ASSESSMENT REPORT

describing

GEOCHEMICAL SAMPLING, PROSPECTING, GEOPHYSICAL SURVEYS, ROTARY AIR BLAST DRILLING AND DIAMOND DRILLING

at the Rau Project of the

RACKLA GOLD PROPERTY

Rau 1-100; ACX 1-310, Gam 1-32; R 61, 63, 65, 67, 69, 71, 73, 75, 77, 79, 81, 83, 85, 87, 89, 91, 93, 95, 97, 99, 101, 103, 105, 107, 109-1337; S 1-1250; GF 3-4; and Q 1-24

NTS 106C03-06, 106D/01-03, 06-08 and 105M14-15
Latitude 63°57´N to 64°28´N; Longitude 133°18´W to 135°26´W

in the

Mayo Mining District, Yukon Territory

Field work performed from June 5th to October 6th, 2019

prepared by

ATAC RESOURCES LTD.

by

A. Schneebeli, B.Sc., G.I.T.
A. B. Coulter, M.Sc., P.Geo.

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INTRODUCTION

The Rau Project is located on the western half of the Rackla Gold Property in east-central Yukon. The Rackla Gold Property comprises a 1,700 km^2 area of highly prospective platform to basin facies sedimentary rocks located along the northern edge of the Tintina Gold Belt. Various commodities have been explored for and discovered within the claim block. Historically, this exploration focused on base metal mineralization, while more recent exploration has been directed towards gold potential. The Rau Project is focused around the Tiger gold deposit, an intrusion related, carbonate replacement gold deposit. The property is owned 100% by ATAC Resources Ltd.

This report describes work completed at the Rau Project in 2019, including: geochemical sampling, prospecting, geophysical surveys, rotary air blast (RAB) drilling and diamond drilling at several targets across the Rau Project. Management of this work was provided by Archer, Cathro & Associates (1981) Limited, on behalf of ATAC. The authors reviewed all data relating to this work, and their Statements of Qualifications appear in Appendix I. A Statement of Expenditures is provided in Appendix II.

PROPERTY LOCATION, CLAIM DATA, ACCESS AND INFASTRUCTURE

The Rau Project consists of 2,791 contiguous mineral claims located from 63°57´N to 64°28´N latitude and stretching from 133°18´W to 134°16´W longitude on NTS map sheets 106D/01-03, 06-08 and 105M14-15 (Figure 1). The claims are all registered with the Mayo Mining Recorder in

the name of ATAC Resources Ltd. Specifics concerning claim registration are tabulated below while the locations of individual claims are shown on Figures 2A-C.

TABLE I: RAU PROJECT CLAIM INFORMATION

Claim Name	Claim Number From	Claim Number To	Grant From	Grant To	Expiry
ACX	1	67	YD08251	YD08317	Apr 28, 2039
ACX	68		YD08318		Apr 28, 2037
ACX	69	75	YD08319	YD08325	Apr 28, 2039
ACX	76		YD08326		Apr 28, 2037
ACX	77	80	YD08327	YD08330	Apr 28, 2039
ACX	81	82	YD08331	YD08332	Apr 28, 2037
ACX	83	112	YD08333	YD08362	Apr 28, 2039
ACX	113	114	YD08363	YD08364	Apr 28, 2037
ACX	115	120	YD08365	YD08370	Apr 28, 2039
ACX	121		YD08371		Apr 28, 2037
ACX	122	151	YD08372	YD08401	Apr 28, 2039
ACX	152	153	YD08402	YD08403	Apr 28, 2037
ACX	154	170	YD08404	YD08420	Apr 28, 2039
ACX	171	186	YD08421	YD08436	Apr 28, 2037
ACX	187	206	YD08437	YD08456	Apr 28, 2039
ACX	207		YD08457		Apr 28, 2037
ACX	208		YD08458		Apr 28, 2039
ACX	209	212	YD08459	YD08462	Apr 28, 2037
ACX	213	218	YD08463	YD08468	Apr 28, 2039
ACX	219	220	YD08469	YD08470	Apr 28, 2037
ACX	221	224	YD08471	YD08474	Apr 28, 2039
ACX	225		YD08475		Apr 28, 2037
ACX	226		YD08476		Apr 28, 2039
ACX	227	229	YD08477	YD08479	Apr 28, 2037
ACX	230		YD08480		Apr 28, 2039
ACX	231		YD08481		Apr 28, 2037
ACX	232		YD08482		Apr 28, 2039
ACX	233		YD08483		Apr 28, 2037
ACX	234		YD08484		Apr 28, 2039
ACX	235	238	YD33163	YD33166	Apr 28, 2039
ACX	239		YD33167		Apr 28, 2037
ACX	240		YD33168		Apr 28, 2039
ACX	241		YD33169		Apr 28, 2037
ACX	242		YD33170		Apr 28, 2039
ACX	243		YD33171		Apr 28, 2037
ACX	244		YD33172		Apr 28, 2039
ACX	245	252	YD33173	YD33180	Apr 28, 2037
ACX	253	258	YD33181	YD33186	Apr 28, 2039
ACX	259	260	YD33187	YD33188	Apr 28, 2037
ACX	261		YD33189		Apr 28, 2039
ACX	262		YD33190		Apr 28, 2037

ACX	263		YD33191		Apr 28, 2037
ACX	264		YD33192		Apr 28, 2037
ACX	265		YD33193		Apr 28, 2039
ACX	266		YD33194		Apr 28, 2037
ACX	267		YD33195		Apr 28, 2039
ACX	268		YD33196		Apr 28, 2037
ACX	269	273	YD33197	YD33201	Apr 28, 2039
ACX	274	282	YD33202	YD33210	Apr 28, 2037
ACX	283		YD33211		Apr 28, 2039
ACX	284		YD33212		Apr 28, 2037
ACX	285		YD33213		Apr 28, 2039
ACX	286		YD33214		Apr 28, 2037
ACX	287	292	YD33215	YD33220	Apr 28, 2039
ACX	293	310	YD33221	YD33238	Apr 28, 2037
GAM	1	21	YC98437	YC98457	Apr 28, 2035
GAM	22	32	YE65090	YE65100	May 25, 2030
GF	3	4	YC32305	YC32306	Apr 28, 2044
Q	1	13	YC92361	YC92373	Apr 28, 2041
Q	14		YC92470		Apr 28, 2041
Q	15	26	YC92375	YC92386	Apr 28, 2041
Q	27	52	YC92387	YC92412	Apr 28, 2034
Q	53	58	YC92413	YC92418	Apr 28, 2038
Q	59	84	YC92419	YC92444	Apr 28, 2034
Q	85	88	YC92445	YC92448	Apr 28, 2038
Q	89		YC92449		Apr 28, 2034
Q	90		YC92450		Apr 28, 2038
Q	91	109	YC92451	YC92469	Apr 28, 2034
R	1	6	YC68334	YC68339	Apr 28, 2043
R	7	10	YC68340	YC68343	Apr 28, 2040
R	11	12	YC68344	YC68345	Apr 28, 2036
R	13	20	YC68346	YC68353	Apr 28, 2043
R	21	24	YC68354	YC68357	Apr 28, 2040
R	25	54	YC68358	YC68387	Apr 28, 2036
R	55	66	YC68388	YC68399	Apr 28, 2043
R	67	70	YC68400	YC68403	Apr 28, 2040
R	71		YC68404		Apr 28, 2038
R	72		YC68405		Apr 28, 2036
R	73		YC68406		Apr 28, 2038
R	74		YC68407		Apr 28, 2036
R	75		YC68408		Apr 28, 2038
R	76		YC68409		Apr 28, 2036
R	77		YC68410		Apr 28, 2038
R	78		YC68411		Apr 28, 2036
R	79		YC68412		Apr 28, 2038
R	80	103	YC68413	YC68436	Apr 28, 2036
R	105	120	YC68438	YC68453	Apr 28, 2043
R	121	124	YC68454	YC68457	Apr 28, 2040
R	125	134	YC68458	YC68467	Apr 28, 2038

R	135	158	YC68468	YC68491	Apr 28, 2036
R	159	178	YC68492	YC68511	Apr 28, 2043
R	179	182	YC68512	YC68515	Apr 28, 2040
R	183	192	YC68516	YC68525	Apr 28, 2038
R	193	214	YC68526	YC68547	Apr 28, 2036
R	215	234	YC68548	YC68567	Apr 28, 2043
R	235	238	YC68568	YC68571	Apr 28, 2040
R	239	248	YC68572	YC68581	Apr 28, 2038
R	249	270	YC68582	YC68603	Apr 28, 2036
R	271	328	YC68604	YC68661	Apr 28, 2043
R	329	416	YC68662	YC68749	Apr 28, 2036
R	417	434	YC68750	YC68767	Apr 28, 2043
R	435	456	YC68768	YC68789	Apr 28, 2036
R	457	467	YC68790	YC68800	Apr 28, 2043
R	468	471	YC68801	YC68804	Apr 28, 2047
R	474	489	YC68807	YC68822	Apr 28, 2043
R	490	495	YC68823	YC68828	Apr 28, 2036
R	496	501	YC68829	YC68834	Apr 28, 2043
R	502	508	YC68835	YC68841	Apr 28, 2047
R	509	535	YC68842	YC68868	Apr 28, 2043
R	536	539	YC68869	YC68872	Apr 28, 2036
R	540	543	YC68873	YC68876	Apr 28, 2043
R	544	551	YC68877	YC68884	Apr 28, 2047
R	552	577	YC68885	YC68910	Apr 28, 2043
R	578	581	YC68911	YC68914	Apr 28, 2036
R	582	584	YC68915	YC68917	Apr 28, 2043
R	585	590	YC68918	YC68923	Apr 28, 2047
R	591	616	YC68924	YC68949	Apr 28, 2043
R	617	620	YC68950	YC68953	Apr 28, 2036
R	621	625	YC68954	YC68958	Apr 28, 2047
R	626	627	YC68959	YC68960	Apr 28, 2046
R	628	651	YC68961	YC68984	Apr 28, 2043
R	652	655	YC68985	YC68988	Apr 28, 2036
R	656	659	YC68989	YC68992	Apr 28, 2047
R	660	663	YC68993	YC68996	Apr 28, 2046
R	664	685	YC68997	YC69018	Apr 28, 2043
R	686	689	YC69019	YC69022	Apr 28, 2036
R	690	691	YC69023	YC69024	Apr 28, 2043
R	692	695	YC69025	YC69028	Apr 28, 2047
R	696	701	YC69029	YC69034	Apr 28, 2046
R	702	719	YC69035	YC69052	Apr 28, 2043
R	720	723	YC69053	YC69056	Apr 28, 2036
R	724	727	YC69057	YC69060	Apr 28, 2043
R	728		YC69061		Apr 28, 2047
R	729		YC69062		Apr 28, 2043
R	730		YC69063		Apr 28, 2046
R	731		YC69064		Apr 28, 2047
R	732	735	YC69065	YC69068	Apr 28, 2046

R	736	753	YC69069	YC69086	Apr 28, 2043
R	754	757	YC69087	YC69090	Apr 28, 2036
R	758	759	YC69091	YC69092	Apr 28, 2043
R	760	761	YC69093	YC69094	Apr 28, 2047
R	762		YC69095		Apr 28, 2046
R	763		YC69096		Apr 28, 2047
R	764	765	YC69097	YC69098	Apr 28, 2046
R	766		YC69099		Apr 28, 2043
R	767		YC69100		Apr 28, 2046
R	768	783	YC69101	YC69116	Apr 28, 2043
R	784	787	YC69117	YC69120	Apr 28, 2036
R	788	790	YC69121	YC69123	Apr 28, 2047
R	791	794	YC69124	YC69127	Apr 28, 2046
R	795	810	YC69128	YC69143	Apr 28, 2043
R	811	814	YC69144	YC69147	Apr 28, 2036
R	815	816	YC69148	YC69149	Apr 28, 2047
R	817	820	YC69150	YC69153	Apr 28, 2046
R	821	836	YC69154	YC69169	Apr 28, 2043
R	837	908	YC69170	YC69241	Apr 28, 2036
R	909	913	YC69242	YC69246	Apr 28, 2047
R	914	915	YC69247	YC69248	Apr 28, 2046
R	916	933	YC69249	YC69266	Apr 28, 2043
R	934	955	YC69267	YC69288	Apr 28, 2036
R	956	961	YC69289	YC69294	Apr 28, 2047
R	962	963	YC69295	YC69296	Apr 28, 2046
R	964	981	YC69297	YC69314	Apr 28, 2043
R	982	1003	YC69315	YC69336	Apr 28, 2036
R	1004		YC69337		Apr 28, 2047
R	1005		YC69338		Apr 28, 2043
R	1006	1009	YC69339	YC69342	Apr 28, 2047
R	1010	1011	YC69343	YC69344	Apr 28, 2046
R	1012	1029	YC69345	YC69362	Apr 28, 2043
R	1030	1051	YC69363	YC69384	Apr 28, 2036
R	1052	1053	YC69385	YC69386	Apr 28, 2043
R	1054	1057	YC69387	YC69390	Apr 28, 2047
R	1058	1061	YC69391	YC69394	Apr 28, 2046
R	1062		YC69395		Apr 28, 2043
R	1063		YC69396		Apr 28, 2046
R	1064	1077	YC69397	YC69410	Apr 28, 2043
R	1078	1107	YC69411	YC69440	Apr 28, 2036
R	1108	1109	YC69441	YC69442	Apr 28, 2043
R	1110		YC69443		Apr 28, 2047
R	1111		YC69444		Apr 28, 2043
R	1112	1113	YC69445	YC69446	Apr 28, 2047
R	1114	1119	YC69447	YC69452	Apr 28, 2046
R	1120		YC69453		Apr 28, 2043
R	1121		YC69454		Apr 28, 2046
R	1122	1131	YC69455	YC69464	Apr 28, 2043

R	1132	1161	YC69465	YC69494	Apr 28, 2036
R	1162	1163	YC69495	YC69496	Apr 28, 2047
R	1164	1169	YC69497	YC69502	Apr 28, 2046
R	1170	1181	YC69503	YC69514	Apr 28, 2043
R	1182	1211	YC69515	YC69544	Apr 28, 2036
R	1212	1213	YC69545	YC69546	Apr 28, 2047
R	1214		YC69547		Apr 28, 2046
R	1215	1219	YC69548	YC69552	Apr 28, 2043
R	1220	1249	YC69553	YC69582	Apr 28, 2036
R	1250	1251	YC69583	YC69584	Apr 28, 2043
R	1252	1295	YC69585	YC69628	Apr 28, 2036
R	1296	1308	YC70595	YC70607	Apr 28, 2033
R	1309		YC70608		Apr 28, 2037
R	1310		YC70609		Apr 28, 2033
R	1311	1315	YC70610	YC70614	Apr 28, 2037
R	1316	1337	YC70615	YC70636	Apr 28, 2033
Rau	1	8	YC50268	YC50275	Apr 28, 2043
Rau	9	10	YC50276	YC50277	Apr 28, 2039
Rau	11		YC50278		Apr 28, 2051
Rau	12		YC50279		Apr 28, 2043
Rau	13	16	YC50280	YC50283	Apr 28, 2051
Rau	17	31	YC50284	YC50298	Apr 28, 2043
Rau	32		YC50299		Apr 28, 2051
Rau	33	44	YC50300	YC50311	Apr 28, 2043
Rau	45	48	YC50312	YC50315	Apr 28, 2051
Rau	49	51	YC50316	YC50318	Apr 28, 2043
Rau	53		YC50320		Apr 28, 2043
Rau	55		YC50322		Apr 28, 2051
Rau	57		YC50324		Apr 28, 2051
Rau	59		YC50326		Apr 28, 2051
Rau	61	64	YC50328	YC50331	Apr 28, 2051
Rau	65	66	YC57529	YC57530	Apr 28, 2036
Rau	77	78	YC57541	YC57542	Apr 28, 2043
Rau	87	96	YC57551	YC57560	Apr 28, 2044
RR	1	148	YC89701	YC89848	Apr 28, 2036
S	1	42	YC90801	YC90842	Apr 28, 2034
S	43	92	YC90843	YC90892	Apr 28, 2041
S	93	700	YC90893	YC91500	Apr 28, 2034
S	701	842	YC91901	YC92042	Apr 28, 2034
S	843		YC92355		Apr 28, 2034
S	844	860	YC92044	YC92060	Apr 28, 2034
S	861	878	YC92061	YC92078	Apr 28, 2033
S	879	896	YC92079	YC92096	Apr 28, 2034
S	897	912	YC92097	YC92112	Apr 28, 2033
S	913	932	YC92113	YC92132	Apr 28, 2034
S	933	946	YC92133	YC92146	Apr 28, 2033
S	947	968	YC92147	YC92168	Apr 28, 2034
S	969	980	YC92169	YC92180	Apr 28, 2033

S	981	1001	YC92181	YC92201	Apr 28, 2034
S	1002	1013	YC92202	YC92213	Apr 28, 2033
S	1014	1036	YC92214	YC92236	Apr 28, 2034
S	1037	1044	YC92237	YC92244	Apr 28, 2033
S	1045	1070	YC92245	YC92270	Apr 28, 2034
S	1071	1078	YC92271	YC92278	Apr 28, 2033
S	1079	1106	YC92279	YC92306	Apr 28, 2034
S	1107	1114	YC92307	YC92314	Apr 28, 2033
S	1115	1154	YC92315	YC92354	Apr 28, 2034
S	1155	1244	YD09635	YD09724	Mar 01, 2028
S	1245		YD09725		Mar 01, 2035
S	1246		YD09726		Mar 01, 2029
S	1247		YD09727		Mar 01, 2033
S	1248		YD09728		Mar 01, 2035
S	1249	1250	YD09729	YD09730	Mar 01, 2028
T	1	28	YD09731	YD09758	Mar 01, 2036
R	472	473	YC68805	YC68806	Apr 28, 2047
Rau	52		YC50319		Apr 28, 2043
Rau	54		YC50321		Apr 28, 2051
Rau	56		YC50323		Apr 28, 2051
Rau	58		YC50325		Apr 28, 2051
Rau	60		YC50327		Apr 28, 2051
Rau	67	68	YC57531	YC57532	Apr 28, 2036
Rau	69		YC57533		Apr 28, 2044
Rau	70		YC57534		Apr 28, 2046
Rau	71		YC57535		Apr 28, 2044
Rau	72		YC57536		Apr 28, 2047
Rau	73		YC57537		Apr 28, 2043
Rau	74		YC57538		Apr 28, 2047
Rau	75		YC57539		Apr 28, 2043
Rau	76		YC57540		Apr 28, 2047
Rau	79	80	YC57543	YC57544	Apr 28, 2043
Rau	81	84	YC57545	YC57548	Apr 28, 2046
Rau	85	86	YC57549	YC57550	Apr 28, 2047
Rau	97	98	YC69925	YC69926	Apr 28, 2045
Rau	99		YC69961		Apr 28, 2044
Rau	100		YC69962		Apr 28, 2037

**Expiry dates include 2019 work which has been filed for assessment and has received assessment credit.*

The Rau Project is centered approximately 100 km northeast of Mayo, the nearest supply centre. The closest road access is to the community of Keno City, situated about 49 km by road northeast of Mayo and 55 km by air southwest of the property. Mayo and Keno City can be reached in all seasons by two wheel drive vehicles using the Yukon highway system. The Wind River trail crosses the western portion of the property and is also accessible via the Yukon highway system from McQuesten Lake near Keno City (Figure 3). This winter trail has been used intermittently by various exploration companies since it was built in the late 1960s.

Access to the project in 2018 was by fixed wing via Mayo to the Rau airstrip, approximately 95 km northeast of Mayo. Alkan Air provided the project's service flights between Mayo and the Rau airstrip utilizing a Cessna 208B Grand Caravan. The locations of the Rau airstrip and Rau camp are shown on Figure 3. All drill core is stored at south end of Rau Camp. Access to work areas on the project was provided by Fireweed Helicopters utilizing a MD520.

HISTORY AND PREVIOUS WORK

The earliest reported exploration within the area of the Rau Project occurred in 1922 following the discovery of silver mineralization at Keno Hill; prospectors first identified and staked mineralized float occurrences at Carpenter Ridge in the far northwest corner of the current property. In 1924, reconnaissance work conducted by the Geological Survey of Canada discovered galena-calcite-siderite in float on the southwest end of Carpenter Ridge. A sample of this float returned 8.75 oz. silver and 56.0% lead (Cockfield, 1925); however, the source of this mineralization was not found. Hand pits were dug in 1927 and 1928 but little record remains of the work completed during this period. All claims were ultimately dropped.

Nearby at Grey Copper Hill, 9 km to the southeast, silver-rich tetrahedrite float was discovered in 1923 by an independent prospector. This showing and other nearby prospects were staked later that year. Several investigatory adits were dug into the hillside during follow up exploration but eventually all claim holdings lapsed.

Between 1930 and 1974 Grey Copper Hill was staked several times by independent prospectors and exploration companies, including Cypress Resources Limited and United Keno Hill Mines Limited. Little work was reported (Hilker, 1969) and all claims ultimately expired.

Hesca Resources Corporation Ltd re-staked Grey Copper Hill in 1974 and conducted prospecting, soil sampling, hand trenching and adit maintenance. In addition, two shallow, small diameter diamond drill holes totalling 56.3 m were drilled; however, the results from this drilling are not documented. No further work was done by Hesca and the claims were dropped (Deklerk and Traynor, 2004).

In spring 1978 Prism Resources Limited re-staked the area and conducted prospecting and geochemical sampling later that year. Soil sampling identified several lead and silver anomalies; however, follow up prospecting failed to explain them (Sivertz, 1979). A sample collected from an outcrop of dolomite yielded 0.60% lead and 51.43 g/t silver, while a tetrahedrite sample collected near an old adit assayed 7,000 g/t silver (Sivertz, 1980). Prism allowed the claims to lapse.

Grey Copper Hill was again restaked in 1983 by a prospector who conducted grid soil sampling later that year. This program delineated silver anomalies coincident with surface lineations. No further work was completed and the claims expired.

In 1988 Bonventures Limited staked the area and conducted limited blast trenching, prospecting, mapping plus soil and rock sampling. A gossan zone with pyrite and strong fracture filling malachite and azurite was identified between two collapsed adits (Carlyle, 1989). These claims eventually lapsed.

The area remained open until August of 2005 when an independent prospector staked four claims over the Grey Copper Hill showing. These four claims were subsequently optioned by Metallic Minerals Corp. and are now surrounded by the Rackla Gold Property.

Approximately 45 km to the southeast, Cominco Limited staked the Beaver claims in 1968 based on results of regional geochemical sampling done the year before. Later that year, L. Elliott staked the nearby Now claims and optioned them to Cominco, which completed mapping and soil sampling in 1968 and 1969 (Johnson and Richardson, 1969a and 1969b).

In 1977, Prism Joint Venture (Asamera Oil Corp, Chieftain Development Company Limited, Prism Resources Ltd, Siebens Oil & Gas Limited and E & B Exploration Limited) restaked Cominco's claims as part of a larger block that extended for about 20 km along the north side of the Beaver River. In 1979, Dome Petroleum Ltd replaced Siebens in the joint venture.

Prism conducted most of its activities around the original Beaver claims. Soil sampling and mapping were performed in 1977 (Montgomery and Dewonck, 1978) and additional soil sampling and trenching were done in 1978 (Prism Joint Venture, 1979a). In 1979 Prism completed six diamond drill holes totalling 610 m (Dewonck, 1980). This work focused primarily on sedimentary exhalite and Mississippi Valley type lead-zinc mineralization, but resulted in the discovery of a narrow gold-rich vein (the Now Showing).

NDU Resources Ltd. staked claims over the Now Showing in 1987 to cover the lead, zinc and silver soil geochemical anomalies identified by Cominco and Prism. The following year, NDU conducted a geochemical sampling program which focused on the gold vein mineralization at the Now Showing (Cathro, 1989).

In 1977, 6.25 km further to the northwest, Prism conducted mapping, soil sampling and electromagnetic surveys. Numerous samples from that program returned high zinc-in-soil values ranging from 2,100 ppm to 12.2%. One sample collected from a large gossan (Ocelot Showing) yielded 3.8 g/t silver, 800 ppm lead and 12.2% zinc (Montgomery and Cavey, 1978), suggesting the metals were leached and remobilized in acidic groundwater before being reprecipitated when the fluids were neutralized. These promising results were not followed up. Prism also performed minor soil sampling near a strong gossan developed 19 km to the east (Kathy Showing) (Prism Joint Venture, 1979b).

In 1979 and 1980, Prism explored in two areas approximately 16 km southeast of the current Ocelot Showing and conducted prospecting, soil geochemical sampling and one diamond drill hole. This work led to the discovery of scheelite mineralization at the Blue Lite and Flat Top Showings. Well mineralized tremolite skarn specimens from the Flat Top Showing assayed up to

8.4% WO_3, but most material graded below 0.04% (Churchill, 1980). No further work was done at either showing.

ATAC's interest in the area was prompted by an isolated, high gold value (150 ppb) reported by a regional-scale stream sediment geochemical survey, conducted by the Geological Survey of Canada (Hornbrook et al., 1990). This value is in the 99th percentile of gold results from the survey and is supported by a 99th percentile tungsten value (25 ppm). The sample was collected near the Rackla Pluton, east of the Tiger Deposit.

In summer 2006, ATAC staked 64 claims to cover the anomalous drainage. During the staking, a number of rock and soil samples were collected, many of which returned anomalous values for tungsten and a few were notably enriched in gold, lead, zinc, silver and copper. Cursory prospecting relocated scheelite-bearing tremolite skarn (Flat Top Showing) and discovered tungsten in diopside-actinolite skarn and highly fractionated intrusive rocks, about 1,500 m to the south.

In 2007 ATAC completed geological mapping, prospecting, grid soil sampling and helicopter-borne variable time-domain electromagnetic (VTEM) surveys (Eaton and Panton, 2008). This work partially delineated a large hydrothermal system centered on the largely buried Rackla Pluton. Following that program, ATAC staked an additional 32 claims, mostly to improve coverage around a very strong gold-in-soil anomaly outlined on the western edge of the grid.

ATAC and Yankee Hat Minerals Limited signed an option agreement in spring 2008 concerning 40 claims that covered the Rackla Pluton and the tungsten-bearing skarns. During the summer of 2008 Yankee Hat conducted prospecting and a total of 437.38 m of diamond drilling in three holes (Dumala, 2008). Several narrow skarn bands with weak to moderate tungsten mineralization were identified within the carbonate host rocks. The option agreement was terminated in late 2008 following poor results and the claims were returned to ATAC.

Also in the summer of 2008, ATAC conducted geological mapping, prospecting, soil and stream sediment geochemical sampling, 3,423.21 m of diamond drilling in 18 holes and property-wide helicopter-borne magnetic variable time-domain electromagnetic (VTEM) surveys on the claims not covered by the Yankee Hat option agreement. Drilling identified three stacked, gold-bearing horizons in what is now known as the Tiger Deposit (Dumala, 2009). The central horizon (Discovery Horizon) contains gold in iron carbonate replacement and hosts the most abundant mineralization. In 2008 grid soil sampling and stream sediment sampling was extended to the northwest. In response to positive results, ATAC added 1,340 claims to cover the favourable stratigraphy along the anomalous trend.

In 2009 ATAC continued to delineate the Tiger Deposit with an additional 58 diamond drill holes totalling 9,578.30 m (Dumala and Lane, 2010). Drilling identified a significant oxide component to the northwest, within the Tiger Deposit. Prospecting in 2009 also identified several new showings containing mineralization similar to that found at the Tiger Deposit. These include the Cub, Lion, Jaguar, Panther, Cougar, Puma, Cheetah and Lynx Showings.

In 2010 ATAC continued definition drilling at the Tiger Deposit resulting in the completion of a mineral resource estimate of the sulphide and oxide horizons (Stroshein et al., 2011). Results of the resource estimate using a 0.3 g/t gold cut off yield an indicated resource estimate of 508,000 ounces of gold (7,150,000 tonnes at an average grade of 2.21 g/t) and an inferred resource estimate of 290,200 ounces of gold (8,280,000 tonnes at an average grade of 1.09 g/t) for the oxide and sulphide horizons combined.

Prospecting at the geochemically anomalous Ocelot Showing in 2010 resulted in the discovery of high grade Ag-Pb-Zn massive sulphide mineralization. Grab samples from this area included 2,100 g/t Ag, 55.33% Pb and 62 g/t In (Dumala, 2011).

In 2011 ATAC drilled 19 holes totaling 3,784.75 m at the Ocelot target beneath a known but previously undrilled surface gossan. The best grade intervals yielded 145.43 g/t silver, 3.36% lead and 11.65% zinc across 41.72 m and 188.07 g/t silver, 8.69% lead and 6.06% zinc over 37.91 m in semi-massive to massive sulphide mineralization. Drilling by the end of the 2011 season identified mineralization over a 230 m strike length and to a depth of 150 m. (Dumala, 2012a).

Also in 2011 ATAC drilled 10 holes totaling 2,113.2 m of diamond drilling at the Now Showing (3 holes), Puma Showing (2 holes), Cheetah Showing (3 holes), and Kathy Showing (2 holes). Weakly anomalous gold, silver, lead and zinc values were intersected in one Now drill hole. Puma and Cheetah drilling intersected weak gold mineralization; while Kathy drilling intersected no significant results (Dumala, 2012b).

In 2012 ATAC completed metallurgical testing, heritage resources assessment and ongoing environmental monitoring in relation to the Tiger Deposit (Carne and Lane, 2013). ATAC also completed mapping, geochemical sampling, prospecting and hand trenching on portions of the Rau trend in 2012 (Lane et al., 2013).

In 2013 1,229 soil and 348 rock samples were collected in seven target areas in the Rau Trend. This exploration focused on assessing gold potential at known mineralized showings and geochemical targets. Emphasis at the mineralized targets was directed to follow up of geochemical anomalies that occurred in proximity to receptive stratigraphy (Lane and Phillips, 2014)

In 2014 ATAC also conducted a small hand pitting and mapping program at the Puma Zone, as well as contour and grid sampling in the central region of the property. Samples collected at Puma returned values ranging from below detection limit to a maximum value of 4.21 g/t Au. The mineralized rock samples supported the hypothesis that the gold at the Puma target may be sourcing from the Puma fault. No significant gold values were returned from the soil sampling program, while arsenic values ranged from below detection limit to a maximum value of 4,310 ppm (Lane and Phillips, 2015).

Also in 2014 ATAC released a maiden Preliminary Economic Assessment (PEA) on the Tiger Deposit. The technical report (Kappes et al., 2014) should be reviewed for details of this PEA.

In 2015 ATAC conducted a program of grid/contour soil sampling, prospecting, and diamond drilling. Notable hand samples collected during 2015 prospecting included a 5.02 g/t Au from Cheetah and a 2.60 g/t Au sample from Panther. Diamond drilling in 2015 had multiple objectives including: exploration, infill, geotechnical and water monitoring hole installation. A total of 1,814.23 m were drilled in the Tiger (18 holes) and Puma (2 holes) zones. Puma Zone exploration drilling confirmed the presence of oxide development within the local host rock and revealed karst development. The highest grade interval from the program returned a value of 1.45 g/t gold over 3.05 m in PM-15-004 (Lane and Phillips, 2016).

An updated Mineral Resource estimate and PEA was completed by ATAC in 2016 that incorporated 2015 diamond drilling. Mineral resources were reported using 0.5 g/t gold and 1.0 g/t gold cut-offs for oxide sulphide mineralization, respectively. The Tiger Deposit contains an estimated 485,700 oz gold in the measured and indicated categories (5,680,000 tonnes grading 2.66 g/t gold) and 188,500 oz gold in the inferred category (3,230,000 tonnes grading 1.81 g/t gold). The technical report (Ghaffari et al., 2016) should be reviewed for details of the updated Mineral Resource and PEA.

In 2016, ATAC completed additional geochemical sampling, and 466.33 m of Rotary Air Blast (RAB) drilling at the Airstrip and Bengal anomalies. Three of the seven RAB holes at the Airstrip Anomaly returned significant intervals including: 1.04 g/t Au over 6.10 m in hole ASR-16-004; 3.68 g/t Au over 1.52 m in hole ASR-16-005; and 1.43 g/t Au over 13.71 m in hole ASR-16-006. While no anomalous gold was intersected in the holes at Bengal, an elevated zinc response was detected in pyritic shale. A LIDAR surveys near the Tiger Deposit, Airstrip Anomaly and several creek crossings along the proposed Rau Tote Road route was also completed in 2016.

In 2017 ATAC completed 1,371.29 m of diamond drilling in 12 holes at the Tiger Deposit (Dumala, 2018). This work demonstrated the potential to expand high-grade oxide gold mineralization along the Tiger Fault to the southeast. Drilling at Tiger East highlighted the potential for mineralization along the southeastern edge of the limit of the proposed pit. Additionally prospecting along trend of the Tiger Deposit identified multiple new and existing targets. Highlights of this work include results from the Northwest Target area where peak values of 2017 grab samples yielded 1.43 g/t gold and 4.14% zinc; and the Condor Showing where peak values of grab samples returned 17.0 g/t gold with 378 g/t silver.

In 2018, ATAC conducted a program consisting of grid and contour soil sampling and a broad prospecting program. Soil sampling east of Bobcat extended an existing silver-lead-tin anomaly by 1.2km^2 (Coulter and Carne, 2019). An expanded soil sample gird at Spotlight identified a west-trending, 2.2km long gold-in-soil anomaly. Rock samples were collected from Bobcat, Spotlight, Condor, Puma and Panther targets. Highlight results from 2018 work include rock samples including 6.07g/t Au, 7.41g/t Cu and 157g/t Ag at Bobcat; rock samples up to 4,090 g/t Ag at the main Spotlight target, and 2.17 g/t Au from samples 1.2km west of the target; grid pitting of a

vegetation anomaly at Condor yielded samples with varying amounts of Au-Ag-Zn-Pb; Panther had peak grab samples values of 4.61 g/t Au, with no significant mineralization returned at Puma.

GEOMORPHOLOGY AND CLIMATE

The core portion of the Rau Project is situated in the Nadaleen Range of the Selwyn Mountains and is drained by creeks that flow into the Rackla and Beaver Rivers, which are both part of the Yukon River watershed. Local topography is alpine to subalpine and features north and south-trending rocky spurs and valleys that flank a main east-west trending ridge. Elevations range from 725 m alongside the Beaver River in the centre of the claim block to 1,800 m atop a peak, referred to as Monument Hill. Outcrop is most abundant near ridge crests and in actively eroding creek beds. Most hillsides are talus covered at higher elevations and are blanketed by glacial till at lower elevations. Soil development is moderate to poor in most areas.

Treeline in the vicinity of the property is at about 1,500 m. Slopes above that elevation are weakly vegetative with willow, buckbrush and grass. The density and size of vegetation gradually increases on lower slopes, and the valley floors are well treed with mature black spruce. Understorey typically consists of low shrubs and moss. Moderately steep, south facing slopes are well drained and are often lightly forested with poplar. Steep, north facing slopes are usually not vegetated. Gentler, spruce- and moss-covered terrain likely exhibits widespread permafrost.

REGIONAL GEOLOGY

The Geological Survey of Canada performed geological mapping in the vicinity of the Rau Project at 1:250,000 scale in the 1960s (Green, 1972) and 1970s (Blusson, 1978). More recent mapping in the area was completed at 1:50,000 scale by Indian and Northern Affairs Canada (Abbott, 1990 and Roots, 1990).

The Rau Project lies within a band of regional-scale thrust and high angle reverse faults that imbricate rocks of Selwyn Basin and Mackenzie Platform (Figures 4, 5 and 6). Selwyn Basin stratigraphy consists of regionally metamorphosed, basinal sediments of Neoproterozoic to Paleozoic age. Mackenzie Platform stratigraphy comprises dominantly shallow water carbonate and clastic sediments that were deposited from Mid-Proterozoic through Paleozoic times. Both packages of sediments were deposited on the western margin of ancestral North America.

Thrust faults were active during Jurassic to Cretaceous times (160 to 130 Ma), when the area underwent compressional orogenesis related to large-scale plate convergence (Fingler, 2005). During the Late Cretaceous (94-90 Ma), intermediate to felsic plutons of the Tombstone Suite were emplaced (Mortensen et al., 2000). Another compressional orogenic event, which occurred about 65 Ma, was accompanied by emplacement of felsic intrusions assigned to the McQuesten Suite.

The regional scale Tombstone, Dawson and Robert Service thrust faults in addition to a number of smaller scale thrust faults affect stratigraphy along the trend of the Rau Project. All thrusts verge north-easterly and predate emplacement of the Tombstone Suite intrusions. The thrust panel that contains the Rau Project approximately straddles the boundary between Selwyn Basin and Mackenzie Platform and includes units belonging to both tectonic elements. Table I contains a brief summary of the main lithologies in the area of the Rau Project.

Table II: Regional Lithological Units (after Roots *in* Cathro, 2006)

Tectonic Element	Age (Ma)	Unit and Lithologies
Rocks of Ancestral North America		
Mackenzie Platform	1700 - 1800	Gillespie Lake Group: orange-brown dolostone and sandstone.
Mackenzie Platform	540 - 390	Bouvette Formation: white and grey limestone with rare black shale.
Mackenzie Platform	540 - 420	Marmot Formation: dark green to brown mafic, vesicular and amygdaloidal volcanic flows.
Selwyn Basin	750? - 530	Hyland Group: brown quartz-mica schist, with rare limestone.
Selwyn Basin	530 - 500	Gull Lake Formation: brown and green shale, sandstone, conglomerate and volcanic tuff.
Selwyn Basin	500 - 480	Rabbitkettle Formation: dark silty limestone and limy mica-rich conglomerate.
Selwyn Basin	480 - 390	Road River Group: black shale, chert and limy siltstone.
Rock formed before orogenic event		
	390 - 350	Earn Group: black shale and chert with lesser pebble conglomerate, sandstone and grit.
	340	Keno Hill Quartzite: grey metamorphosed sandstone, minor black shale and phyllite.
Rocks formed during orogenic event		
	225	Galena Suite intrusions: brown and green diorite and gabbro.
	200 - 250	Jones Lake and Mt. Christie Formations: sandstone, brown shale and dark limestone.
Rocks formed after orogenic event		
	90 - 94	Tombstone Suite intrusions: granite and granodiorite.

62 - 67	McQuesten Suite intrusions: granite with two types of mica.

Sediments younger than 3 Ma

0 - 3	Overburden: ice-deposited sand and gravel; river silt.

PROPERTY GEOLOGY

Only limited detailed geological mapping has been conducted within the Rau Project. Most work prior to 2019 focused within the favourable Bouvette Formation stratigraphy in close proximity to the Tiger Deposit.

The Rau Trend lies within a northwest trending thrust package bound to the south by the Dawson Thrust and to the north by the Kathleen Lakes Fault. Property scale geology is illustrated on Figures 4 and 5. Stratigraphy within this package forms open folds that are aligned parallel to the thrusts and plunge gently to the southeast. Several high angle faults, which parallel the general structural trend, are inferred on the property and others could be present. One or more of these faults may have acted as a conduit for mineralizing fluids.

The **Bouvette Formation** is the most abundant inferred rock type shown on government based maps and is the principal focus of ATAC's exploration. It can be divided into three main units which young to the northeast. In order from oldest to youngest:

1) **Cambrian and Ordovician (COd)** – massive pale grey dolostone, oncolitic dolostone, minor quartzite and sandy dolostone.
2) **Ordovician and/or Silurian (OSl)** – thin to medium bedded grey and buff weathering silty limestone; massive white limestone, well bedded tan and grey limestone in the upper part of the unit.
3) **Silurian and Devonian (SDc)** – thick bedded to massive light grey dolostone and limestone. Dark grey, fetid limestone containing "two hole" and "star" crinoids at the top of the unit.

The thickness of the Bouvette Formation on the property is estimated to be at least 1,400 m. The primary focus of mapping to date has been limited to the area around Monument Hill and the Tiger Deposit within the Ordovician-Silurian strata hosting carbonate gold replacement mineralization. Elsewhere the Bouvette Formation has not been mapped in detail and remains undifferentiated.

The **Marmot Formation (OSv)** consists of thin volcaniclastic horizons that are interbedded with the Ordovician and/or Silurian Bouvette Formation. The horizons range from a few metres to about 20 m thick and comprise dark green to brown weathering mafic, vesicular volcanic flows, carbonate-cemented hyaloclastic breccias and volcanic-derived sandstone, grit and pebble and cobble conglomerate. Locally these horizons are magnetic. Although the Marmot Formation is

volumetrically insignificant, it appears to have played an important role in localizing mineralization in the underlying carbonate by acting as an impermeable cap.

Devonian and Mississippian **Earn Group (DMs)** is located in the southern half of the property and bounds the Bouvette Formation to the south, east and north. This unit is generally recessive weathering and is mostly composed of black shale and chert. To the south a high angle normal fault places Earn Group against Bouvette Formation, while a thrust fault marks the southeastern contact. To the north, the Earn Group conformably lies above Cambrian to Permian shale and limestone, which has been placed against the Bouvette Formation by another high angle fault.

The central part of the property hosts numerous dykes and sills believed to represent a roughly 1000 m diameter granitic plug referred to as the "**Rackla Pluton (Pgg)**". The plug is mostly composed of coarse grained, equigranular, biotite-and muscovite-bearing granite that is locally miarolitic (Panton 2008). The dykes and sills typically range between 30 cm and 7 m in thickness. They are often more fractionated than the plug and include garnet bearing aplite and coarse pegmatite that locally features beryl, amazonite (a green variety of feldspar) and one or more tourmaline minerals (rubellite, indigolite and schorl). The pegmatite bodies comprise mainly orthoclase and quartz but often exhibit abundant lithium-and vanadium-rich micas on their margins.

On surface, the Rackla Pluton is mostly covered by glacial till and only aplite and pegmatite sills and dykes are visible. The pluton is best delineated by its airborne magnetic signature. At the property scale the pluton is represented by a strong magnetic high. When the data is collapsed to the area immediately surrounding the pluton and a high-pass filter is applied, the signature shows a core magnetic low with a fringing magnetic high.

Analysis of several small bodies of granitic aplite and pegmatite have yielded 40Ar/39Ar muscovite ages of 62.3 ± 0.7 Ma, 62.4 ± 1.8 Ma and 59.1 ± 2.0 Ma (Kingston, 2009 and Kingston et al., 2010). Based on this data and the composition of the intrusion, Kingston concludes that the Rackla Pluton does not likely belong to the McQuesten Suite (65.2 ± 2.0 Ma).

Skarn and minor hornfels are developed locally within the Bouvette Formation proximal to the intrusions. Skarn grades from distal tremolite-rich (iron-deficient) facies, which are most abundant near the Flat Top Showing (about 1000 m northwest of the pluton), to proximal actinolite-diopside ± garnet ± pyrrhotite (iron-rich) facies, which are found closer to the pluton and on the margins of some dykes and sills. Massive skarns are mostly developed at contacts between limestone and volcaniclastic horizons. Hornfels is restricted to thin volcaniclastic layers within the Marmot Formation. It is normally rusty weathering and often contains disseminated to semi-massive pyrrhotite. Limestone and dolomite are locally altered to marble and often contain disseminated, light grey scapolite crystals. The scapolite is difficult to recognize on freshly broken surfaces but stands out on weathered surfaces as prismatic randomly orientated crystals.

MINERALIZATION

Several types of mineralization are known to occur on the Rau Project with the three most common being: 1) gold ± silver carbonate replacement; 2) silver – lead – zinc ± gold carbonate replacement; and 3) gold ± copper ± tungsten skarn.

The primary focus of sampling and prospecting during the 2019 program was at and around the Bobcat, Kathy, Spotlight, Blue Lite, Airstrip and Tiger targets. A summary of the mineralized zones identified along the Rau Trend is presented below. Locations of the showings are presented on Figure 7.

Target	General Location	Commodity	Mineralization Style	Years worked by ATAC	Exploration Level by ATAC
Caracal	18 km NW of Tiger	Au	Orogenic?	2012, 2013	soil sampling and prospecting
Discovered in 2013 while following up on **0.545 g/t Au** stream sediment sample collected in 2012. Contour soil sampling returned max values of **0.147 g/t** and **0.162 g/t Au**. Cover is extensive, so 2013 prospecting focused along ridges and incised gullies. Bedrock, where exposed, is dominated by shales and phyllites cut by milky white quartz veins that showed open space-fill textures. Prospecting returned numerous rock samples elevated for gold, the highest of which graded **2.97 g/t Au** in a chloritic-argillite cut by a rusty quartz veins. The absence of carbonates in the area suggests the source for the gold mineralization is most likely gold bearing quartz veins similar to the gold bearing quartz-boulangerite veins historically noted at the Now showing.					
Ocelot	14.5 km NW of Tiger	Ag, Pb, Zn	Carbonate Replacement	2010, 2011	soil sampling, prospecting, IP survey, diamond drilling,
The Ocelot Showing (also referred to as EL) is marked by a 110 m long by 25 m wide northwesterly oriented gossan that parallels a topographic linear. Mineralization collected at surface is most pronounced in a kill zone 400 metres northwest, which originates at a weakly flowing spring. The gossan is predominately dolomite rubble cemented by iron oxides and is surrounded by buff to orange weathering dolomite and limestone. 4,891 m of diamond drilling completed in 24 holes in 2010 and 2011. The most significant interval was in **OC-11-11, which returned 188 g/t Ag, 8.69% Pb and 6.06% Zn over 37.91 m.** Mineralization occurs within a thick sequence of intensely dolomitized limestone containing narrow volcaniclastic beds. Sulphide mineralization (pyrite+sphallerite+galena+/-tetrahedrite) is hosted within a steeply dipping northeast trending horizon. Drilling has tested a total strike length of 470 m with mineralization intersected over a strike length of 230 m.					
Now	10 km W of Tiger	Au, Ag, Pb, Zn	Quartz vein (?) Carbonate Replacement (?)	2010, 2011, 2015, 2017, 2019	soil sampling, prospecting, diamond drilling,
The Now Showing is situated within a pronounced northwest trending gully. Little outcrop is exposed but abundant float occurs along more than 400 m of the gully. Lead, zinc mineralization was first discovered in 1969 by Cominco. Gold, lead and zinc mineralization was identified through work in the late 1970's including: a rock sample collected from a hand pit graded **74 g/t Ag and 2.15% Pb**; two samples of quartz rubble containing boulangerite were retrieved from a partially completed trench and returned results including **39.43 g/t Au, 581 g/t Ag, 23.26% Pb**. Historic drilling returned **1.51 g/t Au, 55 g/t Ag, 2.74% Pb and 5.26% Zn over 0.5** m from an interval of boulangerite and sphalerite in a narrow quartz vein. 3 holes drilled by ATAC in 2010 was unsuccessful and in 2011 three holes targeted gold bearing veins exposed in historic trenches and oxidized dolomite beneath a shale layer. Drilling intersected shale overlying dolomite which contained weak gold values. Hole NW-11-04 was moderately oxidized to approximately 50 m and intersected weakly anomalous gold, silver, lead and zinc values. Weak to intensely chlorite altered diopside skarn intervals were seen towards the bottom of holes NW-11-05 and					

NW-11-06. One rock sample collected in 2017, 300 m east of the historic trenches returned 5.56 g/t Au and 213 g/t Ag in quartz vein crackle breccia.					
Northwest Target Area	9.8 km NW of Tiger	Au, Zn	unknown	2010, 2012, 2017	soil sampling, prospecting
The Northwest Target Area is a broad 7.5 km^2 forested area. Prospecting has been limited due to poor exposure. Grab samples collected in this target area in 2017 yielded peak values of **1.43 g/t Au and 4.14% Zn**.					
Lynx	5 km NW of Tiger	Au, Pb, Zn	Carbonate replacement (?)	2009, 2010	soil sampling, prospecting
The Lynx showing consists of isolated limonite float which returned **0.24 g/t Au, 7,290 ppm As and 0.60% Zn** within a limestone talus field. This showing is located on the opposite side of the valley as the Cheetah Showing. A sample collected 700 metres east of the Lynx showing returned a value of **1.45 g/t Au**.					
Serval	5.8 km NW of Tiger	Au, Ag, Pb, Zn	Carbonate Replacement	2010, 2015	soil sampling, prospecting
The Serval target is located on a ridge top. Samples of variably silicified limonitic oxide float occur in association with an area of intense calcite flooding proximal to a fault that prominently offsets stratigraphy. Gold values from hand samples collected in proximity to this fault in 2015 returned a peak value of **1.44 g/t Au**.					
Cheetah	5 km NW of Tiger	Au	Carbonate Replacement	2009, 2010, 2015, 2017	soil sampling, prospecting, diamond drilled
The Cheetah Showing is defined by a 500 m long by 100 m wide float train extending up a south facing slope to a ridge which is cut by a northeast trending linear. This linear has been traced for approximately 30 m to the northeast until becoming buried in limestone talus. A sample of a purple brown, goethite rich boxwork limonite collected from this area in 2009, returned **3.06 g/t Au**. 6 holes were drilled at the target in 2010 with several of which intersected a steeply dipping oxidized zone corresponding to the surface linear. While all of these intersections yielded low-grade gold mineralization, the most significant intersection came from **CH-10-04 and graded 1.29 g/t Au over 16.90 m.** In 2011 three holes were drilled and intersected intensely oxidized intervals within the dolomite. The oxidized intervals had an average width of 25 m with a composition ranging from partially oxidized dolomite to limonite rich mud. The most significant intersection from drilling was from hole **CH-11-07 which graded 1.11 g/t Au over 13.72 m.** In 2017, prospecting was conducted along float trains and north-easterly-trending structures. An oxide float sample collected during this program returned **2.00 g/t Au and 1.29% Zn.**					
Puma	4.3 km NW of Tiger	Au, Ag	Carbonate Replacement	2009-2011, 2013-2015, 2017-2018	Soil sampling, prospecting, mapping, hand trenching, diamond drilling.
The Puma Target has a geochemical signature similar to Tiger in terms of size and gold and pathfinder element enrichment. Work at Puma from 2009 to 2011 focused around a prominent fault cutting a dolostone package which contained gold bearing oxide material. Six goethite or goethite-rich limonite samples collected in 2009 returned gold values greater than 1.00 g/t, including a **peak value of 18.45 g/t Au**; while four samples returned silver in excess of 100 g/t to a maximum of **241 g/t Ag**. This fault, thought to be controlling the mineralization, was tested in two drill holes - PM-11-01 and PM-11-02. Both holes intersected creamy dolomite cut by a strongly oxidized but healed fault. The best result from this drilling returned **3.9 m of 0.75 g/t Au in PM-11-02**. Detailed mapping of the Puma target was performed in 2013. This work identified the same limestone, dolostone and volcaniclastic units that occur at the Tiger Deposit and noted two distinct generations of faults. The first fault generation shows a northerly orientation which in plan view sinisterly displaces the dolostone-volcaniclastic contact. The second generation, informally referred to as the Puma fault, has a west-northwesterly orientation which dextrally displaces the dolostone-volcaniclastic contact. Prospecting performed at the Puma target in 2013 revealed an area of notable gold enrichment where the dolostone-volcaniclastic contact is cut by the Puma Fault. Follow up prospecting hand pitting and trenching in 2014 returning values of up to **4.21 g/t Au**, seemingly sourcing					

from the Puma fault. In 2015, two diamond drill holes were drilled to test both the Puma fault and faults that offset the Puma fault. Both holes encountered significant intervals of oxide development, but were largely unmineralized. The highest grade interval from the program returned a value of **1.45 g/t Au over 3.05 m.** In 2017, the existing soil sample grid was expanded. Weakly to moderately anomalous gold-in-soil was identified within this expansion, including values of **124 and 115 ppb Au.** In 2018 a grid of hand pits was dug in an area east of the main showing with a strong gold-in-soil response and limited follow up work. No significant results were returned.					
Cougar	3.5 km NW of Tiger	Au, Bi, Ag, Pb, Zn	Carbonate Replacement	2009, 2010, 2013, 2019	Soil sampling, prospecting
The Cougar Showing is located in a north facing cirque. Mineralized float is found in a gully which stretches approximately 600 m from the base of the slope to the ridge then continues over the ridge and into the valley to the southeast. Cobbles of dense rusty limonite with rare blebby bismuthinite and galena in quartz occur in a talus field comprising mostly limestone with volcaniclastic material to the east and west. Mineralized float becomes more concentrated near the ridge, although no outcrop was located. A number of samples collected from this float train produced elevated **gold (1.57 g/t and 3.13 g/t)** and **silver (483 g/t)** values. Three samples taken near the ridge yielded greater than **1% Bi**; however, these samples were only slightly elevated for other elements of interest. Four samples yielded greater than 10% Pb with a peak of **35.74% Pb**, while most samples contained below 0.5% lead, other than the **1.57 g/t gold sample which contained 19.35% Pb**.					
Panther	3 km Northwest	Au, Bi, Ag, Pb, Zn	Carbonate Replacement	2009, 2010, 2015, 2017, 2018	Soil sampling, prospecting, diamond drilling
The Panther Showing is situated on a ridge where limonite float was found within a north northeast trending recessive linear feature that marks the contact between limestone to the south and volcaniclastic to the north. In 2009 a sample containing 5.72 g/t Au, 5 g/t Ag, and 0.11% Zn was collected. Two diamond drill holes targeted the recessive linear. Though observations from drill core suggest that it was not intersected - no significant mineralization was returned. A specimen collected from this area in 2017 returned **8.18 g/t Au, 16 g/t Ag, and 199.5 ppm Bi.** Additional Limonitic float was also found uphill, to the west but to date, the source of mineralization has not yet been located. Results of limited prospecting in the Panther area conducted in 2018 included a sample returning 4.61 g/t Au northeast of the main showing.					
Jaguar	2.5 km NW of Tiger	Au	Carbonate Replacement	2009, 2010, 2015	Soil sampling, prospecting
The Jaguar Showing is located on a grassy spur. Float samples collected generally consisted of dense, rusty purple, goethite-rich limonite with rare patches of quartz. Two samples taken from this showing in 2009 returned **1.57 g/t Au and 2.81 g/t Au**. Prospecting 350 m west of this area in 2015 revealed a northwest trending linear located directly beneath a gossanous exposure. Float samples of oxidized limestone collected in this area in 2015 returned gold values up to **2.55 g/t Au**.					
Condor	1.5 km NW of Tiger	Au, Ag, Zn	Carbonate Replacement	2010, 2015, 2017, 2018	Soil sampling, prospecting, VTEM, diamond drilling
The Condor target was originally identified by a ZTEM geophysical survey and is located 1.5 kilometres northwest of the Tiger deposit. In 2010, prospecting grabs of an oxidized breccia returned values up to **1.50 g/t Au**. Six diamond drill holes followed up these results targeting the projected ZTEM geophysical anomaly at depth. All of the holes intersected limestone and dolomite with narrow volcaniclastic intervals. Only thin intersections of oxide were encountered. No significant mineralization was encountered. It is believed that this drilling did not adequately test the favourable structures. In 2015, a small prospecting program conducted in the vicinity of the Condor target confirmed the presence of limonite altered limestone with anomalous gold values. However, the highest gold value returned from the sampling was 0.13 g/t gold. Results of oxide float samples collected during follow-up prospecting in 2017 yielded strongly anomalous values for multiple elements, including **17.00 g/t gold with 378 g/t silver, 9.46 g/t gold, and 1.2% zinc.** Work in 2018 focused on a 100 m wide vegetation anomaly located upslope of the 2017 samples. Handpits were excavated on a grid pattern across the vegetation anomaly and a variety of samples containing strongly oxidized sulphides hosted in dolostones and volcanic rocks were					

encountered. Highlight results from pit samples include 1.85 g/t Au with 103 g/t Ag, 133 g/t Ag, and two samples yielding 37.49% Zn and 36.51% Zn. Condor is situated in a similar stratigraphic and structural environment to the Tiger Deposit, with a series of carbonate horizons interlayered with volcanoclastic flows. Mineralization at Condor is thought to have developed at the structural intersection of a regional scale northwesterly trending strain zone with a northerly trending brittle fault zone.					
Airstrip Anomaly	6 km SE of Tiger	Au	Unknown	2015, 2016, 2019	Soil sampling, Prospecting, RAB drilling
The Airstrip anomaly was discovered in 2015 through the extension of the soil sample grid southeast from the Bengal zone. The Airstrip anomaly is east of the Bengal Zone, approximately 5.5 km long, and overs a total area of 11.5 km^2. The anomaly is open to extension in the south, west and north directions. Soil samples defining the anomaly range from below detection to **1.03 g/t Au** in soil. The terrain at the Airstrip anomaly is composed of gentle slopes to valley bottom, with approximately half of the anomaly located within an old burn. In 2016, the soil sampling grid was extended and RAB drilling was completed in the vicinity of a cluster of anomalous gold in soil results on the Airstrip anomaly. Prospecting hand samples in 2019 returned a maximum value of **1.63 g/t Au**. First pass mapping began to delineate the rock units in the area, but both this and the prospecting were limited by the amount of outcropping exposures. Soil sampling expanded the 2015 grid southeast and confirmed that the Airstrip anomaly is strong and open to the north, south and west. RAB drilling of two priority anomalies yielded promising results in three of seven total holes. The best RAB drill results were from hole **ASR-16-006 which returned 3.75 g/t Au over 3.05 m** and an additional interval of **1.43 g/t Au over 13.71 m.**					
Lion	750 m west of Tiger	Au, Zn	Unknown	2009, 2010, 2017	Soil sampling, prospecting
Lion was defined when two rocks samples collected in 2009 returned values of **1.36% and 1.17% Zn**. Grid soil sampling was conducted in 2013 to test whether anomalous soil samples flanking Tiger Creek truly defined an area of mineralization or were merely a feature of downstream dispersion from the Tiger Deposit. While most samples returned values for gold below 0.05 ppm, one sample returned **0.17 g/t Au.** This sample was located on the western most soil line approximately 150 m east of the creek. These results suggest that the generally higher grade gold-in-soil anomaly at the Lion target is related to downstream dispersion and lateral overflow deposition from stream sediments sourcing from the Tiger deposit. Prospecting in 2017 identified six close-spaced, northerly trending, oxidized siderite veins in talus, sub-crop and outcrop. Samples yielded weak gold values, with a peak of **0.15 g/t Au.**					
Kitty	1 km NW Tiger	Au	Unknown	2010	soil sampling, ZTEM, diamond drilling
Kitty is a geophysical target located 1 kilometre northwest of the Tiger deposit. It has seen limited prospecting and soil sampling, but one diamond drill hole was drilled in 2010. The hole targeted a north trending structure identified through interpretation of ZTEM geophysical data. The drill hole intersected limestone and dolostone with narrow volcaniclastic intervals, but no significant mineralization was encountered.					
Tiger	-	Au, Ag, W, Zn	Carbonate Replacement	2007- 2011, 2015, 2017, 2019	soil sampling, prospecting, mapping, diamond drilling

The Tiger Deposit is the most well understood target in the Rau Property. It is a thick northwesterly trending body of carbonate replacement style gold mineralization hosted by a moderately northeast dipping horizon. The geometry of the mineralized system is defined by a series of stacked and folded limestone horizons intercalated with locally extensive mafic flows and volcaniclastic units. Mineralization at Tiger has seen the most extensive exploration work, up to and including two Preliminary Economic Assessment (PEA) reports, released in 2014 and 2016.Gold occurs in both sulphide and oxide facies mineralization in the Tiger Deposit. Sulphide mineralization takes place in limestone that is replaced by iron-rich dolomites and iron carbonate minerals. The mineralizing sulphide phase is dominated by pyrite and arsenopyrite, with a non-sulphide component of carbonates (dolomite, ankerite, and calcite, and minor quartz. Gold occurs as both solid solution within sulphides and as discrete mineralization. The main sulphide minerals exhibit at least three stages of mineralization. Oxide mineralization ranges from competent, weakly porous limonitic mud to rubbly porous limonitic grit. Complete oxidation extends up to 150 m from surface. The highest-grade and deepest oxidation occurs where northerly trending extensional faults intersect the northwest trending regional shear structure. The Upper Tiger Zone consists of sulphide mineralization located above the amygdaloidal Volcanic Unit C. In present diamond drill hole intersections, this zone appears to be analogous to the rich Tiger Deposit sulphide horizons. Mineralization here is 4-11 m thick with coarse-grained arsenopyrite, pyrite, and white ankerite. The top and bottom contacts of the Upper Tiger Zone abruptly transition to a white marble. Increased drill hole density is warranted to test its addition to the existing resource. Additional mineralization includes an area of quartz-associated pyrite that overprints all earlier phases including Tiger Deposit-style mineralization. Mineralization at the Tiger Deposit remains open to extension along strike and down dip at both ends of the known zone, as well as at depth across a normal fault that locally defines the southwest margin of the favourable structural corridor.					
Cub	575 m east of Tiger	Au, Ag, Bi, W, Zn, Cu	Carbonate Replacement	2009, 2010, 2017	soil sampling, prospecting
The Cub Showing occurs 575 m to the east of the Tiger Zone. Mineralized float was found in a 110 m wide by 250 m long area on a south facing talus covered slope. The showing coincides with a strong bismuth-in-soil anomaly (>200 ppm). In 2017, prospecting grab samples south-west of the Cub target returned anomalous values for multiple elements, including **4.63% Cu with 12.65% Zn, 43.6% Zn with 3.22% Pb and 157 g/t Ag, and 6.23% Zn with 11.45% Pb and 157 g/t Ag.**					
Hogs Back	2 km SE of Tiger	Au, Cu, W	Skarn	2006-2009	soil sampling, prospecting
The Hogs Back Showing is exposed on the north and south side of a northwest trending gully. It was first identified in 2006 and followed up in 2007. The showing consists of three actinolite skarn layers occurring conformably within a portion of the Bouvette limestone sequence. Mineralization comprises finely disseminated to patchy pyrrhotite, pyrite and lesser chalcopyrite. Marbleization of the surrounding limestone is variable but extends up to 5 m in areas. The skarn layers have been traced to the northwest for over 750 m and vary in thickness from 0.3 m to 6 m, averaging 0.8 m. The thickest and best mineralized exposure occurs at the southeast edge of a crosscutting drainage before disappearing to the southeast beneath cover. In general, the exposed skarn horizons appear to thin to the northwest. The two thickest packages of mineralization appear proximal to a pair of southwest striking, quartz muscovite pegmatite dykes. The northwesterly dyke is one metre wide and exposed along strike for only two metres, while the dyke to the southwest is three metres wide and exposed for ten metres. No direct contact was observed between the dykes and the skarns. Select rock samples collected from this showing in 2006 and 2007 yielded peak values of **4,010 ppm W** and **1.24 g/t Au** from the north side of the showing. A single diamond drill hole WAU-08-003 tested this showing in 2008; however, it was collared too far forward to test the skarn mineralization.					
Flat Top	2.5 km NE of Tiger	Au, W	Skarn	2007-2009	soil sample, prospected, diamond drilled

The Flat Top Showing occurs along the contact between the Bouvette Formation limestone and Earn Group shale strata. The showing is marked by approximately coincident, moderately to strongly anomalous gold, copper and tungsten soil geochemical values over an approximately 600 m long and up to 300 m wide area. Scheelite in tremolite skarn was first found at this locale in 1979 by Prism. Prospecting in 2009 traced skarn mineralization around the nose of the ridge for 400 m. Four types of skarn mineralization occur across a stratigraphic thickness of about 40 m. The first, found immediately above the limestone/shale contact, occurs as felted to radiating masses of acicular tremolite/actinolite or wollastonite/actinolite localized in a band that ranges from a few 10's of cm to a few metres thick. The second, found within unaltered carbonate rock, are masses of tremolite mixed with calcite found in 0.5 mm to 2 cm thick veinlets. Thirdly, an iron rich skarn consisting of coalescing aggregates of radiating acicular masses of tremolite/actinolite preferentially replaces the host carbonate. Rare interstitial green tourmaline or vesuvianite, calcite and quartz also occur with this skarn type. Finally extending upward from the contact is the most iron rich species. It contains felted masses of light green actinolite with local black tourmaline, biotite books, light grey to smoky quartz and patches of massive medium brown limonite. Prism Resources reported rock samples assaying up to 8.38% WO3 but most samples collected from the area grade less than 0.04% WO_3. One sample consisting of a quartz fragment surrounded by green actinolite with black tourmaline and traces of pyrrhotite returned **0.13 g/t Au**. A single diamond drill hole tested the area in 2008 but it was collared too far downhill and only intersected shale belonging to the Earn Group.					
Ridgecrest	3 km SE of Tiger	Au, W	Skarn	2007, 2008, 2017	soil sampled, prospected
The Ridge Crest Showing, located on the southwest margin of the Rackla Pluton, was discovered in 2009 while following up a gold-in-soil anomaly (990 ppb) within the 2007 soil sample grid. A 70 cm deep hand pit dug at this location revealed mainly glacial till and grey limestone fragments. Two cobbles of rusty dark green pyroxene skarn and several oxidized skarn fragments were also extracted from this pit. Samples of the skarn yielded 0.02 g/t Au and 850 ppm W. 15 metres west of this hand pit a dyke containing equigranular, coarse grained white to smoky quartz and minor muscovite with occasional patches of chlorite and trace fine grained sulphides was identified, while a float sample collected nearby returned 1,060 ppm W. A soil sample grid expansion at the Ridge Crest showing in 2017 yielded weakly anomalous results, with values up to 57 ppb Au and 27 ppm Ag.					
Blue Lite	5.5 km NE of Tiger	Au, Cu, W	Skarn	2009, 2015, 2017- 2019	soil sampled, prospected, historically diamond drilled
The Blue Lite Showing, first discovered by Prism in 1979, is a scheelite tremolite skarn that is well exposed on a cliffy outcrop on the north side of a prominent peak. Mineralization consists of scheelite as disseminations with massive pyrrhotite and minor chalcopyrite. The skarn horizon disappears under talus to the east and grass to the west. The Blue Lite Showing is located along a high angle normal fault that dips to the south. This fault marks the contact between Devo-Mississippian clastics to the north and Devonian to Jurassic clastics to the south. Three samples collected in 2009 returned greater than 0.10% W with a peak of **0.34% W**. Most of the other samples ranged from **200 to 950 ppm W**. Gold values were generally all below background. Contour soil sampling conducted in 2010 identified a 200 m long gold-in-soil anomaly coincident with the mapped location of the Blue Lite skarn horizon. Prospecting in 2013 was directed to the skarn horizon with emphasis placed on the characterization of the gold bearing potential of the horizon. Rock samples of oxidized skarn material collected in the vicinity of the gold-in-soil anomaly returned up to **2.18 g/t Au**. Contour soil sampling located a small spot anomaly with samples returning values up to **0.22 g/t Au**. In 2016, 26 rock samples were collected during one day of prospecting. These rock samples graded from below detection limits to a maximum of **0.57 g/t Au**, with three other samples above **0.29 g/t Au**. In 2019, a grab sample 660 m to the SW returned a result of **2.87 g/t Au**. All higher-grade samples were taken from quartz-rich or decalcified float.					
Spotlight	6.2 km NE of Tiger	Au, Ag, Cu, Sn	Skarn	2017- 2019	soil sampled, prospected, mapped
The Spotlight target has seen only limited prospecting following up on a gold-, and arsenic-in-soil anomaly. Grab samples collected from this target in 2017 returned up to **3.27 g/t Au, 7,080 g/t Ag, and 0.88% Cu**. Soil sampling in 2018 extended the gold-in-soil anomaly to over 2 km in length. Prospecting grab samples collected in 2018					

returned up to 2.17 g/t Au, 4090 g/t Ag with 4.87 Pb, and 1765 g/t Ag. Geological mapping was also undertaken in the spotlight area in 2018.					
Kathy	4.5 km E of Tiger	Au, Ag, Pb, Zn	Skarn	2009, 2011, 2019	soil sampled, prospected, RAB drilled, diamond drilled
The Kathy Showing comprises a 40 m wide by 30 m long brick red gossanous ferricrete slab situated downhill of a thrust fault that places Earn Group shale, to the south, over Bouvette Formation carbonates to the north. It is believed that the gossan is formed by fluids traveling along this thrust fault. Soil samples collected by Prism in 1978 returned silver values between 0.08 g/t and 25 g/t, lead values ranging from 32 to 90 ppm and zinc values ranging from 95 to 3,900 ppm. Results for other elements were not reported. In 2011, two holes targeted the source of the gossan identified by Prism in 1977. Drilling at the Kathy Showing intersected dolomitized limestone. Sporadic intervals of cream coloured dolomite with hairline fractures filled with black dolomite were located throughout both holes. Narrow skarn bands and quartz feldspar porphyry were scattered throughout both holes. No significant mineralization was encountered. In 2015, sections of the Kathy drill core that were not split and assayed in 2011 were re-examined and subsequently split and sent for assay. A sample grading **1.01 g/t Au over 3.05 m** was returned, while all other samples did not contain any significant mineralization. Prospecting in 2019 resulted in one grab sample returning **6.39% Cu,** of weakly oxidized fault rock with trace malachite rimming clasts, and one grab sample that returned **643 g/t Ag.** Diamond drilling in 2019 targeted geophysical anomalies. RPP-19-007 encountered low grade gold intervals.					
Bobcat	4.5 km SE of Tiger	Au, Ag, Cu, Pb, Sn	Skarn	2010, 2012, 2018, 2019	soil sampled, prospected, mapped, RAB drilled, diamond drilled
Intrusion-related skarn and vein mineralization with grades from below detection up to **13.70 g/t Au**, **1,090 g/t Ag**, **0.19% Cu**, **11.90% Pb** and **10.9% Sn** were collected from mineralized rock samples from 2010 to 2012. In 2018, detailed mapping, prospecting and hand pitting was carried out in the main Bobcat target area. The existing soil grid was also extended north and east, identifying further areas of gold, silver and copper anomalism. Prospecting in 2019 identified outcropping skarn veins, with highlight results of **50.80 g/t Au** with **3.00% Cu,** and **41.90 g/t Au** with **10.55% Cu.** Diamond drilling in 2019 hit numerous skarn veins and pegmatite dykes, with thin, high grade veins returning up to **173.00 g/t Au** and >1.00% Cu over 5cm and **17.75 g/t Au** across 0.51m.					

SOIL SAMPLING

In 2019, crews preformed grid soil sampling east of Bobcat and contour soil sampling between Flat Top and Spotlight/Blue Lite and east of Spotlight/Blue Lite with a total of 777 soil samples collected (Figure 10).

At Spotlight and Blue Lite, contours to the east, west and south revealed multiple areas of elevated silver-in-soil, trace copper-in-soil and elevated lead- and zinc-in-soil along the western most contour. Highlight soil sample values along the eastern contour include 1675 ppm Pb and 5.47 g/t Ag. The regions to the east, west and south of Spotlight and Blue Lite remain open for further expansion.

At Bobcat, infill soil sampling was conducted within the skarn mineralized zone. Sampling confirmed strong gold, copper, and zinc-in-soil anomalies. A 200 x 1000 m soil grid was sampled to the north of Bobcat which showed no significant anomalism, except for trace lead and zinc occurrences, with highs up to 887 ppm Pb.

East of Bobcat, a soil grid expansion adjacent to 2018 soil sampling revealed a 900 x 400 m gold-in-soil anomaly that is adjacent to a 700 x 500 m copper-in-soil anomaly. These new anomalies demonstrate the continued potential for intrusion-related discoveries in the district. Soil sampling in this area also exposed a 1200 x 400 m silver-in-soil anomaly that extends silver-in-soil anomalism identified in 2018. A linear northwest-southeast trend of elevated zinc was also discovered through grid sampling, with multiple zinc-in-soil values over 200 ppm. Highlight soil results include 0.149 g/t Au, and 759 ppm Cu. Results from all areas sampled in 2019 are illustrated in Figures 11 through 15. Certificates of analysis are included in Appendix III.

Soil Sample Analytical Information

All soil samples were transported from the property to ALS Minerals in Whitehorse, YT in the custody of Archer Cathro employees. Samples were received, prepared and then transported to ALS Minerals' North Vancouver, BC laboratory for geochemical analyses. Soil samples were dried and screened to -80 mesh to produce a fine fraction. Splits of the fine fraction were routinely dissolved in aqua regia and analyzed for 50 elements using inductively coupled plasma-mass spectrometry and atomic emission spectroscopy (ME-ICP41). All samples were also analyzed for gold using a 30g fire assay and inductively coupled plasma-atomic emission spectroscopy (Au-ICP21).

ROCK SAMPLING

A total of 567 rock samples were collected along the Rau property in 2019. The rock sampling was part of a broad prospecting program designed to evaluate intrusion-related mineralization in areas proximal to the Rackla Pluton (at Bobcat, Kathy, Spotlight and Blue Lite) as well as underexplored soil anomalies and targets elsewhere on the property. A summary of results from this sampling is presented below for each target area.

The locations of rock samples collected in 2019 are presented in Figures 16 - 20. Certificates of analysis for the samples are in Appendix Ⅲ and rock descriptions are presented in Appendix Ⅳ.

Airstrip

Multiple days were spent prospecting and hand pitting at the Airstrip target to follow-up on high gold-in-soil areas within the Rackla Gold Property's largest gold-in-soil anomaly. Most samples were of variably oxidized quartz fragments with oxidized sulphides and rusty phyllite from hand pits. This work returned numerous low-grade gold in rock samples with highlights of 1.63 g/t Au and 1.04 g/t Au (Figure 21).

Bobcat-Kathy

Prospecting at Bobcat focused on following-up 2017 pitting and rock samples in the area. The work focused on exposing outcrop, further hand pitting and tracing vein discoveries. An outcrop rock sample of an oxidized tremolite-malachite vein in marble returned 50.80 g/t Au and 3.00% Cu. Follow up work in the surrounding area resulted in many high gold and copper samples,

grading up to 41.90 g/t Au and 10.55% Cu – the highest gold and copper rock samples to date at the target (Figures 22 - 26).

Kathy prospecting returned a 643 g/t Ag rock sample of quartz veins in shale (Figure 23). Follow-up prospecting at Kathy within a gold and copper soil anomaly resulted in a malachite bearing ferricrete rock sample from float that graded 6.39% Cu. Rock samples from both Bobcat and Kathy returned elevated levels of tungsten and zinc (Figure 25 - 26). Highlight grab samples from work at Bobcat and Kathy are presented in Table III below.

Table III: BOBCAT AND KATHY 2019 HIGHLIGHT ROCK RESULTS

Sample ID	Gold (g/t)	Copper (%)	Silver (g/t)
W842156	**50.80**	**3.00**	31
W842158	**19.90**	**2.35**	80
W842178	**41.90**	**10.55**	72
W842179	**28.60**	**6.46**	42
W842181	**16.15**	**7.24**	34
W842190	**15.55**	**2.46**	132
W842194	**24.70**	**2.05**	192
S036469	-	-	**643**
W420655	0.91	**6.39**	-

**Note: dashes indicate no significant result for that element.*

In general, gold-copper skarn mineralization at Bobcat was typically observed within variably-oxidized tremolite-bearing veins with varying concentrations of chalcopyrite and copper oxides, hosted in fine grained limestone. This style of mineralization is characteristic of distal, retrograde skarn alteration related to an intrusive centre. Host rocks observed in the Bobcat area consist mainly of fine-grained limestone, marble, hornfelsed siliciclastic, and minor volcanic rocks.

Spotlight-Blue Lite

Prospecting was conducted during contour soil sampling in the area. A highlight rock sample collected 4.5 km north of Bobcat and south of the Blue Lite and Spotlight skarn anomalies identified large quartz boulders mineralized with coarse grained bismuthinite and pyrite containing 2.87 g/t Au (Figure 27).

Prospecting 3.5 km east of Spotlight and Blue Lite returned multiple rock samples with moderate silver and lead values, and a highlight rock sample contained 484 g/t Ag and 3.15% Pb (Figures 28, 30). One day of prospecting to the north of Blue Lite returned multiple samples of oxidized sulphides with quartz veins containing low-grade copper (Figure 29).

Spotlight contains significant hornfels, marble alteration and abundant tremolite development, indicating high fluid flow, likely from a nearby intrusive system. These observations are supported by development of gold-copper-tungsten skarn mineralization at the historic Blue Lite occurrence located 1 km to the south of Spotlight.

Tiger

Prospecting on the south end of the Tiger Deposit and surrounding areas to the south and south-east returned many rocks with elevated gold, copper, and tungsten (Figures 31 - 34). Samples along the southern end of the Tiger Deposit consisted of primarily rusty oxide material in float and subcrop. Sampling of exposed outcrop from fresh trail building resulted in an outcrop rock sample of dark brown to orange oxide grading 48.30 g/t Au.

Sampling and hand pitting between Tiger and Cub encountered oxidized and variably limonitic limestone and dolostone with highlight samples of 0.56% Cu and 0.55% Cu (Figure 32). Two rock samples also contained high tungsten, with grades of 1830 ppm W and 1820 ppm W (Figure 33). Highlight grab samples from work at Tiger and Cub are presented in Table III below.

Table IV: TIGER AND CUB 2019 HIGHLIGHT ROCK RESULTS

Sample ID	Gold (g/t)	Copper (%)	Tungsten (ppm)
W845332	**48.30**	0.34	-
W845336	**2.66**	-	640
W845339	**14.30**	-	-
W845408	**7.17**	-	-
W845418	**2.82**	-	-
W420685	-	**0.56**	**-**
W845441	-	**0.55**	**-**
W845439	-	**0.21**	**1830**
K291693	-	-	**1820**
S036546	-	-	**3270**
S036549	-	-	**5240**

**Note: dashes indicate no significant result for that element.*

Follow-up prospecting on a strong gold-in-soil anomaly along strike of Tiger stratigraphy, 2 km to the southwest and south of Hogs Back returned two rock samples grading 0.63 g/t Au and 0.87 g/t Au. These samples were taken from small pits dug during prospecting in the area and were composed of weathered, oxidized material with varying quartz and tremolite. Mineralization in this area is situated in a similar stratigraphic and structural environment to the Tiger Deposit, with a series of pale green volcanic horizons.

South of Hogs Back and Ridge Crest is a large and high-grade gold-in-soil anomaly that saw many days of prospecting and pitting. Although many outcrops of semi-massive pyrite-pyrrhotite were discovered and sampled, no significant gold was returned in any sample. Significant tungsten was found in this area, with rock samples grading 5240 ppm W and 3270 ppm W (Figure 33).

Now-Cougar

Broad prospecting around the Now target returned a highlight rock sample with elevated gold, copper, lead, and zinc. This sample graded 1.42 g/t Au, 0.23% Cu, 11.85% Pb and 0.63% Zn and

was described as a quartz-flooded shale with yellowish-green powdery coating on some surfaces (Figures 35 - 38).

A traverse in the Lynx-Cougar-Jaguar region returned no significant gold, copper, lead, or zinc in rock samples of primarily quartz veined, oxidized dolostone.

Rock Sample Analytical Information

Rock samples were transported to ALS Minerals in Whitehorse, YT in the custody of Archer Cathro employees. Samples were received, prepared and then transported to ALS Minerals' North Vancouver, BC laboratory for geochemical analysis. Rock samples were fine crushed before a 250 g split was pulverized to better than 85% passing 75 microns. Splits of the pulverized material were analyzed by ME-MS61, which uses a four acid digestion and analysis for 48 elements by inductively coupled plasma (ICP) together with mass spectrometry (MS) and atomic emission spectroscopy (AES). The samples were assayed for gold by Au-AA25, which takes a 30 g charge and prepares it by fire assay before being finished with atomic absorption spectroscopy (AAS).

Overlimit values for zinc, copper, silver and lead were re-analyzed by the ME-OG62 technique which utilizes a four acid digestion followed by an ICP-AES finish. Overlimit values for silver determined by the ME-OG62 method were re-analyzed using the Ag-GRA21 method, which involves fire assay preparation using a 30 gram charge and a gravimetric finish. Overlimit values for lead determined by the ME-OG62 method were re-analyzed using the Pb-VOL70 method, which uses a four acid digestion and volumetric titration. Overlimit values for zinc determined by the ME-OG62 method were re-analyzed using the Zn-VOL50 technique, which uses a four acid digestion and potentiometric titration. Overlimit values for tin were re-analyzed by the ME-MS85 method, which uses a lithium borate fusion followed by ICP-MS, or by the Sn-AA82 method which uses a peroxide fusion followed by AAS.

GEOPHYSICS

In 2019, 67.4 km of ground magnetics and 47.4 km of Induced Polarization (IP) surveys were completed by Scott Geophysics Ltd. and interpreted by Wright Geophysics at the Rau Project. A pole-dipole array configuration was used for the IP survey. Three different arrays were used:

1. An a-spacing of 100 metres at n-separations of 1 to 6 (100/1-6);
2. An a-spacing of 50 meters at n-separations of 1 to 5 (50/1-5); and
3. An a-spacing of 50 meters at n-separations of 1 to 6 (50/1-6).

The current electrode was located to the south of the potentials for all the lines.

GPS readings were taken at the start and end of each survey line and at the remote ("infinite") electrode location, subject to satellite reception. Elevation measurements were barometric altimeter readings, calibrated to GPS altitude at the beginning of each line.

Total field magnetometer readings were routinely taken at 12.5 metre intervals (reduced to 2-5 metre intervals in areas with a steep magnetic gradient) and corrected for diurnal variation against a fixed base station cycling at 10 second intervals.

In summary, the IP and magnetics surveys refine the overall geologic understanding in the vicinity of the Rackla pluton. A more detailed boundary to the intrusion was generated, and bounding skarns were interpreted with associated IP chargeability anomalies. Five high priority skarn targets were identified based upon correlated chargeability and magnetic anomalies.

The final field report from Scott Geophysics is presented in Appendix VII and the final geophysical interpretation report from Wright Geophysics is presented in Appendix VIII.

RAB DRILLING

Rotary Air Blast (RAB) drilling was carried out at the Rau Project between June 14th and June 29th by Superior Diamond Drilling Ltd. of Powell River, BC. The work was completed using a heli-portable, track-mounted 'Grasshopper' drill manufactured by Multi Power Products Ltd. A total of 267.01 m of RAB drilling was completed in 7 holes. Samples consisted of approximately five pounds of pulverized rock collected at five-foot intervals. Care was taken to collect material throughout the entire five-foot drilled interval. Samples were photographed, logged and entered into a RAB drill database.

The RAB drill was set up on earth filled log pads approximately 15 feet long by 15 feet wide. This pad type was prepared by hand by Archer Cathro employees. Drill collars were marked with a flagged picket and labelled with the basic drillhole information including hole number, azimuth, and dip.

The drill collar locations are plotted on Figure 39 and key data for the holes is listed in Table V. Sampling and analytical procedures are provided in Appendix IX. Geological and sample logs are presented in Appendix X. Certificates of analysis for the RAB samples sampling are shown in Appendix XI.

TABLE V: 2019 RAB DRILL HOLE SPECIFICS

Hole Name	Easting (mE)	Northing (mN)	Elevation (m)	Azimuth (True North)	Dip	Depth (m)	Target
RRB-19-001	532,782	7,117,335	1199	340	-60	64.01	Bobcat
RRB-19-002	532,864	7,117,330	1225	290	-50	73.15	Bobcat
RRB-19-003	532,931	7,117,324	1224	290	-50	71.63	Bobcat
RRB-19-004	532,932	7,117,324	1224	110	-75	10.67	Bobcat
RRB-19-005	532,951	7,117,488	1195	290	-50	12.5	Bobcat
RRB-19-006	532,970	7,117,440	1204	260	-50	7.62	Bobcat
RRB-19-007	532,940	7,117,861	1139	320	-50	27.43	Kathy

RAB DRILLING RESULTS

Observations from each zone drilled this year are described below and illustrated in Figures 39 - 40.

Bobcat
Six RAB holes totalling 239.58 m were drilled in the Bobcat area in 2019. Drilling was carried out at Bobcat to follow up on the area's abundant high-grade gold and copper samples previously collected from hand pitting and outcrops. Holes RRB-19-002 and RRB-19-003 both returned results of sparse anomalous gold. Complications with difficult sub-surface conditions and mechanical issues resulted in significant loss of sample recovery and quality, and the holes were ended short of target depths.

Kathy
One RAB hole totalling 27.43 m was drilled in the Kathy area in 2019, targeting a large copper-in-soil anomaly and potential fault. The hole was ended short of its target depth due to a slow advancing rate. No significant gold or copper was returned in this hole.

DIAMOND DRILLING

The 2019 diamond drilling program at the Rau Property focused on testing gold-copper skarn mineralization at the Bobcat and Kathy Targets, and additional step-out drilling at the Tiger Deposit. Diamond drilling was carried out between July 18th and October 4th by Superior Diamond Drilling Ltd. of Powell River, BC. The work was completed using NQ equipment on a heli-portable Discovery II drill. A total of 2,675.01 m of diamond drilling was completed in 12 holes.

The drill was set up on earth filled log pads approximately 20 feet long by 20 feet wide, prepared by Archer Cathro employees. Following completion of each 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 at Tiger were surveyed using a Leica Geosystems differential GPS and drill hole locations at Bobcat and Kathy were surveyed using a handheld GPS.

The drill collar locations are plotted on Figures 41 and 44, with key data for the holes presented in Table VI. Cross sections for all diamond drill holes are presented in Appendix XV. Sampling and analytical procedures, data verification and QAQC results are provided in Appendix XII, while drill logs are given in Appendix XIII. Certificates of analysis for 2019 drilling are in Appendix XIV.

TABLE VI: 2019 RAU DIAMOND DRILL HOLES

Zone Name	Hole Name	Easting (mE)	Northing (mN)	Elevation (m)	Azimuth (True North)	Dip	Depth (m)
Tiger	RAU-19-163	528,570	7,118,931	1276	227.8	-50	78.64
Tiger	RAU-19-164	528,571	7,118,931	1276	228	-70	92.05
Tiger	RAU-19-165	528,607	7,118,909	1299	228.2	-70	130.76
Tiger	RAU-19-166	528,607	7,118,908	1300	228.2	-50	93.57

Bobcat	RPP-19-001	532,718	7,117,336	1172	79.8	-50	329.18
Bobcat	RPP-19-002	532,936	7,117,433	1193	350.2	-50	103.63
Bobcat	RPP-19-003	532,868	7,117,379	1201	292.2	-50	249.94
Kathy	RPP-19-004	533,294	7,118,016	1143	296.1	-50	475.88
Kathy	RPP-19-005	533,181	7,117,930	1133	288.9	-50	285.60
Kathy	RPP-19-006	532,274	7,117,748	1083	44.9	-50	279.50
Kathy	RPP-19-007	533,027	7,117,930	1129	324.9	-50	252.37
Kathy	RPP-19-008	532,488	7,118,024	1097	276.1	-50	303.89

DIAMOND DRILLING RESULTS

Results of the 2019 diamond drilling program are described below.

Bobcat

A total of 682.75m was drilled at Bobcat in three diamond drill holes (Figures 41-43). Drilling occurred in an area that has seen significant prospecting, hand pitting, and RAB drilling. The holes focused on targeting geophysical anomalies, structural complexities and prospecting discoveries for distal, structurally-dominated retrograde gold-copper skarn mineralization. Drill core samples from Bobcat contain comb textured quartz-tremolite-malachite-sulphide vein mineralization that exhibits multi-phase retrograde skarn alteration.

Drill hole RPP-19-001 did not intersect any significant alteration or bleached envelopes. No significant gold or copper intervals were intersected in this hole.

RPP-19-002 hit unexpected oxide near surface, which caused poor drill core recovery. This hole did not reach its target depth and rods were lost down-hole. This hole returned 17.75 g/t Au over 0.51 m within a broader interval comprising both vein and alteration envelope of 2.47 g/t Au across 1.95 m. Additionally, this hole intercepted 0.12% Cu over 4.99 m near surface.

RPP-19-003 hit a thin (5 cm) tremolite-malachite-chalcopyrite vein that returned 173.00 g/t Au and >1.00% Cu (copper could not be assayed to completion due to sample weight), within a broader interval encompassing the vein and alteration envelope that returned 3.33 g/t Au and 0.77% Cu across 0.59 m. This interval is 30 m below a grab sample, W842156, that returned 50.80 g/t Au and 3.00% Cu. Numerous 3 to 8 cm wide veins throughout the hole returned between 1.04 and 12.00 g/t Au.

Significantly mineralized intervals are listed in Table VII.

TABLE VII: 2019 SIGNIFICANT DIAMOND DRILL INTERSECTIONS - BOBCAT

Drill Hole	Zone	From (m)	To (m)	Interval* (m)	Au (g/t)	Cu (%)
RPP-19-002	Bobcat	22.86	27.85	4.99	0.15	0.12
and		30.05	32.00	1.95	2.47	0.04

incl.		30.49	31.00	0.51	17.75	0.11
RPP-19-003	Bobcat	59.02	59.18	0.16	7.68	0.09
and		73.49	74.08	0.59	3.33	0.77
incl.		74.03	74.08	0.05	173.00	1.00

**Reported intersections are drilled thicknesses and are believed to represent 80 to 100% true widths*

Kathy

A total of 1,597.24 m was drilled at Kathy in five diamond drill holes. Drilling targeted geophysical and soil geochemical anomalies in the area.

Holes RPP-19-004, -005 and -007 all tested a reverse magnetic high. Although some pyrrhotite and pyrite mineralization was observed, it did not explain the intensity of the magnetic anomaly, which may be related to more mineralization at depth. RPP-19-004 and -005 intersected numerous thin tremolite-sphalerite-galena veins in intensely marbleized rocks, returning low-grade gold values. RPP-19-007 encountered tremolite veins within the foot wall of the Kathy Fault, returning 9.40 m of 0.23 g/t Au. Additionally, RPP-19-007 intersected trace Mo and 0.12% Ni over 15.94 m (from 50.51 m), which acts as a stratigraphic marker of the Road River Group making it useful for correlation.

RPP-19-006 and -008 were designed to test two areas of anomalously high magnetic response. RPP-19-006 drilled through pegmatite dykes up to 30 cm wide but did not encounter the main mass of the Rackla Pluton. RPP-19-008 targeted a much stronger magnetic high and encountered altered granodiorite and several pegmatite dykes. No significant gold or copper results were returned in either hole, although there was trace quartz-pyrrhotite-chalcopyrite-molybdenite veining within the granodiorite.

Tiger

A total of 395.02 m was drilled at the Tiger Deposit in four diamond drill holes. These holes were all step-out drill holes on the eastern side of the Tiger Deposit. Drilling focused on testing oxide material observed at surface south-east of the main deposit area within the 2016 PEA pit shell that was previously classified as waste. Significant mineralized intervals from drilling at Tiger drilling are listed in table VIII.

TABLE VIII: 2019 SIGNIFICANT DIAMOND DRILLING RESULTS - TIGER

Drill Hole	From (m)	To (m)	Interval* (m)	Au (g/t)	Type
RAU-19-164	63.22	71.40	8.18	3.32	Oxide
incl.	63.22	64.62	1.40	13.80	
RAU-19-165	1.22	14.94	13.71	0.79	Oxide
RAU-19-166	3.66	6.7	3.04	13.40	Oxide

**Reported intersections are drilled thicknesses and are believed to represent 80 to 100% true widths*

Drilling encountered oxide breccia zones above the main stratabound manto horizon, within a portion of the 2016 PEA pit shell that was defined as waste. This provides compelling evidence for zones of structurally controlled breccias and chimneys outside of the primary oxide horizon. Mineralization remains open in multiple directions and at depth; most prominently to the south and south-east where surface sampling has revealed oxide breccia zones outside of the existing resource and pit shell.

DISCUSSION AND CONCLUSIONS

Since 2007, a total of 22 targets with gold and/or base metal mineralization have been discovered by ATAC across a 20 km trend at the Rau Property. These targets comprise several distinct styles of intrusive-related mineralization, demonstrating systematic zonation outwards from the Rackla Pluton. The 2019 field program was designed to follow-up on high-grade gold, copper and silver results from 2018, preform reconnaissance-scale mapping, soil sampling and prospecting to refine other targets, as well as first-pass RAB and diamond drilling of the Bobcat and Kathy targets.

While underexplored, the Rackla Pluton represents one the proposed hydrothermal fluid sources for the district and may have reduced-intrusion-related gold potential. The neighbouring Bobcat skarn target reflects outward fluid flow and the development of gold-copper skarn mineralization. This mineral zonation continues to transition outward to a gold-silver dominated carbonate-replacement system exemplified by the Tiger Gold Deposit. At the periphery, silver-lead-zinc manto-style mineralization has developed at the Ocelot target, demonstrating distal components of fluid flow.

Exploration efforts in 2019 were focused on the Bobcat and Kathy targets, which returned high grade gold and copper grab samples. Initial RAB and diamond drilling at Bobcat retuned numerous, thin, high grade gold and copper veins, and pegmatite dykes, evidence of a robust intrusive-related, distal, retrograde skarn system. Kathy diamond drilling intersected the Kathy Fault and numerous skarn veins with sulphide mineralization but did not locate a source for the strong geophysical anomalies in the area. Returning to drill Bobcat and Kathy with appropriate muds and HQ rods would yield better recovery and improve potential to reach target depths.

Four step-out diamond drill holes at the Tiger Deposit focused on testing oxide material observed at surface to the south-east of the 2016 PEA pit, in an area that was classified as waste. This step-out drilling encountered gold mineralization within oxidized breccia zones and demonstrates the potential for further expansion in this area. More step-out drilling is warranted at Tiger, following a detailed review and update of the geological model.

Additional property scale prospecting, mapping and soil sampling returned anomalous gold and/or base metal mineralization, including low-grade gold within quartz-oxidized sulphide fragments at the Airstrip target.

Continued systematic exploration of the Rau Project is warranted within this exciting district where significant discovery potential still exists.

Respectfully submitted,

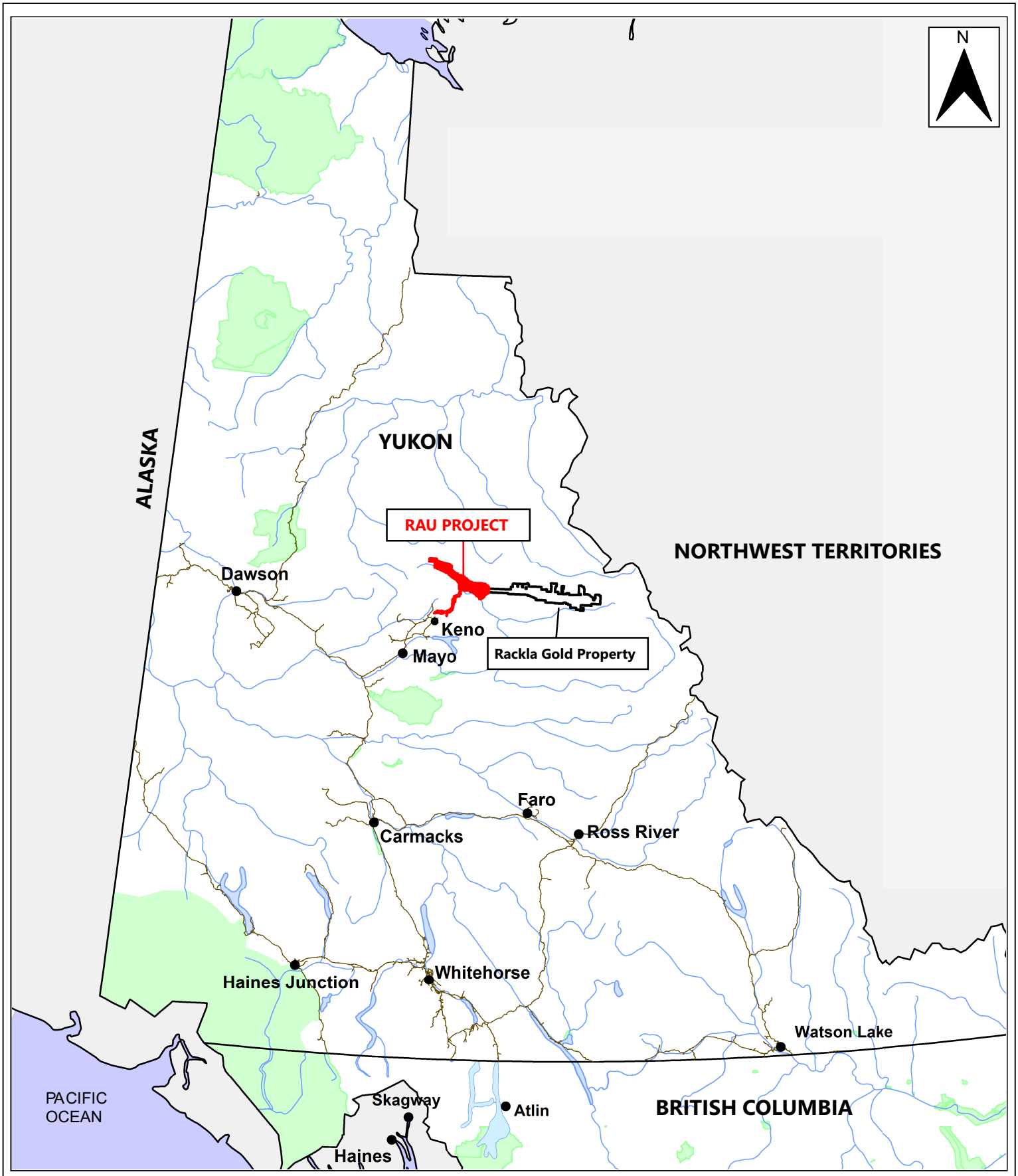
ATAC RESOURCES LIMITED



Austin Schneebeli, B.Sc., G.I.T.



Adam Coulter, M.Sc., P.Geo.



Legend

- Community
- Road
- Park

0 km 50 100 150 200 km

Scale 1:5,000,000

ATAC RESOURCES LTD.

RACKLA GOLD PROPERTY

RAU PROJECT

Project Location

Date	Fig. #	Author	Rev
November 2020	1	AS	1

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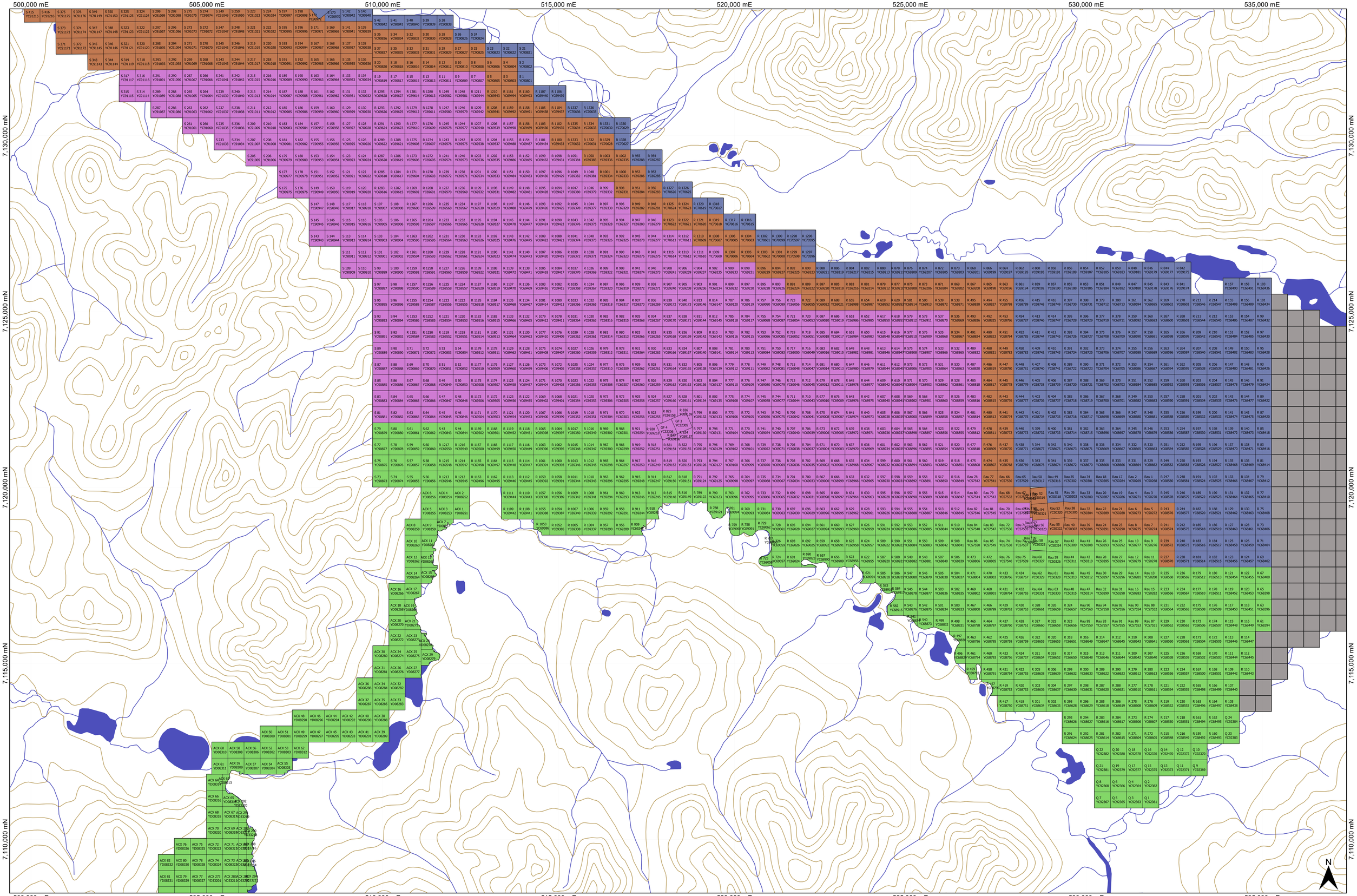
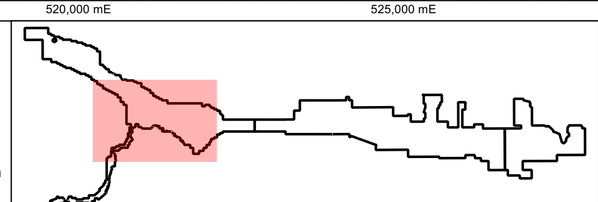


Claim Goupings

- Group I
- Group J
- Group K
- Group L
- Orion Project Claims

0 1 2 3 4 5 km



ATAC RESOURCES LTD.

Rackla Gold Property

Claims by Assessment Group
Rau Project

Coordinate Reference System	Date	Fig. #	Author	Rev
UTM NAD 83 Zone 8N	June 22, 2020	2A	AC	A

Scale: 1:65,000

P:\2020\Rackla Gold\Assessment Report - 2019 Rau Project\Figures - AC\Figure 2 - Claim Groupings\Figure 2 - 2020 Assessment Blocks - Rau.qgz

480,000 mE | 485,000 mE | 490,000 mE | 495,000 mE | 500,000 mE | 505,000 mE | 510,000 mE

7,150,000 mN | 7,145,000 mN | 7,140,000 mN | 7,135,000 mN | 7,130,000 mN

Claim Goupings

- Group J
- Group K
- Group L

0 1 2 3 4 5 km

Rackla Gold Property

Claims by Assessment Group
Rau Project

ATAC RESOURCES LTD.

Coordinate Reference System	Date	Fig. #	Author	Rev
UTM NAD 83 Zone 8N	June 22, 2020	2B	AC	A
Scale 1:65,000	P:\2020\Rackla Gold\Assessment Report - 2019 Rau Project\Figures - AC\Figure 2 - Claim Groupings\Figure 2 - 2020 Assessment Blocks - Rau.qgz			

480,000 mE | 485,000 mE | 490,000 mE | 495,000 mE | 500,000 mE | 505,000 mE | 510,000 mE

7,115,000 mN | 7,110,000 mN | 7,105,000 mN | 7,100,000 mN | 7,095,000 mN

N

Claim Goupings

Group I

0 1 2 3 4 5 km

Rackla Gold Property

Claims by Assessment Group
Rau Project

Coordinate Reference System	Date	Fig. #	Author	Rev
UTM NAD 83 Zone 8N	June 22, 2020	2C	AC	A
Scale 1:65,000	P:\2020\Rackla Gold\Assessment Report - 2019 Rau Project\Figures - AC\Figure 2 - Claim Groupings\Figure 2 - 2020 Assessment Blocks - Rau.qgz			

513,000 mE
522,000 mE
531,000 mE
540,000 mE

7,128,000 mN
7,119,000 mN
7,110,000 mN

Wind River Trail

Rau Camp

Rau Airstrip

N

Legend

- Proposed tote road
- Winter Trail

0 2 4 6 8 10 km

Scale 1:100,000

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Rackla Gold Property

Rau Project - Infrastructure

Coordinate System	Date	Fig. #	Author	Rev
UTM NAD 83 Zone 8N	November 2020	3	AS	1

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480,000 mE 490,000 mE 500,000 mE 510,000 mE 520,000 mE 530,000 mE 540,000 mE 550,000 mE 560,000 mE

7,140,000 mN
7,130,000 mN
7,120,000 mN
7,110,000 mN
7,100,000 mN

CSM
CDB
IPQ
mPH
DG
IPG
uPP
uPR
uPHC
ICI
OSK
TrJ
CT
PCH
DME
mKM

N

Legend

- Property Boundary
- thrust

For Geology Legend - See Figure 5

0 1 2 3 4 5 km

ATAC RESOURCES LTD.

Rackla Gold Property
Rau Trend Geology

Coordinate Reference System	Date	Fig. #	Author	Rev
UTM NAD 83 Zone 8N	November 2020	4	AS	1

Scale 1:140,000

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Upper Cretaceous

LKM — McQueston Suite - Granite with two types of mica

mKM — Tombstone Suite - Granite

Triassic

TrG — Galena Suite - Diorite and Gabbro

Middle to Upper Triassic

TrJ — Jones Lake - Sandstone, shale, and limestone

Lower middle Permian

PJC — Jungle Creek - Sandstone, shale with limestone

Mississippian

CT — Keno Hill Quartzite - Metamorphosed sandstone, shale

Devonian-Mississippian

DME — Earn Group - Shale and chert with lesser conglomerate

Lower middle Devonian

DG — Gossage - Calcareous shale

Silurian-Ordovician

CSM — Marmot - Mafic, vesicular volcanic flows

Upper Ordovician-Silurian

OSK — Kindle - Dolostone and chert

Upper Cambrian-lower devonian

CDB — Bouvette - limestone with minor shale

Upper Cambrian

uCT — Taiga - Limestone, dolostone, minor shale

Lower middle Cambrian

lmCS — Slats Creek - Sandstone with minor shale/silstone

Middle Cambrian

lCG — Gull Lake - Clastic assemblage with volcanics

lCI — Iltyd - Limestone with dolostone

Upper Proterozoic-Cambrian

PCH — Hyland - Turbiditic clastics, limestones, shales

Neoproterozoic

uPHC — Hay Creek - Coarse siliciclastics

uPN — Nadaleen - Carbonates

uPR — Rapitan - Mudstone with interbeds of limestone, sandstone

uPP — Pinguicula - Carbonate assemblage

Mesoproterozic

mPH — Hart River - Mafic volcanic flows

Paleoproterozoic

lPG — Gillespie Lake - Dolostone and silty dolostone

lPQ — Quartet - Shale and siltstone

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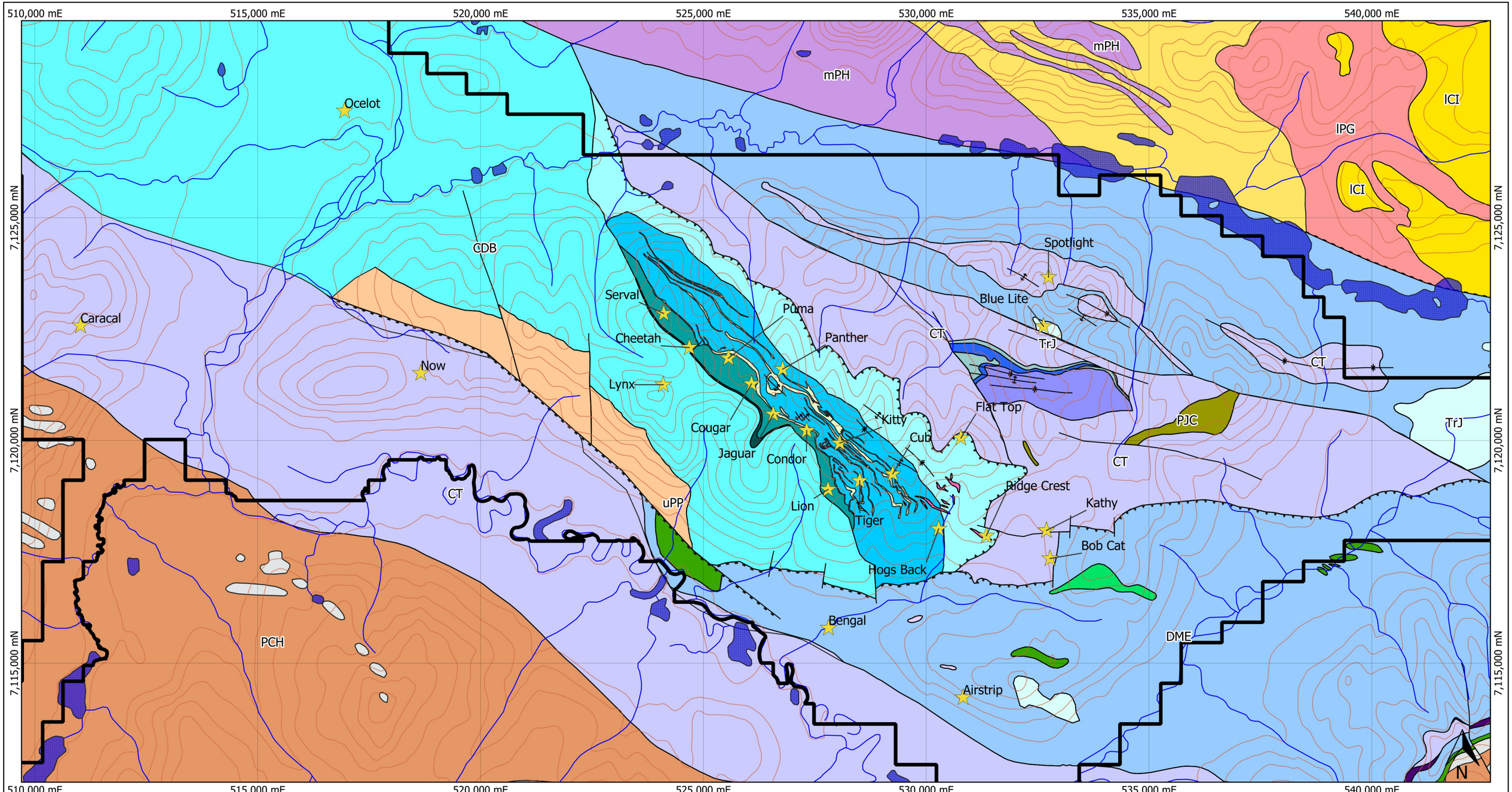
RACKLA GOLD PROPERTY

RAU PROJECT
Geology Legend

Date	Fig. #	Author	Rev
November 2020	5	AC	1

P:\Rau_Assessment_Report_2019



Legend

- Property Boundary
- thrust
- Mineralized Target

For Geology Legend - See Figure 5

0 1 2 3 4 5 km

Scale 1:80,000

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Rackla Gold Property

Rau Detailed Geology

Coordinate System	Date	Fig. #	Author	Rev
UTM NAD 83 Zone 8N	November 2020	6	AS	1

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513,000 mE 522,000 mE 531,000 mE 540,000 mE

7,128,000 mN

7,119,000 mN

7,110,000 mN

Ocelot

Wind River Trail

Caracal

Now

Serval

Cheetah

Panther

Lynx

Condor

Cougar

Jaguar

Kitty

Spotlight

Blue Lite

Flat Top

Hogs Back

Ridge Crest

Cub

Lion

Rau Camp

TIGER DEPOSIT

Kathy

Bob Cat

Bengal

Airstrip

Rau Airstrip

N

Legend

- Winter Trail
- Carbonate Replacement
- Gold Tungsten Skarn
- Manto
- Orogenic
- Reduced Intrusion
- Skarn
- Unknown

0 2 4 6 8 10 km

Scale 1:100,000

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Rackla Gold Property

Rau Project - Showings

Coordinate System	Date	Fig. #	Author	Rev
UTM NAD 83 Zone 8N	November 2020	7	AS	1

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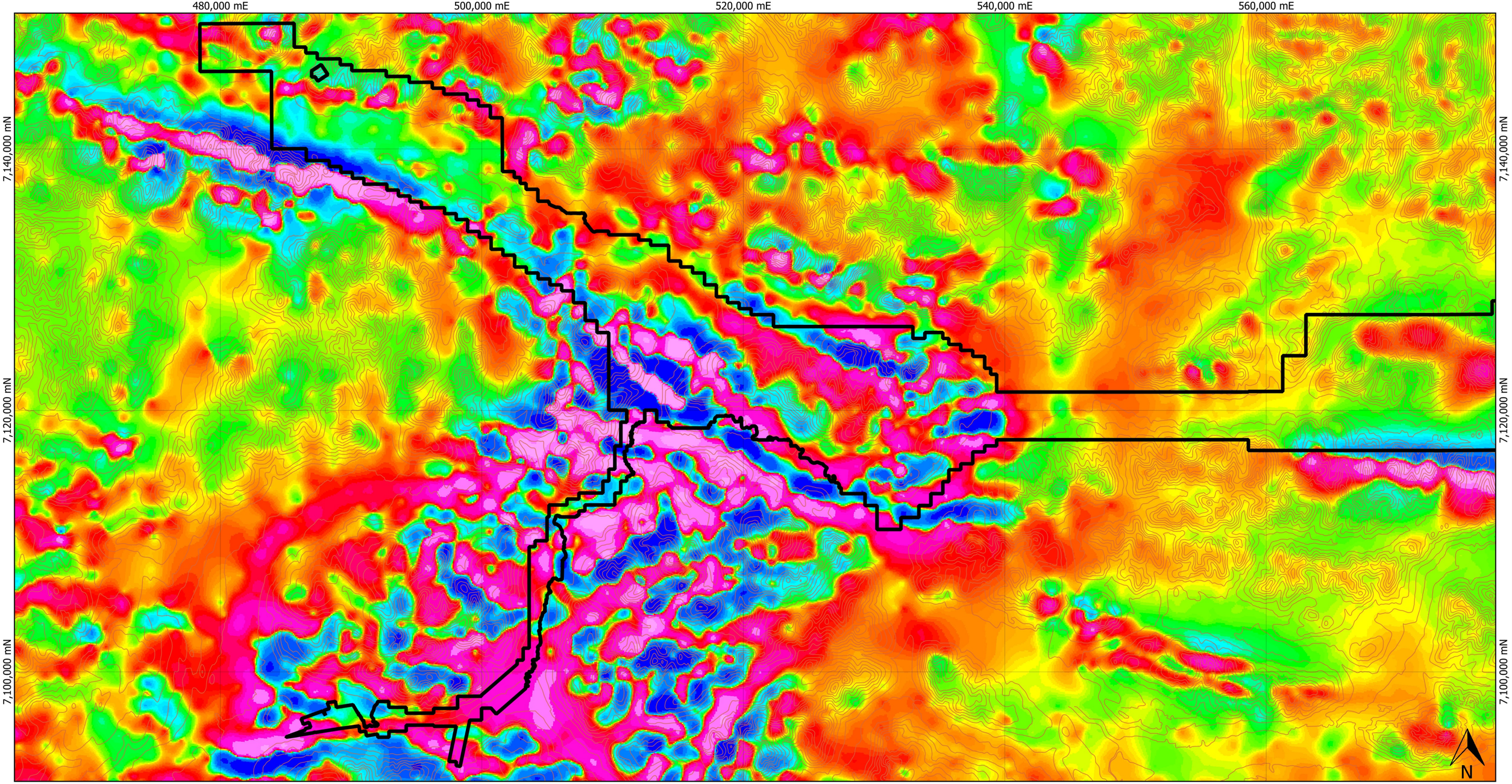
480,000 mE
500,000 mE
520,000 mE
540,000 mE
560,000 mE

7,140,000 mN
7,120,000 mN
7,100,000 mN



Legend

Property Boundary

0 4 8 12 16 20 km

Scale 1:275,000

ATAC RESOURCES LTD.

Rackla Gold Property

Yukon Magnetics - 1st Vertical Derivative

Coordinate System	Date	Fig. #	Author	Rev
UTM NAD 83 Zone 8N	November 2020	8	AS	1

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480,000 mE 500,000 mE 520,000 mE 540,000 mE 560,000 mE

7,140,000 mN

7,120,000 mN

7,100,000 mN

N

Legend

Property Boundary

0 4 8 12 16 20 km

Scale 1:275,000

Rackla Gold Property

Yukon Magnetics - Total Magnetic Intensity

Coordinate System	Date	Fig. #	Author	Rev
UTM NAD 83 Zone 8N	November 2020	9	AS	1

C:\Users\aschn\OneDrive\Desktop\QGIS Workspaces\RacklaGoldProject\Rackla Gold Property.qgz

530,000 mE

535,000 mE

7,120,000 mN

7,120,000 mN

530,000 mE

535,000 mE

N

Legend

- Soil Sample ID

0 1 2 3 4 5 km

ATAC RESOURCES LTD.

Rackla Gold Property

Rau Project - Soil locations

Coordinate Reference System	Date	Fig. #	Author	Rev
UTM NAD 83 Zone 8N	November 2020	10	AS	1

Scale: 1:22,000

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525,000 mE
530,000 mE
535,000 mE
540,000 mE
7,125,000 mN
7,120,000 mN

N

Legend

2019 Soil Outline

Soil Samples (Au - ppb)

- <= 5
- 5 - 10
- 10 - 20
- 20 - 50
- >50

0 1 2 3 4 5 km

Scale 1:45,000

ATAC RESOURCES LTD.

Rackla Gold Property

Rau Project - Gold-In-Soil

Coordinate System	Date	Fig. #	Author	Rev
UTM NAD 83 Zone 8N	November 2020	11	AS	1

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525,000 mE
530,000 mE
535,000 mE
540,000 mE
7,125,000 mN
7,120,000 mN

N

Legend

2019 Soil Outline

Soil Samples (Ag - ppm)

- <= 0.5
- 0.5 - 1
- 1 - 2
- 2 - 3
- >3

0 1 2 3 4 5 km

Scale 1:45,000

ATAC RESOURCES LTD.

Rackla Gold Property

Rau Project - Silver-In-Soil

Coordinate System	Date	Fig. #	Author	Rev
UTM NAD 83 Zone 8N	November 2020	12	AS	1

C:\Users\aschn\OneDrive\Desktop\QGIS Workspaces\RacklaGoldProject\Rackla Gold Property.qgz

525,000 mE
530,000 mE
535,000 mE
540,000 mE
7,125,000 mN
7,120,000 mN

N

Legend

- 2019 Soil Outline

Soil Samples (Cu - ppm)

- <= 30
- 30 - 50
- 50 - 75
- 75 - 100
- >100

0 1 2 3 4 5 km

Scale 1:45,000

ATAC RESOURCES LTD.

Rackla Gold Property

Rau Project - Copper-In-Soil

Coordinate System	Date	Fig. #	Author	Rev
UTM NAD 83 Zone 8N	November 2020	13	AS	1

C:\Users\aschn\OneDrive\Desktop\QGIS Workspaces\RacklaGoldProject\Rackla Gold Property.qgz

525,000 mE
530,000 mE
535,000 mE
540,000 mE
7,125,000 mN
7,120,000 mN

Legend

2019 Soil Outline

Soil Samples (Pb -ppm)

- <= 50
- 50 - 100
- 100 - 200
- 200 - 500
- >500

0 1 2 3 4 5 km

Scale 1:45,000

ATAC RESOURCES LTD.

Rackla Gold Property

Rau Project - Lead-In-Soil

Coordinate System	Date	Fig. #	Author	Rev
UTM NAD 83 Zone 8N	November 2020	14	AS	1

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525,000 mE
530,000 mE
535,000 mE
540,000 mE
7,125,000 mN
7,120,000 mN

N

Legend

2019 Soil Outline

Soil Samples (Zn - ppm)

- <= 100
- 100 - 250
- 250 - 500
- 500 - 1,000
- >1, 000

0 1 2 3 4 5 km

Scale 1:45,000

ATAC RESOURCES LTD.

Rackla Gold Property

Rau Project - Zinc-In-Soil

Coordinate System	Date	Fig. #	Author	Rev
UTM NAD 83 Zone 8N	November 2020	15	AS	1

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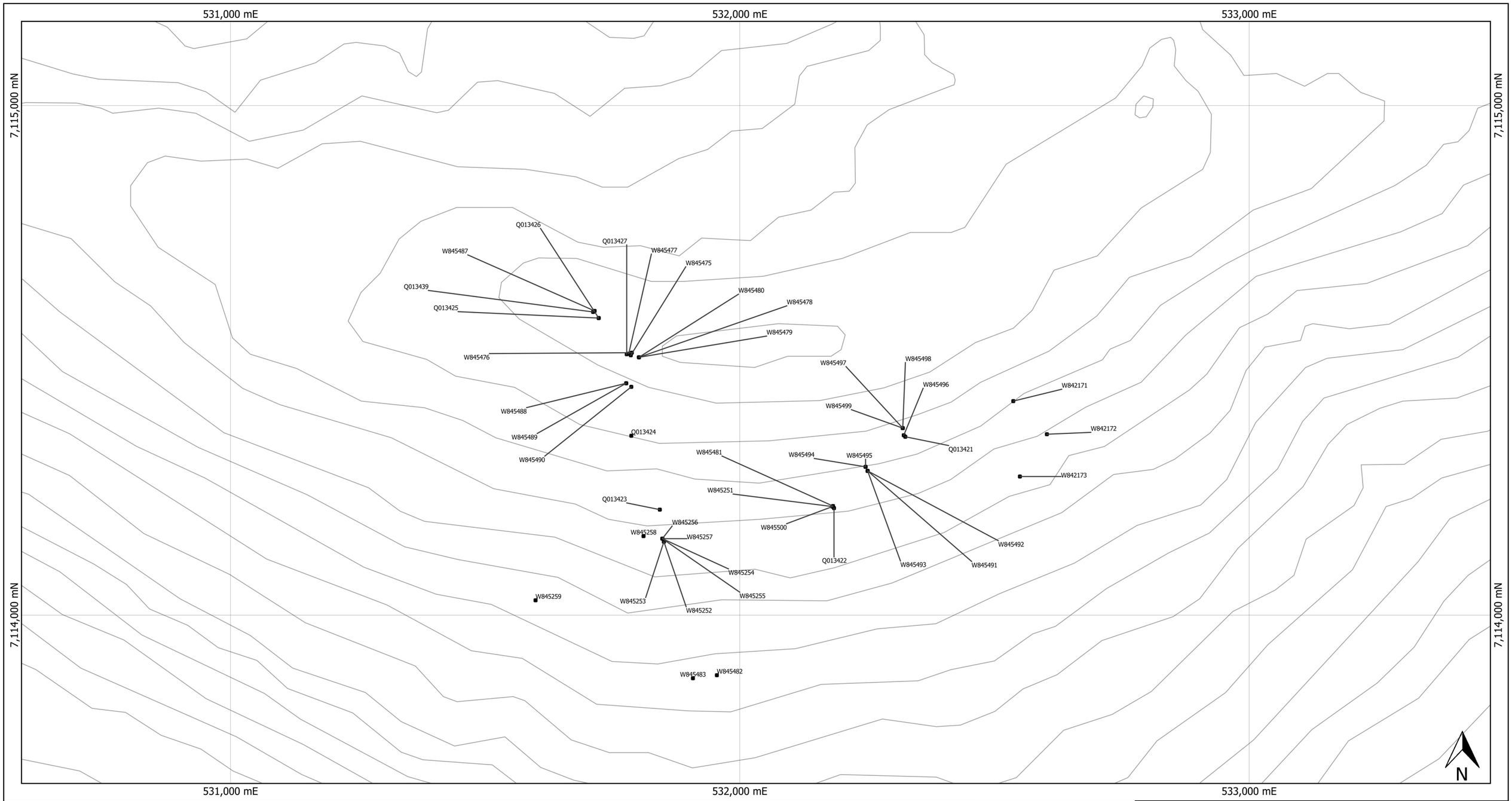

Legend

- Rock Sample ID

0 250 500 750 m

Scale 1:7,000

ATAC RESOURCES LTD.

Rackla Gold Property

Rock Locations - Airstrip

Coordinate System	Date	Fig. #	Author	Rev
UTM NAD 83 Zone 8N	November 2020	16	AS	1

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532,000 mE | 533,000 mE | 534,000 mE | 535,000 mE

7,118,000 mN

7,117,000 mN

K291689

W845455 W845486 W845457 W845485 W845458 W845456 W845484

S036464 S036462 S036463 W845374 W420668 S036474 S036461 S036465 S036459 S036466 S036460 S036468 S036458 S036469 S036456 S036452 S036457 S036453 S036479 S036454 W420654 S036455 S036472 S036451 S036473 S036471

R500834 Q013418 W842200 Q013420 W845454 W845453 W845452 W845450 W845449 W845448 W845379 W845446 W845447 W845375 W845376 W845451 W845378 R500833 Q013419 R500829 R500842 R500840 R500836 R500841 R500832 R500835 R500831 R500837 R500828 R500839 R500838 R500830

W842191 W842192 W842195 W842190 W842189 W842196 W842160 W842193 W842197 W845370 W845369 W842194 W842158 W845368 W842188 W845373 W842159 W842198 W842156 W845371 W842181 W842177 W845372 W842182 W842199 W842174 W842176 W842183 W842157 W842180 W842186 W842179 W842175 W842155 W842184 W842178 W842185 W842187 W420613

W420655 W420657 W420656 W420671 W420670 W420669

W420719 W420718 W420720 W420717 W420721 W420716 W420715 W420722 W420723 W420724

W420725 W420726 W420728 W420727 W420730 W420729

S036480 S036475 S036476 S036478 W845465 W845466 W845460 S036477 W845461 W845464 W845469 W845459 W845470 W845462 W845463 W845468 W845467

W845471 W845472 W845474 W845473

S036483 S036481 S036482

W420732 W420733 W420734 W420739 W420738 W420737 W420736 W420735

R608017 W420744 W420746 W420745 R608016 W420748 W420750 R608015 R608014 W420747 W420749

S036484 W420740 W420741 W420743 W420742

W420648 W420649 W420652 W420651 W420650 W420653 W842154 W842153 W842151 W842152

W420677 W420678 W420681 W420679 W420680 W420672 W420676 W420673 W420675 W420674

N

Legend

- Rock Sample ID

0 200 400 600 m

ATAC RESOURCES LTD.

Rackla Gold Property

Rock Locations - Bobcat & Kathy

Coordinate Reference System	Date	Fig. #	Author	Rev
UTM NAD 83 Zone 8N	November 2020	17	AS	A

Scale 1:6,500

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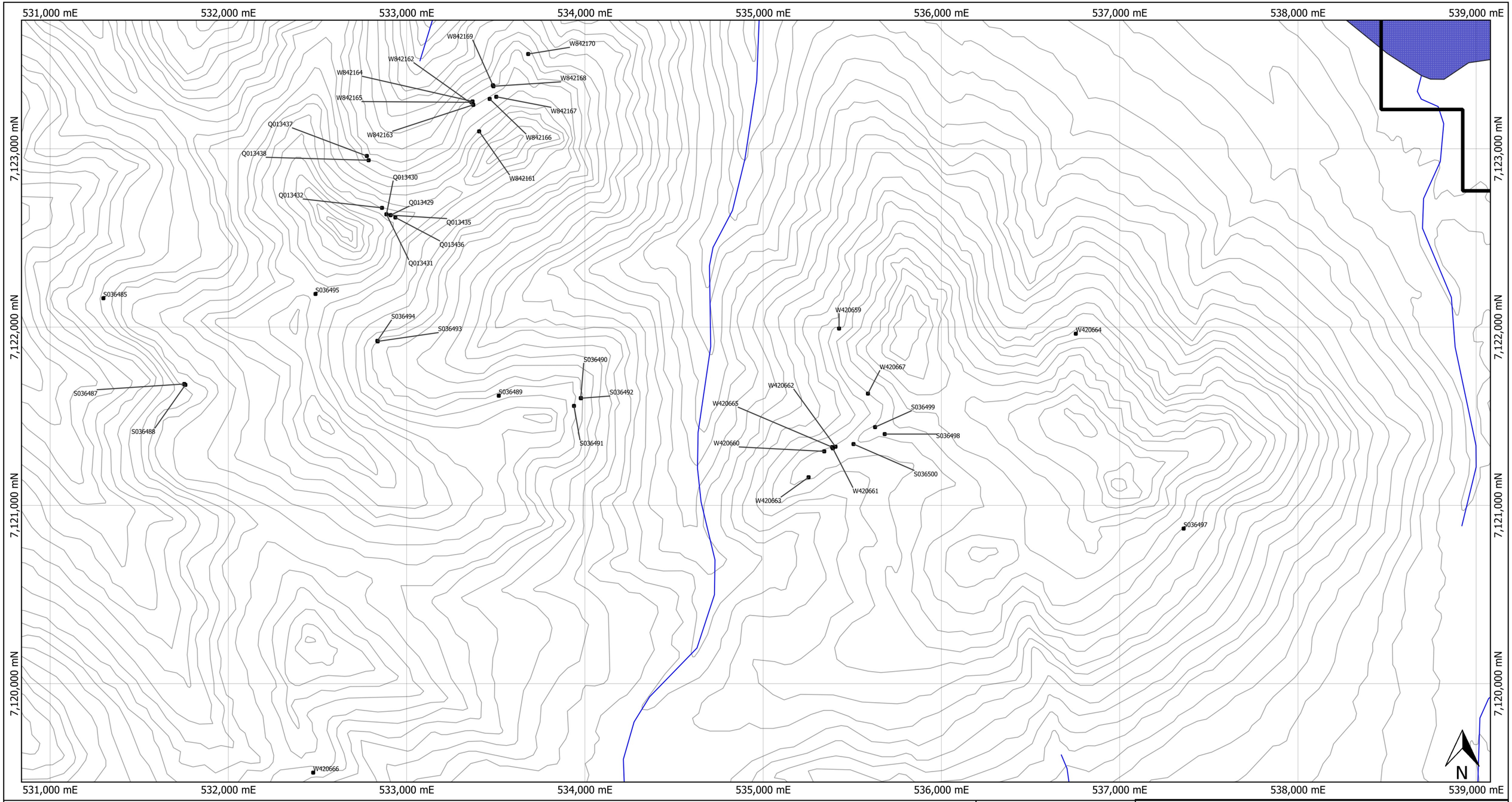


Legend

- Rock Sample ID

0 300 600 900 m

Scale 1:20,000

ATAC RESOURCES LTD.

Rackla Gold Property

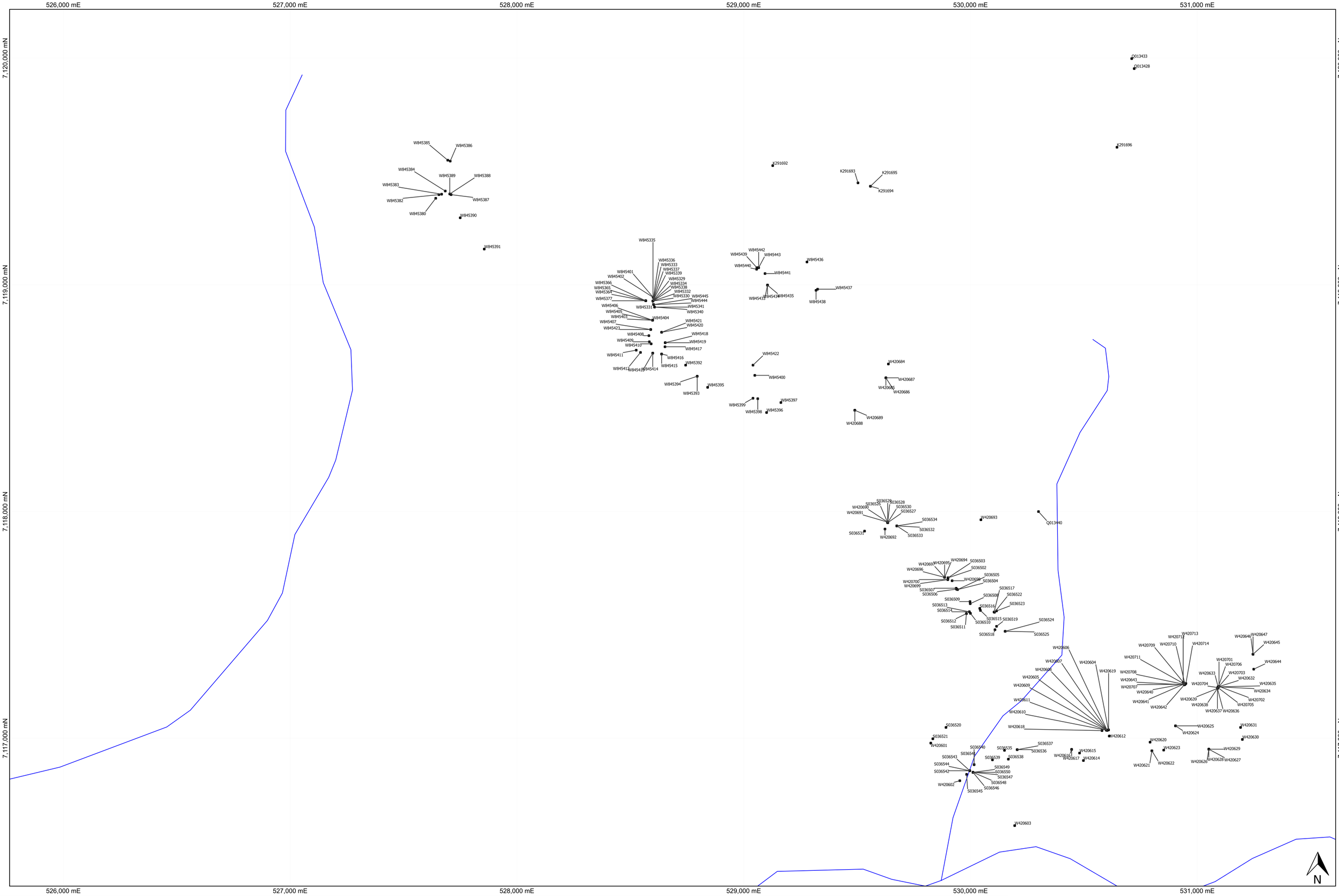
Rock Locations - Spotlight & Blue Lite

Coordinate System	Date	Fig. #	Author	Rev
UTM NAD 83 Zone 8N	November 2020	18	AS	1

C:\Users\aschn\OneDrive\Desktop\QGIS Workspaces\RacklaGoldProject\Rackla Gold Property.qgz

526,000 mE | 527,000 mE | 528,000 mE | 529,000 mE | 530,000 mE | 531,000 mE

7,120,000 mN | 7,119,000 mN | 7,118,000 mN | 7,117,000 mN



Legend

- Rock Sample ID

0 | 200 | 400 | 600 m

ATAC RESOURCES LTD.

Rackla Gold Property

Rock Locations - Tiger

Coordinate Reference System	Date	Fig. #	Author	Rev
UTM NAD 83 Zone 8N	November 2020	19	AS	A

Scale: 1:10,000

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520,000 mE

524,000 mE

528,000 mE

7,124,000 mN

7,120,000 mN

W591752

W420683

W420682

W420658

W845351

W591764

W845363

W845355

W845352

W845356

W845429

W845358

W845357

W845427

W845353

W845354

W845426

W845362

W845360

W845361

W845428

W845425

W845424

W845359

W845432

W845431

W845430

K291699

K291698

K291690

K291697

W591772

K291700

W591751

K291691

N

Legend

- Rock Sample ID

0 500 1,000 1,500 m

Scale 1:30,000

ATAC RESOURCES LTD.

Rackla Gold Property

Rock Locations - Now & Cougar

Coordinate System	Date	Fig. #	Author	Rev
UTM NAD 83 Zone 8N	November 2020	20	AS	1

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531,000 mE

532,000 mE

533,000 mE

7,115,000 mN

7,114,000 mN

0.94

1.63

1.04

Airstrip

N

Legend

2019 Rock Samples (Au - g/t)

- <0.1
- 0.1 - 0.5
- 0.5 - 1.0
- 1.0 - 3.0

0 250 500 750 m

Scale 1:7,000

ATAC RESOURCES LTD.

Rackla Gold Property

Rock Samples Results - Airstrip - Au

Coordinate System	Date	Fig. #	Author	Rev
UTM NAD 83 Zone 8N	November 2020	21	AS	1

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532,000 mE
533,000 mE
534,000 mE
535,000 mE
7,118,000 mN
7,117,000 mN

Kathy

0.61

24.7
15.55
4.19
5.05
3.16
2.96
2.93
1.66
8.99
50.8
41.9
28.6
16.15
13.4
4.47
Bob_Cat
6.49
4.94
3.86
0.75
4.7
1.11
5.39

N

Legend

2019 Rock Samples (Au - g/t)
- <0.1
- 0.1 - 0.5
- 0.5 - 1.0
- 1.0 - 3.0
- >3.0

0 200 400 600 m

ATAC RESOURCES LTD.

Rackla Gold Property
Rock Sample Results - Bobcat & Kathy - Au

Coordinate Reference System	Date	Fig. #	Author	Rev
UTM NAD 83 Zone 8N	November 2020	22	AS	1

Scale: 1:6,500

C:\Users\aschn\OneDrive\Desktop\QGIS Workspaces\RacklaGoldProject\Rackla Gold Property.qgz

532,000 mE
533,000 mE
534,000 mE
535,000 mE
7,118,000 mN
7,117,000 mN
Kathy
Bob Cat
N

Legend

2019 Rock Samples (Ag - g/t)
- <10
- 10 - 50
- 50 - 100
- 100 - 500
- >500

0 200 400 600 m

ATAC RESOURCES LTD.

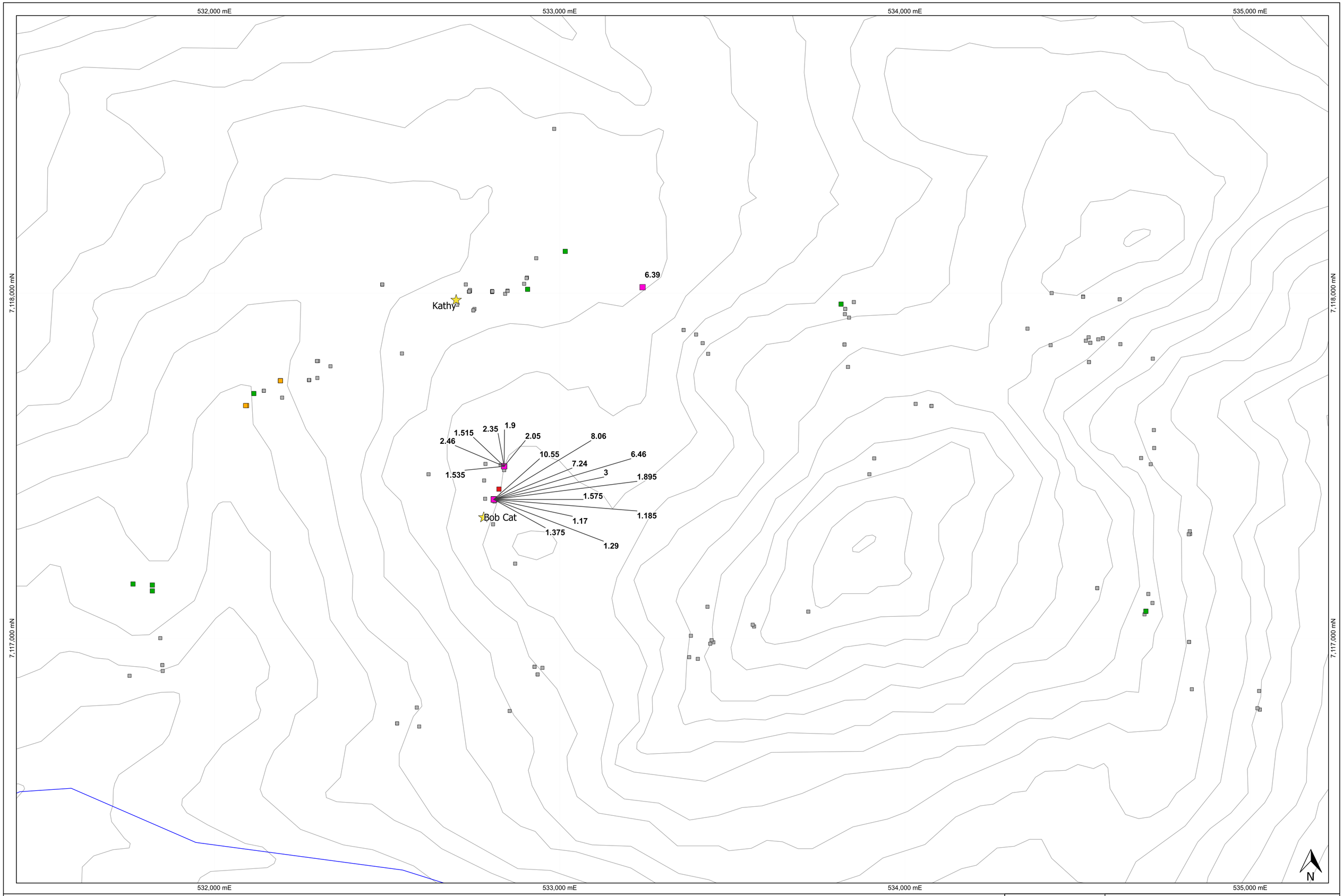
Rackla Gold Property

Rock Sample Results - Bobcat & Kathy - Ag

Coordinate Reference System	Date	Fig. #	Author	Rev
UTM NAD 83 Zone 8N	November 2020	23	AS	1

Scale 1:6,500

C:\Users\aschn\OneDrive\Desktop\QGIS Workspaces\RacklaGoldProject\Rackla Gold Property.qgz



Legend

2019 Rock Samples (Cu - %)

- <0.05
- 0.05 - 0.1
- 0.1 - 0.5
- 0.5 - 1.0
- >1.0

0 200 400 600 m

ATAC RESOURCES LTD.

Rackla Gold Property

Rock Sample Results - Bobcat & Kathy - Cu

Coordinate Reference System	Date	Fig. #	Author	Rev
UTM NAD 83 Zone 8N	November 2020	24	AS	1

Scale 1:6,500

C:\Users\aschn\OneDrive\Desktop\QGIS Workspaces\RacklaGoldProject\Rackla Gold Property.qgz

532,000 mE
533,000 mE
534,000 mE
535,000 mE
7,118,000 mN
7,117,000 mN
Kathy
Bob Cat
4660
3360
3440
N

Legend

2019 Rock Samples (W - ppm)
- <100
- 100 - 200
- 200 - 500
- 500 - 1,000
- >1,000

0 200 400 600 m

ATAC RESOURCES LTD.

Rackla Gold Property
Rock Sample Results - Bobcat & Kathy - W

Coordinate Reference System	Date	Fig. #	Author	Rev
UTM NAD 83 Zone 8N	November 2020	25	AS	1

Scale 1:6,500

C:\Users\aschn\OneDrive\Desktop\QGIS Workspaces\RacklaGoldProject\Rackla Gold Property.qgz

532,000 mE
533,000 mE
534,000 mE
535,000 mE
7,118,000 mN
7,117,000 mN

1.285
1.535
3.02
1.075
Kathy
1.43
1.585
1.31
1.195
4.13
2.47
1.06
Bob Cat

N

Legend

2019 Rock Samples (Zn - %)
- <0.05
- 0.05 - 0.1
- 0.1 - 0.5
- 0.5 - 1.0
- >1.0

0 200 400 600 m

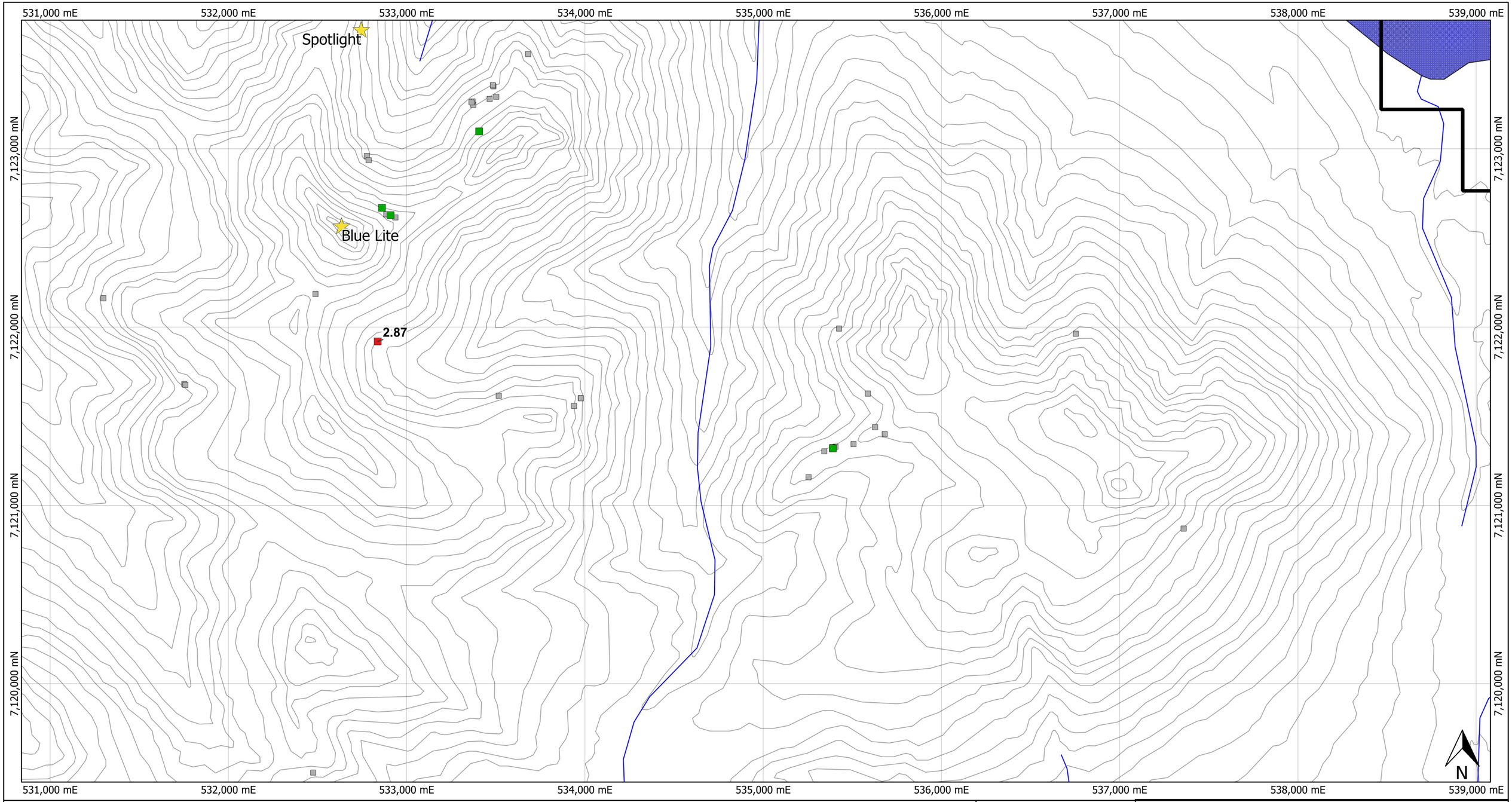
ATAC RESOURCES LTD.

Rackla Gold Property
Rock Sample Results - Bobcat & Kathy - Zn

Coordinate Reference System	Date	Fig. #	Author	Rev
UTM NAD 83 Zone 8N	November 2020	26	AS	1

Scale 1:6,500

C:\Users\aschn\OneDrive\Desktop\QGIS Workspaces\RacklaGoldProject\Rackla Gold Property.qgz



Legend

2019 Rock Samples (Au - g/t)

- <0.1
- 0.1 - 0.5
- 1.0 - 3.0

0 300 600 900 m

Scale 1:20,000

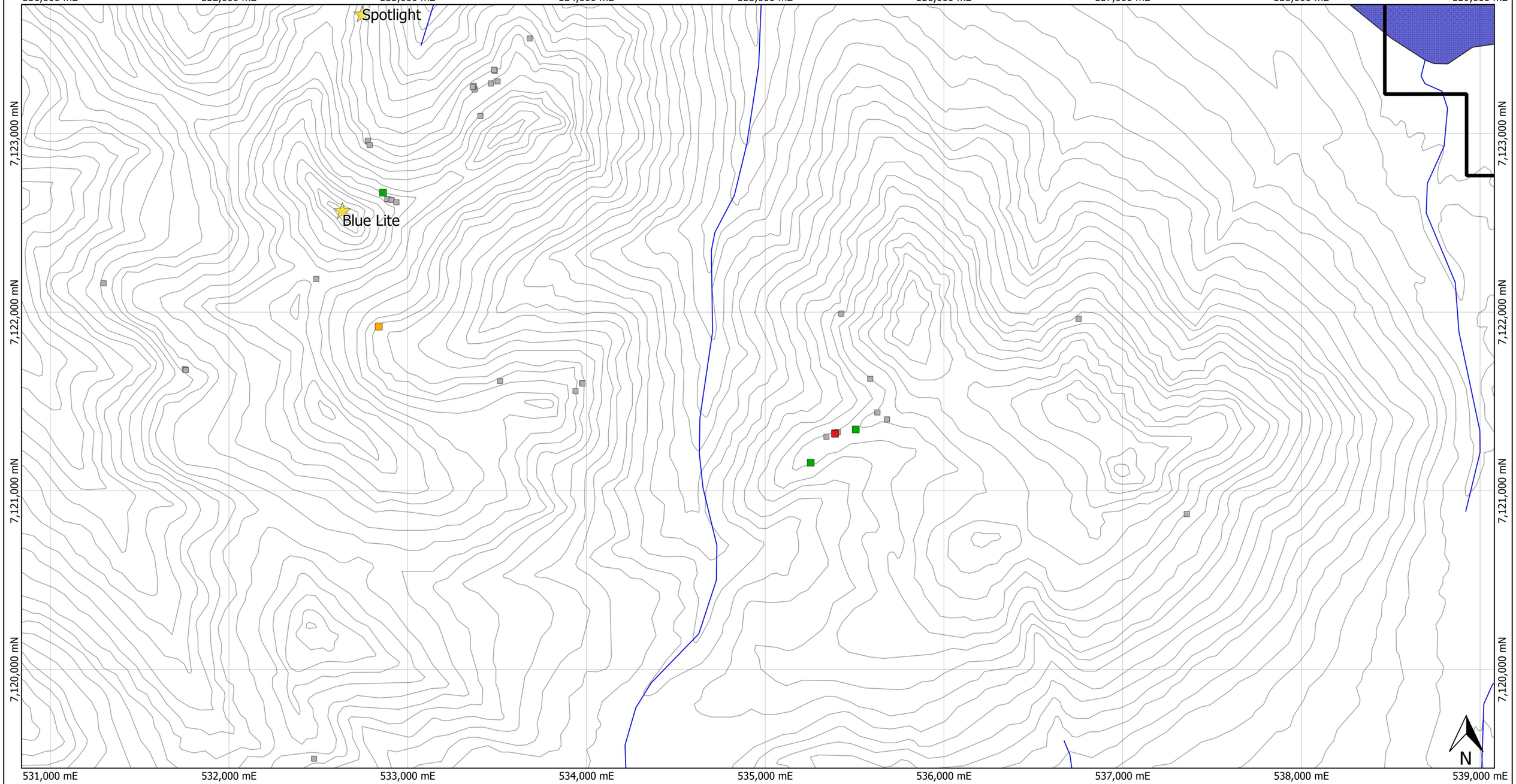
ATAC RESOURCES LTD.

Rackla Gold Property

Rock Sample Results- Spotlight & Blue Lite - Au

Coordinate System	Date	Fig. #	Author	Rev
UTM NAD 83 Zone 8N	November 2020	27	AS	1

C:\Users\aschn\OneDrive\Desktop\QGIS Workspaces\RacklaGoldProject\Rackla Gold Property.qgz



Legend

2019 Rock Samples (Ag - g/t)

- <10
- 10 - 50
- 50 - 100
- 100 - 500

0 300 600 900 m

Scale 1:20,000

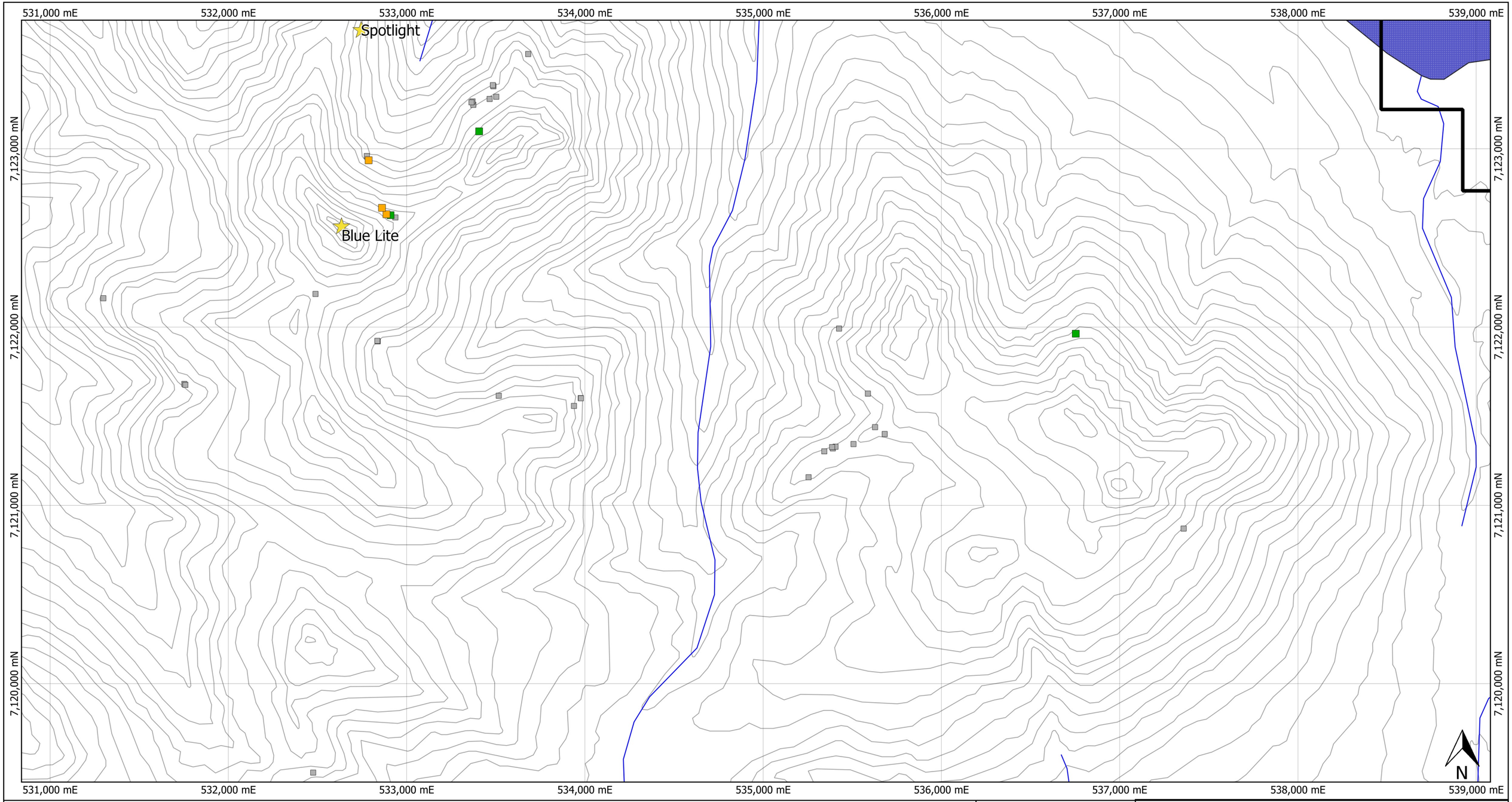
ATAC RESOURCES LTD.

Rackla Gold Property

Rock Sample Results- Spotlight & Blue Lite - Ag

Coordinate System	Date	Fig. #	Author	Rev
UTM NAD 83 Zone 8N	November 2020	28	AS	1

C:\Users\aschn\OneDrive\Desktop\QGIS Workspaces\RacklaGoldProject\Rackla Gold Property.qgz



Legend

2019 Rock Samples (Cu - %)

- <0.05
- 0.05 - 0.1
- 0.1 - 0.5

0 300 600 900 m

Scale 1:20,000

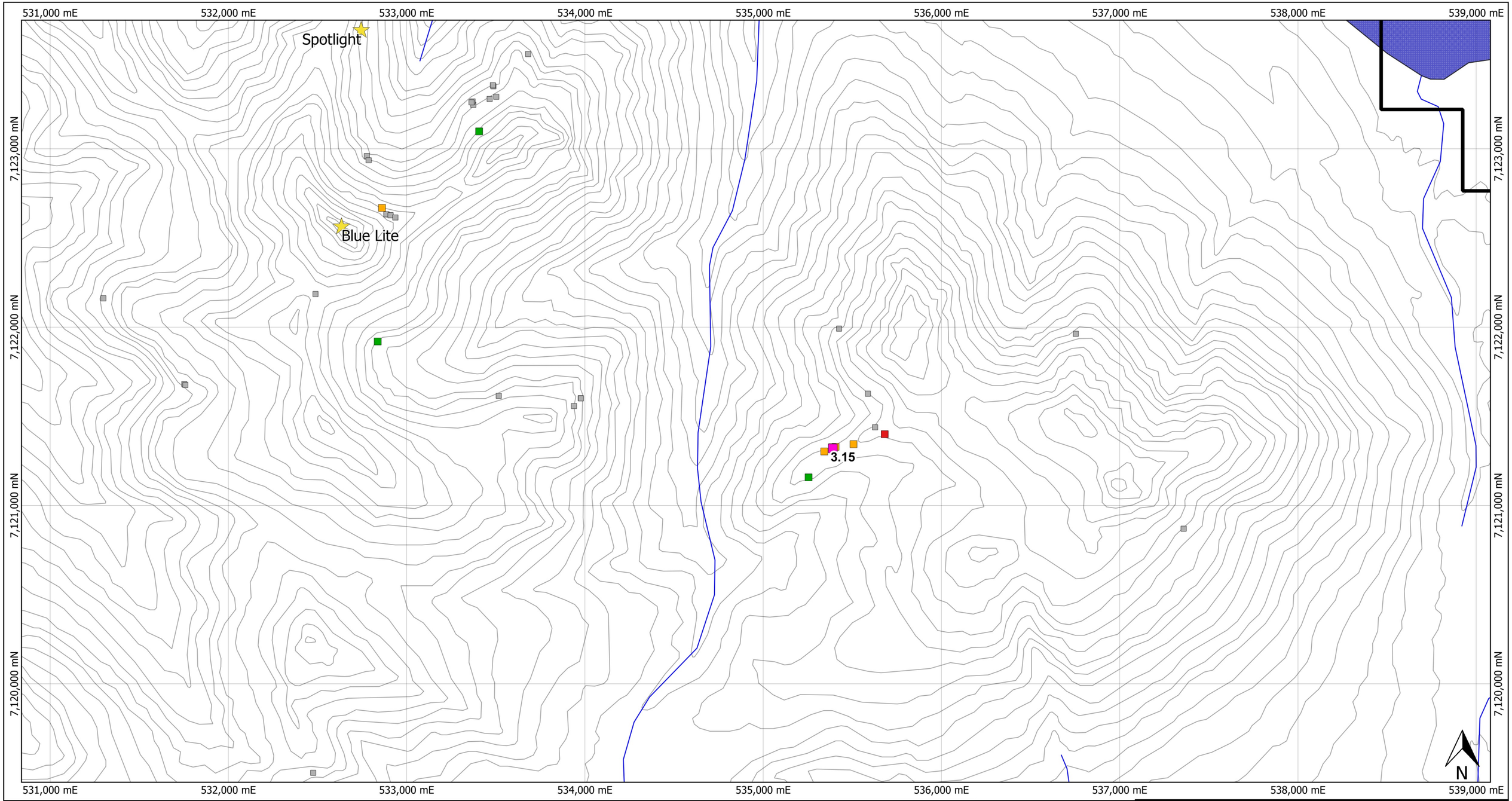
ATAC RESOURCES LTD.

Rackla Gold Property

Rock Sample Results- Spotlight & Blue Lite - Cu

Coordinate System	Date	Fig. #	Author	Rev
UTM NAD 83 Zone 8N	November 2020	29	AS	1

C:\Users\aschn\OneDrive\Desktop\QGIS Workspaces\RacklaGoldProject\Rackla Gold Property.qgz



Legend

2019 Rock Samples (Pb - %)

- <0.005
- 0.05 - 0.1
- 0.1 - 0.5
- 0.5 - 1.0
- >1.0

0 300 600 900 m

Scale 1:20,000

ATAC RESOURCES LTD.

Rackla Gold Property

Rock Sample Results- Spotlight & Blue Lite - Pb

Coordinate System	Date	Fig. #	Author	Rev
UTM NAD 83 Zone 8N	November 2020	30	AS	1

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526,000 mE | 527,000 mE | 528,000 mE | 529,000 mE | 530,000 mE | 531,000 mE

7,120,000 mN | 7,119,000 mN | 7,118,000 mN | 7,117,000 mN

Kitty
Flat Top
Cub
Tiger
Lion
Hogs Back
Ridge Crest

48.3
14.3
1.41
2.66
0.73
2.82
7.17
0.91
1.19
1.91
0.63
0.87

N

Legend

2019 Rock Samples (Au - g/t)

- <0.1
- 0.1 - 0.5
- 0.5 - 1.0
- 1.0 - 3.0
- >3.0

0 200 400 600 m

ATAC RESOURCES LTD.

Rackla Gold Property

Rock Sample Results - Tiger - Au

Coordinate Reference System	Date	Fig. #	Author	Rev
UTM NAD 83 Zone 8N	November 2020	31	AS	1

Scale 1:10,000

C:\Users\aschn\OneDrive\Desktop\QGIS Workspaces\RacklaGoldProject\Rackla Gold Property.qgz

526,000 mE | 527,000 mE | 528,000 mE | 529,000 mE | 530,000 mE | 531,000 mE

7,120,000 mN | 7,119,000 mN | 7,118,000 mN | 7,117,000 mN

Kitty
Flat Top
Cub
Tiger
Lion
Hogs Back
Ridge Crest

N

Legend

2019 Rock Samples (Cu - %)
- <0.05
- 0.05 - 0.1
- 0.1 - 0.5
- 0.5 - 1.0

0 200 400 600 m

ATAC RESOURCES LTD.

Rackla Gold Property
Rock Sample Results - Tiger - Cu

Coordinate Reference System	Date	Fig. #	Author	Rev
UTM NAD 83 Zone 8N	November 2020	32	AS	1

Scale: 1:10,000

C:\Users\aschn\OneDrive\Desktop\QGIS Workspaces\RacklaGoldProject\Rackla Gold Property.qgz

526,000 mE | 527,000 mE | 528,000 mE | 529,000 mE | 530,000 mE | 531,000 mE

7,120,000 mN | 7,119,000 mN | 7,118,000 mN | 7,117,000 mN

Kitty
Flat Top
1820
Cub
1830
Tiger
Lion
Hogs Back
Ridge Crest
1440
5240
3270
N

Legend

2019 Rock Samples (W - ppm)
- <100
- 100 - 200
- 200 - 500
- 500 - 1,000
- >1,000

0 200 400 600 m

ATAC RESOURCES LTD.

Rackla Gold Property
Rock Sample Results - Tiger - W

Coordinate Reference System	Date	Fig. #	Author	Rev
UTM NAD 83 Zone 8N	November 2020	33	AS	1

Scale: 1:10,000

C:\Users\aschn\OneDrive\Desktop\QGIS Workspaces\RacklaGoldProject\Rackla Gold Property.qgz

526,000 mE | 527,000 mE | 528,000 mE | 529,000 mE | 530,000 mE | 531,000 mE

7,120,000 mN | 7,119,000 mN | 7,118,000 mN | 7,117,000 mN

Kitty
Flat Top
Cub
Tiger
Lion
Hogs Back
Ridge Crest

3.06
2.81
1.19
5.04
1.41

N

Legend

2019 Rock Samples (Zn - %)
- <0.05
- 0.05 - 0.1
- 0.1 - 0.5
- 0.5 - 1.0
- >1.0

0 200 400 600 m

ATAC RESOURCES LTD.

Rackla Gold Property
Rock Sample Results - Tiger - Zn

Coordinate Reference System	Date	Fig. #	Author	Rev
UTM NAD 83 Zone 8N	November 2020	34	AS	1

Scale: 1:10,000

C:\Users\aschn\OneDrive\Desktop\QGIS Workspaces\RacklaGoldProject\Rackla Gold Property.qgz

520,000 mE
524,000 mE
528,000 mE
7,124,000 mN
7,120,000 mN
Serval
Cheetah
Puma
Panther
Cougar
Lynx
Jaguar
Condor
Kitty
Now
1.42
N

Legend

2019 Rock Samples (Au - g/t)

- <0.1
- 1.0 - 3.0

0 500 1,000 1,500 m

Scale 1:30,000

ATAC RESOURCES LTD.

Rackla Gold Property

Rock Samples Results - Now & Cougar - Au

Coordinate System	Date	Fig. #	Author	Rev
UTM NAD 83 Zone 8N	November 2020	35	AS	1

C:\Users\aschn\OneDrive\Desktop\QGIS Workspaces\RacklaGoldProject\Rackla Gold Property.qgz

520,000 mE

524,000 mE

528,000 mE

7,124,000 mN

7,120,000 mN

Serval

Cheetah

Puma

Panther

Now

Lynx

Cougar

Jaguar

Condor

Kitty

N

Legend

2019 Rock Samples (Cu - %)

- <0.05
- 0.1 - 0.5
- 0.5 - 1.0

0 500 1,000 1,500 m

Scale 1:30,000

ATAC RESOURCES LTD.

Rackla Gold Property

Rock Samples Results - Now & Cougar - Cu

Coordinate System	Date	Fig. #	Author	Rev
UTM NAD 83 Zone 8N	November 2020	36	AS	1

C:\Users\aschn\OneDrive\Desktop\QGIS Workspaces\RacklaGoldProject\Rackla Gold Property.qgz

520,000 mE

524,000 mE

528,000 mE

7,124,000 mN

7,120,000 mN

Serval

Cheetah

Puma

Panther

Cougar

Lynx

Jaguar

Condor

Kitty

Now

11.85

N

Legend

2019 Rock Samples (Pb - %)

- <0.005
- 0.05 - 0.1
- 0.1 - 0.5
- >1.0

0 500 1,000 1,500 m

Scale 1:30,000

ATAC RESOURCES LTD.

Rackla Gold Property

Rock Samples Results - Now & Cougar - Pb

Coordinate System	Date	Fig. #	Author	Rev
UTM NAD 83 Zone 8N	November 2020	37	AS	1

C:\Users\aschn\OneDrive\Desktop\QGIS Workspaces\RacklaGoldProject\Rackla Gold Property.qgz

520,000 mE

524,000 mE

528,000 mE

7,124,000 mN

7,120,000 mN

Serval

Cheetah

Puma

Panther

Lynx

Cougar

Jaguar

Condor

Kitty

Now

1.235

N

Legend

2019 Rock Samples (Zn - %)

- <0.05
- 0.05 - 0.1
- 0.1 - 0.5
- >1.0

0 500 1,000 1,500 m

Scale 1:30,000

ATAC RESOURCES LTD.

Rackla Gold Property

Rock Samples Results - Now & Cougar - Zn

Coordinate System	Date	Fig. #	Author	Rev
UTM NAD 83 Zone 8N	November 2020	38	AS	1

C:\Users\aschn\OneDrive\Desktop\QGIS Workspaces\RacklaGoldProject\Rackla Gold Property.qgz

532,500 mE | 532,800 mE | 533,100 mE | 533,400 mE

7,117,800 mN

7,117,500 mN

RRB-19-007

RRB-19-005

RRB-19-006

Bob Cat

RRB-19-001

RRB-19-002

RRB-19-003

RRB-19-004

N

Legend

- RAB Collar

Rock Type

- -?-
- DST
- LST
- MBL
- MST
- OVB
- SHL

0 100 200 m

Scale 1:3,000

ATAC RESOURCES LTD.

Rackla Gold Property

Rau Project - RAB Rock Types

Coordinate System	Date	Fig. #	Author	Rev
UTM NAD 83 Zone 8N	November 2020	39	AS	1

C:\Users\aschn\OneDrive\Desktop\QGIS Workspaces\RacklaGoldProject\Rackla Gold Property.qgz

532,500 mE | 532,800 mE | 533,100 mE | 533,400 mE

7,117,800 mN

7,117,500 mN

RRB-19-007

RRB-19-005

RRB-19-006

Bob Cat

RRB-19-001

RRB-19-002

RRB-19-003

RRB-19-004

N

Legend

- RAB Collar

RAB Samples (Au - g/t)

- <0.1
- 0.1-0.5
- 0.5-1.0

0 100 200 m

Scale 1:3,000

ATAC RESOURCES LTD.

Rackla Gold Property

Rau Project - RAB Results - Au

Coordinate System	Date	Fig. #	Author	Rev
UTM NAD 83 Zone 8N	November 2020	40	AS	1

C:\Users\aschn\OneDrive\Desktop\QGIS Workspaces\RacklaGoldProject\Rackla Gold Property.qgz

532,000 mE | 532,500 mE | 533,000 mE | 533,500 mE

7,118,000 mN

7,117,500 mN

RPP-19-008

Kathy

RPP-19-004

RPP-19-007

RPP-19-005

RPP-19-006

RPP-19-002

Bob Cat

RPP-19-003

RPP-19-001

N

Legend

- 2019 Diamond Drill Collar
- Pre-2019 Diamond Drill Collar

Rock Types

- DST
- LST
- MBL
- MST
- OVB
- SHL

0 100 200 300 m

Scale 1:4,500

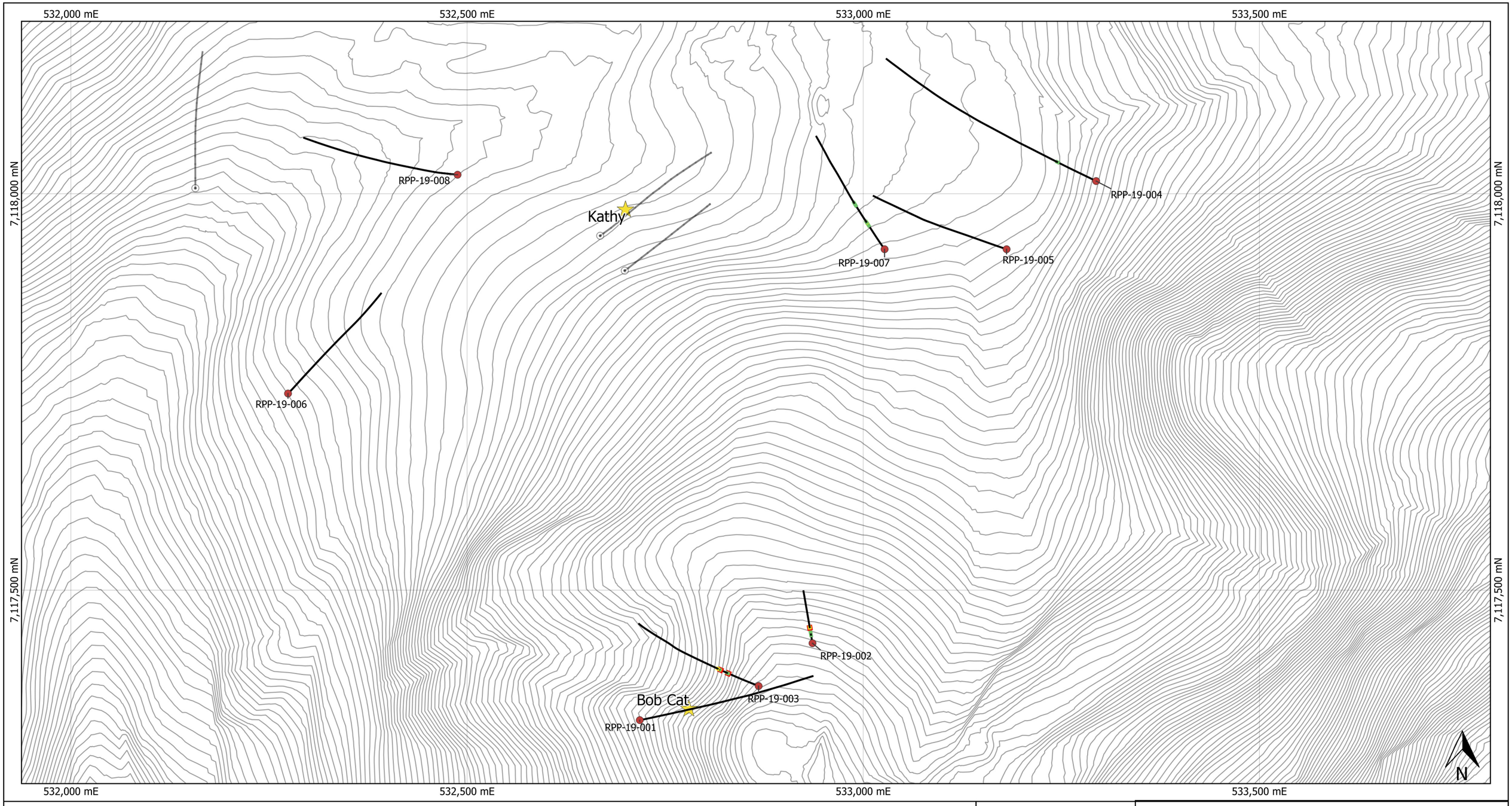
ATAC RESOURCES LTD.

Rackla Gold Property

Bobcat, Kathy - Diamond Drill Rock Types

Coordinate System	Date	Fig. #	Author	Rev
UTM NAD 83 Zone 8N	November 2020	41	AS	1

C:\Users\aschn\OneDrive\Desktop\QGIS Workspaces\RacklaGoldProject\Rackla Gold Property.qgz



Legend

- 2019 Diamond Drill Collar
- Pre-2019 Diamond Drill Collar

Core Samples (Au - g/t)

- <0.1
- 0.1-0.5
- 0.5-1.0
- 1.0-2.0
- >2.0

0 100 200 300 m

Scale 1:4,500

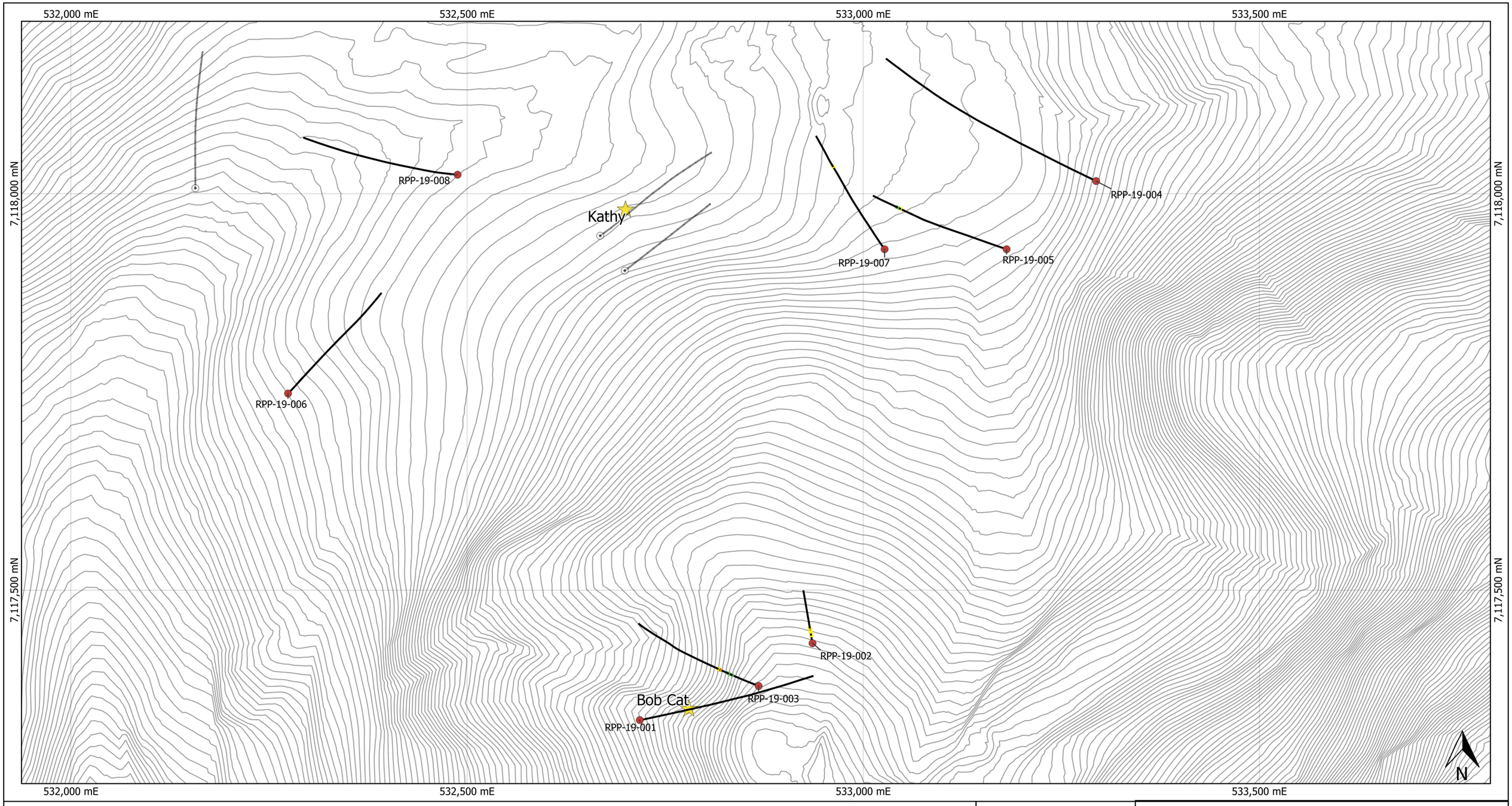
ATAC RESOURCES LTD.

Rackla Gold Property

Bobcat, Kathy - Diamond Drill Results - Au

Coordinate System	Date	Fig. #	Author	Rev
UTM NAD 83 Zone 8N	November 2020	42	AS	1

C:\Users\aschn\OneDrive\Desktop\QGIS Workspaces\RacklaGoldProject\Rackla Gold Property.qgz



Legend

- 2019 Diamond Drill Collar
- Pre-2019 Diamond Drill Collar

Core Sample (Cu - %)

- <0.05
- 0.05 - 0.1
- 0.1 - 0.2
- 0.2 - 1.0

0 100 200 300 m

Scale 1:4,500

ATAC RESOURCES LTD.

Rackla Gold Property

Bobcat, Kathy - Diamond Drill Results - Cu

Coordinate System	Date	Fig. #	Author	Rev
UTM NAD 83 Zone 8N	November 2020	43	AS	1

C:\Users\aschn\OneDrive\Desktop\QGIS Workspaces\RacklaGoldProject\Rackla Gold Property.qgz

528,500 mE | 528,600 mE | 528,700 mE | 528,800 mE

7,119,000 mN

7,118,900 mN

RAU-19-163
RAU-19-164
RAU-19-165
RAU-19-166

N

Legend

- 2019 Diamond Drill Collar
- Pre-2019 Diamond Drill Collar

Rock Types
- LST
- MBL
- OVB

0 20 40 60 m

Scale 1:1,000

ATAC RESOURCES LTD.

Rackla Gold Property

Tiger - Diamond Drill Rock Types

Coordinate System	Date	Fig. #	Author	Rev
UTM NAD 83 Zone 8N	November 2020	44	AS	1

C:\Users\aschn\OneDrive\Desktop\QGIS Workspaces\RacklaGoldProject\Rackla Gold Property.qgz

528,500 mE | 528,600 mE | 528,700 mE | 528,800 mE

7,119,000 mN

7,118,900 mN

RAU-19-163
RAU-19-164
RAU-19-165
RAU-19-166

N

Legend

- 2019 Diamond Drill Collar
- Pre-2019 Diamond Drill Collar

Core Samples (Au - g/t)

- <0.1
- 0.1-0.5
- 0.5-1.0
- 1.0-2.0
- >2.0

0 20 40 60 m

Scale 1:1,000

ATAC RESOURCES LTD.

Rackla Gold Property

Tiger - Diamond Drill Results - Au

Coordinate System	Date	Fig. #	Author	Rev
UTM NAD 83 Zone 8N	November 2020	45	AS	1

C:\Users\aschn\OneDrive\Desktop\QGIS Workspaces\RacklaGoldProject\Rackla Gold Property.qgz

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APPENDIX I

STATEMENT OF QUALIFICATIONS

STATEMENT OF QUALIFICATIONS

I, Austin Schneebeli, geologist, with business address in Vancouver, British Columbia and residential address in Victoria, British Columbia, hereby certify that:

1. I graduated from the University of Victoria in 2020 with a B.Sc. in Earth Sciences.

2. From 2018 to present, I have been actively engaged in mineral exploration in Yukon Territory.

3. I am a Geoscientist-In-Training (G.I.T.) with the Association of Professional Engineers and Geoscientists of British Columbia (Member Number 214745).

4. I have participated in the interpretation of data resulting from the fieldwork reported herein.



Austin Schneebeli, B.Sc., G.I.T.

I, Adam Coulter, geologist, with business 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, Ontario and Nevada.

3. I am a Professional Geoscientist (P.Geo.) with the Association of Professional Engineers and Geoscientists of British Columbia (License Number 49777)

4. I am the Vice-President of Exploration for ATAC Resources Limited.

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



Adam Coulter, M.Sc., P.Geo.

APPENDIX II

STATEMENT OF EXPENDITURES

Statement of Expenditures
Rackla Gold Property
GROUP I - New 2020

Expenses

Superior Diamond Drilling	Invoice 2069	$ 119,310.70
Superior Diamond Drilling	Invoice 2063	$ 6,056.58
Scott Geophysical - 1/3, total divided over three groupings		$ 36,288.12
Horizon Helicopters - $125.84/m, 922.33m drilled in Gorup I		$ 144,658.24
J. L. Wright Geophysics - 1/3, total divided over three groupings		$ 3,453.06
Alkan Air - $ 56.02/ m, 922.33m drilled in Group I		$ 48,016.50
		$ 357,783.20

Total 2019 Expenditures $ 357,783.20

Statement of Expenditures
Rackla Gold Property
Group J - New 2020

Employee	Job Description	Hours	Time Period	Rate/hr	Total
Adam Coulter	Sr. Geologist	168	June 2019-October 2019	$ 85.00	$ 14,280.00
Andrew Carne	Sr. Engineer	198	June 2019-October 2019	$ 96.00	$ 19,008.00
Austin Schneebeli	Field Labour	150	June 2019-October 2019	$ 62.00	$ 9,300.00
Jessie Thomson-Gladish	Field Labour	98	June 2019-October 2019	$ 66.00	$ 6,468.00
Thomas Rozsypalek	Field Labour	72	June 2019-October 2019	$ 49.00	$ 3,528.00
Tyson Brulette	Field Labour	40	June 2019-October 2019	$ 55.00	$ 2,200.00
Hailey Mintz	Cook	160	June 2019-October 2019	$ 85.00	$ 13,600.00
Steve Israel	Sr. Geologist	24	June 2019-October 2019	$ 113.00	$ 2,712.00
Julia Lane	Project Manager	40	June 2019-July 2019	$ 113.00	$ 4,520.00
					$ 75,616.00

Expenses

Room and Board	420 mandays @ $100/day	$ 42,000.00
Horizon Helicopters - $125.84/m, 395.02m drilled in Gorup J		$ 49,709.32
Alkan Air - $ 56.02/ m, 395.02m drilled in Group J		$ 22,129.02
Superior Diamond Drilling		$ 110,945.06
ALS Soil and Rock only		$ 3,066.24
		$ 227,849.64

Total 2019 expenditures $ 303,465.64

February 2020

Statement of Expenditures
Rackla Gold Property
Group K - New 2020

Employee	Job Description	Hours	Time Period	Rate/hr	Total
Adam Coulter	Sr. Geologist	32	June 2019-October 2019	$ 85.00	$ 2,720.00
Andrew Carne	Sr. Engineer	32	June 2019-October 2019	$ 96.00	$ 3,072.00
Austin Schneebeli	Field Labour	16	June 2019-October 2019	$ 62.00	$ 992.00
Jessie Thomson-Gladish	Field Labour	40	June 2019-October 2019	$ 66.00	$ 2,640.00
Thomas Rozsypalek	Field Labour	40	June 2019-October 2019	$ 49.00	$ 1,960.00
Tyson Brulette	Field Labour	24	June 2019-October 2019	$ 55.00	$ 1,320.00
Hailey Mintz	Cook	24	June 2019-October 2019	$ 85.00	$ 2,040.00
Steve Israel	Sr. Geologist	24	June 2019-October 2019	$ 113.00	$ 2,712.00
Julia Lane	Project Manager	24	June 2019-July 2019	$ 113.00	$ 2,712.00
					$ 20,168.00

Expenses

Room and Board, samplers and Scott Geo	90 mandays @ $100/day	$ 9,000.00
Scott Geophysical - 1/3, total divided over three groupings		$ 36,288.12
Horizon Helicopters - $125.84/m, 1041.28 m drilled in Gorup K		$ 131,034.68
Fireweed Helicopters - Jet Fuel Purchase Invoice 5304		$ 3,731.00
J. L. Wright Geophysics - 1/3, total divided over three groupings		$ 3,453.06
Alkan Air - $ 56.02/ m, 1041.28 m drilled in Group K		$ 58,332.51
Superior Diamond Drilling		$ 96,364.20
ALS Soil and Rock only		$ 15,527.36
		$ 353,730.93
	Total 2019 expenditures	$ 373,898.93

February 2020

Statement of Expenditures
Rackla Gold Property
Group L - New 2020

Employee	Job Description	Hours	Time Period	Rate/hr	Total
Adam Coulter	Sr. Geologist	84	June 2019-October 2019	$ 85.00	$ 7,140.00
Andrew Carne	Sr. Engineer	56	June 2019-October 2019	$ 96.00	$ 5,376.00
Austin Schneebeli	Field Labour	64	June 2019-October 2019	$ 62.00	$ 3,968.00
Megan Stone	Field Labour	32	June 2019-October 2019	$ 51.00	$ 1,632.00
Matt Van Loon	Field Labour	24	June 2019-October 2019	$ 80.00	$ 1,920.00
Tyson Brulette	Field Labour	40	June 2019-October 2019	$ 55.00	$ 2,200.00
Doug Van Bibber	Field Labour	16	June 2019-October 2019	$ 69.00	$ 1,104.00
Hailey Mintz	Cook	56	June 2019-October 2019	$ 85.00	$ 4,760.00
Julia Lane	Project Manager	80	June 2019-July 2019	$ 113.00	$ 9,040.00
					$ 37,140.00

Expenses

Room and Board	120 mandays @ $100/day	$ 12,000.00
Scott Geophysical - 1/3, total divided over three groupings		$ 36,288.12
Horizon Helicopters - $125.84/m, 583.39 m drilled in Gorup K		$ 73,413.80
J. L. Wright Geophysics - 1/3, total divided over three groupings		$ 3,453.06
Alkan Air - $ 56.02/ m, 583.39 m drilled in Group K		$ 32,681.51
Carvest Holdings, 64 hrs		$ 9,280.00
Superior Diamond Drilling		$ 73,308.60
Mayo Landing Fuel		$ 18,803.46
ALS Soil and Rock only		$ 2,883.04
		$ 262,111.59

Total 2019 expenditures	$ 299,251.59

APPENDIX III

SOIL SAMPLES - DESCRIPTIONS

APPENDIX IV

SOIL SAMPLES – 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 ST
VANCOUVER BC V6B 1L8

Total # Pages: 8 (A - D)
Plus Appendix Pages
Finalized Date: 29-JUN-2019
Account: RCM

CERTIFICATE WH19146734

Project: RAU

P.O. No.: R19-S01

This report is for 259 Soil samples submitted to our lab in Whitehorse, YT, Canada on 17-JUN-2019.

The following have access to data associated with this certificate:

ANDREW CARNE	ADAM COULTER	JULIA LANE

SAMPLE PREPARATION

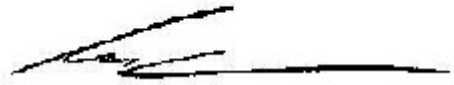
ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-22	Sample login - Rcd w/o BarCode
SCR-41	Screen to -180um and save both

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-ICP21	Au 30g FA ICP-AES Finish	ICP-AES
ME-MS41	Ultra Trace Aqua Regia 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
www.alsglobal.com/geochemistry

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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Project: RAU

Finalized Date: 29-JUN-2019
Account: RCM

CERTIFICATE OF ANALYSIS WH19146734

Sample Description	Method	WEI-21	Au-ICP21	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Recvd Wt.	Au	Ag	Al	As	Au	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr
	Units	kg	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
	LOD	0.02	0.001	0.01	0.01	0.1	0.02	10	10	0.05	0.01	0.01	0.01	0.02	0.1	1
YY10001		0.08	0.001	0.14	2.38	18.0	<0.02	<10	180	0.82	0.25	0.45	0.22	20.9	7.6	38
YY10002		0.10	0.003	0.13	1.88	15.3	<0.02	<10	150	0.62	0.27	0.13	0.32	21.2	6.4	25
YY10003		0.28	<0.001	0.11	1.42	12.5	<0.02	<10	120	0.41	0.26	0.15	0.17	19.30	8.0	27
YY10004		0.07	<0.001	0.05	1.29	13.2	<0.02	<10	100	0.34	0.26	0.08	0.14	22.8	3.8	23
YY10005		0.23	0.004	0.50	2.02	29.0	<0.02	<10	310	1.19	0.23	0.54	1.08	38.2	17.3	34
YY10006		0.12	0.002	0.33	1.32	19.9	<0.02	<10	290	0.62	0.20	0.62	0.84	35.2	9.3	25
YY10007		0.15	0.001	0.55	2.05	23.3	<0.02	<10	280	0.82	0.27	0.19	0.38	34.0	9.4	27
YY10008		0.12	0.002	0.17	1.57	16.0	<0.02	<10	140	0.42	0.25	0.06	0.16	25.3	4.1	24
YY10009		0.22	0.008	0.37	0.11	20.9	<0.02	<10	200	0.05	0.26	<0.01	0.03	17.95	0.2	3
YY10010		0.35	0.004	1.08	1.74	21.3	<0.02	<10	240	0.54	0.25	0.03	0.25	33.9	9.6	27
YY10011		0.13	0.001	0.18	2.46	15.0	<0.02	<10	750	0.47	0.26	1.68	0.30	19.85	25.5	109
YY10012		0.23	0.001	0.16	2.41	9.3	<0.02	<10	550	0.64	2.75	3.69	0.13	20.9	32.7	178
YY10013		0.21	<0.001	0.03	7.26	52.2	<0.02	<10	1100	1.47	0.84	6.58	0.06	10.40	79.6	378
YY10014		0.19	0.001	0.05	5.35	78.9	<0.02	<10	520	0.50	0.94	6.35	0.25	10.85	63.2	342
YY10015		0.24	0.002	1.02	2.32	23.6	<0.02	<10	480	0.50	12.05	3.11	0.18	18.20	62.4	122
YY10016		0.15	<0.001	0.27	1.00	12.4	<0.02	<10	90	0.17	0.27	0.17	0.54	22.3	4.6	22
YY10017		0.06	0.008	0.51	0.67	6.9	<0.02	<10	110	0.42	0.20	1.37	0.49	23.3	9.3	19
YY10018		0.30	0.003	0.33	1.96	8.4	<0.02	<10	270	1.14	0.45	0.10	0.87	57.4	22.3	25
YY10019		0.20	<0.001	0.08	3.66	6.9	<0.02	<10	470	0.59	1.33	0.86	1.11	12.55	34.3	28
YY10020		0.23	0.001	0.47	2.92	1.1	<0.02	<10	500	0.26	1.35	1.68	2.18	9.85	57.8	226
YY10021		0.08	0.004	1.62	0.55	6.9	<0.02	10	370	0.33	0.07	3.62	6.48	28.7	6.8	9
YY10022		0.11	0.007	4.27	0.90	38.0	<0.02	<10	160	0.37	0.21	0.10	1.40	22.5	1.0	16
YY10023		0.20	<0.001	1.48	4.30	13.4	<0.02	<10	130	5.63	0.18	0.19	12.40	133.0	40.1	18
YY10024		0.07	0.010	1.86	2.27	9.2	<0.02	<10	70	0.79	0.14	0.07	4.86	27.9	5.7	18
YY10025		0.26	0.004	1.03	2.25	21.8	<0.02	<10	250	0.89	0.20	0.07	1.38	32.3	11.7	28
YY10026		0.24	0.015	2.18	1.30	104.0	<0.02	<10	460	0.58	0.33	0.04	0.47	58.2	6.4	26
YY10027		0.27	0.007	1.95	2.30	28.5	0.03	<10	220	0.82	0.22	0.09	0.78	33.6	15.3	31
YY10028		0.30	0.004	1.44	1.96	21.3	<0.02	<10	200	0.52	0.28	0.07	0.57	33.7	8.1	31
YY10029		0.27	0.001	1.14	1.06	31.1	<0.02	<10	150	0.22	0.38	0.04	0.21	25.0	3.3	33
YY10030		0.28	0.041	6.98	0.78	43.2	0.02	<10	280	0.19	1.86	0.02	0.11	12.05	1.4	20
YY10031		0.33	0.024	1.96	1.10	71.9	0.02	<10	200	0.26	5.23	0.03	0.11	30.7	3.6	24
YY10032		0.27	0.053	2.49	0.76	48.1	0.03	<10	290	0.25	2.22	0.03	0.12	21.6	2.6	18
YY10033		0.30	0.038	2.31	0.46	55.2	0.03	<10	830	0.21	2.43	0.07	0.25	32.3	2.2	13
YY10034		0.25	0.149	3.98	1.10	91.5	0.10	<10	780	0.39	7.66	0.23	0.31	25.6	5.1	20
YY10035		0.29	0.006	0.74	1.47	52.6	<0.02	<10	400	0.69	0.85	0.12	1.27	32.1	12.2	23
YY10036		0.34	0.009	1.40	1.47	51.6	<0.02	<10	290	0.69	1.04	0.39	0.58	36.4	9.6	26
YY10037		0.28	0.053	3.13	1.06	105.5	0.03	<10	390	0.45	8.00	0.37	1.08	30.9	5.8	30
YY10038		0.44	0.005	1.48	0.83	29.1	<0.02	<10	700	0.34	0.23	0.23	0.70	32.6	4.2	18
YY10039		0.32	0.001	0.84	0.80	20.1	<0.02	<10	270	0.25	0.20	0.03	0.45	26.8	3.2	15
YY10040		0.33	0.005	1.80	1.86	28.0	<0.02	<10	250	0.64	0.23	0.17	0.31	31.3	8.3	30

***** 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
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: 29-JUN-2019
Account: RCM

Project: RAU

CERTIFICATE OF ANALYSIS WH19146734

Sample Description	Method	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Cs	Cu	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na
	Units	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%
	LOD	0.05	0.2	0.01	0.05	0.05	0.02	0.01	0.005	0.01	0.2	0.1	0.01	5	0.05	0.01
YY10001		2.57	21.3	2.92	7.95	<0.05	0.02	0.05	0.028	0.08	9.9	33.4	0.72	424	6.80	0.01
YY10002		2.37	14.8	2.47	6.14	<0.05	0.02	0.06	0.029	0.07	10.2	26.9	0.41	255	4.97	<0.01
YY10003		3.79	9.5	2.44	5.70	<0.05	<0.02	0.01	0.024	0.05	10.0	18.0	0.36	675	4.34	<0.01
YY10004		2.76	10.1	2.47	5.31	<0.05	<0.02	0.03	0.020	0.06	11.7	19.4	0.35	170	3.18	<0.01
YY10005		2.04	31.9	4.01	4.68	0.09	0.08	0.09	0.040	0.08	27.6	28.7	0.71	997	2.84	0.01
YY10006		1.03	34.8	3.14	3.59	0.06	0.04	0.06	0.028	0.08	19.5	17.8	0.52	392	2.68	0.01
YY10007		1.89	20.4	3.48	5.22	0.05	0.04	0.04	0.041	0.08	14.4	27.5	0.38	339	3.74	<0.01
YY10008		1.41	13.0	2.55	5.37	0.05	<0.02	0.04	0.030	0.05	13.1	16.2	0.27	148	2.95	<0.01
YY10009		0.48	5.3	1.66	0.99	<0.05	0.46	0.18	0.023	0.28	13.2	0.7	<0.01	13	12.65	0.02
YY10010		1.14	22.2	3.13	4.20	<0.05	0.07	0.11	0.042	0.08	17.1	17.8	0.34	313	6.16	<0.01
YY10011		3.69	71.3	4.36	9.84	0.06	0.03	0.04	0.048	0.06	11.1	36.1	2.04	757	1.17	<0.01
YY10012		3.55	57.5	4.72	9.44	0.05	0.02	0.02	0.056	0.06	10.6	39.2	1.89	610	1.14	0.01
YY10013		4.36	69.1	5.21	19.15	0.07	<0.02	0.01	0.090	0.10	3.9	56.4	2.98	543	0.25	0.40
YY10014		4.22	92.7	7.22	14.60	0.25	<0.02	0.02	0.080	0.23	4.6	46.1	3.48	1660	0.24	0.13
YY10015		2.09	84.8	7.68	6.43	0.06	0.03	0.04	0.048	0.07	9.5	22.7	1.57	1370	1.68	0.06
YY10016		0.96	15.1	2.39	5.36	<0.05	<0.02	0.04	0.031	0.04	12.7	10.5	0.19	116	3.88	<0.01
YY10017		1.35	18.5	2.13	2.11	0.06	0.02	0.07	0.011	0.14	11.3	5.1	0.22	534	2.65	0.01
YY10018		2.01	35.7	5.43	3.47	0.07	0.03	0.03	0.035	0.18	30.9	20.2	0.42	431	6.17	0.01
YY10019		16.65	66.5	6.13	16.25	0.21	<0.02	0.01	0.072	0.31	5.6	40.7	3.48	619	2.08	<0.01
YY10020		18.05	95.1	7.16	14.15	0.20	<0.02	0.01	0.057	0.84	4.3	37.8	2.50	1060	2.01	0.02
YY10021		1.40	62.3	1.05	1.47	0.13	0.03	0.20	0.015	0.02	21.2	3.8	0.10	341	20.7	<0.01
YY10022		3.88	150.0	2.64	2.26	0.10	0.03	0.16	0.031	0.12	13.8	4.9	0.22	48	7.36	<0.01
YY10023		15.15	759	3.04	4.20	0.35	0.09	0.15	0.046	0.13	71.6	29.4	0.38	751	3.12	<0.01
YY10024		8.11	401	1.98	2.81	0.08	<0.02	0.18	0.057	0.05	14.3	11.9	0.27	109	7.11	<0.01
YY10025		1.86	79.3	3.28	4.47	0.06	0.09	0.14	0.046	0.05	17.2	22.3	0.38	167	4.82	<0.01
YY10026		1.91	31.0	4.48	5.27	0.10	0.08	0.30	0.069	0.27	40.5	11.5	0.25	163	31.0	0.01
YY10027		3.66	151.5	3.53	4.66	0.08	0.06	0.26	0.098	0.07	18.8	21.9	0.35	268	15.35	<0.01
YY10028		1.62	15.6	2.91	6.46	0.06	0.02	0.10	0.039	0.07	18.8	14.5	0.41	238	8.82	<0.01
YY10029		1.19	14.3	3.12	8.37	0.06	<0.02	0.16	0.031	0.05	16.8	7.4	0.13	165	31.9	<0.01
YY10030		0.49	12.9	2.06	2.52	0.14	0.02	0.46	0.024	0.15	10.2	4.2	0.04	77	31.2	<0.01
YY10031		1.10	12.8	3.44	5.40	0.07	0.02	0.07	0.042	0.09	19.1	11.6	0.20	178	25.4	<0.01
YY10032		0.73	15.4	2.01	3.32	0.05	0.02	0.23	0.025	0.07	13.6	7.1	0.12	135	12.70	<0.01
YY10033		0.58	10.8	1.51	2.74	0.07	<0.02	0.13	0.020	0.09	20.7	3.4	0.07	118	34.7	<0.01
YY10034		0.72	22.1	2.77	3.94	0.06	<0.02	0.19	0.046	0.11	16.6	12.4	0.30	208	9.27	<0.01
YY10035		1.35	19.6	3.18	4.62	0.05	0.03	0.07	0.045	0.11	17.5	18.3	0.35	565	3.69	<0.01
YY10036		1.16	26.1	3.21	4.51	0.09	0.04	0.12	0.060	0.09	21.0	16.6	0.52	536	3.01	<0.01
YY10037		1.57	25.7	3.04	4.28	0.11	<0.02	0.10	0.077	0.10	18.5	11.6	0.25	260	5.10	<0.01
YY10038		0.70	24.6	2.11	2.48	0.06	<0.02	0.13	0.029	0.10	21.0	8.8	0.25	182	7.37	<0.01
YY10039		0.82	12.4	2.08	3.33	<0.05	<0.02	0.03	0.023	0.10	16.5	9.5	0.20	136	7.13	<0.01
YY10040		1.18	22.8	3.47	4.96	0.05	0.03	0.09	0.048	0.10	16.4	19.6	0.44	301	4.30	<0.01

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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

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VANCOUVER BC V6B 1L8

Finalized Date: 29-JUN-2019
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Project: RAU

CERTIFICATE OF ANALYSIS WH19146734

Sample Description	Method	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Nb	Ni	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th
	Units	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.05	0.2	10	0.2	0.1	0.001	0.01	0.05	0.1	0.2	0.2	0.2	0.01	0.01	0.2
YY10001		0.56	35.1	990	16.7	15.7	0.001	0.07	0.67	2.6	0.9	1.1	22.4	<0.01	0.04	0.8
YY10002		0.27	24.4	1160	20.7	16.8	<0.001	0.07	0.61	0.7	1.2	0.5	17.2	<0.01	0.04	0.3
YY10003		0.16	17.3	1210	14.1	21.3	<0.001	0.05	0.53	0.4	0.7	0.6	11.8	<0.01	0.03	<0.2
YY10004		0.20	15.3	980	17.3	17.6	<0.001	0.05	0.53	0.5	0.5	0.5	14.2	<0.01	0.03	0.2
YY10005		0.44	55.8	1630	32.6	14.7	<0.001	0.03	1.60	6.7	0.8	0.5	23.9	<0.01	0.05	5.0
YY10006		0.56	47.2	950	20.0	8.0	<0.001	0.03	1.45	3.2	0.7	0.4	36.7	<0.01	0.03	3.7
YY10007		0.39	34.4	1040	26.8	14.3	<0.001	0.05	1.34	2.1	1.2	0.5	18.0	<0.01	0.06	1.7
YY10008		0.82	17.0	450	17.0	9.3	<0.001	0.03	1.00	1.5	1.4	0.7	10.8	<0.01	0.04	1.0
YY10009		0.74	1.3	130	17.5	14.4	0.003	0.64	3.01	0.6	4.2	0.4	18.1	<0.01	0.11	3.3
YY10010		0.73	26.6	450	34.1	11.9	<0.001	0.04	2.27	3.0	2.3	0.5	16.3	<0.01	0.05	4.8
YY10011		4.64	86.6	550	15.3	15.1	0.001	0.05	0.82	3.9	0.9	0.7	49.5	0.01	0.02	1.0
YY10012		0.68	132.0	1090	11.4	17.3	<0.001	0.01	0.65	14.0	0.7	0.9	68.6	<0.01	0.04	2.2
YY10013		1.45	462	830	1.8	6.2	<0.001	0.03	0.10	29.0	0.4	1.7	101.5	<0.01	0.01	0.9
YY10014		2.60	259	1110	2.8	21.6	<0.001	0.08	0.19	22.6	0.5	2.1	97.6	<0.01	0.01	0.6
YY10015		0.67	275	1290	19.2	7.8	<0.001	0.03	0.72	7.9	1.7	1.4	47.9	<0.01	0.20	1.8
YY10016		0.61	41.7	1160	23.4	6.4	0.001	0.02	0.78	0.8	0.8	0.6	10.3	<0.01	0.07	0.2
YY10017		0.74	34.5	1050	4.7	11.9	0.001	0.15	1.40	1.0	2.3	0.3	64.7	<0.01	0.05	1.3
YY10018		1.24	64.0	1110	10.0	18.0	<0.001	0.24	1.34	2.3	1.6	0.3	61.4	0.01	0.05	7.1
YY10019		2.68	68.8	750	2.5	28.9	0.002	0.03	0.43	17.3	1.5	2.9	45.8	<0.01	0.01	0.6
YY10020		0.38	255	1540	2.3	51.8	<0.001	0.04	0.73	14.0	0.8	2.6	49.3	<0.01	0.04	1.4
YY10021		0.29	102.0	1170	4.4	2.7	0.029	0.26	7.18	0.5	22.5	<0.2	206	<0.01	0.02	0.2
YY10022		3.33	24.5	1030	16.4	16.4	0.006	0.21	8.42	1.0	10.6	0.9	73.4	0.01	0.15	0.6
YY10023		0.38	181.0	1180	27.5	20.3	0.004	0.08	1.88	4.3	4.0	0.3	15.6	0.01	0.03	2.5
YY10024		0.74	56.6	1110	9.9	9.6	0.022	0.11	1.81	0.6	6.1	0.4	10.2	<0.01	0.04	0.2
YY10025		1.01	107.5	340	23.3	14.5	0.002	0.02	2.21	3.9	2.8	0.6	14.6	<0.01	0.06	5.3
YY10026		1.92	31.7	1230	93.4	20.9	0.001	0.54	18.70	2.7	9.4	1.3	171.0	0.01	0.30	7.2
YY10027		1.09	115.0	830	25.8	11.9	0.001	0.04	5.47	4.5	5.4	0.9	26.4	0.01	0.08	5.0
YY10028		1.44	20.7	450	19.8	18.3	0.001	0.02	2.84	3.6	2.2	0.9	20.3	<0.01	0.06	4.2
YY10029		1.00	16.4	650	17.7	9.5	<0.001	0.04	7.26	1.3	10.5	1.3	18.5	<0.01	0.20	0.5
YY10030		0.50	9.9	430	81.1	9.5	0.001	0.29	15.10	1.0	48.4	7.5	10.6	<0.01	0.30	1.3
YY10031		0.89	13.0	550	126.5	9.9	0.001	0.08	9.87	1.6	7.9	5.9	18.0	<0.01	0.20	3.1
YY10032		0.53	10.9	370	145.5	6.8	0.001	0.08	10.60	1.2	8.4	3.0	9.5	<0.01	0.15	1.7
YY10033		0.24	8.0	330	171.5	7.0	<0.001	0.10	17.35	0.8	6.9	7.1	10.5	<0.01	0.17	0.4
YY10034		0.51	20.6	570	223	9.1	0.001	0.10	10.60	2.6	6.2	10.6	18.4	<0.01	0.14	1.7
YY10035		0.43	22.1	1200	34.4	18.0	<0.001	0.03	2.91	2.5	3.5	1.1	14.2	<0.01	0.08	1.7
YY10036		0.54	31.2	1430	39.9	10.4	<0.001	0.02	2.88	4.3	3.1	1.0	20.4	<0.01	0.08	3.5
YY10037		0.49	26.7	3690	43.3	13.9	<0.001	0.07	6.04	2.2	15.9	2.2	34.9	<0.01	0.19	1.9
YY10038		0.17	24.9	680	24.7	6.7	<0.001	0.06	3.38	1.4	3.5	0.4	31.5	<0.01	0.10	1.0
YY10039		0.28	15.3	840	22.8	10.6	<0.001	0.05	2.18	1.0	2.1	0.4	20.4	<0.01	0.05	0.8
YY10040		0.87	31.1	1990	26.7	15.3	<0.001	0.02	2.87	2.8	2.7	0.6	16.6	<0.01	0.08	4.0

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North Vancouver BC V7H 0A7
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Sample Description	Method	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Ti	Tl	U	V	W	Y	Zn	Zr
	Units	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.005	0.02	0.05	1	0.05	0.05	2	0.5
YY10001		0.044	0.38	1.41	59	0.15	5.18	80	0.5
YY10002		0.014	0.30	1.35	36	0.11	4.08	59	<0.5
YY10003		0.009	0.34	0.84	48	0.16	2.44	73	<0.5
YY10004		0.009	0.25	0.64	39	0.12	2.18	57	<0.5
YY10005		0.022	0.38	1.82	42	0.15	27.0	145	3.0
YY10006		0.026	0.20	1.06	37	0.16	11.85	153	1.6
YY10007		0.011	0.32	1.26	45	0.13	6.62	116	1.3
YY10008		0.022	0.18	0.66	48	0.25	2.85	59	<0.5
YY10009		0.083	2.10	0.77	17	0.09	2.16	3	23.6
YY10010		0.021	0.29	1.23	49	0.25	3.50	92	3.6
YY10011		0.191	0.18	1.08	84	0.12	11.60	85	1.2
YY10012		0.085	0.30	0.36	118	0.16	11.30	90	0.9
YY10013		0.332	0.43	0.09	227	<0.05	12.60	93	0.5
YY10014		0.170	0.50	0.15	168	0.12	19.25	100	<0.5
YY10015		0.097	0.27	0.39	62	0.26	18.75	66	0.9
YY10016		0.017	0.11	0.73	62	0.22	3.71	101	<0.5
YY10017		0.033	0.19	0.36	15	0.08	6.13	40	1.1
YY10018		0.042	0.22	0.87	32	0.14	5.56	137	1.0
YY10019		0.203	0.90	2.37	130	0.12	12.35	302	<0.5
YY10020		0.262	2.30	0.37	120	<0.05	12.90	193	<0.5
YY10021		0.011	0.50	6.07	20	0.10	27.0	230	0.7
YY10022		0.082	0.78	5.01	42	0.30	17.15	80	1.2
YY10023		0.012	0.64	14.80	25	0.10	165.5	673	1.8
YY10024		0.013	0.39	5.41	27	0.12	12.50	174	<0.5
YY10025		0.027	0.42	2.35	48	0.20	8.27	188	3.4
YY10026		0.105	1.97	2.44	71	0.19	5.06	218	5.4
YY10027		0.031	0.91	3.05	56	0.26	6.64	185	2.4
YY10028		0.050	0.45	1.25	63	0.33	4.16	99	1.1
YY10029		0.037	0.35	0.96	135	0.43	3.09	53	<0.5
YY10030		0.020	0.69	0.91	53	1.48	3.13	23	1.3
YY10031		0.025	0.48	0.70	60	1.17	1.92	62	1.6
YY10032		0.017	0.43	1.20	44	0.72	2.06	39	1.0
YY10033		0.015	0.37	0.99	41	1.11	2.33	36	<0.5
YY10034		0.020	0.36	0.66	57	1.02	5.44	84	0.5
YY10035		0.011	0.26	1.03	55	0.30	5.50	189	0.9
YY10036		0.018	0.26	1.44	48	0.24	11.65	117	1.5
YY10037		0.019	0.65	1.91	52	0.54	8.32	160	0.6
YY10038		0.009	0.31	1.69	38	0.17	7.22	126	<0.5
YY10039		0.010	0.35	0.66	45	0.17	2.24	88	<0.5
YY10040		0.026	0.24	1.15	55	0.23	4.63	98	0.9

***** 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
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: RAU

Finalized Date: 29-JUN-2019
Account: RCM

CERTIFICATE OF ANALYSIS WH19146734

Sample Description	Method / Analyte / Units / LOD	WEI-21 Recvd Wt. kg 0.02	Au-ICP21 Au ppm 0.001	ME-MS41 Ag ppm 0.01	ME-MS41 Al % 0.01	ME-MS41 As ppm 0.1	ME-MS41 Au ppm 0.02	ME-MS41 B ppm 10	ME-MS41 Ba ppm 10	ME-MS41 Be ppm 0.05	ME-MS41 Bi ppm 0.01	ME-MS41 Ca % 0.01	ME-MS41 Cd ppm 0.01	ME-MS41 Ce ppm 0.02	ME-MS41 Co ppm 0.1	ME-MS41 Cr ppm 1
YY10041		0.27	0.003	2.29	1.73	25.7	0.02	<10	280	0.42	0.30	0.06	0.38	31.2	6.4	28
YY10042		0.27	0.001	1.64	1.06	23.0	<0.02	<10	230	0.22	0.33	0.05	0.25	24.8	4.1	21
YY10043		0.31	0.012	1.92	0.50	7.0	<0.02	<10	100	0.11	0.33	0.01	0.03	9.23	0.5	7
YY10044		0.38	0.003	1.94	2.14	28.2	<0.02	<10	280	0.81	0.25	0.11	0.38	33.6	12.3	32
YY10045		0.46	0.011	2.46	1.69	45.3	<0.02	<10	370	0.66	1.77	0.10	0.30	39.6	8.8	26
YY10046		0.41	0.056	3.10	1.73	79.6	0.04	<10	310	0.59	18.90	0.13	0.57	32.3	8.7	29
YY10047		0.11	0.004	0.26	2.01	17.5	<0.02	<10	640	0.38	0.31	3.24	0.50	13.75	30.8	140
YY10048		0.32	0.001	0.17	1.70	23.0	<0.02	<10	650	0.21	0.16	11.20	1.50	15.75	87.2	185
YY10049		0.23	0.001	0.27	2.10	10.5	<0.02	<10	730	0.39	1.39	3.37	0.36	10.60	36.1	112
YY10050		0.36	0.001	0.24	2.15	14.5	<0.02	<10	560	0.51	4.48	3.23	0.53	17.95	30.3	113
YY10051		0.26	0.003	0.34	1.80	13.1	<0.02	<10	220	0.32	0.77	2.96	0.41	16.70	55.1	139
YY10052		0.39	<0.001	0.08	5.31	6.4	<0.02	<10	580	0.80	0.20	1.44	0.46	25.5	60.4	396
YY10053		0.13	0.002	0.31	2.49	12.8	<0.02	<10	630	0.41	3.42	1.55	0.75	17.65	45.9	104
YY10054		0.13	0.002	0.55	2.42	8.4	<0.02	<10	550	0.39	0.06	2.06	2.29	10.80	26.8	110
YY10055		0.14	0.011	1.78	1.35	17.9	<0.02	<10	70	0.39	0.18	0.10	1.37	48.9	3.7	21
YY10056		0.22	0.005	1.40	2.81	17.8	<0.02	<10	130	2.20	0.26	0.09	3.62	42.8	24.4	28
YY10057		0.14	0.004	1.28	1.76	10.5	<0.02	<10	190	1.02	0.30	0.32	10.50	33.5	11.4	24
YY10058		0.14	0.009	1.69	1.69	12.5	<0.02	<10	110	0.62	0.23	0.09	2.02	34.6	5.8	21
YY10059		0.22	0.004	7.17	1.88	28.5	<0.02	<10	330	0.86	0.29	0.27	1.63	44.1	12.8	29
YY10060		0.26	0.002	1.02	2.10	64.0	0.18	<10	140	1.08	0.19	0.05	0.74	52.1	23.2	41
YY10061		0.33	0.004	0.34	0.87	25.5	<0.02	<10	50	0.26	0.14	0.01	0.80	20.3	9.6	40
YY10062		0.26	0.004	1.68	1.61	22.0	<0.02	<10	150	0.54	0.25	0.06	0.63	30.4	11.1	38
YY10063		0.13	0.016	3.15	1.51	69.7	<0.02	<10	1990	1.13	1.32	1.95	5.08	38.9	9.4	24
YY10064		0.24	0.050	4.09	1.35	48.8	0.03	<10	440	0.90	0.73	0.71	0.61	54.7	11.7	23
YY10065		0.16	0.033	1.83	0.38	17.6	<0.02	<10	90	0.09	0.99	0.03	0.15	16.30	1.4	10
YY10066		0.16	0.008	0.81	1.24	26.4	<0.02	<10	540	0.65	0.48	1.62	1.51	22.3	9.4	21
YY10067		0.12	0.006	0.71	0.81	11.8	<0.02	<10	1030	0.35	0.35	0.87	1.11	15.40	6.6	16
YY10068		0.16	0.001	0.38	1.43	16.4	<0.02	<10	370	0.74	0.23	2.20	0.68	26.1	12.9	22
YY10069		0.19	0.001	0.44	1.32	13.8	<0.02	<10	760	0.72	0.21	2.01	0.91	20.7	9.8	21
YY10070		0.26	0.018	1.25	1.04	23.0	<0.02	<10	630	0.51	1.12	1.26	1.35	23.9	9.5	18
YY10071		0.18	0.004	2.10	0.38	15.5	<0.02	<10	290	0.20	0.16	0.50	0.61	19.55	3.6	12
YY10072		0.14	0.002	1.00	0.45	16.9	<0.02	<10	270	0.29	0.12	1.06	1.78	17.85	3.5	12
YY10073		0.12	0.003	1.47	0.79	16.9	<0.02	<10	440	0.43	0.17	1.29	0.63	19.25	5.2	15
YY10074		0.32	0.005	2.39	1.00	20.7	<0.02	<10	590	0.46	0.20	1.03	1.04	23.4	5.6	17
YY10075		0.35	0.002	1.10	0.72	15.2	<0.02	<10	210	0.28	0.19	0.06	0.28	17.45	2.9	12
YY10076		0.34	0.005	0.57	0.49	16.2	<0.02	<10	330	0.21	0.20	0.02	0.12	19.90	3.2	10
YY10077		0.26	0.003	0.72	1.39	25.2	<0.02	<10	690	0.79	0.21	1.71	0.35	27.1	10.5	23
YY10078		0.22	0.002	0.99	1.29	27.7	<0.02	<10	190	0.28	0.34	0.04	0.29	24.8	4.8	25
YY10079		0.24	0.004	0.76	1.48	23.0	<0.02	<10	210	0.42	0.27	0.06	0.24	32.4	7.3	25
YY10080		0.30	0.003	0.44	2.13	23.8	<0.02	<10	360	0.59	0.22	0.05	0.38	27.1	10.0	31

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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

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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Project: RAU

Finalized Date: 29-JUN-2019
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CERTIFICATE OF ANALYSIS WH19146734

Sample Description	Method	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Cs	Cu	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na
	Units	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%
	LOD	0.05	0.2	0.01	0.05	0.05	0.02	0.01	0.005	0.01	0.2	0.1	0.01	5	0.05	0.01
YY10041		1.54	14.3	2.88	6.40	0.05	<0.02	0.15	0.044	0.08	17.5	17.1	0.34	299	6.75	<0.01
YY10042		1.62	11.1	2.59	6.75	<0.05	<0.02	0.09	0.030	0.07	14.7	7.7	0.15	259	8.84	<0.01
YY10043		0.60	5.1	0.64	1.64	<0.05	0.09	0.69	0.032	0.09	4.3	1.0	0.01	19	4.21	<0.01
YY10044		1.37	22.7	3.26	5.62	0.05	0.03	0.08	0.044	0.07	17.4	18.3	0.51	426	3.14	<0.01
YY10045		1.21	27.0	3.31	4.72	0.07	<0.02	0.09	0.054	0.11	21.1	15.3	0.39	517	4.02	<0.01
YY10046		1.23	19.0	3.46	4.70	0.06	0.03	0.08	0.043	0.13	18.8	18.2	0.37	388	8.54	<0.01
YY10047		4.56	71.1	4.01	7.75	0.08	0.02	0.05	0.069	0.15	6.9	20.3	1.90	783	1.91	0.01
YY10048		4.61	164.5	4.30	6.46	0.07	0.12	0.02	0.055	0.52	7.4	17.4	1.34	747	1.51	0.02
YY10049		3.22	76.2	5.21	6.76	0.09	0.04	0.03	0.040	0.25	5.1	20.9	1.98	911	1.97	0.01
YY10050		2.49	62.0	4.65	8.40	0.07	0.03	0.05	0.044	0.15	9.8	24.9	2.75	701	1.93	<0.01
YY10051		1.75	108.0	6.21	6.02	0.07	0.04	0.06	0.038	0.06	9.4	19.9	1.49	582	2.98	0.03
YY10052		17.40	105.5	7.22	14.15	0.25	0.06	0.02	0.046	0.64	14.3	43.4	6.72	969	0.98	<0.01
YY10053		3.44	142.0	4.86	9.22	0.15	0.02	0.03	0.055	0.09	8.7	23.0	2.28	1010	1.93	<0.01
YY10054		3.17	40.1	4.54	9.15	0.11	0.04	0.04	0.041	0.08	5.3	32.1	2.14	559	3.57	0.02
YY10055		5.96	209	7.37	3.11	0.16	0.03	0.14	0.064	0.06	27.8	7.7	0.30	98	11.75	<0.01
YY10056		12.80	274	4.04	4.63	0.08	0.06	0.09	0.066	0.08	22.4	37.3	0.52	536	5.55	<0.01
YY10057		12.25	125.5	2.07	4.44	0.06	0.02	0.18	0.043	0.12	16.2	24.1	0.48	115	4.12	<0.01
YY10058		5.41	173.0	2.45	3.36	0.07	0.03	0.17	0.040	0.06	17.9	14.4	0.31	101	7.24	<0.01
YY10059		1.26	29.9	4.10	4.03	0.05	0.04	0.19	0.057	0.04	14.8	20.4	0.21	554	7.59	<0.01
YY10060		3.02	208	15.20	9.31	0.11	0.05	0.10	0.202	0.07	22.7	16.5	0.28	261	8.40	<0.01
YY10061		1.81	285	30.8	9.81	0.11	0.05	0.06	0.149	0.07	9.8	1.6	0.06	85	10.20	<0.01
YY10062		1.39	114.5	4.45	5.51	0.05	0.02	0.11	0.103	0.05	13.5	12.5	0.23	357	4.89	<0.01
YY10063		1.66	58.8	3.07	4.18	0.08	0.02	0.16	0.142	0.07	23.9	8.6	0.21	433	12.70	<0.01
YY10064		0.99	39.7	3.64	7.27	0.07	0.08	0.59	0.160	0.14	35.7	15.2	0.59	1120	9.95	<0.01
YY10065		0.59	7.2	1.02	2.25	<0.05	<0.02	0.14	0.017	0.04	10.1	2.8	0.08	50	8.62	<0.01
YY10066		0.78	28.4	2.85	3.38	<0.05	0.09	0.14	0.034	0.12	12.4	16.0	0.81	478	3.86	<0.01
YY10067		0.45	13.5	1.87	2.17	<0.05	0.05	0.12	0.020	0.05	8.2	10.1	0.32	441	1.72	<0.01
YY10068		0.78	28.5	3.30	3.66	<0.05	0.06	0.11	0.031	0.12	13.6	19.1	1.34	735	2.30	<0.01
YY10069		0.64	29.8	2.91	3.42	<0.05	0.06	0.12	0.033	0.10	10.7	17.3	0.70	487	2.12	0.01
YY10070		0.64	23.7	2.42	2.83	0.05	0.05	0.15	0.037	0.07	12.8	13.5	0.51	771	2.75	<0.01
YY10071		0.41	16.6	1.24	1.27	<0.05	0.03	0.15	0.025	0.05	12.8	4.3	0.15	185	4.73	<0.01
YY10072		0.36	26.7	1.70	1.23	<0.05	0.04	0.09	0.020	0.05	11.8	4.3	0.29	149	2.80	<0.01
YY10073		0.58	20.1	2.04	2.21	<0.05	0.05	0.15	0.033	0.09	11.2	9.5	0.45	291	3.78	<0.01
YY10074		0.69	27.0	2.27	2.85	0.05	0.05	0.26	0.039	0.10	14.4	9.9	0.32	393	4.05	<0.01
YY10075		0.67	10.7	1.59	2.30	<0.05	<0.02	0.14	0.018	0.07	10.0	8.3	0.16	115	6.50	<0.01
YY10076		0.33	12.1	1.32	1.82	<0.05	0.06	0.15	0.020	0.04	11.5	6.0	0.15	160	9.53	<0.01
YY10077		0.75	38.1	3.57	3.42	0.05	0.09	0.20	0.040	0.11	15.7	15.8	1.07	631	3.71	0.01
YY10078		1.82	12.7	3.76	7.54	<0.05	0.02	0.05	0.033	0.08	13.3	11.3	0.20	205	8.84	<0.01
YY10079		1.20	22.5	2.81	4.31	0.05	0.05	0.15	0.033	0.09	16.6	13.8	0.36	217	15.20	<0.01
YY10080		1.18	35.4	3.89	4.30	<0.05	0.06	0.13	0.057	0.12	12.7	23.5	0.38	290	6.64	<0.01

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ALS Canada Ltd.
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North Vancouver BC V7H 0A7
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CERTIFICATE OF ANALYSIS WH19146734

Sample Description	Method	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Nb	Ni	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th
	Units	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.05	0.2	10	0.2	0.1	0.001	0.01	0.05	0.1	0.2	0.2	0.2	0.01	0.01	0.2
YY10041		1.06	19.8	730	20.6	16.7	<0.001	0.04	4.01	2.3	4.2	0.7	17.4	<0.01	0.10	1.5
YY10042		1.20	12.2	470	23.3	16.0	0.001	0.03	1.46	1.6	2.3	0.9	8.4	<0.01	0.11	1.3
YY10043		0.89	2.0	170	43.8	5.3	<0.001	0.14	3.30	0.9	1.5	0.8	1.3	0.01	0.08	3.9
YY10044		1.10	29.2	820	23.0	14.9	<0.001	0.02	2.27	3.7	1.6	0.7	16.3	<0.01	0.06	3.9
YY10045		0.54	27.3	1210	253	12.4	<0.001	0.04	6.38	4.7	4.6	1.9	18.0	<0.01	0.13	4.0
YY10046		0.82	25.3	1440	83.8	16.3	<0.001	0.14	5.87	2.8	8.4	3.0	21.6	<0.01	0.18	3.7
YY10047		2.62	139.5	870	13.5	20.5	0.002	0.12	1.18	8.6	1.2	0.8	58.8	<0.01	0.03	0.9
YY10048		0.53	430	900	5.9	26.0	0.001	0.01	0.84	7.8	0.5	0.4	126.0	<0.01	<0.01	2.3
YY10049		0.37	143.0	1290	7.3	20.8	<0.001	0.11	0.94	7.6	1.6	0.7	60.2	<0.01	0.03	0.9
YY10050		1.47	125.5	690	22.2	18.5	0.001	0.04	1.13	9.7	1.1	1.0	44.5	<0.01	0.05	1.7
YY10051		0.56	293	1310	9.6	10.5	0.001	0.09	1.39	7.8	1.0	0.6	40.7	<0.01	0.02	1.1
YY10052		2.45	348	1530	2.8	45.8	<0.001	0.01	0.41	12.5	0.5	0.6	50.0	<0.01	0.01	1.6
YY10053		1.71	98.8	850	5.5	12.2	0.001	0.09	1.51	9.0	0.7	0.9	59.5	<0.01	0.05	1.0
YY10054		3.03	138.5	530	6.4	13.0	0.002	0.09	1.31	7.5	2.3	0.6	107.0	<0.01	0.03	0.9
YY10055		0.56	44.9	1180	32.6	7.7	0.006	0.18	5.28	1.6	26.4	0.3	21.4	0.01	0.06	1.2
YY10056		1.05	115.0	630	34.9	19.5	0.001	0.05	4.02	3.7	3.7	0.5	16.4	<0.01	0.06	4.0
YY10057		0.73	79.1	770	28.7	30.7	0.002	0.07	2.10	2.9	3.3	0.5	48.3	<0.01	0.06	2.2
YY10058		0.64	53.1	950	12.7	13.5	0.004	0.09	2.22	1.5	2.5	0.3	18.7	<0.01	0.06	0.9
YY10059		0.50	56.0	1140	43.3	8.0	0.001	0.06	2.53	3.1	2.9	0.8	14.3	0.01	0.10	1.3
YY10060		0.58	131.0	1650	27.4	9.6	0.002	0.05	2.12	8.2	9.2	0.3	7.9	<0.01	0.07	11.7
YY10061		0.30	61.0	1750	16.0	5.1	0.004	0.07	1.40	4.2	6.0	0.2	1.8	0.01	0.08	3.6
YY10062		0.98	63.6	920	21.3	8.4	0.001	0.04	2.58	3.3	2.4	0.5	10.2	<0.01	0.06	2.4
YY10063		0.21	65.3	4770	680	11.1	0.001	0.11	9.89	1.1	10.0	10.1	125.0	<0.01	0.13	0.4
YY10064		0.29	30.4	850	389	10.8	0.001	0.05	10.55	6.0	6.2	12.9	35.5	<0.01	0.18	8.1
YY10065		0.34	5.8	230	93.9	4.6	<0.001	0.03	4.13	0.9	3.8	5.2	8.2	<0.01	0.17	0.9
YY10066		0.32	29.0	970	38.5	8.8	0.001	0.04	3.36	3.5	1.8	0.6	32.9	<0.01	0.07	2.7
YY10067		0.28	15.9	730	29.6	4.7	<0.001	0.07	3.68	1.6	1.5	0.4	19.6	<0.01	0.05	1.0
YY10068		0.37	32.1	730	36.8	8.8	<0.001	0.03	1.61	3.7	0.9	0.4	25.1	<0.01	0.04	2.6
YY10069		0.37	28.3	880	31.6	6.7	<0.001	0.06	1.55	3.1	0.9	0.3	41.0	<0.01	0.04	1.5
YY10070		0.32	26.3	1160	49.9	7.5	0.005	0.06	5.39	2.4	4.8	1.8	28.6	<0.01	0.07	1.4
YY10071		0.32	12.2	980	17.4	4.1	0.002	0.06	4.43	1.0	5.6	0.2	28.9	<0.01	0.08	1.3
YY10072		0.21	19.6	710	18.3	3.2	0.001	0.06	3.52	1.0	2.6	0.2	26.7	<0.01	0.05	1.1
YY10073		0.39	18.9	1230	26.0	6.6	0.001	0.06	3.62	1.8	4.2	0.3	27.4	<0.01	0.07	1.3
YY10074		0.35	20.3	1820	27.6	7.1	0.001	0.09	4.30	1.8	7.1	0.4	36.7	<0.01	0.10	1.0
YY10075		0.38	10.3	310	19.5	7.1	<0.001	0.03	3.87	1.1	4.1	0.3	8.0	<0.01	0.05	1.3
YY10076		0.45	9.7	170	19.0	3.2	<0.001	0.03	4.07	1.8	2.4	0.3	13.0	<0.01	0.08	4.4
YY10077		0.31	38.2	770	36.2	8.9	0.001	0.04	2.17	4.7	1.5	0.4	19.5	<0.01	0.06	2.9
YY10078		1.75	13.4	560	22.9	13.2	<0.001	0.06	2.10	2.2	1.6	0.8	12.9	<0.01	0.08	2.9
YY10079		1.04	22.0	620	23.3	11.9	0.001	0.08	3.64	2.6	4.4	0.5	15.1	<0.01	0.09	4.1
YY10080		0.93	32.4	540	30.4	10.9	<0.001	0.15	2.57	3.0	2.7	0.5	13.0	<0.01	0.07	4.6

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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 ST
VANCOUVER BC V6B 1L8

Finalized Date: 29-JUN-2019
Account: RCM

Project: RAU

CERTIFICATE OF ANALYSIS WH19146734

Sample Description	Method	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Ti	Tl	U	V	W	Y	Zn	Zr
	Units	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.005	0.02	0.05	1	0.05	0.05	2	0.5
YY10041		0.037	0.29	1.04	61	0.25	2.90	87	<0.5
YY10042		0.044	0.39	0.71	69	0.18	2.01	73	<0.5
YY10043		0.067	0.30	1.77	16	<0.05	0.64	5	4.3
YY10044		0.041	0.25	1.18	60	0.23	5.51	110	1.0
YY10045		0.025	0.33	1.36	54	0.24	9.98	97	0.9
YY10046		0.030	0.66	1.08	54	0.45	4.36	94	1.2
YY10047		0.104	0.31	0.95	82	0.07	8.59	110	1.4
YY10048		0.130	0.28	0.53	76	<0.05	10.10	304	6.8
YY10049		0.087	0.31	1.11	81	0.05	14.35	79	1.7
YY10050		0.082	0.31	0.74	74	0.06	10.80	117	1.4
YY10051		0.065	0.20	1.11	65	0.07	17.70	92	2.0
YY10052		0.387	1.11	0.19	148	0.11	9.24	100	1.7
YY10053		0.091	0.31	0.83	78	0.08	9.61	97	0.9
YY10054		0.155	0.39	0.90	81	0.05	6.36	364	1.2
YY10055		0.017	0.65	8.32	36	0.19	31.7	178	0.7
YY10056		0.034	0.79	4.13	52	0.18	22.3	649	1.8
YY10057		0.022	0.65	2.14	36	0.18	14.00	247	0.5
YY10058		0.020	0.48	4.13	34	0.17	13.40	191	0.8
YY10059		0.010	0.39	2.12	60	0.21	15.75	157	1.2
YY10060		0.022	0.85	8.66	63	0.12	19.20	222	1.6
YY10061		0.017	2.24	2.29	1160	0.06	5.01	210	2.5
YY10062		0.024	0.64	3.48	71	0.23	7.00	151	0.6
YY10063		0.007	0.70	4.55	62	0.58	24.6	277	0.5
YY10064		0.010	0.48	2.13	45	1.51	15.45	169	3.7
YY10065		0.014	0.28	0.49	35	0.77	1.35	37	<0.5
YY10066		0.009	0.24	1.01	41	0.15	9.67	152	2.7
YY10067		0.010	0.14	0.64	28	0.14	4.28	84	1.6
YY10068		0.011	0.12	0.55	37	0.11	9.79	148	1.9
YY10069		0.008	0.12	3.55	35	0.13	9.48	132	2.1
YY10070		0.011	0.16	1.55	34	0.19	9.18	150	1.8
YY10071		0.013	0.19	1.18	22	0.16	3.41	88	1.1
YY10072		0.006	0.16	0.94	20	0.11	5.40	132	1.7
YY10073		0.014	0.17	1.14	32	0.16	6.98	94	1.8
YY10074		0.011	0.25	3.05	41	0.19	9.94	71	1.5
YY10075		0.012	0.22	0.62	35	0.11	2.46	49	<0.5
YY10076		0.028	0.15	0.95	22	0.08	3.60	40	3.8
YY10077		0.010	0.23	1.01	43	0.10	15.55	120	2.9
YY10078		0.055	0.40	0.86	91	0.34	2.05	65	1.1
YY10079		0.041	0.39	1.75	63	0.46	3.44	71	2.2
YY10080		0.026	0.46	1.39	67	0.27	2.82	86	2.1

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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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Project: RAU

Finalized Date: 29-JUN-2019
Account: RCM

CERTIFICATE OF ANALYSIS WH19146734

Sample Description	Method	WEI-21	Au-ICP21	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Recvd Wt.	Au	Ag	Al	As	Au	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr
	Units	kg	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
	LOD	0.02	0.001	0.01	0.01	0.1	0.02	10	10	0.05	0.01	0.01	0.01	0.02	0.1	1
YY10081		0.27	0.002	0.22	1.91	20.9	<0.02	<10	280	0.76	0.24	0.12	0.63	29.2	9.7	29
YY10082		0.37	0.001	0.65	1.95	34.9	<0.02	<10	260	0.65	0.29	0.03	0.42	36.1	8.4	31
YY10083		0.26	0.005	0.31	2.08	15.9	<0.02	<10	200	0.70	0.24	0.06	0.51	26.3	8.2	30
YY10084		0.32	0.001	0.41	1.55	16.7	<0.02	<10	140	0.54	0.18	0.14	0.74	33.3	13.6	24
YY10085		0.10	0.007	0.23	1.27	8.5	<0.02	<10	520	0.33	0.33	3.24	0.40	8.77	16.0	61
YY10086		0.18	0.003	0.13	3.04	11.9	<0.02	<10	750	0.47	0.34	2.67	0.34	12.00	31.6	162
YY10087		0.13	0.004	0.17	1.60	189.5	<0.02	<10	320	0.29	3.11	1.60	0.35	16.15	32.2	109
YY10088		0.23	0.008	0.61	1.07	38.8	<0.02	<10	210	0.45	2.21	2.99	0.64	25.4	28.8	31
YY10089		0.23	0.003	0.35	1.74	10.0	<0.02	<10	310	0.46	0.36	2.67	0.59	19.95	20.8	57
YY10090		0.22	0.002	0.23	2.51	7.9	<0.02	<10	530	0.37	0.26	1.73	0.87	21.5	32.0	157
YY10091		0.16	0.002	0.23	1.84	9.8	<0.02	<10	380	0.48	0.17	2.25	0.99	15.85	20.3	88
YY10092		0.26	0.001	0.22	1.18	13.0	<0.02	10	160	0.58	0.20	6.09	1.92	24.5	12.9	22
YY10093		0.14	0.009	0.84	1.93	10.2	<0.02	<10	280	1.73	0.12	2.29	46.2	48.2	29.4	33
YY10094		0.18	0.005	2.15	2.73	14.4	<0.02	<10	80	1.06	0.24	0.07	2.00	51.7	4.3	28
YY10095		0.22	0.001	0.33	1.89	16.5	<0.02	<10	190	1.30	0.25	0.58	8.14	38.7	25.8	24
YY10096		0.28	0.003	3.21	2.81	28.8	<0.02	<10	130	1.88	0.32	0.14	2.78	58.8	21.3	20
YY10097		0.26	0.001	0.34	1.38	21.6	<0.02	10	210	0.79	0.25	1.36	0.92	31.3	13.1	22
YY10098		0.28	0.001	2.05	1.28	26.0	<0.02	<10	70	0.30	0.21	0.04	0.28	32.7	9.0	36
YY10099		0.32	0.002	3.83	1.64	20.2	<0.02	<10	260	0.46	0.21	0.12	0.56	32.6	12.5	53
YY10100		0.23	0.003	2.03	1.26	14.7	<0.02	<10	270	0.26	0.18	0.03	0.33	36.4	3.9	47
YY10101		0.14	0.003	0.35	1.70	17.6	<0.02	10	300	0.97	0.30	1.84	7.57	30.6	20.0	23
YY10102		0.22	0.001	0.29	1.73	17.2	<0.02	10	230	0.85	0.24	2.17	2.35	32.8	18.0	26
YY10103		0.18	0.007	0.32	1.21	16.8	<0.02	<10	250	0.58	0.21	1.78	0.70	20.6	11.0	21
YY10104		0.14	0.023	1.35	0.67	26.6	<0.02	<10	600	0.33	1.33	0.98	0.61	15.05	4.5	14
YY10105		0.35	0.062	1.56	0.11	18.4	<0.02	<10	160	0.05	1.74	0.01	0.01	13.90	0.5	5
YY10106		0.17	0.023	1.09	1.04	19.5	<0.02	<10	390	0.49	0.68	0.47	0.42	26.0	8.8	18
YY10107		0.12	0.002	0.30	0.96	14.2	<0.02	<10	340	0.49	0.17	2.41	0.97	18.70	8.9	18
YY10108		0.12	0.003	0.32	0.92	18.0	<0.02	<10	410	0.49	0.16	3.58	2.11	19.30	9.5	18
YY10109		0.14	0.008	0.26	0.99	13.6	<0.02	<10	250	0.49	0.18	1.59	1.24	21.6	10.6	20
YY10111		0.30	0.011	0.69	0.94	16.7	<0.02	<10	450	0.44	0.65	1.59	1.26	21.1	7.9	18
YY10112		0.34	0.003	1.02	0.71	21.4	<0.02	<10	380	0.46	0.16	0.64	1.47	35.8	6.0	16
YY10113		0.30	0.006	2.41	0.60	14.2	<0.02	<10	490	0.32	0.20	0.97	0.32	21.4	3.4	12
YY10114		0.26	0.005	0.68	0.57	16.7	<0.02	<10	440	0.22	0.19	0.23	0.33	17.05	3.3	12
YY10115		0.23	0.004	0.63	0.94	24.0	<0.02	<10	690	0.44	0.25	0.30	0.28	23.9	6.4	17
YY10116		0.42	0.001	0.35	1.26	17.1	<0.02	10	290	0.67	0.20	5.77	0.72	26.9	11.4	19
YY10117		0.24	0.001	0.56	1.17	18.6	<0.02	<10	940	0.61	0.20	0.29	0.23	35.6	7.4	20
YY10118		0.19	0.001	0.36	1.60	19.1	<0.02	<10	490	0.84	0.23	0.74	0.69	34.7	12.8	26
YY10119		0.14	<0.001	1.24	1.36	24.7	<0.02	<10	1850	0.60	0.31	1.47	0.85	40.2	8.4	21
YY10120		0.38	0.002	0.71	1.24	27.5	<0.02	<10	460	0.65	0.22	2.96	2.45	30.3	10.4	20
YY10121		0.27	0.002	0.61	0.84	18.1	<0.02	<10	240	0.42	0.16	0.89	1.23	24.5	6.7	20

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North Vancouver BC V7H 0A7
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	Analyte	Cs	Cu	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na
	Units	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%
	LOD	0.05	0.2	0.01	0.05	0.05	0.02	0.01	0.005	0.01	0.2	0.1	0.01	5	0.05	0.01
YY10081		1.71	19.5	3.18	5.09	<0.05	0.04	0.04	0.032	0.09	15.5	30.2	0.58	302	5.74	<0.01
YY10082		2.64	27.6	4.14	5.44	0.05	0.03	0.03	0.055	0.14	18.6	27.6	0.50	324	6.14	<0.01
YY10083		1.31	19.0	3.00	5.80	<0.05	<0.02	0.03	0.032	0.05	13.4	16.9	0.36	402	1.92	<0.01
YY10084		1.03	21.8	2.89	3.48	0.05	0.05	0.04	0.028	0.05	16.6	16.3	0.37	420	2.09	<0.01
YY10085		1.29	47.1	2.51	3.60	0.05	0.02	0.04	0.028	0.04	4.7	11.6	0.96	1040	1.16	0.01
YY10086		7.47	59.6	5.63	9.27	0.10	0.03	0.02	0.103	0.19	6.3	27.7	3.99	1120	1.96	0.01
YY10087		1.06	46.4	4.97	6.94	0.05	0.02	0.02	0.064	0.07	8.3	18.7	1.01	1120	3.51	<0.01
YY10088		0.82	92.2	5.44	3.26	0.05	0.05	0.07	0.065	0.10	14.0	10.8	1.16	912	5.98	<0.01
YY10089		0.63	40.2	3.86	5.11	0.05	0.04	0.05	0.060	0.06	10.4	16.3	1.79	1040	1.66	0.01
YY10090		2.47	36.2	4.08	7.08	0.07	0.03	0.05	0.031	0.05	11.5	24.2	2.36	987	1.50	0.01
YY10091		3.24	41.0	3.70	5.66	0.06	0.03	0.06	0.031	0.15	8.3	19.6	1.55	852	1.90	0.01
YY10092		1.24	30.6	3.09	3.03	<0.05	0.06	0.07	0.028	0.17	12.0	17.3	2.79	870	2.78	0.01
YY10093		6.05	424	3.89	3.28	0.17	0.03	0.09	0.050	0.06	50.0	14.9	0.51	1180	6.33	0.01
YY10094		8.23	376	5.72	4.75	0.11	0.06	0.08	0.066	0.13	24.5	17.8	0.62	128	7.09	0.01
YY10095		2.31	97.8	4.11	4.03	0.06	0.05	0.08	0.046	0.15	18.9	29.9	0.66	1040	3.35	<0.01
YY10096		7.09	193.5	3.60	3.13	0.09	0.08	0.16	0.051	0.10	27.2	20.6	0.37	491	8.03	<0.01
YY10097		0.95	39.6	3.68	3.63	0.05	0.07	0.15	0.037	0.16	16.2	18.6	1.03	884	4.27	<0.01
YY10098		2.79	146.0	9.14	8.06	0.06	0.02	0.15	0.126	0.08	15.3	12.6	0.32	185	6.10	<0.01
YY10099		2.30	187.5	11.00	6.24	0.07	0.05	0.11	0.087	0.11	14.7	20.3	0.42	275	8.93	<0.01
YY10100		2.23	138.5	11.35	6.23	0.08	<0.02	0.11	0.118	0.07	17.4	9.6	0.23	95	3.98	<0.01
YY10101		1.13	75.7	3.57	3.70	0.06	0.08	0.08	0.039	0.16	15.5	24.3	1.11	1100	3.25	0.01
YY10102		1.21	89.0	4.16	4.19	0.06	0.08	0.10	0.045	0.18	16.4	26.5	1.46	945	3.53	<0.01
YY10103		0.68	23.9	3.11	3.05	<0.05	0.06	0.08	0.029	0.12	9.5	15.6	0.93	989	2.63	<0.01
YY10104		0.50	15.1	1.80	2.02	0.05	0.07	0.19	0.020	0.08	9.5	8.2	0.28	250	4.59	<0.01
YY10105		0.26	4.8	0.55	0.73	0.07	0.19	0.23	0.012	0.07	8.8	1.3	0.02	22	7.25	<0.01
YY10106		0.53	21.4	2.37	2.88	<0.05	0.05	0.13	0.023	0.06	13.9	12.9	0.38	337	2.30	<0.01
YY10107		0.59	25.0	2.42	2.50	<0.05	0.04	0.10	0.024	0.09	9.9	12.2	1.12	559	1.87	<0.01
YY10108		0.61	25.8	3.13	2.53	<0.05	0.05	0.08	0.041	0.07	9.7	13.3	1.63	1160	3.30	0.01
YY10109		0.57	24.5	2.82	2.68	<0.05	0.05	0.07	0.028	0.07	10.9	15.6	0.80	590	2.70	0.01
YY10111		0.54	22.0	2.36	2.41	<0.05	0.05	0.15	0.026	0.07	11.7	13.0	0.81	604	2.47	<0.01
YY10112		0.67	27.6	2.31	1.89	0.06	0.07	0.14	0.030	0.06	21.8	6.9	0.25	245	5.77	<0.01
YY10113		0.58	17.0	1.47	1.84	0.05	0.04	0.25	0.029	0.08	12.3	6.8	0.40	170	6.00	<0.01
YY10114		0.53	8.7	1.32	1.85	<0.05	0.02	0.12	0.026	0.06	9.7	6.9	0.18	154	6.49	<0.01
YY10115		0.72	18.8	2.39	2.92	<0.05	0.04	0.16	0.029	0.10	14.0	10.7	0.28	319	13.15	<0.01
YY10116		1.00	34.0	3.11	3.29	<0.05	0.07	0.12	0.031	0.15	14.2	18.1	3.07	656	2.72	0.01
YY10117		0.74	21.8	2.67	3.32	0.05	0.06	0.28	0.037	0.10	19.4	13.0	0.40	579	8.27	<0.01
YY10118		0.87	33.2	3.62	4.33	0.05	0.07	0.11	0.040	0.11	18.2	19.0	0.63	856	2.82	0.01
YY10119		2.24	45.5	2.64	3.73	0.07	0.09	0.35	0.045	0.12	25.5	13.0	0.39	584	11.50	<0.01
YY10120		1.12	33.6	3.19	3.21	0.05	0.07	0.16	0.036	0.13	16.8	18.6	1.66	569	5.65	0.01
YY10121		0.74	23.8	2.26	2.26	0.05	0.06	0.07	0.031	0.06	14.2	10.6	0.43	193	3.32	<0.01

***** 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
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: RAU

Finalized Date: 29-JUN-2019
Account: RCM

CERTIFICATE OF ANALYSIS WH19146734

Sample Description	Method	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Nb	Ni	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th
	Units	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.05	0.2	10	0.2	0.1	0.001	0.01	0.05	0.1	0.2	0.2	0.2	0.01	0.01	0.2
YY10081		0.51	34.3	830	23.7	13.0	<0.001	0.04	1.97	2.6	1.5	0.5	19.7	<0.01	0.06	3.0
YY10082		0.46	31.5	890	37.9	21.0	<0.001	0.05	3.24	2.8	2.3	0.7	19.9	<0.01	0.07	4.4
YY10083		0.96	17.8	400	18.9	11.4	<0.001	0.02	0.74	3.2	0.8	0.6	8.6	<0.01	0.04	2.5
YY10084		0.73	41.8	700	19.6	8.7	<0.001	0.02	1.46	2.5	1.1	0.3	14.3	<0.01	0.04	3.3
YY10085		0.31	74.5	690	9.5	6.2	0.001	0.16	0.84	3.2	1.3	0.4	45.9	<0.01	0.02	0.3
YY10086		1.19	130.0	1160	7.8	17.5	<0.001	0.04	0.83	11.2	0.7	0.5	78.8	<0.01	0.03	1.3
YY10087		1.45	94.9	510	14.1	8.9	<0.001	0.09	1.44	7.8	0.7	1.2	28.3	<0.01	0.05	0.9
YY10088		0.44	92.3	1200	28.5	15.5	<0.001	0.04	2.90	4.8	1.1	0.5	52.9	<0.01	0.06	3.5
YY10089		0.45	71.0	990	23.2	7.9	<0.001	0.07	1.88	4.7	0.6	0.4	31.5	<0.01	0.03	1.3
YY10090		3.78	138.5	840	11.3	8.8	0.002	0.11	0.89	4.4	1.4	0.3	61.3	<0.01	0.02	1.0
YY10091		1.90	85.7	850	18.2	17.8	0.001	0.09	1.18	5.4	1.1	0.4	51.8	<0.01	0.02	1.2
YY10092		0.32	75.2	810	34.4	10.1	<0.001	0.02	1.58	3.7	0.6	0.2	67.1	<0.01	0.04	3.2
YY10093		0.47	890	850	18.9	9.5	0.016	0.12	2.13	2.6	8.3	0.2	220	0.01	0.02	0.6
YY10094		0.75	59.0	860	31.7	15.0	0.001	0.08	2.93	4.4	9.6	0.3	13.9	0.01	0.07	4.4
YY10095		0.31	154.5	510	41.6	17.6	<0.001	0.02	2.15	4.2	1.3	0.3	27.7	<0.01	0.04	4.1
YY10096		0.61	96.9	830	38.9	15.5	0.002	0.08	3.42	3.4	2.6	0.6	30.3	0.01	0.06	3.0
YY10097		0.38	48.0	630	44.3	10.0	<0.001	0.02	2.53	4.1	0.9	0.4	26.1	<0.01	0.05	3.8
YY10098		0.57	55.1	1000	23.6	8.9	0.001	0.04	1.65	5.4	3.8	0.3	6.3	<0.01	0.05	11.0
YY10099		0.33	99.1	870	26.9	8.9	0.003	0.04	1.94	6.1	2.7	0.3	6.3	<0.01	0.05	7.2
YY10100		0.56	36.4	1010	19.5	9.3	0.002	0.07	1.48	6.5	4.7	0.3	6.2	<0.01	0.05	3.5
YY10101		0.23	175.5	990	41.2	10.8	0.003	0.04	2.44	4.3	3.6	0.5	38.6	<0.01	0.04	3.3
YY10102		0.25	87.4	990	37.0	10.7	0.001	0.02	1.49	5.4	1.4	0.3	27.2	<0.01	0.05	3.9
YY10103		0.25	25.3	550	38.5	8.3	<0.001	0.05	1.83	2.8	1.0	0.4	20.6	<0.01	0.04	1.6
YY10104		0.26	15.6	610	33.4	6.6	0.001	0.08	5.66	1.8	12.1	1.9	27.0	<0.01	0.14	1.2
YY10105		<0.05	2.1	90	39.8	4.4	0.001	0.13	3.73	0.6	23.8	2.0	2.9	<0.01	0.16	1.1
YY10106		0.28	22.1	540	35.9	5.6	<0.001	0.01	2.13	2.5	2.5	1.0	12.9	<0.01	0.08	2.1
YY10107		0.29	27.1	830	28.6	6.4	<0.001	0.04	1.42	2.4	1.1	0.3	32.6	<0.01	0.04	1.7
YY10108		0.37	28.0	1170	26.6	5.9	0.001	0.04	1.69	3.0	0.9	0.2	51.4	<0.01	0.03	1.7
YY10109		0.38	30.6	610	30.0	5.3	0.001	0.04	1.54	2.9	0.9	0.2	29.8	<0.01	0.05	2.2
YY10111		0.27	23.4	1090	35.1	6.1	0.002	0.04	3.22	2.2	3.1	1.0	25.9	<0.01	0.04	1.5
YY10112		0.32	41.2	600	25.9	5.6	<0.001	0.03	3.21	1.7	2.5	0.2	29.7	<0.01	0.08	2.0
YY10113		0.41	13.4	930	26.7	5.1	<0.001	0.06	5.84	1.5	7.9	0.3	31.6	<0.01	0.09	1.2
YY10114		0.42	8.5	590	20.5	5.5	<0.001	0.03	4.45	1.3	5.4	0.3	17.0	<0.01	0.09	1.9
YY10115		0.38	16.6	490	30.7	7.9	0.002	0.06	2.78	2.1	5.8	0.4	20.3	<0.01	0.10	2.1
YY10116		0.22	33.9	790	43.1	9.5	<0.001	0.01	1.69	3.8	0.9	0.3	54.7	<0.01	0.05	3.9
YY10117		0.29	22.8	560	32.2	9.0	<0.001	0.03	2.83	3.4	2.9	0.4	17.8	<0.01	0.07	2.9
YY10118		0.61	37.0	360	39.9	9.2	<0.001	0.02	1.74	5.1	1.3	0.5	17.7	<0.01	0.05	4.2
YY10119		0.48	47.9	1050	37.5	12.9	0.017	0.15	5.34	2.7	9.6	0.5	50.7	<0.01	0.11	1.7
YY10120		0.20	39.4	1060	41.2	8.7	<0.001	0.03	4.00	3.4	1.7	0.5	50.3	<0.01	0.06	3.9
YY10121		0.37	43.3	740	26.5	6.1	<0.001	0.03	2.61	2.2	1.6	0.4	28.5	<0.01	0.06	2.2

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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

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VANCOUVER BC V6B 1L8

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CERTIFICATE OF ANALYSIS WH19146734

Sample Description	Method	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Ti	Tl	U	V	W	Y	Zn	Zr
	Units	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.005	0.02	0.05	1	0.05	0.05	2	0.5
YY10081		0.017	0.27	1.08	45	0.18	5.49	115	1.1
YY10082		0.011	0.51	0.96	67	0.18	3.53	200	1.5
YY10083		0.029	0.19	1.01	65	0.22	4.84	101	<0.5
YY10084		0.028	0.16	0.83	34	0.18	6.91	164	1.3
YY10085		0.037	0.13	1.70	45	<0.05	8.92	66	0.9
YY10086		0.147	0.49	0.38	108	<0.05	8.43	108	1.0
YY10087		0.048	0.21	0.69	77	0.09	12.60	89	0.6
YY10088		0.030	0.20	1.11	39	0.10	15.25	187	2.6
YY10089		0.035	0.14	0.74	47	0.06	12.05	124	1.5
YY10090		0.115	0.23	1.25	71	0.10	9.26	128	1.0
YY10091		0.097	0.34	1.01	64	0.07	7.69	141	1.5
YY10092		0.014	0.31	0.56	30	0.05	8.75	553	2.8
YY10093		0.028	0.72	15.55	27	0.06	64.2	3810	0.7
YY10094		0.028	0.83	8.08	64	0.15	26.6	212	2.0
YY10095		0.008	0.29	1.08	38	0.08	18.20	1040	2.0
YY10096		0.018	1.11	7.03	38	0.20	35.7	355	2.5
YY10097		0.013	0.25	0.59	41	0.13	10.30	181	2.8
YY10098		0.020	1.03	4.75	63	0.13	7.02	151	0.8
YY10099		0.012	2.68	4.17	83	0.09	7.32	252	1.9
YY10100		0.017	2.07	8.78	91	0.13	10.75	112	<0.5
YY10101		0.007	0.26	2.94	39	0.07	15.20	346	3.1
YY10102		0.008	0.18	2.00	49	0.07	15.95	253	3.2
YY10103		0.008	0.15	0.62	32	0.11	6.33	158	2.0
YY10104		0.011	0.37	0.81	35	0.59	4.89	79	2.7
YY10105		<0.005	0.54	0.21	23	1.21	0.84	8	10.5
YY10106		0.009	0.17	0.72	35	0.50	6.50	79	1.4
YY10107		0.010	0.13	0.80	32	0.19	7.87	145	1.6
YY10108		0.015	0.13	0.94	33	0.16	11.90	146	1.6
YY10109		0.014	0.10	0.94	32	0.10	9.01	138	1.8
YY10111		0.010	0.11	1.08	30	0.14	7.77	149	1.5
YY10112		0.009	0.19	1.95	28	0.12	13.30	206	2.4
YY10113		0.014	0.25	1.22	28	0.18	5.04	63	1.6
YY10114		0.014	0.21	0.97	26	0.13	2.29	37	0.9
YY10115		0.012	0.31	0.83	36	0.22	4.26	62	1.3
YY10116		0.009	0.16	0.66	32	0.08	9.31	140	3.6
YY10117		0.010	0.22	1.35	47	0.24	8.62	81	2.1
YY10118		0.017	0.16	0.81	45	0.14	12.20	128	2.5
YY10119		0.011	0.62	4.30	50	0.32	13.50	84	3.1
YY10120		0.009	0.26	0.78	34	0.10	11.65	170	3.2
YY10121		0.017	0.18	0.85	38	0.13	10.95	302	2.1

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North Vancouver BC V7H 0A7
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CERTIFICATE OF ANALYSIS WH19146734

Sample Description	Method	WEI-21	Au-ICP21	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Recvd Wt.	Au	Ag	Al	As	Au	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr
	Units	kg	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
	LOD	0.02	0.001	0.01	0.01	0.1	0.02	10	10	0.05	0.01	0.01	0.01	0.02	0.1	1
YY10122		0.20	<0.001	0.25	1.16	15.5	<0.02	<10	220	0.49	0.17	0.94	1.21	15.85	6.3	17
YY10123		0.16	0.002	0.48	1.82	21.8	<0.02	<10	520	0.88	0.24	0.40	0.38	36.8	10.7	30
YY10124		0.31	0.001	0.88	1.02	12.8	<0.02	<10	90	0.65	0.15	0.31	0.88	82.2	8.9	21
YY10125		0.23	0.001	0.36	1.09	7.2	<0.02	<10	130	0.42	0.13	5.89	3.09	12.25	4.2	25
YY10126		0.30	0.001	0.16	2.91	31.9	<0.02	<10	240	1.30	0.32	0.41	0.67	32.2	17.6	37
YY10127		0.28	<0.001	0.09	6.80	65.8	<0.02	<10	220	2.31	0.58	0.47	0.34	24.7	8.7	56
YY10128		0.31	<0.001	0.11	2.21	25.4	<0.02	<10	160	0.90	0.31	0.30	0.46	17.80	15.0	30
YY10129		0.18	<0.001	0.06	2.17	38.8	<0.02	<10	120	0.86	0.32	0.59	0.37	14.60	12.9	31
YY10130		0.10	0.014	0.24	2.02	18.7	<0.02	<10	210	0.86	0.20	1.95	0.94	11.70	10.2	27
YY19001		0.33	0.006	0.48	1.46	49.0	<0.02	<10	300	1.26	0.30	0.45	0.62	20.6	11.6	26
YY19002		0.39	0.001	0.17	1.92	25.1	<0.02	<10	280	0.82	0.24	0.29	0.50	34.4	12.4	32
YY19003		0.20	<0.001	0.05	1.91	18.3	<0.02	<10	200	0.60	0.28	0.23	0.36	21.8	7.5	30
YY19004		0.22	<0.001	0.07	1.92	16.3	<0.02	<10	140	0.57	0.25	0.06	0.35	20.6	6.2	30
YY19005		0.26	<0.001	0.10	2.35	14.8	<0.02	<10	130	0.78	0.25	0.14	0.37	24.6	8.5	33
YY19006		0.34	<0.001	0.14	1.93	13.5	<0.02	<10	180	0.73	0.24	0.10	0.50	31.2	12.2	29
YY19007		0.30	<0.001	0.08	2.21	16.1	<0.02	<10	190	0.70	0.27	0.11	0.22	22.4	7.7	30
YY19008		0.23	<0.001	0.03	2.03	21.1	<0.02	<10	100	0.48	0.33	0.06	0.14	15.20	2.2	38
YY19009		0.18	<0.001	0.42	2.50	19.7	<0.02	<10	240	1.03	0.24	0.39	0.28	22.9	11.4	34
YY19010		0.30	<0.001	0.12	2.01	13.4	<0.02	<10	140	0.76	0.24	0.17	0.31	28.1	10.9	30
YY19011		0.40	<0.001	0.14	2.16	16.7	<0.02	<10	240	0.89	0.25	0.30	0.26	27.6	11.4	32
YY19012		0.35	<0.001	0.11	3.09	21.1	<0.02	<10	290	1.19	0.50	0.20	0.22	25.4	10.9	45
YY19013		0.35	<0.001	0.03	2.01	21.2	<0.02	<10	100	0.44	0.34	0.07	0.20	26.1	14.4	36
YY19014		0.39	<0.001	0.05	2.06	17.8	<0.02	<10	190	0.75	0.26	0.17	0.33	31.1	14.5	31
YY19015		0.27	<0.001	0.33	2.11	17.3	<0.02	<10	230	0.93	0.25	0.99	0.92	30.8	12.7	36
YY19016		0.31	0.001	0.12	2.00	24.1	<0.02	<10	290	0.81	0.24	0.15	0.41	29.0	11.7	28
YY19017		0.20	<0.001	0.06	1.22	10.3	<0.02	<10	150	0.23	0.21	0.04	0.08	24.3	2.5	18
YY19018		0.42	0.001	0.10	1.30	20.8	<0.02	<10	200	0.35	0.24	0.05	0.22	26.9	7.1	22
YY19019		0.25	<0.001	0.62	1.60	13.2	<0.02	<10	200	0.39	0.24	0.06	0.16	24.4	4.8	24
YY19020		0.40	<0.001	1.55	1.35	10.4	<0.02	<10	100	0.21	0.25	0.06	0.10	21.1	2.5	22
YY19021		0.32	0.001	7.87	1.99	16.7	<0.02	<10	140	0.32	0.27	0.05	0.20	22.9	6.1	32
YY19022		0.44	0.005	9.31	1.45	15.1	<0.02	<10	140	0.30	0.27	0.05	0.29	33.3	5.5	27
YY19023		0.38	0.002	0.36	1.93	34.9	<0.02	<10	290	1.01	0.29	0.66	0.80	29.5	8.8	31
YY19024		0.25	<0.001	0.70	2.39	23.7	<0.02	<10	300	0.83	0.30	0.13	0.59	57.7	11.8	37
YY19025		0.30	<0.001	0.16	1.44	18.8	<0.02	<10	290	0.37	0.24	0.07	0.18	24.4	5.8	22
YY19026		0.33	0.001	0.22	1.70	27.2	<0.02	<10	540	0.90	0.27	0.04	0.38	38.2	11.5	23
YY19027		0.41	0.003	0.18	1.53	29.9	<0.02	<10	490	0.73	0.25	0.08	0.28	35.6	9.9	20
YY19028		0.40	0.003	0.30	0.57	18.0	<0.02	<10	110	0.14	0.36	0.02	0.06	91.2	2.6	18
YY19029		0.30	0.001	2.03	1.85	20.4	<0.02	<10	180	0.35	0.25	0.05	0.21	26.6	6.3	30
YY19030		0.32	0.003	7.75	1.84	25.7	<0.02	<10	200	0.44	0.26	0.09	0.26	26.0	7.1	31
YY19031		0.30	0.003	1.97	1.36	24.5	<0.02	<10	280	0.44	0.27	0.06	0.26	24.5	6.2	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
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: 29-JUN-2019
Account: RCM

Project: RAU

CERTIFICATE OF ANALYSIS WH19146734

Sample Description	Method	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Cs	Cu	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na
	Units	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%
	LOD	0.05	0.2	0.01	0.05	0.05	0.02	0.01	0.005	0.01	0.2	0.1	0.01	5	0.05	0.01
YY10122		0.91	21.2	2.40	2.97	<0.05	0.07	0.04	0.019	0.07	8.8	15.9	0.46	287	3.27	0.01
YY10123		1.16	25.1	3.44	4.63	0.06	0.05	0.07	0.037	0.07	19.6	17.4	0.52	799	1.88	0.01
YY10124		0.89	27.3	2.60	1.59	0.10	0.05	0.11	0.033	0.03	52.0	7.0	0.11	437	3.02	<0.01
YY10125		0.84	9.3	1.54	2.56	<0.05	<0.02	0.08	0.017	0.03	9.1	8.1	0.10	277	0.72	<0.01
YY10126		2.96	41.4	4.64	6.85	0.05	0.08	0.05	0.032	0.14	17.0	44.0	1.00	580	4.88	0.04
YY10127		5.70	34.9	5.43	13.10	0.09	0.17	0.02	0.048	0.36	12.4	70.9	1.57	557	12.80	0.20
YY10128		2.91	25.3	3.15	7.55	0.05	0.02	0.04	0.027	0.11	9.0	30.0	0.59	478	5.84	0.01
YY10129		3.88	25.7	3.88	7.15	0.05	0.04	0.02	0.029	0.22	7.6	30.4	0.81	912	15.25	0.01
YY10130		2.49	32.7	2.46	4.75	0.05	0.09	0.06	0.023	0.09	6.7	25.7	0.74	597	3.64	0.06
YY19001		4.14	47.7	5.34	3.77	0.06	0.05	0.05	0.076	0.19	11.7	29.1	0.75	184	7.76	0.01
YY19002		1.45	21.3	3.50	5.04	0.06	0.04	0.06	0.031	0.07	19.3	17.7	0.61	1250	2.61	<0.01
YY19003		2.02	16.9	3.38	5.42	<0.05	0.02	0.02	0.026	0.09	12.2	25.5	0.55	289	3.65	0.01
YY19004		3.21	15.0	3.20	5.77	<0.05	<0.02	0.02	0.022	0.08	11.1	29.2	0.57	337	3.41	<0.01
YY19005		3.39	14.8	2.95	6.19	<0.05	0.02	0.04	0.027	0.06	11.8	31.0	0.57	236	2.12	<0.01
YY19006		1.90	16.6	2.62	5.15	<0.05	0.02	0.04	0.025	0.06	14.2	19.5	0.54	382	2.11	<0.01
YY19007		2.62	16.7	2.98	6.65	<0.05	0.02	0.04	0.026	0.09	11.3	24.5	0.45	321	3.74	0.01
YY19008		5.84	13.5	2.18	9.07	<0.05	0.02	0.02	0.018	0.20	7.6	19.1	0.62	375	8.40	0.02
YY19009		3.21	29.7	3.22	6.70	0.05	0.06	0.06	0.030	0.12	12.0	29.0	0.92	707	5.84	0.02
YY19010		2.27	17.8	3.05	5.23	<0.05	0.04	0.03	0.025	0.07	13.1	26.9	0.54	258	4.69	<0.01
YY19011		2.26	25.6	3.26	5.83	0.05	0.03	0.03	0.025	0.09	14.1	32.3	0.73	442	3.00	0.01
YY19012		6.25	27.6	4.28	9.07	0.06	0.04	0.02	0.021	0.40	12.1	41.6	0.87	417	8.42	0.05
YY19013		3.04	21.1	3.68	7.62	<0.05	<0.02	0.02	0.027	0.06	11.2	29.8	0.63	429	2.99	<0.01
YY19014		2.06	18.5	3.31	5.00	0.05	0.02	0.04	0.030	0.07	14.4	21.8	0.53	427	2.46	<0.01
YY19015		2.16	21.4	3.36	4.94	0.06	0.04	0.09	0.033	0.08	22.7	22.0	0.54	418	2.04	0.01
YY19016		1.89	24.5	3.54	4.65	0.05	0.07	0.03	0.032	0.10	13.0	25.7	0.49	573	3.69	0.01
YY19017		1.14	6.7	1.58	5.26	<0.05	<0.02	0.03	0.020	0.05	12.5	8.2	0.16	91	2.46	<0.01
YY19018		1.03	15.7	2.86	4.48	<0.05	<0.02	0.07	0.032	0.08	13.4	10.8	0.26	360	4.45	<0.01
YY19019		1.16	9.5	2.41	5.02	<0.05	<0.02	0.06	0.025	0.04	12.3	12.0	0.26	205	3.42	<0.01
YY19020		1.45	8.1	1.90	5.63	<0.05	<0.02	0.07	0.021	0.04	10.8	7.9	0.20	86	2.50	<0.01
YY19021		1.38	14.4	3.53	6.19	<0.05	0.02	0.13	0.031	0.05	10.7	18.2	0.34	312	2.74	<0.01
YY19022		1.14	11.9	2.51	4.09	<0.05	<0.02	0.13	0.024	0.05	17.6	14.1	0.31	259	3.30	<0.01
YY19023		2.28	42.8	4.14	4.98	0.05	0.07	0.06	0.049	0.12	17.7	23.8	0.67	296	4.74	0.02
YY19024		2.48	20.8	4.02	5.33	0.06	0.06	0.06	0.041	0.08	28.1	19.1	0.45	383	1.62	<0.01
YY19025		1.31	13.1	2.93	4.82	<0.05	0.02	0.04	0.034	0.08	12.6	13.9	0.28	356	5.70	<0.01
YY19026		1.59	30.6	3.09	3.96	0.05	0.07	0.20	0.042	0.14	21.8	20.7	0.44	449	6.17	0.01
YY19027		1.26	23.9	2.76	3.49	<0.05	0.07	0.21	0.037	0.14	17.5	14.6	0.35	508	6.79	<0.01
YY19028		1.26	7.8	1.93	4.55	0.08	0.03	0.07	0.031	0.05	53.7	5.1	0.10	166	20.1	<0.01
YY19029		1.33	13.9	3.37	5.53	<0.05	<0.02	0.16	0.047	0.06	13.3	18.4	0.32	256	3.92	<0.01
YY19030		1.33	13.9	3.70	5.78	<0.05	<0.02	0.18	0.046	0.06	12.7	20.3	0.36	372	3.30	<0.01
YY19031		1.18	17.8	3.18	3.94	<0.05	0.02	0.09	0.035	0.12	13.4	15.1	0.32	314	6.97	<0.01

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2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 (604) 984 0221 Fax: +1 (604) 984 0218
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	Analyte	Nb	Ni	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th
	Units	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.05	0.2	10	0.2	0.1	0.001	0.01	0.05	0.1	0.2	0.2	0.2	0.01	0.01	0.2
YY10122		0.13	26.1	680	16.7	6.9	<0.001	0.05	1.14	1.7	1.3	0.2	28.0	<0.01	0.04	2.1
YY10123		0.54	31.9	600	24.9	10.2	<0.001	0.02	1.31	4.7	0.7	0.5	18.8	<0.01	0.05	3.0
YY10124		0.24	55.0	750	14.9	7.0	<0.001	0.03	1.16	3.8	3.0	0.2	11.7	0.01	0.05	2.6
YY10125		0.61	9.8	1560	8.8	5.7	<0.001	0.09	0.52	0.9	0.5	0.3	25.3	<0.01	0.04	0.2
YY10126		0.23	51.5	1300	29.6	19.5	<0.001	0.10	1.50	4.6	1.0	0.4	58.0	<0.01	0.04	7.1
YY10127		0.25	27.2	1800	44.9	43.9	<0.001	0.52	0.93	6.8	1.2	0.6	124.5	<0.01	0.09	11.3
YY10128		0.53	44.2	900	20.6	19.5	<0.001	0.09	0.89	2.5	0.8	0.6	26.8	<0.01	0.06	1.2
YY10129		0.26	33.2	1120	17.5	22.1	0.001	0.08	0.78	2.7	1.2	0.5	19.2	<0.01	0.05	2.8
YY10130		0.32	43.8	1080	17.1	18.6	0.001	0.15	0.94	2.7	0.9	0.3	56.8	<0.01	0.03	1.6
YY19001		0.38	38.9	1060	52.5	21.4	<0.001	0.35	3.97	1.9	1.6	0.4	45.3	<0.01	0.07	6.2
YY19002		0.51	37.6	700	19.7	13.2	<0.001	0.02	1.03	3.6	0.8	0.4	15.1	<0.01	0.05	1.8
YY19003		0.37	28.2	1170	21.6	15.5	<0.001	0.06	1.04	1.7	0.8	0.4	17.2	<0.01	0.04	1.6
YY19004		0.16	21.9	1390	18.4	25.0	<0.001	0.07	0.74	0.7	0.6	0.4	14.0	<0.01	0.03	0.4
YY19005		0.37	29.0	1420	14.2	17.3	<0.001	0.05	0.61	1.0	0.8	0.5	11.3	<0.01	0.03	0.5
YY19006		0.53	27.2	850	14.5	18.5	<0.001	0.03	0.75	2.3	0.3	0.5	11.8	<0.01	0.03	1.2
YY19007		0.32	24.0	1010	21.3	15.9	<0.001	0.06	0.70	1.2	0.8	0.5	18.9	<0.01	0.03	0.6
YY19008		0.58	9.6	910	14.4	24.0	<0.001	0.14	0.52	1.8	0.5	0.8	24.9	<0.01	0.04	0.5
YY19009		0.58	37.2	1110	21.8	20.4	<0.001	0.04	1.34	4.6	0.5	0.5	37.7	<0.01	0.02	4.1
YY19010		0.89	30.4	750	15.9	18.0	<0.001	0.02	0.61	2.9	0.4	0.4	15.7	<0.01	0.02	3.6
YY19011		0.44	33.9	970	18.7	17.1	<0.001	0.04	0.83	3.0	0.6	0.4	30.7	<0.01	0.04	2.7
YY19012		0.61	30.2	1470	19.4	41.2	<0.001	0.36	0.79	4.0	0.8	0.6	96.0	<0.01	0.06	4.3
YY19013		0.75	41.5	720	15.5	13.0	<0.001	0.04	0.92	2.5	0.8	0.6	11.9	<0.01	0.04	1.0
YY19014		0.54	41.5	1180	16.9	14.7	<0.001	0.04	1.02	2.2	1.2	0.4	14.0	<0.01	0.04	1.3
YY19015		0.48	50.0	2060	20.4	16.5	<0.001	0.04	1.14	3.0	0.7	0.4	22.9	<0.01	0.04	1.5
YY19016		0.42	36.8	1030	25.6	14.3	<0.001	0.04	1.60	2.4	1.3	0.4	18.8	<0.01	0.06	2.8
YY19017		0.42	8.8	490	15.1	7.7	<0.001	0.01	0.70	1.1	0.8	0.6	7.4	<0.01	0.03	0.5
YY19018		0.23	20.6	680	27.6	8.9	<0.001	0.04	1.77	0.8	1.6	0.5	10.9	<0.01	0.05	0.2
YY19019		0.72	12.5	520	16.6	7.8	<0.001	0.02	1.21	1.6	1.5	0.5	8.1	<0.01	0.04	0.8
YY19020		0.21	7.4	950	13.1	7.9	<0.001	0.03	1.00	0.3	2.3	0.6	9.2	<0.01	0.04	<0.2
YY19021		1.46	16.3	990	16.5	9.4	<0.001	0.02	1.46	2.5	2.0	0.6	7.7	<0.01	0.06	3.0
YY19022		0.86	14.2	480	19.2	9.4	<0.001	0.02	1.96	1.8	1.9	1.3	6.3	<0.01	0.08	1.8
YY19023		0.30	37.0	1290	36.1	15.9	<0.001	0.20	1.66	3.2	1.1	0.4	34.8	<0.01	0.08	4.6
YY19024		0.88	28.2	1030	23.2	11.8	<0.001	0.06	1.36	4.1	1.2	0.5	17.3	<0.01	0.07	4.9
YY19025		0.54	15.7	750	22.7	10.6	<0.001	0.04	2.02	1.6	2.2	0.5	12.4	<0.01	0.06	1.2
YY19026		0.41	36.6	480	32.7	13.7	<0.001	0.09	2.87	3.8	1.7	0.4	13.9	<0.01	0.08	6.5
YY19027		0.44	27.3	670	35.7	11.2	<0.001	0.07	3.37	2.7	2.1	0.4	15.9	<0.01	0.07	4.4
YY19028		0.55	7.3	410	46.9	6.5	<0.001	0.03	6.11	1.0	4.3	0.4	37.1	<0.01	0.13	5.1
YY19029		1.02	14.9	670	13.0	11.4	<0.001	0.05	2.57	2.1	4.2	0.5	10.7	<0.01	0.07	1.4
YY19030		0.86	17.0	2080	15.7	12.7	<0.001	0.04	4.03	2.1	5.6	0.5	11.3	<0.01	0.07	1.4
YY19031		0.58	20.1	1130	27.4	13.2	<0.001	0.08	3.24	1.7	3.3	0.5	21.9	<0.01	0.07	2.4

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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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Sample Description	Method	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Ti	Tl	U	V	W	Y	Zn	Zr
	Units	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.005	0.02	0.05	1	0.05	0.05	2	0.5
YY10122		0.005	0.12	0.74	24	0.05	6.51	113	2.2
YY10123		0.017	0.16	1.07	49	0.14	15.65	105	1.4
YY10124		0.011	0.14	0.84	18	0.24	39.0	141	1.7
YY10125		0.016	0.11	0.58	30	0.10	24.9	90	0.5
YY10126		0.021	0.37	1.74	46	0.06	10.25	148	3.4
YY10127		0.073	0.72	2.73	68	0.06	8.92	101	7.5
YY10128		0.038	0.34	1.61	56	0.14	6.27	114	0.7
YY10129		0.036	0.41	2.25	56	0.09	5.41	103	2.0
YY10130		0.028	0.41	2.92	36	0.06	8.62	116	3.6
YY19001		0.026	0.94	1.26	37	0.15	12.40	238	3.0
YY19002		0.022	0.21	1.11	51	0.20	18.50	114	1.1
YY19003		0.012	0.32	0.90	45	0.10	5.32	101	0.6
YY19004		0.009	0.38	0.91	42	0.10	3.27	89	<0.5
YY19005		0.016	0.35	1.17	46	0.11	6.26	83	<0.5
YY19006		0.032	0.23	1.42	46	0.21	7.75	113	0.7
YY19007		0.016	0.37	1.18	46	0.11	4.89	73	0.5
YY19008		0.068	0.36	1.39	56	0.13	3.23	37	1.1
YY19009		0.046	0.36	2.28	51	0.14	10.45	115	2.1
YY19010		0.033	0.20	1.04	47	0.19	5.70	102	1.2
YY19011		0.027	0.27	1.33	42	0.13	8.11	106	1.1
YY19012		0.067	0.72	1.73	65	0.12	5.72	80	1.4
YY19013		0.044	0.23	0.81	66	0.18	2.99	102	<0.5
YY19014		0.026	0.24	1.20	50	0.21	7.46	130	0.7
YY19015		0.020	0.27	1.34	44	0.15	31.8	126	1.1
YY19016		0.015	0.29	1.07	42	0.13	6.33	120	2.0
YY19017		0.016	0.23	0.60	40	0.13	2.22	37	<0.5
YY19018		0.016	0.34	0.91	52	0.14	3.49	78	<0.5
YY19019		0.023	0.17	0.74	51	0.21	2.79	57	<0.5
YY19020		0.010	0.17	0.82	48	0.20	2.18	32	<0.5
YY19021		0.036	0.19	0.68	70	0.28	2.17	77	0.8
YY19022		0.031	0.17	0.63	45	0.25	2.28	71	<0.5
YY19023		0.013	0.59	2.56	42	0.16	12.90	135	3.2
YY19024		0.026	0.23	1.20	55	0.22	10.85	99	2.2
YY19025		0.014	0.26	1.00	56	0.21	3.37	79	0.6
YY19026		0.021	0.58	1.43	46	0.14	9.03	101	4.6
YY19027		0.018	0.47	1.08	50	0.18	5.55	99	2.6
YY19028		0.022	0.28	0.55	29	0.30	1.88	32	2.4
YY19029		0.037	0.32	0.87	57	0.26	2.69	66	0.5
YY19030		0.031	0.27	1.01	63	0.34	3.15	68	0.6
YY19031		0.018	0.43	0.86	49	0.22	2.58	101	0.6

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CERTIFICATE OF ANALYSIS WH19146734

Sample Description	Method	WEI-21	Au-ICP21	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Recvd Wt.	Au	Ag	Al	As	Au	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr
	Units	kg	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
	LOD	0.02	0.001	0.01	0.01	0.1	0.02	10	10	0.05	0.01	0.01	0.01	0.02	0.1	1
YY19032		0.44	0.002	0.52	0.56	21.3	<0.02	<10	200	0.27	0.15	0.05	1.31	30.0	5.4	12
YY19033		0.36	0.002	0.26	1.34	20.1	<0.02	<10	300	0.51	0.26	0.14	0.36	26.1	8.0	22
YY19034		0.28	0.148	3.44	0.32	84.8	0.07	<10	280	0.12	20.4	0.02	0.13	27.4	1.1	14
YY19035		0.31	0.013	0.89	1.72	109.5	<0.02	<10	250	0.37	1.34	0.05	0.42	31.4	8.2	32
YY19036		0.27	0.003	0.63	1.80	37.8	<0.02	<10	230	0.52	1.07	0.11	0.48	27.9	8.6	30
YY19037		0.24	0.021	1.80	0.60	44.8	<0.02	<10	320	0.22	1.99	0.35	0.71	43.3	3.4	15
YY19038		0.15	0.009	2.71	1.34	55.4	<0.02	<10	860	0.51	0.34	0.87	0.55	35.2	10.2	26
YY19039		0.34	0.029	1.53	1.18	28.0	0.02	<10	250	0.38	0.89	0.09	0.25	31.6	9.1	19
YY19040		0.34	0.012	2.41	0.41	20.9	<0.02	<10	390	0.09	0.52	0.02	0.05	24.7	1.4	11
YY19041		0.27	0.015	4.18	0.70	41.3	<0.02	<10	240	0.17	1.28	0.03	0.28	40.3	2.0	19
YY19042		0.35	0.014	1.05	1.05	84.9	<0.02	<10	430	0.41	0.36	0.10	0.63	36.3	5.7	19
YY19043		0.32	0.077	3.20	1.47	103.0	0.05	<10	360	0.45	13.65	0.06	0.39	34.0	6.0	28
YY19044		0.33	<0.001	0.17	1.06	21.8	<0.02	<10	320	0.16	0.15	4.55	0.33	16.15	133.5	58
YY19045		0.15	0.001	0.11	0.89	5.4	<0.02	<10	130	0.14	0.12	3.40	0.29	9.15	29.7	68
YY19046		0.34	0.003	0.42	1.24	15.8	<0.02	<10	290	0.54	0.23	1.54	0.76	26.5	13.0	26
YY19047		0.32	<0.001	0.18	4.26	13.8	<0.02	<10	1260	0.60	0.35	4.18	0.15	19.40	62.6	209
YY19048		0.24	<0.001	0.05	1.34	10.7	<0.02	<10	190	0.14	0.07	0.36	0.16	12.20	83.7	78
YY19049		0.31	<0.001	0.08	4.06	62.4	<0.02	<10	300	0.44	0.55	1.66	0.10	25.3	58.3	438
YY19050		0.32	0.001	0.51	3.69	1.3	<0.02	<10	350	0.55	0.07	4.51	0.65	33.1	67.0	142
YY19051		0.27	<0.001	0.62	1.59	11.3	<0.02	<10	320	0.53	0.24	0.35	14.05	27.7	14.1	29
YY19052		0.27	0.002	1.48	1.47	43.8	<0.02	<10	100	0.34	0.18	0.07	0.99	42.1	6.4	26
YY19053		0.32	0.002	0.40	1.95	18.9	<0.02	<10	260	1.62	0.27	0.55	27.1	25.1	32.3	25
YY19054		0.18	<0.001	0.56	0.99	6.0	<0.02	<10	110	0.70	0.18	0.05	5.94	23.9	2.5	17
YY19055		0.25	0.001	2.40	2.28	15.3	<0.02	<10	220	0.85	0.23	0.07	0.96	44.6	8.9	31
YY19056		0.33	<0.001	0.73	0.95	27.3	<0.02	<10	110	0.15	0.25	0.04	0.17	24.3	2.7	19
YY19057		0.30	<0.001	1.10	1.21	30.9	<0.02	<10	70	0.27	0.31	0.04	0.38	22.0	3.3	22
YY19058		0.25	0.003	1.56	1.11	35.8	<0.02	<10	470	0.20	0.24	0.15	0.88	26.4	3.5	22
YY19059		0.34	0.002	0.69	1.71	22.4	<0.02	<10	280	0.36	0.29	0.07	0.33	30.4	4.5	34
YY19060		0.40	0.004	0.80	0.58	30.5	<0.02	<10	100	0.09	0.38	0.02	0.16	20.9	2.3	13
YY19061		0.43	0.009	1.36	0.47	60.5	<0.02	<10	360	0.10	1.26	0.02	0.05	21.6	1.0	13
YY19062		0.31	0.045	2.58	0.55	48.6	0.04	<10	220	0.13	11.85	0.04	0.15	29.5	1.5	14
YY19063		0.26	0.002	0.82	0.84	38.5	<0.02	<10	640	0.14	0.45	0.04	0.18	25.4	2.2	15
YY19064		0.33	0.021	2.30	0.38	39.0	<0.02	<10	390	0.18	0.38	0.02	0.15	39.1	2.4	13
YY19065		0.34	0.025	2.21	1.04	33.6	<0.02	<10	430	0.53	1.83	0.38	0.92	36.1	9.1	23
YY19066		0.18	0.022	1.57	1.07	20.6	<0.02	<10	870	0.57	1.13	1.42	1.48	23.4	9.1	20
YY19067		0.21	0.011	5.28	0.44	31.8	<0.02	<10	260	0.26	0.49	1.00	1.43	22.7	2.4	18
YY19068		0.19	0.007	3.64	1.01	26.1	<0.02	<10	400	0.44	0.32	1.79	4.71	20.5	5.4	20
YY19069		0.32	0.004	1.17	0.86	15.0	<0.02	<10	550	0.47	0.16	2.07	6.65	25.2	9.3	15
YY19070		0.24	0.007	2.58	0.83	17.4	<0.02	<10	560	0.44	0.21	0.84	0.64	26.7	5.1	17
YY19071		0.36	0.007	3.30	0.87	21.7	<0.02	<10	590	0.40	0.24	0.11	0.57	34.1	5.1	17

***** 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
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: 29-JUN-2019
Account: RCM

Project: RAU

CERTIFICATE OF ANALYSIS WH19146734

Sample Description	Method	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Cs	Cu	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na
	Units	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%
	LOD	0.05	0.2	0.01	0.05	0.05	0.02	0.01	0.005	0.01	0.2	0.1	0.01	5	0.05	0.01
YY19032		0.50	49.2	2.10	1.40	0.05	<0.02	0.17	0.024	0.05	16.6	6.0	0.14	283	5.31	<0.01
YY19033		0.93	28.0	3.02	3.68	<0.05	0.04	0.05	0.035	0.10	13.1	14.9	0.38	466	4.01	<0.01
YY19034		0.46	11.7	2.03	2.13	0.08	<0.02	0.04	0.037	0.08	18.5	2.4	0.06	56	5.80	<0.01
YY19035		2.76	34.5	5.03	8.35	0.05	<0.02	0.04	0.043	0.12	18.1	14.5	0.72	336	6.70	<0.01
YY19036		1.42	14.4	3.09	6.41	0.05	0.04	0.03	0.044	0.06	14.9	17.9	0.39	372	2.62	<0.01
YY19037		1.07	19.7	1.78	3.03	0.05	<0.02	0.08	0.072	0.07	25.4	6.4	0.20	102	5.66	<0.01
YY19038		1.35	31.9	2.65	4.36	0.07	0.03	0.24	0.061	0.08	18.9	13.4	0.47	672	5.77	<0.01
YY19039		0.62	25.6	2.50	2.75	0.05	0.10	0.33	0.037	0.06	16.4	12.5	0.28	570	7.21	<0.01
YY19040		0.68	7.5	1.21	2.83	0.05	<0.02	0.11	0.018	0.04	15.6	1.7	0.05	71	11.00	<0.01
YY19041		0.81	11.3	2.08	6.48	0.05	<0.02	0.08	0.079	0.06	23.3	2.9	0.10	87	11.45	<0.01
YY19042		0.98	16.8	3.17	4.15	0.05	<0.02	0.09	0.049	0.09	18.8	9.7	0.30	303	7.59	<0.01
YY19043		2.04	22.3	3.78	6.09	0.05	<0.02	0.10	0.125	0.12	19.1	14.6	0.39	277	7.78	<0.01
YY19044		1.72	132.5	3.97	2.67	<0.05	0.22	0.01	0.029	0.05	7.9	9.9	0.77	825	1.38	0.01
YY19045		0.53	41.3	2.42	2.80	<0.05	0.04	0.04	0.019	0.02	4.3	7.6	0.39	616	0.85	0.02
YY19046		0.76	31.1	3.10	3.68	<0.05	0.03	0.09	0.034	0.07	14.0	14.0	0.78	809	1.87	<0.01
YY19047		9.03	93.0	7.72	14.50	0.09	0.04	0.02	0.073	0.70	9.9	41.9	3.78	758	1.79	0.01
YY19048		1.29	52.1	7.31	3.76	<0.05	0.08	0.01	0.037	0.04	5.1	13.9	0.88	1200	3.56	<0.01
YY19049		3.43	39.2	6.94	17.75	0.12	<0.02	0.03	0.109	0.14	12.7	33.4	1.82	1970	1.06	0.06
YY19050		6.83	123.0	9.38	14.85	0.34	0.04	0.01	0.065	0.36	18.2	37.0	3.85	1180	1.26	<0.01
YY19051		3.05	80.7	2.85	5.95	0.05	<0.02	0.10	0.053	0.05	15.4	26.0	0.38	509	35.0	<0.01
YY19052		10.40	155.0	8.49	4.97	0.12	<0.02	0.12	0.098	0.17	19.8	11.3	0.72	308	11.05	<0.01
YY19053		9.81	174.0	3.23	3.93	0.06	0.02	0.06	0.037	0.11	12.8	29.4	0.58	968	4.42	<0.01
YY19054		8.30	204	1.45	3.66	0.05	<0.02	0.04	0.020	0.07	13.5	6.9	0.23	78	2.52	<0.01
YY19055		3.05	82.8	3.23	5.89	0.05	0.04	0.12	0.055	0.06	23.2	18.0	0.37	199	7.83	<0.01
YY19056		1.17	10.0	2.48	6.10	<0.05	0.02	0.04	0.024	0.05	13.0	7.1	0.15	115	7.92	<0.01
YY19057		3.45	15.2	3.56	8.33	<0.05	0.04	0.06	0.027	0.04	11.1	11.1	0.29	140	15.15	<0.01
YY19058		2.23	29.7	2.78	6.26	0.05	<0.02	0.28	0.036	0.04	13.9	8.6	0.24	58	21.6	<0.01
YY19059		1.82	14.8	3.24	7.88	0.05	<0.02	0.06	0.044	0.06	17.6	15.9	0.31	160	11.30	<0.01
YY19060		0.75	8.1	2.29	6.56	<0.05	<0.02	0.02	0.017	0.03	10.8	1.4	0.04	88	4.79	<0.01
YY19061		0.73	9.7	1.43	3.25	<0.05	<0.02	0.07	0.040	0.04	13.5	2.7	0.05	39	7.28	<0.01
YY19062		0.76	9.5	1.49	5.50	<0.05	<0.02	0.04	0.044	0.07	17.5	2.7	0.08	64	17.10	<0.01
YY19063		0.83	8.7	2.18	7.77	<0.05	<0.02	0.05	0.018	0.06	13.1	3.7	0.09	85	7.07	<0.01
YY19064		0.42	15.4	1.61	2.18	0.07	0.10	0.54	0.052	0.03	24.6	4.3	0.09	87	5.83	<0.01
YY19065		0.78	29.0	2.54	3.38	0.05	0.06	0.10	0.062	0.07	19.0	15.1	0.44	365	6.32	0.01
YY19066		0.71	33.3	2.42	2.88	<0.05	0.07	0.17	0.045	0.08	13.7	12.9	0.46	668	3.49	<0.01
YY19067		1.00	26.6	1.70	2.30	<0.05	<0.02	0.11	0.063	0.05	14.8	2.8	0.20	73	4.32	<0.01
YY19068		0.95	32.6	1.99	2.60	0.06	0.07	0.27	0.043	0.07	11.6	9.2	0.48	427	2.49	<0.01
YY19069		0.59	58.1	1.91	2.42	<0.05	0.05	0.14	0.034	0.08	14.2	9.5	0.88	425	3.50	<0.01
YY19070		0.62	22.8	1.97	2.56	0.05	0.07	0.23	0.042	0.08	16.2	8.2	0.41	233	5.20	0.03
YY19071		0.88	19.3	2.15	2.75	0.05	<0.02	0.25	0.049	0.11	19.9	9.7	0.20	149	7.74	0.02

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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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Sample Description	Method	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Nb	Ni	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th
	Units	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.05	0.2	10	0.2	0.1	0.001	0.01	0.05	0.1	0.2	0.2	0.2	0.01	0.01	0.2
YY19032		0.17	39.0	430	15.8	4.1	<0.001	0.02	3.09	1.7	1.9	0.2	22.7	<0.01	0.06	2.6
YY19033		0.34	25.5	520	32.9	10.9	<0.001	0.02	2.25	2.3	1.9	0.5	10.3	<0.01	0.05	2.6
YY19034		0.17	6.7	2330	45.4	6.2	0.001	0.12	6.68	0.5	20.3	3.1	13.3	<0.01	0.26	0.8
YY19035		0.81	33.3	1280	37.2	15.8	0.001	0.14	4.63	3.0	4.6	2.0	38.7	<0.01	0.11	3.4
YY19036		1.06	19.3	1280	35.5	14.8	<0.001	0.02	4.69	3.5	2.5	1.6	14.1	<0.01	0.06	4.2
YY19037		0.27	17.9	880	85.4	8.6	<0.001	0.07	7.63	0.9	2.8	3.4	48.5	<0.01	0.12	0.5
YY19038		0.44	30.1	1820	37.3	10.1	0.027	0.11	8.86	2.1	9.5	1.0	40.7	<0.01	0.09	1.1
YY19039		0.53	25.5	550	92.1	7.0	<0.001	0.02	7.84	2.1	3.5	1.3	8.1	<0.01	0.12	3.3
YY19040		0.36	4.6	310	62.7	7.2	<0.001	0.05	12.10	0.6	4.7	5.5	7.3	<0.01	0.13	0.2
YY19041		0.32	6.5	640	151.0	7.1	0.001	0.06	9.31	0.6	3.6	13.7	30.0	<0.01	0.09	0.2
YY19042		0.22	29.9	940	55.0	9.5	<0.001	0.10	6.13	1.0	3.1	1.0	41.5	<0.01	0.09	0.4
YY19043		0.58	24.2	1270	246	17.7	<0.001	0.13	22.4	2.3	4.7	22.8	22.3	<0.01	0.19	2.0
YY19044		0.24	526	2300	3.0	5.2	<0.001	0.07	0.49	3.6	0.2	0.2	53.6	<0.01	<0.01	1.0
YY19045		0.39	120.0	870	3.9	3.1	0.001	0.17	0.40	2.2	0.3	0.2	35.0	<0.01	0.02	0.2
YY19046		0.59	45.0	720	25.3	11.1	<0.001	0.04	1.37	3.7	0.7	0.4	31.8	<0.01	0.04	1.4
YY19047		4.66	326	1760	10.0	41.0	<0.001	0.03	0.76	16.9	0.3	0.8	72.5	<0.01	0.03	2.0
YY19048		0.24	286	990	5.9	4.1	<0.001	0.04	0.65	2.5	<0.2	0.2	7.3	<0.01	0.01	1.2
YY19049		4.06	167.5	590	3.9	18.5	0.001	0.04	0.35	25.7	<0.2	4.1	78.8	0.01	0.04	2.6
YY19050		0.42	266	3110	2.8	15.4	0.001	0.02	0.41	18.0	0.5	0.5	120.5	<0.01	0.02	7.7
YY19051		0.82	180.0	630	11.8	14.0	0.006	0.04	4.86	2.2	3.9	0.6	37.5	<0.01	0.05	0.7
YY19052		0.76	47.8	1100	34.8	22.4	0.005	0.26	11.05	2.7	21.7	0.4	26.4	0.01	0.10	2.1
YY19053		0.61	155.5	820	56.6	22.3	0.004	0.08	3.07	2.7	3.0	0.6	75.7	<0.01	0.07	1.5
YY19054		0.26	33.8	610	8.9	14.7	0.002	0.06	0.76	0.3	1.6	0.4	18.2	<0.01	0.04	<0.2
YY19055		1.32	47.6	370	17.2	17.9	<0.001	0.03	1.57	4.2	2.1	0.6	16.2	<0.01	0.06	3.8
YY19056		1.32	9.1	340	32.6	9.2	<0.001	0.06	2.75	1.4	0.8	1.0	19.9	<0.01	0.07	3.0
YY19057		2.60	10.7	450	22.0	12.4	<0.001	0.02	3.71	1.6	2.1	0.9	7.8	<0.01	0.10	2.8
YY19058		0.86	29.5	930	18.3	13.2	0.008	0.05	2.82	2.1	9.0	0.7	23.2	<0.01	0.08	0.6
YY19059		1.34	14.7	630	19.4	13.0	<0.001	0.06	4.93	2.7	3.6	0.9	45.2	<0.01	0.11	2.8
YY19060		1.31	7.5	360	57.8	4.6	<0.001	0.03	4.19	1.0	1.2	6.6	4.8	<0.01	0.07	1.5
YY19061		0.58	4.4	370	353	7.6	<0.001	0.07	15.00	0.8	3.3	16.5	17.9	<0.01	0.09	3.1
YY19062		0.42	5.9	450	154.5	7.8	<0.001	0.09	7.96	0.8	5.0	6.5	29.8	<0.01	0.13	0.7
YY19063		1.33	7.2	400	23.3	7.4	<0.001	0.07	4.29	1.3	2.1	1.2	10.3	<0.01	0.06	1.4
YY19064		0.26	9.4	370	45.9	3.2	0.001	0.03	5.18	2.4	4.8	0.8	14.1	<0.01	0.14	3.7
YY19065		0.61	30.5	900	88.6	6.6	0.001	0.02	4.34	3.6	1.2	1.6	27.0	<0.01	0.09	4.8
YY19066		0.32	30.4	1120	54.4	8.1	0.004	0.09	6.71	2.6	5.4	2.2	28.7	<0.01	0.07	1.3
YY19067		0.18	23.8	2010	53.9	5.8	0.001	0.07	7.82	0.3	8.1	0.9	53.9	<0.01	0.19	0.2
YY19068		0.31	28.1	1770	19.9	7.5	0.004	0.11	4.70	1.4	13.0	0.4	41.6	<0.01	0.10	0.8
YY19069		0.33	39.1	910	25.4	6.9	0.002	0.06	2.77	2.0	2.3	0.3	38.8	<0.01	0.07	1.3
YY19070		0.39	21.4	1070	26.1	5.5	0.002	0.07	4.81	2.2	5.4	0.4	31.5	<0.01	0.10	2.0
YY19071		0.28	24.4	1360	33.1	7.8	<0.001	0.08	5.58	1.4	8.4	0.5	33.0	<0.01	0.14	1.0

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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 ST
VANCOUVER BC V6B 1L8

Finalized Date: 29-JUN-2019
Account: RCM

Project: RAU

CERTIFICATE OF ANALYSIS WH19146734

Sample Description	Method	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Ti	Tl	U	V	W	Y	Zn	Zr
	Units	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.005	0.02	0.05	1	0.05	0.05	2	0.5
YY19032		0.010	0.30	1.16	26	0.14	12.15	181	0.5
YY19033		0.009	0.20	0.77	43	0.13	4.03	144	1.1
YY19034		0.011	0.22	0.85	34	0.81	1.47	22	<0.5
YY19035		0.034	0.66	0.71	87	0.33	3.66	120	0.8
YY19036		0.028	0.25	1.06	67	0.42	3.41	115	1.4
YY19037		0.016	0.64	0.78	35	0.46	3.93	100	<0.5
YY19038		0.013	0.47	3.59	58	0.22	11.45	131	1.2
YY19039		0.018	0.23	0.87	38	0.34	4.18	81	3.7
YY19040		0.021	0.30	0.73	45	0.67	1.44	21	<0.5
YY19041		0.021	0.30	2.18	66	0.62	2.81	33	<0.5
YY19042		0.011	0.87	1.32	49	0.29	4.13	226	<0.5
YY19043		0.023	0.50	1.13	62	1.23	3.52	134	<0.5
YY19044		0.038	0.13	3.06	28	<0.05	19.05	88	15.1
YY19045		0.028	0.06	1.41	34	<0.05	8.16	47	1.8
YY19046		0.021	0.13	1.05	40	0.14	12.80	111	1.1
YY19047		0.244	0.37	0.39	170	0.09	8.68	166	1.7
YY19048		0.031	0.10	0.92	32	<0.05	3.09	109	5.3
YY19049		0.191	0.40	0.15	211	0.33	26.4	81	<0.5
YY19050		0.166	0.54	0.55	126	0.05	22.6	147	2.6
YY19051		0.028	1.29	5.40	67	0.28	13.80	1260	<0.5
YY19052		0.033	0.85	5.06	58	0.21	19.95	227	<0.5
YY19053		0.029	0.63	2.60	49	0.13	18.80	782	0.8
YY19054		0.011	0.41	2.39	31	0.07	12.05	147	<0.5
YY19055		0.029	0.46	2.88	61	0.26	11.75	135	1.5
YY19056		0.048	0.46	0.52	65	0.21	1.69	49	1.4
YY19057		0.092	1.18	0.70	76	0.40	2.92	49	1.9
YY19058		0.031	1.19	1.91	69	0.26	5.91	54	<0.5
YY19059		0.037	0.98	1.87	125	0.48	3.61	66	<0.5
YY19060		0.047	0.23	0.33	88	0.53	1.23	36	<0.5
YY19061		0.020	0.33	0.70	40	0.51	1.83	21	0.7
YY19062		0.022	0.39	0.85	53	1.27	1.81	28	<0.5
YY19063		0.055	0.61	0.57	95	0.41	2.01	35	<0.5
YY19064		0.014	0.56	0.82	59	0.35	4.02	33	6.2
YY19065		0.034	0.33	0.65	47	0.40	9.46	122	3.1
YY19066		0.011	0.19	3.02	32	0.18	11.20	144	2.5
YY19067		0.007	0.39	1.28	42	0.23	3.73	111	<0.5
YY19068		0.009	0.28	2.87	38	0.14	15.50	148	2.3
YY19069		0.009	0.27	1.71	36	0.13	10.10	169	2.0
YY19070		0.012	0.25	1.50	35	0.20	8.37	75	2.5
YY19071		0.012	0.46	1.58	40	0.23	5.78	86	<0.5

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ALS Canada Ltd.
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North Vancouver BC V7H 0A7
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Project: RAU

Finalized Date: 29-JUN-2019
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CERTIFICATE OF ANALYSIS WH19146734

Sample Description	Method	WEI-21	Au-ICP21	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Recvd Wt.	Au	Ag	Al	As	Au	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr
	Units	kg	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
	LOD	0.02	0.001	0.01	0.01	0.1	0.02	10	10	0.05	0.01	0.01	0.01	0.02	0.1	1
YY19072		0.31	0.006	1.71	0.63	24.7	<0.02	<10	320	0.26	0.25	0.02	0.21	32.5	4.0	15
YY19073		0.34	0.003	2.79	1.14	21.1	<0.02	<10	210	0.30	0.25	0.03	0.15	16.10	3.5	19
YY19074		0.28	0.003	0.36	0.63	17.1	<0.02	<10	190	0.17	0.24	0.01	0.11	17.60	2.7	11
YY19075		0.30	0.001	1.26	1.72	25.6	<0.02	<10	220	0.36	0.31	0.05	0.38	23.2	5.7	28
YY19076		0.22	0.001	0.16	1.56	14.9	<0.02	<10	270	0.42	0.26	0.05	0.29	25.1	9.8	26
YY19077		0.28	0.002	0.43	1.84	18.6	<0.02	<10	210	0.37	0.27	0.05	0.20	25.1	7.3	29
YY19078		0.43	0.003	0.60	1.64	16.1	<0.02	<10	1750	0.57	0.24	0.05	0.26	52.2	8.6	27
YY19079		0.28	0.003	0.24	2.02	13.1	<0.02	<10	350	0.39	0.34	1.96	0.57	14.25	19.6	109
YY19080		0.20	0.004	0.26	0.99	26.5	<0.02	<10	270	0.33	0.79	2.65	0.35	15.65	12.2	38
YY19081		0.18	0.005	0.26	1.67	181.5	<0.02	<10	380	0.30	5.82	3.01	0.53	10.30	30.9	88
YY19082		0.21	0.005	0.21	1.42	19.7	<0.02	<10	290	0.29	0.79	3.11	0.59	11.60	21.2	61
YY19083		0.15	0.012	0.24	0.99	8.3	<0.02	10	210	0.43	0.31	3.11	0.65	16.65	16.1	36
YY19084		0.20	0.002	0.20	2.16	11.3	<0.02	<10	440	0.45	0.23	2.29	1.48	15.85	22.4	85
YY19085		0.27	0.002	0.28	1.22	14.5	<0.02	10	220	0.65	0.22	4.00	7.65	27.7	17.8	20
YY19086		0.27	0.003	0.25	1.41	12.3	<0.02	10	320	0.61	0.18	1.77	12.35	24.2	20.7	39
YY19087		0.23	0.002	0.42	1.33	14.0	<0.02	10	210	0.95	0.12	1.94	35.7	30.3	22.1	27
YY19088		0.33	0.003	0.46	2.36	14.4	<0.02	<10	240	4.04	0.26	0.93	33.8	42.8	79.5	19
YY19089		0.34	0.004	1.31	2.02	29.4	<0.02	<10	270	2.06	0.37	0.64	13.80	53.6	48.2	19
YY19090		0.32	0.001	0.54	1.57	20.1	<0.02	<10	290	0.67	0.27	0.93	0.44	25.8	9.3	24
YY19091		0.31	0.001	0.36	1.31	14.4	<0.02	10	190	0.74	0.21	3.22	1.50	28.6	13.5	20
YY19092		0.33	0.001	0.80	0.70	12.9	<0.02	<10	60	0.15	0.14	0.01	0.10	14.25	4.3	43
YY19093		0.27	0.001	0.33	4.73	15.0	<0.02	10	220	3.67	0.21	0.60	2.49	72.3	18.4	80
YY19094		0.26	0.001	0.31	1.69	15.3	<0.02	10	210	0.85	0.23	4.02	2.74	37.3	20.6	23
YY19095		0.21	0.003	0.28	1.68	16.3	<0.02	10	250	0.80	0.24	1.23	1.70	30.1	16.4	24
YY19096		0.21	0.002	0.23	1.23	13.2	<0.02	10	250	0.58	0.20	1.59	1.74	24.1	13.6	21
YY19097		0.22	0.005	0.55	1.45	19.6	<0.02	<10	370	0.73	0.32	1.20	2.37	27.8	16.8	25
YY19098		0.24	0.008	0.31	1.35	16.2	<0.02	<10	290	0.62	1.26	0.89	0.64	17.55	6.8	22
YY19099		0.27	0.072	1.52	1.15	46.5	0.04	<10	790	0.54	2.38	1.12	0.48	19.35	7.6	19
YY19100		0.14	0.014	1.02	0.70	44.1	<0.02	10	460	0.37	0.52	1.73	0.75	17.35	6.2	20
YY19101		0.18	0.004	0.39	1.31	12.7	<0.02	<10	430	0.66	0.22	2.22	1.71	24.3	10.7	23
YY19102		0.25	0.003	0.44	1.14	16.3	<0.02	10	610	0.58	0.19	1.84	1.29	20.0	8.0	21
YY19103		0.30	0.002	0.35	1.02	11.0	<0.02	<10	320	0.49	0.16	3.90	1.70	22.5	9.3	20
YY19104		0.32	0.009	0.92	0.93	14.3	<0.02	<10	510	0.50	0.46	1.28	2.02	24.1	7.9	16
YY19105		0.26	0.006	1.52	0.43	12.7	<0.02	<10	410	0.21	0.14	1.74	0.30	15.15	2.0	9
YY19106		0.25	0.005	0.59	0.71	16.8	<0.02	<10	320	0.39	0.23	0.73	0.34	28.0	6.0	14
YY19107		0.22	0.003	0.48	0.88	16.3	<0.02	10	1170	0.35	0.15	2.89	0.80	19.15	5.9	14
YY19108		0.32	0.004	0.61	0.91	19.4	<0.02	<10	590	0.47	0.20	0.73	0.53	28.4	8.9	19
YY19109		0.27	0.002	0.48	1.67	16.7	<0.02	<10	650	0.90	0.20	1.15	0.94	48.4	19.4	29
YY19110		0.25	0.002	0.46	1.36	19.4	<0.02	10	610	0.69	0.23	1.10	0.57	25.8	11.8	23
YY19111		0.25	0.002	0.35	1.17	18.9	<0.02	<10	220	0.65	0.19	4.78	0.99	24.5	11.8	16

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	Analyte	Cs	Cu	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na
	Units	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%
	LOD	0.05	0.2	0.01	0.05	0.05	0.02	0.01	0.005	0.01	0.2	0.1	0.01	5	0.05	0.01
YY19072		0.62	21.4	1.93	3.83	0.05	<0.02	0.26	0.056	0.07	19.5	7.0	0.19	128	10.95	0.02
YY19073		0.97	11.0	2.35	3.93	<0.05	0.04	0.27	0.024	0.06	9.1	10.4	0.18	111	14.45	0.02
YY19074		0.74	9.3	1.38	2.70	<0.05	0.10	0.19	0.017	0.05	9.3	4.2	0.11	105	8.75	0.02
YY19075		1.68	11.8	3.43	6.68	<0.05	<0.02	0.08	0.041	0.06	11.9	15.1	0.27	318	6.71	0.03
YY19076		1.42	12.2	3.19	5.85	<0.05	<0.02	0.03	0.041	0.07	12.9	13.5	0.32	1170	4.45	0.03
YY19077		1.45	15.6	3.31	5.97	<0.05	<0.02	0.05	0.043	0.08	13.6	15.8	0.36	356	4.53	0.02
YY19078		1.56	18.4	2.57	6.09	0.06	0.03	0.15	0.108	0.06	27.5	11.8	0.34	290	7.79	0.03
YY19079		5.96	36.7	3.53	6.46	0.07	0.03	0.04	0.054	0.07	7.6	16.4	2.19	303	1.20	0.02
YY19080		0.90	29.4	2.57	3.58	<0.05	0.03	0.04	0.052	0.06	8.7	7.2	0.63	715	4.80	0.03
YY19081		2.87	59.1	4.54	6.59	0.06	0.03	0.04	0.046	0.13	5.3	13.1	1.33	928	2.08	0.04
YY19082		1.09	43.8	3.64	4.65	<0.05	0.02	0.05	0.038	0.07	5.8	10.4	0.89	760	2.13	0.05
YY19083		0.59	30.2	2.48	2.88	<0.05	0.03	0.07	0.029	0.07	8.1	8.6	0.56	756	1.37	0.03
YY19084		4.98	34.9	4.05	6.87	0.05	0.04	0.06	0.037	0.18	8.1	20.3	2.04	712	2.34	0.04
YY19085		1.01	57.7	3.17	3.54	0.06	0.06	0.11	0.040	0.17	13.8	13.3	2.35	831	6.43	0.03
YY19086		1.62	58.3	3.40	4.04	0.05	0.04	0.08	0.036	0.13	12.4	15.9	0.82	1420	5.93	0.03
YY19087		3.75	90.0	3.67	3.04	0.08	0.04	0.10	0.047	0.08	18.7	11.8	0.50	1420	4.25	0.03
YY19088		6.25	157.5	3.29	3.42	0.08	0.05	0.10	0.042	0.11	20.5	25.9	0.55	2910	3.16	0.03
YY19089		4.55	136.5	3.11	3.36	0.09	0.05	0.16	0.052	0.12	27.8	20.8	0.42	1620	7.09	0.03
YY19090		0.76	20.8	3.42	4.30	<0.05	0.04	0.07	0.044	0.08	13.0	16.9	0.68	425	3.34	0.02
YY19091		0.97	37.7	3.34	3.57	0.05	0.08	0.13	0.038	0.16	14.8	13.9	1.81	822	3.40	0.02
YY19092		3.83	217	26.1	5.30	0.05	0.02	0.12	0.146	0.10	6.7	4.8	0.14	77	3.07	0.02
YY19093		1.41	341	6.62	6.47	0.16	0.14	0.10	0.362	0.17	33.5	23.4	0.53	375	3.68	0.02
YY19094		1.21	90.0	3.57	3.93	0.07	0.09	0.12	0.051	0.17	19.8	18.8	2.53	994	4.09	0.03
YY19095		0.93	50.5	3.99	4.32	<0.05	0.08	0.13	0.046	0.15	15.4	19.8	0.79	994	3.37	0.03
YY19096		0.59	41.9	2.96	3.36	<0.05	0.05	0.12	0.033	0.09	12.2	13.3	0.56	743	1.84	0.02
YY19097		1.03	60.5	3.84	3.56	0.06	0.07	0.16	0.052	0.11	14.9	16.5	0.55	833	5.40	0.02
YY19098		0.67	18.7	2.55	3.94	<0.05	0.04	0.09	0.038	0.06	9.2	13.1	0.45	266	2.67	0.02
YY19099		0.78	24.2	2.86	3.52	<0.05	0.06	0.23	0.044	0.09	11.5	10.6	0.37	498	5.31	0.03
YY19100		0.46	20.7	2.00	2.72	<0.05	0.05	0.18	0.042	0.05	10.5	7.0	0.36	472	2.67	0.02
YY19101		0.65	36.0	3.00	3.70	<0.05	0.05	0.11	0.031	0.09	13.1	15.4	1.24	477	3.00	0.02
YY19102		0.56	27.1	2.80	3.27	<0.05	0.06	0.09	0.030	0.08	10.8	12.8	0.70	453	2.89	0.03
YY19103		0.77	27.4	2.54	2.75	<0.05	0.06	0.09	0.025	0.09	11.9	12.4	2.14	497	3.03	0.03
YY19104		0.64	28.9	2.11	2.65	0.05	0.06	0.14	0.035	0.07	13.4	9.8	0.39	1050	3.32	0.03
YY19105		0.29	12.8	1.14	1.34	<0.05	0.05	0.19	0.026	0.05	9.2	4.0	0.39	104	3.97	0.02
YY19106		0.46	19.3	1.87	2.22	<0.05	0.08	0.14	0.024	0.07	15.7	9.2	0.41	325	6.06	0.02
YY19107		0.52	17.9	2.10	2.54	<0.05	0.08	0.11	0.031	0.07	10.4	11.6	1.02	521	3.54	0.03
YY19108		0.48	32.4	2.52	2.96	<0.05	0.06	0.17	0.057	0.07	16.3	9.1	0.32	403	6.65	0.02
YY19109		0.85	127.5	4.52	4.15	0.07	0.07	0.15	0.102	0.11	24.5	16.6	0.80	696	3.71	0.03
YY19110		0.73	33.2	3.30	3.68	<0.05	0.08	0.15	0.039	0.11	13.7	15.7	0.59	836	3.00	0.02
YY19111		0.70	29.7	3.14	3.04	<0.05	0.08	0.11	0.034	0.15	12.6	12.7	2.34	853	2.17	0.02

***** 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
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: 29-JUN-2019
Account: RCM

Project: RAU

CERTIFICATE OF ANALYSIS WH19146734

Sample Description	Method	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Nb	Ni	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th
	Units	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.05	0.2	10	0.2	0.1	0.001	0.01	0.05	0.1	0.2	0.2	0.2	0.01	0.01	0.2
YY19072		0.30	14.9	650	32.0	5.7	0.001	0.05	6.57	1.6	6.2	0.4	20.1	<0.01	0.10	2.4
YY19073		0.98	11.7	330	23.2	8.1	0.001	0.10	2.82	1.6	3.0	0.5	7.0	<0.01	0.08	2.7
YY19074		0.87	9.9	180	17.7	6.2	<0.001	0.20	1.98	1.5	1.6	0.5	8.0	<0.01	0.09	4.3
YY19075		1.31	13.1	900	21.4	16.4	0.001	0.66	1.42	2.4	1.5	0.7	8.2	<0.01	0.07	2.7
YY19076		0.79	17.2	610	23.2	14.4	0.001	0.98	1.36	1.8	1.1	0.6	10.4	<0.01	0.04	0.7
YY19077		1.08	18.3	520	23.4	16.4	0.001	1.15	2.04	2.6	1.5	0.7	11.3	<0.01	0.05	2.4
YY19078		0.87	20.0	480	19.9	10.0	<0.001	1.73	3.54	3.4	2.4	0.5	34.3	<0.01	0.07	4.6
YY19079		1.22	89.0	860	11.9	15.2	0.001	0.10	1.34	7.3	0.7	0.4	46.4	<0.01	0.01	1.2
YY19080		0.78	44.2	730	13.1	6.1	0.001	0.13	2.02	2.7	0.9	0.6	55.7	<0.01	0.03	0.6
YY19081		0.62	112.5	850	6.2	19.0	0.001	0.11	1.11	6.6	1.2	0.9	51.3	<0.01	0.06	0.8
YY19082		0.51	88.6	890	8.4	12.0	0.001	0.13	1.26	3.8	0.8	0.6	47.7	<0.01	0.04	0.5
YY19083		0.39	61.4	850	15.6	6.1	0.002	0.16	1.42	2.4	1.0	0.3	52.5	<0.01	0.03	0.6
YY19084		1.50	96.0	860	15.4	21.5	0.001	0.07	1.18	6.0	1.3	0.7	51.2	<0.01	0.03	1.4
YY19085		0.39	171.0	830	31.2	11.2	0.003	0.03	2.29	3.8	1.7	0.3	52.2	<0.01	0.04	2.8
YY19086		0.58	182.0	690	27.3	12.4	0.013	0.09	2.37	3.6	2.8	0.4	103.5	<0.01	0.03	1.6
YY19087		0.36	576	920	18.9	15.2	0.014	0.15	2.97	2.6	5.8	0.2	175.0	<0.01	0.03	1.2
YY19088		0.30	301	850	30.9	21.0	0.006	0.08	2.30	3.4	3.0	0.3	50.3	<0.01	0.05	2.4
YY19089		0.51	158.0	870	42.1	21.9	0.005	0.10	3.93	3.2	2.7	1.0	50.7	<0.01	0.08	1.9
YY19090		0.51	31.0	660	31.1	7.1	0.001	0.03	1.58	3.9	1.4	0.6	23.1	<0.01	0.05	2.3
YY19091		0.33	46.4	770	39.1	10.6	0.001	0.04	2.17	3.8	1.3	0.4	34.4	<0.01	0.05	2.6
YY19092		0.26	25.4	740	11.1	7.2	0.003	0.56	1.15	5.9	2.5	0.2	2.7	<0.01	0.02	6.4
YY19093		0.24	111.0	910	43.1	11.0	0.002	0.04	1.55	20.8	2.8	0.3	19.7	<0.01	0.04	13.4
YY19094		0.25	93.7	980	36.5	10.8	0.001	0.03	1.84	5.1	1.2	0.3	39.1	<0.01	0.05	3.6
YY19095		0.30	61.1	550	35.8	9.9	0.001	0.04	1.81	4.4	1.8	0.3	23.5	<0.01	0.04	3.1
YY19096		0.43	47.5	770	29.3	6.6	<0.001	0.05	1.28	3.2	1.0	0.3	32.0	<0.01	0.04	1.6
YY19097		0.32	68.8	1050	36.1	10.2	0.007	0.07	3.22	4.1	3.8	0.6	30.7	<0.01	0.05	2.1
YY19098		0.46	21.5	450	22.7	5.2	0.001	0.03	1.75	3.1	1.1	3.0	28.5	<0.01	0.05	1.8
YY19099		0.40	20.4	800	36.6	7.7	0.001	0.09	4.77	2.4	7.8	5.0	22.1	<0.01	0.15	1.0
YY19100		0.24	19.3	830	36.5	4.8	0.001	0.09	3.34	1.7	2.8	0.8	38.6	<0.01	0.11	0.9
YY19101		0.47	33.2	990	29.2	7.3	<0.001	0.03	1.75	3.6	0.9	0.4	40.4	<0.01	0.05	1.9
YY19102		0.45	27.2	1070	25.7	7.1	0.001	0.05	2.10	2.9	1.2	0.4	42.9	<0.01	0.04	1.5
YY19103		0.48	29.9	1090	20.2	5.7	0.002	0.02	1.56	3.4	0.7	0.3	55.3	<0.01	0.03	2.8
YY19104		0.33	30.9	1080	31.2	6.6	0.003	0.06	3.70	2.3	3.7	1.0	34.1	<0.01	0.06	1.3
YY19105		0.29	10.1	860	21.6	3.5	0.002	0.07	4.98	0.9	9.9	0.3	32.8	<0.01	0.09	0.7
YY19106		0.36	21.9	610	28.9	4.9	<0.001	0.03	3.61	2.1	2.1	0.4	21.9	<0.01	0.07	2.3
YY19107		0.30	18.9	610	23.6	5.6	0.002	0.07	2.31	1.7	1.7	0.3	42.2	<0.01	0.06	0.9
YY19108		0.53	24.9	420	27.3	5.4	0.001	0.03	2.66	3.2	3.1	0.3	26.0	<0.01	0.06	3.3
YY19109		0.37	82.1	960	37.2	8.1	0.001	0.03	1.71	10.0	1.9	0.4	20.1	<0.01	0.04	9.2
YY19110		0.40	32.4	670	41.3	8.5	0.001	0.04	2.12	3.6	1.7	0.4	20.9	<0.01	0.06	2.3
YY19111		0.24	29.6	570	50.3	8.9	<0.001	0.02	2.34	3.5	0.5	0.5	35.9	<0.01	0.05	2.9

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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

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VANCOUVER BC V6B 1L8

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CERTIFICATE OF ANALYSIS WH19146734

Sample Description	Method	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Ti	Tl	U	V	W	Y	Zn	Zr
	Units	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.005	0.02	0.05	1	0.05	0.05	2	0.5
YY19072		0.014	0.35	1.17	32	0.23	3.14	60	<0.5
YY19073		0.030	0.45	0.76	41	0.17	1.65	46	1.9
YY19074		0.040	0.35	0.98	31	0.11	1.91	27	5.4
YY19075		0.034	0.34	0.93	76	0.34	2.02	78	0.6
YY19076		0.021	0.22	0.68	64	0.26	2.15	104	<0.5
YY19077		0.028	0.34	0.80	60	0.35	2.61	89	0.5
YY19078		0.034	0.22	1.49	49	0.38	5.69	59	0.9
YY19079		0.093	0.31	0.97	67	0.06	7.28	128	1.6
YY19080		0.030	0.15	0.93	43	0.17	8.46	102	1.4
YY19081		0.072	0.37	0.72	64	0.06	10.95	96	1.6
YY19082		0.044	0.16	0.95	45	0.05	10.70	100	1.2
YY19083		0.017	0.09	0.92	30	0.05	8.46	92	1.3
YY19084		0.103	0.56	0.59	66	0.06	9.52	227	1.7
YY19085		0.013	0.20	1.23	33	0.14	12.60	936	2.6
YY19086		0.026	0.38	1.56	40	0.07	12.95	1040	1.5
YY19087		0.018	0.63	4.41	36	0.06	27.1	3620	1.4
YY19088		0.009	0.90	3.16	30	0.10	38.1	1240	1.9
YY19089		0.015	1.25	5.25	36	0.20	40.1	549	1.7
YY19090		0.013	0.17	1.08	43	0.15	8.27	118	1.5
YY19091		0.010	0.21	0.83	33	0.10	12.65	188	2.6
YY19092		0.009	2.25	3.22	38	0.05	2.55	129	1.1
YY19093		0.007	0.45	16.10	40	0.06	44.5	247	5.5
YY19094		0.009	0.26	2.96	35	0.07	20.9	242	2.9
YY19095		0.008	0.19	1.22	41	0.07	13.05	188	2.7
YY19096		0.011	0.11	1.76	37	0.10	10.20	138	1.7
YY19097		0.009	0.52	3.29	42	0.14	16.25	271	2.3
YY19098		0.011	0.26	0.77	50	0.73	4.58	84	1.4
YY19099		0.008	0.30	2.28	58	1.57	8.81	71	2.2
YY19100		0.007	0.31	1.57	41	0.17	6.38	90	1.7
YY19101		0.016	0.13	0.84	41	0.17	11.35	140	2.0
YY19102		0.014	0.13	1.11	40	0.12	9.45	135	2.1
YY19103		0.020	0.14	0.81	36	0.11	9.81	131	2.2
YY19104		0.010	0.16	1.68	31	0.12	9.65	136	1.9
YY19105		0.008	0.15	1.47	18	0.13	3.65	45	1.9
YY19106		0.013	0.20	0.65	28	0.26	6.88	67	2.7
YY19107		0.008	0.15	0.89	26	0.12	6.32	76	2.3
YY19108		0.015	0.21	3.34	38	0.16	6.59	88	2.1
YY19109		0.013	0.17	11.60	38	0.10	19.60	153	2.2
YY19110		0.011	0.16	1.64	41	0.30	10.70	126	2.3
YY19111		0.007	0.18	0.64	30	0.08	9.92	142	2.8

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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 ST
VANCOUVER BC V6B 1L8

Project: RAU

Finalized Date: 29-JUN-2019
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CERTIFICATE OF ANALYSIS WH19146734

Sample Description	Method	WEI-21	Au-ICP21	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Recvd Wt.	Au	Ag	Al	As	Au	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr
	Units	kg	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
	LOD	0.02	0.001	0.01	0.01	0.1	0.02	10	10	0.05	0.01	0.01	0.01	0.02	0.1	1
YY19112		0.22	0.002	0.60	1.09	20.9	<0.02	10	470	0.51	0.18	2.62	2.76	18.15	8.5	18
YY19113		0.27	0.002	0.55	1.27	22.6	<0.02	<10	290	0.60	0.21	1.45	2.33	22.7	10.2	22
YY19114		0.36	0.002	0.32	1.06	20.8	<0.02	<10	350	0.43	0.17	6.82	2.74	24.5	10.8	17
YY19115		0.24	0.002	0.47	1.79	29.6	<0.02	<10	350	0.84	0.28	0.85	1.91	29.0	14.3	27
YY19116		0.28	<0.001	0.42	1.61	19.4	<0.02	<10	500	0.65	0.21	1.91	1.21	23.1	10.9	24
YY19117		0.23	0.004	0.36	1.59	25.7	<0.02	<10	330	0.68	0.29	3.67	1.31	26.4	12.8	25
YY19118		0.17	0.001	0.29	1.94	18.6	<0.02	<10	600	0.99	0.26	0.93	0.27	28.5	18.0	27
YY19119		0.18	0.001	0.18	2.28	20.6	<0.02	<10	190	0.63	0.24	0.56	0.37	13.05	9.7	36
YY19120		0.29	0.002	0.17	4.20	44.8	<0.02	<10	260	1.69	0.33	0.72	0.52	14.55	18.7	40
YY19121		0.15	0.002	0.06	2.20	28.7	<0.02	<10	100	0.58	0.25	0.13	0.16	13.25	6.6	34
YY19122		0.25	0.002	0.23	2.83	22.2	<0.02	<10	190	0.93	0.25	0.68	0.33	18.00	14.4	35
YY19123		0.21	0.002	0.31	1.51	12.5	<0.02	<10	490	0.42	0.24	0.56	0.85	20.1	5.1	23
YY19124		0.31	0.012	3.13	2.39	25.5	<0.02	<10	450	0.52	0.27	0.12	0.39	24.6	11.3	34
YY19125		0.13	0.004	0.59	0.78	4.7	<0.02	<10	340	0.28	0.12	1.89	0.23	13.95	3.0	12
YY19126		0.23	0.002	0.12	1.71	17.9	<0.02	<10	220	0.48	0.25	0.66	0.21	19.75	5.6	25
YY19127		0.35	0.001	0.12	3.42	47.5	<0.02	<10	200	1.30	0.36	0.41	0.55	33.3	26.9	43
YY19128		0.27	0.002	0.26	1.71	15.8	<0.02	<10	190	0.63	0.23	0.54	0.27	19.20	6.5	24
YY19129		0.30	0.002	0.11	3.11	20.0	<0.02	<10	190	1.14	0.24	0.29	0.23	23.6	12.7	39
YY19130		0.41	0.001	0.52	1.48	10.2	0.02	<10	190	0.63	1.04	0.17	0.43	17.75	6.2	38

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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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VANCOUVER BC V6B 1L8

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Sample Description	Method	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Cs	Cu	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na
	Units	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%
	LOD	0.05	0.2	0.01	0.05	0.05	0.02	0.01	0.005	0.01	0.2	0.1	0.01	5	0.05	0.01
YY19112		0.81	27.1	2.54	2.73	<0.05	0.09	0.12	0.031	0.13	10.4	13.2	1.00	490	2.72	0.03
YY19113		0.84	27.9	2.83	3.09	<0.05	0.08	0.08	0.032	0.11	13.1	16.5	0.59	504	3.76	0.03
YY19114		1.09	28.5	2.62	2.76	0.05	0.12	0.09	0.028	0.13	13.4	16.5	2.34	457	3.55	0.03
YY19115		1.32	34.3	3.80	4.37	0.06	0.12	0.08	0.036	0.16	16.1	25.4	0.79	714	4.59	0.03
YY19116		1.13	28.0	3.13	4.00	<0.05	0.05	0.09	0.032	0.11	12.8	17.9	0.87	653	2.47	0.03
YY19117		1.02	27.2	3.50	3.93	<0.05	0.07	0.08	0.033	0.10	17.2	16.1	0.67	850	2.08	0.03
YY19118		2.03	23.0	3.11	5.27	<0.05	0.04	0.06	0.038	0.05	16.6	13.3	0.35	584	1.97	0.03
YY19119		2.31	22.0	2.91	7.33	<0.05	0.02	0.04	0.030	0.06	6.8	38.1	0.90	365	4.48	0.03
YY19120		4.33	36.4	4.44	9.55	0.06	0.23	0.02	0.045	0.34	6.4	47.5	1.36	1460	13.30	0.12
YY19121		3.13	20.0	3.04	8.91	<0.05	0.03	0.03	0.031	0.12	6.7	27.8	0.73	338	9.09	0.03
YY19122		3.59	31.4	3.04	7.23	0.05	0.07	0.05	0.034	0.12	9.5	34.4	0.98	743	8.99	0.05
YY19123		1.04	20.0	2.42	4.86	<0.05	<0.02	0.08	0.031	0.06	10.6	10.0	0.27	139	1.86	0.03
YY19124		1.46	16.8	3.49	4.73	<0.05	0.20	0.67	0.036	0.06	12.3	24.6	0.46	459	3.45	0.03
YY19125		0.48	12.8	1.32	2.27	<0.05	<0.02	0.14	0.021	0.02	10.4	2.9	0.10	102	0.75	0.03
YY19126		2.23	14.9	2.84	6.06	<0.05	0.02	0.04	0.025	0.07	10.8	23.7	0.46	231	3.81	0.03
YY19127		5.63	30.9	4.92	9.44	0.05	0.09	0.02	0.038	0.19	16.2	70.4	1.02	620	7.02	0.10
YY19128		2.67	18.6	2.50	5.35	<0.05	<0.02	0.06	0.028	0.07	10.5	20.1	0.41	231	3.51	0.03
YY19129		2.83	25.9	2.97	7.49	<0.05	0.14	0.03	0.033	0.09	11.8	29.2	0.81	766	4.31	0.06
YY19130		2.77	38.0	2.35	4.75	<0.05	<0.02	0.05	0.058	0.05	9.6	15.3	0.31	283	3.16	0.02

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CERTIFICATE OF ANALYSIS WH19146734

Sample Description	Method	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Nb	Ni	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th
	Units	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.05	0.2	10	0.2	0.1	0.001	0.01	0.05	0.1	0.2	0.2	0.2	0.01	0.01	0.2
YY19112		0.17	28.5	930	34.9	7.7	0.002	0.07	2.65	2.1	1.6	0.6	35.9	<0.01	0.05	1.3
YY19113		0.19	38.5	1140	30.5	8.2	0.001	0.05	2.26	2.1	1.8	0.4	36.7	<0.01	0.04	1.8
YY19114		0.14	35.5	900	26.5	7.7	0.003	0.01	2.24	2.8	1.4	0.3	109.5	<0.01	0.05	4.2
YY19115		0.18	45.9	1030	34.4	11.5	<0.001	0.04	2.33	3.3	1.3	0.4	32.9	<0.01	0.05	3.4
YY19116		0.34	32.3	860	28.9	11.0	<0.001	0.04	1.72	2.9	1.1	0.5	36.4	<0.01	0.05	1.7
YY19117		0.44	35.5	1320	58.9	12.4	0.001	0.03	1.69	4.0	0.6	0.4	27.9	<0.01	0.05	2.6
YY19118		0.61	29.6	1400	22.0	9.7	<0.001	0.05	1.07	2.4	0.7	0.6	20.3	<0.01	0.05	1.1
YY19119		0.30	32.0	970	17.8	11.2	0.001	0.08	0.53	2.4	0.6	0.5	25.2	<0.01	0.04	1.0
YY19120		0.33	50.9	1560	23.1	33.9	0.001	0.12	0.91	5.8	1.1	0.6	68.8	<0.01	0.06	6.0
YY19121		0.51	24.5	780	13.7	17.0	<0.001	0.05	0.65	3.1	0.8	0.6	15.5	<0.01	0.04	1.5
YY19122		0.63	47.8	1130	15.4	25.2	<0.001	0.09	0.78	4.2	0.6	0.6	35.8	<0.01	0.03	2.8
YY19123		0.41	22.6	1140	18.5	7.2	<0.001	0.07	0.87	0.7	0.8	0.5	19.3	<0.01	0.04	<0.2
YY19124		1.31	25.3	710	16.8	13.3	<0.001	0.02	3.45	3.0	2.3	0.6	12.8	<0.01	0.07	4.1
YY19125		0.28	11.7	1650	15.9	2.4	<0.001	0.14	0.50	0.2	0.9	0.2	42.3	<0.01	0.01	<0.2
YY19126		0.37	19.1	1050	20.0	14.6	<0.001	0.07	0.81	1.8	0.7	0.5	22.2	<0.01	0.05	1.3
YY19127		0.45	81.6	2230	26.3	31.1	<0.001	0.31	0.91	5.4	1.0	0.5	91.1	<0.01	0.04	5.9
YY19128		0.31	29.0	1260	17.2	20.5	0.001	0.09	1.15	0.9	0.8	0.5	25.3	<0.01	0.03	0.4
YY19129		0.81	33.5	880	17.4	15.3	<0.001	0.05	0.73	4.8	0.8	0.7	27.4	0.01	0.04	4.5
YY19130		0.50	45.2	850	13.4	14.1	0.001	0.04	0.68	1.0	1.1	2.3	19.3	<0.01	0.08	0.3

***** 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
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: 29-JUN-2019
Account: RCM

Project: RAU

CERTIFICATE OF ANALYSIS WH19146734

Sample Description	Method	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Ti	Tl	U	V	W	Y	Zn	Zr
	Units	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.005	0.02	0.05	1	0.05	0.05	2	0.5
YY19112		0.006	0.14	1.10	29	0.08	8.69	170	2.8
YY19113		0.006	0.14	1.12	31	0.07	10.95	154	2.7
YY19114		0.007	0.17	0.73	27	0.06	9.09	137	6.6
YY19115		0.007	0.20	0.77	37	0.07	11.85	159	3.8
YY19116		0.012	0.17	0.84	41	0.11	9.69	140	1.7
YY19117		0.013	0.18	0.95	42	0.11	16.80	136	2.2
YY19118		0.014	0.32	1.99	54	0.18	15.95	93	1.1
YY19119		0.036	0.37	1.24	51	0.07	3.84	86	1.0
YY19120		0.051	0.87	3.24	61	0.08	9.85	112	9.2
YY19121		0.048	0.34	1.53	59	0.15	3.73	66	1.5
YY19122		0.046	0.41	3.23	51	0.15	8.33	112	2.4
YY19123		0.011	0.16	1.10	46	0.19	6.94	90	<0.5
YY19124		0.030	0.23	1.67	63	0.68	3.66	146	5.1
YY19125		0.005	0.13	1.79	18	0.09	8.68	26	<0.5
YY19126		0.012	0.30	0.96	46	0.12	3.66	69	0.8
YY19127		0.040	0.44	2.00	61	0.09	7.24	177	2.7
YY19128		0.012	0.36	1.34	39	0.12	6.04	77	<0.5
YY19129		0.049	0.41	2.03	56	0.25	8.15	83	3.8
YY19130		0.024	0.26	1.39	74	1.40	6.24	165	<0.5

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Project: RAU

Finalized Date: 29-JUN-2019
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CERTIFICATE OF ANALYSIS WH19146734

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Applies to Method: Gold determinations by this method are semi-quantitative due to the small sample weight used (0.5g).
ME-MS41

LABORATORY ADDRESSES

Applies to Method: Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.
LOG-22 SCR-41 WEI-21

Applies to Method: Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.
Au-ICP21 ME-MS41

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Finalized Date: 4-JUL-2019
Account: RCM

CERTIFICATE WH19152808

Project: Rau

P.O. No.: R19-S02

This report is for 109 Soil samples submitted to our lab in Whitehorse, YT, Canada on 24-JUN-2019.

The following have access to data associated with this certificate:

ANDREW CARNE	ADAM COULTER	JULIA LANE

SAMPLE PREPARATION

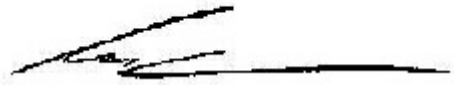
ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-22	Sample login - Rcd w/o BarCode
SCR-41	Screen to -180um and save both

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-ICP21	Au 30g FA ICP-AES Finish	ICP-AES
ME-MS41	Ultra Trace Aqua Regia 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 WH19152808

Sample Description	Method	WEI-21	Au-ICP21	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Recvd Wt.	Au	Ag	Al	As	Au	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr
	Units	kg	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
	LOD	0.02	0.001	0.01	0.01	0.1	0.02	10	10	0.05	0.01	0.01	0.01	0.02	0.1	1
YY10131		0.15	0.001	0.16	2.88	25.0	<0.02	<10	180	1.22	0.27	1.25	0.97	19.50	15.5	35
YY10132		0.17	0.001	0.26	2.34	21.3	<0.02	<10	290	0.97	0.26	1.11	0.64	21.7	13.9	31
YY10133		0.22	0.002	0.21	2.05	19.6	<0.02	<10	270	0.75	0.24	0.78	0.41	10.95	6.6	33
YY10134		0.22	0.003	0.10	1.35	16.0	<0.02	<10	170	0.32	0.27	0.35	0.22	23.7	6.4	25
YY10135		0.22	0.002	0.33	0.87	28.7	<0.02	<10	200	0.44	0.53	2.10	1.64	22.5	14.3	24
YY10136		0.11	0.002	0.22	0.65	14.8	<0.02	<10	180	0.36	0.49	3.08	1.28	11.75	10.9	19
YY10137		0.10	0.001	0.23	1.18	12.1	<0.02	<10	180	0.43	0.37	2.04	1.20	20.2	18.2	41
YY10138		0.09	<0.001	0.26	1.64	13.5	<0.02	<10	410	0.50	0.65	2.40	1.32	23.2	26.8	76
YY10139		0.23	<0.001	0.26	1.10	12.9	<0.02	10	260	0.62	0.22	4.13	1.32	22.2	11.6	18
YY10140		0.10	<0.001	0.24	0.95	13.6	<0.02	10	220	0.54	0.20	2.63	5.72	19.20	14.4	20
YY10141		0.07	0.002	0.51	0.68	10.5	<0.02	10	240	0.37	0.12	2.65	1.16	11.70	5.7	15
YY10142		0.13	0.002	0.72	1.78	14.5	<0.02	10	240	2.01	0.29	1.69	22.3	32.7	46.8	18
YY10143		0.12	0.001	0.33	1.13	19.2	<0.02	10	260	0.70	0.22	3.06	1.88	24.5	11.7	20
YY10144		0.25	0.001	0.18	1.44	14.5	<0.02	10	180	0.81	0.25	4.31	0.84	30.7	14.4	21
YY10145		0.25	0.001	0.22	1.61	17.7	<0.02	<10	160	0.84	0.30	1.15	1.26	35.6	26.2	25
YY10146		0.15	0.001	0.32	2.34	12.4	<0.02	10	120	1.52	0.18	2.26	9.63	86.9	59.9	26
YY10147		0.22	<0.001	0.34	4.19	12.1	<0.02	<10	150	2.75	0.18	1.41	7.42	130.5	85.6	29
YY10148		0.23	0.003	0.22	2.11	14.6	<0.02	<10	270	1.32	0.23	0.78	2.03	43.6	23.4	30
YY10149		0.16	0.001	0.26	1.26	16.3	<0.02	<10	190	0.73	0.24	4.02	2.40	31.3	17.8	20
YY10150		0.19	0.001	0.26	1.28	15.2	<0.02	<10	200	0.76	0.23	1.38	1.54	26.6	15.2	21
YY10151		0.20	0.001	0.26	1.23	15.4	<0.02	10	230	0.77	0.23	2.41	1.16	24.2	13.1	20
YY10152		0.39	0.002	0.33	1.03	16.3	<0.02	<10	190	0.58	0.21	5.67	0.72	22.4	11.6	16
YY10153		0.14	0.014	1.00	0.50	69.9	<0.02	<10	2560	0.27	6.77	0.73	0.32	11.40	4.1	12
YY10154		0.10	0.007	0.47	0.95	27.4	<0.02	<10	260	0.54	0.48	1.20	0.52	22.8	9.8	18
YY10155		0.19	0.007	0.75	0.96	54.7	<0.02	<10	240	0.62	0.48	1.68	0.78	24.0	10.6	18
YY10156		0.15	0.072	1.79	0.57	117.0	0.04	<10	400	0.36	3.78	0.60	0.44	35.6	4.9	19
YY10157		0.20	0.002	0.31	0.89	11.4	<0.02	<10	310	0.51	0.24	2.98	1.30	20.6	8.6	18
YY10158		0.26	0.006	1.47	0.98	23.1	<0.02	<10	300	0.50	0.21	2.55	1.27	26.1	10.4	19
YY10159		0.28	0.002	0.67	1.24	25.0	<0.02	<10	230	0.71	0.22	1.89	1.31	28.0	11.3	22
YY10160		0.25	0.001	0.28	1.41	19.7	<0.02	<10	190	0.74	0.23	3.80	0.51	28.0	15.8	21
YY10161		0.30	0.002	0.32	1.20	15.3	<0.02	10	330	0.74	0.20	5.11	0.70	23.6	12.6	19
YY10162		0.26	0.003	0.30	1.15	14.9	<0.02	10	270	0.69	0.18	5.71	0.64	22.7	10.6	18
YY10163		0.23	0.001	0.33	1.35	16.9	<0.02	10	260	0.78	0.23	1.98	0.66	25.0	13.1	20
YY10164		0.33	0.001	0.24	1.18	15.9	<0.02	10	180	0.67	0.18	7.23	0.79	24.6	12.5	18
YY10165		0.33	0.001	0.34	1.38	17.9	<0.02	<10	180	0.65	0.19	4.42	0.58	25.8	12.7	19
YY10166		0.23	0.001	0.31	1.37	19.5	<0.02	<10	280	0.72	0.19	2.25	2.77	28.0	11.6	21
YY10167		0.21	0.002	0.40	1.05	18.7	<0.02	<10	270	0.55	0.17	2.09	1.77	24.1	8.7	19
YY10168		0.22	0.002	0.51	1.27	26.0	<0.02	<10	350	0.68	0.19	2.98	2.83	23.8	9.8	21
YY10169		0.20	0.002	0.49	1.28	23.1	<0.02	<10	400	0.62	0.18	1.42	1.40	23.1	9.1	21
YY10170		0.25	0.001	0.38	1.53	21.9	<0.02	<10	400	0.72	0.20	1.25	0.92	22.7	10.2	23

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Finalized Date: 4-JUL-2019
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CERTIFICATE OF ANALYSIS WH19152808

Sample Description	Method	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Cs	Cu	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na
	Units	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%
	LOD	0.05	0.2	0.01	0.05	0.05	0.02	0.01	0.005	0.01	0.2	0.1	0.01	5	0.05	0.01
YY10131		4.08	29.8	3.53	7.82	0.06	0.10	0.04	0.037	0.11	9.5	39.1	0.98	939	6.74	0.08
YY10132		2.72	32.4	3.42	6.00	<0.05	0.12	0.06	0.032	0.10	12.0	33.6	0.82	402	4.02	0.03
YY10133		3.83	41.0	3.82	6.25	<0.05	0.17	0.06	0.042	0.20	6.4	29.0	1.15	207	4.55	0.02
YY10134		1.60	8.6	3.14	6.43	<0.05	<0.02	0.02	0.033	0.04	12.0	14.9	0.33	305	2.02	<0.01
YY10135		1.17	33.8	2.96	2.73	<0.05	0.05	0.06	0.053	0.09	12.0	8.8	0.61	1500	3.89	<0.01
YY10136		0.63	25.7	1.89	2.09	<0.05	0.04	0.08	0.038	0.07	6.2	5.5	0.44	1040	1.78	<0.01
YY10137		0.72	29.6	3.06	3.77	<0.05	0.04	0.06	0.036	0.08	10.1	12.1	0.68	675	1.99	0.01
YY10138		1.18	49.5	4.00	5.18	0.05	0.03	0.05	0.037	0.08	12.5	16.6	1.08	1100	2.40	0.01
YY10139		0.98	31.3	2.74	3.41	<0.05	0.06	0.08	0.030	0.16	11.1	14.4	2.24	781	3.57	<0.01
YY10140		0.69	45.5	2.62	2.74	<0.05	0.05	0.08	0.033	0.10	9.8	11.0	0.63	926	3.35	<0.01
YY10141		0.72	23.4	1.64	2.06	<0.05	0.06	0.11	0.019	0.08	7.1	9.1	0.45	358	3.28	<0.01
YY10142		5.34	125.0	3.00	2.84	0.06	0.06	0.10	0.039	0.11	15.7	23.7	0.52	2090	2.93	<0.01
YY10143		1.00	32.3	2.88	3.63	<0.05	0.07	0.10	0.035	0.16	12.8	17.3	1.52	681	3.67	<0.01
YY10144		1.28	31.8	3.37	4.06	<0.05	0.07	0.10	0.032	0.18	15.7	23.1	2.08	741	2.75	<0.01
YY10145		1.13	34.2	4.04	4.47	<0.05	0.09	0.08	0.037	0.15	18.2	31.8	1.06	760	5.37	<0.01
YY10146		1.83	235	3.90	3.82	0.13	0.08	0.08	0.056	0.15	49.3	25.1	1.03	1550	2.97	<0.01
YY10147		1.98	460	4.30	4.26	0.16	0.09	0.08	0.079	0.12	89.1	31.5	0.53	1280	3.17	<0.01
YY10148		1.13	110.0	4.32	4.92	0.07	0.08	0.08	0.068	0.13	23.2	26.4	0.68	660	3.14	<0.01
YY10149		1.11	63.1	3.25	3.65	0.05	0.08	0.09	0.034	0.13	15.9	22.5	2.27	753	3.34	<0.01
YY10150		0.83	46.3	3.13	3.71	0.05	0.06	0.09	0.037	0.11	13.1	20.6	0.69	746	2.70	<0.01
YY10151		0.91	31.8	3.08	3.80	<0.05	0.07	0.10	0.035	0.12	12.3	20.5	1.17	664	2.93	<0.01
YY10152		0.86	31.8	2.85	3.04	<0.05	0.07	0.11	0.027	0.11	11.1	16.3	2.90	600	2.43	<0.01
YY10153		0.39	23.9	1.57	2.11	<0.05	0.07	0.18	0.080	0.04	6.2	6.3	0.23	255	7.57	<0.01
YY10154		0.39	24.7	2.92	2.85	<0.05	0.05	0.13	0.038	0.08	11.9	12.3	0.50	896	3.36	<0.01
YY10155		0.74	31.1	2.85	2.97	<0.05	0.08	0.19	0.036	0.09	12.6	12.5	0.81	651	3.55	<0.01
YY10156		0.55	30.8	2.56	2.46	0.05	0.06	0.17	0.053	0.05	20.1	6.0	0.25	205	9.61	<0.01
YY10157		0.62	23.9	2.20	2.91	<0.05	0.05	0.07	0.023	0.07	11.0	14.4	1.47	412	2.62	<0.01
YY10158		0.71	28.3	3.00	2.84	0.05	0.07	0.17	0.035	0.09	14.1	13.8	1.25	485	3.35	<0.01
YY10159		0.78	29.2	3.22	3.93	<0.05	0.08	0.10	0.041	0.13	14.6	21.2	1.18	438	4.15	<0.01
YY10160		0.98	35.7	3.65	3.52	0.06	0.08	0.08	0.032	0.14	14.2	25.5	2.08	735	2.51	0.01
YY10161		0.93	35.1	3.02	3.09	<0.05	0.05	0.12	0.031	0.14	12.3	18.3	2.37	817	2.43	0.01
YY10162		0.99	29.5	2.81	2.95	<0.05	0.07	0.10	0.030	0.16	11.5	16.1	2.53	703	1.95	0.01
YY10163		0.75	23.6	3.72	3.34	<0.05	0.07	0.09	0.037	0.14	12.3	21.1	1.07	834	1.85	0.01
YY10164		1.10	33.8	3.01	2.96	0.05	0.07	0.10	0.031	0.15	12.6	19.0	3.01	736	1.69	0.01
YY10165		0.96	36.0	3.40	3.36	0.05	0.08	0.10	0.036	0.16	13.5	23.7	2.37	710	1.70	0.01
YY10166		0.95	23.9	3.35	3.48	0.05	0.07	0.07	0.039	0.15	14.1	19.2	1.21	715	4.62	0.01
YY10167		0.78	27.4	2.43	2.73	0.05	0.07	0.06	0.026	0.09	13.1	16.0	1.07	361	3.25	0.02
YY10168		1.01	29.0	2.91	3.13	0.05	0.08	0.08	0.034	0.12	13.9	19.2	1.40	432	4.35	0.01
YY10169		0.91	26.9	2.74	3.03	0.05	0.07	0.10	0.034	0.10	14.2	17.5	0.52	370	2.85	0.01
YY10170		1.04	26.5	3.09	3.54	0.05	0.06	0.08	0.038	0.11	13.8	20.4	0.51	473	2.60	0.02

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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 ST
VANCOUVER BC V6B 1L8

Finalized Date: 4-JUL-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19152808

Sample Description	Method	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Nb	Ni	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th
	Units	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.05	0.2	10	0.2	0.1	0.001	0.01	0.05	0.1	0.2	0.2	0.2	0.01	0.01	0.2
YY10131		0.34	51.3	1150	19.6	18.8	0.002	0.12	0.96	3.6	1.2	0.5	59.7	<0.01	0.04	3.0
YY10132		0.32	52.5	1260	23.0	18.9	0.001	0.11	1.22	2.9	1.1	0.5	42.1	<0.01	0.03	2.8
YY10133		0.20	27.0	670	30.0	21.4	<0.001	0.33	1.11	3.4	0.7	0.5	32.9	<0.01	0.06	5.1
YY10134		0.95	15.4	470	23.6	9.3	<0.001	0.01	0.78	1.5	0.3	0.7	16.6	<0.01	0.05	0.9
YY10135		0.50	62.0	790	27.8	13.1	0.002	0.07	3.89	2.6	1.4	0.4	43.9	<0.01	0.05	1.5
YY10136		0.33	36.3	650	17.6	9.2	0.001	0.13	1.58	1.8	0.8	0.3	51.4	<0.01	0.02	0.6
YY10137		0.50	67.0	810	19.7	9.1	0.001	0.09	1.86	3.0	0.6	0.4	42.5	<0.01	0.03	1.1
YY10138		1.26	122.5	920	17.1	10.2	0.001	0.11	2.26	4.5	1.2	0.4	60.6	<0.01	0.04	1.0
YY10139		0.36	37.8	670	35.6	10.7	0.002	0.04	2.25	3.0	1.3	0.3	41.5	<0.01	0.04	1.8
YY10140		0.37	92.0	680	29.2	7.8	0.005	0.09	2.77	2.3	2.2	0.2	74.6	<0.01	0.03	1.2
YY10141		0.34	24.0	710	17.1	6.7	0.005	0.11	3.25	1.3	2.6	0.2	75.4	<0.01	0.05	0.7
YY10142		0.31	248	990	28.3	22.2	0.005	0.10	2.47	2.4	3.7	0.3	79.4	<0.01	0.06	1.2
YY10143		0.52	35.3	770	34.1	11.0	<0.001	0.04	2.07	3.0	0.9	0.4	37.8	<0.01	0.07	1.9
YY10144		0.22	39.3	680	34.3	10.9	<0.001	0.01	1.23	3.9	0.8	0.3	50.8	<0.01	0.04	4.2
YY10145		0.20	70.8	700	34.9	9.8	0.001	0.01	1.20	3.9	0.9	0.3	20.2	<0.01	0.04	4.7
YY10146		0.21	451	780	30.0	12.3	0.003	0.08	1.39	6.0	1.5	0.2	48.0	<0.01	0.04	3.3
YY10147		0.23	447	840	25.3	12.5	0.002	0.06	1.24	7.1	1.6	0.2	39.1	0.01	0.03	4.0
YY10148		0.34	140.0	540	32.7	10.0	<0.001	0.01	1.23	5.6	0.9	0.4	18.3	<0.01	0.04	3.6
YY10149		0.28	76.2	900	34.1	9.1	0.001	0.02	1.63	3.8	0.8	0.3	47.7	<0.01	0.04	3.6
YY10150		0.33	62.4	830	33.9	9.1	0.002	0.03	1.48	3.4	1.4	0.3	26.0	<0.01	0.04	2.1
YY10151		0.28	38.8	790	34.3	9.5	<0.001	0.04	1.60	3.2	1.5	0.3	30.8	<0.01	0.04	1.8
YY10152		0.26	32.2	770	34.4	7.8	<0.001	0.01	1.51	3.4	0.6	0.3	52.8	<0.01	0.05	2.8
YY10153		0.16	11.8	440	79.9	3.9	<0.001	0.09	4.99	2.4	4.2	2.3	30.0	<0.01	0.17	2.9
YY10154		0.28	25.5	830	32.4	6.2	<0.001	0.05	2.63	2.7	2.0	0.5	39.7	<0.01	0.05	1.4
YY10155		0.27	35.9	830	40.1	8.4	<0.001	0.03	4.10	3.1	1.6	0.5	29.4	<0.01	0.07	2.1
YY10156		0.21	24.8	1180	40.8	5.0	<0.001	0.05	8.24	1.9	2.7	1.1	78.9	<0.01	0.17	2.3
YY10157		0.44	26.8	1040	22.0	6.2	0.001	0.03	1.41	2.7	0.7	0.3	48.4	<0.01	0.05	1.6
YY10158		0.35	38.4	1720	28.5	6.9	<0.001	0.05	3.08	2.7	2.5	0.3	63.3	<0.01	0.07	2.2
YY10159		0.43	34.1	1270	29.5	9.6	<0.001	0.05	2.11	3.8	1.4	0.4	51.0	<0.01	0.05	3.5
YY10160		0.17	43.7	780	48.4	8.8	0.001	0.02	1.37	3.4	0.7	0.2	38.4	<0.01	0.04	3.5
YY10161		0.21	33.2	750	41.2	9.3	<0.001	0.02	1.55	3.3	0.6	0.3	44.0	<0.01	0.03	2.0
YY10162		0.25	27.3	700	38.6	9.6	<0.001	0.03	1.64	3.3	0.8	0.3	50.7	<0.01	0.03	2.2
YY10163		0.21	30.5	630	48.6	8.8	0.002	0.04	1.40	3.5	1.6	0.3	20.6	<0.01	0.04	2.1
YY10164		0.16	32.7	700	41.7	9.1	0.001	0.02	1.36	3.4	0.7	0.3	68.4	<0.01	0.03	3.3
YY10165		0.16	37.5	630	57.8	9.3	<0.001	0.02	1.53	3.4	0.7	0.6	35.4	<0.01	0.05	3.1
YY10166		0.22	32.3	780	43.9	9.9	0.001	0.02	2.09	3.0	2.1	0.4	36.8	<0.01	0.04	2.7
YY10167		0.29	29.1	1020	24.8	6.3	0.001	0.03	1.64	2.3	1.2	0.3	42.5	<0.01	0.05	2.5
YY10168		0.18	35.7	1210	30.8	9.0	0.001	0.04	2.03	2.3	1.9	0.4	45.3	<0.01	0.05	1.9
YY10169		0.23	34.1	1010	29.3	9.5	0.001	0.06	1.81	2.0	1.5	0.4	29.7	<0.01	0.04	1.5
YY10170		0.25	32.7	980	28.5	10.2	<0.001	0.06	1.55	2.4	1.2	0.4	29.6	<0.01	0.04	1.6

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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

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CERTIFICATE OF ANALYSIS WH19152808

Sample Description	Method	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Ti	Tl	U	V	W	Y	Zn	Zr
	Units	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.005	0.02	0.05	1	0.05	0.05	2	0.5
YY10131		0.039	0.57	3.06	46	0.09	10.75	109	4.1
YY10132		0.020	0.34	1.84	41	0.07	10.00	133	3.8
YY10133		0.019	0.77	1.40	50	0.07	8.66	92	8.8
YY10134		0.029	0.22	0.56	66	0.27	3.44	68	<0.5
YY10135		0.017	0.14	1.36	29	0.09	9.48	239	2.1
YY10136		0.012	0.10	1.18	20	0.06	6.57	142	1.8
YY10137		0.021	0.12	0.82	36	0.06	7.80	156	1.4
YY10138		0.047	0.21	1.33	48	0.15	13.25	167	1.5
YY10139		0.012	0.19	1.04	31	0.07	8.46	196	2.1
YY10140		0.010	0.14	1.48	30	0.07	10.60	517	1.9
YY10141		0.007	0.12	2.12	29	0.09	5.67	112	2.8
YY10142		0.009	0.60	3.00	27	0.09	28.1	1140	1.7
YY10143		0.012	0.20	0.78	33	0.10	9.28	143	2.7
YY10144		0.007	0.17	0.61	29	0.05	9.93	131	3.8
YY10145		0.005	0.16	0.57	30	0.06	10.80	163	3.8
YY10146		0.006	2.77	15.15	25	0.06	62.8	719	3.1
YY10147		0.006	2.49	16.10	27	0.06	130.0	643	3.4
YY10148		0.007	0.24	2.81	40	0.09	25.4	270	2.4
YY10149		0.008	0.23	1.20	29	0.06	14.50	190	3.2
YY10150		0.008	0.16	1.27	33	0.09	11.80	171	2.2
YY10151		0.007	0.13	1.02	28	0.07	10.65	134	2.4
YY10152		0.008	0.14	0.70	26	0.06	9.42	131	2.9
YY10153		0.006	0.32	1.25	34	0.49	3.41	44	2.4
YY10154		0.009	0.40	1.07	37	0.17	9.16	119	1.5
YY10155		0.008	0.50	0.80	46	0.16	9.51	128	2.9
YY10156		0.007	0.65	1.43	72	0.39	5.57	79	2.1
YY10157		0.015	0.11	1.18	32	0.19	9.14	111	1.8
YY10158		0.012	0.32	1.74	40	0.20	10.00	162	2.4
YY10159		0.012	0.38	0.89	36	0.13	8.61	131	2.8
YY10160		0.006	0.13	0.77	27	0.05	9.59	162	3.0
YY10161		0.008	0.13	0.59	28	0.07	9.56	145	2.0
YY10162		0.009	0.15	0.69	29	0.07	8.69	147	2.4
YY10163		0.006	0.11	0.78	31	0.05	9.60	158	2.4
YY10164		0.009	0.18	0.53	27	<0.05	8.72	147	3.8
YY10165		0.005	0.13	0.56	28	0.06	9.63	160	2.8
YY10166		0.007	0.20	0.75	36	0.09	10.20	162	2.4
YY10167		0.013	0.12	0.86	28	0.08	9.39	129	2.7
YY10168		0.008	0.16	0.96	31	0.07	12.35	168	2.7
YY10169		0.009	0.21	0.97	30	0.07	11.20	177	2.3
YY10170		0.010	0.17	0.99	33	0.07	10.70	127	2.1

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Sample Description	Method	WEI-21	Au-ICP21	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Recvd Wt.	Au	Ag	Al	As	Au	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr
	Units	kg	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
	LOD	0.02	0.001	0.01	0.01	0.1	0.02	10	10	0.05	0.01	0.01	0.01	0.02	0.1	1
YY10171		0.29	0.001	0.27	1.75	21.3	<0.02	<10	240	0.80	0.20	1.48	0.53	18.80	11.3	23
YY10172		0.27	0.001	0.27	2.85	24.8	<0.02	<10	290	1.29	0.25	1.09	0.56	20.5	13.0	35
YY10173		0.25	0.001	0.21	2.58	25.0	<0.02	<10	260	1.04	0.23	0.71	0.30	18.60	10.4	32
YY10174		0.30	0.001	0.04	2.38	19.1	<0.02	<10	170	0.57	0.26	0.09	0.12	22.5	8.3	38
YY10175		0.16	<0.001	0.09	2.95	21.5	<0.02	<10	160	1.07	0.27	0.38	0.34	18.20	12.1	36
YY10176		0.10	0.002	0.23	2.75	23.9	<0.02	<10	170	1.10	0.23	0.86	0.40	10.15	12.2	33
YY10178		0.34	<0.001	0.41	1.08	4.0	<0.02	<10	50	0.45	0.17	4.55	0.77	14.15	5.7	13
YY10179		0.37	<0.001	0.64	0.87	7.4	<0.02	<10	90	0.38	0.16	1.28	0.48	11.75	4.3	16
YY10180		0.24	0.001	0.25	0.71	4.1	<0.02	<10	70	0.27	0.22	2.91	1.49	12.85	3.7	13
YY10181		0.29	0.001	0.13	1.14	8.5	<0.02	<10	90	0.57	0.20	0.23	0.70	24.5	6.9	22
YY10182		0.40	<0.001	0.20	0.92	5.9	<0.02	<10	110	0.68	0.17	0.34	0.42	15.10	4.3	18
YY10183		0.32	0.002	0.28	0.92	5.9	<0.02	<10	80	0.38	0.16	0.38	0.35	15.80	4.1	17
YY10184		0.28	<0.001	0.25	0.26	1.9	<0.02	<10	30	0.12	0.09	11.90	0.39	5.34	1.6	6
YY10185		0.31	0.001	1.75	1.64	5.9	<0.02	<10	120	0.84	0.57	1.02	0.92	19.55	6.3	17
YY10186		0.35	<0.001	0.57	0.59	2.7	<0.02	<10	60	0.53	0.81	2.16	0.63	8.79	3.9	8
YY10187		0.22	0.001	0.28	2.05	8.2	<0.02	<10	110	0.78	0.84	0.10	0.20	15.65	8.2	35
YY10188		0.39	0.004	0.87	0.75	3.5	<0.02	<10	110	0.47	0.64	3.19	1.45	13.60	5.0	10
YY10189		0.18	<0.001	0.61	1.19	7.3	<0.02	<10	130	0.53	0.53	0.58	0.38	14.45	6.6	23
YY10190		0.26	<0.001	0.18	1.04	8.1	<0.02	<10	100	0.53	0.49	0.22	0.24	16.35	7.7	18
YY19131		0.16	0.003	1.58	0.77	7.2	<0.02	<10	100	0.32	0.76	2.11	18.10	7.65	4.1	22
YY19132		0.31	0.002	0.23	1.36	10.3	<0.02	<10	190	0.49	0.48	0.51	0.85	18.15	5.2	29
YY19133		0.42	<0.001	0.51	0.76	6.8	<0.02	<10	2840	0.40	1.78	0.79	2.22	15.10	5.7	16
YY19134		0.33	<0.001	0.78	0.63	6.6	<0.02	<10	1360	0.39	0.34	2.35	0.96	9.52	3.0	12
YY19135		0.44	0.001	0.47	0.40	6.5	<0.02	<10	1010	0.19	0.30	12.30	1.15	8.47	3.1	9
YY19136		0.39	<0.001	0.46	0.42	8.5	<0.02	<10	140	0.28	0.09	16.25	0.64	8.77	3.9	17
YY19137		0.35	0.001	0.39	0.52	7.2	<0.02	<10	240	0.37	0.08	12.50	0.56	13.95	3.7	27
YY19138		0.37	0.001	0.91	0.54	13.0	<0.02	<10	1230	0.40	0.13	13.55	0.96	9.81	4.8	12
YY19139		0.23	0.001	0.76	0.69	5.5	<0.02	<10	750	1.62	0.95	1.76	0.93	14.35	4.1	14
YY19140		0.41	<0.001	0.54	0.28	3.8	<0.02	<10	310	0.24	0.25	15.20	0.55	7.10	2.4	4
YY19141		0.43	<0.001	0.94	0.33	5.7	<0.02	<10	370	0.33	0.33	12.90	1.20	5.90	3.4	12
YY19142		0.39	0.001	0.71	0.30	7.0	<0.02	<10	160	0.28	0.11	18.05	0.78	6.58	2.5	14
YY19143		0.36	<0.001	0.52	0.41	4.2	<0.02	<10	230	0.39	0.45	11.55	0.78	9.75	3.1	10
YY19144		0.34	<0.001	0.40	0.45	3.7	<0.02	<10	370	0.79	0.58	2.37	0.66	10.40	2.6	13
YY19145		0.27	<0.001	0.30	0.90	6.2	<0.02	<10	140	0.53	0.65	3.92	0.88	12.95	4.3	19
YY19146		0.38	<0.001	0.31	0.52	3.7	<0.02	<10	60	0.36	0.32	7.25	0.51	6.90	2.3	12
YY19147		0.44	<0.001	0.25	0.48	2.9	<0.02	<10	50	0.25	0.45	8.01	0.60	6.93	2.3	11
YY19148		0.33	<0.001	0.30	1.02	6.5	<0.02	<10	110	0.45	0.25	1.33	0.68	16.90	4.7	20
YY19149		0.37	<0.001	0.24	1.17	6.7	<0.02	<10	160	0.65	0.42	0.98	1.13	17.75	5.5	26
YY19150		0.35	<0.001	0.25	0.72	3.3	<0.02	<10	80	0.34	0.20	3.82	0.61	9.92	3.2	13
YY19151		0.32	<0.001	0.27	0.89	5.5	<0.02	<10	140	0.43	0.25	3.95	0.86	13.00	4.3	17

***** 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
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: 4-JUL-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19152808

Sample Description	Method	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Cs	Cu	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na
	Units	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%
	LOD	0.05	0.2	0.01	0.05	0.05	0.02	0.01	0.005	0.01	0.2	0.1	0.01	5	0.05	0.01
YY10171		1.81	28.6	2.99	4.20	<0.05	0.06	0.06	0.036	0.09	10.8	24.4	0.55	378	2.56	0.03
YY10172		3.00	36.1	3.43	6.67	0.05	0.09	0.07	0.033	0.13	11.0	40.3	0.90	506	4.12	0.10
YY10173		2.39	21.9	3.22	6.11	<0.05	0.09	0.06	0.030	0.11	10.2	39.6	0.83	452	4.05	0.06
YY10174		2.10	20.0	2.52	9.05	<0.05	0.03	0.02	0.024	0.08	11.1	36.2	0.89	344	6.57	0.02
YY10175		3.26	16.4	3.24	8.57	<0.05	0.05	0.03	0.030	0.07	8.9	39.6	0.69	363	5.22	0.02
YY10176		3.28	25.6	2.96	6.56	0.05	0.10	0.04	0.025	0.23	5.1	43.0	0.94	476	8.56	0.08
YY10178		1.86	20.2	2.28	3.00	<0.05	0.02	0.02	0.024	0.02	7.4	12.8	0.20	238	0.83	0.05
YY10179		1.37	21.6	2.01	2.47	<0.05	0.02	0.02	0.019	0.02	6.3	11.9	0.20	190	0.81	0.03
YY10180		1.73	12.3	1.24	1.90	<0.05	0.02	0.04	0.025	0.03	11.3	8.4	0.23	257	0.53	0.01
YY10181		1.01	13.3	2.12	3.55	<0.05	<0.02	0.03	0.026	0.05	9.7	13.7	0.31	413	0.86	0.01
YY10182		1.17	11.1	1.46	2.83	<0.05	0.04	0.02	0.024	0.03	6.7	14.7	0.22	421	0.59	0.01
YY10183		0.94	8.9	1.59	2.42	<0.05	0.03	0.02	0.020	0.03	8.1	15.4	0.27	211	0.82	0.02
YY10184		1.20	19.9	0.52	0.75	<0.05	0.03	0.02	0.009	0.02	2.9	7.0	0.16	84	0.60	0.02
YY10185		1.26	17.5	2.16	3.56	<0.05	0.02	0.06	0.044	0.03	7.5	8.9	0.24	524	0.92	0.02
YY10186		0.87	23.3	1.64	1.59	<0.05	<0.02	0.01	0.111	0.01	3.2	4.8	0.10	381	0.39	0.01
YY10187		3.74	84.7	4.88	5.76	<0.05	0.02	0.06	0.023	0.06	7.7	14.0	0.32	199	3.55	0.02
YY10188		1.12	22.8	1.86	2.11	<0.05	0.02	0.03	0.037	0.02	7.8	5.7	0.14	515	0.50	0.02
YY10189		1.53	14.9	2.04	3.55	<0.05	0.03	0.03	0.040	0.03	6.8	9.5	0.28	463	0.88	0.01
YY10190		1.53	12.2	2.08	4.05	<0.05	<0.02	0.02	0.028	0.03	7.0	9.2	0.23	513	0.99	0.01
YY19131		1.84	43.9	1.57	2.16	<0.05	0.02	0.06	0.061	0.03	5.5	6.6	0.18	223	5.86	0.02
YY19132		2.33	18.6	2.41	4.41	<0.05	<0.02	0.02	0.025	0.04	8.9	16.1	0.30	291	2.34	0.01
YY19133		1.20	39.7	2.17	2.34	<0.05	0.03	0.03	0.091	0.05	9.3	6.7	0.19	634	2.39	0.02
YY19134		1.12	13.7	1.73	2.22	<0.05	0.02	0.01	0.040	0.02	5.5	7.7	0.12	211	0.90	0.02
YY19135		1.14	15.6	1.72	1.31	<0.05	0.02	0.02	0.020	0.02	5.3	4.6	0.15	129	0.96	0.02
YY19136		1.67	6.8	1.61	1.57	<0.05	0.02	0.01	0.018	0.04	5.0	9.3	0.26	143	0.43	0.02
YY19137		1.20	11.8	1.58	2.08	0.06	0.03	0.02	0.017	0.02	8.1	16.1	0.37	238	0.98	0.02
YY19138		1.17	12.5	1.98	2.06	<0.05	0.02	0.02	0.031	0.02	6.0	8.4	0.18	161	0.92	0.01
YY19139		1.08	48.6	2.06	2.23	0.05	<0.02	0.03	0.035	0.02	8.1	7.4	0.14	511	1.05	0.02
YY19140		0.50	12.6	1.39	1.01	<0.05	0.02	0.01	0.016	0.02	4.5	3.0	0.08	145	0.61	0.01
YY19141		1.03	19.2	1.81	1.15	<0.05	0.02	0.01	0.017	0.03	3.1	7.9	0.17	117	1.92	0.02
YY19142		0.87	14.0	1.44	1.20	<0.05	0.02	0.02	0.015	0.01	3.7	8.2	0.22	146	1.06	0.02
YY19143		1.02	17.1	1.32	1.47	<0.05	0.02	0.01	0.027	0.03	5.8	7.0	0.15	249	0.70	0.02
YY19144		1.16	19.4	1.14	1.50	<0.05	0.02	0.01	0.026	0.02	6.3	5.4	0.11	193	0.41	0.01
YY19145		2.05	25.9	1.59	2.56	<0.05	0.02	0.02	0.051	0.04	8.1	13.2	0.28	476	0.60	0.02
YY19146		1.05	11.0	1.10	1.56	<0.05	0.03	0.01	0.020	0.02	3.9	5.6	0.13	158	1.07	0.02
YY19147		1.60	13.6	1.30	1.38	<0.05	0.02	0.01	0.022	0.02	4.4	7.9	0.17	177	1.00	0.03
YY19148		1.90	14.9	1.74	2.90	<0.05	<0.02	0.04	0.027	0.03	9.6	16.6	0.27	330	0.71	0.02
YY19149		1.87	17.4	1.97	3.42	<0.05	0.03	0.05	0.033	0.04	9.9	15.9	0.28	420	0.76	0.01
YY19150		1.24	12.0	1.47	2.06	<0.05	0.02	0.02	0.053	0.02	6.5	9.8	0.16	322	0.46	0.02
YY19151		1.22	14.9	1.57	2.45	<0.05	0.02	0.03	0.020	0.04	7.3	10.0	0.31	250	0.70	0.02

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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

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VANCOUVER BC V6B 1L8

Finalized Date: 4-JUL-2019
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CERTIFICATE OF ANALYSIS WH19152808

Sample Description	Method	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Nb	Ni	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th
	Units	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.05	0.2	10	0.2	0.1	0.001	0.01	0.05	0.1	0.2	0.2	0.2	0.01	0.01	0.2
YY10171		0.41	35.4	800	23.9	12.3	<0.001	0.09	1.43	2.4	0.8	0.5	45.8	<0.01	0.05	1.6
YY10172		0.30	42.9	1140	28.4	23.6	<0.001	0.12	1.15	4.0	1.0	0.5	65.9	<0.01	0.04	3.2
YY10173		0.29	33.5	1020	24.6	19.1	<0.001	0.13	0.99	3.2	1.0	0.4	46.4	<0.01	0.04	2.2
YY10174		0.37	24.6	650	18.8	13.4	<0.001	0.08	0.45	3.5	0.5	0.6	21.1	<0.01	0.04	2.2
YY10175		0.49	29.2	790	21.4	21.1	<0.001	0.05	0.49	3.5	0.7	0.6	23.8	0.01	0.05	2.5
YY10176		0.19	38.0	1270	16.5	25.2	0.001	0.23	0.58	3.1	0.8	0.4	77.3	<0.01	0.04	2.9
YY10178		0.16	39.2	600	8.2	4.2	<0.001	0.07	0.45	0.7	1.5	<0.2	135.5	<0.01	0.07	0.5
YY10179		0.16	27.1	440	14.7	4.7	<0.001	0.05	1.00	0.8	0.9	0.3	46.3	<0.01	0.06	0.6
YY10180		0.19	22.9	1170	9.2	7.7	0.001	0.08	0.37	0.4	0.6	0.3	52.5	<0.01	0.03	0.2
YY10181		0.34	18.6	650	21.6	11.7	<0.001	0.03	0.79	1.3	0.2	0.4	12.0	<0.01	0.03	0.4
YY10182		0.32	14.9	550	11.7	8.7	<0.001	0.03	0.43	1.4	0.3	0.3	11.8	<0.01	0.03	0.7
YY10183		0.35	17.6	320	13.1	6.9	<0.001	0.02	0.43	1.4	0.6	0.2	19.1	<0.01	0.03	1.1
YY10184		0.10	11.3	300	6.5	4.8	0.001	0.05	0.28	0.5	1.4	<0.2	159.5	<0.01	0.02	0.3
YY10185		0.34	31.9	730	63.2	9.9	<0.001	0.05	1.06	1.2	1.3	0.7	36.8	<0.01	0.10	0.5
YY10186		0.28	12.1	360	39.3	6.0	<0.001	0.05	1.87	0.8	0.8	1.7	24.2	<0.01	0.13	1.0
YY10187		0.77	41.4	1020	15.2	17.3	0.001	0.17	0.70	2.3	3.6	0.4	25.7	0.01	0.16	1.6
YY10188		0.24	20.8	690	26.8	5.7	<0.001	0.05	1.56	1.0	0.8	0.5	76.7	<0.01	0.10	0.8
YY10189		0.41	16.3	940	45.1	8.3	<0.001	0.07	1.12	1.4	0.5	0.8	18.6	<0.01	0.08	0.7
YY10190		0.40	15.0	720	56.2	10.4	<0.001	0.03	1.38	1.0	0.3	0.9	11.5	<0.01	0.10	0.4
YY19131		0.27	85.7	1760	14.4	6.1	0.003	0.11	0.45	0.7	5.2	0.6	76.6	<0.01	0.06	0.2
YY19132		0.80	23.9	640	12.2	11.8	<0.001	0.04	0.47	1.4	1.5	0.5	23.4	<0.01	0.06	0.5
YY19133		0.35	26.9	660	15.1	9.7	0.001	0.13	0.63	1.4	1.6	0.4	25.7	<0.01	0.03	1.0
YY19134		0.11	15.3	600	24.0	3.0	<0.001	0.20	1.61	0.7	1.1	0.5	38.0	<0.01	0.05	0.7
YY19135		0.13	15.5	680	7.2	2.4	0.001	0.18	0.96	0.6	1.6	0.3	124.5	<0.01	0.04	0.6
YY19136		0.10	11.3	680	4.4	6.0	<0.001	0.16	0.97	0.9	0.7	0.3	177.5	<0.01	0.06	1.1
YY19137		0.13	11.9	900	6.1	3.9	<0.001	0.22	1.14	0.9	1.0	<0.2	138.0	<0.01	0.05	0.5
YY19138		0.08	14.8	750	11.8	2.8	<0.001	0.22	2.06	0.7	1.1	0.2	140.0	<0.01	0.07	1.2
YY19139		0.15	16.1	980	16.1	3.4	<0.001	0.12	1.27	0.5	1.1	0.4	27.8	<0.01	0.04	0.5
YY19140		0.05	8.8	690	4.6	2.1	0.001	0.20	0.97	0.3	1.1	0.3	157.0	<0.01	0.04	0.9
YY19141		0.09	16.0	680	16.8	4.1	0.002	0.09	2.38	0.8	1.5	0.4	137.0	<0.01	0.05	1.2
YY19142		0.09	10.6	550	13.7	2.6	0.003	0.21	2.38	0.7	3.7	0.2	136.5	<0.01	0.04	0.9
YY19143		0.18	13.6	570	11.8	5.1	0.001	0.10	1.07	0.7	1.0	0.4	114.0	<0.01	0.04	0.7
YY19144		0.35	11.8	540	19.4	6.0	<0.001	0.02	0.95	1.2	0.7	0.6	27.1	<0.01	0.03	0.9
YY19145		0.32	30.9	570	8.9	9.4	<0.001	0.05	0.73	1.3	0.5	0.3	47.2	<0.01	0.05	0.7
YY19146		0.10	17.5	360	4.5	3.0	<0.001	0.10	0.43	0.6	1.2	0.2	68.2	<0.01	0.02	0.5
YY19147		0.13	16.9	460	4.5	4.5	0.001	0.07	0.28	0.6	1.0	0.2	74.9	<0.01	0.03	0.4
YY19148		0.28	22.8	640	9.6	8.3	<0.001	0.05	0.45	0.9	0.4	0.3	26.0	<0.01	0.03	0.4
YY19149		0.70	26.0	710	10.1	12.2	<0.001	0.05	0.64	1.9	0.5	0.4	17.8	<0.01	0.04	0.8
YY19150		0.14	22.5	540	5.0	4.3	<0.001	0.06	0.24	0.5	0.4	0.2	47.4	<0.01	0.03	0.3
YY19151		0.47	22.7	610	8.0	9.1	<0.001	0.03	0.53	1.4	0.4	0.3	55.2	<0.01	0.03	0.8

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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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Sample Description	Method	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Ti	Tl	U	V	W	Y	Zn	Zr
	Units	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.005	0.02	0.05	1	0.05	0.05	2	0.5
YY10171		0.015	0.23	1.35	34	0.06	8.89	104	2.1
YY10172		0.035	0.36	1.76	48	0.06	9.78	113	3.4
YY10173		0.029	0.38	1.40	46	0.06	7.51	115	2.9
YY10174		0.050	0.28	1.28	57	0.09	3.56	68	1.3
YY10175		0.045	0.35	1.59	58	0.10	5.34	77	1.8
YY10176		0.038	0.50	2.18	40	<0.05	5.81	90	4.4
YY10178		0.012	0.07	0.64	22	0.27	12.35	129	0.5
YY10179		0.010	0.07	0.49	22	0.25	9.94	77	0.5
YY10180		0.009	0.09	0.49	20	0.31	15.15	182	<0.5
YY10181		0.025	0.08	0.45	37	0.32	7.52	126	<0.5
YY10182		0.015	0.09	0.43	30	2.91	7.69	102	1.0
YY10183		0.018	0.07	0.51	25	1.84	10.25	77	0.8
YY10184		0.006	0.04	0.88	8	1.66	5.12	55	0.9
YY10185		0.016	0.08	0.81	25	0.94	10.70	221	<0.5
YY10186		0.012	0.05	0.37	16	1.52	3.68	236	<0.5
YY10187		0.039	0.20	1.67	83	2.90	4.80	67	0.5
YY10188		0.012	0.07	0.68	18	1.27	9.47	212	0.5
YY10189		0.020	0.13	0.64	38	1.14	5.25	129	0.7
YY10190		0.023	0.10	0.48	37	0.45	3.11	94	<0.5
YY19131		0.012	0.15	8.18	32	0.86	14.30	868	0.8
YY19132		0.029	0.19	2.18	53	0.57	6.42	95	<0.5
YY19133		0.014	0.11	0.83	27	3.37	11.65	341	0.7
YY19134		0.005	0.07	0.44	16	0.60	8.53	154	0.6
YY19135		0.006	0.08	0.87	11	0.55	9.39	127	0.5
YY19136		0.005	0.16	0.44	22	0.43	10.65	80	0.6
YY19137		0.006	0.12	0.67	37	0.27	13.90	92	0.8
YY19138		<0.005	0.12	0.36	16	0.37	10.15	144	0.9
YY19139		0.006	0.09	0.58	19	3.18	11.70	114	<0.5
YY19140		<0.005	0.03	0.45	5	0.40	7.51	90	1.2
YY19141		<0.005	0.09	0.81	17	1.12	7.24	102	0.7
YY19142		<0.005	0.14	1.32	19	1.68	6.84	98	0.8
YY19143		0.006	0.09	0.53	15	1.42	8.88	119	0.7
YY19144		0.008	0.08	0.26	23	4.07	9.19	133	0.8
YY19145		0.016	0.20	0.45	32	2.49	12.80	252	0.8
YY19146		0.005	0.07	0.43	14	1.08	6.78	76	1.0
YY19147		0.006	0.08	0.71	14	0.70	7.62	88	0.6
YY19148		0.014	0.11	0.36	29	0.61	13.00	90	0.5
YY19149		0.024	0.19	0.64	41	1.60	11.35	233	0.9
YY19150		0.007	0.07	0.36	18	0.42	10.65	92	0.5
YY19151		0.020	0.12	0.43	28	0.67	8.76	138	0.8

***** 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
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: 4-JUL-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19152808

Sample Description	Method	WEI-21	Au-ICP21	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Recvd Wt.	Au	Ag	Al	As	Au	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr
	Units	kg	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
	LOD	0.02	0.001	0.01	0.01	0.1	0.02	10	10	0.05	0.01	0.01	0.01	0.02	0.1	1
YY19152		0.24	<0.001	0.20	1.01	4.9	<0.02	<10	100	0.48	0.19	1.14	0.65	14.35	4.8	21
YY19153		0.31	<0.001	0.13	0.35	1.8	<0.02	<10	40	0.16	0.11	9.45	0.32	5.61	1.8	7
YY19154		0.29	<0.001	0.38	1.02	5.6	<0.02	<10	70	0.55	0.29	5.19	0.78	12.00	5.2	20
YY19155		0.34	<0.001	0.13	0.87	4.5	<0.02	<10	120	0.40	0.22	2.98	0.65	13.85	4.1	17
YY19156		0.35	<0.001	0.12	0.34	0.8	<0.02	<10	100	0.22	0.05	14.50	0.53	3.75	1.7	8
YY19157		0.27	<0.001	0.21	1.69	8.6	<0.02	<10	210	0.71	0.19	0.41	0.35	26.1	8.4	28
YY19158		0.27	<0.001	0.24	1.27	9.0	<0.02	<10	130	0.51	0.20	0.30	0.32	17.95	5.4	24
YY19159		0.27	<0.001	0.25	0.94	4.1	<0.02	<10	70	0.41	0.13	1.49	0.62	11.45	3.0	19
YY19160		0.31	0.001	0.08	1.08	10.5	<0.02	<10	100	0.40	0.19	0.18	0.36	18.45	5.6	23
YY19161		0.30	<0.001	0.24	1.28	11.0	<0.02	<10	90	0.52	0.25	0.11	0.75	21.4	4.9	23
YY19162		0.42	0.002	0.41	1.29	12.4	<0.02	<10	150	0.63	0.26	0.92	0.44	30.0	9.4	25
YY19163		0.37	<0.001	0.29	1.41	9.2	<0.02	<10	160	0.58	0.21	0.69	0.64	26.3	8.1	23
YY19164		0.39	<0.001	0.10	1.51	9.3	<0.02	<10	160	0.68	0.27	0.38	0.29	20.8	7.4	27
YY19165		0.33	<0.001	0.15	1.72	9.5	<0.02	<10	200	0.71	0.26	0.27	0.27	23.1	8.5	30
YY19166		0.27	<0.001	0.12	1.58	10.4	<0.02	<10	170	0.59	0.24	0.17	0.44	24.1	8.0	27
YY19167		0.42	0.004	0.17	1.71	10.5	<0.02	<10	190	0.73	0.22	0.22	0.35	28.9	9.1	33
YY19168		0.30	<0.001	0.10	1.83	14.1	<0.02	<10	170	0.74	0.19	0.23	0.37	35.5	9.2	35
YY19169		0.45	0.001	0.10	1.60	11.3	<0.02	<10	200	0.69	0.17	0.21	0.53	28.7	9.3	29
YY19170		0.42	0.001	0.14	1.74	11.1	<0.02	<10	200	0.69	0.20	0.21	0.27	30.3	9.1	29
YY19171		0.36	<0.001	0.07	1.53	14.1	<0.02	<10	150	0.55	0.20	0.12	0.32	31.7	9.3	29
YY19172		0.36	<0.001	0.10	1.84	11.6	<0.02	<10	110	0.72	0.24	0.11	0.40	29.4	9.6	32
YY19173		0.31	<0.001	0.19	1.40	10.1	<0.02	<10	180	0.68	0.15	0.21	0.46	26.2	7.9	26
YY19174		0.27	<0.001	0.03	1.56	9.4	<0.02	<10	170	0.55	0.21	0.16	0.11	19.95	7.2	29
YY19175		0.48	0.003	0.28	1.20	10.3	<0.02	<10	160	0.63	0.13	0.16	0.63	23.2	5.4	29
YY19176		0.41	<0.001	0.14	1.36	8.3	<0.02	<10	170	0.57	0.15	0.30	0.16	19.75	6.1	26
YY19177		0.32	<0.001	0.15	1.21	9.2	<0.02	<10	170	0.50	0.15	0.35	0.25	20.7	6.4	26
YY19178		0.42	<0.001	0.15	1.23	8.2	<0.02	<10	100	0.43	0.09	0.27	0.50	4.58	5.8	31
YY19179		0.39	0.002	0.62	1.05	10.9	<0.02	<10	120	0.56	0.12	0.68	0.22	23.8	5.9	23
YY19180		0.28	<0.001	0.42	1.49	11.2	<0.02	<10	140	0.59	0.14	0.46	0.39	24.5	5.9	20

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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

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Finalized Date: 4-JUL-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19152808

Sample Description	Method	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Cs	Cu	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na
	Units	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%
	LOD	0.05	0.2	0.01	0.05	0.05	0.02	0.01	0.005	0.01	0.2	0.1	0.01	5	0.05	0.01
YY19152		1.63	12.8	1.56	3.03	<0.05	0.02	0.04	0.023	0.03	7.8	13.2	0.26	317	0.52	0.02
YY19153		0.81	7.3	0.57	0.95	<0.05	0.02	0.03	0.009	0.01	3.1	4.9	0.16	127	0.34	0.01
YY19154		2.10	25.9	1.97	2.88	<0.05	0.02	0.03	0.027	0.03	6.6	14.8	0.23	210	0.78	0.02
YY19155		1.50	11.5	1.40	2.52	<0.05	<0.02	0.03	0.021	0.04	7.2	9.6	0.26	340	0.47	0.01
YY19156		1.07	11.1	0.45	0.96	<0.05	0.02	0.01	0.008	0.03	2.4	8.7	0.23	120	0.10	0.01
YY19157		1.57	20.0	2.33	4.72	<0.05	0.03	0.04	0.022	0.05	13.7	16.0	0.38	397	0.83	0.01
YY19158		1.52	14.6	1.90	4.05	<0.05	<0.02	0.03	0.023	0.04	8.7	12.6	0.23	268	0.96	0.01
YY19159		2.24	17.7	1.33	3.33	<0.05	<0.02	0.03	0.019	0.03	8.0	11.5	0.16	262	0.53	0.02
YY19160		1.12	9.5	2.07	3.45	<0.05	0.02	0.02	0.045	0.03	7.1	15.4	0.23	443	0.93	0.01
YY19161		1.37	10.4	2.01	4.65	<0.05	<0.02	0.05	0.021	0.03	9.5	7.1	0.11	521	1.29	0.01
YY19162		1.17	23.1	2.72	3.54	0.06	0.04	0.07	0.027	0.05	18.4	14.4	0.68	580	1.24	0.02
YY19163		0.98	17.1	2.42	3.88	0.05	0.04	0.05	0.030	0.05	13.7	13.6	0.39	476	0.96	0.02
YY19164		1.88	12.2	2.46	4.68	<0.05	0.02	0.02	0.026	0.06	10.2	15.2	0.38	391	1.15	0.01
YY19165		1.98	16.7	2.40	4.96	<0.05	0.02	0.03	0.022	0.06	10.9	16.7	0.40	499	1.15	0.01
YY19166		1.44	14.0	2.61	5.05	<0.05	<0.02	0.02	0.026	0.07	12.0	16.0	0.35	421	1.22	0.01
YY19167		2.09	19.5	2.58	4.55	0.05	0.02	0.04	0.032	0.07	12.5	18.6	0.47	440	0.92	0.02
YY19168		1.69	17.3	3.01	4.80	0.05	0.02	0.02	0.031	0.05	11.8	18.1	0.43	501	0.88	0.01
YY19169		1.34	23.1	2.61	4.26	0.05	0.02	0.03	0.029	0.06	12.3	17.5	0.38	540	1.16	0.01
YY19170		1.42	22.3	2.62	4.51	0.05	0.02	0.03	0.026	0.06	14.7	16.9	0.41	460	1.11	0.01
YY19171		1.31	14.8	3.11	4.88	<0.05	<0.02	0.04	0.030	0.06	13.4	16.4	0.37	638	1.57	0.01
YY19172		1.37	17.1	3.07	4.89	0.05	<0.02	0.04	0.049	0.06	11.4	17.2	0.37	674	1.20	0.01
YY19173		1.18	17.0	2.40	3.35	<0.05	0.03	0.03	0.030	0.05	12.1	15.1	0.35	592	1.27	0.01
YY19174		1.48	8.9	2.45	4.71	<0.05	<0.02	0.21	0.025	0.04	9.7	15.1	0.36	434	1.17	0.01
YY19175		1.22	12.3	1.84	2.63	<0.05	0.03	0.02	0.026	0.04	10.5	14.9	0.31	375	0.91	0.01
YY19176		1.45	8.8	2.00	3.69	<0.05	0.02	0.02	0.024	0.03	10.2	14.0	0.32	292	0.80	0.01
YY19177		1.31	8.9	2.00	3.38	<0.05	0.04	0.02	0.027	0.03	10.7	11.6	0.27	377	0.86	0.01
YY19178		1.88	9.3	1.51	4.26	<0.05	0.02	0.02	0.027	0.07	1.7	18.6	0.21	397	0.65	0.04
YY19179		1.68	10.9	2.02	2.58	<0.05	0.03	0.05	0.022	0.03	17.6	11.0	0.28	373	1.18	0.02
YY19180		1.70	9.7	1.92	3.60	<0.05	0.02	0.03	0.035	0.03	9.6	9.0	0.23	680	0.96	0.01

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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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CERTIFICATE OF ANALYSIS WH19152808

Sample Description	Method	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Nb	Ni	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th
	Units	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.05	0.2	10	0.2	0.1	0.001	0.01	0.05	0.1	0.2	0.2	0.2	0.01	0.01	0.2
YY19152		0.35	19.6	660	7.7	9.8	<0.001	0.05	0.39	1.1	0.4	0.2	25.2	<0.01	0.03	0.4
YY19153		0.09	9.7	540	3.6	3.7	<0.001	0.03	0.15	0.4	0.5	<0.2	95.4	<0.01	0.02	0.4
YY19154		0.19	34.9	720	7.6	6.3	0.001	0.07	0.56	0.8	1.1	0.2	110.0	<0.01	0.04	0.5
YY19155		0.34	15.7	520	7.7	13.3	<0.001	0.04	0.36	1.0	0.4	0.2	50.7	<0.01	0.03	0.4
YY19156		0.11	10.1	670	3.7	5.1	0.001	0.04	0.14	0.4	0.6	<0.2	268	<0.01	0.02	0.3
YY19157		0.60	26.4	820	11.7	11.5	<0.001	0.03	0.57	2.4	0.5	0.4	22.0	<0.01	0.04	1.4
YY19158		0.48	21.5	710	11.5	8.7	<0.001	0.03	0.66	1.1	0.3	0.4	17.0	<0.01	0.04	0.4
YY19159		0.33	20.4	600	6.7	5.2	0.001	0.09	0.46	0.7	1.9	0.2	31.2	<0.01	0.04	0.3
YY19160		0.54	17.6	640	24.7	5.9	<0.001	0.02	0.70	1.6	0.4	0.3	12.0	<0.01	0.04	1.5
YY19161		0.90	14.4	520	20.7	7.9	<0.001	0.02	0.75	1.5	0.7	0.6	8.3	0.01	0.05	0.7
YY19162		0.61	27.0	450	34.8	8.4	<0.001	0.02	1.26	3.7	0.9	0.3	28.0	<0.01	0.05	2.3
YY19163		0.58	26.8	600	28.4	10.7	<0.001	0.03	0.70	2.4	0.6	0.3	31.8	<0.01	0.03	1.5
YY19164		0.49	18.1	1050	24.3	18.7	<0.001	0.05	0.54	1.5	0.4	0.4	18.4	<0.01	0.04	0.6
YY19165		0.58	21.7	940	16.4	15.6	<0.001	0.05	0.57	1.6	0.5	0.4	19.4	<0.01	0.04	0.7
YY19166		0.59	18.6	590	21.9	23.0	0.001	0.03	0.71	1.3	0.3	0.5	14.9	<0.01	0.04	0.3
YY19167		0.80	31.7	550	19.2	13.6	<0.001	0.03	0.75	2.3	0.6	0.4	20.5	<0.01	0.05	1.1
YY19168		0.64	35.6	780	18.4	11.7	<0.001	0.03	0.64	2.1	0.6	0.3	16.3	<0.01	0.05	1.3
YY19169		0.64	31.4	590	23.2	10.0	<0.001	0.01	0.95	2.8	0.3	0.4	18.4	<0.01	0.04	2.1
YY19170		0.67	28.2	720	17.9	12.4	<0.001	0.02	0.80	2.4	0.3	0.4	21.3	<0.01	0.04	1.2
YY19171		0.37	20.9	750	34.0	14.7	<0.001	0.03	1.05	1.2	0.4	0.5	13.0	<0.01	0.05	0.3
YY19172		0.55	24.4	650	30.4	12.5	<0.001	0.04	0.98	1.4	0.8	0.3	10.8	<0.01	0.04	0.4
YY19173		0.49	30.0	450	19.8	8.6	<0.001	<0.01	0.89	2.5	0.5	0.3	17.5	<0.01	0.04	2.6
YY19174		0.33	16.3	990	13.7	10.6	<0.001	0.03	0.50	1.0	0.4	0.4	12.1	<0.01	0.04	0.4
YY19175		0.41	25.6	460	19.8	6.1	<0.001	<0.01	0.75	1.7	0.5	0.3	10.3	<0.01	0.03	2.4
YY19176		0.33	20.8	660	12.1	9.4	<0.001	0.01	0.45	1.2	0.3	0.3	16.0	<0.01	0.03	0.7
YY19177		0.40	19.2	740	15.1	7.9	<0.001	0.02	0.47	1.7	0.4	0.3	17.4	<0.01	0.03	1.3
YY19178		0.24	21.4	420	8.8	8.8	<0.001	0.01	0.47	1.4	0.8	0.2	32.8	<0.01	0.04	2.6
YY19179		0.29	25.5	350	13.9	6.2	<0.001	0.03	0.56	2.3	0.9	0.2	33.1	<0.01	0.03	1.4
YY19180		0.33	21.9	700	17.6	8.3	<0.001	0.02	0.48	0.9	0.4	0.2	24.2	<0.01	0.04	0.7

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ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
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Sample Description	Method	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Ti	Tl	U	V	W	Y	Zn	Zr
	Units	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.005	0.02	0.05	1	0.05	0.05	2	0.5
YY19152		0.017	0.10	0.53	33	0.36	9.97	95	0.5
YY19153		<0.005	0.04	0.28	8	0.36	7.01	40	0.6
YY19154		0.009	0.10	0.76	28	0.50	12.85	142	0.6
YY19155		0.017	0.11	0.46	27	0.56	7.72	78	<0.5
YY19156		0.006	0.05	0.52	13	0.88	4.99	60	0.5
YY19157		0.029	0.12	0.87	47	0.44	12.20	103	0.7
YY19158		0.025	0.13	0.62	40	0.68	5.84	106	<0.5
YY19159		0.016	0.09	1.15	28	0.25	10.10	81	0.5
YY19160		0.022	0.10	0.51	37	0.48	3.66	117	0.6
YY19161		0.038	0.13	0.81	57	0.54	5.61	92	<0.5
YY19162		0.033	0.14	0.78	42	0.50	18.15	113	1.2
YY19163		0.026	0.10	0.63	38	0.25	13.45	142	1.0
YY19164		0.022	0.16	0.87	48	0.60	6.64	107	0.5
YY19165		0.029	0.16	0.84	54	0.51	6.61	91	0.5
YY19166		0.035	0.13	0.62	54	0.48	4.49	108	<0.5
YY19167		0.049	0.16	0.77	53	0.49	7.23	120	<0.5
YY19168		0.031	0.12	1.02	53	0.31	10.55	125	0.7
YY19169		0.032	0.15	0.67	44	0.36	8.17	136	0.8
YY19170		0.039	0.15	0.79	49	0.48	8.91	100	0.6
YY19171		0.024	0.14	0.80	49	0.26	6.26	116	<0.5
YY19172		0.032	0.13	0.81	48	0.39	6.83	131	<0.5
YY19173		0.027	0.13	0.62	39	0.25	10.10	97	1.1
YY19174		0.019	0.16	0.66	49	0.26	5.14	79	<0.5
YY19175		0.018	0.16	0.66	36	0.32	8.24	112	1.1
YY19176		0.019	0.12	0.60	39	0.30	7.43	87	<0.5
YY19177		0.018	0.12	0.63	38	0.43	10.05	81	1.0
YY19178		0.012	0.12	0.24	44	0.26	2.36	85	0.8
YY19179		0.015	0.12	0.51	29	0.25	28.8	67	0.7
YY19180		0.014	0.11	0.48	29	0.25	10.70	114	<0.5

***** 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 ST
VANCOUVER BC V6B 1L8

Project: Rau

Finalized Date: 4-JUL-2019
Account: RCM

CERTIFICATE OF ANALYSIS WH19152808

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Applies to Method: Gold determinations by this method are semi-quantitative due to the small sample weight used (0.5g).
ME-MS41

LABORATORY ADDRESSES

Applies to Method: Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.
LOG-22 SCR-41 WEI-21

Applies to Method: Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.
Au-ICP21 ME-MS41

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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 8-JUL-2019
Account: RCM

CERTIFICATE WH19152890

Project: Rau

P.O. No.: R19-S03

This report is for 214 Soil samples submitted to our lab in Whitehorse, YT, Canada on 24-JUN-2019.

