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ASSESSMENT REPORT

describing

GEOCHEMICAL SAMPLING, HAND TRENCHING, GEOLOGICAL MAPPING AND HERITAGE STUDIES

Field work performed from June 16 to July 6, 2016 and August 25 and 26, 2016

at the

OOO PROPERTY

000 1-16	YD34685-YD34700
17-44	YD56913-YD56940
45-52	YD58583-YD58590
53-68	YD122277-YD122292
69-84	YE66217-YE66232
85-124	YF47164-YF47203

NTS 115J/08 Latitude 62°26'N; Longitude 138°03'W

located in the

Whitehorse Mining District Yukon Territory

prepared by

Archer, Cathro & Associates (1981) Limited

for

STRATEGIC METALS LTD.

by

A. Mitchell, B.Sc. GIT October 2016

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INTRODUCTION

The OOO property lies near the centre of the Dawson Range Gold Belt (DRGB) of western Yukon. The property exhibits strongly anomalous, multi-element rock and soil geochemistry and is considered to be highly prospective for silver- and gold-rich epithermal veins. The property is wholly owned by Strategic Metals Ltd.

This report describes geochemical sampling, hand trenching, geological mapping and heritage studies, which were conducted between June 16 and July 6, 2016, and between August 25 and 26, 2016. Archer, Cathro & Associates (1981) Limited managed the program on behalf of Strategic Metals. The author participated in the exploration program and interpreted the results from it. The author's Statement of Qualifications is provided in Appendix I, and a Statement of Expenditures is located in Appendix II.

PROPERTY LOCATION, CLAIM DATA AND ACCESS

The OOO property consists of 124 contiguous mineral claims, which are located on NTS map sheet 115J/8 at latitude 62°26′ north and longitude 138°03′ west (Figure 1). The property covers an area of approximately 2510 ha (25 sq km). The claims are registered with the Whitehorse Mining Recorder in the name of Archer Cathro, which holds them in trust for Strategic Metals. Specifics concerning claim registration are tabulated below, while the locations of individual claims are shown on Figure 2.

<u>Claim Name</u>	Grant Number	Expiry Date*
000 1-16	YD34685-YD34700	April 15, 2027
17-44	YD56913-YD56940	April 15, 2027
45-52	YD58583-YD58590	April 15, 2027
53-68	YD122277-YD122292	April 15, 2024
69-84	YE66217-YE66232	April 15, 2021
85-124	YF47164-YF47203	April 15, 2021

* Expiry dates do not include 2016 work that has not yet been filed for assessment credit.

Access to and from the property was provided by a Bell 206B helicopter operated by Capital Helicopters (1995) Inc. of Whitehorse, from a temporary base at Rockhaven Resources Ltd.'s Klaza property. The Klaza property lies 55 km southeast of the OOO property and 70 km by road west of the community of Carmacks.

The OOO property lies within the traditional territory of the Selkirk First Nation.

HISTORY AND PREVIOUS WORK

In 1969, Archer Cathro performed regional exploration in the Dawson Range district for the Dawson Range Joint Venture (Cathro, 1974). During that exploration program seven stream sediment samples were collected from creeks draining the OOO property. Those samples were analyzed for copper, molybdenum and lead. Values up to 92 ppm copper, 1 ppm molybdenum





and 430 ppm lead were reported for those samples. No gold analyses were done during this program.

In 1970, London Pride Silver Mines Ltd. staked claims to cover the OOO property. There is no record of the work performed on those claims (Deklerk and Traynor, 2005).

In 1980, Archer Cathro did more work in the Dawson Range – now on behalf of the NAT Joint Venture (NAT JV), which comprised Chevron Canada Limited and Armco Mineral Exploration Ltd. Part of the NAT JV program involved reanalyses of splits from over 5000 previously collected samples for gold, silver, arsenic and lead, plus follow up prospecting and geochemical sampling. Widely spaced, soil, rock and stream sediment samples were collected from the area of the OOO property during the 1980 NAT JV field program. The rock samples yielded up to 0.24 g/t gold, 140 g/t silver, 850 ppm lead and greater than 500 ppm arsenic, while soil samples returned up to 300 ppb gold, 160 ppm silver, 3600 ppm lead and 501 ppm arsenic. Stream sediment samples returned up to 128 ppb gold, 20 ppm silver, 420 ppm lead and 215 ppm arsenic (Archer and Onasick, 1980). The area now covered by the OOO property was staked by NAT JV as part of its much larger Lilypad property, based on the anomalous results of the 1980 field work.

In 1981, NAT JV continued to work in the Dawson Range, both regionally and on its various properties. Exploration at the Lilypad property, within the area of the current OOO claims, included additional rock, soil and stream sediment sampling. Six rock samples taken that year returned up to 6.55 g/t gold, 1936 g/t silver, 65.1% lead and 640 ppm arsenic; 25 soil samples yielded up to 190 ppb gold, 942 ppm silver, 1.25% lead and 360 ppm arsenic; and one stream sediment sample returned 2 ppb gold, 12 ppm silver, 84 ppm lead and 84 ppm arsenic. Prospecting identified a number of mineralized quartz veins within linear depressions on ridges. These veins comprised chalcedonic, drusy or massive quartz with galena, chalcopyrite, sphalerite and pyrite and rare arsenopyrite, barite, fluorite and witherite. Fracture surfaces are typically coated with manganese, hematite and limonite (Archer and Onasick, 1981).

In spring 2010, Strategic Metals staked the central part of the OOO property and collected a total of 148 soil samples (Smith, 2010). These samples returned: background to strongly anomalous values for gold (up to 291 ppb), arsenic (up to 587 ppm) and lead (up to 801 ppm); and background to moderately anomalous values for silver (up to 6 ppm). In December 2010, Strategic Metals staked another 15 claims based on the historical and 2010 geochemical results.

In June 2011, Central Resources Ltd. signed an optional purchase agreement with Strategic Metals and performed additional contour soil geochemical sampling. These samples returned peak values of 361 ppb gold, 604 ppm arsenic, 38.4 ppm silver, 3020 ppm lead, 4780 ppm copper, 2510 ppm zinc, 80 ppm molybdenum, 35 ppm antimony and 427 ppm bismuth (Mitchell, 2012).

In June 2012, Central Resources purchased the property from Strategic Metals. In February 2015, following a corporate reorganization by Central Resources to form Uranium Standard Resources Ltd., Strategic Metals re-purchased the OOO property.

In spring 2015, Strategic Metals contracted Precision GeoSurveys Inc. to conduct helicopterborne magnetic and radiometric geophysical surveys over the OOO property. Full details and results of this survey can be found in Burrell (2015). In summer 2015, Strategic Metals staked an additional 56 claims and collected a total of 17 rock samples. Most rock samples were collected from a series of linear depressions along an east-northeasterly trending ridge in the southern part of the property. The best results came from three composite chips of vein material, which assayed 6680 g/t silver, 30.22% lead, 0.80 g/t gold and 0.26% copper; 2390 g/t silver, 58.36% lead, 0.89 g/t gold and 0.32% copper; and, 2950 g/t silver, 19.70% lead, 0.20 g/t gold and 0.51% copper. One sample of fine grained andesite taken from the northern part of the property graded 23.3 g/t silver, 277 ppm lead, 0.06 g/t gold and 1.58% copper.

GEOMORPHOLOGY AND CLIMATE

The OOO property is situated in the central part of the Dawson Range and covers a system of ridges centered on Apex Mountain. The area is drained by the Selwyn and Klotassin rivers and Apex and Big creeks, all of which connects to the Pacific Ocean via the Yukon River. Most of the Dawson Range escaped Pleistocene glaciation and, as a result, the landscapes are usually mature with dendritic drainages forming radial fans off the flanks of upland domes. Localized alpine glaciers in the Apex Mountain area carved cirques on the north sides of some ridges.

Elevations range from about 1280 to 1980 m above sea level. The property is characterized by steep hillsides that are blanketed by scree or felsenmeener surrounding patches of grass growing on a thin layer of soil. Lower elevations and valley bottoms are lightly treed with black spruce and dwarf birch.

Due to the steep slopes and extensive scree and felsenmeener cover, the soil profile in the upland portions of the OOO property are different than most other areas in the Dawson Range. It typically comprises a discontinuous, up to 10 cm thick layer of 2000 year old volcanic ash sitting on loess mixed with soliflucted C-horizon soil, which overlies a layer of C-horizon residual soil. Permafrost is extensive across most of the property and generally occurs at one to two metres depth. Thicker overburden, which includes a layer of partially decomposed organics and soliflucted mixtures of soil and rock, occurs at elevations below about 1350 m.

Climate in the OOO area is typical of northern continental regions with long, cold winters, truncated fall and spring seasons and short, mild summers. Although summers are relatively mild, arctic cold fronts often cover the area and snowfall can occur in any month. Local annual precipitation is less than 50 cm and snow thickness is correspondingly low. The property is usually snow free from late May until late September.

REGIONAL GEOLOGY

The OOO property lies within the Yukon-Tanana Terrane, a continental arc that was developed along the ancient Pacific margin of North America from Late Devonian to Permian (Figure 3). In 1973, the Geological Survey of Canada (GSC) published a geological map of the Snag area (NTS map sheet 115J) at 1:250,000 scale (Tempelman-Kluit, 1974). The most recent regional



scale mapping in the area was published by Ryan *et al.*, (2013) in GSC Memoir CGM 116. Figure 4 illustrates regional geology in the vicinity of the property.

Regional-scale mapping shows the property is underlain by Middle Cretaceous (110-112 Ma) Whitehorse Suite granodiorite, granite, quartz diorite and diorite and Upper Cretaceous (68-73 Ma) Carmacks Group intermediate to basic volcanic and volcaniclastic rocks. The main lithological units on the property are described in Table I.

Map Suite	Age	Map Unit	Description
Carmacks	Upper	uKC1	A volcanic succession dominated by basic volcanic
Group	Cretaceous		strata; augite-olivine basalt and breccia; hornblende-
_			feldspar porphyry, andesite and dacite flows; vesicular,
			augite phyric andesite and trachyte; minor sandy tuff,
			granite boulder conglomerate, agglomerate and
			associated epiclastic rocks.
		uKC2	Acid vitric crystal tuff, lapilli tuff and welded tuff
			including feeder plugs and necks; felsic volcanic flow
			rocks and quartz-feldspar porphyries; green and purple
			massive tuff breccia with feldspar phyric fragments.
Whitehorse	Mid-	mKgW	Biotite-hornblende granodiorite, hornblende-quartz
Suite	Cretaceous	_	diorite and hornblende diorite; leucocratic, biotite-
			hornblende granodiorite with sparse grey-pink
			potassium feldspar phenocrysts.

Table I – Lithological Units

The dominant structural feature in the vicinity of the OOO property is the Big Creek Fault. It strikes northwesterly from the Freegold Mountain area near Carmacks along Big and Hayes creeks to the Yukon River, a distance of about 145 km. This fault is a high angle, strike-slip structure that appears to have played an important role metallogenically. Most of the porphyry and vein deposits in the Dawson Range occur along its southwestern flank, including Mount Freegold (Northern Freegold Resources Ltd.), Nucleus (Northern Freegold), Cash (First Nation Lands), Prospector Mountain – historically called Lilypad (Alianza Minerals Ltd.), Mt. Cockfield (First Nation Lands) and Casino (Western Copper and Gold Corporation). All of these porphyry and vein systems contain gold and most contain copper, silver and molybdenum.

PROPERTY GEOLOGY

In 1981, cursory geological mapping was done on parts of the OOO property when NAT JV explored its Lilypad property. In 2016, detailed geological mapping was carried out at 1:2500 scale in the southern and eastern parts of the property (Figure 5). The following unit descriptions incorporate mapping done by NAT JV and Strategic Metals, and work performed by GSC and Yukon Geological Survey.

The OOO property is partially underlain by Mid-Cretaceous Whitehorse Suite granodiorite to syenite consisting of 70% potassium feldspar, 20% biotite, 15% plagioclase and 5% quartz. The intrusion varies between hornblende-biotite syenite to quartz-monzonite in the southern part of the property and medium to coarse grained hornblende-biotite granodiorite to the north. Both



phases host feldspar phenocrysts up to 2 cm long. This suite is capped by Upper Cretaceous Carmacks Group intermediate to basic volcanic rocks that include lapilli tuffs, augite-olivine basalt and breccia, hornblende-feldspar porphyry, and andesitic and dacitic flows. The volcanic breccias, tuffs and flows in the Apex Mountain area are typically dark grey-weathering, thin-bedded to massive and commonly fragmental.

The contact between these units is marked locally by strongly oxidized pyritiferous volcanic rocks in the east-central part of the property, but equivalent rocks are unaltered in the southeastern part.

The volcanic rocks are cut by various types of dykes. Trachyte and coarse-grained syenite dykes were observed in the southeastern part of the property. Minor, fine to medium grained hornblende-biotite granodiorite, felsic feldspar porphyry and feldspar andesite porphyry dykes occur in the east-central part, where they trend about 008/70E.

A large sample of hornblende-biotite granodiorite was collected for age dating from a dyke in the east-central part of the property (Figure 5). This sample is currently being analyzed by the Yukon Geological Survey to determine if it belongs to Late Cretaceous Casino Suite, the Late Cretaceous Prospector Mountain Suite or the Cenozoic Rhyolite Creek Volcanics. Casino Suite intrusions are not volumetrically abundant, but they are economically important because they are directly associated with porphyry and epithermal vein mineralization at a number of properties in the Dawson Range, including Casino, Coffee and Klaza (Sanchez *et al.*, 2014).

MINERALIZATION

The OOO property hosts numerous mineralized float occurrences that lie within subtle recessive linears. These float occurrences and recessive linears mark the surface traces of the metal-rich epithermal veins. Detailed prospecting and geological mapping completed in 2016 outlined three main mineralized zones (Southeast, Northeast and Central) on the property. Mineralization in all three zones contain varying amounts of silver, lead, gold, zinc, copper, antimony, arsenic and molybdenum in veins or fracture zones marked by linear depressions.

In 2016, a total of 93 rock samples were collected for analysis, 32 of which were from handtrenches. Rock sample locations are shown on Figure 6, while hand trench locations and anomalous rocks from all sampling programs are plotted on Figure 7. Hand trenching is discussed in the Hand Trenching section below. Certificates of Analysis and Rock Sample Descriptions appear in Appendices III and IV, respectively.

