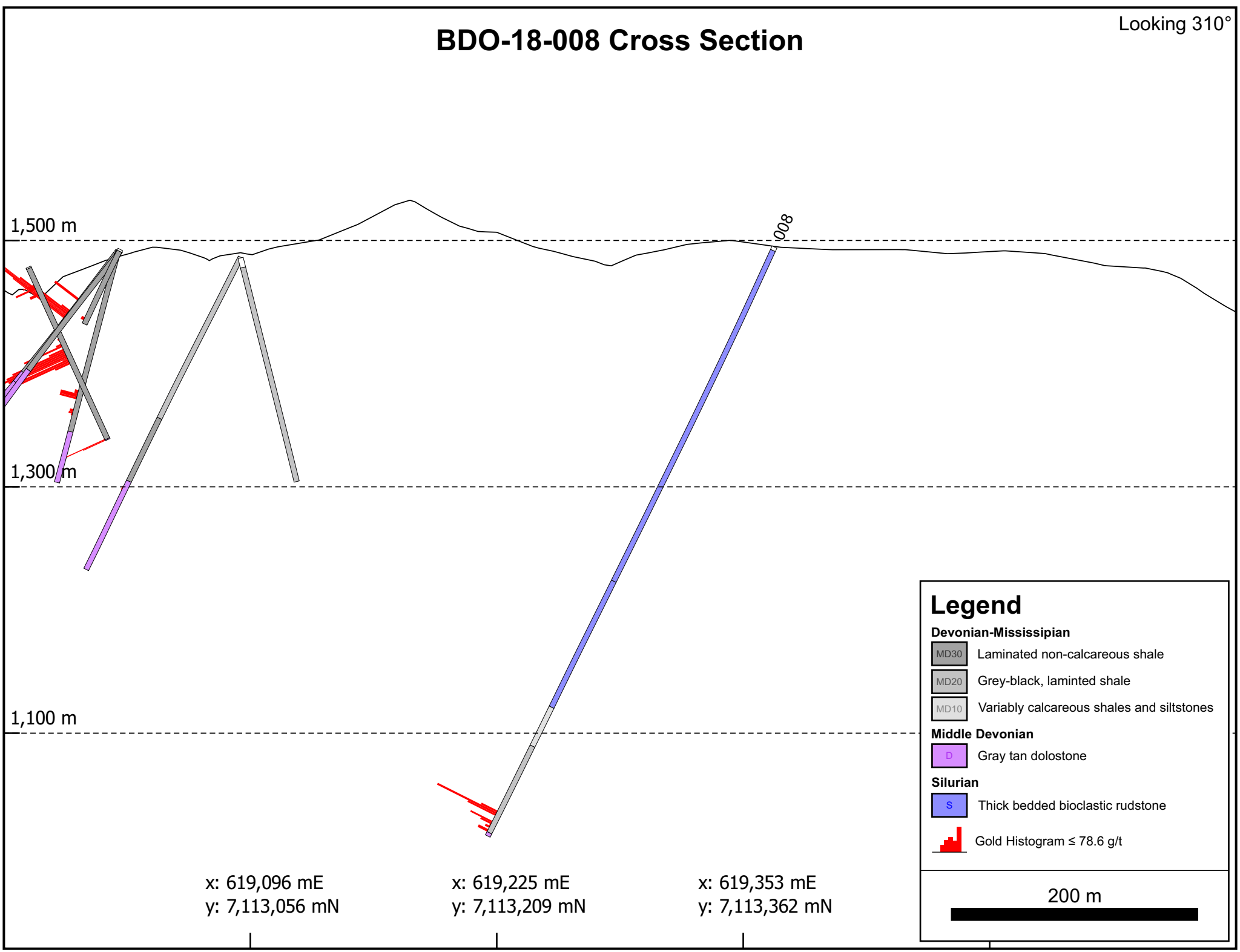
- O — Grey massive bedded rudstone-floatstone