The following have access to data associated with this certificate:

ANDREW CARNE	ADAM COULTER	JULIA LANE

SAMPLE PREPARATION

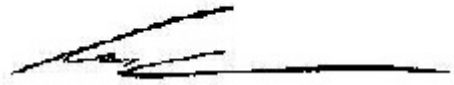
ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-22	Sample login - Rcd w/o BarCode
SCR-41	Screen to -180um and save both

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-ICP21	Au 30g FA ICP-AES Finish	ICP-AES
ME-MS41	Ultra Trace Aqua Regia 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: 8-JUL-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19152890

Sample Description	Method	WEI-21	Au-ICP21	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Recvd Wt.	Au	Ag	Al	As	Au	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr
	Units	kg	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
	LOD	0.02	0.001	0.01	0.01	0.1	0.02	10	10	0.05	0.01	0.01	0.01	0.02	0.1	1
YY10191		0.18	0.003	0.55	1.14	6.8	<0.02	<10	110	0.52	0.23	0.95	0.43	19.80	7.0	19
YY10192		0.26	0.001	0.54	1.00	5.3	<0.02	<10	70	0.41	0.13	0.98	0.77	13.55	4.3	19
YY10193		0.31	0.004	0.85	0.75	4.9	<0.02	<10	50	0.30	0.14	1.42	0.91	11.20	3.7	13
YY10194		0.27	<0.001	0.45	0.85	6.2	<0.02	<10	80	0.32	0.17	1.27	0.84	14.50	3.8	17
YY10195		0.35	<0.001	0.77	0.93	5.7	<0.02	<10	70	0.49	0.20	1.15	1.12	14.40	4.6	15
YY10196		0.32	<0.001	0.22	1.35	7.8	<0.02	<10	110	0.66	0.25	0.29	0.34	12.25	7.3	20
YY10197		0.29	<0.001	0.43	1.00	7.5	<0.02	<10	110	0.54	0.36	0.65	0.54	15.95	6.5	16
YY10198		0.46	<0.001	0.85	0.89	8.8	<0.02	<10	140	0.63	0.70	0.12	0.35	18.70	5.7	13
YY10199		0.29	<0.001	0.27	0.69	5.5	<0.02	<10	110	0.38	0.43	0.20	0.27	10.80	3.7	13
YY10200		0.21	0.003	0.06	1.76	14.1	<0.02	<10	60	0.34	0.30	0.06	0.08	22.8	7.2	27
YY10201		0.23	0.001	0.19	0.89	27.7	<0.02	<10	100	0.22	1.22	0.03	0.14	23.9	2.7	20
YY10202		0.22	0.002	0.14	2.12	16.1	<0.02	<10	130	0.42	0.31	0.07	0.09	32.8	8.0	34
YY10203		0.26	0.002	0.14	1.62	29.5	<0.02	<10	120	1.80	1.62	0.04	0.17	24.5	4.1	33
YY10204		0.30	0.010	0.14	2.42	59.2	<0.02	<10	130	1.98	1.19	0.06	0.31	31.0	20.7	35
YY10205		0.27	0.003	0.29	1.49	22.6	<0.02	<10	60	0.83	0.83	0.05	0.13	25.5	8.9	25
YY10206		0.24	0.005	0.16	2.00	16.7	<0.02	<10	80	1.74	0.52	0.08	0.26	26.0	13.7	27
YY10207		0.25	0.024	0.15	1.68	124.5	<0.02	<10	180	1.47	0.70	0.05	0.11	38.9	7.8	30
YY10208		0.29	0.001	0.26	1.36	32.0	<0.02	<10	110	0.28	0.46	0.05	0.12	24.7	3.4	24
YY10209		0.26	0.005	0.48	2.08	93.4	<0.02	<10	130	1.34	0.77	0.06	0.08	30.7	10.2	37
YY10210		0.23	0.009	0.24	1.36	80.4	<0.02	<10	190	1.01	1.07	0.13	0.37	26.2	9.4	28
YY10211		0.22	0.002	0.18	2.40	16.9	<0.02	<10	220	0.84	0.62	0.07	0.23	22.6	9.4	41
YY10212		0.20	0.017	0.10	1.64	45.9	<0.02	<10	150	0.93	1.49	0.11	0.27	34.2	9.5	37
YY10213		0.21	0.002	0.22	1.10	17.8	<0.02	<10	200	0.39	0.77	0.09	0.77	20.8	4.3	24
YY10214		0.23	<0.001	0.14	1.99	19.6	<0.02	<10	280	0.93	0.68	0.24	0.18	27.0	9.2	36
YY10215		0.18	<0.001	0.18	1.14	15.9	<0.02	<10	130	0.83	0.64	0.10	0.35	17.70	7.4	26
YY10216		0.12	<0.001	0.15	0.94	7.8	<0.02	<10	130	0.38	0.36	0.36	0.15	16.70	4.5	20
YY10217		0.21	0.001	0.12	1.49	8.4	<0.02	<10	160	1.08	0.35	0.16	0.19	16.80	9.4	28
YY10218		0.22	<0.001	0.14	1.60	8.9	<0.02	<10	230	0.92	0.29	0.18	0.15	19.60	8.8	31
YY10219		0.24	<0.001	0.44	2.97	11.0	<0.02	<10	150	1.28	0.41	0.07	0.28	17.00	8.9	35
YY10220		0.14	<0.001	0.13	1.75	11.3	<0.02	<10	210	0.78	0.57	0.50	0.14	22.4	12.1	32
YY10221		0.15	<0.001	0.48	2.28	16.1	<0.02	<10	170	1.23	0.72	0.94	0.46	27.7	32.8	26
YY10222		0.29	<0.001	0.68	1.01	6.4	<0.02	<10	210	0.64	0.78	0.63	0.68	14.10	6.0	21
YY10223		0.13	0.001	0.50	1.37	8.7	<0.02	<10	140	0.82	0.90	0.95	0.47	18.25	11.5	29
YY10224		0.16	<0.001	0.60	1.49	7.7	<0.02	<10	180	0.76	0.67	1.24	0.61	12.85	9.3	34
YY10225		0.21	0.002	0.45	1.93	14.8	<0.02	<10	140	1.14	2.82	0.83	0.61	24.1	26.3	28
YY10226		0.10	0.005	1.27	1.77	8.2	<0.02	10	80	0.67	1.04	3.42	23.0	11.30	11.2	27
YY10227		0.07	0.011	0.78	1.86	7.5	<0.02	<10	90	0.63	0.88	2.52	15.60	8.94	19.5	18
YY10228		0.13	0.003	0.15	1.33	10.3	<0.02	<10	120	0.55	0.28	0.09	0.28	17.60	4.2	30
YY10229		0.23	0.002	0.69	1.80	13.7	<0.02	<10	110	0.86	0.30	2.92	19.55	11.90	8.1	42
YY10230		0.09	0.001	0.37	1.57	10.1	<0.02	<10	150	0.70	1.76	0.96	1.95	15.30	14.8	29

***** See Appendix Page for comments regarding this certificate *****

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North Vancouver BC V7H 0A7
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To: **ATAC RESOURCES LTD.**
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VANCOUVER BC V6B 1L8

Finalized Date: 8-JUL-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19152890

Sample Description	Method	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Cs	Cu	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na
	Units	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%
	LOD	0.05	0.2	0.01	0.05	0.05	0.02	0.01	0.005	0.01	0.2	0.1	0.01	5	0.05	0.01
YY10191		1.33	17.5	2.01	3.49	0.05	0.02	0.04	0.026	0.03	9.8	13.7	0.31	415	0.86	0.01
YY10192		1.57	14.7	1.81	2.69	0.05	0.02	0.02	0.024	0.04	7.4	16.1	0.28	264	0.64	0.02
YY10193		1.22	13.6	1.79	2.03	<0.05	0.02	0.02	0.034	0.03	6.1	10.4	0.18	238	0.58	0.02
YY10194		1.54	10.9	1.58	2.28	<0.05	0.02	0.01	0.019	0.03	7.4	13.4	0.21	234	0.61	0.02
YY10195		1.25	14.1	2.06	3.33	<0.05	0.02	0.03	0.036	0.03	7.9	12.1	0.19	286	0.97	0.02
YY10196		1.30	11.0	2.40	5.82	<0.05	<0.02	0.03	0.035	0.02	5.6	9.5	0.13	523	1.25	0.01
YY10197		1.24	12.7	1.97	3.33	<0.05	0.02	0.02	0.031	0.03	7.7	8.3	0.21	508	0.77	0.01
YY10198		0.97	27.1	1.86	2.38	<0.05	0.03	0.02	0.048	0.02	9.6	6.2	0.20	402	0.63	0.01
YY10199		0.93	11.4	1.46	2.40	<0.05	<0.02	0.01	0.029	0.02	4.9	6.1	0.16	371	0.54	0.01
YY10200		2.84	62.4	3.69	5.12	<0.05	0.02	0.05	0.033	0.04	11.5	16.1	0.29	191	2.05	0.01
YY10201		1.72	14.5	3.20	5.84	<0.05	<0.02	0.03	0.018	0.05	12.3	3.1	0.10	104	1.95	0.01
YY10202		1.87	81.4	3.86	6.23	0.05	0.07	0.07	0.042	0.04	15.1	16.8	0.37	224	2.21	0.01
YY10203		5.20	52.3	5.55	4.82	<0.05	<0.02	0.08	0.020	0.18	12.2	19.0	0.26	136	1.95	0.03
YY10204		8.61	77.2	6.25	5.62	0.06	0.04	0.03	0.034	0.12	14.9	23.4	0.39	335	3.18	0.02
YY10205		6.17	101.0	4.82	3.88	<0.05	<0.02	0.07	0.027	0.07	13.4	13.3	0.23	128	1.83	0.01
YY10206		4.62	54.4	3.77	4.13	0.05	0.04	0.06	0.020	0.08	13.5	22.5	0.32	250	1.84	0.01
YY10207		3.29	28.4	3.32	3.56	0.06	<0.02	0.05	0.013	0.20	19.7	25.4	0.32	94	1.91	0.02
YY10208		1.59	11.7	2.97	6.51	<0.05	<0.02	0.02	0.021	0.04	12.8	8.0	0.22	138	1.34	0.01
YY10209		11.10	44.9	3.58	5.30	0.06	0.02	0.05	0.029	0.10	16.1	31.0	0.47	276	2.73	0.01
YY10210		4.59	30.1	3.66	3.90	0.06	0.03	0.03	0.017	0.18	14.1	14.8	0.39	139	1.69	0.03
YY10211		3.51	22.3	4.38	6.00	<0.05	0.02	0.06	0.033	0.10	12.1	26.2	0.48	317	1.96	0.01
YY10212		5.30	38.0	4.11	4.56	0.06	0.02	0.03	0.026	0.12	18.4	17.8	0.42	180	1.83	0.01
YY10213		1.50	13.6	2.75	4.42	<0.05	<0.02	0.04	0.020	0.06	10.6	9.7	0.23	173	1.31	0.01
YY10214		1.88	18.2	3.08	5.04	<0.05	0.02	0.05	0.027	0.11	13.3	22.0	0.47	287	1.18	0.01
YY10215		1.97	16.3	2.97	4.34	<0.05	<0.02	0.04	0.022	0.10	9.5	14.6	0.21	367	1.23	0.01
YY10216		1.91	13.0	2.08	5.76	<0.05	<0.02	0.02	0.013	0.07	8.8	18.9	0.25	97	1.39	0.01
YY10217		3.35	27.7	3.05	3.87	<0.05	0.03	0.02	0.018	0.11	8.2	31.6	0.36	190	1.46	0.01
YY10218		2.67	22.2	2.64	4.10	<0.05	<0.02	0.03	0.020	0.08	9.9	23.3	0.42	440	0.99	0.01
YY10219		5.45	30.8	4.16	5.69	<0.05	0.04	0.08	0.031	0.13	8.5	35.0	0.46	218	1.83	0.01
YY10220		2.47	19.0	3.05	5.61	<0.05	0.03	0.04	0.032	0.06	9.9	18.1	0.57	655	1.50	0.02
YY10221		8.24	86.5	4.16	5.02	0.07	0.03	0.08	0.039	0.07	15.3	20.5	0.56	841	10.35	0.02
YY10222		2.98	30.3	1.89	3.21	<0.05	0.03	0.03	0.038	0.04	7.6	10.6	0.27	188	1.06	0.02
YY10223		2.24	40.6	2.48	3.92	<0.05	0.03	0.07	0.030	0.04	9.1	19.1	0.43	561	1.65	0.03
YY10224		3.01	40.5	2.47	4.24	0.05	0.02	0.04	0.025	0.05	6.8	17.0	0.46	385	1.99	0.03
YY10225		5.59	91.1	4.23	5.16	0.07	0.03	0.09	0.041	0.06	12.7	21.4	0.64	604	4.73	0.03
YY10226		2.36	60.2	2.21	4.98	0.07	0.02	0.07	0.054	0.03	6.6	10.8	0.25	473	12.90	0.05
YY10227		2.98	59.1	1.99	4.07	0.06	0.02	0.07	0.029	0.03	4.6	7.3	0.25	380	7.40	0.04
YY10228		2.50	14.2	2.15	5.22	<0.05	<0.02	0.04	0.020	0.09	8.9	16.5	0.28	136	4.30	0.01
YY10229		3.41	44.2	2.47	4.68	0.06	0.02	0.04	0.038	0.10	6.7	18.0	0.37	297	8.47	0.06
YY10230		3.69	41.2	2.84	4.27	0.05	0.02	0.06	0.035	0.10	7.4	17.9	0.60	1020	2.41	0.03

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CERTIFICATE OF ANALYSIS WH19152890

Sample Description	Method	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Nb	Ni	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th
	Units	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.05	0.2	10	0.2	0.1	0.001	0.01	0.05	0.1	0.2	0.2	0.2	0.01	0.01	0.2
YY10191		0.40	21.8	830	17.2	9.2	<0.001	0.07	0.65	1.4	0.6	0.4	29.2	<0.01	0.06	0.6
YY10192		0.18	22.9	670	13.5	7.7	<0.001	0.07	0.59	0.9	0.9	0.2	35.4	<0.01	0.05	0.4
YY10193		0.14	20.2	560	22.7	4.8	<0.001	0.07	0.97	0.7	1.0	0.6	43.3	<0.01	0.06	0.5
YY10194		0.22	19.2	610	13.0	6.7	<0.001	0.07	0.55	0.8	0.6	0.3	29.7	<0.01	0.05	0.4
YY10195		0.31	27.1	720	18.6	5.9	<0.001	0.05	0.93	1.0	0.9	0.4	42.6	<0.01	0.05	0.8
YY10196		0.37	18.9	880	17.5	8.6	<0.001	0.06	0.67	0.7	0.5	0.5	11.2	<0.01	0.03	0.3
YY10197		0.36	18.5	860	25.1	6.8	<0.001	0.07	1.07	1.0	0.6	0.7	15.9	<0.01	0.04	0.6
YY10198		0.49	22.9	490	30.6	4.9	<0.001	0.02	3.04	1.7	0.7	0.6	7.6	0.01	0.04	1.5
YY10199		0.28	14.2	540	12.4	6.2	<0.001	0.03	1.14	0.8	0.4	0.4	8.2	<0.01	0.03	0.5
YY10200		1.21	20.4	510	11.2	8.6	<0.001	0.05	0.84	2.1	1.3	0.5	7.2	0.01	0.07	2.3
YY10201		1.20	8.5	990	16.8	9.9	<0.001	0.06	0.77	1.1	0.7	0.8	9.6	<0.01	0.18	1.4
YY10202		1.39	19.8	410	14.1	11.8	<0.001	0.03	0.77	3.9	0.8	0.7	8.8	0.01	0.07	5.4
YY10203		0.53	15.7	1390	19.3	24.0	<0.001	0.24	0.71	0.9	2.4	0.5	22.9	<0.01	0.64	1.0
YY10204		1.30	52.8	1510	19.8	19.2	<0.001	0.17	0.85	2.8	2.2	0.6	29.3	0.01	0.48	3.7
YY10205		0.70	38.4	970	24.3	11.1	<0.001	0.12	2.38	1.1	2.3	0.4	26.1	<0.01	0.20	0.8
YY10206		1.06	40.2	860	12.4	15.2	0.001	0.10	0.87	2.0	1.9	0.4	13.6	<0.01	0.14	2.1
YY10207		0.45	22.2	800	5.5	28.1	<0.001	0.26	0.85	1.0	1.8	0.4	17.8	<0.01	0.14	1.8
YY10208		0.99	11.5	460	15.0	8.8	<0.001	0.03	0.47	1.6	0.5	0.7	7.8	<0.01	0.08	1.0
YY10209		1.01	67.7	370	22.7	28.9	<0.001	0.04	0.62	3.1	3.3	0.6	12.9	<0.01	0.10	3.4
YY10210		0.92	31.1	1100	9.9	30.2	<0.001	0.22	0.55	1.9	1.6	0.4	43.0	<0.01	0.17	3.4
YY10211		1.70	24.8	610	17.3	20.4	<0.001	0.06	0.53	2.4	0.9	0.7	15.6	<0.01	0.11	1.8
YY10212		1.42	35.3	1090	11.4	27.8	<0.001	0.09	0.99	2.5	0.9	0.5	21.7	<0.01	0.16	3.8
YY10213		0.90	15.3	500	13.1	12.2	<0.001	0.05	0.59	1.1	0.2	0.6	11.8	<0.01	0.08	0.5
YY10214		1.47	27.5	530	17.3	16.3	<0.001	0.05	0.56	2.7	0.5	0.7	16.0	<0.01	0.07	2.7
YY10215		0.98	18.5	630	12.1	24.8	<0.001	0.07	0.58	1.0	0.2	0.6	13.5	<0.01	0.08	0.3
YY10216		2.09	16.0	300	9.2	24.8	<0.001	0.05	0.32	1.4	0.5	0.6	45.4	<0.01	0.08	1.4
YY10217		1.64	32.2	670	9.9	23.3	<0.001	0.09	0.30	1.9	1.0	0.4	26.4	<0.01	0.10	2.1
YY10218		1.41	26.6	770	13.5	19.9	<0.001	0.06	0.45	2.0	0.4	0.5	20.2	<0.01	0.07	0.9
YY10219		2.22	34.2	650	13.7	30.3	<0.001	0.11	0.68	2.8	2.3	0.6	15.8	0.01	0.11	2.3
YY10220		0.63	33.5	920	29.5	15.8	<0.001	0.07	0.70	2.8	0.4	0.6	18.9	<0.01	0.05	1.2
YY10221		0.66	108.0	1060	26.5	25.2	0.003	0.12	0.81	3.1	4.0	0.7	23.7	<0.01	0.05	1.8
YY10222		0.41	27.1	690	27.9	12.4	0.004	0.07	1.01	1.7	2.0	0.8	24.3	<0.01	0.05	1.0
YY10223		0.45	49.8	760	24.4	15.2	0.002	0.10	0.64	2.2	2.5	0.3	34.9	<0.01	0.07	0.8
YY10224		0.67	40.4	950	17.1	12.8	0.001	0.13	0.64	2.1	2.3	0.4	48.9	<0.01	0.08	0.9
YY10225		0.79	85.9	1280	27.1	20.3	0.002	0.11	0.74	3.5	4.4	0.5	30.9	<0.01	0.15	2.4
YY10226		0.68	81.4	2460	27.4	11.8	0.012	0.19	1.40	1.0	7.5	0.4	178.0	<0.01	0.06	0.4
YY10227		0.47	70.9	1370	16.9	9.2	0.012	0.22	1.01	1.2	11.1	0.3	122.5	<0.01	0.04	0.7
YY10228		1.25	19.7	590	13.2	15.7	<0.001	0.07	0.42	1.7	0.9	0.6	14.5	<0.01	0.07	1.1
YY10229		1.23	71.2	3330	19.5	14.9	0.008	0.16	1.11	1.5	7.2	0.4	173.0	<0.01	0.06	0.7
YY10230		0.70	44.1	1090	17.0	26.3	0.001	0.12	0.52	2.3	4.5	0.4	34.9	<0.01	0.06	1.2

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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 ST
VANCOUVER BC V6B 1L8

Finalized Date: 8-JUL-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19152890

Sample Description	Method	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Ti	Tl	U	V	W	Y	Zn	Zr
	Units	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.005	0.02	0.05	1	0.05	0.05	2	0.5
YY10191		0.019	0.11	0.83	30	0.40	12.95	88	0.5
YY10192		0.012	0.08	0.99	26	0.27	13.10	135	0.6
YY10193		0.010	0.06	0.65	17	0.28	10.65	190	0.6
YY10194		0.014	0.08	0.72	23	0.37	10.75	127	0.5
YY10195		0.015	0.06	0.83	23	0.30	10.95	163	0.5
YY10196		0.019	0.07	0.64	39	0.47	4.71	97	<0.5
YY10197		0.016	0.08	0.54	28	0.69	6.97	107	0.6
YY10198		0.021	0.07	0.66	22	0.87	8.67	124	0.8
YY10199		0.015	0.05	0.43	24	0.76	5.34	78	<0.5
YY10200		0.043	0.24	1.20	52	0.39	3.16	51	0.8
YY10201		0.044	0.15	0.50	67	0.94	1.80	30	<0.5
YY10202		0.045	0.23	2.29	62	0.48	6.97	51	2.9
YY10203		0.027	0.44	0.93	55	1.48	3.32	48	<0.5
YY10204		0.041	0.45	1.50	59	1.00	6.93	96	1.1
YY10205		0.026	0.47	1.46	47	1.06	4.78	79	<0.5
YY10206		0.034	0.28	1.23	44	0.68	4.21	78	1.1
YY10207		0.027	0.52	0.91	41	0.26	2.36	36	<0.5
YY10208		0.034	0.15	0.54	67	0.44	2.21	39	<0.5
YY10209		0.031	0.55	1.13	58	0.31	6.75	51	0.7
YY10210		0.042	0.49	1.02	45	0.35	4.82	60	0.9
YY10211		0.034	0.37	0.82	68	0.43	2.21	68	0.5
YY10212		0.050	0.56	0.96	60	0.40	5.03	72	0.9
YY10213		0.034	0.23	0.41	62	0.42	1.86	65	<0.5
YY10214		0.027	0.28	0.69	64	0.36	4.17	73	0.6
YY10215		0.033	0.20	0.42	61	0.41	1.61	88	<0.5
YY10216		0.059	0.20	0.35	67	0.23	1.60	39	<0.5
YY10217		0.040	0.21	0.61	46	0.24	3.17	62	0.7
YY10218		0.040	0.23	0.74	51	0.23	5.34	70	<0.5
YY10219		0.058	0.26	0.59	60	0.31	2.49	101	1.4
YY10220		0.026	0.21	0.91	50	3.53	6.10	79	1.0
YY10221		0.031	0.33	4.10	43	8.29	19.35	152	0.7
YY10222		0.021	0.12	1.55	35	4.69	8.91	146	0.7
YY10223		0.022	0.16	1.60	51	2.66	9.41	164	0.9
YY10224		0.033	0.24	1.17	63	9.13	7.17	132	0.9
YY10225		0.036	0.26	2.45	55	7.74	15.85	159	0.9
YY10226		0.019	0.19	10.90	175	1.06	12.50	433	0.7
YY10227		0.019	0.28	2.67	52	0.60	8.35	213	0.9
YY10228		0.037	0.16	0.56	57	0.20	2.72	58	<0.5
YY10229		0.039	0.28	8.56	151	0.48	9.89	335	0.9
YY10230		0.032	0.28	1.61	54	1.52	7.93	176	0.5

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North Vancouver BC V7H 0A7
Phone: +1 (604) 984 0221 Fax: +1 (604) 984 0218
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CERTIFICATE OF ANALYSIS WH19152890

Sample Description	Method	WEI-21	Au-ICP21	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Recvd Wt.	Au	Ag	Al	As	Au	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr
	Units	kg	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
	LOD	0.02	0.001	0.01	0.01	0.1	0.02	10	10	0.05	0.01	0.01	0.01	0.02	0.1	1
YY10231		0.24	0.001	0.71	2.01	22.1	<0.02	<10	220	1.27	17.45	0.88	1.36	19.10	17.6	47
YY10232		0.30	0.001	0.91	1.71	20.8	<0.02	<10	240	1.03	1.12	1.13	1.39	20.0	10.2	38
YY10233		0.10	0.016	0.43	1.49	9.5	<0.02	<10	130	0.68	0.78	1.40	0.92	11.80	8.6	49
YY10234		0.08	<0.001	0.72	1.27	6.6	<0.02	<10	170	1.12	0.74	2.95	0.85	10.50	6.2	38
YY10235		0.09	0.004	4.72	0.91	4.5	<0.02	<10	80	1.30	0.96	2.38	2.04	8.93	4.4	17
YY10236		0.19	<0.001	1.63	0.70	5.5	<0.02	<10	90	0.72	0.36	5.10	1.18	10.75	4.3	14
YY10237		0.30	<0.001	1.30	0.96	7.7	<0.02	<10	100	0.45	0.34	2.39	0.85	17.05	5.5	18
YY10238		0.13	<0.001	0.78	0.52	4.0	<0.02	<10	60	0.25	0.13	2.76	0.69	8.38	3.0	12
YY10239		0.23	<0.001	0.50	1.14	8.4	<0.02	<10	190	0.49	0.27	2.55	1.04	18.15	7.0	22
YY10240		0.31	<0.001	0.34	1.07	5.7	<0.02	<10	310	0.44	0.19	1.73	0.82	17.20	5.8	22
YY10241		0.27	<0.001	0.18	0.71	3.3	<0.02	<10	20	0.25	0.08	6.43	0.24	8.87	1.7	15
YY10242		0.33	<0.001	0.61	0.99	9.4	<0.02	<10	100	0.42	0.19	6.91	0.82	17.80	5.9	17
YY10243		0.16	0.003	0.58	1.27	10.7	<0.02	<10	200	0.59	0.25	2.07	0.88	20.9	9.8	21
YY10244		0.12	0.002	0.38	1.21	9.4	<0.02	<10	220	0.51	0.26	1.33	0.69	18.50	8.0	24
YY10245		0.09	<0.001	0.51	1.42	14.2	<0.02	<10	240	0.65	0.23	1.68	0.82	23.4	9.6	26
YY10246		0.16	0.004	0.62	1.26	10.4	<0.02	<10	220	0.62	0.20	1.93	1.04	17.05	11.0	25
YY10247		0.29	<0.001	0.37	1.16	18.4	<0.02	<10	1230	0.57	0.22	0.19	1.39	23.0	5.5	23
YY10248		0.46	0.003	0.85	0.75	29.1	<0.02	<10	720	0.73	0.20	0.08	0.90	20.0	8.5	19
YY10249		0.61	0.002	1.74	0.78	20.4	<0.02	<10	2070	0.88	0.13	0.40	3.93	18.90	8.7	19
YY10250		0.22	0.072	1.49	0.76	19.1	<0.02	<10	1190	0.64	0.13	1.69	8.00	17.30	6.8	22
YY10251		0.31	<0.001	2.99	0.99	16.4	<0.02	<10	200	0.68	0.12	0.71	14.85	27.0	5.3	29
YY10252		0.35	<0.001	1.03	1.56	15.7	<0.02	<10	440	0.75	0.21	0.67	3.95	34.1	9.0	30
YY10253		0.45	0.001	0.56	1.63	14.2	<0.02	<10	620	0.68	0.20	0.62	0.68	33.2	8.9	32
YY10254		0.34	<0.001	3.37	0.96	13.0	<0.02	<10	490	1.08	0.12	0.68	9.08	22.6	9.9	20
YY10255		0.28	<0.001	0.64	1.68	15.5	<0.02	<10	1640	0.77	0.15	0.71	2.03	36.7	7.5	43
YY10256		0.25	<0.001	2.74	1.46	14.0	<0.02	<10	740	0.79	0.17	0.92	11.80	25.1	7.9	33
YY10257		0.41	0.001	1.57	0.64	19.8	<0.02	<10	3050	1.32	0.09	0.90	13.80	18.30	19.8	17
YY10258		0.32	<0.001	1.16	1.22	15.1	<0.02	<10	2130	0.77	0.15	0.27	1.34	28.3	10.0	26
YY10259		0.35	<0.001	0.31	1.63	12.9	<0.02	<10	1590	0.81	0.18	0.34	0.38	25.7	8.8	31
YY10260		0.56	<0.001	0.75	1.24	16.7	<0.02	<10	1580	0.83	0.18	3.18	1.00	25.5	9.8	23
YY10261		0.56	0.002	1.40	1.70	19.5	<0.02	<10	1610	0.95	0.22	0.44	0.83	33.9	10.3	31
YY10262		0.48	<0.001	2.94	1.74	16.7	<0.02	<10	2120	0.92	0.19	0.33	1.83	27.3	6.9	29
YY10263		0.32	0.001	1.21	2.35	18.0	<0.02	<10	1580	0.64	0.27	0.07	1.14	31.7	11.0	33
YY10264		0.43	<0.001	0.83	1.21	22.2	<0.02	<10	1690	0.35	0.22	0.06	0.53	22.8	4.3	25
YY10265		0.30	<0.001	0.61	1.45	15.0	<0.02	<10	180	0.59	0.31	0.08	0.64	25.9	7.4	26
YY10266		0.38	<0.001	0.48	1.50	14.0	<0.02	<10	150	1.03	0.27	0.05	0.38	31.2	7.4	26
YY10267		0.36	<0.001	0.14	1.64	13.4	<0.02	<10	110	0.62	0.28	0.07	0.19	24.4	6.0	26
YY10268		0.27	<0.001	0.14	1.50	14.7	<0.02	<10	70	0.42	0.27	0.04	0.19	22.5	5.6	25
YY10269		0.15	NSS	0.55	1.36	14.4	<0.02	<10	120	0.41	0.35	0.11	0.17	16.20	4.9	27
YY19181		0.36	<0.001	1.16	0.92	18.4	<0.02	<10	130	0.63	0.10	3.25	0.66	14.00	4.4	31

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North Vancouver BC V7H 0A7
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	Analyte	Cs	Cu	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na
	Units	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%
	LOD	0.05	0.2	0.01	0.05	0.05	0.02	0.01	0.005	0.01	0.2	0.1	0.01	5	0.05	0.01
YY10231		3.60	63.6	4.41	6.30	0.06	0.02	0.05	0.250	0.08	9.5	27.7	0.76	517	2.70	0.04
YY10232		4.47	67.4	3.94	4.71	0.07	0.05	0.04	0.042	0.13	10.0	20.6	0.63	327	2.65	0.05
YY10233		2.94	36.3	2.61	4.87	<0.05	0.02	0.04	0.029	0.06	5.6	22.0	0.52	312	2.18	0.04
YY10234		2.58	39.0	2.29	3.81	0.05	0.02	0.05	0.075	0.05	4.7	15.2	0.42	347	1.11	0.03
YY10235		1.28	28.8	1.80	2.67	<0.05	<0.02	0.05	0.089	0.03	5.1	12.3	0.21	271	0.73	0.02
YY10236		1.39	15.8	1.31	2.03	<0.05	<0.02	0.03	0.041	0.04	5.5	11.7	0.36	236	0.54	0.01
YY10237		1.27	16.9	1.77	2.93	<0.05	0.02	0.06	0.045	0.04	8.6	16.1	0.39	350	0.84	0.01
YY10238		1.55	19.9	1.06	1.48	<0.05	0.02	0.06	0.021	0.02	4.8	9.8	0.18	206	0.52	0.01
YY10239		1.60	24.6	1.94	3.26	0.05	0.03	0.06	0.025	0.06	10.1	17.1	0.76	453	0.81	0.01
YY10240		1.44	18.7	1.74	3.16	<0.05	0.03	0.05	0.021	0.04	9.7	16.7	0.39	303	0.39	0.02
YY10241		0.67	6.6	1.03	2.15	0.05	0.02	0.01	0.013	0.03	3.4	13.3	0.18	70	0.30	0.04
YY10242		1.29	17.9	1.94	2.74	<0.05	0.02	0.05	0.023	0.04	9.9	14.0	0.39	288	1.01	0.02
YY10243		1.54	46.8	2.54	3.66	0.05	0.02	0.06	0.028	0.04	11.2	15.3	0.30	464	0.98	0.02
YY10244		1.25	20.8	2.19	3.34	<0.05	0.03	0.04	0.025	0.06	9.8	14.4	0.35	462	0.92	0.02
YY10245		1.19	24.2	2.73	4.14	0.05	0.03	0.07	0.035	0.07	12.4	15.8	0.38	534	1.17	0.02
YY10246		1.91	26.9	2.35	3.41	<0.05	0.04	0.10	0.031	0.07	9.5	17.4	0.36	534	0.99	0.02
YY10247		0.94	15.5	2.57	3.60	<0.05	0.02	0.05	0.052	0.06	12.1	14.9	0.29	294	2.35	0.01
YY10248		0.58	16.3	2.08	2.23	<0.05	<0.02	0.07	0.080	0.03	11.0	9.7	0.18	833	3.49	<0.01
YY10249		0.60	21.1	2.03	2.16	0.05	0.03	0.22	0.041	0.05	13.2	9.0	0.27	1010	1.76	<0.01
YY10250		0.56	18.9	2.09	2.27	<0.05	0.02	0.16	0.023	0.03	9.2	6.4	0.18	1380	1.08	0.01
YY10251		1.18	11.5	2.39	2.42	0.05	0.02	0.14	0.032	0.03	20.4	6.5	0.16	1120	0.87	<0.01
YY10252		0.97	17.8	2.91	4.28	0.07	0.02	0.12	0.030	0.05	24.7	12.9	0.43	601	1.04	0.01
YY10253		1.21	16.6	2.71	4.66	0.06	0.02	0.08	0.030	0.05	25.4	16.8	0.46	557	1.50	0.01
YY10254		1.22	34.9	1.90	2.53	0.07	0.03	0.13	0.028	0.05	28.5	11.2	0.21	1330	1.71	0.01
YY10255		0.90	14.2	2.75	4.12	0.05	0.03	0.06	0.033	0.06	23.4	20.9	0.47	642	1.16	0.01
YY10256		0.73	14.8	2.78	4.03	0.05	0.02	0.10	0.026	0.05	18.4	10.8	0.35	615	0.95	0.01
YY10257		0.71	41.8	1.88	1.75	0.05	0.02	0.13	0.017	0.04	13.6	20.9	0.39	9640	4.23	<0.01
YY10258		0.64	15.5	2.55	3.13	0.05	0.04	0.16	0.029	0.07	18.7	11.6	0.32	878	1.27	<0.01
YY10259		1.13	21.6	2.63	4.72	<0.05	0.04	0.05	0.028	0.09	13.9	15.5	0.38	631	1.54	<0.01
YY10260		0.88	32.1	2.81	3.45	0.05	0.05	0.15	0.027	0.11	13.9	13.6	1.43	674	1.67	0.01
YY10261		1.18	24.4	3.40	4.48	0.06	0.06	0.20	0.055	0.10	19.3	16.0	0.44	991	2.04	<0.01
YY10262		1.12	16.6	2.53	4.44	<0.05	0.02	0.11	0.033	0.06	17.4	13.9	0.35	462	1.60	<0.01
YY10263		1.37	14.1	3.26	7.19	<0.05	0.03	0.13	0.042	0.06	16.0	19.5	0.36	345	2.05	<0.01
YY10264		0.86	15.5	2.81	5.50	<0.05	<0.02	0.08	0.054	0.05	12.1	9.3	0.23	190	3.09	<0.01
YY10265		1.79	17.0	3.25	5.64	<0.05	<0.02	0.01	0.028	0.09	13.4	24.9	0.31	360	1.63	<0.01
YY10266		2.56	33.0	3.54	4.55	0.05	<0.02	0.02	0.033	0.07	16.4	25.9	0.33	212	1.46	<0.01
YY10267		1.92	18.6	2.84	5.27	<0.05	<0.02	0.08	0.026	0.05	12.4	27.1	0.33	225	2.29	0.01
YY10268		2.76	14.6	3.45	5.38	<0.05	0.02	0.05	0.029	0.04	11.5	33.7	0.26	201	1.53	0.01
YY10269		3.92	26.2	2.53	4.15	<0.05	<0.02	0.09	0.024	0.05	8.3	24.2	0.30	134	1.59	0.01
YY19181		1.31	12.5	2.15	1.98	<0.05	0.03	0.07	0.024	0.02	10.6	16.4	0.27	171	1.11	0.01

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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 ST
VANCOUVER BC V6B 1L8

Finalized Date: 8-JUL-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19152890

Sample Description	Method	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Nb	Ni	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th
	Units	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.05	0.2	10	0.2	0.1	0.001	0.01	0.05	0.1	0.2	0.2	0.2	0.01	0.01	0.2
YY10231		1.17	63.7	950	37.9	19.9	<0.001	0.12	0.98	3.5	4.1	0.8	49.8	<0.01	0.21	2.7
YY10232		1.22	43.7	1210	20.5	27.0	<0.001	0.13	0.95	3.3	2.3	0.6	70.7	<0.01	0.13	3.5
YY10233		0.60	31.1	850	15.1	13.4	<0.001	0.11	0.53	2.4	2.1	0.4	57.9	<0.01	0.11	1.3
YY10234		0.61	26.8	950	19.3	14.1	<0.001	0.12	1.12	1.5	2.2	0.4	64.4	<0.01	0.11	0.5
YY10235		0.41	23.5	660	116.5	8.1	0.001	0.09	1.52	0.7	1.2	1.4	47.6	<0.01	0.43	0.4
YY10236		0.43	19.6	520	38.5	9.6	<0.001	0.03	0.72	1.0	0.9	1.7	89.2	<0.01	0.08	0.5
YY10237		0.44	23.1	350	51.1	8.9	<0.001	0.01	0.79	1.8	0.6	0.7	49.8	<0.01	0.07	1.0
YY10238		0.24	18.1	570	19.4	5.3	0.001	0.06	0.45	0.5	1.9	0.3	52.6	<0.01	0.05	0.2
YY10239		0.61	28.3	840	21.2	12.2	<0.001	0.05	0.82	1.7	0.8	0.4	47.1	<0.01	0.06	0.7
YY10240		0.50	24.2	810	11.8	8.4	<0.001	0.04	0.55	1.5	1.0	0.3	41.4	<0.01	0.05	0.7
YY10241		0.25	15.9	160	6.8	3.6	<0.001	0.02	0.34	0.8	0.2	0.2	118.5	<0.01	0.04	1.3
YY10242		0.39	30.4	490	31.0	7.1	<0.001	0.01	0.91	1.6	0.5	0.5	128.0	<0.01	0.05	1.4
YY10243		0.44	45.0	950	20.1	10.4	<0.001	0.08	1.05	1.0	2.2	0.3	55.9	<0.01	0.05	0.4
YY10244		0.69	27.6	680	31.1	11.1	0.001	0.06	0.98	2.1	1.5	0.4	45.9	<0.01	0.04	1.3
YY10245		0.68	33.4	810	38.4	12.8	<0.001	0.06	1.16	2.4	1.3	0.5	51.0	<0.01	0.06	1.1
YY10246		0.55	48.0	820	33.7	16.7	0.002	0.09	1.26	1.7	2.5	0.4	66.1	<0.01	0.05	0.8
YY10247		0.30	20.7	1250	63.4	10.8	<0.001	0.03	1.97	1.1	1.2	0.7	17.2	<0.01	0.06	0.4
YY10248		0.23	23.1	760	147.5	5.3	<0.001	0.01	5.21	1.0	1.5	1.2	16.0	<0.01	0.07	0.5
YY10249		0.37	28.5	620	226	5.1	<0.001	0.03	5.53	3.2	0.8	1.1	22.1	<0.01	0.05	2.1
YY10250		0.35	22.2	1190	386	4.7	<0.001	0.09	3.88	1.3	0.6	0.7	14.5	<0.01	0.04	0.3
YY10251		0.29	23.3	760	550	6.9	<0.001	0.02	2.54	2.5	0.6	1.0	8.0	<0.01	0.04	0.6
YY10252		0.65	29.3	710	89.1	9.6	<0.001	0.01	1.03	3.3	0.4	0.5	15.3	<0.01	0.05	1.2
YY10253		0.62	29.4	930	44.5	9.5	<0.001	0.02	0.77	3.1	0.4	0.5	17.3	<0.01	0.04	1.1
YY10254		0.39	123.5	2310	220	6.2	<0.001	<0.01	2.27	2.6	0.5	0.9	23.0	<0.01	0.03	1.3
YY10255		0.52	31.1	750	44.0	8.4	<0.001	0.02	0.96	3.0	0.7	0.5	13.4	<0.01	0.03	0.9
YY10256		0.61	26.1	810	256	8.1	<0.001	0.03	1.41	2.4	0.4	0.5	14.4	<0.01	0.03	0.7
YY10257		0.37	102.0	830	1675	4.2	0.001	0.02	8.91	2.5	0.5	0.4	18.8	<0.01	0.04	1.5
YY10258		0.61	27.9	450	186.5	7.1	<0.001	0.01	2.12	4.0	0.8	0.5	15.8	<0.01	0.04	2.7
YY10259		0.57	25.4	540	86.4	11.6	<0.001	<0.01	1.20	3.3	0.3	0.7	14.8	<0.01	0.03	1.9
YY10260		0.46	31.4	630	72.3	8.7	0.001	0.02	2.31	3.7	0.5	0.5	39.8	<0.01	0.05	2.1
YY10261		0.53	32.6	640	103.5	11.9	<0.001	0.01	1.95	4.5	0.4	0.9	15.2	<0.01	0.07	2.0
YY10262		0.44	21.5	910	121.5	9.3	<0.001	0.02	1.49	2.4	0.3	0.7	15.5	<0.01	0.05	0.6
YY10263		1.62	19.1	280	36.5	15.1	<0.001	<0.01	1.02	3.9	0.8	0.9	11.8	<0.01	0.05	4.0
YY10264		0.71	13.0	530	67.6	10.1	<0.001	0.05	1.64	1.1	0.3	0.8	19.6	<0.01	0.04	0.3
YY10265		0.70	18.7	1160	22.5	14.9	<0.001	0.01	0.76	1.5	1.1	0.6	36.6	<0.01	0.07	0.6
YY10266		0.39	32.6	960	31.3	9.2	<0.001	<0.01	0.75	1.6	0.6	0.5	9.4	<0.01	0.07	1.0
YY10267		0.84	17.2	640	18.3	9.5	<0.001	0.01	0.88	1.5	0.7	0.5	10.8	<0.01	0.06	0.6
YY10268		0.90	17.3	600	21.0	7.1	<0.001	0.01	0.62	1.8	0.7	0.5	15.0	<0.01	0.06	1.7
YY10269		0.41	18.8	1110	31.5	7.6	0.001	0.05	0.82	0.7	2.3	0.4	30.1	<0.01	0.09	0.2
YY19181		0.25	23.8	580	16.3	4.3	<0.001	0.02	0.57	1.6	0.8	0.2	63.7	<0.01	0.05	1.1

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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

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VANCOUVER BC V6B 1L8

Finalized Date: 8-JUL-2019
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CERTIFICATE OF ANALYSIS WH19152890

Sample Description	Method	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Ti	Tl	U	V	W	Y	Zn	Zr
	Units	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.005	0.02	0.05	1	0.05	0.05	2	0.5
YY10231		0.043	0.33	1.47	83	11.35	7.23	603	0.9
YY10232		0.051	0.35	1.47	65	3.99	8.01	197	1.7
YY10233		0.032	0.26	1.04	83	5.72	4.00	133	0.7
YY10234		0.024	0.19	1.05	64	2.69	5.72	169	0.7
YY10235		0.012	0.10	1.78	23	5.55	9.60	316	0.5
YY10236		0.016	0.09	0.62	22	3.47	6.87	196	0.6
YY10237		0.018	0.08	0.51	28	0.70	9.95	136	0.6
YY10238		0.010	0.07	1.33	14	0.65	8.06	90	0.7
YY10239		0.022	0.17	0.91	35	0.61	10.85	180	1.2
YY10240		0.019	0.11	0.60	34	0.33	10.95	129	0.9
YY10241		0.009	0.05	0.27	18	0.17	7.86	40	0.8
YY10242		0.017	0.12	0.52	26	0.42	11.05	148	0.9
YY10243		0.015	0.13	1.85	32	0.43	13.10	176	0.6
YY10244		0.027	0.13	0.92	35	0.36	8.66	143	1.2
YY10245		0.023	0.14	1.10	39	0.33	12.60	172	1.2
YY10246		0.020	0.17	1.31	33	0.24	10.10	215	1.3
YY10247		0.010	0.24	0.99	35	0.51	7.95	159	<0.5
YY10248		0.013	0.49	0.79	26	2.65	8.34	217	<0.5
YY10249		0.015	0.73	0.66	28	3.13	18.05	325	0.8
YY10250		0.011	0.48	0.81	26	1.82	12.25	334	0.8
YY10251		0.011	0.46	0.41	32	0.42	25.9	674	<0.5
YY10252		0.026	0.19	0.69	48	0.29	25.8	272	0.7
YY10253		0.025	0.19	0.94	49	0.25	24.1	155	0.7
YY10254		0.016	0.63	0.96	27	0.29	37.1	1120	0.8
YY10255		0.021	0.23	0.96	51	0.38	19.90	303	0.6
YY10256		0.022	0.18	0.54	50	0.48	22.3	455	0.5
YY10257		0.016	3.26	1.06	24	9.03	45.3	1390	0.7
YY10258		0.021	0.31	0.64	38	1.06	18.90	257	1.4
YY10259		0.017	0.21	0.78	48	0.58	7.93	143	1.1
YY10260		0.016	0.28	0.62	36	0.56	12.00	192	1.6
YY10261		0.016	0.28	1.12	49	0.31	20.4	169	1.6
YY10262		0.015	0.29	0.96	49	0.62	15.95	256	0.5
YY10263		0.043	0.29	0.94	76	0.25	4.99	132	1.8
YY10264		0.032	0.37	1.07	60	0.29	2.68	64	<0.5
YY10265		0.023	0.12	0.72	54	0.18	3.07	97	<0.5
YY10266		0.010	0.12	0.69	48	0.09	3.65	132	<0.5
YY10267		0.026	0.13	0.82	54	0.24	3.22	59	<0.5
YY10268		0.020	0.17	0.64	55	0.16	2.83	73	0.6
YY10269		0.014	0.11	1.12	40	0.14	4.57	66	<0.5
YY19181		0.010	0.15	0.38	34	0.29	13.85	95	0.7

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Sample Description	Method	WEI-21	Au-ICP21	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Recvd Wt.	Au	Ag	Al	As	Au	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr
	Units	kg	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
	LOD	0.02	0.001	0.01	0.01	0.1	0.02	10	10	0.05	0.01	0.01	0.01	0.02	0.1	1
YY19182		0.30	<0.001	0.25	1.06	11.0	<0.02	<10	120	0.59	0.13	0.36	0.32	23.3	4.9	25
YY19183		0.28	<0.001	0.18	2.23	8.1	<0.02	<10	160	1.33	0.69	0.08	0.41	17.50	11.6	50
YY19184		0.32	<0.001	0.10	1.80	8.8	<0.02	<10	100	1.36	0.91	0.07	0.60	20.9	5.2	44
YY19185		0.34	0.001	0.16	1.65	9.4	<0.02	<10	370	0.85	1.37	0.07	0.44	19.95	7.5	25
YY19186		0.16	0.006	0.78	1.72	118.5	<0.02	<10	200	0.97	7.12	0.13	0.62	29.5	13.9	35
YY19187		0.14	0.003	0.76	2.04	37.1	<0.02	<10	200	1.11	1.15	0.13	0.45	28.3	12.7	40
YY19188		0.18	0.001	0.40	0.66	24.9	<0.02	<10	70	0.21	1.52	0.06	0.29	20.8	2.9	27
YY19189		0.38	<0.001	0.49	1.53	41.5	<0.02	<10	130	1.08	0.86	0.07	0.30	40.3	15.3	29
YY19190		0.34	0.002	0.30	1.35	16.1	<0.02	<10	270	0.68	0.37	0.31	0.32	35.7	11.4	32
YY19191		0.42	0.003	0.13	1.62	29.6	<0.02	<10	150	0.88	0.65	0.16	0.15	41.5	21.3	33
YY19192		0.37	<0.001	0.36	2.02	37.0	<0.02	<10	120	0.52	1.09	0.04	0.22	24.9	6.3	33
YY19193		0.33	0.004	0.48	1.78	116.5	<0.02	<10	160	0.76	5.16	0.03	0.19	40.9	7.7	34
YY19194		0.35	0.007	0.27	1.17	155.5	<0.02	<10	110	0.55	6.13	0.05	0.32	33.0	5.2	27
YY19195		0.25	0.001	0.64	1.02	10.8	<0.02	<10	100	0.34	1.11	0.17	0.28	30.3	3.4	23
YY19196		0.16	0.001	0.45	1.17	15.5	<0.02	<10	130	0.53	1.04	1.24	0.18	20.9	5.2	26
YY19197		0.12	0.014	0.56	1.18	29.9	<0.02	<10	140	0.56	1.75	1.12	1.19	22.2	25.6	24
YY19198		0.29	0.004	0.81	1.57	29.6	<0.02	<10	110	1.08	1.18	1.19	2.98	26.3	29.5	28
YY19199		0.13	<0.001	0.49	2.11	12.1	<0.02	<10	110	0.65	0.21	2.89	19.85	12.85	13.5	109
YY19200		0.20	0.004	0.53	3.33	30.3	<0.02	<10	140	1.35	0.53	2.32	3.54	10.25	14.9	56
YY19201		0.31	0.002	0.24	2.40	114.0	<0.02	<10	130	0.75	0.25	0.11	0.67	27.5	12.0	33
YY19202		0.21	<0.001	0.23	2.16	18.8	<0.02	<10	140	0.77	0.34	1.24	0.39	14.40	7.9	41
YY19203		0.26	0.003	0.41	2.57	23.7	<0.02	<10	150	0.99	0.33	1.52	3.24	12.40	12.4	59
YY19204		0.19	<0.001	0.25	1.90	43.3	<0.02	<10	180	0.78	1.23	1.21	1.47	20.6	14.8	51
YY19205		0.34	0.003	0.31	2.26	56.0	<0.02	<10	150	0.94	1.48	1.62	2.51	18.00	12.1	50
YY19206		0.26	0.003	0.27	1.58	24.7	<0.02	<10	170	0.69	1.94	0.54	1.48	25.3	9.5	36
YY19207		0.29	0.002	0.19	1.67	44.2	<0.02	<10	180	0.57	3.12	0.23	0.35	28.1	7.8	34
YY19208		0.42	0.001	0.13	1.48	56.1	<0.02	<10	120	0.70	2.11	0.06	0.14	30.5	5.3	31
YY19209		0.47	0.003	0.29	1.45	33.5	<0.02	<10	130	0.67	1.12	0.14	0.09	30.7	10.7	31
YY19210		0.14	0.003	0.57	1.26	27.3	<0.02	<10	200	0.74	0.61	1.01	0.92	19.15	10.2	30
YY19211		0.29	0.005	0.58	3.74	126.0	<0.02	<10	130	1.48	1.00	0.86	1.40	17.70	19.1	55
YY19212		0.36	0.003	0.23	2.35	65.5	<0.02	<10	130	1.04	1.08	0.11	0.52	26.1	18.9	37
YY19213		0.26	0.001	0.33	2.17	22.3	<0.02	<10	170	1.03	0.59	0.36	0.98	20.3	10.2	32
YY19214		0.17	0.002	0.57	1.50	14.4	<0.02	<10	90	0.75	0.61	1.95	0.82	8.55	5.6	30
YY19215		0.28	0.003	0.68	1.93	21.0	<0.02	<10	170	0.99	0.81	1.56	0.93	15.45	15.1	37
YY19216		0.17	0.007	0.50	0.90	10.4	<0.02	<10	100	0.57	0.40	3.89	0.92	8.07	3.7	22
YY19217		0.18	0.003	0.32	1.88	26.4	<0.02	<10	180	0.92	0.78	1.52	1.09	19.10	8.8	42
YY19218		0.30	0.009	0.28	1.41	19.1	<0.02	<10	230	0.77	1.12	0.77	0.58	24.3	9.6	34
YY19219		0.20	0.007	0.37	0.91	7.6	<0.02	<10	270	0.45	0.69	2.19	0.48	10.95	4.6	21
YY19220		0.14	0.003	0.28	1.33	12.4	<0.02	<10	220	0.67	0.98	1.03	0.27	19.30	8.9	30
YY19221		0.24	0.002	0.31	0.96	8.9	<0.02	<10	150	0.52	0.33	2.38	0.47	10.75	4.7	21

***** 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
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: 8-JUL-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19152890

Sample Description	Method	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Cs	Cu	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na
	Units	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%
	LOD	0.05	0.2	0.01	0.05	0.05	0.02	0.01	0.005	0.01	0.2	0.1	0.01	5	0.05	0.01
YY19182		1.18	11.7	1.83	2.49	<0.05	0.03	0.03	0.029	0.03	12.7	15.7	0.26	294	1.07	0.01
YY19183		3.67	42.0	2.69	6.35	<0.05	<0.02	0.04	0.031	0.06	8.7	18.7	0.40	415	2.20	0.01
YY19184		4.92	26.6	2.62	6.83	<0.05	<0.02	0.05	0.026	0.11	10.5	15.5	0.37	282	1.84	0.01
YY19185		1.29	37.2	2.47	4.36	<0.05	<0.02	0.05	0.046	0.04	9.4	11.4	0.25	552	1.39	0.01
YY19186		4.89	70.7	3.18	4.54	0.05	<0.02	0.08	0.047	0.08	15.0	19.8	0.35	151	2.78	0.01
YY19187		3.85	76.8	3.58	5.42	0.05	<0.02	0.13	0.033	0.10	14.6	35.2	0.40	227	3.47	0.02
YY19188		1.73	19.9	1.65	3.72	<0.05	<0.02	0.08	0.013	0.04	11.3	6.0	0.11	56	1.59	0.01
YY19189		3.51	63.4	3.35	5.00	0.05	<0.02	0.11	0.027	0.06	19.7	26.4	0.28	379	3.19	0.02
YY19190		1.58	39.3	2.70	3.83	0.05	0.04	0.11	0.025	0.07	18.4	26.5	0.47	273	1.03	0.02
YY19191		2.06	52.2	3.63	4.07	0.05	0.03	0.06	0.026	0.06	21.3	42.3	0.54	535	2.75	0.01
YY19192		1.60	14.9	3.35	5.90	<0.05	0.06	0.05	0.029	0.04	13.2	29.1	0.30	173	1.94	0.01
YY19193		2.99	37.6	4.04	4.64	0.05	0.05	0.03	0.034	0.10	23.1	25.5	0.33	160	2.50	0.01
YY19194		1.81	21.6	3.59	3.82	0.05	0.02	0.02	0.030	0.09	17.9	16.8	0.24	130	1.99	0.01
YY19195		2.60	24.1	1.49	4.12	<0.05	<0.02	0.07	0.018	0.04	15.9	25.8	0.21	68	0.74	0.01
YY19196		2.21	35.6	1.88	3.37	<0.05	0.04	0.08	0.021	0.05	11.1	39.6	0.34	145	0.59	0.02
YY19197		2.39	108.0	1.78	3.02	<0.05	0.02	0.10	0.019	0.06	11.7	36.9	0.30	658	1.19	0.02
YY19198		3.16	95.9	2.82	2.97	0.07	0.10	0.10	0.059	0.06	15.9	26.4	0.38	296	16.45	0.03
YY19199		3.19	34.0	1.95	5.44	0.06	0.07	0.06	0.028	0.04	8.1	23.7	0.96	560	3.17	0.12
YY19200		6.08	29.6	2.32	8.40	0.07	0.08	0.04	0.041	0.11	5.5	33.4	1.11	720	6.43	0.16
YY19201		4.53	40.1	2.95	4.98	<0.05	0.09	0.05	0.034	0.07	13.6	23.6	0.52	278	3.88	0.02
YY19202		6.37	32.2	2.55	5.58	<0.05	0.06	0.04	0.021	0.07	7.8	40.2	0.68	219	7.20	0.03
YY19203		4.51	30.8	2.39	6.01	0.05	0.07	0.04	0.029	0.08	6.6	30.5	0.83	437	7.54	0.08
YY19204		2.41	26.1	2.82	5.09	<0.05	0.05	0.05	0.038	0.07	10.7	24.6	0.59	347	8.76	0.04
YY19205		2.53	28.1	2.86	5.78	0.05	0.07	0.04	0.032	0.06	9.6	26.2	0.65	315	11.10	0.08
YY19206		2.80	33.7	2.06	3.77	0.05	0.05	0.04	0.026	0.09	13.0	28.0	0.43	84	3.03	0.02
YY19207		2.80	23.6	2.51	4.30	<0.05	<0.02	0.03	0.028	0.09	15.1	26.1	0.43	132	3.83	0.02
YY19208		2.83	28.0	3.28	4.38	<0.05	<0.02	0.02	0.030	0.09	16.2	18.3	0.40	129	2.22	0.01
YY19209		2.94	26.8	3.20	3.95	<0.05	<0.02	0.01	0.029	0.09	16.9	28.8	0.45	207	2.74	0.01
YY19210		2.17	34.8	2.49	3.10	0.05	0.04	0.05	0.029	0.07	10.2	24.6	0.42	399	2.62	0.02
YY19211		7.47	59.7	4.72	9.41	0.06	0.04	0.03	0.066	0.14	9.4	48.0	1.02	389	16.90	0.15
YY19212		4.50	50.5	4.05	5.39	<0.05	0.04	0.08	0.053	0.07	13.8	26.8	0.42	220	4.73	0.02
YY19213		2.55	42.4	2.75	5.41	<0.05	0.04	0.04	0.039	0.05	9.5	15.5	0.26	272	5.22	0.02
YY19214		1.84	38.0	2.03	4.57	<0.05	0.04	0.04	0.052	0.03	4.5	11.3	0.22	165	5.82	0.04
YY19215		1.69	54.4	2.41	4.41	<0.05	0.04	0.05	0.104	0.04	8.0	22.7	0.39	226	2.93	0.04
YY19216		1.04	41.7	1.33	2.19	<0.05	0.04	0.05	0.026	0.02	4.5	9.4	0.21	106	1.03	0.03
YY19217		2.62	40.4	2.67	4.60	<0.05	0.06	0.05	0.040	0.05	10.2	29.2	0.49	297	10.35	0.07
YY19218		2.17	30.7	2.57	3.75	0.05	0.05	0.04	0.028	0.07	12.8	24.5	0.47	356	2.40	0.02
YY19219		1.32	36.3	1.57	2.63	<0.05	0.04	0.04	0.019	0.04	6.2	10.6	0.28	225	1.85	0.03
YY19220		2.16	24.3	2.68	3.59	<0.05	0.04	0.04	0.026	0.05	10.3	22.2	0.42	242	3.36	0.03
YY19221		1.56	21.9	1.59	2.27	<0.05	0.03	0.06	0.016	0.04	5.7	13.5	0.28	200	1.97	0.02

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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.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 8-JUL-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19152890

Sample Description	Method	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Nb	Ni	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th
	Units	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.05	0.2	10	0.2	0.1	0.001	0.01	0.05	0.1	0.2	0.2	0.2	0.01	0.01	0.2
YY19182		0.38	24.5	410	14.5	5.2	<0.001	<0.01	0.57	2.0	0.6	0.2	17.9	<0.01	0.04	1.7
YY19183		0.55	32.1	920	10.8	27.8	<0.001	0.06	0.56	1.5	1.6	0.4	19.9	<0.01	0.07	0.5
YY19184		0.51	19.9	630	9.1	37.8	<0.001	0.04	0.56	0.8	1.2	0.7	9.6	<0.01	0.05	<0.2
YY19185		0.54	22.5	740	8.4	14.4	<0.001	0.03	0.70	1.0	1.1	0.6	10.4	<0.01	0.04	0.4
YY19186		1.30	33.9	1590	20.2	21.0	0.001	0.07	1.79	1.5	3.9	1.4	42.4	<0.01	0.24	0.4
YY19187		1.58	36.3	1860	14.6	25.1	0.001	0.07	1.29	1.7	4.0	0.8	42.0	<0.01	0.21	0.4
YY19188		0.74	16.8	730	26.5	7.0	<0.001	0.04	0.67	0.8	2.1	1.0	15.9	<0.01	0.10	0.3
YY19189		0.84	26.3	1190	13.9	13.4	<0.001	0.07	1.26	1.1	2.5	0.5	26.9	<0.01	0.19	0.6
YY19190		1.20	31.9	960	13.3	11.1	0.001	0.01	0.74	3.2	1.8	0.4	30.6	<0.01	0.07	3.9
YY19191		0.92	44.7	1120	14.5	11.4	<0.001	0.01	1.31	2.4	1.9	0.4	33.9	<0.01	0.10	6.0
YY19192		1.84	16.0	650	11.6	11.7	<0.001	<0.01	0.72	2.4	1.0	0.9	10.6	<0.01	0.06	3.9
YY19193		1.75	23.9	950	22.0	20.8	<0.001	0.04	1.48	2.1	0.9	1.7	24.3	<0.01	0.12	6.1
YY19194		1.70	18.6	1130	60.3	17.9	<0.001	0.04	1.49	1.5	1.1	2.5	20.5	<0.01	0.15	3.0
YY19195		0.89	14.9	740	11.4	10.0	0.008	0.05	0.31	1.1	3.2	0.7	32.3	<0.01	0.07	1.1
YY19196		1.74	30.5	770	11.9	11.6	0.004	0.12	0.55	1.6	3.9	0.7	122.5	<0.01	0.06	1.6
YY19197		1.31	76.5	780	13.2	12.4	0.003	0.09	0.56	1.5	7.4	0.8	121.5	<0.01	0.05	1.5
YY19198		1.08	163.5	1270	15.7	12.1	0.023	0.07	2.45	3.2	6.5	0.7	78.1	<0.01	0.14	1.7
YY19199		0.44	60.3	1610	9.9	12.4	0.002	0.09	3.15	3.4	5.5	0.4	254	<0.01	0.07	0.7
YY19200		0.83	51.3	1270	8.2	22.2	0.003	0.08	1.86	4.5	3.5	1.3	166.5	<0.01	0.05	2.1
YY19201		1.31	24.1	610	12.1	20.2	<0.001	0.01	0.73	3.2	1.0	0.6	15.5	0.01	0.04	5.9
YY19202		0.56	30.1	1310	12.0	21.3	0.006	0.06	0.99	2.4	4.2	0.5	92.6	<0.01	0.06	2.4
YY19203		0.78	60.2	1590	8.9	16.6	0.002	0.06	2.18	3.4	3.6	0.8	123.5	<0.01	0.06	2.4
YY19204		1.04	56.7	1210	11.7	15.1	0.003	0.04	1.69	2.8	3.6	0.8	92.5	<0.01	0.09	1.7
YY19205		1.08	47.0	1080	11.4	16.0	0.008	0.07	2.03	3.2	7.0	0.9	143.0	<0.01	0.07	1.9
YY19206		1.15	45.8	1010	9.0	20.7	0.006	0.09	1.51	2.3	4.1	0.6	82.5	<0.01	0.06	3.2
YY19207		1.21	29.0	910	11.0	22.4	0.002	0.05	0.89	1.6	2.5	0.9	43.1	<0.01	0.11	1.4
YY19208		1.21	20.7	940	9.8	21.2	<0.001	0.04	0.86	1.7	1.4	0.7	24.7	<0.01	0.11	2.5
YY19209		1.11	26.0	990	11.4	22.7	<0.001	0.04	0.83	1.7	2.3	0.5	31.7	<0.01	0.12	3.2
YY19210		1.01	30.2	1340	12.1	15.4	0.024	0.09	1.12	1.7	5.9	0.5	53.7	<0.01	0.08	1.1
YY19211		0.76	74.5	1100	10.5	23.0	0.002	0.23	1.37	5.5	2.5	2.2	151.0	<0.01	0.19	5.6
YY19212		1.18	59.1	1060	11.0	19.0	<0.001	0.05	1.24	2.6	1.7	0.8	32.9	<0.01	0.15	4.9
YY19213		0.89	57.3	1020	10.5	12.7	0.001	0.04	1.01	2.1	2.3	0.7	41.1	0.01	0.07	2.2
YY19214		0.53	55.6	570	10.3	7.1	0.001	0.07	0.79	1.5	4.0	0.9	114.0	<0.01	0.06	1.0
YY19215		0.68	66.4	680	26.3	7.1	0.003	0.08	3.01	2.1	3.9	3.5	99.8	<0.01	0.08	1.6
YY19216		0.32	36.3	850	7.2	3.9	0.008	0.18	1.75	0.8	5.2	0.9	125.0	<0.01	0.05	0.6
YY19217		0.92	59.7	1350	11.3	11.4	0.005	0.07	1.39	2.2	2.8	4.5	128.0	<0.01	0.08	1.6
YY19218		1.28	36.5	1170	11.2	13.7	0.002	0.03	0.94	2.3	1.8	0.6	44.5	<0.01	0.07	2.5
YY19219		0.58	25.6	1230	6.5	8.7	<0.001	0.11	0.82	1.0	2.5	0.4	56.6	<0.01	0.04	0.4
YY19220		0.98	28.6	1040	10.2	13.4	<0.001	0.05	0.83	2.3	1.2	0.5	49.0	<0.01	0.07	2.2
YY19221		0.68	20.9	1700	5.7	7.7	<0.001	0.11	0.76	0.9	2.6	0.4	76.2	<0.01	0.06	0.5

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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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CERTIFICATE OF ANALYSIS WH19152890

Sample Description	Method	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Ti	Tl	U	V	W	Y	Zn	Zr
	Units	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.005	0.02	0.05	1	0.05	0.05	2	0.5
YY19182		0.016	0.14	0.43	31	0.24	15.05	126	0.9
YY19183		0.030	0.26	1.21	89	3.57	4.15	112	<0.5
YY19184		0.034	0.27	1.05	85	2.22	4.75	71	<0.5
YY19185		0.028	0.10	1.00	46	1.86	4.74	88	<0.5
YY19186		0.023	0.31	1.51	50	0.74	10.15	81	<0.5
YY19187		0.029	0.26	1.86	66	0.29	9.17	90	<0.5
YY19188		0.019	0.09	0.66	34	0.29	3.00	38	<0.5
YY19189		0.025	0.13	1.48	57	0.28	7.54	74	<0.5
YY19190		0.035	0.11	1.58	41	0.27	9.34	99	1.7
YY19191		0.033	0.14	1.45	48	0.26	7.96	128	1.5
YY19192		0.033	0.17	0.62	71	0.32	2.53	54	2.4
YY19193		0.023	0.26	0.93	62	0.71	4.37	75	2.2
YY19194		0.030	0.20	0.58	56	0.83	2.82	71	0.6
YY19195		0.015	0.13	1.04	26	0.27	3.37	39	<0.5
YY19196		0.024	0.15	1.87	33	0.27	5.42	48	1.9
YY19197		0.016	0.19	1.09	34	0.34	5.22	94	0.9
YY19198		0.030	1.32	2.79	110	0.42	32.7	310	6.0
YY19199		0.033	1.49	2.10	140	0.19	12.00	258	2.8
YY19200		0.059	0.69	2.23	97	0.20	6.62	140	3.4
YY19201		0.042	0.47	1.11	51	0.28	4.04	61	3.4
YY19202		0.045	0.49	2.14	50	0.13	5.57	61	2.4
YY19203		0.051	0.52	2.07	116	0.28	8.09	142	3.4
YY19204		0.033	0.43	2.03	115	0.45	8.73	161	2.0
YY19205		0.038	0.41	1.98	93	0.42	8.47	140	2.8
YY19206		0.029	0.53	1.74	48	0.58	6.86	103	2.0
YY19207		0.027	0.34	1.13	51	0.74	4.78	78	<0.5
YY19208		0.032	0.28	0.84	51	0.68	3.76	60	<0.5
YY19209		0.031	0.29	0.87	42	1.61	3.85	77	<0.5
YY19210		0.026	0.24	1.44	38	0.35	7.28	99	1.2
YY19211		0.073	0.79	2.87	83	0.24	6.92	142	2.0
YY19212		0.039	0.37	1.33	64	0.46	5.30	137	1.5
YY19213		0.033	0.22	4.04	55	0.58	6.52	185	1.5
YY19214		0.016	0.17	3.49	44	0.50	7.71	164	2.3
YY19215		0.022	0.26	3.05	56	0.48	9.38	166	2.0
YY19216		0.011	0.14	4.12	26	0.29	7.49	68	1.8
YY19217		0.029	0.51	3.03	77	0.40	8.92	98	2.9
YY19218		0.036	0.29	1.00	55	0.51	6.61	96	2.0
YY19219		0.020	0.17	2.54	30	0.60	5.86	65	1.6
YY19220		0.032	0.27	1.45	48	0.90	5.99	87	1.7
YY19221		0.017	0.19	1.38	33	0.24	6.04	50	1.6

***** 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
www.alsglobal.com/geochemistry

To: **ATAC RESOURCES LTD.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 8-JUL-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19152890

Sample Description	Method	WEI-21	Au-ICP21	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Recvd Wt.	Au	Ag	Al	As	Au	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr
	Units	kg	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
	LOD	0.02	0.001	0.01	0.01	0.1	0.02	10	10	0.05	0.01	0.01	0.01	0.02	0.1	1
YY19222		0.21	0.001	0.45	1.23	11.3	<0.02	<10	280	0.64	0.67	1.32	0.28	16.45	7.5	34
YY19223		0.20	0.001	0.50	1.27	9.7	<0.02	<10	240	0.61	0.51	1.37	2.12	16.50	7.7	32
YY19224		0.16	<0.001	0.53	1.04	7.5	<0.02	<10	450	0.53	0.58	1.24	1.20	13.20	5.6	28
YY19225		0.17	<0.001	0.33	1.00	6.3	<0.02	<10	550	0.47	0.40	2.75	0.64	9.34	5.3	23
YY19226		0.22	<0.001	0.41	0.60	8.8	<0.02	<10	2120	0.31	0.24	1.10	0.51	9.86	4.6	14
YY19227		0.37	<0.001	1.24	0.81	15.8	<0.02	<10	260	0.47	0.40	2.25	1.02	8.71	4.9	14
YY19228		0.35	<0.001	0.41	0.69	4.5	<0.02	<10	430	0.34	0.27	6.44	0.67	7.87	3.9	12
YY19229		0.39	<0.001	0.45	0.70	9.4	<0.02	<10	720	0.41	0.28	7.55	0.76	13.20	5.2	23
YY19230		0.41	<0.001	0.41	0.93	9.7	<0.02	<10	890	0.55	0.61	2.31	0.63	15.90	6.0	26
YY19231		0.30	<0.001	0.50	0.90	10.3	<0.02	<10	800	0.51	0.60	3.42	0.74	15.40	6.1	25
YY19232		0.37	<0.001	0.39	1.51	9.0	<0.02	<10	510	0.78	0.51	0.87	0.42	27.0	6.4	28
YY19233		0.33	0.001	0.38	1.34	10.6	<0.02	<10	490	0.82	0.34	1.12	0.53	25.2	7.5	24
YY19234		0.36	<0.001	0.72	0.57	7.0	<0.02	<10	120	0.39	0.68	8.96	0.61	6.90	3.6	8
YY19235		0.25	<0.001	0.33	0.91	5.6	<0.02	<10	100	0.52	0.39	1.61	0.80	14.90	4.8	19
YY19236		0.43	<0.001	0.34	0.81	6.9	<0.02	<10	140	0.42	0.21	5.51	0.51	14.40	5.1	19
YY19237		0.28	0.002	0.32	1.54	10.7	<0.02	<10	1800	0.83	0.37	0.34	0.52	22.8	8.7	25
YY19238		0.32	<0.001	0.36	0.91	6.2	<0.02	<10	180	0.51	0.26	1.48	0.55	15.70	5.1	23
YY19239		0.19	<0.001	0.68	0.81	4.6	<0.02	<10	340	0.79	0.45	1.21	0.63	12.20	3.7	35
YY19240		0.30	<0.001	0.29	0.75	5.0	<0.02	<10	120	0.40	0.32	1.83	0.56	12.95	3.8	16
YY19241		0.38	<0.001	0.30	0.96	6.2	<0.02	<10	530	0.59	0.22	2.88	0.51	16.05	4.9	19
YY19242		0.26	<0.001	0.40	0.78	6.3	<0.02	<10	1290	0.82	0.27	3.76	0.76	13.50	4.4	15
YY19243		0.27	0.001	0.41	1.11	8.3	<0.02	<10	1230	0.64	0.29	0.90	1.76	18.65	6.6	33
YY19244		0.27	0.001	0.38	1.11	8.0	<0.02	<10	490	0.69	0.43	0.73	1.53	18.10	7.0	28
YY19245		0.29	<0.001	0.36	0.82	8.2	<0.02	<10	2180	0.61	0.41	1.20	2.14	14.65	5.2	21
YY19246		0.25	0.005	0.37	0.81	7.9	<0.02	<10	650	0.62	0.38	0.86	1.75	14.25	5.0	21
YY19247		0.25	<0.001	0.47	0.91	11.7	<0.02	<10	820	0.61	0.48	0.85	0.98	14.80	5.5	21
YY19248		0.26	0.001	0.60	1.21	13.1	<0.02	<10	530	0.88	0.61	1.11	2.96	19.85	8.9	31
YY19249		0.24	0.002	0.55	1.35	18.9	<0.02	<10	510	0.82	0.65	1.21	2.07	20.3	10.1	33
YY19250		0.10	<0.001	0.55	1.11	15.8	<0.02	<10	470	0.53	1.23	1.25	1.58	20.5	7.8	30
YY19251		0.17	0.002	0.58	1.45	16.6	<0.02	<10	430	0.78	0.84	1.11	1.75	22.0	8.5	35
YY19252		0.42	<0.001	1.17	1.56	14.9	<0.02	<10	310	1.05	0.62	0.59	4.24	16.65	6.4	52
YY19253		0.18	<0.001	1.10	1.31	13.0	<0.02	<10	270	0.82	0.55	1.46	3.03	17.40	6.5	68
YY19254		0.11	<0.001	0.66	1.05	7.5	<0.02	<10	230	1.08	0.47	1.80	3.34	14.50	5.5	41
YY19255		0.25	0.033	0.89	1.70	20.5	<0.02	<10	540	1.41	4.76	1.07	5.87	17.60	10.1	32
YY19256		0.38	<0.001	0.85	2.00	15.4	<0.02	<10	320	1.37	1.13	0.65	6.85	24.0	11.8	40
YY19257		0.27	0.001	0.58	1.94	13.4	<0.02	<10	240	1.05	0.63	1.03	2.76	21.3	10.0	35
YY19258		0.25	<0.001	0.23	1.80	18.0	<0.02	<10	470	0.91	0.89	0.46	1.44	29.5	13.0	41
YY19259		0.30	0.001	0.48	1.82	18.3	<0.02	<10	320	0.94	0.92	0.55	2.92	29.2	12.6	42
YY19260		0.20	0.001	0.48	1.85	15.2	<0.02	<10	310	1.10	0.99	1.08	2.80	22.8	12.3	33
YY19261		0.24	0.002	0.53	1.24	11.4	<0.02	<10	360	0.65	0.60	1.89	1.65	17.95	8.1	27

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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

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Finalized Date: 8-JUL-2019
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Project: Rau

CERTIFICATE OF ANALYSIS WH19152890

Sample Description	Method	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Cs	Cu	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na
	Units	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%
	LOD	0.05	0.2	0.01	0.05	0.05	0.02	0.01	0.005	0.01	0.2	0.1	0.01	5	0.05	0.01
YY19222		1.54	28.1	2.06	3.65	<0.05	0.04	0.04	0.038	0.04	8.9	16.8	0.34	293	3.03	0.02
YY19223		1.64	42.1	2.05	3.56	<0.05	0.03	0.06	0.034	0.04	8.9	17.5	0.37	360	4.82	0.02
YY19224		1.51	27.7	1.75	2.94	<0.05	0.02	0.04	0.034	0.03	7.4	13.8	0.30	277	2.75	0.02
YY19225		1.21	21.4	1.63	2.92	<0.05	0.02	0.04	0.026	0.03	4.9	9.9	0.21	259	1.57	0.02
YY19226		1.22	14.7	1.52	1.82	<0.05	0.02	0.03	0.024	0.03	4.8	8.5	0.15	235	1.10	0.02
YY19227		1.10	19.1	2.38	3.02	<0.05	0.02	0.02	0.043	0.02	4.3	10.4	0.12	186	0.95	0.04
YY19228		1.24	16.4	1.77	2.22	<0.05	<0.02	0.02	0.023	0.02	4.3	9.1	0.14	183	0.79	0.04
YY19229		1.45	18.4	1.96	2.34	<0.05	0.03	0.02	0.026	0.04	7.5	12.9	0.33	205	1.32	0.02
YY19230		1.90	27.2	2.36	2.83	0.05	0.03	0.03	0.028	0.06	8.8	13.6	0.35	275	1.71	0.02
YY19231		1.69	21.7	2.08	2.82	<0.05	0.03	0.03	0.031	0.04	8.9	15.0	0.39	242	1.46	0.02
YY19232		2.20	18.2	2.26	4.10	<0.05	0.03	0.04	0.038	0.04	13.2	16.4	0.33	300	1.40	0.02
YY19233		1.96	12.4	2.59	4.08	<0.05	0.03	0.04	0.032	0.03	10.9	16.7	0.26	426	1.23	0.02
YY19234		1.21	17.6	1.65	2.04	<0.05	<0.02	0.01	0.021	0.02	3.6	5.9	0.12	155	1.24	0.03
YY19235		1.98	17.8	1.80	2.93	<0.05	0.02	0.02	0.030	0.03	8.9	14.8	0.25	306	0.80	0.03
YY19236		1.38	20.9	1.86	2.45	<0.05	0.02	0.03	0.018	0.04	8.3	12.1	0.29	237	1.05	0.03
YY19237		1.39	33.1	2.48	4.18	<0.05	0.07	0.04	0.028	0.06	12.9	15.0	0.30	335	1.22	0.03
YY19238		1.87	18.3	1.89	3.06	<0.05	0.02	0.02	0.024	0.03	8.7	13.1	0.26	337	1.09	0.03
YY19239		1.56	16.1	1.64	2.72	<0.05	0.02	0.04	0.096	0.02	7.5	11.4	0.15	664	0.90	0.03
YY19240		1.45	16.3	1.53	2.42	<0.05	0.02	0.02	0.058	0.02	7.3	11.1	0.22	238	0.94	0.03
YY19241		1.64	18.1	1.77	3.08	<0.05	0.03	0.02	0.024	0.03	9.2	14.1	0.30	262	1.40	0.03
YY19242		1.40	24.5	1.81	2.49	<0.05	0.02	0.02	0.028	0.03	7.9	9.6	0.27	262	2.24	0.03
YY19243		2.45	22.9	1.87	3.11	<0.05	0.04	0.05	0.026	0.05	9.7	12.6	0.27	422	3.87	0.01
YY19244		1.00	18.8	1.90	3.15	<0.05	0.04	0.06	0.038	0.04	9.5	11.3	0.28	448	2.43	0.02
YY19245		0.99	19.4	1.74	2.48	<0.05	0.03	0.04	0.025	0.04	8.0	9.0	0.21	403	3.08	0.01
YY19246		0.79	18.0	1.65	2.54	<0.05	0.03	0.03	0.026	0.03	7.5	8.6	0.20	321	3.03	0.02
YY19247		0.91	23.0	1.99	2.76	<0.05	0.03	0.04	0.027	0.04	8.1	9.3	0.23	282	2.75	0.02
YY19248		1.25	33.2	2.19	3.73	<0.05	0.03	0.05	0.035	0.05	10.8	14.5	0.31	618	3.25	0.02
YY19249		1.23	34.7	2.85	3.70	<0.05	0.05	0.06	0.033	0.05	11.3	14.2	0.34	1590	3.95	0.02
YY19250		1.32	20.8	2.07	3.32	<0.05	0.06	0.05	0.036	0.05	10.9	14.1	0.34	934	3.74	0.02
YY19251		1.62	40.2	2.33	4.10	0.05	0.08	0.07	0.032	0.06	12.6	13.6	0.32	327	3.89	0.02
YY19252		3.19	36.9	2.56	4.37	<0.05	0.05	0.05	0.048	0.05	9.9	14.6	0.22	178	7.46	0.02
YY19253		1.77	29.0	2.08	3.98	0.05	0.05	0.07	0.038	0.04	9.8	16.7	0.32	530	4.69	0.02
YY19254		1.09	28.9	1.68	3.13	<0.05	0.04	0.05	0.030	0.03	10.1	10.7	0.22	372	2.85	0.02
YY19255		3.90	53.4	3.26	4.80	0.06	0.05	0.05	0.062	0.06	11.5	18.7	0.74	509	11.75	0.03
YY19256		5.21	64.0	3.32	5.30	0.05	0.05	0.06	0.049	0.05	13.8	17.4	0.46	597	7.17	0.02
YY19257		2.83	46.4	3.01	5.36	<0.05	0.07	0.07	0.047	0.06	11.6	17.8	0.43	433	4.43	0.02
YY19258		2.23	43.8	3.29	5.26	0.05	0.08	0.03	0.048	0.09	13.3	21.9	0.66	563	5.06	0.02
YY19259		2.49	52.6	3.17	5.29	<0.05	0.10	0.09	0.039	0.08	15.7	20.2	0.62	288	6.80	0.02
YY19260		4.19	68.3	2.99	5.55	0.05	0.09	0.07	0.038	0.08	12.9	22.4	0.79	458	6.08	0.02
YY19261		1.71	45.3	2.12	3.81	<0.05	0.06	0.06	0.033	0.05	11.1	13.1	0.79	395	3.06	0.02

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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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	Analyte	Nb	Ni	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th
	Units	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.05	0.2	10	0.2	0.1	0.001	0.01	0.05	0.1	0.2	0.2	0.2	0.01	0.01	0.2
YY19222		0.89	39.6	970	9.2	10.4	0.001	0.05	0.72	1.7	1.8	0.7	53.2	<0.01	0.06	0.9
YY19223		0.89	42.6	920	9.2	11.1	0.005	0.07	0.68	1.7	4.6	0.5	48.5	<0.01	0.05	0.7
YY19224		0.64	33.9	730	9.6	8.6	0.007	0.07	0.64	1.2	4.0	0.5	33.3	<0.01	0.04	0.5
YY19225		0.52	28.2	890	6.0	7.0	0.001	0.15	0.61	0.9	3.7	0.4	51.9	<0.01	0.03	0.3
YY19226		0.24	19.5	490	8.5	4.3	<0.001	0.11	0.53	1.0	0.7	0.2	22.6	<0.01	0.04	0.5
YY19227		0.14	23.3	660	50.4	3.7	<0.001	0.23	4.64	1.1	1.2	1.2	41.9	<0.01	0.06	1.5
YY19228		0.15	19.3	580	5.3	3.9	<0.001	0.09	0.49	0.8	0.9	0.5	84.2	<0.01	0.04	0.9
YY19229		0.39	22.6	760	10.0	8.5	<0.001	0.14	1.05	1.8	0.9	0.4	92.1	<0.01	0.04	1.5
YY19230		0.50	27.0	890	10.9	13.3	<0.001	0.09	0.96	2.0	1.0	0.5	42.9	<0.01	0.07	1.3
YY19231		0.60	26.1	810	12.5	9.9	<0.001	0.04	0.94	1.9	0.9	0.8	51.0	<0.01	0.04	1.4
YY19232		0.61	24.1	600	13.5	9.8	<0.001	0.03	0.65	2.3	0.8	0.6	22.4	<0.01	0.04	1.5
YY19233		0.63	22.8	660	13.5	7.5	<0.001	0.06	0.87	2.2	0.6	0.6	21.2	0.01	0.04	2.1
YY19234		0.09	16.6	560	8.2	3.4	<0.001	0.10	1.20	0.6	0.7	0.6	114.5	<0.01	0.04	1.3
YY19235		0.32	23.9	720	7.8	9.0	<0.001	0.04	0.46	1.1	0.5	0.4	29.3	<0.01	0.04	0.5
YY19236		0.41	21.9	710	7.5	7.0	<0.001	0.02	0.55	1.7	0.6	0.3	67.1	<0.01	0.03	1.1
YY19237		0.78	34.8	840	15.4	7.4	<0.001	0.02	0.82	3.0	0.6	0.6	21.5	<0.01	0.05	4.1
YY19238		0.43	21.0	670	8.3	7.7	<0.001	0.01	0.49	1.7	0.5	0.3	25.9	<0.01	0.03	1.3
YY19239		0.25	14.3	810	5.7	3.1	<0.001	0.04	0.32	0.9	1.6	0.3	29.8	<0.01	0.02	1.1
YY19240		0.31	21.7	520	6.4	5.9	<0.001	0.04	0.37	1.0	0.6	0.3	27.3	<0.01	0.02	0.6
YY19241		0.59	26.6	460	11.5	7.5	<0.001	0.01	0.56	1.8	0.5	0.9	39.0	<0.01	0.02	1.7
YY19242		0.53	25.6	550	15.9	6.2	<0.001	0.03	0.85	1.1	0.8	2.0	50.7	<0.01	0.04	0.8
YY19243		0.59	29.5	880	13.2	9.8	0.001	0.05	0.74	2.0	1.6	0.5	29.8	<0.01	0.02	1.0
YY19244		0.61	29.6	880	12.9	8.4	<0.001	0.02	0.60	2.2	0.6	0.7	23.0	<0.01	0.03	1.2
YY19245		0.49	24.9	710	11.3	5.8	<0.001	0.08	0.58	1.5	1.4	0.7	29.2	<0.01	0.02	0.6
YY19246		0.49	23.3	620	8.5	5.4	<0.001	0.03	0.55	1.5	0.9	0.6	22.1	<0.01	0.03	0.7
YY19247		0.53	24.3	690	12.0	7.4	<0.001	0.03	0.79	1.6	1.3	0.8	22.7	<0.01	0.04	0.8
YY19248		0.75	38.4	930	17.0	12.0	0.001	0.04	0.93	2.3	2.0	1.2	33.6	<0.01	0.05	1.0
YY19249		0.78	44.2	1210	19.8	11.3	0.001	0.05	0.99	2.5	1.8	1.1	34.8	<0.01	0.05	1.4
YY19250		0.90	33.1	1240	21.6	8.9	0.001	0.03	1.13	2.0	1.9	1.0	36.9	<0.01	0.04	2.0
YY19251		0.95	42.0	1250	19.2	10.3	0.002	0.05	1.40	2.9	2.9	0.9	37.9	<0.01	0.06	2.0
YY19252		0.91	103.5	1470	27.4	9.0	0.001	0.01	1.03	2.3	3.0	1.7	27.7	<0.01	0.04	2.8
YY19253		0.89	62.7	1230	14.7	7.4	0.001	0.04	0.89	2.2	3.0	2.3	38.4	<0.01	0.04	1.3
YY19254		0.68	41.0	1510	11.8	6.4	<0.001	0.05	0.59	1.4	2.1	1.2	41.6	<0.01	0.04	0.6
YY19255		0.69	111.5	1100	67.5	11.1	0.002	0.09	2.33	2.3	4.2	1.6	37.0	0.01	0.09	2.0
YY19256		0.68	118.0	1080	76.7	13.5	0.002	0.07	1.48	2.2	3.4	1.1	19.5	<0.01	0.06	1.4
YY19257		0.85	75.7	960	35.1	14.6	0.002	0.05	1.03	2.7	2.5	1.2	34.3	<0.01	0.05	1.9
YY19258		1.00	68.5	950	45.2	15.1	0.001	0.01	1.40	3.8	1.2	1.3	25.8	<0.01	0.08	4.3
YY19259		1.06	63.3	1010	24.9	14.3	0.001	<0.01	1.39	4.2	1.6	1.1	24.6	<0.01	0.07	4.3
YY19260		0.97	82.3	930	16.7	26.8	0.003	0.04	1.25	3.1	2.6	0.9	26.9	<0.01	0.08	2.1
YY19261		0.71	48.9	950	16.4	10.8	<0.001	0.06	1.60	1.9	3.1	1.3	26.0	<0.01	0.05	0.8

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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 ST
VANCOUVER BC V6B 1L8

Finalized Date: 8-JUL-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19152890

Sample Description	Method	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Ti	Tl	U	V	W	Y	Zn	Zr
	Units	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.005	0.02	0.05	1	0.05	0.05	2	0.5
YY19222		0.023	0.16	1.43	60	0.74	6.44	105	1.5
YY19223		0.026	0.17	7.11	48	0.52	9.59	181	1.4
YY19224		0.019	0.16	2.86	40	0.56	8.43	191	1.0
YY19225		0.015	0.14	1.68	40	0.59	4.88	111	1.1
YY19226		0.010	0.08	0.94	25	0.37	5.90	107	0.8
YY19227		0.006	0.07	0.41	20	0.83	8.57	127	0.6
YY19228		0.006	0.06	0.42	17	0.85	7.71	126	0.6
YY19229		0.016	0.13	0.62	36	0.58	10.65	116	1.1
YY19230		0.024	0.16	0.90	41	1.80	10.65	119	1.1
YY19231		0.020	0.15	0.76	38	0.83	9.82	124	1.1
YY19232		0.022	0.16	0.71	44	0.58	13.45	126	0.8
YY19233		0.019	0.10	0.77	35	1.06	13.20	101	0.8
YY19234		<0.005	0.06	0.43	12	0.46	7.37	90	0.5
YY19235		0.014	0.12	0.49	28	0.97	12.35	132	0.5
YY19236		0.021	0.10	0.43	31	0.57	10.10	102	0.9
YY19237		0.034	0.14	0.61	39	0.95	10.35	118	2.7
YY19238		0.018	0.10	0.38	37	0.67	10.25	109	0.7
YY19239		0.009	0.11	2.10	42	2.82	13.60	173	0.8
YY19240		0.012	0.08	0.32	24	1.67	9.56	96	0.6
YY19241		0.020	0.08	0.40	31	1.04	10.30	99	1.0
YY19242		0.014	0.08	0.79	23	1.78	10.05	127	0.7
YY19243		0.025	0.14	3.21	55	1.91	8.74	152	1.4
YY19244		0.023	0.11	1.20	51	2.71	8.57	181	1.2
YY19245		0.018	0.09	1.48	40	1.31	8.43	131	1.0
YY19246		0.017	0.09	1.20	42	1.33	7.29	128	0.9
YY19247		0.020	0.11	1.03	39	1.86	7.26	116	1.1
YY19248		0.023	0.16	1.45	55	1.51	10.65	208	1.3
YY19249		0.022	0.15	3.47	59	1.41	11.10	219	1.8
YY19250		0.023	0.18	1.61	47	2.67	6.80	214	1.7
YY19251		0.021	0.20	2.30	52	1.46	13.65	177	2.7
YY19252		0.030	0.21	4.09	79	2.35	11.75	532	2.0
YY19253		0.024	0.17	3.89	92	1.60	12.50	306	2.0
YY19254		0.017	0.14	2.83	61	1.43	13.60	288	1.5
YY19255		0.032	0.55	9.34	132	17.65	13.30	826	2.0
YY19256		0.024	0.54	7.24	99	11.00	15.00	927	1.6
YY19257		0.029	0.40	3.39	76	2.68	10.60	542	2.2
YY19258		0.048	0.39	1.55	108	5.06	8.42	370	3.4
YY19259		0.045	0.47	3.61	101	2.25	11.25	313	4.1
YY19260		0.039	0.77	5.11	104	3.04	11.20	298	3.2
YY19261		0.026	0.34	3.91	69	2.09	10.90	188	2.2

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North Vancouver BC V7H 0A7
Phone: +1 (604) 984 0221 Fax: +1 (604) 984 0218
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Finalized Date: 8-JUL-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19152890

Sample Description	Method	WEI-21	Au-ICP21	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Recvd Wt.	Au	Ag	Al	As	Au	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr
	Units	kg	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
	LOD	0.02	0.001	0.01	0.01	0.1	0.02	10	10	0.05	0.01	0.01	0.01	0.02	0.1	1
YY19262		0.25	0.001	0.65	1.38	22.3	<0.02	<10	360	0.73	0.73	2.26	8.74	15.30	8.6	33
YY19263		0.49	0.001	0.53	1.36	20.3	<0.02	<10	260	0.76	1.12	1.16	2.51	26.0	10.0	37
YY19264		0.24	<0.001	0.73	1.14	7.6	<0.02	<10	180	0.59	1.20	1.86	1.64	9.39	5.5	67
YY19265		0.22	0.001	0.91	1.78	18.8	<0.02	<10	240	1.68	1.37	1.31	4.13	17.35	9.5	49
YY19266		0.30	<0.001	1.53	3.10	25.5	<0.02	<10	70	1.52	1.05	2.36	7.55	8.74	10.4	20
YY19267		0.18	<0.001	0.87	1.06	10.0	<0.02	<10	1160	0.56	0.58	2.16	5.81	9.38	5.2	44
YY19268		0.18	<0.001	0.74	0.90	9.0	<0.02	<10	180	0.46	0.85	1.80	2.43	11.45	5.0	49
YY19269		0.18	0.002	0.81	1.12	10.0	<0.02	<10	170	0.70	0.92	1.23	3.09	15.15	7.8	58
YY19270		0.13	<0.001	0.60	1.05	7.2	<0.02	<10	190	0.57	0.72	1.73	2.33	13.15	6.5	45
YY19271		0.14	0.001	0.46	1.12	6.7	<0.02	<10	190	0.49	1.14	1.75	0.99	14.95	7.0	52
YY19272		0.21	<0.001	0.65	1.09	6.6	<0.02	<10	170	0.57	2.39	1.45	2.14	16.55	6.7	54
YY19273		0.16	0.001	0.51	0.73	4.1	<0.02	<10	210	0.36	0.52	2.79	2.18	10.10	4.0	33
YY19274		0.17	0.008	0.55	0.94	4.8	<0.02	<10	300	0.47	0.84	2.67	0.94	12.15	4.5	48
YY19275		0.32	0.001	0.41	0.91	3.4	<0.02	<10	110	0.60	4.30	0.67	0.72	12.60	4.2	104
YY19276		0.13	0.001	0.81	0.80	13.3	<0.02	<10	170	0.36	7.10	0.93	0.82	11.90	3.9	47
YY19277		0.24	0.001	0.54	1.26	14.9	<0.02	<10	190	0.66	2.42	0.69	0.64	22.0	5.2	53
YY19278		0.19	0.002	3.05	0.80	8.2	<0.02	<10	90	0.31	1.01	0.41	4.00	18.65	2.3	32
YY19279		0.18	0.001	0.85	1.02	13.9	<0.02	<10	140	0.43	0.84	1.85	1.17	14.60	7.3	32
YY19280		0.31	0.002	2.23	1.96	44.6	<0.02	<10	170	1.34	0.65	1.33	11.70	21.6	9.6	33
YY19281		0.24	0.004	1.34	1.41	21.0	<0.02	<10	150	0.73	1.28	1.13	1.00	17.15	5.9	60
YY19282		0.37	0.002	1.97	2.86	33.1	<0.02	<10	150	1.00	0.70	0.11	0.63	21.0	4.4	32
YY19283		0.15	0.003	1.87	2.21	27.5	<0.02	<10	60	0.44	0.55	0.14	1.66	10.70	2.1	26
YY19284		0.21	0.002	0.95	1.52	36.7	<0.02	<10	110	0.47	0.38	0.08	2.09	31.9	4.1	26
YY19285		0.47	<0.001	0.80	2.32	39.9	<0.02	<10	120	2.96	0.96	13.05	62.2	43.0	29.8	22
YY19286		0.26	0.001	1.04	1.64	46.2	<0.02	<10	460	0.85	1.61	1.22	4.59	26.4	11.5	37
YY19287		0.23	0.005	2.37	1.70	43.3	<0.02	<10	730	0.94	2.82	3.55	16.45	29.7	13.3	34
YY19288		0.32	0.002	0.81	0.95	19.8	<0.02	<10	540	0.46	0.71	4.09	9.88	17.70	6.0	23
YY19289		0.11	0.003	1.17	1.08	20.8	<0.02	10	600	0.54	0.61	2.14	5.45	21.5	6.9	26
YY19290		0.22	<0.001	1.62	1.71	28.5	<0.02	<10	420	0.86	0.69	1.29	11.70	21.3	9.6	46
YY19291		0.26	0.003	2.84	1.25	31.5	<0.02	<10	130	0.73	4.54	4.80	13.45	27.3	6.6	31
YY19292		0.46	0.004	1.27	0.89	22.8	<0.02	<10	450	0.59	0.18	2.69	2.54	24.1	8.3	20
YY19293		0.40	0.006	1.00	0.78	53.2	<0.02	<10	1300	0.67	0.20	0.45	3.34	28.0	9.3	24
YY19294		0.53	0.001	0.95	0.80	16.6	<0.02	<10	1360	0.67	0.17	0.14	0.75	18.15	8.6	18
YY19295		0.46	0.001	0.46	1.08	14.5	<0.02	<10	1100	0.71	0.16	0.24	1.16	17.60	8.1	23
YY19296		0.27	0.002	4.10	1.38	16.8	<0.02	<10	590	0.73	0.16	1.12	27.2	23.1	6.9	32
YY19297		0.35	<0.001	5.47	0.54	12.5	<0.02	<10	160	0.31	0.09	3.00	12.75	15.95	3.7	30
YY19298		0.31	0.001	0.89	1.21	12.4	<0.02	<10	410	0.51	0.14	1.79	2.64	20.7	7.6	23
YY19299		0.27	<0.001	1.01	1.76	17.7	<0.02	<10	850	0.90	0.26	0.79	2.52	31.9	13.6	34
YY19300		0.26	<0.001	1.74	0.93	9.2	<0.02	<10	1480	0.55	0.13	1.05	15.25	14.45	6.0	22
YY19301		0.45	<0.001	1.82	0.50	11.5	<0.02	<10	390	0.32	0.09	0.02	0.57	8.85	33.5	15

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North Vancouver BC V7H 0A7
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	Analyte	Cs	Cu	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na
	Units	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%
	LOD	0.05	0.2	0.01	0.05	0.05	0.02	0.01	0.005	0.01	0.2	0.1	0.01	5	0.05	0.01
YY19262		2.81	47.4	2.21	3.95	<0.05	0.06	0.10	0.070	0.07	10.2	17.6	0.87	748	8.63	0.03
YY19263		1.97	61.0	3.11	4.05	0.06	0.09	0.04	0.052	0.09	14.1	12.9	0.60	525	5.12	0.03
YY19264		2.14	35.8	1.82	3.40	<0.05	0.03	0.07	0.044	0.05	5.8	11.8	0.30	718	6.04	0.04
YY19265		2.69	62.5	3.24	4.75	0.05	0.07	0.06	0.068	0.07	10.3	15.1	0.42	292	6.40	0.03
YY19266		4.01	149.0	4.01	4.21	0.05	0.07	0.05	0.100	0.03	5.2	8.4	0.12	288	8.46	0.04
YY19267		1.88	35.9	1.73	2.98	0.05	0.06	0.05	0.039	0.04	6.6	9.6	0.24	232	7.09	0.04
YY19268		1.76	43.5	1.67	2.66	<0.05	0.04	0.06	0.027	0.05	7.4	10.3	0.31	430	3.30	0.02
YY19269		2.58	58.1	2.10	3.34	0.05	0.04	0.06	0.040	0.05	9.9	12.3	0.35	588	7.12	0.02
YY19270		1.73	43.3	1.74	3.00	<0.05	0.04	0.05	0.034	0.04	7.9	11.7	0.32	535	1.98	0.02
YY19271		2.10	40.2	2.08	3.30	<0.05	0.03	0.06	0.037	0.04	8.9	11.5	0.34	445	2.52	0.02
YY19272		3.06	60.8	2.00	3.18	<0.05	0.04	0.07	0.046	0.05	10.6	12.2	0.34	529	2.64	0.02
YY19273		1.38	41.8	1.16	2.23	<0.05	0.04	0.07	0.015	0.03	7.3	7.8	0.24	312	0.62	0.02
YY19274		3.68	90.7	1.63	3.19	0.05	0.05	0.08	0.019	0.11	8.2	13.0	0.35	408	3.05	0.02
YY19275		4.91	97.2	2.65	3.69	0.06	0.06	0.03	0.019	0.16	9.7	23.7	0.58	525	6.77	0.02
YY19276		2.02	37.3	2.13	2.67	<0.05	0.07	0.06	0.022	0.06	7.7	8.8	0.23	208	4.74	0.02
YY19277		3.55	54.9	1.95	3.77	0.05	0.06	0.05	0.028	0.09	12.2	15.3	0.39	197	4.12	0.01
YY19278		4.14	39.8	1.15	3.32	0.05	<0.02	0.38	0.033	0.04	10.9	5.1	0.12	128	4.46	0.01
YY19279		2.19	27.4	1.78	3.12	<0.05	0.03	0.11	0.024	0.04	7.8	9.3	0.28	426	3.90	0.02
YY19280		5.43	68.2	3.02	5.82	0.06	0.08	0.24	0.060	0.09	12.1	18.0	0.49	376	20.0	0.06
YY19281		3.07	41.6	2.40	4.02	0.05	0.04	0.09	0.030	0.05	9.4	16.5	0.38	332	5.81	0.02
YY19282		7.36	45.5	3.66	7.37	<0.05	0.11	0.19	0.060	0.08	11.3	17.8	0.42	133	22.4	0.02
YY19283		3.48	54.2	3.04	5.18	0.07	0.05	0.24	0.047	0.06	5.7	8.7	0.25	45	22.7	0.02
YY19284		4.71	57.8	4.27	5.98	0.06	0.03	0.18	0.039	0.09	16.3	9.6	0.28	100	20.5	0.04
YY19285		3.09	159.5	3.05	1.89	0.12	0.05	0.09	0.091	0.03	40.6	12.0	7.20	582	12.70	0.02
YY19286		3.75	50.6	3.04	4.77	0.06	0.05	0.13	0.095	0.07	20.7	21.1	0.88	554	4.65	0.01
YY19287		5.81	55.6	3.07	5.13	0.06	0.04	0.22	0.287	0.07	29.9	18.0	2.48	991	5.74	0.01
YY19288		1.74	47.6	1.68	2.67	<0.05	0.04	0.11	0.053	0.05	12.4	12.4	1.88	405	2.84	<0.01
YY19289		2.71	43.0	1.79	3.24	0.06	0.04	0.18	0.054	0.05	16.5	13.2	0.61	431	3.31	0.01
YY19290		7.90	57.0	2.33	5.43	0.05	0.06	0.29	0.075	0.06	15.7	27.0	1.66	369	7.42	0.01
YY19291		2.76	50.0	2.85	3.07	0.10	0.04	0.40	1.085	0.06	28.9	12.4	2.66	435	14.15	0.01
YY19292		0.62	31.5	2.61	2.21	0.05	0.04	0.21	0.064	0.06	13.2	12.0	1.42	417	5.37	<0.01
YY19293		0.85	30.0	2.95	2.10	0.05	0.03	0.08	0.103	0.05	14.4	10.1	0.20	647	18.40	<0.01
YY19294		0.65	22.1	1.94	2.31	<0.05	<0.02	0.12	0.085	0.04	11.3	9.8	0.20	852	1.58	<0.01
YY19295		0.82	12.5	2.20	3.24	<0.05	0.02	0.06	0.053	0.05	9.3	9.6	0.25	731	1.30	<0.01
YY19296		0.87	13.3	3.01	3.99	<0.05	<0.02	0.25	0.032	0.04	15.7	9.0	0.31	1560	0.87	<0.01
YY19297		0.51	14.6	1.65	1.25	<0.05	<0.02	0.19	0.020	0.02	11.5	2.2	0.44	1340	0.55	<0.01
YY19298		0.88	15.5	2.07	3.47	<0.05	0.02	0.10	0.024	0.04	23.0	8.5	0.26	591	0.71	<0.01
YY19299		1.48	26.6	2.97	5.67	0.07	0.03	0.07	0.039	0.06	23.1	12.7	0.41	849	1.52	0.01
YY19300		0.90	13.5	1.59	2.89	0.06	0.03	0.06	0.026	0.03	17.9	7.4	0.17	772	0.59	0.01
YY19301		0.49	30.6	1.50	1.71	<0.05	<0.02	0.05	0.016	0.02	5.5	12.1	0.07	1360	2.08	<0.01

***** 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
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: 8-JUL-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19152890

Sample Description	Method	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Nb	Ni	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th
	Units	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.05	0.2	10	0.2	0.1	0.001	0.01	0.05	0.1	0.2	0.2	0.2	0.01	0.01	0.2
YY19262		0.71	82.2	1090	19.7	13.8	0.002	0.09	2.99	1.8	4.4	2.2	26.0	<0.01	0.07	0.7
YY19263		0.44	59.8	1120	40.9	12.0	0.001	0.02	1.61	3.7	1.9	1.8	39.6	<0.01	0.08	4.8
YY19264		0.49	49.2	1500	10.5	13.5	0.003	0.07	0.52	1.2	3.6	1.0	51.5	<0.01	0.06	0.4
YY19265		0.95	94.4	1250	19.5	15.4	0.001	0.03	1.11	2.7	2.8	2.1	50.1	<0.01	0.08	2.8
YY19266		0.44	221	960	13.5	4.7	0.006	0.15	0.76	1.4	6.6	1.9	95.3	<0.01	0.04	1.7
YY19267		0.47	86.9	2030	10.0	8.4	0.001	0.05	0.84	1.2	3.2	1.6	74.0	<0.01	0.05	0.8
YY19268		0.46	45.4	1200	12.6	11.8	0.002	0.07	0.83	1.1	3.5	0.8	39.8	<0.01	0.06	0.4
YY19269		0.62	56.2	1500	13.4	9.5	0.005	0.06	0.68	1.7	4.1	1.0	35.1	<0.01	0.06	0.8
YY19270		0.62	60.7	1060	13.4	10.3	0.005	0.07	0.43	1.7	4.4	1.0	40.2	<0.01	0.05	0.9
YY19271		0.71	55.2	900	23.8	11.5	0.008	0.08	0.37	1.9	4.2	0.9	42.8	<0.01	0.07	0.9
YY19272		0.59	60.1	990	33.6	13.6	0.004	0.06	0.49	1.9	3.4	1.0	36.4	<0.01	0.12	0.7
YY19273		0.46	31.0	1160	8.6	10.7	0.002	0.08	0.54	1.0	3.0	0.6	50.5	<0.01	0.03	0.3
YY19274		0.65	33.4	1090	8.7	26.8	0.006	0.15	0.70	1.6	7.7	0.7	50.0	<0.01	0.07	0.5
YY19275		0.54	88.2	790	39.8	40.8	0.001	0.02	0.33	3.4	2.9	1.0	22.8	<0.01	0.26	1.2
YY19276		0.58	28.7	1220	26.5	12.7	0.003	0.08	0.94	1.4	5.6	0.8	40.4	<0.01	0.23	1.2
YY19277		0.90	36.3	1160	26.7	19.3	0.002	0.05	1.56	2.4	4.4	0.7	34.9	<0.01	0.14	2.6
YY19278		0.49	26.6	1490	25.5	8.2	0.004	0.10	1.48	0.9	8.4	0.8	19.4	<0.01	0.04	0.2
YY19279		0.71	26.2	1150	17.6	8.7	0.007	0.14	3.02	1.3	5.8	0.6	63.6	<0.01	0.08	0.5
YY19280		1.37	85.6	1270	21.0	14.8	0.006	0.27	5.94	2.5	6.6	1.8	117.0	0.01	0.11	1.3
YY19281		0.81	50.9	1020	22.6	13.7	0.005	0.06	4.03	1.7	4.6	0.8	49.2	<0.01	0.16	0.9
YY19282		1.73	37.4	920	25.3	12.7	0.002	0.12	4.78	2.6	4.2	2.3	44.8	0.01	0.15	4.5
YY19283		0.99	37.9	1100	17.3	6.9	0.008	0.18	3.92	1.2	19.9	2.0	28.2	0.01	0.13	1.1
YY19284		1.03	37.3	1150	17.8	10.0	0.010	0.30	6.11	1.4	10.3	1.0	35.3	0.01	0.13	0.7
YY19285		0.32	561	2570	35.3	7.0	0.003	0.02	8.51	2.8	3.3	5.7	64.3	0.01	0.06	1.5
YY19286		0.81	81.8	1450	65.7	26.2	0.001	0.11	3.23	2.9	3.2	5.4	25.5	<0.01	0.09	1.0
YY19287		0.49	167.5	1990	533	26.1	<0.001	0.10	15.75	2.7	2.2	61.3	29.3	<0.01	0.11	0.8
YY19288		0.73	65.3	1130	78.3	12.3	0.001	0.12	3.75	1.8	3.7	3.0	27.5	<0.01	0.06	0.7
YY19289		0.65	59.7	1380	33.6	12.0	0.003	0.16	3.33	1.6	4.7	1.6	23.5	<0.01	0.06	0.5
YY19290		0.78	129.0	1270	30.9	17.3	0.002	0.11	4.61	3.1	3.8	2.0	19.0	<0.01	0.14	0.8
YY19291		0.44	149.5	4360	737	15.3	0.002	0.08	23.8	2.9	3.9	23.3	31.3	<0.01	0.26	1.0
YY19292		0.17	37.1	1700	69.9	5.6	<0.001	0.04	2.98	2.2	2.5	0.7	38.7	<0.01	0.06	0.9
YY19293		0.11	49.4	2420	143.0	8.2	<0.001	0.05	6.33	1.1	7.2	1.0	29.7	<0.01	0.09	0.6
YY19294		0.28	23.9	670	145.0	5.0	<0.001	0.02	4.73	2.5	0.6	1.1	16.6	<0.01	0.04	1.1
YY19295		0.34	20.1	870	142.5	10.0	<0.001	0.03	3.15	1.6	0.4	0.9	12.6	<0.01	0.03	0.6
YY19296		0.49	21.9	930	712	6.2	<0.001	0.06	2.60	2.0	0.6	1.6	12.0	<0.01	0.03	0.4
YY19297		0.18	14.3	1160	771	4.2	<0.001	0.12	2.00	0.9	2.0	0.4	11.4	<0.01	0.03	<0.2
YY19298		0.58	21.7	1220	45.9	7.9	<0.001	0.08	1.30	1.8	0.8	0.6	23.7	<0.01	0.02	0.4
YY19299		0.83	28.4	810	170.0	11.7	<0.001	0.03	1.24	3.6	0.6	0.9	15.1	<0.01	0.05	1.4
YY19300		0.31	18.2	1490	359	5.5	<0.001	0.05	1.72	1.1	0.7	0.6	9.6	<0.01	0.02	0.4
YY19301		0.32	51.7	330	94.4	4.6	<0.001	0.01	1.40	1.3	0.5	0.3	10.5	<0.01	0.02	0.6

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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

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VANCOUVER BC V6B 1L8

Finalized Date: 8-JUL-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19152890

Sample Description	Method	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Ti	Tl	U	V	W	Y	Zn	Zr
	Units	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.005	0.02	0.05	1	0.05	0.05	2	0.5
YY19262		0.027	0.67	7.57	158	1.29	11.00	488	2.2
YY19263		0.050	0.26	2.76	64	4.86	12.40	354	4.6
YY19264		0.015	0.21	4.59	73	2.12	10.40	230	1.3
YY19265		0.030	0.21	4.08	61	3.43	12.80	578	2.7
YY19266		0.013	0.15	6.04	27	3.40	17.55	905	2.7
YY19267		0.014	0.21	3.66	52	1.63	15.10	425	2.1
YY19268		0.013	0.24	4.41	57	2.02	12.95	190	1.6
YY19269		0.016	0.30	4.04	71	2.40	19.60	290	1.5
YY19270		0.016	0.19	4.93	54	1.93	11.30	312	1.6
YY19271		0.019	0.22	4.30	67	3.35	9.78	282	1.4
YY19272		0.017	0.32	5.99	71	4.27	14.10	399	1.3
YY19273		0.012	0.19	6.19	37	0.81	14.95	158	1.4
YY19274		0.018	0.42	8.48	60	3.95	9.58	79	2.2
YY19275		0.025	0.41	2.40	150	8.24	14.55	180	2.9
YY19276		0.013	0.21	2.00	59	17.60	5.58	155	2.5
YY19277		0.018	0.31	2.48	71	8.88	9.56	156	2.6
YY19278		0.016	0.56	6.44	89	0.94	6.91	297	<0.5
YY19279		0.014	0.33	3.70	76	1.34	6.86	121	1.2
YY19280		0.040	1.30	20.1	152	1.49	12.80	745	3.7
YY19281		0.018	0.42	3.33	106	1.65	9.65	188	1.8
YY19282		0.052	1.20	7.10	166	0.98	5.96	112	4.5
YY19283		0.027	0.75	10.30	119	1.29	7.47	112	2.3
YY19284		0.041	0.90	7.30	109	0.68	29.1	205	1.1
YY19285		0.013	1.09	16.60	135	1.24	94.4	4270	1.5
YY19286		0.035	0.70	6.72	134	1.14	26.3	683	1.8
YY19287		0.029	1.07	3.26	174	1.67	47.6	2330	1.2
YY19288		0.022	0.56	7.36	117	0.63	15.20	503	1.7
YY19289		0.021	0.97	7.18	122	0.44	20.6	379	1.7
YY19290		0.044	2.11	6.58	347	0.39	25.6	847	2.3
YY19291		0.022	1.27	10.55	189	1.89	69.4	2170	1.1
YY19292		0.007	0.16	1.25	28	0.29	14.45	177	1.2
YY19293		0.005	0.46	1.52	43	0.99	13.55	302	0.9
YY19294		0.015	0.48	0.66	28	2.62	11.65	253	<0.5
YY19295		0.016	0.42	0.57	36	2.07	7.50	260	0.5
YY19296		0.018	0.71	0.53	50	0.45	24.0	837	<0.5
YY19297		0.008	0.17	0.30	27	0.15	17.10	1000	<0.5
YY19298		0.018	0.16	0.95	35	0.22	28.3	255	0.7
YY19299		0.024	0.35	0.88	56	0.33	20.4	338	0.9
YY19300		0.012	0.23	1.08	30	0.18	16.75	894	0.5
YY19301		0.013	0.73	0.91	19	0.56	22.2	256	<0.5

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Finalized Date: 8-JUL-2019
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CERTIFICATE OF ANALYSIS WH19152890

Sample Description	Method	WEI-21	Au-ICP21	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Recvd Wt.	Au	Ag	Al	As	Au	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr
	Units	kg	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
	LOD	0.02	0.001	0.01	0.01	0.1	0.02	10	10	0.05	0.01	0.01	0.01	0.02	0.1	1
YY19302		0.38	<0.001	1.04	0.72	9.6	<0.02	<10	990	0.51	0.13	0.07	0.99	12.50	17.6	16
YY19303		0.43	<0.001	2.07	1.37	14.2	<0.02	<10	250	0.51	0.15	0.06	0.65	17.50	6.9	25
YY19304		0.54	0.001	0.95	1.17	13.1	<0.02	<10	1450	0.71	0.18	1.34	0.77	22.7	9.0	22
YY19305		0.47	0.006	0.96	1.07	11.7	<0.02	<10	2050	0.71	0.15	0.41	1.32	19.10	8.8	24
YY19306		0.27	<0.001	0.48	1.47	11.7	<0.02	<10	1320	0.67	0.16	1.49	0.92	20.1	9.0	26
YY19307		0.45	<0.001	0.79	1.83	14.1	<0.02	<10	2350	0.71	0.21	0.24	0.99	24.5	9.7	32
YY19308		0.46	<0.001	0.73	1.17	17.5	<0.02	<10	1310	0.49	0.14	0.05	0.75	19.85	8.7	24
YY19309		0.31	<0.001	1.10	1.52	27.3	<0.02	<10	1540	0.51	0.21	0.06	0.75	23.5	7.7	29
YY19310		0.44	0.002	1.16	1.95	24.7	<0.02	<10	190	0.71	0.26	0.13	1.58	24.4	14.4	24
YY19311		0.41	<0.001	0.49	1.44	12.2	<0.02	<10	150	0.49	0.28	0.08	0.38	23.3	5.6	26
YY19312		0.34	<0.001	0.26	1.55	13.7	<0.02	<10	110	0.52	0.27	0.04	0.30	19.10	5.6	26
YY19313		0.46	<0.001	0.19	0.94	9.5	<0.02	<10	80	0.25	0.24	0.03	0.23	18.25	3.1	20
YY19314		0.33	0.001	0.32	1.70	15.0	<0.02	<10	150	0.45	0.25	0.05	0.26	24.8	5.5	26
YY19315		0.38	<0.001	0.12	1.71	13.9	<0.02	<10	100	0.46	0.29	0.05	0.13	24.9	5.7	29

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2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 (604) 984 0221 Fax: +1 (604) 984 0218
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VANCOUVER BC V6B 1L8

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CERTIFICATE OF ANALYSIS WH19152890

Sample Description	Method	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Cs	Cu	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na
	Units	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%
	LOD	0.05	0.2	0.01	0.05	0.05	0.02	0.01	0.005	0.01	0.2	0.1	0.01	5	0.05	0.01
YY19302		0.61	12.8	1.56	2.29	<0.05	<0.02	0.05	0.028	0.03	6.1	10.4	0.14	1780	1.73	<0.01
YY19303		0.75	14.9	2.36	3.30	<0.05	0.02	0.05	0.030	0.05	8.8	12.7	0.29	238	1.30	0.01
YY19304		0.65	23.1	2.54	3.22	0.05	0.05	0.12	0.033	0.08	12.9	11.7	0.86	674	1.15	0.01
YY19305		0.70	21.3	2.12	2.86	0.05	0.06	0.13	0.026	0.06	11.5	10.1	0.29	593	1.37	0.01
YY19306		1.14	21.7	2.41	4.12	<0.05	0.04	0.10	0.025	0.06	11.1	12.9	0.43	657	1.14	<0.01
YY19307		1.33	18.6	3.01	5.70	<0.05	<0.02	0.08	0.040	0.07	13.3	18.5	0.40	544	1.74	<0.01
YY19308		0.87	16.7	2.18	3.48	<0.05	<0.02	0.09	0.024	0.06	10.2	12.3	0.27	721	2.06	<0.01
YY19309		1.14	16.5	3.05	5.88	<0.05	<0.02	0.08	0.034	0.08	12.4	14.0	0.27	490	2.24	<0.01
YY19310		1.59	45.1	3.14	3.38	<0.05	0.02	0.07	0.034	0.09	10.9	21.6	0.27	434	1.90	<0.01
YY19311		2.29	12.4	3.20	5.48	<0.05	<0.02	0.03	0.028	0.09	11.9	21.4	0.32	264	1.40	<0.01
YY19312		2.11	22.6	3.16	4.96	<0.05	<0.02	0.05	0.029	0.07	9.7	16.2	0.26	251	1.85	<0.01
YY19313		1.86	16.5	2.27	4.37	<0.05	<0.02	0.04	0.021	0.05	9.7	7.1	0.12	149	1.69	<0.01
YY19314		1.63	17.5	3.17	6.04	<0.05	<0.02	0.03	0.024	0.05	12.4	25.9	0.26	216	1.89	<0.01
YY19315		3.46	19.1	3.17	5.32	<0.05	<0.02	0.05	0.025	0.07	12.7	31.2	0.34	192	1.70	<0.01

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Project: Rau

CERTIFICATE OF ANALYSIS WH19152890

Sample Description	Method	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Nb	Ni	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th
	Units	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.05	0.2	10	0.2	0.1	0.001	0.01	0.05	0.1	0.2	0.2	0.2	0.01	0.01	0.2
YY19302		0.14	24.4	820	140.0	7.6	<0.001	0.03	2.28	0.5	0.3	1.0	8.0	<0.01	0.03	<0.2
YY19303		0.77	22.2	560	52.6	7.3	<0.001	0.02	1.71	1.6	0.6	0.4	12.5	<0.01	0.03	1.6
YY19304		0.42	24.5	620	87.4	7.3	<0.001	0.03	2.00	3.0	0.8	0.5	18.7	<0.01	0.03	1.5
YY19305		0.37	25.0	750	89.7	8.2	<0.001	0.04	1.91	2.5	0.5	0.5	15.9	<0.01	0.03	1.2
YY19306		0.64	24.6	1000	47.7	7.8	<0.001	0.08	1.22	2.6	0.9	0.4	22.4	<0.01	0.03	0.8
YY19307		0.72	23.2	630	92.2	13.6	<0.001	0.02	1.11	3.0	0.5	0.8	14.9	<0.01	0.03	1.2
YY19308		0.34	20.5	550	62.0	9.9	<0.001	0.03	2.07	1.3	0.5	0.5	17.6	<0.01	0.03	0.3
YY19309		0.51	17.4	840	35.2	15.9	<0.001	0.05	1.45	1.2	0.6	0.7	13.5	<0.01	0.04	0.2
YY19310		0.38	49.6	2030	37.6	11.9	<0.001	0.05	1.36	1.4	1.6	0.4	38.4	<0.01	0.06	0.8
YY19311		0.37	16.7	1360	26.5	15.5	<0.001	0.02	0.57	0.9	0.8	0.5	12.1	<0.01	0.06	0.2
YY19312		0.33	17.7	1050	19.6	11.1	<0.001	0.05	0.81	0.5	1.1	0.5	8.7	<0.01	0.06	<0.2
YY19313		0.24	11.6	900	16.7	11.1	<0.001	0.03	0.64	0.3	0.6	0.5	10.0	<0.01	0.06	<0.2
YY19314		1.16	17.3	490	16.3	8.4	<0.001	0.02	0.73	2.2	0.8	0.6	10.1	<0.01	0.06	2.1
YY19315		0.61	19.2	780	20.2	11.4	<0.001	0.03	0.66	1.3	0.9	0.5	27.8	<0.01	0.07	0.6

***** 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
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: 8-JUL-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19152890

Sample Description	Method	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Ti	Tl	U	V	W	Y	Zn	Zr
	Units	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.005	0.02	0.05	1	0.05	0.05	2	0.5
YY19302		0.012	0.65	0.47	26	1.32	6.12	212	<0.5
YY19303		0.028	0.18	0.47	39	0.69	3.45	160	0.6
YY19304		0.015	0.20	0.55	37	0.66	12.50	187	1.5
YY19305		0.013	0.32	0.73	34	0.69	13.35	267	1.5
YY19306		0.018	0.23	1.06	44	0.42	10.30	171	1.1
YY19307		0.022	0.29	0.83	59	0.27	8.29	258	<0.5
YY19308		0.020	0.65	0.90	39	0.69	8.76	158	<0.5
YY19309		0.029	0.36	1.00	64	0.19	3.79	97	<0.5
YY19310		0.013	0.12	1.19	37	0.12	7.63	148	0.7
YY19311		0.020	0.13	0.55	55	0.17	2.48	91	<0.5
YY19312		0.012	0.13	0.94	55	0.13	3.00	82	<0.5
YY19313		0.010	0.10	0.53	50	0.12	1.71	51	<0.5
YY19314		0.031	0.20	0.67	67	0.20	2.77	66	0.5
YY19315		0.020	0.15	0.92	53	0.19	3.61	69	<0.5

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CERTIFICATE OF ANALYSIS WH19152890

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

	NSS is non-sufficient sample.
Applies to Method:	ALL METHODS
	Gold determinations by this method are semi-quantitative due to the small sample weight used (0.5g).
Applies to Method:	ME-MS41

LABORATORY ADDRESSES

	Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.		
Applies to Method:	LOG-22	SCR-41	WEI-21
	Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.		
Applies to Method:	Au-ICP21	ME-MS41	

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North Vancouver BC V7H 0A7
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Finalized Date: 10-JUL-2019
Account: RCM

CERTIFICATE WH19155120

Project: Rau

P.O. No.: R19-S04

This report is for 101 Soil samples submitted to our lab in Whitehorse, YT, Canada on 26-JUN-2019.

The following have access to data associated with this certificate:

ANDREW CARNE	ADAM COULTER	JULIA LANE

SAMPLE PREPARATION

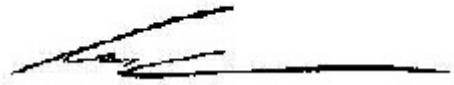
ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-22	Sample login - Rcd w/o BarCode
SCR-41	Screen to -180um and save both

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-ICP21	Au 30g FA ICP-AES Finish	ICP-AES
ME-MS41	Ultra Trace Aqua Regia 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 WH19155120

Sample Description	Method	WEI-21	Au-ICP21	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Recvd Wt.	Au	Ag	Al	As	Au	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr
	Units	kg	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
	LOD	0.02	0.001	0.01	0.01	0.1	0.02	10	10	0.05	0.01	0.01	0.01	0.02	0.1	1
YY10270		0.42	0.004	1.64	1.57	28.1	<0.02	<10	380	0.65	2.32	0.19	0.67	35.3	11.6	28
YY10271		0.39	0.005	2.76	1.68	33.5	<0.02	<10	540	0.76	0.27	0.07	0.85	35.7	10.6	29
YY10272		0.27	0.006	1.26	1.79	46.4	<0.02	<10	490	0.62	1.30	0.07	0.89	27.2	8.9	29
YY10273		0.22	<0.001	1.36	1.23	12.0	<0.02	<10	690	0.37	0.25	0.10	3.15	21.5	8.9	26
YY10274		0.44	0.002	1.24	1.17	18.7	<0.02	<10	410	0.63	1.04	0.36	1.10	26.8	9.5	26
YY10275		0.22	0.002	1.19	1.34	73.9	<0.02	<10	250	0.50	3.50	0.36	4.10	20.1	4.8	30
YY10276		0.32	0.010	0.94	1.55	35.7	<0.02	<10	480	0.54	0.41	0.26	0.29	39.2	10.0	28
YY10277		0.30	0.012	0.83	1.00	123.5	<0.02	<10	100	0.82	0.52	0.14	0.36	64.9	7.4	38
YY10278		0.31	0.002	0.39	1.58	22.6	<0.02	<10	140	0.65	0.37	0.12	0.28	44.9	8.2	34
YY10279		0.34	0.001	0.21	1.82	17.7	<0.02	<10	220	0.49	0.49	0.13	0.36	30.3	8.1	29
YY10280		0.29	0.001	0.29	0.90	12.7	<0.02	<10	120	0.34	0.28	0.05	0.39	39.6	7.2	21
YY10281		0.25	<0.001	0.37	1.98	22.1	<0.02	<10	70	0.44	0.29	0.09	0.20	25.7	7.1	34
YY10282		0.32	0.001	0.24	1.29	14.4	<0.02	<10	70	0.41	0.26	0.05	0.15	26.5	5.0	21
YY10283		0.29	0.001	0.46	1.14	12.4	<0.02	<10	80	0.23	0.26	0.04	0.31	24.1	3.6	19
YY10284		0.38	<0.001	0.69	0.61	19.5	<0.02	<10	70	0.33	0.12	0.51	0.31	29.7	16.6	17
YY10285		0.18	0.008	1.11	1.27	36.5	<0.02	<10	90	0.53	0.65	0.06	0.20	30.6	10.0	26
YY10286		0.23	0.001	0.31	0.65	11.6	<0.02	<10	60	0.11	0.25	0.02	0.14	24.4	2.1	12
YY10287		0.34	0.001	0.15	1.37	15.0	<0.02	<10	140	0.55	0.24	0.08	0.30	34.6	8.0	22
YY10288		0.40	0.170	0.70	1.12	88.6	<0.02	<10	100	0.45	2.11	0.10	0.39	46.6	7.7	23
YY10289		0.39	0.001	0.26	1.20	12.9	<0.02	<10	160	0.39	0.24	0.08	0.25	32.1	5.4	23
YY10290		0.29	0.001	0.05	1.31	11.9	<0.02	<10	160	0.57	0.22	0.14	0.31	22.5	6.6	27
YY10291		0.47	0.001	0.45	1.19	10.0	<0.02	<10	160	0.63	0.20	0.39	0.31	18.20	5.9	25
YY10292		0.43	0.002	0.22	1.35	11.7	<0.02	<10	180	0.57	0.23	0.08	0.28	26.5	7.4	26
YY10293		0.37	0.002	0.09	1.95	14.2	<0.02	<10	210	0.57	0.24	0.16	0.22	33.1	11.3	33
YY10294		0.32	0.001	0.20	1.19	11.5	<0.02	<10	100	0.35	0.22	0.04	0.19	16.00	5.4	27
YY10295		0.32	0.001	0.40	1.45	10.7	<0.02	<10	110	0.37	0.31	0.06	0.29	16.35	4.7	27
YY10296		0.36	0.001	0.49	1.67	12.8	<0.02	<10	120	0.42	0.24	0.07	0.27	20.7	5.8	29
YY10297		0.38	0.008	0.37	2.01	9.3	<0.02	<10	170	1.06	0.14	0.44	0.71	14.90	7.8	24
YY10298		0.37	0.003	0.36	1.70	9.5	<0.02	<10	110	0.80	0.13	0.81	0.43	16.15	5.4	22
YY10299		0.21	0.001	0.35	1.23	8.9	<0.02	<10	180	0.55	0.15	0.83	0.53	13.55	5.9	24
YY10300		0.33	0.001	0.27	1.41	9.7	<0.02	<10	200	0.60	0.26	0.48	0.67	17.65	8.1	26
YY19316		0.32	0.002	0.83	0.95	17.4	<0.02	<10	1250	0.55	0.19	0.40	0.80	19.30	6.3	20
YY19317		0.36	0.001	4.32	0.80	15.5	<0.02	<10	140	0.36	5.05	0.93	1.31	7.75	3.2	20
YY19318		0.33	0.002	0.64	1.67	15.9	<0.02	<10	250	0.76	0.27	0.13	0.80	27.0	9.7	28
YY19319		0.36	<0.001	1.47	0.78	11.5	<0.02	<10	210	0.27	0.23	0.08	0.40	22.2	2.8	14
YY19320		0.49	0.018	4.22	0.57	279	<0.02	<10	120	0.77	3.07	0.02	1.02	47.5	7.8	13
YY19321		0.32	0.017	2.61	2.15	87.6	<0.02	<10	180	1.03	0.46	0.39	1.20	28.1	11.9	32
YY19322		0.42	0.003	0.41	1.19	25.6	<0.02	<10	150	0.37	0.28	0.14	0.48	31.8	6.5	25
YY19323		0.27	0.002	0.95	0.53	15.9	<0.02	<10	70	0.13	0.23	0.03	0.36	18.50	2.2	14
YY19324		0.31	0.004	0.14	1.49	16.0	<0.02	<10	100	0.41	0.44	0.09	0.42	29.2	8.4	27

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CERTIFICATE OF ANALYSIS WH19155120

Sample Description	Method	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Cs	Cu	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na
	Units	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%
	LOD	0.05	0.2	0.01	0.05	0.05	0.02	0.01	0.005	0.01	0.2	0.1	0.01	5	0.05	0.01
YY10270		1.22	31.0	2.99	4.22	<0.05	0.04	0.08	0.080	0.07	17.0	16.7	0.42	725	2.00	<0.01
YY10271		1.51	25.7	2.98	4.24	0.05	0.02	0.08	0.096	0.05	17.5	16.7	0.36	291	2.79	<0.01
YY10272		1.81	19.3	3.14	4.76	<0.05	0.03	0.06	0.082	0.04	13.1	18.3	0.40	226	1.70	<0.01
YY10273		1.69	13.6	2.64	5.13	<0.05	<0.02	0.07	0.031	0.04	10.9	12.8	0.22	2090	1.89	<0.01
YY10274		1.42	24.4	2.80	3.54	<0.05	0.04	0.08	0.062	0.05	14.8	14.3	0.41	701	1.30	<0.01
YY10275		5.50	14.3	2.31	4.48	<0.05	<0.02	0.05	0.274	0.05	11.2	10.2	0.85	818	1.13	<0.01
YY10276		1.43	26.6	3.17	4.23	0.05	0.04	0.12	0.103	0.06	18.9	17.7	0.45	487	1.89	<0.01
YY10277		2.33	43.8	4.79	3.78	0.08	<0.02	0.05	0.045	0.06	39.7	10.7	0.20	181	5.12	<0.01
YY10278		2.86	39.5	3.70	5.23	0.06	0.03	0.04	0.035	0.08	23.2	32.6	0.48	243	1.72	<0.01
YY10279		1.44	12.1	3.58	5.27	<0.05	0.02	0.04	0.039	0.04	15.0	24.8	0.30	231	1.40	<0.01
YY10280		1.38	19.8	2.74	3.99	0.05	<0.02	0.02	0.018	0.06	21.3	11.8	0.19	208	1.65	<0.01
YY10281		2.85	21.5	3.76	6.17	<0.05	0.03	0.05	0.028	0.06	13.2	33.9	0.34	271	2.33	<0.01
YY10282		2.12	14.6	2.63	5.54	<0.05	<0.02	0.10	0.024	0.04	13.8	21.5	0.19	187	2.01	<0.01
YY10283		1.51	11.9	2.41	6.12	<0.05	<0.02	0.04	0.020	0.03	12.9	10.8	0.15	161	2.29	<0.01
YY10284		1.22	5.6	2.02	1.66	<0.05	0.02	0.03	0.055	0.04	15.0	8.5	0.08	407	1.50	<0.01
YY10285		2.96	36.8	3.90	4.57	<0.05	<0.02	0.10	0.026	0.05	17.3	20.7	0.18	275	2.53	<0.01
YY10286		1.33	7.0	1.54	5.26	<0.05	<0.02	0.04	0.014	0.03	13.1	2.1	0.05	70	1.42	<0.01
YY10287		1.21	13.5	3.37	4.15	<0.05	0.03	0.03	0.044	0.05	17.1	23.6	0.23	359	1.53	<0.01
YY10288		1.24	24.2	3.24	3.51	0.06	<0.02	0.04	0.049	0.05	23.7	19.4	0.25	184	2.30	<0.01
YY10289		2.01	17.4	2.66	4.48	<0.05	0.02	0.05	0.025	0.06	16.2	16.6	0.21	167	1.76	<0.01
YY10290		1.53	14.0	2.37	4.63	<0.05	<0.02	0.03	0.026	0.04	10.2	16.6	0.30	291	1.27	<0.01
YY10291		1.84	14.7	1.92	3.56	<0.05	0.04	0.04	0.024	0.03	11.2	15.0	0.27	246	0.87	<0.01
YY10292		1.81	14.2	2.22	3.78	<0.05	0.03	0.03	0.029	0.04	11.5	16.4	0.30	247	0.95	<0.01
YY10293		1.56	15.6	3.12	4.97	<0.05	0.02	0.02	0.029	0.05	13.3	19.8	0.49	434	1.24	<0.01
YY10294		2.20	9.2	2.33	4.32	<0.05	<0.02	0.04	0.029	0.03	7.2	16.3	0.23	275	1.31	<0.01
YY10295		4.02	13.9	2.84	5.48	<0.05	<0.02	0.02	0.036	0.04	8.3	18.1	0.29	204	1.61	<0.01
YY10296		6.60	9.9	3.39	5.72	<0.05	0.02	0.03	0.031	0.04	10.4	18.9	0.34	272	1.45	<0.01
YY10297		3.41	32.6	2.14	5.41	<0.05	0.03	0.02	0.030	0.03	7.2	25.3	0.17	265	1.36	0.02
YY10298		2.08	16.8	1.82	4.37	<0.05	0.03	0.04	0.027	0.02	8.7	16.7	0.20	268	0.91	0.03
YY10299		1.79	15.4	1.83	3.74	<0.05	0.03	0.04	0.024	0.03	7.7	15.2	0.24	423	1.16	<0.01
YY10300		1.64	16.0	2.38	5.07	<0.05	0.02	0.02	0.028	0.04	9.1	15.3	0.29	475	1.82	<0.01
YY19316		0.80	20.0	2.02	2.83	<0.05	0.04	0.09	0.068	0.05	10.7	9.8	0.20	391	2.60	<0.01
YY19317		7.41	12.1	1.53	2.93	<0.05	0.02	0.04	0.158	0.06	4.8	10.4	0.97	278	0.54	<0.01
YY19318		1.55	21.7	2.91	3.72	<0.05	0.06	0.05	0.042	0.05	12.5	20.5	0.36	463	1.53	<0.01
YY19319		1.58	9.4	1.48	3.51	<0.05	<0.02	0.06	0.034	0.04	11.7	7.9	0.11	150	1.25	<0.01
YY19320		4.67	77.1	6.69	1.94	0.07	0.03	0.08	0.308	0.07	27.1	5.4	0.13	111	2.89	<0.01
YY19321		5.11	30.2	3.81	5.53	0.06	0.05	0.04	0.165	0.07	15.7	28.4	1.04	1050	14.60	<0.01
YY19322		1.19	17.8	2.54	4.08	<0.05	<0.02	0.06	0.039	0.05	17.1	16.8	0.32	180	1.54	<0.01
YY19323		1.12	12.2	1.49	3.57	<0.05	<0.02	0.06	0.017	0.04	10.2	2.3	0.06	93	1.17	<0.01
YY19324		1.39	13.1	3.71	5.07	<0.05	0.02	0.04	0.033	0.05	13.3	17.6	0.29	551	1.66	<0.01

***** 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
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: 10-JUL-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19155120

Sample Description	Method	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Nb	Ni	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th
	Units	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.05	0.2	10	0.2	0.1	0.001	0.01	0.05	0.1	0.2	0.2	0.2	0.01	0.01	0.2
YY10270		0.62	31.1	890	81.8	10.2	<0.001	0.02	4.48	3.2	1.1	1.2	19.5	<0.01	0.11	3.7
YY10271		0.64	30.8	520	110.0	9.4	<0.001	0.01	3.93	2.8	1.1	1.1	21.8	<0.01	0.08	4.8
YY10272		0.95	29.5	320	41.4	9.1	<0.001	0.01	1.72	2.6	0.5	0.9	11.1	<0.01	0.06	3.6
YY10273		0.72	22.7	580	55.2	14.4	<0.001	0.03	1.19	1.0	0.7	0.9	12.1	<0.01	0.05	0.2
YY10274		0.55	26.6	640	77.6	12.4	<0.001	0.02	4.31	3.6	0.6	1.3	19.2	<0.01	0.06	2.4
YY10275		0.60	24.9	660	77.9	12.6	<0.001	0.04	3.07	1.9	1.1	4.6	13.4	<0.01	0.08	0.7
YY10276		0.64	32.3	1060	59.1	9.1	<0.001	0.02	4.37	3.2	0.7	0.9	21.4	<0.01	0.06	4.1
YY10277		0.29	32.5	2480	34.1	10.4	<0.001	0.07	7.10	2.2	2.7	1.3	23.3	<0.01	0.11	4.0
YY10278		0.93	26.5	1130	13.3	14.7	<0.001	0.05	2.17	2.7	2.0	0.4	23.3	<0.01	0.09	4.5
YY10279		0.99	19.2	700	28.5	8.6	<0.001	0.03	0.89	2.2	0.5	0.7	19.6	<0.01	0.05	2.6
YY10280		0.15	19.9	1090	21.3	13.2	<0.001	0.03	1.17	0.3	0.5	0.3	15.4	<0.01	0.06	0.2
YY10281		1.38	19.1	900	14.7	10.2	<0.001	0.03	1.02	2.0	1.5	0.5	10.7	<0.01	0.07	3.0
YY10282		1.10	12.4	570	20.0	9.9	<0.001	0.01	0.84	1.7	0.5	0.6	7.7	<0.01	0.06	2.0
YY10283		0.99	9.9	460	15.9	8.3	<0.001	0.01	0.70	1.1	0.5	0.7	11.0	<0.01	0.05	0.6
YY10284		0.25	22.0	2900	71.0	7.1	<0.001	<0.01	1.32	1.1	0.5	3.4	44.6	<0.01	0.05	4.1
YY10285		1.15	23.9	1700	30.6	9.4	<0.001	0.04	1.98	1.2	1.4	0.4	14.6	<0.01	0.20	1.6
YY10286		0.38	5.9	410	19.7	8.5	<0.001	0.01	1.17	0.3	<0.2	0.8	7.2	<0.01	0.06	<0.2
YY10287		0.60	17.8	610	28.5	10.5	<0.001	0.02	1.14	1.5	0.2	0.5	11.3	<0.01	0.07	2.5
YY10288		0.40	22.6	1210	31.9	7.6	<0.001	0.04	5.98	1.2	1.0	1.0	49.7	<0.01	0.11	1.6
YY10289		0.46	17.2	920	25.7	11.2	<0.001	0.03	1.01	1.4	0.5	0.4	15.8	<0.01	0.06	1.2
YY10290		0.52	20.2	630	13.8	10.1	<0.001	0.02	0.77	1.1	0.3	0.4	11.3	<0.01	0.03	0.5
YY10291		0.52	22.5	450	11.1	6.7	<0.001	0.02	0.59	1.9	0.3	0.3	18.0	<0.01	0.03	1.8
YY10292		0.60	25.5	460	13.8	7.3	<0.001	0.02	0.65	1.7	0.6	0.4	8.6	<0.01	0.05	1.4
YY10293		1.22	27.3	580	14.0	11.6	<0.001	0.01	0.74	2.8	0.3	0.5	12.4	<0.01	0.04	3.3
YY10294		0.77	13.7	420	16.9	9.2	<0.001	0.02	0.65	1.4	0.4	0.5	5.5	<0.01	0.04	0.9
YY10295		0.77	17.7	430	21.1	12.0	<0.001	0.04	0.57	1.1	0.6	0.5	12.0	<0.01	0.05	0.6
YY10296		1.39	13.5	380	15.1	13.7	<0.001	0.01	0.64	2.0	0.6	0.6	8.0	<0.01	0.05	2.6
YY10297		0.42	40.0	580	36.8	6.5	<0.001	0.04	0.98	1.3	1.0	0.4	27.8	0.01	0.04	2.0
YY10298		0.44	26.9	560	16.5	5.7	<0.001	0.03	0.60	1.5	0.5	0.3	46.9	<0.01	0.03	1.9
YY10299		0.39	21.7	810	22.1	6.6	<0.001	0.05	0.61	1.2	0.7	0.3	28.5	<0.01	0.03	0.8
YY10300		0.64	20.2	730	26.1	10.0	<0.001	0.02	0.60	1.4	0.2	0.5	19.8	<0.01	0.03	0.7
YY19316		0.26	17.7	990	103.5	7.8	<0.001	0.03	2.46	2.0	0.9	1.0	23.2	<0.01	0.04	1.2
YY19317		0.49	12.1	330	127.5	19.8	<0.001	0.02	9.43	1.6	0.3	2.8	15.0	<0.01	0.40	1.0
YY19318		0.85	30.4	800	42.2	9.7	<0.001	0.02	1.60	2.3	0.5	0.6	12.9	<0.01	0.05	3.2
YY19319		0.33	8.4	650	43.8	8.1	<0.001	0.02	1.38	0.6	0.3	0.7	10.9	<0.01	0.03	0.3
YY19320		0.17	29.2	1470	265	17.7	<0.001	0.17	167.5	1.6	5.7	3.8	19.4	<0.01	0.72	12.6
YY19321		0.19	40.5	2340	88.4	20.3	<0.001	0.09	27.9	1.5	1.7	8.8	25.9	<0.01	0.11	1.3
YY19322		0.80	18.1	860	24.0	9.8	<0.001	0.01	1.36	2.0	0.8	0.7	16.8	<0.01	0.06	2.9
YY19323		0.42	7.7	760	9.8	6.3	<0.001	0.04	0.67	0.2	0.3	0.4	7.9	<0.01	0.05	<0.2
YY19324		1.04	18.8	820	20.2	11.8	<0.001	0.01	0.94	1.9	0.4	0.5	10.3	<0.01	0.05	2.6

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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.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 10-JUL-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19155120

Sample Description	Method	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Ti	Tl	U	V	W	Y	Zn	Zr
	Units	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.005	0.02	0.05	1	0.05	0.05	2	0.5
YY10270		0.021	0.27	0.83	44	0.87	7.87	179	1.2
YY10271		0.020	0.36	1.00	43	0.42	6.43	164	0.8
YY10272		0.026	0.19	0.60	53	0.53	4.18	367	1.2
YY10273		0.024	0.20	0.56	52	0.36	3.09	619	<0.5
YY10274		0.022	0.18	0.79	42	0.68	12.20	342	1.2
YY10275		0.035	0.28	0.54	54	0.61	10.15	1090	<0.5
YY10276		0.024	0.19	1.04	43	0.45	9.68	119	1.3
YY10277		0.016	0.61	1.84	39	0.25	7.21	171	<0.5
YY10278		0.039	0.28	1.44	56	0.31	7.12	116	0.9
YY10279		0.017	0.22	0.76	59	0.21	4.83	77	0.7
YY10280		0.010	0.13	0.80	40	0.16	4.89	128	<0.5
YY10281		0.034	0.17	0.99	60	0.27	4.41	75	0.9
YY10282		0.027	0.16	0.67	56	0.24	3.77	60	<0.5
YY10283		0.029	0.17	0.58	62	0.26	3.36	52	<0.5
YY10284		0.007	0.18	1.30	24	0.07	12.30	205	0.8
YY10285		0.022	0.13	0.86	61	0.28	4.06	97	<0.5
YY10286		0.019	0.12	0.43	48	0.23	1.85	53	<0.5
YY10287		0.012	0.14	0.62	45	0.17	4.03	146	0.8
YY10288		0.016	0.15	1.33	40	0.34	6.48	124	<0.5
YY10289		0.010	0.14	0.83	43	0.15	4.88	80	0.5
YY10290		0.028	0.11	0.68	45	0.42	4.39	101	<0.5
YY10291		0.020	0.11	0.57	38	0.37	11.65	89	1.3
YY10292		0.024	0.16	0.59	38	0.31	7.00	137	0.7
YY10293		0.037	0.14	0.74	53	0.30	4.93	97	0.8
YY10294		0.027	0.15	0.48	46	0.32	2.10	72	<0.5
YY10295		0.029	0.15	0.63	49	0.38	2.10	84	<0.5
YY10296		0.039	0.16	0.62	59	0.34	2.35	87	0.6
YY10297		0.015	0.11	1.00	30	0.51	9.41	169	1.2
YY10298		0.014	0.12	0.97	29	0.49	13.40	104	1.2
YY10299		0.014	0.12	1.08	34	0.45	7.53	109	0.8
YY10300		0.022	0.13	0.90	52	0.49	4.36	117	<0.5
YY19316		0.009	0.18	1.37	31	0.72	8.84	115	1.1
YY19317		0.027	0.42	0.25	41	0.35	7.05	823	0.9
YY19318		0.023	0.18	0.82	46	0.55	5.54	272	1.5
YY19319		0.012	0.20	0.59	31	0.25	3.62	80	<0.5
YY19320		0.006	0.56	1.74	15	2.21	5.95	233	2.4
YY19321		0.015	0.67	3.04	44	0.27	10.80	176	1.8
YY19322		0.027	0.16	0.89	45	0.25	5.19	99	<0.5
YY19323		0.012	0.15	0.52	41	0.19	2.32	69	<0.5
YY19324		0.029	0.18	0.69	53	0.25	3.72	113	0.6

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CERTIFICATE OF ANALYSIS WH19155120

Sample Description	Method	WEI-21	Au-ICP21	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Recvd Wt.	Au	Ag	Al	As	Au	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr
	Units	kg	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
	LOD	0.02	0.001	0.01	0.01	0.1	0.02	10	10	0.05	0.01	0.01	0.01	0.02	0.1	1
YY19325		0.35	0.001	0.25	1.11	13.4	<0.02	<10	60	0.24	0.22	0.05	0.19	29.4	7.1	24
YY19326		0.49	0.001	0.23	1.32	17.9	<0.02	<10	120	0.51	0.29	0.05	0.35	50.9	9.5	28
YY19327		0.43	0.002	0.27	1.56	15.6	<0.02	<10	90	0.47	0.26	0.07	0.31	23.2	12.5	27
YY19328		0.42	0.002	0.38	1.90	13.5	<0.02	<10	210	0.58	0.24	0.06	0.23	33.2	8.0	29
YY19329		0.44	0.002	0.16	1.65	16.1	<0.02	<10	170	0.45	0.31	0.12	0.24	29.8	11.3	30
YY19330		0.39	0.002	0.18	1.43	13.3	<0.02	<10	90	0.41	0.23	0.06	0.26	29.6	7.8	24
YY19331		0.39	0.004	0.20	1.39	14.3	<0.02	<10	110	0.53	0.21	0.11	0.39	39.5	10.1	25
YY19332		0.50	0.003	0.24	1.39	31.8	<0.02	<10	80	0.61	0.34	0.16	0.28	39.5	10.9	29
YY19333		0.26	0.003	0.60	1.11	8.9	<0.02	<10	160	0.34	0.17	0.87	2.00	23.7	11.6	19
YY19334		0.25	0.003	0.46	1.39	13.2	<0.02	<10	130	0.41	0.27	0.11	0.32	22.0	12.4	26
YY19335		0.42	0.002	0.26	1.27	17.9	<0.02	<10	110	0.43	0.25	0.09	0.24	39.4	8.0	25
YY19336		0.44	0.002	0.32	1.32	12.4	<0.02	<10	150	0.53	0.13	0.15	0.39	21.3	5.2	26
YY19337		0.49	<0.001	0.23	0.76	6.1	<0.02	<10	70	0.36	0.08	6.93	0.57	4.66	3.5	10
YY19338		0.43	<0.001	0.10	1.22	9.2	<0.02	<10	110	0.45	0.19	0.13	0.15	13.10	4.4	28
YY19339		0.44	0.001	0.24	1.11	7.4	<0.02	<10	70	0.37	0.10	3.21	0.30	6.86	5.3	19
YY19340		0.34	<0.001	0.06	1.38	9.9	<0.02	<10	100	0.44	0.19	0.07	0.46	16.45	6.2	27
YY19341		0.48	0.002	0.49	1.33	11.7	<0.02	<10	190	0.56	0.21	0.49	0.38	19.80	6.8	26
YY19342		0.36	0.001	0.32	1.68	9.2	<0.02	<10	190	0.64	0.21	0.35	1.18	25.1	5.7	21
YY19343		0.47	0.001	0.33	1.43	13.8	<0.02	<10	280	0.68	0.23	0.14	0.36	25.2	8.0	27
YY19344		0.53	0.002	1.07	1.31	10.2	<0.02	<10	200	0.71	0.18	0.30	0.50	18.60	4.7	23
YY19345		0.53	0.001	0.16	1.55	12.2	<0.02	<10	200	0.54	0.20	0.14	0.19	20.1	6.0	28
YY19346		0.40	0.005	0.19	1.33	14.9	<0.02	<10	240	0.62	0.43	0.14	0.34	24.8	5.7	28
YY19347		0.27	<0.001	0.51	1.45	12.9	<0.02	<10	160	0.54	0.20	0.14	0.60	20.6	12.5	40
YY19348		0.36	<0.001	0.56	1.57	15.4	<0.02	<10	140	0.36	0.31	0.06	0.27	23.4	6.8	29
YY19349		0.41	0.001	0.29	1.58	17.7	<0.02	<10	190	0.57	0.26	0.05	0.52	41.0	5.9	35
YY19350		0.42	<0.001	0.37	1.77	9.9	<0.02	<10	140	1.19	0.15	0.85	0.82	13.50	15.0	22
YY19351		0.28	<0.001	0.23	1.37	7.7	<0.02	<10	90	0.63	0.13	1.09	0.56	12.95	5.2	30
YY19352		0.46	<0.001	0.45	1.71	12.4	<0.02	<10	140	0.79	0.17	0.93	0.48	21.0	8.0	23
YY19353		0.30	0.001	0.22	1.56	10.2	<0.02	<10	180	0.55	0.20	0.58	0.27	20.0	8.8	27
YY19354		0.54	0.001	0.50	1.36	13.0	<0.02	<10	160	0.72	0.19	1.32	0.64	24.4	9.4	24
YY19355		0.42	0.003	0.41	1.53	8.5	<0.02	<10	170	0.66	0.44	0.66	0.83	17.20	6.7	20
YY19356		0.37	0.002	0.38	1.64	11.2	<0.02	<10	130	0.70	0.37	0.89	0.75	18.80	8.1	22
YY19357		0.27	0.001	0.30	1.35	8.7	<0.02	<10	150	0.57	0.26	1.30	0.57	16.10	7.3	21
YY19358		0.38	0.001	0.30	1.41	11.3	<0.02	<10	270	0.52	0.27	0.62	0.84	21.6	8.6	26
YY19359		0.21	0.001	0.36	1.34	9.8	<0.02	<10	270	0.49	0.29	0.72	0.56	19.45	6.6	25
YY19360		0.26	0.003	0.23	1.11	9.7	<0.02	<10	200	0.39	0.33	0.38	0.49	16.10	5.5	21
YY19361		0.38	0.002	0.39	1.15	10.2	<0.02	<10	230	0.49	0.31	0.55	0.81	17.10	6.4	22
YY19362		0.22	0.001	0.52	0.94	11.3	<0.02	<10	320	0.45	0.20	4.77	1.11	16.00	5.4	20
YY19363		0.40	0.002	0.48	0.91	10.6	<0.02	<10	320	0.37	0.20	1.30	1.07	16.25	5.2	19
YY19364		0.32	0.001	1.28	1.08	15.7	<0.02	<10	240	0.47	0.38	1.17	0.94	15.65	5.9	25

***** 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
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: 10-JUL-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19155120

Sample Description	Method	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Cs	Cu	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na
	Units	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%
	LOD	0.05	0.2	0.01	0.05	0.05	0.02	0.01	0.005	0.01	0.2	0.1	0.01	5	0.05	0.01
YY19325		1.53	14.5	3.16	4.24	<0.05	<0.02	0.04	0.025	0.04	15.4	12.2	0.22	293	1.50	<0.01
YY19326		1.52	23.1	4.03	4.00	0.05	0.03	0.03	0.029	0.06	27.5	23.4	0.29	341	2.05	<0.01
YY19327		2.76	15.9	3.09	4.96	<0.05	<0.02	0.06	0.025	0.05	12.4	23.5	0.31	423	1.80	<0.01
YY19328		1.42	15.8	3.01	5.27	<0.05	0.02	0.06	0.028	0.05	17.1	21.1	0.42	301	1.71	<0.01
YY19329		3.39	19.9	2.90	5.41	<0.05	<0.02	0.05	0.029	0.06	15.4	23.6	0.39	395	1.98	<0.01
YY19330		1.42	14.6	2.64	5.11	<0.05	<0.02	0.03	0.023	0.05	15.4	15.8	0.25	399	1.63	<0.01
YY19331		1.60	20.2	3.46	3.79	0.05	0.02	0.05	0.027	0.06	19.8	23.1	0.32	348	1.43	<0.01
YY19332		2.30	60.3	4.61	3.78	0.06	0.04	0.06	0.029	0.04	21.1	26.5	0.34	224	4.14	<0.01
YY19333		1.79	20.1	2.02	3.16	0.05	0.04	0.09	0.023	0.04	12.2	24.0	0.34	380	0.83	<0.01
YY19334		2.37	29.8	2.31	4.25	<0.05	<0.02	0.06	0.027	0.05	10.9	21.9	0.28	243	1.58	<0.01
YY19335		2.93	23.1	3.08	3.89	0.05	0.02	0.03	0.028	0.05	18.6	24.1	0.34	199	1.48	<0.01
YY19336		1.36	11.9	2.05	3.23	<0.05	0.03	0.03	0.022	0.03	8.2	11.7	0.27	300	1.05	<0.01
YY19337		1.48	12.6	1.26	2.23	<0.05	0.02	0.01	0.019	0.02	2.5	7.8	0.13	123	0.86	0.02
YY19338		1.94	9.4	2.01	5.25	<0.05	<0.02	0.02	0.023	0.03	6.3	15.4	0.26	185	1.09	<0.01
YY19339		2.04	12.6	1.49	3.51	<0.05	0.03	0.02	0.022	0.04	3.7	20.2	0.24	191	0.64	0.05
YY19340		1.67	11.1	2.27	5.12	<0.05	<0.02	0.03	0.026	0.04	7.7	12.2	0.28	425	1.26	<0.01
YY19341		1.73	20.3	2.12	4.33	<0.05	0.03	0.04	0.027	0.04	11.1	12.6	0.35	344	1.04	0.01
YY19342		1.44	13.4	1.90	4.11	<0.05	0.03	0.03	0.074	0.03	9.5	10.5	0.18	499	1.22	0.01
YY19343		1.57	19.9	2.35	4.13	0.05	0.04	0.06	0.028	0.05	16.5	12.5	0.38	397	1.09	<0.01
YY19344		1.29	13.3	1.77	2.97	<0.05	0.04	0.05	0.026	0.03	11.7	11.1	0.22	372	1.04	0.01
YY19345		2.10	13.4	2.15	4.62	<0.05	0.03	0.06	0.030	0.04	9.4	14.8	0.30	340	1.22	<0.01
YY19346		1.63	22.1	2.41	3.82	<0.05	0.04	0.02	0.034	0.06	11.8	11.9	0.27	231	1.43	<0.01
YY19347		2.20	12.7	3.45	4.89	<0.05	<0.02	0.05	0.043	0.04	9.6	17.8	0.29	742	1.40	0.01
YY19348		4.09	13.5	3.52	7.27	<0.05	<0.02	0.03	0.031	0.06	11.8	16.7	0.31	317	1.72	<0.01
YY19349		3.84	56.3	3.90	4.48	0.05	<0.02	0.04	0.052	0.08	24.1	19.1	0.32	177	2.24	0.01
YY19350		1.66	26.5	2.28	5.01	<0.05	0.04	0.03	0.030	0.02	7.1	15.7	0.14	262	0.89	0.02
YY19351		2.70	20.7	1.60	4.40	<0.05	0.03	0.03	0.023	0.03	7.6	19.0	0.24	280	0.88	0.02
YY19352		1.50	14.0	2.50	4.82	<0.05	0.04	0.04	0.033	0.03	9.6	12.4	0.23	661	1.16	0.02
YY19353		2.42	21.9	2.35	4.81	<0.05	0.03	0.04	0.028	0.04	10.1	14.5	0.36	469	1.42	<0.01
YY19354		1.16	16.9	2.34	3.43	0.06	0.04	0.04	0.027	0.04	17.0	12.5	0.76	525	1.45	0.01
YY19355		2.90	20.8	1.91	4.30	<0.05	0.03	0.10	0.026	0.03	10.3	14.5	0.27	332	1.09	0.01
YY19356		3.43	25.5	2.43	4.41	<0.05	0.04	0.04	0.025	0.04	10.2	14.5	0.39	404	1.86	0.01
YY19357		2.14	40.1	2.03	4.20	<0.05	0.02	0.05	0.025	0.04	8.8	12.9	0.31	465	2.55	0.01
YY19358		1.37	17.7	2.34	4.40	<0.05	0.03	0.06	0.026	0.04	10.9	13.3	0.37	469	2.71	<0.01
YY19359		1.33	14.0	2.02	4.38	<0.05	0.03	0.04	0.025	0.04	9.6	12.7	0.35	300	2.62	<0.01
YY19360		1.15	11.5	1.93	3.94	<0.05	<0.02	0.03	0.024	0.04	8.4	11.2	0.30	293	1.92	<0.01
YY19361		1.30	17.8	1.99	3.49	<0.05	0.03	0.04	0.027	0.04	9.4	11.1	0.32	396	2.29	<0.01
YY19362		1.08	22.1	1.84	2.72	<0.05	0.04	0.04	0.028	0.06	9.4	11.7	0.46	334	1.54	0.01
YY19363		0.96	18.5	1.80	2.88	<0.05	0.04	0.04	0.031	0.05	9.6	10.5	0.37	265	1.32	0.01
YY19364		2.49	20.6	2.20	3.12	<0.05	0.05	0.05	0.040	0.06	10.0	12.4	0.31	274	4.05	0.01

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	Analyte	Nb	Ni	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th
	Units	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.05	0.2	10	0.2	0.1	0.001	0.01	0.05	0.1	0.2	0.2	0.2	0.01	0.01	0.2
YY19325		0.36	17.6	800	20.5	8.5	<0.001	0.03	0.90	0.5	0.4	0.4	11.1	<0.01	0.06	0.2
YY19326		0.54	26.0	1080	44.0	10.4	<0.001	0.01	1.37	1.5	0.6	0.4	19.6	<0.01	0.08	4.3
YY19327		0.81	19.6	710	17.2	9.1	<0.001	0.03	0.81	1.1	0.5	0.5	12.8	<0.01	0.06	0.5
YY19328		0.95	19.4	500	16.8	10.2	<0.001	<0.01	0.83	2.4	0.4	0.5	9.0	<0.01	0.04	2.6
YY19329		0.69	20.2	920	27.2	12.1	<0.001	0.02	0.78	1.6	0.7	0.7	17.4	<0.01	0.07	0.8
YY19330		0.83	15.3	650	19.3	11.0	<0.001	0.01	0.86	1.3	0.4	0.6	10.7	<0.01	0.04	0.8
YY19331		0.54	27.8	1130	30.7	8.3	<0.001	0.02	1.52	1.4	0.4	0.4	18.3	<0.01	0.05	1.4
YY19332		0.59	36.6	1940	23.1	6.3	0.001	0.03	2.54	1.7	2.2	0.3	27.0	<0.01	0.12	2.3
YY19333		0.49	67.8	1330	19.1	9.5	0.005	0.09	0.80	1.6	2.8	0.4	35.7	<0.01	0.01	1.0
YY19334		0.43	27.8	1320	20.7	9.0	<0.001	0.06	0.92	0.8	0.9	0.4	15.9	<0.01	0.04	0.3
YY19335		0.37	25.6	970	25.4	7.9	<0.001	0.03	1.33	1.1	0.6	0.3	20.3	<0.01	0.06	1.2
YY19336		0.42	26.6	500	14.7	6.8	<0.001	0.01	0.66	1.5	0.4	0.2	11.7	<0.01	0.02	1.6
YY19337		0.21	25.1	350	7.0	3.9	<0.001	0.02	0.44	0.7	0.4	0.2	135.0	<0.01	0.01	1.5
YY19338		0.40	20.2	680	12.6	10.1	<0.001	0.02	0.47	0.8	0.4	0.4	9.3	<0.01	0.03	0.5
YY19339		0.26	24.9	460	9.4	5.8	<0.001	0.02	0.49	0.9	0.5	0.3	94.2	<0.01	0.02	2.0
YY19340		0.37	20.4	550	12.6	12.4	<0.001	0.02	0.64	0.7	0.4	0.4	7.2	<0.01	0.02	0.2
YY19341		0.52	26.2	620	18.4	8.9	<0.001	0.02	0.82	2.1	0.5	0.4	28.6	<0.01	0.03	1.5
YY19342		0.54	25.8	820	18.8	8.3	<0.001	0.04	0.74	1.4	0.6	0.4	23.3	<0.01	0.02	1.0
YY19343		0.59	28.9	410	19.4	9.3	<0.001	0.02	0.88	3.3	0.5	0.4	14.4	<0.01	0.04	2.5
YY19344		0.38	26.0	730	16.1	5.6	<0.001	0.02	0.71	2.3	0.7	0.3	26.4	<0.01	0.04	2.6
YY19345		0.51	25.8	680	20.4	8.0	<0.001	0.03	0.70	1.8	0.8	0.4	13.6	<0.01	0.04	1.5
YY19346		0.73	27.4	550	13.0	8.5	<0.001	0.06	1.11	2.2	1.1	0.4	19.7	<0.01	0.05	3.5
YY19347		0.69	13.2	1050	15.8	11.0	<0.001	0.05	0.50	1.6	0.7	0.4	9.2	<0.01	0.05	0.6
YY19348		1.02	14.9	400	22.7	19.7	<0.001	0.02	0.74	1.6	0.9	0.8	10.3	<0.01	0.05	0.6
YY19349		0.71	23.1	750	19.2	12.6	0.001	0.12	1.33	1.6	2.6	0.5	24.4	<0.01	0.09	2.8
YY19350		0.45	59.5	630	26.8	5.0	<0.001	0.02	1.04	1.3	0.9	0.3	53.3	<0.01	0.03	3.1
YY19351		0.44	30.2	690	10.5	6.6	<0.001	0.04	0.52	1.2	1.0	0.3	54.3	<0.01	0.03	1.0
YY19352		0.46	29.7	550	50.6	7.8	<0.001	0.02	1.12	2.1	1.0	0.4	85.6	<0.01	0.03	2.1
YY19353		0.54	24.6	1030	17.6	12.8	<0.001	0.05	0.54	1.6	0.8	0.4	28.7	<0.01	0.03	0.8
YY19354		0.40	31.7	550	41.3	6.9	<0.001	0.01	1.17	3.5	0.7	0.5	28.7	<0.01	0.02	3.2
YY19355		0.46	35.0	630	23.0	8.0	<0.001	0.02	0.65	1.8	0.6	0.5	37.3	<0.01	0.02	1.5
YY19356		0.48	43.6	470	30.4	7.4	0.001	0.02	1.06	2.0	0.9	0.5	30.4	<0.01	0.03	2.0
YY19357		0.43	29.1	950	23.7	8.4	0.001	0.06	0.82	1.1	1.4	0.5	34.2	<0.01	0.03	0.5
YY19358		0.64	23.3	690	24.9	10.5	<0.001	0.03	0.73	2.2	1.0	0.6	21.8	<0.01	0.02	1.1
YY19359		0.65	20.0	700	25.2	8.5	0.001	0.04	0.68	2.1	0.8	0.6	20.3	<0.01	0.03	1.1
YY19360		0.53	17.1	670	25.1	7.6	<0.001	0.02	0.75	1.4	0.4	0.7	14.9	<0.01	0.02	0.8
YY19361		0.50	23.3	690	28.0	8.5	<0.001	0.02	0.94	1.9	0.6	0.7	19.2	<0.01	0.03	1.4
YY19362		0.45	25.7	610	51.8	8.2	0.001	0.02	1.50	1.7	0.8	0.4	80.8	<0.01	0.03	2.1
YY19363		0.47	24.3	630	43.4	8.0	0.003	0.04	1.41	1.6	1.1	0.5	29.0	<0.01	0.03	1.6
YY19364		0.45	28.3	780	52.4	22.3	0.015	0.07	1.37	1.7	2.9	0.7	29.4	<0.01	0.03	1.7

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North Vancouver BC V7H 0A7
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	Analyte	Ti	Tl	U	V	W	Y	Zn	Zr
	Units	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.005	0.02	0.05	1	0.05	0.05	2	0.5
YY19325		0.015	0.13	0.72	44	0.21	3.44	84	<0.5
YY19326		0.009	0.13	1.03	45	0.10	6.73	181	1.1
YY19327		0.024	0.13	0.79	50	0.27	3.69	94	<0.5
YY19328		0.021	0.18	0.80	58	0.21	5.18	80	<0.5
YY19329		0.024	0.21	1.06	55	0.23	6.71	110	<0.5
YY19330		0.022	0.15	0.70	53	0.23	3.97	95	<0.5
YY19331		0.016	0.19	1.15	42	0.23	8.42	161	<0.5
YY19332		0.025	0.13	1.77	50	0.44	9.06	185	1.3
YY19333		0.016	0.28	0.83	28	0.14	11.35	230	1.0
YY19334		0.015	0.18	1.01	37	0.18	6.30	79	<0.5
YY19335		0.015	0.23	0.91	38	0.15	5.43	104	<0.5
YY19336		0.017	0.14	0.51	33	0.35	7.22	97	1.1
YY19337		0.008	0.06	0.37	11	0.33	5.87	87	0.8
YY19338		0.018	0.17	0.44	42	0.44	4.32	77	<0.5
YY19339		0.011	0.14	0.31	25	0.36	9.63	74	0.9
YY19340		0.022	0.12	0.53	46	0.35	4.86	109	<0.5
YY19341		0.023	0.13	0.60	38	0.36	11.65	107	0.9
YY19342		0.024	0.10	0.78	28	0.35	9.93	254	0.9
YY19343		0.028	0.16	0.69	38	0.38	19.35	89	1.2
YY19344		0.017	0.18	0.70	30	0.39	13.40	115	1.4
YY19345		0.023	0.14	0.71	38	0.39	7.23	74	0.9
YY19346		0.032	0.16	0.96	41	0.52	6.08	98	1.5
YY19347		0.029	0.14	0.65	54	0.31	4.32	109	<0.5
YY19348		0.046	0.17	0.78	65	0.39	3.04	84	<0.5
YY19349		0.031	0.30	1.38	41	0.44	2.74	100	0.6
YY19350		0.011	0.09	0.84	26	0.47	14.70	171	1.6
YY19351		0.016	0.09	1.20	40	0.39	8.84	84	1.0
YY19352		0.016	0.11	0.90	31	0.44	11.25	143	1.2
YY19353		0.019	0.15	1.38	43	0.48	8.16	129	0.9
YY19354		0.015	0.18	0.94	35	0.38	17.65	130	1.6
YY19355		0.019	0.15	1.14	31	0.51	14.55	323	1.0
YY19356		0.019	0.17	0.84	30	0.69	12.10	196	1.3
YY19357		0.016	0.13	2.49	32	1.65	10.05	175	0.8
YY19358		0.023	0.13	2.62	43	0.78	7.09	139	0.9
YY19359		0.020	0.17	1.42	42	0.64	5.45	110	0.8
YY19360		0.019	0.17	0.66	41	0.69	3.60	114	<0.5
YY19361		0.020	0.17	0.71	37	0.68	7.47	164	1.0
YY19362		0.016	0.16	0.94	29	0.62	8.77	243	1.7
YY19363		0.015	0.15	0.74	29	0.57	8.39	239	1.3
YY19364		0.016	0.25	3.06	30	0.93	8.99	389	1.8

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Project: Rau

CERTIFICATE OF ANALYSIS WH19155120

Sample Description	Method	WEI-21	Au-ICP21	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Recvd Wt.	Au	Ag	Al	As	Au	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr
	Units	kg	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
	LOD	0.02	0.001	0.01	0.01	0.1	0.02	10	10	0.05	0.01	0.01	0.01	0.02	0.1	1
YY19365		0.57	0.002	1.87	1.05	26.3	<0.02	<10	200	0.44	0.47	0.55	1.11	17.70	5.9	22
YY19366		0.51	0.001	0.98	0.98	20.9	<0.02	<10	270	0.50	0.23	4.85	2.31	19.25	6.8	22
YY19367		0.29	0.001	0.32	1.52	12.4	<0.02	<10	280	0.56	0.32	0.72	0.80	23.1	9.3	27
YY19368		0.26	0.003	0.39	1.17	12.2	<0.02	<10	270	0.47	0.24	0.88	1.01	20.4	7.4	25
YY19369		0.37	0.002	0.49	1.09	10.8	<0.02	<10	240	0.49	0.21	1.50	1.50	17.65	6.0	22
YY19370		0.35	0.001	0.35	1.21	9.6	<0.02	<10	180	0.50	0.23	0.57	0.44	17.25	6.8	20
YY19371		0.40	0.001	0.17	1.83	11.7	<0.02	<10	140	0.60	0.23	0.12	0.34	22.7	7.0	27
YY19372		0.31	0.001	0.36	1.25	9.6	<0.02	<10	330	0.51	0.28	0.80	1.08	19.15	16.3	21
YY19373		0.30	0.002	0.28	1.58	11.1	<0.02	<10	200	0.63	0.23	0.65	0.68	21.1	9.3	25
YY19374		0.30	0.002	0.35	1.39	11.9	<0.02	<10	210	0.67	0.27	0.63	0.90	21.1	8.5	24
YY19375		0.32	0.002	0.64	1.19	13.5	<0.02	<10	150	0.79	0.30	1.23	1.78	15.00	6.8	21
YY19376		0.49	<0.001	0.41	1.04	9.8	<0.02	<10	140	0.57	0.27	0.41	0.68	14.60	5.6	19
YY19377		0.41	0.002	0.34	1.34	7.5	<0.02	<10	150	0.55	0.30	1.18	0.44	13.85	5.1	21
YY19378		0.31	<0.001	0.07	1.62	9.1	<0.02	<10	180	0.52	0.22	0.47	0.34	19.85	7.4	23
YY19379		0.30	<0.001	0.17	1.90	10.2	<0.02	<10	140	0.71	0.24	0.69	0.28	15.20	8.6	22
YY19380		0.30	0.002	0.09	1.53	9.2	<0.02	<10	160	0.53	0.22	0.42	0.24	16.85	7.4	24
YY19381		0.38	0.001	0.15	2.12	11.3	<0.02	<10	150	0.90	0.20	0.23	0.19	25.3	8.4	27
YY19382		0.34	<0.001	0.17	1.86	12.0	<0.02	<10	130	0.63	0.21	0.08	0.35	25.6	7.2	29
YY19383		0.45	<0.001	0.90	0.55	19.3	<0.02	<10	110	0.13	0.20	0.01	0.09	36.7	1.0	12
YY19384		0.32	0.001	0.11	1.60	11.4	<0.02	<10	120	0.38	0.25	0.06	0.37	19.85	7.5	28
YY19385		0.41	<0.001	0.48	1.06	9.9	<0.02	<10	70	0.35	0.24	0.04	0.22	13.60	3.1	20

***** 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
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: 10-JUL-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19155120

Sample Description	Method	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Cs	Cu	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na
	Units	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%
	LOD	0.05	0.2	0.01	0.05	0.05	0.02	0.01	0.005	0.01	0.2	0.1	0.01	5	0.05	0.01
YY19365		1.24	28.4	2.56	3.09	<0.05	0.04	0.05	0.053	0.04	10.7	10.8	0.24	300	4.25	0.01
YY19366		1.27	26.1	2.37	3.05	<0.05	0.09	0.03	0.048	0.07	11.4	11.0	0.32	643	2.99	0.01
YY19367		1.62	15.4	2.44	4.89	<0.05	0.02	0.04	0.028	0.04	11.8	11.9	0.39	560	2.03	<0.01
YY19368		1.07	18.7	2.34	3.54	<0.05	0.03	0.05	0.025	0.04	12.0	11.5	0.35	573	1.75	0.01
YY19369		0.89	14.4	1.88	3.08	<0.05	0.03	0.05	0.026	0.04	13.9	12.0	0.52	482	1.40	0.02
YY19370		1.07	16.7	1.91	3.62	<0.05	0.03	0.03	0.026	0.03	9.6	12.4	0.29	308	1.00	0.02
YY19371		1.41	9.1	2.53	4.86	<0.05	0.02	0.03	0.028	0.03	9.5	17.6	0.34	263	1.38	0.01
YY19372		1.45	16.7	2.09	4.54	<0.05	<0.02	0.05	0.025	0.03	9.3	10.6	0.25	1890	1.71	0.01
YY19373		1.58	17.2	2.38	4.84	<0.05	0.03	0.03	0.027	0.04	10.4	14.0	0.34	521	1.63	0.01
YY19374		1.45	21.0	2.27	4.16	<0.05	0.03	0.03	0.026	0.04	10.2	12.7	0.36	593	3.45	0.01
YY19375		4.26	61.0	1.92	3.61	<0.05	0.02	0.07	0.022	0.04	8.3	13.3	0.33	401	2.74	0.02
YY19376		1.18	23.1	1.91	2.94	<0.05	0.04	0.04	0.024	0.03	7.4	11.3	0.27	317	1.51	0.02
YY19377		3.26	20.9	1.77	4.04	<0.05	0.02	0.05	0.023	0.03	8.0	13.7	0.47	346	2.04	0.02
YY19378		1.51	11.8	2.29	5.70	<0.05	<0.02	0.03	0.022	0.03	9.3	13.3	0.28	273	1.51	0.01
YY19379		2.33	17.7	2.33	5.95	<0.05	<0.02	0.04	0.031	0.03	7.1	13.6	0.25	468	1.34	0.01
YY19380		2.95	11.1	2.28	4.86	<0.05	<0.02	0.03	0.027	0.04	8.5	14.9	0.37	453	1.13	0.01
YY19381		2.65	17.8	2.46	5.23	<0.05	0.03	0.04	0.029	0.04	12.6	17.5	0.39	282	1.21	0.01
YY19382		2.37	16.7	2.53	5.68	<0.05	<0.02	0.03	0.031	0.04	10.2	15.5	0.33	329	1.33	0.01
YY19383		1.47	15.0	1.52	2.38	<0.05	<0.02	0.05	0.025	0.03	20.0	4.5	0.04	77	1.20	0.01
YY19384		1.59	11.7	2.71	5.49	<0.05	<0.02	0.04	0.028	0.05	9.5	15.7	0.33	440	1.22	0.01
YY19385		1.50	6.2	2.27	4.94	<0.05	<0.02	0.04	0.021	0.03	6.9	12.9	0.16	200	1.05	0.01

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VANCOUVER BC V6B 1L8

Finalized Date: 10-JUL-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19155120

Sample Description	Method	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Nb	Ni	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th
	Units	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.05	0.2	10	0.2	0.1	0.001	0.01	0.05	0.1	0.2	0.2	0.2	0.01	0.01	0.2
YY19365		0.47	35.0	520	60.9	9.7	0.003	0.02	2.87	1.6	1.5	0.7	20.1	<0.01	0.05	3.0
YY19366		0.23	49.3	620	78.9	8.9	0.001	0.01	2.65	2.1	0.5	0.7	89.3	<0.01	0.05	3.9
YY19367		0.68	23.4	740	27.2	12.9	0.001	0.03	0.70	2.4	0.5	0.6	25.6	<0.01	0.02	1.2
YY19368		0.48	25.2	660	30.7	8.2	<0.001	0.04	0.90	1.8	1.0	0.5	26.9	<0.01	0.02	0.9
YY19369		0.37	22.6	830	34.1	7.5	0.001	0.03	0.96	1.5	0.9	0.4	33.0	<0.01	0.02	0.8
YY19370		0.50	23.3	450	23.3	7.5	<0.001	0.01	0.60	1.9	0.4	0.4	25.1	<0.01	0.02	1.6
YY19371		0.93	19.2	370	18.2	8.2	<0.001	<0.01	0.54	1.9	0.6	0.5	9.5	0.01	0.03	1.3
YY19372		0.54	18.9	850	29.0	12.7	<0.001	0.03	0.60	1.1	0.9	0.5	35.8	<0.01	0.05	0.3
YY19373		0.56	23.3	920	20.3	12.1	<0.001	0.03	0.54	1.7	0.7	0.4	33.3	<0.01	0.03	0.9
YY19374		0.54	24.2	580	22.9	11.4	<0.001	0.02	0.64	1.9	0.7	0.5	20.1	<0.01	0.04	1.0
YY19375		0.40	36.1	720	34.9	14.2	0.001	0.04	0.92	1.2	1.8	0.4	30.0	<0.01	0.03	0.5
YY19376		0.35	26.9	360	52.0	8.1	<0.001	0.01	0.87	1.7	0.7	0.4	17.6	<0.01	0.03	1.4
YY19377		0.37	27.6	690	37.2	11.5	<0.001	0.03	0.55	1.0	1.1	0.4	33.1	<0.01	0.02	0.6
YY19378		0.86	16.4	380	13.6	10.8	<0.001	0.01	0.35	1.8	0.5	0.5	29.1	<0.01	0.03	1.1
YY19379		0.57	29.6	860	12.7	8.2	<0.001	0.04	0.46	1.1	0.6	0.4	38.3	<0.01	0.03	0.6
YY19380		0.36	19.0	1100	13.7	15.7	<0.001	0.04	0.35	0.7	0.3	0.4	23.4	<0.01	0.03	0.2
YY19381		0.72	40.4	450	13.5	10.5	<0.001	0.02	0.58	2.2	0.7	0.4	20.6	<0.01	0.04	1.7
YY19382		0.65	27.6	490	16.6	11.9	<0.001	0.02	0.72	1.0	0.8	0.5	9.8	<0.01	0.05	0.3
YY19383		0.43	3.3	450	887	11.6	<0.001	0.03	5.77	0.7	1.3	0.3	12.0	<0.01	0.04	2.2
YY19384		0.63	15.6	440	16.4	15.6	<0.001	0.03	0.53	1.1	1.0	0.6	7.6	<0.01	0.04	0.2
YY19385		0.97	10.2	330	15.6	6.3	<0.001	0.01	0.37	1.4	0.4	0.5	4.5	<0.01	0.05	1.0

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North Vancouver BC V7H 0A7
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Finalized Date: 10-JUL-2019
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Project: Rau

CERTIFICATE OF ANALYSIS WH19155120

Sample Description	Method	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Ti	Tl	U	V	W	Y	Zn	Zr
	Units	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.005	0.02	0.05	1	0.05	0.05	2	0.5
YY19365		0.016	0.24	2.23	30	0.86	7.96	335	1.9
YY19366		0.021	0.37	0.74	35	0.69	13.80	464	5.2
YY19367		0.023	0.19	1.46	46	1.59	7.79	169	0.8
YY19368		0.018	0.13	1.47	37	0.90	10.20	167	0.8
YY19369		0.014	0.12	1.32	32	0.54	12.70	175	0.9
YY19370		0.018	0.10	0.46	32	0.40	8.40	114	1.1
YY19371		0.027	0.14	0.61	48	0.33	3.76	95	0.5
YY19372		0.019	0.15	0.85	42	0.35	5.96	105	<0.5
YY19373		0.018	0.14	0.89	42	0.32	7.46	124	0.8
YY19374		0.020	0.13	2.10	40	1.30	6.73	164	0.7
YY19375		0.016	0.13	3.73	34	4.53	8.34	427	0.6
YY19376		0.014	0.12	0.75	28	1.55	6.86	195	1.2
YY19377		0.015	0.13	1.98	29	1.05	9.78	143	0.6
YY19378		0.024	0.12	0.95	49	0.36	5.05	99	<0.5
YY19379		0.018	0.09	0.76	36	0.38	6.23	89	<0.5
YY19380		0.015	0.13	0.82	42	0.30	6.35	159	<0.5
YY19381		0.023	0.15	0.80	38	0.37	12.05	87	1.0
YY19382		0.027	0.13	0.70	47	0.27	5.30	112	<0.5
YY19383		0.009	0.11	0.43	22	0.37	1.30	46	<0.5
YY19384		0.032	0.14	0.61	53	0.59	2.88	95	<0.5
YY19385		0.028	0.13	0.39	50	0.31	2.62	54	<0.5

***** See Appendix Page for comments regarding this certificate *****

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VANCOUVER BC V6B 1L8

Project: Rau

Finalized Date: 10-JUL-2019
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CERTIFICATE OF ANALYSIS WH19155120

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Applies to Method: Gold determinations by this method are semi-quantitative due to the small sample weight used (0.5g).
ME-MS41

LABORATORY ADDRESSES

Applies to Method: Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.
LOG-22 SCR-41 WEI-21

Applies to Method: Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.
Au-ICP21 ME-MS41

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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VANCOUVER BC V6B 1L8

Finalized Date: 31-AUG-2019
Account: RCM

CERTIFICATE WH19197005

Project: Rau

P.O. No.: R19-S05

This report is for 39 Soil samples submitted to our lab in Whitehorse, YT, Canada on 9-AUG-2019.

The following have access to data associated with this certificate:

ANDREW CARNE	ADAM COULTER	JULIA LANE

SAMPLE PREPARATION

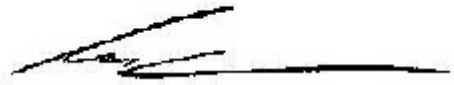
ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-22	Sample login - Rcd w/o BarCode
SCR-41	Screen to -180um and save both

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-ICP21	Au 30g FA ICP-AES Finish	ICP-AES
ME-MS41	Ultra Trace Aqua Regia 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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Finalized Date: 31-AUG-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19197005

Sample Description	Method	WEI-21	Au-ICP21	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Recvd Wt.	Au	Ag	Al	As	Au	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr
	Units	kg	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
	LOD	0.02	0.001	0.01	0.01	0.1	0.02	10	10	0.05	0.01	0.01	0.01	0.02	0.1	1
YY10331		0.41	0.002	0.47	0.98	18.1	<0.02	<10	280	0.46	0.16	4.23	1.93	23.4	8.1	18
YY10332		0.30	0.002	0.40	1.18	17.2	<0.02	<10	360	0.53	0.17	2.36	1.89	22.1	9.3	21
YY10333		0.33	0.001	0.78	0.64	21.6	<0.02	<10	290	0.35	0.16	2.55	0.99	20.2	7.6	15
YY10334		0.38	0.001	0.36	1.19	16.4	0.02	10	300	0.51	0.18	5.37	0.58	22.5	10.4	22
YY10335		0.32	0.001	0.37	1.19	15.2	<0.02	10	240	0.56	0.19	5.49	0.65	20.3	11.1	22
YY10336		0.31	<0.001	0.32	0.93	13.7	<0.02	<10	300	0.42	0.14	3.77	1.36	17.90	8.3	25
YY10337		0.34	0.014	1.52	5.03	582	<0.02	<10	1690	1.37	0.10	1.38	3.91	106.5	11.5	120
YY10338		0.47	0.003	0.44	1.23	15.5	<0.02	10	580	0.58	0.17	3.90	0.69	23.1	8.5	23
YY10339		0.23	0.003	0.64	0.88	12.2	<0.02	<10	360	0.40	0.25	2.00	1.37	18.00	7.3	17
YY10340		0.34	0.008	0.60	1.05	29.1	<0.02	<10	270	0.52	0.55	2.19	0.90	23.2	9.8	19
YY10341		0.40	0.001	0.20	1.39	17.5	<0.02	<10	200	0.57	0.23	4.75	1.04	28.5	14.6	22
YY10342		0.46	0.001	0.25	1.20	14.9	<0.02	<10	210	0.52	0.19	5.43	0.91	25.3	11.7	20
YY10343		0.50	0.004	0.34	1.22	16.5	<0.02	10	300	0.56	0.27	4.90	0.66	22.5	10.1	21
YY10344		0.38	0.002	0.29	1.31	14.8	<0.02	10	200	0.69	0.20	5.76	0.62	26.2	11.5	21
YY10345		0.36	0.002	0.26	1.31	14.8	<0.02	10	170	0.61	0.19	6.04	0.96	24.2	11.4	19
YY10346		0.28	0.002	0.27	1.01	11.7	<0.02	10	200	0.47	0.21	5.10	1.34	15.10	9.5	17
YY10347		0.30	0.001	0.35	1.24	15.8	<0.02	<10	190	0.73	0.24	2.84	1.87	23.7	15.8	20
YY10348		0.28	0.001	0.31	1.18	8.7	<0.02	<10	210	0.65	0.17	3.16	3.49	24.0	16.3	19
YY10349		0.35	0.001	0.29	1.37	12.9	<0.02	<10	200	0.74	0.22	2.87	2.20	26.7	18.2	21
YY10350		0.37	0.002	0.31	1.83	13.1	<0.02	<10	180	1.01	0.20	5.06	2.32	47.9	24.0	21
YY10351		0.40	<0.001	0.23	1.07	13.4	<0.02	10	160	0.73	0.20	8.49	1.06	25.2	10.9	16
YY10352		0.43	0.001	0.22	1.16	13.1	<0.02	<10	170	0.59	0.21	4.66	1.13	20.8	12.3	18
YY10353		0.34	0.001	0.36	1.43	15.0	<0.02	10	240	0.79	0.22	2.31	0.59	25.2	11.9	22
YY10354		0.36	0.002	0.27	1.18	12.0	<0.02	10	170	0.59	0.17	7.54	0.50	20.5	9.8	17
YY10355		0.17	0.002	0.51	1.29	22.0	<0.02	<10	230	0.88	0.26	1.29	6.90	26.4	17.7	18
YY10356		0.15	0.001	0.51	1.50	15.7	<0.02	<10	290	1.27	0.20	1.49	21.2	30.8	23.2	24
YY10357		0.43	0.002	0.32	1.12	14.5	<0.02	<10	220	0.66	0.19	4.26	5.73	24.7	14.7	20
YY10358		0.30	<0.001	0.27	1.07	12.3	<0.02	10	260	0.62	0.18	4.05	4.01	20.1	12.7	18
YY10359		0.37	0.002	0.34	1.21	16.3	<0.02	<10	180	0.68	0.25	6.30	1.27	24.9	11.9	20
YY10360		0.26	0.001	0.48	1.85	28.5	<0.02	<10	310	0.63	0.57	1.93	3.36	24.2	21.2	63
YY10361		0.32	0.002	0.39	1.88	16.4	<0.02	<10	170	0.53	0.34	2.59	2.91	24.3	20.9	87
YY10362		0.22	0.001	0.32	1.38	17.4	<0.02	10	250	0.64	0.40	2.45	1.66	21.7	16.9	40
YY10363		0.28	0.001	0.29	1.08	14.9	<0.02	10	250	0.52	0.21	3.46	0.68	18.40	9.4	17
YY10364		0.52	0.003	0.34	1.23	16.8	<0.02	10	170	0.59	0.27	3.09	0.92	25.8	11.8	25
YY10365		0.25	0.006	0.27	1.10	14.8	<0.02	<10	210	0.57	0.25	2.46	0.88	18.10	11.1	26
YY10366		0.38	0.025	0.24	1.02	13.2	<0.02	<10	200	0.41	0.21	4.66	0.86	19.25	11.2	27
YY10369		0.32	0.001	0.34	1.10	13.6	<0.02	10	180	0.58	0.18	4.09	1.14	21.4	10.4	19
YY10370		0.36	0.002	0.30	0.99	12.9	<0.02	<10	170	0.44	0.16	5.29	1.06	19.40	9.2	17
YY10371		0.28	0.004	0.41	0.89	17.7	<0.02	<10	130	0.42	0.25	1.46	0.94	22.4	8.6	16

***** 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
www.alsglobal.com/geochemistry

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VANCOUVER BC V6B 1L8

Finalized Date: 31-AUG-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19197005

Sample Description	Method	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Cs	Cu	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na
	Units	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%
	LOD	0.05	0.2	0.01	0.05	0.05	0.02	0.01	0.005	0.01	0.2	0.1	0.01	5	0.05	0.01
YY10331		0.83	26.7	2.44	2.80	<0.05	0.05	0.08	0.026	0.11	12.5	14.5	1.79	393	2.77	0.02
YY10332		0.81	32.5	2.68	3.13	<0.05	0.06	0.07	0.027	0.11	11.7	14.9	1.10	541	2.70	0.02
YY10333		0.44	28.8	2.52	1.74	<0.05	0.04	0.12	0.025	0.05	11.9	8.9	1.20	456	2.45	0.01
YY10334		0.93	29.5	3.16	3.02	<0.05	0.05	0.08	0.024	0.16	11.6	16.9	2.67	655	2.29	0.02
YY10335		0.92	27.7	3.08	3.02	<0.05	0.05	0.09	0.024	0.14	10.2	17.5	2.10	682	1.91	0.02
YY10336		0.65	23.0	2.53	2.38	<0.05	0.05	0.08	0.025	0.11	9.0	13.5	1.78	545	3.57	0.02
YY10337		0.83	194.0	13.15	3.64	0.17	0.10	0.20	0.294	0.15	50.9	5.0	0.17	252	10.25	0.01
YY10338		0.92	25.2	2.89	3.19	<0.05	0.06	0.09	0.027	0.16	12.1	17.5	1.91	531	2.39	0.01
YY10339		0.55	23.0	2.04	2.50	<0.05	0.05	0.12	0.024	0.08	9.4	11.6	0.65	511	2.09	0.01
YY10340		0.79	32.3	2.79	3.14	<0.05	0.06	0.12	0.030	0.11	12.2	15.2	1.10	666	2.85	0.01
YY10341		1.16	34.1	3.53	3.87	<0.05	0.07	0.07	0.028	0.17	14.1	24.9	2.40	883	2.99	0.02
YY10342		0.95	30.1	3.15	3.14	<0.05	0.08	0.09	0.026	0.16	12.2	17.6	3.16	925	2.59	0.02
YY10343		0.79	30.7	3.21	3.16	<0.05	0.04	0.11	0.026	0.15	11.2	15.4	2.75	820	2.95	0.02
YY10344		1.03	33.0	3.18	3.52	<0.05	0.06	0.11	0.029	0.19	13.2	16.5	2.71	859	2.70	0.02
YY10345		1.06	32.0	3.37	3.31	<0.05	0.05	0.12	0.028	0.18	11.9	18.2	2.85	782	2.71	0.02
YY10346		0.66	29.0	2.52	2.47	<0.05	0.05	0.08	0.022	0.11	7.8	15.0	2.75	705	2.25	0.02
YY10347		1.03	62.8	3.07	3.34	0.06	0.08	0.11	0.032	0.11	13.2	25.3	1.35	627	3.55	0.01
YY10348		0.77	90.7	2.33	2.84	0.05	0.05	0.08	0.032	0.09	13.4	18.3	1.25	1040	2.01	0.01
YY10349		1.07	57.6	3.17	3.25	0.06	0.07	0.09	0.030	0.14	14.6	23.9	1.49	950	2.87	0.01
YY10350		1.27	107.0	3.40	3.37	0.08	0.07	0.10	0.036	0.15	24.6	21.7	2.40	813	2.76	0.01
YY10351		1.33	31.0	2.77	3.05	0.05	0.11	0.11	0.027	0.19	12.9	15.6	3.14	713	2.74	0.01
YY10352		0.92	34.7	3.01	2.97	<0.05	0.07	0.09	0.024	0.14	11.1	20.6	2.03	718	2.43	0.01
YY10353		0.87	33.1	3.35	3.70	0.05	0.06	0.09	0.033	0.15	13.5	18.8	1.39	813	2.55	0.01
YY10354		0.99	28.0	2.78	2.95	<0.05	0.05	0.09	0.022	0.18	10.4	15.8	3.32	682	1.25	0.01
YY10355		1.31	66.8	2.68	2.85	0.06	0.06	0.13	0.041	0.11	14.5	18.9	0.48	642	4.49	0.01
YY10356		3.48	104.5	3.17	3.01	0.08	0.05	0.11	0.039	0.10	17.5	19.1	0.53	847	4.08	0.01
YY10357		0.89	65.6	3.10	3.13	0.05	0.06	0.08	0.040	0.13	13.0	15.2	2.31	1110	5.23	0.01
YY10358		0.81	46.0	2.75	2.91	0.05	0.06	0.07	0.030	0.14	10.0	13.0	2.01	539	5.08	0.01
YY10359		1.03	37.2	3.03	3.53	0.05	0.07	0.10	0.033	0.16	13.1	15.8	3.03	760	3.16	0.01
YY10360		1.42	50.6	3.94	4.72	0.06	0.04	0.06	0.053	0.09	12.9	20.2	1.25	801	5.42	0.02
YY10361		0.85	40.8	3.92	5.01	0.06	0.05	0.06	0.041	0.10	12.9	13.5	2.47	992	3.36	0.01
YY10362		1.02	43.7	3.14	4.12	0.05	0.06	0.07	0.040	0.12	11.7	13.8	1.13	1020	1.86	0.01
YY10363		0.67	26.6	2.52	2.84	<0.05	0.06	0.08	0.028	0.13	9.6	11.4	1.11	730	1.64	0.01
YY10364		1.23	37.4	3.02	3.60	0.05	0.06	0.08	0.041	0.16	13.3	13.6	1.87	666	2.66	0.01
YY10365		1.22	34.1	2.59	3.20	<0.05	0.04	0.08	0.032	0.12	9.6	11.6	0.90	860	1.92	0.01
YY10366		0.88	27.9	2.56	3.04	0.05	0.04	0.06	0.029	0.12	10.3	11.6	2.09	741	2.36	0.01
YY10369		0.85	31.7	2.73	3.08	0.05	0.06	0.08	0.033	0.16	11.3	13.8	2.17	868	2.79	0.01
YY10370		0.75	27.6	2.50	2.66	0.05	0.05	0.07	0.028	0.14	10.1	12.4	2.79	700	2.57	0.01
YY10371		0.65	37.0	2.91	2.52	0.05	0.04	0.06	0.065	0.10	12.4	10.6	0.61	599	5.34	0.01

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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

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VANCOUVER BC V6B 1L8

Finalized Date: 31-AUG-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19197005

Sample Description	Method	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Nb	Ni	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th
	Units	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.05	0.2	10	0.2	0.1	0.001	0.01	0.05	0.1	0.2	0.2	0.2	0.01	0.01	0.2
YY10331		0.33	29.0	950	30.3	9.1	0.001	0.03	1.77	2.5	1.0	0.4	59.1	<0.01	0.03	2.7
YY10332		0.40	33.9	990	27.1	8.4	0.002	0.05	1.87	2.4	1.7	0.4	39.1	<0.01	0.04	1.8
YY10333		0.13	31.3	670	30.3	4.8	<0.001	0.04	2.14	1.9	0.9	0.3	26.8	<0.01	0.05	1.3
YY10334		0.23	34.9	780	37.1	9.1	<0.001	0.03	1.37	2.9	0.8	0.3	48.3	<0.01	0.04	2.8
YY10335		0.22	35.5	800	36.0	8.9	0.002	0.05	1.44	2.6	1.6	0.3	54.5	<0.01	0.04	1.9
YY10336		0.25	30.0	970	28.0	7.7	0.002	0.06	1.58	2.1	1.3	0.3	37.7	<0.01	0.03	1.4
YY10337		0.07	175.0	>10000	135.0	4.2	0.001	0.25	12.15	8.2	4.2	0.7	1370	<0.01	0.09	4.5
YY10338		0.24	31.4	880	28.4	9.8	0.001	0.02	1.42	3.0	0.9	0.3	47.5	<0.01	0.05	2.8
YY10339		0.38	24.5	1040	23.2	7.1	0.002	0.07	2.00	2.0	1.8	0.4	44.4	<0.01	0.03	1.3
YY10340		0.29	34.0	1000	35.9	8.6	0.001	0.05	2.64	2.7	1.8	0.6	33.4	<0.01	0.05	2.0
YY10341		0.24	43.8	870	32.0	10.4	<0.001	0.02	1.31	3.4	0.5	0.3	48.3	<0.01	0.03	3.8
YY10342		0.27	34.2	880	37.3	9.5	<0.001	0.03	1.53	3.1	0.3	0.3	41.2	<0.01	0.03	3.4
YY10343		0.33	30.3	730	37.3	8.8	<0.001	0.03	1.72	3.2	0.6	0.4	34.5	<0.01	0.03	2.2
YY10344		0.30	35.3	630	39.1	11.4	<0.001	0.02	1.56	3.8	0.6	0.3	49.0	<0.01	0.04	3.4
YY10345		0.23	35.7	780	32.7	10.2	<0.001	0.03	1.46	3.6	0.7	0.3	55.8	<0.01	0.03	3.2
YY10346		0.23	32.8	840	25.0	7.4	0.002	0.06	1.38	2.2	1.4	0.3	33.5	<0.01	0.02	1.1
YY10347		0.20	69.9	900	31.5	7.6	0.001	0.04	1.85	3.4	1.7	0.2	43.2	<0.01	0.05	2.1
YY10348		0.22	98.0	720	25.4	7.1	0.001	0.06	1.24	3.2	1.5	0.2	40.1	<0.01	0.03	1.5
YY10349		0.19	73.1	890	31.3	8.4	0.001	0.04	1.42	3.4	1.4	0.2	35.9	<0.01	0.04	2.2
YY10350		0.20	106.0	820	33.7	8.5	0.001	0.02	1.51	4.6	1.1	0.2	54.0	<0.01	0.04	3.3
YY10351		0.15	27.7	630	36.0	9.2	0.001	0.01	1.61	4.1	0.5	0.3	90.7	<0.01	0.03	3.6
YY10352		0.18	39.7	730	29.6	7.2	0.001	0.04	1.32	3.2	0.8	0.2	63.2	<0.01	0.04	2.5
YY10353		0.23	33.7	690	37.1	10.2	<0.001	0.02	1.63	3.6	0.8	0.3	24.0	<0.01	0.04	1.7
YY10354		0.21	24.4	640	30.2	8.8	<0.001	0.01	1.35	3.4	0.4	0.3	56.6	<0.01	0.03	2.7
YY10355		0.36	89.4	700	38.0	12.5	0.003	0.06	2.45	2.5	2.0	0.7	46.2	<0.01	0.06	1.5
YY10356		0.35	319	910	27.7	16.1	0.008	0.09	2.43	3.0	3.3	0.3	96.4	<0.01	0.04	1.6
YY10357		0.35	98.1	880	30.0	8.7	0.002	0.04	2.35	3.5	1.1	0.3	46.7	<0.01	0.05	2.1
YY10358		0.29	98.3	740	32.9	8.3	0.005	0.06	2.17	3.1	2.3	0.3	66.5	<0.01	0.04	1.5
YY10359		0.35	38.3	700	37.4	10.2	0.001	0.02	2.67	4.4	0.9	0.3	64.6	<0.01	0.03	3.1
YY10360		0.86	116.5	1000	27.1	10.8	0.002	0.10	3.12	4.0	2.3	0.5	56.4	<0.01	0.04	1.3
YY10361		0.76	115.5	950	26.2	8.7	0.001	0.05	2.04	5.5	0.9	0.4	31.2	<0.01	0.03	2.0
YY10362		0.60	74.6	790	29.4	10.6	<0.001	0.07	1.80	4.0	0.9	0.4	38.3	<0.01	0.04	1.4
YY10363		0.36	25.3	600	34.0	9.7	<0.001	0.06	1.71	2.6	0.9	0.3	40.7	<0.01	0.03	1.1
YY10364		0.53	40.2	800	39.3	12.6	0.001	0.03	1.91	3.9	0.6	0.4	30.9	<0.01	0.04	2.2
YY10365		0.44	43.2	720	29.8	13.5	0.001	0.08	1.56	2.8	0.7	0.3	41.6	<0.01	0.03	1.0
YY10366		0.41	40.4	740	26.0	9.5	0.002	0.05	1.64	2.9	0.9	0.3	51.8	<0.01	0.03	1.6
YY10369		0.38	33.0	790	34.5	9.8	0.001	0.04	2.01	3.3	0.9	0.3	38.8	<0.01	0.04	1.7
YY10370		0.40	29.0	830	29.2	8.1	0.002	0.03	1.57	2.7	0.9	0.3	52.0	<0.01	0.04	1.7
YY10371		0.50	39.5	1090	33.4	9.2	0.003	0.07	2.22	2.0	1.1	0.4	38.3	<0.01	0.04	1.7

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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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Sample Description	Method	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Ti	Tl	U	V	W	Y	Zn	Zr
	Units	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.005	0.02	0.05	1	0.05	0.05	2	0.5
YY10331		0.013	0.13	0.67	28	0.23	9.17	136	2.3
YY10332		0.014	0.12	1.28	33	0.09	9.02	135	2.4
YY10333		0.005	0.15	0.82	22	0.07	11.50	127	1.6
YY10334		0.009	0.14	0.64	28	0.05	7.88	151	2.2
YY10335		0.007	0.12	0.85	26	0.05	7.80	157	2.1
YY10336		0.009	0.11	1.01	26	0.08	7.20	147	1.8
YY10337		<0.005	1.13	35.0	521	0.29	30.3	832	4.3
YY10338		0.006	0.12	0.71	32	0.07	8.91	130	2.5
YY10339		0.012	0.13	1.21	30	0.14	7.04	139	1.8
YY10340		0.008	0.26	1.12	36	0.12	8.65	147	2.2
YY10341		0.008	0.16	0.62	28	0.05	8.62	149	3.4
YY10342		0.011	0.15	0.61	30	0.06	7.67	167	3.9
YY10343		0.012	0.13	0.60	32	0.09	8.46	148	1.7
YY10344		0.010	0.16	0.70	32	0.05	10.20	144	2.9
YY10345		0.008	0.16	0.68	30	0.05	9.20	154	2.3
YY10346		0.007	0.13	1.01	25	0.08	7.34	143	1.8
YY10347		0.006	0.17	1.94	25	0.07	14.20	171	3.1
YY10348		0.007	0.13	3.73	23	0.07	15.65	189	2.1
YY10349		0.006	0.15	1.86	27	0.05	14.85	198	2.6
YY10350		0.008	0.75	4.04	27	0.05	29.3	268	2.4
YY10351		0.010	0.16	0.65	25	0.05	9.14	142	5.7
YY10352		0.006	0.12	1.50	24	0.06	9.25	128	2.8
YY10353		0.007	0.11	0.52	33	0.07	11.40	142	1.8
YY10354		0.009	0.11	0.48	27	<0.05	7.59	124	2.4
YY10355		0.010	0.35	2.74	32	0.14	16.75	344	2.0
YY10356		0.015	0.55	2.27	31	0.08	25.9	2070	1.6
YY10357		0.011	0.14	1.54	33	0.11	13.60	282	2.0
YY10358		0.009	0.13	1.33	30	0.07	9.77	504	1.9
YY10359		0.013	0.15	0.67	33	0.08	11.10	153	3.1
YY10360		0.044	0.23	1.69	62	0.10	14.70	373	1.8
YY10361		0.025	0.13	0.75	52	0.13	12.80	278	2.0
YY10362		0.022	0.13	0.81	40	0.07	10.95	247	1.9
YY10363		0.009	0.11	0.82	28	0.06	8.33	124	2.1
YY10364		0.020	0.15	0.67	37	0.08	9.95	190	2.1
YY10365		0.018	0.13	0.81	33	0.06	8.71	179	1.6
YY10366		0.022	0.13	0.71	35	0.06	7.69	194	1.5
YY10369		0.011	0.14	0.94	32	0.06	9.50	178	2.2
YY10370		0.013	0.12	1.10	30	0.08	7.93	153	1.8
YY10371		0.015	0.11	2.55	33	0.08	8.30	214	1.8

***** See Appendix Page for comments regarding this certificate *****

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North Vancouver BC V7H 0A7
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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: Rau

Finalized Date: 31-AUG-2019
Account: RCM

CERTIFICATE OF ANALYSIS WH19197005

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Applies to Method: Gold determinations by this method are semi-quantitative due to the small sample weight used (0.5g).
ME-MS41

LABORATORY ADDRESSES

Applies to Method: Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.
LOG-22 SCR-41 WEI-21

Applies to Method: Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.
Au-ICP21 ME-MS41

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North Vancouver BC V7H 0A7
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Finalized Date: 16-SEP-2019
Account: RCM

CERTIFICATE WH19211911

Project: Rau

P.O. No.: R19-S06

This report is for 7 Soil samples submitted to our lab in Whitehorse, YT, Canada on 26-AUG-2019.

The following have access to data associated with this certificate:

ANDREW CARNE	ADAM COULTER	JULIA LANE

SAMPLE PREPARATION

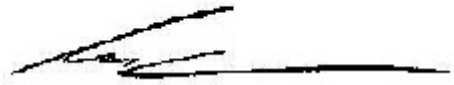
ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-22	Sample login - Rcd w/o BarCode
SCR-41	Screen to -180um and save both

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-ICP21	Au 30g FA ICP-AES Finish	ICP-AES
ME-MS41	Ultra Trace Aqua Regia 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: 16-SEP-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19211911

Sample Description	Method	WEI-21	Au-ICP21	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Recvd Wt.	Au	Ag	Al	As	Au	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr
	Units	kg	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
	LOD	0.02	0.001	0.01	0.01	0.1	0.02	10	10	0.05	0.01	0.01	0.01	0.02	0.1	1
YY10301		0.14	NSS	0.18	0.44	41.0	<0.02	10	410	0.22	1.53	4.02	1.94	4.90	2.7	6
YY10302		0.34	0.008	0.47	1.68	161.5	<0.02	<10	420	0.79	10.85	0.58	1.46	36.0	14.4	31
YY10303		0.37	0.011	0.61	1.50	314	0.22	<10	490	0.76	20.1	2.80	2.89	29.3	12.6	27
YY10304		0.24	0.014	0.44	1.35	514	<0.02	<10	370	0.75	24.1	5.11	2.62	32.6	11.6	23
YY10305		0.24	0.008	0.45	1.54	254	<0.02	<10	400	0.91	26.4	4.91	2.00	51.0	14.5	27
YY10306		0.30	0.010	0.35	1.33	359	<0.02	<10	240	0.93	29.9	8.68	1.47	28.7	8.9	21
YY10307		0.18	0.056	0.99	0.95	859	<0.02	<10	290	0.72	68.2	6.58	1.92	37.7	11.1	17

***** See Appendix Page for comments regarding this certificate *****

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North Vancouver BC V7H 0A7
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Finalized Date: 16-SEP-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19211911

Sample Description	Method	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Cs	Cu	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na
	Units	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%
	LOD	0.05	0.2	0.01	0.05	0.05	0.02	0.01	0.005	0.01	0.2	0.1	0.01	5	0.05	0.01
YY10301		0.56	25.4	0.72	1.17	<0.05	0.03	0.06	0.015	0.02	2.8	3.0	0.55	378	0.87	<0.01
YY10302		1.79	48.1	3.67	5.23	0.05	0.05	0.09	0.048	0.08	18.6	27.5	0.77	453	2.87	0.02
YY10303		2.09	74.3	4.03	4.27	0.05	0.07	0.08	0.068	0.09	16.9	21.6	1.77	520	3.05	0.02
YY10304		2.55	80.6	4.50	3.96	0.06	0.07	0.08	0.069	0.11	18.4	19.1	3.51	562	5.26	0.02
YY10305		2.95	105.5	4.51	4.46	0.07	0.09	0.08	0.061	0.15	32.2	20.2	3.45	610	4.26	0.02
YY10306		4.69	61.8	3.52	3.90	0.06	0.08	0.07	0.052	0.11	16.5	19.0	6.36	524	4.13	0.02
YY10307		2.44	300	7.06	3.09	0.10	0.08	0.08	0.207	0.09	26.9	15.1	4.28	528	10.95	0.02

***** See Appendix Page for comments regarding this certificate *****

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Finalized Date: 16-SEP-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19211911

Sample Description	Method	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Nb	Ni	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th
	Units	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.05	0.2	10	0.2	0.1	0.001	0.01	0.05	0.1	0.2	0.2	0.2	0.01	0.01	0.2
YY10301		0.36	9.7	1040	4.3	4.0	<0.001	0.24	1.04	0.4	2.4	0.3	31.2	0.01	0.03	<0.2
YY10302		1.05	36.8	540	24.6	19.1	0.001	0.03	1.20	3.9	0.6	1.9	17.9	<0.01	0.07	3.0
YY10303		1.30	35.5	880	30.4	19.8	0.001	0.08	1.64	3.1	1.5	2.9	26.6	<0.01	0.16	2.1
YY10304		1.52	38.5	780	36.9	22.1	0.001	0.03	1.93	3.3	0.9	4.2	35.7	<0.01	0.20	3.4
YY10305		0.98	44.7	820	37.4	24.5	<0.001	0.03	2.13	3.9	0.6	2.7	35.6	<0.01	0.12	4.1
YY10306		1.14	31.4	550	50.3	24.4	0.001	0.03	1.85	3.3	0.6	3.4	49.1	<0.01	0.13	3.3
YY10307		2.31	34.4	570	32.6	21.2	<0.001	0.06	11.75	2.9	1.4	30.3	37.9	0.05	0.30	3.0

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North Vancouver BC V7H 0A7
Phone: +1 (604) 984 0221 Fax: +1 (604) 984 0218
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Finalized Date: 16-SEP-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19211911

Sample Description	Method	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Ti	Tl	U	V	W	Y	Zn	Zr
	Units	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.005	0.02	0.05	1	0.05	0.05	2	0.5
YY10301		0.008	0.11	10.90	9	0.19	2.80	50	1.0
YY10302		0.038	0.24	1.21	56	1.74	10.80	149	1.6
YY10303		0.029	0.33	1.54	47	4.58	11.40	186	2.1
YY10304		0.031	0.42	1.44	43	3.30	12.20	219	2.7
YY10305		0.032	0.45	1.10	48	3.69	12.40	219	4.5
YY10306		0.031	0.70	1.18	36	14.75	11.05	223	3.3
YY10307		0.023	0.43	1.31	30	14.20	13.10	236	3.2

***** See Appendix Page for comments regarding this certificate *****

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North Vancouver BC V7H 0A7
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VANCOUVER BC V6B 1L8

Project: Rau

Finalized Date: 16-SEP-2019
Account: RCM

CERTIFICATE OF ANALYSIS WH19211911

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

NSS is non-sufficient sample.
Applies to Method: ALL METHODS

Gold determinations by this method are semi-quantitative due to the small sample weight used (0.5g).
Applies to Method: ME-MS41

LABORATORY ADDRESSES

Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.
Applies to Method: LOG-22 SCR-41 WEI-21

Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.
Applies to Method: Au-ICP21 ME-MS41

ALS Canada Ltd.

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North Vancouver BC V7H 0A7
Phone: +1 (604) 984 0221 Fax: +1 (604) 984 0218
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To: **ATAC RESOURCES LTD.**
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VANCOUVER BC V6B 1L8

Finalized Date: 22-SEP-2019
Account: RCM

CERTIFICATE WH19216434

Project: Rau

P.O. No.: R19-S07

This report is for 27 Soil samples submitted to our lab in Whitehorse, YT, Canada on 30-AUG-2019.

The following have access to data associated with this certificate:

ANDREW CARNE	ADAM COULTER	JULIA LANE

SAMPLE PREPARATION

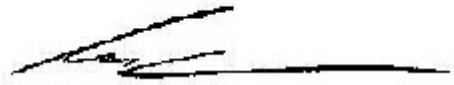
ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-22	Sample login - Rcd w/o BarCode
SCR-41	Screen to -180um and save both

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-ICP21	Au 30g FA ICP-AES Finish	ICP-AES
ME-MS41	Ultra Trace Aqua Regia 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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Finalized Date: 22-SEP-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19216434

Sample Description	Method	WEI-21	Au-ICP21	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Recvd Wt.	Au	Ag	Al	As	Au	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr
	Units	kg	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
	LOD	0.02	0.001	0.01	0.01	0.1	0.02	10	10	0.05	0.01	0.01	0.01	0.02	0.1	1
YY10308		0.21	0.492	0.20	0.23	23.6	0.03	<10	140	0.26	31.9	19.00	1.99	7.28	1.6	5
YY10309		0.25	0.080	0.10	0.19	23.0	0.05	<10	190	0.20	22.0	19.25	1.23	5.95	1.5	4
YY10310		0.25	0.770	0.19	0.34	20.2	0.07	<10	220	0.31	10.90	17.60	1.95	8.84	2.3	6
YY10311		0.22	0.025	0.44	0.88	24.3	<0.02	<10	370	0.56	12.00	10.35	5.54	14.95	4.9	15
YY10312		0.31	0.039	0.34	0.56	19.3	0.02	<10	290	0.52	24.6	15.95	3.83	10.85	3.2	10
YY10313		0.40	0.043	0.32	0.52	17.2	0.02	<10	340	0.47	13.40	15.55	3.21	10.40	3.0	9
YY10314		0.30	0.076	0.41	0.76	23.7	0.03	<10	420	0.65	11.00	13.85	2.96	13.65	4.4	13
YY10315		0.37	0.007	0.11	0.19	13.1	<0.02	<10	80	0.27	1.68	19.75	1.11	6.33	1.6	4
YY10316		0.30	0.004	0.14	0.21	12.9	<0.02	<10	130	0.28	1.12	19.40	0.86	6.21	1.7	5
YY10317		0.36	0.162	0.71	1.51	42.2	<0.02	<10	610	0.87	4.37	5.14	4.63	31.3	9.7	29
YY10318		0.30	0.014	0.53	1.11	29.4	<0.02	<10	460	0.73	3.13	9.72	3.42	22.4	7.0	21
YY10319		0.33	0.129	0.69	1.40	33.7	<0.02	<10	650	0.79	3.22	5.11	4.05	25.2	7.3	26
YY10321		0.32	0.025	0.40	0.96	16.9	0.02	<10	900	0.56	8.71	12.15	1.16	14.65	4.3	17
YY10325		0.22	0.101	0.66	1.85	35.2	<0.02	<10	650	1.08	4.72	0.62	4.57	32.0	11.5	32
YY10326		0.36	0.106	0.17	0.22	12.8	<0.02	<10	90	0.19	0.61	19.45	0.91	6.29	1.4	4
YY10327		0.35	0.016	0.18	0.28	8.4	0.02	<10	220	0.51	1.81	19.90	1.06	6.99	1.5	4
YY10328		0.32	0.031	0.15	0.24	7.1	<0.02	<10	440	0.50	3.92	20.1	1.12	6.40	2.4	4
YY10329		0.37	0.002	0.05	0.24	14.8	<0.02	<10	30	0.40	1.33	18.75	0.19	9.85	1.9	3
YY10330		0.44	<0.001	0.04	0.35	6.7	<0.02	<10	40	0.42	1.69	19.65	0.09	10.05	1.9	4
YY10373		0.35	0.012	0.52	1.14	235	<0.02	<10	540	0.76	26.5	6.20	2.49	41.3	19.6	21
YY10374		0.36	0.004	0.38	0.88	25.5	<0.02	<10	610	0.48	0.96	7.29	1.61	19.35	8.0	18
YY10375		0.30	0.008	0.37	1.23	71.8	<0.02	<10	380	0.60	7.72	6.46	1.76	32.3	9.1	23
YY10376		0.33	0.003	0.33	1.51	40.9	<0.02	<10	410	0.70	2.67	6.37	1.34	23.8	10.0	29
YY10377		0.41	0.003	0.33	1.31	27.6	<0.02	<10	330	0.67	0.97	7.54	1.71	22.5	10.2	23
YY10378		0.47	0.005	0.38	1.58	29.1	<0.02	<10	330	0.84	1.03	2.92	1.11	28.8	10.8	29
YY10379		0.38	0.003	0.37	1.26	21.5	<0.02	<10	330	0.73	1.23	9.21	1.87	20.6	7.5	20
YY10380		0.39	0.003	0.51	1.45	27.2	<0.02	<10	360	0.83	0.85	5.99	2.42	23.7	9.3	23

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.
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North Vancouver BC V7H 0A7
Phone: +1 (604) 984 0221 Fax: +1 (604) 984 0218
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VANCOUVER BC V6B 1L8

Finalized Date: 22-SEP-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19216434

Sample Description	Method	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Cs	Cu	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na
	Units	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%
	LOD	0.05	0.2	0.01	0.05	0.05	0.02	0.01	0.005	0.01	0.2	0.1	0.01	5	0.05	0.01
YY10308		1.00	85.4	0.95	0.73	<0.05	0.02	0.01	0.045	0.02	4.7	5.4	11.15	697	1.48	0.01
YY10309		1.36	88.6	0.79	0.70	<0.05	0.02	0.01	0.018	0.03	4.3	5.8	11.35	610	2.02	0.01
YY10310		1.47	106.0	1.00	1.06	0.05	0.02	0.02	0.020	0.03	5.4	6.7	10.45	645	2.08	0.01
YY10311		1.89	108.5	1.78	2.47	<0.05	0.03	0.05	0.055	0.03	9.9	11.8	6.31	896	1.91	0.01
YY10312		1.55	242	1.24	1.62	<0.05	0.02	0.03	0.045	0.03	7.1	9.0	9.57	688	2.46	0.01
YY10313		1.51	231	1.12	1.63	0.05	0.02	0.03	0.049	0.03	6.7	8.9	9.37	609	2.51	0.01
YY10314		1.80	160.5	1.52	2.18	0.05	0.03	0.05	0.060	0.05	8.6	10.7	8.41	516	3.41	0.01
YY10315		0.61	42.3	0.50	0.76	0.10	<0.02	0.01	0.007	0.01	4.9	4.5	11.65	516	1.58	0.01
YY10316		0.44	42.9	0.55	0.78	0.10	0.02	0.01	0.008	0.01	4.9	5.3	11.50	570	1.31	0.01
YY10317		2.08	107.5	2.86	4.24	0.06	0.08	0.27	0.065	0.10	18.1	16.1	3.44	619	6.41	0.02
YY10318		1.61	130.5	2.11	3.12	0.05	0.05	0.08	0.050	0.06	13.5	13.0	6.00	410	4.22	0.02
YY10319		2.18	78.6	2.47	3.68	0.05	0.14	0.10	0.065	0.13	14.7	13.6	3.39	494	6.33	0.02
YY10321		1.47	30.2	1.57	2.56	0.05	0.04	0.06	0.054	0.06	9.5	11.0	7.36	392	2.01	0.01
YY10325		2.25	55.8	3.56	5.51	0.06	0.05	0.09	0.056	0.07	18.9	19.3	0.88	973	4.23	0.02
YY10326		0.52	13.5	0.68	0.74	0.05	0.02	0.02	0.011	0.02	4.6	3.7	11.45	656	2.40	0.01
YY10327		0.90	29.3	0.58	1.18	0.08	0.03	0.01	0.009	0.02	4.6	6.4	11.50	624	6.04	0.01
YY10328		0.97	54.5	0.60	1.03	0.11	0.05	0.01	0.084	0.04	4.3	5.9	11.40	617	16.10	0.01
YY10329		3.36	3.2	0.49	0.69	0.11	<0.02	0.01	0.005	0.05	4.4	3.7	11.05	416	0.43	0.01
YY10330		8.52	3.0	0.55	1.10	0.11	0.02	<0.01	<0.005	0.20	4.7	10.6	10.75	433	0.26	0.01
YY10373		2.45	85.4	4.66	3.32	0.05	0.08	0.05	0.076	0.09	21.8	13.6	3.36	642	6.73	0.02
YY10374		1.59	21.9	1.96	2.59	0.06	0.09	0.04	0.074	0.08	11.1	11.5	2.48	415	2.34	0.02
YY10375		2.93	51.6	3.10	3.62	0.07	0.10	0.07	0.038	0.10	18.3	13.5	4.09	471	3.22	0.03
YY10376		2.79	51.6	3.08	4.18	0.05	0.12	0.08	0.037	0.15	12.9	15.9	3.94	558	2.99	0.03
YY10377		3.14	41.0	2.89	3.45	0.05	0.16	0.07	0.040	0.15	12.1	15.1	4.10	554	3.60	0.02
YY10378		2.41	58.3	3.32	4.44	0.06	0.09	0.10	0.052	0.13	16.5	17.8	2.32	676	3.61	0.02
YY10379		2.67	35.2	2.24	3.43	0.05	0.12	0.09	0.036	0.13	11.3	14.3	4.68	457	3.02	0.02
YY10380		2.86	48.9	2.68	3.90	0.05	0.10	0.08	0.043	0.14	12.8	15.4	3.79	578	3.53	0.02

***** 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
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: 22-SEP-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19216434

Sample Description	Method	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Nb	Ni	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th
	Units	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.05	0.2	10	0.2	0.1	0.001	0.01	0.05	0.1	0.2	0.2	0.2	0.01	0.01	0.2
YY10308		0.12	15.1	210	19.0	4.2	0.002	0.04	6.72	0.5	0.8	9.2	138.0	<0.01	0.01	0.3
YY10309		0.10	16.6	170	10.1	5.6	0.006	0.04	4.91	0.7	0.9	3.3	144.5	<0.01	0.01	0.4
YY10310		0.19	20.0	270	22.3	6.9	0.004	0.04	6.67	0.9	0.9	3.1	128.5	<0.01	0.03	0.5
YY10311		0.39	29.3	680	61.9	9.2	0.003	0.06	11.55	1.1	1.1	4.4	77.5	<0.01	0.02	0.4
YY10312		0.25	26.2	380	37.3	6.7	0.004	0.03	7.75	1.0	1.1	7.7	109.5	<0.01	0.01	0.4
YY10313		0.24	24.4	320	29.7	7.0	0.005	0.02	6.20	1.1	1.4	5.0	110.5	<0.01	0.02	0.5
YY10314		0.39	38.0	440	47.5	8.9	0.004	0.03	7.32	1.7	1.2	8.3	102.5	<0.01	0.03	1.2
YY10315		0.09	11.8	150	9.6	1.9	0.007	0.02	2.75	0.5	0.4	2.0	134.5	<0.01	<0.01	0.2
YY10316		0.07	10.8	180	6.0	1.6	0.004	0.01	3.34	0.5	0.2	2.4	149.5	<0.01	0.01	0.3
YY10317		0.75	68.3	830	67.8	15.1	0.003	0.02	8.13	3.6	1.4	4.9	57.2	<0.01	0.06	3.5
YY10318		0.54	52.2	650	38.0	9.2	0.003	0.02	5.92	2.5	0.7	3.4	75.5	<0.01	0.04	1.6
YY10319		0.34	53.7	990	69.6	16.0	0.004	0.05	5.95	3.3	2.6	4.2	58.3	<0.01	0.07	4.2
YY10321		0.41	27.2	420	32.1	9.9	0.001	0.02	2.86	2.1	0.7	3.0	97.5	<0.01	0.03	1.6
YY10325		0.80	61.4	540	47.7	17.0	0.006	0.04	3.95	3.8	1.6	2.8	19.0	<0.01	0.06	1.7
YY10326		0.11	11.9	140	7.1	2.6	0.006	0.01	0.93	0.6	0.9	0.5	165.0	<0.01	0.01	0.4
YY10327		0.06	17.9	120	6.5	3.5	0.028	0.01	1.26	0.7	0.5	1.2	156.5	<0.01	0.01	0.5
YY10328		<0.05	36.6	170	4.2	6.3	0.072	0.03	1.45	1.2	2.1	0.7	156.5	<0.01	<0.01	1.0
YY10329		0.20	5.9	70	1.6	19.1	<0.001	0.01	0.15	1.3	<0.2	0.5	91.0	<0.01	<0.01	0.8
YY10330		0.21	5.8	60	0.7	48.6	<0.001	0.02	0.08	1.1	<0.2	0.7	91.0	<0.01	0.01	1.3
YY10373		1.23	36.0	700	62.7	18.5	<0.001	0.04	3.16	2.8	0.9	3.9	46.0	0.01	0.13	3.7
YY10374		0.54	33.3	810	46.4	12.3	0.001	0.02	2.02	2.3	0.5	1.9	72.1	<0.01	0.03	3.3
YY10375		0.81	39.5	750	34.5	19.6	<0.001	0.03	1.96	3.2	0.9	1.7	50.0	<0.01	0.07	3.3
YY10376		0.51	40.9	800	34.0	20.4	0.001	0.04	1.83	3.9	0.7	1.4	53.9	<0.01	0.05	4.4
YY10377		0.40	39.7	780	32.8	18.7	0.001	0.04	1.87	3.4	0.9	1.0	60.0	<0.01	0.05	4.1
YY10378		0.69	49.3	810	36.6	18.5	<0.001	0.04	2.23	4.4	1.0	1.1	33.0	<0.01	0.07	4.4
YY10379		0.39	32.9	680	36.3	21.9	0.001	0.03	1.87	3.0	0.9	1.3	74.8	<0.01	0.05	3.6
YY10380		0.43	42.3	780	46.0	19.3	<0.001	0.03	2.21	3.5	0.8	1.5	57.9	<0.01	0.05	4.1

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North Vancouver BC V7H 0A7
Phone: +1 (604) 984 0221 Fax: +1 (604) 984 0218
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To: **ATAC RESOURCES LTD.**
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1016-510 W HASTINGS ST
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Finalized Date: 22-SEP-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19216434

Sample Description	Method	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Ti	Tl	U	V	W	Y	Zn	Zr
	Units	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.005	0.02	0.05	1	0.05	0.05	2	0.5
YY10308		0.008	0.13	1.86	69	9.62	3.98	132	<0.5
YY10309		0.007	0.14	1.94	70	15.80	3.58	81	<0.5
YY10310		0.011	0.19	1.62	72	8.38	4.95	165	0.6
YY10311		0.019	0.31	1.92	120	3.48	9.34	410	0.8
YY10312		0.015	0.27	1.41	101	3.74	7.43	292	0.7
YY10313		0.015	0.23	1.33	98	3.85	7.27	252	0.6
YY10314		0.020	0.40	1.43	101	4.69	9.32	289	1.0
YY10315		0.006	0.09	0.77	45	1.97	4.50	88	<0.5
YY10316		0.006	0.06	0.57	57	1.52	4.24	61	<0.5
YY10317		0.032	0.66	2.15	93	3.41	14.50	365	2.7
YY10318		0.024	0.42	1.76	81	3.43	12.90	278	1.4
YY10319		0.028	0.96	3.38	77	1.43	13.05	341	6.8
YY10321		0.019	0.32	1.44	81	1.40	8.76	212	1.3
YY10325		0.033	0.43	3.19	122	9.57	16.80	334	1.4
YY10326		0.005	0.15	1.06	32	2.37	3.95	77	0.5
YY10327		0.009	0.21	1.17	104	2.64	4.22	85	1.3
YY10328		0.008	0.25	2.74	94	4.19	3.40	92	2.1
YY10329		0.008	0.21	0.33	5	1.00	2.18	26	0.6
YY10330		0.015	0.61	0.34	4	0.81	2.21	18	0.9
YY10373		0.030	0.50	2.17	38	21.0	12.15	378	3.4
YY10374		0.034	0.45	0.83	32	2.19	9.50	316	4.4
YY10375		0.037	0.46	0.98	42	2.89	10.30	258	4.3
YY10376		0.041	0.45	0.96	51	2.00	10.15	207	6.0
YY10377		0.030	0.49	1.39	40	3.62	9.11	201	7.5
YY10378		0.036	0.45	1.00	54	4.92	13.05	197	4.3
YY10379		0.027	0.49	1.16	37	4.52	9.00	224	5.8
YY10380		0.026	0.67	0.97	48	1.46	10.45	247	5.1

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Project: Rau

Finalized Date: 22-SEP-2019
Account: RCM

CERTIFICATE OF ANALYSIS WH19216434

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Applies to Method: Gold determinations by this method are semi-quantitative due to the small sample weight used (0.5g).
ME-MS41

LABORATORY ADDRESSES

Applies to Method: Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.
LOG-22 SCR-41 WEI-21

Applies to Method: Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.
Au-ICP21 ME-MS41

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2103 Dollarton Hwy
North Vancouver BC V7H 0A7
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1016-510 W HASTINGS ST
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Finalized Date: 6-OCT-2019
Account: RCM

CERTIFICATE WH19229820

Project: Rau

P.O. No.: R19-S08

This report is for 21 Soil samples submitted to our lab in Whitehorse, YT, Canada on 13-SEP-2019.

The following have access to data associated with this certificate:

ANDREW CARNE	ADAM COULTER	

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-22	Sample login - Rcd w/o BarCode
SCR-41	Screen to -180um and save both

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-ICP21	Au 30g FA ICP-AES Finish	ICP-AES
ME-MS41	Ultra Trace Aqua Regia 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:



Saa Traxler, General Manager, North Vancouver

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
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CERTIFICATE OF ANALYSIS WH19229820

Sample Description	Method	WEI-21	Au-ICP21	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Recvd Wt.	Au	Ag	Al	As	Au	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr
	Units	kg	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm
	LOD	0.02	0.001	0.01	0.01	0.1	0.02	10	10	0.05	0.01	0.01	0.01	0.02	0.1	1
YY19386		0.50	0.002	0.10	0.11	5.9	<0.02	<10	80	0.15	2.07	20.6	1.14	4.75	1.1	2
YY19387		0.58	0.008	0.21	0.07	18.2	<0.02	<10	80	0.16	4.98	20.8	0.60	4.88	2.1	1
YY19388		0.46	0.046	0.19	0.10	6.9	<0.02	<10	180	0.26	3.66	20.9	1.00	5.87	1.4	2
YY19389		0.30	0.003	0.61	1.67	29.5	<0.02	<10	560	0.79	1.18	0.63	1.18	29.8	9.7	34
YY19390		0.46	0.003	0.99	1.64	32.3	<0.02	<10	920	1.06	0.99	2.49	4.97	26.2	11.9	32
YY19391		0.31	0.001	0.90	1.35	25.0	<0.02	<10	700	0.58	0.72	0.70	1.02	22.5	7.3	30
YY19392		0.55	0.005	0.49	1.31	37.7	<0.02	<10	550	0.72	0.85	6.44	4.16	20.1	10.9	25
YY19395		0.50	<0.001	0.44	2.78	19.1	<0.02	<10	270	1.21	0.24	0.60	5.84	31.8	12.6	36
YY19396		0.45	<0.001	0.42	1.19	10.2	<0.02	<10	270	0.50	0.32	1.01	1.78	18.00	7.0	24
YY19397		0.48	0.002	0.32	0.96	18.4	<0.02	<10	360	0.46	0.39	5.63	1.45	18.90	8.3	19
YY19398		0.57	0.004	0.47	1.10	52.4	<0.02	<10	390	0.85	0.88	6.85	6.63	18.80	16.9	19
YY19399		0.41	0.004	0.47	1.35	32.0	<0.02	<10	440	0.79	0.98	5.41	4.43	20.1	10.6	22
YY19400		0.43	0.002	0.60	1.54	25.5	<0.02	<10	470	0.66	1.87	0.58	1.77	25.3	10.6	36
YY19401		0.34	0.002	1.18	1.46	33.3	<0.02	<10	770	0.66	0.68	0.64	2.16	26.2	7.6	30
YY19402		0.48	0.002	0.06	0.51	14.8	<0.02	<10	90	0.28	0.28	18.25	0.11	7.58	2.8	7
YY19403		0.43	<0.001	0.12	0.53	3.7	<0.02	<10	200	0.36	0.45	17.60	0.25	10.70	2.5	7
YY19404		0.48	0.002	0.17	0.33	21.3	<0.02	<10	150	1.01	0.58	17.00	2.45	9.43	4.4	6
YY19405		0.36	0.007	0.10	0.36	20.4	<0.02	<10	120	0.36	2.22	18.35	0.18	7.85	3.2	6
YY19406		0.38	0.003	0.99	1.41	28.7	<0.02	<10	650	0.73	1.37	0.87	31.3	27.1	10.0	26
YY19410		0.29	0.003	0.74	2.38	27.0	<0.02	<10	770	1.18	0.65	0.50	4.53	34.3	14.2	40
YY10372		0.55	0.007	0.33	0.55	52.7	<0.02	<10	190	1.35	0.83	14.50	3.21	10.95	18.5	9

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Finalized Date: 6-OCT-2019
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Project: Rau

CERTIFICATE OF ANALYSIS WH19229820

Sample Description	Method	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Cs	Cu	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo	Na
	Units	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%
	LOD	0.05	0.2	0.01	0.05	0.05	0.02	0.01	0.005	0.01	0.2	0.1	0.01	5	0.05	0.01
YY19386		0.64	6.1	0.36	0.52	<0.05	<0.02	0.02	0.012	0.02	4.0	3.9	11.90	511	2.42	0.01
YY19387		0.46	151.0	0.52	0.34	<0.05	<0.02	0.01	0.032	0.02	3.8	2.5	11.75	556	11.65	0.01
YY19388		0.38	38.4	0.43	0.54	<0.05	0.02	0.01	0.015	0.02	4.2	3.3	11.70	659	7.53	0.01
YY19389		1.94	47.5	2.74	4.88	0.06	0.08	0.08	0.061	0.09	16.4	18.3	0.61	414	4.64	0.02
YY19390		2.74	81.3	2.89	4.53	0.06	0.08	0.10	0.071	0.13	14.9	18.9	1.67	454	4.87	0.02
YY19391		1.55	31.4	2.26	3.78	0.05	0.06	0.08	0.062	0.07	12.6	14.8	0.53	323	4.35	0.02
YY19392		1.92	69.5	2.67	3.51	0.05	0.06	0.04	0.054	0.09	10.7	15.1	4.30	533	3.69	0.02
YY19395		1.73	20.2	3.03	3.97	0.06	0.07	0.05	0.040	0.06	14.6	29.6	0.54	1010	2.09	0.04
YY19396		1.25	20.8	1.89	3.13	0.05	0.05	0.04	0.025	0.05	10.8	15.5	0.58	123	2.46	0.02
YY19397		1.19	29.6	2.07	2.88	0.05	0.09	0.05	0.031	0.08	10.8	12.9	1.93	394	6.72	0.02
YY19398		2.40	31.1	3.37	2.99	<0.05	0.07	0.05	0.041	0.08	10.5	13.5	4.37	572	6.71	0.02
YY19399		1.93	39.2	2.84	3.56	<0.05	0.07	0.09	0.050	0.09	11.5	15.5	3.54	560	3.68	0.03
YY19400		1.81	39.0	2.96	4.56	0.05	0.05	0.06	0.045	0.08	13.2	16.2	0.67	463	4.15	0.02
YY19401		1.48	82.7	2.34	4.14	0.06	0.06	0.12	0.062	0.07	14.5	14.6	0.42	296	7.79	0.02
YY19402		2.23	5.4	0.60	1.45	<0.05	0.02	0.01	0.032	0.10	3.8	10.3	11.40	212	1.04	0.02
YY19403		2.39	10.1	0.66	1.56	<0.05	0.03	0.01	0.010	0.07	5.2	7.3	10.80	202	1.41	0.01
YY19404		0.81	10.7	1.98	1.01	<0.05	0.02	0.02	0.023	0.03	5.1	4.1	10.05	433	6.96	0.02
YY19405		1.11	3.9	0.79	1.45	<0.05	0.02	0.02	0.023	0.02	4.9	9.3	11.10	463	5.72	0.01
YY19406		1.87	86.2	1.93	3.71	0.06	0.07	0.16	0.069	0.09	15.0	14.8	0.58	591	6.21	0.02
YY19410		3.99	90.7	3.62	5.61	0.07	0.09	0.11	0.059	0.17	20.2	29.3	0.72	367	6.39	0.02
YY10372		2.99	18.9	1.69	1.39	<0.05	0.04	0.04	0.042	0.05	5.7	6.5	8.51	232	9.15	0.02

***** 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
www.alsglobal.com/geochemistry

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VANCOUVER BC V6B 1L8

Finalized Date: 6-OCT-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19229820

Sample Description	Method	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Nb	Ni	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th
	Units	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.05	0.2	10	0.2	0.1	0.001	0.01	0.05	0.1	0.2	0.2	0.2	0.01	0.01	0.2
YY19386		<0.05	10.1	170	12.4	3.3	0.006	0.02	5.74	0.5	1.0	1.0	196.5	<0.01	0.02	0.2
YY19387		<0.05	29.3	110	15.0	3.0	0.027	0.04	3.43	0.6	1.4	5.4	128.5	<0.01	0.01	0.3
YY19388		<0.05	21.3	110	5.8	2.7	0.032	0.02	1.91	0.8	1.1	7.3	170.5	<0.01	0.01	0.5
YY19389		0.89	45.7	1100	57.5	11.8	0.001	0.03	3.11	3.6	1.7	2.9	32.7	<0.01	0.06	3.8
YY19390		0.73	69.9	1050	60.9	21.6	0.001	0.04	3.40	3.4	2.0	2.8	43.2	<0.01	0.06	3.3
YY19391		0.54	31.1	1060	63.9	10.6	<0.001	0.05	2.72	2.4	2.5	2.4	31.6	<0.01	0.05	1.9
YY19392		0.59	55.6	780	28.1	12.0	0.001	0.02	2.19	2.9	1.0	1.4	57.8	<0.01	0.04	2.9
YY19395		0.60	50.7	1530	51.3	9.8	0.001	0.04	1.56	4.3	0.8	0.6	25.0	0.01	0.04	4.0
YY19396		0.51	26.6	790	29.5	10.4	0.009	0.15	0.94	2.3	2.9	0.6	21.8	<0.01	0.02	2.5
YY19397		0.51	31.8	830	27.9	10.0	0.005	0.11	1.63	2.8	1.2	0.6	58.3	<0.01	0.03	3.2
YY19398		0.56	89.8	710	38.6	20.5	0.005	0.05	1.97	2.8	1.7	1.1	51.4	<0.01	0.05	2.9
YY19399		0.54	57.6	770	36.8	13.8	<0.001	0.03	2.16	2.9	1.0	1.3	45.0	<0.01	0.05	2.6
YY19400		0.73	37.5	910	45.1	12.0	<0.001	0.03	1.99	3.2	1.5	1.5	23.2	<0.01	0.05	2.6
YY19401		0.58	34.9	1130	61.9	12.4	<0.001	0.05	3.91	2.9	3.4	2.6	29.8	<0.01	0.07	1.9
YY19402		0.17	7.5	200	2.7	7.9	<0.001	0.02	0.17	1.2	0.5	0.6	104.5	<0.01	<0.01	0.7
YY19403		0.20	7.9	90	5.2	14.0	<0.001	0.01	0.54	1.6	0.8	0.6	105.5	0.01	<0.01	1.1
YY19404		0.23	57.1	290	7.9	4.5	0.007	0.01	2.67	1.2	0.5	0.7	99.4	<0.01	0.02	1.0
YY19405		0.16	24.7	190	2.8	3.5	0.010	0.03	2.21	0.9	1.0	0.6	109.0	<0.01	0.04	0.5
YY19406		0.63	71.7	920	69.9	18.6	0.017	0.20	3.09	3.2	6.2	2.9	33.2	<0.01	0.06	3.1
YY19410		0.54	91.1	1750	47.9	23.4	0.001	0.03	3.40	4.2	1.5	1.3	44.6	<0.01	0.06	6.0
YY10372		0.30	119.0	370	21.2	16.1	0.159	0.42	2.62	1.4	1.9	1.1	92.4	<0.01	0.03	1.2

***** 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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Finalized Date: 6-OCT-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19229820

Sample Description	Method	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41	ME-MS41
	Analyte	Ti	Tl	U	V	W	Y	Zn	Zr
	Units	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.005	0.02	0.05	1	0.05	0.05	2	0.5
YY19386		0.005	0.08	1.71	73	6.49	3.22	93	<0.5
YY19387		<0.005	0.14	1.81	34	4.20	2.98	77	<0.5
YY19388		<0.005	0.13	1.50	50	2.87	2.74	53	1.2
YY19389		0.033	0.81	1.96	70	0.74	11.40	227	3.2
YY19390		0.030	0.96	1.73	61	2.30	13.70	585	2.9
YY19391		0.021	0.47	1.56	58	0.72	7.45	244	1.9
YY19392		0.030	0.55	0.91	41	1.68	10.45	483	2.9
YY19395		0.030	0.32	1.10	37	1.10	14.75	355	2.6
YY19396		0.020	0.20	1.11	34	0.45	10.05	281	2.0
YY19397		0.027	0.23	1.45	33	1.50	9.72	183	4.6
YY19398		0.024	1.13	0.91	36	4.83	11.75	1080	2.9
YY19399		0.025	0.54	1.07	41	1.59	11.05	577	2.5
YY19400		0.032	0.48	1.81	63	0.96	8.47	249	1.9
YY19401		0.017	0.63	3.27	66	0.51	11.85	214	2.3
YY19402		0.015	0.36	1.20	8	1.19	2.51	20	0.7
YY19403		0.018	0.27	0.71	11	0.48	3.56	31	1.4
YY19404		0.013	0.22	1.18	20	2.10	12.10	577	1.0
YY19405		0.011	0.29	0.81	44	6.87	4.03	63	0.6
YY19406		0.025	1.56	5.21	65	0.91	12.25	734	2.4
YY19410		0.043	1.08	3.35	76	0.40	27.3	554	5.1
YY10372		0.014	0.95	14.45	22	3.25	14.30	1780	1.2

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.
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Project: Rau

Finalized Date: 6-OCT-2019
Account: RCM

CERTIFICATE OF ANALYSIS WH19229820

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

Applies to Method: Gold determinations by this method are semi-quantitative due to the small sample weight used (0.5g).
ME-MS41

LABORATORY ADDRESSES

Applies to Method: Processed at ALS Whitehorse located at 78 Mt. Sima Rd, Whitehorse, YT, Canada.
LOG-22 SCR-41 WEI-21

Applies to Method: Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.
Au-ICP21 ME-MS41

APPENDIX V

ROCK SAMPLE - DESCRIPTIONS

Rock Sample Descriptions Properties: Bobcat, Kathy, Rau, Rau Regional, Spotlight, Unknown Target

Sample Number:	K291689	Date Collected:	2019-06-01	UTM:	532984 mE	Nad83, Zone 8
Elevation:	1126 m	Sampler:	Steve Israel	UTM:	7118476 mN	

Comments: Grab sample of large boulders (2-4 m) of probable skarned intrusion. Actinolite/tremolite with an unknown patchy slightly dull purply-brown mineral

Sample Number:	K291690	Date Collected:	2019-06-01	UTM:	529151 mE	Nad83, Zone 8
Elevation:	1373 m	Sampler:	Steve Israel	UTM:	7121096 mN	

Comments: Grab sample of quartz vein in float. 1 mm pyrite +/- arsenopyrite in rusty weathered, limonitic, creamy white to smokey gray quartz vein material.

Sample Number:	K291691	Date Collected:	2019-06-01	UTM:	526502 mE	Nad83, Zone 8
Elevation:	1684 m	Sampler:	Steve Israel	UTM:	7120518 mN	

Comments: Outcrop grab sample of sheeted quartz veins within grey weathered calcareous dolostone. Veins are filled with rusty weathered quartz +/- calcite. Limonitic alteration along edges of veins. Veins are 1 mm to 3-4 cm wide with spacing of 5 to 10 cm.

Sample Number:	K291692	Date Collected:	2019-06-01	UTM:	529128 mE	Nad83, Zone 8
Elevation:	1662 m	Sampler:	Steve Israel	UTM:	7119526 mN	

Comments: Outcrop grab sample of sandy to silty crystalline (fizzes moderately with HCL) with abundant 0.5-1 mm disseminated sulphides (py, po, +/- aspy) along cleavage planes. Slightly magnetic.

Sample Number:	K291693	Date Collected:	2019-06-01	UTM:	529504 mE	Nad83, Zone 8
Elevation:	1716 m	Sampler:	Steve Israel	UTM:	7119450 mN	

Comments: Grab sample of float material, highly oxidized rock, goethite and limonite alteration. Manganese staining. A few rusty oxidized quartz vein cobbles around sample.

Sample Number:	K291694	Date Collected:	2019-06-01	UTM:	529559 mE	Nad83, Zone 8
Elevation:	1711 m	Sampler:	Steve Israel	UTM:	7119435 mN	

Comments: 30 cm wide zone of massive to semi-massive sulphide in outcrop within calcareous limestone. This sample is a grab sample of massive po, py +/- cpy and is very dense.

Rock Sample Descriptions Properties: Bobcat, Kathy, Rau, Rau Regional, Spotlight, Unknown Target

Sample Number:	K291695	Date Collected:	2019-06-01	UTM:	529559	mE	Nad83, Zone 8
Elevation:	1711 m	Sampler:	Steve Israel	UTM:	7119435	mN	

Comments: 30 cm wide chip sample across zone of massive to semi-massive sulphide in calcareous dolostone. Mainly po, py +/- minor cpy

Sample Number:	K291696	Date Collected:	2019-06-01	UTM:	530646	mE	Nad83, Zone 8
Elevation:	1586 m	Sampler:	Steve Israel	UTM:	7119607	mN	

Comments: Float train on highly oxidized breccia, grab sample of float, cobbles of brecciated oxidized dolostone with quartz +/- calcite infilling. Limonititc and goethitic alteration througout.

Sample Number:	K291697	Date Collected:	2019-06-01	UTM:	529114	mE	Nad83, Zone 8
Elevation:	1385 m	Sampler:	Steve Israel	UTM:	7121095	mN	

Comments: Grab sample of float material, rusty, silicified marble (?) specs of possible cpy or py. Possible malachite staining (could be epidote…).

Sample Number:	K291698	Date Collected:	2019-06-01	UTM:	524888	mE	Nad83, Zone 8
Elevation:	1641 m	Sampler:	Steve Israel	UTM:	7121274	mN	

Comments: Grab sample of float, strongly oxidized, iron rich float sample, pitted and altered, rusty to dark brown boulder. Float train on hill side at least 40 m long 10 m wide.

Sample Number:	K291699	Date Collected:	2019-06-01	UTM:	524885	mE	Nad83, Zone 8
Elevation:	1650 m	Sampler:	Steve Israel	UTM:	7121291	mN	

Comments: Grab sample of float, strongly oxidized, massive goethite, with limonite and hematite alteration throughout. Sample dense.

Sample Number:	K291700	Date Collected:	2019-06-01	UTM:	525655	mE	Nad83, Zone 8
Elevation:	1567 m	Sampler:	Steve Israel	UTM:	7121120	mN	

Comments: Grab sample of float train at least 10 m long, strongly oxidized and pitted iron rich rock.

Rock Sample Descriptions Properties: Bobcat, Kathy, Rau, Rau Regional, Spotlight, Unknown Target

Sample Number:	Q013418	Date Collected:	2019-08-03	UTM:	532297	mE	Nad83, Zone 8
Elevation:	999 m	Sampler:	Julia Lane	UTM:	7117803	mN	

Comments: fine grained dark grey dolostone. Possibly silicified as it seems a bit harder than expected. A few fragmetns are cut by 3 mm quartz vein.

Sample Number:	Q013419	Date Collected:	2019-08-03	UTM:	532298	mE	Nad83, Zone 8
Elevation:	9999 m	Sampler:	Julia Lane	UTM:	7117754	mN	

Comments: coarse grained quartz rich intrusive with 40% qtz, 40% cream to orange cream feldspar, 10% sericite altered (?) muscovite and 5% coarse grained bladed dark green actinolite with radiating fans upto 3 cm long. Collected from hand pit dut at anomalous sample site. Pit size = 2 feet by 2 feet by 4 feet deep. Sampe was one large boulder - 30 cm in diameter and sub rounded.

Sample Number:	Q013420	Date Collected:	2019-08-03	UTM:	532336	mE	Nad83, Zone 8
Elevation:	9999 m	Sampler:	Julia Lane	UTM:	7117788	mN	

Comments: medium grained feldspar rich intrusive rock colelcted from 2 ft by 2 ft by 4 ft deep pit. Sampels contain 50% white to creamy feldspar, 40% clear to smokey quartz and 15% mscovite 5% darker biotite

Sample Number:	Q013421	Date Collected:	2019-08-05	UTM:	532325	mE	Nad83, Zone 8
Elevation:	99999 m	Sampler:	Michael Rego	UTM:	7114350	mN	

Comments: SS 96535 Dug to geotul handle depth. Bottom of pit is very friable and fissile medium grey phyllite. Minor quartz vein fragments with limonite stain and sulfide casts. Sample of quartz vein material taken. No reaction with HCl and non-magnetic.

Sample Number:	Q013422	Date Collected:	2019-08-05	UTM:	532185	mE	Nad83, Zone 8
Elevation:	99999 m	Sampler:	Michael Rego	UTM:	7114210	mN	

Comments: SS 96531 Dug to geotul handle depth. Bottom of pit is very friable and fissile medium grey phyllite. Minor quartz vein fragments with limonite stain and sulfide casts. Sample of quartz vein material taken. No raction with HCl and Non-magnetic.

Sample Number:	Q013423	Date Collected:	2019-08-05	UTM:	531843	mE	Nad83, Zone 8
Elevation:	99999 m	Sampler:	Michael Rego	UTM:	7114207	mN	

Comments: CC141198 Medium grey shale/mudstone outcrop nearby to the south. Here minor quartz vein rubble in the pit dug to follow up the soil anomaly. Minor sulfide casts and limonite. Sample taken of vein. No reaction with HCl and non-magnetic.

Rock Sample Descriptions Properties: Bobcat, Kathy, Rau, Rau Regional, Spotlight, Unknown Target

Sample Number:	Q013424	Date Collected:	2019-08-05	UTM:	531787	mE	Nad83, Zone 8
Elevation:	99999 m	Sampler:	Michael Rego	UTM:	7114352	mN	

Comments: Medium grey phyllite with abundant 4 mm diameter limonitic cubes, originally thought to be limonite after pyrite but clay mineral after andalusite. 5 m upslope subcrop of 4 cm wide limonitic quartz vein with sulfide casts. Minor calcite, non-magnetic.

Sample Number:	Q013425	Date Collected:	2019-08-05	UTM:	531723	mE	Nad83, Zone 8
Elevation:	99999 m	Sampler:	Michael Rego	UTM:	7114583	mN	

Comments: Quartz vein with weathered vein material with significant limonite. Vein material subcrop appears to strike ~110. No reaction with HCl. Non-magnetic.

Sample Number:	Q013426	Date Collected:	2019-08-05	UTM:	531723	mE	Nad83, Zone 8
Elevation:	99999 m	Sampler:	Michael Rego	UTM:	7114583	mN	

Comments: Quartz vein with weathered vein material with significant limonite. This sample was taken ~ 10 m to the east of the MR19-009. No reaction with HCl and non-magnetic.

Sample Number:	Q013427	Date Collected:	2019-08-03	UTM:	531778	mE	Nad83, Zone 8
Elevation:	99999 m	Sampler:	Michael Rego	UTM:	7114512	mN	

Comments: Shale/quartz vein contact

Sample Number:	Q013428	Date Collected:	2019-08-05	UTM:	530722	mE	Nad83, Zone 8
Elevation:	99999 m	Sampler:	Michael Rego	UTM:	7119954	mN	

Comments: Calcite matrix breccia ~3mm silisiclastic reaction rims around medium grey limestone clasts. Clasts are ~40% of rock, are angular and several cm across. Minor dolomite. Non magnetic.

Sample Number:	Q013429	Date Collected:	2019-08-05	UTM:	532910	mE	Nad83, Zone 8
Elevation:	99999 m	Sampler:	Michael Rego	UTM:	7122628	mN	

Comments: Gossan - Mn stained gossan float. No HCl reaction and non-magnetic.

Rock Sample Descriptions Properties: Bobcat, Kathy, Rau, Rau Regional, Spotlight, Unknown Target

Sample Number:	Q013430	Date Collected:	2019-08-05	UTM:	532887	mE	Nad83, Zone 8
Elevation:	99999 m	Sampler:	Michael Rego	UTM:	7122633	mN	

Comments: Jarosite stained vuggy quartz vein material; difficult to tell protolith due to oxidation. No fizz with HCl and non-magnetic

Sample Number:	Q013431	Date Collected:	2019-08-05	UTM:	532887	mE	Nad83, Zone 8
Elevation:	99999 m	Sampler:	Michael Rego	UTM:	7122633	mN	

Comments: Sulfide - Medium grey sulfide rich fine grained skarn? ~4% 3-4 mm diameter forest green mineral taken 10 m along contour from last. No HCl reaction and non-magnetic.

Sample Number:	Q013432	Date Collected:	2019-08-05	UTM:	532862	mE	Nad83, Zone 8
Elevation:	99999 m	Sampler:	Michael Rego	UTM:	7122669	mN	

Comments: 10 cm thick vein ~half very coarse quartz veins other nearly massive pyrite. Wall rock was the same as last. No reaction with HCl, pyrrhotite present.

Sample Number:	Q013433	Date Collected:	2019-08-05	UTM:	530711	mE	Nad83, Zone 8
Elevation:	99999 m	Sampler:	Michael Rego	UTM:	7119998	mN	

Comments: Similar lithology but in outcrop. Moderate limonite 140/58. No fizz. Non magnetic.

Sample Number:	Q013434	Date Collected:	2019-08-05	UTM:	530781	mE	Nad83, Zone 8
Elevation:	99999 m	Sampler:	Michael Rego	UTM:	7120015	mN	

Comments: From last to here more tremolite and actinolite in light to medium grey limestone. On weathered surfaces is appears to occur in "clots" giving the rock a orbicular appearance. Sample was taken of tremolite with limonite (weathered sulfide). spotty calcite. weakly magnetic.

Sample Number:	Q013435	Date Collected:	2019-08-05	UTM:	532910	mE	Nad83, Zone 8
Elevation:	99999 m	Sampler:	Michael Rego	UTM:	7122628	mN	

Comments: Gossan - Quartz with yellow mineral, containing muscovite. Two quartz generations.

Rock Sample Descriptions Properties: Bobcat, Kathy, Rau, Rau Regional, Spotlight, Unknown Target

Sample Number:	Q013436	Date Collected:	2019-08-05	UTM:	532937	mE	Nad83, Zone 8
Elevation:	99999 m	Sampler:	Michael Rego	UTM:	7122615	mN	

Comments: Gossan - possible tungstates

Sample Number:	Q013437	Date Collected:	2019-08-05	UTM:	532777	mE	Nad83, Zone 8
Elevation:	99999 m	Sampler:	Michael Rego	UTM:	7122960	mN	

Comments: Ferricrete in seep associated with spring. Small kill zone, funny, seems like kill is recent. A lot of grass etc. in the ferricrete. No reaction with HCl and non-magnetic.

Sample Number:	Q013438	Date Collected:	2019-08-05	UTM:	532787	mE	Nad83, Zone 8
Elevation:	99999 m	Sampler:	Michael Rego	UTM:	7122936	mN	

Comments: ~50% fine grained pyrite, similar to that found higher up in cirque in subcrop associated with quartz vein. No HCl reaction. Non magnetic.

Sample Number:	Q013439	Date Collected:	2019-08-05	UTM:	531712	mE	Nad83, Zone 8
Elevation:	99999 m	Sampler:	Michael Rego	UTM:	7114595	mN	

Comments: limonite in a 1-2 cm wide quartz vein. No reaction with HCl, non-magnetic.

Sample Number:	Q013440	Date Collected:	2019-08-05	UTM:	530300	mE	Nad83, Zone 8
Elevation:	99999 m	Sampler:	Michael Rego	UTM:	7118000	mN	

Comments: Gossan with dark green skarn and ~5% Po +/- Py on broken faces. Sample taken from top of gossan. No reaction with HCl and non-magnetic.

Sample Number:	R500828	Date Collected:	2019-08-21	UTM:	532274	mE	Nad83, Zone 8
Elevation:	0 m	Sampler:	Rob Carne	UTM:	7117748	mN	

Comments: greisen with grey fluorite >> purple fluorite, Clotty and disseminated pyrite. Cut by 8 cm QZ vein. Non-magnetic; no HCl rx; mag sus 0.009; XRF 300 ppm As. Taken from 30 cm x 60 cm x20 cm boulder along with R500829.

Rock Sample Descriptions Properties: Bobcat, Kathy, Rau, Rau Regional, Spotlight, Unknown Target

Sample Number:	R500829	Date Collected:	2019-08-21	UTM:	532274	mE	Nad83, Zone 8
Elevation:	0 m	Sampler:	Rob Carne	UTM:	7117748	mN	

Comments: greisen with AP clots; green fluorite >> purple fluorite, altered kspar(?); non-mag; mag sus 0.003; no HCl rx; XRF 0.1% As. R500830 and R500831 taken from angular 60 cm x 20 cm x 20 cm boulder.

Sample Number:	R500830	Date Collected:	2019-08-21	UTM:	532274	mE	Nad83, Zone 8
Elevation:	0 m	Sampler:	Rob Carne	UTM:	7117748	mN	

Comments: punky oxidized dolostone(?),dar brown, non-magnetic, mag sus 0.305, no HCl rx: XRF 0.1% Cu, 0.45% As, 30% Fe. R500830 and R500831 taken from angular 60 cm x 20 cm x 20 cm boulder.

Sample Number:	R500831	Date Collected:	2019-08-21	UTM:	532274	mE	Nad83, Zone 8
Elevation:	0 m	Sampler:	Rob Carne	UTM:	7117748	mN	

Comments: SOS R500830, mag sus 0.301, XRF 0.7% As.

Sample Number:	R500832	Date Collected:	2019-08-21	UTM:	532274	mE	Nad83, Zone 8
Elevation:	0 m	Sampler:	Rob Carne	UTM:	7117748	mN	

Comments: large cobble of pyrite-rich greisen; clotty to disseminated AP, band of purple fluorite 1 cm wide; no HCl rx; non magnetic; mag sus 0.033, XRF 2.00% As.

Sample Number:	R500833	Date Collected:	2019-08-20	UTM:	532543	mE	Nad83, Zone 8
Elevation:	m	Sampler:	Rob Carne	UTM:	7117825	mN	

Comments: large aplite boulder, irregular plagioclase megacrysts, tr. Sulphides

Sample Number:	R500834	Date Collected:	2019-08-21	UTM:	532300	mE	Nad83, Zone 8
Elevation:	m	Sampler:	Rob Carne	UTM:	7117803	mN	

Comments: angular cobble of QZ vein with actinolite rosette, found in old deep hand pit

Rock Sample Descriptions Properties: Bobcat, Kathy, Rau, Rau Regional, Spotlight, Unknown Target

Sample Number:	R500835	Date Collected:	2019-08-21	UTM:	532274	mE	Nad83, Zone 8
Elevation:	0 m	Sampler:	Rob Carne	UTM:	7117748	mN	

Comments: rusty small angular boulder of greisen with rusty cavities; abundant purple and dark green fluorite; clotty to dissem PY; non magnetic; mag sus 0.001; XRF 0.17% As.

Sample Number:	R500836	Date Collected:	2019-08-21	UTM:	532274	mE	Nad83, Zone 8
Elevation:	0 m	Sampler:	Rob Carne	UTM:	7117748	mN	

Comments: angular medium sized greisen boulder, tremolite rosettes; clotty to dissem PY; green fluorite abundant >> purple fluorite, one 1.3 cm long stubby, prismatic brown tourmaline crystal; minor tremolite;no HCl rx; non magnetic; mag sus 0.001; XRF 0.17% As.

Sample Number:	R500837	Date Collected:	2019-08-21	UTM:	532274	mE	Nad83, Zone 8
Elevation:	0 m	Sampler:	Rob Carne	UTM:	7117748	mN	

Comments: small angular greisen boulder; abundant green fluorite>>purple fluorite; variable grain size ; dissem PY>>AP>CP(?); no HCl rx; non magnetic; mag sus 0.002; XRF 250 ppm As.

Sample Number:	R500838	Date Collected:	2019-08-21	UTM:	532274	mE	Nad83, Zone 8
Elevation:	0 m	Sampler:	Rob Carne	UTM:	7117748	mN	

Comments: small angular greisen boulder; beryl and quartz; megacrysts; clotty AP(?- blk streak); v. minor brassy PY; abundant green fluorite>>purple fluorite, large kspar phenos, minor muscovite; no HCl rx; non magnetic; mag sus 0.001; XRF 0.1% As.

Sample Number:	R500839	Date Collected:	2019-08-21	UTM:	532274	mE	Nad83, Zone 8
Elevation:	0 m	Sampler:	Rob Carne	UTM:	7117748	mN	

Comments: small angular boulder of greisen-pegmatite with QZ-Py vein, beryl; clotty to patchy PY>>AP; pale green fluorite,no HCl rx, non magnetic; mag sus 0.001; XRF 500 ppm As.

Sample Number:	R500840	Date Collected:	2019-08-21	UTM:	532274	mE	Nad83, Zone 8
Elevation:	0 m	Sampler:	Rob Carne	UTM:	7117748	mN	

Comments: sub-rounded cobble of fine acicular tremolite(?) in decarb altered dolostone(?) with dark brown ground mass; ; completely oxidized and leached; no magnetic; mag sus0.001; no HCl rx; XRF 0.12% As.

Rock Sample Descriptions Properties: Bobcat, Kathy, Rau, Rau Regional, Spotlight, Unknown Target

Sample Number:	R500841	Date Collected:	2019-08-21	UTM:	532274	mE	Nad83, Zone 8
Elevation:	0 m	Sampler:	Rob Carne	UTM:	7117748	mN	

Comments: small angular boulder of oxidized and leached sandy dolostone(?) with punky oxide cavity filling after large (up to 1 cm) PY cubes; non magnetic; mag sus 0.001; no HCl rx; XRF 0.1% As in limonite filled PY cavity.

Sample Number:	R500842	Date Collected:	2019-08-21	UTM:	532274	mE	Nad83, Zone 8
Elevation:	0 m	Sampler:	Rob Carne	UTM:	7117748	mN	

Comments: subrounded cobble of greisen with actinolite rosette, QZ and altereed plagioclase phocrysts, green fluorite; no sulphides; non magnetic, mag sus 0.003; no HCl rx.

Sample Number:	R608014	Date Collected:	2019-07-05	UTM:	533440	mE	Nad83, Zone 8
Elevation:	1302 m	Sampler:	Austin Schneebeli	UTM:	7116994	mN	

Comments: Highly altered gabbro float. White-beige coloured. Contains weak black metallic sulphide (chalcocite?) and trace massive pink mineral (cuprite?). Moderately oxidized with oxidized sulphides. No HCL reaction and non magnetic.

Sample Number:	R608015	Date Collected:	2019-07-05	UTM:	533445	mE	Nad83, Zone 8
Elevation:	1305 m	Sampler:	Austin Schneebeli	UTM:	7116988	mN	

Comments: Megans pit. Multiple float fragments of highly altered gabbro. White grey colour. Contains many oxidized out sulphides and trace purplish rings/veins. Trace euhedral actinolite. No HCL reaction and non magnetic.

Sample Number:	R608016	Date Collected:	2019-07-05	UTM:	533380	mE	Nad83, Zone 8
Elevation:	1267 m	Sampler:	Austin Schneebeli	UTM:	7117007	mN	

Comments: Small pit dug uphill of 211 ppm Cu-in-soil sample. Flat fragments of gabbro with trace black metallix sulphides and strong oxidation on surfaces. Gabbro is medium grained and dark green. Ran 300 ppm Cu of XRF.

Sample Number:	R608017	Date Collected:	2019-07-05	UTM:	533428	mE	Nad83, Zone 8
Elevation:	1267 m	Sampler:	Austin Schneebeli	UTM:	7117091	mN	

Comments: Dark grey-blue gabbro float. Dug in pit 2m uphill from anomalous Cu-in-soil sample. Contains speckly black metallic sulphide and is moderately oxidized. Non magnetic and no HCL reaction.

Rock Sample Descriptions Properties: Bobcat, Kathy, Rau, Rau Regional, Spotlight, Unknown Target

Sample Number:	S036451	Date Collected:	2019-06-09	UTM:	532842	mE	Nad83, Zone 8
Elevation:	1102 m	Sampler:	Jessie Gladish	UTM:	7117998	mN	

Comments: qtz breccia? Float/subcrop maybe. Sub rounded. Photo 677,678.679. (all jessie's rock photos in a folder on desktop labelled jessie RAU rock and soil).

Sample Number:	S036452	Date Collected:	2019-06-09	UTM:	532849	mE	Nad83, Zone 8
Elevation:	1106 m	Sampler:	Jessie Gladish	UTM:	7118007	mN	

Comments: rusty qtz float/subcrop w blk mineral. Photo 680-83

Sample Number:	S036453	Date Collected:	2019-06-09	UTM:	532849	mE	Nad83, Zone 8
Elevation:	1106 m	Sampler:	Jessie Gladish	UTM:	7118007	mN	

Comments: blk shaley rock. Rusted. Pyrite or chalcopyrite? Float or subcrop. Photo 84-86

Sample Number:	S036454	Date Collected:	2019-06-09	UTM:	532849	mE	Nad83, Zone 8
Elevation:	1106 m	Sampler:	Jessie Gladish	UTM:	7118007	mN	

Comments: blk shale, rust. Photo 687-90

Sample Number:	S036455	Date Collected:	2019-06-09	UTM:	532849	mE	Nad83, Zone 8
Elevation:	1107 m	Sampler:	Jessie Gladish	UTM:	7118006	mN	

Comments: rusty qtz. Float/sub. Photo 91-92

Sample Number:	S036456	Date Collected:	2019-06-09	UTM:	532737	mE	Nad83, Zone 8
Elevation:	1106 m	Sampler:	Jessie Gladish	UTM:	7118004	mN	

Comments: rusty qtz. Photo 692-94

Sample Number:	S036457	Date Collected:	2019-06-09	UTM:	532740	mE	Nad83, Zone 8
Elevation:	1111 m	Sampler:	Jessie Gladish	UTM:	7118005	mN	

Comments: blk/grey slatey rock w wollastiniate or trmolite? Photo 95-99

Rock Sample Descriptions Properties: Bobcat, Kathy, Rau, Rau Regional, Spotlight, Unknown Target

Sample Number:	S036458	Date Collected:	2019-06-09	UTM:	532740	mE	Nad83, Zone 8
Elevation:	1111 m	Sampler:	Jessie Gladish	UTM:	7118006	mN	

Comments: purply maroon breccia, blk/rusty veins. Photo 703-705

Sample Number:	S036459	Date Collected:	2019-06-09	UTM:	532740	mE	Nad83, Zone 8
Elevation:	1111 m	Sampler:	Jessie Gladish	UTM:	7118008	mN	

Comments: similar to above. Photo 703-705

Sample Number:	S036460	Date Collected:	2019-06-09	UTM:	532740	mE	Nad83, Zone 8
Elevation:	1111 m	Sampler:	Jessie Gladish	UTM:	7118009	mN	

Comments: blk shiny octagon mineral? Phoo 706,707

Sample Number:	S036461	Date Collected:	2019-06-09	UTM:	532804	mE	Nad83, Zone 8
Elevation:	1111 m	Sampler:	Jessie Gladish	UTM:	7118003	mN	

Comments: tremolite? Wollastinite? Yellowy orange rusting. Potato-y rock. Photo 708-710

Sample Number:	S036462	Date Collected:	2019-06-09	UTM:	532804	mE	Nad83, Zone 8
Elevation:	1111 m	Sampler:	Jessie Gladish	UTM:	7118006	mN	

Comments: qtz boulder. Rusty blk weathering. Yellowish. Photo 711-713

Sample Number:	S036463	Date Collected:	2019-06-09	UTM:	532805	mE	Nad83, Zone 8
Elevation:	1108 m	Sampler:	Jessie Gladish	UTM:	7118004	mN	

Comments: blk shale. pHoto 714-716

Sample Number:	S036464	Date Collected:	2019-06-09	UTM:	532805	mE	Nad83, Zone 8
Elevation:	1108 m	Sampler:	Jessie Gladish	UTM:	7118005	mN	

Comments: same as above. Photo 717-719

Rock Sample Descriptions Properties: Bobcat, Kathy, Rau, Rau Regional, Spotlight, Unknown Target

Sample Number:	S036465	Date Collected:	2019-06-09	UTM:	532905 mE	Nad83, Zone 8
Elevation:	1110 m	Sampler:	Jessie Gladish	UTM:	7118045 mN	
Comments:	light color, intrusive? Dolomitic? Photo 720-21					

Sample Number:	S036466	Date Collected:	2019-06-09	UTM:	532904 mE	Nad83, Zone 8
Elevation:	1110 m	Sampler:	Jessie Gladish	UTM:	7118043 mN	
Comments:	rusty, qtz. Photo 722-724					

Sample Number:	S036467	Date Collected:	2019-06-09	UTM:	532897 mE	Nad83, Zone 8
Elevation:	1110 m	Sampler:	Jessie Gladish	UTM:	7118027 mN	
Comments:	tremolite or wollastinite? Float/sub? Photo 725-728					

Sample Number:	S036468	Date Collected:	2019-06-09	UTM:	532907 mE	Nad83, Zone 8
Elevation:	1111 m	Sampler:	Jessie Gladish	UTM:	7118011 mN	
Comments:	rusty put potatoe. Photo 729-731					

Sample Number:	S036469	Date Collected:	2019-06-09	UTM:	532907 mE	Nad83, Zone 8
Elevation:	1111 m	Sampler:	Jessie Gladish	UTM:	7118011 mN	
Comments:	shale, qtz veins. 732,733 photo.					

Sample Number:	S036471	Date Collected:	2019-06-09	UTM:	532753 mE	Nad83, Zone 8
Elevation:	1102 m	Sampler:	Jessie Gladish	UTM:	7117954 mN	
Comments:	red, rusty, pitty breccia? Photo 736-39					

Sample Number:	S036472	Date Collected:	2019-06-09	UTM:	532750 mE	Nad83, Zone 8
Elevation:	1098 m	Sampler:	Jessie Gladish	UTM:	7117950 mN	
Comments:	vfg lit grey volcaniv w qtz vein,mineralized vein? 1/2 inch thick. Photo 740-41					

Rock Sample Descriptions Properties: Bobcat, Kathy, Rau, Rau Regional, Spotlight, Unknown Target

Sample Number:	S036473	Date Collected:	2019-06-09	UTM:	532750	mE	Nad83, Zone 8
Elevation:	1098 m	Sampler:	Jessie Gladish	UTM:	7117950	mN	
Comments:	same as above. Photo742, 743						

Sample Number:	S036474	Date Collected:	2019-06-09	UTM:	532728	mE	Nad83, Zone 8
Elevation:	1094 m	Sampler:	Jessie Gladish	UTM:	7118025	mN	
Comments:	blk shale w sulphides? Photo 744-746						

Sample Number:	S036475	Date Collected:	2019-06-10	UTM:	534516	mE	Nad83, Zone 8
Elevation:	1312 m	Sampler:	Jessie Gladish	UTM:	7117990	mN	
Comments:	potatoy pitted, rusty, very lightweight. Photo 748-752						

Sample Number:	S036476	Date Collected:	2019-06-10	UTM:	534516	mE	Nad83, Zone 8
Elevation:	1312 m	Sampler:	Jessie Gladish	UTM:	7117989	mN	
Comments:	rusty qtz, veining in blk. Shale? Photo 753, 754.						

Sample Number:	S036477	Date Collected:	2019-06-10	UTM:	534355	mE	Nad83, Zone 8
Elevation:	1300 m	Sampler:	Jessie Gladish	UTM:	7117897	mN	
Comments:	qtz vein 3 inch thick, sub crop, maybe o/c. photo 755-57						

Sample Number:	S036478	Date Collected:	2019-06-10	UTM:	534622	mE	Nad83, Zone 8
Elevation:	1283 m	Sampler:	Jessie Gladish	UTM:	7117982	mN	
Comments:	float. Qtz vein w blk mins. Photo 758.						

Sample Number:	S036479	Date Collected:	2019-06-09	UTM:	532738	mE	Nad83, Zone 8
Elevation:	1094 m	Sampler:	Jessie Gladish	UTM:	7118005	mN	
Comments:	no rep, no photo						

Rock Sample Descriptions Properties: Bobcat, Kathy, Rau, Rau Regional, Spotlight, Unknown Target

Sample Number:	S036480	Date Collected:	2019-06-10	UTM:	534425	mE	Nad83, Zone 8
Elevation:	m	Sampler:	Jessie Gladish	UTM:	7118000	mN	

Comments: Brecciated, veins, rusty, potatoey, rounded. Photo 760

Sample Number:	S036481	Date Collected:	2019-06-11	UTM:	534826	mE	Nad83, Zone 8
Elevation:	1155 m	Sampler:	Jessie Gladish	UTM:	7117302	mN	

Comments: qtz breccia? Photo 761-64

Sample Number:	S036482	Date Collected:	2019-06-11	UTM:	534822	mE	Nad83, Zone 8
Elevation:	1156 m	Sampler:	Jessie Gladish	UTM:	7117301	mN	

Comments: qtz vuggy/pitted, oxidized. Photos 765-66

Sample Number:	S036483	Date Collected:	2019-06-11	UTM:	534825	mE	Nad83, Zone 8
Elevation:	1159 m	Sampler:	Jessie Gladish	UTM:	7117310	mN	

Comments: oxidized pitted vuggy lg boulders in o/c photos 767-777

Sample Number:	S036484	Date Collected:	2019-06-12	UTM:	534831	mE	Nad83, Zone 8
Elevation:	m	Sampler:	Jessie Gladish	UTM:	7116852	mN	

Comments: qtz vein E/W slight south dip. 5 in vein

Sample Number:	S036485	Date Collected:	2019-06-15	UTM:	531299	mE	Nad83, Zone 8
Elevation:	1307 m	Sampler:	Jessie Gladish	UTM:	7122162	mN	

Comments: photos 780-83. intrusive dyke. EW orient

Sample Number:	S036487	Date Collected:	2019-06-15	UTM:	531753	mE	Nad83, Zone 8
Elevation:	1307 m	Sampler:	Jessie Gladish	UTM:	7121681	mN	

Comments: rusty tremolite? Axtinolite? Old creek. Sub crop? Photos 793-796

Rock Sample Descriptions Properties: Bobcat, Kathy, Rau, Rau Regional, Spotlight, Unknown Target

Sample Number:	S036488	Date Collected:	2019-06-15	UTM:	531759	mE	Nad83, Zone 8
Elevation:	1310 m	Sampler:	Jessie Gladish	UTM:	7121676	mN	

Comments: qtz. Same as above spot, old creek drainage.

Sample Number:	S036489	Date Collected:	2019-06-15	UTM:	533517	mE	Nad83, Zone 8
Elevation:	1375 m	Sampler:	Jessie Gladish	UTM:	7121615	mN	

Comments: *THOMAS R collected this one* calco pyrite sulphides? In o/c. photo 797-799.

Sample Number:	S036490	Date Collected:	2019-06-15	UTM:	533977	mE	Nad83, Zone 8
Elevation:	1376 m	Sampler:	Jessie Gladish	UTM:	7121602	mN	

Comments: *THOMAS R collected this rock* hand pit. Photo 798-802

Sample Number:	S036491	Date Collected:	2019-06-15	UTM:	533939	mE	Nad83, Zone 8
Elevation:	1380 m	Sampler:	Jessie Gladish	UTM:	7121558	mN	

Comments: photo 803-805

Sample Number:	S036492	Date Collected:	2019-06-15	UTM:	533978	mE	Nad83, Zone 8
Elevation:	1378 m	Sampler:	Jessie Gladish	UTM:	7121601	mN	

Comments: *THOMAS R collected this rock*hand pit 50cm deep. Photo 806-808

Sample Number:	S036493	Date Collected:	2019-06-15	UTM:	532838	mE	Nad83, Zone 8
Elevation:	1382 m	Sampler:	Jessie Gladish	UTM:	7121920	mN	

Comments: photo 809-812. very large qtz crustals in boulder in old creek drainage. Galena. Sphalerite?

Sample Number:	S036494	Date Collected:	2019-06-15	UTM:	532836	mE	Nad83, Zone 8
Elevation:	1381 m	Sampler:	Jessie Gladish	UTM:	7121923	mN	

Comments: Dark grey-black actinolite cobbles with pitted outer surfaes. Actinolite blades are 0.5-1 cm long on average.

Rock Sample Descriptions Properties: Bobcat, Kathy, Rau, Rau Regional, Spotlight, Unknown Target

Sample Number:	S036495	Date Collected:	2019-06-15	UTM:	532489	mE	Nad83, Zone 8
Elevation:	1560 m	Sampler:	Jessie Gladish	UTM:	7122186	mN	

Comments: *THOMAS R*. Dark green radiating actinolite needdes ~ 1 cm long intergown within white calcite crystals approximatley 0.5 cm in diameter. Trace brown 1 mm garnet? Within. Samples collected from outcrop in saddle up the old creek drainiage. Ridge depression roughly E/W, 20m wide. Fragments with higher concentraction of calcite show trace oxidized 1-2 mm pits of sulphide (pyrite??)

Sample Number:	S036497	Date Collected:	2019-06-18	UTM:	537359	mE	Nad83, Zone 8
Elevation:	1334 m	Sampler:	Jessie Gladish	UTM:	7120870	mN	

Comments: orange/rusty oxidized conglomerate/breccia? Qtz clasts, hefty. Goethite?

Sample Number:	S036498	Date Collected:	2019-06-19	UTM:	535682	mE	Nad83, Zone 8
Elevation:	1313 m	Sampler:	Jessie Gladish	UTM:	7121400	mN	

Comments:

Sample Number:	S036499	Date Collected:	2019-06-19	UTM:	535628	mE	Nad83, Zone 8
Elevation:	1310 m	Sampler:	Jessie Gladish	UTM:	7121439	mN	

Comments:

Sample Number:	S036500	Date Collected:	2019-06-19	UTM:	535507	mE	Nad83, Zone 8
Elevation:	1308 m	Sampler:	Jessie Gladish	UTM:	7121344	mN	

Comments:

Sample Number:	S036502	Date Collected:	2019-06-25	UTM:	529901	mE	Nad83, Zone 8
Elevation:	1126 m	Sampler:	Adam Coulter	UTM:	7117708	mN	

Comments: S036502 - Massive dark grey/green 0.5cm tremolite. Highly reactive with HCl. 0.5-1cm wide white calcite and wollastonite (?) vein. Highly reactive with HCl.

Rock Sample Descriptions Properties: Bobcat, Kathy, Rau, Rau Regional, Spotlight, Unknown Target

Sample Number:	S036503	Date Collected:	2019-06-25	UTM:	529901 mE	Nad83, Zone 8
Elevation:	1126 m	Sampler:	Adam Coulter	UTM:	7117708 mN	

Comments: S036503 - Dark grey limestone with up to 1cm elongate actinolite (?) and multiple rusty/oxidized sulphides. Non-magnetic.

Sample Number:	S036504	Date Collected:	2019-06-26	UTM:	529943 mE	Nad83, Zone 8
Elevation:	1105 m	Sampler:	Adam Coulter	UTM:	7117656 mN	

Comments: S036504 - Small rusty non-calcareous rocks from pit. One piece looks like pitted oxide.

Sample Number:	S036505	Date Collected:	2019-06-26	UTM:	529943 mE	Nad83, Zone 8
Elevation:	1105 m	Sampler:	Adam Coulter	UTM:	7117656 mN	

Comments: S036505 - Calcareous shale float with large rusted out sulphides.

Sample Number:	S036506	Date Collected:	2019-06-26	UTM:	529938 mE	Nad83, Zone 8
Elevation:	1104 m	Sampler:	Adam Coulter	UTM:	7117658 mN	

Comments: Quartz veins in rusty oxidized float. Non-magnetic and no HCL reactivity. Contains small trace purplish nodules and traces weathered sulphides.

Sample Number:	S036507	Date Collected:	2019-06-26	UTM:	529937 mE	Nad83, Zone 8
Elevation:	1110 m	Sampler:	Adam Coulter	UTM:	7117662 mN	

Comments: Medium grey to bluish limestone. Weak-moderate HCL reaction. Contains small black, shiny mineral (magnetite) highly magnetic.

Sample Number:	S036508	Date Collected:	2019-06-26	UTM:	529999 mE	Nad83, Zone 8
Elevation:	1078 m	Sampler:	Adam Coulter	UTM:	7117594 mN	

Comments: Small rusty carbonate fragments with trace tremolite from small pit.

Sample Number:	S036509	Date Collected:	2019-06-26	UTM:	529998 mE	Nad83, Zone 8
Elevation:	1077 m	Sampler:	Adam Coulter	UTM:	7117603 mN	

Comments: Grey-greenish dolostone. Strongly oxidized on surface. Weak reaction with HCL when powdered. Non-mag. Trace pyrite and tremolite. White-black striping of sulphide-carbonate layers.

Rock Sample Descriptions Properties: Bobcat, Kathy, Rau, Rau Regional, Spotlight, Unknown Target

Sample Number:	S036510	Date Collected:	2019-06-26	UTM:	530000	mE	Nad83, Zone 8
Elevation:	1067 m	Sampler:	Adam Coulter	UTM:	7117551	mN	

Comments: Pit float sample at soil picket location. Small orange limestone fragments dug up from pit.

Sample Number:	S036511	Date Collected:	2019-06-26	UTM:	529982	mE	Nad83, Zone 8
Elevation:	1065 m	Sampler:	Adam Coulter	UTM:	7117550	mN	

Comments: Blue/black limestone with abundant stripped calcite veining.

Sample Number:	S036512	Date Collected:	2019-06-26	UTM:	529982	mE	Nad83, Zone 8
Elevation:	1065 m	Sampler:	Adam Coulter	UTM:	7117550	mN	

Comments: Small rusty orange limestone float fragments from pit. Strong HCL reaciton.

Sample Number:	S036513	Date Collected:	2019-06-26	UTM:	529995	mE	Nad83, Zone 8
Elevation:	1069 m	Sampler:	Adam Coulter	UTM:	7117558	mN	

Comments: Oxide float from pit 10m above anomolous soil sample location. Rusty orange/purple sulphides. Weakly mag in places. Talc and quartz throughout. No HCL reaction.

Sample Number:	S036514	Date Collected:	2019-06-26	UTM:	529995	mE	Nad83, Zone 8
Elevation:	1069 m	Sampler:	Adam Coulter	UTM:	7117558	mN	

Comments: Same as previous sample in pit.

Sample Number:	S036515	Date Collected:	2019-06-26	UTM:	530044	mE	Nad83, Zone 8
Elevation:	1052 m	Sampler:	Adam Coulter	UTM:	7117564	mN	

Comments: Small orange rusty limestone float from pit.

Sample Number:	S036516	Date Collected:	2019-06-26	UTM:	530041	mE	Nad83, Zone 8
Elevation:	1053 m	Sampler:	Adam Coulter	UTM:	7117573	mN	

Comments: Multiple fragments of small fragments of orange-purplish, rusty, oxidized rock (dolostone?). Some quartz, trace sulphides and tremolite. Fragments <1.2 cm. Non-mag.

Rock Sample Descriptions Properties: Bobcat, Kathy, Rau, Rau Regional, Spotlight, Unknown Target

Sample Number:	S036517	Date Collected:	2019-06-26	UTM:	530104	mE	Nad83, Zone 8
Elevation:	1062 m	Sampler:	Adam Coulter	UTM:	7117557	mN	

Comments: Oxide float sample from pit. HCL reaction in places. Possibly some talc? Non-mag.

Sample Number:	S036518	Date Collected:	2019-06-26	UTM:	530108	mE	Nad83, Zone 8
Elevation:	1037 m	Sampler:	Adam Coulter	UTM:	7117479	mN	

Comments: Black limestone with trace pyrite next to large 10cm quartz vein in outcrop. Weakly magnetic.

Sample Number:	S036519	Date Collected:	2019-06-26	UTM:	530115	mE	Nad83, Zone 8
Elevation:	1045 m	Sampler:	Adam Coulter	UTM:	7117494	mN	

Comments: Rusty limestone outcrop with magnetite. Grabbed sample quick at end of day.

Sample Number:	S036520	Date Collected:	2019-06-26	UTM:	529892	mE	Nad83, Zone 8
Elevation:	1102 m	Sampler:	Austin Schneebeli	UTM:	7117048	mN	

Comments: S036520 - Rusty-oxidized limestone float with tremolite. No HCl reaction and non-magnetic.

Sample Number:	S036521	Date Collected:	2019-06-26	UTM:	529834	mE	Nad83, Zone 8
Elevation:	1101 m	Sampler:	Austin Schneebeli	UTM:	7116998	mN	

Comments: S036521 - Semi-massive sulphide float. Purplish-rusty orange colour. Contains pyrite, chalcopyrite, pyrrhotite(?) and trace quartz fragments.

Sample Number:	S036522	Date Collected:	2019-06-27	UTM:	530106	mE	Nad83, Zone 8
Elevation:	1062 m	Sampler:	Austin Schneebeli	UTM:	7117556	mN	

Comments: S036522 - Small fragments of intensely oxidized purplish, rusty-orange dolostone(?). Variably trace weak magnetic, no HCl reaction. Contains weak-moderate sericite, talc and limonite. Same pit as S036517.

Sample Number:	S036523	Date Collected:	2019-06-27	UTM:	530115	mE	Nad83, Zone 8
Elevation:	9999 m	Sampler:	Austin Schneebeli	UTM:	7117562	mN	

Comments: S036523 - Megan's pit. Float fragments of grey dolostone. Weak reaction with HCl when scratched and trace weak magnetic. Purplish-orange oxide on surfaces and pervasive. Contains pyrite, sericite and trace arsenopyrite(?).

Rock Sample Descriptions Properties: Bobcat, Kathy, Rau, Rau Regional, Spotlight, Unknown Target

Sample Number:	S036524	Date Collected:	2019-06-27	UTM:	530153	mE	Nad83, Zone 8
Elevation:	1051 m	Sampler:	Austin Schneebeli	UTM:	7117472	mN	

Comments: S036524 - Grey dolostone float. Weak HCl reaction and non-magnetic. Contains calcite and tremolite veins and oxidized/rusty pyrite. Non-oxidized sulphides occur within veins. Sample was taken up slope from anomalous Au soil sample.

Sample Number:	S036525	Date Collected:	2019-06-27	UTM:	530153	mE	Nad83, Zone 8
Elevation:	1051 m	Sampler:	Austin Schneebeli	UTM:	7117472	mN	

Comments: S036525 - Very oxidized wollastonite/tremolite veins in float. No reaction with HCl and non-magnetic. Contains trace talc and purplish-orange rusty nodules.

Sample Number:	S036526	Date Collected:	2019-06-28	UTM:	529635	mE	Nad83, Zone 8
Elevation:	1213 m	Sampler:	Adam Coulter	UTM:	7117951	mN	

Comments: S036526 - Orange/red oxide sand.

Sample Number:	S036527	Date Collected:	2019-06-28	UTM:	529635	mE	Nad83, Zone 8
Elevation:	1213 m	Sampler:	Adam Coulter	UTM:	7117951	mN	

Comments: S036527 - Orange/red oxide sane with white altered carbonate pieces.

Sample Number:	S036528	Date Collected:	2019-06-28	UTM:	529635	mE	Nad83, Zone 8
Elevation:	1213 m	Sampler:	Adam Coulter	UTM:	7117951	mN	

Comments: S036528 - Orange/red oxide sane with white altered carbonate pieces.

Sample Number:	S036529	Date Collected:	2019-06-28	UTM:	529635	mE	Nad83, Zone 8
Elevation:	1213 m	Sampler:	Adam Coulter	UTM:	7117951	mN	

Comments: S036529 - Sulphide cemented breccia. Purple in colour, weakly magnetic.

Sample Number:	S036530	Date Collected:	2019-06-28	UTM:	529635	mE	Nad83, Zone 8
Elevation:	1213 m	Sampler:	Adam Coulter	UTM:	7117951	mN	

Comments: S036530 - Massive sulphide cemented breccia. Purple in colour, weakly magnetic Contains large pyrite and red colouring in places.

Rock Sample Descriptions Properties: Bobcat, Kathy, Rau, Rau Regional, Spotlight, Unknown Target

Sample Number:	S036531	Date Collected:	2019-06-28	UTM:	529533	mE	Nad83, Zone 8
Elevation:	1181 m	Sampler:	Adam Coulter	UTM:	7117914	mN	

Comments: S036531 - Semi-massive sulphide in limestone outcrop on the side of a gully. Contains pyrite and trace chalcopyrite(?). Purplish-orange leaching out of semi-massive sulphide into limestone. Bedding at 120/60.

Sample Number:	S036532	Date Collected:	2019-06-28	UTM:	529675	mE	Nad83, Zone 8
Elevation:	1219 m	Sampler:	Adam Coulter	UTM:	7117937	mN	

Comments: S036532 - Rusty orange-brown, pitted float.

Sample Number:	S036533	Date Collected:	2019-06-28	UTM:	529675	mE	Nad83, Zone 8
Elevation:	1219 m	Sampler:	Adam Coulter	UTM:	7117937	mN	

Comments: S036533 - Orange-brown float with mm-sized black sulphide veins.

Sample Number:	S036534	Date Collected:	2019-06-28	UTM:	529675	mE	Nad83, Zone 8
Elevation:	1219 m	Sampler:	Adam Coulter	UTM:	7117937	mN	

Comments: S036534 - Orange-purple oxide with wollastonite veins.

Sample Number:	S036535	Date Collected:	2019-06-29	UTM:	530150	mE	Nad83, Zone 8
Elevation:	968 m	Sampler:	Adam Coulter	UTM:	7116947	mN	

Comments: S036535 - Orange, ruty dolostone float.

Sample Number:	S036536	Date Collected:	2019-06-29	UTM:	530206	mE	Nad83, Zone 8
Elevation:	977 m	Sampler:	Adam Coulter	UTM:	7116950	mN	

Comments: S036536 - Black and white stripped float of highly altered mudstone with quartz veins.

Sample Number:	S036537	Date Collected:	2019-06-29	UTM:	530206	mE	Nad83, Zone 8
Elevation:	977 m	Sampler:	Adam Coulter	UTM:	7116950	mN	

Comments: S036537 - Soft, rusty orange dolostone float from pit.

Rock Sample Descriptions Properties: Bobcat, Kathy, Rau, Rau Regional, Spotlight, Unknown Target

Sample Number:	S036538	Date Collected:	2019-06-29	UTM:	530167	mE	Nad83, Zone 8
Elevation:	980 m	Sampler:	Adam Coulter	UTM:	7116908	mN	

Comments: S036538 - Small, orange rusty dolostone float fragments dug from pit.

Sample Number:	S036539	Date Collected:	2019-06-29	UTM:	530097	mE	Nad83, Zone 8
Elevation:	955 m	Sampler:	Adam Coulter	UTM:	7116905	mN	

Comments: S036539 - Small red rock, non-magnetic, no HCl reaction. Not sure what is its protolith. Hopefully enough to sample. Float from pit located at a soil picket.

Sample Number:	S036540	Date Collected:	2019-06-29	UTM:	530016	mE	Nad83, Zone 8
Elevation:	921 m	Sampler:	Adam Coulter	UTM:	7116884	mN	

Comments: S036540 - Pyrrhotite and pyrite replacing bedding in limestone outcrop. Highly magnetic and strong HCl reaction.

Sample Number:	S036541	Date Collected:	2019-06-29	UTM:	530016	mE	Nad83, Zone 8
Elevation:	921 m	Sampler:	Adam Coulter	UTM:	7116884	mN	

Comments: S036541 - Orange non-calcareous, weakly magnetic, rusty oxidized dolostone.

Sample Number:	S036542	Date Collected:	2019-06-29	UTM:	529997	mE	Nad83, Zone 8
Elevation:	916 m	Sampler:	Adam Coulter	UTM:	7116857	mN	

Comments: S036542 - Semi-massive pyrite and pyrrhotite with huge 1-2cm pyrite, Odd black and bright red weathering on fractured surfaces.

Sample Number:	S036543	Date Collected:	2019-06-29	UTM:	529997	mE	Nad83, Zone 8
Elevation:	916 m	Sampler:	Adam Coulter	UTM:	7116857	mN	

Comments: S036543 - Semi-massive pyrite and pyrrhotite with huge 1-2cm pyrite, Odd black and bright red weathering on fractured surfaces.

Rock Sample Descriptions Properties: Bobcat, Kathy, Rau, Rau Regional, Spotlight, Unknown Target

Sample Number:	S036544	Date Collected:	2019-06-29	UTM:	529997	mE	Nad83, Zone 8
Elevation:	916 m	Sampler:	Adam Coulter	UTM:	7116857	mN	

Comments: S036544 - Orange, rsuty surface weathering in semi-massive pyrite. Weathering purple in places. No HCl reaction and non-magnetic.

Sample Number:	S036545	Date Collected:	2019-06-29	UTM:	529983	mE	Nad83, Zone 8
Elevation:	906 m	Sampler:	Adam Coulter	UTM:	7116841	mN	

Comments: S036545- Orangy pitted subcrop form beside altered limestone outcrop. Non-magnetic and no HCl reaction.

Sample Number:	S036546	Date Collected:	2019-07-01	UTM:	530011	mE	Nad83, Zone 8
Elevation:	920 m	Sampler:	Adam Coulter	UTM:	7116850	mN	

Comments: S036546 - Orange oxide sand above massive sulphide.

Sample Number:	S036547	Date Collected:	2019-07-01	UTM:	530011	mE	Nad83, Zone 8
Elevation:	920 m	Sampler:	Adam Coulter	UTM:	7116850	mN	

Comments: S036547 - Mostly massive pyrite but some pyrrhotite.

Sample Number:	S036548	Date Collected:	2019-07-01	UTM:	530011	mE	Nad83, Zone 8
Elevation:	920 m	Sampler:	Adam Coulter	UTM:	7116850	mN	

Comments: S036548 - Semi-massive pyrite with trace arenopyrite and brecciated quartz veins.

Sample Number:	S036549	Date Collected:	2019-07-01	UTM:	530011	mE	Nad83, Zone 8
Elevation:	920 m	Sampler:	Adam Coulter	UTM:	7116850	mN	

Comments: S036549 - Orange and grey, rotten non-calcareous, non-magnetic rock with some tremolite.

Sample Number:	S036550	Date Collected:	2019-07-01	UTM:	530011	mE	Nad83, Zone 8
Elevation:	920 m	Sampler:	Adam Coulter	UTM:	7116850	mN	

Comments: S036550 - Orange and grey, rotten non-calcareous, non-magnetic rock with some tremolite. Contains sulphide cemented breccia.

Rock Sample Descriptions Properties: Bobcat, Kathy, Rau, Rau Regional, Spotlight, Unknown Target

Sample Number:	W420601	Date Collected:	2019-06-14	UTM:	529825	mE	Nad83, Zone 8
Elevation:	941 m	Sampler:	Adam Coulter	UTM:	7116979	mN	

Comments: Rusty orange Limestone float.

Sample Number:	W420602	Date Collected:	2019-06-14	UTM:	529953	mE	Nad83, Zone 8
Elevation:	913 m	Sampler:	Adam Coulter	UTM:	7116813	mN	

Comments: Thin sulphide vein in subcrop

Sample Number:	W420603	Date Collected:	2019-06-14	UTM:	530195	mE	Nad83, Zone 8
Elevation:	911 m	Sampler:	Adam Coulter	UTM:	7116615	mN	

Comments: LST float

Sample Number:	W420604	Date Collected:	2019-06-14	UTM:	530608	mE	Nad83, Zone 8
Elevation:	1025 m	Sampler:	Adam Coulter	UTM:	7117038	mN	

Comments: Oxidized tremolite shale?

Sample Number:	W420605	Date Collected:	2019-06-14	UTM:	530603	mE	Nad83, Zone 8
Elevation:	1016 m	Sampler:	Adam Coulter	UTM:	7117035	mN	

Comments: Rusty pyrrhotite massive sulphide in outcrop. Highly magnetic.

Sample Number:	W420606	Date Collected:	2019-06-14	UTM:	530603	mE	Nad83, Zone 8
Elevation:	1016 m	Sampler:	Adam Coulter	UTM:	7117035	mN	

Comments: Semi massive pyrrhotite, pyrite and chalcopyrite. Brecciated white calcite veins throughout.

Sample Number:	W420607	Date Collected:	2019-06-14	UTM:	530602	mE	Nad83, Zone 8
Elevation:	1017 m	Sampler:	Adam Coulter	UTM:	7117036	mN	

Comments: Semi-massive pyrrhotite with orange weathering.

Rock Sample Descriptions Properties: Bobcat, Kathy, Rau, Rau Regional, Spotlight, Unknown Target

Sample Number:	W420608	Date Collected:	2019-06-14	UTM:	530602	mE	Nad83, Zone 8
Elevation:	1017 m	Sampler:	Adam Coulter	UTM:	7117036	mN	
Comments:	Semi-massive pyrrhotite and trace chalcopyrite						
Sample Number:	W420609	Date Collected:	2019-06-14	UTM:	530602	mE	Nad83, Zone 8
Elevation:	1017 m	Sampler:	Adam Coulter	UTM:	7117036	mN	
Comments:	Massive pyrrhotite with biotite, quartz and calcite in highly altered shale.						
Sample Number:	W420610	Date Collected:	2019-06-14	UTM:	530599	mE	Nad83, Zone 8
Elevation:	1016 m	Sampler:	Adam Coulter	UTM:	7117036	mN	
Comments:	Oxidized non-calcareous shale outcrop ~5m from massive sulphide						
Sample Number:	W420611	Date Collected:	2019-06-14	UTM:	530599	mE	Nad83, Zone 8
Elevation:	1016 m	Sampler:	Adam Coulter	UTM:	7117036	mN	
Comments:	Heavily oxidized calcareous hsale with tremolite and actinolite						
Sample Number:	W420612	Date Collected:	2019-06-14	UTM:	530612	mE	Nad83, Zone 8
Elevation:	1086 m	Sampler:	Adam Coulter	UTM:	7117010	mN	
Comments:	Oxidized calcarous shale with tremolite						
Sample Number:	W420613	Date Collected:	2019-06-09	UTM:	532871	mE	Nad83, Zone 8
Elevation:	1217 m	Sampler:	Adam Coulter	UTM:	7117216	mN	
Comments:	Wollastonite skarn with trace oxidized sulphides						
Sample Number:	W420614	Date Collected:	2019-06-15	UTM:	530498	mE	Nad83, Zone 8
Elevation:	1011 m	Sampler:	Adam Coulter	UTM:	7116902	mN	
Comments:	Shale sample from small 0.5 pit						

Rock Sample Descriptions Properties: Bobcat, Kathy, Rau, Rau Regional, Spotlight, Unknown Target

Sample Number:	W420615	Date Collected:	2019-06-15	UTM:	530481	mE	Nad83, Zone 8
Elevation:	1015 m	Sampler:	Adam Coulter	UTM:	7116935	mN	

Comments: Rusty shale outcrop with pyrite along bedding planes

Sample Number:	W420616	Date Collected:	2019-06-15	UTM:	530446	mE	Nad83, Zone 8
Elevation:	1018 m	Sampler:	Adam Coulter	UTM:	7116951	mN	

Comments: Shale fragments dug from small pit

Sample Number:	W420617	Date Collected:	2019-06-15	UTM:	530446	mE	Nad83, Zone 8
Elevation:	1018 m	Sampler:	Adam Coulter	UTM:	7116951	mN	

Comments: Light grey dolostone fragments with oxidized fractures dug from small pit

Sample Number:	W420618	Date Collected:	2019-06-15	UTM:	530580	mE	Nad83, Zone 8
Elevation:	1007 m	Sampler:	Adam Coulter	UTM:	7117034	mN	

Comments: Calcareous shale outcrop 25m west of massive sulphide

Sample Number:	W420619	Date Collected:	2019-06-15	UTM:	530609	mE	Nad83, Zone 8
Elevation:	1018 m	Sampler:	Adam Coulter	UTM:	7117037	mN	

Comments: Actinolite calcareous shale outcrop

Sample Number:	W420620	Date Collected:	2019-06-15	UTM:	530792	mE	Nad83, Zone 8
Elevation:	1026 m	Sampler:	Adam Coulter	UTM:	7116983	mN	

Comments: Rusty shale float from pit

Sample Number:	W420621	Date Collected:	2019-06-15	UTM:	530800	mE	Nad83, Zone 8
Elevation:	1022 m	Sampler:	Adam Coulter	UTM:	7116945	mN	

Comments: Shale float dug from pit

Rock Sample Descriptions Properties: Bobcat, Kathy, Rau, Rau Regional, Spotlight, Unknown Target

Sample Number:	W420622	Date Collected:	2019-06-15	UTM:	530800	mE	Nad83, Zone 8
Elevation:	1022 m	Sampler:	Adam Coulter	UTM:	7116945	mN	

Comments: Light grey, rounded and oxidized dolostone float dug from small pit

Sample Number:	W420623	Date Collected:	2019-06-15	UTM:	530852	mE	Nad83, Zone 8
Elevation:	1022 m	Sampler:	Adam Coulter	UTM:	7116948	mN	

Comments: Rusty and friable shale subcrop

Sample Number:	W420624	Date Collected:	2019-06-15	UTM:	530904	mE	Nad83, Zone 8
Elevation:	1024 m	Sampler:	Adam Coulter	UTM:	7117055	mN	

Comments: Rusty shale fragments from shallow pit

Sample Number:	W420625	Date Collected:	2019-06-15	UTM:	530904	mE	Nad83, Zone 8
Elevation:	1024 m	Sampler:	Adam Coulter	UTM:	7117055	mN	

Comments: Rounded beige non-calcareous sandstone with some oxidized fractures dug from small pit.

Sample Number:	W420626	Date Collected:	2019-06-15	UTM:	531051	mE	Nad83, Zone 8
Elevation:	1010 m	Sampler:	Adam Coulter	UTM:	7116952	mN	

Comments: Rusty shale fragments from small pit

Sample Number:	W420627	Date Collected:	2019-06-15	UTM:	531051	mE	Nad83, Zone 8
Elevation:	1010 m	Sampler:	Adam Coulter	UTM:	7116952	mN	

Comments: Oxidized and altered dolostone fragmements from small pit with actinolite and wollastonite.

Sample Number:	W420628	Date Collected:	2019-06-15	UTM:	531051	mE	Nad83, Zone 8
Elevation:	1010 m	Sampler:	Adam Coulter	UTM:	7116952	mN	

Comments: Very heavy skarnified dolostone from small pit with wollastonite, actinolite and possibly some scheelite. Very rusty weathered surface.

Rock Sample Descriptions Properties: Bobcat, Kathy, Rau, Rau Regional, Spotlight, Unknown Target

Sample Number:	W420629	Date Collected:	2019-06-15	UTM:	531051	mE	Nad83, Zone 8
Elevation:	1010 m	Sampler:	Adam Coulter	UTM:	7116952	mN	

Comments: Oxidized wollastonite, actinolite and sericite skarnified dolostone. Possible sheelite, UV later to determine.

Sample Number:	W420630	Date Collected:	2019-06-15	UTM:	531199	mE	Nad83, Zone 8
Elevation:	986 m	Sampler:	Adam Coulter	UTM:	7116995	mN	

Comments: Rusty shale fragments from pit.

Sample Number:	W420631	Date Collected:	2019-06-15	UTM:	531191	mE	Nad83, Zone 8
Elevation:	998 m	Sampler:	Adam Coulter	UTM:	7117048	mN	

Comments: Oxidized shale fragments from shallow pit at anomolous Au in soil location.

Sample Number:	W420632	Date Collected:	2019-06-15	UTM:	531092	mE	Nad83, Zone 8
Elevation:	1026 m	Sampler:	Adam Coulter	UTM:	7117227	mN	

Comments: Altered siltstone with blebby pyrrhotite.

Sample Number:	W420633	Date Collected:	2019-06-15	UTM:	531092	mE	Nad83, Zone 8
Elevation:	1026 m	Sampler:	Adam Coulter	UTM:	7117227	mN	

Comments: Semi-massive pyrrhotite and pyrite from shallow pit of oxidized marble.

Sample Number:	W420634	Date Collected:	2019-06-15	UTM:	531092	mE	Nad83, Zone 8
Elevation:	1026 m	Sampler:	Adam Coulter	UTM:	7117227	mN	

Comments: Completely recrystallized marble in pit next to sulphides. Orange in colour and friable.

Sample Number:	W420635	Date Collected:	2019-06-15	UTM:	531092	mE	Nad83, Zone 8
Elevation:	1026 m	Sampler:	Adam Coulter	UTM:	7117227	mN	

Comments: Limestone with semi-massive sulphides, mostly pyrite and pyrrhotite.

Rock Sample Descriptions Properties: Bobcat, Kathy, Rau, Rau Regional, Spotlight, Unknown Target

Sample Number:	W420636	Date Collected:	2019-06-15	UTM:	531089	mE	Nad83, Zone 8
Elevation:	1024 m	Sampler:	Adam Coulter	UTM:	7117220	mN	

Comments: Rusty dolostone with blebby pyrrhotite throughout and trace arsenopyrite dug from small pit. Possibly subcrop

Sample Number:	W420637	Date Collected:	2019-06-15	UTM:	531089	mE	Nad83, Zone 8
Elevation:	1024 m	Sampler:	Adam Coulter	UTM:	7117220	mN	

Comments: Very rusty weatehered surface on dolostone float from small pit. Semi-massive pyrrhotite and disseminated arsenopyrite.

Sample Number:	W420638	Date Collected:	2019-06-15	UTM:	531089	mE	Nad83, Zone 8
Elevation:	1024 m	Sampler:	Adam Coulter	UTM:	7117220	mN	

Comments: Massive pyrrhotite, highly magnetic with abundant tremolite from small pit uphill of an anomolous gold in soil location.

Sample Number:	W420639	Date Collected:	2019-06-15	UTM:	531089	mE	Nad83, Zone 8
Elevation:	1024 m	Sampler:	Adam Coulter	UTM:	7117220	mN	

Comments: Massive sphalerite? Black shiny mineral on fresh surface and rusty orange on weathered from small pit.

Sample Number:	W420640	Date Collected:	2019-06-17	UTM:	530943	mE	Nad83, Zone 8
Elevation:	1050 m	Sampler:	Adam Coulter	UTM:	7117240	mN	

Comments: Black altered carbonate with semi-massive pyrite (non-mag)

Sample Number:	W420641	Date Collected:	2019-06-17	UTM:	530943	mE	Nad83, Zone 8
Elevation:	1050 m	Sampler:	Adam Coulter	UTM:	7117240	mN	

Comments: Orange skarnified carbonate with wollastonite in subcrop.

Sample Number:	W420642	Date Collected:	2019-06-17	UTM:	530943	mE	Nad83, Zone 8
Elevation:	1052 m	Sampler:	Adam Coulter	UTM:	7117236	mN	

Comments: Semi massive pyrite and pyrrhotite in subcrop dug in small pit.

Rock Sample Descriptions Properties: Bobcat, Kathy, Rau, Rau Regional, Spotlight, Unknown Target

Sample Number:	W420643	Date Collected:	2019-06-17	UTM:	530943	mE	Nad83, Zone 8
Elevation:	1052 m	Sampler:	Adam Coulter	UTM:	7117236	mN	

Comments: Outcrop of highly altered carbonate next to pits at anomolous Au+Cu soil location.

Sample Number:	W420644	Date Collected:	2019-06-17	UTM:	531249	mE	Nad83, Zone 8
Elevation:	1044 m	Sampler:	Adam Coulter	UTM:	7117305	mN	

Comments: Rusty shale dug from small pit at anomolous Au+Cu soil location

Sample Number:	W420645	Date Collected:	2019-06-17	UTM:	531246	mE	Nad83, Zone 8
Elevation:	1062 m	Sampler:	Adam Coulter	UTM:	7117371	mN	

Comments: Highly altered carbonate, weakly magnetic with trace pyrrhotite and pyrite. Needly black mineral likely actinolite?

Sample Number:	W420646	Date Collected:	2019-06-17	UTM:	531246	mE	Nad83, Zone 8
Elevation:	1062 m	Sampler:	Adam Coulter	UTM:	7117371	mN	

Comments: Stripped carbonate with pyrite stringers along bedding planes.

Sample Number:	W420647	Date Collected:	2019-06-17	UTM:	531246	mE	Nad83, Zone 8
Elevation:	1062 m	Sampler:	Adam Coulter	UTM:	7117371	mN	

Comments: Black possibly massive sphalerite with trace pyrite + pyrrhotite. Strongly magnetic.

Sample Number:	W420648	Date Collected:	2019-06-17	UTM:	531765	mE	Nad83, Zone 8
Elevation:	1029 m	Sampler:	Adam Coulter	UTM:	7117157	mN	

Comments: Trace pyrrhotite in a very rusty quartzite?

Sample Number:	W420649	Date Collected:	2019-06-17	UTM:	531765	mE	Nad83, Zone 8
Elevation:	1029 m	Sampler:	Adam Coulter	UTM:	7117157	mN	

Comments: Similar to previous sample slightly west in outcrop.

Rock Sample Descriptions Properties: Bobcat, Kathy, Rau, Rau Regional, Spotlight, Unknown Target

Sample Number:	W420650	Date Collected:	2019-06-17	UTM:	531764	mE	Nad83, Zone 8
Elevation:	1028 m	Sampler:	Adam Coulter	UTM:	7117157	mN	

Comments: Magnetic semi-massive sulphides in outcrop at 'rusty ridge' found with Graham

Sample Number:	W420651	Date Collected:	2019-06-17	UTM:	531820	mE	Nad83, Zone 8
Elevation:	1028 m	Sampler:	Adam Coulter	UTM:	7117137	mN	

Comments: Highly sheared mylonitic and rusty silty carbonate.

Sample Number:	W420652	Date Collected:	2019-06-17	UTM:	531820	mE	Nad83, Zone 8
Elevation:	1028 m	Sampler:	Adam Coulter	UTM:	7117154	mN	

Comments: Blebby sulphides in highly sheared silty carbonate.

Sample Number:	W420653	Date Collected:	2019-06-17	UTM:	531843	mE	Nad83, Zone 8
Elevation:	1008 m	Sampler:	Adam Coulter	UTM:	7117000	mN	

Comments: Quartzite with pyrrhotite and pyrite from small pit at anomolous Au in soil location

Sample Number:	W420654	Date Collected:	2019-06-18	UTM:	532703	mE	Nad83, Zone 8
Elevation:	1099 m	Sampler:	Adam Coulter	UTM:	7117966	mN	

Comments: Kathy Goassan float/subcrop sample. Orange ferricrete that almost looks like scoria.

Sample Number:	W420655	Date Collected:	2019-06-18	UTM:	533240	mE	Nad83, Zone 8
Elevation:	9999 m	Sampler:	Graham Downs	UTM:	7118017	mN	

Comments: Fault rock taken from side of swamp with anomolous Cu+Au in soil east of Kathy. Brecciated fault rock with clasts of shale and oxidized dolostones with malachite staining on some oxide clasts.

Sample Number:	W420656	Date Collected:	2019-06-18	UTM:	533359	mE	Nad83, Zone 8
Elevation:	9999 m	Sampler:	Graham Downs	UTM:	7117893	mN	

Comments: Grahams samples from prospecting east of Kathy around anomolous Cu soils

Rock Sample Descriptions Properties: Bobcat, Kathy, Rau, Rau Regional, Spotlight, Unknown Target

Sample Number:	W420657	Date Collected:	2019-06-18	UTM:	533359	mE	Nad83, Zone 8
Elevation:	9999 m	Sampler:	Graham Downs	UTM:	7117893	mN	

Comments: Grahams samples from prospecting east of Kathy around anomolous Cu soils

Sample Number:	W420658	Date Collected:	2019-06-19	UTM:	519007	mE	Nad83, Zone 8
Elevation:	9999 m	Sampler:	Julia Lane	UTM:	7121426	mN	

Comments: Quart flooded sample of the surrounding shale (?) Fragment is slightly larger than a fist with grey 1.5 cm wispy stringers and yellowish green powerdy coatings on some broken surfaces. Quartz is medium grained and prismatic on the weathered outer surface.

Sample Number:	W420659	Date Collected:	2019-06-18	UTM:	535426	mE	Nad83, Zone 8
Elevation:	9999 m	Sampler:	Jessie Gladish	UTM:	7121992	mN	

Comments: Jessie rock sample from soil sampling

Sample Number:	W420660	Date Collected:	2019-06-18	UTM:	535343	mE	Nad83, Zone 8
Elevation:	9999 m	Sampler:	Jessie Gladish	UTM:	7121303	mN	

Comments: Jessie rock sample from soil sampling

Sample Number:	W420661	Date Collected:	2019-06-18	UTM:	535391	mE	Nad83, Zone 8
Elevation:	9999 m	Sampler:	Jessie Gladish	UTM:	7121320	mN	

Comments: Jessie rock sample from soil sampling

Sample Number:	W420662	Date Collected:	2019-06-18	UTM:	535406	mE	Nad83, Zone 8
Elevation:	m	Sampler:	Thomas Rozsypalek	UTM:	7121329	mN	

Comments: Thomas rock sample from soil sampling

Sample Number:	W420663	Date Collected:	2019-06-18	UTM:	535255	mE	Nad83, Zone 8
Elevation:	m	Sampler:	Jessie Gladish	UTM:	7121158	mN	

Comments: Jessie rock sample from soil sampling

Rock Sample Descriptions Properties: Bobcat, Kathy, Rau, Rau Regional, Spotlight, Unknown Target

Sample Number:	W420664	Date Collected:	2019-06-18	UTM:	536754	mE	Nad83, Zone 8
Elevation:	m	Sampler:	Jessie Gladish	UTM:	7121963	mN	

Comments: Jessie rock sample from soil sampling

Sample Number:	W420665	Date Collected:	2019-06-18	UTM:	535387	mE	Nad83, Zone 8
Elevation:	m	Sampler:	Jessie Gladish	UTM:	7121327	mN	

Comments: Jessie rock sample from soil sampling

Sample Number:	W420666	Date Collected:	2019-06-18	UTM:	532476	mE	Nad83, Zone 8
Elevation:	m	Sampler:	Thomas Rozsypalek	UTM:	7119501	mN	

Comments: Thomas rock sample from soil sampling

Sample Number:	W420667	Date Collected:	2019-06-18	UTM:	535588	mE	Nad83, Zone 8
Elevation:	m	Sampler:	Thomas Rozsypalek	UTM:	7121627	mN	

Comments: Thomas rock sample from soil sampling

Sample Number:	W420668	Date Collected:	2019-06-21	UTM:	533016	mE	Nad83, Zone 8
Elevation:	1117 m	Sampler:	Adam Coulter	UTM:	7118121	mN	

Comments: Highly sheared, weakly dolomitic siltstone float from small pit in swamp. Green epidote (?) alteration? Trace pyrite throughout. Weak HCL reaction.

Sample Number:	W420669	Date Collected:	2019-06-21	UTM:	533430	mE	Nad83, Zone 8
Elevation:	1222 m	Sampler:	Adam Coulter	UTM:	7117824	mN	

Comments: Sulphide cemented breccia along shale contact trending NW for almost 100m down slope in talus. Pyrite matrix supported fault breccia with large 2-5cm quartz vein clasts and smaller <2cm shale clasts.

Sample Number:	W420670	Date Collected:	2019-06-21	UTM:	533414	mE	Nad83, Zone 8
Elevation:	1202 m	Sampler:	Adam Coulter	UTM:	7117855	mN	

Comments: Sulphide cemented breccia along shale contact trending NW for almost 100m down slope in talus. Pyrite matrix supported fault breccia with large 2-5cm quartz vein clasts and smaller <2cm shale clasts.

Rock Sample Descriptions Properties: Bobcat, Kathy, Rau, Rau Regional, Spotlight, Unknown Target

Sample Number:	W420671	Date Collected:	2019-06-21	UTM:	533395	mE	Nad83, Zone 8
Elevation:	1185 m	Sampler:	Adam Coulter	UTM:	7117880	mN	

Comments: Sulphide cemented breccia along shale contact trending NW for almost 100m down slope in talus. Pyrite matrix supported fault breccia with large 2-5cm quartz vein clasts and smaller <2cm shale clasts.

Sample Number:	W420672	Date Collected:	2019-06-22	UTM:	532586	mE	Nad83, Zone 8
Elevation:	1071 m	Sampler:	Adam Coulter	UTM:	7116799	mN	

Comments: Pit at 167 ppb Au-in-soil location. Difficult digging with permafrost. Grabbed a brecciated dolostone sample with abundant calcite veining. No sulphides observed, looks unaltered. Most common rock type in pit.

Sample Number:	W420673	Date Collected:	2019-06-22	UTM:	532593	mE	Nad83, Zone 8
Elevation:	1075 m	Sampler:	Adam Coulter	UTM:	7116744	mN	

Comments: Rusty shale outcrop near high 167 ppb Au-in-soil location. Heavily sheared along outcrop edge.

Sample Number:	W420674	Date Collected:	2019-06-22	UTM:	532529	mE	Nad83, Zone 8
Elevation:	1060 m	Sampler:	Adam Coulter	UTM:	7116753	mN	

Comments: Highly oxidized tremolite skarn. Pyrite coated fracture surfaces, ~1cm pyrite and pyrrhotite vein and 1 small blebby possible bornite or oxidized and irredescent pyrite. Weakly magnetic in places. No HCL reaction.

Sample Number:	W420675	Date Collected:	2019-06-22	UTM:	532529	mE	Nad83, Zone 8
Elevation:	1060 m	Sampler:	Adam Coulter	UTM:	7116753	mN	

Comments: Very similar to previous sample from same outcrop. Sulphides (likely mostly pyrite) weathered purple along fractures surfaces. Non-mag and no HCL reaction.

Sample Number:	W420676	Date Collected:	2019-06-22	UTM:	532855	mE	Nad83, Zone 8
Elevation:	1134 m	Sampler:	Adam Coulter	UTM:	7116789	mN	

Comments: Dolostone in outcrop. Unaltered and massive with some thin silty beds. Outcrop sample taken for lithogeochem.

Rock Sample Descriptions Properties: Bobcat, Kathy, Rau, Rau Regional, Spotlight, Unknown Target

Sample Number:	W420677	Date Collected:	2019-06-22	UTM:	532927	mE	Nad83, Zone 8
Elevation:	1168 m	Sampler:	Adam Coulter	UTM:	7116917	mN	

Comments: Altered shale with large (3-4 cm) needly black actinolite (?) throughout. No dominant orientation to actinolite.

Sample Number:	W420678	Date Collected:	2019-06-22	UTM:	532927	mE	Nad83, Zone 8
Elevation:	1168 m	Sampler:	Adam Coulter	UTM:	7116917	mN	

Comments: Small white rounded rusty rocks. Not entirely sure where these come from but a lot of them in the pit.

Sample Number:	W420679	Date Collected:	2019-06-22	UTM:	532936	mE	Nad83, Zone 8
Elevation:	1166 m	Sampler:	Adam Coulter	UTM:	7116895	mN	

Comments: Small rusty rocks dug from pit. Few samples with tremolite. Mostly just heavily oxidized rock fragments. Very difficult to determinte protolith. No hcl reaction, non-mag.

Sample Number:	W420680	Date Collected:	2019-06-22	UTM:	532936	mE	Nad83, Zone 8
Elevation:	1166 m	Sampler:	Adam Coulter	UTM:	7116895	mN	

Comments: Metamorphosed shale with long (<1-3cm) actinolite (?) needles. Couldn't get much out of the pit so sampled this anyway.

Sample Number:	W420681	Date Collected:	2019-06-22	UTM:	532950	mE	Nad83, Zone 8
Elevation:	1171 m	Sampler:	Adam Coulter	UTM:	7116914	mN	

Comments: Rusty shale float dug from pit immediately upslope from anomolous Au-in-soil locations. Possibly getting near shale-dst contact?

Sample Number:	W420682	Date Collected:	2019-06-22	UTM:	518826	mE	Nad83, Zone 8
Elevation:	9999 m	Sampler:	Julia Lane	UTM:	7121494	mN	

Comments: Silicic shale/siltstone with porous 1-2 mm recessive pits throughout.

Sample Number:	W420683	Date Collected:	2019-06-22	UTM:	518805	mE	Nad83, Zone 8
Elevation:	9999 m	Sampler:	Julia Lane	UTM:	7121488	mN	

Comments: Float sample of black shale (non calcaresous when scratched) that is brecciated into angular 0.3-3 cm rectangular clasts and cemented in an bright orange matrix. The larger clasts are clast supported and the finer clasts are matrix supported.

Rock Sample Descriptions Properties: Bobcat, Kathy, Rau, Rau Regional, Spotlight, Unknown Target

Sample Number:	W420684	Date Collected:	2019-06-24	UTM:	529638	mE	Nad83, Zone 8
Elevation:	1516 m	Sampler:	Adam Coulter	UTM:	7118651	mN	

Comments: Rusty limestone outcrop on a ridge. Weakly magnetic with strong reaction to HCl. Visible and trace arseonpyrite.

Sample Number:	W420685	Date Collected:	2019-06-24	UTM:	529627	mE	Nad83, Zone 8
Elevation:	1495 m	Sampler:	Adam Coulter	UTM:	7118590	mN	

Comments: W420685 - Massive sulphide in outcrop. Overall purplish-orange colour. Highly magnetic, Dominantly pyrrhotite and blebby chalcopyrite with trace arsenopyrite.

Sample Number:	W420686	Date Collected:	2019-06-24	UTM:	529627	mE	Nad83, Zone 8
Elevation:	1495 m	Sampler:	Adam Coulter	UTM:	7118590	mN	

Comments: W420686 - Orange rusty altered limestone with purplish tinge.

Sample Number:	W420687	Date Collected:	2019-06-24	UTM:	529627	mE	Nad83, Zone 8
Elevation:	1495 m	Sampler:	Adam Coulter	UTM:	7118590	mN	

Comments: W420687 - Semi-massive sulphide with 1-2cm quartz veins. Weakly magnetic. Contains pyrrhotite and chalcopyrite.

Sample Number:	W420688	Date Collected:	2019-06-24	UTM:	529490	mE	Nad83, Zone 8
Elevation:	1412 m	Sampler:	Adam Coulter	UTM:	7118447	mN	

Comments: W420688 - Over 1m wide sulphide vein with highly altered halo. This sample is from the vein margin.

Sample Number:	W420689	Date Collected:	2019-06-24	UTM:	529490	mE	Nad83, Zone 8
Elevation:	1412 m	Sampler:	Adam Coulter	UTM:	7118447	mN	

Comments: W420686 - Orange rusty altered limestone with purplish tinge.

Sample Number:	W420690	Date Collected:	2019-06-24	UTM:	529634	mE	Nad83, Zone 8
Elevation:	1214 m	Sampler:	Adam Coulter	UTM:	7117954	mN	

Comments: W420690 - Stumbled across massive sulphide in open burn area, looking for heli-pad. Weakly magnetic in places. Weird, up to 1cm orthorhombic pyrite (?) with black coating. Weakly magnetic in places and mostly pyrite.

Rock Sample Descriptions Properties: Bobcat, Kathy, Rau, Rau Regional, Spotlight, Unknown Target

Sample Number:	W420691	Date Collected:	2019-06-24	UTM:	529634	mE	Nad83, Zone 8
Elevation:	1214 m	Sampler:	Adam Coulter	UTM:	7117954	mN	

Comments: W420691 - Same as previous. Stumbled across massive sulphide in open burn area, looking for heli-pad. Weakly magnetic in places. Weird, up to 1cm orthorhombic pyrite (?) with black coating. Weakly magnetic in places and mostly pyrite.

Sample Number:	W420692	Date Collected:	2019-06-24	UTM:	529623	mE	Nad83, Zone 8
Elevation:	1210 m	Sampler:	Adam Coulter	UTM:	7117923	mN	

Comments: W420692 - Austin grabbed a rusty limestone containing siderite and iron oxides.

Sample Number:	W420693	Date Collected:	2019-06-24	UTM:	530046	mE	Nad83, Zone 8
Elevation:	1188 m	Sampler:	Adam Coulter	UTM:	7117964	mN	

Comments: W420693 - Green volcanic with blebby pyrite and pyrrhotite dug from a small pit.

Sample Number:	W420694	Date Collected:	2019-06-25	UTM:	529886	mE	Nad83, Zone 8
Elevation:	1130 m	Sampler:	Adam Coulter	UTM:	7117710	mN	

Comments: W420694 - Black limestone float with strong HCl reaction. Weakly magnetic throughout with large ~1cm blebby pyrite.

Sample Number:	W420695	Date Collected:	2019-06-25	UTM:	529886	mE	Nad83, Zone 8
Elevation:	1130 m	Sampler:	Adam Coulter	UTM:	7117710	mN	

Comments: W420695 - Slightly lighter black/blue limestone with abundant ~1cm pyrite. Rusty surface and weakly magnetic in places. This sample type is very abundant in pit.

Sample Number:	W420696	Date Collected:	2019-06-25	UTM:	529886	mE	Nad83, Zone 8
Elevation:	1130 m	Sampler:	Adam Coulter	UTM:	7117710	mN	

Comments: W420696 - Green volcanic float with ~1cm quartz vein on margin. Strongly magnetic.

Sample Number:	W420697	Date Collected:	2019-06-25	UTM:	529886	mE	Nad83, Zone 8
Elevation:	1130 m	Sampler:	Adam Coulter	UTM:	7117710	mN	

Comments: W420697 - Small, rusty fragments with abundant pyrite and tremolite.

Rock Sample Descriptions Properties: Bobcat, Kathy, Rau, Rau Regional, Spotlight, Unknown Target

Sample Number:	W420698	Date Collected:	2019-06-25	UTM:	529919	mE	Nad83, Zone 8
Elevation:	1121 m	Sampler:	Adam Coulter	UTM:	7117695	mN	

Comments: W420698 - A lot of rusty, non-magnetic limestone fragments with trace tremolite.

Sample Number:	W420699	Date Collected:	2019-06-25	UTM:	529900	mE	Nad83, Zone 8
Elevation:	1120 m	Sampler:	Adam Coulter	UTM:	7117700	mN	

Comments: W420699 - Rusty limestone float from megans pit. One piece with black, massive sphalerite (?). All react with HCl

Sample Number:	W420700	Date Collected:	2019-06-25	UTM:	529900	mE	Nad83, Zone 8
Elevation:	1120 m	Sampler:	Adam Coulter	UTM:	7117700	mN	

Comments: W420700 - Green volcanic with blebby pyrite throughout. Non-magnetic.

Sample Number:	W420701	Date Collected:	2019-07-03	UTM:	531096	mE	Nad83, Zone 8
Elevation:	1026 m	Sampler:	Adam Coulter	UTM:	7117229	mN	

Comments: Limestone float with pyrite and arsenopyrite stringers along bedding and pyrite blebs

Sample Number:	W420702	Date Collected:	2019-07-03	UTM:	531096	mE	Nad83, Zone 8
Elevation:	1026 m	Sampler:	Adam Coulter	UTM:	7117229	mN	

Comments: Limestone float with pyrite and arsenopyrite stringers along bedding with pyrite blebs. Same as W420701, but higher concentration of sulphides

Sample Number:	W420703	Date Collected:	2019-07-03	UTM:	531096	mE	Nad83, Zone 8
Elevation:	1026 m	Sampler:	Adam Coulter	UTM:	7117229	mN	

Comments: Fairly oxidized semi-massive sulphide float

Sample Number:	W420704	Date Collected:	2019-07-03	UTM:	531091	mE	Nad83, Zone 8
Elevation:	1025 m	Sampler:	Adam Coulter	UTM:	7117224	mN	

Comments: Orange - purple oxide float sample. Moderately pitted, some quartz fragments, trace wollastonite and epidote(?). No magnetism. No Hydrochloric acid reaction.

Rock Sample Descriptions Properties: Bobcat, Kathy, Rau, Rau Regional, Spotlight, Unknown Target

Sample Number:	W420705	Date Collected:	2019-07-03	UTM:	531091 mE	Nad83, Zone 8
Elevation:	1025 m	Sampler:	Adam Coulter	UTM:	7117224 mN	

Comments: Blue- grey carbonate with strong surficial weathering/ oxidation. Contains disseminated and up to approximately 5 mm blebs of pyrite and silvery sulphide (arsenopyrite?) and pyrrhotite. Variably strongly magnetic. Weak reaction with hydrochloric acid when powdered.

Sample Number:	W420706	Date Collected:	2019-07-03	UTM:	531093 mE	Nad83, Zone 8
Elevation:	1026 m	Sampler:	Adam Coulter	UTM:	7117228 mN	

Comments: Skarn with disseminated pyrite. No magnetism. No reaction with hydrochloric acid.

Sample Number:	W420707	Date Collected:	2019-07-03	UTM:	530942 mE	Nad83, Zone 8
Elevation:	1041 m	Sampler:	Adam Coulter	UTM:	7117238 mN	

Comments: Rusty orange- purple oxidized massive sulphide. Contains multiple mm thick black veins of cuprite(?). No magnetism. No hydrochloric acid reaction.

Sample Number:	W420708	Date Collected:	2019-07-03	UTM:	530942 mE	Nad83, Zone 8
Elevation:	1041 m	Sampler:	Adam Coulter	UTM:	7117238 mN	

Comments: Rusty orange- purple oxidized massive sulphide. Contains multiple mm thick black veins of cuprite(?). No magnetism. No hydrochloric acid reaction. Same as W420707, but contains approximate 5 mm to 1 cm thick wollastonite veins.

Sample Number:	W420709	Date Collected:	2019-07-03	UTM:	530946 mE	Nad83, Zone 8
Elevation:	1041 m	Sampler:	Adam Coulter	UTM:	7117238 mN	

Comments: Dark purple- black, very friable massive sulphide in outcrop. No magnetism. No reaction to hydrochloric acid.

Sample Number:	W420710	Date Collected:	2019-07-03	UTM:	530946 mE	Nad83, Zone 8
Elevation:	1041 m	Sampler:	Adam Coulter	UTM:	7117238 mN	

Comments: Rusty orange- purple, moderately pitted, oxidized massive sulphide in outcrop. Contains sericite and sub- mm black sulphide (?) veins. No magnetism. No reaction to hydrochloric acid.

Rock Sample Descriptions Properties: Bobcat, Kathy, Rau, Rau Regional, Spotlight, Unknown Target

Sample Number:	W420711	Date Collected:	2019-07-03	UTM:	530946	mE	Nad83, Zone 8
Elevation:	1041 m	Sampler:	Adam Coulter	UTM:	7117238	mN	

Comments: Orange- purple massive sulphide with moderate mm- sized sulphide, possibly cuprite veins from outcrop. No magnetism. No reaction to hydrochloric acid.

Sample Number:	W420712	Date Collected:	2019-07-03	UTM:	530938	mE	Nad83, Zone 8
Elevation:	1037 m	Sampler:	Adam Coulter	UTM:	7117247	mN	

Comments: Rusty purple- orange outcrop. Thin purple veins throughout. Trace talc. No magnetism. No hydrochloric acid reaction.

Sample Number:	W420713	Date Collected:	2019-07-03	UTM:	530938	mE	Nad83, Zone 8
Elevation:	1037 m	Sampler:	Adam Coulter	UTM:	7117247	mN	

Comments: Rusty purple- orange outcrop. Thin purple veins throughout. Trace talc. No magnetism. No hydrochloric acid reaction. Same as W420712.

Sample Number:	W420714	Date Collected:	2019-07-03	UTM:	530950	mE	Nad83, Zone 8
Elevation:	1040 m	Sampler:	Adam Coulter	UTM:	7117242	mN	

Comments: Orange- purple oxidized with thin black veins and trace light blue sugary minerals.

Sample Number:	W420715	Date Collected:	2019-07-04	UTM:	533838	mE	Nad83, Zone 8
Elevation:	1261 m	Sampler:	Adam Coulter	UTM:	7117929	mN	

Comments: Non- calcareous shale outcrop with a 1 cm quartz vein with rusted out sulphides.

Sample Number:	W420716	Date Collected:	2019-07-04	UTM:	533826	mE	Nad83, Zone 8
Elevation:	1254 m	Sampler:	Adam Coulter	UTM:	7117939	mN	

Comments: Non calcareous shale subcrop with orange veins.

Sample Number:	W420717	Date Collected:	2019-07-04	UTM:	533827	mE	Nad83, Zone 8
Elevation:	1249 m	Sampler:	Adam Coulter	UTM:	7117954	mN	

Comments: Orange, punky limonite float from anomalous soil picket.

Rock Sample Descriptions Properties: Bobcat, Kathy, Rau, Rau Regional, Spotlight, Unknown Target

Sample Number:	W420718	Date Collected:	2019-07-04	UTM:	533827 mE	Nad83, Zone 8
Elevation:	1249 m	Sampler:	Adam Coulter	UTM:	7117954 mN	

Comments: Finer grained, green gabbro float. Trace pyrite throughout. Lavender purple 1 cm vein with trace pyrite.

Sample Number:	W420719	Date Collected:	2019-07-04	UTM:	533815 mE	Nad83, Zone 8
Elevation:	1238 m	Sampler:	Adam Coulter	UTM:	7117968 mN	

Comments: Limonite cemented breccia. Purple in colour with angular shale clasts.

Sample Number:	W420720	Date Collected:	2019-07-04	UTM:	533815 mE	Nad83, Zone 8
Elevation:	1238 m	Sampler:	Adam Coulter	UTM:	7117968 mN	

Comments: Limonite cemented breccia. Purple in colour with angular shale clasts. Same as W420719

Sample Number:	W420721	Date Collected:	2019-07-04	UTM:	533852 mE	Nad83, Zone 8
Elevation:	1234 m	Sampler:	Adam Coulter	UTM:	7117974 mN	

Comments: Limonite float immediately uphill from high copper soil anomaly. Couldn’t find picket. Shallow permafrost at soil location.

Sample Number:	W420722	Date Collected:	2019-07-04	UTM:	533825 mE	Nad83, Zone 8
Elevation:	1272 m	Sampler:	Adam Coulter	UTM:	7117851 mN	

Comments: Limonite float immediately above from the moderate silver soil anomaly.

Sample Number:	W420723	Date Collected:	2019-07-04	UTM:	533825 mE	Nad83, Zone 8
Elevation:	1272 m	Sampler:	Adam Coulter	UTM:	7117851 mN	

Comments: Rusty brecciated shale float.

Sample Number:	W420724	Date Collected:	2019-07-04	UTM:	533835 mE	Nad83, Zone 8
Elevation:	1293 m	Sampler:	Adam Coulter	UTM:	7117786 mN	

Comments: Sheared shale outcrop with thin 5 mm quartz- carbonate veins with trace rusted sulphides.

Rock Sample Descriptions Properties: Bobcat, Kathy, Rau, Rau Regional, Spotlight, Unknown Target

Sample Number:	W420725	Date Collected:	2019-07-04	UTM:	534031	mE	Nad83, Zone 8
Elevation:	1320 m	Sampler:	Adam Coulter	UTM:	7117679	mN	

Comments: Abundant rusty quartz veins in shale float above 9 g/t silver anomalous soil.

Sample Number:	W420726	Date Collected:	2019-07-04	UTM:	534077	mE	Nad83, Zone 8
Elevation:	1322 m	Sampler:	Adam Coulter	UTM:	7117673	mN	

Comments: Quartz vein float with potential rusted out sulphides near 9 g/t silver anomalous soil.

Sample Number:	W420727	Date Collected:	2019-07-04	UTM:	534077	mE	Nad83, Zone 8
Elevation:	1322 m	Sampler:	Adam Coulter	UTM:	7117673	mN	

Comments: Quartz vein float with potential rusted out sulphides near 9 g/t silver anomalous soil. Same as W420726.

Sample Number:	W420728	Date Collected:	2019-07-04	UTM:	534077	mE	Nad83, Zone 8
Elevation:	1322 m	Sampler:	Adam Coulter	UTM:	7117673	mN	

Comments: Quartz vein float with potential rusted out sulphides near 9 g/t silver anomalous soil. Same as W420726 and W420727.

Sample Number:	W420729	Date Collected:	2019-07-04	UTM:	533897	mE	Nad83, Zone 8
Elevation:	1356 m	Sampler:	Adam Coulter	UTM:	7117475	mN	

Comments: Milky quartz vein float with some rusted out sulphides directly above anomalous arsenic in soil.

Sample Number:	W420730	Date Collected:	2019-07-04	UTM:	533911	mE	Nad83, Zone 8
Elevation:	1346 m	Sampler:	Adam Coulter	UTM:	7117521	mN	

Comments: Milky quartz vein float with some rusted out sulphides directly above anomalous arsenic in soil. Similar to W420729 but with soft black metallic mineral (sphalerite?).

Sample Number:	W420731	Date Collected:	2019-07-05	UTM:	534557	mE	Nad83, Zone 8
Elevation:	1250 m	Sampler:	Adam Coulter	UTM:	7117145	mN	

Comments: Non-calcareous shale in float from pit

Rock Sample Descriptions Properties: Bobcat, Kathy, Rau, Rau Regional, Spotlight, Unknown Target

Sample Number:	W420732	Date Collected:	2019-07-05	UTM:	534557 mE	Nad83, Zone 8
Elevation:	1250 m	Sampler:	Adam Coulter	UTM:	7117145 mN	

Comments: Small fragments of orange oxide float from pit.

Sample Number:	W420733	Date Collected:	2019-07-05	UTM:	534705 mE	Nad83, Zone 8
Elevation:	1209 m	Sampler:	Adam Coulter	UTM:	7117128 mN	

Comments: Non-calcareous shale subcrop

Sample Number:	W420734	Date Collected:	2019-07-05	UTM:	534717 mE	Nad83, Zone 8
Elevation:	1206 m	Sampler:	Adam Coulter	UTM:	7117102 mN	

Comments: Fine-grained orange pitted non-calcareous oxide float from pit.

Sample Number:	W420735	Date Collected:	2019-07-05	UTM:	534698 mE	Nad83, Zone 8
Elevation:	1206 m	Sampler:	Adam Coulter	UTM:	7117078 mN	

Comments: Limonite supported breccia uphill from high Cu-in-soil location. Shale and orange oxide clasts set in iron-rich matrix.

Sample Number:	W420736	Date Collected:	2019-07-05	UTM:	534698 mE	Nad83, Zone 8
Elevation:	1206 m	Sampler:	Adam Coulter	UTM:	7117078 mN	

Comments: Limonite supported breccia uphill from high Cu-in-soil location. Shale and orange oxide clasts set in iron-rich matrix.

Sample Number:	W420737	Date Collected:	2019-07-05	UTM:	534694 mE	Nad83, Zone 8
Elevation:	1205 m	Sampler:	Adam Coulter	UTM:	7117069 mN	

Comments: Orange non-calcareous oxide float. Protolith unknown.

Sample Number:	W420738	Date Collected:	2019-07-05	UTM:	534823 mE	Nad83, Zone 8
Elevation:	1160 m	Sampler:	Adam Coulter	UTM:	7116989 mN	

Comments: Quartz-carbonate vein with possible sphalerite in float from pit.

Rock Sample Descriptions Properties: Bobcat, Kathy, Rau, Rau Regional, Spotlight, Unknown Target

Sample Number:	W420739	Date Collected:	2019-07-05	UTM:	534823	mE	Nad83, Zone 8
Elevation:	1160 m	Sampler:	Adam Coulter	UTM:	7116989	mN	

Comments: Quartz-carbonate vein with possible sphalerite in float from pit.

Sample Number:	W420740	Date Collected:	2019-07-05	UTM:	535026	mE	Nad83, Zone 8
Elevation:	1079 m	Sampler:	Adam Coulter	UTM:	7116847	mN	

Comments: 1-2cm rustyu quartz-carb veins in shale from float in pit. Sulphides completed rusted out, not sure what they were.

Sample Number:	W420741	Date Collected:	2019-07-05	UTM:	535028	mE	Nad83, Zone 8
Elevation:	1071 m	Sampler:	Adam Coulter	UTM:	7116793	mN	

Comments: Limonite supported breccia with red matrix. Contains small 0.5-3cm orange non-calcareous clasts and shale clasts.

Sample Number:	W420742	Date Collected:	2019-07-05	UTM:	535028	mE	Nad83, Zone 8
Elevation:	1071 m	Sampler:	Adam Coulter	UTM:	7116793	mN	

Comments: Limonite supported breccia with green matrix. Contains small 0.5-3cm orange non-calcareous clasts and shale clasts.

Sample Number:	W420743	Date Collected:	2019-07-05	UTM:	535021	mE	Nad83, Zone 8
Elevation:	1075 m	Sampler:	Adam Coulter	UTM:	7116797	mN	

Comments: 10m upslope from ABC-19-142. Limonite suporrted breccia with red matrix containing orange oxide and shale clasts.

Sample Number:	W420744	Date Collected:	2019-07-05	UTM:	533720	mE	Nad83, Zone 8
Elevation:	1381 m	Sampler:	Austin Schneebeli	UTM:	7117077	mN	

Comments: Dark green/blue fine-medium grained gabbro in float/subcrop. Purple rusty orange sulphdie oxidation on surface and pervasive into rock. No HCL reaction and non-mag.

Sample Number:	W420745	Date Collected:	2019-07-05	UTM:	533563	mE	Nad83, Zone 8
Elevation:	1351 m	Sampler:	Austin Schneebeli	UTM:	7117034	mN	

Comments: Moderate to strongly altered gabbro. Yellow limonite replacing most of the host rock. Purple rusty orange oxidation on surfaces and fractures. Trace blebby pyrite and silvery sulphide (arsenopyrite). No HCL reaction and non magnetic.

Rock Sample Descriptions Properties: Bobcat, Kathy, Rau, Rau Regional, Spotlight, Unknown Target

Sample Number:	W420746	Date Collected:	2019-07-05	UTM:	533559	mE	Nad83, Zone 8
Elevation:	1347 m	Sampler:	Austin Schneebeli	UTM:	7117039	mN	

Comments: Light grey, medium grained gabbro. Trace - weak disseminated pyrite. Slight to moderately oxidized ring on surface. No HCL reaction and non magnetic. Downhill from previous sample.

Sample Number:	W420747	Date Collected:	2019-07-05	UTM:	533400	mE	Nad83, Zone 8
Elevation:	1289 m	Sampler:	Austin Schneebeli	UTM:	7116940	mN	

Comments: Altered white/grey gabbro from talus/subcrop. Strong oxidation, variably pitted rusted out sulphides. No HCL reaction and non magnetic. Possibly represents a contact between shale and gabbro.

Sample Number:	W420748	Date Collected:	2019-07-05	UTM:	533375	mE	Nad83, Zone 8
Elevation:	1271 m	Sampler:	Austin Schneebeli	UTM:	7116945	mN	

Comments: Non-calcareous shale. Contains white quartz veins with trace to moderate oxidation. Trace oxidized sulphides in veins and apple-green mineral (tremolite/actinolite?). Shale outcrop is sheared and has wavy bedding

Sample Number:	W420749	Date Collected:	2019-07-05	UTM:	533436	mE	Nad83, Zone 8
Elevation:	1305 m	Sampler:	Austin Schneebeli	UTM:	7116984	mN	

Comments: Green-grey fine to medium grained gabbro outcrop. Contains weak blebby, black metallic sulphides and rusty orange oxide. No HCL reaction and non magnetic. Up hill from 120 ppm Cu-in-soil.

Sample Number:	W420750	Date Collected:	2019-07-05	UTM:	533440	mE	Nad83, Zone 8
Elevation:	1302 m	Sampler:	Austin Schneebeli	UTM:	7116994	mN	

Comments: Highly altered gabbro float. White-beige coloured. Contains weak black metallic sulphide (chalcocite?) and trace massive pink mineral (cuprite?). Moderately oxidized with oxidized sulphides. No HCL reaction and non magnetic.

Sample Number:	W591751	Date Collected:	2019-06-01	UTM:	525777	mE	Nad83, Zone 8
Elevation:	1594 m	Sampler:	Steve Israel	UTM:	7121097	mN	

Comments: Grab sample of outcrop, rusty weathered dolostone with small patches and thin layers of py, po +/- aspy with goethite, limonite alteration around edges of sulphides

Rock Sample Descriptions Properties: Bobcat, Kathy, Rau, Rau Regional, Spotlight, Unknown Target

Sample Number:	W591752	Date Collected:	2019-06-01	UTM:	525239	mE	Nad83, Zone 8
Elevation:	1479 m	Sampler:	Steve Israel	UTM:	7122523	mN	

Comments: Grab sample of outcrop, strongly altered and sheared volcanic/volcaniclastic. Zones of alteration (silica/calcite) within chloritic schist with disseminated py +/- cpy; abundant malachite

Sample Number:	W591764	Date Collected:	2019-06-01	UTM:	518825	mE	Nad83, Zone 8
Elevation:	1091 m	Sampler:	Steve Israel	UTM:	7121445	mN	

Comments: Grab sample of float, frothy, vuggy quartz vein material in siliceous shale/siltstone.

Sample Number:	W591772	Date Collected:	2019-06-01	UTM:	524490	mE	Nad83, Zone 8
Elevation:	1657 m	Sampler:	Steve Israel	UTM:	7121126	mN	

Comments: Outcrop sample of banded white, grey and black quartz vein and quartz infill within altered siliceous dolostone. Fine-grained black carbonaceous layers within quartz vein. Possible very fine-grained biotite and local epidote

Sample Number:	W842151	Date Collected:	2019-07-06	UTM:	531754	mE	Nad83, Zone 8
Elevation:	974 m	Sampler:	Austin Schneebeli	UTM:	7116891	mN	

Comments: W842151 - Medium grey to whitish-brown, marbilized dolostone subcrop/boulder. Contains many radiating tremolites with variable oxidation and large elongate actinolite. Moderate reaction with HCl when scratched, non-magnetic. Down slope of anomalous gold soil sample. Trace speckly silver mineral on surfaces.

Sample Number:	W842152	Date Collected:	2019-07-06	UTM:	531850	mE	Nad83, Zone 8
Elevation:	954 m	Sampler:	Austin Schneebeli	UTM:	7116905	mN	

Comments: W842152 - Michael's pit. 5m from anomalous Au soil sample at the base of a slope. Subcrop/float of variably weak-intensely oxidized silty limestone. Contains multiple calcite vein generations and tremolite veins with weak sulphide oxidation.

Sample Number:	W842153	Date Collected:	2019-07-06	UTM:	531849	mE	Nad83, Zone 8
Elevation:	991 m	Sampler:	Austin Schneebeli	UTM:	7116922	mN	

Comments: W842153 - Very friable, medium-dark grey, sheared limestone. Contains moderate disseminated oxidized sulphides and trace calcite veining. Highly reactive with HCl and non-magnetic.

Rock Sample Descriptions Properties: Bobcat, Kathy, Rau, Rau Regional, Spotlight, Unknown Target

Sample Number:	W842154	Date Collected:	2019-07-06	UTM:	531849	mE	Nad83, Zone 8
Elevation:	991 m	Sampler:	Austin Schneebeli	UTM:	7116922	mN	

Comments: W842154 - Very friable, medium-dark grey, sheared limestone. Contains moderate disseminated oxidized sulphides and trace calcite veining. Highly reactive with HCl and non-magnetic. This sample is a powdered sediment form of W842153.

Sample Number:	W842155	Date Collected:	2019-07-07	UTM:	532807	mE	Nad83, Zone 8
Elevation:	1199 m	Sampler:	Austin Schneebeli	UTM:	7117330	mN	

Comments: W842155 - Radiating ~1cm wide oxidized, tremolite veins on sheared, weakly marbilized dolostone outcrop. Moderate reacting with HCl when scratched, non-magnetic. Fresh tremolite is white-apple green.

Sample Number:	W842156	Date Collected:	2019-07-07	UTM:	532809	mE	Nad83, Zone 8
Elevation:	1190 m	Sampler:	Austin Schneebeli	UTM:	7117402	mN	

Comments: W842156 - 1-2cm thick, white-light green, moderate-strongly oxidized tremolite veins along white marble in outcrop. Contains trace malachite and trace massive, black mineral (chalcocite?) occuring proximal to malachite. Moderately reactive with HCl, non-magnetic

Sample Number:	W842157	Date Collected:	2019-07-07	UTM:	532811	mE	Nad83, Zone 8
Elevation:	1189 m	Sampler:	Austin Schneebeli	UTM:	7117396	mN	

Comments: W842157 - Float sample of intensely oxidized, pitted, massive sulphide. Contains some mm-sized purplish veins and trace tremolite. No HCl reaction, non-magnetic. 1*0.5m wide, 0.75m deep pit dug looking for outcrop, but not found.

Sample Number:	W842158	Date Collected:	2019-07-07	UTM:	532839	mE	Nad83, Zone 8
Elevation:	1193 m	Sampler:	Austin Schneebeli	UTM:	7117498	mN	

Comments: W842158 - Dark grey, fine grained, massive dolostone with locally intense oxidation and oxidized mm-sized tremolite/actinolite veins that contains blebby pyrite and purple oxidized sulphides. Trace malachite on surfaces and veins. Moderate HCl reaction when scratched, non-magnetic.

Rock Sample Descriptions Properties: Bobcat, Kathy, Rau, Rau Regional, Spotlight, Unknown Target

Sample Number:	W842159	Date Collected:	2019-07-07	UTM:	532839	mE	Nad83, Zone 8
Elevation:	1193 m	Sampler:	Austin Schneebeli	UTM:	7117498	mN	

Comments: W842159 - Dark grey, fine grained, massive dolostone with locally intense oxidation and oxidized mm-sized tremolite/actinolite veins that contains blebby pyrite and purple oxidized sulphides. Contains trace malachite on surfaces and veins, speckly, black, trace chalcocite(?) associated with malachite and rare azurite. Moderate HCl reaction when scratched, non-magnetic.

Sample Number:	W842160	Date Collected:	2019-07-07	UTM:	532829	mE	Nad83, Zone 8
Elevation:	1184 m	Sampler:	Austin Schneebeli	UTM:	7117502	mN	

Comments: W842160 - Megan's pit. Dug at 0.034 Au soil sample picket. Medium-dark grey, medium grained limestone (weakly dolotomized?). Contains moderate, elongate (1-2cm) actinolite and mm-sized, oxidized tremolite veins. Moderately reactive with HCl and non-magnetic.

Sample Number:	W842161	Date Collected:	2019-07-09	UTM:	533407	mE	Nad83, Zone 8
Elevation:	1446 m	Sampler:	Austin Schneebeli	UTM:	7123098	mN	

Comments: W842161 - Purplish-orange oxidized, pitted, moderately limonite bearing silty shale. Sample found as talus on outcrop, no sign of upslope origin. ~10% limonite, ~20% weathered, purplish manganese oxide or weathered pyrite (?). Limonite is massive and earthy; the weathered purple mineral is sub-metallic to dull and massive.

Sample Number:	W842162	Date Collected:	2019-07-09	UTM:	533374	mE	Nad83, Zone 8
Elevation:	1387 m	Sampler:	Austin Schneebeli	UTM:	7123247	mN	

Comments: W842162 - Purple-orange-brown, quartz vein brecciated, vuggy, pitted, moderately oxidized, silicified limestone from 1*2m outcrop. Quartz is fresh to orange-oxidized. Dark purple-black sub-metallic to dull mineral/oxide occurs throughout as massive or mm-sized veins. No HCl reaction and non-magnetic.

Sample Number:	W842163	Date Collected:	2019-07-09	UTM:	533374	mE	Nad83, Zone 8
Elevation:	1387 m	Sampler:	Austin Schneebeli	UTM:	7123247	mN	

Comments: W842163 - Purple-orange-brown, quartz vein brecciated, vuggy, pitted, moderately oxidized, silicified limestone from 1*2m outcrop. Quartz is fresh to orange-oxidized. Dark purple-black sub-metallic to dull mineral/oxide occurs throughout as massive, mm-sized veins, and is common on vug surfaces.No HCl reaction and non-magnetic.

Rock Sample Descriptions Properties: Bobcat, Kathy, Rau, Rau Regional, Spotlight, Unknown Target

Sample Number:	W842164	Date Collected:	2019-07-09	UTM:	533370	mE	Nad83, Zone 8
Elevation:	1381 m	Sampler:	Austin Schneebeli	UTM:	7123266	mN	

Comments: W842164 - Blue-grey siliceous limestone vein breccia. Veins are completely replaced by fine grained, massive, orange oxide (limonite?) and very pitted, vuggy, dull, purple massive oxide. Sample found in talus slope. Sample contains rare, pink, massive, earthy mineral occuring in sub-mm vug. Not reactive with HCl and non-magnetic.

Sample Number:	W842165	Date Collected:	2019-07-09	UTM:	533364	mE	Nad83, Zone 8
Elevation:	1379 m	Sampler:	Austin Schneebeli	UTM:	7123261	mN	

Comments: W842165 - ~2-15cm thick quartz vein trending 345/70 along blue-grey siliceous, 5*3m limestone outcrop. Vein is pitted, variably punky with trace orange limonite. The limestone is moderately oxidized by purple, massive dull mineral. Rare, sub-mm sized cubic pyrites rusted out of siliceous limestone. No HCl reaction, non-magnetic.

Sample Number:	W842166	Date Collected:	2019-07-09	UTM:	533466	mE	Nad83, Zone 8
Elevation:	1377 m	Sampler:	Austin Schneebeli	UTM:	7123280	mN	

Comments: W842166 - Sample taken up slope from anomalous soil sample. Outcrop of ~0.5*5m oxidized and quartz veined sandy shale. Sample is pitted, orange-purple on surfaces with rare iridescent tarnish on purple, massive surfaces. No HCl and non-magnetic.

Sample Number:	W842167	Date Collected:	2019-07-09	UTM:	533503	mE	Nad83, Zone 8
Elevation:	1387 m	Sampler:	Austin Schneebeli	UTM:	7123292	mN	

Comments: W842167 - Very steep, rusty, ~3*50m, talus slope, roughly 25m directly up slope from anomalous Cu soil sample. Medium grey, siliceous, silty shale with weak-moderate disseminated euhedral and blebby, dark yellow to white/silver pyrite. Strong oxidation on surface and relict mm-sized cubic pyrites on surfaces. Prites accounts for ~5% of sample. No reaction with HCl and non-magnetic. Field images included.

Sample Number:	W842168	Date Collected:	2019-07-09	UTM:	533487	mE	Nad83, Zone 8
Elevation:	1361 m	Sampler:	Austin Schneebeli	UTM:	7123351	mN	

Comments: W842168 - Sample taken from shale talus slope (~250*30m) with light vegetation. Multiple, marble-tennis ball sized, angular fragments of oxidized, pitted silty sandstone with 1-3mm sized quartz fragments. Surface is variably tarnished orange-dark purple by weakly iridescent, massive mineral. Rare botryoidal, peacocky green-purple bornite (?) on surfaces. Certain fragments are iridescent. No reaction with HCl and non-magnetic. Field images included.

Rock Sample Descriptions Properties: Bobcat, Kathy, Rau, Rau Regional, Spotlight, Unknown Target

Sample Number:	W842169	Date Collected:	2019-07-09	UTM:	533484 mE	Nad83, Zone 8
Elevation:	1354 m	Sampler:	Austin Schneebeli	UTM:	7123357 mN	

Comments: W842169 - Same talus slope as AS-19-052 and 051. Black, angluar, non-calcareous shale, with mm-sized, sub-euhedral andalusite with well developed cross. Andalusite accounts for ~5% of the sample.

Sample Number:	W842170	Date Collected:	2019-07-09	UTM:	533682 mE	Nad83, Zone 8
Elevation:	1372 m	Sampler:	Austin Schneebeli	UTM:	7123532 mN	

Comments: W842170 - Black, non-calcareous shale with 5mm quartz veins and oxidized surfaces. Quartz veins contain moderate orange/yellow, slightly pitted, massive limonite. Sample was taken at a 0.064 Cu in soil sample located in a ~30*40m shale talus slope. Outcrop not found. No reaction with HCl and non-magnetic. Field image included.

Sample Number:	W842171	Date Collected:	2019-07-10	UTM:	532537 mE	Nad83, Zone 8
Elevation:	1134 m	Sampler:	Austin Schneebeli	UTM:	7114420 mN	

Comments: W842171 - Multiple golf-tennis ball sized float fragments of silicified limestone (?) and intensely oxidized, rounded rock with indiscernable protolith. Oxidized surfaces contain trace, speckly, sub mm-sized sericite. Non-magnetic and no reaction with HCl.

Sample Number:	W842172	Date Collected:	2019-07-10	UTM:	532603 mE	Nad83, Zone 8
Elevation:	1073 m	Sampler:	Austin Schneebeli	UTM:	7114355 mN	

Comments: W842172 - 0.75*0.75m by 1m deep pit dug directly up slope of anomalous Au soil sample. Pulled out multiple 5-10cm, angular to sub-angular fragments of strongly orange, brown, purple limonite bearing quartz veins. Limonite is patchy to massive and occurs throughout quartz veins. Contains trace, patchy weathered, iridescent pyrite staining and trace, speckly sub-mm sericite. No HCl reaction, non-magnetic. Tennis ball sized, rounded mudstone and angular shale fragments were also recovered from pit. No sign of sub/outcrop.

Sample Number:	W842173	Date Collected:	2019-07-10	UTM:	532550 mE	Nad83, Zone 8
Elevation:	1065 m	Sampler:	Austin Schneebeli	UTM:	7114272 mN	

Comments: W842173 - 0.5*0.5m by 1m deep pit 3m downlope of 0.043 Au soil sample. Sample is 5*8cm, angular quartz float that is strongly brown, orange and purple limonitic. Limonite is trace pitted, massive and lesser granular. Rare sericite, trace purple-brown iridescent tarnish. No HCl reaction and non-magnetic. No sign of sub/outcrop. Also pulled out black shale with abundant oxidized pyrite, grey mudstone and rare limestone.

Rock Sample Descriptions Properties: Bobcat, Kathy, Rau, Rau Regional, Spotlight, Unknown Target

Sample Number:	W842174	Date Collected:	2019-07-24	UTM:	532809 mE	Nad83, Zone 8
Elevation:	1190 m	Sampler:	Adam Coulter	UTM:	7117402 mN	

Comments: 1cm thick tremolite-malachite vein occuring within marble in outcrop. ~5% Massive-patchy green malachite throughout the tremolite vein. Tremolite is white to moderately oxidized. Moderate HCL reaction. Non-mag.

Sample Number:	W842175	Date Collected:	2019-07-24	UTM:	532809 mE	Nad83, Zone 8
Elevation:	1190 m	Sampler:	Adam Coulter	UTM:	7117402 mN	

Comments: 1-2 cm thick tremolite-malachite vein in marble outcrop.

Sample Number:	W842176	Date Collected:	2019-07-24	UTM:	532809 mE	Nad83, Zone 8
Elevation:	1190 m	Sampler:	Adam Coulter	UTM:	7117402 mN	

Comments: 1-3 cm thick tremolite-malachite vein taken from marble outcrop. Vein contains

Sample Number:	W842177	Date Collected:	2019-07-24	UTM:	532809 mE	Nad83, Zone 8
Elevation:	1190 m	Sampler:	Adam Coulter	UTM:	7117402 mN	

Comments: 1-3 cm thick tremolite vein from marble outcrop. Tremolite is primarly white/fresh with trace-weak oxidation. 1% massive-patchy malachite occurs throughout the vein. 1-5mm sized, black, dull-submetallic, massive mineral (chalcocite?). Maybe sphalerite? Non-magnetic. Moderate HCL reaction. Sample is dense/heavy.

Sample Number:	W842178	Date Collected:	2019-07-24	UTM:	532809 mE	Nad83, Zone 8
Elevation:	1190 m	Sampler:	Adam Coulter	UTM:	7117402 mN	

Comments: 1-2 cm thick tremolite-malachite-quartz vein in float.

Sample Number:	W842179	Date Collected:	2019-07-24	UTM:	532809 mE	Nad83, Zone 8
Elevation:	1190 m	Sampler:	Adam Coulter	UTM:	7117402 mN	

Comments: Tremolite vein from float. Tremolite is mostly oxidized and occurs within dark brown-black, massive ground mass. ~3% malachite occurs weak-moderately throughout the vein in massive-patchy form. Non magnetic. Weak reaction with HCL. Sample feels dense.

Rock Sample Descriptions Properties: Bobcat, Kathy, Rau, Rau Regional, Spotlight, Unknown Target

Sample Number:	W842180	Date Collected:	2019-07-24	UTM:	532809	mE	Nad83, Zone 8
Elevation:	1190 m	Sampler:	Adam Coulter	UTM:	7117402	mN	

Comments: 2cm thick tremolite vein in float. Tremolite is oxidized in places with trace malachite throughout. Strong HCL reaction. Non-magnetic.

Sample Number:	W842181	Date Collected:	2019-07-24	UTM:	532809	mE	Nad83, Zone 8
Elevation:	1190 m	Sampler:	Adam Coulter	UTM:	7117402	mN	

Comments: 2 cm thick tremolite-malachite vein in float.

Sample Number:	W842182	Date Collected:	2019-07-24	UTM:	532809	mE	Nad83, Zone 8
Elevation:	1190 m	Sampler:	Adam Coulter	UTM:	7117402	mN	

Comments: Tremolite-malachite-pyrite vein in float. 3% pyrite and 5% malachite in the tremolite veins. Weak-moderate HCL reaction in places. Non-magnetic.

Sample Number:	W842183	Date Collected:	2019-07-24	UTM:	532809	mE	Nad83, Zone 8
Elevation:	1190 m	Sampler:	Adam Coulter	UTM:	7117402	mN	

Comments: 2cm thick tremolite-malachite vein in float.

Sample Number:	W842184	Date Collected:	2019-07-24	UTM:	532809	mE	Nad83, Zone 8
Elevation:	1190 m	Sampler:	Adam Coulter	UTM:	7117402	mN	

Comments: Heavily oxidized tremolite skarn in float. More oxidized than the rest of samples from this pit. Orange-purple in colour. No HCL reaction. One of the fragments has brecciated quartz veins. Non-magnetic.

Sample Number:	W842185	Date Collected:	2019-07-24	UTM:	532809	mE	Nad83, Zone 8
Elevation:	1190 m	Sampler:	Adam Coulter	UTM:	7117402	mN	

Comments: 2cm thick tremolite-malachite vein in float. The vein is roughly 25% rusted and oxidized with ~5% malachite. Strong HCL reaction. Non-magnetic.

Rock Sample Descriptions Properties: Bobcat, Kathy, Rau, Rau Regional, Spotlight, Unknown Target

Sample Number:	W842186	Date Collected:	2019-07-24	UTM:	532809	mE	Nad83, Zone 8
Elevation:	1190 m	Sampler:	Adam Coulter	UTM:	7117402	mN	

Comments: Tremolite-malachite vein in float. Tremolite is white and mostly fresh looking with ~2% malachite. 2% rusted out sulphides in vein. Strong HCL reaction. Non-magnetic.

Sample Number:	W842187	Date Collected:	2019-07-24	UTM:	532809	mE	Nad83, Zone 8
Elevation:	1190 m	Sampler:	Adam Coulter	UTM:	7117402	mN	

Comments: 3cm thick tremolite-malachite vein in float. ~2-5 mm rusted out vein with malachite staining on edges within tremolite. Strong HCL reaction. Non-magnetic.

Sample Number:	W842188	Date Collected:	2019-07-27	UTM:	532839	mE	Nad83, Zone 8
Elevation:	1193 m	Sampler:	Adam Coulter	UTM:	7117498	mN	

Comments: Dolostone float with thin 0.5-1cm highly oxidized veins and up to 1cm wide fresh pyrite veins. Trace malachite staining throughout. Weak HCL reaction when scratched.

Sample Number:	W842189	Date Collected:	2019-07-27	UTM:	532839	mE	Nad83, Zone 8
Elevation:	1193 m	Sampler:	Adam Coulter	UTM:	7117498	mN	

Comments: Dolostone float with thin 0.5-1cm highly oxidized veins and up to 1cm wide fresh pyrite veins. Trace malachite staining throughout. Weak HCL reaction when scratched.

Sample Number:	W842190	Date Collected:	2019-07-27	UTM:	532839	mE	Nad83, Zone 8
Elevation:	1193 m	Sampler:	Adam Coulter	UTM:	7117498	mN	

Comments: Many small fragments of 0.5-1cm thick highly oxidized tremolite veins. Veins are orange, trace tremolite visible in places. Strong HCL reaction along veins. Non-magnetic. No visible sulphides remaining due to oxidation.

Sample Number:	W842191	Date Collected:	2019-07-27	UTM:	532839	mE	Nad83, Zone 8
Elevation:	1193 m	Sampler:	Adam Coulter	UTM:	7117498	mN	

Comments: Orange massive oxide float. No HCL reaction. Non-magnetic.

Rock Sample Descriptions Properties: Bobcat, Kathy, Rau, Rau Regional, Spotlight, Unknown Target

Sample Number:	W842192	Date Collected:	2019-07-27	UTM:	532839	mE	Nad83, Zone 8
Elevation:	1193 m	Sampler:	Adam Coulter	UTM:	7117498	mN	

Comments: Well foliated siliclastic float with 2% rusted out sulphides and moderate rusting on fracture surfaces. Non-calcareous. Non-magnetic. Interbedded black muddy horizones with coarse quartz-rich layers (distinct black and white stripped).

Sample Number:	W842193	Date Collected:	2019-07-27	UTM:	532839	mE	Nad83, Zone 8
Elevation:	1193 m	Sampler:	Adam Coulter	UTM:	7117498	mN	

Comments: Rusty 3cm thick tremolite veins in float. Thin black ~1mm veins in places. No HCL reaction. Non-magnetic.

Sample Number:	W842194	Date Collected:	2019-07-27	UTM:	532839	mE	Nad83, Zone 8
Elevation:	1193 m	Sampler:	Adam Coulter	UTM:	7117498	mN	

Comments: Black dolostone float with very rusted out 0.5-1cm veins. Trace tremolite observed in veins in places but mostly just rusted out. No obviou sulphides remaining. Weak HCL reaction when scratched. Non-magnetic.

Sample Number:	W842195	Date Collected:	2019-07-27	UTM:	532839	mE	Nad83, Zone 8
Elevation:	1193 m	Sampler:	Adam Coulter	UTM:	7117498	mN	

Comments: Black dolostone float with very rusted out 0.5-1cm veins. Trace tremolite observed in veins in places but mostly just rusted out. No obviou sulphides remaining. Weak HCL reaction when scratched. Non-magnetic.

Sample Number:	W842196	Date Collected:	2019-07-31	UTM:	532839	mE	Nad83, Zone 8
Elevation:	1193 m	Sampler:	Adam Coulter	UTM:	7117498	mN	

Comments: Black dolostone with very rusty fracture surfaces. Moderate HCL reaction when scratched. Non-magnetic.

Sample Number:	W842197	Date Collected:	2019-07-31	UTM:	532839	mE	Nad83, Zone 8
Elevation:	1193 m	Sampler:	Adam Coulter	UTM:	7117498	mN	

Comments: Black dolostone with very rustry fracture surfaces and thin ~5mm moderately oxidized tremolite veins.

Rock Sample Descriptions Properties: Bobcat, Kathy, Rau, Rau Regional, Spotlight, Unknown Target

Sample Number:	W842198	Date Collected:	2019-07-31	UTM:	532839	mE	Nad83, Zone 8
Elevation:	1186 m	Sampler:	Adam Coulter	UTM:	7117487	mN	

Comments: Sampled ~2cm tremolite vein in outcrop. Trace rusted out sulphide throughout vein (pyrite?). Strong HCL reaction. Non-magnetic.

Sample Number:	W842199	Date Collected:	2019-07-28	UTM:	532824	mE	Nad83, Zone 8
Elevation:	1191 m	Sampler:	Adam Coulter	UTM:	7117432	mN	

Comments: ~3cm tremolite-malachite vein in float. Overall fairly clean white tremolite with 2% malachite. Strong HCL reaction. Non-magnetic. Worth returning for more pitting, found and sampled in 5 minutes.

Sample Number:	W842200	Date Collected:	2019-08-03	UTM:	532297	mE	Nad83, Zone 8
Elevation:	9999 m	Sampler:	Julia Lane	UTM:	7117803	mN	

Comments: coarse grained quartz rich intrtusive with ~40% clear quartz and 45% creamy to slightly orange -cream altered feldspars and ~8% fine grained sericite altered (?) muscovite and 2 % darker mica - biotite and 5 % radiating 1-2 cm long dark green tremolite fans.Collected from pit that was 2 ft by 2 ft by 1 m deep. Samples are sub rounded.

Sample Number:	W845251	Date Collected:	2019-09-11	UTM:	532182	mE	Nad83, Zone 8
Elevation:	1091 m	Sampler:	Adam Coulter	UTM:	7114213	mN	

Comments: Non-calcareous shale in float from 60cm deep pit. Shale has 5% fully oxidized presumably cubic pyrite. No HCL reaction. Non-magnetic.

Sample Number:	w845252	Date Collected:	2019-09-11	UTM:	531851	mE	Nad83, Zone 8
Elevation:	1076 m	Sampler:	Milo Mielniczuk	UTM:	7114144	mN	

Comments: small cobble from exploration pit. Oxide rich quartz vein.

Sample Number:	w845253	Date Collected:	2019-09-11	UTM:	531851	mE	Nad83, Zone 8
Elevation:	1076 m	Sampler:	Milo Mielniczuk	UTM:	7114144	mN	

Comments: rusty quartz vein. Large very angular local cobble. 30x10x15cm cobble. Rusty fractures. Trace unweathered sulphides. Last piece out of 60cm deep pit.

Rock Sample Descriptions Properties: Bobcat, Kathy, Rau, Rau Regional, Spotlight, Unknown Target

Sample Number:	W845254	Date Collected:	2019-09-11	UTM:	531848	mE	Nad83, Zone 8
Elevation:	1077 m	Sampler:	Adam Coulter	UTM:	7114150	mN	

Comments: Non-calcareous shale subcrop with 2% fully oxidized sulphides (pyrite). Thin <5mm rusty quartz veins cuting bedding. No HCL reaction. Non-mag.

Sample Number:	W845255	Date Collected:	2019-09-11	UTM:	531848	mE	Nad83, Zone 8
Elevation:	1077 m	Sampler:	Adam Coulter	UTM:	7114150	mN	

Comments: ~5cm thick rusty quartz vein from subcrop. Several parallel veins in shale. Overall quartz vein is very rusty and contains highly oxidized sulphides (presumably pyrite). No HCL reaction. Non-mag.

Sample Number:	W845256	Date Collected:	2019-09-11	UTM:	531848	mE	Nad83, Zone 8
Elevation:	1077 m	Sampler:	Adam Coulter	UTM:	7114150	mN	

Comments: Many small fragments of rusty quartz vein from subcrop. Several parallel quartz veins in shale. Overall quartz vein is very rusty and contains highly oxidized sulphides (presumably pyrite). No HCL reaction. Non-mag.

Sample Number:	W845257	Date Collected:	2019-09-11	UTM:	531848	mE	Nad83, Zone 8
Elevation:	1077 m	Sampler:	Adam Coulter	UTM:	7114150	mN	

Comments: 10cm thick rusty quartz vein from subcrop. Several parallel smaller quartz veins in shale. Overall quartz vein is very rusty and contains highly oxidized sulphides (presumably pyrite). No HCL reaction. Non-mag.

Sample Number:	W845258	Date Collected:	2019-09-11	UTM:	531811	mE	Nad83, Zone 8
Elevation:	1082 m	Sampler:	Adam Coulter	UTM:	7114155	mN	

Comments: Red rusty hemtite (?) rich shale float from side of open slope. Thin 2-5mm hematite-oxide-quartz veins throughout. No HCL reaction. Non-mag.

Sample Number:	W845259	Date Collected:	2019-09-11	UTM:	531599	mE	Nad83, Zone 8
Elevation:	1029 m	Sampler:	Adam Coulter	UTM:	7114029	mN	

Comments: Moderately calcareous black shale with thin rusty quartz veins in float from 70cm deep pit. Sample contains also 2 smaller pure quartz vein fragments from pit. Moderate HCL reaction on shale. Non-magnetic.

Rock Sample Descriptions Properties: Bobcat, Kathy, Rau, Rau Regional, Spotlight, Unknown Target

Sample Number:	W845329	Date Collected:	2019-09-21	UTM:	528600	mE	Nad83, Zone 8
Elevation:	1287 m	Sampler:	Andrew Carne	UTM:	7118929	mN	

Comments: Sample A. 0.00-0.36 m: Fine soft gray sandy oxide horizon

Sample Number:	W845330	Date Collected:	2019-09-21	UTM:	528600	mE	Nad83, Zone 8
Elevation:	1287 m	Sampler:	Andrew Carne	UTM:	7118929	mN	

Comments: Sample B. 0.36 - 0.97 m: Rusty oxide - brown-red. Semi competent.

Sample Number:	W845331	Date Collected:	2019-09-21	UTM:	528600	mE	Nad83, Zone 8
Elevation:	1287 m	Sampler:	Andrew Carne	UTM:	7118929	mN	

Comments: Sample C. 0.97 - 1.30m: Grey semi-competent oxide material

Sample Number:	W845332	Date Collected:	2019-09-21	UTM:	528600	mE	Nad83, Zone 8
Elevation:	1287 m	Sampler:	Andrew Carne	UTM:	7118929	mN	

Comments: Sample D. 1.30 - 2.03 m: Dark red-brown oxide

Sample Number:	W845333	Date Collected:	2019-09-21	UTM:	528600	mE	Nad83, Zone 8
Elevation:	1287 m	Sampler:	Andrew Carne	UTM:	7118929	mN	

Comments: Sample E. 2.03 - 2.24 m: Chunky quartz vein with rusted red faces.

Sample Number:	W845334	Date Collected:	2019-09-21	UTM:	528600	mE	Nad83, Zone 8
Elevation:	1287 m	Sampler:	Andrew Carne	UTM:	7118929	mN	

Comments: Sample F. 2.24 - 2.87m: Orange-red oxide w/ quartz clasts

Sample Number:	W845335	Date Collected:	2019-09-21	UTM:	528600	mE	Nad83, Zone 8
Elevation:	1287 m	Sampler:	Andrew Carne	UTM:	7118929	mN	

Comments: Sample G. 2.87 - 3.33 m: Orange-red oxide w/ quartz clasts

Rock Sample Descriptions Properties: Bobcat, Kathy, Rau, Rau Regional, Spotlight, Unknown Target

Sample Number:	W845336	Date Collected:	2019-09-21	UTM:	528600	mE	Nad83, Zone 8
Elevation:	1287 m	Sampler:	Andrew Carne	UTM:	7118929	mN	

Comments: Sample H. Massive quartz. Large chunks with rusted red faces.

Sample Number:	W845337	Date Collected:	2019-09-21	UTM:	528600	mE	Nad83, Zone 8
Elevation:	1287 m	Sampler:	Andrew Carne	UTM:	7118929	mN	

Comments: Sample I. Quartz vein. Large chunks with rusty red faces.

Sample Number:	W845338	Date Collected:	2019-09-21	UTM:	528600	mE	Nad83, Zone 8
Elevation:	1287 m	Sampler:	Andrew Carne	UTM:	7118929	mN	

Comments: Sample J. Grab sample of quartz vein from high wall.

Sample Number:	W845339	Date Collected:	2019-09-21	UTM:	528600	mE	Nad83, Zone 8
Elevation:	1287 m	Sampler:	Andrew Carne	UTM:	7118929	mN	

Comments: Sample K. Grab sample of yellow-orange oxide from high wall.

Sample Number:	W845340	Date Collected:	2019-09-24	UTM:	528607	mE	Nad83, Zone 8
Elevation:	1298 m	Sampler:	Andrew Carne	UTM:	7118902	mN	

Comments: Red-brown oxide and a gray horizon with cerrusite flakes. Sandy constituency.

Sample Number:	W845341	Date Collected:	2019-09-24	UTM:	528607	mE	Nad83, Zone 8
Elevation:	1298 m	Sampler:	Andrew Carne	UTM:	7118902	mN	

Comments: Grab sample from pad high wall with rusty quartz containing pyrite and oxidized sulphides, and yellow-red oxidized rock with pyrite.

Sample Number:	W845351	Date Collected:	2019-08-27	UTM:	518350	mE	Nad83, Zone 8
Elevation:	1164 m	Sampler:	Andrew Carne	UTM:	7121343	mN	

Comments: Non-calcareous black shale with large 2 cm quartz vein. Vuggy slight oxidation of vein. No hcl reaction. Non magnetic.

Rock Sample Descriptions Properties: Bobcat, Kathy, Rau, Rau Regional, Spotlight, Unknown Target

Sample Number:	W845352	Date Collected:	2019-08-27	UTM:	518947 mE	Nad83, Zone 8
Elevation:	875 m	Sampler:	Andrew Carne	UTM:	7120637 mN	

Comments: Black shale from small pit. Small white veins. Some oxidation. No hcl rxn. No mag response.

Sample Number:	W845353	Date Collected:	2019-08-27	UTM:	518947 mE	Nad83, Zone 8
Elevation:	875 m	Sampler:	Andrew Carne	UTM:	7120637 mN	

Comments: Brown orange amorphous oxide small pit. Very light. Porous. Non-magnetic. No Hcl rxn.

Sample Number:	W845354	Date Collected:	2019-08-27	UTM:	518947 mE	Nad83, Zone 8
Elevation:	875 m	Sampler:	Andrew Carne	UTM:	7120637 mN	

Comments: Large quartz crystals from small pit. Vuggy. No mag response. No hcl rxn.

Sample Number:	W845355	Date Collected:	2019-08-27	UTM:	518952 mE	Nad83, Zone 8
Elevation:	869 m	Sampler:	Adam Coulter	UTM:	7120651 mN	

Comments: Massive orange oxide float from pit. Non-mag. Non-calcareous.

Sample Number:	W845356	Date Collected:	2019-08-27	UTM:	518952 mE	Nad83, Zone 8
Elevation:	869 m	Sampler:	Adam Coulter	UTM:	7120651 mN	

Comments: Clean white/clear quartz vein float. Non-magnetic. Non-calcareous

Sample Number:	W845357	Date Collected:	2019-08-27	UTM:	518952 mE	Nad83, Zone 8
Elevation:	869 m	Sampler:	Adam Coulter	UTM:	7120651 mN	

Comments: Non-calcareous shale float from pit. Some shale fragments are pitted, some have thin quartz veins and thin rusted out veins. All non-calcareous. All fairly boring looking.

Sample Number:	W845358	Date Collected:	2019-08-27	UTM:	519172 mE	Nad83, Zone 8
Elevation:	859 m	Sampler:	Adam Coulter	UTM:	7120652 mN	

Comments: Brecciated shale float. Matrix is all calcite and clasts are all non-calcareous shale. Non-magnetic.

Rock Sample Descriptions Properties: Bobcat, Kathy, Rau, Rau Regional, Spotlight, Unknown Target

Sample Number:	W845359	Date Collected:	2019-08-27	UTM:	519463	mE	Nad83, Zone 8
Elevation:	788 m	Sampler:	Andrew Carne	UTM:	7120322	mN	

Comments: Brown-yellow oxide material. Light coloured and crumbly.

Sample Number:	W845360	Date Collected:	2019-08-27	UTM:	520019	mE	Nad83, Zone 8
Elevation:	866 m	Sampler:	Andrew Carne	UTM:	7120599	mN	

Comments: Two small pieces of quartz vein float from small pit. Semi-rounded, orange-milky in colour. No HCl rxn. Non magnetic.

Sample Number:	W845361	Date Collected:	2019-08-27	UTM:	520019	mE	Nad83, Zone 8
Elevation:	866 m	Sampler:	Andrew Carne	UTM:	7120599	mN	

Comments: Rounded rusty oxidized rocks from small pit. Weak HCl rxn. Non magnetic.

Sample Number:	W845362	Date Collected:	2019-08-27	UTM:	520019	mE	Nad83, Zone 8
Elevation:	866 m	Sampler:	Andrew Carne	UTM:	7120599	mN	

Comments: Zebra striped shale from small pit. Rusty patches. Non-magnetic.

Sample Number:	W845363	Date Collected:	2019-08-28	UTM:	519430	mE	Nad83, Zone 8
Elevation:	950 m	Sampler:	Adam Coulter	UTM:	7120923	mN	

Comments: Dolostone float sample grabbed en route back to helipad. Rusty fracture surface. 5mm carbonate veins. Pitted in places.

Sample Number:	W845364	Date Collected:	2019-08-25	UTM:	528568	mE	Nad83, Zone 8
Elevation:	1274 m	Sampler:	Andrew Carne	UTM:	7118930	mN	

Comments: Top horizon of three stacked oxide horizons. Sampled across 15 cm band. Yellow-red oxide. Sandy consistency with little-to-no rocks.

Sample Number:	W845365	Date Collected:	2019-08-25	UTM:	528568	mE	Nad83, Zone 8
Elevation:	1274 m	Sampler:	Andrew Carne	UTM:	7118930	mN	

Comments: Middle Horizon. Sampled across approx 20 cm thickness. Dark brown-red colour. Sandy consistency with few rocks.

Rock Sample Descriptions Properties: Bobcat, Kathy, Rau, Rau Regional, Spotlight, Unknown Target

Sample Number:	W845366	Date Collected:	2019-08-25	UTM:	528568	mE	Nad83, Zone 8
Elevation:	1274 m	Sampler:	Andrew Carne	UTM:	7118930	mN	

Comments: Bottom horizon. Unknown thickness - extended to bottom of pit. Brown-yellow colour. Sandy with gravel-sized rock particles.

Sample Number:	W845368	Date Collected:	2019-07-31	UTM:	532839	mE	Nad83, Zone 8
Elevation:	1186 m	Sampler:	Adam Coulter	UTM:	7117487	mN	

Comments: 2cm thick tremolite vein in outcrop. Vein is fairly clean white looking with 1% rusted out sulphide (pyrite?). Vein trends 025, 80. Moderate HCL reaction. Non-mag.

Sample Number:	W845369	Date Collected:	2019-07-31	UTM:	532839	mE	Nad83, Zone 8
Elevation:	1193 m	Sampler:	Adam Coulter	UTM:	7117498	mN	

Comments: 1cm thick rusty tremolite vein with malachite staining. ~2% rusted out sulphide (pyrite?) throughout the vein with up to 2% malachite staining in places. Weak-moderate HCL reaction. Non-mag.

Sample Number:	W845370	Date Collected:	2019-08-25	UTM:	532785	mE	Nad83, Zone 8
Elevation:	1181 m	Sampler:	Adam Coulter	UTM:	7117505	mN	

Comments: Grey dolostone float from pit. Odd black weathered sufaces (manganese staining?). Weak HCL reaction when scratched. Non-magnetic.

Sample Number:	W845371	Date Collected:	2019-08-25	UTM:	532781	mE	Nad83, Zone 8
Elevation:	1178 m	Sampler:	Adam Coulter	UTM:	7117457	mN	

Comments: Light orange marble float from small 0.5m pit. Moderate HCL reaction. Non-magnetic.

Sample Number:	W845372	Date Collected:	2019-08-25	UTM:	532784	mE	Nad83, Zone 8
Elevation:	1183 m	Sampler:	Adam Coulter	UTM:	7117404	mN	

Comments: Small fragments of rusty tremolite vein float from pit. Overall fairly orange in colour. No obvious sulphides left. No HCL reaction. Non-mag.

Rock Sample Descriptions Properties: Bobcat, Kathy, Rau, Rau Regional, Spotlight, Unknown Target

Sample Number:	W845373	Date Collected:	2019-08-25	UTM:	532620	mE	Nad83, Zone 8
Elevation:	1154 m	Sampler:	Adam Coulter	UTM:	7117475	mN	

Comments: Small pieces of marble float from pit. Trace rusted out sulphides throughout. Overall beige/orange colour. Moderate HCL reaction. Non-magnetic.

Sample Number:	W845374	Date Collected:	2019-08-28	UTM:	532932	mE	Nad83, Zone 8
Elevation:	1108 m	Sampler:	Adam Coulter	UTM:	7118101	mN	

Comments: Greissen float from donut mag feature in Kathy swamp. Orbicular plagioclase phenocrysts in fine grained grey groundmass. 2% rusty sulphide throughout, could not get a fresh surface on sulphide. Also, trace fresh pyrite. Tremolite also observed. No HCL reaction.

Sample Number:	W845375	Date Collected:	2019-08-25	UTM:	532093	mE	Nad83, Zone 8
Elevation:	1040 m	Sampler:	Milo Mielniczuk	UTM:	7117674	mN	

Comments: Black dolostone float with large actinolite throughout. Small black shiny mineral throughout (not sure what it is). Moderate HCL reaction when scratched. Non-magnetic.

Sample Number:	W845376	Date Collected:	2019-08-25	UTM:	532093	mE	Nad83, Zone 8
Elevation:	1040 m	Sampler:	Milo Mielniczuk	UTM:	7117674	mN	

Comments: Matrix supported conglomerate float with trace pyrite and overal rusty weathered surface. Few thin calcite veins. Interesting zoning in clasts, likely due to contact metamorphism. No HCL reaction. Non-magnetic.

Sample Number:	W845377	Date Collected:	2019-08-25	UTM:	528568	mE	Nad83, Zone 8
Elevation:	1274 m	Sampler:	Andrew Carne	UTM:	7118930	mN	

Comments: Second pit - separate horizon. Bright yellow material. Rockier, with sandy infill between rock chunks. Sampled mixture of both.

Sample Number:	W845378	Date Collected:	2019-08-25	UTM:	532093	mE	Nad83, Zone 8
Elevation:	1040 m	Sampler:	Milo Mielniczuk	UTM:	7117674	mN	

Comments: Semi-massive pyrrhotite-pyrite tremolite skarn in float. Trace chalcopyrite throughout. Large tremolite crystals up to 2cm in length. Strongly magnetic in places. No HCL reaction.

Rock Sample Descriptions Properties: Bobcat, Kathy, Rau, Rau Regional, Spotlight, Unknown Target

Sample Number:	W845379	Date Collected:	2019-08-25	UTM:	532114 mE	Nad83, Zone 8
Elevation:	1045 m	Sampler:	Milo Mielniczuk	UTM:	7117709 mN	

Comments: Dark green diopside, muscovite, plagioclase and pyrrhotite skarn/greissen in float. Strongly magnetic in places. No HCL reaction.

Sample Number:	W845380	Date Collected:	2019-08-29	UTM:	527642 mE	Nad83, Zone 8
Elevation:	1232 m	Sampler:	Adam Coulter	UTM:	7119382 mN	

Comments: Dolostone outcrop sample with trace pyrite and arsenopyrite. 1% vugs with red oxide material and some vugs with black non-magnetic mineral. Weak HCL reaction when scratched. Non-magnetic.

Sample Number:	W845382	Date Collected:	2019-08-29	UTM:	527656 mE	Nad83, Zone 8
Elevation:	1237 m	Sampler:	Adam Coulter	UTM:	7119398 mN	

Comments: Bright orange oxidized volcanic in outcrop. Sample taken from side of outcrop under tree. Thin calcite veins in places. Non-mag.

Sample Number:	W845383	Date Collected:	2019-08-29	UTM:	527668 mE	Nad83, Zone 8
Elevation:	1247 m	Sampler:	Adam Coulter	UTM:	7119400 mN	

Comments: Dolostone outcrop with very rusty surface. Thin 2mm quartz veins. Trace pyrite throughout. Weak HCL when scratched. Non-magnetic.

Sample Number:	W845384	Date Collected:	2019-08-29	UTM:	527684 mE	Nad83, Zone 8
Elevation:	1254 m	Sampler:	Adam Coulter	UTM:	7119414 mN	

Comments: Oxide subcrop in side of creek with lots of orange oxide looking soil. Deep dark red orange clasts in oxide matrix. No HCL reaction. Non-mag.

Sample Number:	W845385	Date Collected:	2019-08-29	UTM:	527695 mE	Nad83, Zone 8
Elevation:	1333 m	Sampler:	Adam Coulter	UTM:	7119550 mN	

Comments: Punky bright orange partially oxidized limestone float. Moderate HCL reaction in some fragments. Non-magnetic.

Sample Number:	W845386	Date Collected:	2019-08-29	UTM:	527706 mE	Nad83, Zone 8
Elevation:	1332 m	Sampler:	Andrew Carne	UTM:	7119546 mN	

Comments: Crumbly orange red to brown oxide material from small pit. Mixed in w/ large rocks.

Rock Sample Descriptions Properties: Bobcat, Kathy, Rau, Rau Regional, Spotlight, Unknown Target

Sample Number:	W845387	Date Collected:	2019-08-30	UTM:	527710	mE	Nad83, Zone 8
Elevation:	1259 m	Sampler:	Andrew Carne	UTM:	7119398	mN	

Comments: Small chunks of highly oxidized material from hand pit. Competent but very light and porous. Orange-red to brown. Strong HCl rxn. Non magnetic.

Sample Number:	W845388	Date Collected:	2019-08-30	UTM:	527704	mE	Nad83, Zone 8
Elevation:	1256 m	Sampler:	Adam Coulter	UTM:	7119401	mN	

Comments: Oxidized volcanic fragments from small pit. Moderate HCL reaction. Non-magnetic.

Sample Number:	W845389	Date Collected:	2019-08-30	UTM:	527704	mE	Nad83, Zone 8
Elevation:	1256 m	Sampler:	Adam Coulter	UTM:	7119401	mN	

Comments: Oxidized volcanic fragments from small pit. Moderate HCL reaction. Non-magnetic.

Sample Number:	W845390	Date Collected:	2019-08-30	UTM:	527750	mE	Nad83, Zone 8
Elevation:	1298 m	Sampler:	Andrew Carne	UTM:	7119296	mN	

Comments: Small pieces of highly oxidized rock from hand pit. Orange yellow colour. Strong HCl rxn. Non magnetic.

Sample Number:	W845391	Date Collected:	2019-08-30	UTM:	527856	mE	Nad83, Zone 8
Elevation:	1304 m	Sampler:	Adam Coulter	UTM:	7119158	mN	

Comments: Small pieces of orange massive oxide from small pit. Strong HCL reaction with some pieces and none with others. Non-magnetic.

Sample Number:	W845392	Date Collected:	2019-08-30	UTM:	528744	mE	Nad83, Zone 8
Elevation:	1365 m	Sampler:	Adam Coulter	UTM:	7118646	mN	

Comments: Small fragments of orange-purple oxide float dug from 60cm deep pit approximately 5m upslope from anomolous soil location. No HCL reaction. Non-magnetic.

Sample Number:	W845393	Date Collected:	2019-08-30	UTM:	528795	mE	Nad83, Zone 8
Elevation:	1318 m	Sampler:	Adam Coulter	UTM:	7118597	mN	

Comments: Orange massive oxide float fragments from 80cm deep put. Sample is composed of many small fragments collected from pit.

Rock Sample Descriptions Properties: Bobcat, Kathy, Rau, Rau Regional, Spotlight, Unknown Target

Sample Number:	W845394	Date Collected:	2019-08-30	UTM:	528795	mE	Nad83, Zone 8
Elevation:	1318 m	Sampler:	Adam Coulter	UTM:	7118597	mN	

Comments: Quartz vein float from 80cm deep pit. An abundance or this angular quartz veins in pit.

Sample Number:	W845395	Date Collected:	2019-08-30	UTM:	528841	mE	Nad83, Zone 8
Elevation:	1271 m	Sampler:	Adam Coulter	UTM:	7118548	mN	

Comments: Sample of tiny orange oxide fragments recovered from 1m deep pit. Might not be enough sample? Oxide is all fairly light orange. Non-magnetic. No HCL reaction.

Sample Number:	W845396	Date Collected:	2019-08-30	UTM:	529101	mE	Nad83, Zone 8
Elevation:	1174 m	Sampler:	Adam Coulter	UTM:	7118437	mN	

Comments: Oxide float with trace malachite. Overl very orange/purple with large 1cm quartz vein clasts.

Sample Number:	W845397	Date Collected:	2019-08-30	UTM:	529164	mE	Nad83, Zone 8
Elevation:	1198 m	Sampler:	Adam Coulter	UTM:	7118481	mN	

Comments: Strongly sheared limestone outcrop trending

Sample Number:	W845398	Date Collected:	2019-08-30	UTM:	529062	mE	Nad83, Zone 8
Elevation:	1209 m	Sampler:	Adam Coulter	UTM:	7118498	mN	

Comments: Oxide float in talus slope. Likely from thin oxide layer in outcrop above. Strong shear in above outcrop. Generally not much oxide talus here, maybe 1-2%.

Sample Number:	W845399	Date Collected:	2019-08-30	UTM:	529041	mE	Nad83, Zone 8
Elevation:	1212 m	Sampler:	Adam Coulter	UTM:	7118500	mN	

Comments: Few pieces of rusty limestone talus from anomolous Au-in-soil location. 1% rusted out sulphide (pyrite?). No-moderate HCL reaction. Non-magnetic.

Sample Number:	W845400	Date Collected:	2019-08-30	UTM:	529049	mE	Nad83, Zone 8
Elevation:	1290 m	Sampler:	Adam Coulter	UTM:	7118601	mN	

Comments: Small isolated (~10cm thick) orange-purple oxide in outcrop. Strong HCL reaction. Non-magnetic.

Rock Sample Descriptions Properties: Bobcat, Kathy, Rau, Rau Regional, Spotlight, Unknown Target

Sample Number:	W845401	Date Collected:	2019-08-30	UTM:	528601	mE	Nad83, Zone 8
Elevation:	1282 m	Sampler:	Andrew Carne	UTM:	7118945	mN	

Comments: Dark red-brown, rubbly oxide horizon exposed by road building with cat. Sampled in-place.

Sample Number:	W845402	Date Collected:	2019-08-30	UTM:	528601	mE	Nad83, Zone 8
Elevation:	1282 m	Sampler:	Andrew Carne	UTM:	7118945	mN	

Comments: Lighter alternating orange and gray sandy oxide horizon exposed by road building with cat. Sampled in place. ~20 cm thick.

Sample Number:	W845403	Date Collected:	2019-08-30	UTM:	528598	mE	Nad83, Zone 8
Elevation:	1294 m	Sampler:	Andrew Carne	UTM:	7118844	mN	

Comments: Weathered, stained rusty seam from DST subcrop. Weak HCl rxn. Non-magnetic. Some pyrite visible.

Sample Number:	W845404	Date Collected:	2019-08-30	UTM:	528598	mE	Nad83, Zone 8
Elevation:	1294 m	Sampler:	Andrew Carne	UTM:	7118844	mN	

Comments: Less weathered DST sample from subcrop. Weak Hcl rxn. Non-magnetic.

Sample Number:	W845405	Date Collected:	2019-08-30	UTM:	528598	mE	Nad83, Zone 8
Elevation:	1294 m	Sampler:	Andrew Carne	UTM:	7118844	mN	

Comments: Very dark, highly oxidized DST w/ sulphosalts precipitated on outside. Chipped from subcrop. No HCl rxn. Non-magnetic.

Sample Number:	W845406	Date Collected:	2019-08-30	UTM:	528598	mE	Nad83, Zone 8
Elevation:	1294 m	Sampler:	Andrew Carne	UTM:	7118844	mN	

Comments: DST with striped fine pyrite. Fresh, no significant alteration. Chipped from subcrop. Weak fizz. Non-magnetic.

Sample Number:	W845407	Date Collected:	2019-08-30	UTM:	528590	mE	Nad83, Zone 8
Elevation:	1307 m	Sampler:	Andrew Carne	UTM:	7118803	mN	

Comments: Small oxidized rubble from hand pit. Doesn't appear to be standard tiger oxide. Strong HCl rzn. Non-magnetic. Red-orange to almost purple in colour.

Rock Sample Descriptions Properties: Bobcat, Kathy, Rau, Rau Regional, Spotlight, Unknown Target

Sample Number:	W845408	Date Collected:	2019-08-30	UTM:	528582	mE	Nad83, Zone 8
Elevation:	1305 m	Sampler:	Andrew Carne	UTM:	7118776	mN	

Comments: Scattered oxidized red-brown-purple float in talus field. Non-magnetic. No HCl rxn.

Sample Number:	W845409	Date Collected:	2019-08-30	UTM:	528584	mE	Nad83, Zone 8
Elevation:	1312 m	Sampler:	Andrew Carne	UTM:	7118749	mN	

Comments: Pitted, heavily oxidized rock float from talus field. Dark red-brown to purple. Strong HCl rxn. Non-magnetic.

Sample Number:	W845410	Date Collected:	2019-08-30	UTM:	528592	mE	Nad83, Zone 8
Elevation:	1309 m	Sampler:	Andrew Carne	UTM:	7118740	mN	

Comments: Oxidized rubble from hand pit. Orange-brown-purple. Strong HCl rxn. Non-magnetic.

Sample Number:	W845411	Date Collected:	2019-08-30	UTM:	528526	mE	Nad83, Zone 8
Elevation:	1296 m	Sampler:	Andrew Carne	UTM:	7118712	mN	

Comments: Punky, highly weathered oxide float from pad wall excavation. Non-magnetic. Moderate fizz.

Sample Number:	W845412	Date Collected:	2019-08-30	UTM:	528545	mE	Nad83, Zone 8
Elevation:	1315 m	Sampler:	Andrew Carne	UTM:	7118702	mN	

Comments: Oxide fragments from small hand pit. Yellow to red-brown. Non-magnetic. Minor fizz from calcite veins?

Sample Number:	W845413	Date Collected:	2019-08-30	UTM:	528599	mE	Nad83, Zone 8
Elevation:	1339 m	Sampler:	Andrew Carne	UTM:	7118699	mN	

Comments: Crumbly, orange-red oxide float from hand pit. Non-magnetic. Strong HCl rxn.

Sample Number:	W845414	Date Collected:	2019-08-30	UTM:	528599	mE	Nad83, Zone 8
Elevation:	1339 m	Sampler:	Andrew Carne	UTM:	7118699	mN	

Comments: Purple-brown oxidized rock w/ calcite veins? Strong Hcl rxn. Non-magnetic.

Rock Sample Descriptions Properties: Bobcat, Kathy, Rau, Rau Regional, Spotlight, Unknown Target

Sample Number:	W845415	Date Collected:	2019-08-30	UTM:	528638	mE	Nad83, Zone 8
Elevation:	1350 m	Sampler:	Andrew Carne	UTM:	7118695	mN	

Comments: Very porous, fibrous oxide float from pad excavation. Orange to black. Moderate HCl rxn in less oxidized areas. Non-magnetic

Sample Number:	W845416	Date Collected:	2019-08-30	UTM:	528638	mE	Nad83, Zone 8
Elevation:	1350 m	Sampler:	Andrew Carne	UTM:	7118695	mN	

Comments: Highly oxidized float from pad excavation. Visible py/aspy? Minor HCl rxn. Non-magnetic. Stained yellow to dark purple.

Sample Number:	W845417	Date Collected:	2019-08-30	UTM:	528653	mE	Nad83, Zone 8
Elevation:	1348 m	Sampler:	Andrew Carne	UTM:	7118727	mN	

Comments: Abundant punky red-orange oxide float in talus. Very light. No HCl rxn. Non-magnetic.

Sample Number:	W845418	Date Collected:	2019-08-30	UTM:	528654	mE	Nad83, Zone 8
Elevation:	1351 m	Sampler:	Andrew Carne	UTM:	7118745	mN	

Comments: Soil constituency oxide from float train at surface. Brown-red colour w/ small pebbles.

Sample Number:	W845419	Date Collected:	2019-08-30	UTM:	528654	mE	Nad83, Zone 8
Elevation:	1351 m	Sampler:	Andrew Carne	UTM:	7118745	mN	

Comments: Competent oxidized rock w/ chunks of py/aspy? From oxide float train at surface. Strong HCl rxn. Non-magnetic.

Sample Number:	W845420	Date Collected:	2019-08-30	UTM:	528638	mE	Nad83, Zone 8
Elevation:	1338 m	Sampler:	Andrew Carne	UTM:	7118791	mN	

Comments: Oxidized punky yellow-red material from hand pit. Strong HCl rxn. Non-magnetic.

Sample Number:	W845421	Date Collected:	2019-08-30	UTM:	528638	mE	Nad83, Zone 8
Elevation:	1338 m	Sampler:	Andrew Carne	UTM:	7118791	mN	

Comments: Quartz w/ large yellow-orange oxide chunks from hand pit. No HCl rxn. Non-magnetic.

Rock Sample Descriptions Properties: Bobcat, Kathy, Rau, Rau Regional, Spotlight, Unknown Target

Sample Number:	W845422	Date Collected:	2019-08-31	UTM:	529041	mE	Nad83, Zone 8
Elevation:	1310 m	Sampler:	Adam Coulter	UTM:	7118646	mN	

Comments: Highly strained light grey volcanic with 3% rusted out sulphides. No HCL reaction. Non-magnetic.

Sample Number:	W845423	Date Collected:	2019-08-30	UTM:	528590	mE	Nad83, Zone 8
Elevation:	1307 m	Sampler:	Andrew Carne	UTM:	7118803	mN	

Comments: DST w/ quartz vein? Possible sulphide around edge of quartz. Weak fizz. Non-magnetic.

Sample Number:	W845424	Date Collected:	2019-08-27	UTM:	519222	mE	Nad83, Zone 8
Elevation:	816 m	Sampler:	Adam Coulter	UTM:	7120494	mN	

Comments: Mixed sample of float dug from pit. Sample contains both shale and oxide due to not having enough sample weight.

Sample Number:	W845425	Date Collected:	2019-08-27	UTM:	519712	mE	Nad83, Zone 8
Elevation:	802 m	Sampler:	Adam Coulter	UTM:	7120349	mN	

Comments: Orange dolostone float with black weathered surface from 50cm deep pit. 5mm quartz-carbonate vein cutting through sample. Weak HCL reaction when scratched. Non-magnetic.

Sample Number:	W845426	Date Collected:	2019-08-27	UTM:	520017	mE	Nad83, Zone 8
Elevation:	867 m	Sampler:	Adam Coulter	UTM:	7120611	mN	

Comments: Mixed bag of float from pit due to little sample weight. Shale, oxide and quartz veins in composite sample. No HCL reactions. Non-magnetic.

Sample Number:	W845427	Date Collected:	2019-08-27	UTM:	519172	mE	Nad83, Zone 8
Elevation:	859 m	Sampler:	Adam Coulter	UTM:	7120652	mN	

Comments: Shale float sample from small pit. Rusty fracture surfaces throughout. Non-calcareous. Non-magnetic.

Sample Number:	W845428	Date Collected:	2019-08-27	UTM:	519911	mE	Nad83, Zone 8
Elevation:	834 m	Sampler:	Adam Coulter	UTM:	7120488	mN	

Comments: Mixed float from small pit. Difficult digging, could hardly get enough sample. Mostly orange dolostone float. Weak HCL reaction when scratched. Non-magnetic.

Rock Sample Descriptions Properties: Bobcat, Kathy, Rau, Rau Regional, Spotlight, Unknown Target

Sample Number:	W845429	Date Collected:	2019-08-27	UTM:	519184 mE	Nad83, Zone 8
Elevation:	852 m	Sampler:	Andrew Carne	UTM:	7120642 mN	

Comments: Quartz vein float from small pit. Quartz is orange-milky in colour. No Hcl rxn. Non-mag.

Sample Number:	W845430	Date Collected:	2019-08-27	UTM:	519229 mE	Nad83, Zone 8
Elevation:	817 m	Sampler:	Andrew Carne	UTM:	7120511 mN	

Comments: Quartz vein float from small pit. Quartz is clear to milky. No HCl rxn. Non magnetic.

Sample Number:	W845431	Date Collected:	2019-08-27	UTM:	519229 mE	Nad83, Zone 8
Elevation:	817 m	Sampler:	Andrew Carne	UTM:	7120511 mN	

Comments: Composite float sample of small oxide dug from pit. 1 piece of limonite as well. No HCl rxn. Non magnetic.

Sample Number:	W845432	Date Collected:	2019-08-27	UTM:	519711 mE	Nad83, Zone 8
Elevation:	798 m	Sampler:	Andrew Carne	UTM:	7120337 mN	

Comments: Composite float sample from pit. Angular quartz vein float. Shale fragment with quartz vein cutting it. And piece of rusty dolostone float.

Sample Number:	W845433	Date Collected:	2019-08-31	UTM:	529105 mE	Nad83, Zone 8
Elevation:	1508 m	Sampler:	Adam Coulter	UTM:	7118999 mN	

Comments: Limonite with highly oxidized orange oxide clasts. Iron-rich matrix is purple and vuggy in places. Clasts are all orange oxide with few quartz vein clasts. Non-magnetic.

Sample Number:	W845434	Date Collected:	2019-08-31	UTM:	529105 mE	Nad83, Zone 8
Elevation:	1508 m	Sampler:	Adam Coulter	UTM:	7118999 mN	

Comments: Limonite with highly oxidized orange oxide clasts. Iron-rich matrix is purple and vuggy in places. Clasts are all orange oxide with few quartz vein clasts. Non-magnetic.

Rock Sample Descriptions Properties: Bobcat, Kathy, Rau, Rau Regional, Spotlight, Unknown Target

Sample Number:	W845435	Date Collected:	2019-08-31	UTM:	529105	mE	Nad83, Zone 8
Elevation:	1508 m	Sampler:	Adam Coulter	UTM:	7118999	mN	

Comments: Limonite with highly oxidized orange oxide clasts. Iron-rich matrix is purple and vuggy in places. Clasts are all orange oxide with few quartz vein clasts. Non-magnetic.

Sample Number:	W845436	Date Collected:	2019-08-31	UTM:	529279	mE	Nad83, Zone 8
Elevation:	1542 m	Sampler:	Adam Coulter	UTM:	7119101	mN	

Comments: Limestone outcrop with blebby Pyrrhotite. Rusty on weathered surface. Seems isolated on outcrop along strain zone. Strongly magnetic.

Sample Number:	W845437	Date Collected:	2019-08-31	UTM:	529326	mE	Nad83, Zone 8
Elevation:	1507 m	Sampler:	Adam Coulter	UTM:	7118981	mN	

Comments: Roughly 2m thick rusty volcanic horizon with 2% pyrrhotite in outcrop. Strongly magnetic.

Sample Number:	W845438	Date Collected:	2019-08-31	UTM:	529319	mE	Nad83, Zone 8
Elevation:	1497 m	Sampler:	Adam Coulter	UTM:	7118976	mN	

Comments: Approximately 2 m thick rusty and sheared volcanic horizon with 2% pyrrhotite in outcrop. Strongly magnetic.

Sample Number:	W845439	Date Collected:	2019-08-31	UTM:	529058	mE	Nad83, Zone 8
Elevation:	1560 m	Sampler:	Adam Coulter	UTM:	7119076	mN	

Comments: Many small fragments of orange massive oxide float dug from small 0.5m pit in Cu-in-soil anomaly.

Sample Number:	W845440	Date Collected:	2019-08-31	UTM:	529057	mE	Nad83, Zone 8
Elevation:	1556 m	Sampler:	Adam Coulter	UTM:	7119069	mN	

Comments: Strongly sericitized limonite with oxide clasts in float form 50cm deep pit.

Sample Number:	W845441	Date Collected:	2019-08-31	UTM:	529094	mE	Nad83, Zone 8
Elevation:	1536 m	Sampler:	Adam Coulter	UTM:	7119050	mN	

Comments: Limonite float dug from 50cm deep pit. 5% of surrounding talus slope is same material. Orange oxide and quartz clasts in limonite.

Rock Sample Descriptions Properties: Bobcat, Kathy, Rau, Rau Regional, Spotlight, Unknown Target

Sample Number:	W845442	Date Collected:	2019-08-31	UTM:	529066	mE	Nad83, Zone 8
Elevation:	1556 m	Sampler:	Adam Coulter	UTM:	7119076	mN	

Comments: Sericitized limonite from outcrop. Strong shear fabric observed with parallal sericite development is 140, 70. Limonite development is parallel to foliation.

Sample Number:	W845443	Date Collected:	2019-08-31	UTM:	529066	mE	Nad83, Zone 8
Elevation:	1556 m	Sampler:	Adam Coulter	UTM:	7119076	mN	

Comments: Limonite from outcrop. Strong shear fabric observed with parallal weak sericite development is 140, 70. Limonite development is parallel to foliation.

Sample Number:	W845444	Date Collected:	2019-08-31	UTM:	528603	mE	Nad83, Zone 8
Elevation:	1285 m	Sampler:	Adam Coulter	UTM:	7118913	mN	

Comments: Dark red massive oxide sand from drill pad.

Sample Number:	W845445	Date Collected:	2019-08-31	UTM:	528603	mE	Nad83, Zone 8
Elevation:	1285 m	Sampler:	Adam Coulter	UTM:	7118913	mN	

Comments: Lighter orange massive oxide from dril pad.

Sample Number:	W845446	Date Collected:	2019-09-04	UTM:	532090	mE	Nad83, Zone 8
Elevation:	1043 m	Sampler:	Adam Coulter	UTM:	7117674	mN	

Comments: Semi-massive pyrrhotite-tremolite skarn in float. Large <2cm long tremolite crystals. Sample is sub-angular and purple in colour on weathered surface. Strongly magnetic.

Sample Number:	W845447	Date Collected:	2019-09-04	UTM:	532090	mE	Nad83, Zone 8
Elevation:	1043 m	Sampler:	Adam Coulter	UTM:	7117674	mN	

Comments: Greisen float w 2% pyrite throughout. Greisen is coarse grained and quartz-rich. Overal fairly rusty looking weathered surface. Non-magnetic. No HCL reaction

Rock Sample Descriptions Properties: Bobcat, Kathy, Rau, Rau Regional, Spotlight, Unknown Target

Sample Number:	W845448	Date Collected:	2019-09-04	UTM:	532143	mE	Nad83, Zone 8
Elevation:	1050 m	Sampler:	Adam Coulter	UTM:	7117717	mN	

Comments: Massive actinolite-tremolite skarn float from pit. Actinolite is dark blue in colour and tremolite is clean white. Weak HCL reaction in tremolite in places. Non-magnetic.

Sample Number:	W845449	Date Collected:	2019-09-04	UTM:	532143	mE	Nad83, Zone 8
Elevation:	1050 m	Sampler:	Adam Coulter	UTM:	7117717	mN	

Comments: Pegmatite float from small pit. Contains purple fluorite. Possible scheelite? Non-calcareous. Non-magnetic.

Sample Number:	W845450	Date Collected:	2019-09-04	UTM:	532143	mE	Nad83, Zone 8
Elevation:	1050 m	Sampler:	Adam Coulter	UTM:	7117717	mN	

Comments: Greissen float from 1m deep pit. Abundant muscovite and trace pyrite throughout. No HCL reaction. Non-magnetic.

Sample Number:	W845451	Date Collected:	2019-09-04	UTM:	532196	mE	Nad83, Zone 8
Elevation:	1068 m	Sampler:	Adam Coulter	UTM:	7117697	mN	

Comments: Weakly oxidized greisen float from 1m deep pit. High quartz and muscovite content. Trace pyrite throughout. No HCL reaction. Non-magnetic.

Sample Number:	W845452	Date Collected:	2019-09-04	UTM:	532191	mE	Nad83, Zone 8
Elevation:	1066 m	Sampler:	Adam Coulter	UTM:	7117746	mN	

Comments: Semi-massive pyrite and non-magnetic pyrrhotite float from 50cm deep pit. A 5cm rounded clast of actinolite skarn is observed within the massive pyrite and pyrrhotite. Small quartz clasts are also observed throughout. No HCL reaction. Non-magnetic.

Sample Number:	W845453	Date Collected:	2019-09-04	UTM:	532191	mE	Nad83, Zone 8
Elevation:	1066 m	Sampler:	Adam Coulter	UTM:	7117746	mN	

Comments: Semi-massive pyrite and non-magnetic pyrrhotite float from 50cm deep pit. Weathered surface is purple and fresh is metallic silver. Small quartz clasts are also observed throughout. No HCL reaction. Non-magnetic.

Rock Sample Descriptions Properties: Bobcat, Kathy, Rau, Rau Regional, Spotlight, Unknown Target

Sample Number:	W845454	Date Collected:	2019-09-04	UTM:	532191	mE	Nad83, Zone 8
Elevation:	1066 m	Sampler:	Adam Coulter	UTM:	7117746	mN	

Comments: Semi-massive pyrite and non-magnetic pyrrhotite float from 50cm deep pit. Weathered surface is purple and fresh is metallic silver. Small quartz clasts are also observed throughout. No HCL reaction. Non-magnetic.

Sample Number:	W845455	Date Collected:	2019-09-04	UTM:	532486	mE	Nad83, Zone 8
Elevation:	1083 m	Sampler:	Adam Coulter	UTM:	7118025	mN	

Comments: Coarse-grained quartz-rich greisen float from RPP-19-008 drill pad. Overal orange in colour and rusty in places. Trace tremolite observed. Contains coarse 1-2cm wide cubic pyrite. No HCL reaction. Non-magnetic.

Sample Number:	W845456	Date Collected:	2019-09-04	UTM:	532486	mE	Nad83, Zone 8
Elevation:	1083 m	Sampler:	Adam Coulter	UTM:	7118025	mN	

Comments: Coarse-grained quartz-rich greisen float from RPP-19-008 drill pad. Overal orange in colour and rusty in places. Contains coarse 1-2cm wide cubic pyrite. No HCL reaction. Non-magnetic.

Sample Number:	W845457	Date Collected:	2019-09-04	UTM:	532486	mE	Nad83, Zone 8
Elevation:	1083 m	Sampler:	Adam Coulter	UTM:	7118025	mN	

Comments: Coarse-grained quartz-rich greisen float from RPP-19-008 drill pad. Overal orange in colour and rusty in places. Disseminated pyrite. No HCL reaction. Non-magnetic.

Sample Number:	W845458	Date Collected:	2019-09-04	UTM:	532486	mE	Nad83, Zone 8
Elevation:	1083 m	Sampler:	Adam Coulter	UTM:	7118025	mN	

Comments: Coarse-grained felsic intrusive rock with large plagioclase phenocrysts. Overal orange in colour on weathered surface. Trace muscovite and pyrite throughout. Looks like the pluton from RSC-10-005.

Sample Number:	W845459	Date Collected:	2019-09-09	UTM:	534422	mE	Nad83, Zone 8
Elevation:	1281 m	Sampler:	Adam Coulter	UTM:	7117849	mN	

Comments: W845459-Quartz vein float from 50cm deep pit. Quartz is white and rusty in places. Small black fragments of shale from side of vein? No HCL reaction. Non-mag.

Rock Sample Descriptions Properties: Bobcat, Kathy, Rau, Rau Regional, Spotlight, Unknown Target

Sample Number:	W845460	Date Collected:	2019-09-09	UTM:	534532 mE	Nad83, Zone 8
Elevation:	1272 m	Sampler:	Adam Coulter	UTM:	7117872 mN	

Comments: W845460-quartz vein float on open slope immediately above anomalous soil YY10046. Quartz is white overalll and rusty on fracture surfaces. No HCL reaction. Non-mag.

Sample Number:	W845461	Date Collected:	2019-09-09	UTM:	534524 mE	Nad83, Zone 8
Elevation:	1272 m	Sampler:	Adam Coulter	UTM:	7117862 mN	

Comments: W845461-shale with 1cm thick rusty quartz vein in float from open slope 5m above anomalous soil. No obvious sulphides in vein but overall rusty red in colour. No HCL reaction in vein or host shale. Non-mag.

Sample Number:	W845462	Date Collected:	2019-09-09	UTM:	534537 mE	Nad83, Zone 8
Elevation:	1277 m	Sampler:	Adam Coulter	UTM:	7117856 mN	

Comments: Quartz vein float from 50cm deep pit. Most vein fragments are white to rusty orange in colour. No HCL. Non-mag.

Sample Number:	W845463	Date Collected:	2019-09-09	UTM:	534537 mE	Nad83, Zone 8
Elevation:	1277 m	Sampler:	Adam Coulter	UTM:	7117856 mN	

Comments: Varying fragments of oxide float from 50 cm deep pit. 1 piece has thin 5mm quartz vein cutting through it. Oxide is dark orange/brown. No HcL. Non-mag.

Sample Number:	W845464	Date Collected:	2019-09-09	UTM:	534560 mE	Nad83, Zone 8
Elevation:	1269 m	Sampler:	Adam Coulter	UTM:	7117866 mN	

Comments: W845464-quartz vein float from open slope. Trace oxidized sulphide throughout. Softer yellow mineral coated on some surfaces (Sericite? Maybe some secondary arsenic oxide coating?). No HCL. Non-mag.

Sample Number:	W845465	Date Collected:	2019-09-09	UTM:	534573 mE	Nad83, Zone 8
Elevation:	1268 m	Sampler:	Adam Coulter	UTM:	7117869 mN	

Comments: Large 50cm yellowy quartz vein float from open slope. 1% 5mm oxidized purplish sulphide (pyrite?). Soft Yellow-orange mineral on quartz surfaces. Not sure what it is. No HCL reaction. Non-mag.

Rock Sample Descriptions Properties: Bobcat, Kathy, Rau, Rau Regional, Spotlight, Unknown Target

Sample Number:	W845466	Date Collected:	2019-09-09	UTM:	534573	mE	Nad83, Zone 8
Elevation:	1268 m	Sampler:	Adam Coulter	UTM:	7117869	mN	

Comments: Large 50cm yellowy quartz vein float from open slope. 1% 5mm oxidized purplish sulphide (pyrite?). Soft Yellow-orange mineral on quartz surfaces. Not sure what it is. No hcl. Non-mag.

Sample Number:	W845467	Date Collected:	2019-09-09	UTM:	534533	mE	Nad83, Zone 8
Elevation:	1248 m	Sampler:	Adam Coulter	UTM:	7117800	mN	

Comments: Pitted orange oxide float from pit at YY19043 picket location. Remnant quartz clasts in oxide. No HCL reaction. Non-mag.

Sample Number:	W845468	Date Collected:	2019-09-09	UTM:	534533	mE	Nad83, Zone 8
Elevation:	1248 m	Sampler:	Adam Coulter	UTM:	7117800	mN	

Comments: Abundant quartz vein float from 30cm deep pit at YY19043 picket location. Quartz is white to creamy to red in colour. No HCL reaction. Non-mag.

Sample Number:	W845469	Date Collected:	2019-09-09	UTM:	534624	mE	Nad83, Zone 8
Elevation:	1241 m	Sampler:	Adam Coulter	UTM:	7117852	mN	

Comments: Abundant quartz vein float from 50cm deep pit at YY19034. Quartz is mostly white and red in places. One fragment has soft red oxide clasts within the quartz vein. No HCL reaction. Non-mag.

Sample Number:	W845470	Date Collected:	2019-09-09	UTM:	534718	mE	Nad83, Zone 8
Elevation:	1199 m	Sampler:	Adam Coulter	UTM:	7117810	mN	

Comments: Massive orange oxide float from 60cm deep pit at YY10037 picket location. No HCL reaction. Non mag.

Sample Number:	W845471	Date Collected:	2019-09-09	UTM:	534721	mE	Nad83, Zone 8
Elevation:	1146 m	Sampler:	Adam Coulter	UTM:	7117603	mN	

Comments: Non calcareous black shale with 1-2cm quartz veins in 60cm deep pit at YY10034 picket location. No hcl. Non-mag.

Rock Sample Descriptions Properties: Bobcat, Kathy, Rau, Rau Regional, Spotlight, Unknown Target

Sample Number:	W845472	Date Collected:	2019-09-09	UTM:	534722	mE	Nad83, Zone 8
Elevation:	1155 m	Sampler:	Adam Coulter	UTM:	7117551	mN	

Comments: Dug quartz veins out of YY10033 soil auger hole by hand. Quartz is mostly clean white. Some is reddish on fractures. No hcl. Non-mag

Sample Number:	W845473	Date Collected:	2019-09-09	UTM:	534712	mE	Nad83, Zone 8
Elevation:	1173 m	Sampler:	Adam Coulter	UTM:	7117504	mN	

Comments: Quartz vein float from anomalous soil picket location. Quartz is mostly clean white. Some is reddish on fractures. No hcl. Non-mag

Sample Number:	W845474	Date Collected:	2019-09-09	UTM:	534684	mE	Nad83, Zone 8
Elevation:	1171 m	Sampler:	Adam Coulter	UTM:	7117522	mN	

Comments: Abundant rusty quartz vein talus on side of slope. Maybe 5% overall in amungst a sea of shale. Grabbed quickly at end of day trying to get back to helipad.

Sample Number:	W845475	Date Collected:	2019-09-09	UTM:	531786	mE	Nad83, Zone 8
Elevation:	1210 m	Sampler:	Austin Schneebeli	UTM:	7114510	mN	

Comments: W845475 - Red/brown limonitic quartz vein in outcrop orientated at 292/70 and hosted in phyllitic-pyritic shale.

Sample Number:	W845476	Date Collected:	2019-09-09	UTM:	531788	mE	Nad83, Zone 8
Elevation:	1212 m	Sampler:	Austin Schneebeli	UTM:	7114515	mN	

Comments: W845476 - Subcrop of strongly oxidized-limonitic reddish-orange coloured with variable quartz veinlets overprinting oxide.

Sample Number:	W845477	Date Collected:	2019-09-09	UTM:	531782	mE	Nad83, Zone 8
Elevation:	1212 m	Sampler:	Austin Schneebeli	UTM:	7114513	mN	

Comments: W845477 - Quartz veins taken from subcrop. Red-orange oxide with trace metallic-grey sulphides.

Sample Number:	W845478	Date Collected:	2019-09-09	UTM:	531802	mE	Nad83, Zone 8
Elevation:	1220 m	Sampler:	Austin Schneebeli	UTM:	7114506	mN	

Comments: W845478 - Variably oxidized quartz veins from outcrop, roughly orientated at 274/72.