The 2016 rock sample sites are marked with orange flagging tape labelled with the sample number. The location of each sample was determined using a hand-held GPS unit. Sample preparation and analysis for 2016 rock samples was carried out by ALS Minerals in North Vancouver. Upon arrival, the samples were dried and fine crushed to better than 70% passing - 2mm before a 250 g split was pulverized to better than 85% passing 75 micron. The samples were then analyzed for gold by fire assay fusion and inductively coupled plasma-atomic emission spectroscopy (Au-ICP21) and 48 other elements by four acid digestion and inductively coupled plasma-atomic emission spectroscopy (ME-MS61). Over limit values for lead were

determined by four acid digestion and inductively coupled plasma-atomic emission spectroscopy (Pb-OG62). Samples with greater than 20% lead were taken final by acid dissolution and titration (Pb-VOL70).

The **Southeast Zone** lies in the southeastern part of the property and is underlain by Carmacks Group volcanics. It covers a 750 by 1000 m area along an east-northeast trending ridge. Mineralization is hosted within banded to milky white quartz veins hosting semi-massive to massive galena, tetrahedrite and malachite, or strongly oxidized, banded to brecciated quartz veins with abundant limonite and goethite. There are a number of known or suspected veins within this zone. All of the known veins trend north-northwestly and appear to dip moderately to the west.

Between 1980 and 1981, NAT JV collected six rock samples from subtle linear depressions atop the east northeast-trending ridge (Archer and Onasick, 1981). Three of these samples returned encouraging results as listed in Table II.

Sample ID	Au (g/t)	As (ppm)	Ag (g/t)	Pb (%)
H010	0.46	300	1134.8	35.40
H011	3.64	50	3085.7	2.03
H012	0.00	750	342.9	22.10

Table II – Significant Historical Rock Sample Results – Southeast Zone

In 2015 and 2016, a total of 34 rock samples were collected from the Southeast Zone (Figure 7). These samples tested banded and nearly massive quartz vein material hosting variable amounts of galena, tetrahedrite and malachite, and strongly oxidized vein material containing limonite and goethite. Significant results from 2015 and 2016 are listed in Table III.

 Table III – Significant 2015 and 2016 Rock Sample Results – Southeast Zone

Sample ID	Au (g/t)	As (ppm)	Ag (g/t)	Pb (%)	Cu (%)	Zn (%)	Mo (ppm)	Sb (ppm)	Bi (ppm)
K291402	0.00	13	17.4	0.22	0.29	0.00	1.23	13	7
K291403	0.02	37	8.2	0.24	0.47	0.01	0.98	25	0
R503951	0.18	98	1470	1.75	0.03	0.06	5.02	1730	109
R503952	0.13	447	65.8	0.23	0.02	0.12	1.81	455	2
R503953	0.13	201	6.9	0.16	0.02	0.10	2.95	245	0
R503954	0.27	770	251	2.02	0.03	0.07	11.35	830	5
R503955	0.54	217	2490	45.78	0.21	0.09	1.18	7410	9
R503958	0.03	16	35.9	0.42	0.75	0.02	2.75	92	6
R503959	0.00	19	5.4	0.01	0.42	0.01	3.31	6	1
R503961	0.00	13	11.1	0.30	0.21	0.01	1.98	19	1
R503962	0.06	22	13.7	0.02	0.25	0.00	25.80	9	18
R503964	0.00	2	54.5	0.18	0.01	0.03	0.12	96	0
R503965	1.53	1235	564	13.95	0.10	0.19	6.00	1585	3

R503967	0.00	23	2.5	0.01	0.15	0.02	1.92	7	53
K283895	0.10	490	8.2	0.12	0.00	0.08	0.90	31	3
K283896	1.06	740	319	22.77	0.01	0.30	7.79	300	80
K283897	0.11	360	7.2	0.61	0.01	0.68	7.24	50	2
K283898	0.06	239	11.3	0.58	0.01	3.43	2.91	35	5
K283899	0.02	102	384	4.95	0.11	0.38	0.58	796	2
K283900	0.20	149	2950	19.70	0.51	0.16	2.11	5850	20
Q934551	0.89	82	2390	58.36	0.32	0.35	0.56	3410	49
Q934553	0.08	228	704	6.62	0.10	0.05	47.00	1725	19
Q934554	0.80	1015	6680	30.22	0.26	0.02	30.40	9060	32
Q934555	0.09	413	425	0.73	0.11	0.09	130	1195	24
R608489	0.13	288	2.8	0.02	0.00	0.09	1.60	34	1
R608490	0.21	845	7.2	0.15	0.01	0.23	9.23	69	4
R608491	0.00	27	1.1	0.00	0.40	0.04	4.74	13	1

The most promising 2016 results came from float specimens within two north-northwest trending linear depressions spaced 570 m apart. A seven piece composite chip sample (chips up to 5 cm wide) of strongly oxidized, vuggy quartz vein with fine grained disseminated limonite pits collected from a linear discovered in 2016 (southwestern) assayed 1470 g/t silver, 1.75% lead, 0.18 g/t gold and 1730 ppm antimony. Two samples taken from a previously identified linear (northeastern) consisted of 15 cm and 20 cm wide quartz-vein float with galena, tetrahedrite and minor oxidized pits. These samples were taken 285 m apart along strike and graded 2490 g/t silver, 45.78% lead, 0.54 g/t gold, 0.21% copper and 7410 ppm antimony, and 564 g/t silver, 13.95% lead, 1.53 g/t gold, 0.10% copper and 1585 ppm antimony, respectfully.

The **Northeast Zone** lies approximately 3000 m northwest of the Southeast Zone and is underlain by Whitehorse Suite hornblende-biotite granodiorite and Carmacks Group volcanics (Figure 7). Mineralization consists of malachite-stained fine grained andesite and light grey weathering, moderately silicified, fine grained intrusive rocks. This zone is marked by a 150 by 240 m rusty orange to blonde gossan.

Between 1980 and 1981, NAT JV collected a total of 11 rock samples from the Northeast Zone. All samples returned subdued results for all elements of interest, except for one grab sample taken near an orangey-red gossan, which returned 0.24 g/t gold and 4800 g/t silver (Archer and Onasick, 1981).

In 2015, three rocks samples were collected from the Northeast Zone, and in 2016, another nine rock samples were taken, six of which tested in and around the 150 by 240 m rusty orange to blonde gossan. Significant results from 2015 and 2016 are listed in Table IV.

Sample ID (year)	Au (g/t)	As (ppm)	Ag (g/t)	Pb (%)	Cu (%)	Zn (%)	Mo (ppm)	Sb (ppm)	Bi (ppm)
R503983	0.15	98	3.6	0.01	0.19	0.04	0.44	2	141
R608477	0.06	211	23.3	0.03	1.58	0.02	1.92	16	208
R608492	0.01	110	3.2	0.01	0.48	0.01	0.71	8	103
R608493	0.05	272	26.7	0.01	0.67	0.02	2.09	16	91

Table IV – Significant 2015 and 2016 Rock Sample Results – Northeast Zone

The highest copper value on the property came from this zone. The sample was taken in 2015 and consists of malachite-stained fine grained andesite from the northeastern corner of the property. The sample assayed 1.58% copper and 23.3 g/t silver. A sample of float in 2016 comprising light grey weathering fine grained intrusive (?) from the rusty orange gossan graded 0.15 g/t gold and 0.19% copper.

Several composite chip samples of both orangey-red and blonde gossanous material were collected; however, they returned subdued results for all elements of interest.

Central Zone is located about one kilometre northwest of the Southeast Zone. It straddles the contact between Carmacks Group volcanics and Whitehorse Suite hornblende-biotite granodiorite (Figure 7). The zone forms an east-northeasterly-elongated trend encompassing a 1.5 by 2.3 km area. This zone hosts a number of northeast-trending silver-lead+/-zinc+/- copper+/-gold, gold and copper-molybdenum enriched quartz veins, which dip moderately to the southeast.

Between 1980 and 1981, NAT JV collected eight rock samples from two northeasterly trending linear depressions, spaced approximately 800 m apart along a north-trending ridge. Two of these samples returned the highest gold values on the property. Significant results are listed in Table V.

Sample ID	Au (g/t)	As (ppm)	Ag (g/t)	Pb (%)
H005	0.01	200	1817.1	1.38
H007	5.01	640	17.1	0.03
H014	6.55	0	1165.7	0.04
H015	0.79	46	30.9	0.03
H017	0.79	46	1937.1	65.10

Table V – Significant Historical Rock Sample Results – Central Zone

In 2016, another 33 rock samples were taken from the Central Zone. Confirmation sampling was done at the sites where high grade values were reported from two historical rock samples specimens were taken, and prospecting done along the projected surface traces of these structures. Detailed prospecting was also conducted along a north-trending ridge, paying close attention to topographic lows. A total of 15 rock samples returned encouraging results as listed in Table VI.

Sample ID	Au (g/t)	As (ppm)	Ag (g/t)	Pb (%)	Cu (%)	Zn (%)	Mo (ppm)	Sb (ppm)	Bi (ppm)
K291408	0.06	885	11.2	0.09	0.32	0.02	3070	8	250
K291411	0.13	126	26.1	0.15	0.01	0.01	3.79	80	32
R503966	0.21	250	677	2.87	0.03	0.38	24.50	101	25100
R503968	2.25	973	11.4	0.04	0.00	0.01	96.00	140	36
R503970	3.13	55	0.7	0.01	0.00	0.00	2.75	4	103
R503971	0.19	40	1510	57.31	0.09	2.39	0.36	1710	34
R503972	0.17	91	1635	51.93	0.21	5.42	2.30	2010	59
R503974	0.82	269	59.3	0.47	0.03	0.05	4.34	127	59
R503976	0.27	268	52.1	0.90	0.03	0.01	2.87	179	38
R503977	1.81	16	1370	75.18	0.53	0.04	0.51	732	414
R503978	1.09	3110	59.7	2.60	0.05	0.11	2.98	94	15
R503990	2.16	12350	388	17.15	0.43	0.16	26.70	1125	24

Table VI – Significant 2015 and 2016 Rock Sample Results – Central Zone

Confirmation sampling carried out in 2016 within the northern-most linear was unable to reproduce previous strong gold results, but did return elevated silver and lead values. This structure has been traced over a 2.15 km strike length. A sample collected 450 m northeast of the southern-most of the historical gold-rich samples returned 2.25 g/t gold. A third, northeast-trending auriferous quartz vein grading 3.13 g/t was discovered on the north-trending ridge, between the two historical veins. A sample from it graded 3.12 g/t gold.

STREAM SEDIMENT AND SOIL GEOCHEMISTRY

Previous geochemical surveys on the OOO property comprised widely spaced reconnaissance soil and stream sediment samples. Over the years, samples were analyzed for some or all of the following elements: gold, arsenic, silver, copper, molybdenum, lead and zinc. Results from historical programs returned background to very strongly anomalous values for these elements. The most anomalous results tend to cluster, and many sites yielded highly elevated values for several metals.

In 2016, 309 soil samples were collected from the property. Most samples were taken on reconnaissance-style contour lines in the eastern and southern parts of the property, but some more focused sampling was also done along ridge lines and along strong linear depressions in areas that were known to be geochemically anomalous. Locations for 2016 soil samples are plotted on Figure 8. Thematic results from historical and 2016 programs for gold, arsenic, silver, lead, copper, zinc, molybdenum, antimony and bismuth are illustrated thematically on Figures 9 to 17, respectively. Certificates of Analysis are provided in Appendix III.

Soil sample locations were recorded using hand-held GPS units. Sample sites are marked by aluminum tags inscribed with the sample numbers and affixed to 0.5 m wooden lath that were driven into the ground. Soil samples were collected from 30 to 50 cm deep holes dug by hand-held auger. Each sample was placed into an individually pre-numbered Kraft paper bag.





















The soil samples were sent to ALS Minerals in North Vancouver, where they were dried and screened to -180 microns, dissolved in aqua regia solution and then analyzed for 35 elements using the inductively coupled plasma with atomic emission spectroscopy technique (ME-ICP41). An additional 30 g charge was further analysed for gold by fire assay with inductively coupled plasma-atomic emissions spectroscopy finish (Au-ICP21).

Contour and ridge top soil sampling has been done across about 30% of the OOO property. Pre-2016 sampling focussed in the central part of the property, which is underlain by Carmacks Group volcanics and Whitehorse Suite intrusives. The rocky nature of many sampled areas means that much of the soil collected could more accurately be described as talus fine material.

Table VII below provides geochemical thresholds and peak values for soil samples collected from all of the geochemical surveys conducted on the property.

Elomort.	Anomalous Thresholds						
Element	Weak	Moderate	Strong	Very Strong	Peak		
Gold (ppb)	10 < 20	$\geq 20 < 50$	$\geq 50 < 100$	≥ 100	1220		
Arsenic (ppm)	20 < 50	$\geq 50 < 100$	$\geq 100 < 200$	≥ 200	870		
Silver (ppm)	1 < 2	$\geq 2 < 5$	≥ 5 < 10	≥ 10	160		
Lead (ppm)	50 < 100	$\geq 100 < 200$	$\geq 200 < 500$	≥ 500	12,500		
Copper (ppm)	50 < 100	$\geq 100 < 200$	$\geq 200 < 500$	≥ 500	4780		
Zinc (ppm)	100 < 200	$\geq 200 < 500$	$\geq 500 < 1000$	≥ 1000	9880		
Molybdenum (ppm)	2 < 5	$\geq 5 < 10$	$\geq 10 < 20$	≥ 20	182		
Antimony (ppm)	2 < 5	≥ 5 < 10	$\geq 10 < 20$	≥ 20	101		
Bismuth (ppm)	5 < 10	$\geq 10 < 20$	$\geq 20 < 50$	≥ 50	427		

Table VII – Geochemical Thresholds for Soil Samples

Coincident moderately to very strongly anomalous gold (up to 1220 ppb), arsenic (up to 870 ppm) and bismuth values (up to 427 ppm) are clustered in three broad anomalies (A, B and C), which correspond with parts of the Northeast, Central and Southeast zones (Figures 9-17). This geochemical signature is important because it marks the veins that have produced the best gold grades on the property. Anomalies A, B and C occur within both Whitehorse Suite intrusives and Carmacks Group volcanics.

Coincidently anomalous silver (up to 160 ppm), lead (up to 12,500 ppm) and bismuth (up to 427 ppm) values occur in a number of broad trends (up to 400 by 1000 m), which are scattered across much of the property. Some of these large, but relatively well defined trends coincide with known veins while others could represent unidentified veins. Within the Northeast and Central zones strongly anomalous zinc and molybdenum values often coincide with high silver, lead and bismuth values. Elsewhere on the property elevated zinc values occur only as isolated highs.