Gold Histogram ≤ 78.6 g/t

200 m

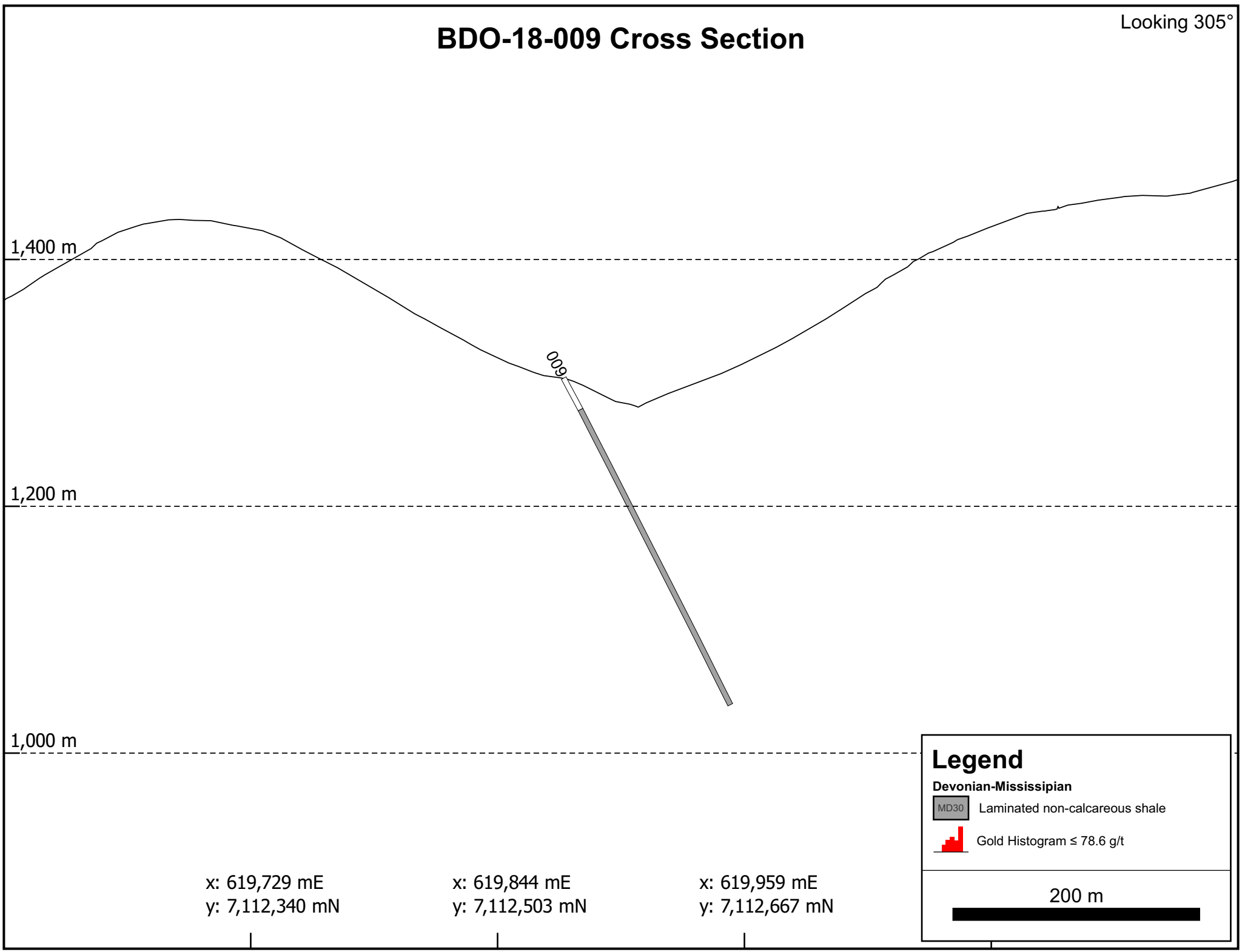
BDO-18-008 Cross Section

Looking 310°



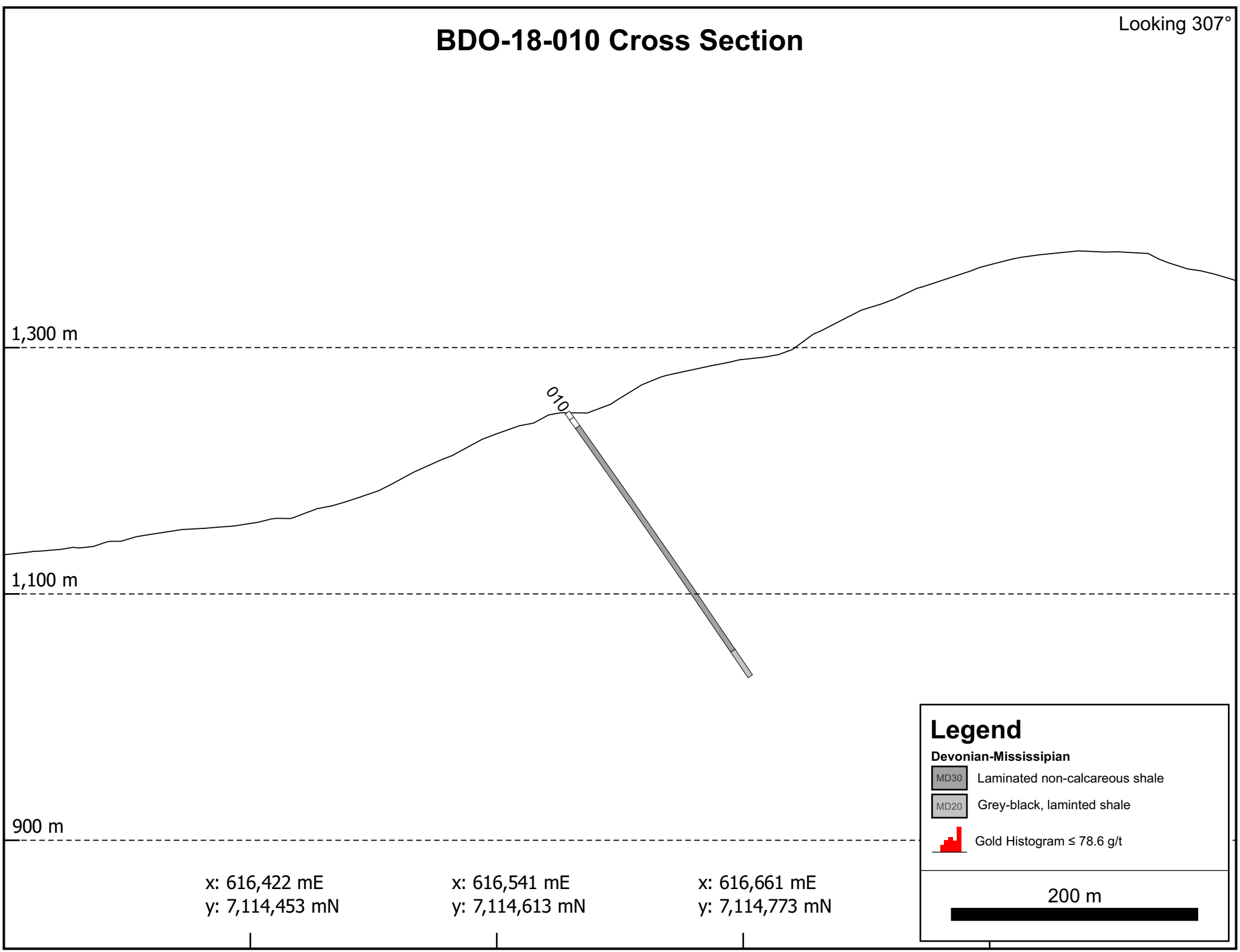
BDO-18-009 Cross Section

Looking 305°



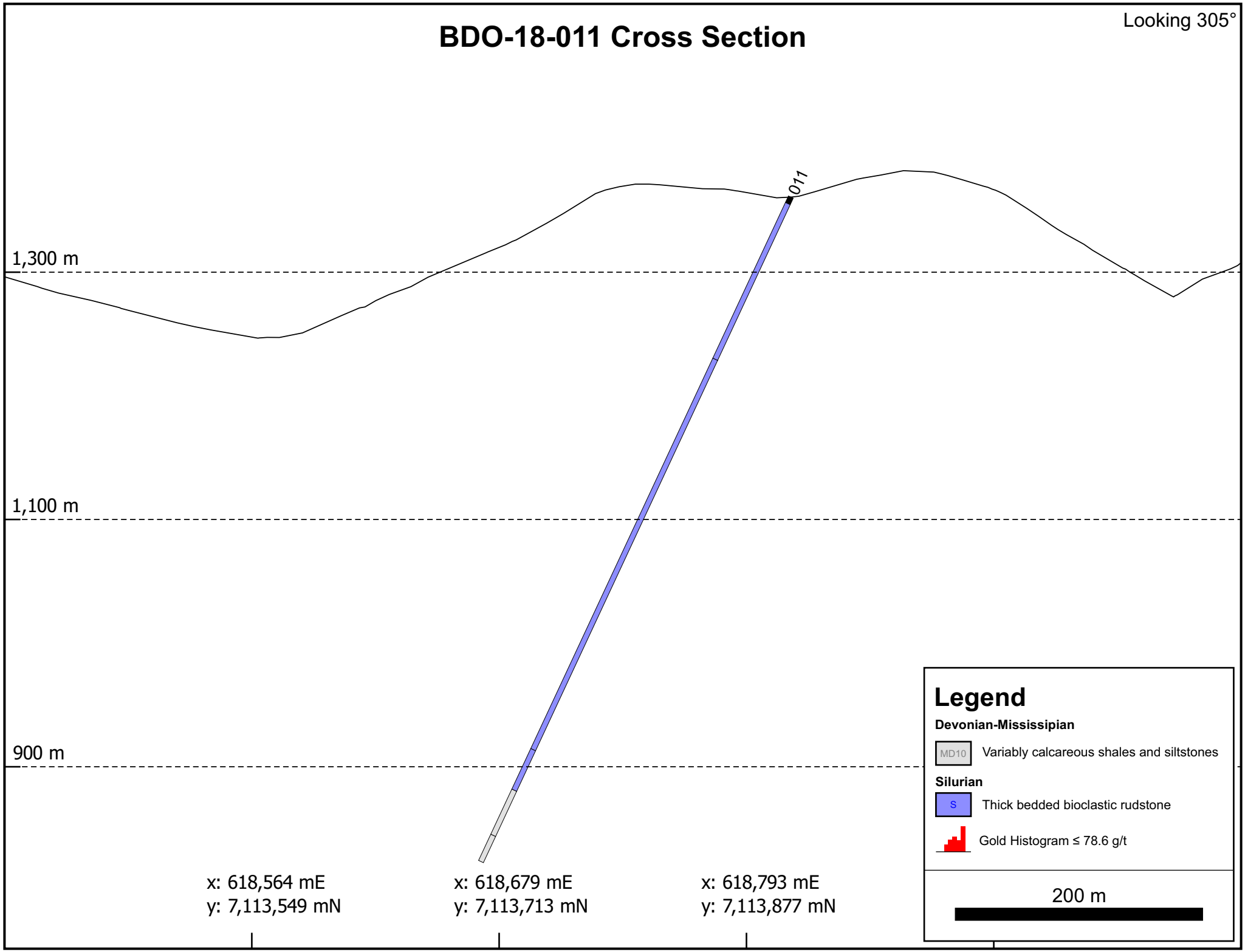
BDO-18-010 Cross Section

Looking 307°



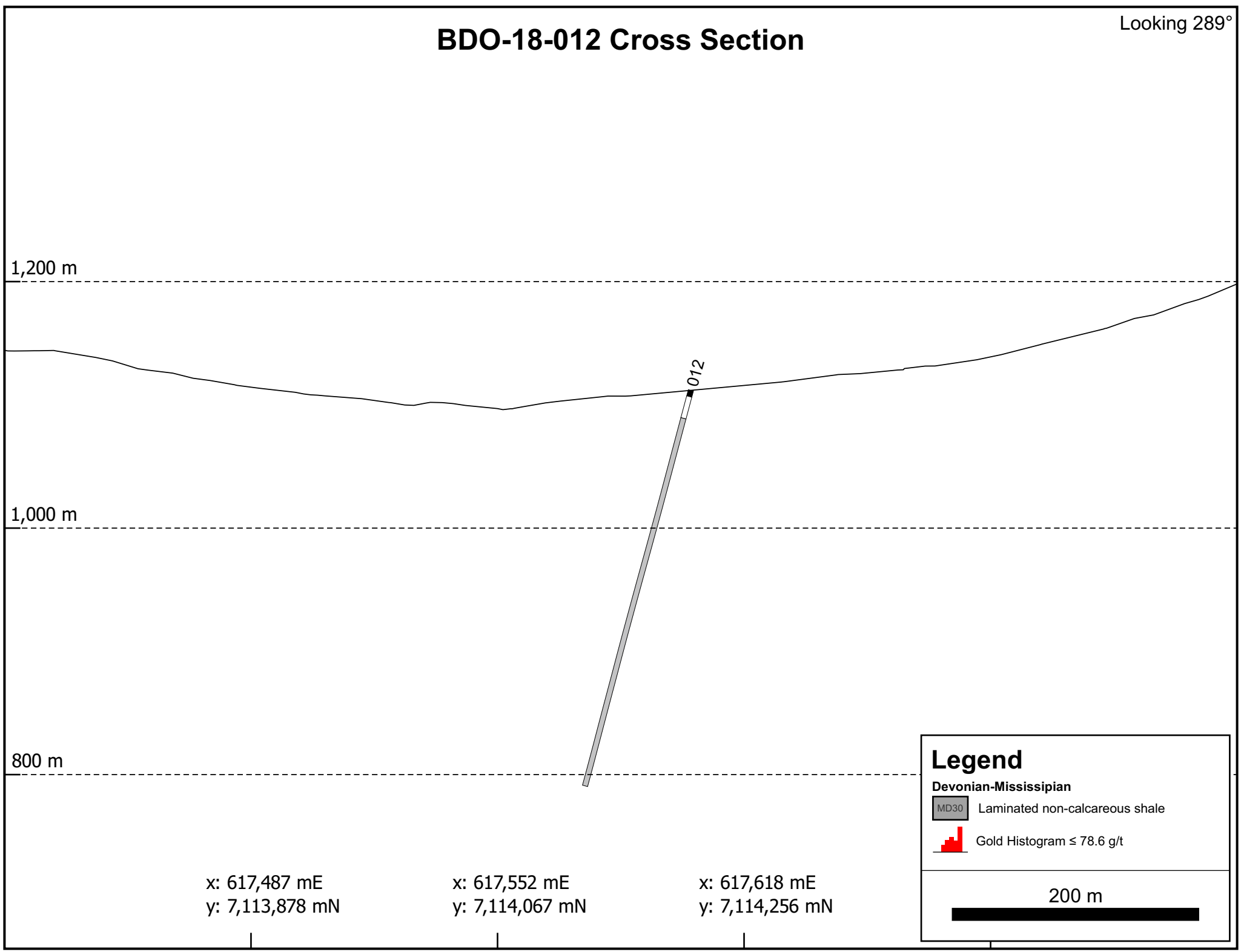
BDO-18-011 Cross Section

Looking 305°



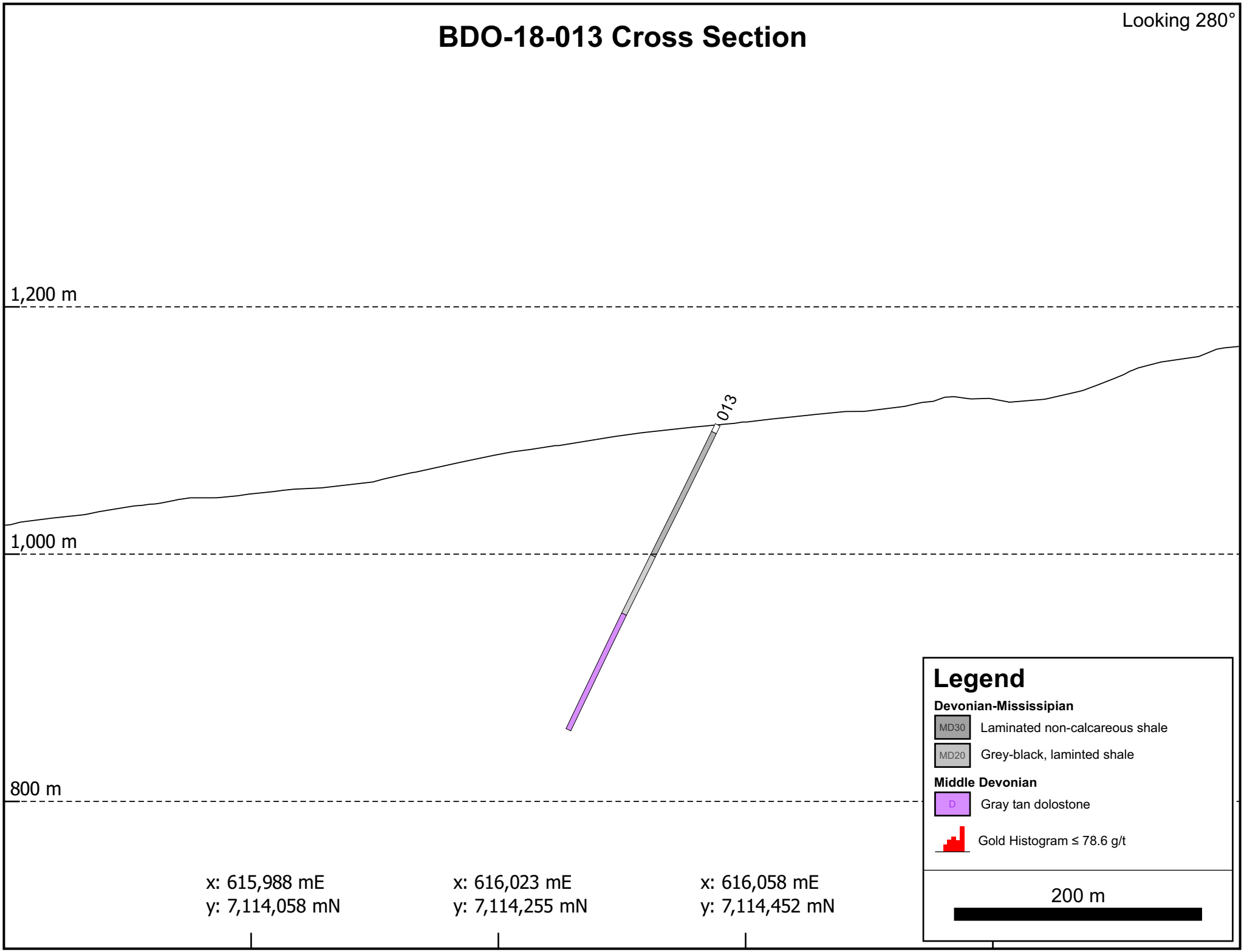
BDO-18-012 Cross Section

Looking 289°



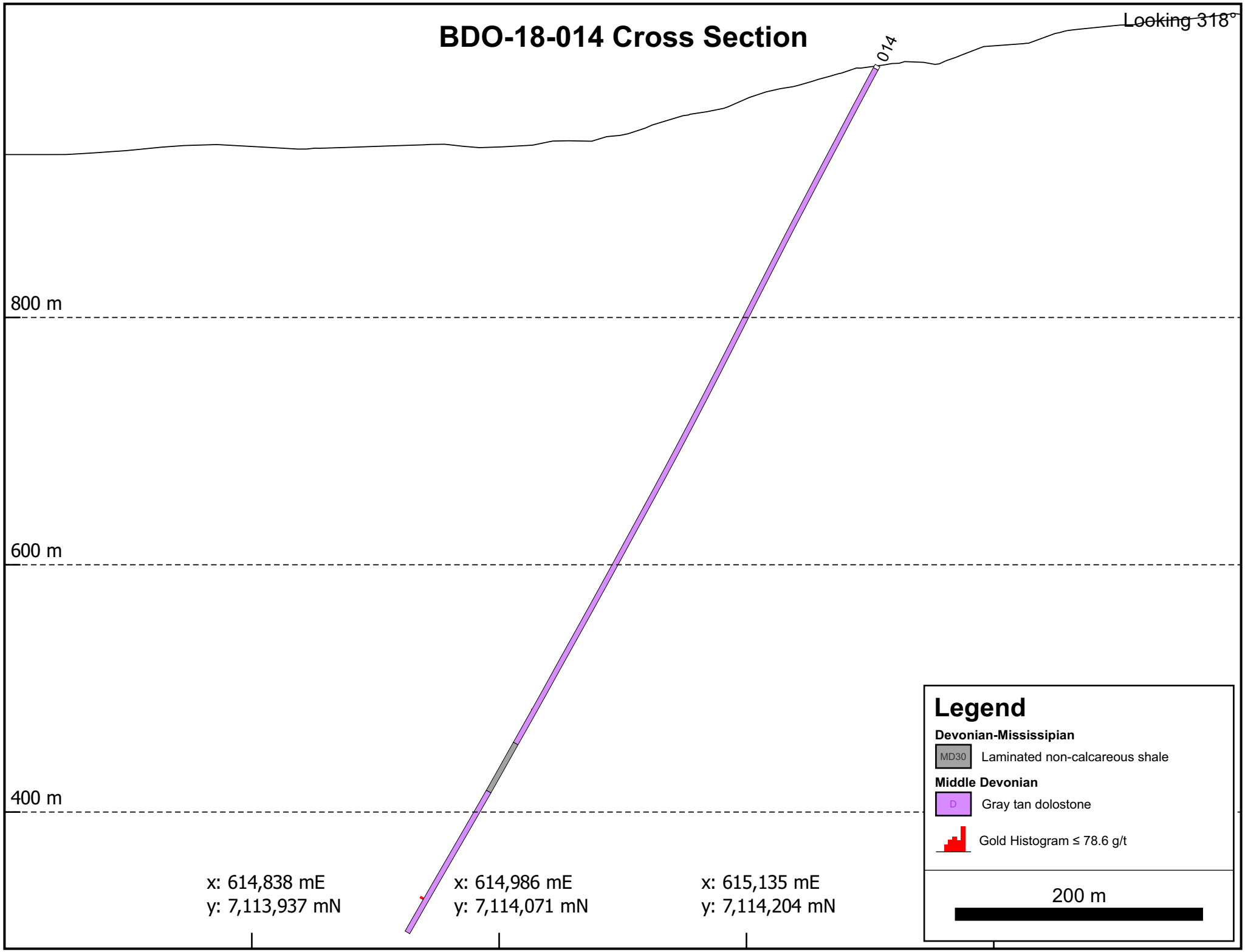
BDO-18-013 Cross Section

Looking 280°



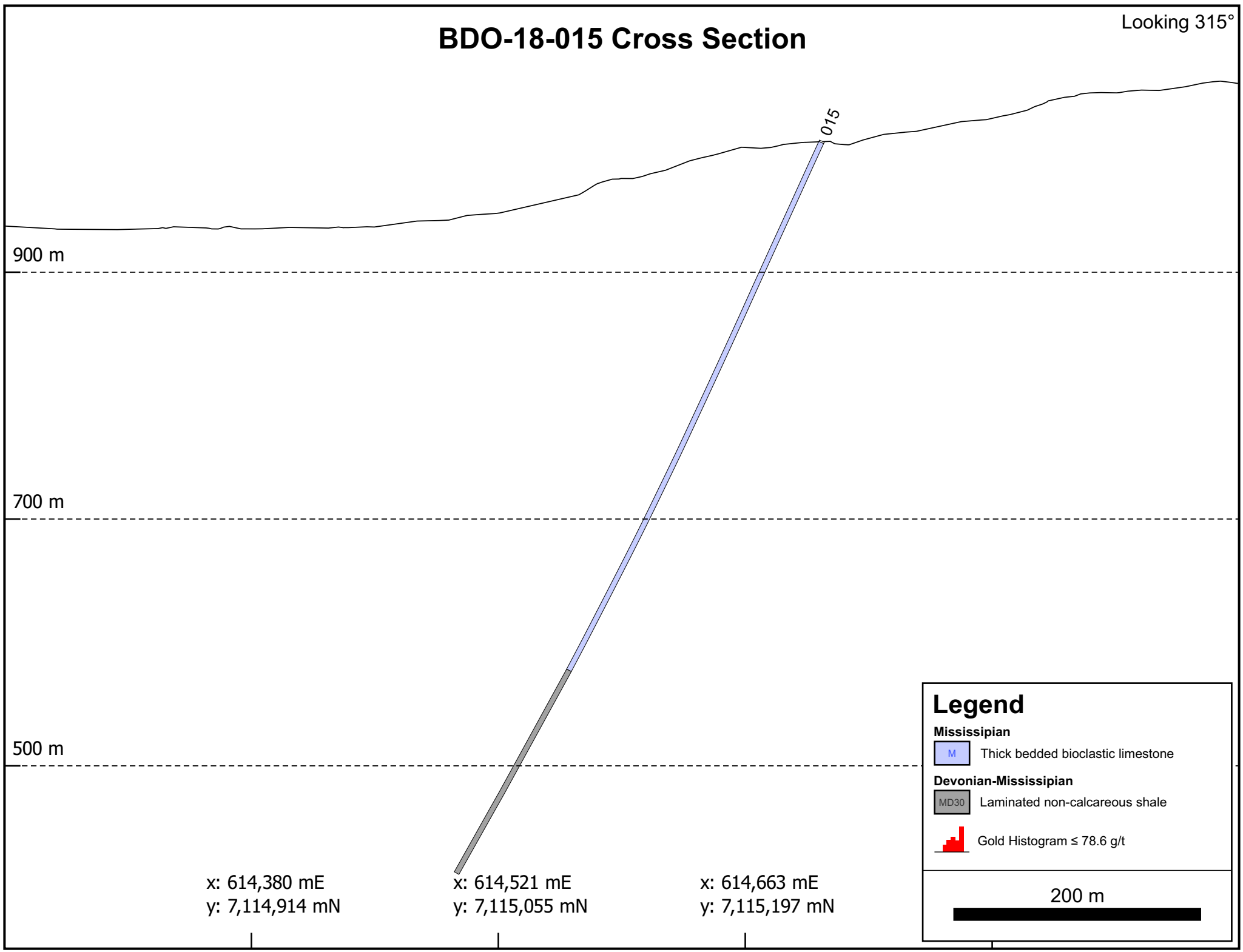
BDO-18-014 Cross Section