Rock Sample Descriptions Properties: Bobcat, Kathy, Rau, Rau Regional, Spotlight, Unknown Target

Sample Number:	W845479	Date Collected:	2019-09-09	UTM:	531802 mE	Nad83, Zone 8
Elevation:	1220 m	Sampler:	Austin Schneebeli	UTM:	7114506 mN	

Comments: W845479 - Subcrop of quartz-limonite vein.

Sample Number:	W845480	Date Collected:	2019-09-09	UTM:	531802 mE	Nad83, Zone 8
Elevation:	1220 m	Sampler:	Austin Schneebeli	UTM:	7114506 mN	

Comments: W845480 - Subcrop of quartz-limonite vein.

Sample Number:	W845481	Date Collected:	2019-09-09	UTM:	532183 mE	Nad83, Zone 8
Elevation:	1100 m	Sampler:	Austin Schneebeli	UTM:	7114214 mN	

Comments: W845481 - Multiple golf ball sized, moderately oxidized, quartz float fragments.

Sample Number:	W845482	Date Collected:	2019-09-09	UTM:	531955 mE	Nad83, Zone 8
Elevation:	1001 m	Sampler:	Austin Schneebeli	UTM:	7113882 mN	

Comments: W845482 - Oxidized, clastic siltstone, sub-rounded boulder.

Sample Number:	W845483	Date Collected:	2019-09-09	UTM:	531908 mE	Nad83, Zone 8
Elevation:	1001 m	Sampler:	Austin Schneebeli	UTM:	7113876 mN	

Comments: W845483 - Directly below soil picket at ~50cm were multiple angular quartz with limonite and lead grey metallic mineral. Float sample.

Sample Number:	W845484	Date Collected:	2019-09-04	UTM:	532486 mE	Nad83, Zone 8
Elevation:	1083 m	Sampler:	Adam Coulter	UTM:	7118025 mN	

Comments: W845484 - Medium grained, quartz rich greisen with trace metallic, silvery-grey, blebby sulphides and rusty orange-brown-purple oxide layer coating the float. Locally weakly magnetic.

Sample Number:	W845485	Date Collected:	2019-09-04	UTM:	532486 mE	Nad83, Zone 8
Elevation:	1083 m	Sampler:	Adam Coulter	UTM:	7118025 mN	

Comments: W845485 - Tremolite bearing, oxidized, weakly pitted dolostone float. Weak HCl reaction, non-magnetic and dense.

Rock Sample Descriptions Properties: Bobcat, Kathy, Rau, Rau Regional, Spotlight, Unknown Target

Sample Number:	W845486	Date Collected:	2019-09-04	UTM:	532486 mE	Nad83, Zone 8
Elevation:	1083 m	Sampler:	Adam Coulter	UTM:	7118025 mN	

Comments: W845486 - Strongly rusty-orange oxidized greisen (?) with pitted textures infilled with reddish-brown oxidized tremolite. No HCl, non-magnetic.

Sample Number:	w845487	Date Collected:	2019-09-11	UTM:	531715 mE	Nad83, Zone 8
Elevation:	1212 m	Sampler:	Milo Mielniczuk	UTM:	7114597 mN	

Comments: Grab of small qtz subcrob clasts in shale host. Rust appearance. Trace unweathered py. Small clasts max 5 cm.

Sample Number:	W845488	Date Collected:	2019-09-11	UTM:	531777 mE	Nad83, Zone 8
Elevation:	1202 m	Sampler:	Milo Mielniczuk	UTM:	7114455 mN	

Comments: qtz hosted in outcrop of shale. Qtz stringers / veins mm to cm size. Rusty appearance. w/ trace unweathered py. Qtz irregular orientation and structure. Choice grab.

Sample Number:	W845489	Date Collected:	2019-09-11	UTM:	531777 mE	Nad83, Zone 8
Elevation:	1202 m	Sampler:	Milo Mielniczuk	UTM:	7114455 mN	

Comments: same station. Collected by A. Coulter. Same style quartz as previous sample. Collected 3-5m north

Sample Number:	W845490	Date Collected:	2019-09-11	UTM:	531787 mE	Nad83, Zone 8
Elevation:	1201 m	Sampler:	Adam Coulter	UTM:	7114448 mN	

Comments: Quartz vein sample from basalt outcrop. Veins are highly deformed/folded and contain trace pyrite and sericite. ~1% moderately oxidizied sulphides throughout. No HCL reaction. Non-magnetic.

Sample Number:	W845491	Date Collected:	2019-09-11	UTM:	532251 mE	Nad83, Zone 8
Elevation:	1119 m	Sampler:	Adam Coulter	UTM:	7114283 mN	

Comments: Abundant angular quartz vein fragments from 60cm deep pit. Took sample bag half full of small fragments. Majority of quartz veins are overall rusty looking and contain <5mm round oxide framgents in quartz vein (presumably this was pyrite?). Trace sericite and remnant pyrite in places. No HCL reaciton. Non-magnetic.

Rock Sample Descriptions Properties: Bobcat, Kathy, Rau, Rau Regional, Spotlight, Unknown Target

Sample Number:	W845492	Date Collected:	2019-09-11	UTM:	532251	mE	Nad83, Zone 8
Elevation:	1119 m	Sampler:	Adam Coulter	UTM:	7114283	mN	

Comments: Quartz vein float from 60cm deep pit. Quartz is mostly white and very rusty looking overall, particularly on fracture surfaces. Trace soft orange oxide in quartz. Vein is hosted in weakly calcareous shale. Non-magnetic.

Sample Number:	W845493	Date Collected:	2019-09-11	UTM:	532251	mE	Nad83, Zone 8
Elevation:	1119 m	Sampler:	Adam Coulter	UTM:	7114283	mN	

Comments: Strongly oxidized quartz-calcite vein float from 60 cm deep pit. 30% oxide and 70% quartz. Quartz is white to clear in places. Oxide is orange, massive and soft. Non-mag. Strong HCL in calcite.

Sample Number:	w845494	Date Collected:	2019-09-11	UTM:	532247	mE	Nad83, Zone 8
Elevation:	1125 m	Sampler:	Milo Mielniczuk	UTM:	7114291	mN	

Comments: Grab samples of the most oxidized quartz clasts from exploration pit. Variable size. Angular and local source.

Sample Number:	w845495	Date Collected:	2019-09-11	UTM:	532247	mE	Nad83, Zone 8
Elevation:	1125 m	Sampler:	Milo Mielniczuk	UTM:	7114291	mN	

Comments: Grab samples of choice quartz with unweathered pyrite. From exploration pit described in station description.

Sample Number:	W845496	Date Collected:	2019-09-11	UTM:	532322	mE	Nad83, Zone 8
Elevation:	1138 m	Sampler:	Milo Mielniczuk	UTM:	7114353	mN	

Comments: Grab of quartz rich material from expl pit. Quartz calc stringers with some weak limonite stain.

Sample Number:	W845497	Date Collected:	2019-09-11	UTM:	532320	mE	Nad83, Zone 8
Elevation:	1141 m	Sampler:	Adam Coulter	UTM:	7114367	mN	

Comments: Quartz vein float dug from 50cm deep pit. 20% oxide overall. Quartz is clear-white. Oxide is massive, orange and very soft. No HCL reaction. Non-mag.

Rock Sample Descriptions Properties: Bobcat, Kathy, Rau, Rau Regional, Spotlight, Unknown Target

Sample Number:	W845498	Date Collected:	2019-09-11	UTM:	532320 mE	Nad83, Zone 8
Elevation:	1141 m	Sampler:	Adam Coulter	UTM:	7114367 mN	

Comments: Quartz vein float dug from 50cm deep pit. 5% oxide overall. Quartz is clear-white. Oxide is massive, orange and very soft. No HCL reaction. Non-mag.

Sample Number:	W845499	Date Collected:	2019-09-11	UTM:	532320 mE	Nad83, Zone 8
Elevation:	1141 m	Sampler:	Adam Coulter	UTM:	7114367 mN	

Comments: Weakly calcareous black shale in float from 50cm deep pit. Contains 2% rounded oxidized pyrite throughout. Weak HCL reaction. Non-mag.

Sample Number:	W845500	Date Collected:	2019-09-11	UTM:	532182 mE	Nad83, Zone 8
Elevation:	1091 m	Sampler:	Adam Coulter	UTM:	7114213 mN	

Comments: Abundant quartz vein in float from 60cm deep pit. Trace oxide throughout veins and overall rusty appearance. No HCL reaction. Non-mag.

APPENDIX VI

ROCK SAMPLES – 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 ST
VANCOUVER BC V6B 1L8

Finalized Date: 2-JUL-2019
Account: RCM

CERTIFICATE WH19146754

Project: RAU

P.O. No.: R19-R01

This report is for 33 Rock samples submitted to our lab in Whitehorse, YT, Canada on 17-JUN-2019.

The following have access to data associated with this certificate:

ANDREW CARNE	ADAM COULTER	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
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
PUL-31	Pulverize split to 85% <75 um

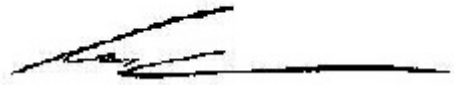
ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid ICP-MS	
Ag-OG62	Ore Grade Ag - Four Acid	
ME-OG62	Ore Grade Elements - Four Acid	ICP-AES
Pb-OG62	Ore Grade Pb - Four Acid	
Zn-OG62	Ore Grade Zn - 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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North Vancouver BC V7H 0A7
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Project: RAU

Finalized Date: 2-JUL-2019
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CERTIFICATE OF ANALYSIS WH19146754

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
S036451		0.35	<0.01	1.36	1.01	35.9	2030	0.44	0.44	0.03	0.89	5.74	0.5	27	1.13	29.3
S036452		0.28	<0.01	1.04	6.91	15.0	1080	25.0	0.56	0.05	1.64	8.77	1.4	4	4.92	5.0
S036453		0.92	<0.01	0.50	8.41	5.6	2270	2.58	1.28	3.01	0.68	75.1	11.8	83	20.7	40.1
S036454		1.43	<0.01	0.37	1.98	6.8	2610	0.83	0.51	0.06	1.32	9.79	1.5	62	2.93	8.0
S036455		0.85	<0.01	0.85	8.83	14.6	2070	29.5	0.63	0.03	2.36	10.55	1.1	5	11.40	4.6
S036456		0.54	<0.01	0.21	7.07	7.4	1530	23.0	0.30	0.15	0.11	17.35	0.7	5	5.37	1.5
S036457		1.74	<0.01	0.05	0.21	2.8	2220	0.39	0.10	23.5	0.75	3.41	1.3	2	0.48	1.5
S036458		1.87	<0.01	0.19	0.87	75.3	820	7.79	0.16	7.05	73.4	57.7	123.0	13	1.14	9.0
S036459		1.46	<0.01	0.36	0.40	105.5	1280	5.38	0.50	12.60	16.20	17.65	74.9	4	0.96	6.9
S036460		0.20	<0.01	0.97	0.78	121.5	820	4.80	0.10	13.30	16.55	18.80	53.3	6	1.89	15.4
S036461		1.10	<0.01	0.12	0.89	3.8	1380	0.47	0.37	27.2	0.75	13.65	2.8	20	2.76	10.7
S036462		1.62	<0.01	0.05	6.35	7.1	660	3.77	0.12	0.48	0.54	5.32	0.9	8	5.17	12.3
S036463		1.33	<0.01	0.23	4.23	6.2	3030	1.32	1.01	0.20	0.57	29.5	2.3	81	7.72	3.6
S036464		2.19	<0.01	0.35	3.01	6.7	120	1.05	0.18	2.35	0.34	37.8	3.8	79	2.59	23.7
S036465		1.70	<0.01	1.11	0.92	3.3	2490	1.52	5.20	1.50	3.84	7.17	1.1	20	2.01	18.6
S036466		0.70	<0.01	0.06	1.24	2.9	>10000	15.00	0.55	0.79	3.52	7.89	2.4	22	20.1	16.3
S036467		1.61	<0.01	0.10	0.90	4.3	8940	1.50	0.60	4.43	1.83	7.04	2.1	37	2.39	16.0
S036468		0.19	<0.01	0.39	0.99	65.8	1280	12.10	0.06	0.11	18.90	48.9	48.6	45	0.74	556
S036469		0.57	0.03	>100	2.02	20.2	3540	1.02	0.21	0.05	4.98	11.25	2.0	47	3.29	16.7
S036471		0.95	<0.01	0.88	1.11	124.5	480	12.70	0.34	15.15	4.02	16.30	31.0	3	1.33	4.8
S036472		1.06	<0.01	0.44	0.09	2.5	400	0.13	0.82	26.0	0.08	2.49	0.4	1	0.71	0.9
S036473		1.09	<0.01	0.11	0.03	3.2	50	0.11	0.01	23.9	0.09	1.79	0.5	1	<0.05	1.0
S036474		1.72	<0.01	0.38	3.06	10.0	240	1.10	0.32	1.02	0.07	28.5	5.1	87	4.71	27.2
S036475		0.19	<0.01	1.35	6.14	15.7	800	1.22	0.15	0.26	2.31	45.4	13.8	40	3.07	10.3
S036476		1.47	<0.01	0.84	2.32	180.5	690	0.92	0.10	0.04	0.40	43.6	8.1	81	2.21	91.9
S036477		1.57	<0.01	1.49	2.53	617	2310	1.06	0.51	0.05	1.45	33.8	0.3	57	2.52	11.9
S036478		0.54	<0.01	0.06	0.19	17.4	210	0.18	<0.01	0.01	0.61	24.2	4.5	22	0.17	24.3
S036479		0.12	<0.01	0.06	0.06	20.0	170	0.36	0.13	23.2	1.12	5.97	2.0	2	0.18	3.6
S036480		0.29	<0.01	0.13	1.41	12.7	660	0.80	0.04	0.06	1.09	7.39	11.4	28	0.91	60.6
S036481		1.20	0.03	1.44	0.20	103.0	210	0.12	0.04	0.02	0.13	3.15	0.2	22	0.20	13.0
S036482		1.15	<0.01	0.09	0.29	24.5	3700	0.10	0.11	0.01	0.03	1.43	0.2	21	0.27	8.3
S036483		1.83	0.05	19.60	0.43	543	180	0.23	9.26	0.02	0.11	36.2	0.6	53	0.37	106.5
S036484		0.90	<0.01	0.44	0.23	7.8	880	0.11	0.02	0.05	1.44	3.20	2.2	23	0.11	100.5

***** See Appendix Page for comments regarding this certificate *****

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Project: RAU

CERTIFICATE OF ANALYSIS WH19146754

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	Fe	Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P
	Units	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
S036451		1.67	3.25	<0.05	0.5	0.077	0.44	3.8	2.6	0.06	91	59.8	0.02	1.7	4.2	160
S036452		1.19	39.5	<0.05	5.0	0.813	4.31	2.7	18.7	0.14	107	1.82	0.06	67.8	20.7	60
S036453		1.79	22.0	0.13	1.7	0.025	3.86	37.0	48.7	0.99	142	1.80	0.58	10.2	26.6	710
S036454		0.93	6.62	<0.05	1.1	0.022	0.92	5.8	12.1	0.17	175	2.02	0.05	5.7	9.7	110
S036455		1.02	63.7	0.06	4.5	0.999	5.86	2.9	37.9	0.23	96	1.18	0.15	61.9	13.0	40
S036456		0.84	35.1	0.07	2.7	0.291	5.94	5.5	8.9	0.09	195	0.79	0.10	57.2	8.2	20
S036457		0.36	0.81	0.22	0.1	0.015	0.12	2.2	9.2	11.95	973	5.73	<0.01	0.3	9.1	60
S036458		26.0	2.33	0.16	0.3	0.021	0.15	28.9	8.4	4.14	10800	23.7	0.01	1.0	588	370
S036459		19.30	1.31	0.09	0.1	0.035	0.14	13.0	8.6	7.98	7590	35.3	0.01	0.7	534	350
S036460		18.15	2.08	0.09	0.2	0.010	0.16	13.1	14.7	9.32	5140	48.8	0.01	1.4	464	260
S036461		1.22	4.78	0.07	0.4	0.015	0.57	9.8	6.2	3.40	745	6.92	0.07	2.3	19.5	170
S036462		0.61	24.2	0.11	1.9	0.059	5.24	2.4	6.8	0.05	183	4.16	0.46	116.0	3.7	10
S036463		0.93	12.90	0.11	1.9	0.026	2.08	15.8	31.7	0.46	179	2.42	0.05	12.1	15.6	60
S036464		1.36	12.80	0.10	1.1	0.014	0.12	22.9	10.6	0.47	101	2.31	0.14	9.2	30.3	160
S036465		0.85	3.04	0.05	0.4	0.403	0.09	4.7	48.7	0.42	547	13.50	0.01	1.6	9.4	80
S036466		1.12	2.70	0.05	0.4	0.009	0.42	4.6	82.2	0.66	256	17.15	0.04	1.9	18.7	320
S036467		1.25	2.40	0.05	0.4	0.012	0.41	4.5	31.9	3.10	338	7.79	0.09	1.4	12.6	340
S036468		48.9	1.98	0.28	0.1	0.035	0.09	23.0	3.9	0.27	467	29.2	0.01	0.4	404	1010
S036469		1.16	5.88	0.05	1.0	0.017	0.92	6.7	8.3	0.20	204	7.75	0.02	3.9	13.0	150
S036471		12.60	6.43	0.06	0.2	0.073	0.54	12.1	8.2	9.25	1520	37.7	0.02	2.9	322	90
S036472		0.14	0.33	0.13	<0.1	0.020	0.06	1.6	4.2	11.45	241	0.87	0.01	0.1	3.5	40
S036473		0.19	0.15	0.21	<0.1	0.016	0.01	1.2	1.1	13.65	353	0.57	<0.01	0.1	3.1	40
S036474		1.66	7.09	0.12	1.2	0.008	1.83	15.2	9.4	0.49	71	2.78	0.09	9.8	39.7	160
S036475		3.29	14.05	0.10	2.2	0.055	5.67	16.1	103.5	1.13	2310	1.05	0.06	7.6	26.8	890
S036476		5.89	11.00	0.10	0.9	0.481	0.43	19.6	15.6	1.62	222	10.55	0.01	3.0	71.5	3550
S036477		3.97	9.12	0.14	1.3	0.757	1.28	23.2	5.1	0.15	75	25.4	0.03	2.8	2.3	>10000
S036478		1.77	0.83	0.05	0.1	0.021	0.05	15.1	1.5	0.01	108	1.01	<0.01	0.2	27.2	580
S036479		1.02	0.28	0.05	<0.1	0.014	0.02	4.0	2.2	12.75	1280	3.56	0.01	0.1	11.6	100
S036480		2.54	2.50	<0.05	0.5	0.015	0.33	4.9	4.0	0.08	127	3.55	0.02	1.5	64.1	320
S036481		2.53	1.07	<0.05	0.1	0.051	0.13	2.5	0.6	0.01	36	8.36	<0.01	0.5	1.3	460
S036482		1.62	0.99	<0.05	0.2	0.034	0.10	1.1	1.1	0.01	32	5.99	0.01	1.5	1.4	240
S036483		10.15	13.15	0.20	0.3	1.295	0.36	27.3	1.5	0.01	58	60.2	0.01	0.5	3.7	2930
S036484		0.84	0.46	<0.05	<0.1	0.022	0.01	1.1	0.7	0.35	235	1.26	<0.01	0.1	20.2	120

***** 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
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: RAU

Finalized Date: 2-JUL-2019
Account: RCM

CERTIFICATE OF ANALYSIS WH19146754

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
S036451		10.2	30.4	<0.002	0.04	3.00	1.9	3	3.4	7.3	0.09	0.10	1.18	0.044	0.82	5.3
S036452		8.4	670	<0.002	0.01	1.64	0.7	<1	68.6	5.5	79.5	<0.05	16.95	<0.005	2.28	2.9
S036453		8.7	340	0.002	1.02	0.99	18.3	1	11.5	211	0.79	0.14	11.30	0.355	3.00	2.9
S036454		4.7	61.9	0.003	0.23	1.34	4.1	1	1.8	29.4	0.43	0.06	3.18	0.145	0.62	1.8
S036455		14.3	1710	<0.002	0.03	0.94	2.7	<1	73.2	7.0	>100	<0.05	17.20	<0.005	7.22	4.7
S036456		11.1	920	<0.002	0.01	0.92	0.3	<1	46.5	12.2	76.0	<0.05	5.02	<0.005	3.59	3.6
S036457		1.9	8.4	0.009	0.09	0.39	0.4	<1	0.3	182.5	0.22	<0.05	0.28	0.008	1.01	5.7
S036458		44.5	11.6	<0.002	0.17	42.1	1.9	5	1.3	52.1	0.15	<0.05	1.00	0.020	0.41	17.3
S036459		66.5	10.7	0.002	0.02	14.05	0.9	8	4.9	81.1	0.08	<0.05	0.75	0.012	0.67	8.8
S036460		48.4	11.9	0.002	0.01	10.60	1.5	9	0.4	77.9	0.11	<0.05	1.37	0.016	0.67	4.1
S036461		4.6	75.2	0.004	0.37	0.76	2.6	1	6.8	316	0.15	0.05	1.47	0.052	0.57	5.9
S036462		37.3	411	<0.002	0.02	0.31	2.3	<1	27.0	51.2	15.35	<0.05	17.55	<0.005	2.96	20.1
S036463		5.3	129.5	0.004	0.26	1.07	8.4	3	3.8	18.7	0.78	0.11	6.43	0.295	1.17	2.1
S036464		10.6	12.8	0.007	0.93	1.32	5.3	2	5.4	84.3	0.57	<0.05	5.15	0.225	0.25	2.4
S036465		531	40.7	0.002	0.16	4.66	1.6	2	97.3	73.3	0.10	0.11	0.85	0.046	0.64	3.6
S036466		8.7	312	0.004	0.09	1.11	1.5	2	19.3	32.5	0.26	<0.05	1.21	0.045	1.86	4.4
S036467		7.2	110.0	0.006	0.15	0.98	2.2	1	13.8	41.6	0.09	<0.05	0.94	0.043	0.85	6.0
S036468		63.6	8.1	<0.002	0.10	7.43	3.9	33	0.4	9.3	0.05	<0.05	0.65	0.011	0.60	15.5
S036469		252	50.0	<0.002	0.08	81.7	4.3	7	5.4	20.5	0.24	0.14	2.31	0.127	1.90	2.6
S036471		25.2	101.0	0.002	<0.01	4.49	0.7	5	29.7	112.5	4.15	<0.05	1.26	<0.005	0.43	3.4
S036472		18.0	13.1	<0.002	0.01	11.75	0.2	<1	1.1	184.0	<0.05	<0.05	0.06	<0.005	0.18	1.4
S036473		5.6	0.8	<0.002	0.01	0.42	0.1	<1	0.4	133.5	<0.05	<0.05	0.05	<0.005	<0.02	0.6
S036474		16.0	194.5	0.019	1.12	4.98	4.9	2	19.1	264	0.57	0.12	5.22	0.238	1.15	1.9
S036475		32.2	120.0	<0.002	0.02	3.34	7.6	1	1.7	18.7	0.53	<0.05	10.35	0.202	0.69	2.9
S036476		21.7	34.5	<0.002	0.20	10.90	18.3	6	1.0	41.5	0.17	0.09	15.90	0.100	1.11	12.5
S036477		273	65.3	<0.002	0.37	21.5	10.1	44	12.2	168.5	0.17	0.39	19.30	0.112	3.41	3.7
S036478		2.8	2.8	<0.002	0.04	1.32	0.9	1	<0.2	24.8	<0.05	<0.05	2.17	<0.005	0.20	1.9
S036479		4.3	3.3	0.002	<0.01	0.72	0.2	<1	0.6	148.5	<0.05	<0.05	0.16	<0.005	0.09	1.4
S036480		3.5	14.7	<0.002	0.02	1.17	1.9	<1	0.3	12.6	0.08	<0.05	1.15	0.041	0.45	8.3
S036481		477	5.6	<0.002	0.11	12.15	0.5	11	9.8	10.5	<0.05	0.06	0.77	0.013	1.12	0.3
S036482		23.2	6.0	<0.002	0.12	7.62	0.8	8	1.4	202	0.08	0.06	0.42	0.052	0.15	0.5
S036483		>10000	12.1	<0.002	0.81	222	2.4	98	264	204	<0.05	0.58	11.40	0.023	1.56	4.0
S036484		20.5	0.9	<0.002	0.04	5.98	1.8	<1	2.5	15.2	<0.05	<0.05	0.52	<0.005	0.07	0.8

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North Vancouver BC V7H 0A7
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VANCOUVER BC V6B 1L8

Project: RAU

Finalized Date: 2-JUL-2019
Account: RCM

CERTIFICATE OF ANALYSIS WH19146754

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Ag-OG62	Pb-OG62	Zn-OG62
	Analyte	V	W	Y	Zn	Zr	Ag	Pb	Zn
	Units	ppm	ppm	ppm	ppm	ppm	ppm	%	%
	LOD	1	0.1	0.1	2	0.5	1	0.001	0.001
S036451		92	3.5	1.8	81	22.2			
S036452		4	5.1	2.5	207	23.1			
S036453		139	1.6	23.1	52	62.1			
S036454		136	1.0	3.6	79	40.1			
S036455		2	5.0	1.2	121	16.7			
S036456		1	4.4	5.0	101	10.6			
S036457		13	0.1	2.2	90	1.5			
S036458		26	4.6	178.0	>10000	27.2			3.02
S036459		14	9.1	72.1	>10000	6.2			1.535
S036460		9	6.3	67.6	>10000	7.7			1.285
S036461		67	2.5	15.6	362	16.3			
S036462		1	8.1	29.3	92	26.5			
S036463		176	1.5	8.7	322	71.0			
S036464		116	0.8	13.1	57	41.8			
S036465		45	3.3	2.3	489	16.3			
S036466		46	14.0	3.4	171	17.3			
S036467		67	3.1	7.2	57	17.6			
S036468		265	0.5	231	>10000	6.0			1.075
S036469		374	1.2	5.4	126	37.3	643		
S036471		8	5.9	65.8	9760	2.6			
S036472		5	0.5	1.7	43	0.6			
S036473		2	0.4	0.8	66	<0.5			
S036474		135	2.9	9.3	33	43.6			
S036475		49	0.8	11.9	83	70.0			
S036476		124	0.5	11.9	346	35.4			
S036477		259	1.5	5.8	20	51.3			
S036478		25	0.1	5.3	381	4.9			
S036479		6	9.1	3.1	193	0.9			
S036480		59	0.2	7.0	480	20.9			
S036481		184	0.5	1.3	24	3.5			
S036482		65	0.5	1.8	11	9.4			
S036483		439	4.1	1.4	103	25.2		1.335	
S036484		14	<0.1	3.5	138	1.7			

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North Vancouver BC V7H 0A7
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To: **ATAC RESOURCES LTD.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Project: RAU

Finalized Date: 2-JUL-2019
Account: RCM

CERTIFICATE OF ANALYSIS WH19146754

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	PUL-31
PUL-QC	SPL-21	WEI-21	

Applies to Method: Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Ag-OG62	Au-AA25	ME-MS61	ME-OG62
Pb-OG62	Zn-OG62		

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North Vancouver BC V7H 0A7
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Finalized Date: 10-JUL-2019
Account: RCM

CERTIFICATE WH19152970

Project: Rau

P.O. No.: R19-R02

This report is for 58 Rock samples submitted to our lab in Whitehorse, YT, Canada on 24-JUN-2019.

The following have access to data associated with this certificate:

ANDREW CARNE	ADAM COULTER	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
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
OA-HSUL10	Handling of High Sulphide Samples
PUL-31	Pulverize split to 85% <75 um

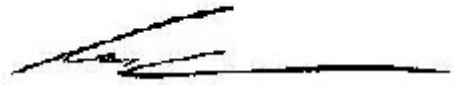
ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid 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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North Vancouver BC V7H 0A7
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Finalized Date: 10-JUL-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19152970

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
W420601		0.40	0.01	0.27	1.28	9.8	590	8.36	1.85	17.40	0.63	11.80	17.3	28	3.83	275
W420602		0.47	0.28	2.12	0.50	972	70	0.72	29.2	12.30	0.48	5.12	1.2	2	1.05	529
W420603		0.34	<0.01	0.08	3.78	10.3	340	1.27	0.26	7.32	3.06	32.1	6.5	27	2.01	13.1
W420604		0.45	0.01	0.67	1.92	8.8	1270	4.22	2.44	9.15	0.06	3.09	0.9	22	3.20	247
W420605		0.44	0.05	1.95	0.14	67.4	20	0.11	11.55	3.49	0.50	1.92	0.9	2	1.65	1650
W420606		0.52	0.05	2.13	0.06	87.2	10	0.07	14.65	4.57	0.52	1.88	4.7	1	0.64	1670
W420607		0.67	0.05	2.87	0.11	543	<10	0.11	6.23	0.36	34.1	1.91	1.3	2	1.68	3060
W420608		0.80	0.01	1.81	0.04	94.8	<10	<0.05	9.03	0.98	0.14	2.14	1.4	<1	0.25	1890
W420609		1.20	0.06	2.20	0.10	75.5	10	<0.05	27.6	3.04	0.33	1.43	1.3	2	1.40	1650
W420610		0.39	0.02	1.68	1.76	2.7	930	1.91	26.8	9.39	0.19	5.08	1.7	25	7.22	305
W420611		0.41	0.01	0.43	2.33	5.5	1640	2.65	1.58	9.25	0.15	4.59	0.5	35	5.10	131.0
W420612		0.90	<0.01	0.97	2.49	2.2	1910	3.38	2.37	7.32	0.42	5.34	2.1	38	8.37	415
W420613		0.33	0.01	0.21	0.42	2.8	420	0.63	1.95	20.7	0.70	22.2	1.0	18	6.94	4.0
W420614		0.44	<0.01	0.11	3.04	1.7	1340	0.95	0.55	1.09	0.06	38.6	3.6	72	3.62	18.2
W420615		0.30	<0.01	0.48	1.49	7.0	210	0.79	0.55	0.57	0.04	2.03	0.6	68	1.49	14.0
W420616		0.22	0.01	0.48	1.96	15.9	850	1.10	1.53	0.28	0.37	18.60	1.8	47	2.14	28.0
W420617		0.19	<0.01	0.10	2.07	11.1	630	0.86	0.47	0.84	3.39	31.5	7.6	18	0.79	11.1
W420618		0.54	0.02	0.03	0.64	40.9	150	0.15	0.95	28.4	0.04	6.60	1.3	9	10.80	3.7
W420619		0.91	0.01	0.21	2.09	4.7	460	0.64	1.80	8.11	0.03	16.60	8.2	29	1.35	25.7
W420620		0.17	0.01	0.48	0.99	34.5	500	0.36	0.49	0.09	0.05	15.40	0.8	29	2.61	17.5
W420621		0.35	0.01	0.35	0.99	34.0	310	0.69	1.51	0.93	2.50	18.65	1.5	35	1.08	28.5
W420622		0.39	0.01	0.05	5.01	15.2	220	1.25	0.47	0.21	0.23	48.4	5.5	43	0.60	12.7
W420623		0.27	<0.01	0.18	1.19	28.3	1210	0.48	0.67	0.04	0.02	26.6	0.7	39	2.84	51.3
W420624		0.08	0.01	0.31	1.99	25.3	960	0.94	1.20	0.17	0.31	14.30	1.7	55	1.88	15.1
W420625		0.34	<0.01	0.23	1.24	21.2	1140	0.45	0.09	3.81	0.66	13.50	3.5	22	0.99	10.9
W420626		0.21	0.01	0.12	3.26	3.4	2140	1.90	2.60	0.27	0.13	41.9	1.9	82	4.16	21.8
W420627		0.33	<0.01	0.06	0.55	0.6	100	6.49	0.16	14.40	0.19	2.21	2.4	11	2.65	60.8
W420628		1.07	<0.01	0.02	0.35	0.5	60	6.63	0.07	15.80	0.10	1.82	1.6	6	1.27	17.2
W420629		0.72	<0.01	0.06	0.45	0.3	100	5.39	0.14	13.40	0.23	2.07	3.2	9	1.88	52.0
W420630		0.31	0.01	0.55	1.99	20.6	3250	1.28	1.14	0.63	0.43	11.30	1.1	46	3.17	18.2
W420631		0.24	<0.01	0.57	1.36	14.6	1370	0.66	0.43	0.08	0.58	7.31	1.4	24	1.81	22.9
W420632		0.63	<0.01	0.21	4.72	1.1	200	34.0	0.55	12.55	<0.02	133.0	26.2	209	9.87	169.0
W420633		0.67	<0.01	0.18	5.92	0.5	510	12.50	1.09	9.22	0.07	108.5	36.1	255	60.3	239
W420634		0.53	<0.01	0.04	0.21	0.6	70	0.13	0.08	31.5	0.18	10.45	2.9	18	0.36	3.1
W420635		0.38	0.01	0.14	4.28	1.4	690	15.60	0.68	12.25	0.14	62.7	15.5	179	14.40	130.0
W420636		0.71	0.01	0.14	3.46	1.0	310	20.4	1.84	12.85	0.07	76.3	19.4	187	6.81	166.0
W420637		0.41	<0.01	0.14	5.05	1.0	230	20.5	0.77	11.80	0.03	164.0	21.8	223	16.35	168.0
W420638		0.81	<0.01	0.20	4.92	1.0	170	16.80	1.33	13.15	0.08	133.0	28.3	218	9.35	222
W420639		0.19	<0.01	0.20	6.67	0.7	700	8.18	1.54	7.79	<0.02	185.0	45.1	281	53.7	325
S036485		0.62	<0.01	0.38	1.28	4.3	310	1.82	51.5	6.49	0.51	15.20	5.9	35	1.25	124.5

***** 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
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: 10-JUL-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19152970

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	Fe	Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P
	Units	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
W420601		6.34	3.82	0.06	0.4	0.026	0.69	5.9	10.4	2.50	278	3.68	0.12	3.1	29.2	150
W420602		17.25	2.77	0.07	<0.1	0.074	0.18	2.7	5.9	7.81	1560	4.52	0.03	0.2	7.2	50
W420603		2.78	9.34	0.07	1.4	0.045	2.15	15.6	17.6	3.26	1330	4.94	0.04	4.9	19.2	330
W420604		13.80	6.65	0.09	0.4	0.152	2.33	1.0	31.0	5.56	1540	22.3	0.14	3.3	9.3	470
W420605		40.2	0.65	0.11	<0.1	0.095	0.05	0.6	0.9	1.53	759	1.65	<0.01	0.2	41.5	40
W420606		38.7	0.24	0.10	<0.1	0.107	0.02	0.6	0.7	1.86	866	0.74	<0.01	0.1	43.6	50
W420607		49.7	0.92	0.13	0.1	0.702	0.06	0.7	0.5	0.66	609	1.71	<0.01	0.3	49.6	60
W420608		47.5	0.31	0.12	<0.1	0.019	0.01	0.9	0.3	0.63	212	0.60	<0.01	0.1	47.3	30
W420609		42.4	0.34	0.10	<0.1	0.029	0.06	0.5	0.8	1.70	851	0.96	<0.01	0.2	46.1	30
W420610		10.70	6.96	0.08	0.4	0.297	2.03	1.3	68.5	7.47	1180	28.3	0.12	3.0	8.9	380
W420611		8.83	6.71	0.09	0.5	0.068	2.81	1.3	40.7	6.24	994	52.5	0.16	3.9	3.4	410
W420612		12.45	9.39	0.09	0.4	0.121	2.94	1.7	70.8	5.50	1200	35.3	0.14	3.8	11.1	470
W420613		0.40	1.96	0.06	0.2	0.012	0.29	26.0	8.9	11.25	492	1.31	0.03	0.8	52.1	1250
W420614		0.82	7.72	0.09	1.1	0.005	2.15	20.5	12.0	0.28	64	1.71	0.27	9.3	20.8	180
W420615		0.77	3.20	0.06	0.8	<0.005	0.25	1.3	4.9	0.19	47	4.60	0.03	3.3	18.3	80
W420616		1.29	6.59	0.08	0.9	0.039	0.68	12.3	9.9	0.26	156	22.7	0.05	5.4	49.2	340
W420617		4.87	4.77	0.06	0.7	0.209	1.28	17.4	10.9	0.60	5610	1.49	0.08	2.6	23.5	230
W420618		0.51	2.08	<0.05	0.1	<0.005	0.67	4.2	3.5	6.57	736	1.04	0.01	1.2	9.3	130
W420619		2.31	4.24	0.06	0.5	0.005	0.89	8.7	12.1	0.73	284	21.9	0.21	3.2	86.3	270
W420620		1.57	4.62	0.05	0.5	0.005	0.41	8.1	8.4	0.54	111	24.9	0.01	2.7	20.3	190
W420621		1.37	8.16	0.06	0.9	2.55	0.31	8.5	4.6	1.21	152	14.05	0.02	3.5	21.0	350
W420622		2.79	11.70	0.06	2.3	0.034	0.38	22.5	26.3	0.68	501	1.18	2.17	6.2	18.9	430
W420623		3.50	7.42	0.06	1.0	0.008	0.67	16.5	8.0	0.51	75	23.6	0.03	2.8	5.6	410
W420624		1.61	5.22	<0.05	0.7	0.018	0.94	8.0	7.3	0.35	181	7.91	0.04	3.4	19.6	200
W420625		1.65	3.13	0.05	0.5	0.016	0.49	10.3	9.8	0.16	251	2.08	0.07	2.1	14.2	410
W420626		1.28	8.76	0.08	1.2	0.017	1.64	26.9	12.9	0.38	146	4.05	0.29	5.8	6.7	560
W420627		4.50	7.19	<0.05	0.2	0.241	0.41	0.7	38.2	10.20	2440	3.95	0.13	1.2	13.0	120
W420628		3.88	6.09	<0.05	0.1	0.242	0.21	0.6	20.8	9.54	2410	2.61	0.12	0.6	7.6	100
W420629		4.84	6.48	<0.05	0.2	0.234	0.29	0.6	28.4	9.35	2260	4.33	0.13	1.2	18.4	130
W420630		1.20	5.20	0.06	0.9	0.011	1.03	7.2	9.8	0.51	126	11.15	0.09	3.6	8.1	480
W420631		0.78	2.52	0.05	0.5	0.007	0.79	4.5	3.5	0.18	791	6.53	0.02	2.1	13.4	80
W420632		5.14	14.75	0.11	1.1	0.311	0.81	77.9	27.6	5.86	1540	0.81	0.60	59.5	238	1730
W420633		5.91	18.65	0.14	1.2	0.194	3.11	60.8	53.9	8.12	1130	0.42	0.26	70.2	278	2170
W420634		0.57	0.73	<0.05	0.1	0.023	0.17	5.0	3.5	0.92	642	0.15	0.02	1.2	3.4	60
W420635		4.48	13.65	0.09	0.9	0.287	1.60	33.8	38.7	6.24	1680	0.74	0.42	51.6	102.0	1570
W420636		5.36	11.35	0.09	1.0	0.316	0.76	43.8	27.9	6.30	1920	1.83	0.42	42.6	110.0	1420
W420637		5.33	16.20	0.12	1.0	0.292	1.07	98.0	42.3	6.04	1600	2.48	0.59	53.6	143.0	1770
W420638		5.54	15.70	0.10	0.9	0.306	0.73	80.1	28.3	5.75	1680	0.86	0.53	52.6	188.0	1890
W420639		7.99	26.4	0.22	1.4	0.176	3.61	105.5	103.5	7.31	1330	0.68	0.32	71.7	317	2520
S036485		2.74	5.05	<0.05	0.5	0.337	0.65	7.3	10.3	0.12	2210	4.21	0.02	3.2	19.6	590

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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.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 10-JUL-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19152970

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
W420601		7.8	63.7	0.002	1.39	0.98	5.1	6	2.5	160.5	0.21	0.27	1.36	0.092	0.49	1.0
W420602		17.2	9.4	<0.002	>10.0	7.85	1.2	7	16.5	79.8	<0.05	0.16	0.41	0.008	0.20	3.3
W420603		4.4	77.6	0.003	0.25	1.86	6.3	1	1.5	75.7	0.33	<0.05	5.14	0.192	0.41	1.3
W420604		8.4	172.0	0.007	0.48	0.25	6.1	18	2.9	49.7	0.17	0.35	1.78	0.089	0.95	2.3
W420605		8.1	11.7	0.002	>10.0	9.56	0.7	5	7.1	10.5	<0.05	0.21	0.08	0.006	0.24	1.1
W420606		7.5	4.2	<0.002	>10.0	8.88	0.4	5	7.3	14.7	<0.05	0.23	0.08	<0.005	0.10	0.6
W420607		7.2	16.3	0.003	>10.0	0.35	0.3	16	13.3	0.4	<0.05	0.10	0.49	0.009	0.21	6.4
W420608		5.7	1.4	<0.002	>10.0	0.35	0.2	16	13.4	1.2	<0.05	0.08	0.03	<0.005	0.05	0.5
W420609		11.6	14.3	<0.002	>10.0	0.45	0.8	4	14.3	10.9	<0.05	0.09	0.04	0.005	0.21	0.6
W420610		58.4	235	0.009	0.50	0.19	3.3	19	2.7	33.0	0.19	0.59	0.81	0.096	1.13	2.9
W420611		8.4	221	0.012	0.16	0.25	3.5	13	1.9	54.6	0.22	0.17	1.42	0.101	1.31	4.0
W420612		4.8	295	0.015	0.23	0.12	3.9	19	2.3	61.1	0.20	0.57	0.98	0.101	1.58	3.3
W420613		23.2	89.0	0.003	0.13	0.58	1.4	1	1.5	247	0.05	0.05	0.81	0.023	0.67	6.5
W420614		3.0	179.5	0.004	0.44	0.15	4.8	1	1.0	85.4	0.56	0.05	5.66	0.242	1.22	1.5
W420615		7.4	18.8	<0.002	0.12	0.70	2.0	7	0.3	19.0	0.19	0.11	1.93	0.101	0.60	1.0
W420616		9.6	46.2	0.002	0.14	3.87	3.9	7	1.7	26.2	0.31	0.16	2.62	0.125	1.45	3.3
W420617		16.7	40.8	<0.002	0.02	1.74	3.7	1	0.6	12.5	0.18	<0.05	3.11	0.079	0.35	1.2
W420618		1.2	88.1	<0.002	<0.01	0.06	1.3	1	0.4	183.5	0.07	<0.05	0.78	0.038	1.06	0.5
W420619		8.7	58.6	<0.002	0.04	0.45	4.2	4	1.6	70.9	0.20	<0.05	2.26	0.114	0.68	5.8
W420620		7.6	29.1	0.002	0.22	1.30	3.7	6	0.7	6.8	0.15	0.10	1.64	0.099	1.89	1.5
W420621		11.9	21.4	0.004	0.22	1.30	5.7	6	1.4	18.6	0.21	0.09	1.24	0.088	1.20	1.5
W420622		11.1	20.1	<0.002	0.02	0.97	9.3	<1	4.5	59.5	0.43	<0.05	10.15	0.195	0.20	1.7
W420623		10.2	35.4	<0.002	0.26	0.40	6.1	5	0.7	23.1	0.16	0.12	3.28	0.119	2.15	3.1
W420624		7.8	57.0	0.002	0.04	2.60	5.5	3	2.4	19.4	0.19	0.13	2.03	0.108	2.38	1.4
W420625		3.1	28.0	0.005	0.05	0.81	2.2	1	0.4	89.4	0.13	0.06	1.70	0.070	0.21	0.8
W420626		4.9	151.0	0.002	0.03	0.67	6.2	4	3.5	49.1	0.36	0.10	3.60	0.211	1.24	5.0
W420627		1.5	67.1	0.005	<0.01	0.09	2.8	1	2.6	8.5	0.07	<0.05	0.84	0.041	0.28	3.3
W420628		1.1	29.7	0.005	0.02	0.08	2.4	1	2.3	18.9	<0.05	<0.05	0.73	0.020	0.11	5.5
W420629		1.6	43.8	0.006	0.08	0.12	3.4	2	2.8	10.8	0.07	<0.05	0.62	0.036	0.17	2.8
W420630		6.9	63.1	0.002	0.11	1.03	5.0	4	1.3	43.4	0.22	0.07	2.47	0.124	2.09	3.1
W420631		7.2	29.4	<0.002	0.07	1.08	2.5	1	0.7	10.1	0.13	0.10	1.69	0.074	1.90	1.2
W420632		3.6	154.5	<0.002	1.66	0.15	22.1	2	26.8	168.5	2.74	0.07	6.90	0.838	0.67	2.7
W420633		2.7	610	<0.002	1.92	0.13	27.6	1	26.1	97.9	3.38	0.11	6.65	1.030	3.21	1.8
W420634		3.4	8.5	<0.002	0.09	0.07	2.0	<1	0.6	249	0.06	<0.05	0.17	0.042	0.07	0.1
W420635		6.9	242	<0.002	0.86	0.13	19.9	2	27.5	124.5	2.30	0.09	4.40	0.725	1.10	2.1
W420636		4.5	106.0	<0.002	0.81	0.12	20.4	2	29.2	101.5	1.99	0.19	4.89	0.657	0.45	1.9
W420637		6.1	195.0	<0.002	1.19	0.13	22.5	2	43.0	137.0	2.39	0.12	6.60	0.824	0.95	2.3
W420638		7.8	115.0	<0.002	1.76	0.11	22.1	3	33.4	147.0	2.49	0.15	7.98	0.836	0.57	2.4
W420639		2.5	670	<0.002	2.68	0.10	18.0	4	32.5	112.0	3.44	0.15	8.14	1.140	3.48	2.8
S036485		5.5	80.5	0.002	0.95	0.74	2.6	2	13.1	94.5	0.18	0.06	2.33	0.078	0.41	1.0

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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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VANCOUVER BC V6B 1L8

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CERTIFICATE OF ANALYSIS WH19152970

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	V	W	Y	Zn	Zr
	Units	ppm	ppm	ppm	ppm	ppm
	LOD	1	0.1	0.1	2	0.5
W420601		30	82.8	6.1	77	10.5
W420602		9	47.5	7.9	34	1.3
W420603		45	1.6	11.8	65	53.7
W420604		427	10.9	5.9	85	14.7
W420605		12	2.6	3.1	87	1.0
W420606		10	1.4	3.7	81	0.5
W420607		13	35.8	2.0	6680	1.8
W420608		8	8.2	2.0	23	<0.5
W420609		20	17.6	3.1	72	1.0
W420610		415	391	10.3	140	16.2
W420611		750	206	12.4	72	18.5
W420612		565	145.5	11.8	86	17.5
W420613		235	4.1	32.2	51	7.2
W420614		133	3.3	9.9	8	43.9
W420615		163	0.3	13.1	19	35.4
W420616		971	1.1	9.7	126	40.2
W420617		31	0.7	20.7	82	28.0
W420618		63	0.6	5.9	6	5.5
W420619		207	7.1	11.5	7	21.9
W420620		279	0.9	15.1	36	21.0
W420621		415	0.6	9.3	294	27.9
W420622		143	2.1	10.5	61	79.0
W420623		105	1.3	5.9	8	45.5
W420624		495	0.9	5.9	60	29.9
W420625		41	0.7	8.0	65	17.0
W420626		548	1.7	14.9	18	48.1
W420627		375	194.5	5.4	140	7.5
W420628		302	7.5	4.6	129	4.8
W420629		444	22.2	5.8	131	6.6
W420630		562	1.9	16.1	50	40.1
W420631		226	0.9	3.1	28	17.1
W420632		137	18.0	23.3	98	25.5
W420633		181	5.5	21.8	137	39.6
W420634		9	0.2	4.8	60	1.9
W420635		138	2.6	18.8	132	26.0
W420636		140	68.6	16.9	123	23.3
W420637		149	31.6	19.0	112	28.9
W420638		153	86.3	19.4	103	26.7
W420639		153	8.4	25.0	152	42.3
S036485		73	8.5	8.5	83	23.3

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ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
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CERTIFICATE OF ANALYSIS WH19152970

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
S036487		1.22	<0.01	0.03	0.38	<0.2	30	5.82	19.30	15.80	0.05	3.37	2.3	84	0.23	3.1
S036488		1.21	<0.01	0.10	0.82	0.5	400	1.45	1.36	0.08	0.03	5.83	1.1	41	1.37	46.1
S036489		1.33	<0.01	1.30	2.26	7.4	150	1.99	0.39	2.09	3.95	16.05	7.3	56	0.64	90.5
S036490		1.30	<0.01	0.42	1.07	1.1	430	15.60	0.61	1.21	0.80	3.36	4.0	34	1.78	249
S036491		1.30	<0.01	0.40	1.84	2.6	2760	3.39	0.42	0.44	0.25	8.43	1.4	52	2.82	169.5
S036492		1.25	<0.01	0.40	0.74	0.6	870	0.77	1.13	11.35	0.80	5.15	1.1	19	2.50	55.2
S036493		1.18	2.87	76.6	0.07	35.2	20	0.09	2400	0.02	0.40	0.35	1.0	27	0.11	65.5
S036494		0.59	<0.01	0.34	0.11	18.4	20	0.12	4.71	0.03	0.12	12.45	4.6	22	0.28	121.5
S036495		1.10	0.01	0.49	0.04	17.6	10	0.10	17.20	0.15	0.02	4.78	2.8	29	0.18	71.4
K291689		0.81	<0.01	0.08	0.61	2.8	530	0.79	0.65	9.72	0.61	3.50	1.4	24	0.36	6.6
K291690		0.56	<0.01	8.32	0.06	13.7	50	0.12	1.04	5.44	3.53	1.82	1.5	14	0.47	6.4
K291691		1.22	0.01	0.16	0.89	17.5	30	0.19	1.17	19.65	0.15	5.14	0.6	11	0.12	1.3
K291692		0.92	<0.01	0.08	3.32	1.2	340	0.85	0.62	26.9	0.06	66.8	9.5	29	2.20	15.5
K291693		0.42	<0.01	1.08	1.54	7.1	770	0.44	693	0.85	0.33	17.65	23.5	16	2.03	659
K291694		1.13	<0.01	0.84	0.08	45.4	30	11.30	653	0.08	0.06	1.89	4.1	1	0.12	1275
K291695		1.43	<0.01	0.91	0.24	159.5	30	0.33	264	0.06	0.04	0.97	11.5	1	0.17	1390
K291696		0.81	<0.01	3.44	0.17	120.5	1520	2.37	1.40	23.0	20.3	10.50	36.1	3	0.45	10.6
K291697		0.71	<0.01	0.03	0.18	1.3	30	0.13	0.55	10.60	0.30	1.56	40.0	1440	0.22	164.0

***** See Appendix Page for comments regarding this certificate *****

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North Vancouver BC V7H 0A7
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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: 10-JUL-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19152970

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	Fe	Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P
	Units	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
S036487		5.75	6.48	<0.05	0.2	0.544	0.07	1.4	6.9	8.19	3510	0.72	0.11	1.2	33.1	660
S036488		3.31	4.13	<0.05	0.2	0.231	0.45	4.6	9.4	0.06	906	4.67	0.02	4.6	6.2	70
S036489		3.72	6.48	0.05	0.3	0.089	0.15	7.3	12.5	0.49	120	1.85	0.42	4.2	27.1	450
S036490		4.58	4.69	<0.05	0.3	0.064	0.62	1.7	17.4	0.76	217	0.56	0.06	2.3	11.8	330
S036491		4.61	5.24	0.05	0.5	0.025	1.30	4.6	10.8	0.45	120	4.56	0.09	8.5	9.6	270
S036492		2.37	3.96	0.05	0.3	0.178	0.65	3.2	17.2	2.08	486	0.43	0.07	1.4	4.3	280
S036493		2.01	0.39	0.07	<0.1	0.300	0.03	<0.5	1.0	0.01	454	2.81	<0.01	<0.1	19.3	10
S036494		3.77	0.75	<0.05	<0.1	0.342	0.06	5.9	1.9	0.02	3280	3.59	0.01	0.1	32.3	10
S036495		2.44	0.28	<0.05	<0.1	0.180	0.02	2.3	2.1	0.02	1190	2.36	0.01	<0.1	5.3	<10
K291689		1.62	3.60	<0.05	0.4	0.142	0.26	1.5	8.2	6.32	1650	0.44	0.08	2.0	8.8	240
K291690		0.46	0.36	<0.05	<0.1	0.229	0.02	2.7	1.9	2.36	282	1.61	0.01	<0.1	7.2	110
K291691		0.81	6.36	0.07	0.5	0.024	0.01	2.2	2.5	11.80	520	1.88	0.11	2.3	3.9	1020
K291692		2.44	8.02	0.10	0.7	0.017	2.02	32.8	15.7	1.17	269	0.23	0.13	4.4	19.6	60
K291693		34.4	3.77	0.16	0.3	0.075	0.71	7.1	5.9	0.39	176	1.13	0.14	1.5	44.6	150
K291694		49.6	0.23	0.19	<0.1	0.066	0.07	0.8	0.2	0.01	5	<0.05	0.01	0.1	13.7	20
K291695		48.6	0.42	0.19	<0.1	0.069	0.25	<0.5	0.4	0.01	<5	<0.05	0.02	0.1	15.2	30
K291696		14.20	1.22	0.08	<0.1	0.021	0.04	16.4	1.8	1.54	9510	5.67	<0.01	0.1	692	530
K291697		2.70	0.58	<0.05	<0.1	0.006	0.03	0.7	6.6	5.57	839	0.16	<0.01	0.3	923	10

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VANCOUVER BC V6B 1L8

Finalized Date: 10-JUL-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19152970

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
S036487		8.6	4.4	0.002	0.02	0.05	4.4	<1	4.1	22.8	0.07	0.27	0.34	0.030	0.03	1.1
S036488		2.3	73.9	<0.002	0.05	0.25	1.8	1	8.4	3.8	0.27	<0.05	1.44	0.050	0.33	0.4
S036489		19.1	5.8	0.004	0.98	0.49	5.3	7	2.6	89.8	0.23	0.11	2.31	0.113	0.08	1.4
S036490		8.6	82.7	<0.002	1.23	0.71	2.2	8	3.0	17.1	0.15	0.17	0.46	0.038	0.36	0.9
S036491		3.7	141.5	<0.002	0.06	0.23	5.6	4	5.3	37.5	0.28	0.12	1.58	0.126	0.61	1.9
S036492		20.0	95.7	<0.002	0.05	1.90	1.9	5	6.6	109.5	0.08	0.34	0.95	0.037	0.36	0.6
S036493		604	3.7	0.003	0.05	44.9	0.2	8	1.8	0.7	<0.05	67.5	0.04	<0.005	0.13	0.1
S036494		5.4	8.9	0.003	0.80	0.73	1.1	3	1.8	1.5	<0.05	0.16	0.76	<0.005	0.05	0.2
S036495		3.2	2.6	<0.002	0.07	0.51	0.3	1	0.5	1.2	<0.05	0.39	0.69	<0.005	0.07	0.5
K291689		7.4	28.5	<0.002	<0.01	0.19	1.5	<1	3.4	9.7	0.16	<0.05	0.57	0.040	0.14	0.7
K291690		3100	4.1	<0.002	0.15	132.0	0.2	5	252	25.0	<0.05	0.32	0.05	<0.005	0.22	0.7
K291691		34.5	0.5	<0.002	<0.01	0.95	0.5	<1	1.9	80.0	0.12	0.05	1.08	0.048	0.04	2.4
K291692		11.6	67.2	<0.002	1.04	0.59	6.2	<1	3.3	450	0.26	<0.05	4.93	0.159	0.41	0.6
K291693		32.0	61.2	0.010	0.31	7.65	3.2	2	3.5	40.5	0.08	0.77	1.66	0.056	0.78	1.3
K291694		4.2	7.5	<0.002	>10.0	8.21	0.1	9	1.3	2.2	<0.05	1.34	0.18	<0.005	0.04	0.1
K291695		2.2	27.3	<0.002	>10.0	3.80	<0.1	6	1.7	4.0	<0.05	0.66	0.21	<0.005	0.09	0.2
K291696		1140	6.2	<0.002	0.22	29.1	0.6	2	4.4	22.4	<0.05	<0.05	0.10	<0.005	0.61	3.1
K291697		5.8	2.2	<0.002	0.09	0.36	5.3	<1	<0.2	117.0	<0.05	<0.05	0.05	<0.005	0.02	0.1

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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 10-JUL-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19152970

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	V	W	Y	Zn	Zr
	Units	ppm	ppm	ppm	ppm	ppm
	LOD	1	0.1	0.1	2	0.5
S036487		200	95.3	8.0	203	10.4
S036488		44	59.5	2.7	11	7.2
S036489		99	2.8	12.8	705	12.3
S036490		74	18.9	6.0	196	13.2
S036491		105	121.5	13.3	38	21.4
S036492		55	27.8	8.0	263	10.6
S036493		2	167.5	0.7	219	<0.5
S036494		7	98.8	3.9	30	<0.5
S036495		1	500	3.0	4	<0.5
K291689		66	4.7	6.8	121	17.4
K291690		6	4.9	4.5	179	<0.5
K291691		55	50.3	3.2	65	22.3
K291692		38	1.2	13.6	15	25.2
K291693		21	1820	5.9	57	12.1
K291694		3	2.5	0.6	5	1.0
K291695		2	75.2	0.4	4	1.1
K291696		59	11.2	49.4	8660	0.9
K291697		14	0.7	4.0	53	3.9

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Project: Rau

Finalized Date: 10-JUL-2019
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CERTIFICATE OF ANALYSIS WH19152970

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	OA-HSUL10
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-AA25	ME-MS61

ALS Canada Ltd.

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North Vancouver BC V7H 0A7
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Finalized Date: 5-JUL-2019
Account: RCM

CERTIFICATE WH19152952

Project: Rau

P.O. No.: R19-R03

This report is for 19 Rock samples submitted to our lab in Whitehorse, YT, Canada on 24-JUN-2019.

The following have access to data associated with this certificate:

ANDREW CARNE	ADAM COULTER	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
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
PUL-31	Pulverize split to 85% <75 um

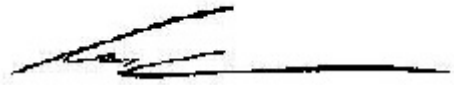
ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid ICP-MS	
ME-OG62	Ore Grade Elements - Four Acid	ICP-AES
Cu-OG62	Ore Grade Cu - Four Acid	
Zn-OG62	Ore Grade Zn - 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.
2103 Dollarton Hwy
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Project: Rau

Finalized Date: 5-JUL-2019
Account: RCM

CERTIFICATE OF ANALYSIS WH19152952

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
W420640		0.84	0.01	0.81	0.64	164.0	280	0.24	13.15	0.04	0.17	5.47	3.3	13	0.68	507
W420641		0.61	0.01	0.51	0.59	869	40	9.00	143.0	7.08	0.10	2.17	0.3	6	6.95	76.8
W420642		1.03	<0.01	0.32	1.87	18.3	420	19.50	3.54	4.54	<0.02	1.10	0.8	15	27.6	192.0
W420643		0.98	<0.01	0.36	7.42	3.4	320	15.85	3.02	4.78	<0.02	54.6	20.0	218	20.4	333
W420644		0.44	<0.01	0.32	0.65	13.8	450	0.35	0.38	0.16	0.06	10.80	0.8	26	1.44	14.4
W420645		0.58	<0.01	0.20	8.60	2.6	890	4.38	1.96	6.00	<0.02	41.0	36.6	219	18.50	407
W420646		0.61	<0.01	0.32	8.38	1.2	1780	3.10	1.12	7.05	0.10	63.1	31.3	70	8.92	328
W420647		0.66	<0.01	<0.01	8.12	2.5	670	1.40	0.57	3.27	0.04	39.5	30.8	211	70.5	8.9
W420648		1.54	<0.01	0.19	7.35	0.3	390	3.58	0.72	10.20	<0.02	56.0	31.6	226	12.40	383
W420649		1.03	<0.01	0.13	7.04	0.6	1820	2.96	0.75	7.48	<0.02	42.9	27.7	216	8.44	306
W420650		1.24	<0.01	0.24	7.35	0.4	610	2.59	0.93	9.30	<0.02	45.3	47.4	201	7.62	538
W420651		1.75	<0.01	0.27	8.38	0.7	1620	2.06	1.61	4.87	<0.02	38.2	20.4	257	8.11	548
W420652		0.88	<0.01	0.28	9.40	0.8	460	3.24	0.85	8.07	<0.02	70.3	42.3	238	8.53	705
W420653		0.95	<0.01	0.47	9.67	55.1	860	9.74	4.17	9.23	1.47	58.6	14.2	86	16.20	57.8
W420654		0.90	<0.01	<0.01	0.04	282	190	4.37	0.02	30.8	3.54	1.84	76.0	1	0.06	2.2
W420655		1.38	<0.01	0.91	3.54	42.4	2210	1.37	0.60	0.26	9.63	33.2	3.5	58	5.24	>10000
W420656		0.76	0.07	20.2	1.89	355	40	2.59	3.05	0.17	4.26	148.5	3.9	53	2.04	482
W420657		0.45	<0.01	0.23	0.98	176.0	290	4.71	0.05	0.11	5.00	18.40	63.9	6	0.54	267
S036497		0.64	<0.01	1.40	0.73	55.2	1490	0.99	0.07	0.21	0.79	8.28	0.9	112	0.59	27.7

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Project: Rau

CERTIFICATE OF ANALYSIS WH19152952

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	Fe	Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P
	Units	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
W420640		44.0	1.86	0.10	0.2	0.069	0.28	2.4	2.1	0.08	130	1.57	0.02	1.1	6.1	190
W420641		9.69	2.31	0.05	0.1	0.018	0.60	0.7	68.7	11.85	894	1.31	0.09	0.2	0.6	90
W420642		20.4	15.80	0.09	0.3	0.095	2.37	<0.5	200	7.92	914	2.16	0.08	1.9	1.0	70
W420643		7.89	24.4	0.12	1.2	0.066	5.17	28.3	88.1	4.00	646	0.97	0.51	31.7	172.0	1540
W420644		1.29	2.90	0.06	0.4	0.010	0.29	7.1	5.1	0.40	99	14.50	0.02	1.6	11.4	120
W420645		6.66	24.5	0.10	0.6	0.091	2.92	21.2	77.2	2.18	640	2.90	1.79	34.0	153.0	1370
W420646		4.73	23.6	0.13	1.0	0.121	4.98	29.5	24.1	1.58	861	1.04	0.51	15.2	89.2	150
W420647		6.47	22.3	0.10	0.4	0.057	3.45	20.3	94.6	4.13	636	0.20	1.76	30.8	169.0	1330
W420648		6.80	24.8	0.10	0.7	0.263	1.66	30.0	54.1	4.49	1500	0.89	1.44	32.1	166.5	1660
W420649		5.89	20.1	0.11	1.0	0.269	3.49	23.0	24.5	3.15	1170	0.54	1.70	27.8	141.5	1940
W420650		8.37	22.8	0.09	1.3	0.307	1.27	23.7	30.1	3.48	1270	0.73	1.83	28.5	186.0	1550
W420651		5.01	24.3	0.12	0.8	0.097	4.69	15.2	36.6	1.60	486	1.35	0.74	35.7	104.5	1890
W420652		7.09	32.0	0.12	0.8	0.102	1.29	38.3	43.0	2.06	618	3.13	1.73	40.9	142.5	2310
W420653		3.43	26.6	0.13	1.3	0.079	1.91	17.0	66.2	5.88	247	0.44	0.78	21.9	51.2	180
W420654		7.53	0.19	<0.05	<0.1	<0.005	0.01	1.3	0.4	0.18	9830	23.2	0.01	0.1	804	40
W420655		13.90	6.57	0.21	1.0	0.081	1.07	19.2	15.4	0.41	140	43.9	0.15	4.7	109.5	960
W420656		20.5	8.19	0.56	0.7	4.23	2.13	106.5	7.2	0.06	118	209	0.03	1.1	44.0	8150
W420657		37.1	0.78	0.10	0.1	0.012	0.08	11.0	3.0	0.20	1260	28.2	0.01	0.3	500	570
S036497		3.07	2.20	<0.05	0.3	0.024	0.22	11.3	23.9	0.04	59	3.98	0.02	1.2	32.6	700

***** 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 ST
VANCOUVER BC V6B 1L8

Finalized Date: 5-JUL-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19152952

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
W420640		5.8	18.2	<0.002	0.83	0.75	1.1	1	1.0	6.2	0.12	0.08	0.88	0.042	0.10	0.3
W420641		6.5	169.0	<0.002	0.15	1.17	2.5	1	3.6	2.1	<0.05	0.46	0.09	0.014	0.38	0.1
W420642		1.7	690	<0.002	0.53	0.14	3.0	4	4.9	5.6	0.69	0.17	0.49	0.036	1.64	0.3
W420643		4.5	500	<0.002	3.10	0.18	21.7	2	46.3	146.0	1.78	0.15	2.86	1.100	1.84	1.1
W420644		6.1	18.6	0.003	0.18	0.66	2.5	3	0.5	14.9	0.11	<0.05	0.94	0.067	1.04	2.2
W420645		4.8	297	<0.002	1.72	0.53	17.8	1	40.9	256	1.51	0.15	2.68	1.130	1.44	1.3
W420646		5.8	204	<0.002	2.00	0.50	15.1	2	8.3	243	0.91	0.13	10.45	0.483	1.31	2.2
W420647		1.8	226	<0.002	0.40	0.17	22.5	1	12.5	132.5	1.40	<0.05	2.14	1.105	3.56	0.5
W420648		3.9	268	<0.002	1.80	0.12	22.8	2	35.2	203	1.64	0.15	3.11	1.130	1.12	1.3
W420649		3.6	308	<0.002	1.56	0.08	19.4	1	29.8	249	1.40	0.11	2.46	1.010	1.07	0.9
W420650		3.7	173.5	<0.002	3.08	0.12	21.9	2	33.9	265	1.46	0.18	2.71	1.040	0.69	1.0
W420651		9.6	346	<0.002	1.28	0.14	23.7	2	27.5	222	1.88	0.19	3.00	1.245	1.53	0.9
W420652		5.8	135.0	<0.002	3.34	0.11	23.6	3	27.7	285	2.00	0.22	4.48	1.300	0.74	1.7
W420653		68.6	190.5	<0.002	1.51	0.83	21.3	2	13.4	192.5	1.22	0.07	12.70	0.590	1.12	4.2
W420654		3.1	0.7	<0.002	0.04	1.28	0.1	1	<0.2	30.0	<0.05	<0.05	0.03	<0.005	39.8	3.8
W420655		91.7	72.6	0.007	0.09	60.9	7.2	73	3.9	52.3	0.31	0.06	4.00	0.148	3.35	24.1
W420656		3460	80.8	0.003	3.57	67.4	5.5	179	181.0	1705	0.08	0.35	7.82	0.043	30.3	22.7
W420657		64.9	3.9	<0.002	0.08	3.09	2.4	9	0.6	7.1	<0.05	<0.05	0.42	0.012	0.47	7.3
S036497		146.0	10.1	<0.002	0.10	49.3	1.6	2	1.3	88.7	0.06	<0.05	0.80	0.029	0.43	2.2

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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 5-JUL-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19152952

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Cu-OG62	Zn-OG62
	Analyte	V	W	Y	Zn	Zr	Cu	Zn
	Units	ppm	ppm	ppm	ppm	ppm	%	%
	LOD	1	0.1	0.1	2	0.5	0.001	0.001
W420640		26	7.4	1.0	99	9.7		
W420641		8	215	4.2	95	1.5		
W420642		39	146.5	1.7	108	6.9		
W420643		159	13.7	21.1	89	34.5		
W420644		210	0.5	5.3	11	14.7		
W420645		135	11.3	26.6	57	13.5		
W420646		96	1.8	27.3	59	34.9		
W420647		138	2.0	21.7	80	12.0		
W420648		173	1.8	22.0	133	14.9		
W420649		127	1.7	20.2	88	43.3		
W420650		144	3.2	23.1	97	29.8		
W420651		166	2.5	23.7	46	25.7		
W420652		127	4.2	19.1	79	19.6		
W420653		96	3.5	17.8	215	45.6		
W420654		<1	16.3	28.4	5170	0.8		
W420655		166	1.3	23.6	1200	38.4	6.39	
W420656		576	1.8	30.1	2520	37.7		
W420657		152	0.4	104.5	>10000	5.1		1.430
S036497		139	2.3	7.3	601	14.3		

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Project: Rau

Finalized Date: 5-JUL-2019
Account: RCM

CERTIFICATE OF ANALYSIS WH19152952

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	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-AA25	Cu-OG62	ME-MS61	ME-OG62
Zn-OG62			

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To: **ATAC RESOURCES LTD.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 28-JUL-2019
Account: RCM

CERTIFICATE WH19155149

Project: Rau

P.O. No.: R19-R04

This report is for 46 Rock samples submitted to our lab in Whitehorse, YT, Canada on 26-JUN-2019.

The following have access to data associated with this certificate:

ANDREW CARNE	ADAM COULTER	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
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
OA-HSUL10	Handling of High Sulphide Samples
PUL-31	Pulverize split to 85% <75 um

ANALYTICAL PROCEDURES

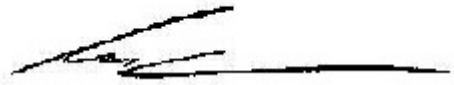
ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid ICP-MS	
Ag-OG62	Ore Grade Ag - Four Acid	
ME-OG62	Ore Grade Elements - Four Acid	ICP-AES
Pb-OG62	Ore Grade Pb - Four Acid	
Zn-OG62	Ore Grade Zn - Four Acid	
Sn-AA82	High Grade Sn	AAS

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: Sample#42(W420689)were oxidized... high sulphide.

Signature:



Colin Ramshaw, Vancouver Laboratory Manager

ALS Canada Ltd.
2103 Dollarton Hwy
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VANCOUVER BC V6B 1L8

Finalized Date: 28-JUL-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19155149

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
W420658		0.69	1.42	>100	0.82	2920	70	0.45	3.54	0.06	52.4	6.38	0.7	49	0.15	2290
W420659		0.54	0.02	0.83	1.90	265	170	2.21	1.50	0.02	2.09	38.4	12.8	61	1.58	25.1
W420660		0.57	0.02	5.90	2.93	305	1770	1.50	1.63	0.03	8.32	38.3	5.6	50	3.20	171.5
W420661		0.80	0.46	>100	0.70	571	2760	0.70	3.56	0.02	41.8	26.3	68.4	39	0.25	154.0
W420662		1.25	0.01	6.51	0.93	37.7	350	0.73	0.36	0.05	0.89	14.05	1.1	25	1.24	35.6
W420663		0.61	0.01	11.45	0.88	45.3	2550	0.67	0.78	0.07	20.4	13.30	18.1	29	1.93	9.2
W420664		0.29	0.03	1.22	1.91	120.5	100	1.23	3.18	0.02	1.37	12.25	55.9	39	0.76	827
W420665		0.68	0.01	4.77	1.50	126.5	1650	2.01	0.28	0.05	2.36	24.1	3.9	34	2.09	22.7
W420666		0.92	<0.01	0.40	2.81	17.2	3650	0.71	0.20	0.01	0.15	23.7	1.1	62	4.31	132.0
W420667		0.54	0.04	3.99	5.67	367	450	2.01	0.53	0.01	0.93	71.0	32.1	67	7.17	127.5
S036498		0.75	0.01	1.48	2.45	660	1160	0.84	0.21	0.12	1.54	25.3	4.9	48	1.63	131.0
S036499		0.99	0.01	0.85	1.38	20.3	680	0.43	0.20	0.08	1.36	12.80	1.4	36	1.28	193.5
S036500		0.81	0.01	14.50	6.64	676	900	2.42	1.22	0.06	2.91	98.1	2.5	71	5.68	175.0
W420668		0.45	0.01	0.43	7.63	3.7	2880	4.37	1.06	4.10	12.25	34.3	16.4	227	9.63	514
W420669		0.69	0.01	0.50	2.82	400	590	6.51	0.33	0.03	6.10	15.95	52.1	13	0.51	276
W420670		0.68	0.01	0.49	3.16	680	5850	9.21	2.02	0.26	10.85	21.4	61.1	15	0.74	195.5
W420671		0.29	<0.01	0.58	1.98	592	1310	7.91	1.04	0.03	9.69	22.5	68.1	13	0.32	253
W420672		0.81	0.01	0.01	0.05	2.9	40	0.12	0.11	22.1	0.30	3.33	0.8	1	0.07	1.7
W420673		0.47	0.01	0.19	1.88	18.8	1290	1.10	5.40	0.66	0.49	32.4	1.7	40	3.24	17.6
W420674		0.78	<0.01	0.17	4.32	4.6	2850	9.02	1.35	6.40	6.23	40.4	3.6	75	6.45	106.0
W420675		0.93	<0.01	0.15	3.69	1.8	2650	6.55	1.92	5.87	4.03	19.60	2.2	60	7.16	89.0
W420676		0.86	0.01	0.01	0.09	1.1	200	0.15	0.14	22.4	0.14	2.00	0.7	1	0.73	1.5
W420677		0.92	<0.01	0.20	0.08	5.4	170	0.24	0.57	21.9	0.09	5.20	0.7	1	1.20	36.2
W420678		0.37	<0.01	0.06	0.87	10.6	450	0.46	0.15	18.45	1.59	9.31	2.1	8	0.88	7.6
W420679		0.17	0.12	0.31	3.71	511	630	1.10	20.8	8.01	7.57	57.1	10.0	33	3.17	36.9
W420680		0.83	0.01	0.07	0.11	2.7	200	0.26	2.27	23.2	0.19	4.18	1.2	2	0.54	10.0
W420681		0.42	0.01	0.38	3.86	16.0	2690	1.30	1.90	0.21	0.87	26.9	1.3	48	5.47	14.5
W420682		0.82	0.01	0.84	0.55	182.0	130	0.48	0.07	0.10	12.50	6.62	3.4	11	0.52	30.1
W420683		0.79	0.01	3.86	1.65	1215	320	4.81	0.09	0.03	79.5	20.3	32.7	24	1.90	50.3
K291698		1.16	0.02	1.78	0.50	3070	180	0.46	116.5	0.32	13.55	6.85	3.6	20	0.37	36.6
K291699		1.57	0.05	0.58	0.17	448	80	0.21	0.75	0.22	8.97	12.30	1.4	5	0.23	8.1
K291700		0.87	0.05	1.57	1.52	98.6	710	0.28	1.28	0.19	1.49	15.00	63.6	237	0.36	329
W591751		0.91	<0.01	0.30	8.79	67.7	240	1.24	0.15	0.54	0.23	105.0	51.2	109	3.84	92.9
W591752		1.07	<0.01	0.95	2.06	0.6	550	0.51	0.04	16.40	0.04	22.4	25.3	153	0.79	5010
W591764		1.22	0.01	1.23	2.16	125.0	480	1.33	0.10	0.13	9.72	20.1	4.8	42	1.92	74.0
W591772		1.12	<0.01	0.02	0.03	1.5	40	<0.05	0.05	0.18	0.06	0.21	0.4	50	<0.05	42.1
W420684		1.25	0.01	1.02	7.59	36.5	990	1.20	5.13	1.83	0.13	23.8	93.2	216	17.35	840
W420685		0.88	0.01	1.28	0.01	2.5	10	<0.05	3.00	<0.01	0.08	0.24	809	2	0.07	5590
W420686		0.76	0.01	0.37	2.73	2.0	210	0.30	5.55	0.55	0.02	6.80	31.4	127	17.85	750
W420687		0.76	<0.01	0.52	0.02	1.9	10	<0.05	2.54	0.01	0.07	0.21	769	2	0.11	2210

Comments: Sample#42(W420689)were oxidized... high sulphide.

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.
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CERTIFICATE OF ANALYSIS WH19155149

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	Fe	Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P
	Units	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
W420658		3.22	0.80	0.61	0.1	12.30	0.06	3.7	1.8	0.01	29	6470	0.01	0.1	27.4	>10000
W420659		11.20	4.16	0.13	0.9	1.675	0.51	21.0	3.5	0.04	180	19.10	0.01	3.3	84.9	3910
W420660		11.75	6.17	0.15	0.8	0.556	0.94	18.5	4.9	0.14	427	84.3	0.02	4.3	83.3	900
W420661		15.05	25.4	0.07	0.3	99.1	0.10	9.0	1.7	0.15	63700	2.86	0.01	1.1	25.3	1760
W420662		7.81	4.49	0.05	0.3	5.47	0.18	9.8	4.1	0.03	157	27.8	0.03	0.6	10.3	650
W420663		6.93	3.59	<0.05	0.4	1.760	0.40	7.6	2.9	0.08	20200	2.29	<0.01	1.5	48.9	280
W420664		40.4	7.95	0.45	0.4	0.165	0.26	5.6	13.8	0.06	1140	3.41	0.01	1.1	170.5	5490
W420665		21.8	6.15	0.12	0.5	1.145	0.40	16.8	4.8	0.05	462	2.01	0.03	1.0	65.8	1330
W420666		6.53	7.66	0.06	1.0	0.033	1.13	14.0	14.8	0.18	68	1.60	0.03	3.3	4.6	620
W420667		25.4	11.90	0.23	1.0	0.895	1.44	39.4	16.2	0.13	778	1.06	0.05	4.0	117.0	1820
S036498		15.30	4.62	0.09	0.7	1.320	0.49	13.8	8.0	0.10	139	3.37	0.01	2.2	38.5	2510
S036499		13.45	3.73	0.08	0.6	0.895	0.49	7.8	3.7	0.08	98	0.69	0.01	2.9	11.0	520
S036500		15.75	20.3	0.24	1.2	0.575	2.07	51.2	12.3	0.59	77	2.75	0.17	3.8	12.9	3150
W420668		3.37	16.60	0.12	0.6	0.148	5.07	15.4	38.3	2.36	727	1.04	0.95	23.5	31.4	1340
W420669		36.1	1.89	0.22	0.2	0.019	0.06	6.7	8.4	0.04	1160	20.1	<0.01	0.9	475	500
W420670		39.9	2.54	0.30	0.4	0.042	0.12	10.4	12.0	0.55	962	28.2	0.01	1.4	606	790
W420671		41.1	1.40	0.30	0.3	0.043	0.06	11.5	4.8	0.07	1440	19.40	<0.01	0.7	645	660
W420672		0.30	0.19	0.06	<0.1	0.007	0.01	2.2	1.8	12.65	494	0.66	0.01	0.1	4.7	40
W420673		1.88	5.49	0.17	0.8	0.076	0.99	22.3	13.2	0.53	90	36.5	0.18	3.7	24.7	380
W420674		3.88	19.90	0.20	1.0	0.045	2.80	24.5	64.8	8.82	638	75.9	0.55	5.7	41.4	650
W420675		4.45	17.40	0.18	0.8	0.052	2.77	10.6	70.5	8.56	668	69.4	0.40	4.6	28.4	540
W420676		0.12	0.34	0.17	<0.1	<0.005	0.06	1.1	2.8	12.60	115	1.02	<0.01	0.1	3.2	40
W420677		0.25	0.56	0.16	<0.1	0.030	0.05	4.1	4.4	12.40	685	0.96	<0.01	0.1	12.1	120
W420678		0.97	2.32	0.15	0.3	0.015	0.41	4.5	11.8	9.89	597	1.51	0.03	1.4	12.2	170
W420679		11.70	8.93	0.22	1.2	0.088	1.17	28.2	15.1	4.48	3400	90.9	0.18	5.2	94.4	570
W420680		0.43	0.48	0.16	<0.1	0.005	0.04	3.0	5.3	12.90	766	5.37	0.01	0.1	17.7	70
W420681		1.12	10.05	0.22	1.5	0.014	1.76	15.0	15.0	0.41	227	12.75	0.07	5.6	13.2	130
W420682		2.30	1.56	0.11	0.3	0.017	0.24	4.8	3.1	0.06	59	54.2	0.01	1.2	137.5	480
W420683		22.4	4.62	0.29	1.7	0.248	0.69	12.7	7.1	0.07	446	415	0.03	2.5	1355	3530
K291698		>50	3.56	0.48	0.1	0.253	0.12	7.1	1.5	0.32	575	4.11	<0.01	0.5	42.3	1710
K291699		>50	0.76	0.28	0.1	0.041	0.06	7.0	1.0	0.09	183	1.95	<0.01	0.3	15.1	550
K291700		47.4	6.21	0.25	0.3	0.255	0.40	5.8	1.7	0.26	484	27.1	0.01	0.8	419	5610
W591751		11.85	22.0	0.28	1.9	0.099	4.02	42.6	50.3	3.05	66	8.36	0.16	18.6	141.5	2930
W591752		3.03	4.47	0.09	0.4	0.016	1.35	9.3	4.9	8.47	2640	0.30	0.08	9.3	44.0	520
W591764		2.05	5.86	0.13	0.9	0.081	0.96	12.5	10.1	0.11	89	147.0	0.04	4.6	152.5	730
W591772		0.53	0.21	0.06	<0.1	<0.005	0.01	<0.5	0.4	0.10	72	0.94	<0.01	0.1	2.7	10
W420684		13.65	17.60	0.16	0.9	0.093	3.98	10.0	57.9	1.64	722	4.30	2.01	8.1	167.0	800
W420685		>50	0.16	0.24	<0.1	0.054	0.01	<0.5	0.4	<0.01	<5	1.15	<0.01	<0.1	680	<10
W420686		34.1	9.98	0.20	0.4	0.049	1.61	3.5	17.4	2.06	204	0.84	0.29	3.9	95.0	270
W420687		39.8	0.15	0.20	<0.1	0.015	0.01	<0.5	0.5	<0.01	14	1.13	<0.01	<0.1	480	<10

Comments: Sample#42(W420689)were oxidized... high sulphide.

***** 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
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: 28-JUL-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19155149

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
W420658		>10000	1.7	0.049	0.60	9680	3.4	268	20.1	6.2	<0.05	10.15	0.49	<0.005	1.78	220
W420659		303	50.5	<0.002	0.01	34.1	6.0	1	34.0	94.0	0.22	0.14	4.86	0.105	0.38	2.6
W420660		1970	101.5	0.003	0.05	139.5	4.0	10	34.5	10.0	0.30	0.39	3.11	0.134	0.71	5.1
W420661		>10000	4.2	<0.002	0.10	301	1.6	3	>500	13.4	0.07	26.2	1.40	0.033	21.5	1.6
W420662		1265	20.1	<0.002	0.05	54.3	0.9	6	13.6	11.6	<0.05	0.18	1.11	0.025	0.26	1.8
W420663		687	57.9	<0.002	0.01	10.60	1.9	1	79.0	27.1	0.11	0.48	1.60	0.051	1.07	1.1
W420664		249	18.1	0.003	0.17	14.00	3.4	46	1.2	20.4	0.08	0.62	2.68	0.037	0.38	3.2
W420665		1800	66.5	<0.002	0.05	299	3.1	2	22.4	18.6	0.06	0.12	1.88	0.027	0.50	2.1
W420666		348	65.5	<0.002	0.12	37.0	4.3	3	1.6	107.0	0.23	<0.05	3.48	0.114	0.54	1.3
W420667		78.1	114.5	0.006	0.11	25.9	13.4	6	49.0	139.5	0.27	0.11	6.24	0.167	0.83	2.7
S036498		5150	33.2	<0.002	0.11	133.0	4.6	3	3.7	164.5	0.15	0.10	3.77	0.072	0.32	3.2
S036499		132.0	31.7	<0.002	0.05	43.2	1.6	12	8.0	14.4	0.18	<0.05	1.83	0.090	0.39	0.9
S036500		1835	203	<0.002	0.10	234	11.4	39	19.5	136.5	0.26	0.64	12.95	0.180	1.57	2.8
W420668		16.9	387	0.010	0.65	1.24	19.1	2	28.8	185.5	1.24	0.13	2.48	1.045	2.32	0.9
W420669		55.1	5.0	0.002	0.14	3.61	12.9	13	1.6	4.1	0.08	<0.05	1.10	0.031	0.31	11.5
W420670		67.2	8.4	0.002	0.21	14.60	4.3	17	5.0	31.9	0.11	<0.05	1.18	0.050	0.74	11.7
W420671		67.8	3.7	<0.002	0.14	7.62	6.2	17	4.3	6.1	0.05	<0.05	0.69	0.021	0.28	11.7
W420672		1.5	0.8	<0.002	<0.01	0.33	0.1	1	0.5	79.9	<0.05	<0.05	0.07	<0.005	0.03	1.0
W420673		6.7	113.0	0.007	0.14	0.63	4.4	9	2.1	44.2	0.19	0.16	2.64	0.128	0.91	7.1
W420674		6.8	309	0.069	0.42	0.20	10.2	13	8.7	61.6	0.33	0.11	5.22	0.198	1.49	8.7
W420675		7.5	326	0.068	0.32	0.23	8.0	13	8.3	51.9	0.26	0.17	3.57	0.165	1.50	8.6
W420676		2.8	6.1	<0.002	0.02	0.23	0.3	1	0.3	94.1	<0.05	<0.05	0.14	<0.005	0.18	1.2
W420677		2.4	6.6	<0.002	0.02	1.53	0.2	2	55.6	137.5	<0.05	<0.05	0.12	<0.005	0.16	2.3
W420678		6.0	16.9	<0.002	0.03	1.34	1.7	2	0.8	135.5	0.08	<0.05	1.17	0.048	0.21	2.2
W420679		19.3	65.0	0.011	0.10	8.30	7.8	15	2.7	75.8	0.32	0.18	4.73	0.199	1.50	5.5
W420680		6.2	3.1	0.011	0.01	0.44	0.2	4	0.5	131.5	<0.05	<0.05	0.12	<0.005	0.23	1.1
W420681		4.3	129.0	0.002	0.13	5.56	7.0	3	3.2	23.1	0.34	0.12	2.76	0.206	2.92	2.5
W420682		35.4	8.5	<0.002	0.02	20.0	1.5	9	0.3	4.1	0.05	0.05	0.83	0.022	0.35	5.4
W420683		683	26.9	<0.002	0.09	104.5	10.5	41	9.0	7.9	0.07	0.05	2.12	0.036	1.59	44.8
K291698		486	5.5	<0.002	0.05	43.4	2.3	7	1.3	2.6	<0.05	0.54	0.31	0.014	0.56	3.0
K291699		182.0	2.2	<0.002	0.07	5.28	0.5	1	0.4	1.7	<0.05	<0.05	0.15	0.008	0.09	10.9
K291700		69.0	7.1	<0.002	0.17	5.55	4.9	3	0.6	5.6	<0.05	<0.05	2.03	0.027	1.24	16.5
W591751		58.1	67.6	0.004	8.36	3.82	24.2	2	2.8	40.1	0.85	<0.05	4.53	0.554	2.67	1.2
W591752		3.5	28.3	<0.002	0.09	0.13	6.1	1	0.3	115.5	0.41	<0.05	0.96	0.271	0.28	1.1
W591764		195.0	34.3	0.002	0.02	58.7	3.7	14	0.9	9.7	0.26	0.05	3.18	0.102	0.69	5.6
W591772		1.6	0.3	<0.002	0.01	0.28	0.1	1	0.2	0.8	<0.05	<0.05	0.02	<0.005	<0.02	0.1
W420684		7.4	398	0.010	1.80	0.45	17.1	1	12.0	121.5	0.38	0.21	2.97	0.612	2.32	1.2
W420685		2.3	0.5	<0.002	>10.0	0.11	<0.1	9	0.3	0.2	<0.05	1.53	0.01	<0.005	0.03	<0.1
W420686		4.1	205	<0.002	2.47	0.14	7.6	1	9.8	38.0	0.20	0.29	0.99	0.331	1.56	0.2
W420687		2.8	0.7	<0.002	>10.0	0.11	<0.1	8	0.2	0.3	<0.05	1.29	0.01	<0.005	0.02	0.1

Comments: Sample#42(W420689)were oxidized... high sulphide.

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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

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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 28-JUL-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19155149

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Ag-OG62	Pb-OG62	Zn-OG62	Sn-AA82
	Analyte	V	W	Y	Zn	Zr	Ag	Pb	Zn	Sn
	Units	ppm	ppm	ppm	ppm	ppm	ppm	%	%	%
	LOD	1	0.1	0.1	2	0.5	1	0.001	0.001	0.01
W420658		491	2.3	7.5	633	28.8	142	11.85		
W420659		245	14.7	20.6	1020	36.9				
W420660		126	6.8	26.1	4340	34.2				
W420661		45	2.1	7.1	2250	10.4	484	3.15		1.14
W420662		25	2.8	3.8	333	11.0				
W420663		43	2.8	7.0	6710	13.4				
W420664		99	0.4	9.8	491	14.9				
W420665		46	1.3	18.2	3950	19.4				
W420666		112	2.1	3.6	164	40.4				
W420667		82	5.3	11.7	3990	35.8				
S036498		113	1.6	10.7	383	27.9				
S036499		57	1.3	3.0	1880	23.4				
S036500		121	1.8	6.7	337	48.6				
W420668		142	2.6	17.1	128	14.8				
W420669		390	0.9	96.2	>10000	12.1			1.195	
W420670		757	2.0	159.5	>10000	28.7			1.310	
W420671		469	1.3	169.0	>10000	12.7			1.585	
W420672		5	0.8	1.4	38	0.5				
W420673		555	10.3	21.6	336	30.1				
W420674		1870	86.7	28.2	252	38.6				
W420675		1680	112.5	22.2	220	31.4				
W420676		9	0.5	1.2	16	1.0				
W420677		51	0.8	3.0	17	0.8				
W420678		18	0.5	4.6	38	10.4				
W420679		108	366	17.8	205	42.9				
W420680		23	1.1	2.7	21	1.0				
W420681		462	1.7	6.3	28	50.6				
W420682		122	0.4	9.8	925	21.7				
W420683		206	1.0	45.3	>10000	278			1.235	
K291698		247	18.5	14.7	3710	4.0				
K291699		31	3.0	3.0	2240	2.2				
K291700		204	1.1	5.2	626	13.9				
W591751		339	0.6	11.7	81	75.1				
W591752		65	0.3	12.3	26	15.6				
W591764		243	1.3	11.8	875	34.3				
W591772		5	<0.1	0.1	7	<0.5				
W420684		92	900	16.5	63	33.3				
W420685		2	0.8	0.3	18	<0.5				
W420686		63	4.7	2.8	50	6.1				
W420687		1	0.7	0.2	15	<0.5				

Comments: Sample#42(W420689)were oxidized... high sulphide.

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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 ST
VANCOUVER BC V6B 1L8

Finalized Date: 28-JUL-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19155149

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
W420688		0.65	<0.01	0.51	0.44	1.1	30	1.34	267	8.78	0.11	6.97	100.0	13	7.34	2120
W420689		0.80	0.01	1.21	0.35	1.1	20	0.69	452	0.06	0.07	0.64	246	10	3.95	2860
W420690		1.23	0.02	5.25	0.10	3510	<10	0.07	3660	0.02	0.09	340	142.5	2	0.10	314
W420691		0.77	0.01	0.96	1.14	876	40	0.93	655	0.09	0.07	500	5.2	33	2.85	212
W420692		0.77	<0.01	0.30	8.77	10.1	1080	2.81	9.19	3.85	0.16	71.3	24.2	91	8.86	60.7
W420693		0.65	<0.01	0.08	7.80	2.7	90	2.48	3.64	7.08	0.02	55.7	43.9	214	5.14	75.3

Comments: Sample#42(W420689)were oxidized... high sulphide.

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CERTIFICATE OF ANALYSIS WH19155149

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	Fe	Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P
	Units	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
W420688		30.9	1.88	0.17	0.1	0.063	0.41	3.3	12.4	0.66	798	0.44	0.01	0.7	49.3	170
W420689		34.8	0.83	0.18	<0.1	0.063	0.10	<0.5	3.0	0.28	38	0.34	0.01	0.5	107.5	30
W420690		43.9	2.16	0.44	0.1	0.037	0.02	215	0.5	0.02	26	0.59	0.01	0.1	50.3	160
W420691		36.6	7.13	0.51	0.4	0.028	0.22	326	5.1	0.64	81	0.40	0.07	1.4	22.1	260
W420692		6.79	23.5	0.22	2.0	0.016	5.47	32.9	41.4	2.21	273	1.21	0.45	16.0	50.4	120
W420693		5.75	16.60	0.13	1.6	0.090	0.48	29.0	13.1	3.81	843	0.73	2.82	35.9	356	1710

Comments: Sample#42(W420689)were oxidized... high sulphide.

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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 ST
VANCOUVER BC V6B 1L8

Finalized Date: 28-JUL-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19155149

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
W420688		4.7	146.0	<0.002	2.05	0.21	2.6	1	1.4	64.0	<0.05	0.72	0.26	0.024	0.85	0.1
W420689		3.1	37.8	0.002	>10.0	0.33	0.6	1	2.9	1.8	<0.05	0.83	0.16	0.013	0.34	0.2
W420690		17.2	1.4	0.004	>10.0	29.9	0.2	3	0.7	0.5	<0.05	4.16	0.63	<0.005	0.04	2.1
W420691		5.0	60.6	<0.002	>10.0	4.67	3.9	1	2.8	5.0	0.06	1.15	1.44	0.081	0.29	2.4
W420692		11.2	183.5	<0.002	1.25	0.32	16.7	1	4.1	172.0	0.87	0.12	10.70	0.525	1.31	2.2
W420693		2.9	63.3	<0.002	0.58	0.28	21.4	1	18.5	408	1.86	<0.05	3.96	1.335	0.57	0.8

Comments: Sample#42(W420689)were oxidized... high sulphide.

***** See Appendix Page for comments regarding this certificate *****

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Finalized Date: 28-JUL-2019
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Project: Rau

CERTIFICATE OF ANALYSIS WH19155149

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Ag-OG62	Pb-OG62	Zn-OG62	Sn-AA82
	Analyte	V	W	Y	Zn	Zr	Ag	Pb	Zn	Sn
	Units	ppm	ppm	ppm	ppm	ppm	ppm	%	%	%
	LOD	1	0.1	0.1	2	0.5	1	0.001	0.001	0.01
W420688		5	5.3	5.8	21	2.7				
W420689		2	1.4	0.4	11	1.7				
W420690		1	210	6.0	11	2.6				
W420691		19	15.7	6.2	18	15.2				
W420692		111	2.3	19.9	52	71.4				
W420693		163	1.8	21.5	78	38.2				

Comments: Sample#42(W420689)were oxidized... high sulphide.

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Account: RCM

CERTIFICATE OF ANALYSIS WH19155149

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	OA-HSUL10
PUL-31	PUL-QC	SPL-21	WEI-21

Applies to Method: Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Ag-OG62	Au-AA25	ME-MS61	ME-OG62
Pb-OG62	Sn-AA82	Zn-OG62	

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Finalized Date: 21-JUL-2019
Account: RCM

CERTIFICATE WH19160955

Project: Rau

P.O. No.: R19-R05

This report is for 51 Rock samples submitted to our lab in Whitehorse, YT, Canada on 2-JUL-2019.

The following have access to data associated with this certificate:

ANDREW CARNE	ADAM COULTER	JULIA LANE

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um

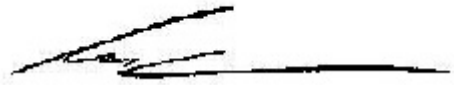
ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid ICP-MS	
ME-OG62	Ore Grade Elements - Four Acid	ICP-AES
Zn-OG62	Ore Grade Zn - 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: Rau

CERTIFICATE OF ANALYSIS WH19160955

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
W420694		1.25	0.02	0.08	7.84	40.2	1400	2.40	1.49	8.40	0.05	52.5	14.5	80	8.74	11.2
W420695		0.64	0.02	0.07	7.89	43.2	1320	2.13	1.26	11.00	0.05	56.5	13.8	74	7.43	8.6
W420696		0.49	0.01	<0.01	7.36	1.2	160	1.26	0.42	5.62	0.08	37.8	39.0	196	7.95	2.6
W420697		0.42	0.24	3.10	5.81	38.8	140	2.00	1095	5.04	1.17	10.95	47.2	55	18.70	65.7
W420698		0.63	0.02	0.10	3.23	2.6	1270	0.65	48.2	7.32	0.11	34.6	9.9	92	10.30	20.9
W420699		0.33	0.02	0.54	4.93	18.8	530	3.43	52.6	1.54	0.66	69.2	4.2	145	25.8	66.4
W420700		0.98	0.01	0.33	1.29	0.6	50	111.0	3.77	12.60	<0.02	14.80	20.4	16	0.80	576
S036502		0.41	0.01	0.05	0.45	0.7	30	0.46	2.17	23.1	2.52	10.85	1.0	15	0.82	15.1
S036503		0.44	0.01	0.05	2.02	1.9	340	0.88	2.12	30.1	0.16	17.55	3.8	48	1.83	12.3
S036504		0.24	0.01	0.25	9.35	6.9	2330	3.95	93.4	2.85	0.21	12.95	5.7	317	21.5	61.2
S036505		0.58	0.01	0.04	7.28	32.8	2330	2.02	1.21	0.87	0.20	85.1	4.4	64	6.08	14.5
S036506		0.40	0.63	0.17	0.17	1.8	70	0.05	499	0.09	0.06	0.75	0.7	13	0.91	10.2
S036507		0.38	0.01	0.86	9.31	1.1	860	3.41	2.94	10.40	1.05	73.0	7.4	75	3.94	19.6
S036508		0.20	0.87	0.17	8.23	2.4	1160	4.04	48.7	6.58	0.12	9.60	1.8	192	17.20	9.5
S036509		0.49	<0.01	0.24	8.43	1.8	2830	2.81	2.98	4.45	0.17	39.0	23.7	283	16.10	45.1
S036510		0.25	0.01	0.06	2.06	4.0	560	1.22	3.68	13.05	0.16	18.60	3.5	22	15.60	13.3
S036511		0.55	0.01	0.02	0.24	0.7	510	0.22	0.24	21.9	0.03	6.93	0.5	2	0.30	1.5
S036512		0.23	0.07	0.16	4.51	10.2	610	3.02	37.0	7.91	0.09	26.3	16.9	93	4.59	93.2
S036513		0.24	0.09	1.44	0.31	14.1	310	0.26	1115	2.33	0.30	7.74	4.3	4	0.65	133.0
S036514		0.23	0.04	0.95	1.03	31.4	250	2.39	923	7.33	1.95	11.60	4.0	18	4.76	77.5
S036515		0.24	0.03	0.19	6.29	24.2	1360	2.10	27.8	7.68	0.49	44.4	11.5	130	10.65	45.5
S036516		0.14	0.01	0.28	5.80	7.1	2050	1.50	30.8	4.46	0.28	31.7	12.4	148	9.05	169.5
S036517		0.28	0.03	0.45	8.26	7.8	3400	2.55	23.7	3.86	0.12	127.0	14.0	150	25.1	422
S036518		1.11	0.01	0.05	9.24	0.4	410	1.83	1.42	6.91	0.12	78.4	14.9	276	7.82	58.1
S036519		0.32	0.01	0.07	9.79	1.5	730	2.30	1.29	4.93	0.03	87.9	48.2	457	16.90	162.5
S036520		0.28	0.01	0.22	7.45	2.6	1100	28.4	1.86	3.75	<0.02	73.9	18.1	233	43.2	263
S036521		0.90	0.04	1.33	0.06	4.2	30	<0.05	5.59	1.46	0.06	0.35	368	1	0.16	3460
S036522		0.41	0.01	0.43	5.95	7.5	1690	2.02	20.8	4.59	0.20	34.0	27.0	200	15.30	528
S036523		0.39	<0.01	0.13	10.20	6.7	3940	2.21	1.60	1.94	0.05	45.2	15.2	287	13.10	102.0
S036524		0.38	<0.01	0.02	1.13	0.6	170	1.08	0.37	21.4	0.03	11.85	1.2	6	1.30	4.9
S036525		0.17	0.01	0.06	5.88	8.8	1620	3.42	0.86	8.92	0.21	16.15	6.2	57	6.58	12.8
S036526		0.61	0.02	2.95	1.03	3760	290	0.42	1455	0.47	0.04	241	2.3	17	1.86	91.8
S036527		0.63	0.04	5.17	0.78	2880	100	0.31	1480	0.12	0.03	379	32.4	18	0.98	56.3
S036528		0.47	0.02	4.50	0.43	3230	60	0.21	1940	0.04	<0.02	139.5	1.2	5	0.36	19.8
S036529		0.97	0.02	1.78	0.55	2230	310	0.21	596	0.07	0.02	52.8	1.7	11	0.89	73.4
S036530		1.01	0.01	2.64	0.13	3630	10	0.07	970	0.02	0.07	108.0	40.3	2	0.12	366
S036531		0.22	<0.01	2.19	0.52	337	20	0.18	>10000	12.85	0.08	447	6.8	14	0.46	247
S036532		0.36	0.02	0.40	0.65	150.0	150	0.12	88.0	0.28	2.85	7.80	1.0	10	0.69	77.3
S036533		0.52	0.01	0.31	0.37	144.5	130	0.06	382	0.62	1.06	17.20	0.8	7	0.38	70.4
S036534		0.73	0.05	2.05	0.22	376	50	0.43	1170	4.74	0.49	7.73	0.2	2	0.24	13.7

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CERTIFICATE OF ANALYSIS WH19160955

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	Fe	Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P
	Units	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
W420694		3.84	20.0	0.09	2.0	0.044	4.63	23.2	33.7	2.36	429	0.52	0.18	14.9	54.0	140
W420695		3.90	19.40	0.10	1.9	0.044	4.25	26.6	30.4	2.15	583	0.30	0.17	14.7	36.7	160
W420696		7.39	17.20	0.06	1.0	0.062	0.66	19.9	35.7	5.49	743	0.11	2.36	27.7	205	1080
W420697		13.10	25.5	0.06	1.6	0.180	2.51	4.5	30.8	4.72	2390	0.92	0.37	6.3	58.8	260
W420698		2.21	7.60	0.06	0.4	0.021	2.48	16.7	19.1	2.07	467	0.39	0.34	10.5	40.1	470
W420699		23.0	14.10	0.17	0.8	1.135	2.13	34.3	30.2	2.64	32200	0.95	1.02	14.4	21.5	670
W420700		18.55	19.10	0.06	0.5	5.24	0.27	6.8	8.2	2.41	8090	1.33	0.20	5.8	22.9	90
S036502		0.51	2.02	0.11	0.3	0.020	0.08	6.3	7.5	9.17	554	0.35	0.10	1.3	8.9	180
S036503		1.32	4.40	0.09	0.4	0.038	1.16	8.8	6.6	2.17	486	0.46	0.08	5.9	23.5	80
S036504		10.80	36.1	0.10	1.1	0.042	4.95	4.4	68.4	2.42	440	1.90	0.84	7.0	31.0	640
S036505		4.33	20.1	0.13	2.6	0.093	3.22	44.8	7.2	0.65	661	0.79	0.22	24.9	15.7	930
S036506		0.78	0.53	0.05	<0.1	<0.005	0.13	<0.5	2.6	0.09	83	0.55	0.02	0.3	4.8	40
S036507		4.02	21.8	0.11	2.0	0.125	0.62	30.3	26.6	5.78	683	0.37	0.52	16.0	43.8	140
S036508		2.13	36.6	0.05	2.2	0.042	4.05	3.4	61.1	5.31	367	0.48	0.36	27.9	12.2	720
S036509		4.73	24.3	0.10	0.6	0.062	5.11	20.6	53.8	4.24	477	0.51	1.08	26.9	154.0	1430
S036510		4.05	6.75	0.07	0.4	0.018	1.35	7.9	23.5	8.07	721	0.59	0.10	2.5	11.2	70
S036511		0.41	0.91	0.06	0.1	0.010	0.12	3.7	3.3	11.90	977	0.05	0.01	0.3	1.3	30
S036512		7.07	12.70	0.06	0.8	0.083	0.61	12.5	10.1	7.37	946	1.30	1.14	18.4	49.1	500
S036513		44.6	1.43	0.23	0.1	0.116	0.07	4.0	1.9	2.54	1140	2.55	0.03	0.5	15.2	70
S036514		23.6	4.54	0.09	0.3	0.210	0.49	6.0	8.3	7.44	1830	3.19	0.06	2.4	16.5	130
S036515		7.82	16.10	0.09	0.8	0.039	2.35	25.1	30.6	4.79	1890	2.27	0.21	10.5	71.2	1180
S036516		4.00	14.95	0.07	0.7	0.070	2.88	14.1	26.6	3.12	499	0.85	0.72	12.8	42.9	460
S036517		10.15	24.7	0.22	1.0	0.060	4.91	66.5	81.2	2.22	449	1.79	0.59	72.1	59.7	4780
S036518		7.81	20.6	0.12	0.5	0.106	1.29	43.5	32.1	1.36	480	0.73	0.75	37.8	154.0	1760
S036519		7.78	24.3	0.13	0.3	0.017	2.96	44.6	71.2	2.14	340	1.38	0.82	28.9	201	1900
S036520		8.84	22.0	0.11	1.0	0.054	2.69	45.6	59.5	4.94	382	1.31	1.39	34.9	21.3	1550
S036521		>50	0.21	0.27	<0.1	0.044	0.04	<0.5	0.6	0.02	<5	6.50	0.01	0.1	335	<10
S036522		11.75	18.15	0.09	0.8	0.091	3.41	17.3	72.8	2.83	614	5.27	0.29	22.4	83.7	1100
S036523		4.09	23.8	0.11	0.5	0.025	4.49	20.3	57.2	1.63	133	1.36	1.16	25.2	78.4	1820
S036524		0.48	3.30	<0.05	0.2	0.036	0.42	5.4	6.7	10.75	303	0.06	0.06	2.1	3.4	80
S036525		2.52	13.55	0.05	1.0	0.038	2.72	6.1	27.4	4.18	616	1.11	0.67	11.0	21.3	110
S036526		39.7	4.33	0.21	0.5	0.022	0.32	161.0	4.1	0.35	84	0.98	0.12	3.0	5.9	240
S036527		38.0	4.20	0.26	0.5	0.071	0.27	245	3.2	0.28	408	2.18	0.06	2.7	5.3	220
S036528		41.3	1.95	0.15	0.2	0.016	0.22	94.2	1.3	0.09	160	0.65	0.03	0.7	1.3	100
S036529		46.8	2.16	0.16	0.2	0.016	0.41	35.9	1.6	0.12	51	0.73	0.04	2.2	3.1	220
S036530		41.9	0.79	0.12	0.1	0.037	0.02	73.7	0.5	0.03	28	0.41	0.01	0.2	42.3	50
S036531		12.65	3.24	0.17	0.7	0.016	0.07	328	1.8	0.37	413	0.46	0.04	3.2	7.1	930
S036532		>50	2.70	0.17	0.2	0.079	0.28	4.7	1.3	0.17	180	2.78	0.05	1.9	5.7	300
S036533		>50	1.64	0.17	0.2	0.045	0.21	12.3	1.2	0.10	97	4.64	0.02	1.4	2.9	270
S036534		30.2	1.99	0.10	0.1	0.019	0.10	2.8	2.1	7.40	522	0.95	0.06	0.5	1.3	100

***** See Appendix Page for comments regarding this certificate *****

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CERTIFICATE OF ANALYSIS WH19160955

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
W420694		5.9	103.0	<0.002	2.60	0.25	15.2	<1	5.4	168.0	0.85	<0.05	8.70	0.520	0.93	1.6
W420695		4.1	102.0	<0.002	2.68	0.18	14.7	<1	5.4	175.0	0.86	<0.05	8.86	0.498	0.80	1.4
W420696		2.4	28.9	<0.002	0.01	0.16	18.6	<1	4.3	467	1.17	<0.05	3.34	0.801	0.50	0.3
W420697		58.6	174.0	<0.002	4.65	6.71	9.7	<1	11.2	77.9	0.37	0.50	4.78	0.244	1.60	2.6
W420698		3.5	240	<0.002	0.12	0.17	7.3	<1	9.1	133.5	0.55	2.64	1.95	0.405	1.22	0.8
W420699		63.5	384	0.007	0.07	0.55	9.1	<1	15.1	113.0	0.68	0.32	2.32	0.478	3.58	2.2
W420700		1.9	8.9	0.004	3.63	0.13	2.8	2	61.6	22.3	0.16	0.23	1.73	0.086	0.33	4.8
S036502		1.6	13.5	<0.002	0.02	0.14	1.1	1	1.2	128.5	0.08	<0.05	0.55	0.035	0.09	0.2
S036503		1.7	35.7	<0.002	0.05	0.10	5.6	1	1.1	651	0.34	<0.05	2.15	0.177	0.24	0.5
S036504		5.2	321	<0.002	0.14	0.58	17.9	1	20.6	235	0.33	0.21	1.00	0.457	2.21	1.9
S036505		2.7	155.0	<0.002	0.02	0.57	13.2	1	3.0	56.2	1.38	<0.05	12.05	0.511	0.95	2.2
S036506		4.6	12.2	<0.002	0.02	0.39	0.2	<1	0.4	5.1	<0.05	24.5	0.11	0.015	0.10	0.1
S036507		138.0	16.2	<0.002	1.99	0.48	16.9	<1	7.3	504	1.03	0.05	10.85	0.555	0.32	2.3
S036508		3.5	490	<0.002	0.04	0.40	14.5	<1	17.9	106.5	1.23	1.66	0.95	0.852	1.96	2.7
S036509		11.1	337	<0.002	0.70	0.19	26.0	<1	22.2	258	1.13	0.12	2.22	1.020	2.19	0.7
S036510		5.1	176.0	<0.002	0.04	0.49	4.1	<1	2.0	61.1	0.15	0.07	2.43	0.100	1.39	0.9
S036511		1.9	4.5	<0.002	0.01	0.29	0.6	1	0.4	97.8	<0.05	<0.05	0.27	0.012	0.06	0.3
S036512		3.5	73.9	<0.002	0.13	0.80	12.5	<1	13.2	104.5	0.89	0.22	2.76	0.588	0.68	4.0
S036513		9.2	5.2	<0.002	0.45	23.3	4.1	2	2.9	11.3	<0.05	1.79	0.54	0.015	0.28	1.5
S036514		60.2	74.7	<0.002	0.30	13.05	4.1	1	17.1	27.3	0.14	1.35	1.37	0.081	0.84	1.6
S036515		10.4	256	<0.002	0.34	1.15	15.6	1	8.3	147.5	0.57	0.11	4.38	0.570	1.71	2.3
S036516		7.9	217	<0.002	0.19	0.68	17.8	<1	8.9	214	0.63	0.12	2.65	0.527	1.31	1.2
S036517		7.8	369	<0.002	0.52	0.35	26.1	1	24.3	298	3.45	1.75	11.70	1.590	2.53	10.8
S036518		3.1	42.9	<0.002	0.17	0.25	27.1	1	2.0	119.0	1.72	<0.05	4.35	1.215	0.24	0.7
S036519		2.7	101.5	<0.002	1.35	0.11	24.1	<1	2.2	154.0	1.31	<0.05	3.46	1.085	1.21	0.4
S036520		4.1	397	<0.002	1.16	0.20	26.9	<1	52.8	151.0	1.42	0.11	4.55	1.110	2.28	1.0
S036521		1.6	2.1	0.007	>10.0	0.07	0.1	58	0.2	3.2	<0.05	1.74	0.02	<0.005	0.15	0.6
S036522		6.0	325	0.009	0.34	1.53	13.8	1	9.8	273	1.09	0.68	3.25	0.593	1.64	3.3
S036523		3.7	226	<0.002	0.71	0.13	23.9	1	8.7	291	1.11	0.09	3.51	0.890	2.25	1.0
S036524		2.5	15.1	<0.002	0.07	0.23	2.2	<1	3.4	74.7	0.11	<0.05	1.61	0.055	0.12	0.3
S036525		28.0	140.5	<0.002	0.03	0.25	11.1	<1	5.7	457	0.65	<0.05	6.40	0.332	0.73	2.1
S036526		24.8	21.9	0.007	1.33	22.1	2.1	2	2.1	21.0	0.21	3.63	2.49	0.092	0.32	1.5
S036527		49.8	17.6	<0.002	8.54	15.25	2.0	3	3.2	9.2	0.15	2.51	1.84	0.085	0.22	1.9
S036528		22.8	15.1	0.002	>10.0	26.9	0.7	2	1.4	3.6	<0.05	3.70	0.92	0.026	0.16	0.8
S036529		81.4	24.3	<0.002	2.29	8.44	1.1	1	1.7	9.0	0.14	1.59	0.92	0.069	0.22	0.5
S036530		7.0	1.6	0.004	>10.0	7.98	0.2	1	0.8	0.7	<0.05	1.65	0.41	0.007	0.08	0.8
S036531		83.8	8.2	<0.002	7.44	53.2	2.2	2	5.5	151.5	0.22	7.80	5.88	0.115	0.11	1.8
S036532		13.6	13.8	<0.002	0.48	0.91	1.1	6	0.5	12.0	0.13	0.17	1.30	0.056	0.13	0.7
S036533		7.3	8.6	<0.002	0.57	2.56	0.7	5	0.4	11.4	0.08	0.37	1.13	0.041	0.10	0.5
S036534		48.3	6.9	<0.002	0.56	9.71	0.8	12	5.5	4.3	<0.05	1.82	0.31	0.013	0.10	0.3

***** 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
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: 21-JUL-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19160955

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Zn-OG62
	Analyte	V	W	Y	Zn	Zr	Zn
	Units	ppm	ppm	ppm	ppm	ppm	%
	LOD	1	0.1	0.1	2	0.5	0.001
W420694		98	2.4	14.5	14	75.6	
W420695		92	2.4	16.5	11	74.8	
W420696		144	0.8	20.6	68	25.9	
W420697		65	10.7	19.1	45	63.5	
W420698		57	16.3	10.2	28	16.1	
W420699		85	940	12.2	180	29.0	
W420700		15	490	6.5	236	19.6	
S036502		23	5.5	11.7	110	9.2	
S036503		25	5.6	9.4	38	13.1	
S036504		169	18.5	8.7	31	40.8	
S036505		129	4.1	10.6	66	124.0	
S036506		3	3.8	0.3	9	1.1	
S036507		101	3.0	19.1	115	66.6	
S036508		164	16.0	6.6	41	86.4	
S036509		202	7.1	17.1	81	17.2	
S036510		29	1.8	7.4	39	13.8	
S036511		4	0.2	3.3	8	2.1	
S036512		105	3.5	14.0	59	22.5	
S036513		9	7.6	10.5	10	4.3	
S036514		23	14.5	10.3	191	12.3	
S036515		114	8.3	11.2	61	25.9	
S036516		75	4.5	14.6	53	24.5	
S036517		232	32.1	33.5	53	36.9	
S036518		136	0.6	23.8	98	12.2	
S036519		167	0.6	29.1	56	6.5	
S036520		117	62.9	30.4	54	25.4	
S036521		2	4.2	0.6	5	<0.5	
S036522		118	1440	15.3	58	26.4	
S036523		135	7.7	17.3	20	15.8	
S036524		11	5.3	6.6	21	8.2	
S036525		87	8.4	6.3	82	35.8	
S036526		25	690	5.3	20	16.9	
S036527		17	102.0	7.8	9	16.1	
S036528		8	403	2.6	<2	8.9	
S036529		18	193.5	1.6	6	9.1	
S036530		2	640	2.0	4	3.7	
S036531		7	7.8	8.3	7	21.6	
S036532		18	3.3	1.2	1760	8.7	
S036533		13	2.1	0.9	1200	5.3	
S036534		23	13.9	4.6	245	2.1	

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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

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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

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Project: Rau

CERTIFICATE OF ANALYSIS WH19160955

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
S036535		0.36	<0.01	0.18	2.06	19.2	360	0.48	26.6	6.88	2.48	32.1	3.5	10	0.76	8.0
S036536		0.60	<0.01	0.47	0.98	26.9	610	0.49	16.30	0.09	2.65	5.23	0.7	27	0.84	84.2
S036537		0.11	<0.01	3.15	1.86	71.9	9130	1.75	2.93	4.60	106.5	36.1	47.4	19	0.86	22.1
S036538		0.17	<0.01	0.36	5.59	19.1	870	1.18	1.06	6.34	2.34	40.0	23.3	74	10.40	81.9
S036539		0.11	<0.01	1.21	0.97	16.7	1050	0.20	4.93	3.01	2.56	8.05	2.2	36	0.46	5.3
S036540		0.66	<0.01	0.18	8.14	11.1	1520	1.30	2.41	3.85	0.42	49.8	27.5	259	14.30	186.5
S036541		0.53	<0.01	0.76	4.73	115.0	350	1.70	5.06	0.32	0.84	11.95	13.4	131	4.65	139.5
S036542		0.82	<0.01	2.02	0.15	56.9	10	<0.05	1355	0.69	0.22	0.61	7.0	16	0.12	376
S036543		0.89	0.01	2.15	0.56	53.2	70	0.12	2690	0.18	0.26	2.05	16.0	37	0.30	354
S036544		0.55	<0.01	0.56	5.26	461	2240	1.29	681	1.10	1.06	25.1	18.7	142	8.77	234
S036545		0.37	0.04	2.07	0.46	1255	180	0.13	138.0	0.67	0.64	7.26	5.7	26	0.38	25.2

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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

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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

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Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19160955

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	Fe	Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P
	Units	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
S036535		3.32	4.00	0.06	0.9	0.030	0.97	15.5	8.1	3.08	2440	7.72	0.09	2.3	14.2	220
S036536		1.33	2.89	<0.05	0.3	0.148	0.48	3.5	2.8	0.12	95	10.00	0.02	1.4	18.8	140
S036537		11.35	5.19	0.09	0.5	0.066	0.85	20.2	16.8	4.13	18250	41.1	0.03	1.6	316	470
S036538		6.52	16.20	0.07	1.5	0.067	2.11	19.5	39.0	4.29	2370	3.02	0.64	7.6	59.9	720
S036539		39.6	3.52	0.33	0.1	22.7	0.15	4.1	4.8	0.99	66900	14.15	0.33	0.3	19.5	230
S036540		3.91	23.0	0.08	0.5	0.060	3.94	27.1	28.9	1.57	252	0.85	0.80	32.9	178.0	2000
S036541		8.72	13.85	0.06	0.3	0.238	1.82	5.3	17.9	0.80	221	10.50	0.16	9.2	58.4	410
S036542		49.0	0.64	0.17	0.1	0.013	0.01	<0.5	0.8	0.05	27	3.99	0.01	0.6	31.0	210
S036543		45.2	2.04	0.16	0.2	0.010	0.04	1.2	1.7	0.17	33	9.83	0.05	1.0	28.5	430
S036544		18.75	12.40	0.09	0.9	0.038	3.89	13.4	28.8	0.79	338	159.5	0.24	17.6	138.0	770
S036545		29.3	1.69	0.09	0.3	0.015	0.08	6.4	3.6	0.29	405	38.8	0.03	1.6	57.3	2230

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ALS Canada Ltd.
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North Vancouver BC V7H 0A7
Phone: +1 (604) 984 0221 Fax: +1 (604) 984 0218
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VANCOUVER BC V6B 1L8

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Project: Rau

CERTIFICATE OF ANALYSIS WH19160955

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
S036535		34.0	29.1	0.004	0.06	1.83	2.2	1	1.5	48.3	0.15	<0.05	2.26	0.099	0.33	1.0
S036536		4.7	25.3	0.002	0.08	9.67	1.5	13	1.9	20.1	0.09	0.18	0.95	0.036	0.90	0.8
S036537		998	34.9	0.002	0.21	26.4	4.4	7	1.5	64.8	0.10	<0.05	2.24	0.051	0.73	3.0
S036538		285	224	<0.002	0.31	2.19	21.1	1	3.5	82.7	0.51	<0.05	4.42	0.776	1.60	1.1
S036539		91.4	14.0	<0.002	0.04	1.61	1.6	1	6.2	107.0	<0.05	<0.05	0.48	0.015	0.35	2.9
S036540		5.4	251	0.003	1.48	0.47	21.0	4	11.4	153.5	1.50	0.13	2.77	0.960	3.00	0.9
S036541		7.7	156.5	<0.002	0.27	1.67	8.6	9	44.1	24.9	0.40	0.20	1.32	0.290	1.31	2.2
S036542		9.9	0.3	0.018	>10.0	19.40	0.3	7	1.3	5.3	<0.05	4.07	0.14	0.012	0.31	1.7
S036543		20.9	1.9	0.023	>10.0	36.2	0.9	8	1.6	7.8	0.05	7.23	0.46	0.027	0.82	4.4
S036544		11.5	223	0.014	0.88	18.75	8.9	11	5.2	87.2	0.84	2.28	2.97	0.523	3.06	12.5
S036545		9.2	4.2	0.004	0.18	5.66	1.0	21	1.2	19.8	0.10	1.83	1.26	0.046	2.33	23.6

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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

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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 21-JUL-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19160955

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Zn-OG62
	Analyte	V	W	Y	Zn	Zr	Zn
	Units	ppm	ppm	ppm	ppm	ppm	%
	LOD	1	0.1	0.1	2	0.5	0.001
S036535		28	1.1	13.8	244	25.8	
S036536		620	2.0	1.8	172	11.3	
S036537		66	3.7	67.2	>10000	18.9	1.410
S036538		236	2.3	20.6	370	76.8	
S036539		33	2.1	6.6	455	3.4	
S036540		155	6.0	9.7	77	16.6	
S036541		71	5.8	4.4	142	10.7	
S036542		25	0.8	8.3	41	4.5	
S036543		73	1.9	8.8	38	7.8	
S036544		129	15.5	13.5	663	33.8	
S036545		64	4.0	14.9	33	12.2	

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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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Project: Rau

Finalized Date: 21-JUL-2019
Account: RCM

CERTIFICATE OF ANALYSIS WH19160955

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	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-AA25	ME-MS61	ME-OG62	Zn-OG62

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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 ST
VANCOUVER BC V6B 1L8

Finalized Date: 31-JUL-2019
Account: RCM

CERTIFICATE WH19164269

Project: Rau

P.O. No.: R19-R06

This report is for 19 Rock samples submitted to our lab in Whitehorse, YT, Canada on 5-JUL-2019.

The following have access to data associated with this certificate:

ANDREW CARNE	ADAM COULTER	JULIA LANE

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
OA-HSUL10	Handling of High Sulphide Samples
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid 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 WH19164269

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
S036546		0.48	<0.01	0.90	0.53	263	50	0.23	1035	0.95	0.29	11.00	3.7	13	0.45	133.0
S036547		0.71	0.01	1.02	0.18	1050	70	0.10	901	0.88	0.88	2.99	212	8	0.37	231
S036548		0.76	<0.01	1.53	0.24	28.6	100	0.06	1270	0.05	0.93	37.7	2.2	9	0.39	318
S036549		0.84	<0.01	0.46	0.13	344	100	0.09	1560	2.20	0.12	39.7	0.5	5	0.16	50.1
S036550		0.47	<0.01	0.43	1.64	120.0	640	0.63	289	0.59	0.73	23.3	5.2	31	2.27	61.3
W420701		0.41	<0.01	0.77	6.03	96.6	570	7.85	12.90	16.20	1.59	64.1	29.2	174	5.30	138.0
W420702		1.01	<0.01	0.08	6.60	1.5	550	4.87	1.51	6.81	0.05	103.5	39.6	250	109.5	146.0
W420703		0.43	<0.01	0.45	0.98	13.1	460	1.19	3.86	9.13	5.06	13.95	6.8	29	1.38	117.0
W420704		0.78	<0.01	0.23	0.25	1.7	70	14.30	0.93	12.70	0.20	6.14	66.9	91	0.45	898
W420705		0.91	<0.01	0.19	5.78	1.9	280	47.6	1.27	12.00	0.14	113.5	36.2	231	14.80	342
W420706		0.77	<0.01	0.32	4.28	1.8	1530	11.55	1.40	11.70	0.07	161.0	19.7	220	8.40	536
W420707		1.17	0.01	3.52	0.10	676	10	0.48	44.9	0.03	<0.02	0.32	2.0	5	0.08	448
W420708		1.04	0.04	1.87	0.26	521	20	4.21	879	2.72	0.11	1.33	0.5	10	2.07	55.0
W420709		0.60	<0.01	1.36	0.12	270	30	0.52	20.3	0.11	0.02	0.63	1.9	2	0.32	590
W420710		0.60	<0.01	0.85	1.66	9.3	440	8.19	13.50	2.73	<0.02	1.75	2.0	37	16.60	420
W420711		0.68	<0.01	0.84	0.76	387	350	0.30	19.25	0.04	0.05	6.33	3.0	12	1.02	475
W420712		1.16	<0.01	0.58	0.32	3.5	110	18.25	4.06	12.95	0.92	2.47	4.7	4	0.76	476
W420713		1.18	<0.01	0.47	0.23	1.5	210	27.5	4.01	14.40	0.21	1.54	4.5	4	1.10	272
W420714		0.95	<0.01	1.07	0.93	8.7	160	20.1	10.75	9.82	0.20	2.62	3.0	6	6.95	254

***** See Appendix Page for comments regarding this certificate *****

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Finalized Date: 31-JUL-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19164269

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	Fe	Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P
	Units	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
S036546		20.0	1.71	0.11	0.3	0.021	0.17	4.0	4.3	0.12	94	10.45	0.05	0.2	27.9	410
S036547		45.4	0.62	0.14	0.1	0.015	0.03	1.8	1.1	0.05	153	7.29	0.02	0.5	83.8	270
S036548		37.2	1.10	0.13	0.1	0.014	0.06	23.4	2.2	0.04	28	5.16	0.03	1.2	45.5	140
S036549		21.6	0.77	0.09	0.1	0.014	0.03	17.6	3.8	0.28	224	3.26	0.01	0.5	4.3	110
S036550		25.8	4.65	0.08	0.6	0.032	0.59	14.0	7.5	0.31	332	23.3	0.16	3.2	39.8	480
W420701		5.75	16.40	0.10	1.0	0.398	2.00	34.3	16.9	2.09	5080	2.93	0.15	57.1	116.5	2380
W420702		6.29	18.40	0.16	1.9	0.146	4.59	55.0	39.1	10.25	863	0.37	0.12	75.9	286	2350
W420703		24.1	2.40	0.10	0.1	2.42	0.88	5.1	2.2	0.64	9930	7.45	0.06	5.3	26.4	150
W420704		14.30	3.95	0.07	0.3	0.545	0.03	2.4	6.8	5.00	3330	4.94	0.07	15.5	110.5	500
W420705		7.41	19.30	0.12	1.1	0.349	0.97	66.1	30.8	5.02	1860	2.37	0.73	63.3	127.5	2270
W420706		6.35	15.25	0.13	1.0	0.514	2.04	97.1	11.2	5.10	1870	1.13	0.40	55.4	45.2	2010
W420707		30.2	0.53	0.07	<0.1	0.029	0.03	<0.5	3.2	0.03	94	2.37	0.01	0.3	1.6	10
W420708		6.60	1.38	<0.05	<0.1	0.014	0.21	<0.5	19.1	4.31	499	1.17	0.04	0.3	2.1	70
W420709		47.6	0.65	0.21	<0.1	0.037	0.07	<0.5	3.7	0.15	148	1.35	0.01	0.5	0.5	120
W420710		28.5	12.85	0.10	0.5	0.116	2.08	0.7	103.0	5.38	764	15.05	0.07	15.2	1.3	110
W420711		50.0	2.49	0.26	0.4	0.037	0.27	3.3	3.5	0.10	72	2.80	0.03	1.7	2.8	140
W420712		11.95	3.34	0.05	0.1	0.355	0.10	1.0	8.2	8.50	1950	1.78	0.07	0.5	2.1	40
W420713		9.13	2.91	0.05	0.1	0.239	0.11	0.5	12.4	9.33	1840	2.10	0.05	0.3	1.3	40
W420714		12.95	8.23	0.06	0.2	0.290	0.84	1.2	83.0	9.08	2360	1.72	0.11	0.8	3.2	80

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Finalized Date: 31-JUL-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19164269

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
S036546		12.6	10.1	0.038	>10.0	14.65	1.2	7	1.4	16.1	<0.05	3.62	0.65	0.028	0.87	3.8
S036547		5.5	1.9	0.039	>10.0	10.95	0.5	10	0.9	7.7	<0.05	3.80	0.43	0.010	0.51	5.4
S036548		6.5	3.0	0.018	>10.0	17.20	0.5	9	1.2	4.4	0.06	4.06	0.43	0.024	0.58	4.3
S036549		3.9	2.2	0.018	1.80	31.3	1.2	6	0.7	10.3	<0.05	6.27	0.29	0.008	0.44	3.4
S036550		27.8	34.7	0.008	1.02	5.10	3.7	5	5.1	32.3	0.22	1.04	2.22	0.090	0.90	3.8
W420701		59.7	214	0.002	1.36	21.5	17.3	2	56.2	159.0	3.08	0.14	5.41	0.966	0.84	1.7
W420702		6.4	820	<0.002	1.97	0.15	27.7	1	21.8	48.9	3.95	0.10	6.80	1.050	5.58	1.5
W420703		14.5	60.7	<0.002	2.27	5.39	9.4	9	6.8	50.8	0.22	0.30	0.55	0.072	0.40	0.5
W420704		3.1	3.8	<0.002	0.09	0.20	16.9	5	6.2	20.3	0.49	0.18	0.46	0.122	0.07	1.0
W420705		6.8	154.0	0.002	2.49	0.25	22.1	5	36.4	167.5	3.28	0.10	6.79	0.906	0.75	2.7
W420706		4.1	168.0	<0.002	0.81	1.44	19.5	5	27.1	196.0	2.90	0.18	8.79	0.847	0.63	2.9
W420707		1.1	3.0	<0.002	7.49	0.44	0.1	1	0.6	0.7	<0.05	0.09	0.04	0.007	0.02	0.1
W420708		4.2	46.8	<0.002	0.07	1.60	0.9	1	2.6	1.6	<0.05	1.48	0.08	0.010	0.14	0.2
W420709		2.1	7.0	<0.002	2.99	0.25	0.3	4	0.9	1.4	0.20	0.34	0.19	0.009	0.04	0.2
W420710		3.8	380	<0.002	0.93	0.13	6.7	7	3.4	14.8	9.21	0.40	0.81	0.092	1.35	0.6
W420711		5.2	17.5	<0.002	1.32	0.68	1.5	2	1.2	7.0	0.16	0.09	1.21	0.052	0.14	0.4
W420712		6.9	11.2	<0.002	0.09	0.21	4.1	3	2.7	11.3	0.05	0.17	0.33	0.012	0.12	0.4
W420713		1.9	19.2	<0.002	0.08	0.18	3.0	3	2.8	11.3	0.05	0.16	0.22	0.010	0.14	0.2
W420714		10.4	183.5	<0.002	0.27	0.35	5.4	3	5.9	11.9	0.08	0.45	0.42	0.024	0.71	0.4

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VANCOUVER BC V6B 1L8

Finalized Date: 31-JUL-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19164269

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	V	W	Y	Zn	Zr
	Units	ppm	ppm	ppm	ppm	ppm
	LOD	1	0.1	0.1	2	0.5
S036546		41	3270	12.8	276	11.0
S036547		20	9.0	10.0	445	4.7
S036548		28	33.6	4.2	171	4.8
S036549		19	5240	27.8	173	4.1
S036550		98	27.8	8.1	325	22.8
W420701		163	28.1	12.1	387	33.0
W420702		203	3.3	22.1	170	62.0
W420703		24	5.4	10.1	1200	3.4
W420704		120	10.9	10.2	166	7.4
W420705		164	42.5	19.9	133	27.7
W420706		138	22.5	25.6	98	24.9
W420707		2	4.0	0.1	15	1.5
W420708		4	29.4	1.6	49	1.3
W420709		5	4.0	0.4	17	1.8
W420710		46	13.3	2.5	73	12.3
W420711		32	4.4	1.3	25	12.1
W420712		19	53.9	8.9	315	4.1
W420713		14	57.7	8.3	114	2.0
W420714		54	2.6	2.7	144	4.7

***** See Appendix Page for comments regarding this certificate *****

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Project: Rau

Finalized Date: 31-JUL-2019
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CERTIFICATE OF ANALYSIS WH19164269

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	OA-HSUL10
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-AA25	ME-MS61

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Finalized Date: 28-JUL-2019
Account: RCM

CERTIFICATE WH19166377

Project: Rau

P.O. No.: R19-R07

This report is for 40 Rock samples submitted to our lab in Whitehorse, YT, Canada on 8-JUL-2019.

The following have access to data associated with this certificate:

ANDREW CARNE	ADAM COULTER	JULIA LANE

SAMPLE PREPARATION

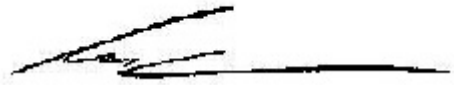
ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid 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 WH19166377

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
W420715		0.68	<0.01	1.95	2.98	132.5	1130	1.00	0.24	0.21	0.68	62.7	0.2	120	3.89	45.4
W420716		0.93	<0.01	1.57	4.72	118.0	1550	1.51	0.29	0.58	0.84	84.1	0.8	198	4.09	147.0
W420717		0.13	<0.01	0.27	4.58	17.5	720	1.67	0.33	0.09	22.9	64.7	15.2	44	3.54	238
W420718		0.74	<0.01	0.17	7.23	4.5	510	0.46	0.10	7.50	1.79	7.02	36.4	252	1.28	110.5
W420719		0.97	<0.01	2.30	1.40	1210	100	1.14	1.62	0.07	12.20	199.5	2.5	283	3.85	495
W420720		0.82	<0.01	4.17	1.03	1100	90	0.91	5.92	0.14	14.15	225	3.3	259	4.67	560
W420721		0.24	<0.01	1.37	1.54	257	840	0.75	0.54	0.27	16.75	81.8	5.2	32	1.37	300
W420722		0.34	<0.01	0.48	2.38	14.9	680	0.81	0.24	0.09	2.35	27.4	8.6	23	1.44	11.5
W420723		0.30	<0.01	0.49	2.56	196.0	5330	0.84	0.19	0.03	0.55	34.2	0.9	43	2.18	19.8
W420724		0.52	0.01	1.66	2.18	401	840	1.12	0.16	0.02	0.56	38.9	0.1	50	4.05	19.0
W420725		0.80	0.03	1.13	1.11	76.5	560	0.40	0.97	0.01	0.07	12.70	0.1	27	1.48	7.2
W420726		0.45	<0.01	4.28	1.38	144.0	750	0.42	4.40	0.08	0.39	104.5	0.3	35	2.42	19.3
W420727		0.36	<0.01	1.57	0.53	100.5	450	0.21	1.74	0.06	0.23	70.9	0.1	19	1.05	11.8
W420728		1.48	<0.01	0.15	0.47	16.1	520	0.27	0.13	0.01	0.03	6.80	0.1	33	0.69	1.6
W420729		0.68	<0.01	0.56	1.31	90.2	990	0.61	0.26	0.02	0.05	11.05	0.1	29	1.86	9.0
W420730		0.67	<0.01	0.33	0.31	8.2	200	0.17	0.16	0.01	<0.02	3.48	0.2	24	0.51	0.9
W420731		0.30	<0.01	0.10	4.26	7.4	2130	1.37	0.20	0.08	0.43	48.5	1.5	64	5.65	18.5
W420732		0.11	<0.01	0.09	6.00	60.7	480	1.77	0.19	0.02	11.00	59.4	30.9	112	7.23	38.4
W420733		0.40	<0.01	0.19	2.33	8.9	1160	0.97	0.24	0.01	0.04	1.44	0.2	32	3.46	2.5
W420734		0.22	<0.01	0.09	4.89	7.4	370	1.88	0.39	0.03	1.64	56.3	10.2	34	3.25	14.9
W420735		0.47	<0.01	0.20	4.00	23.2	840	2.13	0.20	0.19	5.91	46.4	62.9	48	5.24	649
W420736		0.96	<0.01	0.30	3.83	29.1	1070	2.57	0.22	0.27	56.5	52.7	165.5	47	4.91	809
W420737		0.24	<0.01	0.14	5.12	14.5	660	2.29	0.25	0.07	44.9	58.7	52.7	39	4.86	113.0
W420738		0.40	<0.01	0.08	1.84	6.5	220	0.85	0.04	0.41	0.51	3.87	1.4	29	2.40	18.2
W420739		0.37	<0.01	0.19	3.16	3.8	700	1.07	0.09	0.28	0.72	40.1	2.4	54	6.98	25.5
W420740		0.73	<0.01	0.46	4.35	47.3	680	1.62	0.36	0.39	0.32	70.1	3.0	80	4.33	40.6
W420741		0.18	<0.01	0.15	5.64	16.1	460	2.68	0.21	0.41	21.0	109.0	37.5	81	5.10	348
W420742		0.16	<0.01	0.22	9.45	14.6	510	5.08	0.20	0.38	11.70	57.0	51.2	57	5.73	482
W420743		0.57	<0.01	0.15	4.31	10.8	380	1.83	0.17	0.15	18.60	59.8	6.2	79	5.02	274
W420744		0.93	<0.01	0.25	7.84	4.0	1430	0.68	0.69	4.03	7.84	22.5	36.4	297	18.25	37.5
W420745		0.94	<0.01	1.09	8.08	24.8	1510	0.55	0.04	5.15	0.56	23.3	20.5	348	2.64	57.0
W420746		0.86	<0.01	0.34	7.77	110.0	3280	0.67	0.04	4.97	3.41	21.0	37.3	348	2.23	30.0
W420747		0.69	<0.01	0.09	8.05	5.3	1300	1.28	0.17	2.92	0.73	16.35	15.5	357	15.35	45.0
W420748		0.94	<0.01	3.48	1.12	25.6	590	0.57	0.07	0.16	0.77	7.44	0.3	35	1.11	38.2
W420749		0.76	<0.01	0.10	7.85	18.6	890	0.49	0.09	3.44	0.07	21.8	33.5	382	5.08	22.4
W420750		0.65	<0.01	0.04	9.71	4.8	3450	2.66	0.03	0.56	1.62	11.85	5.9	443	9.34	4.6
R608014		0.79	<0.01	0.06	10.45	2.7	2840	2.78	0.04	1.89	1.09	22.4	4.7	339	8.91	9.3
R608015		0.65	<0.01	0.03	9.67	4.0	2100	2.57	0.05	1.49	0.75	8.87	4.6	452	8.84	4.4
R608016		0.55	<0.01	0.06	7.47	5.3	490	0.91	0.36	5.28	2.21	18.00	27.5	171	8.55	45.1
R608017		0.18	0.01	0.36	7.76	1.4	800	0.55	1.91	3.11	1.00	19.35	28.7	124	2.05	106.5

***** 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
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: 28-JUL-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19166377

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	Fe	Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P
	Units	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
W420715		2.47	11.30	0.15	1.2	0.446	0.71	24.9	54.9	1.85	58	31.2	0.04	3.7	27.7	5020
W420716		2.07	11.55	0.17	1.7	0.953	0.67	36.6	25.1	0.40	68	19.35	0.10	3.6	26.1	>10000
W420717		5.25	10.10	0.11	2.2	0.123	3.41	28.3	40.0	0.65	4390	2.55	0.05	6.2	46.0	1090
W420718		7.37	12.00	0.06	0.5	0.075	0.89	2.7	37.3	4.31	3660	2.06	1.73	2.0	110.5	300
W420719		26.7	14.50	0.50	2.0	5.54	2.87	122.5	7.6	0.08	131	385	0.07	1.2	7.6	>10000
W420720		30.6	15.15	0.51	1.6	5.64	3.44	141.5	7.2	0.11	158	470	0.10	0.9	9.0	>10000
W420721		8.33	8.53	0.14	1.1	0.256	0.66	48.9	6.3	0.38	1080	83.9	0.04	2.7	15.9	2280
W420722		3.47	6.04	0.06	0.9	0.101	1.12	12.7	14.8	0.29	3270	4.31	0.07	3.4	16.4	640
W420723		4.36	9.53	0.11	1.2	0.041	0.63	20.2	11.7	0.24	117	49.5	0.02	4.8	5.0	1270
W420724		4.34	7.71	0.08	0.8	0.117	1.02	24.8	10.1	0.15	33	24.1	0.02	3.5	1.4	1500
W420725		1.11	3.82	0.08	0.5	0.047	0.46	8.6	4.7	0.05	35	40.3	0.01	2.0	0.8	180
W420726		5.33	6.83	0.23	0.8	0.127	0.89	67.6	4.0	0.07	57	60.4	0.03	2.3	0.9	2460
W420727		4.24	3.41	0.16	0.3	0.090	0.42	47.5	2.1	0.03	42	43.5	0.02	0.6	0.5	1950
W420728		0.58	1.48	<0.05	0.2	0.009	0.22	4.3	1.6	0.04	44	2.38	0.01	1.0	0.3	90
W420729		0.89	5.24	0.05	0.2	0.120	0.53	6.7	4.7	0.10	36	36.9	0.02	1.1	1.0	350
W420730		0.40	1.28	<0.05	<0.1	0.083	0.13	2.0	1.3	0.03	38	4.14	0.01	0.1	0.2	60
W420731		0.71	12.70	0.07	2.1	0.048	1.73	25.7	10.4	0.35	85	1.73	0.07	13.5	4.1	660
W420732		5.49	14.20	0.10	2.8	0.071	3.91	26.6	47.4	0.99	1720	1.49	0.13	8.7	61.9	440
W420733		0.38	6.59	<0.05	1.2	0.010	0.98	0.8	8.0	0.20	45	19.15	0.02	5.1	2.0	50
W420734		3.83	11.65	0.08	1.8	0.057	3.16	18.7	69.7	0.75	1560	0.72	0.04	6.1	20.5	310
W420735		9.52	9.32	0.10	1.5	0.063	1.15	20.9	19.8	0.44	945	25.1	0.18	5.6	79.1	590
W420736		8.74	9.48	0.11	1.5	0.040	1.12	21.9	19.3	0.59	5910	22.4	0.15	6.1	301	530
W420737		5.99	12.40	0.11	1.5	0.060	3.35	23.4	43.3	0.62	4250	2.89	0.05	4.2	118.0	480
W420738		1.16	5.26	0.05	0.6	0.007	0.49	1.5	10.2	0.34	114	1.82	0.04	4.6	9.5	530
W420739		2.27	8.70	0.07	1.3	0.018	1.04	21.0	14.7	0.49	143	2.81	0.10	8.1	22.1	750
W420740		8.89	13.90	0.13	2.3	0.010	0.82	36.7	69.2	3.17	666	8.12	0.32	15.7	16.9	680
W420741		20.3	12.45	0.16	1.5	0.365	1.43	39.5	20.3	0.51	1200	26.2	0.41	5.1	401	970
W420742		6.44	12.40	0.13	1.8	0.073	1.61	21.8	38.2	0.66	1160	7.38	0.33	7.5	339	750
W420743		29.6	11.80	0.24	1.5	0.386	1.39	30.8	14.1	0.28	234	16.80	0.22	4.4	297	640
W420744		5.98	19.05	0.08	0.7	0.057	0.87	11.4	21.0	4.26	890	2.04	3.29	14.6	82.8	940
W420745		3.92	20.9	0.18	1.1	0.059	1.01	12.6	32.1	4.98	900	1.37	3.14	15.7	46.4	540
W420746		5.75	20.2	0.23	1.1	0.031	1.71	10.1	39.3	5.04	831	1.02	2.13	15.8	120.0	720
W420747		5.77	27.8	0.08	0.3	0.112	1.33	8.1	43.1	3.83	954	2.44	2.96	10.4	42.5	810
W420748		0.53	4.94	0.06	0.5	0.025	0.50	5.9	5.5	0.18	54	15.40	0.01	3.2	3.5	330
W420749		5.58	18.95	0.07	0.5	0.049	0.48	10.9	29.3	4.58	848	0.80	3.75	16.8	114.5	760
W420750		1.52	25.1	0.06	0.3	0.135	2.88	3.4	20.3	0.93	514	1.34	4.31	7.2	24.3	1080
R608014		1.66	25.0	0.09	0.4	0.111	2.35	6.4	23.1	1.05	541	0.83	4.24	10.6	23.0	1220
R608015		2.29	24.7	0.08	0.3	0.099	2.03	3.5	35.4	2.01	461	1.78	4.08	9.9	29.2	1360
R608016		5.31	15.95	0.10	0.8	0.094	0.35	8.9	15.3	4.28	955	2.25	2.98	13.7	93.3	700
R608017		6.26	17.80	0.09	0.5	0.057	0.26	9.5	22.7	3.46	697	2.20	3.76	12.2	53.7	720

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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 ST
VANCOUVER BC V6B 1L8

Finalized Date: 28-JUL-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19166377

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
W420715		19.6	54.6	0.002	0.13	16.35	5.9	6	1.2	75.0	0.23	0.08	5.64	0.121	2.38	30.0
W420716		19.5	56.0	<0.002	0.18	14.10	9.3	4	1.7	145.5	0.32	0.10	7.90	0.090	2.51	47.4
W420717		54.9	105.5	<0.002	0.02	4.75	7.3	1	1.5	12.3	0.46	0.06	9.06	0.193	1.24	7.2
W420718		47.2	32.8	<0.002	0.03	2.62	33.9	1	0.9	86.7	0.12	<0.05	0.37	0.436	0.39	0.3
W420719		47.0	179.0	<0.002	4.61	124.5	70.1	152	15.2	294	0.05	1.38	65.8	0.046	12.25	63.4
W420720		115.0	216	<0.002	6.12	141.0	52.7	150	12.5	282	<0.05	1.42	76.2	0.044	14.95	72.4
W420721		240	38.9	<0.002	0.19	24.2	5.6	28	7.8	79.1	0.20	0.29	28.1	0.107	1.86	5.2
W420722		25.0	50.2	<0.002	0.05	5.06	5.2	2	1.5	10.9	0.23	<0.05	4.00	0.114	0.76	2.0
W420723		114.0	39.8	<0.002	0.16	34.0	7.0	20	10.9	108.0	0.32	0.22	4.82	0.159	1.48	3.9
W420724		1720	54.3	<0.002	0.31	15.55	4.5	9	10.3	84.6	0.23	0.08	2.89	0.112	7.11	3.6
W420725		98.3	36.0	0.006	0.07	27.1	2.2	19	11.0	13.3	0.13	0.12	1.50	0.068	1.19	1.8
W420726		612	75.6	0.005	0.95	45.6	2.9	45	29.2	170.5	0.16	0.33	21.2	0.084	4.88	6.7
W420727		496	31.6	<0.002	0.54	23.6	1.2	33	21.3	112.0	<0.05	0.20	15.40	0.023	2.74	4.0
W420728		7.1	11.7	<0.002	0.05	2.01	1.0	1	1.1	6.3	0.05	<0.05	0.70	0.025	0.25	0.4
W420729		25.2	74.5	<0.002	0.03	9.03	2.6	1	28.3	42.5	0.07	0.09	1.76	0.036	1.56	2.7
W420730		24.5	13.2	<0.002	0.01	2.99	0.3	1	63.7	11.4	<0.05	<0.05	0.37	0.005	0.35	0.3
W420731		4.3	85.5	0.003	0.01	1.62	7.8	1	2.0	44.5	0.78	0.08	7.59	0.281	0.76	3.0
W420732		35.1	137.0	<0.002	0.01	3.25	7.6	1	2.5	18.4	0.59	0.05	10.55	0.292	0.80	3.1
W420733		9.8	49.0	0.009	0.06	5.48	5.6	2	1.2	12.7	0.32	0.11	1.57	0.141	2.10	2.2
W420734		40.8	126.5	<0.002	0.01	1.53	6.8	1	1.7	5.5	0.45	0.05	9.07	0.164	0.55	2.9
W420735		18.8	62.5	0.010	0.17	6.55	7.6	4	1.3	48.2	0.36	0.07	5.10	0.166	1.41	9.0
W420736		22.9	61.2	0.010	0.16	6.92	8.0	5	1.5	43.6	0.39	0.09	4.82	0.170	3.17	9.9
W420737		15.0	90.0	0.002	0.02	3.54	8.1	1	2.0	15.8	0.29	<0.05	5.87	0.152	1.17	2.6
W420738		1.5	36.7	<0.002	0.04	0.79	2.2	<1	1.1	68.1	0.29	<0.05	2.99	0.101	0.47	1.1
W420739		1.8	67.6	<0.002	0.22	1.09	5.4	2	1.1	107.5	0.48	0.07	5.81	0.182	1.10	2.2
W420740		19.5	64.5	0.002	0.33	4.85	16.7	8	1.4	238	0.92	0.11	8.84	0.333	0.91	3.3
W420741		15.8	73.9	0.005	0.07	5.84	10.2	6	1.4	56.2	0.32	<0.05	10.50	0.209	1.97	12.0
W420742		59.9	60.9	0.007	0.20	2.96	13.5	4	1.7	65.2	0.52	<0.05	6.01	0.253	1.35	31.6
W420743		15.0	69.7	0.003	0.08	3.23	7.1	7	1.2	42.7	0.29	<0.05	12.45	0.176	1.19	8.6
W420744		6.0	53.2	<0.002	0.93	1.76	21.6	3	3.2	365	0.69	0.11	1.75	0.539	2.61	0.5
W420745		5.5	30.9	<0.002	2.58	2.59	21.9	42	1.7	601	0.72	<0.05	2.10	0.572	0.80	0.5
W420746		5.4	49.7	<0.002	5.38	2.38	21.3	70	1.5	155.5	0.73	<0.05	1.58	0.700	1.37	0.4
W420747		6.2	61.3	<0.002	0.09	3.09	18.5	6	10.9	273	0.49	<0.05	1.13	0.420	2.64	0.4
W420748		7.0	21.4	0.002	0.03	46.8	2.3	3	2.6	12.0	0.18	0.08	0.93	0.062	0.76	1.6
W420749		2.3	10.9	<0.002	0.09	1.43	19.9	2	1.3	287	0.80	<0.05	1.62	0.658	0.50	0.4
W420750		11.8	271	<0.002	0.01	0.71	5.1	<1	32.1	226	0.31	<0.05	0.88	0.318	3.06	0.4
R608014		6.4	225	<0.002	0.04	0.55	8.1	<1	35.0	346	0.46	<0.05	1.31	0.463	2.61	0.4
R608015		14.8	187.5	<0.002	0.01	0.56	6.2	<1	24.9	276	0.47	<0.05	0.82	0.350	2.27	0.3
R608016		4.3	28.3	<0.002	0.09	2.14	23.1	1	5.9	398	0.65	<0.05	1.54	0.692	0.96	0.5
R608017		5.5	19.3	0.003	1.38	1.54	22.5	4	10.3	238	0.64	0.10	1.36	0.604	0.67	0.4

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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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Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	V	W	Y	Zn	Zr
	Units	ppm	ppm	ppm	ppm	ppm
	LOD	1	0.1	0.1	2	0.5
W420715		1500	0.7	17.8	88	44.3
W420716		537	1.1	37.5	328	62.5
W420717		60	1.1	23.9	134	69.1
W420718		250	0.3	14.6	235	11.8
W420719		789	2.0	6.6	57	74.7
W420720		886	2.8	6.4	60	64.8
W420721		122	0.6	9.7	235	42.3
W420722		92	0.8	12.3	103	30.6
W420723		552	5.2	6.8	35	39.9
W420724		768	3.6	5.3	35	29.9
W420725		311	1.1	2.7	3	19.7
W420726		547	8.0	7.8	12	30.0
W420727		231	4.1	4.3	8	9.5
W420728		64	1.0	1.0	3	7.6
W420729		227	0.9	3.2	12	7.6
W420730		23	2.8	0.5	2	1.5
W420731		198	1.2	11.2	21	79.7
W420732		70	2.0	13.1	192	90.3
W420733		179	0.9	4.0	4	43.9
W420734		43	1.0	12.1	69	55.7
W420735		176	0.8	15.9	280	48.7
W420736		211	1.1	26.9	407	52.4
W420737		82	0.6	24.5	554	51.1
W420738		51	0.4	16.5	23	22.4
W420739		149	1.3	11.2	28	47.2
W420740		278	1.2	43.6	203	91.9
W420741		113	0.7	44.5	3370	50.3
W420742		106	0.9	42.3	1600	58.9
W420743		86	0.5	26.5	3370	46.9
W420744		135	0.5	12.5	109	21.5
W420745		119	0.6	13.3	94	34.5
W420746		121	0.3	14.3	76	35.7
W420747		152	0.5	10.1	187	7.4
W420748		911	0.5	9.8	69	20.2
W420749		124	1.1	12.0	101	13.7
W420750		80	2.7	6.7	148	7.9
R608014		83	3.9	10.5	111	10.6
R608015		87	3.7	7.4	108	9.1
R608016		121	0.6	13.0	149	18.8
R608017		126	2.8	12.3	98	13.4

***** 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
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: Rau

Finalized Date: 28-JUL-2019
Account: RCM

CERTIFICATE OF ANALYSIS WH19166377

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	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-AA25	ME-MS61

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North Vancouver BC V7H 0A7
Phone: +1 (604) 984 0221 Fax: +1 (604) 984 0218
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VANCOUVER BC V6B 1L8

Finalized Date: 29-JUL-2019
Account: RCM

CERTIFICATE WH19167813

Project: Rau

P.O. No.: R19-R08

This report is for 12 Rock samples submitted to our lab in Whitehorse, YT, Canada on 9-JUL-2019.

The following have access to data associated with this certificate:

ANDREW CARNE	ADAM COULTER	JULIA LANE

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um

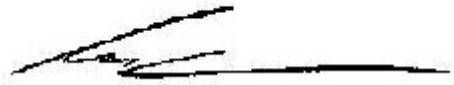
ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid ICP-MS	
Ag-OG62	Ore Grade Ag - Four Acid	
ME-OG62	Ore Grade Elements - Four Acid	ICP-AES
Cu-OG62	Ore Grade Cu - Four Acid	
Zn-OG62	Ore Grade Zn - Four Acid	
Sn-AA82	High Grade Sn	AAS

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
www.alsglobal.com/geochemistry

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Project: Rau

Finalized Date: 29-JUL-2019
Account: RCM

CERTIFICATE OF ANALYSIS WH19167813

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
W842151		0.84	<0.01	0.04	0.43	0.9	110	0.32	1.49	22.7	0.05	8.92	0.9	4	2.37	3.8
W842152		0.72	0.02	0.07	0.18	21.0	160	0.23	52.0	16.60	0.11	7.14	0.5	7	0.34	16.7
W842153		0.41	<0.01	0.03	1.04	2.1	260	0.38	0.40	22.6	0.03	10.60	1.6	8	1.55	3.1
W842154		1.24	<0.01	0.02	0.98	2.4	290	0.36	2.14	21.7	0.03	9.74	1.3	8	1.34	3.0
W842155		0.90	<0.01	0.24	0.21	7.8	510	1.55	13.55	21.7	0.42	5.37	0.3	3	0.39	7.8
W842156		0.51	50.8	30.9	0.32	81.1	180	1.49	1125	14.80	7.97	7.44	2.4	4	0.69	>10000
W842157		0.24	0.03	0.94	1.54	609	390	15.20	8.85	1.84	51.3	31.2	41.1	21	0.95	333
W842158		0.90	19.90	79.5	0.40	115.0	220	1.55	91.8	17.30	37.5	10.90	14.3	3	0.16	>10000
W842159		0.74	5.05	76.0	0.33	64.9	140	1.19	28.5	19.75	39.2	9.43	12.1	3	0.17	8560
W842160		0.38	0.13	0.63	0.92	4.8	120	0.52	1.41	19.45	1.74	10.20	1.4	7	0.60	233
R608018		1.01	0.17	0.32	1.03	57.2	1390	14.30	1.41	18.00	2.73	6.19	2.6	23	9.27	85.7
R608019		0.23	0.21	>100	0.07	24.7	140	0.43	856	31.0	83.6	6.95	2.4	2	0.48	6910

***** See Appendix Page for comments regarding this certificate *****

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North Vancouver BC V7H 0A7
Phone: +1 (604) 984 0221 Fax: +1 (604) 984 0218
www.alsglobal.com/geochemistry

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VANCOUVER BC V6B 1L8

Finalized Date: 29-JUL-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19167813

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	Fe	Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P
	Units	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
W842151		0.63	1.55	0.07	0.1	0.005	0.20	4.7	6.1	11.95	874	0.22	0.03	0.7	2.6	50
W842152		1.26	0.99	0.05	<0.1	0.033	0.06	3.7	3.6	6.36	595	1.02	0.01	0.2	2.4	30
W842153		0.53	2.89	0.07	0.2	0.008	0.47	5.1	8.5	11.35	122	0.07	0.03	1.5	5.0	50
W842154		0.56	2.69	0.09	0.3	0.006	0.44	4.6	8.3	11.20	119	0.10	0.03	1.4	4.9	60
W842155		0.31	1.39	0.12	0.1	0.108	0.04	4.3	3.2	11.45	691	0.54	0.03	0.4	3.8	200
W842156		4.39	8.16	0.20	0.1	4.68	0.05	4.8	4.4	10.15	363	8.79	0.05	0.6	47.5	110
W842157		39.9	3.07	0.44	0.4	0.113	0.08	26.4	14.8	2.25	2240	46.6	0.03	1.3	524	1040
W842158		7.27	15.20	0.16	<0.1	9.55	0.01	7.5	2.2	10.35	808	21.0	<0.01	0.2	190.5	90
W842159		3.81	5.07	0.06	<0.1	2.68	0.01	6.7	2.3	11.65	766	11.75	<0.01	0.2	122.5	80
W842160		1.27	2.30	<0.05	0.4	0.080	0.83	5.6	12.3	10.50	1260	0.74	0.02	1.4	7.5	90
R608018		1.70	6.72	0.06	0.4	0.146	0.63	6.0	36.0	10.90	584	1.53	0.12	1.5	42.6	1330
R608019		0.88	5.73	0.12	<0.1	9.31	0.02	6.8	2.4	3.81	565	1.70	0.01	0.1	36.9	50

***** See Appendix Page for comments regarding this certificate *****

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North Vancouver BC V7H 0A7
Phone: +1 (604) 984 0221 Fax: +1 (604) 984 0218
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VANCOUVER BC V6B 1L8

Finalized Date: 29-JUL-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19167813

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
W842151		0.8	10.9	<0.002	0.07	0.07	0.9	1	0.4	100.0	0.05	<0.05	0.69	0.023	0.18	1.1
W842152		5.8	2.4	<0.002	0.05	4.16	0.7	1	9.0	64.5	<0.05	0.12	0.34	0.007	0.10	0.6
W842153		0.6	18.4	<0.002	0.02	0.17	2.1	1	1.2	137.5	0.10	<0.05	1.29	0.050	0.21	0.6
W842154		0.7	17.0	<0.002	0.01	0.31	1.8	1	1.0	131.0	0.10	<0.05	1.19	0.046	0.18	0.5
W842155		50.3	3.2	<0.002	0.01	21.0	0.4	1	42.2	120.5	<0.05	<0.05	0.25	0.009	0.06	2.0
W842156		127.5	4.2	0.014	1.36	101.0	0.7	62	>500	82.4	<0.05	0.38	0.41	0.013	0.25	17.0
W842157		2730	7.7	0.003	0.02	1770	2.6	7	41.4	12.5	0.08	<0.05	0.99	0.029	0.57	20.5
W842158		347	1.1	0.003	0.57	76.7	0.4	49	>500	126.5	<0.05	0.22	0.17	<0.005	0.14	28.5
W842159		203	1.2	0.004	0.10	47.7	0.3	15	>500	145.0	<0.05	0.06	0.18	<0.005	0.13	14.9
W842160		10.9	18.4	0.003	<0.01	1.87	1.4	1	20.0	93.3	0.10	<0.05	1.60	0.036	0.14	0.9
R608018		10.3	173.5	0.003	0.92	7.70	1.7	9	85.4	117.0	0.09	<0.05	1.17	0.032	1.21	2.7
R608019		4660	4.7	<0.002	0.62	823	0.6	33	>500	282	<0.05	0.58	0.13	<0.005	0.12	2.9

***** See Appendix Page for comments regarding this certificate *****

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North Vancouver BC V7H 0A7
Phone: +1 (604) 984 0221 Fax: +1 (604) 984 0218
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Finalized Date: 29-JUL-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19167813

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Ag-OG62	Cu-OG62	Zn-OG62	Sn-AA82
	Analyte	V	W	Y	Zn	Zr	Ag	Cu	Zn	Sn
	Units	ppm	ppm	ppm	ppm	ppm	ppm	%	%	%
	LOD	1	0.1	0.1	2	0.5	1	0.001	0.001	0.01
W842151		6	0.3	4.0	11	3.8				
W842152		5	1.2	4.2	18	1.3				
W842153		11	0.5	3.8	8	9.5				
W842154		11	0.5	3.5	8	8.7				
W842155		68	2.7	3.9	47	3.4				
W842156		141	8.0	10.1	905	4.5		3.00		0.07
W842157		249	18.7	152.0	>10000	16.3			1.060	
W842158		62	8.4	87.4	3250	2.1		2.35		0.22
W842159		46	3.9	57.1	1740	1.4				0.07
W842160		51	1.3	6.5	69	12.7				
R608018		498	10.2	7.6	248	14.4				
R608019		61	2.3	27.7	>10000	1.0	142		1.185	0.78

***** See Appendix Page for comments regarding this certificate *****

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North Vancouver BC V7H 0A7
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VANCOUVER BC V6B 1L8

Project: Rau

Finalized Date: 29-JUL-2019
Account: RCM

CERTIFICATE OF ANALYSIS WH19167813

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	PUL-31
PUL-QC	SPL-21	WEI-21	

Applies to Method: Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Ag-OG62	Au-AA25	Cu-OG62	ME-MS61
ME-OG62	Sn-AA82	Zn-OG62	

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.**
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VANCOUVER BC V6B 1L8

Finalized Date: 2-AUG-2019
Account: RCM

CERTIFICATE WH19176094

Project: Rau

P.O. No.: R19-R09

This report is for 13 Rock samples submitted to our lab in Whitehorse, YT, Canada on 18-JUL-2019.

The following have access to data associated with this certificate:

ANDREW CARNE	ADAM COULTER	JULIA LANE

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid 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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North Vancouver BC V7H 0A7
Phone: +1 (604) 984 0221 Fax: +1 (604) 984 0218
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To: **ATAC RESOURCES LTD.**
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VANCOUVER BC V6B 1L8

Finalized Date: 2-AUG-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19176094

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
W842161		0.17	0.22	2.21	2.16	>10000	550	4.60	457	0.14	8.31	55.3	25.8	27	0.31	555
W842162		0.63	<0.01	0.29	1.03	277	80	0.83	1.74	0.05	0.38	19.90	2.7	36	0.79	80.5
W842163		0.47	<0.01	0.21	0.82	247	40	0.78	0.81	0.02	0.38	13.90	3.6	32	0.77	89.9
W842164		0.17	<0.01	0.06	3.47	63.8	360	2.23	1.36	0.01	0.62	30.7	13.0	52	1.61	204
W842165		0.57	<0.01	2.13	1.71	93.7	90	0.74	5.66	0.06	0.17	55.6	1.0	55	0.59	44.4
W842166		0.53	0.01	0.20	0.89	272	120	0.40	1.42	0.03	0.04	17.40	33.3	39	1.40	25.8
W842167		0.83	<0.01	0.02	3.53	2.5	750	1.12	0.61	0.28	0.03	41.7	15.0	63	16.35	19.0
W842168		0.43	0.01	0.34	0.33	1040	20	0.28	1.80	0.02	0.13	9.33	1.5	15	0.67	61.0
W842169		0.35	<0.01	0.03	7.41	9.3	1080	2.54	0.54	0.37	<0.02	64.9	0.7	114	8.02	5.3
W842170		1.03	<0.01	0.08	6.78	6.4	1070	2.90	0.69	0.07	<0.02	87.1	0.5	95	5.57	13.9
W842171		0.46	<0.01	0.17	3.16	8.7	290	0.75	0.14	0.14	0.27	44.5	8.3	18	1.31	11.7
W842172		0.49	<0.01	0.08	1.12	83.5	310	0.61	0.19	1.27	0.33	25.2	9.0	22	0.96	46.8
W842173		0.22	<0.01	0.25	0.37	10.4	130	0.21	0.22	0.33	0.58	8.35	12.9	15	0.33	49.7

***** See Appendix Page for comments regarding this certificate *****

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North Vancouver BC V7H 0A7
Phone: +1 (604) 984 0221 Fax: +1 (604) 984 0218
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VANCOUVER BC V6B 1L8

Finalized Date: 2-AUG-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19176094

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	Fe	Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P
	Units	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
W842161		37.0	3.29	0.27	0.2	3.72	0.11	30.1	2.2	0.17	319	5.42	0.07	1.0	83.6	5850
W842162		6.08	2.43	0.08	0.3	0.049	0.30	10.8	3.3	0.10	80	1.58	0.02	1.1	10.3	1470
W842163		6.51	1.98	0.08	0.3	0.039	0.24	7.1	3.7	0.08	103	1.41	0.01	0.9	11.8	1480
W842164		19.00	4.78	0.11	0.7	0.032	0.62	15.2	6.8	0.05	435	0.77	0.03	6.2	70.5	1610
W842165		2.50	4.50	0.10	0.6	0.088	0.26	29.8	2.7	0.33	43	0.88	0.10	3.2	3.0	1100
W842166		4.21	2.37	0.05	0.3	0.011	0.30	10.0	4.9	0.10	87	0.44	0.02	2.0	30.0	440
W842167		3.89	8.65	0.09	1.4	0.016	1.54	21.3	18.3	0.64	143	1.14	0.12	10.1	26.8	940
W842168		6.39	0.87	0.07	<0.1	<0.005	0.06	4.9	2.2	1.70	83	0.84	0.02	0.2	3.4	420
W842169		1.14	19.95	0.13	2.5	0.023	3.20	34.3	23.1	0.70	42	0.54	0.39	12.1	2.3	920
W842170		2.81	17.55	0.14	2.1	0.027	2.89	45.2	17.7	0.48	26	0.86	0.18	10.4	2.2	1070
W842171		2.35	7.40	0.11	1.4	0.041	1.42	18.5	14.2	0.36	615	6.70	0.04	4.7	14.1	220
W842172		2.30	3.23	0.08	0.6	0.032	0.30	12.6	5.5	0.53	601	0.61	0.10	10.2	15.7	1930
W842173		1.83	1.10	0.06	0.1	0.012	0.12	4.0	2.7	0.15	511	1.30	0.04	1.2	23.2	90

***** 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
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: 2-AUG-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19176094

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
W842161		991	4.2	<0.002	0.18	102.0	2.6	31	18.9	456	0.05	4.18	3.51	0.021	0.05	1.8
W842162		12.8	31.0	<0.002	0.02	9.48	2.0	4	1.3	17.3	0.06	0.34	3.56	0.043	0.19	1.3
W842163		7.4	29.2	<0.002	0.02	12.10	1.7	6	0.8	9.6	0.06	0.28	2.99	0.034	0.19	1.3
W842164		5.9	35.3	<0.002	0.06	1.98	4.9	2	0.9	52.1	0.36	<0.05	4.52	0.173	0.31	2.1
W842165		157.0	23.3	<0.002	0.05	2.33	4.1	3	3.1	73.1	0.18	0.29	4.40	0.093	0.27	0.9
W842166		4.0	23.3	<0.002	1.51	0.28	1.8	3	0.5	11.4	0.12	0.53	2.19	0.070	0.32	0.5
W842167		1.4	156.0	0.002	0.54	0.15	6.1	1	1.3	43.4	0.57	0.10	5.89	0.296	2.78	1.8
W842168		5.9	5.6	<0.002	0.17	0.67	1.0	10	0.2	10.2	<0.05	0.80	2.18	0.008	0.11	0.4
W842169		1.7	258	<0.002	0.06	0.14	13.8	1	3.5	82.2	0.64	0.10	9.64	0.351	1.96	2.6
W842170		1.2	204	0.003	0.38	0.13	14.2	4	4.5	73.5	0.61	0.45	10.90	0.276	1.70	2.7
W842171		24.9	53.7	<0.002	0.08	1.01	3.4	1	0.9	16.0	0.31	<0.05	3.62	0.151	0.37	1.2
W842172		12.4	14.1	<0.002	0.04	0.72	3.2	1	0.8	40.5	0.40	<0.05	2.67	0.096	0.10	1.0
W842173		21.0	4.6	0.002	0.11	0.47	0.8	1	0.3	7.7	0.06	<0.05	0.68	0.019	0.04	0.4

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Project: Rau

CERTIFICATE OF ANALYSIS WH19176094

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	V	W	Y	Zn	Zr
	Units	ppm	ppm	ppm	ppm	ppm
	LOD	1	0.1	0.1	2	0.5
W842161		82	46.8	31.4	1100	6.6
W842162		48	1.8	4.7	119	12.5
W842163		41	1.4	5.2	147	10.4
W842164		82	8.2	14.2	1300	28.4
W842165		89	6.4	3.3	30	21.2
W842166		40	1.0	3.0	36	12.1
W842167		90	1.0	7.4	42	57.5
W842168		10	0.3	6.1	27	1.4
W842169		210	13.2	9.8	8	90.9
W842170		206	10.0	7.9	4	78.4
W842171		23	0.5	7.3	30	50.3
W842172		18	0.4	12.6	38	20.0
W842173		8	0.2	3.7	54	3.8

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Finalized Date: 2-AUG-2019
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CERTIFICATE OF ANALYSIS WH19176094

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	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-AA25	ME-MS61

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North Vancouver BC V7H 0A7
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Finalized Date: 19-AUG-2019
Account: RCM

CERTIFICATE WH19183566

Project: Rau

P.O. No.: R19-R10

This report is for 14 Rock samples submitted to our lab in Whitehorse, YT, Canada on 26-JUL-2019.

The following have access to data associated with this certificate:

ANDREW CARNE	ADAM COULTER	JULIA LANE

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid ICP-MS	
ME-OG62	Ore Grade Elements - Four Acid	ICP-AES
Pb-OG62	Ore Grade Pb - Four Acid	
Cu-OG62	Ore Grade Cu - Four Acid	
Zn-OG62	Ore Grade Zn - Four Acid	
ME-MS85	Lithium Borate Fusion - Select Elements	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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North Vancouver BC V7H 0A7
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Project: Rau

CERTIFICATE OF ANALYSIS WH19183566

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
W842174		0.19	1.11	2.20	0.26	78.9	60	1.35	14.25	17.45	6.48	8.86	0.8	3	0.35	>10000
W842175		0.45	6.05	6.43	0.44	51.0	120	2.06	32.0	13.00	8.65	9.53	4.0	4	0.37	>10000
W842176		0.67	4.47	2.24	0.30	53.5	50	1.46	25.6	16.00	8.64	7.68	4.0	3	0.30	7650
W842177		0.71	0.75	2.13	0.21	52.1	60	1.07	66.1	19.90	5.32	8.11	1.7	3	0.21	8740
W842178		0.20	41.9	71.6	0.29	424	250	1.45	5000	4.93	13.90	4.33	6.2	4	0.30	>10000
W842179		0.47	28.6	42.0	0.32	172.0	250	1.54	3270	6.32	11.80	5.36	5.6	4	0.42	>10000
W842180		0.29	6.49	19.85	0.17	185.5	40	1.01	1155	17.25	5.30	5.33	1.3	3	0.44	7160
W842181		0.23	16.15	34.3	0.26	210	300	1.17	2530	7.37	12.65	8.66	1.9	4	0.69	>10000
W842182		0.09	7.77	42.7	0.16	37.5	300	1.16	186.5	9.75	6.87	4.21	3.3	3	0.26	>10000
W842183		0.22	5.39	24.7	0.29	27.4	80	1.54	1595	17.20	9.55	7.05	1.5	5	0.35	>10000
W842184		0.17	4.70	94.5	0.87	411	740	2.60	2260	2.85	184.5	32.3	22.5	7	1.22	3870
W842185		0.14	13.40	80.4	0.32	87.0	90	1.53	5510	12.20	112.0	8.08	4.6	5	0.69	>10000
W842186		0.17	4.94	11.25	0.33	30.4	100	1.83	1695	19.50	4.87	6.97	1.0	4	0.41	>10000
W842187		0.11	3.86	4.88	0.23	35.8	90	1.68	25.9	16.80	4.89	6.48	0.9	8	0.26	>10000

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North Vancouver BC V7H 0A7
Phone: +1 (604) 984 0221 Fax: +1 (604) 984 0218
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Project: Rau

CERTIFICATE OF ANALYSIS WH19183566

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	Fe	Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P
	Units	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
W842174		2.02	4.36	0.10	0.1	1.960	0.03	5.6	2.9	10.30	331	5.22	0.06	0.5	23.3	90
W842175		5.43	5.45	0.09	0.1	3.85	0.07	6.4	3.5	10.45	304	12.15	0.09	0.8	98.1	90
W842176		2.25	3.05	0.08	0.1	1.605	0.04	5.6	3.2	10.55	353	6.42	0.06	0.6	58.8	90
W842177		1.45	3.24	0.08	0.1	1.425	0.02	5.8	2.6	9.39	411	6.81	0.04	0.4	23.8	100
W842178		12.70	24.5	0.25	0.1	21.9	0.03	3.1	3.8	5.76	157	17.35	0.04	0.5	131.5	130
W842179		10.30	16.30	0.17	0.1	15.80	0.04	3.9	4.4	7.69	197	13.15	0.05	0.5	119.0	170
W842180		4.66	2.35	0.08	<0.1	3.38	0.02	4.5	3.3	10.25	355	3.04	0.04	0.4	34.3	90
W842181		14.05	18.50	0.18	0.1	24.0	0.05	5.9	3.6	8.93	247	15.80	0.04	0.5	122.5	130
W842182		12.10	18.55	0.17	0.1	22.2	0.02	3.1	2.9	8.23	221	11.85	0.03	0.4	106.5	100
W842183		3.62	5.62	0.09	0.1	3.75	0.03	4.8	4.1	10.05	343	5.05	0.06	0.7	31.6	110
W842184		24.1	15.55	0.42	0.2	41.1	0.19	13.2	6.7	3.97	343	10.70	0.04	1.0	168.0	230
W842185		4.46	7.04	0.17	0.1	13.00	0.05	6.0	4.7	9.87	544	8.87	0.06	0.8	48.4	220
W842186		2.19	4.10	0.05	0.1	1.960	0.03	4.3	4.8	10.05	408	2.82	0.06	0.5	14.6	90
W842187		4.24	4.51	0.10	0.1	2.54	0.02	4.3	3.6	10.10	354	5.12	0.05	0.4	65.9	130

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CERTIFICATE OF ANALYSIS WH19183566

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
W842174		14.1	1.9	0.003	0.13	11.00	0.4	7	163.0	91.2	<0.05	<0.05	0.41	0.010	0.12	5.8
W842175		23.1	3.3	0.002	0.14	31.7	0.6	23	276	55.9	0.05	<0.05	0.57	0.015	0.24	13.3
W842176		15.5	2.0	0.003	0.03	16.50	0.4	21	114.5	83.0	<0.05	<0.05	0.44	0.010	0.17	4.9
W842177		16.2	1.0	0.002	0.10	12.40	0.3	17	118.5	121.5	<0.05	<0.05	0.28	0.008	0.16	4.9
W842178		498	1.6	0.002	3.50	568	0.5	105	>500	13.6	<0.05	1.67	0.32	0.011	0.21	31.5
W842179		401	2.7	<0.002	1.97	469	0.7	70	>500	18.9	<0.05	0.90	0.45	0.013	0.20	28.3
W842180		1325	1.7	<0.002	0.25	467	0.5	18	>500	101.5	<0.05	0.83	0.19	0.006	0.08	7.9
W842181		189.5	2.7	0.002	2.63	258	0.9	69	>500	24.5	<0.05	0.58	0.33	0.010	0.21	50.4
W842182		86.0	1.0	<0.002	3.75	227	0.4	71	>500	48.3	<0.05	0.13	0.30	0.006	0.24	37.3
W842183		1280	1.4	0.004	0.64	525	0.7	24	412	96.7	<0.05	1.00	0.52	0.013	0.17	17.4
W842184		>10000	11.3	0.002	0.16	5810	3.0	110	>500	18.4	0.07	2.50	0.82	0.028	0.87	16.0
W842185		5420	3.6	0.003	0.59	2100	0.9	57	>500	60.7	<0.05	3.21	0.50	0.015	0.27	12.3
W842186		208	2.9	0.009	0.80	122.0	0.8	17	327	124.5	<0.05	0.33	0.46	0.016	0.13	13.0
W842187		38.5	1.2	0.004	0.82	24.1	0.5	16	265	82.8	<0.05	<0.05	0.28	0.010	0.15	14.1

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CERTIFICATE OF ANALYSIS WH19183566

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Pb-OG62	Cu-OG62	Zn-OG62	ME-MS85	ME-MS85	ME-MS85	ME-MS85	ME-MS85	ME-MS85	ME-MS85
	Analyte	V	W	Y	Zn	Zr	Pb	Cu	Zn	Ba	Ce	Cr	Cs	Dy	Er	Eu
	Units	ppm	ppm	ppm	ppm	ppm	%	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	1	0.1	0.1	2	0.5	0.001	0.001	0.001	0.5	0.1	10	0.01	0.05	0.03	0.03
W842174		126	3.3	6.3	509	3.0		1.290								
W842175		167	3.9	15.8	1390	3.7		1.895								
W842176		154	2.9	11.0	617	2.8										
W842177		119	3.7	6.7	437	2.3										
W842178		135	8.7	13.7	3170	3.4		10.55		314	4.6	<10	0.30	0.80	0.55	0.27
W842179		133	8.7	16.2	2720	3.8		6.46		250	5.6	<10	0.41	0.88	0.68	0.29
W842180		144	9.7	7.2	507	1.9				44.9	14.2	<10	0.43	0.91	0.63	0.46
W842181		216	7.9	14.5	2690	3.0		7.24		323	9.2	<10	0.69	1.20	0.74	0.48
W842182		121	4.9	5.0	2800	2.6		8.06		336	4.8	<10	0.24	0.60	0.34	0.27
W842183		185	6.4	7.2	728	4.1		1.575								
W842184		255	11.7	93.6	>10000	8.5	1.815		4.13	801	31.6	10	1.25	17.85	11.25	3.33
W842185		177	6.8	14.6	>10000	3.8		1.170	2.47	105.0	8.2	10	0.72	1.65	1.12	0.44
W842186		175	4.9	10.6	499	4.7		1.185								
W842187		162	5.7	7.5	466	2.7		1.375								

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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 19-AUG-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19183566

Sample Description	Method	ME-MS85	ME-MS85	ME-MS85	ME-MS85	ME-MS85	ME-MS85	ME-MS85	ME-MS85	ME-MS85	ME-MS85	ME-MS85	ME-MS85	ME-MS85	ME-MS85	ME-MS85
	Analyte	Ga	Gd	Hf	Ho	La	Lu	Nb	Nd	Pr	Rb	Sm	Sn	Sr	Ta	Tb
	Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.1	0.05	0.2	0.01	0.1	0.01	0.2	0.1	0.03	0.2	0.03	1	0.1	0.1	0.01
W842174																
W842175																
W842176																
W842177																
W842178		24.4	0.84	<0.2	0.19	2.9	0.05	0.5	2.5	0.60	1.8	0.69	1970	13.2	<0.1	0.13
W842179		16.1	1.00	<0.2	0.24	3.6	0.06	0.6	3.2	0.74	2.7	0.73	1305	17.2	<0.1	0.14
W842180		2.7	1.02	<0.2	0.18	7.9	0.08	6.3	6.3	1.74	1.6	1.24	1025	97.9	<0.1	0.14
W842181		19.7	1.13	<0.2	0.26	6.5	0.08	1.1	4.4	1.16	2.8	0.95	1630	24.5	<0.1	0.19
W842182		19.7	0.47	<0.2	0.12	3.2	0.05	0.6	2.3	0.62	1.1	0.49	2000	47.2	<0.1	0.09
W842183																
W842184		17.5	16.65	0.3	3.80	12.9	1.49	1.1	36.0	6.67	12.7	11.50	2330	17.9	0.1	2.60
W842185		8.4	1.45	0.2	0.35	6.5	0.13	0.9	4.3	1.09	4.1	0.98	927	60.3	0.1	0.23
W842186																
W842187																

***** See Appendix Page for comments regarding this certificate *****

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North Vancouver BC V7H 0A7
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Project: Rau

CERTIFICATE OF ANALYSIS WH19183566

Sample Description	Method Analyte Units LOD	ME-MS85 Th ppm 0.05	ME-MS85 Tm ppm 0.01	ME-MS85 U ppm 0.05	ME-MS85 V ppm 5	ME-MS85 W ppm 1	ME-MS85 Y ppm 0.1	ME-MS85 Yb ppm 0.03	ME-MS85 Zr ppm 2
W842174									
W842175									
W842176									
W842177									
W842178		0.54	0.08	30.0	156	9	14.5	0.36	6
W842179		0.47	0.08	24.6	140	10	16.3	0.42	6
W842180		0.66	0.07	8.33	158	10	8.2	0.51	4
W842181		0.37	0.10	47.3	235	9	15.4	0.54	4
W842182		0.35	0.04	34.6	132	5	5.6	0.30	3
W842183									
W842184		0.86	1.59	16.45	296	12	100.0	10.45	14
W842185		0.71	0.17	13.15	199	7	16.4	0.85	8
W842186									
W842187									

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CERTIFICATE OF ANALYSIS WH19183566

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	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-AA25	Cu-OG62	ME-MS61	ME-MS85
ME-OG62	Pb-OG62	Zn-OG62	

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Finalized Date: 25-AUG-2019
Account: RCM

CERTIFICATE WH19190857

Project: Rau

P.O. No.: R19-R11

This report is for 12 Rock samples submitted to our lab in Whitehorse, YT, Canada on 3-AUG-2019.

The following have access to data associated with this certificate:

ANDREW CARNE	ADAM COULTER	JULIA LANE

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um

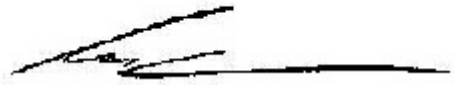
ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid ICP-MS	
Ag-OG62	Ore Grade Ag - Four Acid	
ME-OG62	Ore Grade Elements - Four Acid	ICP-AES
Cu-OG62	Ore Grade Cu - Four Acid	
ME-MS85	Lithium Borate Fusion - Select Elements	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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2103 Dollarton Hwy
North Vancouver BC V7H 0A7
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Finalized Date: 25-AUG-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19190857

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
W842188		0.25	4.19	48.4	0.30	130.5	60	1.19	78.1	17.55	40.7	11.70	11.4	3	0.11	>10000
W842189		0.20	1.66	40.0	0.20	59.2	120	0.81	412	20.2	41.7	7.95	11.6	3	0.31	5380
W842190		0.19	15.55	>100	0.67	534	230	3.30	924	11.75	65.2	21.7	43.1	5	0.58	>10000
W842191		0.37	<0.01	0.41	0.87	34.4	300	1.92	2.10	2.94	3.78	30.4	40.1	594	0.50	129.5
W842192		0.41	<0.01	0.35	0.51	9.0	190	0.29	37.6	0.06	0.80	4.22	0.3	18	0.33	21.5
W842193		0.11	0.20	52.0	0.69	48.3	80	9.09	1490	6.89	2.62	10.50	5.1	11	0.43	>10000
W842194		0.15	24.7	>100	0.79	334	250	3.59	2110	11.20	46.3	22.1	22.9	5	0.65	>10000
W842195		0.34	2.96	8.02	0.22	96.8	70	0.75	29.7	20.1	35.3	10.30	10.7	3	0.14	2550
W842196		0.19	0.01	0.43	0.15	21.1	190	0.38	3.05	21.2	21.6	5.66	25.9	2	0.19	297
W842197		0.15	0.01	0.41	0.10	23.5	130	0.55	18.20	20.7	32.3	5.56	25.5	2	0.17	367
W842198		0.18	2.93	2.41	0.18	7.8	30	1.56	242	19.25	0.77	4.12	0.7	2	0.29	17.0
W842199		0.16	8.99	18.55	0.22	31.3	20	10.10	661	15.90	3.65	6.75	0.8	3	0.24	6530

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Finalized Date: 25-AUG-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19190857

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	Fe	Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P
	Units	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
W842188		6.34	7.43	0.13	<0.1	5.31	0.01	7.4	1.8	10.35	770	21.1	<0.01	0.1	190.5	70
W842189		2.50	3.17	0.08	<0.1	1.935	0.03	6.2	3.6	9.75	915	19.70	0.01	0.1	98.9	100
W842190		14.70	17.30	0.16	0.1	13.15	0.05	14.2	3.6	4.81	1400	64.0	0.02	0.3	592	210
W842191		15.15	1.68	0.12	0.3	0.033	0.38	12.8	7.1	4.58	1300	17.85	0.04	1.3	659	230
W842192		0.79	2.21	0.05	0.3	0.023	0.17	2.3	1.9	0.15	34	19.55	0.03	1.6	3.2	100
W842193		10.00	9.85	0.11	0.2	5.94	0.09	6.3	8.3	11.30	451	15.90	0.10	1.0	121.0	250
W842194		14.30	14.45	0.20	0.1	13.60	0.05	14.1	4.5	7.28	842	49.4	0.01	0.3	491	160
W842195		2.48	1.89	0.06	<0.1	1.030	0.02	6.7	2.5	11.85	843	10.15	<0.01	0.1	108.5	80
W842196		0.79	0.42	<0.05	<0.1	0.016	0.02	4.3	2.7	11.50	1120	5.21	0.01	0.1	61.5	60
W842197		0.84	0.47	0.05	<0.1	0.007	0.01	4.7	2.6	11.05	1200	5.18	0.01	0.1	59.0	60
W842198		0.24	1.55	0.08	<0.1	0.042	0.02	3.3	3.4	11.35	369	11.85	0.04	0.1	11.3	50
W842199		1.58	4.66	0.07	0.1	2.83	0.02	4.8	4.7	10.60	447	9.41	0.05	0.2	14.3	110

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CERTIFICATE OF ANALYSIS WH19190857

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
W842188		289	1.0	0.005	0.16	49.0	0.4	36	>500	141.0	<0.05	0.14	0.14	<0.005	0.08	27.2
W842189		338	2.0	0.003	0.05	121.5	0.5	16	426	163.5	<0.05	0.41	0.12	<0.005	0.20	8.8
W842190		1075	3.8	0.003	0.31	349	1.2	62	>500	85.6	<0.05	1.02	0.23	0.010	0.53	46.9
W842191		14.1	10.9	<0.002	0.03	2.27	4.0	4	6.8	190.5	0.08	<0.05	1.16	0.032	0.22	3.1
W842192		4.9	25.9	0.002	0.15	0.81	1.0	7	4.8	9.7	0.07	0.37	0.66	0.039	17.95	0.9
W842193		1030	5.7	<0.002	0.11	264	1.0	29	>500	11.3	0.06	0.35	0.87	0.030	0.51	23.6
W842194		1745	3.8	0.003	0.12	1130	0.7	68	>500	107.0	<0.05	1.96	0.27	0.009	0.27	57.0
W842195		139.5	1.4	0.005	0.01	25.9	0.4	6	210	173.5	<0.05	0.05	0.14	<0.005	0.14	7.3
W842196		37.0	1.3	0.003	<0.01	10.85	0.2	1	4.2	194.0	<0.05	<0.05	0.13	0.005	0.35	1.7
W842197		45.1	0.9	0.003	<0.01	13.50	0.2	1	2.4	177.5	<0.05	<0.05	0.09	<0.005	0.37	1.7
W842198		221	1.4	0.018	0.04	70.0	0.4	3	4.8	137.5	<0.05	0.23	0.10	0.006	0.03	3.4
W842199		606	2.7	0.004	0.22	179.5	0.4	13	>500	78.1	<0.05	0.33	0.15	0.009	0.07	9.9

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CERTIFICATE OF ANALYSIS WH19190857

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Ag-OG62	Cu-OG62	ME-MS85	ME-MS85	ME-MS85	ME-MS85	ME-MS85	ME-MS85	ME-MS85	ME-MS85
	Analyte	V	W	Y	Zn	Zr	Ag	Cu	Ba	Ce	Cr	Cs	Dy	Er	Eu	Ga
	Units	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	1	0.1	0.1	2	0.5	1	0.001	0.5	0.1	10	0.01	0.05	0.03	0.03	0.1
W842188		57	6.2	81.8	2720	0.9		1.515	65.6	11.1	<10	0.08	8.08	6.07	1.10	8.7
W842189		135	4.8	46.2	1210	0.9										
W842190		335	16.5	200	7240	2.7	132	2.46	252	21.8	10	0.59	20.5	15.40	2.34	21.6
W842191		65	0.8	54.5	2730	10.5										
W842192		45	24.6	1.5	23	15.4										
W842193		243	8.8	35.8	1690	10.1		1.535	86.4	9.7	20	0.41	2.30	1.81	0.56	11.2
W842194		171	7.6	204	6260	2.4	192	2.05	251	19.7	10	0.59	19.60	15.10	2.49	15.9
W842195		61	3.7	47.0	1310	1.2										
W842196		47	2.5	17.5	741	1.3										
W842197		68	2.3	21.8	820	0.8										
W842198		302	2.5	5.8	65	1.0										
W842199		184	5.8	6.3	486	2.2			22.0	7.0	10	0.24	0.88	0.42	0.39	5.3

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Sample Description	Method	ME-MS85	ME-MS85	ME-MS85	ME-MS85	ME-MS85	ME-MS85	ME-MS85	ME-MS85	ME-MS85	ME-MS85	ME-MS85	ME-MS85	ME-MS85	ME-MS85	ME-MS85
	Analyte	Gd	Hf	Ho	La	Lu	Nb	Nd	Pr	Rb	Sm	Sn	Sr	Ta	Tb	Th
	Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	0.05	0.2	0.01	0.1	0.01	0.2	0.1	0.03	0.2	0.03	1	0.1	0.1	0.01	0.05
W842188		7.10	<0.2	1.95	8.1	0.77	0.2	12.0	2.19	0.9	3.38	1695	132.5	0.1	1.13	0.18
W842189																
W842190		15.55	<0.2	4.93	15.1	2.01	0.4	24.0	4.19	4.1	7.15	3310	84.7	0.1	2.72	0.31
W842191																
W842192																
W842193		2.17	0.3	0.56	6.5	0.19	1.0	6.5	1.40	5.6	1.47	915	10.3	0.1	0.32	0.89
W842194		15.75	<0.2	4.93	13.2	1.98	0.3	24.6	4.17	3.7	7.59	2690	97.0	0.1	2.72	0.26
W842195																
W842196																
W842197																
W842198																
W842199		0.91	<0.2	0.17	5.5	0.03	0.2	3.8	0.84	2.9	0.79	649	77.7	0.1	0.13	0.16

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CERTIFICATE OF ANALYSIS WH19190857

Sample Description	Method Analyte Units LOD	ME-MS85 Tm ppm 0.01	ME-MS85 U ppm 0.05	ME-MS85 V ppm 5	ME-MS85 W ppm 1	ME-MS85 Y ppm 0.1	ME-MS85 Yb ppm 0.03	ME-MS85 Zr ppm 2
W842188		0.83	25.3	63	6	81.2	5.31	3
W842189								
W842190		2.09	46.0	390	20	217	12.60	6
W842191								
W842192								
W842193		0.23	21.1	261	10	35.0	1.32	15
W842194		1.99	51.5	180	8	198.5	12.05	4
W842195								
W842196								
W842197								
W842198								
W842199		0.05	10.95	207	7	7.1	0.33	3

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Finalized Date: 25-AUG-2019
Account: RCM

CERTIFICATE OF ANALYSIS WH19190857

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	PUL-31
PUL-QC	SPL-21	WEI-21	

Applies to Method: Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Ag-OG62	Au-AA25	Cu-OG62	ME-MS61
ME-MS85	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: 18-AUG-2019
Account: RCM

CERTIFICATE WH19200222

Project: Rau

P.O. No.: R19-R12

This report is for 4 Rock samples submitted to our lab in Whitehorse, YT, Canada on 13-AUG-2019.

The following have access to data associated with this certificate:

ANDREW CARNE	ADAM COULTER	JULIA LANE

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um

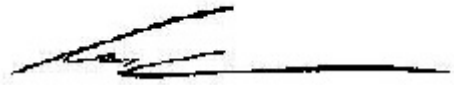
ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid 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

Project: Rau

Finalized Date: 18-AUG-2019
Account: RCM

CERTIFICATE OF ANALYSIS WH19200222

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
Q013418		0.37	0.01	0.05	0.80	20.9	210	0.68	0.34	18.15	0.43	8.47	0.8	16	1.31	4.4
Q013419		1.55	0.02	0.07	7.34	165.0	220	8.69	6.08	0.07	<0.02	7.23	0.3	9	6.25	4.5
Q013420		1.23	0.01	0.07	6.69	8.0	550	4.56	1.12	0.56	0.06	28.4	0.5	10	4.86	3.3
W842200		1.17	0.04	0.30	6.27	103.5	360	6.80	26.7	0.14	<0.02	7.46	0.8	9	7.16	77.8

***** See Appendix Page for comments regarding this certificate *****

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Finalized Date: 18-AUG-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19200222

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	Fe	Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P
	Units	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
Q013418		0.49	2.58	0.09	0.4	0.044	0.22	4.4	5.3	10.15	560	2.00	0.03	1.9	7.8	80
Q013419		1.88	40.5	0.13	2.6	0.201	4.55	3.6	70.0	0.70	143	28.9	0.05	43.1	1.2	20
Q013420		0.47	28.4	0.11	3.1	0.061	4.26	13.2	6.8	0.09	194	0.73	0.80	120.0	1.4	10
W842200		1.90	32.5	0.09	3.0	0.220	4.33	3.5	124.0	0.90	260	15.60	0.42	92.6	1.8	20

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Project: Rau

CERTIFICATE OF ANALYSIS WH19200222

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
Q013418		2.3	27.1	<0.002	0.02	0.67	1.5	1	5.4	82.1	0.11	<0.05	1.25	0.047	0.51	1.8
Q013419		2.9	560	<0.002	0.19	0.71	3.3	<1	383	5.5	21.7	<0.05	6.73	<0.005	1.81	2.2
Q013420		43.6	370	<0.002	0.03	0.32	1.6	1	38.1	37.8	22.6	<0.05	19.10	<0.005	3.33	9.5
W842200		13.8	600	<0.002	0.91	1.08	2.4	1	247	10.1	22.1	<0.05	9.03	0.005	2.27	6.7

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Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19200222

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	V	W	Y	Zn	Zr
	Units	ppm	ppm	ppm	ppm	ppm
	LOD	1	0.1	0.1	2	0.5
Q013418		47	2.2	4.4	31	10.2
Q013419		1	10.1	6.5	6	19.2
Q013420		1	7.7	24.3	15	31.7
W842200		2	170.0	18.2	18	26.7

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VANCOUVER BC V6B 1L8

Project: Rau

Finalized Date: 18-AUG-2019
Account: RCM

CERTIFICATE OF ANALYSIS WH19200222

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	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-AA25	ME-MS61

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VANCOUVER BC V6B 1L8

Finalized Date: 10-SEP-2019
Account: RCM

CERTIFICATE WH19197011

Project: Rau

P.O. No.: R19-R12

This report is for 28 Rock samples submitted to our lab in Whitehorse, YT, Canada on 9-AUG-2019.

The following have access to data associated with this certificate:

ANDREW CARNE	ADAM COULTER	JULIA LANE

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid ICP-MS	

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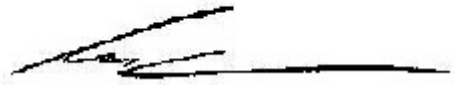
Signature: 

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Finalized Date: 10-SEP-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19197011

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
Q013421		0.15	<0.01	0.13	0.55	2.2	80	0.11	0.03	0.08	0.24	1.48	1.0	13	0.46	5.4
Q013422		0.11	1.63	10.05	1.51	169.5	310	0.34	11.10	0.02	0.16	15.95	1.7	16	0.65	5.9
Q013423		0.10	0.03	0.04	0.67	410	290	0.27	0.31	0.06	0.15	23.5	17.8	24	0.41	52.4
Q013424		1.54	<0.01	0.19	1.45	15.0	520	0.49	0.07	0.30	0.40	15.65	5.8	34	0.59	56.1
Q013425		0.47	0.08	0.01	0.48	151.0	90	0.20	3.78	0.08	0.10	5.23	3.6	26	0.41	27.6
Q013426		0.81	<0.01	0.03	0.09	199.5	30	0.06	0.74	0.51	0.13	1.55	3.1	23	0.30	16.3
Q013427		0.10	0.03	<0.01	1.49	55.7	350	0.67	4.54	0.09	0.07	17.20	11.0	36	0.95	8.4
Q013428		0.60	<0.01	<0.01	0.05	0.6	30	0.09	0.04	24.2	0.04	4.45	0.4	4	0.72	0.8
Q013429		0.66	0.31	0.35	4.53	1.8	180	3.25	248	4.24	0.05	24.3	29.2	170	10.60	543
Q013430		1.02	0.04	0.15	1.03	1.7	100	0.75	52.2	1.09	<0.02	119.0	0.7	63	1.90	58.4
Q013431		0.42	<0.01	0.49	3.32	2.5	20	2.20	7.09	6.56	0.04	169.5	143.0	178	0.80	1160
Q013432		1.02	0.32	27.0	0.14	815	<10	0.11	5860	0.03	8.19	3.29	171.0	10	0.74	2430
Q013433		0.66	0.05	0.15	0.34	1.5	20	19.15	48.9	12.65	0.09	2.79	5.5	9	0.65	220
Q013434		0.92	<0.01	0.04	0.35	0.5	20	12.05	8.88	13.25	0.17	1.69	2.1	8	0.17	15.6
Q013435		0.28	0.01	0.23	1.53	7.3	240	0.91	13.25	1.14	<0.02	22.5	7.3	90	2.87	498
Q013436		0.32	0.03	0.75	0.11	10.9	10	0.18	28.3	0.12	0.03	0.93	18.5	25	0.44	384
Q013437		0.55	<0.01	0.37	3.51	12.0	260	0.92	3.04	0.62	<0.02	40.7	2.5	88	7.41	42.5
Q013438		0.35	<0.01	1.16	3.17	3.0	20	1.34	17.25	3.63	0.06	22.3	132.5	43	0.58	3440
Q013439		0.10	0.94	0.06	0.56	613	120	0.24	3.62	0.04	0.07	6.53	20.1	26	0.42	42.7
Q013440		0.40	<0.01	0.59	0.76	2.8	30	107.0	0.99	14.25	0.12	17.10	11.6	8	0.27	1210
Q013441		0.35	<0.01	1.41	1.11	47.7	130	0.73	0.17	15.25	0.12	11.40	11.7	7	1.57	10.4
Q013442		0.53	<0.01	0.82	0.59	23.7	60	0.44	0.10	19.05	1.26	6.79	6.0	4	0.78	6.2
Q013443		0.41	<0.01	2.84	0.03	10.3	<10	0.07	0.09	20.8	19.50	0.47	1.0	1	<0.05	2.9
Q013444		0.61	<0.01	0.06	0.02	5.8	10	0.05	0.07	20.9	0.19	0.38	1.0	1	<0.05	2.2
Q013445		0.64	<0.01	0.20	0.04	5.9	10	<0.05	0.06	21.6	1.48	0.68	1.0	1	<0.05	1.9
Q013446		0.41	<0.01	0.04	0.02	3.6	10	0.06	0.04	21.4	0.12	0.65	0.8	1	<0.05	1.5
Q013447		0.81	<0.01	0.41	0.02	17.7	<10	0.05	0.03	20.8	0.08	0.57	1.5	1	<0.05	2.1
Q013448		0.70	<0.01	0.34	0.04	20.0	10	0.05	0.05	20.4	1.62	0.77	1.2	1	<0.05	4.7

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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 10-SEP-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19197011

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	Fe	Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P
	Units	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
Q013421		0.91	0.83	<0.05	<0.1	0.007	0.11	0.7	4.1	0.07	128	0.65	0.05	0.7	3.3	220
Q013422		2.29	4.29	<0.05	0.3	0.030	0.69	8.3	0.9	0.06	113	0.69	0.03	5.3	3.9	130
Q013423		4.52	1.92	<0.05	0.3	0.032	0.30	10.4	1.3	0.05	970	2.29	0.01	1.9	51.3	370
Q013424		1.86	3.28	<0.05	0.6	0.010	0.53	8.5	4.7	0.13	373	0.70	0.04	3.5	18.0	540
Q013425		1.36	1.19	<0.05	0.2	0.010	0.19	2.8	0.8	0.06	215	1.00	0.02	1.9	9.7	310
Q013426		1.11	0.30	<0.05	<0.1	0.015	0.01	0.7	0.5	0.24	336	0.51	0.01	0.2	5.7	120
Q013427		2.24	4.06	<0.05	0.9	0.020	0.72	8.2	3.0	0.10	423	1.65	0.01	6.0	27.8	610
Q013428		0.06	0.22	0.08	<0.1	0.007	0.03	9.6	1.6	10.30	85	0.10	0.01	0.1	3.7	160
Q013429		8.87	19.55	0.09	1.1	0.074	0.74	14.9	27.8	0.93	461	110.5	0.65	8.0	55.1	2970
Q013430		2.67	7.87	0.06	0.2	0.078	0.60	83.5	7.2	0.11	78	26.5	0.02	1.2	3.1	5880
Q013431		24.6	13.05	0.48	0.8	0.201	0.04	125.0	3.7	1.02	861	77.2	0.49	6.5	272	9380
Q013432		30.8	0.30	0.20	<0.1	1.155	0.01	2.1	1.0	0.05	1910	2.72	<0.01	0.1	351	20
Q013433		7.08	5.75	<0.05	0.2	0.732	0.08	2.2	8.4	9.81	3360	2.88	0.10	0.4	57.5	510
Q013434		4.83	5.52	<0.05	0.1	0.899	0.07	1.2	6.9	10.65	2800	14.80	0.11	0.5	23.9	380
Q013435		34.3	8.81	0.19	0.5	0.115	0.35	12.9	5.8	0.48	328	80.7	0.15	3.2	14.5	8600
Q013436		8.92	0.47	0.05	<0.1	0.362	0.04	0.5	2.3	0.08	1140	2.81	0.01	0.1	38.3	80
Q013437		21.8	8.99	0.11	0.9	0.047	1.36	20.4	14.5	0.53	98	3.68	0.16	1.6	15.7	2470
Q013438		35.4	11.10	0.26	0.8	0.079	0.03	10.3	2.4	0.73	184	29.2	0.31	5.1	202	1350
Q013439		4.49	1.70	<0.05	0.3	0.019	0.23	3.2	1.2	0.06	574	4.18	0.01	1.7	52.1	500
Q013440		14.60	13.35	0.06	0.4	3.74	0.11	6.4	5.6	4.41	7400	2.75	0.17	21.5	5.8	80
Q013441		3.99	2.96	<0.05	0.4	0.056	0.49	4.8	1.5	6.29	6910	0.33	0.01	1.2	10.1	270
Q013442		2.09	1.61	0.06	0.2	0.023	0.26	2.9	1.4	10.95	3610	0.28	0.01	0.8	5.7	270
Q013443		0.74	0.11	<0.05	<0.1	0.005	0.01	<0.5	0.7	13.10	876	0.09	0.01	<0.1	0.9	50
Q013444		0.94	0.06	<0.05	<0.1	0.008	0.01	<0.5	0.7	13.00	996	0.12	0.01	<0.1	1.1	60
Q013445		1.36	0.10	0.05	<0.1	0.012	0.01	<0.5	0.6	13.25	1480	0.13	0.01	<0.1	1.2	280
Q013446		1.03	0.06	0.07	<0.1	0.006	0.01	<0.5	0.8	13.35	877	0.09	0.01	<0.1	1.1	70
Q013447		2.11	0.06	<0.05	<0.1	<0.005	<0.01	<0.5	0.7	12.75	1150	0.17	0.01	<0.1	2.0	110
Q013448		1.56	0.11	0.08	<0.1	0.010	0.01	<0.5	0.8	12.55	1240	0.67	0.01	<0.1	4.1	200

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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 10-SEP-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19197011

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
Q013421		17.8	5.2	<0.002	<0.01	0.44	0.3	<1	0.2	10.8	<0.05	<0.05	0.13	0.006	0.04	0.1
Q013422		150.5	28.9	<0.002	0.03	4.15	1.7	1	2.8	7.6	0.29	<0.05	1.16	0.071	0.13	0.4
Q013423		6.2	12.6	0.002	0.01	0.39	1.9	2	1.1	5.9	0.10	<0.05	0.70	0.037	0.08	1.5
Q013424		10.5	20.1	<0.002	0.02	0.96	2.2	1	0.4	17.6	0.17	<0.05	1.46	0.072	0.15	0.9
Q013425		4.2	8.1	<0.002	0.01	0.27	1.1	1	2.7	5.7	0.08	<0.05	0.48	0.037	0.08	0.8
Q013426		5.3	0.7	<0.002	0.06	0.34	0.8	1	0.3	5.7	<0.05	<0.05	0.15	<0.005	0.03	0.3
Q013427		2.3	28.4	<0.002	0.01	0.60	3.5	1	4.6	9.6	0.33	<0.05	2.07	0.117	0.16	1.5
Q013428		0.7	4.9	<0.002	<0.01	0.18	0.4	<1	0.3	81.2	<0.05	<0.05	0.11	<0.005	0.08	1.0
Q013429		3.7	173.5	0.203	4.47	0.13	6.2	19	9.1	246	0.50	6.49	4.44	0.309	0.92	7.9
Q013430		1.9	84.8	0.025	0.24	0.11	2.5	8	6.4	10.8	0.05	1.69	6.00	0.045	0.51	4.6
Q013431		3.6	3.4	0.204	>10.0	0.07	7.4	115	8.1	201	0.40	0.32	5.66	0.214	0.21	20.4
Q013432		1090	2.6	0.003	>10.0	43.1	0.2	68	11.6	0.5	<0.05	87.7	0.04	<0.005	0.23	0.3
Q013433		2.4	7.5	0.009	0.10	0.22	0.9	3	4.5	4.6	<0.05	1.91	0.82	0.016	0.13	7.3
Q013434		2.7	2.3	0.042	0.02	0.22	0.8	1	5.1	5.4	<0.05	0.18	0.38	0.012	0.04	2.5
Q013435		4.5	34.9	0.024	1.62	0.36	4.0	61	3.5	30.7	0.22	0.61	4.47	0.127	0.28	7.6
Q013436		14.2	5.0	0.003	5.10	2.79	0.3	15	1.7	0.9	<0.05	1.05	0.08	<0.005	0.18	0.3
Q013437		3.2	128.5	0.017	2.61	0.21	7.0	5	5.9	54.3	0.10	0.26	5.18	0.084	1.17	2.1
Q013438		6.0	2.2	0.043	>10.0	0.13	6.3	83	6.4	165.0	0.34	1.50	4.17	0.239	0.61	7.7
Q013439		4.6	9.6	<0.002	0.16	0.68	1.5	2	3.2	5.1	0.09	0.05	0.81	0.035	0.08	1.4
Q013440		12.7	2.4	0.006	1.59	0.13	1.7	2	30.8	8.7	0.86	<0.05	1.12	0.051	0.22	1.0
Q013441		16.3	25.4	<0.002	0.03	9.26	4.2	<1	0.5	101.0	0.08	<0.05	1.39	0.050	0.26	0.9
Q013442		62.8	12.1	<0.002	0.03	7.32	2.3	<1	0.3	61.6	0.05	<0.05	0.71	0.028	0.16	0.7
Q013443		1060	0.4	<0.002	0.28	6.00	0.1	<1	<0.2	28.6	<0.05	<0.05	0.03	<0.005	<0.02	0.2
Q013444		15.1	0.2	<0.002	0.28	0.56	0.1	<1	<0.2	25.7	<0.05	<0.05	0.02	<0.005	<0.02	0.2
Q013445		52.2	0.4	<0.002	0.32	1.00	0.1	<1	<0.2	30.1	<0.05	<0.05	0.03	<0.005	<0.02	0.2
Q013446		17.8	0.2	<0.002	0.12	2.08	0.1	<1	<0.2	26.0	<0.05	<0.05	0.01	<0.005	<0.02	0.2
Q013447		150.5	0.1	<0.002	1.02	2.31	0.2	1	<0.2	30.5	<0.05	<0.05	0.02	<0.005	<0.02	0.2
Q013448		129.0	0.3	<0.002	0.85	5.28	0.1	1	<0.2	30.7	<0.05	<0.05	0.03	<0.005	0.02	0.3

***** 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
www.alsglobal.com/geochemistry

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Finalized Date: 10-SEP-2019
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Project: Rau

CERTIFICATE OF ANALYSIS WH19197011

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	V	W	Y	Zn	Zr
	Units	ppm	ppm	ppm	ppm	ppm
	LOD	1	0.1	0.1	2	0.5
Q013421		2	<0.1	0.9	53	1.2
Q013422		18	1.0	2.0	366	14.0
Q013423		18	0.3	6.8	22	11.3
Q013424		42	0.4	4.7	53	23.3
Q013425		12	0.6	2.6	13	10.7
Q013426		2	<0.1	4.5	12	1.3
Q013427		48	1.1	7.6	12	42.1
Q013428		12	<0.1	9.3	7	0.8
Q013429		651	8.3	31.1	36	39.8
Q013430		178	1450	14.2	4	7.7
Q013431		1720	386	48.1	41	31.6
Q013432		2	6.1	3.6	1800	<0.5
Q013433		95	210	12.5	187	6.8
Q013434		40	57.8	13.8	175	4.6
Q013435		770	1410	9.8	24	18.8
Q013436		7	8.4	1.8	11	<0.5
Q013437		130	13.0	11.6	14	37.2
Q013438		136	4.8	24.4	22	29.6
Q013439		19	1.1	4.0	20	13.6
Q013440		11	950	21.7	311	12.1
Q013441		20	6.2	12.3	389	12.9
Q013442		11	3.6	6.9	396	8.4
Q013443		2	0.3	0.8	3350	<0.5
Q013444		2	0.3	1.0	121	<0.5
Q013445		1	0.3	2.1	261	<0.5
Q013446		2	0.2	1.3	51	<0.5
Q013447		2	0.1	1.6	46	<0.5
Q013448		2	0.1	1.4	307	<0.5

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CERTIFICATE OF ANALYSIS WH19197011

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	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-AA25	ME-MS61

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CERTIFICATE WH19210568

Project: Rau

P.O. No.: R19-R13

This report is for 15 Rock samples submitted to our lab in Whitehorse, YT, Canada on 24-AUG-2019.

The following have access to data associated with this certificate:

ANDREW CARNE	ADAM COULTER	JULIA LANE

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid ICP-MS	
ME-MS85	Lithium Borate Fusion - Select Elements	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: Rau

CERTIFICATE OF ANALYSIS WH19210568

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
R500828		0.67	0.02	0.05	6.08	235	110	8.31	2.21	0.11	<0.02	13.15	0.4	9	6.14	11.5
R500829		0.69	0.02	0.07	6.30	273	190	8.39	11.45	0.04	<0.02	17.45	0.5	9	6.96	28.2
R500830		0.70	0.30	0.60	6.07	4220	300	6.71	540	0.30	0.23	8.28	2.3	5	0.34	16.4
R500831		0.45	0.35	0.95	5.06	6640	230	4.35	280	0.41	0.58	14.00	2.5	6	0.49	16.0
R500832		0.98	0.02	0.07	6.48	286	140	8.67	17.35	0.03	<0.02	2.70	0.3	10	6.22	1.8
R500833		0.48	0.01	<0.01	6.18	139.0	100	7.62	5.27	0.36	0.06	5.91	0.5	7	3.01	5.1
R500834		0.15	0.01	0.02	0.20	28.2	10	0.31	1.08	0.02	0.18	0.26	0.3	22	0.66	1.4
R500835		0.56	0.10	0.22	4.81	1595	220	6.27	6350	0.87	0.50	13.00	6.2	9	3.70	22.6
R500836		0.75	<0.01	<0.01	2.17	48.4	70	2.06	7.60	0.96	0.08	1.96	0.5	8	21.1	1.5
R500837		0.92	0.01	0.02	6.00	232	170	9.62	34.7	0.19	<0.02	16.75	0.5	10	8.75	1.8
R500838		0.81	0.01	0.03	6.82	107.0	190	8.59	14.40	0.04	<0.02	9.64	0.2	12	6.66	1.8
R500839		1.73	0.03	<0.01	6.90	132.0	290	7.86	8.20	0.02	<0.02	3.17	0.2	11	6.06	2.5
R500840		0.17	0.43	0.92	4.88	2040	270	3.93	450	0.40	1.19	95.3	3.3	17	3.18	59.9
R500841		0.60	0.61	0.36	7.43	1580	180	8.58	38.6	0.30	0.96	5.60	2.1	14	0.55	13.3
R500842		0.21	0.01	0.02	4.42	239	120	6.37	8.27	0.05	<0.02	2.35	0.4	15	4.62	3.9

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CERTIFICATE OF ANALYSIS WH19210568

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	Fe	Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P
	Units	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
R500828		2.40	31.6	0.08	4.4	0.116	3.46	6.7	62.4	0.64	289	1.04	0.04	89.6	1.0	10
R500829		3.01	34.7	0.10	4.3	0.145	3.87	7.4	85.8	0.75	283	11.20	0.05	91.0	1.1	<10
R500830		18.30	37.4	0.10	0.1	0.201	0.09	5.7	10.9	1.83	221	16.65	0.64	9.2	2.0	60
R500831		20.1	36.6	0.11	0.2	0.126	0.09	8.2	7.7	1.59	518	11.85	0.53	4.3	3.7	110
R500832		2.65	30.3	0.11	5.1	0.137	3.50	0.9	85.5	0.91	71	7.22	0.08	121.5	0.8	10
R500833		0.76	27.5	0.14	2.9	0.036	3.56	2.6	4.6	0.05	84	0.47	2.68	147.0	0.4	10
R500834		0.83	2.06	0.08	0.1	0.008	0.03	<0.5	2.5	0.05	83	0.70	0.03	1.5	1.5	10
R500835		12.75	27.9	0.13	4.1	0.643	1.17	4.6	97.0	1.45	1130	8.21	0.32	>500	4.0	40
R500836		1.46	13.35	0.08	2.6	0.069	2.94	0.8	1140	5.40	321	25.7	0.03	117.0	1.1	10
R500837		2.95	34.6	0.12	2.9	0.168	3.68	7.4	190.0	1.18	290	7.12	0.03	114.5	0.8	20
R500838		1.88	29.2	0.10	5.9	0.126	4.38	3.7	71.2	0.69	141	0.56	0.03	103.5	0.7	10
R500839		2.20	29.1	0.10	5.4	0.169	4.41	0.9	62.8	0.58	70	2.04	0.04	102.0	0.4	10
R500840		16.45	31.6	0.19	0.3	0.385	0.38	61.4	59.8	1.85	1190	29.8	0.50	4.2	8.0	120
R500841		8.09	56.1	0.08	0.2	0.106	0.12	2.9	8.9	2.37	444	10.95	0.81	6.1	5.6	120
R500842		1.88	19.15	0.07	2.4	0.104	2.33	1.4	81.4	0.75	116	2.02	0.07	144.5	1.6	10

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CERTIFICATE OF ANALYSIS WH19210568

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
R500828		5.5	403	<0.002	1.70	1.08	1.9	<1	446	2.5	21.3	0.06	12.65	<0.005	1.30	4.3
R500829		10.7	470	<0.002	2.31	0.93	3.4	<1	379	3.7	23.5	0.05	12.75	<0.005	1.74	6.2
R500830		27.9	9.1	<0.002	0.10	7.07	1.9	2	191.0	68.9	3.82	0.31	0.97	0.013	0.09	2.7
R500831		21.3	8.5	<0.002	0.08	5.28	2.1	2	169.5	62.0	2.44	0.18	1.82	0.016	0.12	2.6
R500832		2.3	430	<0.002	1.44	0.69	1.3	<1	394	6.3	27.0	<0.05	15.80	<0.005	1.39	5.0
R500833		51.0	421	<0.002	0.03	0.22	2.3	1	11.7	26.4	17.40	0.07	18.75	<0.005	2.11	19.6
R500834		2.0	3.3	<0.002	0.09	0.18	0.4	<1	4.4	2.8	0.21	<0.05	0.22	<0.005	0.04	0.1
R500835		58.1	175.5	<0.002	1.06	56.1	1.9	3	116.0	34.6	>100	8.45	27.3	0.010	0.59	23.8
R500836		1.0	580	0.004	0.43	0.38	0.4	<1	10.3	15.9	25.2	<0.05	8.13	0.006	1.77	6.3
R500837		1.9	480	<0.002	2.18	0.92	3.1	1	345	4.3	42.7	0.08	12.35	<0.005	1.43	5.7
R500838		1.5	500	<0.002	1.50	0.66	0.7	<1	>500	2.4	19.75	<0.05	13.20	<0.005	1.58	6.9
R500839		3.0	440	<0.002	1.81	0.49	1.4	<1	460	3.6	18.85	<0.05	11.25	<0.005	1.88	5.1
R500840		12.2	58.0	0.004	0.41	9.98	2.5	3	124.0	66.0	2.20	0.94	1.09	0.042	0.44	5.7
R500841		11.2	2.4	<0.002	0.20	2.82	3.6	2	201	83.6	4.93	0.14	0.50	0.030	0.13	1.7
R500842		2.3	304	<0.002	0.10	0.71	0.9	1	196.5	6.7	19.30	0.06	7.32	0.005	0.80	4.1

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CERTIFICATE OF ANALYSIS WH19210568

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS85	ME-MS85	ME-MS85
	Analyte	V	W	Y	Zn	Zr	Sn	Nb	Ta
	Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	1	0.1	0.1	2	0.5	1	0.2	0.1
R500828		1	13.8	18.6	14	32.6			
R500829		1	63.6	16.5	23	36.1			
R500830		7	10.9	10.1	35	2.1			
R500831		11	6.3	3.7	39	3.1			
R500832		1	30.1	32.1	7	41.0			
R500833		<1	7.6	31.3	11	40.9			
R500834		1	6.2	0.4	7	0.8			
R500835		8	52.1	53.3	53	66.2			
R500836		2	510	23.9	14	31.1			
R500837		1	13.1	37.8	10	19.9			
R500838		1	106.5	26.6	5	51.3	575	106.5	20.6
R500839		<1	69.6	22.3	4	44.7			
R500840		20	395	11.5	44	7.2			
R500841		23	1.8	3.6	61	4.4			
R500842		3	113.0	9.6	13	35.3			

***** 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
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: Rau

Finalized Date: 6-SEP-2019
Account: RCM

CERTIFICATE OF ANALYSIS WH19210568

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	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-AA25	ME-MS61	ME-MS85

ALS Canada Ltd.

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North Vancouver BC V7H 0A7
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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-SEP-2019
Account: RCM

CERTIFICATE WH19216425

Project: Rau

P.O. No.: R19-R14

This report is for 23 Rock samples submitted to our lab in Whitehorse, YT, Canada on 30-AUG-2019.

The following have access to data associated with this certificate:

ANDREW CARNE	ADAM COULTER	JULIA LANE

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid ICP-MS	
Ag-OG62	Ore Grade Ag - Four Acid	
ME-OG62	Ore Grade Elements - Four Acid	ICP-AES
Cu-OG62	Ore Grade Cu - Four Acid	
ME-MS85	Lithium Borate Fusion - Select Elements	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:



Saa Traxler, General Manager, North Vancouver

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.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 30-SEP-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19216425

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
W845351		0.48	0.01	3.21	0.57	12.2	270	0.35	0.11	0.04	0.57	2.89	0.3	39	0.39	52.6
W845352		0.22	0.02	0.43	1.82	96.3	540	1.06	0.09	0.12	3.09	19.65	1.9	82	2.07	85.4
W845353		0.16	0.01	0.27	2.48	23.6	440	0.57	0.41	9.45	9.00	32.4	6.8	18	0.79	45.1
W845354		0.18	<0.01	0.03	0.21	1.6	30	<0.05	0.02	0.20	0.79	1.37	2.1	24	0.11	10.0
W845355		0.08	0.01	0.26	3.41	42.0	630	1.59	0.39	1.94	28.9	49.6	8.6	39	1.64	47.2
W845356		0.08	<0.01	0.05	0.74	6.2	80	0.14	0.06	0.26	2.75	16.20	2.2	27	0.22	15.3
W845357		0.20	0.01	0.13	2.18	19.5	770	1.34	0.08	0.13	4.58	28.3	3.6	49	2.61	66.2
W845358		0.58	<0.01	0.02	0.12	2.7	50	0.06	0.02	22.6	0.90	2.69	0.7	3	0.50	4.8
W845359		0.12	<0.01	0.07	3.56	27.7	280	1.02	0.12	12.55	3.19	37.8	6.8	30	1.52	18.6
W845360		0.12	0.01	0.03	0.38	4.6	50	0.07	0.05	0.26	0.42	2.32	0.7	22	0.13	8.5
W845361		0.52	<0.01	0.10	1.50	19.0	630	0.45	0.12	11.60	1.75	37.8	6.3	27	1.07	21.8
W845362		0.28	0.02	0.21	2.15	198.5	490	0.84	0.09	6.56	58.5	23.0	3.6	34	0.92	23.0
W845363		0.84	<0.01	0.05	1.28	25.3	290	0.72	0.05	0.07	2.01	3.52	1.8	35	3.08	90.9
W845364		0.24	0.05	0.63	2.82	1000	350	1.01	19.80	6.16	4.61	83.5	50.5	65	2.94	721
W845365		0.30	0.06	1.52	2.75	435	520	0.95	18.45	1.80	7.45	73.6	51.8	38	4.62	539
W845366		0.26	0.06	0.66	4.63	358	1040	1.54	3.72	0.51	4.28	302	84.4	51	6.15	556
W845367		0.36	0.04	0.96	7.79	375	5060	2.25	5.38	0.15	0.27	50.9	2.3	100	3.62	82.2
W845368		0.18	0.05	0.93	0.24	20.9	30	2.17	53.4	20.1	0.98	4.70	1.6	4	0.42	41.8
W845369		0.12	3.16	>100	0.31	259	100	3.18	4710	17.15	29.1	9.83	3.4	5	0.37	>10000
W845370		0.56	0.01	0.15	0.25	0.9	4210	0.27	4.06	25.3	0.24	3.01	0.3	3	0.77	12.9
W845371		0.32	0.01	0.04	0.10	5.8	180	0.29	0.77	22.5	2.49	5.57	1.9	2	0.35	14.9
W845372		0.04	<0.01	0.24	0.87	12.0	650	1.51	3.05	8.60	1.95	5.86	1.9	19	0.66	16.9
W845373		0.10	<0.01	0.03	1.22	11.9	150	1.37	1.18	20.8	0.09	11.90	1.8	9	31.7	3.9

***** 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: 30-SEP-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19216425

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	Fe	Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P
	Units	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
W845351		0.82	1.98	<0.05	0.2	0.011	0.21	2.6	2.5	0.08	49	14.85	0.01	0.9	15.4	290
W845352		1.19	7.06	0.08	0.7	0.024	0.83	13.3	8.5	0.17	131	31.5	0.03	5.3	37.6	430
W845353		2.54	5.69	0.07	0.7	0.033	2.41	15.1	12.1	4.93	1660	3.51	0.04	2.9	22.3	420
W845354		0.60	0.45	<0.05	<0.1	<0.005	0.04	0.7	0.9	0.03	162	2.11	0.09	0.3	4.3	60
W845355		4.68	10.50	0.09	1.1	0.054	1.89	22.3	30.9	1.34	3470	14.35	0.04	4.3	50.0	620
W845356		1.61	2.07	<0.05	0.8	0.007	0.28	6.7	3.6	0.14	836	5.15	0.02	1.8	5.9	310
W845357		1.38	6.52	0.09	0.8	0.021	0.93	17.0	13.4	0.25	481	36.6	0.04	5.0	72.2	670
W845358		0.16	0.36	<0.05	<0.1	<0.005	0.06	1.6	2.1	12.15	143	1.33	0.01	0.3	6.0	40
W845359		3.19	9.70	0.08	1.5	0.040	1.65	17.6	38.2	6.22	780	9.53	0.41	5.7	44.4	500
W845360		0.95	0.71	<0.05	0.1	<0.005	0.06	1.5	1.7	0.13	116	2.02	0.17	0.5	4.6	60
W845361		2.07	3.80	0.06	0.7	0.017	0.65	23.5	6.6	6.47	667	24.1	0.03	7.8	22.2	1020
W845362		1.31	4.92	0.08	0.6	0.012	0.59	14.7	9.3	1.68	370	55.0	0.67	3.5	157.0	450
W845363		1.27	2.97	0.05	0.3	0.007	0.48	2.6	13.9	0.13	57	43.5	0.02	1.7	81.2	420
W845364		27.3	8.48	0.18	0.8	0.154	0.38	30.8	6.9	4.58	2140	7.48	0.03	1.7	184.5	4430
W845365		37.5	7.54	0.25	0.5	1.475	0.63	26.3	5.2	1.73	2290	3.14	0.02	1.1	194.0	3070
W845366		36.4	15.20	0.43	0.7	0.329	0.87	64.6	8.0	1.47	2750	2.57	0.02	1.3	315	5370
W845367		13.30	21.6	0.17	0.8	0.138	4.08	32.5	18.9	0.48	173	1.36	0.09	37.1	14.1	2070
W845368		0.50	2.20	0.10	<0.1	0.054	0.02	4.3	4.3	11.40	250	2.24	0.05	0.2	20.2	60
W845369		5.09	19.25	0.32	0.1	18.85	0.05	9.8	4.4	8.88	331	23.6	0.05	0.4	111.5	300
W845370		0.10	0.67	0.17	<0.1	0.011	0.07	2.6	4.7	11.00	194	0.43	<0.01	0.5	1.3	50
W845371		0.65	0.55	0.13	<0.1	0.011	0.03	4.0	3.3	13.00	1050	4.54	0.01	0.1	26.1	70
W845372		1.60	3.53	0.12	0.3	0.144	0.16	2.9	12.8	14.55	441	0.65	0.14	1.9	19.7	250
W845373		0.56	3.60	0.20	0.3	0.005	0.89	5.4	31.5	11.65	435	0.61	0.05	1.9	6.9	40

***** 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
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: 30-SEP-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19216425

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
W845351		2.6	10.2	<0.002	0.01	24.1	1.1	3	13.8	20.6	0.05	0.06	0.39	0.025	0.69	3.9
W845352		21.9	39.7	0.002	0.02	27.4	4.2	9	0.8	13.3	0.22	0.14	2.23	0.109	1.74	3.6
W845353		18.3	55.0	<0.002	0.02	3.37	2.8	1	0.7	40.3	0.19	0.05	3.25	0.081	0.32	1.5
W845354		1.0	1.9	<0.002	<0.01	0.39	0.3	1	0.2	10.3	<0.05	<0.05	0.23	0.008	0.04	0.2
W845355		33.5	70.8	<0.002	0.02	7.42	5.1	3	1.2	12.2	0.29	0.13	5.21	0.134	0.61	2.3
W845356		10.2	7.6	<0.002	0.01	2.62	0.9	1	0.5	20.3	0.12	<0.05	2.36	0.072	0.08	0.7
W845357		11.5	46.4	<0.002	0.13	5.19	4.9	6	0.7	39.0	0.28	0.11	2.70	0.115	2.70	4.2
W845358		1.2	2.8	<0.002	<0.01	0.42	0.3	1	0.2	138.0	<0.05	<0.05	0.20	0.009	0.12	0.6
W845359		9.2	63.2	<0.002	0.02	2.76	7.1	1	1.3	149.0	0.37	<0.05	4.87	0.211	0.30	1.6
W845360		12.0	2.8	<0.002	<0.01	0.36	0.5	1	<0.2	8.1	<0.05	<0.05	0.43	0.014	0.05	0.1
W845361		9.0	29.9	<0.002	0.04	1.80	3.3	1	0.5	86.8	0.38	<0.05	2.15	0.147	0.26	1.8
W845362		133.5	18.8	<0.002	0.03	11.75	3.9	8	0.5	253	0.17	0.06	2.55	0.086	0.38	2.1
W845363		5.3	25.7	<0.002	0.01	6.94	1.5	6	0.2	9.8	0.09	0.10	1.08	0.042	1.69	2.7
W845364		27.2	57.1	<0.002	0.15	5.53	8.4	1	3.1	30.6	0.10	0.40	6.43	0.077	0.90	3.7
W845365		9.8	86.1	<0.002	0.18	6.02	7.5	1	1.1	24.3	0.06	0.34	5.30	0.054	0.93	11.1
W845366		4.4	74.2	<0.002	0.09	4.08	8.4	1	1.3	12.4	0.08	0.13	22.0	0.060	1.42	3.4
W845367		4.7	137.5	<0.002	0.64	43.9	8.5	1	3.8	47.2	1.96	0.31	6.86	0.252	1.38	0.7
W845368		65.3	1.8	0.005	0.21	12.65	0.5	2	10.7	139.5	<0.05	0.07	0.16	0.008	0.04	3.0
W845369		3280	3.2	0.009	0.02	2870	1.3	96	>500	118.0	<0.05	3.79	0.44	0.013	0.14	19.3
W845370		4.4	5.5	0.004	<0.01	1.62	0.4	1	3.2	232	<0.05	<0.05	0.24	0.010	0.11	2.0
W845371		3.0	2.6	0.013	<0.01	1.14	0.3	3	1.2	173.5	<0.05	<0.05	0.15	0.005	0.13	1.0
W845372		22.8	8.1	<0.002	0.02	12.75	1.5	1	122.5	18.3	0.11	<0.05	0.91	0.052	0.15	1.1
W845373		0.8	179.5	<0.002	0.01	0.30	2.3	<1	3.0	98.1	0.12	<0.05	1.55	0.068	2.02	0.6

***** See Appendix Page for comments regarding this certificate *****

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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 ST
VANCOUVER BC V6B 1L8

Finalized Date: 30-SEP-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19216425

Sample Description	Method Analyte Units LOD	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	Ag-OG62 Ag ppm 1	Cu-OG62 Cu % 0.001	ME-MS85 Sn ppm 1
W845351		840	0.4	5.9	62	7.7			
W845352		2060	1.2	14.1	291	41.8			
W845353		47	0.5	10.1	102	29.7			
W845354		12	0.1	1.6	16	1.5			
W845355		239	1.2	17.9	347	41.0			
W845356		17	0.8	4.3	42	23.3			
W845357		1060	0.7	11.2	246	40.3			
W845358		9	0.1	1.0	39	1.4			
W845359		65	1.0	15.1	310	54.3			
W845360		12	0.2	1.1	25	4.5			
W845361		42	0.4	7.0	202	32.7			
W845362		379	1.0	15.2	517	32.2			
W845363		368	0.4	4.8	336	17.7			
W845364		43	7.8	35.2	1170	31.9			
W845365		31	32.4	28.6	2030	20.5			
W845366		31	5.3	36.1	1820	27.1			
W845367		105	4.6	5.8	76	33.0			
W845368		407	1.1	7.1	94	1.2			
W845369		262	5.7	74.2	2930	3.9	154	1.900	3520
W845370		64	0.4	2.5	16	2.0			
W845371		64	3.2	3.7	179	1.2			
W845372		216	0.9	2.6	206	12.6			
W845373		14	0.9	4.1	26	9.9			

***** See Appendix Page for comments regarding this certificate *****

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Project: Rau

Finalized Date: 30-SEP-2019
Account: RCM

CERTIFICATE OF ANALYSIS WH19216425

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 Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Ag-OG62	Au-AA25	CRU-31	CRU-QC
Cu-OG62	LOG-21	ME-MS61	ME-MS85
ME-OG62	PUL-31	PUL-QC	SPL-21
WEI-21			

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: 1-OCT-2019
Account: RCM

CERTIFICATE WH19219901

Project: RAU

P.O. No.: R19-R15

This report is for 59 Rock samples submitted to our lab in Whitehorse, YT, Canada on 3-SEP-2019.

The following have access to data associated with this certificate:

ANDREW CARNE	ADAM COULTER	JULIA LANE

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid ICP-MS	
ME-OG62	Ore Grade Elements - Four Acid	ICP-AES
Zn-OG62	Ore Grade Zn - 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:



Saa Traxler, General Manager, North Vancouver

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 ST
VANCOUVER BC V6B 1L8

Finalized Date: 1-OCT-2019
Account: RCM

Project: RAU

CERTIFICATE OF ANALYSIS WH19219901

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
W845374		0.58	<0.01	0.24	1.11	3.8	5460	9.63	0.50	4.43	0.64	11.95	1.8	40	2.96	23.3
W845375		0.78	<0.01	0.04	0.73	2.0	70	0.46	0.09	20.4	0.14	8.33	2.0	8	2.47	6.2
W845376		1.00	<0.01	0.29	0.80	10.8	250	0.25	0.04	0.09	0.74	10.30	1.0	39	0.92	8.8
W845377		0.94	0.01	0.72	1.11	71.0	20	0.85	1555	0.08	0.19	5.33	41.1	3	12.80	1670
W845378		1.00	0.02	0.70	1.10	23.2	10	0.79	2160	0.08	0.17	2.22	39.6	3	13.10	1555
W845379		0.46	0.01	0.15	7.57	1.3	80	75.6	9.00	6.20	0.14	298	20.0	<1	24.0	601
W845380		0.50	<0.01	0.03	0.03	5.0	20	0.25	0.46	20.1	0.22	2.48	0.5	1	0.14	2.9
W845381		0.52	<0.01	0.01	6.48	11.5	1550	1.91	5.11	5.83	0.25	127.5	43.8	5	2.50	23.8
W845382		0.38	0.05	1.51	6.05	46.5	1900	2.04	1.00	7.42	1.43	100.5	115.0	9	2.30	599
W845383		0.48	<0.01	0.06	5.89	5.9	1520	1.73	0.45	8.91	0.20	105.5	13.5	3	1.46	164.0
W845384		0.78	0.17	5.95	6.80	698	2370	1.35	0.22	0.45	8.68	128.0	376	9	1.09	158.5
W845385		0.16	<0.01	0.12	8.90	13.0	1900	2.73	0.18	1.68	0.97	128.0	49.5	12	3.87	37.5
W845386		0.14	<0.01	0.14	7.73	30.3	2230	2.76	0.46	3.29	2.43	132.0	55.7	12	3.54	41.8
W845387		0.06	0.01	0.58	6.49	78.2	1120	1.87	3.93	12.25	1.45	177.5	44.4	14	3.50	38.2
W845388		0.28	<0.01	0.34	7.33	31.4	1190	2.13	0.19	12.85	1.05	130.5	42.9	8	3.93	32.9
W845389		0.30	<0.01	0.14	9.17	11.7	1400	2.77	0.12	6.24	0.18	153.0	57.3	12	5.70	34.6
W845390		0.08	<0.01	0.11	1.38	11.4	180	0.45	0.12	20.8	0.64	23.6	15.7	15	0.49	24.5
W845391		0.04	<0.01	0.34	1.09	102.0	220	0.76	0.91	13.40	4.29	22.0	27.3	12	2.08	34.2
W845392		0.06	0.02	0.40	1.58	621	210	0.30	3.39	3.12	0.20	8.32	183.5	42	0.25	1540
W845393		0.06	0.91	0.16	1.11	803	930	0.39	88.8	16.45	0.32	9.68	10.6	42	0.88	42.1
W845394		0.18	0.05	0.03	0.08	112.0	90	<0.05	1.72	0.26	0.10	1.07	0.8	19	0.50	4.2
W845395		0.02	0.04	0.35	4.20	89.5	1570	1.14	1.08	9.93	0.43	38.3	14.3	82	2.77	39.4
W845396		0.18	0.01	12.85	0.20	559	20	0.16	227	0.17	3.21	5.07	50.3	<1	0.37	2450
W845397		0.24	<0.01	0.13	1.28	4.0	150	0.92	2.27	28.6	0.03	9.32	5.0	55	8.82	24.5
W845398		0.22	0.03	0.32	0.52	158.0	160	0.16	2.06	0.80	0.21	4.90	23.2	20	0.60	33.2
W845399		0.16	<0.01	0.21	8.41	2.7	1480	2.46	0.52	2.30	0.44	171.5	6.7	45	6.54	29.9
W845400		0.46	<0.01	6.87	0.17	124.0	40	0.33	205	0.68	5.63	4.36	40.8	<1	0.39	841
W845401		0.26	0.05	0.58	0.81	1375	70	0.36	119.5	0.32	27.8	9.65	22.1	32	0.25	458
W845402		0.36	0.24	0.29	0.74	408	90	0.48	17.90	15.85	10.45	9.07	6.2	12	0.75	206
W845403		0.30	0.35	0.17	11.95	631	2280	2.64	7.69	0.90	0.06	104.5	10.8	330	3.28	46.6
W845404		0.38	0.39	0.15	8.86	114.0	340	2.33	5.12	7.67	0.03	168.0	20.5	228	2.70	36.7
W845405		0.12	0.41	0.22	11.35	182.5	1920	2.84	4.46	2.12	0.03	91.8	16.6	327	3.07	42.4
W845406		0.28	0.31	0.14	10.15	106.0	310	2.61	2.90	5.12	0.02	85.7	18.9	298	2.70	52.0
W845407		0.14	0.05	0.19	0.43	98.9	530	0.23	1.06	17.40	1.05	11.05	1.5	9	0.37	6.3
W845408		0.14	7.17	0.66	0.37	>10000	210	0.17	230	1.03	0.18	10.65	1.4	10	0.24	8.3
W845409		0.26	0.02	0.98	0.48	248	40	0.11	3.74	0.26	3.67	7.06	88.4	4	0.12	1180
W845410		0.28	0.31	4.67	0.41	2710	480	0.34	66.4	12.40	120.0	8.92	7.5	5	0.49	317
W845411		0.16	1.19	74.5	2.09	7220	1430	1.00	321	5.46	12.65	6.73	32.2	58	0.79	68.8
W845412		0.26	0.04	0.47	5.92	330	1650	0.91	2.88	5.36	0.58	19.40	7.0	252	2.52	59.4
W845413		0.38	0.21	8.96	0.80	5120	360	0.28	30.0	3.94	172.5	6.21	13.4	17	0.57	140.0

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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	Fe	Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P
	Units	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
W845374		1.57	4.22	<0.05	0.6	0.022	0.47	6.0	22.5	2.87	655	6.69	0.09	2.8	13.6	390
W845375		0.39	3.15	<0.05	0.2	0.008	0.23	3.8	9.2	12.25	132	1.15	0.03	1.4	5.0	30
W845376		0.98	2.80	0.13	0.4	<0.005	0.25	7.3	5.2	0.09	28	16.95	0.03	1.5	17.9	40
W845377		43.5	9.07	0.13	0.1	0.031	1.57	3.0	460	2.51	72	1.57	0.02	1.7	3.2	30
W845378		42.4	9.05	0.20	0.1	0.031	1.61	1.2	480	2.61	71	1.63	0.02	1.7	2.9	30
W845379		8.91	66.0	0.29	2.9	0.111	1.94	110.5	78.6	1.31	403	1.57	3.08	167.5	0.7	120
W845380		0.24	0.22	0.13	<0.1	0.007	0.01	1.3	3.9	12.45	336	0.13	0.02	0.4	0.8	20
W845381		8.92	18.95	0.11	4.2	0.101	3.28	63.6	16.4	3.11	852	2.35	0.07	66.2	42.7	3250
W845382		11.55	17.60	0.13	1.6	0.129	2.87	49.5	9.2	1.14	1530	5.92	0.07	31.1	67.2	3550
W845383		4.02	17.50	0.13	1.7	0.101	3.17	51.5	10.7	3.85	936	2.84	0.06	39.4	20.0	2810
W845384		27.0	10.30	0.32	7.3	0.093	3.24	54.9	6.2	0.39	180	22.3	0.06	4.9	727	8010
W845385		11.35	24.5	0.21	0.5	0.123	3.34	60.0	20.2	1.22	1500	1.23	0.33	62.0	44.8	3690
W845386		12.15	23.1	0.25	0.7	0.147	3.27	63.5	14.6	1.32	2340	2.66	0.14	41.1	53.6	3970
W845387		7.89	18.20	0.27	0.8	0.105	2.42	80.4	14.9	1.08	1190	0.83	0.18	61.3	45.0	5110
W845388		8.30	20.3	0.22	1.1	0.114	2.86	73.4	14.9	1.00	1420	0.32	0.15	70.7	43.1	1640
W845389		9.56	27.3	0.23	1.4	0.126	3.43	68.1	24.6	1.50	1110	0.29	0.19	82.7	53.3	810
W845390		8.93	4.46	0.05	0.5	0.024	0.23	12.4	5.4	2.05	979	1.06	0.01	9.6	26.6	640
W845391		27.1	6.80	0.14	0.2	0.041	0.44	11.8	2.8	0.26	1120	1.22	0.01	6.9	28.7	630
W845392		39.5	2.04	0.26	0.3	0.025	0.14	4.6	2.3	0.29	1580	1.89	0.02	0.7	425	210
W845393		6.15	3.91	0.05	0.2	0.057	0.45	4.7	6.0	8.14	1690	0.93	0.03	2.0	38.0	200
W845394		0.63	0.24	<0.05	0.1	0.005	0.03	0.5	0.9	0.09	122	1.52	0.02	0.3	2.5	30
W845395		5.67	11.70	0.12	1.1	0.062	1.82	20.2	20.8	4.86	2160	0.81	0.11	6.2	27.1	400
W845396		>50	2.16	3.46	<0.1	0.214	0.10	2.5	3.1	0.10	526	6.26	<0.01	0.1	30.2	130
W845397		2.02	3.41	0.06	0.3	0.011	0.82	5.3	30.1	1.23	217	0.99	0.06	5.1	22.7	30
W845398		>50	1.54	0.62	0.5	0.010	0.32	3.7	4.5	0.48	367	8.16	<0.01	0.5	56.0	150
W845399		5.73	26.0	0.20	1.0	0.023	4.65	88.6	27.2	0.93	93	0.72	0.33	95.1	24.2	1100
W845400		>50	0.76	0.45	0.1	0.065	0.07	2.0	0.8	0.11	703	5.79	<0.01	0.3	45.4	60
W845401		>50	2.86	0.17	0.1	0.835	0.03	5.0	0.9	0.32	1350	4.97	<0.01	0.1	87.8	360
W845402		11.50	0.86	0.06	<0.1	0.197	0.07	5.0	4.1	9.55	821	1.53	0.01	0.3	30.8	110
W845403		7.00	35.6	0.21	2.5	0.146	5.31	53.9	7.8	1.50	386	3.88	0.16	61.9	66.6	1850
W845404		7.14	27.3	0.31	2.7	0.106	4.43	78.3	6.9	1.61	1120	2.27	0.16	71.3	177.5	7920
W845405		7.83	30.4	0.25	2.1	0.119	5.01	46.8	6.9	1.34	390	2.91	0.12	61.3	97.3	1640
W845406		8.38	27.5	0.24	1.8	0.121	4.50	40.8	6.1	1.32	752	2.90	0.17	76.2	174.5	1870
W845407		4.68	1.48	0.06	0.1	0.369	0.17	4.9	3.0	8.20	4310	0.77	0.02	1.3	9.7	90
W845408		>50	1.86	0.16	0.2	0.340	0.13	5.2	2.0	0.31	3140	4.87	0.02	0.5	8.6	80
W845409		>50	1.79	0.24	0.3	0.120	0.04	3.1	0.8	0.21	1410	4.54	0.04	0.3	53.4	140
W845410		26.3	3.04	0.07	0.2	7.48	0.13	5.3	1.7	2.03	22300	3.57	0.03	0.6	18.4	120
W845411		37.4	11.25	0.39	1.0	0.598	0.93	3.5	5.9	2.94	2650	32.9	0.03	1.1	71.6	50
W845412		9.10	16.30	0.05	0.5	0.086	3.22	10.7	9.0	1.16	826	0.83	0.05	6.5	52.6	720
W845413		38.4	3.07	0.66	0.3	0.165	0.21	3.2	2.2	1.25	6950	4.77	0.03	1.0	29.6	60

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	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
W845374		14.7	143.0	0.005	0.08	0.89	2.8	3	35.6	75.3	0.17	<0.05	1.98	0.088	0.98	2.7
W845375		2.3	22.1	0.002	0.11	0.13	1.3	2	1.1	95.1	0.09	<0.05	0.89	0.042	0.38	1.2
W845376		3.6	21.2	0.022	0.63	1.08	1.3	2	0.3	13.1	0.08	<0.05	0.80	0.038	0.55	6.7
W845377		9.9	291	0.009	>10.0	15.00	0.2	2	3.1	2.0	0.42	3.36	0.14	0.013	1.29	1.1
W845378		10.5	293	0.005	>10.0	19.90	0.2	1	3.0	1.5	0.45	3.56	0.08	0.012	1.26	0.6
W845379		7.6	433	0.003	4.21	0.20	48.7	3	16.2	85.3	76.8	0.19	15.00	0.007	3.13	8.0
W845380		11.4	1.4	<0.002	0.04	0.23	0.2	1	<0.2	65.7	0.18	<0.05	0.10	<0.005	0.02	0.7
W845381		4.1	81.9	0.003	0.40	2.04	12.3	1	2.5	278	3.74	<0.05	5.94	2.00	1.07	1.8
W845382		7.1	75.8	<0.002	0.15	8.66	11.6	2	2.1	78.0	1.90	<0.05	4.45	1.020	0.95	2.8
W845383		1.5	74.2	<0.002	0.28	1.46	10.9	<1	2.1	254	2.19	<0.05	4.63	1.230	0.89	1.1
W845384		10.0	58.6	0.003	0.12	17.70	12.3	5	2.6	189.5	0.30	0.21	8.96	0.189	3.34	38.4
W845385		69.0	87.7	<0.002	0.01	1.12	14.7	<1	3.0	46.1	3.32	<0.05	5.34	1.965	0.77	3.3
W845386		44.6	86.5	0.002	0.04	2.39	13.6	1	2.7	51.4	2.13	<0.05	5.04	1.155	0.71	2.9
W845387		46.4	57.7	<0.002	0.01	3.74	10.9	1	2.6	63.6	3.21	<0.05	5.04	1.895	0.28	1.2
W845388		14.9	63.9	<0.002	<0.01	3.24	12.3	1	2.8	49.1	3.85	<0.05	5.31	2.15	0.32	1.2
W845389		3.8	79.7	<0.002	0.01	1.42	14.8	1	3.3	36.7	4.40	<0.05	6.55	2.61	0.32	1.0
W845390		4.5	7.6	<0.002	0.01	0.35	3.1	<1	0.4	73.7	0.53	0.08	0.94	0.289	0.08	0.9
W845391		141.0	18.8	<0.002	0.02	4.54	3.4	<1	0.7	63.6	0.36	0.07	0.73	0.156	0.26	1.9
W845392		3.9	2.8	<0.002	0.20	1.69	3.7	1	0.2	16.6	0.05	<0.05	0.47	0.030	0.27	4.0
W845393		6.4	16.3	<0.002	0.16	5.11	5.1	<1	0.9	87.0	0.11	0.18	0.66	0.091	0.32	0.6
W845394		6.8	1.6	<0.002	0.02	0.61	0.2	<1	0.2	5.9	<0.05	<0.05	0.08	0.009	0.05	0.1
W845395		59.2	73.9	<0.002	0.03	3.99	12.0	<1	2.0	125.5	0.38	0.06	4.14	0.257	0.76	1.4
W845396		3580	19.0	<0.002	0.11	211	0.9	2	6.0	1.6	<0.05	4.31	0.50	0.006	0.17	4.9
W845397		13.1	78.9	<0.002	0.15	1.09	4.2	<1	2.1	424	0.24	<0.05	0.70	0.161	0.45	0.4
W845398		12.6	12.5	<0.002	0.13	5.18	1.5	1	0.7	10.3	<0.05	0.12	0.70	0.025	1.96	14.8
W845399		34.1	103.0	<0.002	0.25	0.43	6.2	<1	2.2	198.0	4.68	<0.05	14.45	0.453	0.59	0.9
W845400		598	6.8	0.003	0.13	63.0	0.8	1	0.7	3.5	<0.05	1.01	0.66	0.007	1.60	6.9
W845401		189.0	4.0	<0.002	0.11	11.20	5.1	5	0.7	2.1	<0.05	0.34	0.64	<0.005	0.68	6.5
W845402		108.5	10.3	<0.002	0.09	2.43	2.5	2	0.3	45.0	<0.05	0.14	0.36	<0.005	0.29	2.0
W845403		9.0	88.6	0.005	1.39	10.20	28.6	1	4.4	87.0	2.85	0.05	9.19	1.135	0.99	2.4
W845404		5.6	61.7	<0.002	4.29	7.51	22.2	1	3.8	136.0	3.39	<0.05	9.30	1.260	0.83	3.1
W845405		5.6	78.1	0.003	1.65	11.00	25.9	1	4.0	88.8	3.02	0.06	7.88	1.180	0.90	1.8
W845406		3.8	56.9	0.003	4.99	9.34	21.2	<1	4.1	119.0	3.74	<0.05	6.82	1.435	0.84	1.5
W845407		21.8	7.2	<0.002	0.10	1.32	4.1	<1	1.0	92.1	0.07	<0.05	0.52	0.032	0.18	0.3
W845408		8.8	4.8	<0.002	0.17	15.10	1.9	2	0.6	16.4	<0.05	0.30	0.79	0.015	0.46	3.6
W845409		118.5	1.2	0.003	0.13	25.6	2.5	4	8.8	7.1	<0.05	0.36	1.06	0.015	0.20	3.1
W845410		671	6.9	<0.002	0.04	13.50	1.5	2	60.7	66.0	<0.05	0.19	0.70	0.019	0.45	2.9
W845411		4510	63.6	<0.002	1.30	9.76	2.8	9	37.8	22.4	0.06	0.43	4.50	0.056	0.44	4.2
W845412		28.0	68.0	<0.002	0.95	4.44	20.6	<1	1.9	59.4	0.32	<0.05	1.68	0.361	0.59	0.5
W845413		3140	17.9	<0.002	0.10	29.5	3.1	2	31.4	15.5	0.05	0.26	0.71	0.031	0.59	2.4

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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 ST
VANCOUVER BC V6B 1L8

Finalized Date: 1-OCT-2019
Account: RCM

Project: RAU

CERTIFICATE OF ANALYSIS WH19219901

Sample Description	Method Analyte Units LOD	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	Zn-OG62 Zn % 0.001
W845374		133	35.5	6.4	217	23.0	
W845375		10	0.8	2.6	11	6.4	
W845376		64	0.3	2.1	25	18.7	
W845377		9	3.7	3.1	12	3.2	
W845378		7	5.1	3.2	11	3.2	
W845379		7	343	45.1	86	14.1	
W845380		8	1.0	1.2	38	0.6	
W845381		162	0.7	19.5	123	209	
W845382		157	2.6	17.1	825	47.2	
W845383		140	1.0	14.2	82	78.3	
W845384		211	13.0	40.5	5260	309	
W845385		222	5.1	21.0	1260	25.0	
W845386		182	6.9	21.5	971	29.6	
W845387		162	3.2	26.6	589	34.9	
W845388		186	3.3	18.3	602	60.0	
W845389		230	1.3	9.4	254	63.9	
W845390		47	1.2	10.6	174	22.0	
W845391		70	14.7	9.6	1110	7.7	
W845392		24	0.3	18.3	37	3.5	
W845393		34	18.6	14.3	40	11.5	
W845394		3	0.3	0.4	25	0.9	
W845395		73	1.5	20.6	126	43.2	
W845396		9	18.0	8.4	6650	0.6	
W845397		18	0.6	4.5	29	11.0	
W845398		25	1.0	5.6	157	23.9	
W845399		68	0.7	24.2	99	29.7	
W845400		6	8.7	3.4	9520	4.1	
W845401		25	24.7	8.4	3720	2.2	
W845402		14	7.3	8.5	1600	1.9	
W845403		228	10.0	16.8	27	120.0	
W845404		188	9.1	35.9	25	137.5	
W845405		214	9.5	16.2	29	93.6	
W845406		205	9.3	18.4	24	78.6	
W845407		16	1.5	11.9	260	6.3	
W845408		11	46.1	7.3	87	6.3	
W845409		18	3.6	18.1	1460	8.7	
W845410		11	42.8	6.1	>10000	6.5	3.06
W845411		31	10.8	9.8	>10000	40.3	1.190
W845412		162	1.4	7.9	193	18.9	
W845413		20	5.0	4.7	>10000	10.4	5.04

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VANCOUVER BC V6B 1L8

Finalized Date: 1-OCT-2019
Account: RCM

Project: RAU

CERTIFICATE OF ANALYSIS WH19219901

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
W845414		0.12	0.01	0.36	0.20	327	7470	0.16	0.57	33.4	14.95	7.12	4.4	4	0.20	5.5
W845415		0.34	0.01	0.92	0.48	126.5	50	0.15	23.9	0.46	7.47	4.99	27.9	8	0.35	497
W845416		0.76	0.03	19.00	0.45	1325	200	0.11	2200	0.19	1.75	2.93	48.1	12	0.31	975
W845417		0.16	1.91	0.67	0.19	9690	190	0.27	301	0.22	0.98	21.9	6.7	3	0.08	23.9
W845418		0.38	2.82	0.41	0.55	>10000	210	0.23	61.5	17.95	0.26	10.55	2.5	17	0.60	10.3
W845419		0.30	0.32	0.51	0.17	1155	40	0.07	42.0	15.60	0.07	16.60	0.8	10	0.20	5.8
W845420		0.08	0.11	38.5	1.57	707	4840	0.44	30.0	6.87	45.8	20.5	9.9	101	0.73	1175
W845421		0.04	0.01	0.88	3.46	167.5	1120	1.01	1.78	0.37	1.50	123.5	17.6	37	1.47	57.0
W845422		0.34	0.01	0.21	10.15	30.0	2380	2.60	1.43	0.20	1.25	140.5	1.5	133	9.04	8.5
W845423		0.26	0.02	0.50	0.42	28.3	290	0.30	2.70	19.30	1.69	5.40	2.5	8	0.34	4.9
W845424		0.04	0.01	0.38	2.98	70.0	950	1.37	2.17	3.18	11.00	34.0	6.1	57	2.17	64.7
W845425		0.08	<0.01	0.25	1.21	50.1	300	0.45	0.18	13.90	38.9	44.4	7.2	11	0.68	19.0
W845426		0.04	<0.01	0.06	4.96	32.1	520	1.16	1.01	1.76	2.99	45.2	19.2	111	1.78	32.0
W845427		0.08	0.01	0.21	2.33	56.5	690	1.50	0.31	0.59	2.57	33.0	3.2	40	1.91	53.5
W845428		0.04	<0.01	0.04	1.87	22.9	320	0.59	0.44	14.30	5.00	24.5	4.8	10	0.43	6.9
W845429		0.04	<0.01	0.03	0.09	73.6	40	<0.05	1.55	8.40	0.71	1.38	0.7	8	0.18	2.9
W845430		0.10	<0.01	1.47	0.56	22.7	240	0.25	0.32	6.45	26.4	10.35	2.4	19	0.29	34.1
W845431		0.06	<0.01	0.06	0.80	30.1	520	0.35	0.35	13.75	9.05	11.85	6.3	13	0.52	13.1
W845432		0.14	<0.01	0.13	0.05	7.7	230	0.05	0.46	11.00	0.79	0.69	0.6	7	0.07	3.3

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North Vancouver BC V7H 0A7
Phone: +1 (604) 984 0221 Fax: +1 (604) 984 0218
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Project: RAU

Finalized Date: 1-OCT-2019
Account: RCM

CERTIFICATE OF ANALYSIS WH19219901

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	Fe	Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P
	Units	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
W845414		5.18	0.66	<0.05	0.1	0.045	0.07	3.9	0.7	2.54	8820	1.11	<0.01	0.6	13.7	20
W845415		>50	2.05	0.32	0.1	0.193	0.04	2.3	1.2	1.93	1020	2.46	0.04	0.1	57.0	60
W845416		>50	1.55	0.57	<0.1	0.018	0.13	1.4	1.2	0.17	736	1.51	0.03	0.2	52.1	50
W845417		>50	1.62	0.26	0.1	1.065	0.05	7.9	0.8	0.13	4530	4.21	<0.01	0.1	20.2	60
W845418		15.60	2.36	0.07	0.3	0.311	0.21	4.8	4.2	4.84	5160	1.07	0.04	2.0	9.4	100
W845419		18.70	1.38	0.11	0.1	0.396	0.08	7.8	2.4	5.80	6750	0.37	<0.01	0.6	2.0	80
W845420		17.40	5.29	0.08	0.2	31.9	0.82	10.8	4.8	1.26	30700	5.53	0.03	6.0	46.3	300
W845421		7.00	10.50	0.14	1.8	0.771	1.26	64.4	8.5	0.75	1860	1.70	0.03	40.2	34.9	1050
W845422		3.54	31.9	0.17	1.2	0.105	4.78	82.9	38.7	0.96	95	0.80	0.10	108.5	2.7	880
W845423		1.85	1.32	<0.05	0.2	0.379	0.22	3.3	2.0	11.20	3480	0.78	0.01	1.9	6.0	60
W845424		2.69	8.08	0.07	1.1	0.037	1.50	20.6	19.8	1.87	577	43.8	0.07	5.9	113.5	770
W845425		6.21	3.21	0.09	0.6	0.035	0.58	15.0	8.3	6.61	2330	48.0	0.03	2.2	200	200
W845426		4.80	12.10	0.08	1.2	0.054	1.85	21.5	19.3	1.77	1500	14.90	0.44	6.6	111.5	590
W845427		1.06	6.73	0.09	0.9	0.027	1.06	23.2	14.0	0.61	196	36.2	0.03	5.1	81.8	390
W845428		4.05	4.61	0.05	0.5	0.048	0.61	11.3	4.5	8.16	2040	26.9	0.11	1.6	22.8	200
W845429		0.53	0.27	<0.05	<0.1	<0.005	0.04	0.7	1.7	5.07	144	1.40	0.01	0.2	3.2	110
W845430		0.84	1.35	<0.05	0.3	0.103	0.18	5.5	44.5	0.21	1390	18.40	0.01	0.9	23.1	140
W845431		5.70	2.42	0.05	0.4	0.016	0.28	5.4	9.6	8.44	2500	21.2	0.02	1.8	33.4	630
W845432		0.29	0.20	<0.05	<0.1	<0.005	0.01	<0.5	1.7	6.79	209	3.89	0.01	0.1	7.8	90

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VANCOUVER BC V6B 1L8

Project: RAU

Finalized Date: 1-OCT-2019
Account: RCM

CERTIFICATE OF ANALYSIS WH19219901

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
W845414		63.4	4.9	<0.002	0.19	1.71	2.6	2	0.6	96.5	<0.05	<0.05	0.43	0.015	0.16	0.5
W845415		258	1.9	<0.002	0.13	3.74	2.1	3	4.2	6.4	<0.05	0.74	0.18	0.011	0.12	1.0
W845416		1140	3.8	0.003	5.86	207	1.3	7	4.2	5.6	<0.05	5.80	0.13	0.015	0.33	1.1
W845417		28.2	2.2	<0.002	0.15	34.2	1.2	6	0.3	6.1	<0.05	0.15	0.32	<0.005	0.64	3.4
W845418		11.8	8.6	<0.002	1.50	8.55	2.6	2	0.6	131.5	0.10	0.08	0.69	0.051	0.18	0.8
W845419		6.4	4.6	<0.002	>10.0	2.59	1.5	1	0.4	86.2	<0.05	<0.05	0.26	0.015	0.05	0.2
W845420		4010	17.5	<0.002	0.14	7.94	9.2	3	302	97.4	0.33	0.05	1.02	0.193	0.58	2.4
W845421		98.0	53.2	<0.002	0.02	1.39	7.4	1	10.1	18.7	2.02	<0.05	10.65	0.342	0.34	2.3
W845422		11.7	108.0	<0.002	0.75	0.41	14.8	<1	7.2	83.3	5.36	<0.05	9.48	1.460	1.51	1.1
W845423		122.0	20.5	<0.002	0.03	1.06	1.2	2	12.3	62.5	0.10	<0.05	0.43	0.044	0.13	0.4
W845424		34.8	54.2	<0.002	0.05	14.55	5.1	5	1.1	51.4	0.37	0.07	3.88	0.137	1.28	4.2
W845425		11.8	22.4	0.002	0.05	14.85	1.8	2	0.6	98.6	0.15	<0.05	1.62	0.074	0.33	1.1
W845426		14.9	64.5	<0.002	0.02	6.03	11.2	2	1.4	50.9	0.41	<0.05	5.27	0.301	0.59	1.7
W845427		15.6	40.4	<0.002	0.01	9.32	4.0	6	1.0	25.6	0.32	0.07	3.32	0.110	1.62	3.3
W845428		5.3	21.9	<0.002	0.01	3.46	1.6	1	1.6	83.5	0.12	<0.05	1.74	0.055	0.16	0.8
W845429		3.7	1.5	<0.002	0.01	0.78	0.2	1	<0.2	19.6	<0.05	0.07	0.15	0.006	0.02	0.1
W845430		86.1	8.5	<0.002	0.02	9.01	2.0	3	2.4	131.5	<0.05	<0.05	1.07	0.032	0.19	2.0
W845431		11.5	10.4	<0.002	0.02	5.31	2.2	2	0.8	59.7	0.14	<0.05	1.46	0.063	0.15	0.9
W845432		4.8	0.6	<0.002	0.01	3.02	0.1	1	<0.2	36.4	<0.05	<0.05	0.06	<0.005	0.02	0.5

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Finalized Date: 1-OCT-2019
Account: RCM

Project: RAU

CERTIFICATE OF ANALYSIS WH19219901

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Zn-OG62
	Analyte	V	W	Y	Zn	Zr	Zn
	Units	ppm	ppm	ppm	ppm	ppm	%
	LOD	1	0.1	0.1	2	0.5	0.001
W845414		8	1.5	5.7	6260	4.0	
W845415		17	13.6	9.5	2080	2.7	
W845416		16	302	4.4	1680	1.2	
W845417		15	53.5	26.1	538	4.5	
W845418		13	57.9	10.3	106	10.0	
W845419		9	2.1	9.1	30	4.4	
W845420		55	2.2	9.4	>10000	8.7	2.81
W845421		70	4.5	13.2	697	74.5	
W845422		221	6.9	15.3	122	51.1	
W845423		7	1.4	3.1	451	7.6	
W845424		758	1.5	12.2	724	45.9	
W845425		40	0.7	24.1	2000	20.4	
W845426		249	2.1	11.6	190	44.8	
W845427		1120	1.0	12.8	293	38.6	
W845428		28	0.9	12.7	164	17.4	
W845429		6	0.6	0.9	28	1.5	
W845430		61	0.5	4.8	1860	11.8	
W845431		41	0.6	8.0	280	16.4	
W845432		15	0.1	0.6	98	1.3	

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CERTIFICATE OF ANALYSIS WH19219901

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 Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Au-AA25	CRU-31	CRU-QC	LOG-21
ME-MS61	ME-OG62	PUL-31	PUL-QC
SPL-21	WEI-21	Zn-OG62	

ALS Canada Ltd.

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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 ST
VANCOUVER BC V6B 1L8

Finalized Date: 14-OCT-2019
Account: RCM

CERTIFICATE WH19225045

Project: Rau

P.O. No.: R19-R16

This report is for 26 Rock samples submitted to our lab in Whitehorse, YT, Canada on 7-SEP-2019.

The following have access to data associated with this certificate:

ANDREW CARNE	ADAM COULTER	

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
OA-HSUL10	Handling of High Sulphide Samples
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid 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:

Saa Traxler, General Manager, North Vancouver

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Finalized Date: 14-OCT-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19225045

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
W845433		0.61	<0.01	3.06	0.37	16.5	80	0.34	1.01	0.40	11.25	55.2	170.5	1	1.58	3510
W845434		0.27	<0.01	2.22	0.20	11.3	80	0.34	0.98	1.17	11.95	40.2	316	1	0.48	3060
W845435		0.55	<0.01	1.95	0.39	19.6	90	0.42	2.07	2.50	10.00	55.4	302	3	0.73	2940
W845436		0.31	<0.01	0.31	6.67	<0.2	80	1.01	1.54	8.28	0.12	49.3	118.5	157	13.10	381
W845437		0.43	<0.01	0.06	8.76	0.3	780	1.50	0.34	2.27	<0.02	38.4	38.6	248	35.1	117.5
W845438		0.67	0.01	0.06	8.44	1.2	220	1.40	2.57	5.16	<0.02	60.5	54.1	226	40.4	152.5
W845439		0.09	0.01	1.01	0.15	33.4	30	0.15	1345	0.34	0.08	7.25	134.5	8	0.79	2050
W845440		0.51	<0.01	0.25	0.05	0.2	20	0.10	875	2.34	0.07	17.50	16.9	2	0.12	678
W845441		0.40	<0.01	1.01	0.49	0.3	20	0.20	4800	0.15	0.12	1.60	71.2	9	3.48	5470
W845442		0.69	<0.01	1.21	0.49	0.9	20	0.28	2400	0.17	0.08	2.16	22.8	11	4.18	1140
W845443		0.60	<0.01	1.65	0.42	0.8	20	0.24	5820	0.43	0.15	2.68	51.0	8	3.43	1900
W845444		0.62	0.73	24.3	1.09	1985	380	0.61	93.8	0.29	0.49	9.14	8.7	49	1.29	1370
W845445		0.50	0.22	23.7	1.12	2590	170	0.65	131.0	0.20	2.00	30.7	13.8	18	0.86	4570
W845446		0.21	0.02	1.23	1.83	195.5	40	1.54	1535	0.08	0.43	46.2	31.9	6	24.3	1560
W845447		0.44	0.01	0.40	6.37	76.3	170	9.53	26.9	0.28	<0.02	10.65	1.1	9	6.48	69.3
W845448		0.38	<0.01	0.04	0.33	4.5	20	2.68	3.66	19.25	0.99	5.55	1.1	3	0.16	9.6
W845449		0.11	<0.01	0.08	6.67	4.1	480	11.95	2.26	0.96	0.25	8.18	1.0	6	4.39	13.0
W845450		0.19	<0.01	0.08	5.94	28.3	270	13.40	1.37	0.35	0.24	8.54	1.8	7	3.94	37.5
W845451		0.09	<0.01	0.17	7.23	46.9	1010	12.65	11.40	0.54	1.19	35.2	2.7	11	13.95	84.0
W845452		0.77	0.01	0.68	1.77	19.9	50	41.0	3.68	4.89	0.29	211	33.3	14	2.48	977
W845453		2.64	<0.01	0.35	0.85	1.3	50	32.8	3.05	6.33	<0.02	142.0	86.4	<1	0.21	1120
W845454		0.90	0.01	0.38	0.62	1.3	70	25.7	2.97	6.20	0.04	119.0	96.0	<1	0.26	1120
W845455		0.75	0.02	0.47	6.73	494	350	9.20	33.3	0.16	<0.02	16.45	2.7	5	6.64	89.5
W845456		0.81	0.02	0.38	6.01	430	200	8.97	31.9	0.15	<0.02	13.30	2.5	7	8.22	84.6
W845457		1.27	0.01	0.28	5.46	284	250	6.13	24.8	0.02	<0.02	5.76	0.4	10	4.35	41.9
W845458		1.05	<0.01	0.01	6.86	6.5	150	7.82	2.69	0.18	0.12	46.7	0.8	7	7.44	4.1

***** See Appendix Page for comments regarding this certificate *****

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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 ST
VANCOUVER BC V6B 1L8

Finalized Date: 14-OCT-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19225045

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	Fe	Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P
	Units	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
W845433		>50	2.65	0.26	<0.1	0.049	0.11	45.0	1.4	0.34	1240	9.05	0.01	0.1	466	30
W845434		>50	1.43	0.20	<0.1	0.162	0.04	33.4	1.4	0.73	1980	10.90	0.01	0.1	586	20
W845435		49.4	2.56	0.23	0.1	0.053	0.05	42.3	1.9	1.48	1840	11.20	0.01	0.2	581	20
W845436		8.95	16.90	0.11	1.4	0.179	0.87	24.2	13.6	4.66	885	5.90	2.12	33.5	242	1560
W845437		9.55	25.5	0.14	0.3	0.033	4.35	20.9	91.0	4.22	350	0.16	0.99	24.0	168.0	900
W845438		7.47	21.9	0.15	1.0	0.145	2.27	32.9	33.6	4.45	542	0.27	2.53	40.0	160.5	1840
W845439		>50	0.96	0.27	0.6	0.044	0.07	3.4	2.0	0.41	811	8.52	0.01	0.9	14.1	30
W845440		39.0	0.59	0.10	<0.1	0.039	0.01	7.0	1.4	5.64	1200	1.19	0.01	0.1	6.3	20
W845441		37.4	6.21	0.13	0.1	0.061	0.29	0.8	9.4	5.13	156	7.18	0.01	0.3	10.0	30
W845442		32.7	5.36	0.07	0.2	0.037	0.35	1.2	18.9	7.46	290	5.64	0.02	0.3	7.2	20
W845443		44.5	4.02	0.39	0.1	0.103	0.26	1.3	14.6	1.96	357	4.22	0.01	0.1	10.7	20
W845444		>50	5.39	0.37	0.6	6.90	0.43	4.7	2.7	0.39	3920	0.47	0.02	1.3	31.9	1050
W845445		>50	5.35	0.32	0.4	1.575	0.24	15.5	2.4	0.54	942	1.84	0.01	0.5	64.2	890
W845446		35.9	15.45	0.15	0.1	0.139	2.71	29.6	870	4.46	255	2.88	0.03	2.7	6.0	70
W845447		1.74	35.4	0.08	5.4	0.197	3.64	6.3	121.0	0.88	239	3.77	0.06	140.5	2.8	20
W845448		0.45	2.68	<0.05	0.1	0.020	0.04	2.6	5.0	10.95	245	0.19	0.08	1.8	6.1	30
W845449		0.74	30.8	0.08	3.6	0.036	4.06	3.2	4.5	0.11	261	0.42	1.20	106.5	2.3	30
W845450		1.17	27.3	0.09	3.2	0.207	3.25	4.3	44.5	0.44	214	3.04	1.20	116.5	4.5	30
W845451		4.99	38.0	0.15	2.6	0.148	5.61	15.0	89.5	1.41	355	13.30	0.32	97.6	9.7	110
W845452		27.9	16.15	0.29	0.7	1.400	0.50	96.0	9.3	1.30	1520	10.85	0.27	32.8	9.6	240
W845453		38.2	12.35	0.32	0.3	1.245	0.17	64.5	2.9	0.63	1450	13.95	0.22	33.9	2.2	30
W845454		40.1	9.73	0.22	0.3	1.060	0.13	53.8	2.0	0.54	1120	13.25	0.14	26.8	2.3	40
W845455		4.89	40.3	0.10	1.3	0.261	4.96	7.9	116.0	0.78	299	30.6	0.10	70.1	1.2	20
W845456		5.05	35.6	0.09	1.4	0.242	3.96	6.9	215	1.32	388	8.85	0.09	73.0	1.1	30
W845457		3.00	29.0	0.07	1.8	0.180	4.07	3.0	50.5	0.46	232	10.20	0.09	83.3	0.9	<10
W845458		0.63	47.0	0.11	5.1	0.205	4.01	16.5	18.3	0.05	324	7.33	3.20	106.5	2.6	20

***** 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.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 14-OCT-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19225045

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
W845433		263	19.5	0.002	0.07	2.74	12.3	1	0.3	3.3	<0.05	0.10	0.08	0.008	1.51	5.9
W845434		182.5	5.7	<0.002	0.04	1.05	6.1	1	0.2	4.9	<0.05	<0.05	0.16	0.006	2.12	5.7
W845435		422	7.1	0.002	0.04	1.67	5.7	<1	0.3	8.8	<0.05	<0.05	0.23	0.011	1.57	5.4
W845436		6.0	120.5	<0.002	1.76	0.29	17.2	1	27.7	256	1.77	0.13	3.54	1.075	1.36	0.9
W845437		3.1	197.5	<0.002	0.90	0.11	25.0	1	1.9	109.0	1.15	<0.05	2.18	1.010	2.86	0.3
W845438		3.2	262	<0.002	0.64	0.25	22.2	1	21.1	241	2.17	0.22	4.82	1.385	3.10	0.6
W845439		33.2	10.5	0.011	0.18	5.06	2.2	1	1.1	3.4	0.05	6.08	0.91	0.027	0.37	1.8
W845440		17.4	0.9	<0.002	0.11	1.79	1.9	<1	0.3	8.7	<0.05	2.26	0.35	<0.005	0.03	0.6
W845441		42.9	77.3	<0.002	0.09	16.85	1.1	2	1.8	1.5	<0.05	23.3	0.37	0.023	0.67	2.6
W845442		35.3	87.6	<0.002	0.11	5.35	1.0	1	0.8	1.5	<0.05	8.54	0.25	0.037	0.80	1.7
W845443		117.0	65.6	<0.002	0.15	17.35	1.3	2	5.0	3.4	<0.05	23.1	0.27	0.019	0.80	2.3
W845444		120.5	44.5	<0.002	0.15	49.4	2.9	10	32.8	5.4	0.08	0.40	2.02	0.032	0.48	2.3
W845445		25.1	31.2	<0.002	0.14	20.6	3.9	14	6.9	2.5	<0.05	0.48	0.86	0.041	0.83	3.0
W845446		11.1	501	0.018	>10.0	16.30	0.4	2	4.6	2.7	0.66	3.05	0.45	0.021	1.92	1.6
W845447		2.9	466	<0.002	0.55	0.87	2.2	1	364	5.9	35.5	0.08	16.25	<0.005	1.24	4.3
W845448		1.1	3.1	<0.002	0.12	0.24	0.6	1	14.4	65.0	0.26	<0.05	0.36	0.017	0.06	0.4
W845449		32.0	338	<0.002	0.08	0.30	1.4	<1	4.0	50.9	19.95	<0.05	11.05	0.007	2.92	10.7
W845450		18.4	377	<0.002	0.09	0.67	2.1	1	170.0	20.3	23.0	<0.05	11.95	0.006	1.37	6.6
W845451		27.8	612	0.002	0.36	1.73	9.7	1	98.4	49.6	36.8	0.15	13.35	0.033	3.27	5.0
W845452		11.2	42.2	0.022	7.63	1.16	5.4	8	24.3	30.3	2.68	0.85	10.25	0.064	0.71	1.8
W845453		1.7	6.7	0.023	>10.0	0.14	1.6	12	19.1	7.3	3.41	1.05	5.24	<0.005	0.39	1.2
W845454		1.7	4.8	0.022	>10.0	0.13	1.5	12	16.4	5.0	3.12	1.23	4.29	<0.005	0.28	1.1
W845455		12.9	542	0.005	1.37	1.31	4.8	1	204	10.2	12.30	0.24	5.49	0.006	2.38	3.4
W845456		7.4	515	<0.002	0.92	1.39	2.7	1	252	8.2	12.90	0.17	4.42	0.005	1.62	2.3
W845457		12.2	447	<0.002	0.57	1.23	3.0	1	225	10.9	15.90	0.10	4.40	<0.005	1.60	2.6
W845458		58.5	1265	<0.002	0.06	0.31	9.1	1	10.8	12.2	70.3	0.06	17.90	<0.005	6.05	5.1

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.
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North Vancouver BC V7H 0A7
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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-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19225045

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	V	W	Y	Zn	Zr
	Units	ppm	ppm	ppm	ppm	ppm
	LOD	1	0.1	0.1	2	0.5
W845433		13	10.1	60.0	4380	0.6
W845434		11	8.0	50.2	4410	1.1
W845435		13	11.1	49.1	4310	1.7
W845436		128	3.8	22.0	96	42.4
W845437		117	0.7	17.9	75	11.6
W845438		168	5.0	20.2	83	26.8
W845439		12	1830	6.2	23	21.6
W845440		5	10.5	20.7	30	1.0
W845441		13	88.6	2.3	81	3.7
W845442		23	12.2	4.0	60	5.9
W845443		18	12.4	4.8	89	3.4
W845444		28	270	4.8	601	23.8
W845445		41	16.5	11.0	823	20.4
W845446		10	8.9	4.3	68	4.3
W845447		1	93.8	19.0	25	53.1
W845448		49	1.3	2.4	33	2.7
W845449		2	5.3	21.7	19	40.2
W845450		3	10.3	18.9	37	38.4
W845451		17	167.5	23.0	142	29.3
W845452		37	3360	36.9	165	15.5
W845453		1	4660	40.8	86	1.6
W845454		1	3440	36.4	69	1.5
W845455		2	570	20.7	17	12.4
W845456		2	256	16.9	16	12.1
W845457		1	22.2	12.7	14	14.7
W845458		1	7.2	41.2	29	36.2

***** See Appendix Page for comments regarding this certificate *****

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VANCOUVER BC V6B 1L8

Project: Rau

Finalized Date: 14-OCT-2019
Account: RCM

CERTIFICATE OF ANALYSIS WH19225045

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	OA-HSUL10
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-AA25	ME-MS61

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.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 10-OCT-2019
Account: RCM

CERTIFICATE WH19229831

Project: Rau

P.O. No.: R19-R17

This report is for 29 Rock samples submitted to our lab in Whitehorse, YT, Canada on 13-SEP-2019.

The following have access to data associated with this certificate:

ANDREW CARNE	ADAM COULTER	

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid 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:



Saa Traxler, General Manager, North Vancouver

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 ST
VANCOUVER BC V6B 1L8

Finalized Date: 10-OCT-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19229831

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
S036501		0.49	0.01	0.54	0.18	8.8	100	1.48	0.50	26.7	88.7	8.56	1.0	11	0.33	27.2
W845459		0.16	0.01	0.60	0.99	18.6	900	0.39	0.70	0.10	0.19	5.53	0.8	28	1.37	4.1
W845460		0.79	<0.01	0.10	0.04	20.1	80	<0.05	0.68	0.02	0.15	2.62	0.2	39	0.18	2.7
W845461		0.38	0.03	1.17	2.68	258	2730	1.07	0.60	0.06	0.68	3.36	0.2	43	2.80	23.5
W845462		0.07	0.03	4.69	0.62	165.0	710	0.27	43.0	0.04	0.25	7.09	0.8	19	0.86	5.8
W845463		0.06	0.01	0.52	3.67	52.0	580	1.03	2.10	0.17	0.56	62.9	15.7	116	1.91	9.8
W845464		0.61	<0.01	0.63	0.21	290	320	0.10	0.57	0.03	0.80	3.66	0.2	39	0.29	4.5
W845465		0.75	<0.01	0.80	0.34	233	280	0.29	16.00	0.16	2.59	221	0.3	32	0.23	12.3
W845466		0.83	<0.01	0.75	0.21	233	220	0.24	10.30	0.09	2.24	77.5	0.2	25	0.26	13.3
W845467		0.21	0.02	1.57	3.03	368	560	1.19	4.79	0.08	1.59	71.3	13.8	62	2.97	121.5
W845468		1.03	0.01	2.88	0.20	59.8	130	0.14	24.0	0.02	0.06	14.15	1.3	39	0.39	21.2
W845469		0.44	0.01	0.84	0.14	11.4	140	0.07	1.53	0.01	0.05	2.25	0.3	26	0.31	2.5
W845470		0.08	<0.01	0.36	7.10	19.1	630	1.87	0.35	0.15	3.24	69.4	24.0	79	4.72	43.3
W845471		0.48	0.04	1.60	1.13	81.3	1000	0.59	2.66	0.03	0.09	5.30	0.6	30	1.64	8.3
W845472		0.12	0.02	2.84	0.67	35.6	270	0.27	3.08	0.02	0.09	6.21	0.4	19	0.98	9.8
W845473		0.22	0.02	0.64	1.24	94.2	7170	0.48	0.59	0.02	0.11	12.55	0.7	29	1.60	9.2
W845474		1.18	0.01	1.06	0.88	101.5	340	0.35	5.22	0.01	0.21	5.66	0.2	34	1.19	28.2
W845475		0.58	0.01	0.04	0.59	13.4	120	0.24	0.34	0.04	0.09	10.60	12.3	31	0.60	30.2
W845476		0.32	0.01	0.03	1.80	20.7	530	0.64	0.28	2.40	0.20	46.3	12.3	20	1.00	10.5
W845477		0.66	0.02	0.02	1.86	8.1	370	0.48	0.10	0.24	0.14	15.85	9.5	39	1.08	18.4
W845478		0.45	0.06	0.04	1.76	56.3	340	0.47	0.61	0.11	0.10	29.8	10.3	41	1.07	25.2
W845479		0.23	0.01	<0.01	7.29	19.4	1510	1.55	0.20	0.28	0.20	120.0	12.1	43	3.40	15.8
W845480		0.63	0.04	0.05	3.14	58.7	790	0.95	1.06	0.16	0.15	53.2	24.6	34	2.15	42.0
W845481		0.56	0.09	1.11	1.42	195.0	320	0.41	2.28	0.03	0.16	21.5	3.7	25	0.84	6.1
W845482		0.69	<0.01	0.02	0.96	8.7	70	0.37	0.06	16.90	0.17	19.15	5.2	8	2.46	14.9
W845483		0.29	0.01	0.06	0.84	13.3	200	0.27	0.03	0.94	0.40	4.49	3.8	16	0.70	13.1
W845484		0.86	<0.01	0.40	0.70	3.8	70	12.90	0.84	5.50	0.17	7.68	5.3	31	2.15	381
W845485		0.87	<0.01	0.02	0.46	1.5	100	3.51	0.04	14.85	0.38	4.31	2.5	22	0.28	10.4
W845486		0.25	0.02	0.51	5.47	365	180	7.21	47.9	0.07	<0.02	4.49	0.3	7	5.84	97.4

***** See Appendix Page for comments regarding this certificate *****

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North Vancouver BC V7H 0A7
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VANCOUVER BC V6B 1L8

Finalized Date: 10-OCT-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19229831

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	Fe	Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P
	Units	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
S036501		0.38	4.46	0.08	0.2	0.899	0.03	8.3	3.5	6.56	301	0.46	0.03	0.3	12.9	90
W845459		0.78	3.09	<0.05	0.5	0.035	0.44	3.4	2.3	0.09	109	2.41	0.01	1.5	2.0	330
W845460		0.55	0.29	<0.05	0.2	0.015	0.02	1.6	0.3	0.01	47	0.81	<0.01	0.1	1.3	310
W845461		4.22	7.58	0.39	1.0	0.015	1.22	2.2	5.6	0.21	42	58.0	0.02	2.2	3.0	1070
W845462		3.82	3.00	0.06	0.4	0.059	0.70	6.0	3.8	0.05	215	15.20	0.02	0.8	3.0	770
W845463		5.61	7.85	0.08	1.8	0.048	1.69	29.3	24.2	0.25	5780	4.64	0.16	21.5	12.9	2550
W845464		2.23	0.79	0.10	0.2	0.076	0.09	2.4	2.9	0.37	59	6.40	<0.01	0.2	1.8	9590
W845465		2.88	3.52	0.18	0.2	0.039	0.03	183.0	0.7	<0.01	53	10.55	<0.01	0.1	1.3	>10000
W845466		2.73	1.77	0.15	0.2	0.056	0.03	60.8	0.6	0.01	35	9.07	<0.01	0.1	2.2	>10000
W845467		5.02	11.50	0.09	1.7	0.359	1.19	35.6	25.6	1.20	761	11.00	0.08	3.9	74.3	1360
W845468		1.17	1.33	<0.05	0.2	0.054	0.10	8.3	2.0	0.07	73	3.28	0.01	0.4	9.1	440
W845469		0.43	0.54	<0.05	0.2	0.013	0.06	1.6	0.9	0.01	41	1.02	0.01	0.2	1.6	270
W845470		5.61	18.60	0.17	3.0	0.091	3.51	33.9	28.5	0.52	2350	1.39	0.04	10.2	54.0	1770
W845471		1.03	3.35	0.05	0.5	0.010	0.53	3.7	4.4	0.10	55	12.40	0.02	2.3	3.1	150
W845472		1.15	2.48	<0.05	0.2	0.018	0.31	3.8	1.7	0.05	93	19.55	0.01	1.1	2.0	140
W845473		1.94	4.19	0.05	0.5	0.019	0.47	9.2	3.8	0.08	82	36.8	0.01	2.0	2.4	260
W845474		2.07	2.73	0.05	0.3	0.014	0.37	3.5	1.2	0.05	34	43.5	0.01	0.5	1.7	330
W845475		2.51	1.68	0.06	0.2	0.032	0.14	5.3	3.6	0.17	282	0.82	0.03	4.3	22.5	200
W845476		8.43	4.74	0.10	0.6	0.065	0.56	23.7	4.5	0.73	2930	0.63	0.06	13.2	19.7	520
W845477		1.96	3.66	<0.05	0.5	0.026	0.67	8.1	3.5	0.17	328	0.49	0.08	6.8	14.1	420
W845478		3.10	4.72	<0.05	0.6	0.041	0.48	15.3	4.7	0.56	297	0.81	0.07	13.7	13.1	500
W845479		5.43	18.70	0.14	2.9	0.096	2.26	60.0	20.4	1.80	715	0.59	0.11	48.5	15.9	1210
W845480		3.00	9.11	0.06	1.2	0.064	1.22	26.6	5.7	0.49	599	0.53	0.06	21.1	24.2	580
W845481		1.99	4.22	0.05	0.5	0.034	0.63	11.4	1.3	0.08	147	0.47	0.03	7.7	7.4	210
W845482		0.78	2.82	0.06	0.8	0.020	0.44	8.5	11.6	10.50	485	0.52	0.02	2.2	5.8	170
W845483		2.31	2.44	<0.05	0.4	0.022	0.34	2.0	4.9	0.38	714	1.06	0.03	2.4	8.3	580
W845484		4.85	3.77	0.06	0.5	0.197	0.58	6.0	11.0	2.75	1060	69.5	0.06	3.8	21.8	2630
W845485		2.51	4.93	<0.05	0.5	0.250	0.07	1.8	10.0	10.90	2060	0.91	0.08	1.0	5.4	210
W845486		2.94	34.3	0.06	2.2	0.354	3.69	2.1	72.8	0.58	187	17.80	0.08	87.8	0.8	20

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VANCOUVER BC V6B 1L8

Finalized Date: 10-OCT-2019
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CERTIFICATE OF ANALYSIS WH19229831

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
S036501		16.0	2.1	0.002	0.39	8.64	0.9	9	29.1	306	<0.05	<0.05	0.25	0.009	0.04	1.9
W845459		14.0	25.1	<0.002	0.02	5.84	3.2	4	1.8	17.6	0.09	0.06	2.41	0.052	0.67	0.7
W845460		5.4	1.4	<0.002	0.02	1.37	0.4	5	0.2	7.8	<0.05	<0.05	1.33	<0.005	0.04	0.2
W845461		53.6	65.9	<0.002	0.01	75.0	5.1	158	18.0	15.4	0.13	0.77	1.36	0.080	0.85	1.6
W845462		362	30.4	<0.002	0.81	9.62	1.7	16	15.4	39.7	0.05	0.27	4.42	0.032	1.66	1.0
W845463		41.2	54.3	<0.002	0.03	5.96	4.5	4	1.6	59.2	0.93	0.14	6.76	0.359	0.41	2.8
W845464		13.2	4.6	<0.002	0.03	6.72	13.3	34	1.1	13.7	<0.05	0.51	11.70	0.009	0.19	0.9
W845465		31.4	1.7	<0.002	0.02	16.55	3.6	18	1.2	259	<0.05	0.54	17.10	0.006	0.72	2.6
W845466		30.5	2.6	<0.002	0.03	12.40	4.3	26	1.3	97.1	<0.05	0.52	10.10	0.006	0.70	2.5
W845467		103.0	64.1	<0.002	0.18	50.8	8.7	4	27.0	84.9	0.26	0.30	11.20	0.154	1.83	4.3
W845468		195.0	7.4	<0.002	0.08	27.4	0.8	2	39.4	23.2	<0.05	0.10	1.70	0.014	0.46	0.7
W845469		6.8	3.2	<0.002	0.02	1.43	0.4	3	1.8	7.0	<0.05	<0.05	0.49	0.008	0.06	0.1
W845470		11.5	141.0	<0.002	0.01	1.50	14.5	5	2.6	49.0	0.72	0.07	10.70	0.393	0.70	2.5
W845471		94.6	28.1	0.002	0.10	10.40	2.1	6	4.0	12.8	0.15	0.13	1.22	0.080	1.29	1.0
W845472		42.2	17.9	<0.002	0.07	12.75	1.5	4	11.1	7.2	0.06	0.08	0.86	0.036	0.86	0.7
W845473		121.0	24.8	<0.002	0.22	21.8	2.4	7	3.4	28.6	0.12	0.17	1.59	0.072	1.10	2.3
W845474		55.1	22.4	<0.002	0.07	28.6	1.1	4	8.1	15.4	<0.05	0.15	1.42	0.020	1.16	2.0
W845475		8.2	8.0	<0.002	0.02	1.66	1.4	<1	0.6	7.9	0.22	<0.05	1.18	0.051	0.08	0.2
W845476		8.7	26.7	<0.002	0.01	0.84	5.0	1	1.7	39.0	0.72	<0.05	3.66	0.166	0.18	0.7
W845477		7.4	29.2	<0.002	0.01	1.12	2.4	1	1.5	14.9	0.36	<0.05	1.70	0.088	0.18	0.5
W845478		6.2	22.3	<0.002	0.04	0.91	3.5	1	1.5	16.0	0.65	<0.05	3.09	0.152	0.15	0.9
W845479		16.4	101.0	<0.002	0.01	1.32	15.9	<1	6.3	31.7	2.86	<0.05	13.40	0.579	0.54	2.3
W845480		11.1	56.8	<0.002	0.05	0.95	6.5	1	4.0	19.0	1.03	0.05	5.51	0.214	0.34	1.2
W845481		60.9	29.3	<0.002	0.02	5.84	2.4	<1	2.1	11.1	0.39	<0.05	1.69	0.086	0.14	0.5
W845482		2.9	20.6	<0.002	0.01	0.41	3.0	1	0.5	123.0	0.15	0.06	2.09	0.072	0.14	0.7
W845483		12.1	14.3	<0.002	0.01	0.58	3.2	<1	0.3	58.9	0.12	<0.05	0.99	0.045	0.10	0.4
W845484		4.4	73.2	0.068	2.20	0.29	1.4	16	3.6	24.5	0.31	0.16	0.73	0.036	0.43	27.1
W845485		2.4	4.3	0.002	<0.01	0.34	3.0	1	7.0	22.2	0.43	<0.05	0.80	0.023	0.04	1.6
W845486		11.7	478	<0.002	0.18	1.36	3.2	<1	333	10.0	17.05	0.10	5.14	<0.005	1.60	2.8

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Finalized Date: 10-OCT-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19229831

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	V	W	Y	Zn	Zr
	Units	ppm	ppm	ppm	ppm	ppm
	LOD	1	0.1	0.1	2	0.5
S036501		155	1.5	10.3	7600	3.4
W845459		84	0.5	3.2	17	17.0
W845460		5	0.2	0.3	9	1.9
W845461		366	2.3	2.6	36	37.2
W845462		66	1.1	2.9	8	10.9
W845463		97	1.1	10.2	39	71.8
W845464		26	0.4	1.4	13	5.1
W845465		26	0.9	10.3	44	3.1
W845466		26	0.8	6.9	29	6.2
W845467		143	1.8	16.9	317	67.6
W845468		19	0.6	2.5	84	5.8
W845469		13	0.3	0.6	10	3.3
W845470		124	1.2	19.5	243	111.5
W845471		267	2.0	4.8	11	23.4
W845472		59	1.1	5.7	12	10.0
W845473		87	0.7	3.4	29	20.7
W845474		60	0.6	1.3	25	13.5
W845475		9	0.2	3.5	29	4.9
W845476		30	0.7	13.9	64	17.8
W845477		16	0.6	3.9	39	16.8
W845478		30	0.6	8.2	51	27.9
W845479		126	1.2	19.8	91	118.0
W845480		46	1.2	11.9	53	49.8
W845481		19	1.2	2.7	173	21.9
W845482		19	0.6	11.0	24	29.9
W845483		20	0.4	6.0	48	11.7
W845484		45	275	15.3	72	18.8
W845485		59	1.5	8.1	124	15.1
W845486		1	14.0	10.7	15	20.5

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Finalized Date: 10-OCT-2019
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CERTIFICATE OF ANALYSIS WH19229831

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	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-AA25	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: 10-OCT-2019
Account: RCM

CERTIFICATE WH19229838

Project: Rau

P.O. No.: R19-R18

This report is for 23 Rock samples submitted to our lab in Whitehorse, YT, Canada on 13-SEP-2019.

The following have access to data associated with this certificate:

ANDREW CARNE	ADAM COULTER	

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid 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:



Saa Traxler, General Manager, North Vancouver

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

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Finalized Date: 10-OCT-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19229838

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
W845487		0.64	0.05	0.10	0.17	110.0	60	0.11	0.26	0.02	0.25	2.34	7.9	24	0.22	40.0
W845488		0.55	<0.01	0.02	1.78	5.6	250	0.43	0.08	0.46	0.27	17.50	9.3	24	0.82	23.0
W845489		0.41	0.01	0.02	5.41	9.3	1440	1.51	0.43	0.23	0.19	73.9	6.6	47	4.99	16.8
W845490		0.48	0.01	0.02	1.56	5.9	400	0.45	0.14	0.27	0.12	19.45	5.9	56	0.92	19.9
W845491		0.86	0.08	0.03	3.58	209	950	1.16	0.73	0.26	0.59	56.7	10.0	44	1.74	21.2
W845492		0.46	0.05	0.03	2.03	81.3	570	0.64	0.28	1.84	0.10	35.9	2.7	36	1.10	9.8
W845493		0.26	0.04	0.04	2.01	129.0	600	0.66	0.47	0.59	0.72	31.3	9.2	34	1.02	18.7
W845494		0.60	0.07	0.02	2.57	205	720	0.79	1.25	0.13	0.49	44.5	26.4	37	1.44	18.6
W845495		0.56	0.06	0.01	1.70	113.0	340	0.47	0.43	0.30	0.32	19.75	13.1	34	0.83	6.9
W845496		0.62	<0.01	0.03	0.66	13.4	150	0.19	0.42	23.2	0.14	21.3	2.2	25	0.28	3.0
W845497		0.23	0.01	0.11	0.86	9.3	190	0.35	0.30	0.30	0.46	14.55	8.4	18	0.40	37.4
W845498		0.89	0.07	0.10	1.35	14.3	320	0.43	0.44	1.02	0.47	22.0	9.6	37	0.69	27.2
W845499		0.27	<0.01	0.04	7.20	9.0	2340	2.34	0.76	0.83	0.17	106.5	13.0	52	7.58	28.2
W845500		0.39	0.19	0.22	2.11	522	790	0.77	1.33	0.10	0.56	30.1	11.3	32	1.00	23.9
W845251		0.32	0.05	1.45	8.09	588	2160	2.56	9.11	0.14	0.55	149.5	10.9	49	3.85	22.6
W845252		0.10	0.10	0.10	0.55	1150	160	0.22	10.40	0.05	0.28	9.66	3.4	12	0.43	5.3
W845253		0.51	0.06	0.03	0.12	97.2	40	0.05	0.68	0.01	0.08	1.70	0.4	29	0.27	1.7
W845254		0.44	0.02	0.09	11.65	1040	3330	4.09	6.21	0.04	<0.02	295	8.2	55	4.93	13.4
W845255		0.60	0.10	0.06	2.96	640	820	0.99	16.10	0.02	0.06	56.2	2.8	33	1.27	5.8
W845256		0.71	0.04	0.03	3.06	619	810	1.08	4.84	0.02	0.07	27.0	3.2	32	1.25	5.5
W845257		1.11	0.31	0.02	2.47	572	660	0.83	3.71	0.01	0.13	35.1	2.9	33	1.08	5.3
W845258		0.45	0.11	0.13	4.82	174.0	1730	1.86	4.27	0.35	0.17	33.9	20.7	74	2.66	221
W845259		0.17	1.04	0.12	1.29	131.5	420	0.40	0.99	2.87	0.35	22.8	15.2	29	0.81	59.5

***** See Appendix Page for comments regarding this certificate *****

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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 10-OCT-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19229838

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	Fe	Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P
	Units	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
W845487		1.73	0.65	<0.05	0.2	0.015	0.07	1.2	0.6	0.02	310	1.74	0.01	0.4	20.1	200
W845488		3.14	5.88	<0.05	0.3	0.023	0.34	8.9	10.4	1.01	730	1.09	0.02	5.6	17.3	310
W845489		4.26	14.25	0.10	1.5	0.056	2.39	37.8	11.2	1.17	623	0.57	0.06	32.2	17.3	1140
W845490		2.19	3.97	0.05	0.3	0.022	0.60	9.1	2.6	0.24	449	0.57	0.04	7.0	13.6	440
W845491		4.13	9.39	0.07	1.2	0.061	1.47	29.3	6.6	0.56	930	1.09	0.06	20.5	16.0	890
W845492		2.03	5.61	0.06	0.7	0.031	0.93	19.3	2.4	0.55	797	0.61	0.04	13.1	10.5	460
W845493		2.97	5.04	0.05	0.9	0.039	0.90	15.6	2.0	0.19	1480	1.34	0.04	7.5	21.2	730
W845494		2.72	5.79	0.07	1.2	0.039	1.14	22.1	3.0	0.21	512	0.93	0.05	14.3	27.4	680
W845495		1.86	3.02	<0.05	0.4	0.025	0.77	8.9	1.5	0.12	694	0.59	0.03	5.4	19.2	420
W845496		0.94	1.19	0.05	0.3	0.029	0.25	10.4	1.4	0.29	866	0.76	0.02	1.7	5.5	660
W845497		2.80	1.93	<0.05	0.1	0.025	0.23	6.6	5.4	0.26	633	0.89	0.02	2.9	11.9	290
W845498		2.89	3.10	<0.05	0.3	0.030	0.40	10.3	8.4	0.49	719	0.82	0.04	5.1	15.7	420
W845499		4.94	19.20	0.12	3.3	0.081	3.20	54.2	14.6	1.19	922	0.91	0.15	51.7	25.7	1640
W845500		4.95	5.52	0.06	0.4	0.050	0.89	15.2	2.1	0.16	574	0.74	0.04	7.8	25.3	710
W845251		5.27	23.5	0.16	2.1	0.104	3.65	78.8	5.9	0.43	491	0.89	0.12	48.5	26.5	1070
W845252		5.74	1.58	<0.05	0.3	0.007	0.19	5.6	0.9	0.05	163	5.30	0.02	2.6	9.0	670
W845253		0.70	0.35	<0.05	0.1	<0.005	0.05	0.9	0.4	0.01	54	0.57	0.01	0.7	1.5	50
W845254		5.57	34.0	0.28	3.1	0.102	4.67	148.0	17.4	0.60	393	1.77	0.13	134.0	23.8	840
W845255		2.76	8.51	0.06	1.1	0.033	1.32	29.4	4.7	0.17	201	1.22	0.04	29.4	8.6	320
W845256		2.63	8.33	0.05	1.3	0.033	1.38	13.9	4.4	0.15	175	1.39	0.03	21.9	7.8	310
W845257		2.29	6.71	<0.05	1.0	0.035	1.10	18.9	3.4	0.13	153	1.11	0.03	18.7	6.9	290
W845258		6.11	12.50	0.09	1.2	0.048	2.30	19.7	13.0	0.28	377	20.2	0.04	5.1	70.7	2700
W845259		4.19	3.11	<0.05	0.6	0.022	0.52	11.2	2.9	0.26	909	4.08	0.03	6.5	37.8	540

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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 10-OCT-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19229838

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
W845487		5.6	3.9	<0.002	0.01	0.56	0.8	1	1.0	4.6	<0.05	0.05	0.23	0.005	0.04	0.6
W845488		6.7	15.7	<0.002	0.01	0.48	3.8	1	2.0	23.3	0.26	<0.05	1.45	0.074	0.10	0.3
W845489		4.5	116.0	<0.002	0.01	0.61	11.4	<1	9.0	29.1	1.75	<0.05	7.42	0.628	0.67	1.4
W845490		5.1	30.4	0.002	0.02	1.74	3.1	<1	2.1	13.3	0.37	0.05	1.81	0.128	0.17	0.6
W845491		7.9	60.6	<0.002	0.06	1.15	7.3	1	6.2	25.2	1.07	<0.05	5.33	0.314	0.31	1.4
W845492		5.4	37.6	<0.002	0.07	0.54	4.1	<1	3.7	33.1	0.68	<0.05	3.16	0.173	0.16	0.7
W845493		8.5	36.7	<0.002	0.04	0.69	4.9	1	3.8	21.8	0.40	<0.05	2.69	0.122	0.18	0.9
W845494		3.3	50.6	<0.002	0.04	0.58	4.8	1	5.6	17.1	0.76	0.06	3.81	0.178	0.20	1.4
W845495		2.1	35.3	<0.002	0.03	0.59	2.3	<1	5.4	10.3	0.27	<0.05	1.49	0.082	0.16	0.5
W845496		5.1	10.8	<0.002	<0.01	0.16	1.4	1	0.9	696	0.08	<0.05	1.01	0.034	0.06	0.4
W845497		16.3	8.9	<0.002	0.02	1.14	1.2	1	0.6	12.4	0.13	<0.05	0.78	0.035	0.06	0.3
W845498		16.8	15.8	<0.002	0.04	0.66	2.3	1	0.9	29.9	0.23	<0.05	1.49	0.080	0.08	0.4
W845499		4.1	146.0	<0.002	0.01	1.15	15.0	<1	5.5	49.4	2.83	<0.05	12.05	0.821	0.85	2.6
W845500		19.1	40.5	<0.002	0.04	10.25	4.0	<1	2.5	14.8	0.40	<0.05	2.90	0.100	0.20	1.0
W845251		84.3	164.0	<0.002	0.05	16.20	16.3	1	10.8	33.6	2.52	0.05	13.50	0.616	0.74	2.5
W845252		9.5	8.8	<0.002	0.02	21.5	1.2	1	1.9	10.9	0.11	<0.05	0.81	0.042	0.27	1.3
W845253		2.7	2.1	<0.002	0.01	2.28	0.2	<1	0.4	3.1	<0.05	<0.05	0.18	0.011	0.06	0.1
W845254		4.3	167.0	0.002	0.03	13.85	20.9	1	47.4	45.8	7.13	<0.05	19.40	1.060	1.93	4.0
W845255		5.5	55.5	<0.002	0.02	17.00	5.5	1	10.2	15.1	1.59	0.05	4.65	0.206	0.68	1.2
W845256		6.7	58.2	<0.002	0.01	20.7	5.4	1	11.5	10.0	1.12	<0.05	3.70	0.181	0.46	1.3
W845257		6.1	48.9	<0.002	0.01	14.10	4.6	1	9.5	9.1	0.88	<0.05	3.75	0.168	0.41	1.0
W845258		12.1	96.2	0.002	0.02	7.69	7.0	7	9.3	36.6	0.29	0.24	6.92	0.141	0.72	7.8
W845259		13.3	22.6	<0.002	0.05	0.89	3.0	1	1.2	25.9	0.35	<0.05	2.07	0.135	0.17	1.4

***** See Appendix Page for comments regarding this certificate *****

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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 10-OCT-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19229838

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	V	W	Y	Zn	Zr
	Units	ppm	ppm	ppm	ppm	ppm
	LOD	1	0.1	0.1	2	0.5
W845487		5	0.4	2.9	43	5.6
W845488		25	1.1	6.4	41	6.5
W845489		112	2.1	7.6	44	79.4
W845490		26	0.6	3.3	24	10.7
W845491		70	2.6	8.5	118	58.3
W845492		33	1.7	7.6	41	29.4
W845493		38	1.3	7.5	104	35.0
W845494		40	1.1	7.5	190	60.0
W845495		16	0.6	4.4	118	18.3
W845496		9	0.2	16.3	9	10.5
W845497		11	0.4	4.1	53	5.7
W845498		19	0.6	5.9	59	10.6
W845499		141	2.8	21.0	45	186.0
W845500		32	1.0	5.1	334	19.4
W845251		138	6.5	12.8	309	102.0
W845252		11	0.5	2.2	11	13.5
W845253		3	0.1	0.4	7	3.7
W845254		171	10.0	23.3	16	158.0
W845255		42	2.1	8.4	10	68.3
W845256		42	2.2	5.8	14	79.9
W845257		35	1.8	4.6	12	47.3
W845258		512	2.2	15.0	27	54.5
W845259		36	0.8	4.5	33	25.1

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CERTIFICATE OF ANALYSIS WH19229838

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	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-AA25	ME-MS61

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Finalized Date: 2-NOV-2019
Account: RCM

CERTIFICATE WH19235954

Project: RM

P.O. No.: R19-R19

This report is for 35 Rock samples submitted to our lab in Whitehorse, YT, Canada on 20-SEP-2019.

The following have access to data associated with this certificate:

ANDREW CARNE	ADAM COULTER	

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize up to 250g 85% <75 um

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid ICP-MS	
Ag-OG62	Ore Grade Ag - Four Acid	
ME-OG62	Ore Grade Elements - Four Acid	ICP-AES
Pb-OG62	Ore Grade Pb - Four Acid	
Ag-GRA21	Ag 30g FA-GRAV finish	WST-SIM
Ag-CON01	Ag Concentrate	
Pb-VOL70	Pb by Titration	
Cu-OG62	Ore Grade Cu - Four Acid	
Zn-OG62	Ore Grade Zn - Four Acid	
Zn-VOL50	Zn by titration	

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:

Saa Traxler, General Manager, North Vancouver

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Finalized Date: 2-NOV-2019
Account: RCM

Project: RM

CERTIFICATE OF ANALYSIS WH19235954

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
W845301		0.45	0.05	>100	0.18	258	10	0.08	1.53	0.30	>1000	1.40	3.1	1	0.28	>10000
W845302		1.35	0.02	>100	0.03	439	<10	<0.05	0.16	0.05	613	0.26	0.1	1	<0.05	>10000
W845303		0.91	0.01	>100	0.03	258	<10	<0.05	0.04	0.04	683	0.24	0.1	<1	0.05	9030
W845304		0.43	0.03	>100	0.05	477	10	0.05	0.78	1.13	>1000	0.81	0.5	<1	<0.05	1040
W845305		0.33	0.02	>100	0.06	428	<10	0.09	6.02	0.20	>1000	0.86	0.9	1	0.06	1070
W845306		0.53	0.03	>100	0.10	707	10	0.05	0.12	0.22	>1000	0.88	1.0	<1	0.12	1130
W845307		0.28	<0.01	23.3	0.19	736	30	0.06	0.06	7.15	>1000	3.05	1.4	<1	0.11	110.5
W845308		0.90	0.02	>100	0.03	56.7	<10	<0.05	0.03	0.44	62.6	0.08	<0.1	<1	0.07	1840
W845309		0.93	0.02	>100	0.24	317	10	0.06	0.04	0.12	173.0	0.45	0.1	<1	0.17	7920
W845310		0.45	0.17	>100	0.21	13.1	10	0.08	0.26	0.18	978	1.59	2.2	1	0.28	1260
W845311		0.80	0.07	>100	0.01	829	10	<0.05	0.14	0.01	57.0	0.12	0.1	<1	<0.05	>10000
W845312		0.52	0.08	>100	0.05	1155	10	<0.05	0.34	0.07	152.5	0.42	0.2	1	0.07	>10000
W845313		0.28	0.03	>100	0.02	701	10	<0.05	0.06	0.02	25.6	0.23	<0.1	2	<0.05	>10000
W845314		0.34	0.01	>100	0.01	891	10	<0.05	0.02	0.38	473	0.09	<0.1	<1	<0.05	>10000
W845315		0.20	0.07	>100	0.06	>10000	30	<0.05	0.04	0.04	513	0.73	0.3	<1	0.07	1270
W845316		0.27	<0.01	70.7	0.34	56.2	150	1.31	7.51	0.05	239	4.82	41.1	7	0.35	941
W845317		0.23	<0.01	14.15	0.32	10.6	40	0.25	0.30	7.36	698	1.65	63.2	8	0.22	295
W845318		0.21	0.02	13.35	0.63	15.7	20	0.31	0.05	10.40	>1000	0.96	36.9	39	0.65	118.0
W845319		0.25	3.20	93.0	5.32	21.4	230	<0.05	0.42	7.26	115.0	0.86	107.5	32	2.03	>10000
W845320		0.38	<0.01	8.13	0.47	5.3	20	0.15	0.03	0.44	3.70	1.58	1.2	18	0.47	66.5
W845321		0.77	<0.01	5.35	3.41	9.2	440	<0.05	0.03	2.88	2.02	1.25	12.8	22	1.23	97.7
W845322		0.29	<0.01	3.68	0.20	3.2	10	0.11	0.01	10.10	15.25	0.85	7.0	13	0.18	49.7
W845323		0.18	0.03	>100	0.14	2580	30	0.14	0.02	0.82	254	1.45	0.3	<1	0.46	168.5
W845324		0.29	0.02	>100	0.15	3750	20	0.13	0.01	1.16	237	1.66	0.2	<1	0.22	157.0
W845325		0.35	0.08	>100	0.32	>10000	20	0.20	0.02	0.55	357	4.22	0.7	2	0.42	124.0
W845326		0.17	0.01	>100	0.30	5240	10	0.11	0.04	0.63	49.9	0.67	0.4	4	0.22	126.0
W845327		0.28	0.02	49.3	0.72	876	30	0.23	0.02	10.35	266	1.32	0.7	1	0.40	210
W845328		0.18	0.01	>100	0.10	1860	10	0.13	0.02	0.39	297	0.96	0.6	1	0.13	415
W845260		0.72	0.66	>100	0.16	3170	10	0.08	0.03	0.10	316	1.26	0.5	4	0.20	349
W845261		0.42	0.01	>100	0.11	1915	10	0.08	0.01	0.40	215	0.51	0.2	3	0.16	123.5
W845262		0.42	0.02	88.0	0.14	1025	140	0.11	0.01	0.23	602	0.77	0.7	<1	0.12	318
W845263		0.39	<0.01	24.2	0.18	452	80	0.06	<0.01	17.55	211	3.65	1.2	1	0.07	81.4
W845264		0.48	0.03	30.2	0.16	120.5	10	0.08	0.01	2.28	>1000	1.10	0.9	<1	0.17	160.0
W845265		0.58	0.53	>100	0.17	>10000	10	0.07	0.03	0.09	341	1.64	0.6	5	0.14	141.5
W845266		0.41	0.04	>100	0.06	>10000	10	<0.05	0.03	0.03	>1000	0.36	0.1	2	0.05	366

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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

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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 2-NOV-2019
Account: RCM

Project: RM

CERTIFICATE OF ANALYSIS WH19235954

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	Fe	Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P
	Units	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
W845301		1.29	14.90	0.05	0.1	0.098	0.05	0.8	0.9	0.21	1690	0.34	0.01	0.2	5.1	490
W845302		0.81	1.53	0.05	<0.1	0.015	0.01	1.0	0.2	0.03	616	0.15	<0.01	<0.1	0.3	20
W845303		0.36	1.72	0.06	<0.1	<0.005	0.01	0.6	0.3	0.01	224	0.13	<0.01	<0.1	0.2	10
W845304		5.58	7.45	<0.05	<0.1	0.197	0.01	<0.5	0.6	0.61	9340	0.24	<0.01	<0.1	2.8	40
W845305		4.63	3.43	<0.05	<0.1	0.035	0.01	<0.5	0.5	0.20	5920	0.35	0.01	0.1	3.8	60
W845306		4.88	6.05	<0.05	<0.1	<0.005	0.03	<0.5	0.9	0.26	6290	0.29	<0.01	0.1	3.9	30
W845307		7.18	3.24	<0.05	0.1	0.030	0.04	1.3	1.0	2.83	15650	0.28	0.01	0.3	3.1	220
W845308		0.13	0.28	<0.05	<0.1	<0.005	0.01	<0.5	0.2	0.20	142	0.05	<0.01	<0.1	<0.2	<10
W845309		0.30	0.86	<0.05	<0.1	0.014	0.09	0.5	0.4	0.07	357	0.07	<0.01	<0.1	0.3	10
W845310		0.18	3.39	<0.05	0.1	0.081	0.08	0.9	0.9	0.10	246	0.14	<0.01	0.2	7.9	20
W845311		0.05	0.08	<0.05	<0.1	<0.005	<0.01	0.6	0.2	0.01	9	0.07	<0.01	<0.1	<0.2	<10
W845312		0.09	0.25	<0.05	<0.1	0.005	0.02	0.9	0.2	0.03	34	0.23	<0.01	<0.1	0.2	10
W845313		0.04	0.06	<0.05	<0.1	<0.005	0.01	1.2	<0.2	0.01	20	0.09	<0.01	<0.1	0.2	10
W845314		0.43	1.50	<0.05	<0.1	0.006	<0.01	0.9	<0.2	0.13	543	0.06	<0.01	<0.1	<0.2	10
W845315		29.8	2.12	0.10	<0.1	0.023	0.03	0.7	1.4	0.01	332	0.74	<0.01	0.1	0.5	110
W845316		42.6	2.36	0.36	0.1	1.270	0.11	1.9	1.2	0.11	44800	1.74	0.01	0.1	120.5	30
W845317		17.15	1.63	0.06	<0.1	0.974	0.13	0.8	0.5	2.56	33300	0.28	<0.01	0.1	150.5	20
W845318		8.93	3.16	<0.05	0.1	0.125	0.27	<0.5	0.6	4.54	13800	0.31	<0.01	0.2	100.0	30
W845319		11.40	11.50	0.09	<0.1	0.569	2.72	<0.5	73.6	2.26	1230	0.15	0.82	0.1	184.0	100
W845320		0.76	1.75	<0.05	0.2	0.016	0.21	0.7	2.9	0.18	284	0.28	0.01	0.6	6.6	80
W845321		2.56	12.90	0.05	0.1	0.056	1.46	0.6	4.5	0.06	174	0.22	0.20	<0.1	402	20
W845322		3.83	1.08	<0.05	<0.1	0.025	0.08	0.6	1.1	4.22	3520	0.14	0.01	<0.1	29.1	<10
W845323		8.91	8.22	<0.05	<0.1	0.059	0.06	0.9	2.8	0.26	>100000	0.27	<0.01	<0.1	2.3	40
W845324		9.67	6.44	<0.05	<0.1	0.036	0.06	0.8	2.8	0.23	>100000	0.26	<0.01	<0.1	0.8	30
W845325		12.20	7.62	0.06	0.1	0.028	0.12	2.4	3.0	0.12	70800	0.38	<0.01	0.4	2.3	80
W845326		1.67	1.16	<0.05	<0.1	0.008	0.03	<0.5	4.6	0.19	5140	0.29	0.01	0.1	1.4	40
W845327		6.58	2.61	<0.05	<0.1	0.039	0.26	0.6	2.6	3.57	25900	0.16	<0.01	0.3	2.5	10
W845328		7.81	3.71	0.07	<0.1	0.024	0.02	0.8	2.1	0.14	50600	0.24	<0.01	0.2	1.8	30
W845260		1.64	1.25	<0.05	<0.1	0.011	0.04	0.7	3.1	0.04	3620	0.22	<0.01	0.3	1.2	20
W845261		8.80	4.15	0.08	<0.1	0.021	0.03	<0.5	2.3	0.11	53300	0.12	<0.01	0.1	0.5	30
W845262		23.6	4.78	0.07	<0.1	0.023	0.03	0.5	1.8	0.42	67500	0.36	<0.01	0.1	2.5	60
W845263		2.42	2.42	<0.05	0.1	0.027	0.04	2.0	0.8	10.00	4440	0.18	<0.01	0.3	3.2	240
W845264		2.75	4.58	<0.05	<0.1	0.050	0.03	0.6	1.0	1.36	3890	0.26	<0.01	0.1	2.4	70
W845265		3.09	2.09	<0.05	<0.1	0.031	0.05	0.9	3.1	0.04	397	0.16	<0.01	0.1	1.4	30
W845266		1.60	7.77	0.06	<0.1	0.022	0.01	1.4	2.3	0.01	335	0.26	<0.01	0.2	0.5	10

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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.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 2-NOV-2019
Account: RCM

Project: RM

CERTIFICATE OF ANALYSIS WH19235954

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
W845301		>10000	2.3	<0.002	0.67	5650	0.2	2	152.5	4.3	<0.05	<0.05	0.22	0.006	0.42	6.6
W845302		>10000	0.4	<0.002	9.69	>10000	0.1	2	15.1	4.3	<0.05	<0.05	0.04	<0.005	0.58	2.9
W845303		>10000	0.5	<0.002	>10.0	>10000	0.1	1	17.8	4.1	<0.05	<0.05	0.04	<0.005	0.70	3.8
W845304		>10000	0.5	<0.002	1.08	1310	0.2	3	141.5	2.2	<0.05	<0.05	0.04	<0.005	0.02	0.7
W845305		>10000	0.8	<0.002	2.15	1500	0.2	2	35.3	8.7	<0.05	<0.05	0.07	<0.005	0.12	1.4
W845306		>10000	1.6	<0.002	0.13	697	0.3	2	92.4	1.3	<0.05	<0.05	0.12	<0.005	0.09	0.6
W845307		3470	1.9	<0.002	1.76	81.9	0.7	3	26.7	10.9	<0.05	<0.05	0.27	0.008	0.02	0.5
W845308		>10000	0.6	<0.002	>10.0	3410	0.1	<1	5.5	1.7	<0.05	<0.05	0.01	<0.005	0.67	0.1
W845309		>10000	3.5	<0.002	>10.0	8110	0.1	1	12.5	3.8	<0.05	<0.05	0.04	<0.005	0.61	0.3
W845310		>10000	3.3	<0.002	7.59	1885	0.4	3	66.5	9.8	<0.05	<0.05	0.26	0.010	0.31	4.8
W845311		>10000	0.2	<0.002	>10.0	>10000	<0.1	<1	0.7	1.5	<0.05	<0.05	0.02	<0.005	0.61	0.8
W845312		>10000	0.7	<0.002	>10.0	>10000	0.1	<1	4.8	3.8	<0.05	<0.05	0.06	<0.005	0.43	2.5
W845313		>10000	0.2	<0.002	>10.0	>10000	<0.1	<1	0.3	2.9	<0.05	<0.05	0.03	<0.005	0.63	0.6
W845314		>10000	0.1	<0.002	>10.0	>10000	<0.1	2	12.1	2.5	<0.05	<0.05	0.01	<0.005	0.86	0.2
W845315		>10000	0.8	<0.002	2.48	>10000	0.3	3	33.3	1.8	<0.05	<0.05	0.10	<0.005	0.27	0.5
W845316		3140	6.2	<0.002	0.10	361	27.6	5	11.4	28.4	<0.05	<0.05	0.15	0.010	0.14	3.1
W845317		808	8.3	<0.002	2.57	55.2	8.9	3	40.7	9.6	<0.05	<0.05	0.03	0.009	0.12	0.5
W845318		1655	15.4	<0.002	7.74	63.6	4.5	<1	5.6	27.6	<0.05	<0.05	0.05	0.035	0.13	0.4
W845319		1270	74.3	<0.002	8.17	19.20	2.3	9	0.5	40.1	<0.05	0.27	0.02	0.030	0.84	<0.1
W845320		984	10.6	<0.002	0.04	31.7	1.1	<1	0.7	1.5	<0.05	<0.05	0.56	0.012	0.09	0.4
W845321		662	44.3	<0.002	0.05	15.65	3.1	1	0.6	139.0	<0.05	<0.05	0.02	0.008	0.48	0.2
W845322		1730	4.2	<0.002	0.11	15.30	1.2	<1	<0.2	14.6	<0.05	<0.05	0.01	<0.005	0.06	<0.1
W845323		>10000	2.1	<0.002	0.04	7800	1.8	<1	14.5	25.9	<0.05	<0.05	0.06	<0.005	0.08	3.5
W845324		>10000	1.9	<0.002	0.05	7110	1.3	<1	10.6	9.3	<0.05	<0.05	0.06	<0.005	0.08	3.8
W845325		>10000	4.5	0.002	0.21	3910	1.1	1	9.3	25.6	<0.05	<0.05	0.23	0.006	0.19	1.5
W845326		>10000	1.4	<0.002	0.52	887	0.8	1	2.0	4.0	<0.05	<0.05	0.08	<0.005	0.05	2.5
W845327		>10000	9.9	<0.002	1.08	1385	2.5	1	2.1	18.1	<0.05	<0.05	0.03	<0.005	0.10	0.4
W845328		>10000	1.1	0.009	0.19	9270	1.2	2	11.2	8.5	<0.05	<0.05	0.07	<0.005	0.16	1.3
W845260		>10000	1.7	<0.002	0.34	1110	0.4	3	3.9	2.3	<0.05	<0.05	0.10	<0.005	0.05	1.4
W845261		>10000	1.3	0.006	0.07	5630	0.9	1	7.2	7.3	<0.05	<0.05	0.03	<0.005	0.10	0.3
W845262		6370	1.5	<0.002	0.14	2130	0.4	2	8.5	23.2	<0.05	<0.05	0.08	<0.005	0.07	0.9
W845263		981	1.8	<0.002	0.85	99.0	1.8	3	8.1	12.2	<0.05	<0.05	0.20	0.006	0.13	0.5
W845264		5090	1.6	<0.002	0.86	88.8	0.3	2	108.5	5.6	<0.05	<0.05	0.06	<0.005	0.03	0.6
W845265		>10000	2.0	<0.002	5.43	761	0.1	1	8.8	1.7	<0.05	<0.05	0.10	<0.005	0.09	0.4
W845266		>10000	0.4	0.014	>10.0	>10000	0.2	1	64.9	1.7	<0.05	<0.05	0.08	<0.005	0.44	0.4

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ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
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	Analyte	V	W	Y	Zn	Zr	Ag	Ag	Pb	Ag	Pb	Cu	Zn	Zn
	Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	%	%	%	%
	LOD	1	0.1	0.1	2	0.5	1	5	0.001	0.7	0.01	0.001	0.001	0.01
W845301		1	0.3	0.9	>10000	2.6	>1500	1805	16.15			1.430	>30.0	35.84
W845302		<1	0.1	0.2	>10000	<0.5	>1500	2650	>20.0		68.55	1.760	4.84	
W845303		<1	0.1	0.1	>10000	<0.5	>1500	3660	>20.0		73.96		4.04	
W845304		<1	0.2	1.8	>10000	<0.5	179		2.32				>30.0	42.03
W845305		1	0.6	1.0	>10000	1.1	351		>20.0		25.30		>30.0	30.64
W845306		1	8.1	1.2	>10000	1.4	165		1.795				>30.0	44.29
W845307		6	1.8	2.8	>10000	2.4							>30.0	30.78
W845308		<1	<0.1	0.2	>10000	<0.5	>1500	2490	>20.0		81.76		1.285	
W845309		2	<0.1	0.4	>10000	2.0	>1500	4010	>20.0		73.27		3.39	
W845310		3	0.1	0.8	>10000	2.6	>1500	1465	>20.0		57.68		15.40	
W845311		<1	<0.1	0.1	2710	<0.5	>1500	6300	>20.0		80.83	1.555		
W845312		<1	<0.1	0.2	8510	0.7	>1500	>10000	>20.0	11663.0	76.43	2.59		
W845313		<1	<0.1	0.1	583	<0.5	>1500	2700	>20.0		78.59	1.560		
W845314		<1	<0.1	0.1	>10000	<0.5	>1500	3470	>20.0		68.13	1.190	7.46	
W845315		2	30.0	0.9	>10000	0.7	876		9.92				9.48	
W845316		44	0.6	41.4	>10000	2.4							8.06	
W845317		25	0.7	12.4	>10000	0.8							18.25	
W845318		26	2.2	3.9	>10000	1.9							19.60	
W845319		71	0.1	3.8	>10000	1.1						7.67	2.30	
W845320		25	0.2	6.2	640	6.4								
W845321		97	<0.1	6.4	411	1.1								
W845322		4	<0.1	2.5	2750	<0.5								
W845323		4	77.4	7.1	>10000	0.7	965		1.640				1.540	
W845324		3	97.4	6.6	>10000	0.8	1175		1.635				1.455	
W845325		4	438	5.8	>10000	3.3	671		1.745				5.34	
W845326		4	3.2	1.0	>10000	1.0	406		6.46				1.400	
W845327		9	1.0	6.7	>10000	1.8			1.600				8.70	
W845328		3	1170	3.7	>10000	0.8	904		3.02				8.19	
W845260		2	40.1	1.0	>10000	1.7	613		5.85				8.33	
W845261		2	760	2.7	>10000	<0.5	777		1.230				1.405	
W845262		2	6.8	3.3	>10000	0.9							9.93	
W845263		6	1.4	1.0	>10000	2.9							6.46	
W845264		<1	0.6	1.7	>10000	1.0							>30.0	43.48
W845265		1	1.1	0.2	>10000	1.6	321		5.98				7.25	
W845266		<1	1720	0.1	>10000	<0.5	>1500	1630	16.05				26.0	

***** 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
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: RM

Finalized Date: 2-NOV-2019
Account: RCM

CERTIFICATE OF ANALYSIS WH19235954

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	PUL-31
PUL-QC	SPL-21	WEI-21	

Applies to Method: Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Ag-CON01	Ag-GRA21	Ag-OG62	Au-AA25
Cu-OG62	ME-MS61	ME-OG62	Pb-OG62
Pb-VOL70	Zn-OG62	Zn-VOL50	

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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 ST
VANCOUVER BC V6B 1L8

Finalized Date: 7-NOV-2019
Account: RCM

CERTIFICATE WH19243058

Project: Rau

P.O. No.: R19-R20

This report is for 13 Rock samples submitted to our lab in Whitehorse, YT, Canada on 27-SEP-2019.

The following have access to data associated with this certificate:

ANDREW CARNE	ADAM COULTER	

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
OA-HSUL10	Handling of High Sulphide Samples
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize up to 250g 85% <75 um

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid 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:

Saa Traxler, General Manager, North Vancouver

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

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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 7-NOV-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19243058

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
W845329		1.01	0.04	0.18	5.57	128.0	3220	1.49	14.95	7.99	2.39	56.5	31.5	70	48.7	294
W845330		0.96	0.06	2.22	7.43	339	7040	1.94	25.5	0.92	1.41	54.7	42.6	107	46.8	436
W845331		0.86	0.03	3.33	0.78	112.0	230	0.39	4.62	17.70	2.27	19.45	10.3	8	3.67	646
W845332		2.11	48.3	30.5	1.88	1750	420	0.77	542	0.23	1.35	25.6	16.8	23	1.94	3400
W845333		0.84	0.27	5.85	0.17	472	60	0.06	260	0.12	0.14	2.55	1.4	13	0.58	617
W845334		0.92	1.11	4.70	0.70	2660	140	0.26	464	0.20	0.66	10.30	3.7	20	0.70	1715
W845335		1.01	0.45	9.27	0.85	1035	130	0.72	101.0	7.57	2.38	137.0	5.7	12	0.19	3290
W845336		2.92	2.66	10.50	0.77	1440	210	0.43	328	4.07	2.92	353	6.1	19	0.71	616
W845337		3.22	1.41	3.56	1.05	744	480	0.43	78.6	0.17	0.90	10.50	10.9	35	2.80	638
W845338		1.05	0.11	0.73	0.07	253	20	<0.05	27.0	0.03	0.06	1.09	0.7	12	0.35	33.1
W845339		0.36	14.30	9.74	1.41	2310	500	0.70	254	0.19	1.29	6.71	5.7	35	1.04	486
W845340		0.38	0.15	0.37	4.70	153.5	250	2.14	13.05	7.47	1.02	31.8	32.7	109	36.6	52.5
W845341		1.20	0.04	0.23	1.91	73.4	590	0.78	8.06	18.40	0.22	34.1	6.3	46	13.65	37.4

***** 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
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: 7-NOV-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19243058

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	Fe	Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P
	Units	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
W845329		6.17	16.55	0.16	3.0	0.157	4.17	32.5	38.8	10.85	981	1.15	0.02	13.4	113.5	1880
W845330		14.45	22.9	0.22	2.5	0.318	5.91	28.0	41.4	6.01	905	1.43	0.04	14.4	129.5	2750
W845331		5.04	1.96	0.07	0.3	0.336	0.28	9.5	4.2	11.50	1260	0.79	0.01	1.3	33.3	230
W845332		45.1	6.76	0.40	0.8	1.790	0.50	8.7	5.6	0.65	1830	2.39	0.01	1.1	56.2	630
W845333		8.01	1.05	0.05	0.1	0.218	0.06	1.5	0.9	0.72	212	0.66	0.01	0.3	8.8	170
W845334		46.8	4.33	0.35	0.5	0.481	0.26	5.8	1.2	0.71	756	0.80	0.01	0.8	21.0	620
W845335		33.8	2.21	0.15	0.1	3.50	0.02	87.8	0.7	4.28	2860	0.10	0.01	0.1	31.8	360
W845336		36.8	5.31	0.26	0.3	0.635	0.22	228	1.9	2.75	3250	0.30	0.02	0.7	27.8	290
W845337		42.6	7.09	0.40	0.6	0.765	0.40	5.8	2.1	1.08	1590	0.41	0.01	1.5	29.5	410
W845338		3.37	0.58	<0.05	<0.1	0.104	0.03	0.6	0.7	0.06	96	0.27	0.01	0.1	2.9	40
W845339		>50	8.48	0.33	0.5	0.428	0.51	5.0	2.6	0.31	746	0.70	0.01	1.3	30.3	200
W845340		8.25	19.80	0.08	2.3	0.045	3.02	14.6	22.6	9.95	1860	1.45	0.07	26.5	165.0	1970
W845341		3.84	6.83	0.06	0.8	0.052	1.35	18.5	11.1	9.52	1490	0.98	0.01	15.4	26.5	760

***** See Appendix Page for comments regarding this certificate *****

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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 ST
VANCOUVER BC V6B 1L8

Finalized Date: 7-NOV-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19243058

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
W845329		3.4	474	<0.002	0.08	2.89	11.5	9	3.9	22.0	0.80	0.17	3.19	0.482	4.12	4.4
W845330		6.3	352	<0.002	0.17	4.56	16.2	26	4.9	26.4	0.90	0.08	3.44	0.510	4.58	3.3
W845331		2.1	30.1	<0.002	0.01	1.35	2.5	5	0.5	33.4	0.08	<0.05	0.45	0.044	0.54	1.7
W845332		51.8	61.1	<0.002	0.08	185.0	5.3	46	17.5	4.2	0.07	0.92	1.20	0.050	0.83	3.2
W845333		25.2	6.2	<0.002	0.02	33.2	0.4	7	1.7	2.0	<0.05	0.42	0.16	0.010	0.15	0.3
W845334		34.4	35.8	<0.002	0.08	36.7	1.3	25	4.6	3.2	0.05	1.01	0.73	0.033	0.35	1.4
W845335		16.3	2.0	<0.002	0.11	12.55	12.4	6	1.3	57.6	<0.05	0.14	2.63	<0.005	0.93	4.7
W845336		20.3	28.0	0.004	0.60	27.0	7.4	14	6.6	25.8	0.05	0.51	3.79	0.022	1.46	4.2
W845337		17.8	33.9	<0.002	0.07	13.10	3.3	16	1.0	3.2	0.07	0.18	1.59	0.043	0.81	1.4
W845338		4.1	4.0	<0.002	0.02	2.35	0.2	3	1.3	0.8	<0.05	<0.05	0.07	<0.005	0.05	0.1
W845339		37.9	46.4	<0.002	0.11	58.4	3.0	22	4.3	2.6	0.08	0.54	0.75	0.037	0.29	1.5
W845340		6.1	569	<0.002	0.16	6.43	9.8	1	4.5	56.0	1.43	0.31	5.54	0.513	3.44	2.9
W845341		5.0	187.0	<0.002	0.09	4.09	6.7	1	2.0	148.5	0.77	0.07	1.56	0.267	1.21	0.8

***** 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
www.alsglobal.com/geochemistry

To: **ATAC RESOURCES LTD.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 7-NOV-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19243058

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	V	W	Y	Zn	Zr
	Units	ppm	ppm	ppm	ppm	ppm
	LOD	1	0.1	0.1	2	0.5
W845329		109	6.2	11.1	739	111.0
W845330		140	9.5	12.6	541	97.0
W845331		16	2.3	10.9	245	11.0
W845332		35	49.6	10.2	648	31.1
W845333		6	8.9	0.9	115	2.9
W845334		21	31.3	3.9	237	20.1
W845335		20	98.7	24.5	336	2.8
W845336		25	640	18.7	377	12.3
W845337		23	13.3	6.5	207	23.3
W845338		3	1.7	0.4	36	1.1
W845339		28	14.1	4.5	207	19.1
W845340		89	7.5	24.4	304	88.1
W845341		40	6.7	12.9	60	36.5

***** See Appendix Page for comments regarding this certificate *****

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VANCOUVER BC V6B 1L8

Project: Rau

Finalized Date: 7-NOV-2019
Account: RCM

CERTIFICATE OF ANALYSIS WH19243058

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	OA-HSUL10
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-AA25	ME-MS61

APPENDIX VII

SCOTT GEOPHYSICS FIELD REPORT

LOGISTICAL REPORT

INDUCED POLARIZATION SURVEY

RAU PROJECT
Mayo area, Yukon Territory

on behalf of

ATAC RESOURCES LTD.
1016 – 510 West Hasting St
Vancouver, BC, V6B 1L8

Survey performed:
June 8 to July 8, 2019

by

Philip Fortin, Geophysicist
SCOTT GEOPHYSICS LTD.
4013 West 14th Avenue
Vancouver, BC, V6R 2X3

July 20, 2019

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1. Introduction	1
2. Survey coverage and procedures	1
3. Personnel	2
4. Instrumentation	2

Appendix

1. Statement of Qualifications — Rear of Report
2. Accompanying Maps
    Chargeability/resistivity pseudosections (1:5,000 scale)
    Chargeability contour plan – first separation (UTM coordinates, 1:10,000 scale)
    Resistivity contour plan – first separation (UTM coordinates, 1:10,000 scale)
    Total field magnetometer contour plan (UTM coordinates, 1:10,000 scale)
    Stacked magnetometer profiles (idealized grid coordinates, 1:5,000 scale)

Accompanying Data Files

One folder with all survey data and plots in Surfer 9 and PDF or GeoTIFF formats — Rear of Report

1. INTRODUCTION

Induced Polarization (IP) and total field magnetometer (mag) surveys were performed at the Rau property, Mayo area, Yukon, from June 8 to July 8, 2019.

The survey was performed by Scott Geophysics Ltd. on behalf of ATAC Resources Ltd. This report describes the instrumentation and procedures and presents the results of the survey.

2. SURVEY COVERAGE AND PROCEDURES

The pole-dipole array was used for the IP survey. Three different arrays were used:

1. An a-spacing of 100 metres at "n" separations of 1 to 6 (100/1-6).
2. An a-spacings of 50 meters and n-separations 1 to 5 (50/1-5)
3. An a-spacings of 50 meters and n-separations 1 to 6 (50/1-6)

The current electrode was located to the south of the potentials for all the lines.

GPS readings were taken at the start and end of each survey line and at the remote ("infinite") electrode location, subject to satellite reception. Elevation measurements are barometric altimeter readings, calibrated to GPS altitude at the beginning of each line.

Total field magnetometer readings were routinely taken at 12.5 metre intervals (reduced to 2-5 metre intervals in areas with a steep magnetic gradient) and corrected for diurnal variation against a fixed base station cycling at 10 second intervals.

A total of 47.35 kilometres of IP survey (22.5 km at 100/1-6, 7.1 km at 50/1-5, and 17.75 km at 50/1-6) and 67.4 kilometres of magnetic survey was performed.

The chargeability and resistivity results are presented on the accompanying pseudosections and plans. All survey data are archived to the accompanying digital folders.

3. PERSONNEL

Gordon Stewart was the crew chief on the survey on behalf of Scott Geophysics Ltd. Julia Lane was the representative on behalf of ATAC Resources Ltd.

4. INSTRUMENTATION

A GDD GRx8-32 receiver and a GDD TxII transmitter (5000 watts) were used for the IP survey. Readings were taken in the time domain using a 2 second on/2 second off alternating square wave. The chargeability values plotted on the accompanying pseudosections and plan maps are for the interval 690-1050 msec after shutoff.

Scintrex ENVI proton precession magnetometers were used as field and base units for the magnetometer survey.

GPS readings were taken with a Garmin GPSMap GPS receiver.

Respectfully Submitted,



Philip Fortin, Geophysicist

Statement of Qualifications

for

Philip Fortin, GIT (Geophysics)

of

4013 West 14th Avenue
Vancouver, BC V6R 2X3

I hereby certify the following statements regarding my qualifications and involvement in the program of work on behalf of ATAC Resources Ltd.., and as presented in this report of July 20, 2019.

The work was performed by individuals qualified for its performance.

I have no material interest in the property under consideration in this report.

I graduated from the University of British Columbia with a Bachelor of Science degree (Geophysics) in 2015.

I am a registered member (no 163582) of Engineers and Geoscientists of British Columbia (EGBC) as of May 6, 2019.

I have been practising my profession as a Geophysicist in the field of Mineral Exploration since 2015.

Respectfully submitted,



Philip Fortin, PGeo

ATAC Resources Ltd.

Rau Property, Mayo Area, Yukon

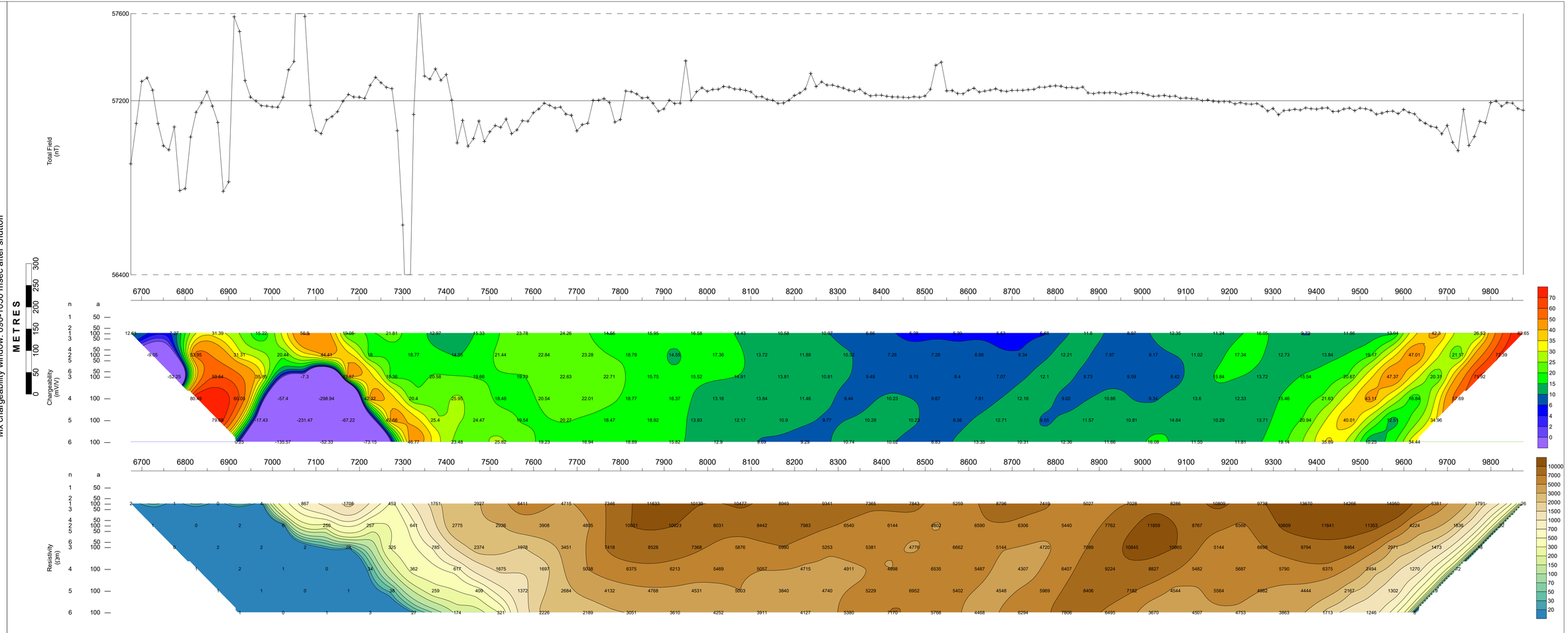
Line: 531300E

Induced Polarization Survey
Scott Geophysics Ltd.
July 2019

Pole-Dipole array
GDD GRx8-32
Pulse rate: 2 sec

Current electrode south of potentials
Mx chargeability window: 690-1050 msec after shutoff

METRES
0 50 100 150 200 250 300



Line: 531300E

ATAC Resources Ltd.

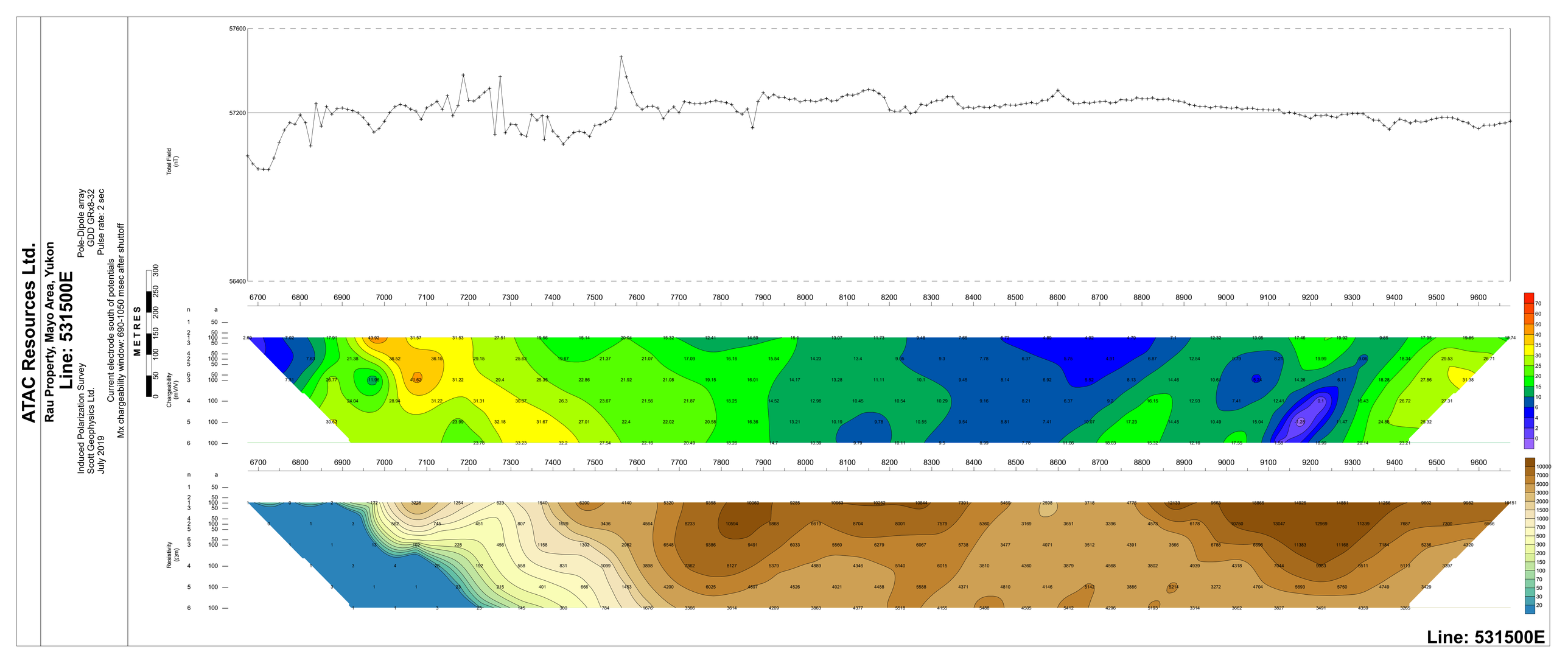
Rau Property, Mayo Area, Yukon

Line: 531500E

Induced Polarization Survey
Scott Geophysics Ltd.
July 2019

Pole-Dipole array
GDD GRx8-32
Pulse rate: 2 sec

Current electrode south of potentials
Mx chargeability window: 690-1050 msec after shutoff



Line: 531500E

ATAC Resources Ltd.

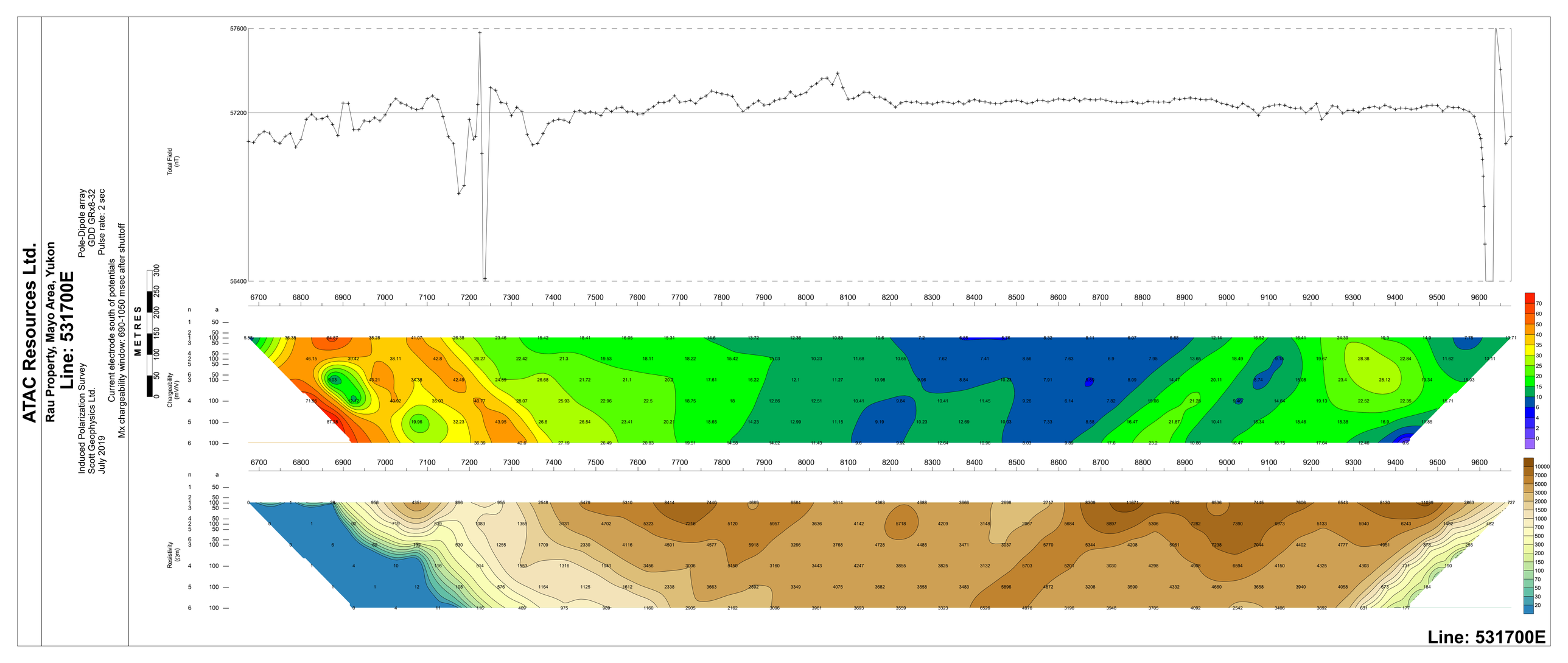
Rau Property, Mayo Area, Yukon

Line: 531700E

Induced Polarization Survey
Scott Geophysics Ltd.
July 2019

Pole-Dipole array
GDD GRx8-32
Pulse rate: 2 sec

Current electrode south of potentials
Mx chargeability window: 690-1050 msec after shutoff



Line: 531700E

ATAC Resources Ltd.

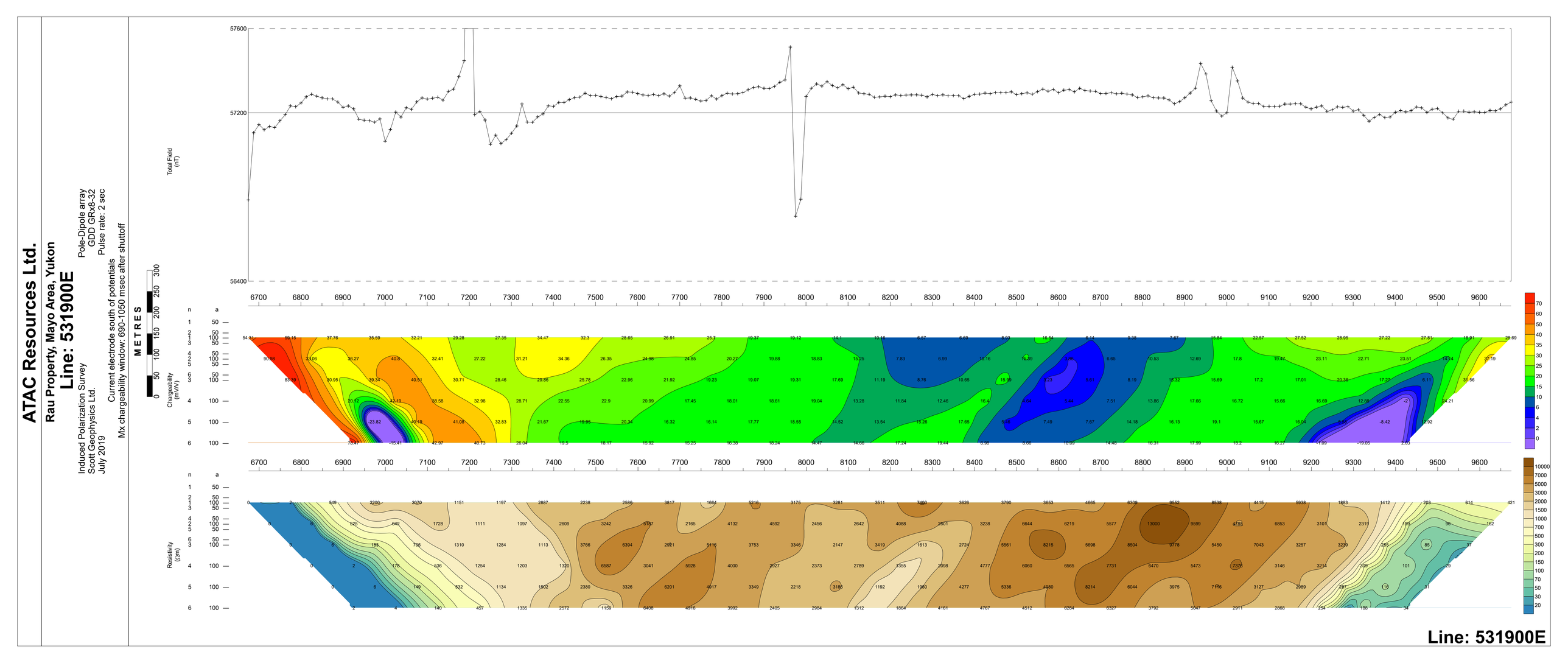
Rau Property, Mayo Area, Yukon

Line: 531900E

Induced Polarization Survey
Scott Geophysics Ltd.
July 2019

Pole-Dipole array
GDD GRx8-32
Pulse rate: 2 sec

Current electrode south of potentials
Mx chargeability window: 690-1050 msec after shutoff



Line: 531900E

ATAC Resources Ltd.

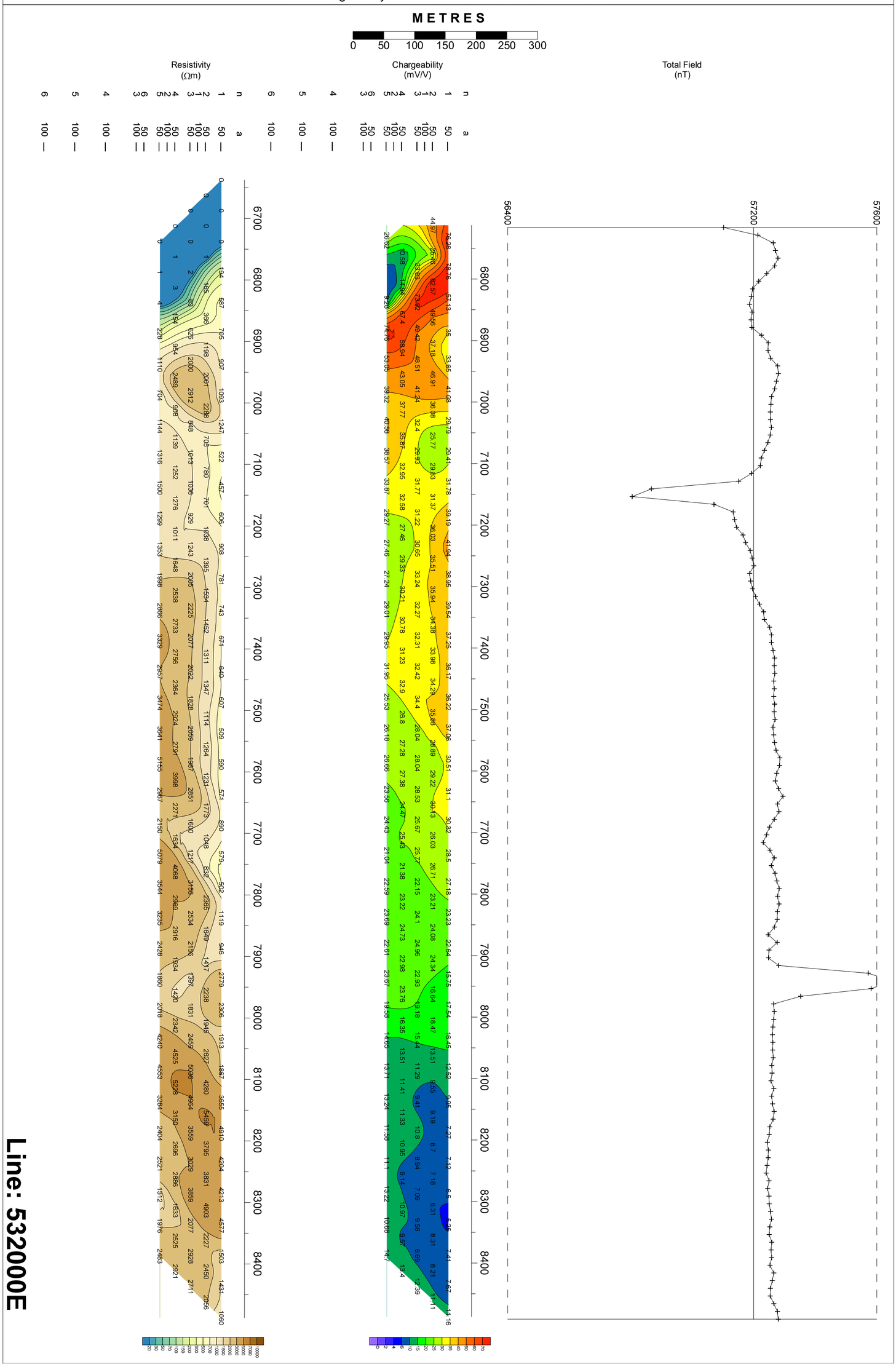
Rau Property, Mayo Area, Yukon

Line: 532000E

Induced Polarization Survey
Scott Geophysics Ltd.
July 2019

Pole-Dipole array
GDD GRx8-32
Pulse rate: 2 sec

Current electrode south of potentials
Mx chargeability window: 690-1050 msec after shuttoff



ATAC Resources Ltd.

Rau Property, Mayo Area, Yukon

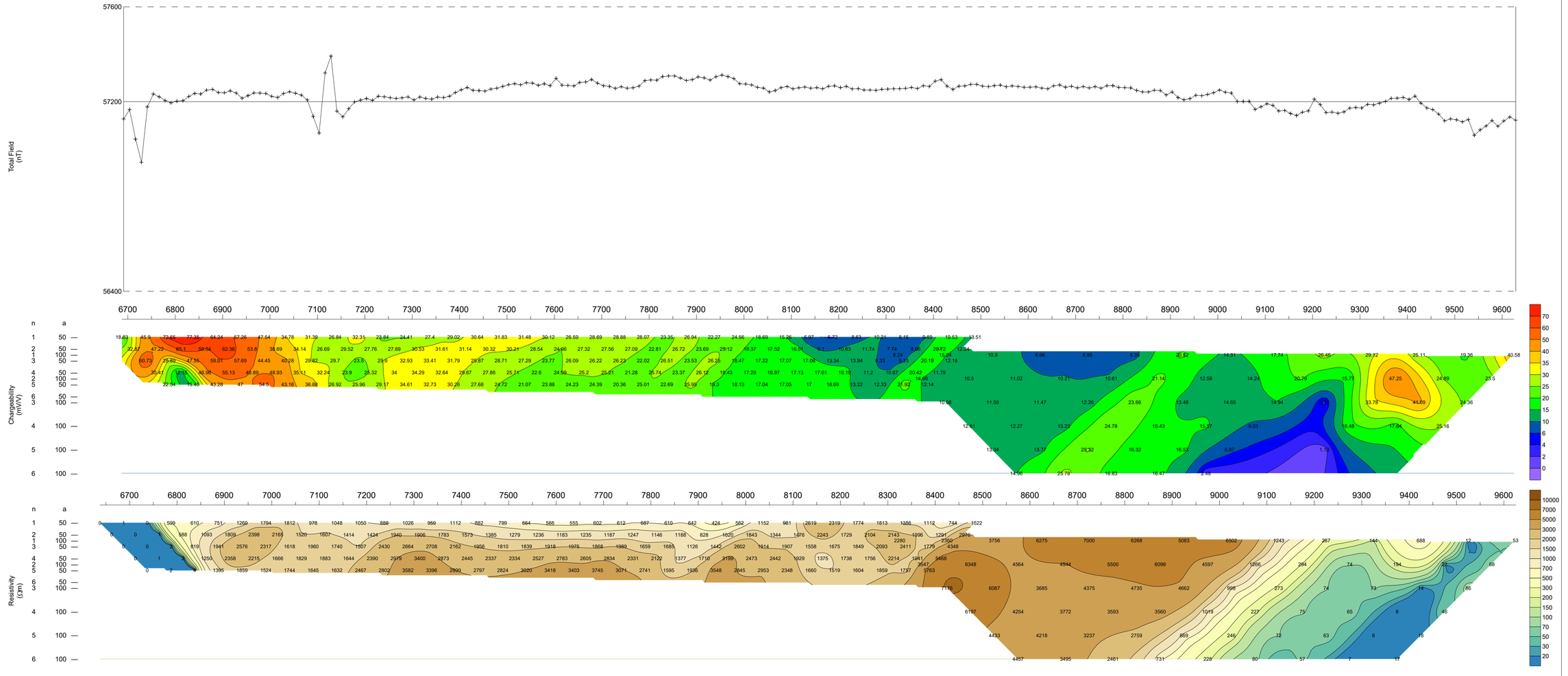
Line: 532100E

Induced Polarization Survey
Scott Geophysics Ltd.
July 2019

Pole-Dipole array
GDD GRX8-32
Pulse rate: 2 sec

Current electrode south of potentials
Mx chargeability window: 690-1050 msec after shuttoff

METRES
0 50 100 150 200 250 300



Line: 532100E

ATAC Resources Ltd.

Rau Property, Mayo Area, Yukon

Line: 532200E

Induced Polarization Survey
Scott Geophysics Ltd.
July 2019

Pole-Dipole array
GDD GRx8-32
Pulse rate: 2 sec

Current electrode south of potentials
Mx chargeability window: 690-1050 msec after shuttoff

METRES
0 50 100 150 200 250 300

Total Field (nT)
57600
57200
56400

6700 6800 6900 7000 7100 7200 7300 7400 7500 7600 7700 7800 7900 8000 8100 8200 8300 8400

n a
1 50
2 50
1 100
3 50
4 50
2 100
5 50
6 50
3 100
4 100
5 100
6 100

Chargeability (mV/V)

24.38 53.16 103.39 97.46 76.71 53.62 30.32 29.14 38.93 38.13 25.24 29.78 20.5 20.52 20.98 14.79 19.54 15.33 18.06 28.53 27.33 29.36 26.18 22.31 29.77 27.05 27.32 24.71 22.51 20.59 20.37 17.98 16.09 10.92 12.65 14.16 13.65
60.32 56.94 84.5 68.07 75.27 55.39 31.41 46.01 40.38 21.06 25.21 23.88 16.72 23.26 26.7 24.26 22.77 21.35 29.18 27.15 28.56 28.35 19.84 27.7 34.37 26.27 20.84 21.95 19.73 20.81 19.17 15.9 11.15 13.38 14.73 11.97
149.03 80.82 54.93 67.24 80.67 56.34 48.59 47.38 23.9 22.69 21.58 21 22.23 31.49 32.65 26.85 25.58 30.7 26.61 27.07 27.07 21.05 24.21 32.34 29.04 19.59 19.56 19.22 20.55 18.97 16.54 11.21 14.28 15.68 12.66
57.2 77.24 53.96 73.91 77.05 72.55 49.6 30.24 25.93 19.93 19.99 25.25 31.79 37.19 32.97 27.69 31.55 26.72 26.44 26.22 20.02 23.51 29.69 27.11 21.57 19.27 17.24 20.11 18.73 16.22 11.95 14.6 16.75 13.84
9.23 0.97 61.03 69.97 90.97 68.9 32.55 32.39 23.27 18.83 23.91 35.43 37.67 35.46 29.78 30.87 26.46 26.78 25.98 19.75 21.84 29.21 24.76 19.59 21.1 17.35 18.18 18.27 16.14 11.96 15.49 17.16 15.08

6700 6800 6900 7000 7100 7200 7300 7400 7500 7600 7700 7800 7900 8000 8100 8200 8300 8400

n a
1 50
2 50
1 100
3 50
4 50
2 100
5 50
6 50
3 100
4 100
5 100
6 100

Resistivity (Ωm)

0 1 0 233 516 1482 2326 6272 6966 2824 3407 3692 3484 2575 3922 3082 4312 2548 3414 1897 1624 1008 1007 1171 1758 804 810 449 401 556 602 811 852 984 789 1037 1198 1466
0 0 1 379 1507 1856 2773 7004 3487 4779 7152 4270 3584 6149 3398 2514 2722 2636 2245 2036 1244 1300 1448 2178 1058 768 687 746 1126 1004 1071 1485 1587 1034 1829 2058 2514
0 0 2 843 1475 1696 2831 2631 4482 7442 5989 3854 6817 4838 2460 1831 2503 1942 2157 1482 1668 1764 2514 1204 947 673 994 1628 1520 1432 1614 2163 1350 1684 2422 3384
0 1 4 715 1162 1745 1052 3333 6262 5388 4899 6820 5287 3016 1823 1874 2000 2061 1615 2032 2256 2989 1415 1063 832 993 1959 1896 1908 1974 2187 1676 1976 2494 3690
0 2 4 510 1142 620 1503 4357 4214 4261 8139 5503 3080 2130 1955 1813 2204 1723 2271 2654 3659 1679 1248 950 1192 1847 2137 2270 2466 2548 1633 2274 2770 3692

Line: 532200E

ATAC Resources Ltd.

Rau Property, Mayo Area, Yukon

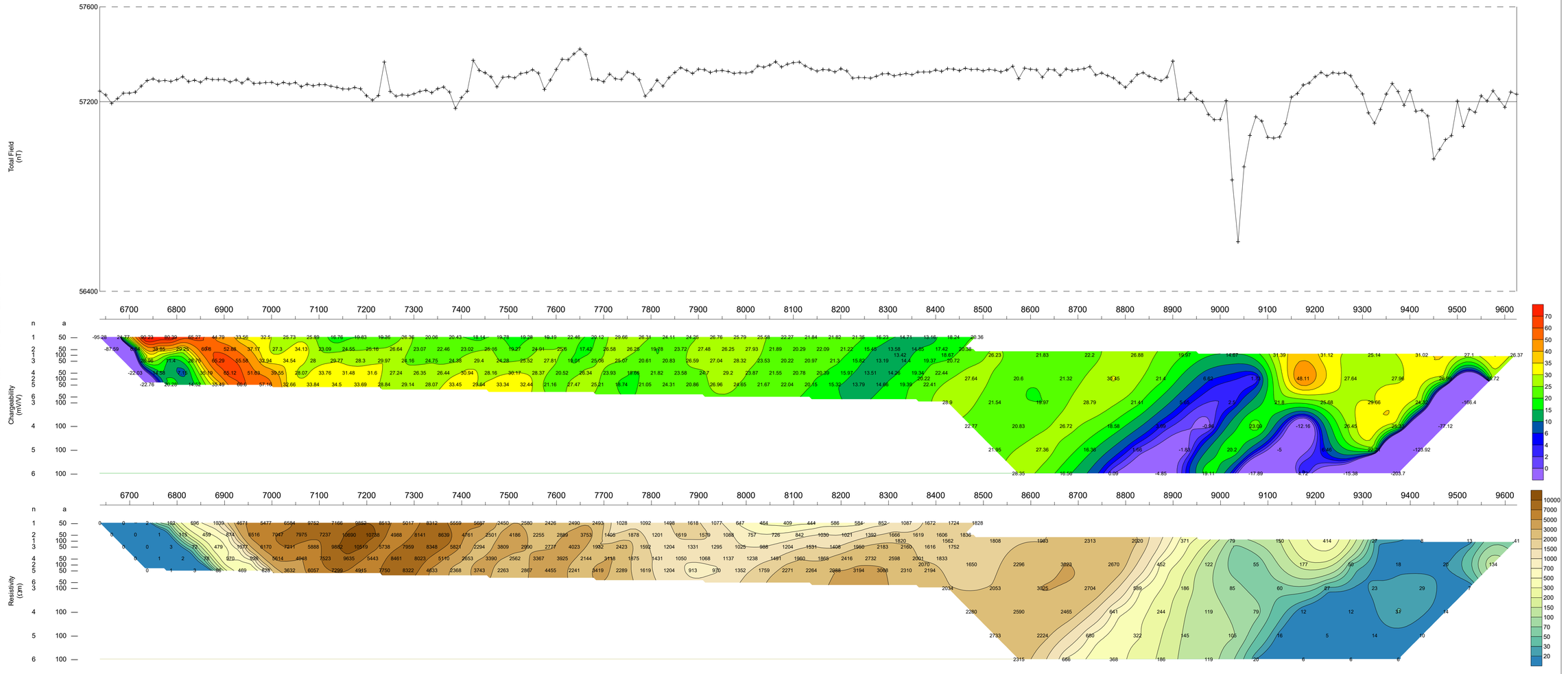
Line: 532300E

Induced Polarization Survey
Scott Geophysics Ltd.
July 2019

Pole-Dipole array
GDD GRX8-32
Pulse rate: 2 sec

Current electrode south of potentials
Mx chargeability window: 690-1050 msec after shuttoff

METRES 0 50 100 150 200 250 300



Line: 532300E

ATAC Resources Ltd.

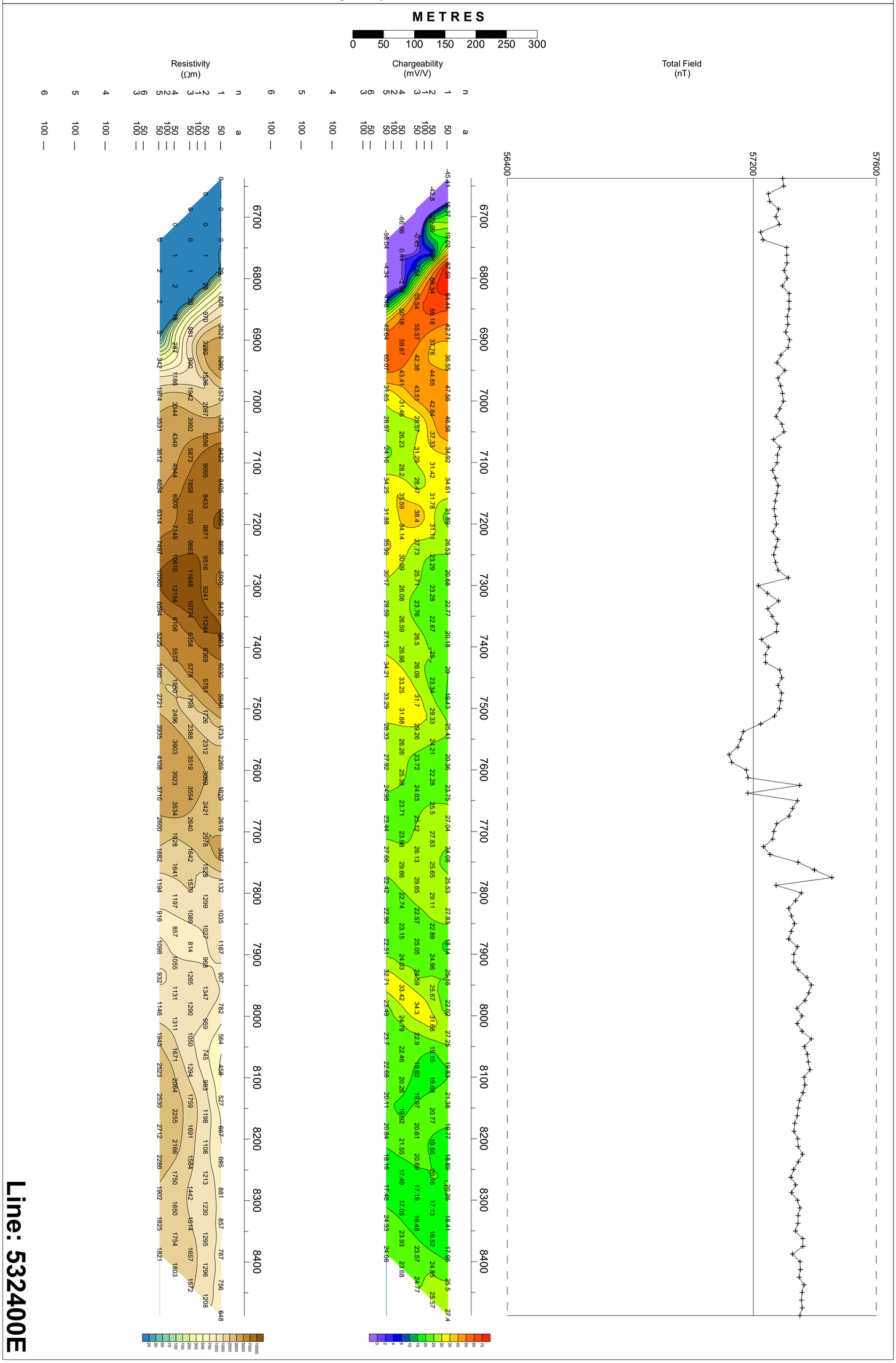
Rau Property, Mayo Area, Yukon

Line: 532400E

Induced Polarization Survey
Scott Geophysics Ltd.
June 2019

Pole-Dipole array
GDD GRx8-32
Pulse rate: 2 sec

Current electrode south of potentials
Mx chargeability window: 690-1050 msec after shuttoff



ATAC Resources Ltd.

Rau Property, Mayo Area, Yukon

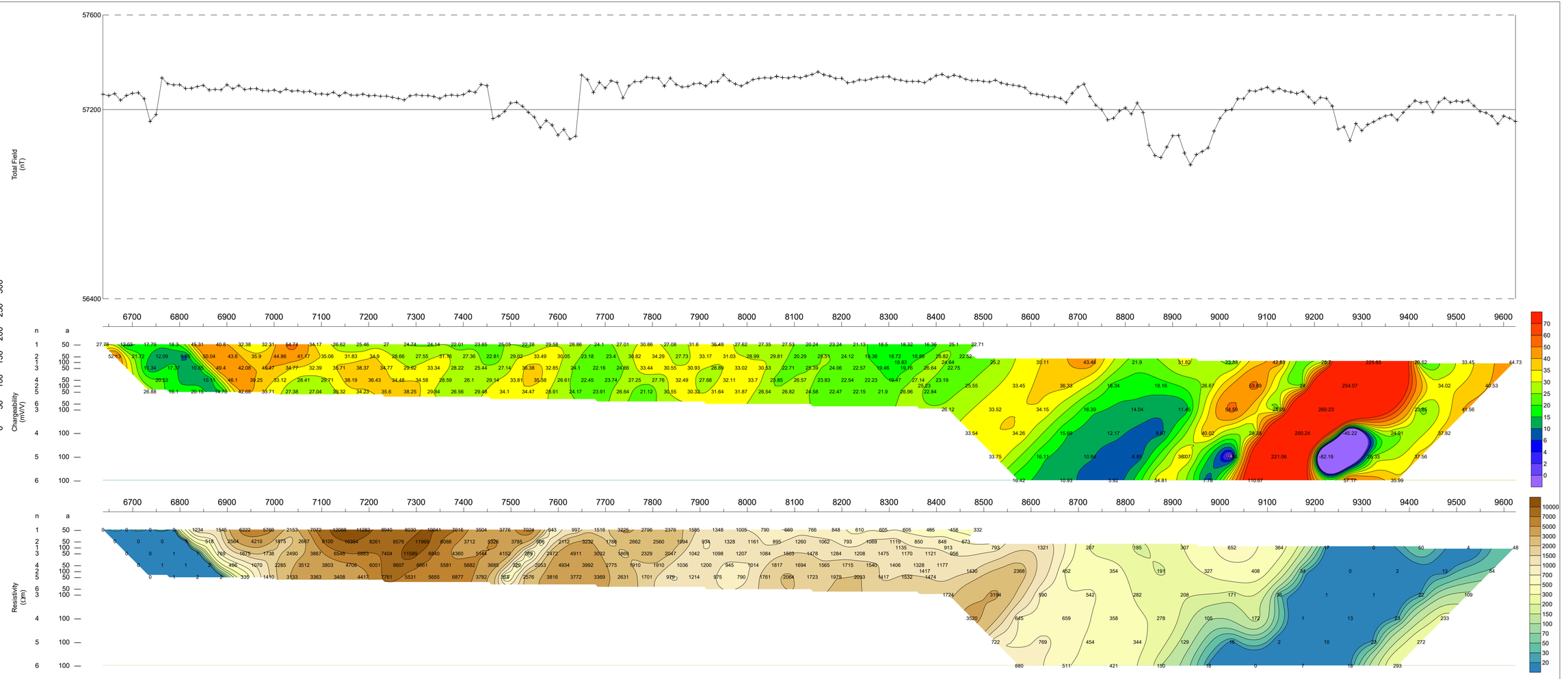
Line: 532500E

Induced Polarization Survey
Scott Geophysics Ltd.
June 2019

Pole-Dipole array
GDD GRX8-32
Pulse rate: 2 sec

Current electrode south of potentials
Mx chargeability window: 690-1050 msec after shuttoff

METRES 0 50 100 150 200 250 300



Line: 532500E

ATAC Resources Ltd.

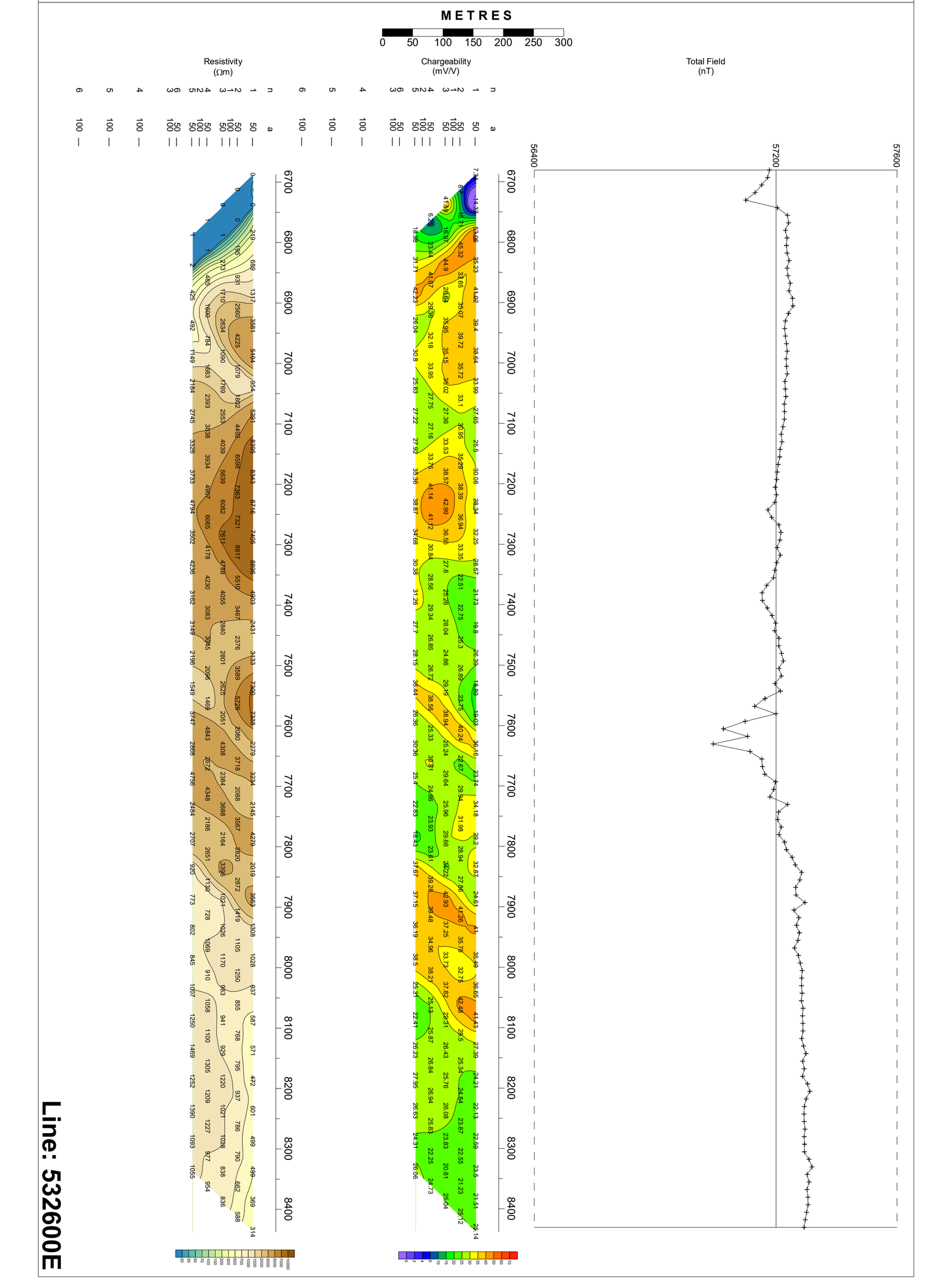
Rau Property, Mayo Area, Yukon

Line: 532600E

Induced Polarization Survey
Scott Geophysics Ltd.
June 2019

Pole-Dipole array
GDD GRx8-32
Pulse rate: 2 sec

Current electrode south of potentials
Mx chargeability window: 690-1050 msec after shuttoff



Line: 532600E

ATAC Resources Ltd.

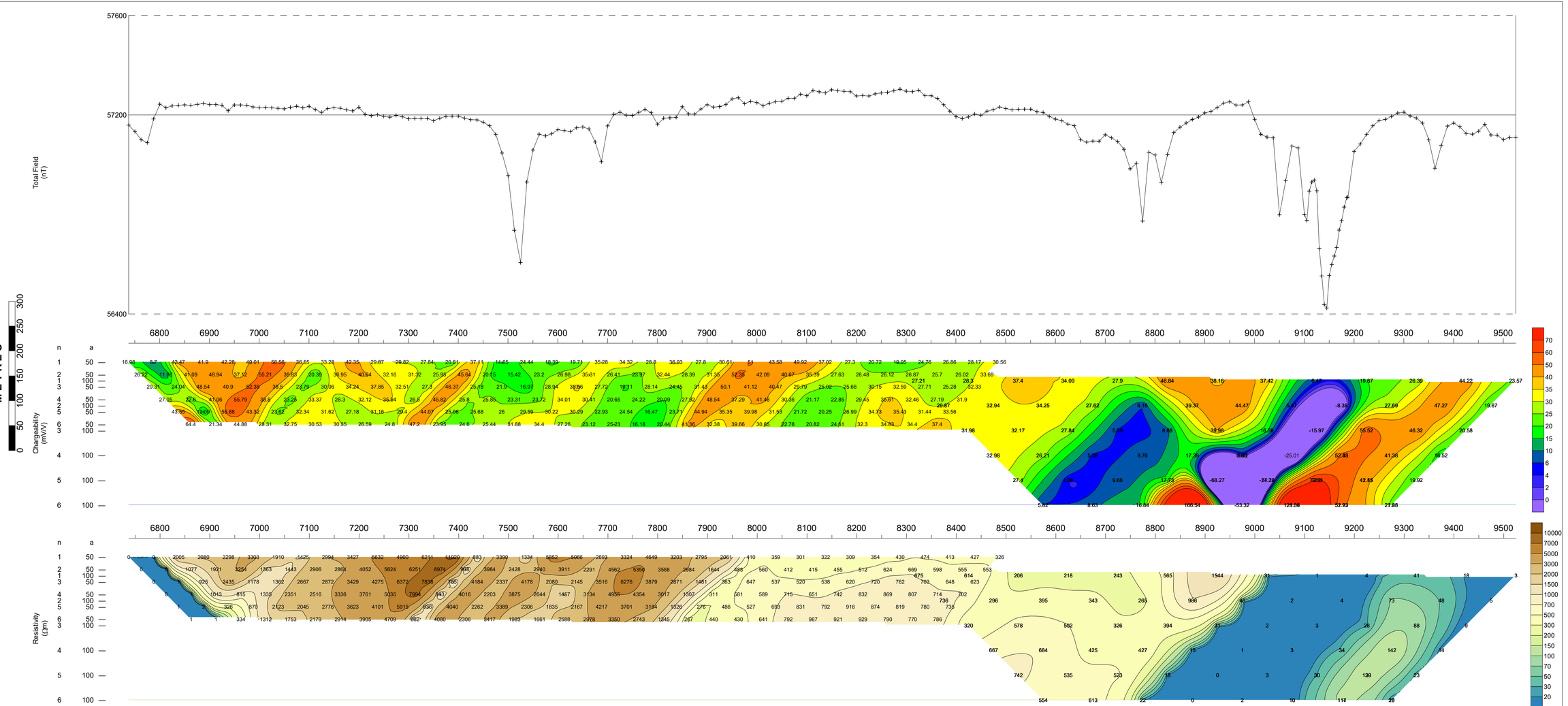
Rau Property, Mayo Area, Yukon

Line: 532700E

Induced Polarization Survey
Scott Geophysics Ltd.
June 2019

Pole-Dipole array
GDD GRx8-32
Pulse rate: 2 sec

Current electrode south of potentials
Mx chargeability window: 690-1050 msec after shutoff



Line: 532700E

ATAC Resources Ltd.

Rau Property, Mayo Area, Yukon

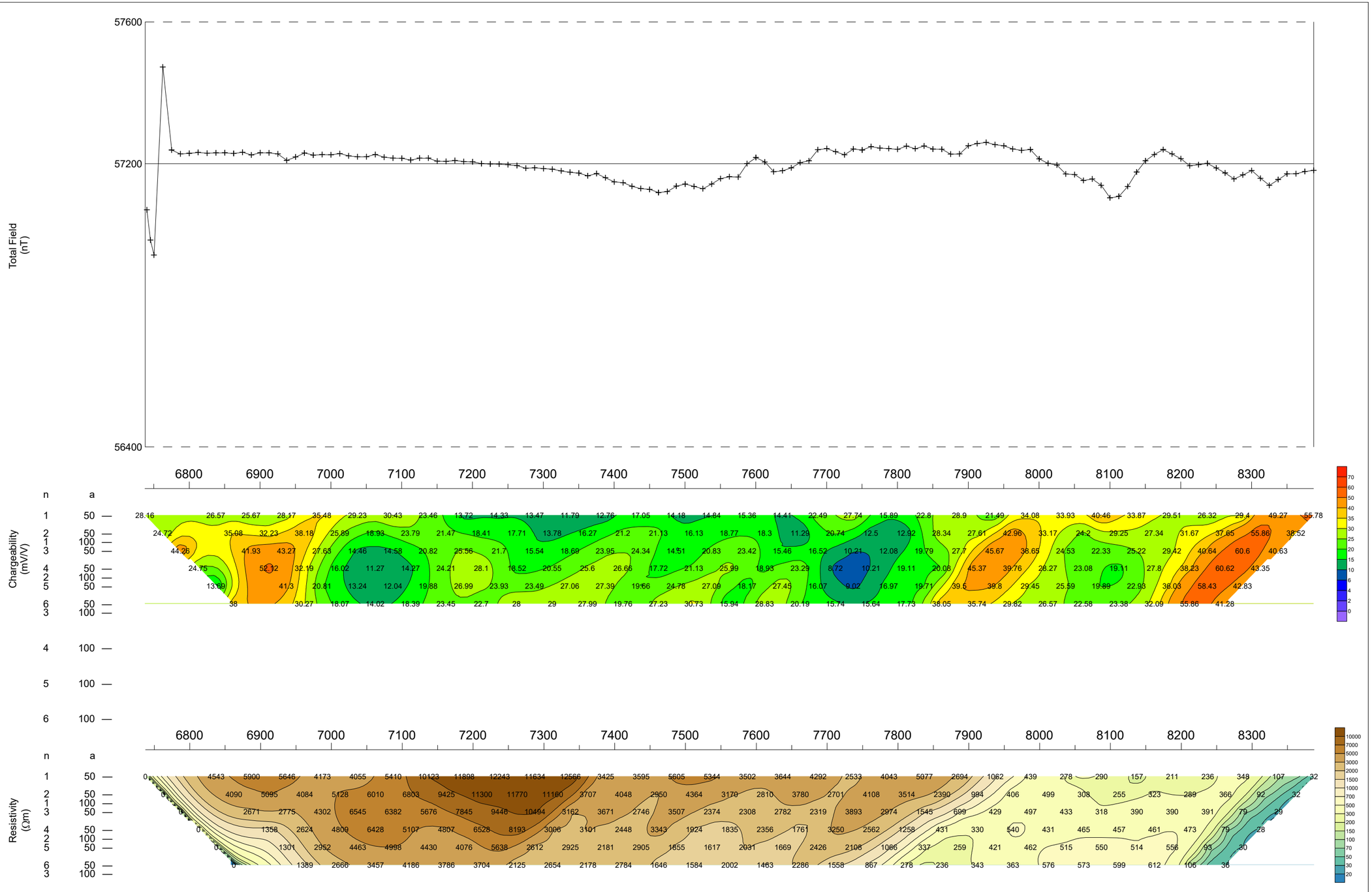
Line: 532800E

Induced Polarization Survey
Scott Geophysics Ltd.
June 2019

Current electrode south of potentials
Mx chargeability window: 690-1050 msec after shuttoff

Pole-Dipole array
GDD GRx8-32
Pulse rate: 2 sec

METRES
0 50 100 150 200 250 300



Line: 532800E

ATAC Resources Ltd.

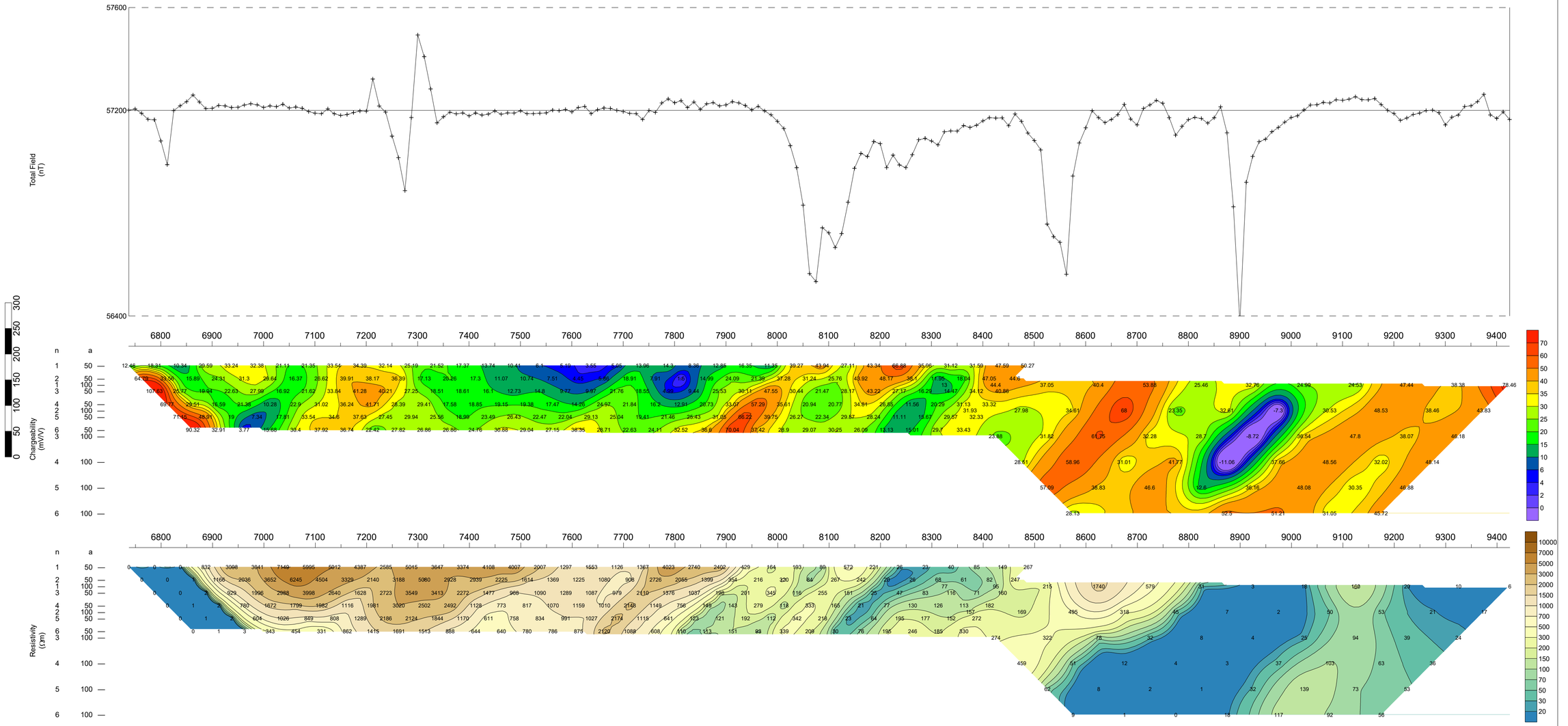
Rau Property, Mayo Area, Yukon

Line: 532900E

Induced Polarization Survey
Scott Geophysics Ltd.
June 2019

Pole-Dipole array
GDD GRx8-32
Pulse rate: 2 sec

Current electrode south of potentials
Mx chargeability window: 690-1050 msec after shutoff



ATAC Resources Ltd.

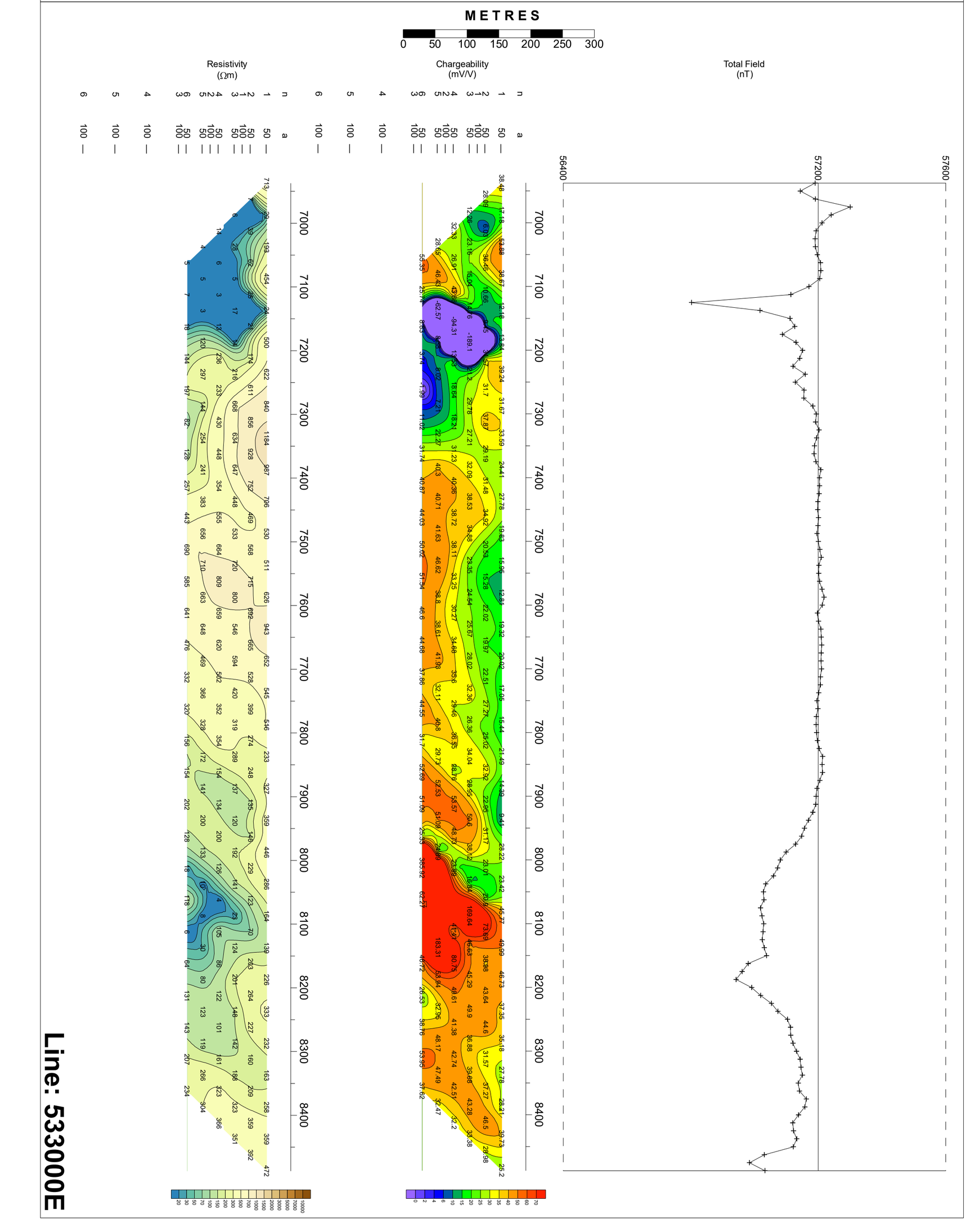
Rau Property, Mayo Area, Yukon

Line: 533000E

Induced Polarization Survey
Scott Geophysics Ltd.
June 2019

Pole-Dipole array
GDD GRx8-32
Pulse rate: 2 sec

Current electrode south of potentials
Mx chargeability window: 690-1050 msec after shuttoff



Line: 533000E

ATAC Resources Ltd.

Rau Property, Mayo Area, Yukon

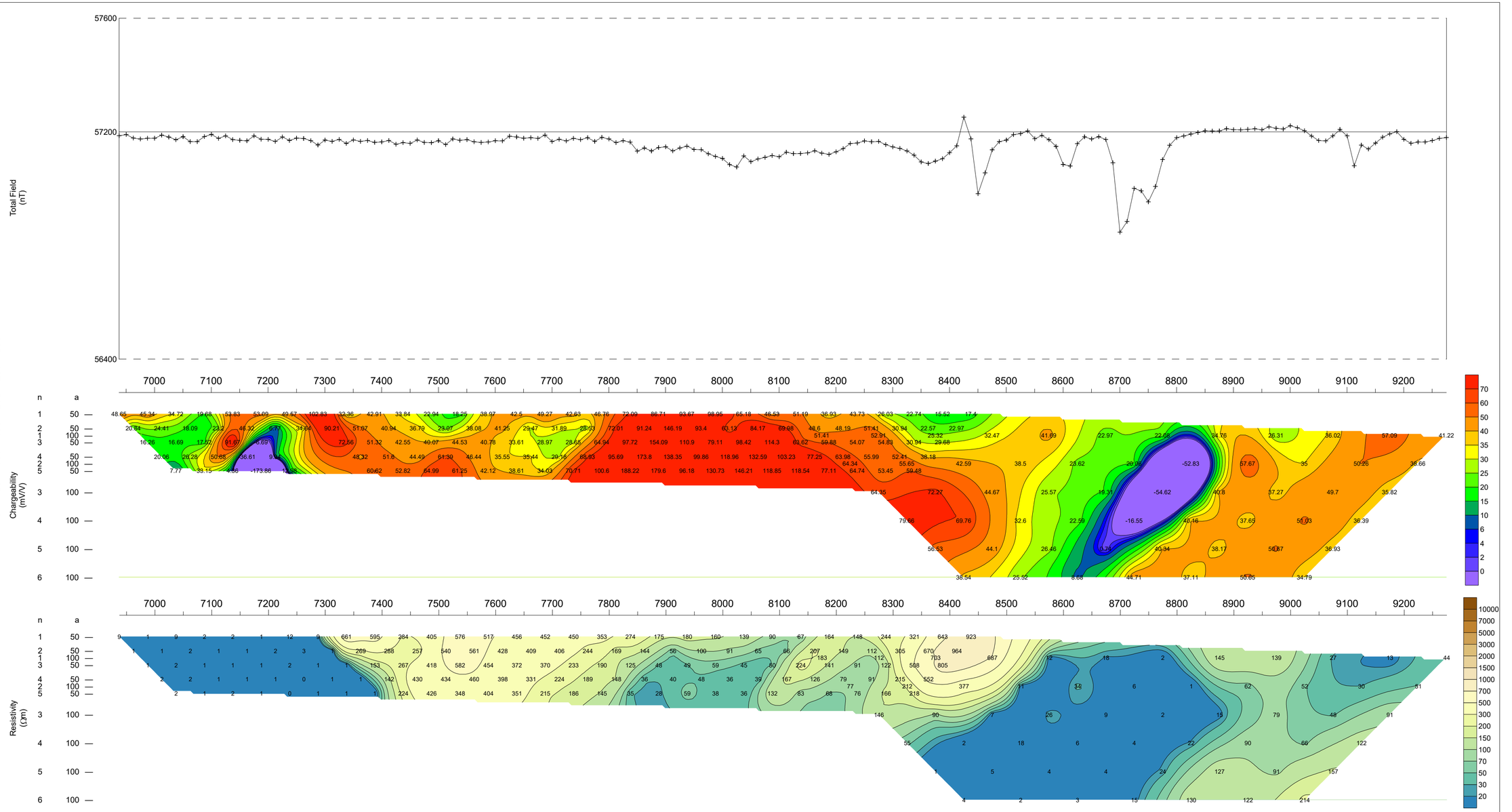
Line: 533100E

Induced Polarization Survey
Scott Geophysics Ltd.
June 2019

Pole-Dipole array
GDD GRx8-32
Pulse rate: 2 sec

Current electrode south of potentials
Mx chargeability window: 690-1050 msec after shutoff

METRES
0 50 100 150 200 250 300



Line: 533100E

ATAC Resources Ltd.

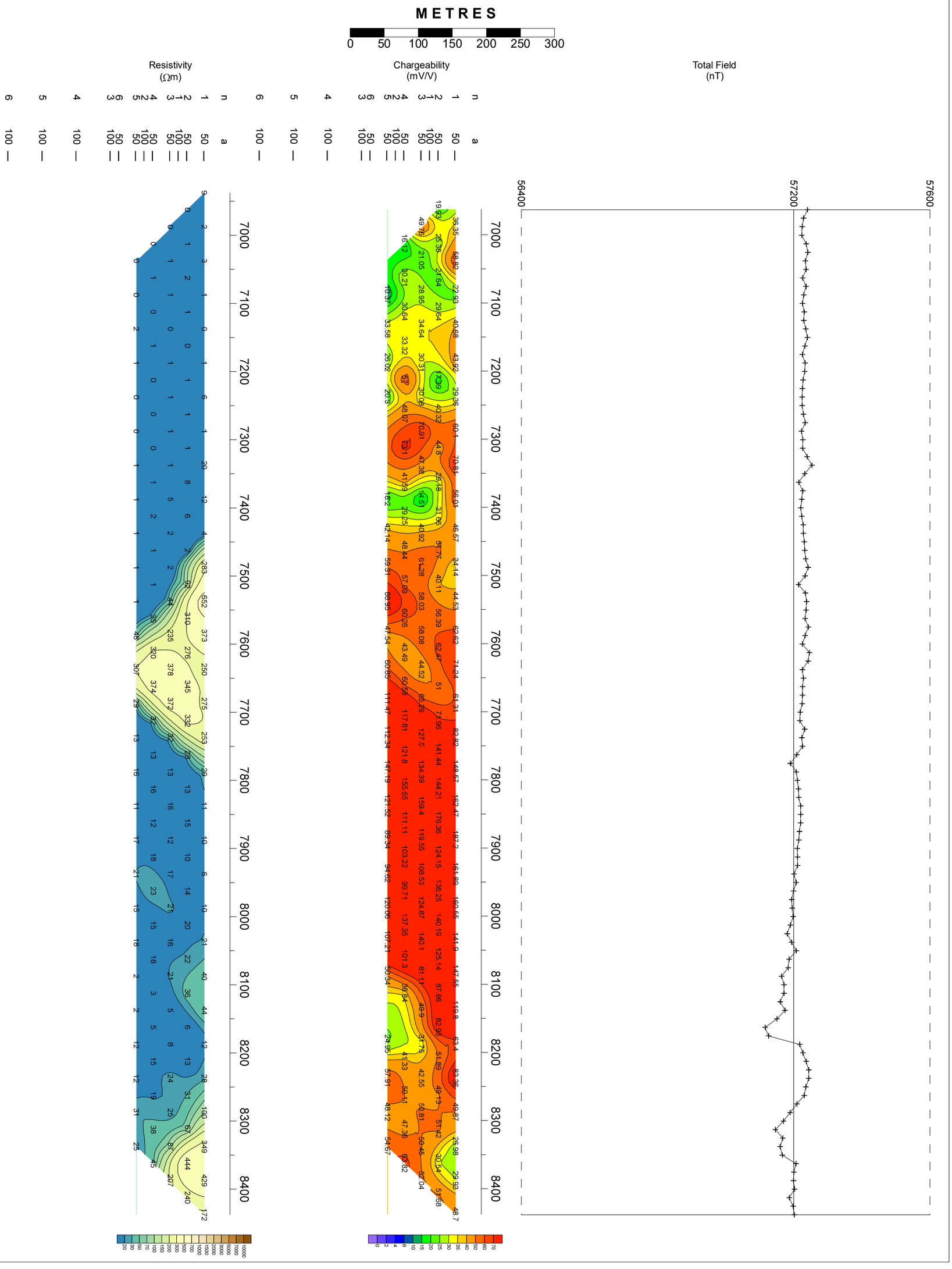
Rau Property, Mayo Area, Yukon

Line: 533200E

Induced Polarization Survey
Scott Geophysics Ltd.
June 2019

Pole-Dipole array
GDD GRx8-32
Pulse rate: 2 sec

Current electrode south of potentials
Mx chargeability window: 690-1050 msec after shuttoff



ATAC Resources Ltd.

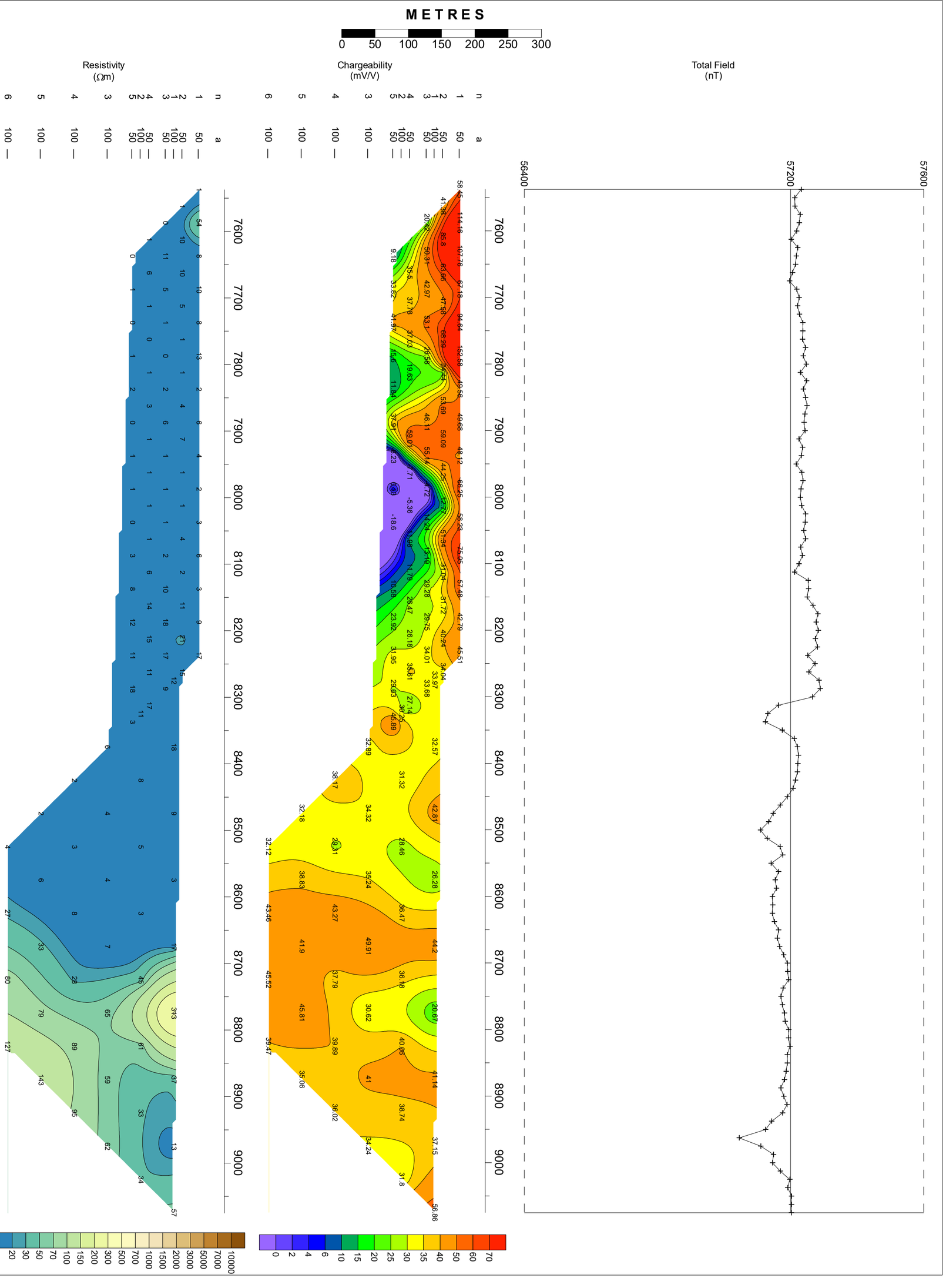
Rau Property, Mayo Area, Yukon

Line: 533300E

Induced Polarization Survey
Scott Geophysics Ltd.
June 2019

Pole-Dipole array
GDD GRx8-32
Pulse rate: 2 sec

Current electrode south of potentials
Mx chargeability window: 690-1050 msec after shuttoff



Survey Specifications

Survey performed: June 8 to July 8, 2019

Receiver: GDD GRx8
Transmitter: GDD TxII (5kW)
Pulse time: 2 sec
Mx receiver window: 690-1050 msec

Array: pole-dipole
a spacing, n separations:
a=100 m, n=1-6
Lines 531300E, 531500E, 531700E,
531900E, 532100E, 532300E,
532500E, 532700E, 532900E, 533100E, 533300E
a=50 m, n=1-5
Lines 532700E, 532800E, 532900E, 533000E
a=50 m, n=1-6
Lines 532000E, 532100E, 532200E,
532300E, 532400E, 532500E, 532600E,
533100E, 533200E, 533300E

Current electrode south of potential electrodes
Grid coordinates: WGS84 UTM Zone 8W

Chargeability
(mV/V)

70
60
50
40
35
30
25
20
15
10
6
4
2
0

N

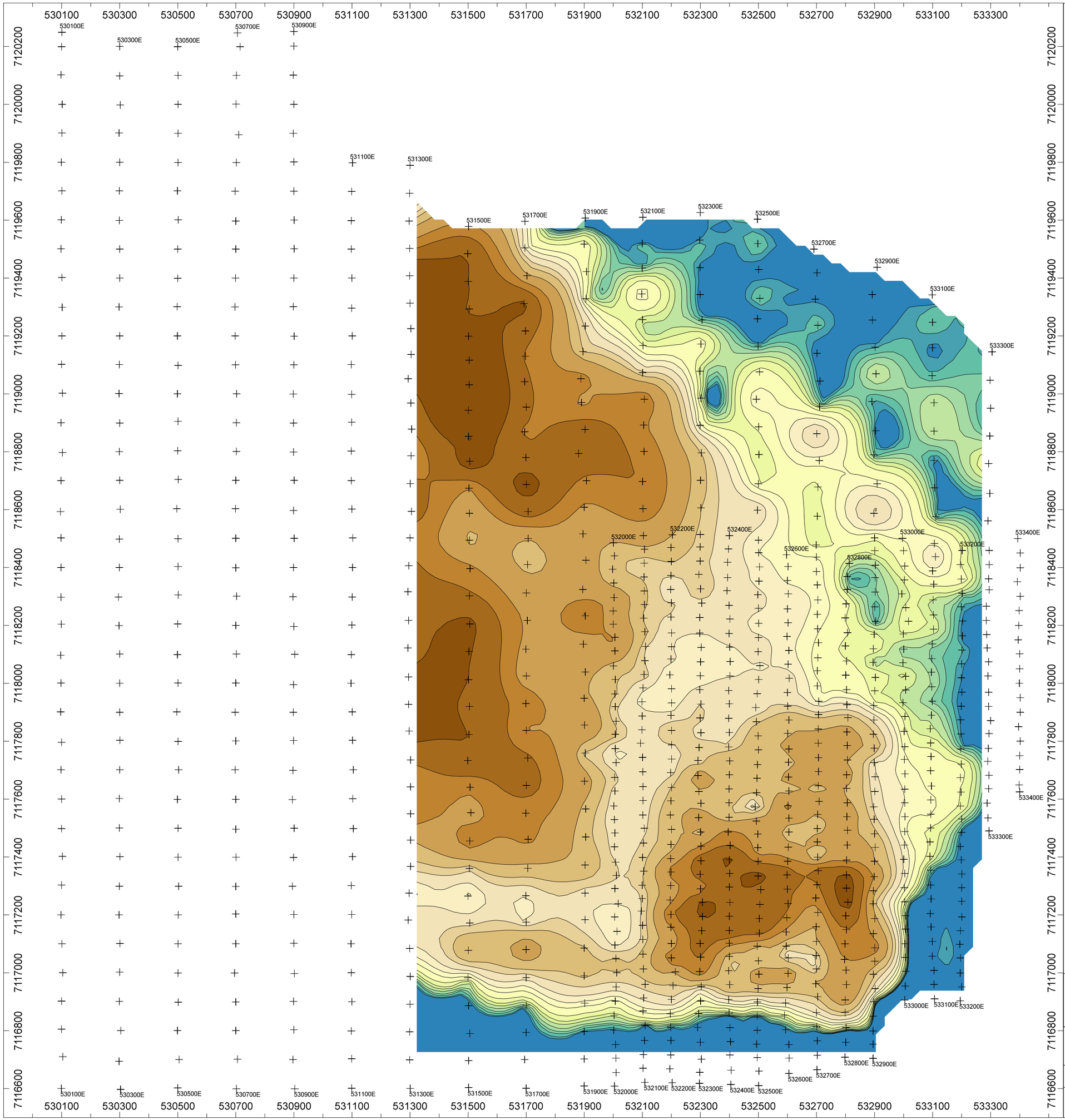
0 100 200 300 400

ATAC Resources Ltd.
Rau Property, Mayo Area, Yukon, Canada

Induced Polarization Survey, n=1 Chargeability
Contour Plan

Drawn by: Philip Fortin Date: July 2019

Scott Geophysics Ltd.