Copper and molybdenum values are highest in, or near, areas underlain by Whitehorse Suite intrusive rocks in the northern and eastern parts of the property.

Antimony-in-soil values are relatively subdued compared to the other metals, with only scattered moderately to strongly anomalous values occurring in localized areas within the Northeast, Central and Southeast zones.

In 2016, particularly noteworthy results were returned from sampling done within the Northeast and Southeast zones. An approximately 1000 m long, southeastly trending soil line was completed along a ridge in the Northeast Zone. The sampling was designed to test across several prominent linear depressions that cut obliquely across the ridge. Strong gold (up to 92 ppb), bismuth (28 ppm), arsenic (157 ppm), silver (4.4 g/t), lead (330 ppm), copper (253 ppm) and molybdenum (182 ppm) values were obtained from a site at the southeastern end of the line, while strong silver (19.8 g/t), bismuth (98 ppm), copper (217 ppm) and lead (2880 ppm) values were returned from a sample at the northwestern end of the line. Sporadic weakly to strongly anomalous values for all elements of interest occur periodically along this ridge. A sample collected on a soil line along an east-trending ridge within the Southeast Zone returned weakly anomalous values for silver (1.6 g/t), gold (14 ppb), copper (75 ppm) and molybdenum (2 ppm); moderately anomalous values for zinc (389 ppm) and antimony (5 ppm); and a very strongly anomalous value for lead (731 ppm). This sample was taken within a subtle topographic low. Spot highs for silver, gold, lead, zinc, molybdenum and antimony occur sporadically elsewhere along the ridge within the Southeastern Zone.

HAND TRENCHING

In 2016, seven hand trenches were dug on the OOO property in or along strike of areas where vein-style mineralization has previously been identified in float (Figure 7). Five trenches were attempted at the Southeast Zone and two at the Central Zone. Four of the trenches in the Southeast Zone exposed at least some bedrock, but the other three trenches did not reach bedrock due to extensive permafrost. Bedrock was continuously chip sampled where exposed. A total of 32 chip samples were collected from the trenches, while 10 soil samples were taken from holes augered into the floors of incomplete trenches. Results are described in the following paragraphs. The chip and soil samples were processed using the same preparation and analytical techniques described above in the Mineralization and Stream Sediment and Soil Geochemistry sections, respectively. Certificates of Analysis are located in Appendix III and cross-sections of trenches TR-16-01, -04, -05 and -07 appear in Appendix V. Table VIII provides details for each trench.

Target	Trench ID	Easting	Northing	Length	Rock Samples	Soil Samples
				(m)		
Southeast Zone	TR-16-01	652408	6925830	29.70	K291465-K291483	N/A
		652380	6925815			
Southeast Zone	TD 16 04	652684	6925963	11.70	K291458-K291464	N/A
	IK-10-04	652696	6925964			
Southeast Zone TR-	TP 16 05	652677	6925933	11.60	K291451-K291457	N/A
	IK-10-03	652689	6925931			
Southeast Zone	TR-16-06	652928	6925913	10.2	N/A	ZZ110163, ZZ110186, ZZ110187
		652918	6925914			
Southeast , Zone	TD 16 07	653111	6925959	12.40	K291479-K291483	N/A
	1 K -10-07	653125	6925961			
Central Zone	TR-16-17	651522	6927029	14.80	N/A	ZZ110220-ZZ10223
		651512	6927040			
Central	TR-16-18	651477	6927046	7.20	N/A	ZZ110224-ZZ110226
Zone		651471	6927050			

Table VIII – 2016 Hand Trenching Details

N/A – Not applicable

Hand trench TR-16-01 was dug across the strong linear where a 2015 rock sample assayed 6680 g/t silver, 30.22% lead and 0.80 g/t gold. This trench was continuously chip sampled along bedrock over a length of 21.6 m. Two vein/fracture zones were exposed, which comprised strongly oxidized, banded, brecciated, and/or boxwork quartz veins and adjacent highly fractured and oxidized volcanic wallrocks. The results from the trench include 570 g/t silver, 2.76% lead and 0.08 g/t gold over 6.4 m and 106 g/t silver, 0.84% lead and 0.03 g/t gold over 9.6 m. These intervals are separated by 5.6 m of weakly mineralized wallrocks.

Trenches TR-16-04 and TR-16-05 were dug 30 m apart across a second linear located 320 m east of TR-16-01. These trenches exposed a banded to massive quartz vein hosting localized semimassive galena and tetrahedrite with malachite staining and extensive light orange to brown gouge. Highlights from these trenches were 60.5 g/t silver and 0.79% lead over 2.1 m (TR-16-04) and 375 g/t silver and 8.33% lead over 0.9 m (TR-16-05).

Trench TR-16-07 exposed strongly oxidized fault gouge and fragments of entrained, silicified and pyritiferous volcanic wallrocks. Continuous chip samples across this material returned 9.4 g/t silver, 0.18 g/t gold, 0.4% lead and 0.3% zinc over 8.4 m.

Three soil samples were collected from beneath the floor of an uncompleted hand trench (TR-16-06) located 200 m west of TR-16-07. Peak values of 10.6 ppm silver, 13 ppb gold, 35 ppm arsenic, 5 ppm bismuth, 159 ppm copper, 394 ppm lead, 1185 ppm zinc, 3 ppm molybdenum and 11 ppm antimony were obtained from this trench.

The two trenches (TR-16-17 and TR-16-18) excavated in Central Zone are spaced 35 m apart and test two separate, linear topographic lows. Neither trench reached bedrock due to permafrost

at a depth of approximately 0.5 m below surface. Soil samples were taken at three metre spacings below the floor of each trench. They returned up to 6.2 g/t silver, 10 ppb gold, 31 ppm arsenic, 7 ppm bismuth, 91 ppm copper, 2180 ppm lead, 535 ppm zinc, 3 ppm molybdenum and 6 ppm antimony.

GEOPHYSICS

In spring 2015, Strategic Metals contracted Precision GeoSurveys Inc. of Vancouver, British Columbia to fly magnetic and radiometric geophysical surveys over the OOO property. Some vein deposits in the Dawson Range Gold Belt, such as Rockhaven Resources' Klaza project, are delineated by linear magnetic lows and coincident VLF-EM conductors.

Figures 18 and 19 illustrate total magnetic intensity (TMI) and calculated vertical gradient (CVG) data, overlain by thematic representations of significant gold-in rock results and gold-insoil geochemistry. The survey revealed north-northwestly and east-northeastly trending magnetic lows, which often coincide with anomalous rock and soil geochemistry. Some of the north-northwestly magnetic lows appear to be offset by east-northeastly trending lows. Some known mineralized structures show little to no magnetic signature, possibly due to the size of the veins or the detail of the survey. Two distinct arcuate magnetic lows in the western part of the property are likely attributed to compositional variations in volcanic rocks. The contact between Whitehorse Suite intrusives and Carmacks Group volcanics is marked by a sinuous magnetic low in the CVG data.

HERITAGE SURVEYS

In 2016, a Heritage Resource Overview Assessment (HROA) and a Heritage Resource Impact Assessment (HRIA) were performed by Ecofor natural and cultural resource consultants of Whitehorse on the OOO property. In early summer, a HROA completed on the OOO property outlined several areas of elevated potential for surface/subsurface archaeological sites. The HROA recommended a HRIA, which was conducted by Ecofor on August 25 and 26 2016. The HRIA consisted of Ecofor staff excavating five Shovel Test Locations. The HROA and HRIA reports relating to Ecofor's surveys are presented in Appendix VI and VII, respectively.

DISCUSSION AND CONCLUSIONS

The OOO property lies within the Dawson Range Gold Belt, which hosts a number of gold-rich veins and porphyry deposits such as the Coffee project of Goldcorp Inc., the Klaza project of Rockhaven Resources and the Casino project of Western Copper and Gold Corp. These deposits are associated with high-level intrusions of Late Cretaceous age (Sanchez *et al.*, 2014).

Strategic Metals' 2016 exploration program at the OOO property was designed to follow up on silver and/or gold-rich epithermal veins discovered during previous programs and to evaluate soil geochemical anomalies and magnetic lows that are associated with linear depressions. Hand trenches were attempted in two zones; however some of these trenches did not reach bedrock due to frozen soil. Chip samples from bedrock exposed in trenches at the Southeast Zone returned particularly encouraging silver results over significant widths.





Systematic prospecting and detailed geological mapping completed in 2016 discovered promising mineralization at the Central Zone, approximately 1.5 km north of the Southeast Zone. Rock sample of vein float from this zone indicate potential for silver-lead+/-zinc+/-gold and gold+/-arsenic+/-bismuth veins. Only cursory prospecting was undertaken in the Northeast zone, which contains two copper-silver+/-gold showings. Many of the soil geochemical anomalies elsewhere on the property have not been prospected, and most prospecting to date has been limited to ridge tops.

Most rock samples collected from the OOO property have returned relatively low gold values; but, based on evidence from nearby properties, there is potential for metal zonation from primarily silver- and lead-rich veins in the upper or more distal part of the hydrothermal system to more gold-rich veins at depth or closer to the core of the system. Attempts to trace the mineralized structures along strike and down-dip, where gold values are likely to increase were hindered by extensive talus and vegetation cover.

Further exploration on the OOO property is warranted and should include the following:

- 1. Air photo interpretation prior to the field season to identify linear or circular features, which should be compared to geochemical and geophysical data;
- 2. Reconnaissance-scale prospecting and contour and ridge-top soil sampling in the lightly sampled northwestern and northeastern parts of the property, paying special attention to linear depressions;
- 3. Closely spaced grid sampling over of all known showings and across north-northwest and east-northeast trending magnetic lows;
- 4. Detailed prospecting and hand trenching to follow up the strongest soil anomalies;
- 5. Hand trenching across recessive linears hosting geochemical anomalies to expose mineralized bedrock;
- 6. Detailed geological mapping within the most prospective areas, paying close attention to cross-cutting structures, dilational-jogs/negative flower structures, surface mineralization, and features that could overlie blind deposits, such as strong brecciation or alteration; and,
- 7. Self-propelled RAB or RC drilling, or helicopter-supported diamond drilling should be done in the Southeast Zone to evaluate the character and continuity of mineralization exposed in hand trenches.

Respectfully submitted,

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

a. Mitchel

A. Mitchell, B.Sc. GIT

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APPENDIX I

STATEMENT OF QUALIFICATIONS

STATEMENT OF QUALIFICATIONS

I, Andrew Mitchell, geoscientist in training, with business addresses in Whitehorse, Yukon Territory and Vancouver, British Columbia and residential address in Kelowna, British Columbia, hereby certify that:

- 1. I graduated from the University of British Columbia in 2010 with a B.Sc. in Earth and Environmental Sciences.
- 2. From 2010 to present, I have been actively engaged in mineral exploration in Yukon Territory.
- 3. I am a Geoscientist in Training (GIT) with the Association of Professional Engineers and Geoscientists of British Columbia.
- 4. I have personally participated in the fieldwork reported herein and have interpreted all data resulting from this work.

a. Mitchel

A. Mitchell, B.Sc. GIT

APPENDIX II

STATEMENT OF EXPENDITURES

Statement of Expenditures OOO 1-124 Mineral Claims March 31, 2017

Labour

D. Eaton (geologist) 56 hours May to November at \$120/hr	\$ 7,056.00
H. Burrell (geologist) 85 hours May to November at \$106/hr	9,460.50
A. Mitchell (geologist) 245 hours May to November at \$82/hr	21,094.50
M. Kulla (field assistant) 184 hours May to November at \$51/hr	9,853.20
R. Burke (field assistant) 184 hours May to November at \$49/hr	9,466.80
J. Mariacher (office) 37 hours May to November at \$90/hr	3,496.50
D. Arnold-Wallinger (office) 10 hours May to November at \$85/hr	892.50
L. Corbett (expedite) 24 hours May to November at \$81/hr	2,041.20
L. Smith (expedite and office) 61 hours May to November at \$69/hr	4,419.45
S. Newman (office) 83.5 hours May to November at \$66/hr	5,786.55
•	73,567.20

Expenses (including management)

Field room and board – 73.5 mandays @ \$180/manday	14,949.90
Capital Helicopters – 11.1 hours Bell 206 at \$1,050/hr plus fuel	15,140.68
Trans North Helicopters – 3.9 hours Bell 206 at \$990/hr plus fuel	4,915.57
Ecofor HRIA and HROA studies	16,112.39
ALS Chemex	<u>12,163.94</u>
	63,282.48

Total

<u>\$136,849.68</u>

APPENDIX III



CERTIFICATE VA16116322

Project: OOO

This report is for 7 Rock samples submitted to our lab in Whitehorse, YT, Canada on 18-JUL-2016.

The following have access to data associated with this certificate:

HEATHER BURRELL

JOAN MARIACHER

To: STRATEGIC METALS LTD. C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED 1016-510 W HASTINGS ST VANCOUVER BC V6B 1L8 Page: 1 Total # Pages: 2 (A) Plus Appendix Pages Finalized Date: 1-AUG-2016 Account: MTT

	SAMPLE PREPARATION	
ALS CODE	DESCRIPTION	
FND-02	Find Sample for Addn Analysis	
r		
	ANALYTICAL PROCEDURE	S
ALS CODE	DESCRIPTION	INSTRUMENT
Ag-AA13	Ag by cyanide leach and AAS	AAS

To: STRATEGIC METALS LTD. ATTN: JOAN MARIACHER C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED 1016-510 W HASTINGS ST VANCOUVER BC V6B 1L8

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.

Signature:

Colin Ramshaw, Vancouver Laboratory Manager

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



2103 Dollarton Hwy North Vancouver BC V7H 0A7 Phone: +1 (604) 984 0221 Fax: +1 (604) 984 0218 www.alsglobal.com To: STRATEGIC METALS LTD. C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED 1016-510 W HASTINGS ST VANCOUVER BC V6B 1L8 Page: 2 - A Total # Pages: 2 (A) Plus Appendix Pages Finalized Date: 1-AUG-2016 Account: MTT

Project: 000

Sample Description	Method Analyte Units LOR	Ag-AA13 Ag ppm 0.03
K291468 K291469 K291470 K291474 K291475		>350 89.21 95.91 39.62 7.58
K291476 K291477		3.43 211.2



Т

2103 Dollarton Hwy North Vancouver BC V7H 0A7 Phone: +1 (604) 984 0221 Fax: +1 (604) 984 0218 www.alsglobal.com To: STRATEGIC METALS LTD. C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED 1016-510 W HASTINGS ST VANCOUVER BC V6B 1L8 Page: Appendix 1 Total # Appendix Pages: 1 Finalized Date: 1-AUG-2016 Account: MTT

Project: 000

	CERTIFICATE COMMENTS
Applies to Method:	LABORATORY ADDRESSES Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada. Ag-AA13 FND-02



CERTIFICATE VA16106175

Project: 000

This report is for 21 Rock samples submitted to our lab in Whitehorse, YT, Canada on 3-JUL-2016.