Looking 318°



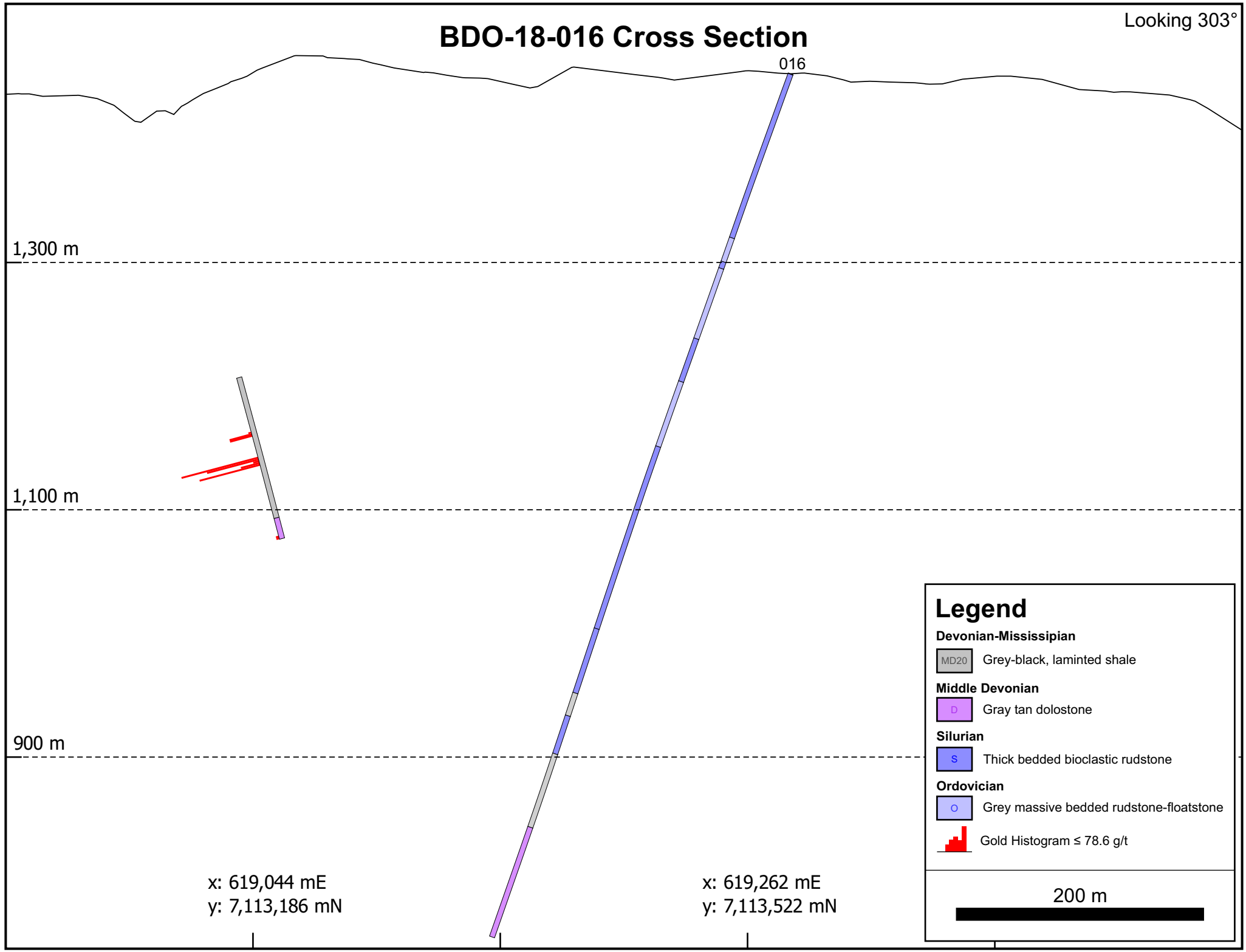
BDO-18-015 Cross Section

Looking 315°



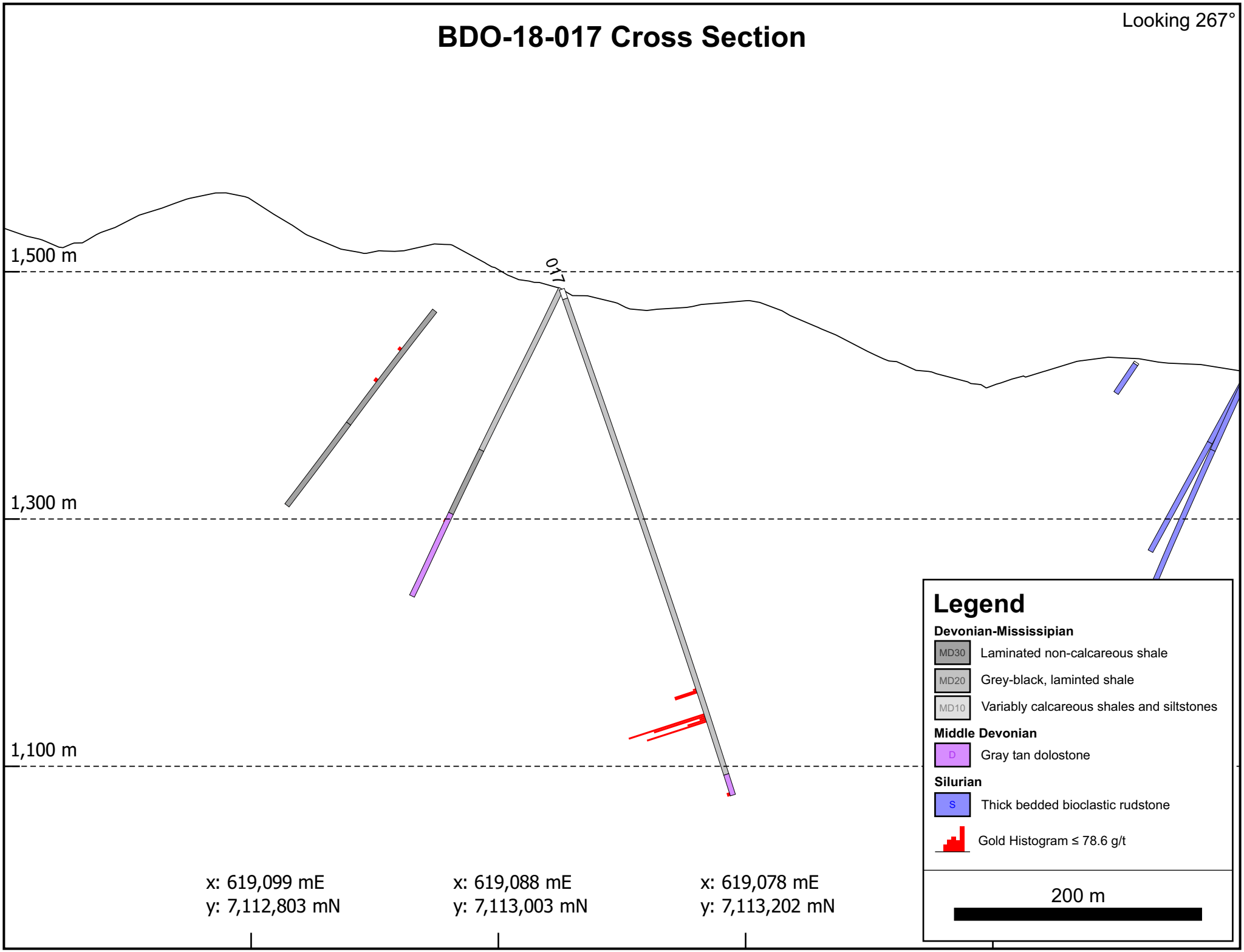
BDO-18-016 Cross Section

Looking 303°



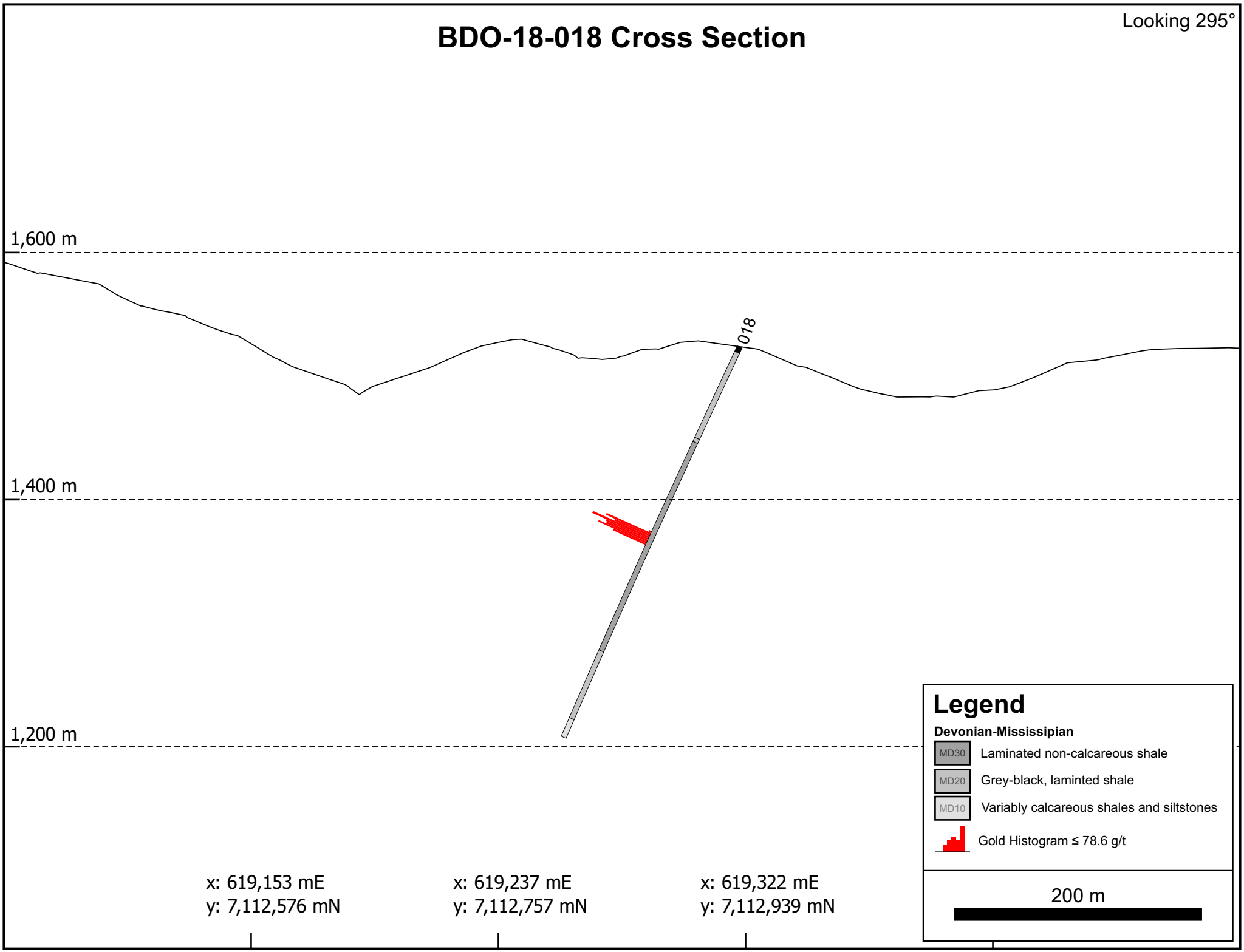
BDO-18-017 Cross Section

Looking 267°



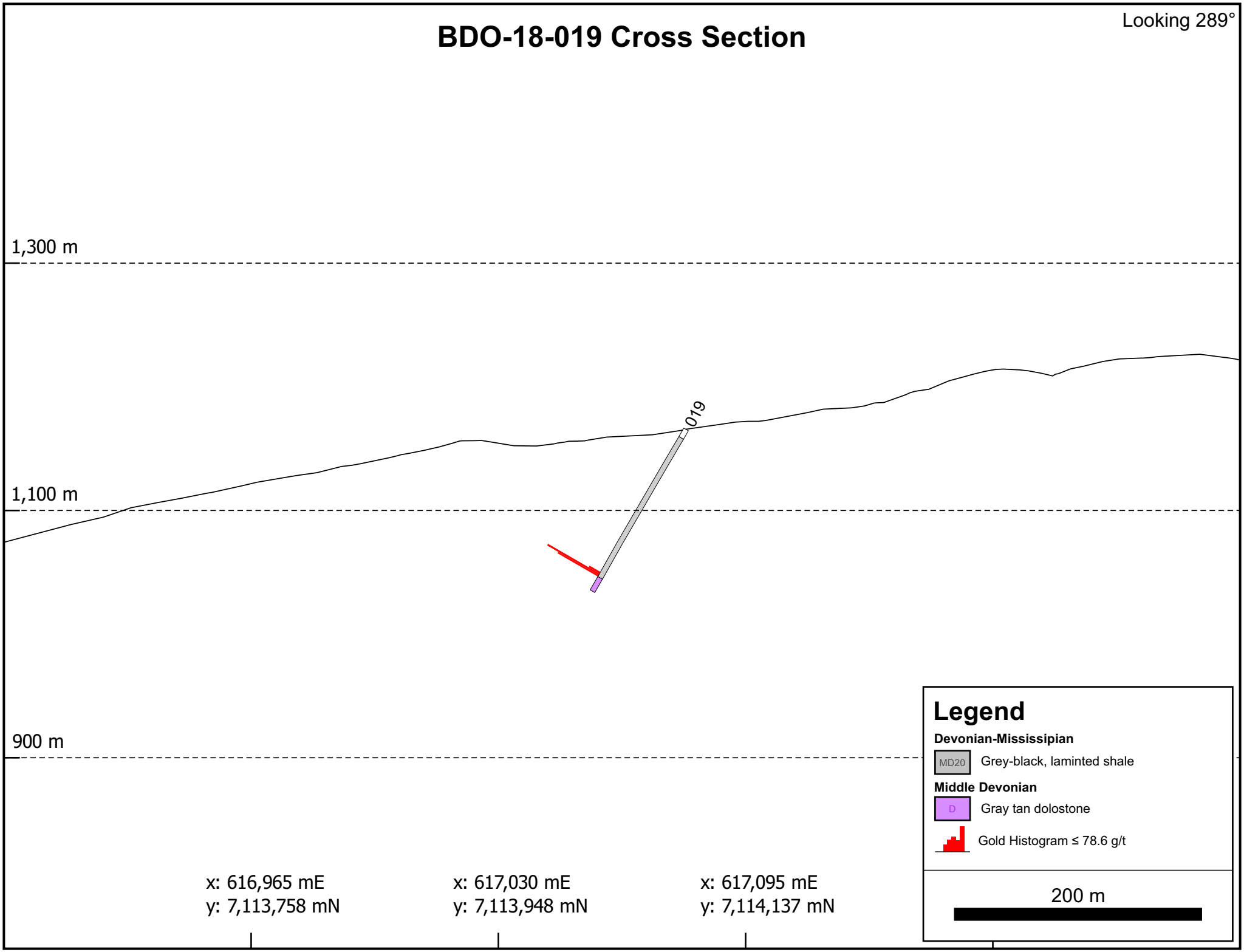
BDO-18-018 Cross Section

Looking 295°



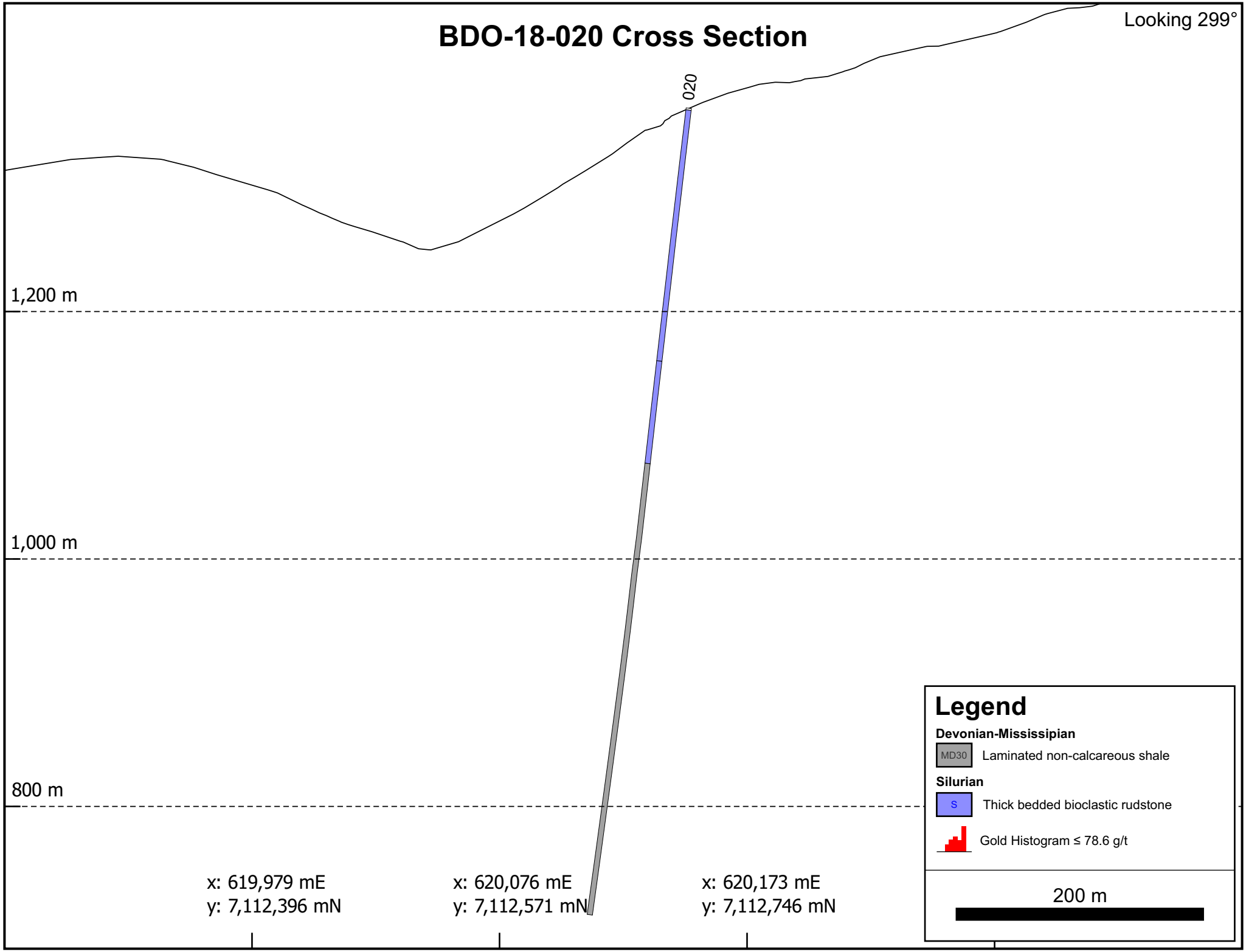
BDO-18-019 Cross Section

Looking 289°



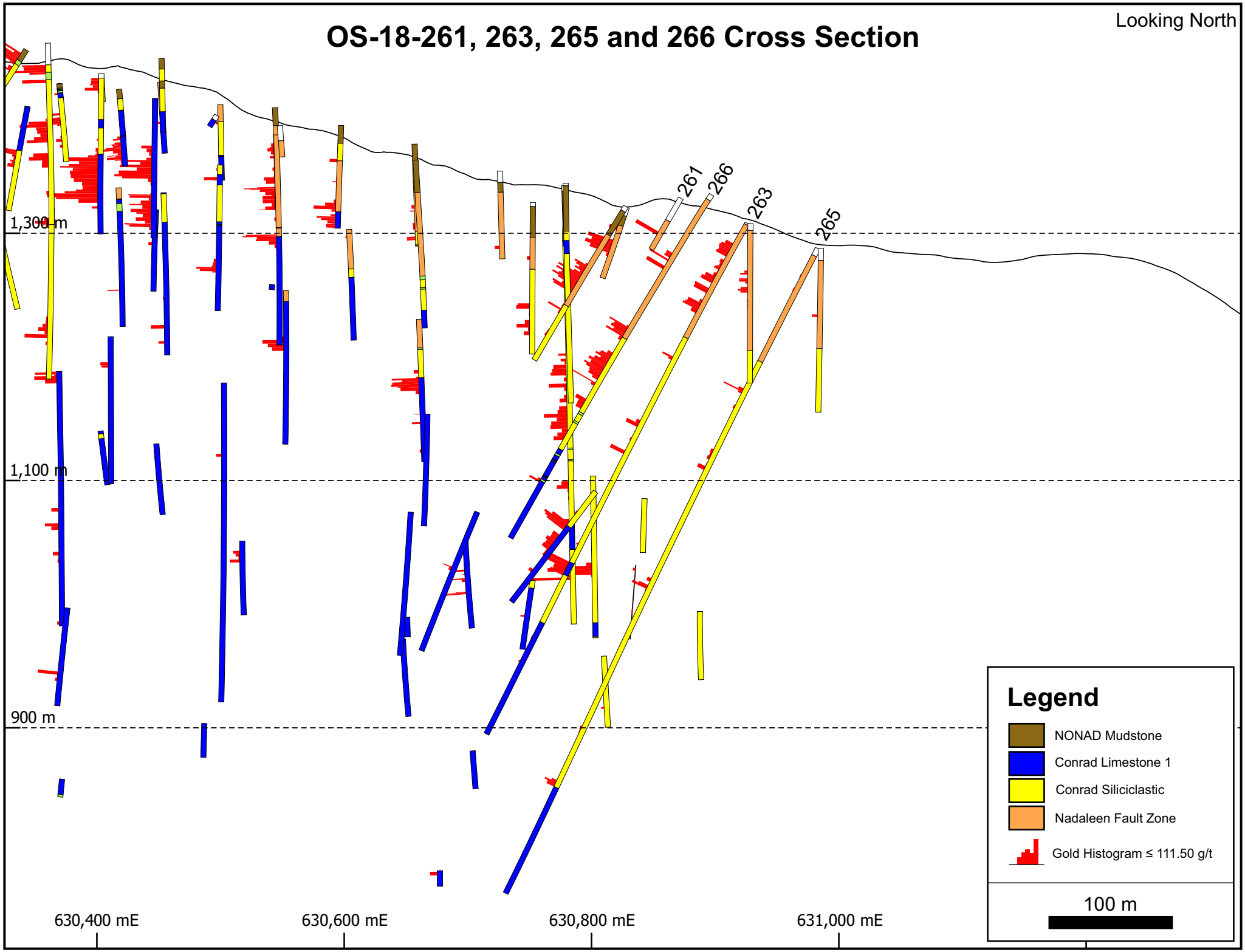
BDO-18-020 Cross Section

Looking 299°



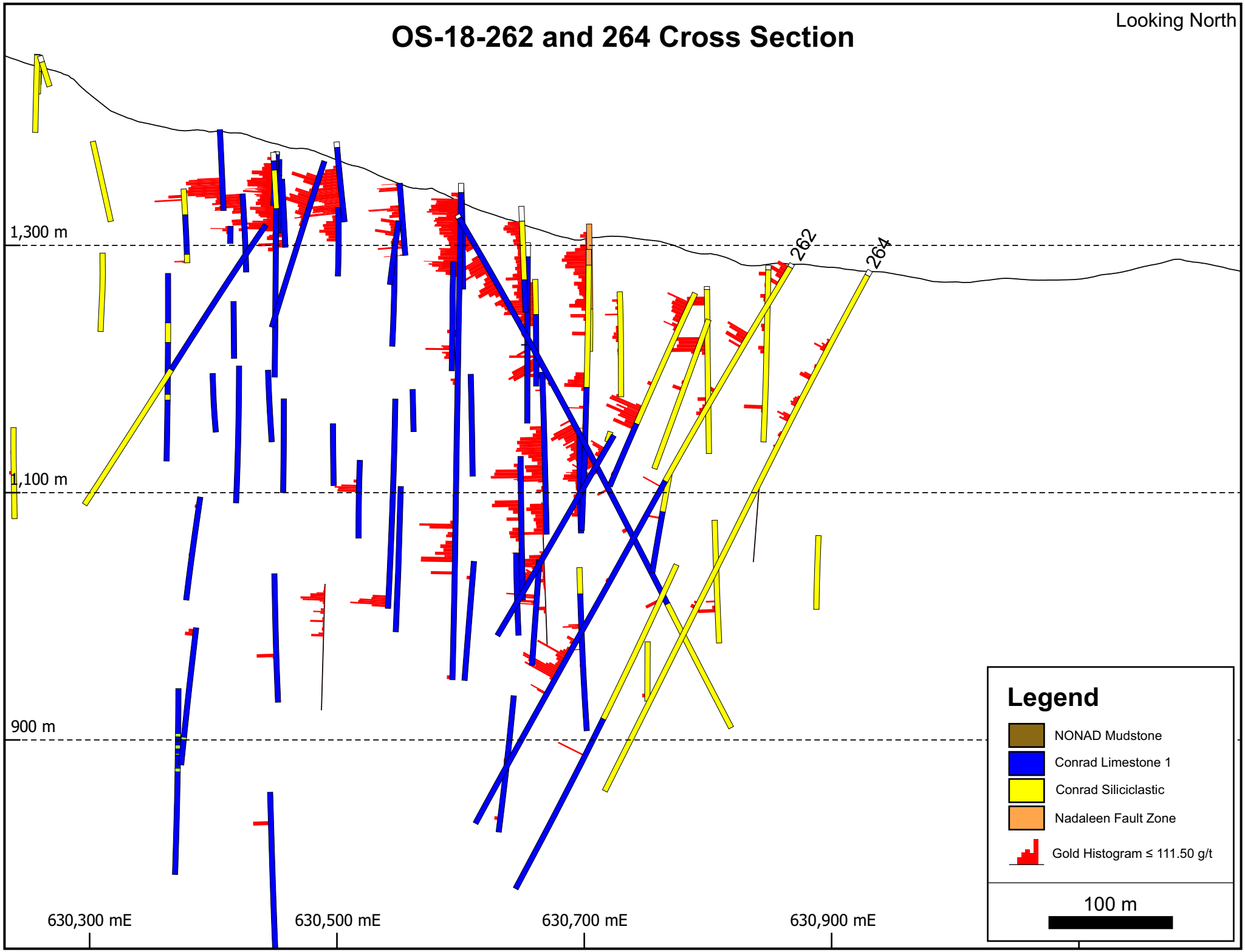
OS-18-261, 263, 265 and 266 Cross Section