Survey Specifications

Survey performed: June 8 to July 8, 2019

Receiver: GDD GRx8
Transmitter: GDD TxII (5kW)
Pulse time: 2 sec
Mx receiver window: 690-1050 msec

Array: pole-dipole
a spacing, n separations:
a=100 m, n=1-6
Lines 531300E, 531500E, 531700E, 531900E, 532100E, 532300E, 532500E, 532700E, 532900E, 533100E, 533300E
a=50 m, n=1-5
Lines 532700E, 532800E, 532900E, 533000E
a=50 m, n=1-6
Lines 532000E, 532100E, 532200E, 532300E, 532400E, 532500E, 532600E, 533100E, 533200E, 533300E

Current electrode south of potential electrodes
Grid coordinates: WGS84 UTM Zone 8W

Resistivity (Ωm)

10000
7000
5000
3000
2000
1500
1000
700
500
300
200
150
100
70
50
30
20

N

0 100 200 300 400

ATAC Resources Ltd.
Rau Property, Mayo Area, Yukon, Canada

Induced Polarization Survey, n=1 Resistivity Contour Plan

Drawn by: Philip Fortin Date: July 2019

Scott Geophysics Ltd.

Survey Specifications

Survey performed: June-July, 2019

Survey magnetometer: GEM GSM-19 Overhauser,
Scintrex ENVI proton precession
Base magnetometer: Scintrex ENVI proton precession

Measurement: total field
Data interval: 5-12.5 metres
Diurnal corrections: base station

Profile base: 57200 nT
Grid coordinates: WGS84 UTM Zone 8W

Total Field Magnetics
(nT)

57325
57297
57281
57270
57261
57253
57246
57238
57230
57223
57215
57207
57199
57192
57185
57179
57172
57166
57159
57152
57143
57131
57118
57100
57074
57014

N

0 100 200 300 400

ATAC Resources Ltd.
Rau Property, Mayo Area, Yukon, Canada

Total Field Magnetometer Survey
Contour Plan

Drawn by: Philip Fortin Date: July 2019

Scott Geophysics Ltd.

Survey Specifications

Survey performed: June-July, 2019

Survey magnetometer: GEM GSM-19 Overhauser, Scintrex ENVI proton precession
Base magnetometer: Scintrex ENVI proton precession

Measurement: total field
Data interval: 5-12.5 metres
Diurnal corrections: base station

Profile base: 57200 nT
Data scale: 100 nT/cm
(at 1:5,000 scale)

Plot coordinates: idealized grid

530100E
530300E
530500E
530700E
530900E
531100E
531300E
531500E
531700E
531900E
532000E
532100E
532200E
532300E
532400E
532500E
532600E
532700E
532800E
532900E
533000E
533100E
533300E
533400E

METRES
0 50 100 150 200 250

ATAC Resources Ltd.
Rau Property, Mayo Area, Yukon
Total Field Magnetometer Survey
Stacked Profiles

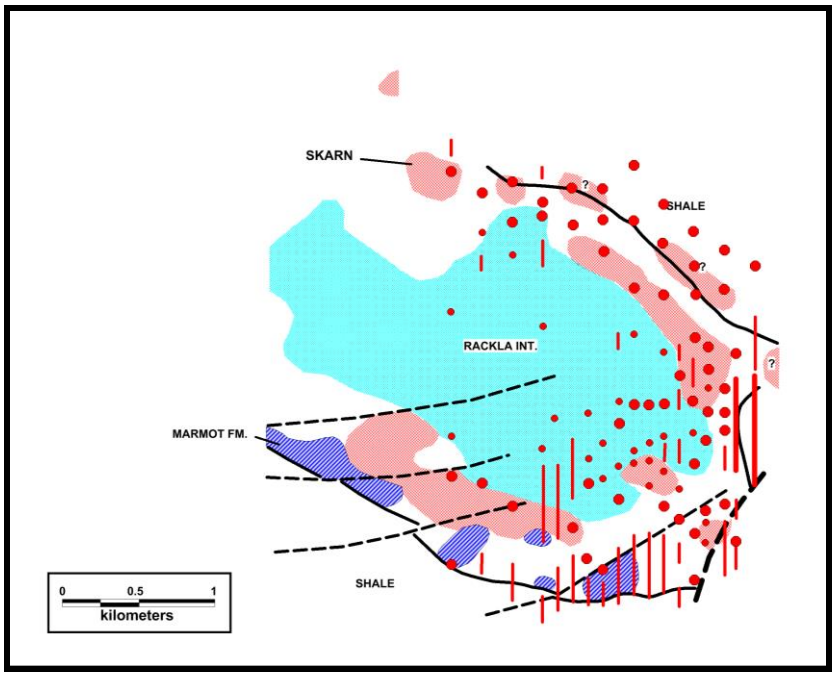
Drawn by: B Scott
Date: July 2019

Scott Geophysics Ltd.

APPENDIX VIII

WRIGHT GEOPHYSICS INTERPRETIVE REPORT

RAU PROPERTY
YUKON, CANADA
GROUND MAGNETIC & INDUCED POLARIZATION SURVEY – 2019
VOLUME 1



Interpretive Summary

James L. Wright M.Sc.
July 22, 2019

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Induced Polarization Survey

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REFERENCES

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APPENDIX B- LOGISTICS, INDUCED POLARIZATION SURVEY

APPENDIX C- INVERTED SECTIONS, RESISTIVITY / CHARGEABILITY

DVD HOLDER- DATABASE DVD

VOLUME 2: INVERSION SUMMARIES

INTRODUCTION

Ground magnetic and induced polarization (IP) surveys were completed over a portion of the Rau property by Scott Geophysics based in Vancouver, British Columbia. Objective is to follow- up interpreted skarns and gold showings in the vicinity of the Rackla intrusion. Wright (2017) interpreted two reversely magnetized skarns immediately east of the intrusion and ground work in the area also located mineralization in outcrop. The report by Wright (2017) should be reviewed to provide motivation for the program, as well as the larger scale geophysical setting.

Survey procedures, data processing and an interpretation along with target area identification are developed in the report. In addition to the two geophysical surveys; district scale topography and geology are included to provide supporting data for the interpretation. Results are provided in digital formats for two GIS products. The digital products include raw data, intermediate processed products, and final products in the form of MAPINFO and ARCGIS files. The GIS files include image, contour and postings for the various data sets and derived products. In addition, KMZ and VOXLER files are provided for all image and vector products. All files are located on a DVD in a sleeve at the rear of the report. A README file on the DVD explains the file / folder organization.

Figure 1 shows the property location relative to towns and topography in the Yukon.

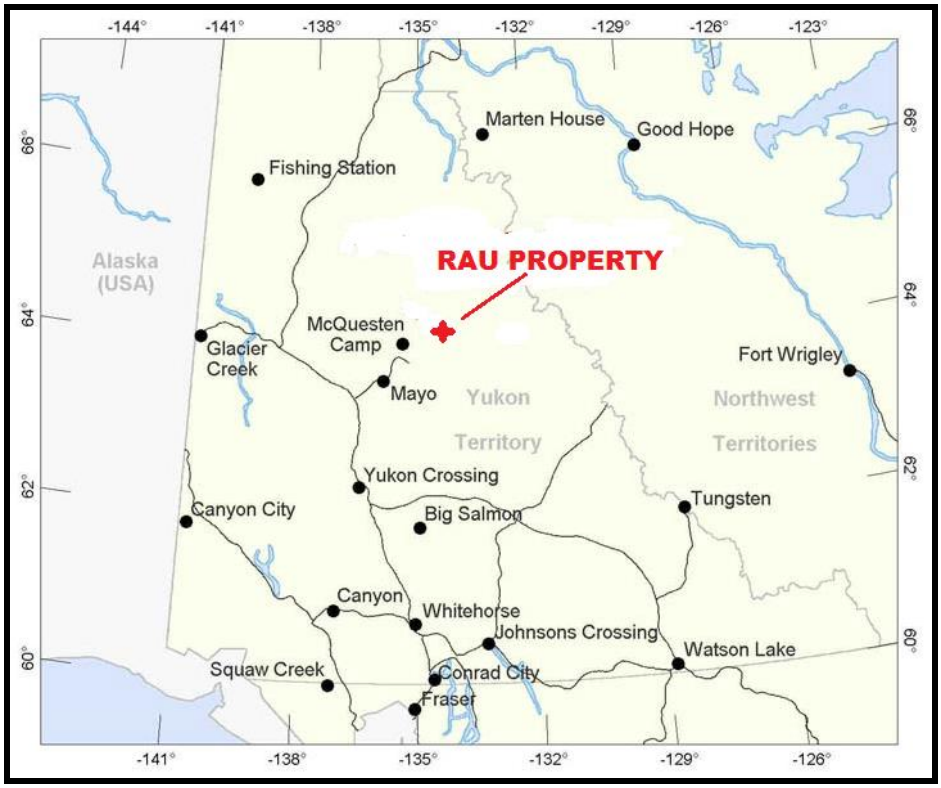


FIGURE 1: Rau Property Location, Yukon, Canada

SURVEY PROCEDURE

Both the magnetic and IP surveys were conducted on a grid established by Scott Geophysics as presented in Figure 2. Coordinate system used for all work is **NAD 83 / Zone 11N**. Lines were established using a Garmin GPS for line navigation and stations chained with a 100 m chain. Once established all station were resurveyed with the Garmin GPS. Line numbers correspond to the UTM easting. Chaining of stations followed by the GPS survey resulted in station positions being short of the planned locations due to short chaining errors. These errors amount to approximately 50 m for the shorter lines and as much as 200 m for the longer lines. **Station numbers were assigned based on the <u>planned</u> UTM location, not the GPS location**. **Thus caution must be exercised when dealing with station numbers, which are simply identifiers and should not be inferred as indicating UTM coordinates.**

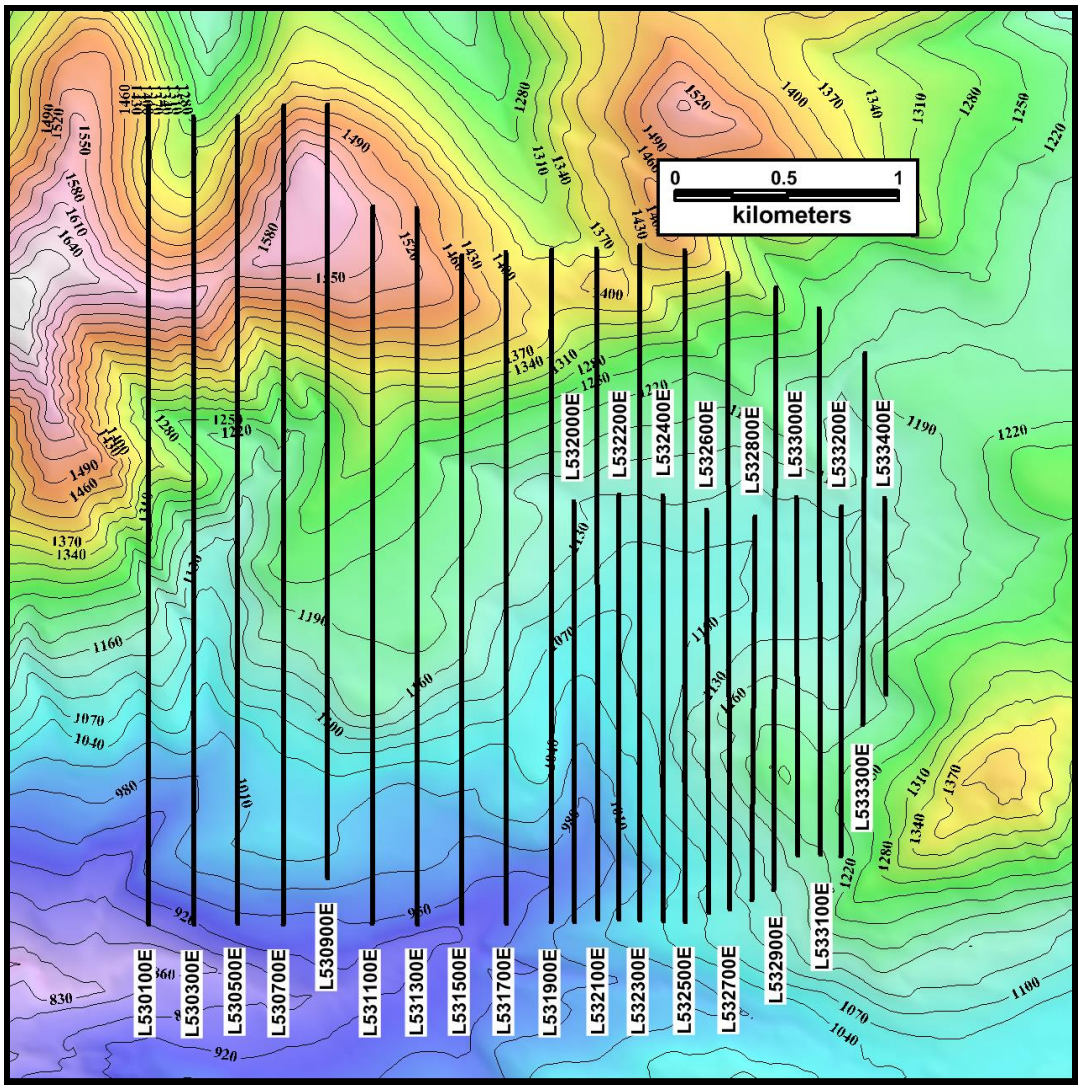


FIGURE 2: Geophysical Survey Grid over Topography

Ground Magnetic Survey:

The 2019 gravity data set is composed of 5483 stations acquired along 100 and 200 m spaced north-south lines and 12.5 m stations. Figure 3 presents a complete station posting over topography. Instrumentation consisted of three Scintrex ENVI magnetometers. One magnetometer was operated as a base station at all times of data acquisition and the data corrected for diurnal variations. Comparison of the survey data with the Kathy ground magnetic survey (see Wright, 2017) reveals good agreement. Additional logistical details are provided in Appendix A.

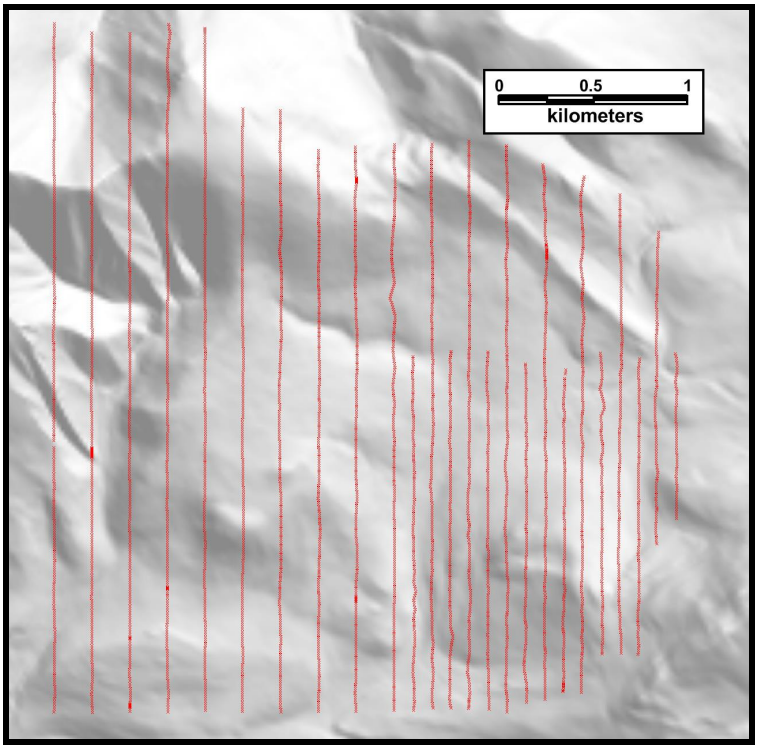


FIGURE 3: Ground Magnetic Station Posting over Gray Shade Topography

Induced Polarization Survey:

The IP survey used a pole-dipole array with a = 50 and 100 m and reading levels n = 1 – 5/6. Instrumentation consisted of GDD Rx8-32 receivers and a GDD Tx II transmitter. Current levels averaged between one to two amps with a very wide range of primary voltages spanning several volts down to well less than a millivolt. The corresponding resistivities range from several thousand ohm-m in the carbonate sediments to less than one ohm-m in the shales. As would be expected, electric noise in the shales resulted in a number of chargeability no-readings, while the resistivities were generally readable.

IP data were acquired with 50 m dipoles on the south ends of lines 532000E to 533300E with 100 m dipole extension to the north on odd numbered lines from 532100E to 533300E. The 50 m portions read n = 1-5 and the 100 m extensions read n = 1-6. Lines 531300E to 531900E used a 100 m dipole and n = 1-6 array. Figure 4 shows a typical

field plot provided by Scott Geophysics. Additional logistical details are provided in Appendix B.

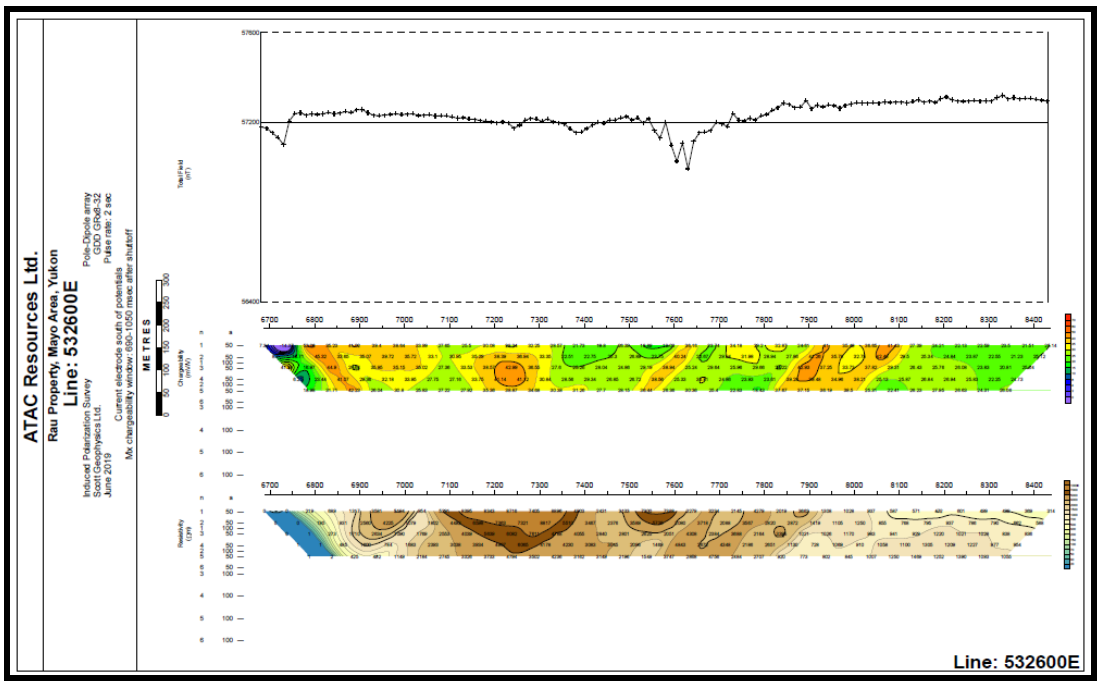


FIGURE 4: L532600E Field Plot

DATA PROCESSING

Ground Magnetic Survey:

The diurnally corrected total magnetic intensity (TMI) data were gridded with an interval of 25 m or 25% of the detail line spacing with a kriging algorithm. Reduction to the pole (RTP) was applied to the TMI to confirm little change due to the high field inclination of ~78°, once confirmed this permits application of all subsequent processing to the TMI. The TMI was upward continued (UC) to produce a regional which subtracted from the TMI yields a residual (RES). A first vertical derivative (VD) and total horizontal derivative (HG) were then produced from the TMI, followed by tilt derivative (TD) and analytic signal (AS) processing. The eight data types (i.e. TMI, RTP, UC, RES, VD, HG, TD, AS) were imaged, mask to the survey limits and contoured for input to MAPINFO and ARCGIS. Color bars with contour interval and measurement unit were embedded into the images. Figure 5 shows a collage of the eight data types.

Three additional data products include all data types exported as KMZ files, one each for the image and contours. Figure 6 shows and example from Google Earth. The second product is import of the digital line data into a 3D format as Figure 7 shows for the VOXLER 3D viewer. Finally, all the individual line profiles were profiled and imported into the GIS application, placed above the survey line in plan as Figure 8 demonstrates.

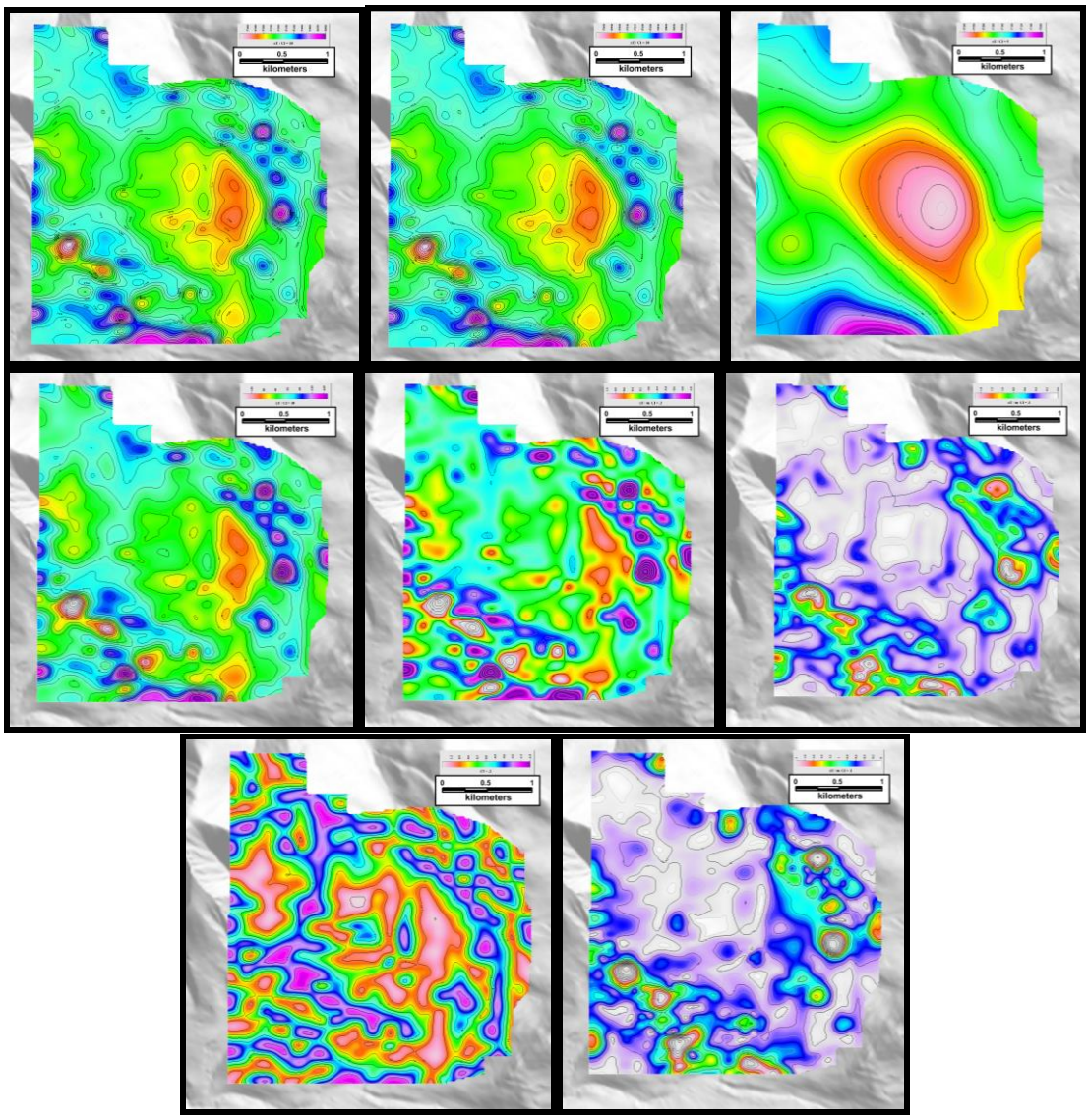


***FIGURE 5: Ground Magnetic Survey Processed Data Types (TMI, RTP, UC,* RES, VD, HG, TD, AS)**

Induced Polarization Survey:

Numerical data for the IP survey includes apparent resistivities in ohm-meters (ohm-m) and chargeabilities in milliseconds (msec). These data were provided in text files for each of the twenty-five lines and line extensions. One file contains the averaged and edited data, and the other contains station survey locations in UTM 8N / NAD 83 coordinates.

Data quality for the survey is generally good except for portions of the lines which extend on to the shale units. In these areas the chargeability data are marginal and in certain locations were deleted prior to processing.

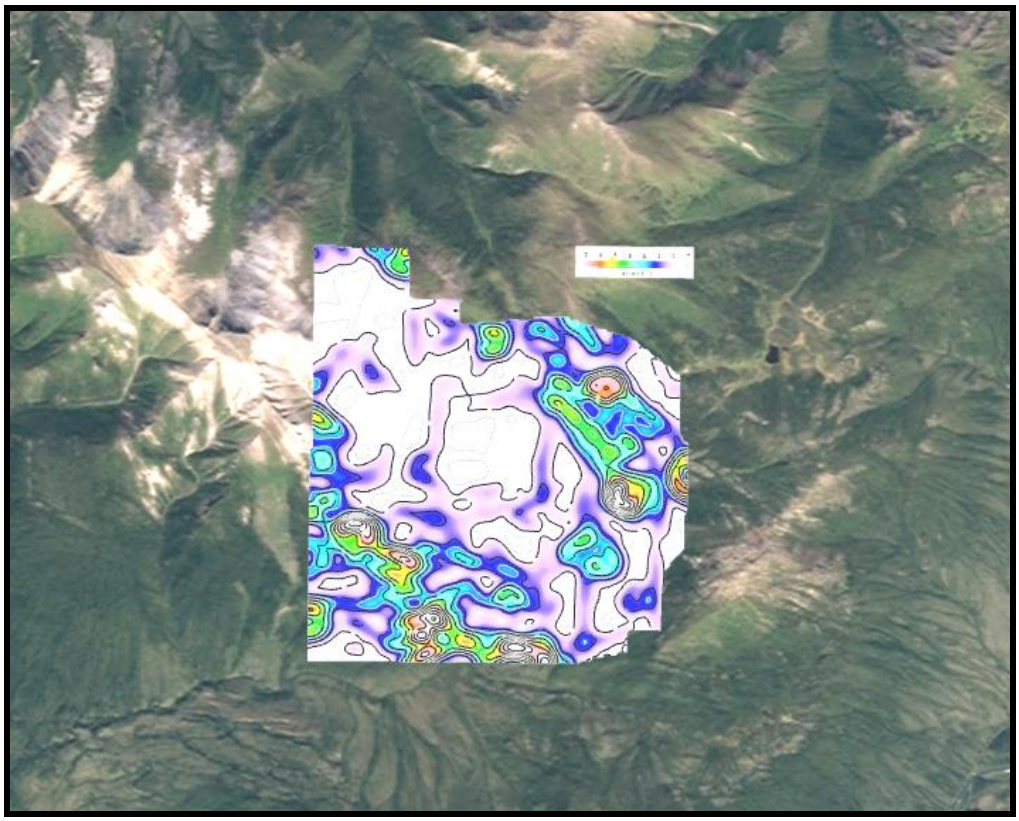


FIGURE 6: Total Horizontal TMI Gradient over Google Earth Image

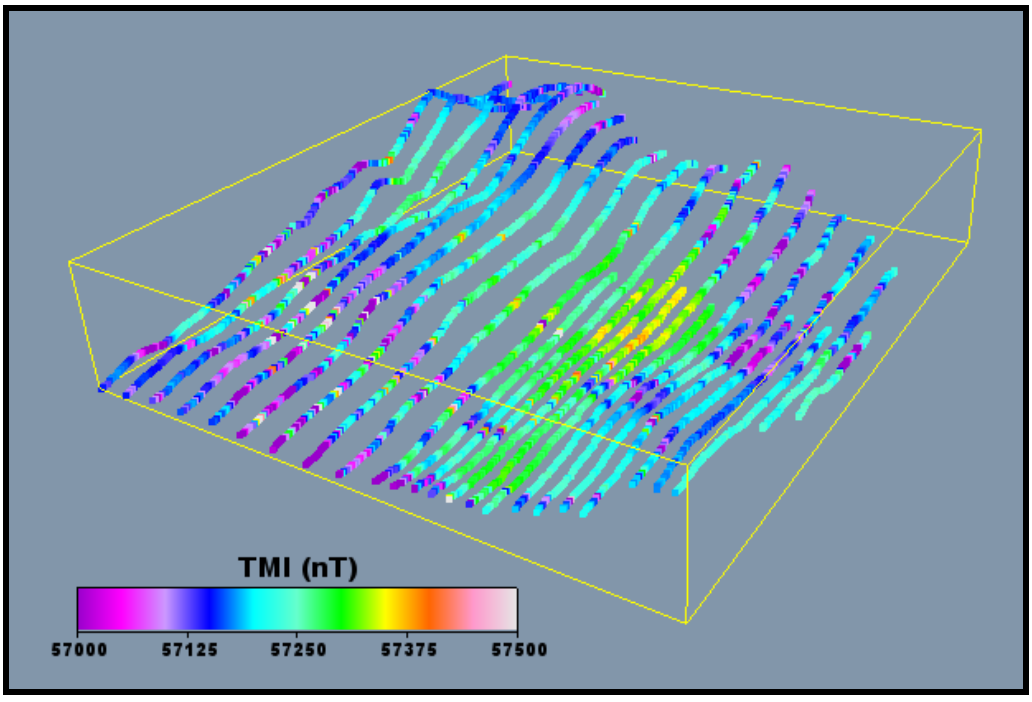


FIGURE 7: VOXLER TMI Line Data Draped on Topography

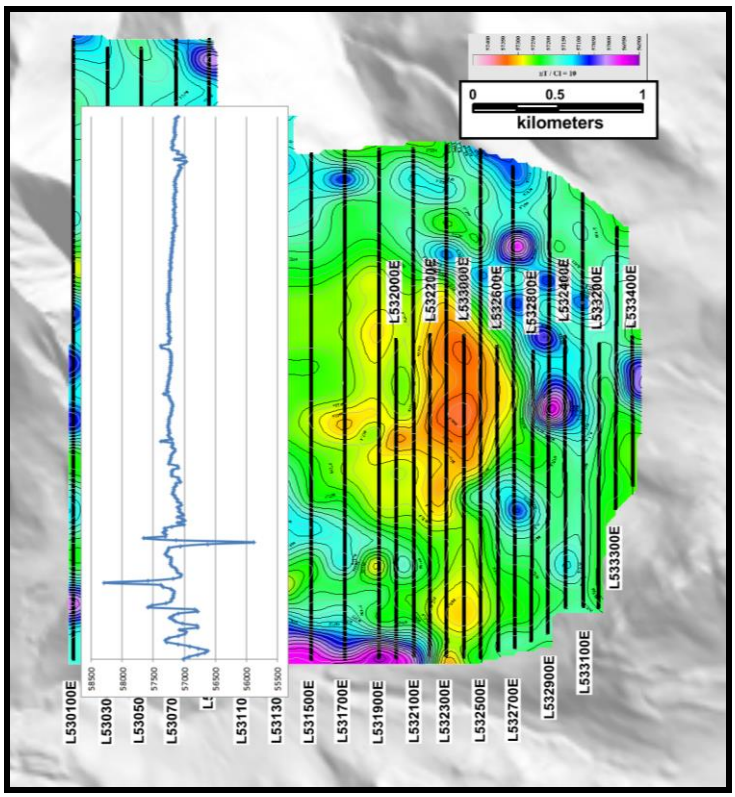


FIGURE 8: Line 531300E Magnetic Profile over TMI Image

The dipole-dipole data received complete 2D inversions for both the chargeabilities and resistivities. The processing flow commenced with verifying conversion of the data to the proper format for input to the Zonge TS2DIP 4.20i smooth model Res / IP inversion program followed by inversion. An accompanying document contains inversion / model summaries for each line. Figure 9 shows an example summary. The top image is the inverted model, below are the observed and calculated data based upon the model. The data are arranged by line in the accompanying PDF document (i.e. Volume 2).

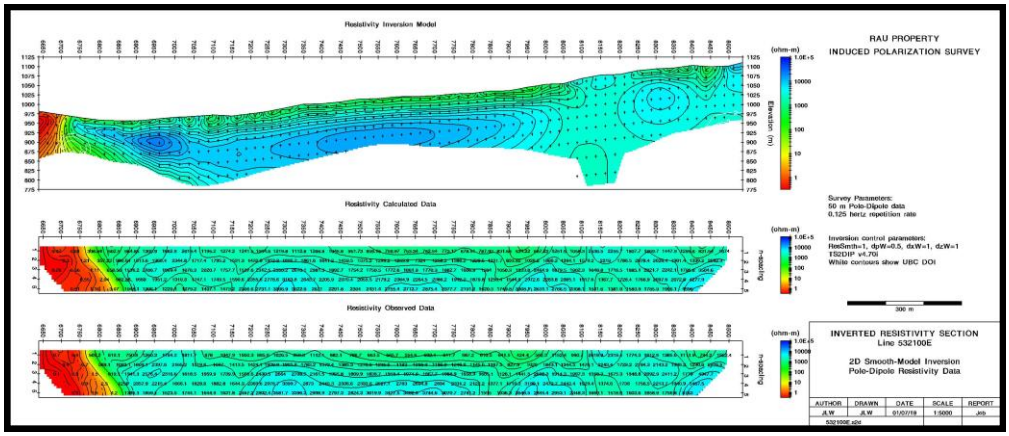
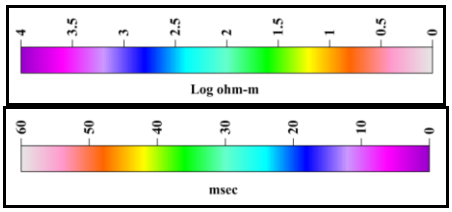


FIGURE 9: LINE 532100E Inversion Summary

The IP inversion model for a given line extends laterally from the outer electrode / pot locations to a depth of approximately two dipole lengths determined by the 1% sensitivity limit. Within the model are discretization blocks ranging from half dipole width / height near surface to approximately a full dipole height at depth.

Prior to processing, the resistivity data were converted to logarithms base ten. The gridded resistivity and chargeability inverted data were colored and contoured with intervals of 0.1 and 1 respectively. Color bars for the resistivity and chargeability follow. This color palette applies to all products; including GIS, depth slices and VOXLER.



Induced Polarization Color Bars

MAPINFO and ARCGIS files for the inverted sections with contours embedded were generated by rotating sections to the east into plan about the line trace. Appendix C contains the inverted sections over the residual ground magnetics. Map slices for the 0 – 50 m, 50 – 100 m, 100 – 200 m and 200 – 400 m **depth** intervals were developed for both the chargeability and resistivity. Figure 10 shows an example. It is important to note these are depth below surface intervals and not fixed elevations. The depth slices were also imported into the GIS applications.

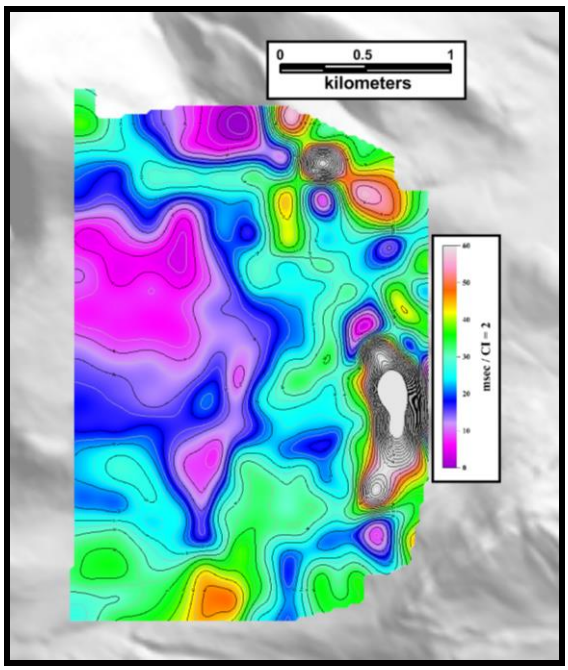


FIGURE 10: Example Depth Slice 100 – 200 m Chargeability

All the section inversions were combined and imported into the VOXLER three dimensional visualization software. Figure 11 presents an example from the program. Also depth slices and inverted sections were exported to KMZ file as Figure 12 shows.

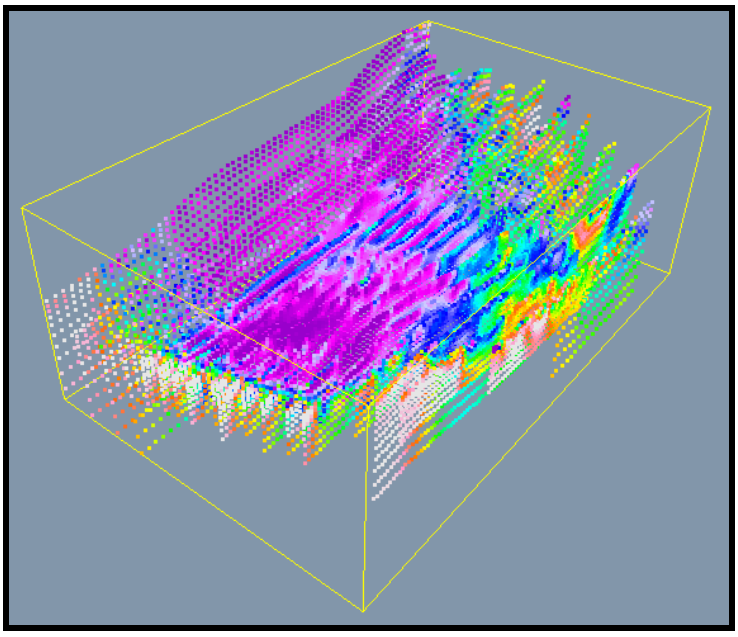


FIGURE 11: Inverted Resistivity Stacked Sections Looking Northwest

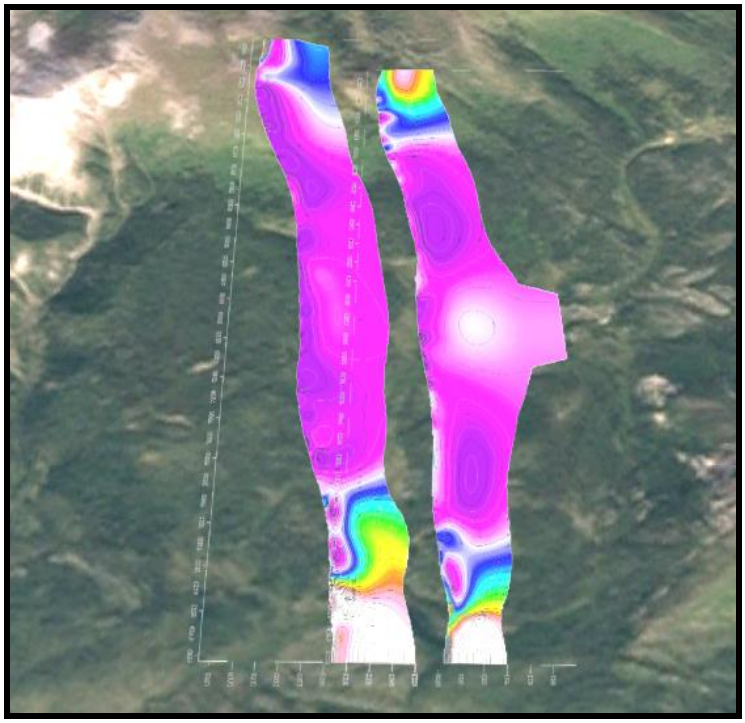


FIGURE 12: Inverted Resistivity Sections over Google Earth Image

INTERPRETATION

The report by Wright (2017) presents a larger picture of the geophysical setting and motivation for the 2019 geophysical surveys. Figure 13 reproduces Figure 10 from Wright (2017), which shows airborne TMI data from the VTEM electromagnetic survey. Features of note include the Marmot formation depicted with green polygons and gabbro intrusive with brown polygons. The Marmot formation converges with the Rackla intrusion down from the northwest and wraps around the southern side to continue to the east. A wedge of gabbro intrusions converge with the Rackla intrusion from the east. The Marmot formation produces moderate strength magnetic highs and the gabbro strong magnetic lows due to reverse remnant magnetization. Concentric structures related to the McQuesten dome control distribution of both units, as well as the Rackla intrusion.

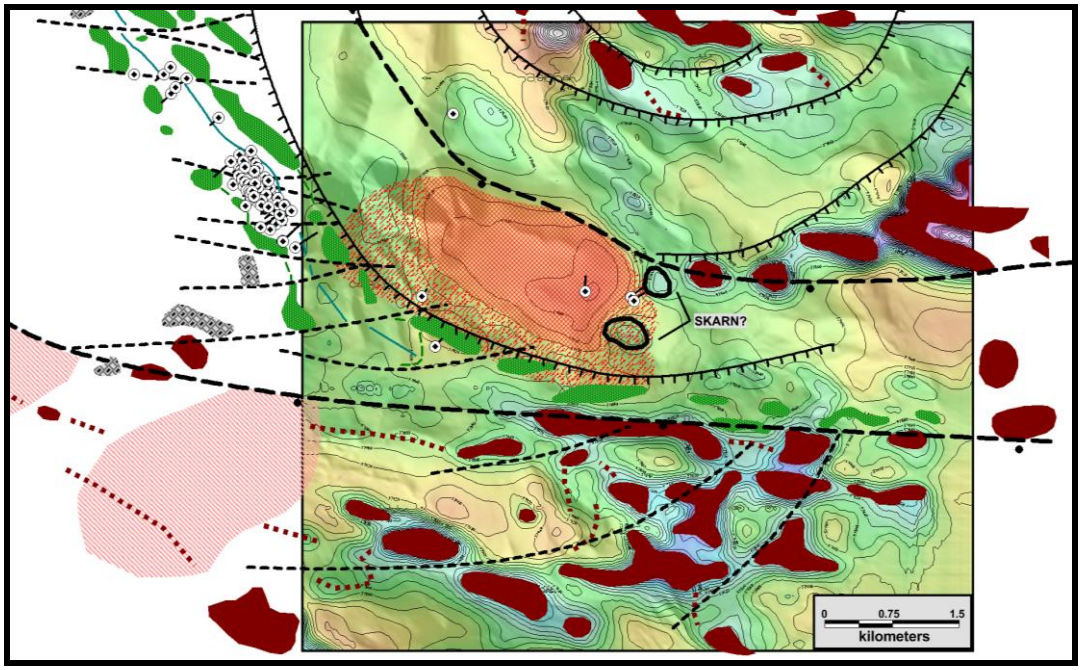


FIGURE 13: Regional Airborne Magnetics with Interpretation for Kathy Area

The residual ground magnetic data are presented in Figure 14 with a qualitative interpretation overlain. A less cluttered image of the interpretation is provided in the lower image with along with IP responses. Features on the interpretation include the Rackla intrusion interpreted primarily from the magnetics and the shale contact as a solid black line interpreted primarily from the IP resistivity. The Marmot formation produces a string of magnetic highs across the south edge of the survey immediately north of the shale contact, which could well be structural as Figure 13 suggests. Surrounding the intrusion and in close contact are interpreted skarns identified with cross-hatch polygons. These are based on the negative magnetic response and proximity to the intrusive contact. Similar magnetic lows fall further to the northeast and could well be gabbro, again as Figure 13 suggests.

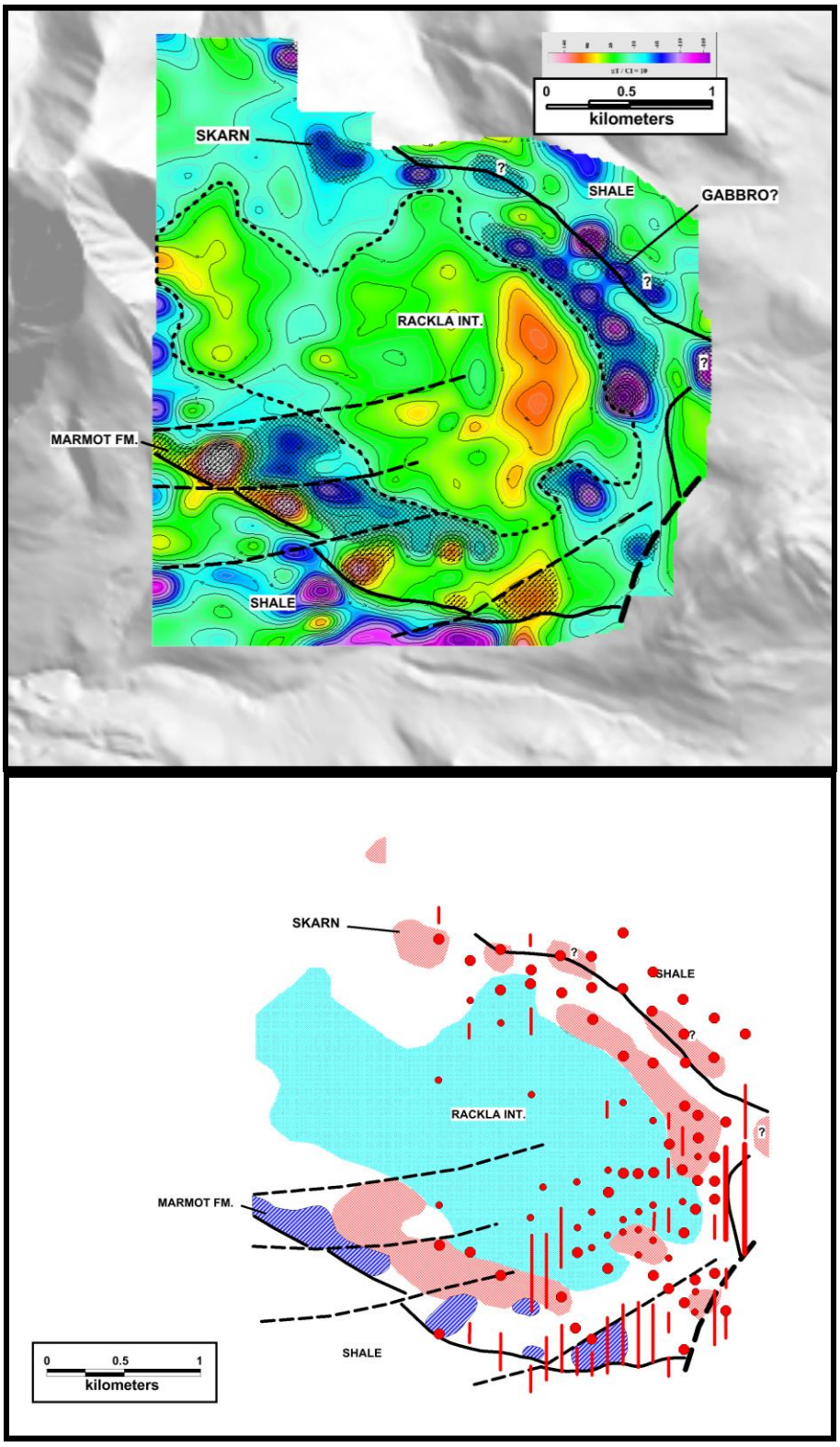


FIGURE 14: Residual Ground Magnetics with Interpretive Overlay

Magnetic response of the Rackla intrusion is positive, low amplitude, relatively uniform, which contrasts with the more robust responses of the Marmot formation and possible skarn /gabbro. Several east-northeast structures, denoted with dashed black lines, cut the southern shale contact with small lateral offsets noted. Wright (2017) had interpreted similar features from the airborne data. A major north-northeast structure, poorly resolved in the data, cuts the southeast corner of the survey area and imparts a major disruption to the southern shale contact.

Chargeability IP anomalies are summarized in the lower image of Figure 14. Red dots indicate line locations of compact, high angle anomalies. These are divided into strong and weak responses as indicated by the dot size. Thin, surface chargeability layers are indicated with red lines of two weights depending upon strength. These surface layers do not appear to be related to mineralization and could be produced by permafrost in some way.

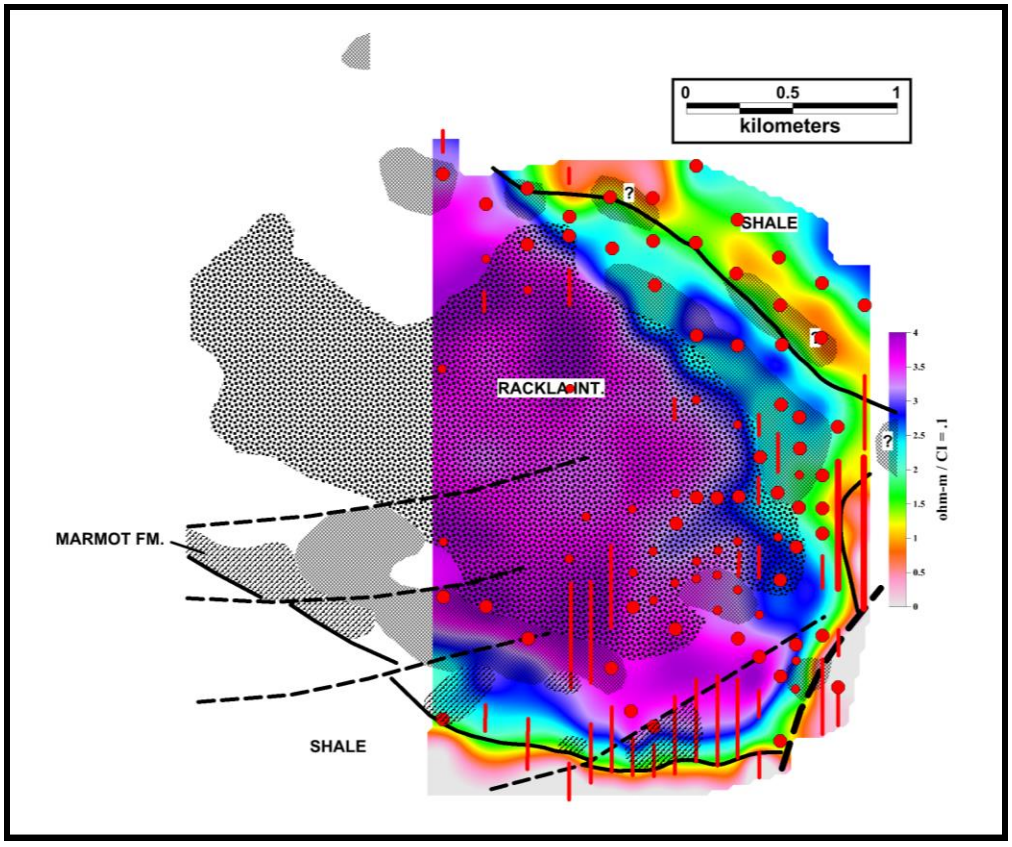


FIGURE 15: Resistivity 100 – 200 m Depth Slice with Interpretation

The resistivity depth slice for 100 -200 m is overlain by the interpretation in Figure 15. Very clear in the image is the high to low resistivity transition at the shale contact with either the intrusion and/or carbonate rocks. Resistivities less than 10 ohm-m are typical of the shale while the intrusion and/or overlying carbonates exhibit resistivities in excess of 1000 ohm-m. The shale contact is mostly separated from the intrusive contact, which is based on the magnetics, by approximately 300 – 600 m, depending upon the position

along the contact. This gap is interpreted as being filled by carbonates, as well as the bulk of interpreted skarns and majority of chargeability anomalies. Interestingly, the resistivity depth slice also indicates a contact which is roughly along the contact of the intrusive and carbonates. This contact is not as definitive as the shale contact, but does separate resistivities on the order of 200 ohm-m for carbonates from >1000 ohm-m interior to the intrusion.

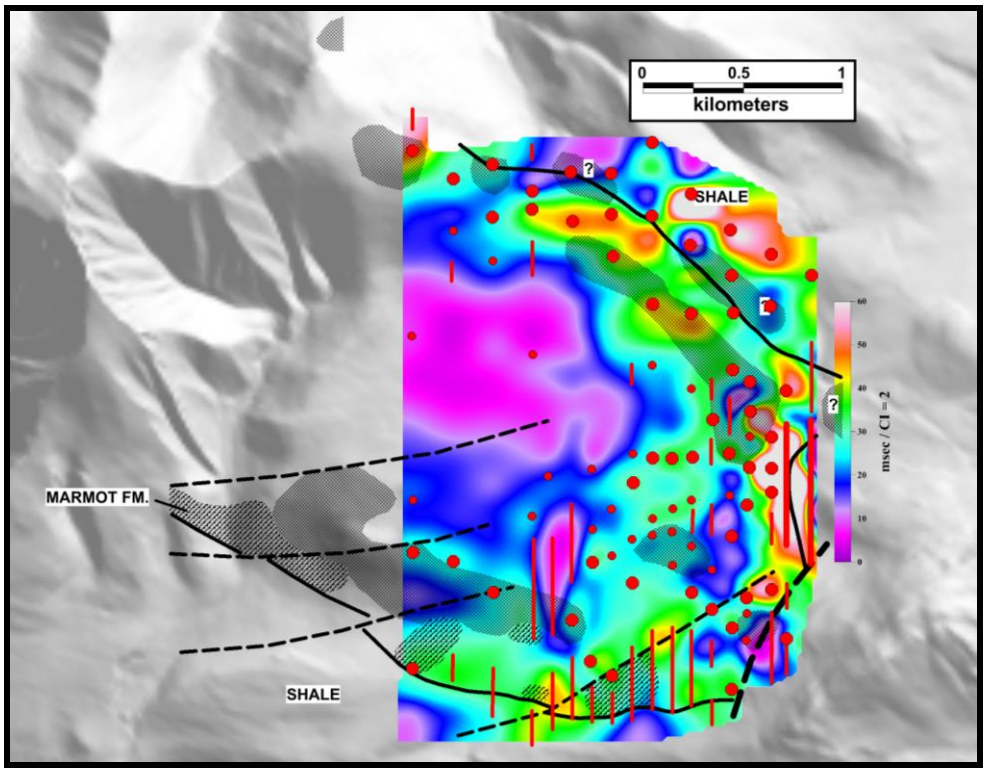


FIGURE 16: Chargeability 50 – 100 m Depth Slice with Interpretation

Figure 16 shows the shallower 50 – 100 m chargeability depth slice with interpretation, but excluding the intrusive polygon for clarity. As should be expected, the red chargeability anomaly indicators fall along highs in the depth slice. In detail, dots fall along linear, compact highs while the lines fall along wide flat responses. A number of strong chargeability highs are located well within the shale area and likely are sourced by graphite / sulfides within the shales. Interestingly, the band of Marmot formation correlates with most of the surface layer anomalies.

The most desirable chargeability targets are those within the carbonate band adjoining the intrusion or extending over the intrusion and with a direct or proximal magnetic correlation. Anomalies within the interpreted intrusion along the east side could well be hosted in a carbonate layer over the intrusion. Favorability of a magnetic correlation is based on the premise the magnetic response is related to skarn development, specifically with associated pyrrhotite. However, this does not preclude a gold association with the other chargeability anomalies without a magnetic correlation.

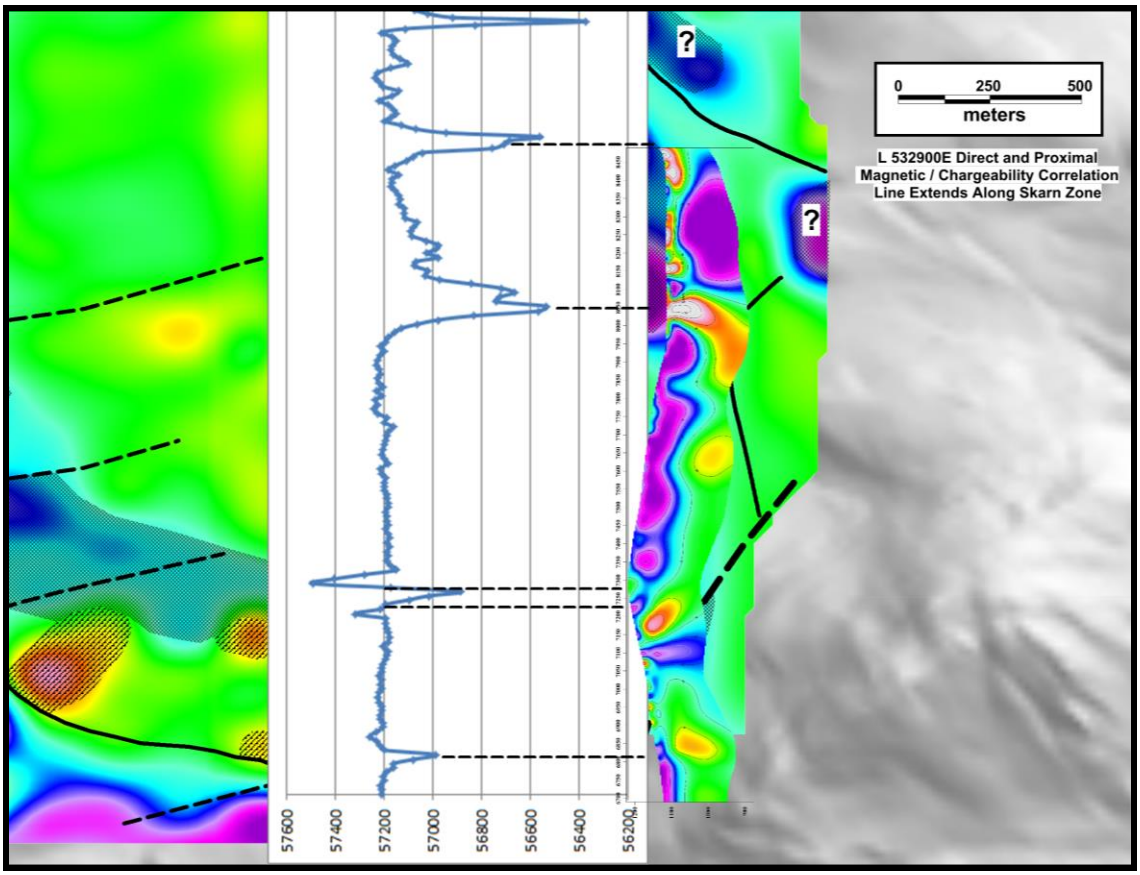


FIGURE 17: Line 532900E Chargeability Section, Magnetic Profile over Residual Magnetics

The most interesting skarn target wraps around the northeast side of the intrusion and down the east side. Due to this southern bend IP lines 532800E, 532900E and 532000E extend along the target for considerable distances ranging from 400 – 600 m. Figure 17 shows the Line 532900E chargeability section with magnetic line profile. In the portion of the line crossing the main skarn target are several strong chargeability responses with the northern and southern ones exhibiting a strong magnetic low correlations.

An example of chargeability anomalies located within the boundary of the intrusion is presented in Figure 18. As noted previously, these are likely located in carbonate rocks sitting atop the intrusion or possibly endoskarn in the intrusion.. A strong chargeability anomaly is noted with no magnetic correlation and conversely a strong magnetic anomaly with only a weak chargeability correlation further south along the line. Such variability is to be expected given that magnetite could well be sourcing some of the magnetic anomalies, which does not produce strong chargeability response. In addition nonmagnetic sulfides such a pyrite could produce large chargeability anomalies with no magnetic correlation. In fact, relative position to the intrusive could result in zoning of which type of responses are produced.

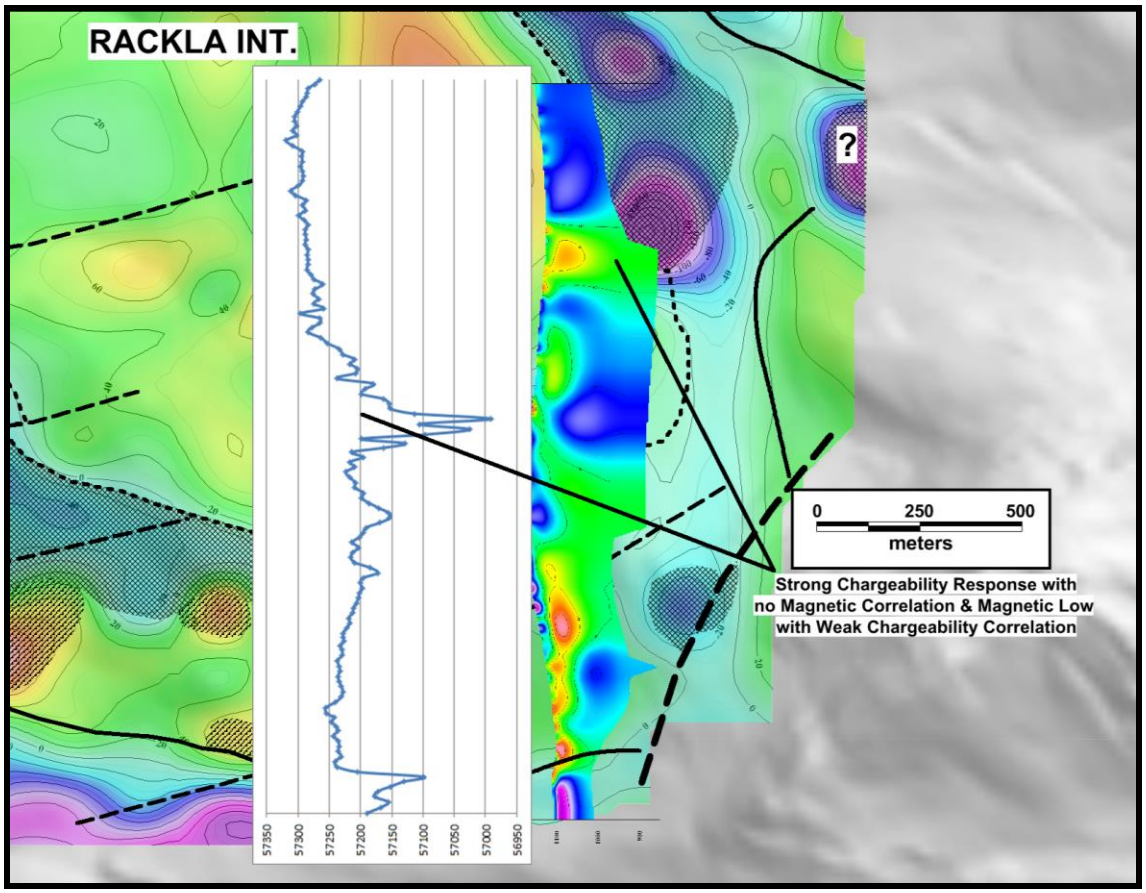


FIGURE 18: Line 532600E Chargeability Section, Magnetic Profile over Residual Magnetics

High priority skarn type targets are deemed to be those proximal to the intrusion with a magnetic low correlation and high chargeability. However, strong chargeability responses within the intrusion are also considered favorable targets, as well as magnetic low / chargeability high anomalies somewhat removed from the intrusive margins, these being possible distal skarns. Figures 17 and 18 present examples of each. Less desirable anomalies are those removed from the intrusion and positioned along the shale contact or within the shale. These are predominantly located northeast of the intrusion.

Figure 19 identifies five specific target areas with black circles and numbers. These are based upon the foregoing rational. Area 1 is within the main skarn magnetic response along the intrusive boundary and includes numerous large amplitude chargeability highs. An extension of the area to the west into or over the intrusion is also noted. Areas 2, 4 and 5 fall along the intrusive margin with a somewhat reduced magnetic correlation. Finally, Area 3 could be considered and extension of Area 2, but with much stronger chargeability responses. This could well be hosting a distal skarn. Of course, numerous other targets are identifiable without magnetic / chargeability attributes used to identify the five priority targets. These should not be discount until reviewed in detail.

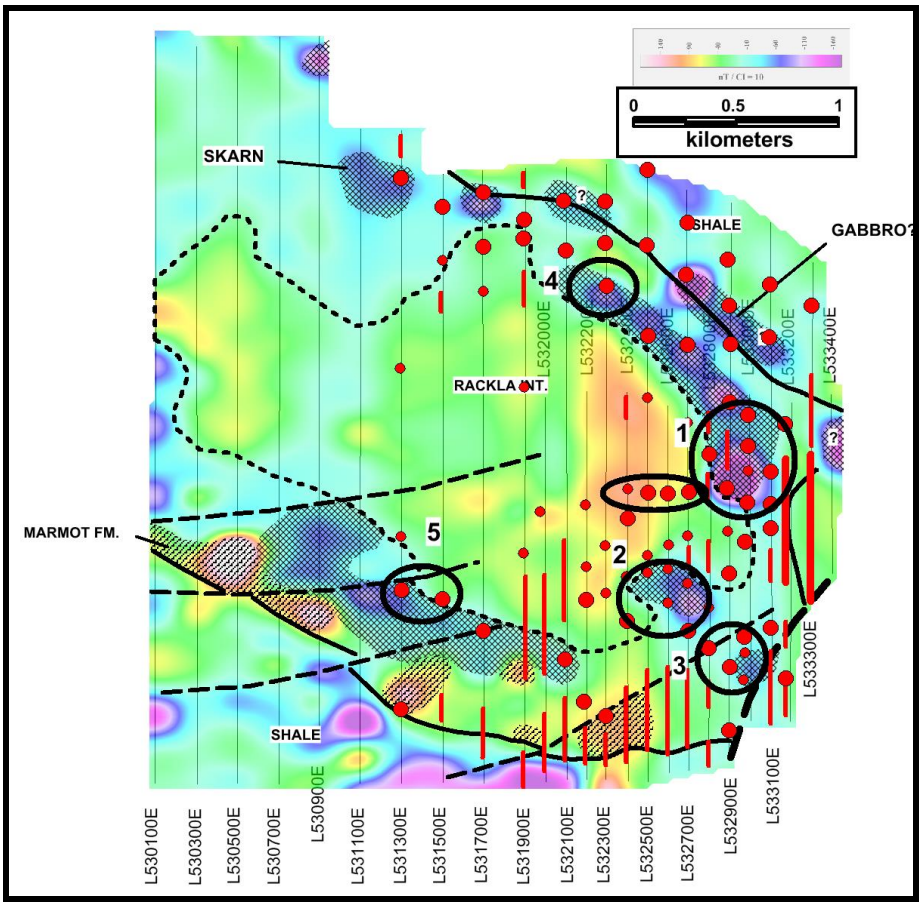


FIGURE 19: Interpretation, Target Areas over Residual Magnetics

CONCLUSIONS AND RECOMMENDATIONS

The IP / magnetic surveys refine the overall picture in the vicinity of the Rackla intrusion. Specifically, a more detailed boundary to the intrusion is generated plus interpreted bounding skarns with associated IP chargeability anomalies. In addition, the interpretation conforms to the regional interpretation as set forth by Wright (2017). Five specific targets are identified based upon correlated chargeability / magnetic anomalies. A skarn host is postulated. Numerous other possible target areas are identified which lack the strong magnetic / chargeability correlation, but should still be considered targets.

No additional geophysical work is recommended until an integration of the current results with the available geochemistry and geology is completed. The five priority targets are sufficiently detailed to allow spotting of drill holes.

REFERENCES

Wright, J. L., 2017, Rau property, Yukon, Canada, geophysical review – 2017: ATAC Resources company report.

APPENDIX A

LOGISTICAL REPORT INDUCED POLARIZATION SURVEY

RAU PROJECT Mayo area, Yukon Territory

on behalf of

ATAC RESOURCES LTD. 1016 – 510 West Hasting St Vancouver, BC, V6B 1L8

Survey performed: June 8 to July 8, 2019

by

Philip Fortin, Geophysicist SCOTT GEOPHYSICS LTD.
4013 West 14th Avenue Vancouver, BC, V6R 2X3

1. INTRODUCTION

Induced Polarization (IP) and total field magnetometer (mag) surveys were performed at the Rau property, Mayo area, Yukon, from June 8 to July 8, 2019.

The survey was performed by Scott Geophysics Ltd. on behalf of ATAC Resources Ltd. This report describes the instrumentation and procedures and presents the results of the survey.

2. SURVEY COVERAGE AND PROCEDURES

The pole-dipole array was used for the IP survey. Three different arrays were used:

1. 1. An a-spacing of 100 metres at "n" separations of 1 to 6 (100/1-6).
2. 2. An a-spacings of 50 meters and n-separations 1 to 5 (50/1-5)

3. An a-spacings of 50 meters and n-separations 1 to 6 (50/1-6) The current electrode was located to the south of the potentials for all the lines.

GPS readings were taken at the start and end of each survey line and at the remote ("infinite") electrode location, subject to satellite reception. Elevation measurements are barometric altimeter readings, calibrated to GPS altitude at the beginning of each line.

Total field magnetometer readings were routinely taken at 12.5 metre intervals (reduced to 2-5 metre intervals in areas with a steep magnetic gradient) and corrected for diurnal variation against a fixed base station cycling at 10 second intervals.

A total of 47.35 kilometres of IP survey (22.5 km at 100/1-6, 7.1 km at 50/1-5, and 17.75 km at 50/1-6) and 67.4 kilometres of magnetic survey was performed.

The chargeability and resistivity results are presented on the accompanying pseudo-sections and plans. All survey data are archived to the accompanying digital folders.

4. PERSONNEL

Gordon Stewart was the crew chief on the survey on behalf of Scott Geophysics Ltd.
Julia Lane was the representative on behalf of ATAC Resources Ltd.

5. INSTRUMENTATION

A GDD GRx8-32 receiver and a GDD TxII transmitter (5000 watts) were used for the IP survey. Readings were taken in the time domain using a 2 second on/2 second off alternating square wave. The chargeability values plotted on the accompanying pseudosections and plan maps are for the interval 690-1050 msec after shutoff.

Scintrex ENVI proton precession magnetometers were used as field and base units for the magnetometer survey. GPS readings were taken with a Garmin GPSMap GPS receiver.

6. Statement of Qualifications for Philip Fortin, GIT (Geophysics) of 4013 West 14th Avenue Vancouver, BC V6R 2X3

I hereby certify the following statements regarding my qualifications and involvement in the program of work on behalf of ATAC Resources Ltd.., and as presented in this report of July 20, 2019.

The work was performed by individuals qualified for its performance.

I have no material interest in the property under consideration in this report.

I graduated from the University of British Columbia with a Bachelor of Science degree (Geophysics) in 2015.

I am a registered member (no 163582) of Engineers and Geoscientists of British Columbia (EGBC) as of May 6, 2019.

I have been practicing my profession as a Geophysicist in the field of Mineral Exploration since 2015.

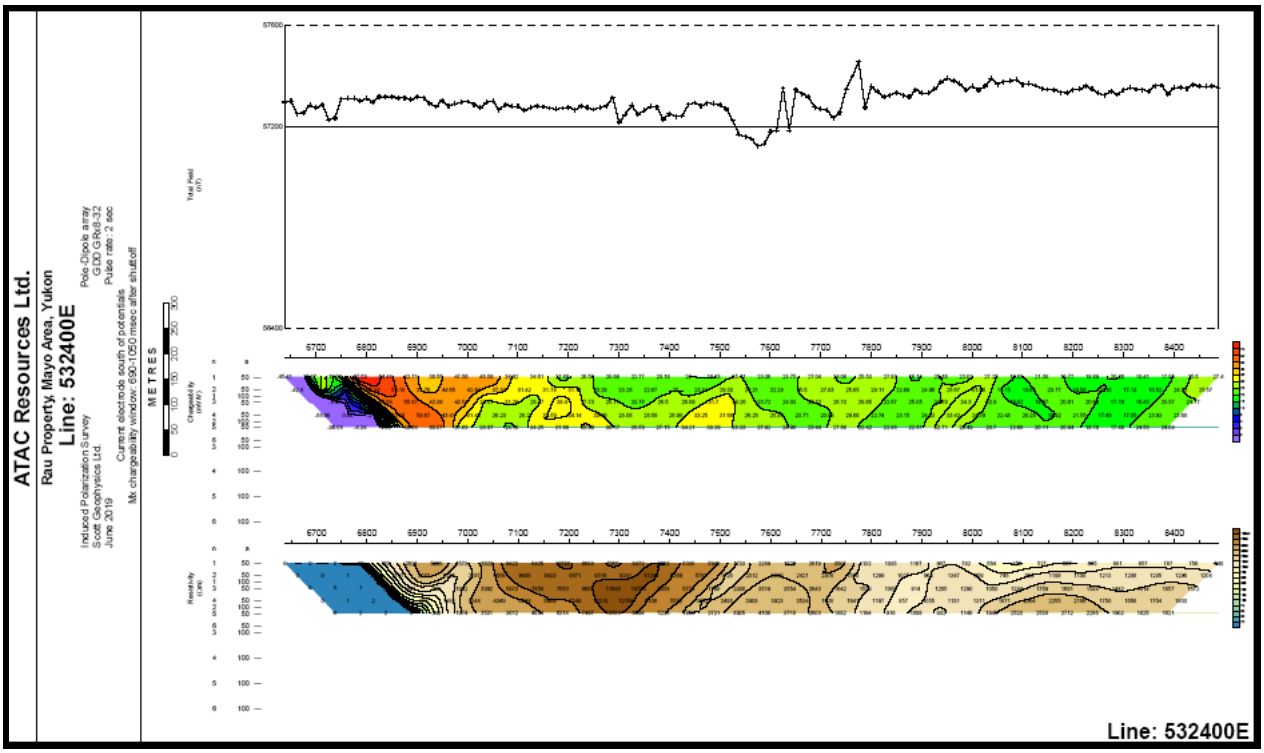


FIGURE A1: Pseudo-section Field Plot with Magnetic Profile

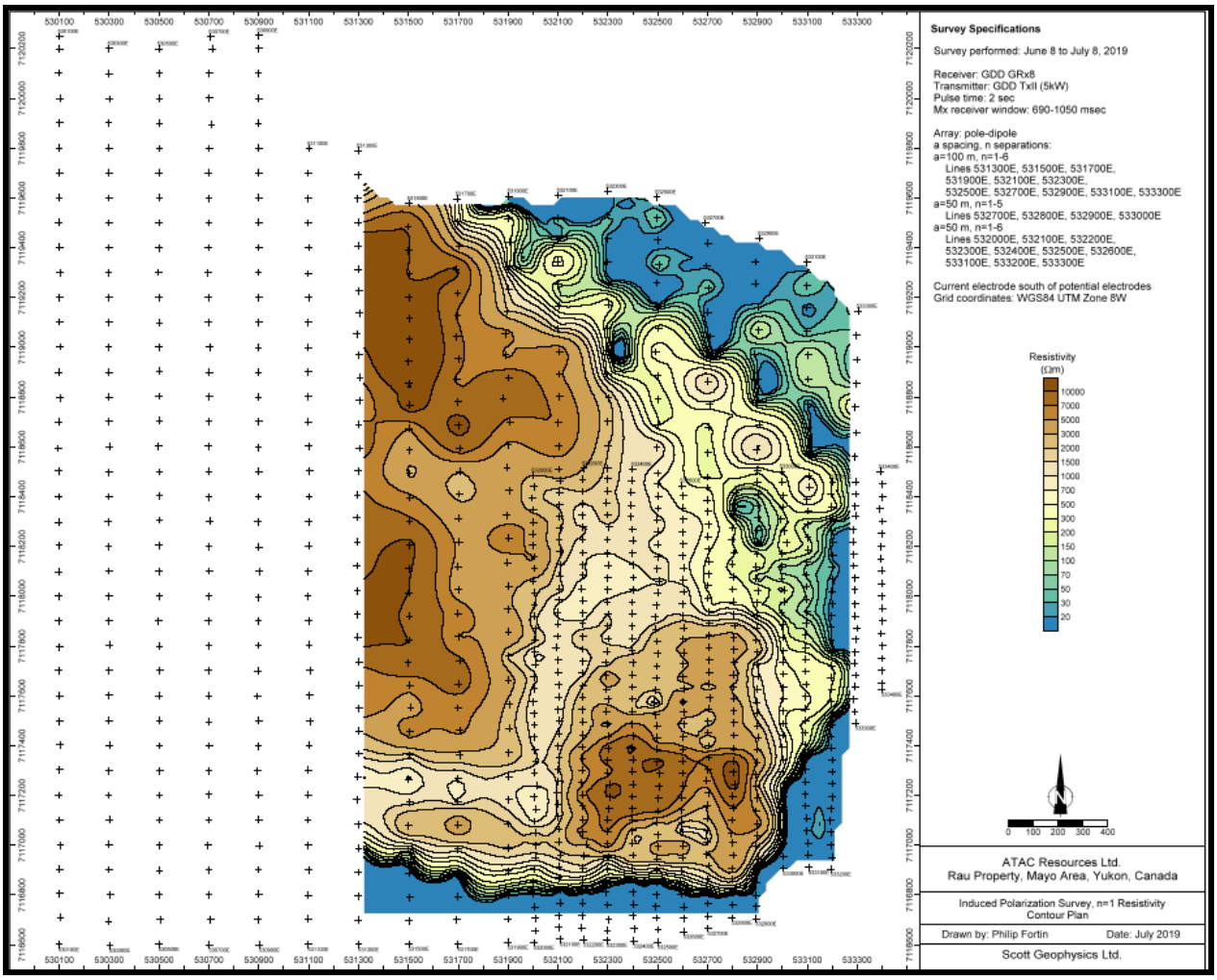


FIGURE A2: Pole-Dipole N = 1 Level Plot

APPENDIX B

LOGISTICAL REPORT GROUND MAGNETIC SURVEY

RAU PROJECT Mayo area, Yukon Territory

on behalf of

ATAC RESOURCES LTD. 1016 – 510 West Hasting St Vancouver, BC, V6B 1L8

Survey performed: June 8 to July 8, 2019

by

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4013 West 14th Avenue Vancouver, BC, V6R 2X3

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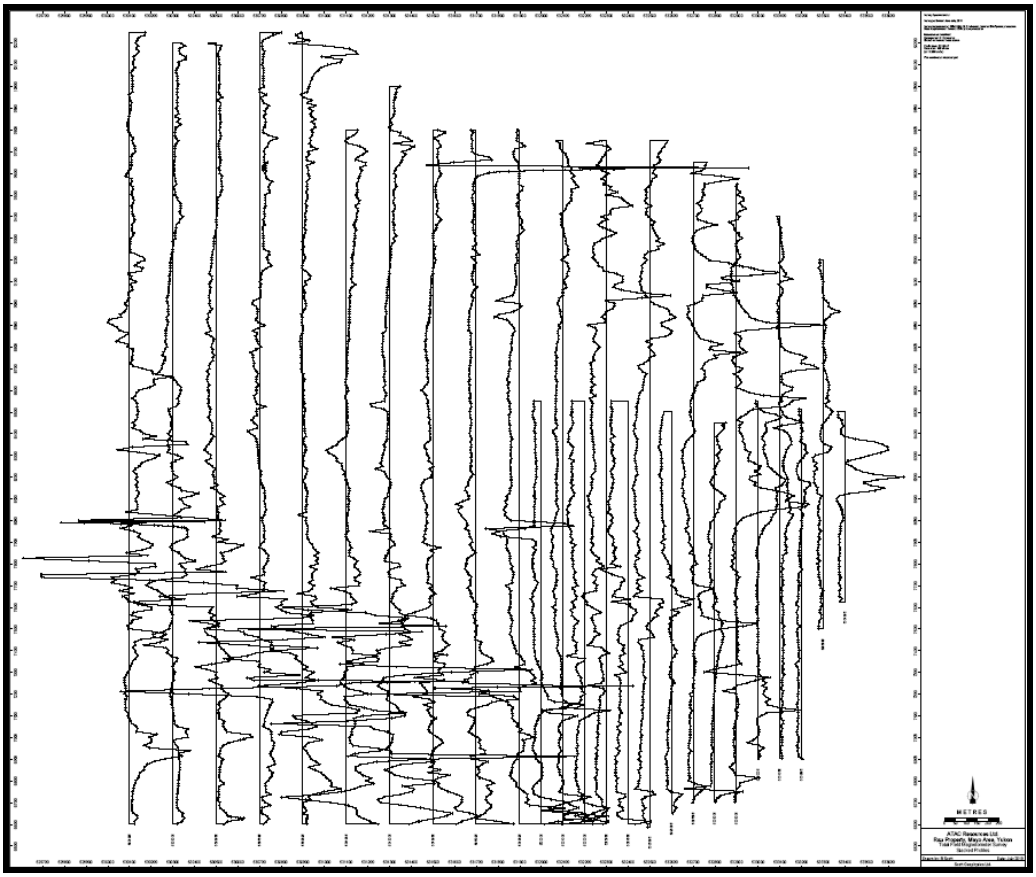
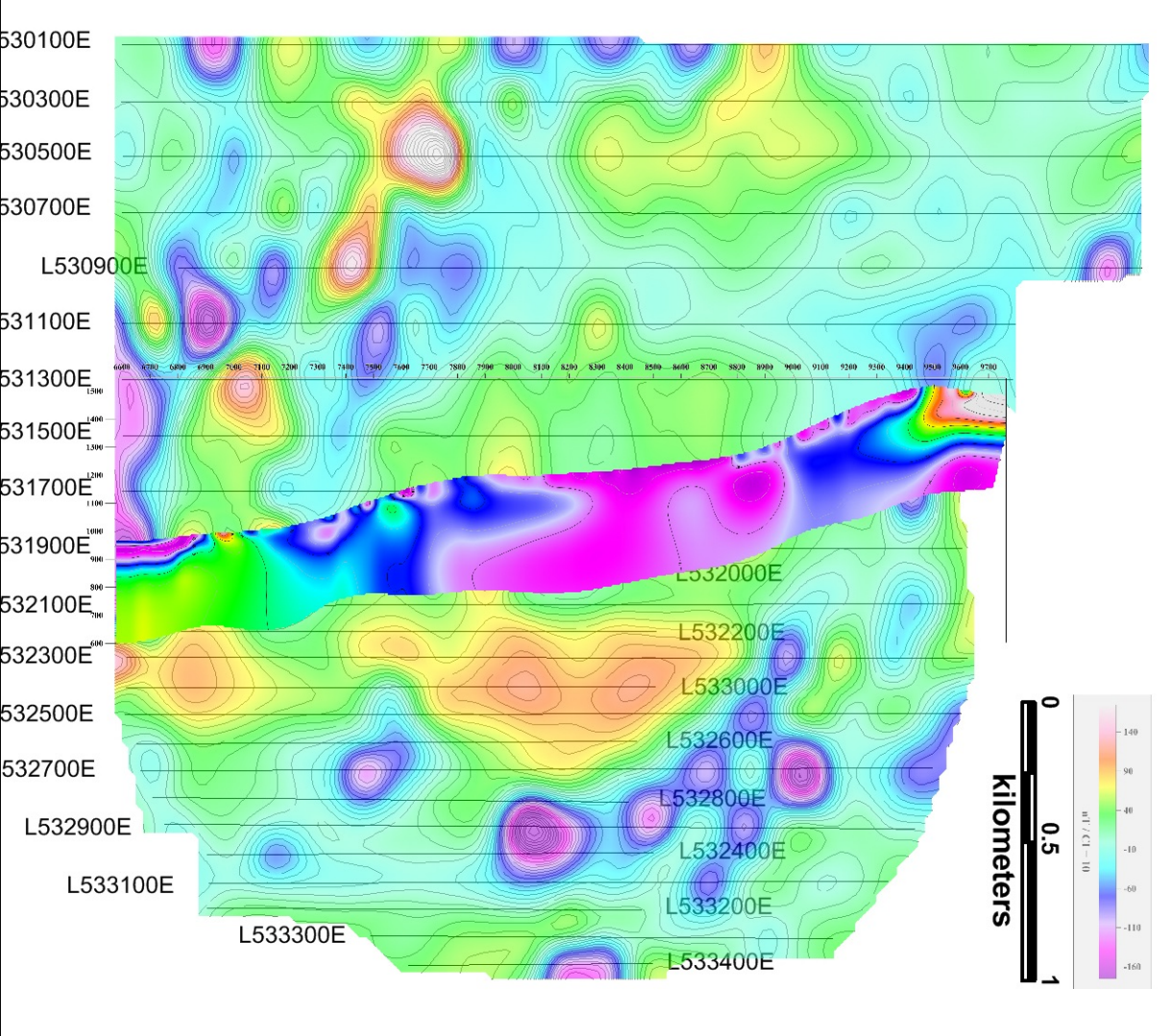


FIGURE B1: TMI Stacked Profile Plot

APPENDIX C

INVERTED SECTIONS

RESISTIVITY / CHARGEABILITY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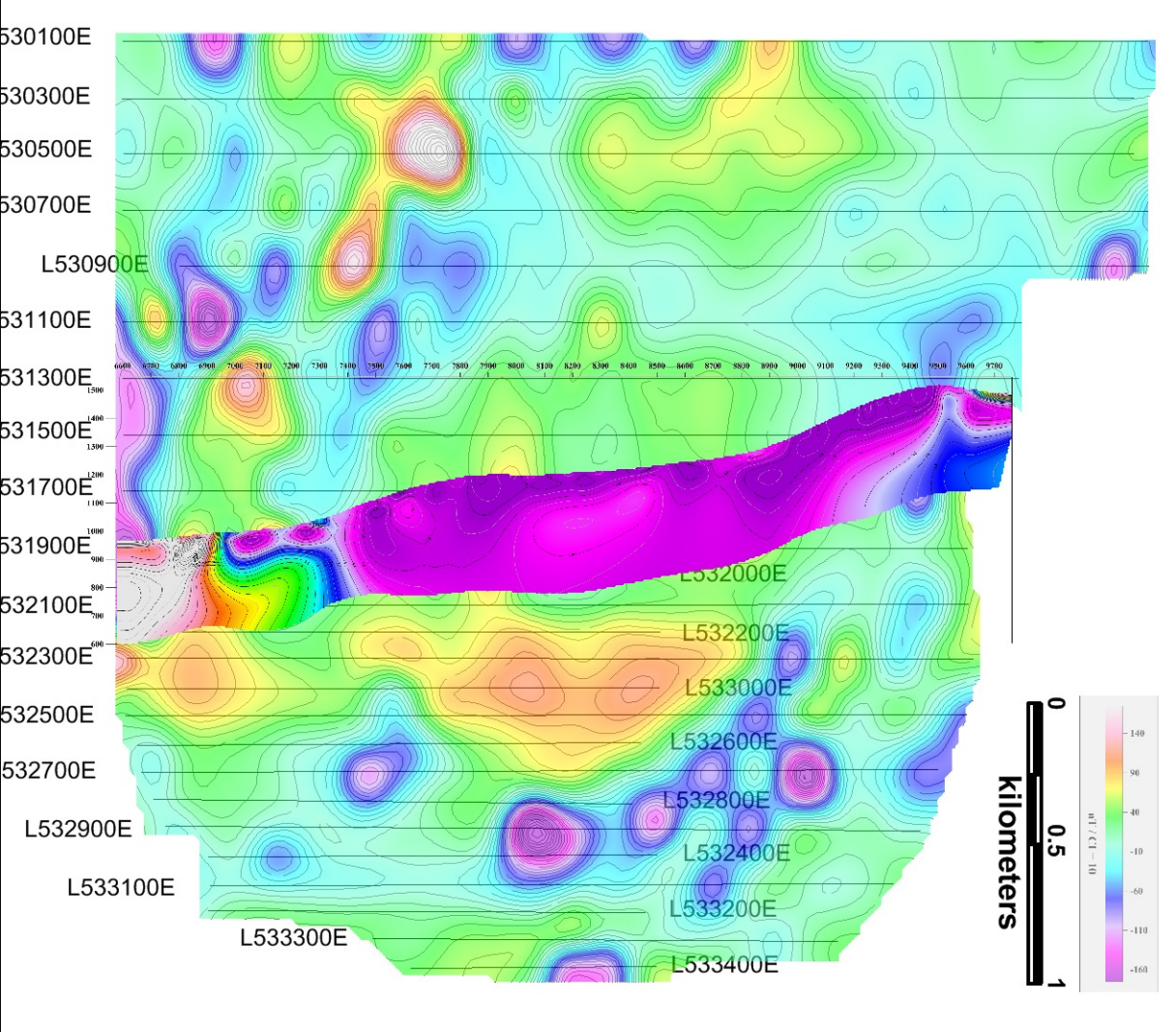
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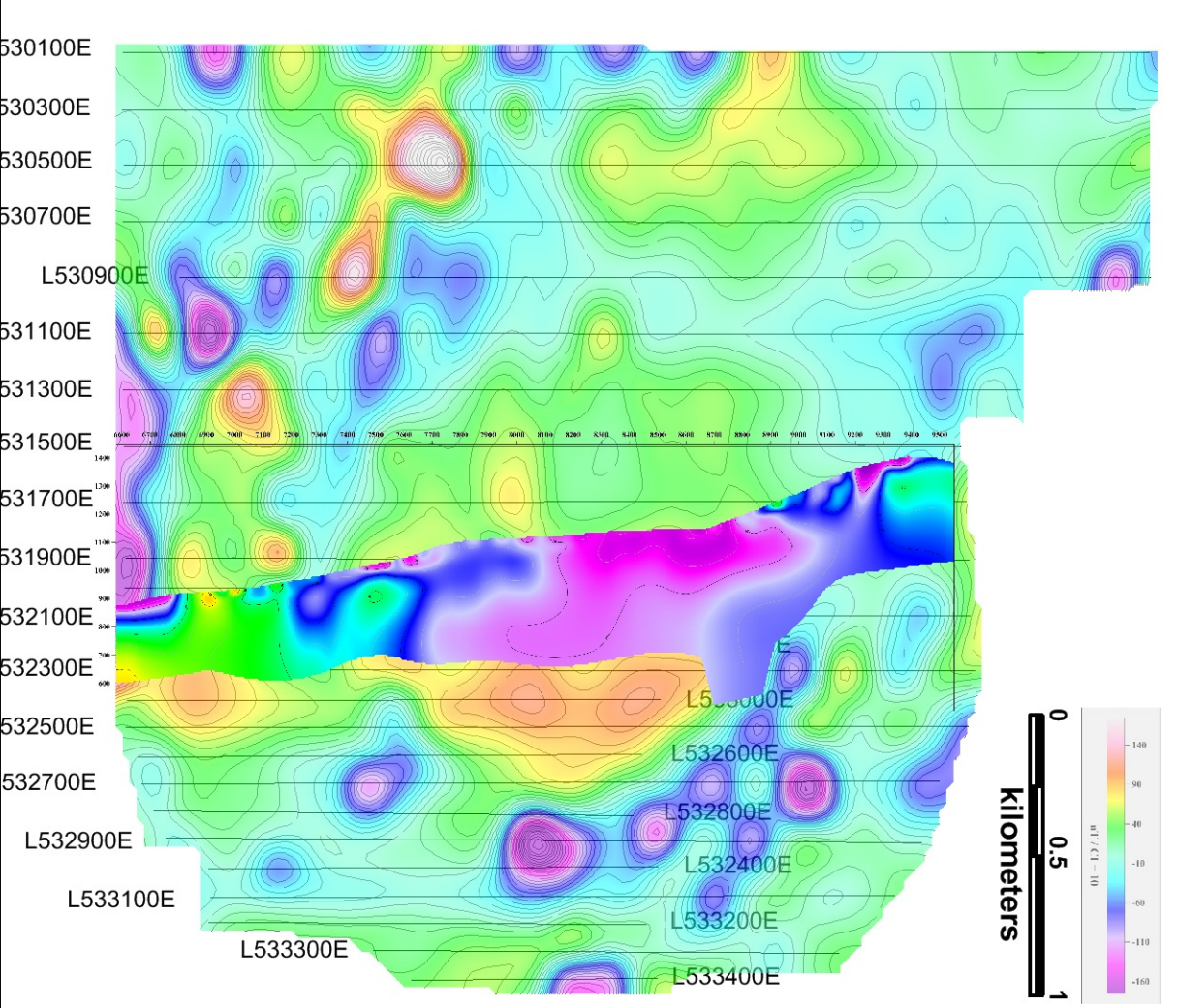
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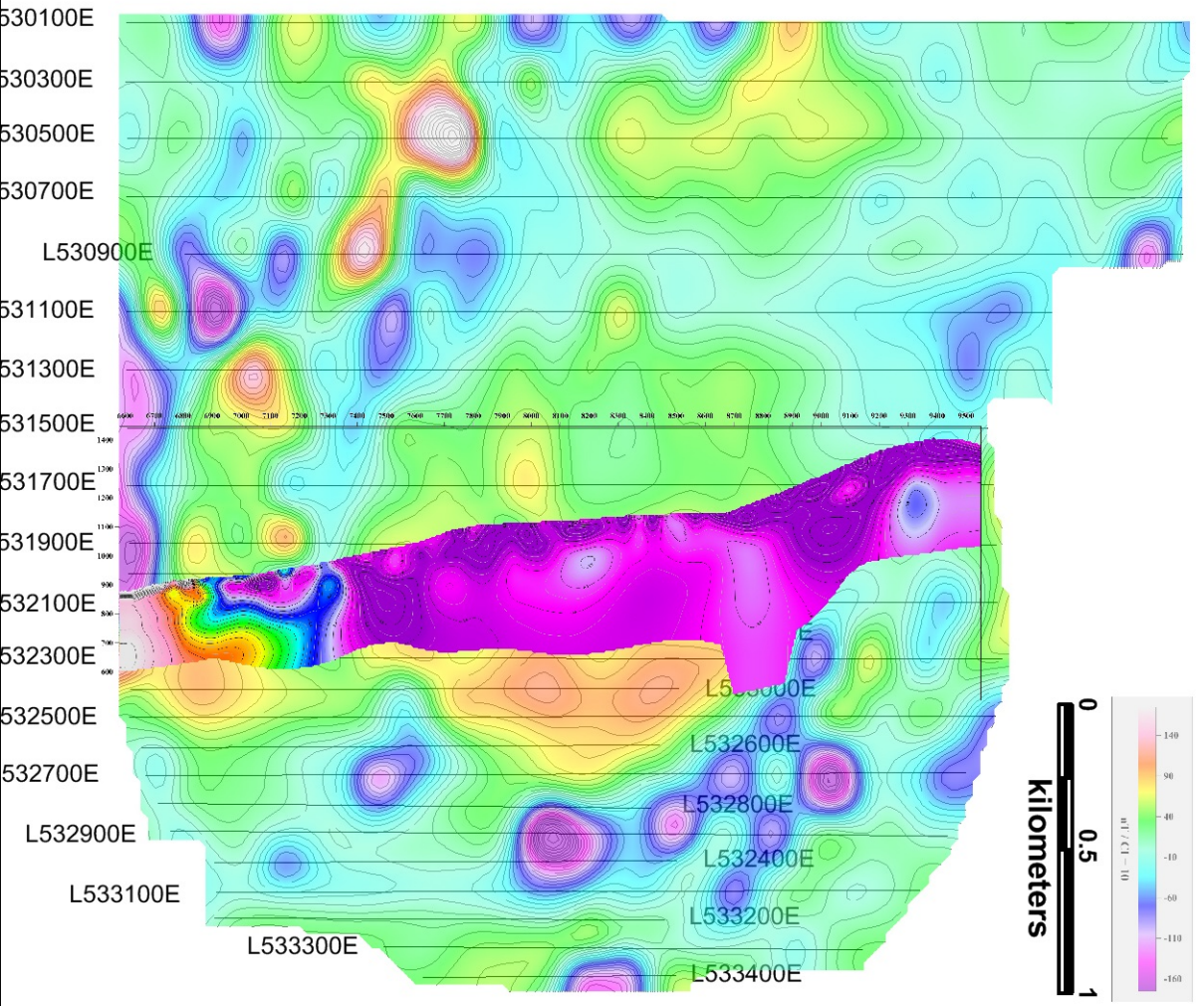
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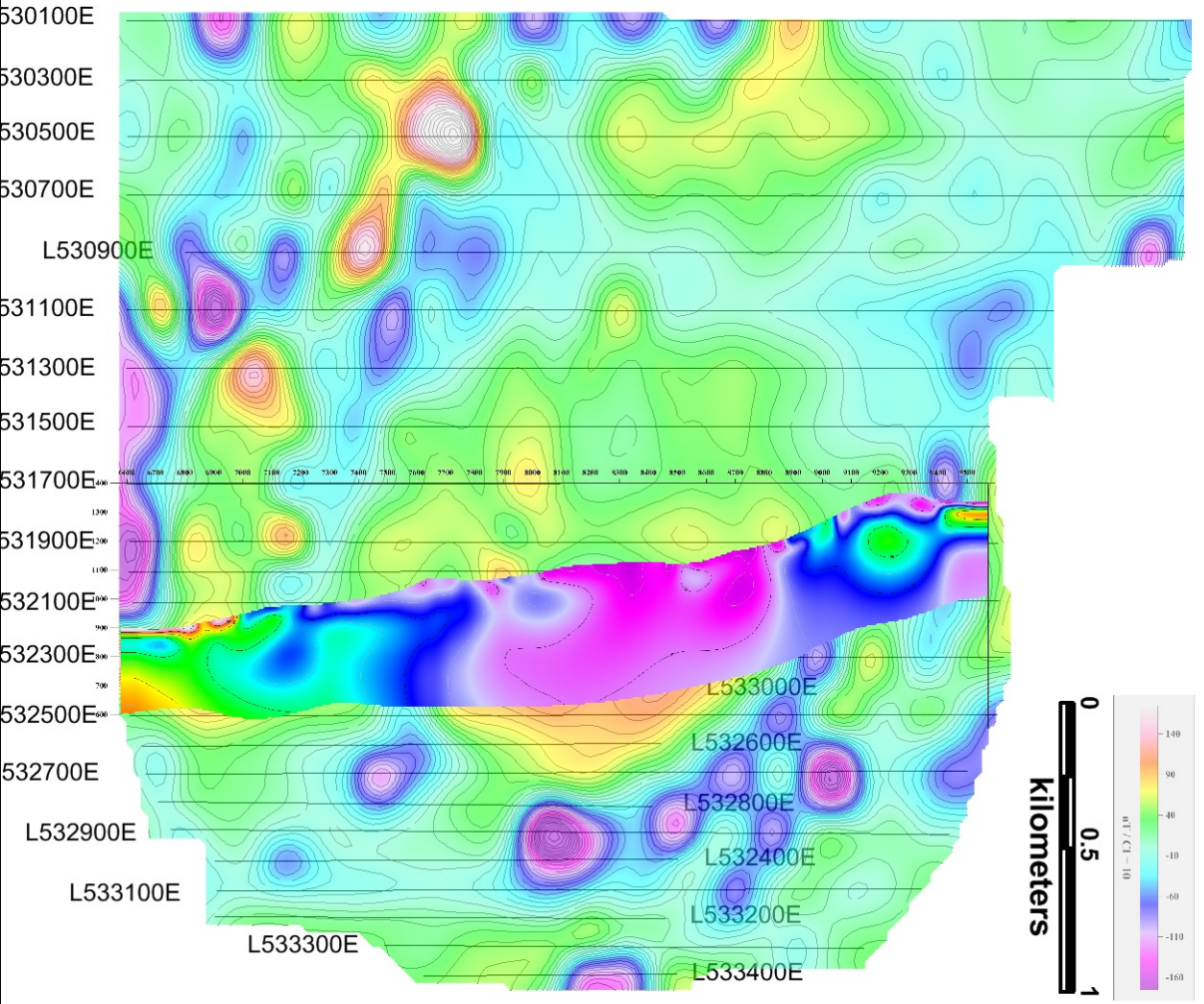
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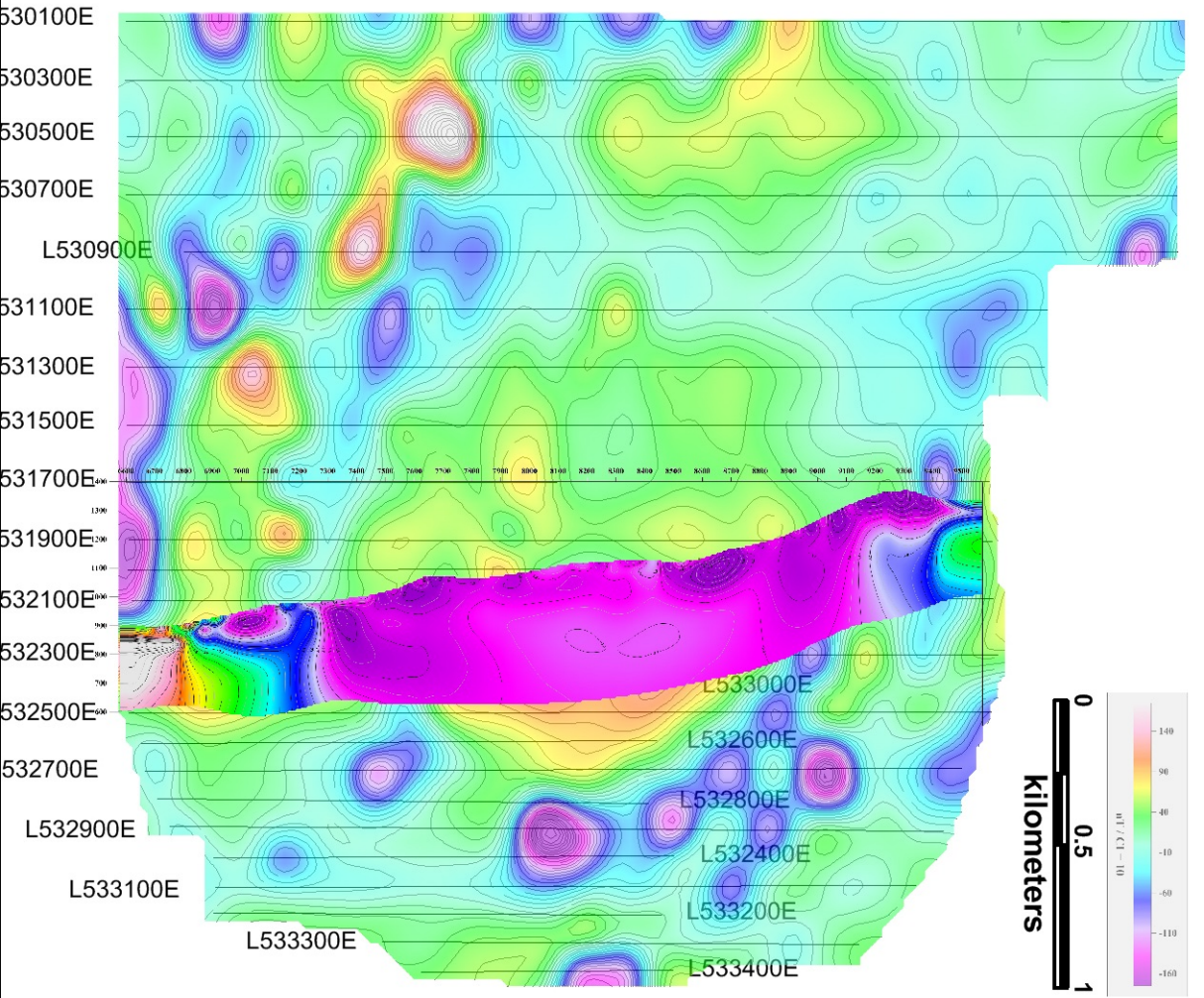

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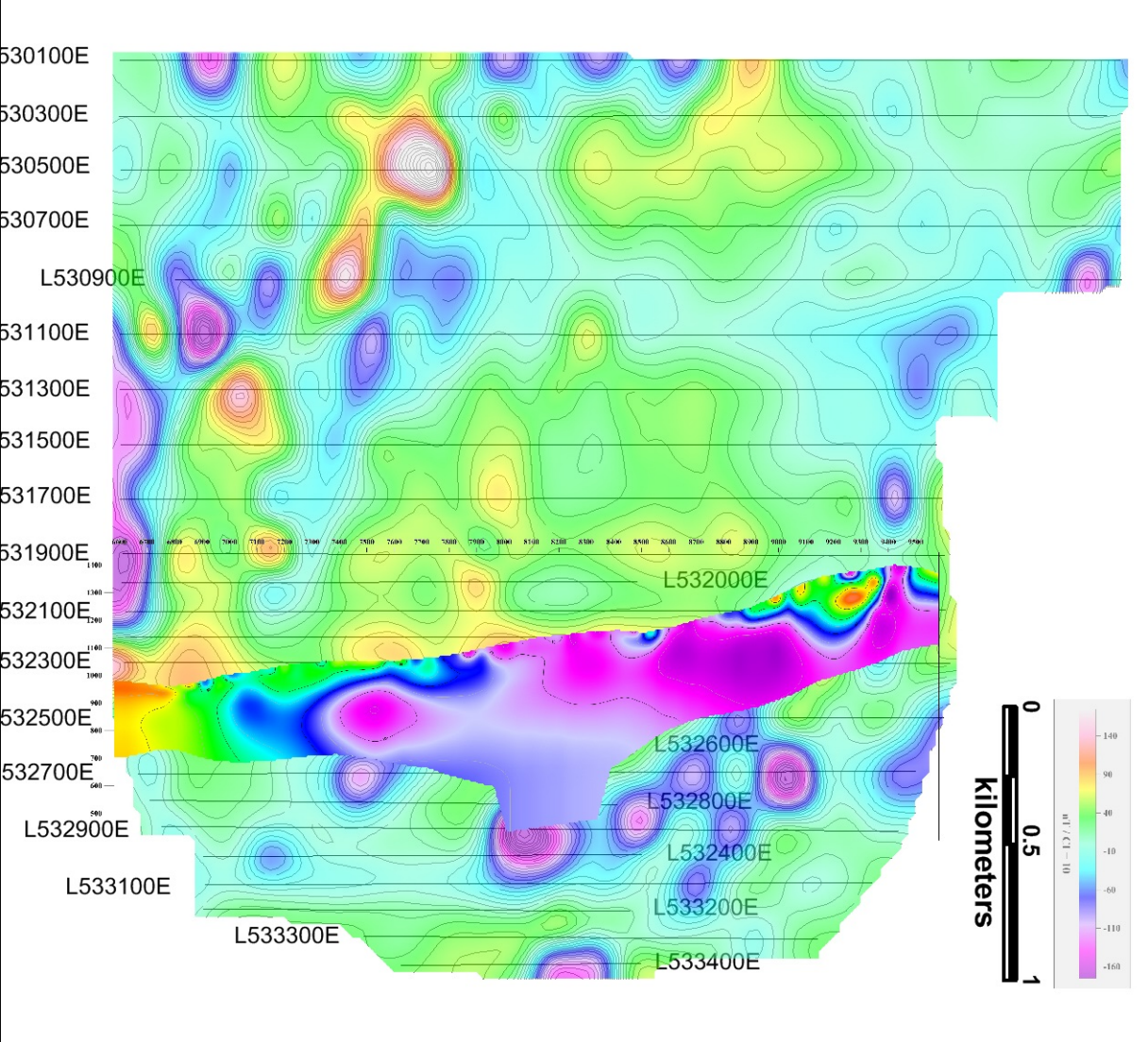
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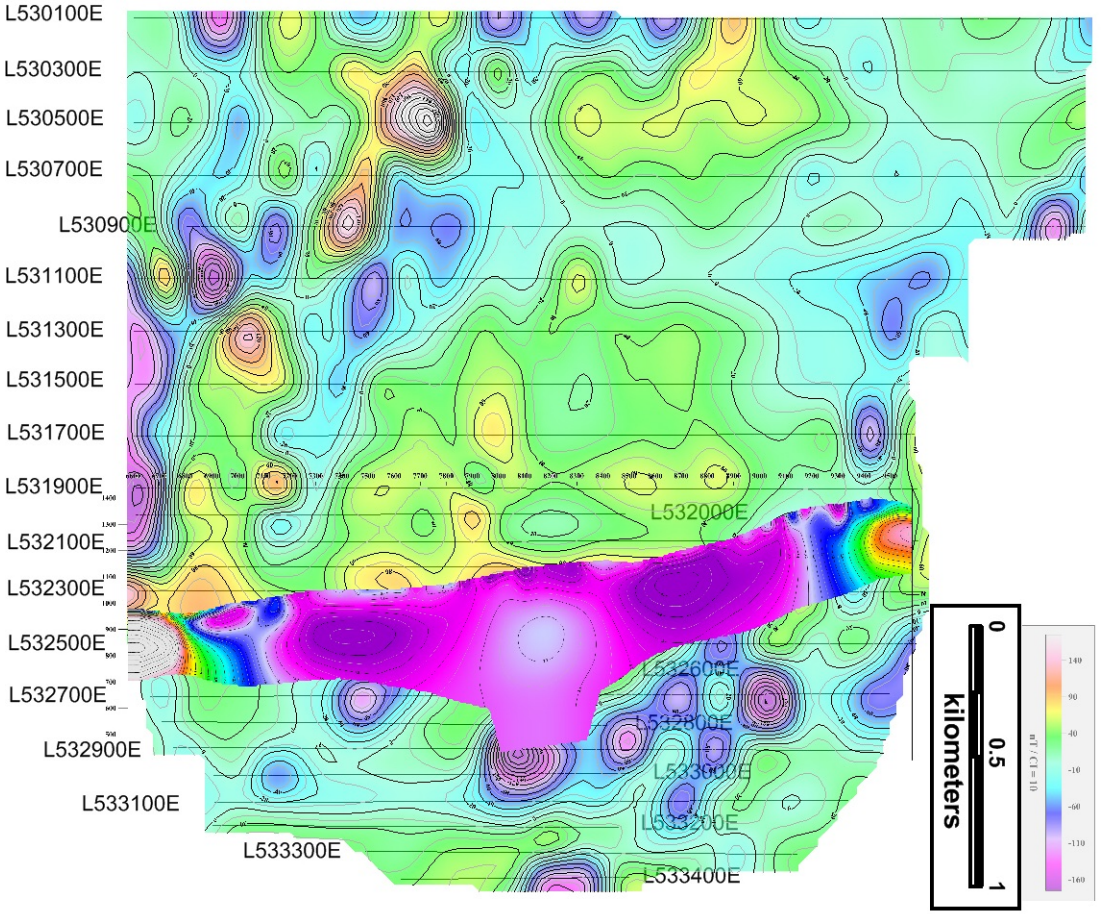
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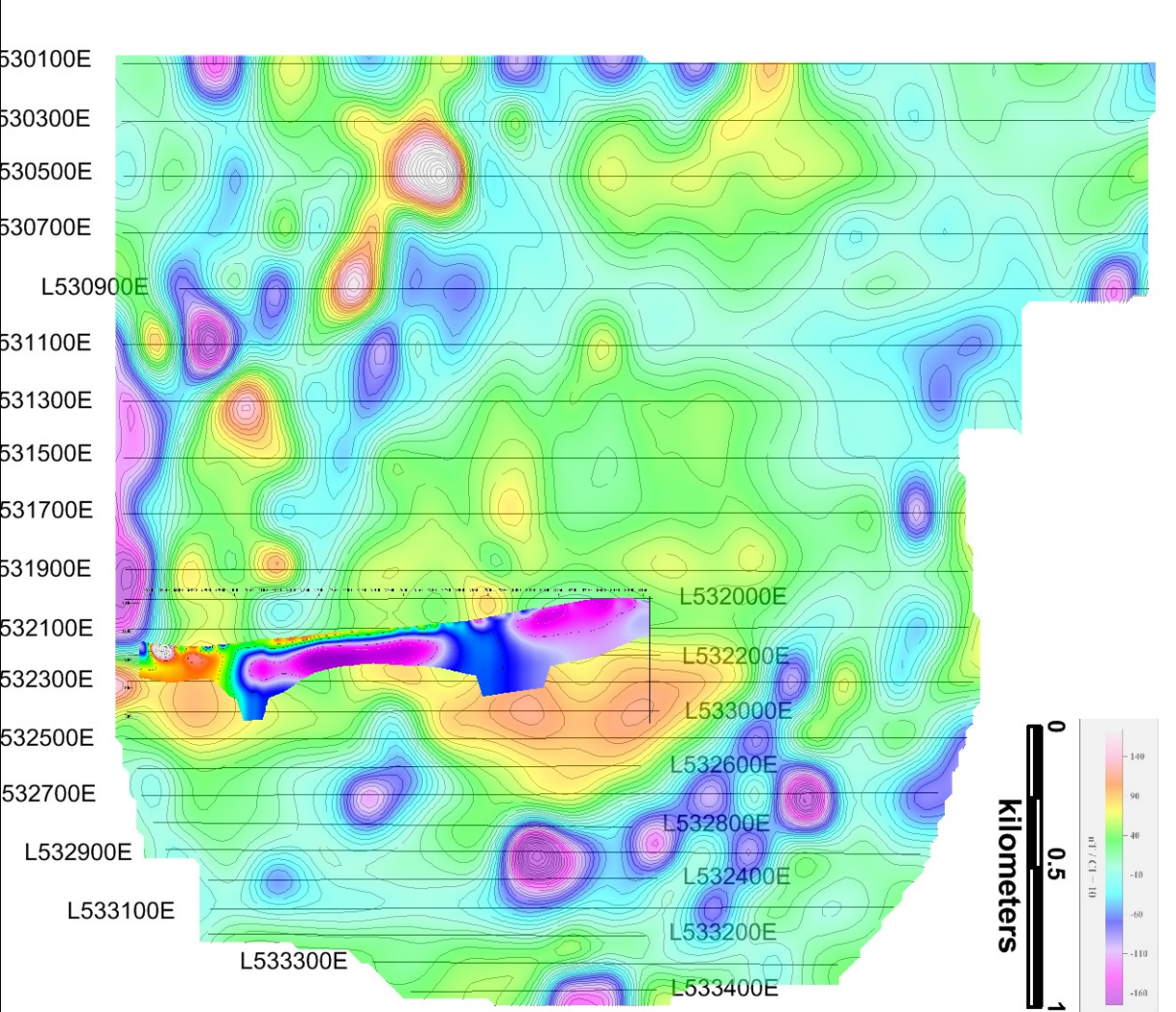
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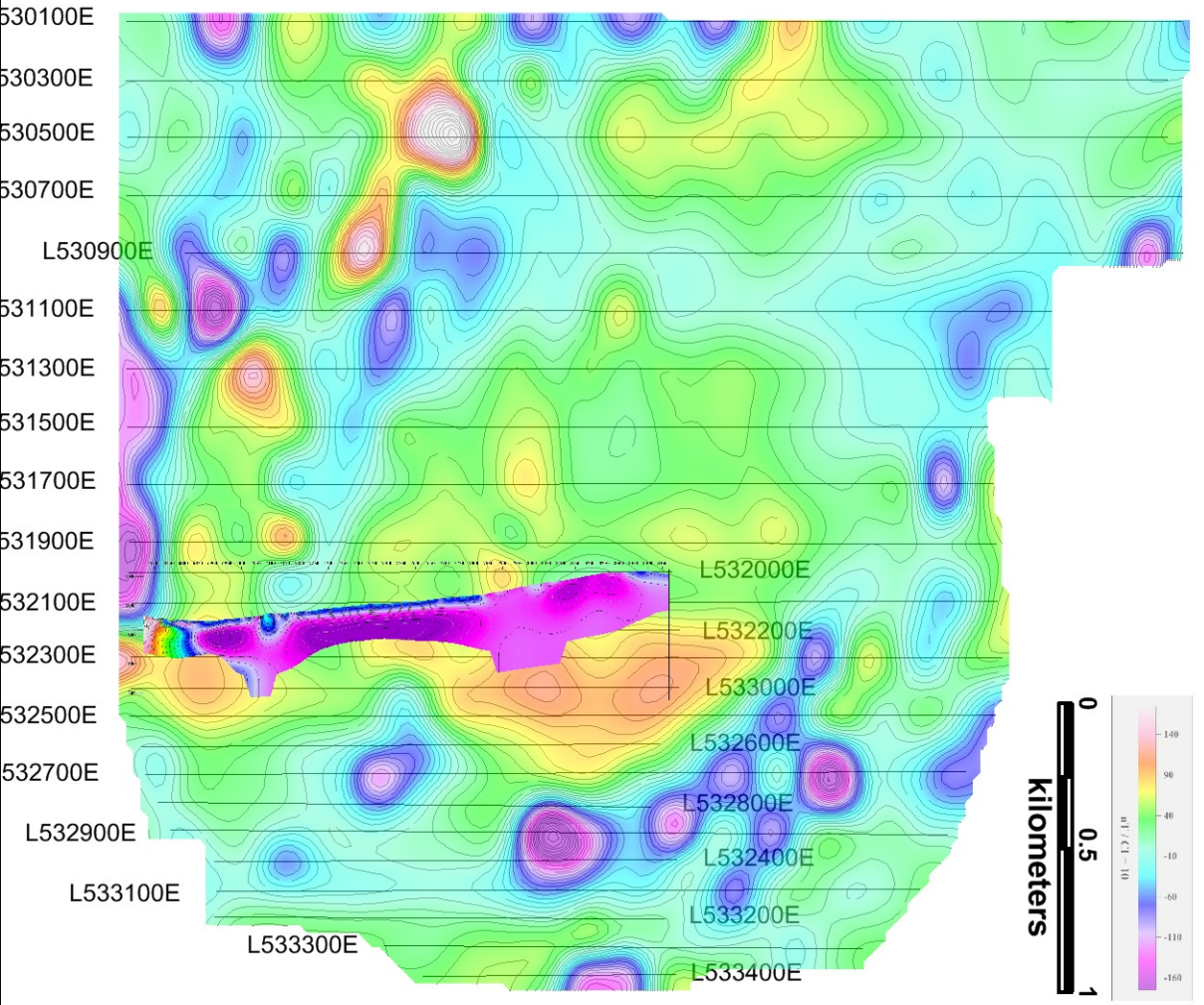
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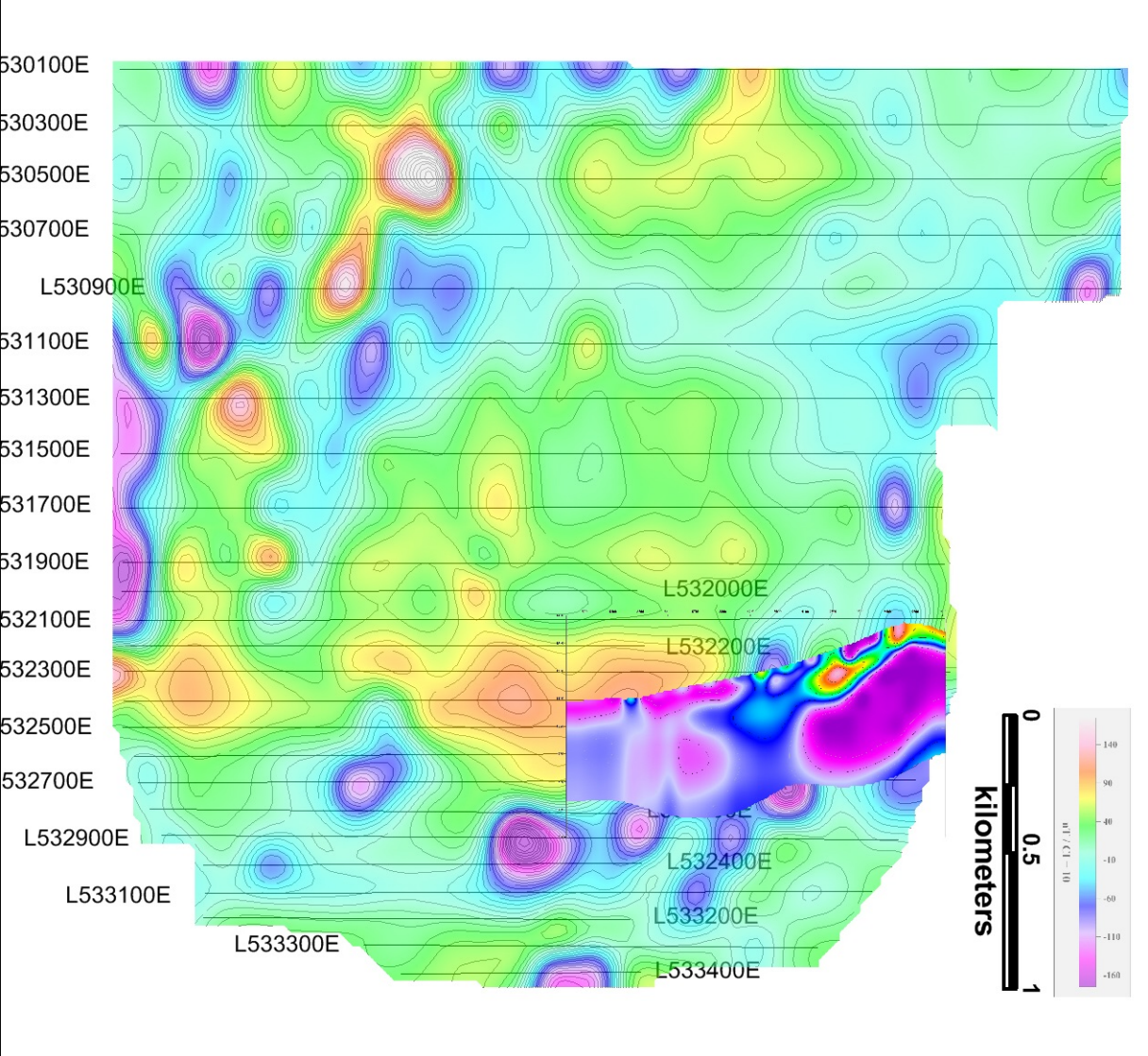
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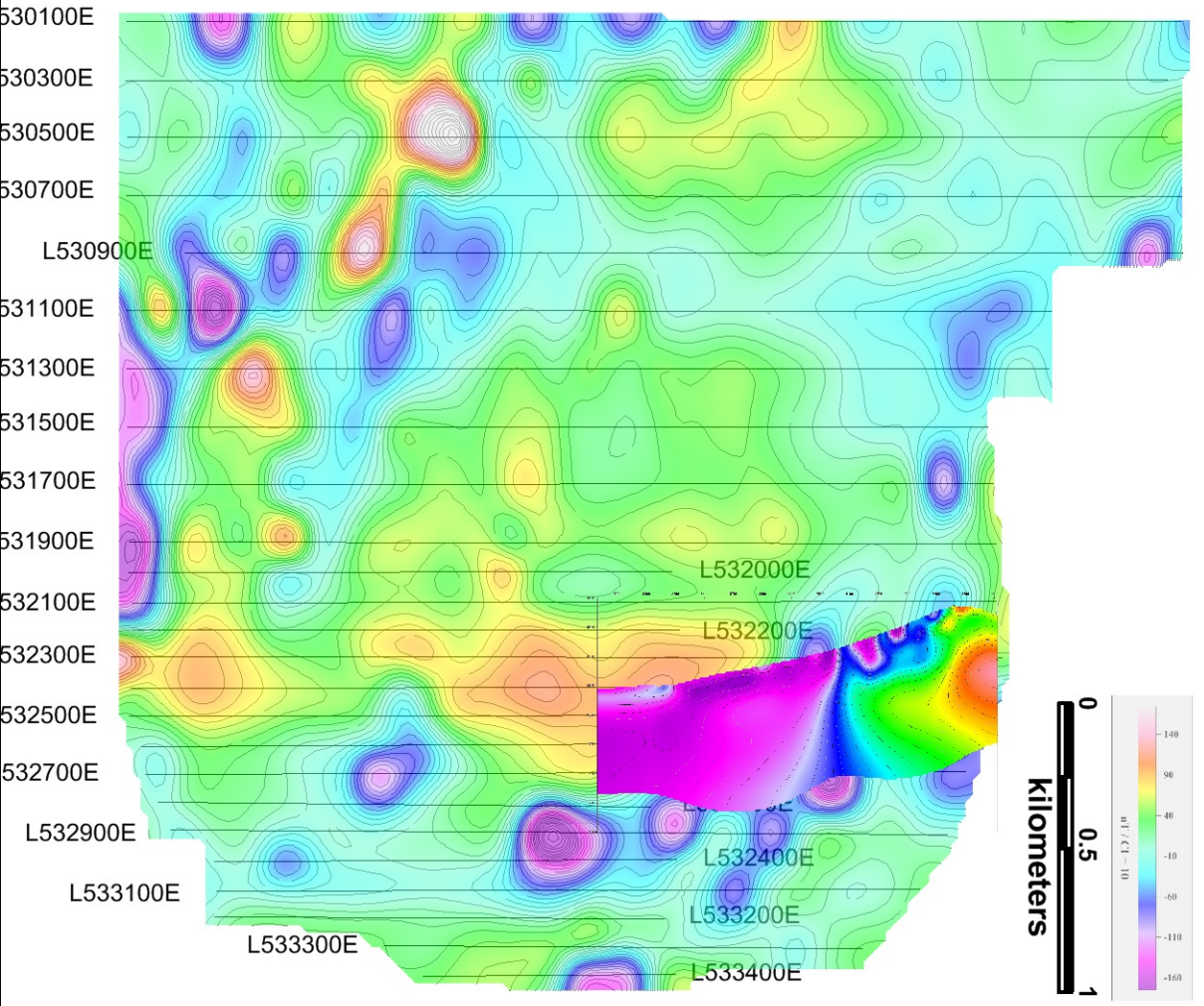
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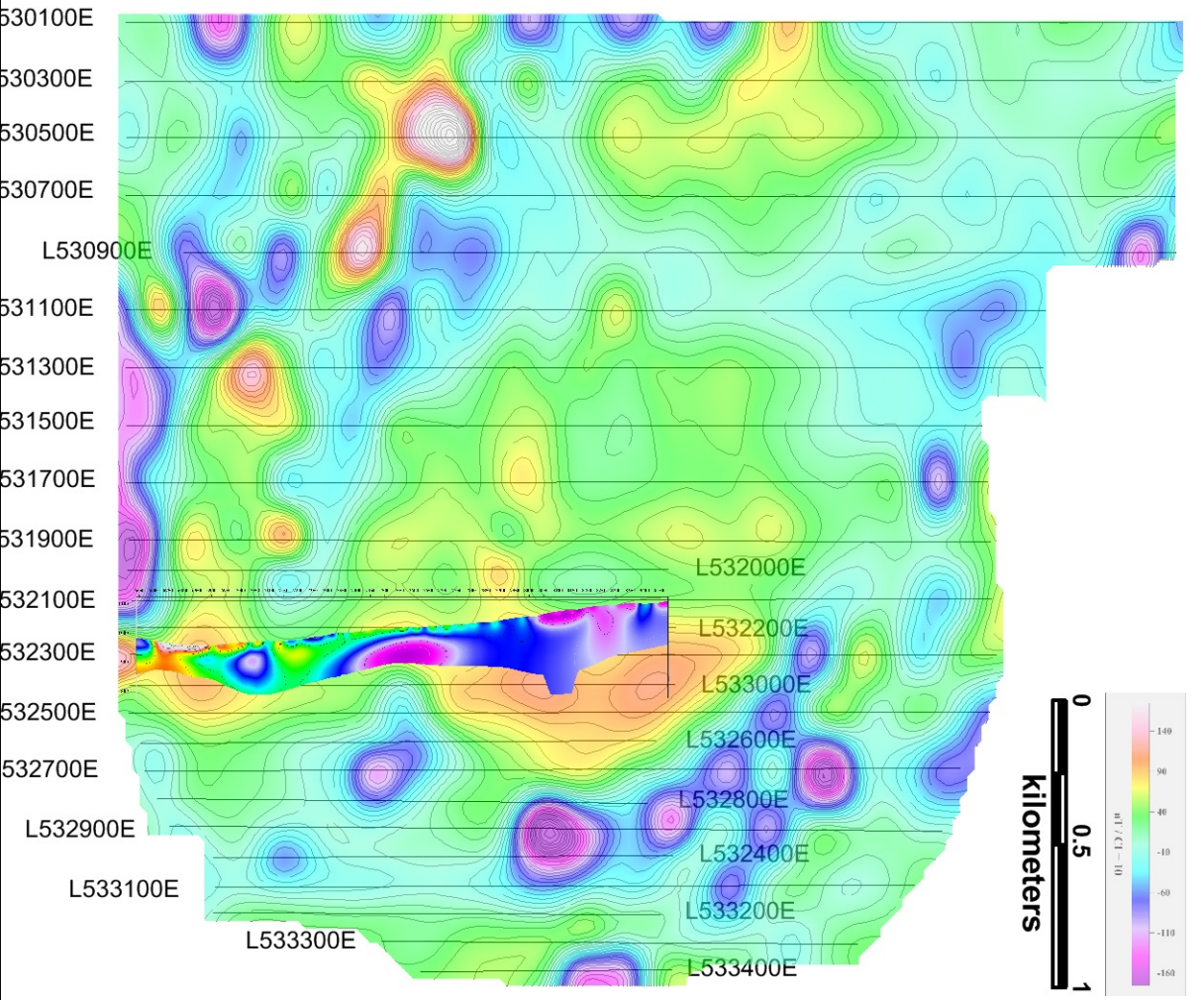
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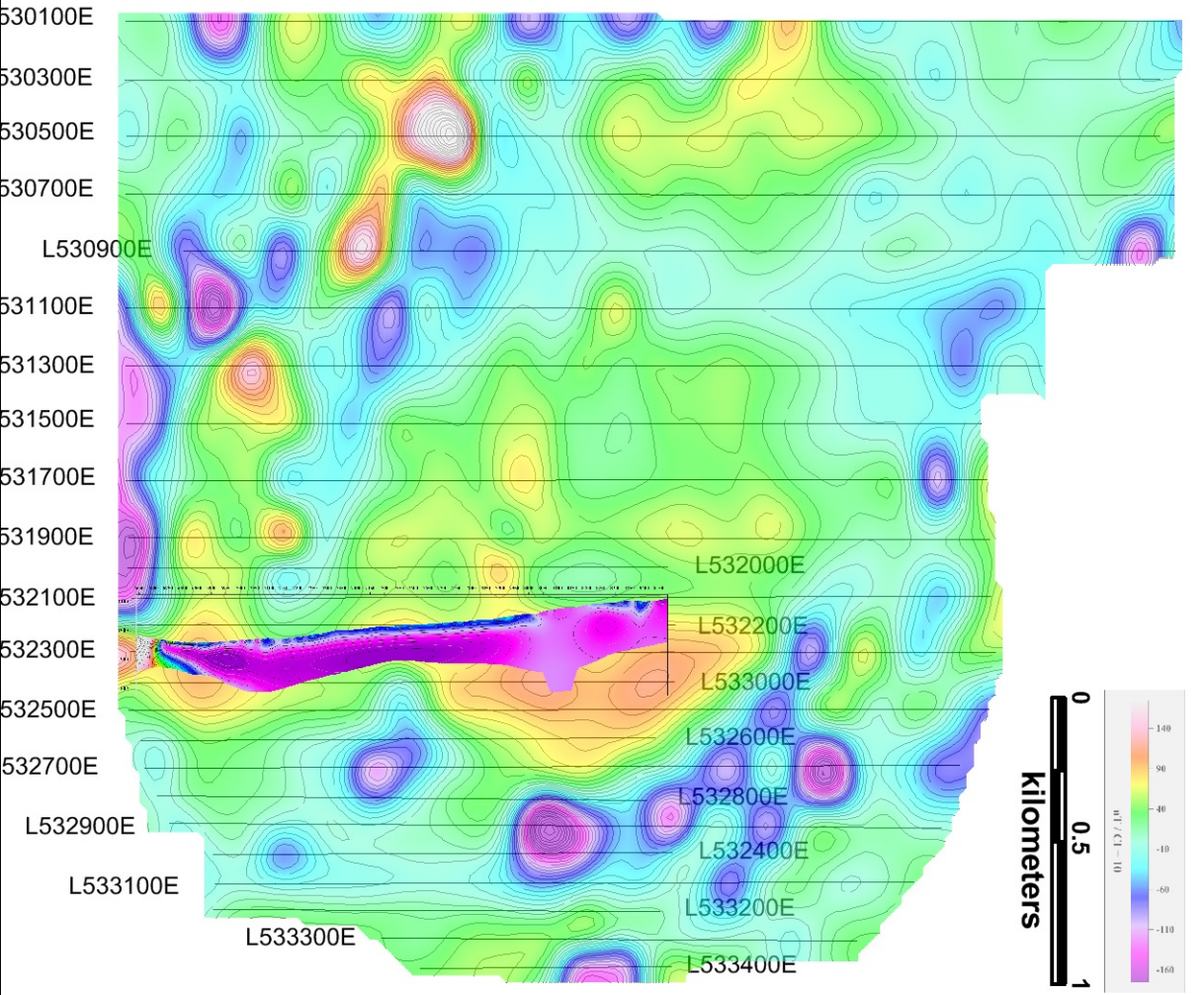
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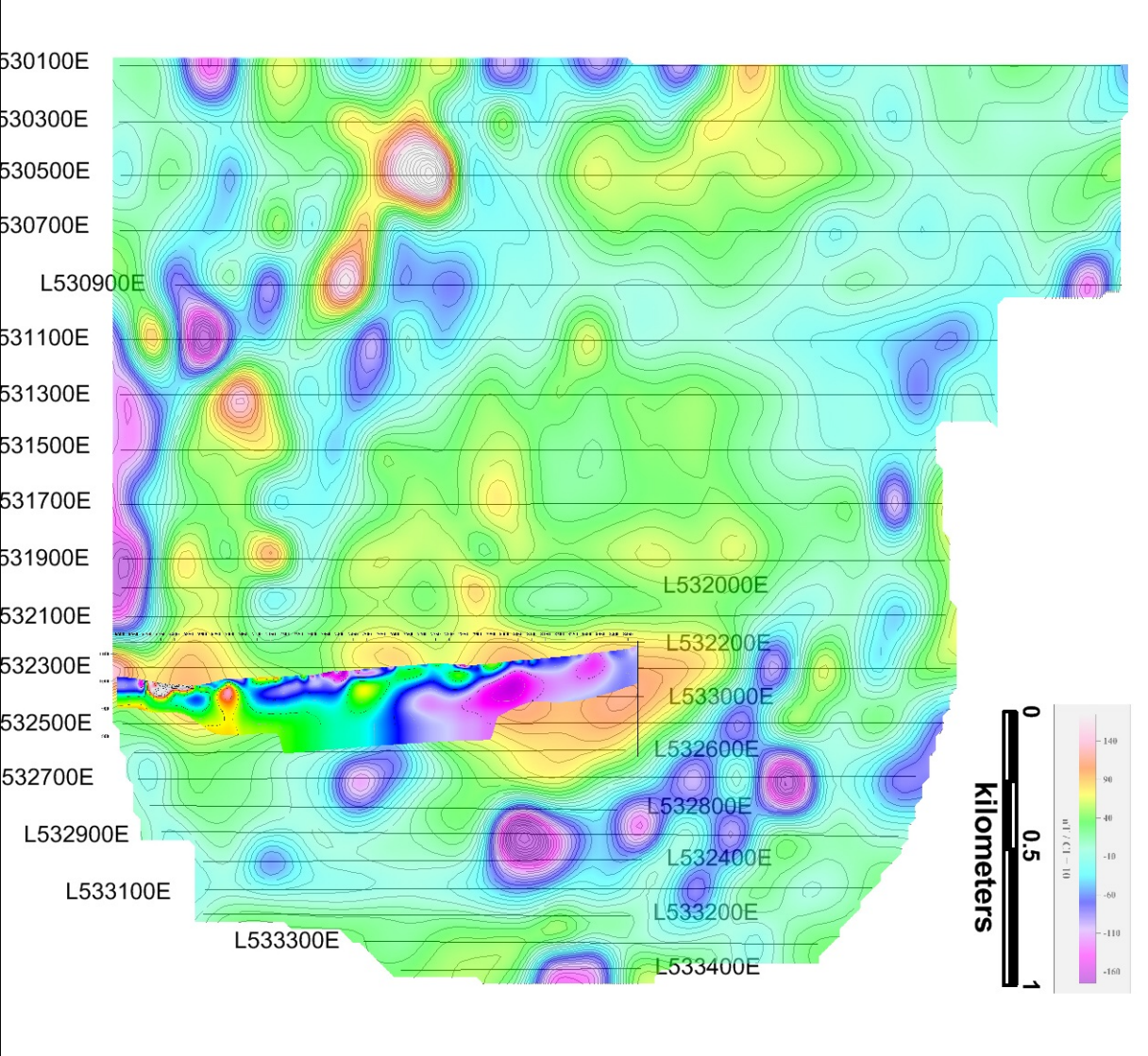
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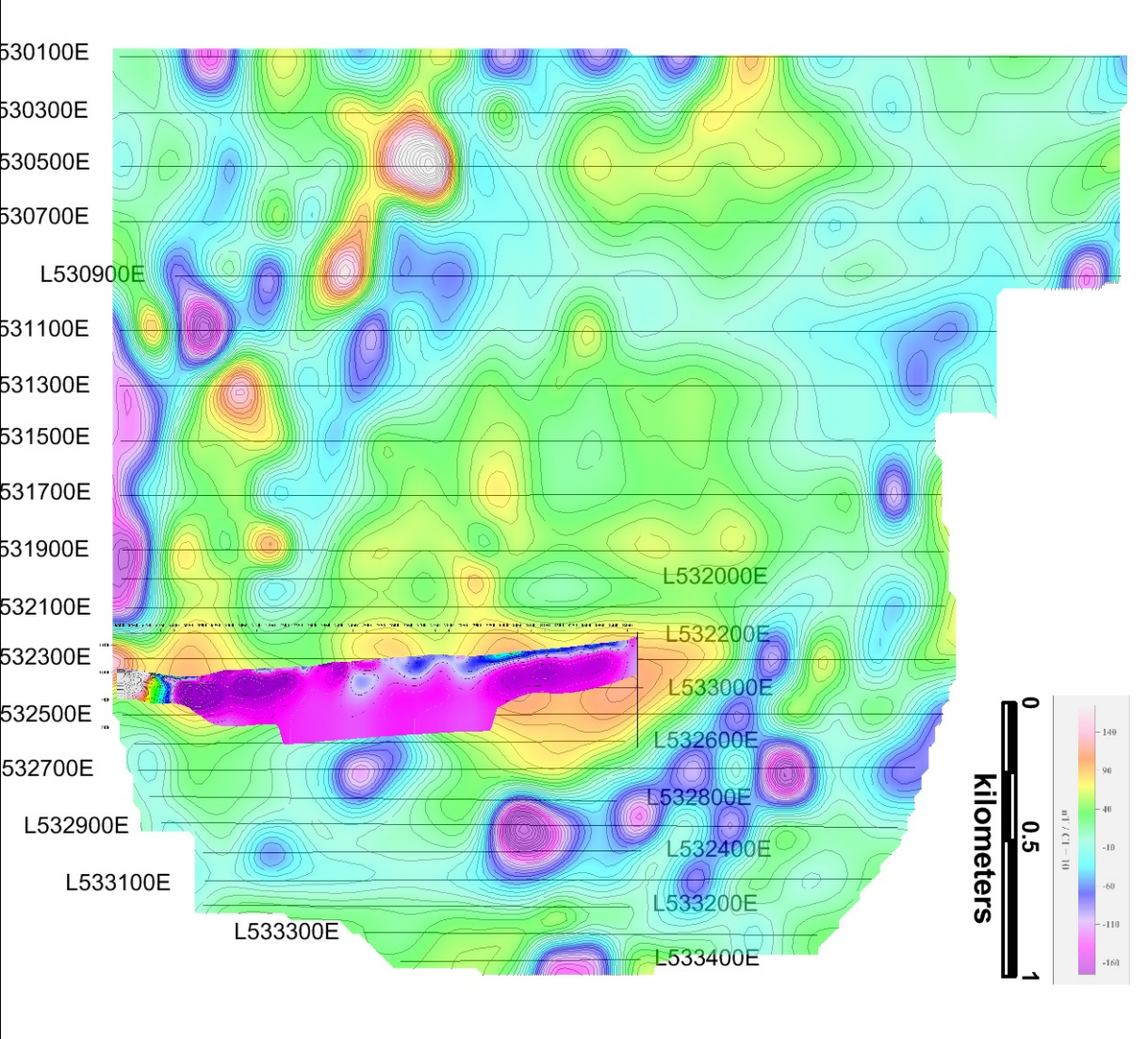
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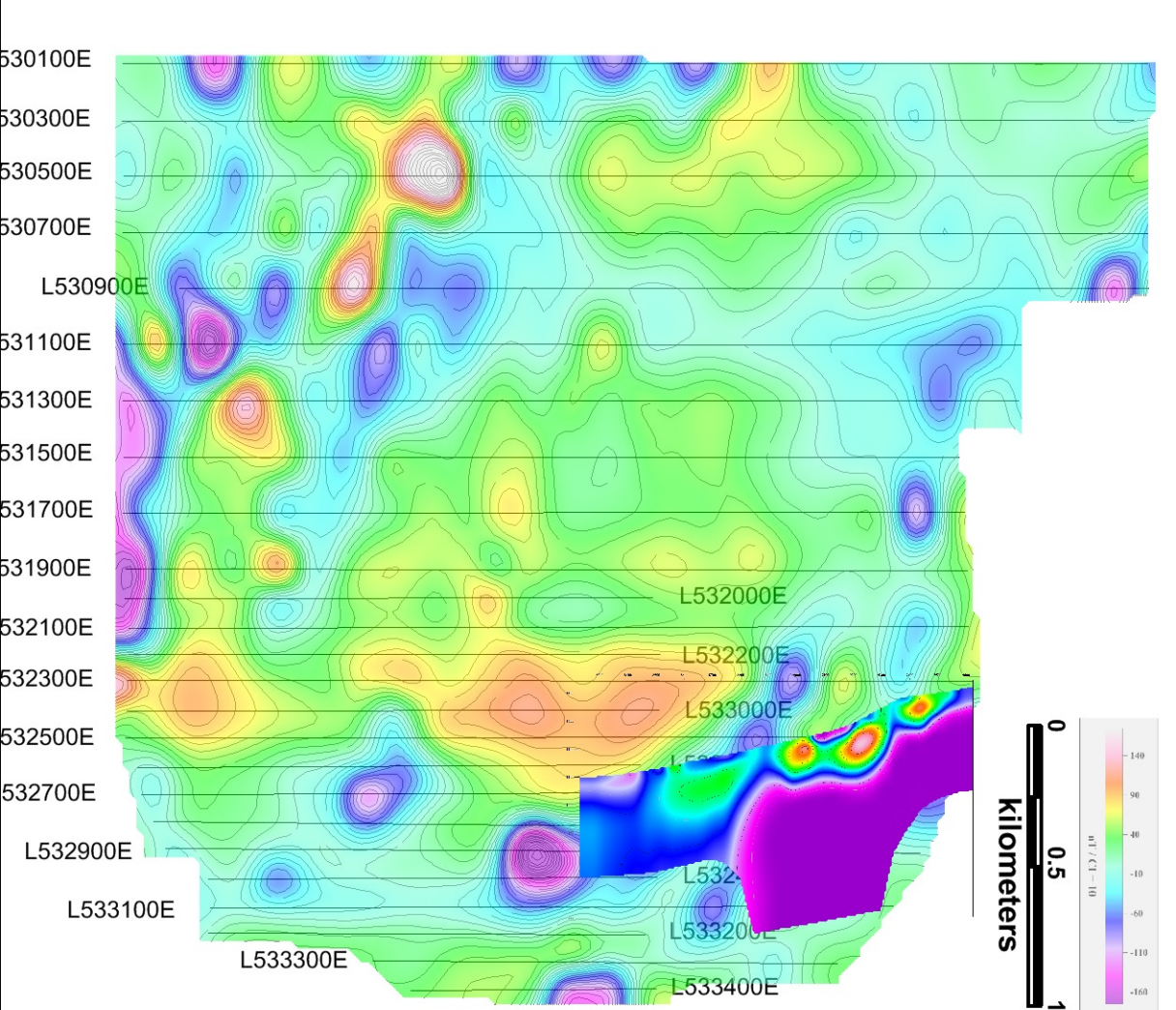
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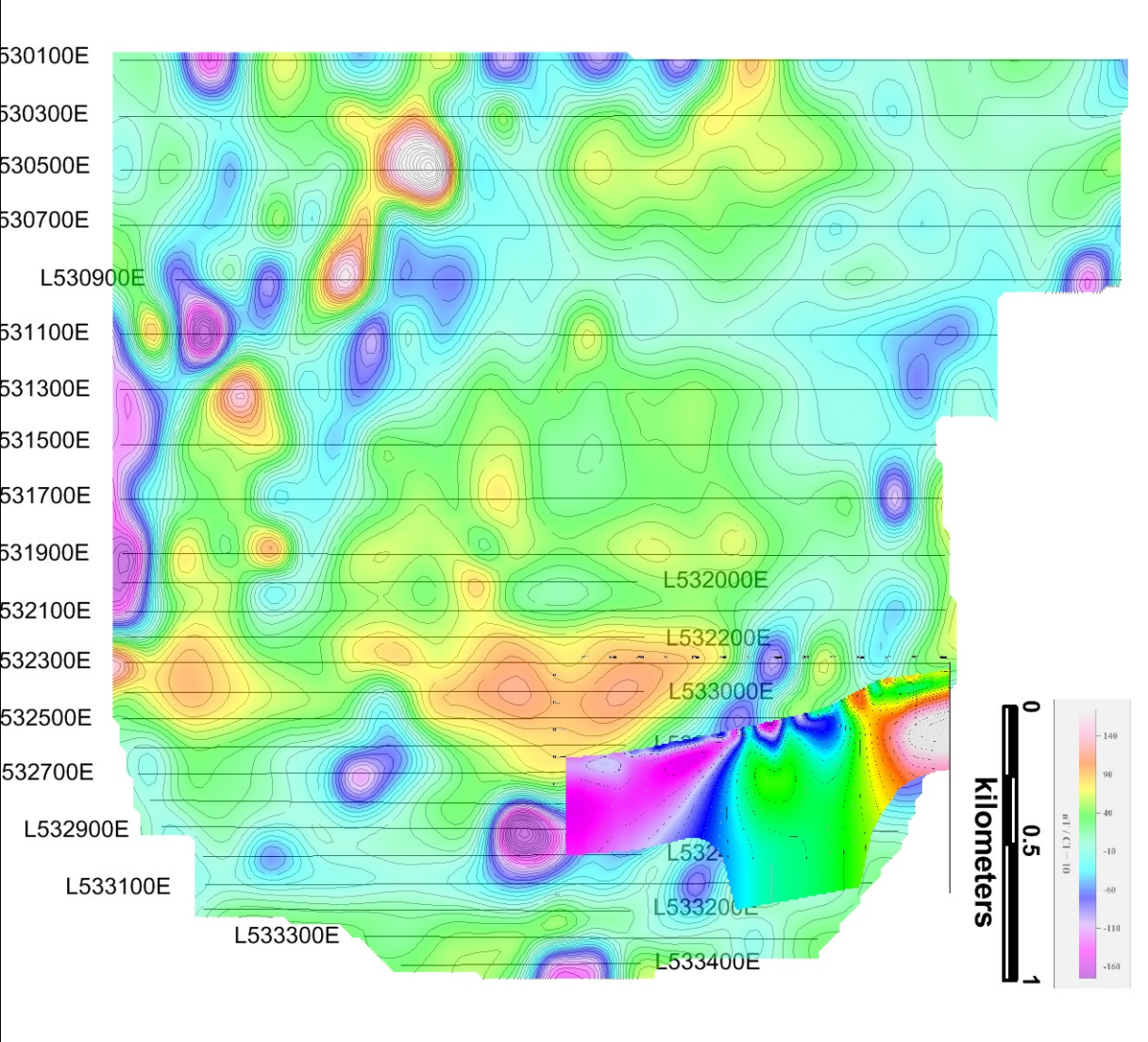
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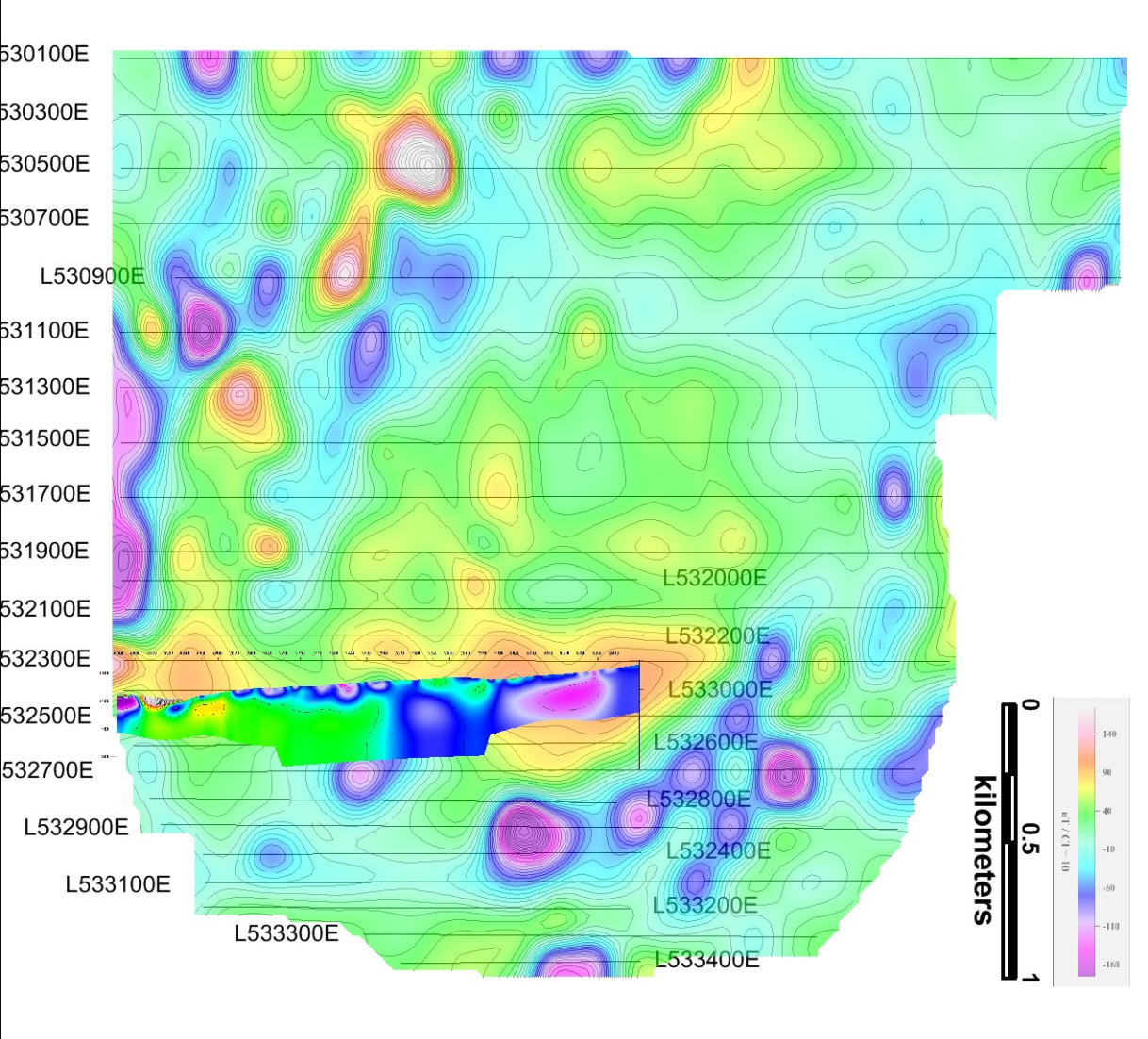

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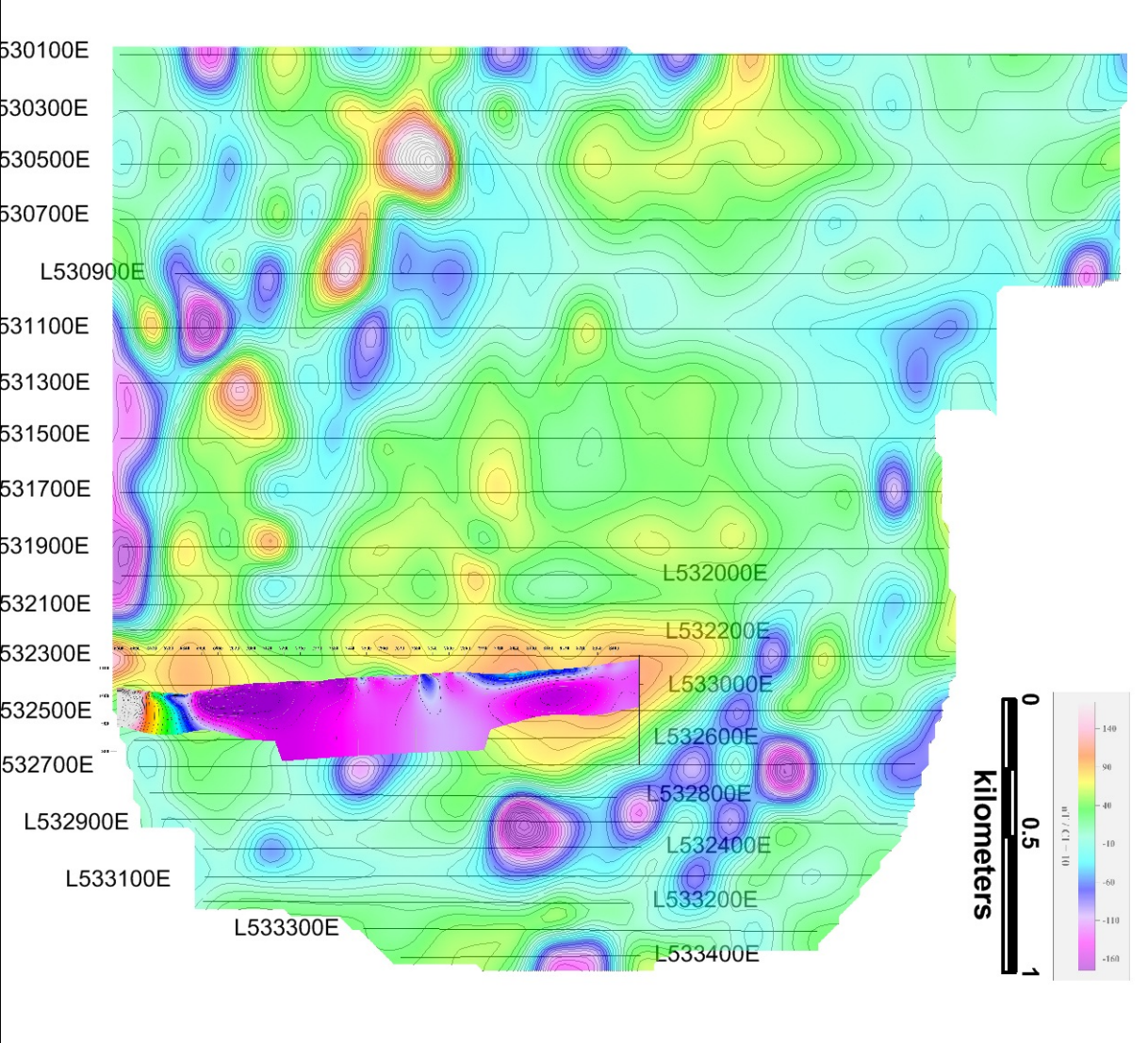
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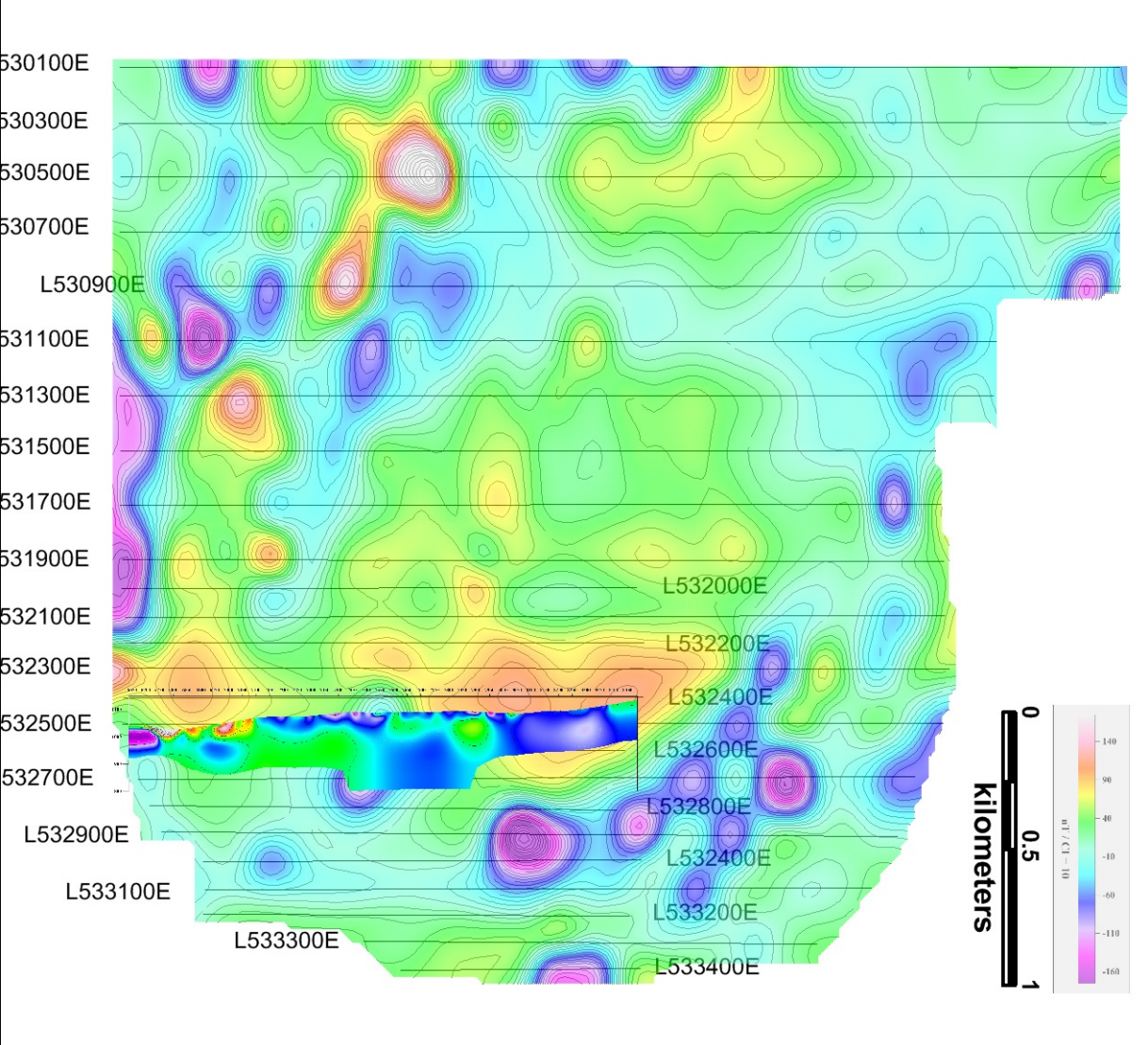
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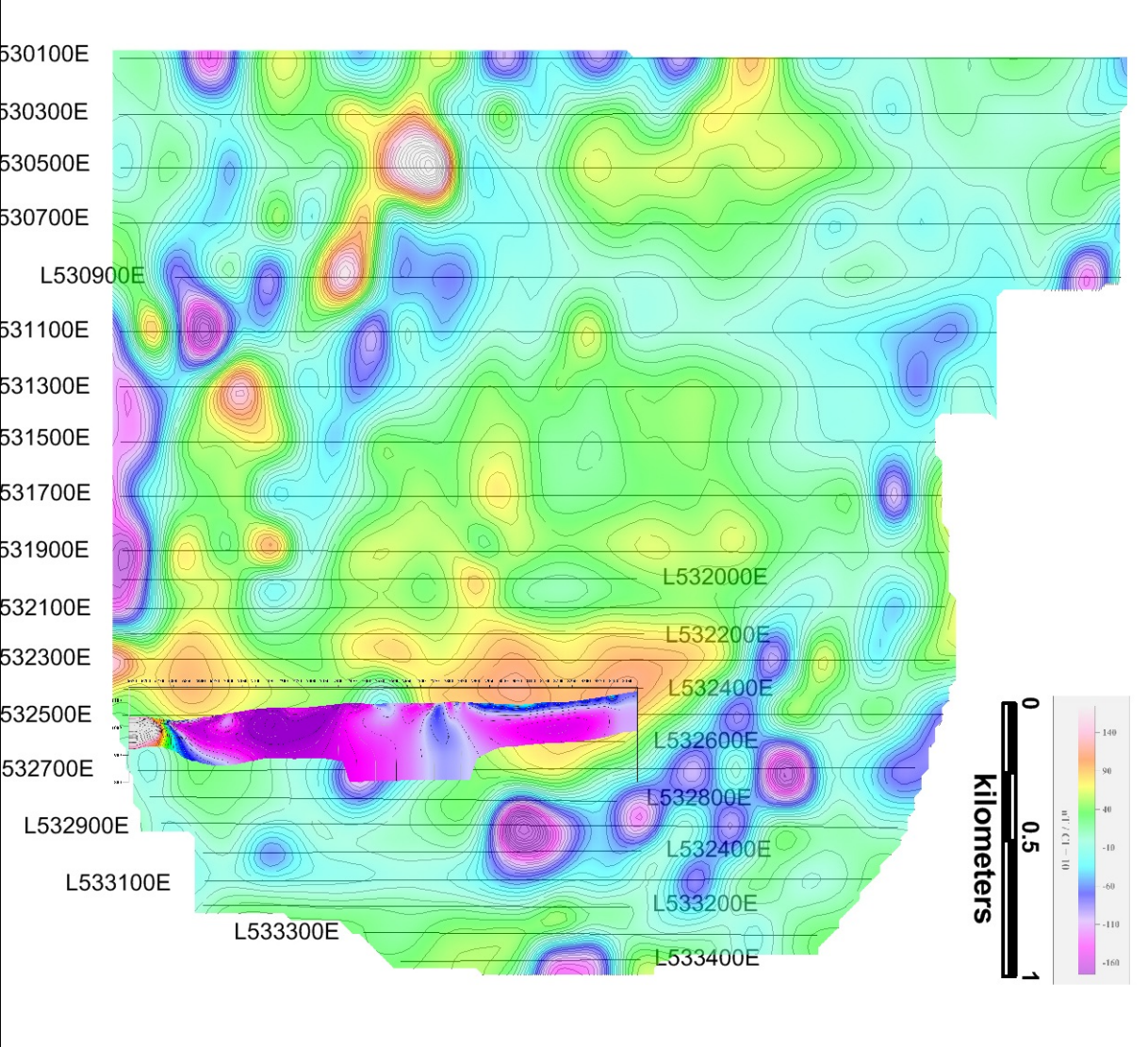
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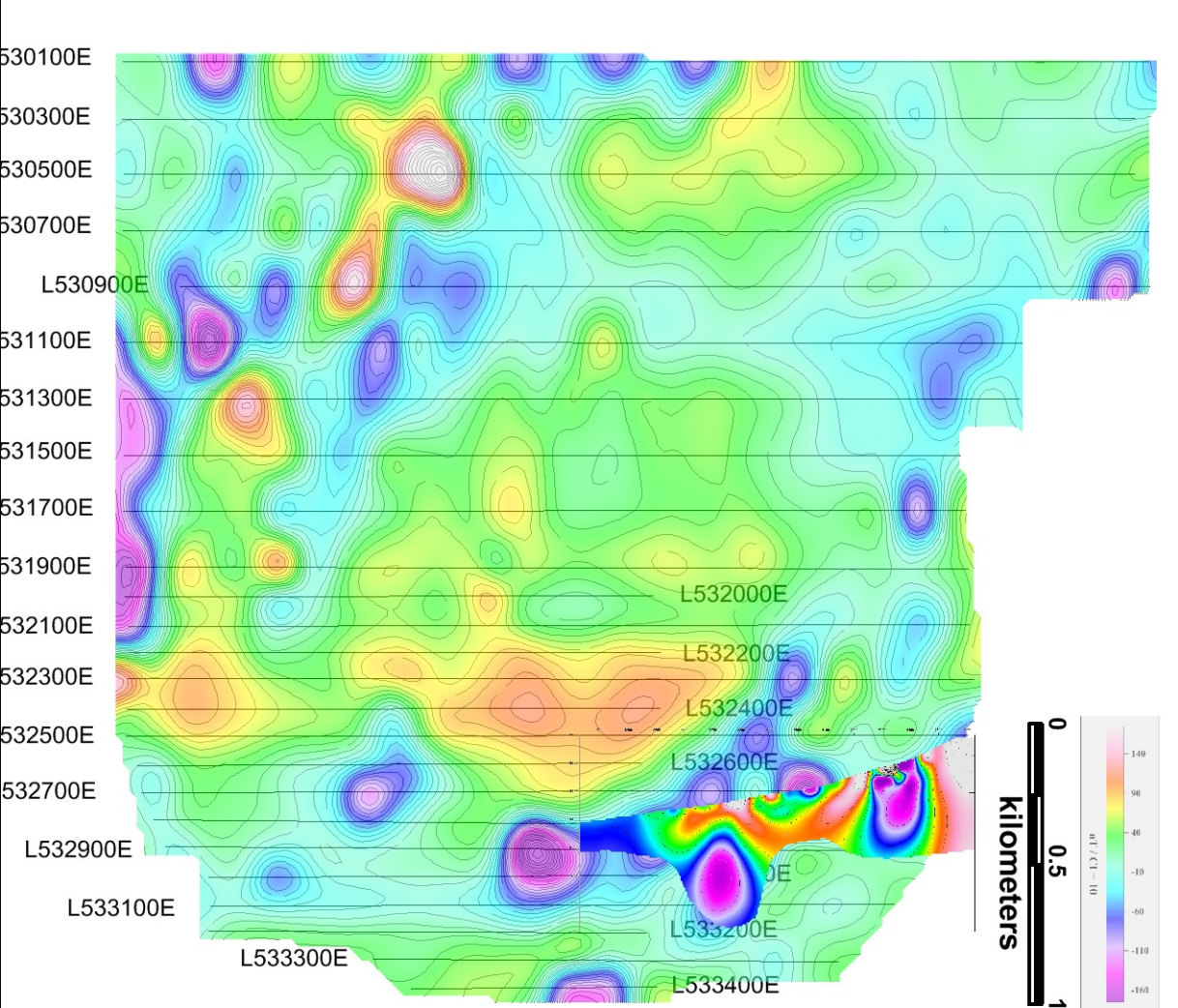
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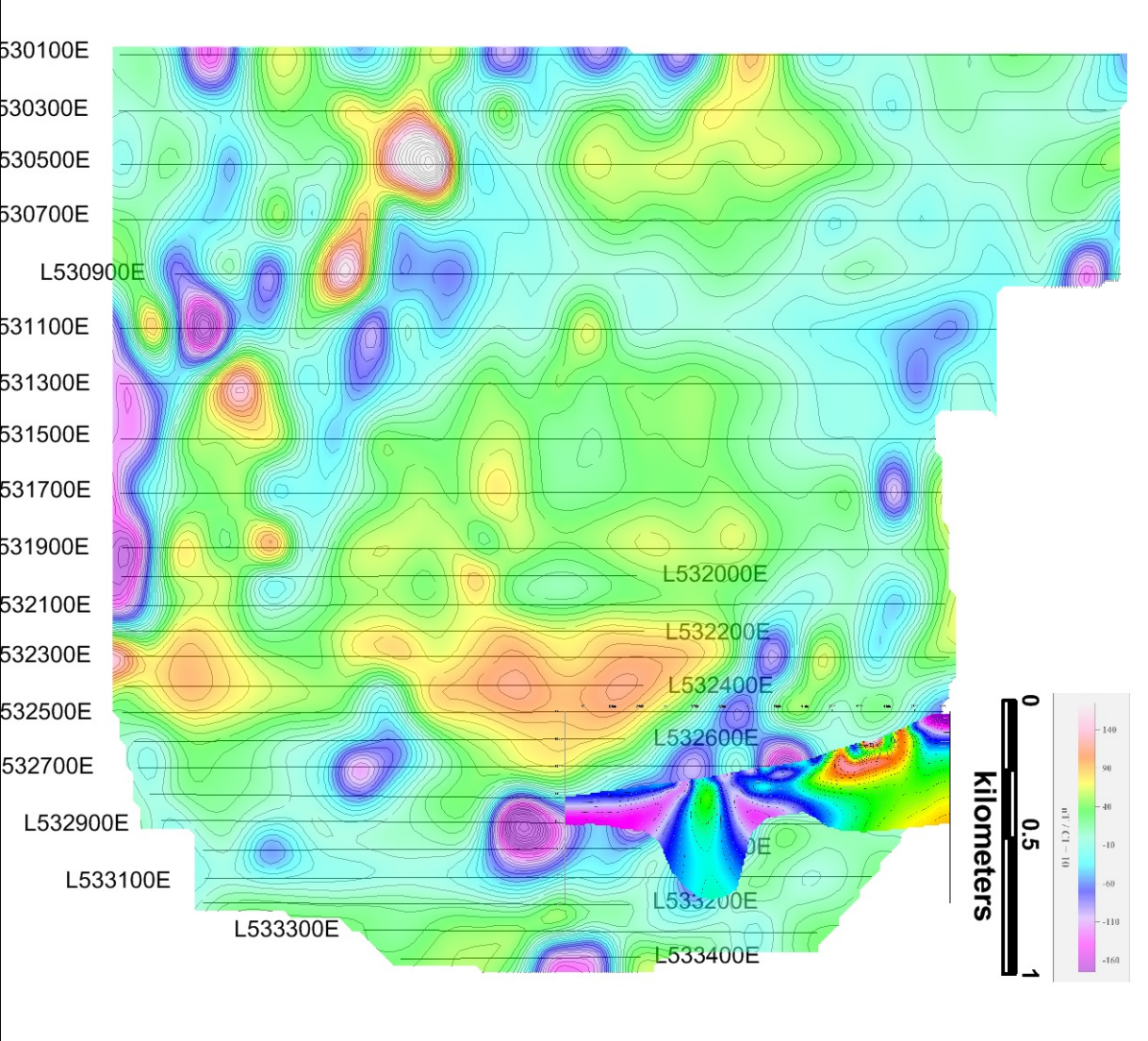
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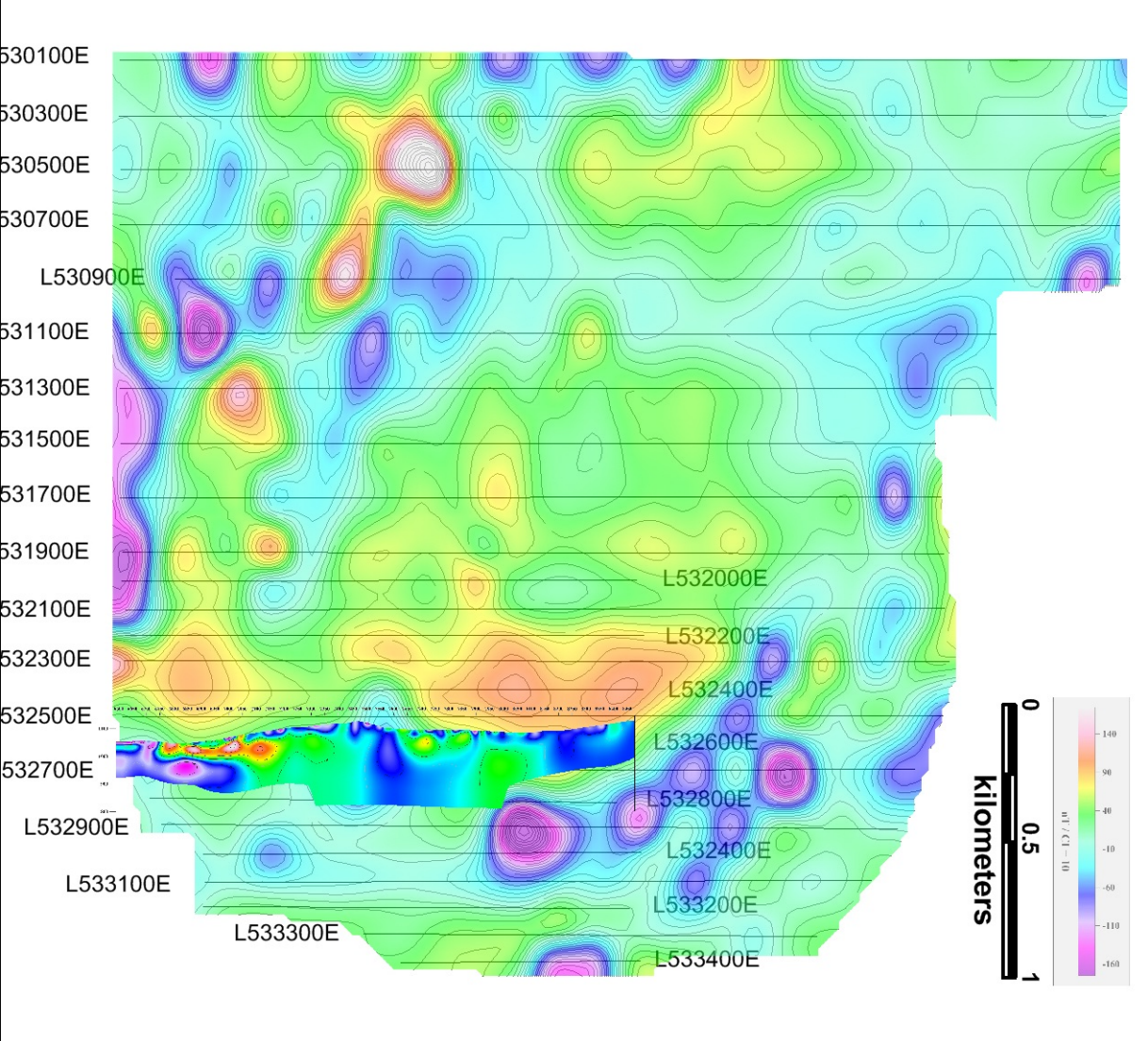
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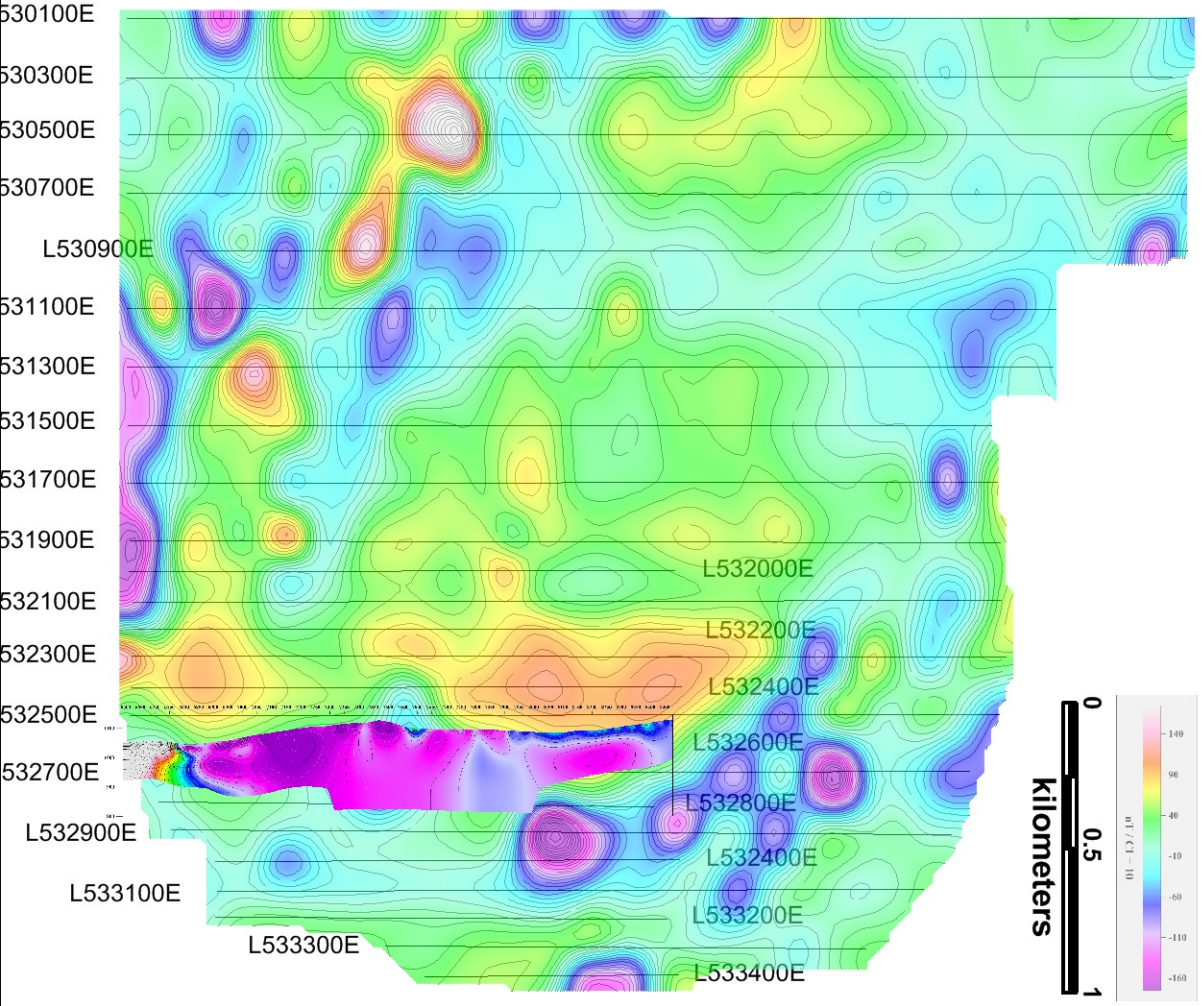

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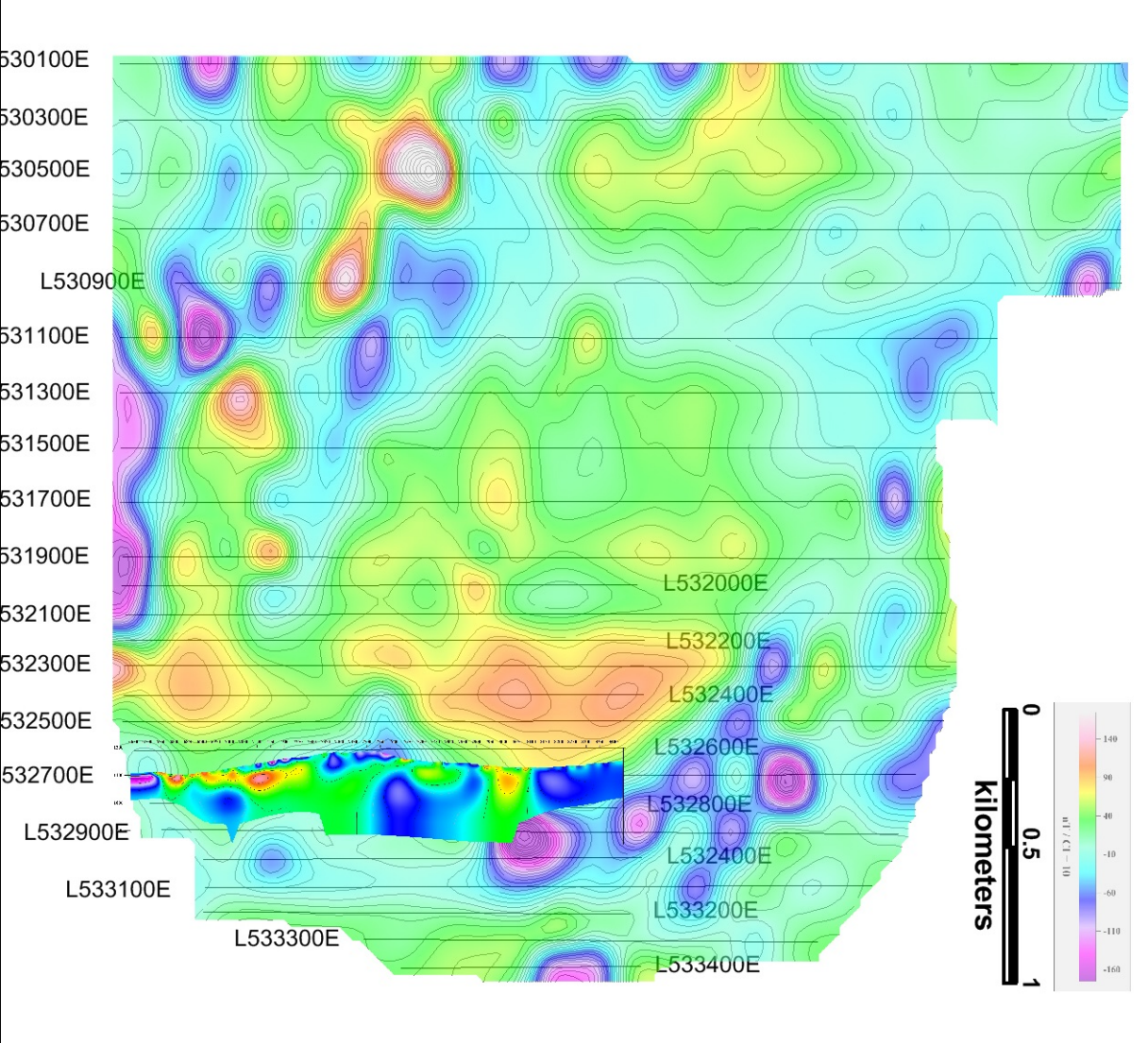
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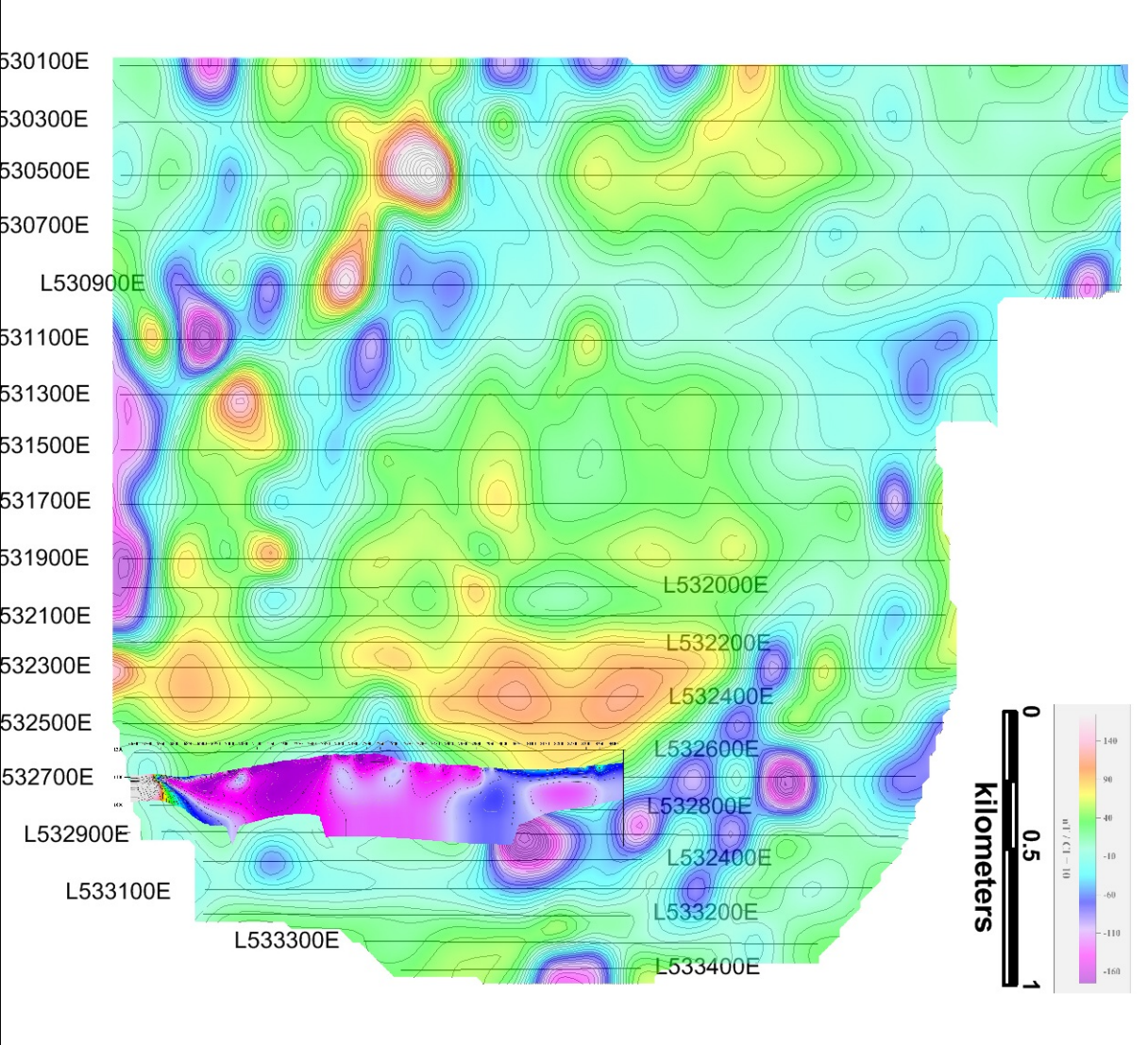
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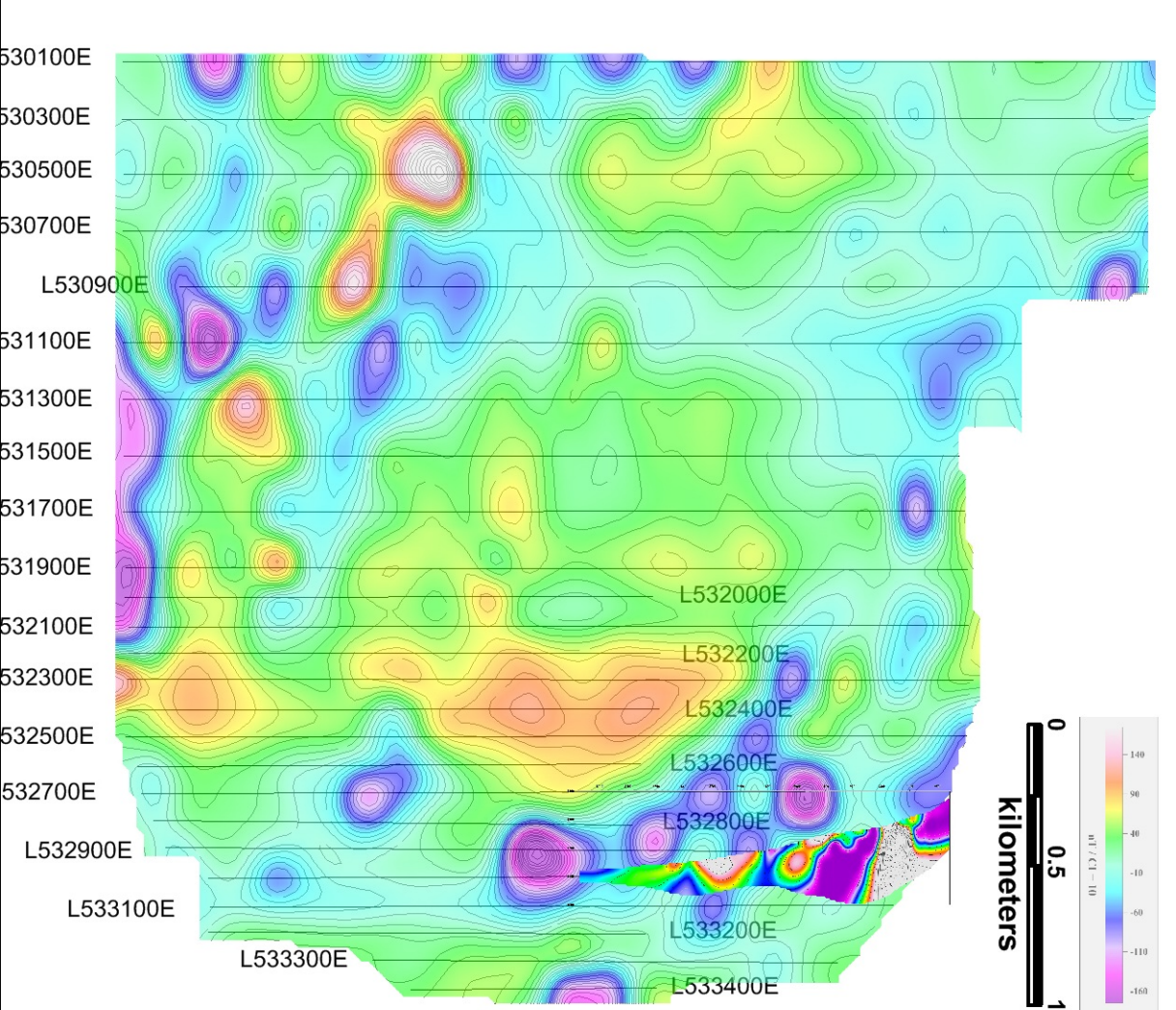
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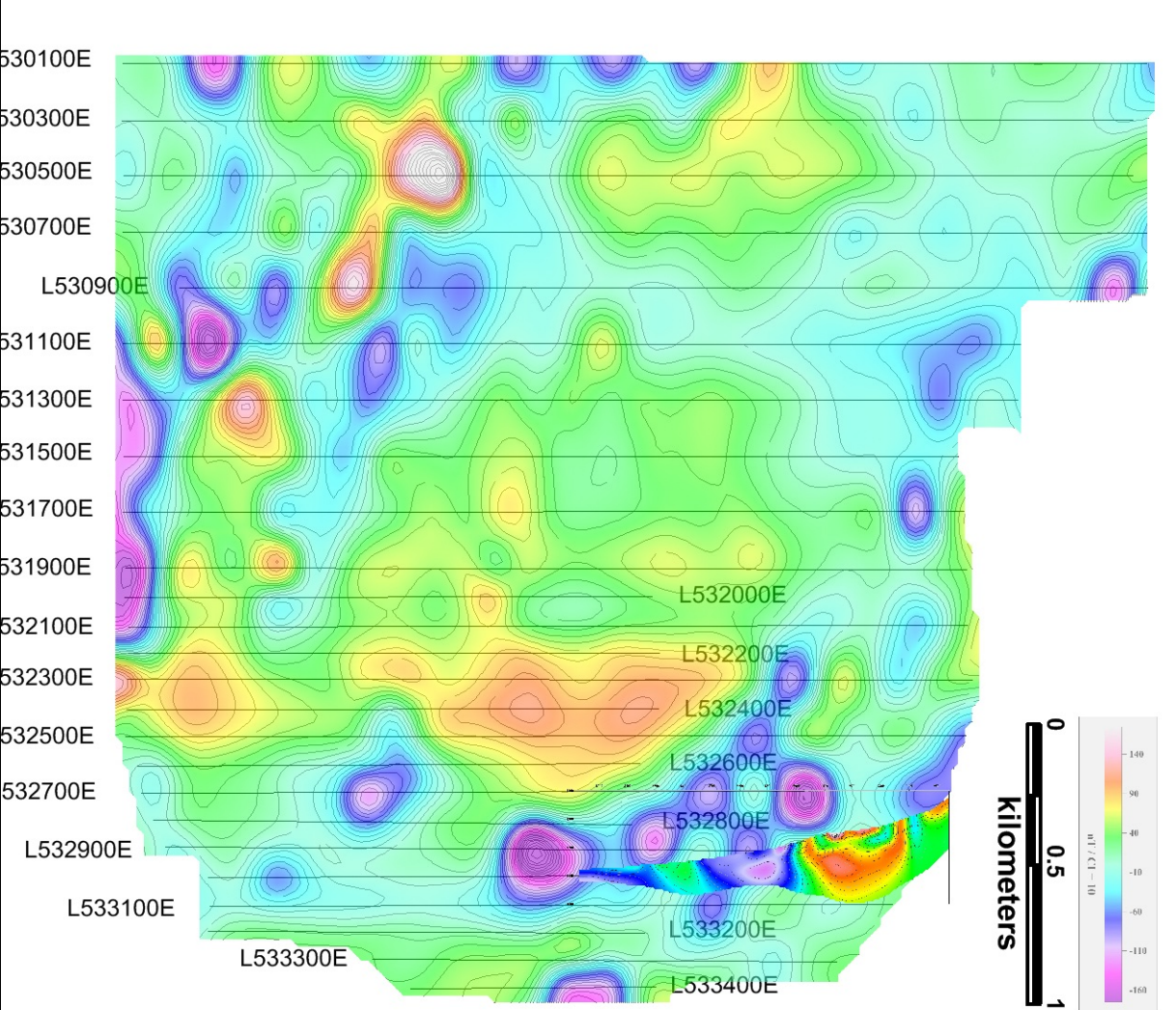
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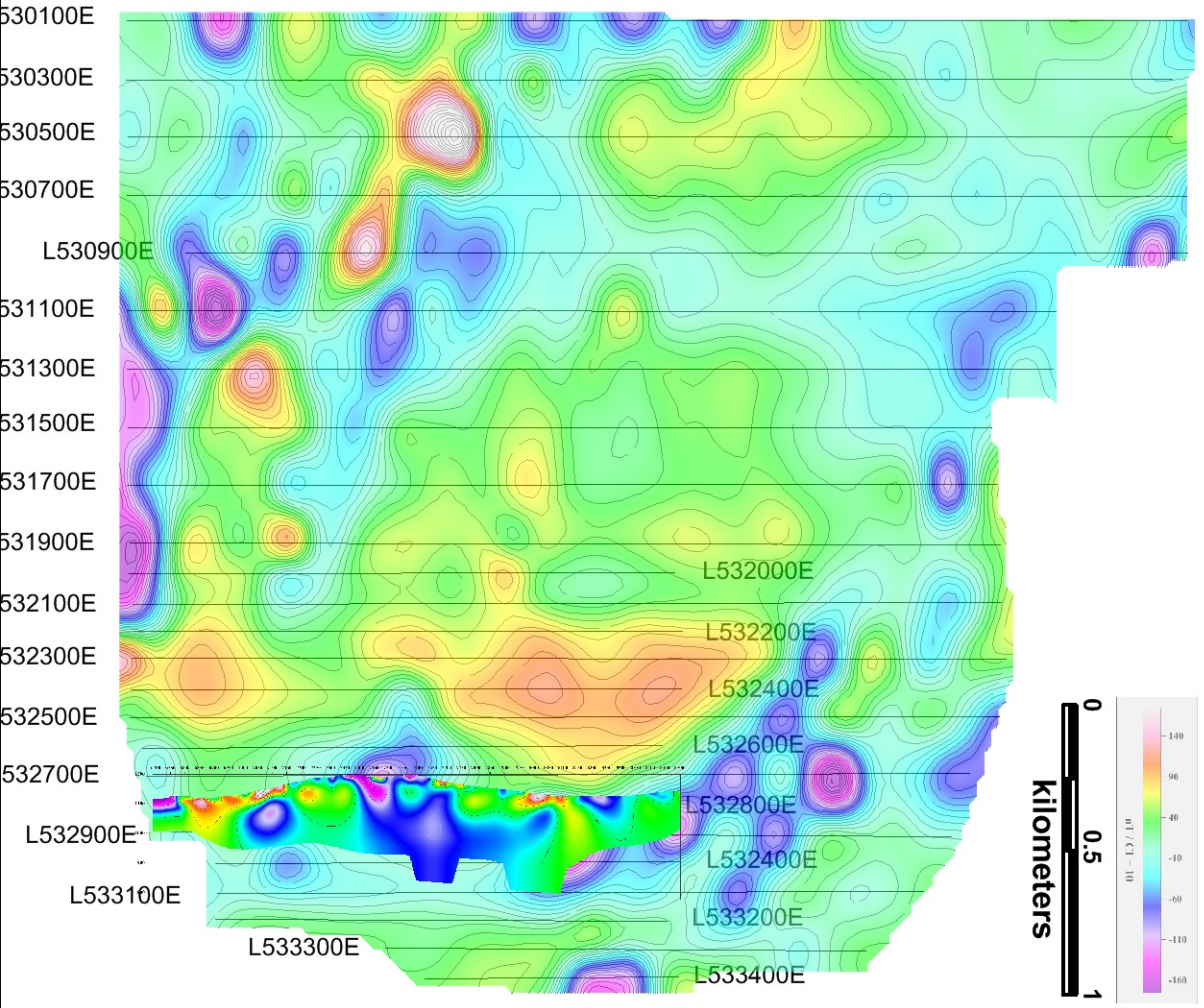

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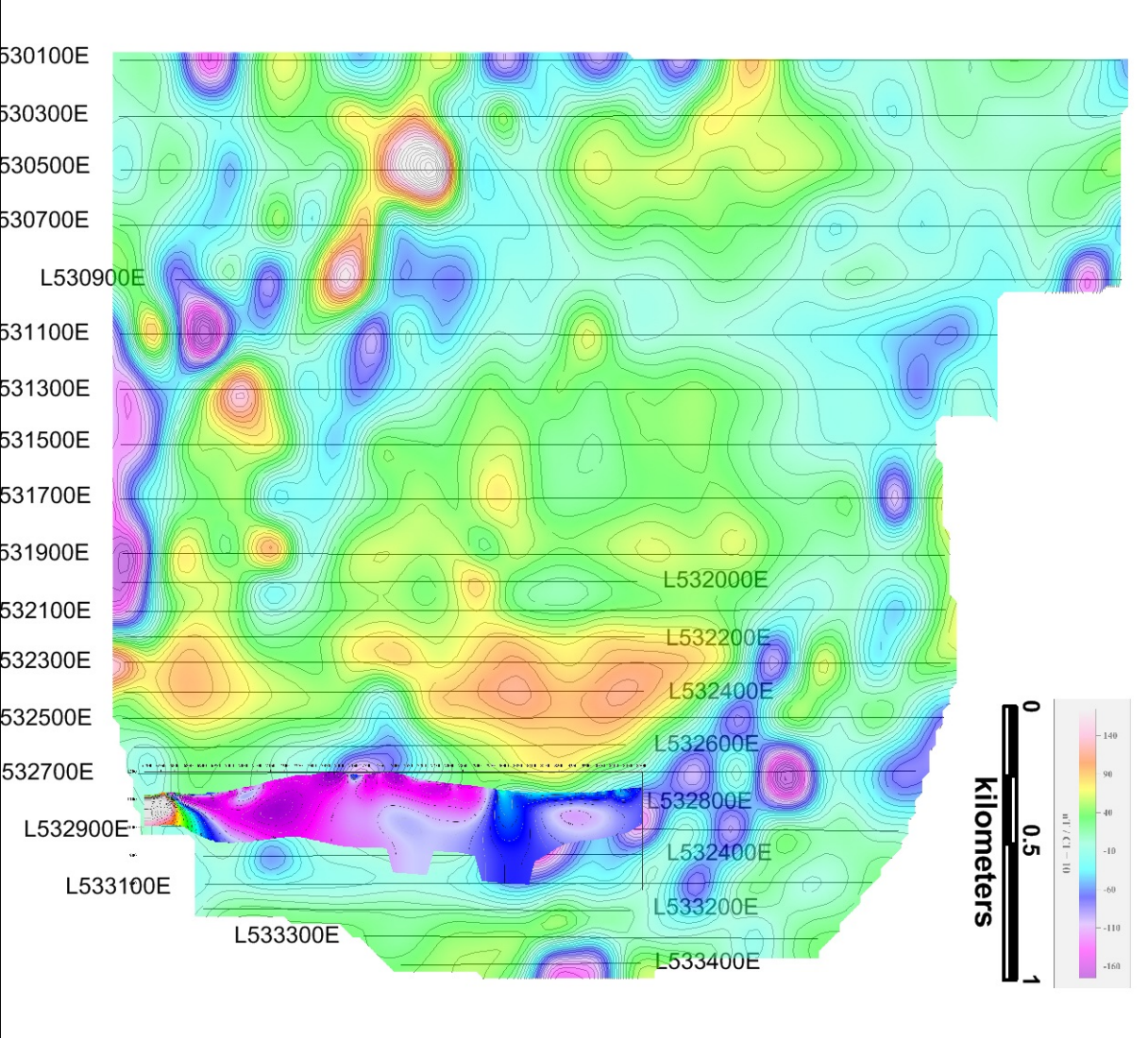
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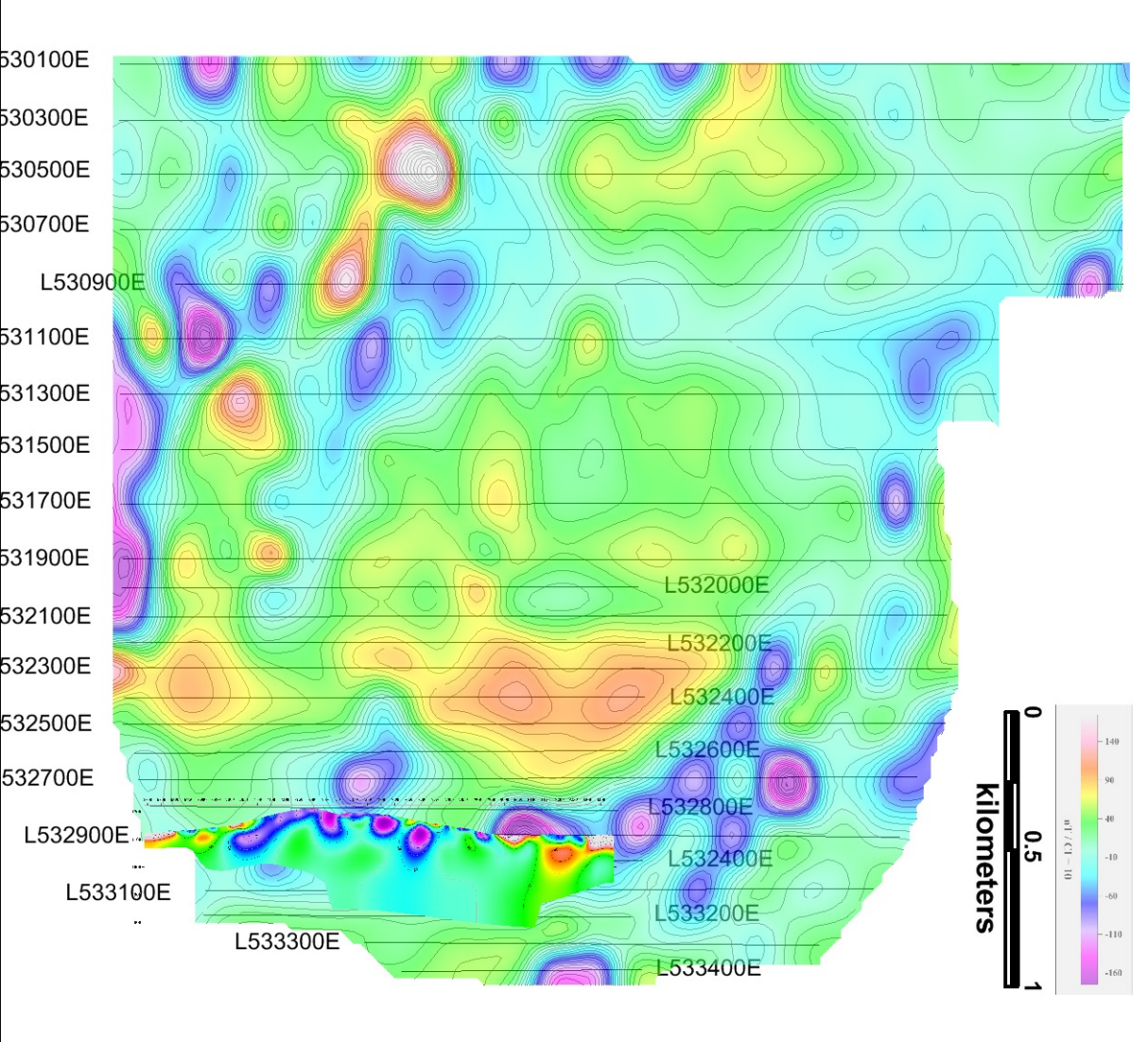
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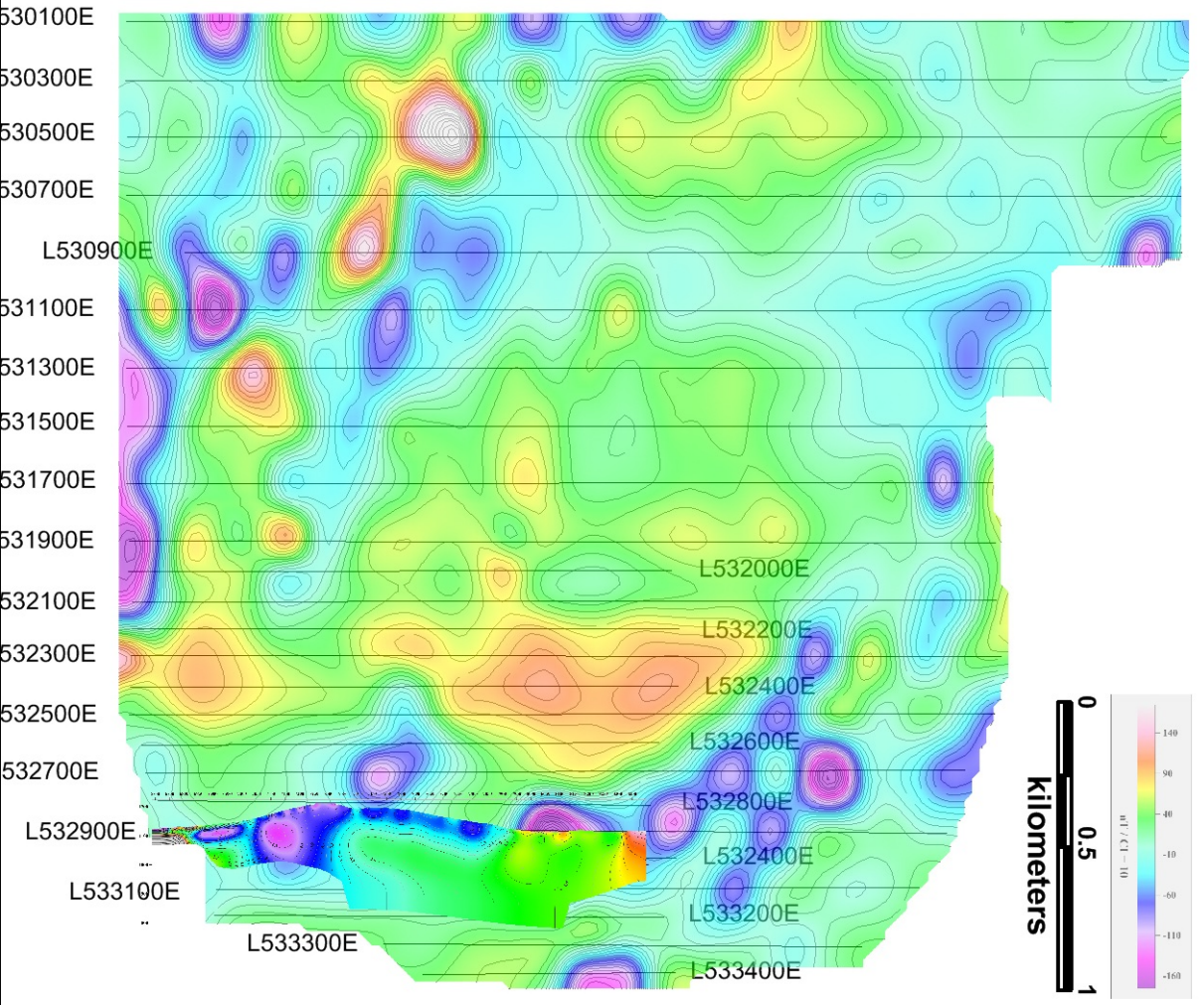
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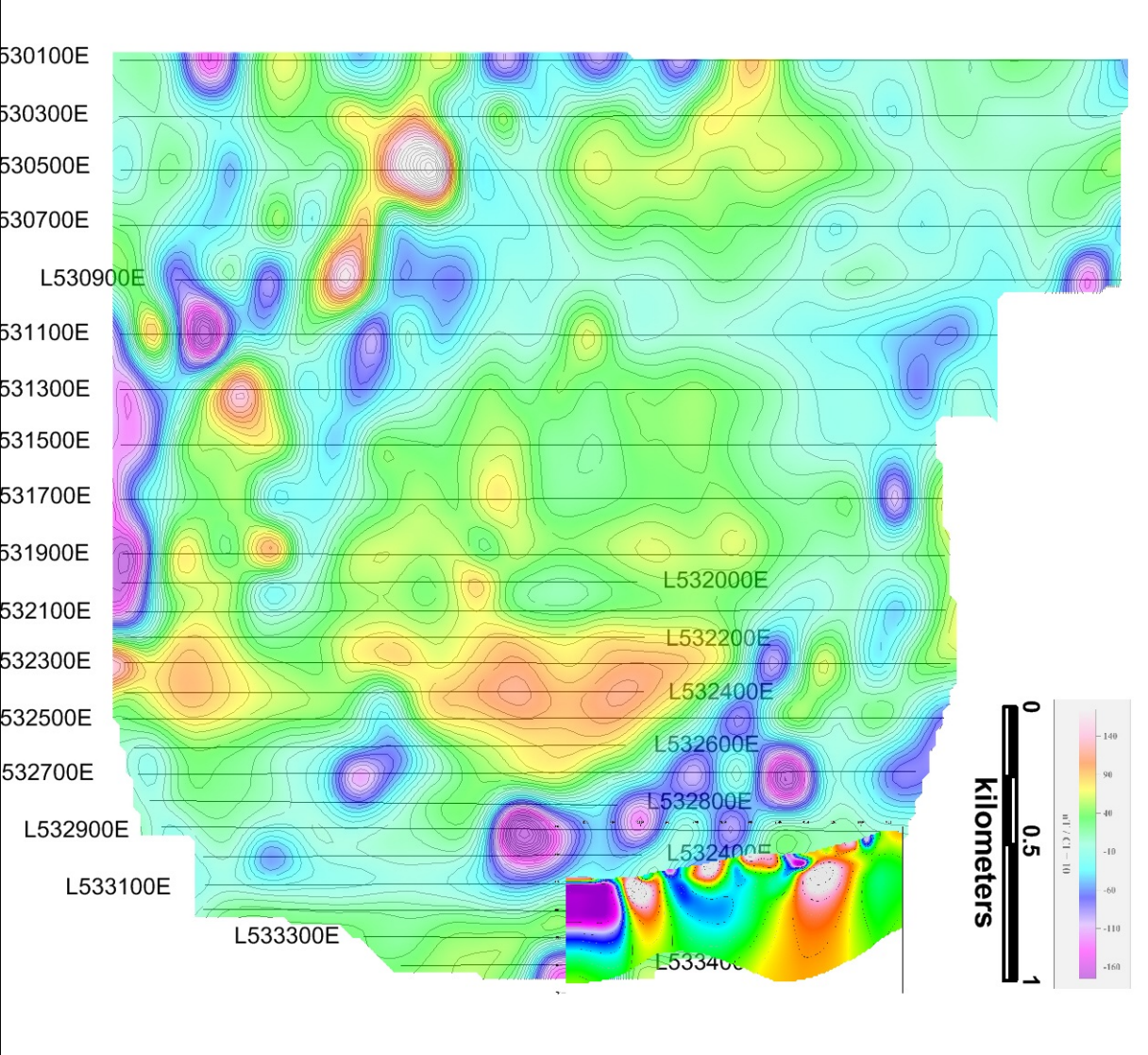
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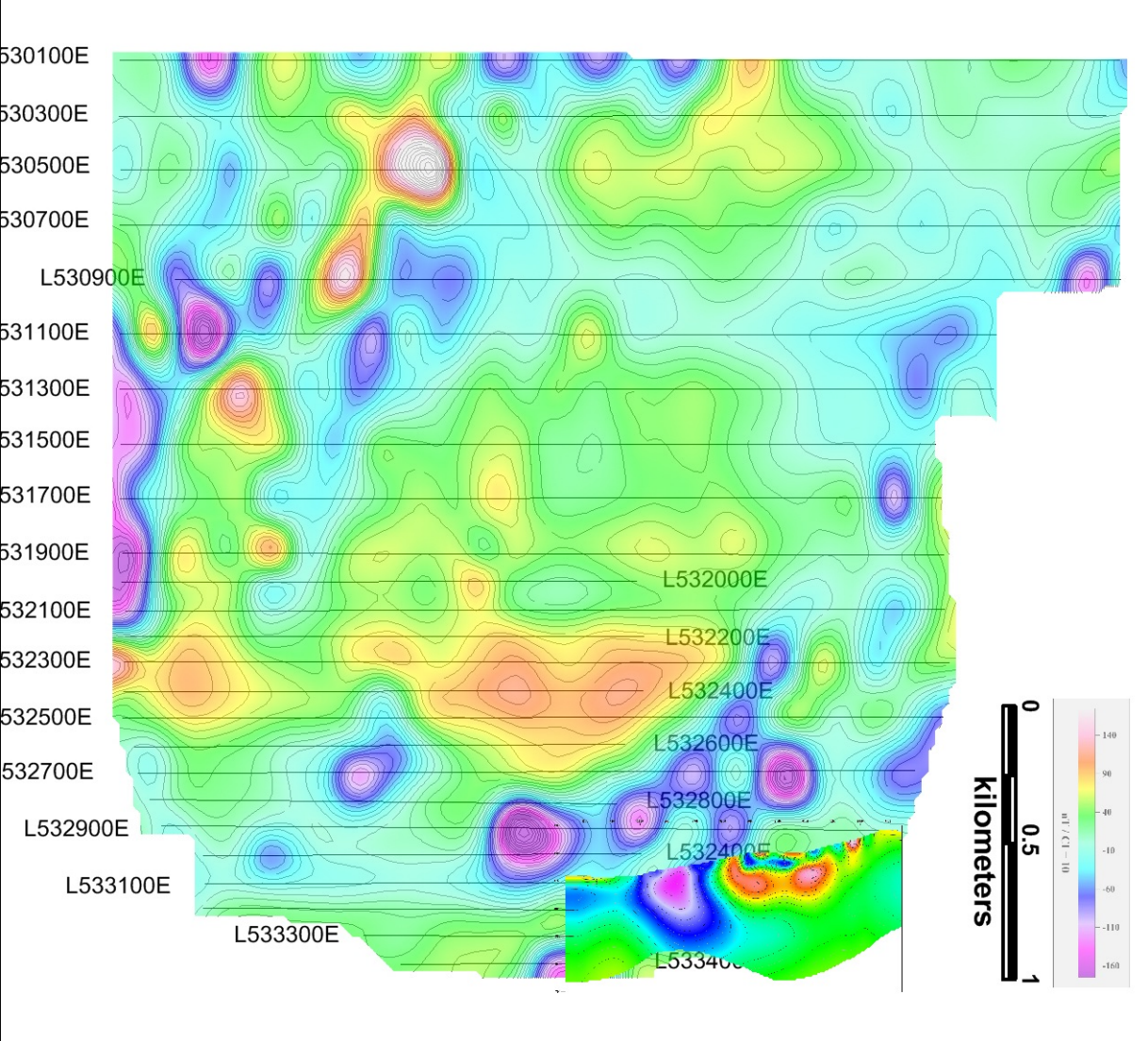
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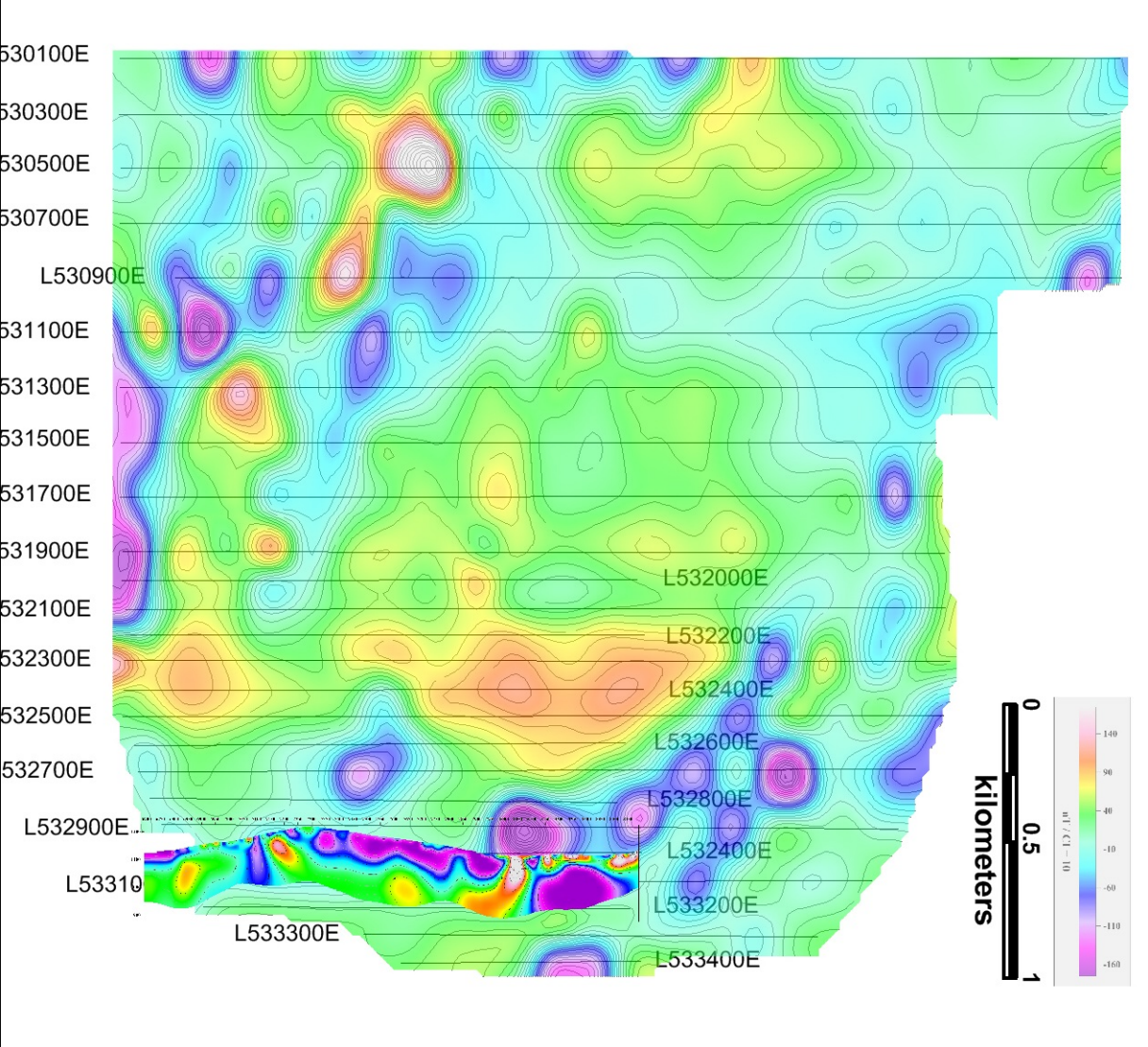
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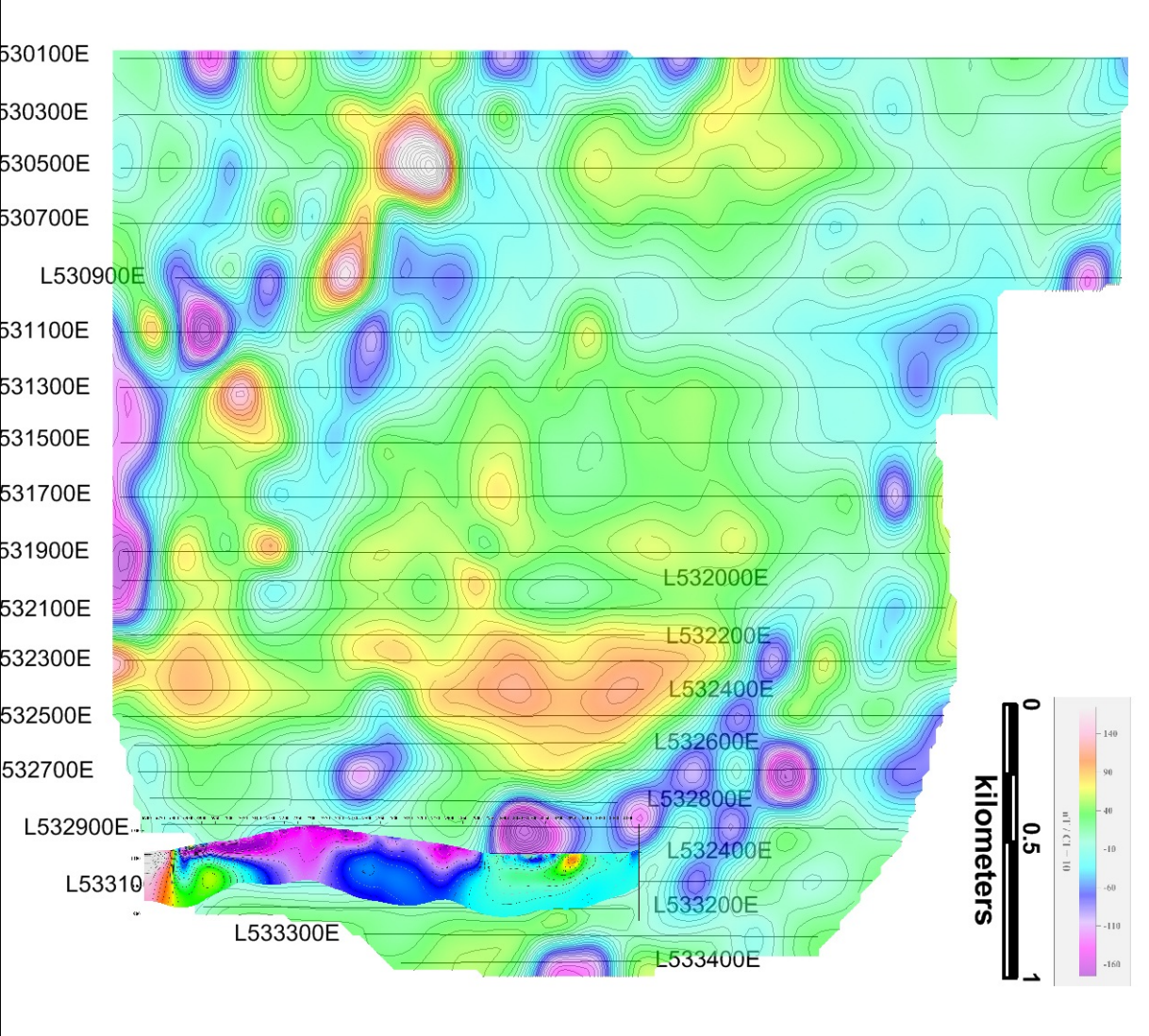
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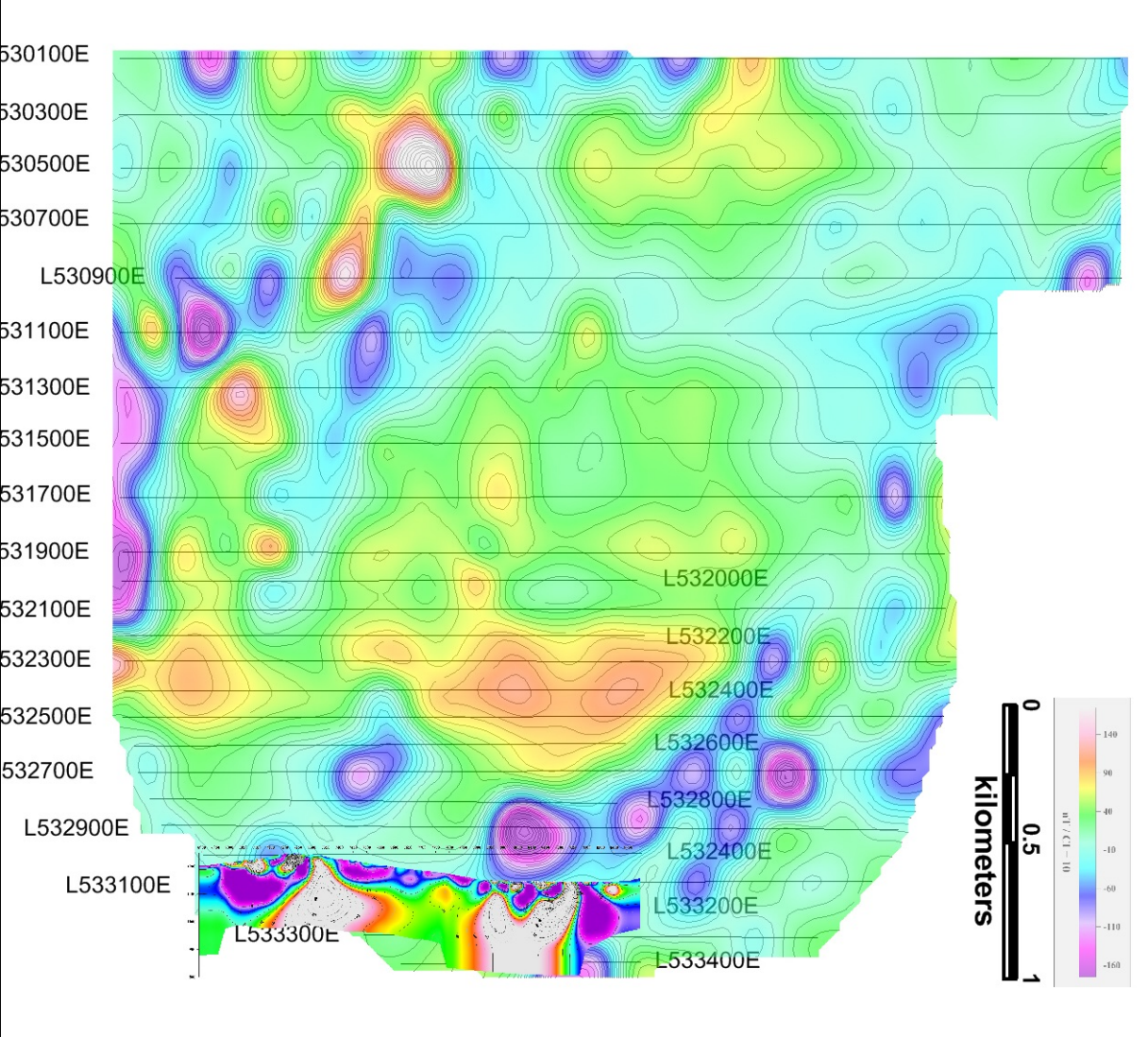
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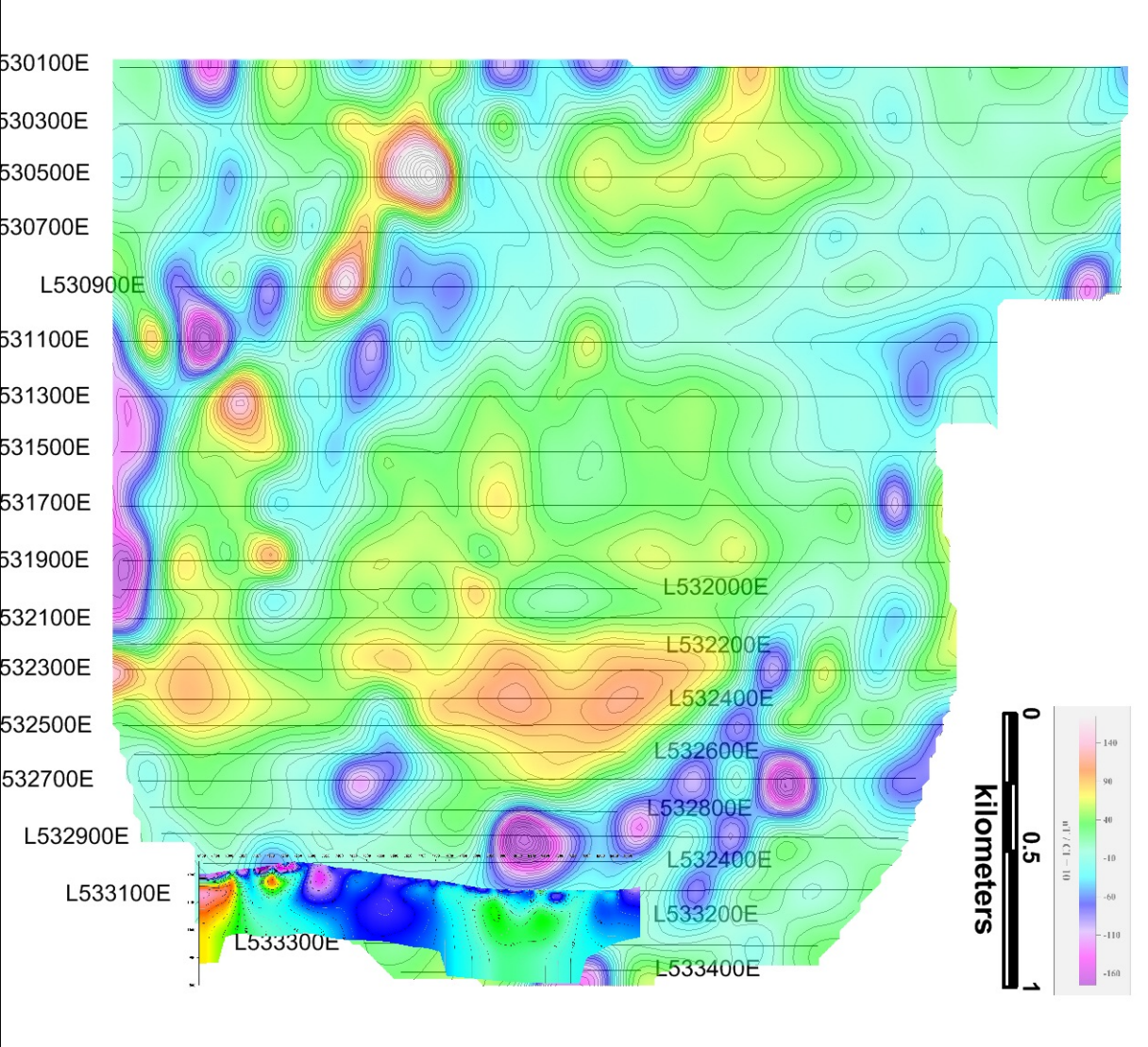
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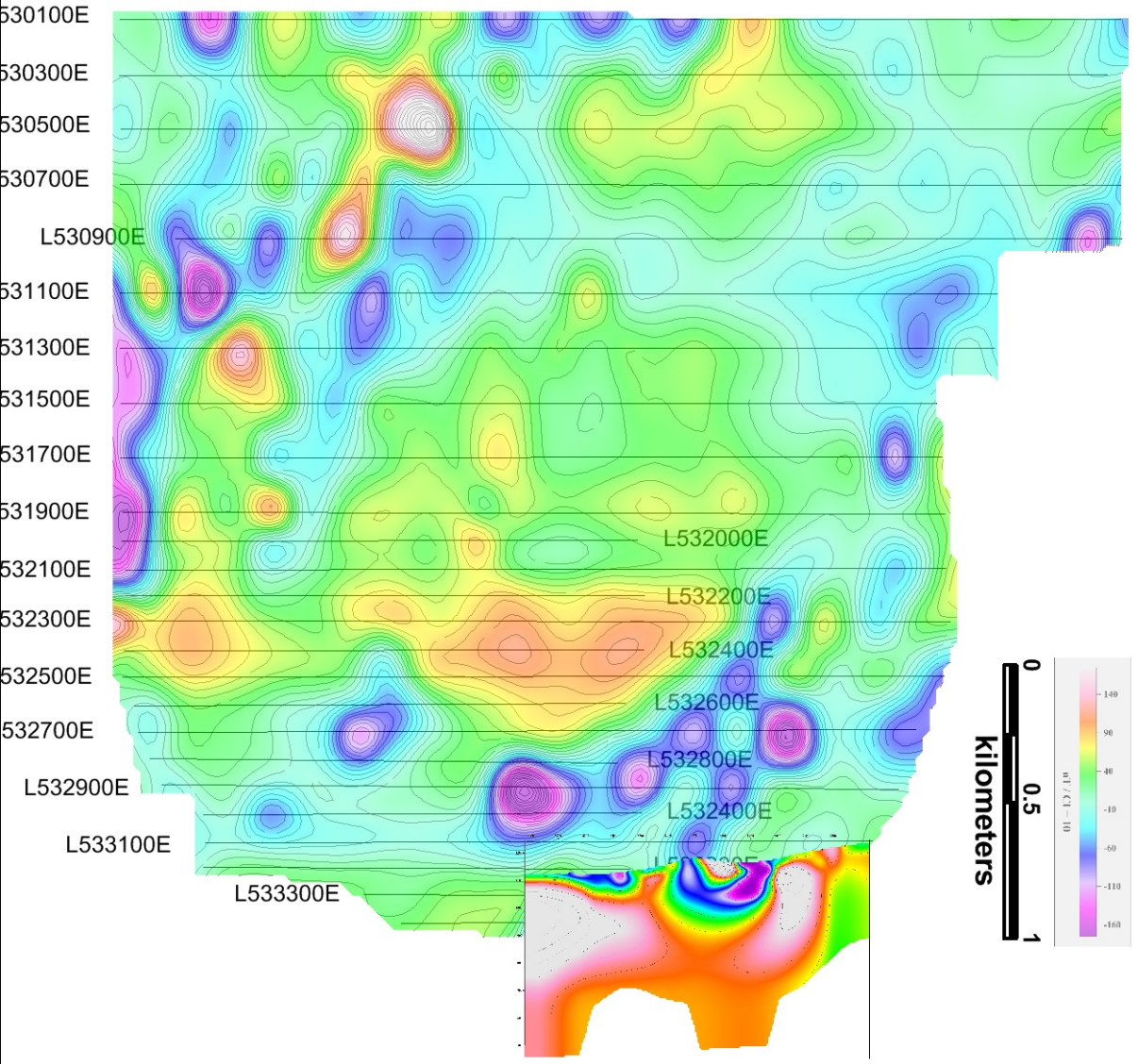
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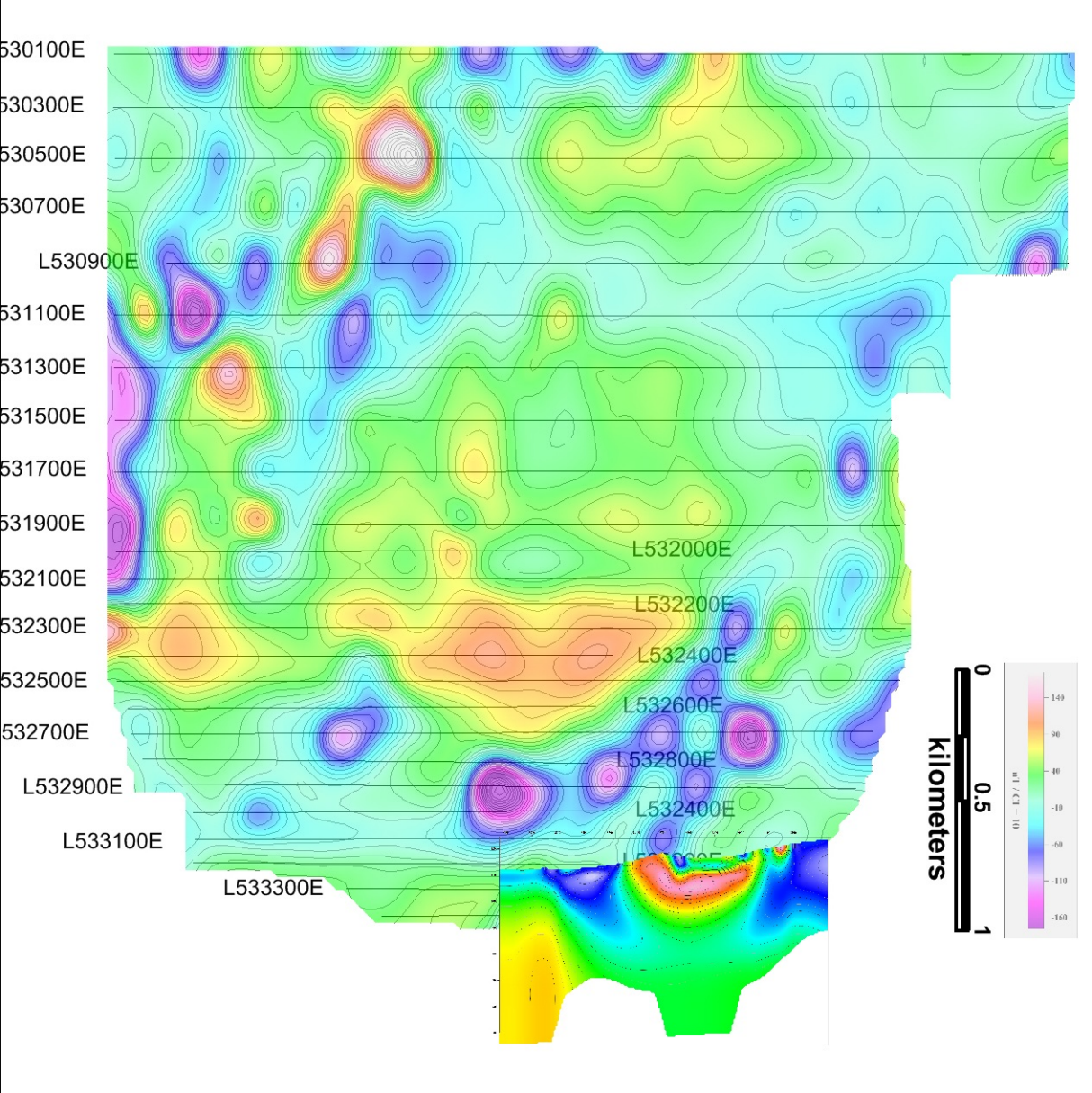
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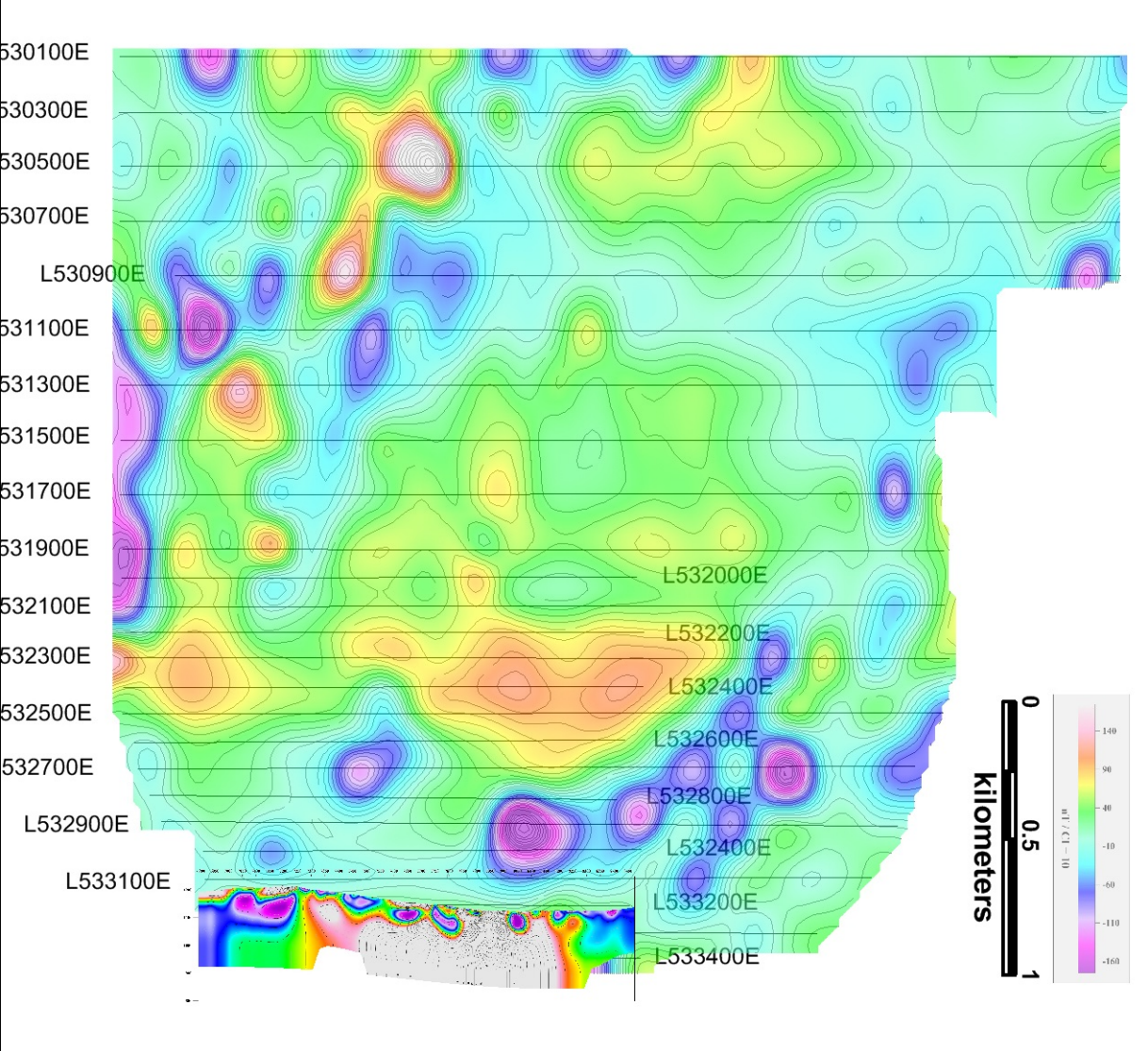
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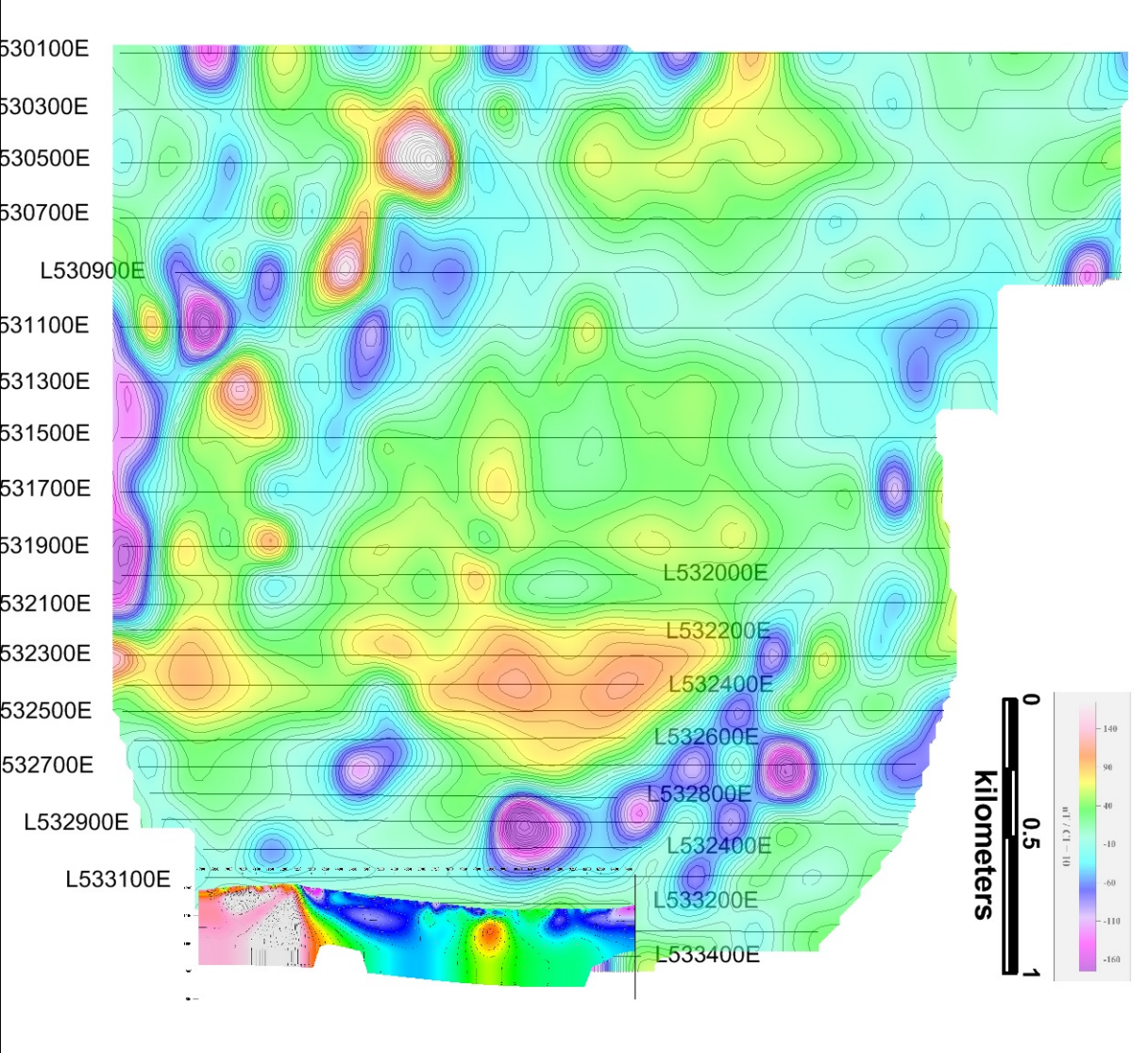
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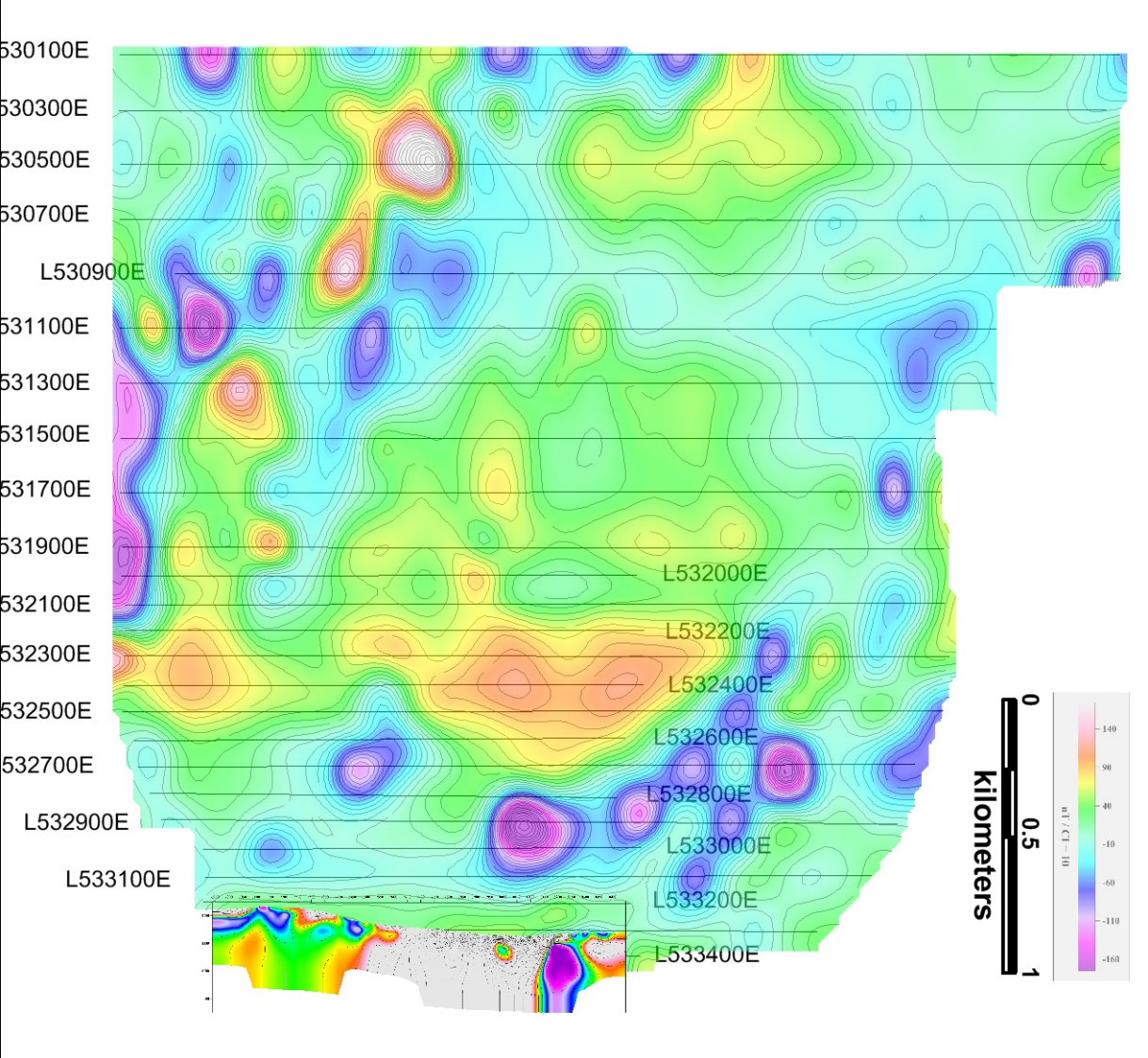
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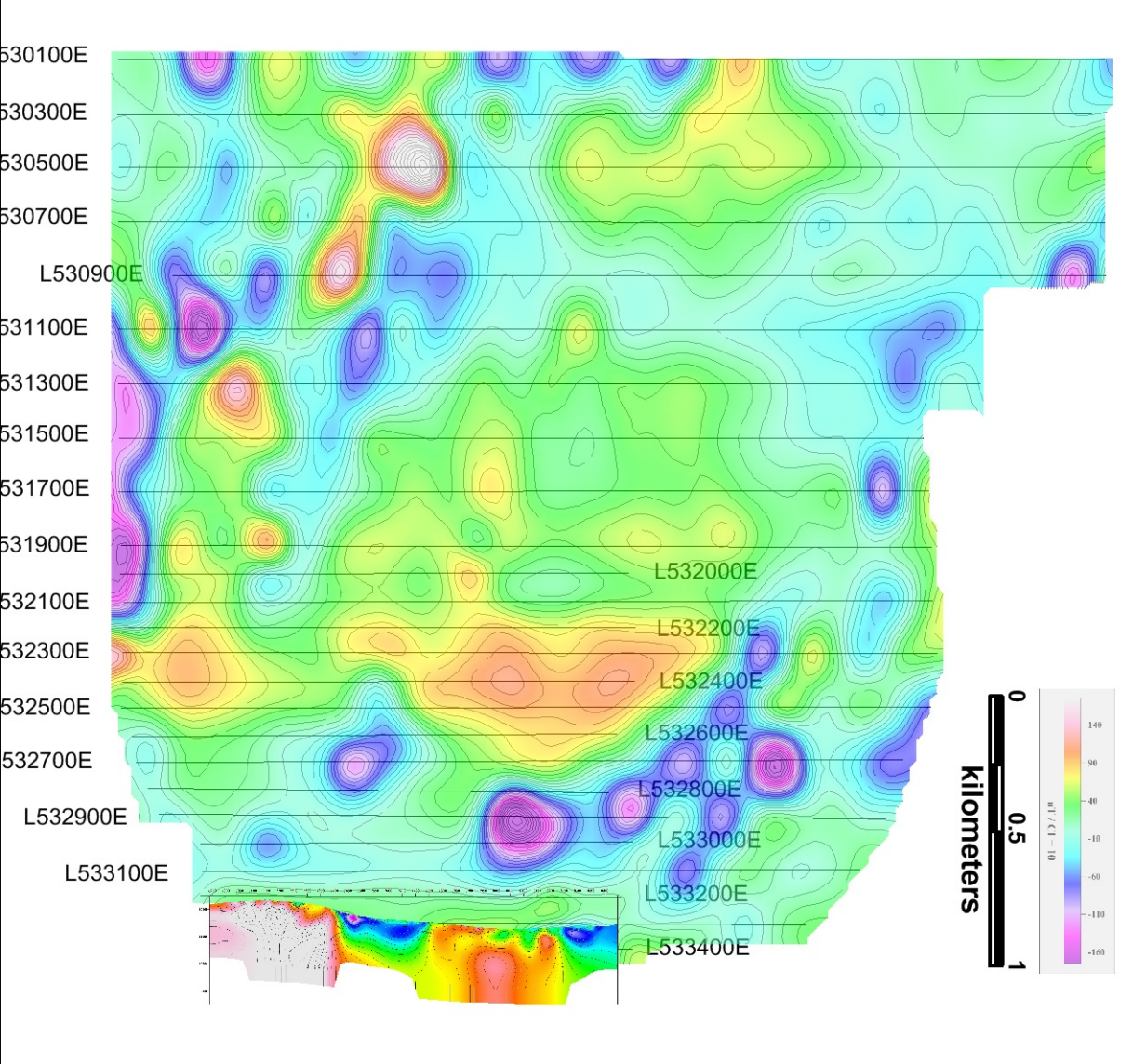
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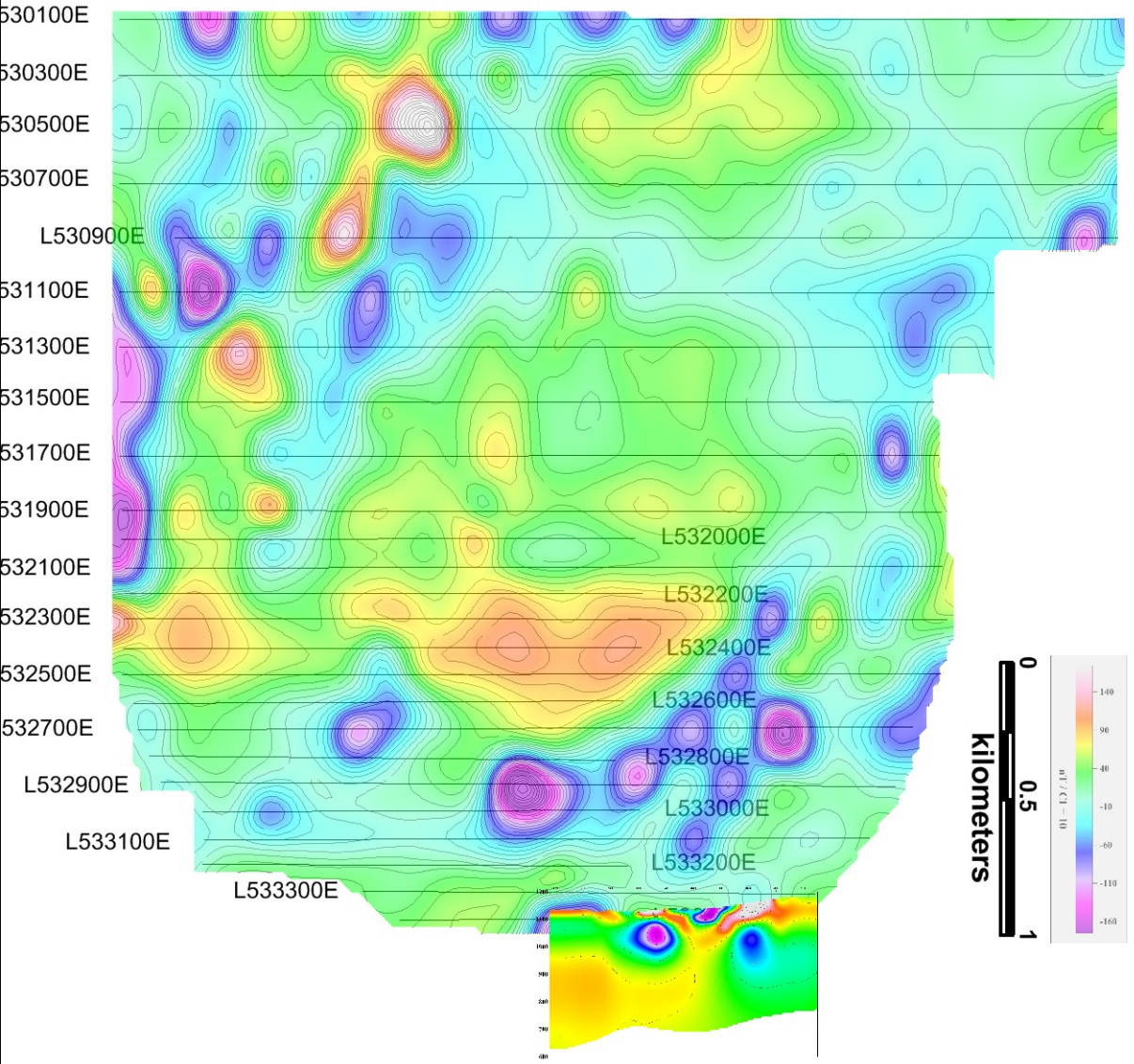
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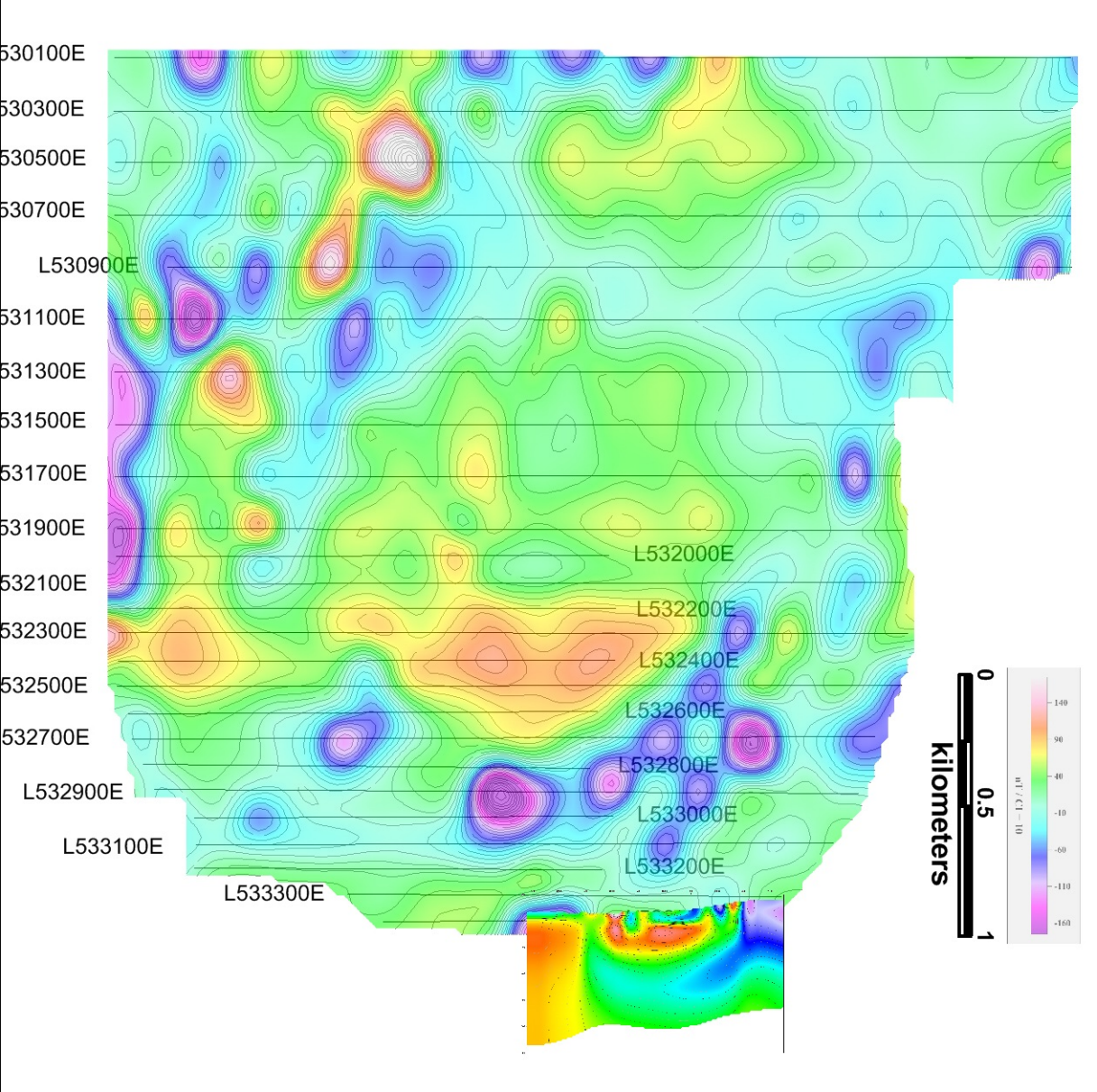
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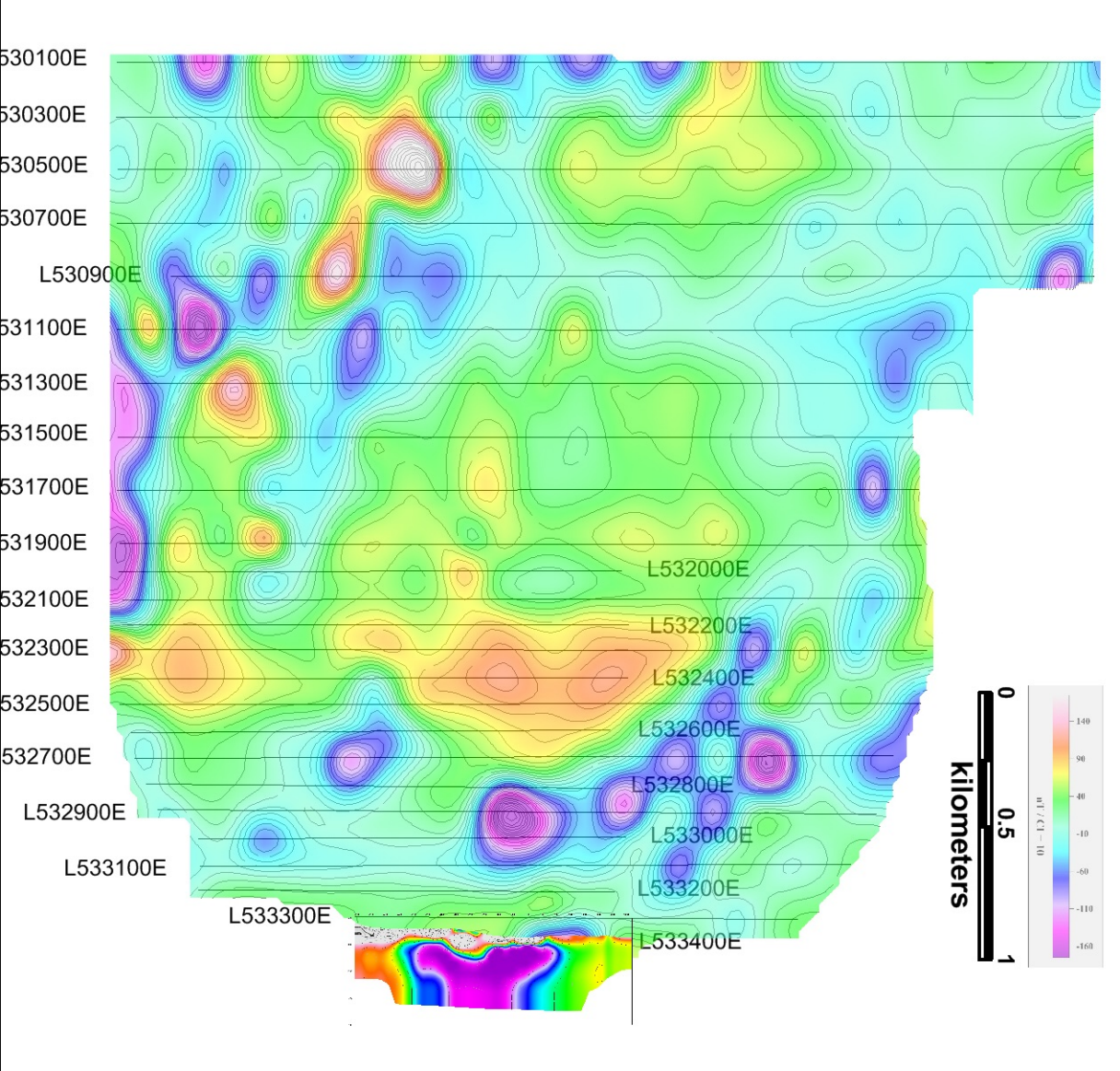
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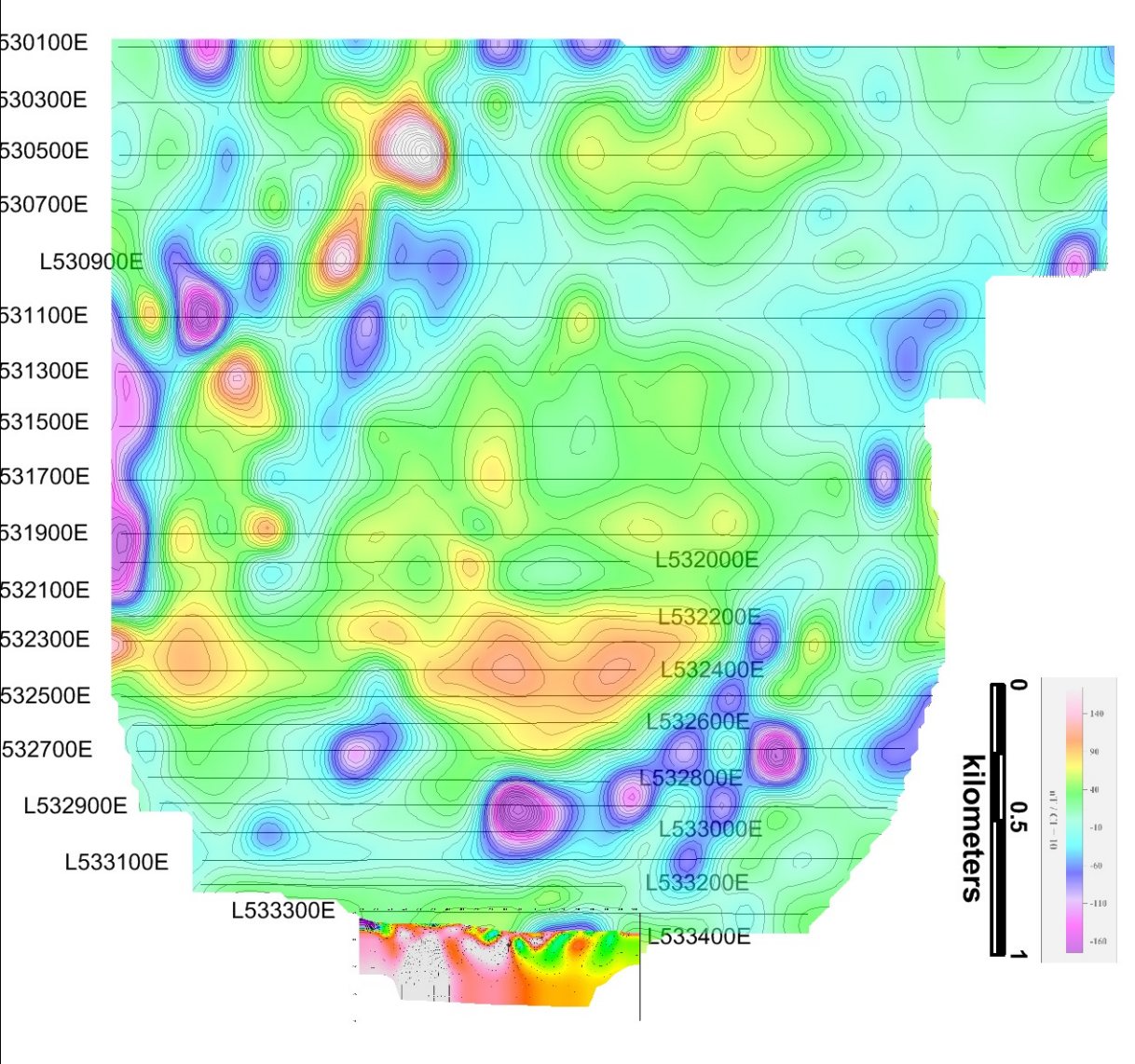
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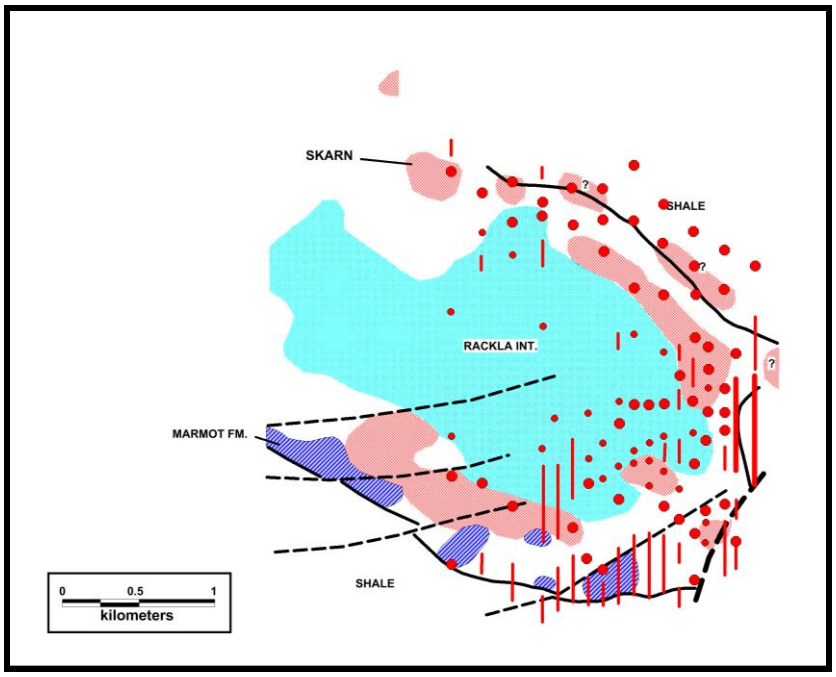
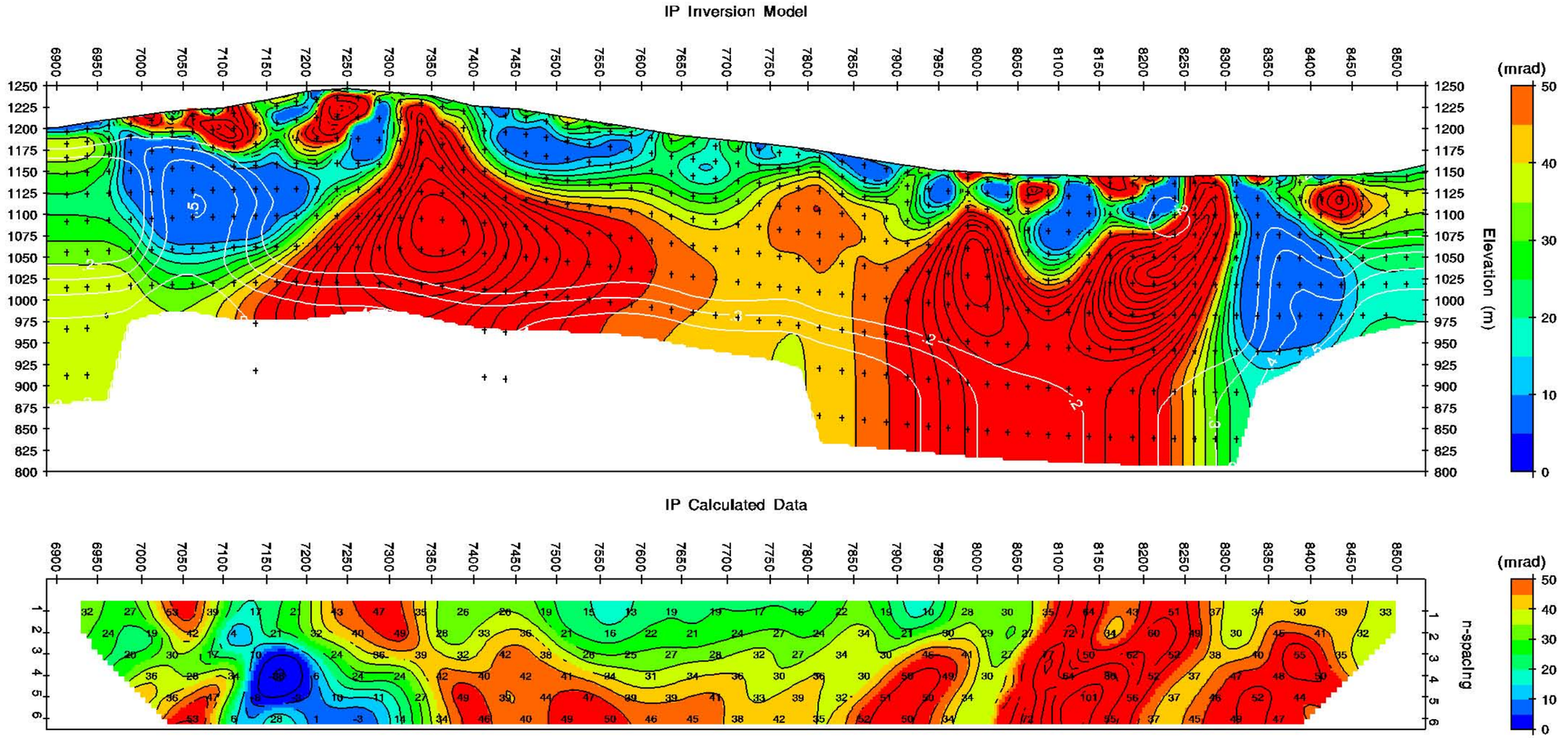
RAU PROPERTY
YUKON, CANADA
GROUND MAGNETIC & INDUCED POLARIZATION SURVEY – 2019
VOLUME 2



Interpretive Summary

James L. Wright M.Sc.
July 22, 2019

RAU PROPERTY
INDUCED POLARIZATION SURVEY



Survey Parameters:
50 m Pole-Dipole data
0.125 hertz repetition rate

Inversion control parameters:
IPSmth=0.1, dpW=0.5, dxW=1, dzW=1
TS2DIP v4.70i
White contours show UBC DOI

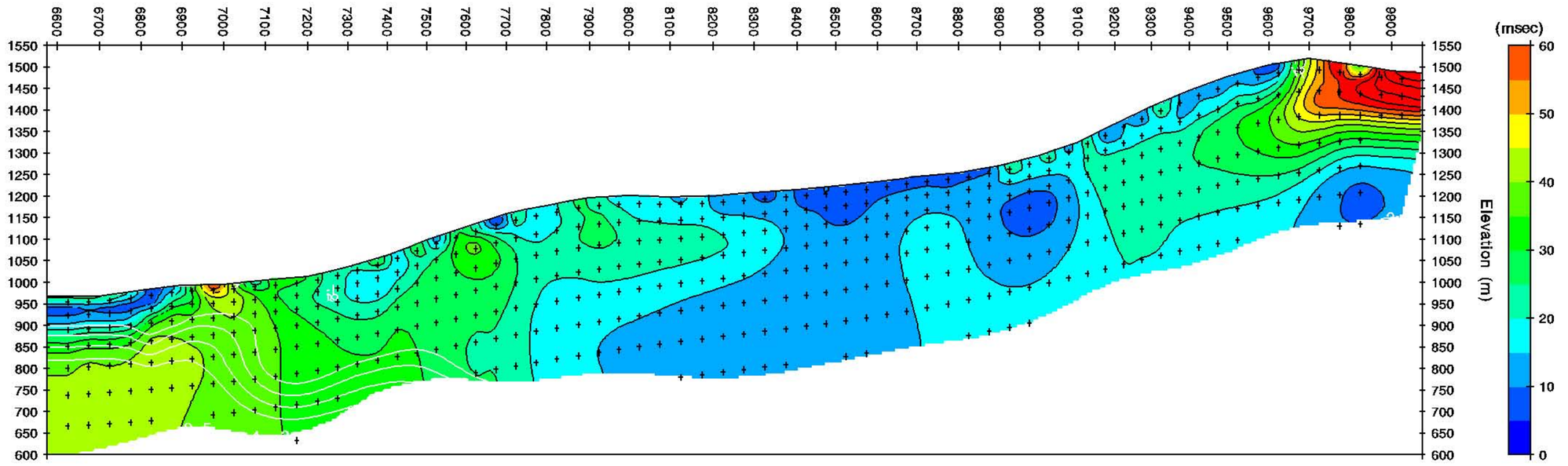
300 m

INVERTED CHARGEABILITY SECTION
Line 533000E

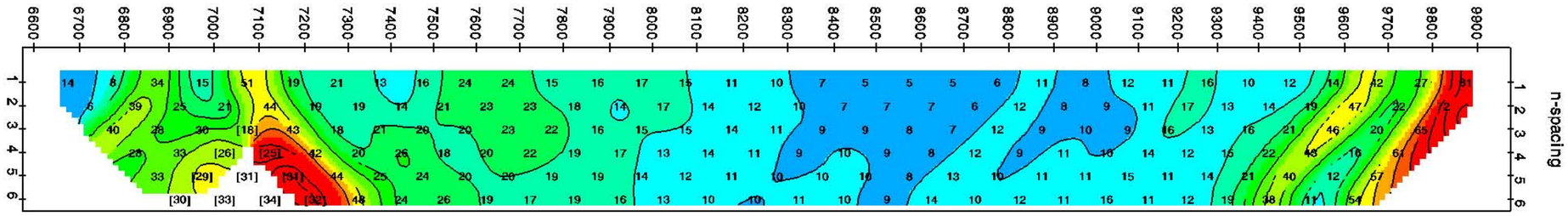
2D Smooth-Model Inversion
Pole-Dipole IP Data

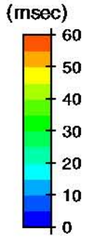
AUTHOR	DRAWN	DATE	SCALE	REPORT
JLW	JLW	16/06/19	1:5000	Job
L533000.s2d				

IP Inversion Model

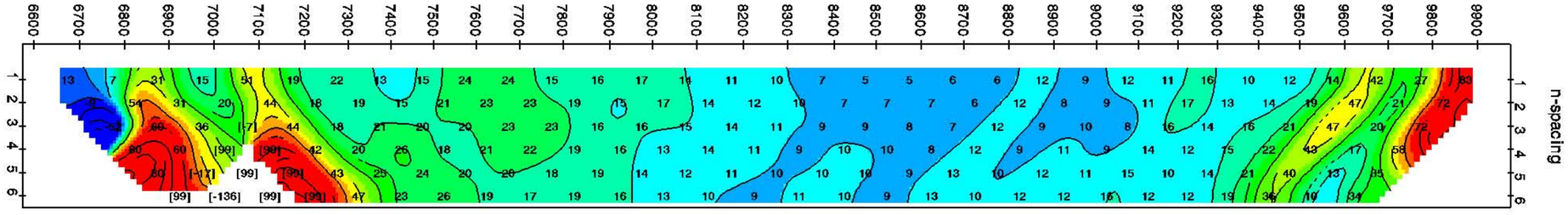


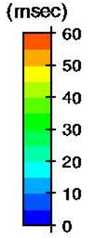
IP Calculated Data





IP Observed Data





RAU PROPERTY

INDUCED POLARIZATION SURVEY

Survey Parameters:
100 m Pole-Dipole data
0.125 hertz repetition rate

Inversion control parameters:
IPSmth=0.1, dpW=0.5, dxW=1, dzW=1
TS2DIP v4.70i
White contours show UBC DOI

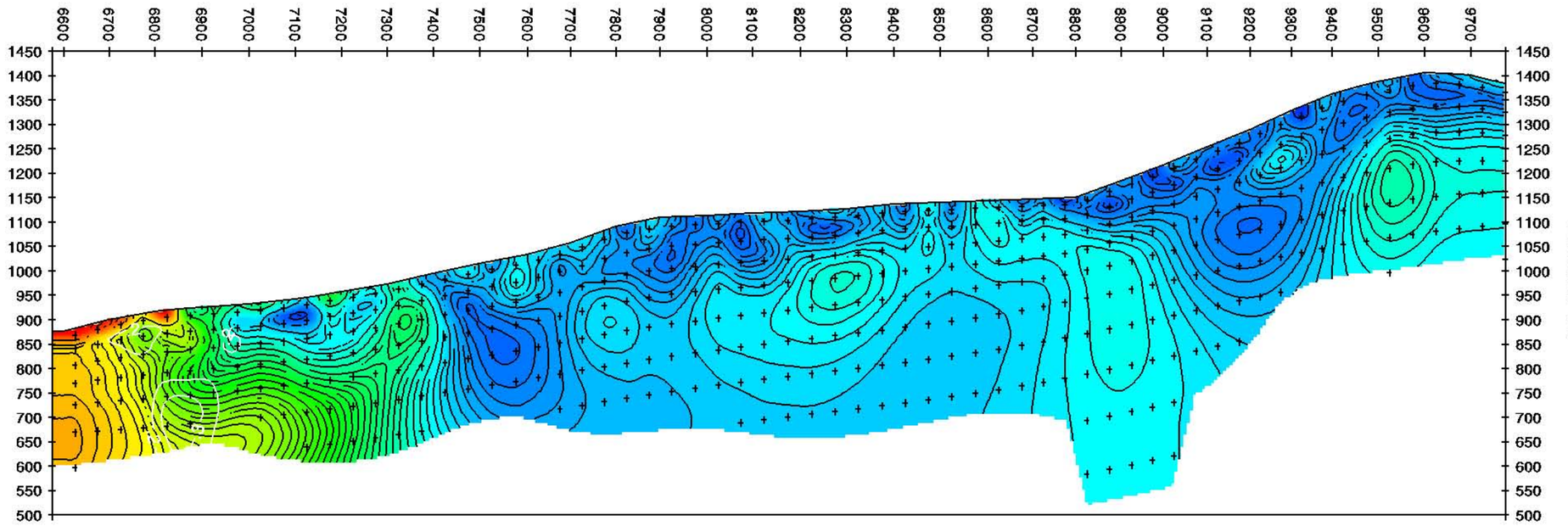
600 m

INVERTED CHARGEABILITY SECTION
Line 531300E

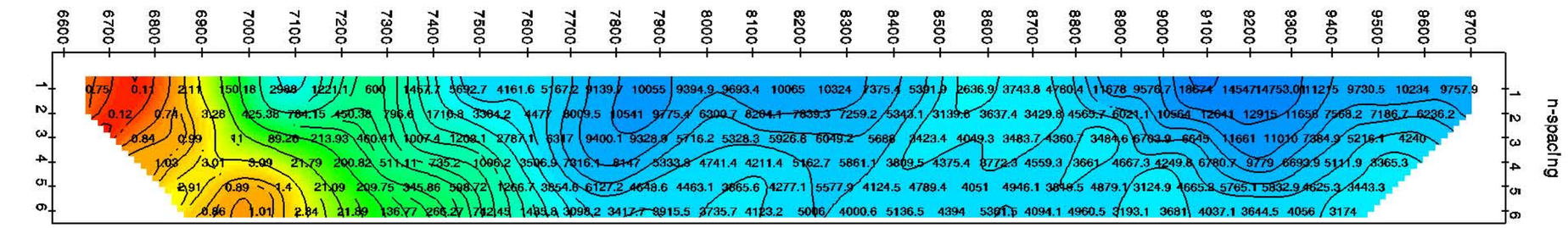
2D Smooth-Model Inversion
Pole-Dipole IP Data

AUTHOR	DRAWN	DATE	SCALE	REPORT
JLW	JLW	13/07/19	1:10000	Job
531300E.s2d				

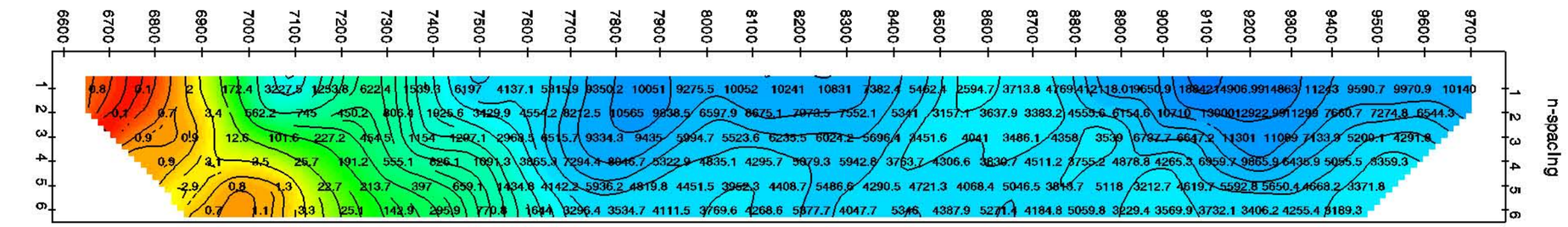
Resistivity Inversion Model

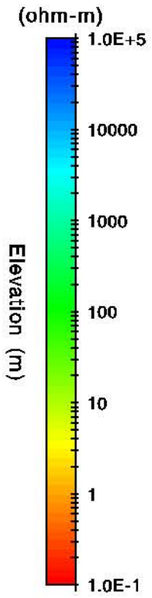


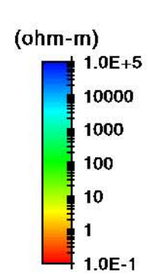
Resistivity Calculated Data

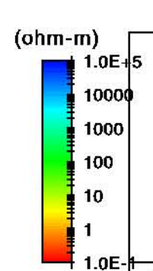


Resistivity Observed Data









RAU PROPERTY
INDUCED POLARIZATION SURVEY

Survey Parameters:
100 m Pole-Dipole data
0.125 hertz repetition rate

Inversion control parameters:
ResSmth=1, dpW=0.5, dxW=1, dzW=1
TS2DIP v4.70i
White contours show UBC DOI

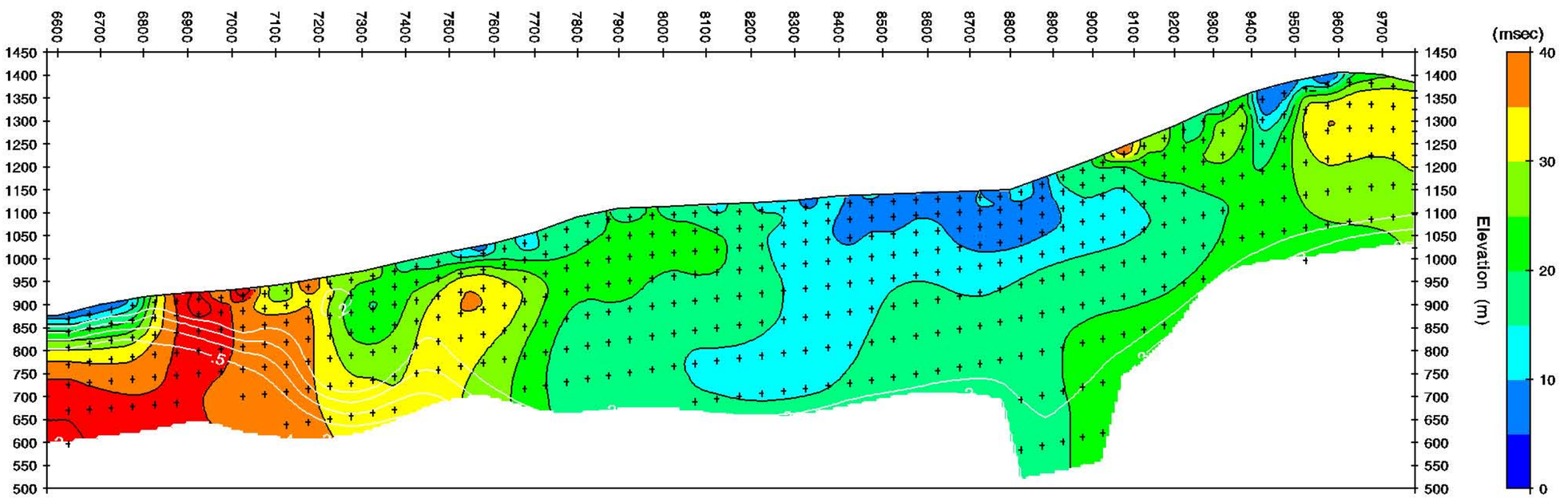
600 m

INVERTED RESISTIVITY SECTION
Line 531500E

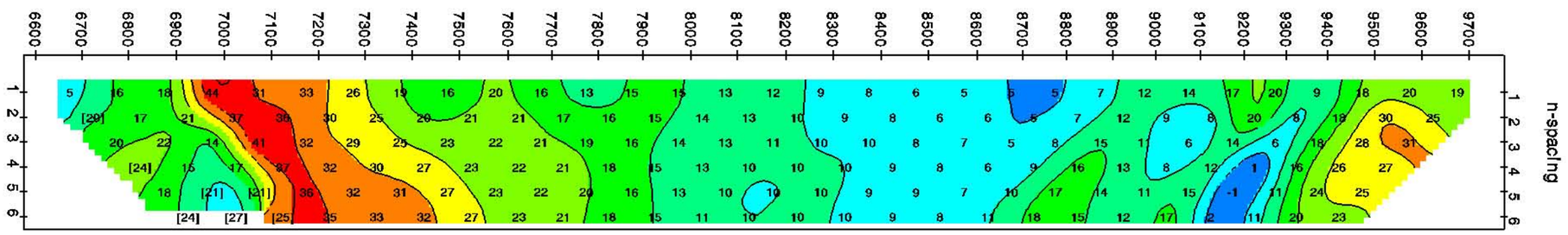
2D Smooth-Model Inversion
Pole-Dipole Resistivity Data

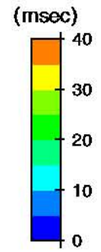
AUTHOR	DRAWN	DATE	SCALE	REPORT
JLW	JLW	09/07/19	1:10000	Job
531500E.s2d				

IP Inversion Model

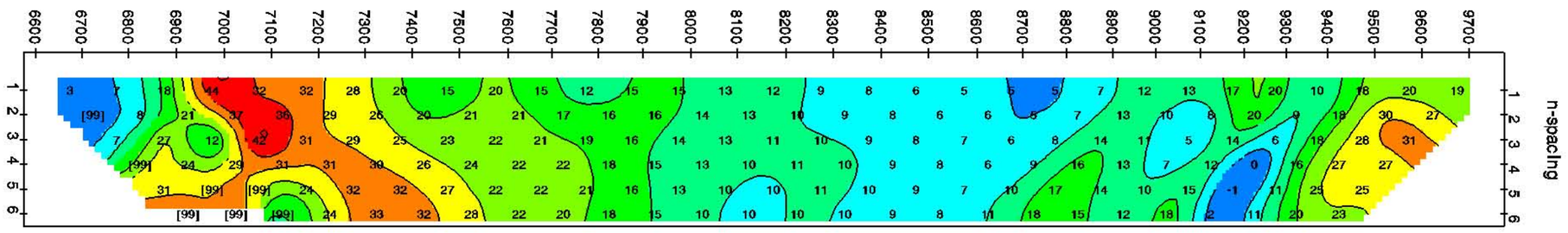


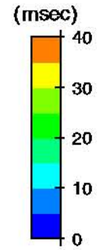
IP Calculated Data





IP Observed Data





RAU PROPERTY

INDUCED POLARIZATION SURVEY

Survey Parameters:
100 m Pole-Dipole data
0.125 hertz repetition rate

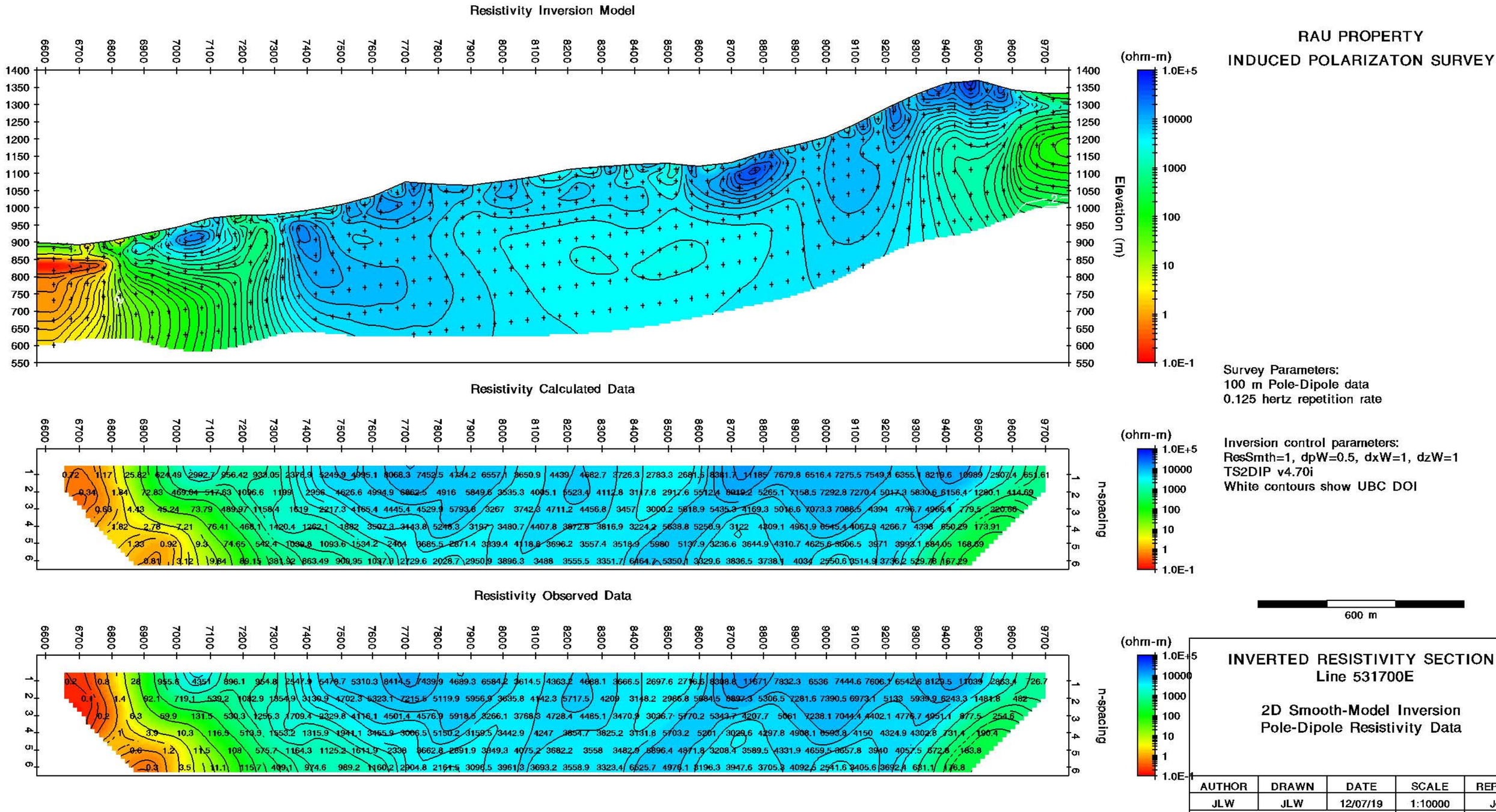
Inversion control parameters:
IPSmth=0.1, dpW=0.5, dxW=1, dzW=1
TS2DIP v4.70i
White contours show UBC DOI

600 m

INVERTED RESISTIVITY SECTION
Line 531500E

2D Smooth-Model Inversion
Pole-Dipole IP Data

AUTHOR	DRAWN	DATE	SCALE	REPORT
JLW	JLW	09/07/19	1:10000	Job
531500E.s2d				



RAU PROPERTY

INDUCED POLARIZATON SURVEY

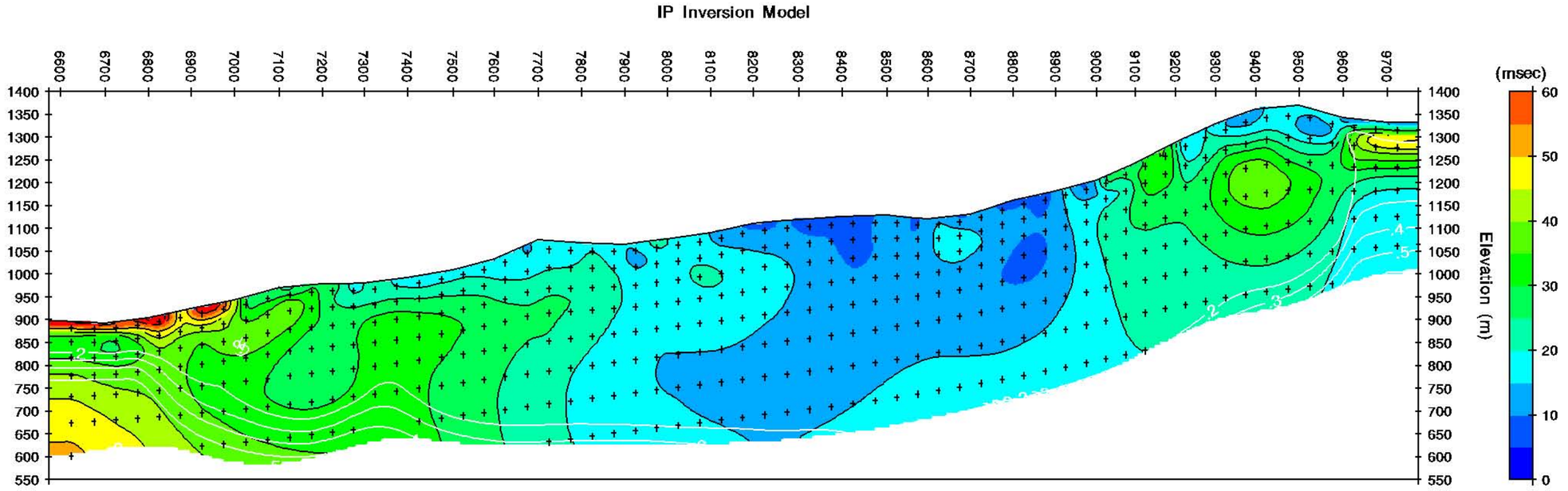
Survey Parameters:
100 m Pole-Dipole data
0.125 hertz repetition rate

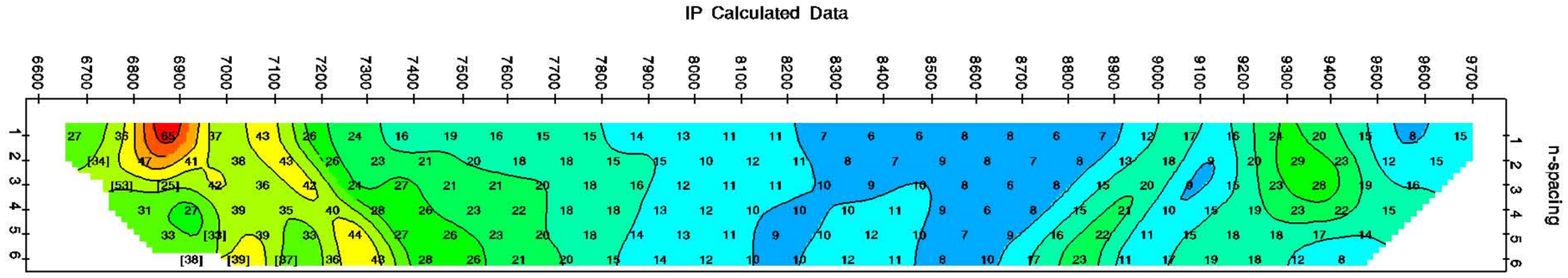
Inversion control parameters:
ResSmth=1, dpW=0.5, dxW=1, dzW=1
TS2DIP v4.70i
White contours show UBC DOI

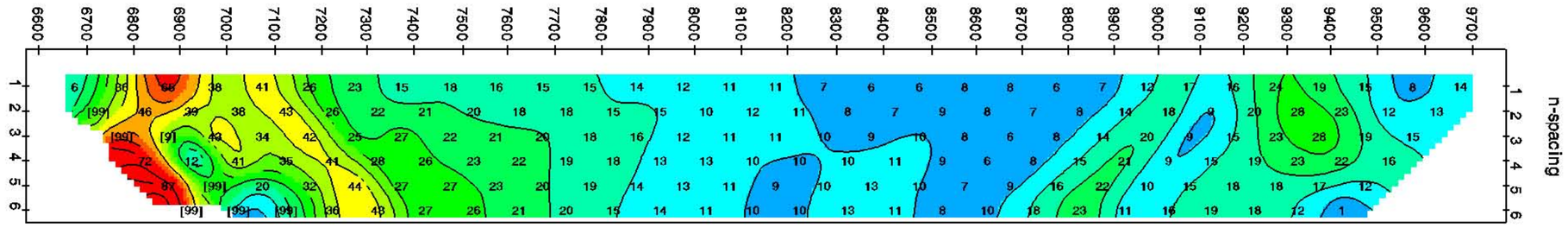
INVERTED RESISTIVITY SECTION
Line 531700E

2D Smooth-Model Inversion
Pole-Dipole Resistivity Data

AUTHOR	DRAWN	DATE	SCALE	REPORT
JLW	JLW	12/07/19	1:10000	Job
531700.s2d				







RAU PROPERTY
INDUCED POLARIZATON SURVEY

Survey Parameters:
100 m Pole-Dipole data
0.125 hertz repetition rate

Inversion control parameters:
IPSmth=0.1, dpW=0.5, dxW=1, dzW=1
TS2DIP v4.70i
White contours show UBC DOI

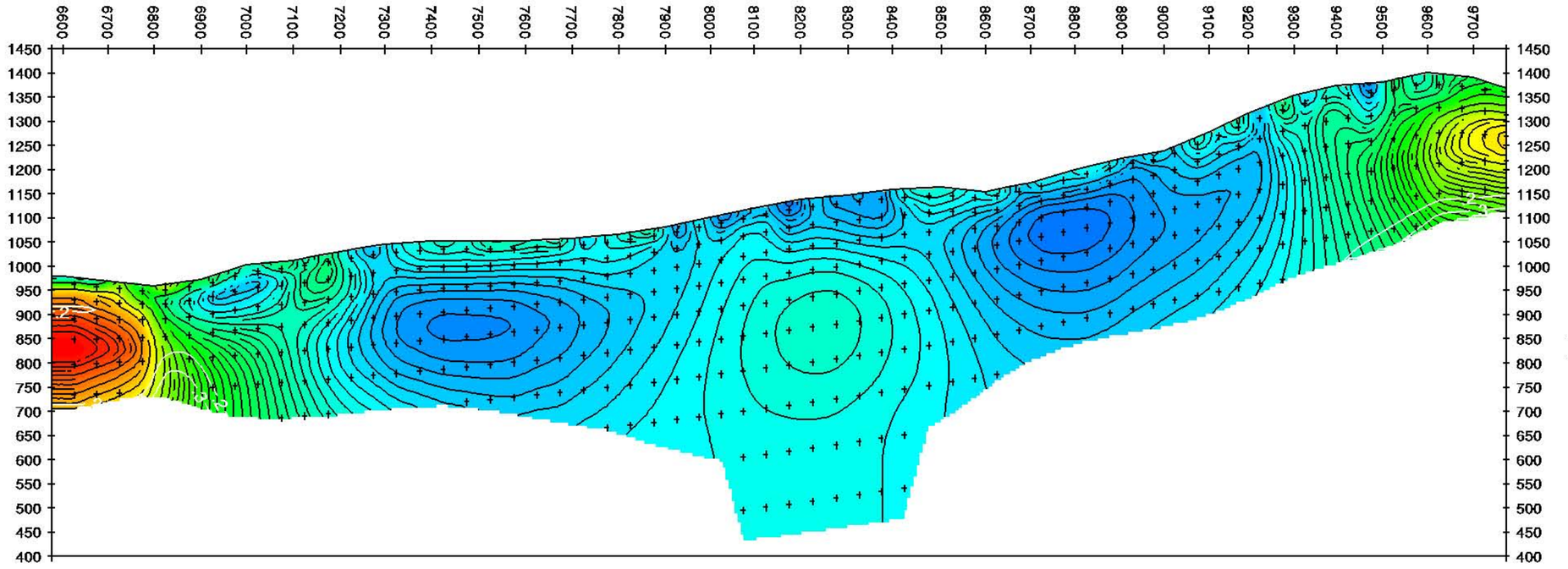
600 m

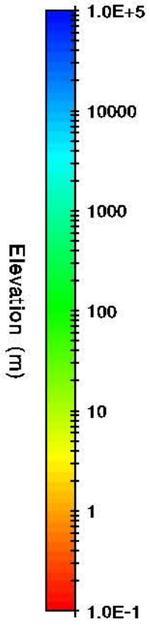
INVERTED CHARGEABILITY SECTION
Line 531700E

2D Smooth-Model Inversion
Pole-Dipole IP Data

AUTHOR	DRAWN	DATE	SCALE	REPORT
JLW	JLW	12/07/19	1:10000	Job
531700.s2d				

Resistivity Inversion Model





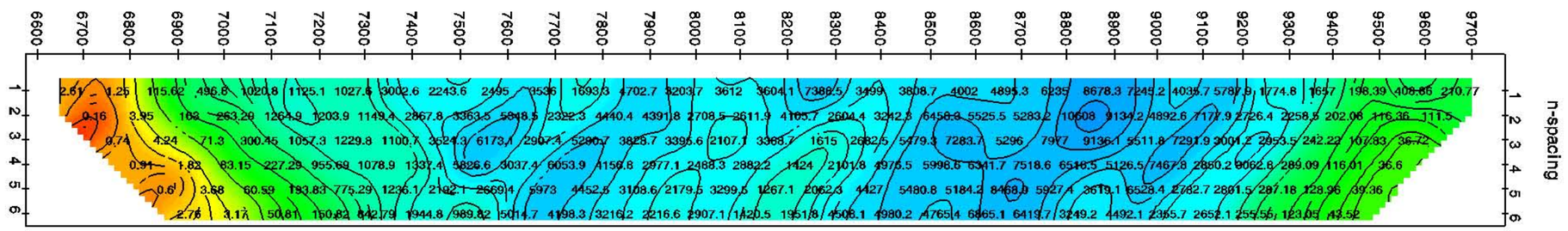
RAU PROPERTY

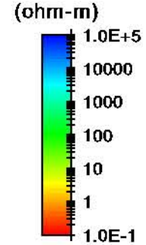
INDUCED POLARIZATION SURVEY

Survey Parameters:
100 m Pole-Dipole data
0.125 hertz repetition rate

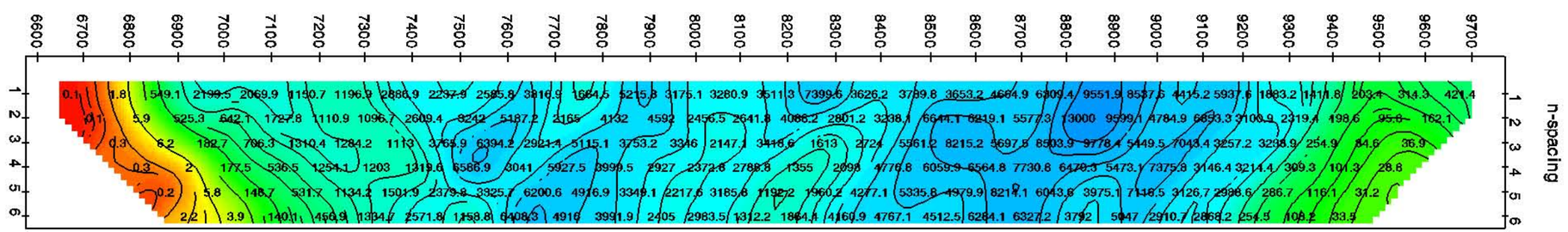
Inversion control parameters:
ResSmth=1, dpW=0.5, dxW=1, dzW=1
TS2DIP v4.70i
White contours show UBC DOI

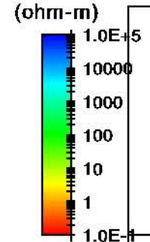
Resistivity Calculated Data





Resistivity Observed Data





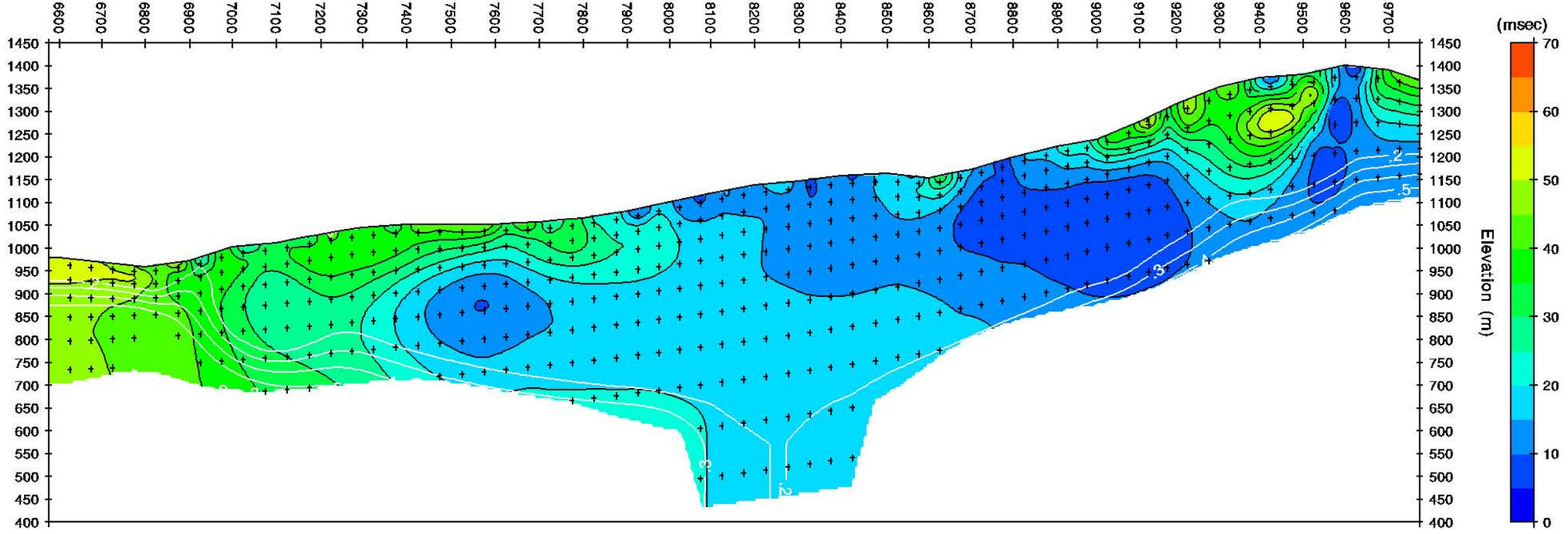
600 m

INVERTED RESISTIVITY SURVEY
Line 531900E

2D Smooth-Model Inversion
Pole-Dipole Resistivity Data

AUTHOR	DRAWN	DATE	SCALE	REPORT
JLW	JLW	05/07/19	1:10000	Job
531900.s2d				

IP Inversion Model



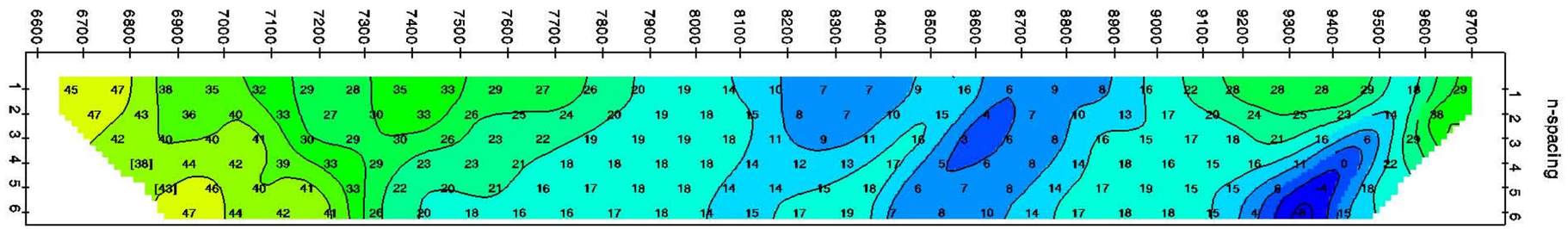
RAU PROPERTY

INDUCED POLARIZATION SURVEY

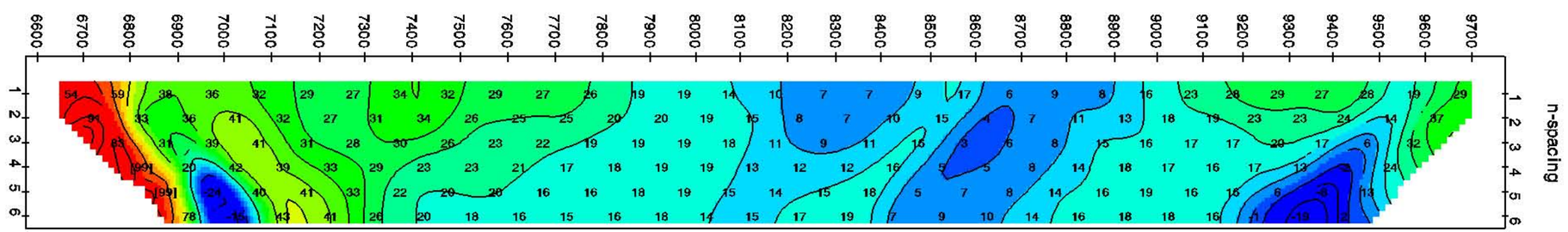
Survey Parameters:
100 m Pole-Dipole data
0.125 hertz repetition rate

Inversion control parameters:
IPSmth=0.1, dpW=0.5, dxW=1, dzW=1
TS2DIP v4.70i
White contours show UBC DOI

IP Calculated Data



IP Observed Data

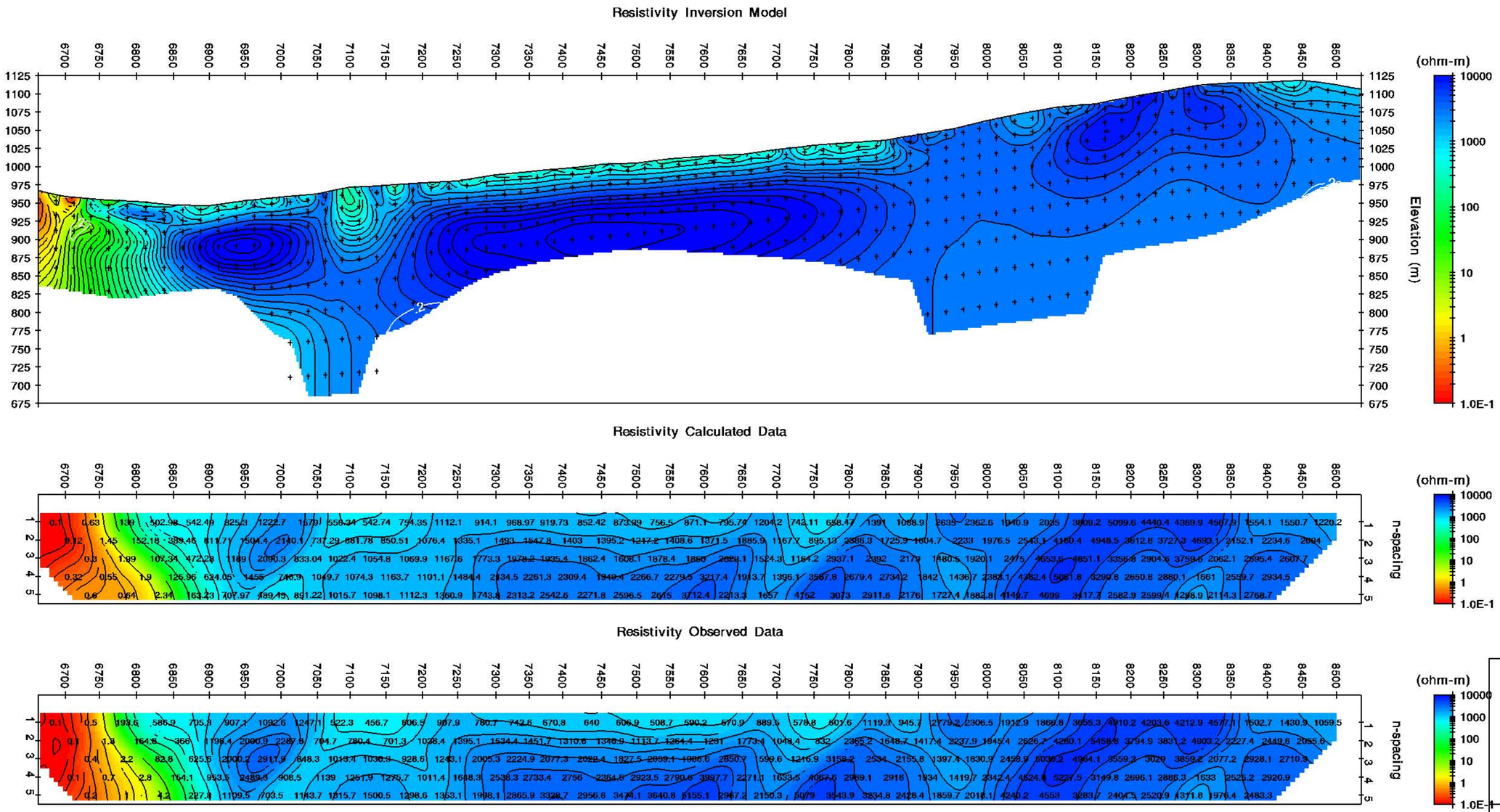


600 m

INVERTED CHARGEABILITY SURVEY
Line 531900E

2D Smooth-Model Inversion
Pole-Dipole IP Data

AUTHOR	DRAWN	DATE	SCALE	REPORT
JLW	JLW	05/07/19	1:10000	Job
531900.s2d				



RAU PROPERTY
INDUCED POLARIZATION SURVEY

Survey Parameters:
50 m Pole-Dipole data
0.125 hertz repetition rate

Inversion control parameters:
ResSmth=1, dpW=0.5, dxW=1, dzW=1
TS2DIP v4.70i
White contours show UBC DOI

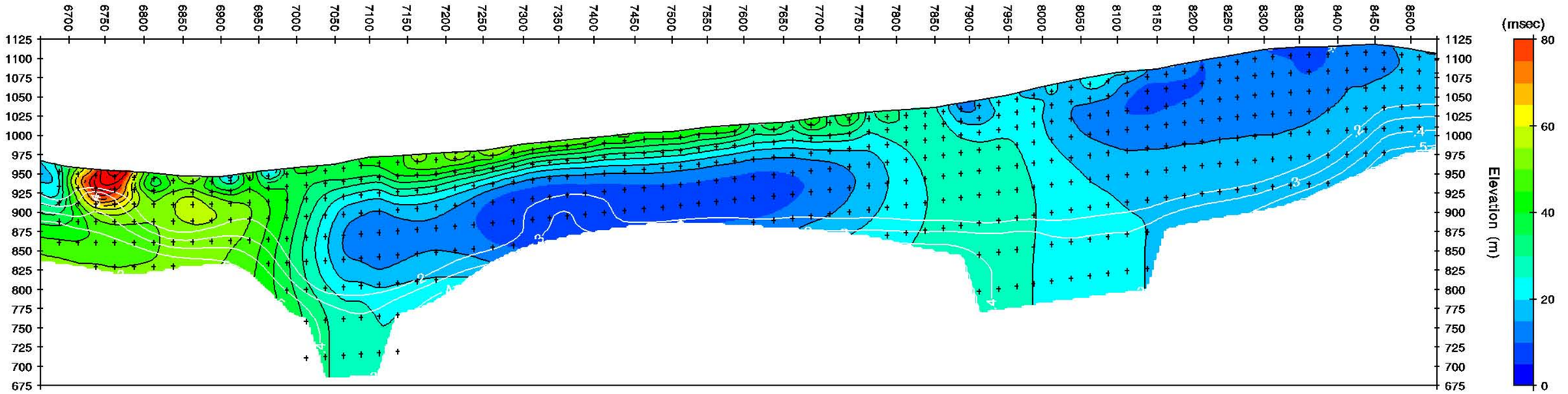
300 m

INVERTED RESISTIVITY SECTION
Line 532000E

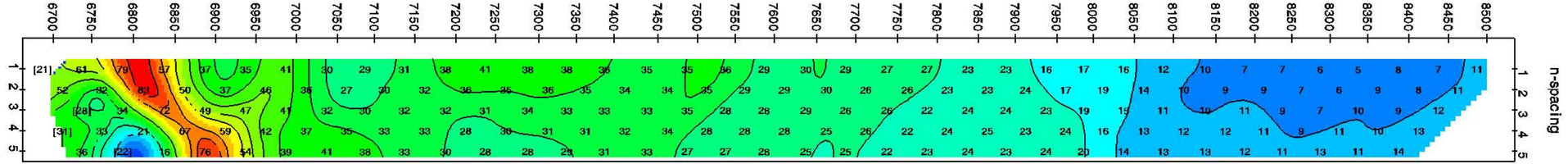
2D Smooth-Model Inversion
Pole-Dipole Resistivity Data

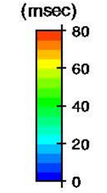
AUTHOR	DRAWN	DATE	SCALE	REPORT
JLW	JLW	01/07/19	1:5000	Job
532000E.s2d				

IP Inversion Model

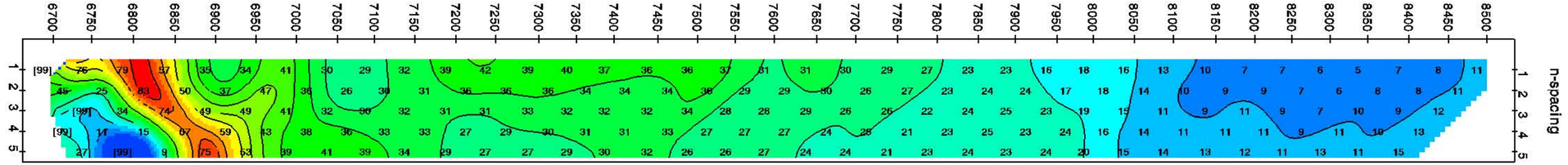


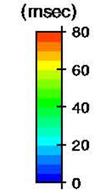
IP Calculated Data





IP Observed Data





RAU PROPERTY

INDUCED POLARIZATION SURVEY

Survey Parameters:
50 m Pole-Dipole data
0.125 hertz repetition rate

Inversion control parameters:
IPSmth=0.1, dpW=0.5, dxW=1, dzW=1
TS2DIP v4.70i
White contours show UBC DOI

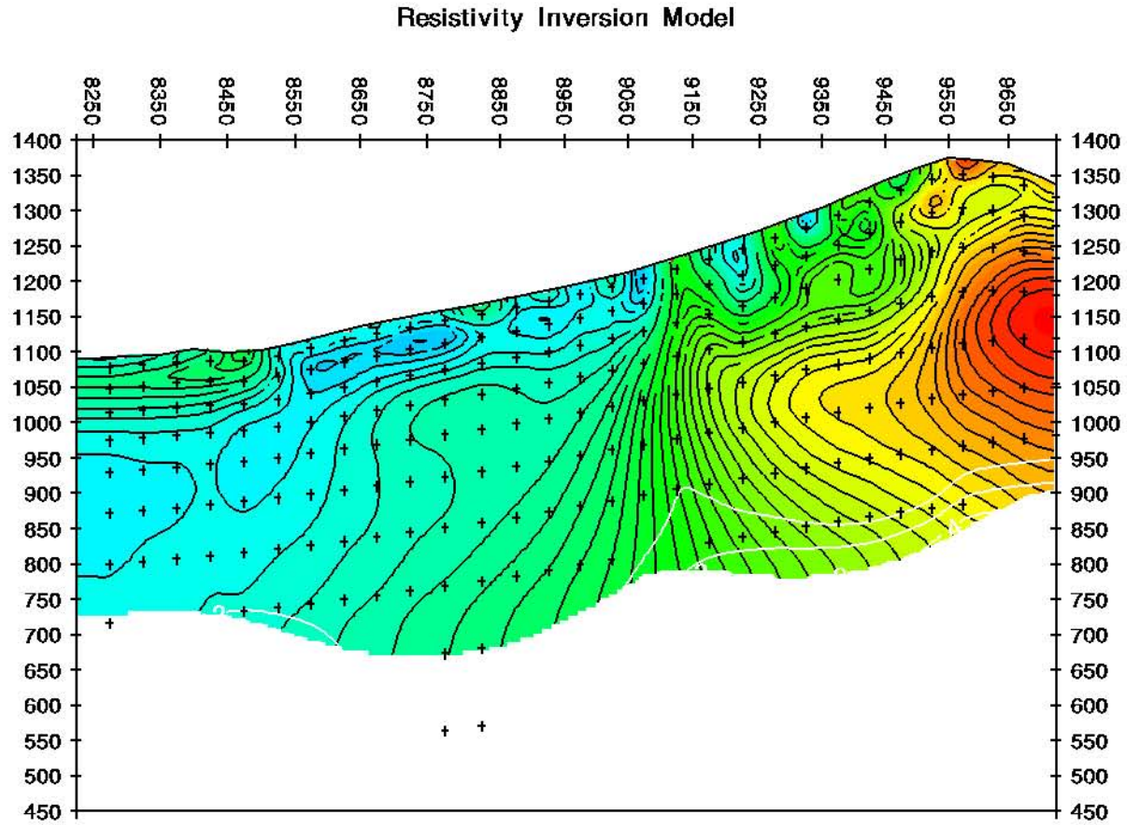
300 m

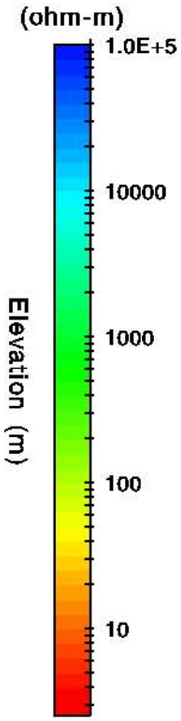
INVERTED CHARGEABILITY SECTION
Line 532000E

2D Smooth-Model Inversion
Pole-Dipole IP Data

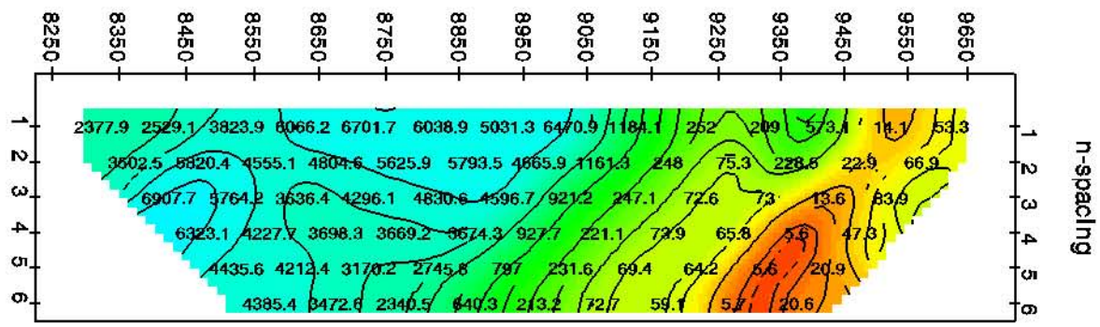
AUTHOR	DRAWN	DATE	SCALE	REPORT
JLW	JLW	01/07/19	1:5000	Job
532000E.s2d				

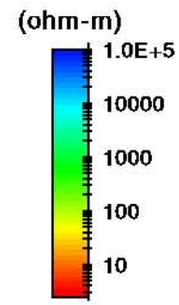
RAU PROPERTY
INDUCED POLARIZATION SURVEY



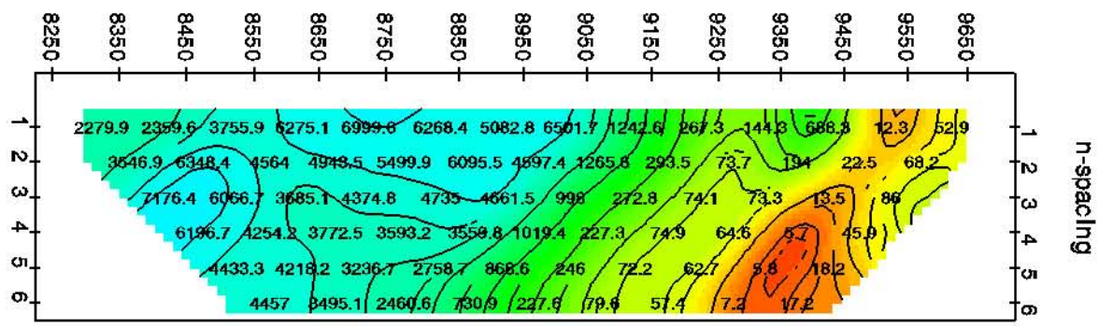


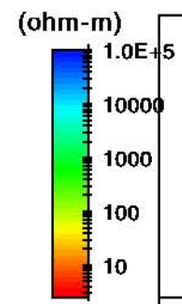
Survey Parameters:
100 m Pole-Dipole data
0.125 hertz repetition rate





Inversion control parameters:
ResSmth=1, dpW=0.5, dxW=1, dzW=1
TS2DIP v4.70i
White contours show UBC DOI





600 m

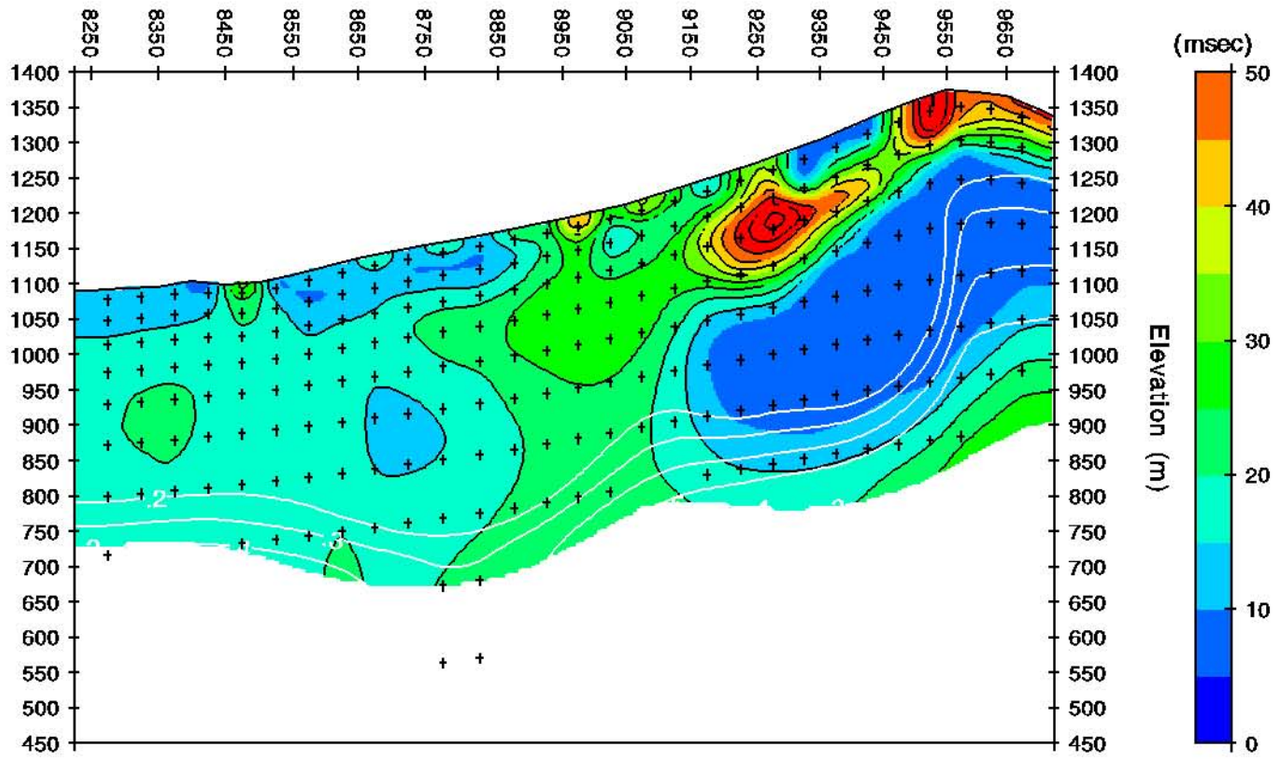
INVERTED RESISTIVITY SECTION
Line 532100_100

2D Smooth-Model Inversion
Pole-Dipole Resistivity Data

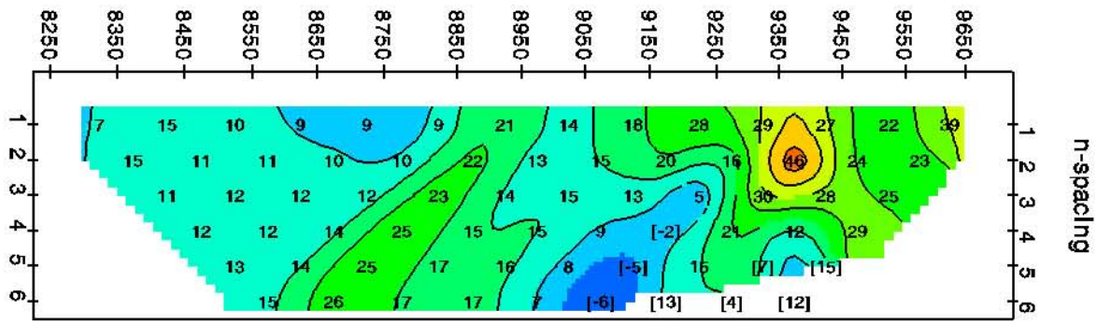
AUTHOR	DRAWN	DATE	SCALE	REPORT
JLW	JLW	01/07/19	1:10000	Job
532100_100.s2d				

RAU PROPERTY
INDUCED POLARIZATION SURVEY

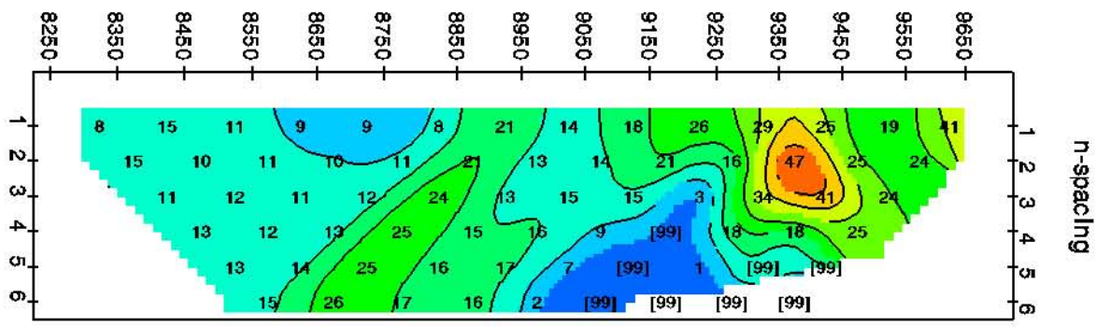
IP Inversion Model



IP Calculated Data



IP Observed Data



Survey Parameters:
100 m Pole-Dipole data
0.125 hertz repetition rate

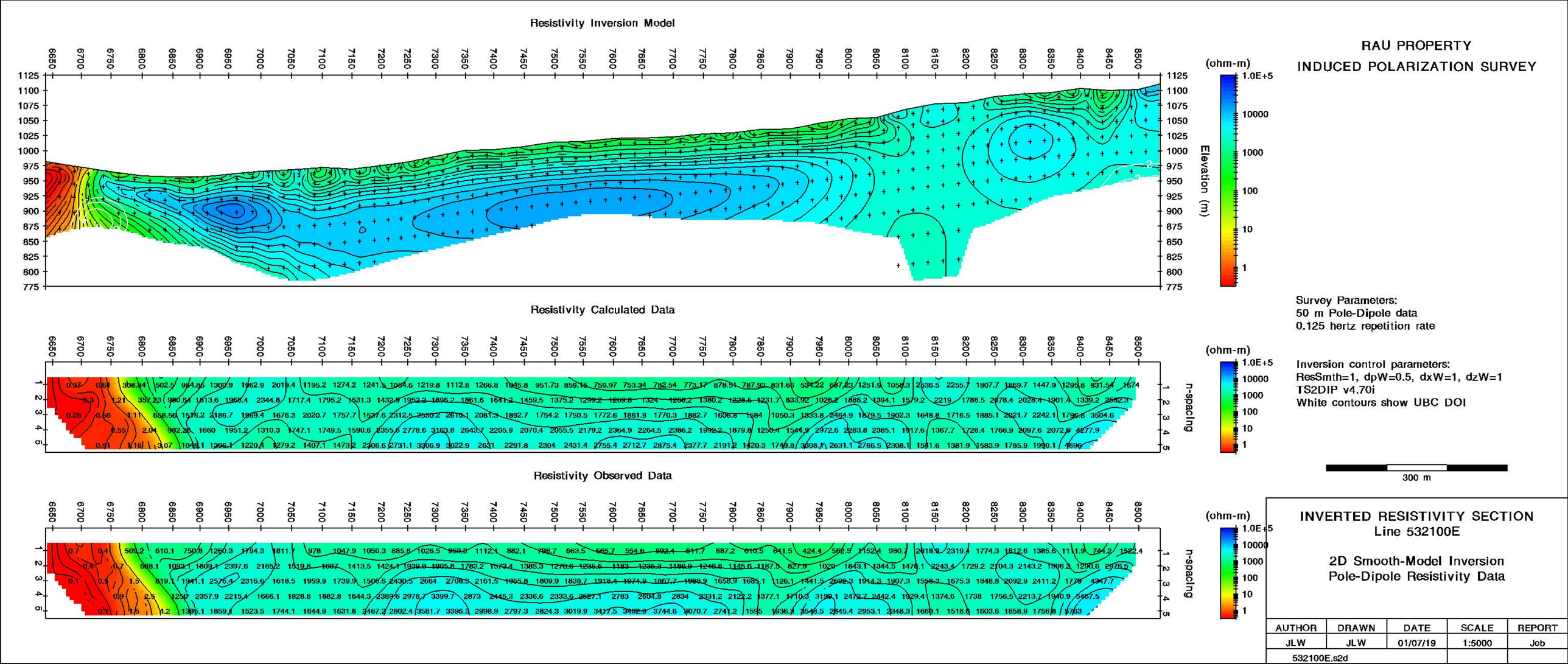
Inversion control parameters:
IPSmth=0.1, dpW=0.5, dxW=1, dzW=1
TS2DIP v4.70i
White contours show UBC DOI

600 m

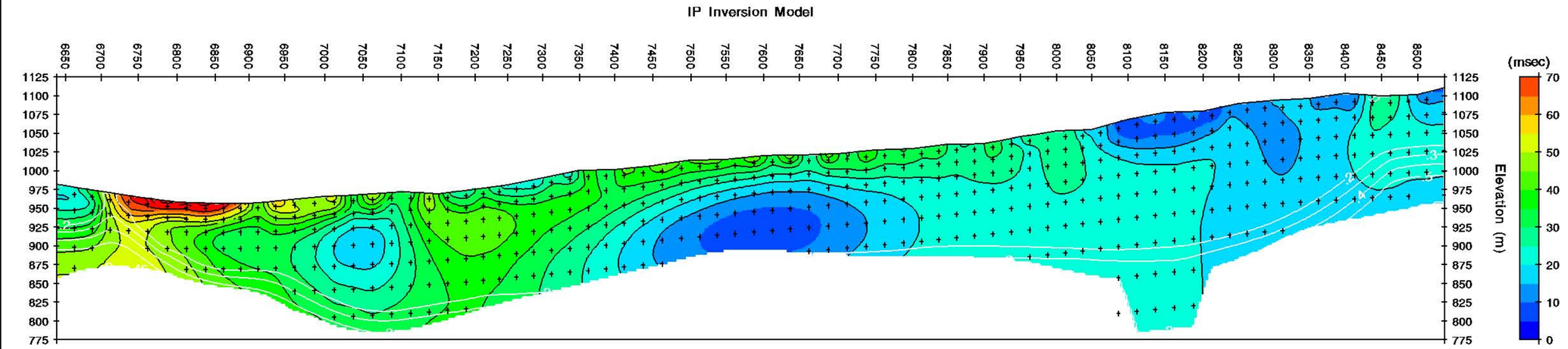
INVERTED CHARGEABILITY SECTION
Line 532100_100

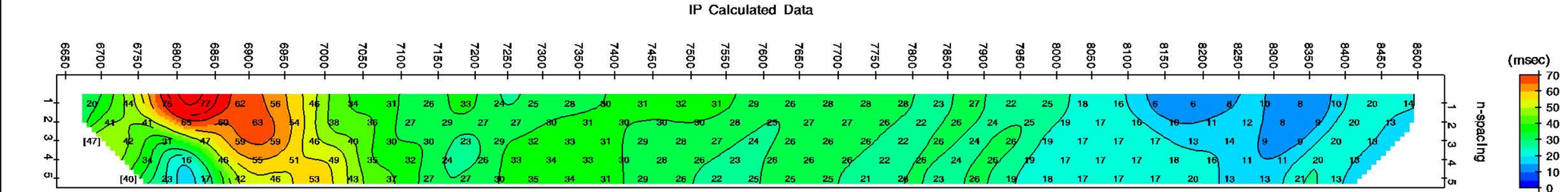
2D Smooth-Model Inversion
Pole-Dipole IP Data

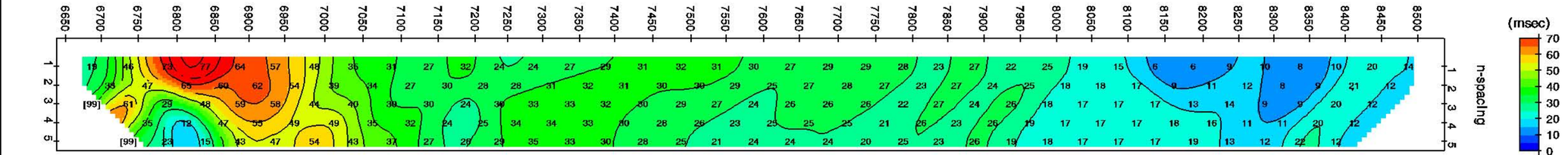
AUTHOR	DRAWN	DATE	SCALE	REPORT
JLW	JLW	01/07/19	1:10000	Job
532100 100.s2d				


Resistivity Inversion Model
Resistivity Calculated Data
Resistivity Observed Data
(ohm-m)
1.0E+5
10000
1000
100
10
1
Elevation (m)
n-spacing
RAU PROPERTY
INDUCED POLARIZATION SURVEY
Survey Parameters:
50 m Pole-Dipole data
0.125 hertz repetition rate
Inversion control parameters:
ResSmth=1, dpW=0.5, dxW=1, dzW=1
TS2DIP v4.70i
White contours show UBC DOI
300 m
INVERTED RESISTIVITY SECTION
Line 532100E
2D Smooth-Model Inversion
Pole-Dipole Resistivity Data
AUTHOR
DRAWN
DATE
SCALE
REPORT
JLW
JLW
01/07/19
1:5000
Job
532100E.s2d

RAU PROPERTY
INDUCED POLARIZATION SURVEY







Survey Parameters:
50 m Pole-Dipole data
0.125 hertz repetition rate

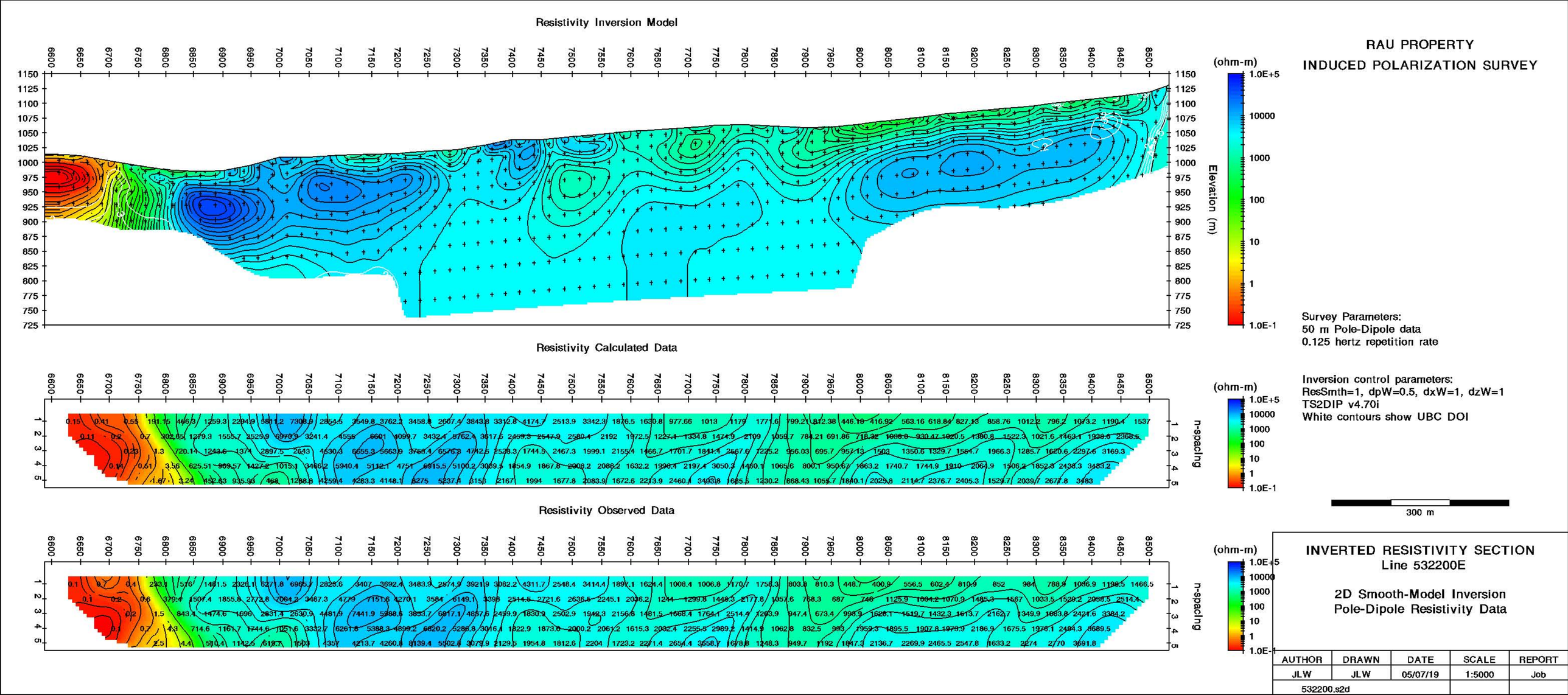
Inversion control parameters:
IPSmth=0.1, dpW=0.5, dxW=1, dzW=1
TS2DIP v4.70i
White contours show UBC DOI

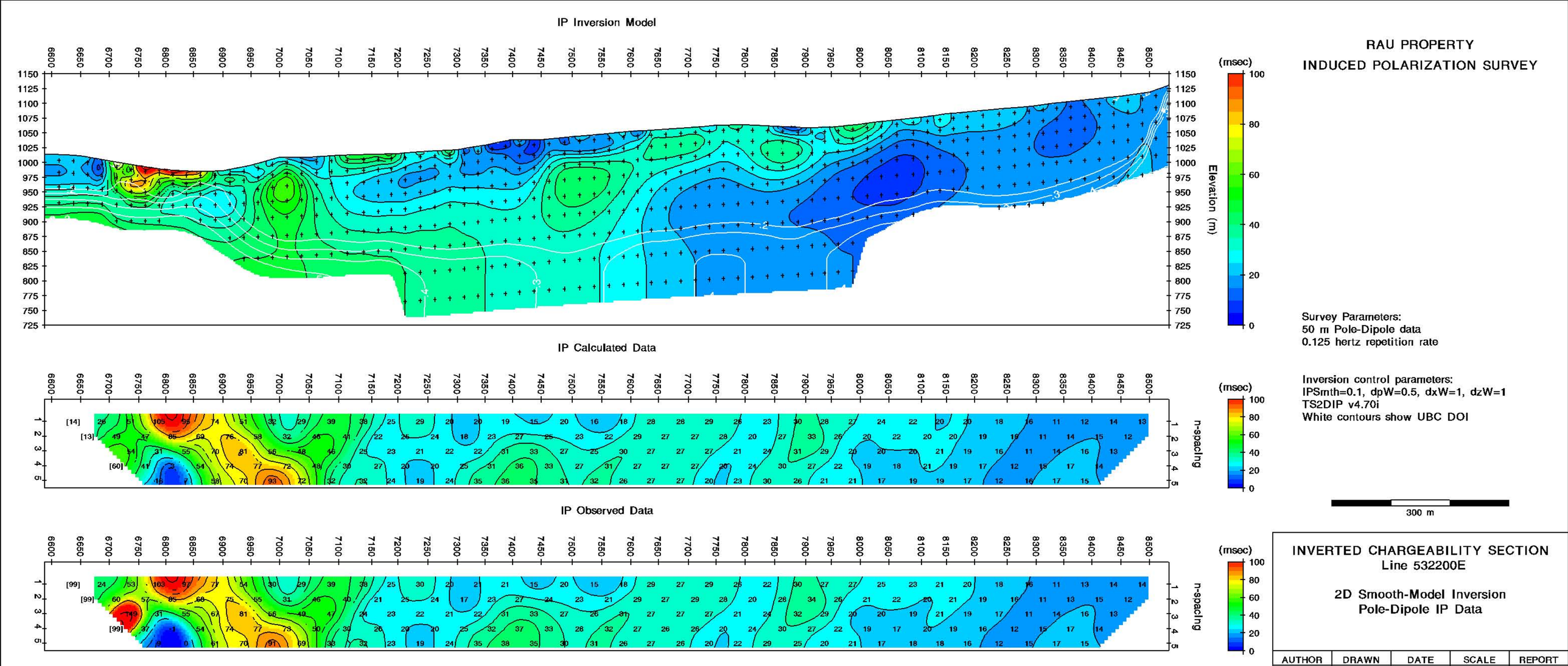
300 m

INVERTED CHARGEABILITY SECTION
Line 532100E

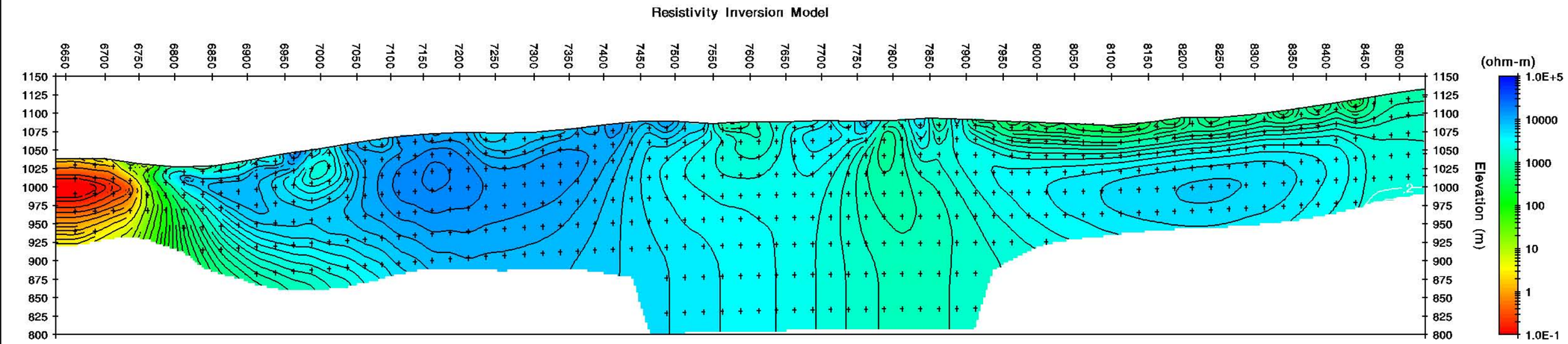
2D Smooth-Model Inversion
Pole-Dipole IP Data

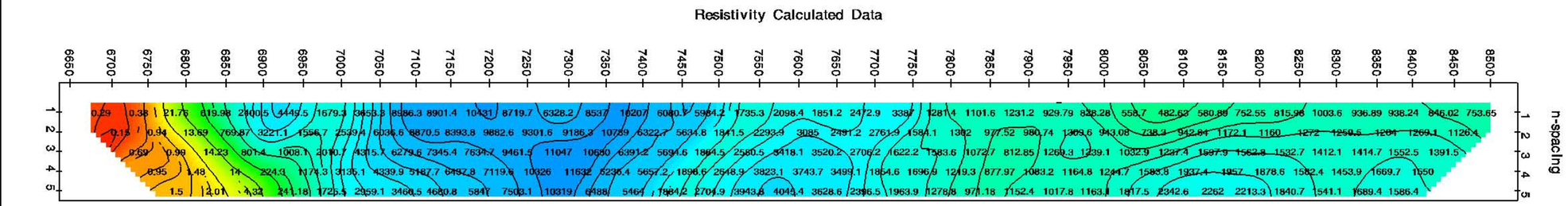
AUTHOR	DRAWN	DATE	SCALE	REPORT
JLW	JLW	01/07/19	1:5000	Job
532100E.s2d				

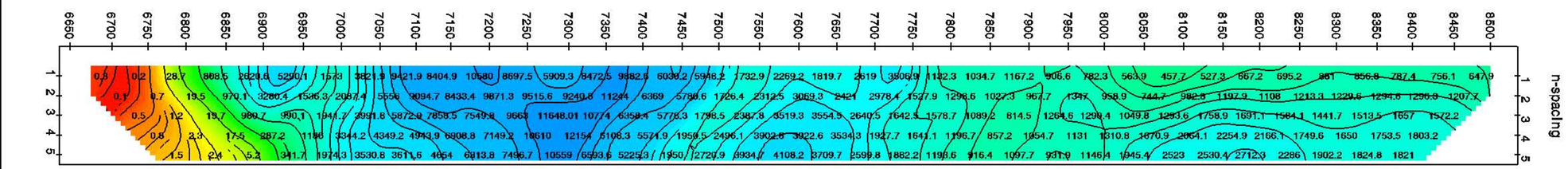

Resistivity Inversion Model
Resistivity Calculated Data
Resistivity Observed Data
(ohm-m)
1.0E+5
10000
1000
100
10
1
1.0E-1
Elevation (m)
n-spacing
RAU PROPERTY
INDUCED POLARIZATION SURVEY
Survey Parameters:
50 m Pole-Dipole data
0.125 hertz repetition rate
Inversion control parameters:
ResSmth=1, dpW=0.5, dxW=1, dzW=1
TS2DIP v4.70i
White contours show UBC DOI
300 m
INVERTED RESISTIVITY SECTION
Line 532200E
2D Smooth-Model Inversion
Pole-Dipole Resistivity Data
AUTHOR
DRAWN
DATE
SCALE
REPORT
JLW
JLW
05/07/19
1:5000
Job
532200.s2d


IP Inversion Model
IP Calculated Data
IP Observed Data
Elevation (m)
n-spacing
(msec)
RAU PROPERTY
INDUCED POLARIZATION SURVEY
Survey Parameters:
50 m Pole-Dipole data
0.125 hertz repetition rate
Inversion control parameters:
IPSmth=0.1, dpW=0.5, dxW=1, dzW=1
TS2DIP v4.70i
White contours show UBC DOI
300 m
INVERTED CHARGEABILITY SECTION
Line 532200E
2D Smooth-Model Inversion
Pole-Dipole IP Data
AUTHOR JLW
DRAWN JLW
DATE 05/07/19
SCALE 1:5000
REPORT Job
532200.s2d

RAU PROPERTY
INDUCED POLAIZATION SURVEY







Survey Parameters:
50 m Pole-Dipole data
0.125 hertz repetition rate

Inversion control parameters:
ResSmth=1, dpW=0.5, dxW=1, dzW=1
TS2DIP v4.70i
White contours show UBC DOI

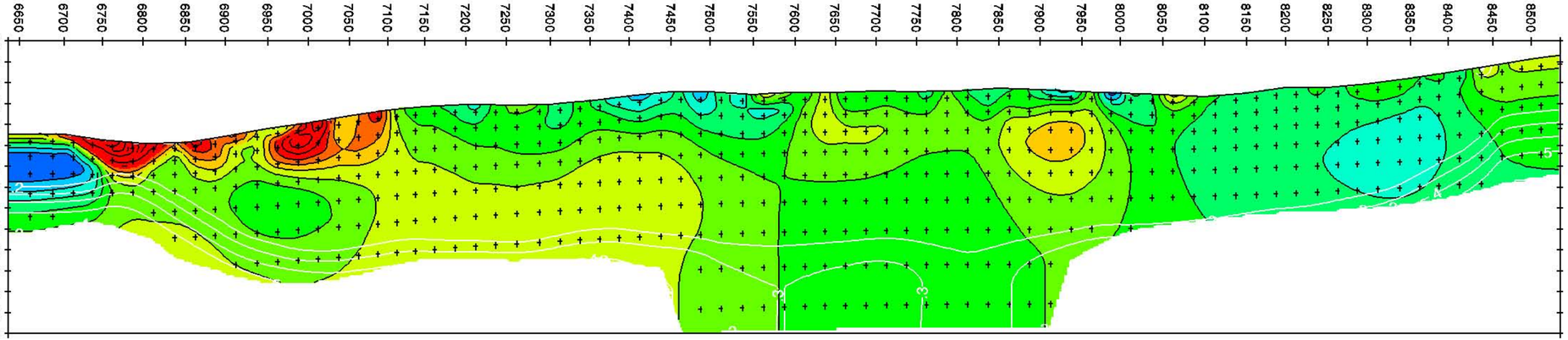
300 m

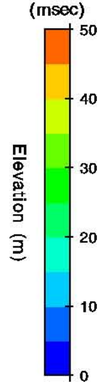
INVERTED RESISTIVITY SECTION
Line 532400E

2D Smooth-Model Inversion
Pole-Dipole Resistivity Data

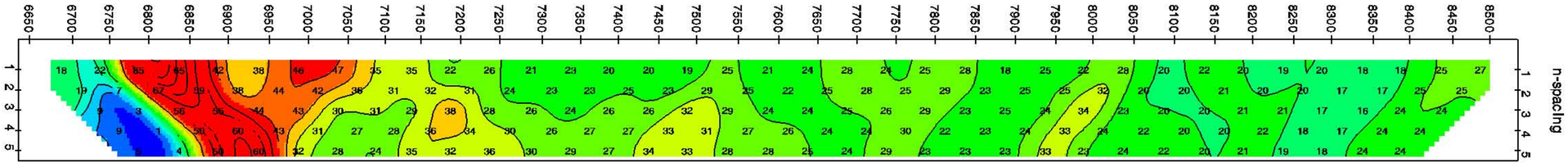
AUTHOR	DRAWN	DATE	SCALE	REPORT
JLW	JLW	23/06/19	1:5000	Job
532400.s2d				

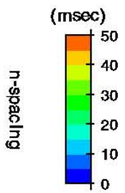
IP Inversion Model



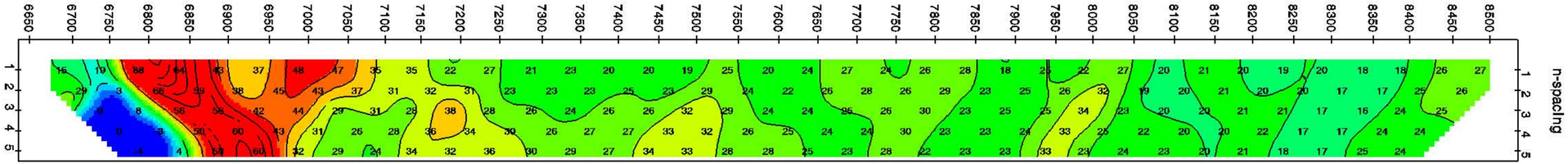


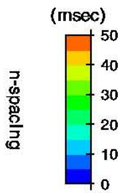
IP Calculated Data





IP Observed Data





RAU PROPERTY

INDUCED POLAIZATION SURVEY

Survey Parameters:
50 m Pole-Dipole data
0.125 hertz repetition rate

Inversion control parameters:
IPSmth=0.1, dpW=0.5, dxW=1, dzW=1
TS2DIP v4.70i
White contours show UBC DOI

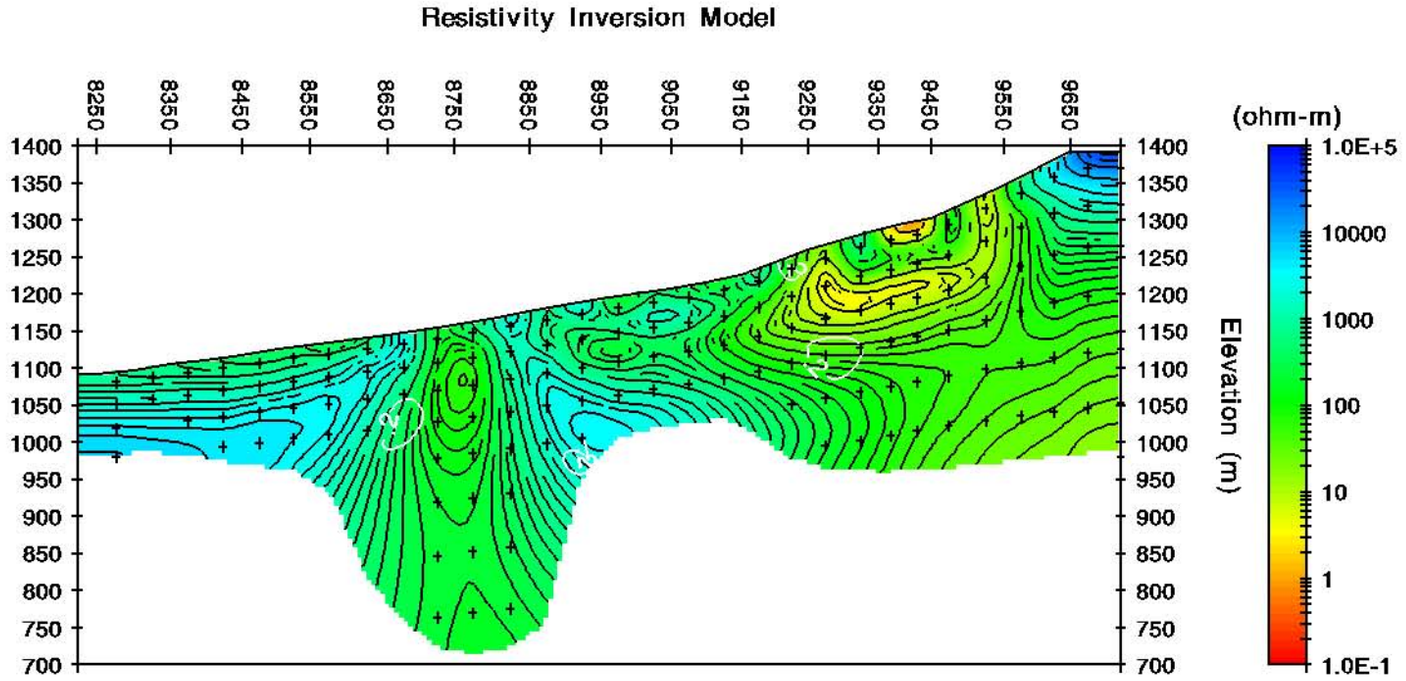
300 m

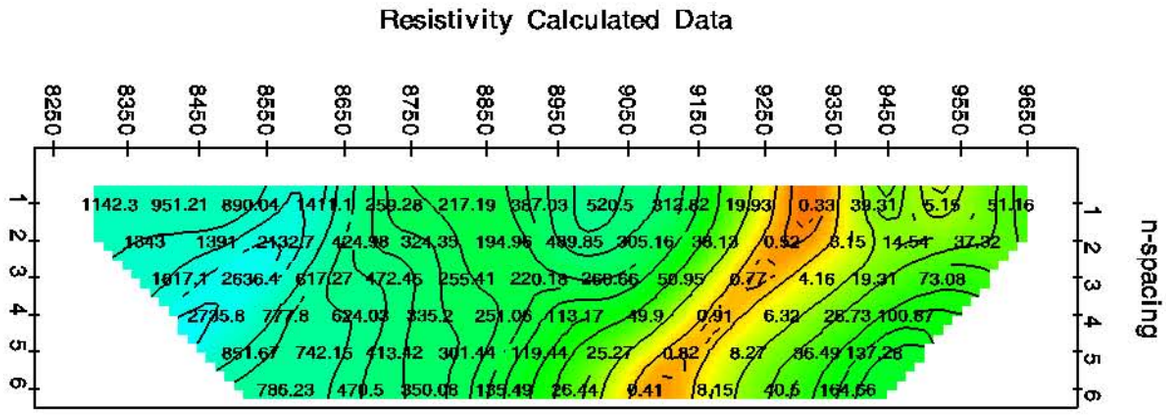
INVERTED CHARGEABILITY SECTION
Line 532400E

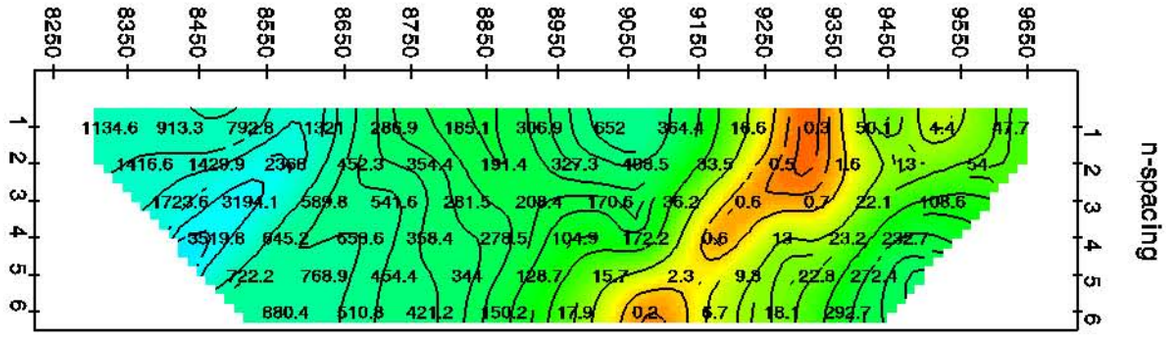
2D Smooth-Model Inversion
Pole-Dipole IP Data

AUTHOR	DRAWN	DATE	SCALE	REPORT
JLW	JLW	23/06/19	1:5000	Job
532400.s2d				

RAU PROPERTY
INDUCED POLARIZATION SURVEY







Survey Parameters:
100 m Pole-Dipole data
0.125 hertz repetition rate

Inversion control parameters:
ResSmth=1, dpW=0.5, dxW=1, dzW=1
TS2DIP v4.70i
White contours show UBC DOI

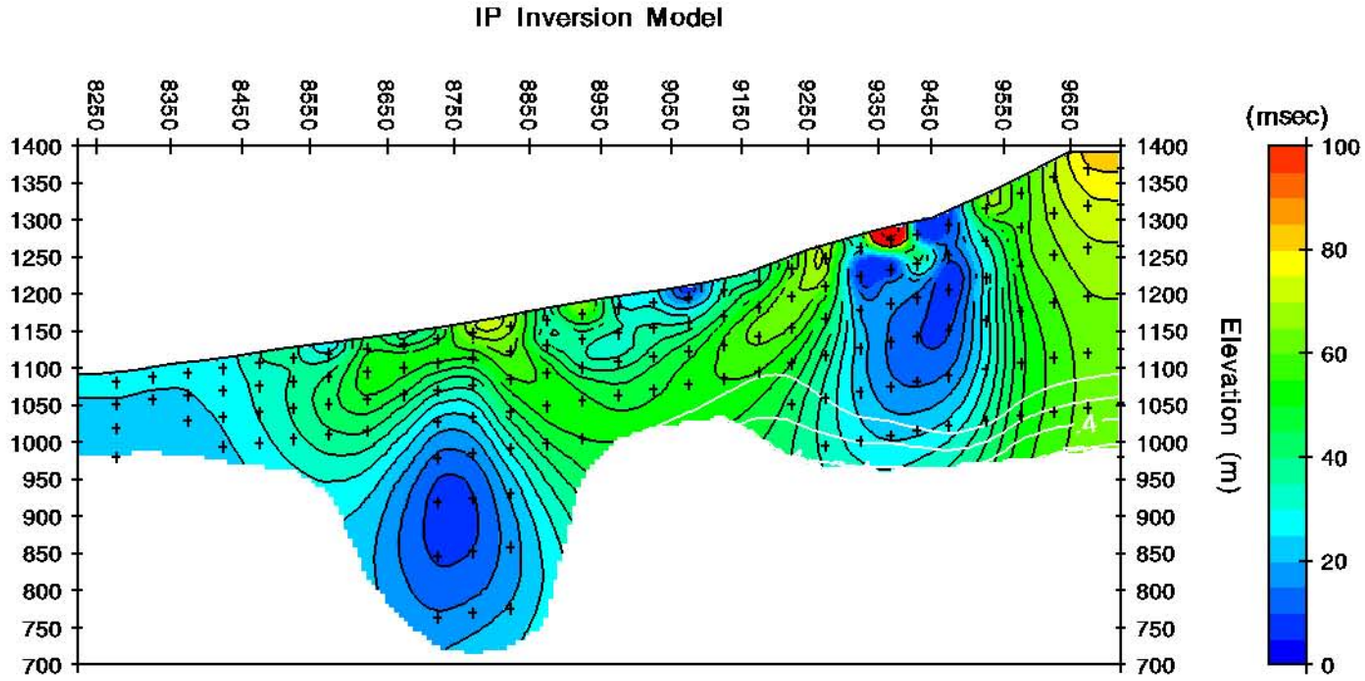
600 m

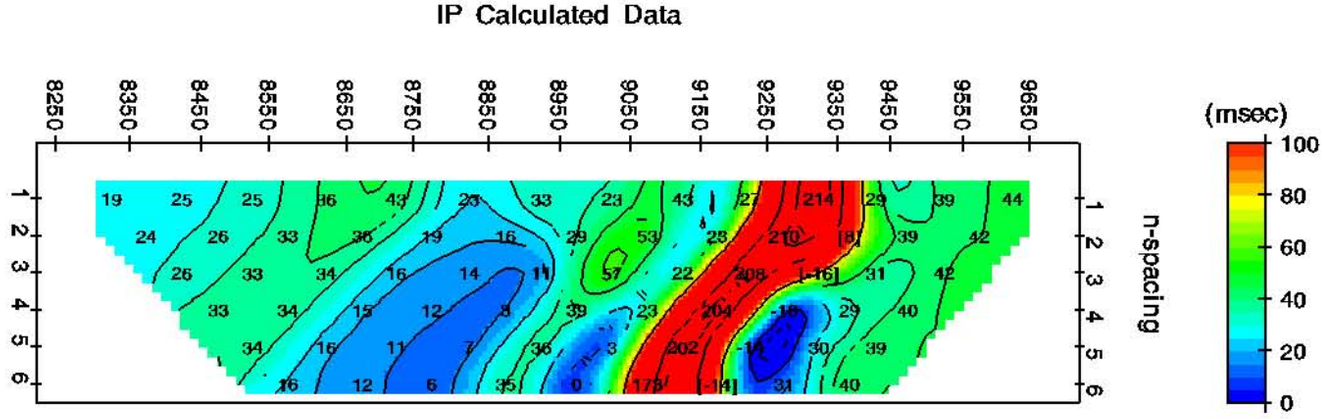
INVERTED RESISTIVITY SECTION
Line 532500_100

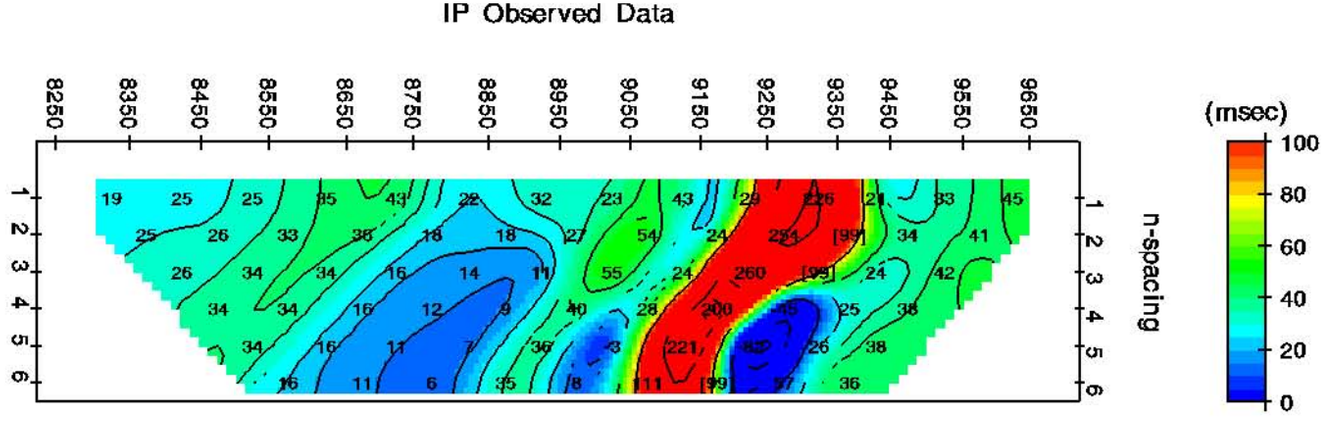
2D Smooth-Model Inversion
Pole-Dipole Resistivity Data

AUTHOR	DRAWN	DATE	SCALE	REPORT
JLW	JLW	05/07/19	1:10000	Job
532500_100.s2d				

RAU PROPERTY
INDUCED POLARIZATION SURVEY







Survey Parameters:
100 m Pole-Dipole data
0.125 hertz repetition rate

Inversion control parameters:
IPSmth=0.1, dpW=0.5, dxW=1, dzW=1
TS2DIP v4.70i
White contours show UBC DOI

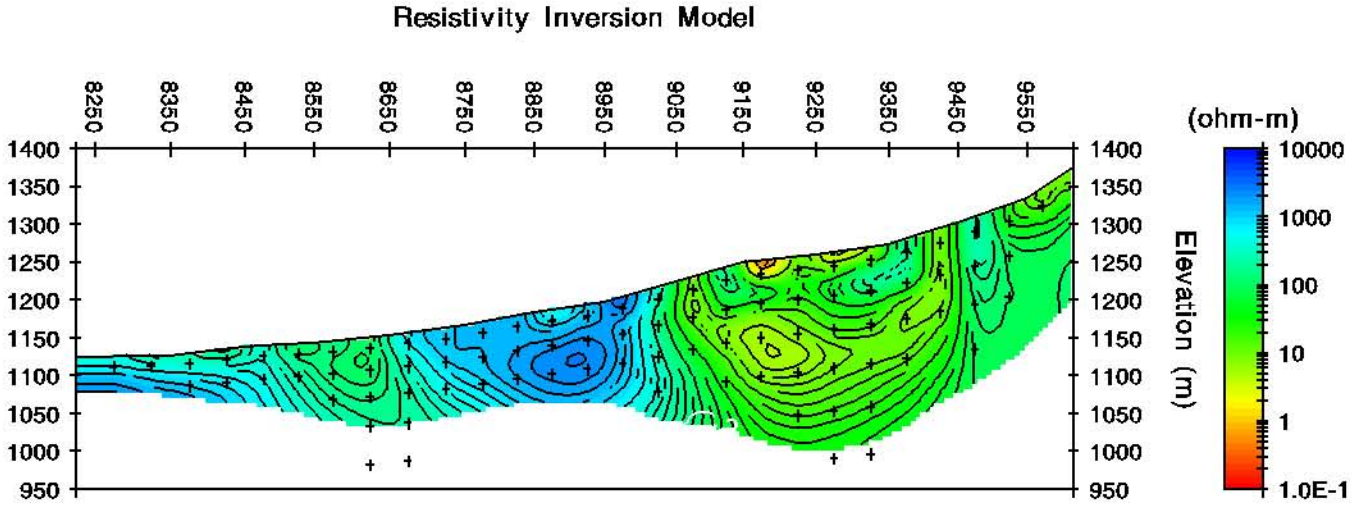
600 m

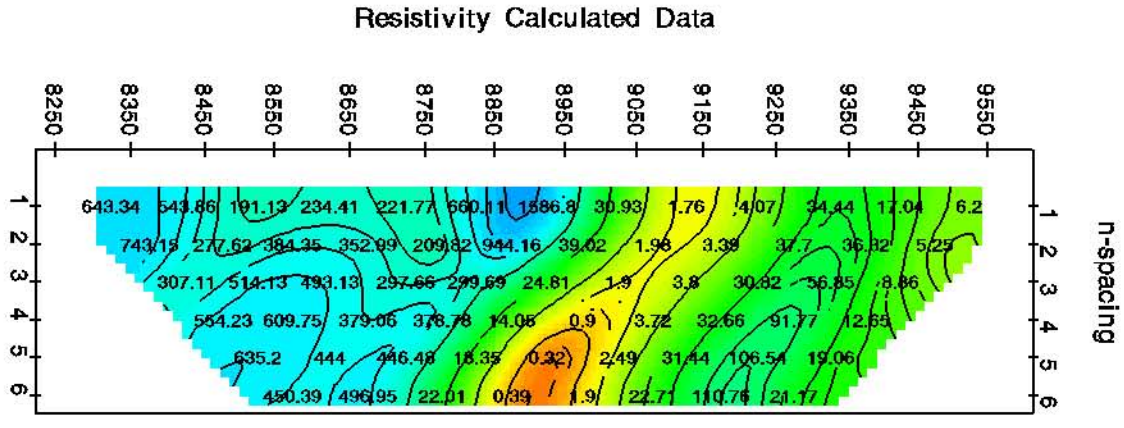
INVERTED CHARGEABILITY SECTION
Line 532500_100

2D Smooth-Model Inversion
Pole-Dipole IP Data

AUTHOR	DRAWN	DATE	SCALE	REPORT
JLW	JLW	05/07/19	1:10000	Job
532500_100.s2d				

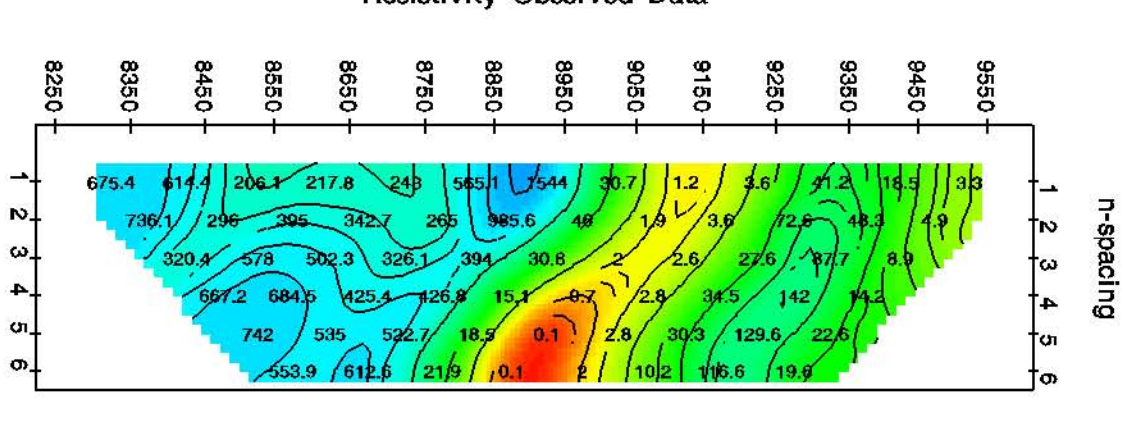
RAU PROPERTY
INDUCED POLARIZATION SURVEY





Survey Parameters:
100 m Pole-Dipole data
0.125 hertz repetition rate

Inversion control parameters:
ResSmth=1, dpW=0.5, dxW=1, dzW=1
TS2DIP v4.70i
White contours show UBC DOI



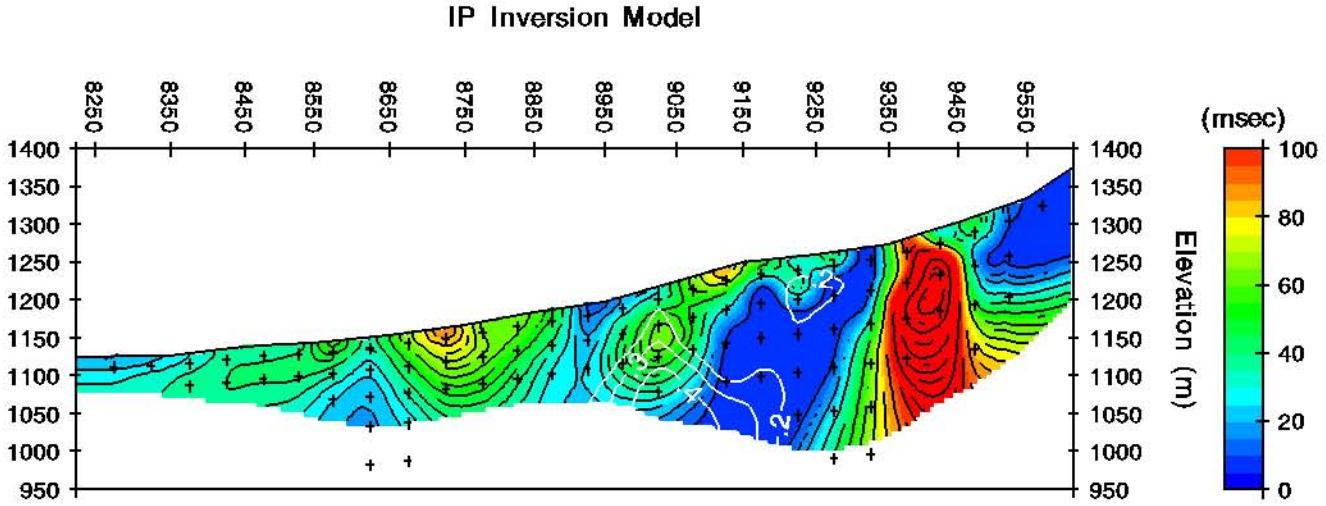
600 m

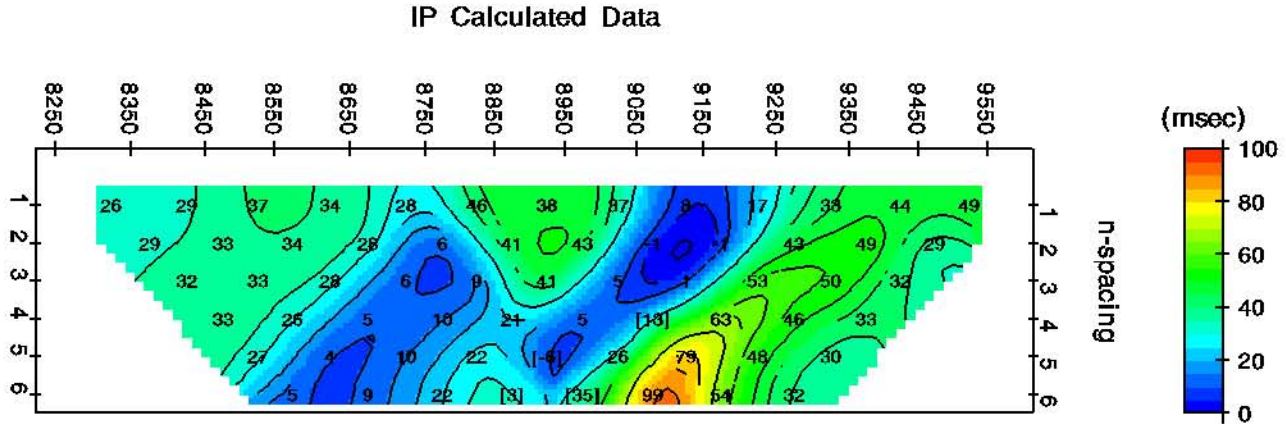
INVERTED RESISTIVITY SECTION
Line 532700_100

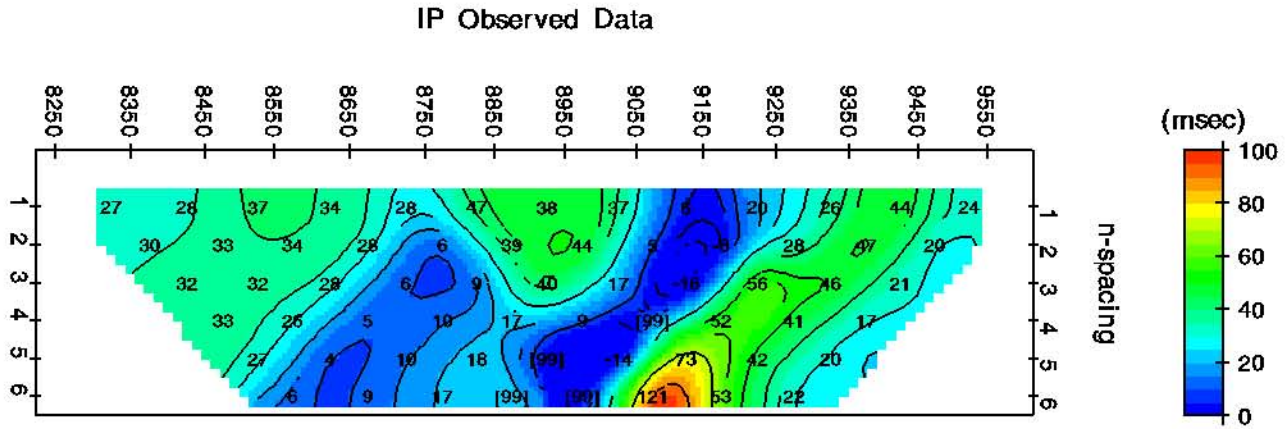
2D Smooth-Model Inversion
Pole-Dipole Resistivity Data

AUTHOR	DRAWN	DATE	SCALE	REPORT
JLW	JLW	05/07/19	1:10000	Job
532700E_100.s2d				

RAU PROPERTY
INDUCED POLARIZATION SURVEY







Survey Parameters:
100 m Pole-Dipole data
0.125 hertz repetition rate

Inversion control parameters:
IPSmth=0.1, dpW=0.5, dxW=1, dzW=1
TS2DIP v4.70i
White contours show UBC DOI

600 m

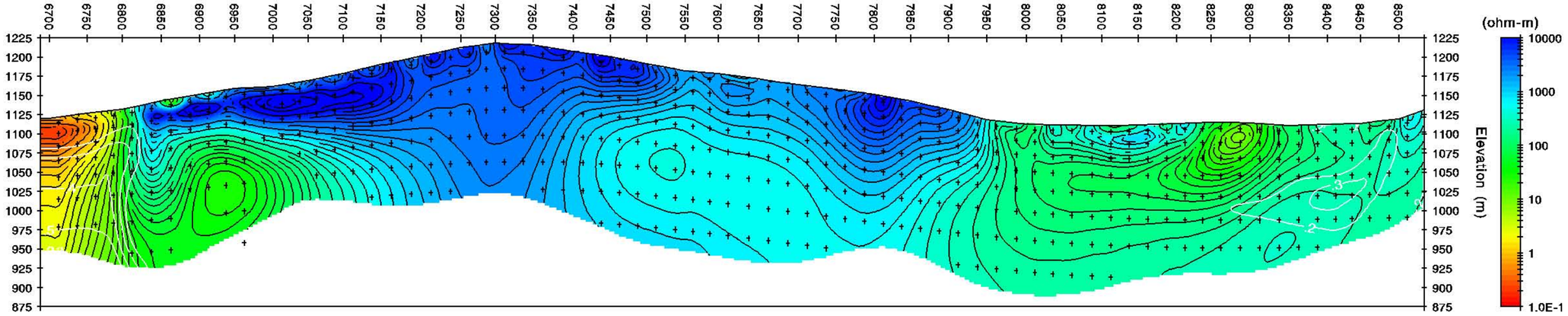
INVERTED CHARGEABILITY SECTION
Line 532700_100

2D Smooth-Model Inversion
Pole-Dipole IP Data

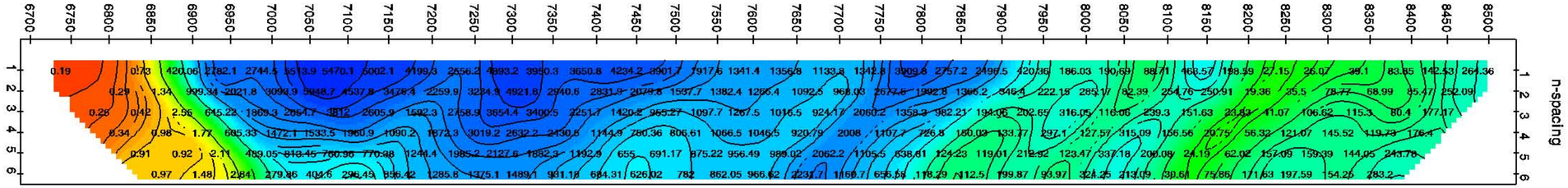
AUTHOR	DRAWN	DATE	SCALE	REPORT
JLW	JLW	05/07/19	1:10000	Job
532700E_100.s2d				

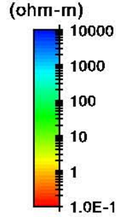
RAU PROPERTY
INDUCED POLARIZATION SURVEY

Resistivity Inversion Model



Resistivity Calculated Data

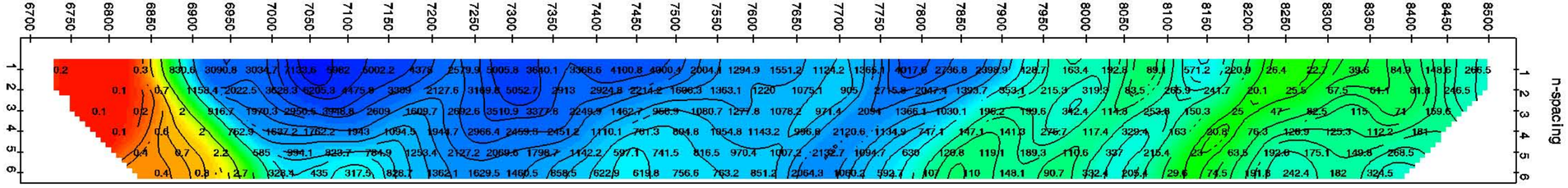


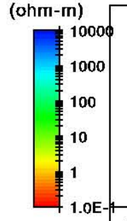


Survey Parameters:
50 m Pole-Dipole data
0.125 hertz repetition rate

Inversion control parameters:
ResSmth=1, dpW=0.5, dxW=1, dzW=1
TS2DIP v4.70i
White contours show UBC DOI

Resistivity Observed Data





300 m

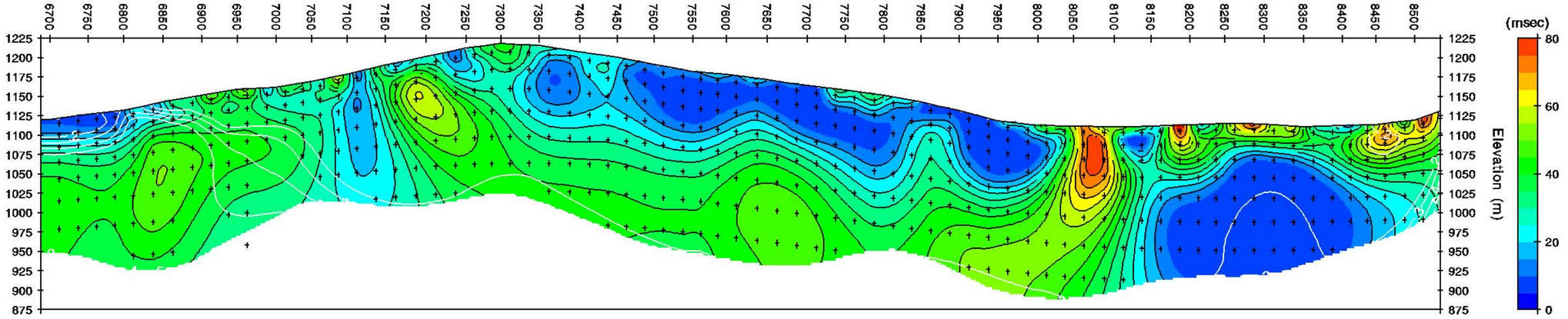
INVERTED RESISTIVITY SECTION
Line 532900

2D Smooth-Model Inversion
Pole-Dipole Resistivity Data

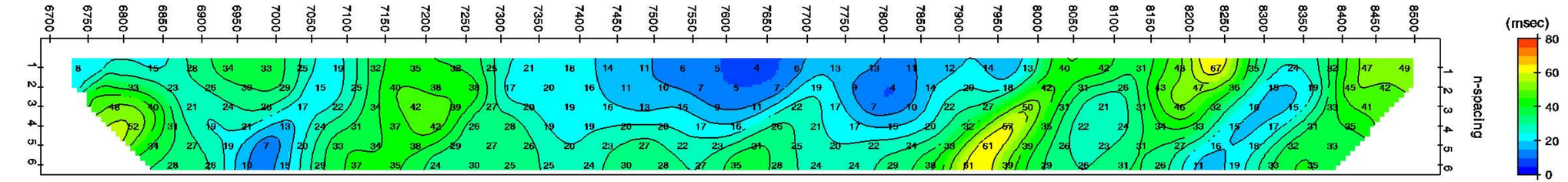
AUTHOR	DRAWN	DATE	SCALE	REPORT
JLW	JLW	15/06/19	1:5000	Job
532900E.s2d				

RAU PROPERTY
INDUCED POLARIZATION SURVEY

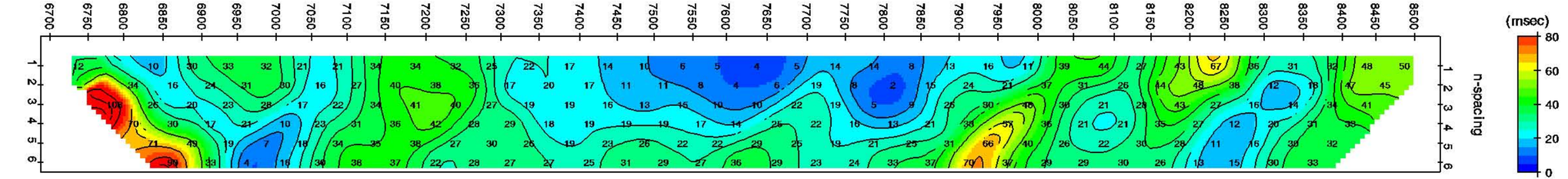
IP Inversion Model



IP Calculated Data



IP Observed Data



Survey Parameters:
50 m Pole-Dipole data
0.125 hertz repetition rate

Inversion control parameters:
IPSmth=0.1, dpW=0.5, dxW=1, dzW=1
TS2DIP v4.70i
White contours show UBC DOI

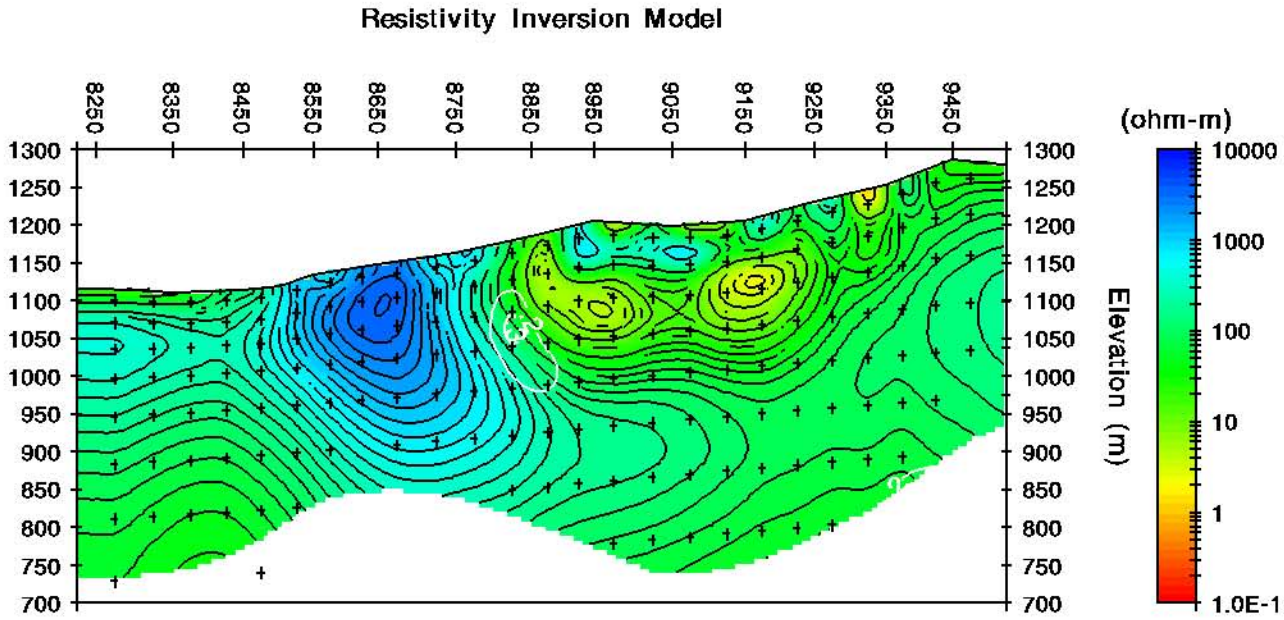
300 m

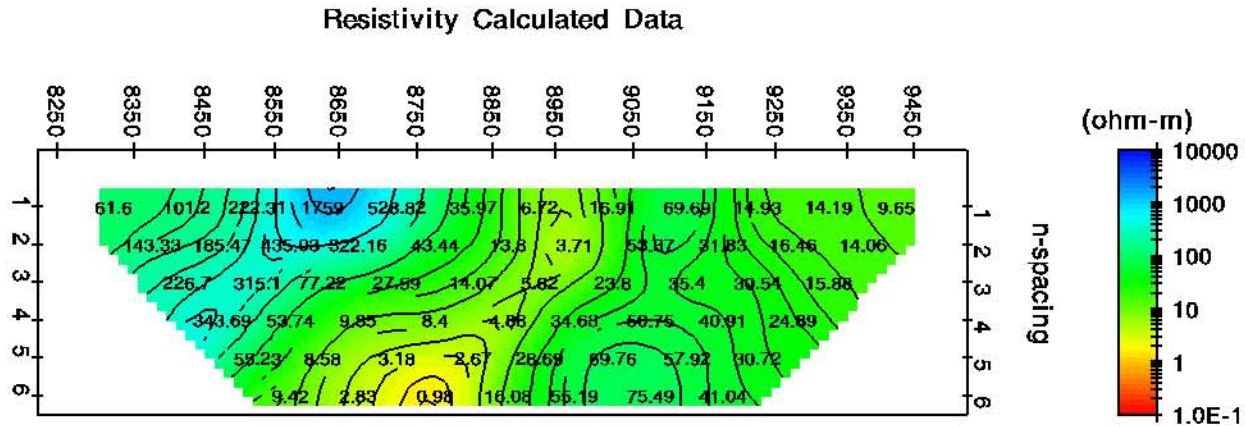
INVERTED CHARGEABILITY SECTION
Line 532900

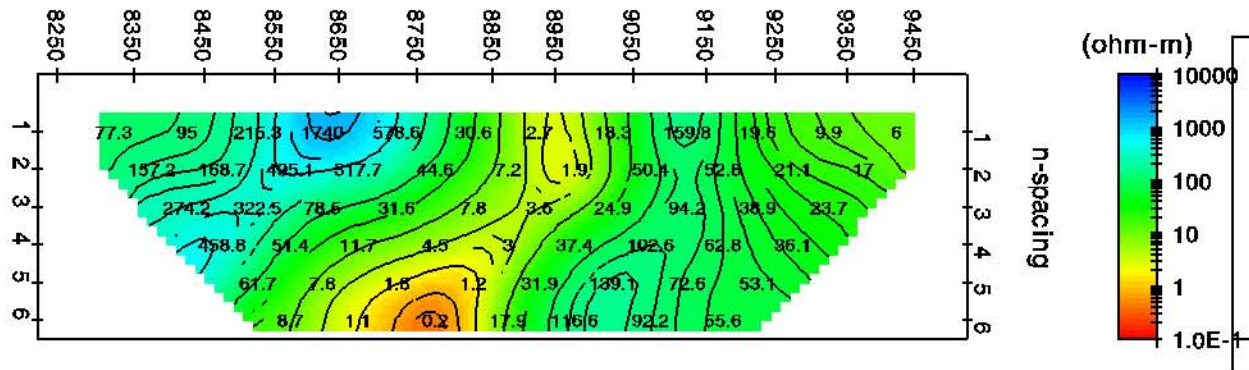
2D Smooth-Model Inversion
Pole-Dipole IP Data

AUTHOR	DRAWN	DATE	SCALE	REPORT
JLW	JLW	15/06/19	1:5000	Job
532900E.s2d				

RAU PROPERTY
INDUCED POLARIZATION SURVEY







Survey Parameters:
100 m Pole-Dipole data
0.125 hertz repetition rate

Inversion control parameters:
ResSmth=1, dpW=0.5, dxW=1, dzW=1
TS2DIP v4.70i
White contours show UBC DOI

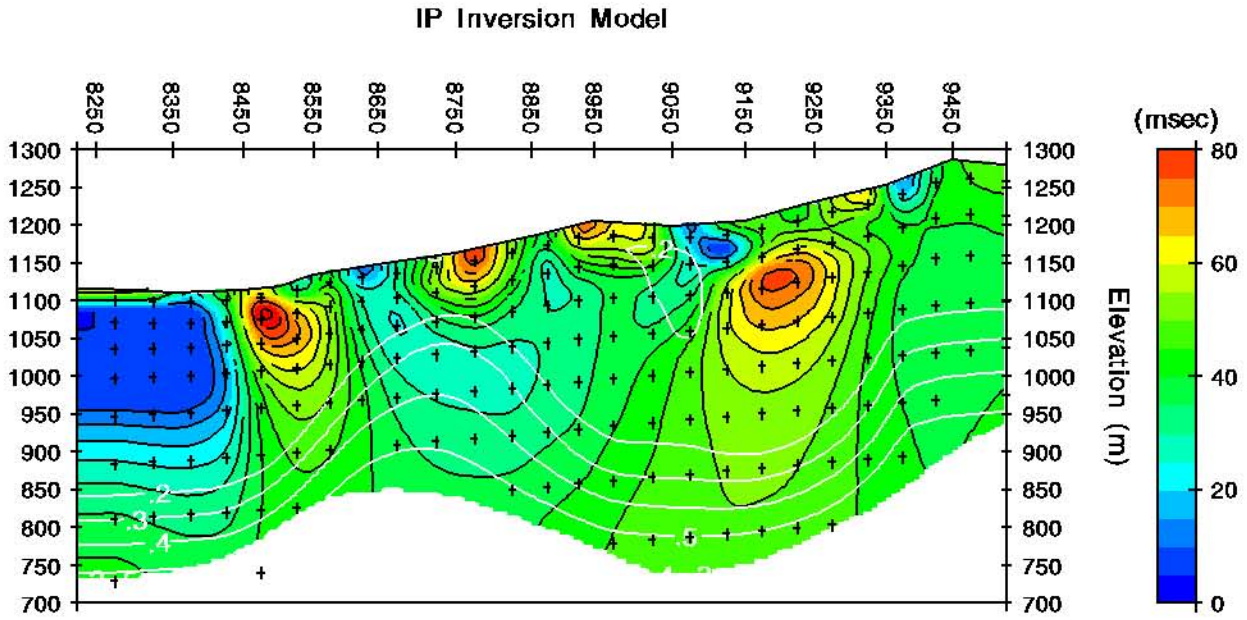
600 m

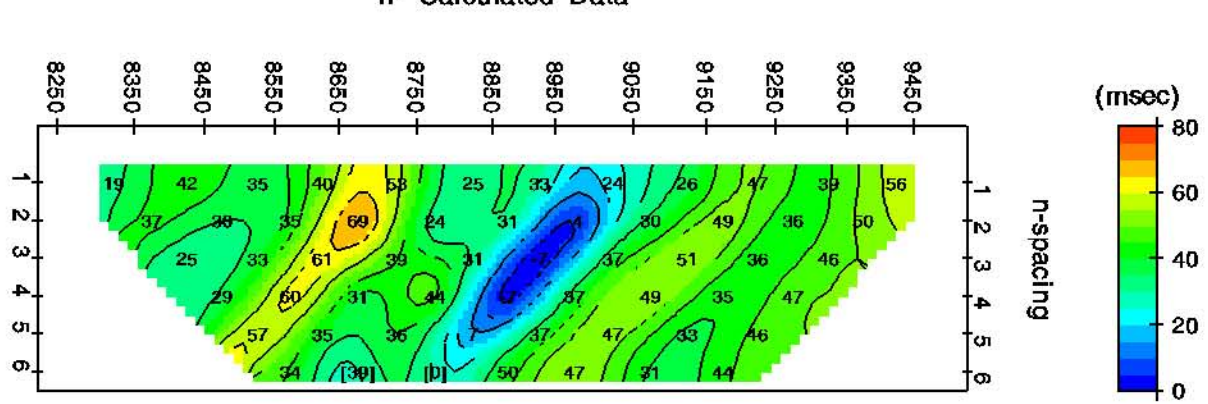
INVERTED RESISTIVITY SECTION
Line 532900_100E

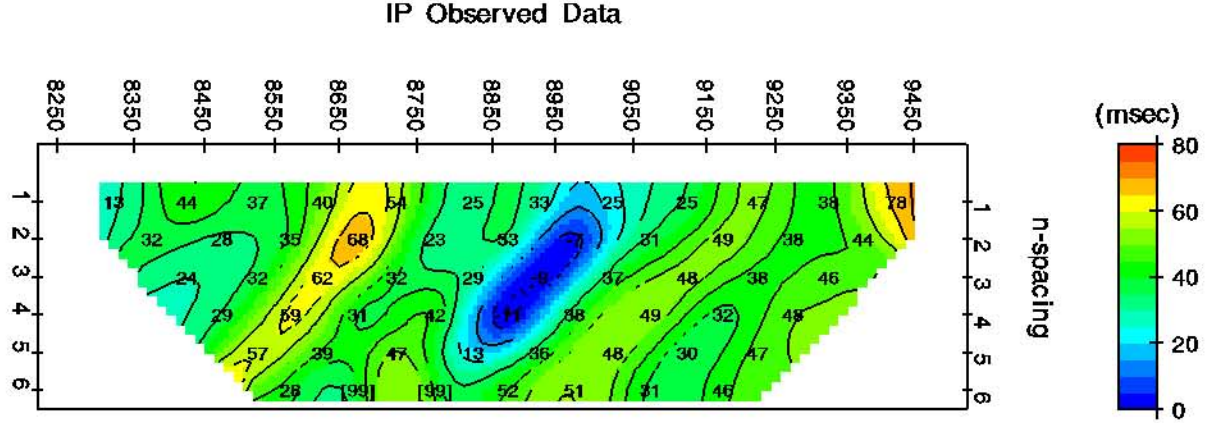
2D Smooth-Model Inversion
Pole-Dipole Resistivity Data

AUTHOR	DRAWN	DATE	SCALE	REPORT
JLW	JLW	09/07/19	1:10000	Job
532900_100.s2d				

RAU PROPERTY
INDUCED POLARIZATION SURVEY







Survey Parameters:
100 m Pole-Dipole data
0.125 hertz repetition rate

Inversion control parameters:
IPSmth=0.1, dpW=0.5, dxW=1, dzW=1
TS2DIP v4.70i
White contours show UBC DOI

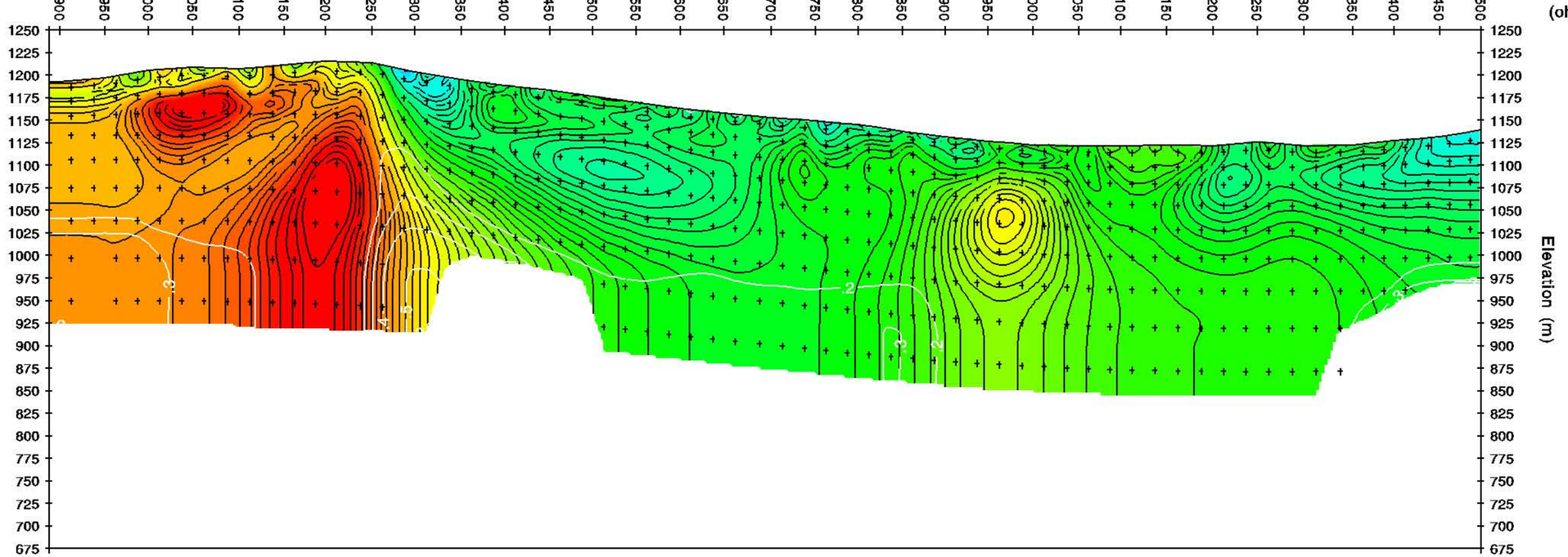
600 m

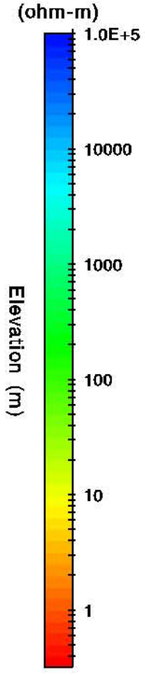
INVERTED CHARGEABILITY SECTION
Line 532900_100E

2D Smooth-Model Inversion
Pole-Dipole IP Data

AUTHOR	DRAWN	DATE	SCALE	REPORT
JLW	JLW	09/07/19	1:10000	Job
532900_100.s2d				

Resistivity Inversion Model





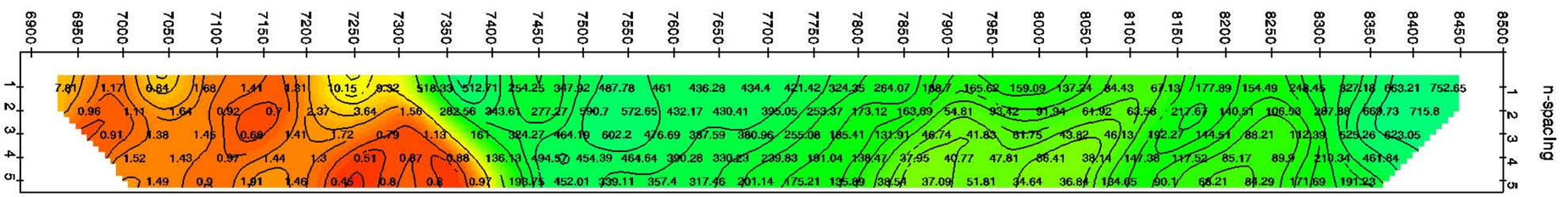
RAU PROPERTY

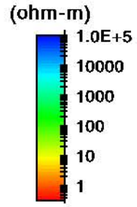
INDUCED POLARIZATION SURVEY

Survey Parameters:
50 m Pole-Dipole data
0.125 hertz repetition rate

Inversion control parameters:
ResSmth=1, dpW=0.5, dxW=1, dzW=1
TS2DIP v4.70i
White contours show UBC DOI