The following have access to data associated with this certificate:

HEATHER BURRELL

JOAN MARIACHER

To: STRATEGIC METALS LTD. C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED 1016-510 W HASTINGS ST VANCOUVER BC V6B 1L8 Page: 1 Total # Pages: 2 (A - D) Plus Appendix Pages Finalized Date: 12-JUL-2016 Account: MTT

	SAMPLE PREPARATION
ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-21	Sample logging - ClientBarCode
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize split to 85% <75 um
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test

	ANALYTICAL PROCEDUR	ES
ALS CODE	DESCRIPTION	INSTRUMENT
Au-ICP21	Au 30g FA ICP-AES Finish	ICP-AES
Ag-OG62	Ore Grade Ag - Four Acid	VARIABLE
ME-MS61	48 element four acid ICP-MS	
ME-OG62	Ore Grade Elements - Four Acid	ICP-AES
Pb-OG62	Ore Grade Pb - Four Acid	VARIABLE
Ag-GRA21	Ag 30g FA-GRAV finish	WST-SIM
Pb-VOL70	Pb by Titration	

TO: STRATEGIC METALS LTD. ATTN: JOAN MARIACHER C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED 1016-510 W HASTINGS ST VANCOUVER BC V6B 1L8

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.



Colin Ramshaw, Vancouver Laboratory Manager

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



ALS Canada Ltd.

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Project: 000

Sample Description	Method Analyte Units LOR	WEI-21 Recvd Wt. kg 0.02	Ag-OG62 Ag ppm 1	Pb-OG62 Pb % 0.001	Ag-GRA21 Ag ppm 5	Pb-VOL70 Pb % 0.01	ME-MS61 Ag ppm 0.01	ME-MS61 AI % 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
K291451 K291452 K291453 K291453 K291454 K291455		1.98 2.36 2.44 1.20 4.20	>1500	>20.0 1.710	2780	61.33	4.36 >100 74.6 3.30 15.10	6.72 0.43 6.82 6.74 7.38	24.6 112.5 27.2 18.9 68.6	1410 40 1440 1480 1200	1.75 0.30 1.94 1.40 2.48	0.59 26.5 3.48 0.49 3.44	3.18 0.22 2.59 3.19 2.11	6.03 70.5 4.65 1.88 8.13	38.4 1.04 42.0 41.8 49.2	42.6 6.0 38.6 33.9 41.1
K291458 K291459 K291460 K291461 K291462		1.12 1.82 2.28 1.54 1.66	338	3.92			1.17 >100 46.6 0.44 0.89	7.10 0.17 6.18 6.57 7.40	18.2 17.0 36.6 14.6 17.1	1030 270 8330 1110 1680	1.98 0.15 1.65 1.34 1.83	0.41 0.79 1.54 0.36 0.30	2.37 0.08 2.92 3.99 1.90	17.75 15.60 12.60 0.61 0.31	40.5 0.42 38.7 37.6 27.3	33.8 1.0 29.8 34.1 24.4
K291468 K291469 K291470 K291474 K291475		1.66 1.94 2.44 2.76 1.54	>1500 128 126	5.21 2.38	1545		>100 >100 >100 61.5 40.3	3.68 4.71 4.07 4.84 6.99	288 149.0 153.0 203 80.5	400 370 330 280 380	1.64 2.37 1.77 2.38 3.46	9.86 54.6 9.07 16.90 28.4	0.22 0.13 0.10 0.07 0.37	6.22 6.46 0.60 2.44 4.18	25.9 28.0 21.2 13.25 46.5	43.8 41.5 5.4 30.8 41.3
K291476 K291477 K291479 K291480 K291481		1.92 2.72 1.52 3.54 3.96	370	1.820			8.79 >100 1.35 11.55 8.01	7.62 5.56 7.30 5.47 5.65	84.1 130.5 25.1 354 528	920 440 1420 310 290	2.68 2.88 2.13 2.58 2.29	14.75 28.8 0.78 3.74 3.06	1.72 0.31 2.16 0.46 0.16	1.26 5.04 13.65 17.40 8.04	50.4 36.4 45.8 40.1 34.2	22.5 42.7 46.9 15.6 12.3
K291482		3.24					8.44	5.48	658	490	2.08	4.42	0.90	12.75	35.0	22.7



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1016-510 W HASTINGS ST VANCOUVER BC V6B 1L8 Page: 2 - B Total # Pages: 2 (A - D) Plus Appendix Pages Finalized Date: 12-JUL-2016 Account: MTT

Project: 000

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	Cr	Cs	Cu	Fe	Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na
	Units	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%
	LOR	1	0.05	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
K291451 K291452 K291453 K291453 K291454 K291455		403 33 407 435 638	12.90 2.23 13.80 9.07 27.6	77.3 3820 150.0 18.7 379	6.16 0.85 6.02 6.11 5.65	17.10 1.18 16.80 16.30 18.30	0.13 <0.05 0.10 0.10 0.11	3.0 0.1 3.0 3.0 3.0	0.082 0.930 0.113 0.077 0.206	2.28 0.10 2.04 2.54 2.21	18.4 <0.5 19.8 20.4 24.4	18.3 5.5 20.8 21.0 16.9	4.82 0.17 4.03 4.82 2.15	1150 1470 1860 1280 6890	1.28 0.60 0.88 0.82 14.40	1.05 0.02 0.97 1.04 0.41
K291458		421	10.50	28.0	7.10	18.30	0.11	2.9	0.174	1.77	20.3	45.4	3.56	5090	2.29	0.78
K291459		9	1.54	432	0.37	0.50	<0.05	<0.1	0.190	0.03	<0.5	7.2	0.06	405	0.28	0.01
K291460		357	10.45	445	6.11	15.70	0.10	1.0	0.222	1.58	18.2	26.2	3.34	5400	2.84	0.85
K291461		358	2.71	82.7	5.76	16.00	0.10	2.6	0.118	1.71	17.9	24.8	5.00	1620	1.97	1.17
K291462		371	53.7	69.2	4.94	19.05	0.09	1.9	0.082	2.30	11.1	17.5	2.85	957	1.04	1.11
K291468		204	15.65	1980	11.90	10.50	0.08	1.1	4.21	0.81	12.6	55.8	0.34	21600	91.8	0.04
K291469		430	38.7	428	10.85	21.7	0.10	1.6	0.396	1.86	14.0	27.3	0.23	11300	20.7	0.05
K291470		148	21.2	385	7.35	7.95	0.10	1.4	0.156	1.50	12.2	68.0	0.14	735	136.5	0.06
K291474		142	21.3	479	8.98	16.45	0.10	1.7	0.380	1.87	7.1	20.8	0.19	2830	59.6	0.02
K291475		243	20.3	274	8.52	22.6	0.11	2.8	0.460	1.95	21.6	41.4	1.30	6880	8.35	0.09
K291476 K291477 K291479 K291479 K291480 K291481		241 154 355 283 320	16.50 21.7 11.20 28.1 18.15	240 479 30.1 72.1 37.1	7.16 10.55 6.22 13.00 14.05	23.6 18.85 17.95 15.10 15.25	0.15 0.11 0.12 0.11 0.11	2.3 1.9 3.0 1.4 1.5	0.387 0.540 0.070 1.295 0.752	2.28 1.84 2.73 1.69 2.05	23.6 17.8 21.3 18.9 16.0	32.4 30.8 31.8 34.4 27.0	1.83 0.46 3.90 0.66 0.38	2050 6990 10850 5460 3800	38.2 403 2.27 7.66 5.77	0.91 0.10 0.93 0.25 0.07
K291482		308	12.40	45.4	12.70	14.25	0.10	1.9	0.637	1.43	16.2	28.9	1.03	6280	4.67	0.30



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LIMITED 1016-510 W HASTINGS ST VANCOUVER BC V6B 1L8

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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	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
	LOR	0.1	0.2	10	0.5	0.1	0.002	0.01	0.05	0.1	1	0.2	0.2	0.05	0.05	0.01
K291451		8.7	255	1920	613	97.8	0.002	0.02	26.3	19.7	1	1.5	393	0.47	0.05	3.86
K291452		0.4	20.4	120	>10000	8.0	<0.002	9.00	4120	1.4	1	0.4	128.5	<0.05	0.15	0.05
K291453		8.7	224	1940	>10000	85.3	<0.002	0.32	124.5	20.1	<1	1.6	312	0.45	<0.05	4.05
K291454		8.6	256	2020	504	83.4	<0.002	0.02	15.90	19.5	<1	1.4	315	0.44	0.07	3.90
K291455 K291458 K291459 K291460 K291461 K291462		9.9 8.6 0.2 7.9 8.4 10.5	292 272 4.9 197.0 225 158.0	2020 40 1690 1780 2240	937 >10000 6330 90.6 78.1	94.8 3.1 89.3 54.0 57.2	<0.002 <0.002 <0.002 <0.002 <0.002 <0.002 <0.002	0.10 0.02 0.65 0.35 0.02 0.01	125.0 17.30 559 126.5 6.96 16.90	23.9 20.6 0.6 17.7 19.1 18.3	1 <1 1 <1 <1 <1	1.8 1.5 0.2 1.7 1.4 1.7	260 1545 680 274 326	0.52 0.44 <0.05 0.39 0.42 0.55	 0.13 <0.05 0.05 0.18 0.06 <0.05 	4.61 4.13 0.04 2.45 3.65 3.07
K291468		3.5	103.5	920	>10000	57.2	<0.002	0.10	3040	10.5	2	3.8	105.0	0.15	0.98	3.07
K291469		5.7	91.5	1330	7740	170.5	<0.002	0.12	435	24.6	4	23.5	166.5	0.28	3.80	3.43
K291470		4.7	18.8	860	>10000	81.9	<0.002	0.20	507	8.4	3	8.3	100.0	0.22	5.40	4.51
K291474		5.5	38.3	1340	6780	135.5	<0.002	0.14	290	15.1	5	12.7	103.5	0.27	4.28	3.34
K291475		9.0	79.0	1820	5150	181.0	<0.002	0.14	41.6	23.4	1	8.1	134.5	0.47	0.86	4.97
K291476		9.8	74.6	1800	5340	129.5	<0.002	0.17	37.0	25.4	3	9.7	285	0.54	1.68	5.45
K291477		6.4	71.3	1430	>10000	165.5	0.003	0.24	526	18.4	5	7.0	197.0	0.33	6.31	4.53
K291479		9.7	233	2190	216	105.5	<0.002	0.15	14.25	18.5	1	1.7	384	0.50	0.24	4.42
K291480		5.4	85.0	1810	6290	180.5	<0.002	0.30	36.5	13.8	1	3.3	91.3	0.27	1.28	3.37
K291481		4.7	74.0	1800	2130	240	<0.002	0.24	38.3	15.3	2	3.4	44.2	0.22	1.10	3.13
K291482		6.7	115.5	1740	1890	118.0	<0.002	0.34	42.9	15.5	1	3.2	133.5	0.34	0.84	3.30



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LIMITED 1016-510 W HASTINGS ST VANCOUVER BC V6B 1L8

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- CERTIFICATE OF ANALISIS - VATOTOOT/S

Sample Description	Method Analyte Units LOR	ME-MS61 Ti % 0.005	ME-MS61 Tl ppm 0.02	ME-MS61 U ppm 0.1	ME-MS61 V ppm 1	ME-MS61 W ppm 0.1	ME-MS61 Y ppm 0.1	ME-MS61 Zn ppm 2	ME-MS61 Zr ppm 0.5	Au-ICP21 Au ppm 0.001	
K291451		0.491	1.91	1.7	161	2.2	20.6	570	118.0	0.001	
K291452		0.033	0.55	0.2	11	0.5	2.1	3610	3.6	1.115	
K291453		0.503	1.71	1.7	168	3.1	21.9	648	108.0	0.021	
K291454		0.501	1.51	1.5	165	1.9	19.4	231	111.5	<0.001	
K291455		0.550	2.44	1.8	185	5.6	24.0	1020	110.0	0.004	
K291458		0.511	1.74	1.9	180	5.0	22.0	1960	107.0	0.001	
K291459		0.011	0.12	0.1	5	0.1	0.7	415	1.3	0.042	
K291460		0.454	1.40	1.3	154	2.4	16.8	1270	33.9	0.005	
K291461		0.481	1.06	1.5	163	1.1	16.9	162	109.5	<0.001	
K291462		0.570	1.58	1.2	181	1.9	11.8	114	70.7	<0.001	
K291468		0.219	1.16	12.3	88	0.8	10.5	678	35.5	0.167	
K291469		0.338	2.94	4.1	163	1.6	21.1	598	61.5	0.049	
K291470		0.299	1.73	1.8	74	1.2	9.8	164	52.2	0.038	
K291474		0.328	2.87	1.9	134	1.5	9.0	392	63.5	0.023	
K291475		0.529	3.52	3.0	186	1.7	16.0	556	104.0	0.005	
K291476		0.556	2.48	3.0	217	2.2	23.6	289	79.8	0.008	
K291477		0.386	2.94	2.6	145	2.1	12.9	755	66.5	0.094	
K291479		0.512	1.99	1.7	152	2.8	22.0	1580	108.0	0.002	
K291480		0.294	2.86	1.4	123	11.5	10.9	2790	54.9	0.197	
K291481		0.275	5.54	1.6	135	13.2	10.1	2340	60.8	0.182	
K291482		0.370	2.64	1.4	132	19.3	12.4	2920	64.0	0.165	



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		CERTIFICATE COMMENTS	S	
		ANALYTICAL C	OMMENTS	
Applies to Method:	REE's may not be totally soluble in t ME-MS61	his method.		
		LABORATORY A	ADDRESSES	
	Processed at ALS Vancouver located	at 2103 Dollarton Hwy, North Vanco	ouver, BC, Canada.	
Applies to Method:	Ag-GRA21 CRU-QC Pb-OG62 SPL-21	Ag-OG62 LOG-21 Pb-VOL70 WEI-21	Au-ICP21 ME-MS61 PUL-31	CRU-31 ME-OG62 PUL-QC



To: STRATEGIC METALS LTD. C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED 1016-510 W HASTINGS ST VANCOUVER BC V6B 1L8

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CERTIFICATE VA16101586

Project: 000

This report is for 19 Rock samples submitted to our lab in Whitehorse, YT, Canada on 24-JUN-2016.