Looking North



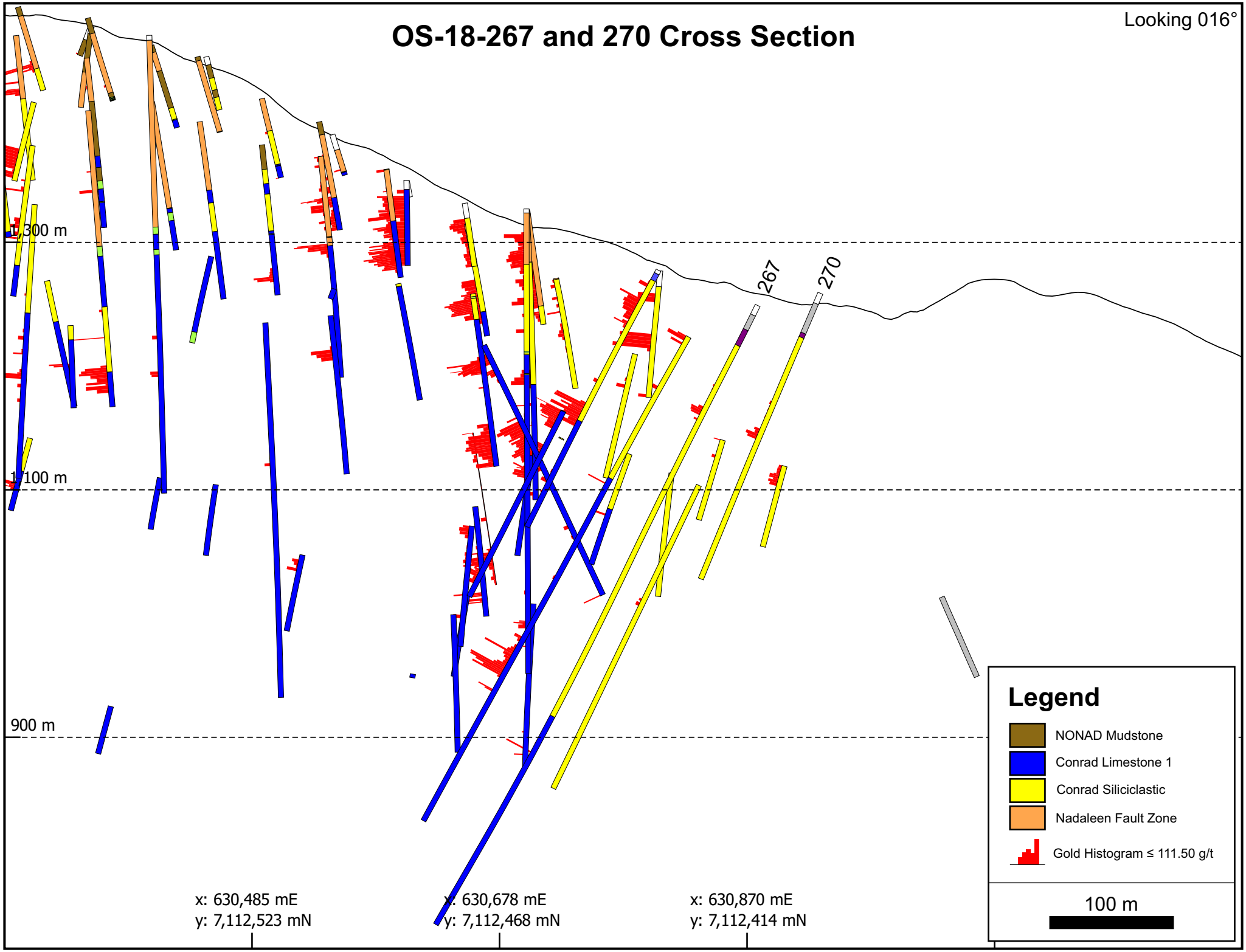
OS-18-262 and 264 Cross Section

Looking North

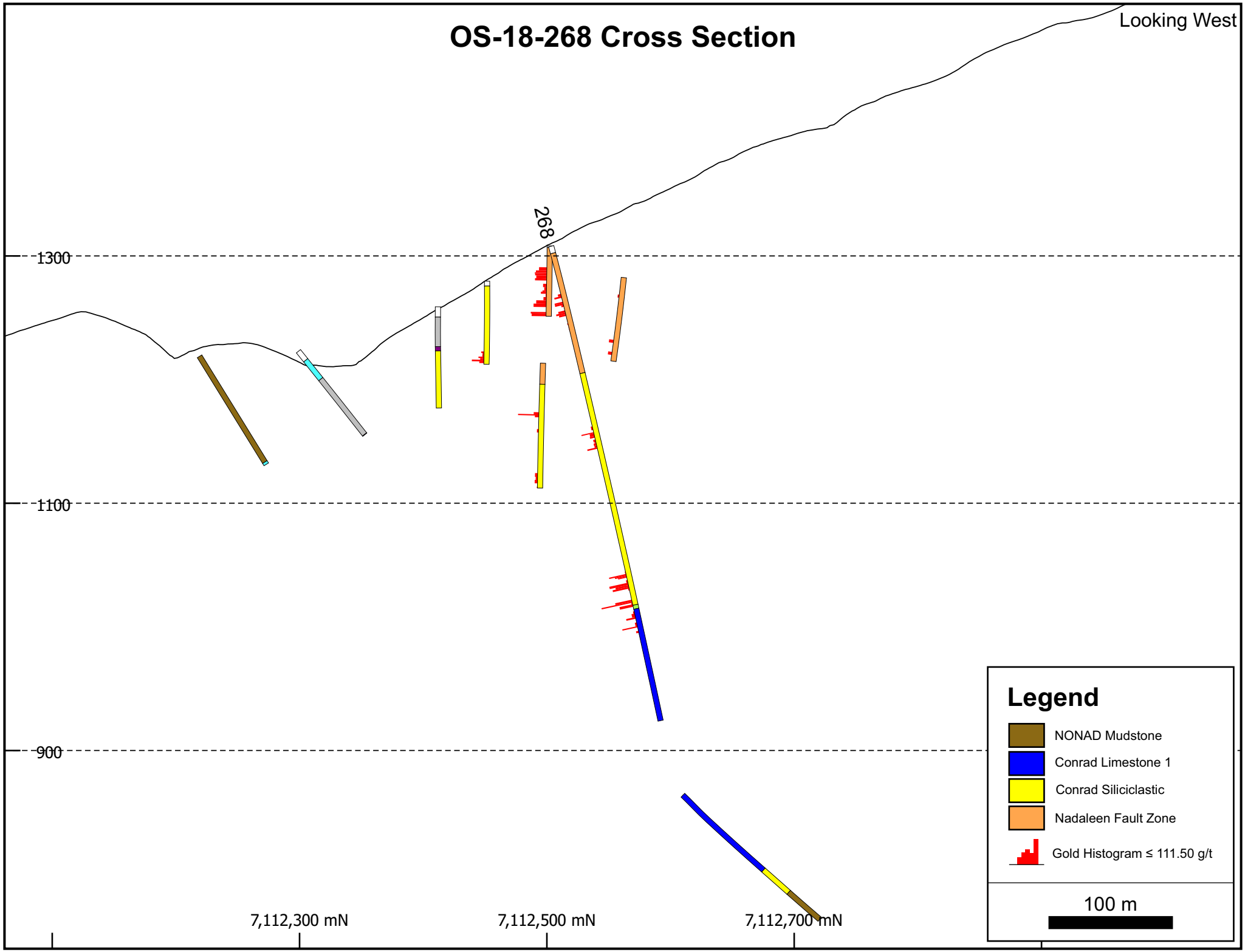


OS-18-267 and 270 Cross Section

Looking 016°

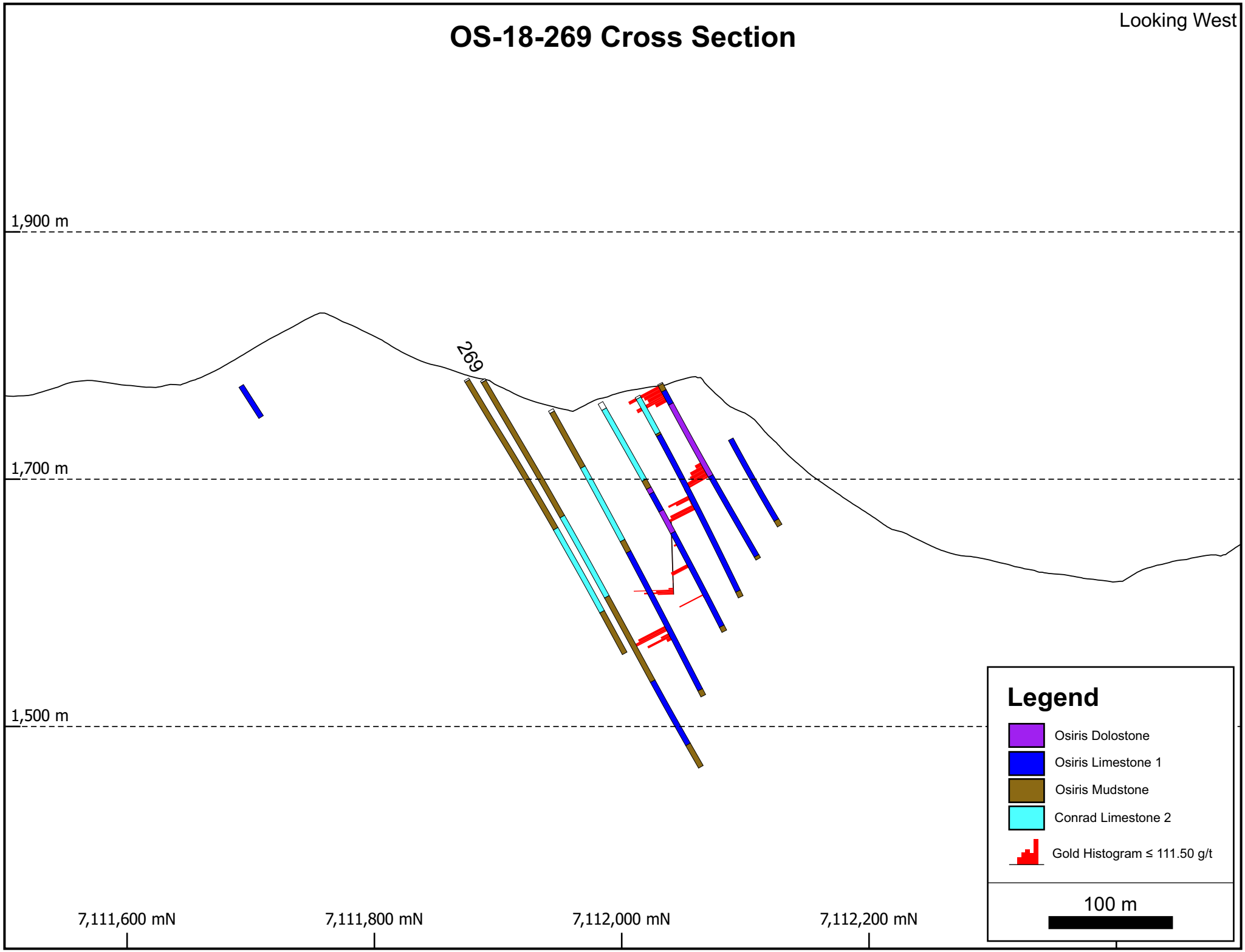


OS-18-268 Cross Section



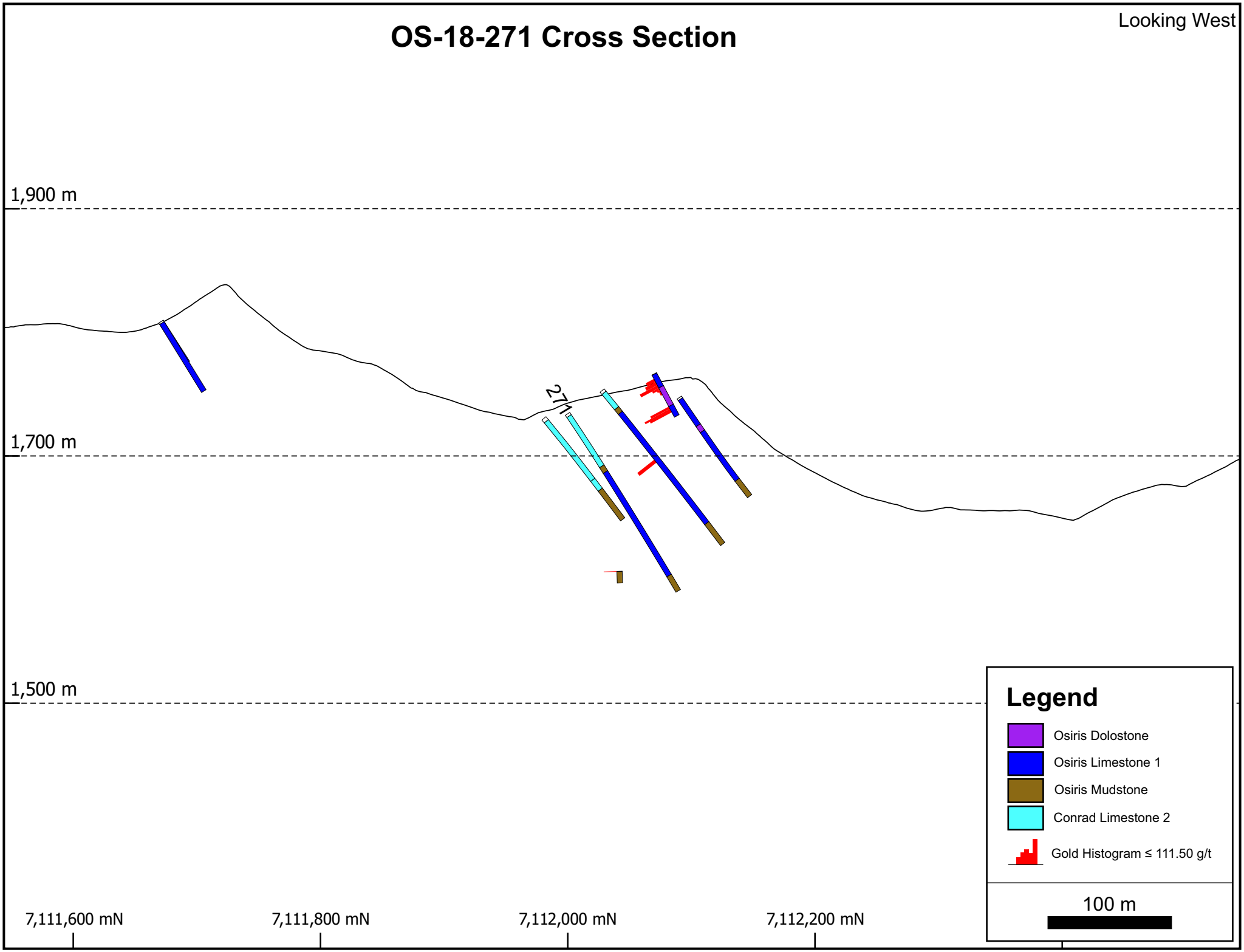
OS-18-269 Cross Section

Looking West



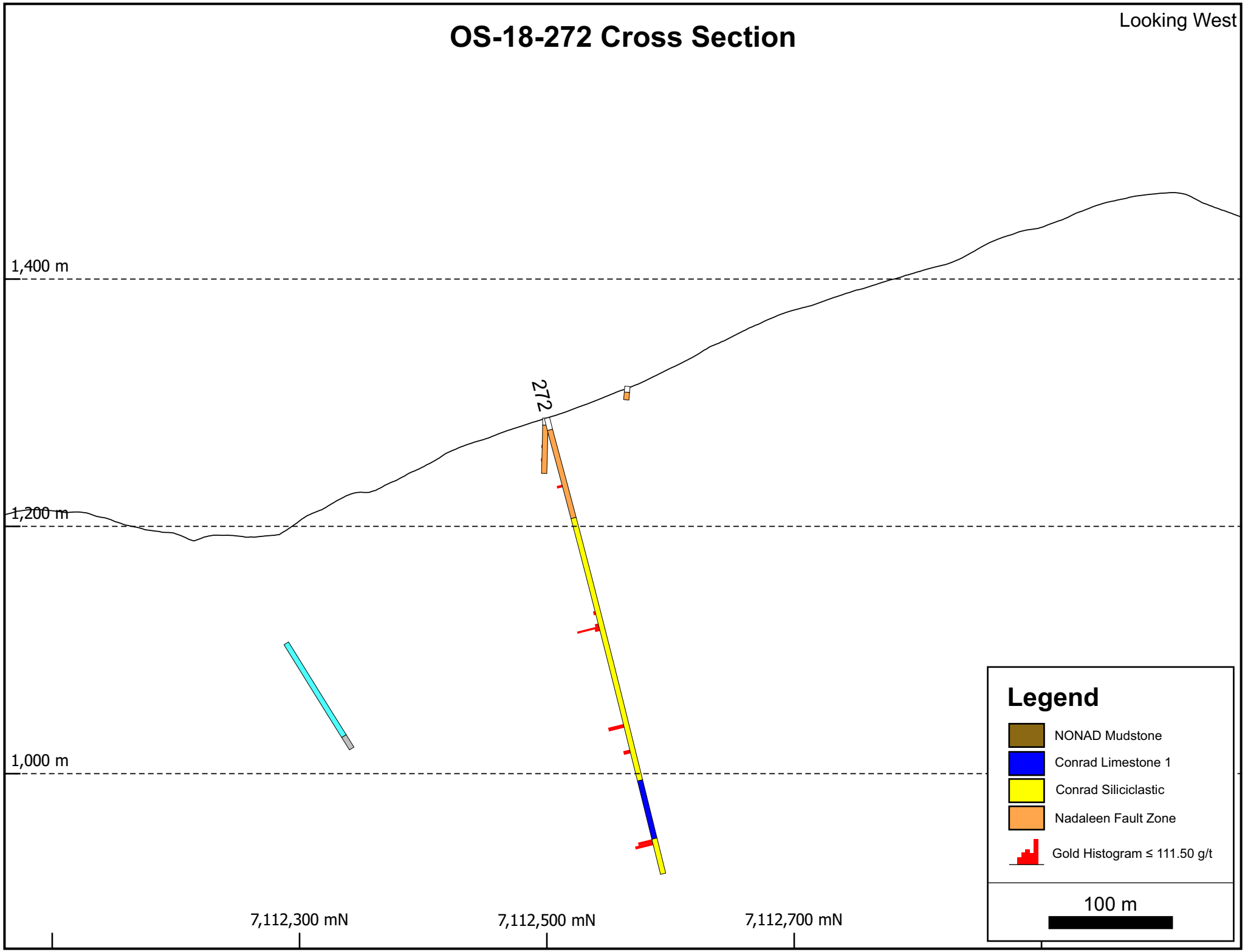
OS-18-271 Cross Section

Looking West



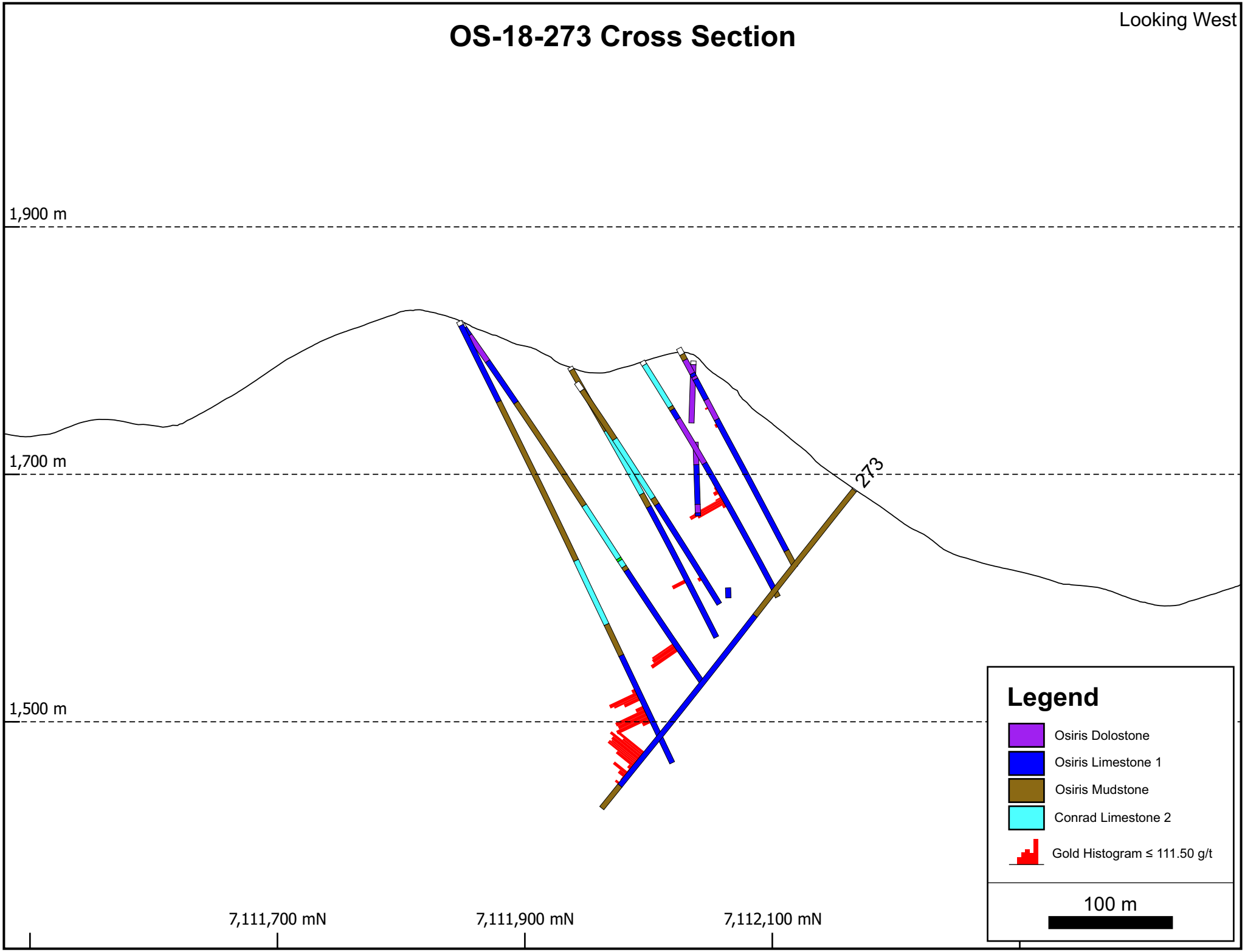
OS-18-272 Cross Section

Looking West



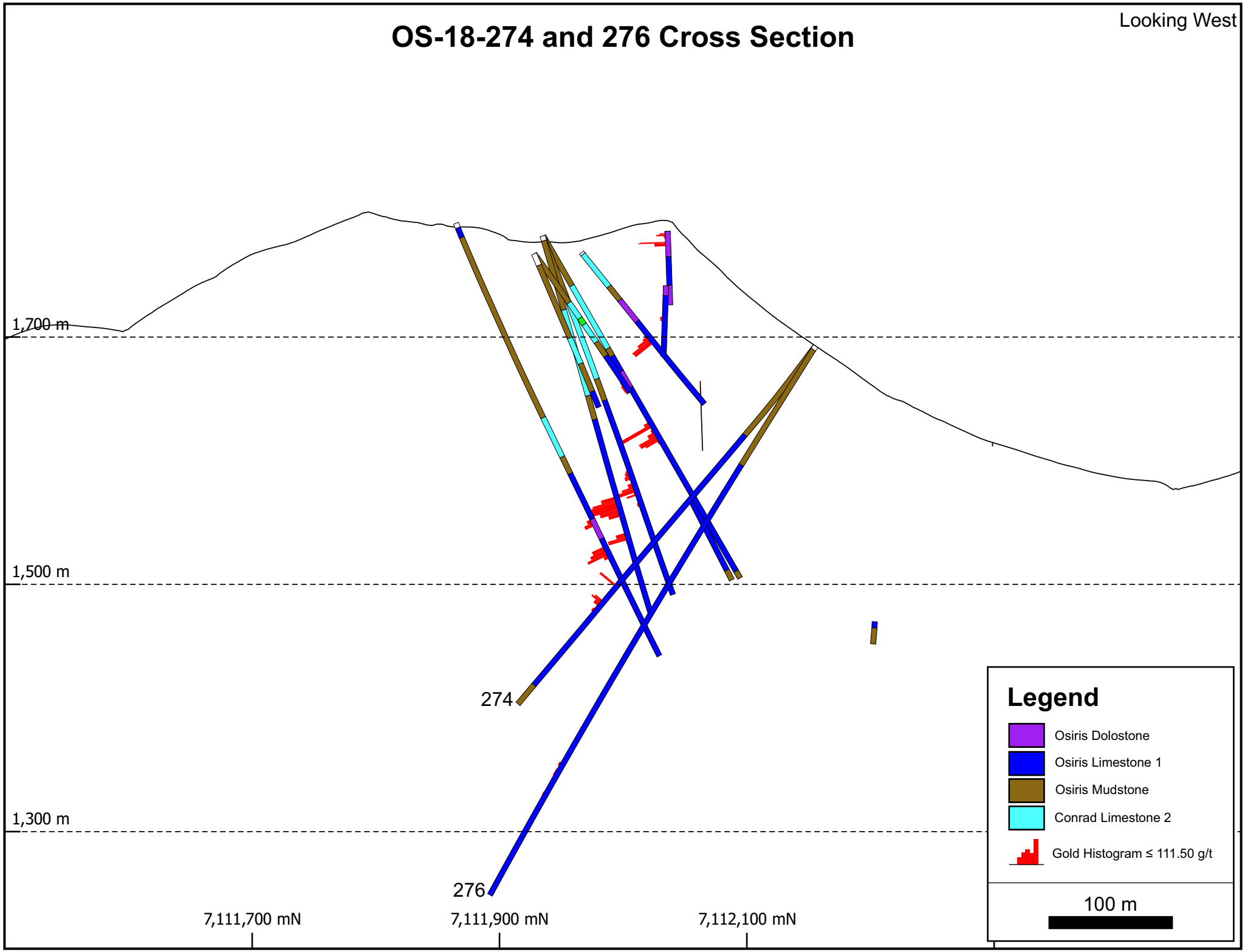
OS-18-273 Cross Section

Looking West



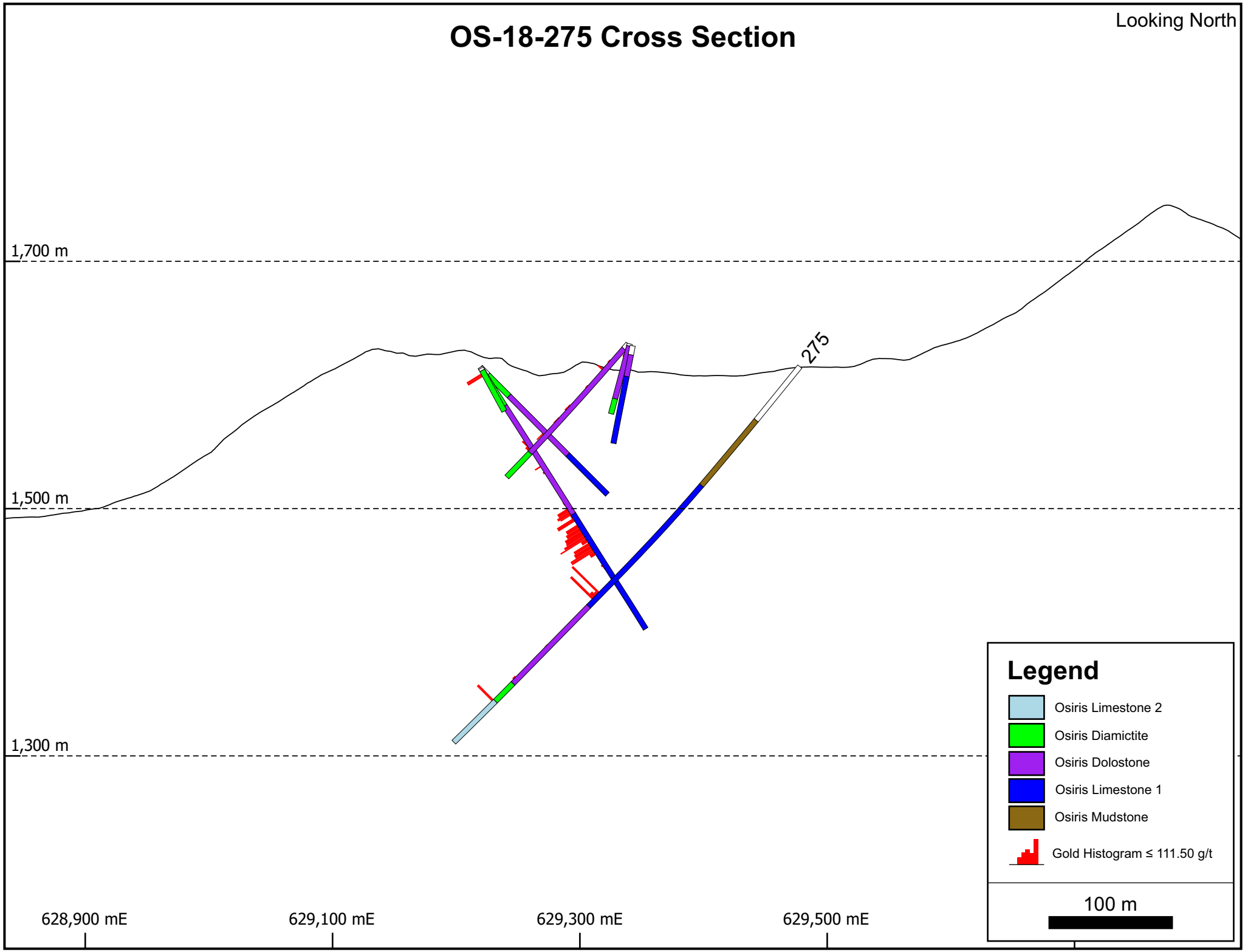
OS-18-274 and 276 Cross Section

Looking West



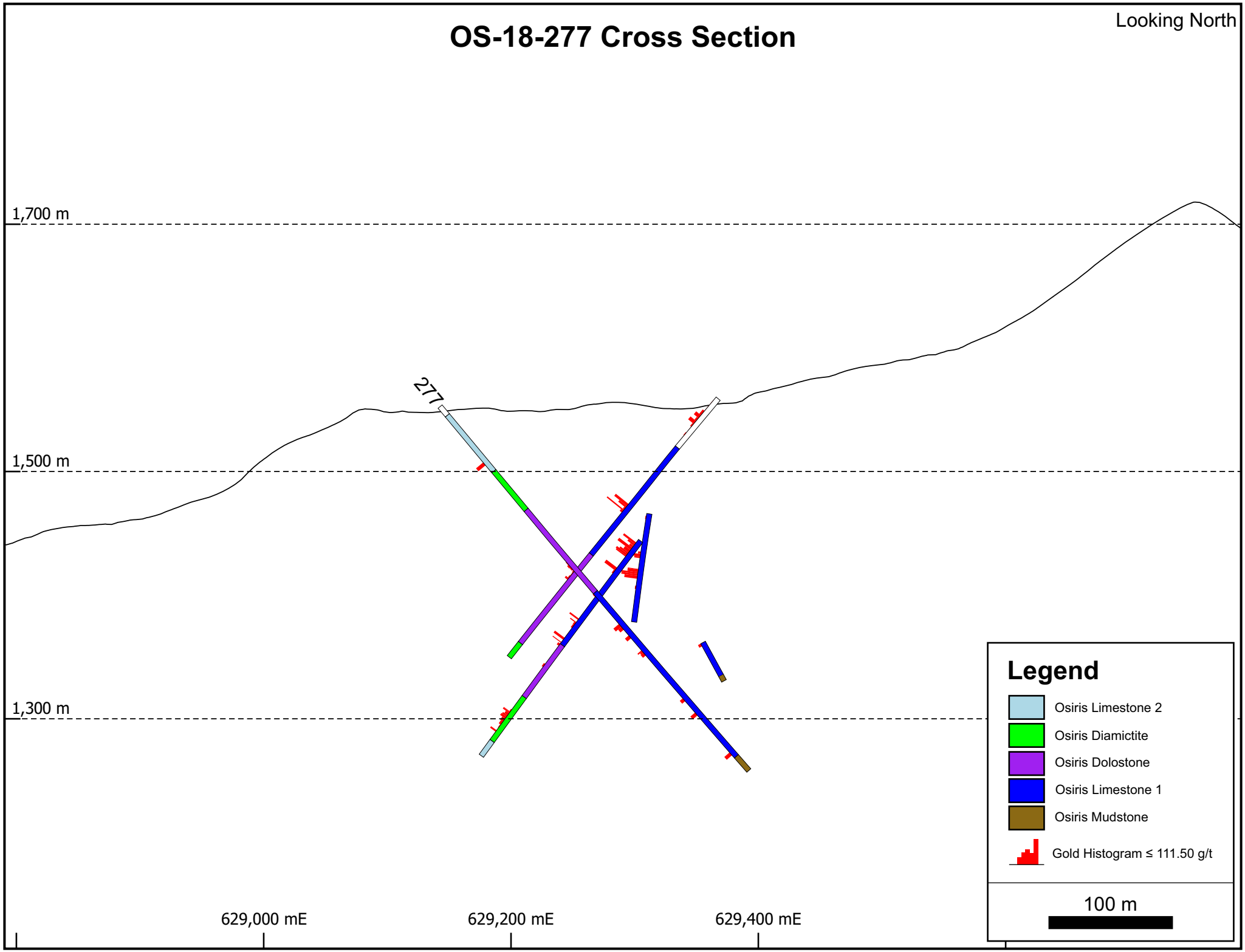
OS-18-275 Cross Section

Looking North



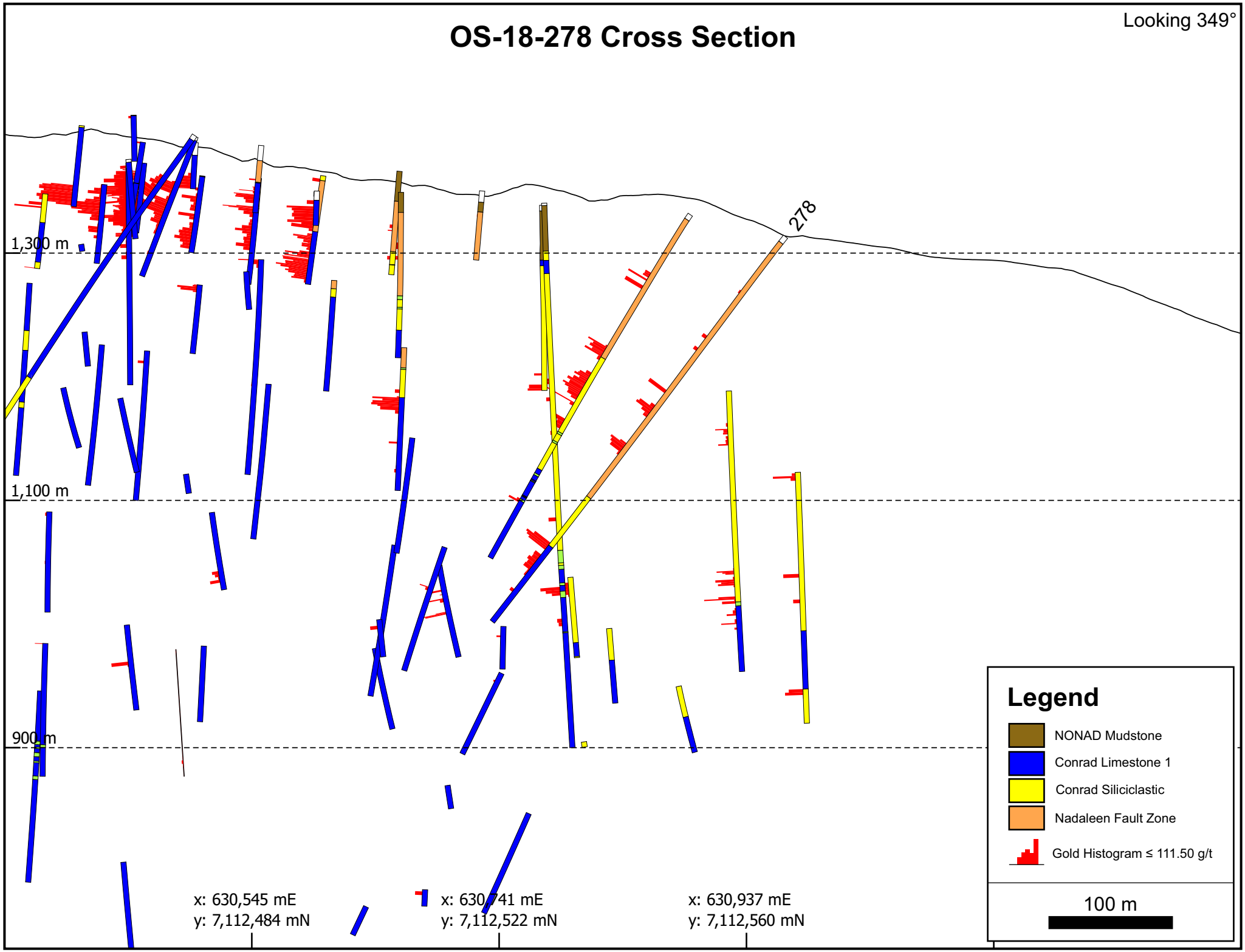
OS-18-277 Cross Section

Looking North



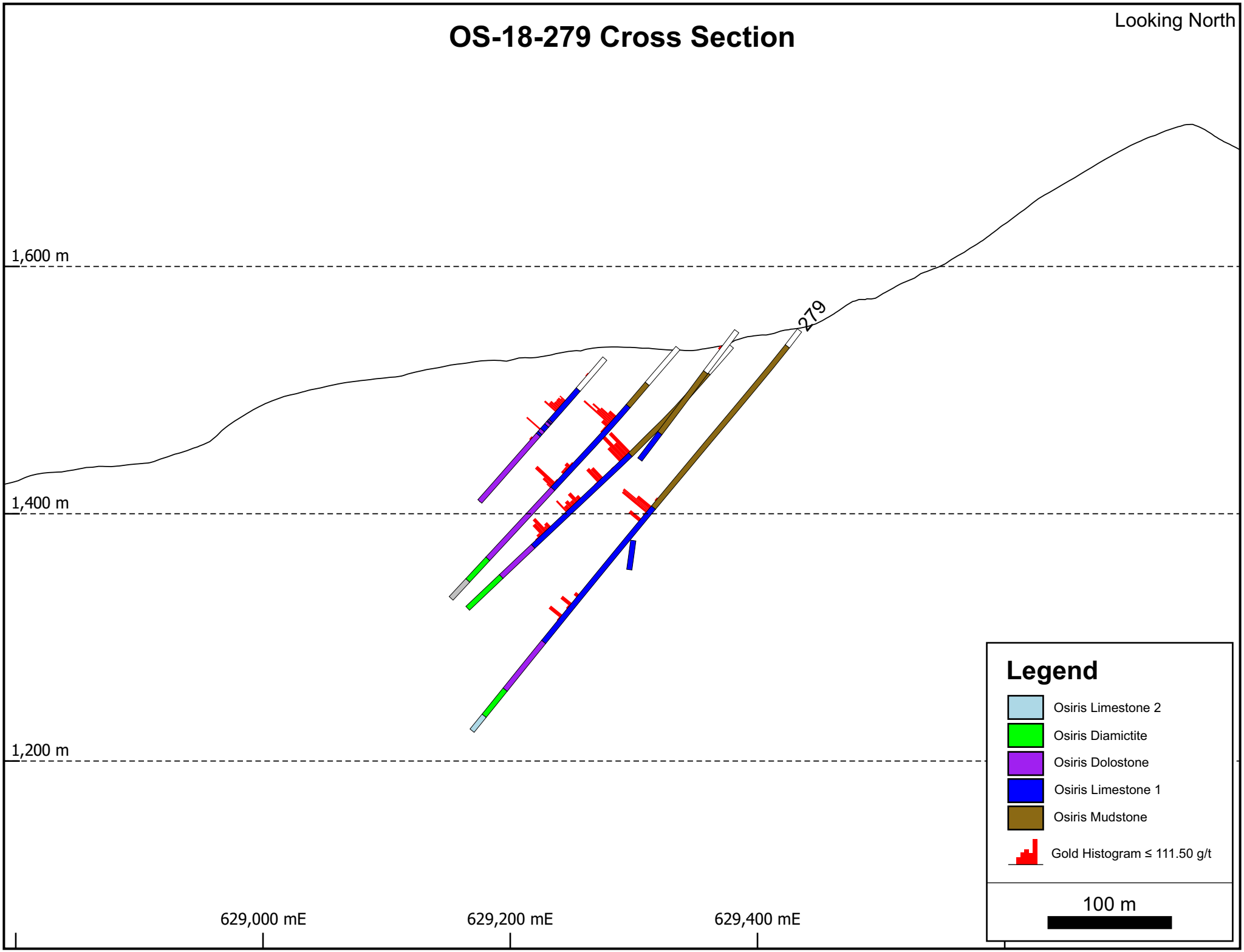
OS-18-278 Cross Section