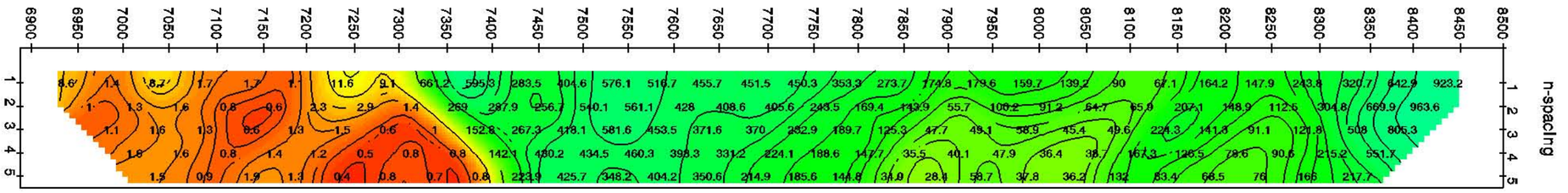
Resistivity Calculated Data

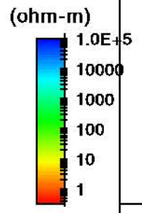




300 m

Resistivity Observed Data



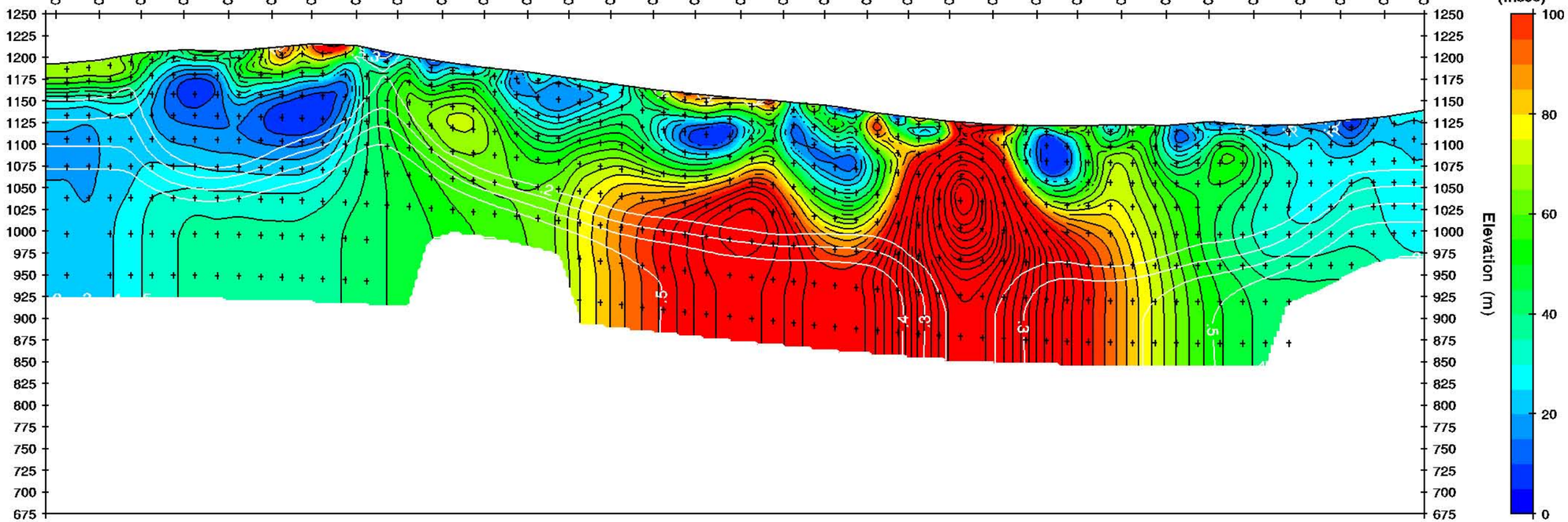


INVERTED RESISTIVITY SURVEY
Line 533100E

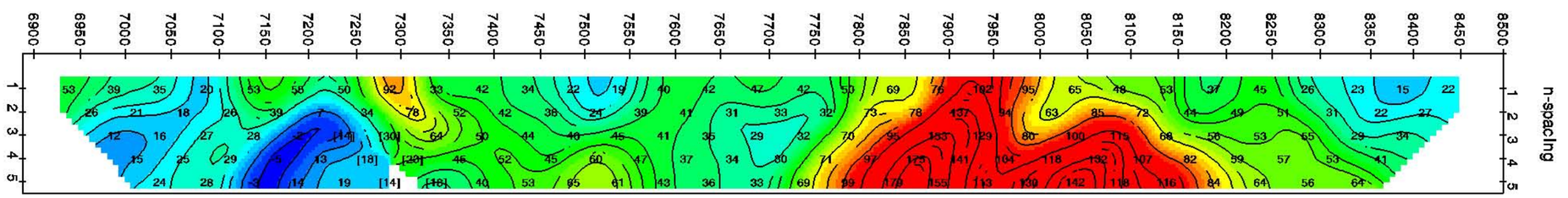
2D Smooth-Model Inversion
Pole-Dipole Resistivity Data

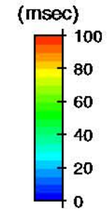
AUTHOR	DRAWN	DATE	SCALE	REPORT
JLW	JLW	23/06/19	1:5000	Job
533100.s2d				

IP Inversion Model

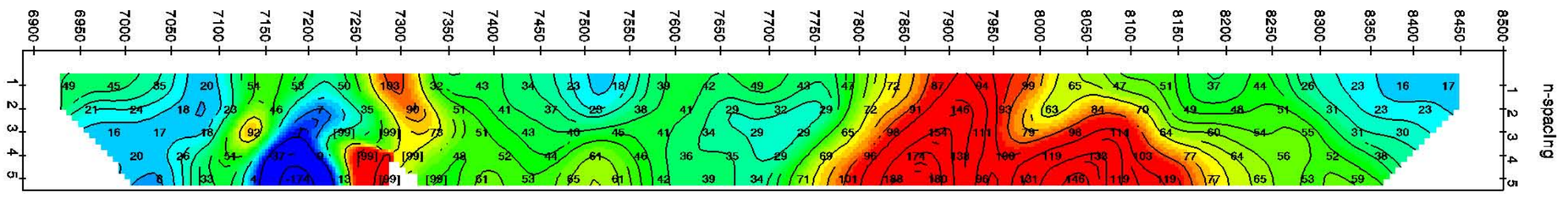


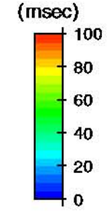
IP Calculated Data





IP Observed Data





RAU PROPERTY
INDUCED POLARIZATION SURVEY

Survey Parameters:
50 m Pole-Dipole data
0.125 hertz repetition rate

Inversion control parameters:
IPSmth=0.1, dpW=0.5, dxW=1, dzW=1
TS2DIP v4.70i
White contours show UBC DOI

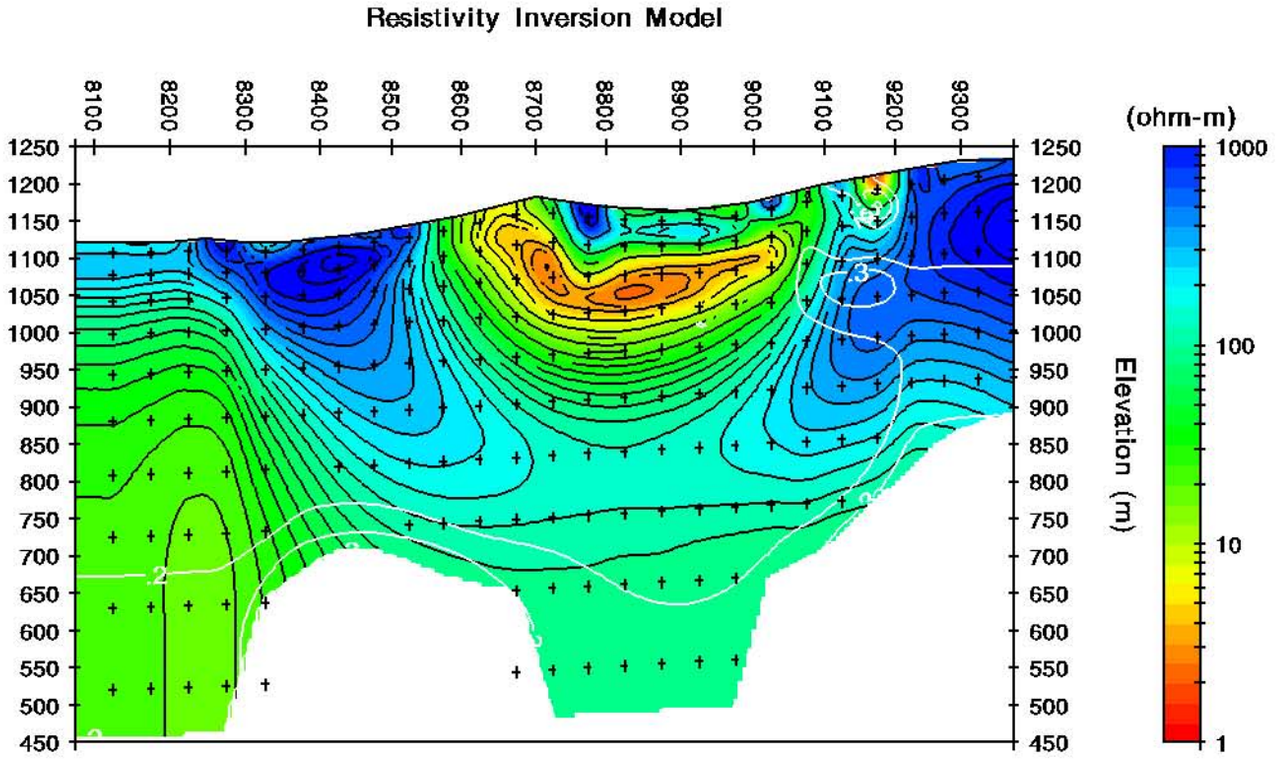
300 m

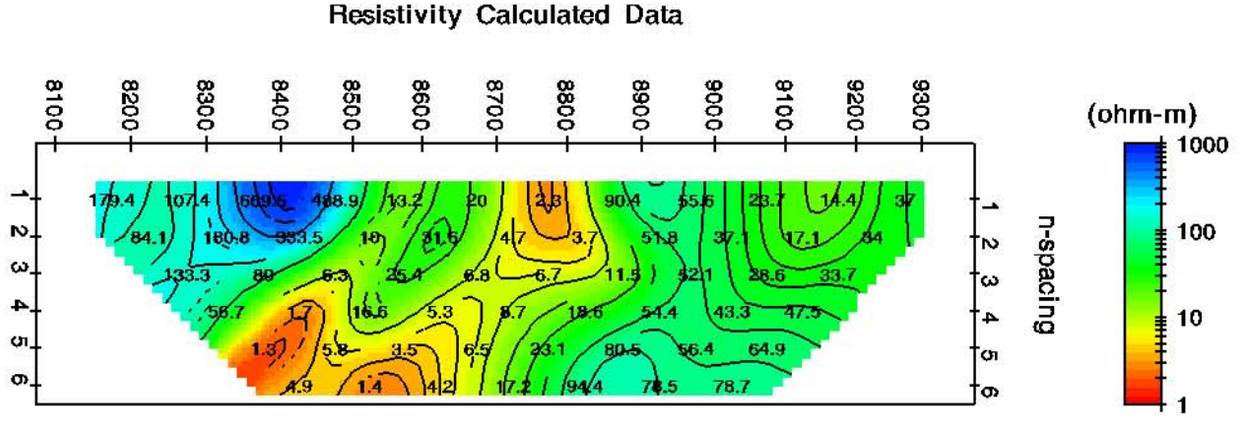
INVERTED CHARGEABILITY SURVEY
Line 533100E

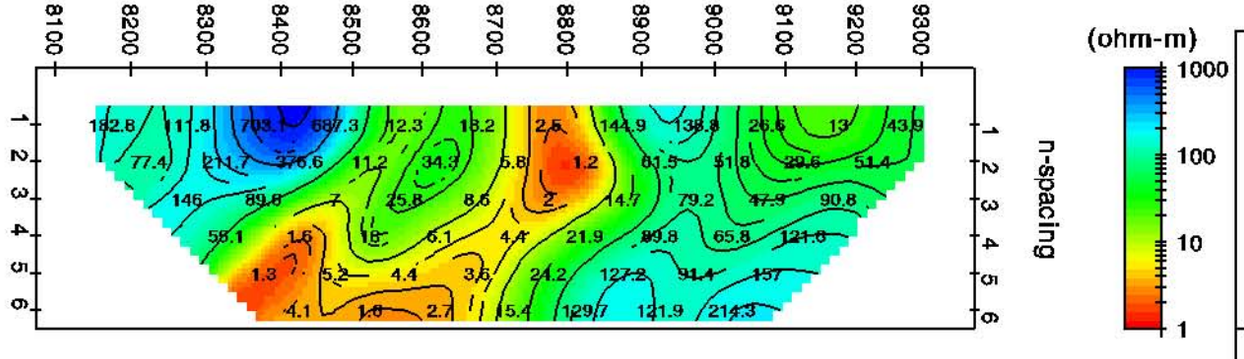
2D Smooth-Model Inversion
Pole-Dipole IP Data

AUTHOR	DRAWN	DATE	SCALE	REPORT
JLW	JLW	23/06/19	1:5000	Job
533100.s2d				

RAU PROPERTY
INDUCED POLARIZATION SURVEY







Survey Parameters:
100 m Pole-Dipole data
0.125 hertz repetition rate

Inversion control parameters:
ResSmth=1, dpW=0.5, dxW=1, dzW=1
TS2DIP v4.70i
White contours show UBC DOI

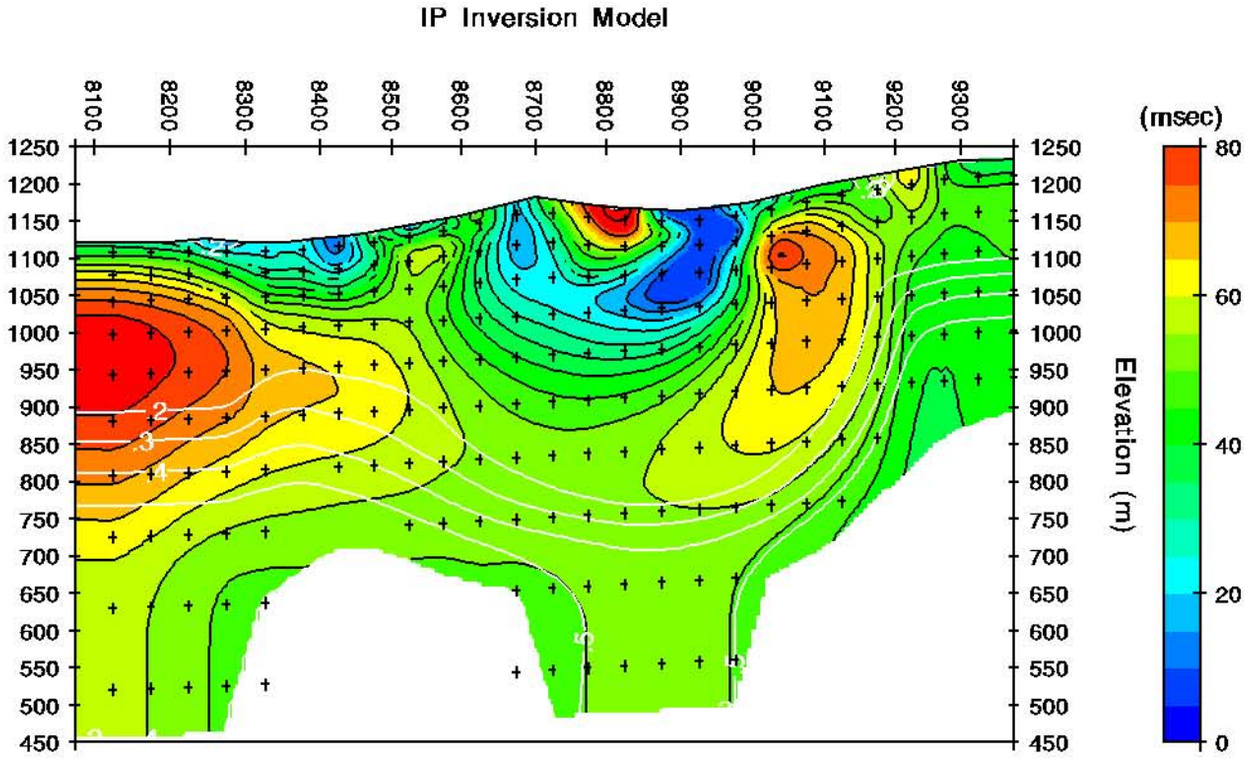
600 m

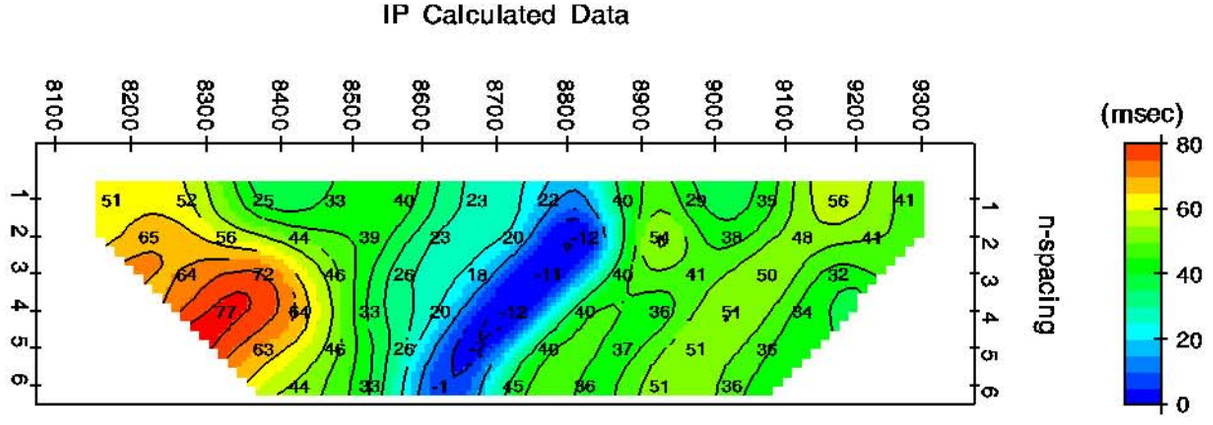
INVERTED RESISTIVITY SECTION
Line 533100_100E

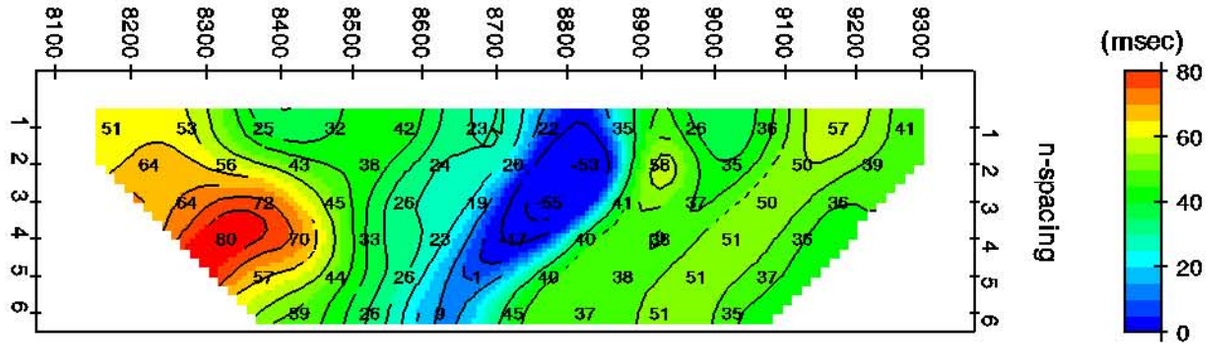
2D Smooth-Model Inversion
Pole-Dipole Resistivity Data

AUTHOR	DRAWN	DATE	SCALE	REPORT
JLW	JLW	02/07/19	1:10000	Job
533100_100.s2d				

RAU PROPERTY
INDUCED POLARIZATION SURVEY







Survey Parameters:
100 m Pole-Dipole data
0.125 hertz repetition rate

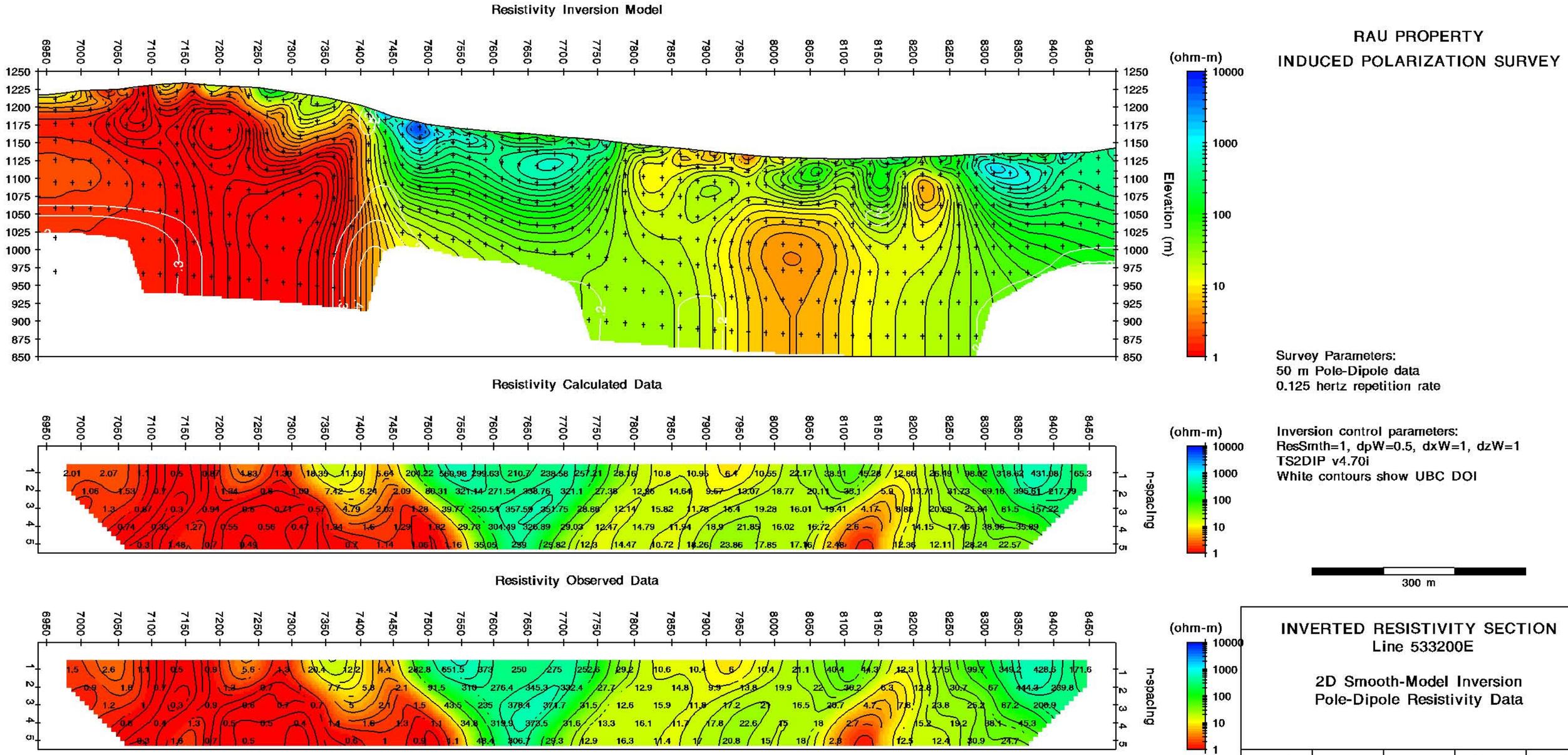
Inversion control parameters:
IPSmth=0.1, dpW=0.5, dxW=1, dzW=1
TS2DIP v4.70i
White contours show UBC DOI

600 m

INVERTED CHARGEABILITY SECTION
Line 533100_100E

2D Smooth-Model Inversion
Pole-Dipole IP Data

AUTHOR	DRAWN	DATE	SCALE	REPORT
JLW	JLW	02/07/19	1:10000	Job
533100_100.s2d				



RAU PROPERTY
INDUCED POLARIZATION SURVEY

Survey Parameters:
50 m Pole-Dipole data
0.125 hertz repetition rate

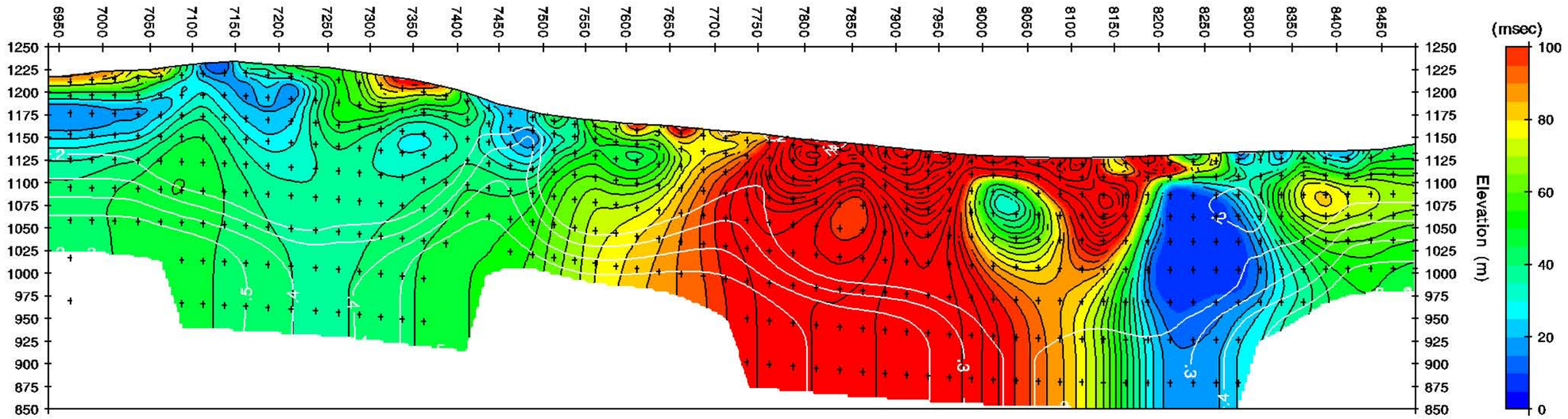
Inversion control parameters:
ResSmth=1, dpW=0.5, dxW=1, dzW=1
TS2DIP v4.70i
White contours show UBC DOI

INVERTED RESISTIVITY SECTION
Line 533200E

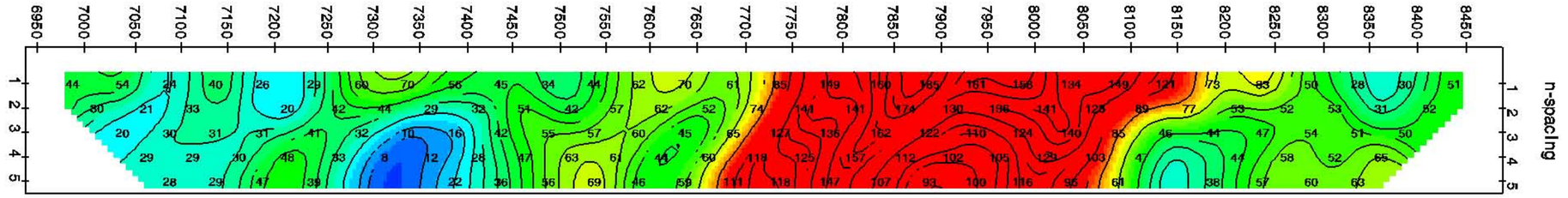
2D Smooth-Model Inversion
Pole-Dipole Resistivity Data

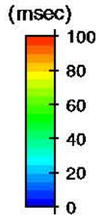
AUTHOR	DRAWN	DATE	SCALE	REPORT
JLW	JLW	24/06/19	1:5000	Job
533200.s2d				

IP Inversion Model

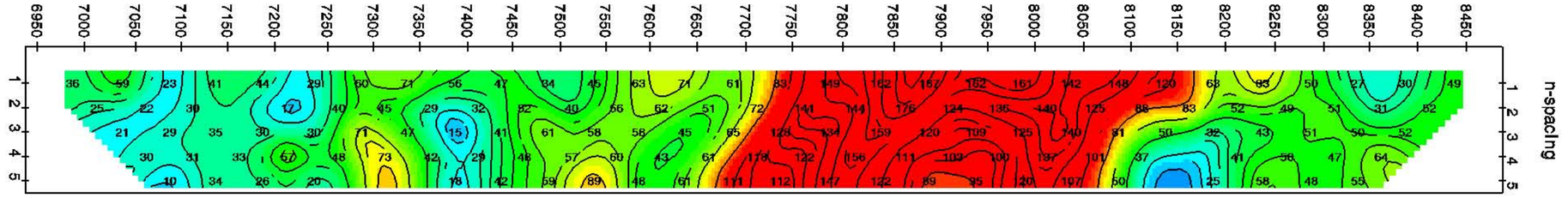


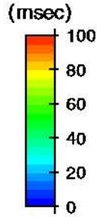
IP Calculated Data





IP Observed Data





RAU PROPERTY
INDUCED POLARIZATION SURVEY

Survey Parameters:
50 m Pole-Dipole data
0.125 hertz repetition rate

Inversion control parameters:
IPSmth=0.1, dpW=0.5, dxW=1, dzW=1
TS2DIP v4.70i
White contours show UBC DOI

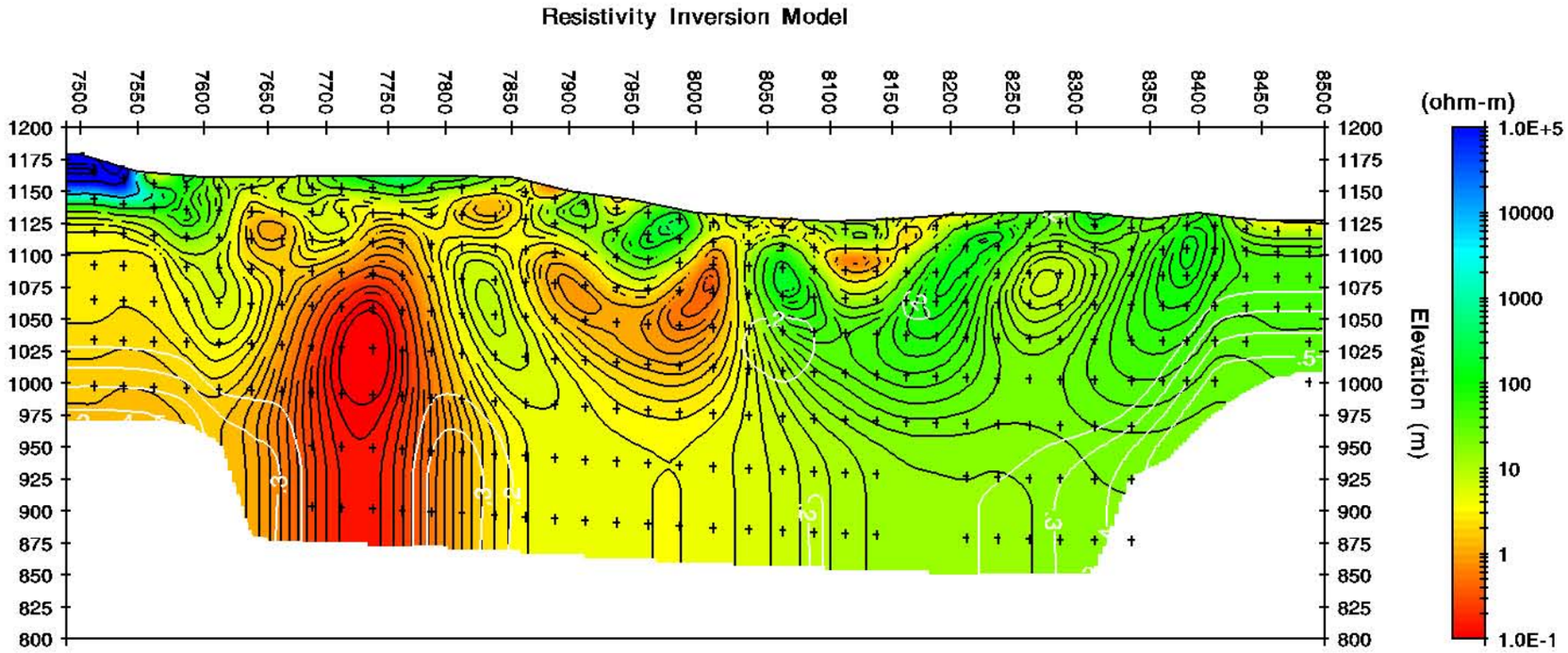
300 m

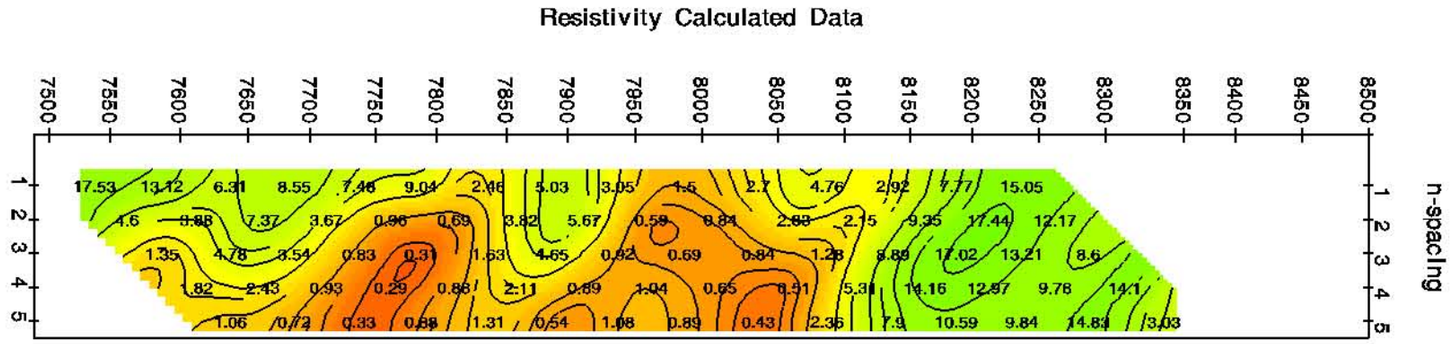
INVERTED CHARGEABILITY SECTION
Line 533200E

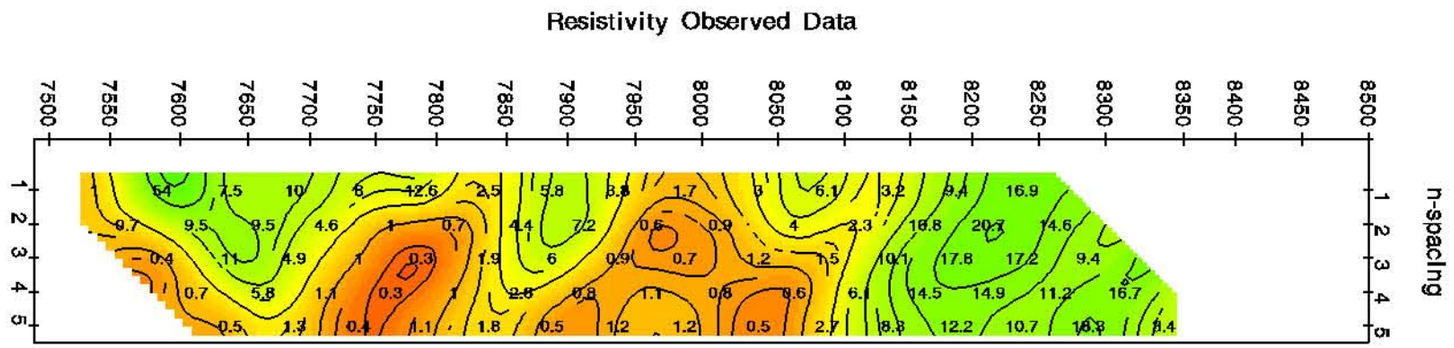
2D Smooth-Model Inversion
Pole-Dipole IP Data

AUTHOR	DRAWN	DATE	SCALE	REPORT
JLW	JLW	24/06/19	1:5000	Job
533200.s2d				

RAU PROPERTY
INDUCED POLARIZATION SURVEY







Survey Parameters:
50 m Pole-Dipole data
0.125 hertz repetition rate

Inversion control parameters:
ResSmth=1, dpW=0.5, dxW=1, dzW=1
TS2DIP v4.70i
White contours show UBC DOI

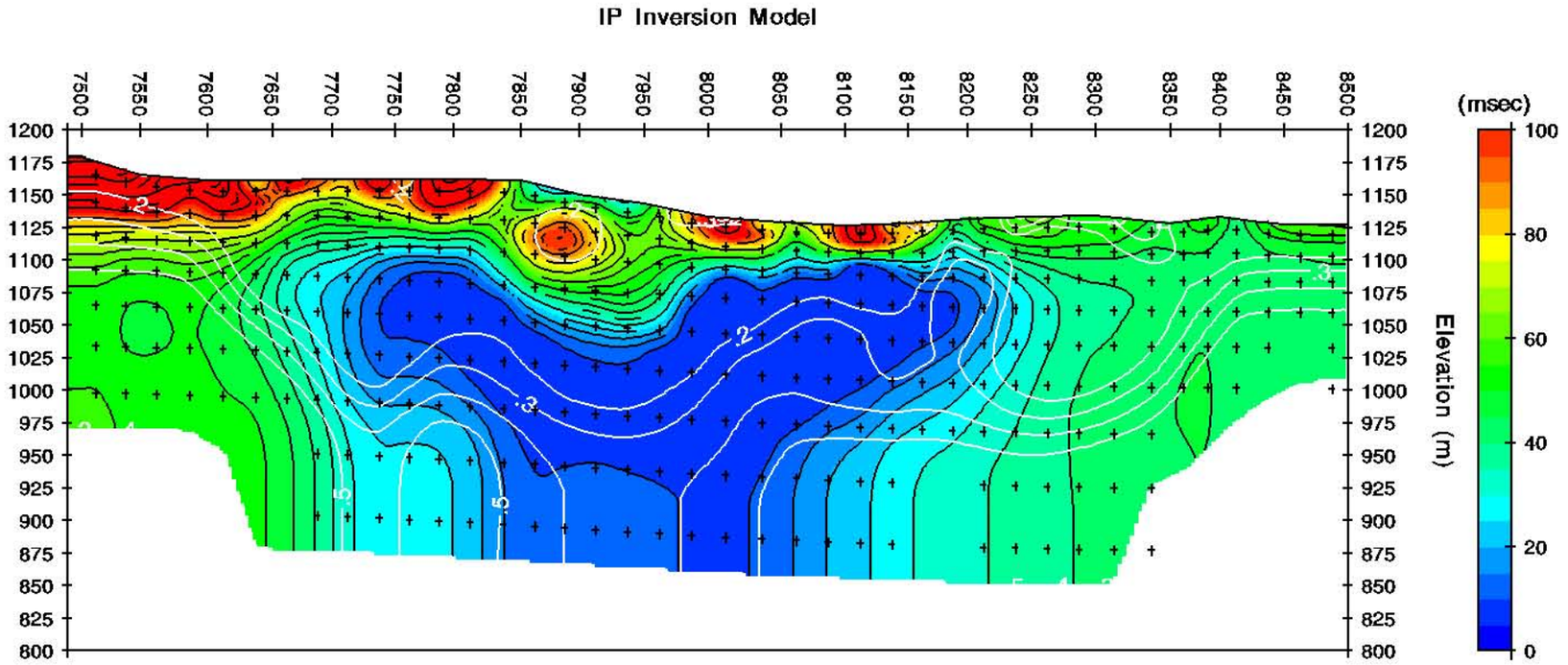
300 m

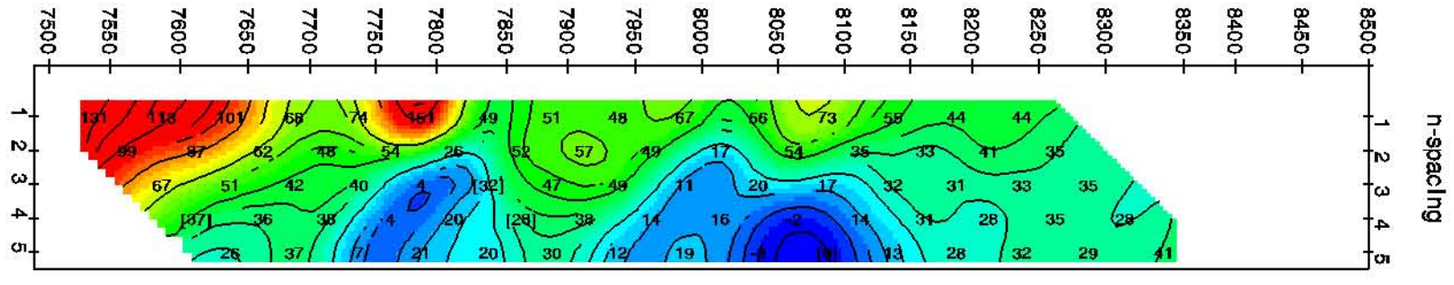
INVERTED RESISTIVITY SECTION
Line 533300E

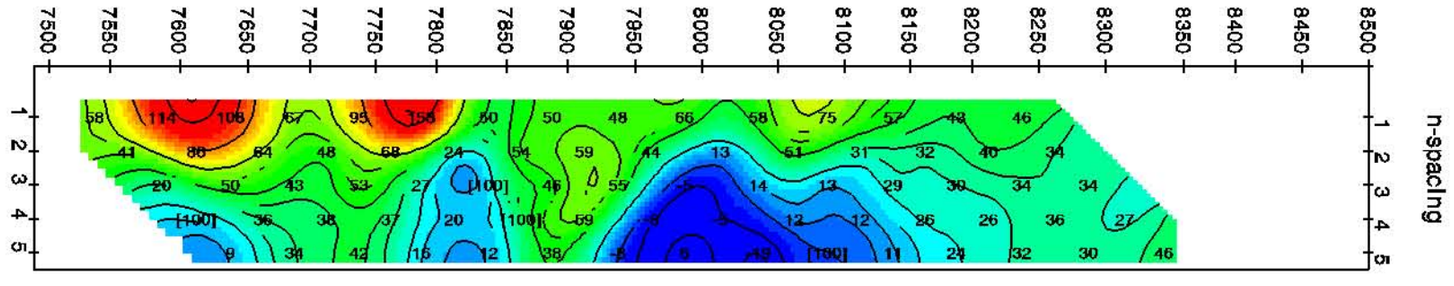
2D Smooth-Model Inversion
Pole-Dipole Resistivity Data

AUTHOR	DRAWN	DATE	SCALE	REPORT
JLW	JLW	24/06/19	1:5000	Job
533300.s2d				

RAU PROPERTY
INDUCED POLARIZATION SURVEY







Survey Parameters:
50 m Pole-Dipole data
0.125 hertz repetition rate

Inversion control parameters:
IPSmth=0.1, dpW=0.5, dxW=1, dzW=1
TS2DIP v4.70i
White contours show UBC DOI

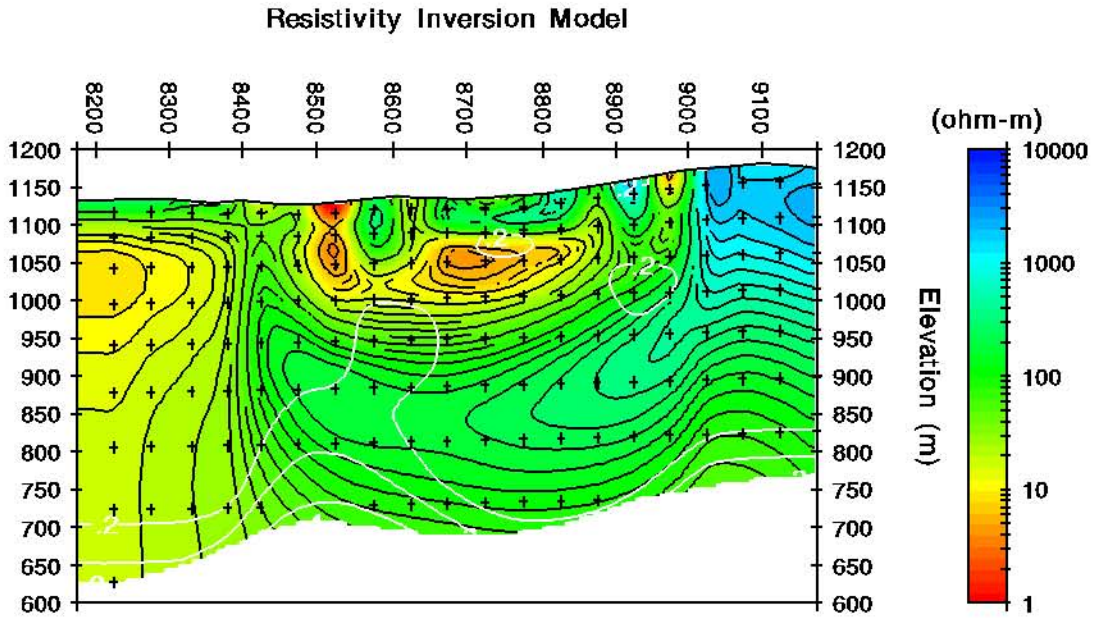
300 m

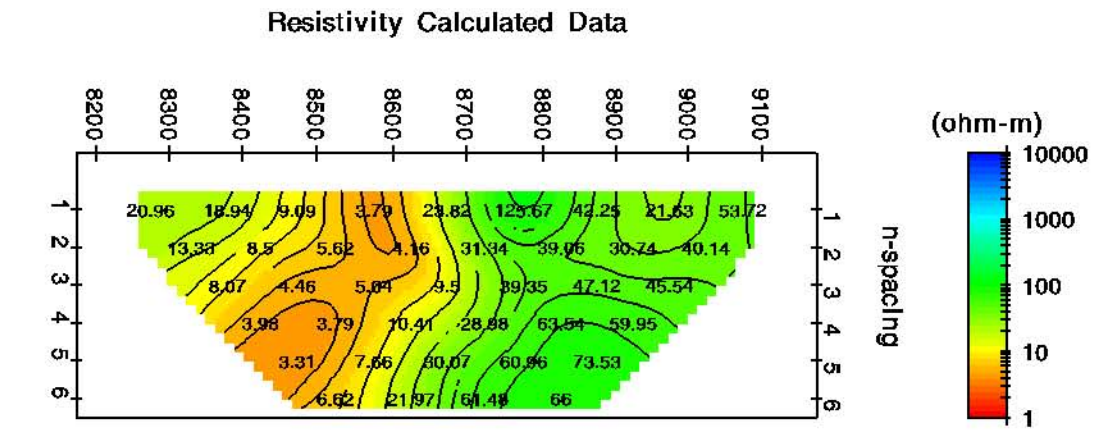
INVERTED CHARGEABILITY SECTION
Line 533300E

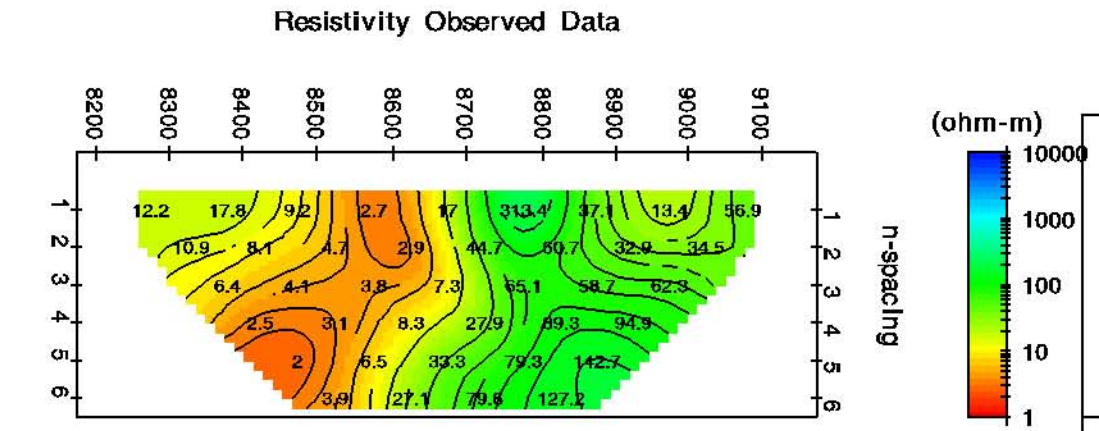
2D Smooth-Model Inversion
Pole-Dipole IP Data

AUTHOR	DRAWN	DATE	SCALE	REPORT
JLW	JLW	24/06/19	1:5000	Job
533300.s2d				

RAU PROPERTY
INDUCED POLARIZATION SURVEY







Survey Parameters:
100 m Pole-Dipole data
0.125 hertz repetition rate

Inversion control parameters:
ResSmth=1, dpW=0.5, dxW=1, dzW=1
TS2DIP v4.70i
White contours show UBC DOI

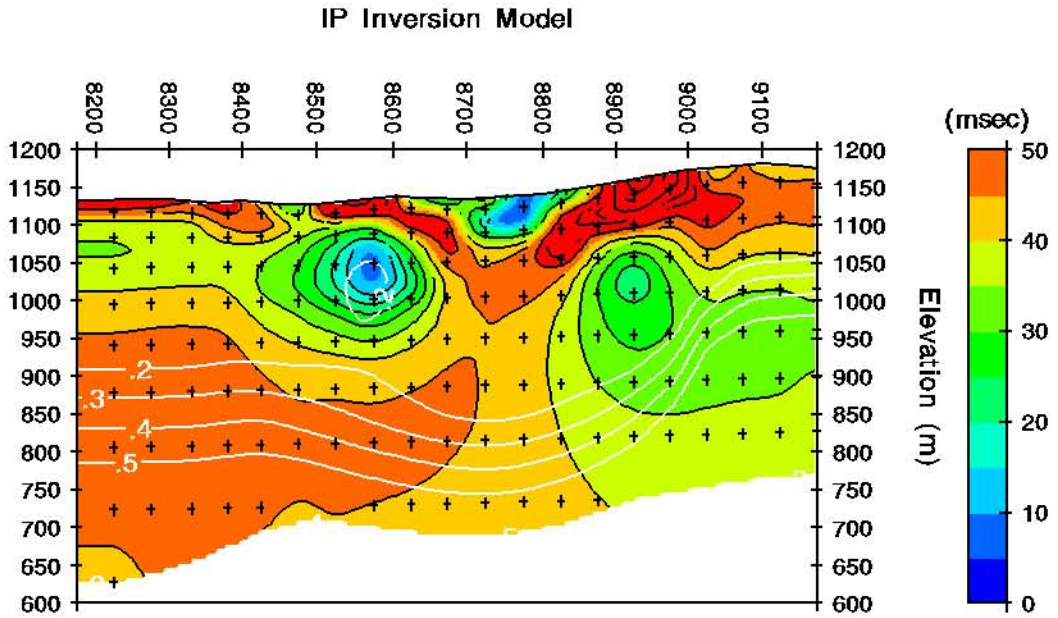
600 m

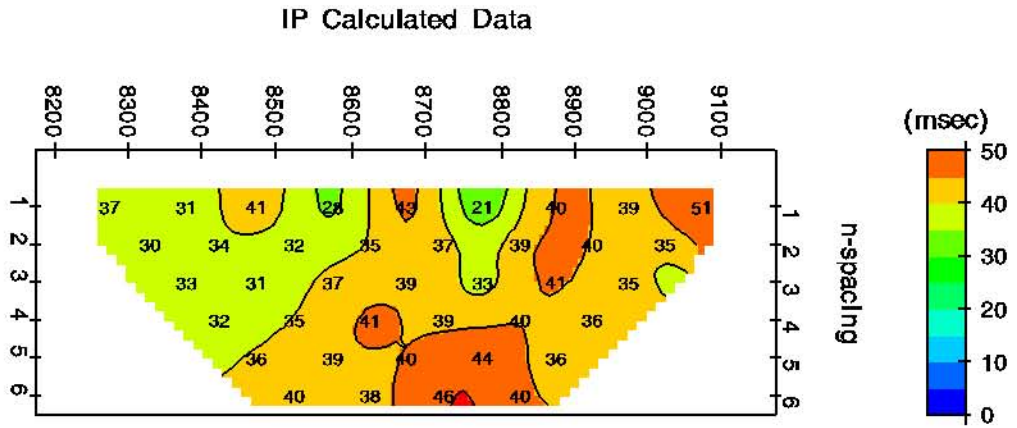
INVERTED RESISTIVITY SECTION
Line 533300_100E

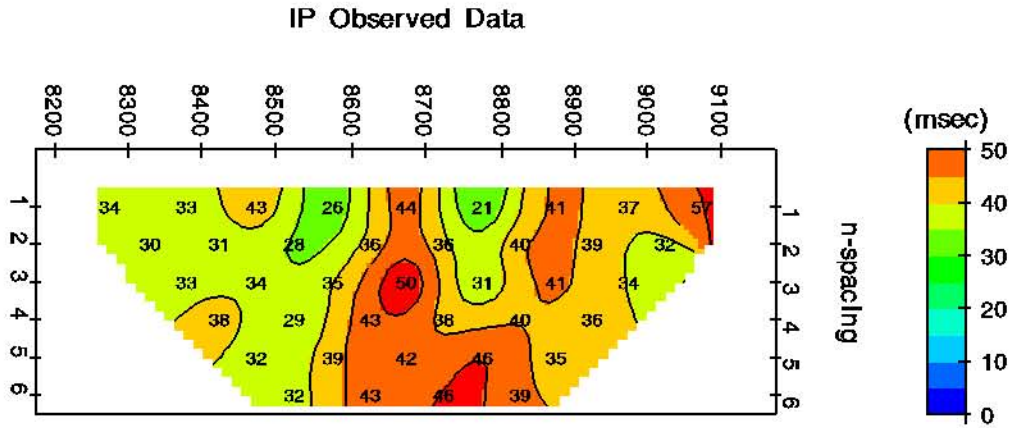
2D Smooth-Model Inversion
Pole-Dipole Resistivity Data

AUTHOR	DRAWN	DATE	SCALE	REPORT
JLW	JLW	02/07/19	1:10000	Job
533300_100.s2d				

RAU PROPERTY
INDUCED POLARIZATION SURVEY







Survey Parameters:
100 m Pole-Dipole data
0.125 hertz repetition rate

Inversion control parameters:
IPSmth=0.1, dpW=0.5, dxW=1, dzW=1
TS2DIP v4.70i
White contours show UBC DOI

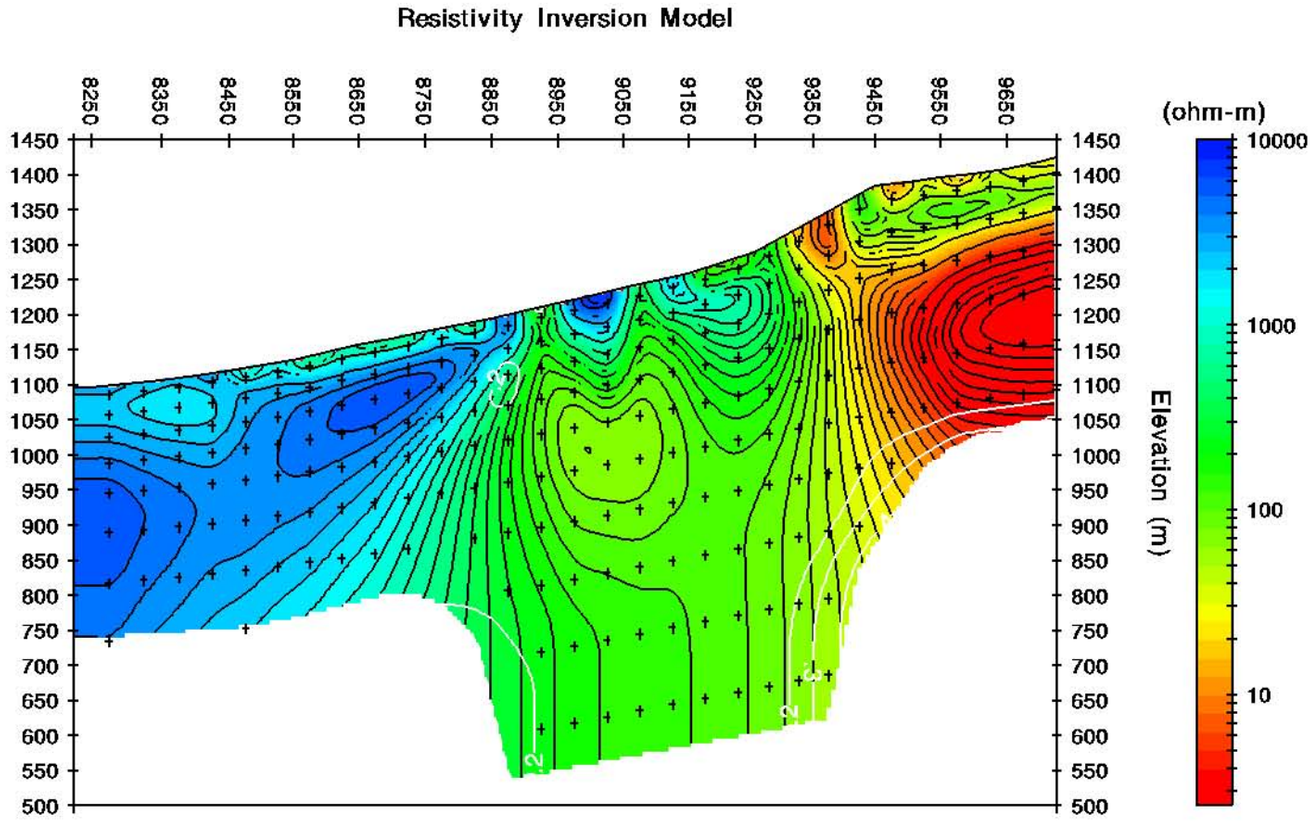
600 m

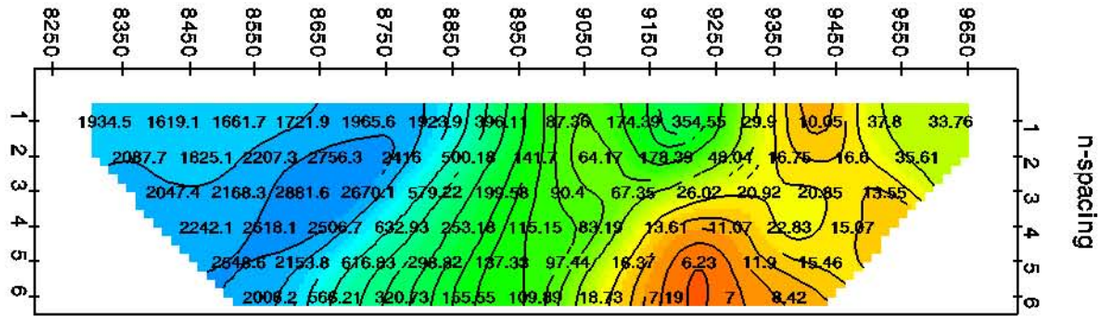
INVERTED CHARGEABILITY SECTION
Line 533300_100E

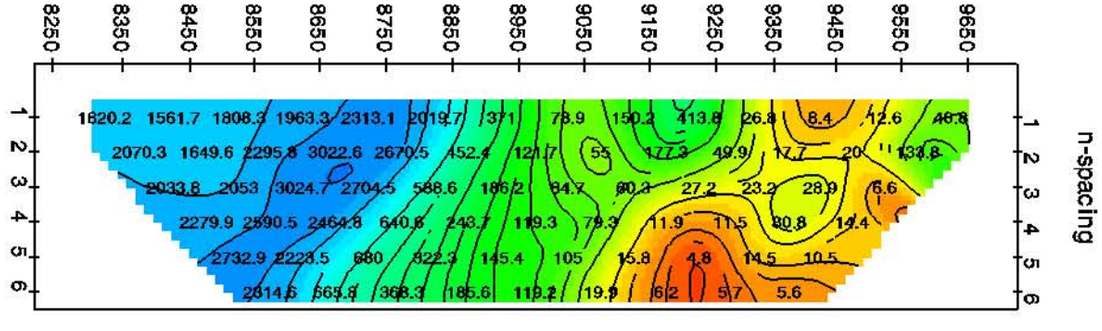
2D Smooth-Model Inversion
Pole-Dipole IP Data

AUTHOR	DRAWN	DATE	SCALE	REPORT
JLW	JLW	02/07/19	1:10000	Job
533300_100.s2d				

RAU PROPERTY
INDUCED POLARIZATION SURVEY







Survey Parameters:
100 m Pole-Dipole data
0.125 hertz repetition rate

Inversion control parameters:
ResSmth=1, dpW=0.5, dxW=1, dzW=1
TS2DIP v4.70i
White contours show UBC DOI

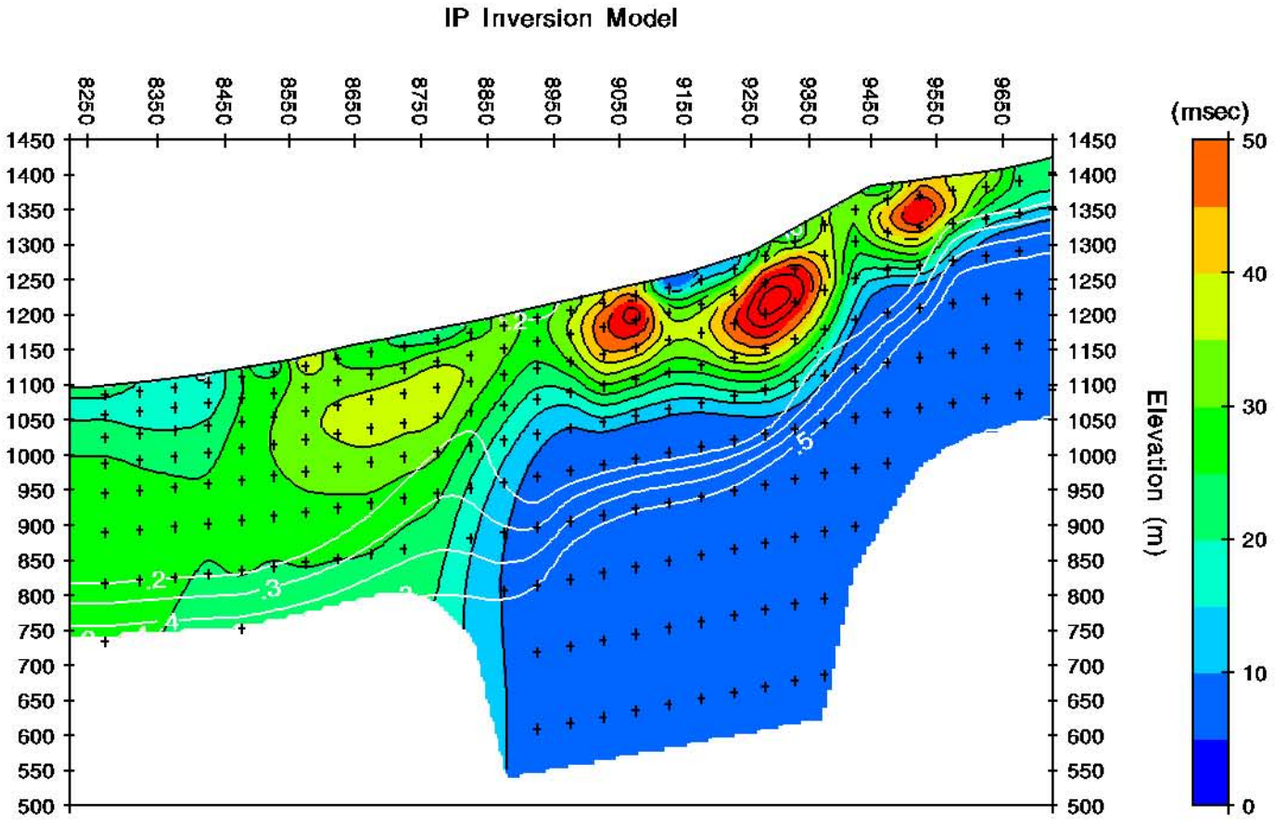
600 m

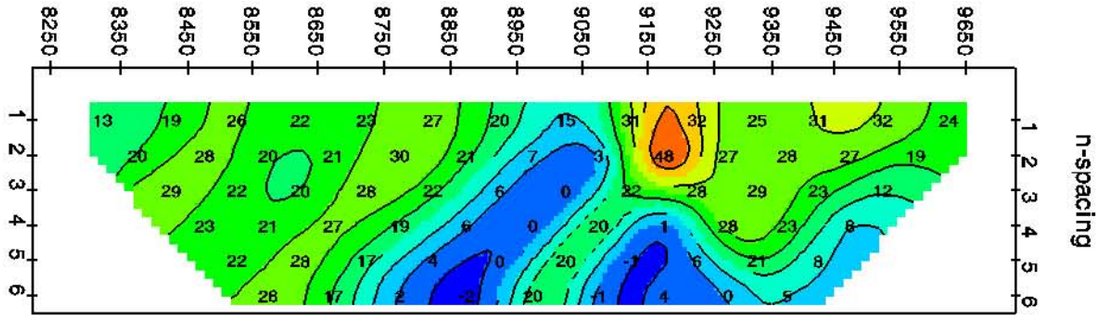
INVERTED RESISTIVITY SECTION
Line 532300_100E

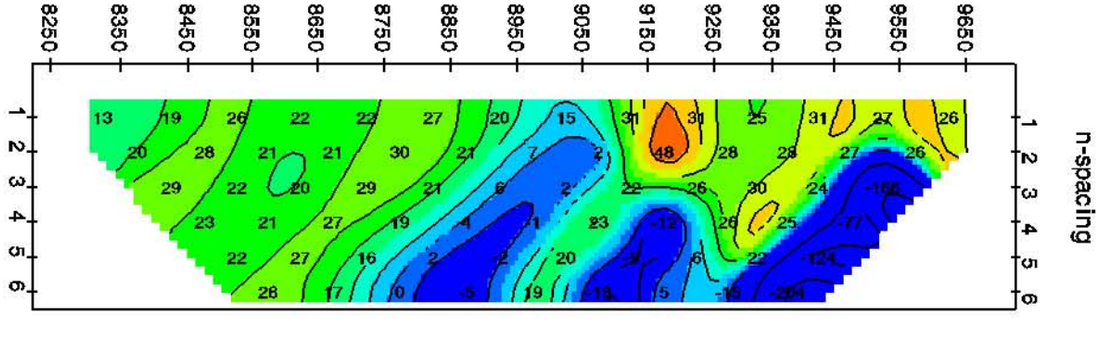
2D Smooth-Model Inversion
Pole-Dipole Resistivity Data

AUTHOR	DRAWN	DATE	SCALE	REPORT
JLW	JLW	02/07/19	1:10000	Job
L532300 100.s2d				

RAU PROPERTY
INDUCED POLARIZATION SURVEY







Survey Parameters:
100 m Pole-Dipole data
0.125 hertz repetition rate

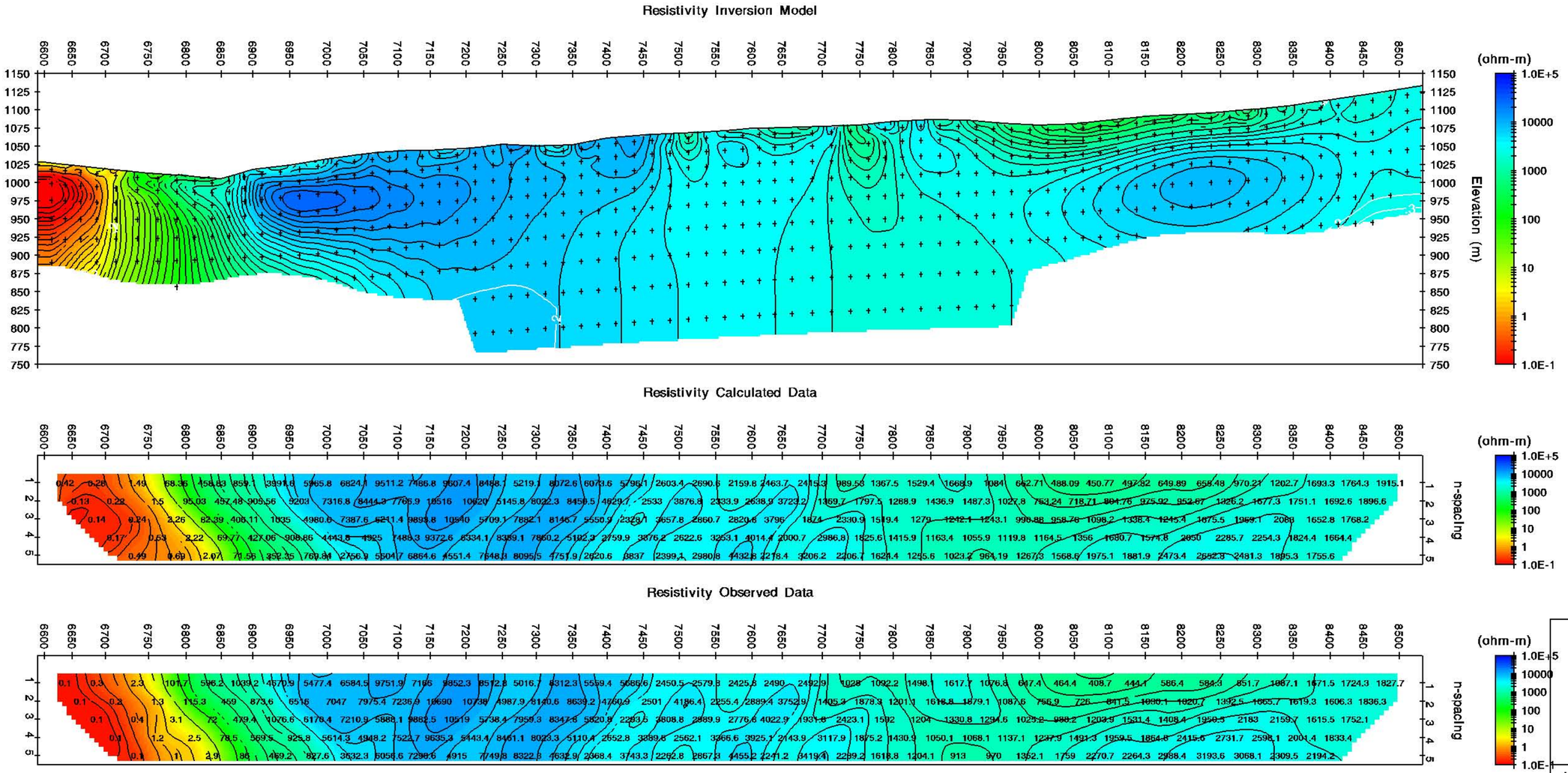
Inversion control parameters:
IPSmth=0.1, dpW=0.5, dxW=1, dzW=1
TS2DIP v4.70i
White contours show UBC DOI

600 m

INVERTED CHARGEABILITY SECTION
Line 532300_100E

2D Smooth-Model Inversion
Pole-Dipole IP Data

AUTHOR	DRAWN	DATE	SCALE	REPORT
JLW	JLW	02/07/19	1:10000	Job
L532300 100.s2d				



RAU PROPERTY
INDUCED POLARIZATION SURVEY

Survey Parameters:
50 m Pole-Dipole data
0.125 hertz repetition rate

Inversion control parameters:
ResSmth=1, dpW=0.5, dxW=1, dzW=1
TS2DIP v4.70i
White contours show UBC DOI

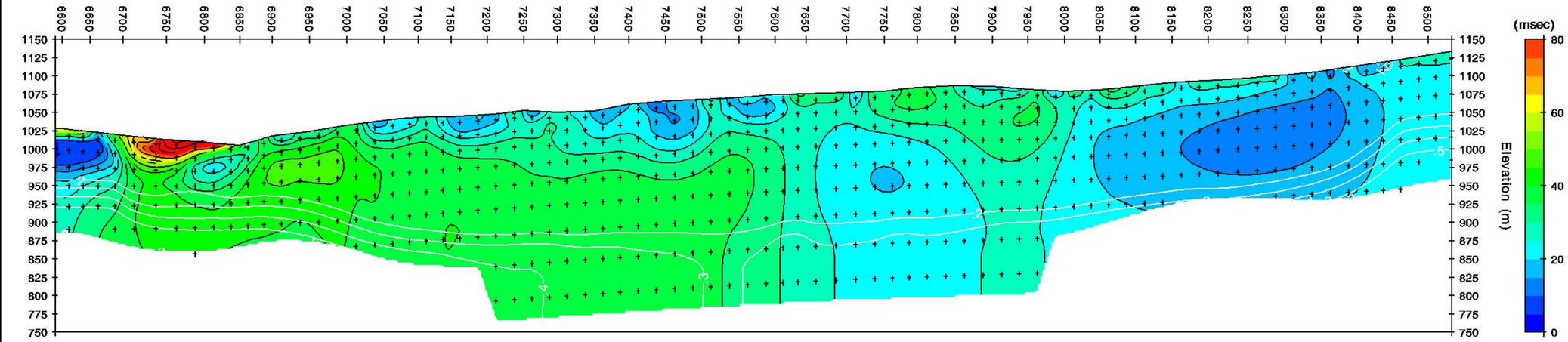
300 m

INVERTED RESISTIVITY SECTION
Line 532300E

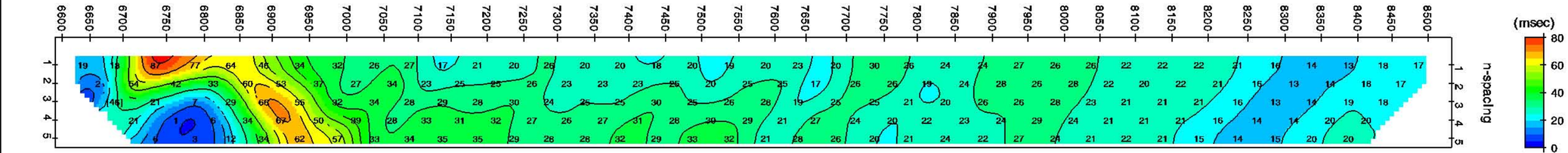
2D Smooth-Model Inversion
Pole-Dipole Resistivity Data

AUTHOR	DRAWN	DATE	SCALE	REPORT
JLW	JLW	02/07/19	1:5000	Job
L532300.s2d				

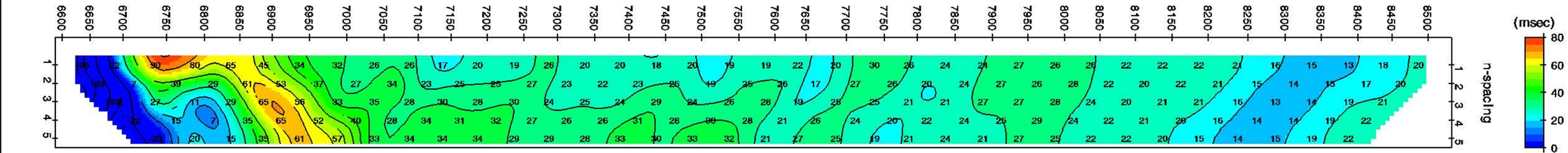
IP Inversion Model



IP Calculated Data



IP Observed Data



RAU PROPERTY

INDUCED POLARIZATION SURVEY

Survey Parameters:
50 m Pole-Dipole data
0.125 hertz repetition rate

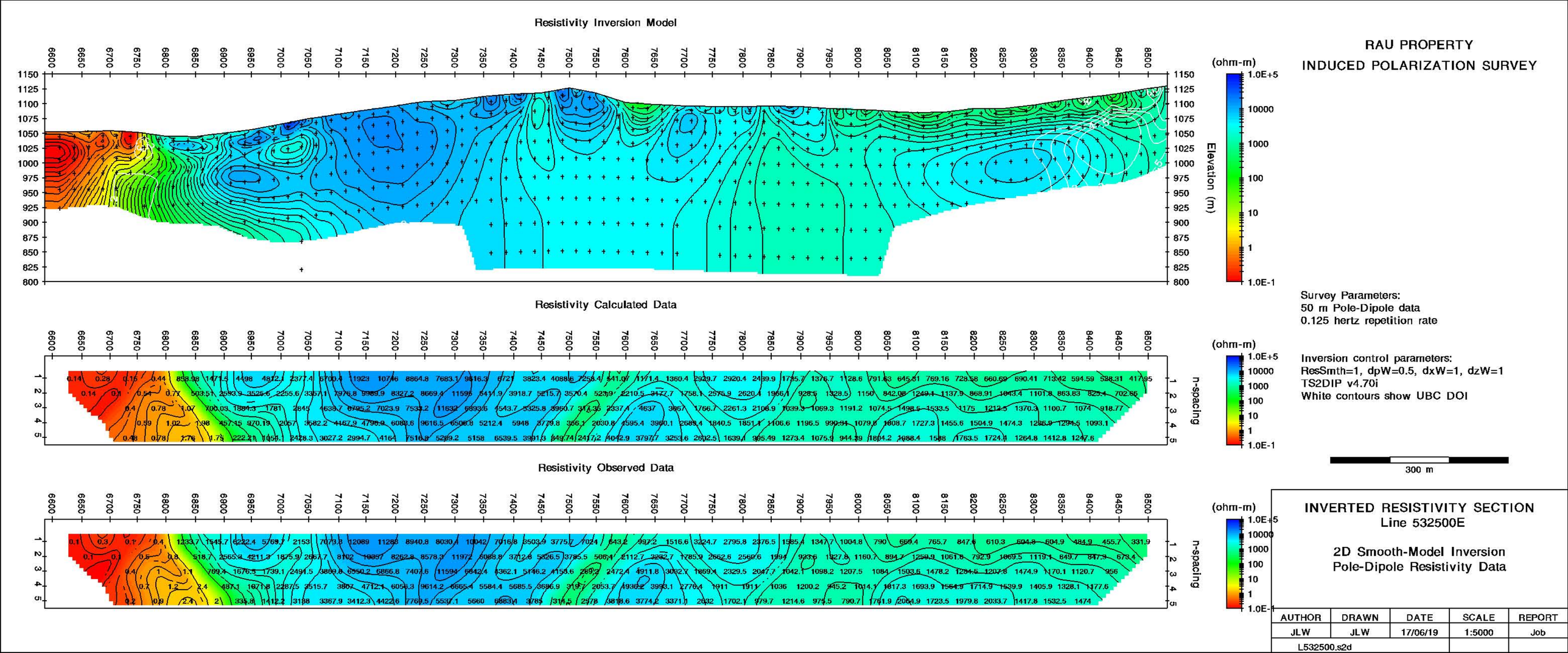
Inversion control parameters:
IPSmth=0.1, dpW=0.5, dxW=1, dzW=1
TS2DIP v4.70i
White contours show UBC DOI

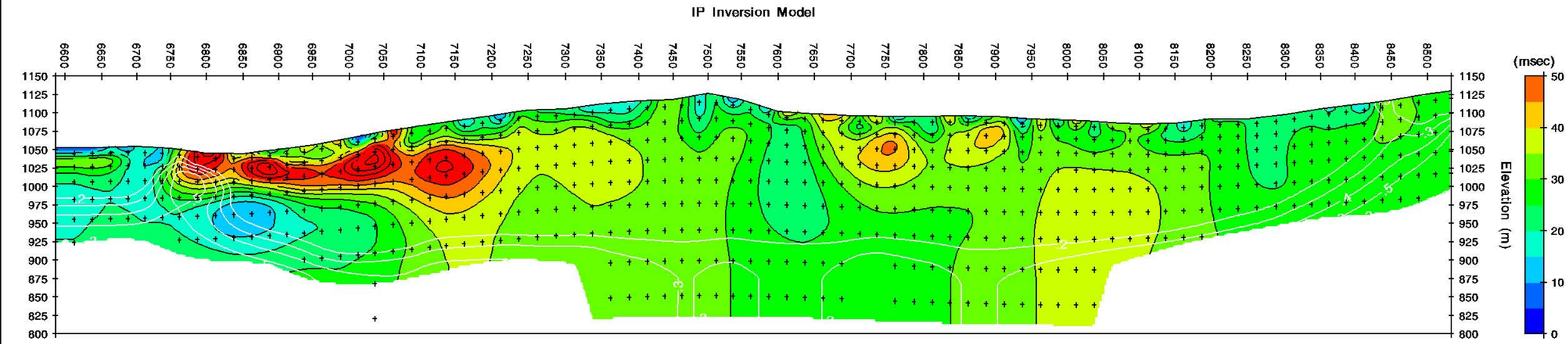
300 m

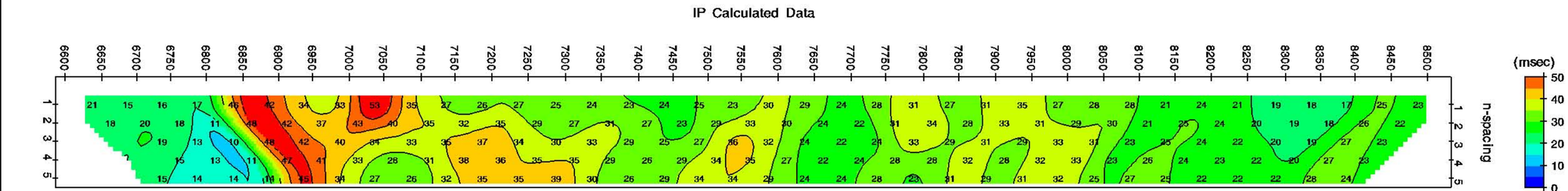
INVERTED CHARGEABILITY SECTION
Line 532300E

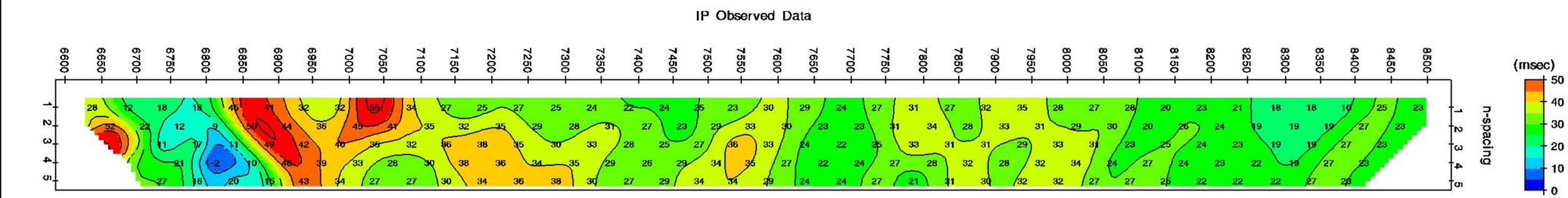
2D Smooth-Model Inversion
Pole-Dipole IP Data

AUTHOR	DRAWN	DATE	SCALE	REPORT
JLW	JLW	02/07/19	1:5000	Job
L532300.s2d				


Resistivity Inversion Model
Resistivity Calculated Data
Resistivity Observed Data
Elevation (m)
n-spacing
(ohm-m)
1.0E+5
10000
1000
100
10
1
1.0E-1
RAU PROPERTY
INDUCED POLARIZATION SURVEY
Survey Parameters:
50 m Pole-Dipole data
0.125 hertz repetition rate
Inversion control parameters:
ResSmth=1, dpW=0.5, dxW=1, dzW=1
TS2DIP v4.70i
White contours show UBC DOI
300 m
INVERTED RESISTIVITY SECTION
Line 532500E
2D Smooth-Model Inversion
Pole-Dipole Resistivity Data
AUTHOR JLW
DRAWN JLW
DATE 17/06/19
SCALE 1:5000
REPORT Job
L532500.s2d







RAU PROPERTY

INDUCED POLARIZATION SURVEY

Survey Parameters:
50 m Pole-Dipole data
0.125 hertz repetition rate

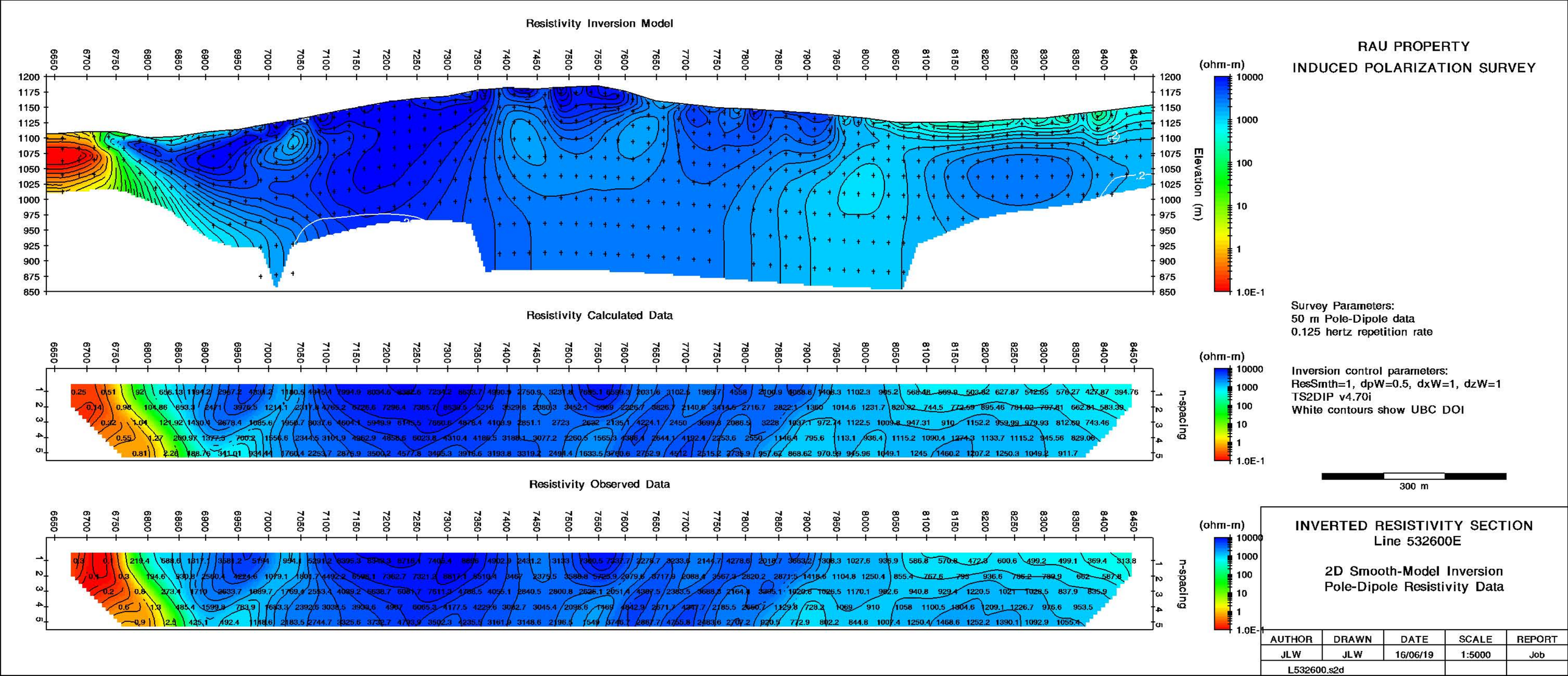
Inversion control parameters:
IPSmth=0.1, dpW=0.5, dxW=1, dzW=1
TS2DIP v4.70i
White contours show UBC DOI

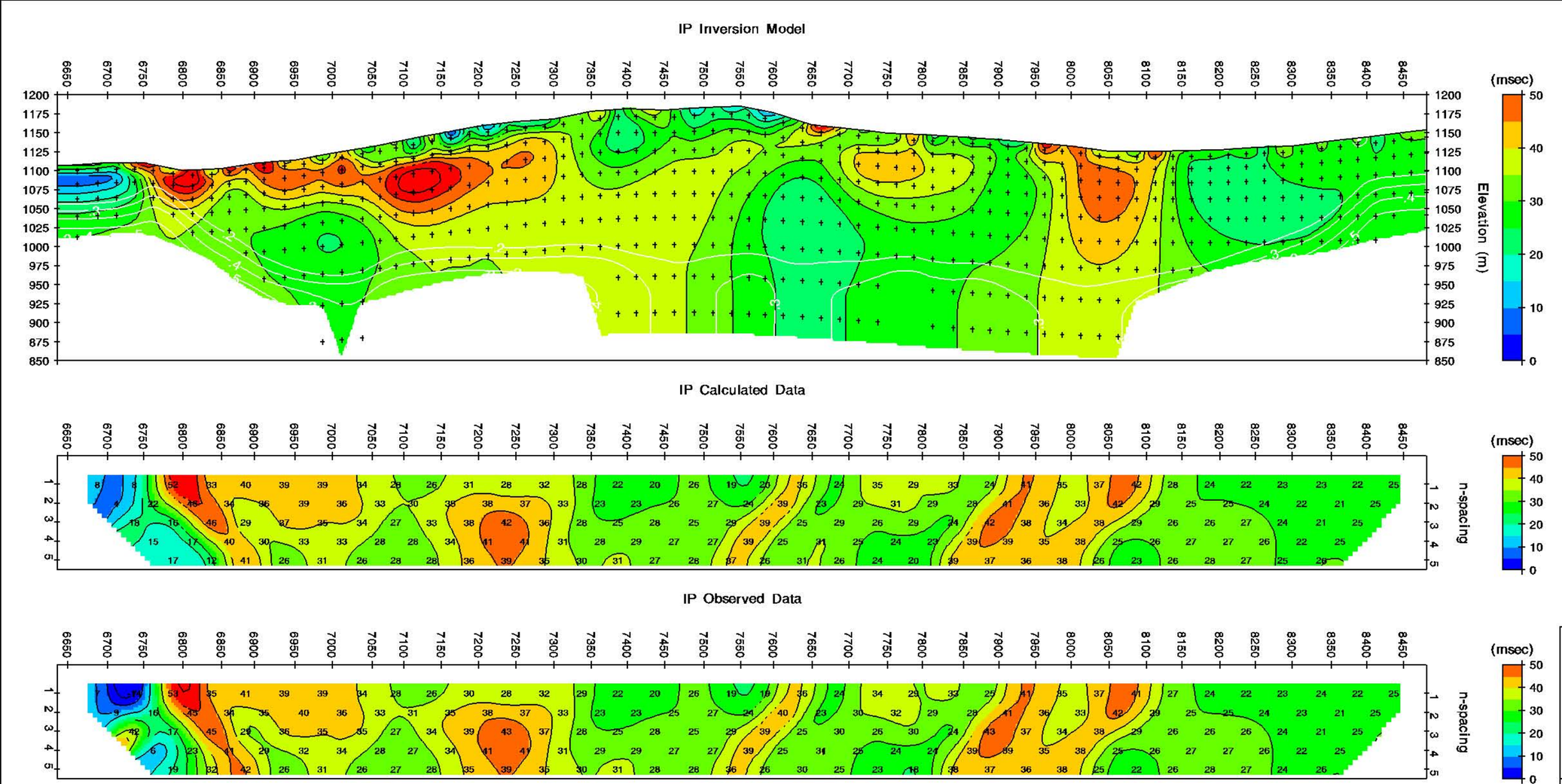
300 m

INVERTED CHARGEABILITY SECTION
Line 532500E

2D Smooth-Model Inversion
Pole-Dipole IP Data

AUTHOR	DRAWN	DATE	SCALE	REPORT
JLW	JLW	17/06/19	1:5000	Job
L532500.s2d				


Resistivity Inversion Model
Resistivity Calculated Data
Resistivity Observed Data
(ohm-m)
10000
1000
100
10
1
1.0E-1
Elevation (m)
n-spacing
RAU PROPERTY
INDUCED POLARIZATION SURVEY
Survey Parameters:
50 m Pole-Dipole data
0.125 hertz repetition rate
Inversion control parameters:
ResSmth=1, dpW=0.5, dxW=1, dzW=1
TS2DIP v4.70i
White contours show UBC DOI
300 m
INVERTED RESISTIVITY SECTION
Line 532600E
2D Smooth-Model Inversion
Pole-Dipole Resistivity Data
AUTHOR JLW
DRAWN JLW
DATE 16/06/19
SCALE 1:5000
REPORT Job
L532600.s2d



RAU PROPERTY
INDUCED POLARIZATION SURVEY

Survey Parameters:
50 m Pole-Dipole data
0.125 hertz repetition rate

Inversion control parameters:
IPSmth=0.1, dpW=0.5, dxW=1, dzW=1
TS2DIP v4.70i
White contours show UBC DOI

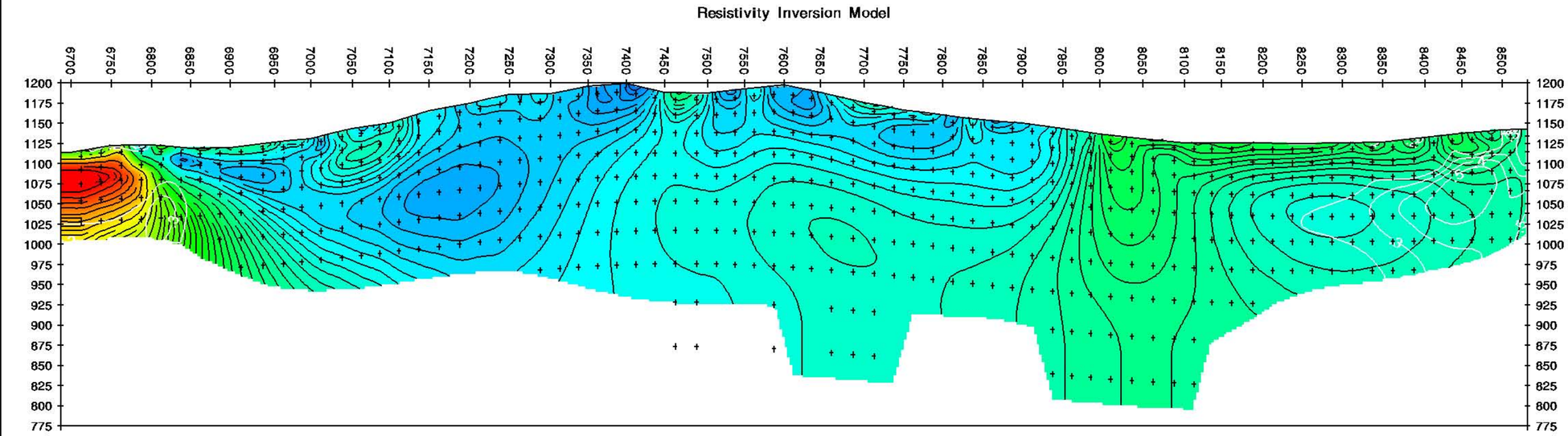
300 m

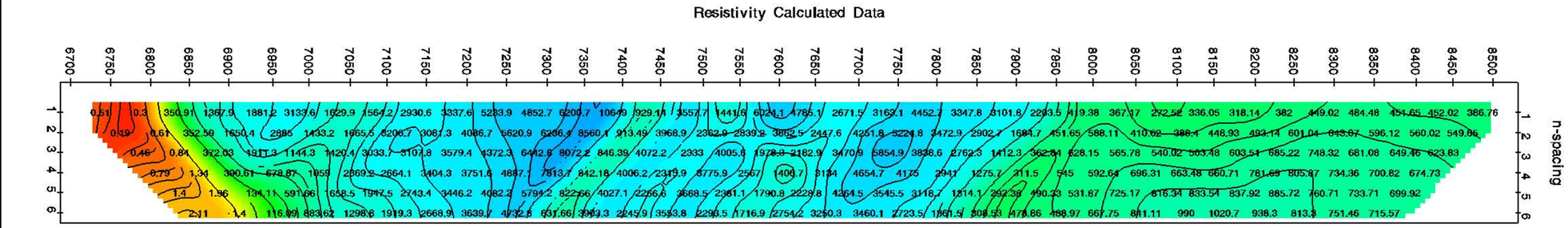
INVERTED CHARGEABILITY SECTION
Line 532600E

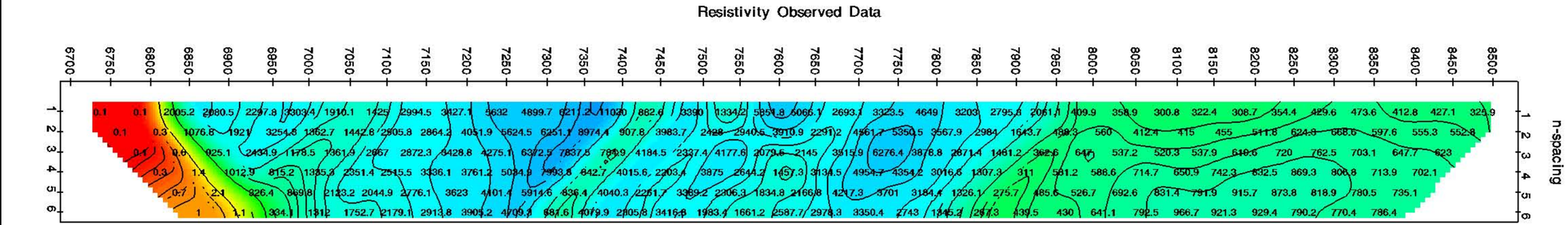
2D Smooth-Model Inversion
Pole-Dipole IP Data

AUTHOR	DRAWN	DATE	SCALE	REPORT
JLW	JLW	16/06/19	1:5000	Job
L532600.s2d				

RAU PROPERTY
INDUCED POLARIZATION SURVEY







Survey Parameters:
50 m Pole-Dipole data
0.125 hertz repetition rate

Inversion control parameters:
ResSmth=1, dpW=0.5, dxW=1, dzW=1
TS2DIP v4.70i
White contours show UBC DOI

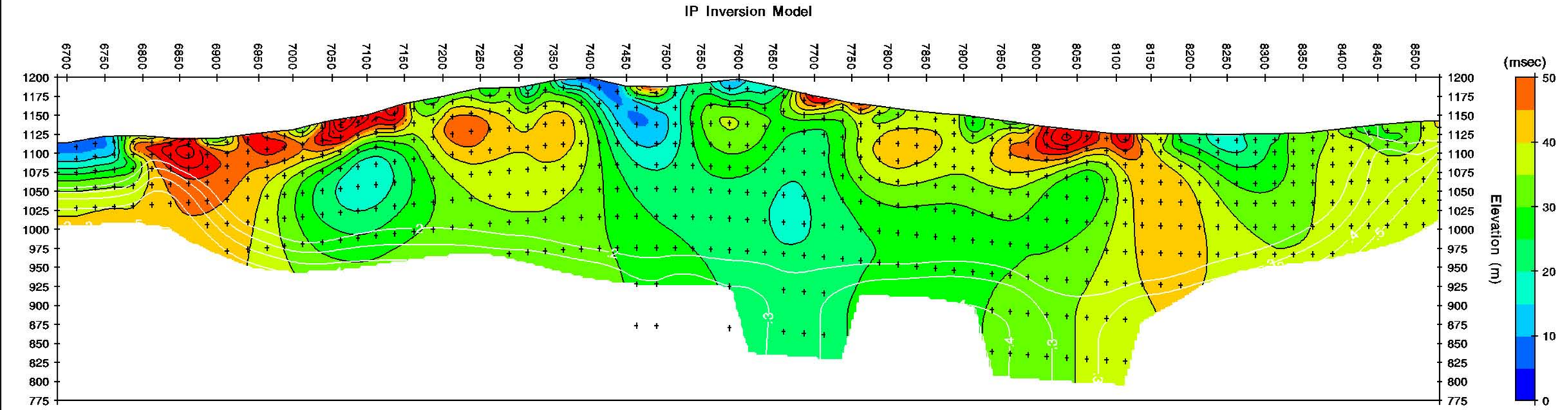
300 m

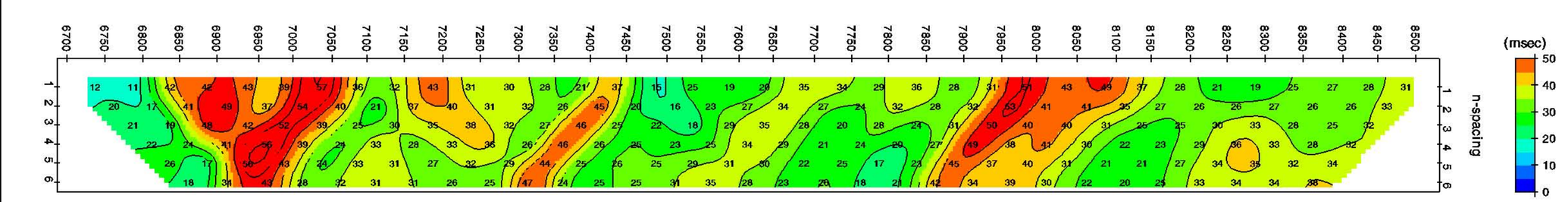
INVERTED RESISTIVITY SECTION
Line 532700E

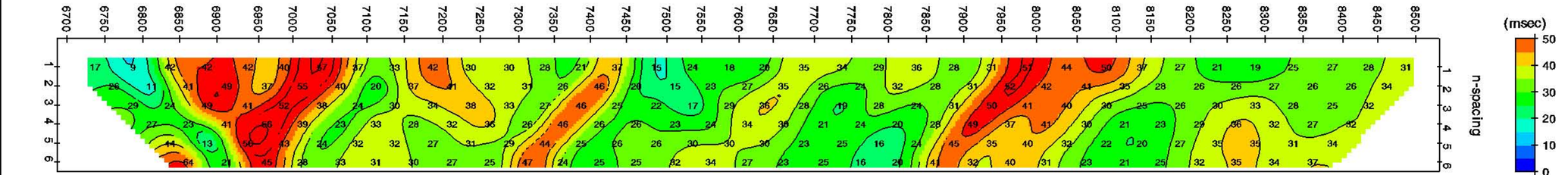
2D Smooth-Model Inversion
Pole-Dipole Resistivity Data

AUTHOR	DRAWN	DATE	SCALE	REPORT
JLW	JLW	16/06/19	1:5000	Job
L532700.s2d				

RAU PROPERTY
INDUCED POLARIZATION SURVEY







Survey Parameters:
50 m Pole-Dipole data
0.125 hertz repetition rate

Inversion control parameters:
IPSmth=0.1, dpW=0.5, dxW=1, dzW=1
TS2DIP v4.70i
White contours show UBC DOI

300 m

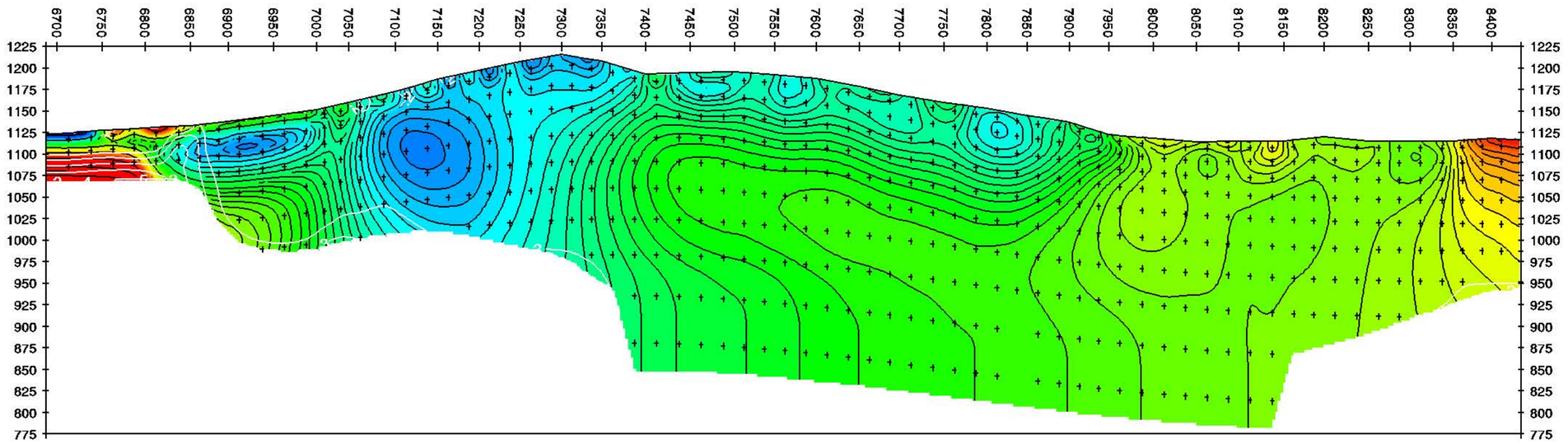
INVERTED CHARGEABILITY SECTION
Line 532700E

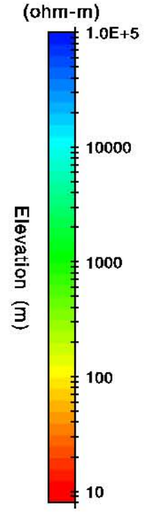
2D Smooth-Model Inversion
Pole-Dipole IP Data

AUTHOR	DRAWN	DATE	SCALE	REPORT
JLW	JLW	16/06/19	1:5000	Job
L532700.s2d				

RAU PROPERTY
INDUCED POLARIZATION SURVEY

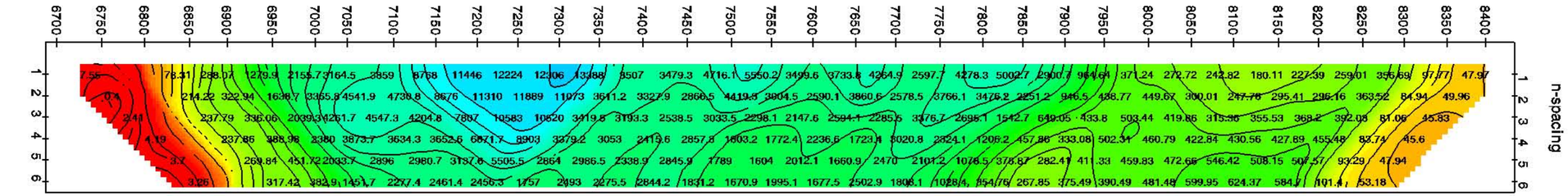
Resistivity Inversion Model

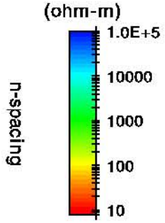




Survey Parameters:
50 m Pole-Dipole data
0.125 hertz repetition rate

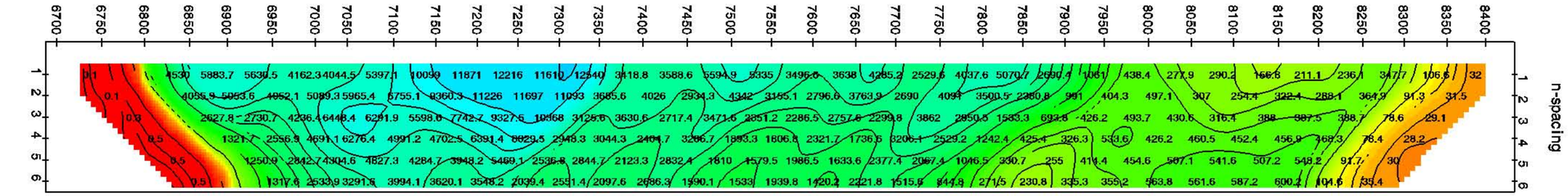
Resistivity Calculated Data

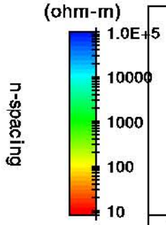




Inversion control parameters:
ResSmth=1, dpW=0.5, dxW=1, dzW=1
TS2DIP v4.70i
White contours show UBC DOI

Resistivity Observed Data



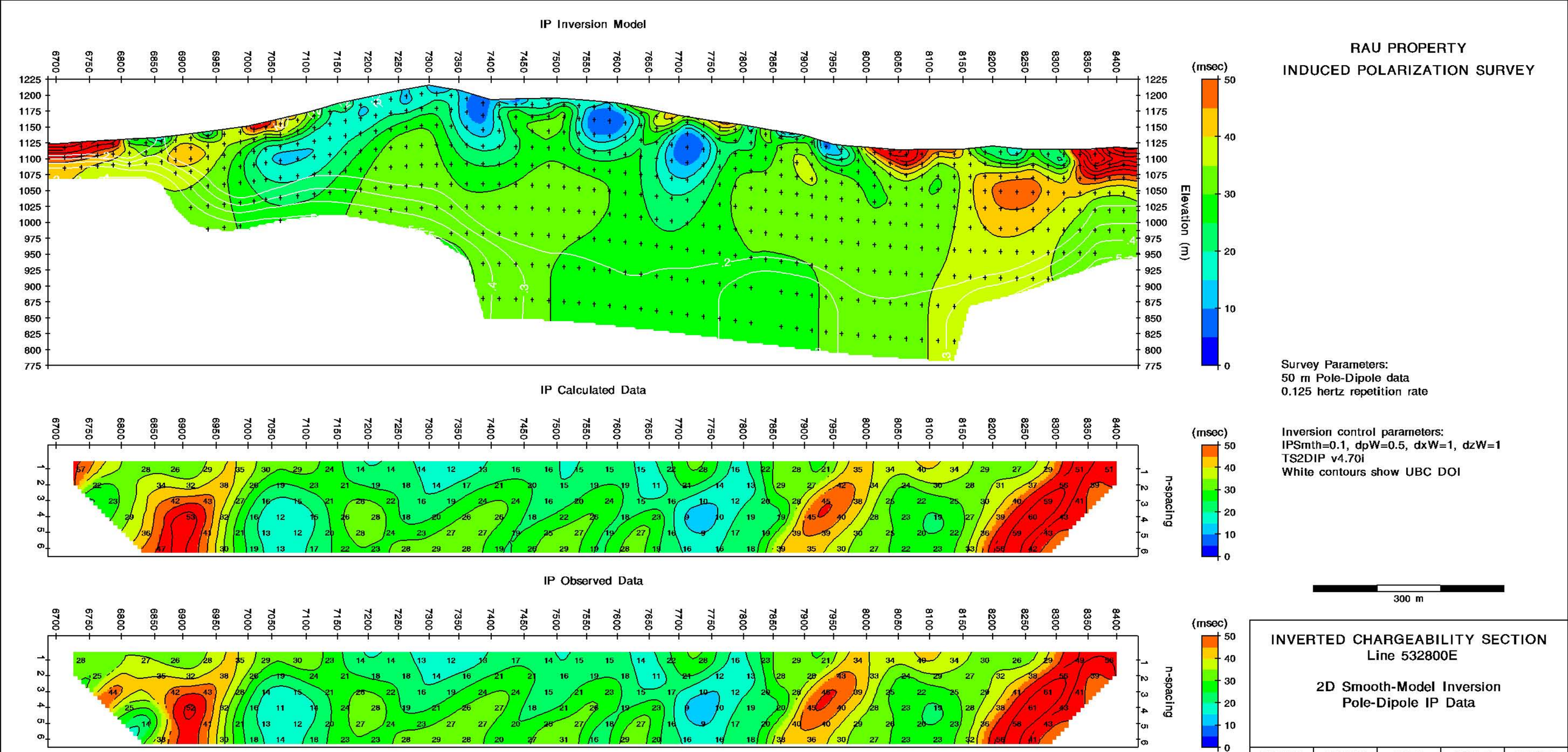


300 m

INVERTED RESISTIVITY SECTION
Line 532800E

2D Smooth-Model Inversion
Pole-Dipole Resistivity Data

AUTHOR	DRAWN	DATE	SCALE	REPORT
JLW	JLW	13/06/19	1:5000	Job
L532800E.s2d				



RAU PROPERTY

INDUCED POLARIZATION SURVEY

Survey Parameters:
50 m Pole-Dipole data
0.125 hertz repetition rate

Inversion control parameters:
IPSmth=0.1, dpW=0.5, dxW=1, dzW=1
TS2DIP v4.70i
White contours show UBC DOI

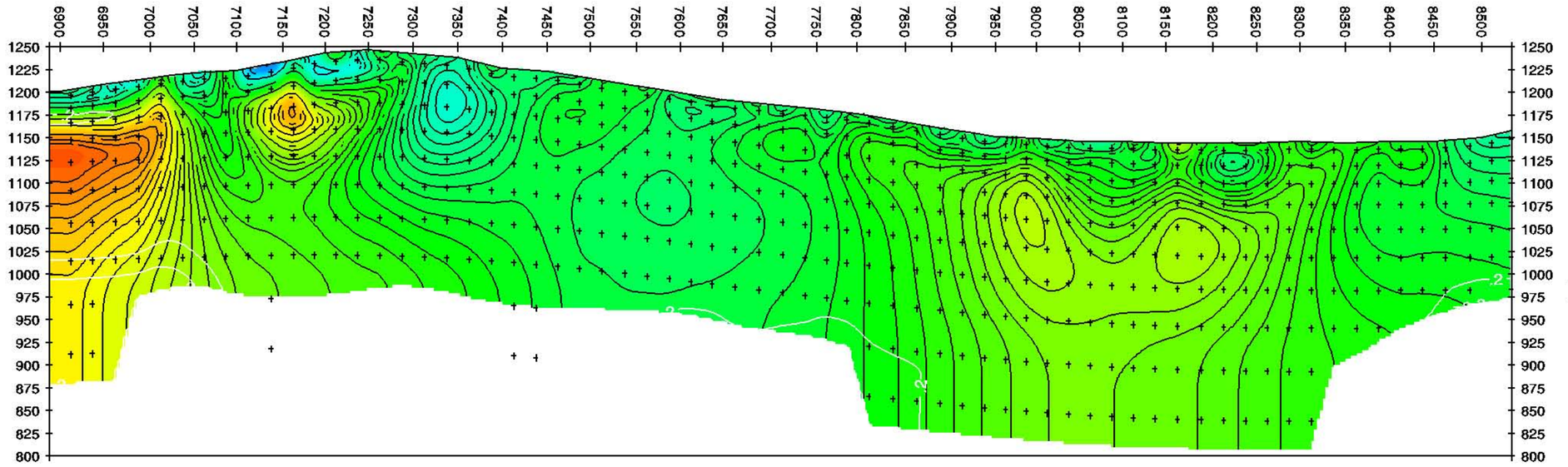
INVERTED CHARGEABILITY SECTION
Line 532800E

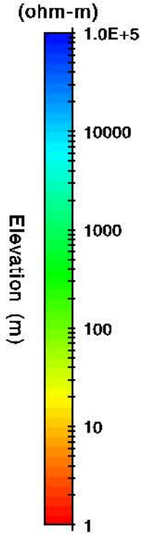
2D Smooth-Model Inversion
Pole-Dipole IP Data

AUTHOR	DRAWN	DATE	SCALE	REPORT
JLW	JLW	13/06/19	1:5000	Job
L532800E.s2d				

RAU PROPERTY
INDUCED POLARIZATION SURVEY

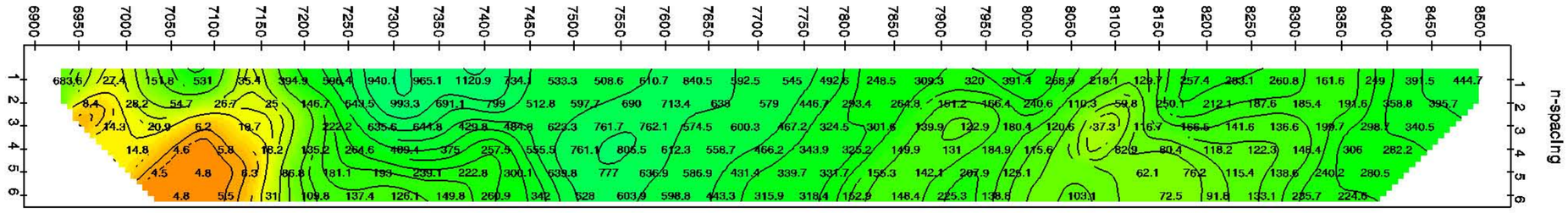
Resistivity Inversion Model

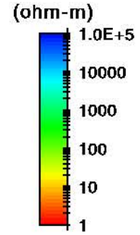




Survey Parameters:
50 m Pole-Dipole data
0.125 hertz repetition rate

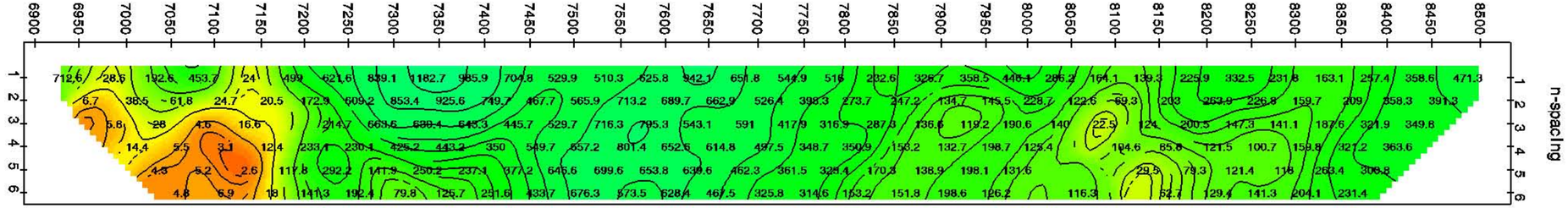
Resistivity Calculated Data

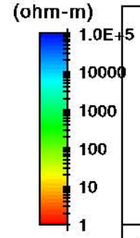




Inversion control parameters:
ResSmth=1, dpW=0.5, dxW=1, dzW=1
TS2DIP v4.70i
White contours show UBC DOI

Resistivity Observed Data



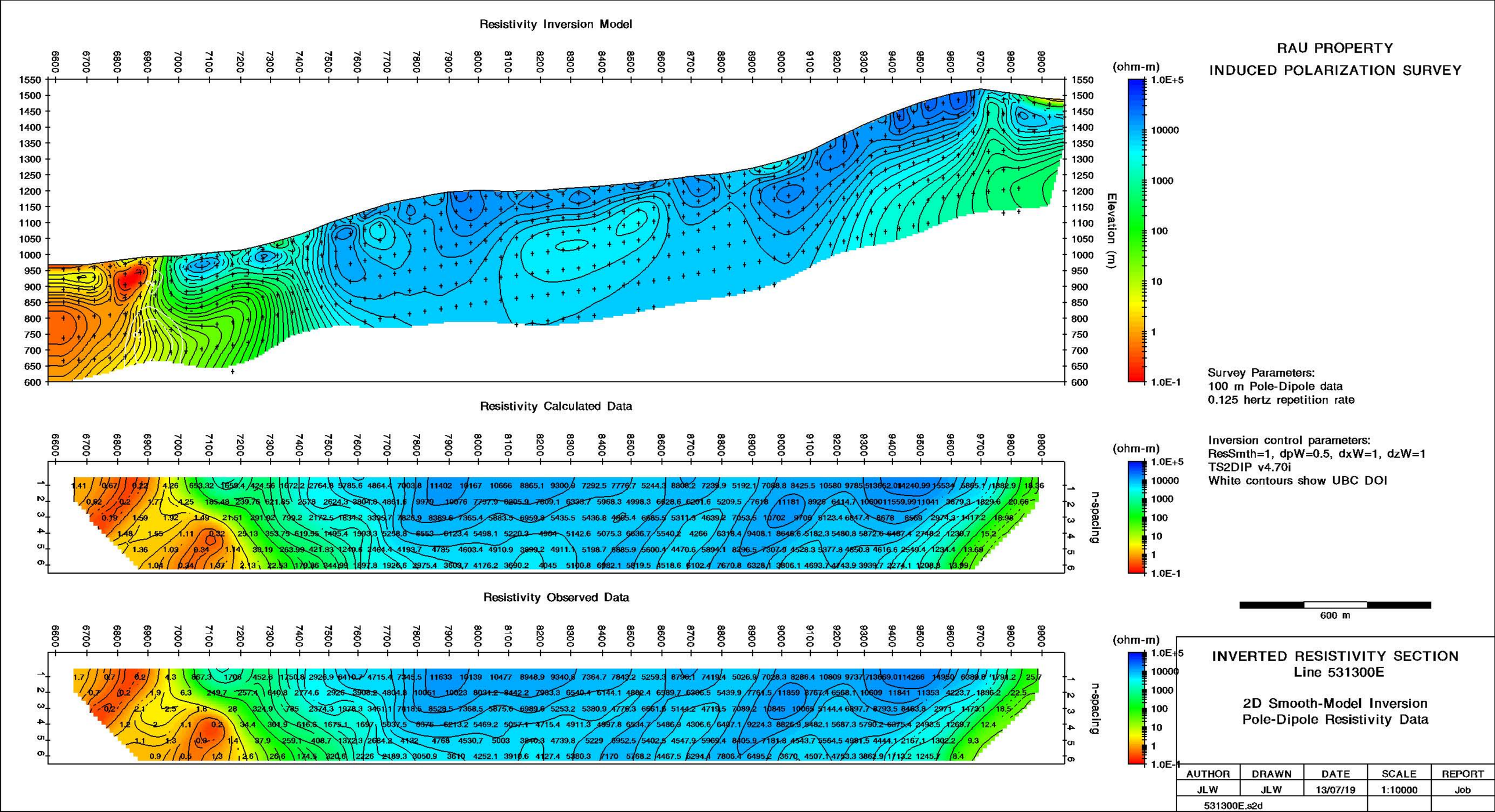


300 m

INVERTED RESISTIVITY SECTION
Line 533000E

2D Smooth-Model Inversion
Pole-Dipole Resistivity Data

AUTHOR	DRAWN	DATE	SCALE	REPORT
JLW	JLW	16/06/19	1:5000	Job
L533000.s2d				


Resistivity Inversion Model
Resistivity Calculated Data
Resistivity Observed Data
Elevation (m)
n-spacing
(ohm-m)
1.0E+5
10000
1000
100
10
1
1.0E-1
600 m
RAU PROPERTY
INDUCED POLARIZATION SURVEY
Survey Parameters:
100 m Pole-Dipole data
0.125 hertz repetition rate
Inversion control parameters:
ResSmth=1, dpW=0.5, dxW=1, dzW=1
TS2DIP v4.70i
White contours show UBC DOI
INVERTED RESISTIVITY SECTION
Line 531300E
2D Smooth-Model Inversion
Pole-Dipole Resistivity Data
AUTHOR JLW
DRAWN JLW
DATE 13/07/19
SCALE 1:10000
REPORT Job
531300E.s2d

APPENDIX IX

RAB DRILLING – SAMPLING METHODS, ANALYSIS AND DATA VERIFICATION

2019 RAB Drill Sampling Methods, Sample Analysis, and Data Verification

Geological logging was done on all RAB drill material (chips) in 2019. Data that was collected included:

1.) Footage
2.) Rock Type
3.) Weathering
4.) HCL reactivity
5.) Colour
6.) Alteration
7.) Colour
8.) Minerals
9.) Written Description

In the event that there were two or more visually distinct rock types, a percentage field was available to discriminate between the different types.

Data was entered into an application on a digital tablet that synced with the existing drill hole database when the tablet returned to camp. A representative collective of chips and pulverised material was also collected and stored in plastic chip boxes, and labelled with their respective hole number, footage and sample number.

Photographs were taken of each 5 foot run, and if there were two or more visually distinct rock types they were separated for the photo.

Samples for analysis was collected from a 5 gallon pail that collected material from each 5 foot run. The material was homogenized by hand and approximately 5 lbs of material was scooped into a plastic sample bag. This bag was then doubled bagged and had an ALS assay tag inserted between the bags.

Sample Handling and Security

Samples were flown by helicopter from the drill sites back to Rau camp. The samples were later flown by helicopter to the Rau Airstrip, flown by fixed wing to the Whitehorse airport and transported to ALS Minerals by truck. All samples were controlled by employees of Archer Cathro until they were delivered directly to ALS Minerals where they were logged. ALS Minerals was responsible for shipping the logged samples to its North Vancouver laboratory, where they were prepared and analyzed.

Sample Analysis

All samples were sent to ALS Minerals' laboratory in Whitehorse to be logged and then on to its laboratory in North Vancouver for preparation and 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.

Samples were fine crushed before a 250 g split was pulverized to better than 85% passing 75 microns. Splits of the pulverized material were analyzed by ME-MS61, which uses a four acid digestion and analysis for 48 elements by inductively coupled plasma (ICP) together with mass spectrometry (MS) and atomic

emission spectroscopy (AES). Samples were assayed for gold by Au-AA25, which takes a 30 g charge and prepares it by fire assay before being finished with atomic absorption spectroscopy (AAS).

DATA VERIFICATION

Collar Locations

All RAB hole collars were located and recorded using a handheld GPS.

Assays

Assay certificates 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.

A QA/QC program was not implemented for RAB drilling as the results are considered preliminary and not suitable for resource calculations or other detailed assessments.

APPENDIX X

RAB DRILLING – COLLAR INFORMATION, GEOLOGICAL AND SAMPLE LOGS

Tiger - Rau

Archer,Cathro & Associates (1981) Limited

Grid East	Grid North	Easting	Northing	Elevation	Depth (m)
		532782	7117335	1199	64.01

ZONE: Bobcat

SECTION:

HOLE: RRB-19-001

CLAIM:

Contractor: Superior

Drill: 1

Core Size: BTW

Casing Depth:

Drilling Dates: Jun 14 - Jun 15, 2019

Geology Logged By: R. Tablet

SURVEY			
Depth (m)	Azimuth	Dip	Method

TARGET:

SUMMARY

SAMPLES	
Numbers:	V763563 to V763583
Total:	21
Batch:	
Certificates:	WH19152962

COMMENTS

hole ended after low recovery encountered in several samples

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
							☐				☐	☐	☐

Sample Results

Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
		0.00	1.52								☐	☐	☐	☐	
	V763563	1.52	4.57	0.11	1	629	28	154.0	77	5.30	☐	☐	☐	☐	.
	V763564	4.57	7.62	0.02	1	243	14	57.0	24	7.40	☐	☐	☐	☐	
	V763565	7.62	10.67	0.01	0	39	7	25.0	2	14.90	☐	☐	☐	☐	
	V763566	10.67	13.72	0.01	0	16	4	43.0	1	16.90	☐	☐	☐	☐	
	V763567	13.72	16.76	0.01	0	25	6	129.0	2	7.90	☐	☐	☐	☐	
	V763568	16.76	19.81	0.01	0	7	3	35.0	1	3.80	☐	☐	☐	☐	
	V763569	19.81	22.86	0.01	0	7	4	17.0	1	4.20	☐	☐	☐	☐	
	V763570	22.86	25.91	0.01	0	13	4	73.0	2	3.60	☐	☐	☐	☐	
	V763571	25.91	28.96	0.02	0	20	9	15.0	4	5.00	☐	☐	☐	☐	
	V763572	28.96	32.00	0.01	0	6	2	41.0	1	2.60	☐	☐	☐	☐	
	V763573	32.00	35.05	0.01	0	19	2	85.0	4	5.00	☐	☐	☐	☐	
	V763574	35.05	38.10	0.01	0	5	2	29.0	1	51.60	☐	☐	☐	☐	
	V763575	38.10	41.15	0.01	0	27	4	309.0	3	8.50	☐	☐	☐	☐	



Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
	V763576	41.15	44.20	0.01	0	6	2	68.0	4	6.00	☐	☐	☐	☐	
	V763577	44.20	47.24	0.01	0	6	1	38.0	1	3.50	☐	☐	☐	☐	
	V763578	47.24	50.29	0.01	0	5	1	16.0	2	3.30	☐	☐	☐	☐	
	V763579	50.29	53.34	0.01	0	8	1	50.0	1	3.30	☐	☐	☐	☐	
	V763580	53.34	56.39	0.01	0	29	12	676.0	12	17.00	☐	☐	☐	☐	
	V763581	56.39	59.44	0.01	0	4	1	106.0	1	3.60	☐	☐	☐	☐	
	V763582	59.44	62.48	0.01	0	14	15	6120.0	2	20.90	☐	☐	☐	☐	
	V763583	62.48	64.01	0.01	0	7	4	1360.0	1	5.50	☐	☐	☐	☐	



Tiger - Rau

Archer,Cathro & Associates (1981) Limited

Grid East	Grid North	Easting	Northing	Elevation	Depth (m)
		532864	7117330	1225	73.15

ZONE: Bobcat

SECTION:

HOLE: RRB-19-002

CLAIM:

Contractor: Superior

Drill: 1

Core Size: BTW

Casing Depth:

Drilling Dates: Jun 17 - Jun 17, 2019

Geology Logged By: R. Tablet

SURVEY			
Depth (m)	Azimuth	Dip	Method

TARGET:

SUMMARY

SAMPLES	
Numbers:	V763584 to V763596, V763599, W842051 to W842060
Total:	24
Batch:	
Certificates:	WH19152896

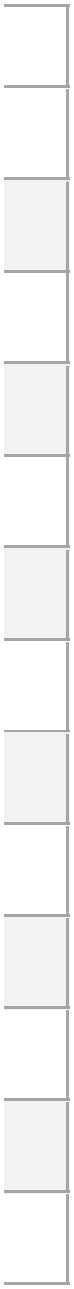
COMMENTS

Hole ended at maximum number of rods

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
							☐				☐	☐	☐

Sample Results

Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
	V763584	0.00	3.05	0.01	0	10	51	297.0	5	2.30	☐	☐	☐	☐	
	V763585	3.05	6.10	0.01	0	6	81	224.0	4	1.70	☐	☐	☐	☐	
	V763586	6.10	9.14	0.01	0	14	24	171.0	3	2.20	☐	☐	☐	☐	
	V763587	9.14	12.19	0.01	0	14	30	200.0	8	3.00	☐	☐	☐	☐	
	V763588	12.19	15.24	0.01	0	7	17	140.0	3	1.50	☐	☐	☐	☐	
	V763589	15.24	18.29	0.18	1	11	90	184.0	14	1.90	☐	☐	☐	☐	
	V763590	18.29	21.34	0.08	0	7	22	58.0	5	1.30	☐	☐	☐	☐	
	V763591	21.34	24.38	0.13	0	9	36	129.0	7	2.10	☐	☐	☐	☐	
	V763592	24.38	27.43	0.01	0	6	9	72.0	3	2.00	☐	☐	☐	☐	
	V763593	27.43	30.48	0.01	0	5	7	23.0	2	1.90	☐	☐	☐	☐	
	V763594	30.48	33.53	0.01	0	5	18	57.0	3	4.80	☐	☐	☐	☐	
	V763595	33.53	36.58	0.01	0	5	17	59.0	5	8.60	☐	☐	☐	☐	
	V763596	36.58	39.62	0.01	0	8	32	172.0	3	3.40	☐	☐	☐	☐	



Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
	V763599	39.62	42.67	0.01	0	4	49	290.0	5	0.80	☐	☐	☐	☐	
	W842051	42.67	45.72	0.01	0	5	78	98.0	5	1.00	☐	☐	☐	☐	
	W842052	45.72	48.77	0.01	0	3	42	111.0	6	1.10	☐	☐	☐	☐	
	W842053	48.77	51.82	0.01	0	4	10	119.0	4	0.80	☐	☐	☐	☐	
	W842054	51.82	54.86	0.01	0	6	49	273.0	10	1.00	☐	☐	☐	☐	
	W842055	54.86	57.91	0.01	0	4	15	115.0	4	1.10	☐	☐	☐	☐	
	W842056	57.91	60.96	0.01	0	7	7	106.0	2	1.30	☐	☐	☐	☐	
	W842057	60.96	64.01	0.31	0	19	21	105.0	2	2.80	☐	☐	☐	☐	
	W842058	64.01	67.06	0.01	0	12	10	52.0	3	1.30	☐	☐	☐	☐	
	W842059	67.06	70.10	0.01	0	4	3	22.0	4	0.90	☐	☐	☐	☐	
	W842060	70.10	73.15	0.01	0	21	8	68.0	1	52.50	☐	☐	☐	☐	



Tiger - Rau

Archer,Cathro & Associates (1981) Limited

Grid East	Grid North	Easting	Northing	Elevation	Depth (m)
		532931	7117324	1224	71.63

ZONE: Bobcat

SECTION:

HOLE: RRB-19-003

CLAIM:

Contractor: Superior

Drill: 1

Core Size: BTW

Casing Depth:

Drilling Dates: Jun 18 - Jun 19, 2019

Geology Logged By: R. Tablet

SURVEY			
Depth (m)	Azimuth	Dip	Method

TARGET:

SUMMARY

SAMPLES	
Numbers:	W842061 to W842084
Total:	24
Batch:	
Certificates:	WH19155145

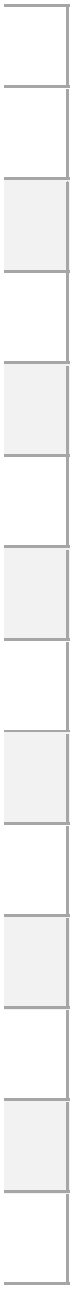
COMMENTS

Hole ended at maximum number of rods

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
							☐				☐	☐	☐

Sample Results

Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
	W842061	0.00	3.05	0.01	0	37	18	371.0	5	3.50	☐	☐	☐	☐	
	W842062	3.05	6.10	0.01	0	8	5	27.0	2	8.50	☐	☐	☐	☐	
	W842063	6.10	9.14	0.01	0	75	4	123.0	5	13.30	☐	☐	☐	☐	
	W842064	9.14	12.19	0.01	0	41	4	95.0	2	11.10	☐	☐	☐	☐	
	W842065	12.19	15.24	0.01	0	12	3	69.0	3	109.50	☐	☐	☐	☐	
	W842066	15.24	18.29	0.01	0	21	5	223.0	8	136.00	☐	☐	☐	☐	
	W842067	18.29	21.34	0.01	0	29	8	443.0	16	13.60	☐	☐	☐	☐	
	W842068	21.34	24.38	0.01	1	141	8	297.0	147	1.30	☐	☐	☐	☐	
	W842069	24.38	27.43	0.01	0	4	23	121.0	9	0.80	☐	☐	☐	☐	
	W842070	27.43	30.48	0.01	0	4	2	61.0	2	1.40	☐	☐	☐	☐	
	W842071	30.48	33.53	0.01	1	15	88	297.0	29	3.10	☐	☐	☐	☐	
	W842072	33.53	36.58	0.01	0	15	10	151.0	14	4.20	☐	☐	☐	☐	
	W842073	36.58	39.62	0.01	1	18	239	491.0	4	7.30	☐	☐	☐	☐	



Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
	W842074	39.62	42.67	0.01	0	17	17	313.0	9	1.50	☐	☐	☐	☐	
	W842075	42.67	45.72	0.01	0	11	43	352.0	8	1.30	☐	☐	☐	☐	
	W842076	45.72	48.77	0.02	1	19	140	1280.0	40	3.90	☐	☐	☐	☐	
	W842077	48.77	51.82	0.62	1	33	35	47.0	17	1.90	☐	☐	☐	☐	
	W842078	51.82	54.86	0.01	0	16	56	311.0	66	1.90	☐	☐	☐	☐	
	W842079	54.86	57.91	0.01	1	13	204	785.0	60	1.50	☐	☐	☐	☐	
	W842080	57.91	60.96	0.01	0	9	26	216.0	4	1.50	☐	☐	☐	☐	
	W842081	60.96	64.01	0.01	0	7	79	179.0	9	0.90	☐	☐	☐	☐	
	W842082	64.01	67.06	0.01	1	34	87	444.0	19	1.70	☐	☐	☐	☐	
	W842083	67.06	70.10	0.01	1	17	122	442.0	28	1.90	☐	☐	☐	☐	
	W842084	70.10	71.63	0.06	1	14	126	468.0	22	3.40	☐	☐	☐	☐	



Tiger - Rau

Archer,Cathro & Associates (1981) Limited

Grid East	Grid North	Easting	Northing	Elevation	Depth (m)
		532932	7117324	1224	10.67

ZONE: Bobcat

SECTION:

HOLE: RRB-19-004

CLAIM:

Contractor: Superior

Drill: 1

Core Size: BTW

Casing Depth:

Drilling Dates: Jun 20 - Jun 21, 2019

Geology Logged By: R. Tablet

SURVEY			
Depth (m)	Azimuth	Dip	Method

TARGET:

SUMMARY

SAMPLES	
Numbers:	W842085 to W842088
Total:	4
Batch:	
Certificates:	WH19155145

COMMENTS

Hole ended after getting stuck in soft mucky fault zone

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
							☐				☐	☐	☐

Sample Results

Archer, Cathro & Associates (1981) Limited

Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
	W842085	0.00	3.05	0.01	1	7	11	46.0	3	2.30	☐	☐	☐	☐	
	W842086	3.05	6.10	0.01	1	8	12	19.0	2	2320.00	☐	☐	☐	☐	
	W842087	6.10	9.14	0.01	0	10	4	13.0	2	600.00	☐	☐	☐	☐	
	W842088	9.14	10.67	0.01	0	22	3	31.0	2	3420.00	☐	☐	☐	☐	



Tiger - Rau

Archer,Cathro & Associates (1981) Limited

Grid East	Grid North	Easting	Northing	Elevation	Depth (m)
		532951	7117488	1195	12.5

ZONE: Bobcat

SECTION:

HOLE: RRB-19-005

CLAIM:

Contractor:

Drill: 1

Core Size:

Casing Depth:

Drilling Dates: Jun 22 - Jun 24, 2019

Geology Logged By: R. Tablet

SURVEY			
Depth (m)	Azimuth	Dip	Method

TARGET:

SUMMARY

SAMPLES	
Numbers:	W842089 to W842092
Total:	4
Batch:	
Certificates:	WH19155145

COMMENTS
Could not advance due to poor ground conditions

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
							☐				☐	☐	☐

Sample Results

Archer, Cathro & Associates (1981) Limited

Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
	W842089	0.00	4.57	0.01	1	87	25	554.0	2	59.50	☐	☐	☐	☐	
	W842090	4.57	7.62	0.01	0	79	16	693.0	2	50.50	☐	☐	☐	☐	
	W842091	7.62	10.67	0.01	0	153	10	2100.0	5	13.40	☐	☐	☐	☐	
	W842092	10.67	12.50	0.01	0	80	8	1120.0	24	42.20	☐	☐	☐	☐	



Tiger - Rau

Archer,Cathro & Associates (1981) Limited

Grid East	Grid North	Easting	Northing	Elevation	Depth (m)
		532970	7117440	1204	7.62

ZONE: Bobcat

SECTION:

HOLE: RRB-19-006

CLAIM:

Contractor: Superior

Drill: 1

Core Size: BTW

Casing Depth:

Drilling Dates: Jun 25 - Jun 26, 2019

Geology Logged By: R. Tablet

SURVEY			
Depth (m)	Azimuth	Dip	Method

TARGET:

SUMMARY

SAMPLES	
Numbers:	W842093 to W842095
Total:	3
Batch:	
Certificates:	WH19160960

COMMENTS

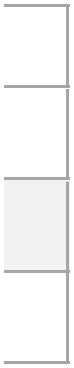
Shoe broke on casing and lost hole

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
							☐				☐	☐	☐

Sample Results

Archer, Cathro & Associates (1981) Limited

Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
	W842093	0.00	3.05	0.01	1	160	23	723.0	2	4.70	☐	☐	☐	☐	
	W842094	3.05	6.10	0.01	2	227	51	1020.0	2	4.70	☐	☐	☐	☐	
	W842095	6.10	7.62	0.01	1	76	11	491.0	2	5.10	☐	☐	☐	☐	



Tiger - Rau

Archer,Cathro & Associates (1981) Limited

Grid East	Grid North	Easting	Northing	Elevation	Depth (m)
		532940	7117861	1139	27.43

ZONE: Kathy

SECTION:

HOLE: RRB-19-007

CLAIM:

Contractor: Superior

Drill: 1

Core Size: BTW

Casing Depth:

Drilling Dates: Jun 28 - Jun 29, 2019

Geology Logged By: R. Tablet

SURVEY			
Depth (m)	Azimuth	Dip	Method

TARGET:

SUMMARY

SAMPLES	
Numbers:	W842096 to W842104
Total:	9
Batch:	
Certificates:	WH19160960

COMMENTS

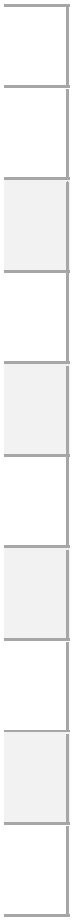
Hole lost due to slow advancing rate and end of program

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
							☐				☐	☐	☐

Sample Results

Archer, Cathro & Associates (1981) Limited

Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
	W842096	0.00	3.05	0.01	1	16	22	6320.0	5	5.30	☐	☐	☐	☐	
	W842097	3.05	6.10	0.01	2	24	22	4430.0	7	10.00	☐	☐	☐	☐	
	W842098	6.10	9.14	0.01	2	23	12	3090.0	3	12.90	☐	☐	☐	☐	
	W842099	9.14	12.19	0.03	7	36	15	2530.0	3	43.50	☐	☐	☐	☐	
	W842100	12.19	15.24	0.05	6	122	53	7140.0	8	26.20	☐	☐	☐	☐	
	W842101	15.24	18.29	0.01	1	45	7	1940.0	1	5.10	☐	☐	☐	☐	
	W842102	18.29	21.34	0.01	1	7	8	8240.0	1	4.10	☐	☐	☐	☐	
	W842103	21.34	24.38	0.01	1	4	5	3960.0	1	4.00	☐	☐	☐	☐	
	W842104	24.38	27.43	0.01	1	3	3	807.0	1	3.20	☐	☐	☐	☐	



APPENDIX XI

RAB 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 ST
VANCOUVER BC V6B 1L8

Finalized Date: 6-JUL-2019
Account: RCM

CERTIFICATE WH19152962

Project: Rau

P.O. No.: R19-B01

This report is for 21 Percussion samples submitted to our lab in Whitehorse, YT, Canada on 24-JUN-2019.

The following have access to data associated with this certificate:

ANDREW CARNE	ADAM COULTER	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
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
PUL-31	Pulverize split to 85% <75 um

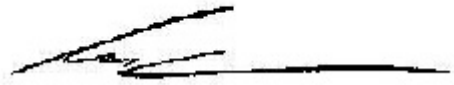
ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid 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
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: 6-JUL-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19152962

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
V763563		1.58	0.11	1.07	0.36	41.7	250	5.87	308	21.1	1.02	8.45	2.2	5	1.78	629
V763564		1.72	0.02	0.55	0.14	12.0	230	0.67	246	22.6	0.44	5.36	1.5	3	1.59	243
V763565		1.79	<0.01	0.17	0.06	5.2	160	0.48	18.90	22.9	0.10	3.39	1.1	1	0.94	39.0
V763566		1.89	<0.01	0.11	0.09	48.0	170	0.24	7.42	22.2	0.18	3.79	1.3	2	0.95	15.6
V763567		2.37	<0.01	0.18	0.30	24.2	520	0.65	4.85	22.8	0.33	4.31	3.1	3	3.73	25.4
V763568		1.97	<0.01	0.10	0.22	3.3	460	0.34	6.60	22.9	0.11	4.32	2.0	3	2.05	7.3
V763569		2.19	<0.01	0.09	0.08	3.4	140	0.23	5.51	22.7	0.08	4.26	1.2	2	0.87	7.2
V763570		2.39	<0.01	0.10	0.15	10.8	180	0.37	2.51	23.1	0.24	4.38	1.7	2	1.81	12.6
V763571		2.31	0.02	0.48	0.12	10.1	200	0.22	31.0	21.9	0.07	4.63	1.3	2	1.38	19.9
V763572		2.20	<0.01	0.05	0.19	2.8	360	0.31	2.53	22.4	0.17	4.08	1.9	3	2.22	5.9
V763573		1.95	<0.01	0.04	0.19	8.1	320	0.41	1.71	22.7	0.27	5.29	2.0	4	1.92	19.1
V763574		2.29	<0.01	0.03	0.06	1.8	70	0.13	1.04	22.1	0.07	5.58	1.0	2	0.94	4.6
V763575		2.55	<0.01	0.07	0.24	10.6	260	1.26	0.78	21.2	0.83	6.03	3.2	3	5.11	27.4
V763576		2.12	<0.01	0.06	0.26	9.9	330	0.92	1.53	21.3	0.32	5.62	1.6	5	3.12	5.8
V763577		2.17	<0.01	0.02	0.23	2.6	440	0.34	0.98	21.7	0.08	4.80	1.5	4	2.95	6.0
V763578		2.05	<0.01	0.02	0.14	1.9	270	0.30	1.08	22.5	0.06	5.57	1.0	3	1.53	4.6
V763579		2.36	<0.01	0.03	0.15	2.9	350	0.26	3.17	23.3	0.30	3.54	1.4	3	1.66	7.8
V763580		2.17	0.01	0.47	0.13	31.0	170	0.23	14.75	22.4	3.23	4.32	1.8	4	2.91	28.8
V763581		2.25	<0.01	0.03	0.10	3.5	240	0.22	0.85	22.6	0.31	3.80	2.2	3	1.27	3.9
V763582		1.78	<0.01	0.28	0.23	175.5	920	10.95	2.04	15.05	5.71	15.95	26.6	8	1.97	13.5
V763583		1.51	<0.01	0.12	0.16	30.2	460	2.37	0.48	20.5	5.69	5.69	6.0	4	1.22	6.9

***** 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
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: 6-JUL-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19152962

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	Fe	Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P
	Units	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
V763563		0.94	1.51	0.07	0.1	0.094	0.13	5.9	7.2	12.50	723	4.76	0.04	0.5	22.2	140
V763564		0.94	0.82	0.10	<0.1	0.044	0.08	4.1	5.2	12.70	677	4.80	0.01	0.2	18.4	80
V763565		0.55	0.45	0.16	<0.1	0.014	0.04	2.8	3.9	12.70	492	2.45	0.01	0.1	10.6	80
V763566		1.75	0.46	0.07	<0.1	0.006	0.05	3.0	4.5	12.10	481	8.04	0.01	0.1	23.3	60
V763567		0.56	1.33	0.15	0.1	0.025	0.17	3.3	12.2	12.20	449	28.8	0.02	0.4	73.0	90
V763568		0.39	1.07	0.24	0.1	0.012	0.10	3.5	8.5	12.80	446	9.08	0.01	0.3	34.0	100
V763569		0.38	0.60	<0.05	<0.1	0.009	0.04	3.5	3.8	12.80	533	3.59	0.01	0.1	20.0	80
V763570		0.53	0.87	0.05	0.1	0.021	0.06	3.6	4.9	12.65	562	3.68	0.01	0.2	32.2	90
V763571		0.44	0.77	0.11	<0.1	0.019	0.05	3.5	4.7	12.30	527	9.39	0.01	0.2	29.6	60
V763572		0.34	1.05	0.10	0.1	0.023	0.09	3.1	7.5	12.45	422	9.99	0.01	0.3	25.9	100
V763573		0.62	1.20	0.10	0.1	0.016	0.08	4.0	7.2	12.60	618	9.10	0.01	0.3	27.8	90
V763574		0.46	0.58	0.10	<0.1	0.006	0.03	4.3	2.9	12.25	648	3.04	<0.01	0.1	8.1	60
V763575		1.08	1.37	0.08	0.1	0.012	0.13	4.3	9.9	11.95	669	9.44	0.01	0.4	61.8	90
V763576		0.81	1.77	0.06	0.1	0.015	0.12	4.2	9.6	12.15	682	8.22	0.02	0.4	29.2	140
V763577		0.47	1.24	0.07	0.1	0.008	0.16	3.6	12.4	12.15	516	9.02	0.01	0.3	21.8	140
V763578		0.52	0.98	0.11	0.1	0.010	0.08	4.2	7.1	12.15	565	6.09	0.01	0.2	11.7	110
V763579		0.24	0.83	0.17	<0.1	0.029	0.08	2.8	7.9	12.60	385	7.29	0.01	0.2	14.9	100
V763580		0.54	1.19	0.16	<0.1	0.426	0.08	3.1	6.7	12.30	475	10.45	0.01	0.2	43.8	140
V763581		0.54	0.75	0.15	0.1	0.013	0.05	2.8	5.2	12.55	595	6.56	0.01	0.5	26.9	80
V763582		17.30	1.50	0.06	0.1	0.032	0.11	12.4	7.2	8.95	1660	77.6	0.01	0.3	399	400
V763583		4.20	0.89	<0.05	<0.1	0.009	0.09	4.2	7.7	12.75	654	20.9	0.01	0.2	99.3	140

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Finalized Date: 6-JUL-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19152962

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
V763563		28.2	22.6	0.013	0.03	30.7	0.7	4	76.8	114.5	<0.05	0.10	0.43	0.017	0.32	1.9
V763564		13.9	18.1	0.018	0.03	16.75	0.3	4	23.9	122.0	<0.05	0.09	0.20	0.007	0.24	3.4
V763565		7.0	11.8	0.022	0.13	3.35	0.1	5	2.3	130.0	<0.05	<0.05	0.06	<0.005	0.14	3.5
V763566		3.9	6.7	0.069	1.73	2.38	0.2	5	0.9	141.5	<0.05	<0.05	0.12	<0.005	0.17	4.3
V763567		6.1	31.3	0.211	0.17	3.17	0.6	4	1.5	140.5	0.05	<0.05	0.36	0.013	0.58	5.5
V763568		2.9	10.3	0.074	0.17	1.30	0.5	4	0.8	126.5	<0.05	<0.05	0.38	0.010	0.38	9.9
V763569		4.1	4.5	0.015	0.14	1.26	0.2	3	0.9	116.0	<0.05	<0.05	0.11	<0.005	0.18	5.3
V763570		3.7	10.0	0.016	0.14	1.10	0.3	3	1.8	135.0	<0.05	<0.05	0.18	0.007	0.28	5.3
V763571		9.2	7.5	0.056	0.17	9.37	0.2	5	3.6	122.0	<0.05	0.14	0.17	0.005	0.24	6.8
V763572		1.7	13.2	0.099	0.13	0.84	0.4	4	0.6	123.5	<0.05	<0.05	0.30	0.008	0.34	6.9
V763573		1.5	14.4	0.084	0.22	1.44	0.4	4	3.8	142.0	<0.05	<0.05	0.27	0.010	0.32	6.0
V763574		1.8	7.5	0.024	0.12	0.53	0.2	2	0.7	133.0	<0.05	<0.05	0.08	<0.005	0.13	3.5
V763575		4.3	39.0	0.122	0.37	4.81	0.4	5	3.0	140.5	<0.05	<0.05	0.30	0.010	0.55	7.8
V763576		1.9	20.5	0.097	0.50	0.97	0.4	5	4.2	157.5	<0.05	<0.05	0.30	0.013	0.37	7.9
V763577		0.8	23.5	0.079	0.16	0.54	0.5	4	1.1	139.0	<0.05	<0.05	0.33	0.011	0.48	6.3
V763578		1.1	12.8	0.079	0.20	0.58	0.3	4	1.5	149.0	<0.05	<0.05	0.20	0.007	0.25	7.3
V763579		0.9	13.4	0.080	0.07	0.79	0.3	3	0.7	155.0	<0.05	<0.05	0.22	0.006	0.28	4.2
V763580		11.6	23.6	0.091	0.27	11.45	0.3	4	12.3	158.5	<0.05	0.05	0.20	0.007	0.32	6.2
V763581		1.2	8.0	0.052	0.06	0.68	0.2	4	0.9	173.0	0.05	<0.05	0.30	<0.005	0.22	4.3
V763582		15.3	13.1	0.021	0.07	28.3	0.7	4	2.3	102.0	<0.05	<0.05	0.28	0.008	0.34	9.4
V763583		3.5	8.2	0.011	<0.01	5.02	0.3	6	0.8	117.0	<0.05	<0.05	0.17	0.006	0.27	3.1

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VANCOUVER BC V6B 1L8

Finalized Date: 6-JUL-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19152962

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	V	W	Y	Zn	Zr
	Units	ppm	ppm	ppm	ppm	ppm
	LOD	1	0.1	0.1	2	0.5
V763563		52	5.3	4.3	154	4.0
V763564		46	7.4	3.2	57	1.6
V763565		29	14.9	1.9	25	0.5
V763566		42	16.9	2.3	43	0.9
V763567		122	7.9	2.7	129	2.8
V763568		106	3.8	2.2	35	2.2
V763569		48	4.2	2.3	17	1.0
V763570		78	3.6	2.7	73	1.5
V763571		45	5.0	2.4	15	1.4
V763572		76	2.6	2.3	41	2.0
V763573		61	5.0	3.5	85	2.6
V763574		25	51.6	2.7	29	0.6
V763575		66	8.5	6.4	309	2.9
V763576		76	6.0	3.5	68	3.9
V763577		98	3.5	2.7	38	2.7
V763578		66	3.3	2.8	16	1.7
V763579		66	3.3	1.8	50	1.7
V763580		62	17.0	2.5	676	1.8
V763581		36	3.6	2.8	106	2.2
V763582		55	20.9	83.1	6120	3.6
V763583		30	5.5	22.7	1360	1.8

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Project: Rau

Finalized Date: 6-JUL-2019
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CERTIFICATE OF ANALYSIS WH19152962

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	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-AA25	ME-MS61

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North Vancouver BC V7H 0A7
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Finalized Date: 5-JUL-2019
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CERTIFICATE WH19152896

Project: Rau

P.O. No.: R19-B02

This report is for 24 Percussion samples submitted to our lab in Whitehorse, YT, Canada on 24-JUN-2019.

The following have access to data associated with this certificate:

ANDREW CARNE	ADAM COULTER	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
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
PUL-31	Pulverize split to 85% <75 um

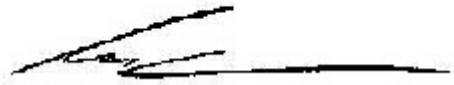
ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid 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 WH19152896

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
V763584		1.84	<0.01	0.20	0.27	17.0	1520	0.29	0.37	21.3	3.44	4.55	2.0	5	1.99	10.4
V763585		1.66	<0.01	0.22	0.26	12.2	1660	0.35	0.30	21.7	2.69	3.75	1.7	6	1.84	5.9
V763586		1.76	0.01	0.27	0.14	19.2	330	0.32	6.66	21.6	0.91	3.78	1.2	5	1.56	13.8
V763587		1.68	0.01	0.27	0.27	24.0	540	0.45	1.71	21.2	0.87	4.20	1.7	8	1.52	14.2
V763588		2.19	<0.01	0.18	0.13	19.9	340	0.23	0.55	22.3	0.83	2.34	1.1	4	0.93	6.7
V763589		2.39	0.18	0.95	0.08	24.0	240	0.23	3.96	21.8	1.02	2.92	2.4	4	0.87	10.9
V763590		2.09	0.08	0.14	0.06	14.3	210	0.17	6.26	21.3	0.58	3.40	0.6	2	0.58	6.7
V763591		1.87	0.13	0.44	0.11	9.0	250	0.46	14.70	21.6	0.83	3.90	0.7	3	1.26	8.7
V763592		2.31	<0.01	0.09	0.15	6.5	470	0.39	1.51	21.7	0.39	3.78	1.0	4	2.00	6.4
V763593		2.03	<0.01	0.06	0.18	4.1	380	0.35	1.09	21.9	0.13	3.72	0.6	4	2.49	4.9
V763594		2.05	<0.01	0.08	0.11	6.1	270	0.29	0.98	22.3	0.32	3.27	0.5	2	2.09	4.6
V763595		1.70	<0.01	0.15	0.19	10.6	450	0.35	1.49	22.0	0.45	4.62	0.7	3	2.85	4.5
V763596		1.77	<0.01	0.09	0.19	10.1	1550	0.32	0.48	22.2	1.21	4.01	0.8	4	1.55	7.6
V763599		1.76	<0.01	0.24	0.17	8.2	1870	0.28	0.30	22.6	2.18	2.64	0.8	4	0.93	4.2
W842051		2.36	<0.01	0.46	0.13	5.9	1860	0.22	0.39	21.7	1.07	2.63	0.7	3	0.79	4.7
W842052		1.94	<0.01	0.17	0.18	9.6	2400	0.31	0.37	21.6	0.65	2.68	0.6	4	0.82	3.2
W842053		1.99	<0.01	0.07	0.18	3.7	1670	0.30	0.83	22.1	0.57	4.46	0.7	3	1.47	4.3
W842054		1.90	<0.01	0.34	0.22	6.6	2440	0.33	0.35	21.4	1.29	3.55	0.7	4	0.83	6.4
W842055		1.63	<0.01	0.14	0.31	5.1	900	0.36	0.44	22.1	0.87	4.15	0.8	5	1.45	4.2
W842056		1.64	<0.01	0.06	0.22	5.0	560	0.63	0.89	21.9	0.82	4.92	0.9	4	1.58	6.8
W842057		1.71	0.31	0.25	0.24	12.2	430	0.74	98.1	21.8	0.50	5.64	1.2	4	0.96	18.8
W842058		1.79	0.01	0.19	0.24	9.9	520	0.47	5.70	21.5	0.18	4.29	0.9	6	0.79	12.4
W842059		1.84	<0.01	0.05	0.18	6.6	620	0.34	2.44	21.9	0.06	3.69	0.7	4	0.94	3.5
W842060		1.95	<0.01	0.08	0.27	2.4	1010	0.46	1.76	21.6	0.43	4.28	1.3	4	2.34	20.6

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Project: Rau

CERTIFICATE OF ANALYSIS WH19152896

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	Fe	Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P
	Units	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
V763584		0.43	0.89	0.15	0.1	0.031	0.10	4.8	6.5	12.80	308	1.85	0.02	0.4	26.5	230
V763585		0.34	1.11	0.22	0.1	0.040	0.12	4.0	9.1	12.40	207	1.51	0.01	0.4	26.6	320
V763586		0.53	0.71	0.22	0.1	0.023	0.07	3.8	6.0	12.50	412	2.25	0.01	0.2	30.5	210
V763587		0.62	1.27	0.19	0.1	0.026	0.10	3.8	6.6	12.35	342	3.62	0.02	0.4	44.8	360
V763588		0.25	0.72	0.37	<0.1	0.025	0.06	2.4	6.5	12.45	242	3.11	0.01	0.2	23.7	120
V763589		0.36	0.59	0.36	<0.1	0.068	0.05	3.2	4.6	12.25	269	3.63	0.01	0.1	22.1	140
V763590		0.38	0.38	0.30	<0.1	0.016	0.04	3.1	3.4	12.45	372	1.20	<0.01	0.1	5.8	90
V763591		0.28	0.73	0.34	<0.1	0.056	0.07	3.4	4.4	12.05	349	1.91	0.01	0.2	9.1	110
V763592		0.44	0.88	0.27	0.1	0.032	0.11	3.4	6.1	12.15	422	1.74	0.01	0.3	11.6	190
V763593		0.24	0.82	0.38	0.1	0.008	0.13	3.4	6.4	12.50	365	1.34	0.01	0.3	6.3	190
V763594		0.18	0.61	0.43	<0.1	0.024	0.08	3.3	4.9	12.65	308	2.80	0.01	0.2	6.0	120
V763595		0.27	0.98	0.40	0.1	0.015	0.10	4.1	6.8	12.50	348	2.09	0.01	0.3	7.4	130
V763596		0.28	0.89	0.40	0.1	0.023	0.09	3.5	5.2	12.20	339	1.83	0.02	0.3	9.3	90
V763599		0.11	0.81	0.54	0.1	0.028	0.06	2.8	4.4	11.60	150	1.32	0.02	0.2	9.9	100
W842051		0.12	0.61	0.47	<0.1	0.027	0.05	2.4	4.2	12.20	191	1.47	0.01	0.2	5.8	80
W842052		0.17	0.81	0.48	0.1	0.020	0.06	2.4	4.2	11.95	209	1.03	0.02	0.2	9.3	70
W842053		0.16	1.03	0.51	0.1	0.061	0.12	3.7	6.3	12.10	346	1.19	0.01	0.3	7.6	80
W842054		0.17	1.13	0.45	0.1	0.093	0.10	3.0	4.5	11.40	263	2.26	0.02	0.3	11.8	110
W842055		0.24	1.22	0.45	0.1	0.042	0.15	3.2	7.5	11.85	296	1.44	0.01	0.4	10.0	130
W842056		0.42	0.98	0.38	0.1	0.023	0.12	3.8	7.4	12.15	485	1.98	0.01	0.3	11.3	70
W842057		0.67	1.19	0.32	0.1	0.032	0.11	4.4	7.3	12.30	591	4.60	0.01	0.3	15.2	110
W842058		0.42	1.16	0.24	0.1	0.043	0.12	3.3	7.8	11.90	438	2.26	0.01	0.3	17.8	80
W842059		0.50	0.94	0.24	0.1	0.025	0.10	3.0	6.2	12.10	516	2.41	0.01	0.3	13.1	80
W842060		0.67	1.89	0.22	0.1	0.024	0.19	3.3	13.2	12.30	403	5.39	0.01	0.5	23.4	110

***** 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
www.alsglobal.com/geochemistry

To: **ATAC RESOURCES LTD.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 5-JUL-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19152896

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
V763584		51.3	19.4	0.002	0.05	17.75	0.5	1	5.1	188.0	<0.05	<0.05	0.33	0.012	0.27	2.2
V763585		80.8	13.3	0.004	0.21	21.8	0.5	3	3.8	210	<0.05	<0.05	0.33	0.012	0.24	3.9
V763586		24.2	14.2	0.007	0.10	15.60	0.3	2	2.8	189.0	<0.05	<0.05	0.18	0.006	0.21	2.9
V763587		30.4	14.5	0.028	0.28	15.40	0.5	4	7.7	177.0	<0.05	<0.05	0.37	0.011	0.25	5.9
V763588		16.7	7.7	0.025	0.11	5.83	0.2	3	2.9	189.5	<0.05	<0.05	0.16	0.006	0.16	4.7
V763589		89.8	6.8	0.021	0.28	36.1	0.1	7	13.5	172.0	<0.05	<0.05	0.11	<0.005	0.17	4.9
V763590		21.7	6.1	0.007	0.27	13.80	0.1	2	4.5	127.0	<0.05	<0.05	0.06	<0.005	0.09	2.6
V763591		35.5	14.4	0.016	0.15	16.20	0.2	4	7.0	133.0	<0.05	<0.05	0.15	<0.005	0.17	3.7
V763592		9.4	17.6	0.020	0.34	4.85	0.3	3	2.5	134.5	<0.05	<0.05	0.20	0.007	0.29	4.1
V763593		7.2	24.7	0.007	0.12	5.27	0.3	2	2.2	129.5	<0.05	<0.05	0.27	0.008	0.32	3.3
V763594		18.2	20.0	0.016	0.10	9.44	0.2	2	3.4	131.0	<0.05	<0.05	0.16	0.005	0.20	5.7
V763595		17.2	28.6	0.006	0.19	6.08	0.4	2	4.6	131.0	<0.05	<0.05	0.29	0.009	0.27	5.3
V763596		31.6	18.1	0.005	0.17	6.74	0.4	2	2.8	150.5	<0.05	<0.05	0.25	0.009	0.19	5.1
V763599		49.3	8.3	0.002	0.04	12.50	0.4	2	4.5	170.5	<0.05	<0.05	0.21	0.006	0.14	4.2
W842051		77.8	7.7	<0.002	0.04	5.22	0.3	1	4.9	169.5	<0.05	<0.05	0.15	0.005	0.11	3.0
W842052		42.4	8.7	0.003	0.11	5.99	0.3	3	5.7	154.0	<0.05	<0.05	0.19	0.006	0.13	4.7
W842053		9.7	17.4	0.006	0.12	3.04	0.4	2	4.1	158.5	<0.05	<0.05	0.27	0.008	0.21	6.6
W842054		49.2	10.7	0.008	0.12	16.35	0.4	2	9.5	194.0	<0.05	<0.05	0.25	0.009	0.15	4.0
W842055		14.5	19.4	0.010	0.07	4.98	0.5	2	4.0	167.5	<0.05	<0.05	0.40	0.015	0.26	2.5
W842056		6.5	16.7	0.035	0.12	3.30	0.4	3	1.5	187.5	<0.05	<0.05	0.28	0.010	0.21	2.8
W842057		21.4	11.1	0.045	0.25	35.9	0.4	7	1.7	133.0	<0.05	0.05	0.28	0.010	0.18	4.2
W842058		10.1	8.7	0.015	0.22	8.50	0.4	5	2.7	131.0	<0.05	<0.05	0.34	0.010	0.14	7.5
W842059		3.1	10.8	0.015	0.31	1.79	0.3	4	3.6	152.0	<0.05	<0.05	0.21	0.008	0.14	5.3
W842060		7.8	23.2	0.030	0.16	3.73	0.5	5	1.4	129.0	<0.05	<0.05	0.32	0.011	0.34	5.8

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Finalized Date: 5-JUL-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19152896

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	V	W	Y	Zn	Zr
	Units	ppm	ppm	ppm	ppm	ppm
	LOD	1	0.1	0.1	2	0.5
V763584		159	2.3	6.5	297	3.4
V763585		297	1.7	5.4	224	3.7
V763586		179	2.2	4.1	171	1.9
V763587		356	3.0	5.0	200	3.9
V763588		134	1.5	2.6	140	1.6
V763589		117	1.9	2.9	184	1.1
V763590		54	1.3	2.7	58	0.8
V763591		95	2.1	3.3	129	1.4
V763592		142	2.0	2.9	72	2.0
V763593		125	1.9	3.2	23	2.4
V763594		71	4.8	3.2	57	1.7
V763595		122	8.6	4.6	59	2.5
V763596		125	3.4	3.9	172	3.1
V763599		98	0.8	2.9	290	2.3
W842051		55	1.0	2.4	98	1.7
W842052		97	1.1	2.3	111	2.4
W842053		77	0.8	3.1	119	2.6
W842054		93	1.0	2.8	273	2.9
W842055		56	1.1	2.8	115	4.5
W842056		61	1.3	2.9	106	2.5
W842057		55	2.8	3.4	105	2.8
W842058		113	1.3	2.4	52	2.7
W842059		101	0.9	2.2	22	2.2
W842060		106	52.5	3.0	68	2.7

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CERTIFICATE OF ANALYSIS WH19152896

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	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-AA25	ME-MS61

ALS Canada Ltd.

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North Vancouver BC V7H 0A7
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Finalized Date: 13-JUL-2019
Account: RCM

CERTIFICATE WH19155145

Project: Rau

P.O. No.: R19-B03

This report is for 32 Percussion samples submitted to our lab in Whitehorse, YT, Canada on 26-JUN-2019.

The following have access to data associated with this certificate:

ANDREW CARNE	ADAM COULTER	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
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
PUL-31	Pulverize split to 85% <75 um

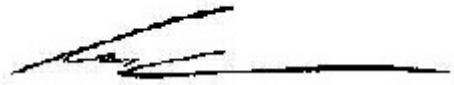
ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid 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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2103 Dollarton Hwy
North Vancouver BC V7H 0A7
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Project: Rau

CERTIFICATE OF ANALYSIS WH19155145

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
W842061		1.59	<0.01	0.41	3.24	16.5	3360	1.43	6.34	4.39	4.41	32.7	7.5	71	8.78	36.7
W842062		1.69	<0.01	0.28	3.29	10.5	1450	1.02	0.59	0.29	0.64	39.8	1.5	90	5.73	8.1
W842063		1.46	<0.01	0.28	2.26	13.8	360	1.16	1.18	0.39	6.76	23.2	5.6	67	3.16	74.6
W842064		1.98	<0.01	0.26	1.43	6.0	310	0.54	0.84	2.86	1.31	11.45	3.0	48	2.11	41.3
W842065		1.79	<0.01	0.17	1.20	5.5	870	0.39	0.78	0.79	0.41	10.40	8.5	32	1.90	11.9
W842066		1.69	<0.01	0.12	0.95	8.0	190	1.47	2.70	16.35	1.89	17.60	11.2	24	9.88	20.8
W842067		1.34	<0.01	0.22	1.03	11.5	240	1.63	26.5	17.30	6.43	23.0	3.3	24	12.35	28.5
W842068		1.80	<0.01	1.18	0.23	10.4	1610	0.31	3.11	20.5	2.67	5.21	1.6	7	3.17	140.5
W842069		1.74	<0.01	0.16	0.20	7.8	2420	0.20	1.14	21.2	1.10	3.48	1.1	5	2.18	3.5
W842070		1.71	<0.01	0.05	0.16	16.0	510	0.29	0.80	20.9	0.86	4.00	1.0	4	2.35	3.6
W842071		1.50	<0.01	0.64	0.31	49.8	130	0.57	2.26	20.3	2.20	4.18	1.6	10	3.45	15.3
W842072		1.41	<0.01	0.16	0.16	16.8	520	0.38	2.46	20.9	0.94	4.08	0.9	5	2.79	15.0
W842073		1.59	<0.01	1.43	0.29	31.1	580	0.37	1.13	22.2	5.00	4.51	2.4	6	4.05	18.2
W842074		1.64	<0.01	0.24	0.34	30.3	1520	0.56	0.97	21.0	3.83	5.97	2.7	7	2.75	17.1
W842075		1.56	<0.01	0.23	0.23	19.3	350	0.37	1.27	22.0	3.75	4.18	2.4	5	2.57	10.9
W842076		1.53	0.02	0.96	0.29	50.3	470	0.62	12.65	20.1	7.61	5.91	1.7	7	1.90	18.7
W842077		1.69	0.62	0.57	0.57	100.5	460	0.59	8.63	19.20	0.28	4.99	1.5	18	2.94	32.7
W842078		1.49	<0.01	0.41	0.29	10.7	1320	0.59	2.12	21.2	1.06	5.17	1.0	7	2.22	15.7
W842079		1.36	<0.01	1.28	0.17	6.7	1240	0.40	1.59	22.0	3.27	4.14	0.8	5	0.82	12.5
W842080		1.77	<0.01	0.13	0.22	8.0	1130	0.40	0.39	20.9	3.06	3.36	1.7	4	1.33	8.6
W842081		1.83	<0.01	0.22	0.15	7.1	810	0.38	0.67	21.2	1.11	2.49	0.9	3	0.58	7.3
W842082		1.96	<0.01	0.67	0.15	11.4	450	0.31	4.51	20.6	7.07	3.40	1.7	2	0.54	33.7
W842083		1.83	<0.01	0.81	0.12	7.9	260	0.30	1.08	21.5	4.35	3.82	1.0	2	0.50	17.0
W842084		1.27	0.06	1.02	0.16	40.2	260	0.38	6.57	20.9	5.79	5.15	1.6	2	0.46	13.8
W842085		2.01	<0.01	0.53	4.21	8.7	7210	1.27	0.97	0.46	0.88	36.3	0.6	104	10.30	6.6
W842086		2.00	<0.01	0.88	3.25	12.1	2000	1.09	0.35	0.28	0.23	41.3	167.5	92	8.06	7.5
W842087		2.10	<0.01	0.33	2.61	11.1	460	0.94	0.38	0.05	0.41	32.4	39.8	83	4.95	10.2
W842088		1.26	<0.01	0.16	2.26	12.3	480	0.86	0.57	0.08	0.78	27.6	238	103	3.69	21.9
W842089		1.54	<0.01	0.59	4.00	41.5	7490	1.73	0.34	1.60	10.10	39.3	5.9	100	19.60	87.1
W842090		1.88	<0.01	0.48	3.27	37.8	5610	2.78	0.29	1.13	12.00	36.3	7.0	95	20.6	79.1
W842091		1.72	<0.01	0.36	2.61	62.3	4140	7.65	1.77	1.28	20.9	33.9	13.0	71	22.3	152.5
W842092		1.77	<0.01	0.34	1.41	75.6	2310	5.77	2.38	0.53	10.15	38.9	8.5	62	7.27	79.7

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CERTIFICATE OF ANALYSIS WH19155145

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	Fe	Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P
	Units	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
W842061		2.58	8.12	0.13	1.3	0.049	1.09	18.7	24.7	2.22	479	6.43	0.31	7.1	50.7	660
W842062		1.21	10.50	0.14	1.6	0.021	1.41	23.3	19.9	0.36	45	9.01	0.21	8.1	6.6	240
W842063		2.02	7.41	0.11	1.1	0.077	1.34	13.1	14.9	0.20	76	6.18	0.14	5.5	33.4	390
W842064		1.70	4.65	0.08	0.7	0.019	0.64	7.4	8.2	0.13	70	5.66	0.06	3.2	23.6	190
W842065		0.87	3.35	0.08	0.6	0.023	0.48	6.8	7.3	0.10	51	5.50	0.04	2.2	17.7	110
W842066		1.60	3.41	0.10	0.3	0.094	0.65	18.4	7.9	10.25	657	3.15	0.05	1.1	42.3	1840
W842067		1.76	4.01	0.09	0.3	0.044	0.69	25.2	9.7	10.45	946	3.37	0.04	1.1	39.9	1890
W842068		0.87	0.95	0.14	0.1	0.089	0.13	5.7	7.0	11.65	513	1.57	0.01	0.3	24.1	450
W842069		0.40	0.62	0.24	<0.1	0.052	0.09	3.6	7.1	12.05	406	1.02	<0.01	0.2	17.7	180
W842070		0.74	0.68	0.19	<0.1	0.024	0.10	3.8	7.7	12.30	533	0.95	0.01	0.2	16.4	200
W842071		1.74	1.20	0.10	0.1	0.072	0.14	4.0	8.1	11.05	462	1.61	0.02	0.5	36.4	200
W842072		0.79	0.86	0.15	0.1	0.076	0.11	3.8	7.2	12.00	768	1.08	0.01	0.3	16.9	130
W842073		0.97	1.09	0.12	0.1	0.064	0.12	4.7	9.3	11.75	342	2.31	0.01	0.3	56.6	170
W842074		0.99	1.36	0.15	0.1	0.023	0.17	5.3	13.3	12.10	510	4.10	0.02	0.4	48.4	160
W842075		0.63	0.88	0.20	0.1	0.042	0.12	3.7	10.0	13.05	419	2.02	0.01	0.3	32.3	150
W842076		1.10	1.91	0.15	0.1	0.609	0.14	4.9	11.0	11.95	580	3.53	0.03	0.4	26.2	110
W842077		2.49	2.11	0.06	0.2	0.034	0.26	4.2	16.9	11.25	586	2.41	0.06	0.7	40.0	170
W842078		0.58	1.30	0.14	0.1	0.201	0.11	5.2	7.6	10.95	508	2.14	0.03	0.4	16.9	190
W842079		0.32	0.92	0.27	0.1	0.328	0.09	4.2	6.7	11.40	338	1.83	0.01	0.2	14.2	130
W842080		0.35	0.73	0.06	0.1	0.020	0.13	3.2	8.0	12.10	244	2.40	0.02	0.4	20.5	90
W842081		0.20	0.58	0.08	0.1	0.048	0.06	2.8	4.4	11.55	180	2.03	0.02	0.3	16.0	120
W842082		0.53	0.60	0.07	<0.1	0.043	0.06	3.1	4.6	11.80	273	2.65	0.01	0.2	19.1	60
W842083		0.23	0.61	0.09	<0.1	0.170	0.06	3.4	5.6	12.10	315	2.03	<0.01	0.2	7.6	90
W842084		0.61	0.82	0.07	0.1	0.112	0.07	4.4	5.4	11.70	458	3.25	0.01	0.2	20.6	70
W842085		1.08	11.65	0.12	2.2	0.039	2.00	20.6	28.9	0.56	36	8.02	0.07	12.3	5.0	190
W842086		1.13	9.92	0.10	1.9	0.029	1.56	23.7	22.4	0.41	32	9.76	0.06	10.4	5.4	240
W842087		1.31	8.54	0.10	1.3	0.024	1.26	19.8	17.2	0.21	37	8.05	0.19	7.0	31.4	380
W842088		2.29	6.76	0.09	1.1	0.022	0.91	15.2	15.3	0.16	80	15.65	0.55	4.1	87.5	530
W842089		3.31	10.25	0.09	1.8	0.045	1.81	26.9	35.9	2.56	144	9.37	0.09	11.4	173.5	890
W842090		4.30	8.60	0.08	1.6	0.044	1.61	26.4	36.6	2.11	143	8.43	0.07	9.5	131.0	850
W842091		13.10	6.99	0.12	1.1	0.061	1.18	22.2	28.2	2.64	1050	25.0	0.05	6.9	175.0	1370
W842092		11.90	4.84	0.10	0.7	0.517	0.59	21.8	11.2	1.16	681	36.0	0.03	2.5	75.0	840

***** See Appendix Page for comments regarding this certificate *****

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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 ST
VANCOUVER BC V6B 1L8

Finalized Date: 13-JUL-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19155145

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
W842061		17.7	90.5	0.002	0.14	3.20	6.6	3	5.0	118.0	0.45	0.06	4.37	0.213	1.93	3.4
W842062		5.0	101.5	<0.002	0.34	1.36	7.5	3	2.3	109.5	0.53	<0.05	5.05	0.219	1.97	2.7
W842063		4.1	152.5	0.020	0.80	0.83	4.7	5	5.4	95.4	0.34	0.05	3.61	0.134	1.33	3.8
W842064		4.0	60.1	0.014	0.92	1.33	2.8	3	2.0	127.5	0.21	<0.05	1.37	0.080	0.96	3.1
W842065		3.3	41.2	0.007	0.38	1.59	2.2	3	2.6	123.5	0.15	<0.05	1.40	0.060	0.63	3.2
W842066		4.8	183.0	0.007	1.18	0.70	2.1	4	8.4	205	0.07	0.05	1.24	0.033	1.25	11.6
W842067		7.7	224	0.002	0.78	2.18	1.7	3	16.3	185.5	0.07	<0.05	1.15	0.031	1.46	5.8
W842068		7.8	36.8	<0.002	0.75	1.70	0.6	10	147.0	189.5	<0.05	<0.05	0.31	0.011	0.40	4.2
W842069		22.9	20.3	0.005	0.30	4.67	0.4	2	9.3	155.0	<0.05	<0.05	0.20	0.007	0.23	4.6
W842070		2.2	23.3	0.003	0.62	0.72	0.3	1	2.2	123.5	<0.05	<0.05	0.18	0.007	0.27	5.9
W842071		88.4	42.9	0.006	1.89	21.3	0.5	3	28.5	171.0	<0.05	<0.05	0.36	0.015	0.38	5.8
W842072		9.5	41.9	0.006	0.75	3.09	0.4	2	14.0	145.0	<0.05	<0.05	0.20	0.008	0.31	3.6
W842073		239	17.3	0.014	0.82	29.0	0.6	2	4.0	323	<0.05	<0.05	0.29	0.010	0.36	3.4
W842074		17.3	24.3	0.016	0.49	8.69	0.5	2	8.7	176.5	<0.05	<0.05	0.36	0.013	0.34	2.7
W842075		43.3	24.5	0.007	0.17	10.90	0.4	2	8.2	106.5	<0.05	<0.05	0.24	0.009	0.31	2.7
W842076		139.5	17.4	0.069	0.97	45.2	0.6	4	39.7	90.6	<0.05	<0.05	0.32	0.013	0.35	4.5
W842077		34.6	35.6	0.025	2.50	7.04	0.9	6	16.6	101.0	0.05	<0.05	0.56	0.019	0.63	5.0
W842078		55.5	11.1	0.024	0.48	33.8	0.6	2	66.1	253	<0.05	<0.05	0.35	0.012	0.19	5.2
W842079		204	11.9	0.009	0.34	55.6	0.3	3	59.6	239	<0.05	<0.05	0.21	0.007	0.19	4.6
W842080		26.4	18.8	0.024	0.13	10.60	0.4	3	4.3	146.5	<0.05	<0.05	0.31	0.011	0.23	4.0
W842081		79.2	8.1	0.021	0.10	34.6	0.3	3	9.3	142.5	<0.05	<0.05	0.18	0.007	0.11	5.2
W842082		86.5	6.4	0.005	0.03	49.7	0.2	2	18.8	125.5	<0.05	<0.05	0.17	0.006	0.10	2.1
W842083		121.5	6.2	0.008	0.08	44.3	0.2	1	28.1	140.5	<0.05	<0.05	0.17	0.005	0.12	5.0
W842084		125.5	5.9	0.018	0.24	58.1	0.3	4	22.2	128.0	<0.05	<0.05	0.22	0.008	0.15	4.7
W842085		11.3	131.0	<0.002	0.23	4.20	8.6	4	2.8	97.0	0.74	0.08	5.61	0.288	3.31	4.1
W842086		12.2	102.5	0.018	0.41	5.41	7.3	4	2.1	88.6	0.62	0.09	5.04	0.243	2.73	3.5
W842087		4.4	102.5	0.012	0.52	1.96	5.9	3	1.7	122.5	0.44	0.07	5.24	0.176	1.71	2.9
W842088		3.0	104.0	0.040	0.64	0.89	4.4	2	1.8	196.0	0.08	<0.05	4.13	0.124	1.20	4.0
W842089		24.8	115.0	0.015	0.16	5.15	7.9	2	2.4	109.0	0.70	0.12	6.27	0.266	5.84	7.3
W842090		16.1	121.0	0.011	0.13	5.86	6.9	2	2.2	81.7	0.58	0.13	5.23	0.223	4.33	6.9
W842091		10.3	213	0.014	0.07	6.15	5.6	5	4.9	61.9	0.41	0.07	3.73	0.147	3.52	10.4
W842092		8.0	123.5	0.004	0.10	2.68	3.8	3	23.8	30.5	0.15	<0.05	3.05	0.058	1.57	7.8

***** See Appendix Page for comments regarding this certificate *****

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North Vancouver BC V7H 0A7
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 13-JUL-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19155145

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	V	W	Y	Zn	Zr
	Units	ppm	ppm	ppm	ppm	ppm
	LOD	1	0.1	0.1	2	0.5
W842061		257	3.5	17.0	371	44.0
W842062		411	8.5	5.9	27	61.6
W842063		168	13.3	5.0	123	44.6
W842064		183	11.1	4.9	95	28.5
W842065		104	109.5	3.4	69	23.5
W842066		130	136.0	38.3	223	9.7
W842067		122	13.6	31.2	443	9.3
W842068		95	1.3	9.2	297	3.1
W842069		84	0.8	6.3	121	1.8
W842070		65	1.4	4.7	61	1.6
W842071		144	3.1	5.5	297	4.6
W842072		80	4.2	4.8	151	2.2
W842073		157	7.3	6.0	491	3.3
W842074		182	1.5	6.8	313	3.8
W842075		82	1.3	5.5	352	2.5
W842076		108	3.9	4.2	1280	4.0
W842077		267	1.9	3.8	47	7.6
W842078		126	1.9	4.6	311	4.8
W842079		112	1.5	4.3	785	2.2
W842080		131	1.5	4.2	216	2.8
W842081		115	0.9	2.9	179	2.7
W842082		174	1.7	7.1	444	1.7
W842083		154	1.9	3.6	442	1.6
W842084		150	3.4	4.7	468	1.7
W842085		222	2.3	6.5	46	79.1
W842086		241	2320	5.2	19	73.4
W842087		311	600	4.9	13	53.7
W842088		136	3420	5.1	31	44.5
W842089		255	59.5	13.1	554	65.9
W842090		265	50.5	15.7	693	63.9
W842091		211	13.4	30.0	2100	48.3
W842092		111	42.2	23.4	1120	29.4

***** See Appendix Page for comments regarding this certificate *****

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North Vancouver BC V7H 0A7
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VANCOUVER BC V6B 1L8

Project: Rau

Finalized Date: 13-JUL-2019
Account: RCM

CERTIFICATE OF ANALYSIS WH19155145

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	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-AA25	ME-MS61

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North Vancouver BC V7H 0A7
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To: **ATAC RESOURCES LTD.**
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VANCOUVER BC V6B 1L8

Finalized Date: 15-JUL-2019
Account: RCM

CERTIFICATE WH19160960

Project: Rau

P.O. No.: R19-B04

This report is for 12 Percussion samples submitted to our lab in Whitehorse, YT, Canada on 2-JUL-2019.

The following have access to data associated with this certificate:

ANDREW CARNE	ADAM COULTER	JULIA LANE

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um

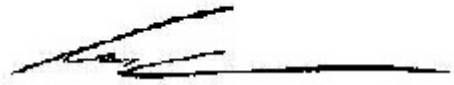
ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid 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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Finalized Date: 15-JUL-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19160960

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
W842093		1.60	<0.01	0.69	3.78	49.5	2840	2.74	1.84	0.92	13.50	29.9	7.0	84	5.88	160.0
W842094		1.80	<0.01	1.68	3.12	39.2	3200	3.45	0.98	0.44	15.85	29.4	6.5	82	6.31	227
W842095		1.28	<0.01	0.53	2.24	20.6	3630	1.77	0.78	0.82	6.35	27.0	2.9	76	6.66	75.9
W842096		1.15	<0.01	1.34	0.61	56.7	650	3.52	4.10	16.30	69.6	8.53	12.4	8	3.17	15.9
W842097		1.47	0.01	2.04	0.61	39.5	830	2.51	3.69	17.90	45.7	7.14	39.4	8	3.62	23.9
W842098		1.50	0.01	1.64	0.41	35.9	810	2.53	1.50	18.75	30.6	6.02	11.0	6	2.93	23.1
W842099		1.44	0.03	6.85	0.41	26.8	600	1.65	3.93	20.0	21.5	5.57	13.0	13	2.36	36.2
W842100		1.00	0.05	6.45	0.35	68.4	590	3.59	121.5	18.00	26.3	9.76	26.4	7	2.55	121.5
W842101		1.71	<0.01	0.65	0.70	15.0	890	1.13	2.06	17.30	18.25	8.57	11.0	16	2.21	45.4
W842102		1.69	<0.01	1.06	0.13	18.5	380	1.46	2.36	18.00	22.0	5.59	30.2	4	0.33	6.5
W842103		1.68	0.01	0.97	0.15	18.8	490	0.96	0.73	19.50	14.95	4.67	18.6	3	0.49	4.1
W842104		1.58	0.01	0.84	0.12	10.6	640	0.47	1.62	21.3	9.84	3.14	3.7	4	0.76	2.8

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CERTIFICATE OF ANALYSIS WH19160960

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	Fe	Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P
	Units	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
W842093		3.91	8.81	0.11	1.3	0.049	1.30	17.6	30.8	0.80	202	7.17	0.36	9.0	80.0	760
W842094		4.84	7.07	0.14	1.1	0.044	1.22	17.1	29.8	0.85	154	7.39	0.14	7.3	131.5	860
W842095		2.92	6.17	0.10	1.0	0.024	1.09	16.0	27.3	1.61	111	4.45	0.06	6.4	81.7	670
W842096		7.93	1.38	0.11	0.2	0.054	0.19	6.0	8.0	10.20	902	14.75	0.02	0.8	299	320
W842097		4.63	1.53	0.08	0.1	0.068	0.18	4.8	8.1	11.40	2430	11.25	0.02	0.7	231	300
W842098		3.45	1.15	0.07	0.1	0.021	0.15	4.1	6.7	11.95	1360	11.20	0.01	0.4	161.0	270
W842099		3.07	1.31	0.09	0.1	0.045	0.11	3.8	5.9	12.55	1700	25.3	0.02	0.4	118.0	180
W842100		8.17	1.19	0.08	0.1	0.150	0.13	6.7	5.4	11.15	1740	22.3	0.01	0.4	224	190
W842101		2.77	1.75	0.05	0.2	0.031	0.27	5.4	8.7	10.85	833	5.10	0.03	1.5	77.4	230
W842102		8.93	0.33	<0.05	<0.1	0.015	0.03	4.3	2.3	11.00	1930	10.85	0.01	0.1	243	100
W842103		4.61	0.38	<0.05	<0.1	0.013	0.05	3.5	3.2	12.15	1160	6.35	0.01	0.1	129.0	90
W842104		1.11	0.38	0.07	<0.1	0.011	0.06	2.2	4.1	13.25	574	4.54	0.01	0.1	33.7	70

***** 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
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: 15-JUL-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19160960

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
W842093		23.1	94.1	0.007	0.09	6.87	7.2	2	2.4	75.0	0.51	0.09	4.30	0.270	2.72	3.9
W842094		50.6	73.0	0.006	0.13	8.68	5.6	3	1.8	60.0	0.41	0.06	4.08	0.194	2.60	5.4
W842095		11.2	62.3	0.004	0.15	2.53	4.7	2	1.8	47.2	0.35	0.06	3.66	0.167	2.16	3.9
W842096		21.7	37.1	0.004	<0.01	3.30	1.0	4	4.5	99.1	0.06	<0.05	0.66	0.024	1.48	2.8
W842097		21.5	38.7	0.005	<0.01	4.04	0.9	4	7.4	111.5	0.05	<0.05	0.61	0.022	4.40	2.8
W842098		11.7	33.0	0.005	<0.01	2.57	0.6	3	2.7	114.5	<0.05	<0.05	0.43	0.014	1.52	2.5
W842099		14.7	26.5	0.011	<0.01	3.47	0.6	3	3.0	132.5	<0.05	<0.05	0.46	0.012	1.86	3.0
W842100		53.2	29.0	0.006	0.03	10.00	0.6	6	8.2	115.5	<0.05	0.05	0.44	0.013	1.52	4.1
W842101		6.8	22.4	0.004	0.01	1.77	1.3	1	1.3	120.5	0.10	<0.05	0.96	0.039	0.95	2.4
W842102		7.6	3.7	0.002	<0.01	1.86	0.3	3	0.9	116.5	<0.05	<0.05	0.15	<0.005	1.01	3.4
W842103		4.5	5.5	0.002	<0.01	1.26	0.3	2	0.7	140.5	<0.05	<0.05	0.16	<0.005	0.63	2.1
W842104		3.3	7.4	0.003	<0.01	0.66	0.2	1	0.5	164.0	<0.05	<0.05	0.10	<0.005	0.31	1.1

***** See Appendix Page for comments regarding this certificate *****

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CERTIFICATE OF ANALYSIS WH19160960

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	V	W	Y	Zn	Zr
	Units	ppm	ppm	ppm	ppm	ppm
	LOD	1	0.1	0.1	2	0.5
W842093		213	4.7	12.5	723	44.8
W842094		190	4.7	15.5	1020	43.7
W842095		185	5.1	10.9	491	36.8
W842096		38	5.3	28.4	6320	5.6
W842097		36	10.0	20.5	4430	4.9
W842098		28	12.9	17.9	3090	3.6
W842099		26	43.5	13.7	2530	3.5
W842100		24	26.2	24.7	7140	3.9
W842101		42	5.1	9.2	1940	9.8
W842102		9	4.1	29.0	8240	1.1
W842103		9	4.0	16.8	3960	1.3
W842104		6	3.2	5.5	807	0.9

***** See Appendix Page for comments regarding this certificate *****

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Account: RCM

CERTIFICATE OF ANALYSIS WH19160960

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	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-AA25	ME-MS61

APPENDIX XII

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

2019 Drill Core Sampling Methods, Sample Analysis, Data Verification and QA/QC Results

Geotechnical and geological logging was performed on all drill core from the 2019 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.

All logged data was entered 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) Intervals of core deemed to hold promise of mineralization were sawn in half using a rock saw and the remainder left unsampled.
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) 1 blank and 2 standards were randomly included in every batch of 35 core samples.
9) 1 quarter-split sample was included in every batch of 35 core samples.
10) 1 coarse reject duplicate sample was included in every batch of 35 core samples.

Care was taken to ensure that the sample splits were 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 Rau Camp. The samples were later flown by helicopter to the Rau 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 fine crushed before a 250 g split was pulverized to better than 85% passing 75 microns. Samples from Tiger drilling had an additional "wash" step which involved cleaning the crusher and pulverizer with barren quartz sand between samples to reduce potential for oxide material contamination. Splits of the pulverized material were analyzed by ME-MS61, which uses a four acid digestion and analysis for 48 elements by inductively coupled plasma (ICP) together with mass spectrometry (MS) and atomic emission spectroscopy (AES). Samples from Tiger drilling were assayed for gold by Au-AA26, which takes a 50 g charge and prepares it by fire assay before being finished with atomic absorption spectroscopy (AAS). Samples from other drilling were assayed for gold by Au-AA25, which takes a 30 g charge and prepares it by fire assay before being finished with atomic absorption spectroscopy (AAS).

Overlimit values for zinc, copper, silver, lead, and arsenic were re-analyzed by the ME-OG62 technique which utilizes a four acid digestion followed by an ICP-AES finish. Overlimit values for silver determined by the ME-OG62 method were re-analyzed using the Ag-GRA21 method, which involves fire assay preparation using a 30 gram charge and a gravimetric finish. Overlimit values for lead determined by the ME-OG62 method were re-analyzed using the Pb-VOL70 method, which uses a four acid digestion and volumetric titration. Overlimit values for zinc determined by the ME-OG62 method were re-analyzed using the Zn-VOL50 technique, which uses a four acid digestion and potentiometric titration. Overlimit values for tin were re-analyzed by the ME-MS85 method, which uses a lithium borate fusion followed by ICP-MS. Over limit gold analysis were run with the Au-GRA21 method, which involves fire assay with a gravimetric finish.

DATA VERIFICATION

Database

Geological and geotechnical logging in 2019 was entered directly into a MS SQL Server® database.

Collar Locations

Tiger drill hole collars were located and recorded using a Leica RTK GPS system. All other drill collars were located with a handheld Garmin GPS.

Down-hole Orientations

Original survey data was obtained from Reflex survey tools in CSV format and 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 samples were re-submitted for assay.
5) Sample blanks: commercial samples of barren rock 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 approximately 5 kg 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 considered matrix compatible and certified for gold were used for drilling at Tiger. For all other drilling, standards prepared by Archer Cathro from coarse rejects at a previous copper gold skarn project, and certified by an independent laboratory, were used.

The consensus and two standard deviation values for each of the standard samples used during the 2019 program are provided below, and the certificates follow.

2019 Standards

Standard Name	Gold Grade (g/t)	Gold 2Sigma (g/t)	Copper Grade* (ppm)	Copper 2Sigma* (ppm)
G306-3	8.66	0.66	-	-
G912-7	0.42	0.04	-	-

G999-4	3.02	0.34	-	-
ML-1	0.332	0.026	820	80
ML-2	0.787	0.040	3,470	180
ML-3	1.66	0.068	6,560	320
ML-4	1.18	0.10	12,390	420
ML-5	2.43	0.13	4,270	260

* A dash indicates the standard was not certified for copper.

Of the 35 batches analyzed in 2019, one batch failed the QA/QC program due to a standard returning a gold value above the acceptable grade. This batch was reanalyzed and returned acceptable gold values for the problem standards.

APPENDIX XIII

DIAMOND DRILLING – COLLAR INFORMATION, GEOLOGICAL, GEOTECHNICAL AND SAMPLE LOGS

Tiger - Rau

Archer,Cathro & Associates (1981) Limited

Grid East	Grid North	Easting	Northing	Elevation	Depth (m)
		528570	7118931	1275.939	78.64

ZONE: Tiger

SECTION:

HOLE: RAU-19-163

CLAIM:

Contractor: Superior

Drill: 6

Core Size: HQ3

Casing Depth:

Drilling Dates: Sep 20 - Sep 23, 2019

Geology Logged By: A. Coulter

SURVEY			
Depth (m)	Azimuth	Dip	Method
0	227.8	-50	Compass
78.64	228.1	-50.9	Reflex

TARGET:

SUMMARY			
From (m)	To (m)	Interval (m)	Rock Type
0	2.44	2.44	OVB
2.44	13.74	11.3	LST
13.74	14.32	0.58	OX
14.32	16.15	1.83	LST
16.15	19.1	2.95	OX
19.1	20.07	0.97	VOL
20.07	23.77	3.7	OX
23.77	26.05	2.28	LST
26.05	26.82	0.77	VOL
26.82	30.1	3.28	OX
30.1	30.34	0.24	LST
30.34	32.92	2.58	OX
32.92	43.55	10.63	LST
43.55	44.91	1.36	OX
44.91	78.64	33.73	MBL

SAMPLES	
Numbers:	W843301 to W843335
Total:	35
Batch:	D29
Certificates:	WH19249579, WH19278794

COMMENTS

The hole was ended 30m into barren marble at target depth.

RAU-19-163

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
0.00	2.44	2.44	OVB	--	0 - 1.94 m no recovery. Black mush with organics in it till 2.44 m.							
2.44	13.74	11.30	LST	--	Weak to moderately oxidized light to dark grey limestone. Some primary bedding observed from 5.5-9.5 m. Core is mostly competent but reduced to rubble in places. Trace brown oxide in rubble sections and in top 2 m of interval. Thick ~5 cm dolomite-quartz from near parallel to core axis from 10.5 - 10.9 m. A similar looking 6 cm dolomite vein perpendicular to core axis at 12.71 m. Veins display oxidized margins. ~3 cm clean white quartz vein reduced to rubble at 13.75 m just before small oxide section begins. Weak to moderate HCL reaction throughout. Non-magnetic. Unconformable upper contact with overburden. Exact contact is difficult to determine as there is also some near surface oxide.							
13.74	14.32	0.58	OX	--	Bright orange to darker orange-brown non-calcareous oxide that is reduced to rubble in the upper part of the section and has a more competent piece of oxide in the last 5cm. Some dark grey limestone rubble in middle of interval. Oxide runs ~700 ppm arsenic on the XRF. Sharp upper contact with more competent limestone and has ~3 cm thick clean white quartz vein that is also reduced to rubble.							
14.32	16.15	1.83	LST	--	Moderately oxidized grey to rusty orange limestone interval with thin oxide interval from 14.95-15.02 m. Core is mostly competent other than thin oxide interval which is reduced to rubble. Chaotic dolomite-quartz veining throughout interval and is as thick as the core diameter in places. 1% cubic fully oxidized mineral throughout, likely was pyrite prior to oxidation. Moderate HCL reaction. Non-magnetic. Sharp upper contact with oxide interal.							

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
16.15	19.10	2.95	OX	--	Deep red to orange-brown calcareous rubbly oxide. Trace fresh pyrite observed in orange oxide at 18.15 m. 17 cm long piece of highly oxidized and competent limestone at 18 m. Moderate HCL reaction throughout. Non-magnetic. Sharp upper contact with oxidized limestone.							
19.10	20.07	0.97	VOL	--	Thin ~1 m interval of grey calcareous sericitized lapilli tuff that is mostly reduced to rubble but has few pieces of competent core. Lapilli are black and aphanitic and range in size from a few mm's up to 2 cm. Strong HCL reaction throughout. Non-magnetc. Sharp upper contact with orange oxide.							
20.07	23.77	3.70	OX	--	Grey to orange-brown calcareous rubbly oxide. One piece of competent orange oxide from 20.73 - 20.91 m. Few small <10 cm pieces competent limestone, otherwise core is reduced to rubble. Gradational upper contact with volcanic horizon. Perhaps some of the more grey oxide has a volcanic protolith. Moderate to strong HCL reaction throughout. Non-magnetic.							
23.77	26.05	2.28	LST	--	Weak to moderately oxidized light to dark grey limestone. Core is mostly competent but reduced to rubble in places with trace oxide. Quartz vein rubble observed at 25.25 m. Few calcite observed up to 2cm thick from 25.30 - 26.05 m. Weak-moderate HCL reaction throughout. Non-magnetic. Sharp upper contact with oxide.							
26.05	26.82	0.77	VOL	--	Thin ~1 m interval of grey calcareous sericitized lapilli tuff that is mostly reduced to rubble but has few pieces of competent core. Lapilli are black and aphanitic and range in size from a few mm's up to 2 cm. Strong HCL reaction throughout. Non-magnetc. Sharp upper contact with LST.							

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
26.82	30.10	3.28	OX	--	Deep red to orange, weakly to strongly calcareous rubbly oxide. Up to 0.3% As on the XRF in this section. Few pieces of competent yet strongly oxidized limestone. Some dark purple to red porous limonite from 28.5 - 29.0 m. Non-magnetic. Sharp upper contact with volcanic.							
30.10	30.34	0.24	LST	--	Small 30cm light to dark grey foliated limestone. Overall fairly fresh in appearance with little to no oxidation. Strong HCL reaciotn. Non-magnetic. Sharp upper contact with orange oxide.							
30.34	32.92	2.58	OX	--	Choclately brown to orange, strongly calcareous oxide. Core is friable but mostly solid and reduced to rubble in only a few small secitons. Up to 0.5% As on the XRF in this section. Few dark orange oxide clasts within otherwise massive orange oxide. Strong HCL reaction throughout. Non-magnetic. Sharp upper contact with small competent limestone interval.							
32.92	43.55	10.63	LST	--	Light to dark grey weakly foliated and veined limestone interaval. Core is mostly competent throughout interval but is rubbly in minor intervals. Foliation is defined by black and white striping. Some chaotic black dolomite veining in places. Weak to moderate marblization in places. Strong HCL throughout. Non-magnetic. Sharp upper contact with orange oxide.							
43.55	44.91	1.36	OX	--	Bright orange weakly calcareous oxide. Up to 2% As on the XRF in this seciton. Core is reduced to residual soil/muck. Few pieces of small 1-2 mm purple fragments within otherwise massive orange oxide soil (residual sulphides?). Weak HCL reaction throughout. Non-magnetic. Sharp upper contact with limestone.							

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
44.91	47.66	2.75	MBL	FG	Weakly oxidized and dolomitized light grey to brown marble interval at contact with oxide. Fairly pervasive dolomitization (and weak silicification?) from 46.40-47.66 m with roughly 1% partially oxidized pyrite. Thin ~5mm quartz veins throughout this interval as well with trace fully oxidized sulphide in them (likely pyrite?). Trace bismuthanite observed at 47.20 m. Rubble zone from 45.30- 45.85 m with some oxide development on joints. Weak to moderate HCL reaction throughout. Non-magnetic. Sharp upper contact with red oxide.							
47.66	59.00	11.34	MBL	FG	Light and dark grey foliated marble. Appears as black and white stripped marble. Some small intervals grade to more massive white marble. Thin ~5mm thick oxide development on joint at 52.95 m. Strong HCL reaction. Non-magnetic. Gradational upper contact with more altered marble.							
59.00	78.64	19.64	MBL	FG	Massive white marble that would make for great blank material. Some thin grey beds remain in marble but mostly massive white. Light red hue to marble from 65.0-65.5 and 78.0-78.5 m due to thin red coating on fractured surfaces. Strong HCL reaciton throughout. Non-magnetic. Gradational upper contact with foliated marble.							

RAU-19-163

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
0.00	1.94	1.94	0	0	0.00	0	--	--	--	No recovery
1.94	2.44	0.50	0.5	100	0.00	0	--	--	6W	Overburden
2.44	3.96	1.52	0.88	58	0.00	0	3R	2H	5W	
3.96	5.49	1.53	0.35	23	0.00	0	2R	--	5W	
5.49	7.01	1.52	1.27	84	0.50	33	3R	3H	4W	
7.01	8.53	1.52	1.03	68	0.30	20	4R	3H	4W	
8.53	10.06	1.53	1.43	93	0.61	40	4R	3H	4W	
10.06	11.58	1.52	1.21	80	0.74	49	3R	4H	4W	
11.58	13.11	1.53	1.42	93	1.17	76	3R	4H	2W	
13.11	14.63	1.52	1.47	97	0.82	54	2R	4H	3W	
14.63	16.15	1.52	1.43	94	1.00	66	3R	3H	3W	
16.15	17.68	1.53	1.5	98	0.00	0	3R	1H	5W	
17.68	19.20	1.52	1.5	99	0.15	10	4R	1H	6W	
19.20	20.73	1.53	1	65	0.00	0	4R	2H	6W	
20.73	22.25	1.52	0.93	61	0.12	8	3R	2H	5W	
22.25	23.77	1.52	1.06	70	0.12	8	3R	2H	4W	
23.77	25.30	1.53	0.66	43	0.18	12	4R	3H	4W	
25.30	26.82	1.52	0.8	53	0.38	25	4R	3H	3W	
26.82	28.34	1.52	0.7	46	0.26	17	2R	2H	5W	
28.34	29.87	1.53	1.05	69	0.37	24	2R	1H	5W	
29.87	31.39	1.52	1.02	67	0.10	7	3R	1H	5W	
31.39	32.92	1.53	1.34	88	0.14	9	2R	1H	5W	
32.92	34.44	1.52	1.01	66	0.88	58	4R	3H	2W	
34.44	35.97	1.53	1.27	83	1.16	76	4R	3H	2W	
35.97	37.49	1.52	0.95	63	0.66	43	4R	3H	2W	
37.49	39.01	1.52	0.98	64	0.43	28	4R	3H	2W	
39.01	40.54	1.53	1.24	81	0.56	37	4R	3H	3W	
40.54	42.06	1.52	0.73	48	0.14	9	4R	3H	2W	
42.06	43.59	1.53	1.37	90	0.59	39	4R	3H	3W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
43.59	45.11	1.52	1.3	86	0.14	9	1R	1H	6W	
45.11	46.63	1.52	1.42	93	0.83	55	3R	2H	3W	
46.63	48.16	1.53	1.53	100	1.42	93	2R	2H	3W	
48.16	49.68	1.52	1.52	100	1.18	78	4R	3H	2W	
49.68	51.21	1.53	1.53	100	1.40	92	4R	4H	2W	
51.21	52.73	1.52	1.41	93	0.78	51	4R	4H	2W	
52.73	54.25	1.52	1.52	100	1.45	95	3R	3H	3W	
54.25	55.78	1.53	1.5	98	1.21	79	4R	4H	2W	
55.78	57.30	1.52	1.45	95	1.43	94	4R	4H	2W	
57.30	58.83	1.53	1.53	100	1.49	97	4R	4H	2W	
58.83	60.35	1.52	1.52	100	1.52	100	4R	4H	1W	
60.35	61.87	1.52	1.36	89	1.36	89	4R	3H	2W	
61.87	63.40	1.53	1.53	100	1.47	96	4R	4H	1W	
63.40	64.92	1.52	1.52	100	1.42	93	4R	3H	2W	
64.92	66.45	1.53	1.53	100	1.40	92	4R	4H	2W	
66.45	67.97	1.52	1.37	90	1.24	82	4R	4H	1W	
67.97	69.49	1.52	1.52	100	1.52	100	4R	4H	1W	
69.49	71.02	1.53	1.5	98	1.50	98	4R	4H	1W	
71.02	72.54	1.52	1.52	100	1.52	100	4R	4H	1W	
72.54	74.07	1.53	1.43	93	1.43	93	4R	5H	1W	
74.07	75.59	1.52	1.52	100	1.52	100	4R	5H	1W	
75.59	77.11	1.52	1.52	100	1.52	100	4R	4H	1W	
77.11	78.64	1.53	1.53	100	1.53	100	4R	4H	2W	

RAU-19-163

Rau Archer,Cathro & Associates (1981) Limited
Tiger Zone

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	W843310	☐	R19-D29	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W843325	☐	R19-D29	Core	G999-4	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W843308	☐	R19-D29	Core	G306-3	☐	☐	☐
1.94	2.44	0.50	OVB	0.50	100	W843301	☐	R19-D29	Core		☐	☐	☐
2.44	5.49	3.05	LST, OVB	1.23	40	W843302	☐	R19-D29	Core		☐	☐	☐
5.49	8.53	3.04	LST	2.30	76	W843303	☐	R19-D29	Core		☐	☐	☐
8.53	11.58	3.05	LST	2.64	87	W843304	☐	R19-D29	Core		☐	☐	☐
11.58	13.75	2.17	LST	2.05	94	W843305	☐	R19-D29	Core		☐	☐	☐
13.75	14.30	0.55	OX	0.39	71	W843306	☐	R19-D29	Core		☐	☐	☐
14.30	16.15	1.85	OX	1.64	89	W843307	☐	R19-D29	Core		☐	☐	☐
16.15	19.20	3.05	LST, OX	3.00	98	W843309	☐	R19-D29	Core		☐	☐	☐
19.20	20.73	1.53	VOL	1.00	65	W843311	☐	R19-D29	Core		☐	☐	☐
20.73	23.77	3.04	OX	1.99	65	W843312	☐	R19-D29	Core		☐	☐	☐
23.77	26.82	3.05	OX, LST	1.46	48	W843313	☐	R19-D29	Core		☐	☐	☐
26.82	29.87	3.05	OX, VOL	1.75	57	W843314	☐	R19-D29	Core		☐	☐	☐
29.87	32.92	3.05	OX	2.36	77	W843315	☐	R19-D29	Core		☐	☐	☐
29.87	32.92	3.05	OX	2.36	77	W843316	☐	R19-D29	Core		☐	☐	☑
32.92	35.97	3.05	LST, OX	2.28	75	W843317	☐	R19-D29	Core		☐	☐	☐
35.97	39.01	3.04	LST	1.93	63	W843318	☐	R19-D29	Core		☐	☐	☐
39.01	42.06	3.05	LST	1.97	65	W843319	☐	R19-D29	Core		☐	☐	☐
42.06	43.55	1.49	LST	1.20	81	W843320	☐	R19-D29	Core		☐	☐	☐
43.55	44.88	1.33	LST, OX	1.10	83	W843321	☐	R19-D29	Core		☐	☐	☐
44.88	47.66	2.78	OX	2.52	91	W843322	☐	R19-D29	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
47.66	49.68	2.02	MBL	1.95	97	W843323	☐	R19-D29	Core		☐	☐	☐
49.68	52.73	3.05	MBL	2.94	96	W843324	☐	R19-D29	Core		☐	☐	☐
52.73	55.78	3.05	MBL	3.02	99	W843326	☐	R19-D29	Core		☐	☐	☐
55.78	58.83	3.05	MBL	2.98	98	W843327	☐	R19-D29	Core		☐	☐	☐
58.83	61.87	3.04	MBL	2.88	95	W843328	☐	R19-D29	Core		☐	☐	☐
61.87	64.92	3.05	MBL	3.05	100	W843329	☐	R19-D29	Core		☐	☐	☐
64.92	67.97	3.05	MBL	2.90	95	W843330	☐	R19-D29	Core		☐	☐	☐
67.97	71.02	3.05	MBL	3.02	99	W843331	☐	R19-D29	Core		☐	☐	☐
71.02	74.07	3.05	MBL	2.95	97	W843332	☐	R19-D29	Core		☐	☐	☐
74.07	77.11	3.04	MBL	3.04	100	W843333	☐	R19-D29	Core		☐	☐	☐
77.11	78.64	1.53	MBL	1.53	100	W843334	☐	R19-D29	Core		☐	☐	☐
77.11	78.64	1.53	MBL	1.53	100	W843335	☐	R19-D29	Core		☐	☑	☐

Sample Results

Archer, Cathro & Associates (1981) Limited

Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
R19-D29	W843310	0.00	0.00	0.01	0	2	0	5.0	0	0.05	☐	☐	☑	☐	
R19-D29	W843308	0.00	0.00	8.39	23	17	5	34.0	1	0.40	☐	☐	☐	☑ G306-3	
R19-D29	W843325	0.00	0.00	3.15	2	1100	255	395.0	3	43.20	☐	☐	☐	☑ G999-4	
		0.00	1.94								☐	☐	☐	☐	
R19-D29	W843301	1.94	2.44	0.76	10	218	44	404.0	7	40.60	☐	☐	☐	☐	
R19-D29	W843302	2.44	5.49	0.10	1	53	12	511.0	2	15.80	☐	☐	☐	☐	
R19-D29	W843303	5.49	8.53	0.01	0	3	4	61.0	0	0.40	☐	☐	☐	☐	
R19-D29	W843304	8.53	11.58	0.01	1	4	33	765.0	3	4.10	☐	☐	☐	☐	
R19-D29	W843305	11.58	13.75	0.01	0	2	19	206.0	2	0.50	☐	☐	☐	☐	
R19-D29	W843306	13.75	14.30	0.08	2	18	86	1180.0	21	11.90	☐	☐	☐	☐	
R19-D29	W843307	14.30	16.15	0.02	0	4	33	247.0	8	1.40	☐	☐	☐	☐	
R19-D29	W843309	16.15	19.20	0.14	4	5	103	575.0	10	12.80	☐	☐	☐	☐	
R19-D29	W843311	19.20	20.73	0.23	1	8	27	257.0	12	11.90	☐	☐	☐	☐	
R19-D29	W843312	20.73	23.77	0.12	1	10	33	316.0	5	25.60	☐	☐	☐	☐	



Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
R19-D29	W843313	23.77	26.82	0.02	1	3	11	258.0	2	0.90	☐	☐	☐	☐	
R19-D29	W843314	26.82	29.87	0.20	2	4	102	775.0	3	22.80	☐	☐	☐	☐	
R19-D29	W843315	29.87	32.92	0.26	0	5	7	94.0	1	98.60	☐	☐	☐	☐	
R19-D29	W843316	29.87	32.92	0.26	0	5	7	95.0	1	89.00	☐	☑	☐	☐	
R19-D29	W843317	32.92	35.97	0.01	0	1	2	12.0	0	0.40	☐	☐	☐	☐	
R19-D29	W843318	35.97	39.01	0.02	0	2	2	27.0	0	0.30	☐	☐	☐	☐	
R19-D29	W843319	39.01	42.06	0.01	0	2	3	31.0	0	0.40	☐	☐	☐	☐	
R19-D29	W843320	42.06	43.55	0.02	0	2	3	41.0	0	1.30	☐	☐	☐	☐	
R19-D29	W843321	43.55	44.88	0.51	7	17	209	2930.0	6	26.80	☐	☐	☐	☐	
R19-D29	W843322	44.88	47.66	0.27	0	54	47	448.0	2	4.10	☐	☐	☐	☐	
R19-D29	W843323	47.66	49.68	0.02	0	37	6	62.0	1	0.70	☐	☐	☐	☐	
R19-D29	W843324	49.68	52.73	0.01	0	2	1	12.0	0	0.20	☐	☐	☐	☐	
R19-D29	W843326	52.73	55.78	0.01	0	2	2	30.0	0	0.10	☐	☐	☐	☐	
R19-D29	W843327	55.78	58.83	0.01	0	1	1	19.0	0	0.20	☐	☐	☐	☐	
R19-D29	W843328	58.83	61.87	0.01	0	1	1	9.0	0	0.05	☐	☐	☐	☐	

Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
R19-D29	W843329	61.87	64.92	0.01	0	1	1	10.0	0	0.10	☐	☐	☐	☐	
R19-D29	W843330	64.92	67.97	0.01	0	1	1	28.0	0	0.05	☐	☐	☐	☐	
R19-D29	W843331	67.97	71.02	0.01	0	1	1	11.0	0	0.05	☐	☐	☐	☐	
R19-D29	W843332	71.02	74.07	0.01	0	1	1	7.0	0	0.05	☐	☐	☐	☐	
R19-D29	W843333	74.07	77.11	0.01	0	2	1	7.0	0	0.10	☐	☐	☐	☐	
R19-D29	W843334	77.11	78.64	0.01	0	1	1	11.0	0	0.05	☐	☐	☐	☐	
R19-D29	W843335	77.11	78.64	0.01	0	2	1	8.0	0	0.05	☑	☐	☐	☐	



Tiger - Rau

Archer,Cathro & Associates (1981) Limited

Grid East	Grid North	Easting	Northing	Elevation	Depth (m)
		528571	7118931	1276.022	92.05

ZONE: Tiger

SECTION:

HOLE: RAU-19-164

CLAIM:

Contractor: Superior

Drill: 6

Core Size: NQ

Casing Depth:

Drilling Dates: Sep 23 - Sep 26, 2019

Geology Logged By: A. Coulter

SURVEY			
Depth (m)	Azimuth	Dip	Method
0	228	-70	Compass
92.05	224.6	-69.9	Reflex

TARGET:

SUMMARY			
From (m)	To (m)	Interval (m)	Rock Type
0	3.2	3.2	OVB
3.2	6.4	3.2	LST
6.4	8.45	2.05	VOL
8.45	16.72	8.27	LST
16.72	23.93	7.21	OX
23.93	25.6	1.67	VOL
25.6	34.5	8.9	LST
34.5	49.38	14.88	OX
49.38	53.1	3.72	LST
53.1	53.95	0.85	OX
53.95	58.72	4.77	LST
58.72	60.13	1.41	OX
60.13	63.19	3.06	LST
63.19	72.55	9.36	OX
72.55	92.05	19.5	MBL

SAMPLES	
Numbers:	W843336 to W843384
Total:	49
Batch:	D29, D30, D31
Certificates:	WH19249579, WH19249580, WH19255444, WH19278798

COMMENTS

The hole was ended 20m into barren marble at target depth.

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	--	0-3.15 no recovery. 5cm of mud and rounded cobbles before solid rock.							
3.20	3.45	0.25	LST	FG	Light grey fine grained fairly competent limestone. Fiarly wavy primary bedding features. Strong HCL reaction. Non-magnetic. Unconformable upper contact with overburden.							
3.45	4.97	1.52	OX	FG	Light orange to brown oxide. Core is mostly reduced to angular rubble. One piece of more competent core at end of interval contains small <5mm sub-rounded quartz clasts in an otherwise massive orange matrix observed on the microscope. No HCL reaction. Non-magnetic. Sharp upper contact with limestone.							
4.97	5.90	0.93	LST	FG	Light grey fine grained fairly competent limestone. Planar bedding throughout, one thin ~1cm bed appears to be replaced with oxide high in the section. Strong HCL reaction. Non-magnetic. Sharp upper contact with oxide.							
5.90	6.40	0.50	OX	FG	Light orange to brown oxide. Core is mostly reduced to angular rubble. One piece of more competent core at end of interval contains small <5mm sub-rounded quartz clasts and is overall fairly pitted in an otherwise massive orange matrix observed on the microscope. No HCL reaction. Non-magnetic. Sharp upper contact with limestone.							
6.40	8.45	2.05	VOL	FG	Thinly bedded fine grained soft non-calcareous Volcanic. Volcanic is grey on the fresh surface and orange on the weathered surface. Core is all rubble other than one small piece of competent limestone from 7.88-8.00m. Almost looks like shale in places as it is fairly fissile. No HCL reaction throughout other than the small piece of limestone. Non-magnetic. Sharp upper contact with oxide.							

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
8.45	16.72	8.27	LST	FG	Intermittent Limestone and oxide interval. Approximately 70% limestone with 30% oxide. Many small ~10 cm sections of brown-orange oxide every ~1-2 m throughout interval. Oxide is mostly orange rubble-muck while limestone is all very competent. Limestone is light-dark grey bedded with highly variable bedding. Most bedding is fairly chaotic and is planar in some places. Strong HCL reaction in limestone and weak to moderate HCL reaciton in oxide. Sharp upper contact with mudstone.							
16.72	23.93	7.21	OX	FG	Intermittent oxide and limestone interval. Approximately 70% oxide with 30% limestone. Oxide is mostly orange to brown rubble-soil while limestone is all very competent. Many small pieces of <15 cm limestone core. Limestone is light-dark grey bedded with highly variable bedding. Most bedding is fairly chaotic while bedding can be planar in places. Strong HCL reaction in limestone and weak to moderate HCL reaciton in oxide. Sharp upper contact with limestone.							
23.93	25.60	1.67	VOL	FG	Thin ~1 m interval of grey-green calcareous sericitized lapilli tuff that is mostly reduced to rubble but has few pieces of competent core. Lapilli are black and aphanitic and range in size from a few mm's up to 2 cm. Few small rounded oxidized fragments, posssibly oxidized lapilli? Strong HCL reaction throughout. Non-magnetc. Sharp upper contact with oxide.							
25.60	34.50	8.90	LST	FG	Variable light to dark grey limestone that grades to marble in places. Intersting 1-4 cm thick oxidized vein (?) from 29.57-30.50 m. Beddding is chaotic throughout most of interval but is planar around 32.5-33.0 m. Grades to marble from 28-29 and 31.5-32.5 m. Strong HCL reaction throughout. Non-magnetic. Sharp upper contact with thin volcanic horizon.							

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
34.50	49.38	14.88	OX	FG	Intermittent oxide and limestone interval with very poor recovery. Likely was signifcantly more oxide here!! Approximately 70% oxide with 30% limestone. Oxide is mostly bright orange-red to brown rubble-soil while limestone is all very competent. Few competent pieces of oxide core. Many small pieces of <15 cm limestone core. Limestone is light-dark grey bedded with highly variable bedding. Most bedding is fairly chaotic while bedding can be planar in places. Strong HCL reaction in limestone and weak to moderate HCL reaciton in oxide. Sharp upper contact with mudstone.							
49.38	53.10	3.72	LST	FG	Weakly oxidized light to dark grey limestone that grades to marble in places. Beddding is chaotic throughout most of interval but can be planar. Top 1 m of section is weakly oxidized. Strong HCL reaction throughout. Non-magnetic. Gradational upper contact with oxide.							
53.10	53.95	0.85	OX	FG	Small ~1m section of bright red calcareous oxide. Small ~1-2mm quartz fragments visible on the microscope in an otherwise massive orange oxide. Strong HCL reaction. Non-magnetic. Sharp upper contact with limestone.							
53.95	58.72	4.77	LST	FG	Variable light to dark grey limestone that grades to marble in places. Bedding is mostly planar and near parallel to core axis. Grades to marble lower in the section. Strong HCL reaction throughout. Non-magnetic. Sharp upper contact with thin oxide horizon.							
58.72	60.13	1.41	OX	FG	Small ~1m section of bright red calcareous oxide. Interesting lower contact with limestone that has angular clasts of limestone within oxide. Strong HCL reaction. Non-magnetic. Sharp upper contact with limestone.							
60.13	63.19	3.06	LST	FG	Variable light to dark grey competent limestone. Bedding is mostly chaotic but is planar in places. Strong HCL reaction throughout. Non-magnetic. Interesting upper contact with oxide, it is sharp, however, contains angular clasts of the limestone in the oxide.							

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
63.19	72.55	9.36	OX	FG	Bright orange to deep red non-calcareous massive oxide. The XRF consistently gave ~2% As values throughout the interval and was up to 5% in a darker black oxide near the top of the interval. Core is mixed between more competent sections that appear almost limonitic while the remainder of the core is reduced to an orange soil. No HCL reaction. Non-mag. Sharp upper contact with limestone, oxide is fairly pitted at upper contact.							
72.55	92.05	19.50	MBL	FG	Variable clean white marble to bedded limestone. Majority of interval is marble; however, some parts of interval have remnant limestone. Limestone is typically planaly bedded and weakly marbilized. Joint surfaces are all fairly red and weakly oxidized. Weak oxidation pervasive into marble around some joints. Strong HCL reaction throughout. Non-mag. Sharp upper contact with oxide, contact is rubble.							

RAU-19-164

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
0.00	2.13	2.13	0	0	0.00	0	--	--	--	No recovery.
2.13	3.66	1.53	0.89	58	0.10	7	4R	2H	4W	
3.66	5.18	1.52	0.42	28	0.00	0	1R	3H	5W	
5.18	6.70	1.52	1	66	0.29	19	4R	3H	4W	
6.70	8.23	1.53	1.53	100	0.00	0	1R	--	5W	Chips of oxidized rubble
8.23	9.75	1.52	1.52	100	0.68	45	3R	3H	4W	
9.75	11.28	1.53	1.02	67	0.49	32	4R	3H	3W	
11.28	12.80	1.52	1.52	100	1.03	68	4R	3H	3W	
12.80	14.32	1.52	1.52	100	0.51	34	4R	4H	2W	
14.32	15.85	1.53	1.32	86	0.73	48	4R	4H	2W	
15.85	17.37	1.52	1.52	100	0.68	45	4R	3H	3W	
17.37	18.90	1.53	1.28	84	0.12	8	4R	2H	5W	
18.90	20.42	1.52	0.76	50	0.28	18	4R	3H	4W	
20.42	21.95	1.53	1.05	69	0.55	36	4R	3H	4W	
21.95	23.47	1.52	1.27	84	0.33	22	1R	1H	5W	
23.47	24.99	1.52	1.52	100	0.37	24	3R	2H	5W	
24.99	26.52	1.53	1.42	93	0.53	35	4R	3H	4W	
26.52	28.04	1.52	1.52	100	1.13	74	4R	2H	4W	
28.04	29.57	1.53	1.52	99	0.95	62	4R	4H	2W	
29.57	31.09	1.52	1.42	93	0.70	46	4R	3H	3W	
31.09	32.61	1.52	1.52	100	1.29	85	4R	5H	2W	
32.61	34.14	1.53	0.68	44	0.16	10	4R	4H	4W	Drillers encountered a void of unknown size
34.14	35.66	1.52	1.22	80	0.00	0	4R	3H	4W	
35.66	37.19	1.53	1.13	74	0.17	11	4R	2H	5W	
37.19	38.71	1.52	0.8	53	0.28	18	4R	1H	6W	
38.71	40.23	1.52	0.94	62	0.33	22	3R	1H	6W	
40.23	41.76	1.53	0.36	24	0.18	12	4R	5H	2W	Extremely poor recovery. Only some limestone chunks remain. Highly likely oxide interval lost.

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
41.76	43.28	1.52	0.59	39	0.31	20	4R	3H	4W	Very poor recovery. Only some altered limestone and small remnant oxide left. Likey significant oxide lost.
43.28	44.81	1.53	0.7	46	0.27	18	4R	1H	5W	Poor recovery. Likely significant oxide lost
44.81	46.33	1.52	0.98	64	0.45	30	4R	3H	5W	
46.33	47.85	1.52	1.35	89	0.46	30	4R	1H	6W	
47.85	49.38	1.53	0.65	42	0.00	0	3R	1H	6W	
49.38	50.90	1.52	1.11	73	0.68	45	4R	2H	4W	
50.90	52.43	1.53	0.9	59	0.27	18	4R	5H	2W	
52.43	53.95	1.52	0.83	55	0.25	16	4R	2H	5W	
53.95	55.47	1.52	0.73	48	0.24	16	4R	5H	2W	
55.47	57.00	1.53	1.53	100	1.29	84	4R	5H	1W	
57.00	58.52	1.52	0.72	47	0.00	0	4R	4H	3W	
58.52	60.05	1.53	1.25	82	0.13	8	4R	2H	5W	
60.05	61.57	1.52	1.09	72	0.88	58	4R	3H	4W	
61.57	63.09	1.52	1.37	90	0.97	64	4R	5H	2W	
63.09	64.62	1.53	1.04	68	0.00	0	1R	1H	6W	
64.62	66.14	1.52	1.52	100	0.00	0	0R	1H	6W	
66.14	67.67	1.53	1.32	86	0.00	0	0R	1H	6W	
67.67	69.19	1.52	1.35	89	0.00	0	0R	1H	6W	
69.19	70.71	1.52	1.52	100	0.00	0	0R	1H	6W	
70.71	72.24	1.53	1.37	90	0.47	31	3R	2H	6W	
72.24	73.76	1.52	1.29	85	0.85	56	4R	5H	1W	
73.76	75.29	1.53	1.53	100	1.53	100	4R	5H	1W	
75.29	76.81	1.52	1.52	100	1.47	97	4R	5H	1W	
76.81	78.33	1.52	1.52	100	1.48	97	4R	5H	1W	
78.33	79.86	1.53	1.53	100	0.83	54	4R	4H	2W	
79.86	81.38	1.52	1.31	86	0.92	61	4R	4H	2W	
81.38	82.91	1.53	1.43	93	1.43	93	4R	5H	1W	
82.91	84.43	1.52	1.52	100	1.50	99	4R	5H	1W	
84.43	85.95	1.52	1.45	95	1.45	95	4R	5H	1W	
85.95	87.48	1.53	1.53	100	1.53	100	4R	5H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
87.48	89.00	1.52	1.43	94	1.43	94	4R	4H	1W	
89.00	90.53	1.53	1.53	100	1.53	100	4R	4H	1W	
90.53	92.05	1.52	1.36	89	1.26	83	4R	4H	1W	

RAU-19-164

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	W843350	☐	R19-D30	Core	G306-3	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W843376	☐	R19-D30	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W843384	☐	R19-D31	Core	G912-7	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W843345	☐	R19-D30	Core	G999-4	☐	☐	☐
3.15	5.18	2.03	OVB	0.88	43	W843336	☐	R19-D29	Core		☐	☐	☐
5.18	6.70	1.52	LST	1.00	66	W843337	☐	R19-D29	Core		☐	☐	☐
6.70	8.23	1.53	VOL	1.53	100	W843338	☐	R19-D29	Core		☐	☐	☐
8.23	11.28	3.05	VOL	2.54	83	W843339	☐	R19-D29	Core		☐	☐	☐
11.28	14.32	3.04	LST	3.04	100	W843340	☐	R19-D29	Core		☐	☐	☐
14.32	16.73	2.41	LST	1.96	81	W843341	☐	R19-D30	Core		☐	☐	☐
16.73	17.37	0.64	OX	0.55	86	W843342	☐	R19-D30	Core		☐	☐	☐
17.37	19.10	1.73	OX	1.37	79	W843343	☐	R19-D30	Core		☐	☐	☐
19.10	21.95	2.85	OX	1.54	54	W843344	☐	R19-D30	Core		☐	☐	☐
21.95	23.94	1.99	OX	1.51	76	W843346	☐	R19-D30	Core		☐	☐	☐
23.94	25.30	1.36	VOL	1.18	87	W843347	☐	R19-D30	Core		☐	☐	☐
25.30	28.04	2.74	VOL	2.29	84	W843348	☐	R19-D30	Core		☐	☐	☐
28.04	31.09	3.05	LST	2.94	96	W843349	☐	R19-D30	Core		☐	☐	☐
31.09	34.14	3.05	LST	2.20	72	W843351	☐	R19-D30	Core		☐	☐	☐
34.14	35.66	1.52	LST	1.22	80	W843352	☐	R19-D30	Core		☐	☐	☐
35.66	38.42	2.76	OX	1.37	50	W843353	☐	R19-D30	Core		☐	☐	☐
38.42	39.00	0.58	OX	0.38	66	W843354	☐	R19-D30	Core		☐	☐	☐
39.00	39.90	0.90	OX	0.37	41	W843355	☐	R19-D30	Core		☐	☐	☐
39.90	41.76	1.86	OX	0.71	38	W843356	☐	R19-D30	Core		☐	☐	☐
41.76	43.42	1.66	OX	0.65	39	W843357	☐	R19-D30	Core		☐	☐	☐
43.42	44.81	1.39	OX	0.57	41	W843358	☐	R19-D30	Core		☐	☐	☐
44.81	46.70	1.89	OX	1.31	69	W843359	☐	R19-D30	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
46.70	49.38	2.68	OX	1.33	50	W843360	☐	R19-D30	Core		☐	☐	☐
49.38	50.90	1.52	LST, OX	1.11	73	W843361	☐	R19-D30	Core		☐	☐	☐
50.90	53.09	2.19	LST	1.13	52	W843362	☐	R19-D30	Core		☐	☐	☐
53.09	53.95	0.86	LST	0.40	47	W843363	☐	R19-D30	Core		☐	☐	☐
53.95	57.00	3.05	OX, LST	2.26	74	W843364	☐	R19-D30	Core		☐	☐	☐
57.00	58.72	1.72	LST	0.53	31	W843365	☐	R19-D30	Core		☐	☐	☐
58.72	60.17	1.45	OX, LST	1.01	70	W843366	☐	R19-D30	Core		☐	☐	☐
60.17	63.22	3.05	LST	2.43	80	W843367	☐	R19-D30	Core		☐	☐	☐
63.22	64.62	1.40	OX	0.89	64	W843368	☐	R19-D30	Core		☐	☐	☐
63.22	64.62	1.40	OX	0.89	64	W843369	☐	R19-D30	Core		☐	☐	☑
64.62	66.14	1.52	OX	1.52	100	W843370	☐	R19-D30	Core		☐	☐	☐
66.14	67.67	1.53	OX	1.32	86	W843371	☐	R19-D30	Core		☐	☐	☐
66.14	67.67	1.53	OX	1.32	86	W843372	☐	R19-D30	Core		☐	☑	☐
67.67	69.19	1.52	OX	1.35	89	W843373	☐	R19-D30	Core		☐	☐	☐
69.19	70.71	1.52	OX	1.52	100	W843374	☐	R19-D30	Core		☐	☐	☐
70.71	71.40	0.69	OX	0.53	77	W843375	☐	R19-D30	Core		☐	☐	☐
71.40	73.76	2.36	OX	1.96	83	W843377	☐	R19-D30	Core		☐	☐	☐
73.76	76.81	3.05	MBL	3.05	100	W843378	☐	R19-D30	Core		☐	☐	☐
76.81	79.86	3.05	MBL	3.05	100	W843379	☐	R19-D30	Core		☐	☐	☐
79.86	82.91	3.05	MBL	2.74	90	W843380	☐	R19-D30	Core		☐	☐	☐
82.91	85.95	3.04	MBL	2.97	98	W843381	☐	R19-D31	Core		☐	☐	☐
85.95	89.00	3.05	MBL	2.96	97	W843382	☐	R19-D31	Core		☐	☐	☐
89.00	92.05	3.05	MBL	2.89	95	W843383	☐	R19-D31	Core		☐	☐	☐

Sample Results

Archer, Cathro & Associates (1981) Limited

Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
R19-D31	W843384	0.00	0.00	0.43	2	35	22	65.0	3	0.80	☐	☐	☐	☑ G912-7	
		0.00	3.15								☐	☐	☐	☐	
R19-D30	W843376	0.00	0.00	0.01	0	2	1	6.0	0	0.50	☐	☐	☑	☐	
R19-D30	W843345	0.00	0.00	3.09	2	1080	248	389.0	3	41.30	☐	☐	☐	☑ G999-4	
R19-D30	W843350	0.00	0.00	8.88	21	19	5	32.0	1	0.30	☐	☐	☐	☑ G306-3	
R19-D29	W843336	3.15	5.18	0.32	1	24	12	1350.0	1	12.30	☐	☐	☐	☐	
R19-D29	W843337	5.18	6.70	0.01	0	21	11	629.0	1	7.50	☐	☐	☐	☐	
R19-D29	W843338	6.70	8.23	0.01	0	85	35	1040.0	2	21.10	☐	☐	☐	☐	
R19-D29	W843339	8.23	11.28	0.01	0	14	9	326.0	1	3.90	☐	☐	☐	☐	
R19-D29	W843340	11.28	14.32	0.01	0	9	6	386.0	0	3.30	☐	☐	☐	☐	
R19-D30	W843341	14.32	16.73	0.02	0	8	6	167.0	1	1.80	☐	☐	☐	☐	
R19-D30	W843342	16.73	17.37	0.02	0	33	17	727.0	2	7.10	☐	☐	☐	☐	
R19-D30	W843343	17.37	19.10	0.02	0	23	12	646.0	1	4.90	☐	☐	☐	☐	
R19-D30	W843344	19.10	21.95	0.02	0	15	26	2350.0	4	5.20	☐	☐	☐	☐	



Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
R19-D30	W843346	21.95	23.94	0.15	2	9	35	741.0	2	4.30	☐	☐	☐	☐	
R19-D30	W843347	23.94	25.30	0.17	1	5	22	304.0	7	3.30	☐	☐	☐	☐	
R19-D30	W843348	25.30	28.04	0.04	0	3	10	143.0	1	1.30	☐	☐	☐	☐	
R19-D30	W843349	28.04	31.09	0.01	0	2	9	155.0	1	0.80	☐	☐	☐	☐	
R19-D30	W843351	31.09	34.14	0.02	0	3	6	35.0	0	0.80	☐	☐	☐	☐	
R19-D30	W843352	34.14	35.66	0.08	1	6	34	890.0	1	11.30	☐	☐	☐	☐	
R19-D30	W843353	35.66	38.42	0.16	1	6	55	488.0	1	34.90	☐	☐	☐	☐	
R19-D30	W843354	38.42	39.00	0.01	0	2	1	25.0	0	0.70	☐	☐	☐	☐	
R19-D30	W843355	39.00	39.90	0.28	2	5	61	406.0	2	62.80	☐	☐	☐	☐	
R19-D30	W843356	39.90	41.76	0.01	0	2	10	56.0	1	0.60	☐	☐	☐	☐	
R19-D30	W843357	41.76	43.42	0.05	0	2	3	85.0	0	3.10	☐	☐	☐	☐	
R19-D30	W843358	43.42	44.81	0.49	0	5	11	372.0	1	41.90	☐	☐	☐	☐	
R19-D30	W843359	44.81	46.70	0.02	0	5	11	123.0	1	1.80	☐	☐	☐	☐	
R19-D30	W843360	46.70	49.38	0.33	3	9	97	671.0	5	23.60	☐	☐	☐	☐	
R19-D30	W843361	49.38	50.90	0.04	1	4	29	247.0	1	1.50	☐	☐	☐	☐	

Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
R19-D30	W843362	50.90	53.09	0.02	0	3	8	99.0	0	0.90	☐	☐	☐	☐	
R19-D30	W843363	53.09	53.95	0.15	2	6	91	947.0	3	10.70	☐	☐	☐	☐	
R19-D30	W843364	53.95	57.00	0.01	0	1	4	95.0	0	0.70	☐	☐	☐	☐	
R19-D30	W843365	57.00	58.72	0.05	0	3	8	145.0	0	1.60	☐	☐	☐	☐	
R19-D30	W843366	58.72	60.17	0.17	1	11	18	538.0	1	17.00	☐	☐	☐	☐	
R19-D30	W843367	60.17	63.22	0.05	0	2	3	29.0	0	0.40	☐	☐	☐	☐	
R19-D30	W843369	63.22	64.62	15.45	14	9	1305	604.0	6	53.30	☐	☑	☐	☐	
R19-D30	W843368	63.22	64.62	13.80	14	8	1225	602.0	6	63.60	☐	☐	☐	☐	
R19-D30	W843370	64.62	66.14	2.40	1	11	138	1830.0	0	10.70	☐	☐	☐	☐	
R19-D30	W843371	66.14	67.67	0.14	1	21	161	2210.0	1	10.10	☐	☐	☐	☐	
R19-D30	W843372	66.14	67.67	0.13	1	23	203	2120.0	0	9.50	☑	☐	☐	☐	
R19-D30	W843373	67.67	69.19	0.45	2	32	265	1780.0	1	129.50	☐	☐	☐	☐	
R19-D30	W843374	69.19	70.71	1.89	2	29	147	710.0	2	71.70	☐	☐	☐	☐	
R19-D30	W843375	70.71	71.40	0.64	0	72	11	1330.0	0	6.70	☐	☐	☐	☐	
R19-D30	W843377	71.40	73.76	0.01	0	2	1	11.0	0	0.20	☐	☐	☐	☐	

Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
R19-D30	W843378	73.76	76.81	0.01	0	1	1	4.0	0	0.30	☐	☐	☐	☐	
R19-D30	W843379	76.81	79.86	0.01	0	1	1	6.0	0	0.10	☐	☐	☐	☐	
R19-D30	W843380	79.86	82.91	0.01	0	1	1	18.0	0	0.10	☐	☐	☐	☐	
R19-D31	W843381	82.91	85.95	0.01	0	2	1	9.0	0	0.10	☐	☐	☐	☐	
R19-D31	W843382	85.95	89.00	0.01	0	3	1	7.0	0	0.10	☐	☐	☐	☐	
R19-D31	W843383	89.00	92.05	0.01	0	2	1	11.0	0	0.05	☐	☐	☐	☐	



Tiger - Rau

Archer,Cathro & Associates (1981) Limited

Grid East	Grid North	Easting	Northing	Elevation	Depth (m)
		528607	7118909	1299.47	130.76

ZONE: Tiger

SECTION:

HOLE: RAU-19-165

CLAIM:

Contractor: Superior

Drill: 6

Core Size: HQ3

Casing Depth:

Drilling Dates: Sep 26 - Oct 02, 2019

Geology Logged By: A. Coulter

SURVEY			
Depth (m)	Azimuth	Dip	Method
0	228.2	-70	Compass
130.76	228.5	-71	Reflex

TARGET:

SUMMARY			
From (m)	To (m)	Interval (m)	Rock Type
0	2	2	OVB
2	15.77	13.77	BAS
15.77	19.78	4.01	LST
19.78	20.86	1.08	BAS
20.86	24.84	3.98	LST
24.84	28.15	3.31	PEP
28.15	32.1	3.95	LST
32.1	32.6	0.5	BAS
32.6	39.87	7.27	LST
39.87	41.71	1.84	OX
41.71	45.73	4.02	LST
45.73	49.68	3.95	OX
49.68	51.6	1.92	LST
51.6	54.11	2.51	BAS
54.11	55.07	0.96	OX
55.07	56.95	1.88	LST

SAMPLES	
Numbers:	W843385 to W843424, W843431 to W843467
Total:	77
Batch:	D31, D32, D33
Certificates:	WH19255444, WH19255449, WH19255450, WH19278805, WH19278807

COMMENTS

The hole was ended 25m into barren marble at target depth.

56.95	57.85	0.9	BAS
57.85	58.7	0.85	LST
58.7	59.13	0.43	BAS
59.13	63.4	4.27	LST
63.4	66.51	3.11	PEP
66.51	67.41	0.9	MBL
67.41	69.46	2.05	PEP
69.46	70	0.54	LST
70	71.89	1.89	BAS
71.89	79.84	7.95	LST
79.84	79.92	0.08	BAS
79.92	80.88	0.96	LST
80.88	81.64	0.76	PEP
81.64	82.5	0.86	LST
82.5	87.03	4.53	OX
87.03	87.26	0.23	LST
87.26	88.7	1.44	OX
88.7	102.51	13.81	LST
102.51	105.78	3.27	OX
105.78	130.76	24.98	MBL

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
0.00	2.00	2.00	OVB	--	0 - 1.22 m no recovery. Some brown mud in top 20 cm of box.							
2.00	15.77	13.77	BAS	--	Jet black and weak-strongly oxidized basalt. Core is black on fresh surface and bright orange on weathered surfaces. Basalt displays fairly planar flows/beds and almost looks like a mudstone where weathered near surface and broken along near planar flows. Core is soft and rubbly near surface and becomes more competent deeper in the interval. Coarse granular quartz veins at 8.60-8.70 and 12.26-12.28 m. Soft orange-yellow non-calcareous thin 1-5 mm chaotic veins throughout interval. Grading into possible peperite at 14.70 m to end of section. Strongly oxidized, limonitic last 30 cm of interval. No HCL reaction. Non-magnetic. Unconformable upper contact with overburden.							
15.77	19.78	4.01	LST	--	Light to dark grey variable limestone interval. Uppermost 1 m appears gradational with overlying peperite and contains quenching textures and soft sediment deformation. Primary black calcareous muddy horizons within limestone are brecciated likely due to slumping. Strong HCL reaction throughout. Non-magnetic. Sharp upper contact with oxidized basalt.							
19.78	20.86	1.08	BAS	--	Small ~1m interval of black basalt with abudant amygdules throughout. Modal abundance of amygdules varies from 2-5% and they vary in size from 1-10 mm. Amygdules are composed of calcite-quartz-pyrite in order of abundance. Few thin calcite-pyrite veins and trace disseminated pyrite throughout. Large 7cm limestone clast at lower contact with limestone. No HCL reaction with basalt but strong reaction with amygdules. Non-magnetic. Sharp upper contact with limestone in small ~5 cm rubble zone.							

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
20.86	24.84	3.98	LST	--	Light to dark grey variable limestone interval. Uppermost 1 m contains some minor peperite development with 2% pyrite from 20.86 - 22.13 m. Thin primary black calcareous muddy horizons within limestone are deformed and chaotic looking likely due to slumping and volcanic intrusive. Strong HCL reaction throughout. Non-magnetic. Sharp upper contact with basalt.							
24.84	28.15	3.31	PEP	--	Dark grey matrix supperoted and pyrite rich peperite. Clasts are mostly basalt with well developed chill margins. ~1% black aphanitic small <5 mm volcanic glass throughout. 3-5% pyrite disseminated in groundmass and concentrated around some basalt clasts throughout interval and along upper and lower contacts. Some minor calcite replacement of small rounded clasts, possibly amygdules? No HCL reaction. Non-magnetic. Sharp upper contact with limestone with ~5 mm thick pyrite devlopment along contct.							
28.15	32.10	3.95	LST	--	Light to dark grey variable limestone interval. Thin primary black calcareous muddy horizons within limestone are deformed and chaotic looking likely due to slumping and nearby volcanic intrusive. Strong HCL reaction throughout. Non-magnetic. Sharp upper contact with peperite.							
32.10	32.60	0.50	BAS	--	Thin 0.5 m dark black basalt interval within limestone. Basalt has slightly undulating laminated flows and is moderately oxidized along joints. No HCL reaction. Non-magnetic. Sharp upper contact low angle to core axis with limestone.							
32.60	39.87	7.27	LST	--	Light to dark grey variable limestone interval. Thin primary black calcareous muddy beds within limestone are deformed and chaotic looking likely due to slumping and nearby volcanic intrusive. Strong HCL reaction throughout. Non-magnetic. Sharp upper contact with basalt.							

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
39.87	41.71	1.84	OX	--	Intermittent oxide and limestone interval. Approximately 60% oxide and 40% limestone. The oxide is all rubble to sand and the limestone is all fairly competent. Oxide is red to orange in colour and has a moderate to strong HCL reaction. The limestone is light grey with thin dark grey calcareous muddy beds within it. Moderate to strong HCL reaction throughout. Non-magnetic. Sharp upper contact with limestone.							
41.71	45.73	4.02	LST	--	Light to dark grey/green limestone interval with some thicker oxide (<5cm) development on joints. Thin primary black calcareous muddy beds within limestone are deformed and chaotic looking likely due to slumping. Strong HCL reaction throughout. Non-magnetic. Gradational upper contact with oxide.							
45.73	49.68	3.95	OX	--	Intermittent oxide and limestone interval. Approximately 60% oxide and 40% limestone. The oxide is all rubble to sand and the limestone is all fairly competent. Oxide is red to orange in colour and hasno HCL reaction. The limestone is light grey with thin dark grey calcareous muddy beds within it. Moderate to strong HCL reaction in limestone only. Non-magnetic. Sharp upper contact with limestone.							
49.68	51.60	1.92	LST	--	Light to dark grey bedded limestone interval. Beds are mostly planar in this section with some minor deviation. Strong HCL reaction throughout. Non-magnetic. Sharp upper contact with intermittent oxide.							
51.60	54.11	2.51	BAS	--	Moderate to strongly oxidized dark grey basalt. Core is mostly competent but reduced to rubble in areas of strong oxidation and core becomes orange in colour. Basalt is mostly massive in areas of lesser oxidation and some planar flows are observed. Flows are clearly seen as oxidized planes in an otheriwse massive dark grey basalt. No HCL reaciton. Non-magnetic. Sharp upper contact with limestone.							

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
54.11	55.07	0.96	OX	--	Light to dark orange massive oxide interval. Likely more strongly oxidized volcanic from previous interval; however, no primary textures are observed. Core is mostly reduced to rubble-sand. No HCL reaction. Non-magnetic. Gradational upper contact with oxidized volcaninc.							
55.07	56.95	1.88	LST	--	Light to dark grey bedded limestone interval. Beds are mostly planar in this section with some minor deviation. Strong HCL reaction throughout. Non-magnetic. Sharp upper contact with oxide.							
56.95	57.85	0.90	BAS	--	Moderately oxidized light grey to orange basalt interval. Core is mostly solid but easily broken and is more orange in colour wherever oxidized. Trace light green mineral throughout interval, likely fuchsite. Basaltic flows are slightly undulating throughout interval but are overall fairly planar. Minor calcite replacement of thin beds ~2mm in minor sections throughout interval. Otherwise, no HCL reaction. Non-magnetic. Sharp upper contact with limestone.							
57.85	58.70	0.85	LST	--	Light to dark grey bedded limestone interval. Beds are mostly planar in this section with some minor deviation. Strong HCL reaction throughout. Non-magnetic. Sharp upper contact with oxide.							
58.70	59.13	0.43	BAS	--	Moderately oxidized light grey to orange basalt interval. Core is mostly solid but easily broken and is more orange in colour wherever oxidized. Trace light green mineral throughout interval, likely fuchsite. Basaltic flows are slightly undulating throughout interval but are overall fairly planar. Minor calcite replacement of thin beds ~2mm in minor sections throughout interval. Otherwise, no HCL reaction. Non-magnetic. Sharp upper contact with limestone.							

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
59.13	63.40	4.27	LST	--	Light to dark grey bedded limestone interval. Beds are mostly planar in this section with some minor deviation. Grades to marble lower in section from 62.86-63.40 m. Moderate-strong HCL reaction throughout. Non-magnetic. Sharp upper contact with volcanic..							
63.40	66.51	3.11	PEP	--	Light to dark grey basaltic peperite. Rock is composed of round elongate clasts of basalt in an apahanitc beige to grey presumably basaltic matrix. Clasts display distinct chill margins.Trace pyrite throughout. No HCL reaction. Non-magnetic. Sharp upper contact with limestone.							
66.51	67.41	0.90	MBL	--	White to grey massive and competent marble. Moderate to strong HCL reaction throughout. Non-magnetic. Sharp upper contact with peprite.							
67.41	69.46	2.05	PEP	--	Light to dark grey basaltic peperite. Rock is composed of round elongate clasts of basalt in an apahanitc beige to grey presumably basaltic matrix. Clasts display distinct chill margins.Trace pyrite throughout. No HCL reaction. Non-magnetic. Sharp upper contact with marble.							
69.46	70.00	0.54	LST	--	Light to dark grey bedded limestone interval with some moderate oxidation. Beds are mostly planar in this section. Moderate-strong HCL reaction throughout. Non-magnetic. Sharp upper contact with peperite.							
70.00	71.89	1.89	BAS	--	Variable basalt unit with trace limestone from 70.46-70.61 m. Moderate oxidation in places. Upper 50 cm is more typical basalt as seen in previous units, light grey with laminated flows. Interesting upper contact with limestone that is faulted and offset ~3 cm. Lower 1 of of interval is darker grey perhaps muddy section with basalt intervals within it, perhaps more peperite. Overall very variable section. No HCL reaction other than small 15 cm of limestone. Non-magnetic. Sharp upper contact with limestone.							

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
71.89	79.84	7.95	LST	--	Light to dark grey bedded limestone interval. Beds are mostly planar in this section with undulation in places. Beds appear to undulate around small ~1cm circular nodules. Grades to marble in small intervls throughout. Small basalt flow from 79.85-79.93 m. Moderate-strong HCL reaction throughout. Non-magnetic. Sharp upper contact with variable volcanic interval that has ~20cm of marbilization at contact.							
79.84	79.92	0.08	BAS	--	Thin 8 cm rusty light grey basalt flow within limestone. Strong calcite veining. Flows are fairly planar. Basalt itself is has no HCL reaction but calcite veins have strong reaction. Non-magnetic. Sharp upper contact with limestone with minor marblization.							
79.92	80.88	0.96	LST	--	Light to dark grey bedded limestone interval. Beds are mostly planar in this section with undulation in places. Beds appear to undulate around small ~1cm circular nodules. Grades to marble in small intervls throughout. Moderate-strong HCL reaction throughout. Non-magnetic. Sharp upper contact with thin basalt flow.							
80.88	81.64	0.76	PEP	--	Small peperite flow with minor interbedded limestone. Peperite is made up of small elongate basalt clasts and is nearly clast supported in a minor light grey to beige aphanitic groundmass. Clasts display distinct black chill margins. Minor oxidization in places. No HCL reaction other than minor limestone intervals. Non-magnetic. Gradational upper contact due to interbedded nature of peperite and limestone.							
81.64	82.50	0.86	LST	--	Light to dark grey bedded limestone interval. Beds are mostly planar in this section with undulation in places. Beds appear to undulate around small ~1cm circular nodules. Core is mostly broken in this section. Moderate-strong HCL reaction throughout. Non-magnetic. Sharp upper contact with variablepeperite.							

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
82.50	87.03	4.53	OX	--	Dark brown-orange very competent iron-rich oxide. This unit is perhaps more of a limonite rather than an oxide. It is generally fairly massive but remanant beds (or flows?) are apparent as varying shades of brown-orange in places. Typically 30-40% iron and 1-2% zinc on the XRF. Core is solid and heavy due to iron-rich nature. Some remnant fragments of limestone appear through oxide. Moderate to no HCL reaction in places. Non-magnetic but has high magnetic susceptibility. Sharp upper contact with limestone.							
87.03	87.26	0.23	LST	--	Small light to dark grey bedded limestone interval within oxide/limonite. Beds are mostly planar in this section with undulation in places. Beds appear to undulate around small ~1cm circular nodules. Moderate-strong HCL reaction throughout. Non-magnetic. Sharp upper contact with oxide that is oddly not altered.							
87.26	88.70	1.44	OX	--	Dark brown-orange very competent iron-rich oxide. This unit is perhaps more of a limonite rather than an oxide. It is generally fairly massive but remanant beds (or flows?) are apparent as varying shades of brown-orange in places. Typically 30-40% iron and 1-2% zinc on the XRF. Core is solid and heavy due to iron-rich nature. Some remnant fragments of limestone appear through oxide. Moderate to no HCL reaction in places. Non-magnetic but has high magnetic susceptibility. Sharp upper contact with limestone.							
88.70	91.70	3.00	LST	FG	Light to dark grey bedded limestone interval. Beds are mostly planar in this section with undulation in places. Beds appear to undulate around small ~1cm circular nodules. Large 6cm irregular calcite vein at 90.28 m. Moderate-strong HCL reaction throughout. Non-magnetic. Sharp upper contact with oxide that is oddly not altered.							

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
91.70	95.15	3.45	LST	FG	Darker grey limestone debris flow. Many limestone clasts within darker grey weakly calcareous muddy matrix. Broken coral observed at 95.60 m. Weak marbilization lower in the section. Weak to strong HCL reaction. Non-magnetic. Gradational upper contact with bedded limestone.							
95.15	102.51	7.36	LST	FG	Light to dark grey bedded limestone interval that grades to marble in places. Beds are mostly planar in this section with undulation in places. Beds appear to undulate around small ~1cm circular nodules. Large 6cm irregular calcite vein at 90.28 m. Moderate-strong HCL reaction throughout. Non-magnetic. Gradational upper contact with limestone debris flow.							
102.51	105.78	3.27	OX	--	Bright orange to orangy brown massive oxide. Core competency is variable from solid and competent to oxide sand/clay. Very poor recovery from 103.33-104.85 m. Minor limestone intervals from top of interval to ~103m. Interesting and abundnant calcite veining around 103 m. Oxide has weak to no HCL reaction. Non-magnetic. Gradational upper contact with limestone as there are minor limestone fragments in top 50 cm of interval. Interesting lower contact with limestone with an oxide infill limestone breccia.							
105.78	130.76	24.98	MBL	--	Variable clean white marble to marbilized bedded limestone. Majority of interval is marble; however, some parts of interval have remnant limestone. Limestone is typically planaly bedded and weakly marbilized. Joint surfaces are weakly oxidized near oxide. Strong HCL reaction throughout. Non-mag. Sharp upper contact with oxide.							

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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	--	--	--	No recovery
1.22	2.74	1.52	0.39	26	0.00	0	0R	1H	6W	
2.74	4.27	1.53	0.6	39	0.00	0	0R	1H	6W	
4.27	5.79	1.52	1.05	69	0.00	0	0R	1H	6W	
5.79	7.32	1.53	1.23	80	0.00	0	0R	1H	6W	
7.32	8.84	1.52	1.42	93	0.00	0	0R	1H	6W	
8.84	10.36	1.52	1.52	100	0.26	17	0R	2H	5W	
10.36	11.89	1.53	1.53	100	1.04	68	0R	2H	5W	
11.89	13.41	1.52	1.38	91	1.28	84	0R	2H	4W	
13.41	14.94	1.53	1.53	100	1.30	85	0R	2H	4W	
14.94	16.46	1.52	1.3	86	0.94	62	2R	3H	3W	
16.46	17.98	1.52	1.42	93	1.22	80	4R	4H	2W	
17.98	19.51	1.53	1.53	100	1.19	78	4R	4H	2W	
19.51	21.03	1.52	1.52	100	1.35	89	2R	4H	2W	
21.03	22.56	1.53	1.42	93	1.39	91	3R	4H	2W	
22.56	24.08	1.52	1.52	100	1.52	100	4R	4H	1W	
24.08	25.60	1.52	1.47	97	1.45	95	3R	4H	2W	
25.60	27.13	1.53	1.53	100	1.40	92	2R	3H	3W	
27.13	28.65	1.52	1.51	99	0.58	38	4R	4H	3W	
28.65	30.18	1.53	1.53	100	1.40	92	4R	5H	1W	
30.18	31.70	1.52	1.44	95	1.01	66	4R	5H	3W	
31.70	33.22	1.52	1.52	100	0.89	59	3R	4H	3W	
33.22	34.75	1.53	1.47	96	1.21	79	4R	4H	2W	
34.75	36.27	1.52	1.52	100	1.42	93	4R	4H	2W	
36.27	37.80	1.53	1.41	92	1.38	90	4R	4H	2W	
37.80	39.32	1.52	1.52	100	1.48	97	4R	4H	2W	
39.32	40.84	1.52	1.39	91	0.52	34	4R	3H	4W	
40.84	42.37	1.53	1.53	100	0.83	54	3R	2H	5W	
42.37	43.89	1.52	1.48	97	1.22	80	3R	2H	5W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
43.89	45.42	1.53	1.51	99	1.39	91	1R	3H	4W	
45.42	46.94	1.52	1.35	89	0.37	24	2R	1H	6W	
46.94	48.46	1.52	1.45	95	0.58	38	2R	1H	6W	
48.46	49.99	1.53	1.02	67	0.55	36	4R	3H	4W	
49.99	51.51	1.52	1.52	100	1.52	100	4R	4H	2W	
51.51	53.04	1.53	1.4	92	0.40	26	1R	2H	5W	
53.04	54.56	1.52	1.52	100	0.58	38	0R	1H	5W	
54.56	56.08	1.52	1.44	95	0.70	46	3R	1H	5W	
56.08	57.61	1.53	1.53	100	0.85	56	2R	1H	5W	
57.61	59.13	1.52	1.52	100	0.18	12	2R	1H	5W	
59.13	60.66	1.53	1.52	99	0.95	62	4R	5H	2W	
60.66	62.18	1.52	1.52	100	0.98	64	4R	5H	2W	
62.18	63.70	1.52	1.52	100	1.12	74	3R	4H	2W	
63.70	65.23	1.53	1.52	99	0.91	59	0R	3H	3W	
65.23	66.75	1.52	1.52	100	0.62	41	1R	3H	3W	
66.75	68.28	1.53	1.36	89	0.80	52	2R	3H	2W	
68.28	69.80	1.52	1.52	100	0.94	62	2R	3H	3W	
69.80	71.32	1.52	1.52	100	0.68	45	1R	3H	3W	
71.32	72.85	1.53	1.53	100	1.20	78	3R	3H	3W	
72.85	74.37	1.52	1.52	100	1.32	87	4R	4H	1W	
74.37	75.90	1.53	1.52	99	0.75	49	4R	4H	2W	
75.90	77.42	1.52	1.28	84	1.05	69	4R	5H	1W	
77.42	78.94	1.52	1.52	100	1.34	88	4R	5H	1W	
78.94	80.47	1.53	1.52	99	1.47	96	4R	5H	2W	
80.47	81.99	1.52	1.52	100	0.87	57	3R	3H	3W	
81.99	83.52	1.53	1.53	100	0.77	50	3R	2H	5W	
83.52	85.04	1.52	1.52	100	0.79	52	2R	2H	5W	
85.04	86.56	1.52	1.41	93	1.33	88	1R	2H	5W	
86.56	88.09	1.53	1.53	100	1.45	95	2R	2H	5W	
88.09	89.61	1.52	1.4	92	0.97	64	3R	3H	4W	
89.61	91.14	1.53	1.45	95	1.12	73	4R	4H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
91.14	92.66	1.52	1.52	100	1.30	86	4R	4H	1W	
92.66	94.18	1.52	1.49	98	1.49	98	2R	5H	1W	
94.18	95.71	1.53	1.44	94	1.02	67	3R	4H	1W	
95.71	97.23	1.52	1.52	100	0.53	35	4R	4H	1W	Low RQD appears drill-induced. Fresh marble poker chips and rubble.
97.23	98.76	1.53	1.26	82	1.20	78	4R	5H	1W	
98.76	100.28	1.52	1.52	100	0.69	45	4R	4H	2W	
100.28	101.80	1.52	1.37	90	1.17	77	4R	4H	1W	
101.80	103.33	1.53	1.53	100	0.47	31	4R	3H	4W	
103.33	104.85	1.52	0.37	24	0.00	0	0R	2H	5W	
104.85	106.38	1.53	1.33	87	0.61	40	3R	1H	6W	
106.38	107.90	1.52	1.41	93	1.27	84	4R	4H	1W	
107.90	109.42	1.52	1.4	92	1.20	79	4R	4H	1W	
109.42	110.95	1.53	1.53	100	1.20	78	4R	4H	1W	
110.95	112.47	1.52	1.52	100	1.52	100	4R	4H	1W	
112.47	113.99	1.52	1.44	95	1.44	95	4R	4H	1W	
113.99	115.52	1.53	1.53	100	1.53	100	4R	4H	1W	
115.52	117.04	1.52	1.52	100	1.52	100	4R	4H	1W	
117.04	118.57	1.53	1.51	99	1.44	94	4R	4H	1W	
118.57	120.09	1.52	1.52	100	1.52	100	4R	4H	1W	
120.09	121.62	1.53	1.52	99	1.45	95	4R	4H	1W	
121.62	123.14	1.52	1.43	94	1.37	90	4R	4H	1W	
123.14	124.66	1.52	1.52	100	1.33	88	4R	4H	1W	
124.66	126.19	1.53	1.47	96	1.47	96	4R	4H	1W	
126.19	127.71	1.52	1.52	100	1.52	100	4R	5H	1W	
127.71	129.24	1.53	1.52	99	1.46	95	4R	5H	1W	
129.24	130.76	1.52	1.52	100	1.47	97	4R	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	W843410	☐	R19-D31	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W843433	☐	R19-D32	Core	G999-4	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W843438	☐	R19-D32	Core	G912-7	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W843447	☐	R19-D32	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W843466	☐	R19-D33	Core	G912-7	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W843390	☐	R19-D31	Core	G999-4	☐	☐	☐
1.22	4.27	3.05	OVB	0.99	32	W843385	☐	R19-D31	Core		☐	☐	☐
4.27	7.32	3.05	BAS	2.28	75	W843386	☐	R19-D31	Core		☐	☐	☐
7.32	10.36	3.04	BAS	2.94	97	W843387	☐	R19-D31	Core		☐	☐	☐
10.36	13.41	3.05	BAS	2.91	95	W843388	☐	R19-D31	Core		☐	☐	☐
13.41	14.94	1.53	BAS	1.53	100	W843389	☐	R19-D31	Core		☐	☐	☐
14.94	15.95	1.01	BAS	0.58	57	W843391	☐	R19-D31	Core		☐	☐	☐
15.95	17.98	2.03	LST	2.03	100	W843392	☐	R19-D31	Core		☐	☐	☐
17.98	19.65	1.67	LST	1.50	90	W843393	☐	R19-D31	Core		☐	☐	☐
19.65	20.89	1.24	LST	1.24	100	W843394	☐	R19-D31	Core		☐	☐	☐
20.89	23.03	2.14	LST	2.07	97	W843395	☐	R19-D31	Core		☐	☐	☐
23.03	24.84	1.81	LST	1.79	99	W843396	☐	R19-D31	Core		☐	☐	☐
24.84	27.13	2.29	LST, PEP	2.29	100	W843397	☐	R19-D31	Core		☐	☐	☐
27.13	28.65	1.52	PEP	1.51	99	W843398	☐	R19-D31	Core		☐	☐	☐
28.65	31.70	3.05	LST	2.97	97	W843399	☐	R19-D31	Core		☐	☐	☐
31.70	33.22	1.52	LST	1.52	100	W843400	☐	R19-D31	Core		☐	☐	☐
33.22	36.27	3.05	LST	2.99	98	W843401	☐	R19-D31	Core		☐	☐	☐
36.27	37.80	1.53	LST	1.41	92	W843402	☐	R19-D31	Core		☐	☐	☐
37.80	39.74	1.94	LST	1.94	100	W843403	☐	R19-D31	Core		☐	☐	☐
39.74	40.84	1.10	LST	0.94	85	W843404	☐	R19-D31	Core		☐	☐	☐
39.74	40.84	1.10	LST	0.94	85	W843405	☐	R19-D31	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
40.84	42.37	1.53	OX	1.53	100	W843406	☐	R19-D31	Core		☐	☐	☐
42.37	43.89	1.52	LST	1.48	97	W843407	☐	R19-D31	Core		☐	☐	☐
43.89	45.76	1.87	LST	1.82	97	W843408	☐	R19-D31	Core		☐	☐	☐
45.76	47.15	1.39	OX	1.13	81	W843409	☐	R19-D31	Core		☐	☐	☐
47.15	48.05	0.90	OX	0.68	76	W843411	☐	R19-D31	Core		☐	☐	☐
48.05	48.46	0.41	OX	0.39	95	W843412	☐	R19-D31	Core		☐	☐	☐
48.05	48.46	0.41	OX	0.39	95	W843413	☐	R19-D31	Core		☐	☑	☐
48.46	49.68	1.22	OX	0.64	52	W843414	☐	R19-D31	Core		☐	☐	☐
49.68	51.51	1.83	LST, OX	1.83	100	W843415	☐	R19-D31	Core		☐	☐	☐
51.51	53.04	1.53	LST	1.40	92	W843416	☐	R19-D31	Core		☐	☐	☐
53.04	54.10	1.06	BAS	1.06	100	W843417	☐	R19-D31	Core		☐	☐	☐
54.10	55.06	0.96	BAS	0.95	99	W843418	☐	R19-D31	Core		☐	☐	☐
55.06	56.95	1.89	OX	1.86	98	W843419	☐	R19-D31	Core		☐	☐	☐
56.95	57.84	0.89	LST, BAS	0.76	85	W843420	☐	R19-D31	Core		☐	☐	☐
57.84	59.13	1.29	BAS	1.10	85	W843421	☐	R19-D32	Core		☐	☐	☐
59.13	62.18	3.05	BAS, LST	3.04	100	W843422	☐	R19-D32	Core		☐	☐	☐
62.18	63.48	1.30	LST	1.30	100	W843423	☐	R19-D32	Core		☐	☐	☐
63.48	65.23	1.75	PEP	1.75	100	W843424	☐	R19-D32	Core		☐	☐	☐
65.23	66.50	1.27	PEP	1.20	94	W843431	☐	R19-D32	Core		☐	☐	☐
66.50	67.43	0.93	PEP	0.89	96	W843432	☐	R19-D32	Core		☐	☐	☐
67.43	69.46	2.03	PEP	2.03	100	W843434	☐	R19-D32	Core		☐	☐	☐
69.46	71.90	2.44	PEP, LST	2.04	84	W843435	☐	R19-D32	Core		☐	☐	☐
71.90	74.37	2.47	LST	2.47	100	W843436	☐	R19-D32	Core		☐	☐	☐
74.37	77.42	3.05	LST	2.80	92	W843437	☐	R19-D32	Core		☐	☐	☐
77.42	79.79	2.37	LST	2.37	100	W843439	☐	R19-D32	Core		☐	☐	☐
79.79	82.62	2.83	LST	2.83	100	W843440	☐	R19-D32	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
82.62	83.52	0.90	OX	0.90	100	W843441	☐	R19-D32	Core		☐	☐	☐
82.62	83.52	0.90	OX	0.90	100	W843442	☐	R19-D32	Core		☐	☑	☐
83.52	85.04	1.52	OX	1.52	100	W843443	☐	R19-D32	Core		☐	☐	☐
85.04	86.56	1.52	OX	1.41	93	W843444	☐	R19-D32	Core		☐	☐	☐
86.56	87.42	0.86	OX	0.86	100	W843445	☐	R19-D32	Core		☐	☐	☐
87.42	88.68	1.26	OX	1.26	100	W843446	☐	R19-D32	Core		☐	☐	☐
88.68	91.14	2.46	OX	2.14	87	W843448	☐	R19-D32	Core		☐	☐	☐
91.14	94.18	3.04	LST	3.01	99	W843449	☐	R19-D32	Core		☐	☐	☐
94.18	97.23	3.05	LST	2.96	97	W843450	☐	R19-D32	Core		☐	☐	☐
97.23	100.28	3.05	LST	2.78	91	W843451	☐	R19-D32	Core		☐	☐	☐
100.28	102.53	2.25	LST	2.09	93	W843452	☐	R19-D32	Core		☐	☐	☐
102.53	103.33	0.80	OX	0.80	100	W843453	☐	R19-D32	Core		☐	☐	☐
103.33	104.85	1.52	OX	0.37	24	W843454	☐	R19-D32	Core		☐	☐	☐
103.33	104.85	1.52	OX	0.37	24	W843455	☐	R19-D32	Core		☐	☐	☑
104.85	105.34	0.49	OX	0.44	90	W843456	☐	R19-D32	Core		☐	☐	☐
105.34	105.90	0.56	OX	0.36	64	W843457	☐	R19-D32	Core		☐	☐	☐
105.90	107.90	2.00	MBL	1.93	97	W843458	☐	R19-D32	Core		☐	☐	☐
107.90	110.95	3.05	MBL	2.93	96	W843459	☐	R19-D32	Core		☐	☐	☐
110.95	113.99	3.04	MBL	2.96	97	W843460	☐	R19-D32	Core		☐	☐	☐
113.99	117.04	3.05	MBL	3.05	100	W843461	☐	R19-D33	Core		☐	☐	☐
117.04	120.09	3.05	MBL	3.03	99	W843462	☐	R19-D33	Core		☐	☐	☐
120.09	123.14	3.05	MBL	2.95	97	W843463	☐	R19-D33	Core		☐	☐	☐
123.14	126.19	3.05	MBL	2.99	98	W843464	☐	R19-D33	Core		☐	☐	☐
126.19	129.24	3.05	MBL	3.04	100	W843465	☐	R19-D33	Core		☐	☐	☐
129.24	130.76	1.52	MBL	1.52	100	W843467	☐	R19-D33	Core		☐	☐	☐

Sample Results

Archer, Cathro & Associates (1981) Limited

Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
R19-D33	W843466	0.00	0.00	0.42	2	35	19	69.0	3	0.80	☐	☐	☐	☑ G912-7	
R19-D32	W843438	0.00	0.00	0.39	2	36	19	67.0	3	0.90	☐	☐	☐	☑ G912-7	
R19-D32	W843433	0.00	0.00	3.11	2	1085	245	372.0	3	41.40	☐	☐	☐	☑ G999-4	
R19-D32	W843447	0.00	0.00	0.01	0	2	1	29.0	0	0.05	☐	☐	☑	☐	
R19-D31	W843410	0.00	0.00	0.01	0	2	0	8.0	0	0.05	☐	☐	☑	☐	
R19-D31	W843390	0.00	0.00	3.12	2	1060	248	380.0	3	39.30	☐	☐	☐	☑ G999-4	
		0.00	1.22								☐	☐	☐	☐	
R19-D31	W843385	1.22	4.27	0.37	3	40	23	164.0	31	21.50	☐	☐	☐	☐	
R19-D31	W843386	4.27	7.32	0.56	3	16	20	63.0	60	31.60	☐	☐	☐	☐	
R19-D31	W843387	7.32	10.36	1.22	7	242	12	19.0	56	31.70	☐	☐	☐	☐	
R19-D31	W843388	10.36	13.41	1.03	3	119	16	14.0	69	27.50	☐	☐	☐	☐	
R19-D31	W843389	13.41	14.94	0.75	2	84	18	36.0	23	21.50	☐	☐	☐	☐	
R19-D31	W843391	14.94	15.95	0.05	0	581	5	162.0	5	5.60	☐	☐	☐	☐	
R19-D31	W843392	15.95	17.98	0.01	0	4	2	4.0	0	0.20	☐	☐	☐	☐	



Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
R19-D31	W843393	17.98	19.65	0.01	0	11	1	12.0	0	0.30	☐	☐	☐	☐	
R19-D31	W843394	19.65	20.89	0.01	0	12	1	33.0	4	3.70	☐	☐	☐	☐	
R19-D31	W843395	20.89	23.03	0.01	0	4	1	6.0	0	0.40	☐	☐	☐	☐	
R19-D31	W843396	23.03	24.84	0.01	0	4	1	3.0	0	0.10	☐	☐	☐	☐	
R19-D31	W843397	24.84	27.13	0.02	0	11	2	19.0	5	4.90	☐	☐	☐	☐	
R19-D31	W843398	27.13	28.65	0.03	0	8	1	43.0	2	2.50	☐	☐	☐	☐	
R19-D31	W843399	28.65	31.70	0.01	0	4	0	40.0	1	1.00	☐	☐	☐	☐	
R19-D31	W843400	31.70	33.22	0.01	0	19	0	131.0	2	3.90	☐	☐	☐	☐	
R19-D31	W843401	33.22	36.27	0.01	0	4	0	16.0	0	0.10	☐	☐	☐	☐	
R19-D31	W843402	36.27	37.80	0.01	0	3	0	16.0	0	0.30	☐	☐	☐	☐	
R19-D31	W843403	37.80	39.74	0.01	0	5	0	10.0	0	0.10	☐	☐	☐	☐	
R19-D31	W843404	39.74	40.84	0.01	0	291	0	636.0	0	0.50	☐	☐	☐	☐	
R19-D31	W843405	39.74	40.84	0.01	0	289	0	626.0	0	0.50	☐	☑	☐	☐	
R19-D31	W843406	40.84	42.37	0.01	0	110	0	303.0	0	0.40	☐	☐	☐	☐	
R19-D31	W843407	42.37	43.89	0.01	0	42	1	195.0	0	0.50	☐	☐	☐	☐	

Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
R19-D31	W843408	43.89	45.76	0.01	0	12	1	307.0	0	0.90	☐	☐	☐	☐	
R19-D31	W843409	45.76	47.15	0.01	0	72	2	4720.0	0	3.60	☐	☐	☐	☐	
R19-D31	W843411	47.15	48.05	0.01	0	28	6	668.0	0	1.00	☐	☐	☐	☐	
R19-D31	W843412	48.05	48.46	0.01	1	165	73	6680.0	0	8.10	☐	☐	☐	☐	
R19-D31	W843413	48.05	48.46	0.01	1	172	83	6470.0	0	7.30	☑	☐	☐	☐	
R19-D31	W843414	48.46	49.68	0.01	0	90	2	1360.0	0	0.50	☐	☐	☐	☐	
R19-D31	W843415	49.68	51.51	0.01	0	5	0	74.0	0	0.10	☐	☐	☐	☐	
R19-D31	W843416	51.51	53.04	0.01	0	69	3	1090.0	2	2.20	☐	☐	☐	☐	
R19-D31	W843417	53.04	54.10	0.01	0	65	6	642.0	3	10.70	☐	☐	☐	☐	
R19-D31	W843418	54.10	55.06	0.01	1	46	10	4330.0	1	14.60	☐	☐	☐	☐	
R19-D31	W843419	55.06	56.95	0.01	0	6	0	91.0	0	0.10	☐	☐	☐	☐	
R19-D31	W843420	56.95	57.84	0.01	1	28	2	438.0	5	9.80	☐	☐	☐	☐	
R19-D32	W843421	57.84	59.13	0.01	0	13	2	95.0	8	2.90	☐	☐	☐	☐	
R19-D32	W843422	59.13	62.18	0.01	0	5	1	30.0	1	1.10	☐	☐	☐	☐	
R19-D32	W843423	62.18	63.48	0.01	0	8	1	10.0	0	0.10	☐	☐	☐	☐	

Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
R19-D32	W843424	63.48	65.23	0.01	0	56	1	67.0	4	1.40	☐	☐	☐	☐	
R19-D32	W843431	65.23	66.50	0.01	0	43	1	83.0	2	1.80	☐	☐	☐	☐	
R19-D32	W843432	66.50	67.43	0.01	0	12	2	10.0	0	0.30	☐	☐	☐	☐	
R19-D32	W843434	67.43	69.46	0.01	0	54	2	62.0	2	1.50	☐	☐	☐	☐	
R19-D32	W843435	69.46	71.90	0.01	0	41	3	64.0	2	1.00	☐	☐	☐	☐	
R19-D32	W843436	71.90	74.37	0.01	0	5	7	32.0	0	0.10	☐	☐	☐	☐	
R19-D32	W843437	74.37	77.42	0.01	0	3	1	97.0	0	0.10	☐	☐	☐	☐	
R19-D32	W843439	77.42	79.79	0.01	0	3	2	107.0	0	0.10	☐	☐	☐	☐	
R19-D32	W843440	79.79	82.62	0.01	0	13	5	215.0	1	0.80	☐	☐	☐	☐	
R19-D32	W843441	82.62	83.52	0.01	0	57	104	4070.0	24	1.90	☐	☐	☐	☐	
R19-D32	W843442	82.62	83.52	0.01	0	59	88	4330.0	24	2.50	☑	☐	☐	☐	
R19-D32	W843443	83.52	85.04	0.01	2	221	179	7410.0	134	2.70	☐	☐	☐	☐	
R19-D32	W843444	85.04	86.56	0.02	1	52	52	8580.0	35	1.00	☐	☐	☐	☐	
R19-D32	W843445	86.56	87.42	0.01	1	117	21	17000.0	73	0.80	☐	☐	☐	☐	
R19-D32	W843446	87.42	88.68	0.02	1	31	58	5520.0	24	1.20	☐	☐	☐	☐	

Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
R19-D32	W843448	88.68	91.14	0.01	0	2	4	142.0	0	0.10	☐	☐	☐	☐	
R19-D32	W843449	91.14	94.18	0.01	0	2	8	198.0	1	0.60	☐	☐	☐	☐	
R19-D32	W843450	94.18	97.23	0.01	0	2	4	85.0	0	0.20	☐	☐	☐	☐	
R19-D32	W843451	97.23	100.28	0.01	0	2	0	239.0	0	0.10	☐	☐	☐	☐	
R19-D32	W843452	100.28	102.53	0.01	0	1	0	79.0	0	0.10	☐	☐	☐	☐	
R19-D32	W843453	102.53	103.33	0.29	1	8	18	5860.0	0	7.10	☐	☐	☐	☐	
R19-D32	W843454	103.33	104.85	0.07	0	10	4	4360.0	0	10.00	☐	☐	☐	☐	
R19-D32	W843455	103.33	104.85	0.07	0	10	4	4230.0	0	9.90	☐	☑	☐	☐	
R19-D32	W843456	104.85	105.34	0.61	1	20	80	4810.0	0	46.60	☐	☐	☐	☐	
R19-D32	W843457	105.34	105.90	0.28	0	3	2	3330.0	0	4.90	☐	☐	☐	☐	
R19-D32	W843458	105.90	107.90	0.01	0	1	0	50.0	0	0.20	☐	☐	☐	☐	
R19-D32	W843459	107.90	110.95	0.01	0	1	0	20.0	0	0.10	☐	☐	☐	☐	
R19-D32	W843460	110.95	113.99	0.01	0	1	0	4.0	0	0.10	☐	☐	☐	☐	
R19-D33	W843461	113.99	117.04	0.01	0	1	0	7.0	0	0.10	☐	☐	☐	☐	
R19-D33	W843462	117.04	120.09	0.01	0	6	0	9.0	0	0.20	☐	☐	☐	☐	

Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
R19-D33	W843463	120.09	123.14	0.01	0	1	0	11.0	0	0.05	☐	☐	☐	☐	
R19-D33	W843464	123.14	126.19	0.01	0	1	0	6.0	0	0.05	☐	☐	☐	☐	
R19-D33	W843465	126.19	129.24	0.01	0	3	0	7.0	0	0.10	☐	☐	☐	☐	
R19-D33	W843467	129.24	130.76	0.01	0	1	0	10.0	0	0.05	☐	☐	☐	☐	



Tiger - Rau

Archer,Cathro & Associates (1981) Limited

Grid East	Grid North	Easting	Northing	Elevation	Depth (m)
		528607	7118908	1299.603	93.57

ZONE: Tiger

SECTION:

HOLE: RAU-19-166

CLAIM:

Contractor: Superior

Drill: 6

Core Size: HQ3

Casing Depth:

Drilling Dates: Oct 02 -

Geology Logged By: A. Coulter

SURVEY			
Depth (m)	Azimuth	Dip	Method
0	228.2	-50	Compass
92.04	228.2	-50.7	Reflex

TARGET:

SUMMARY			
From (m)	To (m)	Interval (m)	Rock Type
0	3	3	OVB
3	3.74	0.74	BAS
3.74	6.57	2.83	OX
6.57	10.37	3.8	LST
10.37	10.69	0.32	BAS
10.69	18.04	7.35	LST
18.04	21.34	3.3	BAS
21.34	26.56	5.22	LST
26.56	26.62	0.06	BAS
26.62	27.29	0.67	LST
27.29	27.37	0.08	BAS
27.37	28.89	1.52	LST
28.89	29.71	0.82	PEP
29.71	32.74	3.03	LST
32.74	33.07	0.33	PEP
33.07	33.89	0.82	MBL

SAMPLES	
Numbers:	W843468 to W843513
Total:	46
Batch:	D33, D34
Certificates:	WH19255450, WH19255451, WH19278811

COMMENTS

The hole was ended 30m into barren marble at target depth.

33.89	34.4	0.51	PEP
34.4	34.89	0.49	MBL
34.89	35.67	0.78	PEP
35.67	41.27	5.6	LST
41.27	45.56	4.29	BAS
45.56	46.49	0.93	MBL
46.49	46.72	0.23	BAS
46.72	65.61	18.89	LST
65.61	93.57	27.96	MBL

RAU-19-166

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
0.00	3.00	3.00	OVB	--	0-2.13 m no recovery. Black non calcareous mush from 2.13-3 m.							
3.00	3.74	0.74	BAS	--	Soft mushy and chippy black basalt flow at top of hole. Core is mostly rubble-muck but majority of fragments of rock appear to be basalt. High Ti on XRF ~1-2%. No HCL reaction. Non-magnetic. Unconformable upper contact with the overburden.							
3.74	6.57	2.83	OX	--	Bright to dark orange massive non-calcareous oxide. Large quartz vein from 5.20-5.50 m. No HCL reaction. Non-magnetic. Sharp upper contact with basalt in rubbly core.							
6.57	10.37	3.80	LST	--	Light to dark grey bedded limestone. Beds are mostly planar with some minor undulations in places. Undulations appear to flow around small black rounded concretions. Most joint surfaces are oxidized. Moderate HCL reaction. Non-magnetic. Gradational upper contact with oxide over ~20 cm.							
10.37	10.69	0.32	BAS	FG	Weakly oxidized light grey-green basalt flow. Flows are mostly planar with some minor black glassy fragments within them (possibly lapilli?) Core is mostly competent but broken along flows and reduced to rubble in places. No HCL reaction. Non-magnetic. Sharp and oxidized upper contact with limestone.							
10.69	18.04	7.35	LST	FG	Light to dark grey bedded limestone. Beds are mostly planar with some minor undulations in places. Undulations appear to flow around small black rounded concretions. Thin basalt flow from 16.51-16.74. Moderate HCL reaction. Non-magnetic. Sharp upper contact with basalt.							

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
18.04	21.34	3.30	BAS	FG	Variable basalt interval with 3 small <14 cm limestone intervals. Basalt is dark grey to black and is mostly massive but flows are visible lower in section. Small 1-2 mm black glassy fragments visible lower in section, possibly lapilli? No HCL reaction in basalt and moderate HCL reaction in minor limestone intervals. Non-magnetic. Sharp contacts between limestone and basalt but overall interbedded nature of limestone and basalt in this section.							
21.34	26.56	5.22	LST	FG	Light to dark grey bedded limestone. Beds are mostly planar with some minor undulations in places. Undulations appear to flow around small black rounded concretions. Large ~2cm pyrite clot at 23.70 m. Core is overall very competent. Moderate HCL reaction. Non-magnetic. Sharp upper contact with basalt.							
26.56	26.62	0.06	BAS	FG	Thin 6 cm oxidized light grey to orange basalt flow. Core is mostly rubble and highly oxidized. Where not broken, lamanar flows are observed. No HCL reaction. Non-magnetic. Sharp upper contact with limestone.							
26.62	27.29	0.67	LST	FG	Light to dark grey bedded limestone. Beds are mostly planar with some minor undulations in places. Undulations appear to flow around small black rounded concretions. Core is overall very competent. Moderate HCL reaction. Non-magnetic. Sharp upper contact with basalt.							
27.29	27.37	0.08	BAS	FG	Thin 8 cm bleached light grey to light orange basalt flow. Fairly laminar flows are observed through interval. Small elongate quartz clasts are observed along flow planes, possibly more of a peperite? Core is very competent. No HCL reaction. Non-magnetic. Sharp upper contact with limestone.							

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
27.37	28.89	1.52	LST	FG	Light to dark grey bedded limestone. Beds are mostly planar with some minor undulations in places. Undulations appear to flow around small black rounded concretions. Weak marbilization throughout interval. Core is overall very competent. Moderate HCL reaction. Non-magnetic. Sharp upper contact with basalt with minor marbilization.							
28.89	29.71	0.82	PEP	FG	Mixed peperite and marble interval. Peperite is mostly light grey-green and contains trace pyrite and fuchsite. Peperite is composed of small <3cm elongate basalt clasts sat in light grey-green matrix. Clasts contain distinct thin black chill margins. Few peperite clasts appear to be replaced with calcite. Few small <5cm marble interbeds within unit. Marble is clean white with sharp contacts. No HCL reaction in peperite other than calcite clasts and moderate HCL reaction in marble. Non-magnetic. Sharp upper contact with limestone with ~10cm marble zone.							
29.71	32.74	3.03	LST	FG	Light to dark grey bedded limestone. Beds are mostly planar with some minor undulations in places. Undulations appear to flow around small black rounded concretions. Thin black dolomite veining in places. Core is overall very competent. Moderate HCL reaction. Non-magnetic. Sharp upper contact with peperite.							
32.74	33.07	0.33	PEP	FG	Light grey-green clast supported peperite with trace pyrite, pyrrhotite and fuchsite. Peperite is composed of small <3 cm elongate basalt clasts sat in light grey-green matrix. Clasts contain distinct thin black chill margins. Few peperite clasts appear to be replaced with calcite. No HCL reaction in peperite other than calcite clasts. Non-magnetic other than at trace pyrrhotite. Sharp upper contact with limestone with ~5 cm marble zone.							
33.07	33.89	0.82	MBL	FG	Clean white marble with thin black chaotic dolomite veins throughout. Strong HCL reaction. No HCL reaction. Sharp upper contact with peperite with light orange staining.							

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
33.89	34.40	0.51	PEP	FG	Light grey-green clast supported peperite with trace pyrite, pyrrhotite and fuchsite. Peperite is composed of small <3 cm elongate basalt clasts sat in light grey-green matrix. Clasts contain distinct thin black chill margins. Few peperite clasts appear to be replaced with calcite. No HCL reaction in peperite other than calcite clasts. Non-magnetic other than at trace pyrrhotite. Sharp upper contact with marble.							
34.40	34.89	0.49	MBL	FG	Clean white marble with thin black chaotic dolomite veins throughout with some minor peperite intruding. Strong HCL reaction. No HCL reaction. Sharp upper contact with peperite.							
34.89	35.67	0.78	PEP	FG	Light grey-green clast supported peperite with trace pyrite, pyrrhotite and fuchsite. Peperite is composed of small <3 cm elongate basalt clasts sat in light grey-green matrix. Clasts contain distinct thin black chill margins. Few peperite clasts appear to be replaced with calcite. No HCL reaction in peperite other than calcite clasts. Non-magnetic other than at trace pyrrhotite. Sharp upper contact with marble.							
35.67	41.27	5.60	LST	FG	Light to dark grey bedded limestone. Beds are mostly planar with some minor undulations in places. Undulations appear to flow around small black rounded concretions. Possibly some minor peperite with trace pyrrhotite in limestone from 36.80-37.10 m. Core is overall very competent. Moderate HCL reaction. Non-magnetic. Sharp upper contact with peperite.							
41.27	45.56	4.29	BAS	FG	Grey to black basalt that grades into peperite in the bottom 1 m of interval. Trace pyrite and pyrrhotite mostly along flow planes throughout interval. Laminar flows with small rounded quartz amygdules observed throughout bulk of interval. Lower 1 m is a matrix supported and weakly bleached peperite interval. Strong HCL reaction in places. Strongly magnetic wherever fine grained pyrrhotite observed. Sharp upper contact with limestone.							

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
45.56	46.49	0.93	MBL	FG	White to orange weakly oxidized massive marble. Strong HCL reaction. No HCL reaction. Sharp upper contact with basalt.							
46.49	46.72	0.23	BAS	FG	Thin 23 cm bleached and weakly oxidized light grey to light orange basalt flow. Fairly laminar flows are observed through interval. 2 thin 3-5 mm quartz veins. Core is solid but easily broken. No HCL reaction. Non-magnetic. Sharp upper contact with marble.							
46.72	65.61	18.89	LST	FG	Light to dark grey bedded limestone that grades to marble throughout. Beds are mostly planar with some minor undulations in places. Undulations appear to flow around small black rounded concretions. Core is overall very competent. Moderate HCL reaction. Non-magnetic. Sharp upper contact with basalt.							
65.61	93.57	27.96	MBL	FG	Variable marble interval that grades from light orange to white massive marble to clean white with chaotic remnant black beds. Core is all very competent. Variably weak to strong HCL reaction throughout. Non-magnetic. Sharp upper contact with limestone with broken core over ~3 m.							

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From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
0.00	2.13	2.13	0	0	0.00	0	--	--	--	No recovery
2.13	3.66	1.53	0.6	39	0.00	0	1R	1H	6W	
3.66	5.18	1.52	1.4	92	0.00	0	0R	1H	6W	
5.18	6.70	1.52	1.02	67	0.27	18	2R	1H	5W	
6.70	8.23	1.53	1.13	74	0.85	56	3R	4H	2W	
8.23	9.75	1.52	1.52	100	1.25	82	4R	4H	1W	
9.75	11.28	1.53	1.53	100	1.10	72	3R	3H	3W	
11.28	12.80	1.52	1.48	97	1.37	90	4R	4H	1W	
12.80	14.32	1.52	1.52	100	1.52	100	4R	4H	1W	
14.32	15.85	1.53	1.48	97	1.44	94	4R	4H	1W	
15.85	17.37	1.52	1.52	100	0.99	65	4R	4H	1W	
17.37	18.90	1.53	1.46	95	1.39	91	3R	4H	2W	
18.90	20.42	1.52	1.49	98	1.27	84	2R	3H	3W	
20.42	21.94	1.52	1.48	97	1.16	76	2R	3H	2W	
21.94	23.47	1.53	1.46	95	1.23	80	4R	4H	1W	
23.47	24.99	1.52	1.52	100	1.52	100	4R	4H	1W	
24.99	26.52	1.53	1.52	99	1.36	89	4R	4H	1W	
26.52	28.04	1.52	1.52	100	1.32	87	3R	4H	3W	
28.04	29.56	1.52	1.52	100	1.34	88	4R	3H	2W	
29.56	31.09	1.53	1.53	100	1.45	95	4R	4H	1W	
31.09	32.61	1.52	1.52	100	1.38	91	4R	4H	1W	
32.61	34.14	1.53	1.49	97	1.49	97	3R	3H	1W	
34.14	35.66	1.52	1.52	100	1.49	98	2R	3H	2W	
35.66	37.18	1.52	1.42	93	1.42	93	3R	3H	2W	
37.18	38.71	1.53	1.53	100	1.51	99	4R	4H	1W	
38.71	40.23	1.52	1.49	98	1.45	95	4R	4H	1W	
40.23	41.76	1.53	1.53	100	1.40	92	4R	3H	1W	
41.76	43.28	1.52	1.4	92	1.30	86	2R	4H	1W	
43.28	44.81	1.53	1.53	100	1.18	77	2R	3H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
44.81	46.33	1.52	1.52	100	1.25	82	2R	3H	1W	
46.33	47.85	1.52	1.52	100	1.11	73	3R	3H	3W	
47.85	49.38	1.53	1.36	89	1.33	87	4R	4H	1W	
49.38	50.90	1.52	1.52	100	1.46	96	4R	4H	1W	
50.90	52.42	1.52	1.52	100	1.41	93	4R	4H	1W	
52.42	53.95	1.53	1.52	99	1.41	92	3R	4H	1W	
53.95	55.47	1.52	1.44	95	1.44	95	3R	4H	1W	
55.47	56.99	1.52	1.36	89	1.19	78	4R	4H	1W	
56.99	58.52	1.53	1.52	99	1.45	95	4R	4H	1W	
58.52	60.04	1.52	1.52	100	1.48	97	4R	4H	1W	
60.04	61.57	1.53	1.53	100	1.43	93	4R	4H	1W	
61.57	63.09	1.52	1.52	100	1.52	100	4R	4H	1W	
63.09	64.62	1.53	1.4	92	1.40	92	4R	4H	1W	
64.62	66.14	1.52	1.52	100	1.27	84	4R	4H	2W	
66.14	67.66	1.52	1.49	98	1.15	76	4R	4H	2W	
67.66	69.19	1.53	1.31	86	1.12	73	4R	4H	2W	
69.19	70.71	1.52	1.52	100	1.42	93	4R	4H	1W	
70.71	72.23	1.52	1.52	100	1.52	100	4R	4H	1W	
72.23	73.76	1.53	1.4	92	1.40	92	4R	4H	1W	
73.76	75.29	1.53	1.5	98	1.32	86	4R	4H	1W	
75.29	76.81	1.52	1.52	100	1.52	100	4R	4H	1W	
76.81	78.33	1.52	1.52	100	1.46	96	4R	4H	1W	
78.33	79.86	1.53	1.52	99	1.43	93	4R	4H	2W	
79.86	81.38	1.52	1.5	99	1.29	85	4R	4H	3W	
81.38	82.90	1.52	1.52	100	1.35	89	4R	4H	2W	
82.90	84.43	1.53	1.5	98	1.37	90	4R	4H	1W	
84.43	85.95	1.52	1.43	94	1.43	94	4R	4H	2W	
85.95	87.48	1.53	1.53	100	1.53	100	4R	4H	2W	
87.48	89.00	1.52	1.46	96	1.42	93	4R	4H	2W	
89.00	90.53	1.53	1.53	100	1.48	97	4R	4H	2W	
90.53	92.05	1.52	1.37	90	1.37	90	4R	4H	2W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
92.05	93.57	1.52	1.52	100	1.52	100	4R	4H	2W	

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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	W843487	☐	R19-D33	Core	G999-4	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W843506	☐	R19-D34	Core	G999-4	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W843511	☐	R19-D34	Core	G912-7	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W843513	☐	R19-D34	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W843472	☐	R19-D33	Core		☑	☐	☐
2.13	3.66	1.53	OVB	0.60	39	W843468	☐	R19-D33	Core		☐	☐	☐
3.66	5.18	1.52	BAS	1.40	92	W843469	☐	R19-D33	Core		☐	☐	☐
3.66	5.18	1.52	BAS	1.40	92	W843470	☐	R19-D33	Core		☐	☐	☑
5.18	6.70	1.52	OX	1.02	67	W843471	☐	R19-D33	Core		☐	☐	☐
6.70	8.23	1.53	LST	1.13	74	W843473	☐	R19-D33	Core		☐	☐	☐
8.23	10.37	2.14	LST	2.11	99	W843474	☐	R19-D33	Core		☐	☐	☐
10.37	10.80	0.43	LST, BAS	0.41	95	W843475	☐	R19-D33	Core		☐	☐	☐
10.80	12.80	2.00	LST	2.00	100	W843476	☐	R19-D33	Core		☐	☐	☐
12.80	15.85	3.05	LST	3.00	98	W843477	☐	R19-D33	Core		☐	☐	☐
15.85	17.84	1.99	LST	1.93	97	W843478	☐	R19-D33	Core		☐	☐	☐
17.84	20.42	2.58	LST	2.48	96	W843479	☐	R19-D33	Core		☐	☐	☐
20.42	21.34	0.92	BAS	0.92	100	W843480	☐	R19-D33	Core		☐	☐	☐
21.34	23.47	2.13	BAS, LST	1.95	92	W843481	☐	R19-D33	Core		☐	☐	☐
23.47	26.52	3.05	LST	3.04	100	W843482	☐	R19-D33	Core		☐	☐	☐
26.52	28.57	2.05	LST	2.05	100	W843483	☐	R19-D33	Core		☐	☐	☐
28.57	29.95	1.38	LST	1.38	100	W843484	☐	R19-D33	Core		☐	☐	☐
29.95	32.61	2.66	LST	2.66	100	W843485	☐	R19-D33	Core		☐	☐	☐
32.61	35.66	3.05	LST	3.01	99	W843486	☐	R19-D33	Core		☐	☐	☐
35.66	38.71	3.05	PEP	2.95	97	W843488	☐	R19-D33	Core		☐	☐	☐
38.71	41.28	2.57	LST	2.57	100	W843489	☐	R19-D33	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
41.28	43.28	2.00	BAS	1.85	93	W843490	☐	R19-D33	Core		☐	☐	☐
43.28	45.62	2.34	BAS	2.34	100	W843491	☐	R19-D33	Core		☐	☐	☐
45.62	47.85	2.23	MBL	2.23	100	W843492	☐	R19-D33	Core		☐	☐	☐
47.85	50.90	3.05	LST	2.88	94	W843493	☐	R19-D33	Core		☐	☐	☐
50.90	53.95	3.05	LST	3.04	100	W843494	☐	R19-D33	Core		☐	☐	☐
50.90	53.95	3.05	LST	3.04	100	W843495	☐	R19-D33	Core		☐	☑	☐
53.95	56.99	3.04	LST	2.80	92	W843496	☐	R19-D33	Core		☐	☐	☐
56.99	60.04	3.05	LST	3.04	100	W843497	☐	R19-D33	Core		☐	☐	☐
60.04	63.09	3.05	LST	3.05	100	W843498	☐	R19-D33	Core		☐	☐	☐
63.09	66.14	3.05	LST	2.92	96	W843499	☐	R19-D33	Core		☐	☐	☐
66.14	69.19	3.05	MBL	2.80	92	W843500	☐	R19-D33	Core		☐	☐	☐
69.19	72.23	3.04	MBL	3.04	100	W843501	☐	R19-D34	Core		☐	☐	☐
72.23	75.29	3.06	MBL	2.90	95	W843502	☐	R19-D34	Core		☐	☐	☐
72.23	75.29	3.06	MBL	2.90	95	W843503	☐	R19-D34	Core		☐	☐	☑
75.29	78.33	3.04	MBL	3.04	100	W843504	☐	R19-D34	Core		☐	☐	☐
78.33	81.38	3.05	MBL	3.02	99	W843505	☐	R19-D34	Core		☐	☐	☐
81.38	84.43	3.05	MBL	3.02	99	W843507	☐	R19-D34	Core		☐	☐	☐
84.43	87.48	3.05	MBL	2.96	97	W843508	☐	R19-D34	Core		☐	☐	☐
84.43	87.48	3.05	MBL	2.96	97	W843509	☐	R19-D34	Core		☐	☑	☐
87.48	90.53	3.05	MBL	2.99	98	W843510	☐	R19-D34	Core		☐	☐	☐
90.53	93.57	3.04	MBL	2.89	95	W843512	☐	R19-D34	Core		☐	☐	☐

Sample Results

Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
R19-D33	W843487	0.00	0.00	3.01	2	1075	239	366.0	3	39.30	☐	☐	☐	☑ G999-4	
R19-D33	W843472	0.00	0.00	0.01	0	3	0	8.0	0	0.20	☐	☐	☑	☐	
R19-D34	W843513	0.00	0.00	0.01	0	1	0	4.0	0	0.10	☐	☐	☑	☐	
R19-D34	W843506	0.00	0.00	3.00	2	1090	245	369.0	3	43.90	☐	☐	☐	☑ G999-4	
		0.00	2.13								☐	☐	☐	☐	
R19-D34	W843511	0.00	0.00	0.41	2	35	19	63.0	3	0.80	☐	☐	☐	☑ G912-7	
R19-D33	W843468	2.13	3.66	0.22	3	96	17	163.0	4	8.00	☐	☐	☐	☐	
R19-D33	W843470	3.66	5.18	13.90	3	194	23	264.0	2	165.00	☐	☑	☐	☐	
R19-D33	W843469	3.66	5.18	15.15	6	194	23	261.0	2	152.00	☐	☐	☐	☐	
R19-D33	W843471	5.18	6.70	11.65	13	5780	57	7070.0	38	68.20	☐	☐	☐	☐	
R19-D33	W843473	6.70	8.23	0.01	0	26	2	519.0	4	0.30	☐	☐	☐	☐	
R19-D33	W843474	8.23	10.37	0.01	0	3	1	20.0	0	0.20	☐	☐	☐	☐	
R19-D33	W843475	10.37	10.80	0.02	0	63	3	720.0	4	6.20	☐	☐	☐	☐	
R19-D33	W843476	10.80	12.80	0.01	0	3	1	8.0	0	0.10	☐	☐	☐	☐	



Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
R19-D33	W843477	12.80	15.85	0.01	0	3	1	6.0	0	0.10	☐	☐	☐	☐	
R19-D33	W843478	15.85	17.84	0.01	0	7	2	25.0	1	0.50	☐	☐	☐	☐	
R19-D33	W843479	17.84	20.42	0.01	0	10	8	47.0	3	2.10	☐	☐	☐	☐	
R19-D33	W843480	20.42	21.34	0.01	0	12	11	40.0	2	1.40	☐	☐	☐	☐	
R19-D33	W843481	21.34	23.47	0.01	0	8	2	41.0	0	0.20	☐	☐	☐	☐	
R19-D33	W843482	23.47	26.52	0.01	0	5	1	15.0	0	0.05	☐	☐	☐	☐	
R19-D33	W843483	26.52	28.57	0.01	0	5	1	58.0	0	0.30	☐	☐	☐	☐	
R19-D33	W843484	28.57	29.95	0.01	0	38	4	38.0	2	0.90	☐	☐	☐	☐	
R19-D33	W843485	29.95	32.61	0.01	0	3	1	5.0	0	0.05	☐	☐	☐	☐	
R19-D33	W843486	32.61	35.66	0.01	0	11	3	34.0	2	0.80	☐	☐	☐	☐	
R19-D33	W843488	35.66	38.71	0.01	0	6	3	8.0	0	0.20	☐	☐	☐	☐	
R19-D33	W843489	38.71	41.28	0.01	0	3	2	5.0	0	0.10	☐	☐	☐	☐	
R19-D33	W843490	41.28	43.28	0.01	0	102	5	36.0	3	1.20	☐	☐	☐	☐	
R19-D33	W843491	43.28	45.62	0.01	0	63	6	35.0	3	1.50	☐	☐	☐	☐	
R19-D33	W843492	45.62	47.85	0.01	0	2	3	15.0	1	0.40	☐	☐	☐	☐	

Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
R19-D33	W843493	47.85	50.90	0.01	0	2	2	3.0	0	0.10	☐	☐	☐	☐	
R19-D33	W843495	50.90	53.95	0.02	1	43	2	13.0	0	0.10	☑	☐	☐	☐	
R19-D33	W843494	50.90	53.95	0.01	0	3	2	10.0	0	0.10	☐	☐	☐	☐	
R19-D33	W843496	53.95	56.99	0.01	0	2	3	21.0	0	0.20	☐	☐	☐	☐	
R19-D33	W843497	56.99	60.04	0.01	0	3	2	12.0	1	0.80	☐	☐	☐	☐	
R19-D33	W843498	60.04	63.09	0.01	0	2	2	4.0	0	0.50	☐	☐	☐	☐	
R19-D33	W843499	63.09	66.14	0.01	0	2	2	28.0	0	0.20	☐	☐	☐	☐	
R19-D33	W843500	66.14	69.19	0.01	0	1	2	25.0	0	0.20	☐	☐	☐	☐	
R19-D34	W843501	69.19	72.23	0.01	0	2	2	12.0	0	0.10	☐	☐	☐	☐	
R19-D34	W843503	72.23	75.29	0.01	0	2	1	12.0	0	0.10	☐	☑	☐	☐	
R19-D34	W843502	72.23	75.29	0.01	0	1	1	10.0	0	0.10	☐	☐	☐	☐	
R19-D34	W843504	75.29	78.33	0.01	0	2	1	7.0	0	0.10	☐	☐	☐	☐	
R19-D34	W843505	78.33	81.38	0.01	0	1	1	13.0	0	0.10	☐	☐	☐	☐	
R19-D34	W843507	81.38	84.43	0.01	0	2	1	8.0	0	0.10	☐	☐	☐	☐	
R19-D34	W843508	84.43	87.48	0.01	0	1	1	10.0	0	0.10	☐	☐	☐	☐	

Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
R19-D34	W843509	84.43	87.48	0.01	0	1	1	8.0	0	0.10	☑	☐	☐	☐	
R19-D34	W843510	87.48	90.53	0.01	0	1	1	8.0	0	0.10	☐	☐	☐	☐	
R19-D34	W843512	90.53	93.57	0.01	0	1	1	6.0	0	0.10	☐	☐	☐	☐	



Tiger - Rau

Archer,Cathro & Associates (1981) Limited

Grid East	Grid North	Easting	Northing	Elevation	Depth (m)
		532718	7117336	1172	329.18

ZONE: Bobcat

SECTION:

HOLE: RPP-19-001

CLAIM:

Contractor: Superior

Drill: 6

Core Size: NQ2

Casing Depth:

Drilling Dates: Jul 18 - Jul 22, 2019

Geology Logged By: A. Schneebeli

SURVEY			
Depth (m)	Azimuth	Dip	Method
0	79.8	-50	Compass
329.18	72.7	-49.7	Reflex

TARGET: Targetting underneath pits at Bobat and localized struct

SUMMARY			
From (m)	To (m)	Interval (m)	Rock Type
0	1.91	1.91	OVB
1.91	10.05	8.14	LST
10.05	92.18	82.13	LST
92.18	108.5	16.32	LST
108.5	174.1	65.6	LST
174.1	193.57	19.47	SKN
193.57	276.91	83.34	MBL
276.91	277.19	0.28	PEG
277.19	280.74	3.55	MBL
280.74	281.9	1.16	PEG
281.9	329.18	47.28	MBL

SAMPLES	
Numbers:	W842201 to W842335
Total:	135
Batch:	D01, D02, D03, D04
Certificates:	WH19183557, WH19183560, WH19190701, WH19190858

COMMENTS

Hole terminated due to being significantly passed original 200 m targeted depth during a small DDH program. The hole was continued past the targeted depth because there is interesting skarn alteration (act + trem), marbelization and thin (<10 cm) sulphide (Po +- py) veins towards EOH.

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
0.00	1.91	1.91	OVB	--	0-1.47 no recovery. 5-25cm long, angular fragments of fractured limestone with weak HCl reaction.							

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
1.91	10.05	8.14	LST	FG	Tremolite veins and small bleached horizon within this interval. Light-medium grey, fine-medium grained, competent, weakly, to locally observed strongly, sheared and brecciated, moderately veined, bedded limestone with sporadic calcite-tremolite veins. Bedding is planar, 0.5-2cm thick and ranges between 10-40 degrees TCA. Tremolite-bearing calcite veins occur at 6.38-6.39m, 6.85-6.87m, 6.98-7.04m, and 9.26-9.33m. 6.38-6.39 and 6.85-6.87 – tremolite is white to rusty orange, mm-sized, radiating and accounts for 10-20% of the vein. Sub mm-sized, massive and lesser subhedral, fresh to locally oxidized pyrite also occurs within the vein and accounts for 5-20% of the vein. 6.98-7.04 - tremolite is white to rusty orange, mm-sized, radiating and accounts for 40% of the vein. The vein is moderately 'pitted' along fracture surface. 9.26-9.33m – tremolite is white, mm-sized, radiating and accounts for 1% of the vein, it is associated with a soft, black, sooty infill mineral (graphite?). This vein is also locally undergoing trace chlorite alteration. 8.40-8.53m – Small, olive green hue, weakly marbleized section with sub-mm sized rusty-orange, spots of oxidized, disseminated pyrite. Multiple generations of calcite veins, veinlets and fracture infill occur throughout the interval. 0.5-1.5cm, moderate to high angle calcite veins occur every ~55cm. Shearing and foliation textures are primarily post calcite veining, veinlets and infill and occur between 10-40 degrees TCA. Strong vein brecciation occurs at 6.63-6.85m, 9.55-9.85m. Trace pyrite mineralization occurs throughout the interval as: sub mm-sized, fresh (lesser oxidized), primarily blebby and lesser subhedral							

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
1.91	10.05	8.14			disseminations (~0.2%); and as mm-sized blebby to subhedral minerals within calcite veins (0.1%).							
						MD	GY	FO			Py	0.05
						LT	GY	BD	BLE	2I	Py	0.15
											Py	0.1
10.05	18.51	8.46	LST	FG	Tremolite veins and multiple bleached/marble horizons within interval. Light-medium grey, fine-medium grained, massive to locally observed weak vein brecciated, foliated, weakly veined limestone with multiple 10-85cm thick bleached/marble horizons and cm sized tremolite veins. Tremolite veins occur at: 14.12-14.41m there are two 0.5-1cm thick weak tremolite-bearing calcite veins. Tremolite is radiating and white to light brown oxidized; 16.71-16.79m trace-weak tremolite-bearing calcite vein. Tremolite is mm-sized, radiating and is variably oxidized; 17.24-17.27m there is a 1-2cm thick, massive to subhedral radiating, white to light brown tremolite vein with trace pitting; 18.47-18.51m trace, white, sub mm-sized, radiating tremolite in 0.3cm thick calcite vein with weak amount of black, stubby to elongate, opaque mineral (manganese oxide?). Bleached/marble horizons occur at: 10.05-10.64m, 10.97-12m, 15.50-16.27m. All horizons are variably bleached white to rusty-orange in colour, massive, rarely pitted, weakly dolotomized and contain moderate to strong concentrations of sub mm-sized, oxidized disseminations of an-subhedral pyrite(?). Theses horizons also contain trace-weak amounts of calcite re-deposition and rare, patchy, black manganese oxides(?). Foliation in this interval ranges from 30-40 degrees TCA. Pyrite occurs primarily as rusted out disseminations within bleached/marble horizons (~0.2%) and less as rare mm-sized, blebby, fresh disseminations within non-bleached horizons.							

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
						MD	GY	FO	MBL	2I	Py	0.1
						LT	GY	BX	BLE	3I	Py	0.2
18.51	40.95	22.44	LST	FG	Light-medium grey, fine-medium grained, foliated, locally massive limestone with moderate calcite veining, sparse tremolite veins and trace bleached horizons. Tremolite veins occur at: 20.90-20.93m as white, radiating, continuous 0.2-0.5cm thick vein; 25.22-25.32m white to rusty-brown, mm-sized, radiating tremolite within 0.5-1cm thick calcite vein that also contains trace, blebby pyrrhotite intergrowths within calcite.; 25.80-26.03m two 0.5cm thick, white tremolite veins occur that contain a moderate amount of a black, sooty, soft mineral within the vein (graphite?). Bleached horizons occur at 29.10-29.15m, 29.60-29.75m and 37.32-37.38m, all are white to rusty-orange and contain a moderate-strong concentration of sub mm-sized, oxidized disseminations of an-subhedral pyrite(?). 25.29-26.10m contains a very strong concentration of fine grained, sub mm-sized, dull, black, discontinuous veinlets that follow the average foliation of the interval (dolomite, iron/manganese oxides?). Calcite veining is moderate throughout the interval and occurs as veins, veinlets and infill along micro-fractures. Rare veinlets are completely oxidized, likely due to sulphide within veinets. Foliation textures vary from 20-40 degrees TCA. Pyrite occurs as trace, fresh (lesser oxidized) euhedral disseminations throughout the interval (~0.1%). Pyrrhotite is observed once in this interval as a mm-sized, blebby intergrowth in a calcite-tremolite vein (~0.01%).							
						MD	GY	MA			Po	0.01
						LT	GY	FO	BLE	1I	Py	0.1

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
40.95	43.05	2.10	LST	FG	Bleached horizon interval. White to rusty-orange with slight green hue, weakly dolotomized, trace 'pitted', foliated, weakly veined limestone with strong, black veinlets and trace marbleisation. 'Pitted' texture occurs primarily on fracture surfaces and proximal to oxidized sulphides within calcite veins and veinlets. Weak to moderate, massive and patchy orange-brown oxidation occurs on fractured surfaces. Veining in this interval occurs primarily as oxidized, calcite veinlets, often containing rusty, blebby disseminated pyrite and lesser as white calcite veinlets. Strong concentration of fine grained, sub mm-sized, dull, black, discontinuous veinlets occur throughout the interval (dolomite, iron/manganese oxides?). Pyrite occurs primarily as sub mm to mm-sized blebby, oxidized (lesser as fresh) disseminations in calcite veins and veinlets throughout the interval (0.5%). Pyrite also occurs as sub mm-sized, an-subhedral, oxidized disseminations throughout the interval (0.1%).							
						MD	OR	VU	MBL	1I	Py	0.1
						MD	WH	FO	DOL	2I	Py	0.5
						LT	GN					

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
43.05	59.25	16.20	LST	FG	Light-medium grey, fine-medium grained, competent, weak to moderately foliated, locally weakly to moderately brecciated, moderately veined limestone. 50.94-50.97m discontinuous calcite vein with intergrowths of mm-sized blebby pyrrhotite and lesser pyrite occur within the vein. Veining occurs as calcite veins, veinlets and infill of fractures. Calcite veins commonly contain a very fine grained, black, sub mm-sized, replacement mineral (dolomite, manganese/iron oxide?). Veining is primarily pre-foliation. Weak to moderate, massive and patchy orange-brown, lesser yellow oxidation is common on fracture and joint surfaces. Foliation is at 30-45 degrees TCA. 53.59-59.25m is more foliated than shallower part of the interval. Pyrite occurs as trace, blebby, mm-sized disseminations throughout the interval and lesser in calcite veins (~0.1%). Pyrrhotite occurs as mm-sized, blebby intergrowths in a single calcite vein (~0.05%).							
						MD	GY	BX			Po	0.05
						LT	GY	FO	OXI	1I	Py	0.1

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
59.25	59.89	0.64	LST	FG	Bleached horizon interval. White to rusty-orange with slight green hue, fine grained, massive, weakly dolotomized, rare 'pitted', weakly veined limestone. 'Pitted' texture occurs primarily on fracture surfaces and proximal to oxidized sulphides within calcite veins and veinlets. Weak to moderate, massive and patchy orange-brown oxidation occurs on fractured surfaces. Veining in this interval occurs primarily as oxidized, calcite veinlets, often containing rusty, blebby disseminated pyrite and lesser as white calcite veinlets. Trace amounts of re-deposited calcite occurs within the interval and containing trace mm-sized white, radiating tremolite. Pyrite occurs primarily as sub mm to mm-sized blebby, oxidized (lesser as fresh) crystals in calcite veins and veinlets throughout the interval (0.5%). Pyrite also occurs as sub mm-sized, an-subhedral, oxidized disseminations throughout the interval (0.1%). Pyrrhotite occurs as fresh, subhedral, sub mm-sized disseminations from 59.36-59.70m (0.5%).							
						MD	WH	MA	DOL	2I	Py	0.5
						MD	OR				Py	0.1
						LT	GN				Po	0.5

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
59.89	70.51	10.62	LST	MG	Light-dark grey, fine-medium grained, competent, weak to moderately foliated, locally weakly to moderately brecciated, moderately veined limestone. 65.16-65.55m is a small rubble zone of darker grey, moderately dolotomized limestone. Veining occurs as calcite veins, veinlets, infill of fractures and lesser as vein breccia. Veining is primarily pre-foliation. Rare/sporadic, orange-brown oxidation of calcite vein occurs from 61.00-67.35m. Weak to moderate, massive and patchy orange-brown oxidation is common on fractured and joint surfaces. Oxidation is strongest along fractured surfaces. Weak to moderate, massive and patchy orange-brown, lesser yellow oxidation is common on fracture and joint surfaces. Foliation is at 30-45 degrees TCA. 63.78-65.00m is more foliated. Pyrite occurs as trace, blebby, mm-sized disseminations throughout the interval and lesser in calcite veins (~0.05%).							
						LT	GY	FO	DOL	1I	Py	0.05
						DK	GY	BX	OXI	2I		

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
70.51	73.15	2.64	LST	MG	Medium-dark grey with green hue, locally bleached, variably foliated, locally pitted, sheared, weak-moderately dolotomized, porous limestone with moderate, mm-sized actinolite and biotite(?) occurring throughout the interval. 72.66-72.80m is weakly bleached and contains re-deposited calcite with patches of a black, sooty, soft, dull mineral (graphite?). Multiple generations of calcite veins, veinlets and infill along healed fractures occur throughout the interval. Weak oxidation of calcite veins occurs from 70.51-71.20m. Foliation varies from 45 degrees TCA at the top of the interval and lessens to 10 degrees TCA at the end of the interval. Shearing is weakly evident from 70.51-71.29m at 50 degrees TCA. 70.51-71.29m is more porous than the deeper parts of the interval, as evident by the sections ability to retain water. This interval is also weak to moderately pitted. Weak to moderate, massive and patchy orange-brown, lesser yellow oxidation is common on fracture and joint surfaces. Weak to moderate, platy, sub mm-sized, black biotite(?) and black, stubby to needley, subhedral actinolite disseminations(?) occur from 71.13-73.15m. Pyrite occurs as trace sub mm-sized, blebby disseminations throughout the interval (~0.01%).							
						MD	GY	VU	DOL	3I	Py	0.01
						LT	GN	SH			Bi	0.2
						DK	GY	FO			Ac	0.5

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
73.15	85.62	12.47	MST	CG	Light to dark grey, fine to medium grained, foliated, variably oxidized, competent, coarse grained, weak to moderately veined, poorly sorted, variably crackle brecciated, clast supported conglomerate (debris flow) with ~1m of interbedded limestone and calcareous mudstone at the end of the interval. Clasts are composed of granule to boulder sized, sub-rounded to angular bedded limestone, massive limestone and lesser calcareous mudstone. 84.47-85.62m contains interbeds of 1-3cm thick dark grey, fine grained, calcareous mudstone and medium grey, fine grained limestone. Veining occurs as calcite veins, veinlets, infill along healed fractures and lesser as vein breccia. Rare calcite veins contain weak amounts of very fine grained, black, dull, sub mm-sized replacement mineral (dolomite, manganese/iron oxide?). 73.74-73.77m - 4cm thick, calcite vein breccia perpendicular TCA containing mm-sized, elongate, angular to irregular shaped limestone fragments. Rusty-orange to brown, massive to patchy oxidation occurs weakly on fractured surfaces throughout the interval. From 81.92-82.89m moderate to strong, rusty orange/brown to locally observed purple, massive to patchy oxidation occurs on fractured and joint surfaces, this section is also weakly pitted along fractured surfaces. Foliation varies from 10-50 degrees TCA throughout the interval. 82.05-82.15m – small rubble zone. Rare, 0.5-2mm sized, fresh, sub-euhedral pyrite disseminations occur throughout the interval (~0.05%). Lesser, sub mm-sized, anhedral, oxidized pyrite dissemination also occur throughout the interval (~0.01%).							
						LT	GY	DB	OXI	2I	Py	0.06
						DK	GY	CR				

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
								FO				
								BX				
85.62	92.18	6.56	LST	MG	Bleached horizon interval. Medium-dark grey, fine grained, massive, weakly veined, locally foliated and sheared limestone with 6-20cm sections of white to rusty-orange with slight green hue, weakly dolotomized, rare 'pitted', bleached horizons. Bleached horizons occur at: 86.34-86.42m, 87.16-87.24m, 89.62-89.70m and 90.00-90.20m. Bleaching is stronger at and proximal to fractured surfaces. 86.40-86.43m – 5-7mm thick, calcite vein that has been replaced by fine grained, blebby pyrite (~60% of vein) and pyrrhotitte (~20% of vein) at 55 degrees TCA. 90.03-90.06m – single joint with orange-brown, massive to powdery oxide on joint surface. Joint attitude is 55 degrees TCA. 90.04-90.30 – contains abundant chaotic, continuous to discontinuous, sub mm-sized, massive, fine grained pyrite stringers. This section also contains a strong concentration of 1-2mm long, black, needley actinolite crystals throughout the section. Veining occurs as weakly abundant, primarily high angle TCA, calcite veins and infill along healed fractures. Foliation and shearing varies between 20-40 degrees TCA, both textures increase in intensity towards the end of the interval. Bleached horizon interval occurring above fault zone. Py occurs as fine grained stringer (~0.5%) and within calcite veins (~0.1%). Pyrrhotite only occurs within one calcite vein in a blebby and fine grained form (0.1%).							
						MD	GY	FO	BLE	2I	Py	0.6
						DK	GY	SH	DOL	1I	Po	0.1

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
92.18	104.20	12.02	LST	MG	Fault zone interval. Medium tan-grey with slight green hue, highly fractured to locally rubbly/gougey, moderately to strongly oxidized, moderately to strongly pitted, sheared, crackly, massive, locally weakly dolotomized limestone. Rubble zones occur at: 95.22-95.90m – rusty yellow/orange to brown cm-mm sized rock fragments to residual soil occurs within the section and contains two 10cm long segments of intensely oxidized, soft fault gouge. 96.70-96.86m – cm sized limestone fragments with strong brown oxidation on fractured surfaces. 97.48-97.86m – yellow/orange to dark brown strong to intensely oxidized cm-mm sized rock fragments, residual soil and powdery oxide occurs within the section. Rock fragments are moderately pitted and contain rare, white, radiating tremolite. 103.05-104.20m – rusty brown-orange cm-mm sized rock fragments and primarily residual soil with very rare sub mm-sized white tremolite crystals. Pitted texture occurs throughout the section, but preferentially occurs along oxidized veinlets and proximal to fracture surfaces. Oxidation occurs moderately pervasive within the rock and in veins/veinlets throughout the interval, with locally observed strong-intense oxidation occurring primarily in rubble zones and along fracture surfaces. Oxidation is likely a result of surficial weathering permeating down the fault at depth. At 100.31m (45 degrees TCA) and 101.65 (25 degrees TCA) fracture surfaces contain strong, orange-brown, massive to powdery oxidation with weakly concentrated 1-4mm sized, euhedral calcite and trace-moderately abundant, sub mm-sized, white-clear sericite. Veining is occurs weakly throughout the interval as moderately oxidized calcite veins, oxidized							

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
92.18	104.20	12.02			calcite veinlets and as infill along healed fractures. Pyrite not readily apparent, however it is likely that pyrite (and other sulphides) has been oxidized to an extent that they are no longer apparent.							
						MD	GY	RB	OXI	4I	Tr	0.01
						MD	TN	FR	DOL	2I	Py	0
						LT	GN	VU				
								SH				
								CR				
104.20	108.50	4.30	LST	MG	Fault zone interval. Medium-dark grey, medium grained, strongly foliated and sheared, crackle brecciated limestone with calcareous mudstone and a 24cm section of coarse grained, matrix supported fault breccia. Fault breccia is composed of granule to pebble sized, white-grey, angular dolostone fragments hosted in a black, weakly calcareous mudstone occurring from 104.20-104.44m. This section is also moderately pitted. Strong foliation and shear textures vary from 20-45 degrees TCA from 104.44-108.50m. Moderate pervasive, rusty orange-brown oxidation and vein/veinlet oxidation occurs from 104.20-105.70; strong rusty orange-brown oxidation occurs on fracture surfaces from 104.20-105.50m. The interval is weakly veined with calcite (trace dolomite) veins and veinlets, but contains abundant calcite infill in crackle breccia. Veining occurred pre-foliation/shearing. Pyrite occurs weakly in the interval as trace, 1-3mm sized blebs within the fault breccia (0.01%), as fresh, subhedral 1-3mm sized disseminations throughout the interval (0.1%) and discontinuous, sub mm-sized, fine grained stringers from 104.45-104.65m (0.1%).							
						MD	GY	FO	OXI	3I	Py	0.01
						DK	GY	SH			Py	0.1

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
								CR			Py	0.1
								BX				
108.50	126.83	18.33	LST	FG	Bleached horizon interval. Light-medium grey, fine grained, massive, weakly veined, locally foliated and sheared limestone with 10-20cm sections of white to rusty-orange with slight green hue, weak 'pitted', bleached horizons. Bleached horizons occur at: 110.03-11.13m, 112.38-112.59m, 118.15-118.28, 118.41-118.53m. Bleaching and pitted texture is stronger at and proximal to fractured surfaces. Four evenly spaced 1-3cm thick, moderate to high angle, coarse grained, variably oxidized, euhedral calcite/dolomite veins occur. 114.29-114.32m – weakly orange stained, 1-10mm sized, euhedral dolomite crystals within vein along with a 10mm, blebby pyrite crystal. Veining occurs as weakly abundant, primarily high angle TCA, calcite veins and infill along healed fractures. Foliation and shearing varies between 10-60 degrees TCA, both textures decrease in intensity from start of the interval. Bleached horizon interval occurring below fault zone. Py occurs as rare, sub mm-sized disseminations (0.01%) and as mm-sized blebby disseminations within veins (0.01%).							
						MD	GY	SH			Py	0.01
						LT	GY	MA	BLE	2I	Py	0.01

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
126.83	129.87	3.04	MST	MG	Light to dark grey, fine to medium grained, foliated, pitted, coarse grained, weak to moderately veined, poorly sorted, variably crackle brecciated, clast supported conglomerate (debris flow). Clasts are composed of granule to pebble sized, sub-rounded to angular, light to dark grey, massive limestone and lesser calcareous mudstone. Pitted texture is primarily weak throughout this interval and moderate proximal to fractured surfaces and along trace veinlets. Weak calcite veins, veinlets and moderate infill along healed fractures occur throughout the interval. Weak oxidation of calcite veins occurs throughout the interval. Weak to moderate, massive and patchy orange-brown, lesser yellow oxidation is common on fracture and joint surfaces. Foliation varies from 35-45 degrees TCA. Py is rare in the interval and occurs as fresh, blebby disseminations (0.01%).							
						MD	GY	VU				
						LT	GY	FO	OXI	1I	Py	0.01
								CR				
								BX				

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
129.87	149.36	19.49	LST	FG	Light-medium grey, fine-medium grained, competent, weak to moderately foliated, locally weakly to moderately brecciated, moderately veined limestone with ~2m section of interbedded limestone and calcareous mudstone. Veining occurs as calcite veins, veinlets and infill of fractures. Calcite veins commonly contain a very fine grained, black, sub mm-sized, replacement mineral (dolomite, manganese/iron oxide?). Veining is primarily pre-foliation. Weak to moderate, massive and patchy orange-brown, lesser yellow oxidation is common on fracture and joint surfaces from 132.00-133.00m. Wavy, 1-2cm thick interbedded limestone and calcareous mudstone occurs from 136.45-138.50m 148.45m – fractured surface with fine grained, massive, dull/earthy, rainbow/peacocky coloured mineral, possibly weathered pyrite? Strong vein brecciation occurs from 143.60-144.45m Foliation varies from 0-50 degrees TCA. Py is rare in the interval and occurs as fresh, blebby disseminations throughout the interval (0.01%).							
						MD	GY	BX				
						LT	GY	FO	OXI	1I	Py	0.01
								BD				

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
149.36	158.20	8.84	LST	FG	Massive pyrite and bismuthinite vein within interval. Light-medium grey, fine grained, foliated, massive, locally brecciated limestone with abundant thick, coarse grained calcite veins and strong amount of sub mm-sized, discontinuous, fine grained, black veinlets (dolomite, manganese/iron oxides?) throughout interval. Veining is overall weak throughout the interval, with the exception of 12 1-2cm thick, moderate-high angle TCA, coarse grained calcite veins. 155.24-155.40m – massive, fresh, sub-euhedral, 1-5mm sized pyrite with lesser intergrowths of sub-mm to mm sized, blebby pyrrhotite and a weakly occurring, blue/black, metallic, massive mineral (bismuthinite?); all occurring as re-deposition within a calcite vein. Foliation varies from 35-50 degrees TCA. Py occurs primarily within the above mentioned vein (1%) and lesser and fresh, blebby, mm-sized, disseminations throughout the interval (0.5%). Po occurs within the above mentioned vein (0.1%). Bismuthinite(?) occurs within the above mentioned vein (0.05%).							
						MD	GY	MA			Py	0.05
						LT	GY	FO			Py	1
								BX			Po	0.1
											Bs	0.05

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
158.20	174.10	15.90	LST	MG	Light to medium grey, fine to locally coarse grained, locally vein brecciated and strongly foliated, variably massive to bedded, moderately veined limestone. Strong vein brecciation occurs at: 161.19-161.40m, 164.70-165.04m, 165.72-165.95m and 169.55-169.85m. Strong foliation occurs at: 163.05-164.61m and 170.00m-173.36m and varies from 30-50 degrees TCA. Rare, rusty orange, massive-patchy oxidation occurs on rare fracture surfaces. 171.19-171.20m – 55 degree TCA white, with slight green colour, smoothly fractures, fine grained calcite vein bearing trace-weak massive, fresh blebby pyrite. This interval is directly above a limestone/marble lithology hosting numerous thin-thick skarn bands/horizons. Veining primarily occurs as calcite vein brecciation and infill along healed fractures, and lesser as calcite veins and veinlets at primarily high angles TCA. Py occurs primarily as trace, 1-3mm sized disseminations throughout the interval (~0.5%) and lesser within calcite veins (~0.05%).							
						MD	GY	BD			Py	0.05
						LT	GY	MA	OXI	1I	Py	0.5
								FO				
								BX				

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
174.10	182.80	8.70	LST	MG	Tremolite-actinolite ± pyrite and pyrrhotite veins occur within this interval. Light-medium grey, medium grained, vein brecciated, foliated limestone with intermittent 0.2-2m long white-light grey, tremolite-actinolte bearing, massive to locally observer weakly vein brecciated marble containing multiple white-green tremolite ± pyrite and pyrrhotite veins. Tremolite-actinolite ± pyrite and pyrrhotite veins occur at: 174.53-174.65m, 175.48-175.67m, 179.04-179.10m, 179.23-179.26m and 179.82-179.90m. 174.53-174.65m – white 30 degrees TCA, primarily calcite vein with moderate amount of mm-sized, white, radiating tremolite crystals and sub-mm sized pyrite stringers that are vein concordant. Rare chlorite alteration occurs within vein to give a slight green hue. 175.48-175.67m – white and pale green, 35 degrees TCA, tremolite-calcite vein with weak amount of 1-3mm sized, fresh, blebby pyrite and pyrrhotite that occurs primarily as sub mm-sized disseminations within the vein, and locally as a 0.5*1.5cm sized bleb. Tremolite is primarily green, lesser white, and ranges, radiating euhedral, ranges from sub mm-sized to 1cm in size and accounts for 80% of the vein. 179.04-179.10m – medium-dark green in center, dull white along margin, 35 degrees TCA calcite-tremolite vein with moderate amounts of disseminated blebby pyrite occurring throughout the vein. Tremolite is primarily green, lesser white, massive to euhedral and sub mm-sized to 0.5cm needley crsytals. 179.23-179.26m - medium-dark green in center, dull white along margin, 35 degrees TCA calcite-tremolite vein. Tremolite is primarily green, lesser white, massive to euhedral and sub mm-sized to 0.5cm needley crsytals. 179.82-179.90m – white, 20 degrees TCA, primarily calcite vein with weak amounts of massive, very fine grained tremolite. Weak amounts of sub mm-sized disseminations of pyrrhotite occurs proximal to vein. Well-formed slickenlines, often with a powdery white-green mineral (tremolite?) occur							

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
174.10	182.80	8.70			throughout the interval on fracture surfaces and are locally observed to contain trace, mm-sized, fresh pyrite disseminations. Marble sections occur at 174.52-174.77m and 176-178.20m, both contain abundant 0.5-1.5cm sized, lesser massive tremolite (±actinolite?) throughout the interval, as is very obvious on fractured marble surfaces. Trace, 1-2mm sized pyrrhotite disseminations occur within the marble interval. 177.23-177.31m – contains multiple 1-2mm sized, ~spherical, red/clear mineral (garnets?). Veining occurs primarily as calcite vein brecciation and veinlets and lesser as tremolite veins. Py occurs primarily as blebs in tremolite veins (~0.5%), lesser as sub mm-sized disseminations throughout the interval (0.1%) and as sub mm-sized, fine grained stringers (0.1%). Po occurs as blebs within tremolite veins (0.1%) and as sub mm-sized disseminations within marble sections (0.05%). Tremolite accounts for ~5% of the total interval.							
						MD	GY	FO			Py	0.1
						LT	GY	BX	MBL	3I	Py	0.5
											Py	0.1
											Po	0.1
											Po	0.05
											Tr	5

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
182.80	187.44	4.64	LST	MG	Multiple skarn bands within interval. Light-medium grey, medium grained, locally vein brecciated, foliated, moderately veined limestone and 1.5m section of tremolite-actinolite bearing marble at the end of the interval. Skarn bands occur at: 182.85-182.95m, 183.32-183.37m, 183.67-183.83m and 186.32-186.50m. 182.85-182.95m – Massive, fine grained medium-dark green tremolite ± actinolite is abundant within the band. 2-5mm sized, subhedral quartz occurs along center of band with rare blebby Po. Fine-medium grained calcite occurs on margins of band with a 1-4mm thick intergrowth Py and lesser Po occurring on most distal margins of the band. 183.32-183.37m - Massive, fine grained medium-dark green tremolite ± actinolite is abundant within the band. Zonation is observed within this band, the shallow half is darker and finer grained; the middle contains moderate 1-5mm wide Po blebs that are perpendicular TCA; the deeper half is lighter in colour and slightly coarser grained. 183.67-183.83m - Massive, fine dark green tremolite and black actinolite is abundant within the band. Po occurs throughout the band as 1-5mm thick blebs. A fracture down the middle of this band exposes 1-5mm thick, subhedral quartz crystals. 186.32-186.50m – three 2-5cm thick, massive, fine grained, dark green to black tremolite and actinolite rich bands. The bands are separated by calcite veins that have undergone weak chlorite alteration. Po occurs moderately as 1-10mm blebs intergrown with subhedral quartz crystals of the same size. Trace-moderate amounts of white, 0.5-5mm sized tremolite and black actinolite is common on fracture surfaces throughout the interval. Veining occurs as calcite vein brecciation and lesser as mm-sized calcite veinlets at varying angles TCA. Po occurs as blebs within skarn bands (0.5%).							

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
182.80	187.44	4.64			Tremolite accounts for 3% of interval							
						MD	GY	FO			Tr	3
						LT	GY	BX	MBL	4I	Po	0.5
187.44	187.73	0.29	SKN	FG	Skarn interval. Medium-dark green/dark grey, fine-medium grained, massive, tremolite-actinolite-pyrrhotite ± chalcopyrite and quartz skarn with 5cm section of light grey, medium grain, tremolite bearing marble. Massive to subhedral, fine grained, 0.5-1.5cm thick pyrrhotite vein occurs from 187.52-182.55m. Subhedral, mm-sized quartz crystals occur with pyrrhotite. Intergrowths of brassy-green, massive, metallic chalcopyrite occur within the pyrrhotite vein. Skarn is dark in colour towards its center and is lighter towards its margins. Marble section contains 1-5mm sized, euhedral, radiating to needley tremolite, certain have a chlorite-green colour. Po occurs as a vein (2%) and as blebby dissemination throughout the skarn interval, strongly abundant from 187.63-187.70 (1%). Chalcopyrite occurs as a brassy-green, massive intergrowth within Po vein (0.5%).							
						MD	GN	MA	MBL	4I	Po	2
						DK	GN				Po	1
						DK	GY				Cp	0.5
											Ac	1
											Tr	10
											Tr	1

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
187.73	190.76	3.03	MBL	MG	Light-medium grey, medium grained, moderately vein brecciated, tremolite ± actinolite bearing marble. 189.76-189.79m – dark green, massive, fine grained tremolite-actinolite-calcite ± pyrrhottie and pyrite vein. Po and lesser Py occur as massive, fine grianed, 1-3mm sized blebs within the vein. Even amounts of 1-5mm, euhedral, radiating white tremolite and black actinolite occur throughout the interval and fractured surfaces. Veining occurs mainly as calcite vein breccia and lesser as calcite veinlets at varying angles TCA. This interval is situated between two skarn intervals. Po occurs within tremolite-actinolite vein above (0.5%). Py occurs within tremolite-actinolite vein above (0.1%).							
						MD	GY	MA			Py	0.1
						LT	GY	BX			Po	0.5
											Tr	2
											Ac	0.5

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
190.76	191.20	0.44	SKN	MG	Skarn interval. Medium-dark green/dark grey, fine-medium grained, massive, tremolite-actinolite-pyrrhotite ± quartz skarn with 10cm section of light grey, medium grain, tremolite bearing marble 191.12m – vein parallel fracture exposes 2cm thick massive, fine grained Po vein. 1-10mm, fresh, massive, fine grained blebs of pyrrhotite occur throughout the skarn and appear to preferentially occur proximal to subhedral quartz crystals of the same size. Marble section contains 1-5mm sized, euhedral, radiating to needley tremolite, certain have a chlorite-green colour. Po occurs as a vein (5%) and as blebs throughout the interval (2%).							
						MD	GN	MA	MBL	2I	Po	5
						DK	GN				Po	2
						DK	GY				Tr	20
											Tr	2
											Ac	5
											Ac	1

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
191.20	193.10	1.90	MBL	MG	Light-medium grey, medium grained, moderately vein brecciated, tremolite ± actinolite bearing marble. 191.47-191.48m – medium-dark green, very fine grained, massive tremolite ± chlorite vein with weak, sub mm-sized, blebby pyrrhotite and trace, sub mm-sized, blebby Pyrite. 191.87-191.97m – primarily white calcite with lesser medium-green, fine grained, massive tremolite vein. Weak Py and trace Po occurs as 1-3mm sized blebs to irregular shaped within the vein. 192.42-192.48m – light green, fine grained, massive tremolite rich with subordinate calcite vein. Vein lack sulphides and is cross-cut by calcite vein. Even amounts of 1-5mm, euhedral, radiating white tremolite and black actinolite occur throughout the interval and fractured surfaces. Veining occurs mainly as calcite vein breccia and lesser as calcite veinlets at varying angles TCA. This interval is situated between two skarn intervals. Po occurs within tremolite veins above (0.5%). Py occurs within tremolite veins above (0.1%) and very rare as sub-mm sized disseminations (0.01%).							
						MD	GY				Py	0.1
						LT	GY	BX	MBL	4I	Po	0.5
											Py	0.01
											Tr	2
											Ac	2

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
193.10	193.57	0.47	SKN	FG	Skarn interval. Medium-dark green/dark grey, fine-medium grained, massive, tremolite-actinolite-pyrrhotite ± chalcopyrite and quartz skarn with 10-15cm section of light grey, medium grain, tremolite bearing marble. Fractured surfaces at 193.41m and 193.47m expose 1-5mm sized, massive to subhedral pyrrhotite and subordinate intergrowths of brassy-green, massive chalcopyrite cover ~90% of fracture surface. Skarn is dark in colour towards its center and is lighter towards its margins. Marble section contains 1-5mm sized, euhedral, radiating to needley tremolite, certain have a chlorite-green colour. Tremolite in marble has a stronger green colour proximal to skarn sections. Po occurs as a vein (5%) and as blebby dissemination throughout the skarn interval, strongly abundant at 193.41m and 193.47m (2%). Chalcopyrite occurs as a brassy-green, massive intergrowth within Po vein (0.5%). Tremolite accounts for 10% of the interval.							
						MD	GN	MA	MBL	3I	Po	5
						DK	GN				Po	2
						DK	GY				Cp	0.5
											Tr	10

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
193.57	212.57	19.00	MBL	MG	Interval contains sporadic, discrete calcite-tremolite veins. Light-medium grey, medium grained, moderately vein brecciated, tremolite ± actinolite bearing marble with intermittent ~1m thick, fine-medium grained, foliated, weakly vein brecciated limestone. 197.52m and 198.12m – fracture surfaces exposing 1-8mm sized, euhedral, bladed calcite crystals covering the entire fractured surfaces. 199.00-199.55m contains two 10-20cm thick, medium grained calcite veins. 203.90-203.96m – white calcite-green massive, fine grained tremolite vein with abundant, blebby, fresh pyrite. 207.60-207.67m – fracture parallel to primarily white calcite, with lesser green tremolite vein with trace disseminated pyrite. 208.66-208.81m three light-dark green, fine grained, massive tremolite-calcite veins with trace sub mm-sized disseminated pyrite and rare pyrrhotite. 211.30-211.46m - medium-dark green, very fine grained, massive tremolite ± calcite vein with weak, mm-sized, disseminated and euhedral pyrite. Marble section contains 1-5mm sized, white to green, euhedral, radiating to needley tremolite. Veining occurs primarily as calcite vein brecciation, less as calcite veinlets and as trace cm-sized calcite veins. Foliation in limestone varies within 30-50 degrees TCA. Pyrite occurs as blebs within tremolite veins (0.1%) and as rare euhedral disseminations throughout the interval (0.05%). Pyrrhotite occurs within one vein, mentioned above (0.01%). Tremolite accounts for 1% of interval.							
						MD	GY	FO			Py	0.05
						LT	GY	BX			Py	0.1
											Tr	1
											Po	0.01

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
212.57	220.40	7.83	LST	FG	Light-medium grey, fine-medium grained, foliated, massive to weakly vein brecciated, weak to moderately veined limestone. Veining occurs primarily as calcite vein brecciation and lesser as variably angled calcite veinlets. White to black, 1-3mm sized, radiating tremolite and actinolites occur weakly throughout the interval and on sporadic fracture surfaces Pyrite occurs weakly throughout the interval as fresh, 1-3mm sized euhedral disseminations (0.5%) and within veinlets (0.1%). Tremolite and actinolite account for ~2% of the interval.							
						MD	GY	FO			Py	0.1
						LT	GY	BX			Py	0.5
											Tr	1
											Ac	1

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
220.40	276.91	56.51	MBL	MG	Contains sparse, discrete tremolite-calcite veins and rare skarn bands. White to light grey, massive, weakly veined, variably foliated, locally observed moderately pitted, variably containing 1-3mm sized actinolite marble with sparse tremolite-calcite veins and rare skarn bands and 1-2m sections of massive to brecciated limestone. Mineralized intervals: 228-228.80 is moderately pitted, with trace oxidation around pitted texture and has a slight green hue. 229.15-229.25m - medium-dark green, very fine grained, massive tremolite-actinolite ± calcite vein with weak, fresh to weaky oxidized, mm-sized, disseminated and euhedral pyrite. 235.14-235.22m, 250.43-250.48m, 253.85-253.88m, 260.58-260.64m and 264.71-264.77m – white to light green, very fine grained tremolite (±chlorite) skarn bands with variable white fine grained calcite horizons. White 1-2mm sized, euhedral, radiating tremolites occur on margin of vein. Rare, 1-2mm sized disseminations of pyrrhotite and pyrite occurs within the veins. 238.42-238.50m – white, fine grained calcite vein with 1-5mm sized tan dolomite horizons towards the vein margins. 1-5mm sized, fresh disseminations of pyrite and pyrrhotite occur equally throughout the vein. 247.32-247.46m – multiple fractures both perpendicular and parallel to primarily coarse grained calcite with weak brownish, fine grained quartz veins bearing trace amounts of blue-green, fine grained, massive tremolite and 1-5mm sized, fresh, blebby pyrite within vein and sub mm-sized disseminations of pyrrhotite on vein margins. 250.05-250.09m – fracture parallel to calcite vein. Calcite is primarily massive and lesser 2-5mm sized euhedral. 1-2mm sized, euhedral pyrite occurs rarely along fracture surface. 255.54-256.03m – 5mm thick, very fine grained, green-blue tremolite-calcite vein with ~3cm thick alteration halo. Alteration halo consists of 1-2cm of massive, mm-sized bedded pyrrhotite-calcite proximal to tremolite-calcite veinand 1cm of black, euhedral, radiating actinolite and calcite							

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
220.40	276.91	56.51			most distal to tremolite-calcite vein. Pyrrhotite is very abundant with this section and occurs primarily as massive, very fine grained disseminations, and lesser and 1-5mm sized blebs. Pyrite occurs weak-moderate as 1-5mm irregular shaped blebs. 273.22-273.55m - Massive, fine-grained dark green-black actinolite skarn band. 1-5mm horizon of fine grained, white calcite encloses the skarn band. Pyrite and pyrrhotite both occurs moderately throughout the band as 1-5mm thick blebs. 273.74-274.22m – Multiple zoned 1-1.5cm thick dark green to dark grey, fine grained actinolite(?) veins with 1-5mm sized calcite horizons enclosing the vein. Veining occurs primarily as trace-weak calcite veins and veinlets and lesser as vein brecciation. 223.00-224.50m – calcite veins are often enclosed by 1-3mm thick ring of black, fine grained, massive dolomite crystals. This marble interval lack significant amount of euhedral, 1-5mm sized tremolite/actinolite crystals throughout the interval. Pitted texture occurs primarily along rare calcite vein. Brecciated limestone occurs primarily near the end of the interval. Pyrite occurs within veins (0.5%) and as rare disseminations throughout the interval (0.1%). Pyrrhotite occurs within veins (0.3%) and as rare blebs throughout the interval (0.05) Tremolite accounts for 1.5% of the interval.							
						MD	GY	FO			Py	0.1
						LT	GY	VU			Py	0.5
											Po	0.35
											Tr	1.5

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
276.91	277.19	0.28	PEG	CG	Pegmatite with skarn horizons interval. Clear to light green, coarse grained, subhedral quartz-pegmatite with 3-5cm thick dark green-grey actinolite-skarn horizons. Pegmatite is composed of clear-smoky, coarse grained, subhedral quartz and a light green to white (possibly due to micro-scale chloritization?), medium-coarse grained, anhedral to aphanitic mineral (var. feldspar?). 35 degree TCA fracture at 277m exposes quartz crystals along fractured surfaces. The pegmatite has an irregular contact with its skarn horizons. Dark green/dark grey, fine-medium grained, massive, tremolite-actinolite-pyrrhotite ± pyrite skarns occur on top and bottom of pegmatite. Pyrrhotite occurs as 1-5mm blebs to irregularly shaped, moderately abundant crystals throughout the skarns. Trace 1-3mm sized, blebby pyrite occurs within the skarns. Very rare, massive, brassy-green chalcopyrite occurs as intergrowths within the pyrrhotite. Strong zonation of skarn with white, fine grained calcite and sub mm-sized pyrite stringers occurs at the shallow-end skarn. Pyrrhottie occurs within the skarn horizons as blebs (2%). Pyrite occurs within the skarn horizons as blebs (0.5%) and lesser as sub mm-sized stringers (0.1%). Chalcopyrite occurs as massive intergrowths within pyrrhotite (0.01%). Actinolite accounts for 15% of interval.							
						LT	WH	AN			Py	0.5
						LT	GN				Py	0.1
						--	CL	XL	CHL	1I	Po	2
											Cp	0.01
											Ac	15
											Qz	5

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
277.19	280.74	3.55	LST	MG	Contains sparse, discrete tremolite-calcite veins and rare skarn bands. White to light grey, massive, weakly veined, variably foliated, massive to brecciated limestone with sparse actinolite-skarn bands. Skarn bands occur at: 278.76-278.81m, 278.85-278.91m, 278.93-278.97 and 279.48-279.53m – Moderate to high angle TCA skarn horizons. Massive, fine-grained dark green-black actinolite skarn band with 1-5mm horizon of fine grained, white calcite encloses the skarn band. Pyrite and pyrrhotite both occurs moderately throughout the band as 1-2mm thick blebs. Veining occurs primarily as mm-sized calcite veinlets and lesser as calcite vein breccia. 277.90-277.05m – calcite-pyrite vein. Pyrite occurs vein-parallel through the middle of the vein as 1-3mm thick blebs. Foliation is at ~50 degrees TCA. Pyrite occurs within veins (0.5%). Pyrrhotite occurs within vein (0.1%). Actinolite occurs as massive skarn bands (1%).							
						MD	WH	FO	MBL	2I	Py	0.5
						LT	GY	BX			Po	0.1
											Ac	1

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
280.74	281.90	1.16	PEG	CG	Clear to light green, coarse grained, subhedral quartz-pegmatite with 3-7cm thick dark green-grey actinolite-skarn horizons. Pegmatite is composed of: clear-smoky, coarse grained, subhedral quartz; a light green to white (possibly due to micro-scale chloritization?), medium-coarse grained, anhedral to aphanitic mineral (albite?); trace, purple, 1-5mm sized, subhedral fluorite and rare, blue, massive veinlets of amazonite(?). Locally observed, coarse grained, euhedral, lesser massive pyrite occurs within the pegmatite. On fractured surfaces of the pegmatite, trace, 1-2mm-sized, dark grey-black, sub-metallic, non-magnetic mineral occurs. Trace, silvery, metallic, subhedral arsenopyrite is locally observed within the pegmatite.The pegmatite has an irregular contact with its skarn horizons. Dark green/dark grey, fine-medium grained, massive, tremolite-actinolite ± pyrrhotite skarns occur on top and bottom of pegmatite. Pyrrhotite occurs as 1-3mm blebs to irregularly shaped, weakly abundant crystals throughout the skarns. Trace 1-3mm sized, blebby pyrite occurs within the skarns. Strong zonation of skarn with white, fine grained calcite occurs at the margins of the interval. Pyrite occurs euhedral within the pegmatite (1.5%) and within skarn as blebs (0.1%). Pyrrhotite occurs within skarn bands as blebs (0.5%). Arsenopyrite occurs within the pegmatite (0.5%). Actinolite occurs within the skarns (5%). 1-2mm-sized, dark grey-black, sub-metallic, non-magnetic mineral occurs in pegmatite (0.5%).							
						LT	GN	AN			Py	1.5
						--	CL	XT			Fl	1
											Ac	5
											Un	0.5
											As	0.5
											Po	0.5
											Py	0.1

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
281.90	326.44	44.54	MBL	MG	White to light grey, fine to medium grained, massive to locally brecciated, moderately veined and locally observed weakly bleached marble with 0.2-2m sections of medium grey, foliated debrites and limestones. 296.84-297.13m – light-medium grey, poorly sorted, granule-pebble sized limestone clasts, calcareous mudstone matrix supported debrite. 312.64-312.72m – Fresh, massive to euhedral, 1-8mm thick pyrrhotite vein with intergrowths of trace massive, brassy-green chalcopyrite. 322.11m – Low angle TCA fracture with blue-green, massive to patchy mineral coating surface (actinolite?). Veining occurs primarily as calcite veinlets, and sub mm-sized, fine grained black dolomite(?) stringers and lesser as calcite vein brecciation. Foliation varies from 30-50 degrees TCA. Pyrite occurs as rare-trace sub mm-sized disseminations occur throughout the interval (0.05%). Pyrrhotite occurs within vein described above (0.01%).							
						MD	WH	MA			Py	0.05
						LT	GY	BD			Po	0.01
								DB				

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
326.44	327.82	1.38	SKN	MG	Skarn interval. Brown-grey to dark green skarn horizon, well foliated at 40 TCA. Upper contact with limestone is gradational, into pale brown calcite. At 326.92, banding is much less severe, until 327.45 when dark green and white calcite, actinolite coarse grained (0.5cm) pegmatitic zone occurs over 2cm. Sharply transitioning into banded dark green, white, and brown, actinolite-calcite-quartz skarn is present to the sharp contact at a fracture which is undulose. Pyrrhotite occurs as disseminations and submassive veinlets throughout. 326.45 to 327.41 banded brown to grey quartz, calcite horizon with disseminated sub-mm Pyrrhotite. 327.45 to 327.82m banded dark green actinolite, white calcite, brown quartz skarn horizon with disseminated and submassive veinlets of pyrrhotite. Pyrrhotite = 1%							
						MD	BR	FO			Po	1
						MD	GY					
327.82	329.18	1.36	MBL	MG	White to light grey, fine to medium grained, massive to locally brecciated, moderately veined and locally observed weakly bleached marble with 0.2-2m sections of medium grey, foliated debrites and limestones. Veining occurs primarily as calcite veinlets, and sub mm-sized, fine grained black dolomite(?) stringers and lesser as calcite vein brecciation. Foliation varies from 30-50 degrees TCA.							
						MD	WH	MA	BLE	1I		
						LT	GY	BX				

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
0.00	1.47	1.47	0	0	0.00	0	--	--	--	0-1.47m no recovery
1.47	3.05	1.58	1.57	99	1.13	72	3R	3H	1W	
3.05	6.10	3.05	2.3	75	1.72	56	2R	3H	1W	
6.10	9.14	3.04	2.78	91	2.40	79	2R	3H	1W	
9.14	12.19	3.05	2.62	86	2.04	67	2R	3H	2W	
12.19	15.24	3.05	3.05	100	3.05	100	3R	3H	1W	
15.24	18.29	3.05	3.05	100	2.92	96	2R	3H	2W	
18.29	21.34	3.05	2.89	95	2.86	94	3R	4H	1W	
21.34	24.38	3.04	3.04	100	3.04	100	3R	3H	1W	
24.38	27.43	3.05	3.05	100	3.05	100	2R	4H	1W	
27.43	30.48	3.05	2.98	98	2.87	94	2R	4H	2W	
30.48	33.53	3.05	3.05	100	2.87	94	3R	3H	1W	
33.53	36.58	3.05	3.01	99	2.74	90	3R	3H	1W	
36.58	39.62	3.04	3.04	100	2.76	91	3R	4H	2W	
39.62	42.67	3.05	2.69	88	2.53	83	3R	4H	2W	
42.67	45.72	3.05	3.05	100	2.76	90	3R	4H	2W	
45.72	48.77	3.05	3.05	100	3.05	100	2R	4H	1W	
48.77	51.82	3.05	2.92	96	2.74	90	2R	4H	1W	
51.82	54.86	3.04	2.9	95	2.76	91	2R	4H	1W	
54.86	57.91	3.05	3	98	3.00	98	2R	4H	1W	
57.91	60.96	3.05	3.05	100	2.86	94	2R	3H	1W	
60.96	64.01	3.05	2.93	96	2.85	93	2R	3H	2W	
64.01	67.06	3.05	2.9	95	2.41	79	2R	3H	2W	20cm RBZ
67.06	70.10	3.04	3.04	100	2.75	90	3R	3H	2W	
70.10	73.15	3.05	2.78	91	1.94	64	2R	3H	1W	2x5cm RBZ. On one low angle fracture face is a cluster of 2mm euhedral py
73.15	76.20	3.05	2.94	96	2.89	95	2R	4H	1W	3 single fractures from low to moderate angle TCA
76.20	79.25	3.05	3.02	99	2.52	83	2R	4H	1W	
79.25	82.30	3.05	3	98	2.76	90	2R	4H	2W	8 cm RBZ and 4 cm RBZ

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
82.30	85.34	3.04	3.01	99	2.73	90	1R	3H	1W	
85.34	88.39	3.05	3	98	3.00	98	1R	3H	2W	
88.39	91.44	3.05	3	98	2.73	90	1R	3H	1W	
91.44	94.49	3.05	2.77	91	1.36	45	1R	2H	4W	8 cm RBZ and 4 cm RBZ
94.49	97.54	3.05	1.79	59	0.55	18	1R	1H	6W	20cm, and 2x10cm RBZ
97.54	100.58	3.04	2.78	91	1.17	38	1R	2H	4W	2 x 8 cm RBZ which are highly oxidized
100.58	103.63	3.05	1.8	59	1.06	35	1R	1H	5W	20 cm RBZ which is extremely oxidized
103.63	106.68	3.05	2.16	71	1.72	56	1R	1H	5W	20 cm RBZ which is highly oxidized
106.68	109.73	3.05	3.02	99	2.78	91	2R	3H	1W	
109.73	112.78	3.05	3	98	2.71	89	2R	3H	1W	
112.78	115.82	3.04	2.98	98	2.84	93	2R	3H	1W	
115.82	118.87	3.05	3.04	100	2.80	92	1R	3H	1W	
118.87	121.92	3.05	3.05	100	2.89	95	1R	3H	1W	
121.92	124.97	3.05	3.05	100	3.05	100	1R	3H	1W	
124.97	128.02	3.05	2.97	97	2.81	92	2R	3H	1W	
128.02	131.06	3.04	2.98	98	2.23	73	1R	3H	1W	
131.06	134.11	3.05	2.99	98	2.33	76	1R	3H	1W	
134.11	137.16	3.05	3.05	100	2.98	98	1R	4H	1W	
137.16	140.21	3.05	3.02	99	2.78	91	1R	4H	1W	
140.21	143.26	3.05	3	98	3.00	98	1R	4H	1W	
143.26	146.30	3.04	2.99	98	2.64	87	2R	4H	1W	
146.30	149.35	3.05	3.03	99	2.94	96	1R	4H	1W	
149.35	152.40	3.05	3.04	100	2.90	95	1R	4H	1W	
152.40	155.45	3.05	2.9	95	2.56	84	1R	4H	1W	3 cm pyrite vein
155.45	158.50	3.05	3.03	99	2.63	86	2R	4H	1W	1 cm calcite vein with 1- 6 mm pyrite
158.50	161.54	3.04	3.04	100	2.83	93	1R	4H	1W	
161.54	164.59	3.05	3.02	99	2.85	93	2R	4H	1W	
164.59	167.64	3.05	3.05	100	3.05	100	2R	4H	1W	
167.64	170.69	3.05	3.01	99	2.19	72	3R	4H	1W	
170.69	173.74	3.05	2.97	97	2.87	94	3R	4H	1W	
173.74	176.78	3.04	2.93	96	2.47	81	3R	4H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
176.78	179.83	3.05	3.02	99	2.68	88	3R	4H	1W	Slickenside joint at end of run which coincides with slickenside joint at beginning of next run
179.83	182.88	3.05	2.99	98	2.29	75	3R	3H	1W	Slickenside joint at beginning of run which coincides with last run
182.88	185.93	3.05	3.05	100	2.26	74	3R	4H	1W	
185.93	188.98	3.05	3.03	99	3.01	99	2R	3H	1W	High angle fracture with pyrrhotite and chalcopyrite
188.98	192.02	3.04	3.01	99	2.75	90	3R	3H	1W	1.5 cm wide pyrrhotite vein on undulatory high angle fracture
192.02	195.07	3.05	3.05	100	2.82	92	3R	3H	1W	Jointing with pyrrhotite and small amounts of chalcopyrite
195.07	198.12	3.05	2.98	98	2.88	94	3R	3H	1W	2 x low angle fractures with calcite mineralization
198.12	201.17	3.05	3.03	99	2.99	98	3R	3H	1W	
201.17	204.22	3.05	2.92	96	2.56	84	3R	3H	1W	2 x 5 mm chalcopyrite vein
204.22	207.26	3.04	3.04	100	1.82	60	2R	3H	1W	
207.26	210.31	3.05	2.95	97	2.51	82	2R	4H	1W	
210.31	213.36	3.05	3.05	100	2.90	95	3R	3H	1W	Chalcopyrite on a low angle fracture
213.36	216.41	3.05	3.05	100	2.43	80	2R	3H	1W	
216.41	219.46	3.05	2.95	97	2.84	93	2R	3H	1W	
219.46	222.50	3.04	3.02	99	3.02	99	2R	3H	1W	
222.50	225.55	3.05	3.02	99	2.41	79	2R	3H	1W	
225.55	228.60	3.05	2.76	90	2.49	82	1R	3H	1W	
228.60	231.65	3.05	3.01	99	2.91	95	2R	3H	1W	
231.65	234.70	3.05	3.01	99	2.54	83	3R	4H	1W	
234.70	237.74	3.04	2.98	98	2.32	76	3R	4H	1W	
237.74	240.79	3.05	2.92	96	2.66	87	3R	4H	1W	Jointing on moderate angled calcite veins with 1 mm pyrites
240.79	243.84	3.05	2.95	97	2.68	88	3R	3H	1W	
243.84	246.89	3.05	2.83	93	2.34	77	3R	4H	1W	
246.89	249.94	3.05	3	98	2.23	73	2R	4H	1W	5 mm pyrite vein near joint
249.94	252.98	3.04	3.04	100	2.42	80	3R	3H	1W	
252.98	256.03	3.05	3.05	100	2.89	95	2R	3H	1W	Moderate angled slickenside joint at end of run corresponding with next run

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
256.03	259.08	3.05	3.05	100	2.46	81	1R	4H	1W	Moderate angled slickenside joint at start of run
259.08	262.13	3.05	3.05	100	2.22	73	1R	4H	1W	Calcite veins with 1- 5 mm pyrite
262.13	265.18	3.05	3.01	99	2.61	86	2R	4H	1W	
265.18	268.22	3.04	2.93	96	2.07	68	2R	4H	1W	
268.22	271.27	3.05	3	98	2.61	86	3R	4H	1W	
271.27	274.32	3.05	3.02	99	2.37	78	2R	4H	1W	
274.32	277.37	3.05	2.91	95	2.67	88	2R	4H	1W	1 cm calcite vein on joint
277.37	280.42	3.05	2.84	93	1.94	64	1R	3H	1W	20 cm calcite vein with pyrite and low angle joints containing 5 mm + sulphides
280.42	283.46	3.04	2.89	95	2.30	76	1R	4H	1W	Low angle veins containing 5 mm pyrite and purple flourite. 5- 10 mm calcite veins containing 2- 7 mm pyrite throughout
283.46	286.51	3.05	3.02	99	2.50	82	2R	4H	1W	
286.51	289.56	3.05	3.03	99	2.96	97	1R	4H	1W	
289.56	292.61	3.05	3.05	100	2.94	96	2R	4H	1W	
292.61	295.66	3.05	2.95	97	2.75	90	3R	4H	1W	
295.66	298.70	3.04	3.02	99	2.94	97	2R	4H	1W	
298.70	301.75	3.05	3.05	100	2.81	92	2R	4H	1W	
301.75	304.80	3.05	2.91	95	2.47	81	2R	4H	1W	
304.80	307.85	3.05	3.05	100	2.96	97	2R	4H	1W	
307.85	310.90	3.05	2.97	97	2.73	90	3R	4H	1W	
310.90	313.94	3.04	2.94	97	2.86	94	2R	3H	1W	1 cm sulphide vein through fracture
313.94	316.99	3.05	3	98	2.62	86	2R	4H	1W	
316.99	320.04	3.05	2.95	97	2.69	88	2R	4H	1W	
320.04	323.09	3.05	2.94	96	2.61	86	2R	4H	1W	Green and blue mineralization on very low angle fracture mid- run
323.09	326.14	3.05	3.02	99	2.78	91	2R	4H	1W	
326.14	329.18	3.04	2.96	97	2.51	83	3R	4H	1W	

RPP-19-001

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	W842304	☐	R19-D03	Core	ML-3	☐	☐	☐
0.00	3.05	3.05	-QC-	1.57	51	W842201	☐	R19-D01	Core		☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W842334	☐	R19-D04	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W842217	☐	R19-D01	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W842315	☐	R19-D03	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W842294	☐	R19-D03	Core	ML-1	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W842278	☐	R19-D02	Core	ML-2	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W842274	☐	R19-D02	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W842245	☐	R19-D02	Core	ML-1	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W842240	☐	R19-D01	Core	ML-2	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W842224	☐	R19-D01	Core	ML-1	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W842330	☐	R19-D04	Core	ML-2	☐	☐	☐
3.05	6.10	3.05	LST	2.30	75	W842202	☐	R19-D01	Core		☐	☐	☐
6.10	9.14	3.04	LST	2.78	91	W842203	☐	R19-D01	Core		☐	☐	☐
9.14	12.19	3.05	LST	2.62	86	W842204	☐	R19-D01	Core		☐	☐	☐
12.19	15.24	3.05	LST	3.05	100	W842205	☐	R19-D01	Core		☐	☐	☐
12.19	15.24	3.05	LST	3.05	100	W842206	☐	R19-D01	Core		☐	☑	☐
15.24	18.29	3.05	LST	3.05	100	W842207	☐	R19-D01	Core		☐	☐	☐
18.29	21.34	3.05	LST	2.89	95	W842208	☐	R19-D01	Core		☐	☐	☐
21.34	24.38	3.04	LST	3.04	100	W842209	☐	R19-D01	Core		☐	☐	☐
24.38	27.43	3.05	LST	3.05	100	W842210	☐	R19-D01	Core		☐	☐	☐
27.43	30.48	3.05	LST	2.98	98	W842211	☐	R19-D01	Core		☐	☐	☐
30.48	33.53	3.05	LST	3.05	100	W842212	☐	R19-D01	Core		☐	☐	☐
33.53	36.58	3.05	LST	3.01	99	W842213	☐	R19-D01	Core		☐	☐	☐
36.58	39.62	3.04	LST	3.04	100	W842214	☐	R19-D01	Core		☐	☐	☐
39.62	41.00	1.38	LST	1.18	86	W842215	☐	R19-D01	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
41.00	42.67	1.67	LST	1.35	81	W842216	☐	R19-D01	Core		☐	☐	☐
42.67	45.72	3.05	LST	3.05	100	W842218	☐	R19-D01	Core		☐	☐	☐
45.72	48.77	3.05	LST	3.05	100	W842219	☐	R19-D01	Core		☐	☐	☐
48.77	51.82	3.05	LST	2.92	96	W842220	☐	R19-D01	Core		☐	☐	☐
51.82	54.86	3.04	LST	2.90	95	W842221	☐	R19-D01	Core		☐	☐	☐
54.86	57.91	3.05	LST	3.00	98	W842222	☐	R19-D01	Core		☐	☐	☐
57.91	60.96	3.05	LST	3.05	100	W842223	☐	R19-D01	Core		☐	☐	☐
60.96	64.01	3.05	LST	2.93	96	W842225	☐	R19-D01	Core		☐	☐	☐
64.01	67.06	3.05	LST	2.90	95	W842226	☐	R19-D01	Core		☐	☐	☐
67.06	70.10	3.04	LST	3.04	100	W842227	☐	R19-D01	Core		☐	☐	☐
70.10	73.15	3.05	LST	2.78	91	W842228	☐	R19-D01	Core		☐	☐	☐
73.15	76.20	3.05	LST	2.94	96	W842229	☐	R19-D01	Core		☐	☐	☐
76.20	79.25	3.05	LST	3.02	99	W842230	☐	R19-D01	Core		☐	☐	☐
79.25	82.30	3.05	LST	3.00	98	W842231	☐	R19-D01	Core		☐	☐	☐
82.30	85.34	3.04	LST	3.01	99	W842232	☐	R19-D01	Core		☐	☐	☐
85.34	88.39	3.05	LST	3.00	98	W842233	☐	R19-D01	Core		☐	☐	☐
88.39	91.44	3.05	LST	3.00	98	W842234	☐	R19-D01	Core		☐	☐	☐
91.44	94.49	3.05	LST	2.77	91	W842235	☐	R19-D01	Core		☐	☐	☐
94.49	97.54	3.05	LST	1.79	59	W842236	☐	R19-D01	Core		☐	☐	☐
94.49	97.54	3.05	LST	1.79	59	W842237	☐	R19-D01	Core		☐	☐	☑
97.54	100.58	3.04	LST	2.78	91	W842238	☐	R19-D01	Core		☐	☐	☐
100.58	103.63	3.05	LST	1.80	59	W842239	☐	R19-D01	Core		☐	☐	☐
103.63	106.68	3.05	LST	2.16	71	W842241	☐	R19-D02	Core		☐	☐	☐
106.68	109.73	3.05	LST	3.02	99	W842242	☐	R19-D02	Core		☐	☐	☐
109.73	112.78	3.05	LST	3.00	98	W842243	☐	R19-D02	Core		☐	☐	☐
112.78	115.82	3.04	LST	2.98	98	W842244	☐	R19-D02	Core		☐	☐	☐
115.82	118.87	3.05	LST	3.04	100	W842246	☐	R19-D02	Core		☐	☐	☐
118.87	121.92	3.05	LST	3.05	100	W842247	☐	R19-D02	Core		☐	☐	☐

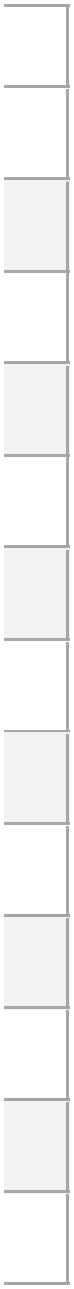
From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
121.92	124.97	3.05	LST	3.05	100	W842248	☐	R19-D02	Core		☐	☐	☐
124.97	128.02	3.05	LST	2.97	97	W842249	☐	R19-D02	Core		☐	☐	☐
128.02	131.06	3.04	LST	2.98	98	W842250	☐	R19-D02	Core		☐	☐	☐
131.06	134.11	3.05	LST	2.99	98	W842251	☐	R19-D02	Core		☐	☐	☐
134.11	137.16	3.05	LST	3.05	100	W842252	☐	R19-D02	Core		☐	☐	☐
137.16	140.21	3.05	LST	3.02	99	W842253	☐	R19-D02	Core		☐	☐	☐
140.21	143.26	3.05	LST	3.00	98	W842254	☐	R19-D02	Core		☐	☐	☐
140.21	143.26	3.05	LST	3.00	98	W842255	☐	R19-D02	Core		☐	☑	☐
143.26	146.30	3.04	LST	2.99	98	W842256	☐	R19-D02	Core		☐	☐	☐
146.30	149.35	3.05	LST	3.03	99	W842257	☐	R19-D02	Core		☐	☐	☐
149.35	152.40	3.05	LST	3.04	100	W842258	☐	R19-D02	Core		☐	☐	☐
152.40	155.45	3.05	LST	2.90	95	W842259	☐	R19-D02	Core		☐	☐	☐
155.45	158.50	3.05	LST	3.03	99	W842260	☐	R19-D02	Core		☐	☐	☐
158.50	161.54	3.04	LST	3.04	100	W842261	☐	R19-D02	Core		☐	☐	☐
161.54	164.59	3.05	LST	3.02	99	W842262	☐	R19-D02	Core		☐	☐	☐
164.59	167.64	3.05	LST	3.05	100	W842263	☐	R19-D02	Core		☐	☐	☐
167.64	170.69	3.05	LST	3.01	99	W842264	☐	R19-D02	Core		☐	☐	☐
170.69	173.74	3.05	LST	2.97	97	W842265	☐	R19-D02	Core		☐	☐	☐
173.74	176.78	3.04	LST	2.93	96	W842266	☐	R19-D02	Core		☐	☐	☐
176.78	179.83	3.05	SKN	3.02	99	W842267	☐	R19-D02	Core		☐	☐	☐
179.83	182.88	3.05	SKN	2.99	98	W842268	☐	R19-D02	Core		☐	☐	☐
182.88	185.93	3.05	SKN	3.05	100	W842269	☐	R19-D02	Core		☐	☐	☐
185.93	187.82	1.89	SKN	1.87	99	W842270	☐	R19-D02	Core		☐	☐	☐
185.93	187.82	1.89	SKN	1.87	99	W842271	☐	R19-D02	Core		☐	☐	☑
187.82	190.54	2.72	SKN	2.72	100	W842272	☐	R19-D02	Core		☐	☐	☐
190.54	192.02	1.48	SKN	1.35	91	W842273	☐	R19-D02	Core		☐	☐	☐
192.02	193.72	1.70	SKN	1.70	100	W842275	☐	R19-D02	Core		☐	☐	☐
193.72	195.07	1.35	MBL	1.28	95	W842276	☐	R19-D02	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
195.07	198.12	3.05	MBL	2.98	98	W842277	☐	R19-D02	Core		☐	☐	☐
198.12	201.17	3.05	MBL	3.03	99	W842279	☐	R19-D02	Core		☐	☐	☐
201.17	204.22	3.05	MBL	2.92	96	W842280	☐	R19-D02	Core		☐	☐	☐
204.22	207.26	3.04	MBL	3.04	100	W842281	☐	R19-D03	Core		☐	☐	☐
207.26	210.31	3.05	MBL	2.95	97	W842282	☐	R19-D03	Core		☐	☐	☐
210.31	213.36	3.05	MBL	3.05	100	W842283	☐	R19-D03	Core		☐	☐	☐
210.31	213.36	3.05	MBL	3.05	100	W842284	☐	R19-D03	Core		☐	☑	☐
213.36	216.41	3.05	MBL	3.05	100	W842285	☐	R19-D03	Core		☐	☐	☐
216.41	219.46	3.05	MBL	2.95	97	W842286	☐	R19-D03	Core		☐	☐	☐
219.46	222.50	3.04	MBL	3.02	99	W842287	☐	R19-D03	Core		☐	☐	☐
222.50	225.55	3.05	MBL	3.02	99	W842288	☐	R19-D03	Core		☐	☐	☐
225.55	228.60	3.05	MBL	2.76	90	W842289	☐	R19-D03	Core		☐	☐	☐
228.60	231.65	3.05	MBL	3.01	99	W842290	☐	R19-D03	Core		☐	☐	☐
231.65	234.70	3.05	MBL	3.01	99	W842291	☐	R19-D03	Core		☐	☐	☐
234.70	237.74	3.04	MBL	2.98	98	W842292	☐	R19-D03	Core		☐	☐	☐
237.74	240.79	3.05	MBL	2.92	96	W842293	☐	R19-D03	Core		☐	☐	☐
240.79	243.84	3.05	MBL	2.95	97	W842295	☐	R19-D03	Core		☐	☐	☐
243.84	246.89	3.05	MBL	2.83	93	W842296	☐	R19-D03	Core		☐	☐	☐
246.89	249.94	3.05	MBL	3.00	98	W842297	☐	R19-D03	Core		☐	☐	☐
249.94	252.98	3.04	MBL	3.04	100	W842298	☐	R19-D03	Core		☐	☐	☐
252.98	256.03	3.05	MBL	3.05	100	W842299	☐	R19-D03	Core		☐	☐	☐
252.98	256.03	3.05	MBL	3.05	100	W842300	☐	R19-D03	Core		☐	☐	☑
256.03	259.08	3.05	MBL	3.05	100	W842301	☐	R19-D03	Core		☐	☐	☐
259.08	262.13	3.05	MBL	3.05	100	W842302	☐	R19-D03	Core		☐	☐	☐
262.13	265.18	3.05	MBL	3.01	99	W842303	☐	R19-D03	Core		☐	☐	☐
265.18	268.22	3.04	MBL	2.93	96	W842305	☐	R19-D03	Core		☐	☐	☐
268.22	271.27	3.05	MBL	3.00	98	W842306	☐	R19-D03	Core		☐	☐	☐
271.27	273.09	1.82	MBL	1.79	98	W842307	☐	R19-D03	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
273.09	274.32	1.23	MBL	1.23	100	W842308	☐	R19-D03	Core		☐	☐	☐
274.32	276.70	2.38	MBL	2.33	98	W842309	☐	R19-D03	Core		☐	☐	☐
276.70	277.37	0.67	MBL	0.64	96	W842310	☐	R19-D03	Core		☐	☐	☐
277.37	280.42	3.05	MBL	2.84	93	W842311	☐	R19-D03	Core		☐	☐	☐
280.42	282.00	1.58	MBL	1.52	96	W842312	☐	R19-D03	Core		☐	☐	☐
282.00	283.46	1.46	MBL	1.46	100	W842313	☐	R19-D03	Core		☐	☐	☐
283.46	286.51	3.05	MBL	3.02	99	W842314	☐	R19-D03	Core		☐	☐	☐
286.51	289.56	3.05	MBL	3.03	99	W842316	☐	R19-D03	Core		☐	☐	☐
289.56	292.61	3.05	MBL	3.05	100	W842317	☐	R19-D03	Core		☐	☐	☐
292.61	295.66	3.05	MBL	2.95	97	W842318	☐	R19-D03	Core		☐	☐	☐
295.66	298.70	3.04	MBL	3.02	99	W842319	☐	R19-D03	Core		☐	☐	☐
298.70	301.75	3.05	MBL	3.05	100	W842320	☐	R19-D03	Core		☐	☐	☐
301.75	304.80	3.05	MBL	2.91	95	W842321	☐	R19-D04	Core		☐	☐	☐
304.80	307.85	3.05	MBL	3.05	100	W842322	☐	R19-D04	Core		☐	☐	☐
307.85	310.90	3.05	MBL	2.97	97	W842323	☐	R19-D04	Core		☐	☐	☐
310.90	312.53	1.63	MBL	1.56	96	W842324	☐	R19-D04	Core		☐	☐	☐
312.53	313.94	1.41	MBL	1.36	96	W842325	☐	R19-D04	Core		☐	☐	☐
312.53	313.94	1.41	MBL	1.36	96	W842326	☐	R19-D04	Core		☐	☐	☑
313.94	316.99	3.05	MBL	3.00	98	W842327	☐	R19-D04	Core		☐	☐	☐
316.99	320.04	3.05	MBL	2.95	97	W842328	☐	R19-D04	Core		☐	☐	☐
320.04	323.09	3.05	MBL	2.94	96	W842329	☐	R19-D04	Core		☐	☐	☐
323.09	325.00	1.91	MBL	1.91	100	W842331	☐	R19-D04	Core		☐	☐	☐
325.00	326.43	1.43	MBL	1.43	100	W842332	☐	R19-D04	Core		☐	☐	☐
326.43	327.90	1.47	MBL	1.44	98	W842333	☐	R19-D04	Core		☐	☐	☐
327.90	329.18	1.28	MBL	1.28	100	W842335	☐	R19-D04	Core		☐	☐	☐

Sample Results

Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
R19-D04	W842334	0.00	0.00	0.01	0	3	1	17.0	0	0.10	☐	☐	☑	☐	
R19-D01	W842217	0.00	0.00	0.01	0	2	1	15.0	0	0.20	☐	☐	☑	☐	Blank
R19-D02	W842274	0.00	0.00	0.01	0	2	1	16.0	0	0.60	☐	☐	☑	☐	Blank
R19-D01	W842201	0.00	3.05	0.01	0	4	2	15.0	1	1.00	☐	☐	☐	☐	
R19-D03	W842315	0.00	0.00	0.01	0	2	1	14.0	0	0.10	☐	☐	☑	☐	
R19-D03	W842304	0.00	0.00	1.69	12	6200	27	202.0	104	23.20	☐	☐	☐	☑ ML-3	
R19-D01	W842240	0.00	0.00	0.81	7	3300	34	166.0	103	32.00	☐	☐	☐	☑ ML-2	ML-2
R19-D02	W842245	0.00	0.00	0.33	3	820	57	123.0	73	19.00	☐	☐	☐	☑ ML-1	ML-1
R19-D04	W842330	0.00	0.00	0.78	8	3250	32	166.0	105	35.00	☐	☐	☐	☑ ML-2	
R19-D03	W842294	0.00	0.00	0.33	3	749	51	113.0	71	18.70	☐	☐	☐	☑ ML-1	
R19-D02	W842278	0.00	0.00	0.84	7	3350	32	164.0	98	35.70	☐	☐	☐	☑ ML-2	ML-2
R19-D01	W842224	0.00	0.00	0.37	3	815	54	125.0	70	21.40	☐	☐	☐	☑ ML-1	ML-1
R19-D01	W842202	3.05	6.10	0.01	0	3	1	24.0	0	1.00	☐	☐	☐	☐	



Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
R19-D01	W842203	6.10	9.14	0.01	0	11	2	22.0	1	1.80	☐	☐	☐	☐	
R19-D01	W842204	9.14	12.19	0.01	0	9	2	51.0	1	3.70	☐	☐	☐	☐	
R19-D01	W842206	12.19	15.24	0.03	0	9	1	45.0	1	3.00	☑	☐	☐	☐	1/4 Duplicate.
R19-D01	W842205	12.19	15.24	0.01	0	8	2	44.0	2	2.80	☐	☐	☐	☐	
R19-D01	W842207	15.24	18.29	0.01	0	5	1	45.0	0	1.80	☐	☐	☐	☐	
R19-D01	W842208	18.29	21.34	0.01	0	8	1	14.0	1	3.10	☐	☐	☐	☐	
R19-D01	W842209	21.34	24.38	0.01	0	4	1	10.0	0	0.90	☐	☐	☐	☐	
R19-D01	W842210	24.38	27.43	0.01	0	5	1	20.0	1	1.30	☐	☐	☐	☐	
R19-D01	W842211	27.43	30.48	0.01	0	6	1	37.0	0	4.40	☐	☐	☐	☐	
R19-D01	W842212	30.48	33.53	0.01	0	5	1	50.0	1	1.60	☐	☐	☐	☐	
R19-D01	W842213	33.53	36.58	0.01	0	4	1	32.0	1	1.30	☐	☐	☐	☐	
R19-D01	W842214	36.58	39.62	0.01	0	7	1	60.0	1	1.70	☐	☐	☐	☐	
R19-D01	W842215	39.62	41.00	0.01	0	7	1	34.0	1	2.90	☐	☐	☐	☐	
R19-D01	W842216	41.00	42.67	0.01	0	47	3	165.0	9	15.20	☐	☐	☐	☐	
R19-D01	W842218	42.67	45.72	0.01	0	8	1	33.0	1	2.70	☐	☐	☐	☐	

Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
R19-D01	W842219	45.72	48.77	0.01	0	5	1	7.0	1	3.20	☐	☐	☐	☐	
R19-D01	W842220	48.77	51.82	0.01	0	2	1	16.0	0	1.00	☐	☐	☐	☐	
R19-D01	W842221	51.82	54.86	0.01	0	6	1	11.0	0	0.90	☐	☐	☐	☐	
R19-D01	W842222	54.86	57.91	0.01	0	4	1	9.0	0	0.60	☐	☐	☐	☐	
R19-D01	W842223	57.91	60.96	0.01	0	6	1	47.0	0	0.80	☐	☐	☐	☐	
R19-D01	W842225	60.96	64.01	0.01	0	5	1	61.0	1	0.90	☐	☐	☐	☐	
R19-D01	W842226	64.01	67.06	0.01	0	2	1	78.0	0	0.40	☐	☐	☐	☐	
R19-D01	W842227	67.06	70.10	0.01	0	5	1	63.0	1	0.50	☐	☐	☐	☐	
R19-D01	W842228	70.10	73.15	0.01	0	6	1	160.0	0	1.00	☐	☐	☐	☐	
R19-D01	W842229	73.15	76.20	0.01	0	3	1	89.0	0	0.80	☐	☐	☐	☐	
R19-D01	W842230	76.20	79.25	0.01	0	2	1	70.0	0	1.00	☐	☐	☐	☐	
R19-D01	W842231	79.25	82.30	0.01	0	2	1	75.0	0	1.30	☐	☐	☐	☐	
R19-D01	W842232	82.30	85.34	0.01	0	2	0	86.0	0	1.10	☐	☐	☐	☐	
R19-D01	W842233	85.34	88.39	0.01	0	2	1	56.0	0	1.30	☐	☐	☐	☐	
R19-D01	W842234	88.39	91.44	0.01	0	2	1	72.0	0	0.70	☐	☐	☐	☐	

Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
R19-D01	W842235	91.44	94.49	0.01	0	2	1	315.0	0	1.00	☐	☐	☐	☐	
R19-D01	W842236	94.49	97.54	0.01	0	2	2	602.0	0	2.00	☐	☐	☐	☐	
R19-D01	W842237	94.49	97.54	0.01	0	2	3	624.0	0	2.10	☐	☑	☐	☐	Coarse reject
R19-D01	W842238	97.54	100.58	0.01	0	2	1	534.0	0	0.50	☐	☐	☐	☐	
R19-D01	W842239	100.58	103.63	0.01	0	1	1	992.0	0	0.90	☐	☐	☐	☐	
R19-D02	W842241	103.63	106.68	0.01	0	6	6	595.0	1	4.80	☐	☐	☐	☐	
R19-D02	W842242	106.68	109.73	0.01	0	2	0	11.0	0	1.30	☐	☐	☐	☐	
R19-D02	W842243	109.73	112.78	0.01	0	2	0	68.0	0	1.50	☐	☐	☐	☐	
R19-D02	W842244	112.78	115.82	0.01	0	1	1	39.0	0	1.00	☐	☐	☐	☐	
R19-D02	W842246	115.82	118.87	0.01	0	2	0	49.0	0	1.60	☐	☐	☐	☐	
R19-D02	W842247	118.87	121.92	0.01	0	2	0	20.0	0	0.70	☐	☐	☐	☐	
R19-D02	W842248	121.92	124.97	0.01	0	2	0	4.0	0	1.40	☐	☐	☐	☐	
R19-D02	W842249	124.97	128.02	0.01	0	2	1	77.0	0	3.20	☐	☐	☐	☐	
R19-D02	W842250	128.02	131.06	0.01	0	2	1	303.0	0	1.50	☐	☐	☐	☐	
R19-D02	W842251	131.06	134.11	0.01	0	1	1	47.0	0	0.60	☐	☐	☐	☐	

Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
R19-D02	W842252	134.11	137.16	0.01	0	2	1	11.0	0	0.70	☐	☐	☐	☐	
R19-D02	W842253	137.16	140.21	0.01	0	4	1	22.0	0	1.30	☐	☐	☐	☐	
R19-D02	W842255	140.21	143.26	0.01	0	1	1	5.0	0	0.80	☑	☐	☐	☐	1/4 duplicate
R19-D02	W842254	140.21	143.26	0.01	0	2	2	7.0	0	0.80	☐	☐	☐	☐	
R19-D02	W842256	143.26	146.30	0.01	0	1	1	12.0	0	1.00	☐	☐	☐	☐	
R19-D02	W842257	146.30	149.35	0.01	0	2	1	8.0	0	2.40	☐	☐	☐	☐	
R19-D02	W842258	149.35	152.40	0.01	0	2	1	32.0	0	4.60	☐	☐	☐	☐	
R19-D02	W842259	152.40	155.45	0.01	0	52	1	102.0	1	119.00	☐	☐	☐	☐	
R19-D02	W842260	155.45	158.50	0.01	0	9	1	20.0	0	51.60	☐	☐	☐	☐	
R19-D02	W842261	158.50	161.54	0.01	0	3	1	76.0	0	3.00	☐	☐	☐	☐	
R19-D02	W842262	161.54	164.59	0.01	0	3	1	16.0	0	2.60	☐	☐	☐	☐	
R19-D02	W842263	164.59	167.64	0.01	0	3	1	11.0	1	2.10	☐	☐	☐	☐	
R19-D02	W842264	167.64	170.69	0.01	0	3	1	31.0	2	1.20	☐	☐	☐	☐	
R19-D02	W842265	170.69	173.74	0.01	0	6	2	21.0	3	5.20	☐	☐	☐	☐	
R19-D02	W842266	173.74	176.78	0.01	0	9	2	34.0	2	19.20	☐	☐	☐	☐	

Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
R19-D02	W842267	176.78	179.83	0.01	0	15	1	36.0	6	1.70	☐	☐	☐	☐	
R19-D02	W842268	179.83	182.88	0.01	0	6	1	17.0	1	5.60	☐	☐	☐	☐	
R19-D02	W842269	182.88	185.93	0.01	0	44	1	36.0	1	167.50	☐	☐	☐	☐	
R19-D02	W842271	185.93	187.82	0.01	0	91	1	32.0	2	223.00	☐	☑	☐	☐	Coarse reject
R19-D02	W842270	185.93	187.82	0.01	0	81	1	34.0	2	223.00	☐	☐	☐	☐	
R19-D02	W842272	187.82	190.54	0.01	0	15	1	19.0	2	50.80	☐	☐	☐	☐	
R19-D02	W842273	190.54	192.02	0.01	0	123	1	37.0	2	267.00	☐	☐	☐	☐	
R19-D02	W842275	192.02	193.72	0.01	0	84	1	22.0	2	341.00	☐	☐	☐	☐	
R19-D02	W842276	193.72	195.07	0.01	0	6	1	8.0	1	1.40	☐	☐	☐	☐	
R19-D02	W842277	195.07	198.12	0.01	0	8	1	127.0	2	5.20	☐	☐	☐	☐	
R19-D02	W842279	198.12	201.17	0.01	0	8	1	18.0	3	0.80	☐	☐	☐	☐	
R19-D02	W842280	201.17	204.22	0.01	0	20	1	11.0	1	3.20	☐	☐	☐	☐	
R19-D03	W842281	204.22	207.26	0.01	0	13	2	37.0	1	1.30	☐	☐	☐	☐	
R19-D03	W842282	207.26	210.31	0.01	0	11	2	14.0	1	4.50	☐	☐	☐	☐	
R19-D03	W842284	210.31	213.36	0.01	0	12	1	10.0	1	7.80	☑	☐	☐	☐	1/4 Dulicate

Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
R19-D03	W842283	210.31	213.36	0.01	0	13	1	11.0	1	5.20	☐	☐	☐	☐	
R19-D03	W842285	213.36	216.41	0.01	0	5	1	9.0	2	3.40	☐	☐	☐	☐	
R19-D03	W842286	216.41	219.46	0.01	0	3	1	6.0	1	4.50	☐	☐	☐	☐	
R19-D03	W842287	219.46	222.50	0.01	0	3	1	9.0	2	1.70	☐	☐	☐	☐	
R19-D03	W842288	222.50	225.55	0.01	0	6	1	10.0	2	2.50	☐	☐	☐	☐	
R19-D03	W842289	225.55	228.60	0.01	0	5	2	64.0	2	4.80	☐	☐	☐	☐	
R19-D03	W842290	228.60	231.65	0.01	0	18	1	32.0	2	4.70	☐	☐	☐	☐	
R19-D03	W842291	231.65	234.70	0.01	0	2	1	8.0	1	2.10	☐	☐	☐	☐	
R19-D03	W842292	234.70	237.74	0.01	0	6	1	11.0	2	2.00	☐	☐	☐	☐	
R19-D03	W842293	237.74	240.79	0.01	0	22	1	7.0	4	2.40	☐	☐	☐	☐	
R19-D03	W842295	240.79	243.84	0.01	0	4	1	19.0	1	8.60	☐	☐	☐	☐	
R19-D03	W842296	243.84	246.89	0.01	0	10	1	8.0	2	10.10	☐	☐	☐	☐	
R19-D03	W842297	246.89	249.94	0.01	0	5	1	9.0	2	30.60	☐	☐	☐	☐	
R19-D03	W842298	249.94	252.98	0.01	0	6	1	17.0	2	5.80	☐	☐	☐	☐	
R19-D03	W842299	252.98	256.03	0.01	0	26	2	19.0	5	19.30	☐	☐	☐	☐	

Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
R19-D03	W842300	252.98	256.03	0.01	0	26	1	23.0	5	26.10	☐	☑	☐	☐	
R19-D03	W842301	256.03	259.08	0.01	0	14	1	12.0	3	3.10	☐	☐	☐	☐	
R19-D03	W842302	259.08	262.13	0.01	0	10	1	9.0	1	0.90	☐	☐	☐	☐	
R19-D03	W842303	262.13	265.18	0.01	0	6	1	15.0	1	2.20	☐	☐	☐	☐	
R19-D03	W842305	265.18	268.22	0.01	0	7	2	17.0	1	0.90	☐	☐	☐	☐	
R19-D03	W842306	268.22	271.27	0.01	0	4	1	19.0	2	8.10	☐	☐	☐	☐	
R19-D03	W842307	271.27	273.09	0.01	0	2	1	11.0	1	0.80	☐	☐	☐	☐	
R19-D03	W842308	273.09	274.32	0.01	0	24	1	47.0	2	98.10	☐	☐	☐	☐	
R19-D03	W842309	274.32	276.70	0.01	0	2	2	11.0	1	1.50	☐	☐	☐	☐	
R19-D03	W842310	276.70	277.37	0.01	0	29	5	67.0	4	66.90	☐	☐	☐	☐	
R19-D03	W842311	277.37	280.42	0.05	0	10	1	42.0	4	17.40	☐	☐	☐	☐	
R19-D03	W842312	280.42	282.00	0.01	0	9	3	19.0	75	79.90	☐	☐	☐	☐	
R19-D03	W842313	282.00	283.46	0.01	0	8	2	39.0	12	3.20	☐	☐	☐	☐	
R19-D03	W842314	283.46	286.51	0.01	0	16	2	25.0	3	3.30	☐	☐	☐	☐	
R19-D03	W842316	286.51	289.56	0.01	0	14	1	11.0	5	1.20	☐	☐	☐	☐	

Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
R19-D03	W842317	289.56	292.61	0.01	0	2	1	9.0	1	0.80	☐	☐	☐	☐	
R19-D03	W842318	292.61	295.66	0.01	0	3	1	6.0	2	0.90	☐	☐	☐	☐	
R19-D03	W842319	295.66	298.70	0.01	0	3	1	6.0	2	1.00	☐	☐	☐	☐	
R19-D03	W842320	298.70	301.75	0.01	0	4	1	8.0	1	0.70	☐	☐	☐	☐	
R19-D04	W842321	301.75	304.80	0.01	0	4	1	8.0	4	0.90	☐	☐	☐	☐	
R19-D04	W842322	304.80	307.85	0.01	0	5	1	10.0	2	0.60	☐	☐	☐	☐	
R19-D04	W842323	307.85	310.90	0.01	0	5	1	9.0	1	0.50	☐	☐	☐	☐	
R19-D04	W842324	310.90	312.53	0.01	0	6	2	9.0	1	0.40	☐	☐	☐	☐	
R19-D04	W842326	312.53	313.94	0.01	1	212	1	32.0	128	0.60	☐	☑	☐	☐	
R19-D04	W842325	312.53	313.94	0.01	1	372	1	54.0	225	0.60	☐	☐	☐	☐	
R19-D04	W842327	313.94	316.99	0.01	0	3	1	6.0	2	0.50	☐	☐	☐	☐	
R19-D04	W842328	316.99	320.04	0.01	0	5	1	10.0	2	0.60	☐	☐	☐	☐	
R19-D04	W842329	320.04	323.09	0.01	0	5	1	10.0	1	0.80	☐	☐	☐	☐	
R19-D04	W842331	323.09	325.00	0.01	0	6	1	9.0	2	0.60	☐	☐	☐	☐	
R19-D04	W842332	325.00	326.43	0.01	0	5	2	15.0	1	0.60	☐	☐	☐	☐	

Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
R19-D04	W842333	326.43	327.90	0.01	0	62	5	57.0	35	1.30	☐	☐	☐	☐	
R19-D04	W842335	327.90	329.18	0.01	0	16	1	9.0	1	0.50	☐	☐	☐	☐	



Tiger - Rau

Archer,Cathro & Associates (1981) Limited

Grid East	Grid North	Easting	Northing	Elevation	Depth (m)
		532936	7117433	1193	103.63

ZONE: Bobcat

SECTION:

HOLE: RPP-19-002

CLAIM:

Contractor: Superior

Drill: 6

Core Size: NQ2

Casing Depth: 7.62m, In

Drilling Dates: Jul 23 - Aug 26, 2019

Geology Logged By: A. Schneebeli

SURVEY			
Depth (m)	Azimuth	Dip	Method

TARGET: Targetting high grade gold and copper grab samples fro

SUMMARY			
From (m)	To (m)	Interval (m)	Rock Type
0	15.6	15.6	DST
15.6	16.76	1.16	OX
16.76	22.8	6.04	DST
22.8	27.82	5.02	OX
27.82	86.87	59.05	DST
86.87	103.63	16.76	LST

SAMPLES	
Numbers:	R500823, R608077 to R608080, W842336 to W842377
Total:	47
Batch:	D04, D05, DR1
Certificates:	WH19190701, WH19190705, WH19210571

COMMENTS

Hole intersected oxide and highly oxidized sulphide within tremolite veins. Hole caved in at 103.63m and we lost 24 rods downhole and did not reach TD. This hole does not provide an accurate test of the ground due to very poor recovery. Unexpected oxide was encountered and we did not have the proper muds on site for recovery. If reattempted, HQ with

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
0.00	4.41	4.41	OVB	--	No recovery.							
4.41	13.78	9.37	DST	CG	Light-dark grey, fine-coarse grained, moderately-poorly sorted, variably oxidized, weakly pitted, clast supported dolostone conglomerate with local fracture zones. Clasts are granule-pebble sized, sub-rounded to rounded, trace elongate primarily dolostone with lesser dolotomized limestone and rare limestone. Weak pitted texture occurs throughout the interval, primarily as dissolution of dolostone groundmass. Oxidation occurs primarily along fractured surfaces as orange-brown, massive-patchy, moderate oxidation. 10.12-13.78m: weak to moderate, orange-brown oxidation is pervasive into the rock, and is strongest within the groundmass. 8.70-8.79m and 10.45-10.49m: trace-weak, light pink oxidation coating on the surface of the core. Fracture zones occur at: 4.57-5.00m: black dolostone conglomerate (possibly black due to ash) is highly fracrtured. 11.50-12.50m: oxidized dolostone conglomerate is highly fractured. Black, sub mm-sized spots to dendritic manganese oxides are common on fractured surfaces. Pyrite occurs throughout the interval as sub mm-szied disseminations 0.1%.							
						MD	GY	FR				
						MD	BK					
						LT	GY	PB	OXI	2I	Py	0.1
						DK	GY					

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
13.78	15.60	1.82	DST	FG	Light grey, fine grained, massive to weakly brecciated, weak-moderately veined, moderate-strongly oxidized, highly fractured, trace pitted, dolostone. Poor core recovery within this interval. Trace pitted texture occurs primarily along oxidized dolomite veins and lesser within the dolostone. Moderate-strong, orange-brown to black,massive oxidation occurs on all fracture surfaces and lesser as pervasive into the rock. Veining occurs primarily as moderately abundant, mm-sized, often oxidized, dolomite veinlets. Rare, white to oxidized, mm-sized, subhedral tremolite occurs on fracture surfaces (possibly remnants of tremolite veins?). Black, sub mm-sized spots to dendritic manganese oxides are common on fractured surfaces and throughout the rock. Tremolite accounts for 0.01% of the interval.							
						LT	GY	MA	OXI	3I	Tr	0.01
								FR				
								BX				

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
15.60	16.76	1.16	OX	FG	Light-dark brown/light orange/dark purple, very rubbly, oxide. Varibaly light-brown and light orange with trace sections of more dark purple oxidation. The entire interval is strong to intensely rubbly oxidized to nearly residual soil. Throughout the interval trace 1-10mm sized angular fragments of white-slightly oxidized, massive to subhedral tremolite occurs. Protolith appears to be massive dolostone, based on 2-5cm sized intact oxide fragments. Possible that this interval is a strongly oxidized tremolite vein as seen at AS-19-036 and ABC-19-144. Tremolite accounts for 0.5% of the interval.							
						MD	BN	RB				
						LT	BN	FR	OXI	4I	Tr	0.5
						LT	OR					
						DK	PU					
						DK	BN					

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
16.76	22.80	6.04	DST	MG	Light-dark grey, fine-coarse grained, moderately-poorly sorted, variably oxidized, weakly pitted, clast supported dolostone conglomerate. Clasts are granule-pebble sized, sub-rounded to rounded, trace elongate primarily dolostone with lesser dolotomized limestone and rare limestone. Tremolite occurs tracely within the oxidized sections of the interval Weak pitted texture occurs throughout the interval, primarily as dissolution of dolostone groundmass. Oxidation occurs primarily along fractured surfaces as orange-brown, massive-patchy, moderate oxidation. 17.85-18.30m and 21.90-22.80m: weak to moderate, orange-brown oxidation is pervasive into the rock, and is strongest within the groundmass. Black, sub mm-sized spots to dendritic manganese oxides are common on fractured surfaces. Pyrite occurs throughout the interval as sub mm-szied disseminations 0.2%. Tremolite accounts for 1% of the interval.							
						MD	GY				Tr	1
						LT	GY	PB	OXI	3I	Py	0.2
						DK	GY					

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
22.80	27.82	5.02	OX	FG	Light-dark brown/light orange/dark purple, very rubbly, oxide. Varibaly light-brown and light orange with trace sections of more dark purple oxidation. 22.80-25.91m - stronger dark orange/brown to purple and intensely rubbly section compared to the lower interval. 25.91-27.82m - medium brown/yellow section that contains rubbly and highly fractured 2-5cm sized rock fragments. Throughout the interval trace 1-10mm sized angular fragments of white-slightly oxidized, massive to subhedral tremolite occurs. Protolith appears to be massive dolostone, based on 2-5cm sized intact oxide fragments. Possible that this interval is a strongly oxidized tremolite vein as seen at AS-19-036 and ABC-19-144. Tremolite accounts for 0.5% of the interval.							
						MD	BN	RB	OXI	4I	Tr	0.5
						LT	OR					
						LT	BN					
						DK	BN					
						DK	PU					

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
27.82	32.00	4.18	DST	FG	Light grey and medium brown, fine-coarse grained, moderately oxidized, moderately to locally strongly fractured, variably brecciated dolostone. Contains moderate amounts of massive, fine grained, white to oxidized tremolite within vein brecciation. Tremolite also occurs at 30.90-31.10m as 0.5-1.5cm, white, radiating, elongate, discontinuous veins. Poor core recovery within the interval. Brecciation contains cobble-pebble sized clasts of medium grey dolostone with primarily dolomite veins surrounding the clasts with rare tremolite. Light brown/orange, massive oxidation occurs moderately throughout the interval and on fracture surfaces. Strong oxidation occurs from 29.00-29.30m, 30.12-30.24m, 30.54-30.80m and 31.20-31.35m. Black, sub mm-sized spots to dendritic manganese oxides are common on fractured surfaces and throughout the rock. Tremolite accounts for 0.1% of the interval.1-2mm sized, oxidized, cubic pyrites occur moderately from 28.00-29.50m within veins. 0.1%							
						MD	BN	BX			Tr	0.1
						LT	GY	FR	OXI	3I	Py	0.1
32.00	33.90	1.90	DST	FG	Light brown-grey-yellow, fine grained, intensely rubbly, moderately oxidized strongly fractured dolostone. Interval is primarily composed of 3-5mm sized oxidized rock fragments with sporadic 2-6cm sized fragments of medium grey dolostone. 33.30-33.45m - 1-6cm thick sections of clayey-gouge material. Oxidation is light orange-brown, massive-patchy and occurs weakly to moderately throughout the interval.							