The following have access to data associated with this certificate:

HEATHER BURRELL

JOAN MARIACHER

SAMPLE PREPARATION								
ALS CODE	DESCRIPTION							
WEI-21	Received Sample Weight							
LOG-21	Sample logging - ClientBarCode							
CRU-31	Fine crushing - 70% < 2mm							
SPL-21	Split sample - riffle splitter							
PUL-31	Pulverize split to 85% <75 um							
PUL-QC	Pulverizing QC Test							
CRU-QC	Crushing QC Test							

	ANALYTICAL PROCEDUR	ES
ALS CODE	DESCRIPTION	INSTRUMENT
Au-ICP21	Au 30g FA ICP-AES Finish	ICP-AES
Ag-OG62	Ore Grade Ag - Four Acid	VARIABLE
ME-MS61	48 element four acid ICP-MS	
ME-OG62	Ore Grade Elements - Four Acid	ICP-AES
Pb-OG62	Ore Grade Pb - Four Acid	VARIABLE
Ag-GRA21	Ag 30g FA-GRAV finish	WST-SIM
Pb-VOL70	Pb by Titration	

TO: STRATEGIC METALS LTD. ATTN: JOAN MARIACHER C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED 1016-510 W HASTINGS ST VANCOUVER BC V6B 1L8

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.



Colin Ramshaw, Vancouver Laboratory Manager

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



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Sample Description	Method Analyte Units LOR	WEI-21 Recvd Wt. kg 0.02	Ag-OG62 Ag ppm 1	Pb-OG62 Pb % 0.001	Ag-GRA21 Ag ppm 5	Pb-VOL70 Pb % 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
R503951 R503952 R503953 R503954 R503955		0.52 0.60 0.90 1.26 0.40	1470 251 >1500	1.750 2.02 >20.0	2490	45.78	>100 65.8 6.94 >100 >100	1.08 1.17 1.15 4.18 0.77	97.5 447 201 770 217	220 80 70 60 120	1.18 1.00 1.14 4.20 0.47	108.5 1.68 0.42 4.63 8.56	0.04 0.04 0.04 0.15 0.01	12.60 0.61 0.34 1.33 147.5	2.03 0.63 0.56 6.05 14.10	0.7 1.2 1.0 4.6 1.3
R503956 R503957 R503958 R503959 R503959		0.86 1.02 0.92 0.88 0.66					4.57 2.26 35.9 5.36 0.82	2.63 7.57 7.30 6.57 7.66	39.9 23.1 15.6 18.6 17.4	40 830 2130 800 1110	6.02 2.10 1.24 1.52 1.29	0.92 0.24 6.10 0.51 0.21	0.16 3.89 2.17 4.18 4.53	4.26 4.31 2.15 0.46 0.14	5.68 41.0 32.3 40.7 42.0	26.1 16.5 191.0 75.8 25.8
R503961 R503962 R503963 R503964 R503965		0.54 1.06 1.34 0.64 1.60	564	13.95			11.05 13.70 1.27 54.5 >100	6.19 7.16 8.45 0.04 2.07	12.5 21.9 17.2 2.3 1235	790 480 1580 1950 700	1.17 3.19 4.24 0.05 1.77	0.84 17.80 0.85 0.05 2.60	4.92 4.52 2.15 0.06 0.09	0.65 0.45 0.25 4.88 5.89	25.2 48.6 85.0 0.27 12.20	30.1 12.8 6.5 0.3 8.6
K291401 K291402 K291403 K291404		0.86 0.46 1.06 0.76					1.58 17.40 8.15 2.52	7.25 2.25 7.49 2.40	25.6 12.7 37.1 74.8	440 3070 3820 30	5.17 1.31 4.09 5.93	9.69 6.92 0.27 4.22	0.34 7.53 2.37 8.71	0.05 7.45 0.55 10.50	23.9 18.60 52.9 11.05	12.8 8.9 17.0 3.0



Sample Description

R503951 R503952 R503953 R503954 R503955 R503956 R503957 R503958 R503959 R503960 R503960 R503963 R503964 R503964 R503965

K291401

K291402

K291403

K291404

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CERTIFICATE OF ANALYSIS VA16101586

								-		-			-		
Method	ME-MS61														
Analyte	Cr	Cs	Cu	Fe	Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na
Units	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%
LOR	1	0.05	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
	37	10.45	283	2.06	2.48	0.21	0.3	4.69	0.30	1.2	103.5	0.03	234	5.02	0.02
	26	4.24	242	9.28	6.09	0.10	0.2	1.770	0.29	<0.5	32.9	0.09	110	1.81	0.04
	29	4.83	165.0	9.79	5.28	0.07	0.2	2.28	0.23	<0.5	28.3	0.12	89	2.95	0.05
	59	4.12	251	9.46	14.65	0.08	0.5	2.72	0.24	3.9	33.0	0.90	174	11.35	0.40
	11	3.15	2080	3.70	1.87	0.06	0.1	9.51	0.23	7.6	14.0	0.02	106	1.18	0.02
	184	1.22	8.8	0.99	20.1	0.05	0.6	0.078	0.05	2.0	17.9	0.63	3150	1.15	0.19
	71	18.15	4.4	5.75	17.25	0.14	0.6	0.112	2.97	17.6	188.0	0.73	2940	1.14	0.17
	124	7.33	7450	9.36	16.35	0.10	1.7	0.226	1.87	15.1	32.1	2.90	1950	2.75	0.66
	166	2.50	4160	7.07	16.40	0.11	1.8	0.123	1.23	19.6	28.6	3.15	855	3.31	0.93
	26	2.33	10.6	5.87	17.80	0.11	0.9	0.112	2.06	19.4	19.5	3.63	892	1.43	1.92
	82	1.29	2090	5.51	15.55	0.09	1.3	0.066	1.13	11.4	34.1	2.37	800	1.98	1.28
	79	1.61	2450	3.30	17.05	0.12	2.7	0.074	1.31	24.7	20.3	1.25	593	25.8	3.09
	24	3.75	31.0	3.09	20.3	0.20	1.6	0.119	4.53	41.7	13.6	0.99	267	2.64	2.53
	3	0.46	89.8	0.09	0.37	0.05	<0.1	0.029	0.01	<0.5	5.3	0.02	134	0.12	0.01
	106	1.04	1045	8.77	6.55	0.09	0.4	8.00	0.02	5.5	28.1	0.48	2130	6.00	0.20
	66	1.70	3.8	6.60	49.6	0.07	2.6	0.220	0.71	9.5	73.7	7.10	611	0.58	0.02

0.047

0.199

0.072

0.89

4.86

0.02

8.9

25.7

4.8

24.6

11.8

18.2

1.31

1.75

1.74

1140

583

1530

1.23

0.98

1.14

0.17

2.16

0.19

81

91

27

0.79

2.80

0.29

2920

4740

32.6

2.40

3.95

1.10

8.77

17.00

22.6

0.06

0.16

0.06

0.6

3.3

0.3



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CERTIFICATE

OF	ANAI	YSIS	VA1	61	01586
				υı	01300

Sample Description	Method Analyte Units LOR	ME-MS61 Nb ppm 0.1	ME-MS61 Ni ppm 0.2	ME-MS61 P ppm 10	ME-MS61 Pb ppm 0.5	ME-MS61 Rb ppm 0.1	ME-MS61 Re ppm 0.002	ME-MS61 S % 0.01	ME-MS61 Sb ppm 0.05	ME-MS61 Sc ppm 0.1	ME-MS61 Se ppm 1	ME-MS61 Sn ppm 0.2	ME-MS61 Sr ppm 0.2	ME-MS61 Ta ppm 0.05	ME-MS61 Te ppm 0.05	ME-MS61 Th ppm 0.01
R503951 R503952 R503953 R503954 R503955		0.1 0.5 0.8 2.1 0.3	6.5 4.3 3.4 10.4 5.3	160 310 440 940 670	>10000 2320 1630 >10000 >10000	22.0 38.2 30.7 23.0 23.3	<0.002 <0.002 <0.002 <0.002 <0.002	0.09 0.16 0.14 0.93 6.78	1730 455 245 830 7410	3.7 4.8 4.9 26.8 5.5	2 <1 1 2 <1	0.9 2.4 2.7 10.5 3.6	21.9 18.7 22.7 257 374	<0.05 <0.05 <0.05 0.12 <0.05	0.29 <0.05 <0.05 0.42 <0.05	0.95 0.34 0.50 0.78 0.14
R503956 R503957 R503958 R503959 R503959 R503960		2.0 8.1 7.4 8.0 8.9	200 12.8 43.2 84.5 8.5	640 2000 1300 1130 1780	841 244 4210 98.7 42.7	3.2 272 94.3 50.3 67.9	<0.002 <0.002 <0.002 <0.002 <0.002	0.06 0.65 0.39 0.31 <0.01	34.8 23.1 91.6 5.65 9.30	35.3 20.1 21.5 23.3 19.8	2 2 2 2 1	73.5 1.5 1.7 1.4 1.5	51.1 50.4 296 719 580	0.11 0.42 0.46 0.48 0.42	0.27 <0.05 1.30 0.20 <0.05	1.25 1.55 5.58 5.14 1.45
R503961 R503962 R503963 R503964 R503965		5.2 13.2 20.6 <0.1 1.0	19.2 52.2 10.2 0.7 31.6	1020 2300 1010 10 1410	3000 176.5 87.2 1760 >10000	34.6 38.1 162.5 0.7 1.6	<0.002 <0.002 <0.002 <0.002 <0.002	0.09 0.02 0.92 0.13 1.79	19.45 9.02 5.14 96.1 1585	16.6 8.0 7.8 0.1 8.6	1 1 2 <1 3	0.7 1.5 4.3 <0.2 9.8	531 551 589 2430 87.7	0.30 0.80 1.79 <0.05 <0.05	<0.05 0.08 0.08 <0.05 0.35	2.38 9.42 33.2 0.03 1.08
K291401 K291402 K291403 K291404		7.8 2.3 15.2 2.2	10.8 46.1 67.4 58.6	1900 480 2710 1590	268 2210 2370 382	32.4 31.8 90.5 1.1	<0.002 <0.002 <0.002 <0.002	0.29 0.20 0.03 0.07	9.57 12.70 24.5 27.8	18.6 5.6 8.4 35.1	1 2 1	16.3 0.5 2.1 48.2	18.9 401 556 144.0	0.39 0.13 0.91 0.11	6.56 0.07 0.08 0.40	2.13 0.99 8.26 0.69



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LIMITED 1016-510 W HASTINGS ST VANCOUVER BC V6B 1L8

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Project: 000

CERTIFICATE OF ANALYSIS	VA16101586
	VAIOIUISOO

Sample Description	Method Analyte Units LOR	ME-MS61 Ti % 0.005	ME-MS61 TI ppm 0.02	ME-MS61 U ppm 0.1	ME-MS61 V ppm 1	ME-MS61 W ppm 0.1	ME-MS61 Y ppm 0.1	ME-MS61 Zn ppm 2	ME-MS61 Zr ppm 0.5	Au-ICP21 Au ppm 0.001	
R503951 R503952 R503953 R503954 R503955		0.048 0.045 0.056 0.193 0.037	2.48 0.83 0.65 2.78 5.98	0.9 0.2 0.2 0.5 12.0	21 40 47 121 19	0.1 1.1 1.1 2.1 0.8	1.5 1.4 1.0 2.5 0.9	567 1220 961 746 870	9.7 6.8 7.8 17.0 3.0	0.177 0.130 0.127 0.271 0.537	
R503956 R503957 R503958 R503959 R503960		0.125 0.521 0.451 0.470 0.551	0.19 4.29 1.98 0.73 0.80	5.2 0.5 2.6 2.1 0.5	293 171 182 172 183	2.5 1.9 2.0 0.8 0.7	31.7 21.7 15.7 20.5 21.1	361 417 198 85 96	23.8 18.3 59.9 70.2 29.2	0.002 0.002 0.027 0.003 <0.001	
R503961 R503962 R503963 R503964 R503965		0.353 0.394 0.336 <0.005 0.076	0.77 0.67 1.35 0.25 6.93	1.0 3.8 10.5 <0.1 1.4	151 132 69 1 61	1.4 0.9 0.8 <0.1 0.9	13.9 14.7 20.5 0.2 7.3	79 34 48 251 1920	42.7 114.0 46.3 <0.5 15.0	<0.001 0.058 0.002 0.003 1.525	
K291401 K291402 K291403 K291404		0.500 0.125 0.456 0.131	0.55 0.74 1.64 0.08	1.7 0.6 5.0 2.0	161 60 156 291	1.9 0.3 1.5 0.8	13.4 6.6 14.8 24.1	192 36 56 774	102.0 24.9 135.0 12.1	0.004 0.004 0.018 0.001	



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		CERTIFICATE CON	IMENTS	
		ANALY	TICAL COMMENTS	
Applies to Method:	REE's may not be totally solul ME-MS61	ble in this method.		
		LABOR	ATORY ADDRESSES	
	Processed at ALS Vancouver I	ocated at 2103 Dollarton Hwy, No	rth Vancouver, BC, Canada.	
Applies to Method:	Ag-GRA21 CRU-QC Pb-OG62	Ag-OG62 LOG-21 Pb-VOL70	Au-ICP21 ME-MS61 PUL-31	CRU-31 ME-OG62 PUL-QC
	SPL-21	WEI-21		



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CERTIFICATE WH16109096

Project: 000

This report is for 26 Rock samples submitted to our lab in Whitehorse, YT, Canada on 7-JUL-2016.

The following have access to data associated with this certificate:

HEATHER BURRELL

JOAN MARIACHER

	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-ICP21	Au 30g FA ICP-AES Finish	ICP-AES
Ag-OG62	Ore Grade Ag - Four Acid	VARIABLE
ME-MS61	48 element four acid ICP-MS	
ME-OG62	Ore Grade Elements - Four Acid	ICP-AES
Pb-OG62	Ore Grade Pb - Four Acid	VARIABLE
As-OG62	Ore Grade As - Four Acid	VARIABLE

TO: STRATEGIC METALS LTD. ATTN: JOAN MARIACHER C/O ARCHER, CATHRO & ASSOCIATES (1981) LIMITED 1016-510 W HASTINGS ST VANCOUVER BC V6B 1L8

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.