Looking 349°



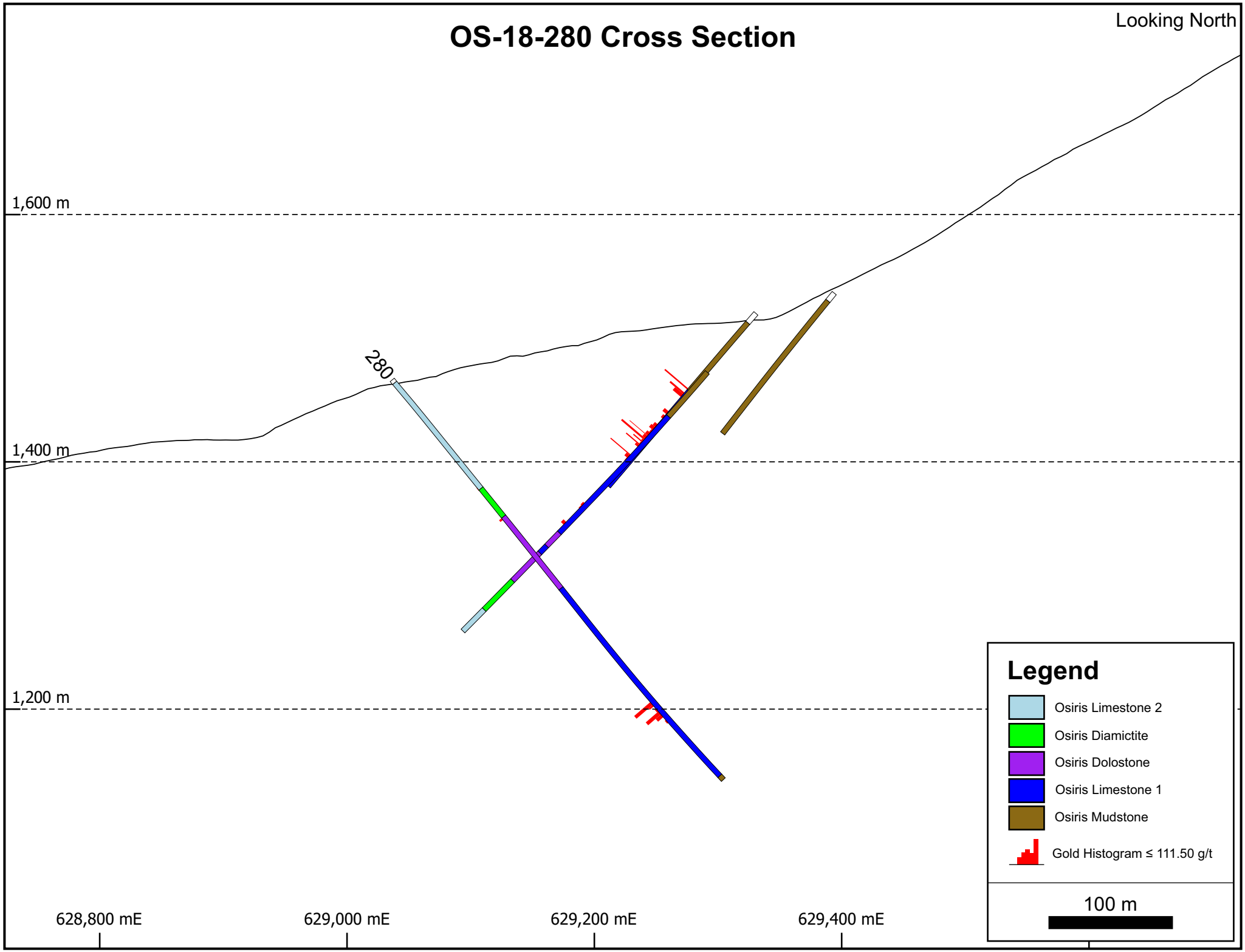
OS-18-279 Cross Section

Looking North



OS-18-280 Cross Section

Looking North



ATAC RESOURCES LIMITED

FIGURE 1
ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

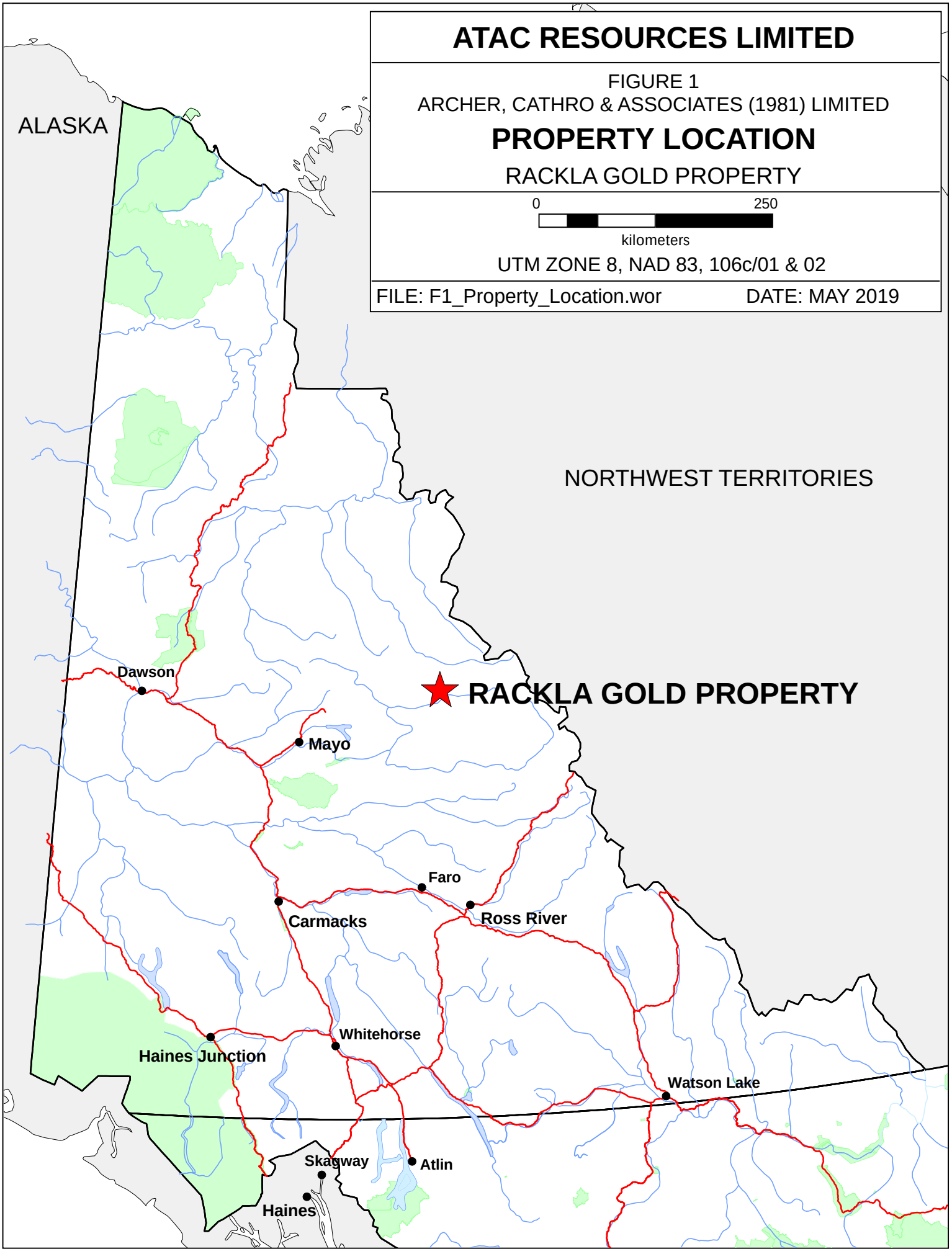
PROPERTY LOCATION

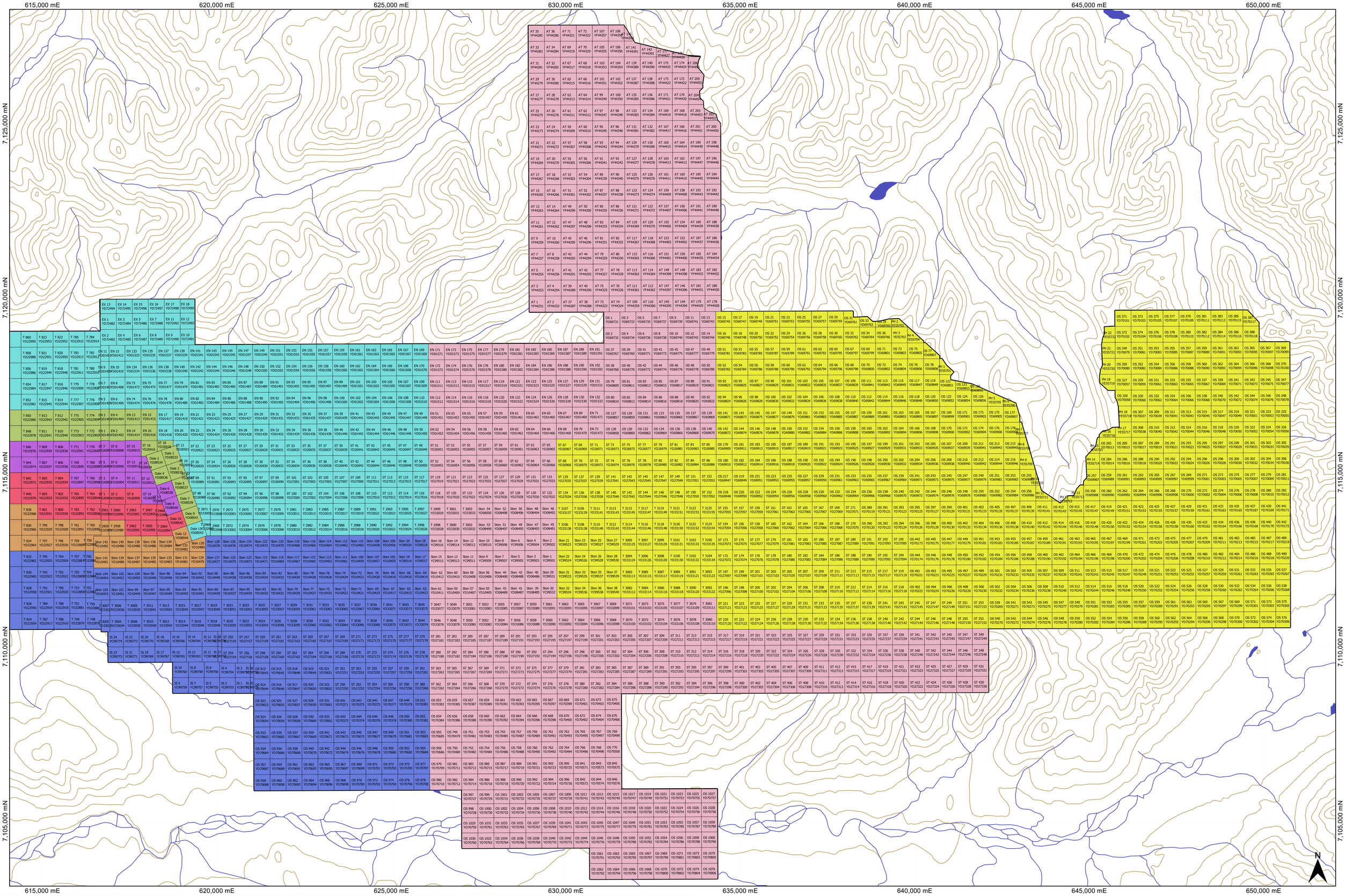
RACKLA GOLD PROPERTY

0 250
kilometers

UTM ZONE 8, NAD 83, 106c/01 & 02

FILE: F1_Property_Location.wor DATE: MAY 2019





Claim Groupings

- Group A
- Group B
- Group C
- Group D
- Group E
- Group F
- Group G
- Group H

0 1 2 3 4 5 km

1:65000

UTM NAD 83
Zone 8N

Client: ATAC RESOURCES LTD.

Rackla Gold Property

Claims by Assessment Group
Osiris & Orion Projects

Date	Fig. #	Author	Rev
April 11, 2019	2A	AC	A

ARCHER CATHRO

P:\2019\Rackla Gold\Assessment Report - 2018 Osiris and Orion Projects\Figures\Figure 2-9 - Claim Groupings\2019 Assessment Blocks.qgz