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
						LT	GY	RB				
						LT	BN	FR	OXI	3I		
						LT	YW					
33.90	44.29	10.39	DST	FG	Tremolite veins occur within this interval. Light-medium grey, locally with green tinge, brecciated, moderately pitted, tracely-weakly veined, fractured, weak-moderately oxidized dolostone. Tremolite veins occur at:34.19-34.21m, 38.34-38.36m, 39.55-40.05m, 42.98-42.01m, 42.18-42.20, 42.22-42.27m and 43.65-43.68m as 2-5mm sized, white, planar to slightly undulating veins. Tremolite also occurs rarely as white, 1-2mm sized crystal fragments in more fractured sections of the interval. Poor core recovery within this interval. Pitted texture is primarily associted along dolomite veinlets, but also occurs throughout the rock. Oxidation occurs primarily on fractured surfaces and lesser pervasively into the rock. Strong, orange-brown, massive oxidation occurs at: 34.67-35.68m and 42.75-42.90m. Multiple fractures from 39.60-40.00m exposes surfaces with moderate, massive oxidation, trace oxidized tremolite and a black, patchy, earthy oxide mineral. Veining occurs primarily as weakly abundant dolomite veinlets and as rare-trace tremolite veins. Black, sub mm-sized spots, dendritic and veinlet manganese oxides are common on fractured surfaces and throughout the rock. Tremolite accounts for 0.5% of the interval.							
						MD	GY	FR				
						LT	GY	BX	OXI	2I	Tr	0.5
								VU				

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
44.29	45.81	1.52	DST	FG	Rusty orange to light grey, rubbly, moderately-strongly oxidized, gougey/clayey dolostone. Poor core recovery in this interval. The interval is gougey/clay rich form 45.00m to the end of the interval. The interval is mainly composed of oxidized dolostone clay with moderate amounts of 0.5-1cm sized dolostone fragments.							
						MD	OR	RB	OXI	3I		
						LT	GY		CLY	2I		
45.81	68.55	22.74	DST	FG	Tremolite veins occur within the interval. Light-medium grey, fine grained, moderately pitted, fractured, massive, moderately veined, weakly oxidized dolostone. Very poor core recovery in this interval. Tremolite primarily occurs as fracture parallel, white, radiating mm-sized, subhedral crystals in veins from 58.05-66.10m and lesser as rare veinlets throughout the interval. Pitted texture occurs weak-moderately throughout the interval, and strongest along vein/veinlets. Strong pitting occurs from 58.05-58.20m and 63.80-64.24 along tremolite-dolomite veins. Oxidation occurs primarily along fractured surfaces and veins/veinlets and lesser pervasively into the rock. Strong oxidation occurs at: 54.00-54.30m and 58.60-59.15m. Rubble zone from 66.50-67.90m. 47.20-48.00m - brown clay/mud wash(?) from drilling. Tremolite accounts for 1% of the interval. 1-2mm sized, oxidized, cubic pyrites occur weakly throughout the interval within veins and lesser on fracture surfaces 0.2%.							
						MD	GY	MA			Py	0.2

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
						LT	GY	VU	OXI	2I	Tr	1
68.55	86.87	18.32	DST	FG	Light-medium grey, fine grained, moderately pitted, fractured, foliated, moderately veined, weakly oxidized dolostone. Very poor core recovery in this interval. Tremolite primarily occurs as fracture parallel, white, radiating mm-sized, subhedral crystals in veins from 70.00-74.68m and lesser as rare veinlets throughout the interval. Pitted texture occurs weak throughout the interval, and strongest along vein/veinlets. Oxidation occurs primarily along fractured surfaces and veins/veinlets and lesser pervasively into the rock. Foliation is orientated between 40-45 degrees TCA. Rubble zones at: 75.20-75.40m and 78.35-78.80m. Tremolite accounts for 0.05% of the interval. 1-2mm sized, oxidized, cubic pyrites occur weakly throughout the interval within veins and lesser on fracture surfaces 0.2%.							
						MD	GY	FR			Py	0.2
						LT	GY	VU	OXI	2I	Tr	0.05
								FO				

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
86.87	103.63	16.76	LST	FG	Light-medium grey to light brown, fine grained, highly fracutred to locally rubbly, weak to local strong oxidized limestone. Very poor core recovery within this interval. Rubble zones occur at: ~94-97m, 99.40-99.60m, 103.00-103.37m and 103.53-103.63m. 91.0-92.96m - section is moderate-stongly oxidized brown-orange, moderately marbleized and contains trace-moderate amounts of rusted out, euhedral, 1-5mm sized pyrites with trace intergrowths of granular, black-brown, dull-sub metallic mineral (sphalerite?). 99.40-99.60m - section is rubbly, and contains 2-3cm fragments of moderately oxidized limestone with white, 5mm sized, radiating tremolites. 103.37-103.53m - ~competent, grey-slightly green to brown coloured, moderately oxidized brown limestone with abundant 1-5mm sized, black, dendritic manganese oxides. Oxidation occurs moderately throughout the rock, and is strongest in rubble zones and along fracture surfaces. Pyrite occurs as rusted out euhedral, 1-5mm sized crystals (0.5%). Tremolite accounts for 0.01% of the interval. EOH.							
						MD	GY	RB	MBL	2I	Tr	0.01
						LT	GY	FR	OXI	3I	Py	0.5
						LT	BN					

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
0.00	4.41	4.41	0	0	0.00	0	--	--	--	
4.41	4.57	0.16	0.16	100	0.00	0	0R	4H	3W	
4.57	7.62	3.05	2.16	71	1.11	36	1R	3H	3W	
7.62	10.67	3.05	2.89	95	2.10	69	1R	4H	2W	
10.67	13.72	3.05	1.57	51	0.61	20	0R	4H	3W	
13.72	16.76	3.04	1.18	39	0.21	7	1R	1H	5W	60 cm highly oxidized RBZ
16.76	19.81	3.05	1.04	34	0.24	8	0R	1H	4W	7 cm highly oxidized RBZ
19.81	22.86	3.05	1.36	45	1.01	33	0R	4H	3W	10 cm RBZ at end of run
22.86	25.91	3.05	0.7	23	0.00	0	0R	1H	5W	Entire run of highly oxidized RBZ
25.91	28.96	3.05	1.58	52	0.00	0	1R	1H	4W	Run mainly rubble with ~65 cm of competent rock
28.96	32.00	3.04	2.42	80	0.40	13	1R	1H	4W	One 19 cm RBZ and one 32 cm highly oxidized RBZ
32.00	35.05	3.05	1.64	54	0.00	0	1R	1H	5W	125 cm highly oxidized RBZ
35.05	38.10	3.05	2.55	84	1.00	33	1R	2H	3W	
38.10	41.15	3.05	2.04	67	0.45	15	1R	2H	3W	Two 5 cm RBZ
41.15	44.20	3.05	1.89	62	0.28	9	1R	2H	4W	Two 5 cm RBZ
44.20	47.24	3.04	1.26	41	0.31	10	2R	1H	5W	One 66 cm highly oxidized RBZ and one 15 cm highly oxidized RBZ
47.24	50.29	3.05	0.67	22	0.00	0	0R	1H	5W	Run begins with 26 cm very soft mud and small highly oxidized RBZ's throughout
50.29	53.34	3.05	1.35	44	0.29	10	1R	3H	2W	
53.34	56.39	3.05	0.94	31	0.14	5	1R	2H	3W	4 cm RBZ
56.39	59.44	3.05	0.98	32	0.28	9	1R	1H	4W	Small RBZ throughout run
59.44	62.48	3.04	1.32	43	0.00	0	1R	3H	2W	
62.48	65.53	3.05	0.84	28	0.00	0	1R	3H	3W	Three 5 cm RBZ's throughout run
65.53	68.58	3.05	0.37	12	0.00	0	1R	1H	4W	30 cm RBZ
68.58	71.63	3.05	0.64	21	0.00	0	1R	1H	3W	
71.63	74.68	3.05	0.59	19	0.00	0	1R	1H	3W	2 x 5 cm RBZ
74.68	77.72	3.04	0.58	19	0.00	0	1R	2H	3W	One 6 cm RBZ and 1 3 cm RBZ
77.72	80.77	3.05	0.96	31	0.28	9	1R	1H	4W	20 cm RBZ

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
80.77	83.82	3.05	1.46	48	0.54	18	1R	1H	3W	
83.82	86.87	3.05	0.2	7	0.00	0	1R	1H	4W	5cm RBZ
86.87	89.92	3.05	0.5	16	0.00	0	1R	1H	5W	1x10cm and 2x5cm RBZ
89.92	92.96	3.04	0.37	12	0.00	0	1R	1H	4W	2x 5cm RBZ
92.96	96.01	3.05	0.21	7	0.00	0	1R	1H	5W	15cm RBZ
96.01	99.06	3.05	0.7	23	0.50	16	2R	1H	4W	10cm RBZ
99.06	102.11	3.05	0.87	29	0.30	10	3R	1H	4W	20cm RBZ
102.11	103.63	1.52	0.94	62	0.00	0	1R	1H	4W	2x35cm, 1x10cm RBZ

RPP-19-002

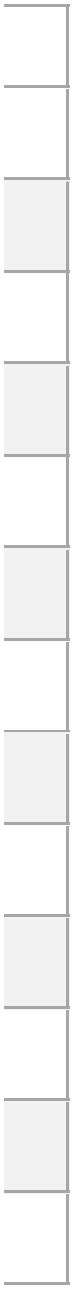
From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
0.00	0.00	0.00	-QC-	0.00	0	W842371	☐	R19-D05	Core	ML-3	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W842377	☐	R19-D05	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W842359	☐	R19-D04	Core	ML-1	☐	☐	☐
4.57	7.62	3.05	DST	2.16	71	W842336	☐	R19-D04	Core		☐	☐	☐
7.62	10.67	3.05	DST	2.89	95	W842337	☐	R19-D04	Core		☐	☐	☐
10.67	13.72	3.05	DST	1.57	51	W842338	☐	R19-D04	Core		☐	☐	☐
13.72	15.60	1.88	DST	0.41	22	W842339	☐	R19-D04	Core		☐	☐	☐
15.60	16.76	1.16	OX, DST	0.31	27	W842340	☐	R19-D04	Core		☐	☐	☐
16.76	19.81	3.05	OX, DST	1.04	34	W842341	☐	R19-D04	Core		☐	☐	☐
19.81	22.86	3.05	DST	1.36	45	W842342	☐	R19-D04	Core		☐	☐	☐
19.81	22.86	3.05	DST	1.36	45	W842343	☐	R19-D04	Core		☐	☑	☐
22.86	24.10	1.24	OX	0.33	27	W842344	☐	R19-D04	Core		☐	☐	☐
24.10	25.91	1.81	OX	0.50	28	W842345	☐	R19-D04	Core		☐	☐	☐
25.91	27.85	1.94	OX	1.13	58	W842346	☐	R19-D04	Core		☐	☐	☐
27.85	30.05	2.20	DST	1.55	70	W842347	☐	R19-D04	Core		☐	☐	☐
30.05	30.49	0.44	DST	0.30	68	R500823	☐	R19-DR1	Core		☐	☐	☐
30.05	32.00	1.95	DST	1.39	71	W842348	☐	R19-D04	Core		☐	☐	☐
30.49	31.00	0.51	DST	0.15	29	R608077	☐	R19-DR1	Core		☐	☐	☐
31.00	31.40	0.40	DST	0.35	88	R608078	☐	R19-DR1	Core		☐	☐	☐
31.40	31.70	0.30	DST	0.06	20	R608079	☐	R19-DR1	Core		☐	☐	☐
31.70	32.00	0.30	DST	0.30	100	R608080	☐	R19-DR1	Core		☐	☐	☐
32.00	33.84	1.84	DST	0.44	24	W842349	☐	R19-D04	Core		☐	☐	☐
33.84	35.05	1.21	DST	0.79	65	W842350	☐	R19-D04	Core		☐	☐	☐
35.05	38.10	3.05	DST	2.55	84	W842351	☐	R19-D04	Core		☐	☐	☐
38.10	41.15	3.05	DST	2.04	67	W842352	☐	R19-D04	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
41.15	44.20	3.05	DST	1.89	62	W842353	☐	R19-D04	Core		☐	☐	☐
44.20	47.24	3.04	DST	1.26	41	W842354	☐	R19-D04	Core		☐	☐	☐
47.24	50.29	3.05	DST	0.67	22	W842355	☐	R19-D04	Core		☐	☐	☐
50.29	53.34	3.05	DST	1.35	44	W842356	☐	R19-D04	Core		☐	☐	☐
53.34	56.39	3.05	DST	0.94	31	W842357	☐	R19-D04	Core		☐	☐	☐
56.39	59.44	3.05	DST	0.98	32	W842358	☐	R19-D04	Core		☐	☐	☐
59.44	62.48	3.04	DST	1.32	43	W842360	☐	R19-D04	Core		☐	☐	☐
62.48	65.53	3.05	DST	0.84	28	W842361	☐	R19-D05	Core		☐	☐	☐
65.53	68.58	3.05	DST	0.37	12	W842362	☐	R19-D05	Core		☐	☐	☐
68.58	71.63	3.05	DST	0.64	21	W842363	☐	R19-D05	Core		☐	☐	☐
71.63	74.68	3.05	DST	0.59	19	W842364	☐	R19-D05	Core		☐	☐	☐
74.68	77.72	3.04	DST	0.58	19	W842365	☐	R19-D05	Core		☐	☐	☐
77.72	80.77	3.05	DST	0.96	31	W842366	☐	R19-D05	Core		☐	☐	☐
80.77	83.82	3.05	DST	1.46	48	W842367	☐	R19-D05	Core		☐	☐	☐
83.82	86.87	3.05	DST	0.20	7	W842368	☐	R19-D05	Core		☐	☐	☐
86.87	89.92	3.05	LST, DST	0.50	16	W842369	☐	R19-D05	Core		☐	☐	☐
89.92	92.96	3.04	LST	0.37	12	W842370	☐	R19-D05	Core		☐	☐	☐
92.96	96.01	3.05	LST	0.21	7	W842372	☐	R19-D05	Core		☐	☐	☐
96.01	99.06	3.05	LST	0.70	23	W842373	☐	R19-D05	Core		☐	☐	☐
99.06	102.11	3.05	LST	0.87	29	W842374	☐	R19-D05	Core		☐	☐	☐
99.06	102.11	3.05	LST	0.87	29	W842375	☐	R19-D05	Core		☐	☐	☑
102.11	103.63	1.52	LST	0.94	62	W842376	☐	R19-D05	Core		☐	☐	☐

Sample Results

Archer, Cathro & Associates (1981) Limited

Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
R19-D05	W842371	0.00	0.00	1.66	13	6430	31	212.0	105	20.90	☐	☐	☐	☑ ML-3	
R19-D04	W842359	0.00	0.00	0.34	3	793	55	125.0	70	17.50	☐	☐	☐	☑ ML-1	ML-1
R19-D05	W842377	0.00	0.00	0.01	0	3	1	17.0	0	0.10	☐	☐	☑	☐	
R19-D04	W842336	4.57	7.62	0.01	0	59	6	603.0	3	1.30	☐	☐	☐	☐	
R19-D04	W842337	7.62	10.67	0.01	0	18	5	336.0	5	1.40	☐	☐	☐	☐	
R19-D04	W842338	10.67	13.72	0.01	1	65	11	434.0	26	5.00	☐	☐	☐	☐	
R19-D04	W842339	13.72	15.60	0.03	0	186	3	701.0	5	1.90	☐	☐	☐	☐	
R19-D04	W842340	15.60	16.76	0.45	3	1995	39	4030.0	81	12.50	☐	☐	☐	☐	
R19-D04	W842341	16.76	19.81	0.01	1	196	8	370.0	11	3.80	☐	☐	☐	☐	
R19-D04	W842343	19.81	22.86	0.02	1	324	6	405.0	14	4.60	☑	☐	☐	☐	1/4 duplicate
R19-D04	W842342	19.81	22.86	0.01	1	345	5	262.0	15	3.00	☐	☐	☐	☐	
R19-D04	W842344	22.86	24.10	0.14	6	1120	55	4630.0	114	20.10	☐	☐	☐	☐	
R19-D04	W842345	24.10	25.91	0.19	9	1705	31	6580.0	17	20.10	☐	☐	☐	☐	



Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
R19-D04	W842346	25.91	27.85	0.13	6	1020	29	2990.0	144	14.20	☐	☐	☐	☐	
R19-D04	W842347	27.85	30.05	0.01	1	176	8	1040.0	4	4.40	☐	☐	☐	☐	
R19-D04	W842348	30.05	32.00	2.47	3	428	68	1600.0	88	8.50	☐	☐	☐	☐	Marked as chip to avoid overlap w/ resample. Actua sawn. -AC
R19-DR1	R500823	30.05	30.49	0.02	1	198	23	1050.0	6	6.00	☐	☐	☐	☐	Resample
R19-DR1	R608077	30.49	31.00	17.75	13	1120	359	2610.0	460	7.00	☐	☐	☐	☐	Resample
R19-DR1	R608078	31.00	31.40	0.15	2	210	54	1140.0	22	4.40	☐	☐	☐	☐	Resample
R19-DR1	R608079	31.40	31.70	0.91	2	472	201	2840.0	158	21.30	☐	☐	☐	☐	Resample
R19-DR1	R608080	31.70	32.00	0.02	1	72	100	480.0	19	6.30	☐	☐	☐	☐	Resample
R19-D04	W842349	32.00	33.84	0.09	8	333	323	2340.0	490	83.20	☐	☐	☐	☐	
R19-D04	W842350	33.84	35.05	0.05	3	100	112	1180.0	148	4.60	☐	☐	☐	☐	
R19-D04	W842351	35.05	38.10	0.01	0	64	20	957.0	41	4.00	☐	☐	☐	☐	
R19-D04	W842352	38.10	41.15	0.01	2	44	187	530.0	74	3.40	☐	☐	☐	☐	
R19-D04	W842353	41.15	44.20	0.01	0	48	11	779.0	12	3.30	☐	☐	☐	☐	
R19-D04	W842354	44.20	47.24	0.03	6	174	50	1280.0	696	6.20	☐	☐	☐	☐	

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Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
R19-D04	W842355	47.24	50.29	0.01	1	55	15	625.0	11	6.10	☐	☐	☐	☐	
R19-D04	W842356	50.29	53.34	0.01	0	20	6	564.0	7	2.60	☐	☐	☐	☐	
R19-D04	W842357	53.34	56.39	0.01	0	60	14	944.0	4	5.50	☐	☐	☐	☐	
R19-D04	W842358	56.39	59.44	0.01	0	25	21	521.0	7	1.90	☐	☐	☐	☐	
R19-D04	W842360	59.44	62.48	0.01	0	23	8	412.0	4	1.20	☐	☐	☐	☐	
R19-D05	W842361	62.48	65.53	0.01	0	29	18	685.0	8	3.20	☐	☐	☐	☐	
R19-D05	W842362	65.53	68.58	0.01	1	27	51	540.0	17	2.80	☐	☐	☐	☐	
R19-D05	W842363	68.58	71.63	0.01	0	12	10	234.0	2	3.60	☐	☐	☐	☐	
R19-D05	W842364	71.63	74.68	0.01	0	37	6	255.0	3	2.80	☐	☐	☐	☐	
R19-D05	W842365	74.68	77.72	0.03	1	16	78	327.0	29	1.80	☐	☐	☐	☐	
R19-D05	W842366	77.72	80.77	0.01	1	16	76	599.0	15	1.70	☐	☐	☐	☐	
R19-D05	W842367	80.77	83.82	0.01	0	8	14	379.0	4	4.90	☐	☐	☐	☐	
R19-D05	W842368	83.82	86.87	0.01	0	13	25	826.0	7	3.60	☐	☐	☐	☐	
R19-D05	W842369	86.87	89.92	0.01	0	9	12	730.0	2	6.30	☐	☐	☐	☐	
R19-D05	W842370	89.92	92.96	0.01	0	11	8	547.0	1	4.70	☐	☐	☐	☐	

Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
R19-D05	W842372	92.96	96.01	0.01	1	36	11	2640.0	5	6.90	☐	☐	☐	☐	
R19-D05	W842373	96.01	99.06	0.02	0	10	38	349.0	6	1.00	☐	☐	☐	☐	
R19-D05	W842374	99.06	102.11	0.01	0	9	6	633.0	2	2.10	☐	☐	☐	☐	
R19-D05	W842375	99.06	102.11	0.01	0	9	6	621.0	2	2.10	☐	☑	☐	☐	
R19-D05	W842376	102.11	103.63	0.05	2	241	46	412.0	20	2.90	☐	☐	☐	☐	



Tiger - Rau

Archer,Cathro & Associates (1981) Limited

Grid East	Grid North	Easting	Northing	Elevation	Depth (m)
		532868	7117379	1201	249.94

ZONE: Bobcat

SECTION:

HOLE: RPP-19-003

CLAIM:

Contractor: Superior

Drill: 6

Core Size: NQ2

Casing Depth:

Drilling Dates: Jul 27 - Jul 31, 2019

Geology Logged By: A. Schneebeli

SURVEY			
Depth (m)	Azimuth	Dip	Method
0	292.2	-50	Compass
249.94	310.3	-49.8	Reflex

TARGET: Hole is targeting 020,80 tremolite veins measured in ou

SUMMARY			
From (m)	To (m)	Interval (m)	Rock Type
0	6.1	6.1	OVB
6.1	7.47	1.37	LST
7.47	9.62	2.15	MBL
9.62	11.1	1.48	LST
11.1	11.16	0.06	MBL
11.16	11.21	0.05	PEG
11.21	23.56	12.35	LST
23.56	27.43	3.87	MBL
27.43	29	1.57	SKN
29	30.18	1.18	MBL
30.18	31.69	1.51	SKN
31.69	35.77	4.08	MBL
35.77	40.24	4.47	LST
40.24	47.9	7.66	MBL
47.9	48.63	0.73	SKN
48.63	59.03	10.4	LST

SAMPLES	
Numbers:	R500824 to R500827, R608081 to R608100, W842378 to W842498
Total:	145
Batch:	D05, D06, D07, D08, DR1
Certificates:	WH19190705, WH19190896, WH19192343, WH19203493, WH19210571

COMMENTS

Hole terminated at target depth in limestone ~100 m past any significant mineralization in tremolite veins, some disseminated pyrrhotite towards EOH. Hole succesfully targetted a few thin (<70 cm) tremolite veins with oxidized sulphides +- mal +- cpy +- apy +- po +- py in the first 80m of the hole. Thin and clean (little to no sulphide) tremolite veins

59.03	59.08	0.05	SKN
59.08	61.54	2.46	LST
61.54	62.17	0.63	SKN
62.17	74	11.83	LST
74	76.79	2.79	SKN
76.79	79.67	2.88	LST
79.67	80.16	0.49	SKN
80.16	93.26	13.1	LST
93.26	93.93	0.67	MBL
93.93	97.27	3.34	LST
97.27	99.67	2.4	MBL
99.67	117.78	18.11	LST
117.78	118.9	1.12	MBL
118.9	127.42	8.52	LST
127.42	127.65	0.23	PEG
127.65	147.03	19.38	LST
147.03	156.34	9.31	LST
156.34	156.95	0.61	PEG
156.95	169.45	12.5	LST
169.45	249.94	80.49	LST

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
0.00	2.95	2.95	0	0	0.00	0	--	--	--	No recovery
2.95	3.05	0.10	0.06	60	0.00	0	1R	1H	2W	
3.05	6.10	3.05	0.18	6	0.15	5	1R	2H	2W	
6.10	9.14	3.04	2.44	80	2.10	69	1R	3H	2W	
9.14	12.19	3.05	2.87	94	2.57	84	1R	2H	2W	0.5cm Py VNs
12.19	15.24	3.05	3.05	100	3.05	100	1R	2H	2W	
15.24	18.29	3.05	3.03	99	2.75	90	1R	2H	2W	Py VTs
18.29	21.34	3.05	2.81	92	2.52	83	1R	2H	2W	DISS Py
21.34	24.38	3.04	2.98	98	2.85	94	1R	2H	2W	variably bleched, bright green Tr
24.38	27.43	3.05	2.55	84	2.15	70	1R	2H	3W	variably bleached, 3x 1cm Tr VNs
27.43	30.48	3.05	1.68	55	0.51	17	1R	1H	4W	variably oxidized and bleached
30.48	33.53	3.05	2.5	82	0.75	25	1R	1H	4W	bleached, variably oxidized
33.53	36.58	3.05	2.74	90	2.46	81	1R	2H	4W	Variably bleached and oxidized
36.58	39.62	3.04	2.94	97	2.35	77	1R	2H	3W	Oxidized, strongly pitted Tr VNs
39.62	42.67	3.05	2.74	90	1.64	54	1R	3H	3W	Bleached and oxidized
42.67	45.72	3.05	2.3	75	0.59	19	1R	2H	4W	Bleached and variably oxidized, moderately pitted Tr VNs
45.72	48.77	3.05	2.2	72	0.11	4	1R	2H	3W	Varoably bleached, 0.6m Tr VN
48.77	51.82	3.05	2.94	96	1.77	58	2R	2H	2W	Ca/Tr? VN hosting possibly Apy 51.55.
51.82	54.86	3.04	2.83	93	2.54	84	1R	2H	1W	VB and variable Tr/Ca VTs. Weak to moderate pitting
54.86	57.91	3.05	2.61	86	1.74	57	1R	2H	1W	Several pitted Tr VN and VTs
57.91	60.96	3.05	3.05	100	2.44	80	1R	2H	1W	Variably oxidized, pitted Tr VNs. One containing malachite
60.96	64.01	3.05	2.3	75	1.60	52	1R	1H	3W	Oxidized Tr VN with blebby Apy
64.01	67.06	3.05	3	98	2.16	71	1R	2H	1W	Variably oxidized Tr VTs, Ca VNs are very deformed
67.06	70.10	3.04	2.86	94	2.46	81	1R	2H	1W	Moderately oxidized Tr VN
70.10	73.15	3.05	3.05	100	2.59	85	2R	3H	1W	Pitted Tr/Ca VN
73.15	76.20	3.05	2.69	88	2.09	69	2R	3H	1W	Two rusty Tr VNs with Malachite

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
76.20	79.25	3.05	3.03	99	2.69	88	1R	3H	1W	Variably bleached. Two slightly oxidized Tr VNs
79.25	82.30	3.05	2.41	79	1.60	52	1R	3H	1W	0.5m RBZ
82.30	85.34	3.04	2.98	98	2.31	76	1R	3H	1W	Ca VN/VB
85.34	88.39	3.05	2.67	88	2.12	70	2R	3H	1W	Ca Vt and VB with many moderately oxidized
88.39	91.44	3.05	2.92	96	2.73	90	1R	4H	1W	Ca VN
91.44	94.49	3.05	2.95	97	2.71	89	2R	3H	1W	
94.49	97.54	3.05	3.05	100	2.94	96	2R	3H	1W	
97.54	100.58	3.04	3.04	100	2.68	88	2R	3H	1W	Tr Vn's with Py
100.58	103.63	3.05	3.04	100	2.84	93	2R	4H	1W	
103.63	106.68	3.05	3.01	99	2.92	96	3R	4H	1W	Sphalerite along one joint
106.68	109.73	3.05	3.05	100	3.05	100	3R	4H	1W	0.5cm Ca VN with Py and Ca VB. 1- 3mm Py throughout
109.73	112.78	3.05	2.94	96	2.78	91	3R	4H	1W	Ca Vn's and VB
112.78	115.82	3.04	3.04	100	3.00	99	3R	4H	1W	Ca VN's and VT's
115.82	118.87	3.05	2.74	90	1.98	65	3R	1H	1W	Two 10-12 cm RBZ. Variable oxidation throughout run
118.87	121.92	3.05	2.8	92	2.80	92	2R	4H	1W	Ca VB
121.92	124.97	3.05	2.97	97	2.59	85	2R	4H	1W	Ca VN's, some moderately oxidized
124.97	128.02	3.05	2.89	95	2.24	73	2R	4H	1W	Weak to moderate oxidized Ca/Tr VN/VT. VB throughout. Areas with purple flourite(?)
128.02	131.06	3.04	3.03	100	2.94	97	2R	4H	1W	Ca Vn's
131.06	134.11	3.05	2.78	91	2.07	68	2R	4H	1W	Variably oxidized on fracture surfaces and through VN's and VT's
134.11	137.16	3.05	2.8	92	1.77	58	2R	4H	1W	10 cm RBZ
137.16	140.21	3.05	1.87	61	1.58	52	3R	4H	1W	Variably oxidized and pitted Ca Vn/VT
140.21	143.26	3.05	2.84	93	2.57	84	3R	4H	1W	40 TCA slickenside joint at 141.58m
143.26	146.30	3.04	3.03	100	2.81	92	3R	4H	1W	
146.30	149.35	3.05	3.05	100	2.85	93	3R	4H	1W	1 cm Ca Vn with Sulphides (Apy?). Ca VN/VT/VB throughout
149.35	152.40	3.05	2.9	95	2.52	83	3R	4H	1W	Ca VN/VT/VB with Py
152.40	155.45	3.05	3.05	100	2.58	85	2R	4H	1W	Low angle 2cm Py VN through first 50 cm of run

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
155.45	158.50	3.05	3.05	100	2.35	77	2R	4H	1W	
158.50	161.54	3.04	2.94	97	2.65	87	3R	4H	1W	
161.54	164.59	3.05	3.02	99	2.86	94	2R	4H	1W	
164.59	167.64	3.05	3.05	100	2.96	97	2R	4H	1W	
167.64	170.69	3.05	3	98	2.91	95	2R	4H	1W	
170.69	173.74	3.05	3.01	99	2.48	81	2R	4H	1W	1-2 cm VN with Po
173.74	176.78	3.04	3.04	100	2.57	85	3R	4H	1W	
176.78	179.83	3.05	3.05	100	2.76	90	3R	4H	1W	Low angle 1.15m Chlorite(?) VN with 1-5mm Py. 10cm RBZ at end of run
179.83	182.88	3.05	3.05	100	2.62	86	2R	4H	1W	
182.88	185.93	3.05	3.05	100	2.70	89	2R	4H	1W	
185.93	188.98	3.05	3.05	100	3.05	100	3R	4H	1W	Ca/ Chlorite (?) VN with Sulphides
188.98	192.02	3.04	3.03	100	2.78	91	3R	4H	1W	
192.02	195.07	3.05	3.03	99	2.97	97	3R	4H	1W	
195.07	198.12	3.05	3.02	99	2.90	95	3R	4H	1W	
198.12	201.17	3.05	3.05	100	2.92	96	3R	3H	1W	
201.17	204.22	3.05	3	98	2.73	90	3R	3H	1W	
204.22	207.26	3.04	3.04	100	2.78	91	3R	3H	1W	
207.26	210.31	3.05	3.04	100	2.85	93	2R	4H	1W	
210.31	213.36	3.05	2.98	98	2.79	91	2R	4H	1W	
213.36	216.41	3.05	3.05	100	2.98	98	2R	4H	1W	
216.41	219.46	3.05	2.94	96	2.82	92	3R	4H	1W	Ca VN with blebby Py
219.46	222.50	3.04	3.02	99	2.96	97	2R	4H	1W	
222.50	225.55	3.05	3.05	100	3.05	100	3R	4H	1W	Ca VN with 3- 5mm Py
225.55	228.60	3.05	2.97	97	2.58	85	3R	4H	1W	
228.60	231.65	3.05	3.04	100	2.72	89	2R	4H	1W	
231.65	234.70	3.05	3.03	99	2.94	96	2R	4H	1W	Ca VN's with Py/Apy (?)
234.70	237.74	3.04	3.04	100	2.82	93	2R	4H	1W	
237.74	240.79	3.05	3	98	2.89	95	3R	3H	1W	Ca VN with 1- 2mm Py
240.79	243.84	3.05	2.87	94	2.77	91	2R	4H	1W	
243.84	246.89	3.05	3.05	100	3.05	100	2R	4H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
246.89	249.94	3.05	3	98	3.00	98	2R	4H	1W	Ca VN's with massive Py

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
0.00	6.10	6.10	OVB	--	No recovery from 0-2.95m. Very poor core recovery from 2.95-6.10m. Overburrden consists of 1-12cm sized white marble and grey limestone.							

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
6.10	7.47	1.37	LST	FG	Tremolite veins within this interval. Medium-dark grey, moderately veined, locally vein brecciated and crackle brecciated, marbilized, weakly dolotomized limestone. Tremolite veins occur at: 6.11-6.12m, 6.52-6.61m, 6.64-6.87m and 7.20-7.25m. 6.11-6.12m - 1-5mm thick, white to pale green, calcite-tremolite vein. Tremolite occurs as white, sub mm to mm sized, radiating crytals. 6.52-6.61m - 2-12mm thick, white/clear to pale green, quartz-tremolite-calcite vein. Tremolite occurs as white to rusty orange, sub mm sized crystals along the margins of the vein. 6.64-6.87m - 5-15mm thick, white to pale green, calcite-tremolite-pyrite vein. Tremolite occurs as 1-4mm sized, white, massive to lesser subhedral-radiating crystals. Pyrite occurs as 1-3mm sized, fresh blebs. A vein parallel fracture exposes moderately abundant, euhedral, lesser massive, 1-3mm sized, oxidized pyrites. A 2-10mm sized, fresh, blebby pyrite vein cross-cuts the calcite-tremolite-pyrite vein at an oblique angle and is likely the source for the vast majority of pyrites on the fracture surface. 7.20-7.25m - 5mm thick, white to light green, calcite-tremolite vein. Tremolite occurs as white, sub mm to mm sized, radiating crytals. Rare, 1mm sized pyrite blebs with rusted margin occur proximal (within 5mm of vein). The interval is weak-moderately marbilized towards the end of the interval, as seen by 2-5cm sized, 1-5cm spaced, medium grained sections from 7.29-7.64m. 6.67-6.92m: A 2-10mm sized, fresh, blebby pyrite vein cross-cuts a calcite-tremolite-pyrite vein at an oblique angle at and is likely the source for the vast majority of pyrites on the fracture surface. Veining occurs primarily as locally observed calcite vein breccia and calcite infill of crackle breccia and lesser as calcite-tremolite±pyrite±quartz veins.							

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
6.10	7.47	1.37			Pyrite occurs as blebs within veins (0.5%), as a blebby pyrite vein (0.5) and as rare, sub mm-sized, fresh disseminations (0.1%). Tremolite veins vary from 0.1-1.5cm thick, and are spaced 2-50cm between eachother (3%).							
						MD	GY	BX	MBL	1I	Py	0.5
						DK	GY	CR			Py	0.5
											Tr	3
7.47	9.62	2.15	MBL	MG	White-light tan, medium grained, weakly dolotomized, tremolite bearing marble. Trace-weakly abundant, light green, 1-3mm sized, subhedral acicular to massive tremolite crystals occur throughout the marble interval. Moderate oxidation occurs at 8.95-9.05m along a fracture and subsequent multiple healed fractures and leaches into the rock for 0.5-1cm from the healed fractures. 1-5mm sized, discontinuous, irregularly shaped calcite-pyrite veinlets occur moserately throughout the interval. Calcite is white to clear, pyrite is fresh, 0.1-1mm sized and blebby. Pyrite occurs throughout the interval as sub mm-sized, fresh disseminations (0.05%) and as calcite-pyrite veinlets (1.5%). Tremolite occurs throughout the interval as light green, mm sized, subhedral to massive crystals (2%).							
						MD	WH	MA			Py	0.05
						LT	TN				Py	1.5
											Tr	2

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
9.62	11.10	1.48	LST	FG	Trace tremolite veins within this interval. Medium-dark grey, moderately veined, locally vein brecciated, locally pitted, marbilized, weakly dolotomized limestone. Tremolite veins occur at: 10.34-10.39m and 10.78-10.83m. 10.34-10.39m - 0.5-1.5cm thick, white to light green calcite-tremolite-pyrite vein. Tremolite occurs as white to light green, 2-4mm sized, euhdral, radiating to lesser massive crystals. Pyrite occurs as ~vein parallel, fine grained, fresh, mm-sized stringers within and proximal to the calcite-tremolite-pyrite vein. 10.78-10.83m - two 3mm thick, white to clear, discontinuous, undulating calcite-quartz-tremolite veins occur within 5cm. Quartz is clear and 3mm sized. Tremolite is white, 1mm sized, and radiating. Rare, light green, 1-3mm sized, subhedral acicular to massive tremolite crystals occur throughout the interval. Pitted texture occurs primarily within 2-5mm sized calcite veins and lesser on fractured surfaces. Veining occurs moderately as calcite veinlets and lesser as calcite veinlets, both primarily as high angles TCA. There is a gradual increase in calcite vein content from 10.90-11.10m towards the underlying marble. Pyrite occurs primarily as fine grained, fresh stringers within and proximal to a tremolite vein (0.1%) and lesser as rare, sub mm-sized disseminations throughout the interval (0.05%). Tremolite occurs within calcite-tremolite±quartz (0.05%) veins and lesser as rare, euhedral crystals (0.01%).							
						MD	GY	MA	MBL	2I	Py	0.1
						DK	GY	BX	DOL	2I	Py	0.05
											Tr	0.05

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
											Tr	0.01
11.10	11.16	0.06	MBL	MG	White-light tan, medium grained, weakly dolotomized, tremolite bearing marble. Same general marble lithology as 7.47-9.62m. Trace-weakly abundant, light green, 1-3mm sized, subhedral acicular to massive tremolite crystals occur throughout the marble interval. Marble horizon occurs directly between overlying limestone and underlying quartz-pegmatite. Pyrite occurs as fresh to lesser oxidized mm-sized disseminations throughout the interval (2%) as rusty, 1mm sized, subhedral crystals on fracture surface at 11.12m. Tremolite occurs throughout the interval as light green, mm sized, subhedral to massive crystals (0.5%).							
						MD	WH	MA	DOL	2I	Py	2
						LT	TN				Py	0.5
						LT	BN				Tr	0.5

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
11.16	11.21	0.05	PEG	CG	Pegmatite interval. Clear, white to light green, coarse grained, subhedral quartz-tremolite-calcite-pegmatite. Pegmatite is composed of clear-smoky, coarse grained, subhedral quartz, white to light green, 3-5mm sized, euhedral radiating tremolite and white, massive calcite. Coarse grained quartz occurs predominantly on the up-hole margin of the interval along the marble pegmatite contact, whereas the tremolite and calcite occur primarily on the down-hole side of the pegmatite. Trace 1-2mm sized, fresh pyrite blebs occurs within both the tremolite and quartz crystals of the pegmatite. Pyrite occurs as trace mm-sized blebs (1%). Tremolite occurs as 3-5mm sized, euhedral crystals primarily on the down-hole side of the pegmatite (30%).							
						MD	WH				Tr	30
						LT	GN					
						--	CL	XL			Py	1

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
11.21	23.56	12.35	LST	FG	Rare tremolite veins within this interval. Medium-dark grey, moderately veined, locally vein brecciated and crackle brecciated,trace marbilized, locally pitted, weakly dolotomized limestone. Same general limestone lithology from 6.10-7.47m 12.10-12.49m - 0.5-2cm thick, irregularly shaped bands of white-bleached marble, spaced evenly every 3-5cm. 16.90-19.15m - Black, 1-2mm sized, acicular, moderately abundant actinolite occurs within this interval. Crystals have no obvious orientation. Pitted texture is exclusively associated with veins/veinlets proximal (within 1-3cm) to fractures within darker coloured limestone at 12.79-12.95m, 17.34-17.70m, 18.24-18.55m, 19.39-19.45m and 20.95-21.01m. Vening occurs primarily as 3-10mm thick calcite veins/veinlets that occur moderately throughout the entire interval.Veins/veinlets common possess weak-moderate amounts of black, fine grained, granular, sub mm-sized, dull dolomite intergorwths. Pyrite occurs as sparse, 1-4mm thick, fresh, blebby veinlets within the interval ~every 1.5-2m (0.1%); as rare, fresh, sub mm-sized disseminations throughout (0.1%) and as two 3-6mm sized, subhedral crystals on a fartured surface at 13.95m (0.01%). Tremolite occurs as rare/sparse 1-3mm sized, white, subhedral calcite-tremolite veins every 2-2.5m throughout the interval. Patchy, radiating, white, 1-3mm sized weakly occurring tremolite crystals are also seen on a gougey fracture surface at 18.40m (0.2%). Actinolite occurs as 1-2mm acicular crystals from 16.90-19.15m (0.05%).							
						MD	GY	BX	MBL	1I	Py	0.1
						DK	GY	CR	DOL	1I	Py	0.1

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
											Ac	0.05
											Tr	0.2
											Py	0.01
23.56	27.43	3.87	MBL	MG	White-light tan, medium grained, weakly dolotomized, weakly pitted, weakly oxidized marble. Same general marble lithology as 7.47-9.62m. Colour darkens to a more tan-brown colour 26.10m to the end of the interval. 24.98-25.00m - 0.5-1.5cm thick, white, massive to subhedral tremolite-calcite vein. Tremolite also occurs as rare, subhedral infill of 1-5mm sized vugs from 25.80-27.43. Pitted texture is most abunadnt from 25.80-27.43m occurring weakly within the rock and moderately within mm-sized calcite veins/veinlets. Veining occurs as weakly abundant calcite veins/veinlets throughout the interval, but slightly more concentrated from 25.80-27.43m. Pyrite occurs as trace, fresh, sub mm-sized disseminations throughout the interval (0.1%) with a concentrated amount of oxidized, lesser fresh, 1-2mm sized disseminations occurring from 25.80-25.95m. (0.1%).							

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
27.43	29.00	1.57	SKN	MG	Tremolite bearing skarn interval. Medium brown to light orange, fine-medium grained, moderately-strongly oxidized, weakly pitted, highly fractured to locally rubbly, dolomititc skarn. White to light brown, 3-5mm sized, subhedral to massive tremolite occurs throughout the interval in rubbly sections and within rock fragments. Rubble zones occur at: 27.70-27.90m and 28.90-29.00m. Oxidation is light orange and occurs moderately throughout the entire interval and is strongest within rubble zone at 27.70-27.90m. Fractured surfaces often contain a 1-3mm thick, dark grey clay infill. 28.50m - medium-dark green-black, vitreous-sub metallic, 1-2mm sized, platy mineral (biotite?) occurs at what appears to be the terminations of oxidized tremolites. Pyrite occurs as trace sub mm-sized dissemintions throughout the interval (0.05%) and as 1-3mm sized, oxidized, euhedral crystal on a fractured surface at 27.45m (0.01%). Tremolite occurs abundantly throughout the interval (10%).							
						MD	BN	FR	DOL	3I	Py	0.05
						LT	OR	RB			Py	0.01

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
29.00	30.18	1.18	MBL	MG	White-light tan, medium grained, weakly dolotomized, fractured, weakly pitted, weakly oxidized, tremolite bearing marble. Same general marble lithology as 7.47-9.62m. Colour darkens to a more tan-brown colour 29.60m to the end of the interval. Individual, White to light brown oxidized, 1-5mm sized, radiating euhedral tremolite occurs moderately throughout the interval within the marble. Pitted texture occurs weakly within the rock and moderately within mm-sized calcite veins/veinlets. Veining occurs as weakly abundant calcite veins/veinlets throughout the interval. Pyrite occurs as trace, fresh, sub mm-sized disseminations throughout the interval (0.1%) with a concentrated amount of oxidized, lesser fresh, 1-2mm sized disseminations occurring from 25.80-25.95m. (0.1%).							
						MD	WH	FR	DOL	2I	Py	0.2
						LT	TN		OXI	2I	Tr	5

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
30.18	31.69	1.51	SKN	MG	Tremolite bearing skarn interval. Medium brown to light orange, fine-medium grained, moderately-strongly oxidized, gougey, highly fractured to locally rubbly, dolomititc skarn. Same general skarn lithology as 27.43-29.00m. White to light brown, 3-5mm sized, subhedral to massive tremolite occurs throughout the interval in rubbly sections and within rock fragments. Rubble zones occur at: 30.18-30.32m 30.48-30.70m and 31.00-31.69m. Oxidation is light orange and occurs moderately throughout the entire interval and is strongest within rubble zones. 30.54-30.66m - light brown-rusty orange, clayey-gougey section. Fractured surfaces often contain a 1-3mm thick, dark grey clay infill. Pyrtie occurs as very rare, oxidized, 1mm sized euhedral crystals (0.01%). Tremolite occurs abundantly throughout the interval (5%).							
						MD	BN	FR	OXI	3I	Py	0.01
						LT	OR	RB	DOL	3I	Tr	5

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
31.69	35.77	4.08	MBL	MG	Tremolite bearing skarn interval. Medium brown to light orange, fine-medium grained, moderately-strongly oxidized, gougey, highly fractured to locally rubbly, dolomititc skarn. Same general skarn lithology as 27.43-29.00m. White to light brown, 3-5mm sized, subhedral to massive tremolite occurs throughout the interval in rubbly sections and within rock fragments. Rubble zones occur at: 30.18-30.32m 30.48-30.70m and 31.00-31.69m. Oxidation is light orange and occurs moderately throughout the entire interval and is strongest within rubble zones. 30.54-30.66m - light brown-rusty orange, clayey-gougey section. Fractured surfaces often contain a 1-3mm thick, dark grey clay infill. Pyrite occurs as very rare, oxidized, 1mm sized euhedral crystals (0.01%). Tremolite occurs abundantly throughout the interval (5%).							
						MD	WH	FR	DOL	2I	Py	0.2
						LT	BN		OXI	2I	Py	0.05
											Tr	5
											Tr	0.5

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
35.77	38.91	3.14	LST	FG	Trace tremolite veins within this interval. Light-dark grey, fine grained, massive, weakly veined, competent, weakly dolotomized limestone. Same general limestone lithology as 6.10-7.47m. Tremolite veins occur at: 35.90-35.95m, 36.20-36.22m, 37.52-37.60, 37.99-38.02m and 38.30-38.32m. 35.90-35.95, 36.20-36.22m and 38.30-38.32m- 2-3mm thick, white, calcite-tremolite±pyrite veinlets. Tremolite occurs as sub mm to 1mm sized, white, massive crystals on the margins of the veinlets. Pyrite occurs as rare, very fine grained, sub mm-sized, fresh blebs within the veins. 37.52-37.60m - 8cm thick, white calcite-tremolite vein. Vein is dominantly calcite bearing, with tracely occurring, individual white-light green 1-3mm sized, acicular tremolite crystals. 37.99-38.02m - two 0.5-1cm thick, tan-medium brown, oxidized tremolite veins. Vein parallel fractures show 1-5mm thick, black clay infill along oxidized, 1-3mm sized, subhedral tremolite veins. pXRF indicates 6.9% zinc on margin of the veins - however, no obvious sphalerite is observed. Veining occurs as weakly abundant calcite veinlets and lesser veins throughout the interval, both at ~moderate to high angles TCA. Pyrite occurs as weakly abundant, 1-2mm sized, oxidized disseminations throughout the interval (0.2%). Tremolite veins are 0.2-8cm thick and occur every ~0.75m. Tremolite occurs as euhedral crystals (0.5%) and lesser and massive crystals (0.2%).							
						MD	GY				Tr	0.5
						LT	GY	MA	DOL	2I	Py	0.2
						DK	GY				Tr	0.2

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
38.91	40.24	1.33	LST	FG	Moderate tremolite veins within this interval. Medium-dark grey, strongly pitted/vuggy, moderately oxidized, massive to locally vein brecciated, weak-moderately dolotomized limestone. Tremolite veins occur at: 38.91-38.95m, 39.00-39.26m and 39.96-40.22m. 38.91-38.95m - 2.5cm thick, white-grey calcite-tremolite vein. Tremolite is white-grey, massive to lesser subhedral 2-5mm sized crystals. Three 1-2cm vugs within this vein. 39.00-39.26m- intensely pitted/vuggy section with 1-15mm sized, irregularly shaped tremolite veins. Tremolite is variably oxidized, massive to euhedral 5-7mm sized crystal. 39.96-40.22m- intensely pitted/vuggy section with 1-15mm sized, irregularly shaped tremolite veins. Tremolite is variably oxidized, massive to euhedral 5-7mm sized crystal. Strong calcite vein brecciation is associated with this section. Strong to intensely pitted/vuggy sections occur at 39.00-40.22m with multiple 1-3cm pits/vugs within the rock and calcite-tremolite veins. Oxidation is rusty brown, massive and occurs throughout the interval, with an increase in intenseity towards the end of the interval. Tremolite occurs in moderate abundance throughout the interval within veins (8%).							
						MD	GY	BX	DOL	3I	Tr	8
						DK	GY	VU				

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
40.24	44.16	3.92	MBL	MG	White-light tan/brown, medium grained, weakly dolotomized, fractured, weakly pitted, moderately oxidized, tremolite bearing marble. Same general marble lithology as observed at 7.47-9.62m Colour lightens to a more tan-light grey colour from 42.20m to the end of the interval due to decreased oxidation. White to rusty brown, 0.5-1.5cm thick tremolite veins occur every ~5-30cm throughout the interval. Tremolite is 3-5mm sized, white to rusty brown and subhedral radiating. 41.38-41.50m, 41.88-41.91m, 42.30-42.35m and 43.20-43.27m - 0.2-1.5cm thick, oxidized tremolite veins with moderately abundant, oxidized, 1-3mm thick subhedral pyrites. 42.74-42.78m - 4mm thick tremolite vein with well formed 'Z' fold. Weak pitted texture occurs weakly within the rock and moderately within mm-sized calcite veins/veinlets. Weak-moderate light brown-rusty orange oxidation occurs throughouth the interval and moderately along fractured surfaces, with strong oxidation occurring at 40.24-42.20m. Veining occurs as weakly abundant calcite veins/veinlets throughout the interval. Pyrite occurs as weakly abundant, 1mm sized, oxidized disseminations throughout the interval (0.05%) and within tremolite veins and suubhedral crystals (0.5%) Tremolite occurs as white to light brown, euhedral veins (2%).							
						MD	WH	FR	DOL	2I	Py	0.05
						LT	TN		OXI	3I	Py	0.5
						LT	BN				Tr	2

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
44.16	45.78	1.62	MBL	MG	White-light tan/brown, medium grained, moderately dolotomized, fractured, weakly pitted, moderately-strongly oxidized, rubbly, tremolite bearing marble. Rubble zones occur at: 44.16-44.50m and 45.30-45.43m. Oxidation occurs moderately throughout the interval and stongest within the rubble zones. Rusty ornage-brown, clay rich, gougey section occurs at 44.25-44.50m. Tremolite occurs weakly as individual broken off, white, 1-4mm sized, subhedral crystals. 5-10cm fragments of medium grey limestone and tan-white marble occur 44.95-45.78m. Tremolite accounts for 1% of the interval.							
						MD	WH	FR	DOL	3I	Tr	1
						LT	TN		OXI	4I		
						LT	BN					
45.78	47.90	2.12	MBL	MG	White/light-brown/medium grey, medium grained, weakly dolotomized, moderately-strongly veined, highly fractured, moderately pitted, weakly oxidized, tremolite marble. Pitted texture occurs as mm-cm sized pits/vugs within the rock and more prominently within calcite-tremolite veins. Tremolite occurs as white, subhedral, 1-4mm sized crystals within pitted veins/veinlets. Veining occurs primarily as high angle TCA, 1-2mm sized, continuous, oxidized calcite veinlets. Weak, rusty orange-brown oxidation is common on fractured surfaces. Tremolite occurs within pitted veins/veinlets (2%).							
						MD	WH	FR	DOL	2I	Tr	2
						MD	GY					

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
						LT	BN		OXI	2I		
47.90	48.63	0.73	SKN	MG	Strong tremolite vein within interval. White to light brown, massive, trace oxidized, subhedral, 1-5mm sized individual crystals tremolite vein with 2-10cm white-medium grey, oxidzed marble on the margins of the vein. Tremolite vein occurs at 48.00-48.61m and comprises the entire segment of core. The tremolite is white to light brown, and has a "sawdust" appearance. Fracture surfaces within the tremolite vein are fresh to lesser with a 1-2mm thick dark grey/brown clay infill. No abundant sulphides observed within this interval, just large amounts of massive tremolite. Tremolite accounts for 60% of this interval.							

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
48.63	59.03	10.40	LST	FG	Trace malachite/tremolite veins within this interval. Light-medium grey, massive to vein brecciated, locally pitted, weakly-moderately veined, locally fractured limestone. 52.15-52.20m - Pyrite-tremolite-calcite-chalcopyrite-malachite veinlet. 3-5mm thick, fresh to oxidized. Tremolite is white to light brown. Pyrite and chalcopyrite occur as massive, fresh, intergrowths. Malachite is rare, spotty and occurs proximal to chalcopyrite. pXRF indicates an average of 0.4% Cu in this veinlet. 58.65-58.68m - Calcite-pyrrhotite-pyrite vein. Medium-coarse grained calcite with weakly abundant, 1-3mm sized, fresh, massive pyrrhotite and blebby pyrite occur within the vein. Tremolite veins occur at: 49.00-49.14m, 50.47-50.56m, 51.55-51.60m, 54.07-54.10m, 55.17-55.49m, 55.67-55.90, 56.15-56.20, 58.15-58.18m and 58.96-58.99m. 49.00-49.14m - white, massive to subhedral, 3-5mm sized crystals, tremolite vein with vein parallel fracture that has 1-10mm of clay/rock fragment infill. 50.47-50.56m and 51.55-51.60m - 5-9cm thick tremolite-calcite-actinolite-arsenopyrite±pyrite veins. Veins are white/light green/black, medium grained, variably trace-weakly oxidized and show strong zonation. Tremolite primarily occurs as white, 3-5mm sized, euhedral radiating crystals along the margin of the veins. Actinolite is black, 1-2mm sized and massive and occurs as 0.2-2cm sized patches in the middle portions of the veins. Arsenopyrite occurs weakly in both veins (slightly more abundant in the deep vein) as sub-euhedral, silvery, 1-7mm sized crystals with sub mm-sized oxidation rims. Pyrite is observed in the shallower vein as 1-3mm sized blebs. 54.07-54.10m - 4mm thick, clacite-tremolite veinlet. Tremolite is white to light green and radiating euhedral. 55.17-55.49m and 56.15-56.20m - 3-15mm thick calcite-tremolite-pyrite vein. Tremolite is white, euhedral radiating and vairably oxidized. Pyrites are 1-8m sized, strongly oxidized and subhedral.							

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
48.63	59.03	10.40			55.67-55.90m - vein parallel fracture exposes 5-10mm thick, oxidized tremolite vein. Tremolite is oxidized and massive to subhedral. Infill along fracture is rusty orange/brown clay. 58.15-58.18m - 5mm thick, irregularly shaped, oxidized tremolite-calcite vein. 58.96-58.99m - 5-8mm thick calcite-tremolite-pyrrhotite-pyrite vein. White, 3-5mm sized, euhedral tremolite occurs in the middle of the vein with calcite along the margins. 1-3mm sized, fresh, blebby pyrrhotite occurs weakly within the calcite of the vein. 1-2mm sized, fresh, blebby pyrite is trace in the calcite of the vein. Tremolite veins are 0.2-8cm thick and occur every ~80cm. Strong pitted textures occur at: 48.90-49.14m, 49.64-50.02m and 55.17-56.20m. Pyrite occurs primarily within vein as blebs (0.2%) and lesser as sub mm-sized disseminations throughout the interval (0.05%). Chalcopyrite occurs within veins/veinlets as blebs to massive (0.05%). Pyrrhotite occurs within veins as blebs to massive (0.1%). Arsenopyrite occurs within two veins as sub-euhedral crystals (0.03%). Malachite occurs very rare within one vein (0.01%). Tremolite occurs as veins/veinlets throughout the interval (5%).							
						MD	GY	BX			Py	0.05
						LT	GY	MA			Py	0.2
											Mc	0.01
											Tr	5
											As	0.03
											Po	0.1
											Cp	0.05

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
59.03	59.08	0.05	SKN	MG	Malachite-skarn band. Medium brown-locally white, strongly oxidized, tremolite-pyrite-malachite skarn band. 3-10mm thick sakrn band. Tremolite is mm-sized, white to brown and euhedral (10%). Pyrite is fresh, 1-2mm sized, subhedral and occurs on the margins of the skarn band (5%). Malachite is characteristic green, patchy and occurs within strong oxide material (0.5%).							
						MD	WH				Py	5
						MD	BN		OXI	4I	Tr	10
											Mc	0.5
59.08	61.54	2.46	LST	FG	Light-medium grey, moderately veined, massive limestone. Rare, 2-4mm sized, fresh to trace oxidized calcite-tremolite veins occur sparsely every 20-80cm. Veining occurs primarily as calcite veins/veinlets. Small 5cm thick bleached horizons at 61.25-61.30m and 61.50-61.54m. Pyrite occurs as rare-trace sub mm-sized disseminations throuhgout the interval (0.05%).							
						MD	GY					
						LT	GY	MA			Py	0.05

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
61.54	62.17	0.63	SKN	MG	Oxidized skarn interval. Light-medium brown, moderately pitted, moderately oxidized tremolite-pyrite skarn interval with 3-10cm thick, variably bleached limestone interbeds. Tremolite occurs as white, 3-5mm sized, euhedral radiating, fresh to strongly oxidized crystals. Pitted texture within the skarn interval exposes well formed tremolites. 3-5mm sized, fine grained pyrite blebs occurs within a more fresh tremolite vein from 61.54-61.66m. Pyrite occurs as blebs within a tremolite vein (0.5%) and as trace oxidized, mm-sized, euhedral disseminations throughout the interval (0.5%).							
						MD	BN				Py	0.5
						LT	BN	MA	BLE	2I	Py	0.5
											Tr	10

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
62.17	74.00	11.83	LST	FG	Light-medium grey, moderately veined, locally sheared, locally bleached limestone. Same general limestone lithology as 59.08-61.54m. Malachtie occurs within bleached horizon at 73.59-73.64m as trace, patchy, green crystals proximal to sub mm-sized, fine grained pyrite stringers on surface of core and along a fracture surface at 73.61m. 72.35-72.37m - 2cm thick, white-light brown, 3-4mm sized, subhedral tremolite vein with trace occurring 1-2mm sized, subhedral, weakly oxidized pyrites. Bleached horizons occur at: 67.84-67.94m, 73.18-73.24 and 73.59-73.64m. Veining occurs primarily as calcite veins, lesser as multiple generations of calcite veinlets. Pyrite occurs rarely throughout the interval as 1-2mm sized fresh disseminations (0.01%). Malachite occurs within bleached horizon towards the end of the interval (0.01%).							
						MD	GY				Mc	0.01
						LT	GY	SH	BLE	2I	Py	0.01

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
74.00	76.79	2.79	SKN	MG	Tremolite-chalcopyrite-malachite-skarn bands within this interval. Interval is primarily medium-dark grey, moderately veined, moderately-strongly dolotomized limestone with 2-5cm thick tremolite-chalcopyrite-malachite-skarn bands and veins. Skarn bands occur at: 74.00-74.05m - 5cm thick, dark brown, moderately oxidized, tremolite-chalcopyrite-malachite-skarn band. Tremolite is brown oxidized to lesser white, 3-5mm sized and occurs primarily on the margins of this band. Chalcopyrite is weakly abundant and occurs as fresh, irregularly shaped, 1-4mm sized blebs in the center of the band. Malachite occurs as trace, characteristically green, sub mm-sized patches and as rare 1mm thick veinlets. Pitted fractures are on both ends of this band. pXRF indicates 30% Cu within this band. 76.72-76.79m - 3cm thick, dark brown to rusty orange, moderately oxidized, tremolite-chalcopyrite-malachite-skarn band. Tremolite is brown oxidized to lesser white, 3-5mm sized and occurs primarily on the margins of this band. Chalcopyrite is weakly abundant and occurs as fresh, irregularly shaped, 1-4mm sized blebs in the center of the band. Malachite occurs as trace, characteristically green, sub mm-sized patches proximal to chalcopyrite. Strong zonation is observed in this band. Margins of the band are more fresh, unoxidized, sulphide lacking tremolite; the center of the band is strongly oxidized and hosts chalcopyrite and malachite. Skarn bands occur at the start and end of the interval. Tremolite-calcite±chalcopyrite±malachite veins occur at: 74.73-74.74m, 75.23-75.25m, 75.30-75.33m, 75.60-75.63m and 75.65-75.68m. 74.73-74.74m - 5mm thick, weakly oxidized calcite-tremolite-malachite vein. Tremolite is white to light brown, euhedral, mm sized.							

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
74.00	76.79	2.79			Malachite occurs in rare-trace abundance, and is characteristically green, sub mm-sized 75.23-75.25 - 5-8mm thick, weakly oxidized calcite-tremolite-chalcopyrite vein. Tremolite is white to light brown, euhedral, mm sized. Chalcopyrite occurs in 1cm section of vein as 2-4mm sized, fresh, blebs. 75.30-75.33m, 75.60-75.63m and 75.65-75.68m - 5-15mm thick, weakly oxidzed calcite-tremolite veins. Tremolite-calcite±chalcopyrite±malachite veins are 5-15mm thick and occur every ~5-50cm. Veining occurs primarily as multiple generations of calcite veinlets and lesser as rare 0.5-1cm thick calcite vein breccia. Bleached horizon occurs from 75.68-76.72m leading into the deeper skarn band. Chalcopyrite occurs within skarn bands and skarn veins as blebs (0.5%). Malachite occurs within skarn bands and skarn veins as sub mm-sized patches (0.05%). Tremolite occurs within skarn bands and skarn calcite-tremolite veins (5%).							
						MD	GY		DOL	3I	Cp	0.5
						DK	GY				Mc	0.05
											Tr	5

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
76.79	79.67	2.88	LST	FG	Light-medium grey, moderate-strongly veined, locally vein brecciated, moderately dolotomized limestone with 8-60cm thick bleached marble horizons. Same general limestone lithology as 62.17-74.00m. 76.78-76.95m - brassy-green, 3-8mm sized blebs of chalcopyrite occur moderately every 1-3cm with a 2mm band of chalcopyrite at 76.94-76.95m. Chalcopyrite has a 1-2mm thick bleached/oxidized horizon surrounding the blebs/band. Bleached marble horizons occur at: 76.52-76.97m, 77.05-77.29m and 78.48-78.56m. 78.60-79.25m - moderate to strongly calcite vein brecciated section. Pyrite occurs as rare 1-3mm sized, euhedal, fresh disseminations throughout the interval (0.05%). Chalcopyrite occurs within 50cm section as blebs and a band (0.1%).							
						MD	GY				Cp	0.1
						LT	GY	BX	DOL	3I	Py	0.05

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
79.67	80.16	0.49	SKN	MG	Tremolite-malachite-skarn interval. Medium brown/rusty orange, moderately oxidized, highly fractured, massive, weakly pitted tremolite-malachite skarn. Tremolite is most common on fracture surfaces as broken veins and occurs lesser as individual broken off crystals in fractured rubble. Tremolite is light brown, 3-5mm sized, euhdral. Malachite is very rare and occurs on one fractured surface of a tremolite vein. Malachite occurs as characteristally green, 1mm sized patches. Tremolite vein at 79.67-79.70m - 13mm sized, oxidized tremolite with trace oxidized sulphides. Oxidation is light brown, massive and occurs pervasive into the rock and on fracture surface. Trace fractured surfaces have dark purple, slightly iridescent oxidation. Tremolite occurs as intact and broken vein (5%). Malachite occurs as very rare oatches on tremolite vein (0.01%).							
						MD	OR	MA			Mc	0.01
						MD	BN	FR	OXI	3I	Tr	5
80.16	81.17	1.01	LST	FG	Medium-dark grey, moderately dolotomized, fractured, weakly pitted, weakly oxidized limestone. Calcite-tremolite, 3-5mm thick, continuous veins occur every 3-10cm throughout the interval and contain variable amounts of rusty/oxidized mm-sized subhedral pyrites. Pitted texture occurs along fracture/broken surfaces and within calcite veins. Oxidation occurs within pitted veins and stronger on fractured surfaces as orange-brown to dark purple, massive oxidation. Pyrite occurs within tremolite veins (0.1%). Tremolite occurs as calcite-tremolite veins (5%)							
						MD	GY	FR	DOL	3I	Py	0.1

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
						DK	GY		OXI	2I	Tr	5
81.17	87.90	6.73	LST	FG	Light-medium grey, fine grained, weakly foliated, weakly veined limestone with locally observed 6cm thick bleached horizon. Bleached horizon occurs at 81.80-81.85m. Rare/sparse calcite-tremolite veins are 5-7mm thick, weakly oxidized and occur every ~80cm-1m throughout the interval. 83.27-84.90m - Section contains weak-moderately abundant amounts of individual, black, 1-3mm sized, acicular actinolite crystals within limestone. Foliation is orientated at ~80 degrees TCA. Veining occurs primarily as weakly abundant calcite veinlets and lesser as rare 3-4cm thick medium grained calcite veins. Pyrtie occurs as weakly abundant, fresh, 1-3mm sized subhedral disseminations throughout the interval with moderately higher concentration between 84.75-84.88m (0.5%). Tremolite occurs as sparse 5-7mm thick veins (0.1%).							
						MD	GY		OXI	2I	Tr	0.5
						LT	GY	FO	DOL	2I	Py	0.5

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
87.90	93.26	5.36	LST	FG	Light-medium grey, fine grained, weakly foliated, weakly veined limestone with locally observed 6cm thick bleached horizon. Rare/sparse calcite-tremolite veins are 5-15mm thick, weakly oxidized and occur every ~80cm-1m throughout the interval. 90.48-90.56m - Section is darker grey, with greenish-hue and contains moderately abundant amounts of individual, black, 1-3mm sized, acicular actinolite crystals within limestone. Veining occurs primarily as weakly abundant calcite veinlets and lesser as rare 1-2cm thick medium grained calcite veins. This interval also contains moderately abundant sub mm-sized, fine grained, black dolomite veinlets at varying orientations TCA. Pyrtie occurs as weakly abundant, fresh, 1-3mm sized subhedral disseminations throughout the interval (0.1%). Tremolite occurs as sparse 5-15mm thick veins (0.2%).							
						MD	GY				Tr	0.2
						LT	GY		BLE	1I	Py	0.1
93.26	93.93	0.67	MBL	MG	White to medium tan/brown, medium grained, massive, locally bleached and oxidized marble. Bleaching occurs from 93.55-93.82m. Bleached section is moderately dolotomized. Weak, rusty orange/brown oxidation occurs on fracture/broken surfaces within the bleached section - 93.55-93.82m. Black, dendritic, 1-4mm sized manganese oxides occur within the bleached section. Broken surfaces expose trace, white-bronze, 1-2mm sized blebby pyrtie disseminations. Pyrite occurs on broken surfaces as 1-2mm sized white-bronze blebs (0.02%).							
						MD	WH	MA	BLE	2I	Py	0.02
						MD	TN		OXI	2I		
						MD	BN					

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
93.93	97.27	3.34	LST	FG	Light-medium grey, fine grained, moderately veined, weakly foliated limestone with a 10cm thick bleached horizon. Same general limestone lithology as 80.16-93.93m. Bleached horizon occurs at 94.72-94.81m. Bleached section contains moderately-strongly abundant 1-2mm sized, sub-anhedral oxidized sulphide (pyrite?) disseminations throughout and trace 1-3mm sized subhedral, fresh pyrite disseminations. Veining occurs primarily as weakly abundant, discontinuous calcite veinlets and lesser as rare 1cm thick medium grained calcite veins. This interval also contains moderately abundant sub mm-sized, fine grained, black dolomite veinlets at varying orientations TCA. Foliation is orientated at ~80 degrees TCA. Pyrite occurs primarily as fresh to oxidized disseminations within the the bleached section (0.08%), and as fresh blebby disseminations throughout the interval (0.05%) and as very rare blebs in calcite veins (0.001%).							
						MD	GY				Py	0.01
						LT	GY	FO	BLE	1I	Py	0.15

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
97.27	99.67	2.40	MBL	MG	White-light grey, massive, locally bleached marble with an 85cm sized interbed of medium grained, moderately veined limestone. Bleached horizons occur at: 99.14-99.14m and 99.19-99.23m. Limestone occurs at: 98.07-98.92 and contains moderately abundant calcite veinlets at varying orientations TCA. 99.37-99.62m: 25cm section containing moderately-strongly abundant 1-3mm sized, fine grained, discontinuous pyrite stringers and weakly abundant 3-5mm sized, fresh pyrite blebs. This section also contain weak amounts of individual, black, 1-3mm sized, acicular actinolite crystals within marble. White, 8mm sized tremolite occurs on fracture surface at 99.37m. Pyrite occurs weakly throughout the interval as sub mm-sized to 2mm sized fresh disseminations (0.1%), more concentrated from 99.37-99.62m as disseminations (0.1%) and stringers (0.1%).							
						MD	WH	MA	BLE	2I	Py	0.2
						LT	GY				Py	0.1

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
99.67	104.75	5.08	LST	FG	Light-medium grey, fine grained, weakly veined limestone with a locally observed 15cm thick bleached horizon. Same general limestone lithology as 93.93-97.27m. 101.02-101.08m, 101.39-101.46m and 101.64-101.71m - sections containing moderately-strongly abundant 1-3mm sized, fine grained, discontinuous pyrite stringers and weakly abundant 3-5mm sized, fresh pyrite blebs. This section also contain weak amounts of individual, black, 1-3mm sized, acicular actinolite crystals within limestone Bleached horizon occurs at 102.05-102.20m - bleaching is strong. White to light brown, 3-5mm sized, sub-euhedrl tremolites occur as a 1cm thick vein with bleaching leaching from tremolite vein. Trace oxidized, 3-4mm sized pyrite occur within the bleached section. Veining occurs primarily as weakly abundant calcite veinlets and lesser as rare 1-2cm thick medium grained calcite veins. This interval also contains moderately abundant sub mm-sized, fine grained, black dolomite veinlets at varying orientations TCA. 103.75-103.81m - 2cm thick coarse grained calcite-pyrite-pyrrhotite vein. Pyrite occurs as moderately abundant 0.5-1.5cm sized, subhedral crystals within the vein. Pyrrhotite occurs as weakly abundant 0.2-0.6cm sized, subhedral crystals within the vein, proximal to pyrite. Pyrite occurs weakly throughout the interval as sub mm-sized to 2mm sized fresh disseminations (0.1%), more concentrated at 101.02-101.08m, 101.39-101.46m and 101.64-101.71m as disseminations (0.1%) and stringers (0.1%). Pyrite also occurs as large, subhedral crystals within a calcite vein at 103.75-103.81m (0.05%). Pyrrhotite occurs as 2-6mm sized, subhedral crystals within calcite vein at 103.75-103.81m (0.02%).							
						MD	GY				Py	0.1

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
						LT	GY		BLE	2I	Py	0.2
											Py	0.05
											Po	0.02

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
104.75	117.78	13.03	LST	FG	Light-medium grey, fine grained, massive to intermittently strongly vein brecciated, locally crackly, locally foliated, moderately veined limestone. Vein brecciation occurs as 30-85cm thick sections occurring every ~several meters throughout the interval. Clasts are granule to pebble sized, poorly sorted, angular to sub-angular limestone. 105.26-105.27m - a fracture exposes surfaces coated with massive-granular, burgandy, sub-vitreous, 1-2mm sized, subhedral sphalerite crystals. 106.55-106.64m and 112.72-112.76m- 1cm thick, medium grained, calcite vein with 2-4mm sized, fresh pyrrhotite blebs occurring on the margins of the vein. 106.69-106.75m - 5mm thick tremolite-pyrite-calcite vein. Tremolite is white and euhedral radiating. Pyrite occurs as moderately abundant, fresh, 3-4mm sized blebs within and at times expanding past the width of the vein. 116.98-117.09m - 1-1.5cm thick tremolite-calcite vein. Tremolite is primarily white/fresh but is also weakly oxidized. Trace, 1-2mm sized, strongly oxidized sulphides (pyrite?) occur within the vein. Veining occurs primarily as calcite vein brecciation and lesser as calcite veins/veinlets with locally observed strongly abundant 3-10cm thick, sub mm-sized, fine grained, black dolomite veinlet sections occuring every several meters. Weak bleaching occurs from 117.50 to the end of the interval as a gradational contact into the underlying bleach, fractured marble. 116.21m to the end of the interval contains weak amounts of individual, black, 1-3mm sized, acicular actinolite crystals within limestone and bleached section. Pyrite occurs throughout the interval as 2-3mm sized, subhedral, fresh blebs (0.1%) and lesser within veins as blebs (0.05%). Pyrrhotite occurs within rare calcite veins as 2-							

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
104.75	117.78	13.03			4mm blebs (0.03%) and is locally observed as sub mm-sized disseminations throughout the interval (0.01%).							
						MD	GY	MA			Po	0.03
						LT	GY	FO			Py	0.15
								CR				
								BX			Po	0.01
117.78	118.90	1.12	MBL	MG	White/tan to medium grey, fine-medium grained, weakly pitted, moderately veined, moderately oxidized, locally bleached, highly fractured dolomite-marble. Same general marble lithology as 97.27-99.67m Bleached horizon occurs at 117.78-118.08m. Bleached section contains moderately-strongly abundant 1-2mm sized, sub-anhedral oxidized sulphide (pyrite?) disseminations throughout and trace 1-3mm sized subhedral, fresh pyrite disseminations. Oxidation occurs throughout the interval, strongest from 118.08-118.90m, as rusty brown/orange, massive-powdery, 1-4mm thick coating on fracture surfaces and lesser as pervasive into the rock and along healed fractures in rock fragments. Pitted texture occurs as 3-5mm pits in two 3-5mm thick, highly oxidized dolomite(?) veins. Veining occurs 1-3mm thick, oxidized tremolite veinlets and lesser as oxidized dolomite veinlets both occur primarily from 118.08-118.90m in rock fragments in more fractured section. Pyrite occurs primarily as 1-2mm sized disseminations within the bleached horizon (0.5%). Tremolite occurs as oxidized veinlets throoughout the interval (3%).							
						MD	WH	FR	BLE	1I	Py	0.5
						MD	GY		OXI	3I		
						LT	TN		DOL	3I	Tr	3

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
118.90	124.62	5.72	LST	FG	Light-medium grey, fine grained, brecciated, vein brecciated, locally crackle brecciated variably muddy limestone. Strongly brecciated, 7-20cm sections of limestone occur every ~30-50cm. Clasts are 0.5-4cm sized, angular to sub-angluar, poorly sorted limestones. Vein breccia occurs as 10-15cm sections within limestone and occurs every few meters. Moderately-strongly calcite vein brecciated, 7-20cm sections of limestone occur every ~30-50cm. Clasts are 0.5-4cm sized, angular to sub-angluar, poorly sorted limestones. In trace, 5-10cm sections, occurring once every several meters, of darker grey, more muddy sections of limestone that contain weak amounts of individual, black, 2-3mm sized, platy biotite(?) crystals. Pyrite occurs as trace, 1-3mm, fresh, euhedral disseminations throughout the interval (0.05%), pyrites also occur within rare calcite veinlets as strongly oxidized, sub mm-sized crystals. Biotite occurs within more muddy sections of limestone as 2-3mm sized, platy crystals (0.02%).							
						MD	GY	CR			Py	0.01
						LT	GY	BX			Py	0.05
											Bi	0.02

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
124.62	127.42	2.80	LST	FG	Weak tremolite veins occur within interval. Light-medium grey, fine grained, massive to locally vein brecciated, trace oxidized, weakly fractured, weakly dolotomized limestone with locally observed sections of strongly abundant black, dolomite veinlets. Tremolite veins occur at: 129.61-129.84m, 125.08-125.10m and 125.29-125.37m. 129.61-129.84m - 3-5mm thick, light brown to dark green, moderately oxidized, fractured, massive to subhedral, tremolite-calcite veins. Finr grained, massive dark green tremolite±actinolite(?) occurs in the middle of the veins, followed by a 1-2mm thick oxide layer, variably containing trace oxidized subhedral pyrite. White 1-2mm thick, subhedral tremolite occurs on the margins of the veins. 125.08-125.10m - White-light brown, 3-4mmm sized, an-subhedral to massive, weakly pitted tremolite vein. 125.29-125.37m - 3-5mm thick, white, calcite-tremolite vein. Tremoite is white, euhedral and trace oxidized. Tremolite veins are 3-5mm thick and occur every 10-30cm from 129.61-125.37m. Ocidation occurs on surfaces of fractures as rusty orange-brown to trace dark purple, massive to patchy oxidation. Moderate vein brecciation occurs at 125.46-125.64m, 126.41-126.49m and 127.02-127.15m. Veining occurs primarily as locally strongly abundant black, fine grained, 1mm thick, discontinuous dolomite veinlets, and lesser as calcite vein breccia and 0.2-0.5cm sized calcite veins. 127.26-127.31m - 3cm thick, white calcite-tremolite vein. Tremolite occurs on the margins of the vein as white/fresh to light brown, weakly oxidized crystals. Calcite contains rare, black, sub mm-sized dolomite recrystalizations. Vein contains trace, oxidized, lesser fresh, 1mm sized pyrite disseminations and 3-5mm sized, dendritic manganese oxides leaching from cross-cutting							

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
124.62	127.42	2.80			calcite veinlet. This interval is directly above a pegmatite vein. Pyrite occurs within trace veins as blebs/disseminations with calcite and calcite-tremolite veins (0.01%). Tremolite occurs as veins (0.2%).							
						MD	GY	BX	DOL	2I	Tr	0.2
						LT	GY	MA	OXI	1I	Py	0.01
								FR				
127.42	127.65	0.23	PEG	CG	Clear to light green, coarse grained, subhedral quartz-pegmatite with 2-10mm thick zoned fresh-oxidized tremolite horizon. Pegmatite is composed of clear-smoky, coarse grained, subhedral quartz; a white to lesser light green (possibly due to micro-scale chloritization?), medium-coarse grained, anhedral to amorphous mineral (albite?); and less abundant, purple to clear, coarse grained, subhedral fluorite. Trace 1-4mm sized, fresh, intergrowths of pyrrhotite occur in the middle of the pegmatite proximal to quartz crystals. The pegmatite has a 2-10mm thick chilled margin into fresh to oxidized zoned tremolite horizon. The margins of the pegmatite is enclosed by zoned 1-2mm thick white, fine grained, massive, fresh tremolite and a 2-8mm thick strongly oxidized horizon at the most distal part of the pegmatite interval with trace oxidized sulphide (pyrite?) disseminations occurring within the oxide. 4cm thick pegmatite cuts throughout the above and below limestone at ~30 degrees TCA. Fluorite occurs as purple to clear, coarse grained crystals in the pegmatite (15%). Pyrrhotite occurs as mm-sized intergrowths associated with coarse grained quartz (2%). Pyrite occurs as trace oxidized disseminations within the oxidized horizon (0.5%).							
						LT	GN				Po	2
						--	CL	XL			Fl	15

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
											Py	0.5
127.65	132.07	4.42	LST	FG	Light-medium grey, fine grained, massive to locally vein brecciated, trace bleached, weakly dolotomized limestone with locally observed sections of strongly abundant black, dolomite veinlets. Bleached horizons occur at: 127.82-128.02m (weak), 128.20-128.35m (weak), 129.88-130.14m (moderate) and 130.72-131.06m (weak). Bleached horizons are 15-40cm thick and occur every 20-50cm throughout the interval. 5-10mm sized calcite-tremolite veins occur every ~20-90cm throughout the interval. 127.64-127.66m, 128.53-128.56m, 130.00-130.02m, 130.43-130.48m, 130.63-130.69m, 131.11-131.16m and 131.28-131.36m: 5-8mm sized, trace oxidized calcite-tremolite veins with trace-weak concentrations of rusted 1-2mm sized pyrite blebs. Veining occurs primarily as locally strongly abundant black, fine grained, 1mm thick, discontinuous dolomite veinlets, and lesser as calcite vein breccia and 0.2-0.5cm sized calcite veins. Pyrite occurs as blebs within calcite-tremolite veins (0.5%) and lesser as rare, fresh, 1-3mm sized disseminations throughout the interval (0.1%). Tremolite occurs as veins (1.5%).							
						MD	GY	CR	BLE	1I	Py	0.1
						LT	GY	BX	DOL	2I	Py	0.5
											Tr	1.5

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
132.07	135.97	3.90	LST	FG	Medium grey with slight green hue, fine grained, brecciated, highly fractured, weakly oxidized, weakly pitted, trace bleached limestone. Bleaching occurs very weakly throughout the entire interval. Pitted texture occurs along oxidized calcite veins and veinlets, most commonly as 1-2mm sized pits and very rarely as 8mm sized pits within calcite veins. Fractured surfaces all have a 1-3mm thick coating of rusty brown/orange to lesser dark purple oxide. Breccia clasts are 2-5mm sized, angular, moderately sorted limestone. No obvious sulphides, but abundant oxidation on fractured surfaces may suggest micro-scale sulphide presence?							
						MD	GN	FR	BLE	1I		
						MD	GY	BX	OXI	2I		

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
135.97	147.03	11.06	LST	FG	Light-medium grey, fine grained, brecciated, vein brecciated, weakly foliated, locally crackle brecciated variably muddy limestone. Strongly brecciated, 7-20cm sections of limestone occur every ~30-50cm. Clasts are 0.5-4cm sized, angular to sub-angluar, poorly sorted limestones. Vein breccia occurs as 10-15cm sections within limestone and occurs every few meters. Moderately-strongly calcite vein brecciated, 7-20cm sections of limestone occur every ~30-50cm. Clasts are 0.5-4cm sized, angular to sub-angluar, poorly sorted limestones. In trace, 5-10cm sections, occurring once every several meters, of darker grey, more muddy sections of limestone that contain weak amounts of individual, black, 2-3mm sized, platy biotite(?) crystals. 140.36-140.42m - Small, 3-5cm thick weak-moderately bleached section that contains trace, 1-2mm sized, platy sericite crystals on broken surface. 143.56-143.62m - Small, 3-5cm thick, weakly bleach section with moderately abundant 3-8mm sized, fresh, blebby pyrite and trace 1-2mm sized, subhedral arsenopyrite. 143.82-143.86 - section containing moderately-strongly abundant 1-3mm sized, fine grained, discontinuous pyrite stringers and weakly abundant 3-5mm sized, fresh pyrite blebs. Foliation is orientated at ~80 degrees TCA. Pyrite occurs as trace, 1-3mm, fresh, euhedral disseminations throughout the interval (0.1%), as blebs (0.01%). Biotite occurs as 1-3mm sized, platy, individual crystals in muddy sections of limestone (0.05%).							
						MD	GY	BX			Py	0.01
						LT	GY	FO			Py	0.1
								CR			Bi	0.05

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
147.03	156.34	9.31	LST	MG	Trace tremolite veins and pyrite±pyrrhotite bands within this interval. White to light grey, medium grained, massive to locally weakly vein brecciated, moderately veined marble with 10-80cm thick sections of actinolite bearing, medium grey, fine grained limestone. Tremolite veins occur at: 147.12-147.16m, 147.23-147.29m and 153.53-153.56m. 147.12-147.16m - 1cm thick, calcite-tremolite-pyrrhotite vein, Tremolite is white, euhedral coarse graied. Pyrrhotite occurs as evenly spaced, 3-5mm sized, fresh blebs within the vein. 147.23-147.29 - 4cm thick, calcite-tremolite-pyrite±scheelite(?) vein. Tremolite is white to bleached, fine grained. Pyrite occurs preferentially on the margins of the vein as 2-4mm sized, fresh blebs. pXRF on vein parallel fracture surface indicates 0.8% W, 12% Fe and 450ppm As. Lamping this surface with a UV light saw trace 1mm sized specks of light blue illuminated minerals on fracture surface - likely scheelite. 153.53-153.56m- 2-2.5cm thick white-light brown tremolite-calite vein. Tremolite is white to light brown and is the dominant mineral within the vein. The vein is irregularly shaped and continuous. Pyrtie±pyrrhotite bands occur at: 151.60-153.00m, 153.11-153.14m, 153.20-153.23m and 156.15-156.19m. 151.60-153.00m - 0.1-2cm thick ~drilling parallel massive, very fine grained pyrite-calcite±pyrrhotite vein. The vein is fractured along its middle for its entire length, which exposes a light-medium green to rusty orange fracture surface. pXRF measurements on the fracture surfaces provided an average value of 0.3%W. 153.11-153.14m and 153.20-153.23m - 1-2cm thick, massive, very fine grained calcite-pyrite±pyrrhotite veins. 156.15-156.19m - 2.5cm thick, massive pyrite-actinolite vein. Pyrite comprises 80% of the vein, with 0.5-1cm thick dark green to black, massive, very fine grained actinolite occurring in the							

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
147.03	156.34	9.31			middle of the vein. 147.90-148.20m - Two 2-3cm thick bands of calcite-quartz-pyrite. Quartz occurs as elongate, 1-2cm long crystal in the middle of the bands. Pyrite occurs as band parallel, 1-2mm sized, discontinuous stringers and as 2-3mm sized, fresh blebs. Actinolite bearing limestone occurs at: 148.61-149.09m, 151.25-151.94m and 155.54-156.04m. The actinolite occurs as moderately abundant individual, black, 1-3mm sized, acicular to half-radiating actinolite crystals within limestone. Veining occurs primarily as calcite veinlets and lesser as calcite vein brecciation and calcite veins - rare veins are weakly chloritized. This interval is directly above a pegmatite interval. Pyrite occurs as sub mm-sized dissemintations throughout the interval - more concentrated in the marble (0.1%), as blebs in veins (0.05%), as massive pyrite-rich bands (1.5%) and as stringers (0.01%). Pyrrhotite occurs as sub mm-sized dissemintations throughout the interval - more concentrated in the marble (0.1%) massive intergrowths in massive pyrite-rich bands (0.5%). Scheelite occurs very rarely on fracture surfaces (0.001%). Actinolite occurs as individual crystals within limestone (1%) and within pyrite-rich bands (0.1%).							
						MD	WH	MA			Py	0.1
						LT	GY	BX			Py	0.05
											Ac	1.1
											Py	1.5
											Po	0.1
											Po	0.5
											Sh	0.01

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
156.34	156.95	0.61	PEG	CG	Clear to light green, coarse grained, subhedral quartz-pegmatite with 2-10mm thick zoned fresh-oxidized tremolite horizon. Pegmatite is composed of clear-smoky, coarse grained, subhedral quartz; a white to lesser light green (possibly due to micro-scale chloritization?), medium-coarse grained, anhedral to amorphous mineral (albite?); calcite occurs as white-light green, medium grained, subhedral crystals; and less abundant, purple to clear, fine grained massive to locally observed banded, subhedral fluorite. Trace 1-4mm sized, fresh, intergrowths of pyrrhotite occur in the middle of the pegmatite proximal to quartz crystals. Locally observed, coarse grained, euhedral, lesser massive pyrite occurs within the pegmatite. Purple, planar, 3-5mm thick fluorite band is observed at the up-hole contact between the limestone and the pegmatite. Fluorite is more common in the pegmatite towards the upper contact. A dark green, seemingly secondary, mineral occurs abundantly near the lower contact and is associated with quartz and white-light green mineral (albite?). Pyrite occurs weakly within the pegmatite as 2-3mm sized, subhedral, fresh crystals and along the inner margin of the lower contact as 4-5mm sized, fresh blebs. Pyrrhotite occurs rarely within the pegmatite as fresh, massive intergrowths proximal to quartz crystals. 60cm thick pegmatite cuts throughout the above and below limestone at ~45 degrees TCA. The pegmatite is directly above a 10cm thick skarn horizon followed by a 20cm thick marble section - strongly indicative of contact metamorphism. Fluorite occurs as purple to clear, fine grained massive to banded crystals in the pegmatite (2%). Pyrrhotite occurs as mm-sized intergrowths associated with coarse grained quartz (0.5%).							

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
156.34	156.95	0.61			Pyrite occurs as trace oxidized disseminations within the oxidized horizon (0.5%).							
						LT	GN				Po	0.5
						--	CL	XL	CHL	1I	Fl	2
											Py	0.5
156.95	159.00	2.05	LST	FG	10cm skarn horizon within this interval. Medium-dark grey, massive, locally marbilized, moderately-strongly veined limestone with 10cm thick skarn horizon followed by a 20cm thick marble front at the top of the interval. Massive-pyrite-actinolite-calcite-pyrrhotite-tremolite skarn horizon is at 156.95-157.05m. The skarn horizon is light-brown to dark grey, medium grained and is composed of mainly massive, medium grained pyrite and fine grained, massive actinolite with lesser white calcite, massive pyrrhotite and subordinate white tremolite. The horizon is in sharp contact with a marble front. Marble front is at 157.05-157.24m. Marble is white, medium grained, massive and contains trace 1-3mm sized, white, subhedral tremolite crystals throughout the horizon. Veining occurs primarily as strongly-intensely abundant black, fine grained, sub mm to mm-sized, chaotic dolomite veinlets from 157.91-158.84m and lesser as calcite veinlets. Marbilization occurs sporadically from 158.00m and increases towards the end of the interval. Pyrite occurs within the skarn horizon as massive crystals (5%). Actinolite occurs within the skarn horizon as fine grained, massive crystals (3%). Pyrrhotite occurs within the skarn horizon as massive crystals (1%).							
						MD	GY	MA	MBL	1I	Py	5
						DK	GY				Ac	3
											Po	1

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
159.00	159.72	0.72	MBL	MG	White, medium grained, massive, weakly veined marble. 1-3mm sized, fresh, pyrite and pyrrhotite disseminations occurs throughout the marble. Veining occurs primarily as moderately abundant 1mm sized, discontinuous, black, dolomite veinlets and lesser as calcite veins with rare chloritization. Pyrite occurs as fresh, mm-sized disseminations throughout the interval (1.5%). Pyrrhotite occurs as fresh, mm-sized disseminations throughout the interval (1%).							
						MD	WH	MA			Py	1.5
											Po	1
159.72	169.45	9.73	LST	FG	Medium-dark grey, fine grained, moderately veined, massive to vein brecciated limestone with 20-30cm sections of actinolite bearing limestone. Actinolite-bearing limestone sections are 20-30cm thick and occur every ~0.7-1.5m throughout the interval. Actinolite occurs as moderately abundant individual, black, 1-3mm sized, acicular to half-radiating crystals. Strong calcite vein brecciation is observed from 166.76-168-19m. 165.30-165.35m - 2-3cm thick, discontinuous calcite-pyrite-pyrrhotite vein. Pyrite and pyrrhotite occur as weak-moderately abundant, fresh, sub-euhedral, 3-5mm sized crystals within calcite vein. Pyrite occurs as fresh, mm-sized disseminations throughout the interval (1%) and within calcite veins (0.05%). Pyrrhotite occurs as fresh, mm-sized disseminations throughout the interval (0.25%) and within calcite veins (0.05%).							
						MD	GY	BX			Py	1
						DK	GY				Py	0.05
											Po	0.25

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
											Po	0.05

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
169.45	183.89	14.44	LST	MG	White to light grey, medium grained, locally chloritized, massive, actinolite±tremolite bearing limestone with 1.20m section of dark grey, moderately veined, actinolite-biotite bearing muddy limestone. Actinolite occurs as moderately-strongly abundant individual, black, 1-5mm sized, acicular to half-radiating crystals. Tremolite occurs as trace abundant, individual, white, 1-3mm sized, subhedral acicular crystals. 178.18-179.40m - 0.1-1.2cm thick ~drilling parallel, blue-green, massive, strongly chloritized calcite-pyrite vein. Pyrite occurs as 3-5mm sized, fresh blebs. The vein is fractured along its middle for its entire length, which exposes a light-medium green to rusty orange fracture surface. Pyrite-calcite-dolomite-pyrrhotite bands occur at: 170.69-170.80m, 173.86-174.15m and 177.38-177.78m. The bands are 1-10cm thick, light-brown to dark grey, medium grained and is composed of mainly massive, medium grained pyrite and fine grained, calcite and dolomite with lesser massive pyrrhotite and subordinate white tremolite. 184.46-186.49m: 2-3cm thick, discontinuous calcite-pyrite-pyrrhotite vein. Pyrite and pyrrhotite occur as weak-moderately abundant, fresh, sub-euhedral, 3-5mm sized crystals within calcite vein. Muddy limestone interval is at 172.46-173.72m and contains moderately-strongly abundant individual, black, 1-5mm sized, acicular to half-radiating crystals and weak-moderate amounts of individual, black, 2-3mm sized, platy biotite(?) crystals. Pyrite occurs as fresh, mm-sized disseminations throughout the interval (1%), within calcite veins (0.05%) and in pyrite-calcite-dolomite-pyrrhotite bands (0.5%). Pyrrhotite occurs as fresh, mm-sized disseminations throughout the interval (0.25%), within calcite veins (0.05%) and in pyrite-calcite-dolomite-pyrrhotite bands (0.25%).							

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
169.45	183.89	14.44			Actinolite occurs throughout the interval as mm-sized, euhedral crystals (8%). Tremolite occurs intermittently throughout the interval as mm-sized, subhedral crystals (1%). Biotite occurs within the limestone section as mm-sized, platy crystals (0.5%).							
						MD	WH	MA			Py	1
						LT	GY				Py	0.05
											Py	0.5
											Po	0.25
											Po	0.05
											Po	0.25
											Ac	8
											Bi	0.5
183.89	185.44	1.55	LST	FG	Dark grey, fine grained, foliated, weakly veined limestone. 184.46-186.49m: 2-3cm thick, discontinuous calcite-pyrite-pyrrhotite vein. Pyrite and pyrrhotite occur as weak-moderately abundant, fresh, sub-euhedral, 3-5mm sized crystals within calcite vein. Veining occurs primarily as weakly abundant calcite veinlets. Foliation varies from 40-60 degrees TCA. Pyrite occurs as fresh, mm-sized disseminations throughout the interval (0.75%) and within calcite veins (0.1%). Pyrrhotite occurs as fresh, mm-sized disseminations throughout the interval (0.5%) and within calcite veins (0.1%).							
						DK	GY	FO			Py	0.75
											Po	0.5
											Po	0.1

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
185.44	196.35	10.91	LST	FG	Light-dark grey, fine-medium grained, trace veined, massive, locally marbilized, actinolite±tremolite bearing limestone with ~15cm thick sections of white, medium grained marble. Marble sections occur at: 192.55-192.66m and 192.96-193.14m. 188.45-188.64m - 5-8mm thick, low angle TCA, tan-brown, very fine grained pyrite-calcite band with trace 2-3mm sized, fresh pyrrhotite blebs along the band margin. 193.21-193.28m -2cm thick, white-light brown, dolomite-pyrite vein. Pyrite occurs as 2-3mm sized, vein parallel bands. Vein parallel fracture exposes a very weakly oxidzied surface with moderate amounts of 2-3mm sized subhedral pyrite. Veining occurs weakly as calcite veinlets and rare dolomite veinlets. Pyrite occurs trace-weakly throughout the interval as sub mm-sized to 2mm sized, subhedral, fresh disseminations (0.75%) and within calcite-pyrite veins (0.1%). Pyrrhotite occurs trace-weakly throughout the interval as sub mm-sized to 2mm sized, subhedral, fresh disseminations (0.5%) and within pyrite-calcite veins (0.05%). Actinolite occurs moderately throughout the interval, higher concentration from 185.44-193.00m, as individual, 1-5mm sized, black-dark grey, euhedral acicular, lesser half-radiating (4%). Tremolite occurs weakly throughout the interval as individual, 1-3mm sized, white, subhdral acicular crystals (1.5%).							
						MD	GY	BX			Py	0.1
						LT	GY	MA	MBL	1I	Py	0.75
						DK	GY				Po	0.5
											Po	0.05
											Ac	4
											Tr	1.5

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
196.35	200.50	4.15	MBL	MG	Two bleached horizons occur within this interval. White-light grey, medium grained, massive, tremolite-bearing marble with intermittened actinolite-bearing limestone. Bleached horizons occur at: 198.38-198.48m and 199.00-199.20m. Fractures at the center of both horizons shows the strongest orangebleaching with bleaching leaching into surrounding rock with decreasing intensity. 199.98m - hinge of angular contact between actinolite-bearing limestone and tremolite bearing marble. Sub mm-sized blebby pyrrhotite stringers occur very weakly throughout the interval every ~meter. Pyrite occurs trace-weakly throughout the interval as sub mm-sized to 2mm sized, subhedral, fresh disseminations (0.5%). Pyrrhotite occurs trace-weakly throughout the interval as sub mm-sized to 2mm sized, subhedral, fresh disseminations (0.75%) and within pyrrhotite stringers (0.05%). Actinolite occurs moderately throughout the interval as individual, 1-5mm sized, black-dark grey, euhedral acicular, lesser half-radiating (4%). Tremolite occurs weakly throughout the interval as individual, 1-3mm sized, white, subhdral acicular crystals (1.5%).							
						MD	WH	MA			Py	0.5
						LT	GY				Po	0.75
											Ac	4
											Tr	1.5
											Po	0.05

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
200.50	219.65	19.15	LST	MG	White-light grey, medium grained, massive, trace veined, weakly marbilized, actinolite bearing marble with ~1m sections of medium-dark grey, fine grained, massive to vein brecciated limestone. Higher concentration of actinolite and disseminated pyrrhotite than previous intervals in this lithology. Fine grained pyrrhotite-clacite bands occur at: 201.70-202.11m and 202.50-202.55m. Pyrrhotite-calcite bands are 2-8mm thick, medium brown to dark grey and fine grained. Pyrrhotite is massive with trace 2-4mm sized blebs occurring within the veins. Sub mm-sized blebby pyrrhotite stringers occur very weakly throughout the interval every several meter. Vein brecciations occurs at: 207.75-207.87m, 208.61-208.69m and 211.32-211.43m. Veining occurs primarily as calcite veinlets within the white-light grey limestone and as calcite vein brecciation within the medium-dark grey limestone. Pyrite occurs trace-weakly throughout the interval as sub mm-sized to 2mm sized, subhedral, fresh disseminations (0.5%). Pyrrhotite occurs trace-weakly throughout the interval as sub mm-sized to 2mm sized, subhedral, fresh disseminations (1%) and within pyrrhotite stringers (0.1%). Actinolite occurs moderately throughout the interval as individual, 1-5mm sized, black-dark grey, euhedral acicular, lesser half-radiating (8%).							
						MD	WH	MA			Py	0.5
						LT	GY	BX			Po	1
											Po	0.1
											Ac	8

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
219.65	223.23	3.58	MBL	MG	Light grey, medium grained, massive, trace veined, weakly dolotomized marble. 220.98-221.05m - 0.2-2cm thick, white dolomite-calcite-tremolite vein. Tremolite is white, radiating and occurs primarily on the margins of the vein. Rare-trace, 1-2mm sized pyrite blebs are observed within the vein 2-3mm sized calcite±pyrite±pyrrhotite veinlets occur every ~10-50cm throughout the interval. Veining occurs primarily as calcite±pyrite±pyrrhotite veinlets and locally observed strongly abundant, black 1-2mm sizedm fine grained veinlets at 209.18-209.45m. Pyrite occurs rare-trace throughout the interval as sub mm-sized, subhedral, fresh disseminations (0.01%) and within calcite±pyrite±pyrrhotite veinlets (0.01%). Pyrrhotite occurs rare-trace throughout the interval as sub mm-sized, subhedral, fresh disseminations (0.01%) and within calcite±pyrite±pyrrhotite veinlets (0.01%).							
						LT	GY					

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
223.23	238.71	15.48	LST	FG	Light-dark grey, fine-medium grained, trace veined, massive, locally pitted, trace marbilized, actinolite±tremolite bearing limestone with 20-30cm sections of dark grey fine grained limestone. 222.75-222.92m -1-3cm thick, white-light brown, dolomite-pyrite vein. Pyrite occurs as 2-3mm sized, vein parallel bands. Vein parallel fracture exposes a very weakly oxidzied surface with moderate amounts of 2-3mm sized subhedral pyrite. 1.5cm thick calcite vein crosscuts the dolomite-pyrite vein. 227.69-227.83 - 2-3cm thick calcite±pyrite, white to pink vein. Calcite is white to variably light pink. Pyrite is 5-10mm sized, fresh and blebby. 233.21-233.27m - 5mm thick calcite-pyrite-arsenopyrite vein. Pyrite is fresh, 2-3mm sized and euhedral. Arsenopyrite is 1-2mm sized, fresh, and euhedral. 236.09-236.18m - 2-5mm thick calcite-pyrite±arsenopyrite veinlets. Both pyrite and arsenopyrite are euhedral. 231-238.71m - 2-3mm thick, calcite-pyrite veinlets occur every ~50cm in this section. Pyrite occurs as blebs to lesser euhedral within the veinlets. 235.40m - broken surface shows trace, patchy, aqua-blue chloritiziation of limestone. Veining occurs weakly as calcite veinlets and rare dolomite veinlets. Pitted texture is locally observed from 226.09-226.49m within tremolite bearing limestone. Pyrite occurs trace-weakly throughout the interval as sub mm-sized to 2mm sized, subhedral, fresh disseminations (2%) and within calcite-pyrite veins (0.25%). Pyrrhotite occurs trace-weakly throughout the interval as sub mm-sized to 2mm sized, subhedral, fresh disseminations (1.5%). Arsenopyrite occurs within calcite-pyrite-arsenopyrite veinlets in the last 5m of the interval (0.05%). Actinolite occurs moderately throughout the interval as individual, 1-5mm sized, black-dark							

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
223.23	238.71	15.48			grey, euhedral acicular, lesser half-radiating (8%). Tremolite occurs weakly throughout the interval as individual, 1-3mm sized, white, subhdral acicular crystals (1.5%).							
						LT	GY	MA	MBL	1I	Py	2
						DK	GY				Py	0.25
											Ac	8
											Tr	1.5
											As	0.05
											Po	1.5
238.71	243.40	4.69	MBL	MG	Calcite-pyrite-arsenopyrite veins within this interval. Light grey to white, medium grained, massive, moderately veined, weakly dolotomized marble. 2-5mm thick calcite-pyrite-arsenopyrite veins occur between 240.43-240.84m every 1-15cm. Pyrite occurs more abundantly than arsenopyrite, but both mineral completely replace sections of the vein, as fresh, euhedral crystals. 241.74-241.77m - two parallel, sub mm-sized pyrrhotite stringers. Veining occurs primarily as black, fine grained, 1mm sized, dolomite veinlets; lesser as sparse coarse grained calcite veins. 1-2mm sized, white tremolite occurs in weak abundance from 241.95-243.40m. Pyrite occurs trace-weakly throughout the interval as sub mm-sized to 2mm sized, subhedral, fresh disseminations (1%) and within calcite-pyrite-arsenopyrite veins (0.5%). Pyrrhotite occurs trace-weakly throughout the interval as sub mm-sized to 2mm sized, subhedral, fresh disseminations (0.1%). Arsenopyrite occurs within calcite-pyrite-arsenopyrite veinlets in the last 5m of the interval (0.05%). Tremolite occurs weakly throughout the interval as individual, 1-3mm sized, white, subhdral acicular crystals (2%).							

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
						MD	WH				Py	0.5
						LT	GY	MA	DOL	2I	Py	1
											Po	0.1
											As	0.05
											Tr	2
243.40	249.94	6.54	LST	FG	Medium-dark grey, fine grained, moderately veined, massive, tremolite bearing limestone. Tremolite occurs as 1-2mm sized, white, subhedral radiating crystals throughout the interval. 244.00-244.21m - 2-4mm thick, tan-dark green, fine grained, pyrite-calcite-pyrrhotite band. Pyrite occurs as fine grained, massive crystals wihtin the band as directly adjacent to the outside margin of the band as moderately abundant 3-5mm sized, fresh, blebs. Pyrrhotite occurs as weakly abundant 2-3mm sized, fresh, replacements of the band. 247.64m and 249.94m - two fractured surfaces that expose weak-moderate amounts of 2-3mm sized subhedral pyrite crystals occurring in clusters. Veining occurs primarily as moderately abundant calcite veinlets. Pyrite occurs trace-weakly throughout the interval as sub mm-sized to 2mm sized, subhedral, fresh disseminations (2%) and within calcite-pyrite veins (0.5%). Pyrrhotite occurs trace-weakly throughout the interval as sub mm-sized to 2mm sized, subhedral, fresh disseminations (1.5%) and within pyrite-calcite-pyrrhotite band (0.05%). Tremolite occurs weakly throughout the interval as individual, 1-3mm sized, white, subhdral acicular crystals (5%).							
						MD	GY	MA			Py	2
						DK	GY				Py	0.5
											Tr	5
											Po	1.5
											Po	0.05

RPP-19-003

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	W842468	☐	R19-D07	Core	ML-2	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W842498	☐	R19-D08	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	R608092	☐	R19-DR1	Core	ML-3	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W842479	☐	R19-D07	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W842448	☐	R19-D07	Core	ML-1	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W842432	☐	R19-D06	Core	ML-1	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W842415	☐	R19-D06	Core	ML-5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W842406	☐	R19-D06	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W842387	☐	R19-D05	Core	ML-1	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	R608099	☐	R19-DR1	Core	ML-4	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	R608096	☐	R19-DR1	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W842488	☐	R19-D08	Core	ML-1	☐	☐	☐
3.05	6.10	3.05	OVB	0.18	6	W842378	☐	R19-D05	Core		☐	☐	☐
6.10	7.70	1.60	OVB, LST	1.30	81	W842379	☐	R19-D05	Core		☐	☐	☐
7.70	9.78	2.08	MBL	1.68	81	W842380	☐	R19-D05	Core		☐	☐	☐
9.78	12.54	2.76	LST	2.68	97	W842381	☐	R19-D05	Core		☐	☐	☐
12.54	15.24	2.70	LST	2.70	100	W842382	☐	R19-D05	Core		☐	☐	☐
15.24	18.29	3.05	LST	3.03	99	W842383	☐	R19-D05	Core		☐	☐	☐
15.24	18.29	3.05	LST	3.03	99	W842384	☐	R19-D05	Core		☐	☑	☐
18.29	21.34	3.05	LST	2.81	92	W842385	☐	R19-D05	Core		☐	☐	☐
21.34	24.38	3.04	LST	2.98	98	W842386	☐	R19-D05	Core		☐	☐	☐
24.38	26.18	1.80	MBL	1.62	90	W842388	☐	R19-D05	Core		☐	☐	☐
26.18	28.00	1.82	MBL	1.25	69	W842389	☐	R19-D05	Core		☐	☐	☐
28.00	30.13	2.13	SKN	1.63	77	W842390	☐	R19-D05	Core		☐	☐	☐
30.13	31.71	1.58	MBL	1.55	98	W842391	☐	R19-D05	Core		☐	☐	☐
31.71	33.53	1.82	MBL	1.82	100	W842392	☐	R19-D05	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	36.06	2.53	MBL	2.23	88	W842393	☐	R19-D05	Core		☐	☐	☐
36.06	39.00	2.94	LST	2.94	100	W842394	☐	R19-D05	Core		☐	☐	☐
39.00	41.00	2.00	LST	1.90	95	W842395	☐	R19-D05	Core		☐	☐	☐
41.00	42.67	1.67	MBL	1.58	95	W842396	☐	R19-D05	Core		☐	☐	☐
42.67	44.18	1.51	MBL	1.51	100	W842397	☐	R19-D05	Core		☐	☐	☐
44.18	45.72	1.54	MBL	1.07	69	W842398	☐	R19-D05	Core		☐	☐	☐
45.72	47.77	2.05	MBL	1.67	81	W842399	☐	R19-D05	Core		☐	☐	☐
47.77	48.66	0.89	MBL	0.78	88	W842400	☐	R19-D05	Core		☐	☐	☐
48.66	50.56	1.90	LST	1.80	95	W842401	☐	R19-D06	Core		☐	☐	☐
50.48	50.56	0.08	LST	0.08	100	R500827	☐	R19-DR1	Core		☐	☐	☐
50.56	51.49	0.93	LST	0.88	95	W842402	☐	R19-D06	Core		☐	☐	☐
51.49	52.24	0.75	LST	0.73	97	W842403	☐	R19-D06	Core		☐	☐	☐
52.24	55.09	2.85	LST	2.70	95	W842404	☐	R19-D06	Core		☐	☐	☐
55.09	56.24	1.15	LST	1.10	96	W842405	☐	R19-D06	Core		☐	☐	☐
56.24	58.14	1.90	LST	1.55	82	W842407	☐	R19-D06	Core		☐	☐	☐
58.14	58.25	0.11	LST	0.11	100	R608081	☐	R19-DR1	Core		☐	☐	☐
58.14	59.18	1.04	LST	0.93	89	W842408	☐	R19-D06	Core		☐	☐	☐
58.25	58.30	0.05	LST	0.05	100	R608082	☐	R19-DR1	Core		☐	☐	☐
58.30	58.72	0.42	LST	0.42	100	R608083	☐	R19-DR1	Core		☐	☐	☐
58.72	58.77	0.05	LST	0.05	100	R608084	☐	R19-DR1	Core		☐	☐	☐
58.77	59.02	0.25	LST	0.25	100	R608085	☐	R19-DR1	Core		☐	☐	☐
59.02	59.07	0.05	LST	0.05	100	R608086	☐	R19-DR1	Core		☐	☐	☐
59.07	59.14	0.07	SKN	0.07	100	R608087	☐	R19-DR1	Core		☐	☐	☐
59.14	59.18	0.04	LST	0.04	100	R608088	☐	R19-DR1	Core		☐	☐	☐
59.18	61.45	2.27	LST	2.26	100	W842409	☐	R19-D06	Core		☐	☐	☐
61.45	62.21	0.76	LST	0.61	80	W842410	☐	R19-D06	Core		☐	☐	☐
61.45	62.21	0.76	LST	0.61	80	W842411	☐	R19-D06	Core		☐	☐	✔
62.21	64.01	1.80	LST	1.44	80	W842412	☐	R19-D06	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
64.01	67.06	3.05	LST	3.00	98	W842413	☐	R19-D06	Core		☐	☐	☐
67.06	70.10	3.04	LST	2.86	94	W842414	☐	R19-D06	Core		☐	☐	☐
70.10	72.33	2.23	LST	2.23	100	W842416	☐	R19-D06	Core		☐	☐	☐
72.33	73.49	1.16	LST	1.16	100	W842417	☐	R19-D06	Core		☐	☐	☐
73.49	74.03	0.54	LST	0.54	100	R608089	☐	R19-DR1	Core		☐	☐	☐
73.49	74.08	0.59	LST	0.50	85	W842418	☐	R19-D06	Core		☐	☐	☐
74.03	74.08	0.05	SKN	0.05	100	R608090	☐	R19-DR1	Core		☐	☐	☐
74.08	75.17	1.09	SKN	0.66	61	W842419	☐	R19-D06	Core		☐	☐	☐
75.17	75.22	0.05	SKN	0.05	100	R500824	☐	R19-DR1	Core		☐	☐	☐
75.17	76.12	0.95	SKN	0.93	98	W842420	☐	R19-D06	Core		☐	☐	☐
75.22	75.33	0.11	SKN	0.11	100	R608091	☐	R19-DR1	Core		☐	☐	☐
75.33	75.69	0.36	SKN	0.36	100	R608093	☐	R19-DR1	Core		☐	☐	☐
75.69	75.99	0.30	SKN	0.30	100	R608094	☐	R19-DR1	Core		☐	☐	☐
75.99	76.12	0.13	SKN	0.13	100	R608095	☐	R19-DR1	Core		☐	☐	☐
76.12	76.80	0.68	SKN	0.68	100	W842421	☐	R19-D06	Core		☐	☐	☐
76.80	76.96	0.16	LST	0.16	100	R500825	☐	R19-DR1	Core		☐	☐	☐
76.80	77.42	0.62	LST	0.58	94	W842422	☐	R19-D06	Core		☐	☐	☐
76.96	77.42	0.46	LST	0.46	100	R500826	☐	R19-DR1	Core		☐	☐	☐
77.42	79.50	2.08	LST	2.08	100	W842423	☐	R19-D06	Core		☐	☐	☐
79.50	79.64	0.14	LST	0.14	100	R608097	☐	R19-DR1	Core		☐	☐	☐
79.50	81.37	1.87	LST	1.35	72	W842424	☐	R19-D06	Core		☐	☐	☐
79.64	79.77	0.13	LST	0.13	100	R608098	☐	R19-DR1	Core		☐	☐	☐
79.77	81.37	1.60	SKN	0.60	38	R608100	☐	R19-DR1	Core		☐	☐	☐
81.37	83.12	1.75	LST	1.71	98	W842425	☐	R19-D06	Core		☐	☐	☐
83.12	85.34	2.22	LST	2.18	98	W842426	☐	R19-D06	Core		☐	☐	☐
85.34	88.39	3.05	LST	2.67	88	W842427	☐	R19-D06	Core		☐	☐	☐
88.39	91.44	3.05	LST	2.92	96	W842428	☐	R19-D06	Core		☐	☐	☐
88.39	91.44	3.05	LST	2.92	96	W842429	☐	R19-D06	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
91.44	94.49	3.05	LST	2.95	97	W842430	☐	R19-D06	Core		☐	☐	☐
94.49	97.54	3.05	LST	3.05	100	W842431	☐	R19-D06	Core		☐	☐	☐
97.54	99.14	1.60	MBL	1.60	100	W842433	☐	R19-D06	Core		☐	☐	☐
99.14	100.58	1.44	MBL	1.44	100	W842434	☐	R19-D06	Core		☐	☐	☐
100.58	103.63	3.05	LST	3.04	100	W842435	☐	R19-D06	Core		☐	☐	☐
103.63	105.38	1.75	LST	1.73	99	W842436	☐	R19-D06	Core		☐	☐	☐
105.38	107.00	1.62	LST	1.57	97	W842437	☐	R19-D06	Core		☐	☐	☐
107.00	109.73	2.73	LST	2.70	99	W842438	☐	R19-D06	Core		☐	☐	☐
109.73	112.78	3.05	LST	2.94	96	W842439	☐	R19-D06	Core		☐	☐	☐
112.78	115.82	3.04	LST	3.04	100	W842440	☐	R19-D06	Core		☐	☐	☐
115.82	117.79	1.97	LST	1.92	97	W842441	☐	R19-D07	Core		☐	☐	☐
117.79	118.87	1.08	MBL	0.76	70	W842442	☐	R19-D07	Core		☐	☐	☐
118.87	121.92	3.05	MBL	2.80	92	W842443	☐	R19-D07	Core		☐	☐	☐
118.87	121.92	3.05	MBL	2.80	92	W842444	☐	R19-D07	Core		☐	☑	☐
121.92	124.51	2.59	LST	2.56	99	W842445	☐	R19-D07	Core		☐	☐	☐
124.51	127.12	2.61	LST	2.50	96	W842446	☐	R19-D07	Core		☐	☐	☐
127.12	128.02	0.90	LST	0.90	100	W842447	☐	R19-D07	Core		☐	☐	☐
128.02	130.26	2.24	LST	2.21	99	W842449	☐	R19-D07	Core		☐	☐	☐
130.26	132.08	1.82	LST	1.71	94	W842450	☐	R19-D07	Core		☐	☐	☐
132.08	134.11	2.03	LST	1.84	91	W842451	☐	R19-D07	Core		☐	☐	☐
134.11	136.18	2.07	LST	1.86	90	W842452	☐	R19-D07	Core		☐	☐	☐
136.18	138.33	2.15	LST	1.71	80	W842453	☐	R19-D07	Core		☐	☐	☐
138.33	141.00	2.67	LST	2.03	76	W842454	☐	R19-D07	Core		☐	☐	☐
141.00	144.00	3.00	LST	2.69	90	W842455	☐	R19-D07	Core		☐	☐	☐
144.00	147.00	3.00	LST	3.00	100	W842456	☐	R19-D07	Core		☐	☐	☐
147.00	148.43	1.43	LST	1.43	100	W842457	☐	R19-D07	Core		☐	☐	☐
148.43	151.43	3.00	LST	2.91	97	W842458	☐	R19-D07	Core		☐	☐	☐
151.43	153.14	1.71	LST	1.64	96	W842459	☐	R19-D07	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
153.14	156.07	2.93	LST	2.93	100	W842460	☐	R19-D07	Core		☐	☐	☐
156.07	157.13	1.06	LST	1.01	95	W842461	☐	R19-D07	Core		☐	☐	☐
156.07	157.13	1.06	LST	1.01	95	W842462	☐	R19-D07	Core		☐	☐	☑
157.13	158.50	1.37	LST	1.37	100	W842463	☐	R19-D07	Core		☐	☐	☐
158.50	161.54	3.04	LST	2.94	97	W842464	☐	R19-D07	Core		☐	☐	☐
161.54	164.59	3.05	LST	3.02	99	W842465	☐	R19-D07	Core		☐	☐	☐
164.59	167.64	3.05	LST	3.05	100	W842466	☐	R19-D07	Core		☐	☐	☐
167.64	170.69	3.05	LST	3.00	98	W842467	☐	R19-D07	Core		☐	☐	☐
170.69	173.74	3.05	LST	3.01	99	W842469	☐	R19-D07	Core		☐	☐	☐
173.74	176.78	3.04	LST	3.04	100	W842470	☐	R19-D07	Core		☐	☐	☐
176.78	179.83	3.05	LST	3.05	100	W842471	☐	R19-D07	Core		☐	☐	☐
179.83	182.88	3.05	LST	3.05	100	W842472	☐	R19-D07	Core		☐	☐	☐
182.88	185.93	3.05	LST	3.05	100	W842473	☐	R19-D07	Core		☐	☐	☐
185.93	188.98	3.05	LST	3.05	100	W842474	☐	R19-D07	Core		☐	☐	☐
188.98	192.02	3.04	LST	3.03	100	W842475	☐	R19-D07	Core		☐	☐	☐
192.02	195.07	3.05	LST	3.03	99	W842476	☐	R19-D07	Core		☐	☐	☐
195.07	198.12	3.05	LST	3.02	99	W842477	☐	R19-D07	Core		☐	☐	☐
198.12	201.17	3.05	LST	3.05	100	W842478	☐	R19-D07	Core		☐	☐	☐
201.17	204.22	3.05	LST	3.00	98	W842480	☐	R19-D07	Core		☐	☐	☐
204.22	207.26	3.04	LST	3.04	100	W842481	☐	R19-D08	Core		☐	☐	☐
207.26	210.31	3.05	LST	3.04	100	W842482	☐	R19-D08	Core		☐	☐	☐
207.26	210.31	3.05	LST	3.04	100	W842483	☐	R19-D08	Core		☐	☑	☐
210.31	213.36	3.05	LST	2.98	98	W842484	☐	R19-D08	Core		☐	☐	☐
213.36	216.41	3.05	LST	3.05	100	W842485	☐	R19-D08	Core		☐	☐	☐
216.41	219.46	3.05	LST	2.94	96	W842486	☐	R19-D08	Core		☐	☐	☐
219.46	222.50	3.04	LST	3.02	99	W842487	☐	R19-D08	Core		☐	☐	☐
222.50	225.55	3.05	LST	3.05	100	W842489	☐	R19-D08	Core		☐	☐	☐
225.55	228.60	3.05	LST	2.97	97	W842490	☐	R19-D08	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
228.60	231.65	3.05	LST	3.04	100	W842491	☐	R19-D08	Core		☐	☐	☐
231.65	234.70	3.05	LST	3.03	99	W842492	☐	R19-D08	Core		☐	☐	☐
234.70	237.74	3.04	LST	3.04	100	W842493	☐	R19-D08	Core		☐	☐	☐
237.74	240.79	3.05	LST	3.00	98	W842494	☐	R19-D08	Core		☐	☐	☐
240.79	243.84	3.05	LST	2.87	94	W842495	☐	R19-D08	Core		☐	☐	☐
243.84	246.89	3.05	LST	3.05	100	W842496	☐	R19-D08	Core		☐	☐	☐
246.89	249.94	3.05	LST	3.00	98	W842497	☐	R19-D08	Core		☐	☐	☐

Sample Results

Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
R19-DR1	R608099	0.00	0.00	1.21	25	12250	29	330.0	97	287.00	☐	☐	☐	☑ ML-4	Resample. Standard ML-4
R19-D06	W842432	0.00	0.00	0.36	3	823	58	125.0	74	20.20	☐	☐	☐	☑ ML-1	
R19-D06	W842415	0.00	0.00	2.49	11	4290	47	212.0	91	1640.00	☐	☐	☐	☑ ML-5	
R19-D07	W842468	0.00	0.00	0.81	8	3520	32	173.0	109	32.40	☐	☐	☐	☑ ML-2	
R19-D08	W842488	0.00	0.00	0.36	2	841	55	129.0	70	23.20	☐	☐	☐	☑ ML-1	
R19-D07	W842448	0.00	0.00	0.34	3	839	52	128.0	75	20.20	☐	☐	☐	☑ ML-1	
R19-DR1	R608096	0.00	0.00	0.01	0	22	1	5.0	0	0.10	☐	☐	☑	☐	Resample - Blank
R19-D05	W842387	0.00	0.00	0.34	3	791	52	123.0	70	18.90	☐	☐	☐	☑ ML-1	
R19-D08	W842498	0.00	0.00	0.01	0	2	1	15.0	0	0.10	☐	☐	☑	☐	
R19-D06	W842406	0.00	0.00	0.01	0	3	1	17.0	0	0.10	☐	☐	☑	☐	
R19-DR1	R608092	0.00	0.00	1.73	13	6500	29	217.0	111	24.90	☐	☐	☐	☑ ML-3	Resample - Standard ML-3
		0.00	3.05								☐	☐	☐	☐	OVB
R19-D07	W842479	0.00	0.00	0.01	0	4	2	16.0	0	0.20	☐	☐	☑	☐	
R19-D05	W842378	3.05	6.10	0.01	0	4	13	53.0	6	2.90	☐	☐	☐	☐	



Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
R19-D05	W842379	6.10	7.70	0.03	1	8	60	48.0	2	1.00	☐	☐	☐	☐	
R19-D05	W842380	7.70	9.78	0.01	0	8	5	55.0	5	0.80	☐	☐	☐	☐	
R19-D05	W842381	9.78	12.54	0.09	0	12	17	85.0	7	1.20	☐	☐	☐	☐	
R19-D05	W842382	12.54	15.24	0.01	0	2	2	26.0	0	0.60	☐	☐	☐	☐	
R19-D05	W842383	15.24	18.29	0.01	0	4	4	86.0	1	0.80	☐	☐	☐	☐	
R19-D05	W842384	15.24	18.29	0.01	0	4	4	75.0	1	0.80	☑	☐	☐	☐	
R19-D05	W842385	18.29	21.34	0.01	0	7	8	73.0	2	0.50	☐	☐	☐	☐	
R19-D05	W842386	21.34	24.38	0.01	0	4	4	32.0	1	1.00	☐	☐	☐	☐	
R19-D05	W842388	24.38	26.18	0.01	0	9	8	109.0	1	1.60	☐	☐	☐	☐	
R19-D05	W842389	26.18	28.00	0.01	0	10	12	657.0	1	1.50	☐	☐	☐	☐	
R19-D05	W842390	28.00	30.13	0.01	0	21	16	1040.0	3	1.20	☐	☐	☐	☐	
R19-D05	W842391	30.13	31.71	0.01	0	7	23	473.0	3	0.90	☐	☐	☐	☐	
R19-D05	W842392	31.71	33.53	0.01	0	3	8	191.0	1	0.80	☐	☐	☐	☐	
R19-D05	W842393	33.53	36.06	0.01	0	7	41	295.0	4	1.60	☐	☐	☐	☐	
R19-D05	W842394	36.06	39.00	0.01	1	10	95	298.0	19	2.90	☐	☐	☐	☐	

Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
R19-D05	W842395	39.00	41.00	0.01	1	20	64	795.0	2	1.20	☐	☐	☐	☐	
R19-D05	W842396	41.00	42.67	0.01	1	60	66	508.0	1	1.90	☐	☐	☐	☐	
R19-D05	W842397	42.67	44.18	0.01	0	16	29	409.0	0	3.00	☐	☐	☐	☐	
R19-D05	W842398	44.18	45.72	0.01	1	19	94	630.0	1	7.20	☐	☐	☐	☐	
R19-D05	W842399	45.72	47.77	0.01	0	10	30	385.0	0	1.80	☐	☐	☐	☐	
R19-D05	W842400	47.77	48.66	0.01	0	13	73	395.0	4	2.40	☐	☐	☐	☐	
R19-D06	W842401	48.66	50.56	0.10	39	340	2240	209.0	200	1.90	☐	☐	☐	☐	
R19-DR1	R500827	50.48	50.56	2.35	520	1745	21100	244.0	231	8.00	☐	☐	☐	☐	Resample - marked as chip a whole interval was not resampled. Actually quartered. -AC
R19-D06	W842402	50.56	51.49	0.01	0	4	5	9.0	2	0.40	☐	☐	☐	☐	
R19-D06	W842403	51.49	52.24	0.09	14	678	691	80.0	122	2.90	☐	☐	☐	☐	
R19-D06	W842404	52.24	55.09	0.01	0	12	5	38.0	1	3.60	☐	☐	☐	☐	
R19-D06	W842405	55.09	56.24	0.01	0	28	12	145.0	1	12.00	☐	☐	☐	☐	
R19-D06	W842407	56.24	58.14	0.01	0	10	5	102.0	0	5.10	☐	☐	☐	☐	


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Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
R19-D06	W842408	58.14	59.18	0.55	0	288	13	50.0	28	3.50	☐	☐	☐	☐	End of sample changed fron 59.07 to 59.18 based on re-measuring when re-samplin Marked as chip to avoid overlap with resample. Actu sawn. -AC
R19-DR1	R608081	58.14	58.25	0.34	2	41	254	172.0	11	4.20	☐	☐	☐	☐	Resample
R19-DR1	R608082	58.25	58.30	1.04	8	55	957	30.0	6	7.90	☐	☐	☐	☐	Resample
R19-DR1	R608083	58.30	58.72	0.01	0	25	3	25.0	1	3.20	☐	☐	☐	☐	Resample
R19-DR1	R608084	58.72	58.77	0.06	0	250	27	30.0	1	3.30	☐	☐	☐	☐	Resample
R19-DR1	R608085	58.77	59.02	0.02	0	16	1	13.0	1	4.20	☐	☐	☐	☐	Resample
R19-DR1	R608086	59.02	59.07	5.06	1	277	38	16.0	12	8.40	☐	☐	☐	☐	Resample
R19-DR1	R608087	59.07	59.14	7.08	9	857	242	162.0	109	6.00	☐	☐	☐	☐	Resample
R19-DR1	R608088	59.14	59.18	12.00	29	21200	231	2630.0	3080	21.70	☐	☐	☐	☐	Resample
R19-D06	W842409	59.18	61.45	0.11	0	34	7	63.0	8	2.40	☐	☐	☐	☐	Start of sample changed fro 59.07 to 59.18 based on re-measuring when resampling
R19-D06	W842410	61.45	62.21	0.10	0	58	14	159.0	8	1.50	☐	☐	☐	☐	
R19-D06	W842411	61.45	62.21	0.04	0	57	15	154.0	8	1.50	☐	☑	☐	☐	

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Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
R19-D06	W842412	62.21	64.01	0.01	0	11	2	134.0	0	1.70	☐	☐	☐	☐	
R19-D06	W842413	64.01	67.06	0.01	0	113	5	27.0	9	1.70	☐	☐	☐	☐	
R19-D06	W842414	67.06	70.10	0.01	0	10	3	78.0	0	3.30	☐	☐	☐	☐	
R19-D06	W842416	70.10	72.33	0.01	0	19	2	18.0	0	1.30	☐	☐	☐	☐	
R19-D06	W842417	72.33	73.49	0.01	0	72	3	16.0	1	1.90	☐	☐	☐	☐	
R19-DR1	R608089	73.49	74.03	0.21	1	313	3	78.0	6	2.90	☐	☐	☐	☐	Resample
R19-D06	W842418	73.49	74.08	3.33	2	7700	38	295.0	115	2.80	☐	☐	☐	☐	Marked as chip to avoid overlap with resample. Actu sawn -AC
R19-DR1	R608090	74.03	74.08	173.00	61	10001	417	2570.0	501	2.90	☐	☐	☐	☐	Resample
R19-D06	W842419	74.08	75.17	0.01	0	86	6	49.0	1	2.40	☐	☐	☐	☐	
R19-DR1	R500824	75.17	75.22	0.01	0	72	2	31.0	1	1.60	☐	☐	☐	☐	Resample
R19-D06	W842420	75.17	76.12	0.16	1	2000	12	136.0	22	2.90	☐	☐	☐	☐	Marked as chip to avoid overlap with resample. Actu sawn -AC
R19-DR1	R608091	75.22	75.33	0.11	0	298	2	32.0	3	1.70	☐	☐	☐	☐	Resample
R19-DR1	R608093	75.33	75.69	0.54	0	1180	9	55.0	16	2.70	☐	☐	☐	☐	Resample
R19-DR1	R608094	75.69	75.99	1.38	1	4310	6	303.0	46	4.80	☐	☐	☐	☐	Resample

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Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
R19-DR1	R608095	75.99	76.12	0.11	0	559	2	49.0	7	2.10	☐	☐	☐	☐	Resample
R19-D06	W842421	76.12	76.80	0.02	0	157	1	9.0	1	3.00	☐	☐	☐	☐	
R19-D06	W842422	76.80	77.42	0.19	1	1285	3	54.0	21	1.70	☐	☐	☐	☐	Marked as chip to avoid overlap with resample. Actu sawn -AC
R19-DR1	R500825	76.80	76.96	0.24	1	3680	7	160.0	58	3.60	☐	☐	☐	☐	Resample
R19-DR1	R500826	76.96	77.42	0.10	0	344	3	18.0	6	1.60	☐	☐	☐	☐	Resample
R19-D06	W842423	77.42	79.50	0.01	0	233	2	35.0	11	2.20	☐	☐	☐	☐	
R19-D06	W842424	79.50	81.37	0.27	1	773	18	1440.0	32	2.80	☐	☐	☐	☐	Marked as chip to avoid overlap with resample. Actu sawn -AC
R19-DR1	R608097	79.50	79.64	0.01	0	63	2	146.0	1	3.80	☐	☐	☐	☐	Resample
R19-DR1	R608098	79.64	79.77	0.53	1	1445	40	2520.0	67	6.30	☐	☐	☐	☐	Resample
R19-DR1	R608100	79.77	81.37	0.01	0	124	3	843.0	1	1.60	☐	☐	☐	☐	Resample
R19-D06	W842425	81.37	83.12	0.01	0	7	1	20.0	0	0.90	☐	☐	☐	☐	
R19-D06	W842426	83.12	85.34	0.03	0	26	3	163.0	1	1.30	☐	☐	☐	☐	
R19-D06	W842427	85.34	88.39	0.01	0	12	2	148.0	1	1.40	☐	☐	☐	☐	
R19-D06	W842428	88.39	91.44	0.01	0	4	1	49.0	0	1.80	☐	☐	☐	☐	

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Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
R19-D06	W842429	88.39	91.44	0.01	0	5	1	62.0	0	1.70	☑	☐	☐	☐	
R19-D06	W842430	91.44	94.49	0.01	0	3	1	45.0	0	2.00	☐	☐	☐	☐	
R19-D06	W842431	94.49	97.54	0.01	0	5	1	57.0	0	1.50	☐	☐	☐	☐	
R19-D06	W842433	97.54	99.14	0.01	0	3	2	31.0	1	2.50	☐	☐	☐	☐	
R19-D06	W842434	99.14	100.58	0.01	0	5	1	160.0	1	4.30	☐	☐	☐	☐	
R19-D06	W842435	100.58	103.63	0.01	0	3	3	14.0	1	2.80	☐	☐	☐	☐	
R19-D06	W842436	103.63	105.38	0.01	0	18	6	2490.0	7	11.10	☐	☐	☐	☐	
R19-D06	W842437	105.38	107.00	0.01	0	7	6	28.0	1	3.60	☐	☐	☐	☐	
R19-D06	W842438	107.00	109.73	0.01	0	3	4	65.0	1	1.30	☐	☐	☐	☐	
R19-D06	W842439	109.73	112.78	0.01	0	3	1	16.0	0	1.70	☐	☐	☐	☐	
R19-D06	W842440	112.78	115.82	0.01	0	2	1	9.0	0	1.10	☐	☐	☐	☐	
R19-D07	W842441	115.82	117.79	0.02	0	2	1	53.0	0	1.10	☐	☐	☐	☐	
R19-D07	W842442	117.79	118.87	0.01	0	21	9	748.0	1	11.00	☐	☐	☐	☐	
R19-D07	W842443	118.87	121.92	0.01	0	3	1	51.0	0	1.30	☐	☐	☐	☐	
R19-D07	W842444	118.87	121.92	0.02	0	4	1	53.0	0	1.40	☑	☐	☐	☐	1/4 duplicate

Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
R19-D07	W842445	121.92	124.51	0.01	0	3	1	13.0	0	1.20	☐	☐	☐	☐	
R19-D07	W842446	124.51	127.12	0.01	0	24	1	88.0	1	133.00	☐	☐	☐	☐	
R19-D07	W842447	127.12	128.02	0.01	0	22	1	54.0	1	45.60	☐	☐	☐	☐	
R19-D07	W842449	128.02	130.26	0.01	0	4	0	62.0	0	3.00	☐	☐	☐	☐	
R19-D07	W842450	130.26	132.08	0.01	0	4	1	40.0	0	2.70	☐	☐	☐	☐	
R19-D07	W842451	132.08	134.11	0.01	0	3	1	906.0	0	2.10	☐	☐	☐	☐	
R19-D07	W842452	134.11	136.18	0.01	0	2	1	546.0	0	1.30	☐	☐	☐	☐	
R19-D07	W842453	136.18	138.33	0.01	0	2	1	80.0	0	0.60	☐	☐	☐	☐	
R19-D07	W842454	138.33	141.00	0.01	0	3	1	56.0	1	4.70	☐	☐	☐	☐	
R19-D07	W842455	141.00	144.00	0.01	0	18	1	33.0	6	72.00	☐	☐	☐	☐	
R19-D07	W842456	144.00	147.00	0.01	0	3	1	8.0	1	1.40	☐	☐	☐	☐	
R19-D07	W842457	147.00	148.43	0.01	0	15	2	50.0	9	59.30	☐	☐	☐	☐	
R19-D07	W842458	148.43	151.43	0.01	0	3	1	10.0	2	2.10	☐	☐	☐	☐	
R19-D07	W842459	151.43	153.14	0.01	1	143	80	1180.0	3	580.00	☐	☐	☐	☐	
R19-D07	W842460	153.14	156.07	0.01	0	9	1	21.0	3	3.00	☐	☐	☐	☐	

Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
R19-D07	W842461	156.07	157.13	0.01	0	79	8	111.0	13	860.00	☐	☐	☐	☐	
R19-D07	W842462	156.07	157.13	0.01	0	92	7	111.0	12	880.00	☐	☑	☐	☐	
R19-D07	W842463	157.13	158.50	0.01	0	3	1	7.0	1	4.30	☐	☐	☐	☐	
R19-D07	W842464	158.50	161.54	0.01	0	4	2	9.0	1	2.10	☐	☐	☐	☐	
R19-D07	W842465	161.54	164.59	0.01	0	5	1	7.0	1	1.30	☐	☐	☐	☐	
R19-D07	W842466	164.59	167.64	0.01	0	5	1	9.0	1	1.20	☐	☐	☐	☐	
R19-D07	W842467	167.64	170.69	0.01	0	8	1	7.0	1	2.80	☐	☐	☐	☐	
R19-D07	W842469	170.69	173.74	0.01	0	7	1	9.0	1	0.90	☐	☐	☐	☐	
R19-D07	W842470	173.74	176.78	0.01	0	12	1	16.0	1	0.80	☐	☐	☐	☐	
R19-D07	W842471	176.78	179.83	0.01	0	26	2	101.0	10	12.00	☐	☐	☐	☐	
R19-D07	W842472	179.83	182.88	0.01	0	8	1	62.0	1	3.60	☐	☐	☐	☐	
R19-D07	W842473	182.88	185.93	0.01	0	4	1	6.0	1	0.80	☐	☐	☐	☐	
R19-D07	W842474	185.93	188.98	0.01	0	5	1	8.0	2	1.00	☐	☐	☐	☐	
R19-D07	W842475	188.98	192.02	0.01	0	3	1	7.0	1	0.70	☐	☐	☐	☐	
R19-D07	W842476	192.02	195.07	0.01	0	13	1	13.0	3	1.20	☐	☐	☐	☐	

Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
R19-D07	W842477	195.07	198.12	0.01	0	9	2	11.0	1	0.80	☐	☐	☐	☐	
R19-D07	W842478	198.12	201.17	0.01	0	12	1	44.0	2	1.70	☐	☐	☐	☐	
R19-D07	W842480	201.17	204.22	0.01	0	6	1	16.0	2	0.90	☐	☐	☐	☐	
R19-D08	W842481	204.22	207.26	0.01	0	7	4	10.0	1	0.50	☐	☐	☐	☐	
R19-D08	W842482	207.26	210.31	0.01	0	3	1	14.0	1	0.80	☐	☐	☐	☐	
R19-D08	W842483	207.26	210.31	0.01	0	3	1	15.0	1	0.90	☑	☐	☐	☐	
R19-D08	W842484	210.31	213.36	0.01	0	2	1	10.0	1	1.30	☐	☐	☐	☐	
R19-D08	W842485	213.36	216.41	0.01	0	3	1	15.0	1	1.90	☐	☐	☐	☐	
R19-D08	W842486	216.41	219.46	0.01	0	7	1	14.0	7	2.90	☐	☐	☐	☐	
R19-D08	W842487	219.46	222.50	0.01	0	3	1	9.0	5	5.00	☐	☐	☐	☐	
R19-D08	W842489	222.50	225.55	0.01	0	7	1	10.0	9	3.70	☐	☐	☐	☐	
R19-D08	W842490	225.55	228.60	0.01	0	6	1	11.0	10	4.40	☐	☐	☐	☐	
R19-D08	W842491	228.60	231.65	0.01	0	2	1	10.0	3	2.00	☐	☐	☐	☐	
R19-D08	W842492	231.65	234.70	0.01	0	4	1	14.0	7	3.40	☐	☐	☐	☐	
R19-D08	W842493	234.70	237.74	0.01	0	9	1	9.0	7	4.80	☐	☐	☐	☐	

Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
R19-D08	W842494	237.74	240.79	0.01	0	5	1	17.0	6	6.30	☐	☐	☐	☐	
R19-D08	W842495	240.79	243.84	0.01	0	2	1	10.0	2	1.80	☐	☐	☐	☐	
R19-D08	W842496	243.84	246.89	0.01	1	3	1	12.0	4	2.30	☐	☐	☐	☐	
R19-D08	W842497	246.89	249.94	0.01	0	6	1	11.0	4	3.00	☐	☐	☐	☐	



Tiger - Rau

Archer,Cathro & Associates (1981) Limited

Grid East	Grid North	Easting	Northing	Elevation	Depth (m)
		533294	7118016	1143	475.88

ZONE: Kathy

SECTION:

HOLE: RPP-19-004

CLAIM:

Contractor: Superior

Drill: 6

Core Size: NQ2

Casing Depth:

Drilling Dates: Aug 01 - Sep 05, 2019

Geology Logged By: A. Schneebeli

SURVEY			
Depth (m)	Azimuth	Dip	Method
0	296.1	-50	Compass
473.35	308	-51.6	Reflex

TARGET: Hole is targeting the intersection of the E-W Kathy Fault

SUMMARY			
From (m)	To (m)	Interval (m)	Rock Type
0	3.05	3.05	OVB
3.05	19.51	16.46	SHL
19.51	19.85	0.34	SKN
19.85	48.7	28.85	SHL
48.7	49.08	0.38	SKN
49.08	126	76.92	SHL
126	162.9	36.9	SKN
162.9	172	9.1	LST
172	174.39	2.39	SKN
174.39	174.65	0.26	LST
174.65	183.7	9.05	PEG
183.7	232.3	48.6	CGL
232.3	234.5	2.2	PEG
234.5	268.1	33.6	CGL
268.1	289.9	21.8	CGL
289.9	291.5	1.6	PEG

SAMPLES	
Numbers:	W842499 to W842574, W842873 to W843031
Total:	235
Batch:	D08, D09, D10, D18, D19, D20, D21, D22
Certificates:	WH19203493, WH19203502, WH19210573, WH19229855, WH19229861, WH19229863, WH19229867, WH19235016, WH19268571, WH19268575

COMMENTS

The drill pad settled into the mud and drilling could not continue past ~174 m. The drill was moved off the pad on August 4 and the casing was left in. We reamed back into the hole on August 31 and finished on September 5. The hole was continued past the planned target depth due to an abundance of pyrrhotite and some sphalerite.

291.5	309.65	18.15	DST
309.65	310.05	0.4	PEG
310.05	370.15	60.1	DST
370.15	475.88	105.73	MBL

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 from 0.00-2.94m. Rock recovered is composed of irregularly shaped shale fragments.							
						DK	GY					

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
3.05	19.51	16.46	SHL	FG	Dark grey, fine grained, highly fractured with weak-moderate oxidation on fractured surfaces, foliated, non-calcareous shale. Foliation is at ~35 degrees TCA. Pyrite occurs weakly-moderately throughout the interval as mm-sized foliation parallel, elongate nodules(?) and lesser as trace foliation parallel sub mm-sized, very fine grained, fresh interstial/disseminations; indicating a pre-deformation deposition of these pyrites. Locally observed pyrite nodules contain sub mm-sized quartz inclusions. 1-2mm sized, very fine grained, trace oxidized pyrite stringers occur weakly throughout the interval with no preferential attitude. Rare pyrite stringers show trace rusty orange oxidation. 16.10-16.13m - 1cm thick, variably oxidized quartz-pyrite vein with white to oxidized, soft, non-calcareous, non-fibrous mineral occurring within and parallel to the vein. Pyrite is 2-4mm sized, fresh, blebby to irregularly shaped, white to oxidized, soft, non-calcareous, non-fibrous mineral appears to occur interstially with pyrite. Oxidation occurs primarily along foliation-parallel fractures and joints as weak-moderate, varaibly yellow-orange-brown-red-dark purple-black coloured, massive to patchy oxidation. Tarnished pyrite/iridescent patchy coating occurs on rare fractured surfaces ~once every 3 meters. Trace oxidation occurs on rare pyrite stringers. 1-2mm sized, very fine grained, trace oxidized pyrite stringers occur weakly throughout the interval with no preferential attitude. Rare pyrite stringers show trace rusty orange oxidation. Pyrite occurs as pre-deformation deposited nodules (3%), very fine grained interstial/disseminations (2%), pyrite stringers (1.5%) and least as quartz-pyrite vein (0.01%).							
						DK	GY	FO	OXI	2I	Py	3
								FR			Py	2

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
											Py	0.01
19.51	19.85	0.34	SKN	VF	Pyrite rich skarn. Bronze/light brown/white, very fine to fine grained, massive, weakly oxidized pyrite rich skarn. The skarn is bounded at its contacts parallel to shale foliation of ~35-50 degrees TCA, but the skarn is not foliated. Very fine grained, granular, semi-massive pyrite is the dominant mineral in the skarn. Pyrite is trace, rusty orange oxidized. Two other significant minerals occur within the skarn: a white, 1-3mm sized, ~radiating, non-calcareous mineral that occurs moderately from 19.70-19.85m; and a black, very fine grained, non-calcareous, non-fibrous mineral (var. clinopyroxene?) that is not evidently clasts of host shale. Rare, varaibly oxidized, 2-3mm sized pyrite stringers crosscut the skarn interval. Three fractures within this interval expose surfaces with rusty brown/orange to dark purple, massive oxidation. 19.51-19.70m - 0.5-2cm thick, wavy inclusions of host shale are observed to cross cut the skarn. Pyrite occurs as very fine grained, granular crystals (60%) and as rare pyrite stringers (2%).							
						MD	BZ	MA	OXI	2I	Py	60
						MD	WH					
						LT	BN				Py	2

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
19.85	48.70	28.85	SHL	FG	Dark grey, very fine grained, highly fractured with weak-moderate oxidation on fractured surfaces, foliated, non-calcareous shale. Same general shale lithology as observed shallower in hole. This shale interval contains two 9-18cm sections of moderately oxidized, bronze/light brown/white, fine-medium grained, massive sections (small skarns?) occur at: 46.31-46.39m and 47.73-47.90m. The sections are bounded at its contacts parallel to shale foliation, but the skarn is not foliated. Three significant minerals occur within the skarn: a white, 1-3mm sized, ~radiating, non-calcareous mineral (wollastonite?) that occurs moderately from 19.70-19.85m; a black, very fine grained, non-calcareous, non-fibrous mineral (var. clinopyroxene?) that is not evidently clasts of host shale; and fine grained, interstitial to other two mineral, semi-massive pyrite. Pyrite is moderately, rusty orange oxidized. The section at 47.73-47.90m contains two 5-10mm thick, medium-coarse grained, light grey-light pink/yellow quartz veins crosscutting the section at high angles TCA - with one vein containing a 1-1.5cm, fine grained, fresh pyrite bleb. Foliation is at ~40-50 degrees TCA. Pyrite occurs weakly-moderately throughout the interval as mm-sized foliation parallel, elongate nodules(?) and lesser as trace foliation parallel sub mm-sized, very fine grained, fresh interstial/disseminations; indicating a pre-deformation deposition of these pyrites. Locally observed pyrite nodules contain sub mm-sized quartz inclusions. 1-2mm sized, very fine grained, trace oxidized pyrite stringers occur weakly throughout the interval with no preferential attitude. Rare pyrite stringers show trace rusty orange oxidation. 20.38-20.42m and 33.56-33.58m - 1cm thick, variably oxidized quartz-pyrite vein with white to oxidized, soft, non-calcareous, non-fibrous mineral occurring within and parallel to the vein.							

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
19.85	48.70	28.85			Pyrite is 2-4mm sized, fresh, blebby to irregularly shaped, white to oxidized, soft, non-calcareous, non-fibrous mineral appears to occur interstially with pyrite. 24.94-25.04m and 33.68-33.87m - 7-19cm thick sections of very fine grained, massive, fresh to weakly oxidized pyrite occurring parallel to foliation. Oxidation occurs primarily along foliation-parallel fractures and joints as weak-moderate, varaibly yellow-orange-brown-red-dark purple-black coloured, massive to patchy oxidation. Tarnished pyrite/iridescent patchy coating occurs on rare fractured surfaces ~once every 3 meters. Trace oxidation occurs on rare pyrite stringers. 1-2mm sized, very fine grained, trace oxidized pyrite stringers occur weakly throughout the interval with no preferential attitude. Rare pyrite stringers show trace rusty orange oxidation. Pyrite occurs as pre-deformation deposited nodules (8%), very fine grained interstitial/disseminations (5%), pyrite stringers (2%) and least as quartz-pyrite vein (0.01%). Pyrite also occurs within more medium grained sections as interstitial growths (1%).							
						DK	GY	MA	OXI	2I	Py	8
											Py	5
											Py	2
											Py	1

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
48.70	49.08	0.38	SKN	FG	Pyrite rich skarn. Medium grey-olive, fine-medium grained, massive, rare oxidized pyrite rich skarn. 1-3cm thick, discontinuous, medium grained, clear to trace pink hue quartz veins. Veins have variably sharp contacts with the skarn, indicating a late syn-deposition with the skarn. The skarn is bounded by sharp, high angle TCA contacts with the shale, but the skarn is not foliated. Very fine grained, granular to intergrown with the other two minerals, semi-massive pyrite in the skarn. Pyrite is rare, rusty orange oxidized. Three significant minerals occur within the skarn: a white, 1-3mm sized, ~radiating, non-calcareous mineral, (wollastonite?) - which is more concentrated around quartz veins; and a black, very fine grained, non-calcareous, non-fibrous mineral (var. clinopyroxene?) that is not evidently clasts of host shale. Throughout the skarn, most common proximal (within 2cm of quartz veins) there is weakly occurring, fresh, irregularly shaped, 2-4mm sized, overprinted pyrite. Pyrite occurs as very fine grained, granular crystals (40%) and as irregularly shaped overprints (1%).							
						MD	GY	MA	OXI	1I	Py	40
						MD	OL				Py	1

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
49.08	54.05	4.97	SHL	VF	Dark grey, very fine grained, highly fractured with weak-moderate oxidation on fractured surfaces, strongly veined, foliated, non-calcareous shale. This is the same shale general lithology as observed shallower in the hole. Abundant 0.1-2.5cm thick, white, planar to irregularly shaped, primarily continuous to variably discontinuous quartz-pyrite veins/veinlets occur throughout the interval. At least 2 generations of quartz-pyrite is observed due to locally observed younger generations offsetting older generations by 1-3mm. Quartz-pyrite veins are mostly shale foliation parallel, but also deform foliation textures. Pyrite occurs as weakly-moderately abundant, 3-5mm sized, fresh, blebs and lesser intergrowths within the quartz veins. Quartz-pyrite veining occurs from 50.10-54.05m. Foliation is at ~40 degrees TCA where it has not been deformed by veining. Pyrite occurs weakly-moderately throughout the interval as mm-sized foliation parallel, elongate nodules(?) and lesser as trace foliation parallel sub mm-sized, very fine grained, fresh interstitial/disseminations; indicating a pre-deformation deposition of these pyrites.. Locally observed pyrite nodules contain sub mm-sized quartz inclusions. 1-2mm sized, very fine grained, trace oxidized pyrite stringers occur weakly throughout the interval with no preferential attitude. Rare pyrite stringers show trace rusty orange oxidation. Oxidation occurs primarily along foliation-parallel fractures and joints as weak-moderate, varaibly yellow-orange-brown-red-dark purple-black coloured, massive to patchy oxidation. Tarnished pyrite/iridescent patchy coating occurs on rare fractured surfaces ~once every 3 meters. Trace oxidation occurs on rare pyrite stringers. 1-2mm sized, very fine grained, trace oxidized pyrite stringers occur weakly throughout the interval with no preferential attitude. Rare pyrite stringers show trace rusty orange oxidation.							

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
49.08	54.05	4.97			Pyrite occurs as pre-deformation deposited nodules (8%), very fine grained interstitial/disseminations (5%), pyrite stringers (2%) and least as quartz-pyrite vein (5%).							
						DK	GY	FO	OXI	2I	Py	8
											Py	5
											Py	7

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
54.05	80.45	26.40	SHL	VF	Dark grey, very fine grained, highly fractured with trace-weak oxidation on fractured surfaces, foliated, non-calcareous shale with 50cm thick section of brecciated shale. 55.35-55.90m - granule to pebble sized, sub-angular to sub-rounded, poorly sorted, weakly imbricated, clast supported breccia. Clasts are composed of dark grey to black, non-calcareous shale - clasts commonly retain their original foliation, lesser are amorphous. Ground mass is a white-light grey, ~soft, non-calcareous muddy material. 67.85-69.00m - trace, patchy, salmon pink-orangey coloured sphalerite within white, soft, non-calcareous, non-fibrous, powdery veinlets and veins occurring every ~15cm within this section. 1cm thick vein at 68.75-68.90m hosts 1-3mm sized, subhedral sphalerite crystals and 3-8mm sized clasts of surrounding shale. Foliation is at ~40 degrees TCA. Pyrite occurs weakly-moderately throughout the interval as mm-sized foliation parallel, elongate nodules(?) and lesser as trace foliation parallel sub mm-sized, very fine grained, fresh interstitial/disseminations; indicating a pre-deformation deposition of these pyrites.. Locally observed pyrite nodules contain sub mm-sized quartz inclusions. 1-2mm sized, very fine grained, trace oxidized pyrite stringers occur weakly throughout the interval with no preferential attitude. Rare pyrite stringers show trace rusty orange oxidation. Oxidation occurs primarily along foliation-parallel fractures and joints as trace-weak, primarily as a white, soft powdery coating and as rare varaibly yellow-orange-brown-red-dark purple-black coloured, massive to patchy oxidation. Trace oxidation occurs on rare pyrite stringers. 1-2mm sized, very fine grained, trace oxidized pyrite stringers occur rarely throughout the interval with no preferential attitude. Rare pyrite stringers show trace rusty orange oxidation.							

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
54.05	80.45	26.40			Pyrite occurs as pre-deformation deposited nodules (8%), very fine grained interstitial/disseminations (5%), pyrite stringers (2%) and least as quartz-pyrite vein (0.01%). Sphalerite occurs from 67.85-69.00m within veinlets and veins as subhedral mm-sized crystals (0.1%).							
						DK	GY	FO	OXI	1I	Py	8
											Py	5
											Py	2.01
											Sp	0.01

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
80.45	82.30	1.85	SHL	FG	Dark grey, fine-medium grained, pitted, weakly friable, strongly veined, sphalerite bearing, non-calcareous shale. Orange/pink, fine grained, subhedral, disseminated(?) occurs throughout the interval (up to 5%) and as weak-moderately abundant intergrowths to blebby within veins. Trace fresh, 1-3mm sized, sub-euhedral dissemination occur within the interval, and primarily within veins. Veining occurs primarily as 2-4cm thick, continuous, planar, white and dull yellow, sphalerite+galena veins. White mineral is crystalline, non-fibrous, softer than quartz, non-calcareous and varaibly powdery. Dull yellow mineral is amorphous, non-calcareous, non-fibrous and slightly harder than the white mineral. Sphalerite occurs as orange/pink fine grained, weak-moderately abundant intergrowths to blebby crystal within the veins. Galena occurs as trace 2-4mm sized, fresh, sub-euhedral crystals and lesser as intergrowths associated with sphalerite. Veining also occurs as 1-1.5cm thick, discontinuous, white, sphalerite+galena veins. White mineral is crystalline, softer than quartz, non-calcareous and varaibly powdery. Sphalerite occurs as orange/pink fine grained, weak-moderately abundant intergrowths to blebby crystal within the veins. Galena occurs as trace 2-4mm sized, fresh, sub-euhedral crystals and lesser as intergrowths associated with sphalerite. Rare black, 1-2mm sized, ~bladey mineral (actinolite?) occurs within the interval -requires hand lens to decifer. Pyrite occcurs throughout the interval as fresh, mm-sized disseminations, no pyrite occurs within veins. This interval has lost the general lithology's characteristic foliation. XRF indicates 0.5-15% Zn throughout the interval. Pyrite occurs as mm-sized disseminations							

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
80.45	82.30	1.85			throughout the interval (5%). Sphalerite occurs throughout the interval as disseminations (4%) and as intergrowths within veins (1%). Galena occurs as mm-sized disseminations (0.5%) and as sub-euhedral crystals within vein (1%). Actinolite occurs as rare, black, mm-sized, blades (0.01%).							
						DK	GY				Py	5
											Sp	1
											Gn	0.05
											Gn	1
											Ac	0.01

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
82.30	93.35	11.05	SHL	VF	Dark grey, very fine grained, highly fractured with trace-weak oxidation on fractured surfaces, weak-moderately veined, foliated, non-calcareous shale with a 10cm strongly oxidized section. 85.33-85.43m - strongly rusty orange/brown, oxidized, 10cm section, indicating high iron content. Trace fresh, mm-sized pyrites are observed as likely post-oxidation disseminated deposition. Foliation is at higher angles than the shallower shale intervals at ~60 degrees TCA. Pyrite occurs weakly-moderately throughout the interval as mm-sized foliation parallel, elongate nodules(?) and lesser as trace foliation parallel sub mm-sized, very fine grained, fresh interstitial/disseminations; indicating a pre-deformation deposition of these pyrites.. Locally observed pyrite nodules contain sub mm-sized quartz inclusions. 1-2mm sized, very fine grained, trace oxidized pyrite stringers occur weakly throughout the interval with no preferential attitude. Rare pyrite stringers show trace rusty orange oxidation. Oxidation occurs primarily along foliation-parallel fractures and joints as trace-weak, primarily as a white, soft powdery coating and as rare varaibly yellow-orange-brown-red-dark purple-black coloured, massive to patchy oxidation. Trace oxidation occurs on rare pyrite stringers. Veining occurs primarily as continuous, crosscutting foliation, white to clear, 3-10mm sized quartz±pyrite veins, and lesser as irregularly shaped quartz veins. 89.16-89.26m - two 2-5mm sized, continuous, perpendicular TCA, quartz veins with boudinage-like shape. Pyrite occurs as pre-deformation deposited nodules (8%), very fine grained interstitial/disseminations (5%), pyrite stringers (2%) and least as quartz-pyrite vein (0.5%).							

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
						DK	GY	FR	OXI	2I	Py	8
								FO			Py	5
											Py	2
											Py	0.5
93.35	93.58	0.23	BXA	CG	Dark grey-black, non-calcareous, weakly oxidized, angular, poorly sorted, granule-pebble sized shale and quartz clast supported fault breccia with 10cm of fault gouge. Fault gouge is from 93.48-93.58m and is black, clayey with trace angular shale fragments and trace pyrite disseminations. Ground mass of the fault breccia is variably weakly rusty orange/brown/yellow oxidized, non-calcareous mud. Pyrite occurs throughout the fault breccia as post-oxidation, moderately abundant, sub mm-sized growths. Contact between fault breccia and shale and the fault breccia-fault gouge contact are both at 60 degrees TCA - same as the foliation in the overlying shale. Pyrite occurs as disseminations (5%.)							
						MD	BK					
						DK	GY	BX	OXI	2I	Py	5

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
93.58	108.20	14.62	SHL	VF	Dark grey, very fine grained, highly fractured with trace-weak oxidation on fractured surfaces, weak-moderately veined, foliated, non-calcareous shale. Foliation is at higher angles than the shallower shale intervals at ~60 degrees TCA. Pyrite occurs weakly-moderately throughout the interval as 1-4mm sized foliation parallel, elongate nodules(?) and lesser as trace foliation parallel sub mm-sized, very fine grained, fresh interstitial/disseminations; indicating a pre-deformation deposition of these pyrites.. Locally observed pyrite nodules contain sub mm-sized quartz inclusions. 1-2mm sized, very fine grained, trace oxidized pyrite stringers occur weakly throughout the interval with no preferential attitude. Rare pyrite stringers show trace rusty orange oxidation. Oxidation occurs primarily along foliation-parallel fractures and joints as trace-weak, primarily as a white, soft powdery coating and as rare varaibly yellow-orange-brown-red-dark purple-black coloured, massive to patchy oxidation. Trace oxidation occurs on rare pyrite stringers. Veining occurs primarily as continuous, crosscutting foliation, white to clear, 3-10mm sized quartz±pyrite veins, and lesser as irregularly shaped quartz veins. Pyrite occurs as pre-deformation deposited nodules (6%), very fine grained interstitial/disseminations (7%), pyrite stringers (2%) and least as quartz-pyrite vein (0.5%).							
						DK	GY	FR	OXI	1I	Py	6
								FO			Py	7
											Py	2.5

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
108.20	111.07	2.87	SHL	FG	Dark grey, fine-medium grained, silica flooded, locally brecciated, weakly pitted, foliated, locally friable, non-calcareous shale. White, silica-flooded (quartz) bands are 1-3cm thick, foliation parallel and occur every ~10-15cm throughout the interval. The bands contain weak-moderate amounts of fresh, overprinting pyrite on bands. Reddish-brown, patchy sphalerite occurs rarely within the silica-flooded bands. Pyrrhotite is observed for the first time in this interval as 1-3mm sized, fresh, disseminations. 110.57-110.78m - Near the end of the interval is a 20cm thick section of more medium grained, light grey, weakly friable, possibly clay altered, non-calcareous, ~soft section with small (1mm sized), weakly abundant, black, non-fibrous/bladey, non-calcareous mineral (pyroxene?). Multiple low angle (15-20 degrees TCA), 2-5mm thick, non-calcareous, soft, white-aqua blue veinlets occur within this section. The veinlets are likely clay altered, white, very soft mineral with slight soapy feel is on the veinlets (talc?). Chloritization appears as a aqua-blue/green to dark green colour on the veinlet margins. Pyrite occurs within the veinlets as trace 2-4mm wide bands perpendicular to the veinlet. Foliation is at ~55-65 degrees TCA. Weak pitted texture is primarily observed from 108.25-109.11m. Pyrite occurs as fresh, overprints within silica-flooded bands (3%) and as foliation parallel, elongate, fresh disseminations (1.5%). Sphalerite occurs within silica-flooded bands as patchy mineralization (0.25%).							
						DK	GY	BX	TLC	1I	Py	3
								FO	CHL	1I	Sp	0.25
								FD	CLY	1I	Py	1.5

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
111.07	115.27	4.20	SHL	FG	Dark grey-black, fine grained, brecciated, fracture, foliated, non-calcareous shale. Foliation is at ~50-60 degrees TCA. Brecciation (crackly) occurs throughout the interval, commonly along foliations. Strong, granule-pebble sized, clast supported brecciation occurs at 113.78-114.17m with white, soft, non-calcareous, possibly clay altered groundmass. Trace-weakly abundant white-red/brown, mm-sized, patchy sphalerite occurs within the groundmass. Clasts are commonly missing from the rock - giving the core the appearance of a variably pitted texture. Veining occurs tracely throughout the interval as 1-2mm sized quartz veinlets. Pyrite occurs as pre-deformation deposited nodules (3%), very fine grained interstitial/disseminations (5%), pyrite stringers (0.05%) and as quartz-pyrite vein (3%). Sphalerite occurs as trace-weak, mm-sized, patchy mineralization in a 40cm section of the interval (0.5%).							
						MD	BK	FR			Py	5
						DK	GY	BX			Py	3
								FO			Py	0.05
											Sp	0.5
											Py	3

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
115.27	126.00	10.73	SHL	FG	Dark grey-white, fine grained, hard, locally silicified, hard, locally foliated, locally cholitized and clay altered highly fractured, crackle brecciated, non-calcareous shale with meter long sections of variably brecciated, silica-flooding. 119.54-119.67m - pebble quartz, angular to sub-angular, moderately sorted breccia with soft, white, non-calcareous muddy, moderately light green chloritized groundmass. 117.20-117.80m - thick section of silica-flooded, white, amorphous material with moderately-strongly abundant concentration of, fine grained, black, discontinuous, non-calcareous veinlets at varying attitudes. 115.51-117.20m and 117.80-121.92m - strongly brecciated, very coarse grained to pebble sized, sub-angular to angular, poorly sorted, quartz clast supported breccia. 115.52-115.62m - 15 degrees TCA, 2-3mm thick veinlet of soft, white, non-calcareous, non-fibrous/bladey mineral with trace, patchy, mint-green coloured mineral. Foliated, silicified shale occurs as 5-10cm sections throughout the interval every 10cm-1.5m and from 121.92-126.00m. Foliaiton is at ~55 degrees TCA. Sphalerite occurs as weakly abundant patchy to locally subhedral crystals from 119.10-118.30m and 120.21-126.00m on fractured surfaces and within quartz veinlets. Pyrite occurs as pre-deformation deposited nodules (0.25%), very fine grained disseminations (2%) and as quartz-pyrite vein (0.1%). Sphalerite occurs as weak, mm-sized, patchy-subhedral mineralization in two 20cm-4m sections of the interval (1%).							
						MD	WH	FR	CLY	2I	Py	0.25
						DK	GY	FO	CHL	1I	Sp	1

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
								FD			Py	0.1
								CR				
								BX			Py	2

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
126.00	132.02	6.02	SKN	MG	Tremolite-pyrite±quartz±pyrrhotite skarn. White-light green/light grey, medium-coarse grained, weakly-moderately chloritized, trace clay altered, locally brecciated, non-calcareous tremolite-pyrite±pyrrhotite skarn interval. The skarn is composed almost entirely of 3-15mm sized, euhedral, radiating, white to lesser light grey tremolite crystals. White tremolites are trace to moderately chloritized, giving the interval a light green to locally blue shade - "toothpaste coloured". Pyrite occurs moderately abundant infill after tremolite formation - locally taking on the reverse radiating pattern of the tremolite. A white, soft, non-calcareous, non-fibrous/bladey, sub mm-sized mineral often occurs weakly with pyrite infill. - possibly clay alteration or breakdown of tremolite crystals. Pyrite is also observed to occur as very rare 2mm sized stringers, crosscutting the skarn at high angles TCA. Quartz occurs at 127.85-129.05m as very coarse grained, frosted-white veins that occured after pyrite infill. Pyrrhotite is rarely observed as fresh infill between tremolite crystals. Breccia section at 131.28-131.43m - granule-pebble sized, polymictic, poorly sorted, clast supported breccia. Clasts are composed of individual grey tremolite crystals, blue-green chloritized fragments of the skarn, and overlying shale with retained foliation. Weak oxidation of chloritized tremolite occurs at 131.49-131.76m. Pyrite occurs as infill of tremolite crystals (20%) and as a 2mm thick stringer (0.01%). Tremolite is white to grey to light green/blue chloritized (70%). Pyrrhotite occurs as rare infill of tremolite crystals (3%).							

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
						MD	WH	BX	CHL	2I	Py	20
						LT	GN		CLY	1I	Py	0.01
						LT	GY				Tr	70
											Po	3
132.02	139.29	7.27	SKN	FG	Black, fine grained, sooty, rubbly, pitted, friable, actinolite-tremolite skarn interval with 1.30m section at the end of the inteval of intermittent lighter coloured-chloritized skarn and silica-flooded shale. The skarn is composed of mainly a black, amorphous, non-calcareous mineral - possibly weakly thermally altered shale; with lesser 1-3mm sized, dark grey, acicular to prismatic actinolite and subordinate light-medium grey 1-2mm sized, bladey to prismatic tremolite. 137.93-139.29m - White-light green/light grey, medium-coarse grained, weakly-moderately chloritized, weakly clay altered, non-calcareous tremolite-quartz skarn interval. This section is composed almost entirely of 3-8mm sized, euhedral, radiating, white to lesser light grey tremolite crystals. White tremolites are trace to moderately chloritized, giving the interval a light green to locally blue shade. Quartz is a white-greyish coloured, fine grained and occurs as infill within tremolite crystals. A very soft, white, non-calcareous, non-fibrous mineral (talc) occurs weak-moderately within this section. Silica-flooded shale is amorphous and hard. Trace veining occurs as at least two generations of crosscutting quartz veinlets and infill along healed fractures. Pitted texture is moderate and locally strong to accommodate rubbly zones. Pyrite occurs as weakly abundant mm-sized disseminations within the silica-flooded shale (0.1%). Tremolite occurs as mm-sized, euhedral crystals throughout the interval - more abundant from 137.93-139.29m (10%). Actinolite occurs moderately from 132.02-137.93m as mm-sized, euhedral crystals (18%).							

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
						MD	BK	RB	CHL	2I	Py	0.1
								FR			Tr	10
								FD			Ac	18
139.29	143.26	3.97	SKN	MG	White-light green/light grey, medium-coarse grained, weakly-moderately chloritized, weakly-moderately clay altered, non-calcareous tremolite-quartz skarn interval with 10-20cm sections of silica-flooded shale and oxidized, polymictic, matrix supported breccias. This section is composed almost entirely of 3-8mm sized, euhedral, radiating, white tremolite to lesser dark grey actinolite crystals. White tremolites are trace to moderately chloritized, giving the interval a light green to locally blue shade. Quartz is a white-greyish coloured, fine grained and occurs as infill within tremolite crystals. A very soft, white, non-calcareous, non-fibrous mineral (talc) occurs weak-moderately within this section. Silica-flooded shale is amorphous and hard. Oxidized breccias occur at: 139.29-139.49m, 139.72-140.29m and 141.36-141.68m. Clasts are very coarse grained sand-pebble sized, sub-rounded to angular, mudstone/quartz/fine grained tremolite crystals. Mudstone and tremolites are always rusty-orange oxidized, quartz is fresh to rusty orange oxidized. Matrix is composed of soft, black to moderately oxidized orange, non-calcareous mud. 141.24-140.29m - breccia forms within a 35 degree TCA band between sharp contacts with quartz and skarn. Rare-trace pyrite occurs as sub mm-sized disseminations within the breccia sections (0.5%). Tremolite is white to grey to light green/blue chloritized (30%). Actinolite is dark grey and acicular to prismatic (10%).							
						MD	WH	BX	CLY	2I	Tr	30
						LT	GN	MA	CHL	2I	Py	0.5
						LT	GY		SIL	2I	Ac	10

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
143.26	149.80	6.54	SKN	FG	Dark grey-black, soft, weak, rubbly, fractured, non-calcareous, grey tremolite bearing, muddy (fault?) gouge. Tremolite occurs weak-moderately throughout the interval, primarily as fresh medium grey, 1-3mm sized crystals within the muddy gouge as-well-as ~parallel TCA 2-4mm sized, weakly oxidized veinlets from 149.35-149.60m. Section of massive, oxidized tremolite occurs at 148.80-149.35m. 10-50cm rubbly sections occur throughout the interval This interval is essentially amorphous. Pyrite occurs as fresh, sub mm-sized disseminations throughout the interval - required 20x lens to observe (3%). Tremolite occurs as mm-sized euhedral crystals (20%).							
						MD	BK	FD			Tr	20
						DK	GY	RB	CLY	4I	Py	3

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
149.80	151.00	1.20	SKN	MG	Light grey to rusty-orange, moderately-strongly clay altered, weakly-moderately oxidized, competent, locally brecciated, non-calcareous, tremolite bearing gouge/skarn. This interval is potentially a highly altered, retrograded skarn. Tremolite is white to rusty orange oxidized, massive to euhedral and 2-4mm sized with variable 'sawdust' appearance when oxidized. 3-5cm thick, white to very light aqua-blue clay alteration bands occur throughout the interval. White mineral within the clay altered bands is non-calcareous, non-fibrous and soft (talc?). Brecciated section occurs at 150.45-150.70m - the section is white with slight light blue hue, very soft, non-calcareous, clayey matrix supported with granule-cobble sized sub-rounded fragments of quartz. Pyrite occurs weakly as oxidzied, euhedral, 1-2mm sized crystals exclusively within the oxidized tremolite sections (1%). Tremolite accounts for 60% of the interval.							
						LT	GY	BX	CLY	3I	Py	1
						DK	OR		OXI	3I	Tr	60

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
151.00	157.00	6.00	SKN	MG	Dark grey-black, soft, fractured, non-calcareous, grey tremolite bearing, muddy (fault?) gouge. This interval is similar to 143.26-149.80m, but is more competent and less gougey. Tremolite occurs weak-moderately throughout the interval, primarily as fresh medium grey, 1-3mm sized crystals within the muddy gouge as-well-as ~parallel TCA 2-4mm sized, weakly oxidized veinlets from 149.35-149.60m. Section of massive, oxidized tremolite occurs at 148.80-149.35m. 153.19-153.43m - White clay altered section with 1-2mm sized, black, variably striated, mineral (some sort of pyroxene?), commonly with intergrowths of pyrtie and pyrrhotite, giving this section a spotted appearance. This interval is essentially amorphous. Pyrite occurs as fresh, sub mm-sized disseminations throughout the interval - required 20x lens to observe (2%) and as intergrowths with black, possibly pyroxene mineral in 20cm section (1%). Pyrrhotite occurs as fresh, very weakly magnetic intergrowths with black, possibly pyroxene mineral in 20cm section (1%). Tremolite occurs as mm-sized euhedral crystals (20%).							
						MD	BK				Py	1
						DK	GY	FR	CLY	3I	Py	2
											Po	1
											Tr	20

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
157.00	160.80	3.80	SKN	MG	Dark grey, fine grained, crackle brecciated, competent, weakly-moderately silicified, variably weakly calcareous shale with tremolite veins and infill. Tremolite occurs as weak-moderately abundant, 2-5mm sized, fresh, variably calcareous veinlets at 25-35 degrees TCA. Tremolite also occurs as moderately abundant infill of healed fractures and as crackle brecciation infill at 159.95-160.02m. Tremolite veins/veinlets contain rare inclusions of 1-2mm sized, black, variably striated, mineral (some sort of pyroxene?). Crackle brecciation occurs throughout the interval, primarily as seen by separated clasts of variably calcareous shale, and medium grey clasts. Infill of crackle brecciation is commonly a very fine grained, black, moderately hard, non-calcareous, non-fibrous mineral. The entire interval is harder than shales previously seen shallower in the hole, indicating a possibly silicification of the interval - quartz veins do not occur within this interval. Sphalerite occurs at 158.50-158.65m as 1-5mm sized, red/brown patchy crystals proximal to tremolite vein. Pyrite occurs as 1-3mm sized subhedral dissmeinations on fractured surfaces, but not readily visible throughout the core (3%). Tremolite occurs as veins/veinlets and infill of healed fractures (25%).							
						DK	GY	CR	SIL	2I	Sp	0.5
											Py	2
											Tr	25

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
160.80	162.90	2.10	SHL	MG	White/light green, medium grained, fractured, weakly calcareous, chloritized, clay altered, tremolite skarns with ~1m section of silicified, calcareous shale. Tremolite is very abundant within the skarn sections as white to blue-green, due to chlorite alteration, 1-5mm sized, euhedral crystals. The skarn is soft, and has undergone moderate amounts of clay-sericite alteration. Sulphides are not readily visible within the skarns. The entire shale section is harder than shales previously seen shallower in the hole, indicating a possibly silicification of the interval - quartz veins do not occur within this interval. Crackle brecciation occurs throughout the interval, primarily as seen by separated clasts of variably calcareous shale, and medium grey clasts. Infill of crackle brecciation is commonly a very fine grained, black, moderately hard, non-calcareous, non-fibrous mineral. Tremolite accounts for 30% of the entire interval.							
						MD	WH	FR	CHL	3I	Tr	30
						LT	GN		CLY	3I		

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
162.90	172.00	9.10	LST	FG	Skarn bands and pyrite veins occur within this interval. Light-medium grey, fine grained, crackle brecciated, competent limestone with 1-7cm thick skarn bands occurring every ~1.5m. Tremolite veins occur at: 167.45-167.51m, 169.37-169.47m and 171.09-171.15m. The bands are 1-7cm thick, light-dark green, chloritized tremolite-rich±fresh sub mm-sized pyrite disseminations. Fractures within the skarn bands are often polished with slickenlines and a very dark green-black, soapy feeling, soft mineral (dark green chlorite?). Pyrite veins occur at: 166.14-166.18m, 166.56-166.67m, 169.20-169.23m and 171.91-171.93m. The veins are 0.5-1cm thick, very fine grained pyrite ground mass with secondary, fresh, 2-4mm sized fresh, euhedral pyrite growths and variably containing calcite. Veining occurs weakly throughout the interval as 1-3mm sized calcite veins of variably high angles TCA and calcite infill along crackle brecciations and healed fractures. 171.56-171.71m - 2-5cm wide, angular patches of clay altered/serisite altered fragments. Pyrite occurs as rare pyrite veins (1.5%) and as trace disseminations (0.1%) to rare blebs (0.05%). Pyrrhotite is highly concentrated towards the last 50cm of this interval as fresh, infill of plucked out tremolite crystals (3%). Tremolite occurs within skarn bands (5%). Two 0.5mm sized flecks of chalcopyrite are observed on a mechanically broken surface at 171.71m, but is not significant. XRF indicates 0.1% Cu.							
						MD	GY				Py	0.1
						LT	GY	CR			Py	1.5
											Po	3
											Tr	5
											Py	0.05

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
172.00	174.39	2.39	SKN	CG	Clear/light green/dull yellow-olive colour, fine-coarse grained, serisite altered, chloritized, silica-flooded(?), tremolite rich skarn (possibly pegmatite). Tremolite occurs abundantly throughout the interval as fine grained, mm-cm sized patches with bladey terminations. These fine grained tremolite patches have undergone serisite alteration to give the tremolite a more dull yellow/olive colour and softness, seristie altered fragments also varaibly react with HCl, so some amount of calcite must be present. Tremolite is also locally chloritized to give a unique deep-water green colour. Pyrrhotite occurs as moderately abundant, fresh infilling within tremolite crystals. Silica/quartz-flooding occurs significantly throughout the interval - likely post-tremolite formation and pyrrhotite infill due to mainly sharp contacts between the quartz/silica and tremolite+pyrrhotite. Quartz also occurs as 2-4mm sized, clear, bladey shape - possibly a result of quartz replacing tremolite (?), this is most notable from 172.17-172.64m. 174.02-174.39m - locally observed, mint green, calcareous tremolite occurring with white, calcareous tremolite. Possibly a chloritization alteration. 173.80-174.39m - pyrite is observed to infill along tremolite crystals. Pyrite occurs as locally observed infill along tremolite crystals (0.5%). Pyrrhotite occurs moderately as infill of tremolite crystals (5%). Tremolite occurs significantly throughout the interval (30%).							
						LT	GN		CHL	3I	Po	5
						DK	YW				Tr	30
						--	CL	XL	SER	3I	Py	0.5

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
174.39	174.65	0.26	LST	FG	Same general lithology as 162.90-172.00m. Waiting for drill to return to this pad to finish the hole…							
174.65	182.75	8.10	PEG	CG	Limestone, possibly altered conglomerate, intermittently cut by a quartz/feldspar pegmatite subparallel TCA, minor fluorite, sharp contact. Disseminated fine grained euhedral pyrite throughout. Cut by moderate angle TCA calcite veinlets.							
182.75	183.70	0.95	CGL	FG	Silicified host rock with fine to coarse disseminated euhedral pyrite throughout.							
183.70	212.90	29.20	CGL	CG	Polylithic pebble conglomerate, with subrounded clasts in a fine grained matrix, variably replaced with calcite, moderately to strongly foliated. Fine disseminated to blebby sulphides dominantly pyrite and pyrrhotite throughout. Cut by moderate to shallow angle TCA calcite veins and veinlets, some hosting pyrite/pyrrhotite. 205.70m : pyrite smeared along slickensides on fracture face 203.05m: 0.5cm actinolite? Vein, 20 TCA							
212.90	215.44	2.54	CGL	CG	vein breccia of angular, deformed clasts of host rock (conglomerate/shale) in calcite matrix. Fine grained disseminated pyrite/pyrrhotite infill. 215.50m two 2cm thick quartz veins hosting pyrite and sphalerite.							
215.44	221.60	6.16	SHL	MG	Interbedded pyritic shale and coarse grained sandstone (same composition as conglomerate but equigranular 1-2mm grains) with calcite matrix. Fine grained pyrite throughout.							

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
221.60	232.30	10.70	CGL	CG	interbedded sandstone, mudstone, and polylithic pebble conglomerate, with subrounded clasts in a fine grained matrix, variably replaced with calcite, moderately to strongly foliated. Fine disseminated to blebby pyrite and pyrrhotite throughout. 227.25-229.20m: clasts are “fuzzy” and are more altered.							
232.30	234.50	2.20	PEG	CG	Quartz/Feldspar pegmatite/vein breccia weakly mineralized. Low angle TCA white vein hosts minor fluourite.							
234.50	268.10	33.60	CGL	CG	interbedded sandstone, mudstone, and polylithic pebble conglomerate, with subrounded clasts in a fine grained matrix, variably clast and matrix supported, variably replaced with calcite, moderately to strongly foliated. Fine disseminated to blebby pyrite and pyrrhotite throughout. 250.70-251.00m: altered host rock to white, calcite replaced matrix, hosting a subparallel TCA pegmatite vein, 1cm. Coarse disseminated pyrite throughout.							
268.10	289.90	21.80	CGL	CG	pebble conglomerate, variably clast and matrix supported. Matrix replaced by calcite and/or feldspar. Disseminated, blebby, and banded pyrite, pyrrhotite, sphalerite, and minor chalcopyrite throughout, associated with veins and replacing the matrix with varying intensity.							
289.90	291.50	1.60	PEG	CG	Quartz/Feldspar pegmatite, disseminated 0.5cm biotite. Disseminated to blebby pyrrhotite, 10-15%. Patchy green mineral, possibly actinolite.							

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
291.50	309.65	18.15	DST	FG	Fine grained dolostone, variably brecciated, cut by moderate angle calcite, tremolite, and quartz veins. Disseminated to blebby pyrrhotite (1%) and sphalerite (2%) as matrix infill, and host replacement. Sulphides seem to be in higher abundance with tremolite. Calcite vein at 301.50m hosts 2mm chunks of graphite. Fracture faces have abundant graphite. Minor fine disseminated pyrite throughout.							
309.65	310.05	0.40	PEG	CG	Quartz/Feldspar/Tremolite pegmatite vein with blebby pyrrhotite (<.5%).							

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
310.05	370.15	60.10	DST	FG	Fine grained dolostone, variably brecciated, cut by moderate angle calcite, tremolite, and quartz veins. Disseminated to blebby pyrite (1%), pyrrhotite (2%) and sphalerite (2%) as matrix infill, and host replacement. Sulphides seem to be in higher abundance with tremolite. -314.65-315.10m: subparallel TCA tremolite vein hosting disseminated to blebby pyrrhotite. -315.65-316.80m: Blebby sphalerite and pyrrhotite intergrown with tremolite. Pyrite vein 316.79-316.80m. -318.76-319.83m: Pyrrhotite overprinting dolostone, with minor blebby pyrite. -320.90-321.50m: blebby to massive sphalerite (30%) intergrown with massive trmolite. Yyy -322.75-331.85m: Disseminated to blebby pyrrhotite and pyrite as matrix infill and overprinting -334.55-342.00m: disseminated pyrrhotite and pyrite throughout (3%), calcite veins host blebby pyrrhotite, pyrite, and sphalerite. -337.19-337.21m: pyrrhotite and pyrite vein -344.00-345.00m: disseminated pyrrhotite and pyrite throughout (2%) -347.07-347.12m: Calcite/tremolite vein hosting disseminated pyrrhotite and minor sphalerite -354.00-370.10m: disseminated pyrrhotite and pyrite throughout (3%). Blebby sphalerite associated with tremolite veining. -361.50-361.57m: massive sphaleite, pyrrhotite, and calcite vein. Possibly two phases of pyrrhotite. Yyyy -355.85m first appearance of marble clasts							

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
370.15	377.40	7.25	MBL	FG	Breccia with subrounded clasts, dominantly of marble, in a fine grained matrix, cut by moderate angle calcite veins. - Transition to more ductile flow evident in matrix. - Disseminated pyrrhotite and pyrite, lesser sphalerite, in matrix of breccia. -Fine grained disseminated pyrite matrix infil(2%) -Calcite veins show deformation, few are planar.							
377.40	377.45	0.05	MBL	FG	Disseminated pyrrhotite (40%)							
377.45	378.28	0.83	MBL	FG	Breccia with subrounded clasts, dominantly of marble, in a fine grained matrix, cut by moderate angle calcite veins. - Transition to more ductile flow evident in matrix. - Disseminated pyrrhotite (<1%) and pyrite (<1%), lesser sphalerite (<1%), in matrix of breccia. -Fine grained disseminated pyrite matrix infill -Calcite veins show deformation, few are planar.							
378.28	378.35	0.07	MBL	FG	Disseminated pyrrhotite (25%) and sphalerite (5%)							

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
378.35	390.58	12.23	MBL	FG	Breccia with subrounded clasts, dominantly of marble, in a fine grained matrix, cut by moderate angle calcite veins. - Transition to more ductile flow evident in matrix. - Disseminated pyrrhotite (3%) and pyrite (5%), lesser sphalerite (3%), in matrix of breccia. -Fine grained disseminated pyrite matrix infill -Calcite veins show deformation, few are planar.							
390.58	390.70	0.12	MBL	FG	Submassive pyrrhotite (20%), sphalerite (30%), and lesser pyrite (10%)							
390.70	390.84	0.14	MBL	FG	Breccia with subrounded clasts, dominantly of marble, in a fine grained matrix, cut by moderate angle calcite veins. - Transition to more ductile flow evident in matrix. - Disseminated pyrrhotite (2%) and pyrite (5%), lesser sphalerite (2%), in matrix of breccia. -Fine grained disseminated pyrite matrix infill -Calcite veins show deformation, few are planar.							
390.84	390.93	0.09	MBL	FG	Submassive pyrite (25%) and sphalerite (10%), lesser pyrrhotite (2%)							

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
390.93	391.26	0.33	MBL	FG	Breccia with subrounded clasts, dominantly of marble, in a fine grained matrix, cut by moderate angle calcite veins. - Transition to more ductile flow evident in matrix. - Disseminated pyrrhotite (5%) and pyrite (5%), sphalerite (5%), in matrix of breccia. -Fine grained disseminated pyrite matrix infill -Calcite veins show deformation, few are planar.							
391.26	391.70	0.44	MBL	FG	Submassive pyrrhotite (20%) and sphalerite (40%)							
391.70	393.16	1.46	MBL	FG	Breccia with subrounded clasts, dominantly of marble, in a fine grained matrix, cut by moderate angle calcite veins. - Transition to more ductile flow evident in matrix. - Disseminated pyrrhotite (10%) and pyrite (3%), sphalerite (5%), in matrix of breccia. -Fine grained disseminated pyrite matrix infill -Calcite veins show deformation, few are planar.							
393.16	393.22	0.06	MBL	FG	Spotty to submassive pyrrhotite (5%) and sphalerite (7%)							

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
393.22	397.28	4.06	MBL	FG	Breccia with subrounded clasts, dominantly of marble, in a fine grained matrix, cut by moderate angle calcite veins. - Transition to more ductile flow evident in matrix. - Disseminated pyrrhotite (1%) and pyrite (1%), lesser sphalerite (<1%), in matrix of breccia. -Fine grained disseminated pyrite matrix infill -Calcite veins show deformation, few are planar.							
397.28	397.40	0.12	MBL	FG	Submassive pyrrhotite (30%) and sphalerite (10%)							
397.40	398.63	1.23	MBL	FG	Breccia with subrounded clasts, dominantly of marble, in a fine grained matrix, cut by moderate angle calcite veins. - Transition to more ductile flow evident in matrix. - Disseminated pyrrhotite (1%) and pyrite (<1%), lesser sphalerite (<1%), in matrix of breccia. -Fine grained disseminated pyrite matrix infill -Calcite veins show deformation, few are planar.							
398.63	398.66	0.03	MBL	FG	Submassive pyrrhotite (20%) and sphalerite (2%)							

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
398.66	398.81	0.15	MBL	FG	Breccia with subrounded clasts, dominantly of marble, in a fine grained matrix, cut by moderate angle calcite veins. - Transition to more ductile flow evident in matrix. - Disseminated pyrrhotite (1%) and pyrite (<1%), lesser sphalerite(<1%), in matrix of breccia. -Fine grained disseminated pyrite matrix infill -Calcite veins show deformation, few are planar.							
398.81	398.82	0.01	MBL	FG	Submassive pyrrhotite (20%), and sphalerite (1%)							
398.82	398.87	0.05	MBL	FG	Breccia with subrounded clasts, dominantly of marble, in a fine grained matrix, cut by moderate angle calcite veins. - Transition to more ductile flow evident in matrix. - Disseminated pyrrhotite (<1%) and pyrite (<1%), lesser sphalerite (<1%), in matrix of breccia. -Fine grained disseminated pyrite matrix infill -Calcite veins show deformation, few are planar.							
398.87	398.88	0.01	MBL	FG	Submassive pyrrhotite (7%) and sphalerite (1%)							

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
398.88	424.59	25.71	MBL	FG	Breccia with subrounded clasts, dominantly of marble, in a fine grained matrix, cut by moderate angle calcite veins. - Transition to more ductile flow evident in matrix. - Disseminated pyrrhotite (<1%) and pyrite (<1%), lesser sphalerite (<1%), in matrix of breccia. -Fine grained disseminated pyrite matrix infill -Calcite veins show deformation, few are planar.							
424.59	475.88	51.29	MBL	FG	Breccia with subrounded clasts, dominantly of LST, in a fine grained matrix, cut by moderate angle calcite veins. - Transition to more ductile flow evident in matrix. - Disseminated pyrrhotite (<1%) and pyrite (2%), lesser sphalerite (<1%), in matrix of breccia. -Fine grained disseminated pyrite matrix inll -Calcite veins show deformation, few are planar. - 429.90-429.95m: Spahlerite vein in calcite							

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Kathy Zone

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
0.00	2.94	2.94	0	0	0.00	0	--	--	--	No recovery
2.94	3.05	0.11	0.11	100	0.00	0	0R	4H	1W	
3.05	6.10	3.05	0.83	27	0.12	4	0R	4H	1W	
6.10	9.14	3.04	2.12	70	0.13	4	0R	4H	1W	Two 10cm RBZ slightly oxidized
9.14	12.19	3.05	2.84	93	0.89	29	0R	4H	1W	
12.19	15.24	3.05	2.44	80	0.46	15	0R	4H	1W	
15.24	18.29	3.05	3	98	1.03	34	0R	4H	1W	0.5mm Oxidized vein with sulphides (Py?)
18.29	21.34	3.05	2.41	79	0.44	14	0R	4H	1W	1cm oxidized VN with patchy 1mm Py. Three 5cm RBZ moderately oxidized
21.34	24.38	3.04	2.79	92	1.03	34	0R	4H	1W	One 5cm RBZ
24.38	27.43	3.05	2.67	88	0.90	30	0R	4H	1W	
27.43	30.48	3.05	2.82	92	1.28	42	0R	4H	1W	One 10cm RBZ moderately oxidized
30.48	33.53	3.05	1.86	61	0.49	16	0R	4H	1W	Highly fractured and slightly oxidized
33.53	36.58	3.05	2.35	77	0.28	9	0R	4H	1W	Highly fractured with several RBZ's (5-10cm) and moderately oxidized
36.58	39.62	3.04	2.43	80	0.43	14	0R	4H	1W	Highly fractured and slighty oxidized
39.62	42.67	3.05	2.66	87	0.28	9	0R	4H	1W	
42.67	45.72	3.05	2.05	67	0.00	0	0R	4H	1W	Highly fractured- 10cm RBZ
45.72	48.77	3.05	2.26	74	0.15	5	0R	4H	1W	Highly fractured and moderately oxidized and pitted with several RBZ
48.77	51.82	3.05	2.44	80	1.09	36	0R	3H	1W	
51.82	54.86	3.04	2.3	76	0.56	18	0R	3H	1W	
54.86	57.91	3.05	2.42	79	0.58	19	0R	4H	1W	Moderately fractured and slightly oxidized with several RBZ's (5-10cm)
57.91	60.96	3.05	1.95	64	0.38	12	0R	4H	1W	Highly fractured and slightly oxidized with several RBZ's (5-15cm)
60.96	64.01	3.05	1.81	59	0.41	13	0R	4H	1W	Moderate- highly fractured with two x10cm RBZ's
64.01	67.06	3.05	1.12	37	0.15	5	0R	4H	1W	Highly fractured with several RBZ's (10-40cm)
67.06	70.10	3.04	2.18	72	0.16	5	0R	4H	1W	Highly fractured with several RBZ's (10-40cm)

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
70.10	73.15	3.05	1.87	61	0.00	0	0R	4H	1W	Highly fractured
73.15	76.20	3.05	1.98	65	0.12	4	0R	4H	1W	Highly fractured with several 5cm RBZ's
76.20	79.25	3.05	2.59	85	1.11	36	0R	4H	1W	
79.25	82.30	3.05	2.01	66	0.69	23	0R	3H	1W	White/cream VN's with sulphides and 1mm pink mineral throughout
82.30	85.34	3.04	2.33	77	0.38	13	0R	3H	1W	
85.34	88.39	3.05	2.39	78	0.43	14	0R	3H	1W	
88.39	91.44	3.05	2.44	80	0.69	23	0R	4H	1W	
91.44	94.49	3.05	2.18	71	0.17	6	0R	2H	1W	10cm fault gouge
94.49	97.54	3.05	2.6	85	0.45	15	0R	3H	1W	
97.54	100.58	3.04	2.48	82	0.54	18	0R	2H	1W	
100.58	103.63	3.05	2.33	76	0.46	15	0R	1H	1W	
103.63	106.68	3.05	2.63	86	0.28	9	0R	2H	1W	
106.68	109.73	3.05	2.68	88	0.85	28	0R	2H	1W	Disseminated sulphides throughout
109.73	112.78	3.05	2.52	83	0.90	30	0R	3H	1W	VN's of soft white material and darker green mineral (chlorite?). Disseminated/patchy sulphides (Py?) throughout
112.78	115.82	3.04	2.72	89	0.33	11	0R	4H	1W	
115.82	118.87	3.05	1.68	55	0.00	0	0R	4H	1W	Small red/pink minerals on some fracture surfaces (sphalerite?)
118.87	121.92	3.05	1.32	43	0.11	4	0R	3H	1W	
121.92	124.97	3.05	1.82	60	0.00	0	0R	4H	1W	
124.97	128.02	3.05	1.78	58	0.15	5	0R	4H	1W	
128.02	131.06	3.04	1.18	39	0.82	27	0R	3H	1W	
131.06	134.11	3.05	2.57	84	0.72	24	0R	1H	6W	0.15 m RBZ
134.11	137.16	3.05	1.35	44	0.81	27	0R	1H	6W	0.20 m RBZ
137.16	140.21	3.05	2.57	84	1.21	40	0R	1H	2W	
140.21	143.26	3.05	1.88	62	0.29	10	0R	1H	2W	VB and skarn
143.26	146.30	3.04	1.16	38	0.00	0	0R	1H	1W	Mainly fault gouge
146.30	149.35	3.05	0.88	29	0.00	0	0R	1H	2W	Mainly fault gouge with VB at end of run
149.35	152.40	3.05	2.88	94	0.54	18	0R	1H	3W	Mainly fault gouge and altered clay with Tr
152.40	155.45	3.05	2.07	68	0.36	12	0R	1H	2W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
155.45	158.50	3.05	1.76	58	0.57	19	0R	1H	1W	0.70m altered clay
158.50	161.54	3.04	3.04	100	2.00	66	0R	1H	1W	
161.54	164.59	3.05	2.26	74	1.05	34	1R	1H	1W	
164.59	167.64	3.05	3.05	100	1.70	56	2R	2H	1W	
167.64	170.69	3.05	2.94	96	1.73	57	1R	4H	1W	8cm (carbonate?) VN with slickenside jointing
170.69	173.74	3.05	3.04	100	1.90	62	3R	4H	1W	
173.74	174.65	0.91	0.91	100	0.72	79	2R	4H	1W	
174.65	177.70	3.05	1.62	53	1.62	53	2R	3H	1W	Resumption of drilling. Short run might be due to shift in pad height.
177.70	180.75	3.05	3.05	100	2.35	77	1R	4H	1W	
180.75	183.79	3.04	2.98	98	2.90	95	0R	4H	1W	
183.79	186.84	3.05	3.05	100	2.84	93	1R	4H	1W	
186.84	189.89	3.05	3.04	100	3.04	100	2R	4H	1W	
189.89	192.94	3.05	3	98	2.94	96	2R	4H	1W	
192.94	195.99	3.05	3.02	99	2.71	89	1R	4H	1W	
195.99	199.03	3.04	3	99	2.96	97	1R	4H	1W	
199.03	202.08	3.05	3.04	100	2.79	91	1R	4H	1W	
202.08	205.13	3.05	3.05	100	2.72	89	1R	4H	2W	
205.13	208.18	3.05	3.02	99	2.18	71	2R	4H	1W	
208.18	211.23	3.05	3.05	100	2.95	97	3R	4H	2W	
211.23	214.27	3.04	3.04	100	2.77	91	3R	4H	2W	
214.27	217.32	3.05	3	98	2.44	80	1R	3H	1W	
217.32	220.37	3.05	3	98	2.61	86	2R	4H	1W	
220.37	223.42	3.05	3.04	100	2.77	91	2R	4H	1W	
223.42	226.45	3.03	3.03	100	2.91	96	2R	4H	1W	
226.45	229.51	3.06	3.05	100	2.74	90	2R	4H	1W	
229.51	232.56	3.05	3	98	3.00	98	1R	3H	1W	
232.56	235.61	3.05	2.98	98	2.88	94	1R	3H	1W	
235.61	238.66	3.05	3.05	100	3.03	99	0R	4H	1W	
238.66	241.71	3.05	3.03	99	2.98	98	1R	4H	1W	
241.71	244.75	3.04	3.04	100	2.93	96	0R	4H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
244.75	247.80	3.05	3	98	3.00	98	0R	4H	1W	
247.80	250.85	3.05	3.05	100	2.99	98	1R	4H	1W	
250.85	253.90	3.05	3.05	100	3.05	100	0R	5H	1W	
253.90	256.95	3.05	3.05	100	3.05	100	1R	5H	1W	
256.95	259.99	3.04	2.9	95	2.90	95	0R	4H	1W	
259.99	263.04	3.05	3.05	100	3.05	100	0R	4H	1W	
263.04	266.09	3.05	3.05	100	3.05	100	1R	4H	1W	
266.09	269.14	3.05	3.05	100	3.00	98	1R	4H	1W	
269.14	272.19	3.05	3.05	100	3.05	100	1R	4H	1W	
272.19	275.23	3.04	3.04	100	2.80	92	1R	4H	1W	
275.23	278.28	3.05	2.93	96	2.93	96	0R	4H	1W	
278.28	281.33	3.05	3.05	100	3.00	98	1R	4H	1W	
281.33	284.38	3.05	3.05	100	3.00	98	1R	4H	1W	
284.38	287.43	3.05	3.05	100	2.91	95	1R	4H	1W	
287.43	290.47	3.04	3	99	2.00	66	1R	5H	1W	
290.47	293.52	3.05	3	98	2.55	84	1R	4H	1W	
293.52	296.57	3.05	3.05	100	3.00	98	1R	4H	1W	
296.57	299.62	3.05	3.05	100	2.83	93	1R	4H	1W	
299.62	302.67	3.05	2.95	97	2.72	89	2R	4H	1W	
302.67	305.71	3.04	3	99	2.79	92	1R	4H	1W	
305.71	308.76	3.05	3.05	100	3.02	99	1R	4H	1W	
308.76	311.81	3.05	2.77	91	2.61	86	2R	4H	1W	
311.81	314.86	3.05	3.05	100	3.05	100	1R	4H	1W	
314.86	317.91	3.05	2.98	98	2.91	95	1R	5H	1W	
317.91	320.95	3.04	2.96	97	2.80	92	2R	5H	1W	
320.95	324.00	3.05	3	98	2.92	96	1R	4H	1W	
324.00	327.05	3.05	3.05	100	3.04	100	1R	5H	1W	
327.05	330.10	3.05	3.05	100	3.04	100	1R	4H	1W	
330.10	333.15	3.05	3.05	100	3.02	99	1R	4H	1W	
333.15	336.19	3.04	3.04	100	3.03	100	1R	4H	1W	
336.19	339.24	3.05	3	98	2.96	97	1R	4H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
339.24	342.29	3.05	2.93	96	2.81	92	1R	4H	1W	
342.29	345.34	3.05	3.03	99	2.76	90	1R	4H	1W	
345.34	348.39	3.05	3.05	100	3.05	100	1R	4H	1W	
348.39	351.43	3.04	2.99	98	2.83	93	2R	5H	1W	
351.43	354.48	3.05	2.99	98	2.98	98	2R	5H	1W	
354.48	357.53	3.05	3.05	100	2.96	97	2R	5H	1W	
357.53	360.58	3.05	2.99	98	2.98	98	2R	5H	1W	
360.58	363.63	3.05	3.05	100	3.04	100	3R	4H	1W	
363.63	366.67	3.04	3.04	100	3.00	99	2R	4H	1W	
366.67	369.72	3.05	3.04	100	2.98	98	2R	4H	1W	
369.72	372.77	3.05	3.05	100	2.91	95	2R	4H	1W	
372.77	375.82	3.05	3.05	100	3.00	98	1R	4H	1W	
375.82	378.87	3.05	3.03	99	2.84	93	1R	4H	1W	
378.87	381.91	3.04	3.04	100	2.88	95	2R	4H	1W	
381.91	384.96	3.05	3.04	100	2.90	95	2R	4H	1W	
384.96	388.02	3.06	3.02	99	2.90	95	2R	5H	1W	
388.02	391.06	3.04	3.04	100	3.00	99	1R	5H	1W	
391.06	394.11	3.05	3.02	99	3.01	99	2R	4H	1W	
394.11	397.15	3.04	3.04	100	2.87	94	1R	4H	1W	
397.15	400.20	3.05	3.05	100	2.88	94	1R	4H	1W	
400.20	403.25	3.05	3.04	100	2.91	95	2R	4H	1W	
403.25	406.30	3.05	2.99	98	2.94	96	2R	4H	1W	
406.30	409.35	3.05	3.05	100	3.02	99	1R	4H	1W	
409.35	412.39	3.04	3.04	100	3.01	99	2R	4H	1W	
412.39	415.44	3.05	3.04	100	3.04	100	1R	4H	1W	
415.44	418.49	3.05	3.05	100	3.05	100	1R	4H	1W	
418.49	421.54	3.05	3.05	100	3.05	100	1R	4H	1W	
421.54	424.59	3.05	3.05	100	3.04	100	1R	4H	1W	
424.59	427.63	3.04	3.04	100	2.91	96	2R	4H	1W	
427.63	430.68	3.05	3.04	100	2.92	96	2R	4H	1W	
430.68	433.73	3.05	3.03	99	2.98	98	2R	4H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
433.73	436.78	3.05	3.05	100	3.05	100	2R	4H	1W	
436.78	439.83	3.05	3	98	2.93	96	2R	4H	1W	
439.83	442.87	3.04	3.04	100	3.04	100	2R	4H	1W	
442.87	445.92	3.05	3.04	100	2.94	96	2R	4H	1W	
445.92	448.97	3.05	3.05	100	2.96	97	2R	4H	1W	
448.97	452.02	3.05	2.95	97	2.95	97	2R	4H	1W	
452.02	455.07	3.05	3.05	100	2.77	91	2R	4H	1W	
455.07	458.11	3.04	3.04	100	3.00	99	2R	4H	1W	
458.11	461.16	3.05	2.95	97	2.70	89	2R	4H	1W	
461.16	464.21	3.05	2.92	96	2.20	72	2R	4H	1W	
464.21	467.26	3.05	3.05	100	2.93	96	2R	4H	1W	
467.26	470.31	3.05	3.03	99	2.87	94	2R	4H	1W	
470.31	473.35	3.04	3.04	100	3.01	99	2R	4H	1W	
473.35	475.88	2.53	2.5	99	2.41	95	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	W842959	☐	R19-D20	Core	ML-2	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W843025	☐	R19-D22	Core	ML-1	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W843013	☐	R19-D21	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W842502	☐	R19-D08	Core	ML-2	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W842990	☐	R19-D21	Core	ML-2	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W842952	☐	R19-D20	Core	ML-2	☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W842949	☐	R19-D20	Core	ML-1	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W842934	☐	R19-D19	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W842923	☐	R19-D19	Core	ML-2	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W842899	☐	R19-D18	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W842891	☐	R19-D18	Core	ML-2	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W842574	☐	R19-D10	Core	ML-2	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W843001	☐	R19-D21	Core	ML-1	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W842563	☐	R19-D10	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W842557	☐	R19-D09	Core	ML-3	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W842554	☐	R19-D09	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W842525	☐	R19-D09	Core	ML-1	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W842907	☐	R19-D19	Core	ML-1	☐	☐	☐
3.05	6.10	3.05	SHL, OVB	0.83	27	W842499	☐	R19-D08	Core		☐	☐	☐
6.10	9.14	3.04	SHL	2.12	70	W842500	☐	R19-D08	Core		☐	☐	☐
9.14	12.19	3.05	SHL	2.84	93	W842501	☐	R19-D08	Core		☐	☐	☐
12.19	15.24	3.05	SHL	3.00	98	W842503	☐	R19-D08	Core		☐	☐	☐
15.24	18.29	3.05	SHL	3.00	98	W842504	☐	R19-D08	Core		☐	☐	☐
18.29	19.90	1.61	SHL	1.38	86	W842505	☐	R19-D08	Core		☐	☐	☐
19.90	21.34	1.44	SHL	1.15	80	W842506	☐	R19-D08	Core		☐	☐	☐
21.34	24.38	3.04	SHL	2.79	92	W842507	☐	R19-D08	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
24.38	27.43	3.05	SHL	2.67	88	W842508	☐	R19-D08	Core		☐	☐	☐
27.43	30.48	3.05	SHL	2.82	92	W842509	☐	R19-D08	Core		☐	☐	☐
30.48	33.53	3.05	SHL	1.86	61	W842510	☐	R19-D08	Core		☐	☐	☐
33.53	36.58	3.05	SHL	2.35	77	W842511	☐	R19-D08	Core		☐	☐	☐
36.58	39.62	3.04	SHL	2.43	80	W842512	☐	R19-D08	Core		☐	☐	☐
39.62	42.67	3.05	SHL	2.66	87	W842513	☐	R19-D08	Core		☐	☐	☐
42.67	45.72	3.05	SHL	2.05	67	W842514	☐	R19-D08	Core		☐	☐	☐
45.72	48.77	3.05	SHL	2.26	74	W842515	☐	R19-D08	Core		☐	☐	☐
48.77	49.70	0.93	SKN	0.91	98	W842516	☐	R19-D08	Core		☐	☐	☐
49.70	51.82	2.12	SHL	1.55	73	W842517	☐	R19-D08	Core		☐	☐	☐
49.70	51.82	2.12	SHL	1.55	73	W842518	☐	R19-D08	Core		☐	☐	☑
51.82	54.86	3.04	SHL	2.30	76	W842519	☐	R19-D08	Core		☐	☐	☐
54.86	57.91	3.05	SHL	2.42	79	W842520	☐	R19-D08	Core		☐	☐	☐
57.91	60.96	3.05	SHL	1.95	64	W842521	☐	R19-D09	Core		☐	☐	☐
60.96	64.01	3.05	SHL	1.81	59	W842522	☐	R19-D09	Core		☐	☐	☐
64.01	67.06	3.05	SHL	1.12	37	W842523	☐	R19-D09	Core		☐	☐	☐
67.06	70.10	3.04	SHL	2.18	72	W842524	☐	R19-D09	Core		☐	☐	☐
70.10	73.15	3.05	SHL	1.87	61	W842526	☐	R19-D09	Core		☐	☐	☐
73.15	76.20	3.05	SHL	1.98	65	W842527	☐	R19-D09	Core		☐	☐	☐
76.20	78.85	2.65	SHL	2.23	84	W842528	☐	R19-D09	Core		☐	☐	☐
78.85	80.50	1.65	SHL	1.04	63	W842529	☐	R19-D09	Core		☐	☐	☐
80.50	82.30	1.80	SHL	1.55	86	W842530	☐	R19-D09	Core		☐	☐	☐
82.30	85.34	3.04	SHL	2.33	77	W842531	☐	R19-D09	Core		☐	☐	☐
85.34	88.39	3.05	SHL	2.39	78	W842532	☐	R19-D09	Core		☐	☐	☐
88.39	91.44	3.05	SHL	2.44	80	W842533	☐	R19-D09	Core		☐	☐	☐
91.44	94.49	3.05	SHL	2.18	71	W842534	☐	R19-D09	Core		☐	☐	☐
91.44	94.49	3.05	SHL	2.18	71	W842535	☐	R19-D09	Core		☐	☐	☑
94.49	97.54	3.05	SHL	2.60	85	W842536	☐	R19-D09	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
97.54	100.58	3.04	SHL	2.48	82	W842537	☐	R19-D09	Core		☐	☐	☐
100.58	103.63	3.05	SHL	2.33	76	W842538	☐	R19-D09	Core		☐	☐	☐
103.63	106.68	3.05	SHL	2.63	86	W842539	☐	R19-D09	Core		☐	☐	☐
106.68	109.73	3.05	SHL	2.68	88	W842540	☐	R19-D09	Core		☐	☐	☐
109.73	111.07	1.34	SHL	1.18	88	W842541	☐	R19-D09	Core		☐	☐	☐
111.07	113.75	2.68	SHL	1.37	51	W842542	☐	R19-D09	Core		☐	☐	☐
113.75	115.82	2.07	SHL	2.02	98	W842543	☐	R19-D09	Core		☐	☐	☐
115.82	118.00	2.18	SHL	1.38	63	W842544	☐	R19-D09	Core		☐	☐	☐
118.00	121.00	3.00	SHL	1.60	53	W842545	☐	R19-D09	Core		☐	☐	☐
121.00	124.00	3.00	SHL	1.55	52	W842546	☐	R19-D09	Core		☐	☐	☐
121.00	124.00	3.00	SHL	1.55	52	W842547	☐	R19-D09	Core		☐	☑	☐
124.00	125.95	1.95	SHL	1.12	57	W842548	☐	R19-D09	Core		☐	☐	☐
125.95	128.02	2.07	SHL	1.24	60	W842549	☐	R19-D09	Core		☐	☐	☐
128.02	131.06	3.04	SKN	1.18	39	W842550	☐	R19-D09	Core		☐	☐	☐
131.06	132.30	1.24	SKN	1.10	89	W842551	☐	R19-D09	Core		☐	☐	☐
132.30	134.11	1.81	SKN	1.52	84	W842552	☐	R19-D09	Core		☐	☐	☐
134.11	137.16	3.05	SKN	1.35	44	W842553	☐	R19-D09	Core		☐	☐	☐
137.16	139.26	2.10	SKN	1.74	83	W842555	☐	R19-D09	Core		☐	☐	☐
139.26	141.82	2.56	SKN	1.73	68	W842556	☐	R19-D09	Core		☐	☐	☐
141.82	143.26	1.44	SKN	0.96	67	W842558	☐	R19-D09	Core		☐	☐	☐
143.26	146.30	3.04	SKN	1.16	38	W842559	☐	R19-D09	Core		☐	☐	☐
146.30	149.35	3.05	SKN	0.88	29	W842560	☐	R19-D09	Core		☐	☐	☐
149.35	151.00	1.65	SKN	1.52	92	W842561	☐	R19-D10	Core		☐	☐	☐
151.00	152.40	1.40	SKN	1.21	86	W842562	☐	R19-D10	Core		☐	☐	☐
152.40	155.45	3.05	SKN	2.07	68	W842564	☐	R19-D10	Core		☐	☐	☐
155.45	158.50	3.05	SKN	1.76	58	W842565	☐	R19-D10	Core		☐	☐	☐
155.45	158.50	3.05	SKN	1.76	58	W842566	☐	R19-D10	Core		☐	☐	☑
158.50	160.61	2.11	SKN	2.08	99	W842567	☐	R19-D10	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
160.61	162.90	2.29	SKN	1.77	77	W842568	☐	R19-D10	Core		☐	☐	☐
162.90	164.59	1.69	SKN, LST	1.24	73	W842569	☐	R19-D10	Core		☐	☐	☐
164.59	167.64	3.05	LST	3.05	100	W842570	☐	R19-D10	Core		☐	☐	☐
167.64	169.47	1.83	LST	1.78	97	W842571	☐	R19-D10	Core		☐	☐	☐
169.47	171.97	2.50	LST	2.34	94	W842572	☐	R19-D10	Core		☐	☐	☐
171.97	174.65	2.68	LST	2.68	100	W842573	☐	R19-D10	Core		☐	☐	☐
174.65	177.70	3.05	PEG, LST	1.62	53	W842873	☐	R19-D18	Core		☐	☐	☐
177.70	180.75	3.05	PEG	3.05	100	W842874	☐	R19-D18	Core		☐	☐	☐
180.75	182.25	1.50	PEG	1.49	99	W842875	☐	R19-D18	Core		☐	☐	☐
182.25	183.27	1.02	PEG	0.96	94	W842876	☐	R19-D18	Core		☐	☐	☐
182.25	183.27	1.02	PEG	0.96	94	W842877	☐	R19-D18	Core		☐	☐	☑
183.27	183.79	0.52	PEG	0.52	100	W842878	☐	R19-D18	Core		☐	☐	☐
183.79	186.84	3.05	CGL	3.05	100	W842879	☐	R19-D18	Core		☐	☐	☐
186.84	189.89	3.05	CGL	3.04	100	W842880	☐	R19-D18	Core		☐	☐	☐
189.89	192.94	3.05	CGL	3.00	98	W842881	☐	R19-D18	Core		☐	☐	☐
192.94	195.99	3.05	CGL	3.02	99	W842882	☐	R19-D18	Core		☐	☐	☐
195.99	199.03	3.04	CGL	3.00	99	W842883	☐	R19-D18	Core		☐	☐	☐
199.03	202.08	3.05	CGL	3.04	100	W842884	☐	R19-D18	Core		☐	☐	☐
202.08	205.13	3.05	CGL	3.05	100	W842885	☐	R19-D18	Core		☐	☐	☐
205.13	208.18	3.05	CGL	3.02	99	W842886	☐	R19-D18	Core		☐	☐	☐
208.18	211.23	3.05	CGL	3.05	100	W842887	☐	R19-D18	Core		☐	☐	☐
211.23	212.89	1.66	CGL	1.66	100	W842888	☐	R19-D18	Core		☐	☐	☐
212.89	214.27	1.38	CGL	1.38	100	W842889	☐	R19-D18	Core		☐	☐	☐
214.27	217.32	3.05	CGL	3.00	98	W842890	☐	R19-D18	Core		☐	☐	☐
217.32	220.37	3.05	CGL	3.00	98	W842892	☐	R19-D18	Core		☐	☐	☐
220.37	223.42	3.05	CGL	3.04	100	W842893	☐	R19-D18	Core		☐	☐	☐
223.42	226.45	3.03	CGL	3.03	100	W842894	☐	R19-D18	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
226.45	229.51	3.06	CGL	3.05	100	W842895	☐	R19-D18	Core		☐	☐	☐
229.51	232.56	3.05	CGL	3.00	98	W842896	☐	R19-D18	Core		☐	☐	☐
232.56	233.74	1.18	PEG	1.17	99	W842897	☐	R19-D18	Core		☐	☐	☐
233.74	234.36	0.62	PEG	0.57	92	W842898	☐	R19-D18	Core		☐	☐	☐
234.36	235.61	1.25	PEG	1.23	98	W842900	☐	R19-D18	Core		☐	☐	☐
235.61	238.66	3.05	CGL	3.05	100	W842901	☐	R19-D19	Core		☐	☐	☐
238.66	241.71	3.05	CGL	3.03	99	W842902	☐	R19-D19	Core		☐	☐	☐
241.71	244.75	3.04	CGL	3.04	100	W842903	☐	R19-D19	Core		☐	☐	☐
244.75	247.80	3.05	CGL	3.00	98	W842904	☐	R19-D19	Core		☐	☐	☐
247.80	250.66	2.86	CGL	2.83	99	W842905	☐	R19-D19	Core		☐	☐	☐
250.66	251.07	0.41	CGL	0.36	88	W842906	☐	R19-D19	Core		☐	☐	☐
251.07	253.90	2.83	CGL	2.83	100	W842908	☐	R19-D19	Core		☐	☐	☐
253.90	256.95	3.05	CGL	3.05	100	W842909	☐	R19-D19	Core		☐	☐	☐
256.95	259.99	3.04	CGL	2.90	95	W842910	☐	R19-D19	Core		☐	☐	☐
259.99	263.04	3.05	CGL	3.05	100	W842911	☐	R19-D19	Core		☐	☐	☐
263.04	266.09	3.05	CGL	3.05	100	W842912	☐	R19-D19	Core		☐	☐	☐
266.09	269.14	3.05	CGL	3.05	100	W842913	☐	R19-D19	Core		☐	☐	☐
269.14	272.19	3.05	CGL	3.05	100	W842914	☐	R19-D19	Core		☐	☐	☐
269.14	272.19	3.05	CGL	3.05	100	W842915	☐	R19-D19	Core		☐	☑	☐
272.19	275.23	3.04	CGL	3.04	100	W842916	☐	R19-D19	Core		☐	☐	☐
275.23	278.28	3.05	CGL	2.93	96	W842917	☐	R19-D19	Core		☐	☐	☐
278.28	281.33	3.05	CGL	3.05	100	W842918	☐	R19-D19	Core		☐	☐	☐
281.33	284.38	3.05	CGL	3.05	100	W842919	☐	R19-D19	Core		☐	☐	☐
284.38	287.43	3.05	CGL	3.05	100	W842920	☐	R19-D19	Core		☐	☐	☐
287.43	289.99	2.56	CGL	2.44	95	W842921	☐	R19-D19	Core		☐	☐	☐
289.99	291.55	1.56	PEG	1.55	99	W842922	☐	R19-D19	Core		☐	☐	☐
291.55	292.81	1.26	DST	1.26	100	W842924	☐	R19-D19	Core		☐	☐	☐
292.81	294.66	1.85	DST	1.84	99	W842925	☐	R19-D19	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
294.66	295.49	0.83	DST	0.83	100	W842926	☐	R19-D19	Core		☐	☐	☐
295.49	298.00	2.51	DST	2.50	100	W842927	☐	R19-D19	Core		☐	☐	☐
298.00	300.99	2.99	DST	2.99	100	W842928	☐	R19-D19	Core		☐	☐	☐
300.99	302.95	1.96	DST	1.88	96	W842929	☐	R19-D19	Core		☐	☐	☐
302.95	305.66	2.71	DST	1.60	59	W842930	☐	R19-D19	Core		☐	☐	☐
305.66	306.07	0.41	DST	0.40	98	W842931	☐	R19-D19	Core		☐	☐	☐
305.66	306.07	0.41	DST	0.40	98	W842932	☐	R19-D19	Core		☐	☐	☑
306.07	306.92	0.85	DST	0.85	100	W842933	☐	R19-D19	Core		☐	☐	☐
306.92	308.76	1.84	DST	1.84	100	W842935	☐	R19-D19	Core		☐	☐	☐
308.76	310.34	1.58	DST	1.57	99	W842936	☐	R19-D19	Core		☐	☐	☐
310.34	313.35	3.01	DST	2.68	89	W842937	☐	R19-D19	Core		☐	☐	☐
313.35	313.61	0.26	DST	0.26	100	W842938	☐	R19-D19	Core		☐	☐	☐
313.61	315.53	1.92	DST	1.91	99	W842939	☐	R19-D19	Core		☐	☐	☐
315.53	316.83	1.30	DST	1.20	92	W842940	☐	R19-D19	Core		☐	☐	☐
316.83	318.74	1.91	DST	1.91	100	W842941	☐	R19-D20	Core		☐	☐	☐
318.74	319.84	1.10	DST	1.09	99	W842942	☐	R19-D20	Core		☐	☐	☐
319.84	320.89	1.05	DST	1.02	97	W842943	☐	R19-D20	Core		☐	☐	☐
320.89	321.47	0.58	DST	0.57	98	W842944	☐	R19-D20	Core		☐	☐	☐
321.47	323.33	1.86	DST	1.83	98	W842945	☐	R19-D20	Core		☐	☐	☐
323.33	323.58	0.25	DST	0.25	100	W842946	☐	R19-D20	Core		☐	☐	☐
323.58	325.38	1.80	DST	1.71	95	W842947	☐	R19-D20	Core		☐	☐	☐
325.38	327.42	2.04	DST	2.03	100	W842948	☐	R19-D20	Core		☐	☐	☐
327.42	330.10	2.68	DST	2.68	100	W842950	☐	R19-D20	Core		☐	☐	☐
330.10	333.00	2.90	DST	2.89	100	W842951	☐	R19-D20	Core		☐	☐	☐
333.00	333.15	0.15	DST	0.15	100	W842953	☐	R19-D20	Core		☐	☐	☐
333.15	335.05	1.90	DST	1.90	100	W842954	☐	R19-D20	Core		☐	☐	☐
335.05	336.99	1.94	DST	1.92	99	W842955	☐	R19-D20	Core		☐	☐	☐
336.99	337.90	0.91	DST	0.91	100	W842956	☐	R19-D20	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
337.90	337.97	0.07	DST	0.07	100	W842957	☐	R19-D20	Core		☐	☐	☐
337.97	339.75	1.78	DST	1.75	98	W842958	☐	R19-D20	Core		☐	☐	☐
339.75	341.57	1.82	DST	1.78	98	W842960	☐	R19-D20	Core		☐	☐	☐
341.57	343.42	1.85	DST	1.75	95	W842961	☐	R19-D20	Core		☐	☐	☐
343.42	344.91	1.49	DST	1.49	100	W842962	☐	R19-D20	Core		☐	☐	☐
344.91	347.16	2.25	DST	2.23	99	W842963	☐	R19-D20	Core		☐	☐	☐
347.16	349.02	1.86	DST	1.86	100	W842964	☐	R19-D20	Core		☐	☐	☐
349.02	351.43	2.41	DST	2.37	98	W842965	☐	R19-D20	Core		☐	☐	☐
351.43	354.48	3.05	DST	2.99	98	W842966	☐	R19-D20	Core		☐	☐	☐
354.48	357.53	3.05	DST	3.05	100	W842967	☐	R19-D20	Core		☐	☐	☐
357.53	357.68	0.15	DST	0.15	100	W842968	☐	R19-D20	Core		☐	☐	☐
357.53	357.68	0.15	DST	0.15	100	W842969	☐	R19-D20	Core		☐	☐	☑
357.68	358.84	1.16	DST	1.14	98	W842970	☐	R19-D20	Core		☐	☐	☐
358.84	360.47	1.63	DST	1.59	98	W842971	☐	R19-D20	Core		☐	☐	☐
360.47	361.50	1.03	DST	1.03	100	W842972	☐	R19-D20	Core		☐	☐	☐
361.50	361.62	0.12	DST	0.12	100	W842973	☐	R19-D20	Core		☐	☐	☐
361.50	361.62	0.12	DST	0.12	100	W842974	☐	R19-D20	Core		☐	☑	☐
361.62	361.90	0.28	DST	0.28	100	W842975	☐	R19-D20	Core		☐	☐	☐
361.90	363.63	1.73	DST	1.71	99	W842976	☐	R19-D20	Core		☐	☐	☐
363.63	366.67	3.04	DST	3.04	100	W842977	☐	R19-D20	Core		☐	☐	☐
366.67	369.72	3.05	DST	3.04	100	W842978	☐	R19-D20	Core		☐	☐	☐
369.72	372.77	3.05	DST	3.05	100	W842979	☐	R19-D20	Core		☐	☐	☐
372.77	373.69	0.92	MBL	0.92	100	W842980	☐	R19-D20	Core		☐	☐	☐
373.69	374.22	0.53	MBL	0.51	96	W842981	☐	R19-D21	Core		☐	☐	☐
374.22	375.39	1.17	MBL	1.17	100	W842982	☐	R19-D21	Core		☐	☐	☐
375.39	375.66	0.27	MBL	0.26	96	W842983	☐	R19-D21	Core		☐	☐	☐
375.66	376.14	0.48	MBL	0.48	100	W842984	☐	R19-D21	Core		☐	☐	☐
376.14	378.73	2.59	MBL	2.53	98	W842985	☐	R19-D21	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
378.73	381.65	2.92	MBL	2.91	100	W842986	☐	R19-D21	Core		☐	☐	☐
381.65	384.35	2.70	MBL	2.68	99	W842987	☐	R19-D21	Core		☐	☐	☐
384.35	385.22	0.87	MBL	0.30	34	W842988	☐	R19-D21	Core		☐	☐	☐
385.22	388.01	2.79	MBL	2.66	95	W842989	☐	R19-D21	Core		☐	☐	☐
388.01	389.35	1.34	MBL	1.34	100	W842991	☐	R19-D21	Core		☐	☐	☐
389.35	390.49	1.14	MBL	1.13	99	W842992	☐	R19-D21	Core		☐	☐	☐
390.49	391.81	1.32	MBL	1.32	100	W842993	☐	R19-D21	Core		☐	☐	☐
390.49	391.81	1.32	MBL	1.32	100	W842994	☐	R19-D21	Core		☐	☐	☑
391.81	392.89	1.08	MBL	1.08	100	W842995	☐	R19-D21	Core		☐	☐	☐
392.89	393.69	0.80	MBL	0.80	100	W842996	☐	R19-D21	Core		☐	☐	☐
393.69	395.75	2.06	MBL	2.01	98	W842997	☐	R19-D21	Core		☐	☐	☐
395.75	397.25	1.50	MBL	1.50	100	W842998	☐	R19-D21	Core		☐	☐	☐
397.25	399.01	1.76	MBL	1.76	100	W842999	☐	R19-D21	Core		☐	☐	☐
399.01	400.91	1.90	MBL	1.90	100	W843000	☐	R19-D21	Core		☐	☐	☐
400.91	403.25	2.34	MBL	2.32	99	W843002	☐	R19-D21	Core		☐	☐	☐
403.25	406.30	3.05	MBL	2.99	98	W843003	☐	R19-D21	Core		☐	☐	☐
406.30	409.35	3.05	MBL	3.05	100	W843004	☐	R19-D21	Core		☐	☐	☐
409.35	412.39	3.04	MBL	3.04	100	W843005	☐	R19-D21	Core		☐	☐	☐
412.39	415.44	3.05	MBL	3.04	100	W843006	☐	R19-D21	Core		☐	☐	☐
415.44	418.49	3.05	MBL	3.05	100	W843007	☐	R19-D21	Core		☐	☐	☐
418.49	421.54	3.05	MBL	3.05	100	W843008	☐	R19-D21	Core		☐	☐	☐
421.54	424.59	3.05	MBL	3.05	100	W843009	☐	R19-D21	Core		☐	☐	☐
424.59	427.63	3.04	MBL	3.04	100	W843010	☐	R19-D21	Core		☐	☐	☐
427.63	429.75	2.12	MBL	2.11	100	W843011	☐	R19-D21	Core		☐	☐	☐
429.75	429.92	0.17	MBL	0.17	100	W843012	☐	R19-D21	Core		☐	☐	☐
429.92	430.68	0.76	MBL	0.73	96	W843014	☐	R19-D21	Core		☐	☐	☐
429.92	430.68	0.76	MBL	0.73	96	W843015	☐	R19-D21	Core		☐	☑	☐
430.68	433.73	3.05	MBL	3.03	99	W843016	☐	R19-D21	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
433.73	436.78	3.05	MBL	3.05	100	W843017	☐	R19-D21	Core		☐	☐	☐
436.78	439.83	3.05	MBL	3.00	98	W843018	☐	R19-D21	Core		☐	☐	☐
439.83	442.87	3.04	MBL	3.04	100	W843019	☐	R19-D21	Core		☐	☐	☐
442.87	445.92	3.05	MBL	3.04	100	W843020	☐	R19-D21	Core		☐	☐	☐
445.92	448.97	3.05	MBL	3.05	100	W843021	☐	R19-D22	Core		☐	☐	☐
448.97	452.02	3.05	MBL	2.95	97	W843022	☐	R19-D22	Core		☐	☐	☐
452.02	455.07	3.05	MBL	3.05	100	W843023	☐	R19-D22	Core		☐	☐	☐
455.07	458.11	3.04	MBL	3.04	100	W843024	☐	R19-D22	Core		☐	☐	☐
458.11	461.16	3.05	MBL	2.95	97	W843026	☐	R19-D22	Core		☐	☐	☐
461.16	464.21	3.05	MBL	2.92	96	W843027	☐	R19-D22	Core		☐	☐	☐
464.21	467.26	3.05	MBL	3.05	100	W843028	☐	R19-D22	Core		☐	☐	☐
467.26	470.31	3.05	MBL	3.03	99	W843029	☐	R19-D22	Core		☐	☐	☐
470.31	473.35	3.04	MBL	3.04	100	W843030	☐	R19-D22	Core		☐	☐	☐
473.35	475.88	2.53	MBL	2.50	99	W843031	☐	R19-D22	Core		☐	☐	☐

Sample Results

Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
R19-D09	W842554	0.00	0.00	0.01	0	2	1	13.0	0	0.10	☐	☐	☑	☐	
R19-D21	W843013	0.00	0.00	0.01	0	2	1	8.0	0	0.05	☐	☐	☑	☐	
R19-D21	W843001	0.00	0.00	0.34	3	842	57	132.0	76	21.40	☐	☐	☐	☑ ML-1	
		0.00	3.05								☐	☐	☐	☐	OVB
R19-D20	W842959	0.00	0.00	0.79	7	3450	35	171.0	103	34.80	☐	☐	☐	☑ ML-2	
R19-D08	W842502	0.00	0.00	0.80	6	3460	33	170.0	100	33.10	☐	☐	☐	☑ ML-2	
R19-D22	W843025	0.00	0.00	0.36	3	828	53	124.0	69	19.20	☐	☐	☐	☑ ML-1	
R19-D09	W842557	0.00	0.00	1.63	13	6430	31	221.0	108	23.80	☐	☐	☐	☑ ML-3	
R19-D19	W842907	0.00	0.00	0.34	3	805	52	118.0	65	19.60	☐	☐	☐	☑ ML-1	
R19-D10	W842563	0.00	0.00	0.01	0	2	2	87.0	1	3.80	☐	☐	☑	☐	
R19-D18	W842891	0.00	0.00	0.82	7	3380	32	163.0	112	32.60	☐	☐	☐	☑ ML-2	
R19-D10	W842574	0.00	0.00	0.85	7	3220	31	163.0	109	30.20	☐	☐	☐	☑ ML-2	
R19-D21	W842990	0.00	0.00	0.82	6	3400	34	167.0	104	32.80	☐	☐	☐	☑ ML-2	
R19-D19	W842934	0.00	0.00	0.01	0	2	1	113.0	0	1.00	☐	☐	☑	☐	



Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
R19-D20	W842952	0.00	0.00	0.01	0	2	1	15.0	0	0.20	☐	☐	☑	☐ ML-2	
R19-D20	W842949	0.00	0.00	0.36	3	831	55	133.0	72	23.30	☐	☐	☐	☑ ML-1	
R19-D18	W842899	0.00	0.00	0.01	0	4	3	18.0	0	0.10	☐	☐	☑	☐	
R19-D09	W842525	0.00	0.00	0.33	3	812	57	135.0	74	21.80	☐	☐	☐	☑ ML-1	
R19-D19	W842923	0.00	0.00	0.80	7	3220	33	161.0	97	29.70	☐	☐	☐	☑ ML-2	
R19-D08	W842499	3.05	6.10	0.01	0	34	5	82.0	6	1.10	☐	☐	☐	☐	
R19-D08	W842500	6.10	9.14	0.01	0	27	5	92.0	6	1.30	☐	☐	☐	☐	
R19-D08	W842501	9.14	12.19	0.01	0	41	7	137.0	5	1.10	☐	☐	☐	☐	
R19-D08	W842503	12.19	15.24	0.01	0	40	7	215.0	7	1.40	☐	☐	☐	☐	
R19-D08	W842504	15.24	18.29	0.01	0	45	6	281.0	12	1.50	☐	☐	☐	☐	
R19-D08	W842505	18.29	19.90	0.01	1	119	17	709.0	12	1.10	☐	☐	☐	☐	
R19-D08	W842506	19.90	21.34	0.09	2	132	31	503.0	10	1.20	☐	☐	☐	☐	
R19-D08	W842507	21.34	24.38	0.01	0	35	6	359.0	11	1.30	☐	☐	☐	☐	
R19-D08	W842508	24.38	27.43	0.01	0	27	9	330.0	4	0.90	☐	☐	☐	☐	
R19-D08	W842509	27.43	30.48	0.02	0	55	8	312.0	6	1.20	☐	☐	☐	☐	

Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
R19-D08	W842510	30.48	33.53	0.01	0	115	11	407.0	3	1.10	☐	☐	☐	☐	
R19-D08	W842511	33.53	36.58	0.01	1	214	17	612.0	3	1.10	☐	☐	☐	☐	
R19-D08	W842512	36.58	39.62	0.01	0	152	10	345.0	3	1.10	☐	☐	☐	☐	
R19-D08	W842513	39.62	42.67	0.01	0	69	7	183.0	3	1.20	☐	☐	☐	☐	
R19-D08	W842514	42.67	45.72	0.01	0	92	9	317.0	3	1.30	☐	☐	☐	☐	
R19-D08	W842515	45.72	48.77	0.01	0	106	11	948.0	5	1.10	☐	☐	☐	☐	
R19-D08	W842516	48.77	49.70	0.01	1	41	13	265.0	6	1.10	☐	☐	☐	☐	
R19-D08	W842517	49.70	51.82	0.01	0	80	13	283.0	3	1.50	☐	☐	☐	☐	
R19-D08	W842518	49.70	51.82	0.01	0	81	12	274.0	3	1.50	☐	☑	☐	☐	
R19-D08	W842519	51.82	54.86	0.01	0	93	12	396.0	3	2.30	☐	☐	☐	☐	
R19-D08	W842520	54.86	57.91	0.01	0	92	9	651.0	4	1.20	☐	☐	☐	☐	
R19-D09	W842521	57.91	60.96	0.01	0	97	14	768.0	5	1.10	☐	☐	☐	☐	
R19-D09	W842522	60.96	64.01	0.01	1	73	32	245.0	5	1.00	☐	☐	☐	☐	
R19-D09	W842523	64.01	67.06	0.01	2	65	278	1010.0	5	1.30	☐	☐	☐	☐	
R19-D09	W842524	67.06	70.10	0.01	3	46	636	3150.0	6	1.40	☐	☐	☐	☐	

Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
R19-D09	W842526	70.10	73.15	0.01	2	44	118	439.0	5	1.50	☐	☐	☐	☐	
R19-D09	W842527	73.15	76.20	0.01	2	43	280	546.0	6	1.30	☐	☐	☐	☐	
R19-D09	W842528	76.20	78.85	0.01	0	100	21	339.0	7	1.70	☐	☐	☐	☐	
R19-D09	W842529	78.85	80.50	0.01	1	134	117	373.0	11	4.40	☐	☐	☐	☐	
R19-D09	W842530	80.50	82.30	0.27	151	146	16300	25600.0	57	24.60	☐	☐	☐	☐	
R19-D09	W842531	82.30	85.34	0.01	1	88	38	156.0	9	6.90	☐	☐	☐	☐	
R19-D09	W842532	85.34	88.39	0.01	0	51	37	371.0	6	7.80	☐	☐	☐	☐	
R19-D09	W842533	88.39	91.44	0.01	0	46	12	219.0	5	7.50	☐	☐	☐	☐	
R19-D09	W842534	91.44	94.49	0.01	1	44	175	1440.0	8	3.80	☐	☐	☐	☐	
R19-D09	W842535	91.44	94.49	0.01	1	43	160	1460.0	8	3.80	☐	☑	☐	☐	
R19-D09	W842536	94.49	97.54	0.01	0	100	21	138.0	8	9.00	☐	☐	☐	☐	
R19-D09	W842537	97.54	100.58	0.01	0	129	102	1340.0	10	2.40	☐	☐	☐	☐	
R19-D09	W842538	100.58	103.63	0.01	0	76	19	195.0	10	2.10	☐	☐	☐	☐	
R19-D09	W842539	103.63	106.68	0.01	0	119	25	152.0	7	4.70	☐	☐	☐	☐	
R19-D09	W842540	106.68	109.73	0.01	0	144	65	1230.0	11	6.20	☐	☐	☐	☐	

Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
R19-D09	W842541	109.73	111.07	0.01	0	158	17	2940.0	14	30.10	☐	☐	☐	☐	
R19-D09	W842542	111.07	113.75	0.01	1	42	210	1850.0	7	6.50	☐	☐	☐	☐	
R19-D09	W842543	113.75	115.82	0.02	5	109	873	6550.0	11	2.90	☐	☐	☐	☐	
R19-D09	W842544	115.82	118.00	0.01	2	14	151	1350.0	10	5.30	☐	☐	☐	☐	
R19-D09	W842545	118.00	121.00	0.01	4	61	443	2660.0	20	7.40	☐	☐	☐	☐	
R19-D09	W842547	121.00	124.00	0.01	5	34	679	4940.0	12	4.70	☑	☐	☐	☐	
R19-D09	W842546	121.00	124.00	0.01	4	32	686	5460.0	13	6.00	☐	☐	☐	☐	
R19-D09	W842548	124.00	125.95	0.01	10	49	1365	8090.0	5	1.70	☐	☐	☐	☐	
R19-D09	W842549	125.95	128.02	0.01	1	254	36	861.0	12	17.50	☐	☐	☐	☐	
R19-D09	W842550	128.02	131.06	0.01	0	318	13	576.0	18	19.10	☐	☐	☐	☐	
R19-D09	W842551	131.06	132.30	0.01	0	32	69	5880.0	12	13.90	☐	☐	☐	☐	
R19-D09	W842552	132.30	134.11	0.01	0	23	93	2900.0	6	10.40	☐	☐	☐	☐	
R19-D09	W842553	134.11	137.16	0.01	0	30	27	3800.0	14	9.40	☐	☐	☐	☐	
R19-D09	W842555	137.16	139.26	0.01	0	22	94	1240.0	9	23.60	☐	☐	☐	☐	
R19-D09	W842556	139.26	141.82	0.01	0	31	72	1730.0	9	263.00	☐	☐	☐	☐	

Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
R19-D09	W842558	141.82	143.26	0.01	0	19	44	773.0	10	159.00	☐	☐	☐	☐	
R19-D09	W842559	143.26	146.30	0.01	0	22	124	2950.0	3	61.40	☐	☐	☐	☐	
R19-D09	W842560	146.30	149.35	0.01	1	45	81	2550.0	8	47.70	☐	☐	☐	☐	
R19-D10	W842561	149.35	151.00	0.01	0	23	69	3520.0	25	224.00	☐	☐	☐	☐	
R19-D10	W842562	151.00	152.40	0.01	0	58	97	14600.0	10	41.10	☐	☐	☐	☐	
R19-D10	W842564	152.40	155.45	0.01	0	70	36	21300.0	9	18.60	☐	☐	☐	☐	
R19-D10	W842565	155.45	158.50	0.01	0	20	34	16500.0	6	15.00	☐	☐	☐	☐	
R19-D10	W842566	155.45	158.50	0.01	0	20	36	16100.0	6	14.20	☐	☑	☐	☐	
R19-D10	W842567	158.50	160.61	0.01	0	24	5	5890.0	6	18.70	☐	☐	☐	☐	
R19-D10	W842568	160.61	162.90	0.01	0	6	6	4320.0	4	5.00	☐	☐	☐	☐	
R19-D10	W842569	162.90	164.59	0.01	0	17	5	4460.0	3	14.00	☐	☐	☐	☐	
R19-D10	W842570	164.59	167.64	0.01	0	11	4	1650.0	1	5.30	☐	☐	☐	☐	
R19-D10	W842571	167.64	169.47	0.01	0	8	2	292.0	2	3.10	☐	☐	☐	☐	
R19-D10	W842572	169.47	171.97	0.01	0	13	2	227.0	3	12.60	☐	☐	☐	☐	
R19-D10	W842573	171.97	174.65	0.01	0	9	6	102.0	13	45.30	☐	☐	☐	☐	

Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
R19-D18	W842873	174.65	177.70	0.01	0	5	2	28.0	2	5.10	☐	☐	☐	☐	
R19-D18	W842874	177.70	180.75	0.01	0	10	4	83.0	5	12.00	☐	☐	☐	☐	
R19-D18	W842875	180.75	182.25	0.01	0	10	2	28.0	4	3.00	☐	☐	☐	☐	
R19-D18	W842877	182.25	183.27	0.01	0	5	3	7.0	4	6.80	☐	☑	☐	☐	
R19-D18	W842876	182.25	183.27	0.01	0	5	3	6.0	4	6.30	☐	☐	☐	☐	
R19-D18	W842878	183.27	183.79	0.01	0	7	1	12.0	4	6.40	☐	☐	☐	☐	
R19-D18	W842879	183.79	186.84	0.01	0	9	2	48.0	2	0.60	☐	☐	☐	☐	
R19-D18	W842880	186.84	189.89	0.01	0	7	2	18.0	1	0.40	☐	☐	☐	☐	
R19-D18	W842881	189.89	192.94	0.01	0	7	2	12.0	1	0.60	☐	☐	☐	☐	
R19-D18	W842882	192.94	195.99	0.01	0	7	3	12.0	1	0.40	☐	☐	☐	☐	
R19-D18	W842883	195.99	199.03	0.01	0	12	2	317.0	6	0.30	☐	☐	☐	☐	
R19-D18	W842884	199.03	202.08	0.01	0	8	4	23.0	2	1.20	☐	☐	☐	☐	
R19-D18	W842885	202.08	205.13	0.01	0	7	3	47.0	4	3.50	☐	☐	☐	☐	
R19-D18	W842886	205.13	208.18	0.01	0	6	6	11.0	3	1.10	☐	☐	☐	☐	
R19-D18	W842887	208.18	211.23	0.01	0	7	3	13.0	3	1.40	☐	☐	☐	☐	

Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
R19-D18	W842888	211.23	212.89	0.01	0	4	2	10.0	1	2.60	☐	☐	☐	☐	
R19-D18	W842889	212.89	214.27	0.01	0	41	4	638.0	6	9.40	☐	☐	☐	☐	
R19-D18	W842890	214.27	217.32	0.01	1	34	9	1120.0	6	8.70	☐	☐	☐	☐	
R19-D18	W842892	217.32	220.37	0.01	0	36	4	202.0	2	1.00	☐	☐	☐	☐	
R19-D18	W842893	220.37	223.42	0.01	1	57	6	330.0	4	1.30	☐	☐	☐	☐	
R19-D18	W842894	223.42	226.45	0.01	0	13	4	228.0	1	0.70	☐	☐	☐	☐	
R19-D18	W842895	226.45	229.51	0.01	0	13	4	154.0	2	0.90	☐	☐	☐	☐	
R19-D18	W842896	229.51	232.56	0.01	0	17	13	423.0	9	2.90	☐	☐	☐	☐	
R19-D18	W842897	232.56	233.74	0.01	0	46	6	1560.0	13	10.90	☐	☐	☐	☐	
R19-D18	W842898	233.74	234.36	0.01	0	23	4	1060.0	10	11.90	☐	☐	☐	☐	
R19-D18	W842900	234.36	235.61	0.01	0	26	5	187.0	8	4.20	☐	☐	☐	☐	
R19-D19	W842901	235.61	238.66	0.01	0	18	5	160.0	5	2.60	☐	☐	☐	☐	
R19-D19	W842902	238.66	241.71	0.01	0	23	4	462.0	5	6.90	☐	☐	☐	☐	
R19-D19	W842903	241.71	244.75	0.01	0	16	3	199.0	6	7.10	☐	☐	☐	☐	
R19-D19	W842904	244.75	247.80	0.01	0	22	4	115.0	9	37.80	☐	☐	☐	☐	

Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
R19-D19	W842905	247.80	250.66	0.01	0	21	5	196.0	5	15.70	☐	☐	☐	☐	
R19-D19	W842906	250.66	251.07	0.01	0	12	7	174.0	5	6.50	☐	☐	☐	☐	
R19-D19	W842908	251.07	253.90	0.01	0	25	4	319.0	6	4.40	☐	☐	☐	☐	
R19-D19	W842909	253.90	256.95	0.01	0	30	4	135.0	6	3.50	☐	☐	☐	☐	
R19-D19	W842910	256.95	259.99	0.01	0	20	5	190.0	4	1.80	☐	☐	☐	☐	
R19-D19	W842911	259.99	263.04	0.01	0	16	5	62.0	6	21.90	☐	☐	☐	☐	
R19-D19	W842912	263.04	266.09	0.01	0	14	5	76.0	5	1.50	☐	☐	☐	☐	
R19-D19	W842913	266.09	269.14	0.01	0	15	7	256.0	7	2.20	☐	☐	☐	☐	
R19-D19	W842914	269.14	272.19	0.01	0	25	7	1090.0	12	6.90	☐	☐	☐	☐	
R19-D19	W842915	269.14	272.19	0.01	0	26	5	864.0	10	8.00	☑	☐	☐	☐	
R19-D19	W842916	272.19	275.23	0.01	0	35	22	414.0	12	45.60	☐	☐	☐	☐	
R19-D19	W842917	275.23	278.28	0.01	0	123	7	135.0	10	98.70	☐	☐	☐	☐	
R19-D19	W842918	278.28	281.33	0.01	0	68	6	123.0	8	28.20	☐	☐	☐	☐	
R19-D19	W842919	281.33	284.38	0.01	0	21	9	191.0	8	6.30	☐	☐	☐	☐	
R19-D19	W842920	284.38	287.43	0.01	0	29	19	526.0	18	14.20	☐	☐	☐	☐	

Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
R19-D19	W842921	287.43	289.99	0.01	0	29	19	673.0	18	14.60	☐	☐	☐	☐	
R19-D19	W842922	289.99	291.55	0.01	0	96	5	346.0	6	217.00	☐	☐	☐	☐	
R19-D19	W842924	291.55	292.81	0.01	0	15	5	444.0	1	13.00	☐	☐	☐	☐	
R19-D19	W842925	292.81	294.66	0.01	0	8	5	512.0	1	6.70	☐	☐	☐	☐	
R19-D19	W842926	294.66	295.49	0.01	0	26	17	118.0	2	10.70	☐	☐	☐	☐	
R19-D19	W842927	295.49	298.00	0.01	0	5	18	1110.0	1	11.20	☐	☐	☐	☐	
R19-D19	W842928	298.00	300.99	0.01	0	4	3	39.0	1	3.90	☐	☐	☐	☐	
R19-D19	W842929	300.99	302.95	0.01	0	53	8	2050.0	11	86.70	☐	☐	☐	☐	
R19-D19	W842930	302.95	305.66	0.01	0	39	5	2280.0	6	96.60	☐	☐	☐	☐	
R19-D19	W842932	305.66	306.07	0.01	1	243	15	69600.0	18	312.00	☐	☑	☐	☐	
R19-D19	W842931	305.66	306.07	0.01	1	252	15	69800.0	18	290.00	☐	☐	☐	☐	
R19-D19	W842933	306.07	306.92	0.01	0	50	6	10750.0	13	98.50	☐	☐	☐	☐	
R19-D19	W842935	306.92	308.76	0.01	0	24	5	1040.0	4	36.80	☐	☐	☐	☐	
R19-D19	W842936	308.76	310.34	0.01	0	13	5	288.0	5	20.30	☐	☐	☐	☐	
R19-D19	W842937	310.34	313.35	0.01	0	29	6	166.0	2	46.60	☐	☐	☐	☐	

Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
R19-D19	W842938	313.35	313.61	0.01	0	22	7	5600.0	7	122.00	☐	☐	☐	☐	
R19-D19	W842939	313.61	315.53	0.01	0	13	5	1310.0	6	55.20	☐	☐	☐	☐	Actual recovery = 2.24m
R19-D19	W842940	315.53	316.83	0.01	2	135	40	13500.0	12	90.00	☐	☐	☐	☐	
R19-D20	W842941	316.83	318.74	0.01	1	29	19	1080.0	10	115.00	☐	☐	☐	☐	
R19-D20	W842942	318.74	319.84	0.01	1	79	27	225.0	7	204.00	☐	☐	☐	☐	
R19-D20	W842943	319.84	320.89	0.01	0	9	5	2260.0	4	37.40	☐	☐	☐	☐	
R19-D20	W842944	320.89	321.47	0.01	2	19	13	191500.0	10	16.40	☐	☐	☐	☐	
R19-D20	W842945	321.47	323.33	0.01	0	4	6	788.0	2	15.30	☐	☐	☐	☐	
R19-D20	W842946	323.33	323.58	0.01	1	34	36	4770.0	8	107.00	☐	☐	☐	☐	
R19-D20	W842947	323.58	325.38	0.01	0	5	9	330.0	1	16.80	☐	☐	☐	☐	
R19-D20	W842948	325.38	327.42	0.01	0	14	16	474.0	3	84.90	☐	☐	☐	☐	
R19-D20	W842950	327.42	330.10	0.01	0	6	10	358.0	2	40.50	☐	☐	☐	☐	
R19-D20	W842951	330.10	333.00	0.01	0	7	20	479.0	2	35.70	☐	☐	☐	☐	
R19-D20	W842953	333.00	333.15	0.01	0	8	11	5980.0	5	82.20	☐	☐	☐	☐	
R19-D20	W842954	333.15	335.05	0.02	0	8	14	292.0	2	17.30	☐	☐	☐	☐	

Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
R19-D20	W842955	335.05	336.99	0.01	0	4	8	99.0	2	7.60	☐	☐	☐	☐	
R19-D20	W842956	336.99	337.90	0.02	0	15	16	68.0	2	47.80	☐	☐	☐	☐	
R19-D20	W842957	337.90	337.97	0.01	0	6	17	2190.0	4	258.00	☐	☐	☐	☐	
R19-D20	W842958	337.97	339.75	0.01	0	7	12	1200.0	2	31.40	☐	☐	☐	☐	
R19-D20	W842960	339.75	341.57	0.01	0	4	6	84.0	2	62.70	☐	☐	☐	☐	
R19-D20	W842961	341.57	343.42	0.01	0	4	17	78.0	4	85.40	☐	☐	☐	☐	
R19-D20	W842962	343.42	344.91	0.01	0	6	8	15.0	1	26.00	☐	☐	☐	☐	
R19-D20	W842963	344.91	347.16	0.01	0	5	13	291.0	2	46.80	☐	☐	☐	☐	
R19-D20	W842964	347.16	349.02	0.01	0	6	6	54.0	6	40.70	☐	☐	☐	☐	
R19-D20	W842965	349.02	351.43	0.01	0	7	6	219.0	9	31.00	☐	☐	☐	☐	
R19-D20	W842966	351.43	354.48	0.01	0	16	3	43.0	4	11.20	☐	☐	☐	☐	
R19-D20	W842967	354.48	357.53	0.01	0	36	6	57.0	4	20.30	☐	☐	☐	☐	
R19-D20	W842969	357.53	357.68	0.01	14	71	1305	2490.0	9	101.00	☐	☑	☐	☐	
R19-D20	W842968	357.53	357.68	0.01	13	67	1295	2730.0	8	95.70	☐	☐	☐	☐	
R19-D20	W842970	357.68	358.84	0.01	0	232	14	573.0	3	127.50	☐	☐	☐	☐	

Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
R19-D20	W842971	358.84	360.47	0.01	0	9	11	56.0	1	6.40	☐	☐	☐	☐	
R19-D20	W842972	360.47	361.50	0.01	0	13	37	454.0	3	5.80	☐	☐	☐	☐	
R19-D20	W842973	361.50	361.62	0.01	5	61	5180	212000.0	1760	10.40	☐	☐	☐	☐	
R19-D20	W842974	361.50	361.62	0.01	15	105	24500	140000.0	8710	13.70	☑	☐	☐	☐	
R19-D20	W842975	361.62	361.90	0.01	0	3	39	1010.0	18	10.40	☐	☐	☐	☐	
R19-D20	W842976	361.90	363.63	0.01	0	8	45	2350.0	16	37.60	☐	☐	☐	☐	
R19-D20	W842977	363.63	366.67	0.01	0	4	20	223.0	3	18.10	☐	☐	☐	☐	
R19-D20	W842978	366.67	369.72	0.01	0	6	12	33.0	2	4.60	☐	☐	☐	☐	
R19-D20	W842979	369.72	372.77	0.01	0	5	14	67.0	1	1.10	☐	☐	☐	☐	
R19-D20	W842980	372.77	373.69	0.01	0	6	73	307.0	19	17.40	☐	☐	☐	☐	
R19-D21	W842981	373.69	374.22	0.01	5	11	295	4820.0	107	106.00	☐	☐	☐	☐	
R19-D21	W842982	374.22	375.39	0.01	0	5	43	31.0	10	15.60	☐	☐	☐	☐	
R19-D21	W842983	375.39	375.66	0.01	1	16	85	10900.0	38	98.50	☐	☐	☐	☐	
R19-D21	W842984	375.66	376.14	0.01	2	8	139	2810.0	47	142.50	☐	☐	☐	☐	
R19-D21	W842985	376.14	378.73	0.01	1	10	220	2880.0	64	103.00	☐	☐	☐	☐	

Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
R19-D21	W842986	378.73	381.65	0.01	0	4	19	319.0	5	31.00	☐	☐	☐	☐	
R19-D21	W842987	381.65	384.35	0.01	0	9	16	230.0	10	74.90	☐	☐	☐	☐	
R19-D21	W842988	384.35	385.22	0.01	3	21	127	2150.0	18	229.00	☐	☐	☐	☐	
R19-D21	W842989	385.22	388.01	0.01	1	10	128	322.0	37	181.00	☐	☐	☐	☐	
R19-D21	W842991	388.01	389.35	0.01	0	21	22	65.0	11	122.00	☐	☐	☐	☐	
R19-D21	W842992	389.35	390.49	0.01	2	15	284	2990.0	47	162.00	☐	☐	☐	☐	
R19-D21	W842994	390.49	391.81	0.01	5	39	1780	44900.0	462	223.00	☐	☑	☐	☐	
R19-D21	W842993	390.49	391.81	0.01	6	43	1850	45700.0	481	211.00	☐	☐	☐	☐	
R19-D21	W842995	391.81	392.89	0.01	1	8	261	15600.0	104	90.80	☐	☐	☐	☐	
R19-D21	W842996	392.89	393.69	0.01	2	17	276	30500.0	103	172.00	☐	☐	☐	☐	
R19-D21	W842997	393.69	395.75	0.01	0	2	14	242.0	3	31.50	☐	☐	☐	☐	
R19-D21	W842998	395.75	397.25	0.01	0	3	21	673.0	3	27.20	☐	☐	☐	☐	
R19-D21	W842999	397.25	399.01	0.01	0	11	71	2890.0	16	88.50	☐	☐	☐	☐	
R19-D21	W843000	399.01	400.91	0.01	0	4	21	48.0	4	13.50	☐	☐	☐	☐	
R19-D21	W843002	400.91	403.25	0.01	0	4	27	116.0	6	12.30	☐	☐	☐	☐	

Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
R19-D21	W843003	403.25	406.30	0.01	0	4	17	304.0	3	17.20	☐	☐	☐	☐	
R19-D21	W843004	406.30	409.35	0.01	0	4	11	47.0	1	2.30	☐	☐	☐	☐	
R19-D21	W843005	409.35	412.39	0.01	0	7	24	27.0	4	0.40	☐	☐	☐	☐	
R19-D21	W843006	412.39	415.44	0.01	0	6	9	93.0	1	0.90	☐	☐	☐	☐	
R19-D21	W843007	415.44	418.49	0.01	0	2	10	26.0	1	3.10	☐	☐	☐	☐	
R19-D21	W843008	418.49	421.54	0.01	0	3	4	34.0	1	2.80	☐	☐	☐	☐	
R19-D21	W843009	421.54	424.59	0.01	0	3	23	62.0	3	4.40	☐	☐	☐	☐	
R19-D21	W843010	424.59	427.63	0.01	1	5	85	765.0	1	3.30	☐	☐	☐	☐	
R19-D21	W843011	427.63	429.75	0.01	0	3	8	19.0	1	0.20	☐	☐	☐	☐	
R19-D21	W843012	429.75	429.92	0.05	2	9	149	2050.0	5	1.30	☐	☐	☐	☐	
R19-D21	W843015	429.92	430.68	0.01	0	3	63	206.0	3	0.50	☑	☐	☐	☐	
R19-D21	W843014	429.92	430.68	0.01	0	3	33	73.0	2	0.40	☐	☐	☐	☐	
R19-D21	W843016	430.68	433.73	0.01	0	3	14	18.0	1	0.90	☐	☐	☐	☐	
R19-D21	W843017	433.73	436.78	0.01	0	6	22	343.0	5	7.70	☐	☐	☐	☐	
R19-D21	W843018	436.78	439.83	0.01	0	6	31	1220.0	2	5.50	☐	☐	☐	☐	

Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
R19-D21	W843019	439.83	442.87	0.01	0	3	37	77.0	1	1.50	☐	☐	☐	☐	
R19-D21	W843020	442.87	445.92	0.01	0	3	13	54.0	1	6.20	☐	☐	☐	☐	
R19-D22	W843021	445.92	448.97	0.01	0	4	14	802.0	1	3.20	☐	☐	☐	☐	
R19-D22	W843022	448.97	452.02	0.01	0	4	8	30.0	1	3.60	☐	☐	☐	☐	
R19-D22	W843023	452.02	455.07	0.01	0	2	12	38.0	1	1.10	☐	☐	☐	☐	
R19-D22	W843024	455.07	458.11	0.01	0	3	10	122.0	1	3.90	☐	☐	☐	☐	
R19-D22	W843026	458.11	461.16	0.01	0	5	8	21.0	3	5.90	☐	☐	☐	☐	
R19-D22	W843027	461.16	464.21	0.01	0	5	20	129.0	3	1.40	☐	☐	☐	☐	
R19-D22	W843028	464.21	467.26	0.01	0	3	97	327.0	2	3.10	☐	☐	☐	☐	
R19-D22	W843029	467.26	470.31	0.01	0	10	70	30.0	18	18.30	☐	☐	☐	☐	
R19-D22	W843030	470.31	473.35	0.01	0	4	76	31.0	20	6.50	☐	☐	☐	☐	
R19-D22	W843031	473.35	475.88	0.01	0	9	103	250.0	22	4.60	☐	☐	☐	☐	



Tiger - Rau

Archer,Cathro & Associates (1981) Limited

Grid East	Grid North	Easting	Northing	Elevation	Depth (m)
		533181	7117930	1133	285.6

ZONE: Kathy

SECTION:

HOLE: RPP-19-005

CLAIM:

Contractor: Superior

Drill: 6

Core Size: NQ2

Casing Depth: 9.14m, In

Drilling Dates: Aug 04 - Aug 26, 2019

Geology Logged By: A. Schneebeli

SURVEY			
Depth (m)	Azimuth	Dip	Method
0	288.9	-50	Compass
285.6	297.3	-52.7	Reflex

TARGET: Targeting the intersection of the E-W kathy fault with t

SUMMARY			
From (m)	To (m)	Interval (m)	Rock Type
0	4.88	4.88	OVB
4.88	85.85	80.97	SHL
85.85	100	14.15	FLR
100	132	32	DST
132	143.95	11.95	SHL
143.95	153	9.05	FEL
153	160.4	7.4	SHL
160.4	161.24	0.84	FEL
161.24	161.26	0.02	PEG
161.26	162.39	1.13	FEL
162.39	162.41	0.02	PEG
162.41	162.71	0.3	SHL
162.71	167.87	5.16	CGL
167.87	167.98	0.11	PEG
167.98	170.11	2.13	CGL
170.11	171.15	1.04	PEG

SAMPLES	
Numbers:	W842575 to W842724
Total:	150
Batch:	D10, D11, D12, D13, D14
Certificates:	WH19203512, WH19210573, WH19216428, WH19216438, WH19219755, WH19268577

COMMENTS

This hole encountered the Earn shale with a faulted contact to the lower Earn Group conglomerates. A large pegmatite with at least 2 phases intruded along the contact between the conglomerates and the Bouvette FM dolostone. Clasts of tremolite vein are observed in the faulted contact between the shale and conglomerate, potentially making this fault younger

171.15	174.75	3.6	CGL
174.75	174.8	0.05	PEG
174.8	175.26	0.46	CGL
175.26	177.27	2.01	CGL
177.27	177.38	0.11	PEG
177.38	180	2.62	CGL
180	180.05	0.05	PEG
180.05	182.5	2.45	CGL
182.5	183.55	1.05	PEG
183.55	199	15.45	CGL
199	229.75	30.75	PEG
229.75	236.49	6.74	DST
236.49	240.32	3.83	PEG
240.32	285.6	45.28	DST

RPP-19-005

Rau
Kathy Zone
Archer,Cathro & Associates (1981) Limited

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
0.00	4.88	4.88	OVB	--	0-4.72m - no recovery.							
4.88	66.33	61.45	SHL	FG	Dark grey, very fine grained, highly fractured with weak-moderate oxidation on fractured surfaces, foliated, non-calcareous shale. Foliation is at ~25-55 degrees TCA. Pyrite occurs weakly-moderately throughout the interval as mm-sized foliation parallel, elongate nodules(?) and lesser as trace foliation parallel sub mm-sized, very fine grained, fresh interstitial/disseminations; indicating a pre-deformation deposition of these pyrites.. Locally observed pyrite nodules contain sub mm-sized quartz inclusions. Oxidation occurs primarily along foliation-parallel fractures and joints as weak-moderate, varaibly yellow-orange-brown-red-dark purple-black coloured, massive to patchy oxidation. Tarnished pyrite/iridescent patchy coating occurs on rare fractured surfaces ~once every 3 meters. Stronger oxidation on fracture surfaces and locally observed brecciation occurs from 53.41-66.33m. Pyrite occurs as pre-deformation deposited nodules (8%), very fine grained interstitial/disseminations (5%) and least as quartz-pyrite vein (0.01%).							
						MD	BK	FO			Py	5
						DK	GY	FR	OXI	2I	Py	8
											Py	0.01

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
66.33	85.85	19.52	SHL	FG	Medium-dark grey, fine grained, rubbly, highly fractured, locally foliated, weak-moderately oxidized, brecciated/vein brecciated, moderately veined, non-calcareous shale. Brecciated/vein brecciated, strongly oxidzied sections are common throughout the interval. Clasts are granule-cobble sized, angular to rounded, poorly sorted, shale, with fragments of soft, soapy talc(?) veins towards the lower contact. Ground mass, is very soft, strongly oxidized, non-calcareous muddy/clay material. Veining occurs as oxidized vein brecciation and as white, amorphous, variably oxidized, soft (H=1-2.5), soapy, talc(?). Foliation occurs locally at ~30-50 degrees TCA. Pyrite or other sulphides are not observed within veins or oxidized sections. Pyrite occurs as pre-deformation deposited nodules (5%) and very fine grained disseminations (3%)							
						MD	GY	FR	OXI	4I	Py	5
						DK	GY	FO			Py	3
								RB				
								BX				
85.85	87.17	1.32	FLR	MG	Light-medium brown, poorly consolidated, brecciated, poly-clastic, non-calcareous, gougey fault rock. Clasts are granule to pebble sized, angular to sub-angular, poorly sorted, non-calcareous, primarily shale, lesser quartz and a white, soft, soapy, amorphous mineral (talc?). Brown colour is potentially due to slight oxidation of this section of the fault rock. This section lacks readily observable sulphides and amphiboles (tremolite/actinolite).							
						MD	BN					
						LT	BN	BX	OXI	1I		

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
87.17	96.32	9.15	FLR	MG	Dark black-blue, poor-moderately consolidated, brecciated to locally conglomeratic, trace foliated, poly-clastic, non-calcareous, gougey-muddy fault rock. 95.50-95.50m - white to locally oxidized, euhedral, 1-2cm thick, non-calcareous, tremolite vein. 88.90-90.26m - matrix supported conglomerate. Matrix is soft, non, calcareous, light grey/tan and muddy. Clasts are sub-angular to rounded, very coarse grained sand to pebble sized, poorly sorted, primarily shale with trace quartz fragments. Gougey-mud is the dominant rock type of the interval, it contains rare-trace sub-rounded to rounded, white with blue hue, fragments of a soft, soapy mineral (talc?). Tremolite occurs weak-moderately throughout the gougey-mud as white-dark grey, 2-4mm sized, individual, prismatic crystals. Foliation occurs within the gougey-mud at ~50-65 degrees TCA. Actinolite occurs throughout the interval as mm-sized euhedral, individual crystals (5%) and as a vein (0.5%).							
						MD	BL	BX				
						DK	BK	FO			Ac	0.5
96.32	100.00	3.68	FLR	MG	Medium-dark grey/dark tan, variably clast to matrix supported, brecciated, moderately sorted, poly-clastic conglomeratic fault rock with 10-20cm sections of unaltered shale. Shale sections are representative of the shales seen shallower in the hole from 4.88-66.33m. Clasts are all non-calcareous, granule-pebble sized, sub-rounded, primarily shale, lesser quartz fragments and a soft, soapy mineral (talc?). This interval lacks readily observable sulphides and amphiboles (tremolite/actinolite).							
						MD	GY	BX				

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
						DK	GY					
						DK	TN					

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
100.00	132.00	32.00	DST	FG	Tremolite-calcite veins occur in this interval. Light-dark grey, fine grained, crackle brecciated, variably pitted, moderate-strongly veined, dolostone. Tremolite occurs as white, euhedral infill of pitted textures, as 3-10mm thick, locally oxidized, tremolite-calcite veins and as acicular, medium grey, 3-5mm sized crystals throughout the dolostone. Oxidized tremolite veins occur at: 110.18-110.20m, 111.00-111.02m and 113.78-113.83m. 113.02-113.07m - 1-1.5cm thick, blebby-subhedral, fresh, pyrite vein with loclly observed red/orange sphalerite occurring on vein margin and enclosing pyrite crystals. XRF indicates an average of 1.98% Zn, 0.25% Cu, 40% Fe and 0.24% Sn in this vein after three measurements. Veining occurs as, primarily, moderate to locally intense black, fine grained, discontinuous, dolomite veinlets; as calcite infill of crackle breccia and infill of healed fractures; and as calcite±pyrite±tremolite veins. 107.10-107.80m: - gougey-breccia/conglomerate section similar to 96.32-100.00m. Pyrite occurs as sub mm-sized, fresh disseminations throughout the interval (2%), and within veins (±calcite±tremolite) (2%). Sphalerite occurs as trace mineralization in one vein, and is otherwise not significant within the interval. Tremolite occurs as veins, infill (5%) and as euhedral crystals throughout the interval (3%). . . . Continued on August 24, 2019. 120.7-132.00m: Fine grained, variably foliated, dolostone showing crackle breccia texture of grey clasts in a dark grey to black matrix. Locally exhibiting what is likely bedding, though heavily deformed.							

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
100.00	132.00	32.00			-1-2mm calcite veinlets occuring every 50cm. At 123.50m is a 2cm coarse grained euhedral calcite/dolomite vein. - 128.00-130.5m both veins and host are pitted. - fine grained, sub-millimetre diagenetic pyrite 0.5% or less. - Rare actinolite on fracture faces							
						MD	GY	BX			Py	2
						LT	GY	CR			Py	2
						DK	GY				Tr	5
											Tr	3
132.00	132.95	0.95	SHL	FG	Black shale, massive, with disseminated Pyrite veinlets along foliation.							
132.95	133.20	0.25	FEL	MG	First appearance of felsic, medium grained, intrusive. Hosts disseminated pyrite and pyrrhotite, a bright green, subhedral mineral. Abundant disseminations of brown-red mineral, sphalerite/garnet.							
133.20	141.00	7.80	SHL	FG	Variable crackle breccia and fine grained pebble conglomerate. To sharp contact with massive black shale. Grades into pebble conglomerate.							
141.00	141.50	0.50	FEL	FG	Quartz rich felsic intrusive with fine <1mm disseminated pyrite. At 141.25m is contact with pebble conglomerate. 141.25-141.50m: three veins of felsic intrusion with sharp, nonplanar contacts. Slight chilled margin along vein contact.							
141.50	142.70	1.20	SHL	FG	142.15-142.70m very fine grained brown-grey mudstone interbedded with pebble conglomerate in black matrix, contains disseminated pyrite and pyrrhotite. 142.80-143.95m alternating fine grained, pale grey layers within fine to medium grained felsic intrusive, grading into black matrix pebble conglomerate. 1mm sized disseminated Pyrrhotite most abundant within intrusive.							

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
142.70	143.95	1.25	FEL	FG	Mainly fine grained felsic intrusive, grading into pebble congomerate. Some aparent mixing of host and instrusive. Disseminated pyrite and pyrrhotite, <1% Py, 1% Po.							
143.95	153.00	9.05	FEL	FG	Fine grained felsic intrusive, with white to brown, splotchy alteration. - 145.75m: 2cm quartz vein with fluourite abundant along the core of the vein, 25 deg. TCA. - 146.40-147.00m: white spotted alteration with some grains containing a black core. Local actinolite, weakly developed acicular habit. - 147.00-153.00m: blebby Pyrrhotite, 0.1-1cm, throughout and along fracture face at 147.78m. - 150.75-153.00m: subhedral tremolite/actinolite disseminated throughout							
153.00	155.00	2.00	MST	VC	Coarse grained polylithic pebble conglomerate, white to grey clasts, moderately foliated. Cut by a very fine grained, grey alteration front?? From 153.55-153.90m.							
155.00	159.80	4.80	MST	FG	black shale with disseminated fine grained pyrite throughout, and isolated pyrite blebs, 0.5-2cm, anhedral to subhedral. Calcite intergrown with some larger pyrite blebs.							
159.80	160.40	0.60	MST	CG	Fine to medium grained pebble conglomerate, weakly foliated. Polylithic, white to grey clasts showing variable zonation. Calcite veinlets variably infilling matrix.							
160.40	161.24	0.84	FEL	FG	Felsic intrusive, including white, rounded, 0.2-2cm clasts? which lack sharp grain boundaries. Abundant disseminated 1-2mm Pyrrhotite, and larger blebby to euhedral pyrite, locally associated with bright green anhedral mineral. Pyrrhotite occasionally associated with quartz veinlets.							

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
161.24	161.26	0.02	PEG	CG	Quartz±Dark green mineral±Bright green mineral±milky white mineral pegmatite vein parallel to core axis. At 161.40m where host rock changes from clast bearing conglomerate to shale, pegmatite vein changes from containing green mineral in the conglomerate to only quartz and white mineral when hosted in shale. - 161.87-162.05: pegmatite vein cuts through fine grained, lighter grey, possibly intrusive band, green mineral is present through this interval but changes back to quartz and white mineral when in shale.							
161.26	162.39	1.13	FEL	CG	Coarse to fine grained felsic intrusive, variably containing clasts? Lacking sharp grain boundaries and showing some zonation. Sharp transition to shale at 161.40. Shale is cut by a fine grained, likely intrusive vein from 161.80-162.00m. - Disseminated pyrite, and blebbly pyrite intergrown with pyrrhotite at 162.39m.							
162.39	162.41	0.02	PEG	CG	Pegmatite vein with quartz, pale green mineral, fluorite. Margin showing comb textured quartz							
162.41	162.71	0.30	SHL	FG	shale with disseminated pyrite and blebby pyrrhotite 0.5cm							
162.71	167.87	5.16	BXA	CG	Clast supported polylithic conglomerate variably foliated, and variably showing zonation. Calcite veinlet infill of matrix ranges from absent to intense. Clast size 0.3-2cm.							
167.87	167.98	0.11	PEG	CG	11cm quartz, white mineral, pale green mineral pegmatite with minor fine grained muscovite.							
167.98	170.11	2.13	BXA	CG	Clast supported polylithic conglomerate variably foliated. Clasts variably show zonation. Calcite veinlet infill of matrix absent to moderate. Clasts range from .3-2cm. - Disseminated pyrite and pyrrhotite throughout, 0.1cm							

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
170.11	171.15	1.04	PEG	CG	Quartz, pale green mineral, milky white mineral, minor muscovite pegmatite							
171.15	174.75	3.60	BXA	CG	Clast supported polylithic conglomerate variably foliated. Clasts variably show zonation. Calcite veinlet infill of matrix absent to intense. Clasts range from .3-2cm. - Disseminated pyrite and pyrrhotite throughout, 0.1cm							
174.75	174.80	0.05	PEG	CG	Quartz, tremolite, muscovite, milky white mineral, pale green mineral pegmatite vein. - 174.73-174.79m vein of darker, quartz							
174.80	175.26	0.46	BXA	CG	Coarse grained, clast supported polylithic conglomerate. Disseminated fine grained pyrite							
175.26	177.27	2.01	BXA	CG	Variably clast and matrix supported polylithic conglomerate/intrusion breccia. Abundant calcite veinlets infilling matrix. 1-2mm Pyrite and Pyrrhotite disseminated throughout.							
177.27	177.38	0.11	PEG	CG	Quartz-Pale green-Dark green-White cubic mineral pegmatite with weak comb textured rim. Downhole vein is parallel TCA and dark green mineral is associated with white cubic mineral.							
177.38	180.00	2.62	BXA	CG	Variably clast and matrix supported polylithic conglomerate/intrusion breccia. Abundant calcite veinlets infilling matrix. 1-2mm Pyrite and Pyrrhotite disseminated throughout.							
180.00	180.05	0.05	PEG	CG	Quartz-Pale green-milky white mineral pegmatite with weak comb textured rim. Glassy dark green to olive green mineral present.							
180.05	182.50	2.45	BXA	CG	Variably matrix and clast supported polylithic conglomerate/intrusion breccia?							

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
182.50	183.55	1.05	PEG	CG	Quartz-pale green-milky white mineral pegmatite. Disseminated to blebby Pyrite, Pyrrhotite, and locally sphalerite.							
183.55	196.50	12.95	BXA	CG	Variably matrix and clast supported polylithic conglomerate/intrusion breccia with porphyritic matrix of spotty albite. Moderate to heavy matrix infill by calcite veinlets. 2mm disseminated Pyrite throughout. Sphalerite in isolated vein at 188.90m.							
196.50	196.64	0.14	FEL	FG	Porphyritic spotty anhedral albite in a fine grained pale grey matrix.							
196.64	199.00	2.36	BXA	CG	Variably matrix and clast supported polylithic conglomerate/intrusion breccia with porphyritic matrix of spotty albite. Moderate to heavy matrix infill by calcite veinlets. Variably clast zonation.							

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
199.00	227.50	28.50	PEG	CG	199.00-227.50m: Pegmatite body with several compositional zones. Dominantly quartz-pale green-dark green-milky white pegmatite with locally well developed feldspar laths, fluourite rich zones, and submassive pyrrhotite veins. - 199.00-203.10m: Pegmatite of pale green albite? Assimilating clasts from the upper conglomgerate/breccia. - Milky white pegmatite vein at 199.10m with sharp contacts. 199.75m: Clasts grade into a massive fine grained medium grey zone of quartz and mica? 200.00m grading into quartz-fluorite-black-white mineral 200.25m 3cm feldspar laths, and 2-3cm pyrrhotite blebs 202.30-203.10m: disseminated to blebby pyrrhotite associated with a blue-green mineral - 203.30-208.50m: Presence of a dull yellow mineral (203.50m) in milky white mineral, fluourite, diopside (206.80m), actinolite, a glassy yellow-green mineral (207.15m), glassy brown-orange mineral, possibly scheelite (207.15m), dark green fluorite (209.90m). 208.50-210.25m: quartz-calcite pegmatite with minor mica, and dark green mineral 209.75-210.05m. anhedral pinkish minerl in dark green groundmass, possibly actinolite (214.00m) blebby pyrrhotite along vein of dark blue mineral, calcite, purple and green fluorite (215.60m) - 226.50-227.50m: calcite intergrown with actinolite and dull yellow mineral+quartz							
227.50	229.75	2.25	PEG	CG	feldspar laths intergrown with fluorite.							

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
229.75	236.49	6.74	DST	FG	Fine grained dolostone with isolated blebby pyrrhotite and chalcopyrite at 231.17-231.65m.							
236.49	240.32	3.83	PEG	CG	Quartz/Albite pegmatite with fluorite, dark green mineral, rounded deep pea-soup green mineral, and pale green mineral.							
240.32	245.15	4.83	DST	FG	fine grained dolostone altered proximal to pegmatite, disseminated subhedral tremolite/actinolite, blebbly pyrrhotite, disseminated pyrite, and some pyroxene visible on fracture faces.							
245.15	285.60	40.45	DST	FG	Fine grained dolostone, variably crackle breccia texture and vein brecciated. Abundant calcite veins cutting at variable angles TCA. Isolated blebby to disseminated pyrite and pyrrhotite. - black graphitic mineral associated with calcite veins							

RPP-19-005

Rau
Kathy Zone
Archer,Cathro & Associates (1981) Limited

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
0.00	4.72	4.72	0	0	0.00	0	--	--	--	Recovery
4.72	4.88	0.16	0.16	100	0.00	0	0R	4H	2W	rubbly likely zone of poor recovery
4.88	7.92	3.04	0.22	7	0.00	0	0R	3H	2W	zone of very poor recovery
7.92	10.97	3.05	0.25	8	0.00	0	0R	3H	2W	some clasts appear rounded - still ovb??
10.97	14.02	3.05	1.13	37	0.21	7	0R	3H	1W	
14.02	17.07	3.05	2.02	66	0.67	22	0R	3H	1W	
17.07	20.12	3.05	2.27	74	0.22	7	0R	3H	1W	
20.12	23.16	3.04	0.12	4	0.00	0	0R	4H	1W	very poor recovery
23.16	26.21	3.05	1.49	49	0.40	13	0R	4H	2W	
26.21	29.26	3.05	2.86	94	0.43	14	0R	4H	2W	
29.26	32.31	3.05	2.44	80	0.25	8	0R	4H	2W	
32.31	35.36	3.05	2.08	68	0.00	0	0R	2H	2W	
35.36	38.40	3.04	1.97	65	0.26	9	0R	2H	2W	
38.40	41.45	3.05	2.3	75	0.10	3	0R	2H	1W	
41.45	44.50	3.05	2.61	86	0.68	22	0R	2H	1W	
44.50	47.55	3.05	3.05	100	1.64	54	0R	3H	2W	
47.55	50.60	3.05	2.6	85	0.79	26	0R	3H	2W	14cm RBZ
50.60	53.64	3.04	2.81	92	1.17	38	0R	3H	1W	
53.64	56.69	3.05	1.7	56	0.00	0	0R	3H	1W	Several large moderately/highly oxidized RBZ's
56.69	59.74	3.05	2.79	91	0.72	24	0R	1H	1W	
59.74	62.79	3.05	2.11	69	0.00	0	0R	2H	1W	Small highly oxidized RBZ's
62.79	65.84	3.05	2.03	67	0.10	3	0R	3H	1W	Large weakly oxidized RBZ's
65.84	68.89	3.05	2.18	71	0.00	0	0R	2H	1W	Moderately oxidized breccia matrix and RBZ's
68.89	71.93	3.04	2.15	71	0.14	5	0R	2H	1W	Moderately to highly oxidized breccia matrix with RBZ's
71.93	74.98	3.05	2.49	82	0.10	3	0R	2H	1W	Weakly to moderately oxidized breccia matrix
74.98	78.03	3.05	2.61	86	0.27	9	0R	2H	1W	Areas of highly oxidized breccia matrix and RBZ's

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
78.03	81.08	3.05	1.52	50	0.00	0	0R	2H	1W	Moderate to highly oxidized RBZ's
81.08	84.13	3.05	1.56	51	0.12	4	0R	2H	1W	Several moderate to highly oxidized RBZ's
84.13	87.17	3.04	1.64	54	0.00	0	0R	1H	1W	Highly oxidized zone with several RBZ's
87.17	90.22	3.05	1.31	43	0.53	17	0R	1H	1W	Extremely altered black/blue, soft breccia zone
90.22	93.27	3.05	3.02	99	1.41	46	0R	1H	1W	Extremely altered black/blue, soft breccia zone
93.27	96.32	3.05	1.68	55	0.62	20	0R	1H	1W	Extremely altered black/blue, soft breccia zone
96.32	99.37	3.05	1.65	54	0.41	13	0R	1H	1W	Highly altered grey/blue/tan, soft breccia zone
99.37	102.41	3.04	1.53	50	0.46	15	0R	2H	1W	
102.41	105.46	3.05	2.21	72	1.20	39	2R	1H	1W	
105.46	108.51	3.05	1.91	63	1.35	44	2R	1H	1W	25cm very soft dark grey breccia zone
108.51	111.56	3.05	1.44	47	0.91	30	2R	2H	1W	
111.56	114.61	3.05	3.05	100	0.77	25	1R	3H	1W	
114.61	117.65	3.04	1.41	46	0.72	24	1R	3H	1W	25cm of highly oxidized RBZ
117.65	120.70	3.05	2.74	90	1.32	43	1R	3H	1W	
120.70	124.05	3.35	2.98	89	2.86	85	3R	4H	1W	1cm white/cream VN on fracture
124.05	127.10	3.05	3.02	99	2.73	90	2R	4H	1W	
127.10	130.15	3.05	2.48	81	1.71	56	2R	4H	1W	
130.15	133.20	3.05	2.66	87	2.03	67	1R	4H	1W	
133.20	136.25	3.05	2.97	97	2.75	90	0R	4H	1W	
136.25	139.29	3.04	2.98	98	2.72	89	0R	4H	1W	
139.29	142.34	3.05	3.05	100	2.64	87	1R	4H	1W	
142.34	145.39	3.05	3.04	100	2.90	95	1R	3H	1W	
145.39	148.44	3.05	3	98	2.99	98	1R	3H	1W	
148.44	151.49	3.05	3.01	99	3.01	99	1R	4H	1W	
151.49	154.53	3.04	2.97	98	2.73	90	1R	3H	1W	
154.53	157.58	3.05	3.03	99	2.74	90	0R	4H	1W	
157.58	160.63	3.05	3.05	100	3.05	100	0R	4H	1W	
160.63	163.68	3.05	3.05	100	2.99	98	2R	4H	1W	
163.68	166.72	3.04	2.98	98	2.90	95	3R	4H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
166.72	169.77	3.05	3.05	100	3.05	100	2R	4H	1W	
169.77	172.82	3.05	3.01	99	2.81	92	2R	4H	1W	
172.82	175.87	3.05	3.05	100	2.97	97	1R	4H	1W	
175.87	178.92	3.05	3.04	100	3.04	100	2R	4H	1W	
178.92	181.97	3.05	3.05	100	2.83	93	2R	4H	1W	
181.97	185.01	3.04	3.04	100	2.76	91	1R	4H	1W	
185.01	188.06	3.05	3.04	100	2.98	98	1R	5H	1W	
188.06	191.11	3.05	3.03	99	3.03	99	2R	4H	1W	
191.11	194.16	3.05	3.05	100	3.05	100	2R	5H	1W	
194.16	197.21	3.05	2.99	98	2.99	98	2R	4H	1W	
197.21	200.25	3.04	3.04	100	3.04	100	2R	4H	1W	
200.25	203.30	3.05	3	98	2.86	94	2R	3H	1W	
203.30	206.35	3.05	3.04	100	3.04	100	1R	4H	1W	
206.35	209.40	3.05	3	98	2.54	83	4R	3H	1W	Large portion of run consists of euhedral Ca and Qtz
209.40	212.45	3.05	3.02	99	2.85	93	2R	3H	1W	
212.45	215.49	3.04	3.04	100	2.97	98	1R	4H	1W	
215.49	218.54	3.05	3.02	99	3.02	99	1R	4H	1W	
218.54	221.59	3.05	3.05	100	2.99	98	1R	4H	1W	
221.59	224.64	3.05	3.04	100	3.04	100	1R	4H	1W	
224.64	227.69	3.05	3.05	100	3.05	100	2R	3H	1W	
227.69	230.73	3.04	3.01	99	3.01	99	2R	4H	1W	
230.73	233.78	3.05	3.04	100	2.94	96	3R	4H	1W	
233.78	236.83	3.05	3.05	100	3.05	100	3R	4H	1W	
236.83	239.88	3.05	3.05	100	3.05	100	2R	4H	1W	
239.88	242.93	3.05	3.03	99	3.03	99	2R	4H	1W	
242.93	245.97	3.04	2.88	95	2.88	95	2R	3H	1W	
245.97	249.02	3.05	3.05	100	3.05	100	2R	4H	1W	
249.02	252.07	3.05	3.05	100	3.05	100	3R	3H	1W	
252.07	255.12	3.05	3.05	100	2.98	98	3R	4H	1W	
255.12	258.17	3.05	2.96	97	2.93	96	2R	4H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
258.17	261.21	3.04	3.04	100	2.92	96	2R	4H	1W	
261.21	264.26	3.05	3.05	100	3.00	98	2R	4H	1W	
264.26	267.31	3.05	3.05	100	3.05	100	2R	4H	1W	
267.31	270.36	3.05	2.81	92	2.76	90	3R	4H	1W	
270.36	273.41	3.05	3.05	100	3.05	100	3R	4H	1W	
273.41	276.45	3.04	3.04	100	3.01	99	3R	4H	1W	
276.45	279.50	3.05	3	98	3.00	98	3R	4H	1W	
279.50	282.55	3.05	3	98	2.93	96	2R	4H	1W	
282.55	285.60	3.05	3.05	100	3.05	100	3R	4H	1W	

RPP-19-005

Rau
Kathy 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	W842667	☐	R19-D13	Core	ML-1	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W842718	☐	R19-D14	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W842584	☐	R19-D10	Core	ML-1	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W842684	☐	R19-D13	Core	ML-1	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W842662	☐	R19-D13	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W842659	☐	R19-D12	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W842635	☐	R19-D12	Core	ML-2	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W842629	☐	R19-D12	Core	ML-1	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W842615	☐	R19-D11	Core	ML-5	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W842608	☐	R19-D11	Core	ML-1	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W842605	☐	R19-D11	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W842705	☐	R19-D14	Core	ML-1	☐	☐	☐
4.88	7.92	3.04	SHL, OVB	0.22	7	W842575	☐	R19-D10	Core		☐	☐	☐
7.92	10.97	3.05	SHL	0.25	8	W842576	☐	R19-D10	Core		☐	☐	☐
10.97	14.02	3.05	SHL	1.13	37	W842577	☐	R19-D10	Core		☐	☐	☐
14.02	17.07	3.05	SHL	2.02	66	W842578	☐	R19-D10	Core		☐	☐	☐
17.07	20.12	3.05	SHL	2.27	74	W842579	☐	R19-D10	Core		☐	☐	☐
20.12	23.16	3.04	SHL	0.12	4	W842580	☐	R19-D10	Core		☐	☐	☐
23.16	26.21	3.05	SHL	1.49	49	W842581	☐	R19-D10	Core		☐	☐	☐
26.21	29.26	3.05	SHL	2.86	94	W842582	☐	R19-D10	Core		☐	☐	☐
29.26	32.31	3.05	SHL	2.44	80	W842583	☐	R19-D10	Core		☐	☐	☐
32.31	35.36	3.05	SHL	2.08	68	W842585	☐	R19-D10	Core		☐	☐	☐
35.36	38.40	3.04	SHL	1.97	65	W842586	☐	R19-D10	Core		☐	☐	☐
38.40	41.45	3.05	SHL	2.30	75	W842587	☐	R19-D10	Core		☐	☐	☐
41.45	44.50	3.05	SHL	2.61	86	W842588	☐	R19-D10	Core		☐	☐	☐
44.50	47.55	3.05	SHL	3.05	100	W842589	☐	R19-D10	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
47.55	50.60	3.05	SHL	2.60	85	W842590	☐	R19-D10	Core		☐	☐	☐
50.60	53.64	3.04	SHL	2.81	92	W842591	☐	R19-D10	Core		☐	☐	☐
53.64	56.69	3.05	SHL	1.70	56	W842592	☐	R19-D10	Core		☐	☐	☐
56.69	59.74	3.05	SHL	2.79	91	W842593	☐	R19-D10	Core		☐	☐	☐
59.74	62.79	3.05	SHL	2.11	69	W842594	☐	R19-D10	Core		☐	☐	☐
62.79	65.84	3.05	SHL	2.03	67	W842595	☐	R19-D10	Core		☐	☐	☐
62.79	65.84	3.05	SHL	2.03	67	W842596	☐	R19-D10	Core		☐	☑	☐
65.84	68.89	3.05	SHL	2.18	71	W842597	☐	R19-D10	Core		☐	☐	☐
68.89	71.93	3.04	SHL	2.15	71	W842598	☐	R19-D10	Core		☐	☐	☐
71.93	74.98	3.05	SHL	2.49	82	W842599	☐	R19-D10	Core		☐	☐	☐
74.98	78.03	3.05	SHL	2.61	86	W842600	☐	R19-D10	Core		☐	☐	☐
78.03	81.08	3.05	SHL	1.52	50	W842601	☐	R19-D11	Core		☐	☐	☐
81.08	84.13	3.05	SHL	1.56	51	W842602	☐	R19-D11	Core		☐	☐	☐
84.13	86.00	1.87	SHL	0.88	47	W842603	☐	R19-D11	Core		☐	☐	☐
86.00	87.17	1.17	FLR	0.77	66	W842604	☐	R19-D11	Core		☐	☐	☐
87.17	90.22	3.05	FLR	1.31	43	W842606	☐	R19-D11	Core		☐	☐	☐
90.22	93.27	3.05	FLR	3.02	99	W842607	☐	R19-D11	Core		☐	☐	☐
93.27	96.32	3.05	FLR	1.68	55	W842609	☐	R19-D11	Core		☐	☐	☐
93.27	96.32	3.05	FLR	1.68	55	W842610	☐	R19-D11	Core		☐	☐	☑
96.32	99.37	3.05	FLR	1.65	54	W842611	☐	R19-D11	Core		☐	☐	☐
99.37	102.41	3.04	FLR	1.53	50	W842612	☐	R19-D11	Core		☐	☐	☐
102.41	105.46	3.05	DST	2.21	72	W842613	☐	R19-D11	Core		☐	☐	☐
105.46	108.51	3.05	DST	1.91	63	W842614	☐	R19-D11	Core		☐	☐	☐
108.51	111.56	3.05	DST	1.44	47	W842616	☐	R19-D11	Core		☐	☐	☐
111.56	114.61	3.05	DST	3.05	100	W842617	☐	R19-D11	Core		☐	☐	☐
114.61	117.65	3.04	DST	1.41	46	W842618	☐	R19-D11	Core		☐	☐	☐
117.65	120.70	3.05	DST	2.74	90	W842619	☐	R19-D11	Core		☐	☐	☐
117.65	120.70	3.05	DST	2.74	90	W842620	☐	R19-D11	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
120.70	124.05	3.35	DST	2.98	89	W842621	☐	R19-D12	Core		☐	☐	☐
124.05	127.10	3.05	DST	3.02	99	W842622	☐	R19-D12	Core		☐	☐	☐
127.10	128.00	0.90	DST	0.90	100	W842623	☐	R19-D12	Core		☐	☐	☐
128.00	129.00	1.00	DST	0.45	45	W842624	☐	R19-D12	Core		☐	☐	☐
129.00	130.25	1.25	DST	1.23	98	W842625	☐	R19-D12	Core		☐	☐	☐
130.25	132.00	1.75	DST	1.51	86	W842626	☐	R19-D12	Core		☐	☐	☐
132.00	132.89	0.89	DST, SHL	0.77	87	W842627	☐	R19-D12	Core		☐	☐	☐
132.89	133.20	0.31	SHL	0.26	84	W842628	☐	R19-D12	Core		☐	☐	☐
133.20	136.25	3.05	SHL	2.97	97	W842630	☐	R19-D12	Core		☐	☐	☐
136.25	139.29	3.04	SHL	2.98	98	W842631	☐	R19-D12	Core		☐	☐	☐
139.29	142.34	3.05	SHL	3.05	100	W842632	☐	R19-D12	Core		☐	☐	☐
142.34	143.91	1.57	SHL	1.56	99	W842633	☐	R19-D12	Core		☐	☐	☐
143.91	145.39	1.48	SHL	1.45	98	W842634	☐	R19-D12	Core		☐	☐	☐
145.39	148.44	3.05	FEL	3.00	98	W842636	☐	R19-D12	Core		☐	☐	☐
148.44	151.49	3.05	FEL	3.01	99	W842637	☐	R19-D12	Core		☐	☐	☐
151.49	153.00	1.51	FEL	1.51	100	W842638	☐	R19-D12	Core		☐	☐	☐
153.00	154.94	1.94	SHL, FEL	1.92	99	W842639	☐	R19-D12	Core		☐	☐	☐
154.94	157.58	2.64	SHL	2.55	97	W842640	☐	R19-D12	Core		☐	☐	☐
157.58	160.38	2.80	SHL	2.78	99	W842641	☐	R19-D12	Core		☐	☐	☐
160.38	161.11	0.73	SHL	0.73	100	W842642	☐	R19-D12	Core		☐	☐	☐
160.38	161.11	0.73	SHL	0.73	100	W842643	☐	R19-D12	Core		☐	☐	☑
161.11	161.75	0.64	FEL	0.64	100	W842644	☐	R19-D12	Core		☐	☐	☐
161.75	162.00	0.25	FEL	0.17	68	W842645	☐	R19-D12	Core		☐	☐	☐
162.00	163.68	1.68	FEL	1.67	99	W842646	☐	R19-D12	Core		☐	☐	☐
163.68	166.72	3.04	CGL	2.98	98	W842647	☐	R19-D12	Core		☐	☐	☐
166.72	167.76	1.04	CGL	1.04	100	W842648	☐	R19-D12	Core		☐	☐	☐
167.76	168.07	0.31	CGL	0.31	100	W842649	☐	R19-D12	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
168.07	170.10	2.03	CGL	2.03	100	W842650	☐	R19-D12	Core		☐	☐	☐
170.10	171.18	1.08	CGL	1.08	100	W842651	☐	R19-D12	Core		☐	☐	☐
171.18	173.73	2.55	CGL	2.55	100	W842652	☐	R19-D12	Core		☐	☐	☐
173.73	175.45	1.72	CGL	1.72	100	W842653	☐	R19-D12	Core		☐	☐	☐
175.45	177.26	1.81	CGL	1.81	100	W842654	☐	R19-D12	Core		☐	☐	☐
177.26	177.71	0.45	CGL	0.45	100	W842655	☐	R19-D12	Core		☐	☐	☐
177.26	177.71	0.45	CGL	0.45	100	W842656	☐	R19-D12	Core		☐	☑	☐
177.71	179.32	1.61	CGL	1.61	100	W842657	☐	R19-D12	Core		☐	☐	☐
179.32	181.32	2.00	CGL	2.00	100	W842658	☐	R19-D12	Core		☐	☐	☐
181.32	183.11	1.79	CGL	1.79	100	W842660	☐	R19-D12	Core		☐	☐	☐
183.11	183.26	0.15	PEG	0.15	100	W842661	☐	R19-D13	Core		☐	☐	☐
183.26	183.54	0.28	PEG	0.28	100	W842663	☐	R19-D13	Core		☐	☐	☐
183.54	184.49	0.95	PEG	0.95	100	W842664	☐	R19-D13	Core		☐	☐	☐
184.49	186.67	2.18	CGL	2.18	100	W842665	☐	R19-D13	Core		☐	☐	☐
186.67	188.06	1.39	CGL	1.39	100	W842666	☐	R19-D13	Core		☐	☐	☐
188.06	191.11	3.05	CGL	3.03	99	W842668	☐	R19-D13	Core		☐	☐	☐
191.11	194.16	3.05	CGL	3.05	100	W842669	☐	R19-D13	Core		☐	☐	☐
194.16	195.57	1.41	CGL	1.41	100	W842670	☐	R19-D13	Core		☐	☐	☐
195.57	197.21	1.64	CGL	1.64	100	W842671	☐	R19-D13	Core		☐	☐	☐
197.21	197.49	0.28	CGL	0.28	100	W842672	☐	R19-D13	Core		☐	☐	☐
197.49	197.83	0.34	CGL	0.34	100	W842673	☐	R19-D13	Core		☐	☐	☐
197.49	197.83	0.34	CGL	0.34	100	W842674	☐	R19-D13	Core		☐	☑	☐
197.83	199.03	1.20	CGL	1.20	100	W842675	☐	R19-D13	Core		☐	☐	☐
199.03	200.25	1.22	PEG	1.22	100	W842676	☐	R19-D13	Core		☐	☐	☐
200.25	201.03	0.78	PEG	0.78	100	W842677	☐	R19-D13	Core		☐	☐	☐
201.03	202.28	1.25	PEG	1.25	100	W842678	☐	R19-D13	Core		☐	☐	☐
202.28	203.10	0.82	PEG	0.82	100	W842679	☐	R19-D13	Core		☐	☐	☐
203.10	205.00	1.90	PEG	1.90	100	W842680	☐	R19-D13	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
205.00	206.56	1.56	PEG	1.56	100	W842681	☐	R19-D13	Core		☐	☐	☐
206.56	207.45	0.89	PEG	0.89	100	W842682	☐	R19-D13	Core		☐	☐	☐
207.45	209.40	1.95	PEG	1.95	100	W842683	☐	R19-D13	Core		☐	☐	☐
209.40	212.45	3.05	PEG	3.05	100	W842685	☐	R19-D13	Core		☐	☐	☐
212.45	215.49	3.04	PEG	3.04	100	W842686	☐	R19-D13	Core		☐	☐	☐
215.49	216.86	1.37	PEG	1.37	100	W842687	☐	R19-D13	Core		☐	☐	☐
216.86	218.54	1.68	PEG	1.68	100	W842688	☐	R19-D13	Core		☐	☐	☐
218.54	221.59	3.05	PEG	3.05	100	W842689	☐	R19-D13	Core		☐	☐	☐
221.59	223.92	2.33	PEG	2.33	100	W842690	☐	R19-D13	Core		☐	☐	☐
223.92	224.34	0.42	PEG	0.42	100	W842691	☐	R19-D13	Core		☐	☐	☐
224.34	224.56	0.22	PEG	0.22	100	W842692	☐	R19-D13	Core		☐	☐	☐
224.34	224.56	0.22	PEG	0.22	100	W842693	☐	R19-D13	Core		☐	☐	☑
224.56	226.25	1.69	PEG	1.69	100	W842694	☐	R19-D13	Core		☐	☐	☐
226.25	228.27	2.02	PEG	2.02	100	W842695	☐	R19-D13	Core		☐	☐	☐
228.27	229.78	1.51	PEG	1.51	100	W842696	☐	R19-D13	Core		☐	☐	☐
229.78	231.17	1.39	DST	1.39	100	W842697	☐	R19-D13	Core		☐	☐	☐
231.17	231.64	0.47	DST	0.47	100	W842698	☐	R19-D13	Core		☐	☐	☐
231.64	233.47	1.83	DST	0.83	45	W842699	☐	R19-D13	Core		☐	☐	☐
233.47	235.97	2.50	DST	2.50	100	W842700	☐	R19-D13	Core		☐	☐	☐
235.97	236.48	0.51	DST	0.51	100	W842701	☐	R19-D14	Core		☐	☐	☐
236.48	237.66	1.18	DST	1.18	100	W842702	☐	R19-D14	Core		☐	☐	☐
237.66	240.38	2.72	PEG	2.72	100	W842703	☐	R19-D14	Core		☐	☐	☐
240.38	242.93	2.55	DST	2.55	100	W842704	☐	R19-D14	Core		☐	☐	☐
242.93	245.97	3.04	DST	3.04	100	W842706	☐	R19-D14	Core		☐	☐	☐
245.97	249.02	3.05	DST	3.05	100	W842707	☐	R19-D14	Core		☐	☐	☐
249.02	252.07	3.05	DST	3.05	100	W842708	☐	R19-D14	Core		☐	☐	☐
252.07	255.12	3.05	DST	3.05	100	W842709	☐	R19-D14	Core		☐	☐	☐
255.12	258.17	3.05	DST	2.96	97	W842710	☐	R19-D14	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	DST	3.04	100	W842711	☐	R19-D14	Core		☐	☐	☐
261.21	264.26	3.05	DST	3.05	100	W842712	☐	R19-D14	Core		☐	☐	☐
264.26	267.31	3.05	DST	3.05	100	W842713	☐	R19-D14	Core		☐	☐	☐
267.31	270.36	3.05	DST	2.81	92	W842714	☐	R19-D14	Core		☐	☐	☐
270.36	273.14	2.78	DST	2.78	100	W842715	☐	R19-D14	Core		☐	☐	☐
273.14	275.32	2.18	DST	2.18	100	W842716	☐	R19-D14	Core		☐	☐	☐
275.32	275.79	0.47	DST	0.47	100	W842717	☐	R19-D14	Core		☐	☐	☐
275.79	276.45	0.66	DST	0.66	100	W842719	☐	R19-D14	Core		☐	☐	☐
276.45	277.64	1.19	DST	1.19	100	W842720	☐	R19-D14	Core		☐	☐	☐
277.64	279.50	1.86	DST	1.86	100	W842721	☐	R19-D14	Core		☐	☐	☐
279.50	282.55	3.05	DST	3.00	98	W842722	☐	R19-D14	Core		☐	☐	☐
279.50	282.55	3.05	DST	3.00	98	W842723	☐	R19-D14	Core		☐	☐	☑
282.55	285.60	3.05	DST	3.05	100	W842724	☐	R19-D14	Core		☐	☐	☐

Sample Results

Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
R19-D11	W842608	0.00	0.00	0.36	3	826	55	124.0	73	20.70	☐	☐	☐	☑ ML-1	
		0.00	4.88								☐	☐	☐	☐	
R19-D14	W842718	0.00	0.00	0.01	0	5	2	5.0	0	0.50	☐	☐	☑	☐	
R19-D12	W842635	0.00	0.00	0.81	7	3330	34	166.0	103	36.50	☐	☐	☐	☑ ML-2	
R19-D13	W842667	0.00	0.00	0.34	2	830	51	126.0	69	19.00	☐	☐	☐	☑ ML-1	
R19-D12	W842629	0.00	0.00	0.33	3	802	52	132.0	75	23.60	☐	☐	☐	☑ ML-1	
R19-D13	W842684	0.00	0.00	0.34	3	828	49	126.0	67	18.90	☐	☐	☐	☑ ML-1	
R19-D13	W842662	0.00	0.00	0.01	0	2	1	31.0	0	0.05	☐	☐	☑	☐	
R19-D11	W842615	0.00	0.00	2.56	9	4110	44	216.0	85	1510.00	☐	☐	☐	☑ ML-5	
R19-D11	W842605	0.00	0.00	0.01	0	5	2	32.0	0	0.30	☐	☐	☑	☐	
R19-D14	W842705	0.00	0.00	0.33	3	819	58	126.0	72	19.50	☐	☐	☐	☑ ML-1	
R19-D10	W842584	0.00	0.00	0.34	3	792	51	120.0	73	19.10	☐	☐	☐	☑ ML-1	
R19-D12	W842659	0.00	0.00	0.01	0	3	2	20.0	1	0.10	☐	☐	☑	☐	
R19-D10	W842575	4.88	7.92	0.01	1	42	33	149.0	5	3.20	☐	☐	☐	☐	



Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
R19-D10	W842576	7.92	10.97	0.01	0	47	25	1300.0	6	1.90	☐	☐	☐	☐	
R19-D10	W842577	10.97	14.02	0.01	0	80	6	222.0	4	1.60	☐	☐	☐	☐	
R19-D10	W842578	14.02	17.07	0.01	0	51	5	188.0	2	1.10	☐	☐	☐	☐	
R19-D10	W842579	17.07	20.12	0.01	0	67	5	164.0	2	1.50	☐	☐	☐	☐	
R19-D10	W842580	20.12	23.16	0.01	1	16	4	178.0	2	1.60	☐	☐	☐	☐	
R19-D10	W842581	23.16	26.21	0.01	1	33	18	56.0	3	1.50	☐	☐	☐	☐	
R19-D10	W842582	26.21	29.26	0.01	1	54	5	57.0	3	1.30	☐	☐	☐	☐	
R19-D10	W842583	29.26	32.31	0.01	1	21	108	68.0	3	1.30	☐	☐	☐	☐	
R19-D10	W842585	32.31	35.36	0.01	2	40	226	142.0	3	1.50	☐	☐	☐	☐	
R19-D10	W842586	35.36	38.40	0.01	3	29	529	94.0	2	1.30	☐	☐	☐	☐	
R19-D10	W842587	38.40	41.45	0.01	2	220	24	175.0	2	1.70	☐	☐	☐	☐	
R19-D10	W842588	41.45	44.50	0.01	1	125	11	120.0	2	1.30	☐	☐	☐	☐	
R19-D10	W842589	44.50	47.55	0.01	0	92	7	55.0	3	1.20	☐	☐	☐	☐	
R19-D10	W842590	47.55	50.60	0.01	1	166	9	99.0	3	1.50	☐	☐	☐	☐	
R19-D10	W842591	50.60	53.64	0.01	1	76	7	60.0	3	1.40	☐	☐	☐	☐	

Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
R19-D10	W842592	53.64	56.69	0.01	5	44	10	382.0	3	1.80	☐	☐	☐	☐	
R19-D10	W842593	56.69	59.74	0.01	5	20	7	194.0	3	1.40	☐	☐	☐	☐	
R19-D10	W842594	59.74	62.79	0.01	2	37	5	264.0	2	1.10	☐	☐	☐	☐	
R19-D10	W842595	62.79	65.84	0.01	3	34	16	188.0	5	1.40	☐	☐	☐	☐	
R19-D10	W842596	62.79	65.84	0.01	1	32	13	181.0	4	1.20	☑	☐	☐	☐	
R19-D10	W842597	65.84	68.89	0.01	2	54	14	327.0	3	1.10	☐	☐	☐	☐	
R19-D10	W842598	68.89	71.93	0.01	3	46	6	363.0	2	1.20	☐	☐	☐	☐	
R19-D10	W842599	71.93	74.98	0.01	2	42	6	420.0	3	3.20	☐	☐	☐	☐	
R19-D10	W842600	74.98	78.03	0.01	3	37	10	586.0	1	2.50	☐	☐	☐	☐	
R19-D11	W842601	78.03	81.08	0.01	3	40	17	694.0	1	3.30	☐	☐	☐	☐	
R19-D11	W842602	81.08	84.13	0.01	6	55	6	718.0	2	9.90	☐	☐	☐	☐	
R19-D11	W842603	84.13	86.00	0.01	3	149	15	1290.0	5	23.20	☐	☐	☐	☐	
R19-D11	W842604	86.00	87.17	0.01	20	206	5	1120.0	8	14.70	☐	☐	☐	☐	
R19-D11	W842606	87.17	90.22	0.01	4	275	26	1100.0	12	15.50	☐	☐	☐	☐	
R19-D11	W842607	90.22	93.27	0.04	1	143	16	1250.0	10	7.90	☐	☐	☐	☐	

Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
R19-D11	W842609	93.27	96.32	0.01	2	368	22	968.0	11	12.00	☐	☐	☐	☐	
R19-D11	W842610	93.27	96.32	0.01	2	384	23	1000.0	11	12.80	☐	☑	☐	☐	
R19-D11	W842611	96.32	99.37	0.01	1	222	18	1060.0	9	7.90	☐	☐	☐	☐	
R19-D11	W842612	99.37	102.41	0.01	0	42	7	1070.0	3	1.50	☐	☐	☐	☐	
R19-D11	W842613	102.41	105.46	0.01	0	6	2	688.0	1	0.40	☐	☐	☐	☐	
R19-D11	W842614	105.46	108.51	0.01	1	48	6	404.0	2	1.80	☐	☐	☐	☐	
R19-D11	W842616	108.51	111.56	0.01	0	9	6	3970.0	1	1.40	☐	☐	☐	☐	
R19-D11	W842617	111.56	114.61	0.01	0	11	3	3210.0	7	1.20	☐	☐	☐	☐	
R19-D11	W842618	114.61	117.65	0.01	0	7	6	1790.0	2	0.80	☐	☐	☐	☐	
R19-D11	W842620	117.65	120.70	0.01	0	3	2	1240.0	1	1.00	☑	☐	☐	☐	
R19-D11	W842619	117.65	120.70	0.01	0	3	2	1200.0	1	1.00	☐	☐	☐	☐	
R19-D12	W842621	120.70	124.05	0.01	0	4	4	135.0	1	0.60	☐	☐	☐	☐	
R19-D12	W842622	124.05	127.10	0.01	0	4	4	234.0	1	0.50	☐	☐	☐	☐	
R19-D12	W842623	127.10	128.00	0.01	0	5	8	122.0	2	0.30	☐	☐	☐	☐	
R19-D12	W842624	128.00	129.00	0.01	0	4	7	3190.0	1	0.70	☐	☐	☐	☐	

Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
R19-D12	W842625	129.00	130.25	0.01	0	6	8	822.0	1	0.40	☐	☐	☐	☐	
R19-D12	W842626	130.25	132.00	0.01	0	6	2	86.0	1	1.30	☐	☐	☐	☐	
R19-D12	W842627	132.00	132.89	0.01	0	20	7	37.0	3	1.30	☐	☐	☐	☐	
R19-D12	W842628	132.89	133.20	0.01	0	68	4	6540.0	15	3.60	☐	☐	☐	☐	
R19-D12	W842630	133.20	136.25	0.01	0	32	8	287.0	2	1.20	☐	☐	☐	☐	
R19-D12	W842631	136.25	139.29	0.01	0	30	3	181.0	2	5.00	☐	☐	☐	☐	
R19-D12	W842632	139.29	142.34	0.01	0	31	3	97.0	5	8.90	☐	☐	☐	☐	
R19-D12	W842633	142.34	143.91	0.01	0	15	5	75.0	14	12.30	☐	☐	☐	☐	
R19-D12	W842634	143.91	145.39	0.01	0	13	5	398.0	53	126.00	☐	☐	☐	☐	
R19-D12	W842636	145.39	148.44	0.01	0	22	6	362.0	71	56.60	☐	☐	☐	☐	
R19-D12	W842637	148.44	151.49	0.01	0	24	12	129.0	68	47.10	☐	☐	☐	☐	
R19-D12	W842638	151.49	153.00	0.01	0	26	10	181.0	69	15.20	☐	☐	☐	☐	
R19-D12	W842639	153.00	154.94	0.01	0	23	3	158.0	5	3.00	☐	☐	☐	☐	
R19-D12	W842640	154.94	157.58	0.01	0	42	6	168.0	5	4.60	☐	☐	☐	☐	
R19-D12	W842641	157.58	160.38	0.01	0	25	4	81.0	5	2.10	☐	☐	☐	☐	

Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
R19-D12	W842643	160.38	161.11	0.01	0	59	5	51.0	8	15.10	☐	☑	☐	☐	
R19-D12	W842642	160.38	161.11	0.01	0	58	5	57.0	9	16.00	☐	☐	☐	☐	
R19-D12	W842644	161.11	161.75	0.01	0	30	8	75.0	11	16.30	☐	☐	☐	☐	
R19-D12	W842645	161.75	162.00	0.01	0	19	9	139.0	12	19.20	☐	☐	☐	☐	
R19-D12	W842646	162.00	163.68	0.01	0	32	9	68.0	11	11.10	☐	☐	☐	☐	
R19-D12	W842647	163.68	166.72	0.01	0	10	3	31.0	2	0.90	☐	☐	☐	☐	
R19-D12	W842648	166.72	167.76	0.01	0	9	2	32.0	2	1.10	☐	☐	☐	☐	
R19-D12	W842649	167.76	168.07	0.05	0	6	29	48.0	3	2.10	☐	☐	☐	☐	
R19-D12	W842650	168.07	170.10	0.03	0	18	4	50.0	3	3.00	☐	☐	☐	☐	
R19-D12	W842651	170.10	171.18	0.01	0	57	13	167.0	9	11.30	☐	☐	☐	☐	
R19-D12	W842652	171.18	173.73	0.01	0	33	4	101.0	5	1.70	☐	☐	☐	☐	
R19-D12	W842653	173.73	175.45	0.01	0	11	27	146.0	4	4.00	☐	☐	☐	☐	
R19-D12	W842654	175.45	177.26	0.01	1	29	121	447.0	20	4.40	☐	☐	☐	☐	
R19-D12	W842656	177.26	177.71	0.01	0	29	48	610.0	13	9.80	☑	☐	☐	☐	
R19-D12	W842655	177.26	177.71	0.01	0	19	41	396.0	8	8.90	☐	☐	☐	☐	

Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
R19-D12	W842657	177.71	179.32	0.01	1	25	152	1120.0	14	8.40	☐	☐	☐	☐	
R19-D12	W842658	179.32	181.32	0.01	0	11	40	242.0	6	3.40	☐	☐	☐	☐	
R19-D12	W842660	181.32	183.11	0.01	0	6	30	78.0	5	5.10	☐	☐	☐	☐	
R19-D13	W842661	183.11	183.26	0.01	0	157	8	19900.0	5	6.80	☐	☐	☐	☐	
R19-D13	W842663	183.26	183.54	0.01	0	16	13	128.0	6	5.60	☐	☐	☐	☐	
R19-D13	W842664	183.54	184.49	0.01	0	35	14	209.0	16	30.00	☐	☐	☐	☐	
R19-D13	W842665	184.49	186.67	0.01	0	21	172	233.0	29	6.30	☐	☐	☐	☐	
R19-D13	W842666	186.67	188.06	0.01	0	39	12	172.0	28	2.10	☐	☐	☐	☐	
R19-D13	W842668	188.06	191.11	0.01	0	11	86	373.0	22	2.40	☐	☐	☐	☐	
R19-D13	W842669	191.11	194.16	0.01	0	14	9	55.0	6	1.60	☐	☐	☐	☐	
R19-D13	W842670	194.16	195.57	0.01	0	18	8	91.0	4	2.30	☐	☐	☐	☐	
R19-D13	W842671	195.57	197.21	0.01	0	15	4	51.0	5	2.40	☐	☐	☐	☐	
R19-D13	W842672	197.21	197.49	0.01	0	37	4	107.0	11	7.10	☐	☐	☐	☐	
R19-D13	W842673	197.49	197.83	0.02	0	68	6	210.0	15	239.00	☐	☐	☐	☐	
R19-D13	W842674	197.49	197.83	0.04	0	134	9	224.0	13	470.00	☑	☐	☐	☐	

Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
R19-D13	W842675	197.83	199.03	0.01	0	34	5	65.0	10	12.70	☐	☐	☐	☐	
R19-D13	W842676	199.03	200.25	0.01	0	34	7	130.0	30	270.00	☐	☐	☐	☐	
R19-D13	W842677	200.25	201.03	0.01	0	80	4	141.0	19	1740.00	☐	☐	☐	☐	
R19-D13	W842678	201.03	202.28	0.01	0	5	2	160.0	35	104.00	☐	☐	☐	☐	
R19-D13	W842679	202.28	203.10	0.01	0	255	2	110.0	9	176.00	☐	☐	☐	☐	
R19-D13	W842680	203.10	205.00	0.01	0	7	21	11.0	23	143.00	☐	☐	☐	☐	
R19-D13	W842681	205.00	206.56	0.01	0	1	19	10.0	24	5.50	☐	☐	☐	☐	
R19-D13	W842682	206.56	207.45	0.01	0	59	2	17.0	57	840.00	☐	☐	☐	☐	
R19-D13	W842683	207.45	209.40	0.01	0	1	3	7.0	72	12.40	☐	☐	☐	☐	
R19-D13	W842685	209.40	212.45	0.01	0	2	8	12.0	33	26.70	☐	☐	☐	☐	
R19-D13	W842686	212.45	215.49	0.01	0	1	14	9.0	22	3.50	☐	☐	☐	☐	
R19-D13	W842687	215.49	216.86	0.01	0	30	14	31.0	13	5.20	☐	☐	☐	☐	
R19-D13	W842688	216.86	218.54	0.01	0	4	22	23.0	21	4.80	☐	☐	☐	☐	
R19-D13	W842689	218.54	221.59	0.01	0	2	31	18.0	5	5.00	☐	☐	☐	☐	
R19-D13	W842690	221.59	223.92	0.01	0	1	28	16.0	7	4.80	☐	☐	☐	☐	

Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
R19-D13	W842691	223.92	224.34	0.01	0	5	3	432.0	23	307.00	☐	☐	☐	☐	
R19-D13	W842693	224.34	224.56	0.01	1	1415	8	127.0	38	42.60	☐	☑	☐	☐	
R19-D13	W842692	224.34	224.56	0.01	1	1630	9	128.0	39	40.70	☐	☐	☐	☐	
R19-D13	W842694	224.56	226.25	0.01	0	6	4	122.0	25	21.90	☐	☐	☐	☐	
R19-D13	W842695	226.25	228.27	0.01	0	2	11	15.0	45	8.60	☐	☐	☐	☐	
R19-D13	W842696	228.27	229.78	0.01	0	4	5	223.0	20	13.20	☐	☐	☐	☐	
R19-D13	W842697	229.78	231.17	0.01	0	4	11	566.0	3	22.80	☐	☐	☐	☐	
R19-D13	W842698	231.17	231.64	0.01	1	628	13	278.0	17	87.70	☐	☐	☐	☐	
R19-D13	W842699	231.64	233.47	0.01	0	5	8	638.0	6	28.90	☐	☐	☐	☐	
R19-D13	W842700	233.47	235.97	0.01	1	7	41	1600.0	5	42.80	☐	☐	☐	☐	
R19-D14	W842701	235.97	236.48	0.01	2	27	250	3370.0	12	74.80	☐	☐	☐	☐	
R19-D14	W842702	236.48	237.66	0.01	0	55	10	269.0	20	12.80	☐	☐	☐	☐	
R19-D14	W842703	237.66	240.38	0.01	0	4	23	67.0	8	2.20	☐	☐	☐	☐	
R19-D14	W842704	240.38	242.93	0.01	0	12	5	163.0	34	19.50	☐	☐	☐	☐	
R19-D14	W842706	242.93	245.97	0.01	0	49	11	2840.0	24	1970.00	☐	☐	☐	☐	

Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
R19-D14	W842707	245.97	249.02	0.01	0	6	4	393.0	1	7.70	☐	☐	☐	☐	
R19-D14	W842708	249.02	252.07	0.01	0	5	8	38.0	2	9.30	☐	☐	☐	☐	
R19-D14	W842709	252.07	255.12	0.01	0	9	26	47.0	3	15.80	☐	☐	☐	☐	
R19-D14	W842710	255.12	258.17	0.01	0	16	58	31.0	2	12.90	☐	☐	☐	☐	
R19-D14	W842711	258.17	261.21	0.01	0	12	25	104.0	1	7.00	☐	☐	☐	☐	
R19-D14	W842712	261.21	264.26	0.01	0	8	10	70.0	1	9.70	☐	☐	☐	☐	
R19-D14	W842713	264.26	267.31	0.01	0	3	12	16.0	0	1.80	☐	☐	☐	☐	
R19-D14	W842714	267.31	270.36	0.02	0	3	115	50.0	2	6.20	☐	☐	☐	☐	
R19-D14	W842715	270.36	273.14	0.01	0	8	9	59.0	2	45.90	☐	☐	☐	☐	
R19-D14	W842716	273.14	275.32	0.01	0	6	52	159.0	2	8.20	☐	☐	☐	☐	
R19-D14	W842717	275.32	275.79	0.01	2	179	380	383.0	2	84.00	☐	☐	☐	☐	
R19-D14	W842719	275.79	276.45	0.01	0	5	23	51.0	1	5.20	☐	☐	☐	☐	
R19-D14	W842720	276.45	277.64	0.01	0	14	84	112.0	2	12.20	☐	☐	☐	☐	
R19-D14	W842721	277.64	279.50	0.01	0	20	63	134.0	4	11.40	☐	☐	☐	☐	
R19-D14	W842722	279.50	282.55	0.01	0	24	45	209.0	4	153.50	☐	☐	☐	☐	

Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
R19-D14	W842723	279.50	282.55	0.01	0	23	43	196.0	4	108.00	☐	☑	☐	☐	
R19-D14	W842724	282.55	285.60	0.01	1	18	135	237.0	3	67.10	☐	☐	☐	☐	



Tiger - Rau

Archer,Cathro & Associates (1981) Limited

Grid East	Grid North	Easting	Northing	Elevation	Depth (m)
		532274	7117748	1083	279.5

ZONE: Kathy

SECTION:

HOLE: RPP-19-006

CLAIM:

Contractor: Superior

Drill: 6

Core Size: NQ2

Casing Depth:

Drilling Dates: Aug 26 - Aug 30, 2019

Geology Logged By: M. Rego

SURVEY			
Depth (m)	Azimuth	Dip	Method
0	44.9	-50	Compass
279.5	38.9	-53.4	Reflex

TARGET: This hole targetted the mag high produced from the gro

SUMMARY			
From (m)	To (m)	Interval (m)	Rock Type
0	2.5	2.5	OVB
2.5	9.14	6.64	DST
9.14	9.95	0.81	PEG
9.95	20.5	10.55	DST
20.5	20.6	0.1	PEG
20.6	37.95	17.35	DST
37.95	38.33	0.38	PEG
38.33	43.94	5.61	DST
43.94	49.02	5.08	PEG
49.02	49.77	0.75	DST
49.77	51.12	1.35	PEG
51.12	52.93	1.81	DST
52.93	55.32	2.39	PEG
55.32	55.82	0.5	DST
55.82	62.55	6.73	PEG
62.55	67.31	4.76	LST

SAMPLES	
Numbers:	w842725 to W842872
Total:	148
Batch:	D14, D15, D16, D17, D18
Certificates:	WH19219755, WH19219765, WH19225052, WH19225062, WH19229855

COMMENTS

This hole collared in the Bouvette Formation dolostones and limestones. Several pegmatites are encoutnerd throughout the hole with thin <10cm skarn development on the pegmatite margin. Several marble zones are encountered throughout the hole. The large mag high feature remains unexplained after this hole. Some of the skarn intervals had magnetite and were

67.31	87.7	20.39	LST
87.7	87.98	0.28	PEG
87.98	88.11	0.13	LST
88.11	93.13	5.02	PEG
93.13	96	2.87	LST
96	96.21	0.21	PEG
96.21	110.61	14.4	LST
110.61	110.76	0.15	PEG
110.76	140.57	29.81	LST
140.57	141.66	1.09	SKN
141.66	141.88	0.22	LST
141.88	142.31	0.43	PEG
142.31	143.9	1.59	LST
143.9	157.25	13.35	MBL
157.25	157.58	0.33	PEG
157.58	161.37	3.79	LST
161.37	167.96	6.59	MBL
167.96	192.5	24.54	PEG
192.5	218.51	26.01	DST
218.51	234	15.49	LST
234	279.5	45.5	MBL

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
0.00	2.50	2.50	OVB	--	0-1.73m no recovery. Poor recovery, some dolostone blocks							
2.50	9.14	6.64	DST	FG	Foliated dolostone with 1mm calcite veinlets, and variably vein brecciated. Minor tremolite as inclusions in calcite veins.							
9.14	9.95	0.81	PEG	CG	Pegmatite, weakly oxidized, quartz rich (9.14-9.51m), pale green mica and calcite rich (9.51-9.95m). Actinolite skarn altered margins.							
9.95	20.50	10.55	DST	FG	Variably foliated dolostone cut by moderate angle TCA calcite veins and veinlets. Minor tremolite as inclusions in calcite veins.							
20.50	20.60	0.10	PEG	CG	Quartz-calcite pegmatite with skarn altered contacts, pale green/blue colour throughout							
20.60	37.95	17.35	DST	FG	Variably foliated dolostone cut by moderate angle TCA calcite veins and veinlets. Fine, disseminated <1mm pyrite throughout. - 26.94-27.00m: altered calcite, actinolite? Vein with some blebby subhedral pyrite 0.5cm -27.38-27.46m: massive pale grey groundmass with 0.5cm actinolite phenocrysts, grading into white laths and spots of calcite?/tremolite? In LST/DST?. -33.31-33.33m: Calcite, mica, tremolite? Vein/skarn band? -36.12-36.60m: actinolite phenocrysts in a massive pale grey dolostone groundmass -Disseminated pyrite <1mm throughout -30.95-32.05m: vein breccia with calcite infill							
37.95	38.33	0.38	PEG	CG	zoned skarn band, calcite, actinolite, green-brown mineral, and dark black laths as altered rims (3-10cm) of a quartz/calcite pegmatite.							

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
38.33	40.81	2.48	DST	FG	Fine grained dolostone cut by calcite veins and veinlets at moderate angle TCA. Fine, <1mm, disseminated pyrite throughout. Altered bands at 38.43-38.45m and 39.42-39.45m composed of zoned calcite, possibly tremolite - 39.75-40.30m: altered, vein brecciated dolostone. Alteration front visible as a sharp contact of pale grey and dark grey parallel TCA at 39.80m.							
40.81	41.05	0.24	DST	FG	Dolostone with several pale, zoned veins at approximately 45 TCA containing actinolite, calcite, and a light brown anhedral mineral							
41.05	43.94	2.89	DST	FG	fine grained variably foliated dolostone cut by moderate angle calcite veins and veinlets. Fine, <1mm, disseminated Pyrite throughout, and a 1mm veinlet hosting 2mm pyrite crystals and associated green mineral, possibly actinolite							
43.94	49.02	5.08	PEG	CG	Quartz/feldspar pegmatite with sub/euhedral red garnet (pyrope?) 46.25-47.25m, and disseminated euhedral actinolite throughout. Locally equigranular granite. Lower 5cm margin of quartz/feldspar graphic intergrowths. 43.94-44.22m: skarn altered margin, dominantly actinolite, fluourite, calcite, quartz, disseminated pyrite and possibly trace scheelite. trace molybdenite in rubble at 48.98m							
49.02	49.77	0.75	DST	FG	Crackle breccia fine grained dolostone grading into foliated dolostone. Zoned 1cm calcite vein with core of fine grained pale green actinolite?, 49.64m							

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
49.77	51.12	1.35	PEG	CG	quartz/feldspar pegmatite with skarn altered margin 49.77-49.87m: skarn altered margin, blebby pyrite in zones of calcite, actinolite, fluourite, glassy green mineral, and quartz white pegmatite of quartz, feldspar, disseminated blebs of euhedral to subhedral actinolite, and disseminated sub/euhedral red garnet 51.07-51.07m: skarn altered margin, blebby pyrite in zones of calcite, actinolite, fluourite, glassy green mineral, and quartz							
51.12	52.93	1.81	DST	FG	Crackle breccia fine grained dolostone grading into foliated dolostone. Zoned 1cm calcite vein with core of fine grained pale green actinolite?, 52.81m							
52.93	55.32	2.39	PEG	CG	quartz/feldspar pegmatite with skarn altered margin - 52.93-52.95m: skarn altered margin, zones of calcite, actinolite, fluourite, and quartz 52.95-55.30m: variably equigranular granite and quartz/feldspar pegmatite with disseminated fine grained sub/euhedral red garnet 55.30-55.32m: actinolite, calcite zoned margin with sharp contact to dolostone							
55.32	55.82	0.50	DST	FG	fine grained, weakly foliated dolostone							

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
55.82	62.55	6.73	PEG	CG	Variably equigranular and pegmatitic granite with disseminated to massive actinolite, equigranular to graphic quartz/feldspar, glassy green mineral, and rusty orange mineral (scheelite?) 60.05-60.25m: zoned quartz, calcite, actinolite veins Pale yellow mineral associated with quartz/feldspar graphic texture fine grained sub-euhedral red garnets throughout, <1% 60.32-60.45m: submassive pyrite, XRF indicates 900ppm As, grades into massive actinolite vein, zoned to fluorite and calcite.							
62.55	67.31	4.76	DST	FG	crackle to foliated limestone with 1cm zoned calcite veins spaced on average every 10cm, more abundant at 63.95-64.12m. Oxidized fracture surfaces at 66.72m and 67.30m.							
67.31	87.70	20.39	LST	FG	variably foliated and crackle breccia textured limestone cut by calcite veins and veinlets. Pitted veinlets at 77.40-77.80m and 85.19-86.50m							
87.70	87.98	0.28	PEG	CG	Quartz, feldspar, actinolite pegmatite with skarn altered margin hosting glassy green-brown mineral. Disseminated pyrite thoughout.							
87.98	88.11	0.13	LST	FG	Foliated limestone with 1cm calcite veins/vein breccia							
88.11	93.13	5.02	PEG	CG	Quartz/feldspar/muscovite pegmatite with variably equigranular and myrmekitic texture. Hosts massive quartz and actinolite veins.							
93.13	96.00	2.87	LST	FG	Foliated fine grained limestone cut by zoned calcite veins. Fine disseminated pyrite throughout. 0.2cm Sp veinlet at 94.12							
96.00	96.21	0.21	PEG	CG	Quartz/feldspar pegmatite with disseminated actinolite, and skarn altered margin of actinolite, quartz, fluorite.							

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
96.21	110.61	14.40	LST	FG	Foliated fine grained limestone cut by zoned calcite veins. Fine disseminated pyrite throughout							
110.61	110.76	0.15	PEG	CG	Quart/feldspar pegmatite with skarn altered margins and disseminated subhedral pyrite.							
110.76	121.01	10.25	LST	FG	Variably foliated limestone, cut by calcite veins and veinlets at moderate angle TCA.							
121.01	131.10	10.09	MBL	FG	Variably foliated, crackle brecciated, and massive marble, with dolomite veinlets?							
131.10	133.75	2.65	LST	FG	Foliated/crackle brecciated fine grained limstone							
133.75	136.85	3.10	MBL	FG	Foliated/crackle brecciated marble with dolomite? Veinlets							
136.85	140.57	3.72	LST	FG	foliated/crackle brecciated limestone							
140.57	141.66	1.09	SKN	FG	Oxidized/weathered skarn? Horizon. Rusty tremolite vein along fracture subparallel TCA. Minor actinolite vein.							
141.66	141.88	0.22	LST	FG	Foliated fine grained limestone showing evidence of shearing							
141.88	142.31	0.43	PEG	CG	Quartz/feldspar pegmatite? With altered margins of zoned calcite.							
142.31	143.90	1.59	LST	FG	Foliated, fine grained limestone. MnO in calcite vein							
143.90	150.22	6.32	MBL	FG	Crackle brecciated marble, cut by moderate angle TCA calcite veins, weakly oxidized on fracture faces							
150.22	150.77	0.55	MBL	FG	Crackle brecciated marble with bleached alteration, cut by moderate angle TCA calcite veins, weakly oxidized on fracture faces							
150.77	157.25	6.48	MBL	FG	Crackle brecciated marble, cut by moderate angle TCA calcite veins, weakly oxidized on fracture faces							

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
157.25	157.58	0.33	PEG	CG	Quartz-feldspar pegmatite with skarn altered margins. Variably pegmatitic and equigranular texture Pale yellow feldspar, quartz, calcite, muscovite, and actinolite.							
157.58	161.37	3.79	LST	FG	Foliated and crackle brecciated, fine grained limestone, cut by moderate angle TCA calcite veins which are variably pitted.							
161.37	166.15	4.78	MBL	FG	Crackle brecciated marble, grading into strongly foliated limestone. 10cm vein breccia contact hosting bladed calcite.							
166.15	167.96	1.81	LST	FG	Strongly foliated limestone cut by moderate angle calcite veins, associated with a 1cm skarn band at 167.34m							
167.96	192.50	24.54	PEG	CG	Quartz/Feldspar pegmatite with variably quigranular and pegmatitic texture, minor myrmekitic texture. Hosts actinolite veins, very coarse euhedral fluorite, fine grained sub/euhedral garnets pink-red, blebby to submassive pyrite, disseminated biotite, and black prismatic mineral.							
192.50	218.51	26.01	DST	FG	Variably crackle brecciated and foliated dolostone, with intervals of dolomitized marble. 192.77-192.82m: Actinolite calcite quartz zoned skarn band Unit cut by calcite veins, pitted, on average 0.2cm Fine disseminated pyrite throughout							
218.51	221.59	3.08	LST	FG	Weakly foliated limestone cut by moderate angle TCA calcite veins, variably pitted, fine disseminated pyrite throughout							

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
221.59	222.00	0.41	LST	FG	Weakly foliated limestone cut by moderate angle TCA calcite veins, variably pitted, fine disseminated pyrite throughout. Bleached alteration to a pale brown colour.							
222.00	234.00	12.00	LST	FG	Weakly foliated limestone cut by moderate angle TCA calcite veins, variably pitted, fine disseminated pyrite throughout							
234.00	279.50	45.50	MBL	FG	Fine grained, variably foliated limestone and banded marble with fine to coarse disseminated euhedral pyrite throughout. Calcite vein and fracture face at 259.58-259.68m hosts euhedral sphalerite in vugs, as well as actinolite and pyrite. Calcite vein at 271.70 hosts abundant euhedral cassiterite, pyrite, and garnet							

RPP-19-006

Rau
Kathy Zone
Archer,Cathro & Associates (1981) Limited

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
0.00	1.73	1.73	0	0	0.00	0	--	--	--	No recovery
1.73	2.13	0.40	0.4	100	0.13	33	2R	1H	5W	Overburden and rubble zones
2.13	5.18	3.05	1.24	41	0.97	32	1R	1H	4W	Begins with weathered rubble zone
5.18	8.23	3.05	2.99	98	2.02	66	2R	3H	2W	
8.23	11.28	3.05	3.01	99	2.64	87	2R	4H	1W	74cm pegmatite body through run
11.28	14.33	3.05	2.97	97	2.31	76	2R	4H	1W	
14.33	17.37	3.04	3.04	100	2.22	73	1R	4H	1W	
17.37	20.42	3.05	2.96	97	2.02	66	2R	4H	1W	
20.42	23.47	3.05	3	98	2.32	76	3R	4H	1W	
23.47	26.52	3.05	3.01	99	2.90	95	2R	4H	1W	
26.52	29.57	3.05	2.94	96	1.80	59	2R	4H	1W	
29.57	32.61	3.04	3.03	100	2.51	83	3R	4H	1W	
32.61	35.66	3.05	3	98	2.37	78	2R	4H	1W	
35.66	38.71	3.05	3.05	100	2.43	80	2R	4H	1W	
38.71	41.76	3.05	3.02	99	2.19	72	2R	4H	1W	
41.76	44.81	3.05	2.99	98	1.68	55	2R	4H	1W	
44.81	47.85	3.04	3.04	100	2.96	97	1R	4H	1W	
47.85	50.90	3.05	3.05	100	2.79	91	1R	4H	1W	
50.90	53.95	3.05	2.88	94	2.47	81	2R	4H	1W	
53.95	57.00	3.05	3.02	99	2.29	75	1R	4H	1W	
57.00	60.05	3.05	3.05	100	2.80	92	1R	5H	1W	
60.05	63.09	3.04	2.9	95	2.60	86	1R	5H	1W	
63.09	66.14	3.05	3.05	100	2.90	95	2R	4H	1W	
66.14	69.19	3.05	2.94	96	2.91	95	2R	4H	1W	
69.19	72.24	3.05	3.05	100	2.86	94	2R	4H	1W	
72.24	75.29	3.05	2.91	95	2.84	93	2R	4H	1W	
75.29	78.33	3.04	3.02	99	2.16	71	2R	4H	1W	
78.33	81.38	3.05	3.05	100	1.97	65	2R	4H	1W	
81.38	84.43	3.05	3.03	99	2.57	84	2R	4H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
84.43	87.48	3.05	3	98	2.35	77	2R	4H	1W	
87.48	90.53	3.05	3.05	100	2.66	87	1R	5H	1W	
90.53	93.57	3.04	2.94	97	2.34	77	1R	5H	1W	
93.57	96.62	3.05	3.04	100	2.57	84	2R	4H	1W	
96.62	99.67	3.05	2.78	91	1.33	44	2R	3H	1W	
99.67	102.72	3.05	2.93	96	2.26	74	3R	3H	1W	
102.72	105.77	3.05	2.95	97	1.82	60	2R	3H	1W	
105.77	108.81	3.04	3.04	100	2.19	72	2R	3H	1W	
108.81	111.86	3.05	3.05	100	3.02	99	2R	4H	1W	
111.86	114.91	3.05	3.05	100	2.90	95	2R	4H	1W	
114.91	117.96	3.05	3.04	100	2.74	90	3R	4H	1W	
117.96	121.01	3.05	3.05	100	2.95	97	2R	3H	1W	
121.01	124.05	3.04	3.01	99	2.90	95	2R	3H	1W	
124.05	127.10	3.05	2.94	96	2.87	94	2R	4H	1W	
127.10	130.15	3.05	2.99	98	2.91	95	3R	3H	1W	
130.15	133.20	3.05	2.78	91	1.70	56	2R	3H	1W	
133.20	136.25	3.05	3.05	100	2.88	94	2R	4H	1W	
136.25	139.29	3.04	2.99	98	2.99	98	2R	4H	1W	
139.29	142.34	3.05	3.04	100	1.93	63	2R	3H	3W	contact zone, fractured and sectipon weathered.
142.34	145.39	3.05	2.79	91	1.22	40	1R	3H	3W	Blocky rubbly zone with rusty fractures.
145.39	148.44	3.05	2.83	93	1.30	43	1R	3H	3W	blocky
148.44	151.49	3.05	3	98	1.50	49	1R	2H	2W	
151.49	154.53	3.04	3.04	100	2.42	80	2R	3H	1W	
154.53	157.58	3.05	2.99	98	2.35	77	1R	3H	1W	
157.58	160.63	3.05	2.92	96	2.16	71	1R	3H	1W	
160.63	163.68	3.05	2.93	96	2.20	72	1R	4H	1W	
163.68	166.73	3.05	3.05	100	1.97	65	2R	3H	1W	
166.73	169.77	3.04	3.04	100	2.40	79	1R	4H	1W	
169.77	172.82	3.05	2.97	97	2.62	86	0R	4H	1W	
172.82	175.87	3.05	2.99	98	2.62	86	0R	4H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
175.87	178.92	3.05	3.05	100	2.93	96	0R	4H	1W	
178.92	181.97	3.05	3.02	99	3.02	99	0R	4H	1W	
181.97	185.01	3.04	2.95	97	2.74	90	0R	4H	1W	
185.01	188.06	3.05	3.02	99	2.84	93	0R	4H	1W	
188.06	191.11	3.05	3.05	100	2.94	96	0R	4H	1W	
191.11	194.16	3.05	2.86	94	2.65	87	1R	3H	1W	
194.16	197.21	3.05	3.01	99	2.20	72	1R	3H	1W	
197.21	200.25	3.04	2.98	98	1.30	43	1R	3H	1W	
200.25	203.30	3.05	3.05	100	2.40	79	1R	3H	1W	
203.30	206.35	3.05	2.99	98	2.56	84	1R	3H	1W	
206.35	209.40	3.05	2.95	97	2.05	67	1R	3H	1W	
209.40	212.45	3.05	3.03	99	1.69	55	1R	3H	1W	
212.45	215.49	3.04	2.9	95	1.16	38	1R	3H	1W	
215.49	218.54	3.05	3.05	100	2.99	98	1R	3H	1W	
218.54	221.59	3.05	2.98	98	2.67	88	1R	3H	1W	
221.59	224.64	3.05	3.05	100	2.63	86	2R	3H	1W	
224.64	227.69	3.05	2.92	96	2.25	74	2R	3H	1W	
227.69	230.73	3.04	2.95	97	1.98	65	2R	3H	1W	
230.73	233.78	3.05	3.02	99	2.43	80	3R	3H	1W	
233.78	236.83	3.05	3.01	99	2.62	86	3R	3H	1W	
236.83	239.88	3.05	3.05	100	2.76	90	3R	3H	1W	
239.88	242.93	3.05	3.05	100	2.61	86	3R	3H	1W	
242.93	245.97	3.04	3.04	100	3.04	100	3R	3H	1W	
245.97	249.02	3.05	3.03	99	3.00	98	3R	3H	1W	
249.02	252.07	3.05	3.05	100	3.05	100	3R	3H	1W	
252.07	255.12	3.05	3	98	3.00	98	2R	3H	1W	
255.12	258.17	3.05	3.05	100	2.95	97	2R	3H	1W	
258.17	261.21	3.04	2.98	98	2.98	98	3R	3H	2W	
261.21	264.26	3.05	3.05	100	3.05	100	3R	3H	2W	
264.26	267.31	3.05	3	98	2.42	79	3R	3H	1W	
267.31	270.36	3.05	3.05	100	2.78	91	1R	3H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
270.36	273.41	3.05	3.03	99	2.96	97	1R	3H	1W	
273.41	276.45	3.04	2.97	98	2.97	98	1R	3H	1W	
276.45	279.50	3.05	3	98	2.81	92	1R	3H	1W	

RPP-19-006

Rau Archer,Cathro & Associates (1981) Limited
Kathy Zone

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	W842844	☐	R19-D17	Core	ML-1	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W842733	☐	R19-D14	Core	ML-2	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W842850	☐	R19-D17	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W842827	☐	R19-D17	Core	ML-2	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W842819	☐	R19-D16	Core	ML-2	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W842812	☐	R19-D16	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W842789	☐	R19-D16	Core	ML-1	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W842778	☐	R19-D15	Core	ML-2	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W842757	☐	R19-D15	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W842748	☐	R19-D15	Core	ML-1	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W842865	☐	R19-D18	Core	ML-1	☐	☐	☐
1.73	2.13	0.40	OVB	0.40	100	w842725	☐	R19-D14	Core		☐	☐	☐
2.13	5.18	3.05	OVB	1.24	41	W842726	☐	R19-D14	Core		☐	☐	☐
5.18	8.23	3.05	DST	2.99	98	W842727	☐	R19-D14	Core		☐	☐	☐
8.23	9.08	0.85	DST	0.85	100	W842728	☐	R19-D14	Core		☐	☐	☐
9.08	9.91	0.83	DST	0.83	100	W842729	☐	R19-D14	Core		☐	☐	☐
9.91	10.01	0.10	PEG	0.10	100	W842730	☐	R19-D14	Core		☐	☐	☐
10.01	11.28	1.27	DST	1.27	100	W842731	☐	R19-D14	Core		☐	☐	☐
11.28	14.33	3.05	DST	2.97	97	W842732	☐	R19-D14	Core		☐	☐	☐
14.33	17.37	3.04	DST	3.04	100	W842734	☐	R19-D14	Core		☐	☐	☐
17.37	20.37	3.00	DST	3.00	100	W842735	☐	R19-D14	Core		☐	☐	☐
20.37	20.64	0.27	DST	0.27	100	W842736	☐	R19-D14	Core		☐	☐	☐
20.64	23.47	2.83	DST	2.83	100	W842737	☐	R19-D14	Core		☐	☐	☐
23.47	25.41	1.94	DST	1.94	100	W842738	☐	R19-D14	Core		☐	☐	☐
25.41	26.86	1.45	DST	1.45	100	W842739	☐	R19-D14	Core		☐	☐	☐
25.41	26.86	1.45	DST	1.45	100	W842740	☐	R19-D14	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
26.86	26.98	0.12	DST	0.12	100	W842741	☐	R19-D15	Core		☐	☐	☐
26.98	29.57	2.59	DST	2.59	100	W842742	☐	R19-D15	Core		☐	☐	☐
29.57	30.85	1.28	DST	1.28	100	W842743	☐	R19-D15	Core		☐	☐	☐
30.85	32.04	1.19	DST	1.19	100	W842744	☐	R19-D15	Core		☐	☐	☐
32.04	33.29	1.25	DST	1.25	100	W842745	☐	R19-D15	Core		☐	☐	☐
33.29	33.46	0.17	DST	0.17	100	W842746	☐	R19-D15	Core		☐	☐	☐
33.46	35.66	2.20	DST	2.20	100	W842747	☐	R19-D15	Core		☐	☐	☐
35.66	37.91	2.25	DST	2.25	100	W842749	☐	R19-D15	Core		☐	☐	☐
37.91	37.98	0.07	DST	0.07	100	W842750	☐	R19-D15	Core		☐	☐	☐
37.98	38.18	0.20	PEG	0.20	100	W842751	☐	R19-D15	Core		☐	☐	☐
38.18	38.30	0.12	PEG	0.12	100	W842752	☐	R19-D15	Core		☐	☐	☐
38.30	40.82	2.52	PEG	2.52	100	W842753	☐	R19-D15	Core		☐	☐	☐
40.82	41.06	0.24	DST	0.24	100	W842754	☐	R19-D15	Core		☐	☐	☐
41.06	43.84	2.78	DST	2.78	100	W842755	☐	R19-D15	Core		☐	☐	☐
43.84	44.81	0.97	DST	0.97	100	W842756	☐	R19-D15	Core		☐	☐	☐
44.81	47.85	3.04	PEG	3.04	100	W842758	☐	R19-D15	Core		☐	☐	☐
47.85	48.95	1.10	PEG	1.10	100	W842759	☐	R19-D15	Core		☐	☐	☐
48.95	48.98	0.03	PEG	0.03	100	W842760	☐	R19-D15	Core		☐	☐	☐
48.98	49.76	0.78	PEG	0.78	100	W842761	☐	R19-D15	Core		☐	☐	☐
49.76	51.09	1.33	DST	1.33	100	W842762	☐	R19-D15	Core		☐	☐	☐
51.09	52.86	1.77	PEG	1.77	100	W842763	☐	R19-D15	Core		☐	☐	☐
52.86	55.32	2.46	DST	2.46	100	W842764	☐	R19-D15	Core		☐	☐	☐
55.32	55.84	0.52	PEG, DST	0.52	100	W842765	☐	R19-D15	Core		☐	☐	☐
55.84	58.24	2.40	PEG	2.40	100	W842766	☐	R19-D15	Core		☐	☐	☐
55.84	58.24	2.40	PEG	2.40	100	W842767	☐	R19-D15	Core		☐	☑	☐
58.24	60.05	1.81	PEG	1.81	100	W842768	☐	R19-D15	Core		☐	☐	☐
60.05	62.32	2.27	PEG	2.27	100	W842769	☐	R19-D15	Core		☐	☐	☐
62.32	62.45	0.13	PEG	0.13	100	W842770	☐	R19-D15	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
62.32	62.45	0.13	PEG	0.13	100	W842771	☐	R19-D15	Core		☐	☐	☑
62.45	63.09	0.64	PEG	0.64	100	W842772	☐	R19-D15	Core		☐	☐	☐
63.09	66.14	3.05	LST	3.05	100	W842773	☐	R19-D15	Core		☐	☐	☐
66.14	69.19	3.05	LST	2.94	96	W842774	☐	R19-D15	Core		☐	☐	☐
69.19	72.24	3.05	LST	3.05	100	W842775	☐	R19-D15	Core		☐	☐	☐
72.24	75.29	3.05	LST	2.91	95	W842776	☐	R19-D15	Core		☐	☐	☐
75.29	78.33	3.04	LST	3.02	99	W842777	☐	R19-D15	Core		☐	☐	☐
78.33	81.38	3.05	LST	3.05	100	W842779	☐	R19-D15	Core		☐	☐	☐
81.38	84.43	3.05	LST	3.03	99	W842780	☐	R19-D15	Core		☐	☐	☐
84.43	87.48	3.05	LST	3.00	98	W842781	☐	R19-D16	Core		☐	☐	☐
87.48	87.70	0.22	LST	0.22	100	W842782	☐	R19-D16	Core		☐	☐	☐
87.70	87.97	0.27	PEG, LST	0.27	100	W842783	☐	R19-D16	Core		☐	☐	☐
87.97	88.15	0.18	PEG	0.18	100	W842784	☐	R19-D16	Core		☐	☐	☐
88.15	90.53	2.38	PEG	2.38	100	W842785	☐	R19-D16	Core		☐	☐	☐
90.53	93.09	2.56	PEG	2.56	100	W842786	☐	R19-D16	Core		☐	☐	☐
93.09	93.57	0.48	PEG	0.48	100	W842787	☐	R19-D16	Core		☐	☐	☐
93.57	95.85	2.28	LST	2.28	100	W842788	☐	R19-D16	Core		☐	☐	☐
95.85	96.26	0.41	LST	0.41	100	W842790	☐	R19-D16	Core		☐	☐	☐
96.26	98.07	1.81	LST	1.81	100	W842791	☐	R19-D16	Core		☐	☐	☐
98.07	99.67	1.60	LST	1.60	100	W842792	☐	R19-D16	Core		☐	☐	☐
99.67	102.72	3.05	LST	2.93	96	W842793	☐	R19-D16	Core		☐	☐	☐
102.72	105.77	3.05	LST	2.95	97	W842794	☐	R19-D16	Core		☐	☐	☐
105.77	108.81	3.04	LST	3.04	100	W842795	☐	R19-D16	Core		☐	☐	☐
108.81	110.60	1.79	LST	1.79	100	W842796	☐	R19-D16	Core		☐	☐	☐
110.60	110.79	0.19	LST	0.19	100	W842797	☐	R19-D16	Core		☐	☐	☐
110.60	110.79	0.19	LST	0.19	100	W842798	☐	R19-D16	Core		☐	☐	☑
110.79	112.95	2.16	LST	2.16	100	W842799	☐	R19-D16	Core		☐	☐	☐
112.95	114.91	1.96	LST	1.96	100	W842800	☐	R19-D16	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
114.91	117.96	3.05	LST	3.04	100	W842801	☐	R19-D16	Core		☐	☐	☐
117.96	121.01	3.05	LST	3.05	100	W842802	☐	R19-D16	Core		☐	☐	☐
121.01	124.05	3.04	LST	3.01	99	W842803	☐	R19-D16	Core		☐	☐	☐
124.05	127.10	3.05	LST	2.94	96	W842804	☐	R19-D16	Core		☐	☐	☐
127.10	130.15	3.05	LST	2.99	98	W842805	☐	R19-D16	Core		☐	☐	☐
130.15	133.20	3.05	LST	2.78	91	W842806	☐	R19-D16	Core		☐	☐	☐
130.15	133.20	3.05	LST	2.78	91	W842807	☐	R19-D16	Core		☐	☑	☐
133.20	136.25	3.05	LST	3.05	100	W842808	☐	R19-D16	Core		☐	☐	☐
136.25	139.29	3.04	LST	2.99	98	W842809	☐	R19-D16	Core		☐	☐	☐
139.29	140.56	1.27	LST	1.27	100	W842810	☐	R19-D16	Core		☐	☐	☐
140.56	141.66	1.10	LST	1.10	100	W842811	☐	R19-D16	Core		☐	☐	☐
141.66	141.88	0.22	LST, SKN	0.22	100	W842813	☐	R19-D16	Core		☐	☐	☐
141.88	142.34	0.46	LST, PEG	0.46	100	W842814	☐	R19-D16	Core		☐	☐	☐
142.34	145.39	3.05	LST	2.79	91	W842815	☐	R19-D16	Core		☐	☐	☐
145.39	148.44	3.05	MBL	2.83	93	W842816	☐	R19-D16	Core		☐	☐	☐
148.44	151.49	3.05	MBL	3.00	98	W842817	☐	R19-D16	Core		☐	☐	☐
151.49	154.53	3.04	MBL	3.04	100	W842818	☐	R19-D16	Core		☐	☐	☐
154.53	157.25	2.72	MBL	2.72	100	W842820	☐	R19-D16	Core		☐	☐	☐
157.25	157.58	0.33	MBL, PEG	0.33	100	W842821	☐	R19-D17	Core		☐	☐	☐
157.58	160.63	3.05	LST, PEG	2.92	96	W842822	☐	R19-D17	Core		☐	☐	☐
160.63	163.68	3.05	LST	2.93	96	W842823	☐	R19-D17	Core		☐	☐	☐
163.68	166.73	3.05	MBL	3.05	100	W842824	☐	R19-D17	Core		☐	☐	☐
166.73	167.91	1.18	MBL	1.18	100	W842825	☐	R19-D17	Core		☐	☐	☐
167.91	169.77	1.86	MBL	1.86	100	W842826	☐	R19-D17	Core		☐	☐	☐
169.77	172.82	3.05	PEG	2.97	97	W842828	☐	R19-D17	Core		☐	☐	☐
172.82	175.87	3.05	PEG	2.99	98	W842829	☐	R19-D17	Core		☐	☐	☐

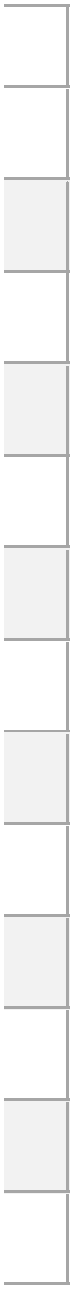
From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
175.87	178.92	3.05	PEG	3.05	100	W842830	☐	R19-D17	Core		☐	☐	☐
175.87	178.92	3.05	PEG	3.05	100	W842831	☐	R19-D17	Core		☐	☑	☐
178.92	181.97	3.05	PEG	2.99	98	W842832	☐	R19-D17	Core		☐	☐	☐
181.97	185.01	3.04	PEG	2.95	97	W842833	☐	R19-D17	Core		☐	☐	☐
185.01	188.06	3.05	PEG	3.02	99	W842834	☐	R19-D17	Core		☐	☐	☐
188.06	191.11	3.05	PEG	3.05	100	W842835	☐	R19-D17	Core		☐	☐	☐
191.11	192.59	1.48	PEG	1.34	91	W842836	☐	R19-D17	Core		☐	☐	☐
192.59	192.91	0.32	DST	0.32	100	W842837	☐	R19-D17	Core		☐	☐	☐
192.59	192.91	0.32	DST	0.32	100	W842838	☐	R19-D17	Core		☐	☐	☑
192.91	194.16	1.25	DST	1.24	99	W842839	☐	R19-D17	Core		☐	☐	☐
194.16	197.21	3.05	DST	3.01	99	W842840	☐	R19-D17	Core		☐	☐	☐
197.21	200.25	3.04	DST	2.98	98	W842841	☐	R19-D17	Core		☐	☐	☐
200.25	203.30	3.05	DST	3.05	100	W842842	☐	R19-D17	Core		☐	☐	☐
203.30	206.35	3.05	DST	2.99	98	W842843	☐	R19-D17	Core		☐	☐	☐
206.35	209.40	3.05	DST	2.95	97	W842845	☐	R19-D17	Core		☐	☐	☐
209.40	212.45	3.05	DST	3.03	99	W842846	☐	R19-D17	Core		☐	☐	☐
212.45	215.49	3.04	DST	2.90	95	W842847	☐	R19-D17	Core		☐	☐	☐
215.49	218.54	3.05	DST	3.05	100	W842848	☐	R19-D17	Core		☐	☐	☐
218.54	221.59	3.05	LST	2.98	98	W842849	☐	R19-D17	Core		☐	☐	☐
221.59	224.64	3.05	LST	3.05	100	W842851	☐	R19-D17	Core		☐	☐	☐
224.64	227.69	3.05	LST	2.92	96	W842852	☐	R19-D17	Core		☐	☐	☐
227.69	230.73	3.04	LST	2.95	97	W842853	☐	R19-D17	Core		☐	☐	☐
230.73	233.78	3.05	LST	3.02	99	W842854	☐	R19-D17	Core		☐	☐	☐
233.78	236.83	3.05	LST	3.01	99	W842855	☐	R19-D17	Core		☐	☐	☐
236.83	239.88	3.05	MBL	3.05	100	W842856	☐	R19-D17	Core		☐	☐	☐
239.88	242.93	3.05	MBL	3.05	100	W842857	☐	R19-D17	Core		☐	☐	☐
242.93	245.97	3.04	MBL	3.04	100	W842858	☐	R19-D17	Core		☐	☐	☐
245.97	249.02	3.05	MBL	3.03	99	W842859	☐	R19-D17	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
249.02	252.07	3.05	MBL	3.05	100	W842860	☐	R19-D17	Core		☐	☐	☐
252.07	255.12	3.05	MBL	3.00	98	W842861	☐	R19-D18	Core		☐	☐	☐
255.12	258.17	3.05	MBL	3.05	100	W842862	☐	R19-D18	Core		☐	☐	☐
258.17	261.21	3.04	MBL	2.98	98	W842863	☐	R19-D18	Core		☐	☐	☐
261.21	264.26	3.05	MBL	3.05	100	W842864	☐	R19-D18	Core		☐	☐	☐
264.26	267.31	3.05	MBL	3.00	98	W842866	☐	R19-D18	Core		☐	☐	☐
267.31	270.36	3.05	MBL	3.05	100	W842867	☐	R19-D18	Core		☐	☐	☐
270.36	272.85	2.49	MBL	2.49	100	W842868	☐	R19-D18	Core		☐	☐	☐
272.85	274.44	1.59	MBL	1.59	100	W842869	☐	R19-D18	Core		☐	☐	☐
272.85	274.44	1.59	MBL	1.59	100	W842870	☐	R19-D18	Core		☐	☑	☐
274.44	276.45	2.01	MBL	2.01	100	W842871	☐	R19-D18	Core		☐	☐	☐
276.45	279.50	3.05	MBL	3.00	98	W842872	☐	R19-D18	Core		☐	☐	☐

Sample Results

Archer, Cathro & Associates (1981) Limited

Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
R19-D14	W842733	0.00	0.00	0.75	7	3540	34	169.0	98	27.60	☐	☐	☐	☑ ML-2	
R19-D18	W842865	0.00	0.00	0.34	3	824	58	123.0	72	19.70	☐	☐	☐	☑ ML-1	
R19-D16	W842789	0.00	0.00	0.33	3	862	54	133.0	74	19.90	☐	☐	☐	☑ ML-1	
R19-D17	W842844	0.00	0.00	0.34	3	805	54	119.0	73	22.60	☐	☐	☐	☑ ML-1	
R19-D15	W842757	0.00	0.00	0.01	0	3	1	3.0	0	0.30	☐	☐	☑	☐	
R19-D17	W842850	0.00	0.00	0.01	0	1	1	8.0	0	0.20	☐	☐	☑	☐	
R19-D17	W842827	0.00	0.00	0.79	7	3370	34	165.0	106	41.10	☐	☐	☐	☑ ML-2	
R19-D15	W842778	0.00	0.00	0.81	7	3500	33	167.0	106	30.40	☐	☐	☐	☑ ML-2	
R19-D16	W842819	0.00	0.00	0.81	7	3300	33	167.0	100	38.60	☐	☐	☐	☑ ML-2	
R19-D16	W842812	0.00	0.00	0.01	0	2	0	4.0	0	0.20	☐	☐	☑	☐	
R19-D15	W842748	0.00	0.00	0.35	3	867	53	129.0	72	20.70	☐	☐	☐	☑ ML-1	
R19-D14	w842725	1.73	2.13	0.01	0	13	5	206.0	43	5.80	☐	☐	☐	☐	
R19-D14	W842726	2.13	5.18	0.01	0	2	1	19.0	1	1.20	☐	☐	☐	☐	



Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
R19-D14	W842727	5.18	8.23	0.01	0	3	1	26.0	1	0.90	☐	☐	☐	☐	
R19-D14	W842728	8.23	9.08	0.01	0	9	2	70.0	1	5.90	☐	☐	☐	☐	
R19-D14	W842729	9.08	9.91	0.01	0	6	7	23.0	140	7.50	☐	☐	☐	☐	
R19-D14	W842730	9.91	10.01	0.01	0	28	2	110.0	14	500.00	☐	☐	☐	☐	
R19-D14	W842731	10.01	11.28	0.01	0	4	1	21.0	1	2.30	☐	☐	☐	☐	
R19-D14	W842732	11.28	14.33	0.01	0	6	1	11.0	1	3.60	☐	☐	☐	☐	
R19-D14	W842734	14.33	17.37	0.01	0	6	1	9.0	0	0.70	☐	☐	☐	☐	
R19-D14	W842735	17.37	20.37	0.01	0	6	1	6.0	1	2.30	☐	☐	☐	☐	
R19-D14	W842736	20.37	20.64	0.01	0	6	2	43.0	1	9.90	☐	☐	☐	☐	
R19-D14	W842737	20.64	23.47	0.01	0	5	1	27.0	0	2.00	☐	☐	☐	☐	
R19-D14	W842738	23.47	25.41	0.01	0	3	1	10.0	0	1.00	☐	☐	☐	☐	
R19-D14	W842739	25.41	26.86	0.01	0	2	1	4.0	0	0.60	☐	☐	☐	☐	
R19-D14	W842740	25.41	26.86	0.01	0	2	0	3.0	0	0.60	☑	☐	☐	☐	
R19-D15	W842741	26.86	26.98	0.01	0	12	1	14.0	5	3.70	☐	☐	☐	☐	
R19-D15	W842742	26.98	29.57	0.01	0	3	1	22.0	1	1.60	☐	☐	☐	☐	

Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
R19-D15	W842743	29.57	30.85	0.01	0	2	0	5.0	0	0.50	☐	☐	☐	☐	
R19-D15	W842744	30.85	32.04	0.01	0	2	1	3.0	1	1.50	☐	☐	☐	☐	
R19-D15	W842745	32.04	33.29	0.01	0	3	1	15.0	0	2.50	☐	☐	☐	☐	
R19-D15	W842746	33.29	33.46	0.01	0	6	3	150.0	2	121.00	☐	☐	☐	☐	
R19-D15	W842747	33.46	35.66	0.01	0	3	1	7.0	1	2.40	☐	☐	☐	☐	
R19-D15	W842749	35.66	37.91	0.01	0	5	1	7.0	1	1.10	☐	☐	☐	☐	
R19-D15	W842750	37.91	37.98	0.01	0	6	5	65.0	3	300.00	☐	☐	☐	☐	
R19-D15	W842751	37.98	38.18	0.01	0	2	15	48.0	6	51.10	☐	☐	☐	☐	
R19-D15	W842752	38.18	38.30	0.01	0	25	5	175.0	5	258.00	☐	☐	☐	☐	
R19-D15	W842753	38.30	40.82	0.01	0	2	1	13.0	0	3.10	☐	☐	☐	☐	
R19-D15	W842754	40.82	41.06	0.01	0	6	11	274.0	8	82.50	☐	☐	☐	☐	
R19-D15	W842755	41.06	43.84	0.01	0	3	1	10.0	1	3.30	☐	☐	☐	☐	
R19-D15	W842756	43.84	44.81	0.01	0	47	27	35.0	80	282.00	☐	☐	☐	☐	
R19-D15	W842758	44.81	47.85	0.01	0	6	78	39.0	14	4.60	☐	☐	☐	☐	
R19-D15	W842759	47.85	48.95	0.01	0	3	60	24.0	10	7.20	☐	☐	☐	☐	

Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
R19-D15	W842760	48.95	48.98	0.01	0	8	20	36.0	47	29.70	☐	☐	☐	☐	
R19-D15	W842761	48.98	49.76	0.01	0	1	1	9.0	1	7.40	☐	☐	☐	☐	
R19-D15	W842762	49.76	51.09	0.01	0	2	66	49.0	7	19.50	☐	☐	☐	☐	
R19-D15	W842763	51.09	52.86	0.01	0	2	2	14.0	1	1.80	☐	☐	☐	☐	
R19-D15	W842764	52.86	55.32	0.01	0	4	65	37.0	10	4.70	☐	☐	☐	☐	
R19-D15	W842765	55.32	55.84	0.01	0	1	1	7.0	1	6.10	☐	☐	☐	☐	
R19-D15	W842766	55.84	58.24	0.01	0	3	64	18.0	30	5.20	☐	☐	☐	☐	
R19-D15	W842767	55.84	58.24	0.01	0	3	56	21.0	31	6.00	☑	☐	☐	☐	
R19-D15	W842768	58.24	60.05	0.01	0	4	47	23.0	135	8.60	☐	☐	☐	☐	
R19-D15	W842769	60.05	62.32	0.01	0	4	33	20.0	140	19.60	☐	☐	☐	☐	
R19-D15	W842770	62.32	62.45	0.03	0	49	5	13.0	270	183.00	☐	☐	☐	☐	
R19-D15	W842771	62.32	62.45	0.07	0	47	5	12.0	267	181.50	☐	☑	☐	☐	
R19-D15	W842772	62.45	63.09	0.01	0	2	2	22.0	5	2.00	☐	☐	☐	☐	
R19-D15	W842773	63.09	66.14	0.01	0	5	5	29.0	3	3.40	☐	☐	☐	☐	
R19-D15	W842774	66.14	69.19	0.01	0	3	2	9.0	3	3.60	☐	☐	☐	☐	

Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
R19-D15	W842775	69.19	72.24	0.01	0	2	1	5.0	1	1.30	☐	☐	☐	☐	
R19-D15	W842776	72.24	75.29	0.01	0	3	1	6.0	1	1.00	☐	☐	☐	☐	
R19-D15	W842777	75.29	78.33	0.01	0	6	58	529.0	8	2.90	☐	☐	☐	☐	
R19-D15	W842779	78.33	81.38	0.01	0	5	4	18.0	2	1.30	☐	☐	☐	☐	
R19-D15	W842780	81.38	84.43	0.01	0	2	1	9.0	1	1.70	☐	☐	☐	☐	
R19-D16	W842781	84.43	87.48	0.01	0	3	2	24.0	3	1.70	☐	☐	☐	☐	
R19-D16	W842782	87.48	87.70	0.01	0	4	13	34.0	9	1.50	☐	☐	☐	☐	
R19-D16	W842783	87.70	87.97	0.01	0	50	11	40.0	11	91.60	☐	☐	☐	☐	
R19-D16	W842784	87.97	88.15	0.01	0	43	2	69.0	4	129.50	☐	☐	☐	☐	
R19-D16	W842785	88.15	90.53	0.01	0	5	22	24.0	136	12.40	☐	☐	☐	☐	
R19-D16	W842786	90.53	93.09	0.01	0	4	11	30.0	236	123.50	☐	☐	☐	☐	
R19-D16	W842787	93.09	93.57	0.01	0	19	4	101.0	19	42.80	☐	☐	☐	☐	
R19-D16	W842788	93.57	95.85	0.01	0	4	2	21.0	7	1.40	☐	☐	☐	☐	
R19-D16	W842790	95.85	96.26	0.01	0	20	12	80.0	56	67.00	☐	☐	☐	☐	
R19-D16	W842791	96.26	98.07	0.01	0	7	69	341.0	2	3.00	☐	☐	☐	☐	

Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
R19-D16	W842792	98.07	99.67	0.01	0	3	2	10.0	1	2.30	☐	☐	☐	☐	
R19-D16	W842793	99.67	102.72	0.01	0	4	2	17.0	1	1.90	☐	☐	☐	☐	
R19-D16	W842794	102.72	105.77	0.01	0	3	3	17.0	2	5.10	☐	☐	☐	☐	
R19-D16	W842795	105.77	108.81	0.01	0	5	6	23.0	5	3.50	☐	☐	☐	☐	
R19-D16	W842796	108.81	110.60	0.01	0	2	2	11.0	1	1.00	☐	☐	☐	☐	
R19-D16	W842797	110.60	110.79	0.01	0	10	2	41.0	203	18.30	☐	☐	☐	☐	
R19-D16	W842798	110.60	110.79	0.01	0	10	2	44.0	200	21.20	☐	☑	☐	☐	
R19-D16	W842799	110.79	112.95	0.01	0	5	3	26.0	3	5.00	☐	☐	☐	☐	
R19-D16	W842800	112.95	114.91	0.01	0	2	2	4.0	2	1.10	☐	☐	☐	☐	
R19-D16	W842801	114.91	117.96	0.01	0	3	9	20.0	4	2.20	☐	☐	☐	☐	
R19-D16	W842802	117.96	121.01	0.01	0	3	2	13.0	2	2.10	☐	☐	☐	☐	
R19-D16	W842803	121.01	124.05	0.01	0	3	4	65.0	4	3.70	☐	☐	☐	☐	
R19-D16	W842804	124.05	127.10	0.01	0	3	6	18.0	4	7.30	☐	☐	☐	☐	
R19-D16	W842805	127.10	130.15	0.01	0	1	3	14.0	1	2.50	☐	☐	☐	☐	
R19-D16	W842807	130.15	133.20	0.01	0	2	3	20.0	1	2.10	☑	☐	☐	☐	

Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
R19-D16	W842806	130.15	133.20	0.01	0	2	3	25.0	1	1.80	☐	☐	☐	☐	
R19-D16	W842808	133.20	136.25	0.01	0	2	3	22.0	1	1.10	☐	☐	☐	☐	
R19-D16	W842809	136.25	139.29	0.01	0	3	9	74.0	2	2.50	☐	☐	☐	☐	
R19-D16	W842810	139.29	140.56	0.01	0	2	5	22.0	2	1.70	☐	☐	☐	☐	
R19-D16	W842811	140.56	141.66	0.01	0	23	41	344.0	10	216.00	☐	☐	☐	☐	
R19-D16	W842813	141.66	141.88	0.01	1	149	59	261.0	5	225.00	☐	☐	☐	☐	
R19-D16	W842814	141.88	142.34	0.01	0	18	31	97.0	2	82.70	☐	☐	☐	☐	
R19-D16	W842815	142.34	145.39	0.01	0	3	21	91.0	3	5.30	☐	☐	☐	☐	
R19-D16	W842816	145.39	148.44	0.01	0	1	11	24.0	2	1.70	☐	☐	☐	☐	
R19-D16	W842817	148.44	151.49	0.01	0	2	19	37.0	2	3.10	☐	☐	☐	☐	
R19-D16	W842818	151.49	154.53	0.01	0	2	5	15.0	4	1.10	☐	☐	☐	☐	
R19-D16	W842820	154.53	157.25	0.01	0	4	8	14.0	3	1.00	☐	☐	☐	☐	
R19-D17	W842821	157.25	157.58	0.01	0	5	6	37.0	103	13.90	☐	☐	☐	☐	
R19-D17	W842822	157.58	160.63	0.01	0	3	4	19.0	4	1.70	☐	☐	☐	☐	
R19-D17	W842823	160.63	163.68	0.01	0	2	4	15.0	2	1.60	☐	☐	☐	☐	

Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
R19-D17	W842824	163.68	166.73	0.01	0	2	3	10.0	1	1.40	☐	☐	☐	☐	
R19-D17	W842825	166.73	167.91	0.01	0	1	14	76.0	4	3.00	☐	☐	☐	☐	
R19-D17	W842826	167.91	169.77	0.01	0	2	61	26.0	7	6.70	☐	☐	☐	☐	
R19-D17	W842828	169.77	172.82	0.01	0	2	74	27.0	5	3.70	☐	☐	☐	☐	
R19-D17	W842829	172.82	175.87	0.01	0	1	61	27.0	10	4.80	☐	☐	☐	☐	
R19-D17	W842830	175.87	178.92	0.01	0	3	46	34.0	83	117.00	☐	☐	☐	☐	
R19-D17	W842831	175.87	178.92	0.01	0	3	40	34.0	85	157.00	☑	☐	☐	☐	
R19-D17	W842832	178.92	181.97	0.01	0	12	50	55.0	11	6.10	☐	☐	☐	☐	
R19-D17	W842833	181.97	185.01	0.01	0	2	47	29.0	28	6.90	☐	☐	☐	☐	
R19-D17	W842834	185.01	188.06	0.01	0	6	50	36.0	9	6.10	☐	☐	☐	☐	
R19-D17	W842835	188.06	191.11	0.01	0	1	53	44.0	38	16.50	☐	☐	☐	☐	
R19-D17	W842836	191.11	192.59	0.01	0	1	44	42.0	8	32.00	☐	☐	☐	☐	
R19-D17	W842838	192.59	192.91	0.01	0	2	8	86.0	15	180.00	☐	☑	☐	☐	
R19-D17	W842837	192.59	192.91	0.01	0	1	9	85.0	15	191.50	☐	☐	☐	☐	
R19-D17	W842839	192.91	194.16	0.01	0	4	21	88.0	7	2.50	☐	☐	☐	☐	

Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
R19-D17	W842840	194.16	197.21	0.01	1	10	46	36.0	4	3.40	☐	☐	☐	☐	
R19-D17	W842841	197.21	200.25	0.01	2	13	37	79.0	4	1.40	☐	☐	☐	☐	
R19-D17	W842842	200.25	203.30	0.01	2	19	40	60.0	9	2.30	☐	☐	☐	☐	
R19-D17	W842843	203.30	206.35	0.01	0	2	11	48.0	1	2.40	☐	☐	☐	☐	
R19-D17	W842845	206.35	209.40	0.01	0	3	48	207.0	2	3.00	☐	☐	☐	☐	
R19-D17	W842846	209.40	212.45	0.01	0	3	61	264.0	1	2.30	☐	☐	☐	☐	
R19-D17	W842847	212.45	215.49	0.01	0	3	35	160.0	1	3.90	☐	☐	☐	☐	
R19-D17	W842848	215.49	218.54	0.01	0	7	6	31.0	2	18.60	☐	☐	☐	☐	
R19-D17	W842849	218.54	221.59	0.01	0	2	24	40.0	1	0.80	☐	☐	☐	☐	
R19-D17	W842851	221.59	224.64	0.01	1	4	217	671.0	2	2.10	☐	☐	☐	☐	
R19-D17	W842852	224.64	227.69	0.01	0	2	1	41.0	1	1.50	☐	☐	☐	☐	
R19-D17	W842853	227.69	230.73	0.01	0	5	2	11.0	3	2.90	☐	☐	☐	☐	
R19-D17	W842854	230.73	233.78	0.01	0	1	1	3.0	1	0.60	☐	☐	☐	☐	
R19-D17	W842855	233.78	236.83	0.01	0	2	1	4.0	3	0.70	☐	☐	☐	☐	
R19-D17	W842856	236.83	239.88	0.01	0	2	1	3.0	2	1.40	☐	☐	☐	☐	

Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
R19-D17	W842857	239.88	242.93	0.01	0	3	3	19.0	1	14.10	☐	☐	☐	☐	
R19-D17	W842858	242.93	245.97	0.01	0	6	6	14.0	2	8.10	☐	☐	☐	☐	
R19-D17	W842859	245.97	249.02	0.01	0	3	3	11.0	2	4.50	☐	☐	☐	☐	
R19-D17	W842860	249.02	252.07	0.01	0	4	10	46.0	3	3.70	☐	☐	☐	☐	
R19-D18	W842861	252.07	255.12	0.01	1	5	16	22.0	3	5.00	☐	☐	☐	☐	
R19-D18	W842862	255.12	258.17	0.01	0	6	11	47.0	5	7.40	☐	☐	☐	☐	
R19-D18	W842863	258.17	261.21	0.01	0	3	22	90.0	4	5.70	☐	☐	☐	☐	
R19-D18	W842864	261.21	264.26	0.01	0	5	10	59.0	4	7.30	☐	☐	☐	☐	
R19-D18	W842866	264.26	267.31	0.01	0	25	9	64.0	3	10.10	☐	☐	☐	☐	
R19-D18	W842867	267.31	270.36	0.01	0	2	10	30.0	2	3.00	☐	☐	☐	☐	
R19-D18	W842868	270.36	272.85	0.01	0	2	12	61.0	4	2.40	☐	☐	☐	☐	
R19-D18	W842869	272.85	274.44	0.01	0	6	18	31.0	11	47.60	☐	☐	☐	☐	
R19-D18	W842870	272.85	274.44	0.01	0	9	20	31.0	14	26.90	☑	☐	☐	☐	
R19-D18	W842871	274.44	276.45	0.01	0	3	11	48.0	2	3.40	☐	☐	☐	☐	
R19-D18	W842872	276.45	279.50	0.01	0	2	17	30.0	2	2.40	☐	☐	☐	☐	

Tiger - Rau

Archer,Cathro & Associates (1981) Limited

Grid East	Grid North	Easting	Northing	Elevation	Depth (m)
		533027	7117930	1129	252.37

ZONE: Kathy

SECTION:

HOLE: RPP-19-007

CLAIM:

Contractor: Superior

Drill: 6

Core Size: NQ2

Casing Depth:

Drilling Dates: Sep 06 - Sep 13, 2019

Geology Logged By: M. Rego

SURVEY			
Depth (m)	Azimuth	Dip	Method
0	324.9	-50	Compass
252.37	330.5	-49.4	Reflex

TARGET: Hole is targetting a shallow IP conductor and a strong re

SUMMARY			
From (m)	To (m)	Interval (m)	Rock Type
0	6	6	OVB
6	20.1	14.1	FLR
20.1	51	30.9	FLR
51	66.45	15.45	FLR
66.45	72.75	6.3	MST
72.75	137.05	64.3	CGL
137.05	138.49	1.44	MST
138.49	138.91	0.42	CGL
138.91	141.63	2.72	SKN
141.63	188.66	47.03	LST
188.66	192.49	3.83	SKN
192.49	196	3.51	MBL
196	196.92	0.92	SKN
196.92	239.28	42.36	LST
239.28	239.8	0.52	PEG
239.8	252.37	12.57	LST

SAMPLES	
Numbers:	W843032 to W843156
Total:	125
Batch:	D22, D23, D24, D25
Certificates:	WH19235016, WH19235028, WH19235970, WH19239248, WH19268580

COMMENTS

Hole was ended at target depth in barren limestone. There is an interesting garnet bearing pegmatite at around 239 m that indicates we are possibly getting into higher temperatures.

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
0.00	6.00	6.00	OVB	--	No recovery 0 - 2.44 m. Mixed overburden and shale down to 6.00 m.							
6.00	20.10	14.10	FLR	FG	Intermittent black shale and fault gouge. Overburden to 2.44, not clear where OBV ends?							
20.10	51.00	30.90	FLR	FG	Intermittent conglomerate/breccia, and fault gouge. Conglomerate/breccia of round to subround polylithic clasts, siliceous grey mineral and tremolite, in a fine grained matrix, variably replace by oxidized tremolite.							
51.00	66.45	15.45	FLR	FG	Fine grained, massive, black to brown, fault gouge. Hosts clasts of white to oxidized tremolite.							
66.45	72.75	6.30	MST	FG	fine grained grey mudstone, noncalcareous. Cut by high angle TCA calcite veinlets. Some fracture faces contain fine grained green mineral, likely actinolite. Gouge at 68.20m is green, and sulphide bearing (Pyrite/Pyrrhotite).							
72.75	137.05	64.30	CGL	CG	Polylithic conglomerate, variably clast and matrix supported, subround to round clasts in a fine grained matrix variably noncalcareous grey to calcite replaced. Clasts are mostly mudstone and quartzite and mostly ~1cm but are as big as the core diameter in places. Fine grained pyrite throughout (2%). Pyrite replacing matrix (up to 20%) from: - 100.90-101.40m - 104.85-105.00m - 106.85-107.25m							
137.05	138.49	1.44	MST	FG	Non-calcareous fine grained black pyritic mudstone. Fine grained cubic pyrite disseminated throughout. Higher concentration of pyrite up to several percent locally along some bedding planes, particularly higher up in the seciton. Thin bedding planes defined by varying shades of black and grey and are approximately 45 TCA. Some calcite on joints. Gradational upper contact with overlying conglomerate.							

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
138.49	138.91	0.42	CGL	CG	Polylithic conglomerate, variably clast and matrix supported, subround to round clasts in a fine grained matrix variably noncalcareous grey to calcite replaced. Clasts are mostly mudstone and quartzite and mostly ~1cm. Fine grained pyrite throughout (2%). Weakly foliated at gradational upper contact with mudstone. Few thin <1cm interbeds of mudstone and conglomerate at upper contact.							
138.91	139.69	0.78	SKN	FG	Bleached beige-green pyrrhotite-actinolite bearing skarn interval. Pervasive bleaching alteration throughout interval possibly combination of sericite and chlorite replacement. Approximately 5% pyrrhotite throughout and up to 10% pyrrhotite at upper gradational contact with conglomerate. Trace chalcopyrite at 139.39 m in actinolite-quartz-pyrrhotite clast.							
139.69	140.09	0.40	LST	FG	Dark grey weakly dolomitic limestone with 2% pyrrhotite throughout. Trace chalcopyrite and tremolite observed on the microscope. Weak HCL reaction. Gradational upper contact with skarn band. Few thin ~1mm black dolomite veins in multiple orientations in middle of section.							
140.09	140.39	0.30	SKN	FG	Bleached beige-green pyrrhotite-actinolite bearing skarn interval. Pervasive bleaching alteration throughout interval possibly combination of sericite, and tremolite chlorite replacement. Approximately 5% pyrrhotite throughout. Sharp upper contact with limestone.							
140.39	141.28	0.89	LST	FG	Dark grey weakly dolomitic limestone with 2% pyrrhotite throughout. Borderline more massive marble in places. Thin 1mm black dolomite veins in multiple orietnations in marblized areas. Tremolite throughout observed on the microscope. Gradational upper contact with skarn band.							

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
141.28	141.63	0.35	SKN	FG	Bleached beige-green pyrrhotite-actinolite bearing skarn interval. Pervasive bleaching alteration throughout interval possibly combination of sericite and chlorite replacement. Approximately 5% pyrrhotite throughout. Sharp upper contact with Limestone.							
141.63	146.93	5.30	LST	FG	Dark grey brecciated limestone interval with approximately 5% combined pyrrhotite and pyrite throughout. Clasts are all lighter grey and react strongly with HCL while the matrix is darker grey and muddy and is less reactive to HCL. Pyrrhotite and pyrite mostly replace the matrix. In some cases there is pyrrhotite assocated with calcite veins. Moderate HCL reaction throughout. Strongly magnetic around pyrrhotite. Gradational upper contact with skarn interval							
146.93	180.70	33.77	LST	FG	Dark grey brecciated limestone interval with trace ~5mm cubic pyrite and disseminated pyrrhotite throughout. Clasts are all lighter grey and react strongly with HCL while the matrix is darker grey and lime-muddy and is less reactive to HCL. Thin 1-2mm black doloimite veins near upper gradational contact with more pyrrhotite right section. Possible broken circular crinoid stems that have been replaced with clacite in places? 167-168 m section with calcite rims around limestone clasts.							
180.70	188.66	7.96	LST	FG	Light grey to black limestone with some minor sphalerite and pyrrhotite throughout. Overall darker in colour than previous sections. Some minor brecciation of limestone with lighter coloured clasts and more muddy matrix. Trace fossils throughout, possibly some broken cinoid stems and brachiopods? 180.90 - 181.22m: Sphalerite in calcite veins 182.50 - 183.50m: Quartz-calcite-pyrite-pyrrhotite vein 186.85 - 187.10m: Semi-massive pyrrhotite 187.80 - 188.66m: Pyrrhotite veins and disseminations throughout.							

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
188.66	192.49	3.83	SKN	FG	Light tan to dark green-blue coloured skarnified marble interval. Dark green-blue mineral is likely actinolite or some other amphibole. Light tan coloured groundmass appears to be a bleached marble. Trace biotite, muscovite and long needly actinolite in places (possibly some very altered intrusive material here). 5% pyrrhotite throughout and up to 20% in localized areas.							
192.49	196.00	3.51	MBL	FG	Varying marble, skarn and limestone interval. Skarnified intervals from 194.16 - 194.26 m,194.68 - 194.79 m. These skarn intervals are tan to dark green in colour with 3% pyrrhotite and trace chalcopyrite observed on the microscope. Increased marbilization lower in section towards another skarn interval. Sharp upper contact with skarn. Limestone is grey in colour and contains small <5mm quartz pebbles in places. Thin chlorite-calcite vein observed at 193.30 m.							
196.00	196.92	0.92	SKN	FG	Bleached tan colored actinolite-biotite-pyrrhotite skarn interval with trace chalcopyrite. Sharp upper contact with marble and displays some gradational contact metamorphic marbilization. Contains diffuse lower contact with marble. 5% disseminated pyrrhotite throughout and is blebby in places.Trace chalcopyrite observed on the microscope. Bands of biotite in localized areas. Trace actinolite and tremolite.							
196.92	221.84	24.92	LST	FG	Light grey brecciated limestone that grades to marble in places. Small <50 cm marbilized sections contain thin black dolomite veins. Brecciation is observed as darker grey limestone clasts with calcite rims in lighter grey limestone matrix. Approximately 1% pyrrhotite observed throughout and is up to 10% in small <5cm sections. ~1cm pyrrhotite-arsenopyrite-sphalerite-chlorite-calcite vein at 203.80 - 206.40 m drilled along core axis.Trace disseminated galena from 217-219 m and trace disseminated cubic pyrite throughout.							

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
221.84	239.28	17.44	LST	FG	Dark grey to black moderately brecciated limestone with minor marbilization in places. Trace ~5mm blebby pyrrhotite and trace disseminated pyrite throughout. ~1-2 cm calcite vein breccias cut limestone. Gradational upper contact with lighter grey limestone. Possibly higher calcareous mud content in this section.							
239.28	239.80	0.52	PEG	CG	Overall fairly bleached light green albite-quartz-chlorite-garnet pegmatite. Trace pyrrhotite, pyrite and molybdenite observed throughout. Trace light orange mineral likely grossular garnet observed. Sharp upper contact with thin 1cm contact metamorphosed aurole at the contact with the limestone. Similar contact at bottom of interval but contains fluorite-calcite-pyrrhotite in a thin contact metamorphic zone with thin late stage pyrite veins cutting through.							
239.80	252.37	12.57	LST	FG	Light grey limestone interval with thin calcite veining throughout. Few thin sphalerite-pyrite-pyrrhotite-calcite-chalcopyrite veins at 240.25 and 241.25 m. Sharp upper contact with intruding pegmatite with interesting fluorite-calcite-pyrrhotite assemblage on pegmatite margin. Thin 5mm calcite vein with clasts of graphite at 250.55 m. Minor brecciation of limestone in places with lighter grey limestone in calcareous mud matrix.							

RPP-19-007

Rau Archer,Cathro & Associates (1981) Limited
Kathy Zone

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
0.00	2.44	2.44	0.98	40	0.00	0	0R	1H	6W	OVB?
2.44	5.49	3.05	0.38	12	0.00	0	0R	1H	6W	
5.49	8.53	3.04	0.66	22	0.00	0	0R	1H	6W	
8.53	11.58	3.05	0.64	21	0.00	0	0R	1H	6W	
11.58	14.63	3.05	1.88	62	0.00	0	0R	1H	6W	
14.63	17.68	3.05	1.02	33	0.11	4	0R	1H	6W	
17.68	20.73	3.05	2.51	82	0.25	8	0R	1H	6W	
20.73	23.77	3.04	1.1	36	0.12	4	0R	1H	6W	
23.77	26.82	3.05	1.66	54	0.47	15	0R	1H	6W	
26.82	29.87	3.05	1.54	50	0.58	19	0R	1H	6W	
29.87	32.92	3.05	1.55	51	0.00	0	0R	1H	6W	
32.92	35.97	3.05	0.75	25	0.00	0	0R	1H	6W	
35.97	39.01	3.04	1.2	39	0.00	0	0R	1H	6W	
39.01	42.06	3.05	0.78	26	0.23	8	0R	1H	6W	
42.06	45.11	3.05	2.04	67	0.48	16	0R	1H	6W	
45.11	48.16	3.05	2.26	74	1.10	36	0R	1H	6W	
48.16	51.21	3.05	3.05	100	0.80	26	0R	1H	6W	
51.21	54.25	3.04	3.02	99	1.56	51	0R	1H	6W	
54.25	57.30	3.05	2.11	69	0.70	23	0R	1H	6W	
57.30	60.35	3.05	2.94	96	0.64	21	0R	1H	6W	
60.35	63.40	3.05	2.46	81	0.59	19	0R	1H	6W	
63.40	66.45	3.05	1.65	54	0.00	0	0R	1H	6W	
66.45	69.49	3.04	2.98	98	1.06	35	0R	1H	6W	
69.49	72.54	3.05	2.85	93	2.19	72	0R	1H	2W	
72.54	75.59	3.05	2.93	96	2.53	83	0R	1H	2W	
75.59	78.64	3.05	2.88	94	2.00	66	0R	1H	2W	
78.64	81.69	3.05	3	98	3.00	98	0R	1H	2W	
81.69	84.73	3.04	3.04	100	2.86	94	0R	1H	2W	
84.73	87.78	3.05	3.03	99	2.95	97	0R	4H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
87.78	90.83	3.05	2.54	83	2.37	78	1R	3H	1W	
90.83	93.88	3.05	3.05	100	2.71	89	2R	3H	1W	
93.88	96.93	3.05	3.05	100	2.74	90	2R	3H	1W	
96.93	99.97	3.04	3.04	100	2.17	71	2R	3H	1W	
99.97	103.02	3.05	3.03	99	2.31	76	3R	3H	1W	
103.02	106.07	3.05	3.05	100	2.71	89	2R	3H	1W	
106.07	109.12	3.05	2.83	93	2.27	74	2R	3H	1W	
109.12	112.17	3.05	3.04	100	2.76	90	2R	3H	1W	
112.17	115.21	3.04	3.04	100	2.86	94	2R	3H	1W	
115.21	118.26	3.05	3.05	100	2.79	91	2R	3H	1W	
118.26	121.31	3.05	3.05	100	2.49	82	1R	4H	1W	
121.31	124.36	3.05	2.82	92	2.62	86	2R	3H	1W	
124.36	127.41	3.05	3.05	100	3.00	98	2R	3H	1W	
127.41	130.45	3.04	2.9	95	2.79	92	1R	4H	1W	
130.45	133.50	3.05	3.05	100	2.95	97	2R	4H	1W	
133.50	136.55	3.05	2.93	96	2.18	71	2R	4H	1W	
136.55	139.60	3.05	2.93	96	2.57	84	1R	4H	1W	
139.60	142.65	3.05	2.99	98	2.85	93	2R	3H	1W	
142.65	145.69	3.04	3	99	2.81	92	2R	3H	1W	
145.69	148.74	3.05	3.05	100	3.05	100	3R	3H	1W	
148.74	151.79	3.05	2.96	97	2.89	95	3R	3H	1W	
151.79	154.84	3.05	3.05	100	3.00	98	3R	3H	1W	
154.84	157.89	3.05	2.96	97	2.09	69	3R	3H	1W	
157.89	160.93	3.04	3.03	100	2.71	89	3R	3H	1W	
160.93	163.98	3.05	2.96	97	2.87	94	3R	3H	1W	
163.98	167.03	3.05	3.03	99	3.03	99	3R	3H	1W	
167.03	170.08	3.05	3.05	100	3.00	98	3R	3H	1W	
170.08	173.13	3.05	2.78	91	2.75	90	3R	3H	1W	
173.13	176.17	3.04	3.04	100	3.04	100	3R	4H	1W	
176.17	179.22	3.05	3.05	100	3.05	100	3R	4H	1W	
179.22	182.27	3.05	3.05	100	2.94	96	3R	4H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
182.27	185.32	3.05	2.91	95	2.82	92	2R	4H	1W	
185.32	188.37	3.05	3.05	100	3.05	100	3R	4H	1W	
188.37	191.41	3.04	3.04	100	3.04	100	3R	4H	1W	
191.41	194.46	3.05	3.05	100	2.98	98	3R	3H	1W	
194.46	197.51	3.05	3.05	100	2.99	98	3R	3H	1W	
197.51	200.56	3.05	3.05	100	3.05	100	4R	4H	1W	
200.56	203.61	3.05	3.04	100	3.04	100	4R	3H	1W	
203.61	206.65	3.04	3.04	100	2.83	93	4R	3H	1W	
206.65	209.70	3.05	2.98	98	2.89	95	3R	3H	1W	
209.70	212.75	3.05	3.05	100	2.89	95	4R	3H	1W	
212.75	215.80	3.05	3.03	99	3.03	99	3R	3H	1W	
215.80	218.85	3.05	2.88	94	2.88	94	3R	3H	1W	
218.85	221.89	3.04	2.91	96	2.66	88	3R	3H	1W	
221.89	224.94	3.05	2.99	98	2.63	86	3R	3H	1W	
224.94	227.99	3.05	3.04	100	1.32	43	2R	3H	1W	Jointed blocky core
227.99	231.04	3.05	3.03	99	2.13	70	2R	4H	1W	
231.04	234.09	3.05	2.87	94	2.32	76	3R	3H	1W	Very blocky section 231.1-232
234.09	237.13	3.04	3.02	99	2.62	86	3R	3H	1W	
237.13	240.18	3.05	2.99	98	1.44	47	3R	3H	1W	Fractured
240.18	243.23	3.05	2.91	95	1.38	45	2R	3H	1W	fractured
243.23	246.28	3.05	2.96	97	2.36	77	3R	3H	1W	
246.28	249.33	3.05	3.05	100	2.17	71	3R	3H	1W	
249.33	252.37	3.04	3.01	99	2.62	86	2R	3H	1W	

RPP-19-007

Rau
Kathy 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	W843041	☐	R19-D22	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W843072	☐	R19-D23	Core	ML-1	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W843087	☐	R19-D23	Core	ML-2	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W843096	☐	R19-D23	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W843106	☐	R19-D24	Core	ML-1	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W843111	☐	R19-D24	Core	ML-2	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W843119	☐	R19-D24	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W843144	☐	R19-D25	Core	ML-1	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W843156	☐	R19-D25	Core	ML-2	☐	☐	☐
0.00	2.44	2.44	-QC-	0.98	40	W843032	☐	R19-D22	Core		☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W843033	☐	R19-D22	Core	ML-2	☐	☐	☐
2.44	5.49	3.05	OVB	0.38	12	W843034	☐	R19-D22	Core		☐	☐	☐
5.49	8.53	3.04	OVB	0.66	22	W843035	☐	R19-D22	Core		☐	☐	☐
8.53	11.58	3.05	FLR	0.64	21	W843036	☐	R19-D22	Core		☐	☐	☐
11.58	14.63	3.05	FLR	1.88	62	W843037	☐	R19-D22	Core		☐	☐	☐
14.63	17.68	3.05	FLR	1.02	33	W843038	☐	R19-D22	Core		☐	☐	☐
17.68	20.73	3.05	FLR	2.51	82	W843039	☐	R19-D22	Core		☐	☐	☐
20.73	23.77	3.04	FLR	1.10	36	W843040	☐	R19-D22	Core		☐	☐	☐
23.77	26.82	3.05	FLR	1.66	54	W843042	☐	R19-D22	Core		☐	☐	☐
26.82	29.87	3.05	FLR	1.54	50	W843043	☐	R19-D22	Core		☐	☐	☐
29.87	32.92	3.05	FLR	1.55	51	W843044	☐	R19-D22	Core		☐	☐	☐
32.92	35.97	3.05	FLR	0.75	25	W843045	☐	R19-D22	Core		☐	☐	☐
35.97	39.01	3.04	FLR	1.20	39	W843046	☐	R19-D22	Core		☐	☐	☐
35.97	39.01	3.04	FLR	1.20	39	W843047	☐	R19-D22	Core		☐	☐	☑
39.01	42.06	3.05	FLR	0.78	26	W843048	☐	R19-D22	Core		☐	☐	☐
42.06	45.11	3.05	FLR	2.04	67	W843049	☐	R19-D22	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
45.11	48.16	3.05	FLR	2.26	74	W843050	☐	R19-D22	Core		☐	☐	☐
48.16	50.51	2.35	FLR	2.32	99	W843051	☐	R19-D22	Core		☐	☐	☐
50.51	51.37	0.86	FLR	0.84	98	W843052	☐	R19-D22	Core		☐	☐	☐
51.37	54.00	2.63	FLR	2.61	99	W843053	☐	R19-D22	Core		☐	☐	☐
54.00	54.25	0.25	FLR	0.25	100	W843054	☐	R19-D22	Core		☐	☐	☐
54.25	57.30	3.05	FLR	2.11	69	W843055	☐	R19-D22	Core		☐	☐	☐
57.30	59.39	2.09	FLR	2.05	98	W843056	☐	R19-D22	Core		☐	☐	☐
59.39	61.24	1.85	FLR	1.80	97	W843057	☐	R19-D22	Core		☐	☐	☐
61.24	62.10	0.86	FLR	0.72	84	W843058	☐	R19-D22	Core		☐	☐	☐
61.24	62.10	0.86	FLR	0.72	84	W843059	☐	R19-D22	Core		☐	☑	☐
62.10	63.40	1.30	FLR	0.85	65	W843060	☐	R19-D22	Core		☐	☐	☐
63.40	66.45	3.05	FLR	1.65	54	W843061	☐	R19-D23	Core		☐	☐	☐
66.45	68.00	1.55	MST, FLR	1.32	85	W843062	☐	R19-D23	Core		☐	☐	☐
68.00	68.34	0.34	MST	0.34	100	W843063	☐	R19-D23	Core		☐	☐	☐
68.00	68.34	0.34	MST	0.34	100	W843064	☐	R19-D23	Core		☐	☐	☑
68.34	69.49	1.15	MST	1.15	100	W843065	☐	R19-D23	Core		☐	☐	☐
69.49	71.00	1.51	MST	1.50	99	W843066	☐	R19-D23	Core		☐	☐	☐
71.00	72.85	1.85	MST	1.58	85	W843067	☐	R19-D23	Core		☐	☐	☐
72.85	75.59	2.74	CGL	2.68	98	W843068	☐	R19-D23	Core		☐	☐	☐
75.59	78.64	3.05	CGL	2.88	94	W843069	☐	R19-D23	Core		☐	☐	☐
78.64	81.69	3.05	CGL	3.00	98	W843070	☐	R19-D23	Core		☐	☐	☐
81.69	84.73	3.04	CGL	3.04	100	W843071	☐	R19-D23	Core		☐	☐	☐
84.73	87.78	3.05	CGL	3.03	99	W843073	☐	R19-D23	Core		☐	☐	☐
87.78	90.83	3.05	CGL	2.54	83	W843074	☐	R19-D23	Core		☐	☐	☐
90.83	93.88	3.05	CGL	3.05	100	W843075	☐	R19-D23	Core		☐	☐	☐
93.88	96.93	3.05	CGL	3.05	100	W843076	☐	R19-D23	Core		☐	☐	☐
96.93	99.97	3.04	CGL	3.04	100	W843077	☐	R19-D23	Core		☐	☐	☐
99.97	103.02	3.05	CGL	3.03	99	W843078	☐	R19-D23	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
99.97	103.02	3.05	CGL	3.03	99	W843079	☐	R19-D23	Core		☐	☑	☐
103.02	106.07	3.05	CGL	3.05	100	W843080	☐	R19-D23	Core		☐	☐	☐
106.07	109.12	3.05	CGL	2.83	93	W843081	☐	R19-D23	Core		☐	☐	☐
109.12	112.17	3.05	CGL	3.04	100	W843082	☐	R19-D23	Core		☐	☐	☐
112.17	115.21	3.04	CGL	3.04	100	W843083	☐	R19-D23	Core		☐	☐	☐
115.21	118.26	3.05	CGL	3.05	100	W843084	☐	R19-D23	Core		☐	☐	☐
118.26	121.31	3.05	CGL	3.05	100	W843085	☐	R19-D23	Core		☐	☐	☐
121.31	124.36	3.05	CGL	2.82	92	W843086	☐	R19-D23	Core		☐	☐	☐
124.36	127.41	3.05	CGL	3.05	100	W843088	☐	R19-D23	Core		☐	☐	☐
127.41	130.45	3.04	CGL	2.90	95	W843089	☐	R19-D23	Core		☐	☐	☐
130.45	133.50	3.05	CGL	3.05	100	W843090	☐	R19-D23	Core		☐	☐	☐
133.50	135.94	2.44	CGL	2.37	97	W843091	☐	R19-D23	Core		☐	☐	☐
135.94	137.05	1.11	CGL	1.09	98	W843092	☐	R19-D23	Core		☐	☐	☐
137.05	138.50	1.45	CGL, MST	1.42	98	W843093	☐	R19-D23	Core		☐	☐	☐
138.50	138.91	0.41	CGL	0.41	100	W843094	☐	R19-D23	Core		☐	☐	☐
138.91	139.69	0.78	CGL, SKN	0.70	90	W843095	☐	R19-D23	Core		☐	☐	☐
139.69	140.09	0.40	SKN	0.38	95	W843097	☐	R19-D23	Core		☐	☐	☐
140.09	140.39	0.30	SKN	0.30	100	W843098	☐	R19-D23	Core		☐	☐	☐
140.39	141.28	0.89	SKN	0.85	96	W843099	☐	R19-D23	Core		☐	☐	☐
141.28	141.63	0.35	SKN	0.35	100	W843100	☐	R19-D23	Core		☐	☐	☐
141.63	142.65	1.02	LST, SKN	0.97	95	W843101	☐	R19-D24	Core		☐	☐	☐
142.65	144.00	1.35	LST	1.32	98	W843102	☐	R19-D24	Core		☐	☐	☐
144.00	145.69	1.69	LST	1.65	98	W843103	☐	R19-D24	Core		☐	☐	☐
145.69	148.74	3.05	LST	3.05	100	W843104	☐	R19-D24	Core		☐	☐	☐
148.74	151.79	3.05	LST	2.96	97	W843105	☐	R19-D24	Core		☐	☐	☐
151.79	154.84	3.05	LST	3.05	100	W843107	☐	R19-D24	Core		☐	☐	☐
154.84	157.89	3.05	LST	2.96	97	W843108	☐	R19-D24	Core		☐	☐	☐

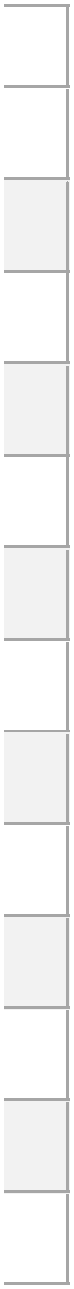
From (m)	To (m)	Interval (m)	Rock Type	Recovery (m)	Recovery %	Sample Number	Not Sampled	BatchName	Batch Class	Standard	Blank	1/4 Dup	Coarse Dup
157.89	160.93	3.04	LST	3.03	100	W843109	☐	R19-D24	Core		☐	☐	☐
160.93	163.98	3.05	LST	2.96	97	W843110	☐	R19-D24	Core		☐	☐	☐
163.98	167.03	3.05	LST	3.03	99	W843112	☐	R19-D24	Core		☐	☐	☐
167.03	170.08	3.05	LST	3.05	100	W843113	☐	R19-D24	Core		☐	☐	☐
170.08	173.13	3.05	LST	2.78	91	W843114	☐	R19-D24	Core		☐	☐	☐
173.13	176.17	3.04	LST	3.04	100	W843115	☐	R19-D24	Core		☐	☐	☐
176.17	179.22	3.05	LST	3.05	100	W843116	☐	R19-D24	Core		☐	☐	☐
179.22	180.65	1.43	LST	1.43	100	W843117	☐	R19-D24	Core		☐	☐	☐
180.65	181.05	0.40	LST	0.39	98	W843118	☐	R19-D24	Core		☐	☐	☐
181.05	182.48	1.43	LST	1.43	100	W843120	☐	R19-D24	Core		☐	☐	☐
182.48	183.62	1.14	LST	1.03	90	W843121	☐	R19-D24	Core		☐	☐	☐
183.62	186.67	3.05	LST	3.03	99	W843122	☐	R19-D24	Core		☐	☐	☐
186.67	187.07	0.40	LST	0.40	100	W843123	☐	R19-D24	Core		☐	☐	☐
186.67	187.07	0.40	LST	0.10	25	W843124	☐	R19-D24	Core		☐	☐	☑
187.07	188.66	1.59	LST	1.59	100	W843125	☐	R19-D24	Core		☐	☐	☐
188.66	190.35	1.69	SKN, LST	1.66	98	W843126	☐	R19-D24	Core		☐	☐	☐
188.66	190.35	1.69	SKN, LST	1.66	98	W843127	☐	R19-D24	Core		☐	☑	☐
190.35	192.47	2.12	SKN	2.12	100	W843128	☐	R19-D24	Core		☐	☐	☐
192.47	194.19	1.72	SKN	1.72	100	W843129	☐	R19-D24	Core		☐	☐	☐
194.19	196.00	1.81	MBL	1.81	100	W843130	☐	R19-D24	Core		☐	☐	☐
196.00	197.31	1.31	SKN, MBL	1.26	96	W843131	☐	R19-D24	Core		☐	☐	☐
197.31	198.65	1.34	LST	1.34	100	W843132	☐	R19-D24	Core		☐	☐	☐
198.65	200.77	2.12	LST	2.12	100	W843133	☐	R19-D24	Core		☐	☐	☐
200.77	203.75	2.98	LST	2.93	98	W843134	☐	R19-D24	Core		☐	☐	☐
203.75	205.13	1.38	LST	1.34	97	W843135	☐	R19-D24	Core		☐	☐	☐
205.13	206.65	1.52	LST	1.52	100	W843136	☐	R19-D24	Core		☐	☐	☐
206.65	209.70	3.05	LST	2.98	98	W843137	☐	R19-D24	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
209.70	212.75	3.05	LST	3.05	100	W843138	☐	R19-D24	Core		☐	☐	☐
212.75	215.80	3.05	LST	3.03	99	W843139	☐	R19-D24	Core		☐	☐	☐
215.80	218.85	3.05	LST	2.88	94	W843140	☐	R19-D24	Core		☐	☐	☐
218.85	221.89	3.04	LST	2.91	96	W843141	☐	R19-D25	Core		☐	☐	☐
221.89	224.94	3.05	LST	2.99	98	W843142	☐	R19-D25	Core		☐	☐	☐
224.94	227.99	3.05	LST	3.04	100	W843143	☐	R19-D25	Core		☐	☐	☐
227.99	231.04	3.05	LST	3.03	99	W843145	☐	R19-D25	Core		☐	☐	☐
231.04	234.09	3.05	LST	2.87	94	W843146	☐	R19-D25	Core		☐	☐	☐
234.09	237.13	3.04	LST	3.02	99	W843147	☐	R19-D25	Core		☐	☐	☐
237.13	239.22	2.09	LST	2.09	100	W843148	☐	R19-D25	Core		☐	☐	☐
239.22	239.91	0.69	LST	0.60	87	W843149	☐	R19-D25	Core		☐	☐	☐
239.22	239.91	0.69	LST	0.60	87	W843150	☐	R19-D25	Core		☐	☐	☑
239.91	241.47	1.56	LST	1.56	100	W843151	☐	R19-D25	Core		☐	☐	☐
241.47	243.23	1.76	LST	1.66	94	W843152	☐	R19-D25	Core		☐	☐	☐
243.23	246.28	3.05	LST	2.96	97	W843153	☐	R19-D25	Core		☐	☐	☐
246.28	249.33	3.05	LST	3.05	100	W843154	☐	R19-D25	Core		☐	☐	☐
249.33	252.37	3.04	LST	3.01	99	W843155	☐	R19-D25	Core		☐	☐	☐

Sample Results

Archer, Cathro & Associates (1981) Limited

Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
R19-D22	W843033	0.00	0.00	0.81	6	3430	30	158.0	102	31.10	☐	☐	☐	☑ ML-2	
R19-D24	W843111	0.00	0.00	0.76	7	3460	35	169.0	112	34.40	☐	☐	☐	☑ ML-2	
R19-D22	W843041	0.00	0.00	0.01	0	3	1	15.0	0	0.10	☐	☐	☑	☐	
R19-D23	W843072	0.00	0.00	0.34	3	838	51	126.0	74	20.50	☐	☐	☐	☑ ML-1	
R19-D25	W843156	0.00	0.00	0.82	7	3400	37	168.0	104	37.20	☐	☐	☐	☑ ML-2	
R19-D22	W843032	0.00	2.44	0.01	1	51	47	157.0	4	4.00	☐	☐	☐	☐	
R19-D23	W843096	0.00	0.00	0.01	0	2	0	4.0	0	1.00	☐	☐	☑	☐	
R19-D25	W843144	0.00	0.00	0.34	3	815	55	126.0	69	17.70	☐	☐	☐	☑ ML-1	
R19-D24	W843106	0.00	0.00	0.34	3	845	53	130.0	77	20.50	☐	☐	☐	☑ ML-1	
R19-D23	W843087	0.00	0.00	0.80	7	3570	31	177.0	105	37.60	☐	☐	☐	☑ ML-2	
R19-D24	W843119	0.00	0.00	0.01	0	3	2	18.0	0	0.10	☐	☐	☑	☐	
R19-D22	W843034	2.44	5.49	0.01	0	28	18	81.0	2	0.90	☐	☐	☐	☐	
R19-D22	W843035	5.49	8.53	0.01	1	52	49	160.0	4	11.40	☐	☐	☐	☐	



Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
R19-D22	W843036	8.53	11.58	0.01	1	53	49	196.0	6	19.10	☐	☐	☐	☐	
R19-D22	W843037	11.58	14.63	0.01	1	74	19	598.0	2	2.50	☐	☐	☐	☐	
R19-D22	W843038	14.63	17.68	0.01	1	56	13	422.0	2	3.90	☐	☐	☐	☐	
R19-D22	W843039	17.68	20.73	0.01	1	60	19	582.0	2	4.30	☐	☐	☐	☐	
R19-D22	W843040	20.73	23.77	0.01	2	61	14	424.0	2	3.80	☐	☐	☐	☐	
R19-D22	W843042	23.77	26.82	0.01	6	66	10	371.0	1	4.50	☐	☐	☐	☐	
R19-D22	W843043	26.82	29.87	0.01	3	33	6	190.0	1	4.80	☐	☐	☐	☐	
R19-D22	W843044	29.87	32.92	0.01	1	46	16	2010.0	7	21.00	☐	☐	☐	☐	
R19-D22	W843045	32.92	35.97	0.01	2	85	54	983.0	12	8.40	☐	☐	☐	☐	
R19-D22	W843047	35.97	39.01	0.01	2	166	50	901.0	19	5.00	☐	☑	☐	☐	
R19-D22	W843046	35.97	39.01	0.01	2	160	49	897.0	15	5.50	☐	☐	☐	☐	
R19-D22	W843048	39.01	42.06	0.01	1	173	51	631.0	15	10.00	☐	☐	☐	☐	
R19-D22	W843049	42.06	45.11	0.01	3	297	121	892.0	64	10.40	☐	☐	☐	☐	
R19-D22	W843050	45.11	48.16	0.01	4	354	58	786.0	21	7.90	☐	☐	☐	☐	
R19-D22	W843051	48.16	50.51	0.01	2	343	19	1130.0	8	3.40	☐	☐	☐	☐	

Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
R19-D22	W843052	50.51	51.37	0.01	4	493	60	1960.0	38	7.70	☐	☐	☐	☐	
R19-D22	W843053	51.37	54.00	0.03	7	128	66	2860.0	30	6.10	☐	☐	☐	☐	
R19-D22	W843054	54.00	54.25	0.07	4	78	193	6710.0	32	15.00	☐	☐	☐	☐	
R19-D22	W843055	54.25	57.30	0.15	6	66	404	1980.0	33	13.50	☐	☐	☐	☐	
R19-D22	W843056	57.30	59.39	0.19	3	40	118	1660.0	21	9.90	☐	☐	☐	☐	
R19-D22	W843057	59.39	61.24	0.20	14	74	176	5420.0	25	10.90	☐	☐	☐	☐	
R19-D22	W843058	61.24	62.10	0.54	8	89	252	2550.0	68	16.50	☐	☐	☐	☐	
R19-D22	W843059	61.24	62.10	0.62	26	102	262	2740.0	70	16.60	☑	☐	☐	☐	
R19-D22	W843060	62.10	63.40	0.34	11	92	198	3080.0	42	8.00	☐	☐	☐	☐	
R19-D23	W843061	63.40	66.45	0.05	3	160	66	3340.0	10	4.70	☐	☐	☐	☐	
R19-D23	W843062	66.45	68.00	0.01	0	4	3	872.0	1	0.60	☐	☐	☐	☐	
R19-D23	W843064	68.00	68.34	0.01	0	59	11	2130.0	7	5.10	☐	☑	☐	☐	
R19-D23	W843063	68.00	68.34	0.01	0	66	11	2140.0	7	5.60	☐	☐	☐	☐	
R19-D23	W843065	68.34	69.49	0.03	0	23	4	241.0	4	1.70	☐	☐	☐	☐	
R19-D23	W843066	69.49	71.00	0.01	0	14	2	967.0	3	1.00	☐	☐	☐	☐	

Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
R19-D23	W843067	71.00	72.85	0.01	0	25	4	220.0	3	1.80	☐	☐	☐	☐	
R19-D23	W843068	72.85	75.59	0.01	0	18	2	467.0	3	4.50	☐	☐	☐	☐	
R19-D23	W843069	75.59	78.64	0.01	0	21	6	334.0	4	1.20	☐	☐	☐	☐	
R19-D23	W843070	78.64	81.69	0.02	0	26	3	42.0	2	0.80	☐	☐	☐	☐	
R19-D23	W843071	81.69	84.73	0.01	0	11	3	102.0	3	6.70	☐	☐	☐	☐	
R19-D23	W843073	84.73	87.78	0.01	0	13	3	44.0	4	1.30	☐	☐	☐	☐	
R19-D23	W843074	87.78	90.83	0.01	0	11	7	42.0	3	4.20	☐	☐	☐	☐	
R19-D23	W843075	90.83	93.88	0.01	0	14	5	70.0	4	0.60	☐	☐	☐	☐	
R19-D23	W843076	93.88	96.93	0.01	0	30	6	58.0	2	3.00	☐	☐	☐	☐	
R19-D23	W843077	96.93	99.97	0.01	0	25	6	88.0	3	1.00	☐	☐	☐	☐	
R19-D23	W843079	99.97	103.02	0.12	0	38	7	57.0	56	4.50	☑	☐	☐	☐	
R19-D23	W843078	99.97	103.02	0.30	0	34	7	39.0	64	5.50	☐	☐	☐	☐	
R19-D23	W843080	103.02	106.07	0.38	1	10	5	13.0	68	4.10	☐	☐	☐	☐	
R19-D23	W843081	106.07	109.12	0.07	0	11	4	23.0	46	3.70	☐	☐	☐	☐	
R19-D23	W843082	109.12	112.17	0.01	0	22	7	40.0	17	2.10	☐	☐	☐	☐	

Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
R19-D23	W843083	112.17	115.21	0.01	0	16	4	43.0	8	1.40	☐	☐	☐	☐	
R19-D23	W843084	115.21	118.26	0.01	0	14	5	68.0	2	0.70	☐	☐	☐	☐	
R19-D23	W843085	118.26	121.31	0.01	1	13	7	40.0	2	0.50	☐	☐	☐	☐	
R19-D23	W843086	121.31	124.36	0.01	0	13	7	35.0	2	0.60	☐	☐	☐	☐	
R19-D23	W843088	124.36	127.41	0.01	0	13	5	21.0	3	0.80	☐	☐	☐	☐	
R19-D23	W843089	127.41	130.45	0.01	0	14	6	31.0	13	1.90	☐	☐	☐	☐	
R19-D23	W843090	130.45	133.50	0.01	0	11	4	26.0	5	1.00	☐	☐	☐	☐	
R19-D23	W843091	133.50	135.94	0.01	0	15	4	58.0	5	5.00	☐	☐	☐	☐	
R19-D23	W843092	135.94	137.05	0.01	0	16	7	405.0	8	3.10	☐	☐	☐	☐	
R19-D23	W843093	137.05	138.50	0.01	0	16	9	223.0	5	1.30	☐	☐	☐	☐	
R19-D23	W843094	138.50	138.91	0.01	0	76	15	268.0	13	4.60	☐	☐	☐	☐	
R19-D23	W843095	138.91	139.69	0.01	0	386	2	118.0	15	920.00	☐	☐	☐	☐	
R19-D23	W843097	139.69	140.09	0.01	0	105	7	53.0	6	25.70	☐	☐	☐	☐	
R19-D23	W843098	140.09	140.39	0.01	0	229	3	286.0	24	18.70	☐	☐	☐	☐	
R19-D23	W843099	140.39	141.28	0.01	0	97	6	56.0	2	4.60	☐	☐	☐	☐	

Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
R19-D23	W843100	141.28	141.63	0.01	1	418	5	80.0	10	164.00	☐	☐	☐	☐	
R19-D24	W843101	141.63	142.65	0.01	0	111	15	112.0	2	7.50	☐	☐	☐	☐	
R19-D24	W843102	142.65	144.00	0.01	0	66	7	62.0	3	11.40	☐	☐	☐	☐	
R19-D24	W843103	144.00	145.69	0.01	0	37	6	228.0	1	6.00	☐	☐	☐	☐	
R19-D24	W843104	145.69	148.74	0.01	0	12	4	52.0	1	4.30	☐	☐	☐	☐	
R19-D24	W843105	148.74	151.79	0.01	0	1	3	36.0	1	1.10	☐	☐	☐	☐	
R19-D24	W843107	151.79	154.84	0.01	0	2	3	14.0	1	0.60	☐	☐	☐	☐	
R19-D24	W843108	154.84	157.89	0.01	0	1	3	24.0	1	0.60	☐	☐	☐	☐	
R19-D24	W843109	157.89	160.93	0.01	0	2	2	11.0	1	1.50	☐	☐	☐	☐	
R19-D24	W843110	160.93	163.98	0.01	0	3	3	42.0	1	2.80	☐	☐	☐	☐	
R19-D24	W843112	163.98	167.03	0.01	0	6	4	19.0	1	4.70	☐	☐	☐	☐	
R19-D24	W843113	167.03	170.08	0.01	0	2	10	35.0	1	1.20	☐	☐	☐	☐	
R19-D24	W843114	170.08	173.13	0.01	0	2	3	25.0	1	2.60	☐	☐	☐	☐	
R19-D24	W843115	173.13	176.17	0.01	0	10	6	134.0	5	8.60	☐	☐	☐	☐	
R19-D24	W843116	176.17	179.22	0.01	0	11	7	174.0	6	18.20	☐	☐	☐	☐	

Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
R19-D24	W843117	179.22	180.65	0.01	1	20	80	645.0	6	28.10	☐	☐	☐	☐	
R19-D24	W843118	180.65	181.05	0.01	1	37	646	1180.0	27	17.60	☐	☐	☐	☐	
R19-D24	W843120	181.05	182.48	0.01	1	27	213	585.0	17	22.50	☐	☐	☐	☐	
R19-D24	W843121	182.48	183.62	0.01	1	45	56	4760.0	24	97.70	☐	☐	☐	☐	
R19-D24	W843122	183.62	186.67	0.01	0	17	23	461.0	3	20.50	☐	☐	☐	☐	
R19-D24	W843124	186.67	187.07	0.01	7	1030	601	89.0	50	144.50	☐	☑	☐	☐	
R19-D24	W843123	186.67	187.07	0.01	6	1045	586	92.0	44	136.00	☐	☐	☐	☐	
R19-D24	W843125	187.07	188.66	0.01	1	146	126	646.0	7	127.00	☐	☐	☐	☐	
R19-D24	W843127	188.66	190.35	0.01	0	228	9	156.0	7	296.00	☑	☐	☐	☐	
R19-D24	W843126	188.66	190.35	0.01	0	272	10	157.0	7	253.00	☐	☐	☐	☐	
R19-D24	W843128	190.35	192.47	0.01	0	35	4	216.0	8	164.50	☐	☐	☐	☐	
R19-D24	W843129	192.47	194.19	0.01	0	29	54	942.0	6	75.50	☐	☐	☐	☐	
R19-D24	W843130	194.19	196.00	0.01	1	56	76	714.0	13	69.50	☐	☐	☐	☐	
R19-D24	W843131	196.00	197.31	0.01	0	326	15	352.0	7	210.00	☐	☐	☐	☐	
R19-D24	W843132	197.31	198.65	0.01	1	27	91	911.0	10	52.90	☐	☐	☐	☐	

Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
R19-D24	W843133	198.65	200.77	0.01	0	20	56	336.0	9	31.50	☐	☐	☐	☐	
R19-D24	W843134	200.77	203.75	0.01	1	41	179	741.0	27	107.00	☐	☐	☐	☐	
R19-D24	W843135	203.75	205.13	0.01	24	73	3740	2830.0	61	3840.00	☐	☐	☐	☐	
R19-D24	W843136	205.13	206.65	0.01	5	37	589	1470.0	20	3080.00	☐	☐	☐	☐	
R19-D24	W843137	206.65	209.70	0.01	2	31	307	237.0	9	99.20	☐	☐	☐	☐	
R19-D24	W843138	209.70	212.75	0.01	2	24	366	349.0	8	30.20	☐	☐	☐	☐	
R19-D24	W843139	212.75	215.80	0.01	1	26	140	165.0	4	30.80	☐	☐	☐	☐	
R19-D24	W843140	215.80	218.85	0.01	1	27	242	234.0	3	45.30	☐	☐	☐	☐	
R19-D25	W843141	218.85	221.89	0.01	1	79	291	584.0	7	187.50	☐	☐	☐	☐	
R19-D25	W843142	221.89	224.94	0.01	0	36	61	305.0	5	155.50	☐	☐	☐	☐	
R19-D25	W843143	224.94	227.99	0.02	0	9	66	186.0	3	13.60	☐	☐	☐	☐	
R19-D25	W843145	227.99	231.04	0.01	0	8	12	20.0	1	5.50	☐	☐	☐	☐	
R19-D25	W843146	231.04	234.09	0.01	0	4	22	63.0	1	4.60	☐	☐	☐	☐	
R19-D25	W843147	234.09	237.13	0.01	0	4	6	18.0	1	6.00	☐	☐	☐	☐	
R19-D25	W843148	237.13	239.22	0.01	0	8	21	80.0	6	22.00	☐	☐	☐	☐	

Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
R19-D25	W843149	239.22	239.91	0.01	0	18	21	36.0	3	37.20	☐	☐	☐	☐	
R19-D25	W843150	239.22	239.91	0.01	0	18	22	35.0	3	35.40	☐	☑	☐	☐	
R19-D25	W843151	239.91	241.47	0.01	5	137	694	4670.0	102	40.30	☐	☐	☐	☐	
R19-D25	W843152	241.47	243.23	0.01	1	32	250	444.0	16	9.10	☐	☐	☐	☐	
R19-D25	W843153	243.23	246.28	0.01	0	38	13	58.0	31	25.00	☐	☐	☐	☐	
R19-D25	W843154	246.28	249.33	0.01	0	8	59	27.0	5	51.50	☐	☐	☐	☐	
R19-D25	W843155	249.33	252.37	0.01	0	6	13	25.0	2	11.20	☐	☐	☐	☐	



Tiger - Rau

Archer,Cathro & Associates (1981) Limited

Grid East	Grid North	Easting	Northing	Elevation	Depth (m)
		532488	7118024	1097	303.89

ZONE: Kathy

SECTION:

HOLE: RPP-19-008

CLAIM:

Contractor: Superior

Drill: 6

Core Size: NQ2

Casing Depth: 21.34m, In

Drilling Dates: Sep 14 - Sep 19, 2019

Geology Logged By: A. Coulter

SURVEY			
Depth (m)	Azimuth	Dip	Method
0	276.1	-50	Compass
303.89	289.7	-48.8	Reflex

TARGET: Hole is targetting mag high from 2019 ground mag surv

SUMMARY			
From (m)	To (m)	Interval (m)	Rock Type
0	19	19	OVB
19	63	44	LST
63	63.09	0.09	PEG
63.09	65.39	2.3	LST
65.39	78.42	13.03	PEG
78.42	102.19	23.77	MBL
102.19	134.9	32.71	PEG
134.9	183.12	48.22	MBL
183.12	205.55	22.43	PEG
205.55	232.05	26.5	MBL
232.05	303.89	71.84	GRD

SAMPLES	
Numbers:	W843157 to W843285
Total:	129
Batch:	D25, D26, D27, D28
Certificates:	WH19239248, WH19239249, WH19239251, WH19243059, WH19275079

COMMENTS

Hole was ended at target depth in barren granodiorite. Casing left in incase we want to continue drilling into pluton next season.

RPP-19-008

Rau Kathy Zone
Archer,Cathro & Associates (1981) Limited

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
0.00	19.00	19.00	OVB	--	0 - 4.91 m no recovery. Varying pebble to boulder size float of varying lithologies in black mud.							
19.00	58.70	39.70	LST	FG	Variable dark grey competent limestone that is thinly bedded in places, displays moderate calcite veining and weak marbilization in places. Calcite veins display parasitic M folding of calcite veins in places so possibly in fold hinge. Weak foliation developed in places. Weak marble development from ~32.8-34.8, 42.0-43.0, 51.5-53.1 m. Moderate HCL reaction throughout. Non-magnetic. Unconformable upper contact with overburden.							
58.70	60.90	2.20	MBL	FG	Massive light grey marble with thin black chaotic dolomite veins. Weak oxidation developed along thin 1-5 mm calcite veins. Moderate HCL reaction throughout. Non-magnetic. Gradational upper contact with limestone.							
60.90	63.00	2.10	LST	FG	Variable dark grey competent limestone that has primary sedimentary slumping and weak marble development throughout. Slumping appears as brecciated limestone with lighter grey clasts in a calcareous mud matrix. Weak marble development causes rock to become more massive. Moderate HCL reaction throughout. Non-magnetic. Gradational upper conctact with marble.							
63.00	63.09	0.09	PEG	FG	Coarse-grained quartz-plagioclase pegmatite with trace pyrrhotite and chalcopyrite. Pegmatite contains small broken orange garnet (almandine?). No HCL rection in pegmatite. Magnetic only where trace pyrrhotite observed. Sharp upper contact with limestone and has ~1cm wide contact metamorphosed marble development.							