Colin Ramshaw, Vancouver Laboratory Manager

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



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1016-510 W HASTINGS ST VANCOUVER BC V6B 1L8 Page: 2 - A Total # Pages: 2 (A - D) Plus Appendix Pages Finalized Date: 12-JUL-2016 Account: MTT

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Sample Description	Method Analyte Units LOR	WEI-21 Recvd Wt. kg 0.02	Ag-OG62 Ag ppm 1	Pb-OG62 Pb % 0.001	As-OG62 As % 0.001	ME-MS61 Ag ppm 0.01	ME-MS61 AI % 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
R503982 R503983 R503984 R503985 R503986		1.11 0.42 0.66 0.77 1.02				3.00 3.59 0.72 0.44 0.17	7.26 7.62 7.03 7.31 7.33	3560 97.6 25.9 11.4 6.3	470 1770 1030 1070 1100	2.46 3.28 3.72 3.65 3.18	3.05 140.5 1.11 1.32 0.77	0.10 0.47 1.33 1.40 0.94	0.90 1.53 0.48 0.30 0.21	51.7 34.4 68.7 69.2 67.0	7.0 26.7 9.4 5.9 5.3	20 21 24 21 21
R503987 R503988 R503989 R503990 R503991		1.01 0.75 1.24 0.89 0.58	388	17.15	1.235	0.48 0.37 1.43 >100 0.88	5.55 8.18 7.81 1.17 7.09	5.0 44.0 12.2 >10000 29.3	330 1120 1290 50 1510	0.97 1.77 3.36 0.86 3.44	13.90 1.66 1.38 24.4 3.25	4.58 2.16 0.59 0.03 0.28	0.14 2.99 7.15 5.79 0.93	11.65 42.9 68.6 25.0 12.85	3.0 12.4 3.5 0.5 1.8	5 28 12 3 16
K291405 K291406 K291407 K291408 K291408 K291409		1.07 0.79 1.36 1.01 1.53				2.87 0.21 0.41 11.20 0.63	6.26 3.05 8.28 5.25 2.88	234 7.0 64.9 885 6.0	780 50 1120 730 110	3.90 0.79 3.53 1.98 4.27	2.41 0.33 2.13 250 0.88	0.06 0.22 0.40 0.59 0.09	0.20 0.32 1.09 1.36 1.06	19.60 21.2 100.0 17.65 2.26	0.5 1.4 22.1 2.5 1.1	7 9 24 11 11
K291410 K291411 K291412 K291413 K291413 K291414		0.76 1.11 0.99 1.21 0.27				1.92 26.1 14.75 0.18 5.29	7.45 3.67 4.34 1.07 7.39	13.1 126.0 230 34.1 2650	210 140 150 20 270	4.73 1.74 2.63 2.66 1.96	3.75 31.8 25.2 0.91 2.26	0.24 0.11 0.36 8.88 0.29	0.49 0.43 0.88 0.30 12.65	11.55 15.10 16.35 7.58 47.9	1.1 1.1 2.0 34.3 4.5	10 11 17 193 27
K291415 K291416 K291501 K291502 K291503		1.62 1.68 1.70 2.33 2.16				6.99 0.96 0.77 9.81 1.57	7.30 6.60 8.27 5.23 6.56	16.3 41.7 125.5 356 70.9	1320 970 1360 80 640	3.12 3.06 1.45 2.78 3.05	149.0 5.16 1.71 14.85 4.27	1.34 0.46 0.16 0.30 0.51	1.58 0.27 0.39 1.36 1.98	63.7 51.1 42.6 18.10 20.6	2.3 3.0 3.0 4.4 1.8	13 14 16 19 19
K291504		1.55				3.30	3.07	494	110	1.63	1.77	0.13	0.08	7.94	1.2	30



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Sample Description	Method Analyte Units LOR	ME-MS61 Cs ppm 0.05	ME-MS61 Cu ppm 0.2	ME-MS61 Fe % 0.01	ME-MS61 Ga ppm 0.05	ME-MS61 Ge ppm 0.05	ME-MS61 Hf ppm 0.1	ME-MS61 In ppm 0.005	ME-MS61 K % 0.01	ME-MS61 La ppm 0.5	ME-MS61 Li ppm 0.2	ME-MS61 Mg % 0.01	ME-MS61 Mn ppm 5	ME-MS61 Mo ppm 0.05	ME-MS61 Na % 0.01	ME-MS61 Nb ppm 0.1
R503982 R503983 R503984 R503985 R503986		10.95 6.61 7.53 6.66 6.72	20.2 1890 128.0 69.9 30.0	3.54 1.51 2.45 2.29 1.96	18.15 17.55 17.40 17.65 17.10	0.20 0.20 0.25 0.22 0.25	2.1 2.6 1.7 1.7 2.1	0.581 1.665 0.064 0.051 0.051	3.20 4.57 4.20 4.22 4.27	27.8 14.5 36.7 38.6 34.9	11.3 18.9 24.9 26.5 30.2	0.24 0.45 0.79 0.86 0.76	186 509 385 258 349	1.63 0.44 2.68 2.32 1.59	0.03 2.22 1.83 2.01 2.06	16.6 15.7 18.3 18.5 18.2
R503987 R503988 R503989 R503989 R503990 P503991		10.90 12.25 6.40 12.85 4.10	55.6 82.1 37.6 4330 28.2	0.49 4.73 1.96 6.33 1.01	4.65 19.20 18.75 4.86 13.70	0.14 0.19 0.22 0.20 0.16	0.4 0.7 0.9 0.1 1 1	0.256 0.069 0.199 9.30 0.112	1.43 2.32 3.36 0.42 3.31	6.2 21.0 37.6 17.9 6.0	6.1 24.6 16.7 38.7 18.6	0.11 1.43 0.57 0.04 0.58	229 564 2860 69 630	0.19 4.48 2.39 26.7 0.64	0.24 2.40 1.23 0.02 0.66	3.5 8.0 14.9 1.3 10.0
K291405 K291406 K291407 K291408		6.75 1.54 5.69 4.49	47.4 4.5 95.4 3230	3.12 1.05 4.20 1.88	12.90 8.57 22.7 12.25 5.35	0.15 0.12 0.26 0.18 0.00	0.6 0.4 1.0 0.5	0.581 0.163 0.095 0.538	2.68 0.32 4.25 1.80 0.67	11.6 9.0 34.0 9.5	5.5 10.2 40.5 18.4	0.34 0.33 1.20 0.42 0.12	204 276 1210 753	16.45 0.61 2.27 3070	0.10 1.14 2.39 1.51 0.70	4.9 5.6 8.4 8.3 2.1
K291407 K291410 K291411 K291412 K291413 K291414		9.83 4.56 2.60 0.78 8.66	34.9 83.9 596 36.0 57.2	2.98 2.29 1.58 7.98 9.29	18.15 14.10 11.25 7.96 16.35	0.17 0.11 0.13 0.13 0.19	2.8 0.6 0.9 0.3	0.232 0.320 0.507 1.830 0.608	2.46 0.59 0.89 0.04 1.94	6.5 12.7 7.9 3.0 25.4	18.2 28.6 17.6 29.0 58.4	0.56 0.48 0.48 4.91 1.48	1040 149 386 2510 3980	6.32 3.79 4.64 13.50 2.05	0.21 0.21 0.20 0.07 0.03	12.6 4.5 7.3 1.5 6.9
K291415 K291416 K291501 K291502		6.30 4.55 12.30 2.13 2.80	199.5 20.5 21.9 185.0 20.2	1.54 2.00 3.32 1.85 1.52	16.15 18.30 18.65 13.05	0.22 0.17 0.19 0.13 0.16	1.1 1.0 0.6 0.9	0.153 0.206 0.042 0.291 0.162	3.54 2.39 3.30 0.47 1.65	35.7 28.6 21.3 8.5	13.5 19.1 21.5 28.4 20.7	0.59 0.67 0.58 0.79	1480 611 154 1160	2.48 0.81 5.93 2.02 0.80	0.28 1.06 1.11 0.33 0.35	11.6 12.1 2.9 6.7
K291503		1.72	27.9	1.49	7.45	0.18	0.5	0.244	0.52	4.4	18.2	0.88	161	0.58	0.35	4.6



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Sample Description	Method Analyte Units LOR	ME-MS61 Ni ppm 0.2	ME-MS61 P ppm 10	ME-MS61 Pb ppm 0.5	ME-MS61 Rb ppm 0.1	ME-MS61 Re ppm 0.002	ME-MS61 S % 0.01	ME-MS61 Sb ppm 0.05	ME-MS61 Sc ppm 0.1	ME-MS61 Se ppm 1	ME-MS61 Sn ppm 0.2	ME-MS61 Sr ppm 0.2	ME-MS61 Ta ppm 0.05	ME-MS61 Te ppm 0.05	ME-MS61 Th ppm 0.01	ME-MS61 Ti % 0.005
R503982 R503983 R503984 R503985 R503986		2.8 10.0 5.4 5.5 5.3	600 760 760 740 710	889 129.5 101.0 33.0 22.1	337 311 240 234 262	<0.002 <0.002 <0.002 0.004 <0.002	2.33 0.09 0.28 0.18 0.04	11.15 2.47 7.32 0.89 0.82	6.9 6.1 8.0 7.7 7.5	1 2 3 1 1	10.9 7.1 3.7 4.8 5.5	9.6 138.0 388 328 263	1.74 1.62 1.76 1.86 1.89	<0.05 0.48 0.06 0.06 <0.05	28.6 37.6 33.3 34.4 33.9	0.226 0.236 0.286 0.281 0.259
R503987 R503987 R503988 R503989 R503990 R503991		1.9 4.2 4.9 1.8 3.8	180 1230 920 50 740	100.0 74.2 323 >10000 389	54.6 93.2 232 41.6 186 5	<0.002 <pre></pre> <pre></pre> <pr< td=""><td><0.01 1.29 0.01 1.32 0.01</td><td>0.76 1.30 3.98 1125 7.79</td><td>1.3 17.8 4.8 0.8 4.1</td><td>1 6 1 21 <1</td><td>10.1 2.3 23.9 17.8 27.1</td><td>152.0 498 229 10.9 121.0</td><td>0.35 0.52 1.08 0.11 0.78</td><td>0.08 0.16 0.26 0.06 0.81</td><td>3.72 6.03 19.85 2.95 20.5</td><td>0.055 0.447 0.250 0.027 0.180</td></pr<>	<0.01 1.29 0.01 1.32 0.01	0.76 1.30 3.98 1125 7.79	1.3 17.8 4.8 0.8 4.1	1 6 1 21 <1	10.1 2.3 23.9 17.8 27.1	152.0 498 229 10.9 121.0	0.35 0.52 1.08 0.11 0.78	0.08 0.16 0.26 0.06 0.81	3.72 6.03 19.85 2.95 20.5	0.055 0.447 0.250 0.027 0.180
K291405 K291406 K291407 K291407 K291408 K291409		1.4 2.5 13.3 4.2 1.4	240 440 1120 610 10	1265 33.0 106.5 896 163.0	292 33.4 229 115.5 74.3	<0.002 <0.002 <0.002 0.512 <0.002	0.07 <0.01 0.01 0.68 <0.01	11.60 1.15 5.33 7.80 3.74	2.2 2.3 11.8 3.9 1.8	2 <1 1 5 <1	13.6 20.3 14.9 20.8 12.6	62.7 57.7 245 213 22.8	0.62 0.62 0.70 0.60 0.14	0.26 0.08 0.06 0.78 0.29	14.15 9.33 29.0 12.25 1.25	0.091 0.106 0.308 0.161 0.045
K291410 K291411 K291412 K291413 K291414		2.9 1.6 4.8 54.9 3.0	720 200 1120 110 1250	451 1515 808 13.6 2590	323 64.8 98.0 1.4 229	<0.002 <0.002 0.002 0.003 <0.002	0.01 0.12 0.03 3.01 0.26	8.32 80.4 15.55 10.65 17.15	3.8 3.8 3.8 33.3 13.4	<1 1 1 5 1	33.6 29.8 45.3 11.7 14.6	47.7 44.8 45.6 75.5 21.6	0.99 0.43 0.60 0.06 0.45	0.07 2.20 0.20 0.38 <0.05	21.9 8.44 15.15 1.28 5.82	0.215 0.096 0.131 0.105 0.351
K291415 K291416 K291501 K291502 K291503		6.9 4.0 1.7 5.2 4.4	790 700 960 580 560	558 70.2 121.5 856 236	211 152.5 177.0 44.3 125.5	<0.002 <0.002 0.002 <0.002 <0.002	0.02 <0.01 0.77 0.05 0.01	12.40 3.74 5.97 15.85 16.40	4.2 4.6 12.7 4.2 5.6	2 1 4 1	35.7 36.8 3.8 29.5 24.4	125.5 189.0 147.0 60.7 75.2	0.98 0.99 0.19 0.55 0.66	39.8 1.56 0.21 0.16 0.22	23.0 23.4 6.67 14.20 16.65	0.196 0.192 0.176 0.156 0.162
K291504		3.4	350	1760	56.3	<0.002	0.04	15.40	2.6	<1	28.2	29.0	0.38	0.13	8.57	0.094



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CERTIFICATE OF ANALYSIS WH16109096

	Method Analyte	ME-MS61 TI	ME-MS61 U	ME-MS61 V	ME-MS61 W	ME-MS61 Y	ME-MS61 Zn	ME-MS61 Zr	Au-ICP21 Au	
Sample Description	Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Sample Description	LOR	0.02	0.1	1	0.1	0.1	2	0.5	0.001	
R503982		5.11	7.8	57	15.2	10.7	178	65.0	0.091	
R503983		2.51	11.4	53	4.4	16.7	357	79.4	0.150	
R503984		2.03	10.8	71	1.1	20.8	89	51.0	0.005	
R503985		1.52	11.3	61	0.8	21.1	45	47.9	0.010	
R503986		1.84	7.8	60	1.7	19.5	68	64.3	0.002	
R503987		1.10	1.2	17	4.4	2.1	93	11.5	0.003	
R503988		1.97	2.4	157	1.1	19.4	208	26.4	0.008	
R503989		3.31	3.9	43	3.2	12.3	578	28.4	0.005	
R503990		2.51	23	38	0.0	2.2	1/15	2.7	2.10	
K303771		2.01	2.5	00	0.4	0.4	140	30.5	0.007	
K291405		4.43	3.8	22	3.1	1.6	49	15.5	0.049	
K291406		0.54	1.5	29	1.0	5.0	47	10.1	0.004	
K291407		2.29	7.3	37	1.3	24.9	207	24.0 13.4	0.005	
K291400		1.00	1.0	17	9.0	2.2	208	43	0.001	
K291409		1.01	7.0	05	3.0	2.2	200	4.5	0.001	
K291410		4.19	7.2	35	11.Z	0.2 5.2	228	93.0 15.0	< 0.001	
K291411 K201412		1.03	3.0 1.5	40	5.0 8.3	0.2	31	24.5	0.131	
K291412 K291413		0.05	4.5	244	0.0	16.2	72	11.8	0.072	
K291413		2.99	1.7	124	26.3	12.0	1120	30.1	0.001	
K291415		3.28	4.2	39	3.3	13.7	266	31.7	0.001	
K291416		2.00	3.2	41	3.5	11.3	111	27.5	0.001	
K291501		2.77	1.3	122	1.6	6.0	135	21.0	0.001	
K291502		0.71	4.4	47	5.9	7.3	167	25.5	0.016	
K291503		1.94	3.6	50	7.9	8.6	469	30.6	0.001	
K291504		0.80	2.8	25	7.8	3.0	54	14.1	0.009	