580,000 mE
585,000 mE
590,000 mE
595,000 mE
600,000 mE
605,000 mE
610,000 mE
615,000 mE

7,125,000 mN
7,120,000 mN
7,115,000 mN
7,110,000 mN
7,105,000 mN

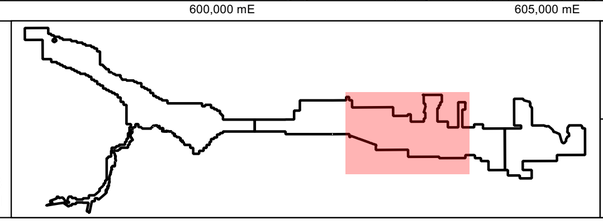
Claim Groupings

- Group A
- Group B
- Group C
- Group D
- Group E
- Group F
- Group G
- Group H

0 1 2 3 4 5 km

1:65000

UTM NAD 83
Zone 8N



Client

ATAC RESOURCES LTD.

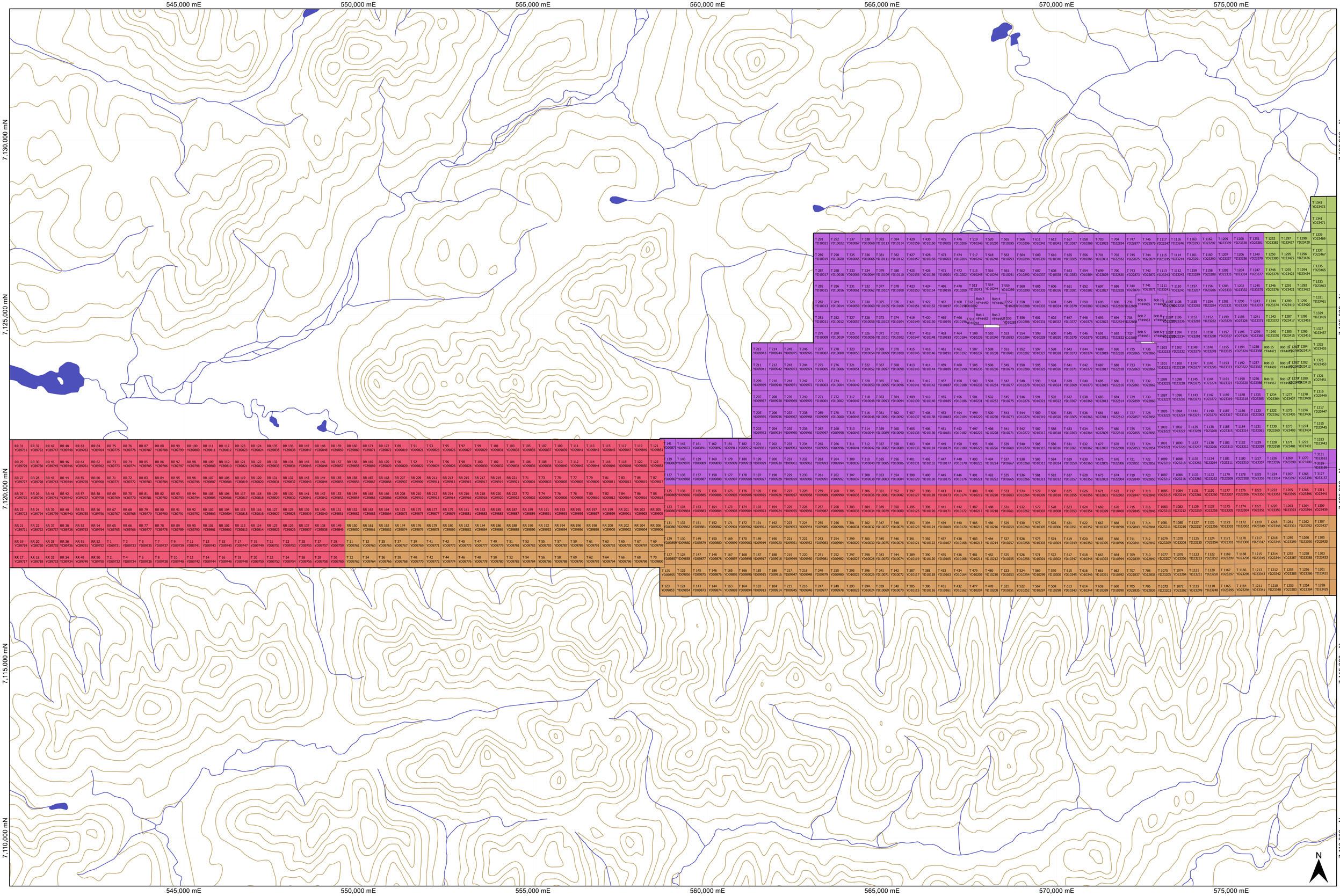
ARCHER CATHRO

Rackla Gold Property

Claims by Assessment Group
Osiris & Orion Projects

Date	Fig. #	Author	Rev
April 11, 2019	2B	AC	A

P:\2019\Rackla Gold\Assessment Report - 2018 Osiris and Orion Projects\Figures\Figure 2-9 - Claim Groupings\2019 Assessment Blocks.qgz



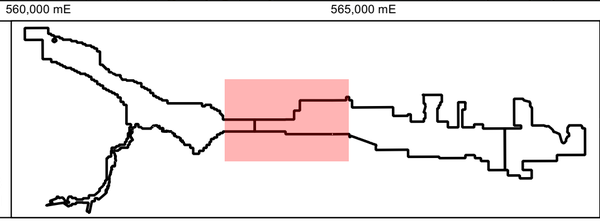
Claim Groupings

- Group A
- Group B
- Group C
- Group D
- Group E
- Group F
- Group G
- Group H

0 1 2 3 4 5 km

1:65000

UTM NAD 83
Zone 8N



Client: ATAC RESOURCES LTD.