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
63.09	65.39	2.30	LST	FG	Variable dark grey competent limestone that is thinly bedded in places, displays moderate calcite veining and weak marbilization in places. Weak foliation developed in places. Weak marble development from ~63.43-63.56 and 64.54-65.10 m. Unknown orange mineral at 63.50 m, maybe garnet?. Moderate HCL reaction throughout. Non-magnetic. Sharp upper contact with pegmatite with ~1cm thick green-ish marble front.							
65.39	78.42	13.03	PEG	MG	Medium to coarse grained quartz-plagioclase-actinolite pegmatite that has a late stage chloritic overprint in places. 1% red garnet (almandine?) throughout. Trace pyrrhotite throughout. 2 ~1cm thick quartz-fluorite-pyrite-sphalerite veins cutting the pegmatite at 73.08 and 73.33 m. Graphic texture observed throughout as quartz-plagioclase intergrowths. No HCL reaction. Generally non-magnetic other than pyrrhotite. Sharp upper contact with limestone with ~2cm marble development due to contact metamorphism from pegmatite.							
78.42	102.19	23.77	MBL	FG	Variable marble which contains some remamnant primary limestone beds in places. Many thin <5 cm quartz-pyrite-pyrrhotite-sphalerite veins from 83-88.5m mostly along core axis. They contain a distinct massive pale green alteration halo around the veins. The contact metamoprhosed margin on the side of the veins is similar to those on the margins of the pegmatites so must be fairly high temperatures veins. Possibly skarn or pegmatitic in origin? Moderate HCL reaction throughout. Non-magnetic other than the veins. Thin 2cm black actinolite-quartz-pyrrhotite skarn interval from 91.18-91.20m with thin marbilization along contact.							

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
102.19	130.37	28.18	PEG	CG	Medium to coarse grained quartz-feldspar-amphibole pegmatite that has a late stage chloritic overprint in places. Trace pyrrhotite in places. Coarse cubic pyrite observed with large quartz and/or actinolite veining. Trace molybdenite observed at 118.53 and 119.71m. Fluorite observed in the pegmatite around 113.5-114.0m. Graphic texture observed throughout as quartz-plagioclase intergrowths. No HCL reaction. Generally non-magnetic other than pyrrhotite. Sharp upper contact with limestone with ~2cm marble development due to contact metamorphism from pegmatite.							
130.37	134.90	4.53	PEG	CG	Highly oxidized medium to coarse grained quartz-feldspar-amphibole pegmatite at the lower contact with the marble. ~1% cubic pyrite throughout that is up to 1cm that is mostly oxidizied, remamnant pyrite visible on the microscope in places. Upper contact is dark green and aphanitic on the micrscope; however, has the colour of diopside and is gradational with the more fresh pegmatite. Many primary textures and mineralogy are difficult to make out on the microscope due to the oxidized overprint. No HCL reaction and non-magnetic.							
134.90	183.12	48.22	MBL	FG	Variable marble to limestone throughout interval, majority is marble.Contains some remamnant primary limestone beds in places. Upper contact with oxidized pegmatite is in ~50cm rubble zone and has ~2m of massive marble at contact, likely due to contact metamorphism from the pegmatite. Weak to moderate HCL reaction throughout. Non-magnetic. Cluster of coarse ~1cm cubic pyrite at 142.58m. Coarse 5mm cubic pyrite in calcite breccia vein at 161.35m. 5mm thick pyrite-calcite vein at 170.66m.							

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
183.12	205.55	22.43	PEG	VC	Medium to very coarse grained quartz-feldspar-amphibole-fluorite pegmatite that has a late stage chloritic overprint in places. Trace chalcopyrite observed at 187.75m in quartz vein. Trace pyrrhotite observed at 185.40 and 186.42m. Very coarse 2cm cubic pyrite and trace arsenopyrite observed within a quartz-calcite vein at 188.95m. Graphic texture observed throughout as quartz-plagioclase intergrowths. Trace red garnet (almandine?) at 202.0m. ~10cm wide massive black-blue amphibole (actinolite?) cluster at 184.50m. No HCL reaction. Generally non-magnetic other than pyrrhotite. Sharp upper contact with limestone with ~2cm amphibole skarn development due to contact metamorphism from pegmatite.							
205.55	232.05	26.50	MBL	FG	Light to dark grey banded marble with up to 5cm thick calcite-quartz-amphibole+-pyrrhotite veins. Amphibole in veins appears to be hornblende. Unknwon brown mineral in veins, possibly tourmaline? Trace pyrrhotite observed at 208.95m in marble. Moderate HCL reaction throughout. No magnetic other than pyrrhotite. Sharp upper contact with pegmatite with ~1cm zone of chloritized and weakly skarnified marble.							
232.05	270.20	38.15	GRD	CG	Medium to coarse grained quartz-feldspar-biotite-hornblende granodiorite. Periodic fine-medium grained sections of granodiorite within more commonly medium-coarse grained granodiorite. Weak chloritic overprint in minor intervals throughout. Trace pyrrhotite obesrved. 1cm pyrrhotite bleb with microscopic chalcopyrite rim at 236.60m. Trace muscovite observed. 1 plagioclase phenocryst at 255m. No HCL reaction throughout. No magnetic reaction other than where pyrrhotite is observed. Sharp upper contact with mable with ~10cm zone of contact metamorphism of marble with weak chloritization and skarnification.							

From (m)	To (m)	Interval (m)	Rock Type	Grain Size	Description	Shade	Colour	Texture	Alteration	Intensity	Mineral	Conc.
270.20	280.40	10.20	GRD	CG	Medium to coarse grained quartz-feldspar-biotite-hornblende granodiorite with notable incrase in plagioclase phenocrysts. 4cm thick quartz-pyrrhotite-molybdenite-chalcopyrite vein at 273.55m. Weak chloritic overprint in minor intervals throughout. Trace muscovite observed. No HCL reaction throughout. No magnetic reaction other than where pyrrhotite is observed. Gradational upper contact with granodiorite above without plagioclase phenocrysts.							
280.40	287.58	7.18	GRD	CG	Medium to coarse grained quartz-feldspar-biotite-hornblende granodiorite with notable incrase in late stage chloritic overprint. Strong chloritic alteration from 286.85-287.58. Very coarse grained quartz-plagioclase more pegmatitic section from 280.70-281.10m. 2cm thick quartz-pyrrhotite-molybdenite-chalcopyrite vein at 280.52m. Trace muscovite observed. Large plagioclase phenocrysts observed throughout. ne-medium grained sections of granodiorite within more commonly medium-coarse grained granodiorite. No HCL reaction throughout. No magnetic reaction other than where pyrrhotite is observed. Gradational upper contact with granodiorite above with plagioclase phenocrysts.							
287.58	303.89	16.31	GRD	CG	Medium to coarse grained quartz-feldspar-biotite-hornblende granodiorite with plagioclase phenocrysts. Periodic fine-medium grained sections of granodiorite within more commonly medium-coarse grained granodiorite. Some zoned plagioclase phenocrysts. Trace muscovite observed. No HCL reaction throughout. No magnetic reaction other than where pyrrhotite is observed. Gradational upper contact with chlorite altered granodiorite.							

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Rau
Kathy Zone
Archer,Cathro & Associates (1981) Limited

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
0.00	5.18	5.18	0.24	5	0.00	0	--	--	--	Overburden
5.18	8.23	3.05	0.53	17	0.00	0	--	--	--	Overburden
8.23	11.28	3.05	1	33	0.00	0	--	--	--	Overburden
11.28	14.33	3.05	0.74	24	0.00	0	--	--	--	Overburden
14.33	17.37	3.04	0.3	10	0.00	0	--	--	--	Overburden
17.37	20.42	3.05	1.33	44	1.03	34	3R	3H	2W	0.24 m of overburden then into bedrock.
20.42	23.47	3.05	2.9	95	2.49	82	2R	4H	2W	
23.47	26.52	3.05	3.05	100	2.95	97	3R	4H	2W	
26.52	29.57	3.05	2.96	97	2.68	88	4R	4H	1W	
29.57	32.61	3.04	3.04	100	2.63	87	3R	3H	2W	Come back and do strength after photo
32.61	35.66	3.05	3	98	2.89	95	4R	4H	2W	DO strength after
35.66	38.71	3.05	3	98	2.23	73	4R	4H	2W	Do strength after
38.71	41.76	3.05	3.05	100	1.69	55	3R	4H	2W	Do strength after
41.76	44.81	3.05	3.05	100	2.45	80	2R	3H	1W	Do strength after
44.81	47.85	3.04	3.04	100	2.59	85	3R	4H	1W	Do strength after
47.85	50.90	3.05	3	98	2.46	81	3R	4H	2W	DO strength after
50.90	53.95	3.05	2.97	97	2.72	89	3R	3H	1W	DO strength after
53.95	57.00	3.05	3.05	100	2.53	83	3R	4H	1W	
57.00	60.05	3.05	3.05	100	2.63	86	3R	3H	2W	
60.05	63.09	3.04	3.04	100	2.91	96	3R	4H	2W	
63.09	66.14	3.05	3.05	100	3.00	98	2R	4H	1W	
66.14	69.19	3.05	3.05	100	3.03	99	0R	4H	1W	
69.19	72.24	3.05	3.05	100	3.05	100	0R	4H	1W	
72.24	75.29	3.05	3.05	100	3.03	99	0R	4H	1W	
75.29	78.33	3.04	3.04	100	3.04	100	1R	3H	1W	
78.33	81.38	3.05	3.05	100	2.46	81	1R	4H	2W	
81.38	84.43	3.05	3.03	99	2.88	94	3R	4H	1W	
84.43	87.48	3.05	3.05	100	3.05	100	3R	4H	1W	
87.48	90.53	3.05	3.05	100	2.78	91	3R	4H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
90.53	93.57	3.04	3	99	2.84	93	3R	4H	1W	
93.57	96.62	3.05	3.05	100	3.05	100	2R	4H	2W	
96.62	99.67	3.05	3.05	100	2.16	71	1R	4H	1W	
99.67	102.72	3.05	2.97	97	2.35	77	1R	4H	1W	
102.72	105.77	3.05	3.05	100	3.05	100	0R	4H	1W	
105.77	108.81	3.04	2.96	97	2.96	97	0R	4H	1W	
108.81	111.86	3.05	3.05	100	3.05	100	0R	5H	1W	
111.86	114.91	3.05	2.96	97	2.96	97	0R	5H	1W	
114.91	117.96	3.05	3.04	100	3.04	100	0R	4H	1W	
117.96	121.00	3.04	3.04	100	3.02	99	1R	4H	1W	
121.00	124.05	3.05	3	98	2.76	90	0R	5H	1W	
124.05	127.10	3.05	3.05	100	2.74	90	0R	5H	1W	
127.10	130.15	3.05	3.05	100	2.70	89	1R	4H	1W	
130.15	133.19	3.04	2.95	97	2.01	66	0R	3H	3W	
133.19	136.25	3.06	3.05	100	1.83	60	2R	3H	3W	
136.25	139.29	3.04	2.95	97	2.91	96	3R	4H	1W	
139.29	142.34	3.05	2.86	94	2.63	86	3R	4H	1W	
142.34	145.39	3.05	3.05	100	2.17	71	1R	4H	1W	
145.39	148.44	3.05	3.05	100	2.80	92	4R	4H	1W	
148.44	151.49	3.05	3.05	100	2.84	93	3R	4H	1W	
151.49	154.53	3.04	3	99	2.49	82	4R	4H	1W	
154.53	157.58	3.05	2.89	95	2.68	88	4R	4H	1W	
157.58	160.63	3.05	3.05	100	3.03	99	3R	4H	1W	
160.63	163.68	3.05	3.05	100	2.91	95	2R	4H	1W	
163.68	166.73	3.05	3.05	100	2.96	97	0R	4H	1W	
166.73	169.77	3.04	2.9	95	2.90	95	3R	5H	1W	
169.77	172.82	3.05	3.05	100	2.92	96	4R	5H	1W	
172.82	175.87	3.05	3.05	100	3.05	100	4R	5H	1W	
175.87	178.92	3.05	3.05	100	3.05	100	4R	5H	1W	
178.92	181.97	3.05	3.05	100	3.05	100	3R	5H	1W	
181.97	185.01	3.04	2.96	97	2.92	96	2R	5H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
185.01	188.06	3.05	3.02	99	2.94	96	0R	5H	1W	
188.06	191.11	3.05	3.05	100	3.05	100	0R	5H	1W	
191.11	194.16	3.05	3.05	100	2.94	96	0R	5H	1W	
194.16	197.21	3.05	2.92	96	2.92	96	0R	5H	1W	
197.21	200.25	3.04	3.04	100	2.99	98	0R	5H	1W	
200.25	203.30	3.05	3.05	100	3.05	100	0R	5H	1W	
203.30	206.35	3.05	3	98	2.93	96	1R	5H	1W	
206.35	209.40	3.05	3.05	100	3.00	98	3R	5H	1W	
209.40	212.45	3.05	3.05	100	2.99	98	3R	5H	1W	
212.45	215.49	3.04	3.04	100	3.04	100	3R	5H	1W	
215.49	218.54	3.05	3.05	100	2.98	98	4R	5H	1W	
218.54	221.59	3.05	3	98	2.93	96	2R	5H	1W	
221.59	224.64	3.05	3.05	100	2.94	96	2R	5H	1W	
224.64	227.69	3.05	3.05	100	2.69	88	2R	5H	1W	
227.69	230.73	3.04	3.04	100	3.04	100	2R	5H	1W	
230.73	233.78	3.05	2.93	96	2.93	96	1R	5H	1W	
233.78	236.83	3.05	3.05	100	3.05	100	0R	5H	1W	
236.83	239.88	3.05	3	98	3.00	98	0R	5H	1W	
239.88	242.93	3.05	3.05	100	3.05	100	0R	5H	1W	
242.93	245.97	3.04	3.04	100	3.04	100	0R	5H	1W	
245.97	249.02	3.05	3.05	100	3.05	100	0R	5H	1W	
249.02	252.07	3.05	3.05	100	3.05	100	0R	5H	1W	
252.07	255.12	3.05	3.05	100	3.05	100	0R	5H	1W	
255.12	258.17	3.05	3.05	100	3.05	100	0R	5H	1W	
258.17	261.21	3.04	3.03	100	3.03	100	0R	5H	1W	
261.21	264.26	3.05	3.05	100	3.05	100	0R	5H	1W	
264.26	267.31	3.05	2.98	98	2.98	98	0R	5H	1W	
267.31	270.36	3.05	3.05	100	3.05	100	0R	5H	1W	
270.36	273.41	3.05	3.05	100	3.05	100	0R	5H	1W	
273.41	276.45	3.04	3.04	100	3.04	100	1R	5H	1W	
276.45	279.50	3.05	2.97	97	2.97	97	0R	5H	1W	

From (m)	To (m)	Interval (m)	Recovery (m)	Recovery %	RQD	RQD %	Reactivity	Hardness	Weathering	Comments
279.50	282.55	3.05	3.05	100	3.05	100	1R	5H	1W	
282.55	285.60	3.05	3	98	3.00	98	0R	5H	1W	
285.60	288.65	3.05	3.05	100	3.05	100	1R	4H	1W	
288.65	291.69	3.04	3	99	3.00	99	0R	5H	1W	
291.69	294.74	3.05	3.05	100	3.05	100	0R	5H	1W	
294.74	297.79	3.05	3.05	100	3.05	100	0R	5H	1W	
297.79	300.84	3.05	2.98	98	2.98	98	0R	5H	1W	
300.84	303.89	3.05	3.05	100	3.05	100	0R	5H	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	W843263	☐	R19-D28	Core	ML-2	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W843177	☐	R19-D25	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W843269	☐	R19-D28	Core	ML-1	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W843252	☐	R19-D27	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W843238	☐	R19-D27	Core	ML-2	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W843226	☐	R19-D27	Core	ML-1	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W843213	☐	R19-D26	Core	ML-2	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W843210	☐	R19-D26	Core		☑	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W843195	☐	R19-D26	Core	ML-1	☐	☐	☐
0.00	0.00	0.00	-QC-	0.00	0	W843271	☐	R19-D28	Core		☑	☐	☐
4.91	8.23	3.32	OVB	0.61	18	W843157	☐	R19-D25	Core		☐	☐	☐
8.23	14.33	6.10	OVB	1.74	29	W843158	☐	R19-D25	Core		☐	☐	☐
14.33	19.00	4.67	OVB	0.53	11	W843159	☐	R19-D25	Core		☐	☐	☐
19.00	20.42	1.42	OVB, LST	1.09	77	W843160	☐	R19-D25	Core		☐	☐	☐
19.00	20.42	1.42	OVB, LST	1.09	77	W843161	☐	R19-D25	Core		☐	☑	☐
20.42	23.47	3.05	LST	2.90	95	W843162	☐	R19-D25	Core		☐	☐	☐
23.47	26.52	3.05	LST	3.05	100	W843163	☐	R19-D25	Core		☐	☐	☐
26.52	29.57	3.05	LST	2.96	97	W843164	☐	R19-D25	Core		☐	☐	☐
29.57	32.61	3.04	LST	3.04	100	W843165	☐	R19-D25	Core		☐	☐	☐
32.61	35.66	3.05	LST	3.00	98	W843166	☐	R19-D25	Core		☐	☐	☐
35.66	38.71	3.05	LST	3.00	98	W843167	☐	R19-D25	Core		☐	☐	☐
38.71	41.76	3.05	LST	3.05	100	W843168	☐	R19-D25	Core		☐	☐	☐
41.76	44.81	3.05	LST	3.05	100	W843169	☐	R19-D25	Core		☐	☐	☐
44.81	47.85	3.04	LST	3.04	100	W843170	☐	R19-D25	Core		☐	☐	☐
47.85	50.90	3.05	LST	3.00	98	W843171	☐	R19-D25	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	LST	2.97	97	W843172	☐	R19-D25	Core		☐	☐	☐
53.95	57.00	3.05	LST	3.05	100	W843173	☐	R19-D25	Core		☐	☐	☐
57.00	60.05	3.05	LST	3.05	100	W843174	☐	R19-D25	Core		☐	☐	☐
60.05	63.00	2.95	LST	2.95	100	W843175	☐	R19-D25	Core		☐	☐	☐
63.00	63.09	0.09	LST, PEG	0.09	100	W843176	☐	R19-D25	Core		☐	☐	☐
63.09	65.39	2.30	PEG, LST	2.30	100	W843178	☐	R19-D25	Core		☐	☐	☐
65.39	67.41	2.02	PEG, LST	1.97	98	W843179	☐	R19-D25	Core		☐	☐	☐
67.41	70.33	2.92	PEG	2.92	100	W843180	☐	R19-D25	Core		☐	☐	☐
70.33	72.93	2.60	PEG	2.56	98	W843181	☐	R19-D26	Core		☐	☐	☐
72.93	75.63	2.70	PEG	2.70	100	W843182	☐	R19-D26	Core		☐	☐	☐
75.63	78.42	2.79	PEG	2.79	100	W843183	☐	R19-D26	Core		☐	☐	☐
75.63	78.42	2.79	PEG	2.79	100	W843184	☐	R19-D26	Core		☐	☑	☐
78.42	81.38	2.96	PEG, MBL	2.87	97	W843185	☐	R19-D26	Core		☐	☐	☐
81.38	83.35	1.97	MBL	1.94	98	W843186	☐	R19-D26	Core		☐	☐	☐
83.35	85.39	2.04	MBL	1.97	97	W843187	☐	R19-D26	Core		☐	☐	☐
83.35	85.39	2.04	MBL	1.97	97	W843188	☐	R19-D26	Core		☐	☐	☑
85.39	87.48	2.09	MBL	2.09	100	W843189	☐	R19-D26	Core		☐	☐	☐
87.48	89.08	1.60	MBL	1.57	98	W843190	☐	R19-D26	Core		☐	☐	☐
89.08	91.34	2.26	MBL	2.24	99	W843191	☐	R19-D26	Core		☐	☐	☐
91.34	93.57	2.23	MBL	2.17	97	W843192	☐	R19-D26	Core		☐	☐	☐
93.57	96.62	3.05	MBL	3.05	100	W843193	☐	R19-D26	Core		☐	☐	☐
96.62	99.67	3.05	MBL	3.05	100	W843194	☐	R19-D26	Core		☐	☐	☐
99.67	102.18	2.51	MBL	2.41	96	W843196	☐	R19-D26	Core		☐	☐	☐
102.18	104.27	2.09	MBL	2.09	100	W843197	☐	R19-D26	Core		☐	☐	☐
104.27	105.77	1.50	PEG	1.50	100	W843198	☐	R19-D26	Core		☐	☐	☐
105.77	108.81	3.04	PEG	2.96	97	W843199	☐	R19-D26	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
108.81	111.86	3.05	PEG	3.05	100	W843200	☐	R19-D26	Core		☐	☐	☐
111.86	114.91	3.05	PEG	2.96	97	W843201	☐	R19-D26	Core		☐	☐	☐
114.91	117.96	3.05	PEG	3.04	100	W843202	☐	R19-D26	Core		☐	☐	☐
117.96	121.00	3.04	PEG	3.04	100	W843203	☐	R19-D26	Core		☐	☐	☐
121.00	124.05	3.05	PEG	3.00	98	W843204	☐	R19-D26	Core		☐	☐	☐
124.05	127.10	3.05	PEG	3.05	100	W843205	☐	R19-D26	Core		☐	☐	☐
127.10	130.15	3.05	PEG	3.05	100	W843206	☐	R19-D26	Core		☐	☐	☐
130.15	131.66	1.51	PEG	1.48	98	W843207	☐	R19-D26	Core		☐	☐	☐
131.66	133.19	1.53	PEG	1.28	84	W843208	☐	R19-D26	Core		☐	☐	☐
133.19	134.50	1.31	PEG	1.18	90	W843209	☐	R19-D26	Core		☐	☐	☐
134.50	136.25	1.75	PEG	1.67	95	W843211	☐	R19-D26	Core		☐	☐	☐
136.25	139.29	3.04	MBL	2.95	97	W843212	☐	R19-D26	Core		☐	☐	☐
139.29	142.34	3.05	MBL	2.86	94	W843214	☐	R19-D26	Core		☐	☐	☐
142.34	145.39	3.05	MBL	3.05	100	W843215	☐	R19-D26	Core		☐	☐	☐
145.39	148.44	3.05	MBL	3.05	100	W843216	☐	R19-D26	Core		☐	☐	☐
148.44	151.49	3.05	MBL	3.05	100	W843217	☐	R19-D26	Core		☐	☐	☐
151.49	154.53	3.04	MBL	3.00	99	W843218	☐	R19-D26	Core		☐	☐	☐
154.53	157.58	3.05	MBL	2.89	95	W843219	☐	R19-D26	Core		☐	☐	☐
157.58	160.63	3.05	MBL	3.05	100	W843220	☐	R19-D26	Core		☐	☐	☐
160.63	163.68	3.05	MBL	3.05	100	W843221	☐	R19-D27	Core		☐	☐	☐
163.68	166.73	3.05	MBL	3.05	100	W843222	☐	R19-D27	Core		☐	☐	☐
166.73	169.77	3.04	MBL	2.90	95	W843223	☐	R19-D27	Core		☐	☐	☐
169.77	172.82	3.05	MBL	3.05	100	W843224	☐	R19-D27	Core		☐	☐	☐
172.82	175.87	3.05	MBL	3.05	100	W843225	☐	R19-D27	Core		☐	☐	☐
175.87	178.92	3.05	MBL	3.05	100	W843227	☐	R19-D27	Core		☐	☐	☐
178.92	181.97	3.05	MBL	3.05	100	W843228	☐	R19-D27	Core		☐	☐	☐
181.97	183.12	1.15	MBL	1.12	97	W843229	☐	R19-D27	Core		☐	☐	☐
183.12	185.01	1.89	PEG, MBL	1.85	98	W843230	☐	R19-D27	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
185.01	186.50	1.49	PEG	1.46	98	W843231	☐	R19-D27	Core		☐	☐	☐
185.01	186.50	1.49	PEG	1.46	98	W843232	☐	R19-D27	Core		☐	☑	☐
186.50	188.06	1.56	PEG	1.56	100	W843233	☐	R19-D27	Core		☐	☐	☐
188.06	189.22	1.16	PEG	1.13	97	W843234	☐	R19-D27	Core		☐	☐	☐
189.22	191.11	1.89	PEG	1.89	100	W843235	☐	R19-D27	Core		☐	☐	☐
191.11	194.16	3.05	PEG	3.05	100	W843236	☐	R19-D27	Core		☐	☐	☐
194.16	197.21	3.05	PEG	2.92	96	W843237	☐	R19-D27	Core		☐	☐	☐
197.21	200.25	3.04	PEG	3.04	100	W843239	☐	R19-D27	Core		☐	☐	☐
200.25	203.30	3.05	PEG	3.05	100	W843240	☐	R19-D27	Core		☐	☐	☐
203.30	205.54	2.24	PEG	2.22	99	W843241	☐	R19-D27	Core		☐	☐	☐
205.54	206.35	0.81	PEG	0.80	99	W843242	☐	R19-D27	Core		☐	☐	☐
206.35	209.40	3.05	MBL	3.05	100	W843243	☐	R19-D27	Core		☐	☐	☐
209.40	212.45	3.05	MBL	3.05	100	W843244	☐	R19-D27	Core		☐	☐	☐
212.45	215.49	3.04	MBL	3.04	100	W843245	☐	R19-D27	Core		☐	☐	☐
215.49	218.54	3.05	MBL	3.05	100	W843246	☐	R19-D27	Core		☐	☐	☐
218.54	221.59	3.05	MBL	3.00	98	W843247	☐	R19-D27	Core		☐	☐	☐
221.59	224.64	3.05	MBL	3.05	100	W843248	☐	R19-D27	Core		☐	☐	☐
224.64	227.69	3.05	MBL	3.05	100	W843249	☐	R19-D27	Core		☐	☐	☐
227.69	230.73	3.04	MBL	3.04	100	W843250	☐	R19-D27	Core		☐	☐	☐
230.73	232.05	1.32	MBL	1.24	94	W843251	☐	R19-D27	Core		☐	☐	☐
232.05	233.78	1.73	MBL, GRD	1.70	98	W843253	☐	R19-D27	Core		☐	☐	☐
233.78	236.83	3.05	GRD	3.05	100	W843254	☐	R19-D27	Core		☐	☐	☐
236.83	239.88	3.05	GRD	3.00	98	W843255	☐	R19-D27	Core		☐	☐	☐
239.88	242.93	3.05	GRD	3.05	100	W843256	☐	R19-D27	Core		☐	☐	☐
239.88	242.93	3.05	GRD	3.05	100	W843257	☐	R19-D27	Core		☐	☐	☑
242.93	245.97	3.04	GRD	3.04	100	W843258	☐	R19-D27	Core		☐	☐	☐
245.97	249.02	3.05	GRD	3.05	100	W843259	☐	R19-D27	Core		☐	☐	☐
249.02	252.07	3.05	GRD	3.05	100	W843260	☐	R19-D27	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
252.07	255.12	3.05	GRD	3.05	100	W843261	☐	R19-D28	Core		☐	☐	☐
255.12	258.17	3.05	GRD	3.05	100	W843262	☐	R19-D28	Core		☐	☐	☐
258.17	261.21	3.04	GRD	3.03	100	W843264	☐	R19-D28	Core		☐	☐	☐
261.21	264.26	3.05	GRD	3.05	100	W843265	☐	R19-D28	Core		☐	☐	☐
264.26	267.31	3.05	GRD	2.98	98	W843266	☐	R19-D28	Core		☐	☐	☐
267.31	270.36	3.05	GRD	3.05	100	W843267	☐	R19-D28	Core		☐	☐	☐
270.36	273.41	3.05	GRD	3.05	100	W843268	☐	R19-D28	Core		☐	☐	☐
273.41	273.65	0.24	GRD	0.24	100	W843270	☐	R19-D28	Core		☐	☐	☐
273.65	276.45	2.80	GRD	2.80	100	W843272	☐	R19-D28	Core		☐	☐	☐
276.45	279.50	3.05	GRD	2.97	97	W843273	☐	R19-D28	Core		☐	☐	☐
279.50	280.34	0.84	GRD	0.84	100	W843274	☐	R19-D28	Core		☐	☐	☐
280.34	280.63	0.29	GRD	0.29	100	W843275	☐	R19-D28	Core		☐	☐	☐
280.63	282.55	1.92	GRD	1.92	100	W843276	☐	R19-D28	Core		☐	☐	☐
280.63	282.55	1.92	GRD	1.92	100	W843277	☐	R19-D28	Core		☐	☑	☐
282.55	285.60	3.05	GRD	3.00	98	W843278	☐	R19-D28	Core		☐	☐	☐
285.60	288.65	3.05	GRD	3.05	100	W843279	☐	R19-D28	Core		☐	☐	☐
288.65	291.69	3.04	GRD	3.00	99	W843280	☐	R19-D28	Core		☐	☐	☐
291.69	294.74	3.05	GRD	3.05	100	W843281	☐	R19-D28	Core		☐	☐	☐
294.74	297.79	3.05	GRD	3.05	100	W843282	☐	R19-D28	Core		☐	☐	☐
297.79	300.84	3.05	GRD	2.98	98	W843283	☐	R19-D28	Core		☐	☐	☐
300.84	303.89	3.05	GRD	3.05	100	W843284	☐	R19-D28	Core		☐	☐	☐
300.84	303.89	3.05	GRD	3.05	100	W843285	☐	R19-D28	Core		☐	☐	☑

Sample Results

Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
		0.00	4.91								☐	☐	☐	☐	
R19-D27	W843252	0.00	0.00	0.01	0	1	1	4.0	0	0.50	☐	☐	☑	☐	
R19-D28	W843269	0.00	0.00	0.36	3	825	50	122.0	71	21.20	☐	☐	☐	☑ ML-1	
R19-D26	W843210	0.00	0.00	0.01	0	5	1	16.0	1	0.10	☐	☐	☑	☐	
R19-D26	W843213	0.00	0.00	0.82	7	3570	34	174.0	105	33.30	☐	☐	☐	☑ ML-2	
R19-D27	W843238	0.00	0.00	0.81	7	3350	32	165.0	99	28.20	☐	☐	☐	☑ ML-2	
R19-D28	W843271	0.00	0.00	0.01	0	2	0	4.0	0	0.20	☐	☐	☑	☐	
R19-D27	W843226	0.00	0.00	0.37	3	830	51	124.0	70	20.00	☐	☐	☐	☑ ML-1	
R19-D26	W843195	0.00	0.00	0.37	3	871	55	128.0	76	21.90	☐	☐	☐	☑ ML-1	
R19-D25	W843177	0.00	0.00	0.01	0	2	1	16.0	0	0.10	☐	☐	☑	☐	
R19-D28	W843263	0.00	0.00	0.82	12	3530	36	170.0	107	31.80	☐	☐	☐	☑ ML-2	
R19-D25	W843157	4.91	8.23	0.01	0	26	25	127.0	3	63.60	☐	☐	☐	☐	
R19-D25	W843158	8.23	14.33	0.01	0	14	11	96.0	2	1.50	☐	☐	☐	☐	
R19-D25	W843159	14.33	19.00	0.01	0	14	10	73.0	4	4.00	☐	☐	☐	☐	



Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
R19-D25	W843160	19.00	20.42	0.09	0	1	2	13.0	1	3.30	☐	☐	☐	☐	
R19-D25	W843161	19.00	20.42	0.01	0	1	1	8.0	1	1.90	☑	☐	☐	☐	
R19-D25	W843162	20.42	23.47	0.01	0	3	18	54.0	2	2.70	☐	☐	☐	☐	
R19-D25	W843163	23.47	26.52	0.01	0	1	4	37.0	1	1.60	☐	☐	☐	☐	
R19-D25	W843164	26.52	29.57	0.01	0	2	2	13.0	1	2.40	☐	☐	☐	☐	
R19-D25	W843165	29.57	32.61	0.01	0	2	3	15.0	1	3.80	☐	☐	☐	☐	
R19-D25	W843166	32.61	35.66	0.01	0	4	4	19.0	1	4.00	☐	☐	☐	☐	
R19-D25	W843167	35.66	38.71	0.01	0	2	5	24.0	2	4.20	☐	☐	☐	☐	
R19-D25	W843168	38.71	41.76	0.01	0	3	17	70.0	3	4.70	☐	☐	☐	☐	
R19-D25	W843169	41.76	44.81	0.01	0	2	18	81.0	1	3.60	☐	☐	☐	☐	
R19-D25	W843170	44.81	47.85	0.01	0	4	7	40.0	1	3.20	☐	☐	☐	☐	
R19-D25	W843171	47.85	50.90	0.01	0	4	2	18.0	1	1.70	☐	☐	☐	☐	
R19-D25	W843172	50.90	53.95	0.01	0	3	4	41.0	1	1.40	☐	☐	☐	☐	
R19-D25	W843173	53.95	57.00	0.01	0	3	4	24.0	1	2.20	☐	☐	☐	☐	
R19-D25	W843174	57.00	60.05	0.01	0	3	17	153.0	1	2.00	☐	☐	☐	☐	

Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
R19-D25	W843175	60.05	63.00	0.01	0	2	3	25.0	1	6.20	☐	☐	☐	☐	
R19-D25	W843176	63.00	63.09	0.01	0	13	44	69.0	6	80.10	☐	☐	☐	☐	
R19-D25	W843178	63.09	65.39	0.01	0	4	8	69.0	2	20.10	☐	☐	☐	☐	
R19-D25	W843179	65.39	67.41	0.01	0	2	68	36.0	17	14.20	☐	☐	☐	☐	
R19-D25	W843180	67.41	70.33	0.01	0	2	67	29.0	4	5.60	☐	☐	☐	☐	
R19-D26	W843181	70.33	72.93	0.01	0	2	68	43.0	3	5.50	☐	☐	☐	☐	
R19-D26	W843182	72.93	75.63	0.01	0	10	61	425.0	9	7.00	☐	☐	☐	☐	
R19-D26	W843184	75.63	78.42	0.01	0	4	34	29.0	63	8.00	☑	☐	☐	☐	
R19-D26	W843183	75.63	78.42	0.01	0	7	33	34.0	68	8.20	☐	☐	☐	☐	
R19-D26	W843185	78.42	81.38	0.01	1	6	62	48.0	4	18.60	☐	☐	☐	☐	
R19-D26	W843186	81.38	83.35	0.01	0	5	5	123.0	2	5.80	☐	☐	☐	☐	
R19-D26	W843187	83.35	85.39	0.01	0	104	15	2440.0	6	106.50	☐	☐	☐	☐	
R19-D26	W843188	83.35	85.39	0.01	0	103	17	2270.0	6	124.00	☐	☑	☐	☐	
R19-D26	W843189	85.39	87.48	0.01	0	19	8	327.0	3	35.50	☐	☐	☐	☐	
R19-D26	W843190	87.48	89.08	0.01	0	51	11	512.0	7	56.90	☐	☐	☐	☐	

Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
R19-D26	W843191	89.08	91.34	0.01	0	8	15	400.0	9	10.70	☐	☐	☐	☐	
R19-D26	W843192	91.34	93.57	0.01	0	5	7	121.0	5	1.70	☐	☐	☐	☐	
R19-D26	W843193	93.57	96.62	0.01	0	4	5	79.0	3	4.50	☐	☐	☐	☐	
R19-D26	W843194	96.62	99.67	0.01	0	4	9	61.0	7	3.80	☐	☐	☐	☐	
R19-D26	W843196	99.67	102.18	0.01	0	3	5	35.0	1	5.50	☐	☐	☐	☐	
R19-D26	W843197	102.18	104.27	0.01	0	10	41	47.0	9	17.30	☐	☐	☐	☐	
R19-D26	W843198	104.27	105.77	0.01	0	25	43	33.0	5	5.20	☐	☐	☐	☐	
R19-D26	W843199	105.77	108.81	0.01	0	3	36	17.0	11	5.20	☐	☐	☐	☐	
R19-D26	W843200	108.81	111.86	0.01	0	5	54	50.0	25	127.50	☐	☐	☐	☐	
R19-D26	W843201	111.86	114.91	0.01	0	7	40	33.0	37	5.60	☐	☐	☐	☐	
R19-D26	W843202	114.91	117.96	0.01	0	9	50	84.0	79	56.90	☐	☐	☐	☐	
R19-D26	W843203	117.96	121.00	0.01	0	6	35	96.0	159	368.00	☐	☐	☐	☐	
R19-D26	W843204	121.00	124.05	0.01	0	6	42	146.0	25	6.10	☐	☐	☐	☐	
R19-D26	W843205	124.05	127.10	0.01	0	5	37	34.0	9	5.00	☐	☐	☐	☐	
R19-D26	W843206	127.10	130.15	0.01	1	5	53	147.0	128	8.60	☐	☐	☐	☐	

Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
R19-D26	W843207	130.15	131.66	0.01	0	5	52	169.0	217	15.60	☐	☐	☐	☐	
R19-D26	W843208	131.66	133.19	0.01	0	3	114	162.0	318	19.30	☐	☐	☐	☐	
R19-D26	W843209	133.19	134.50	0.01	1	5	45	241.0	135	11.80	☐	☐	☐	☐	
R19-D26	W843211	134.50	136.25	0.01	0	12	5	55.0	2	3.60	☐	☐	☐	☐	
R19-D26	W843212	136.25	139.29	0.01	0	5	9	58.0	3	1.90	☐	☐	☐	☐	
R19-D26	W843214	139.29	142.34	0.01	0	5	10	38.0	2	0.70	☐	☐	☐	☐	
R19-D26	W843215	142.34	145.39	0.01	0	4	26	75.0	2	3.90	☐	☐	☐	☐	
R19-D26	W843216	145.39	148.44	0.01	0	3	4	26.0	1	0.90	☐	☐	☐	☐	
R19-D26	W843217	148.44	151.49	0.01	0	2	6	24.0	1	0.80	☐	☐	☐	☐	
R19-D26	W843218	151.49	154.53	0.01	0	3	7	43.0	1	1.20	☐	☐	☐	☐	
R19-D26	W843219	154.53	157.58	0.01	0	2	6	36.0	2	0.90	☐	☐	☐	☐	
R19-D26	W843220	157.58	160.63	0.01	0	3	11	40.0	2	0.90	☐	☐	☐	☐	
R19-D27	W843221	160.63	163.68	0.01	0	3	31	69.0	3	1.40	☐	☐	☐	☐	
R19-D27	W843222	163.68	166.73	0.01	0	3	14	65.0	2	0.70	☐	☐	☐	☐	
R19-D27	W843223	166.73	169.77	0.01	0	4	13	59.0	1	1.30	☐	☐	☐	☐	

Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
R19-D27	W843224	169.77	172.82	0.01	1	3	51	88.0	2	1.20	☐	☐	☐	☐	
R19-D27	W843225	172.82	175.87	0.01	0	3	7	65.0	1	2.80	☐	☐	☐	☐	
R19-D27	W843227	175.87	178.92	0.01	0	3	4	15.0	1	0.50	☐	☐	☐	☐	
R19-D27	W843228	178.92	181.97	0.01	0	2	6	18.0	1	0.60	☐	☐	☐	☐	
R19-D27	W843229	181.97	183.12	0.01	0	5	12	63.0	3	69.90	☐	☐	☐	☐	
R19-D27	W843230	183.12	185.01	0.01	0	27	35	20.0	10	25.30	☐	☐	☐	☐	
R19-D27	W843232	185.01	186.50	0.01	0	7	28	25.0	6	150.50	☑	☐	☐	☐	
R19-D27	W843231	185.01	186.50	0.01	0	11	26	24.0	5	34.80	☐	☐	☐	☐	
R19-D27	W843233	186.50	188.06	0.01	0	10	22	24.0	11	7.20	☐	☐	☐	☐	
R19-D27	W843234	188.06	189.22	0.01	0	25	28	21.0	46	3.70	☐	☐	☐	☐	
R19-D27	W843235	189.22	191.11	0.02	0	14	33	33.0	45	5.30	☐	☐	☐	☐	
R19-D27	W843236	191.11	194.16	0.01	0	3	24	19.0	14	3.90	☐	☐	☐	☐	
R19-D27	W843237	194.16	197.21	0.01	0	2	30	16.0	42	3.70	☐	☐	☐	☐	
R19-D27	W843239	197.21	200.25	0.01	0	3	30	24.0	2	2.10	☐	☐	☐	☐	
R19-D27	W843240	200.25	203.30	0.01	0	5	39	31.0	4	1.80	☐	☐	☐	☐	

Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
R19-D27	W843241	203.30	205.54	0.01	0	1	33	30.0	5	5.10	☐	☐	☐	☐	
R19-D27	W843242	205.54	206.35	0.01	0	2	1	13.0	2	24.80	☐	☐	☐	☐	
R19-D27	W843243	206.35	209.40	0.01	0	4	2	5.0	1	0.70	☐	☐	☐	☐	
R19-D27	W843244	209.40	212.45	0.01	0	4	2	9.0	1	0.90	☐	☐	☐	☐	
R19-D27	W843245	212.45	215.49	0.01	0	2	2	34.0	1	2.90	☐	☐	☐	☐	
R19-D27	W843246	215.49	218.54	0.01	0	2	3	5.0	2	1.20	☐	☐	☐	☐	
R19-D27	W843247	218.54	221.59	0.01	0	3	4	38.0	1	2.80	☐	☐	☐	☐	
R19-D27	W843248	221.59	224.64	0.01	0	2	2	17.0	0	3.90	☐	☐	☐	☐	
R19-D27	W843249	224.64	227.69	0.01	0	3	2	13.0	1	7.40	☐	☐	☐	☐	
R19-D27	W843250	227.69	230.73	0.01	0	3	2	12.0	0	3.10	☐	☐	☐	☐	
R19-D27	W843251	230.73	232.05	0.01	0	3	2	35.0	2	94.70	☐	☐	☐	☐	
R19-D27	W843253	232.05	233.78	0.01	0	7	29	33.0	3	4.20	☐	☐	☐	☐	
R19-D27	W843254	233.78	236.83	0.01	0	2	29	20.0	4	2.20	☐	☐	☐	☐	
R19-D27	W843255	236.83	239.88	0.01	0	1	35	24.0	4	1.80	☐	☐	☐	☐	
R19-D27	W843257	239.88	242.93	0.01	0	2	30	18.0	2	1.70	☐	☑	☐	☐	

Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
R19-D27	W843256	239.88	242.93	0.01	0	2	29	20.0	2	1.50	☐	☐	☐	☐	
R19-D27	W843258	242.93	245.97	0.01	0	0	29	18.0	1	1.70	☐	☐	☐	☐	
R19-D27	W843259	245.97	249.02	0.01	0	1	28	14.0	2	1.60	☐	☐	☐	☐	
R19-D27	W843260	249.02	252.07	0.01	0	1	30	29.0	4	1.40	☐	☐	☐	☐	
R19-D28	W843261	252.07	255.12	0.01	0	1	34	40.0	4	1.70	☐	☐	☐	☐	
R19-D28	W843262	255.12	258.17	0.01	0	1	31	21.0	2	1.20	☐	☐	☐	☐	
R19-D28	W843264	258.17	261.21	0.01	0	3	31	17.0	2	1.20	☐	☐	☐	☐	
R19-D28	W843265	261.21	264.26	0.01	0	1	30	18.0	2	1.00	☐	☐	☐	☐	
R19-D28	W843266	264.26	267.31	0.01	0	1	29	16.0	2	1.50	☐	☐	☐	☐	
R19-D28	W843267	267.31	270.36	0.01	0	1	27	12.0	2	1.10	☐	☐	☐	☐	
R19-D28	W843268	270.36	273.41	0.01	0	1	29	30.0	5	1.10	☐	☐	☐	☐	
R19-D28	W843270	273.41	273.65	0.01	0	79	21	22.0	19	640.00	☐	☐	☐	☐	
R19-D28	W843272	273.65	276.45	0.01	0	2	21	18.0	7	3.70	☐	☐	☐	☐	
R19-D28	W843273	276.45	279.50	0.01	0	2	23	26.0	5	2.60	☐	☐	☐	☐	
R19-D28	W843274	279.50	280.34	0.01	0	5	23	19.0	2	1.00	☐	☐	☐	☐	

Batch	Sample	From (m)	To (m)	Au g/t	Ag g/t	Cu ppm	Pb ppm	Zn ppm	Sn ppm	W ppm	¼ Dup	Crs. Dup	Blk	Standard	Comments
R19-D28	W843275	280.34	280.63	0.01	0	32	17	18.0	25	119.50	☐	☐	☐	☐	
R19-D28	W843276	280.63	282.55	0.01	0	3	27	18.0	7	2.30	☐	☐	☐	☐	
R19-D28	W843277	280.63	282.55	0.01	0	3	28	18.0	8	1.70	☑	☐	☐	☐	
R19-D28	W843278	282.55	285.60	0.01	0	1	25	18.0	3	0.80	☐	☐	☐	☐	
R19-D28	W843279	285.60	288.65	0.01	0	2	26	27.0	67	3.70	☐	☐	☐	☐	
R19-D28	W843280	288.65	291.69	0.01	0	1	31	22.0	6	1.90	☐	☐	☐	☐	
R19-D28	W843281	291.69	294.74	0.01	0	1	28	20.0	7	0.80	☐	☐	☐	☐	
R19-D28	W843282	294.74	297.79	0.01	0	1	27	23.0	9	0.70	☐	☐	☐	☐	
R19-D28	W843283	297.79	300.84	0.01	0	1	25	24.0	9	0.80	☐	☐	☐	☐	
R19-D28	W843285	300.84	303.89	0.01	0	1	26	26.0	6	1.10	☐	☑	☐	☐	
R19-D28	W843284	300.84	303.89	0.01	0	1	27	25.0	6	1.10	☐	☐	☐	☐	



APPENDIX XIV

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 ST
VANCOUVER BC V6B 1L8

Finalized Date: 18-AUG-2019
Account: RCM

CERTIFICATE WH19183557

Project: Rau

P.O. No.: R19-D01

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 26-JUL-2019.

The following have access to data associated with this certificate:

ANDREW CARNE	ADAM COULTER	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
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-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid 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: 18-AUG-2019
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Project: Rau

CERTIFICATE OF ANALYSIS WH19183557

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
W842201		3.97	0.01	0.04	0.08	3.2	280	0.18	0.40	22.9	0.05	3.00	0.9	1	0.59	3.5
W842202		6.10	0.01	0.08	0.06	3.1	260	0.11	0.59	22.3	0.11	2.53	1.0	<1	0.49	3.1
W842203		7.23	0.01	0.11	0.10	5.1	320	0.20	0.64	22.6	0.10	3.26	1.2	1	0.73	11.0
W842204		6.86	0.01	0.08	0.19	2.5	580	0.40	1.07	22.9	0.32	3.92	1.7	2	1.37	9.1
W842205		4.01	0.01	0.12	0.28	2.0	690	0.52	1.91	22.4	0.13	4.67	2.0	2	2.15	7.9
W842206		3.69	0.03	0.08	0.29	2.4	720	0.47	1.05	22.5	0.16	4.87	1.7	2	2.33	8.6
W842207		8.11	0.01	0.03	0.08	2.3	250	0.19	0.10	22.8	0.18	4.19	1.3	1	0.65	4.7
W842208		7.65	<0.01	0.06	0.17	2.2	430	0.37	0.80	22.4	0.05	4.75	1.2	2	1.31	7.8
W842209		8.44	0.01	0.03	0.09	2.2	270	0.19	0.03	21.9	0.04	4.16	0.9	1	0.62	3.8
W842210		8.19	0.01	0.04	0.07	1.9	190	0.20	0.06	21.7	0.06	4.50	0.7	1	0.60	5.3
W842211		7.83	0.01	0.04	0.14	2.9	420	0.24	0.11	22.5	0.14	3.70	1.4	1	1.44	6.3
W842212		8.09	<0.01	0.03	0.09	2.3	320	0.14	0.17	21.9	0.20	2.43	0.9	1	0.72	5.0
W842213		8.27	0.01	0.04	0.08	3.4	360	0.14	0.15	21.9	0.13	2.54	0.9	1	0.73	4.1
W842214		8.07	0.01	0.04	0.06	2.8	210	0.12	0.28	22.6	0.41	2.50	1.3	<1	0.28	7.2
W842215		3.30	0.01	0.03	0.11	3.6	220	0.17	0.10	22.2	0.11	3.02	1.3	1	0.54	6.9
W842216		3.60	0.01	0.16	0.09	8.9	170	0.38	1.07	21.9	0.39	3.94	1.5	<1	1.83	47.0
W842217		4.21	0.01	0.01	0.06	<0.2	20	0.05	<0.01	20.9	0.05	1.44	0.9	<1	0.17	2.1
W842218		8.43	<0.01	0.03	0.12	3.8	250	0.25	0.06	22.6	0.16	3.69	1.0	1	1.01	8.1
W842219		8.53	<0.01	0.02	0.19	1.1	420	0.26	0.13	22.6	0.02	3.43	1.1	1	1.19	4.8
W842220		7.97	<0.01	0.03	0.10	2.5	270	0.17	0.25	21.8	0.04	2.57	0.9	1	1.06	2.4
W842221		7.74	0.01	0.02	0.13	1.9	430	0.19	0.37	21.7	0.03	2.31	1.1	2	1.24	5.8
W842222		7.86	<0.01	0.04	0.11	2.4	380	0.27	0.18	21.9	0.03	1.98	1.1	1	0.57	3.5
W842223		8.12	0.01	0.03	0.13	1.6	430	0.23	0.15	22.2	0.09	2.92	1.3	1	0.65	5.8
W842224		0.10	0.37	2.62	5.70	>10000	2070	1.59	367	11.40	0.85	141.5	46.4	60	12.65	815
W842225		7.50	0.01	0.04	0.26	6.4	790	0.34	0.34	21.8	0.20	3.04	1.6	2	2.16	4.6
W842226		7.75	<0.01	0.02	0.09	3.3	290	0.16	0.29	22.2	0.43	2.81	1.2	1	0.51	2.2
W842227		7.97	<0.01	0.03	0.08	2.9	230	0.18	0.20	21.5	0.51	2.35	0.7	2	0.28	4.6
W842228		8.84	0.01	0.06	0.33	4.7	680	0.33	5.11	21.6	1.18	2.92	2.0	4	1.64	6.3
W842229		7.68	<0.01	0.02	0.11	2.3	360	0.21	0.32	21.9	0.44	2.81	1.1	1	0.51	2.6
W842230		7.14	<0.01	0.02	0.09	4.9	400	0.22	0.20	22.1	0.41	2.46	1.4	1	0.65	2.0
W842231		8.33	<0.01	0.02	0.07	1.0	270	0.15	0.07	22.5	0.38	2.16	1.1	1	0.34	2.0
W842232		7.95	<0.01	0.02	0.08	1.2	280	0.23	0.15	22.3	0.42	2.14	1.2	1	0.54	2.3
W842233		8.33	<0.01	0.01	0.13	1.1	350	0.16	0.13	22.4	0.25	2.34	1.1	1	1.66	2.0
W842234		8.41	<0.01	0.02	0.09	1.5	300	0.16	0.28	22.1	0.24	2.94	1.1	1	1.32	1.9
W842235		6.91	<0.01	0.03	0.17	3.9	400	0.52	0.78	21.7	1.09	4.33	2.1	1	1.68	2.1
W842236		4.60	<0.01	0.03	0.11	16.7	210	1.15	0.62	20.1	1.28	4.87	3.3	1	2.87	2.4
W842237		<0.02	<0.01	0.02	0.11	14.6	220	1.15	0.60	20.4	1.38	5.03	3.4	1	3.00	2.3
W842238		7.10	<0.01	0.02	0.04	6.5	110	0.54	0.12	21.8	0.79	3.09	2.1	1	0.81	1.7
W842239		4.11	<0.01	0.02	0.09	8.5	210	0.99	0.07	20.5	1.05	3.46	3.9	1	3.11	1.2
W842240		0.10	0.81	7.16	4.91	8440	1210	1.69	204	12.90	1.08	455	77.2	47	10.45	3300

***** See Appendix Page for comments regarding this certificate *****

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VANCOUVER BC V6B 1L8

Finalized Date: 18-AUG-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19183557

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	Fe	Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P
	Units	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
W842201		0.15	0.57	0.22	<0.1	0.008	0.05	2.2	3.7	12.50	268	1.64	0.01	0.1	11.7	60
W842202		0.16	0.45	0.27	<0.1	0.013	0.04	1.9	3.0	12.30	261	1.99	<0.01	0.1	10.3	70
W842203		0.25	0.65	0.31	<0.1	0.007	0.05	2.3	4.0	12.50	360	5.55	<0.01	0.1	13.6	70
W842204		0.32	1.09	0.32	0.1	0.014	0.11	2.7	6.9	12.35	391	7.95	0.01	0.3	20.5	90
W842205		0.37	1.56	0.26	0.1	0.025	0.16	3.2	9.1	12.30	358	16.80	0.01	0.4	28.3	110
W842206		0.36	1.56	0.29	0.1	0.026	0.17	3.3	9.6	12.40	363	17.60	0.01	0.4	27.2	100
W842207		0.26	0.65	0.38	<0.1	0.006	0.05	3.2	3.6	12.40	377	7.29	<0.01	0.1	13.4	50
W842208		0.36	1.01	0.35	<0.1	0.006	0.09	3.4	5.8	12.40	396	14.80	0.01	0.2	17.2	80
W842209		0.24	0.63	0.38	<0.1	0.005	0.05	3.2	3.7	12.20	361	4.08	<0.01	0.1	9.5	80
W842210		0.21	0.62	0.40	<0.1	<0.005	0.04	3.3	3.0	12.15	401	3.51	<0.01	0.1	6.0	60
W842211		0.23	0.88	0.37	<0.1	0.009	0.08	2.9	4.9	12.30	337	12.70	0.01	0.2	17.2	70
W842212		0.13	0.61	0.46	<0.1	0.030	0.04	2.0	3.2	11.90	232	6.34	<0.01	0.1	10.2	60
W842213		0.13	0.63	0.41	<0.1	0.016	0.05	2.0	3.5	11.95	223	3.58	<0.01	0.1	8.4	70
W842214		0.19	0.55	0.47	<0.1	0.028	0.02	1.9	2.6	12.50	267	4.62	<0.01	0.1	22.0	70
W842215		0.20	0.69	0.42	<0.1	0.025	0.04	2.2	3.0	12.20	303	8.54	<0.01	0.2	11.9	70
W842216		0.63	0.73	0.30	<0.1	0.049	0.06	2.6	2.7	12.10	506	6.71	<0.01	0.2	11.9	110
W842217		0.41	0.41	0.35	<0.1	<0.005	0.02	0.7	0.9	12.95	180	0.19	<0.01	0.2	1.6	190
W842218		0.20	0.69	0.24	<0.1	<0.005	0.05	2.8	3.4	12.05	325	3.27	0.01	0.2	6.6	90
W842219		0.25	0.97	0.34	0.1	0.006	0.07	2.5	5.5	12.15	307	11.45	0.01	0.3	11.1	150
W842220		0.17	0.69	0.40	<0.1	0.005	0.06	1.9	4.8	12.45	287	3.20	<0.01	0.2	6.1	80
W842221		0.23	0.80	0.41	<0.1	0.005	0.08	1.8	5.9	12.10	232	5.83	0.01	0.2	19.1	100
W842222		0.20	0.66	0.44	<0.1	0.005	0.04	1.4	4.7	12.30	248	5.05	<0.01	0.1	7.4	70
W842223		0.40	0.74	0.39	0.1	0.008	0.06	2.1	5.4	11.95	350	8.98	<0.01	0.2	12.4	60
W842224		6.69	15.20	0.21	2.2	0.912	3.36	84.1	24.8	1.61	1150	12.35	1.15	13.0	31.9	940
W842225		0.29	1.17	0.18	0.1	0.016	0.16	2.2	9.7	12.00	302	10.20	0.01	0.4	16.8	90
W842226		0.19	0.49	0.29	<0.1	0.020	0.04	1.9	3.7	12.35	257	5.89	<0.01	0.1	10.7	70
W842227		0.11	0.36	0.17	<0.1	0.017	0.03	1.7	3.5	11.70	198	5.94	<0.01	0.1	17.2	60
W842228		0.38	1.15	0.22	0.1	0.018	0.13	1.9	9.7	12.20	217	11.35	0.01	0.4	23.7	70
W842229		0.14	0.62	0.41	<0.1	0.019	0.04	2.0	5.7	12.30	157	7.81	<0.01	0.1	12.5	60
W842230		0.09	0.63	0.51	<0.1	0.021	0.05	1.9	5.6	12.25	146	11.95	<0.01	0.1	10.9	70
W842231		0.12	0.56	0.50	<0.1	0.011	0.03	1.6	3.3	12.45	190	6.01	<0.01	0.1	9.2	50
W842232		0.17	0.56	0.49	<0.1	0.008	0.03	1.5	3.2	12.60	224	5.90	<0.01	0.2	10.2	40
W842233		0.18	0.78	0.50	<0.1	0.014	0.06	1.7	5.0	12.40	184	8.69	0.01	0.3	13.5	100
W842234		0.24	0.66	0.46	<0.1	0.009	0.05	2.2	4.4	11.95	254	6.50	<0.01	0.2	11.7	100
W842235		0.63	0.84	0.36	<0.1	0.006	0.07	2.8	5.6	12.90	424	8.86	0.01	0.3	20.4	110
W842236		1.89	0.57	0.12	<0.1	0.005	0.07	3.1	5.1	12.55	583	10.30	0.01	0.2	50.8	130
W842237		1.97	0.53	0.07	<0.1	<0.005	0.07	3.2	5.1	12.70	594	10.80	<0.01	0.2	54.1	130
W842238		1.20	0.29	0.12	<0.1	<0.005	0.03	2.0	3.1	13.25	416	5.27	<0.01	0.1	23.9	60
W842239		2.18	0.47	0.07	<0.1	0.005	0.07	2.4	5.0	12.60	400	6.29	<0.01	0.1	39.9	90
W842240		9.20	19.05	0.37	1.9	1.895	1.93	255	38.0	1.38	2280	13.65	0.83	9.5	36.4	940

***** 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
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: 18-AUG-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19183557

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
W842201		1.5	3.2	0.012	0.03	1.00	0.2	1	0.6	140.0	<0.05	<0.05	0.12	<0.005	0.23	2.1
W842202		1.4	3.1	0.011	0.03	0.62	0.1	1	0.3	124.0	<0.05	<0.05	0.08	<0.005	0.22	2.3
W842203		2.3	5.1	0.062	0.07	3.08	0.2	2	1.3	122.0	<0.05	<0.05	0.19	<0.005	0.30	4.9
W842204		2.3	12.1	0.067	0.06	1.27	0.4	2	1.2	133.0	<0.05	<0.05	0.30	0.008	0.63	4.7
W842205		1.7	16.4	0.166	0.15	0.91	0.6	2	1.6	134.5	<0.05	<0.05	0.38	0.011	0.89	7.2
W842206		1.4	17.6	0.185	0.14	0.73	0.6	2	1.4	135.0	<0.05	<0.05	0.40	0.012	0.96	7.8
W842207		1.0	4.4	0.068	0.05	0.36	0.2	2	0.4	132.5	<0.05	<0.05	0.12	<0.005	0.31	3.7
W842208		1.1	7.7	0.144	0.12	0.76	0.3	2	0.7	136.0	<0.05	<0.05	0.24	0.007	0.47	7.3
W842209		0.9	4.1	0.061	0.09	0.17	0.2	1	0.4	138.0	<0.05	<0.05	0.12	<0.005	0.26	5.9
W842210		1.3	3.3	0.048	0.05	0.33	0.2	1	0.8	145.0	<0.05	<0.05	0.10	<0.005	0.18	4.0
W842211		1.0	6.0	0.116	0.08	0.55	0.3	2	0.4	177.5	<0.05	<0.05	0.20	0.005	0.37	4.2
W842212		1.1	2.7	0.081	0.04	0.57	0.2	1	0.6	167.0	<0.05	<0.05	0.13	<0.005	0.18	5.1
W842213		1.0	3.3	0.049	0.04	0.61	0.2	1	0.8	173.5	<0.05	<0.05	0.13	<0.005	0.24	3.8
W842214		0.9	2.0	0.049	0.06	0.51	0.1	1	0.6	161.0	<0.05	<0.05	0.08	<0.005	0.10	3.4
W842215		0.8	4.0	0.109	0.09	0.34	0.3	1	0.6	163.0	<0.05	<0.05	0.19	<0.005	0.13	5.2
W842216		3.3	13.9	0.022	0.09	2.59	0.2	3	9.3	151.0	<0.05	<0.05	0.17	<0.005	0.25	1.8
W842217		1.3	1.1	0.002	<0.01	<0.05	0.2	1	<0.2	47.7	<0.05	<0.05	0.10	<0.005	<0.02	0.6
W842218		0.8	8.3	0.058	0.05	0.39	0.3	1	0.9	152.0	<0.05	<0.05	0.21	0.005	0.22	5.3
W842219		0.7	7.2	0.131	0.10	0.39	0.4	2	0.5	171.0	<0.05	<0.05	0.35	0.006	0.27	8.1
W842220		1.0	9.6	0.074	0.06	0.33	0.2	1	0.4	130.0	<0.05	<0.05	0.13	<0.005	0.25	3.3
W842221		0.8	7.0	0.089	0.10	0.35	0.3	2	0.3	147.5	<0.05	<0.05	0.20	0.005	0.33	6.9
W842222		0.8	3.3	0.086	0.08	0.27	0.2	2	0.4	155.5	<0.05	<0.05	0.18	<0.005	0.16	4.9
W842223		1.0	5.7	0.135	0.13	0.25	0.3	3	0.3	169.5	<0.05	<0.05	0.23	<0.005	0.25	5.7
W842224		54.0	204	0.002	0.74	41.4	9.0	4	69.9	314	0.83	0.66	11.65	0.322	2.14	5.2
W842225		0.8	17.0	0.127	0.09	0.29	0.5	2	1.1	152.0	<0.05	<0.05	0.43	0.011	0.73	5.1
W842226		0.7	3.9	0.089	0.05	0.37	0.2	1	0.4	130.5	<0.05	<0.05	0.15	<0.005	0.21	3.3
W842227		1.4	2.4	0.070	0.02	0.34	0.2	1	0.6	113.5	<0.05	<0.05	0.14	<0.005	0.11	2.3
W842228		1.3	12.1	0.135	0.13	0.77	0.5	2	0.4	109.0	<0.05	<0.05	0.45	0.013	0.57	3.2
W842229		0.6	4.5	0.077	0.02	0.18	0.3	1	0.3	116.5	<0.05	<0.05	0.18	<0.005	0.17	1.9
W842230		0.7	5.0	0.122	0.03	0.25	0.2	1	0.3	122.5	<0.05	<0.05	0.17	<0.005	0.23	2.9
W842231		0.5	3.3	0.045	<0.01	0.21	0.2	1	0.2	115.5	<0.05	<0.05	0.13	<0.005	0.13	1.4
W842232		<0.5	4.5	0.037	0.01	0.17	0.2	1	0.2	111.0	<0.05	<0.05	0.17	<0.005	0.14	1.8
W842233		0.5	11.3	0.118	0.09	0.10	0.3	1	0.3	116.5	<0.05	<0.05	0.22	0.006	0.33	7.0
W842234		0.5	6.8	0.071	0.10	0.12	0.2	1	0.3	120.0	<0.05	<0.05	0.14	<0.005	0.30	4.2
W842235		0.6	9.4	0.014	0.01	0.71	0.4	2	0.3	117.0	<0.05	<0.05	0.29	0.007	0.31	1.5
W842236		2.4	18.5	0.009	<0.01	3.67	0.2	4	0.3	99.4	<0.05	<0.05	0.15	0.005	0.37	1.6
W842237		2.5	19.0	0.010	<0.01	3.92	0.3	4	0.3	102.0	<0.05	<0.05	0.16	0.005	0.36	1.6
W842238		1.0	7.0	<0.002	<0.01	0.79	0.1	2	0.2	91.8	<0.05	<0.05	0.06	<0.005	0.14	1.8
W842239		0.8	19.1	<0.002	<0.01	0.88	0.1	4	0.2	87.2	<0.05	<0.05	0.07	<0.005	0.33	1.7
W842240		34.2	125.5	0.003	1.32	32.1	7.8	5	102.5	247	0.61	1.05	11.00	0.228	1.34	11.5

***** 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
www.alsglobal.com/geochemistry

To: **ATAC RESOURCES LTD.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 18-AUG-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19183557

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	V	W	Y	Zn	Zr
	Units	ppm	ppm	ppm	ppm	ppm
	LOD	1	0.1	0.1	2	0.5
W842201		43	1.0	1.6	15	<0.5
W842202		33	1.0	1.4	24	<0.5
W842203		39	1.8	1.9	22	<0.5
W842204		53	3.7	2.4	51	1.1
W842205		64	2.8	2.5	44	2.2
W842206		62	3.0	2.5	45	2.4
W842207		32	1.8	2.0	45	<0.5
W842208		49	3.1	2.5	14	0.8
W842209		30	0.9	1.9	10	<0.5
W842210		20	1.3	1.9	20	<0.5
W842211		30	4.4	2.0	37	0.7
W842212		25	1.6	1.3	50	<0.5
W842213		22	1.3	1.5	32	<0.5
W842214		19	1.7	1.5	60	<0.5
W842215		21	2.9	1.7	34	<0.5
W842216		18	15.2	3.3	165	<0.5
W842217		2	0.2	0.9	15	<0.5
W842218		19	2.7	1.6	33	0.6
W842219		24	3.2	1.7	7	1.2
W842220		14	1.0	1.4	16	<0.5
W842221		20	0.9	1.6	11	<0.5
W842222		16	0.6	1.1	9	<0.5
W842223		19	0.8	1.7	47	<0.5
W842224		72	21.4	22.7	125	82.4
W842225		37	0.9	2.1	61	2.0
W842226		20	0.4	1.9	78	<0.5
W842227		19	0.5	1.2	63	0.9
W842228		28	1.0	2.8	160	2.8
W842229		14	0.8	1.8	89	<0.5
W842230		9	1.0	1.5	70	<0.5
W842231		8	1.3	1.6	75	<0.5
W842232		12	1.1	1.6	86	<0.5
W842233		13	1.3	1.1	56	<0.5
W842234		13	0.7	1.6	72	<0.5
W842235		9	1.0	6.4	315	0.6
W842236		7	2.0	15.2	602	<0.5
W842237		7	2.1	16.0	624	<0.5
W842238		8	0.5	8.8	534	<0.5
W842239		11	0.9	14.3	992	<0.5
W842240		54	32.0	29.9	166	61.1

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North Vancouver BC V7H 0A7
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Project: Rau

Finalized Date: 18-AUG-2019
Account: RCM

CERTIFICATE OF ANALYSIS WH19183557

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	ME-MS61

ALS Canada Ltd.

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North Vancouver BC V7H 0A7
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Finalized Date: 16-AUG-2019
Account: RCM

CERTIFICATE WH19183560

Project: Rau

P.O. No.: R19-D02

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 26-JUL-2019.

The following have access to data associated with this certificate:

ANDREW CARNE	ADAM COULTER	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
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

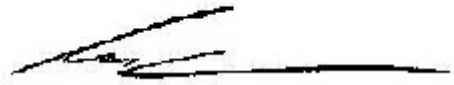
ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid 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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CERTIFICATE OF ANALYSIS WH19183560

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
W842241		5.60	<0.01	0.06	0.21	16.0	260	1.22	1.37	20.7	0.58	4.77	3.3	2	1.52	5.6
W842242		8.00	0.01	0.01	0.14	1.1	190	0.65	0.29	22.8	<0.02	2.53	1.1	1	0.97	2.4
W842243		8.05	<0.01	0.01	0.14	0.7	180	0.23	0.37	22.4	0.08	2.91	1.1	1	1.26	1.6
W842244		7.89	<0.01	0.01	0.05	0.2	60	0.20	0.05	22.1	0.07	2.21	0.8	<1	0.57	1.2
W842245		0.11	0.33	2.85	5.66	>10000	2050	1.54	360	11.30	0.90	146.0	50.7	60	13.00	820
W842246		7.89	<0.01	0.01	0.14	1.9	250	0.59	0.64	21.3	0.11	3.12	1.0	1	1.46	1.9
W842247		8.26	<0.01	0.01	0.07	0.2	130	0.28	0.14	21.2	0.03	2.50	0.7	<1	0.56	1.5
W842248		8.18	0.01	0.01	0.10	0.7	240	0.21	0.14	22.0	<0.02	2.63	0.7	1	1.06	1.5
W842249		7.59	<0.01	0.01	0.14	2.0	470	0.49	0.14	22.3	0.32	3.25	1.2	2	1.33	2.1
W842250		8.16	<0.01	0.01	0.09	2.2	300	1.27	0.21	21.7	0.64	3.13	2.4	1	0.65	2.1
W842251		8.02	<0.01	0.01	0.04	0.5	130	0.19	0.13	21.5	0.08	1.75	0.9	1	0.25	1.2
W842252		8.21	<0.01	0.01	0.05	<0.2	110	0.38	0.07	22.4	0.03	1.83	0.8	1	0.21	1.6
W842253		8.57	<0.01	0.01	0.13	1.0	210	0.14	0.14	21.8	0.02	2.41	1.5	2	0.37	3.8
W842254		3.97	<0.01	0.02	0.05	1.3	100	0.11	0.04	22.2	0.02	2.16	1.0	1	0.18	2.4
W842255		4.00	<0.01	0.02	0.05	0.8	100	0.10	0.05	21.8	<0.02	2.23	0.8	1	0.16	0.9
W842256		7.94	<0.01	0.02	0.09	0.9	320	0.40	0.04	22.6	0.03	1.96	0.6	1	0.34	1.0
W842257		7.52	<0.01	0.02	0.11	2.5	440	0.88	0.07	22.5	<0.02	1.91	0.9	2	0.47	1.6
W842258		8.39	<0.01	0.02	0.04	1.8	140	0.35	0.05	22.3	0.13	1.75	0.3	2	0.22	1.7
W842259		7.85	<0.01	0.08	0.08	1.0	130	0.33	0.51	21.8	0.10	2.13	0.8	1	0.80	52.4
W842260		8.44	<0.01	0.04	0.18	1.1	340	0.43	0.35	21.2	0.03	3.22	0.8	2	0.88	9.3
W842261		8.11	<0.01	0.02	0.08	1.3	270	1.39	0.50	22.2	0.11	2.37	0.7	1	0.44	2.9
W842262		7.96	<0.01	0.03	0.07	1.1	240	0.12	0.08	22.1	0.02	1.81	0.7	1	0.17	3.2
W842263		7.81	<0.01	0.03	0.16	1.7	1040	0.28	0.41	21.9	0.03	2.19	0.5	2	1.67	3.1
W842264		8.07	<0.01	0.02	0.16	1.4	940	0.35	0.09	26.6	0.04	2.62	0.6	3	1.00	3.0
W842265		8.08	<0.01	0.05	0.58	2.2	2010	1.22	0.22	24.5	0.07	5.00	1.2	5	4.42	5.9
W842266		7.78	<0.01	0.04	0.76	0.2	3260	4.24	0.39	22.8	0.08	6.69	1.9	6	11.20	8.5
W842267		8.17	<0.01	0.05	0.68	<0.2	5360	2.37	0.33	22.2	0.13	6.08	1.7	5	6.09	14.7
W842268		7.89	<0.01	0.02	0.59	0.9	2090	1.94	0.82	21.9	0.03	5.83	1.3	4	4.77	5.7
W842269		8.32	0.01	0.06	1.03	0.2	1080	14.75	17.80	21.8	0.06	6.77	1.8	5	13.85	44.3
W842270		5.08	<0.01	0.08	0.95	<0.2	740	12.15	15.35	19.95	0.03	7.46	2.3	5	14.45	80.8
W842271		<0.02	<0.01	0.08	0.97	0.3	760	16.95	11.55	20.1	0.04	6.04	2.5	5	14.40	91.2
W842272		7.67	<0.01	0.04	0.67	<0.2	430	2.36	5.06	21.2	0.03	5.79	1.7	5	5.36	14.7
W842273		3.67	<0.01	0.06	1.21	1.0	490	10.65	0.72	18.40	<0.02	5.71	4.5	7	18.05	123.0
W842274		4.17	<0.01	<0.01	0.07	0.4	20	0.08	0.06	20.5	0.07	1.34	0.7	1	0.22	2.2
W842275		4.65	<0.01	0.12	1.20	2.3	520	8.05	18.90	19.70	0.02	6.33	2.6	6	20.6	84.4
W842276		3.55	<0.01	0.02	0.47	<0.2	240	0.75	0.34	22.1	0.02	6.02	1.1	4	3.66	6.4
W842277		7.81	<0.01	0.03	0.58	0.2	650	1.08	0.33	22.2	0.05	5.94	2.1	5	6.13	8.4
W842278		0.11	0.84	6.81	5.04	8530	1120	1.46	215	13.65	0.81	432	74.5	49	9.11	3350
W842279		8.15	<0.01	0.03	0.62	3.8	1490	0.52	0.48	20.7	0.06	6.13	1.7	4	9.21	7.6
W842280		7.89	<0.01	0.05	0.59	7.2	2010	0.67	0.54	21.0	0.03	6.16	1.6	4	7.58	20.3

***** 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
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: 16-AUG-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19183560

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	Fe	Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P
	Units	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
W842241		1.73	0.75	<0.05	0.1	0.011	0.08	3.0	3.4	12.35	497	4.28	0.01	0.3	44.5	130
W842242		0.16	0.60	0.27	0.1	<0.005	0.04	1.6	3.4	12.10	270	2.66	0.01	0.2	7.5	70
W842243		0.19	0.56	0.20	<0.1	<0.005	0.05	1.8	3.2	12.05	280	2.58	0.01	0.2	8.2	90
W842244		0.14	0.35	0.29	<0.1	<0.005	0.02	1.4	2.1	12.75	307	0.90	<0.01	0.1	4.1	60
W842245		6.61	16.00	0.18	2.4	0.883	3.34	86.1	24.8	1.58	1150	14.05	1.14	13.4	33.7	930
W842246		0.21	0.55	0.17	<0.1	<0.005	0.06	1.9	4.6	11.50	310	3.06	0.01	0.2	7.7	70
W842247		0.11	0.36	0.29	<0.1	<0.005	0.03	1.7	2.9	11.80	278	1.15	<0.01	0.1	3.2	90
W842248		0.11	0.48	0.33	<0.1	<0.005	0.06	1.7	3.7	12.00	269	1.89	0.01	0.1	3.2	110
W842249		0.19	0.61	0.34	<0.1	<0.005	0.09	2.0	5.4	12.05	241	3.93	0.01	0.2	7.5	190
W842250		0.40	0.54	0.34	<0.1	0.005	0.05	1.8	3.6	12.45	298	2.73	<0.01	0.1	14.6	60
W842251		0.10	0.32	0.38	<0.1	<0.005	0.02	1.0	2.4	12.65	148	1.27	<0.01	<0.1	3.0	30
W842252		0.06	0.37	0.40	<0.1	<0.005	0.02	1.1	2.2	12.85	91	3.65	<0.01	0.1	4.2	50
W842253		0.13	0.63	0.42	<0.1	<0.005	0.04	1.4	3.1	12.05	87	12.70	<0.01	0.2	12.2	50
W842254		0.08	0.21	0.28	<0.1	0.009	0.02	1.1	1.8	12.70	88	3.72	<0.01	<0.1	8.1	40
W842255		0.08	0.25	0.38	<0.1	0.010	0.02	1.2	1.8	12.50	84	3.70	<0.01	<0.1	7.2	50
W842256		0.09	0.37	0.39	<0.1	0.012	0.04	1.2	3.6	12.55	114	3.51	<0.01	0.1	6.4	50
W842257		0.13	0.42	0.45	<0.1	0.018	0.05	1.2	3.6	12.40	187	3.75	<0.01	0.1	8.5	40
W842258		0.13	0.25	0.41	<0.1	0.026	0.02	1.1	1.7	13.20	356	3.54	<0.01	<0.1	7.0	70
W842259		1.20	0.69	0.16	<0.1	0.017	0.07	1.4	4.5	12.40	354	3.05	<0.01	0.3	4.6	40
W842260		0.37	0.61	0.26	<0.1	0.020	0.08	1.9	4.6	11.65	373	15.30	0.01	0.3	11.7	40
W842261		0.18	0.36	0.38	<0.1	0.014	0.04	1.5	2.6	12.85	329	7.66	<0.01	0.2	7.0	30
W842262		0.12	0.32	0.49	<0.1	0.019	0.02	1.3	2.2	12.60	195	21.4	<0.01	0.1	10.4	30
W842263		0.12	0.73	0.44	<0.1	0.020	0.11	1.5	6.9	12.55	165	15.30	<0.01	0.3	12.7	50
W842264		0.38	0.69	0.37	<0.1	0.136	0.08	1.9	4.5	9.08	634	6.69	0.01	0.3	7.6	70
W842265		0.44	2.18	0.32	0.1	0.102	0.28	2.5	9.6	9.69	540	2.48	0.01	0.8	4.8	30
W842266		0.50	3.10	0.28	0.2	0.036	0.46	3.2	13.3	11.25	272	2.27	0.03	1.2	7.9	30
W842267		0.45	2.59	0.29	0.2	0.045	0.36	2.9	12.6	12.05	213	2.77	0.03	1.1	6.2	50
W842268		0.38	2.43	0.31	0.1	0.039	0.33	2.8	10.2	11.50	254	2.42	0.02	0.9	4.6	50
W842269		1.27	10.40	0.20	0.2	0.067	0.75	3.0	26.6	10.95	376	1.97	0.04	2.0	5.1	70
W842270		1.76	10.95	0.15	0.2	0.059	0.91	3.1	46.9	11.30	412	1.68	0.05	2.8	4.3	80
W842271		1.82	11.40	0.13	0.2	0.059	0.92	2.6	50.0	11.55	420	1.71	0.05	3.0	4.6	80
W842272		0.53	2.67	0.22	0.2	0.040	0.40	2.7	7.5	11.90	215	1.81	0.04	1.3	5.4	50
W842273		3.47	12.30	0.12	0.2	0.070	1.19	2.5	48.3	11.10	494	1.96	0.07	4.2	5.5	60
W842274		0.43	0.31	0.28	<0.1	0.022	0.03	0.6	1.2	12.95	189	0.07	0.01	0.2	1.6	200
W842275		1.86	11.40	0.15	0.2	0.042	1.16	2.8	43.2	11.75	349	1.92	0.06	3.1	5.4	50
W842276		0.29	1.74	0.27	0.1	0.019	0.27	2.9	5.4	11.35	222	2.26	0.03	0.8	3.9	40
W842277		0.46	2.24	0.26	0.1	0.023	0.36	2.8	10.6	11.05	262	2.08	0.04	1.1	7.3	50
W842278		9.37	18.75	0.37	1.7	1.770	1.95	243	40.0	1.44	2380	12.35	0.84	8.9	37.4	950
W842279		0.41	1.52	0.20	0.2	0.025	0.39	3.0	9.7	11.65	275	1.96	0.03	1.1	4.7	70
W842280		0.57	2.17	0.18	0.1	0.031	0.40	2.9	12.6	12.40	218	1.84	0.02	1.1	4.8	60

***** 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
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: 16-AUG-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19183560

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
W842241		6.1	17.1	0.003	0.02	2.76	0.5	2	0.6	98.8	<0.05	<0.05	0.31	0.007	0.24	1.4
W842242		<0.5	7.3	0.032	0.05	0.09	0.4	1	0.2	112.5	<0.05	<0.05	0.26	0.006	0.17	3.8
W842243		<0.5	8.8	0.030	0.02	0.09	0.3	1	0.2	107.5	<0.05	<0.05	0.27	0.006	0.18	3.9
W842244		0.6	6.6	0.010	0.01	0.12	0.1	1	0.2	85.6	<0.05	<0.05	0.10	<0.005	0.08	2.7
W842245		56.8	207	0.002	0.73	42.3	9.4	5	72.7	312	0.84	0.69	11.85	0.323	2.18	5.2
W842246		<0.5	12.3	0.038	0.05	0.09	0.3	1	0.3	93.1	<0.05	<0.05	0.24	0.005	0.24	3.7
W842247		<0.5	5.7	0.015	0.02	<0.05	0.2	1	<0.2	93.7	<0.05	<0.05	0.11	<0.005	0.11	3.1
W842248		<0.5	11.3	0.023	0.03	0.05	0.2	1	0.2	96.2	<0.05	<0.05	0.18	<0.005	0.20	4.6
W842249		0.5	13.6	0.055	0.05	0.08	0.3	1	0.2	105.0	<0.05	<0.05	0.28	0.005	0.34	4.9
W842250		0.6	11.4	0.013	0.05	0.17	0.2	2	0.3	93.6	<0.05	<0.05	0.20	<0.005	0.21	2.4
W842251		0.6	2.7	0.012	0.01	0.08	0.1	1	0.2	72.2	<0.05	<0.05	0.05	<0.005	0.09	2.0
W842252		0.5	2.4	0.039	0.01	0.05	0.1	1	<0.2	80.1	<0.05	<0.05	0.09	<0.005	0.08	2.8
W842253		0.6	3.9	0.138	0.07	0.06	0.3	1	0.2	84.8	<0.05	<0.05	0.20	<0.005	0.16	1.8
W842254		2.0	2.1	0.030	0.04	0.33	0.1	1	<0.2	84.7	<0.05	<0.05	0.08	<0.005	0.06	3.3
W842255		0.5	1.9	0.037	0.03	0.11	0.1	1	<0.2	83.3	<0.05	<0.05	0.09	<0.005	0.06	3.5
W842256		0.5	3.6	0.033	0.03	0.12	0.2	<1	0.2	105.0	<0.05	<0.05	0.15	<0.005	0.14	5.1
W842257		0.6	6.2	0.045	0.06	0.17	0.2	1	0.3	106.0	<0.05	<0.05	0.15	<0.005	0.16	2.8
W842258		0.7	5.0	0.020	0.03	0.20	0.1	<1	0.4	79.8	<0.05	<0.05	0.07	<0.005	0.06	4.9
W842259		0.7	20.1	0.017	0.89	0.66	0.2	1	1.0	77.3	<0.05	<0.05	0.04	<0.005	0.60	2.2
W842260		0.8	10.8	0.069	0.17	0.22	0.3	1	0.4	86.9	<0.05	<0.05	0.27	0.006	0.27	4.3
W842261		0.7	10.4	0.038	0.05	0.26	0.1	1	0.4	79.8	<0.05	<0.05	0.11	<0.005	0.16	3.2
W842262		0.6	2.2	0.077	0.05	0.11	0.1	<1	0.2	87.8	<0.05	<0.05	0.10	<0.005	0.07	4.2
W842263		0.8	19.6	0.084	0.03	0.15	0.3	1	1.0	113.0	<0.05	<0.05	0.27	0.008	0.45	5.9
W842264		0.8	16.0	0.023	0.01	0.29	0.3	1	1.9	195.0	<0.05	<0.05	0.29	0.008	0.28	5.6
W842265		1.5	46.2	0.004	0.13	0.15	0.9	1	2.8	171.0	0.05	<0.05	0.68	0.026	0.56	2.8
W842266		1.9	128.5	0.002	0.18	0.10	1.3	1	1.8	128.0	0.07	<0.05	1.10	0.037	1.16	4.8
W842267		0.7	68.5	0.002	0.18	0.07	1.1	<1	5.5	132.5	0.08	<0.05	0.91	0.037	0.78	2.8
W842268		0.5	62.8	<0.002	0.10	0.07	1.0	1	0.9	123.0	0.07	<0.05	0.67	0.029	0.67	2.2
W842269		0.8	285	0.003	0.40	0.08	1.7	1	1.3	115.5	0.14	0.08	0.87	0.031	1.54	2.4
W842270		1.0	324	0.002	0.59	0.09	2.5	1	1.8	97.8	0.16	0.06	0.82	0.030	1.56	1.7
W842271		1.0	326	0.002	0.62	0.10	2.6	1	1.9	100.5	0.18	0.07	0.74	0.030	1.70	1.8
W842272		0.9	72.1	<0.002	0.19	0.13	1.1	1	2.0	102.5	0.08	<0.05	0.84	0.035	0.73	2.2
W842273		0.7	379	0.003	1.19	0.08	4.3	1	1.9	81.2	0.28	0.06	0.95	0.039	1.85	2.0
W842274		1.1	2.0	<0.002	<0.01	<0.05	0.2	1	<0.2	46.1	<0.05	<0.05	0.12	<0.005	<0.02	0.5
W842275		0.8	480	0.003	0.69	0.10	2.4	1	1.6	94.1	0.17	0.11	0.81	0.034	2.25	2.2
W842276		0.7	45.5	<0.002	0.05	0.06	0.8	<1	1.1	109.0	0.05	<0.05	0.60	0.026	0.47	2.5
W842277		0.6	73.9	<0.002	0.11	0.21	1.0	1	1.7	112.0	0.07	<0.05	0.73	0.032	0.70	2.3
W842278		32.2	115.0	0.004	1.34	33.6	7.2	5	98.4	249	0.57	1.04	9.34	0.236	1.23	13.0
W842279		0.9	134.5	<0.002	0.15	0.11	1.0	1	2.5	119.0	0.07	<0.05	0.82	0.036	0.89	1.8
W842280		0.8	96.6	0.002	0.30	0.17	1.0	1	1.0	115.5	0.07	<0.05	0.72	0.031	0.78	2.4

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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 ST
VANCOUVER BC V6B 1L8

Finalized Date: 16-AUG-2019
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CERTIFICATE OF ANALYSIS WH19183560

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	V	W	Y	Zn	Zr
	Units	ppm	ppm	ppm	ppm	ppm
	LOD	1	0.1	0.1	2	0.5
W842241		21	4.8	12.1	595	1.3
W842242		6	1.3	1.2	11	0.5
W842243		6	1.5	1.7	68	0.6
W842244		4	1.0	1.1	39	<0.5
W842245		71	19.0	23.1	123	82.3
W842246		5	1.6	1.7	49	<0.5
W842247		2	0.7	0.9	20	<0.5
W842248		4	1.4	1.1	4	<0.5
W842249		6	3.2	2.3	77	<0.5
W842250		3	1.5	3.7	303	<0.5
W842251		2	0.6	0.8	47	<0.5
W842252		2	0.7	0.9	11	<0.5
W842253		6	1.3	1.3	22	<0.5
W842254		3	0.8	0.9	7	<0.5
W842255		2	0.8	0.9	5	<0.5
W842256		4	1.0	1.1	12	0.9
W842257		6	2.4	1.1	8	1.1
W842258		5	4.6	0.8	32	<0.5
W842259		5	119.0	2.4	102	<0.5
W842260		4	51.6	1.9	20	1.7
W842261		3	3.0	1.6	76	0.6
W842262		7	2.6	1.0	16	0.7
W842263		16	2.1	1.4	11	1.4
W842264		13	1.2	3.0	31	1.7
W842265		9	5.2	2.4	21	4.7
W842266		13	19.2	2.8	34	7.5
W842267		11	1.7	2.3	36	6.5
W842268		8	5.6	2.4	17	5.2
W842269		9	167.5	3.1	36	5.4
W842270		7	223	3.0	34	5.1
W842271		8	223	3.0	32	5.4
W842272		8	50.8	2.2	19	6.4
W842273		10	267	4.6	37	6.5
W842274		2	0.6	0.8	16	<0.5
W842275		8	341	3.3	22	6.0
W842276		8	1.4	2.1	8	4.9
W842277		8	5.2	3.9	127	5.5
W842278		55	35.7	28.3	164	62.7
W842279		8	0.8	2.1	18	6.1
W842280		8	3.2	2.3	11	4.8

***** 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
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: Rau

Finalized Date: 16-AUG-2019
Account: RCM

CERTIFICATE OF ANALYSIS WH19183560

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	ME-MS61

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North Vancouver BC V7H 0A7
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To: **ATAC RESOURCES LTD.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 25-AUG-2019
Account: RCM

CERTIFICATE WH19190858

Project: Rau

P.O. No.: R19-D03

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 3-AUG-2019.

The following have access to data associated with this certificate:

ANDREW CARNE	ADAM COULTER	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
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
WSH-22	"Wash" pulverizers
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

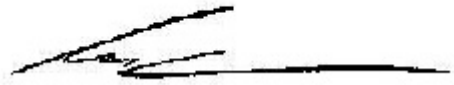
ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid 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-AUG-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19190858

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
W842281		8.47	<0.01	0.06	0.73	0.4	920	1.43	1.87	20.4	0.14	6.85	1.8	6	10.95	12.5
W842282		7.79	<0.01	0.05	0.51	0.3	530	0.82	1.80	21.4	0.04	6.22	1.2	4	9.29	11.0
W842283		3.85	<0.01	0.05	1.11	0.4	630	2.47	0.31	20.4	0.02	8.55	2.4	9	21.4	12.6
W842284		3.99	<0.01	0.06	1.04	0.9	560	2.46	0.41	20.5	0.02	7.99	2.3	9	19.55	12.1
W842285		8.11	<0.01	0.06	0.54	0.8	220	0.82	0.32	21.7	<0.02	6.00	1.5	5	10.00	4.7
W842286		8.01	<0.01	0.05	0.46	1.4	260	0.67	0.31	21.0	0.02	5.62	1.4	5	8.81	3.2
W842287		7.98	<0.01	0.05	0.72	0.3	510	0.50	0.35	21.3	0.02	9.20	2.0	6	23.1	3.3
W842288		8.16	<0.01	0.04	0.61	0.6	260	0.76	0.42	20.5	0.02	7.00	1.6	5	21.0	5.8
W842289		7.05	<0.01	0.07	1.00	0.4	370	1.25	2.98	20.9	0.03	10.60	2.6	8	36.3	4.9
W842290		8.08	<0.01	0.06	1.06	4.9	280	1.42	1.84	20.2	0.03	9.50	2.6	8	33.3	18.2
W842291		8.02	<0.01	0.01	0.41	1.2	90	0.44	0.28	21.7	0.03	6.22	1.0	3	12.30	1.9
W842292		7.80	<0.01	0.04	0.96	0.4	200	1.08	0.84	22.4	0.05	10.70	2.0	6	25.9	6.3
W842293		7.94	<0.01	0.06	0.54	17.5	120	0.69	0.72	20.4	<0.02	6.18	1.3	4	10.50	22.0
W842294		0.10	0.33	2.61	5.52	9680	1970	1.43	331	10.15	0.73	126.0	45.9	58	11.20	749
W842295		7.98	<0.01	0.02	0.51	3.9	170	0.83	2.53	20.9	0.05	5.59	1.1	4	12.40	3.8
W842296		7.72	<0.01	0.04	0.71	0.8	140	5.13	1.06	21.9	<0.02	7.95	1.7	5	18.10	9.7
W842297		8.18	<0.01	0.03	0.65	0.8	150	10.45	3.06	21.9	<0.02	7.58	1.6	5	19.10	4.9
W842298		8.36	<0.01	0.04	0.94	0.5	120	3.03	0.67	19.95	0.03	9.38	2.4	6	22.2	5.6
W842299		8.28	<0.01	0.07	1.84	0.8	230	5.83	9.89	18.35	0.02	16.20	4.2	11	52.2	25.6
W842300		<0.02	<0.01	0.06	1.92	0.5	240	6.15	1.38	18.90	<0.02	16.00	4.5	13	53.1	26.4
W842301		7.95	<0.01	0.04	0.53	2.0	70	1.14	0.44	21.4	0.02	6.42	1.5	3	16.25	13.7
W842302		8.70	<0.01	0.03	0.24	<0.2	50	1.27	0.39	21.8	<0.02	3.48	0.8	2	5.60	10.3
W842303		8.30	<0.01	0.03	0.39	1.0	70	1.98	0.62	21.6	0.05	5.33	1.2	3	10.15	5.7
W842304		0.10	1.69	11.50	4.64	>10000	910	1.57	274	12.15	1.33	358	123.0	45	7.17	6200
W842305		7.76	<0.01	0.05	0.60	4.2	110	0.53	5.16	22.5	0.03	7.22	1.4	5	17.10	6.9
W842306		8.63	<0.01	0.04	0.41	75.1	100	3.16	1.66	21.8	0.04	5.41	1.1	3	10.10	4.3
W842307		4.85	<0.01	0.02	0.47	0.5	90	0.39	0.39	20.8	0.03	5.73	1.1	4	9.75	1.9
W842308		3.38	<0.01	0.04	1.07	0.3	170	22.2	4.37	20.8	0.05	7.68	2.2	5	30.1	23.9
W842309		6.21	<0.01	0.03	0.32	0.4	60	0.76	2.23	20.3	0.03	4.05	1.0	3	5.81	2.3
W842310		1.71	<0.01	0.07	3.16	1.3	110	38.4	3.49	16.90	0.03	6.00	1.1	1	20.3	29.4
W842311		7.87	0.05	0.06	0.34	440	30	4.81	3.52	20.5	0.04	3.00	1.5	1	5.64	10.2
W842312		3.91	0.01	0.06	7.12	312	260	85.2	2.48	10.95	<0.02	10.20	0.6	1	12.55	9.2
W842313		4.17	<0.01	0.06	0.35	11.1	40	8.70	0.62	21.3	0.03	4.58	1.3	2	4.32	8.1
W842314		7.94	0.01	0.07	0.30	27.7	60	2.13	1.99	21.3	0.07	4.76	1.2	2	7.12	16.0
W842315		4.22	<0.01	0.02	0.05	<0.2	30	0.09	0.12	20.1	0.06	1.01	0.6	1	0.16	1.8
W842316		8.08	<0.01	0.07	0.46	1.9	50	0.81	0.51	22.7	0.03	5.79	1.3	4	6.58	14.3
W842317		8.09	0.01	0.03	0.32	0.5	60	0.29	0.26	21.5	0.02	4.68	1.1	3	7.01	1.8
W842318		7.79	<0.01	0.03	0.41	0.5	60	0.34	0.53	21.0	0.03	5.29	1.4	3	7.51	2.8
W842319		8.05	<0.01	0.02	0.30	0.9	50	0.29	0.22	20.7	0.02	4.39	1.2	3	5.51	3.0
W842320		8.13	<0.01	0.04	0.22	55.4	50	0.23	0.15	21.8	0.03	4.18	0.9	2	4.45	3.8

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To: **ATAC RESOURCES LTD.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 25-AUG-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19190858

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	Fe	Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P
	Units	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
W842281		0.48	2.38	0.05	0.2	0.013	0.51	3.2	13.1	12.00	226	1.62	0.02	1.1	5.6	40
W842282		0.39	1.91	0.10	0.1	0.005	0.41	3.2	10.3	11.65	200	2.32	0.02	0.8	4.5	40
W842283		0.56	3.42	0.14	0.3	0.005	0.83	3.9	23.0	11.10	207	4.25	0.05	1.9	7.5	40
W842284		0.60	3.18	0.17	0.3	<0.005	0.76	3.9	21.6	11.20	209	3.96	0.05	1.6	7.5	50
W842285		0.43	1.74	0.19	0.1	0.034	0.36	3.1	12.3	11.45	397	3.00	0.02	0.9	4.4	30
W842286		0.27	1.57	0.27	0.1	<0.005	0.29	2.8	11.1	12.25	139	3.69	0.02	0.9	3.6	30
W842287		0.50	2.20	0.22	0.2	0.025	0.51	4.1	17.4	11.80	528	4.16	0.03	1.3	5.2	50
W842288		0.52	2.01	0.20	0.2	0.037	0.44	3.5	14.7	11.25	688	4.81	0.03	1.0	5.1	50
W842289		0.61	3.00	0.24	0.3	0.012	0.70	4.7	19.9	10.65	570	3.26	0.04	1.6	8.9	40
W842290		0.63	3.62	0.15	0.3	0.014	0.74	4.4	18.6	10.95	433	3.92	0.04	1.7	7.9	50
W842291		0.28	1.20	0.18	0.1	<0.005	0.29	3.1	7.4	11.15	377	2.27	0.02	0.7	3.7	40
W842292		0.56	2.68	0.18	0.2	0.023	0.65	4.6	16.6	11.40	500	2.16	0.03	1.4	6.9	60
W842293		0.67	1.79	0.14	0.1	0.074	0.34	3.0	9.9	10.65	835	1.02	0.02	0.8	3.4	60
W842294		6.26	15.15	0.17	2.1	0.684	3.19	75.2	23.2	1.48	1080	13.95	1.07	13.4	31.7	890
W842295		0.35	1.48	0.16	0.1	0.019	0.33	2.8	9.1	10.60	264	0.82	0.02	0.8	3.0	50
W842296		0.53	2.19	0.15	0.2	0.009	0.43	3.8	13.2	11.50	421	1.50	0.03	1.3	4.4	70
W842297		0.47	2.13	0.22	0.2	0.008	0.42	3.7	13.1	11.05	276	1.02	0.03	1.3	4.8	40
W842298		0.53	2.95	0.19	0.2	0.019	0.60	4.3	15.3	11.20	279	1.00	0.02	1.6	5.8	60
W842299		1.10	5.90	0.16	0.5	0.022	1.39	7.2	25.5	10.45	363	1.49	0.05	3.1	11.6	60
W842300		1.18	6.09	0.15	0.5	0.024	1.43	7.3	26.8	10.85	374	1.48	0.05	3.2	12.3	60
W842301		0.58	1.63	0.18	0.1	0.066	0.43	3.2	8.1	11.75	748	0.84	0.01	0.9	3.7	60
W842302		0.29	0.76	0.21	<0.1	0.013	0.18	1.8	4.4	12.25	247	0.41	0.01	0.3	1.8	40
W842303		0.32	1.37	0.29	0.1	0.009	0.27	2.6	7.0	11.80	257	0.74	0.01	0.7	2.8	40
W842304		9.66	15.80	0.31	1.4	2.47	1.50	220	33.9	1.18	2040	16.65	0.94	7.9	61.8	880
W842305		0.34	1.57	0.13	0.2	0.008	0.44	3.5	8.1	11.35	329	1.96	0.02	1.0	3.3	40
W842306		0.36	1.34	0.18	0.1	0.034	0.27	2.7	8.0	11.80	347	0.95	0.01	0.6	2.8	50
W842307		0.25	1.39	0.21	0.1	<0.005	0.26	2.8	7.3	11.80	142	1.26	0.01	0.9	2.4	40
W842308		0.88	5.88	0.17	0.2	0.021	0.71	3.4	22.9	11.70	420	1.25	0.05	2.3	3.8	40
W842309		0.24	0.94	0.24	0.1	0.008	0.19	2.0	7.1	11.60	139	0.93	0.01	0.6	2.4	30
W842310		1.10	20.6	0.15	1.1	0.027	0.92	2.4	45.8	8.76	401	5.04	0.90	16.6	1.0	30
W842311		0.58	1.41	0.16	<0.1	0.075	0.24	1.5	10.8	11.50	769	0.57	0.01	0.6	3.4	30
W842312		1.00	54.1	0.23	2.9	0.323	3.19	4.2	32.2	4.46	927	12.95	0.46	38.9	0.9	20
W842313		1.23	1.50	0.15	0.1	0.243	0.23	2.3	18.8	10.70	2310	2.16	0.01	0.9	3.4	50
W842314		0.45	0.88	0.16	0.1	0.037	0.22	2.4	5.2	11.10	399	1.18	0.01	0.5	3.7	50
W842315		0.41	0.23	0.23	<0.1	0.005	0.03	0.5	1.4	12.00	182	0.06	<0.01	0.2	1.3	180
W842316		0.51	1.21	0.18	0.1	0.086	0.25	2.9	5.8	12.15	662	1.52	0.01	0.8	3.7	50
W842317		0.27	0.87	0.26	0.1	0.010	0.22	2.4	4.8	12.10	196	1.60	0.01	0.5	3.1	50
W842318		0.29	1.12	0.28	0.1	0.011	0.24	2.6	5.4	11.60	182	1.62	0.01	0.7	3.8	50
W842319		0.26	0.83	0.32	0.1	0.014	0.18	2.2	4.4	11.60	204	1.21	0.01	0.5	3.0	50
W842320		0.21	0.64	0.30	0.1	0.014	0.15	2.2	4.1	11.65	221	0.59	<0.01	0.4	1.9	50

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Finalized Date: 25-AUG-2019
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Project: Rau

CERTIFICATE OF ANALYSIS WH19190858

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
W842281		2.2	79.4	<0.002	0.19	0.09	1.1	1	1.1	112.0	0.07	<0.05	1.01	0.036	0.93	3.3
W842282		1.5	80.1	<0.002	0.14	0.06	0.8	1	0.6	123.0	0.07	0.07	0.64	0.027	0.73	2.8
W842283		1.1	159.5	<0.002	0.26	0.21	1.6	1	1.4	118.5	0.11	<0.05	1.36	0.058	1.55	3.8
W842284		1.2	141.0	<0.002	0.31	0.35	1.6	1	1.3	121.0	0.10	<0.05	1.20	0.053	1.36	3.7
W842285		1.1	53.1	<0.002	0.14	0.08	0.9	1	2.1	123.0	0.05	<0.05	0.62	0.028	0.68	1.9
W842286		0.6	35.8	<0.002	0.11	<0.05	0.8	<1	0.5	117.0	0.05	<0.05	0.58	0.027	0.61	1.4
W842287		0.8	99.6	<0.002	0.17	0.06	1.3	1	1.6	136.5	0.08	<0.05	1.05	0.041	1.14	2.3
W842288		0.8	120.0	0.002	0.17	0.07	1.1	1	1.6	124.0	0.06	<0.05	0.92	0.034	1.06	2.0
W842289		1.7	211	<0.002	0.23	0.22	1.9	1	2.3	135.0	0.10	<0.05	1.45	0.052	1.81	2.3
W842290		1.1	204	0.002	0.30	0.78	1.9	1	2.3	123.5	0.11	<0.05	1.41	0.052	1.82	2.9
W842291		0.7	70.1	0.003	0.08	0.10	0.7	1	0.7	144.0	<0.05	<0.05	0.56	0.022	0.68	2.3
W842292		1.2	136.5	0.003	0.22	0.20	1.7	<1	2.3	152.0	0.09	<0.05	1.11	0.047	1.26	4.0
W842293		0.8	55.0	<0.002	0.15	0.23	0.9	1	4.0	139.5	0.05	<0.05	0.71	0.026	0.55	2.2
W842294		51.0	181.0	0.002	0.69	42.6	8.2	5	70.7	295	0.77	0.75	9.04	0.303	1.76	5.0
W842295		0.8	59.1	<0.002	0.14	0.11	0.8	<1	1.2	156.0	0.06	<0.05	0.64	0.025	0.62	1.6
W842296		0.8	124.0	<0.002	0.23	0.13	1.2	1	1.9	144.0	0.08	<0.05	0.91	0.038	0.92	2.5
W842297		0.7	104.5	<0.002	0.26	0.07	1.1	1	1.6	136.5	0.09	<0.05	0.91	0.034	0.93	2.0
W842298		0.9	116.0	<0.002	0.22	0.10	1.6	<1	1.8	107.0	0.12	<0.05	1.11	0.047	1.14	2.7
W842299		1.6	424	0.002	0.49	0.09	2.9	1	5.3	95.7	0.20	<0.05	2.39	0.095	2.82	3.9
W842300		1.2	446	<0.002	0.53	0.07	3.1	1	5.4	98.8	0.22	<0.05	2.44	0.101	2.92	4.1
W842301		0.9	112.5	<0.002	0.14	0.12	0.9	1	2.9	108.0	0.06	<0.05	0.63	0.027	0.83	2.2
W842302		0.7	39.4	<0.002	0.10	0.05	0.4	<1	1.1	112.5	<0.05	<0.05	0.23	0.011	0.36	1.1
W842303		0.8	64.6	<0.002	0.11	0.05	0.6	1	1.4	133.5	<0.05	<0.05	0.47	0.018	0.60	1.5
W842304		27.2	78.2	0.006	1.77	38.4	5.9	9	103.5	231	0.48	2.51	7.10	0.208	0.86	11.2
W842305		1.7	106.0	<0.002	0.09	0.05	0.9	<1	1.4	132.0	0.07	<0.05	0.73	0.032	0.91	1.4
W842306		0.8	61.1	<0.002	0.09	0.15	0.6	1	2.0	140.5	0.06	<0.05	0.49	0.017	0.58	1.3
W842307		0.7	40.4	<0.002	0.07	<0.05	0.8	1	1.0	122.0	0.06	<0.05	0.64	0.026	0.54	1.0
W842308		1.2	325	<0.002	0.38	0.05	1.1	1	2.1	117.0	3.29	0.06	1.12	0.021	1.48	1.5
W842309		1.8	33.4	<0.002	0.08	0.11	0.5	<1	0.9	113.0	0.05	<0.05	0.43	0.016	0.37	1.4
W842310		5.0	470	<0.002	0.38	0.16	1.0	<1	3.9	112.5	24.7	0.05	1.01	0.006	1.62	2.7
W842311		1.4	96.7	<0.002	0.20	1.04	0.3	<1	3.9	97.0	0.21	<0.05	0.21	0.007	0.48	0.9
W842312		2.9	590	<0.002	0.32	0.78	2.0	<1	75.3	75.8	44.5	<0.05	5.25	<0.005	1.84	4.1
W842313		2.1	65.8	0.004	0.15	0.27	0.5	<1	12.3	126.0	0.17	<0.05	0.35	0.009	0.31	1.9
W842314		1.8	48.7	<0.002	0.16	0.28	0.5	1	2.5	146.0	0.08	<0.05	0.34	0.012	0.40	2.3
W842315		1.1	1.4	<0.002	<0.01	<0.05	0.2	<1	0.2	42.2	<0.05	<0.05	0.06	<0.005	<0.02	0.6
W842316		1.3	35.3	<0.002	0.09	0.19	0.7	<1	5.3	137.0	0.07	<0.05	0.59	0.023	0.41	2.0
W842317		1.0	28.6	0.002	0.09	0.06	0.5	1	1.1	110.5	<0.05	<0.05	0.39	0.015	0.38	2.3
W842318		1.1	30.6	<0.002	0.11	0.06	0.7	<1	1.6	101.5	0.05	<0.05	0.51	0.021	0.42	1.8
W842319		0.8	23.8	<0.002	0.09	0.06	0.6	<1	1.6	104.0	<0.05	<0.05	0.41	0.016	0.27	2.0
W842320		0.6	21.0	<0.002	0.05	0.16	0.4	<1	1.2	144.5	<0.05	<0.05	0.26	0.011	0.24	1.2

***** 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
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: 25-AUG-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19190858

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	V	W	Y	Zn	Zr
	Units	ppm	ppm	ppm	ppm	ppm
	LOD	1	0.1	0.1	2	0.5
W842281		10	1.3	2.6	37	6.4
W842282		8	4.5	2.1	14	4.6
W842283		13	5.2	3.0	11	9.7
W842284		13	7.8	3.0	10	9.2
W842285		8	3.4	2.5	9	5.0
W842286		6	4.5	1.8	6	4.2
W842287		9	1.7	2.7	9	7.2
W842288		7	2.5	2.6	10	6.9
W842289		11	4.8	4.0	64	10.8
W842290		12	4.7	3.6	32	10.2
W842291		6	2.1	1.7	8	3.8
W842292		11	2.0	3.2	11	8.4
W842293		7	2.4	2.2	7	4.5
W842294		70	18.7	20.6	113	83.8
W842295		6	8.6	1.9	19	4.5
W842296		8	10.1	2.6	8	7.0
W842297		8	30.6	2.5	9	6.6
W842298		11	5.8	3.0	17	8.3
W842299		24	19.3	3.7	19	18.6
W842300		25	26.1	3.8	23	19.8
W842301		8	3.1	1.9	12	5.0
W842302		4	0.9	1.1	9	1.9
W842303		5	2.2	1.8	15	3.3
W842304		46	23.2	27.5	202	56.2
W842305		8	0.9	2.5	17	5.9
W842306		5	8.1	1.8	19	3.6
W842307		6	0.8	1.8	11	5.1
W842308		7	98.1	2.6	47	4.9
W842309		4	1.5	1.5	11	2.9
W842310		2	66.9	4.4	67	5.5
W842311		3	17.4	1.3	42	1.1
W842312		1	79.9	12.2	19	13.5
W842313		5	3.2	2.0	39	1.9
W842314		6	3.3	1.5	25	2.3
W842315		2	0.1	0.7	14	<0.5
W842316		6	1.2	2.1	11	4.4
W842317		6	0.8	1.6	9	2.9
W842318		7	0.9	1.8	6	4.0
W842319		6	1.0	1.5	6	3.2
W842320		4	0.7	1.3	8	1.8

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North Vancouver BC V7H 0A7
Phone: +1 (604) 984 0221 Fax: +1 (604) 984 0218
www.alsglobal.com/geochemistry

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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Project: Rau

Finalized Date: 25-AUG-2019
Account: RCM

CERTIFICATE OF ANALYSIS WH19190858

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:	
Au-AA25	ME-MS61

ALS Canada Ltd.

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North Vancouver BC V7H 0A7
Phone: +1 (604) 984 0221 Fax: +1 (604) 984 0218
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To: **ATAC RESOURCES LTD.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 15-AUG-2019
Account: RCM

CERTIFICATE WH19190701

Project: Rau

P.O. No.: R19-D04

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 2-AUG-2019.

The following have access to data associated with this certificate:

ANDREW CARNE	ADAM COULTER	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
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-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid ICP-MS	
ME-MS85	Lithium Borate Fusion - Select Elements	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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Finalized Date: 15-AUG-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19190701

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
W842321		7.71	<0.01	0.02	0.59	1.5	160	0.52	0.17	21.0	0.03	6.92	2.1	6	12.35	4.2
W842322		8.63	<0.01	0.03	0.56	0.2	110	0.34	0.10	20.3	0.02	6.79	1.5	5	8.28	5.0
W842323		7.74	<0.01	0.03	0.49	<0.2	90	0.30	0.18	20.8	0.03	6.43	2.2	5	8.25	5.0
W842324		4.18	<0.01	0.03	0.26	0.6	70	0.20	0.08	21.5	0.03	5.08	0.9	2	5.35	5.6
W842325		3.68	<0.01	1.00	0.17	0.9	40	0.14	0.41	22.0	<0.02	4.41	1.9	2	2.88	372
W842326		<0.02	<0.01	0.53	0.17	1.9	40	0.17	1.39	22.4	<0.02	4.49	2.1	2	2.98	212
W842327		8.01	0.01	0.02	0.21	0.4	60	0.26	0.09	22.7	<0.02	4.89	0.9	2	3.60	3.0
W842328		7.74	<0.01	0.03	0.26	<0.2	70	0.25	0.09	21.2	0.03	5.34	1.3	3	5.36	4.9
W842329		7.97	<0.01	0.03	0.54	0.3	160	0.39	0.20	21.6	0.03	6.70	2.4	5	7.60	5.4
W842330		0.10	0.78	7.60	4.80	8410	1190	1.48	204	13.00	0.89	446	76.7	50	9.87	3250
W842331		5.05	<0.01	0.11	0.62	3.2	160	0.38	0.40	20.7	0.03	7.52	1.7	5	7.23	5.9
W842332		3.78	<0.01	0.05	0.49	0.8	200	0.24	0.19	22.2	0.05	7.74	2.1	4	13.25	5.2
W842333		3.95	<0.01	0.09	5.61	0.9	1030	10.60	0.67	13.60	<0.02	45.2	9.0	49	66.3	61.8
W842334		4.33	<0.01	0.01	0.06	<0.2	130	0.05	0.05	21.0	0.06	1.24	0.8	1	0.20	2.7
W842335		3.51	<0.01	0.04	0.53	<0.2	260	0.64	0.15	21.1	<0.02	6.73	1.5	4	12.80	16.3
W842336		5.75	<0.01	0.16	1.37	5.5	5080	1.06	0.48	2.22	5.01	12.05	4.2	27	2.53	58.5
W842337		7.16	<0.01	0.11	0.80	3.9	6200	0.46	0.81	3.47	3.47	8.99	3.0	31	2.59	17.7
W842338		4.17	0.01	0.55	1.40	22.8	370	1.82	3.75	3.35	3.77	21.6	2.7	63	5.98	64.7
W842339		2.88	0.03	0.25	0.37	21.3	400	0.71	1.48	19.05	46.0	19.80	8.3	15	9.36	186.0
W842340		1.15	0.45	3.08	9.08	164.5	1360	11.40	149.0	2.52	50.0	36.0	35.6	119	13.00	1995
W842341		3.30	<0.01	0.56	2.18	20.0	>10000	1.85	5.68	0.50	6.18	62.2	3.5	63	5.14	196.0
W842342		1.67	0.01	0.63	2.10	23.2	440	1.39	2.49	0.50	183.0	19.95	13.7	76	4.68	345
W842343		1.69	0.02	0.75	2.09	36.3	570	2.00	2.15	0.37	290	22.0	18.7	87	5.14	324
W842344		1.01	0.14	5.96	8.58	345	9760	11.85	44.4	0.44	39.0	30.8	36.7	58	25.4	1120
W842345		1.18	0.19	8.91	9.69	627	1310	12.75	39.4	0.76	52.7	28.9	36.5	52	17.25	1705
W842346		3.98	0.13	6.44	3.35	400	950	4.98	16.10	14.85	95.0	31.5	15.8	28	6.74	1020
W842347		3.80	0.01	0.61	0.69	58.7	410	1.08	1.70	18.75	85.2	16.35	7.9	16	6.52	176.0
W842348		4.82	2.47	2.66	1.46	85.5	1440	2.25	14.25	17.00	86.3	31.2	11.6	30	8.03	428
W842349		2.83	0.09	8.38	1.60	96.3	1790	2.83	17.00	15.35	55.4	49.4	10.1	36	10.15	333
W842350		2.21	0.05	3.36	0.81	21.2	990	1.49	21.0	18.40	50.0	55.0	5.8	23	18.60	100.0
W842351		5.70	<0.01	0.26	1.13	10.1	1080	2.39	0.80	17.95	49.3	31.5	9.2	20	7.40	64.3
W842352		5.93	<0.01	1.98	0.54	10.6	760	0.81	6.03	19.95	45.3	28.8	5.0	17	7.65	43.9
W842353		6.00	<0.01	0.27	0.50	11.4	620	0.97	1.28	20.0	95.9	24.5	9.1	16	5.38	47.8
W842354		3.98	0.03	6.12	1.16	25.2	730	1.91	188.0	17.70	97.0	49.8	6.6	24	10.10	173.5
W842355		1.68	0.01	0.91	1.47	18.5	1240	1.37	1.87	18.50	82.8	40.5	3.5	32	17.80	54.5
W842356		3.85	<0.01	0.09	0.45	7.5	690	0.75	1.27	20.2	64.9	38.0	8.3	17	7.19	19.8
W842357		2.88	<0.01	0.19	0.69	22.6	860	1.58	1.81	18.95	117.0	30.5	4.7	15	8.02	60.0
W842358		3.03	<0.01	0.31	0.51	10.5	790	0.98	2.05	19.45	113.0	24.4	2.4	13	5.18	25.2
W842359		0.10	0.34	2.71	5.53	9890	2020	1.58	345	11.45	0.76	135.0	50.3	60	12.55	793
W842360		3.53	<0.01	0.10	0.49	10.6	670	0.74	0.51	20.1	117.5	17.75	2.4	12	2.01	22.7

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ALS Canada Ltd.
2103 Dollarton Hwy
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CERTIFICATE OF ANALYSIS WH19190701

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	Fe	Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P
	Units	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
W842321		0.44	1.77	0.18	0.2	0.038	0.37	3.1	9.4	11.60	346	0.77	0.01	1.2	4.7	40
W842322		0.35	1.73	0.24	0.2	0.038	0.31	3.1	9.8	12.00	253	0.41	0.01	1.1	3.6	30
W842323		0.32	1.61	0.28	0.1	0.015	0.29	2.9	8.3	11.80	196	0.41	0.01	1.0	3.6	50
W842324		0.20	0.73	0.08	0.1	0.009	0.20	2.5	5.1	12.05	181	0.59	0.01	0.4	3.4	40
W842325		0.40	0.53	0.15	0.1	0.072	0.11	2.1	4.1	12.75	258	0.42	0.01	0.3	2.6	40
W842326		0.38	0.52	0.18	<0.1	0.056	0.11	2.2	4.3	13.05	267	0.40	0.01	0.3	2.5	40
W842327		0.23	0.61	0.27	<0.1	0.007	0.15	2.4	4.9	13.25	214	0.66	0.01	0.3	2.3	40
W842328		0.24	0.93	0.34	0.1	0.006	0.18	2.5	4.8	12.10	184	0.48	0.01	0.5	2.9	40
W842329		0.43	1.73	0.28	0.2	0.017	0.36	3.0	8.9	12.40	238	1.65	0.01	1.0	4.7	40
W842330		9.02	18.35	0.31	1.8	1.780	1.91	243	38.7	1.37	2270	14.95	0.81	9.1	38.9	940
W842331		0.46	1.81	0.13	0.2	0.030	0.37	3.4	8.2	12.10	349	0.82	0.01	1.1	3.9	40
W842332		0.44	1.61	0.22	0.1	0.008	0.47	3.5	8.2	11.55	331	1.43	0.01	0.9	5.4	50
W842333		2.97	18.35	0.18	1.0	0.133	2.71	21.4	85.6	8.15	655	6.46	0.15	10.2	32.6	180
W842334		0.42	0.28	0.22	<0.1	<0.005	0.03	0.6	1.2	12.90	183	0.08	0.01	0.2	1.4	180
W842335		0.49	1.97	0.17	0.1	0.013	0.51	2.9	9.9	11.85	490	1.06	0.01	0.8	4.0	40
W842336		1.29	2.81	0.13	0.5	0.033	0.39	7.3	8.1	0.80	106	5.70	0.04	1.8	73.4	440
W842337		0.72	2.36	0.10	0.6	0.012	0.37	5.9	5.2	0.90	174	5.87	0.02	1.8	32.8	120
W842338		2.52	6.57	0.11	0.6	0.027	0.85	16.9	10.4	2.76	302	12.25	0.07	2.1	45.1	510
W842339		1.85	1.64	0.10	0.1	0.007	0.26	17.8	11.1	12.35	1100	2.29	0.01	0.7	73.8	880
W842340		15.45	10.30	0.19	0.3	0.896	0.42	25.7	21.5	3.60	497	20.8	0.03	0.9	926	4050
W842341		2.35	5.85	0.14	0.6	0.064	1.09	47.7	10.1	0.87	101	14.45	0.08	2.5	66.3	590
W842342		2.76	5.95	0.10	0.6	0.030	0.98	13.8	19.7	0.85	75	20.1	0.08	2.2	70.9	390
W842343		3.92	6.42	0.09	0.6	0.035	1.08	15.4	19.3	0.69	75	20.7	0.09	2.1	83.2	530
W842344		20.8	13.50	0.23	0.4	0.301	1.56	15.5	53.7	2.43	387	22.1	0.04	1.1	615	3350
W842345		24.2	3.86	0.25	0.2	0.126	0.43	16.3	22.3	1.12	448	15.60	0.02	0.7	826	3730
W842346		8.45	2.07	0.15	0.2	0.138	0.21	23.4	12.5	9.29	801	3.86	0.02	0.6	361	1930
W842347		2.54	1.53	0.07	0.1	0.012	0.17	14.7	10.3	11.90	996	2.19	0.02	0.5	98.2	890
W842348		3.98	2.95	0.10	0.3	0.147	0.33	28.1	15.9	11.40	969	3.23	0.04	1.2	170.0	1720
W842349		6.09	4.32	0.12	0.5	1.590	0.46	49.3	20.3	10.35	739	5.13	0.09	2.1	204	2500
W842350		2.00	3.57	0.10	0.3	0.989	0.46	62.6	20.3	12.70	1030	1.95	0.03	1.2	91.5	3100
W842351		1.69	2.82	0.11	0.3	0.063	0.34	33.9	19.2	12.40	622	1.87	0.03	1.1	109.0	1850
W842352		0.85	1.69	0.15	0.2	0.245	0.25	33.7	15.4	12.55	522	1.21	0.02	0.6	49.3	1520
W842353		1.28	1.40	0.15	0.1	0.028	0.18	27.6	13.3	12.60	763	1.25	0.02	0.6	65.3	1510
W842354		1.95	2.24	0.16	0.2	0.612	0.27	52.9	16.0	11.80	936	1.91	0.02	0.8	141.5	1490
W842355		1.02	2.45	0.17	0.2	0.029	0.47	42.8	23.3	12.15	843	1.72	0.02	1.2	112.0	2430
W842356		0.92	1.52	0.17	0.2	0.009	0.23	40.8	12.3	12.25	1100	1.00	0.02	0.7	47.1	1940
W842357		1.79	1.69	0.10	0.1	0.014	0.24	35.8	11.8	11.90	1060	1.98	0.01	0.7	81.4	1090
W842358		1.06	1.14	0.10	0.1	0.081	0.19	31.4	11.1	11.95	576	2.08	0.01	0.5	44.4	1360
W842359		6.51	15.00	0.23	2.1	0.810	3.22	80.5	24.7	1.58	1160	13.60	1.11	13.6	35.8	910
W842360		0.85	1.23	0.07	0.1	0.008	0.15	19.4	11.3	12.25	673	2.12	0.03	0.6	48.1	1400

***** 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
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: 15-AUG-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19190701

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
W842321		1.1	46.1	<0.002	0.14	0.13	1.2	1	3.6	147.5	0.08	<0.05	0.91	0.034	0.61	1.5
W842322		1.1	32.8	<0.002	0.10	0.09	1.1	1	2.3	131.5	0.08	<0.05	0.88	0.033	0.53	1.0
W842323		1.1	31.4	<0.002	0.11	0.10	1.0	1	1.4	132.5	0.07	<0.05	0.74	0.028	0.48	1.1
W842324		2.3	22.7	<0.002	0.05	0.19	0.5	1	0.6	139.0	<0.05	<0.05	0.31	0.013	0.35	1.0
W842325		0.6	13.4	<0.002	0.18	0.09	0.3	<1	225	138.0	<0.05	<0.05	0.22	0.009	0.20	0.9
W842326		0.5	13.8	<0.002	0.16	0.05	0.3	1	127.5	140.5	<0.05	<0.05	0.20	0.009	0.19	0.9
W842327		0.5	16.6	<0.002	0.06	0.08	0.4	<1	1.8	140.5	<0.05	<0.05	0.28	0.011	0.26	1.2
W842328		0.9	22.4	<0.002	0.06	0.05	0.5	1	1.7	132.5	<0.05	<0.05	0.41	0.014	0.30	1.4
W842329		1.1	34.6	<0.002	0.16	0.09	1.0	1	1.4	137.0	0.07	<0.05	0.84	0.030	0.55	1.6
W842330		32.3	107.0	0.002	1.29	31.4	7.6	6	104.5	246	0.60	0.98	9.55	0.229	1.25	12.3
W842331		1.1	38.6	<0.002	0.14	0.10	1.1	1	2.0	124.5	0.08	<0.05	0.92	0.035	0.57	1.2
W842332		1.6	65.7	<0.002	0.14	0.06	1.1	1	0.7	148.5	0.06	<0.05	0.77	0.027	0.83	1.8
W842333		4.5	750	0.004	1.01	0.14	9.5	1	35.3	108.5	0.66	<0.05	7.64	0.316	5.00	3.1
W842334		1.3	1.4	<0.002	0.01	<0.05	0.2	1	0.2	46.4	<0.05	<0.05	0.12	<0.005	0.02	0.7
W842335		1.1	92.4	<0.002	0.10	<0.05	1.1	1	0.9	122.5	0.06	<0.05	0.88	0.027	0.80	1.2
W842336		6.2	42.7	<0.002	0.06	1.16	2.0	2	3.0	67.4	0.11	<0.05	1.47	0.051	0.55	4.4
W842337		4.8	56.0	0.005	0.08	1.19	1.5	2	4.9	66.5	0.12	<0.05	1.28	0.050	0.56	2.9
W842338		11.4	119.5	0.013	1.11	2.75	3.6	4	26.0	58.3	0.13	<0.05	2.55	0.056	1.07	5.9
W842339		2.5	66.3	0.003	0.07	2.55	1.2	2	4.9	192.5	<0.05	<0.05	0.74	0.019	0.94	4.8
W842340		39.1	84.2	0.005	0.08	140.5	16.0	19	80.6	47.9	0.07	0.15	6.58	0.029	1.75	61.4
W842341		7.5	145.0	0.026	0.19	6.94	3.9	8	10.9	174.5	0.16	<0.05	3.60	0.059	1.97	7.1
W842342		4.7	105.5	0.385	0.73	6.04	4.0	10	15.3	66.0	0.14	<0.05	2.72	0.056	5.22	7.8
W842343		6.0	112.5	0.559	0.73	11.05	4.1	10	13.9	72.9	0.13	<0.05	2.96	0.055	5.53	8.8
W842344		55.0	109.5	0.007	0.24	127.0	7.5	26	114.0	237	0.07	0.12	1.26	0.034	4.21	39.2
W842345		31.3	72.8	0.005	0.10	116.0	5.5	45	16.5	117.5	0.05	0.06	1.18	0.023	2.36	46.2
W842346		28.8	36.3	0.005	0.11	82.1	2.2	13	144.0	121.0	<0.05	0.05	0.97	0.016	0.98	19.8
W842347		7.5	51.2	0.003	0.03	11.60	1.2	6	4.3	149.5	<0.05	<0.05	0.62	0.015	0.72	5.9
W842348		67.9	63.7	0.005	0.06	45.7	2.2	8	88.0	182.5	0.09	<0.05	1.41	0.036	1.06	7.9
W842349		323	66.6	0.003	0.07	95.4	3.4	7	490	159.0	0.13	0.05	2.25	0.063	1.20	10.0
W842350		111.5	173.0	<0.002	0.12	29.0	1.9	3	148.0	153.5	0.08	<0.05	1.59	0.036	1.53	10.6
W842351		20.3	60.0	0.009	0.04	5.70	1.8	4	40.6	234	0.07	<0.05	1.32	0.031	0.84	8.5
W842352		187.0	57.6	0.002	0.05	45.9	1.3	2	74.1	269	<0.05	<0.05	0.91	0.019	0.81	6.3
W842353		10.8	32.9	<0.002	0.03	3.22	1.2	3	12.2	227	<0.05	<0.05	0.83	0.017	0.81	6.9
W842354		50.1	90.6	<0.002	0.04	18.10	1.4	4	>500	121.0	0.06	0.10	1.25	0.022	0.95	10.4
W842355		15.3	149.0	<0.002	0.02	3.05	1.5	2	10.8	131.5	0.10	<0.05	1.84	0.030	1.56	11.5
W842356		6.3	42.6	0.002	0.04	1.06	1.2	2	6.6	130.5	0.05	<0.05	1.07	0.021	0.79	8.6
W842357		14.4	98.1	0.003	0.03	3.50	1.1	3	4.0	127.5	0.05	<0.05	1.01	0.020	0.80	7.1
W842358		21.1	52.1	0.002	0.01	12.00	1.0	2	7.0	140.5	<0.05	<0.05	0.69	0.018	0.46	6.0
W842359		54.7	201	0.003	0.72	40.6	8.8	4	70.2	309	0.77	0.70	9.37	0.320	1.76	5.3
W842360		7.6	19.1	0.014	0.01	2.37	0.9	3	3.9	147.5	0.05	<0.05	0.70	0.021	0.30	4.6

***** 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
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: 15-AUG-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19190701

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS85
	Analyte	V	W	Y	Zn	Zr	Sn
	Units	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	1	0.1	0.1	2	0.5	1
W842321		8	0.9	2.5	8	6.5	
W842322		6	0.6	2.1	10	5.5	
W842323		6	0.5	2.3	9	5.1	
W842324		4	0.4	1.7	9	1.9	
W842325		2	0.6	1.4	54	1.3	
W842326		2	0.6	1.4	32	1.3	
W842327		3	0.5	1.6	6	1.5	
W842328		4	0.6	1.9	10	2.3	
W842329		7	0.8	2.3	10	5.3	
W842330		54	35.0	29.1	166	64.5	
W842331		9	0.6	2.4	9	5.7	
W842332		7	0.6	3.4	15	4.8	
W842333		55	1.3	11.6	57	31.4	
W842334		2	0.1	0.8	17	<0.5	
W842335		7	0.5	3.4	9	4.1	
W842336		82	1.3	16.8	603	19.4	
W842337		65	1.4	7.0	336	18.9	
W842338		203	5.0	9.5	434	22.8	
W842339		131	1.9	34.4	701	5.2	
W842340		313	12.5	143.5	4030	12.3	
W842341		217	3.8	12.0	370	26.0	
W842342		251	3.0	6.6	262	25.9	
W842343		283	4.6	7.8	405	26.6	
W842344		310	20.1	58.2	4630	14.8	
W842345		240	20.1	70.4	6580	8.9	
W842346		132	14.2	89.6	2990	5.5	
W842347		118	4.4	30.6	1040	4.4	
W842348		183	8.5	53.2	1600	10.8	
W842349		273	83.2	65.3	2340	17.5	
W842350		288	4.6	44.3	1180	10.6	
W842351		256	4.0	45.0	957	10.2	
W842352		136	3.4	35.3	530	5.7	
W842353		138	3.3	33.4	779	5.0	
W842354		109	6.2	44.6	1280	6.1	696
W842355		127	6.1	36.2	625	7.3	
W842356		109	2.6	35.5	564	5.9	
W842357		114	5.5	32.6	944	4.8	
W842358		111	1.9	31.0	521	4.3	
W842359		72	17.5	23.0	125	83.4	
W842360		73	1.2	28.1	412	4.1	

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North Vancouver BC V7H 0A7
Phone: +1 (604) 984 0221 Fax: +1 (604) 984 0218
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To: **ATAC RESOURCES LTD.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Project: Rau

Finalized Date: 15-AUG-2019
Account: RCM

CERTIFICATE OF ANALYSIS WH19190701

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	ME-MS61	ME-MS85

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.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 11-AUG-2019
Account: RCM

CERTIFICATE WH19190705

Project: Rau

P.O. No.: R19-D05

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 2-AUG-2019.

The following have access to data associated with this certificate:

ANDREW CARNE	ADAM COULTER	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
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

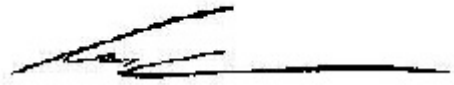
ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid 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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Finalized Date: 11-AUG-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19190705

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
W842361		2.40	<0.01	0.13	0.49	14.0	800	0.80	1.36	19.80	106.0	20.2	3.9	17	2.43	29.1
W842362		1.19	0.01	0.95	0.59	15.3	680	0.77	3.06	19.60	50.1	6.21	3.3	16	3.76	27.2
W842363		2.00	<0.01	0.13	0.15	9.7	130	0.29	1.25	21.0	54.1	4.63	1.6	3	1.12	11.6
W842364		1.65	<0.01	0.42	0.11	7.8	80	0.21	0.59	21.1	43.1	4.46	2.1	3	0.52	37.0
W842365		1.90	0.03	1.34	0.24	11.5	170	0.42	3.20	19.95	63.2	4.79	1.4	4	0.44	16.1
W842366		3.09	0.01	0.59	0.26	15.5	270	0.53	0.80	20.8	37.7	4.18	4.0	4	0.65	15.9
W842367		4.56	<0.01	0.35	0.12	7.5	200	0.30	1.75	21.5	25.1	4.37	3.0	2	0.52	8.4
W842368		0.61	0.01	0.44	0.11	14.0	180	0.51	4.42	20.7	29.8	6.21	3.3	4	0.57	12.6
W842369		1.34	0.01	0.20	0.05	120.0	120	0.30	2.59	20.3	27.9	5.44	2.5	3	0.20	8.7
W842370		1.37	0.01	0.10	0.08	59.3	150	0.41	1.09	21.4	27.3	6.73	3.8	2	0.24	10.5
W842371		0.10	1.66	13.10	4.56	>10000	910	1.73	303	13.60	1.46	397	129.5	46	8.10	6430
W842372		0.58	0.01	0.58	0.19	133.5	620	2.03	2.79	17.70	25.1	8.02	49.1	4	0.62	36.0
W842373		1.85	0.02	0.29	0.07	21.1	170	0.34	120.5	22.6	1.20	4.17	3.0	2	0.31	10.4
W842374		2.96	0.01	0.20	0.15	14.9	320	0.56	2.04	23.2	1.80	4.13	6.5	3	0.51	9.3
W842375		<0.02	<0.01	0.18	0.14	14.4	310	0.56	2.95	23.6	1.63	4.21	6.1	2	0.48	9.0
W842376		3.59	0.05	1.53	0.11	42.2	210	0.42	49.5	22.2	1.36	4.40	3.0	1	0.41	241
W842377		4.69	<0.01	0.02	0.05	0.3	10	0.05	0.18	21.6	0.11	1.05	0.7	1	0.12	2.6
W842378		0.91	0.01	0.23	1.33	44.5	50	1.29	1.06	16.60	0.35	6.70	2.9	32	1.17	4.4
W842379		3.35	0.03	0.83	0.10	15.0	470	0.32	19.50	21.9	0.37	17.50	1.3	3	0.29	8.0
W842380		4.59	<0.01	0.06	0.26	3.9	3980	0.36	0.31	22.0	0.53	2.55	1.4	5	1.19	7.6
W842381		7.28	0.09	0.18	0.15	15.5	830	0.32	8.01	21.5	1.08	3.07	1.2	3	0.44	11.7
W842382		7.08	<0.01	0.03	0.04	2.0	130	0.21	0.32	21.7	0.61	2.48	0.5	2	0.25	2.3
W842383		3.70	<0.01	0.07	0.17	5.5	640	0.33	0.35	21.9	1.78	3.21	0.9	3	0.46	3.7
W842384		3.72	0.01	0.04	0.15	5.4	640	0.35	0.26	22.0	1.35	3.18	0.9	3	0.42	3.9
W842385		7.32	<0.01	0.19	0.13	9.7	350	0.28	0.31	22.3	1.84	2.35	0.7	3	0.41	6.7
W842386		7.87	<0.01	0.04	0.17	2.4	880	0.33	0.17	22.0	0.25	2.29	0.6	3	1.18	3.7
W842387		0.11	0.34	2.65	5.52	9810	2000	1.52	348	11.15	0.61	132.5	48.9	59	12.35	791
W842388		4.22	<0.01	0.21	0.12	3.8	350	0.31	0.63	22.4	0.95	2.54	1.1	2	0.77	8.6
W842389		3.19	<0.01	0.07	0.18	7.2	530	0.65	0.18	20.7	14.65	3.47	3.5	3	1.84	9.7
W842390		4.06	<0.01	0.08	0.20	6.1	260	0.64	0.16	20.5	13.50	3.88	5.2	4	0.86	20.5
W842391		3.05	<0.01	0.08	0.34	3.9	2400	0.51	0.81	20.8	20.9	3.42	2.1	5	1.66	6.9
W842392		4.86	<0.01	0.04	0.23	2.4	1860	0.36	0.32	22.2	2.73	3.05	1.1	4	1.41	2.5
W842393		5.74	<0.01	0.17	0.23	4.3	1950	0.50	0.59	22.5	4.17	2.94	2.1	3	1.04	6.7
W842394		7.86	<0.01	0.73	0.16	2.6	610	0.40	0.33	23.1	1.71	3.18	0.6	3	1.15	9.9
W842395		5.14	<0.01	0.51	0.11	10.4	330	0.48	0.51	21.0	13.75	2.51	3.4	2	0.60	19.5
W842396		4.02	<0.01	0.95	0.10	9.8	240	0.46	0.80	21.2	17.65	3.17	2.3	2	0.53	59.6
W842397		3.97	<0.01	0.20	0.09	6.1	210	0.42	0.07	21.9	15.80	3.46	2.2	1	0.55	16.1
W842398		3.02	<0.01	0.61	0.34	16.1	680	1.16	1.47	20.7	28.2	4.79	2.4	4	1.64	18.7
W842399		3.41	<0.01	0.20	0.09	5.9	160	0.41	0.60	21.7	31.9	2.07	1.5	2	0.31	10.0
W842400		1.54	0.01	0.21	0.69	11.7	130	2.18	1.81	16.35	17.10	2.92	1.5	10	0.69	12.5

***** 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
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-AUG-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19190705

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	Fe	Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P
	Units	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
W842361		1.17	1.59	0.09	0.2	0.039	0.21	20.5	14.1	12.30	714	7.05	0.01	0.7	64.3	2010
W842362		0.97	1.83	0.08	0.2	0.057	0.20	5.8	13.1	12.25	677	3.76	0.01	0.7	66.3	830
W842363		0.51	0.46	0.08	<0.1	0.005	0.05	4.1	4.8	12.95	727	2.64	<0.01	0.1	24.5	300
W842364		0.53	0.36	0.09	<0.1	0.007	0.02	3.8	3.4	12.90	713	3.39	<0.01	0.1	23.5	150
W842365		0.56	0.68	0.10	<0.1	0.185	0.04	4.0	4.8	12.65	528	2.32	0.01	0.2	26.1	110
W842366		0.65	0.61	0.11	0.1	0.039	0.06	3.8	6.4	12.50	544	3.19	0.01	0.2	34.7	160
W842367		0.49	0.48	0.11	<0.1	0.012	0.05	3.9	5.9	12.55	602	4.08	<0.01	0.1	32.0	80
W842368		1.50	0.61	0.07	<0.1	0.274	0.05	5.8	4.5	12.60	958	2.64	0.01	0.1	52.7	210
W842369		2.46	0.30	0.07	<0.1	0.110	0.02	4.8	2.6	11.95	914	3.07	0.01	0.1	34.3	50
W842370		2.13	0.47	0.10	<0.1	0.021	0.04	5.4	3.1	12.80	1200	1.39	0.01	0.1	29.5	80
W842371		9.79	16.20	0.35	1.5	2.87	1.47	234	39.0	1.24	2160	15.25	0.94	8.1	72.3	880
W842372		8.44	0.83	0.05	0.1	0.077	0.07	8.5	5.6	10.70	2890	7.71	0.02	0.2	239	280
W842373		0.82	0.41	<0.05	<0.1	0.034	0.04	3.9	3.9	11.45	905	0.67	0.01	0.2	28.8	70
W842374		1.06	0.71	<0.05	<0.1	0.012	0.07	4.0	5.8	10.60	1260	1.56	0.01	0.1	60.9	60
W842375		1.01	0.73	0.05	<0.1	0.019	0.06	4.1	5.7	10.55	1220	1.45	0.01	0.1	58.4	60
W842376		0.92	0.50	0.06	<0.1	0.214	0.05	4.0	3.4	11.65	1160	3.83	<0.01	0.1	43.1	50
W842377		0.43	0.20	0.07	<0.1	<0.005	0.02	0.5	1.0	12.90	193	0.43	<0.01	0.1	1.9	210
W842378		3.37	3.89	0.09	0.4	0.006	0.48	4.8	12.7	8.78	523	2.64	0.20	1.5	51.2	660
W842379		0.60	0.54	0.08	<0.1	0.024	0.05	19.8	5.2	12.20	323	2.26	0.01	0.2	22.8	80
W842380		0.33	0.90	0.08	0.1	0.009	0.11	2.6	8.3	11.85	251	2.07	0.01	0.4	26.1	140
W842381		0.34	0.67	0.11	0.1	0.026	0.07	2.7	6.3	12.10	339	1.94	0.01	0.2	17.3	80
W842382		0.15	0.22	0.11	<0.1	<0.005	0.02	2.3	3.3	12.15	348	0.37	<0.01	<0.1	3.4	70
W842383		0.29	0.68	0.15	0.1	<0.005	0.07	2.8	7.3	12.25	311	1.09	0.01	0.2	10.1	90
W842384		0.29	0.63	0.12	0.1	<0.005	0.07	2.7	6.5	12.20	309	1.05	0.01	0.2	10.4	80
W842385		0.28	0.52	0.13	<0.1	0.009	0.05	2.2	4.4	12.35	201	0.62	0.02	0.2	10.6	80
W842386		0.12	0.60	0.15	0.1	<0.005	0.11	2.1	7.5	12.30	208	0.35	0.01	0.3	6.2	100
W842387		6.46	14.35	0.20	2.1	0.771	3.23	79.0	24.0	1.57	1140	12.15	1.11	13.4	34.9	900
W842388		0.29	0.42	0.09	<0.1	0.023	0.07	2.4	4.7	12.60	362	0.97	0.01	0.1	11.3	60
W842389		0.78	0.59	0.08	0.1	<0.005	0.11	2.9	7.2	12.40	501	2.43	0.01	0.3	40.2	100
W842390		1.28	0.67	0.10	0.1	0.007	0.07	3.0	5.2	13.10	607	3.46	0.02	0.3	69.4	90
W842391		0.66	0.82	0.08	0.1	0.024	0.14	2.8	8.6	13.15	395	1.52	0.01	0.5	32.5	120
W842392		0.26	0.62	0.12	0.1	0.010	0.13	2.6	8.2	13.20	417	0.72	<0.01	0.4	10.8	110
W842393		0.46	0.71	<0.05	0.1	0.029	0.09	2.5	6.6	12.85	261	2.18	0.01	0.3	24.7	140
W842394		0.13	0.80	0.06	0.1	0.355	0.10	2.9	7.4	12.60	229	4.16	0.01	0.2	12.1	70
W842395		0.75	0.43	0.07	<0.1	0.023	0.05	2.3	4.4	12.70	365	4.66	0.01	0.2	43.6	70
W842396		1.31	0.41	0.06	<0.1	0.017	0.05	2.4	3.9	13.00	494	3.61	<0.01	0.1	33.4	140
W842397		0.73	0.40	0.05	<0.1	<0.005	0.05	2.6	4.1	13.35	574	2.66	<0.01	0.1	26.1	80
W842398		1.69	1.17	0.06	0.1	0.010	0.16	3.4	9.5	13.05	422	5.28	0.01	0.4	47.3	250
W842399		0.62	0.29	0.05	<0.1	<0.005	0.03	1.7	2.7	13.55	254	2.20	<0.01	0.1	21.8	90
W842400		0.84	2.25	0.07	0.2	0.020	0.09	2.1	5.8	13.50	168	2.29	0.08	0.8	43.8	230

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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.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 11-AUG-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19190705

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
W842361		17.7	26.2	0.159	0.02	5.27	1.1	3	7.6	137.5	0.05	<0.05	0.77	0.023	0.51	7.7
W842362		50.6	40.6	0.005	0.06	40.6	0.8	2	17.3	103.0	0.05	<0.05	0.66	0.024	0.52	4.1
W842363		9.5	9.8	0.010	0.01	3.28	0.3	2	2.4	112.5	<0.05	<0.05	0.14	<0.005	0.14	2.2
W842364		5.7	5.1	0.011	0.02	2.41	0.3	2	2.7	109.5	<0.05	<0.05	0.13	<0.005	0.09	1.9
W842365		77.9	4.3	0.004	0.01	20.7	0.3	2	29.1	118.5	<0.05	<0.05	0.16	0.006	0.09	1.4
W842366		76.0	5.2	0.006	0.03	10.15	0.4	3	14.7	116.0	<0.05	<0.05	0.22	0.007	0.14	1.6
W842367		14.1	4.6	0.017	0.04	3.52	0.3	3	3.5	93.4	<0.05	<0.05	0.14	<0.005	0.14	1.9
W842368		25.1	6.5	0.006	<0.01	5.84	0.3	2	6.8	99.3	<0.05	<0.05	0.17	0.005	0.15	2.3
W842369		12.2	2.5	0.009	0.08	3.39	0.2	8	1.9	95.5	<0.05	<0.05	0.11	<0.005	0.10	2.4
W842370		7.5	3.0	0.004	0.24	2.27	0.2	14	0.8	149.5	<0.05	<0.05	0.14	<0.005	0.19	1.8
W842371		30.8	91.6	0.009	1.77	37.5	6.5	11	104.5	234	0.51	2.85	7.72	0.213	0.92	11.9
W842372		11.0	7.0	0.002	0.01	7.41	0.5	2	5.3	112.5	<0.05	<0.05	0.27	0.007	1.81	2.9
W842373		38.3	2.7	<0.002	<0.01	12.90	0.2	2	5.7	121.0	<0.05	0.06	0.11	<0.005	0.13	1.3
W842374		5.9	4.5	0.009	<0.01	2.14	0.3	3	1.5	109.0	<0.05	<0.05	0.19	0.006	0.26	1.2
W842375		5.8	4.4	0.004	<0.01	2.22	0.3	4	1.5	109.5	<0.05	<0.05	0.17	0.007	0.22	1.3
W842376		46.4	5.4	0.010	0.01	19.10	0.3	3	20.2	88.7	<0.05	<0.05	0.17	<0.005	0.17	1.8
W842377		1.2	1.1	<0.002	<0.01	0.07	0.2	1	<0.2	44.0	<0.05	<0.05	0.07	<0.005	<0.02	0.6
W842378		13.0	30.2	0.009	3.24	2.27	1.9	19	5.8	189.0	0.10	<0.05	0.84	0.052	0.43	5.1
W842379		59.7	3.8	0.016	0.56	29.3	0.2	10	1.7	230	<0.05	<0.05	0.15	<0.005	0.12	4.0
W842380		5.2	7.4	0.014	0.25	0.89	0.5	5	5.0	274	<0.05	<0.05	0.33	0.012	0.24	4.2
W842381		17.1	5.7	0.012	0.27	5.28	0.3	3	6.5	164.5	<0.05	<0.05	0.18	0.007	0.17	4.7
W842382		1.6	2.7	0.004	0.03	0.36	0.1	1	0.3	127.5	<0.05	<0.05	0.05	<0.005	0.07	2.6
W842383		3.5	5.2	0.008	0.14	1.22	0.3	2	1.2	156.5	<0.05	<0.05	0.20	0.007	0.13	2.8
W842384		3.5	4.9	0.010	0.15	1.12	0.3	3	1.3	157.0	<0.05	<0.05	0.22	0.007	0.12	3.0
W842385		8.0	4.4	<0.002	0.06	1.83	0.3	1	1.9	191.5	<0.05	<0.05	0.20	0.005	0.10	2.1
W842386		3.6	12.8	0.003	0.02	2.22	0.3	1	0.8	174.5	<0.05	<0.05	0.27	0.008	0.20	2.4
W842387		52.3	197.0	0.002	0.71	40.0	8.6	5	70.1	308	0.77	0.65	9.11	0.317	1.75	5.1
W842388		7.9	9.5	0.004	0.11	9.25	0.2	2	1.0	168.0	<0.05	<0.05	0.16	0.005	0.15	2.1
W842389		11.9	23.0	0.003	0.01	5.74	0.3	4	0.7	131.0	<0.05	<0.05	0.23	0.008	0.24	2.1
W842390		16.0	11.6	0.005	0.01	6.09	0.4	4	2.7	124.0	<0.05	<0.05	0.23	0.008	0.15	2.2
W842391		22.5	18.4	<0.002	<0.01	9.25	0.6	1	2.5	113.0	<0.05	<0.05	0.40	0.016	0.22	2.1
W842392		7.9	15.7	0.002	<0.01	1.65	0.4	1	1.0	125.5	<0.05	<0.05	0.32	0.012	0.21	1.6
W842393		40.6	10.4	0.003	0.01	10.60	0.4	1	3.9	150.0	<0.05	<0.05	0.31	0.011	0.21	2.6
W842394		94.6	14.8	0.003	0.01	27.8	0.3	1	19.2	165.5	<0.05	0.05	0.22	0.008	0.23	2.8
W842395		64.4	7.6	0.002	<0.01	21.5	0.2	3	2.0	136.0	<0.05	<0.05	0.12	<0.005	0.13	1.6
W842396		66.1	6.6	0.002	0.02	40.4	0.2	5	0.7	117.0	<0.05	0.05	0.11	<0.005	0.12	1.2
W842397		28.6	6.2	0.006	0.02	14.50	0.2	3	0.4	120.5	<0.05	<0.05	0.10	<0.005	0.12	1.1
W842398		93.7	16.9	0.004	<0.01	63.3	0.6	1	0.6	142.0	<0.05	<0.05	0.37	0.015	0.30	1.7
W842399		29.7	2.8	0.003	<0.01	13.20	0.2	1	0.2	163.5	<0.05	<0.05	0.07	<0.005	0.06	1.1
W842400		72.8	5.1	0.002	<0.01	20.8	0.9	1	4.4	87.2	0.05	<0.05	0.43	0.030	0.08	1.6

***** 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
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-AUG-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19190705

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	V	W	Y	Zn	Zr
	Units	ppm	ppm	ppm	ppm	ppm
	LOD	1	0.1	0.1	2	0.5
W842361		104	3.2	31.5	685	4.7
W842362		126	2.8	15.2	540	5.3
W842363		74	3.6	9.0	234	1.0
W842364		72	2.8	8.2	255	0.7
W842365		104	1.8	8.7	327	1.8
W842366		62	1.7	11.3	599	1.9
W842367		58	4.9	7.9	379	1.0
W842368		64	3.6	14.6	826	1.3
W842369		57	6.3	15.1	730	0.6
W842370		62	4.7	13.8	547	1.0
W842371		46	20.9	31.2	212	55.7
W842372		124	6.9	32.5	2640	2.0
W842373		85	1.0	5.4	349	0.9
W842374		134	2.1	7.0	633	1.7
W842375		128	2.1	7.0	621	1.4
W842376		39	2.9	5.3	412	1.1
W842377		3	0.1	0.7	17	<0.5
W842378		344	2.9	6.7	53	14.3
W842379		174	1.0	2.8	48	1.2
W842380		288	0.8	3.7	55	3.3
W842381		166	1.2	2.6	85	1.7
W842382		55	0.6	2.0	26	0.6
W842383		74	0.8	3.0	86	1.9
W842384		71	0.8	2.9	75	1.9
W842385		46	0.5	2.7	73	1.7
W842386		60	1.0	2.3	32	2.1
W842387		70	18.9	21.9	123	79.3
W842388		50	1.6	2.4	109	1.9
W842389		40	1.5	8.1	657	2.0
W842390		56	1.2	12.9	1040	2.2
W842391		55	0.9	8.5	473	3.6
W842392		66	0.8	2.9	191	3.3
W842393		102	1.6	5.5	295	2.7
W842394		89	2.9	3.0	298	1.9
W842395		54	1.2	9.0	795	1.2
W842396		51	1.9	7.9	508	1.0
W842397		53	3.0	6.6	409	0.9
W842398		107	7.2	16.7	630	3.5
W842399		36	1.8	7.9	385	0.9
W842400		107	2.4	8.6	395	7.3

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North Vancouver BC V7H 0A7
Phone: +1 (604) 984 0221 Fax: +1 (604) 984 0218
www.alsglobal.com/geochemistry

To: **ATAC RESOURCES LTD.**
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VANCOUVER BC V6B 1L8

Project: Rau

Finalized Date: 11-AUG-2019
Account: RCM

CERTIFICATE OF ANALYSIS WH19190705

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	ME-MS61

ALS Canada Ltd.

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North Vancouver BC V7H 0A7
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1016-510 W HASTINGS ST
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Finalized Date: 11-AUG-2019
Account: RCM

CERTIFICATE WH19190896

Project: Rau

P.O. No.: R19-D06

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 3-AUG-2019.

The following have access to data associated with this certificate:

ANDREW CARNE	ADAM COULTER	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
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

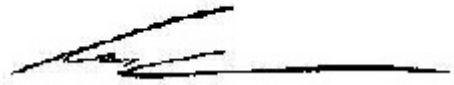
ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid 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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Finalized Date: 11-AUG-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19190896

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
W842401		4.59	0.10	39.2	0.15	210	110	8.84	31.9	20.9	7.08	2.06	1.1	4	0.24	340
W842402		2.28	0.01	0.19	0.04	5.9	40	0.44	0.08	22.3	0.05	2.32	0.3	1	0.06	4.3
W842403		1.88	0.09	14.10	0.07	311	60	4.45	16.60	21.8	2.05	2.38	0.5	2	0.11	678
W842404		6.83	0.01	0.10	0.20	4.1	500	0.39	1.28	23.2	1.14	3.35	1.0	2	0.72	11.9
W842405		2.84	<0.01	0.20	0.04	6.5	100	0.41	0.60	22.6	2.94	2.89	1.4	1	0.19	28.0
W842406		4.43	<0.01	0.02	0.05	0.3	20	0.07	0.04	22.2	0.08	1.07	0.7	1	0.12	2.7
W842407		3.94	<0.01	0.05	0.04	3.8	180	0.21	0.31	22.6	6.41	2.80	0.9	1	0.20	9.7
W842408		2.63	0.55	0.40	0.03	14.9	120	0.18	9.46	23.6	0.45	2.96	0.6	1	0.15	288
W842409		5.64	0.11	0.13	0.13	4.0	330	0.30	4.05	22.5	1.71	4.18	0.8	2	0.75	34.0
W842410		1.55	0.10	0.08	0.23	27.3	120	0.99	2.66	19.75	15.85	4.69	6.3	5	0.13	58.3
W842411		<0.02	0.04	0.07	0.22	28.1	110	1.03	2.74	19.50	16.25	4.76	5.9	4	0.12	57.2
W842412		4.00	<0.01	0.02	0.13	3.6	350	0.27	0.28	23.2	3.53	4.44	1.6	2	0.85	11.4
W842413		7.95	0.01	0.14	0.17	5.3	420	0.38	1.49	23.2	0.26	4.45	0.8	2	1.27	113.0
W842414		7.75	<0.01	0.05	0.28	6.0	650	0.41	0.83	23.0	1.08	3.28	1.3	3	2.40	9.5
W842415		0.10	2.49	11.40	5.30	>10000	1080	2.08	325	12.70	1.63	254	79.8	63	8.35	4290
W842416		5.87	<0.01	0.02	0.12	4.9	350	0.24	0.25	23.3	0.26	2.90	0.6	2	0.83	19.0
W842417		3.08	0.01	0.05	0.14	5.8	350	0.30	1.47	23.5	0.08	4.02	1.2	2	0.82	71.5
W842418		1.47	3.33	2.47	0.28	9.0	610	0.69	459	20.9	1.19	5.04	1.9	2	1.85	7700
W842419		1.72	0.01	0.07	0.12	6.8	270	0.37	1.92	22.9	0.19	5.34	0.9	1	1.09	85.5
W842420		2.45	0.16	0.93	0.26	9.2	490	0.94	44.1	22.4	0.67	6.25	1.8	2	1.76	2000
W842421		2.28	0.02	0.08	0.15	3.5	450	0.32	1.13	22.5	0.03	4.57	1.4	2	1.16	156.5
W842422		1.57	0.19	0.59	0.15	6.7	250	0.66	26.5	22.5	0.31	5.00	0.8	2	1.17	1285
W842423		5.47	0.01	0.37	0.12	3.6	420	0.37	3.43	23.3	0.23	3.89	1.0	1	0.94	233
W842424		3.66	0.27	0.61	0.19	33.7	310	1.15	23.1	21.8	21.2	5.46	7.2	2	1.05	773
W842425		4.44	<0.01	0.03	0.10	3.3	390	0.22	0.22	24.3	0.13	2.26	0.8	1	1.15	6.8
W842426		5.64	0.03	0.09	0.23	8.1	740	0.39	1.53	22.3	2.29	4.25	1.9	2	1.28	25.5
W842427		7.48	<0.01	0.05	0.21	3.2	580	0.35	1.10	23.6	1.91	3.26	1.5	2	1.13	12.4
W842428		3.70	<0.01	0.02	0.11	2.4	250	0.29	0.75	23.6	0.34	3.58	0.9	2	0.96	3.7
W842429		3.76	<0.01	0.02	0.12	4.3	260	0.27	0.91	23.6	0.46	3.41	1.0	1	0.92	4.9
W842430		7.72	<0.01	0.02	0.18	1.7	390	0.34	0.49	23.3	0.27	2.77	0.8	2	2.19	3.4
W842431		8.05	<0.01	0.02	0.10	0.9	300	0.41	0.54	22.8	0.30	2.44	0.7	1	1.10	4.6
W842432		0.10	0.36	2.78	5.71	9940	2070	1.88	356	11.50	0.70	137.0	50.9	60	12.45	823
W842433		4.26	<0.01	0.05	0.22	7.4	600	0.37	2.09	23.3	0.09	3.38	0.8	2	3.15	3.0
W842434		3.99	<0.01	0.04	0.09	14.3	120	0.26	1.36	22.0	0.58	3.81	0.5	1	1.72	5.1
W842435		8.23	<0.01	0.03	0.21	3.9	260	0.38	1.02	24.6	0.06	5.20	0.8	2	3.96	3.4
W842436		4.69	<0.01	0.14	0.12	8.7	170	0.32	0.49	22.8	9.82	3.09	0.9	1	3.05	18.1
W842437		4.20	<0.01	0.05	0.16	1.3	300	0.31	1.42	23.3	0.11	2.71	0.7	2	2.58	7.1
W842438		7.26	<0.01	0.03	0.17	2.6	530	0.32	0.83	24.1	0.24	2.86	0.7	2	2.39	3.1
W842439		7.89	<0.01	0.02	0.13	1.4	380	0.32	0.17	23.4	0.04	3.23	0.7	2	1.87	3.2
W842440		8.25	<0.01	0.02	0.12	0.9	170	0.19	0.16	24.2	0.04	3.69	0.5	1	1.33	2.4

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Finalized Date: 11-AUG-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19190896

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	Fe	Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P
	Units	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
W842401		0.26	0.83	0.14	0.1	0.191	0.02	2.1	3.2	12.45	230	2.11	0.03	0.2	19.7	120
W842402		0.08	0.22	0.11	<0.1	<0.005	0.01	2.4	1.8	12.45	270	0.32	0.01	<0.1	5.1	40
W842403		0.22	0.88	0.14	<0.1	0.175	0.01	2.2	2.6	12.75	280	4.86	0.01	0.1	9.5	80
W842404		0.22	0.89	0.15	<0.1	0.011	0.10	2.8	8.7	12.40	300	4.92	0.01	0.3	15.7	70
W842405		0.80	0.43	0.10	<0.1	0.006	0.02	2.5	2.7	12.80	519	2.83	0.01	<0.1	15.7	40
W842406		0.45	0.22	0.10	<0.1	<0.005	0.02	0.5	1.1	13.60	206	0.12	<0.01	0.1	2.0	210
W842407		0.24	0.28	0.13	<0.1	0.006	0.02	2.5	3.0	13.05	482	1.57	<0.01	<0.1	7.9	60
W842408		0.46	0.36	0.12	<0.1	0.177	0.02	2.7	2.6	13.00	433	1.84	<0.01	<0.1	8.4	60
W842409		0.33	0.74	0.14	<0.1	0.020	0.07	3.4	6.1	12.85	601	2.74	0.01	0.1	11.5	60
W842410		1.51	1.83	0.10	0.1	0.014	0.01	3.3	4.1	12.40	514	3.70	0.04	0.4	31.0	140
W842411		1.45	1.73	0.09	0.1	0.013	0.01	3.4	4.1	12.15	504	3.62	0.04	0.4	30.5	150
W842412		0.34	0.61	0.10	<0.1	0.014	0.07	3.3	5.8	12.65	525	5.93	0.01	0.1	21.0	60
W842413		0.32	0.85	0.10	<0.1	0.031	0.09	3.2	7.2	12.25	400	6.27	0.01	0.1	14.7	60
W842414		0.26	1.04	0.13	0.1	0.007	0.13	2.6	9.1	12.45	291	7.79	0.01	0.2	17.7	120
W842415		9.32	16.80	0.30	1.8	2.10	1.82	150.5	40.6	1.42	1700	13.10	1.26	9.4	40.5	870
W842416		0.16	0.46	0.08	<0.1	<0.005	0.06	2.3	5.5	12.45	317	3.62	<0.01	0.1	9.9	60
W842417		0.30	0.47	0.08	<0.1	0.006	0.05	3.0	5.3	11.50	416	6.56	<0.01	0.1	18.3	60
W842418		1.56	2.80	0.08	0.1	1.620	0.13	3.7	9.5	12.10	501	20.3	0.01	0.4	31.6	90
W842419		0.29	0.51	0.09	<0.1	0.014	0.08	3.8	6.7	12.85	582	3.40	<0.01	0.1	9.8	80
W842420		0.83	1.37	0.08	0.1	0.317	0.15	4.4	9.7	12.10	618	12.80	0.02	0.3	22.1	120
W842421		0.55	0.50	0.08	<0.1	0.006	0.07	3.4	5.8	11.90	568	15.00	<0.01	0.2	23.4	110
W842422		0.55	1.25	0.10	<0.1	0.282	0.07	3.7	4.8	11.80	513	5.87	0.01	0.2	24.6	130
W842423		0.30	0.49	0.12	<0.1	0.289	0.08	3.0	5.7	11.65	457	5.91	<0.01	0.1	16.2	70
W842424		2.32	0.66	0.08	<0.1	0.461	0.06	3.6	5.1	12.20	768	9.81	0.01	0.1	87.6	80
W842425		0.11	0.36	0.08	<0.1	0.008	0.06	1.9	4.8	12.25	276	3.61	<0.01	0.1	9.2	70
W842426		0.40	1.03	0.08	0.1	0.020	0.11	2.8	9.3	11.70	376	8.39	0.01	0.2	20.7	90
W842427		0.27	0.77	0.10	<0.1	0.030	0.10	2.3	7.9	12.60	388	6.36	0.01	0.2	17.4	130
W842428		0.25	0.52	0.11	<0.1	0.009	0.05	2.5	4.7	12.35	482	5.22	0.01	0.1	10.6	90
W842429		0.26	0.45	0.10	<0.1	0.006	0.05	2.4	4.4	12.60	497	5.10	0.01	0.1	11.0	100
W842430		0.21	0.63	0.10	<0.1	0.007	0.09	2.0	6.2	12.20	355	4.63	0.01	0.2	9.8	80
W842431		0.18	0.38	0.13	<0.1	0.011	0.05	1.8	4.0	12.40	333	3.16	0.01	0.1	9.8	70
W842432		6.68	16.10	0.25	2.2	0.762	3.35	79.4	25.8	1.60	1180	13.70	1.14	13.5	37.5	940
W842433		0.21	0.77	0.07	0.1	0.008	0.13	2.2	7.6	12.05	330	7.92	0.01	0.2	24.6	170
W842434		0.62	0.42	0.08	<0.1	0.040	0.05	2.5	3.6	12.20	606	2.79	0.01	0.1	4.4	80
W842435		0.42	0.81	0.09	0.1	0.011	0.11	3.5	6.9	11.25	643	5.85	0.01	0.2	8.5	110
W842436		0.38	1.66	0.11	<0.1	1.215	0.08	2.1	5.3	12.10	435	21.7	0.01	0.1	11.1	80
W842437		0.18	0.73	0.13	<0.1	0.016	0.08	2.0	5.0	12.25	269	16.80	0.01	0.2	15.8	100
W842438		0.13	0.66	0.12	<0.1	0.019	0.08	2.1	5.5	12.40	187	23.8	0.01	0.2	22.2	120
W842439		0.21	0.55	0.12	<0.1	<0.005	0.07	2.3	4.7	12.35	317	19.55	<0.01	0.1	12.6	130
W842440		0.16	0.52	0.17	0.1	<0.005	0.05	2.6	3.9	12.45	404	5.36	<0.01	0.2	5.8	110

***** 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
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-AUG-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19190896

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
W842401		2240	2.3	0.002	0.16	1875	0.3	30	200	154.0	<0.05	1.33	0.13	0.007	0.11	1.8
W842402		4.5	0.6	0.002	<0.01	6.23	0.1	1	1.6	159.5	<0.05	<0.05	0.05	<0.005	0.02	1.9
W842403		691	1.2	0.003	0.12	415	0.2	13	121.5	140.0	<0.05	0.68	0.08	<0.005	0.08	2.9
W842404		4.9	8.0	0.068	0.09	1.82	0.4	4	0.5	158.5	<0.05	<0.05	0.28	0.009	0.29	4.7
W842405		11.7	2.1	0.006	0.02	6.88	0.1	5	1.3	116.0	<0.05	<0.05	0.06	<0.005	0.08	2.0
W842406		1.2	1.0	<0.002	<0.01	0.12	0.2	1	<0.2	47.4	<0.05	<0.05	0.06	<0.005	<0.02	0.4
W842407		5.1	2.1	0.003	<0.01	2.28	0.1	1	0.2	124.5	<0.05	<0.05	0.05	<0.005	0.08	0.9
W842408		13.2	1.4	0.019	0.23	9.09	0.1	3	28.4	143.0	<0.05	<0.05	0.04	<0.005	0.08	5.8
W842409		6.5	7.2	0.016	0.04	2.54	0.2	2	7.9	139.0	<0.05	0.05	0.17	0.006	0.26	2.6
W842410		14.2	0.9	0.009	0.49	3.26	0.3	7	7.5	98.0	<0.05	<0.05	0.22	0.012	1.22	3.6
W842411		14.6	1.0	0.006	0.42	3.66	0.3	7	7.5	97.2	<0.05	<0.05	0.21	0.012	1.26	3.2
W842412		2.2	7.1	0.069	0.04	0.71	0.3	2	0.3	134.0	<0.05	<0.05	0.21	0.006	0.39	2.2
W842413		4.5	7.9	0.092	0.10	3.50	0.4	2	8.9	134.5	<0.05	0.05	0.20	0.006	0.44	3.8
W842414		2.7	12.5	0.115	0.09	1.14	0.5	2	0.2	132.0	<0.05	<0.05	0.32	0.010	0.55	4.0
W842415		47.1	112.0	0.016	1.33	38.4	8.1	7	90.9	305	0.56	2.54	9.29	0.251	1.22	8.0
W842416		1.8	5.1	0.038	0.03	0.60	0.2	1	0.2	139.0	<0.05	<0.05	0.16	0.005	0.28	2.1
W842417		3.0	4.5	0.043	0.06	1.46	0.3	2	0.7	150.5	<0.05	<0.05	0.21	0.005	0.23	2.2
W842418		37.5	13.7	0.030	0.15	38.8	0.5	10	114.5	131.5	<0.05	0.11	0.54	0.011	0.54	5.7
W842419		5.6	10.5	0.013	0.04	1.57	0.2	2	0.8	167.0	<0.05	<0.05	0.17	0.005	0.37	1.4
W842420		12.3	19.7	0.132	0.16	2.68	0.5	3	21.6	145.0	<0.05	<0.05	0.33	0.012	0.69	6.0
W842421		1.3	9.0	0.163	0.26	0.27	0.3	3	0.8	162.0	<0.05	<0.05	0.24	0.006	0.30	6.1
W842422		3.3	9.8	0.063	0.33	2.30	0.3	3	21.1	164.5	<0.05	<0.05	0.19	0.007	0.30	4.6
W842423		1.7	11.9	0.076	0.07	0.30	0.2	2	11.3	160.5	<0.05	<0.05	0.18	0.005	0.33	2.9
W842424		17.7	8.6	0.014	0.01	8.90	0.3	7	32.3	158.0	<0.05	<0.05	0.15	<0.005	0.33	2.4
W842425		1.4	7.4	0.034	0.01	0.25	0.2	1	0.4	167.5	<0.05	<0.05	0.15	<0.005	0.26	2.6
W842426		3.4	7.3	0.074	0.17	1.94	0.5	2	0.7	144.5	<0.05	<0.05	0.32	0.009	0.51	3.1
W842427		1.9	6.4	0.045	0.04	0.81	0.4	1	0.6	134.5	<0.05	<0.05	0.28	0.008	0.42	2.3
W842428		0.8	6.0	0.053	0.07	0.30	0.3	1	0.4	141.5	<0.05	<0.05	0.15	<0.005	0.22	3.8
W842429		1.2	6.1	0.036	0.06	0.30	0.3	2	0.3	138.0	<0.05	<0.05	0.17	0.005	0.22	3.7
W842430		0.7	15.8	0.051	0.06	0.24	0.4	1	0.4	136.5	<0.05	<0.05	0.23	0.007	0.33	5.2
W842431		0.9	6.2	0.038	0.02	0.13	0.2	1	0.4	126.0	<0.05	<0.05	0.14	<0.005	0.22	2.7
W842432		57.6	207	0.002	0.73	44.3	9.3	5	74.4	317	0.76	0.75	9.57	0.327	1.85	5.0
W842433		1.5	21.0	0.107	0.08	0.23	0.4	1	0.8	147.0	<0.05	<0.05	0.32	0.010	0.45	9.8
W842434		0.8	12.3	0.036	0.49	0.48	0.2	2	0.7	118.5	<0.05	<0.05	0.16	<0.005	0.17	9.1
W842435		3.2	33.2	0.049	0.18	0.57	0.4	2	1.2	157.5	<0.05	<0.05	0.28	0.009	0.41	5.8
W842436		5.7	23.8	0.170	0.38	1.78	0.2	2	6.6	144.5	<0.05	<0.05	0.15	<0.005	0.32	5.7
W842437		6.2	21.2	0.159	0.07	1.00	0.3	2	1.3	150.0	<0.05	<0.05	0.24	0.006	0.31	5.0
W842438		3.8	14.6	0.166	0.04	0.51	0.4	1	0.6	163.5	<0.05	<0.05	0.22	0.006	0.31	6.5
W842439		1.0	11.4	0.116	0.07	0.15	0.3	2	0.3	133.0	<0.05	<0.05	0.18	0.005	0.25	6.2
W842440		0.8	9.1	0.030	0.04	0.12	0.3	1	0.3	131.5	<0.05	<0.05	0.16	0.005	0.14	6.0

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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 11-AUG-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19190896

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	V	W	Y	Zn	Zr
	Units	ppm	ppm	ppm	ppm	ppm
	LOD	1	0.1	0.1	2	0.5
W842401		49	1.9	3.4	209	2.8
W842402		38	0.4	1.7	9	0.6
W842403		54	2.9	2.4	80	1.5
W842404		117	3.6	3.0	38	2.2
W842405		49	12.0	3.4	145	<0.5
W842406		4	0.1	0.8	17	<0.5
W842407		37	5.1	3.2	102	<0.5
W842408		30	3.5	3.7	50	<0.5
W842409		90	2.4	3.3	63	1.2
W842410		120	1.5	3.0	159	4.5
W842411		117	1.5	3.1	154	4.4
W842412		54	1.7	3.1	134	1.4
W842413		34	1.7	2.5	27	1.6
W842414		39	3.3	2.8	78	2.2
W842415		54	1640	28.2	212	69.2
W842416		21	1.3	1.7	18	1.1
W842417		33	1.9	2.9	16	1.3
W842418		44	2.8	5.7	295	2.8
W842419		35	2.4	2.8	49	1.2
W842420		36	2.9	5.9	136	2.8
W842421		25	3.0	2.2	9	1.8
W842422		26	1.7	2.6	54	1.7
W842423		27	2.2	2.2	35	1.3
W842424		26	2.8	25.5	1440	1.1
W842425		15	0.9	1.5	20	1.0
W842426		16	1.3	3.8	163	2.3
W842427		12	1.4	2.5	148	1.8
W842428		8	1.8	2.1	49	1.0
W842429		8	1.7	2.0	62	1.0
W842430		9	2.0	1.4	45	1.4
W842431		7	1.5	1.4	57	0.9
W842432		73	20.2	23.2	125	86.8
W842433		10	2.5	1.7	31	2.1
W842434		6	4.3	1.5	160	0.8
W842435		9	2.8	2.3	14	2.2
W842436		11	11.1	1.8	2490	1.0
W842437		15	3.6	1.5	28	1.7
W842438		14	1.3	1.9	65	1.5
W842439		13	1.7	2.0	16	1.3
W842440		6	1.1	1.6	9	1.3

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North Vancouver BC V7H 0A7
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Project: Rau

Finalized Date: 11-AUG-2019
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CERTIFICATE OF ANALYSIS WH19190896

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	ME-MS61

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2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 (604) 984 0221 Fax: +1 (604) 984 0218
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Finalized Date: 13-AUG-2019
Account: RCM

CERTIFICATE WH19192343

Project: Rau

P.O. No.: R19-D07

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 5-AUG-2019.

The following have access to data associated with this certificate:

ANDREW CARNE	ADAM COULTER	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
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

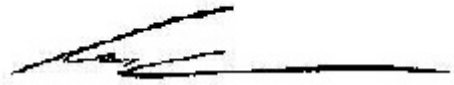
ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid 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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North Vancouver BC V7H 0A7
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CERTIFICATE OF ANALYSIS WH19192343

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
W842441		5.08	0.02	0.03	0.14	1.2	170	0.26	0.49	22.8	0.23	5.56	1.3	1	1.91	2.1
W842442		2.31	0.01	0.07	0.18	18.1	290	0.87	0.72	21.7	11.15	8.02	4.3	2	3.91	21.2
W842443		3.43	<0.01	0.02	0.20	1.1	460	0.52	1.20	23.2	0.43	2.89	1.3	2	1.45	3.1
W842444		3.67	0.02	0.06	0.21	0.7	520	0.47	0.42	24.4	0.50	2.90	1.4	2	1.56	3.5
W842445		7.03	<0.01	0.02	0.15	<0.2	250	0.71	0.25	23.5	0.09	3.18	1.0	1	0.93	3.0
W842446		6.45	0.01	0.05	0.26	1.3	280	6.77	7.63	22.6	0.20	3.82	2.1	1	5.82	23.5
W842447		2.59	0.01	0.05	0.63	0.6	210	52.6	2.68	23.4	0.30	11.15	1.5	1	7.68	22.3
W842448		0.10	0.34	2.61	5.76	>10000	2100	1.70	367	12.00	0.77	137.5	50.0	60	11.85	839
W842449		6.04	<0.01	<0.01	0.09	0.6	110	1.20	0.57	22.4	0.30	3.31	0.9	2	2.10	4.2
W842450		4.67	0.01	0.03	0.04	0.9	50	0.33	0.24	22.6	0.23	3.67	0.8	<1	1.40	4.3
W842451		4.94	<0.01	0.03	0.10	6.9	180	0.75	0.72	21.5	2.88	5.40	5.9	1	1.33	3.0
W842452		4.85	<0.01	0.03	0.15	6.6	440	1.09	0.30	21.6	2.30	3.87	3.1	2	1.77	1.9
W842453		4.53	0.01	0.02	0.13	1.3	350	0.33	0.10	22.5	0.41	2.61	1.3	2	2.24	1.5
W842454		5.32	0.01	0.07	0.57	2.8	2310	2.51	1.61	23.5	0.25	6.08	2.2	4	13.00	3.4
W842455		7.07	0.01	0.09	0.82	3.9	750	0.91	0.60	23.7	0.04	7.93	2.3	5	15.95	17.6
W842456		8.12	<0.01	0.03	0.55	<0.2	230	0.56	0.36	23.1	0.02	6.35	2.0	5	10.20	2.7
W842457		3.98	0.01	0.08	1.42	15.6	330	8.69	8.28	20.8	0.04	10.85	3.9	9	51.8	14.9
W842458		7.25	<0.01	0.03	0.61	<0.2	120	3.28	0.70	23.1	0.03	7.38	2.0	4	18.70	3.4
W842459		4.21	<0.01	0.93	2.63	49.6	630	11.85	7.34	15.15	2.09	10.40	14.8	13	90.9	142.5
W842460		7.58	<0.01	0.05	1.03	<0.2	250	1.62	2.86	22.0	0.03	10.10	2.7	7	38.5	8.5
W842461		2.62	0.01	0.17	4.07	5.5	660	93.9	1.38	12.80	0.21	13.15	8.1	9	60.6	79.2
W842462		<0.02	<0.01	0.20	3.93	5.8	640	80.5	1.01	12.40	0.18	12.25	9.6	8	61.1	92.2
W842463		3.83	0.01	0.02	0.23	0.3	90	0.83	0.40	22.1	0.02	3.68	1.2	2	6.71	2.8
W842464		7.57	0.01	0.03	0.63	0.6	250	0.81	0.47	21.3	0.02	6.57	2.2	5	16.20	3.6
W842465		7.77	<0.01	0.03	0.87	0.3	190	0.53	0.36	21.5	<0.02	8.77	3.1	9	8.83	4.5
W842466		8.37	<0.01	0.04	1.18	<0.2	170	0.61	0.29	21.4	0.02	10.70	3.0	10	7.87	4.8
W842467		8.22	<0.01	0.03	0.71	1.2	110	0.56	0.17	21.9	<0.02	8.33	2.4	6	5.49	8.0
W842468		0.11	0.81	7.58	5.04	8770	1230	1.53	216	13.80	0.86	432	81.4	47	9.63	3520
W842469		8.15	0.01	0.06	0.88	2.0	150	0.44	0.23	21.3	0.02	8.79	2.9	6	5.06	6.8
W842470		8.37	<0.01	0.04	1.12	0.3	240	0.68	0.19	20.2	0.05	11.40	2.7	8	10.15	11.9
W842471		8.11	<0.01	0.12	3.03	10.6	400	1.34	0.72	20.4	0.27	24.9	8.4	23	28.0	26.2
W842472		8.40	<0.01	0.03	0.87	2.8	90	0.48	0.22	21.6	0.21	9.97	3.2	6	6.89	7.8
W842473		8.51	0.01	0.03	0.62	0.5	60	0.32	0.16	21.2	0.02	7.13	2.1	5	5.99	4.4
W842474		8.19	<0.01	0.04	1.26	0.8	90	0.51	0.29	21.9	<0.02	10.55	3.6	11	8.13	4.6
W842475		8.38	<0.01	0.03	0.90	0.6	70	0.38	0.27	22.7	<0.02	9.45	2.5	6	6.14	2.9
W842476		8.22	<0.01	0.06	1.05	4.8	90	0.70	0.70	22.0	0.03	9.78	3.3	7	8.06	12.7
W842477		8.16	<0.01	0.05	1.41	0.5	110	0.65	0.34	21.2	0.03	11.80	3.4	10	7.76	9.3
W842478		8.10	<0.01	0.06	1.33	9.1	110	0.66	0.61	22.1	0.03	11.85	4.4	10	7.53	11.7
W842479		4.22	<0.01	0.04	0.06	<0.2	20	0.06	0.03	21.3	0.07	1.20	0.9	<1	0.16	3.9
W842480		8.11	<0.01	0.06	1.28	0.5	130	0.62	0.29	21.5	0.07	11.55	3.4	10	6.99	6.3

***** 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
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-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19192343

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	Fe	Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P
	Units	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
W842441		0.35	0.62	0.08	0.1	<0.005	0.07	3.7	4.9	12.90	560	3.09	0.01	0.6	7.9	110
W842442		1.33	0.84	0.07	0.2	0.006	0.11	5.0	6.1	13.30	658	10.60	0.01	1.6	47.3	90
W842443		0.19	0.78	0.16	0.1	0.010	0.08	2.0	5.9	12.05	230	5.67	0.01	0.3	12.8	70
W842444		0.20	0.81	0.19	0.1	0.008	0.09	2.0	6.2	12.45	239	6.05	0.01	0.3	13.1	70
W842445		0.19	0.68	0.27	<0.1	<0.005	0.06	2.2	4.6	12.75	288	3.70	0.01	0.3	7.7	70
W842446		0.80	2.88	0.20	<0.1	0.018	0.27	2.5	14.5	13.10	654	9.08	0.02	0.6	14.0	80
W842447		0.80	7.12	0.18	<0.1	0.025	0.32	4.6	22.5	12.20	614	5.18	0.04	3.2	6.9	120
W842448		6.85	15.25	0.18	2.2	0.854	3.44	80.8	29.9	1.66	1200	14.00	1.18	13.2	34.2	970
W842449		0.24	0.58	0.11	<0.1	0.005	0.07	2.3	3.7	12.35	518	3.11	0.01	0.1	7.5	90
W842450		0.37	0.35	0.20	<0.1	<0.005	0.04	2.1	3.4	13.25	659	2.25	<0.01	0.1	4.3	60
W842451		1.38	0.42	0.12	<0.1	0.006	0.05	3.7	2.8	12.90	948	14.05	0.01	0.2	45.0	60
W842452		0.86	0.46	0.09	0.1	<0.005	0.08	2.7	3.2	13.20	503	9.37	0.01	0.3	29.6	70
W842453		0.20	0.54	0.24	<0.1	<0.005	0.07	1.8	3.3	13.35	268	1.91	<0.01	0.2	7.2	90
W842454		0.38	1.96	0.23	0.1	0.005	0.39	3.1	16.1	11.80	329	5.16	0.03	0.9	7.1	40
W842455		0.56	3.42	0.23	0.2	0.053	0.59	3.8	24.9	11.65	424	3.28	0.03	1.5	7.6	50
W842456		0.31	1.87	0.26	0.2	<0.005	0.32	3.2	15.0	11.85	222	2.65	0.03	1.0	5.3	30
W842457		1.11	5.02	0.17	0.4	0.115	1.12	4.7	32.8	11.10	1160	2.44	0.06	2.0	14.6	160
W842458		0.35	2.03	0.24	0.2	0.006	0.38	3.5	13.5	11.35	442	1.69	0.03	1.1	5.3	60
W842459		2.46	20.7	0.13	0.4	0.059	2.95	4.1	73.7	11.85	828	3.91	0.07	8.6	65.8	170
W842460		0.61	3.97	0.20	0.3	0.014	0.87	4.7	24.7	11.85	777	2.64	0.04	1.6	8.1	70
W842461		2.13	22.7	0.13	1.0	0.323	3.36	4.3	273	7.85	1040	6.25	0.42	25.6	13.7	50
W842462		2.38	22.8	0.11	1.0	0.337	3.29	4.0	282	7.82	1060	5.86	0.38	24.0	14.9	50
W842463		0.21	1.05	0.22	0.1	0.028	0.22	1.9	8.2	12.00	476	1.18	0.01	0.4	2.4	30
W842464		0.35	2.43	0.22	0.2	0.005	0.48	3.2	19.9	12.05	318	2.36	0.03	1.1	5.1	60
W842465		0.49	3.05	0.20	0.3	0.005	0.46	4.1	14.4	11.90	155	4.10	0.04	1.8	8.1	40
W842466		0.61	3.97	0.23	0.3	0.015	0.58	4.9	19.2	11.75	159	3.52	0.04	2.1	8.1	50
W842467		0.48	2.63	0.24	0.2	0.030	0.41	4.0	13.5	12.70	227	2.38	0.03	1.4	6.0	50
W842468		9.60	18.65	0.29	1.9	1.880	2.00	248	41.7	1.44	2390	19.05	0.86	9.8	41.0	980
W842469		0.49	2.71	0.12	0.3	0.015	0.45	4.1	14.6	12.60	118	2.52	0.04	1.7	7.1	60
W842470		0.68	3.51	0.17	0.3	0.006	0.73	5.4	21.0	11.20	189	1.75	0.05	2.0	7.7	80
W842471		1.39	9.80	0.15	0.9	0.030	1.63	11.4	53.2	10.70	246	4.54	0.11	5.1	33.5	100
W842472		0.45	2.87	0.21	0.2	0.010	0.48	4.7	17.1	12.20	197	1.56	0.03	1.5	11.4	60
W842473		0.37	1.83	0.22	0.2	0.006	0.39	3.4	14.5	12.25	127	2.68	0.04	1.1	5.7	50
W842474		0.63	3.58	0.20	0.4	<0.005	0.61	4.8	23.7	11.70	150	3.31	0.07	2.5	11.5	40
W842475		0.47	2.67	0.23	0.2	0.005	0.48	4.5	17.6	12.20	168	1.85	0.05	1.5	6.7	40
W842476		0.63	3.23	0.19	0.3	0.037	0.65	4.7	20.7	11.55	199	2.25	0.05	1.8	8.0	40
W842477		0.67	3.93	<0.05	0.3	0.006	0.68	5.4	22.1	11.00	103	2.13	0.06	2.4	11.1	50
W842478		0.70	3.54	0.05	0.3	0.009	0.64	5.4	21.2	11.70	118	3.27	0.07	2.3	15.7	40
W842479		0.44	0.19	0.05	<0.1	<0.005	0.02	0.6	1.3	13.40	190	0.10	0.01	0.2	1.8	190
W842480		0.66	3.30	0.05	0.3	0.010	0.63	5.4	21.7	11.40	97	2.62	0.08	2.2	10.5	40

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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

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VANCOUVER BC V6B 1L8

Finalized Date: 13-AUG-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19192343

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
W842441		1.1	12.0	0.027	0.11	0.25	0.2	2	0.4	116.0	<0.05	<0.05	0.24	0.006	0.26	4.5
W842442		9.1	29.9	0.014	0.01	5.68	0.3	4	0.6	123.5	0.16	<0.05	0.69	0.007	0.48	2.0
W842443		1.1	10.0	0.046	0.04	0.17	0.4	1	0.3	138.5	<0.05	<0.05	0.32	0.008	0.27	4.8
W842444		1.0	11.2	0.046	0.05	0.20	0.4	2	0.3	142.0	<0.05	<0.05	0.33	0.008	0.33	5.0
W842445		0.9	7.2	0.023	0.04	0.08	0.3	1	0.3	122.5	<0.05	<0.05	0.24	0.006	0.19	4.7
W842446		1.2	100.5	0.049	0.22	0.36	0.2	4	0.5	96.5	0.30	0.06	0.19	0.005	0.76	4.7
W842447		1.3	201	0.055	0.22	0.09	0.5	2	0.9	86.0	1.68	0.05	0.96	<0.005	0.88	6.3
W842448		51.5	203	0.003	0.75	40.1	9.1	5	74.9	316	0.84	0.64	10.90	0.336	2.03	6.1
W842449		<0.5	24.9	0.009	0.02	0.07	0.2	2	0.3	91.0	<0.05	<0.05	0.12	<0.005	0.22	2.4
W842450		1.4	18.5	0.020	0.10	<0.05	0.1	1	0.2	76.8	<0.05	<0.05	0.06	<0.005	0.14	4.3
W842451		0.9	13.3	0.008	<0.01	0.19	0.2	4	0.2	89.4	<0.05	<0.05	0.20	<0.005	0.18	2.1
W842452		1.0	17.1	0.003	<0.01	0.26	0.3	2	0.2	87.3	<0.05	<0.05	0.26	0.006	0.23	1.6
W842453		0.7	12.8	0.002	<0.01	0.07	0.3	1	0.3	99.0	<0.05	<0.05	0.20	0.007	0.24	1.6
W842454		1.2	121.0	0.004	0.12	0.06	1.1	1	0.7	142.0	0.07	<0.05	0.90	0.028	1.10	3.5
W842455		1.4	133.5	0.006	0.23	0.10	1.4	2	6.0	108.0	0.10	<0.05	1.17	0.036	1.31	5.0
W842456		0.6	57.7	0.003	0.12	<0.05	1.1	1	0.6	117.5	0.07	<0.05	0.81	0.030	0.82	3.1
W842457		1.9	520	0.015	0.51	0.36	2.5	2	9.2	76.6	0.13	<0.05	2.11	0.068	3.04	5.5
W842458		1.1	116.5	<0.002	0.14	<0.05	1.2	1	1.5	103.0	0.07	<0.05	0.97	0.034	1.08	3.2
W842459		80.4	1330	0.136	1.71	0.89	3.4	8	3.2	77.0	0.26	<0.05	2.14	0.071	7.11	5.1
W842460		1.3	359	0.005	0.23	0.07	2.0	1	2.9	104.0	0.11	<0.05	1.57	0.053	2.41	5.3
W842461		7.5	1630	0.014	1.17	0.41	2.3	1	12.5	66.6	18.55	<0.05	8.88	0.045	5.54	5.5
W842462		7.0	1630	0.015	1.37	0.44	2.3	2	12.3	64.3	17.30	<0.05	7.55	0.044	5.36	5.4
W842463		1.1	85.6	<0.002	0.03	0.08	0.5	1	1.1	124.5	0.05	<0.05	0.36	0.011	0.49	1.3
W842464		1.7	136.0	<0.002	0.14	0.05	1.3	1	0.9	118.0	0.08	<0.05	0.89	0.034	1.13	2.0
W842465		0.7	61.2	0.004	0.25	<0.05	1.6	1	1.3	127.5	0.11	<0.05	1.57	0.052	0.86	4.0
W842466		0.7	55.5	0.002	0.28	0.05	2.3	1	1.2	127.5	0.14	<0.05	1.74	0.066	0.93	4.0
W842467		0.6	46.2	0.002	0.18	0.05	1.4	1	1.2	124.5	0.09	<0.05	1.11	0.041	0.60	3.3
W842468		32.3	126.5	0.002	1.37	32.0	7.9	6	108.5	254	0.63	1.16	9.89	0.242	1.29	13.1
W842469		0.8	29.9	0.005	0.21	0.08	1.6	1	1.1	119.0	0.10	<0.05	1.28	0.051	0.61	3.0
W842470		0.7	83.4	<0.002	0.33	0.05	2.2	2	1.1	131.0	0.13	<0.05	1.81	0.064	1.06	2.9
W842471		2.2	172.0	0.034	1.05	4.02	5.2	3	10.2	142.0	0.33	<0.05	4.61	0.158	3.02	3.0
W842472		0.9	39.6	0.012	0.19	0.82	1.8	2	1.1	131.0	0.10	<0.05	1.29	0.046	0.83	2.1
W842473		0.5	41.1	0.003	0.16	<0.05	1.2	1	0.6	131.0	0.08	<0.05	0.90	0.035	0.66	2.8
W842474		0.7	70.5	0.002	0.30	0.05	2.4	1	1.5	147.5	0.16	<0.05	1.85	0.073	1.10	3.7
W842475		0.6	53.4	<0.002	0.20	<0.05	1.9	1	1.2	149.5	0.10	<0.05	1.26	0.050	0.82	2.6
W842476		1.0	74.7	0.003	0.33	0.08	2.1	1	3.0	152.5	0.13	<0.05	1.44	0.054	0.97	2.8
W842477		2.0	46.5	<0.002	0.31	0.19	2.3	1	1.2	159.5	0.15	<0.05	1.92	0.076	0.91	2.4
W842478		1.3	44.6	0.008	0.33	0.09	2.1	2	1.8	165.0	0.15	<0.05	1.98	0.073	1.08	3.4
W842479		1.7	1.2	<0.002	<0.01	<0.05	0.2	1	<0.2	46.2	<0.05	<0.05	0.08	<0.005	<0.02	0.6
W842480		0.7	37.3	0.002	0.32	0.05	2.0	1	1.5	162.0	0.14	<0.05	1.79	0.071	0.84	2.8

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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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Finalized Date: 13-AUG-2019
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CERTIFICATE OF ANALYSIS WH19192343

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	V	W	Y	Zn	Zr
	Units	ppm	ppm	ppm	ppm	ppm
	LOD	1	0.1	0.1	2	0.5
W842441		7	1.1	3.2	53	2.6
W842442		8	11.0	15.1	748	6.3
W842443		10	1.3	1.9	51	2.4
W842444		11	1.4	1.9	53	2.4
W842445		7	1.2	1.6	13	1.8
W842446		13	133.0	2.3	88	1.3
W842447		9	45.6	6.4	54	0.7
W842448		73	20.2	23.1	128	80.2
W842449		11	3.0	2.0	62	0.9
W842450		5	2.7	1.9	40	0.5
W842451		6	2.1	11.1	906	1.6
W842452		6	1.3	8.3	546	2.0
W842453		9	0.6	2.5	80	1.5
W842454		9	4.7	3.4	56	6.3
W842455		9	72.0	3.0	33	7.6
W842456		8	1.4	2.2	8	5.5
W842457		14	59.3	4.4	50	14.0
W842458		7	2.1	2.7	10	7.1
W842459		14	580	7.3	1180	12.3
W842460		12	3.0	3.9	21	11.8
W842461		11	860	6.8	111	12.1
W842462		11	880	6.6	111	12.1
W842463		3	4.3	1.5	7	2.3
W842464		7	2.1	2.5	9	7.1
W842465		13	1.3	3.1	7	9.7
W842466		20	1.2	3.8	9	12.1
W842467		10	2.8	2.9	7	8.1
W842468		56	32.4	31.3	173	65.7
W842469		10	0.9	3.0	9	9.6
W842470		14	0.8	4.3	16	11.7
W842471		35	12.0	6.9	101	29.4
W842472		11	3.6	3.4	62	8.6
W842473		9	0.8	2.5	6	6.4
W842474		24	1.0	3.5	8	13.5
W842475		19	0.7	3.1	7	9.1
W842476		20	1.2	3.4	13	9.2
W842477		22	0.8	3.4	11	12.8
W842478		28	1.7	3.7	44	11.6
W842479		2	0.2	0.8	16	<0.5
W842480		29	0.9	3.5	16	10.9

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CERTIFICATE OF ANALYSIS WH19192343

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	ME-MS61

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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 ST
VANCOUVER BC V6B 1L8

Finalized Date: 6-SEP-2019
Account: RCM

CERTIFICATE WH19203493

Project: Rau

P.O. No.: R19-D08

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 16-AUG-2019.

The following have access to data associated with this certificate:

ANDREW CARNE	ADAM COULTER	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
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-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid 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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2103 Dollarton Hwy
North Vancouver BC V7H 0A7
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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
W842481		8.17	<0.01	0.06	1.09	1.1	140	0.35	0.35	22.8	0.18	12.35	2.2	9	7.39	7.1
W842482		3.89	<0.01	0.03	0.87	1.1	120	0.37	0.49	22.3	0.10	8.95	2.4	6	6.15	3.3
W842483		3.97	<0.01	0.03	0.81	1.1	110	0.36	0.45	22.1	0.09	8.89	2.2	6	5.83	2.7
W842484		7.98	<0.01	0.01	0.71	1.1	220	0.26	0.19	21.0	0.10	7.30	2.3	5	7.49	2.0
W842485		9.39	<0.01	0.03	0.71	2.0	120	0.38	0.21	21.4	0.07	7.11	2.0	5	10.10	2.5
W842486		7.88	0.01	0.04	0.87	139.5	150	0.64	0.71	22.4	0.09	9.75	2.3	5	24.3	6.7
W842487		8.28	<0.01	0.02	0.58	19.5	60	0.50	0.27	23.5	0.05	7.89	1.5	4	12.40	3.1
W842488		0.10	0.36	2.28	5.83	9950	2130	1.59	364	12.30	0.78	137.5	48.2	62	11.75	841
W842489		8.32	<0.01	0.04	0.90	18.7	110	2.43	0.56	22.1	0.05	10.35	2.7	6	22.0	7.1
W842490		8.13	<0.01	0.03	0.58	108.5	120	3.22	5.84	22.4	0.02	8.45	1.9	4	13.35	6.4
W842491		8.28	<0.01	0.02	0.61	2.7	200	0.51	0.31	22.3	0.03	8.22	1.6	5	14.20	2.4
W842492		8.22	<0.01	0.04	0.74	98.0	120	0.85	0.61	22.6	0.04	8.34	1.7	5	11.60	3.9
W842493		8.10	<0.01	0.03	0.78	80.0	110	1.10	0.58	22.3	0.02	8.99	2.0	5	13.45	8.9
W842494		8.13	<0.01	0.06	0.87	109.5	110	1.99	7.89	22.2	<0.02	12.65	2.7	7	23.4	4.5
W842495		7.81	<0.01	0.01	0.33	1.1	60	1.54	0.18	22.1	0.03	5.85	0.9	2	9.65	1.5
W842496		8.37	<0.01	0.59	0.81	8.9	80	1.12	1.03	21.8	0.15	8.19	2.2	6	16.55	2.9
W842497		8.19	0.01	0.03	0.85	281	90	1.80	1.61	22.2	0.04	9.50	2.2	7	15.30	5.8
W842498		5.10	<0.01	0.01	0.05	1.6	20	0.05	0.08	21.4	0.07	1.17	0.8	<1	0.27	1.8
W842499		1.98	<0.01	0.22	4.30	3.9	1970	1.24	0.36	0.41	0.38	42.5	5.4	90	11.00	33.7
W842500		5.94	<0.01	0.21	4.18	1.6	2220	1.21	0.25	0.22	0.44	37.4	4.5	91	10.20	27.2
W842501		7.68	<0.01	0.21	4.17	8.6	2280	1.32	0.23	0.08	2.91	44.6	6.4	97	8.69	40.7
W842502		0.10	0.80	6.10	5.08	8230	1240	1.46	200	13.95	1.02	420	75.1	51	9.09	3460
W842503		7.31	<0.01	0.25	4.48	10.7	2420	1.54	0.49	0.09	12.90	48.0	10.2	93	7.51	39.5
W842504		7.74	<0.01	0.32	4.75	8.9	1530	1.78	0.70	0.09	9.60	54.9	11.0	98	9.24	44.7
W842505		4.23	<0.01	0.69	4.02	13.6	510	1.35	1.80	0.45	34.2	48.1	18.0	84	8.42	119.0
W842506		3.08	0.09	2.29	4.18	24.2	590	1.75	12.45	0.11	73.3	38.3	15.1	94	7.01	131.5
W842507		7.84	<0.01	0.22	4.68	5.1	1460	1.49	0.73	0.10	30.9	48.4	9.9	94	7.93	35.1
W842508		7.38	<0.01	0.25	3.98	2.5	1330	1.33	0.44	0.42	13.95	43.8	7.7	95	8.84	26.9
W842509		7.83	0.02	0.32	5.18	6.4	720	1.62	0.44	0.31	6.72	53.5	9.4	92	10.25	55.2
W842510		7.10	<0.01	0.26	5.18	9.8	1520	1.37	0.28	0.11	34.7	55.6	6.4	102	9.74	114.5
W842511		6.95	<0.01	0.56	5.51	24.6	420	1.61	0.46	0.30	16.10	54.8	10.8	96	11.25	214
W842512		6.49	<0.01	0.23	4.71	14.8	1550	1.32	0.21	0.22	18.00	52.5	13.7	96	9.55	152.0
W842513		7.27	<0.01	0.18	4.84	6.7	1740	1.33	0.17	0.07	6.54	48.1	5.6	99	9.59	69.1
W842514		6.01	<0.01	0.31	4.75	10.5	480	1.29	0.30	0.55	6.51	48.2	7.1	101	11.20	92.1
W842515		6.59	0.01	0.31	4.45	11.5	1150	1.30	0.48	1.71	77.8	42.6	15.2	97	7.28	105.5
W842516		2.41	<0.01	0.67	3.55	9.6	330	1.26	1.33	3.97	2.27	36.4	6.3	79	5.46	41.0
W842517		4.06	<0.01	0.23	4.20	7.0	790	1.19	0.43	0.09	32.6	45.3	5.6	83	7.22	79.6
W842518		<0.02	<0.01	0.22	4.21	7.8	900	1.15	0.44	0.08	31.3	47.7	5.6	84	7.34	81.1
W842519		6.86	<0.01	0.28	4.30	14.4	250	1.53	0.43	0.37	38.5	50.4	11.9	84	6.97	92.6
W842520		6.30	<0.01	0.32	4.55	18.6	430	1.57	0.33	0.08	40.5	42.9	14.0	80	7.62	91.7

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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	Fe	Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P
	Units	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
W842481		0.55	3.26	0.14	0.2	0.006	0.65	5.7	19.2	11.70	106	1.19	0.05	1.7	8.0	160
W842482		0.50	2.46	0.15	0.2	0.009	0.47	4.1	14.1	13.25	142	3.26	0.03	1.4	8.3	70
W842483		0.49	2.35	0.17	0.2	0.012	0.43	4.2	13.9	12.85	150	3.41	0.03	1.4	7.3	80
W842484		0.43	2.12	0.16	0.2	0.006	0.42	3.6	12.5	12.60	141	4.58	0.02	1.2	4.8	50
W842485		0.43	2.11	0.18	0.2	0.008	0.39	3.5	12.2	12.95	170	2.91	0.02	1.2	5.4	30
W842486		0.69	2.56	0.17	0.2	0.071	0.55	4.5	14.4	12.30	624	3.15	0.03	1.3	5.9	60
W842487		0.39	1.72	0.18	0.2	0.028	0.25	4.1	8.4	12.25	547	6.12	0.03	0.9	4.8	40
W842488		6.97	16.05	0.21	2.2	0.796	3.43	82.7	25.6	1.69	1220	14.15	1.19	12.7	33.4	970
W842489		0.62	3.36	0.12	0.2	0.031	0.52	4.9	17.9	11.35	489	4.46	0.03	1.6	8.2	40
W842490		0.56	1.90	0.14	0.1	0.044	0.30	4.2	10.6	11.65	596	1.70	0.02	0.9	4.3	50
W842491		0.41	2.10	0.16	0.2	0.019	0.34	4.1	12.1	11.75	260	2.84	0.01	1.0	4.3	70
W842492		0.53	2.37	0.14	0.1	0.031	0.38	4.0	13.2	12.25	398	1.76	0.01	1.1	4.3	50
W842493		0.63	2.85	0.17	0.2	0.066	0.42	4.3	13.8	12.05	522	2.06	0.02	1.2	5.8	60
W842494		0.60	3.35	0.22	0.2	0.025	0.53	5.9	21.7	11.70	378	2.26	0.02	1.6	7.5	50
W842495		0.24	1.09	0.26	0.1	0.020	0.23	3.1	8.5	12.60	308	0.65	0.01	0.5	2.3	40
W842496		0.51	2.65	0.20	0.2	0.023	0.37	4.0	14.8	12.80	315	1.58	0.02	1.3	6.3	30
W842497		0.64	2.79	0.19	0.2	0.022	0.44	4.8	17.9	13.05	347	2.28	0.02	1.4	6.1	40
W842498		0.46	0.24	0.24	<0.1	0.005	0.02	0.6	1.0	13.35	205	0.10	<0.01	0.1	1.6	190
W842499		2.05	12.25	0.18	1.8	0.046	2.04	22.1	20.3	0.72	83	1.08	0.06	10.0	26.9	320
W842500		1.74	12.15	0.16	1.7	0.048	1.99	19.3	19.0	0.54	64	1.50	0.06	10.1	24.8	280
W842501		1.60	12.05	0.16	1.6	0.050	1.93	23.7	17.9	0.43	61	1.91	0.05	10.2	44.7	310
W842502		9.55	19.30	0.40	1.9	1.660	1.98	243	35.5	1.44	2410	14.65	0.85	8.7	37.0	980
W842503		1.66	12.95	0.14	1.7	0.086	2.13	25.2	15.9	0.36	40	2.13	0.06	10.6	57.5	320
W842504		2.25	15.00	0.16	1.9	0.114	2.32	29.5	20.8	0.48	114	2.35	0.06	12.3	59.8	340
W842505		4.41	11.15	0.15	1.6	0.112	1.69	22.7	27.1	0.91	143	6.45	0.05	8.0	119.5	1210
W842506		3.10	9.36	0.12	1.3	0.088	1.57	21.3	29.6	0.59	113	3.66	0.05	6.8	141.0	500
W842507		1.99	12.20	0.12	1.5	0.073	2.19	26.3	23.4	0.51	96	1.84	0.05	9.7	71.7	350
W842508		2.56	10.45	0.13	1.5	0.035	1.49	24.1	29.2	0.67	131	2.50	0.16	8.0	72.3	320
W842509		3.20	13.75	0.13	2.0	0.061	2.26	28.4	35.2	0.83	148	1.59	0.14	9.8	55.3	650
W842510		2.13	12.15	0.13	1.5	0.050	2.01	30.3	34.3	0.59	91	2.07	0.06	9.2	133.0	480
W842511		3.47	12.10	0.13	1.5	0.067	1.86	29.6	42.8	0.77	114	3.46	0.06	8.6	275	890
W842512		1.93	11.80	0.13	1.6	0.053	1.82	28.7	34.0	0.50	86	2.34	0.07	9.3	241	520
W842513		1.64	11.80	0.13	1.6	0.054	2.07	25.8	33.8	0.48	66	1.67	0.05	9.3	100.5	450
W842514		2.53	11.60	0.12	1.6	0.040	1.97	25.9	38.9	0.71	109	2.27	0.16	9.7	154.0	500
W842515		3.03	9.96	0.12	1.4	0.031	1.02	23.4	35.1	1.02	235	2.84	0.18	10.0	361	450
W842516		5.58	10.80	0.12	1.1	0.073	1.23	18.8	24.1	2.37	663	3.09	0.13	8.4	42.5	500
W842517		1.41	10.45	0.21	1.6	0.028	1.71	25.1	40.9	0.39	56	1.79	0.04	10.2	149.5	420
W842518		1.39	10.80	0.18	1.6	0.028	1.71	25.7	41.8	0.39	54	1.80	0.04	10.3	148.5	420
W842519		1.85	9.82	0.19	1.5	0.027	1.52	26.6	45.5	0.39	52	2.31	0.07	9.2	276	1450
W842520		1.76	10.70	0.17	1.6	0.044	1.74	23.0	37.8	0.35	117	2.15	0.04	9.7	181.0	510

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	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
W842481		3.7	40.0	<0.002	0.33	0.18	2.0	1	0.9	155.5	0.12	<0.05	1.41	0.056	0.89	2.1
W842482		1.2	32.6	0.003	0.33	0.11	1.4	1	1.1	128.5	0.11	<0.05	1.15	0.051	0.70	2.2
W842483		1.1	30.9	0.005	0.30	0.11	1.4	1	1.1	127.0	0.10	<0.05	1.11	0.047	0.67	2.1
W842484		0.8	36.2	<0.002	0.23	0.08	1.2	1	1.0	111.5	0.08	<0.05	1.11	0.041	0.70	2.0
W842485		0.9	41.7	0.002	0.22	0.21	1.2	1	1.4	110.5	0.09	<0.05	0.96	0.040	0.75	1.5
W842486		1.1	127.5	<0.002	0.44	0.22	1.6	1	7.3	134.5	0.09	<0.05	1.23	0.048	1.17	2.1
W842487		0.8	76.1	<0.002	0.19	0.13	1.0	1	5.2	175.0	0.06	<0.05	0.86	0.031	0.60	1.9
W842488		54.8	198.5	0.002	0.74	40.5	9.0	5	70.3	315	0.88	0.70	11.25	0.343	2.09	6.3
W842489		1.3	157.0	0.002	0.30	0.17	1.7	1	9.0	165.5	0.10	<0.05	1.45	0.048	1.32	4.1
W842490		1.0	66.7	0.002	0.27	0.40	1.1	1	10.0	152.0	0.07	<0.05	0.84	0.030	0.74	2.1
W842491		0.8	60.0	<0.002	0.20	0.08	1.1	1	3.1	177.0	0.07	<0.05	0.84	0.034	0.84	2.0
W842492		1.3	57.4	<0.002	0.23	0.15	1.2	1	7.1	169.5	0.08	<0.05	0.90	0.039	0.73	2.0
W842493		0.8	70.9	0.002	0.28	0.21	1.5	1	7.3	175.5	0.08	<0.05	1.09	0.039	0.82	3.1
W842494		1.3	142.0	<0.002	0.34	0.24	1.8	1	6.2	178.5	0.12	<0.05	1.45	0.045	1.42	2.9
W842495		0.5	60.8	<0.002	0.07	0.08	0.6	1	1.6	144.0	<0.05	<0.05	0.47	0.017	0.57	1.4
W842496		1.1	68.4	0.002	0.23	0.15	1.5	1	3.9	126.0	0.10	<0.05	1.15	0.044	0.86	1.8
W842497		0.8	72.2	0.002	0.32	0.36	1.5	1	4.4	117.0	0.12	<0.05	0.98	0.045	0.88	2.0
W842498		1.2	1.6	<0.002	0.01	0.10	0.1	1	0.2	46.6	<0.05	<0.05	0.07	<0.005	0.02	0.6
W842499		5.3	114.5	0.007	1.00	1.72	8.1	4	6.0	17.5	0.68	0.11	7.70	0.280	1.25	3.2
W842500		5.2	111.0	0.007	0.75	1.72	7.8	5	6.1	16.2	0.66	0.10	7.24	0.271	1.17	3.2
W842501		6.9	106.0	0.015	0.71	2.64	8.0	6	4.8	16.7	0.67	0.08	7.48	0.268	1.81	3.4
W842502		32.9	118.0	0.003	1.37	32.5	7.4	5	99.7	248	0.63	1.07	9.48	0.243	1.27	13.7
W842503		6.5	118.0	0.013	0.93	2.11	8.5	5	7.3	18.4	0.69	0.11	7.89	0.278	2.06	3.3
W842504		5.9	131.0	0.012	1.22	2.31	9.5	4	11.9	21.7	0.78	0.13	8.67	0.298	2.03	3.6
W842505		16.6	107.5	0.020	2.91	2.84	7.2	8	11.7	19.0	0.56	0.17	6.14	0.228	2.15	6.1
W842506		30.5	108.0	0.025	1.91	3.35	6.7	10	9.8	23.3	0.46	0.70	5.98	0.208	2.76	5.0
W842507		6.3	102.5	0.014	1.11	1.51	7.8	3	10.7	19.6	0.65	0.08	7.42	0.280	1.09	3.0
W842508		9.4	88.5	0.010	1.07	1.14	7.2	3	4.4	66.6	0.53	0.08	6.59	0.242	1.05	2.7
W842509		8.2	114.0	0.006	1.55	1.78	9.2	4	5.6	40.8	0.66	0.12	8.07	0.300	1.63	3.8
W842510		10.8	98.6	0.008	1.13	3.34	8.3	4	3.4	24.8	0.62	0.09	7.47	0.279	1.31	4.4
W842511		16.9	93.8	0.010	2.15	4.78	8.7	8	3.1	43.0	0.57	0.18	6.95	0.258	4.12	8.0
W842512		10.1	90.9	0.034	1.04	4.67	8.1	5	3.0	67.9	0.63	0.08	7.16	0.264	6.72	5.6
W842513		6.9	97.7	0.011	1.05	2.48	7.8	3	2.8	35.6	0.63	0.09	6.99	0.268	1.77	4.0
W842514		8.5	100.5	0.010	1.75	2.69	8.1	4	2.5	115.0	0.63	0.11	6.95	0.269	3.47	4.5
W842515		10.9	58.8	0.031	1.51	4.84	7.6	3	4.6	261	0.67	0.21	6.90	0.266	5.87	6.3
W842516		12.9	73.7	0.007	4.26	3.40	6.7	5	6.3	154.5	0.54	0.38	5.66	0.228	1.04	2.3
W842517		12.6	110.0	0.017	1.05	2.92	7.3	3	2.9	69.2	0.61	0.09	7.39	0.240	2.89	5.9
W842518		12.2	110.5	0.014	1.05	3.03	7.5	3	3.0	67.9	0.63	0.06	7.28	0.240	2.89	5.8
W842519		11.9	104.5	0.031	1.50	4.30	7.6	4	2.8	72.8	0.56	0.09	6.82	0.216	3.02	6.3
W842520		9.4	96.9	0.056	1.25	4.84	7.4	4	3.7	33.9	0.60	<0.05	6.70	0.243	5.16	7.6

***** 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
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: 6-SEP-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19203493

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	V	W	Y	Zn	Zr
	Units	ppm	ppm	ppm	ppm	ppm
	LOD	1	0.1	0.1	2	0.5
W842481		14	0.5	4.8	10	7.8
W842482		12	0.8	3.0	14	7.2
W842483		11	0.9	3.0	15	7.0
W842484		10	1.3	2.4	10	6.0
W842485		9	1.9	2.3	15	5.5
W842486		10	2.9	3.2	14	8.1
W842487		7	5.0	2.2	9	6.3
W842488		75	23.2	20.6	129	85.9
W842489		11	3.7	3.4	10	8.4
W842490		8	4.4	2.5	11	5.3
W842491		9	2.0	2.5	10	4.8
W842492		10	3.4	2.4	14	5.3
W842493		11	4.8	2.7	9	6.7
W842494		11	6.3	3.9	17	8.9
W842495		4	1.8	1.6	10	3.1
W842496		10	2.3	2.6	12	7.1
W842497		10	3.0	2.6	11	6.7
W842498		2	0.1	0.8	15	<0.5
W842499		184	1.1	9.3	82	72.4
W842500		181	1.3	8.9	92	68.9
W842501		188	1.1	9.5	137	68.0
W842502		56	33.1	26.9	170	62.1
W842503		197	1.4	9.1	215	68.1
W842504		202	1.5	11.5	281	79.7
W842505		167	1.1	23.4	709	70.8
W842506		181	1.2	15.8	503	50.1
W842507		187	1.3	13.5	359	61.7
W842508		174	0.9	13.9	330	60.7
W842509		196	1.2	19.6	312	70.9
W842510		216	1.1	17.7	407	64.8
W842511		240	1.1	21.2	612	65.9
W842512		212	1.1	15.1	345	61.9
W842513		214	1.2	11.6	183	63.1
W842514		212	1.3	15.6	317	65.2
W842515		205	1.1	20.4	948	58.3
W842516		144	1.1	21.0	265	44.8
W842517		187	1.5	12.5	283	62.6
W842518		188	1.5	12.8	274	64.1
W842519		187	2.3	20.5	396	62.1
W842520		208	1.2	16.7	651	60.0

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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Project: Rau

Finalized Date: 6-SEP-2019
Account: RCM

CERTIFICATE OF ANALYSIS WH19203493

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	ME-MS61

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North Vancouver BC V7H 0A7
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VANCOUVER BC V6B 1L8

Finalized Date: 6-SEP-2019
Account: RCM

CERTIFICATE WH19203502

Project: Rau

P.O. No.: R19-D09

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 16-AUG-2019.

The following have access to data associated with this certificate:

ANDREW CARNE	ADAM COULTER	JULIA LANE

SAMPLE PREPARATION

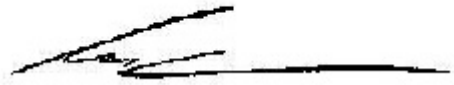
ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
PUL-31	Pulverize split to 85% <75 um
LOG-23	Pulp Login - Rcvd with Barcode
LOG-21d	Sample logging - ClientBarCode Dup
SPL-21d	Split sample - duplicate
PUL-31d	Pulverize Split - duplicate

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid ICP-MS	
Ag-OG62	Ore Grade Ag - Four Acid	
ME-OG62	Ore Grade Elements - Four Acid	ICP-AES
Pb-OG62	Ore Grade Pb - Four Acid	
Zn-OG62	Ore Grade Zn - 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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North Vancouver BC V7H 0A7
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Finalized Date: 6-SEP-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19203502

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
W842521		5.85	<0.01	0.37	4.27	41.0	820	1.42	0.25	0.11	156.5	47.3	27.8	91	7.14	97.1
W842522		4.48	<0.01	0.62	4.63	23.6	640	1.64	0.35	0.07	17.45	42.2	4.6	95	7.74	73.3
W842523		2.81	<0.01	2.39	4.02	19.6	520	1.19	0.34	0.05	22.3	28.2	4.5	94	6.55	65.3
W842524		5.79	<0.01	2.81	4.07	35.3	220	1.02	0.29	0.06	47.9	25.3	6.2	88	6.49	45.8
W842525		0.10	0.33	2.69	5.71	10000	2080	1.63	371	11.90	0.93	139.0	49.9	63	12.70	812
W842526		4.94	<0.01	1.50	4.50	30.7	470	1.09	0.35	0.07	17.30	32.9	6.4	88	6.29	44.4
W842527		5.00	<0.01	1.77	4.16	19.7	990	1.08	0.18	0.06	25.1	33.1	5.9	80	6.66	43.3
W842528		4.77	0.01	0.38	3.58	12.9	310	1.09	0.38	0.13	11.40	40.1	8.4	89	8.99	99.7
W842529		2.80	<0.01	0.91	3.92	13.5	250	0.82	0.67	0.06	16.15	25.8	5.4	91	3.40	133.5
W842530		3.14	0.27	>100	6.78	128.5	250	2.81	1.51	0.51	433	20.2	9.1	77	4.71	146.0
W842531		6.28	<0.01	0.52	3.78	8.0	290	2.16	1.44	0.09	10.95	29.5	5.9	80	7.39	87.9
W842532		5.84	<0.01	0.29	4.42	5.8	550	2.48	1.70	0.14	26.1	49.2	8.2	84	9.68	51.3
W842533		5.83	<0.01	0.13	4.14	10.6	230	2.07	1.78	0.11	13.70	43.1	6.4	84	9.43	45.5
W842534		5.81	<0.01	0.85	4.71	63.7	160	1.80	1.96	0.10	45.5	34.2	6.9	82	8.82	43.5
W842535		<0.02	<0.01	0.80	4.64	67.7	150	1.84	1.85	0.10	42.2	33.5	6.8	82	9.04	42.6
W842536		6.43	<0.01	0.16	4.39	7.4	130	3.37	1.82	0.07	9.51	40.4	7.4	90	8.45	99.6
W842537		6.39	<0.01	0.21	4.91	16.5	120	1.81	1.87	0.08	48.5	46.7	9.0	102	8.81	128.5
W842538		6.13	<0.01	0.15	4.78	10.7	480	1.48	1.60	0.08	13.65	40.5	6.8	99	8.11	76.0
W842539		6.53	<0.01	0.22	4.93	24.8	240	1.75	2.24	0.09	19.80	42.2	7.9	101	13.25	119.0
W842540		6.19	<0.01	0.20	4.02	15.7	200	4.36	2.27	0.41	272	42.4	56.4	85	6.69	144.0
W842541		3.12	<0.01	0.47	3.69	27.6	80	10.55	3.73	0.42	137.5	43.0	124.5	79	4.86	158.0
W842542		6.47	<0.01	1.12	4.21	21.7	150	2.88	2.39	0.15	109.0	37.3	35.7	91	8.18	41.8
W842543		5.72	0.02	5.24	3.85	56.5	160	1.96	1.36	0.11	126.5	29.3	6.4	76	5.04	108.5
W842544		4.14	<0.01	1.50	1.60	26.6	1290	2.77	0.71	0.09	40.6	21.1	3.6	43	2.55	13.8
W842545		4.53	0.01	3.72	2.64	99.4	120	3.85	1.76	0.34	150.5	35.4	10.8	67	3.41	60.5
W842546		2.01	0.01	4.36	1.22	146.0	140	2.05	2.67	0.22	152.0	30.9	8.6	47	1.60	32.0
W842547		2.15	0.01	4.79	1.18	124.5	390	1.82	2.37	0.25	167.0	29.9	11.4	45	1.54	34.0
W842548		3.49	<0.01	9.63	1.06	88.5	50	0.55	0.66	0.49	151.5	12.10	16.6	63	1.49	48.9
W842549		3.09	<0.01	0.61	1.68	13.4	70	8.45	1.54	4.35	202	19.30	28.5	37	3.69	254
W842550		3.24	<0.01	0.44	1.53	10.9	180	34.2	1.96	8.24	54.8	92.2	22.6	48	2.12	318
W842551		2.65	<0.01	0.12	3.84	31.0	2220	29.3	0.68	6.58	278	44.0	55.5	45	10.00	31.8
W842552		2.97	<0.01	0.17	4.80	85.8	470	3.22	2.20	7.18	594	18.10	61.4	52	13.75	22.8
W842553		2.45	<0.01	0.16	6.93	128.0	750	3.04	2.32	6.16	259	32.8	42.2	55	17.15	29.8
W842554		4.88	<0.01	0.01	0.11	1.0	20	0.08	0.02	35.0	1.19	1.13	1.3	1	0.05	1.7
W842555		3.70	<0.01	0.20	5.57	67.6	1820	4.78	1.88	4.52	292	37.3	27.3	48	6.73	21.6
W842556		4.29	0.01	0.26	4.73	34.8	4110	13.55	1.31	2.38	87.1	78.3	33.4	48	3.33	30.5
W842557		0.11	1.63	12.50	4.64	>10000	930	1.72	307	13.95	1.98	408	131.5	47	9.09	6430
W842558		2.30	<0.01	0.19	3.55	21.1	1930	15.50	0.78	2.52	155.5	36.5	31.1	39	2.52	18.9
W842559		2.57	<0.01	0.33	10.25	75.5	2960	10.55	7.51	3.60	86.1	98.9	17.0	92	33.0	21.9
W842560		1.84	<0.01	0.64	5.68	60.4	160	4.50	4.79	6.04	339	133.5	24.0	116	37.0	44.7

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Finalized Date: 6-SEP-2019
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CERTIFICATE OF ANALYSIS WH19203502

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	Fe	Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P
	Units	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
W842521		1.50	10.30	0.15	1.6	0.044	1.65	26.2	46.7	0.38	43	2.67	0.05	9.3	402	640
W842522		1.50	10.80	0.14	1.6	0.053	1.74	23.5	33.8	0.32	28	2.41	0.04	9.4	101.0	590
W842523		1.56	10.75	0.11	1.5	0.037	1.73	15.8	27.5	0.28	22	2.01	0.04	9.6	56.7	270
W842524		1.69	10.25	0.12	1.6	0.038	1.66	13.2	24.7	0.25	24	3.51	0.03	10.0	71.5	330
W842525		6.72	16.55	0.19	2.4	0.822	3.41	82.5	25.8	1.65	1180	14.25	1.16	13.9	34.7	950
W842526		1.80	10.50	0.13	1.5	0.022	1.43	18.5	33.4	0.21	23	3.13	0.03	10.1	114.0	390
W842527		1.15	10.80	0.13	1.5	0.020	1.65	18.4	28.7	0.24	25	2.34	0.03	10.3	90.5	290
W842528		1.72	9.93	0.13	1.4	0.019	1.51	23.3	39.5	0.37	101	2.78	0.06	9.5	108.0	280
W842529		1.80	7.89	0.11	1.3	0.015	0.71	13.9	33.9	0.13	42	2.49	0.02	9.7	77.4	310
W842530		6.26	10.55	0.13	0.9	0.164	0.75	10.1	21.5	0.16	10600	13.35	<0.01	8.4	296	1650
W842531		1.30	8.49	0.10	1.4	0.026	1.46	16.4	48.1	0.30	50	3.12	0.06	9.2	79.3	390
W842532		1.70	10.50	0.16	1.7	0.033	2.06	26.5	59.4	0.48	68	2.34	0.09	10.0	107.0	510
W842533		1.65	9.57	0.15	1.7	0.026	1.92	22.5	52.8	0.49	65	2.64	0.08	9.7	89.5	490
W842534		2.47	11.85	0.13	1.7	0.035	1.64	17.8	40.3	0.35	229	4.91	0.04	9.5	88.4	680
W842535		2.54	11.50	0.13	1.7	0.035	1.62	17.3	41.5	0.36	267	4.64	0.04	9.4	87.3	640
W842536		1.93	10.55	0.13	1.6	0.028	1.79	20.5	62.1	0.46	44	1.93	0.06	9.0	71.2	390
W842537		2.44	12.75	0.19	1.9	0.035	1.92	23.3	50.0	0.43	34	3.67	0.05	10.5	101.5	570
W842538		1.45	12.85	0.14	1.8	0.036	2.04	21.5	43.7	0.37	23	1.59	0.06	11.5	55.1	450
W842539		1.90	12.10	0.17	2.0	0.020	2.27	20.8	60.8	0.73	75	1.79	0.08	11.8	107.0	480
W842540		1.94	10.00	0.19	1.3	0.088	1.21	23.0	55.9	0.40	97	3.58	0.04	8.1	754	1560
W842541		3.43	13.15	0.16	1.0	0.062	0.78	22.2	38.9	0.40	215	3.23	0.04	8.3	1575	620
W842542		1.66	11.15	0.14	1.7	0.025	1.99	19.1	58.0	0.34	65	4.69	0.07	9.5	401	720
W842543		1.43	8.79	0.14	1.3	0.079	1.38	16.3	34.5	0.23	30	5.76	0.03	6.6	83.7	980
W842544		0.71	4.73	0.11	0.7	0.141	0.63	16.0	26.1	0.11	32	4.21	0.01	3.9	43.5	560
W842545		1.74	6.36	0.19	0.5	0.326	0.91	39.4	45.9	0.13	38	20.0	0.02	2.2	140.0	2060
W842546		1.57	4.12	0.15	0.3	0.247	0.35	37.8	15.1	0.07	32	17.95	0.01	1.0	141.0	1360
W842547		1.41	4.20	0.16	0.2	0.254	0.36	36.8	17.1	0.07	30	14.95	0.01	0.9	177.0	1460
W842548		2.71	6.90	0.16	0.3	0.159	0.27	7.0	9.6	0.06	41	41.0	0.01	1.0	353	2480
W842549		4.34	6.03	0.14	0.2	0.083	0.28	22.1	27.4	6.49	447	13.85	0.08	0.9	356	2070
W842550		6.45	8.91	0.24	0.4	0.114	0.18	94.8	30.9	12.05	953	24.3	0.17	1.8	288	2370
W842551		4.70	9.45	0.14	0.4	0.109	0.63	43.3	31.8	10.55	1880	40.8	0.09	1.9	751	3470
W842552		0.76	5.99	0.12	0.3	0.122	0.50	22.2	9.6	12.15	327	65.2	0.05	0.9	786	4900
W842553		0.85	5.89	0.21	0.3	0.690	0.47	58.7	9.0	10.40	170	59.5	0.05	1.3	565	4420
W842554		0.13	0.37	0.14	0.1	<0.005	0.03	1.3	1.1	1.81	118	0.20	0.05	0.2	1.7	100
W842555		0.84	5.39	0.25	0.3	0.155	0.22	40.7	16.3	6.37	316	33.5	0.05	0.8	513	5740
W842556		1.59	6.38	0.23	0.4	0.112	0.34	78.1	31.0	2.63	280	34.9	0.05	1.8	694	3870
W842557		10.05	18.35	0.44	1.6	2.94	1.53	245	38.7	1.27	2140	19.35	0.97	9.1	68.6	900
W842558		0.82	6.62	0.11	0.4	0.094	0.20	36.6	32.9	3.21	298	35.6	0.05	2.0	525	2240
W842559		3.44	8.09	0.43	0.5	0.219	0.76	104.0	28.0	6.50	426	45.5	0.04	2.3	929	5320
W842560		4.44	12.60	0.41	0.7	0.156	1.08	132.0	32.5	10.00	394	158.0	0.08	3.4	621	7890

***** 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
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: 6-SEP-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19203502

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
W842521		14.2	94.7	0.168	1.31	9.57	7.6	4	4.5	44.2	0.56	<0.05	6.14	0.240	13.05	6.0
W842522		31.6	103.5	0.015	1.44	4.96	7.5	4	5.1	36.8	0.57	0.07	6.31	0.243	1.49	6.9
W842523		278	98.8	0.012	1.66	6.06	7.1	3	4.8	19.0	0.56	0.08	6.16	0.253	1.49	3.2
W842524		636	95.7	0.014	1.94	9.09	7.0	3	5.5	16.9	0.60	0.08	6.49	0.238	1.33	4.2
W842525		56.9	204	0.002	0.76	41.4	9.3	5	73.5	313	0.85	0.70	11.45	0.327	2.09	5.9
W842526		117.5	100.5	0.010	1.79	6.76	6.5	4	4.7	21.1	0.60	0.08	6.69	0.223	1.88	5.5
W842527		280	105.5	0.009	1.16	7.01	6.8	2	5.5	21.3	0.61	0.07	6.61	0.237	1.89	3.7
W842528		21.0	116.5	0.018	1.38	4.77	7.0	3	6.9	45.9	0.57	0.08	6.49	0.209	2.98	4.1
W842529		117.0	72.5	0.012	1.86	7.77	4.1	3	11.0	31.3	0.60	0.08	6.55	0.231	2.01	4.2
W842530		>10000	77.7	0.025	3.65	74.6	6.5	8	57.0	52.9	0.52	0.15	5.08	0.199	2.27	27.1
W842531		38.3	208	0.016	1.22	6.55	6.0	3	9.3	65.2	0.54	0.09	6.44	0.212	2.49	4.9
W842532		37.4	311	0.021	1.11	3.44	8.0	4	6.1	67.7	0.58	0.10	7.52	0.230	2.83	5.1
W842533		12.0	293	0.016	1.26	2.80	7.1	3	5.0	61.1	0.57	0.09	7.00	0.215	2.85	4.9
W842534		175.0	212	0.011	1.83	11.50	7.8	3	7.7	32.2	0.57	0.09	7.04	0.221	3.13	8.1
W842535		159.5	211	0.014	1.86	12.00	7.6	4	7.7	30.9	0.55	0.08	6.60	0.219	3.18	7.3
W842536		21.0	244	0.016	1.95	2.31	7.6	4	7.6	36.2	0.53	0.09	6.33	0.227	2.30	5.5
W842537		101.5	204	0.022	2.31	8.86	9.1	5	10.0	37.5	0.62	0.08	7.87	0.246	3.33	7.7
W842538		19.1	199.5	0.011	1.53	3.93	8.7	4	9.5	22.2	0.68	0.07	7.72	0.275	2.39	5.1
W842539		25.2	308	0.023	1.78	3.53	9.0	5	7.3	58.9	0.70	0.10	7.75	0.264	3.34	8.1
W842540		64.8	212	0.347	1.75	5.31	6.4	5	11.0	80.5	0.49	0.10	5.54	0.192	7.16	22.2
W842541		16.6	157.5	0.490	3.50	6.31	4.7	6	13.5	68.8	0.48	0.20	4.77	0.189	15.80	45.3
W842542		210	273	0.152	1.65	4.30	7.9	4	6.5	46.4	0.56	0.07	5.83	0.223	5.37	12.8
W842543		873	154.5	0.028	1.84	12.55	6.2	5	11.0	29.2	0.40	0.08	4.42	0.164	2.12	11.8
W842544		151.0	118.5	0.014	0.64	5.74	2.8	3	10.0	20.9	0.52	<0.05	2.64	0.089	0.97	5.6
W842545		443	174.5	0.067	1.90	20.0	3.8	11	19.5	46.2	0.35	0.06	1.62	0.052	2.00	27.1
W842546		686	62.4	0.096	1.93	19.40	1.1	9	12.7	41.1	0.12	0.07	0.77	0.024	0.92	22.6
W842547		679	61.7	0.121	1.76	22.8	1.1	9	12.3	38.5	0.11	0.05	0.94	0.024	1.19	24.0
W842548		1365	36.5	0.182	3.39	31.5	0.7	17	4.9	32.6	0.05	0.05	0.35	0.028	2.38	50.2
W842549		35.6	83.2	0.180	4.54	4.78	2.6	19	11.9	74.2	0.06	0.19	0.98	0.024	4.14	48.1
W842550		13.2	43.6	0.136	5.47	1.94	3.4	22	17.9	31.5	0.17	0.28	2.24	0.037	4.15	42.9
W842551		69.3	222	0.394	0.51	8.23	3.1	5	11.6	137.0	0.31	0.05	1.59	0.040	5.42	50.4
W842552		92.9	206	1.310	0.62	21.6	4.2	5	6.2	84.9	0.08	0.08	1.53	0.032	14.35	76.4
W842553		26.5	224	0.991	1.00	4.00	3.8	8	13.6	45.9	0.08	0.05	1.86	0.035	18.50	82.2
W842554		0.7	1.2	0.003	0.02	0.10	0.2	1	<0.2	82.9	<0.05	<0.05	0.09	0.005	0.08	0.3
W842555		94.1	90.9	0.216	0.47	8.01	3.3	12	9.1	137.0	0.16	0.05	1.32	0.021	3.08	86.0
W842556		71.7	74.1	0.238	0.41	7.05	2.9	4	9.2	158.0	2.17	0.05	2.49	0.027	5.21	70.0
W842557		30.8	91.4	0.009	1.84	38.0	7.0	9	107.5	234	0.56	2.48	9.18	0.215	1.03	14.0
W842558		43.5	51.1	0.192	0.21	2.93	1.7	2	10.2	66.6	5.53	<0.05	1.70	0.022	1.53	48.3
W842559		123.5	344	0.093	1.09	16.00	5.2	31	3.2	81.6	0.33	0.10	3.64	0.054	6.31	66.3
W842560		80.6	360	0.248	2.88	7.39	4.2	26	7.8	34.2	0.30	0.12	5.31	0.091	9.96	96.0

***** 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 ST
VANCOUVER BC V6B 1L8

Finalized Date: 6-SEP-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19203502

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Ag-OG62	Pb-OG62	Zn-OG62
	Analyte	V	W	Y	Zn	Zr	Ag	Pb	Zn
	Units	ppm	ppm	ppm	ppm	ppm	ppm	%	%
	LOD	1	0.1	0.1	2	0.5	1	0.001	0.001
W842521		191	1.1	14.7	768	63.2			
W842522		207	1.0	11.5	245	61.4			
W842523		178	1.3	8.5	1010	61.8			
W842524		172	1.4	9.1	3150	58.8			
W842525		74	21.8	22.9	135	84.0			
W842526		209	1.5	11.7	439	60.7			
W842527		183	1.3	8.7	546	56.7			
W842528		169	1.7	13.8	339	57.6			
W842529		178	4.4	9.5	373	48.4			
W842530		431	24.6	27.6	>10000	34.1	151	1.630	2.56
W842531		166	6.9	8.4	156	52.3			
W842532		188	7.8	13.9	371	69.1			
W842533		183	7.5	13.1	219	63.0			
W842534		220	3.8	16.3	1440	66.9			
W842535		215	3.8	15.7	1460	65.4			
W842536		201	9.0	15.0	138	59.8			
W842537		219	2.4	20.6	1340	72.1			
W842538		210	2.1	15.1	195	72.8			
W842539		219	4.7	26.9	152	77.0			
W842540		214	6.2	33.8	1230	51.0			
W842541		235	30.1	32.3	2940	40.1			
W842542		274	6.5	15.0	1850	64.5			
W842543		335	2.9	15.2	6550	48.1			
W842544		185	5.3	6.9	1350	29.5			
W842545		623	7.4	24.1	2660	21.5			
W842546		274	6.0	19.3	5460	9.9			
W842547		266	4.7	20.1	4940	10.2			
W842548		316	1.7	34.1	8090	9.4			
W842549		275	17.5	24.3	861	9.6			
W842550		353	19.1	37.5	576	13.1			
W842551		423	13.9	49.2	5880	18.0			
W842552		347	10.4	44.9	2900	13.4			
W842553		435	9.4	59.3	3800	11.2			
W842554		2	0.1	2.4	13	2.1			
W842555		453	23.6	55.5	1240	14.7			
W842556		461	263	40.3	1730	18.4			
W842557		48	23.8	31.8	221	59.0			
W842558		226	159.0	27.9	773	11.4			
W842559		1090	61.4	137.5	2950	19.1			
W842560		732	47.7	198.5	2550	23.7			

***** See Appendix Page for comments regarding this certificate *****

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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 ST
VANCOUVER BC V6B 1L8

Project: Rau

Finalized Date: 6-SEP-2019
Account: RCM

CERTIFICATE OF ANALYSIS WH19203502

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:			
Ag-OG62	Au-AA25	ME-MS61	ME-OG62
Pb-OG62	Zn-OG62		

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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 ST
VANCOUVER BC V6B 1L8

Finalized Date: 4-NOV-2019
Account: RCM

CERTIFICATE WH19268571

Project: Rau

P.O. No.: R19-D09

This report is for 10 Pulp samples submitted to our lab in Whitehorse, YT, Canada on 24-OCT-2019.

The following have access to data associated with this certificate:

ANDREW CARNE	ADAM COULTER	JULIA LANE

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
FND-02	Find Sample for Addn Analysis

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
PGM-ICP23	Pt, Pd, Au 30g FA ICP	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:

Saa Traxler, General Manager, North Vancouver

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.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 4-NOV-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19268571

Sample Description	Method Analyte Units LOD	PGM-ICP23 Au ppm 0.001	PGM-ICP23 Pt ppm 0.005	PGM-ICP23 Pd ppm 0.001
W842540		<0.001	<0.005	0.001
W842541		<0.001	<0.005	0.001
W842551		<0.001	<0.005	<0.001
W842552		<0.001	<0.005	0.001
W842553		<0.001	<0.005	0.001
W842555		<0.001	<0.005	0.001
W842556		<0.001	<0.005	<0.001
W842558		<0.001	<0.005	0.001
W842559		<0.001	<0.005	0.003
W842560		<0.001	0.006	0.004

***** 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
www.alsglobal.com/geochemistry

To: **ATAC RESOURCES LTD.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Project: Rau

Finalized Date: 4-NOV-2019
Account: RCM

CERTIFICATE OF ANALYSIS WH19268571

CERTIFICATE COMMENTS

LABORATORY ADDRESSES

Applies to Method:

Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

FND-02 PGM-ICP23

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 ST
VANCOUVER BC V6B 1L8

Finalized Date: 21-SEP-2019
Account: RCM

CERTIFICATE WH19210573

Project: Rau

P.O. No.: R19-D10

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 24-AUG-2019.

The following have access to data associated with this certificate:

ANDREW CARNE	ADAM COULTER	JULIA LANE

SAMPLE PREPARATION

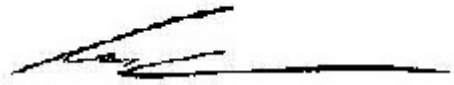
ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
PUL-31	Pulverize split to 85% <75 um
LOG-23	Pulp Login - Rcvd with Barcode
LOG-21d	Sample logging - ClientBarCode Dup
SPL-21d	Split sample - duplicate
PUL-31d	Pulverize Split - duplicate

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid ICP-MS	
ME-OG62	Ore Grade Elements - Four Acid	ICP-AES
Zn-OG62	Ore Grade Zn - 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.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 (604) 984 0221 Fax: +1 (604) 984 0218
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Finalized Date: 21-SEP-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19210573

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
W842561		2.49	<0.01	0.23	7.13	24.5	9000	34.2	1.05	4.91	24.1	83.5	10.6	66	13.50	22.5
W842562		2.24	<0.01	0.26	10.10	42.2	2920	7.83	1.84	2.80	189.0	47.7	80.6	75	16.00	58.0
W842563		4.91	<0.01	0.01	0.41	0.3	160	0.81	0.10	33.3	0.86	3.03	0.9	3	0.25	2.4
W842564		3.07	<0.01	0.24	6.40	49.2	3450	7.91	1.09	5.40	250	28.9	154.5	46	10.30	69.5
W842565		3.45	<0.01	0.17	2.50	14.1	2810	12.55	0.85	10.65	128.5	29.8	72.6	21	9.34	20.3
W842566		<0.02	0.01	0.17	2.38	14.3	2370	12.85	0.84	10.70	140.0	29.7	72.8	20	9.48	20.0
W842567		4.44	<0.01	0.16	0.77	6.2	2090	18.05	0.76	15.30	23.8	26.3	32.6	21	13.30	24.3
W842568		4.14	<0.01	0.07	2.04	4.0	8480	25.4	0.34	12.35	18.95	14.20	17.7	13	14.95	5.5
W842569		2.54	<0.01	0.09	2.37	11.0	700	15.65	1.25	16.55	46.1	24.1	43.2	24	20.8	16.6
W842570		6.65	<0.01	0.07	0.37	2.4	3010	5.07	3.09	20.2	11.30	12.15	8.3	10	4.43	10.6
W842571		3.85	<0.01	0.05	0.27	<0.2	2570	8.35	1.05	21.3	2.77	10.85	2.3	10	3.98	7.5
W842572		5.40	<0.01	0.04	0.38	0.9	2150	13.20	0.79	20.3	1.48	8.68	1.3	10	9.76	12.7
W842573		5.94	<0.01	0.11	2.15	2.5	5830	153.5	0.38	8.91	0.62	55.8	1.0	35	4.05	9.0
W842574		0.10	0.85	7.12	4.86	8190	1210	1.59	207	12.95	0.86	413	73.4	48	9.13	3220
W842575		0.46	<0.01	1.08	3.32	13.8	2330	1.31	0.32	1.19	34.3	24.8	4.1	57	4.82	42.4
W842576		0.51	<0.01	0.48	4.03	13.1	1250	1.43	0.64	3.64	70.3	47.2	34.0	67	6.09	47.1
W842577		2.92	<0.01	0.19	4.37	3.1	2710	1.38	0.22	0.09	8.47	48.3	8.1	85	11.40	79.8
W842578		4.61	<0.01	0.17	4.53	2.5	2710	1.12	0.22	0.05	2.57	42.2	7.4	90	9.68	51.4
W842579		5.57	<0.01	0.47	4.52	2.2	2820	1.43	0.22	0.04	1.71	42.5	3.1	88	9.34	67.4
W842580		0.23	<0.01	0.85	4.26	1.9	2410	1.20	0.15	0.03	0.30	33.3	1.1	83	7.82	15.5
W842581		3.71	<0.01	0.78	4.76	3.1	2380	1.33	0.19	0.04	0.43	44.3	3.1	91	8.17	32.8
W842582		6.24	<0.01	0.67	4.23	6.6	2410	1.36	0.24	0.04	1.75	43.7	5.7	87	7.90	54.3
W842583		5.36	<0.01	1.47	4.35	8.3	2450	1.51	0.22	0.04	1.04	43.6	1.7	87	7.16	20.5
W842584		0.10	0.34	2.54	5.68	9990	2060	1.67	326	11.30	0.99	131.5	47.8	61	11.65	792
W842585		5.63	<0.01	2.39	4.41	10.4	2180	1.27	0.30	0.05	1.03	39.8	0.6	88	7.21	40.3
W842586		5.34	<0.01	3.13	4.82	12.0	2260	1.28	0.19	0.08	0.59	40.2	0.7	84	7.65	28.7
W842587		6.24	<0.01	1.95	4.63	15.2	520	1.23	0.26	0.16	78.3	42.1	18.9	89	7.49	220
W842588		5.13	<0.01	0.86	4.99	6.5	1090	1.04	0.23	0.07	54.3	53.1	13.1	89	7.88	124.5
W842589		6.06	<0.01	0.48	4.44	4.2	740	1.11	0.24	0.04	19.00	46.7	9.8	90	7.55	92.4
W842590		4.99	<0.01	0.83	5.30	10.7	780	1.68	0.28	0.06	45.8	51.5	8.1	93	9.01	165.5
W842591		6.13	<0.01	0.89	4.72	12.8	410	1.26	0.27	0.05	3.12	47.9	11.6	90	8.42	76.0
W842592		4.83	<0.01	4.60	5.09	61.1	2150	1.60	0.22	0.04	1.30	31.9	1.4	85	8.01	43.7
W842593		5.99	<0.01	4.96	4.24	41.4	2600	1.42	0.40	0.04	0.78	32.5	0.7	85	6.78	20.0
W842594		4.63	<0.01	2.32	4.41	53.4	2610	1.62	0.20	0.07	1.01	36.7	1.1	81	6.65	36.5
W842595		4.27	<0.01	2.87	4.23	47.3	2430	1.73	0.67	0.03	0.69	45.1	0.9	82	6.89	34.2
W842596		2.20	<0.01	1.44	4.12	46.2	2360	1.71	0.55	0.03	0.70	45.1	0.8	81	6.74	32.3
W842597		4.53	<0.01	2.30	5.11	99.0	2490	1.77	0.37	0.11	1.95	43.7	1.4	80	6.94	53.8
W842598		5.16	<0.01	2.91	5.99	156.5	2040	2.79	0.20	0.18	3.63	32.9	1.9	71	5.94	46.0
W842599		4.79	<0.01	2.43	6.17	76.8	2420	5.93	0.18	0.12	3.05	29.6	1.8	76	8.23	41.6
W842600		5.38	<0.01	2.74	8.38	147.0	1770	1.90	0.17	0.32	7.45	22.2	2.2	62	4.22	36.6

***** 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
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: 21-SEP-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19210573

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	Fe	Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P
	Units	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
W842561		3.52	9.33	0.14	0.7	0.155	0.96	80.2	22.8	6.58	945	45.6	0.09	4.6	486	4060
W842562		13.20	4.47	0.15	0.4	0.085	0.37	55.2	18.8	3.90	4400	51.0	0.03	1.6	1170	3250
W842563		0.20	0.92	<0.05	0.1	<0.005	0.10	2.9	1.9	2.14	125	1.41	0.12	0.4	13.9	140
W842564		14.85	3.78	0.11	0.4	0.052	0.38	29.3	13.9	4.77	5610	41.4	0.05	1.6	1900	1980
W842565		11.80	2.70	0.10	0.2	0.195	0.28	35.2	10.3	8.39	4930	31.5	0.03	1.0	689	1150
W842566		11.85	2.73	0.10	0.2	0.189	0.27	33.7	10.3	8.56	4950	30.7	0.03	0.8	658	1110
W842567		4.45	3.21	0.05	0.2	0.228	0.32	32.2	14.9	12.30	2090	34.2	0.06	0.8	374	1500
W842568		3.95	6.53	0.06	0.2	0.065	0.66	14.2	75.0	10.60	1920	23.4	0.09	1.0	176.5	900
W842569		2.54	3.27	0.10	0.1	0.069	0.33	26.4	24.8	10.75	1290	77.9	0.02	1.2	628	1250
W842570		1.57	1.21	0.05	0.1	0.055	0.09	15.9	8.2	11.90	730	30.7	0.01	0.4	129.5	540
W842571		0.48	1.24	0.17	0.1	0.033	0.07	15.2	5.7	12.00	342	27.6	0.02	0.4	59.0	510
W842572		0.57	2.52	0.13	0.1	0.056	0.26	10.9	13.2	11.45	782	15.20	0.03	0.8	44.8	540
W842573		1.06	9.40	0.16	1.1	0.084	0.52	41.6	40.2	3.65	937	22.4	0.41	5.9	20.8	710
W842574		9.16	18.00	0.36	1.9	1.700	1.92	239	38.8	1.34	2310	16.05	0.81	8.7	37.2	910
W842575		1.27	9.37	0.09	1.5	0.037	1.35	13.7	15.7	0.74	128	6.27	0.10	6.1	24.5	710
W842576		2.85	12.00	0.11	1.5	0.067	1.27	24.7	24.9	1.52	425	5.47	0.22	11.4	341	600
W842577		1.37	12.25	0.10	1.6	0.044	1.91	25.7	31.5	0.46	76	1.15	0.06	10.3	55.2	240
W842578		1.45	10.55	0.11	1.5	0.043	1.97	22.3	30.4	0.48	67	1.16	0.06	9.2	46.0	190
W842579		1.08	11.75	0.17	1.6	0.045	1.92	22.5	30.3	0.40	51	1.23	0.06	9.8	37.4	210
W842580		0.83	10.55	0.12	1.6	0.037	1.66	16.6	25.3	0.28	54	0.77	0.05	9.5	38.5	120
W842581		0.94	12.90	0.15	1.7	0.047	2.07	23.5	25.4	0.30	41	1.87	0.05	10.7	32.3	230
W842582		0.91	11.45	0.19	1.6	0.039	1.90	23.5	30.8	0.37	46	1.87	0.04	10.4	46.6	280
W842583		0.73	11.40	0.15	1.8	0.033	1.93	24.1	28.9	0.33	35	2.35	0.04	10.6	24.9	300
W842584		6.70	15.45	0.20	2.1	0.775	3.36	78.7	26.5	1.55	1160	13.55	1.14	12.9	33.8	880
W842585		0.75	10.95	0.13	1.7	0.035	1.84	22.0	24.6	0.29	30	4.42	0.04	9.7	33.0	500
W842586		0.49	10.85	0.18	1.6	0.041	1.88	21.2	27.2	0.29	26	2.34	0.04	10.0	53.5	1030
W842587		1.52	11.25	0.17	1.6	0.030	1.71	22.4	36.8	0.49	60	9.13	0.06	9.9	183.0	530
W842588		1.25	12.15	0.18	1.8	0.033	1.98	28.0	36.7	0.46	45	1.75	0.05	10.6	144.0	400
W842589		1.39	11.85	0.16	1.7	0.042	1.93	24.4	33.6	0.42	37	1.35	0.04	10.1	59.7	200
W842590		1.48	12.65	0.20	1.8	0.029	2.07	27.6	38.7	0.45	38	2.13	0.06	10.7	91.3	370
W842591		1.71	12.30	0.16	1.7	0.032	1.95	24.8	36.4	0.43	37	2.04	0.05	10.4	78.5	230
W842592		2.53	11.50	0.12	1.7	0.026	1.93	16.3	34.1	0.31	32	13.45	0.04	9.3	71.9	430
W842593		1.43	10.60	0.13	1.7	0.030	1.84	16.8	29.8	0.33	28	6.32	0.04	9.0	35.1	520
W842594		1.69	9.95	0.11	1.5	0.023	1.76	18.8	29.1	0.31	30	4.26	0.04	8.5	65.4	970
W842595		1.33	10.30	0.13	1.7	0.190	1.85	24.0	29.9	0.31	25	3.05	0.04	8.9	46.6	510
W842596		1.33	10.05	0.16	1.5	0.112	1.76	23.4	28.6	0.30	27	2.88	0.04	8.5	49.2	530
W842597		2.19	9.52	0.13	1.5	0.049	1.69	23.4	31.8	0.29	28	4.06	0.04	7.6	78.5	1790
W842598		1.99	7.94	0.13	1.4	0.023	1.40	16.5	41.6	0.26	31	4.85	0.04	6.5	104.0	2920
W842599		1.72	9.09	0.13	1.4	0.021	1.51	14.8	67.6	0.30	27	6.33	0.04	7.8	116.0	1710
W842600		1.80	6.02	0.12	1.0	0.017	0.95	10.7	28.3	0.20	28	10.45	0.03	5.0	184.5	5010

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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.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 21-SEP-2019
Account: RCM

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CERTIFICATE OF ANALYSIS WH19210573

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
W842561		68.6	210	0.088	0.09	10.65	4.2	2	24.9	31.4	1.39	0.05	3.03	0.080	2.80	62.1
W842562		97.3	98.5	0.117	0.63	11.50	3.6	31	9.5	27.6	0.10	<0.05	1.97	0.044	3.43	67.5
W842563		2.4	4.9	0.003	0.01	0.36	0.3	1	0.7	76.3	0.05	0.05	0.21	0.006	0.10	1.5
W842564		36.2	99.9	0.654	0.83	5.56	2.4	11	9.1	38.7	0.15	<0.05	1.35	0.038	6.87	55.2
W842565		33.7	104.5	0.451	0.57	1.92	1.3	12	5.9	50.9	0.14	<0.05	0.89	0.022	3.80	31.0
W842566		35.9	107.0	0.437	0.56	1.98	1.4	14	5.6	53.2	0.12	<0.05	0.79	0.020	3.57	27.0
W842567		5.0	152.0	0.387	0.61	0.66	1.0	4	5.7	61.0	0.11	<0.05	0.96	0.021	3.21	31.3
W842568		5.5	299	0.049	0.19	2.42	1.3	2	4.4	89.1	1.96	<0.05	0.43	0.011	1.71	14.7
W842569		4.8	289	0.175	0.53	4.07	1.2	9	2.8	105.5	2.65	<0.05	0.88	0.015	4.09	22.4
W842570		3.8	67.6	0.044	0.38	0.83	0.6	5	1.4	119.0	0.10	<0.05	0.35	0.008	0.84	8.9
W842571		2.4	43.2	0.029	0.22	0.19	0.9	4	1.8	162.5	0.07	<0.05	0.41	0.009	0.51	12.7
W842572		1.5	177.0	0.018	0.23	0.10	1.0	3	2.8	129.0	0.91	<0.05	0.54	0.009	0.92	9.5
W842573		5.8	132.5	0.029	0.25	0.40	3.2	1	12.7	54.1	5.06	<0.05	1.82	0.066	0.70	7.3
W842574		30.9	114.0	0.002	1.29	32.2	7.3	6	109.0	241	0.59	1.02	9.06	0.219	1.28	11.6
W842575		32.8	82.1	0.007	0.27	4.14	8.6	8	4.6	40.4	0.41	0.10	5.21	0.215	2.48	3.4
W842576		24.5	80.8	0.050	0.88	3.64	8.8	8	6.4	206	0.64	0.10	5.14	0.320	19.35	3.0
W842577		6.3	101.0	0.010	0.29	1.35	8.4	5	3.5	43.5	0.64	0.08	7.11	0.270	2.88	2.7
W842578		4.5	84.5	0.010	0.32	1.16	7.5	5	2.4	34.6	0.57	0.09	6.56	0.282	2.90	2.5
W842579		4.8	85.9	0.007	0.15	1.48	7.8	12	2.4	36.1	0.61	0.08	7.05	0.265	1.95	2.5
W842580		3.6	73.1	<0.002	0.01	1.18	7.1	2	2.2	23.4	0.61	0.08	6.38	0.252	1.40	2.6
W842581		17.8	106.5	0.005	0.53	2.20	8.5	6	3.0	35.4	0.66	0.08	7.50	0.275	1.67	2.6
W842582		5.1	95.4	0.011	0.56	2.84	7.8	17	2.8	45.7	0.63	0.11	7.16	0.253	5.48	2.9
W842583		108.0	95.7	0.006	0.32	2.96	7.6	11	2.9	41.5	0.66	0.08	6.87	0.260	1.13	3.0
W842584		50.7	187.5	0.002	0.72	40.0	9.3	5	73.0	297	0.79	0.66	9.73	0.301	1.95	5.4
W842585		226	92.0	0.004	0.03	6.96	7.5	11	2.5	59.6	0.60	0.10	6.15	0.247	1.04	4.1
W842586		529	91.9	0.004	0.12	4.20	7.6	6	2.2	140.5	0.64	0.07	6.54	0.252	1.01	4.0
W842587		23.7	84.7	0.025	1.17	5.94	7.8	22	2.2	74.2	0.62	0.11	6.56	0.244	15.25	3.8
W842588		10.5	96.5	0.031	1.04	3.53	8.6	13	2.3	67.1	0.67	0.11	7.37	0.256	5.72	3.2
W842589		7.0	95.1	0.015	1.33	2.42	8.1	13	2.5	24.2	0.62	0.08	6.87	0.254	4.04	2.6
W842590		9.3	107.0	0.018	1.31	4.59	9.0	22	3.0	40.1	1.28	0.06	7.48	0.270	3.10	3.4
W842591		7.4	106.0	0.017	1.62	2.15	8.6	13	3.2	30.5	0.62	0.11	7.14	0.259	4.77	2.8
W842592		9.5	112.5	0.003	0.03	7.19	8.0	8	2.9	24.3	0.56	0.06	6.98	0.235	1.26	5.8
W842593		7.2	95.4	<0.002	0.01	2.93	7.4	6	2.6	50.3	0.59	0.06	6.37	0.238	0.90	4.6
W842594		5.1	108.0	<0.002	0.01	3.48	7.2	3	2.3	101.5	0.50	0.07	5.93	0.213	1.02	6.0
W842595		15.8	114.5	<0.002	0.01	3.91	7.1	5	4.9	44.3	0.56	0.05	6.38	0.223	0.88	5.0
W842596		12.9	111.5	<0.002	0.01	3.56	6.8	3	4.4	46.6	0.51	0.06	5.91	0.210	0.91	5.2
W842597		13.6	108.0	<0.002	0.02	10.70	6.7	4	2.7	99.2	0.48	0.07	6.03	0.196	1.03	8.2
W842598		6.2	96.6	<0.002	0.03	9.47	5.6	4	2.0	118.0	0.40	0.06	5.01	0.163	0.88	12.9
W842599		5.5	150.5	<0.002	0.03	5.56	6.1	3	2.7	59.7	1.01	<0.05	5.51	0.191	1.12	9.8
W842600		10.4	69.1	0.002	0.07	6.47	4.3	1	1.4	221	0.31	<0.05	3.62	0.123	0.89	13.8

***** 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
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: 21-SEP-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19210573

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Zn-OG62
	Analyte	V	W	Y	Zn	Zr	Zn
	Units	ppm	ppm	ppm	ppm	ppm	%
	LOD	1	0.1	0.1	2	0.5	0.001
W842561		668	224	109.5	3520	26.7	
W842562		977	41.1	93.0	>10000	17.0	1.460
W842563		19	3.8	4.7	87	3.1	
W842564		554	18.6	97.4	>10000	11.8	2.13
W842565		237	15.0	74.2	>10000	8.6	1.650
W842566		230	14.2	77.9	>10000	8.0	1.610
W842567		139	18.7	49.7	5890	5.8	
W842568		122	5.0	40.6	4320	3.8	
W842569		169	14.0	46.8	4460	4.2	
W842570		44	5.3	22.5	1650	2.2	
W842571		51	3.1	19.1	292	2.7	
W842572		51	12.6	14.7	227	2.8	
W842573		140	45.3	19.0	102	25.3	
W842574		52	30.2	26.8	163	59.9	
W842575		287	3.2	9.6	149	49.8	
W842576		246	1.9	14.5	1300	57.9	
W842577		182	1.6	15.1	222	66.1	
W842578		181	1.1	11.1	188	58.9	
W842579		188	1.5	11.7	164	61.6	
W842580		181	1.6	10.8	178	58.5	
W842581		190	1.5	14.0	56	63.5	
W842582		178	1.3	12.6	57	66.5	
W842583		195	1.3	13.0	68	67.2	
W842584		71	19.1	21.2	120	81.9	
W842585		216	1.5	13.8	142	66.8	
W842586		217	1.3	18.7	94	62.2	
W842587		205	1.7	14.3	175	61.8	
W842588		201	1.3	13.4	120	67.3	
W842589		189	1.2	9.6	55	66.6	
W842590		210	1.5	10.9	99	70.1	
W842591		188	1.4	10.6	60	69.2	
W842592		213	1.8	9.0	382	72.0	
W842593		173	1.4	8.9	194	61.6	
W842594		178	1.1	11.5	264	58.7	
W842595		188	1.4	7.8	188	60.1	
W842596		179	1.2	7.9	181	58.2	
W842597		239	1.1	12.7	327	56.4	
W842598		242	1.2	13.2	363	50.2	
W842599		316	3.2	8.5	420	54.1	
W842600		358	2.5	8.1	586	38.9	

***** See Appendix Page for comments regarding this certificate *****

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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 ST
VANCOUVER BC V6B 1L8

Project: Rau

Finalized Date: 21-SEP-2019
Account: RCM

CERTIFICATE OF ANALYSIS WH19210573

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	ME-MS61	ME-OG62	Zn-OG62

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 ST
VANCOUVER BC V6B 1L8

Finalized Date: 4-NOV-2019
Account: RCM

CERTIFICATE WH19268575

Project: Rau

P.O. No.: R19-D10

This report is for 7 Pulp samples submitted to our lab in Whitehorse, YT, Canada on 24-OCT-2019.

The following have access to data associated with this certificate:

ANDREW CARNE	ADAM COULTER	JULIA LANE

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
FND-02	Find Sample for Addn Analysis

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
PGM-ICP23	Pt, Pd, Au 30g FA ICP	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:

Saa Traxler, General Manager, North Vancouver

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 ST
VANCOUVER BC V6B 1L8

Finalized Date: 4-NOV-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19268575

Sample Description	Method	PGM-ICP23	PGM-ICP23	PGM-ICP23
	Analyte	Au	Pt	Pd
	Units	ppm	ppm	ppm
	LOD	0.001	0.005	0.001
W842561		<0.001	<0.005	0.001
W842562		<0.001	<0.005	0.003
W842564		<0.001	<0.005	0.001
W842565		<0.001	<0.005	0.001
W842567		<0.001	<0.005	0.001
W842568		<0.001	<0.005	<0.001
W842569		<0.001	<0.005	0.001

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.
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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 ST
VANCOUVER BC V6B 1L8

Project: Rau

Finalized Date: 4-NOV-2019
Account: RCM

CERTIFICATE OF ANALYSIS WH19268575

CERTIFICATE COMMENTS

LABORATORY ADDRESSES

Applies to Method: Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.
FND-02 PGM-ICP23

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 ST
VANCOUVER BC V6B 1L8

Finalized Date: 7-SEP-2019
Account: RCM

CERTIFICATE WH19203512

Project: Rau

P.O. No.: R19-D11

This report is for 20 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 16-AUG-2019.

The following have access to data associated with this certificate:

ANDREW CARNE	ADAM COULTER	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
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

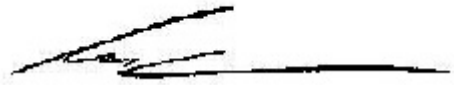
ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid 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
www.alsglobal.com/geochemistry

To: **ATAC RESOURCES LTD.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 7-SEP-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19203512

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
W842601		3.77	<0.01	3.14	9.58	122.0	1600	2.02	0.20	0.32	6.89	21.7	2.8	60	4.67	40.3
W842602		3.92	<0.01	5.85	8.79	107.0	2080	5.51	0.87	0.28	6.16	16.60	2.9	56	4.92	55.4
W842603		1.76	<0.01	2.54	11.45	122.0	1690	4.49	0.99	0.68	8.35	39.9	5.6	51	3.43	148.5
W842604		1.43	<0.01	19.75	12.40	39.3	6800	2.58	1.40	0.23	2.08	7.12	4.6	40	2.66	206
W842605		4.91	<0.01	0.05	0.21	1.4	50	0.12	0.04	20.5	0.17	1.48	0.9	2	0.18	5.3
W842606		2.50	<0.01	3.92	11.10	176.5	4110	10.10	5.50	1.48	278	12.05	9.2	35	1.62	275
W842607		5.42	0.04	0.63	11.15	20.2	8280	5.86	6.53	0.39	1.94	7.53	6.0	29	5.23	142.5
W842608		0.10	0.36	2.65	5.58	9900	2040	1.71	354	11.45	0.92	143.0	50.6	59	12.95	826
W842609		3.50	0.01	2.15	7.95	19.9	8240	15.05	7.64	2.64	92.7	16.10	10.4	25	9.74	368
W842610		<0.02	<0.01	2.37	7.38	17.2	8740	15.35	6.53	2.67	110.0	15.30	11.7	25	8.35	384
W842611		3.63	<0.01	0.67	8.36	25.5	2310	5.61	3.42	0.88	13.65	18.20	8.1	47	8.74	222
W842612		4.43	0.01	0.21	2.17	17.4	5900	2.14	1.43	17.85	34.0	6.00	8.8	7	2.57	41.6
W842613		4.29	<0.01	0.25	0.54	4.4	4450	0.43	0.29	21.3	10.75	3.82	5.3	4	0.92	5.7
W842614		4.06	<0.01	1.10	1.41	12.9	3030	1.37	0.60	18.65	4.58	5.79	3.0	8	2.57	48.3
W842615		0.10	2.56	9.27	5.05	9670	1030	1.83	306	12.20	1.78	242	75.1	59	8.92	4110
W842616		3.48	<0.01	0.07	0.28	8.8	2810	0.60	0.53	19.10	33.8	5.88	20.9	3	0.89	9.2
W842617		6.28	<0.01	0.11	0.28	3.9	2340	0.48	0.24	19.10	19.75	5.85	18.6	2	0.99	10.7
W842618		3.14	<0.01	0.14	0.77	6.5	1790	0.81	0.35	19.25	11.80	6.80	9.9	6	3.45	6.5
W842619		2.97	<0.01	0.08	0.19	2.7	1330	0.29	0.11	20.8	6.86	3.90	7.3	2	1.18	2.6
W842620		2.88	<0.01	0.17	0.17	2.9	1360	0.29	0.10	21.2	7.42	3.89	7.0	2	1.10	3.1

***** 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 ST
VANCOUVER BC V6B 1L8

Finalized Date: 7-SEP-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19203512

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	Fe	Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P
	Units	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
W842601		2.04	6.28	0.12	1.0	0.018	0.96	11.3	30.9	0.22	33	12.40	0.03	4.7	196.0	5340
W842602		2.25	5.14	0.13	0.8	0.013	0.66	9.4	43.4	0.24	43	14.50	0.03	4.7	231	4310
W842603		3.50	5.60	0.17	0.5	0.051	0.33	25.7	53.5	0.78	95	27.8	0.02	4.8	560	5550
W842604		3.33	7.70	0.14	0.3	0.109	0.15	4.5	21.8	0.27	35	36.6	0.01	2.3	718	710
W842605		0.45	0.40	0.16	<0.1	<0.005	0.04	0.8	1.7	12.40	187	0.39	0.01	0.2	7.5	250
W842606		0.77	5.09	0.22	0.3	0.168	0.09	5.7	19.2	1.98	45	36.3	0.02	1.9	1010	6360
W842607		0.76	3.26	0.16	0.2	0.195	0.21	3.6	22.2	0.88	19	14.85	0.02	1.7	1330	1410
W842608		6.60	17.00	0.31	2.3	0.846	3.38	84.9	27.2	1.58	1140	13.25	1.13	14.1	34.7	910
W842609		1.02	5.23	0.23	0.4	0.213	0.43	9.7	30.3	4.63	94	19.85	0.07	2.2	1040	880
W842610		1.01	5.17	0.22	0.4	0.210	0.39	8.9	30.6	4.56	93	20.4	0.06	2.2	1090	890
W842611		1.04	7.13	0.17	0.8	0.134	0.77	10.8	42.8	1.68	48	8.87	0.05	4.9	712	950
W842612		1.19	1.69	0.23	0.1	0.038	0.13	3.9	13.8	11.55	429	12.80	0.01	0.8	195.5	250
W842613		0.61	1.25	0.19	0.1	0.012	0.09	2.6	6.5	12.35	331	22.5	0.01	0.4	45.8	130
W842614		0.66	1.58	0.11	0.2	0.025	0.14	3.8	13.9	10.80	167	16.55	0.02	0.9	114.0	290
W842615		8.90	17.05	0.30	1.9	2.04	1.77	146.0	35.4	1.37	1640	13.80	1.20	10.7	37.7	810
W842616		3.43	0.93	<0.05	0.1	0.010	0.07	3.6	5.8	11.45	1450	13.05	0.01	0.4	113.0	130
W842617		3.06	0.78	<0.05	0.1	0.030	0.07	3.7	5.0	11.85	1620	13.50	<0.01	0.3	99.8	100
W842618		1.73	1.76	0.05	0.2	0.012	0.23	3.9	11.9	11.55	824	18.30	0.01	1.0	68.8	160
W842619		1.01	0.58	0.08	<0.1	<0.005	0.07	2.4	5.1	12.60	663	5.12	<0.01	0.3	35.9	110
W842620		1.06	0.54	0.08	0.1	<0.005	0.07	2.4	4.7	12.70	655	5.06	<0.01	0.2	35.9	110

***** 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
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: Rau

Finalized Date: 7-SEP-2019
Account: RCM

CERTIFICATE OF ANALYSIS WH19203512

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
W842601		17.1	67.1	<0.002	0.08	5.64	4.3	2	1.4	138.0	0.30	<0.05	3.51	0.120	0.84	14.0
W842602		6.1	80.7	0.002	0.08	5.02	3.2	3	2.0	35.2	0.34	0.05	3.00	0.101	0.83	13.4
W842603		15.4	44.3	0.011	0.07	8.36	2.3	5	5.2	107.5	0.39	0.06	2.51	0.066	1.11	17.2
W842604		5.4	16.4	0.021	0.17	6.90	2.5	7	7.5	22.6	0.16	0.13	1.34	0.037	1.65	12.1
W842605		2.2	1.9	<0.002	<0.01	0.13	0.2	1	<0.2	47.4	<0.05	<0.05	0.07	0.005	0.02	0.6
W842606		25.7	3.1	0.025	0.21	10.80	2.2	12	12.4	133.0	1.69	0.12	0.78	0.032	2.19	37.0
W842607		15.5	28.6	0.007	0.15	9.43	1.7	2	9.7	25.8	1.36	<0.05	1.12	0.037	2.49	50.0
W842608		54.8	197.0	0.003	0.72	41.9	10.2	5	73.0	304	0.87	0.69	11.60	0.327	1.97	6.1
W842609		21.8	83.4	0.044	0.41	6.75	2.2	11	11.1	21.7	0.20	0.06	1.13	0.046	3.58	32.9
W842610		22.9	51.9	0.047	0.43	6.96	2.0	12	11.1	20.6	0.21	0.06	0.96	0.046	3.77	29.1
W842611		18.3	43.1	0.006	0.04	5.73	3.9	2	8.7	29.5	0.36	<0.05	2.31	0.115	2.44	16.8
W842612		6.5	20.8	0.033	0.17	1.64	1.0	2	2.6	124.5	0.06	<0.05	0.67	0.020	1.33	9.1
W842613		2.0	5.9	0.067	0.17	0.44	0.6	2	1.1	148.0	<0.05	<0.05	0.41	0.013	0.85	9.1
W842614		6.2	25.6	0.042	0.12	1.63	0.9	2	1.6	139.0	0.05	<0.05	0.68	0.021	0.86	10.4
W842615		44.4	108.0	0.017	1.28	36.9	8.0	7	85.0	285	0.61	2.37	9.85	0.233	1.28	9.0
W842616		6.4	8.4	0.042	0.21	0.97	0.6	3	1.0	122.5	<0.05	<0.05	0.31	0.010	0.81	7.9
W842617		2.5	12.3	0.049	0.44	0.41	0.4	2	7.1	139.0	<0.05	<0.05	0.26	0.008	0.51	8.2
W842618		5.9	26.5	0.067	0.38	1.26	1.1	3	2.1	125.0	0.06	<0.05	0.77	0.027	1.53	8.6
W842619		2.0	15.5	0.022	0.11	0.47	0.3	2	0.9	101.5	<0.05	<0.05	0.20	0.007	0.54	5.7
W842620		2.4	14.0	0.022	0.10	0.47	0.3	1	0.7	103.5	<0.05	<0.05	0.20	0.007	0.50	5.8

***** 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
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: 7-SEP-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19203512

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	V	W	Y	Zn	Zr
	Units	ppm	ppm	ppm	ppm	ppm
	LOD	1	0.1	0.1	2	0.5
W842601		406	3.3	9.5	694	36.5
W842602		457	9.9	9.9	718	30.8
W842603		628	23.2	19.1	1290	17.9
W842604		735	14.7	4.8	1120	12.7
W842605		8	0.3	1.0	32	0.5
W842606		1280	15.5	114.5	1100	8.5
W842607		877	7.9	31.3	1250	9.0
W842608		72	20.7	23.2	124	87.1
W842609		788	12.0	158.5	968	12.2
W842610		839	12.8	142.0	1000	12.1
W842611		435	7.9	30.6	1060	29.4
W842612		140	1.5	23.1	1070	4.8
W842613		28	0.4	6.3	688	2.8
W842614		108	1.8	10.1	404	6.1
W842615		52	1510	26.1	216	69.5
W842616		38	1.4	18.4	3970	3.2
W842617		24	1.2	16.3	3210	2.2
W842618		35	0.8	11.0	1790	6.5
W842619		14	1.0	7.2	1200	1.7
W842620		13	1.0	7.2	1240	1.7

***** See Appendix Page for comments regarding this certificate *****

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Project: Rau

Finalized Date: 7-SEP-2019
Account: RCM

CERTIFICATE OF ANALYSIS WH19203512

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	ME-MS61

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 ST
VANCOUVER BC V6B 1L8

Finalized Date: 4-NOV-2019
Account: RCM

CERTIFICATE WH19268577

Project: Rau

P.O. No.: R19-D11

This report is for 6 Pulp samples submitted to our lab in Whitehorse, YT, Canada on 24-OCT-2019.

The following have access to data associated with this certificate:

ANDREW CARNE	ADAM COULTER	JULIA LANE

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
FND-02	Find Sample for Addn Analysis

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
PGM-ICP23	Pt, Pd, Au 30g FA ICP	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:

Saa Traxler, General Manager, North Vancouver

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 ST
VANCOUVER BC V6B 1L8

Finalized Date: 4-NOV-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19268577

Sample Description	Method Analyte Units LOD	PGM-ICP23 Au ppm 0.001	PGM-ICP23 Pt ppm 0.005	PGM-ICP23 Pd ppm 0.001
W842603		0.001	<0.005	<0.001
W842604		<0.001	<0.005	0.001
W842606		0.001	<0.005	<0.001
W842607		0.039	<0.005	<0.001
W842609		0.016	<0.005	<0.001
W842611		0.004	<0.005	<0.001

***** 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
www.alsglobal.com/geochemistry

To: **ATAC RESOURCES LTD.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Project: Rau

Finalized Date: 4-NOV-2019
Account: RCM

CERTIFICATE OF ANALYSIS WH19268577

CERTIFICATE COMMENTS

LABORATORY ADDRESSES

Applies to Method:

Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

FND-02 PGM-ICP23

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 ST
VANCOUVER BC V6B 1L8

Finalized Date: 24-SEP-2019
Account: RCM

CERTIFICATE WH19216438

Project: Rau

P.O. No.: R19-D12

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 30-AUG-2019.

The following have access to data associated with this certificate:

ANDREW CARNE	ADAM COULTER	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
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

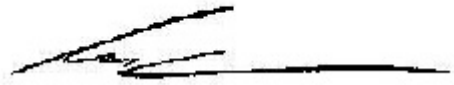
ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid 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 ST
VANCOUVER BC V6B 1L8

Finalized Date: 24-SEP-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19216438

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
W842621		7.64	<0.01	0.14	0.29	3.5	3070	0.32	0.14	22.7	0.82	3.41	1.9	3	1.80	3.6
W842622		7.73	<0.01	0.15	0.21	3.7	2230	0.21	0.11	22.6	1.38	2.70	2.3	2	1.55	3.9
W842623		2.44	<0.01	0.10	0.22	4.5	1590	0.26	0.14	22.2	1.27	2.67	1.9	3	1.90	4.6
W842624		1.05	<0.01	0.21	0.63	19.4	80	0.95	0.18	18.35	14.95	7.70	21.2	6	3.83	3.9
W842625		3.40	<0.01	0.07	0.26	3.9	600	0.33	0.16	19.90	4.30	4.27	5.2	5	1.07	5.9
W842626		4.15	<0.01	0.06	0.28	1.2	1640	0.56	0.12	21.6	0.62	3.05	1.9	3	5.00	5.7
W842627		2.10	<0.01	0.33	3.17	6.0	120	1.26	1.16	1.41	0.29	31.9	3.9	92	6.13	20.4
W842628		0.73	<0.01	0.24	2.05	3.0	90	1.85	0.85	0.93	40.6	14.80	4.7	57	3.26	68.3
W842629		0.10	0.33	2.64	5.59	>10000	2050	1.53	353	11.50	0.94	139.0	48.2	64	12.25	802
W842630		7.79	<0.01	0.30	4.02	9.6	70	1.66	0.70	0.24	1.69	36.1	7.1	92	11.95	31.8
W842631		7.50	<0.01	0.22	2.08	3.2	200	3.47	0.40	0.15	1.21	20.0	3.4	91	6.47	30.4
W842632		7.61	<0.01	0.15	2.14	1.5	210	3.72	0.68	0.42	0.67	17.65	3.9	79	8.72	31.2
W842633		4.10	<0.01	0.14	2.88	3.1	150	16.75	1.11	3.34	0.34	32.1	2.9	76	18.80	14.5
W842634		3.97	<0.01	0.06	2.13	0.5	5970	111.0	0.66	8.50	2.15	12.60	1.0	37	49.7	13.0
W842635		0.10	0.81	7.26	4.88	8750	1210	1.57	220	13.70	1.17	427	73.2	49	9.64	3330
W842636		7.70	<0.01	0.08	2.53	4.5	2670	81.7	0.71	7.73	1.85	11.50	1.2	35	58.1	21.8
W842637		7.80	<0.01	0.14	2.10	1.4	640	75.4	1.37	8.12	0.55	21.3	1.5	42	40.6	23.8
W842638		4.12	<0.01	0.14	1.96	1.4	330	71.4	1.04	8.31	0.74	18.95	2.0	50	25.5	26.2
W842639		4.72	<0.01	0.18	1.90	5.7	180	2.79	0.48	0.37	0.87	18.70	3.6	56	6.59	22.9
W842640		6.45	0.01	0.18	4.24	6.9	80	8.52	0.78	0.75	0.87	40.2	8.3	86	16.70	41.8
W842641		6.77	<0.01	0.16	3.40	4.0	110	2.54	1.01	0.59	0.39	35.0	7.0	69	9.80	24.8
W842642		1.99	<0.01	0.13	1.77	1.4	260	21.5	0.38	0.39	0.32	10.60	4.4	30	9.74	58.3
W842643		<0.02	<0.01	0.11	1.82	1.4	250	21.9	0.35	0.38	0.27	10.40	4.1	31	9.80	58.6
W842644		1.92	<0.01	0.13	3.56	1.7	440	70.3	0.81	0.32	0.37	30.0	5.4	50	25.4	30.2
W842645		0.52	<0.01	0.19	2.71	3.2	1180	349	0.64	3.58	0.76	15.05	3.4	28	26.8	19.1
W842646		4.27	<0.01	0.16	2.34	2.9	400	18.65	0.58	1.37	0.35	22.6	4.0	47	14.00	32.4
W842647		7.81	<0.01	0.08	1.01	3.0	490	0.97	0.57	4.64	0.21	7.05	1.5	34	3.82	10.0
W842648		2.86	<0.01	0.07	1.00	1.8	1140	4.57	0.87	2.65	0.25	5.77	1.1	33	3.49	9.2
W842649		0.85	0.05	0.03	3.90	1.1	2750	5.09	0.71	1.97	0.25	28.5	0.6	18	7.16	5.6
W842650		5.38	0.03	0.09	1.04	2.0	580	2.43	1.83	2.06	0.31	7.89	1.1	38	2.86	18.3
W842651		2.69	<0.01	0.33	3.12	18.2	1280	15.30	4.54	0.66	0.84	20.0	0.9	23	5.94	57.3
W842652		6.43	0.01	0.14	1.29	3.4	2700	0.88	1.29	4.32	0.63	12.85	1.9	43	1.51	33.3
W842653		4.09	<0.01	0.10	4.08	1.7	3660	7.46	2.06	1.90	0.47	19.75	1.0	30	7.45	10.9
W842654		4.58	<0.01	0.91	2.15	1.4	>10000	4.40	10.35	7.47	2.47	14.05	1.5	27	4.00	29.0
W842655		0.59	<0.01	0.17	4.70	1.4	5600	22.9	1.51	0.94	1.50	19.30	0.7	14	6.51	19.2
W842656		0.60	<0.01	0.36	2.97	2.4	730	40.1	3.09	1.26	2.97	11.15	0.9	20	4.65	28.7
W842657		4.04	<0.01	1.14	0.91	2.6	480	4.58	5.56	3.56	6.75	6.46	1.0	22	1.06	24.8
W842658		5.10	<0.01	0.20	2.58	1.2	3010	7.57	3.19	1.96	1.03	16.75	0.7	23	12.90	11.1
W842659		5.10	<0.01	0.01	0.04	<0.2	110	0.09	0.05	22.4	0.06	0.91	0.9	1	0.13	2.6
W842660		4.62	<0.01	<0.01	4.51	0.5	6980	12.40	2.51	1.43	0.26	21.4	0.4	13	7.34	5.5

***** 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

Finalized Date: 24-SEP-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19216438

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	Fe	Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P
	Units	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
W842621		0.38	0.86	0.19	0.1	<0.005	0.12	2.0	8.4	12.25	226	10.70	0.01	0.5	15.0	120
W842622		0.48	0.69	0.14	0.1	0.005	0.10	1.8	8.4	12.35	239	18.75	0.01	0.3	19.3	90
W842623		0.46	0.80	0.15	0.1	0.007	0.10	1.9	9.0	12.25	169	34.5	0.01	0.4	21.5	80
W842624		3.92	1.35	0.06	0.2	0.008	0.18	4.9	15.5	11.55	1400	51.8	0.02	1.0	155.5	100
W842625		0.86	0.74	0.08	0.1	0.008	0.11	2.8	4.0	11.90	493	5.69	0.01	0.6	29.6	50
W842626		0.52	0.94	0.09	0.1	<0.005	0.16	2.0	6.5	11.75	208	17.10	0.01	0.6	19.4	70
W842627		2.30	8.01	0.10	1.2	0.009	1.29	16.0	23.6	0.58	45	3.13	0.36	9.1	47.8	480
W842628		2.68	5.37	0.09	0.9	1.030	0.39	6.9	18.7	0.42	261	2.17	0.05	5.5	46.9	390
W842629		6.69	16.45	0.16	2.4	0.869	3.39	83.9	26.4	1.59	1140	14.45	1.16	13.3	33.4	920
W842630		2.85	14.55	0.11	1.9	0.018	1.91	14.8	72.1	0.42	49	3.76	0.15	8.5	61.4	680
W842631		1.74	8.10	0.06	1.0	0.013	0.93	12.0	59.1	0.20	49	3.94	0.10	3.9	47.6	420
W842632		1.54	7.49	0.06	1.0	0.009	0.93	10.4	69.2	0.25	62	6.75	0.22	4.4	46.6	480
W842633		2.18	10.55	0.08	1.0	0.018	1.24	17.0	99.6	1.61	233	0.72	0.53	8.1	31.2	480
W842634		0.97	8.20	0.06	0.6	0.190	0.94	6.2	332	5.20	1000	0.33	0.55	3.9	10.1	260
W842635		9.40	18.95	0.35	1.9	1.810	1.98	247	38.2	1.39	2310	13.70	0.85	9.1	36.8	940
W842636		1.27	12.90	0.05	0.9	0.172	1.34	5.0	580	5.17	1100	0.45	0.53	5.1	8.5	260
W842637		1.41	7.97	0.07	0.7	0.107	0.95	12.4	341	4.92	1040	0.36	0.59	4.7	10.6	270
W842638		1.88	7.22	0.05	0.6	0.093	0.79	10.7	217	4.94	1180	0.34	0.56	3.8	13.9	630
W842639		1.67	6.37	0.05	0.9	0.020	0.88	11.8	48.5	0.19	124	7.56	0.06	3.0	39.4	460
W842640		3.09	12.55	0.10	1.9	0.025	2.02	14.6	83.9	0.47	78	4.62	0.38	6.7	51.7	750
W842641		2.42	11.05	0.08	1.5	0.007	1.69	15.8	70.0	0.35	59	3.49	0.27	5.8	39.4	580
W842642		2.12	5.91	<0.05	0.7	0.018	0.82	4.9	131.5	0.11	148	1.28	0.13	2.9	23.4	310
W842643		2.14	5.78	0.05	0.7	0.019	0.83	4.8	132.5	0.11	148	1.36	0.13	2.8	24.6	310
W842644		2.09	11.70	0.09	2.1	0.014	2.03	13.1	207	0.26	161	3.44	0.46	8.8	32.7	500
W842645		1.28	8.58	0.07	1.3	0.024	1.11	6.5	128.0	0.57	275	1.24	0.46	6.0	14.7	630
W842646		1.65	5.74	0.07	1.1	0.010	1.08	10.6	114.5	0.24	198	2.82	0.18	4.9	24.1	330
W842647		0.96	3.54	<0.05	0.5	0.005	0.45	4.0	14.0	0.14	116	5.70	0.09	1.8	12.3	710
W842648		0.96	4.24	<0.05	0.5	0.006	0.32	3.4	10.1	0.10	96	5.64	0.13	2.5	9.2	290
W842649		0.68	24.6	0.09	3.7	0.024	1.81	9.3	9.6	0.05	268	3.70	1.90	40.7	4.9	130
W842650		1.22	3.09	0.05	0.5	0.009	0.46	4.8	9.9	0.10	129	7.13	0.11	2.0	10.7	430
W842651		1.15	15.10	0.07	2.2	0.143	1.49	9.4	19.2	0.10	178	3.78	0.82	31.5	15.3	270
W842652		1.16	2.61	0.05	0.6	0.043	0.24	8.3	6.9	0.18	240	6.15	0.02	2.3	19.6	650
W842653		0.96	19.50	0.07	2.2	0.081	2.09	9.1	11.5	0.10	264	5.75	1.41	41.7	13.2	690
W842654		1.12	7.34	0.06	1.3	0.101	0.48	8.1	15.0	0.25	830	5.97	0.37	15.1	12.5	500
W842655		1.05	27.7	0.08	1.7	0.138	2.43	6.8	13.1	0.05	243	9.80	1.43	30.5	5.0	100
W842656		1.30	14.75	0.06	1.0	0.199	1.34	5.3	12.6	0.09	503	10.35	0.59	13.6	7.9	230
W842657		1.35	2.65	<0.05	0.4	0.293	0.13	4.8	14.2	0.14	984	10.90	0.01	1.5	7.1	200
W842658		0.82	13.10	0.06	1.3	0.075	1.35	8.0	29.0	0.10	447	4.72	0.83	19.8	6.9	280
W842659		0.47	0.16	0.05	<0.1	<0.005	0.02	0.5	1.0	12.90	208	0.14	<0.01	0.2	1.6	170
W842660		0.55	27.8	0.11	3.4	0.054	2.19	7.8	13.9	0.08	227	3.17	2.04	93.5	3.3	110

***** 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
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: 24-SEP-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19216438

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
W842621		3.8	15.1	0.044	0.28	0.85	0.5	1	1.1	130.0	<0.05	<0.05	0.43	0.014	1.01	6.5
W842622		3.6	9.1	0.080	0.34	0.73	0.4	2	0.9	116.0	<0.05	<0.05	0.35	0.009	1.10	7.1
W842623		8.1	8.5	0.154	0.46	1.30	0.4	2	2.1	113.5	<0.05	<0.05	0.33	0.011	1.42	6.9
W842624		7.1	15.0	0.236	1.66	1.76	0.9	5	0.8	116.5	0.06	0.05	0.85	0.028	2.62	8.6
W842625		7.6	7.8	0.024	0.15	1.01	0.5	2	1.0	90.2	<0.05	<0.05	0.44	0.015	0.36	5.5
W842626		1.6	28.3	0.107	0.37	0.39	0.6	2	0.8	141.0	<0.05	<0.05	0.39	0.014	1.52	6.5
W842627		7.0	162.0	0.012	1.28	0.87	5.1	5	2.7	94.1	0.55	0.05	4.82	0.211	2.30	3.2
W842628		4.1	56.9	0.009	1.23	0.63	3.6	6	15.2	37.3	0.31	<0.05	2.43	0.126	1.04	2.9
W842629		52.2	196.5	<0.002	0.73	42.8	8.8	6	74.7	301	0.86	0.70	10.75	0.321	2.07	5.4
W842630		7.6	126.5	0.010	2.55	0.59	8.2	4	2.1	26.5	0.54	<0.05	5.45	0.226	3.13	3.5
W842631		2.5	91.4	0.007	0.98	0.17	4.3	2	2.1	8.3	0.25	<0.05	3.02	0.106	1.49	2.8
W842632		2.9	149.0	0.007	0.80	0.18	4.4	3	4.6	33.2	0.27	<0.05	3.11	0.112	1.83	3.6
W842633		4.7	353	<0.002	1.16	0.32	5.1	4	14.2	75.0	0.51	0.05	4.72	0.171	2.67	1.9
W842634		5.2	982	<0.002	0.20	0.45	3.0	1	53.2	54.4	0.49	<0.05	2.91	0.079	3.92	1.4
W842635		34.2	117.0	<0.002	1.34	34.6	7.1	6	102.5	244	0.61	0.93	10.00	0.232	1.36	11.8
W842636		6.1	1490	<0.002	0.19	0.20	3.9	3	70.9	44.3	4.08	<0.05	3.60	0.064	6.56	1.9
W842637		11.8	891	<0.002	0.36	0.17	3.9	4	68.0	59.6	1.17	<0.05	3.49	0.078	4.36	1.5
W842638		9.7	590	<0.002	0.70	0.18	4.0	4	68.8	67.8	0.45	<0.05	3.46	0.071	3.05	1.5
W842639		3.3	126.5	0.008	0.97	1.13	3.0	3	4.8	27.1	0.20	<0.05	2.57	0.085	1.78	3.0
W842640		5.6	265	<0.002	2.15	0.44	8.2	3	4.9	110.5	1.35	<0.05	6.74	0.167	3.39	2.8
W842641		3.7	185.5	0.002	1.63	0.28	6.5	3	4.7	61.1	0.34	<0.05	5.17	0.172	2.33	2.2
W842642		4.8	488	<0.002	0.70	0.10	2.3	3	8.7	55.1	2.76	0.05	2.31	0.049	3.04	1.6
W842643		4.5	493	<0.002	0.62	0.10	2.4	4	8.4	56.8	2.46	<0.05	2.25	0.049	3.09	1.5
W842644		8.1	844	<0.002	0.50	0.26	5.3	3	10.6	136.5	16.20	0.06	6.01	0.131	5.37	3.0
W842645		9.1	536	<0.002	0.28	0.41	5.9	2	11.6	152.0	16.00	<0.05	3.38	0.066	3.20	2.5
W842646		8.6	431	<0.002	0.41	0.48	4.1	2	10.8	140.0	2.99	<0.05	3.46	0.120	3.21	3.1
W842647		2.7	64.8	0.008	0.51	0.44	2.1	2	2.0	115.5	0.13	<0.05	1.26	0.056	0.92	5.5
W842648		2.4	61.3	0.007	0.51	0.26	1.8	2	2.0	60.5	1.91	<0.05	1.21	0.046	0.55	3.1
W842649		29.3	835	0.004	0.31	0.18	1.6	1	2.6	52.0	41.7	<0.05	12.10	0.022	4.09	3.9
W842650		3.9	108.0	0.009	0.53	0.37	1.8	2	3.2	51.9	0.64	0.05	1.14	0.051	0.76	4.1
W842651		13.4	475	0.011	0.26	1.41	1.7	3	8.8	33.1	28.9	<0.05	8.18	0.034	2.33	4.3
W842652		4.0	45.4	0.010	0.09	0.65	2.4	3	4.6	119.5	0.18	<0.05	1.48	0.067	0.61	4.5
W842653		27.2	866	0.012	0.15	0.42	1.9	2	3.8	82.7	55.6	<0.05	7.33	0.045	4.25	6.2
W842654		120.5	141.5	0.007	0.02	0.37	2.2	1	19.9	480	9.81	<0.05	3.94	0.063	0.81	5.6
W842655		41.1	940	0.003	0.10	0.23	1.1	2	8.3	81.0	35.0	<0.05	6.42	0.022	4.27	2.9
W842656		48.4	570	0.005	0.33	0.26	1.3	2	13.4	98.0	11.50	<0.05	2.93	0.038	2.66	2.9
W842657		152.0	40.3	0.003	0.41	0.51	1.6	3	13.6	225	0.19	<0.05	0.87	0.042	0.40	3.1
W842658		40.3	726	0.004	0.13	0.53	1.8	1	5.5	76.7	19.35	<0.05	4.70	0.037	3.26	4.2
W842659		1.9	1.9	<0.002	<0.01	<0.05	0.1	1	0.5	47.8	0.07	<0.05	0.05	<0.005	<0.02	0.6
W842660		29.8	1025	0.003	0.18	0.16	2.0	1	4.8	46.7	>100	<0.05	9.00	0.017	4.24	4.5

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Phone: +1 (604) 984 0221 Fax: +1 (604) 984 0218
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To: **ATAC RESOURCES LTD.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 24-SEP-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19216438

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	V	W	Y	Zn	Zr
	Units	ppm	ppm	ppm	ppm	ppm
	LOD	1	0.1	0.1	2	0.5
W842621		16	0.6	2.6	135	3.2
W842622		17	0.5	2.9	234	1.9
W842623		30	0.3	2.3	122	2.3
W842624		44	0.7	16.7	3190	7.1
W842625		29	0.4	5.6	822	3.7
W842626		26	1.3	2.4	86	3.0
W842627		216	1.3	13.6	37	50.0
W842628		167	3.6	10.1	6540	33.9
W842629		72	23.6	23.3	132	84.8
W842630		271	1.2	10.7	287	68.3
W842631		176	5.0	6.1	181	37.6
W842632		221	8.9	7.6	97	38.5
W842633		153	12.3	13.3	75	36.2
W842634		70	126.0	10.8	398	18.8
W842635		55	36.5	29.4	166	60.7
W842636		81	56.6	9.2	362	18.9
W842637		74	47.1	9.2	129	21.0
W842638		78	15.2	13.5	181	18.5
W842639		210	3.0	6.7	158	34.2
W842640		235	4.6	13.1	168	64.9
W842641		183	2.1	9.2	81	53.2
W842642		64	16.0	7.6	57	19.7
W842643		65	15.1	7.5	51	20.8
W842644		153	16.3	9.3	75	44.3
W842645		48	19.2	13.9	139	21.5
W842646		109	11.1	7.2	68	36.7
W842647		73	0.9	5.3	31	19.2
W842648		71	1.1	3.8	32	17.5
W842649		35	2.1	7.0	48	29.7
W842650		79	3.0	4.2	50	17.7
W842651		53	11.3	5.5	167	25.2
W842652		112	1.7	6.3	101	24.6
W842653		83	4.0	7.4	146	26.4
W842654		93	4.4	7.4	447	24.7
W842655		27	8.9	4.6	396	17.1
W842656		46	9.8	3.9	610	17.2
W842657		48	8.4	3.3	1120	14.5
W842658		51	3.4	6.4	242	19.3
W842659		2	0.1	0.7	20	<0.5
W842660		20	5.1	8.5	78	25.4

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To: **ATAC RESOURCES LTD.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Project: Rau

Finalized Date: 24-SEP-2019
Account: RCM

CERTIFICATE OF ANALYSIS WH19216438

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	ME-MS61		

ALS Canada Ltd.

2103 Dollarton Hwy
North Vancouver BC V7H 0A7
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To: **ATAC RESOURCES LTD.**
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1016-510 W HASTINGS ST
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Finalized Date: 27-SEP-2019
Account: RCM

CERTIFICATE WH19216428

Project: Rau

P.O. No.: R19-D13

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 30-AUG-2019.

The following have access to data associated with this certificate:

ANDREW CARNE	ADAM COULTER	

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-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid ICP-MS	
ME-OG62	Ore Grade Elements - Four Acid	ICP-AES
Zn-OG62	Ore Grade Zn - 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:



Saa Traxler, General Manager, North Vancouver

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CERTIFICATE OF ANALYSIS WH19216428

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
W842661		0.46	<0.01	0.31	1.45	2.1	110	18.65	1.22	1.22	121.0	3.74	2.4	17	10.75	156.5
W842662		4.93	<0.01	0.01	0.06	1.2	20	0.09	0.01	34.2	0.15	0.98	0.9	2	<0.05	2.4
W842663		0.82	<0.01	0.05	2.92	0.7	6680	32.0	0.45	1.55	0.37	12.80	0.8	14	23.4	15.5
W842664		2.57	<0.01	0.19	1.09	1.2	1910	11.60	0.57	2.18	1.35	6.66	1.3	22	6.17	34.7
W842665		5.83	<0.01	0.47	0.90	3.3	1230	2.70	2.59	1.34	1.81	7.22	1.2	25	1.94	21.3
W842666		3.83	0.01	0.09	0.95	1.9	1010	2.18	0.47	3.26	1.02	7.13	1.3	36	0.62	38.5
W842667		0.10	0.34	2.48	5.74	>10000	2120	1.79	360	11.70	0.86	131.5	52.6	64	11.65	830
W842668		8.46	<0.01	0.39	0.86	6.7	810	0.76	2.38	2.99	2.80	6.71	1.3	36	0.67	11.3
W842669		8.19	<0.01	0.21	0.89	4.2	590	0.52	0.61	3.18	0.42	6.54	1.3	32	2.21	13.6
W842670		3.62	<0.01	0.19	0.91	3.9	380	0.55	0.66	3.95	0.53	6.93	1.6	27	2.07	18.0
W842671		4.27	<0.01	0.12	0.85	3.3	880	1.10	0.57	3.55	0.31	6.48	1.5	22	1.51	14.7
W842672		0.83	<0.01	0.13	0.88	1.5	1430	3.72	1.94	3.52	0.55	6.80	1.5	21	1.89	36.8
W842673		0.47	0.02	0.07	4.16	0.3	1180	306	13.80	6.90	0.18	>500	2.2	15	71.9	67.5
W842674		0.48	0.04	0.16	4.16	0.7	310	380	17.70	6.72	0.20	>500	4.0	14	72.6	133.5
W842675		3.13	<0.01	0.10	0.99	2.5	1260	6.35	2.14	3.44	0.30	8.64	1.7	23	2.17	33.9
W842676		3.41	<0.01	0.07	3.09	0.5	4720	93.2	11.90	10.25	0.15	49.1	1.3	15	31.4	33.9
W842677		2.36	<0.01	0.08	1.60	0.5	2120	64.3	0.42	16.90	0.07	>500	3.5	7	27.9	79.5
W842678		3.57	<0.01	0.02	0.72	1.3	660	78.5	0.24	15.85	0.11	4.39	1.1	6	18.80	4.7
W842679		2.15	<0.01	0.17	0.94	0.8	430	54.9	0.90	11.45	0.05	5.81	5.7	6	12.60	255
W842680		4.74	<0.01	0.04	7.47	0.3	>10000	26.7	0.47	2.05	0.02	47.0	0.2	4	9.39	6.8
W842681		3.93	<0.01	0.01	7.51	0.9	>10000	24.0	0.88	1.90	<0.02	21.9	0.3	4	11.10	0.7
W842682		2.08	0.01	0.18	3.07	32.7	2530	58.9	0.32	8.34	<0.02	>500	2.8	4	6.89	59.2
W842683		4.72	<0.01	0.01	3.18	0.3	4610	344	0.02	11.15	<0.02	>500	0.5	4	3.87	0.9
W842684		0.10	0.34	2.51	5.73	>10000	2120	1.80	365	11.90	0.86	129.5	53.8	64	11.30	828
W842685		7.31	<0.01	0.01	8.13	3.1	8320	27.1	0.22	1.64	0.02	120.5	0.2	5	9.43	1.7
W842686		7.64	<0.01	0.01	7.71	1.2	3110	18.15	0.74	0.79	<0.02	43.9	0.2	5	5.51	0.8
W842687		3.53	<0.01	0.12	6.51	42.3	2020	72.0	0.94	3.03	0.13	25.7	1.8	5	3.88	29.8
W842688		4.13	<0.01	0.08	8.30	4.8	2260	38.2	0.87	1.13	0.04	36.5	0.3	4	7.99	3.7
W842689		7.65	<0.01	<0.01	8.20	1.2	3850	32.4	0.46	1.44	0.07	21.8	0.1	4	21.0	1.8
W842690		5.56	<0.01	<0.01	7.26	2.4	4050	29.7	0.49	1.37	0.03	41.2	0.3	6	17.35	0.9
W842691		1.32	<0.01	0.03	0.93	0.3	320	103.0	0.63	18.70	1.86	17.70	0.7	5	7.87	5.4
W842692		0.76	0.01	1.12	0.64	5.0	30	34.7	6.28	9.10	0.19	5.22	35.1	9	22.3	1630
W842693		<0.02	<0.01	1.02	0.65	3.7	40	36.6	5.47	9.32	0.22	5.60	32.9	9	23.5	1415
W842694		4.62	<0.01	0.03	2.72	3.6	4090	107.0	0.43	14.10	0.28	10.05	0.7	11	38.6	5.8
W842695		5.33	<0.01	0.01	6.97	3.7	4690	73.7	0.11	2.97	<0.02	20.3	0.2	7	22.2	2.2
W842696		4.28	<0.01	0.03	2.88	1.8	>10000	97.2	0.40	13.30	0.89	6.84	0.5	16	16.85	3.6
W842697		3.74	<0.01	0.12	0.07	<0.2	150	3.32	7.90	21.9	3.83	3.24	0.5	4	1.99	3.8
W842698		1.44	<0.01	0.71	0.39	4.4	70	54.1	10.35	13.60	1.59	21.7	5.8	2	12.00	628
W842699		4.82	<0.01	0.12	0.27	0.5	370	17.25	4.81	21.6	4.17	4.05	0.5	4	7.60	4.6
W842700		6.80	<0.01	0.86	0.32	0.7	720	13.85	18.15	22.9	11.15	5.51	0.5	4	26.1	6.6

***** 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
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: 27-SEP-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19216428

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	Fe	Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P
	Units	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
W842661		2.57	9.50	0.10	0.5	7.97	0.87	1.6	136.5	0.16	623	4.19	0.35	6.5	9.2	50
W842662		0.12	0.24	<0.05	<0.1	0.010	0.01	1.1	1.3	1.57	113	0.06	0.03	0.1	0.6	50
W842663		0.97	17.60	0.05	1.5	0.045	1.32	5.6	293	0.56	554	8.95	1.17	15.2	10.5	120
W842664		1.24	3.37	0.05	0.4	0.057	0.38	4.3	42.7	0.92	347	11.75	0.08	2.4	10.3	370
W842665		1.15	2.47	0.05	0.4	0.053	0.18	5.3	26.0	0.53	363	11.00	0.02	1.8	9.5	250
W842666		1.66	2.80	0.05	0.4	0.073	0.11	4.8	25.0	1.63	751	19.10	0.03	1.8	10.6	640
W842667		6.75	16.80	0.19	2.4	0.803	3.41	77.9	29.0	1.63	1160	15.20	1.16	14.1	36.9	930
W842668		0.96	2.33	<0.05	0.4	0.167	0.25	4.9	13.3	0.70	371	9.52	0.03	1.7	11.3	470
W842669		1.27	2.37	<0.05	0.4	0.022	0.47	4.5	9.3	0.73	175	18.70	0.10	1.7	10.4	490
W842670		1.71	2.52	<0.05	0.5	0.016	0.52	4.6	8.4	0.58	192	20.9	0.12	1.7	9.5	310
W842671		1.20	2.43	<0.05	0.5	0.016	0.47	4.4	7.1	1.09	282	12.10	0.07	1.7	9.7	360
W842672		1.29	3.14	0.05	0.5	0.058	0.43	5.0	12.1	1.85	462	14.55	0.06	1.8	10.8	150
W842673		3.31	70.4	0.74	0.4	0.136	3.55	357	319	3.41	1540	4.99	0.68	24.9	10.9	260
W842674		4.37	72.5	0.57	0.4	0.148	3.57	257	360	3.45	1430	4.63	0.71	23.2	16.5	330
W842675		1.13	3.41	0.05	0.5	0.066	0.63	5.2	10.5	1.74	485	9.50	0.08	2.1	11.6	440
W842676		2.12	18.25	0.10	1.2	0.230	1.98	42.3	224	5.79	1770	56.8	0.35	9.8	10.6	1130
W842677		3.60	17.55	0.38	0.5	0.296	1.70	500	155.0	8.73	2260	67.0	0.09	5.3	17.9	2270
W842678		2.47	9.32	<0.05	0.1	0.315	0.73	2.9	149.0	10.45	2600	43.9	0.09	1.8	10.2	1370
W842679		5.70	9.88	0.09	0.2	0.276	0.98	3.6	185.0	8.98	1990	106.5	0.12	2.7	39.4	1280
W842680		0.33	41.1	0.10	13.0	0.167	4.55	31.6	16.9	0.14	497	14.50	1.47	57.1	8.2	80
W842681		0.34	52.4	0.13	9.7	0.205	4.47	11.9	21.6	0.11	647	1.74	2.10	64.8	0.6	30
W842682		3.02	65.6	3.80	5.8	0.676	1.76	5540	102.0	2.97	3460	9.61	0.02	7.1	47.1	10
W842683		1.01	17.40	0.46	7.2	0.447	2.27	670	25.6	0.71	2710	1.39	0.05	25.0	1.5	<10
W842684		6.74	16.70	0.17	2.3	0.783	3.40	77.7	28.5	1.65	1170	14.95	1.16	13.9	38.0	960
W842685		0.42	51.7	0.16	8.8	0.184	3.75	97.1	36.7	0.43	330	13.65	3.34	50.4	1.0	40
W842686		0.41	66.7	0.12	9.3	0.128	1.87	17.3	29.3	0.14	761	0.35	4.92	104.0	1.1	30
W842687		1.16	59.7	0.12	9.6	0.197	0.96	8.5	27.3	0.28	981	0.58	5.02	60.6	3.0	30
W842688		0.45	66.8	0.13	13.0	0.123	1.38	12.7	23.9	0.34	980	0.42	5.48	78.6	0.9	30
W842689		0.28	62.0	0.14	5.5	0.030	3.08	7.2	9.5	0.05	971	1.58	4.64	55.7	0.5	20
W842690		0.34	43.8	0.16	10.7	0.030	2.98	15.7	16.4	0.23	1100	1.71	3.61	74.8	0.7	10
W842691		1.81	9.91	0.07	0.4	0.412	0.29	11.7	73.8	9.52	2840	20.2	0.26	5.1	6.8	560
W842692		21.0	7.00	0.35	0.3	0.184	0.47	3.6	106.0	7.72	1880	30.4	0.11	4.3	88.8	1430
W842693		19.85	7.01	0.32	0.3	0.190	0.50	3.9	109.5	7.68	1920	28.9	0.11	4.2	81.7	1480
W842694		1.49	19.85	0.05	2.1	0.225	1.85	5.5	389	7.20	2780	42.3	0.59	20.7	3.9	1710
W842695		0.59	49.3	0.08	8.9	0.207	2.61	7.1	102.0	0.66	642	4.17	2.36	60.7	1.5	200
W842696		1.22	11.95	0.06	2.1	0.267	2.22	5.1	104.5	7.12	2240	25.5	0.26	15.0	6.2	2050
W842697		0.22	0.59	<0.05	<0.1	0.145	0.06	4.7	7.0	12.35	1650	11.50	0.02	0.2	3.4	460
W842698		16.10	5.64	0.27	<0.1	0.198	0.37	17.4	55.3	8.62	1620	5.46	0.05	2.2	15.9	360
W842699		0.35	2.51	<0.05	0.1	0.280	0.20	4.6	49.3	11.90	2150	10.30	0.06	1.1	6.0	550
W842700		0.31	3.07	<0.05	0.3	0.546	0.35	6.1	42.6	11.75	2260	14.70	0.03	3.1	9.8	610

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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 ST
VANCOUVER BC V6B 1L8

Finalized Date: 27-SEP-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19216428

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
W842661		7.6	663	0.004	2.25	0.18	1.5	11	5.2	22.5	10.25	<0.05	0.72	0.016	2.40	2.5
W842662		1.1	1.1	<0.002	0.01	0.22	0.2	2	<0.2	79.2	<0.05	<0.05	0.06	<0.005	<0.02	0.1
W842663		13.2	1160	0.006	0.20	0.13	2.1	1	6.3	27.9	20.1	<0.05	4.08	0.030	4.15	3.9
W842664		14.1	174.5	0.009	0.31	0.34	2.0	2	16.0	56.9	0.65	<0.05	1.03	0.042	1.07	4.1
W842665		171.5	57.4	0.009	0.29	0.74	1.8	2	28.7	96.1	0.22	<0.05	0.93	0.046	0.60	3.6
W842666		11.7	28.7	0.011	0.48	0.66	2.0	2	27.7	99.4	0.11	<0.05	0.82	0.050	0.22	5.4
W842667		51.2	198.5	0.002	0.74	39.2	10.5	5	69.2	316	0.85	0.58	10.35	0.326	2.03	5.7
W842668		85.6	40.7	0.007	0.43	0.93	1.8	2	21.6	159.0	0.10	<0.05	0.94	0.046	0.49	5.2
W842669		8.5	85.6	0.008	0.74	0.73	1.9	2	5.5	89.4	0.10	<0.05	0.86	0.047	1.08	4.9
W842670		7.6	103.5	0.007	1.03	0.83	1.8	3	4.0	56.9	0.10	<0.05	0.66	0.050	1.01	4.2
W842671		4.3	88.5	0.007	0.56	0.79	1.8	3	5.4	45.8	0.09	<0.05	1.10	0.048	0.68	4.1
W842672		3.7	97.7	0.009	0.42	0.46	2.1	3	10.7	27.5	0.10	<0.05	1.13	0.048	0.59	4.6
W842673		6.1	2020	0.009	0.79	0.35	18.7	4	14.5	39.4	0.56	0.41	2.24	0.030	7.11	10.6
W842674		8.8	2010	0.009	1.52	0.91	16.4	5	13.4	41.1	0.54	0.74	1.46	0.030	7.20	9.4
W842675		4.9	128.5	0.008	0.34	0.69	2.2	3	9.5	28.2	0.11	0.07	1.35	0.057	0.65	5.3
W842676		7.0	1665	0.056	0.32	0.41	2.6	2	29.9	25.7	9.84	0.11	3.42	0.026	5.39	13.9
W842677		4.1	621	0.075	0.68	0.17	2.4	6	19.3	23.8	2.00	0.05	15.90	0.020	2.03	26.4
W842678		1.9	397	0.047	0.02	0.40	1.8	1	35.0	13.6	1.08	<0.05	0.37	0.009	1.15	15.0
W842679		1.7	346	0.076	2.25	0.53	0.9	15	8.6	34.0	3.08	0.12	0.42	0.011	1.12	11.7
W842680		20.6	712	0.007	0.06	0.27	1.0	1	23.0	95.0	63.3	<0.05	18.80	<0.005	5.13	11.4
W842681		19.3	952	<0.002	0.01	0.30	1.4	1	24.3	59.7	98.6	<0.05	12.40	<0.005	5.54	8.1
W842682		2.4	556	0.028	0.51	1.89	4.0	3	56.9	83.6	4.01	<0.05	54.2	0.029	1.18	62.9
W842683		2.9	342	<0.002	0.01	0.25	2.5	<1	71.8	100.5	23.7	<0.05	18.35	<0.005	1.08	15.4
W842684		49.0	196.0	0.002	0.74	39.4	9.8	5	67.1	317	0.84	0.58	9.81	0.329	1.90	5.6
W842685		7.9	624	0.007	0.01	0.25	1.1	1	33.3	66.1	71.7	<0.05	19.85	<0.005	2.07	8.9
W842686		14.1	487	<0.002	<0.01	0.31	2.1	<1	21.5	17.5	>100	<0.05	27.7	<0.005	1.54	11.7
W842687		14.0	191.5	<0.002	0.83	0.23	1.4	2	13.3	46.4	87.9	<0.05	17.50	<0.005	0.77	8.4
W842688		22.0	420	<0.002	0.06	0.29	1.5	1	20.9	27.2	>100	<0.05	28.0	<0.005	1.25	14.8
W842689		31.4	1365	<0.002	0.01	0.23	1.6	1	5.1	56.7	64.9	<0.05	11.40	<0.005	5.72	7.8
W842690		27.6	1070	<0.002	0.01	0.30	1.8	1	7.3	46.7	71.1	<0.05	26.4	<0.005	4.05	12.3
W842691		2.6	198.5	0.027	0.05	0.25	1.6	1	23.1	31.4	4.56	<0.05	1.50	0.010	0.61	5.6
W842692		9.2	414	0.039	>10.0	0.50	1.1	87	39.4	10.9	1.11	0.39	0.74	0.026	1.43	13.1
W842693		8.4	434	0.033	>10.0	0.44	1.1	78	38.0	10.9	1.09	0.33	0.68	0.025	1.43	12.2
W842694		3.8	1055	0.054	0.06	0.41	1.8	1	24.9	60.0	27.1	<0.05	4.09	0.021	3.13	17.9
W842695		11.0	809	0.003	0.05	0.35	1.5	1	44.7	33.0	73.0	<0.05	17.05	<0.005	2.50	9.6
W842696		5.1	628	0.029	0.03	0.25	1.7	1	19.8	85.9	27.1	<0.05	4.16	0.042	2.42	15.0
W842697		10.7	35.3	0.023	0.07	0.70	0.2	2	2.6	137.5	0.07	<0.05	0.11	<0.005	0.20	7.1
W842698		13.4	263	0.014	8.99	0.52	0.2	73	17.1	49.1	0.48	0.25	0.24	<0.005	0.98	3.1
W842699		8.1	146.0	0.019	0.08	0.39	0.3	2	5.5	151.0	0.66	<0.05	0.19	<0.005	0.54	8.1
W842700		40.6	378	0.023	0.18	0.61	0.2	3	4.7	192.5	4.37	0.07	0.88	<0.005	1.26	8.2

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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

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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 27-SEP-2019
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Project: Rau

CERTIFICATE OF ANALYSIS WH19216428

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Zn-OG62
	Analyte	V	W	Y	Zn	Zr	Zn
	Units	ppm	ppm	ppm	ppm	ppm	%
	LOD	1	0.1	0.1	2	0.5	0.001
W842661		29	6.8	5.0	>10000	6.9	1.990
W842662		1	<0.1	2.2	31	1.6	
W842663		66	5.6	5.4	128	20.2	
W842664		53	30.0	4.7	209	16.2	
W842665		62	6.3	3.4	233	16.3	
W842666		66	2.1	4.4	172	16.6	
W842667		72	19.0	22.8	126	85.5	
W842668		59	2.4	3.9	373	17.4	
W842669		55	1.6	3.9	55	17.4	
W842670		50	2.3	3.3	91	20.0	
W842671		48	2.4	3.5	51	18.6	
W842672		73	7.1	3.2	107	20.0	
W842673		104	239	20.4	210	13.8	
W842674		99	470	19.1	224	12.3	
W842675		54	12.7	4.6	65	21.5	
W842676		69	270	14.4	130	16.1	
W842677		83	1740	30.2	141	5.0	
W842678		106	104.0	13.5	160	2.7	
W842679		74	176.0	13.9	110	3.2	
W842680		2	143.0	13.8	11	86.8	
W842681		1	5.5	13.8	10	59.0	
W842682		83	840	152.5	17	53.7	
W842683		10	12.4	57.0	7	55.4	
W842684		72	18.9	22.2	126	86.5	
W842685		2	26.7	9.0	12	49.5	
W842686		3	3.5	12.6	9	47.5	
W842687		2	5.2	15.3	31	48.7	
W842688		2	4.8	14.5	23	62.3	
W842689		<1	5.0	10.9	18	31.6	
W842690		2	4.8	28.5	16	69.5	
W842691		77	307	18.9	432	5.6	
W842692		62	40.7	11.5	128	12.2	
W842693		61	42.6	11.5	127	11.5	
W842694		81	21.9	19.2	122	18.4	
W842695		9	8.6	25.2	15	56.6	
W842696		112	13.2	17.9	223	26.4	
W842697		23	22.8	8.6	566	0.9	
W842698		48	87.7	11.9	278	1.0	
W842699		33	28.9	9.9	638	1.1	
W842700		32	42.8	9.9	1600	1.4	

***** 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
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: Rau

Finalized Date: 27-SEP-2019
Account: RCM

CERTIFICATE OF ANALYSIS WH19216428

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	ME-MS61	ME-OG62	Zn-OG62

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North Vancouver BC V7H 0A7
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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-2019
Account: RCM

CERTIFICATE WH19219755

Project: Rau

P.O. No.: R19-D14

This report is for 41 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 3-SEP-2019.

The following have access to data associated with this certificate:

ANDREW CARNE	ADAM COULTER	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
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-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid 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 *****

Comments: W842715C is a contaminated portion of sample W842715.

Signature:

Saa Traxler, General Manager, North Vancouver

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Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19219755

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
W842701		1.54	<0.01	2.39	0.41	0.6	880	22.4	35.0	22.7	25.1	7.05	0.6	4	6.17	27.4
W842702		3.28	<0.01	0.25	6.45	28.1	1860	100.0	3.72	7.33	1.53	13.30	1.2	3	24.6	55.4
W842703		6.98	<0.01	0.09	7.10	13.3	7920	39.3	3.71	1.43	0.12	32.0	0.1	3	15.10	4.3
W842704		7.83	<0.01	0.04	1.09	1.4	1710	60.3	0.71	16.55	0.49	7.70	0.5	12	15.45	11.9
W842705		0.10	0.33	2.56	5.58	>10000	2100	1.80	359	11.70	0.80	139.5	51.2	63	11.40	819
W842706		8.34	<0.01	0.22	0.67	6.0	1610	40.7	5.79	17.35	20.5	7.95	1.0	8	33.3	49.4
W842707		8.78	<0.01	0.05	0.04	1.3	90	0.48	1.27	22.2	3.04	1.78	0.3	3	0.55	6.2
W842708		8.33	<0.01	0.11	0.20	0.8	1040	1.22	1.72	20.6	0.28	3.36	0.5	8	12.70	4.7
W842709		8.38	<0.01	0.26	0.11	0.9	390	0.68	3.11	21.3	0.31	3.84	0.5	7	5.42	9.4
W842710		7.92	<0.01	0.48	0.05	0.9	240	0.45	5.49	20.4	0.29	2.13	0.4	4	3.03	15.8
W842711		8.21	<0.01	0.14	0.04	1.4	220	0.33	2.67	22.3	0.91	1.67	0.3	3	1.87	12.0
W842712		8.41	<0.01	0.08	0.03	0.7	230	0.28	1.05	22.4	0.59	1.35	0.3	5	1.18	8.2
W842713		9.26	<0.01	0.07	0.03	1.1	430	0.15	0.32	23.3	0.16	1.40	0.3	5	0.82	2.6
W842714		7.85	0.02	0.43	0.06	0.9	480	0.42	2.70	22.2	0.48	2.27	0.4	14	2.16	3.1
W842715		8.31	0.01	0.07	0.13	1.5	880	1.17	0.47	21.7	0.51	3.99	0.5	8	5.98	7.9
W842716		5.25	<0.01	0.24	0.12	0.3	920	0.77	1.68	21.5	1.59	3.90	0.5	7	8.54	5.8
W842717		1.47	<0.01	1.92	0.28	1.7	60	1.70	7.34	17.25	4.20	4.29	0.6	10	20.1	178.5
W842718		5.06	<0.01	0.01	0.18	0.2	20	0.13	0.05	31.6	0.02	0.90	0.6	1	0.05	4.9
W842719		1.98	<0.01	0.08	0.12	0.2	1300	0.52	0.35	21.0	0.51	5.16	0.5	7	8.27	4.7
W842720		3.28	<0.01	0.29	0.14	0.2	1590	0.39	0.99	20.9	1.28	5.52	0.6	12	8.39	14.0
W842721		5.14	<0.01	0.21	0.17	0.7	1510	0.83	1.00	20.2	1.87	7.28	0.7	13	14.70	20.1
W842722		8.34	<0.01	0.17	0.35	0.4	4420	2.22	0.78	21.2	2.88	8.16	0.9	16	34.9	24.2
W842723		<0.02	<0.01	0.14	0.33	0.8	3660	2.08	0.77	20.8	2.59	7.86	0.8	16	32.2	22.6
W842724		8.74	<0.01	0.62	0.34	0.7	6160	2.12	4.44	21.3	3.02	8.22	0.9	17	52.5	18.3
W842725		1.06	<0.01	0.09	1.83	55.3	280	2.09	2.86	15.95	0.42	9.98	2.6	8	2.84	13.4
W842726		3.29	<0.01	0.02	0.10	12.4	90	0.28	0.11	21.4	0.05	1.94	0.6	1	1.16	2.3
W842727		8.07	0.01	0.02	0.33	20.7	140	0.33	0.10	21.5	0.04	3.74	1.3	4	1.61	3.2
W842728		2.66	0.01	0.04	0.56	26.2	220	1.05	0.47	21.1	0.09	4.96	2.2	6	5.17	9.0
W842729		2.16	<0.01	<0.01	6.15	20.4	260	29.5	0.21	4.04	<0.02	26.4	0.4	5	6.42	6.2
W842730		0.30	<0.01	0.04	1.85	34.2	80	17.00	0.26	17.05	0.05	6.26	3.3	4	25.4	28.1
W842731		3.40	<0.01	0.01	0.19	20.0	50	0.38	0.06	25.8	0.04	4.90	0.6	2	0.62	3.6
W842732		8.25	<0.01	0.01	0.38	6.9	180	0.57	0.08	22.5	0.02	2.90	1.3	5	1.96	6.3
W842733		0.10	0.75	7.38	5.19	9150	1290	1.62	213	14.15	0.91	434	80.4	49	9.48	3540
W842734		8.83	<0.01	0.02	0.15	11.9	90	0.27	0.34	22.7	0.02	2.73	0.5	2	0.68	5.6
W842735		8.22	<0.01	0.03	0.51	3.5	220	0.57	0.26	22.9	0.02	5.76	1.1	6	2.18	5.8
W842736		0.71	<0.01	0.04	0.19	2.8	100	2.80	0.18	24.3	0.14	6.32	0.5	2	3.33	6.3
W842737		7.58	0.01	0.02	0.26	1.5	120	0.85	0.17	23.0	0.12	3.39	0.9	3	1.64	4.7
W842738		5.21	<0.01	0.04	0.33	0.5	150	0.33	0.13	22.1	0.03	3.84	0.8	4	1.93	3.2
W842739		1.80	<0.01	0.02	0.18	0.3	90	0.13	0.11	21.6	0.02	3.20	0.6	2	1.41	1.8
W842740		1.79	<0.01	0.02	0.20	0.7	90	0.21	0.09	21.8	<0.02	3.28	0.6	2	1.71	2.3

Comments: W842715C is a contaminated portion of sample W842715.

***** See Appendix Page for comments regarding this certificate *****

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 2-OCT-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19219755

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	Fe	Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P
	Units	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
W842701		1.09	4.44	0.08	0.4	1.385	0.22	5.8	38.3	8.97	3370	9.81	0.10	2.5	18.6	390
W842702		1.55	40.0	0.14	5.5	0.203	3.00	6.5	153.5	3.59	1430	1.10	1.44	24.0	7.0	130
W842703		0.25	51.0	0.22	8.5	0.055	2.00	9.6	24.8	0.17	2330	0.54	4.55	57.4	0.6	10
W842704		1.44	9.05	0.12	0.7	0.198	0.61	4.9	204	10.25	3080	55.5	0.20	11.3	15.0	1070
W842705		6.70	16.60	0.19	2.3	0.777	3.32	84.1	26.4	1.61	1180	14.35	1.15	12.6	35.2	940
W842706		1.88	7.63	0.08	0.2	1.360	0.73	8.2	229	11.60	1980	34.8	0.05	3.0	15.9	540
W842707		0.31	0.27	0.11	<0.1	0.176	0.01	2.9	5.0	12.70	552	17.20	0.01	0.1	4.6	180
W842708		0.95	0.64	0.09	0.1	0.020	0.16	4.7	5.9	12.20	392	41.9	0.01	0.4	8.8	500
W842709		0.76	0.49	0.10	<0.1	0.024	0.08	5.8	4.0	12.55	668	44.0	0.01	0.2	12.4	530
W842710		1.17	0.34	0.10	<0.1	0.026	0.04	3.6	8.1	11.90	455	38.5	0.01	0.1	18.1	290
W842711		0.45	0.27	0.12	<0.1	0.060	0.02	2.9	7.6	13.10	630	17.40	0.01	0.1	8.5	140
W842712		0.46	0.22	0.13	<0.1	0.045	0.02	2.3	5.5	13.15	372	33.0	0.01	<0.1	8.4	90
W842713		0.10	0.17	0.19	<0.1	0.012	0.01	2.5	4.5	13.45	206	6.65	<0.01	<0.1	3.3	170
W842714		0.13	0.38	0.18	<0.1	0.028	0.03	3.8	6.0	13.20	420	23.4	0.01	0.1	11.5	350
W842715		0.31	0.49	0.19	<0.1	0.049	0.08	5.8	9.2	13.05	683	19.20	0.02	0.5	12.9	340
W842716		0.25	0.47	0.21	<0.1	0.118	0.09	5.9	13.1	12.95	711	19.90	0.01	0.2	11.2	290
W842717		10.90	0.78	0.14	<0.1	0.274	0.21	6.0	22.7	9.91	909	232	0.01	0.2	22.2	600
W842718		0.13	0.66	0.05	0.1	<0.005	0.06	1.0	1.3	1.84	109	0.64	0.10	0.6	0.6	60
W842719		0.33	0.41	0.15	0.1	0.023	0.08	7.3	12.0	12.55	499	13.80	0.01	0.2	9.9	630
W842720		0.90	0.40	0.14	<0.1	0.053	0.08	8.0	11.8	12.45	427	52.5	0.01	0.3	20.7	680
W842721		0.62	0.48	0.13	0.1	0.142	0.12	10.0	17.7	12.15	652	38.0	0.02	0.4	25.8	590
W842722		0.64	0.80	0.13	0.1	0.206	0.29	11.3	70.4	12.65	1000	47.3	0.01	0.4	32.3	930
W842723		0.65	0.81	0.13	0.1	0.172	0.28	10.7	62.2	12.30	954	45.1	0.01	0.4	32.3	920
W842724		0.43	0.72	0.18	0.1	0.201	0.31	11.6	69.2	12.50	720	76.5	0.01	0.3	45.9	900
W842725		0.99	7.69	0.14	0.9	0.104	1.10	5.5	13.8	9.61	424	2.73	0.07	27.4	14.1	120
W842726		0.28	0.40	0.17	<0.1	0.025	0.07	1.1	3.2	13.20	396	1.22	0.01	0.3	2.5	30
W842727		0.36	1.25	0.20	0.1	<0.005	0.16	2.0	9.0	13.25	124	2.13	0.02	0.7	5.7	40
W842728		0.58	2.08	<0.05	0.2	0.011	0.31	2.4	11.1	12.45	281	5.59	0.03	1.5	6.7	110
W842729		0.61	45.7	0.17	4.1	0.151	4.18	9.7	20.4	0.40	584	0.40	0.56	120.0	0.7	<10
W842730		5.45	31.6	0.08	0.3	0.373	1.64	2.7	150.5	8.13	1730	4.64	0.07	72.5	6.3	50
W842731		0.50	0.60	<0.05	0.2	0.063	0.07	2.6	1.7	10.90	725	3.04	0.01	0.7	3.0	30
W842732		0.28	1.18	0.06	0.1	0.009	0.19	1.3	4.0	12.95	167	2.76	0.01	0.6	5.4	50
W842733		9.69	17.85	0.36	1.7	1.820	2.00	246	40.8	1.45	2440	12.80	0.86	8.6	40.0	1000
W842734		0.15	0.46	<0.05	<0.1	0.008	0.09	1.4	1.6	13.80	113	0.82	<0.01	0.2	2.5	50
W842735		0.33	1.58	0.08	0.1	0.015	0.25	2.7	5.5	13.15	202	2.02	0.01	0.6	4.8	80
W842736		0.22	1.23	0.13	<0.1	0.017	0.15	3.0	3.0	11.70	231	4.26	0.03	0.2	4.3	100
W842737		0.18	0.87	0.18	0.1	0.012	0.13	1.7	2.1	13.75	187	1.30	<0.01	0.3	4.5	30
W842738		0.18	1.03	0.19	0.1	<0.005	0.17	1.8	4.2	13.30	103	1.31	0.01	0.5	3.5	100
W842739		0.13	0.61	0.25	<0.1	<0.005	0.10	1.6	3.1	13.10	72	0.88	0.01	0.3	1.4	40
W842740		0.14	0.65	0.25	<0.1	<0.005	0.11	1.7	3.7	13.30	70	0.93	0.01	0.3	1.6	40

Comments: W842715C is a contaminated portion of sample W842715.

***** See Appendix Page for comments regarding this certificate *****

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Project: Rau

CERTIFICATE OF ANALYSIS WH19219755

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
W842701		250	163.5	0.014	0.62	1.14	0.4	7	11.7	261	3.13	0.23	0.77	<0.005	0.66	4.0
W842702		9.6	1110	<0.002	0.64	0.56	1.7	4	19.8	146.0	47.5	0.05	11.90	<0.005	3.39	7.5
W842703		23.1	777	<0.002	0.04	0.75	2.5	1	7.5	50.2	50.3	<0.05	23.6	<0.005	3.14	8.2
W842704		4.6	389	0.075	0.18	0.46	1.3	2	34.2	39.4	16.20	<0.05	1.62	0.021	1.16	10.3
W842705		57.7	201	0.003	0.73	42.0	9.4	4	72.4	311	0.83	0.68	10.75	0.323	2.08	5.5
W842706		11.1	668	0.042	0.89	0.53	0.8	6	24.1	55.6	1.90	0.09	0.62	0.015	2.31	5.8
W842707		4.4	8.0	0.015	0.18	0.32	0.1	2	1.2	101.0	<0.05	<0.05	0.05	<0.005	0.10	3.7
W842708		7.7	158.0	0.030	0.56	0.33	0.4	2	2.1	93.3	0.22	<0.05	0.29	0.010	1.12	8.8
W842709		26.4	70.7	0.042	0.42	0.36	0.3	2	3.0	103.0	<0.05	<0.05	0.17	0.006	0.52	8.0
W842710		57.6	38.4	0.025	0.72	0.75	0.2	4	1.7	91.0	<0.05	0.07	0.07	<0.005	0.35	5.2
W842711		25.4	18.3	0.013	0.26	0.51	0.1	3	1.3	122.0	<0.05	<0.05	0.05	<0.005	0.22	2.9
W842712		10.3	15.0	0.018	0.29	0.34	0.1	2	0.6	90.3	<0.05	<0.05	0.04	<0.005	0.16	2.4
W842713		11.8	9.4	0.022	0.03	0.12	0.1	1	0.4	107.5	<0.05	<0.05	0.04	<0.005	0.10	2.7
W842714		115.0	32.7	0.048	0.04	0.23	0.2	1	1.9	140.0	<0.05	<0.05	0.13	<0.005	0.42	6.6
W842715		9.2	78.6	0.025	0.15	0.26	0.3	1	2.3	111.0	0.47	<0.05	0.23	<0.005	0.60	5.9
W842716		52.3	102.0	0.050	0.12	0.30	0.3	2	1.8	113.0	<0.05	<0.05	0.22	0.005	0.80	4.9
W842717		380	225	0.050	5.32	2.46	0.3	29	2.2	98.0	<0.05	0.19	0.24	0.007	2.18	6.7
W842718		1.5	2.3	<0.002	0.01	0.08	0.2	1	<0.2	77.0	0.05	<0.05	0.13	0.005	0.03	0.3
W842719		23.1	79.2	0.021	0.15	0.23	0.4	1	0.8	107.5	<0.05	<0.05	0.29	0.008	0.71	9.4
W842720		83.8	74.2	0.063	0.50	0.39	0.4	3	2.2	128.0	<0.05	<0.05	0.28	0.008	0.83	8.1
W842721		62.7	114.5	0.050	0.34	0.37	0.5	3	3.5	123.0	<0.05	<0.05	0.45	0.009	0.94	8.7
W842722		44.9	346	0.091	0.37	0.39	0.6	3	4.1	149.0	<0.05	<0.05	0.47	0.013	2.36	12.3
W842723		42.8	312	0.069	0.36	0.34	0.5	4	3.6	143.5	<0.05	<0.05	0.45	0.012	2.21	12.5
W842724		134.5	378	0.101	0.23	0.37	0.5	3	3.2	126.0	<0.05	<0.05	0.44	0.010	2.46	13.5
W842725		5.3	124.0	0.003	0.02	0.70	1.6	1	43.2	44.9	4.07	<0.05	5.05	0.037	0.60	2.9
W842726		1.1	8.6	<0.002	<0.01	0.12	0.2	1	0.7	66.8	<0.05	<0.05	0.17	0.006	0.14	0.5
W842727		0.8	13.9	<0.002	0.06	0.11	0.6	<1	0.7	52.4	0.05	<0.05	0.51	0.018	0.38	2.1
W842728		1.6	46.4	0.003	0.16	0.15	1.1	<1	0.8	62.7	0.08	0.08	0.96	0.031	0.72	4.0
W842729		6.7	352	<0.002	0.03	0.21	2.0	<1	140.0	38.3	100.0	<0.05	12.10	<0.005	1.57	11.5
W842730		2.1	457	0.006	0.13	0.30	10.7	1	13.7	53.1	7.03	<0.05	1.94	0.018	2.15	5.4
W842731		1.0	8.3	0.010	0.02	0.10	0.3	1	1.1	97.2	0.21	<0.05	0.40	0.006	0.10	2.3
W842732		0.5	24.2	0.003	0.09	0.08	0.7	<1	0.6	72.4	<0.05	<0.05	0.54	0.014	0.35	2.2
W842733		34.4	120.0	<0.002	1.34	32.4	7.1	5	98.2	258	0.58	1.14	9.18	0.248	1.38	11.9
W842734		0.5	8.8	<0.002	0.01	0.08	0.2	<1	0.4	82.2	<0.05	<0.05	0.19	0.005	0.16	0.9
W842735		0.8	28.0	0.003	0.13	0.08	0.9	2	0.9	68.6	0.05	<0.05	0.87	0.021	0.43	2.6
W842736		1.6	48.9	0.006	0.08	0.20	0.5	1	1.4	122.5	<0.05	<0.05	0.12	<0.005	0.29	2.3
W842737		0.7	26.6	0.004	0.06	0.15	0.4	1	0.4	76.1	<0.05	<0.05	0.38	0.009	0.24	2.8
W842738		1.0	18.0	0.003	0.07	0.08	0.6	1	0.4	67.9	<0.05	<0.05	0.50	0.016	0.32	3.1
W842739		0.5	10.0	<0.002	0.04	0.08	0.3	1	0.2	62.7	<0.05	<0.05	0.27	0.009	0.21	1.9
W842740		<0.5	11.8	<0.002	0.05	0.05	0.4	1	0.2	64.3	<0.05	<0.05	0.31	0.009	0.27	2.0

Comments: W842715C is a contaminated portion of sample W842715.

***** 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
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: 2-OCT-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19219755

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	V	W	Y	Zn	Zr
	Units	ppm	ppm	ppm	ppm	ppm
	LOD	1	0.1	0.1	2	0.5
W842701		43	74.8	10.9	3370	1.9
W842702		28	12.8	11.2	269	26.2
W842703		1	2.2	20.7	67	49.5
W842704		89	19.5	16.7	163	7.9
W842705		73	19.5	23.6	126	85.2
W842706		90	1970	10.2	2840	4.5
W842707		18	7.7	5.8	393	<0.5
W842708		31	9.3	8.8	38	2.0
W842709		36	15.8	8.0	47	1.4
W842710		50	12.9	6.1	31	0.6
W842711		50	7.0	5.4	104	<0.5
W842712		21	9.7	4.0	70	<0.5
W842713		14	1.8	4.4	16	<0.5
W842714		28	6.2	7.0	50	0.8
W842715		40	45.9	10.2	59	0.9
W842716		28	8.2	9.0	159	0.9
W842717		43	84.0	8.4	383	1.2
W842718		1	0.5	2.9	5	1.9
W842719		25	5.2	11.2	51	1.2
W842720		29	12.2	10.5	112	1.3
W842721		31	11.4	12.5	134	1.7
W842722		37	153.5	13.8	209	2.1
W842723		36	108.0	13.2	196	1.9
W842724		32	67.1	15.8	237	1.7
W842725		17	5.8	8.3	206	13.4
W842726		3	1.2	1.0	19	0.8
W842727		7	0.9	1.9	26	2.3
W842728		12	5.9	3.2	70	6.3
W842729		1	7.5	23.6	23	53.8
W842730		12	500	29.3	110	5.2
W842731		9	2.3	3.8	21	2.4
W842732		18	3.6	1.4	11	3.8
W842733		57	27.6	28.5	169	64.4
W842734		11	0.7	1.1	9	1.2
W842735		14	2.3	1.9	6	4.7
W842736		44	9.9	2.6	43	0.8
W842737		15	2.0	1.0	27	3.1
W842738		10	1.0	1.2	10	2.7
W842739		3	0.6	0.9	4	1.3
W842740		4	0.6	0.9	3	1.4

Comments: W842715C is a contaminated portion of sample W842715.

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Finalized Date: 2-OCT-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19219755

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
W842715C		0.29	<0.01	0.08	0.13	0.3	640	0.94	0.66	21.8	1.07	4.52	0.4	10	8.95	6.4

Comments: W842715C is a contaminated portion of sample W842715.

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Project: Rau

Finalized Date: 2-OCT-2019
Account: RCM

CERTIFICATE OF ANALYSIS WH19219755

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	Fe	Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P
	Units	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
W842715C		0.19	0.48	0.23	<0.1	0.092	0.09	6.2	6.7	12.65	646	13.20	0.01	0.2	11.7	260

Comments: W842715C is a contaminated portion of sample W842715.

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Finalized Date: 2-OCT-2019
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CERTIFICATE OF ANALYSIS WH19219755

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
W842715C		11.7	105.5	0.039	0.08	0.11	0.4	1	1.3	114.0	0.07	<0.05	0.38	0.006	0.79	7.1

Comments: W842715C is a contaminated portion of sample W842715.

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Finalized Date: 2-OCT-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19219755

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	V	W	Y	Zn	Zr
	Units	ppm	ppm	ppm	ppm	ppm
	LOD	1	0.1	0.1	2	0.5
W842715C		37	8.2	9.8	113	1.4

Comments: W842715C is a contaminated portion of sample W842715.

***** See Appendix Page for comments regarding this certificate *****

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Project: Rau

Finalized Date: 2-OCT-2019
Account: RCM

CERTIFICATE OF ANALYSIS WH19219755

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	ME-MS61

ALS Canada Ltd.

2103 Dollarton Hwy
North Vancouver BC V7H 0A7
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To: **ATAC RESOURCES LTD.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 29-SEP-2019
Account: RCM

CERTIFICATE WH19219765

Project: Rau

P.O. No.: R19-D15

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 3-SEP-2019.

The following have access to data associated with this certificate:

ANDREW CARNE	ADAM COULTER	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
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-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid 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:

Saa Traxler, General Manager, North Vancouver

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2103 Dollarton Hwy
North Vancouver BC V7H 0A7
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Finalized Date: 29-SEP-2019
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Project: Rau

CERTIFICATE OF ANALYSIS WH19219765

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
W842741		0.52	0.01	0.04	1.71	5.6	490	1.20	0.29	21.0	<0.02	23.4	5.0	16	29.4	12.4
W842742		6.78	0.01	0.02	0.44	5.5	160	0.74	0.07	22.2	0.02	5.39	1.1	5	3.96	3.1
W842743		3.61	<0.01	0.01	0.13	1.5	70	0.20	0.03	23.2	<0.02	2.64	0.5	3	1.31	1.6
W842744		3.07	<0.01	0.01	0.26	<0.2	70	0.37	0.05	28.3	0.02	5.09	0.4	2	3.71	2.0
W842745		3.58	<0.01	0.02	0.17	0.5	60	0.57	0.09	22.7	0.04	2.51	0.6	3	1.70	2.9
W842746		0.42	<0.01	0.03	0.56	4.6	130	11.00	0.96	23.0	0.15	3.76	0.9	3	6.06	5.7
W842747		6.04	0.01	0.02	0.35	<0.2	140	0.59	0.06	22.9	0.02	4.48	0.8	4	3.50	2.6
W842748		0.10	0.35	2.86	5.83	>10000	2130	1.79	357	11.95	0.91	143.0	49.1	58	12.35	867
W842749		6.25	<0.01	0.02	0.48	4.4	150	0.52	0.61	22.5	0.02	6.27	1.2	6	3.95	4.6
W842750		0.40	<0.01	0.04	4.05	3.0	100	60.7	3.40	17.35	0.07	23.8	1.0	2	20.3	6.3
W842751		0.53	<0.01	0.06	7.86	1.5	170	136.0	1.79	7.67	0.18	19.15	0.3	1	4.69	1.8
W842752		0.47	<0.01	0.03	4.56	2.7	420	59.0	0.45	16.35	0.08	40.2	3.0	8	37.3	24.8
W842753		7.00	<0.01	0.01	0.19	<0.2	90	1.17	0.21	22.5	0.03	2.85	0.5	2	4.10	2.3
W842754		0.69	<0.01	0.11	1.62	3.3	230	25.7	12.65	22.7	0.27	5.80	1.3	5	35.7	5.9
W842755		7.78	<0.01	0.02	0.27	<0.2	130	2.87	0.27	22.6	0.04	3.66	0.7	3	6.73	2.5
W842756		2.57	<0.01	0.12	6.92	17.8	480	25.4	42.7	5.77	<0.02	93.0	3.2	4	11.25	47.2
W842757		4.93	<0.01	<0.01	0.21	<0.2	30	0.15	0.13	33.4	<0.02	1.56	0.5	2	0.06	3.4
W842758		7.92	<0.01	0.02	6.12	1.7	80	9.29	12.15	0.53	0.03	8.75	0.4	6	8.71	5.9
W842759		2.97	<0.01	<0.01	6.31	1.6	120	8.61	3.25	0.75	<0.02	10.45	0.2	7	5.04	3.3
W842760		0.11	<0.01	0.05	6.65	2.7	910	17.05	1.28	2.58	<0.02	79.4	1.2	2	10.75	8.2
W842761		2.12	<0.01	<0.01	0.14	<0.2	50	1.14	0.43	21.4	0.03	2.24	0.3	1	3.61	1.4
W842762		3.67	<0.01	0.02	5.75	1.0	100	13.10	5.15	3.08	0.17	24.5	0.3	5	10.15	1.9
W842763		4.34	<0.01	0.01	0.28	<0.2	120	1.36	0.16	22.2	0.06	3.26	0.7	3	4.87	1.6
W842764		6.14	<0.01	0.04	6.11	1.4	110	9.78	3.76	1.83	0.11	12.75	0.3	5	6.44	3.7
W842765		1.42	<0.01	0.01	0.22	1.2	80	0.91	0.30	21.7	0.02	2.94	0.5	2	3.69	1.3
W842766		3.08	<0.01	0.01	6.18	1.2	140	9.10	1.25	0.69	0.02	10.60	0.2	6	4.43	3.1
W842767		2.85	<0.01	0.01	6.13	1.5	170	7.46	1.06	0.84	<0.02	12.10	0.3	7	4.73	3.0
W842768		4.40	<0.01	0.04	6.13	3.9	130	7.07	13.00	1.01	<0.02	10.70	0.2	6	5.66	3.9
W842769		5.42	<0.01	<0.01	6.29	3.4	270	9.81	0.85	1.34	<0.02	9.97	0.3	6	6.13	4.2
W842770		0.61	0.03	0.22	4.28	917	100	6.71	13.50	10.90	<0.02	45.4	4.5	3	7.74	49.4
W842771		<0.02	0.07	0.28	4.28	1075	100	6.42	8.35	10.40	<0.02	41.0	5.1	3	7.49	46.9
W842772		1.42	<0.01	0.01	0.22	6.0	80	5.04	0.25	21.7	<0.02	2.11	0.4	2	2.93	1.6
W842773		8.42	<0.01	0.05	0.69	1.9	390	3.37	1.62	22.2	0.12	5.16	1.6	6	17.45	4.6
W842774		7.90	<0.01	0.02	0.46	0.4	230	2.14	0.32	22.3	0.02	3.98	1.2	5	12.45	3.3
W842775		8.17	0.01	0.01	0.16	3.0	90	0.87	0.33	22.3	0.02	2.18	0.5	4	2.09	1.8
W842776		7.86	<0.01	0.02	0.28	0.4	160	0.76	0.15	22.2	<0.02	2.72	0.8	3	4.43	2.7
W842777		7.78	<0.01	0.31	0.34	4.5	100	1.00	0.51	22.6	1.63	3.98	1.0	4	3.87	5.9
W842778		0.10	0.81	6.98	4.85	8590	1160	1.61	209	13.20	0.86	427	70.8	49	8.91	3500
W842779		7.83	<0.01	0.03	0.13	6.2	60	0.34	0.38	23.2	0.06	1.86	0.5	2	0.81	4.7
W842780		8.28	<0.01	0.01	0.12	2.2	70	0.39	0.27	23.2	0.03	2.04	0.4	1	1.15	1.6

***** 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
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: 29-SEP-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19219765

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	Fe	Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P
	Units	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
W842741		1.07	6.07	0.09	0.3	<0.005	0.87	10.4	36.9	11.30	206	3.49	0.07	2.9	15.2	90
W842742		0.35	1.34	0.10	0.1	<0.005	0.22	2.6	9.5	12.00	110	3.26	0.02	0.9	3.7	150
W842743		0.10	0.41	0.15	<0.1	<0.005	0.07	1.4	2.9	11.90	85	1.20	0.01	0.3	2.2	40
W842744		0.08	0.82	0.16	<0.1	<0.005	0.11	2.8	3.1	8.32	122	8.54	0.01	0.3	4.1	100
W842745		0.14	0.55	0.22	<0.1	0.007	0.11	1.3	3.4	12.55	166	20.9	<0.01	0.3	2.8	40
W842746		0.41	3.12	0.22	0.1	0.035	0.41	1.8	23.9	11.55	576	4.54	0.02	3.1	5.2	50
W842747		0.19	1.17	0.26	0.1	<0.005	0.20	2.2	7.6	12.65	82	4.48	0.01	0.6	3.6	50
W842748		7.02	16.25	0.23	2.4	0.809	3.47	84.8	28.1	1.67	1240	14.00	1.19	13.1	37.0	980
W842749		0.32	1.42	0.14	0.1	0.010	0.23	3.0	10.5	12.55	171	1.97	0.02	0.9	3.6	100
W842750		1.82	25.2	0.14	1.0	0.122	0.97	8.0	51.0	8.42	1170	24.6	1.44	24.7	1.5	50
W842751		0.43	57.4	0.18	5.1	0.025	0.54	5.4	15.7	0.64	258	95.0	4.72	52.2	0.4	40
W842752		2.30	26.9	0.17	1.6	0.113	1.70	14.7	53.3	7.58	1670	19.85	1.23	26.9	7.3	330
W842753		0.09	0.64	0.33	0.1	0.006	0.14	1.4	3.8	12.35	188	2.92	0.01	0.4	2.2	40
W842754		0.62	6.01	0.21	0.5	0.108	1.09	2.3	21.9	11.20	1600	5.19	0.04	7.3	7.0	40
W842755		0.16	1.00	0.30	0.1	0.008	0.23	1.8	9.0	12.40	217	1.20	0.01	0.4	2.9	40
W842756		1.50	36.2	0.30	3.3	0.088	4.49	41.1	35.7	1.87	546	28.4	1.51	90.7	3.0	30
W842757		0.12	0.74	0.17	0.1	<0.005	0.07	1.4	1.4	1.70	107	0.12	0.10	0.4	0.4	90
W842758		0.52	29.6	0.29	3.4	0.041	3.78	3.8	19.3	0.03	480	1.25	2.66	162.5	3.2	10
W842759		0.39	30.0	0.27	4.2	0.041	3.83	4.2	8.2	0.03	395	0.36	2.87	184.0	0.7	<10
W842760		1.31	40.8	0.34	2.8	0.065	4.72	30.0	46.7	1.65	678	50.4	0.73	113.5	4.7	20
W842761		0.13	1.45	0.33	<0.1	0.010	0.15	1.2	12.7	11.45	248	0.57	0.01	0.8	1.1	20
W842762		0.51	34.6	0.41	7.4	0.056	2.63	7.7	15.6	0.96	1370	1.47	3.20	86.3	0.8	10
W842763		0.16	0.97	0.38	0.1	<0.005	0.18	1.6	8.1	11.40	125	2.53	0.02	0.7	2.4	40
W842764		0.43	31.7	0.49	3.7	0.039	3.30	5.0	11.1	0.60	355	0.28	2.68	180.0	1.3	10
W842765		0.24	1.34	0.39	0.1	0.015	0.19	1.4	13.2	11.15	333	0.84	0.01	2.3	1.2	30
W842766		0.35	27.8	0.45	2.9	0.048	4.34	4.5	9.1	0.08	194	0.48	2.30	157.0	0.7	<10
W842767		0.47	28.4	0.34	3.6	0.056	4.14	5.2	10.2	0.10	277	0.30	2.37	165.5	0.6	<10
W842768		0.52	28.0	0.32	3.6	0.102	3.84	4.8	23.7	0.19	356	0.26	1.77	183.0	0.6	<10
W842769		0.59	29.0	0.39	3.6	0.088	4.88	4.4	31.2	0.34	314	1.62	1.19	157.5	0.6	<10
W842770		3.69	22.8	0.34	1.1	0.324	2.66	26.2	133.0	3.73	1180	96.2	0.04	136.0	1.4	20
W842771		3.91	21.8	0.22	1.0	0.296	2.63	23.0	125.0	3.60	1180	67.0	0.04	131.5	1.4	20
W842772		0.20	0.82	0.20	0.1	0.029	0.10	1.1	5.2	11.80	468	1.69	<0.01	1.0	1.7	30
W842773		0.39	2.20	0.31	0.2	0.015	0.42	2.4	38.3	11.10	269	5.97	0.03	1.3	5.8	70
W842774		0.24	1.34	0.33	0.1	0.007	0.27	1.9	23.0	11.30	139	7.60	0.02	0.8	5.3	40
W842775		0.10	0.65	0.43	<0.1	0.009	0.09	1.1	4.9	11.85	116	1.27	<0.01	0.3	2.5	40
W842776		0.16	0.96	0.52	0.1	<0.005	0.16	1.3	11.2	12.00	84	2.02	0.01	0.5	3.3	40
W842777		0.27	1.22	0.46	0.1	0.029	0.20	1.9	9.7	11.20	495	3.45	0.01	0.7	4.7	100
W842778		9.17	17.50	0.33	1.6	1.790	1.94	248	36.3	1.38	2380	13.80	0.82	8.6	36.1	940
W842779		0.17	0.40	0.20	<0.1	0.019	0.06	0.9	3.4	11.75	264	1.30	<0.01	0.2	3.1	30
W842780		0.08	0.54	0.37	<0.1	0.006	0.08	1.1	5.3	11.85	124	1.03	0.01	0.2	4.4	50

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2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 (604) 984 0221 Fax: +1 (604) 984 0218
www.alsglobal.com/geochemistry

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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 29-SEP-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19219765

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
W842741		1.0	301	0.003	0.68	0.11	3.5	1	5.3	68.6	0.18	<0.05	2.93	0.092	2.86	4.9
W842742		0.5	27.3	0.005	0.10	0.13	0.8	1	0.7	67.6	0.05	<0.05	0.62	0.024	0.52	3.8
W842743		<0.5	12.5	<0.002	0.01	0.10	0.2	1	0.2	74.5	<0.05	<0.05	0.20	0.007	0.20	2.2
W842744		0.9	34.9	<0.002	0.02	0.11	0.3	1	0.5	148.0	<0.05	<0.05	0.21	0.008	0.29	1.5
W842745		1.2	24.1	0.004	0.04	0.12	0.3	1	0.3	67.4	<0.05	<0.05	0.26	0.008	0.23	2.4
W842746		2.9	185.5	0.008	0.09	0.15	0.6	1	1.8	65.4	0.22	<0.05	0.40	0.012	0.82	4.9
W842747		0.6	23.7	0.004	0.08	0.08	0.7	<1	0.5	60.8	<0.05	<0.05	0.55	0.017	0.44	3.3
W842748		53.0	199.5	0.002	0.75	40.5	9.4	4	72.4	318	0.86	0.68	10.90	0.325	2.09	6.1
W842749		0.9	23.4	<0.002	0.13	0.12	0.8	1	0.8	55.7	0.05	<0.05	0.80	0.027	0.45	3.1
W842750		4.7	469	0.002	0.04	0.22	3.4	<1	2.9	74.2	28.0	<0.05	5.52	<0.005	1.78	4.3
W842751		15.4	34.8	0.003	0.01	0.18	1.6	<1	6.0	160.0	>100	<0.05	6.64	<0.005	0.58	5.2
W842752		5.1	756	0.011	0.26	0.18	5.4	1	5.0	87.0	30.5	<0.05	9.06	0.040	3.16	9.5
W842753		1.0	53.5	0.002	0.01	0.08	0.3	1	0.4	45.6	0.11	<0.05	0.28	0.006	0.41	2.4
W842754		10.9	825	0.002	0.05	0.15	1.7	1	7.5	56.3	1.44	<0.05	1.50	0.028	3.46	7.1
W842755		1.3	79.2	0.002	0.05	0.06	0.5	1	0.6	53.6	<0.05	<0.05	0.37	0.011	0.70	2.5
W842756		26.8	646	0.007	0.66	0.86	5.7	<1	80.0	74.4	33.7	0.11	22.0	0.006	2.84	9.6
W842757		0.5	2.3	<0.002	0.01	0.12	0.6	1	0.2	84.1	0.05	<0.05	0.21	0.019	0.02	0.3
W842758		78.4	784	<0.002	0.04	0.70	2.3	<1	13.9	9.3	26.4	<0.05	18.95	<0.005	3.91	19.6
W842759		60.4	585	<0.002	0.03	0.22	2.4	<1	10.1	17.8	25.5	<0.05	25.0	<0.005	2.81	40.0
W842760		19.7	397	<0.002	0.25	0.29	9.5	<1	46.9	96.3	67.9	<0.05	19.25	0.007	3.53	5.0
W842761		1.2	66.1	<0.002	<0.01	0.09	0.5	1	0.5	116.0	0.14	<0.05	0.19	<0.005	0.32	2.2
W842762		65.9	582	<0.002	0.02	0.20	4.9	<1	7.0	27.1	25.3	<0.05	19.75	<0.005	2.93	5.9
W842763		1.7	63.7	<0.002	0.06	0.05	0.5	<1	0.8	141.5	0.06	<0.05	0.42	0.011	0.48	2.2
W842764		65.0	613	<0.002	0.06	0.30	2.0	<1	10.2	23.6	28.5	<0.05	20.6	<0.005	2.91	21.8
W842765		1.2	67.2	0.002	0.01	0.09	0.4	<1	0.8	142.0	0.31	<0.05	1.04	0.005	0.45	3.6
W842766		64.0	642	<0.002	0.03	0.19	1.3	<1	29.8	22.2	20.9	<0.05	20.2	<0.005	3.04	30.9
W842767		55.9	577	<0.002	0.02	0.19	1.9	<1	31.2	24.3	21.7	<0.05	21.8	<0.005	2.79	32.1
W842768		46.9	558	<0.002	0.05	0.46	1.0	<1	135.0	10.4	22.5	0.05	26.2	<0.005	2.56	32.8
W842769		33.2	619	0.002	0.05	0.32	0.8	<1	139.5	25.1	17.85	<0.05	26.2	0.005	2.64	40.6
W842770		4.8	389	0.003	3.53	1.70	1.1	1	270	72.8	18.30	0.07	13.10	0.007	1.20	38.5
W842771		4.5	376	0.006	3.80	1.68	1.1	1	267	69.9	17.00	0.08	12.05	0.007	1.12	33.7
W842772		1.9	45.8	0.002	0.01	0.08	0.2	<1	5.0	114.0	0.13	<0.05	0.26	0.005	0.22	3.3
W842773		4.8	147.5	0.002	0.17	0.09	1.1	1	3.3	149.0	0.22	<0.05	0.88	0.025	1.33	3.6
W842774		1.5	120.0	0.003	0.10	0.07	0.8	1	2.6	136.0	0.06	<0.05	0.54	0.018	0.93	2.4
W842775		1.2	19.7	0.002	0.02	0.08	0.3	<1	1.2	121.0	<0.05	<0.05	0.23	0.006	0.23	2.1
W842776		1.3	47.1	0.003	0.06	0.07	0.5	<1	1.3	112.5	<0.05	<0.05	0.47	0.010	0.45	2.1
W842777		57.9	57.9	0.006	0.09	0.70	0.6	1	7.6	117.0	<0.05	<0.05	0.53	0.012	0.45	2.1
W842778		33.1	117.0	0.003	1.28	30.0	6.9	6	105.5	245	0.56	1.11	8.68	0.230	1.20	11.1
W842779		4.3	12.2	<0.002	0.01	0.19	0.2	<1	1.6	132.5	<0.05	<0.05	0.18	0.005	0.10	1.4
W842780		1.1	14.2	<0.002	0.02	0.10	0.2	<1	1.1	145.5	<0.05	<0.05	0.20	0.005	0.13	1.3

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2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 (604) 984 0221 Fax: +1 (604) 984 0218
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CERTIFICATE OF ANALYSIS WH19219765

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	V	W	Y	Zn	Zr
	Units	ppm	ppm	ppm	ppm	ppm
	LOD	1	0.1	0.1	2	0.5
W842741		21	3.7	6.3	14	11.5
W842742		8	1.6	2.5	22	3.5
W842743		8	0.5	1.2	5	1.0
W842744		20	1.5	2.2	3	1.0
W842745		9	2.5	1.4	15	1.6
W842746		14	121.0	2.4	150	4.8
W842747		8	2.4	1.4	7	2.9
W842748		75	20.7	23.0	129	88.8
W842749		9	1.1	2.2	7	4.1
W842750		4	300	15.2	65	5.7
W842751		<1	51.1	9.6	48	22.5
W842752		13	258	11.2	175	21.1
W842753		7	3.1	1.3	13	2.3
W842754		14	82.5	5.1	274	13.0
W842755		10	3.3	1.4	10	2.7
W842756		3	282	62.6	35	27.4
W842757		4	0.3	3.2	3	3.8
W842758		<1	4.6	31.6	39	50.1
W842759		<1	7.2	45.4	24	67.2
W842760		2	29.7	74.6	36	23.7
W842761		4	7.4	6.2	9	1.3
W842762		1	19.5	53.4	49	68.6
W842763		8	1.8	2.1	14	2.9
W842764		1	4.7	31.5	37	60.9
W842765		3	6.1	8.3	7	2.1
W842766		<1	5.2	30.6	18	48.3
W842767		<1	6.0	30.1	21	64.5
W842768		<1	8.6	36.0	23	69.0
W842769		1	19.6	36.1	20	70.3
W842770		2	183.0	87.5	13	20.9
W842771		2	181.5	82.5	12	18.3
W842772		6	2.0	2.8	22	2.2
W842773		10	3.4	2.1	29	6.8
W842774		15	3.6	1.5	9	5.3
W842775		9	1.3	0.8	5	2.0
W842776		10	1.0	1.0	6	4.8
W842777		15	2.9	2.1	529	4.9
W842778		54	30.4	28.1	167	61.3
W842779		13	1.3	1.3	18	1.9
W842780		19	1.7	1.1	9	1.4

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CERTIFICATE OF ANALYSIS WH19219765

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	ME-MS61

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North Vancouver BC V7H 0A7
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 12-OCT-2019
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CERTIFICATE WH19225052

Project: Rau

P.O. No.: R19-D16

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 7-SEP-2019.

The following have access to data associated with this certificate:

ANDREW CARNE	ADAM COULTER	

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-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid 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:

Saa Traxler, General Manager, North Vancouver

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 ST
VANCOUVER BC V6B 1L8

Finalized Date: 12-OCT-2019
Account: RCM

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CERTIFICATE OF ANALYSIS WH19225052

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
W842781		8.17	<0.01	0.03	0.32	6.6	140	0.75	0.23	22.7	0.04	3.17	0.9	3	3.14	2.9
W842782		0.68	<0.01	0.06	0.52	2.8	140	6.63	0.82	23.1	<0.02	3.65	1.7	3	28.3	3.8
W842783		0.78	0.01	0.04	6.20	1.7	680	28.7	0.49	3.95	0.04	33.4	2.2	21	11.50	50.1
W842784		0.60	<0.01	0.05	0.53	0.4	50	17.45	0.35	21.9	0.07	3.33	0.7	6	15.55	43.2
W842785		6.01	<0.01	<0.01	5.91	6.3	210	12.30	0.67	1.65	<0.02	28.4	0.3	15	4.40	5.1
W842786		6.24	<0.01	0.07	5.08	7.0	150	5.53	1.10	2.09	<0.02	18.45	0.2	10	3.60	3.7
W842787		1.36	<0.01	0.08	0.90	5.7	110	10.40	0.67	22.2	0.24	9.35	0.7	6	25.3	19.3
W842788		6.24	<0.01	0.04	0.44	4.6	140	3.62	0.33	23.3	0.07	4.36	0.8	4	11.75	4.3
W842789		0.10	0.33	3.03	5.93	>10000	2180	1.54	386	12.20	0.73	125.5	49.0	63	11.00	862
W842790		1.00	0.01	0.05	3.88	4.0	330	12.35	1.86	17.00	0.02	36.6	1.7	2	10.60	20.3
W842791		4.56	<0.01	0.21	0.57	6.3	290	0.62	0.51	23.7	0.95	5.90	1.7	6	4.06	6.8
W842792		3.98	<0.01	0.02	0.37	1.3	240	0.27	0.39	23.6	0.03	4.96	1.4	4	4.28	3.3
W842793		7.64	<0.01	0.01	0.52	1.1	340	3.81	0.17	23.1	0.03	6.62	1.0	5	4.39	4.0
W842794		7.77	<0.01	0.03	0.16	0.7	90	0.54	0.29	25.2	0.05	2.45	0.8	2	2.65	3.2
W842795		7.81	<0.01	0.03	0.70	0.7	380	3.68	0.51	24.7	0.06	6.40	1.7	7	18.50	5.2
W842796		5.54	<0.01	0.01	0.20	0.8	130	1.15	0.11	24.2	0.03	2.53	0.7	2	3.17	1.9
W842797		0.56	<0.01	0.04	4.78	2.5	560	23.4	2.93	15.45	<0.02	8.43	0.7	1	9.46	9.9
W842798		<0.02	<0.01	0.01	4.73	1.8	550	19.60	3.51	15.30	<0.02	9.48	1.0	1	10.70	9.9
W842799		6.07	0.01	0.02	0.32	0.9	220	0.95	0.38	24.4	0.12	3.73	1.2	4	4.34	4.7
W842800		5.29	<0.01	0.01	0.16	0.3	140	0.37	0.09	23.8	0.02	2.27	0.7	2	2.81	1.9
W842801		8.47	0.01	0.04	0.34	0.8	240	1.25	0.46	23.0	0.10	3.78	1.0	4	6.44	3.1
W842802		8.11	<0.01	0.02	0.26	0.7	240	0.30	0.22	23.4	0.04	3.36	1.0	3	3.13	2.8
W842803		8.18	<0.01	0.03	0.19	3.2	140	1.33	1.21	22.9	0.25	2.56	0.8	2	1.92	2.8
W842804		8.10	0.01	0.04	0.36	0.9	270	1.15	0.47	23.2	0.06	4.31	1.0	4	5.29	2.9
W842805		8.11	<0.01	0.02	0.08	0.5	50	0.58	0.11	24.3	0.06	1.22	0.5	1	0.60	1.3
W842806		3.59	0.01	0.02	0.09	2.2	100	0.24	0.11	24.3	0.06	1.39	0.5	1	0.57	1.9
W842807		3.45	0.01	0.03	0.08	2.5	90	0.29	0.13	23.4	0.06	1.57	0.6	1	0.62	1.7
W842808		9.07	0.01	0.02	0.07	0.7	90	0.21	0.07	22.8	0.10	1.15	0.7	1	0.45	1.8
W842809		8.19	<0.01	0.05	0.08	0.9	100	2.28	0.58	23.8	0.54	1.04	0.7	1	0.56	2.6
W842810		3.88	<0.01	0.02	0.11	3.0	140	0.42	0.25	23.4	0.05	1.75	0.7	1	0.69	2.4
W842811		2.51	0.01	0.20	1.01	46.8	100	14.55	6.13	24.0	0.81	8.71	2.7	2	5.76	22.8
W842812		4.90	<0.01	<0.01	0.13	0.3	20	0.11	0.03	35.4	<0.02	0.94	0.8	1	<0.05	1.8
W842813		0.64	<0.01	0.61	2.09	19.4	170	13.60	1.18	17.40	0.85	8.30	6.2	3	9.57	148.5
W842814		1.46	0.01	0.04	5.81	3.5	200	16.10	1.55	5.99	0.17	5.17	1.5	4	5.31	17.5
W842815		7.55	<0.01	0.13	0.20	16.9	40	2.60	2.61	22.5	0.38	1.45	0.7	1	4.26	2.6
W842816		7.70	<0.01	0.04	0.03	4.2	20	0.57	0.44	22.9	0.05	0.46	0.5	1	0.10	1.4
W842817		8.50	<0.01	0.44	0.03	4.6	10	0.66	1.53	22.4	0.06	0.58	0.5	<1	0.11	1.7
W842818		8.58	<0.01	0.02	0.08	1.0	70	0.54	0.14	22.5	0.04	1.12	0.6	2	0.84	2.1
W842819		0.10	0.81	7.06	4.92	8800	1180	1.59	211	13.35	0.95	404	74.9	50	9.23	3300
W842820		7.46	<0.01	0.05	0.07	5.4	40	1.09	0.59	22.8	0.03	1.21	0.6	2	0.28	4.4

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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	Fe	Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P
	Units	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
W842781		0.57	0.92	<0.05	0.1	0.074	0.17	1.6	14.6	12.15	1020	3.22	0.02	0.6	3.7	50
W842782		0.43	1.30	<0.05	0.3	0.033	0.29	1.8	5.7	11.65	618	4.48	0.01	1.1	5.7	380
W842783		1.61	34.8	0.10	1.8	0.118	4.62	10.8	31.5	1.59	500	8.08	0.65	38.4	1.6	20
W842784		1.40	6.95	<0.05	0.1	0.109	0.67	1.4	51.4	10.95	965	12.15	0.02	3.3	1.5	40
W842785		0.43	28.2	0.10	2.6	0.096	4.13	12.3	18.5	0.25	361	0.60	0.96	142.0	0.7	10
W842786		0.52	23.7	0.12	2.7	0.167	3.28	10.0	29.3	0.43	493	6.46	0.07	99.6	0.5	<10
W842787		0.73	4.32	0.06	0.3	0.145	0.59	4.8	25.0	11.30	1180	9.51	0.03	9.6	3.1	70
W842788		0.42	1.33	0.05	0.2	0.045	0.24	2.1	11.8	12.20	610	2.18	0.02	0.9	3.5	70
W842789		7.00	15.05	0.18	2.0	0.757	3.49	77.2	23.8	1.74	1260	13.85	1.19	12.0	33.8	990
W842790		1.45	22.9	0.13	1.7	0.141	3.44	15.8	73.6	7.28	1100	1.32	0.07	56.2	2.9	20
W842791		0.36	1.67	0.14	0.3	0.009	0.27	2.7	6.6	12.50	339	2.86	0.01	1.0	7.9	80
W842792		0.22	1.13	0.16	0.2	<0.005	0.18	2.5	8.4	12.15	86	4.74	0.01	1.0	6.4	60
W842793		0.28	1.53	0.28	0.3	<0.005	0.28	3.5	22.8	12.05	114	21.0	0.02	2.1	4.8	60
W842794		0.10	0.51	0.21	0.1	0.007	0.09	1.3	4.5	13.05	120	4.88	0.01	0.4	3.4	30
W842795		0.37	1.92	0.14	0.4	0.012	0.42	3.1	21.3	12.45	190	4.92	0.02	1.1	7.3	60
W842796		0.17	0.61	0.20	0.1	0.020	0.12	1.3	5.8	13.00	248	3.84	0.01	0.3	2.1	50
W842797		0.82	24.2	0.31	0.7	0.343	3.55	3.3	96.5	6.46	1100	0.86	0.04	17.6	2.6	40
W842798		0.81	26.9	0.18	0.6	0.350	3.55	3.5	92.4	6.36	1100	0.89	0.04	20.6	2.7	20
W842799		0.26	0.97	0.17	0.2	0.040	0.19	1.9	9.4	12.35	245	3.16	0.01	0.4	3.8	50
W842800		0.10	0.50	0.23	0.1	0.006	0.10	1.2	7.9	12.95	85	2.07	0.01	0.2	2.7	30
W842801		0.20	1.00	0.20	0.2	0.013	0.20	1.9	17.3	12.25	189	2.48	0.01	0.6	3.5	40
W842802		0.18	0.87	0.20	0.1	0.013	0.15	1.8	12.9	12.10	159	2.42	0.01	0.3	2.7	40
W842803		0.37	0.69	0.18	0.1	0.102	0.11	1.4	7.8	12.20	786	3.07	0.01	0.2	2.4	40
W842804		0.32	1.18	0.18	0.2	0.039	0.20	2.2	12.4	11.95	440	8.23	0.01	0.4	3.4	40
W842805		0.36	0.30	0.18	<0.1	0.083	0.03	0.7	2.6	12.90	881	9.55	<0.01	0.1	1.5	30
W842806		0.47	0.29	0.14	<0.1	0.073	0.04	0.7	3.2	13.30	1020	4.98	<0.01	0.2	2.3	40
W842807		0.42	0.32	0.17	<0.1	0.080	0.04	0.8	3.7	12.70	911	4.66	<0.01	0.3	2.7	30
W842808		0.06	0.33	0.21	<0.1	0.016	0.04	0.6	2.6	12.80	79	2.72	<0.01	0.1	3.2	30
W842809		0.07	0.44	0.22	<0.1	0.077	0.04	0.6	3.1	13.15	286	2.30	<0.01	0.1	6.4	30
W842810		0.16	0.38	0.17	0.1	0.019	0.05	0.9	3.6	12.55	152	1.84	<0.01	0.4	3.8	50
W842811		2.44	8.43	0.10	0.3	0.457	0.51	3.7	21.0	7.91	2500	12.70	0.16	28.3	23.6	60
W842812		0.11	0.47	0.10	0.1	<0.005	0.04	1.1	1.2	1.81	114	0.06	0.07	0.3	0.7	70
W842813		2.84	18.30	0.10	0.2	0.171	1.47	3.5	112.0	9.33	2310	3.45	0.02	41.4	15.2	40
W842814		0.89	25.1	0.13	0.9	0.028	3.78	2.2	10.7	2.61	394	7.40	1.49	66.3	7.1	<10
W842815		0.29	0.95	0.16	<0.1	0.076	0.15	0.7	3.3	12.30	938	3.23	<0.01	1.2	10.2	30
W842816		0.11	0.21	0.18	<0.1	0.009	0.01	<0.5	2.1	13.65	221	0.43	<0.01	0.5	4.1	30
W842817		0.32	0.24	0.22	<0.1	0.029	0.01	<0.5	1.7	13.65	508	1.05	<0.01	0.3	3.6	20
W842818		0.09	0.38	0.23	0.1	0.010	0.04	0.6	2.0	12.80	241	1.18	<0.01	0.2	3.5	50
W842819		9.14	18.85	0.41	1.7	1.635	1.92	244	40.2	1.43	2390	14.15	0.82	9.1	38.4	950
W842820		0.09	0.29	0.15	<0.1	0.007	0.02	0.7	1.6	13.20	205	1.98	<0.01	0.5	5.4	20

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	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
W842781		1.9	28.4	0.010	0.10	0.49	0.5	1	2.8	129.5	0.07	<0.05	0.41	0.011	0.39	2.9
W842782		12.9	354	0.009	0.17	0.35	0.6	1	9.3	154.5	1.15	<0.05	0.71	0.010	1.53	6.1
W842783		11.4	593	<0.002	0.42	0.35	1.8	1	10.9	81.4	63.5	<0.05	6.53	<0.005	2.93	5.2
W842784		1.6	451	0.004	0.24	0.19	1.2	1	4.0	106.0	0.83	<0.05	0.26	0.005	1.58	3.9
W842785		22.0	481	<0.002	0.10	0.31	1.6	<1	135.5	27.7	30.9	<0.05	21.1	<0.005	2.09	29.2
W842786		10.7	358	<0.002	0.09	0.34	2.0	1	236	16.8	19.00	<0.05	12.25	<0.005	1.19	10.4
W842787		3.8	370	0.004	0.20	0.29	1.4	1	18.8	131.5	9.44	<0.05	2.17	0.017	1.68	10.2
W842788		2.4	130.0	0.004	0.17	0.22	0.7	1	7.1	170.5	0.31	<0.05	0.65	0.013	0.79	3.4
W842789		53.6	189.0	0.002	0.77	39.4	8.5	4	74.4	328	0.81	0.70	8.97	0.338	2.00	5.1
W842790		11.8	618	0.002	0.24	1.70	4.0	<1	55.6	103.0	76.1	<0.05	10.55	0.012	3.08	10.3
W842791		69.1	44.5	0.013	0.21	2.26	1.0	1	1.6	179.5	0.11	<0.05	0.91	0.019	1.00	7.3
W842792		1.5	39.4	0.019	0.12	0.49	0.7	2	1.1	180.0	0.11	<0.05	0.64	0.012	0.70	6.4
W842793		1.8	34.2	0.015	0.18	0.31	0.8	<1	1.1	181.0	0.16	<0.05	1.07	0.019	0.84	3.7
W842794		3.4	30.3	0.010	0.03	0.35	0.3	1	2.4	161.0	<0.05	<0.05	0.25	0.005	0.32	4.0
W842795		6.4	170.5	0.012	0.19	0.39	1.2	2	5.1	199.0	0.39	<0.05	1.09	0.024	1.69	4.0
W842796		1.9	34.5	0.004	0.05	0.08	0.3	1	1.3	161.0	0.08	<0.05	0.30	0.007	0.33	2.8
W842797		2.3	668	0.004	0.10	0.31	1.8	<1	203	131.5	49.4	<0.05	3.11	<0.005	2.39	3.6
W842798		2.0	672	0.003	0.10	0.32	2.1	1	200	135.5	49.6	<0.05	3.07	<0.005	2.42	3.8
W842799		2.8	56.3	0.007	0.11	0.18	0.5	1	2.5	158.5	0.14	<0.05	0.52	0.010	0.51	3.4
W842800		1.6	33.6	0.004	0.03	0.07	0.3	1	1.6	158.5	0.06	<0.05	0.27	0.006	0.34	2.6
W842801		8.5	83.0	0.005	0.10	0.18	0.6	1	4.1	196.5	0.96	<0.05	0.56	0.010	0.65	2.6
W842802		2.2	33.0	0.003	0.08	0.10	0.5	2	2.1	174.0	<0.05	<0.05	0.43	0.010	0.46	2.4
W842803		3.7	34.2	0.004	0.10	0.18	0.4	1	3.5	134.5	<0.05	<0.05	0.30	0.006	0.24	2.6
W842804		5.8	49.6	0.005	0.14	0.31	0.7	2	3.9	153.0	<0.05	<0.05	0.55	0.014	0.54	2.6
W842805		2.5	12.0	0.003	0.01	0.08	0.2	1	1.2	147.5	<0.05	<0.05	0.12	<0.005	0.06	2.1
W842806		3.1	9.8	0.003	0.03	0.22	0.2	1	1.0	125.0	<0.05	<0.05	0.13	<0.005	0.11	1.5
W842807		3.3	11.4	0.003	0.03	0.16	0.2	1	1.2	128.0	<0.05	<0.05	0.13	<0.005	0.11	1.8
W842808		2.9	8.3	0.005	0.02	0.12	0.2	1	0.9	115.5	<0.05	<0.05	0.12	<0.005	0.09	2.5
W842809		9.1	16.6	0.004	0.01	0.13	0.1	1	2.4	108.0	<0.05	<0.05	0.10	<0.005	0.09	2.0
W842810		5.1	20.6	0.006	<0.01	0.19	0.3	1	1.8	172.0	<0.05	<0.05	0.18	<0.005	0.12	2.6
W842811		41.1	147.5	0.009	0.12	2.70	1.3	2	10.2	111.0	2.46	0.05	3.45	0.007	1.20	5.6
W842812		<0.5	1.2	<0.002	0.01	0.11	0.2	2	<0.2	83.1	<0.05	<0.05	0.08	0.005	0.02	0.2
W842813		59.3	285	0.015	1.09	4.71	2.8	2	4.5	105.0	4.06	0.05	4.74	0.011	3.42	9.7
W842814		31.4	450	0.004	0.22	0.82	1.3	<1	2.0	72.0	8.49	<0.05	7.74	<0.005	3.41	14.1
W842815		20.8	142.5	0.006	<0.01	0.32	0.1	1	3.0	88.3	0.08	<0.05	0.13	<0.005	0.51	2.6
W842816		10.7	3.4	<0.002	<0.01	0.21	0.1	1	2.2	57.7	<0.05	<0.05	0.04	<0.005	0.03	1.7
W842817		18.8	4.0	<0.002	<0.01	0.36	0.1	1	1.6	63.0	<0.05	<0.05	0.04	<0.005	0.03	1.5
W842818		4.7	24.2	0.003	<0.01	0.17	0.2	1	3.8	108.5	<0.05	<0.05	0.14	<0.005	0.13	2.4
W842819		33.2	115.0	0.003	1.31	32.9	7.4	6	100.0	248	0.61	1.12	9.60	0.229	1.25	12.7
W842820		8.2	7.3	0.004	<0.01	0.12	0.1	1	2.5	78.3	<0.05	<0.05	0.10	<0.005	0.05	3.5

***** 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
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: 12-OCT-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19225052

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	V	W	Y	Zn	Zr
	Units	ppm	ppm	ppm	ppm	ppm
	LOD	1	0.1	0.1	2	0.5
W842781		6	1.7	3.0	24	2.7
W842782		5	1.5	1.8	34	6.1
W842783		2	91.6	3.9	40	8.1
W842784		4	129.5	4.2	69	2.8
W842785		<1	12.4	31.9	24	38.1
W842786		1	123.5	24.3	30	35.8
W842787		5	42.8	8.8	101	7.0
W842788		5	1.4	1.8	21	6.2
W842789		76	19.9	20.3	133	79.6
W842790		8	67.0	8.0	80	8.1
W842791		15	3.0	2.6	341	11.5
W842792		8	2.3	1.9	10	8.2
W842793		7	1.9	2.6	17	9.4
W842794		9	5.1	1.2	17	3.3
W842795		22	3.5	2.4	23	14.0
W842796		6	1.0	0.9	11	3.3
W842797		3	18.3	3.4	41	2.9
W842798		3	21.2	3.8	44	2.4
W842799		10	5.0	1.3	26	6.1
W842800		9	1.1	0.8	4	3.5
W842801		8	2.2	1.2	20	6.8
W842802		7	2.1	1.2	13	5.5
W842803		7	3.7	1.1	65	3.8
W842804		6	7.3	1.5	18	6.3
W842805		3	2.5	0.6	14	1.5
W842806		7	1.8	1.3	25	2.0
W842807		8	2.1	1.5	20	2.1
W842808		8	1.1	0.5	22	1.5
W842809		23	2.5	0.5	74	1.4
W842810		17	1.7	1.8	22	2.3
W842811		22	216	38.1	344	9.0
W842812		1	0.2	2.3	4	1.8
W842813		31	225	37.0	261	4.5
W842814		9	82.7	17.6	97	14.1
W842815		25	5.3	4.3	91	1.2
W842816		14	1.7	1.7	24	0.9
W842817		10	3.1	1.4	37	1.0
W842818		20	1.1	0.5	15	2.3
W842819		54	38.6	27.3	167	58.2
W842820		19	1.0	2.0	14	1.1

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To: **ATAC RESOURCES LTD.**
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VANCOUVER BC V6B 1L8

Project: Rau

Finalized Date: 12-OCT-2019
Account: RCM

CERTIFICATE OF ANALYSIS WH19225052

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	ME-MS61

ALS Canada Ltd.

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North Vancouver BC V7H 0A7
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To: **ATAC RESOURCES LTD.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 5-OCT-2019
Account: RCM

CERTIFICATE WH19225062

Project: Rau

P.O. No.: R19-D17

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 7-SEP-2019.

The following have access to data associated with this certificate:

ANDREW CARNE	ADAM COULTER	

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-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid 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:



Saa Traxler, General Manager, North Vancouver

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
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Finalized Date: 5-OCT-2019
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Project: Rau

CERTIFICATE OF ANALYSIS WH19225062

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
W842821		0.92	<0.01	0.07	4.81	1.5	130	41.3	0.41	15.75	<0.02	26.7	0.6	2	4.80	4.9
W842822		8.02	<0.01	0.03	0.29	2.6	230	0.80	0.52	21.4	0.05	4.77	0.7	4	2.58	3.3
W842823		8.51	<0.01	0.04	0.11	1.6	120	0.36	0.76	21.6	0.03	1.55	0.5	1	0.93	1.9
W842824		8.48	<0.01	0.01	0.11	1.8	130	0.32	0.10	22.9	0.03	1.65	0.6	1	0.88	1.7
W842825		3.19	<0.01	0.04	0.18	2.4	100	3.20	0.10	22.5	0.21	1.37	0.4	1	1.36	1.2
W842826		4.96	<0.01	0.01	6.68	0.6	100	8.94	11.15	1.61	0.04	30.6	0.2	5	9.41	2.4
W842827		0.10	0.79	6.89	5.02	8590	1250	1.55	212	14.20	0.90	444	79.6	49	9.39	3370
W842828		8.01	<0.01	<0.01	6.46	1.7	60	7.46	14.90	0.74	0.05	24.3	0.1	5	8.82	1.5
W842829		7.69	<0.01	<0.01	6.21	1.1	320	8.36	3.99	0.62	0.03	9.34	0.1	5	7.63	1.0
W842830		3.54	<0.01	0.24	6.89	146.5	610	4.98	85.3	1.14	<0.02	22.8	4.7	5	5.74	3.4
W842831		3.42	<0.01	0.03	7.09	152.5	650	4.77	48.5	1.11	<0.02	6.23	5.4	4	5.56	2.7
W842832		7.94	<0.01	0.38	6.24	19.8	160	7.44	12.25	0.82	0.11	14.45	0.3	6	6.26	11.5
W842833		7.73	<0.01	<0.01	7.00	114.5	160	5.41	1.42	0.80	0.02	8.42	0.3	7	6.65	2.4
W842834		8.20	<0.01	<0.01	6.59	43.1	100	7.75	32.6	0.77	0.03	11.05	0.2	8	6.39	5.5
W842835		8.28	<0.01	<0.01	6.78	14.2	270	7.87	4.14	0.72	0.08	19.20	0.2	9	7.16	1.4
W842836		3.78	<0.01	<0.01	6.55	2.0	290	19.35	5.03	4.43	0.09	37.9	0.3	5	10.45	1.1
W842837		0.93	<0.01	0.06	1.26	2.5	130	21.9	1.27	20.8	0.09	6.44	0.7	2	9.87	1.4
W842838		<0.02	<0.01	0.08	1.25	2.1	130	21.2	1.04	21.0	0.11	5.59	0.7	2	9.38	1.5
W842839		3.52	<0.01	0.22	0.28	3.8	80	0.49	0.23	21.8	0.22	3.41	0.6	3	1.01	3.7
W842840		8.55	<0.01	0.99	0.11	4.8	10	0.49	1.69	20.6	0.12	2.19	0.4	1	0.35	9.6
W842841		8.36	<0.01	1.64	0.12	5.3	20	0.30	1.00	21.4	0.28	2.31	0.4	1	0.30	13.3
W842842		8.45	<0.01	1.98	0.20	4.8	20	0.62	1.89	21.3	0.16	3.09	0.5	1	1.08	18.8
W842843		8.37	<0.01	0.06	0.16	1.3	130	0.20	0.14	21.6	0.15	1.98	0.5	2	0.84	1.9
W842844		0.10	0.34	2.57	5.60	>10000	2040	1.73	348	11.85	0.68	137.0	52.5	59	11.30	805
W842845		8.23	<0.01	0.13	0.18	3.3	90	0.59	0.26	23.5	1.11	2.45	0.8	2	1.04	3.0
W842846		8.06	<0.01	0.33	0.17	2.5	70	0.75	0.49	23.3	0.81	2.79	0.6	1	1.16	3.2
W842847		7.72	<0.01	0.12	0.33	0.6	210	0.48	2.58	22.1	0.51	3.91	0.8	3	7.82	2.9
W842848		8.27	<0.01	0.04	0.61	0.2	220	1.15	0.19	21.6	0.07	6.48	1.4	5	20.4	6.6
W842849		8.31	<0.01	0.08	0.39	0.2	140	0.17	0.10	22.2	0.05	4.94	0.9	4	5.00	1.8
W842850		4.92	<0.01	<0.01	0.06	0.2	20	0.06	0.02	27.9	0.02	0.96	0.7	<1	0.15	1.3
W842851		7.88	<0.01	0.56	0.33	1.0	160	0.22	0.07	22.4	2.07	4.44	0.8	3	4.77	3.6
W842852		8.01	<0.01	0.02	0.22	0.2	170	0.21	0.04	21.0	0.13	2.75	0.8	2	4.67	2.1
W842853		8.30	<0.01	0.03	0.51	0.3	190	1.12	0.06	21.1	0.02	5.64	1.2	5	7.21	5.3
W842854		8.23	<0.01	0.01	0.26	0.2	170	0.13	0.05	22.7	<0.02	3.42	0.9	2	2.24	1.4
W842855		8.08	<0.01	0.02	0.34	0.5	200	0.19	0.06	20.8	<0.02	3.92	0.9	3	2.01	1.9
W842856		8.18	<0.01	0.02	0.19	<0.2	160	0.22	0.05	20.8	0.02	2.75	0.7	2	1.57	1.5
W842857		8.38	<0.01	0.03	0.33	0.8	440	0.58	0.14	22.8	0.06	3.34	0.9	3	5.11	3.4
W842858		8.54	<0.01	0.08	0.27	2.8	210	0.20	0.66	22.4	0.05	3.81	1.0	3	3.67	5.8
W842859		8.45	<0.01	0.06	0.31	0.4	210	0.31	0.18	22.8	0.05	4.41	0.9	3	3.11	3.4
W842860		8.54	<0.01	0.20	0.20	1.6	120	0.62	0.39	22.8	0.15	3.80	0.6	2	2.27	4.4

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Finalized Date: 5-OCT-2019
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CERTIFICATE OF ANALYSIS WH19225062

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	Fe	Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P
	Units	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
W842821		0.62	30.5	0.24	2.6	0.154	2.66	9.4	76.3	2.81	1590	1.65	0.05	92.7	1.2	20
W842822		0.38	0.97	<0.05	0.2	0.034	0.15	2.0	5.3	12.10	591	2.33	0.01	0.8	4.1	60
W842823		0.20	0.31	0.11	0.1	0.015	0.04	0.7	1.5	12.50	346	1.35	<0.01	0.6	3.1	40
W842824		0.16	0.33	0.17	0.1	0.020	0.04	0.8	1.6	12.55	250	2.41	<0.01	0.2	4.0	50
W842825		0.44	0.61	0.12	0.1	0.068	0.07	0.7	1.8	12.05	1040	1.62	<0.01	0.4	3.6	50
W842826		0.54	41.6	0.16	3.7	0.067	3.26	10.2	11.8	0.42	1360	16.60	3.27	93.4	0.5	10
W842827		9.73	17.95	0.37	1.7	1.830	2.02	250	45.9	1.46	2380	13.80	0.87	8.9	37.5	950
W842828		0.60	33.1	0.17	4.3	0.066	3.61	8.3	11.3	0.12	829	1.14	2.89	139.5	0.6	10
W842829		0.60	30.9	0.19	4.2	0.045	3.72	3.9	13.5	0.06	461	0.29	2.70	131.5	0.4	<10
W842830		1.85	26.0	0.18	4.0	0.383	4.58	13.7	12.7	0.18	1520	0.23	1.06	112.5	1.2	<10
W842831		1.61	25.8	0.15	4.4	0.306	4.89	3.1	12.5	0.17	1160	0.16	1.04	114.5	1.1	<10
W842832		0.97	26.4	0.17	1.6	0.061	3.91	5.1	17.8	0.05	402	0.21	2.52	154.0	0.4	<10
W842833		1.05	28.3	0.12	3.9	0.187	4.92	3.4	9.5	0.10	959	0.25	2.15	138.0	0.6	<10
W842834		0.73	26.8	0.18	1.9	0.048	4.23	4.2	14.6	0.04	334	0.22	2.74	166.5	0.4	<10
W842835		1.10	31.6	0.19	2.9	0.240	4.96	6.3	12.3	0.12	1240	0.28	1.89	158.5	0.4	<10
W842836		0.69	36.2	0.19	3.9	0.062	3.80	13.6	17.3	2.20	1500	4.96	2.64	95.9	0.7	10
W842837		1.14	6.93	0.08	0.5	0.236	0.60	2.2	20.2	10.45	1280	15.80	0.20	13.7	2.2	60
W842838		1.14	7.07	0.07	0.6	0.225	0.58	1.9	20.1	10.60	1280	16.35	0.20	13.3	2.5	50
W842839		1.40	0.83	0.05	0.2	0.290	0.13	1.5	1.9	12.15	2760	2.12	0.01	0.6	3.6	60
W842840		3.25	0.45	<0.05	0.1	0.662	0.04	0.9	1.4	11.35	6460	1.43	0.01	0.5	1.9	40
W842841		1.81	0.46	<0.05	0.1	0.325	0.05	1.0	1.8	12.60	3620	1.17	0.01	0.7	2.1	40
W842842		1.82	0.89	<0.05	0.2	0.416	0.09	1.3	2.8	12.15	3610	2.38	<0.01	1.2	3.1	50
W842843		0.41	0.40	0.09	0.1	0.063	0.05	0.9	2.1	12.25	779	1.95	<0.01	0.5	3.1	40
W842844		6.78	15.05	0.23	2.1	0.781	3.38	81.0	26.8	1.64	1160	13.35	1.16	12.3	33.5	910
W842845		0.51	0.57	0.10	0.1	0.027	0.07	1.2	1.3	11.30	1290	3.05	<0.01	0.6	6.1	60
W842846		0.83	0.53	0.06	0.1	0.017	0.07	1.4	2.6	11.45	2750	1.72	<0.01	0.4	7.3	50
W842847		0.49	0.96	0.08	0.2	0.005	0.24	1.9	4.6	11.45	1180	2.08	0.01	0.6	3.0	50
W842848		0.35	1.46	0.11	0.1	0.008	0.50	2.9	14.3	11.70	247	1.30	0.04	1.0	4.7	90
W842849		0.23	0.97	0.17	0.1	<0.005	0.21	2.2	12.9	12.25	93	1.29	0.03	0.7	2.8	80
W842850		0.25	0.22	0.14	<0.1	<0.005	0.02	0.8	0.9	6.65	142	0.05	0.02	0.1	0.7	140
W842851		0.37	0.87	0.14	0.1	0.009	0.17	2.1	9.4	12.40	774	1.22	0.02	0.6	2.4	50
W842852		0.13	0.64	0.24	<0.1	<0.005	0.15	1.3	8.7	12.25	87	1.09	0.01	0.3	2.1	40
W842853		0.26	1.28	0.19	0.1	<0.005	0.23	2.7	11.2	11.45	100	0.76	0.03	1.0	2.9	40
W842854		0.16	0.72	0.26	0.1	<0.005	0.14	1.6	8.6	12.10	53	0.56	0.02	0.5	1.7	50
W842855		0.18	0.94	0.22	0.1	0.008	0.17	1.8	13.4	11.95	68	0.63	0.03	0.5	2.1	40
W842856		0.11	0.58	0.29	0.1	<0.005	0.11	1.3	10.7	12.15	60	0.77	0.02	0.3	1.5	30
W842857		0.18	0.78	0.27	0.2	0.009	0.21	1.5	17.8	12.05	136	1.65	0.02	0.5	2.6	50
W842858		0.24	0.61	0.17	0.1	0.019	0.18	1.8	17.0	11.85	258	1.62	0.02	0.5	5.0	70
W842859		0.21	0.69	0.24	0.1	0.009	0.18	2.1	19.8	12.05	114	2.22	0.02	0.8	3.8	50
W842860		0.27	0.42	0.20	0.1	0.044	0.12	2.1	14.9	12.50	372	1.36	0.02	0.3	1.8	40

***** 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
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: 5-OCT-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19225062

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
W842821		6.2	308	0.002	0.03	0.59	2.6	<1	103.0	73.6	>100	<0.05	9.98	0.006	0.89	27.4
W842822		4.0	53.6	0.005	0.03	0.50	0.5	1	3.6	99.7	0.08	<0.05	0.44	0.009	0.43	4.2
W842823		3.7	15.3	0.006	<0.01	0.37	0.2	1	1.5	71.7	0.05	<0.05	0.16	0.005	0.18	4.3
W842824		2.7	12.3	0.008	0.02	0.32	0.2	1	0.7	128.0	<0.05	<0.05	0.17	0.005	0.17	4.5
W842825		14.4	37.4	0.004	0.01	0.36	0.2	1	3.8	138.5	0.87	<0.05	0.20	<0.005	0.17	3.4
W842826		60.9	703	0.002	0.02	0.22	3.1	<1	6.5	13.9	37.8	<0.05	10.60	<0.005	4.00	7.6
W842827		34.2	121.5	0.005	1.31	31.7	7.4	5	105.5	250	0.65	1.20	8.97	0.236	1.35	11.4
W842828		73.8	770	0.002	0.01	0.37	2.3	<1	5.3	6.5	20.1	<0.05	13.35	<0.005	4.54	21.9
W842829		60.5	650	<0.002	0.01	0.25	1.5	<1	10.0	8.7	16.90	<0.05	18.95	0.005	3.62	29.3
W842830		46.3	407	0.002	0.46	1.52	1.2	1	83.1	28.8	9.40	0.14	18.50	<0.005	3.62	26.3
W842831		39.6	374	<0.002	0.45	1.18	1.0	<1	84.8	29.2	8.98	0.12	19.75	<0.005	3.63	27.2
W842832		49.9	491	<0.002	0.08	0.84	1.7	<1	11.0	20.0	7.84	<0.05	21.5	0.017	2.89	39.0
W842833		47.3	583	<0.002	0.03	0.44	1.7	1	27.9	15.7	12.20	<0.05	21.9	0.008	3.13	38.3
W842834		50.1	552	<0.002	0.07	0.54	1.3	<1	9.2	16.1	9.46	0.09	22.8	0.007	3.15	43.9
W842835		52.9	658	<0.002	0.02	0.49	1.9	<1	37.6	11.0	19.75	<0.05	22.7	<0.005	3.70	35.5
W842836		44.3	824	<0.002	0.01	0.24	2.4	<1	7.6	39.6	51.7	<0.05	18.25	<0.005	4.63	10.0
W842837		9.3	230	<0.002	0.05	0.54	0.5	1	14.6	156.5	38.8	<0.05	3.04	0.008	1.14	6.3
W842838		8.4	220	0.003	0.05	0.55	0.5	1	14.7	159.5	41.4	<0.05	1.95	0.008	1.13	6.1
W842839		20.5	19.3	0.006	0.06	1.07	0.5	1	6.8	153.5	0.12	<0.05	0.45	0.012	0.25	9.8
W842840		46.1	7.0	0.005	0.03	0.63	0.1	1	3.7	85.6	0.28	<0.05	0.19	<0.005	0.05	4.0
W842841		37.1	7.1	0.004	0.04	5.64	0.2	1	4.4	69.1	0.06	<0.05	0.25	<0.005	0.08	3.4
W842842		40.4	20.1	0.008	0.06	4.85	0.3	1	9.4	85.6	0.14	<0.05	0.42	0.007	0.22	3.9
W842843		11.4	9.7	0.007	0.02	0.64	0.3	1	1.1	95.2	<0.05	<0.05	0.25	0.008	0.18	4.5
W842844		54.1	192.0	0.003	0.71	42.8	8.9	4	73.0	302	0.83	0.67	9.48	0.320	2.16	5.1
W842845		48.2	17.2	0.013	0.03	0.73	0.3	1	2.0	157.0	0.12	<0.05	0.30	0.007	0.23	4.3
W842846		60.5	23.7	0.008	0.01	0.54	0.3	1	1.4	152.0	<0.05	<0.05	0.29	0.007	0.17	2.8
W842847		35.1	71.5	0.002	0.05	0.36	0.6	1	1.1	151.5	0.06	<0.05	0.50	0.017	0.74	2.6
W842848		6.3	190.0	<0.002	0.12	0.12	1.0	1	1.8	145.0	0.08	<0.05	0.94	0.034	1.63	2.3
W842849		24.1	19.2	0.003	0.07	0.07	0.7	1	1.2	150.0	0.05	<0.05	0.59	0.023	0.50	2.0
W842850		0.5	1.4	<0.002	0.01	<0.05	0.1	1	<0.2	67.1	<0.05	<0.05	0.08	<0.005	0.02	0.4
W842851		217	24.7	0.002	0.03	0.56	0.6	1	1.9	103.0	<0.05	<0.05	0.53	0.018	0.46	2.1
W842852		0.8	36.3	0.004	0.03	0.13	0.4	1	0.5	77.7	<0.05	<0.05	0.38	0.011	0.41	2.4
W842853		2.1	53.6	0.002	0.10	0.13	0.7	1	2.9	127.5	0.06	<0.05	0.77	0.030	0.61	1.7
W842854		0.6	9.3	<0.002	0.06	0.06	0.5	1	1.3	163.0	<0.05	<0.05	0.42	0.013	0.27	1.8
W842855		0.8	8.9	<0.002	0.06	<0.05	0.6	1	2.5	121.5	<0.05	<0.05	0.49	0.018	0.27	1.8
W842856		0.6	7.8	<0.002	0.03	<0.05	0.4	1	1.5	106.0	<0.05	<0.05	0.44	0.011	0.20	2.0
W842857		2.6	43.3	<0.002	0.07	0.22	0.5	1	1.4	180.0	0.05	<0.05	1.88	0.015	0.49	4.3
W842858		5.6	33.3	0.002	0.09	0.55	0.5	<1	1.8	166.0	0.06	<0.05	0.48	0.015	0.48	1.6
W842859		3.4	26.7	0.005	0.08	0.20	0.7	1	2.1	199.0	0.05	<0.05	0.61	0.017	0.56	3.0
W842860		10.2	16.8	0.003	0.06	0.51	0.4	<1	2.9	144.0	<0.05	<0.05	0.35	0.009	0.32	2.9

***** See Appendix Page for comments regarding this certificate *****

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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.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 5-OCT-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19225062

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	V	W	Y	Zn	Zr
	Units	ppm	ppm	ppm	ppm	ppm
	LOD	1	0.1	0.1	2	0.5
W842821		6	13.9	54.1	37	8.0
W842822		24	1.7	4.1	19	5.8
W842823		13	1.6	1.6	15	2.1
W842824		12	1.4	0.8	10	2.2
W842825		12	3.0	0.7	76	1.7
W842826		1	6.7	32.8	26	32.3
W842827		56	41.1	29.5	165	65.2
W842828		<1	3.7	43.6	27	50.6
W842829		<1	4.8	34.0	27	63.7
W842830		<1	117.0	29.2	34	64.6
W842831		<1	157.0	28.5	34	71.3
W842832		<1	6.1	39.6	55	29.4
W842833		<1	6.9	39.2	29	56.9
W842834		<1	6.1	43.4	36	35.5
W842835		<1	16.5	38.7	44	38.7
W842836		1	32.0	20.4	42	38.8
W842837		9	191.5	3.0	85	5.4
W842838		9	180.0	3.1	86	5.7
W842839		15	2.5	2.5	88	6.4
W842840		12	3.4	6.3	36	1.9
W842841		12	1.4	3.3	79	3.0
W842842		12	2.3	2.9	60	5.6
W842843		9	2.4	0.7	48	3.6
W842844		72	22.6	22.2	119	82.6
W842845		20	3.0	1.3	207	4.3
W842846		33	2.3	1.3	264	4.1
W842847		11	3.9	1.5	160	6.7
W842848		11	18.6	2.4	31	4.1
W842849		7	0.8	1.6	40	3.2
W842850		1	0.2	1.5	8	1.0
W842851		6	2.1	1.6	671	2.5
W842852		5	1.5	0.9	41	1.4
W842853		6	2.9	1.7	11	3.0
W842854		3	0.6	1.1	3	1.9
W842855		4	0.7	1.3	4	2.6
W842856		3	1.4	0.9	3	1.6
W842857		6	14.1	1.2	19	7.4
W842858		6	8.1	1.2	14	3.3
W842859		5	4.5	1.3	11	5.3
W842860		3	3.7	0.9	46	3.2

***** See Appendix Page for comments regarding this certificate *****

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North Vancouver BC V7H 0A7
Phone: +1 (604) 984 0221 Fax: +1 (604) 984 0218
www.alsglobal.com/geochemistry

To: **ATAC RESOURCES LTD.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Project: Rau

Finalized Date: 5-OCT-2019
Account: RCM

CERTIFICATE OF ANALYSIS WH19225062

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	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.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 21-OCT-2019
Account: RCM

CERTIFICATE WH19229855

Project: Rau

P.O. No.: R19-D18

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 13-SEP-2019.

The following have access to data associated with this certificate:

ANDREW CARNE	ADAM COULTER	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
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
OA-HSUL10	Handling of High Sulphide Samples
PUL-31	Pulverize up to 250g 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-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid 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:



Saa Traxler, General Manager, North Vancouver

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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Project: Rau

CERTIFICATE OF ANALYSIS WH19229855

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
W842861		8.40	<0.01	1.19	0.26	6.1	130	0.27	72.7	21.6	0.06	4.21	0.8	3	1.94	5.3
W842862		8.47	<0.01	0.12	0.23	4.8	150	1.15	0.33	22.5	0.11	4.19	0.8	2	2.03	6.1
W842863		8.12	<0.01	0.19	0.18	12.8	80	0.52	1.00	21.4	0.28	2.45	0.6	2	1.26	3.0
W842864		8.30	<0.01	0.10	0.25	1.4	210	1.27	0.68	21.9	0.34	3.04	0.8	2	3.76	4.9
W842865		0.10	0.34	2.75	5.73	>10000	2090	1.55	373	11.65	0.68	137.0	50.9	63	10.95	824
W842866		8.10	<0.01	0.13	0.30	5.9	850	1.92	1.07	22.7	0.26	3.01	0.9	2	2.99	24.5
W842867		8.32	<0.01	0.16	0.11	3.5	330	0.26	0.54	21.8	0.11	12.20	0.4	1	0.38	2.1
W842868		6.78	<0.01	0.14	0.13	9.3	30	1.11	0.49	20.8	0.36	2.18	0.4	1	0.34	1.7
W842869		2.18	<0.01	0.03	5.67	1.9	210	14.40	0.97	5.81	0.04	14.15	0.7	5	5.08	5.8
W842870		1.95	<0.01	0.04	5.40	9.8	200	12.80	0.77	6.50	0.02	18.75	0.7	4	4.84	9.0
W842871		5.43	<0.01	0.10	0.13	1.1	110	0.97	0.74	21.8	0.37	1.61	0.4	1	0.58	2.8
W842872		8.14	<0.01	0.11	0.11	1.0	380	0.63	0.87	22.8	0.14	1.54	0.4	1	0.29	2.2
W842873		4.06	<0.01	0.06	0.98	0.9	1610	37.2	0.29	19.40	0.19	9.50	0.6	13	2.26	5.0
W842874		7.79	<0.01	0.11	1.33	3.6	1130	20.4	0.78	4.03	0.45	9.34	0.8	28	8.07	10.0
W842875		3.82	<0.01	0.07	1.19	2.4	820	7.19	0.45	0.80	0.17	8.85	0.8	38	6.37	9.6
W842876		2.53	<0.01	0.03	2.34	2.6	8950	20.2	0.23	0.54	0.03	9.08	0.5	23	4.92	5.2
W842877		<0.02	<0.01	0.03	2.47	2.4	9240	24.1	0.22	0.57	0.02	14.30	0.5	26	5.31	5.1
W842878		1.35	<0.01	0.04	1.07	1.1	5280	14.30	0.32	0.25	0.05	10.00	0.9	32	5.03	7.2
W842879		7.55	0.01	0.11	1.05	4.3	800	0.95	0.38	2.44	0.32	9.40	1.0	49	3.59	8.7
W842880		7.08	<0.01	0.15	0.85	4.6	590	0.38	0.23	7.70	0.12	8.83	0.8	31	1.81	6.7
W842881		7.05	<0.01	0.18	0.65	16.1	420	0.63	0.39	8.19	0.08	6.27	1.0	24	1.66	6.7
W842882		7.24	<0.01	0.19	0.64	8.6	940	0.69	0.17	4.08	0.12	6.87	3.3	32	1.32	6.7
W842883		7.52	<0.01	0.23	0.74	5.3	1280	0.38	0.41	5.73	2.27	6.65	1.2	24	1.38	12.4
W842884		7.68	<0.01	0.15	0.89	5.4	530	4.17	0.38	4.57	0.17	7.90	0.8	31	1.51	7.7
W842885		7.64	<0.01	0.12	1.49	3.5	2590	19.75	0.19	5.60	0.32	9.03	0.7	28	3.74	7.2
W842886		7.27	<0.01	0.10	0.81	10.4	1440	1.78	0.61	8.00	0.12	7.12	0.7	26	2.76	5.7
W842887		7.85	<0.01	0.12	0.67	4.7	750	2.03	0.34	8.92	0.13	6.21	0.8	23	1.86	7.2
W842888		4.03	<0.01	0.08	0.32	2.2	2860	0.53	0.09	25.6	0.09	3.24	0.9	9	1.20	4.0
W842889		3.54	<0.01	0.20	1.60	1.8	420	79.0	0.34	10.80	3.49	8.02	1.9	26	3.18	41.0
W842890		7.55	<0.01	0.51	3.51	52.4	140	4.59	0.76	2.82	3.62	30.5	5.5	75	6.82	34.4
W842891		0.10	0.82	6.77	4.94	8810	1230	1.65	217	13.45	0.75	431	80.0	47	8.86	3380
W842892		7.86	<0.01	0.44	2.19	17.5	160	1.15	1.11	5.61	1.04	22.2	3.7	61	5.32	36.4
W842893		7.72	<0.01	0.74	2.05	8.5	170	1.01	0.97	3.97	2.26	18.55	3.3	73	4.38	57.1
W842894		7.74	<0.01	0.30	1.67	6.2	170	0.76	1.15	7.04	1.06	12.55	4.5	37	3.26	12.6
W842895		8.04	<0.01	0.30	1.75	7.1	150	0.94	1.24	3.44	0.64	19.70	3.7	62	3.62	12.8
W842896		7.61	<0.01	0.26	1.66	4.2	240	1.88	2.19	4.41	2.73	13.80	3.5	38	1.93	17.3
W842897		3.13	<0.01	0.35	1.68	3.0	230	3.92	2.46	2.40	9.70	12.10	13.2	48	2.34	45.8
W842898		1.51	<0.01	0.23	1.65	2.8	450	3.64	2.92	1.65	6.71	19.75	3.4	44	3.40	22.5
W842899		4.85	<0.01	0.03	0.05	0.3	70	0.05	0.02	25.2	0.08	0.98	0.9	1	0.10	4.0
W842900		3.20	<0.01	0.22	1.64	1.9	590	0.79	2.36	1.92	1.51	12.05	3.3	55	3.11	26.2

***** 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
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: 21-OCT-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19229855

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	Fe	Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P
	Units	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
W842861		0.35	0.56	0.07	0.1	0.025	0.14	2.3	10.6	12.05	508	1.45	0.02	0.3	1.8	70
W842862		0.43	0.53	0.08	0.1	0.043	0.14	2.3	7.3	12.30	808	1.73	0.01	0.3	1.8	60
W842863		0.75	0.56	0.13	0.1	0.074	0.09	1.1	11.3	11.70	1560	1.17	0.01	0.2	1.5	40
W842864		0.27	0.60	0.24	0.2	0.060	0.13	1.5	11.3	12.50	522	1.62	0.02	0.4	1.8	50
W842865		6.68	15.75	0.22	2.2	0.757	3.38	80.6	26.7	1.63	1170	13.75	1.15	12.4	33.7	960
W842866		0.50	0.67	0.16	0.3	0.050	0.17	1.5	11.6	11.55	1080	4.46	0.01	0.5	7.1	80
W842867		0.62	0.40	0.16	0.1	0.067	0.05	8.5	6.2	11.90	1370	1.24	0.01	0.2	1.0	60
W842868		1.71	0.61	0.09	0.1	0.221	0.04	1.2	1.8	11.55	3540	1.69	0.01	0.4	1.2	40
W842869		0.94	24.3	0.21	0.8	0.091	3.61	5.6	19.1	2.61	634	1.07	1.50	121.0	0.6	20
W842870		1.00	22.8	0.25	1.9	0.105	3.75	7.1	19.2	2.81	734	0.87	1.28	120.0	0.7	20
W842871		0.28	0.57	0.24	0.1	0.054	0.06	0.8	5.9	11.60	671	1.28	0.01	0.9	0.8	40
W842872		0.23	0.37	0.34	<0.1	0.019	0.04	0.8	8.2	12.05	528	1.73	0.01	0.2	0.9	60
W842873		0.36	4.44	0.25	0.5	0.005	0.22	6.0	9.1	0.19	224	1.46	0.21	3.0	4.7	60
W842874		0.99	5.46	0.25	0.7	0.028	0.61	5.4	57.0	0.89	188	2.56	0.16	3.2	7.6	110
W842875		0.84	4.22	0.23	0.7	0.007	0.60	5.5	64.5	0.26	72	2.72	0.08	3.0	8.4	80
W842876		0.51	5.97	0.26	1.3	0.009	1.54	5.7	24.7	0.07	58	2.15	0.10	5.2	6.4	60
W842877		0.53	6.31	0.24	1.4	0.007	1.62	9.3	25.4	0.07	62	2.41	0.11	5.2	6.8	70
W842878		0.84	2.32	0.18	0.5	0.005	0.27	6.3	34.3	0.08	69	3.81	0.05	1.9	12.1	80
W842879		0.89	3.20	0.17	0.4	0.014	0.48	5.5	15.2	0.13	57	2.01	0.05	1.7	8.9	120
W842880		0.75	2.84	0.17	0.4	0.010	0.36	5.2	10.4	0.15	83	1.68	0.05	1.5	5.4	70
W842881		0.74	2.13	0.12	0.4	0.008	0.22	3.5	13.7	0.14	122	2.90	0.02	1.3	7.3	60
W842882		1.02	2.21	0.14	0.3	0.009	0.22	4.1	12.0	0.08	59	2.30	0.01	1.4	12.7	30
W842883		0.68	2.49	0.12	0.4	0.180	0.32	4.0	10.0	0.10	76	3.62	0.03	1.3	8.6	60
W842884		0.85	2.89	0.08	0.4	0.006	0.32	4.5	11.1	0.17	107	2.63	0.03	1.8	12.7	80
W842885		0.72	7.10	0.15	0.8	0.009	0.49	4.9	19.2	0.15	123	3.15	0.32	5.9	9.3	80
W842886		0.65	2.59	0.13	0.4	0.005	0.30	4.7	19.3	0.26	137	5.02	0.02	1.5	10.7	90
W842887		0.95	2.26	0.11	0.4	<0.005	0.30	3.8	15.0	0.98	224	2.33	0.05	1.4	12.3	100
W842888		0.42	1.11	0.09	0.2	<0.005	0.11	2.1	5.5	0.16	208	1.10	0.02	0.7	4.5	60
W842889		1.82	7.46	0.12	0.9	0.061	0.31	4.4	33.9	2.06	539	2.01	0.28	4.0	8.7	450
W842890		3.22	11.25	0.11	1.4	0.729	1.51	15.3	86.1	0.41	1920	4.13	0.09	7.5	53.5	570
W842891		9.26	18.45	0.36	1.7	1.760	1.93	248	40.3	1.37	2330	14.75	0.83	8.9	37.5	970
W842892		1.60	6.97	0.08	0.8	0.028	1.07	11.7	42.3	0.26	116	4.75	0.07	3.9	49.7	570
W842893		2.07	7.86	0.09	0.8	0.039	0.70	10.2	28.3	0.21	112	8.39	0.06	4.3	38.4	600
W842894		1.59	5.94	0.06	0.6	0.028	0.72	6.4	25.4	0.19	144	2.58	0.08	2.5	38.9	280
W842895		1.68	6.19	0.08	0.7	0.024	0.78	9.1	17.2	0.19	159	3.45	0.08	3.6	22.8	200
W842896		1.48	2.95	0.10	0.6	0.079	0.60	6.2	18.8	0.16	328	2.24	0.05	3.5	19.3	280
W842897		2.26	3.32	0.07	0.6	0.277	0.57	5.4	19.4	0.16	339	3.15	0.06	3.1	59.8	320
W842898		1.64	3.15	0.09	0.5	0.137	0.90	10.3	14.0	0.16	309	3.32	0.10	3.2	22.0	310
W842899		0.35	0.19	0.08	<0.1	0.008	0.02	0.7	1.0	9.11	170	0.58	0.01	0.1	3.0	130
W842900		1.43	2.45	0.07	0.6	0.034	0.80	7.1	12.5	0.18	139	7.02	0.08	3.1	34.8	580

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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

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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 21-OCT-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19229855

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
W842861		16.1	21.2	0.005	0.10	2.34	0.5	3	3.4	137.5	<0.05	0.12	0.41	0.011	0.32	2.4
W842862		10.9	32.4	0.004	0.09	0.34	0.4	1	5.0	146.0	<0.05	<0.05	0.37	0.007	0.32	2.4
W842863		21.9	19.9	0.002	0.14	0.21	0.3	1	4.4	109.5	<0.05	<0.05	0.28	0.005	0.23	1.9
W842864		9.8	46.1	<0.002	0.04	0.25	0.4	<1	4.0	69.3	<0.05	<0.05	0.38	0.009	0.47	1.8
W842865		57.5	184.0	0.002	0.74	38.5	8.8	4	72.0	310	0.81	0.76	10.55	0.319	2.10	5.7
W842866		9.4	66.5	0.006	0.08	0.20	0.5	1	3.3	155.0	<0.05	<0.05	0.57	0.011	0.48	3.1
W842867		10.1	9.2	0.002	0.02	0.26	0.2	1	2.4	115.0	<0.05	<0.05	0.22	<0.005	0.08	4.2
W842868		11.9	7.7	0.007	0.08	0.14	0.2	<1	3.6	115.5	<0.05	<0.05	0.13	<0.005	0.06	2.8
W842869		18.2	326	0.002	0.07	0.25	1.0	1	11.4	59.7	8.37	<0.05	21.8	0.007	1.83	33.3
W842870		20.3	340	<0.002	0.10	0.28	1.4	<1	13.6	58.3	9.49	<0.05	22.1	0.008	2.02	32.7
W842871		11.4	12.5	0.003	0.01	0.29	0.2	1	2.3	125.0	0.05	<0.05	0.21	<0.005	0.13	3.8
W842872		17.0	8.9	0.005	0.01	0.23	0.2	<1	2.0	132.5	<0.05	<0.05	0.13	<0.005	0.09	4.0
W842873		2.2	59.8	0.003	0.25	0.19	1.2	1	1.7	280	1.44	<0.05	1.66	0.020	0.41	3.4
W842874		4.1	261	<0.002	0.48	0.52	1.9	1	4.7	51.4	1.64	<0.05	1.89	0.038	1.37	7.2
W842875		2.3	243	<0.002	0.48	0.38	1.9	1	3.9	17.4	0.83	<0.05	1.64	0.042	1.44	7.3
W842876		2.7	437	<0.002	0.07	0.58	1.1	1	4.0	39.7	4.45	<0.05	4.42	0.024	2.07	4.4
W842877		2.8	471	<0.002	0.07	0.61	1.2	1	4.1	42.6	4.91	<0.05	4.75	0.025	2.19	4.4
W842878		1.4	155.0	<0.002	0.10	0.09	2.0	1	3.9	12.7	0.18	<0.05	1.23	0.044	1.11	6.2
W842879		2.1	56.0	<0.002	0.62	0.53	1.7	<1	1.5	41.0	0.12	<0.05	1.28	0.045	0.84	5.5
W842880		2.3	18.7	<0.002	0.68	0.67	1.8	1	1.1	99.1	0.08	<0.05	1.10	0.040	0.59	5.8
W842881		1.9	15.3	<0.002	0.64	1.82	1.3	1	0.9	96.2	0.08	<0.05	0.77	0.035	0.53	4.0
W842882		2.6	10.9	0.014	1.04	1.71	1.0	1	0.7	36.2	0.09	<0.05	0.73	0.037	0.38	2.9
W842883		2.2	18.6	0.007	0.56	0.61	1.4	1	5.6	90.5	0.08	<0.05	0.78	0.036	0.40	4.1
W842884		3.5	46.4	<0.002	0.53	1.81	1.7	<1	2.2	78.7	0.50	<0.05	1.03	0.040	0.55	6.1
W842885		3.2	171.0	0.006	0.47	1.18	1.5	1	4.1	76.8	7.74	<0.05	2.56	0.036	0.94	7.6
W842886		5.6	49.7	0.012	0.44	1.76	1.7	<1	2.7	92.2	0.11	<0.05	1.02	0.039	0.72	7.8
W842887		3.2	51.2	0.016	0.59	1.58	1.4	1	3.4	86.6	0.11	<0.05	0.84	0.034	0.49	3.3
W842888		1.7	16.5	0.005	0.37	0.49	0.7	1	0.9	301	<0.05	<0.05	0.41	0.018	0.22	1.1
W842889		3.7	84.8	0.005	1.15	0.30	2.6	4	6.3	106.5	7.71	<0.05	2.40	0.035	0.51	2.9
W842890		9.2	183.0	0.005	1.73	6.22	6.0	4	6.2	41.2	1.77	0.06	4.60	0.187	2.34	3.4
W842891		31.5	117.0	0.002	1.33	31.7	7.3	5	111.5	247	0.63	1.00	9.68	0.227	1.38	12.2
W842892		3.9	83.4	0.002	1.36	0.83	4.3	2	1.7	92.2	0.35	0.07	2.77	0.109	1.76	4.0
W842893		6.1	59.4	<0.002	1.81	1.53	4.6	3	4.4	84.2	0.27	<0.05	2.59	0.115	1.48	3.7
W842894		3.9	53.5	0.044	1.54	0.49	3.2	2	1.1	190.0	0.16	0.06	1.79	0.071	1.38	2.3
W842895		4.2	80.2	0.007	1.51	1.03	3.4	2	2.3	111.0	0.23	0.05	2.01	0.102	1.19	2.2
W842896		12.6	95.9	0.002	0.65	1.75	3.0	2	8.7	259	0.22	<0.05	1.91	0.098	1.03	2.3
W842897		6.4	131.5	0.004	0.73	0.44	2.9	4	12.5	95.8	0.20	<0.05	1.68	0.090	0.97	2.3
W842898		4.4	199.0	<0.002	0.49	0.36	3.3	2	10.1	111.0	0.20	<0.05	1.80	0.095	1.37	1.8
W842899		2.9	1.0	<0.002	<0.01	0.33	0.2	1	<0.2	57.8	<0.05	<0.05	0.06	<0.005	<0.02	0.4
W842900		5.0	168.5	0.003	0.38	0.55	3.3	3	7.6	115.5	0.20	<0.05	2.10	0.099	1.17	2.8

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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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Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	V	W	Y	Zn	Zr
	Units	ppm	ppm	ppm	ppm	ppm
	LOD	1	0.1	0.1	2	0.5
W842861		3	5.0	1.2	22	4.9
W842862		3	7.4	1.2	47	4.7
W842863		3	5.7	1.2	90	4.2
W842864		5	7.3	1.0	59	6.1
W842865		73	19.7	22.3	123	84.2
W842866		5	10.1	1.1	64	7.8
W842867		3	3.0	0.9	30	2.2
W842868		3	2.4	1.4	61	1.9
W842869		2	47.6	46.9	31	10.9
W842870		2	26.9	49.8	31	25.6
W842871		3	3.4	1.0	48	1.9
W842872		4	2.4	0.9	30	1.5
W842873		39	5.1	4.4	28	11.0
W842874		63	12.0	4.3	83	18.7
W842875		70	3.0	2.4	28	22.0
W842876		38	6.3	2.1	6	17.5
W842877		39	6.8	2.2	7	19.2
W842878		72	6.4	2.6	12	21.0
W842879		64	0.6	2.7	48	19.5
W842880		56	0.4	3.1	18	17.4
W842881		48	0.6	2.8	12	14.4
W842882		58	0.4	2.0	12	13.9
W842883		49	0.3	2.8	317	16.1
W842884		57	1.2	3.3	23	16.9
W842885		49	3.5	3.7	47	17.0
W842886		55	1.1	3.9	11	17.4
W842887		44	1.4	4.5	13	14.9
W842888		28	2.6	5.1	10	9.3
W842889		53	9.4	10.7	638	14.0
W842890		209	8.7	11.8	1120	50.8
W842891		55	32.6	29.6	163	62.8
W842892		229	1.0	10.1	202	36.5
W842893		344	1.3	11.5	330	33.6
W842894		95	0.7	5.7	228	25.9
W842895		100	0.9	7.3	154	25.6
W842896		89	2.9	6.1	423	24.8
W842897		114	10.9	5.4	1560	20.7
W842898		132	11.9	7.3	1060	18.4
W842899		3	0.1	1.2	18	0.8
W842900		156	4.2	11.9	187	22.6

***** 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
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: Rau

Finalized Date: 21-OCT-2019
Account: RCM

CERTIFICATE OF ANALYSIS WH19229855

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	OA-HSUL10	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	ME-MS61

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: 20-OCT-2019
Account: RCM

CERTIFICATE WH19229861

Project: Rau

P.O. No.: R19-D19

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 13-SEP-2019.