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		CERTIFICATE CON	IMENTS	
		ANALY	TICAL COMMENTS	
Applies to Method:	REE's may not be totally so ME-MS61	oluble in this method.		
		LABOR	ATORY ADDRESSES	
	Processed at ALS Whitehor	se located at 78 Mt. Sima Rd. Whiteh	orse, YT, Canada.	
Applies to Method:	CRU-31	CRU-OC	LOG-21	PUL-31
	PUL-QC	SPL-21	WEI-21	
	Processed at ALS Vancouv	er located at 2103 Dollarton Hwy, No	rth Vancouver, BC, Canada.	
Applies to Method:	Ag-OG62	As-OG62	Au-ICP21	ME-MS61
	ME-OG62	Pb-OG62		

APPENDIX IV

ROCK SAMPLE DESCRIPTIONS

Rock Sample Des	criptions	Prop	erty: 000	
Sample Number: Elevation:	K291401 1580 m	UTM: UTM:	652412 mE 6926125 mN	Nad83, Zone 7
Comments:	Located in 2m by 5r surrounding rock. F	m talus fl ine graine	oat train on steep slo ed volcanic, brown ox	pe approximately 30m west of east most drainage gully. Less than 1% of idized weathering. Light green interior with chalcopyrite inclusions
Sample Number:	K291402	UTM:	652375 mE	Nad83, Zone 7
Elevation:	1669 m	UTM:	6925973 mN	
Comments:	Located in 10m by 2 quartz vein. Contair	1m talus i 1s galena	float train. Less than a and chalcopyrite.	1% of surrounding rock. Light green and brown weathered surface with 3cm
Sample Number:	K291403	UTM:	652813 mE	Nad83, Zone 7
Elevation:	1639 m	UTM:	6926159 mN	
Comments:	Located slightly up rock (talus and subo Makes up less than	rock face crop) is da 1% of ma	in talus of white, fine ark grey/black weathe aterial in dike.	e grained volcanics containing phenocrysts (possible 2x5m dike?). Surrounding ered andesite. Grey weathered fine grained containing prominent malachite.
Sample Number:	K291404	UTM:	652786 mE	Nad83, Zone 7
Elevation:	1600 m	UTM:	6926265 mN	
Comments:	Located in float trai vuggy quartz veins :	n on side 1mm-1cn	of hill surrounded by n in volcanic host rocl	vegetation. Less than 1% of surrounding rock. Heavily weathered (rusty), k. Residual galena and trace chalcopyrite.
Sample Number:	K291405	UTM:	651394 mE	Nad83, Zone 7
Elevation:	1701 m	UTM:	6928749 mN	
Comments:	Bleached/silicified i orange to rusty. Rej taken from outcrop	ntrusive presents /subcrop	with 3 parallel veins. (less than 1% of rock i).	One vein is 5mm, others are 1mm. Vein is dark black (tourmaline?). Weathered n area. Taken from the east of linear, possibly contact metamorphism? Sample

Rock Sample Des	criptions	Prop	erty: 000	
Sample Number: Elevation:	K291406 1708 m	UTM: UTM:	651379 mE 6928751 mN	Nad83, Zone 7
Comments:	Taken uphill from w syenite/monzonite within syenite/mon	est side hosting s zonite. P	of saddle, representir parse vuggy pockets henocrysts no larger	ng less than 1% of rock in area. Smoky quartz vein in contact with 1cm x 1cm with limonite/chalcopyrite. Less than 5% tourmaline? Dispersed than 2 cm, generally prismatic.
Sample Number: Elevation:	K291407 1817 m	UTM: UTM:	651081 mE 6928769 mN	Nad83, Zone 7
Comments:	Taken from east sid syenite/monzonite	e of sado with cavi	lle, representing less ty filling quartz? And	than 1% of surrounding rock. Heavily weathered, dark orange prismatic/bladed dark brown/purple crystals hosted in the intrusive.
Sample Number:	K291408	UTM:	652049 mE	Nad83, Zone 7
Elevation:	1542 m	UTM:	6928181 mN	
Comments:	Less than 1% of roc to rusty weathering brown/orange chalo	k in area. . Flow ba copyrite,	In small moss covere inding with 3? Episod malachite and black b	ed rock fall area at 1540 m elevation. Surrounding area is intrusive talus. Orange les of mineralization. Black sludge bands and cavity filled band of dark chocolate bladed crystals. Intrusive doesn't appear to host any alteration salvages.
Sample Number:	K291409	UTM:	652084 mE	Nad83, Zone 7
Elevation:	1544 m	UTM:	6928159 mN	
Comments:	Less than 5% of sur Open cavities with multiple episodes?	rounding well form	rocking in immediate ed quartz crystals. Bl	e area on talus slope of intrusive rock. Possible quartz vein with black seams. ack sludge?, seams and veins show no overall prefered orientation. Possibly
Sample Number:	K291410	UTM:	652230 mE	Nad83, Zone 7
Elevation:	1538 m	UTM:	6927968 mN	
Comments:	White, brown/rusty	,black w	eathering of intrusive	rock with black seam up to 0.5 cm, possibly mixed with quartz?

ock Sample Des	criptions	Prope	rty: 000	
Sample Number: Elevation:	K291411 1548 m	UTM: UTM:	652314 mE 6927752 mN	Nad83, Zone 7
Comments:	In orange stained go 25% of rock in the g seams running para	ossan train ossan. Or llel throu	n 30m x 4m on slope ange weathering wit gh quartz vein. Brecc	, surrounding rock is intrusive talus. Sample rock makes up approximately 20- h slight vuggy texture. Intrusive rock with quartz vein up to 1cm with black ciated and possibly clay altered (argillic?)
Sample Number:	K291412	UTM:	651942 mE	Nad83, Zone 7
Elevation:	1536 m	UTM:	6927476 mN	
Comments:	In 3m x 1m felsenm of intrusive. Flow ba Quartz vein has cav	eer makir anded and ities runn	ng up less than 1% of I brecciated. Quartz ing through the centi	rock in area. Surrounding rock is vegetated intrusive. Grey brown weathering vein 2cm wide with black seams (chalcacite?) running parallel to quartz vein. re of vein filled by rusty weathered crystals. Minor malachite and chalcopyrite.
Sample Number:	K291413	UTM:	651829 mE	Nad83, Zone 7
Elevation:	1593 m	UTM:	6927088 mN	
Comments:	Located on east side volcanics with mino sulphides.	e of draina r medium	age up hill 20 metres grained hornblende	. Makes up less than 1% of rock in area. Surrounding rock is dominantly granodiorite diking. Large, elongated crystals up to 5cm and tarnished
Sample Number:	K291414	UTM:	651862 mE	Nad83, Zone 7
Elevation:	1567 m	UTM:	6927147 mN	
Comments:	Located on east side containing galena a	e of draina nd dark re	age up hill approxima ed/dark chocolate bro	ately 15 metres, making up less than 1% of rock in area. Intrusive rock own weathering.
Sample Number:	K291415	UTM:	651880 mE	Nad83, Zone 7
Elevation:	1603 m	UTM:	6927578 mN	
Comments:	Collected from float	train of i	ntrusive rock, making buff, weak argillic al	g up approximately 5% of rock in area. Intrusive rock containing black seams un teration.

Rock Sample Des	criptions	Prop	erty: 000	
Sample Number:	K291416	UTM:	651934 mE	Nad83, Zone 7
Elevation:	1624 m	UTM:	6927632 mN	
Comments:	Collected from 5m :	x 10m flo	oat train at 1624m ele	evation. Makes up less than 1% of rock in area. Quartz veining up to 5cm wide
	paralleled by black :	seams 1-	2mm thick through in	ntrusive (feldspar phenocrysts up to 3cm in length) also containing black,
	elongated/bladed c	rrystals. P	Possibly brecciated an	d with weak argillic alteration.
Sample Number:	K291451	UTM:	652689 mE	Nad83, Zone 7
Elevation:	1704 m	UTM:	6925931 mN	
Comments:	TR-16-05 - 0-2.5 m	- fine gra	ined dark green ande	site wall rock.
Sample Number:	K291452	UTM:	652687 mE	Nad83, Zone 7
Elevation:	1702 m	UTM:	6925933 mN	
Comments:	TR-16-05 - 2.50-2.6	0 m Milk	y white quartz vein ho	osting semi-massive galena, and tetrahedrite and malachite
Sample Number:	K291453	UTM:	652686 mE	Nad83, Zone 7
Elevation:	1701 m	UTM:	6925933 mN	
Comments:	TR-16-05 - 2.60-3.4	0 m - Str	ongly weathered orar	nge to brown clay "baby shit".
Sample Number:	K291454	UTM:	652685 mE	Nad83, Zone 7
Elevation:	1701 m	UTM:	6925932 mN	
Comments:	TR-16-05 - 3.40-5.0	0 m - Dai	rk green fine grained a	andesite.
Sample Number:	K291455	UTM:	652684 mE	Nad83, Zone 7
Elevation:	1701 m	UTM:	6925933 mN	
Comments:	TR-16-05 - 5.00-6.7	0 m Orar	nge and brown and cla	ay altered "baby shit".
Sample Number:	K291456	UTM:	652682 mE	Nad83, Zone 7
Elevation:	1701 m	UTM:	6925932 mN	
Comments:	TR-16-05 - 6.70 -8.7	70 m - Da	rk green fine grained	andesite.

Rock Sample Descrip	tions	Prop	erty: 000						
Sample Number: Elevation:	K291457 1700 m	UTM: UTM:	652680 mE 6925933 mN	Nad83, Zone 7					
Comments: TR-	16-05 - 8.70-11.0	60 - Darl	green fine grained ar	ndesite.					
Sample Number: Elevation:	K291458 1700 m	UTM: UTM:	652694 mE 6925963 mN	Nad83, Zone 7					
Comments: TR-	16-04 - 0-1.30 m	ı - Dark g	green fine grained and	esite.					
Sample Number: Elevation:	K291459 1701 m	UTM: UTM:	652694 mE 6925963 mN	Nad83, Zone 7					
Comments: TR-	16-04 - 1.30-1.4	0 - Milky	white quartz vein hos	sting semi-massive galena and tetrahedrite (2%) and malachite.					
Sample Number: Elevation:	K291460 1701 m	UTM: UTM:	652693 mE 6925963 mN	Nad83, Zone 7					
Comments: TR-	16-04 - 1.40-3.4	0 - Mix o	f fine grained, dark gr	een andesite, permafrost and soil.					
Sample Number: Elevation:	K291461 1701 m	UTM: UTM:	652690 mE 6925964 mN	Nad83, Zone 7					
Comments: TR-	16-04 - 3.40-5.6	0 - Dark	green fine grained and	desite, permafrost and soil.					
Sample Number: Elevation:	K291462 1701 m	UTM: UTM:	652689 mE 6925964 mN	Nad83, Zone 7					
Comments: TR-	16-04 - 5.60-6.1	0 - Oran	ge to brown clay "baby	y shit".					
Sample Number: Elevation:	K291463 1701 m	UTM: UTM:	652688 mE 6925963 mN	Nad83, Zone 7					
Comments: TR-	Comments: TR-16-04 - 6.10-8.70 - Dark green fine grained andesite, permafrost and soil.								

Rock Sample Des	criptions	Prop	perty: 000	
Sample Number: Elevation:	K291464 1700 m	UTM: UTM:	652685 mE 6925963 mN	Nad83, Zone 7
Comments:	TR-16-04 - 8.70-11.	70 - Darl	k green, fine grained a	ndesite, permafrost and soil.
Sample Number: Elevation:	K291465 1726 m	UTM: UTM:	652407 mE 6925830 mN	Nad83, Zone 7
Comments:	TR-16-01 - 0-3.00 -	Dark gre	en fine grained andes	ite, permafrost and soil.
Sample Number: Elevation:	K291466 1724 m	UTM: UTM:	652405 mE 6925829 mN	Nad83, Zone 7
Comments:	TR-16-01 - 3.00-6.0	0 - Dark	green fine grained and	desite, permafrost and soil.
Sample Number: Elevation: Comments:	K291467 1724 m TR-16-01 - 6 00-8 1	UTM: UTM: 0 m - Da	652402 mE 6925828 mN rk green fine grained a	Nad83, Zone 7
	K201468			Nad83, Zone 7
Sample Number: Elevation:	K291468 1723 m	UTM:	6925828 mN	
Comments:	TR-16-01 - 8.10 - 10 banding and boxwo).10 m - (ork.	Quartz vein hosting st	rongly oxidized staining, limonite and goethite and appears as brecciations, flow
Sample Number: Elevation:	K291469 1723 m	UTM: UTM:	652398 mE 6925826 mN	Nad83, Zone 7
Comments:	TR-16-01 - 10.10-12 banding and boxwo	2.10 m - (ork.	Quartz vein hosting st	rongly oxidized staining, limonite and goethite and appears as brecciations, flow