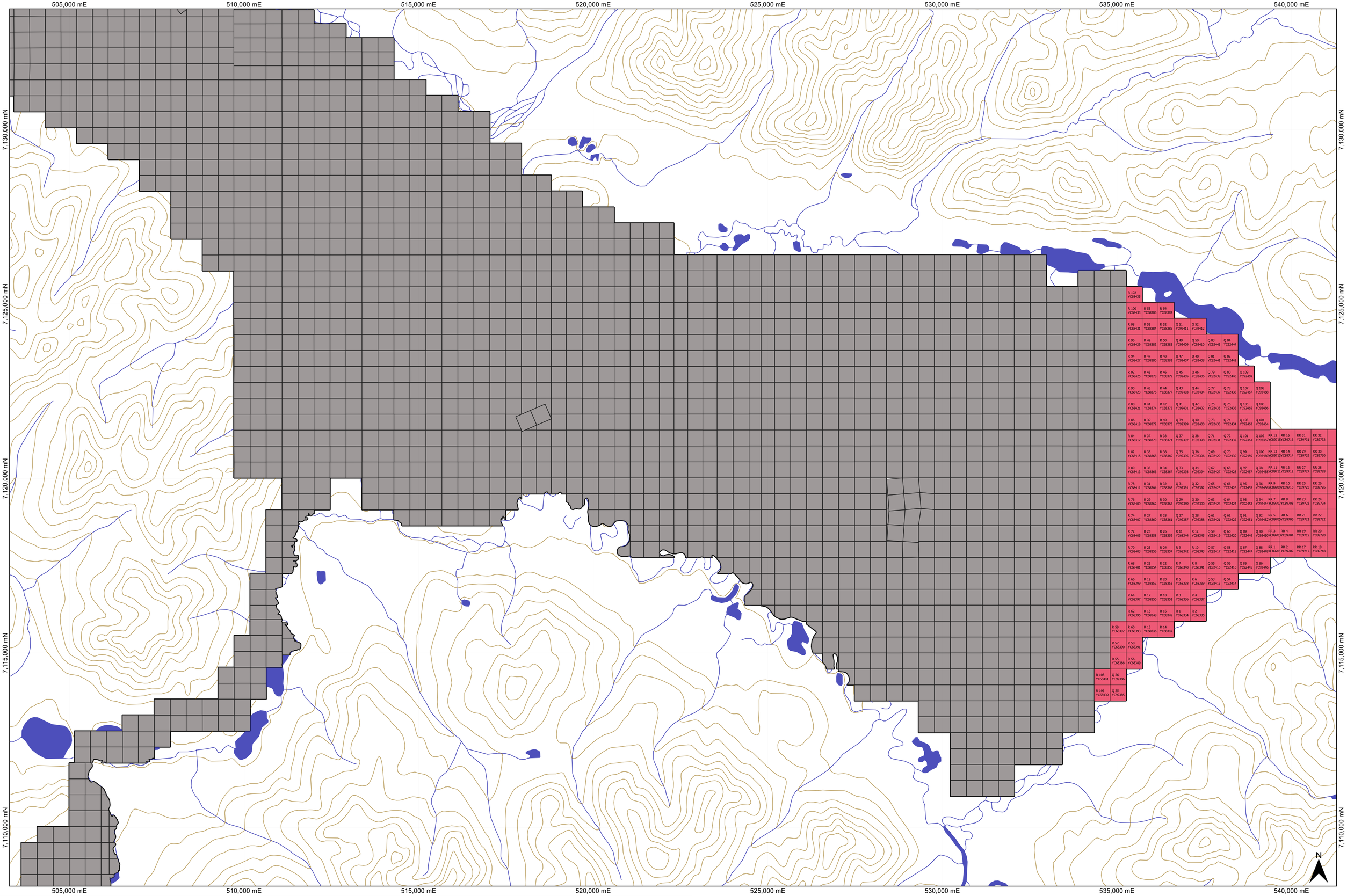
Rackla Gold Property

Claims by Assessment Group
Osiris & Orion Projects

ARCHER CATHRO

Date	Fig. #	Author	Rev
April 11, 2019	2C	AC	A

P:\2019\Rackla Gold\Assessment Report - 2018 Osiris and Orion Projects\Figures\Figure 2-9 - Claim Groupings\2019 Assessment Blocks.qgz



Claim Goupings

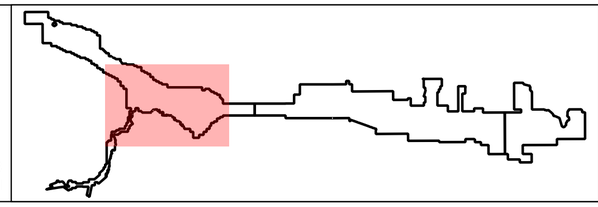
- Group A
- Group B
- Group C
- Group D
- Group E
- Group F
- Group G
- Group H

Rau Project Claims

0 1 2 3 4 5 km

1:65000

UTM NAD 83
Zone 8N



Client: ATAC RESOURCES LTD.

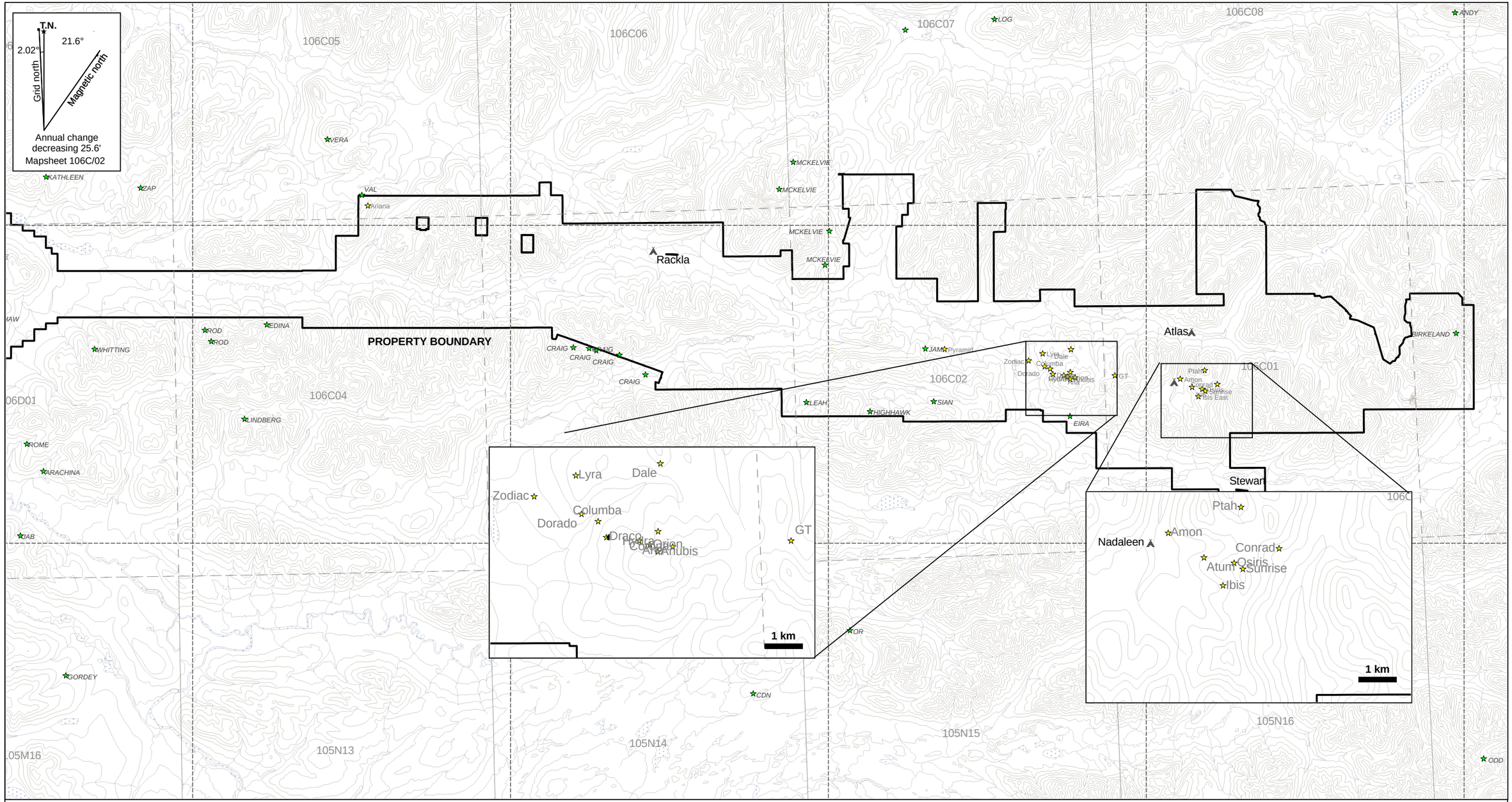
Rackla Gold Property

Claims by Assessment Group
Osiris & Orion Projects

ARCHER CATHRO

Date	Fig. #	Author	Rev
April 11, 2019	2D	AC	A

P:\2019\Rackla Gold\Assessment Report - 2018 Osiris and Orion Projects\Figures\Figure 2-9 - Claim Groupings\2019 Assessment Blocks.qgz



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FIGURE 3

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

SHOWING, CAMP & AIRSTRIP LOCATIONS

RACKLA GOLD PROJECT

0 — 20 km

UTM Zone 8, NAD 83, Contour interval 100 m, Scale: 1: 300 000

FILE:.../F_3-Showing,Camp&Airstrip_Locations.wor

DATE: May 2019

ATAC RESOURCES LIMITED

FIGURE 4

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

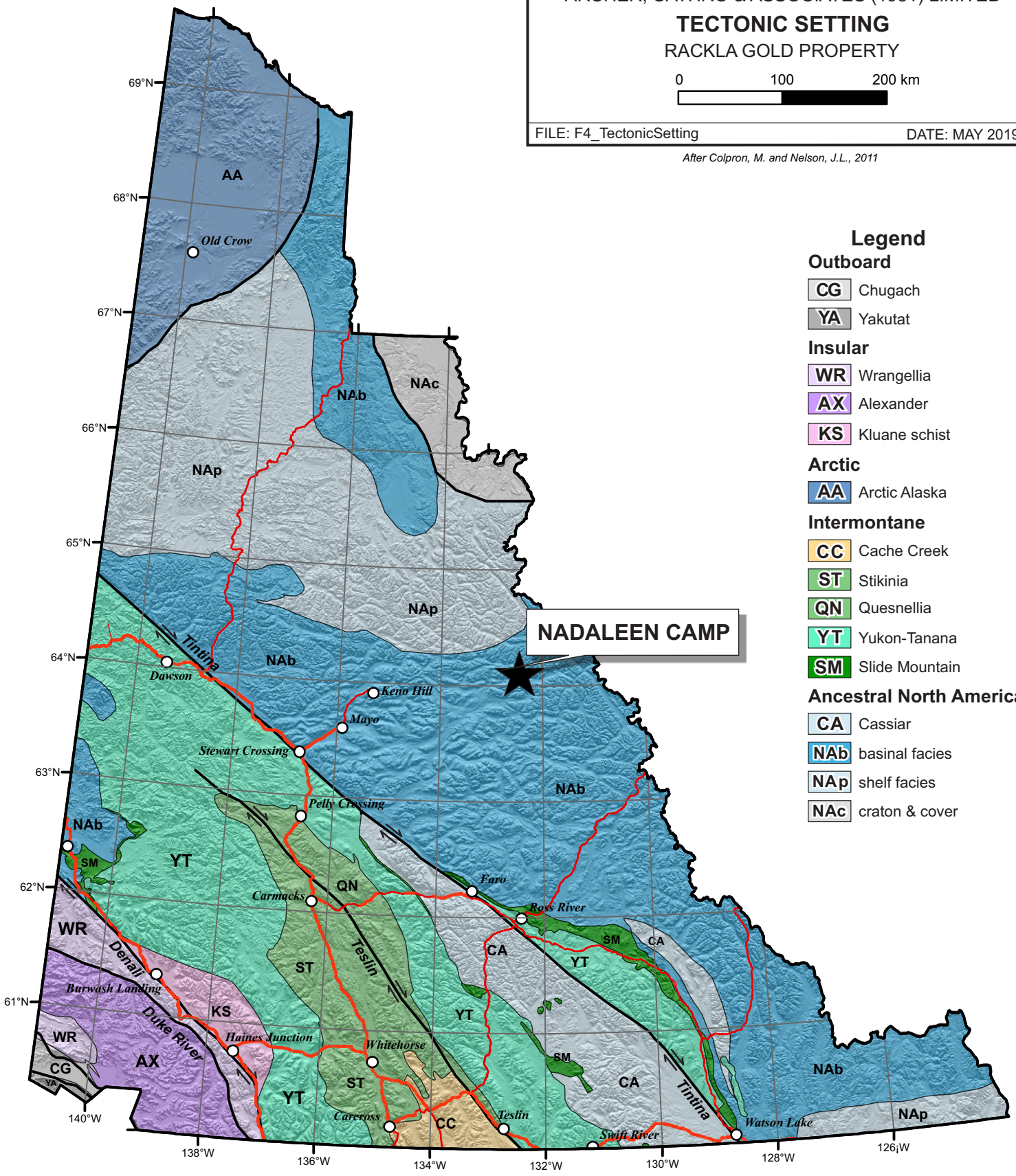
TECTONIC SETTING

RACKLA GOLD PROPERTY

0 100 200 km

FILE: F4_TectonicSetting DATE: MAY 2019

After Colpron, M. and Nelson, J.L., 2011



Legend

Outboard

- CG Chugach
- YA Yakutat

Insular

- WR Wrangellia
- AX Alexander
- KS Kluane schist

Arctic

- AA Arctic Alaska

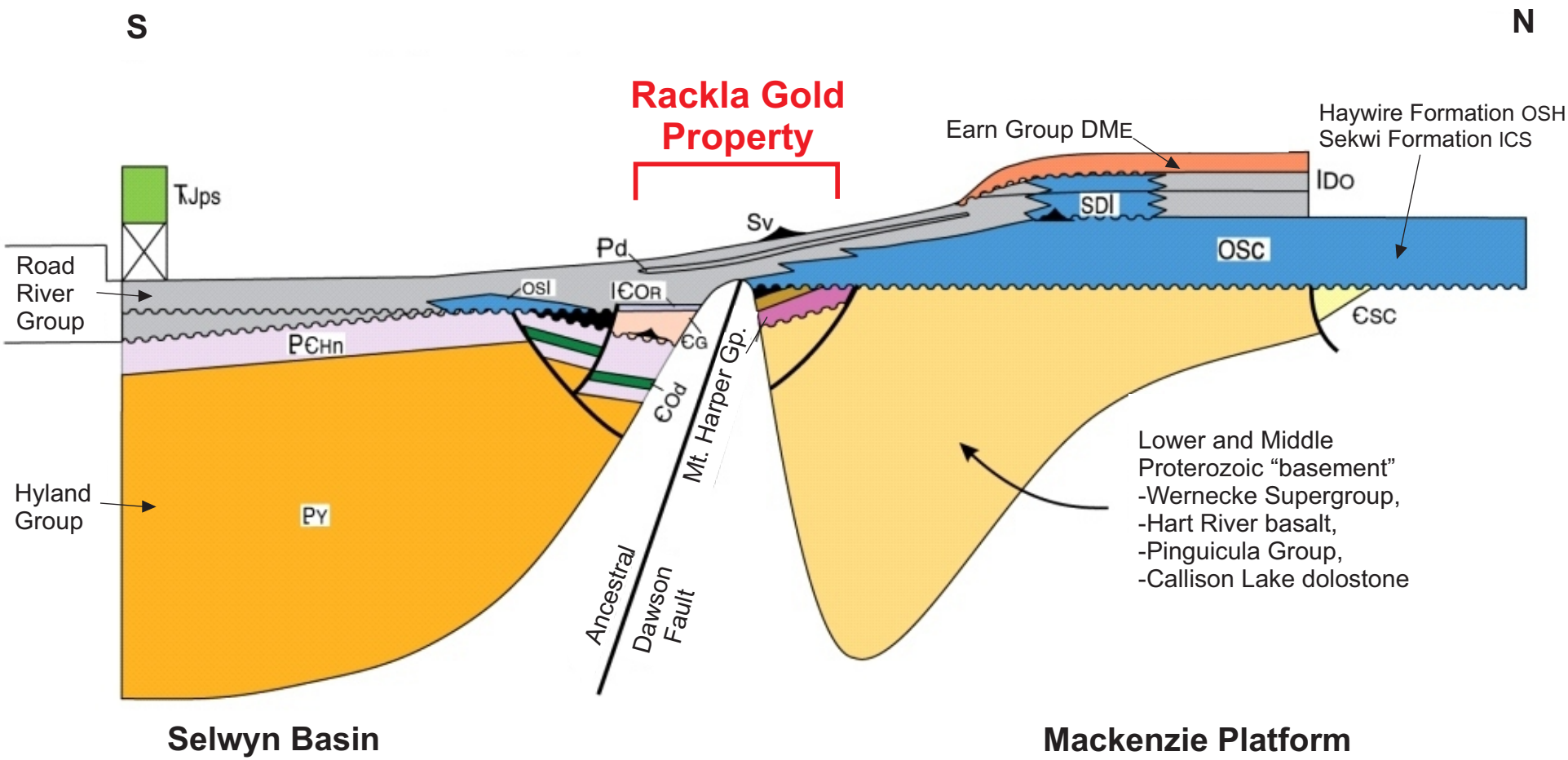
Intermontane

- CC Cache Creek
- ST Stikinia
- QN Quesnellia
- YT Yukon-Tanana
- SM Slide Mountain