The following have access to data associated with this certificate:

ANDREW CARNE	ADAM COULTER	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
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
OA-HSUL10	Handling of High Sulphide Samples
PUL-31	Pulverize up to 250g 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-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid ICP-MS	
ME-OG62	Ore Grade Elements - Four Acid	ICP-AES
Zn-OG62	Ore Grade Zn - 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:



Saa Traxler, General Manager, North Vancouver

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Finalized Date: 20-OCT-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19229861

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
W842901		7.83	<0.01	0.19	1.87	3.0	400	2.41	2.43	1.48	1.45	15.15	2.5	67	6.02	17.6
W842902		7.70	<0.01	0.17	1.48	2.4	640	7.53	1.76	1.05	3.62	12.90	2.4	84	7.57	22.7
W842903		7.44	<0.01	0.12	1.64	1.2	1780	7.13	1.89	1.46	1.69	23.6	2.4	70	5.64	15.5
W842904		7.60	<0.01	0.10	2.22	1.3	2580	19.60	0.90	3.26	0.81	20.0	2.1	60	8.35	21.8
W842905		7.16	<0.01	0.16	2.74	1.2	390	9.74	2.02	2.22	1.48	26.5	4.7	102	10.30	21.0
W842906		1.05	<0.01	0.21	1.38	18.2	210	11.45	0.75	12.80	0.94	9.80	2.6	40	6.80	11.7
W842907		0.10	0.34	2.56	5.51	>10000	2010	1.55	353	11.10	0.80	130.5	47.7	59	11.80	805
W842908		7.46	0.01	0.19	3.03	9.4	270	1.57	3.07	4.76	2.22	26.7	5.3	127	5.13	25.4
W842909		8.01	<0.01	0.13	1.66	5.2	2680	2.36	2.80	4.65	0.86	18.05	2.5	71	2.71	29.9
W842910		7.67	<0.01	0.21	2.27	8.8	190	1.20	1.79	0.56	1.30	23.1	4.2	70	5.33	19.9
W842911		7.97	<0.01	0.17	1.43	4.8	1060	3.16	3.65	1.06	0.36	13.45	2.1	50	3.61	16.2
W842912		7.96	<0.01	0.14	1.30	4.9	580	0.98	3.23	2.10	0.39	13.25	2.7	55	3.47	14.0
W842913		7.55	<0.01	0.18	1.22	4.9	1100	1.68	3.62	2.62	1.59	10.85	2.2	33	2.34	15.3
W842914		3.75	<0.01	0.13	0.85	7.7	1360	5.95	46.6	5.20	6.79	5.72	1.2	23	1.12	25.3
W842915		3.81	<0.01	0.12	0.84	6.3	1550	5.25	24.5	5.24	4.58	4.81	1.0	19	0.90	26.2
W842916		8.07	<0.01	0.41	0.92	1.5	1160	5.48	19.20	5.18	2.61	8.28	1.2	24	1.50	35.1
W842917		7.63	<0.01	0.15	1.01	3.6	210	4.49	1.22	3.34	0.74	11.85	2.4	29	1.34	122.5
W842918		7.86	<0.01	0.12	0.99	2.3	540	2.02	0.58	2.13	0.84	10.15	1.6	32	1.44	67.5
W842919		7.64	<0.01	0.24	0.96	6.6	840	0.95	3.41	2.24	1.25	8.59	1.3	33	1.24	20.5
W842920		7.98	<0.01	0.29	1.04	5.2	970	12.45	6.33	3.63	3.18	6.93	1.1	22	3.21	29.0
W842921		6.33	<0.01	0.28	0.87	5.2	960	11.50	6.43	5.54	3.15	7.09	1.1	22	3.28	29.2
W842922		4.66	<0.01	0.17	1.98	1.0	400	66.5	0.84	14.20	1.54	11.20	2.5	13	12.10	96.0
W842923		0.10	0.80	6.71	4.81	8710	1210	1.61	215	13.10	0.99	423	74.2	46	9.88	3220
W842924		3.37	<0.01	0.16	0.07	9.3	110	0.53	2.64	23.1	2.89	4.92	0.6	5	2.35	14.8
W842925		4.90	<0.01	0.13	0.06	5.6	100	0.46	1.93	21.6	3.59	4.65	0.5	5	1.87	7.7
W842926		2.31	<0.01	0.48	0.17	12.0	240	0.50	4.65	20.6	1.03	5.09	2.7	27	7.07	26.3
W842927		6.70	<0.01	0.13	0.04	8.4	100	0.33	44.0	23.0	7.65	3.68	0.5	6	0.98	5.2
W842928		8.05	<0.01	0.07	0.03	1.9	40	0.47	3.24	21.6	0.32	3.67	0.4	5	0.32	4.2
W842929		4.93	<0.01	0.34	0.15	0.9	20	6.38	12.40	17.00	12.15	7.25	0.7	7	0.21	52.7
W842930		7.20	<0.01	0.24	0.08	1.2	20	3.82	6.54	18.30	14.10	4.98	0.4	5	0.23	38.5
W842931		1.24	<0.01	1.17	0.19	1.4	10	6.63	21.2	9.26	393	6.97	1.4	10	0.20	252
W842932		<0.02	<0.01	1.10	0.19	1.3	10	6.29	20.8	9.46	383	7.24	1.4	11	0.20	243
W842933		2.35	<0.01	0.29	0.23	1.1	50	7.57	7.98	15.95	64.3	8.72	0.6	9	1.94	50.4
W842934		5.09	<0.01	0.01	0.03	0.5	20	0.10	0.14	20.8	0.78	0.97	0.8	1	0.11	1.9
W842935		4.89	<0.01	0.22	0.25	1.3	150	1.83	7.54	18.45	6.46	6.55	0.5	10	6.36	24.0
W842936		4.13	<0.01	0.20	0.11	1.7	50	0.84	8.67	19.10	1.79	5.24	0.6	6	1.68	12.6
W842937		7.12	<0.01	0.25	0.05	1.2	40	0.99	11.25	20.1	1.09	3.85	0.4	4	0.55	29.0
W842938		0.81	<0.01	0.31	0.14	1.0	60	3.29	9.69	14.65	38.6	6.17	0.5	6	1.24	21.5
W842939		6.09	<0.01	0.16	0.11	0.8	70	2.19	5.09	17.95	8.49	5.84	0.4	6	1.65	12.5
W842940		3.48	<0.01	1.75	0.19	10.2	120	9.34	45.3	8.63	91.4	4.06	0.9	10	3.01	135.0

***** See Appendix Page for comments regarding this certificate *****

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VANCOUVER BC V6B 1L8

Finalized Date: 20-OCT-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19229861

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	Fe	Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P
	Units	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
W842901		1.38	4.12	0.06	0.8	0.020	0.94	9.5	36.5	0.18	107	6.41	0.21	3.8	40.1	380
W842902		1.30	2.68	0.06	0.6	0.079	0.96	8.9	49.2	0.34	146	5.35	0.09	2.7	33.1	310
W842903		1.25	2.45	0.08	0.7	0.031	0.81	16.6	25.6	0.32	103	5.65	0.10	3.5	33.8	460
W842904		1.10	3.37	0.07	0.7	0.024	1.21	12.2	71.0	0.80	163	7.63	0.20	3.8	34.2	500
W842905		1.94	5.03	0.09	1.0	0.020	1.40	17.6	86.1	0.96	158	10.40	0.33	5.2	73.8	760
W842906		1.41	5.81	0.05	0.4	0.031	0.47	5.8	61.7	5.80	1100	3.90	0.17	2.7	26.7	520
W842907		6.44	14.75	0.16	2.1	0.766	3.23	76.5	25.3	1.55	1120	12.40	1.11	12.4	33.1	910
W842908		2.18	6.64	0.09	1.1	0.029	1.51	17.5	32.4	1.07	213	12.20	0.35	6.0	88.1	930
W842909		1.44	2.96	0.05	0.7	0.024	0.62	12.0	19.1	0.88	289	6.36	0.09	3.4	30.6	470
W842910		1.78	3.27	0.05	1.0	0.041	1.06	11.0	26.1	0.36	130	4.65	0.13	5.2	38.2	550
W842911		1.27	2.54	0.05	0.6	0.026	0.90	7.4	16.4	0.18	220	2.61	0.08	3.3	16.3	500
W842912		1.56	2.89	<0.05	0.6	0.030	0.75	6.7	13.9	0.44	243	2.42	0.14	3.0	17.8	500
W842913		1.28	2.46	<0.05	0.5	0.049	0.49	6.0	15.3	0.66	280	3.41	0.06	2.6	14.8	460
W842914		1.33	2.76	<0.05	0.4	0.267	0.31	3.6	17.7	2.27	892	3.24	0.05	1.6	9.1	360
W842915		1.33	2.34	<0.05	0.3	0.180	0.30	3.1	14.5	2.25	868	2.36	0.05	1.3	7.3	450
W842916		1.32	3.01	<0.05	0.4	0.133	0.33	6.0	13.3	2.34	876	4.98	0.05	1.7	9.7	540
W842917		2.82	2.90	0.05	0.4	0.078	0.43	7.9	10.3	1.67	684	7.00	0.05	2.5	10.9	550
W842918		1.81	2.43	<0.05	0.4	0.053	0.39	6.9	11.2	0.86	403	5.37	0.03	2.3	12.0	730
W842919		1.12	2.16	<0.05	0.5	0.057	0.43	5.4	8.2	0.77	365	4.69	0.03	1.9	11.4	430
W842920		1.41	3.50	<0.05	0.5	0.140	0.55	4.5	17.9	1.52	777	12.75	0.06	2.3	8.5	520
W842921		1.51	3.56	<0.05	0.5	0.148	0.47	4.5	18.3	2.70	856	13.00	0.07	2.3	8.6	490
W842922		3.59	9.56	0.07	0.4	0.220	1.76	7.9	86.5	7.26	2050	54.5	0.18	7.0	12.8	3330
W842923		8.97	17.95	0.32	1.7	1.815	1.88	245	38.3	1.36	2260	14.75	0.81	9.2	38.0	940
W842924		0.95	0.59	<0.05	<0.1	0.036	0.06	7.2	2.1	11.00	872	33.3	0.01	0.1	13.9	1050
W842925		0.92	0.58	<0.05	<0.1	0.033	0.05	7.1	2.2	11.95	786	29.2	0.01	0.1	12.5	1910
W842926		4.16	1.15	0.07	0.1	0.010	0.15	7.9	2.3	10.35	720	98.2	0.01	0.4	63.2	2300
W842927		1.23	0.37	<0.05	<0.1	0.144	0.03	6.1	1.3	10.45	587	35.9	<0.01	0.1	12.8	920
W842928		0.77	0.32	<0.05	<0.1	0.009	0.01	5.8	2.0	11.30	605	29.2	0.01	0.1	9.4	790
W842929		3.31	1.88	0.06	<0.1	0.373	0.03	8.4	1.4	9.36	1070	91.6	0.04	0.1	46.1	1420
W842930		2.09	0.98	<0.05	<0.1	0.347	0.02	6.2	2.4	11.70	786	65.7	0.03	0.1	11.3	2160
W842931		9.62	3.00	0.16	0.1	10.10	0.04	7.3	1.3	9.08	1220	77.4	0.05	0.2	28.8	3000
W842932		9.38	2.92	0.16	0.1	9.75	0.04	7.4	1.3	9.03	1220	77.6	0.05	0.2	27.5	3030
W842933		2.18	2.52	0.05	0.1	1.785	0.09	9.7	1.6	10.00	1080	39.4	0.05	0.3	16.1	2020
W842934		0.46	0.15	<0.05	<0.1	0.022	0.01	0.5	0.8	12.70	206	0.43	<0.01	0.1	1.3	190
W842935		2.05	1.99	0.06	0.1	0.201	0.22	9.2	2.9	11.30	924	56.7	0.03	0.3	16.1	2070
W842936		1.70	0.91	0.05	0.1	0.046	0.06	7.8	1.9	11.45	808	37.0	0.02	0.2	17.1	670
W842937		2.46	0.49	0.06	<0.1	0.034	0.03	5.3	2.6	11.70	728	47.4	0.01	0.1	14.6	880
W842938		2.14	1.61	0.07	0.1	0.840	0.07	7.2	1.8	12.40	996	65.2	0.05	0.2	14.9	1020
W842939		1.21	1.14	0.05	<0.1	0.211	0.07	7.9	2.8	11.95	897	40.0	0.03	0.2	11.3	910
W842940		12.85	2.31	0.18	0.1	2.35	0.12	4.1	3.3	10.50	984	46.5	0.05	0.2	30.4	1400

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CERTIFICATE OF ANALYSIS WH19229861

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
W842901		5.0	188.0	0.002	0.65	0.64	3.8	3	4.5	95.3	2.46	0.05	2.51	0.107	1.42	3.4
W842902		3.9	236	<0.002	0.52	0.69	2.9	3	5.0	94.3	0.18	0.05	1.88	0.089	1.74	3.0
W842903		3.0	178.5	0.002	0.30	0.31	3.2	3	5.8	137.0	0.21	0.05	2.54	0.106	1.56	3.8
W842904		4.3	389	0.003	0.18	0.22	3.0	2	8.7	211	0.30	<0.05	2.61	0.103	2.46	3.6
W842905		4.6	303	0.004	0.77	0.24	5.8	3	4.9	283	0.32	0.05	3.75	0.165	2.67	4.6
W842906		6.5	102.0	0.003	0.78	0.13	3.3	3	4.9	276	0.17	<0.05	1.68	0.079	0.69	2.9
W842907		52.1	180.0	0.003	0.71	37.4	9.1	5	64.8	298	0.81	0.60	10.35	0.306	2.05	5.8
W842908		3.8	298	0.010	0.96	0.26	6.7	4	5.6	307	0.37	0.08	4.15	0.187	1.94	6.5
W842909		3.7	142.0	0.006	0.22	0.32	3.8	2	6.1	134.0	0.20	0.05	2.37	0.105	1.03	4.6
W842910		4.8	132.0	0.021	0.70	0.88	4.5	3	3.7	107.0	0.32	0.05	3.20	0.142	2.06	4.7
W842911		4.7	195.0	0.002	0.38	0.65	2.7	2	5.7	64.8	0.21	0.08	2.12	0.094	1.08	2.8
W842912		5.1	146.5	0.002	0.66	0.54	2.8	2	5.1	83.4	0.17	0.06	1.86	0.084	1.03	2.8
W842913		7.3	98.7	0.003	0.37	0.56	2.6	2	6.8	82.8	0.15	<0.05	1.66	0.071	0.71	2.6
W842914		6.5	71.0	0.004	0.31	0.68	1.9	3	12.1	69.1	0.11	0.33	1.00	0.043	0.41	2.8
W842915		5.4	58.3	0.003	0.29	0.53	1.6	2	10.2	60.8	0.08	0.13	0.84	0.042	0.34	2.4
W842916		22.4	74.6	0.010	0.31	0.66	2.0	3	11.5	85.7	0.11	0.06	1.10	0.046	0.46	3.8
W842917		6.5	76.5	0.009	1.23	0.33	2.0	6	9.9	46.8	0.14	<0.05	1.13	0.054	0.50	4.1
W842918		6.1	60.4	0.007	0.65	0.36	2.1	4	7.7	66.6	0.11	<0.05	0.65	0.052	0.42	6.7
W842919		9.1	63.3	0.004	0.44	0.75	2.1	2	8.4	68.4	0.11	<0.05	1.21	0.052	0.60	4.5
W842920		18.6	149.0	0.005	0.46	0.73	1.8	3	17.6	40.5	0.96	<0.05	1.36	0.044	0.74	3.8
W842921		18.9	148.5	0.005	0.46	0.71	1.8	4	18.1	41.8	0.99	<0.05	1.38	0.046	0.77	3.9
W842922		4.6	278	0.063	0.79	0.26	2.8	7	5.7	67.3	2.33	<0.05	0.86	0.040	1.09	20.4
W842923		33.0	116.5	0.003	1.28	31.7	7.8	6	97.4	240	0.60	0.93	9.94	0.221	1.34	12.9
W842924		5.0	32.5	0.086	0.57	0.40	0.3	4	1.1	153.0	<0.05	0.08	0.16	<0.005	0.22	13.1
W842925		5.2	27.5	0.069	0.60	0.46	0.4	4	1.1	150.0	<0.05	0.05	0.14	<0.005	0.22	21.2
W842926		16.8	91.7	0.200	2.97	1.08	0.5	16	1.9	129.5	<0.05	0.18	0.35	0.010	0.95	24.5
W842927		17.8	18.3	0.069	1.19	1.13	0.2	5	0.9	138.5	<0.05	0.07	0.11	<0.005	0.31	12.7
W842928		3.4	6.0	0.051	0.55	0.27	0.3	2	0.7	112.0	<0.05	0.06	0.10	<0.005	0.07	10.7
W842929		8.3	3.4	0.125	1.99	0.57	0.8	11	10.8	58.4	<0.05	0.39	0.12	<0.005	0.12	19.3
W842930		5.3	3.1	0.097	1.36	0.41	0.5	8	6.3	54.4	<0.05	0.24	0.13	<0.005	0.09	31.3
W842931		15.1	2.5	0.108	9.18	1.62	1.3	50	18.4	18.6	<0.05	1.24	0.27	0.005	0.49	41.7
W842932		14.8	2.4	0.102	8.91	1.59	1.3	50	18.0	19.0	<0.05	1.19	0.27	0.005	0.46	39.6
W842933		5.5	35.8	0.066	1.82	0.59	0.8	9	13.1	47.9	<0.05	0.35	0.43	0.009	0.25	25.2
W842934		1.2	0.9	<0.002	0.01	<0.05	0.1	1	0.2	46.8	<0.05	<0.05	0.07	<0.005	<0.02	1.0
W842935		4.9	136.5	0.089	1.28	0.44	0.5	7	4.4	79.9	<0.05	0.34	0.29	0.011	0.61	25.4
W842936		5.3	35.8	0.056	1.05	0.40	0.4	6	4.7	84.5	<0.05	0.28	0.13	0.006	0.20	9.5
W842937		5.6	15.2	0.064	1.49	0.53	0.2	9	1.5	81.7	<0.05	0.32	0.08	<0.005	0.12	11.4
W842938		6.8	32.9	0.086	1.58	0.57	0.5	9	7.4	49.4	<0.05	0.28	0.16	0.005	0.20	14.7
W842939		4.5	40.8	0.069	0.79	0.37	0.4	5	5.7	71.1	<0.05	0.15	0.15	0.005	0.25	12.8
W842940		40.1	68.1	0.076	9.07	2.50	0.5	51	11.5	18.2	<0.05	1.11	0.37	0.011	0.46	18.5

***** 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
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: 20-OCT-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19229861

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Zn-OG62
	Analyte	V	W	Y	Zn	Zr	Zn
	Units	ppm	ppm	ppm	ppm	ppm	%
	LOD	1	0.1	0.1	2	0.5	0.001
W842901		295	2.6	9.5	160	30.2	
W842902		234	6.9	6.8	462	23.8	
W842903		214	7.1	10.9	199	28.2	
W842904		211	37.8	10.6	115	28.2	
W842905		406	15.7	19.9	196	39.5	
W842906		144	6.5	20.3	174	14.4	
W842907		70	19.6	22.4	118	76.4	
W842908		433	4.4	24.5	319	42.9	
W842909		158	3.5	13.8	135	26.8	
W842910		155	1.8	12.5	190	39.8	
W842911		103	21.9	8.4	62	24.7	
W842912		115	1.5	8.7	76	24.6	
W842913		91	2.2	5.9	256	21.9	
W842914		64	6.9	4.6	1090	16.6	
W842915		62	8.0	4.1	864	12.9	
W842916		68	45.6	5.4	414	16.2	
W842917		88	98.7	5.6	135	17.7	
W842918		88	28.2	6.1	123	17.1	
W842919		80	6.3	4.5	191	17.7	
W842920		43	14.2	5.1	526	15.5	
W842921		50	14.6	5.2	673	15.7	
W842922		63	217	20.1	346	14.7	
W842923		54	29.7	29.7	161	59.7	
W842924		29	13.0	11.6	444	1.0	
W842925		37	6.7	13.8	512	1.0	
W842926		101	10.7	14.1	118	2.1	
W842927		25	11.2	10.7	1110	0.7	
W842928		26	3.9	14.3	39	0.5	
W842929		134	86.7	19.5	2050	1.5	
W842930		39	96.6	12.6	2280	1.3	
W842931		68	290	15.2	>10000	2.0	6.98
W842932		68	312	15.5	>10000	2.0	6.96
W842933		134	98.5	18.1	>10000	2.5	1.075
W842934		3	1.0	0.8	113	<0.5	
W842935		94	36.8	15.3	1040	2.7	
W842936		44	20.3	12.1	288	2.1	
W842937		25	46.6	9.2	166	0.5	
W842938		50	122.0	14.9	5600	1.8	
W842939		41	55.2	11.7	1310	1.7	
W842940		73	90.0	7.9	>10000	4.0	1.350

***** See Appendix Page for comments regarding this certificate *****

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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.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Project: Rau

Finalized Date: 20-OCT-2019
Account: RCM

CERTIFICATE OF ANALYSIS WH19229861

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	OA-HSUL10	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	ME-MS61	ME-OG62	Zn-OG62

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North Vancouver BC V7H 0A7
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VANCOUVER BC V6B 1L8

Finalized Date: 21-OCT-2019
Account: RCM

CERTIFICATE WH19229863

Project: Rau

P.O. No.: R19-D20

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 13-SEP-2019.

The following have access to data associated with this certificate:

ANDREW CARNE	ADAM COULTER	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
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
OA-HSUL10	Handling of High Sulphide Samples
PUL-31	Pulverize up to 250g 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-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid ICP-MS	
ME-OG62	Ore Grade Elements - Four Acid	ICP-AES
Pb-OG62	Ore Grade Pb - Four Acid	
Zn-OG62	Ore Grade Zn - Four Acid	
ME-MS85	Lithium Borate Fusion - Select Elements	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:

Saa Traxler, General Manager, North Vancouver

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
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Finalized Date: 21-OCT-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19229863

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
W842941		4.98	<0.01	0.69	0.25	0.9	260	7.98	21.3	15.70	6.97	4.84	0.3	10	6.25	28.7
W842942		3.23	0.01	1.14	0.12	5.6	100	0.91	33.2	15.10	1.42	7.71	0.7	10	1.88	78.9
W842943		2.76	<0.01	0.24	0.06	1.1	60	0.97	5.26	20.1	15.75	8.04	0.4	5	0.64	9.1
W842944		1.71	<0.01	1.92	0.08	1.5	20	2.19	15.95	9.26	>1000	2.82	0.3	2	0.07	19.1
W842945		4.98	<0.01	0.14	0.05	1.4	80	0.54	5.07	21.1	5.12	3.63	0.4	3	0.80	4.1
W842946		1.01	<0.01	1.10	0.07	6.6	30	1.33	28.0	15.40	35.1	3.62	0.9	4	0.21	34.2
W842947		4.57	<0.01	0.26	0.04	1.5	70	0.30	6.12	21.4	2.27	3.22	0.4	3	0.58	4.8
W842948		5.70	<0.01	0.47	0.05	3.7	80	0.35	6.98	19.25	3.22	4.35	0.5	5	0.82	13.6
W842949		0.10	0.36	2.64	5.83	>10000	2080	1.67	369	11.60	0.85	141.5	52.2	62	12.35	831
W842950		7.64	<0.01	0.24	0.07	8.0	100	0.45	4.49	20.1	2.95	5.01	0.5	6	1.20	6.4
W842951		8.18	<0.01	0.32	0.07	4.2	120	0.32	13.00	19.85	3.38	4.82	0.5	6	1.62	6.9
W842952		5.02	<0.01	0.02	0.03	0.3	30	0.05	0.17	20.6	0.08	0.98	0.7	<1	0.09	1.5
W842953		0.41	0.01	0.18	0.08	2.1	120	0.84	4.76	21.2	47.5	7.84	0.4	5	1.07	7.5
W842954		5.39	0.02	0.27	0.06	2.9	100	0.27	7.10	20.2	2.11	3.84	0.5	5	1.10	8.3
W842955		5.27	0.01	0.18	0.10	2.1	150	0.35	3.69	19.90	0.69	4.41	0.5	6	2.42	4.1
W842956		2.40	0.02	0.36	0.06	5.4	110	0.35	7.27	19.90	0.48	4.88	0.6	6	1.21	14.9
W842957		0.27	<0.01	0.32	0.96	0.6	1540	2.76	3.80	19.20	15.30	10.55	0.3	6	92.7	5.8
W842958		4.93	<0.01	0.33	0.07	4.7	130	0.41	6.15	20.3	8.28	3.99	0.5	7	1.66	7.4
W842959		0.10	0.79	7.02	5.01	8860	1060	1.58	232	13.20	0.89	445	82.4	48	10.35	3450
W842960		5.16	<0.01	0.17	0.12	4.2	340	0.53	2.49	21.2	0.56	3.90	0.3	4	4.75	4.4
W842961		4.90	<0.01	0.34	0.33	1.6	1040	1.69	3.49	19.90	0.52	5.37	0.5	5	22.3	4.1
W842962		4.19	<0.01	0.26	0.17	3.0	630	0.56	2.52	20.7	0.10	5.90	0.6	7	12.10	6.0
W842963		5.92	<0.01	0.27	0.11	1.6	430	0.36	3.03	21.6	2.04	4.43	0.5	4	6.36	4.8
W842964		5.20	<0.01	0.15	0.24	1.9	560	0.50	1.59	20.1	0.34	6.41	0.7	10	12.65	6.0
W842965		6.42	<0.01	0.13	0.36	2.3	970	0.80	2.01	19.95	1.35	6.02	0.8	12	20.4	6.9
W842966		8.22	<0.01	0.10	0.16	0.9	450	0.75	1.25	21.4	0.24	4.21	0.5	5	5.62	15.8
W842967		8.47	<0.01	0.15	0.17	0.8	480	0.51	1.93	21.6	0.35	5.01	0.6	6	7.15	36.3
W842968		0.39	0.01	12.95	0.51	1.2	120	1.36	1205	19.05	20.3	4.92	0.6	6	41.4	66.8
W842969		<0.02	<0.01	13.80	0.53	1.9	110	1.38	1195	19.30	19.30	5.07	0.6	6	43.9	71.2
W842970		3.19	<0.01	0.39	0.28	0.8	180	0.73	13.10	21.1	4.00	4.79	2.0	6	12.10	232
W842971		4.28	<0.01	0.15	0.19	8.2	1240	0.51	3.58	20.2	0.35	4.69	0.8	4	5.65	8.9
W842972		2.86	<0.01	0.43	0.37	8.1	160	0.45	9.81	19.20	3.30	4.33	1.1	9	11.25	13.1
W842973		0.15	<0.01	5.05	0.06	6.0	60	0.34	2960	15.10	>1000	3.88	0.5	<1	1.62	60.7
W842974		0.17	0.01	15.30	0.09	36.9	50	0.74	>10000	12.95	926	3.39	0.6	1	2.02	105.0
W842975		0.87	<0.01	0.06	0.14	0.6	890	0.54	18.60	21.0	6.80	2.66	0.3	2	6.50	2.9
W842976		4.65	<0.01	0.36	0.25	4.1	1370	0.61	15.40	21.4	15.30	4.31	0.7	4	10.50	7.7
W842977		8.19	<0.01	0.23	0.11	3.0	1310	0.47	2.88	20.7	1.56	3.06	0.4	5	3.38	3.8
W842978		8.44	<0.01	0.23	0.27	7.9	180	0.27	1.49	20.1	0.28	4.21	0.7	6	4.25	6.2
W842979		8.49	<0.01	0.18	0.18	11.6	160	0.36	2.52	21.2	0.65	3.52	0.7	5	3.15	4.9
W842980		2.74	0.01	0.37	0.23	19.3	150	0.47	30.0	21.4	2.17	3.84	0.7	6	7.27	6.4

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Project: Rau

CERTIFICATE OF ANALYSIS WH19229863

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	Fe	Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P
	Units	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
W842941		2.95	2.39	0.07	0.1	0.193	0.21	5.6	4.6	12.65	923	48.7	0.04	0.2	9.3	1270
W842942		14.40	0.93	0.15	0.1	0.051	0.08	9.6	2.4	8.65	842	401	0.02	0.1	61.9	3900
W842943		1.88	0.71	0.06	<0.1	0.160	0.03	10.1	2.7	10.95	1140	53.4	0.02	0.1	8.8	1820
W842944		3.75	5.90	0.19	<0.1	12.20	0.02	3.0	1.2	8.23	5470	8.70	0.03	0.1	2.7	410
W842945		1.16	0.43	0.05	<0.1	0.053	0.03	5.3	3.0	11.75	885	54.1	0.01	0.1	12.0	1230
W842946		7.32	0.84	0.09	<0.1	0.462	0.02	4.8	2.0	11.40	834	68.2	0.02	0.1	31.9	690
W842947		1.40	0.32	0.05	<0.1	0.037	0.02	4.8	3.0	12.35	675	59.2	0.01	0.1	12.3	870
W842948		3.87	0.36	0.06	<0.1	0.057	0.03	6.9	3.0	11.20	828	116.0	0.01	0.1	21.3	1580
W842949		6.81	16.10	0.15	2.2	0.794	3.42	81.6	24.9	1.65	1180	14.40	1.17	13.2	35.2	960
W842950		1.59	0.49	0.05	<0.1	0.039	0.04	7.8	3.7	11.45	813	77.2	0.02	0.1	16.0	1680
W842951		1.54	0.46	<0.05	<0.1	0.064	0.04	7.6	3.6	11.80	744	67.7	0.02	0.1	13.1	1490
W842952		0.44	0.13	<0.05	<0.1	0.005	0.01	0.5	0.8	12.85	203	0.33	<0.01	0.1	1.4	180
W842953		1.58	0.68	0.05	<0.1	0.680	0.03	11.0	2.7	10.75	1130	48.5	0.03	0.1	11.6	1510
W842954		2.16	0.41	<0.05	<0.1	0.044	0.03	6.4	4.1	12.15	824	93.0	0.02	0.1	21.2	1020
W842955		1.41	0.52	<0.05	<0.1	0.019	0.06	7.4	3.6	12.00	756	83.6	0.02	0.1	15.6	1130
W842956		3.44	0.38	0.06	<0.1	0.021	0.04	7.5	3.8	11.50	795	123.5	0.02	0.1	23.4	1130
W842957		0.99	5.31	0.06	<0.1	0.305	0.86	14.9	30.9	10.30	1070	102.0	0.04	0.3	8.6	1110
W842958		2.18	0.44	0.05	<0.1	0.103	0.05	6.2	4.5	11.90	725	102.0	0.01	0.1	17.2	1290
W842959		9.36	18.95	0.31	1.7	1.805	1.96	251	39.0	1.41	2380	15.05	0.84	9.6	39.4	980
W842960		1.16	0.55	<0.05	<0.1	0.012	0.10	5.8	5.4	11.90	580	80.5	0.01	0.1	10.4	1010
W842961		1.27	1.49	0.05	0.1	0.019	0.33	7.7	12.3	12.35	603	86.8	0.02	0.4	11.0	2660
W842962		1.78	0.71	<0.05	<0.1	0.012	0.16	8.0	6.6	11.95	484	86.6	0.01	0.3	13.2	2000
W842963		1.05	0.44	0.06	<0.1	0.038	0.10	6.4	6.3	11.80	416	47.1	0.01	0.2	10.1	1460
W842964		1.20	0.86	0.05	0.1	0.019	0.17	9.4	5.2	11.65	532	52.4	0.04	0.4	15.9	1260
W842965		1.24	1.19	0.05	0.2	0.035	0.28	8.9	7.5	11.55	539	51.2	0.04	0.6	15.8	1050
W842966		0.87	0.85	<0.05	<0.1	0.012	0.13	5.8	5.0	12.40	508	37.0	0.02	0.3	7.1	630
W842967		1.46	0.99	<0.05	0.1	0.017	0.14	7.2	3.4	12.00	703	62.0	0.02	0.3	9.7	910
W842968		4.83	2.71	0.10	0.1	0.424	0.47	6.7	5.3	10.45	760	48.0	0.02	0.5	16.7	930
W842969		5.10	2.76	0.10	0.1	0.401	0.49	6.9	5.4	10.45	750	50.0	0.02	0.5	18.3	950
W842970		4.18	1.31	0.05	0.1	0.302	0.25	6.7	3.6	11.25	746	51.9	0.01	0.4	17.3	840
W842971		0.79	0.72	<0.05	0.1	0.015	0.13	6.6	4.3	11.75	485	37.2	0.01	0.4	9.6	880
W842972		3.31	1.19	0.05	0.1	0.099	0.22	5.5	6.0	11.30	711	130.5	0.01	0.7	31.4	580
W842973		3.67	12.95	0.21	<0.1	49.8	0.03	5.6	2.4	4.72	8870	2.49	0.01	0.1	4.1	50
W842974		9.16	9.40	0.44	<0.1	66.1	0.04	4.7	2.5	5.23	7160	1.71	0.02	0.1	28.0	40
W842975		0.31	0.84	<0.05	<0.1	0.256	0.13	3.8	7.5	12.60	734	3.18	<0.01	0.2	1.1	60
W842976		0.90	1.62	<0.05	0.1	0.772	0.19	6.0	13.4	11.45	1370	44.4	0.02	0.5	12.8	320
W842977		0.96	0.46	<0.05	<0.1	0.057	0.06	4.5	7.2	11.90	672	44.1	0.02	0.2	9.3	430
W842978		2.08	0.75	0.05	0.1	0.019	0.06	4.6	10.6	11.85	424	63.9	0.02	0.5	13.3	450
W842979		1.58	0.56	<0.05	<0.1	0.026	0.05	4.2	12.5	11.85	268	84.6	0.01	0.4	15.5	480
W842980		2.89	0.78	<0.05	0.1	0.182	0.15	4.7	15.8	10.20	464	104.5	0.01	0.5	15.8	550

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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 ST
VANCOUVER BC V6B 1L8

Finalized Date: 21-OCT-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19229863

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
W842941		18.7	141.5	0.072	1.95	1.46	0.3	11	10.2	48.2	<0.05	0.63	0.31	0.010	0.81	16.8
W842942		27.4	46.9	0.291	8.18	2.49	0.4	39	7.0	64.9	<0.05	1.56	0.20	0.005	0.42	56.2
W842943		5.3	12.9	0.049	1.19	0.58	0.3	7	3.5	107.5	<0.05	0.24	0.09	<0.005	0.11	23.7
W842944		13.4	1.1	0.010	>10.0	0.76	0.3	67	9.5	31.9	<0.05	0.12	0.05	<0.005	0.02	5.4
W842945		5.7	20.2	0.054	0.72	0.48	0.2	4	1.5	112.0	<0.05	0.10	0.11	<0.005	0.17	15.1
W842946		35.6	4.2	0.066	4.11	2.13	0.2	20	7.8	65.5	<0.05	0.44	0.06	<0.005	0.09	10.1
W842947		9.4	14.3	0.052	0.85	0.74	0.2	4	1.3	104.0	<0.05	0.11	0.07	<0.005	0.15	11.7
W842948		16.1	17.1	0.101	2.17	1.22	0.2	9	3.0	106.0	<0.05	0.19	0.11	<0.005	0.18	21.1
W842949		55.2	208	0.005	0.74	42.6	9.6	5	71.7	317	0.82	0.74	11.20	0.324	1.98	5.6
W842950		9.5	24.0	0.088	0.94	0.78	0.3	4	2.4	120.5	<0.05	0.08	0.13	<0.005	0.21	23.4
W842951		20.4	29.0	0.088	0.98	1.07	0.3	4	2.3	121.5	<0.05	0.09	0.13	<0.005	0.25	21.8
W842952		1.1	0.8	<0.002	<0.01	<0.05	0.1	<1	<0.2	47.5	<0.05	<0.05	0.05	<0.005	<0.02	0.6
W842953		10.5	18.7	0.073	1.15	0.59	0.3	5	4.6	136.5	<0.05	0.07	0.12	<0.005	0.17	14.7
W842954		13.7	19.5	0.085	1.30	0.95	0.3	5	1.8	123.0	<0.05	0.10	0.11	<0.005	0.18	15.7
W842955		7.7	43.6	0.109	0.81	0.58	0.3	3	1.9	131.0	<0.05	0.09	0.15	<0.005	0.33	18.3
W842956		16.3	22.2	0.118	2.35	1.23	0.3	8	2.0	125.5	<0.05	0.16	0.10	<0.005	0.21	17.6
W842957		16.6	789	0.110	0.63	0.61	0.5	3	3.9	121.5	<0.05	0.07	0.19	0.006	4.82	16.9
W842958		11.7	35.2	0.108	1.49	0.97	0.3	5	1.6	129.0	<0.05	0.10	0.10	<0.005	0.29	20.2
W842959		35.1	128.5	0.004	1.31	33.7	8.0	5	103.0	251	0.59	1.14	10.20	0.232	1.29	13.5
W842960		6.1	82.9	0.107	0.71	0.50	0.2	3	1.5	115.5	<0.05	0.06	0.10	<0.005	0.54	16.3
W842961		16.9	302	0.114	0.78	0.59	0.4	3	4.2	121.0	<0.05	0.05	0.30	0.010	1.76	30.1
W842962		8.1	141.0	0.117	1.07	0.57	0.4	4	1.3	112.5	<0.05	0.07	0.30	0.009	0.97	27.3
W842963		13.4	78.8	0.060	0.66	0.58	0.3	3	1.6	104.5	<0.05	<0.05	0.18	0.005	0.59	19.6
W842964		5.6	147.5	0.079	0.72	0.60	0.6	3	5.7	109.5	<0.05	<0.05	0.40	0.013	0.94	18.9
W842965		5.8	251	0.068	0.70	0.51	0.7	4	8.7	98.5	<0.05	0.05	0.55	0.021	1.48	15.8
W842966		2.8	84.6	0.040	0.41	0.21	0.4	2	4.2	82.6	<0.05	<0.05	0.20	0.008	0.50	10.9
W842967		6.3	88.2	0.063	0.81	0.36	0.5	5	3.6	101.0	<0.05	0.07	0.26	0.008	0.52	15.1
W842968		1295	340	0.047	2.18	23.1	0.5	26	7.6	85.8	<0.05	1.04	0.50	0.013	2.48	25.9
W842969		1305	354	0.056	2.41	23.6	0.5	29	9.3	87.2	<0.05	1.03	0.54	0.013	2.52	28.7
W842970		13.8	171.0	0.055	1.86	0.80	0.6	8	2.9	95.0	<0.05	0.14	0.35	0.012	1.32	14.7
W842971		10.8	75.4	0.051	0.47	0.63	0.5	2	1.4	89.7	<0.05	<0.05	0.26	0.009	0.75	16.7
W842972		36.6	125.5	0.178	2.20	1.11	0.7	6	3.2	102.0	<0.05	<0.05	0.50	0.020	1.70	13.4
W842973		5180	20.6	0.004	9.59	129.5	0.3	82	>500	113.0	<0.05	0.32	0.03	<0.005	0.41	0.8
W842974		>10000	26.6	0.004	>10.0	575	0.3	170	>500	93.2	<0.05	1.51	0.03	<0.005	1.25	0.7
W842975		38.5	85.9	0.008	0.22	1.12	0.3	3	18.3	120.0	<0.05	<0.05	0.18	0.007	0.81	2.6
W842976		45.4	124.5	0.112	0.87	1.61	0.5	3	16.3	233	<0.05	<0.05	0.40	0.013	1.41	7.5
W842977		20.4	44.0	0.079	0.75	1.15	0.3	3	2.8	129.0	<0.05	<0.05	0.16	0.005	0.53	7.4
W842978		11.8	40.2	0.073	1.48	1.38	0.6	5	1.9	115.5	<0.05	0.06	0.43	0.014	0.92	9.5
W842979		14.4	21.5	0.132	1.74	1.74	0.5	4	1.2	98.7	<0.05	0.05	0.30	0.010	1.35	9.9
W842980		72.9	76.9	0.126	3.44	5.54	0.5	7	19.1	99.1	<0.05	0.07	0.31	0.013	2.37	11.2

***** 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
www.alsglobal.com/geochemistry

To: **ATAC RESOURCES LTD.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 21-OCT-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19229863

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Pb-OG62	Zn-OG62	ME-MS85
	Analyte	V	W	Y	Zn	Zr	Pb	Zn	Sn
	Units	ppm	ppm	ppm	ppm	ppm	%	%	ppm
	LOD	1	0.1	0.1	2	0.5	0.001	0.001	1
W842941		56	115.0	11.1	1080	5.4			
W842942		45	204	14.0	225	2.2			
W842943		28	37.4	14.6	2260	1.0			
W842944		27	16.4	7.9	>10000	0.7		19.15	
W842945		20	15.3	10.2	788	0.7			
W842946		32	107.0	9.7	4770	0.7			
W842947		24	16.8	11.7	330	0.5			
W842948		23	84.9	12.8	474	1.0			
W842949		73	23.3	23.6	133	84.5			
W842950		30	40.5	16.5	358	1.1			
W842951		28	35.7	14.4	479	1.1			
W842952		2	0.2	0.8	15	<0.5			
W842953		29	82.2	17.8	5980	1.2			
W842954		30	17.3	11.8	292	0.9			
W842955		27	7.6	14.1	99	1.3			
W842956		27	47.8	12.8	68	0.9			
W842957		43	258	20.7	2190	1.4			
W842958		30	31.4	12.7	1200	1.4			
W842959		55	34.8	31.2	171	65.3			
W842960		20	62.7	10.5	84	0.7			
W842961		29	85.4	14.6	78	2.4			
W842962		30	26.0	15.0	15	1.9			
W842963		27	46.8	14.7	291	0.9			
W842964		46	40.7	12.4	54	3.8			
W842965		50	31.0	10.8	219	5.6			
W842966		24	11.2	10.4	43	1.7			
W842967		28	20.3	11.9	57	2.2			
W842968		43	95.7	11.9	2730	2.3			
W842969		46	101.0	12.3	2490	2.6			
W842970		32	127.5	11.6	573	1.9			
W842971		27	6.4	10.4	56	1.8			
W842972		43	5.8	8.4	454	2.9			
W842973		11	10.4	12.7	>10000	<0.5		21.2	1760
W842974		24	13.7	9.4	>10000	0.5	2.45	14.00	8710
W842975		19	10.4	4.6	1010	1.4			
W842976		31	37.6	6.8	2350	2.7			
W842977		23	18.1	6.9	223	1.0			
W842978		38	4.6	7.5	33	2.1			
W842979		29	1.1	6.8	67	1.5			
W842980		30	17.4	7.1	307	1.7			

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Project: Rau

Finalized Date: 21-OCT-2019
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CERTIFICATE OF ANALYSIS WH19229863

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	OA-HSUL10	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	ME-MS61	ME-MS85	ME-OG62
	Pb-OG62	Zn-OG62		

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Finalized Date: 21-OCT-2019
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CERTIFICATE WH19229867

Project: Rau

P.O. No.: R19-D21

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 13-SEP-2019.

The following have access to data associated with this certificate:

ANDREW CARNE	ADAM COULTER	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
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
OA-HSUL10	Handling of High Sulphide Samples
PUL-31	Pulverize up to 250g 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-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid ICP-MS	
ME-OG62	Ore Grade Elements - Four Acid	ICP-AES
Zn-OG62	Ore Grade Zn - Four Acid	
ME-MS85	Lithium Borate Fusion - Select Elements	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:



Saa Traxler, General Manager, North Vancouver

ALS Canada Ltd.
2103 Dollarton Hwy
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CERTIFICATE OF ANALYSIS WH19229867

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
W842981		1.57	0.01	4.98	0.27	96.5	40	0.68	233	18.20	34.0	3.95	0.8	7	9.81	11.2
W842982		3.37	<0.01	0.24	0.19	10.5	590	0.53	15.15	21.8	0.20	3.36	0.6	5	7.56	4.8
W842983		0.80	0.01	1.31	0.20	18.0	670	0.57	39.0	24.7	84.5	7.32	0.6	5	9.91	16.1
W842984		1.45	0.01	1.51	0.31	30.4	100	0.91	83.7	21.7	20.5	6.49	0.9	8	17.90	7.5
W842985		7.05	<0.01	0.68	0.11	8.3	340	2.83	125.5	21.0	19.45	3.28	0.4	3	9.88	10.3
W842986		7.95	<0.01	0.14	0.24	6.6	580	2.10	8.30	22.3	2.20	3.45	0.6	4	15.80	4.2
W842987		7.57	<0.01	0.25	0.33	2.0	1110	2.06	4.47	20.6	1.45	6.02	0.6	8	5.45	8.9
W842988		2.66	0.01	2.59	0.49	4.0	160	4.48	98.7	20.8	13.45	8.71	0.5	8	6.27	21.3
W842989		7.29	<0.01	1.00	0.34	2.1	1010	2.29	120.0	20.4	2.08	6.69	0.7	8	14.70	9.6
W842990		0.10	0.82	6.48	5.02	8940	1240	1.50	208	13.60	0.89	425	78.0	47	9.84	3400
W842991		3.87	<0.01	0.36	0.32	21.0	1200	2.64	2.37	22.2	0.36	8.12	1.0	8	4.70	20.7
W842992		3.27	<0.01	1.68	0.32	15.9	1160	2.51	201	21.4	19.70	9.83	0.9	9	8.16	14.8
W842993		4.04	<0.01	5.54	0.08	79.5	140	1.03	963	15.35	304	6.66	0.6	5	3.54	43.3
W842994		<0.02	<0.01	5.36	0.08	72.4	160	1.14	927	15.05	292	6.21	0.5	5	3.54	39.1
W842995		2.91	<0.01	0.72	0.13	3.6	590	0.95	124.5	23.8	109.0	8.20	0.4	4	9.11	8.3
W842996		2.20	0.01	1.55	0.31	5.1	350	1.06	117.5	22.5	201	6.56	0.4	4	30.1	16.7
W842997		5.35	<0.01	0.10	0.07	2.7	610	0.36	4.10	24.5	1.84	2.68	0.4	3	3.70	2.2
W842998		4.26	<0.01	0.14	0.12	4.5	920	0.42	6.31	23.0	4.68	3.64	0.6	5	5.03	3.3
W842999		4.92	<0.01	0.46	0.21	4.9	230	0.79	20.2	21.3	20.3	4.55	0.5	5	11.50	11.0
W843000		5.10	<0.01	0.17	0.15	7.8	250	0.35	2.27	22.1	0.37	3.42	0.6	5	6.67	3.9
W843001		0.10	0.34	2.86	5.79	>10000	2100	1.70	372	11.65	0.97	146.5	53.9	64	12.95	842
W843002		6.30	<0.01	0.17	0.19	14.8	220	0.57	2.34	22.0	0.89	3.61	0.5	5	7.27	3.9
W843003		8.02	<0.01	0.17	0.06	14.5	1190	0.30	2.95	23.0	2.29	2.95	0.5	3	2.68	3.9
W843004		8.09	<0.01	0.13	0.08	7.0	1040	0.14	0.99	22.8	0.37	3.79	0.5	5	1.86	3.7
W843005		8.37	<0.01	0.47	0.12	10.7	690	0.17	1.69	23.7	0.33	5.05	0.6	6	1.09	6.9
W843006		8.27	0.01	0.35	0.08	6.9	1140	0.21	1.27	23.1	0.80	5.35	0.5	5	1.34	5.5
W843007		8.43	<0.01	0.25	0.06	4.0	850	0.25	2.18	22.0	0.23	4.17	0.4	5	0.80	2.2
W843008		8.37	<0.01	0.13	0.07	4.1	880	0.28	1.13	21.7	0.25	4.82	0.4	6	0.91	2.5
W843009		8.47	<0.01	0.28	0.08	3.9	1560	0.22	2.02	23.2	0.44	3.60	0.4	4	0.52	3.1
W843010		8.15	<0.01	0.84	0.09	6.8	1340	0.26	0.88	22.0	2.35	4.93	0.4	7	1.12	4.8
W843011		5.65	<0.01	0.18	0.08	11.2	960	0.13	0.27	22.0	0.16	4.61	0.4	5	0.69	2.6
W843012		0.63	0.05	2.02	0.12	1390	1070	0.44	4.54	18.05	5.53	4.82	1.1	5	0.71	8.8
W843013		4.96	0.01	0.03	0.17	1.3	30	0.12	0.04	30.5	0.02	0.90	0.5	1	0.05	2.0
W843014		1.06	<0.01	0.28	0.11	31.6	1290	0.26	0.35	19.90	0.21	4.83	0.5	5	0.70	3.4
W843015		0.96	0.01	0.46	0.15	320	690	0.24	0.66	19.65	0.60	4.89	0.6	5	0.66	3.3
W843016		8.19	<0.01	0.19	0.09	5.8	860	0.16	0.69	22.1	0.15	5.46	0.4	7	1.72	3.0
W843017		8.50	<0.01	0.42	0.16	6.9	1160	0.53	1.16	21.0	2.24	4.83	0.5	7	1.87	6.2
W843018		8.34	0.01	0.28	0.07	5.3	600	0.24	0.50	21.9	8.24	6.12	0.5	7	1.27	6.1
W843019		8.62	<0.01	0.29	0.07	5.7	500	0.18	0.75	22.6	0.52	4.99	0.4	6	1.52	3.2
W843020		8.33	<0.01	0.13	0.06	4.4	410	0.20	1.00	21.8	0.43	4.73	0.4	5	1.15	2.5

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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 ST
VANCOUVER BC V6B 1L8

Finalized Date: 21-OCT-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19229867

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	Fe	Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P
	Units	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
W842981		6.90	1.77	0.11	0.1	2.32	0.19	5.1	14.8	9.82	835	109.5	0.03	0.6	16.4	500
W842982		1.98	0.79	<0.05	<0.1	0.033	0.15	4.3	12.0	11.05	426	84.4	0.01	0.3	13.6	400
W842983		2.27	4.47	0.05	<0.1	5.12	0.17	10.3	10.2	8.94	1500	62.4	0.02	0.4	10.9	360
W842984		5.81	2.20	0.06	0.1	0.843	0.28	8.6	16.9	9.17	1020	202	0.03	0.6	23.9	500
W842985		3.72	0.88	0.06	<0.1	0.597	0.09	4.5	10.3	11.05	1200	106.5	0.02	0.2	12.9	320
W842986		1.92	1.02	<0.05	0.1	0.083	0.15	4.6	15.1	10.70	677	92.2	0.02	0.7	12.3	350
W842987		1.62	1.68	<0.05	0.2	0.068	0.10	7.9	20.0	9.51	821	67.8	0.04	0.8	14.9	890
W842988		2.37	2.32	0.05	0.2	0.325	0.28	11.3	40.9	8.11	912	39.1	0.04	0.7	8.7	600
W842989		2.47	2.27	0.05	0.1	0.142	0.26	9.0	8.6	9.68	931	94.2	0.04	0.7	15.8	530
W842990		9.36	18.40	0.30	1.8	1.770	1.94	249	37.9	1.40	2350	14.95	0.84	9.5	38.6	970
W842991		1.94	1.80	<0.05	0.2	0.039	0.13	10.7	14.8	9.08	735	90.4	0.04	0.5	15.8	720
W842992		2.01	2.70	0.05	0.1	0.613	0.20	13.9	15.5	8.34	933	81.8	0.05	0.7	15.1	670
W842993		13.35	2.92	0.19	<0.1	15.45	0.05	8.8	3.4	7.61	2460	53.5	0.03	0.2	14.7	270
W842994		12.95	2.93	0.20	<0.1	15.60	0.05	8.5	3.4	7.62	2390	56.7	0.03	0.3	14.6	280
W842995		1.81	2.74	0.05	0.1	3.83	0.11	12.9	6.9	7.77	2000	45.4	0.03	0.3	5.9	330
W842996		2.66	9.12	0.07	<0.1	7.84	0.31	9.4	18.9	8.31	2570	60.9	0.03	0.3	6.7	420
W842997		0.77	0.60	<0.05	<0.1	0.080	0.07	4.0	7.4	9.71	741	55.6	0.01	0.1	7.7	260
W842998		1.64	0.70	<0.05	<0.1	0.174	0.09	5.3	8.5	10.65	754	92.9	0.01	0.2	14.1	580
W842999		3.45	1.68	0.05	<0.1	0.717	0.16	6.3	16.1	10.40	1010	109.5	0.02	0.3	15.5	360
W843000		1.99	0.61	<0.05	0.1	0.022	0.07	4.7	12.0	10.70	634	96.5	0.03	0.3	12.9	350
W843001		6.75	17.00	0.14	2.5	0.862	3.36	86.3	27.7	1.63	1180	14.10	1.16	14.3	37.5	960
W843002		1.81	0.85	<0.05	0.1	0.042	0.09	4.9	13.6	11.10	775	93.8	0.03	0.4	11.3	330
W843003		1.11	0.41	<0.05	<0.1	0.076	0.04	4.4	7.1	11.05	883	44.8	0.01	0.1	6.3	240
W843004		1.22	0.32	0.05	<0.1	0.018	0.03	5.4	8.3	12.00	264	55.1	0.01	0.1	9.1	400
W843005		1.59	0.37	0.05	<0.1	0.013	0.02	7.1	6.7	11.05	168	61.1	0.02	0.2	11.1	370
W843006		0.67	0.29	0.08	<0.1	0.047	0.03	8.0	7.2	11.60	176	27.3	<0.01	0.2	10.8	340
W843007		0.45	0.26	0.07	<0.1	0.008	0.03	6.5	5.9	11.60	227	19.95	<0.01	0.1	6.8	340
W843008		0.43	0.32	0.06	<0.1	0.012	0.04	7.7	6.8	11.10	267	16.70	0.01	0.1	7.5	370
W843009		0.52	0.31	0.05	<0.1	0.028	0.02	5.3	4.2	9.88	611	21.8	0.01	0.1	5.9	330
W843010		0.91	0.40	0.07	<0.1	<0.005	0.05	7.8	5.9	11.25	218	38.9	0.01	0.2	9.5	360
W843011		0.89	0.29	0.05	<0.1	0.016	0.03	7.6	4.1	10.95	304	30.1	0.01	0.2	8.4	310
W843012		3.64	0.47	<0.05	<0.1	0.673	0.06	5.9	16.2	9.09	5660	43.6	0.01	0.3	12.0	270
W843013		0.13	0.55	<0.05	0.1	<0.005	0.06	1.0	1.3	2.25	124	0.29	0.09	0.3	0.5	100
W843014		1.17	0.32	<0.05	<0.1	0.065	0.03	7.3	4.2	11.05	860	39.2	0.02	0.2	10.2	380
W843015		1.25	0.41	<0.05	0.1	0.065	0.04	7.3	4.3	10.60	907	34.8	0.03	0.3	10.2	310
W843016		0.68	0.31	<0.05	<0.1	0.006	0.05	8.3	5.2	10.35	191	33.3	0.01	0.2	10.5	330
W843017		1.28	0.65	0.05	0.1	0.134	0.07	6.7	8.5	10.40	830	41.3	0.02	0.3	11.0	390
W843018		0.91	0.49	<0.05	<0.1	0.403	0.05	9.0	3.8	10.65	392	34.9	0.01	0.2	15.1	420
W843019		1.26	0.34	<0.05	<0.1	0.026	0.06	8.0	3.6	11.05	283	43.6	<0.01	0.1	10.0	250
W843020		0.87	0.32	0.05	<0.1	0.016	0.05	7.7	3.9	10.80	303	37.0	0.01	0.1	10.7	300

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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

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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 21-OCT-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19229867

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
W842981		295	117.0	0.123	8.19	18.60	0.6	38	106.5	84.4	<0.05	0.26	0.39	0.015	2.47	13.0
W842982		43.2	95.5	0.102	2.27	2.79	0.5	5	9.5	107.0	<0.05	<0.05	0.25	0.010	1.69	8.6
W842983		85.4	133.5	0.074	2.89	4.49	0.5	13	37.5	190.0	<0.05	0.06	0.27	0.011	1.51	7.1
W842984		139.0	225	0.191	6.24	5.60	0.7	13	47.4	159.0	<0.05	0.15	0.43	0.017	2.54	10.4
W842985		220	89.1	0.107	2.83	3.62	0.2	16	63.9	128.5	<0.05	0.11	0.16	<0.005	0.78	7.1
W842986		19.2	172.0	0.101	2.01	1.00	0.4	4	5.2	160.0	1.18	0.05	0.31	0.007	1.42	7.6
W842987		15.9	71.0	0.091	0.82	1.27	0.8	5	9.5	114.5	0.05	0.05	0.48	0.018	0.51	12.1
W842988		127.0	162.5	0.061	1.35	13.25	0.8	9	17.6	114.5	0.05	0.26	0.48	0.019	1.78	10.0
W842989		127.5	194.5	0.103	1.28	2.99	0.7	11	36.8	153.0	0.05	0.23	0.41	0.018	1.76	9.8
W842990		33.5	122.5	0.002	1.35	32.3	7.6	6	103.5	250	0.60	0.95	9.82	0.229	1.32	12.6
W842991		22.3	82.0	0.104	0.87	0.65	0.7	7	10.5	127.0	<0.05	0.08	0.51	0.017	0.55	14.1
W842992		284	151.5	0.097	1.18	6.44	0.7	10	47.0	152.0	<0.05	0.17	0.44	0.017	1.57	12.3
W842993		1850	43.7	0.047	>10.0	46.6	0.2	75	>500	93.6	<0.05	0.41	0.15	<0.005	0.77	7.0
W842994		1780	44.6	0.049	>10.0	43.5	0.2	75	>500	92.3	<0.05	0.39	0.15	0.005	0.78	6.6
W842995		261	108.0	0.048	1.68	6.94	0.3	12	103.5	151.5	<0.05	0.06	0.17	0.006	0.75	6.9
W842996		276	337	0.061	2.90	9.84	0.3	21	103.0	182.5	<0.05	0.08	0.18	0.006	2.14	9.7
W842997		14.3	55.8	0.063	0.74	0.78	0.2	2	2.8	133.0	<0.05	<0.05	0.11	<0.005	0.50	5.6
W842998		21.2	70.0	0.108	1.52	0.97	0.3	4	3.3	109.0	<0.05	<0.05	0.20	0.006	0.82	10.6
W842999		71.2	134.0	0.115	2.52	3.20	0.4	10	16.2	114.0	<0.05	0.08	0.25	0.009	1.48	8.0
W843000		21.2	66.2	0.093	1.97	1.46	0.4	4	4.0	114.0	<0.05	<0.05	0.22	0.008	0.84	8.4
W843001		56.9	214	0.004	0.74	42.9	10.0	5	76.4	313	0.92	0.77	11.30	0.327	2.09	6.2
W843002		27.4	82.9	0.081	1.93	1.62	0.4	3	6.4	138.0	<0.05	<0.05	0.23	0.010	1.01	7.0
W843003		16.7	31.3	0.037	1.03	1.43	0.2	3	2.7	134.0	<0.05	<0.05	0.12	<0.005	0.41	6.2
W843004		10.7	21.3	0.036	1.35	1.58	0.2	2	0.8	95.2	<0.05	<0.05	0.15	<0.005	0.54	7.0
W843005		23.6	9.0	0.040	1.78	5.01	0.3	2	3.8	96.2	<0.05	0.06	0.26	0.006	0.49	6.8
W843006		8.7	15.1	0.028	0.72	1.65	0.3	2	0.9	72.0	<0.05	0.07	0.20	0.005	0.60	6.8
W843007		9.8	13.2	0.020	0.52	1.05	0.3	1	0.6	67.1	<0.05	0.06	0.15	<0.005	0.40	5.7
W843008		4.0	17.6	0.021	0.48	0.80	0.3	1	0.5	74.3	<0.05	0.05	0.16	<0.005	0.46	5.9
W843009		23.4	8.2	0.021	0.57	3.87	0.2	1	3.2	124.5	<0.05	<0.05	0.12	<0.005	0.34	5.3
W843010		85.2	16.3	0.028	1.12	2.67	0.3	2	1.2	69.7	<0.05	0.05	0.20	0.006	0.85	7.6
W843011		7.5	6.6	0.022	0.96	1.51	0.3	2	1.1	68.4	<0.05	0.05	0.17	0.005	0.41	6.9
W843012		149.0	12.2	0.028	1.20	7.98	0.4	3	4.8	56.4	<0.05	<0.05	0.21	0.007	0.28	6.4
W843013		0.6	1.9	<0.002	<0.01	0.13	0.3	<1	<0.2	71.7	<0.05	<0.05	0.09	0.014	0.04	0.2
W843014		33.2	6.9	0.025	1.02	1.47	0.3	2	2.2	57.9	<0.05	0.06	0.21	0.006	0.40	10.6
W843015		62.8	6.5	0.024	1.03	2.66	0.3	2	3.4	55.2	<0.05	<0.05	0.20	0.008	0.38	9.2
W843016		13.5	19.0	0.030	0.78	1.98	0.3	1	0.7	78.8	<0.05	<0.05	0.20	0.006	0.76	7.5
W843017		21.6	28.2	0.025	1.40	3.61	0.4	2	5.1	180.0	<0.05	0.09	0.32	0.010	0.88	8.6
W843018		30.7	21.1	0.037	1.07	5.59	0.3	2	1.8	84.0	<0.05	<0.05	0.20	0.005	0.56	8.8
W843019		37.2	24.1	0.023	1.49	6.23	0.3	1	1.2	74.1	<0.05	0.05	0.19	0.005	0.58	5.8
W843020		13.0	21.3	0.021	1.03	1.92	0.2	2	0.5	75.4	<0.05	<0.05	0.13	<0.005	0.42	6.5

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ALS Canada Ltd.
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North Vancouver BC V7H 0A7
Phone: +1 (604) 984 0221 Fax: +1 (604) 984 0218
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Project: Rau

CERTIFICATE OF ANALYSIS WH19229867

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Zn-OG62	ME-MS85
	Analyte	V	W	Y	Zn	Zr	Zn	Sn
	Units	ppm	ppm	ppm	ppm	ppm	%	ppm
	LOD	1	0.1	0.1	2	0.5	0.001	1
W842981		33	106.0	7.4	4820	2.1		
W842982		23	15.6	6.6	31	1.4		
W842983		26	98.5	11.0	>10000	1.7	1.090	
W842984		40	142.5	9.8	2810	3.1		
W842985		23	103.0	6.4	2880	0.8		
W842986		19	31.0	6.3	319	1.9		
W842987		44	74.9	8.6	230	7.1		
W842988		36	229	11.1	2150	7.1		
W842989		39	181.0	7.2	322	5.5		
W842990		55	32.8	29.0	167	68.0		
W842991		44	122.0	9.2	65	5.2		
W842992		42	162.0	9.6	2990	5.3		
W842993		21	211	6.0	>10000	1.5	4.57	481
W842994		21	223	6.0	>10000	1.5	4.49	462
W842995		18	90.8	7.5	>10000	2.3	1.560	
W842996		22	172.0	7.7	>10000	1.7	3.05	
W842997		17	31.5	6.8	242	0.8		
W842998		21	27.2	8.1	673	1.2		
W842999		24	88.5	6.7	2890	1.6		
W843000		22	13.5	6.7	48	2.0		
W843001		73	21.4	24.0	132	94.8		
W843002		23	12.3	6.9	116	3.4		
W843003		15	17.2	6.6	304	0.8		
W843004		14	2.3	9.1	47	0.6		
W843005		17	0.4	10.6	27	1.2		
W843006		15	0.9	10.3	93	0.9		
W843007		14	3.1	9.7	26	0.6		
W843008		14	2.8	10.4	34	0.7		
W843009		15	4.4	8.6	62	0.9		
W843010		15	3.3	9.8	765	1.0		
W843011		14	0.2	9.4	19	1.3		
W843012		16	1.3	8.7	2050	1.7		
W843013		3	<0.1	2.3	8	2.7		
W843014		17	0.4	9.1	73	1.8		
W843015		19	0.5	9.3	206	2.1		
W843016		16	0.9	10.8	18	1.0		
W843017		20	7.7	9.1	343	2.1		
W843018		13	5.5	10.3	1220	0.7		
W843019		12	1.5	9.3	77	0.8		
W843020		13	6.2	9.4	54	0.7		

***** 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
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: Rau

Finalized Date: 21-OCT-2019
Account: RCM

CERTIFICATE OF ANALYSIS WH19229867

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	OA-HSUL10	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	ME-MS61	ME-MS85	ME-OG62
Zn-OG62			

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North Vancouver BC V7H 0A7
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To: **ATAC RESOURCES LTD.**
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1016-510 W HASTINGS ST
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Finalized Date: 23-OCT-2019
Account: RCM

CERTIFICATE WH19235016

Project: Rau

P.O. No.: R19-D22

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 19-SEP-2019.

The following have access to data associated with this certificate:

ANDREW CARNE	ADAM COULTER	

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 up to 250g 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-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid 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:



Saa Traxler, General Manager, North Vancouver

ALS Canada Ltd.
2103 Dollarton Hwy
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Project: Rau

CERTIFICATE OF ANALYSIS WH19235016

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
W843021		8.27	<0.01	0.25	0.08	3.7	660	0.21	1.07	23.3	6.72	6.03	0.5	6	1.36	3.5
W843022		8.00	<0.01	0.26	0.11	2.7	950	0.24	0.53	21.9	0.29	5.79	0.5	8	1.69	4.0
W843023		8.20	<0.01	0.10	0.07	2.4	700	0.16	0.88	23.0	0.36	6.44	0.5	6	1.42	2.4
W843024		8.34	<0.01	0.20	0.09	6.4	800	0.24	0.81	22.6	0.99	6.85	0.5	7	1.98	3.2
W843025		0.10	0.36	2.79	5.32	9880	1940	1.53	336	10.70	0.94	138.0	47.4	60	11.45	828
W843026		7.90	<0.01	0.39	0.12	5.1	750	0.30	1.00	20.9	0.14	6.28	0.6	7	2.49	4.8
W843027		8.25	<0.01	0.18	0.05	4.0	460	0.24	0.68	21.2	0.74	6.23	0.5	4	1.02	5.3
W843028		8.14	<0.01	0.38	0.08	8.2	350	0.24	0.77	21.4	2.33	7.53	0.5	6	2.33	3.0
W843029		8.18	<0.01	0.24	0.31	2.3	2690	0.74	1.72	18.20	0.09	14.90	0.6	11	3.22	9.9
W843030		8.31	<0.01	0.15	0.16	1.8	690	0.40	1.42	21.8	0.20	7.10	0.6	9	5.95	3.9
W843031		7.19	<0.01	0.46	0.14	7.8	350	0.34	1.88	20.4	1.81	6.64	0.6	7	4.46	8.5
W843032		1.92	<0.01	0.87	3.46	19.6	2260	1.19	0.62	1.74	2.35	37.7	5.7	55	4.32	51.2
W843033		0.10	0.81	6.40	4.74	8370	1180	1.44	193.0	12.55	0.89	429	71.4	49	9.36	3430
W843034		0.76	<0.01	0.46	2.14	14.1	1330	0.73	0.48	5.89	1.19	19.60	4.0	42	2.63	27.6
W843035		1.52	<0.01	0.74	3.74	20.2	1790	1.16	0.82	4.24	2.09	41.8	6.3	60	4.48	52.0
W843036		1.54	<0.01	0.97	3.99	23.6	1930	1.27	1.24	3.48	2.46	43.4	7.0	67	5.33	53.1
W843037		4.25	<0.01	0.64	4.48	100.5	3840	1.43	0.49	0.75	9.34	48.5	5.4	72	5.37	73.8
W843038		2.51	<0.01	0.90	3.42	73.9	3870	1.08	0.77	0.65	4.77	35.4	3.2	59	4.05	56.4
W843039		6.11	<0.01	1.49	3.50	81.0	2760	1.13	0.49	0.33	9.59	37.9	4.4	53	3.41	60.1
W843040		2.54	<0.01	1.95	2.79	46.3	1760	0.69	0.46	0.17	4.16	32.3	2.8	43	2.21	60.8
W843041		5.02	<0.01	0.04	0.15	1.5	50	0.10	0.09	30.5	0.17	1.48	0.6	1	0.08	2.7
W843042		4.50	<0.01	5.50	3.96	51.5	5880	1.08	0.44	0.17	8.13	59.9	3.2	48	3.42	66.2
W843043		3.68	<0.01	2.81	2.06	24.2	4360	0.85	0.40	0.10	30.4	34.8	2.1	42	2.59	32.8
W843044		2.25	<0.01	0.81	10.35	26.1	2790	2.25	0.94	0.76	364	22.2	17.6	27	2.18	46.3
W843045		1.25	<0.01	1.60	10.85	79.9	3750	5.08	4.06	1.06	60.5	13.95	8.2	48	6.14	85.1
W843046		1.89	<0.01	2.36	12.35	108.0	4060	6.45	6.49	0.56	40.4	14.35	7.8	41	8.43	160.0
W843047		<0.02	<0.01	1.67	18.25	116.0	4390	6.57	6.92	0.94	33.1	21.5	7.7	42	11.60	166.0
W843048		1.28	<0.01	1.12	12.05	77.5	3730	4.81	4.80	0.41	10.80	4.68	6.5	23	3.71	173.0
W843049		2.83	<0.01	2.71	11.40	74.1	7180	9.16	23.4	0.36	22.3	11.30	7.6	33	6.38	297
W843050		3.87	<0.01	4.47	12.10	40.2	6110	2.82	3.73	0.25	8.61	16.00	6.7	37	4.09	354
W843051		2.92	<0.01	2.15	18.45	104.5	2280	6.92	1.72	0.93	37.6	14.50	8.7	23	6.66	343
W843052		1.36	<0.01	3.80	12.50	50.1	6600	9.65	3.91	0.22	10.20	7.87	28.8	24	5.09	493
W843053		3.86	0.03	6.74	10.05	49.2	>10000	11.90	3.53	0.67	14.95	17.05	18.0	40	5.92	127.5
W843054		0.51	0.07	3.93	9.83	95.8	4860	20.6	4.75	0.99	21.3	24.2	50.9	34	5.87	77.6
W843055		3.24	0.15	5.82	12.60	60.2	4320	7.93	9.63	0.96	9.55	25.3	6.4	38	8.69	66.0
W843056		2.87	0.19	3.27	16.30	41.7	2380	3.38	11.90	0.85	6.09	5.83	4.4	27	8.01	40.4
W843057		2.88	0.20	14.00	9.17	60.7	3780	10.60	8.21	3.19	11.65	15.90	9.0	24	2.74	74.3
W843058		0.65	0.54	8.39	10.45	58.3	>10000	13.15	22.2	0.99	10.10	40.6	5.7	37	7.86	89.1
W843059		0.60	0.62	25.8	9.55	75.3	>10000	14.20	23.5	0.80	11.45	33.1	6.2	39	5.68	102.0
W843060		1.48	0.34	10.70	10.70	69.5	5490	14.35	19.25	1.12	14.25	45.6	7.1	28	5.59	92.4

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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.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 23-OCT-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19235016

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	Fe	Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P
	Units	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
W843021		0.84	0.46	0.13	<0.1	0.201	0.05	9.1	4.2	11.35	330	33.3	0.01	0.2	10.8	340
W843022		0.91	0.49	0.14	<0.1	0.014	0.06	8.7	7.2	12.30	238	33.2	0.02	0.2	10.8	430
W843023		0.42	0.42	0.23	<0.1	0.015	0.04	10.0	5.4	11.75	218	23.7	0.01	0.2	10.2	320
W843024		1.04	0.51	0.14	<0.1	0.041	0.06	10.4	5.6	11.90	270	35.9	0.01	0.2	10.4	330
W843025		6.26	15.25	0.19	2.2	0.863	3.13	81.3	23.0	1.50	1100	13.60	1.07	12.5	36.3	890
W843026		0.99	0.55	0.09	<0.1	0.007	0.08	9.1	5.4	10.60	318	32.4	0.01	0.2	10.0	350
W843027		0.38	0.32	0.13	<0.1	0.039	0.04	9.6	2.2	11.15	324	11.80	<0.01	0.1	6.8	350
W843028		0.55	0.46	0.16	<0.1	0.080	0.08	11.1	2.8	10.95	345	19.05	<0.01	0.2	8.1	460
W843029		0.83	1.15	0.13	0.1	0.023	0.17	24.9	10.8	9.12	539	24.9	0.04	0.6	12.4	520
W843030		0.51	0.66	0.22	0.1	0.026	0.13	9.6	7.4	10.80	354	24.6	0.01	0.3	13.4	380
W843031		3.37	0.62	0.08	<0.1	0.105	0.10	8.9	7.3	9.71	324	71.8	0.01	0.3	9.2	330
W843032		1.84	9.28	0.13	1.3	0.067	1.19	21.7	18.2	1.20	418	7.64	0.22	6.6	28.2	590
W843033		8.85	18.15	0.35	1.7	1.730	1.85	247	32.9	1.33	2250	13.50	0.80	8.7	36.8	930
W843034		1.18	5.54	0.08	0.8	0.023	0.77	10.9	10.5	3.52	419	6.23	0.11	3.2	14.3	250
W843035		2.02	9.73	0.14	1.5	0.067	1.07	22.7	23.6	2.68	354	5.19	0.42	7.3	30.4	720
W843036		2.16	10.40	0.15	1.5	0.065	1.27	24.2	22.5	1.68	364	6.60	0.26	7.5	33.3	800
W843037		3.04	9.12	0.14	1.4	0.034	1.29	27.4	30.0	0.45	112	8.42	0.07	6.0	103.0	1650
W843038		2.48	7.08	0.14	1.3	0.028	1.03	20.1	24.9	0.49	118	7.40	0.04	5.3	71.1	1070
W843039		2.80	6.09	0.12	1.0	0.028	0.75	20.0	20.3	0.29	84	13.75	0.05	4.2	122.5	1680
W843040		2.12	4.72	0.13	0.8	0.028	0.34	17.1	15.1	0.17	59	15.75	0.03	3.5	137.5	1580
W843041		0.13	0.43	0.08	0.1	<0.005	0.02	1.4	1.3	1.79	103	0.29	0.04	0.2	2.2	100
W843042		2.09	5.86	0.21	0.8	0.035	0.60	34.4	32.6	0.15	54	10.60	0.03	3.6	189.5	1740
W843043		1.13	6.26	0.18	1.0	0.022	0.61	21.6	21.9	0.16	36	7.47	0.04	3.5	50.0	770
W843044		0.70	3.11	0.19	0.2	0.037	0.16	7.2	20.6	1.40	22	45.6	0.02	1.4	691	5210
W843045		2.27	5.84	0.13	0.8	0.150	0.55	7.3	28.7	1.35	121	15.10	0.08	6.1	378	7040
W843046		1.95	3.86	0.13	0.4	0.069	0.39	8.9	39.0	0.89	96	15.55	0.05	2.4	691	6420
W843047		2.45	3.92	0.13	0.6	0.090	0.48	13.5	41.7	1.08	123	15.45	0.05	2.6	709	7030
W843048		1.19	2.46	0.11	0.2	0.076	0.24	2.4	34.8	0.77	51	7.79	0.04	1.7	999	3600
W843049		1.59	3.78	0.13	2.1	0.101	0.42	5.8	44.2	1.03	44	10.30	0.05	2.2	842	2940
W843050		1.65	4.12	0.15	0.5	0.118	0.30	9.2	34.7	0.47	32	15.10	0.02	2.5	703	1380
W843051		1.34	2.64	0.13	0.3	0.040	0.35	8.9	32.3	0.53	122	10.45	0.04	1.5	646	7640
W843052		2.67	3.62	0.11	0.4	0.090	0.52	4.1	58.5	1.19	217	62.8	0.03	1.4	1525	1640
W843053		2.05	5.71	0.13	0.6	0.116	0.72	8.2	71.0	2.02	176	8.74	0.05	2.8	1185	2780
W843054		5.82	5.42	0.13	0.5	0.171	0.55	12.1	55.2	2.14	1250	12.75	0.05	2.2	1290	3050
W843055		1.76	6.90	0.15	0.6	0.339	0.66	16.0	62.9	1.96	54	19.90	0.04	3.3	1040	1940
W843056		1.34	5.02	0.11	0.4	0.234	0.47	3.7	45.0	1.51	51	11.60	0.03	2.2	777	1210
W843057		4.50	4.92	0.12	0.5	0.244	0.40	7.8	49.5	3.61	109	34.1	0.05	2.2	1145	1490
W843058		2.28	7.57	0.17	0.7	0.498	0.74	22.5	80.0	3.17	67	23.2	0.06	3.4	1305	910
W843059		2.77	7.22	0.15	0.6	0.360	0.63	16.6	77.6	3.01	64	30.2	0.05	3.4	1285	970
W843060		1.76	5.43	0.18	0.5	0.326	0.54	24.3	67.8	2.89	46	3.83	0.06	2.5	1460	1200

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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	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
W843021		14.4	19.6	0.027	0.91	1.78	0.3	2	1.0	88.0	<0.05	<0.05	0.20	0.005	0.44	8.5
W843022		7.6	23.1	0.024	0.65	1.09	0.4	3	1.3	59.1	<0.05	0.05	0.28	0.007	0.57	11.1
W843023		12.0	17.3	0.024	0.43	1.48	0.3	2	0.6	75.0	<0.05	<0.05	0.18	0.005	0.48	8.6
W843024		10.1	27.9	0.025	1.21	1.63	0.4	3	0.8	69.7	<0.05	0.06	0.24	0.006	0.72	8.5
W843025		53.3	194.0	0.002	0.68	39.0	8.9	4	68.9	289	0.80	0.77	10.55	0.300	1.99	5.4
W843026		8.1	44.4	0.019	0.81	1.30	0.4	3	3.2	78.4	<0.05	0.05	0.26	0.007	0.57	7.6
W843027		19.9	16.7	0.009	0.36	2.26	0.2	1	2.5	76.7	<0.05	<0.05	0.16	<0.005	0.30	7.4
W843028		97.3	38.6	0.014	0.55	15.70	0.3	1	2.0	69.7	<0.05	0.05	0.21	0.005	0.48	9.0
W843029		69.5	70.8	0.035	0.47	9.42	0.7	2	18.2	65.3	<0.05	<0.05	0.58	0.018	0.55	7.9
W843030		75.6	88.9	0.041	0.27	11.35	0.5	2	20.3	93.0	<0.05	<0.05	0.36	0.010	0.94	7.9
W843031		102.5	55.8	0.025	3.75	15.00	0.4	3	21.6	96.5	<0.05	<0.05	0.33	0.009	0.94	5.3
W843032		46.5	75.8	<0.002	0.05	3.77	7.4	3	3.7	67.2	0.46	0.07	4.99	0.200	1.69	2.7
W843033		30.4	120.0	0.002	1.27	32.1	7.3	5	102.0	238	0.60	1.07	10.20	0.220	1.25	12.1
W843034		18.4	44.3	<0.002	0.04	2.22	6.1	3	2.3	38.4	0.21	0.07	2.49	0.112	1.29	1.8
W843035		49.4	71.0	<0.002	0.08	3.37	7.2	3	3.8	93.3	0.53	0.09	6.45	0.223	1.42	3.1
W843036		49.0	86.8	0.004	0.24	4.08	8.3	4	5.9	90.9	0.50	0.07	6.02	0.231	1.57	3.4
W843037		18.9	75.8	0.002	0.10	4.72	6.0	3	2.0	83.8	0.40	0.06	5.45	0.172	1.17	7.2
W843038		13.3	68.4	<0.002	0.09	3.39	4.6	3	1.9	51.3	0.35	0.08	4.74	0.141	0.89	5.4
W843039		18.5	46.2	0.006	0.06	4.64	4.0	3	1.8	98.9	0.28	<0.05	3.63	0.116	0.98	6.5
W843040		13.9	23.1	0.003	0.04	4.24	2.7	3	1.7	115.0	0.24	0.05	2.61	0.094	0.94	5.4
W843041		0.9	1.1	<0.002	<0.01	0.13	0.2	<1	<0.2	75.9	<0.05	<0.05	0.12	0.006	0.03	0.2
W843042		9.7	40.8	0.003	0.13	4.75	3.5	3	1.3	105.5	0.25	0.05	2.89	0.090	1.53	8.9
W843043		5.6	47.4	0.007	0.14	2.76	3.1	4	1.3	37.2	0.25	<0.05	3.57	0.111	1.49	6.9
W843044		15.9	10.4	0.243	0.31	9.23	1.0	7	6.5	208	0.09	0.06	0.76	0.035	3.97	61.5
W843045		54.3	48.1	0.007	0.08	13.25	3.3	2	12.4	163.5	0.61	0.05	3.04	0.103	2.55	36.9
W843046		48.6	94.0	0.008	0.07	9.91	2.2	1	14.7	86.2	0.18	0.06	2.13	0.058	2.80	73.0
W843047		49.8	141.0	0.006	0.08	10.05	2.7	1	18.6	121.5	0.20	<0.05	2.85	0.061	2.93	83.2
W843048		51.3	20.2	0.002	0.05	8.27	1.1	<1	15.2	75.4	0.12	0.05	0.68	0.031	2.80	31.0
W843049		120.5	49.9	0.002	0.12	14.35	1.9	2	63.5	49.7	0.16	0.08	1.44	0.060	3.79	37.1
W843050		58.1	30.5	0.002	0.13	10.55	2.0	2	21.4	38.7	0.16	0.06	1.96	0.063	2.96	21.9
W843051		19.0	57.2	0.003	0.07	6.25	2.6	1	8.1	291	0.12	<0.05	2.05	0.046	3.65	45.6
W843052		60.3	36.7	0.004	0.07	17.60	1.6	1	37.8	41.3	0.10	0.06	1.56	0.047	8.29	36.0
W843053		65.6	43.1	0.008	0.13	12.70	2.8	1	29.8	74.7	0.21	0.05	1.93	0.087	7.57	16.7
W843054		193.0	30.7	0.006	0.02	25.0	2.8	2	31.7	32.9	0.18	0.08	1.62	0.065	8.51	24.5
W843055		404	97.8	0.028	0.16	15.80	3.5	10	33.2	59.8	0.24	0.10	3.08	0.090	6.16	24.4
W843056		118.0	102.0	0.004	0.06	11.85	1.8	2	21.2	26.8	0.18	0.08	2.84	0.064	4.22	11.2
W843057		176.0	16.8	0.007	0.04	18.95	2.4	2	25.2	29.1	0.17	0.07	1.44	0.064	4.83	17.1
W843058		252	45.6	0.005	0.18	19.25	3.1	3	68.3	26.0	0.27	0.09	2.24	0.100	6.58	17.2
W843059		262	25.3	0.005	0.27	21.7	2.8	3	70.2	24.5	0.26	0.10	1.61	0.094	6.27	18.9
W843060		197.5	28.7	0.002	0.06	17.75	2.5	1	42.2	23.8	0.19	0.08	1.53	0.067	5.97	12.8

***** 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
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: 23-OCT-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19235016

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	V	W	Y	Zn	Zr
	Units	ppm	ppm	ppm	ppm	ppm
	LOD	1	0.1	0.1	2	0.5
W843021		16	3.2	11.4	802	0.8
W843022		20	3.6	10.2	30	1.5
W843023		16	1.1	11.6	38	1.0
W843024		16	3.9	12.8	122	1.1
W843025		68	19.2	22.2	124	82.2
W843026		18	5.9	9.8	21	1.5
W843027		10	1.4	10.4	129	<0.5
W843028		13	3.1	11.9	327	0.8
W843029		36	18.3	9.3	30	5.2
W843030		19	6.5	10.5	31	2.0
W843031		11	4.6	9.9	250	1.0
W843032		264	4.0	11.1	157	46.5
W843033		53	31.1	27.8	158	58.9
W843034		247	0.9	6.9	81	28.7
W843035		182	11.4	11.6	160	54.1
W843036		215	19.1	13.6	196	50.0
W843037		211	2.5	18.8	598	52.3
W843038		168	3.9	14.9	422	52.3
W843039		210	4.3	20.5	582	37.9
W843040		202	3.8	26.5	424	30.5
W843041		4	0.1	2.2	15	1.9
W843042		251	4.5	24.1	371	29.6
W843043		296	4.8	15.0	190	37.4
W843044		930	21.0	20.5	2010	8.0
W843045		666	8.4	21.1	983	24.7
W843046		655	5.5	28.5	897	15.9
W843047		621	5.0	40.0	901	15.6
W843048		385	10.0	13.5	631	8.1
W843049		579	10.4	125.5	892	13.4
W843050		607	7.9	46.8	786	16.4
W843051		504	3.4	82.5	1130	10.9
W843052		633	7.7	62.0	1960	11.9
W843053		667	6.1	133.5	2860	19.2
W843054		1000	15.0	244	6710	15.8
W843055		1030	13.5	59.2	1980	20.0
W843056		857	9.9	26.1	1660	15.3
W843057		875	10.9	175.5	5420	15.0
W843058		867	16.5	274	2550	20.4
W843059		963	16.6	239	2740	20.0
W843060		666	8.0	352	3080	14.9

***** 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
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: Rau

Finalized Date: 23-OCT-2019
Account: RCM

CERTIFICATE OF ANALYSIS WH19235016

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	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 ST
VANCOUVER BC V6B 1L8

Finalized Date: 4-NOV-2019
Account: RCM

CERTIFICATE WH19268580

Project: Rau

P.O. No.: R19-D22

This report is for 15 Pulp samples submitted to our lab in Whitehorse, YT, Canada on 24-OCT-2019.

The following have access to data associated with this certificate:

ANDREW CARNE	ADAM COULTER	JULIA LANE

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
FND-02	Find Sample for Addn Analysis

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
PGM-ICP23	Pt, Pd, Au 30g FA ICP	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:

Saa Traxler, General Manager, North Vancouver

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 ST
VANCOUVER BC V6B 1L8

Finalized Date: 4-NOV-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19268580

Sample Description	Method Analyte Units LOD	PGM-ICP23 Au ppm 0.001	PGM-ICP23 Pt ppm 0.005	PGM-ICP23 Pd ppm 0.001
W843044		<0.001	<0.005	0.001
W843045		0.002	<0.005	<0.001
W843046		0.001	<0.005	<0.001
W843048		0.005	<0.005	<0.001
W843049		0.003	<0.005	<0.001
W843050		0.002	<0.005	<0.001
W843051		0.004	<0.005	<0.001
W843052		0.006	<0.005	<0.001
W843053		0.028	<0.005	<0.001
W843054		0.050	<0.005	0.001
W843055		0.151	<0.005	0.001
W843056		0.147	<0.005	<0.001
W843057		0.164	<0.005	0.001
W843058		0.221	<0.005	0.001
W843060		0.259	<0.005	<0.001

***** 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
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: Rau

Finalized Date: 4-NOV-2019
Account: RCM

CERTIFICATE OF ANALYSIS WH19268580

CERTIFICATE COMMENTS

LABORATORY ADDRESSES

Applies to Method:

Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

FND-02 PGM-ICP23

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 ST
VANCOUVER BC V6B 1L8

Finalized Date: 5-NOV-2019
Account: RCM

CERTIFICATE WH19235028

Project: Rau

P.O. No.: R19-D23

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 19-SEP-2019.

The following have access to data associated with this certificate:

ANDREW CARNE	ADAM COULTER	

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
OA-HSUL10	Handling of High Sulphide Samples
PUL-31	Pulverize up to 250g 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-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid ICP-MS	
PGM-ICP23	Pt, Pd, Au 30g FA ICP	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:

Saa Traxler, General Manager, North Vancouver

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.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 5-NOV-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19235028

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
W843061		1.86	0.05	2.61	8.50	39.2	9280	16.75	4.69	7.41	25.9	24.5	13.7	18	3.44	159.5
W843062		3.38	0.01	0.08	0.21	1.7	320	0.35	0.21	21.3	15.75	2.95	6.1	2	1.92	4.4
W843063		0.73	<0.01	0.31	1.35	4.2	360	14.20	0.52	14.30	6.77	9.23	16.9	19	1.99	66.0
W843064		<0.02	<0.01	0.32	1.27	3.9	490	13.50	0.51	14.40	7.23	8.66	17.4	18	1.95	58.7
W843065		3.22	0.03	0.18	2.46	4.3	240	1.97	0.57	1.31	0.86	20.2	4.8	68	3.09	23.1
W843066		4.06	<0.01	0.12	2.21	1.4	550	0.94	0.29	2.51	5.79	16.40	20.6	60	3.63	13.6
W843067		4.24	<0.01	0.18	2.35	4.3	210	1.57	0.47	0.42	2.91	18.20	47.7	54	10.15	25.0
W843068		6.89	<0.01	0.14	1.25	3.3	410	3.62	0.21	3.29	1.65	11.70	5.7	48	4.54	17.5
W843069		7.34	<0.01	0.16	0.89	3.3	1130	0.98	0.25	2.34	1.19	6.99	3.7	39	2.06	21.3
W843070		7.68	0.02	0.13	1.03	1.6	2740	2.33	0.21	2.43	0.18	6.78	1.2	37	1.36	25.5
W843071		7.93	<0.01	0.10	1.05	1.8	1760	7.47	0.30	2.24	0.60	6.71	1.5	32	3.24	10.5
W843072		0.10	0.34	2.64	5.78	>10000	2080	1.68	364	11.40	0.75	133.0	48.9	63	12.10	838
W843073		7.87	<0.01	0.10	0.96	4.3	3640	2.18	0.39	2.02	0.26	6.75	1.1	68	1.59	12.6
W843074		6.90	<0.01	0.17	0.86	2.5	1800	0.77	0.74	4.41	0.22	6.17	1.1	31	1.46	11.4
W843075		8.23	<0.01	0.23	0.82	1.8	1650	0.36	0.25	5.17	0.46	5.49	0.9	35	0.80	14.3
W843076		7.73	<0.01	0.22	0.80	2.1	600	0.70	0.24	4.46	0.26	5.04	1.1	27	1.17	30.3
W843077		8.03	<0.01	0.20	0.86	1.9	410	0.75	0.36	4.58	0.45	5.65	1.1	27	0.59	24.9
W843078		3.93	0.30	0.40	1.07	33.3	80	2.42	1.70	2.62	0.12	7.65	1.4	28	1.01	33.9
W843079		3.60	0.12	0.33	1.06	19.3	90	2.20	1.51	2.74	0.10	6.72	1.2	32	0.92	38.0
W843080		7.54	0.38	0.52	0.79	37.8	50	1.58	2.24	2.73	<0.02	6.06	1.0	26	0.83	9.5
W843081		7.59	0.07	0.40	0.82	37.6	50	1.09	1.34	2.38	0.37	5.10	0.9	26	0.94	10.6
W843082		7.76	0.01	0.39	0.85	16.0	110	0.73	0.86	3.38	0.10	5.63	1.0	28	1.82	22.3
W843083		7.93	<0.01	0.41	1.00	8.1	330	0.68	0.35	2.39	0.29	8.00	1.5	41	2.56	15.7
W843084		7.16	<0.01	0.41	0.87	6.0	550	0.47	0.16	4.22	0.51	6.93	1.4	52	2.61	14.0
W843085		6.92	<0.01	0.54	0.89	10.3	700	0.44	0.20	3.82	0.39	6.98	1.5	62	2.63	12.7
W843086		6.96	<0.01	0.49	0.94	7.1	420	0.39	0.15	3.36	0.33	8.47	1.4	60	2.99	12.9
W843087		0.10	0.80	7.10	5.11	8810	1260	1.70	215	13.95	1.14	410	74.6	49	9.44	3570
W843088		6.38	<0.01	0.33	0.95	9.7	380	0.47	0.40	2.84	0.17	7.25	1.5	64	4.75	12.5
W843089		6.27	<0.01	0.36	1.21	26.3	400	0.94	1.52	2.05	0.24	8.46	1.7	53	4.99	13.6
W843090		6.48	0.01	0.26	1.02	11.3	930	0.65	0.61	4.56	0.21	8.50	1.5	37	5.19	11.2
W843091		5.13	<0.01	0.18	1.05	3.8	880	1.07	0.44	3.34	0.36	8.33	1.8	51	5.31	14.8
W843092		2.38	0.01	0.17	0.98	3.8	360	1.08	0.62	2.58	2.55	7.00	1.8	31	3.05	16.4
W843093		3.03	0.01	0.25	2.72	7.7	120	3.29	0.32	0.94	2.79	20.6	3.5	77	11.30	16.1
W843094		1.08	<0.01	0.42	1.12	8.7	130	2.58	1.83	2.89	1.74	9.68	2.9	31	1.62	76.4
W843095		1.80	<0.01	0.42	0.90	0.4	80	48.9	0.66	15.60	0.07	9.14	4.0	21	4.40	386
W843096		5.03	<0.01	<0.01	0.08	0.2	40	0.11	0.03	33.6	<0.02	0.95	0.5	1	<0.05	2.3
W843097		0.74	<0.01	0.25	0.18	1.6	260	4.04	3.42	19.05	0.23	5.48	1.2	11	4.36	104.5
W843098		1.11	<0.01	0.27	0.22	1.2	130	30.2	1.31	16.85	1.02	6.79	2.7	14	2.09	229
W843099		1.93	<0.01	0.23	0.08	1.6	120	0.67	3.13	21.1	0.32	4.05	1.0	9	1.19	97.4
W843100		1.21	0.01	0.50	0.44	175.0	240	37.8	3.92	12.45	0.06	7.69	3.1	12	5.15	418

***** 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
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: 5-NOV-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19235028

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	Fe	Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P
	Units	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
W843061		3.09	4.01	0.08	0.4	0.123	0.51	15.1	54.2	5.50	310	12.95	0.02	2.3	1460	880
W843062		0.75	0.59	<0.05	<0.1	0.006	0.10	2.0	3.8	13.00	857	3.06	0.01	0.2	34.9	100
W843063		3.01	6.71	0.08	0.3	0.028	0.35	5.1	26.9	10.10	1450	4.85	0.07	2.3	117.0	300
W843064		2.93	6.70	0.09	0.3	0.030	0.34	4.8	26.6	10.10	1440	4.57	0.07	2.2	113.5	290
W843065		1.34	9.59	0.09	1.1	0.014	0.73	12.2	22.1	0.33	118	5.26	0.11	5.7	38.2	440
W843066		1.19	9.71	0.07	0.9	0.026	0.64	10.0	21.5	0.24	105	4.10	0.12	4.9	53.3	440
W843067		1.68	8.03	0.09	1.0	0.005	1.28	10.5	57.5	0.22	137	4.92	0.22	3.5	165.5	460
W843068		1.26	4.84	0.07	0.6	0.008	0.52	7.8	19.7	0.12	252	9.27	0.07	2.7	58.7	290
W843069		1.05	1.83	0.06	0.4	0.059	0.29	5.0	7.7	0.20	434	6.99	0.03	1.6	32.2	310
W843070		0.80	2.18	0.06	0.5	<0.005	0.17	4.6	7.0	0.15	79	7.52	0.02	2.1	12.4	360
W843071		0.85	2.22	0.05	0.5	0.010	0.44	4.7	10.2	0.31	154	31.7	0.05	2.5	13.7	310
W843072		6.76	16.65	0.19	2.4	0.786	3.45	83.6	26.4	1.59	1180	13.70	1.16	14.0	34.8	930
W843073		0.80	2.12	0.05	0.4	0.007	0.20	4.9	8.5	0.39	94	19.15	0.01	1.8	10.9	250
W843074		0.68	1.70	0.05	0.4	0.017	0.29	4.4	10.4	0.27	142	99.7	0.03	1.6	9.1	220
W843075		0.73	1.68	<0.05	0.4	0.019	0.25	3.9	10.5	0.17	99	37.4	0.02	1.5	7.1	330
W843076		1.19	1.80	<0.05	0.4	0.066	0.23	3.6	7.4	0.15	245	5.98	0.01	1.4	7.1	190
W843077		1.24	1.91	<0.05	0.4	0.025	0.34	4.0	8.6	0.15	227	5.63	0.02	1.5	8.5	460
W843078		2.49	3.23	0.05	0.5	0.203	0.55	5.8	10.0	0.17	665	5.66	0.01	2.1	11.0	300
W843079		2.26	3.04	<0.05	0.5	0.167	0.55	4.8	10.4	0.17	602	5.60	0.01	2.0	10.7	440
W843080		3.27	2.50	<0.05	0.4	0.289	0.43	4.5	8.6	0.21	1180	5.25	0.01	1.4	8.2	700
W843081		3.28	2.41	0.05	0.4	0.227	0.40	3.7	8.3	0.13	622	6.88	0.01	1.5	8.0	330
W843082		1.89	2.25	<0.05	0.5	0.089	0.36	3.6	9.9	0.25	435	19.40	0.02	1.6	7.9	330
W843083		1.36	2.87	<0.05	0.5	0.042	0.50	5.7	11.0	0.49	204	20.6	0.04	1.8	10.2	710
W843084		0.97	3.46	<0.05	0.5	0.024	0.42	5.4	9.5	0.16	101	13.90	0.08	1.6	13.2	400
W843085		1.27	4.38	0.05	0.5	0.015	0.39	5.2	9.4	0.19	84	18.40	0.08	1.6	11.3	650
W843086		1.35	4.67	<0.05	0.5	0.014	0.41	6.3	8.1	0.22	72	21.0	0.07	1.7	11.0	430
W843087		9.57	19.70	0.39	2.1	1.820	2.04	256	37.5	1.40	2410	14.15	0.86	9.7	39.5	970
W843088		1.16	4.86	<0.05	0.6	0.030	0.51	5.0	8.4	0.46	166	12.30	0.05	1.8	9.6	340
W843089		1.51	6.38	<0.05	0.6	0.077	0.61	5.6	10.7	0.39	292	14.55	0.04	2.4	12.8	540
W843090		1.29	4.95	<0.05	0.5	0.093	0.51	5.9	11.2	0.81	531	9.34	0.05	1.8	10.3	500
W843091		1.12	4.71	0.05	0.6	0.025	0.58	5.5	12.1	1.15	213	10.35	0.08	2.1	9.6	460
W843092		1.35	2.77	0.06	0.5	0.046	0.59	4.2	9.2	1.31	197	12.00	0.08	1.8	10.4	1130
W843093		1.95	9.22	0.10	1.2	0.032	1.66	12.7	29.5	0.58	99	6.13	0.29	4.6	44.0	1750
W843094		2.45	2.88	0.05	0.5	0.109	0.28	7.1	14.3	0.93	661	14.95	0.02	3.3	16.6	2340
W843095		7.50	6.80	0.10	0.3	0.219	0.71	7.3	64.4	8.06	2570	87.0	0.10	6.2	17.3	3610
W843096		0.12	0.28	0.05	<0.1	<0.005	0.02	1.2	1.1	1.68	112	0.25	0.04	0.2	0.6	90
W843097		4.65	1.19	0.06	0.1	0.023	0.12	7.3	8.8	10.90	1140	74.9	0.04	0.3	13.7	2920
W843098		5.93	2.77	0.07	0.1	0.223	0.08	7.2	31.4	9.71	2230	83.1	0.07	0.7	15.7	3180
W843099		3.39	0.39	<0.05	<0.1	0.019	0.03	6.6	3.3	11.35	675	45.4	0.01	0.1	11.3	2640
W843100		10.30	7.40	0.08	0.1	0.392	0.36	7.2	40.1	9.33	1520	91.7	0.08	0.9	22.7	4640

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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

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VANCOUVER BC V6B 1L8

Finalized Date: 5-NOV-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19235028

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
W843061		65.7	15.4	0.007	0.11	11.15	1.8	<1	10.4	75.2	0.25	<0.05	1.42	0.057	4.75	9.1
W843062		3.3	11.6	0.019	0.02	0.38	0.4	1	0.7	128.0	<0.05	<0.05	0.21	0.008	0.58	1.9
W843063		11.0	37.5	0.020	0.86	1.12	3.7	3	6.8	78.6	0.15	<0.05	1.39	0.055	1.76	4.2
W843064		11.0	37.0	0.020	0.82	1.15	3.7	3	6.6	81.3	0.15	<0.05	1.28	0.052	1.86	3.3
W843065		3.9	101.0	0.008	0.72	0.46	4.3	3	3.5	40.8	0.32	<0.05	3.10	0.150	2.06	4.6
W843066		2.0	80.4	0.020	0.79	0.18	4.4	3	2.5	40.9	0.27	<0.05	2.76	0.135	1.81	5.8
W843067		4.1	179.5	0.020	1.17	0.53	3.9	4	2.5	32.3	0.21	<0.05	3.57	0.095	5.13	5.9
W843068		2.1	103.0	0.023	0.68	0.43	2.5	3	2.9	56.2	0.15	<0.05	1.70	0.078	1.94	4.3
W843069		5.7	41.4	0.017	0.29	1.04	1.7	1	4.4	43.0	0.09	<0.05	1.01	0.045	1.04	4.9
W843070		3.1	29.9	0.012	0.17	0.51	1.6	1	2.1	54.6	0.57	<0.05	1.34	0.048	0.68	6.3
W843071		3.0	82.4	0.015	0.21	0.45	1.6	2	2.8	59.5	0.74	<0.05	1.33	0.045	1.20	4.6
W843072		51.1	191.0	0.002	0.73	40.8	9.1	4	73.5	314	0.82	0.71	11.45	0.321	2.03	5.9
W843073		3.0	34.0	0.008	0.15	0.61	1.5	1	3.6	62.0	0.51	<0.05	1.04	0.047	0.61	4.2
W843074		6.8	36.3	0.007	0.22	0.80	1.5	1	2.5	114.0	0.09	<0.05	0.97	0.043	0.73	4.2
W843075		5.4	18.9	0.005	0.27	0.95	1.4	1	4.4	122.0	0.08	<0.05	0.93	0.042	0.74	4.5
W843076		5.7	15.6	0.004	0.49	0.90	1.5	1	2.0	130.5	0.09	<0.05	0.45	0.040	0.53	3.3
W843077		5.6	20.0	0.006	0.68	0.91	1.6	1	3.0	157.0	0.08	<0.05	0.37	0.043	0.80	4.4
W843078		7.2	63.4	0.006	2.32	0.82	2.0	2	64.0	88.0	0.13	<0.05	0.56	0.054	0.59	4.3
W843079		7.0	58.3	0.007	2.04	0.76	1.9	2	55.6	97.4	0.11	<0.05	0.58	0.052	0.58	5.0
W843080		5.2	51.4	0.006	3.27	0.60	1.5	1	67.6	73.5	0.09	<0.05	0.53	0.037	0.37	6.0
W843081		4.1	38.8	0.007	3.38	0.87	1.4	2	46.0	69.7	0.09	<0.05	0.57	0.041	0.79	3.9
W843082		6.5	29.8	0.007	1.54	1.06	1.7	1	16.9	95.3	0.09	<0.05	0.52	0.044	1.03	4.7
W843083		4.1	36.2	0.010	0.85	1.02	1.9	2	7.8	56.8	0.11	<0.05	0.56	0.053	2.21	5.6
W843084		5.1	24.7	0.015	0.81	1.17	1.6	2	2.4	71.4	0.09	<0.05	1.03	0.045	1.75	5.5
W843085		6.8	23.6	0.015	1.25	1.48	1.7	2	2.1	56.4	0.09	<0.05	1.10	0.047	1.57	5.4
W843086		7.0	25.4	0.013	1.39	1.44	1.7	2	2.3	48.0	0.10	0.05	1.15	0.051	1.72	5.1
W843087		31.4	117.5	0.002	1.35	32.9	7.5	5	104.5	255	0.59	1.06	11.05	0.233	1.32	13.7
W843088		4.9	40.2	0.014	1.01	1.10	1.7	2	3.2	39.5	0.10	<0.05	1.36	0.053	2.07	5.0
W843089		5.8	60.8	0.014	1.36	1.36	2.1	3	12.5	27.6	0.20	<0.05	1.58	0.064	1.53	5.6
W843090		4.3	42.9	0.011	0.84	0.98	1.9	2	5.2	50.4	0.11	<0.05	1.32	0.056	1.47	4.8
W843091		3.9	92.1	0.008	0.72	0.80	2.0	2	4.6	40.9	0.12	<0.05	1.44	0.059	1.38	5.7
W843092		6.6	115.0	0.011	0.80	1.09	2.2	2	8.1	39.8	0.10	<0.05	1.21	0.052	1.02	10.3
W843093		8.6	173.0	0.049	1.69	1.40	5.5	7	4.8	73.0	0.27	0.05	3.11	0.139	3.96	9.7
W843094		15.2	49.6	0.013	1.37	1.09	2.4	4	13.3	63.3	1.32	0.07	0.67	0.061	0.38	15.7
W843095		2.2	113.0	0.047	3.21	0.15	2.3	13	15.1	33.3	4.27	0.17	0.72	0.032	0.58	27.9
W843096		<0.5	0.8	<0.002	0.01	0.06	0.2	1	0.2	79.7	<0.05	<0.05	0.07	0.005	<0.02	0.2
W843097		6.7	79.4	0.037	2.63	0.38	0.6	6	6.0	117.5	<0.05	0.10	0.25	0.008	0.43	23.7
W843098		2.9	39.3	0.031	2.89	0.34	0.8	10	23.5	44.1	0.10	0.12	0.42	0.011	0.17	26.2
W843099		6.1	22.1	0.015	1.98	0.64	0.4	3	1.8	108.0	<0.05	0.07	0.12	<0.005	0.16	19.0
W843100		5.2	149.5	0.042	5.18	0.52	0.6	17	10.2	27.9	0.07	0.26	0.37	0.010	0.51	34.5

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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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CERTIFICATE OF ANALYSIS WH19235028

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	PGM-ICP23	PGM-ICP23	PGM-ICP23
	Analyte	V	W	Y	Zn	Zr	Au	Pt	Pd
	Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	LOD	1	0.1	0.1	2	0.5	0.001	0.005	0.001
W843061		361	4.7	170.5	3340	11.0	0.047	<0.005	0.001
W843062		14	0.6	5.7	872	1.7	0.005	<0.005	0.001
W843063		113	5.6	15.7	2140	12.4	0.004	<0.005	0.001
W843064		109	5.1	15.2	2130	12.2			
W843065		206	1.7	10.2	241	41.2	0.029	0.012	0.003
W843066		185	1.0	7.8	967	35.5			
W843067		171	1.8	7.2	220	39.3			
W843068		156	4.5	6.8	467	25.5			
W843069		58	1.2	5.6	334	16.9			
W843070		68	0.8	4.4	42	18.5			
W843071		76	6.7	4.3	102	16.4			
W843072		72	20.5	22.7	126	82.7			
W843073		65	1.3	3.5	44	17.0			
W843074		61	4.2	3.3	42	17.8			
W843075		52	0.6	3.4	70	16.3			
W843076		53	3.0	2.8	58	14.8			
W843077		55	1.0	3.9	88	15.8			
W843078		83	5.5	4.1	39	19.9			
W843079		77	4.5	4.6	57	19.4			
W843080		49	4.1	5.1	13	16.3			
W843081		55	3.7	3.8	23	16.4			
W843082		56	2.1	3.9	40	18.3			
W843083		67	1.4	4.9	43	20.1			
W843084		63	0.7	4.2	68	19.0			
W843085		57	0.5	4.4	40	18.7			
W843086		56	0.6	3.9	35	20.3			
W843087		55	37.6	29.2	177	69.0			
W843088		49	0.8	3.8	21	22.0			
W843089		71	1.9	4.4	31	30.6			
W843090		57	1.0	4.7	26	21.0			
W843091		56	5.0	4.4	58	23.0			
W843092		54	3.1	7.0	405	20.3			
W843093		293	1.3	15.9	223	45.6			
W843094		74	4.6	13.1	268	20.6			
W843095		90	920	22.3	118	11.7			
W843096		2	1.0	2.3	4	1.4			
W843097		47	25.7	16.0	53	3.7			
W843098		75	18.7	15.8	286	4.9			
W843099		35	4.6	15.0	56	1.4			
W843100		62	164.0	19.2	80	3.1			

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To: **ATAC RESOURCES LTD.**
C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Project: Rau

Finalized Date: 5-NOV-2019
Account: RCM

CERTIFICATE OF ANALYSIS WH19235028

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	OA-HSUL10	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	ME-MS61	PGM-ICP23

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 ST
VANCOUVER BC V6B 1L8

Finalized Date: 2-NOV-2019
Account: RCM

CERTIFICATE WH19235970

Project: Rau

P.O. No.: R19-D24

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 20-SEP-2019.

The following have access to data associated with this certificate:

ANDREW CARNE	ADAM COULTER	

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
OA-HSUL10	Handling of High Sulphide Samples
WSH-22	"Wash" pulverizers
PUL-31	Pulverize up to 250g 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-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid 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:



Saa Traxler, General Manager, North Vancouver

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CERTIFICATE OF ANALYSIS WH19235970

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
W843101		2.73	<0.01	0.34	0.08	1.6	210	1.13	3.32	21.2	0.76	3.73	1.0	8	2.18	110.5
W843102		3.81	<0.01	0.31	0.17	2.3	380	3.49	4.69	20.1	0.35	5.65	0.7	10	5.85	65.8
W843103		4.83	<0.01	0.27	0.08	1.1	190	2.15	4.56	21.2	1.50	3.64	0.5	5	2.75	37.1
W843104		8.64	<0.01	0.15	0.04	0.9	70	0.54	2.13	21.9	0.32	2.52	0.4	4	0.67	12.3
W843105		8.27	0.01	0.04	0.02	1.6	80	0.21	0.28	22.3	0.25	2.20	0.4	3	0.24	1.3
W843106		0.11	0.34	2.61	5.74	>10000	2080	1.63	363	11.35	1.10	137.5	47.8	64	11.40	845
W843107		8.70	<0.01	0.04	0.02	5.1	110	0.21	0.33	21.7	0.10	2.07	0.4	3	0.24	1.6
W843108		8.29	<0.01	0.02	0.01	4.1	70	0.27	0.17	23.0	0.14	2.28	0.4	2	0.21	1.3
W843109		8.46	<0.01	0.04	0.02	1.2	60	0.23	0.26	21.8	0.06	1.97	0.4	3	0.21	1.7
W843110		7.99	<0.01	0.06	0.06	3.5	60	0.25	0.42	21.7	0.26	2.46	0.4	3	0.26	2.5
W843111		0.10	0.76	6.96	5.02	8690	1240	1.77	204	13.75	0.98	442	77.0	49	9.42	3460
W843112		8.46	<0.01	0.08	0.06	5.2	110	0.29	0.92	21.5	0.09	2.69	0.5	4	0.60	5.7
W843113		8.44	<0.01	0.17	0.02	2.4	120	0.24	1.69	22.5	0.25	2.38	0.4	4	0.33	1.8
W843114		7.80	<0.01	0.03	0.05	2.3	270	0.14	0.47	21.5	0.18	2.93	0.5	4	0.97	2.1
W843115		8.14	<0.01	0.08	0.15	1.3	570	0.64	1.15	20.7	0.94	4.70	0.6	7	1.53	9.6
W843116		8.01	<0.01	0.11	0.10	1.9	370	0.71	2.75	20.6	1.16	4.06	0.5	5	1.65	10.8
W843117		3.84	<0.01	0.68	0.06	1.1	380	0.73	56.9	21.5	4.51	3.04	0.5	3	1.00	19.6
W843118		1.12	<0.01	0.76	0.05	2.1	240	0.59	214	22.4	10.15	3.14	0.5	3	0.55	37.0
W843119		4.99	<0.01	0.01	0.03	<0.2	60	0.05	0.26	22.0	0.07	0.98	0.8	<1	0.08	3.2
W843120		4.40	<0.01	0.68	0.06	0.8	260	0.71	71.6	21.7	4.11	3.49	0.5	4	1.79	26.5
W843121		2.63	<0.01	0.74	2.82	5.6	1500	119.0	18.85	16.40	33.9	7.94	0.6	5	32.9	44.6
W843122		8.14	<0.01	0.22	0.10	1.2	300	1.42	5.41	21.5	3.42	3.31	0.5	5	4.05	17.3
W843123		1.30	<0.01	6.30	0.04	2.1	160	0.59	144.5	13.45	0.76	2.43	1.6	8	1.22	1045
W843124		<0.02	<0.01	6.57	0.04	1.2	110	0.44	148.5	12.60	0.77	2.45	1.7	7	1.27	1030
W843125		4.42	<0.01	1.29	0.19	2.3	320	9.27	81.1	19.05	4.88	4.50	1.1	6	4.45	145.5
W843126		2.44	<0.01	0.23	0.65	3.2	450	35.8	1.10	14.45	0.28	3.16	3.3	10	9.68	272
W843127		2.38	<0.01	0.20	0.66	1.0	570	37.7	0.83	14.50	0.26	3.42	2.9	8	10.50	228
W843128		6.72	<0.01	0.05	0.62	5.5	350	33.3	0.46	15.85	0.60	16.95	1.3	7	6.58	35.4
W843129		4.56	<0.01	0.29	0.16	1.4	500	2.99	6.07	22.1	7.03	4.18	0.7	4	6.39	29.0
W843130		5.34	<0.01	0.50	0.23	1.1	380	4.02	5.31	21.5	5.01	6.95	1.2	8	10.65	56.0
W843131		3.79	<0.01	0.30	0.49	1.2	640	21.8	2.33	16.35	1.90	9.87	4.8	11	4.37	326
W843132		3.85	<0.01	0.73	0.14	1.7	450	0.67	6.25	21.9	7.07	4.78	0.6	6	4.84	27.2
W843133		6.05	<0.01	0.39	0.16	1.9	630	0.87	3.15	21.1	2.46	5.15	0.6	7	11.05	19.9
W843134		8.20	<0.01	1.25	0.38	1.1	1590	2.46	9.99	19.95	5.71	6.41	0.8	9	27.0	40.5
W843135		3.75	<0.01	23.9	2.13	12.7	330	13.60	249	16.45	23.4	8.63	1.0	4	227	72.5
W843136		4.45	<0.01	4.51	0.96	1.9	390	14.25	44.3	19.45	11.75	6.31	0.6	4	76.0	36.6
W843137		8.09	<0.01	2.25	0.24	1.6	1530	3.08	17.85	20.8	2.06	4.99	0.5	5	20.3	30.5
W843138		8.33	<0.01	1.91	0.12	0.8	1800	2.07	13.20	21.1	3.24	4.82	0.5	4	11.65	24.2
W843139		8.39	<0.01	0.66	0.14	1.0	1110	3.07	8.01	21.5	1.43	5.02	0.5	5	7.51	26.3
W843140		7.82	<0.01	0.83	0.26	0.2	3420	6.22	9.95	20.4	2.04	5.07	0.7	5	25.8	26.9

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CERTIFICATE OF ANALYSIS WH19235970

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	Fe	Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P
	Units	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
W843101		3.39	0.52	<0.05	<0.1	0.021	0.06	5.9	4.3	11.55	578	59.3	0.01	0.1	9.3	2870
W843102		4.32	0.70	0.05	0.1	0.011	0.14	8.7	5.0	10.90	813	84.3	0.02	0.3	12.6	5580
W843103		3.21	0.40	<0.05	<0.1	0.039	0.05	5.8	4.6	11.75	556	61.2	0.01	0.1	7.9	2480
W843104		1.66	0.22	<0.05	<0.1	0.010	0.02	4.1	3.3	12.15	363	32.9	0.01	0.1	6.0	990
W843105		0.10	0.15	0.14	<0.1	0.016	0.01	3.5	4.2	12.70	283	5.54	0.01	<0.1	3.9	630
W843106		6.77	15.60	0.16	2.2	0.774	3.47	80.8	28.8	1.61	1180	13.00	1.16	13.5	32.1	940
W843107		0.12	0.20	0.12	<0.1	0.018	0.01	3.3	5.2	12.35	218	6.41	0.01	<0.1	5.1	510
W843108		0.10	0.15	0.18	<0.1	0.017	<0.01	3.7	5.8	12.80	195	6.01	0.01	<0.1	4.2	250
W843109		0.12	0.20	0.20	<0.1	0.007	0.01	3.5	3.0	12.50	191	6.57	0.01	<0.1	3.5	430
W843110		0.26	0.36	0.24	<0.1	0.008	0.01	3.9	3.0	12.50	351	11.40	0.01	0.1	4.2	550
W843111		9.46	19.50	0.35	1.8	1.785	2.00	253	44.9	1.40	2380	15.05	0.85	9.2	37.5	970
W843112		0.47	0.29	0.07	<0.1	0.010	0.02	4.2	3.2	12.40	303	21.5	0.01	0.1	6.2	640
W843113		0.09	0.18	0.19	<0.1	0.010	0.01	4.0	3.2	12.25	209	5.59	0.01	<0.1	8.0	570
W843114		0.19	0.29	0.21	<0.1	0.007	0.03	4.4	2.0	12.15	257	16.50	0.01	0.1	5.3	710
W843115		0.53	0.51	0.12	0.1	0.056	0.05	7.0	2.2	11.95	723	27.7	0.02	0.3	9.5	1310
W843116		0.40	0.56	0.18	0.1	0.084	0.04	6.0	2.8	11.85	889	23.5	0.02	0.2	7.8	1040
W843117		0.57	0.45	0.14	<0.1	0.339	0.03	4.3	2.8	12.20	810	21.0	0.01	0.1	10.0	460
W843118		0.96	0.59	0.09	<0.1	0.804	0.02	4.7	1.6	12.00	663	8.56	0.01	0.1	5.1	480
W843119		0.47	0.15	0.18	<0.1	<0.005	0.01	0.5	0.9	13.35	217	0.33	<0.01	0.1	1.7	170
W843120		0.53	0.56	0.14	<0.1	0.318	0.04	4.9	3.3	12.60	1000	20.7	0.01	0.1	6.2	710
W843121		1.24	15.70	0.11	1.0	2.50	1.57	7.3	137.0	9.37	1310	21.5	0.18	16.4	15.7	780
W843122		0.43	0.79	0.13	<0.1	0.243	0.09	4.4	7.3	12.05	1020	34.0	0.01	0.2	11.7	850
W843123		21.7	0.36	0.19	<0.1	0.101	0.04	3.6	2.4	7.77	1040	218	0.01	<0.1	138.0	790
W843124		22.7	0.34	0.19	<0.1	0.119	0.04	3.6	2.2	7.47	997	217	0.01	<0.1	140.5	770
W843125		3.01	2.77	0.06	0.1	0.432	0.19	5.9	11.2	10.90	1660	73.0	0.03	0.4	25.7	1150
W843126		7.04	8.04	0.09	0.2	0.489	0.63	1.7	83.0	9.67	2420	40.5	0.08	2.7	14.5	770
W843127		6.37	8.52	0.07	0.2	0.533	0.64	1.9	87.0	9.79	2400	40.7	0.09	2.7	10.8	830
W843128		3.74	8.13	<0.05	0.2	0.397	0.50	13.4	50.1	9.60	2670	68.2	0.10	3.3	15.0	1140
W843129		1.19	1.66	<0.05	<0.1	0.380	0.16	5.0	6.1	11.55	1540	57.3	0.01	0.4	10.5	1500
W843130		1.73	1.96	<0.05	0.1	0.333	0.18	8.3	5.8	10.00	2240	77.4	0.03	0.6	13.9	1760
W843131		6.54	5.88	0.06	0.2	0.336	0.33	9.1	20.7	9.49	2330	122.0	0.07	1.7	10.5	1910
W843132		2.15	0.82	<0.05	0.1	0.201	0.11	6.5	3.9	11.15	2140	115.5	0.02	0.3	8.8	1520
W843133		0.99	0.90	<0.05	0.1	0.107	0.14	7.4	5.0	11.75	2110	53.4	0.02	0.3	10.3	1280
W843134		1.46	1.68	<0.05	0.1	0.323	0.36	9.1	11.9	10.55	2510	84.9	0.04	0.6	16.8	1140
W843135		1.86	9.33	0.07	0.1	1.825	2.14	11.3	97.1	10.15	2500	61.3	0.04	0.9	13.7	860
W843136		0.99	4.01	<0.05	0.1	0.922	0.90	9.1	64.2	10.90	2130	50.7	0.02	0.7	7.6	860
W843137		0.80	1.18	<0.05	0.1	0.156	0.24	7.5	24.8	11.85	1620	43.8	0.02	0.2	8.7	1250
W843138		0.72	0.66	<0.05	<0.1	0.201	0.11	6.9	27.3	11.75	1510	31.6	<0.01	0.2	7.6	840
W843139		1.21	1.00	<0.05	0.1	0.221	0.11	6.6	14.6	12.15	1140	42.1	<0.01	0.5	9.8	740
W843140		1.02	1.15	<0.05	0.1	0.230	0.24	6.6	14.7	11.80	1860	30.3	0.02	0.6	9.5	640

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	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
W843101		14.5	45.3	0.028	2.09	1.11	0.3	3	1.7	117.5	<0.05	0.08	0.14	<0.005	0.26	25.7
W843102		6.5	134.0	0.045	2.65	0.41	0.4	3	2.6	150.0	<0.05	0.06	0.29	0.009	0.67	40.9
W843103		5.6	50.3	0.024	2.03	0.45	0.2	2	1.4	113.5	<0.05	0.07	0.12	<0.005	0.25	19.2
W843104		4.1	13.0	0.014	1.05	0.32	0.2	1	1.1	103.5	<0.05	<0.05	0.07	<0.005	0.08	8.5
W843105		3.2	2.5	0.008	0.03	0.32	0.1	<1	1.1	92.0	<0.05	<0.05	0.04	<0.005	0.04	5.5
W843106		53.4	188.5	0.002	0.73	41.8	8.6	5	76.5	313	0.80	0.68	10.15	0.323	1.90	5.4
W843107		2.9	4.1	0.008	0.02	0.44	0.1	<1	0.8	78.4	<0.05	<0.05	0.05	<0.005	0.06	6.1
W843108		2.6	2.8	0.008	<0.01	0.54	0.1	1	0.6	72.9	<0.05	<0.05	0.04	<0.005	0.04	4.4
W843109		2.3	2.4	0.010	0.04	0.27	0.1	<1	0.7	67.6	<0.05	<0.05	0.04	<0.005	0.04	5.6
W843110		2.5	3.7	0.012	0.13	0.30	0.2	1	1.2	77.2	<0.05	<0.05	0.07	<0.005	0.04	6.3
W843111		34.9	122.0	0.002	1.37	33.6	7.4	6	112.0	251	0.60	1.14	9.47	0.234	1.30	12.0
W843112		3.9	10.1	0.014	0.33	0.26	0.2	1	0.7	74.4	<0.05	<0.05	0.11	<0.005	0.08	8.9
W843113		9.8	3.6	0.012	0.03	0.39	0.1	1	0.6	73.3	<0.05	0.05	0.05	<0.005	0.05	6.6
W843114		2.6	18.1	0.021	0.08	0.24	0.3	1	0.7	97.3	<0.05	<0.05	0.10	<0.005	0.14	8.3
W843115		6.3	30.7	0.028	0.28	0.50	0.4	1	5.3	129.5	<0.05	0.05	0.24	0.008	0.20	12.6
W843116		7.2	24.3	0.021	0.20	0.60	0.4	2	5.6	119.5	<0.05	0.05	0.16	0.005	0.15	10.3
W843117		79.6	19.7	0.020	0.35	1.83	0.2	3	5.8	100.5	<0.05	0.18	0.11	<0.005	0.16	4.9
W843118		646	12.2	0.011	0.62	20.2	0.2	8	27.4	87.6	<0.05	0.26	0.11	<0.005	0.20	5.0
W843119		2.2	0.7	<0.002	<0.01	0.08	0.1	<1	<0.2	50.0	<0.05	<0.05	0.05	<0.005	<0.02	0.7
W843120		213	30.0	0.025	0.33	3.23	0.2	4	17.1	123.0	<0.05	0.09	0.12	<0.005	0.18	7.4
W843121		56.4	901	0.029	0.40	1.39	0.8	4	24.2	183.0	26.2	0.14	3.72	<0.005	3.32	19.2
W843122		23.3	67.5	0.030	0.26	0.59	0.3	1	3.4	162.5	<0.05	<0.05	0.18	<0.005	0.36	12.6
W843123		586	26.7	0.070	>10.0	8.35	0.1	62	43.5	121.0	<0.05	1.16	0.11	<0.005	0.82	10.1
W843124		601	26.8	0.075	>10.0	8.85	0.1	62	49.5	119.0	<0.05	1.18	0.10	<0.005	0.82	10.0
W843125		126.0	90.9	0.050	1.72	1.23	0.4	10	7.0	169.5	0.05	0.36	0.24	0.006	0.41	13.6
W843126		10.0	229	0.039	2.65	0.17	0.7	14	7.2	11.6	0.81	0.15	0.48	0.022	0.89	9.2
W843127		9.1	240	0.040	2.16	0.15	0.7	13	7.0	11.9	0.87	0.11	0.46	0.021	0.90	9.9
W843128		3.9	161.0	0.052	0.32	0.61	1.1	2	7.6	19.1	0.59	<0.05	0.96	0.019	0.59	12.8
W843129		54.1	114.5	0.052	0.67	1.26	0.3	3	5.6	409	<0.05	0.08	0.18	0.005	0.56	13.4
W843130		75.8	146.5	0.079	0.79	2.76	0.6	4	13.4	306	<0.05	0.05	0.37	0.012	0.61	17.7
W843131		15.0	109.5	0.056	2.58	0.38	0.8	13	6.9	131.0	0.07	0.09	0.46	0.020	0.44	18.9
W843132		91.4	95.1	0.045	1.39	0.76	0.4	3	9.6	378	<0.05	0.08	0.21	0.007	0.57	16.4
W843133		56.4	152.5	0.046	0.60	0.39	0.5	2	9.4	314	<0.05	<0.05	0.24	0.009	0.87	12.7
W843134		178.5	418	0.066	0.84	0.62	0.6	3	26.7	374	<0.05	0.07	0.35	0.015	2.18	10.8
W843135		3740	2940	0.063	0.97	2.84	0.5	17	61.0	286	<0.05	0.89	0.28	0.017	15.00	8.2
W843136		589	1140	0.052	0.52	0.88	0.4	6	19.6	295	<0.05	0.20	0.24	0.010	5.89	9.3
W843137		307	303	0.040	0.49	0.67	0.4	4	8.9	299	<0.05	0.10	0.22	0.007	1.56	13.5
W843138		366	143.5	0.029	0.45	0.62	0.3	3	7.5	347	<0.05	0.08	0.16	<0.005	0.93	9.3
W843139		140.0	121.5	0.039	0.50	0.32	0.3	3	4.1	292	<0.05	<0.05	0.21	0.006	0.98	8.7
W843140		242	257	0.024	0.41	0.22	0.5	2	3.1	425	<0.05	<0.05	0.33	0.014	1.62	8.7

***** 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
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: 2-NOV-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19235970

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	V	W	Y	Zn	Zr
	Units	ppm	ppm	ppm	ppm	ppm
	LOD	1	0.1	0.1	2	0.5
W843101		33	7.5	13.2	112	1.4
W843102		60	11.4	16.4	62	2.8
W843103		35	6.0	13.2	228	1.2
W843104		24	4.3	9.4	52	0.6
W843105		18	1.1	9.4	36	<0.5
W843106		73	20.5	22.1	130	91.1
W843107		19	0.6	8.4	14	<0.5
W843108		21	0.6	8.5	24	<0.5
W843109		20	1.5	8.4	11	<0.5
W843110		23	2.8	9.1	42	0.7
W843111		56	34.4	30.2	169	73.9
W843112		30	4.7	9.2	19	0.8
W843113		33	1.2	9.7	35	<0.5
W843114		25	2.6	9.5	25	0.6
W843115		40	8.6	14.8	134	2.3
W843116		36	18.2	13.8	174	1.4
W843117		37	28.1	9.0	645	0.6
W843118		18	17.6	8.1	1180	0.7
W843119		2	0.1	0.7	18	<0.5
W843120		29	22.5	11.6	585	0.7
W843121		41	97.7	12.7	4760	5.0
W843122		40	20.5	12.0	461	0.9
W843123		40	136.0	7.4	92	0.7
W843124		39	144.5	7.4	89	0.5
W843125		51	127.0	13.6	646	1.6
W843126		55	253	13.1	157	7.4
W843127		53	296	14.6	156	8.0
W843128		45	164.5	15.0	216	5.9
W843129		29	75.5	11.1	942	1.2
W843130		29	69.5	13.7	714	4.0
W843131		41	210	14.4	352	6.0
W843132		30	52.9	13.9	911	2.5
W843133		35	31.5	13.2	336	2.4
W843134		40	107.0	13.0	741	5.2
W843135		54	3840	11.4	2830	4.6
W843136		37	3080	12.0	1470	3.1
W843137		26	99.2	13.0	237	1.9
W843138		26	30.2	11.8	349	1.0
W843139		30	30.8	10.8	165	1.4
W843140		34	45.3	10.0	234	3.1

***** 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
www.alsglobal.com/geochemistry

To: **ATAC RESOURCES LTD.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Project: Rau

Finalized Date: 2-NOV-2019
Account: RCM

CERTIFICATE OF ANALYSIS WH19235970

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	OA-HSUL10	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	ME-MS61

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Finalized Date: 27-OCT-2019
Account: RCM

CERTIFICATE WH19239248

Project: Rau

P.O. No.: R19-D25

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 24-SEP-2019.

The following have access to data associated with this certificate:

ANDREW CARNE	ADAM COULTER	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
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
PUL-31	Pulverize up to 250g 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-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid 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:



Saa Traxler, General Manager, North Vancouver

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
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Finalized Date: 27-OCT-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19239248

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
W843141		7.78	<0.01	1.18	0.29	0.6	1580	4.51	9.99	21.2	5.69	7.03	0.9	8	30.0	79.0
W843142		8.05	<0.01	0.23	1.16	0.5	4450	9.35	1.83	20.2	3.37	12.60	0.9	19	111.5	35.5
W843143		8.03	0.02	0.43	0.24	2.1	2020	1.21	1.63	22.2	0.90	4.65	0.6	8	13.40	9.1
W843144		0.10	0.34	2.64	5.62	>10000	2050	1.37	363	11.40	1.01	140.0	50.3	62	12.65	815
W843145		8.13	<0.01	0.06	0.24	2.9	1790	1.85	0.48	22.2	0.15	3.82	0.6	6	13.10	7.8
W843146		7.90	<0.01	0.12	0.26	1.3	3290	1.22	0.51	23.1	0.24	2.82	0.6	5	3.00	4.3
W843147		8.10	<0.01	0.03	0.09	0.3	860	0.61	0.29	21.6	0.12	2.26	0.3	2	1.01	3.7
W843148		5.61	<0.01	0.11	0.19	0.2	660	1.02	0.87	24.1	0.55	2.83	0.5	4	4.78	7.7
W843149		1.58	<0.01	<0.01	6.22	0.8	1570	22.9	2.02	6.19	0.19	34.3	0.7	6	8.67	18.2
W843150		<0.02	<0.01	<0.01	6.20	0.9	1580	21.8	1.40	6.10	0.16	34.6	0.7	5	8.56	17.6
W843151		4.26	<0.01	4.52	0.19	1.4	530	2.46	111.5	21.9	37.5	3.28	0.4	2	3.21	137.0
W843152		4.52	<0.01	1.10	0.13	1.0	620	0.65	50.3	22.2	3.45	2.29	0.4	2	2.05	32.0
W843153		8.03	<0.01	0.38	0.21	0.8	1250	0.89	1.02	22.9	0.51	3.20	0.6	3	11.20	38.0
W843154		8.20	<0.01	0.28	0.35	1.3	2500	0.90	2.90	22.2	0.24	4.15	0.8	4	13.25	7.8
W843155		8.13	<0.01	0.11	0.21	0.8	1640	0.66	0.46	23.2	0.22	3.36	0.6	4	11.75	5.5
W843156		0.10	0.82	7.03	4.93	8800	1230	1.45	215	13.20	1.08	444	77.0	50	10.05	3400
W843157		1.30	<0.01	0.20	3.44	8.9	490	0.61	0.48	10.50	0.76	17.50	20.5	24	1.88	25.6
W843158		3.42	<0.01	0.28	1.95	10.8	670	0.58	0.35	10.75	0.75	24.0	5.4	28	1.84	14.2
W843159		1.23	<0.01	0.18	3.02	7.7	780	5.26	0.55	13.35	0.50	27.4	5.1	20	3.32	13.8
W843160		1.43	0.09	0.02	0.09	0.6	120	0.35	0.19	22.5	0.06	1.80	0.6	1	0.24	1.2
W843161		1.39	<0.01	0.01	0.08	0.4	130	0.31	0.11	23.3	0.03	1.75	0.5	3	0.25	1.1
W843162		7.34	0.01	0.22	0.14	2.0	130	0.25	0.61	22.3	0.16	2.84	0.7	2	0.38	2.5
W843163		7.89	<0.01	0.04	0.07	1.7	150	0.13	0.11	24.0	0.11	2.39	0.4	1	0.40	1.3
W843164		7.41	<0.01	0.02	0.08	0.6	450	0.21	0.15	23.8	0.04	1.98	0.5	1	0.42	1.5
W843165		7.78	<0.01	0.02	0.12	1.0	300	0.13	0.26	23.2	0.05	2.12	0.5	2	1.41	1.7
W843166		7.42	<0.01	0.04	0.37	1.7	1010	0.24	0.15	23.2	0.06	4.27	1.0	4	3.40	4.1
W843167		7.72	0.01	0.06	0.10	1.0	270	0.19	0.06	23.4	0.06	1.89	0.5	2	0.53	2.0
W843168		7.58	<0.01	0.11	0.09	0.9	170	0.18	0.06	22.0	0.18	1.46	0.8	1	0.17	2.6
W843169		7.86	<0.01	0.06	0.12	0.5	480	0.24	0.04	20.8	0.22	2.31	0.7	1	0.45	2.3
W843170		7.97	<0.01	0.06	0.25	0.9	1780	0.46	0.05	20.9	0.10	2.45	0.9	2	1.18	3.9
W843171		7.67	<0.01	0.04	0.19	0.9	630	0.47	0.13	22.4	0.04	2.75	0.9	2	0.92	3.7
W843172		7.89	<0.01	0.04	0.17	1.2	340	0.47	0.13	22.1	0.17	2.40	0.9	2	0.93	3.3
W843173		8.05	<0.01	0.03	0.15	0.4	340	0.40	0.19	21.9	0.06	1.88	0.8	2	1.46	2.9
W843174		8.12	<0.01	0.06	0.22	1.5	390	0.34	0.11	21.8	0.38	2.47	1.0	3	1.54	2.8
W843175		7.84	<0.01	0.01	0.08	0.2	330	0.51	0.05	23.2	0.06	0.95	0.8	1	0.37	1.9
W843176		0.34	<0.01	0.01	5.75	1.0	930	25.4	10.40	4.98	0.06	8.27	0.6	3	5.23	13.0
W843177		4.64	<0.01	0.01	0.04	<0.2	40	0.07	0.05	21.3	0.06	0.94	1.0	<1	0.10	2.1
W843178		6.54	<0.01	0.06	0.23	0.8	860	1.56	0.79	22.1	0.16	2.14	1.0	3	1.04	4.2
W843179		5.20	<0.01	0.03	6.62	1.2	180	9.92	4.12	0.95	0.05	7.78	0.2	7	5.63	2.4
W843180		7.50	<0.01	<0.01	6.62	0.9	90	7.93	0.64	0.68	0.03	7.10	0.2	9	6.00	1.9

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Finalized Date: 27-OCT-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19239248

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	Fe	Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P
	Units	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
W843141		1.69	0.76	<0.05	0.1	0.421	0.28	10.0	19.6	11.90	1900	47.9	0.02	0.4	14.8	820
W843142		0.78	1.79	0.06	0.2	0.228	1.20	15.7	97.4	11.45	1680	26.6	0.04	0.9	20.7	1040
W843143		0.45	0.49	0.09	0.1	0.084	0.17	5.6	7.5	12.70	1110	20.1	<0.01	0.4	10.1	300
W843144		6.55	14.55	0.12	2.2	0.857	3.31	81.7	22.5	1.59	1150	12.90	1.12	12.8	34.8	940
W843145		0.28	0.54	0.12	0.1	0.012	0.16	3.8	7.3	12.95	430	5.78	<0.01	0.4	6.3	260
W843146		0.34	0.41	0.13	0.1	0.027	0.12	2.4	5.7	12.50	618	3.58	0.01	0.4	4.1	160
W843147		0.15	0.20	0.20	<0.1	0.013	0.04	2.2	2.7	11.65	517	1.63	<0.01	0.1	1.5	190
W843148		0.19	0.44	0.19	<0.1	0.046	0.13	2.6	3.5	13.00	897	2.47	<0.01	0.2	2.9	160
W843149		0.74	32.7	0.14	2.7	0.049	2.87	14.1	26.8	2.60	387	17.15	2.07	75.2	1.0	50
W843150		0.67	33.0	0.15	2.8	0.046	2.78	14.5	26.2	2.58	373	14.70	2.08	73.9	0.9	60
W843151		0.49	1.00	0.15	<0.1	3.58	0.11	4.0	7.0	12.35	731	1.64	0.01	0.3	1.3	110
W843152		0.25	0.43	0.21	<0.1	0.334	0.08	2.5	5.5	12.80	575	4.49	0.01	0.3	1.8	110
W843153		0.25	0.75	0.22	<0.1	0.055	0.18	2.8	22.3	12.75	1240	7.60	0.01	0.3	4.4	70
W843154		0.33	0.87	0.18	0.1	0.023	0.27	3.1	37.9	12.15	585	7.51	0.01	0.6	3.4	110
W843155		0.23	0.55	0.25	<0.1	0.018	0.17	2.9	24.2	13.35	503	7.86	<0.01	0.3	3.9	160
W843156		9.23	17.20	0.30	1.7	1.960	1.95	251	35.8	1.39	2380	15.45	0.83	8.7	39.4	970
W843157		4.83	8.59	<0.05	0.9	0.073	0.44	8.7	18.7	7.10	1370	2.51	0.85	3.5	28.3	440
W843158		1.68	4.27	<0.05	0.7	0.054	0.63	14.2	13.2	3.27	533	1.87	0.20	3.2	15.9	480
W843159		1.28	11.45	0.07	1.4	0.055	0.98	12.7	16.2	5.79	434	3.21	0.51	12.5	14.3	310
W843160		0.10	0.33	0.19	<0.1	0.013	0.03	1.1	2.0	11.80	195	1.39	0.01	0.1	1.3	40
W843161		0.08	0.32	0.23	<0.1	0.012	0.03	1.1	2.1	11.90	180	1.04	0.01	0.1	0.9	40
W843162		0.59	0.46	0.14	<0.1	0.106	0.06	1.6	2.0	11.85	1340	2.63	0.01	0.2	2.9	40
W843163		0.17	0.28	0.24	<0.1	0.015	0.03	1.4	1.6	12.40	479	2.09	<0.01	0.1	1.3	30
W843164		0.09	0.33	0.25	<0.1	0.008	0.04	1.1	2.4	12.50	195	1.86	<0.01	0.1	1.6	40
W843165		0.16	0.42	0.23	<0.1	0.019	0.06	1.2	4.4	12.30	291	2.90	0.01	0.1	1.5	40
W843166		0.23	1.02	0.22	0.1	0.008	0.22	2.2	13.9	12.60	143	5.18	0.03	0.4	2.8	80
W843167		0.65	0.36	0.16	<0.1	0.113	0.04	1.0	2.3	12.30	1440	1.58	0.01	0.1	1.2	40
W843168		0.58	0.34	0.08	<0.1	0.096	0.04	0.8	0.9	12.65	1430	1.89	<0.01	0.1	2.2	40
W843169		0.17	0.49	0.25	<0.1	0.019	0.05	1.2	1.6	12.35	378	1.37	<0.01	0.1	1.6	40
W843170		0.23	0.82	0.25	0.1	0.022	0.10	1.3	4.2	12.45	422	2.24	0.01	0.3	2.5	40
W843171		0.18	0.77	0.28	0.1	0.023	0.10	1.5	4.7	12.90	339	2.07	0.01	0.2	2.2	50
W843172		0.19	0.69	0.29	0.1	0.038	0.09	1.2	2.9	12.90	334	2.20	<0.01	0.2	2.7	40
W843173		0.11	0.63	0.35	0.1	0.017	0.09	1.0	3.3	12.65	258	2.84	<0.01	0.2	3.3	30
W843174		0.15	0.83	0.32	0.1	0.015	0.12	1.3	3.9	11.90	248	2.29	0.01	0.3	2.5	50
W843175		0.07	0.40	0.29	<0.1	0.012	0.03	0.5	0.9	12.60	274	1.09	<0.01	0.2	1.8	40
W843176		0.53	25.9	0.16	1.0	0.069	3.92	3.5	7.4	2.67	503	12.60	1.85	68.4	2.8	10
W843177		0.43	0.22	0.21	<0.1	0.012	0.02	0.5	0.8	12.85	200	0.10	0.01	0.1	1.7	190
W843178		0.14	1.07	0.29	0.2	0.025	0.09	1.1	3.0	11.85	510	2.06	<0.01	0.7	4.0	50
W843179		0.61	33.9	0.16	4.2	0.066	4.03	3.1	8.4	0.17	451	0.60	2.71	155.0	0.9	10
W843180		0.51	30.2	0.13	2.7	0.022	4.03	2.9	8.9	0.08	240	0.27	3.00	138.0	0.7	<10

***** 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
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: 27-OCT-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19239248

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
W843141		291	332	0.045	0.85	0.34	0.6	4	7.1	335	<0.05	0.06	0.35	0.013	1.94	12.2
W843142		60.5	1375	0.055	0.39	0.20	1.0	2	5.0	154.5	0.06	<0.05	0.79	0.028	7.10	21.6
W843143		65.6	130.0	0.028	0.15	0.83	0.5	1	3.0	108.0	<0.05	<0.05	0.32	0.012	1.03	13.3
W843144		55.3	198.5	0.003	0.73	39.8	8.6	4	69.4	302	0.81	0.76	9.51	0.317	2.10	5.8
W843145		11.7	140.0	0.009	0.15	0.19	0.5	1	1.1	70.7	<0.05	<0.05	0.32	0.011	1.19	9.8
W843146		21.5	47.8	0.009	0.12	0.31	0.4	1	1.4	79.7	<0.05	<0.05	0.29	0.012	0.78	7.1
W843147		5.8	21.9	0.004	0.05	0.14	0.2	1	1.2	71.2	<0.05	<0.05	0.10	<0.005	0.24	6.4
W843148		20.8	78.0	0.007	0.05	0.14	0.3	1	6.1	78.3	<0.05	<0.05	0.23	0.006	0.74	6.3
W843149		21.3	519	0.002	0.18	0.16	2.3	<1	2.8	73.2	33.8	<0.05	12.30	<0.005	2.56	8.1
W843150		21.5	509	0.002	0.17	0.15	2.4	1	2.9	73.2	34.0	<0.05	13.40	<0.005	2.57	8.4
W843151		694	71.1	0.002	0.61	2.12	0.2	9	102.0	62.4	0.06	0.15	0.17	0.005	0.90	4.4
W843152		250	41.3	0.004	0.18	1.63	0.2	3	16.3	52.0	0.05	0.06	0.16	0.005	0.61	4.8
W843153		13.1	163.5	0.014	0.13	0.39	0.4	1	30.5	99.8	<0.05	<0.05	0.29	0.009	1.32	5.1
W843154		59.1	190.5	0.007	0.15	0.75	0.7	1	4.6	110.5	<0.05	<0.05	0.49	0.018	1.99	6.4
W843155		12.5	148.0	0.011	0.10	0.21	0.4	1	1.7	104.5	<0.05	<0.05	0.26	0.009	1.35	6.1
W843156		36.6	124.0	0.003	1.31	33.1	7.1	5	104.0	247	0.58	1.18	9.65	0.231	1.41	14.0
W843157		25.4	34.5	0.007	0.02	2.64	17.7	<1	3.0	103.0	0.25	<0.05	1.76	0.344	0.36	1.4
W843158		11.2	33.3	0.004	0.12	1.08	3.5	1	1.9	125.5	0.22	<0.05	2.66	0.116	0.35	1.6
W843159		9.6	120.0	0.002	0.04	0.85	3.4	<1	3.5	126.5	11.25	<0.05	5.28	0.096	0.85	1.7
W843160		2.3	4.3	0.007	<0.01	0.08	0.2	1	0.9	162.5	<0.05	<0.05	0.13	<0.005	0.07	2.3
W843161		1.4	4.0	0.005	<0.01	0.08	0.2	1	0.5	164.0	0.05	<0.05	0.14	<0.005	0.06	2.3
W843162		18.1	7.1	0.007	0.01	0.84	0.3	1	2.4	150.5	<0.05	<0.05	0.21	0.006	0.08	1.4
W843163		4.2	4.4	0.009	0.01	0.26	0.1	1	0.9	172.0	<0.05	<0.05	0.12	<0.005	0.07	1.9
W843164		2.1	5.9	0.007	0.01	0.11	0.2	1	0.5	176.0	<0.05	<0.05	0.14	<0.005	0.11	2.6
W843165		2.9	8.3	0.006	0.03	0.10	0.2	<1	0.6	169.0	<0.05	<0.05	0.21	0.005	0.18	2.8
W843166		3.8	23.0	0.007	0.11	0.14	0.7	1	1.0	187.5	<0.05	<0.05	0.54	0.015	0.63	3.4
W843167		5.3	5.4	0.005	0.01	0.25	0.2	1	1.9	152.0	<0.05	<0.05	0.16	<0.005	0.10	2.0
W843168		17.3	5.1	0.005	0.01	0.38	0.2	1	2.7	93.9	<0.05	<0.05	0.13	<0.005	0.05	1.0
W843169		18.3	7.6	0.004	0.02	0.38	0.3	1	1.1	61.8	<0.05	<0.05	0.19	0.005	0.10	1.7
W843170		7.3	23.5	<0.002	0.04	0.31	0.5	1	1.1	62.1	<0.05	<0.05	0.31	0.011	0.30	2.3
W843171		2.3	19.0	0.005	0.03	0.16	0.4	1	1.1	88.9	<0.05	<0.05	0.28	0.007	0.23	2.8
W843172		4.1	18.9	0.003	0.04	0.17	0.3	1	1.2	83.5	<0.05	<0.05	0.27	0.006	0.21	2.7
W843173		3.8	24.5	0.007	0.02	0.12	0.3	<1	0.8	70.3	<0.05	<0.05	0.27	0.006	0.22	2.9
W843174		16.7	23.5	0.004	0.05	0.25	0.4	1	1.2	120.5	<0.05	<0.05	0.33	0.009	0.31	2.7
W843175		2.7	12.7	0.004	<0.01	0.07	0.2	1	1.3	122.5	<0.05	<0.05	0.11	<0.005	0.10	1.5
W843176		43.6	800	0.003	0.11	0.09	0.5	<1	6.3	29.2	13.95	<0.05	8.63	<0.005	3.61	14.2
W843177		1.2	1.0	<0.002	<0.01	<0.05	0.1	1	<0.2	48.3	<0.05	<0.05	0.06	<0.005	<0.02	0.9
W843178		7.6	40.6	0.005	0.01	0.10	0.5	1	2.2	124.5	<0.05	<0.05	0.34	0.011	0.24	3.0
W843179		67.5	673	<0.002	0.02	0.43	0.8	<1	16.8	10.6	18.45	<0.05	23.2	0.005	3.20	39.9
W843180		66.9	687	0.003	0.02	0.11	0.6	<1	3.5	18.8	16.85	<0.05	19.65	<0.005	3.39	36.8

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VANCOUVER BC V6B 1L8

Finalized Date: 27-OCT-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19239248

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	V	W	Y	Zn	Zr
	Units	ppm	ppm	ppm	ppm	ppm
	LOD	1	0.1	0.1	2	0.5
W843141		40	187.5	15.1	584	3.5
W843142		79	155.5	22.5	305	7.1
W843143		43	13.6	8.3	186	2.1
W843144		72	17.7	22.5	126	78.2
W843145		28	5.5	6.4	20	2.1
W843146		21	4.6	3.1	63	2.0
W843147		9	6.0	3.0	18	1.0
W843148		10	22.0	2.7	80	1.9
W843149		2	37.2	31.6	36	22.2
W843150		2	35.4	29.9	35	21.4
W843151		4	40.3	3.2	4670	1.1
W843152		5	9.1	2.2	444	1.2
W843153		11	25.0	2.7	58	1.5
W843154		12	51.5	3.4	27	2.2
W843155		12	11.2	3.6	25	1.2
W843156		55	37.2	29.9	168	59.5
W843157		173	63.6	15.1	127	30.2
W843158		58	1.5	9.2	96	25.4
W843159		41	4.0	8.2	73	25.3
W843160		4	3.3	0.8	13	1.0
W843161		4	1.9	0.8	8	0.9
W843162		5	2.7	1.6	54	1.4
W843163		4	1.6	1.0	37	0.7
W843164		3	2.4	0.9	13	1.1
W843165		3	3.8	0.9	15	1.6
W843166		6	4.0	1.7	19	3.7
W843167		3	4.2	0.9	24	1.2
W843168		3	4.7	0.9	70	1.2
W843169		4	3.6	0.9	81	1.4
W843170		7	3.2	1.1	40	2.7
W843171		6	1.7	1.2	18	2.5
W843172		8	1.4	0.9	41	3.1
W843173		10	2.2	0.8	24	3.4
W843174		5	2.0	1.0	153	3.5
W843175		6	6.2	0.5	25	1.6
W843176		4	80.1	25.0	69	12.2
W843177		2	0.1	0.7	16	<0.5
W843178		20	20.1	1.4	69	7.2
W843179		1	14.2	41.7	36	67.4
W843180		<1	5.6	30.9	29	45.9

***** See Appendix Page for comments regarding this certificate *****

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North Vancouver BC V7H 0A7
Phone: +1 (604) 984 0221 Fax: +1 (604) 984 0218
www.alsglobal.com/geochemistry

To: **ATAC RESOURCES LTD.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Project: Rau

Finalized Date: 27-OCT-2019
Account: RCM

CERTIFICATE OF ANALYSIS WH19239248

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	ME-MS61

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.**
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Finalized Date: 26-OCT-2019
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CERTIFICATE WH19239249

Project: Rau

P.O. No.: R19-D26

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 24-SEP-2019.

The following have access to data associated with this certificate:

ANDREW CARNE	ADAM COULTER	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
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
PUL-31	Pulverize up to 250g 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-AA25	Ore Grade Au 30g FA AA finish	AAS
ME-MS61	48 element four acid 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:



Saa Traxler, General Manager, North Vancouver

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2103 Dollarton Hwy
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CERTIFICATE OF ANALYSIS WH19239249

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
W843181		6.59	<0.01	0.01	6.76	9.9	70	7.09	0.54	0.75	0.11	5.88	0.3	7	5.34	2.1
W843182		7.06	<0.01	0.17	6.45	19.1	210	8.45	0.54	1.01	1.36	6.52	0.6	8	4.99	10.1
W843183		3.29	0.01	0.05	6.61	6.0	260	26.9	1.38	2.45	<0.02	16.90	0.5	5	6.28	6.6
W843184		3.16	<0.01	0.01	6.32	3.8	240	23.5	1.35	2.29	<0.02	16.35	0.4	6	6.45	3.5
W843185		7.50	<0.01	1.35	0.22	5.2	260	1.08	4.08	21.7	0.11	2.84	1.0	4	2.00	6.1
W843186		5.09	<0.01	0.09	0.14	1.6	120	3.00	2.53	21.6	0.58	1.64	0.8	2	1.04	5.4
W843187		5.48	<0.01	0.40	1.59	3.0	250	32.7	50.6	21.1	12.25	10.75	0.8	1	28.1	104.0
W843188		<0.02	<0.01	0.40	1.53	2.3	250	31.7	55.4	20.4	11.15	10.20	0.8	1	26.9	103.0
W843189		5.97	<0.01	0.13	0.29	1.1	80	6.48	13.30	22.3	1.22	2.77	0.7	1	3.83	19.1
W843190		4.22	<0.01	0.33	0.86	6.7	220	17.25	12.10	21.4	1.96	6.41	0.9	1	10.25	50.9
W843191		5.97	<0.01	0.13	0.37	1.9	320	26.8	6.44	22.5	2.18	2.02	0.9	1	4.10	8.1
W843192		6.10	<0.01	0.12	0.17	1.8	100	2.08	0.35	21.6	0.53	1.81	0.8	1	0.81	4.9
W843193		8.38	0.01	0.08	0.12	1.1	160	1.88	0.28	21.7	0.56	1.32	0.8	1	1.08	4.1
W843194		8.01	<0.01	0.11	0.16	2.3	90	2.46	0.29	21.7	0.30	1.51	0.7	1	0.61	4.1
W843195		0.10	0.37	2.61	5.83	>10000	2120	1.66	371	11.70	0.76	137.5	52.3	64	11.85	871
W843196		6.57	<0.01	0.05	0.06	4.3	30	0.94	0.37	20.4	0.06	1.31	0.6	1	0.24	3.1
W843197		5.14	<0.01	0.07	6.39	10.4	220	9.31	1.65	0.97	0.09	13.10	0.7	5	5.20	9.8
W843198		3.67	<0.01	0.17	6.07	2.6	100	7.84	0.66	1.23	0.05	7.18	2.1	7	4.59	25.3
W843199		7.44	<0.01	<0.01	6.30	1.8	140	8.39	1.29	0.79	<0.02	18.60	0.4	8	4.02	3.1
W843200		7.69	<0.01	0.08	6.63	28.9	70	9.81	0.51	0.81	0.11	15.45	2.9	11	4.72	5.1
W843201		7.44	<0.01	0.02	6.71	5.6	90	8.92	0.35	0.88	<0.02	8.93	0.4	7	4.82	6.8
W843202		7.44	<0.01	0.30	6.53	12.6	130	9.29	4.23	0.89	0.04	9.15	0.6	9	4.68	8.6
W843203		7.50	<0.01	0.20	6.31	21.7	230	7.08	1.54	1.47	<0.02	8.97	0.8	6	4.77	6.1
W843204		7.52	0.01	0.07	6.50	5.4	100	8.54	0.25	0.93	0.38	8.83	0.3	6	5.05	6.2
W843205		7.46	<0.01	0.06	6.34	4.0	120	12.50	0.41	0.88	0.09	13.50	0.6	9	5.06	5.3
W843206		7.47	0.01	0.83	6.30	34.3	160	10.35	3.29	0.97	0.30	9.99	0.6	8	5.29	5.3
W843207		3.53	<0.01	0.49	7.09	35.1	230	10.80	0.41	0.54	<0.02	14.55	0.4	7	6.66	5.2
W843208		2.99	<0.01	0.44	6.31	24.2	230	9.22	0.48	0.31	0.02	5.50	0.3	6	5.59	3.2
W843209		3.02	<0.01	0.74	7.00	17.1	260	9.34	0.79	0.59	0.36	8.93	0.6	7	8.69	5.1
W843210		4.82	<0.01	0.01	0.06	<0.2	20	0.08	0.03	21.3	0.05	1.10	1.0	1	0.14	5.1
W843211		4.25	<0.01	0.07	0.73	5.9	110	3.39	0.54	22.0	0.06	4.19	1.3	2	1.85	11.5
W843212		7.91	<0.01	0.14	0.07	<0.2	40	0.20	0.81	22.5	0.19	1.29	0.9	1	0.30	5.2
W843213		0.10	0.82	7.21	5.24	9210	1290	1.87	243	14.30	1.00	452	81.0	47	9.92	3570
W843214		7.96	0.01	0.14	0.07	5.1	30	0.23	0.53	21.7	0.11	1.79	0.6	1	0.12	5.2
W843215		8.36	<0.01	0.42	0.07	14.9	20	0.25	0.79	22.0	0.22	2.12	1.4	1	0.15	4.2
W843216		7.92	<0.01	0.04	0.13	1.8	210	0.16	0.14	22.7	0.08	2.15	0.8	2	0.78	2.8
W843217		8.35	<0.01	0.03	0.11	1.6	100	0.20	0.13	22.3	0.07	2.12	0.7	2	0.77	2.3
W843218		7.78	<0.01	0.05	0.13	0.7	80	0.19	0.17	23.6	0.14	2.00	0.7	2	0.74	2.5
W843219		7.52	0.01	0.04	0.19	1.5	140	0.25	0.12	22.5	0.10	2.32	0.8	3	1.34	2.3
W843220		8.40	<0.01	0.12	0.15	1.3	220	0.21	0.23	23.5	0.12	2.23	0.8	2	0.86	2.9

***** 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
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-OCT-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19239249

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	Fe	Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P
	Units	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
W843181		0.66	31.4	0.12	3.9	0.031	4.29	2.4	7.5	0.03	415	0.17	2.93	139.0	0.6	<10
W843182		0.72	29.9	0.14	2.8	0.095	4.78	2.5	5.1	0.06	490	0.27	1.82	165.5	0.5	<10
W843183		0.64	41.6	0.15	3.5	0.123	4.58	5.8	24.9	0.16	490	60.2	1.80	193.5	1.2	10
W843184		0.55	40.3	0.16	3.2	0.097	4.59	5.5	24.6	0.15	466	71.9	1.80	190.0	0.6	10
W843185		1.30	1.12	0.08	0.1	0.225	0.13	1.3	3.6	12.30	2580	11.05	0.01	1.9	3.8	50
W843186		0.64	0.82	0.09	0.1	0.184	0.09	0.7	3.1	12.50	1320	1.08	0.01	0.5	1.5	50
W843187		1.11	11.00	0.10	<0.1	2.80	1.69	3.0	38.2	11.85	646	2.11	0.03	6.7	1.6	60
W843188		1.05	10.30	0.10	<0.1	2.55	1.63	2.8	36.3	11.50	622	2.16	0.03	6.0	1.4	50
W843189		0.25	2.25	0.21	<0.1	0.355	0.28	1.1	7.8	12.90	517	1.58	0.01	0.9	2.8	40
W843190		1.01	6.53	0.10	0.1	0.680	0.84	2.1	15.2	12.10	1410	1.71	0.02	3.2	2.6	60
W843191		0.61	2.28	0.11	0.1	0.359	0.23	1.1	12.5	12.00	1350	2.07	0.01	3.9	3.4	50
W843192		0.90	0.71	0.10	0.1	0.210	0.10	1.0	4.4	12.55	1910	1.66	<0.01	0.3	1.9	50
W843193		0.92	0.38	0.09	<0.1	0.172	0.06	0.7	3.7	12.45	2030	1.59	<0.01	0.2	2.3	50
W843194		1.23	0.67	0.05	0.1	0.271	0.08	0.8	2.9	12.30	2760	1.51	<0.01	0.4	2.7	50
W843195		6.80	16.80	0.14	2.3	0.805	3.40	83.8	26.2	1.64	1200	13.70	1.17	13.7	36.0	960
W843196		0.90	0.40	<0.05	<0.1	0.139	0.03	0.7	3.8	11.85	2080	1.27	<0.01	0.7	2.6	40
W843197		0.71	28.2	0.10	2.7	0.060	4.72	4.8	6.0	0.15	372	0.17	2.00	174.5	0.5	<10
W843198		1.01	27.6	0.08	1.7	0.049	3.96	2.7	6.3	0.07	300	0.16	2.62	139.5	0.4	<10
W843199		0.55	27.3	0.09	2.5	0.035	4.01	7.4	7.0	0.04	208	0.18	2.52	153.0	0.4	<10
W843200		1.26	30.2	0.12	2.1	0.110	4.06	6.6	11.3	0.09	474	0.30	2.35	153.0	0.5	<10
W843201		0.84	29.4	0.12	2.0	0.098	4.59	3.6	14.2	0.09	462	0.38	2.14	146.5	0.3	<10
W843202		0.84	27.8	0.11	2.2	0.103	4.48	3.6	14.6	0.14	449	26.9	1.76	150.5	0.5	<10
W843203		1.09	26.9	0.12	1.3	0.221	4.75	4.1	29.2	0.33	1060	187.0	0.57	136.0	0.4	10
W843204		0.65	26.7	<0.05	2.4	0.082	4.62	3.3	16.8	0.10	274	0.51	1.82	158.5	1.2	<10
W843205		0.55	25.9	<0.05	2.7	0.039	4.35	4.9	10.2	0.04	200	0.40	2.25	154.0	0.5	<10
W843206		1.42	26.1	<0.05	2.6	0.231	4.18	4.4	47.3	0.40	1050	623	0.67	125.0	0.6	<10
W843207		1.18	28.3	<0.05	2.0	0.179	4.84	6.1	46.9	0.42	217	1.01	0.09	150.0	0.8	10
W843208		0.96	26.0	<0.05	2.2	0.275	3.73	2.8	35.7	0.39	357	1.23	0.02	120.0	0.8	10
W843209		1.03	28.2	<0.05	3.5	0.216	4.63	3.8	44.5	0.41	521	1.21	0.12	178.5	0.8	10
W843210		0.46	0.26	0.13	<0.1	0.015	0.03	0.5	1.4	13.00	194	0.48	0.01	0.5	1.9	190
W843211		0.43	3.37	0.07	0.3	0.021	0.31	1.9	12.6	11.10	451	2.73	0.02	18.2	1.7	50
W843212		0.27	0.30	0.17	<0.1	0.042	0.03	0.7	4.4	12.60	508	2.82	0.01	0.3	2.0	30
W843213		9.67	20.0	0.34	1.8	1.740	2.02	257	45.4	1.46	2440	14.60	0.87	9.7	42.0	1000
W843214		0.66	0.38	<0.05	<0.1	0.084	0.02	1.0	3.0	12.55	1360	1.25	0.01	0.3	0.8	20
W843215		1.95	0.40	<0.05	<0.1	0.225	0.01	1.1	2.5	12.35	4040	2.44	0.01	0.3	2.1	30
W843216		0.63	0.39	<0.05	0.1	0.067	0.07	1.2	6.2	12.60	1220	2.23	0.01	0.4	2.6	50
W843217		0.86	0.34	<0.05	0.1	0.109	0.06	1.0	3.6	12.30	1760	2.91	0.01	0.5	2.4	30
W843218		0.43	0.41	0.08	0.1	0.056	0.07	1.0	4.1	12.65	880	2.45	0.01	0.7	2.0	40
W843219		0.50	0.57	0.06	0.1	0.060	0.10	1.3	5.3	12.45	916	5.33	0.01	0.5	2.3	40
W843220		0.37	0.48	0.09	0.1	0.048	0.07	1.2	3.4	12.20	657	4.74	0.01	0.4	2.2	50

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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

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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 26-OCT-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19239249

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
W843181		68.1	681	0.002	0.03	0.31	0.7	<1	3.1	14.7	15.65	<0.05	20.1	0.005	3.46	39.1
W843182		60.6	613	<0.002	0.12	0.75	0.7	<1	8.7	23.3	17.55	<0.05	21.9	0.005	3.18	43.3
W843183		32.5	538	0.005	0.08	0.42	0.9	<1	67.6	42.9	30.6	<0.05	20.9	0.009	2.70	39.8
W843184		34.3	548	0.004	0.04	0.40	0.8	<1	62.6	38.8	27.3	<0.05	19.25	0.008	2.79	38.7
W843185		61.9	41.4	0.007	0.10	0.47	0.3	1	4.2	95.4	0.16	<0.05	0.37	0.006	0.28	3.6
W843186		4.9	66.7	0.003	0.04	0.14	0.2	1	2.2	77.0	0.05	<0.05	0.20	<0.005	0.25	3.2
W843187		14.7	2020	0.004	0.69	0.89	0.5	3	5.5	84.8	0.64	0.05	1.65	<0.005	4.99	6.6
W843188		16.7	1950	0.010	0.67	0.73	0.5	4	5.6	83.7	0.63	0.05	1.79	<0.005	4.91	6.3
W843189		7.5	303	0.004	0.12	0.26	0.1	1	3.3	88.9	0.10	<0.05	0.21	<0.005	0.72	2.8
W843190		11.1	841	0.004	0.45	0.97	0.4	1	7.4	83.6	0.45	<0.05	0.95	<0.005	2.17	3.9
W843191		15.1	179.5	0.008	0.06	0.35	0.3	1	9.0	85.9	0.46	<0.05	0.30	<0.005	0.53	5.5
W843192		7.4	48.2	0.003	0.04	0.45	0.3	1	5.0	81.9	<0.05	<0.05	0.22	0.005	0.18	3.4
W843193		4.8	29.6	0.004	0.02	0.19	0.2	1	2.6	73.6	<0.05	<0.05	0.14	<0.005	0.16	3.6
W843194		9.4	21.0	0.006	0.01	0.51	0.2	1	7.1	70.4	<0.05	<0.05	0.20	0.005	0.10	4.0
W843195		54.9	209	0.003	0.75	44.1	9.5	5	76.1	315	0.84	0.75	9.66	0.329	2.02	5.9
W843196		5.0	5.5	0.005	0.01	0.35	0.2	<1	1.4	58.0	<0.05	<0.05	0.11	<0.005	0.04	6.8
W843197		41.2	568	<0.002	0.12	0.63	0.4	1	8.9	20.9	13.60	<0.05	27.1	0.011	2.85	57.3
W843198		42.7	497	<0.002	0.41	0.27	0.3	1	4.8	15.5	10.95	0.05	16.75	0.014	2.64	35.3
W843199		36.4	475	<0.002	0.05	0.13	0.3	<1	10.6	19.2	12.10	<0.05	25.5	0.011	2.27	45.0
W843200		54.4	470	0.002	0.36	0.43	0.7	<1	24.7	14.1	14.80	<0.05	22.0	0.021	2.27	40.2
W843201		39.5	486	0.002	0.07	0.32	0.7	<1	36.5	18.3	12.60	<0.05	20.7	0.018	2.33	42.1
W843202		50.1	478	0.003	0.16	0.72	0.7	<1	79.0	19.8	13.00	<0.05	25.9	0.014	2.23	54.2
W843203		35.2	461	0.007	0.20	0.80	0.6	<1	159.0	19.1	12.20	<0.05	20.4	0.011	1.99	43.4
W843204		41.6	490	<0.002	0.06	0.75	0.6	<1	25.0	14.5	10.60	<0.05	25.9	0.014	2.41	52.7
W843205		36.6	444	<0.002	0.08	0.31	0.5	<1	8.6	21.3	12.95	<0.05	26.7	0.013	2.27	43.1
W843206		53.3	437	0.017	0.36	0.88	0.5	<1	127.5	18.9	8.40	<0.05	23.6	0.011	2.01	35.6
W843207		51.5	519	<0.002	0.02	1.74	0.8	<1	217	10.3	10.75	<0.05	31.2	0.018	2.12	10.9
W843208		114.0	424	<0.002	<0.01	1.36	0.7	<1	318	2.8	8.79	<0.05	19.70	0.016	1.31	5.6
W843209		45.1	499	<0.002	0.03	2.83	0.6	1	134.5	11.4	11.95	<0.05	29.2	0.010	2.48	15.1
W843210		1.1	1.7	<0.002	<0.01	0.06	0.2	1	0.6	44.9	<0.05	<0.05	0.14	<0.005	<0.02	0.7
W843211		4.8	43.0	0.011	0.19	1.64	0.5	1	2.3	137.0	1.11	<0.05	3.03	0.007	0.74	9.1
W843212		9.3	4.6	0.007	0.05	0.29	0.2	1	2.8	108.5	<0.05	<0.05	0.13	<0.005	0.09	3.8
W843213		33.9	127.5	0.003	1.42	31.4	8.1	7	105.0	262	0.63	1.07	9.83	0.245	1.29	12.5
W843214		9.5	1.8	<0.002	0.04	0.26	0.2	1	1.7	81.3	<0.05	<0.05	0.12	<0.005	<0.02	3.2
W843215		25.6	1.6	0.005	0.19	0.56	0.2	1	2.1	105.0	<0.05	<0.05	0.14	<0.005	<0.02	2.2
W843216		3.8	7.6	0.007	0.05	0.11	0.3	1	1.4	120.5	<0.05	<0.05	0.23	0.006	0.23	4.4
W843217		6.1	9.2	0.006	0.04	0.11	0.3	1	1.2	118.5	<0.05	<0.05	0.22	0.005	0.22	3.2
W843218		6.6	6.8	0.004	0.03	0.16	0.3	1	1.4	141.5	0.05	<0.05	0.27	0.007	0.19	3.6
W843219		5.6	10.8	0.007	0.06	0.16	0.4	1	1.5	114.0	<0.05	<0.05	0.36	0.010	0.33	5.9
W843220		11.1	8.6	0.008	0.06	0.31	0.3	1	1.5	151.5	<0.05	<0.05	0.27	0.007	0.24	3.9

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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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Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	V	W	Y	Zn	Zr
	Units	ppm	ppm	ppm	ppm	ppm
	LOD	1	0.1	0.1	2	0.5
W843181		<1	5.5	34.0	43	61.4
W843182		<1	7.0	41.0	425	44.9
W843183		2	8.2	38.7	34	54.5
W843184		1	8.0	37.4	29	49.9
W843185		11	18.6	5.0	48	3.2
W843186		4	5.8	1.0	123	1.7
W843187		3	106.5	0.6	2440	1.0
W843188		3	124.0	0.6	2270	1.0
W843189		7	35.5	0.7	327	0.9
W843190		4	56.9	1.5	512	2.0
W843191		6	10.7	1.9	400	1.4
W843192		3	1.7	1.2	121	2.6
W843193		5	4.5	1.5	79	1.6
W843194		8	3.8	2.8	61	2.4
W843195		75	21.9	22.8	128	87.1
W843196		6	5.5	3.7	35	1.1
W843197		<1	17.3	48.1	47	47.6
W843198		<1	5.2	34.8	33	29.4
W843199		<1	5.2	44.4	17	42.7
W843200		<1	127.5	42.1	50	33.1
W843201		<1	5.6	40.4	33	31.1
W843202		<1	56.9	50.4	84	35.7
W843203		1	368	46.0	96	17.9
W843204		<1	6.1	47.0	146	38.8
W843205		<1	5.0	45.7	34	43.7
W843206		1	8.6	39.3	147	45.8
W843207		<1	15.6	38.4	169	30.5
W843208		<1	19.3	28.5	162	33.9
W843209		<1	11.8	43.9	241	60.7
W843210		2	0.1	0.9	16	<0.5
W843211		2	3.6	19.9	55	6.1
W843212		2	1.9	0.6	58	2.1
W843213		57	33.3	31.8	174	64.0
W843214		2	0.7	1.1	38	1.8
W843215		2	3.9	2.1	75	2.1
W843216		3	0.9	1.1	26	3.0
W843217		2	0.8	1.1	24	3.8
W843218		3	1.2	0.9	43	3.4
W843219		4	0.9	1.4	36	4.1
W843220		4	0.9	1.2	40	3.9

***** 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
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: Rau

Finalized Date: 26-OCT-2019
Account: RCM

CERTIFICATE OF ANALYSIS WH19239249

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	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-2019
Account: RCM

CERTIFICATE WH19239251

Project: Rau

P.O. No.: R19-D27

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 24-SEP-2019.

The following have access to data associated with this certificate:

ANDREW CARNE	ADAM COULTER	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
CRU-QC	Crushing QC Test
PUL-31	Pulverize up to 250g 85% <75 um
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	
ME-XRF06	Whole Rock Package - XRF	XRF
OA-GRA06	LOI for ME-XRF06	WST-SIM

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:

Saa Traxler, General Manager, North Vancouver

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CERTIFICATE OF ANALYSIS WH19239251

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
W843221		7.90	<0.01	0.29	0.13	11.4	110	0.32	0.49	21.5	0.20	2.56	0.6	3	0.23	2.9
W843222		8.19	<0.01	0.18	0.10	2.7	80	0.46	0.52	22.3	0.19	1.83	0.8	1	0.35	2.7
W843223		7.73	0.01	0.14	0.13	3.5	180	0.26	0.39	23.5	0.17	2.09	0.9	2	0.77	3.9
W843224		8.14	<0.01	1.06	0.13	15.0	300	0.28	2.03	22.9	0.29	2.15	1.0	2	0.47	3.1
W843225		8.14	<0.01	0.05	0.22	1.4	200	0.37	0.15	23.3	0.18	2.34	1.0	3	2.00	2.7
W843226		0.10	0.35	2.64	5.68	>10000	2070	1.60	354	11.55	0.96	136.5	50.1	58	12.20	830
W843227		8.27	<0.01	0.04	0.17	3.5	160	0.15	0.40	23.5	0.05	2.26	0.9	3	1.03	2.6
W843228		8.10	<0.01	0.11	0.13	2.2	70	0.22	0.43	23.3	0.06	1.89	0.9	2	0.73	2.3
W843229		3.07	0.01	0.07	0.26	7.0	60	1.86	0.29	23.0	0.19	2.65	1.0	1	1.36	4.6
W843230		4.55	<0.01	0.01	6.15	1.8	220	6.64	3.82	0.98	0.04	8.42	1.2	10	4.53	26.5
W843231		1.76	<0.01	<0.01	5.63	0.6	120	6.12	0.45	1.20	0.03	9.12	0.9	9	4.32	11.1
W843232		1.68	<0.01	<0.01	6.00	1.2	140	9.78	0.47	1.11	<0.02	11.40	0.8	10	4.91	7.1
W843233		3.93	<0.01	<0.01	6.12	21.4	210	7.64	0.88	1.10	0.02	15.75	0.4	10	4.69	9.5
W843234		2.80	0.02	0.23	4.98	638	340	5.93	149.0	1.91	<0.02	6.68	6.0	10	4.56	25.3
W843235		4.57	0.03	0.09	6.48	22.0	160	28.0	1.59	0.94	<0.02	15.40	0.5	17	5.32	13.5
W843236		7.52	0.01	<0.01	6.32	3.2	190	10.05	1.49	0.95	0.04	19.80	0.3	11	4.75	2.6
W843237		7.29	<0.01	0.01	6.55	1.8	110	81.0	0.31	0.93	<0.02	10.45	0.3	10	4.97	2.1
W843238		0.10	0.93	6.53	4.95	8680	1220	1.63	198.0	13.05	1.00	428	77.0	46	9.59	3350
W843239		7.78	<0.01	0.01	6.42	4.5	50	9.32	0.49	0.76	0.03	20.0	0.2	15	5.66	3.0
W843240		7.82	0.01	0.08	6.17	2.2	20	7.76	0.35	0.59	0.05	15.00	0.1	10	11.85	4.6
W843241		6.04	<0.01	<0.01	6.32	1.8	10	11.55	1.50	0.86	<0.02	20.6	0.1	9	15.70	1.0
W843242		2.23	<0.01	0.02	0.29	1.1	60	3.77	0.60	22.3	0.03	2.27	0.5	2	1.38	1.8
W843243		8.58	<0.01	0.03	0.16	1.4	120	0.49	1.01	22.9	0.03	2.11	0.9	2	1.78	4.1
W843244		8.45	<0.01	0.02	0.17	<0.2	110	1.22	0.45	22.7	0.03	2.10	0.7	2	2.89	4.1
W843245		8.55	<0.01	0.03	0.16	1.4	90	0.45	1.53	22.5	0.04	2.86	0.7	2	2.20	2.1
W843246		8.42	0.02	0.02	0.12	0.5	170	0.32	0.17	22.1	0.03	1.69	0.6	2	1.73	1.9
W843247		6.35	<0.01	0.04	0.16	0.5	90	0.35	0.82	22.4	0.04	2.17	0.7	2	2.03	2.6
W843248		6.50	0.01	0.02	0.15	0.3	100	0.30	0.27	22.5	0.02	1.86	0.6	2	1.76	2.4
W843249		7.05	0.01	0.03	0.15	0.5	130	0.91	1.10	23.0	0.02	2.13	0.7	2	1.87	2.5
W843250		6.64	0.01	0.02	0.12	0.6	290	0.45	0.24	22.9	0.03	1.71	0.6	2	1.45	3.1
W843251		2.82	0.02	0.03	0.73	1.1	1310	6.15	0.46	21.3	0.04	3.12	0.9	1	3.38	2.6
W843252		3.55	0.01	0.01	0.06	<0.2	30	0.08	0.02	33.6	<0.02	0.85	0.6	1	0.05	1.3
W843253		3.64	0.01	0.05	6.71	1.4	70	11.50	0.81	1.09	0.02	16.05	0.8	5	7.28	7.3
W843254		5.80	0.01	0.04	5.92	0.6	90	9.19	0.25	1.02	0.03	15.10	0.3	6	7.32	1.7
W843255		5.77	0.01	0.05	6.42	0.9	30	8.72	0.09	0.76	0.02	14.40	0.2	7	9.21	0.5
W843256		5.70	0.01	0.05	6.28	1.6	40	7.09	0.08	0.77	0.03	17.55	0.5	9	5.54	2.4
W843257		<0.02	0.01	0.03	6.30	1.1	40	7.52	0.08	0.76	0.02	19.00	0.5	7	5.69	2.0
W843258		5.55	<0.01	0.02	6.22	0.6	60	7.06	0.05	0.89	0.02	23.0	0.4	10	3.82	0.4
W843259		5.75	0.01	0.03	6.34	1.2	50	6.78	0.06	0.86	0.02	20.7	0.3	7	4.39	0.5
W843260		6.38	0.01	0.03	6.25	1.5	100	8.29	0.11	0.84	<0.02	32.7	0.5	7	8.80	1.3

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VANCOUVER BC V6B 1L8

Finalized Date: 28-OCT-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19239251

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	Fe	Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P
	Units	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
W843221		2.06	0.64	<0.05	0.1	0.213	0.03	1.4	1.9	12.15	3920	10.75	0.01	0.3	2.4	40
W843222		1.13	0.41	<0.05	0.1	0.117	0.03	0.9	2.9	12.00	2460	2.81	0.01	0.1	2.5	30
W843223		0.22	0.43	0.10	0.1	0.024	0.05	1.1	2.9	12.20	362	2.58	0.01	0.2	3.5	50
W843224		0.54	0.50	0.06	0.1	0.061	0.04	1.0	2.1	11.90	1010	2.08	0.01	0.3	4.0	50
W843225		0.31	0.63	0.10	0.1	0.026	0.12	1.2	8.7	12.15	595	3.47	0.02	0.6	6.4	50
W843226		6.61	16.50	0.14	2.3	0.748	3.26	81.2	25.0	1.60	1160	14.00	1.13	14.0	36.5	940
W843227		0.20	0.43	0.08	0.1	0.020	0.08	1.2	5.9	12.05	214	2.71	0.02	0.4	5.3	40
W843228		0.23	0.44	0.14	0.1	0.036	0.05	1.0	2.2	12.25	371	2.29	0.01	0.3	4.2	60
W843229		0.65	1.81	<0.05	0.1	0.087	0.16	1.3	9.8	12.25	901	2.04	0.01	5.0	1.4	60
W843230		0.76	24.4	0.09	2.6	0.036	5.03	3.3	8.9	0.11	255	0.49	1.74	85.4	0.5	<10
W843231		0.86	22.6	0.07	2.4	0.034	3.99	3.4	10.0	0.06	294	0.30	2.29	92.2	0.5	10
W843232		0.87	24.3	0.07	2.7	0.041	4.08	4.1	11.4	0.02	315	0.47	2.36	100.0	0.4	<10
W843233		0.89	22.7	0.09	2.4	0.047	4.22	6.2	14.3	0.04	269	12.10	2.01	81.8	0.5	<10
W843234		1.77	21.5	0.07	2.4	0.119	4.50	2.4	15.9	0.06	510	0.25	1.46	75.5	0.9	<10
W843235		0.92	24.5	0.08	2.3	0.091	4.31	6.3	14.8	0.06	298	0.27	1.99	87.1	0.6	<10
W843236		0.62	25.1	0.09	4.5	0.044	4.25	7.1	10.6	0.03	232	0.27	2.18	149.0	0.5	<10
W843237		0.61	26.6	0.08	4.7	0.048	4.76	3.8	13.8	0.07	217	0.23	2.10	118.0	0.5	<10
W843238		9.11	18.65	0.29	1.6	1.635	1.89	248	40.8	1.37	2310	14.90	0.82	9.2	40.2	950
W843239		0.71	24.5	0.05	4.9	0.017	3.81	7.4	16.7	0.01	223	9.14	2.85	123.0	0.5	20
W843240		0.67	23.7	0.07	4.8	0.032	4.00	5.2	27.0	0.01	396	0.39	2.68	104.0	0.4	10
W843241		0.69	24.4	0.06	4.0	0.042	3.14	7.6	33.5	0.09	433	0.28	3.03	115.0	0.5	<10
W843242		0.56	1.69	0.10	0.1	0.101	0.10	1.0	7.3	11.50	839	2.38	0.08	6.8	1.8	50
W843243		0.22	0.47	0.20	0.1	0.008	0.08	1.0	10.0	12.05	232	2.67	0.02	0.3	3.5	30
W843244		0.19	0.51	0.21	0.1	0.007	0.11	1.1	15.4	12.20	201	3.39	0.01	0.2	3.1	50
W843245		0.42	0.74	0.13	0.1	0.038	0.09	1.4	13.7	12.00	702	1.78	0.02	1.8	3.4	50
W843246		0.23	0.34	0.23	0.1	0.023	0.07	1.0	17.9	12.15	382	3.22	0.01	0.2	3.4	60
W843247		0.26	0.70	0.23	0.1	0.017	0.08	1.3	5.7	12.10	347	3.52	0.02	1.0	3.5	50
W843248		0.15	0.48	0.25	0.1	0.006	0.08	1.0	4.5	12.60	176	2.68	0.02	0.3	2.1	40
W843249		0.26	0.53	0.24	0.1	0.032	0.09	1.1	5.9	12.50	339	1.61	0.01	0.4	2.6	50
W843250		0.18	0.41	0.28	0.1	0.012	0.07	1.0	3.4	12.00	234	1.83	0.01	0.2	2.8	40
W843251		0.87	3.45	0.14	0.4	0.123	0.16	1.6	5.9	11.45	673	4.63	0.23	9.6	2.2	20
W843252		0.11	0.26	0.14	<0.1	<0.005	0.01	1.0	1.2	2.14	117	<0.05	0.03	0.1	0.5	60
W843253		0.89	22.9	0.16	1.9	0.061	4.22	6.0	18.5	0.12	327	0.91	2.47	59.6	0.2	20
W843254		0.53	20.8	0.14	1.5	0.030	3.93	5.4	18.4	0.03	222	0.25	2.45	50.8	0.2	20
W843255		0.61	22.1	0.15	2.5	0.025	3.92	5.2	27.6	0.02	227	0.19	2.70	74.4	0.2	10
W843256		0.65	20.8	0.13	2.5	0.011	4.06	6.7	35.5	0.03	153	11.40	2.50	59.5	0.2	30
W843257		0.66	21.8	0.14	2.7	0.016	4.06	7.4	37.1	0.02	154	8.44	2.49	61.1	0.2	30
W843258		0.55	21.1	0.17	2.8	0.017	4.01	9.5	28.0	0.03	137	1.31	2.50	57.7	0.3	50
W843259		0.50	20.8	0.15	2.7	0.013	4.08	8.3	31.8	0.03	112	1.72	2.52	59.5	0.3	30
W843260		0.73	20.7	0.14	2.6	0.026	3.93	15.9	36.4	0.05	281	1.14	2.36	59.0	0.2	90

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CERTIFICATE OF ANALYSIS WH19239251

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
W843221		31.3	4.7	0.010	0.07	0.99	0.3	1	3.4	117.5	<0.05	<0.05	0.21	<0.005	0.07	3.1
W843222		14.4	5.8	0.007	0.03	0.29	0.2	1	1.8	137.0	<0.05	<0.05	0.15	<0.005	0.05	4.3
W843223		12.8	7.3	0.009	0.05	0.39	0.3	1	0.7	154.0	<0.05	<0.05	0.21	0.005	0.20	4.8
W843224		50.8	6.6	0.009	0.13	0.85	0.3	1	1.6	130.5	<0.05	<0.05	0.20	<0.005	0.14	6.4
W843225		7.4	19.1	0.019	0.07	0.21	0.4	1	1.4	160.5	0.05	<0.05	0.34	0.009	0.43	7.3
W843226		51.3	207	0.003	0.74	39.9	9.5	5	69.8	313	0.83	0.72	10.30	0.322	1.92	5.6
W843227		4.3	6.3	0.016	0.05	0.20	0.4	1	0.9	178.0	<0.05	<0.05	0.29	0.007	0.34	6.5
W843228		5.5	6.1	0.013	0.04	0.11	0.3	1	1.0	160.0	<0.05	<0.05	0.27	0.005	0.16	6.3
W843229		11.8	30.1	0.002	0.12	0.19	0.6	1	3.2	139.0	0.42	<0.05	0.44	0.006	0.14	9.6
W843230		34.5	509	<0.002	0.24	0.15	1.1	<1	10.4	30.3	6.39	<0.05	15.90	0.010	2.32	29.2
W843231		26.0	364	<0.002	0.14	0.13	0.9	<1	5.2	28.0	4.94	<0.05	16.35	0.020	1.83	30.5
W843232		28.0	406	0.002	0.09	0.12	1.0	<1	6.0	27.2	5.57	<0.05	19.55	0.020	1.99	34.6
W843233		21.8	379	<0.002	0.11	0.12	1.7	<1	10.7	37.2	4.41	<0.05	18.50	0.024	1.76	32.7
W843234		27.6	375	<0.002	1.32	1.46	1.1	1	46.1	38.5	5.31	1.13	9.12	0.018	1.90	18.5
W843235		32.6	420	<0.002	0.25	0.19	1.2	<1	45.3	24.2	5.07	<0.05	18.75	0.020	1.87	34.7
W843236		23.6	399	<0.002	0.03	0.20	0.8	<1	14.2	22.6	5.78	<0.05	33.5	0.017	1.82	56.4
W843237		29.5	475	<0.002	0.03	0.15	0.9	<1	42.4	19.7	5.71	<0.05	24.4	0.012	2.05	44.8
W843238		31.7	122.0	0.003	1.33	30.1	7.8	5	98.7	247	0.59	1.07	9.19	0.227	1.23	12.5
W843239		29.5	388	<0.002	0.01	0.14	1.5	<1	2.1	30.0	7.87	<0.05	33.8	0.022	1.82	56.3
W843240		38.5	477	<0.002	0.01	0.28	1.1	1	4.1	13.9	5.10	<0.05	30.3	0.014	2.39	57.4
W843241		32.8	382	<0.002	<0.01	0.23	1.0	1	4.7	16.5	4.92	<0.05	34.7	0.016	1.94	54.1
W843242		1.1	23.4	0.008	0.01	0.08	0.5	1	2.3	127.5	0.70	<0.05	0.71	<0.005	0.12	10.9
W843243		2.0	16.4	0.012	0.08	0.12	0.3	<1	0.9	146.5	<0.05	<0.05	0.29	0.005	0.29	8.8
W843244		2.3	32.0	0.013	0.06	0.09	0.3	1	1.0	149.5	<0.05	<0.05	0.20	0.005	0.39	4.7
W843245		1.7	15.3	0.007	0.06	0.09	0.3	1	1.1	127.0	0.06	<0.05	0.37	0.005	0.32	5.7
W843246		2.7	13.8	0.009	0.04	0.25	0.3	1	1.6	134.5	<0.05	<0.05	0.21	<0.005	0.25	5.5
W843247		4.3	11.6	0.013	0.05	0.25	0.4	1	0.7	138.0	<0.05	<0.05	0.26	0.006	0.40	3.4
W843248		2.0	9.6	0.006	0.04	0.13	0.3	1	0.4	116.0	<0.05	<0.05	0.24	0.006	0.27	3.1
W843249		2.1	12.9	0.006	0.04	0.14	0.3	1	0.6	108.5	<0.05	<0.05	0.24	0.006	0.23	5.4
W843250		1.8	14.3	0.006	0.04	0.09	0.3	1	0.4	154.5	<0.05	<0.05	0.15	<0.005	0.23	3.2
W843251		2.0	35.0	0.005	0.06	0.10	0.8	1	2.1	153.0	0.72	<0.05	1.90	0.006	0.34	8.7
W843252		0.5	0.6	<0.002	0.01	0.08	0.2	1	<0.2	76.0	<0.05	<0.05	0.06	<0.005	<0.02	0.1
W843253		29.0	365	<0.002	0.09	0.24	5.4	<1	3.1	64.8	4.71	0.06	23.3	0.034	2.04	35.1
W843254		28.5	357	<0.002	0.03	0.12	2.6	<1	4.2	64.5	4.38	<0.05	20.5	0.030	1.90	39.8
W843255		34.9	385	<0.002	<0.01	0.10	1.9	1	3.8	43.0	3.86	<0.05	20.2	0.026	2.03	39.3
W843256		29.2	331	<0.002	0.01	0.11	1.9	<1	2.2	64.5	3.35	<0.05	26.6	0.033	1.70	62.3
W843257		29.8	344	<0.002	0.01	0.07	2.0	<1	2.3	66.7	3.53	<0.05	26.6	0.033	1.82	51.8
W843258		28.5	314	<0.002	<0.01	0.07	2.2	<1	1.4	89.1	4.20	<0.05	29.1	0.037	1.61	38.9
W843259		28.3	317	<0.002	<0.01	0.08	1.7	<1	1.5	75.2	3.97	<0.05	29.5	0.032	1.60	50.6
W843260		29.6	346	<0.002	0.01	0.13	1.6	1	3.7	110.0	4.16	<0.05	35.5	0.042	1.78	45.2

***** 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
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: 28-OCT-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19239251

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06
	Analyte	V	W	Y	Zn	Zr	SiO2	Al2O3	Fe2O3	CaO	MgO	Na2O	K2O	Cr2O3	TiO2	MnO
	Units	ppm	ppm	ppm	ppm	ppm	%	%	%	%	%	%	%	%	%	%
	LOD	1	0.1	0.1	2	0.5	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
W843221		4	1.4	2.0	69	2.9										
W843222		2	0.7	1.0	65	2.0										
W843223		4	1.3	0.8	59	2.7										
W843224		7	1.2	1.0	88	2.7										
W843225		8	2.8	1.1	65	4.5										
W843226		72	20.0	24.0	124	83.9										
W843227		7	0.5	0.9	15	4.1										
W843228		5	0.6	0.7	18	4.0										
W843229		4	69.9	10.6	63	2.9										
W843230		1	25.3	28.1	20	45.3										
W843231		1	34.8	28.0	24	43.0										
W843232		<1	150.5	33.7	25	48.6										
W843233		1	7.2	29.4	24	45.5										
W843234		1	3.7	23.4	21	32.7										
W843235		1	5.3	30.8	33	41.5										
W843236		<1	3.9	51.3	19	87.5										
W843237		1	3.7	44.1	16	88.8										
W843238		53	28.2	30.4	165	60.9										
W843239		1	2.1	50.6	24	91.7										
W843240		<1	1.8	41.8	31	100.0										
W843241		<1	5.1	46.2	30	81.7										
W843242		7	24.8	5.2	13	3.0										
W843243		7	0.7	1.0	5	3.8										
W843244		5	0.9	1.2	9	2.7										
W843245		5	2.9	2.2	34	2.5										
W843246		9	1.2	1.0	5	2.6										
W843247		5	2.8	1.3	38	2.9										
W843248		4	3.9	0.8	17	3.0										
W843249		6	7.4	0.9	13	3.7										
W843250		6	3.1	1.1	12	2.2										
W843251		6	94.7	6.4	35	6.3										
W843252		1	0.5	2.2	4	1.2										
W843253		1	4.2	21.0	33	29.5	74.20	13.47	1.28	1.44	0.27	3.39	5.02	<0.01	0.05	0.04
W843254		1	2.2	13.8	20	26.1	75.12	12.93	0.80	1.43	0.12	3.45	4.73	<0.01	0.06	0.03
W843255		1	1.8	25.1	24	44.1	75.87	13.07	0.88	1.03	0.08	3.65	4.65	<0.01	0.04	0.03
W843256		2	1.5	16.7	20	51.0	75.88	13.22	0.97	1.08	0.09	3.47	4.87	<0.01	0.05	0.02
W843257		2	1.7	17.0	18	59.0	75.56	13.10	0.98	1.05	0.09	3.44	4.87	<0.01	0.05	0.02
W843258		2	1.7	15.6	18	59.5	75.54	13.30	0.84	1.26	0.09	3.47	4.83	<0.01	0.06	0.02
W843259		2	1.6	19.7	14	54.7	75.89	13.21	0.74	1.17	0.09	3.41	4.88	<0.01	0.06	0.01
W843260		4	1.4	19.2	29	56.2	75.62	13.26	1.10	1.18	0.13	3.40	4.87	<0.01	0.07	0.04

***** See Appendix Page for comments regarding this certificate *****

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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 ST
VANCOUVER BC V6B 1L8

Finalized Date: 28-OCT-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19239251

Sample Description	Method	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06
	Analyte	P2O5	SrO	BaO	LOI	Total
	Units	%	%	%	%	%
	LOD	0.001	0.01	0.01	0.01	0.01
W843221						
W843222						
W843223						
W843224						
W843225						
W843226						
W843227						
W843228						
W843229						
W843230						
W843231						
W843232						
W843233						
W843234						
W843235						
W843236						
W843237						
W843238						
W843239						
W843240						
W843241						
W843242						
W843243						
W843244						
W843245						
W843246						
W843247						
W843248						
W843249						
W843250						
W843251						
W843252						
W843253		0.010	0.01	<0.01	0.72	99.90
W843254		0.014	0.01	0.01	0.93	99.63
W843255		0.008	<0.01	<0.01	0.39	99.70
W843256		0.011	0.01	<0.01	0.36	100.05
W843257		0.011	0.01	0.01	0.35	99.54
W843258		0.014	0.01	0.01	0.34	99.78
W843259		0.012	0.01	<0.01	0.35	99.83
W843260		0.029	0.01	0.01	0.36	100.10

***** See Appendix Page for comments regarding this certificate *****

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VANCOUVER BC V6B 1L8

Project: Rau

Finalized Date: 28-OCT-2019
Account: RCM

CERTIFICATE OF ANALYSIS WH19239251

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	ME-MS61	ME-XRF06	OA-GRA06

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 ST
VANCOUVER BC V6B 1L8

Finalized Date: 5-NOV-2019
This copy reported on 6-NOV-2019
Account: RCM

CERTIFICATE WH19275079

Project: RCM_WH19239251

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 31-OCT-2019.

The following have access to data associated with this certificate:

ANDREW CARNE	ADAM COULTER	JULIA LANE

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
FND-02	Find Sample for Addn Analysis

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS

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:



Saa Traxler, General Manager, North Vancouver

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 ST
VANCOUVER BC V6B 1L8

Project: RCM_WH19239251

Finalized Date: 5-NOV-2019
Account: RCM

CERTIFICATE OF ANALYSIS WH19275079

Sample Description	Method Analyte Units LOD	Au-AA25 Au ppm 0.01
W843221		<0.01
W843222		<0.01
W843223		<0.01
W843224		<0.01
W843225		<0.01
W843226		0.37
W843227		<0.01
W843228		<0.01
W843229		<0.01
W843230		<0.01
W843231		<0.01
W843232		<0.01
W843233		<0.01
W843234		0.01
W843235		0.02
W843236		<0.01
W843237		<0.01
W843238		0.81
W843239		<0.01
W843240		<0.01
W843241		<0.01
W843242		<0.01
W843243		<0.01
W843244		<0.01
W843245		<0.01
W843246		<0.01
W843247		<0.01
W843248		<0.01
W843249		<0.01
W843250		<0.01
W843251		<0.01
W843252		<0.01
W843253		<0.01
W843254		<0.01
W843255		<0.01
W843256		<0.01
W843257		<0.01
W843258		<0.01
W843259		<0.01
W843260		<0.01

***** 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 ST
VANCOUVER BC V6B 1L8

Project: RCM_WH19239251

Finalized Date: 5-NOV-2019
Account: RCM

CERTIFICATE OF ANALYSIS WH19275079

CERTIFICATE COMMENTS

LABORATORY ADDRESSES

Applies to Method: Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.
Au-AA25 FND-02

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 ST
VANCOUVER BC V6B 1L8

Finalized Date: 2-NOV-2019
Account: RCM

CERTIFICATE WH19243059

Project: Rau

P.O. No.: R19-D28

This report is for 25 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 28-SEP-2019.

The following have access to data associated with this certificate:

ANDREW CARNE	ADAM COULTER	

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-31	Pulverize up to 250g 85% <75 um
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	
ME-XRF06	Whole Rock Package - XRF	XRF
OA-GRA06	LOI for ME-XRF06	WST-SIM

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:



Saa Traxler, General Manager, North Vancouver

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 ST
VANCOUVER BC V6B 1L8

Finalized Date: 2-NOV-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19243059

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
W843261		5.67	<0.01	<0.01	6.77	1.0	160	6.96	0.13	0.97	0.03	39.9	0.6	9	8.22	1.4
W843262		7.28	<0.01	<0.01	6.82	0.9	120	6.64	0.08	0.92	0.03	50.0	0.6	9	5.53	1.0
W843263		0.10	0.82	11.65	5.11	9180	1250	1.42	230	14.05	0.93	418	81.0	48	9.02	3530
W843264		7.26	<0.01	<0.01	6.88	2.8	120	6.92	0.24	0.96	0.03	49.1	0.6	10	5.66	2.5
W843265		7.39	<0.01	<0.01	6.90	1.0	130	7.03	0.10	0.97	<0.02	50.1	0.7	8	6.28	1.2
W843266		6.95	<0.01	<0.01	6.78	1.0	80	8.15	0.09	0.95	0.03	31.7	0.4	6	5.43	0.9
W843267		7.31	<0.01	<0.01	6.85	0.8	120	9.12	0.05	1.00	0.03	39.6	0.6	9	5.01	1.0
W843268		7.18	<0.01	<0.01	6.46	1.3	200	7.96	0.23	0.96	0.02	49.0	0.7	6	11.55	0.8
W843269		0.10	0.36	2.78	5.57	>10000	2050	1.58	349	11.45	0.93	136.5	49.0	62	12.55	825
W843270		0.57	<0.01	0.05	6.41	5.3	750	4.19	0.34	1.61	<0.02	73.0	9.3	6	5.82	78.8
W843271		3.59	<0.01	0.01	0.07	0.9	20	0.06	0.04	32.4	<0.02	1.03	0.6	2	<0.05	1.6
W843272		6.67	<0.01	0.03	6.45	1.0	610	5.17	0.23	1.37	0.04	89.8	1.2	8	6.23	2.1
W843273		6.95	<0.01	0.05	6.46	1.2	640	5.05	0.11	1.45	0.04	80.5	1.3	9	6.39	1.9
W843274		2.11	<0.01	0.02	6.49	1.2	300	7.15	0.12	1.20	0.07	67.3	1.1	7	4.65	5.3
W843275		0.70	<0.01	0.04	5.74	11.7	420	4.68	0.35	1.40	0.05	32.1	1.3	6	4.36	31.8
W843276		2.23	<0.01	0.02	6.26	1.2	300	7.33	0.21	0.89	0.03	40.3	0.6	8	6.66	2.5
W843277		2.17	<0.01	0.02	6.28	1.2	370	7.23	2.02	0.97	0.05	44.5	0.8	8	6.30	2.8
W843278		7.21	<0.01	<0.01	6.43	1.0	300	7.31	0.07	1.08	0.04	61.6	0.9	8	5.44	1.0
W843279		7.38	<0.01	<0.01	6.48	3.0	420	7.93	0.23	1.49	<0.02	45.1	0.7	7	7.76	1.7
W843280		6.98	<0.01	0.01	6.63	1.5	290	9.59	0.12	1.03	0.04	42.7	0.6	7	7.80	1.1
W843281		7.58	<0.01	<0.01	6.82	1.0	460	8.28	0.08	1.10	0.04	81.4	1.0	10	8.86	1.1
W843282		7.49	<0.01	<0.01	6.69	0.9	370	7.63	0.08	1.07	<0.02	80.7	1.0	8	9.07	0.7
W843283		7.25	<0.01	<0.01	6.73	0.9	570	6.83	0.10	1.16	0.02	101.0	1.1	9	8.35	0.5
W843284		7.09	<0.01	<0.01	6.42	0.8	450	7.20	0.07	1.00	0.02	77.0	1.0	8	7.43	0.8
W843285		<0.02	<0.01	<0.01	6.57	1.0	470	7.23	0.08	1.03	0.04	76.2	1.3	8	7.43	1.0

***** 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
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: 2-NOV-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19243059

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	Fe	Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P
	Units	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
W843261		0.95	21.0	0.13	3.7	0.021	4.11	17.6	31.5	0.07	287	2.17	2.45	67.9	0.7	200
W843262		0.80	20.9	0.14	3.0	0.012	4.38	23.8	24.1	0.05	156	4.17	2.41	49.3	0.6	110
W843263		9.56	18.50	0.36	1.9	1.715	2.01	244	34.0	1.42	2440	14.85	0.85	8.8	42.0	990
W843264		0.80	21.5	0.14	2.9	0.012	4.36	21.1	24.9	0.05	157	9.50	2.38	48.2	0.7	100
W843265		0.90	21.0	0.14	3.0	0.016	4.43	22.1	28.7	0.06	167	7.07	2.39	50.8	0.6	140
W843266		0.63	21.1	0.12	3.1	0.011	4.12	13.6	21.6	0.04	141	0.44	2.58	54.5	0.5	70
W843267		0.79	21.8	0.13	3.4	0.007	4.17	17.3	25.6	0.05	120	0.96	2.48	47.2	0.6	120
W843268		0.89	23.0	0.13	3.0	0.025	3.93	23.6	43.2	0.09	253	0.94	2.38	49.5	0.6	220
W843269		6.51	17.15	0.23	2.3	0.803	3.31	80.1	25.2	1.58	1140	13.65	1.11	13.7	35.1	940
W843270		2.67	20.1	0.17	2.3	0.029	4.82	36.3	26.8	0.14	214	163.5	1.35	40.4	0.9	400
W843271		0.10	0.28	0.14	<0.1	<0.005	0.02	1.2	0.8	1.47	105	0.11	0.03	0.1	0.5	70
W843272		1.17	22.4	0.27	2.4	0.021	4.30	45.2	29.6	0.16	196	4.41	1.90	47.3	0.6	500
W843273		1.29	22.3	0.26	2.3	0.022	4.11	40.4	32.7	0.17	229	5.48	2.06	49.7	0.6	500
W843274		0.90	23.0	0.26	2.4	0.013	4.14	32.4	22.4	0.11	137	0.24	2.18	46.4	0.6	290
W843275		0.88	17.55	0.16	2.0	0.081	5.11	15.6	13.6	0.07	226	76.1	1.05	33.2	0.7	120
W843276		0.63	22.7	0.19	2.1	0.021	4.65	19.2	19.5	0.07	150	1.52	1.98	50.5	0.4	160
W843277		0.63	22.0	0.21	2.5	0.026	4.71	21.5	20.5	0.07	164	3.10	1.90	49.6	0.4	170
W843278		0.88	23.3	0.21	2.4	0.017	4.05	29.9	35.5	0.10	160	0.50	2.28	47.2	0.5	270
W843279		0.88	23.9	0.18	3.2	0.084	4.10	21.4	35.4	0.12	381	0.46	1.82	63.3	0.5	270
W843280		0.70	24.0	0.18	2.7	0.022	4.28	20.5	36.1	0.07	194	0.22	2.44	77.8	0.4	180
W843281		1.09	23.8	0.20	3.0	0.019	4.21	38.9	51.1	0.13	216	0.22	2.45	60.5	0.6	360
W843282		1.18	23.7	0.22	2.7	0.017	4.13	39.3	58.6	0.14	264	0.20	2.42	60.0	0.7	370
W843283		1.24	22.2	0.22	2.9	0.027	4.25	50.2	51.6	0.15	274	0.24	2.26	54.0	0.7	430
W843284		1.06	22.2	0.19	2.8	0.023	3.98	38.1	37.4	0.12	236	0.37	2.33	61.2	0.5	350
W843285		1.10	22.2	0.19	3.3	0.020	4.04	38.3	38.2	0.12	241	0.24	2.39	64.3	0.5	370

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VANCOUVER BC V6B 1L8

Finalized Date: 2-NOV-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19243059

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
W843261		33.5	367	<0.002	0.01	0.12	2.8	<1	4.1	142.5	4.31	<0.05	37.5	0.065	2.13	50.7
W843262		31.1	356	<0.002	0.01	0.09	2.9	1	1.6	157.0	3.95	<0.05	49.7	0.061	1.88	33.6
W843263		35.5	122.0	0.005	1.37	31.1	7.9	7	106.5	256	0.61	1.07	10.05	0.240	1.37	12.2
W843264		30.5	371	<0.002	0.01	0.10	2.8	<1	2.3	158.0	4.06	<0.05	52.4	0.061	1.97	32.9
W843265		29.8	363	<0.002	<0.01	0.07	3.4	<1	2.0	157.0	3.57	<0.05	50.4	0.064	1.90	36.6
W843266		28.8	335	<0.002	<0.01	0.11	2.4	<1	2.1	121.5	4.34	<0.05	36.1	0.048	1.72	42.0
W843267		27.4	328	<0.002	<0.01	0.08	2.6	<1	1.8	155.5	6.41	<0.05	32.3	0.059	1.72	43.9
W843268		28.7	351	<0.002	<0.01	0.15	2.7	<1	4.8	203	5.42	<0.05	36.9	0.087	1.93	35.8
W843269		49.9	203	0.002	0.72	41.2	9.5	5	71.1	302	0.82	0.69	10.15	0.313	1.91	5.5
W843270		21.0	349	0.005	1.04	0.13	3.1	1	19.1	272	3.28	<0.05	38.8	0.111	1.83	27.7
W843271		<0.5	0.7	<0.002	<0.01	0.05	0.2	1	<0.2	80.4	<0.05	<0.05	0.13	0.005	<0.02	0.3
W843272		20.6	319	<0.002	0.02	0.11	3.5	<1	7.4	319	3.57	<0.05	43.5	0.148	1.70	31.1
W843273		23.1	305	<0.002	0.01	0.10	3.9	<1	5.4	368	3.22	<0.05	42.6	0.151	1.75	23.2
W843274		22.8	301	<0.002	0.05	0.10	3.2	<1	2.2	267	3.24	<0.05	39.9	0.106	1.59	25.9
W843275		17.3	323	<0.002	0.37	0.13	1.7	<1	24.6	160.0	2.88	<0.05	24.9	0.052	1.49	37.5
W843276		27.2	383	<0.002	0.02	0.11	2.2	<1	6.6	166.5	3.88	<0.05	30.1	0.061	1.90	35.8
W843277		27.7	375	<0.002	0.03	0.14	2.3	<1	8.0	183.0	4.18	<0.05	31.6	0.064	2.00	38.4
W843278		25.3	330	<0.002	<0.01	0.08	2.8	<1	3.3	256	4.22	<0.05	41.5	0.094	1.77	29.3
W843279		26.3	380	<0.002	0.01	0.19	3.2	<1	67.4	204	5.97	<0.05	34.9	0.087	2.05	38.6
W843280		31.3	386	<0.002	<0.01	0.11	2.8	<1	6.3	191.5	7.07	<0.05	32.2	0.069	1.98	39.0
W843281		27.9	392	<0.002	0.01	0.10	3.8	<1	6.9	290	5.92	<0.05	43.3	0.120	2.20	31.2
W843282		27.1	408	<0.002	<0.01	0.06	4.1	<1	8.9	264	4.62	<0.05	39.2	0.129	2.16	36.7
W843283		24.7	365	<0.002	<0.01	0.08	4.0	<1	8.8	335	3.97	<0.05	49.3	0.143	2.05	23.6
W843284		26.5	345	<0.002	0.01	0.08	3.9	<1	6.1	247	4.03	<0.05	36.9	0.110	1.91	33.0
W843285		25.7	340	<0.002	0.01	0.07	3.9	<1	5.9	258	4.15	<0.05	39.5	0.111	1.88	34.9

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2103 Dollarton Hwy
North Vancouver BC V7H 0A7
Phone: +1 (604) 984 0221 Fax: +1 (604) 984 0218
www.alsglobal.com/geochemistry

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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 2-NOV-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19243059

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06
	Analyte	V	W	Y	Zn	Zr	SiO2	Al2O3	Fe2O3	CaO	MgO	Na2O	K2O	Cr2O3	TiO2	MnO
	Units	ppm	ppm	ppm	ppm	ppm	%	%	%	%	%	%	%	%	%	%
	LOD	1	0.1	0.1	2	0.5	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
W843261		7	1.7	26.3	40	67.1	75.46	13.16	1.40	1.31	0.17	3.29	4.78	<0.01	0.10	0.04
W843262		5	1.2	17.9	21	64.1	75.60	13.08	1.18	1.21	0.14	3.15	4.93	<0.01	0.09	0.02
W843263		57	31.8	29.4	170	61.7	43.99	9.36	13.69	19.78	2.73	1.14	2.19	0.01	0.40	0.33
W843264		5	1.2	15.9	17	63.0	75.62	13.14	1.12	1.27	0.14	3.13	5.09	<0.01	0.09	0.02
W843265		5	1.0	18.7	18	66.9	75.74	13.06	1.29	1.28	0.14	3.11	5.02	<0.01	0.10	0.02
W843266		4	1.5	20.4	16	54.0	75.76	13.22	0.91	1.29	0.12	3.41	4.77	<0.01	0.07	0.02
W843267		6	1.1	18.4	12	61.8	75.80	13.18	1.13	1.35	0.14	3.25	4.81	<0.01	0.09	0.01
W843268		9	1.1	18.4	30	53.6	73.77	13.16	1.37	1.41	0.20	3.43	4.81	<0.01	0.15	0.03
W843269		72	21.2	22.7	122	100.5	47.15	10.58	9.65	16.52	3.04	1.53	3.74	0.02	0.54	0.16
W843270		16	640	18.4	22	52.2	71.00	12.96	4.07	2.20	0.32	1.89	6.30	0.02	0.23	0.03
W843271		1	0.2	2.1	4	1.5	9.81	0.10	0.14	48.99	2.56	0.05	0.02	<0.01	0.02	0.01
W843272		21	3.7	16.0	18	54.3	72.11	13.18	1.81	1.92	0.36	2.73	5.27	<0.01	0.26	0.03
W843273		21	2.6	15.6	26	52.8	73.16	13.38	1.96	2.01	0.38	2.87	4.98	<0.01	0.26	0.03
W843274		12	1.0	14.7	19	54.1	74.68	13.26	1.36	1.66	0.26	2.98	4.96	<0.01	0.18	0.02
W843275		7	119.5	12.5	18	44.3	74.77	12.36	1.37	1.96	0.20	1.48	6.32	<0.01	0.11	0.03
W843276		7	2.3	18.2	18	40.7	74.85	13.16	0.98	1.32	0.18	2.76	5.71	<0.01	0.10	0.02
W843277		7	1.7	18.8	18	45.5	74.76	13.16	0.99	1.41	0.18	2.65	5.75	<0.01	0.11	0.02
W843278		11	0.8	17.1	18	47.2	74.60	13.30	1.34	1.55	0.23	3.14	4.85	<0.01	0.16	0.02
W843279		10	3.7	25.4	27	60.1	73.66	13.32	1.28	2.01	0.28	2.43	5.03	<0.01	0.15	0.05
W843280		8	1.9	32.0	22	42.9	75.07	13.30	1.05	1.43	0.17	3.26	4.96	<0.01	0.11	0.02
W843281		15	0.8	22.5	20	55.1	74.52	13.54	1.62	1.51	0.28	3.28	4.94	<0.01	0.19	0.03
W843282		16	0.7	20.8	23	55.1	74.34	13.36	1.77	1.48	0.30	3.23	4.78	<0.01	0.21	0.03
W843283		18	0.8	18.1	24	60.9	74.11	13.36	1.82	1.59	0.32	3.07	4.97	<0.01	0.24	0.03
W843284		14	1.1	22.5	25	57.9	74.43	13.40	1.64	1.45	0.27	3.26	4.84	<0.01	0.19	0.03
W843285		14	1.1	23.3	26	64.5	74.26	13.46	1.68	1.46	0.28	3.26	4.88	<0.01	0.19	0.03

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VANCOUVER BC V6B 1L8

Finalized Date: 2-NOV-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19243059

Sample Description	Method	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06	ME-XRF06
	Analyte	P2O5	SrO	BaO	LOI	Total
	Units	%	%	%	%	%
	LOD	0.001	0.01	0.01	0.01	0.01
W843261		0.045	0.01	0.02	0.47	100.25
W843262		0.026	0.02	0.01	0.40	99.86
W843263		0.225	0.02	0.14	4.30	98.30
W843264		0.026	0.02	0.01	0.45	100.15
W843265		0.032	0.02	0.02	0.40	100.25
W843266		0.017	0.01	0.01	0.36	99.97
W843267		0.031	0.02	0.01	0.30	100.10
W843268		0.055	0.02	0.03	0.31	98.74
W843269		0.212	0.03	0.23	4.71	98.11
W843270		0.096	0.03	0.08	1.16	100.40
W843271		0.016	0.01	0.01	38.00	99.74
W843272		0.116	0.04	0.07	1.03	98.93
W843273		0.118	0.04	0.07	0.71	99.97
W843274		0.068	0.03	0.03	0.49	99.98
W843275		0.030	0.02	0.05	1.53	100.25
W843276		0.037	0.02	0.04	0.53	99.71
W843277		0.040	0.02	0.04	0.59	99.72
W843278		0.063	0.03	0.04	0.37	99.69
W843279		0.064	0.02	0.05	1.44	99.78
W843280		0.042	0.02	0.03	0.45	99.91
W843281		0.080	0.03	0.05	0.34	100.40
W843282		0.084	0.03	0.04	0.29	99.94
W843283		0.098	0.04	0.06	0.48	100.20
W843284		0.082	0.03	0.05	0.32	99.99
W843285		0.084	0.03	0.05	0.29	99.95

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Project: Rau

Finalized Date: 2-NOV-2019
Account: RCM

CERTIFICATE OF ANALYSIS WH19243059

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	ME-MS61	ME-XRF06	OA-GRA06

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VANCOUVER BC V6B 1L8

Finalized Date: 15-OCT-2019
This copy reported on 16-OCT-2019
Account: RCM

CERTIFICATE WH19249579

Project: Tiger

P.O. No.: R19-D29

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 4-OCT-2019.

The following have access to data associated with this certificate:

ANDREW CARNE		

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
WSH-21	"Wash" crushers
WSH-22	"Wash" pulverizers
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-AA26	Ore Grade Au 50g FA AA finish	AAS
ME-MS61	48 element four acid 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:



Saa Traxler, General Manager, North Vancouver

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 ST
VANCOUVER BC V6B 1L8

Finalized Date: 15-OCT-2019
Account: RCM

Project: Tiger

CERTIFICATE OF ANALYSIS WH19249579

Sample Description	Method / Analyte / Units / LOD	WEI-21 Recvd Wt. kg 0.02	Au-AA26 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
W843301		1.11	0.76	9.65	7.19	1090	1860	2.00	34.9	5.74	2.19	88.4	16.5	179	8.18	218
W843302		2.51	0.10	0.83	3.86	1410	880	1.09	8.25	16.75	1.77	59.7	14.1	72	1.76	52.5
W843303		6.87	0.01	0.02	0.50	41.6	130	0.14	0.07	36.0	0.39	8.58	2.1	7	0.20	3.4
W843304		8.04	0.01	1.13	0.22	253	610	0.15	8.29	30.5	2.90	8.96	2.7	4	0.25	3.9
W843305		7.97	0.01	0.21	0.08	76.4	190	0.14	0.85	23.7	0.64	5.82	1.0	2	0.18	2.1
W843306		1.34	0.08	1.50	6.05	843	1510	2.10	30.9	4.57	2.67	28.3	15.5	100	4.02	18.1
W843307		5.99	0.02	0.37	0.45	156.0	130	0.31	1.81	22.7	1.01	11.15	1.6	6	0.58	4.4
W843308		0.05	8.39	23.1	5.45	6.6	40	1.41	1.31	1.52	0.04	6.18	8.6	43	64.0	17.4
W843309		7.41	0.14	4.15	1.35	1060	470	0.61	37.8	21.3	2.48	13.75	6.7	14	2.43	5.0
W843310		5.71	0.01	0.02	0.10	1.3	30	0.09	0.13	34.5	<0.02	1.14	0.9	1	<0.05	1.8
W843311		2.89	0.23	0.95	4.01	440	780	1.50	16.10	16.40	1.19	23.6	7.3	29	11.85	8.1
W843312		5.23	0.12	1.21	1.11	430	310	0.57	21.4	18.40	1.15	8.42	4.2	16	1.40	9.6
W843313		4.02	0.02	0.52	0.44	125.5	120	0.23	2.24	27.9	1.02	6.49	2.0	4	2.22	2.7
W843314		4.39	0.20	1.53	0.45	1510	200	0.39	26.9	16.65	1.95	11.20	4.7	8	0.77	4.4
W843315		6.48	0.26	0.20	0.47	1210	380	0.25	33.2	24.5	0.31	38.3	4.8	6	0.69	4.9
W843316		<0.02	0.26	0.20	0.48	1210	380	0.26	32.1	25.2	0.31	40.5	4.9	6	0.72	5.1
W843317		7.76	0.01	0.03	0.06	15.1	30	0.07	0.19	34.5	0.09	2.95	1.1	1	0.09	1.2
W843318		6.29	0.02	0.03	0.15	13.4	60	0.11	0.19	37.9	0.21	2.98	1.5	2	0.08	1.8
W843319		5.88	0.01	0.06	0.14	40.5	50	0.09	0.69	36.8	0.17	4.02	1.7	2	0.13	1.9
W843320		4.17	0.02	0.05	0.10	72.8	60	0.07	1.22	37.3	0.25	2.90	1.7	2	0.09	1.5
W843321		2.41	0.51	6.61	1.23	>10000	570	0.63	134.0	6.54	9.33	35.5	24.8	16	1.55	17.4
W843322		9.07	0.27	0.36	0.07	961	60	0.07	150.5	34.7	1.76	5.22	2.0	1	0.09	53.6
W843323		6.93	0.02	0.03	0.13	76.2	50	0.09	0.52	38.7	0.32	2.63	1.2	2	0.12	37.1
W843324		10.53	0.01	0.01	0.16	14.7	140	0.13	0.39	37.9	0.13	2.88	1.3	3	0.08	1.5
W843325		0.05	3.15	1.78	6.81	1950	390	1.48	2.96	2.18	1.19	36.7	53.3	615	5.09	1100
W843326		11.02	<0.01	0.01	0.11	27.6	100	0.10	0.06	37.6	0.17	2.40	1.4	2	0.07	1.9
W843327		10.95	<0.01	<0.01	0.08	10.0	50	<0.05	0.07	37.7	0.16	2.29	1.2	1	0.05	1.4
W843328		10.98	<0.01	0.01	0.08	1.5	70	0.06	0.04	38.2	0.11	2.39	1.1	1	<0.05	1.4
W843329		11.39	<0.01	0.01	0.11	0.5	90	0.09	0.05	36.3	0.09	2.57	1.1	2	0.09	1.4
W843330		11.24	<0.01	<0.01	0.07	1.2	70	0.05	0.03	38.2	0.20	3.00	1.0	1	0.05	1.4
W843331		11.19	<0.01	<0.01	0.06	1.5	60	0.06	0.05	37.5	0.12	2.13	1.0	1	0.10	1.3
W843332		11.31	<0.01	<0.01	0.08	0.6	50	0.06	0.04	37.6	0.08	2.07	1.1	1	0.21	1.3
W843333		11.37	<0.01	<0.01	0.10	0.2	50	0.08	0.03	38.6	0.09	2.72	1.2	2	0.15	2.0
W843334		2.76	<0.01	<0.01	0.07	0.7	40	0.06	0.03	37.5	0.12	1.72	1.0	1	<0.05	1.3
W843335		2.72	<0.01	<0.01	0.07	0.9	40	0.06	0.03	38.3	0.09	1.91	1.1	2	<0.05	1.5
W843336		3.67	0.32	0.88	2.39	2750	940	0.66	7.89	14.05	4.02	37.7	17.1	26	1.88	24.3
W843337		3.26	0.01	0.10	2.10	1360	400	0.64	0.17	24.7	2.14	34.2	18.1	49	1.21	21.4
W843338		4.06	0.01	0.17	8.42	1530	3080	2.14	0.19	4.87	2.04	124.5	38.7	228	4.02	85.1
W843339		7.99	0.01	0.11	2.06	767	660	0.55	0.17	26.5	0.88	33.0	12.0	44	0.92	14.4
W843340		11.26	0.01	0.07	1.59	743	330	0.43	0.10	29.0	1.24	29.9	9.9	31	0.84	8.6

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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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VANCOUVER BC V6B 1L8

Finalized Date: 15-OCT-2019
Account: RCM

Project: Tiger

CERTIFICATE OF ANALYSIS WH19249579

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	Fe	Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P
	Units	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
W843301		8.27	20.5	0.20	1.7	0.222	3.25	46.8	18.4	4.09	1280	1.79	0.22	41.9	71.2	1600
W843302		11.55	10.75	0.14	0.8	0.067	1.82	32.9	6.1	1.67	1540	2.45	0.12	27.7	52.3	1420
W843303		0.67	1.38	0.05	0.2	0.015	0.23	5.1	0.8	0.44	304	0.18	0.01	3.9	4.1	170
W843304		4.30	1.00	<0.05	0.1	0.246	0.10	5.2	1.2	3.26	5960	1.23	0.01	0.9	6.7	130
W843305		2.36	0.60	<0.05	<0.1	0.088	0.03	3.2	2.0	12.00	3860	0.29	0.01	0.3	2.0	50
W843306		15.65	37.0	0.14	2.5	0.152	2.37	11.6	8.4	2.52	2260	2.24	0.11	40.7	67.8	2430
W843307		5.54	3.45	0.05	0.1	0.233	0.19	4.6	2.7	9.18	8520	0.57	0.01	1.4	4.6	180
W843308		2.24	15.25	0.11	0.9	0.019	4.00	2.6	16.9	0.70	321	16.10	1.35	2.1	13.1	690
W843309		10.20	7.60	0.07	0.5	0.178	0.66	6.5	4.0	6.58	5410	3.19	0.02	7.1	16.8	430
W843310		0.15	0.37	0.07	0.1	<0.005	0.03	1.3	1.2	2.08	153	<0.05	0.05	0.1	<0.2	70
W843311		5.92	19.15	0.10	1.0	0.091	2.20	14.2	15.7	6.54	2220	2.59	0.03	20.5	23.5	710
W843312		5.98	6.75	0.07	0.4	0.092	0.52	4.6	4.1	7.31	2660	2.77	0.02	5.7	12.3	400
W843313		2.23	2.08	0.05	0.1	0.248	0.21	4.0	3.2	5.88	2930	0.69	0.01	2.1	4.4	110
W843314		15.20	2.58	0.07	0.2	0.134	0.17	5.5	2.4	5.80	3910	5.43	0.01	2.2	15.8	230
W843315		8.54	2.28	0.08	0.1	0.220	0.22	22.7	2.7	4.08	4710	2.15	0.01	2.1	14.9	270
W843316		8.62	2.28	0.08	0.1	0.221	0.23	23.4	2.8	4.12	4770	2.18	0.01	2.1	14.7	280
W843317		0.19	0.22	0.05	<0.1	0.010	0.03	2.2	0.8	2.71	263	<0.05	<0.01	0.3	1.0	30
W843318		0.26	0.48	0.07	<0.1	<0.005	0.07	2.7	0.7	0.47	180	<0.05	<0.01	0.8	2.8	70
W843319		0.32	0.50	0.07	0.1	0.012	0.07	3.2	1.0	0.54	254	0.06	<0.01	0.8	3.0	90
W843320		0.47	0.32	0.06	<0.1	0.010	0.04	2.5	0.6	0.45	364	0.17	<0.01	0.5	2.3	50
W843321		38.4	4.68	0.32	0.4	0.429	0.48	18.6	3.3	0.57	6830	15.25	0.02	3.7	62.2	640
W843322		2.89	0.40	<0.05	<0.1	0.060	0.03	3.4	0.7	1.90	3330	0.51	<0.01	0.3	2.3	100
W843323		0.31	0.41	<0.05	<0.1	0.024	0.06	2.4	1.2	0.62	219	0.07	<0.01	0.7	1.1	90
W843324		0.28	0.43	0.06	<0.1	<0.005	0.07	2.7	0.4	0.36	144	<0.05	<0.01	1.0	1.6	80
W843325		9.10	16.70	0.12	6.1	0.126	1.43	18.0	25.7	2.55	817	6.46	0.91	3.5	553	390
W843326		0.31	0.33	0.05	0.1	<0.005	0.05	2.4	0.5	0.33	167	0.06	<0.01	0.7	1.7	110
W843327		0.15	0.29	0.13	<0.1	<0.005	0.04	2.4	0.3	0.33	141	<0.05	<0.01	0.5	1.1	60
W843328		0.14	0.30	0.13	<0.1	<0.005	0.04	2.5	0.3	0.27	130	<0.05	<0.01	0.5	1.1	80
W843329		0.16	0.37	0.11	0.1	<0.005	0.06	2.5	0.4	0.29	109	<0.05	<0.01	0.7	1.0	100
W843330		0.11	0.27	0.13	<0.1	<0.005	0.04	2.8	0.3	0.23	127	<0.05	<0.01	0.5	0.8	50
W843331		0.12	0.24	0.12	<0.1	<0.005	0.03	2.2	0.3	0.33	132	<0.05	<0.01	0.4	0.9	50
W843332		0.13	0.31	0.14	<0.1	<0.005	0.05	2.2	0.4	0.35	147	<0.05	<0.01	0.7	0.8	50
W843333		0.16	0.34	0.13	0.1	<0.005	0.06	2.9	0.4	0.43	146	<0.05	<0.01	0.6	1.4	70
W843334		0.11	0.25	0.11	<0.1	<0.005	0.03	1.9	0.2	0.22	130	<0.05	<0.01	0.5	0.9	100
W843335		0.10	0.26	0.14	<0.1	<0.005	0.03	2.1	0.2	0.23	134	<0.05	<0.01	0.5	0.9	80
W843336		25.0	6.46	0.14	0.4	0.036	1.08	20.4	3.1	0.65	4580	6.19	0.02	19.6	50.1	550
W843337		13.20	5.58	0.11	0.3	0.043	1.01	18.5	1.3	0.30	2110	3.34	0.01	12.8	55.9	490
W843338		12.25	24.2	0.22	1.0	0.077	4.32	59.6	5.5	0.46	1800	2.88	0.05	37.1	136.0	2300
W843339		4.95	5.23	0.07	0.6	0.029	0.99	17.7	1.7	0.48	676	1.34	0.01	14.2	31.3	550
W843340		5.75	4.29	0.08	0.4	0.027	0.75	16.4	1.5	0.60	934	1.50	0.01	12.5	25.8	550

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	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
W843301		43.5	139.5	<0.002	0.30	119.5	18.4	1	6.7	72.3	2.33	0.19	7.76	0.865	1.33	2.0
W843302		11.9	52.0	<0.002	0.02	25.1	7.4	1	2.2	95.7	1.52	<0.05	4.91	0.371	0.41	1.4
W843303		3.9	5.7	<0.002	0.04	0.85	1.1	1	0.2	157.0	0.21	<0.05	0.70	0.052	0.08	0.2
W843304		33.3	5.6	<0.002	0.04	1.68	0.9	1	2.5	128.5	0.05	<0.05	0.25	0.017	0.21	0.5
W843305		19.2	2.3	<0.002	0.01	0.71	0.4	1	1.5	59.9	<0.05	<0.05	0.17	0.006	0.09	0.2
W843306		86.0	116.0	<0.002	0.07	5.28	7.7	2	21.0	34.1	2.05	0.18	9.81	0.507	0.81	3.5
W843307		33.4	20.3	<0.002	0.02	1.33	1.5	1	7.6	81.8	0.07	<0.05	0.45	0.024	0.22	0.5
W843308		5.4	1670	<0.002	0.03	0.76	7.2	<1	1.0	60.8	0.37	<0.05	0.54	0.278	15.10	0.2
W843309		103.0	48.7	<0.002	0.01	5.26	2.5	1	10.3	42.7	0.37	0.05	1.55	0.093	0.42	1.2
W843310		<0.5	0.9	<0.002	<0.01	0.06	0.2	<1	<0.2	80.3	<0.05	<0.05	0.09	0.005	<0.02	0.1
W843311		26.6	133.0	<0.002	<0.01	2.73	3.8	<1	11.8	29.9	1.09	<0.05	4.75	0.218	1.15	1.5
W843312		33.3	32.8	<0.002	0.01	2.36	2.1	1	5.4	38.9	0.29	0.05	1.20	0.082	0.24	0.7
W843313		10.9	14.1	<0.002	<0.01	0.79	1.0	<1	1.5	98.1	0.11	<0.05	0.46	0.027	0.23	0.3
W843314		101.5	14.4	<0.002	0.02	3.68	1.5	1	3.0	45.1	0.13	0.05	0.53	0.033	0.26	1.5
W843315		7.0	12.8	<0.002	<0.01	5.71	1.2	1	0.7	93.1	0.12	<0.05	0.59	0.028	0.19	0.9
W843316		7.1	12.9	<0.002	<0.01	5.66	1.2	1	0.7	94.2	0.12	0.06	0.59	0.028	0.18	0.9
W843317		2.0	1.0	<0.002	0.02	0.28	0.4	1	<0.2	123.0	<0.05	<0.05	0.11	0.005	0.02	0.1
W843318		1.5	1.9	<0.002	0.08	0.26	0.5	<1	<0.2	131.0	<0.05	<0.05	0.17	0.016	0.02	0.1
W843319		2.6	2.4	<0.002	0.02	0.34	0.5	1	<0.2	132.0	<0.05	<0.05	0.18	0.014	0.02	0.1
W843320		2.5	1.4	<0.002	0.02	0.35	0.4	1	<0.2	126.0	<0.05	<0.05	0.15	0.009	0.02	0.1
W843321		209	23.5	<0.002	0.04	10.50	2.7	1	6.1	37.2	0.25	0.14	1.93	0.050	2.72	4.3
W843322		47.4	1.6	<0.002	0.03	6.92	0.3	1	2.2	140.5	<0.05	0.05	0.10	0.005	0.07	0.3
W843323		6.3	2.4	<0.002	0.04	0.33	0.5	1	0.6	161.5	<0.05	<0.05	0.15	0.016	0.02	0.1
W843324		0.8	1.7	<0.002	0.11	0.11	0.6	1	<0.2	153.5	0.05	<0.05	0.17	0.022	<0.02	0.1
W843325		255	76.6	0.004	1.55	198.5	23.0	2	3.0	137.0	0.36	1.80	4.92	0.240	0.92	1.6
W843326		1.5	1.4	<0.002	0.04	0.21	0.4	1	<0.2	142.0	<0.05	<0.05	0.19	0.013	<0.02	0.1
W843327		1.2	1.3	<0.002	0.05	0.09	0.4	1	<0.2	133.5	<0.05	<0.05	0.09	0.010	<0.02	0.1
W843328		0.7	1.2	<0.002	0.06	0.05	0.4	1	<0.2	143.0	<0.05	<0.05	0.11	0.012	<0.02	0.1
W843329		0.5	1.6	<0.002	0.07	0.06	0.5	1	<0.2	127.0	<0.05	<0.05	0.12	0.016	<0.02	0.1
W843330		0.8	1.2	<0.002	0.03	<0.05	0.3	1	<0.2	144.0	<0.05	<0.05	0.12	0.007	<0.02	0.1
W843331		0.6	1.2	<0.002	0.05	<0.05	0.3	1	<0.2	148.0	<0.05	<0.05	0.09	0.008	<0.02	0.1
W843332		0.6	2.2	<0.002	0.05	<0.05	0.3	<1	<0.2	149.5	<0.05	<0.05	0.14	0.010	<0.02	0.1
W843333		0.6	1.9	<0.002	0.07	0.05	0.5	1	<0.2	154.0	<0.05	<0.05	0.12	0.014	<0.02	0.1
W843334		0.5	0.9	<0.002	0.03	<0.05	0.3	1	<0.2	155.0	<0.05	<0.05	0.09	0.009	<0.02	0.1
W843335		0.5	1.0	<0.002	0.03	<0.05	0.3	1	<0.2	160.5	<0.05	<0.05	0.09	0.009	<0.02	0.1
W843336		12.1	36.1	<0.002	0.03	20.5	2.7	1	1.0	71.0	1.12	0.06	3.56	0.143	0.75	3.6
W843337		11.3	25.9	<0.002	0.04	7.02	4.9	<1	0.7	121.5	0.69	<0.05	2.10	0.224	0.43	1.5
W843338		35.1	115.0	<0.002	0.08	12.50	21.9	1	2.1	55.2	1.98	<0.05	8.79	0.706	0.99	2.0
W843339		8.6	23.8	<0.002	<0.01	5.35	4.6	1	0.6	147.5	0.79	<0.05	2.35	0.223	0.22	1.0
W843340		5.8	20.8	<0.002	<0.01	3.63	3.4	<1	0.4	139.0	0.68	<0.05	2.03	0.162	0.19	0.8

***** 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
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: 15-OCT-2019
Account: RCM

Project: Tiger

CERTIFICATE OF ANALYSIS WH19249579

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	As-OG62
	Analyte	V	W	Y	Zn	Zr	As
	Units	ppm	ppm	ppm	ppm	ppm	%
	LOD	1	0.1	0.1	2	0.5	0.001
W843301		132	40.6	17.4	404	70.2	
W843302		71	15.8	13.9	511	59.2	
W843303		7	0.4	4.8	61	7.7	
W843304		5	4.1	5.7	765	3.5	
W843305		4	0.5	4.4	206	1.5	
W843306		97	11.9	13.0	1180	117.0	
W843307		11	1.4	11.6	247	6.6	
W843308		60	0.4	7.6	34	35.5	
W843309		19	12.8	9.5	575	21.8	
W843310		2	<0.1	2.2	5	1.7	
W843311		35	11.9	7.1	257	46.2	
W843312		21	25.6	6.5	316	17.7	
W843313		5	0.9	4.6	258	5.2	
W843314		10	22.8	8.4	775	8.1	
W843315		7	98.6	14.0	94	7.1	
W843316		7	89.0	14.8	95	6.3	
W843317		2	0.4	2.3	12	1.1	
W843318		3	0.3	2.9	27	2.1	
W843319		3	0.4	3.8	31	2.8	
W843320		2	1.3	2.6	41	2.3	
W843321		19	26.8	19.4	2930	12.5	2.49
W843322		2	4.1	8.0	448	2.4	
W843323		2	0.7	3.6	62	2.1	
W843324		3	0.2	3.9	12	2.0	
W843325		159	43.2	14.1	395	281	
W843326		2	0.1	3.4	30	2.7	
W843327		2	0.2	4.3	19	1.9	
W843328		2	<0.1	4.3	9	2.1	
W843329		2	0.1	4.3	10	2.9	
W843330		1	<0.1	4.4	28	1.9	
W843331		1	<0.1	3.7	11	1.6	
W843332		2	<0.1	3.5	7	2.5	
W843333		2	0.1	5.0	7	2.4	
W843334		2	<0.1	2.7	11	2.1	
W843335		2	<0.1	2.6	8	2.5	
W843336		28	12.3	11.7	1350	15.5	
W843337		35	7.5	8.2	629	15.3	
W843338		156	21.1	20.5	1040	47.3	
W843339		41	3.9	8.5	326	27.6	
W843340		30	3.3	9.0	386	16.7	

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To: **ATAC RESOURCES LTD.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Project: Tiger

Finalized Date: 15-OCT-2019
Account: RCM

CERTIFICATE OF ANALYSIS WH19249579

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-21
	WSH-22			

Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Applies to Method:				
	As-OG62	Au-AA26	ME-MS61	ME-OG62

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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 ST
VANCOUVER BC V6B 1L8

Finalized Date: 15-OCT-2019
This copy reported on 16-OCT-2019
Account: RCM

CERTIFICATE WH19249580

Project: Tiger

P.O. No.: R19-D30

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 4-OCT-2019.

The following have access to data associated with this certificate:

ANDREW CARNE		

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
WSH-21	"Wash" crushers
WSH-22	"Wash" pulverizers
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-AA26	Ore Grade Au 50g FA AA finish	AAS
ME-MS61	48 element four acid 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:



Saa Traxler, General Manager, North Vancouver

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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VANCOUVER BC V6B 1L8

Finalized Date: 15-OCT-2019
Account: RCM

Project: Tiger

CERTIFICATE OF ANALYSIS WH19249580

Sample Description	Method	WEI-21	Au-AA26	ME-MS61	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
W843341		7.36	0.02	0.04	1.84	316	660	0.51	0.10	30.9	0.57	24.9	6.2	38	0.88	8.0
W843342		1.44	0.02	0.23	7.03	2000	1420	1.70	0.53	10.70	2.14	103.0	24.8	114	2.89	33.3
W843343		4.26	0.02	0.16	4.49	2010	990	1.14	0.32	18.25	2.27	68.1	21.1	84	1.93	22.8
W843344		5.76	0.02	0.45	1.76	1670	710	0.56	3.60	23.6	12.45	34.6	10.9	27	0.99	15.4
W843345		0.05	3.09	1.67	6.70	1930	380	1.39	3.03	2.14	1.13	35.4	51.7	588	4.91	1080
W843346		5.87	0.15	1.63	1.46	1410	390	0.62	17.35	19.55	2.91	32.1	8.9	26	1.05	9.0
W843347		3.91	0.17	0.67	1.77	272	380	0.87	4.69	20.0	1.02	15.35	4.6	16	1.80	5.1
W843348		7.89	0.04	0.21	0.61	149.0	190	0.33	1.27	27.1	0.51	9.89	2.3	6	1.26	3.2
W843349		9.63	0.01	0.07	0.15	116.5	50	0.18	0.65	35.1	0.65	3.80	1.8	3	0.29	2.3
W843350		0.05	8.88	21.3	5.25	7.6	40	1.57	1.12	1.48	0.04	5.60	8.4	40	59.2	18.5
W843351		7.52	0.02	0.11	0.32	30.8	80	0.19	0.75	35.0	0.25	3.86	1.4	4	0.48	2.8
W843352		2.87	0.08	0.76	1.08	1310	350	0.40	11.90	25.1	3.11	17.00	10.0	19	0.79	6.1
W843353		3.84	0.16	0.90	0.26	1270	290	0.18	49.2	27.9	1.97	11.20	3.9	4	0.41	5.8
W843354		1.60	0.01	0.04	0.14	32.5	40	0.10	0.65	36.4	0.33	4.71	1.1	3	0.69	1.6
W843355		1.06	0.28	1.90	0.43	1590	180	0.35	35.6	21.7	3.02	14.45	3.7	7	0.59	5.4
W843356		2.55	0.01	0.23	0.11	84.8	20	0.13	5.22	28.8	0.39	9.51	0.7	1	0.49	1.8
W843357		2.46	0.05	0.09	0.21	427	80	0.14	3.57	34.9	1.40	7.84	1.5	5	0.80	2.3
W843358		1.61	0.49	0.24	0.35	3310	210	0.24	36.4	23.4	3.06	13.65	2.3	5	0.53	5.2
W843359		4.89	0.02	0.15	0.60	487	150	0.22	4.07	34.4	0.64	9.71	2.3	25	0.51	5.0
W843360		4.24	0.33	3.11	3.32	2270	1030	0.96	108.5	17.00	3.23	20.4	5.3	21	3.43	8.7
W843361		3.65	0.04	0.61	0.12	478	110	0.08	15.55	30.3	1.21	7.93	2.3	2	0.22	3.6
W843362		3.96	0.02	0.24	0.11	202	50	0.07	0.96	36.4	0.53	4.01	1.6	2	0.14	2.5
W843363		1.53	0.15	2.08	0.59	3160	310	0.34	84.3	25.2	3.91	16.70	7.1	7	0.55	6.4
W843364		8.62	0.01	0.08	0.10	254	50	0.13	1.37	35.9	0.40	2.20	1.3	1	0.10	1.4
W843365		2.74	0.05	0.35	0.14	663	60	0.08	6.86	37.2	0.53	4.59	2.4	2	0.09	2.7
W843366		3.46	0.17	0.88	0.21	3540	200	0.18	91.4	32.6	1.81	15.55	10.9	3	0.21	10.8
W843367		9.42	0.05	0.05	0.10	268	30	0.05	5.38	37.1	0.17	3.93	1.2	1	0.07	2.2
W843368		1.87	13.80	14.05	0.21	>10000	600	0.11	4070	8.63	2.59	14.85	2.9	4	0.31	8.1
W843369		<0.02	15.45	14.45	0.22	>10000	630	0.11	4300	8.52	2.60	14.65	2.8	5	0.32	9.2
W843370		4.75	2.40	1.20	0.26	>10000	340	0.16	139.5	1.36	5.51	33.0	13.7	4	0.22	11.4
W843371		1.56	0.14	0.65	0.78	>10000	530	0.66	49.9	1.58	14.50	23.5	15.6	7	0.48	21.1
W843372		1.49	0.13	0.68	0.78	>10000	540	0.72	40.3	1.55	14.55	25.5	17.0	8	0.38	23.1
W843373		3.57	0.45	1.65	0.69	>10000	520	0.70	141.5	3.69	11.15	40.0	11.1	5	0.35	31.7
W843374		4.13	1.89	2.09	0.19	>10000	370	0.13	231	5.10	3.65	13.35	7.5	2	0.06	29.4
W843375		1.30	0.64	0.47	0.66	>10000	370	0.30	2.95	2.31	1.86	24.4	13.9	5	0.53	72.3
W843376		5.13	0.01	0.01	0.06	90.3	20	0.06	0.56	32.7	0.02	0.96	0.7	1	<0.05	2.2
W843377		7.86	0.01	0.01	0.10	85.2	30	0.05	0.43	36.9	0.09	2.26	1.0	2	0.10	1.7
W843378		11.33	0.01	<0.01	0.10	34.6	50	0.05	0.38	37.4	0.06	2.02	0.9	1	<0.05	1.4
W843379		11.93	0.01	<0.01	0.08	23.7	60	<0.05	0.22	37.6	0.07	2.28	1.0	1	<0.05	1.4
W843380		9.83	0.01	<0.01	0.06	37.6	40	<0.05	0.38	39.4	0.10	1.43	1.0	1	<0.05	1.4

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Finalized Date: 15-OCT-2019
Account: RCM

Project: Tiger

CERTIFICATE OF ANALYSIS WH19249580

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	Fe	Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P
	Units	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
W843341		2.31	4.86	0.07	0.5	0.031	0.89	14.2	1.7	0.49	383	0.56	0.01	16.7	19.6	400
W843342		9.65	18.65	0.18	1.8	0.075	3.43	54.4	4.5	0.41	1080	2.82	0.05	62.1	77.6	1380
W843343		10.75	11.70	0.14	1.2	0.051	2.19	36.5	2.9	0.48	1430	2.82	0.03	36.9	61.3	1140
W843344		13.05	5.17	0.11	0.3	1.060	0.85	19.7	1.5	0.66	8370	4.55	0.01	13.2	32.7	690
W843345		8.92	16.85	0.11	6.0	0.118	1.43	17.6	24.6	2.50	808	6.31	0.89	3.5	543	380
W843346		12.55	4.51	0.10	0.4	0.113	0.70	18.4	4.2	4.01	2570	1.80	0.02	10.0	24.8	430
W843347		2.95	8.27	0.14	0.5	0.068	0.91	9.3	6.7	8.88	2600	0.74	0.02	10.9	14.6	390
W843348		1.60	2.40	0.11	0.2	0.075	0.31	6.1	4.0	6.26	1740	0.36	0.01	3.6	6.8	180
W843349		1.03	0.62	0.10	0.1	0.074	0.08	3.5	1.1	1.23	760	0.30	<0.01	0.8	4.8	60
W843350		2.12	15.45	0.17	0.9	0.021	3.86	2.3	21.4	0.67	310	15.90	1.27	1.8	14.7	660
W843351		0.54	1.38	0.10	0.1	0.030	0.15	3.2	1.9	1.35	456	0.12	0.01	1.6	3.4	70
W843352		11.30	3.45	0.14	0.4	0.060	0.50	10.3	1.7	1.53	3690	3.81	0.01	6.5	28.8	390
W843353		11.45	1.76	0.13	0.1	0.141	0.12	4.8	1.2	1.26	7150	5.67	0.01	0.7	10.7	190
W843354		0.46	0.60	0.09	0.1	0.071	0.07	4.8	1.5	1.36	1200	0.10	<0.01	0.7	2.3	60
W843355		12.30	2.59	0.13	0.2	0.113	0.17	11.0	3.0	5.26	5680	3.09	0.01	1.7	14.3	240
W843356		3.44	0.82	0.10	<0.1	0.256	0.03	5.1	1.7	5.32	6460	0.13	0.01	0.1	1.0	50
W843357		1.48	0.96	0.10	0.1	0.059	0.10	5.4	1.7	2.46	1820	0.21	0.01	1.1	3.9	120
W843358		12.50	1.55	0.13	0.1	0.092	0.14	8.0	2.2	4.14	2120	0.62	0.01	1.2	7.8	130
W843359		1.85	2.15	0.10	0.2	0.042	0.27	5.5	1.5	0.76	686	0.33	0.01	4.1	7.3	160
W843360		10.25	10.35	0.15	0.5	0.106	1.67	10.6	12.3	3.28	3560	2.50	0.04	20.4	18.6	330
W843361		4.17	0.69	0.10	0.1	0.096	0.04	4.0	1.4	4.13	4840	1.41	0.01	0.3	3.9	150
W843362		0.75	0.41	0.09	<0.1	0.027	0.05	3.2	0.8	0.58	499	0.29	<0.01	0.6	2.1	70
W843363		12.30	3.22	0.14	0.2	0.124	0.23	8.8	1.9	2.35	5890	5.20	0.01	2.5	20.2	430
W843364		0.99	0.40	0.10	0.1	0.011	0.05	2.1	0.9	0.69	245	0.25	<0.01	0.8	1.9	90
W843365		1.67	0.52	0.07	<0.1	0.048	0.06	3.8	0.7	0.39	655	0.75	<0.01	0.9	4.2	90
W843366		8.04	1.06	0.12	0.1	0.187	0.09	10.2	1.5	0.86	3430	3.81	<0.01	1.0	20.3	190
W843367		0.75	0.35	0.09	<0.1	0.036	0.04	3.1	0.7	0.56	364	0.22	<0.01	0.7	1.8	60
W843368		20.0	1.70	0.17	0.1	0.121	0.18	9.7	3.1	0.47	4880	2.26	0.01	0.8	7.7	210
W843369		20.7	1.72	0.16	0.2	0.119	0.20	9.6	3.0	0.47	4940	2.21	0.01	0.7	7.4	200
W843370		>50	1.41	0.29	0.1	0.121	0.09	22.8	1.7	0.11	4850	6.99	0.01	0.3	34.3	230
W843371		48.8	2.44	0.30	0.2	0.213	0.16	13.6	2.8	0.16	4100	5.27	0.01	0.6	32.3	380
W843372		49.4	2.48	0.31	0.2	0.223	0.14	14.3	2.9	0.16	4440	4.71	0.01	0.6	31.3	390
W843373		41.8	2.40	0.33	0.1	0.231	0.11	24.5	1.6	1.20	5510	5.18	0.01	0.4	27.1	470
W843374		46.3	1.31	0.30	0.1	0.166	0.16	7.6	2.4	0.12	3890	5.85	0.01	0.2	15.7	260
W843375		49.6	1.91	0.28	0.1	0.037	0.11	12.9	2.1	0.18	3420	3.67	0.01	0.3	47.5	320
W843376		0.22	0.19	0.08	<0.1	0.006	0.01	1.1	1.1	2.24	145	<0.05	0.03	0.1	<0.2	70
W843377		0.28	0.30	0.09	<0.1	<0.005	0.06	2.2	0.5	0.65	148	<0.05	<0.01	0.5	1.3	80
W843378		0.15	0.29	0.08	<0.1	<0.005	0.05	2.2	0.4	0.42	152	<0.05	<0.01	0.5	1.0	90
W843379		0.13	0.23	0.08	<0.1	<0.005	0.05	2.4	0.2	0.35	148	<0.05	<0.01	0.5	1.1	90
W843380		0.15	0.15	0.08	<0.1	<0.005	0.03	1.7	0.3	0.28	161	<0.05	<0.01	0.3	1.1	90

***** 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
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: 15-OCT-2019
Account: RCM

Project: Tiger

CERTIFICATE OF ANALYSIS WH19249580

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
W843341		5.5	22.5	<0.002	<0.01	3.35	3.8	1	0.6	173.5	0.94	<0.05	2.04	0.217	0.19	0.6
W843342		17.0	79.7	<0.002	0.05	15.15	12.8	<1	2.3	78.7	3.61	<0.05	8.93	0.779	0.65	2.6
W843343		12.1	52.5	<0.002	0.02	11.80	8.7	1	1.4	106.0	1.97	<0.05	5.16	0.499	0.49	2.1
W843344		25.6	27.9	<0.002	0.01	5.94	3.8	<1	3.8	87.6	0.72	<0.05	2.21	0.178	0.49	1.5
W843345		248	75.6	0.002	1.52	195.0	21.8	2	3.0	135.0	0.35	1.74	5.08	0.234	0.96	1.7
W843346		35.2	21.4	<0.002	0.01	7.91	2.9	1	1.8	60.3	0.53	<0.05	2.20	0.118	0.28	1.3
W843347		22.3	52.6	0.002	<0.01	2.53	2.2	1	7.0	55.4	0.56	<0.05	2.13	0.129	0.36	0.6
W843348		10.1	16.9	0.003	<0.01	1.38	1.1	1	1.3	109.5	0.20	<0.05	0.75	0.046	0.17	0.4
W843349		9.0	5.5	0.002	0.04	0.67	0.5	1	1.1	163.5	<0.05	<0.05	0.16	0.019	0.07	0.2
W843350		5.4	1570	0.003	0.03	0.70	7.4	<1	1.0	60.7	0.20	<0.05	0.49	0.266	12.40	0.2
W843351		5.5	6.5	0.002	0.08	0.29	0.7	1	0.4	175.5	0.09	<0.05	0.33	0.029	0.07	0.2
W843352		34.3	15.2	0.002	0.01	4.31	2.2	1	1.0	109.0	0.34	<0.05	1.20	0.093	0.53	1.4
W843353		55.1	8.6	0.002	0.01	4.75	1.0	1	1.1	80.9	<0.05	<0.05	0.25	0.015	0.39	1.3
W843354		1.2	3.9	<0.002	<0.01	0.12	0.5	1	0.2	197.5	<0.05	<0.05	0.13	0.020	0.06	0.1
W843355		61.0	13.5	<0.002	0.01	2.56	1.4	1	2.0	66.3	0.09	<0.05	0.72	0.033	0.34	1.4
W843356		9.7	3.3	<0.002	<0.01	0.30	0.7	1	1.4	157.5	<0.05	<0.05	0.06	<0.005	0.07	0.2
W843357		2.7	7.8	<0.002	0.02	0.51	0.8	1	0.4	162.5	0.06	<0.05	0.21	0.029	0.11	0.2
W843358		10.7	8.4	<0.002	0.01	3.84	1.2	1	0.6	97.3	0.07	0.05	0.42	0.022	0.22	0.7
W843359		10.6	9.3	<0.002	0.02	0.77	1.8	1	0.8	174.5	0.19	<0.05	0.49	0.083	0.10	0.3
W843360		96.9	72.4	0.002	0.01	5.46	4.1	1	4.5	49.3	1.16	0.10	3.24	0.199	0.67	1.1
W843361		28.6	2.5	<0.002	<0.01	1.27	0.8	1	0.8	110.5	<0.05	<0.05	0.16	0.006	0.15	0.3
W843362		8.1	1.8	<0.002	0.02	0.54	0.4	1	0.2	134.5	<0.05	<0.05	0.11	0.012	0.05	0.1
W843363		91.2	14.3	<0.002	<0.01	5.20	1.7	2	3.0	58.7	0.15	0.07	0.72	0.037	0.37	1.1
W843364		4.0	1.9	<0.002	0.03	0.51	0.4	1	0.2	122.0	0.05	<0.05	0.24	0.007	0.03	0.1
W843365		7.9	2.1	<0.002	0.02	1.66	0.5	1	0.2	124.0	0.05	<0.05	0.19	0.015	0.07	0.2
W843366		18.1	3.8	<0.002	<0.01	26.0	0.7	1	0.5	95.1	0.05	0.05	0.28	0.013	0.28	0.7
W843367		3.1	1.4	0.002	0.04	0.91	0.3	1	<0.2	140.0	<0.05	<0.05	0.16	0.008	0.02	0.1
W843368		1225	10.6	0.002	0.26	337	0.4	5	5.5	457	<0.05	2.95	0.22	0.017	1.32	6.1
W843369		1305	11.1	<0.002	0.28	354	0.4	5	5.7	479	<0.05	2.91	0.23	0.016	1.30	6.5
W843370		137.5	5.1	<0.002	0.09	38.6	0.7	2	0.4	82.1	<0.05	0.33	0.49	0.006	1.00	4.7
W843371		160.5	5.8	0.002	0.10	26.6	2.8	2	0.5	84.1	<0.05	0.10	1.63	0.015	1.17	6.2
W843372		203	4.9	<0.002	0.11	27.0	3.1	2	0.4	90.4	<0.05	0.11	1.59	0.015	1.32	6.2
W843373		265	4.8	0.002	0.06	41.4	1.6	2	0.8	63.4	<0.05	0.26	0.62	0.010	0.78	5.2
W843374		146.5	3.7	<0.002	0.30	35.9	0.6	5	1.8	151.5	<0.05	0.46	0.42	<0.005	0.82	5.5
W843375		10.6	5.1	0.002	0.05	5.59	1.2	2	0.2	34.2	<0.05	0.08	0.46	0.009	0.22	4.1
W843376		0.6	0.2	<0.002	<0.01	0.13	0.2	1	<0.2	80.3	<0.05	<0.05	0.06	<0.005	<0.02	0.2
W843377		0.7	1.5	<0.002	0.08	0.12	0.4	1	<0.2	137.5	<0.05	<0.05	0.11	0.011	<0.02	0.1
W843378		0.6	0.8	<0.002	0.03	0.07	0.3	1	<0.2	139.0	<0.05	<0.05	0.10	0.011	<0.02	0.1
W843379		0.6	0.8	<0.002	0.03	0.06	0.3	1	<0.2	146.5	<0.05	<0.05	0.09	0.010	<0.02	0.1
W843380		0.5	0.6	<0.002	0.01	0.09	0.2	1	<0.2	154.0	<0.05	<0.05	0.06	0.007	<0.02	0.1

***** See Appendix Page for comments regarding this certificate *****

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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 ST
VANCOUVER BC V6B 1L8

Finalized Date: 15-OCT-2019
Account: RCM

Project: Tiger

CERTIFICATE OF ANALYSIS WH19249580

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	As-OG62
	Analyte	V	W	Y	Zn	Zr	As
	Units	ppm	ppm	ppm	ppm	ppm	%
	LOD	1	0.1	0.1	2	0.5	0.001
W843341		36	1.8	6.4	167	25.3	
W843342		128	7.1	19.2	727	84.1	
W843343		85	4.9	15.4	646	56.1	
W843344		33	5.2	11.0	2350	15.6	
W843345		155	41.3	13.7	389	276	
W843346		24	4.3	9.5	741	17.3	
W843347		20	3.3	6.1	304	25.6	
W843348		8	1.3	5.1	143	8.5	
W843349		3	0.8	3.0	155	3.8	
W843350		58	0.3	8.0	32	33.1	
W843351		5	0.8	3.4	35	5.1	
W843352		19	11.3	8.1	890	17.5	
W843353		6	34.9	11.9	488	6.2	
W843354		4	0.7	3.6	25	3.7	
W843355		10	62.8	11.7	406	8.9	
W843356		3	0.6	9.5	56	1.4	
W843357		5	3.1	5.8	85	3.9	
W843358		5	41.9	10.2	372	4.9	
W843359		15	1.8	5.1	123	6.1	
W843360		29	23.6	11.8	671	23.3	
W843361		4	1.5	10.2	247	2.4	
W843362		2	0.9	3.9	99	2.7	
W843363		11	10.7	14.9	947	9.9	
W843364		2	0.7	4.9	95	2.6	
W843365		2	1.6	5.0	145	2.6	
W843366		3	17.0	8.8	538	3.4	
W843367		2	0.4	3.9	29	1.7	
W843368		4	63.6	2.9	602	6.9	12.05
W843369		4	53.3	2.7	604	7.0	12.20
W843370		6	10.7	9.0	1830	3.8	4.77
W843371		12	10.1	20.9	2210	7.3	5.88
W843372		12	9.5	22.6	2120	7.4	5.89
W843373		14	129.5	22.7	1780	6.1	4.90
W843374		6	71.7	4.8	710	4.7	4.98
W843375		12	6.7	15.1	1330	5.5	2.12
W843376		1	0.5	2.2	6	1.2	
W843377		2	0.2	2.8	11	2.1	
W843378		2	0.3	3.1	4	2.5	
W843379		2	0.1	3.7	6	1.7	
W843380		1	0.1	3.0	18	1.6	

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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

Project: Tiger

Finalized Date: 15-OCT-2019
Account: RCM

CERTIFICATE OF ANALYSIS WH19249580

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-21
	WSH-22			

Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Applies to Method:				
	As-OG62	Au-AA26	ME-MS61	ME-OG62

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North Vancouver BC V7H 0A7
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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: 21-OCT-2019
Account: RCM

CERTIFICATE WH19255444

Project: Tiger

P.O. No.: R19-D31

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 10-OCT-2019.

The following have access to data associated with this certificate:

ANDREW CARNE	JULIA LANE	

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
WSH-21	"Wash" crushers
WSH-22	"Wash" pulverizers
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 up to 250g 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-AA26	Ore Grade Au 50g FA AA finish	AAS
ME-MS61	48 element four acid 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:



Saa Traxler, General Manager, North Vancouver

ALS Canada Ltd.
2103 Dollarton Hwy
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To: **ATAC RESOURCES LTD.**
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Finalized Date: 21-OCT-2019
Account: RCM

Project: Tiger

CERTIFICATE OF ANALYSIS WH19255444

Sample Description	Method	WEI-21	Au-AA26	ME-MS61	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
W843381		11.30	0.01	0.01	0.11	3.4	80	0.08	0.03	39.0	0.10	2.00	0.5	2	0.08	1.8
W843382		11.39	0.01	0.01	0.12	0.6	90	<0.05	0.04	38.1	0.07	1.77	0.4	2	<0.05	2.6
W843383		11.05	<0.01	0.01	0.15	0.7	90	0.07	0.04	39.3	0.11	2.39	0.5	3	0.11	2.4
W843384		0.05	0.43	1.51	8.97	4.9	320	1.67	0.39	3.39	0.04	35.8	19.2	108	1.74	34.6
W843385		2.60	0.37	2.86	10.95	396	4200	3.11	55.1	0.87	0.29	116.0	3.8	304	5.57	40.4
W843386		4.78	0.56	3.27	13.20	325	6640	4.09	27.8	0.09	<0.02	88.6	0.9	390	5.61	16.1
W843387		6.59	1.22	6.94	13.10	74.8	6090	4.01	12.15	0.05	<0.02	15.80	5.4	376	4.25	242
W843388		9.43	1.03	3.35	13.00	115.5	5180	3.79	23.5	0.12	<0.02	7.35	3.3	344	4.32	119.0
W843389		5.55	0.75	2.12	11.70	355	3750	3.79	39.5	0.11	<0.02	122.0	22.7	307	4.90	83.9
W843390		0.05	3.12	1.67	6.60	1980	380	1.37	3.11	2.11	1.06	33.7	48.1	616	4.36	1060
W843391		2.21	0.05	0.40	7.80	343	2010	2.47	9.21	1.04	0.36	143.5	48.7	131	8.60	581
W843392		7.28	<0.01	0.01	0.07	1.9	20	0.07	0.12	39.6	0.06	2.89	0.8	2	0.11	3.9
W843393		5.53	<0.01	0.03	0.16	5.8	40	0.11	0.27	38.9	0.10	6.60	1.5	4	0.56	10.5
W843394		4.79	0.01	0.08	7.79	30.1	2140	2.21	0.63	5.64	0.08	71.7	7.6	30	9.75	12.4
W843395		7.41	<0.01	0.02	0.28	5.9	90	0.11	0.16	39.4	0.05	9.60	1.7	7	0.74	4.2
W843396		6.87	<0.01	0.02	0.05	2.1	20	0.05	0.08	39.4	0.07	4.80	0.7	1	0.10	4.2
W843397		8.92	0.02	0.10	8.60	28.8	460	1.92	0.72	4.89	<0.02	111.0	14.8	96	4.59	10.7
W843398		6.04	0.03	0.08	3.73	32.2	620	0.68	0.90	23.1	0.13	53.9	7.4	46	2.31	8.0
W843399		10.85	<0.01	0.02	0.98	22.0	370	0.33	0.19	35.1	0.11	10.90	2.6	8	0.93	3.7
W843400		5.38	0.01	0.03	3.77	35.5	1440	1.41	0.35	26.5	0.45	54.3	9.3	32	2.82	18.8
W843401		11.69	<0.01	0.01	0.07	5.1	40	0.10	0.05	37.0	0.08	1.81	1.1	1	0.05	3.6
W843402		5.51	<0.01	0.01	0.25	3.1	90	0.08	0.04	41.2	0.07	6.16	1.6	4	0.17	3.1
W843403		7.42	<0.01	<0.01	0.06	2.4	30	<0.05	0.03	39.3	0.09	4.08	0.6	1	<0.05	4.7
W843404		2.94	<0.01	0.11	0.37	225	40	0.28	0.29	33.7	0.96	25.2	18.9	5	0.05	291
W843405		<0.02	<0.01	0.13	0.36	219	40	0.25	0.26	34.1	0.95	25.2	19.2	5	0.05	289
W843406		4.50	<0.01	0.09	0.19	105.5	30	0.27	0.07	30.9	0.71	13.70	11.7	3	<0.05	109.5
W843407		5.21	0.01	0.05	0.28	85.6	90	0.21	0.33	28.0	0.64	9.87	7.7	4	0.15	42.4
W843408		6.79	0.01	0.09	0.33	69.2	110	0.20	0.29	24.7	1.02	9.45	6.5	3	0.21	12.2
W843409		3.47	0.01	0.35	0.32	518	150	0.22	0.45	19.05	3.87	20.1	31.3	3	0.17	72.2
W843410		6.53	<0.01	<0.01	0.14	0.8	30	0.05	0.02	35.3	<0.02	0.97	0.6	1	<0.05	1.9
W843411		2.30	<0.01	0.06	0.06	204	30	0.07	0.11	36.4	1.43	5.51	7.7	1	<0.05	27.9
W843412		0.75	0.01	0.76	0.34	1830	200	0.52	1.69	0.49	5.01	23.4	78.1	4	0.26	164.5
W843413		0.66	0.01	0.89	0.34	1740	200	0.53	1.82	0.29	5.78	32.9	84.6	4	0.32	171.5
W843414		2.08	<0.01	0.22	0.12	404	50	0.07	0.12	32.9	1.39	5.78	13.2	3	<0.05	89.7
W843415		6.94	<0.01	0.01	0.04	14.7	30	<0.05	0.02	40.3	0.26	1.86	1.7	1	<0.05	4.5
W843416		4.25	0.01	0.31	9.70	410	1760	1.55	0.09	1.46	1.26	91.0	17.8	167	4.07	68.9
W843417		3.62	<0.01	0.32	10.05	138.5	1730	1.73	0.11	0.33	1.60	116.5	20.4	196	5.32	65.4
W843418		2.46	0.01	1.26	2.29	978	420	0.74	10.20	0.29	4.96	64.6	32.8	35	1.48	46.0
W843419		7.52	<0.01	0.03	0.08	19.3	20	<0.05	0.03	38.5	0.21	2.59	1.5	1	<0.05	5.9
W843420		2.61	0.01	0.52	8.67	64.8	2030	2.37	0.54	4.01	0.74	99.3	24.3	199	3.54	28.2

***** 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
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: 21-OCT-2019
Account: RCM

Project: Tiger

CERTIFICATE OF ANALYSIS WH19255444

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	Fe	Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P
	Units	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
W843381		0.15	0.26	<0.05	0.1	<0.005	0.06	2.0	0.5	0.28	146	<0.05	<0.01	0.7	1.2	90
W843382		0.16	0.28	<0.05	<0.1	<0.005	0.07	1.8	<0.2	0.29	129	<0.05	<0.01	0.8	1.0	110
W843383		0.20	0.34	<0.05	0.1	<0.005	0.10	2.2	<0.2	0.35	143	<0.05	<0.01	1.0	1.1	110
W843384		7.32	30.6	0.05	5.1	0.084	1.30	15.7	15.1	1.63	729	8.85	2.01	12.6	25.1	460
W843385		4.36	39.2	0.08	3.0	0.125	4.70	58.5	27.2	1.09	208	1.77	0.15	90.4	27.9	980
W843386		3.10	57.4	0.08	4.1	0.142	4.35	39.7	35.4	0.74	30	1.93	0.15	125.5	12.2	1140
W843387		2.27	59.3	0.05	4.4	0.118	5.19	6.9	38.1	0.72	112	1.61	0.16	137.0	11.8	230
W843388		4.67	56.8	<0.05	3.8	0.101	5.05	3.2	40.1	0.73	52	1.95	0.15	109.5	17.0	310
W843389		5.41	46.5	0.10	3.9	0.145	4.96	60.6	39.0	0.76	70	2.40	0.12	104.5	75.4	2100
W843390		9.11	17.05	0.05	6.2	0.124	1.43	15.3	26.5	2.53	824	6.59	0.89	4.0	535	390
W843391		18.50	23.4	0.13	2.0	0.147	3.96	72.4	20.2	1.34	330	1.17	0.06	45.3	146.0	4580
W843392		0.35	0.23	<0.05	<0.1	0.054	0.03	2.2	0.4	0.67	464	0.06	<0.01	0.6	2.7	50
W843393		0.65	0.53	<0.05	0.1	0.046	0.09	4.2	0.7	1.32	482	0.11	<0.01	1.3	6.3	80
W843394		1.80	19.70	0.07	1.6	0.038	4.34	38.9	18.1	1.76	171	1.11	0.07	61.7	46.8	570
W843395		0.59	0.72	<0.05	0.1	0.047	0.15	5.3	1.1	1.13	462	0.15	<0.01	2.5	5.6	100
W843396		0.48	0.16	<0.05	<0.1	0.064	0.03	3.4	0.5	0.96	305	0.05	<0.01	0.4	2.1	40
W843397		3.46	26.7	0.11	1.7	0.074	4.97	56.5	15.8	1.43	82	0.47	0.09	157.5	40.0	3550
W843398		3.56	9.73	0.05	1.0	0.060	1.89	29.5	6.0	1.40	437	0.39	0.04	51.3	28.9	980
W843399		0.99	2.75	<0.05	0.5	0.073	0.49	6.9	2.5	1.14	505	0.12	0.01	10.1	9.7	230
W843400		2.44	10.75	0.07	1.2	0.068	1.92	30.2	7.4	1.47	587	0.23	0.04	36.9	33.8	1560
W843401		0.30	0.22	<0.05	<0.1	0.040	0.03	1.7	0.2	1.26	252	<0.05	<0.01	0.4	2.9	60
W843402		0.40	0.68	<0.05	0.1	0.046	0.13	3.8	0.4	0.65	292	<0.05	<0.01	2.2	5.8	130
W843403		0.22	0.17	<0.05	<0.1	0.070	0.02	2.8	<0.2	0.49	316	<0.05	<0.01	0.3	3.0	60
W843404		8.33	0.75	<0.05	<0.1	0.233	0.03	10.9	0.3	0.46	820	0.42	<0.01	0.2	87.6	1140
W843405		8.15	0.75	<0.05	<0.1	0.236	0.03	11.0	0.2	0.47	816	0.40	<0.01	0.2	87.4	1140
W843406		4.04	0.34	<0.05	<0.1	0.091	0.02	6.5	0.3	4.38	882	0.33	<0.01	0.3	60.8	390
W843407		2.94	0.85	<0.05	0.1	0.054	0.09	5.2	1.1	7.35	1040	0.32	<0.01	1.8	37.2	250
W843408		3.06	0.98	<0.05	0.1	0.034	0.11	5.4	1.4	8.85	1890	0.28	<0.01	2.4	22.1	160
W843409		30.0	0.78	<0.05	0.1	0.103	0.10	12.6	0.4	0.38	3140	1.99	0.01	1.6	146.5	390
W843410		0.21	0.49	<0.05	0.1	<0.005	0.02	1.1	0.9	1.95	139	<0.05	0.07	0.3	0.7	70
W843411		5.48	0.11	<0.05	<0.1	0.018	0.01	4.1	<0.2	0.82	1080	0.71	<0.01	0.1	30.3	160
W843412		>50	0.68	0.08	0.2	0.067	0.04	14.6	0.2	0.14	6280	7.32	0.01	0.2	256	1250
W843413		>50	0.59	0.08	0.1	0.052	0.04	15.5	0.5	0.14	7020	6.46	0.01	0.2	261	1220
W843414		9.89	0.24	<0.05	<0.1	0.032	0.01	4.4	<0.2	1.29	940	1.77	<0.01	0.1	58.5	470
W843415		0.65	0.14	<0.05	<0.1	0.007	0.01	1.7	<0.2	0.36	312	0.09	<0.01	0.2	4.5	50
W843416		11.70	24.8	0.07	1.3	0.077	5.06	59.7	10.9	1.02	646	1.14	0.08	59.6	95.9	2120
W843417		9.47	29.1	0.07	1.3	0.063	5.32	57.3	10.4	0.89	1260	0.62	0.08	54.9	97.1	2350
W843418		>50	5.27	0.14	0.6	0.067	0.97	38.8	1.1	0.24	4950	3.93	0.02	9.4	143.5	2100
W843419		0.80	0.23	<0.05	<0.1	0.008	0.03	2.2	<0.2	1.25	294	0.13	<0.01	0.5	3.7	90
W843420		6.93	27.8	0.08	1.6	0.075	4.84	48.8	15.0	0.86	1480	1.79	0.08	111.5	94.7	1870

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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

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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 21-OCT-2019
Account: RCM

Project: Tiger

CERTIFICATE OF ANALYSIS WH19255444

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
W843381		0.9	1.4	<0.002	0.03	0.05	0.3	1	<0.2	136.5	<0.05	<0.05	0.13	0.014	<0.02	0.1
W843382		0.9	1.3	<0.002	0.04	0.06	0.4	1	<0.2	137.5	<0.05	<0.05	0.14	0.018	<0.02	0.1
W843383		0.9	2.1	<0.002	0.09	0.05	0.4	<1	<0.2	142.0	0.06	<0.05	0.19	0.021	<0.02	0.1
W843384		21.8	62.5	<0.002	0.05	0.61	19.6	1	3.4	147.0	1.35	<0.05	31.5	0.736	0.48	5.7
W843385		23.4	146.0	<0.002	0.69	54.3	23.9	2	30.6	48.7	5.01	0.38	11.05	1.595	1.97	2.5
W843386		20.4	135.0	<0.002	0.35	77.2	27.5	3	59.8	35.1	7.18	0.24	13.05	2.22	2.23	3.2
W843387		12.3	146.5	<0.002	0.36	101.0	28.1	1	56.1	20.6	7.41	0.11	3.25	2.39	1.89	3.7
W843388		16.3	144.5	<0.002	0.23	98.4	30.1	2	69.3	20.6	5.99	0.15	3.65	1.870	1.86	3.4
W843389		18.3	148.0	0.002	2.40	38.3	29.7	7	22.5	26.2	5.89	0.09	13.50	1.740	1.80	3.4
W843390		248	73.2	0.002	1.53	189.5	21.9	2	3.2	132.0	0.40	1.88	5.14	0.253	0.93	1.6
W843391		5.4	170.0	<0.002	1.94	13.30	9.9	2	4.7	20.7	2.65	0.05	14.95	0.328	1.49	2.3
W843392		1.5	1.8	<0.002	0.08	0.22	0.2	1	<0.2	219	<0.05	<0.05	0.14	0.008	0.05	0.1
W843393		1.3	4.8	<0.002	0.23	0.38	0.4	1	0.2	226	0.06	<0.05	0.25	0.015	0.10	0.1
W843394		1.4	123.5	<0.002	0.98	1.06	4.7	<1	3.7	41.7	3.45	<0.05	10.10	0.430	1.28	0.6
W843395		1.2	5.5	<0.002	0.29	0.28	0.7	1	0.2	241	0.14	<0.05	0.39	0.039	0.08	0.1
W843396		0.8	0.7	<0.002	0.26	0.23	0.2	1	<0.2	240	<0.05	<0.05	0.09	0.006	0.02	<0.1
W843397		1.5	83.9	<0.002	3.20	2.63	8.5	1	4.8	39.9	8.19	<0.05	13.85	1.005	0.86	0.5
W843398		1.0	42.9	<0.002	2.81	1.79	4.2	<1	1.7	135.0	2.56	<0.05	5.93	0.412	0.45	0.5
W843399		<0.5	12.0	<0.002	0.26	0.48	1.1	1	0.5	206	0.56	<0.05	1.52	0.088	0.15	0.4
W843400		<0.5	45.8	<0.002	0.92	0.84	4.5	1	1.8	162.5	1.89	<0.05	5.98	0.350	0.71	0.8
W843401		<0.5	0.6	<0.002	0.04	0.16	0.2	1	<0.2	215	<0.05	<0.05	0.08	0.007	0.02	0.1
W843402		<0.5	3.2	<0.002	0.04	0.27	0.7	1	0.2	259	0.12	<0.05	0.31	0.032	0.07	0.1
W843403		<0.5	0.6	<0.002	<0.01	0.11	0.2	1	<0.2	247	<0.05	<0.05	0.07	0.006	<0.02	0.1
W843404		<0.5	0.7	<0.002	0.01	4.04	1.7	1	<0.2	209	<0.05	<0.05	4.09	0.005	0.11	1.3
W843405		<0.5	0.8	<0.002	0.01	4.14	1.8	1	<0.2	213	<0.05	<0.05	4.11	0.005	0.10	1.3
W843406		<0.5	0.6	<0.002	<0.01	2.04	0.6	1	<0.2	173.5	<0.05	<0.05	0.81	0.005	0.14	0.4
W843407		0.6	2.5	<0.002	0.02	2.15	0.7	1	0.2	129.5	0.09	<0.05	0.62	0.023	0.25	0.3
W843408		1.4	3.1	<0.002	0.01	1.19	0.7	1	0.2	83.1	0.13	<0.05	0.69	0.022	1.28	0.3
W843409		2.2	2.3	<0.002	0.02	5.13	0.6	1	<0.2	105.5	0.09	<0.05	0.59	0.014	2.61	2.2
W843410		<0.5	0.7	<0.002	<0.01	0.07	0.3	1	<0.2	83.3	<0.05	<0.05	0.13	0.007	0.02	0.2
W843411		5.6	0.2	<0.002	0.04	2.32	0.3	1	<0.2	144.5	<0.05	<0.05	0.09	<0.005	0.61	0.5
W843412		72.8	1.7	<0.002	0.04	16.10	1.1	1	0.2	5.6	<0.05	<0.05	2.01	<0.005	6.38	4.2
W843413		83.2	1.8	<0.002	0.03	16.35	1.0	1	0.2	5.7	<0.05	<0.05	1.74	<0.005	7.03	4.0
W843414		1.7	0.3	<0.002	0.06	4.85	0.4	1	<0.2	119.0	<0.05	<0.05	1.36	<0.005	0.70	0.6
W843415		<0.5	0.2	<0.002	0.04	0.27	0.2	1	<0.2	172.5	<0.05	<0.05	0.07	<0.005	0.17	0.1
W843416		3.2	96.7	<0.002	0.12	9.41	16.8	1	2.4	68.4	3.69	<0.05	10.60	0.647	1.78	1.6
W843417		5.5	100.5	<0.002	0.05	7.57	17.8	2	2.6	33.1	3.26	<0.05	12.80	0.536	1.72	2.3
W843418		9.5	19.8	<0.002	0.02	11.80	2.9	2	0.7	7.4	0.54	<0.05	3.70	0.095	2.23	3.9
W843419		<0.5	0.6	0.002	0.06	0.52	0.3	1	<0.2	147.0	<0.05	<0.05	0.10	0.008	0.16	0.2
W843420		2.4	86.4	<0.002	0.01	4.42	14.4	1	5.2	19.7	5.95	<0.05	10.00	1.125	2.60	1.6

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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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CERTIFICATE OF ANALYSIS WH19255444

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	V	W	Y	Zn	Zr
	Units	ppm	ppm	ppm	ppm	ppm
	LOD	1	0.1	0.1	2	0.5
W843381		1	0.1	3.1	9	2.3
W843382		3	0.1	2.7	7	2.1
W843383		2	<0.1	2.7	11	2.8
W843384		207	0.8	21.8	65	170.5
W843385		229	21.5	9.3	164	130.5
W843386		291	31.6	6.2	63	167.0
W843387		275	31.7	5.6	19	187.5
W843388		261	27.5	6.3	14	164.0
W843389		229	21.5	11.8	36	169.0
W843390		155	39.3	12.8	380	274
W843391		99	5.6	32.2	162	82.7
W843392		2	0.2	2.9	4	2.4
W843393		3	0.3	4.4	12	3.8
W843394		40	3.7	11.7	33	73.1
W843395		5	0.4	5.6	6	4.0
W843396		1	0.1	2.1	3	1.5
W843397		120	4.9	19.6	19	70.6
W843398		51	2.5	14.4	43	40.5
W843399		11	1.0	6.8	40	13.8
W843400		45	3.9	20.4	131	48.2
W843401		1	0.1	1.8	16	1.5
W843402		4	0.3	3.2	16	6.9
W843403		1	0.1	2.1	10	1.3
W843404		2	0.5	12.0	636	1.7
W843405		2	0.5	12.3	626	1.7
W843406		1	0.4	7.7	303	1.1
W843407		4	0.5	6.8	195	2.9
W843408		5	0.9	6.1	307	5.1
W843409		2	3.6	12.5	4720	4.0
W843410		2	<0.1	2.3	8	1.9
W843411		<1	1.0	3.7	668	2.1
W843412		4	8.1	14.1	6680	11.5
W843413		5	7.3	14.8	6470	11.3
W843414		1	0.5	4.8	1360	1.1
W843415		1	0.1	2.1	74	1.0
W843416		189	2.2	14.8	1090	53.5
W843417		188	10.7	17.9	642	53.0
W843418		36	14.6	21.2	4330	20.3
W843419		2	0.1	3.1	91	1.7
W843420		192	9.8	18.3	438	67.6

***** 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
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: Tiger

Finalized Date: 21-OCT-2019
Account: RCM

CERTIFICATE OF ANALYSIS WH19255444

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-21
WSH-22			

Applies to Method: Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Au-AA26	ME-MS61

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-OCT-2019
Account: RCM

CERTIFICATE WH19255449

Project: Tiger

P.O. No.: R19-D32

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 10-OCT-2019.

The following have access to data associated with this certificate:

ANDREW CARNE	ADAM COULTER	JULIA LANE

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
WSH-21	"Wash" crushers
WSH-22	"Wash" pulverizers
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 up to 250g 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-AA26	Ore Grade Au 50g FA AA finish	AAS
ME-MS61	48 element four acid ICP-MS	
ME-OG62	Ore Grade Elements - Four Acid	ICP-AES
Zn-OG62	Ore Grade Zn - Four Acid	
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:

Saa Traxler, General Manager, North Vancouver

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2103 Dollarton Hwy
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VANCOUVER BC V6B 1L8

Finalized Date: 29-OCT-2019
Account: RCM

Project: Tiger

CERTIFICATE OF ANALYSIS WH19255449

Sample Description	Method	WEI-21	Au-AA26	ME-MS61	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
W843421		3.87	<0.01	<0.01	6.75	43.6	1160	1.60	0.17	16.55	0.36	105.0	6.6	110	2.64	12.6
W843422		11.64	0.01	0.02	0.38	25.1	90	0.15	1.15	35.2	0.16	6.11	2.4	6	0.20	5.0
W843423		5.12	<0.01	0.02	0.09	3.4	50	0.05	0.05	37.9	0.15	2.84	1.3	2	0.13	7.6
W843424		7.95	<0.01	<0.01	9.02	16.6	2530	1.99	0.23	3.36	0.05	115.5	13.7	190	11.15	55.7
W843425		5.33	0.23	1.13	0.18	213	170	0.08	273	20.6	2.93	13.20	1.0	2	0.30	4.2
W843426		5.60	0.95	0.79	0.32	>10000	390	0.08	458	0.45	1.22	4.52	2.1	22	0.42	7.0
W843427		0.93	5.90	0.31	0.29	>10000	1210	0.09	511	0.79	0.93	12.00	2.2	4	0.25	12.2
W843428		3.17	0.30	0.24	0.12	3060	30	0.07	435	4.90	0.08	47.1	1.3	4	0.12	3.7
W843429		5.90	1.94	0.07	0.14	>10000	10	0.06	1260	12.20	0.05	110.5	0.9	2	0.73	3.2
W843430		2.76	10.60	0.17	0.05	599	10	<0.05	163.5	15.80	0.17	35.8	0.5	2	0.73	3.2
W843431		5.58	0.01	<0.01	8.96	22.6	2750	2.25	0.79	4.04	0.12	107.5	12.8	209	10.50	43.0
W843432		3.53	0.01	<0.01	0.23	10.6	70	0.08	0.45	36.8	0.12	5.31	2.5	4	0.91	12.2
W843433		0.05	3.11	1.76	6.69	1970	390	1.34	2.80	2.15	1.12	35.3	51.3	589	4.87	1085
W843434		8.76	<0.01	<0.01	8.86	11.2	2450	1.93	0.29	3.70	0.03	96.4	17.7	211	10.25	53.8
W843435		8.43	<0.01	0.01	7.69	58.1	1790	1.67	0.40	9.78	0.13	99.7	34.4	130	3.10	40.6
W843436		11.14	<0.01	0.08	0.13	12.8	40	0.07	0.15	38.4	0.17	5.69	3.6	2	0.09	4.7
W843437		10.69	<0.01	0.01	0.06	19.4	30	0.07	0.15	36.1	0.34	2.37	2.5	1	<0.05	3.4
W843438		0.05	0.39	1.57	9.10	6.6	330	1.50	0.46	3.43	0.05	35.1	21.6	106	1.80	35.8
W843439		10.36	<0.01	0.02	0.16	12.5	30	0.06	0.15	36.7	0.30	4.75	3.2	4	0.19	3.0
W843440		10.55	<0.01	0.02	3.51	51.5	560	0.66	0.21	28.4	1.12	52.5	36.8	81	2.00	13.1
W843441		1.69	<0.01	0.45	0.50	193.0	370	0.34	0.43	21.9	16.55	41.7	58.8	7	1.39	57.3
W843442		1.77	0.01	0.43	0.58	213	330	0.47	0.28	22.2	14.90	53.1	56.1	6	1.53	59.1
W843443		6.06	0.01	1.93	1.47	108.5	570	1.00	2.42	8.08	35.1	23.6	58.0	8	3.51	221
W843444		5.52	0.02	0.78	0.35	149.0	50	0.54	1.22	8.09	48.0	8.58	3.9	5	1.77	51.5
W843445		3.24	0.01	1.14	0.07	161.0	20	0.36	0.65	16.15	54.3	11.65	4.9	2	0.70	116.5
W843446		5.24	0.02	0.59	0.46	383	110	0.49	1.16	12.20	19.50	13.35	4.9	4	1.42	31.2
W843447		7.75	<0.01	<0.01	0.16	1.0	30	0.11	0.07	33.8	0.10	1.19	1.1	1	<0.05	1.7
W843448		8.90	<0.01	0.02	0.07	27.1	20	0.08	0.11	35.2	1.37	2.79	1.0	1	0.10	1.8
W843449		12.17	<0.01	0.04	0.35	51.0	50	0.30	0.13	28.3	1.51	5.51	1.5	5	0.48	1.9
W843450		10.92	<0.01	0.02	0.24	28.3	50	0.14	0.11	34.9	1.34	4.39	1.5	3	0.22	2.1
W843451		11.05	<0.01	0.03	0.08	54.5	20	<0.05	0.03	37.6	6.28	3.34	1.0	1	0.07	1.5
W843452		7.99	<0.01	0.02	0.11	15.6	50	0.07	0.05	38.0	1.57	3.04	0.8	1	0.06	1.3
W843453		2.68	0.29	0.94	0.13	>10000	120	0.12	30.6	26.8	76.8	6.36	41.7	1	0.10	8.4
W843454		1.18	0.07	0.27	0.15	>10000	80	0.07	4.21	2.75	39.4	8.03	35.6	2	0.14	9.7
W843455		<0.02	0.07	0.27	0.14	>10000	70	0.06	4.09	2.81	38.7	7.94	34.5	2	0.14	9.7
W843456		1.45	0.61	0.99	0.30	>10000	240	0.20	48.3	1.43	16.80	21.7	13.8	5	0.10	19.7
W843457		1.34	0.28	0.20	0.12	5920	100	0.05	3.06	32.7	20.5	4.96	5.5	2	0.12	3.3
W843458		7.24	<0.01	0.01	0.14	119.0	60	0.06	0.13	37.1	0.63	3.23	0.7	2	0.06	1.0
W843459		10.94	<0.01	<0.01	0.07	24.0	30	<0.05	0.03	38.7	0.10	2.38	0.5	1	<0.05	0.8
W843460		11.24	<0.01	<0.01	0.11	9.3	40	0.06	0.03	38.7	0.08	2.27	0.7	2	<0.05	0.9

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To: **ATAC RESOURCES LTD.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 29-OCT-2019
Account: RCM

Project: Tiger

CERTIFICATE OF ANALYSIS WH19255449

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	Fe	Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P
	Units	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
W843421		2.15	19.60	0.18	0.9	0.063	3.46	55.8	8.6	0.41	671	0.84	0.06	66.9	53.7	1990
W843422		0.79	1.11	0.06	0.2	0.032	0.19	3.7	0.8	0.94	840	0.21	<0.01	3.1	5.8	150
W843423		0.40	0.29	0.09	<0.1	0.014	0.03	2.1	0.4	0.49	231	0.29	<0.01	0.4	1.9	50
W843424		4.18	28.2	0.26	0.8	0.102	5.33	53.8	32.8	1.01	364	0.85	0.08	68.3	101.5	3400
W843425		6.80	1.24	0.07	0.2	0.088	0.04	5.0	1.8	8.90	6940	0.15	0.02	0.6	2.4	130
W843426		>50	1.91	0.28	0.2	0.061	0.09	1.9	0.8	0.13	401	6.85	0.02	0.6	10.1	450
W843427		>50	1.51	0.26	0.1	0.122	0.02	5.7	0.7	0.38	1340	1.53	0.02	0.2	9.1	160
W843428		33.1	1.05	0.19	0.1	0.013	0.01	31.2	0.7	2.48	285	0.12	0.01	0.6	10.3	30
W843429		17.15	1.54	0.15	0.1	0.045	0.05	70.2	1.6	7.01	1930	0.09	0.01	0.6	3.5	150
W843430		13.05	0.67	0.09	<0.1	0.132	0.03	21.6	2.2	8.26	2930	0.08	0.01	0.2	0.3	60
W843431		4.29	30.2	0.25	0.6	0.116	5.39	48.3	33.2	0.90	438	1.04	0.08	62.4	103.0	3300
W843432		0.83	0.74	0.05	0.1	0.037	0.15	3.5	1.6	0.39	301	0.07	<0.01	2.1	5.9	80
W843433		8.77	16.80	0.09	6.4	0.128	1.41	16.9	24.6	2.47	800	6.29	0.88	3.2	524	390
W843434		4.31	28.5	0.19	0.7	0.090	5.32	42.2	31.3	1.00	280	0.72	0.08	60.8	100.5	3290
W843435		2.50	22.7	0.18	4.6	0.052	4.28	53.0	8.7	0.67	222	1.87	0.07	60.9	77.4	2340
W843436		0.62	0.38	0.08	0.1	0.013	0.05	3.9	0.3	0.44	251	0.21	0.01	0.8	9.4	60
W843437		0.82	0.21	0.07	<0.1	0.009	0.02	1.8	0.2	0.42	260	0.23	<0.01	0.2	6.7	80
W843438		7.23	30.4	0.11	5.2	0.098	1.31	16.4	14.8	1.60	717	8.95	2.02	12.3	24.9	480
W843439		1.29	0.51	0.06	0.1	0.019	0.07	3.4	0.3	0.41	311	0.26	<0.01	0.9	8.5	130
W843440		2.01	9.33	0.11	1.3	0.078	1.78	28.0	4.0	0.54	939	1.55	0.01	26.1	61.6	1400
W843441		18.55	2.29	0.12	0.1	7.44	0.19	26.7	1.0	0.23	34300	4.72	<0.01	1.7	196.0	540
W843442		19.15	2.52	0.13	0.1	6.51	0.20	29.5	1.2	0.24	33400	5.35	<0.01	1.9	203	680
W843443		30.2	7.24	0.20	0.3	26.0	0.70	13.9	3.1	0.30	60100	2.50	0.01	3.2	153.0	320
W843444		37.0	2.77	0.13	0.1	9.99	0.20	6.9	0.9	0.22	67000	0.13	<0.01	0.1	12.3	100
W843445		26.9	2.20	0.09	<0.1	6.18	0.06	8.4	0.4	0.32	45800	0.09	<0.01	0.2	6.4	40
W843446		29.7	3.03	0.09	0.1	12.85	0.27	11.5	1.3	0.64	60000	0.44	<0.01	1.1	16.6	110
W843447		0.18	0.53	0.07	0.1	0.032	0.05	1.2	1.0	1.81	235	0.06	0.08	0.4	0.4	70
W843448		0.47	0.24	0.08	<0.1	0.104	0.03	2.6	0.6	1.75	663	0.06	<0.01	0.4	1.6	60
W843449		0.54	1.06	0.15	0.2	0.061	0.20	4.5	1.7	7.47	547	0.15	<0.01	1.9	3.5	230
W843450		0.39	0.69	0.14	0.1	0.009	0.11	3.8	1.1	2.68	298	0.06	<0.01	1.3	3.3	180
W843451		0.49	0.23	0.05	<0.1	<0.005	0.04	3.1	0.4	0.79	243	0.11	<0.01	0.5	2.2	100
W843452		0.30	0.28	0.05	0.1	<0.005	0.06	2.8	0.3	0.45	188	<0.05	<0.01	0.7	1.7	80
W843453		14.65	0.46	<0.05	<0.1	0.028	0.04	4.8	0.4	0.18	8600	1.08	<0.01	0.6	61.9	210
W843454		48.5	0.53	0.13	<0.1	0.041	0.04	4.4	0.6	0.18	9980	1.48	<0.01	0.2	41.5	140
W843455		47.0	0.47	0.10	<0.1	0.040	0.04	4.4	0.5	0.18	9630	1.54	<0.01	0.2	40.9	140
W843456		50.0	1.14	0.12	0.1	0.080	0.11	12.5	0.5	0.10	2460	3.22	0.01	0.8	28.9	350
W843457		7.03	0.34	<0.05	0.1	0.007	0.06	3.9	0.5	0.34	1920	0.78	<0.01	0.5	13.8	190
W843458		0.31	0.37	<0.05	<0.1	<0.005	0.09	3.0	0.3	0.32	174	0.05	<0.01	0.9	1.4	90
W843459		0.19	0.21	<0.05	<0.1	<0.005	0.04	2.5	0.2	0.24	167	<0.05	<0.01	0.5	0.7	50
W843460		0.14	0.28	<0.05	<0.1	<0.005	0.06	2.4	0.2	0.24	136	<0.05	<0.01	0.7	1.2	100

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CERTIFICATE OF ANALYSIS WH19255449

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
W843421		2.1	107.0	<0.002	<0.01	2.79	12.5	1	8.0	84.2	3.66	<0.05	7.76	0.816	0.87	0.6
W843422		1.1	5.4	0.002	0.03	1.14	0.7	1	0.6	148.0	0.14	<0.05	0.39	0.048	0.14	0.3
W843423		1.3	1.0	<0.002	0.03	0.21	0.3	1	<0.2	201	<0.05	<0.05	0.10	0.009	0.07	0.1
W843424		0.9	98.8	<0.002	0.01	0.80	20.6	1	3.6	69.5	3.73	<0.05	7.54	1.335	1.14	0.6
W843425		114.0	3.2	0.003	0.17	4.08	1.0	1	0.7	116.5	<0.05	0.24	0.13	0.015	0.07	0.4
W843426		54.2	5.1	<0.002	0.03	13.70	1.1	3	0.8	7.0	<0.05	0.76	0.69	0.014	0.08	2.6
W843427		7.4	1.5	0.002	0.07	19.05	1.5	21	0.3	14.7	<0.05	1.32	0.19	<0.005	0.49	3.0
W843428		13.1	1.1	<0.002	>10.0	5.81	0.2	19	0.4	19.3	<0.05	0.59	0.23	0.012	0.06	0.8
W843429		6.7	6.8	0.003	>10.0	25.4	0.5	6	0.3	83.6	<0.05	0.78	0.54	0.009	0.15	1.7
W843430		4.8	4.4	0.002	>10.0	4.90	1.7	3	0.9	106.0	<0.05	0.08	0.81	<0.005	0.11	0.2
W843431		1.2	102.5	<0.002	0.02	0.68	20.0	1	2.1	70.6	3.02	<0.05	6.32	1.560	1.17	0.6
W843432		1.9	5.3	<0.002	0.02	0.08	0.7	1	<0.2	245	0.11	<0.05	0.25	0.032	0.04	0.1
W843433		245	73.8	0.003	1.49	189.0	22.9	2	2.9	135.0	0.34	1.64	4.55	0.227	0.88	1.5
W843434		1.5	83.2	<0.002	0.02	1.24	22.0	1	1.9	61.6	3.31	<0.05	6.10	1.355	0.92	0.8
W843435		2.5	74.7	<0.002	0.09	2.46	18.3	1	1.6	80.2	3.45	<0.05	8.65	1.090	0.53	6.2
W843436		7.0	1.2	<0.002	0.03	0.32	0.4	2	<0.2	204	<0.05	<0.05	0.24	0.015	0.03	0.2
W843437		1.4	0.4	<0.002	0.01	0.17	0.2	1	<0.2	181.5	<0.05	<0.05	0.07	0.006	0.03	0.1
W843438		19.4	52.4	<0.002	0.05	0.62	20.6	1	3.1	153.0	1.23	<0.05	26.5	0.732	0.43	5.2
W843439		1.6	1.8	<0.002	0.01	0.21	0.5	2	<0.2	242	0.05	<0.05	0.15	0.022	0.06	0.2
W843440		4.5	38.3	<0.002	<0.01	1.64	7.5	1	0.8	137.0	1.28	<0.05	3.01	0.536	0.50	1.3
W843441		104.0	21.1	<0.002	0.01	3.01	0.9	1	24.3	61.3	0.09	<0.05	0.43	0.025	2.02	2.4
W843442		87.6	25.1	<0.002	0.01	2.56	1.0	1	24.0	68.4	0.10	<0.05	0.45	0.027	1.88	2.5
W843443		178.5	70.6	<0.002	0.01	4.22	1.8	1	133.5	95.4	0.17	<0.05	2.03	0.041	1.71	3.4
W843444		52.0	29.0	<0.002	0.01	0.71	0.9	1	34.6	131.0	<0.05	<0.05	0.38	0.006	0.18	2.1
W843445		20.9	8.0	<0.002	0.01	0.45	0.3	1	72.9	121.0	<0.05	<0.05	0.12	0.005	0.17	1.4
W843446		57.7	28.9	<0.002	0.01	0.98	0.6	1	24.0	94.9	0.06	<0.05	0.53	0.015	0.36	1.8
W843447		0.7	1.7	<0.002	0.01	0.09	0.2	1	0.3	84.2	<0.05	<0.05	0.13	0.005	0.02	0.4
W843448		4.3	1.5	<0.002	0.04	0.24	0.3	1	0.4	121.5	<0.05	<0.05	0.11	0.006	0.04	0.1
W843449		8.0	11.2	<0.002	<0.01	0.62	1.0	1	0.8	78.9	0.11	<0.05	0.37	0.043	0.12	0.2
W843450		3.9	5.2	<0.002	0.06	0.35	0.7	2	0.2	119.5	0.07	<0.05	0.26	0.028	0.05	0.1
W843451		<0.5	1.0	<0.002	0.03	0.09	0.3	1	<0.2	125.5	<0.05	<0.05	0.10	0.008	0.03	0.1
W843452		<0.5	1.1	<0.002	0.07	0.10	0.4	1	<0.2	124.5	<0.05	<0.05	0.14	0.013	0.03	0.1
W843453		18.0	1.5	<0.002	0.03	3.74	0.5	1	0.3	69.9	<0.05	0.05	0.19	0.009	3.53	1.5
W843454		3.5	2.0	<0.002	0.06	7.05	0.4	1	<0.2	24.6	<0.05	<0.05	0.17	<0.005	6.12	4.1
W843455		3.5	1.9	<0.002	0.06	6.86	0.4	1	<0.2	24.3	<0.05	<0.05	0.17	<0.005	5.79	3.9
W843456		79.5	1.8	<0.002	0.09	18.25	1.1	3	0.3	32.6	0.05	0.21	0.39	0.015	2.03	3.1
W843457		2.4	1.5	<0.002	0.02	1.46	0.4	1	<0.2	79.0	<0.05	<0.05	0.13	0.009	0.61	0.6
W843458		<0.5	1.8	<0.002	0.05	0.08	0.4	1	<0.2	141.0	<0.05	<0.05	0.15	0.018	0.02	0.1
W843459		<0.5	0.9	<0.002	0.02	<0.05	0.3	1	<0.2	133.5	<0.05	<0.05	0.09	0.010	0.02	0.1
W843460		<0.5	1.1	<0.002	0.01	<0.05	0.4	1	<0.2	144.0	<0.05	<0.05	0.14	0.014	<0.02	0.1

***** 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
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: Tiger

Finalized Date: 29-OCT-2019
Account: RCM

CERTIFICATE OF ANALYSIS WH19255449

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Zn-OG62	As-OG62
	Analyte	V	W	Y	Zn	Zr	Zn	As
	Units	ppm	ppm	ppm	ppm	ppm	%	%
	LOD	1	0.1	0.1	2	0.5	0.001	0.001
W843421		133	2.9	18.7	95	43.7		
W843422		8	1.1	3.9	30	6.4		
W843423		2	0.1	2.3	10	1.7		
W843424		271	1.4	24.5	67	34.8		
W843425		8	316	15.1	490	5.8		
W843426		10	12.8	4.2	229	7.8		1.465
W843427		10	275	10.7	379	3.4		3.04
W843428		6	2.5	1.7	20	3.6		
W843429		7	387	6.3	24	4.7		1.815
W843430		13	335	10.7	40	0.9		
W843431		295	1.8	26.6	83	27.4		
W843432		5	0.3	3.5	10	2.8		
W843433		156	41.4	13.7	372	270		
W843434		280	1.5	23.7	62	27.8		
W843435		210	1.0	19.3	64	191.0		
W843436		3	0.1	3.1	32	3.5		
W843437		2	0.1	2.7	97	1.2		
W843438		215	0.9	22.6	67	169.0		
W843439		5	0.1	3.1	107	2.4		
W843440		93	0.8	9.4	215	61.6		
W843441		6	1.9	24.8	4070	3.0		
W843442		6	2.5	30.6	4330	3.6		
W843443		11	2.7	11.3	7410	10.8		
W843444		4	1.0	4.2	8580	3.4		
W843445		<1	0.8	3.0	>10000	1.0	1.700	
W843446		3	1.2	3.6	5520	4.1		
W843447		1	<0.1	2.4	29	2.3		
W843448		2	0.1	3.3	142	1.4		
W843449		5	0.6	5.3	198	7.5		
W843450		4	0.2	4.6	85	4.7		
W843451		1	0.1	3.9	239	2.1		
W843452		3	0.1	3.7	79	3.5		
W843453		1	7.1	6.2	5860	2.4		1.085
W843454		3	10.0	4.8	4360	1.2		2.25
W843455		2	9.9	4.8	4230	1.0		2.20
W843456		7	46.6	12.4	4810	4.1		4.30
W843457		2	4.9	5.3	3330	2.2		
W843458		2	0.2	3.8	50	2.6		
W843459		2	0.1	3.6	20	1.8		
W843460		2	0.1	3.1	4	2.9		

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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Project: Tiger

Finalized Date: 29-OCT-2019
Account: RCM

CERTIFICATE OF ANALYSIS WH19255449

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-21
	WSH-22			

Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Applies to Method:				
	As-OG62	Au-AA26	ME-MS61	ME-OG62
	Zn-OG62			

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Finalized Date: 27-OCT-2019
Account: RCM

CERTIFICATE WH19255450

Project: Tiger

P.O. No.: R19-D33

This report is for 40 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 10-OCT-2019.

The following have access to data associated with this certificate:

ANDREW CARNE	ADAM COULTER	JULIA LANE

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
WSH-21	"Wash" crushers
WSH-22	"Wash" pulverizers
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 up to 250g 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-AA26	Ore Grade Au 50g FA AA finish	AAS
ME-MS61	48 element four acid 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:



Saa Traxler, General Manager, North Vancouver

ALS Canada Ltd.
2103 Dollarton Hwy
North Vancouver BC V7H 0A7
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Finalized Date: 27-OCT-2019
Account: RCM

Project: Tiger

CERTIFICATE OF ANALYSIS WH19255450

Sample Description	Method	WEI-21	Au-AA26	ME-MS61	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
W843461		11.95	<0.01	<0.01	0.11	2.4	40	0.07	0.02	38.1	0.07	2.60	0.6	2	<0.05	1.0
W843462		11.67	<0.01	<0.01	0.52	2.5	160	0.21	0.02	37.1	0.10	4.52	1.3	9	0.21	6.3
W843463		11.54	<0.01	<0.01	0.04	3.0	20	<0.05	0.01	37.8	0.13	1.52	0.4	1	<0.05	0.8
W843464		11.75	<0.01	<0.01	0.06	2.6	20	<0.05	0.02	39.1	0.09	1.66	0.3	1	<0.05	0.7
W843465		11.84	<0.01	0.01	0.26	2.9	80	0.12	0.02	38.2	0.06	4.00	0.9	3	0.07	2.9
W843466		0.05	0.42	1.51	8.97	8.5	330	1.46	0.36	3.49	0.07	34.1	19.3	106	1.80	34.6
W843467		6.09	<0.01	<0.01	0.02	1.0	10	<0.05	0.01	39.2	0.10	1.11	0.3	1	<0.05	0.7
W843468		2.05	0.22	2.74	5.52	431	1200	1.36	14.85	16.35	0.81	71.5	20.8	132	6.72	96.4
W843469		2.27	15.15	5.88	1.27	3400	300	0.43	101.0	0.75	1.57	45.2	27.3	37	0.76	194.0
W843470		<0.02	13.90	2.66	1.18	3410	280	0.36	102.0	0.70	1.49	39.8	27.1	36	0.69	193.5
W843471		1.92	11.65	13.35	0.16	5890	30	0.24	145.0	10.35	30.5	22.6	23.9	4	0.23	5780
W843472		6.74	0.01	0.02	0.11	7.6	20	0.09	0.24	33.7	0.02	1.16	0.5	1	<0.05	3.4
W843473		4.14	0.01	0.09	0.05	37.1	20	0.08	0.54	37.0	2.17	3.70	1.9	1	<0.05	25.7
W843474		8.29	<0.01	0.02	0.12	28.9	50	0.09	0.11	36.9	0.15	4.17	3.4	2	0.06	3.2
W843475		1.42	0.02	0.10	6.85	464	2030	2.56	1.25	2.99	1.32	34.1	7.9	51	3.00	63.4
W843476		7.95	<0.01	0.02	0.10	4.6	30	0.05	0.10	38.0	0.09	2.54	0.6	2	<0.05	3.4
W843477		11.51	<0.01	0.01	0.03	1.3	10	<0.05	0.04	38.3	0.08	1.83	0.6	1	<0.05	2.9
W843478		7.64	<0.01	0.06	1.48	8.4	360	0.37	0.07	34.2	0.13	26.4	4.2	11	0.59	6.7
W843479		9.00	<0.01	0.05	7.90	78.2	1490	1.89	0.10	7.04	0.17	116.5	11.4	191	2.81	10.3
W843480		3.09	0.01	0.08	6.65	45.0	1050	1.40	0.09	16.40	0.16	101.5	9.7	139	1.96	11.8
W843481		7.82	<0.01	0.04	0.70	17.6	130	0.15	0.05	35.1	0.15	18.00	2.4	16	0.20	7.7
W843482		11.70	<0.01	0.12	0.04	2.6	20	<0.05	0.03	38.4	0.13	3.23	0.4	1	<0.05	4.7
W843483		7.50	<0.01	0.03	0.80	21.9	160	0.19	0.02	35.0	0.13	14.65	1.5	15	0.18	4.9
W843484		5.35	<0.01	0.32	5.31	54.3	1120	0.84	0.04	18.55	0.09	77.2	41.1	134	0.89	37.7
W843485		10.46	<0.01	0.02	0.10	0.7	20	0.05	0.03	35.9	0.07	3.37	0.5	2	<0.05	2.6
W843486		11.84	<0.01	0.09	5.82	29.0	960	0.83	0.07	17.75	0.10	105.0	27.7	58	1.17	11.1
W843487		0.05	3.01	1.62	6.29	1910	370	1.10	2.78	2.05	1.08	35.6	48.6	588	4.86	1075
W843488		11.73	<0.01	0.07	1.18	12.3	190	0.21	0.05	31.8	0.08	26.9	6.9	22	0.29	6.4
W843489		10.23	<0.01	0.01	0.27	8.7	50	0.08	0.02	36.6	0.10	4.45	3.4	7	0.11	3.1
W843490		7.91	<0.01	0.04	8.94	215	1440	2.44	0.06	3.32	0.08	113.0	43.5	297	4.71	102.0
W843491		9.66	<0.01	0.07	9.06	217	1350	2.25	0.08	3.57	0.09	110.5	29.6	229	3.96	63.4
W843492		8.41	<0.01	0.01	1.18	15.6	230	0.30	0.03	33.7	0.11	25.0	2.3	22	0.40	1.9
W843493		11.19	<0.01	0.01	0.28	5.7	60	0.11	0.02	37.3	0.08	6.17	1.3	4	0.06	2.2
W843494		5.80	<0.01	0.05	0.27	4.0	50	0.09	0.02	33.7	0.08	6.43	0.9	4	0.11	2.7
W843495		5.69	0.02	1.28	0.25	11.8	50	0.08	0.04	34.5	0.14	7.77	1.0	3	0.11	42.6
W843496		11.15	<0.01	0.03	0.57	5.8	70	0.18	0.03	31.7	0.14	6.16	1.0	5	0.22	2.0
W843497		11.30	<0.01	0.08	0.83	10.4	270	0.24	0.08	33.2	0.09	18.65	1.9	6	0.38	3.3
W843498		12.07	0.01	0.02	0.45	2.4	220	0.13	0.05	36.3	0.08	10.10	1.0	6	0.17	1.9
W843499		11.50	<0.01	0.01	0.19	4.9	90	0.12	0.05	36.3	0.10	3.63	1.0	3	0.15	1.8
W843500		9.79	<0.01	0.01	0.14	6.0	70	0.07	0.03	36.3	0.10	2.79	0.7	3	0.08	1.2

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Finalized Date: 27-OCT-2019
Account: RCM

Project: Tiger

CERTIFICATE OF ANALYSIS WH19255450

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	Fe	Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P
	Units	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
W843461		0.14	0.30	<0.05	<0.1	<0.005	0.06	2.6	0.2	0.20	142	<0.05	<0.01	0.7	1.5	100
W843462		0.18	1.25	0.05	0.3	<0.005	0.34	3.7	1.2	0.42	161	0.07	<0.01	5.2	3.1	180
W843463		0.10	0.10	<0.05	<0.1	<0.005	0.02	1.5	<0.2	0.21	145	<0.05	<0.01	0.2	0.6	70
W843464		0.10	0.15	<0.05	<0.1	<0.005	0.03	2.0	<0.2	0.22	133	<0.05	<0.01	0.4	0.4	80
W843465		0.19	0.66	<0.05	0.1	<0.005	0.15	3.1	0.4	0.28	164	<0.05	<0.01	2.0	1.8	100
W843466		7.21	29.1	0.08	5.0	0.097	1.31	16.2	14.6	1.62	730	8.90	2.02	11.9	22.6	490
W843467		0.06	0.06	<0.05	<0.1	<0.005	<0.01	1.2	<0.2	0.18	190	<0.05	<0.01	<0.1	<0.2	10
W843468		4.54	14.95	0.10	1.3	0.094	2.71	37.5	13.7	2.95	736	2.02	0.13	34.3	81.0	1160
W843469		46.1	5.17	0.25	0.2	0.590	0.59	19.4	2.7	0.16	787	11.25	0.01	1.4	131.5	7600
W843470		45.8	4.87	0.20	0.2	0.567	0.54	16.8	2.6	0.16	807	10.80	0.01	1.3	129.5	7450
W843471		22.9	1.03	0.07	0.1	23.1	0.05	11.0	0.6	1.56	23300	1.58	<0.01	0.2	74.0	410
W843472		0.20	0.34	<0.05	<0.1	0.010	0.03	1.3	0.9	1.85	127	0.09	0.05	0.1	0.6	90
W843473		0.64	0.25	<0.05	<0.1	1.515	0.02	3.2	<0.2	0.37	1750	0.14	<0.01	0.2	3.0	50
W843474		0.32	0.39	<0.05	0.1	0.047	0.05	3.3	0.2	0.37	325	0.08	<0.01	0.9	5.4	70
W843475		5.06	25.2	0.07	1.3	0.091	4.26	18.2	9.4	0.28	205	0.75	0.08	81.4	47.4	600
W843476		0.21	0.32	<0.05	0.1	0.023	0.04	2.1	0.2	0.25	153	0.09	<0.01	0.6	1.2	110
W843477		0.23	0.11	<0.05	<0.1	0.010	0.01	2.0	<0.2	0.64	151	<0.05	<0.01	0.1	1.0	40
W843478		0.92	4.15	0.05	0.5	0.023	0.76	16.7	1.6	0.62	226	0.21	0.01	15.4	11.9	280
W843479		2.72	26.5	0.18	1.1	0.063	4.85	56.3	6.8	0.90	111	0.50	0.05	93.4	57.3	2230
W843480		2.59	19.30	0.14	1.4	0.060	3.46	53.5	4.7	0.67	156	1.17	0.03	71.7	39.8	2220
W843481		1.04	1.93	0.05	0.1	0.030	0.36	10.0	0.6	0.87	251	0.10	<0.01	6.0	10.7	210
W843482		0.42	0.15	<0.05	<0.1	0.011	0.02	2.5	<0.2	0.52	138	0.05	<0.01	0.2	1.0	50
W843483		0.74	2.36	<0.05	0.3	0.021	0.40	8.5	0.6	0.62	153	0.17	0.01	8.3	6.4	250
W843484		1.65	14.70	0.11	2.5	0.052	2.84	41.2	3.4	1.04	179	1.29	0.03	44.8	61.6	1730
W843485		0.40	0.34	0.05	0.1	0.010	0.04	2.5	0.2	0.77	149	0.05	<0.01	0.7	1.4	50
W843486		1.99	15.65	0.12	3.0	0.049	3.16	58.7	3.5	1.04	130	0.99	0.03	84.3	48.7	1220
W843487		8.37	16.00	0.07	6.3	0.117	1.35	16.9	21.4	2.37	783	6.59	0.83	3.0	514	370
W843488		0.82	3.15	<0.05	0.8	0.023	0.60	14.7	0.7	0.72	160	0.76	0.01	16.4	15.7	370
W843489		0.59	0.72	<0.05	0.1	0.014	0.14	3.0	<0.2	0.35	183	0.56	<0.01	2.0	5.3	70
W843490		7.92	28.7	0.16	1.7	0.099	4.99	51.3	4.3	1.06	487	1.93	0.06	71.0	190.0	2600
W843491		6.55	27.3	0.15	2.0	0.100	5.00	53.0	4.2	1.06	421	1.70	0.06	63.4	139.0	2800
W843492		0.83	3.16	0.06	0.4	0.043	0.57	13.8	0.8	0.44	223	0.17	0.01	12.6	7.1	380
W843493		0.40	0.74	<0.05	0.1	0.008	0.14	4.7	0.2	0.25	127	<0.05	<0.01	2.6	4.4	70
W843494		0.37	0.69	<0.05	0.1	0.011	0.14	4.5	0.6	2.43	163	<0.05	<0.01	2.2	2.6	80
W843495		0.36	0.73	<0.05	0.1	0.011	0.13	5.4	0.5	1.98	160	0.05	<0.01	2.0	2.8	90
W843496		0.30	1.36	<0.05	0.1	0.009	0.24	4.3	1.2	3.95	163	0.05	0.01	3.0	5.1	90
W843497		1.22	2.60	0.05	0.5	0.008	0.45	11.0	1.6	0.56	145	0.10	<0.01	8.3	9.9	150
W843498		0.39	1.27	<0.05	0.2	0.008	0.25	7.3	0.7	0.29	140	0.05	<0.01	3.9	4.3	120
W843499		0.33	0.58	<0.05	0.1	0.018	0.08	3.4	0.7	0.80	234	<0.05	<0.01	0.9	3.9	70
W843500		0.20	0.39	<0.05	0.1	<0.005	0.07	2.8	0.6	0.22	163	<0.05	<0.01	1.1	2.3	50

***** 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
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: 27-OCT-2019
Account: RCM

Project: Tiger

CERTIFICATE OF ANALYSIS WH19255450

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
W843461		<0.5	1.1	<0.002	0.01	0.05	0.3	1	<0.2	131.0	<0.05	<0.05	0.15	0.015	<0.02	0.1
W843462		<0.5	6.0	<0.002	0.03	0.06	0.7	1	0.2	130.0	0.26	<0.05	0.75	0.065	0.02	0.3
W843463		<0.5	0.3	<0.002	<0.01	<0.05	0.2	1	<0.2	133.5	<0.05	<0.05	0.05	<0.005	<0.02	0.1
W843464		<0.5	0.5	<0.002	0.01	<0.05	0.2	1	<0.2	138.5	<0.05	<0.05	0.08	0.008	<0.02	0.1
W843465		<0.5	2.5	<0.002	0.06	<0.05	0.5	1	<0.2	132.0	0.10	<0.05	0.30	0.031	<0.02	0.1
W843466		18.5	53.0	<0.002	0.04	0.61	18.7	1	3.2	152.0	1.22	<0.05	28.3	0.743	0.45	5.1
W843467		<0.5	0.1	<0.002	<0.01	<0.05	0.1	1	<0.2	139.0	<0.05	<0.05	0.04	<0.005	<0.02	0.1
W843468		16.9	118.0	<0.002	0.17	52.0	12.3	1	3.8	109.5	1.75	0.09	5.66	0.647	0.96	1.3
W843469		22.8	23.1	<0.002	0.16	32.9	4.0	2	2.4	24.7	0.07	0.14	22.3	0.036	0.33	1.0
W843470		23.0	21.2	<0.002	0.16	33.1	3.8	2	2.4	23.6	0.07	0.13	21.7	0.034	0.29	0.9
W843471		57.3	3.2	<0.002	0.55	31.3	0.9	3	38.4	36.1	<0.05	0.06	0.99	<0.005	0.08	0.6
W843472		<0.5	0.7	<0.002	0.01	0.14	0.2	1	<0.2	82.2	<0.05	<0.05	0.12	0.005	<0.02	0.2
W843473		1.9	0.7	<0.002	0.08	0.53	0.2	1	4.1	151.5	<0.05	<0.05	0.06	0.006	<0.02	0.1
W843474		1.2	1.6	<0.002	0.08	0.37	0.3	1	<0.2	198.5	0.05	<0.05	0.21	0.011	0.03	0.1
W843475		2.9	78.6	<0.002	0.03	19.80	7.2	<1	4.2	31.3	4.34	<0.05	9.59	0.613	0.80	0.9
W843476		1.0	1.1	<0.002	0.07	0.41	0.2	1	<0.2	189.0	<0.05	<0.05	0.14	0.008	<0.02	0.1
W843477		0.9	0.3	<0.002	0.08	0.20	0.2	1	<0.2	190.5	<0.05	<0.05	0.05	<0.005	<0.02	<0.1
W843478		2.4	16.7	<0.002	0.29	1.28	2.1	1	0.6	187.5	0.79	<0.05	2.51	0.124	0.08	0.2
W843479		8.3	69.6	<0.002	1.72	4.88	15.2	1	3.2	48.9	4.77	<0.05	10.50	1.230	0.43	0.6
W843480		10.5	72.6	<0.002	0.47	4.14	12.4	1	2.2	104.0	3.57	<0.05	8.04	0.886	0.31	1.0
W843481		1.7	6.7	<0.002	0.42	1.08	1.4	1	0.3	193.0	0.27	<0.05	0.78	0.100	0.06	0.1
W843482		1.3	0.4	<0.002	0.29	2.67	0.2	1	<0.2	180.5	<0.05	<0.05	0.07	<0.005	<0.02	<0.1
W843483		1.4	7.7	<0.002	0.03	1.59	1.6	1	0.3	189.5	0.41	<0.05	1.17	0.098	0.05	0.2
W843484		3.6	53.0	0.002	0.78	17.45	10.0	<1	1.6	149.0	2.41	<0.05	6.52	0.689	0.26	2.0
W843485		1.0	0.8	<0.002	0.03	4.05	0.3	1	<0.2	170.5	<0.05	<0.05	0.11	0.012	<0.02	<0.1
W843486		2.7	57.2	<0.002	1.05	5.56	5.3	<1	2.1	129.5	4.78	<0.05	12.20	0.434	0.37	1.2
W843487		239	74.2	0.002	1.43	184.5	19.9	2	2.9	131.0	0.32	1.58	4.75	0.211	0.97	1.5
W843488		3.4	11.0	<0.002	0.32	2.12	1.4	1	0.4	177.5	0.95	<0.05	2.48	0.115	0.08	0.5
W843489		1.7	2.8	<0.002	0.10	0.64	0.7	1	<0.2	168.5	0.11	<0.05	0.31	0.037	0.02	0.1
W843490		4.7	62.9	0.002	2.89	5.37	24.6	1	3.1	66.3	3.84	<0.05	8.79	1.330	0.89	1.6
W843491		6.0	67.6	<0.002	2.84	4.44	20.7	<1	3.0	70.2	3.61	<0.05	9.61	1.100	0.79	1.9
W843492		3.3	12.9	<0.002	0.10	0.55	2.0	1	0.5	201	0.68	<0.05	1.67	0.163	0.07	0.2
W843493		2.0	3.1	<0.002	0.22	0.21	0.6	1	<0.2	184.5	0.16	<0.05	0.40	0.031	0.02	0.1
W843494		1.8	3.3	<0.002	0.18	0.73	0.5	1	<0.2	152.5	0.11	<0.05	0.38	0.029	0.03	0.1
W843495		2.1	3.2	<0.002	0.18	20.3	0.6	1	0.2	161.5	0.10	<0.05	0.40	0.026	0.02	0.1
W843496		2.7	6.1	<0.002	0.10	0.60	0.7	1	0.2	115.0	0.18	<0.05	0.80	0.040	0.04	0.1
W843497		1.9	11.7	<0.002	1.25	0.63	1.2	1	0.5	135.0	0.55	<0.05	2.57	0.063	0.04	0.1
W843498		1.6	5.9	<0.002	0.32	0.35	0.8	1	0.3	167.0	0.23	<0.05	1.04	0.043	0.02	0.1
W843499		1.9	2.7	<0.002	0.18	0.26	0.5	1	<0.2	157.5	0.05	<0.05	0.24	0.018	0.04	0.1
W843500		2.1	2.1	<0.002	0.05	0.16	0.4	1	<0.2	119.0	0.05	<0.05	0.18	0.018	0.04	0.2

***** 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
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: 27-OCT-2019
Account: RCM

Project: Tiger

CERTIFICATE OF ANALYSIS WH19255450

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	V	W	Y	Zn	Zr
	Units	ppm	ppm	ppm	ppm	ppm
	LOD	1	0.1	0.1	2	0.5
W843461		2	0.1	2.6	7	2.5
W843462		8	0.2	4.9	9	10.8
W843463		1	<0.1	2.3	11	1.1
W843464		1	<0.1	2.6	6	1.1
W843465		4	0.1	3.2	7	2.7
W843466		212	0.8	22.9	69	163.0
W843467		1	<0.1	2.0	10	0.6
W843468		98	8.0	14.8	163	49.9
W843469		24	152.0	14.1	261	6.6
W843470		23	165.0	13.4	264	6.1
W843471		2	68.2	15.6	7070	3.3
W843472		1	0.2	2.2	8	1.6
W843473		1	0.3	2.6	519	1.3
W843474		2	0.2	3.5	20	2.7
W843475		79	6.2	8.6	720	49.9
W843476		2	0.1	2.6	8	2.3
W843477		1	0.1	2.4	6	0.8
W843478		16	0.5	10.7	25	20.0
W843479		164	2.1	17.3	47	46.1
W843480		116	1.4	17.6	40	74.4
W843481		13	0.2	5.8	41	4.5
W843482		1	<0.1	2.8	15	0.9
W843483		13	0.3	4.4	58	9.8
W843484		146	0.9	15.1	38	97.4
W843485		2	<0.1	2.2	5	1.5
W843486		65	0.8	14.8	34	113.0
W843487		148	39.3	12.8	366	259
W843488		18	0.2	6.4	8	31.1
W843489		5	0.1	2.1	5	3.6
W843490		202	1.2	20.2	36	70.7
W843491		188	1.5	21.3	35	83.0
W843492		20	0.4	6.5	15	13.2
W843493		5	0.1	2.9	3	3.7
W843494		5	0.1	3.5	10	3.5
W843495		5	0.1	3.9	13	3.7
W843496		6	0.2	3.7	21	3.6
W843497		12	0.8	6.8	12	18.3
W843498		11	0.5	4.2	4	5.5
W843499		4	0.2	3.9	28	3.4
W843500		3	0.2	3.4	25	3.9

***** 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: Tiger

Finalized Date: 27-OCT-2019
Account: RCM

CERTIFICATE OF ANALYSIS WH19255450

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-21
WSH-22			

Applies to Method: Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Au-AA26	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.**
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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 19-OCT-2019
Account: RCM

CERTIFICATE WH19255451

Project: Tiger

P.O. No.: R19-D34

This report is for 13 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 10-OCT-2019.

The following have access to data associated with this certificate:

ANDREW CARNE	JULIA LANE	

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
WSH-21	"Wash" crushers
WSH-22	"Wash" pulverizers
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 up to 250g 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-AA26	Ore Grade Au 50g FA AA finish	AAS
ME-MS61	48 element four acid 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:



Saa Traxler, General Manager, North Vancouver

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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VANCOUVER BC V6B 1L8

Finalized Date: 19-OCT-2019
Account: RCM

Project: Tiger

CERTIFICATE OF ANALYSIS WH19255451

Sample Description	Method	WEI-21	Au-AA26	ME-MS61	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
W843501		12.08	0.01	0.01	0.05	<0.2	40	<0.05	0.02	35.8	0.10	1.54	0.5	1	<0.05	2.0
W843502		11.05	<0.01	0.01	0.06	0.8	50	<0.05	0.01	35.8	0.10	1.63	0.5	1	0.05	1.2
W843503		<0.02	<0.01	0.01	0.06	0.9	50	0.07	0.01	35.5	0.12	1.83	0.5	1	<0.05	1.6
W843504		12.22	<0.01	<0.01	0.04	0.3	30	<0.05	0.01	35.8	0.09	1.43	0.5	1	<0.05	2.1
W843505		11.49	<0.01	<0.01	0.07	1.1	40	0.06	0.01	35.7	0.09	1.51	0.7	1	0.05	1.2
W843506		0.05	3.00	1.69	6.54	1955	380	1.38	2.79	2.14	1.10	35.9	53.7	584	4.64	1090
W843507		11.31	<0.01	0.01	0.05	1.9	40	<0.05	0.01	37.3	0.08	1.61	0.5	1	<0.05	1.7
W843508		5.59	<0.01	0.01	0.09	0.2	50	0.06	0.01	36.9	0.10	2.01	0.6	1	0.18	1.4
W843509		5.38	<0.01	<0.01	0.07	<0.2	50	<0.05	0.01	36.0	0.08	1.98	0.5	1	0.09	1.4
W843510		11.80	<0.01	0.01	0.13	1.3	100	0.05	0.01	35.9	0.09	2.18	0.6	1	0.09	1.1
W843511		0.05	0.41	1.59	9.00	5.4	310	1.47	0.30	3.30	0.06	36.1	20.1	102	1.85	35.1
W843512		11.47	<0.01	0.01	0.10	<0.2	70	0.05	0.02	36.1	0.07	2.31	0.6	1	0.10	1.2
W843513		6.21	<0.01	<0.01	0.10	0.2	20	0.10	0.01	32.1	0.02	1.03	0.5	1	<0.05	1.4

***** 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
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: 19-OCT-2019
Account: RCM

Project: Tiger

CERTIFICATE OF ANALYSIS WH19255451

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	Fe	Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P
	Units	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm
	LOD	0.01	0.05	0.05	0.1	0.005	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2	10
W843501		0.12	0.15	0.11	<0.1	<0.005	0.02	1.8	0.2	0.28	109	0.07	<0.01	0.2	0.7	70
W843502		0.11	0.19	0.15	<0.1	<0.005	0.03	2.0	0.3	0.29	106	<0.05	<0.01	0.4	0.6	60
W843503		0.10	0.20	0.14	<0.1	<0.005	0.03	2.1	0.3	0.28	106	0.05	<0.01	0.4	0.5	70
W843504		0.09	0.14	0.14	<0.1	<0.005	0.02	1.7	0.2	0.58	108	0.06	<0.01	0.3	0.5	50
W843505		0.13	0.24	0.14	<0.1	<0.005	0.03	1.7	0.4	0.36	127	0.09	<0.01	0.4	0.9	60
W843506		8.61	17.60	0.13	6.3	0.128	1.40	17.6	25.0	2.42	794	6.37	0.87	3.2	526	380
W843507		0.10	0.14	0.10	0.1	<0.005	0.02	1.9	0.3	0.28	101	0.07	<0.01	0.2	0.6	50
W843508		0.14	0.26	0.11	0.1	<0.005	0.06	2.2	0.5	0.38	113	0.06	<0.01	0.6	0.9	80
W843509		0.12	0.24	0.15	<0.1	<0.005	0.04	2.1	0.3	0.34	109	<0.05	<0.01	0.4	0.6	70
W843510		0.12	0.37	0.11	0.1	<0.005	0.08	2.2	0.5	0.25	109	<0.05	<0.01	1.7	1.1	80
W843511		6.85	31.1	0.14	5.0	0.101	1.25	16.7	14.5	1.51	683	9.13	1.92	11.7	24.2	460
W843512		0.16	0.29	0.11	<0.1	<0.005	0.05	2.4	0.4	0.26	126	0.08	<0.01	0.6	1.1	60
W843513		0.11	0.37	0.13	0.1	<0.005	0.03	1.2	1.1	1.65	108	0.06	0.05	0.4	<0.2	70

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VANCOUVER BC V6B 1L8

Finalized Date: 19-OCT-2019
Account: RCM

Project: Tiger

CERTIFICATE OF ANALYSIS WH19255451

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
W843501		1.9	0.5	<0.002	0.05	0.16	0.2	1	<0.2	135.5	<0.05	<0.05	0.07	<0.005	<0.02	0.1
W843502		1.1	1.0	<0.002	0.04	0.13	0.2	<1	<0.2	135.0	<0.05	<0.05	0.09	0.007	<0.02	0.1
W843503		1.1	0.9	<0.002	0.04	0.12	0.2	1	<0.2	137.5	<0.05	<0.05	0.10	0.007	<0.02	0.1
W843504		0.9	0.6	<0.002	0.03	0.11	0.2	<1	<0.2	146.5	<0.05	<0.05	0.08	0.005	<0.02	0.1
W843505		0.7	1.0	<0.002	0.03	0.15	0.2	<1	<0.2	142.0	<0.05	<0.05	0.10	0.008	<0.02	0.1
W843506		245	74.2	<0.002	1.50	192.0	23.0	1	3.1	134.0	0.33	1.56	4.80	0.238	1.01	1.6
W843507		0.8	0.7	<0.002	0.03	0.27	0.2	1	<0.2	134.5	<0.05	<0.05	0.07	0.005	<0.02	<0.1
W843508		0.7	2.5	<0.002	0.05	0.12	0.3	1	<0.2	147.0	<0.05	<0.05	0.10	0.011	<0.02	0.1
W843509		0.7	1.4	<0.002	0.05	0.14	0.3	1	<0.2	139.0	<0.05	<0.05	0.09	0.008	<0.02	0.1
W843510		0.7	2.1	<0.002	0.03	0.11	0.2	<1	<0.2	145.0	0.11	<0.05	0.25	0.010	<0.02	0.1
W843511		18.9	66.5	<0.002	0.04	0.67	18.7	1	3.4	146.0	1.23	<0.05	26.9	0.718	0.45	4.7
W843512		0.7	1.7	<0.002	0.06	0.09	0.4	1	<0.2	147.5	<0.05	<0.05	0.12	0.013	<0.02	0.1
W843513		<0.5	0.8	<0.002	<0.01	0.11	0.2	1	<0.2	81.0	<0.05	<0.05	0.08	<0.005	0.02	0.2

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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 19-OCT-2019
Account: RCM

Project: Tiger

CERTIFICATE OF ANALYSIS WH19255451

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61
	Analyte	V	W	Y	Zn	Zr
	Units	ppm	ppm	ppm	ppm	ppm
	LOD	1	0.1	0.1	2	0.5
W843501		1	0.1	3.2	12	1.2
W843502		1	0.1	3.3	10	1.4
W843503		1	0.1	3.4	12	1.5
W843504		1	0.1	3.2	7	1.1
W843505		1	0.1	3.2	13	2.0
W843506		152	43.9	12.9	369	276
W843507		1	0.1	3.2	8	1.3
W843508		2	0.1	3.4	10	2.2
W843509		1	0.1	3.3	8	1.5
W843510		2	0.1	3.8	8	3.2
W843511		197	0.8	22.6	63	168.5
W843512		2	0.1	3.6	6	1.6
W843513		1	0.1	2.2	4	1.7

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Project: Tiger

Finalized Date: 19-OCT-2019
Account: RCM

CERTIFICATE OF ANALYSIS WH19255451

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-21
WSH-22			

Applies to Method: Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Au-AA26	ME-MS61

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VANCOUVER BC V6B 1L8

Finalized Date: 3-SEP-2019
Account: RCM

CERTIFICATE WH19210571

Project: Rau

P.O. No.: R19-DR1

This report is for 29 Drill Core samples submitted to our lab in Whitehorse, YT, Canada on 24-AUG-2019.

The following have access to data associated with this certificate:

ANDREW CARNE	ADAM COULTER	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
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

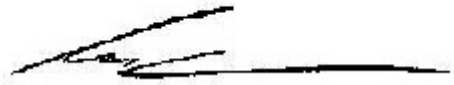
ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA25	Ore Grade Au 30g FA AA finish	AAS
Au-GRA21	Au 30g FA-GRAV finish	WST-SIM
ME-MS61	48 element four acid ICP-MS	
Ag-OG62	Ore Grade Ag - Four Acid	
ME-OG62	Ore Grade Elements - Four Acid	ICP-AES
Pb-OG62	Ore Grade Pb - Four Acid	
Cu-OG62	Ore Grade Cu - Four Acid	
ME-MS85	Lithium Borate Fusion - Select Elements	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
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Finalized Date: 3-SEP-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19210571

Sample Description	Method	WEI-21	Au-AA25	Au-GRA21	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	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	ppm
	LOD	0.02	0.01	0.05	0.01	0.01	0.2	10	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05
R500823		0.70	0.02		0.96	1.00	28.8	1030	1.93	2.23	18.20	85.7	21.8	8.6	21	11.65
R500824		0.06	0.01		0.05	0.14	3.0	270	0.23	1.14	22.8	0.95	5.92	1.0	1	1.16
R500825		0.20	0.24		1.25	0.19	23.3	280	0.89	167.0	22.0	2.54	5.57	1.0	2	1.35
R500826		0.57	0.10		0.20	0.15	4.2	190	0.80	0.94	22.6	0.21	5.59	0.6	1	0.94
R500827		0.10	2.35		>100	0.59	1240	50	160.0	263	17.35	11.70	3.37	1.8	13	0.83
R608077		0.38	17.75		13.45	1.00	241	1450	2.83	119.5	15.70	88.9	28.9	18.8	20	5.33
R608078		0.54	0.15		2.35	0.97	25.3	1340	1.96	2.88	18.30	101.0	33.6	9.3	20	4.50
R608079		0.19	0.91		1.92	5.06	86.4	2910	6.83	19.40	9.34	72.2	67.6	11.0	60	9.55
R608080		0.54	0.02		1.11	0.69	17.7	1030	1.15	10.05	19.15	72.4	29.1	2.2	16	2.68
R608081		0.10	0.34		2.28	0.25	24.5	180	0.57	432	21.6	4.89	5.03	1.2	2	0.43
R608082		0.07	1.04		7.51	0.04	60.9	180	0.22	1500	22.0	2.16	2.96	0.8	1	0.22
R608083		0.55	0.01		0.05	0.04	3.3	130	0.15	3.65	23.1	0.35	3.17	0.3	1	0.19
R608084		0.06	0.06		0.33	0.04	34.2	150	0.14	30.0	24.1	0.48	3.25	1.1	1	0.29
R608085		0.33	0.02		0.03	0.03	1.7	110	0.13	0.60	23.3	0.13	3.36	0.2	1	0.19
R608086		0.06	5.06		0.93	0.05	8.2	20	0.72	66.5	22.7	0.20	3.61	0.6	1	<0.05
R608087		0.09	7.08		8.75	0.03	25.5	40	0.26	335	23.4	1.85	3.44	0.6	<1	0.06
R608088		0.05	12.00		29.0	0.05	237	150	0.36	149.5	17.95	9.91	3.75	2.7	1	0.26
R608089		0.54	0.21		0.57	0.28	4.2	690	0.47	2.86	22.3	0.60	4.84	1.5	2	2.29
R608090		0.05	>100	173.0	60.8	0.32	32.8	140	3.57	4260	7.26	6.22	7.31	5.9	2	0.15
R608091		0.16	0.11		0.09	0.14	9.1	240	0.46	5.97	22.1	0.09	6.40	2.2	1	0.94
R608092		0.08	1.73		13.20	4.72	>10000	930	1.73	302	14.00	1.79	401	138.0	49	8.34
R608093		0.43	0.54		0.48	0.20	3.6	460	0.52	63.3	24.5	0.18	7.07	0.9	2	1.66
R608094		0.37	1.38		1.17	0.47	10.9	720	1.71	1.43	22.2	2.16	7.74	1.9	4	3.12
R608095		0.35	0.11		0.17	0.15	3.5	420	0.29	3.18	23.6	0.11	6.13	0.8	1	1.23
R608096		0.51	0.01		0.02	0.05	1.2	20	<0.05	0.13	35.2	0.03	0.88	0.6	1	0.06
R608097		0.19	0.01		0.06	0.11	1.5	430	0.33	0.78	24.3	0.11	4.80	2.5	1	1.11
R608098		0.26	0.53		1.45	0.49	54.2	770	2.40	101.5	19.35	25.7	8.49	12.6	4	2.99
R608099		0.08	1.21		24.6	4.34	>10000	570	1.58	268	14.55	2.91	233	71.6	53	5.58
R608100		1.21	0.01		0.14	0.10	8.4	210	0.45	0.56	23.4	13.35	4.35	5.9	1	0.87

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Finalized Date: 3-SEP-2019
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Project: Rau

CERTIFICATE OF ANALYSIS WH19210571

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	Cu	Fe	Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni
	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	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2
R500823		198.0	2.02	2.56	0.10	0.2	0.027	0.33	21.3	16.1	12.30	1170	1.85	0.03	0.9	122.5
R500824		71.8	0.35	0.44	0.12	<0.1	0.013	0.09	4.3	6.1	13.15	628	3.35	0.01	0.1	9.5
R500825		3680	1.04	1.95	0.08	0.1	0.799	0.08	3.9	5.3	12.15	537	11.15	0.02	0.3	17.0
R500826		344	0.41	0.75	0.12	<0.1	0.068	0.06	4.1	4.6	11.85	481	4.59	0.02	0.2	27.1
R500827		1745	0.69	3.42	0.57	0.3	1.255	0.02	3.1	8.7	9.19	170	8.20	0.13	1.2	50.0
R608077		1120	7.48	2.14	0.18	0.2	0.647	0.22	25.4	11.7	10.25	1120	4.96	0.03	0.6	220
R608078		210	2.38	2.35	0.12	0.3	0.150	0.25	35.8	12.8	12.00	951	2.78	0.05	1.1	103.5
R608079		472	7.57	6.31	0.25	0.8	0.164	0.73	55.1	28.1	6.97	397	5.77	0.11	3.0	376
R608080		72.1	1.34	1.57	0.11	0.2	0.099	0.16	35.0	10.6	12.35	648	1.28	0.04	0.7	63.9
R608081		41.4	0.52	0.31	0.12	<0.1	0.021	0.04	4.0	3.0	12.15	355	4.91	0.01	0.1	22.7
R608082		54.8	0.44	0.16	0.16	<0.1	0.057	0.02	2.7	2.5	12.20	450	15.35	<0.01	0.1	16.4
R608083		24.8	0.22	0.19	0.20	<0.1	0.019	0.02	2.8	2.8	12.95	367	1.50	<0.01	<0.1	5.6
R608084		250	1.80	0.17	0.09	<0.1	0.032	0.02	2.8	2.8	11.65	551	2.07	<0.01	<0.1	8.6
R608085		15.7	0.18	0.18	0.19	<0.1	<0.005	0.02	3.0	2.7	13.40	434	1.57	<0.01	<0.1	4.8
R608086		277	1.14	0.47	0.08	<0.1	0.099	<0.01	3.2	1.4	12.95	457	3.35	0.01	<0.1	11.1
R608087		857	0.40	0.71	0.16	<0.1	0.671	0.01	3.0	1.6	13.10	479	1.64	0.01	<0.1	3.9
R608088		>10000	7.65	13.95	0.13	<0.1	18.85	0.03	3.5	2.8	10.25	494	24.9	0.01	<0.1	51.2
R608089		313	0.32	0.74	0.10	0.1	0.046	0.16	3.7	9.7	12.50	484	12.25	0.01	0.6	18.1
R608090		>10000	11.25	15.50	0.15	<0.1	12.00	0.02	5.4	3.1	10.05	249	60.4	0.06	0.2	149.5
R608091		298	0.55	0.55	0.05	<0.1	0.033	0.08	4.5	5.5	12.15	632	5.71	0.01	0.2	14.1
R608092		6500	9.98	16.30	0.39	1.6	3.01	1.50	234	35.2	1.27	2120	19.00	0.96	8.0	67.3
R608093		1180	0.58	0.95	0.07	0.1	0.192	0.15	4.9	9.3	12.05	593	13.05	0.01	0.2	19.9
R608094		4310	1.46	2.70	0.07	0.2	0.666	0.24	5.2	13.6	12.60	620	18.15	0.04	0.5	32.1
R608095		559	0.29	0.55	0.06	0.1	0.078	0.09	4.4	5.8	12.55	596	7.65	<0.01	0.2	14.8
R608096		21.6	0.09	0.18	0.07	<0.1	<0.005	0.02	1.1	1.1	1.79	96	0.15	0.02	0.1	1.1
R608097		62.5	0.29	0.39	0.08	<0.1	0.009	0.08	3.4	5.6	12.85	573	7.46	<0.01	0.2	24.5
R608098		1445	4.15	1.63	0.07	0.1	0.872	0.18	5.4	11.5	12.30	863	21.6	0.02	0.4	147.5
R608099		>10000	11.60	13.70	0.25	1.6	4.75	1.12	139.0	42.2	1.31	1780	13.50	1.19	7.9	75.0
R608100		124.0	1.19	0.29	0.05	<0.1	0.008	0.04	3.0	3.9	11.90	720	6.35	0.01	0.1	50.3

***** 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
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: 3-SEP-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19210571

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
R500823		1500	23.0	128.0	<0.002	0.03	28.1	1.7	2	5.6	143.0	0.07	<0.05	1.23	0.028	1.50
R500824		80	1.5	9.5	0.013	0.04	0.70	0.2	1	0.7	153.5	<0.05	<0.05	0.23	0.005	0.36
R500825		110	7.3	10.0	0.127	0.68	6.77	0.3	4	57.8	151.5	<0.05	0.09	0.29	0.009	0.39
R500826		150	2.7	7.1	0.051	0.17	0.74	0.3	2	5.6	161.0	<0.05	<0.05	0.16	0.006	0.25
R500827		230	>10000	0.7	0.016	1.47	>10000	1.0	219	231	122.0	0.08	14.20	0.52	0.026	1.03
R608077		1120	359	46.5	0.002	0.09	280	1.5	26	460	151.5	0.05	0.33	0.92	0.020	1.24
R608078		1340	53.5	31.8	0.005	0.08	39.1	1.8	6	21.5	190.0	0.07	<0.05	1.33	0.032	0.81
R608079		3680	201	70.2	0.017	0.04	108.5	5.3	4	158.0	257	0.20	0.07	3.69	0.096	1.62
R608080		1130	99.6	18.0	<0.002	0.06	70.1	1.4	2	19.0	161.5	0.05	0.05	1.13	0.022	0.38
R608081		190	254	2.7	0.005	0.02	108.5	0.3	5	10.7	140.5	<0.05	0.07	0.21	<0.005	0.14
R608082		60	957	1.2	0.007	0.10	392	0.2	16	5.7	134.5	<0.05	0.29	0.10	<0.005	0.12
R608083		50	3.4	1.3	0.018	0.08	2.40	0.1	2	0.8	137.5	<0.05	<0.05	0.06	<0.005	0.08
R608084		40	27.3	1.5	0.014	1.22	11.20	0.6	7	1.4	149.0	<0.05	<0.05	0.06	<0.005	0.11
R608085		60	1.2	1.4	0.019	0.03	1.11	0.1	1	0.6	145.0	<0.05	<0.05	0.05	<0.005	0.09
R608086		50	37.6	<0.1	0.065	0.68	22.6	0.1	5	11.7	143.5	<0.05	0.05	0.07	<0.005	0.03
R608087		50	242	0.2	0.006	0.10	83.0	0.1	3	109.0	147.0	<0.05	0.15	0.05	<0.005	0.02
R608088		80	231	2.0	0.006	1.33	136.0	0.1	33	>500	100.0	<0.05	0.20	0.13	<0.005	0.18
R608089		90	3.3	16.7	0.034	0.05	2.62	0.5	2	6.2	149.5	0.05	<0.05	0.64	0.012	0.68
R608090		50	417	0.5	0.007	0.78	245	0.5	38	>500	11.6	<0.05	0.95	0.14	0.010	0.28
R608091		50	2.3	8.9	0.019	0.13	0.72	0.3	2	2.9	140.0	<0.05	<0.05	0.21	0.006	0.38
R608092		900	29.1	89.2	0.008	1.85	38.9	6.6	9	111.0	229	0.54	3.03	8.79	0.218	0.96
R608093		90	9.0	17.9	0.115	0.13	3.57	0.4	2	16.3	159.5	<0.05	<0.05	0.30	0.009	0.69
R608094		260	6.2	29.9	0.134	0.24	5.09	0.8	4	46.2	134.5	<0.05	<0.05	0.69	0.021	1.23
R608095		60	1.8	11.1	0.079	0.10	0.72	0.3	1	6.6	158.5	<0.05	<0.05	0.25	0.007	0.49
R608096		60	0.7	0.9	<0.002	<0.01	0.17	0.1	1	0.4	80.1	<0.05	<0.05	0.05	<0.005	0.03
R608097		60	1.9	10.4	0.040	<0.01	0.46	0.3	2	1.2	168.0	<0.05	<0.05	0.26	0.006	0.42
R608098		130	40.2	26.6	0.035	0.01	18.55	0.6	11	66.6	131.5	<0.05	0.05	0.39	0.014	0.96
R608099		810	29.0	60.1	0.007	2.60	31.5	5.9	11	96.5	245	0.50	1.81	7.90	0.203	0.98
R608100		50	3.4	5.6	0.029	0.02	2.20	0.1	3	0.6	163.5	<0.05	<0.05	0.08	<0.005	0.26

***** See Appendix Page for comments regarding this certificate *****

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1016-510 W HASTINGS ST
VANCOUVER BC V6B 1L8

Finalized Date: 3-SEP-2019
Account: RCM

Project: Rau

CERTIFICATE OF ANALYSIS WH19210571

Sample Description	Method	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	ME-MS61	Ag-OG62	Pb-OG62	Cu-OG62	ME-MS85
	Analyte	U	V	W	Y	Zn	Zr	Ag	Pb	Cu	Sn
	Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm
	LOD	0.1	1	0.1	0.1	2	0.5	1	0.001	0.001	1
R500823		7.1	168	6.0	39.8	1050	7.6				
R500824		2.0	29	1.6	2.9	31	1.1				
R500825		5.4	30	3.6	3.6	160	2.1				
R500826		5.8	26	1.6	2.6	18	1.7				
R500827		9.6	125	8.0	4.1	244	10.8	520	2.11		
R608077		9.5	135	7.0	56.6	2610	6.5				
R608078		7.0	164	4.4	44.4	1140	8.6				
R608079		12.2	327	21.3	120.0	2840	27.0				
R608080		5.7	151	6.3	33.2	480	6.1				
R608081		3.2	32	4.2	8.0	172	1.6				
R608082		8.1	30	7.9	3.2	30	0.5				
R608083		6.8	29	3.2	3.8	25	<0.5				
R608084		7.9	28	3.3	12.0	30	<0.5				
R608085		5.7	24	4.2	4.2	13	0.5				
R608086		6.3	62	8.4	4.1	16	0.5				
R608087		4.1	31	6.0	3.5	162	<0.5				
R608088		37.6	37	21.7	4.1	2630	0.6			2.12	3080
R608089		2.0	44	2.9	2.8	78	3.1				
R608090		40.0	67	2.9	42.3	2570	1.6			NSS	NSS
R608091		3.5	37	1.7	3.6	32	1.4				
R608092		13.6	48	24.9	32.8	217	67.3				
R608093		5.7	26	2.7	4.9	55	2.3				
R608094		12.0	48	4.8	9.5	303	5.3				
R608095		3.0	23	2.1	3.5	49	1.8				
R608096		0.2	1	0.1	2.1	5	1.2				
R608097		1.3	29	3.8	2.8	146	1.4				
R608098		2.9	45	6.3	44.6	2520	3.4				
R608099		8.9	48	287	26.1	330	53.6			1.225	
R608100		1.8	22	1.6	13.1	843	0.7				

***** See Appendix Page for comments regarding this certificate *****

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VANCOUVER BC V6B 1L8

Project: Rau

Finalized Date: 3-SEP-2019
Account: RCM

CERTIFICATE OF ANALYSIS WH19210571

CERTIFICATE COMMENTS

ANALYTICAL COMMENTS

NSS is non-sufficient sample.
Applies to Method: ALL METHODS

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-23
	PUL-31	PUL-QC	SPL-21	WEI-21

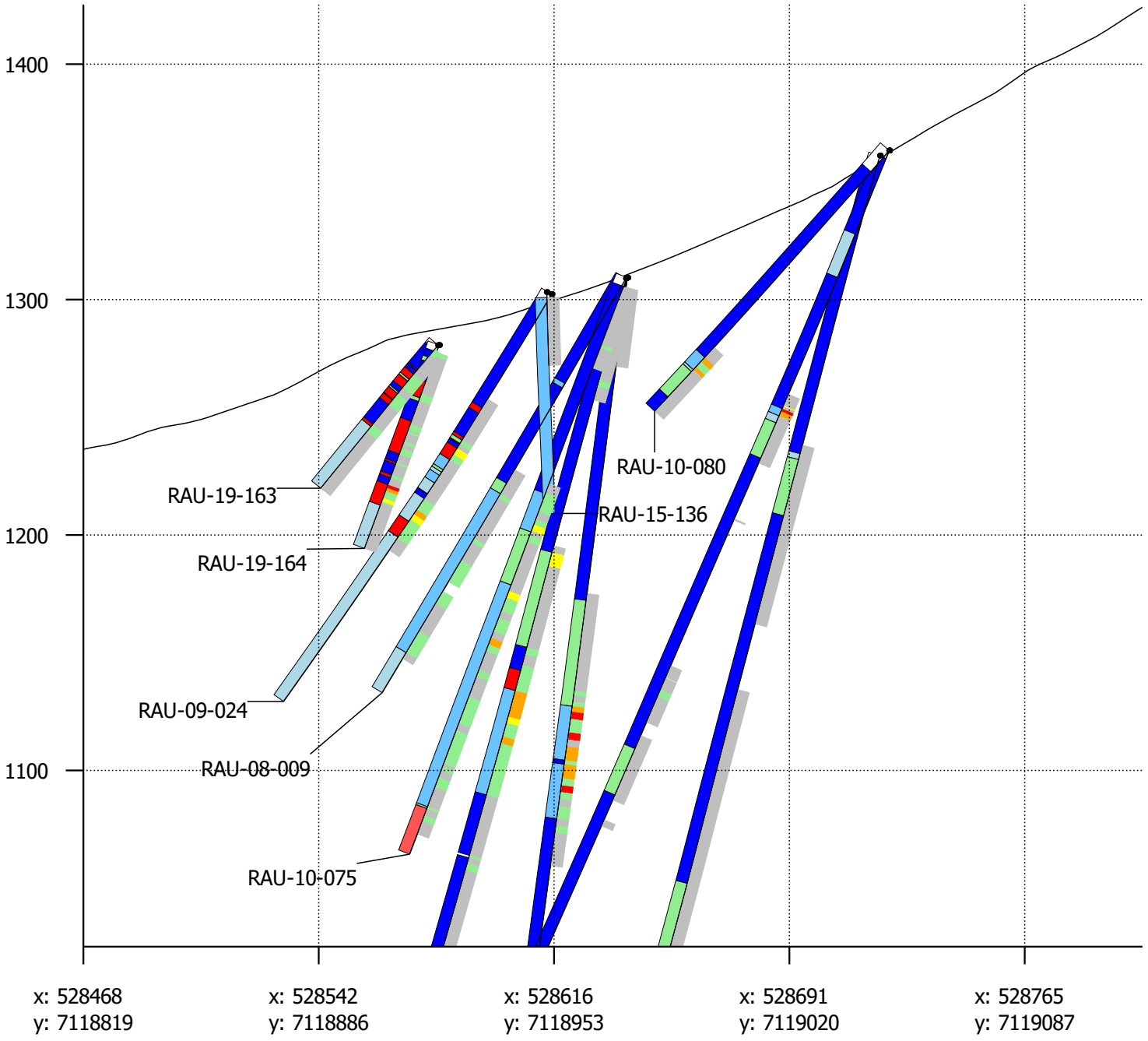
Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.

Applies to Method:				
	Ag-OG62	Au-AA25	Au-GRA21	Cu-OG62
	ME-MS61	ME-MS85	ME-OG62	Pb-OG62

APPENDIX XV

DIAMOND DRILLING – CROSS SECTIONS

RAU-19-163 and -164



ATAC RESOURCES LTD.

Legend

RockType

- DST
- OX
- LEP
- OXL
- LST
- VOL
- MBL
- MX
- OVB

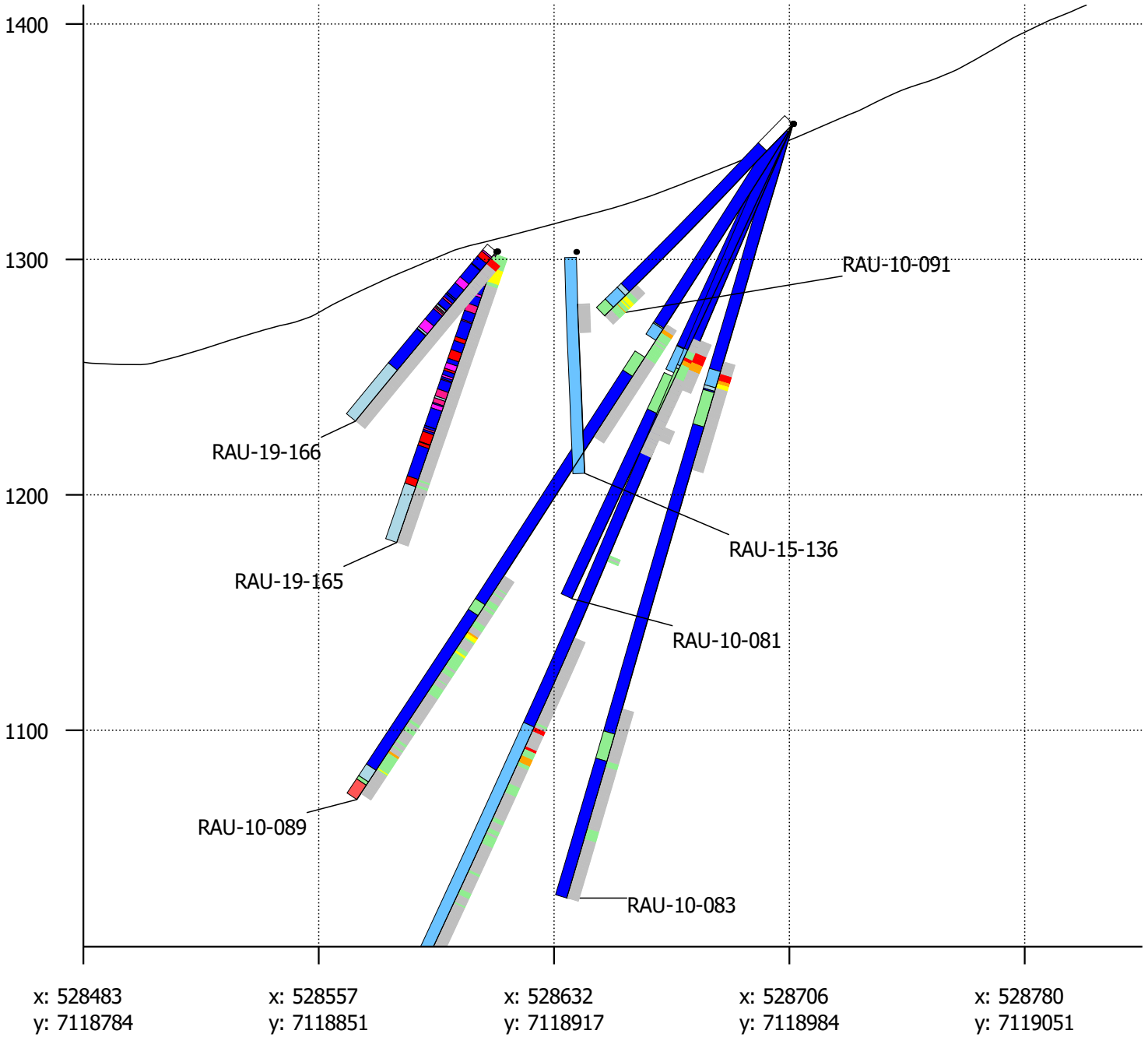
Au

- < 0.1
- ≤ 5
- ≤ 1
- > 5
- ≤ 2

Scale: 1:2,500

0m — 100m

RAU-19-165 and -166



ATAC RESOURCES LTD.

Legend

RockType

BAS	OVB
DST	OX
LEP	OXL
LST	PEP
MBL	VOL
MX	

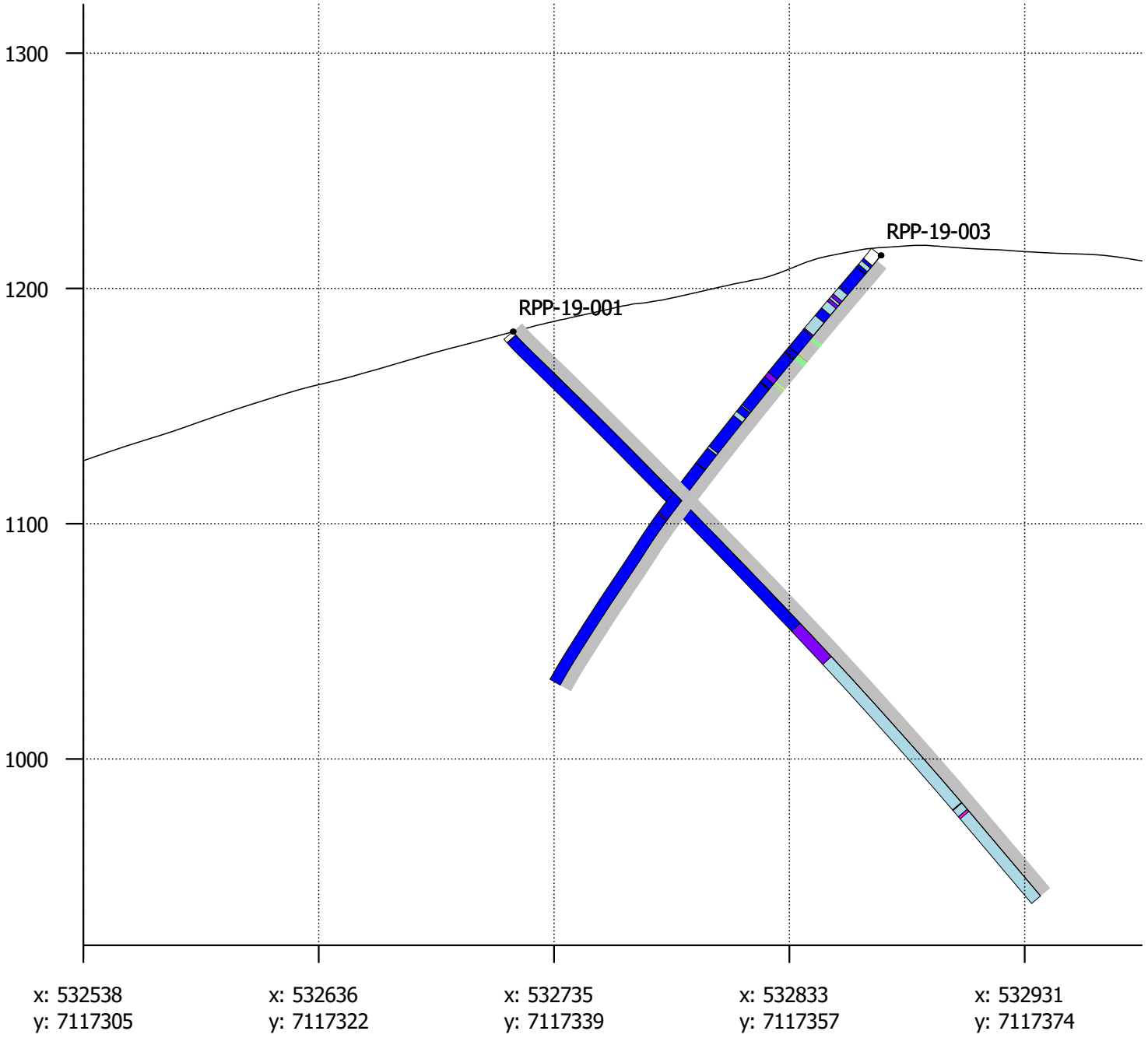
Au

< 0.1	≤ 5
≤ 1	> 5
≤ 2	

Scale: 1:2,500

0m 100m

RPP-19-001 and -003



ATAC RESOURCES LTD.

Legend

RockType

- CGL
- OVB
- DST
- PEG
- GRD
- SKN
- LST
- MBL
- MST

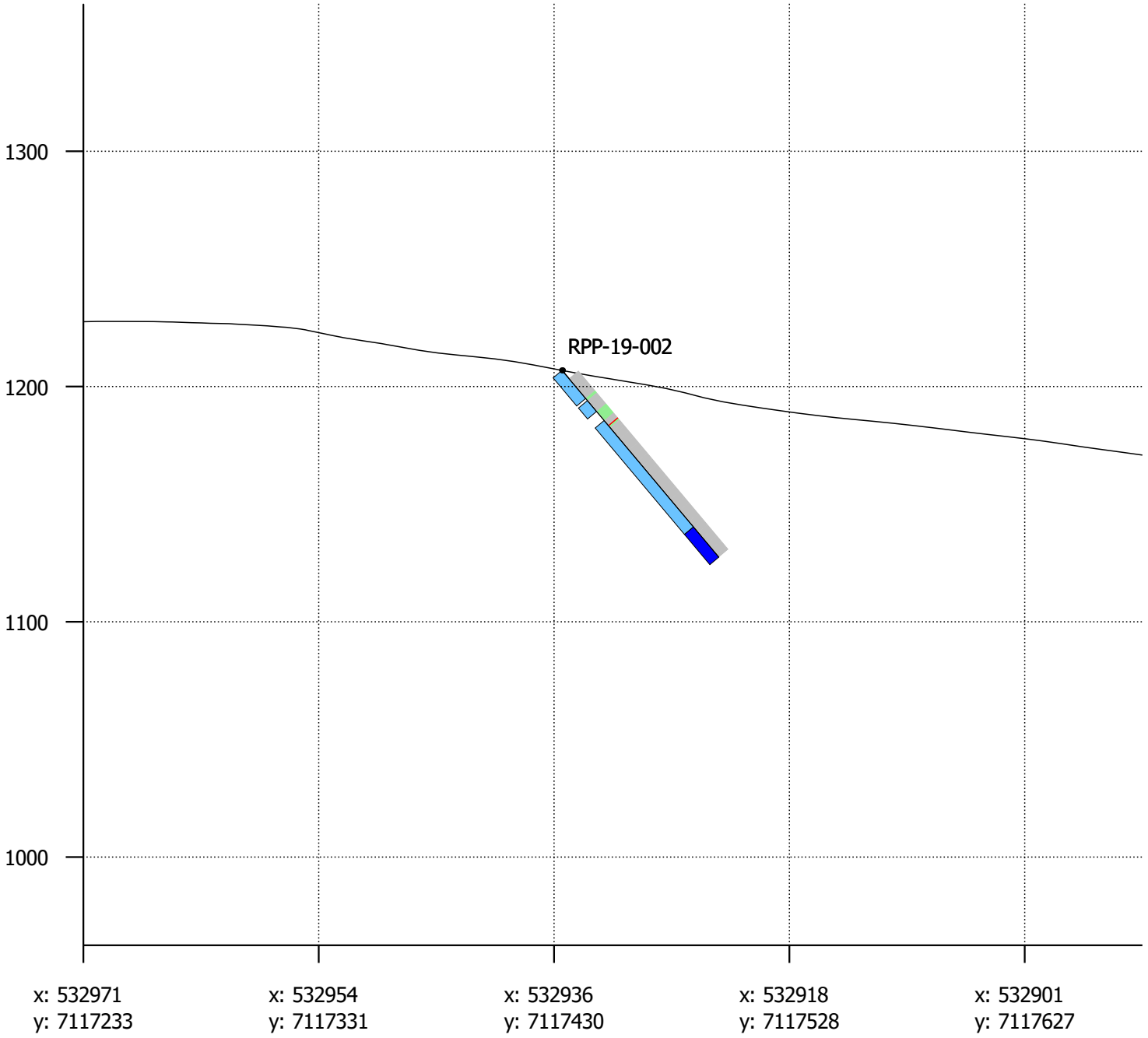
Au

- < 0.1
- ≤ 5
- ≤ 1
- > 5
- ≤ 2

Scale: 1:2,500

0m 100m

RPP-19-002



Legend

RockType

- CGL
- OVB
- DST
- PEG
- GRD
- SKN
- LST
- MBL
- MST

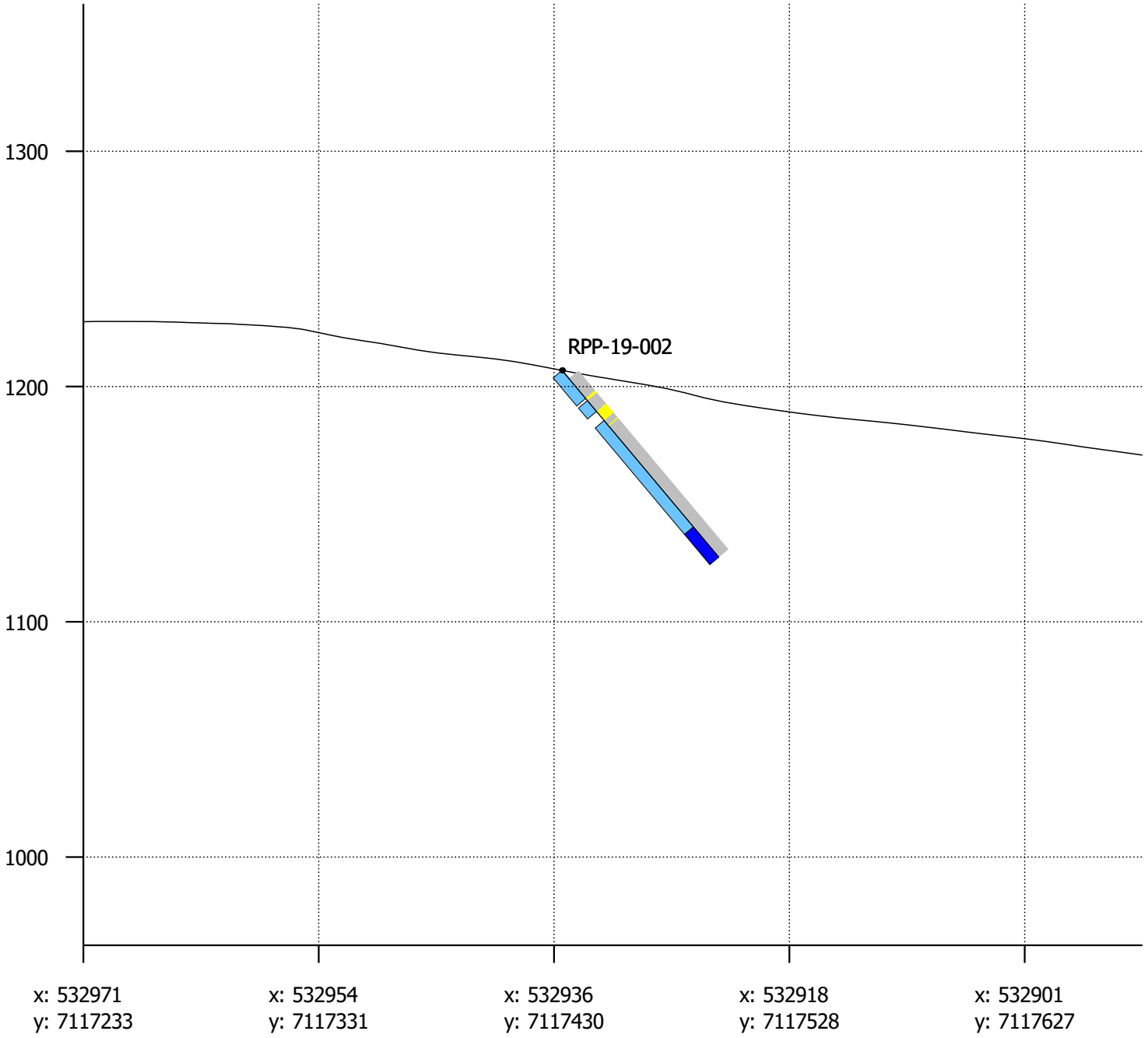
Au

- < 0.1
- ≤ 5
- ≤ 1
- > 5
- ≤ 2

Scale: 1:2,500

0m — 100m

RPP-19-002



Legend

RockType

- CGL
- OVB
- DST
- PEG
- GRD
- SKN
- LST
- MBL
- MST

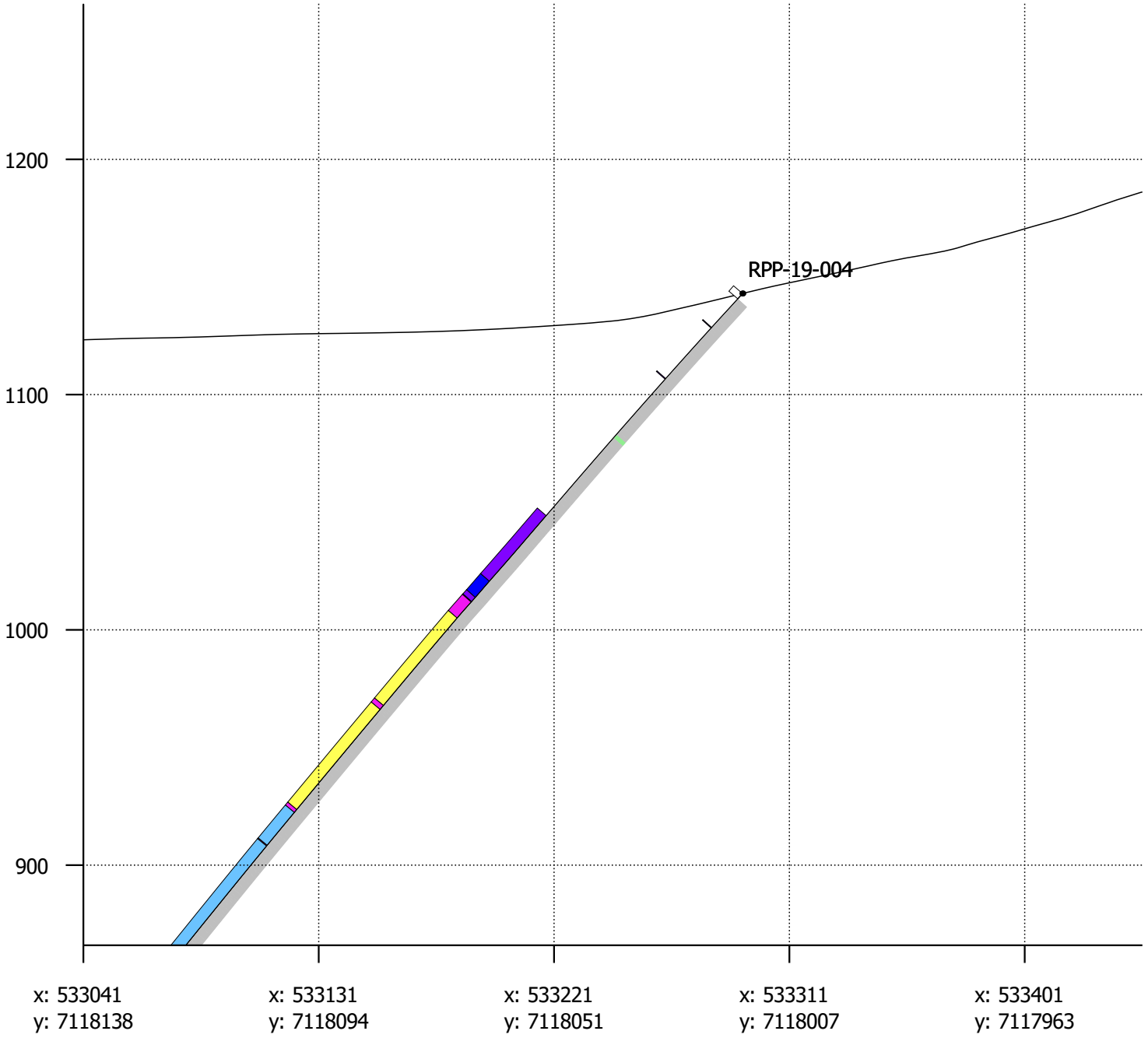
Cu

- ≤ 500
- ≤ 5000
- ≤ 1000
- > 5000
- ≤ 2000

Scale: 1:2,500

0m — 100m

RPP-19-004



ATAC RESOURCES LTD.

Legend

RockType

- CGL
- OVB
- DST
- PEG
- GRD
- SKN
- LST
- MBL
- MST

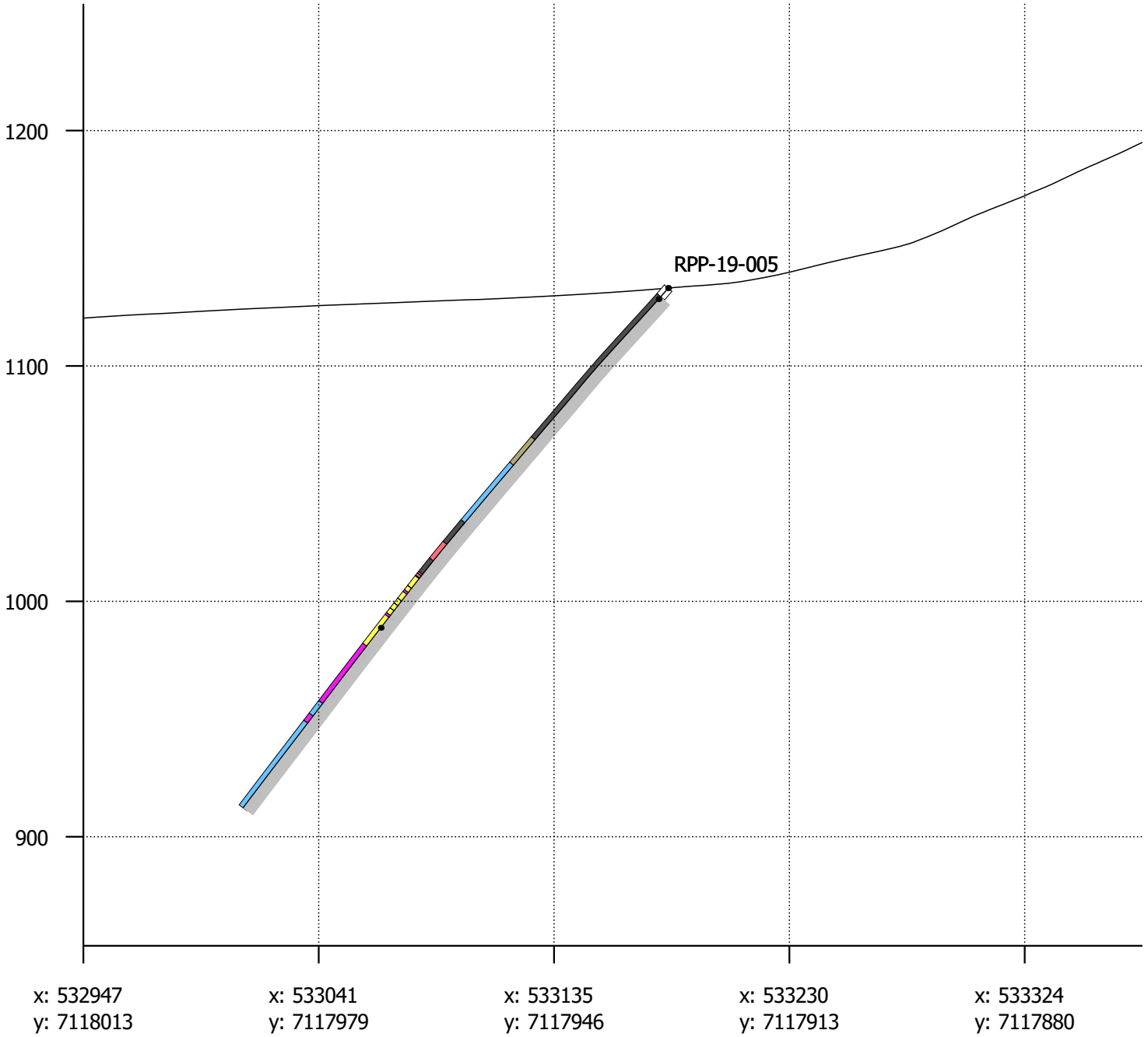
Au

- < 0.1
- ≤ 5
- ≤ 1
- > 5
- ≤ 2

Scale: 1:2,500

0m 100m

RPP-19-005



ATAC RESOURCES LTD.

Legend

RockType

CGL	FLR	PEG
DST	GRD	SHL
FEL	OVB	SKN

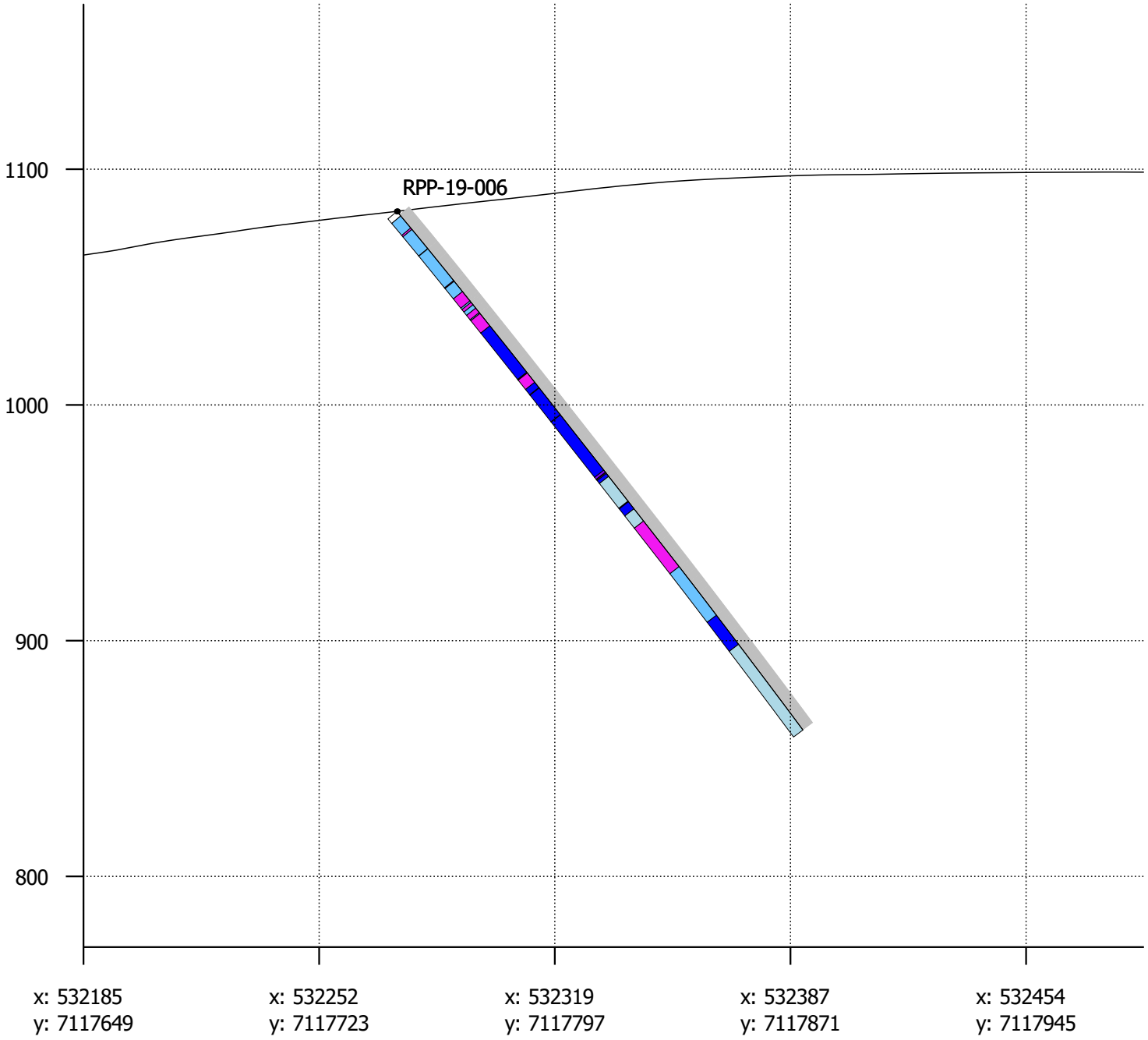
Au

< 0.1	≤ 5
≤ 1	> 5
≤ 2	

Scale: 1:2,500

0m 100m

RPP-19-006



Legend

RockType

- CGL
- OVB
- DST
- PEG
- GRD
- SKN
- LST
- MBL
- MST

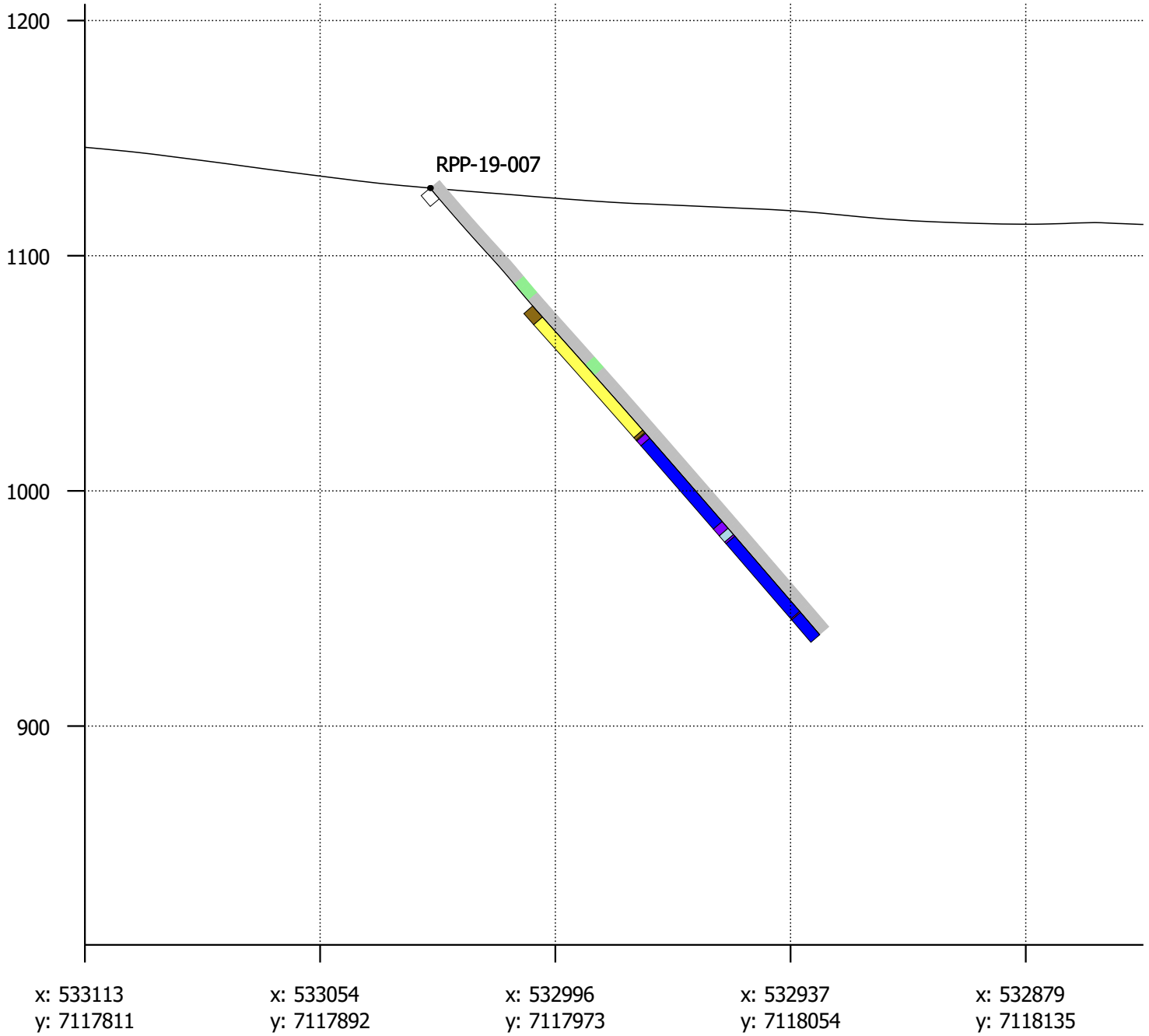
Au

- < 0.1
- ≤ 5
- ≤ 1
- > 5
- ≤ 2

Scale: 1:2,500

0m 100m

RPP-19-007



ATAC RESOURCES LTD.

Legend

RockType

- CGL
- OVB
- DST
- PEG
- GRD
- SKN
- LST
- MBL
- MST

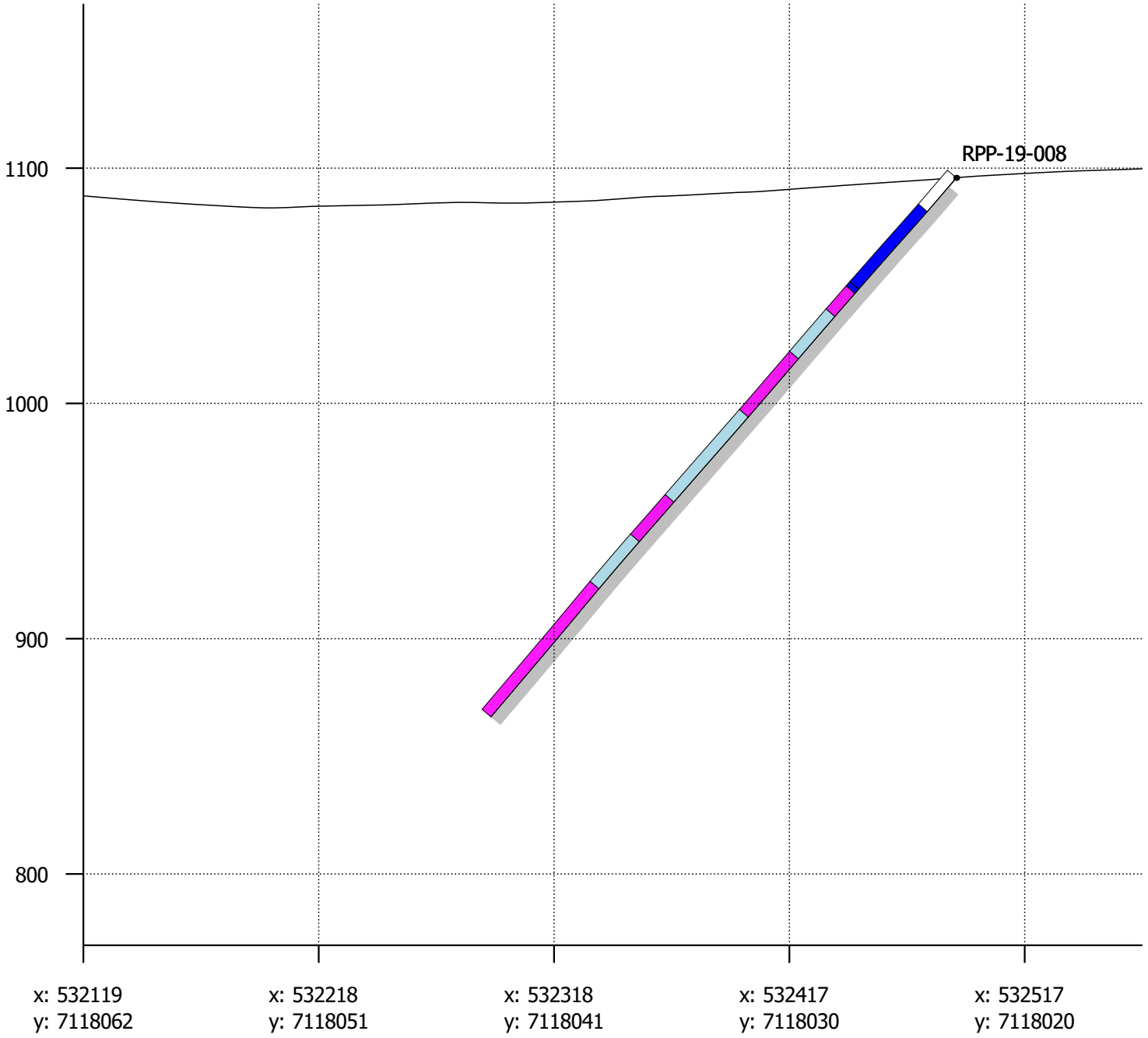
Au

- < 0.1
- ≤ 5
- ≤ 1
- > 5
- ≤ 2

Scale: 1:2,500

0m 100m

RPP-19-008



ATAC RESOURCES LTD.

Legend

RockType

- CGL
- OVB
- DST
- PEG
- GRD
- SKN
- LST
- MBL
- MST

Au

- < 0.1
- ≤ 5
- ≤ 1
- > 5
- ≤ 2

Scale: 1:2,500

0m 100m

APPENDIX XVI

STANDARD CERTIFICATES

GEOSTATS PTY LTD

Mining Industry Consultants
Reference Material Manufacture and Sales

Certified Gold Reference Material Product Code

G306-3

Certified Control Values

50 gram Fire Assay

Gold Grade	8.66 ppm
Standard Deviation	0.33 ppm
Confidence Interval	+/- 0.047 ppm

Aqua Regia Digest

Gold Grade	8.60 ppm
Standard Deviation	0.52 ppm
Confidence Interval	+/- 0.113 ppm

CRM Details

Control Statistic Details

Control statsitics were produced from results accumulated in the :

October-2006	Geostats Pty Ltd Laboratory Round Robin Program.
191	laboratories tested this material using 50 gram Fire Assay.
84	laboratories tested it using an Aqua Regia Technique.
1	laboratories tested this material using Neutron Activation Analysis.

Source Material

Prior to homogenisation and testing, this material was sourced from
High Grade oxide ore

Colour Designation

Pale red

Usage

This product is for use in the mining industry as reference materials for monitoring and testing the accuracy of laboratory assaying.

Preparation and Packaging

All standards are dried in an oven for a minimum of 12 hours at 110C. The dry material is then pulverised to better than 75 micron (nominal mean of 45 micron) using an Air Classifier. The material is then homogenised and stored in a sealed, stable container ready for final packaging.

Materials are statistically sampled from stores, then packaged into either heat sealed, air tight, plastic pulp packets or screw top sealed plastic containers ready for distribution. All packaging has been chosen to ensure minimal contamination from outside sources during shipment, use and storage.

Assay Testwork

All standards are tested thoroughly in the Geostats bi-annual laboratory survey. This involves assaying by a minimum of 50 reputable laboratories selected from across the world. Results are compiled into a comprehensive report detailing statistics for each standard. Assay distributions are checked and processed statistically, producing monitoring statistics for these standards. Materials are tested regularly to ensure stability and homogeneity.

Neutron Activation Analysis Results (ppm)	
Antimony	0.81
Arsenic	6.79
Barium	52.50
Bromine	0.24
Cadmium	nr
Cerium	4.00
Caesium	62.55
Chromium	49.90
Cobalt	11.05
Europium	-0.40
Gold ppb	9450.00
Hafnium	0.64
Iridium ppb	-12.20
Iron %	2.09
Lanthanum	2.33
Lutetium	0.14
Molybdenum	21.70
Nickel	-100.00
Rubidium	1615.00
Samarium	1.26
Scandium	7.13
Selenium	-4.49
Sodium %	1.22
Tantalum	-0.50
Tellurium	nr
Terbium	-0.50
Thorium	-0.25
Tin	-100.00
Tungsten	-1.00
Uranium	-0.50
Ytterbium	0.60
Zinc	-50.00
Zirconium	nr
Calcium%	nr
Potassium %	nr
Silver	26.60
Mercury	nr
Neodymium	-7.64
Strontium	-11.90

10A Marsh Close, O'Connor, Western Australia 6163
Phone : +61 8 9314 2566, Fax : +61 8 9314 3699
e-mail : pjh@geostats.com.au, srr@geostats.com.au
Website http://www.geostats.com.au

G306-3

Geostats Pty Ltd, Certified Gold Reference Material, Product Code :

GEOSTATS PTY LTD

Mining Industry Consultants
Reference Material Manufacture and Sales

Certified Gold Reference Material Product Code

G912-7

Certified Control Values

50 gram Fire Assay

Gold Grade	0.42 ppm
Standard Deviation	0.02 ppm
Confidence Interval	+/- 0.004 ppm

Aqua Regia Digest

Gold Grade	0.41 ppm
Standard Deviation	0.04 ppm
Confidence Interval	+/- 0.008 ppm



CRM Details

Control Statistic Details

Control statistics were produced from results accumulated in the October-2012 round robin. A total of 158 fire assay results and 73 results from an aqua regia technique were used to certify this material.

Material Description

This material is described as a Cut Off ore low grade oxide.

Colour Designation (ISCC-NBS, SP440)

This material is pale red in colour.

Usage

This product is for use in the mining industry as a reference material for monitoring and testing the accuracy of laboratory assaying.

Preparation and Packaging

All CRMs are dried in an oven for a minimum of 12 hours at 110°C. The dry material is then pulverised to better than 75 micron (nominal mean of 45 micron) using an air classifier. The material is then homogenised and stored in a sealed, stable container ready for final packaging.

Materials are statistically sampled from stores, then packaged into either heat sealed, air tight, plastic pulp packets or screw top sealed plastic containers ready for distribution. All packaging has been chosen to ensure minimal contamination from outside sources during shipment, use and storage.

Assay Testwork

All standards are tested thoroughly in the Geostats bi-annual laboratory survey. This involves assaying by multiple laboratories from around the world. Results are compiled into a comprehensive report detailing statistics for each standard. Assay distributions are checked and processed statistically, producing monitoring statistics for these standards. Materials are tested regularly to ensure stability and homogeneity.

Stability

This product remains stable in its original packaging, away from direct sunlight.

Material Safety

This product is not hazardous and non-toxic.

Neutron Activation Analysis Results (ppm, unless otherwise noted)	
Antimony	0.5
Arsenic	4.6
Barium	340
Bromine	1.8
Cadmium	<5
Caesium	1.5
Calcium (%)	nr
Cerium	35
Chromium	129
Cobalt	21
Europium	1
Gold (ppb)	410
Hafnium	6
Iridium (ppb)	<10
Iron (%)	7.63
Lanthanum	18
Lutetium	0.4
Mercury	nr
Molybdenum	10
Neodymium	nr
Nickel	25
Potassium (%)	nr
Rubidium	80
Samarium	3.8
Scandium	20.4
Selenium	<2
Silver	<2
Sodium (%)	1.95
Strontium	nr
Tantalum	1.3
Tellurium	<10
Terbium	0.7
Thorium	28.3
Tin	<200
Tungsten	<2
Uranium	6.3
Ytterbium	2.2
Zinc	64
Zirconium	<500

Major Elements by Fusion / XRF (%)	
Fe	7.55
SiO_2	52.37
Al_2O_3	19.05
TiO_2	1.227
MnO	0.1
CaO	4.94
P	0.048
S	0.044
MgO	2.81
K_2O	1.6
Na_2O	2.624
LOI1000	4.16

Neutron Activation Analyses and Fusion / XRF Analyses are single results and are indicative only. These are provided for matrix identification purposes.

'nr': Not Reported

20 Hines Road, O'Connor, Western Australia 6163
Phone : +61 8 9314 2566, Fax : +61 8 9314 3699
e-mail : pjh@geostats.com.au, srr@geostats.com.au
Website http://www.geostats.com.au

G912-7

Geostats Pty Ltd, Certified Gold Reference Material, Product Code:

GEOSTATS PTY LTD

Mining Industry Consultants
Reference Material Manufacture and Sales

Certified Gold Reference Material Product Code

G999-4

Certified Control Values

50 gram Fire Assay

Gold Grade	3.02 ppm
Standard Deviation	0.17 ppm
Confidence Interval	+/- 0.024 ppm

Aqua Regia Digest

Gold Grade	2.93 ppm
Standard Deviation	0.21 ppm
Confidence Interval	+/- 0.041 ppm



CRM Details

Control Statistic Details

Control statistics were produced from results accumulated in the October-1999 & October-2006 round robins. A total of 199 fire assay results and 101 results from an aqua regia technique were used to certify this material.

Material Description

This material is described as an Oxide Ore ex Eastern Goldfields.

Colour Designation (ISCC-NBS, SP440)

This material is pale yellowish brown in colour.

Usage

This product is for use in the mining industry as a reference material for monitoring and testing the accuracy of laboratory assaying.

Preparation and Packaging

All CRMs are dried in an oven for a minimum of 12 hours at 110°C. The dry material is then pulverised to better than 75 micron (nominal mean of 45 micron) using an air classifier. The material is then homogenised and stored in a sealed, stable container ready for final packaging.

Materials are statistically sampled from stores, then packaged into either heat sealed, air tight, plastic pulp packets or screw top sealed plastic containers ready for distribution. All packaging has been chosen to ensure minimal contamination from outside sources during shipment, use and storage.

Assay Testwork

All standards are tested thoroughly in the Geostats bi-annual laboratory survey. This involves assaying by multiple laboratories from around the world. Results are compiled into a comprehensive report detailing statistics for each standard. Assay distributions are checked and processed statistically, producing monitoring statistics for these standards. Materials are tested regularly to ensure stability and homogeneity.

Stability

This product remains stable in its original packaging, away from direct sunlight.

Material Safety

This product is not hazardous and non-toxic.

Neutron Activation Analysis Results (ppm, unless otherwise noted)	
Antimony	187.5
Arsenic	1855
Barium	341.5
Bromine	2.49
Cadmium	nr
Caesium	3.98
Calcium (%)	2.02
Cerium	35.9
Chromium	689
Cobalt	47.5
Europium	0.82
Gold (ppb)	3065
Hafnium	4.795
Iridium (ppb)	<20
Iron (%)	8.415
Lanthanum	15.8
Lutetium	0.482
Mercury	nr
Molybdenum	<5
Neodymium	<16.4
Nickel	492
Potassium (%)	1.22
Rubidium	56.05
Samarium	3.43
Scandium	21.45
Selenium	<5
Silver	<5
Sodium (%)	0.812
Strontium	<38.4
Tantalum	<1
Tellurium	<5
Terbium	<0.255
Thorium	4.42
Tin	<208
Tungsten	41.25
Uranium	<2
Ytterbium	<2.03
Zinc	460.5
Zirconium	<500

Major Elements by Fusion / XRF (%)	
Fe	nr
SiO_2	nr
Al_2O_3	nr
TiO_2	nr
MnO	nr
CaO	nr
P	nr
S	nr
MgO	nr
K_2O	nr
Na_2O	nr
LOI1000	nr

Neutron Activation Analyses and Fusion / XRF Analyses are single results and are indicative only. These are provided for matrix identification purposes.

'nr': Not Reported

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G999-4

Geostats Pty Ltd, Certified Gold Reference Material, Product Code:

SMEE & ASSOCIATES CONSULTING LTD.
CONSULTING GEOCHEMISTRY / GEOLOGY

Certificate of Analysis

Mike Lake Standard ML-1

Element	Certified Mean	Two Standard Deviations (between lab)
Tot. Cu	0.082 %	0.008 %
Tot As	0.965 %	0.072 %
FA Au	0.332 g/t	0.026 g/t

Element	Indicated Mean
Tot. Ag	2.7 ppm
Tot. W	19 ppm

Means and standard deviations were calculated from data supplied by five laboratories using a four acid digestion and an ICP-ES or AAS finish for Total Cu, As, and Ag and a combination of a total digestion or XRF for W, and fire assay with instrument finish for Au where reported.

The participating laboratories were:
ALS Chemex Brisbane
ALS Chemex, Vancouver
Acme, Vancouver
OMAC, Ireland
Genalysis, Perth

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. This was done by using a Student's t test of means where a laboratory was removed from the data base if failing the t test. The means and standard deviations from the remaining data were calculated. Any analysis that fell outside of the mean ± 2SD 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 final standard deviation is known as the "Between Lab" deviation, and can be used to monitor accuracy of a single analysis.

Elements are certified if the Relative Standard Deviation (RSD) is near 5 % or less. Elements that have a RSD of between 5 % and 15 % are given a Provisional mean and elements that have a RSD of more than 15 %, or have insufficient data are not certified but given an Indicated Mean.

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 and packaged by CDN Labs of Delta B.C. Each bulk sample was pulverized in a large rod mill, screened through 200 mesh using an electric sieve, and homogenized in a large rotating mixer. Each set of 20 standard packages were sealed in plastic to prevent gravity separation and oxidation.

Certified by:



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

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Certificate of Analysis

Mike Lake Standard ML-2

Element	Certified Mean	Two Standard Deviations (between lab)
Tot. Cu	**0.347 %**	**0.018 %**
Tot As	**0.842 %**	**0.070 %**
FA Au	**0.787 g/t**	**0.040 g/t**

Element	Indicated Mean
Tot. Ag	**7.0 ppm**
Tot. W	**30 ppm**

Means and standard deviations were calculated from data supplied by five laboratories using a four acid digestion and an ICP-ES or AAS finish for Total Cu, As, and Ag and a combination of a total digestion or XRF for W, and fire assay with instrument finish for Au where reported.

The participating laboratories were:
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ALS Chemex, Vancouver
Acme, Vancouver
OMAC, Ireland
Genalysis, Perth

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. This was done by using a Student's t test of means where a laboratory was removed from the data base if failing the t test. The means and standard deviations from the remaining data were calculated. Any analysis that fell outside of the mean ± 2SD 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 final standard deviation is known as the "Between Lab" deviation, and can be used to monitor accuracy of a single analysis.

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Certificate of Analysis

Mike Lake Standard ML-3

Element	Certified Mean	Two Standard Deviations (between lab)
Tot. Cu	0.656 %	0.032 %
Tot As	1.31 %	0.084 %
FA Au	1.66 g/t	0.068 g/t

Element	Provisional Mean	Two Standard Deviations (between lab)
Tot. Ag	13.1 ppm	2.7 ppm

Element	Indicated Mean
Tot. W	28 ppm

Means and standard deviations were calculated from data supplied by five laboratories using a four acid digestion and an ICP-ES or AAS finish for Total Cu, As, and Ag and a combination of a total digestion or XRF for W, and fire assay with instrument finish for Au where reported.

The participating laboratories were:
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ALS Chemex, Vancouver
Acme, Vancouver
OMAC, Ireland
Genalysis, Perth

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. This was done by using a Student's t test of means where a laboratory was removed from the data base if failing the t test. The means and standard deviations from the remaining data were calculated. Any analysis that fell outside of the mean ± 2SD 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 final standard deviation is known as the "Between Lab" deviation, and can be used to monitor accuracy of a single analysis.

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Certificate of Analysis

Mike Lake Standard ML-4

Element	Certified Mean	Two Standard Deviations (between lab)
Tot. Cu	**1.239 %**	**0.042 %**
Tot As	**0.949 %**	**0.050 %**
FA Au	**1.18 g/t**	**0.10 g/t**
Tot. Ag	**23.2 ppm**	**2.6 ppm**

Element	Provisional Mean	Two Standard Deviations (between lab)
Tot. W	**281 ppm**	**35 ppm**

Means and standard deviations were calculated from data supplied by five laboratories using a four acid digestion and an ICP-ES or AAS finish for Total Cu, As, and Ag and a combination of a total digestion or XRF for W, and fire assay with instrument finish for Au where reported.

The participating laboratories were:
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ALS Chemex, Vancouver
Acme, Vancouver
OMAC, Ireland
Genalysis, Perth

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. This was done by using a Student's t test of means where a laboratory was removed from the data base if failing the t test. The means and standard deviations from the remaining data were calculated. Any analysis that fell outside of the mean ± 2SD 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 final standard deviation is known as the "Between Lab" deviation, and can be used to monitor accuracy of a single analysis.

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Certificate of Analysis

Mike Lake Standard ML-5

Element	Certified Mean	Two Standard Deviations (between lab)
Tot. Cu	0.427 %	0.026 %
Tot As	0.99 %	0.08 %
FA Au	2.43 g/t	0.13 g/t
Tot. W	1678 ppm	51 ppm

Element	Provisional Mean	Two Standard Deviations (between lab)
Tot. Ag	9.0 ppm	1.3 ppm

Means and standard deviations were calculated from data supplied by five laboratories using a four acid digestion and an ICP-ES or AAS finish for Total Cu, As, and Ag and a combination of a total digestion or XRF for W, and fire assay with instrument finish for Au where reported.

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Genalysis, Perth

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