Ancestral North America

- CA Cassiar
- NAb basinal facies
- NAp shelf facies
- NAc craton & cover

after Abbott (1997)



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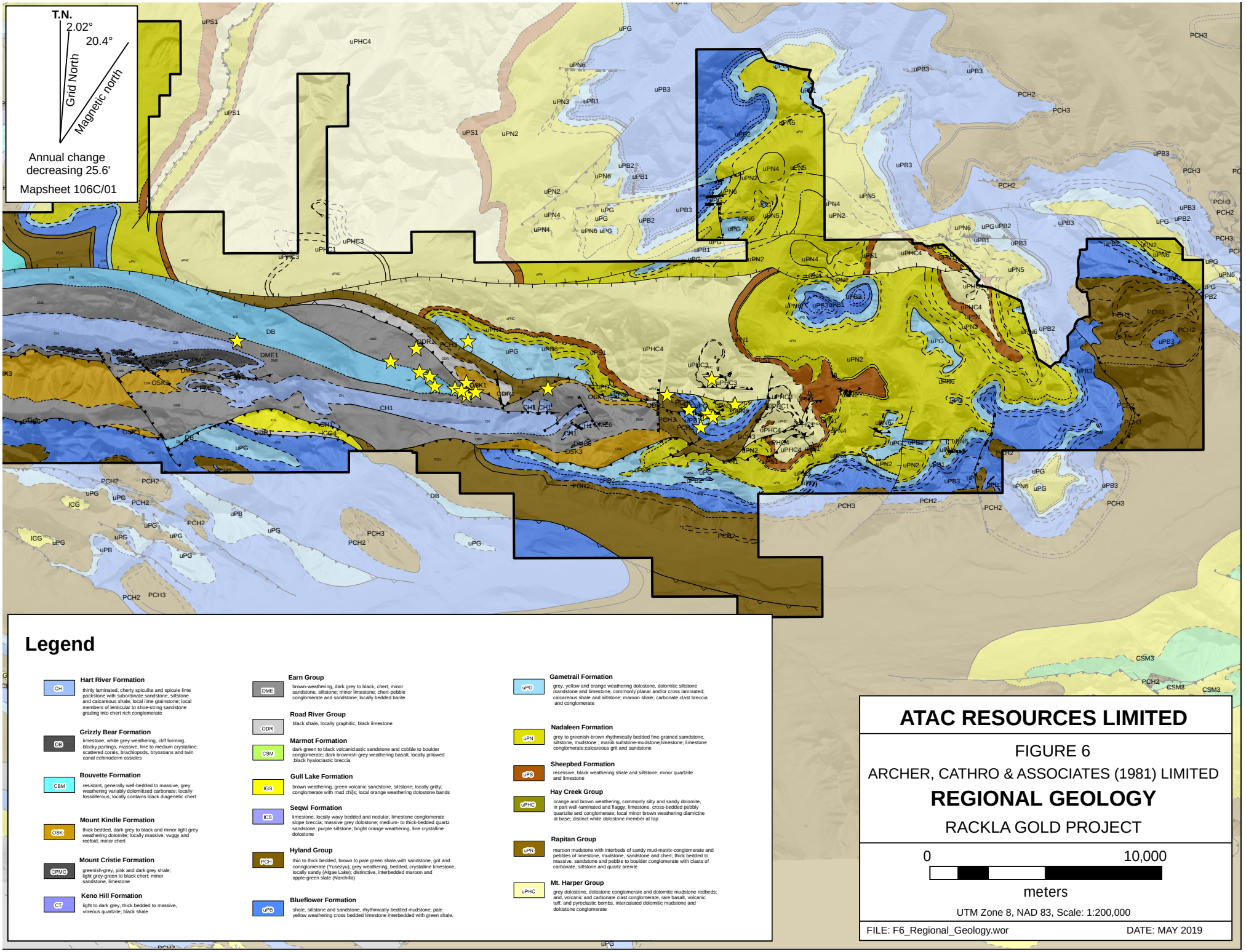
FIGURE 5

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

REGIONAL STRATIGRAPHIC SECTION

RACKLA GOLD PROPERTY

FILE: F5_RegionalStratigraphicSection DATE: MAY 2019


T.N.
2.02°
20.4°
Grid North
Magnetic north
Annual change
decreasing 25.6'
Mapsheet 106C/01
Legend
Hart River Formation
thinly laminated, cherty spiculite and spicule lime packstone with subordinate sandstone, siltstone and calcareous shale; local lime grainstone; local members of lenticular to shoe-string sandstone grading into chert rich conglomerate
Grizzly Bear Formation
limestone, white grey weathering, cliff forming, blocky partings, massive, fine to medium crystalline; scattered corals, brachiopods, bryozoans and twin canal echinoderm ossicles
Bouvette Formation
resistant, generally well-bedded to massive, grey weathering variably dolomilized carbonate; locally fossiliferous; locally contains black diagenetic chert
Mount Kindle Formation
thick bedded, dark grey to black and minor light grey weathering dolomite; locally massive, vuggy and reefoid; minor chert
Mount Cristie Formation
greenish-grey, pink and dark grey shale; light grey-green to black chert; minor sandstone, limestone
Keno Hill Formation
light to dark grey, thick bedded to massive, vitreous quartzite; black shale
Earn Group
brown-weathering, dark grey to black, chert, minor sandstone, siltstone; minor limestone; chert-pebble conglomerate and sandstone; locally bedded barite
Road River Group
black shale, locally graphitic; black limestone
Marmot Formation
dark green to black volcaniclastic sandstone and cobble to boulder conglomerate; dark brownish-grey weathering basalt, locally pillowed ;black hyaloclastic breccia
Gull Lake Formation
brown weathering, green volcanic sandstone, siltstone; locally gritty; conglomerate with mud chi[s; local orange weathering dolostone bands
Seqwi Formation
limestone, locally wavy bedded and nodular; limestone conglomerate slope breccia; massive grey dolostone; medium- to thick-bedded quartz sandstone; purple siltstone; bright orange weathering, fine crystalline dolostone
Hyland Group
thin to thick bedded, brown to pale green shale,with sandstone, grit and connglomerate (Yusezyu); grey weathering, bedded, crystalline limestone, locally sandy (Algae Lake); distinctive, interbedded maroon and apple-green slate (Narchilla)
Blueflower Formation
shale, siltstone and sandstone, rhythmically bedded mudstone; pale yellow weathering cross bedded limestone interbedded with green shale.
Gametrail Formation
grey, yellow and orange weathering dolostone, dolomitic siltstone /sandstone and limestone, commonly planar and/or cross laminated; calcareous shale and siltstone; maroon shale; carbonate clast breccia and conglomerate
Nadaleen Formation
grey to greenish-brown rhythmically bedded fine-grained samdstone, siltstone, mudstone ; marilb sultstone-mudstone;limestone; limestone conglomerate;calcareous grit and sandstone
Sheepbed Formation
recessive, black weathering shale and siltstone; minor quartzite and limestone
Hay Creek Group
orange and brown weathering, commonly silty and sandy dolomite, in part well-laminated and flaggy; limestone, cross-bedded pebbly quartzite and conglomerate; local minor brown weathering diamictite at base; distinct white dolostone member at top
Rapitan Group
maroon mudstone with interbeds of sandy mud-matrix-conglomerate and pebbles of limestone, mudstone, sandstone and chert; thick bedded to massive, sandstone and pebble to boulder conglomerate with clasts of carbonate, siltstone and quartz arenite
Mt. Harper Group
grey dolostone, dolostone conglomerate and dolomitic mudstone redbeds; and, volcanic and carbonate clast conglomerate, rare basalt, volcanic tuff, and pyroclastic bombs, intercalated dolomitic mudstone and dolostone conglomerate
ATAC RESOURCES LIMITED
FIGURE 6
ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
REGIONAL GEOLOGY
RACKLA GOLD PROJECT
0
10,000
meters
UTM Zone 8, NAD 83, Scale: 1:200,000
FILE: F6_Regional_Geology.wor
DATE: MAY 2019

620,000 mE

625,000 mE

7,115,000 mN

7,110,000 mN

N

N-MST

C-SLC

O-MST

O-LST1

O-LST2

A-SLT

A-DST

A-MST

GL

O

S

D

M

MD10

MD20

MD30

Legend

Mississipian

- M — Thick bedded bioclastic limestone

Devonian-Mississipian

- MD30 — Laminated non-calcareous shale
- MD20 — Grey-black, laminted shale
- MD10 — Variably calcareous shales and siltstones

Middle Devonian

- D — Gray tan dolostone

Silurian

- S — Thick bedded bioclastic rudstone

Ordovician-Devonian

- ODRR — Black shale with local limestone layers

Ordovician

- O — Grey massive bedded rudstone-floatstone
- O-GAB — Osiris Gabbro 465.66±4.4 Ma (Tucker, 2015)

Neoproterozoic-Cambrian

- GL — Gull Lake Sandstone and Siltstone

Neoproterozoic-Cambrian

- Amon Mudstone
- Atum Dolostone
- Atum Siltstone
- Osiris Limestone 2
- Osiris Diamictite
- Osiris Dolostone
- Osiris Limestone 1
- Osiris Mudstone
- Conrad Limestone 2
- Conrad Shale
- Conrad Dolostone
- Conrad Siliciclastic
- Conrad Limestone 1
- NONAD Mudstone
- Diamond Drill Hole

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FIGURE 7

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

NADALEEN TREND GEOLOGY

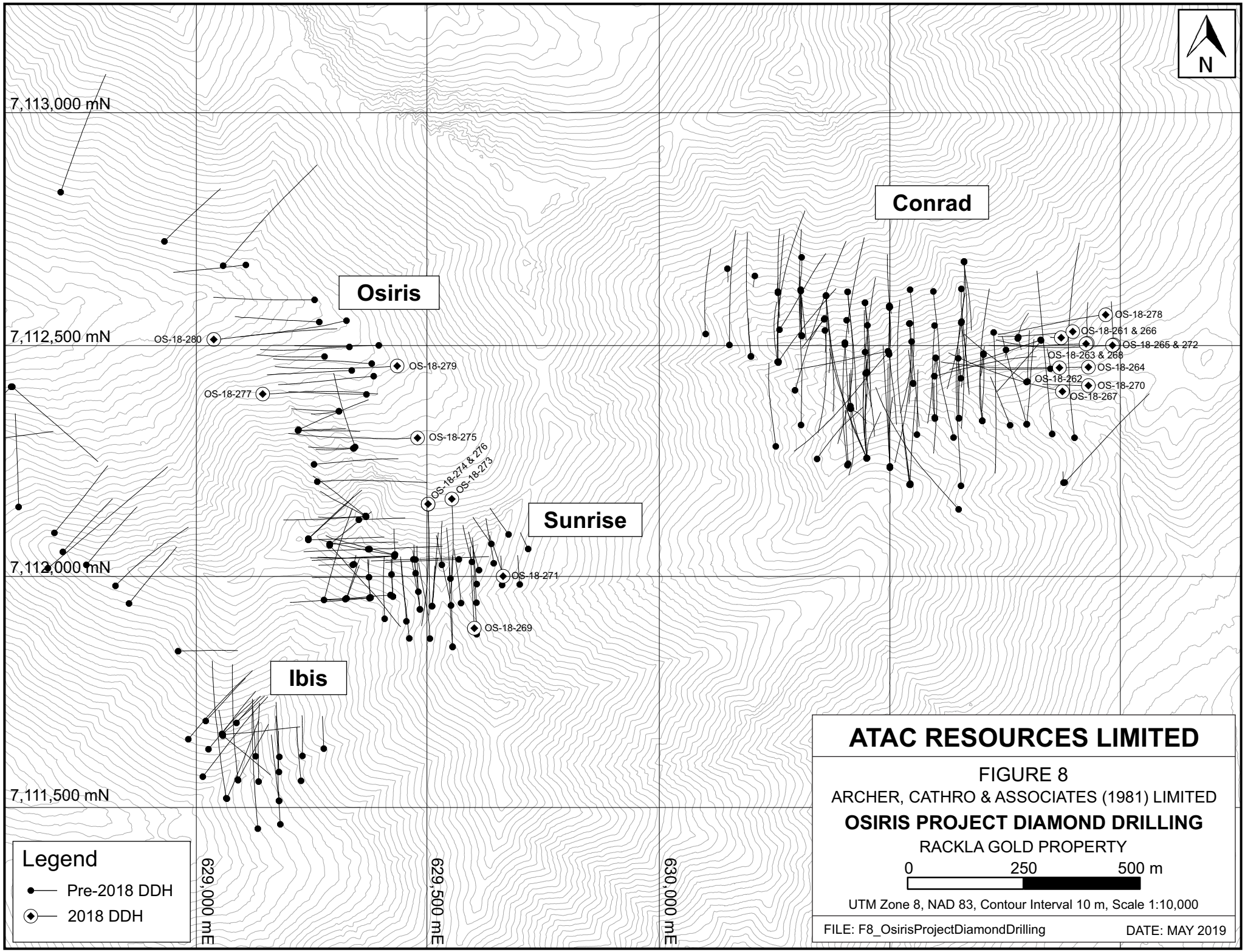
RACKLA GOLD PROPERTY

0 1 2 km

UTM Zone 8, NAD 83, Contour Interval 100 ft, Scale 1:40,000

FILE: F7_NadaleenTrendGeology

DATE: MAY 2019



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FIGURE 8

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

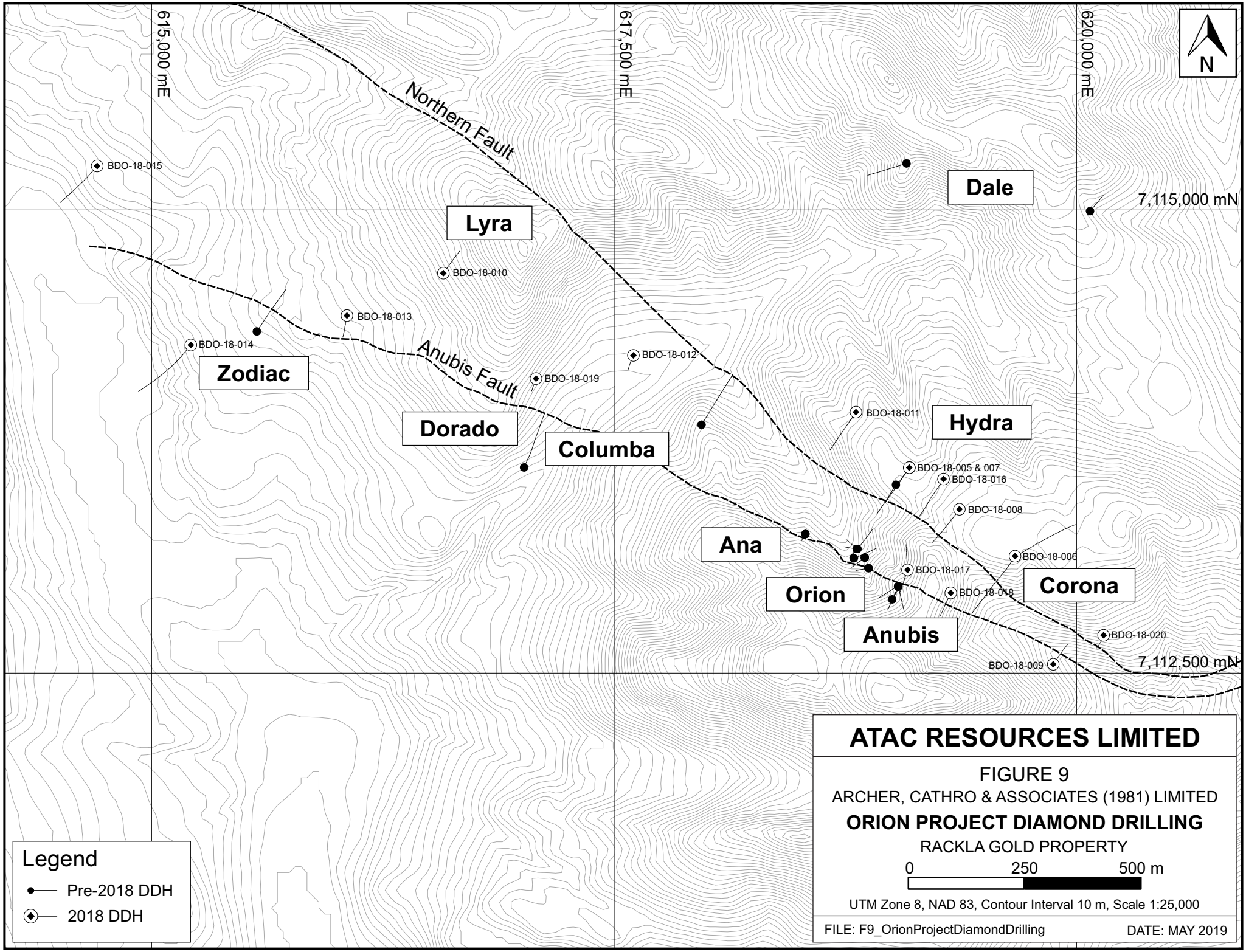
OSIRIS PROJECT DIAMOND DRILLING

RACKLA GOLD PROPERTY

0 250 500 m

UTM Zone 8, NAD 83, Contour Interval 10 m, Scale 1:10,000

FILE: F8_OsirisProjectDiamondDrilling DATE: MAY 2019


615,000 mE
617,500 mE
620,000 mE
N
Northern Fault
Anubis Fault
BDO-18-015
BDO-18-010
BDO-18-013
BDO-18-014
BDO-18-012
BDO-18-019
BDO-18-011
BDO-18-005 & 007
BDO-18-016
BDO-18-008
BDO-18-006
BDO-18-017
BDO-18-018
BDO-18-020
BDO-18-009
Lyra
Dale
Zodiac
Dorado
Columba
Hydra
Ana
Orion
Anubis
Corona
7,115,000 mN
7,112,500 mN
Legend
Pre-2018 DDH
2018 DDH
ATAC RESOURCES LIMITED
FIGURE 9
ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
ORION PROJECT DIAMOND DRILLING
RACKLA GOLD PROPERTY
0
250
500 m
UTM Zone 8, NAD 83, Contour Interval 10 m, Scale 1:25,000
FILE: F9_OrionProjectDiamondDrilling
DATE: MAY 2019