Rock Sample Desc	riptions	Pro	perty: 000	
Sample Number: Elevation:	K291470 1723 m	UTM: UTM:	652396 mE 6925825 mN	Nad83, Zone 7
Comments:	TR-16-01 - 12.10-14 banding and boxwo	I.50 m - ork.	Quartz vein hosting st	rongly oxidized staining, limonite and goethite and appears as brecciations, flow
Sample Number: Elevation:	K291471 1723 m	UTM: UTM:	652394 mE 6925824 mN	Nad83, Zone 7
Comments:	TR-16-01 - 14.50-16	6.60 m -	Dark green fine graine	ed andesite, permafrost and soil.
Sample Number: Elevation:	K291472 1723 m	UTM: UTM:	652393 mE 6925823 mN	Nad83, Zone 7
Comments:	TR-16-01 - 16.60-18	3.00 m -	Dark green fine graine	ed andesite, permafrost and soil.
Sample Number: Elevation:	K291473 1722 m	UTM: UTM:	652391 mE 6925821 mN	Nad83, Zone 7
Comments:	TR-16-01 - 18.00-20).10 m -	Dark green fine graine	d andesite, permafrost and soil.
Sample Number: Elevation:	K291474 1723 m	UTM: UTM:	652390 mE 6925821 mN	Nad83, Zone 7
Comments:	TR-16-01 - 20.10-23 banding and boxwo	3.10 m - ork.	Quartz vein hosting st	rongly oxidized staining, limonite and goethite and appears as brecciations, flow
Sample Number: Elevation:	K291475 1722 m	UTM: UTM:	652388 mE 6925817 mN	Nad83, Zone 7
Comments:	TR-16-01 - 23.10-24 banding and boxwo	I.70 m - ork.	Quartz vein hosting st	rongly oxidized staining, limonite and goethite and appears as brecciations, flow

Rock Sample Descriptions		Property: 000		
Sample Number: Elevation:	K291476 1724 m	UTM: UTM:	652385 mE 6925819 mN	Nad83, Zone 7
Comments: TR-16-01 - 24.70-27.70 m - Quartz vein hosting strongly oxidized staining, limonite and goethite and appears as brecciations, flow banding and boxwork.				
Sample Number:	K291477	UTM:	652384 mE	Nad83, Zone 7
Elevation:	1723 m	UTM:	6925816 mN	
Comments: TR-16-01 - 27.70-29.70 m - Quartz vein hosting strongly oxidized staining, limonite and goethite and appears as brecciations, flow banding and boxwork.				
Sample Number:	K291479	UTM:	653126 mE	Nad83, Zone 7
Elevation:	1642 m	UTM:	6925960 mN	
Comments: TR-16-07 - 0.00-2.00 m - Manganese stained, pyritiferous dark green andesite - Wall rock				
Sample Number:	K291480	UTM:	653123 mE	Nad83, Zone 7
Elevation:	1641 m	UTM:	6925960 mN	
Comments: TR-16-07 - 2.00-5.00 m - Strongly oxidized clay (fault gouge?) with a few pieces of strongly silicified and/or clay altered pyritiferous volcanics.				
Sample Number:	K291481	UTM:	653120 mE	Nad83, Zone 7
Elevation:	1641 m	UTM:	6925960 mN	
Comments: TR-16-07 - 5.00-8.00 m - Strongly oxidized clay (fault gouge?) with a few pieces of strongly silicified and/or clay altered pyritiferous volcanics.				
Sample Number:	K291482	UTM:	653118 mE	Nad83, Zone 7
Elevation:	1641 m	UTM:	6925959 mN	
Comments: TR-16-07 - 8.00-10.40 m - Strongly oxidized clay (fault gouge?) with a few pieces of strongly silicified and/or clay altered pyritiferous volcanics.				
Rock Sample Desc	criptions	Prop	erty: 000	
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Sample Number:	K291483	UTM:	653116 mE	Nad83, Zone 7
Elevation:	1642 m	UTM:	6925958 mN	
Comments:	TR-16-07 - 10.40-12	2.40 m - E	Oark green, fine grain	ed andesite with little signs of any alteration.
Sample Number:	K291501	UTM:	651797 mE	Nad83, Zone 7
Elevation:	1529 m	UTM:	6927269 mN	
Comments:	20-piece composite Rocks comprise of c	chip san oxidized v	nple from gossanous volcanics and are mos	area 70m by 20m, comprised mostly of talus/felsenmeer eroding into creek. stly pyritiferous
Sample Number:	K291502	UTM:	651968 mE	Nad83, Zone 7
Elevation:	1603 m	UTM:	6927597 mN	
Comments:	2-cm wide qtz vein	with 1-cr	n black seam filling th	ne cavity between the qtz vein. Host rock is weakly argillacaly altered instrusive
Sample Number:	K291503	UTM:	651970 mE	Nad83, Zone 7
Elevation:	1608 m	UTM:	6927608 mN	
Comments:	3 cm wide qtz vein Minor malachite sta	with thre aining on	e 1 cm wide black sea one chip of sample	ams running parallel w qtz vein in mildy argillic altered intrusive host rock.
Sample Number:	K291504	UTM:	651970 mE	Nad83, Zone 7
Elevation:	1607 m	UTM:	6927608 mN	
Comments:	Five black seams ra developed crystals	nging fro that are ι	m 1-3 cm in thickness up to 4 cms in length.	s dispersed parallel amon qtz vein that is 6-8 cms thick. Qtz vein has well- Rusty weathering is present throughout. Hosted in intrusive
Sample Number:	R503951	UTM:	652454 mE	Nad83, Zone 7
Elevation:	1705 m	UTM:	6925874 mN	
Comments:	7 piece composite of disseminated throut volcanics. Sample v	chip samp ghout. S was collee	ble of up to 5 cm wide ample collected from cted from a prominer	e strongly oxidized and vuggy quartz vein with fine grained limonite pits a 0.5 by 0.5 m frost heave hosting mostly strongly manganese stained at linear gully.

Rock Sample Des	criptions	Prope	rty: 000	
Sample Number:	R503952	UTM:	652980 mE	Nad83, Zone 7
Elevation:	1537 m	UTM:	6926199 mN	
Comments:	2 piece composite c	hip sampl	e of up to 10 cm wic	le strongly rusty weathering quartz vein? With strong limonite alteration and
	minor medium grain	ned goeth	ite. Sample collecte	d from a talus slope consisting of augite porphyritic andesite and lapilli tuff.
	Rocks cover a 20 by	20 m area	a and represent less	than 1% of the rocks in the area.
Sample Number:	R503953	UTM:	652987 mE	Nad83, Zone 7
Elevation:	1529 m	UTM:	6926205 mN	
Comments:	10 cm wide rusty or comprising mostly a	ange alter Indesite al	ed quartz vein? Wit nd lapilli tuff. Only o	h minor limonite pits and trace siderite? Sample collected from talus slope ne rock in this area like this.
Sample Number:	R503954	UTM:	652974 mE	Nad83, Zone 7
Elevation:	1557 m	UTM:	6926174 mN	
Comments:	2 piece composite c	hip sampl	e consisting of dark	orange to red weathering (minor manganese staining) quartz vein? With strong
	limonite alteration a	and trace	goethite. Appears to	b be brecciated, but difficult to tell due to the extent of alteration. Sample
	collected from a 5 x	5 m area	hosting about 5% of	this material within volcanic talus.
Sample Number:	R503955	UTM:	652949 mE	Nad83, Zone 7
Elevation:	1588 m	UTM:	6926159 mN	
Comments:	5 centimetre wide a near the top of a kil	inglesite c I zone puk	oated quartz vein ho ing out rusty altered	osting 10-20% fine grained galena and rusty orange cavities. Sample collected I quartz veins +/- galena up to 15 cm wide.
Sample Number:	R503956	UTM:	652886 mE	Nad83, Zone 7
Elevation:	1634 m	UTM:	6926116 mN	
Comments:	Up to 10 cm wide q fractures. Trace gal	uartz vein ena? Only	hosting weak oxide rock in this area. Tr	staining on surface and trace limonite pits. Patchy manganese staining along rying to trace mineralization along strike, but may have lost it even here.

Rock Sample Des	criptions	Proper	rty: 000	
Sample Number: Elevation:	R503957 1538 m	UTM: UTM:	653125 mE 6926183 mN	Nad83, Zone 7
Comments:	Dark purple to brow throughout. Taken felsenmeer train.	vn weathe from withi	ring. Volcanic(?) wit n felsenmeer train c	h limonite pits with minor tarnished sulphides (pyrite) disseminated of mostly volcanics and rock type represents approx. 2% of the 1x5m
Sample Number: Elevation:	R503958 1549 m	UTM: UTM:	653209 mE 6926089 mN	Nad83, Zone 7
Comments:	Purple to red stained seams/cavities. Ho stain and crystals re heading uphill to tro (dacite) dyking asso	ed (mang. a sts fine to eplacing ch y and find f ociated wit	and siderite? respect medium grained cha alcopyrite. Taken fro the source. Appears h it. Sample collecte	tively) together fine grained dark-med green andesite with calcareous alcopyrite and tarnished pyrite? And goethite. Minor malachite and azurite om float train above soil sample (686). Only rock of this type visible thus far but to be associated with calcite veining and may have some fine grained intrusive ed from a linear trending at approximately 240 degrees.
Sample Number:	R503959	UTM:	653179 mE	Nad83, Zone 7
Elevation:	1595 m	UTM:	6926047 mN	
Comments:	Approximately2 cm epidote phenocryst (light grey-white, fin area.	wide chal s up to 2m ne grained	copyrite, malachite om disseminated. Ta with prismatic, lame	and dark chocolate brown weathered vein within propylitic altered andesite- ken from talus slope of dominantly volcanics and minor rhyolite dyke? Material ellae, olive green mineralization and biotite. Only sample of this material in the
Sample Number:	R503960	UTM:	653141 mE	Nad83, Zone 7
Elevation:	1593 m	UTM:	6926097 mN	
Comments:	Propylitic altered an grained galena. Sur from talus train and	ndesite (ep face is rust d vegetatio	bidote, calcite) with any orange to grey we with rocks consist	quartz-carbonate veins/veinlets up to 1cm wide hosting fine grained to medium eathered with pits. Sample taken from above soil sample 683. Sample collected ing of mostly andesite.

Rock Sample Des	criptions	Prop	erty: 000	
Sample Number:	R503961	UTM:	653136 mE	Nad83, Zone 7
Elevation:	1603 m	UTM:	6926078 mN	
Comments:	Approximately 4 cm	n wide qu	iartz-carbonate vein (needles filling cavity (vuggy like) hosting needles of galena surrounded by
	malachite staining.	Mineraliz	zation appears toi be	be late with infilling of calcite after quartz? Epidote adjacent to quartz crystals
	euhedral up to 5mm	nx2mm.	Take from talus slope	above soil sample 683 and R503960. Only rock like this in area (volcanics).
Sample Number:	R503962	UTM:	652397 mE	Nad83, Zone 7
Elevation:	1642 m	UTM:	6926006 mN	
Comments:	Strong calcite-epido volcanic talus train	ote (scord and is on	lite) veined andesite ly rock like it in the a	with trace fine grained arsenopyrite? And minor malachite stain. Taken from rea. Surface has slickensides with hematite? or siderite.
Sample Number:	R503963	UTM:	652031 mE	Nad83, Zone 7
Elevation:	1657 m	UTM:	6926777 mN	
Comments:	Hornblende-biotite	-monzon	ite with plagioclase p	henocrysts up to 1x2.5cm hosting disseminated fine grained chalcopyrite (1-2%)
	mostly found replace	cing mafie	c rocks and usually ha	as dark chocolate brown weathering around edges. Rock is dark orange to
	brown weathering weathering sample of this kind.	with horr	blende and chlorite.	Looks propylitic altered. Collected from 3x5m exposure of felsenmeer and only
Sample Number:	R503964	UTM:	652641 mE	Nad83, Zone 7
Elevation:	1655 m	UTM:	6926061 mN	
Comments:	Milky white quartz grained tabular like	vein up to and not	o 5cm wide hosting fi all that well formed (ne to medium grained euhedral galena (1-2%). Quartz is fine- to medium- anhedral to sub-hedral) with somewhat banded appearance.
Sample Number:	R503965	UTM:	652767 mE	Nad83, Zone 7
Elevation:	1538 m	UTM:	6926380 mN	
Comments:	20x20cm sample of found within (4%) b	strongly out possib	oxidized quartz vein oly anglesite dissemin	with strong limonite vugs and major goethite along surface and within. Galena ated within. Taken from approximately 1x20m long talus train.

	5500066		654006	Nado2 Zana Z
Sample Number:	R503966	UTM:	651936 mE	Nad83, Zone /
Elevation:	1710 m	UTM:	6926222 mN	
Comments:	Three piece compo- oxidized with yellow top. Rocks within the collected from a fla	site chip s v-green st he kill zon t bench th	ample of up to 8 cm ain from centre of qu e are strongly manga at is up to 30 m wide	wide flow banded and brecciated quartz vein material. Surface is strongly uartz vein. Sample taken from kill zone within prominent linear gully on ridge anese stained, oxidized and broken - likely within a fault zone. Sample e.
Sample Number:	R503967	UTM:	652246 mE	Nad83, Zone 7
Elevation:	1708 m	UTM:	6925963 mN	
	andesite. Weak tet Vuggy surface weat 20 m area.	rahedrate hering ne	(1-2%) with malachi ar mineralization. No	ite staining. Sample collected from a talus field west of TR-16-01, 02 and 03. o visible structures in the area and represents about 2% of talus within a 10 x
Sample Number:	R503968	UTM:	652105 mE	Nad83, Zone 7
Elevation:	1621 m	UTM:	6926812 mN	
Comments:	5 cm wide flow ban monzonite to syeni	ded quart te felsenm	z vein with goethite a neer and represents l	and limonite pits (5%). Sample collected from the top of hornblende-biotite- less than 1% of rocks within it.
	R503969	UTM:	651752 mE	Nad83, Zone 7
Sample Number:	11303303			
Sample Number: Elevation:	1742 m	UTM:	6926850 mN	
Sample Number: Elevation: Comments:	1742 m 5 piece composite o limonite pits dissem found within talus/	UTM: hip sampl linated th elsenmee	6926850 mN le of up to 3 cm oxidi roughout. Sample co r.	ized and manganese stained quartz vein with vuggy textures on surface. Mino ollected above anomalous silver-gold-in-soil point anomaly. Only material
Sample Number: Elevation: Comments: Sample Number:	1742 m 5 piece composite o limonite pits dissem found within talus/ R503970	UTM: hip samp ninated th elsenmee UTM:	6926850 mN le of up to 3 cm oxidi roughout. Sample co r. 651662 mE	ized and manganese stained quartz vein with vuggy textures on surface. Mino ollected above anomalous silver-gold-in-soil point anomaly. Only material Nad83, Zone 7
Sample Number: Elevation: Comments: Sample Number: Elevation:	1742 m 5 piece composite o limonite pits dissem found within talus/ R503970 1742 m	UTM: hip samp hinated th elsenmee UTM: UTM:	6926850 mN le of up to 3 cm oxidi roughout. Sample co r. 651662 mE 6926903 mN	ized and manganese stained quartz vein with vuggy textures on surface. Mino ollected above anomalous silver-gold-in-soil point anomaly. Only material Nad83, Zone 7

Rock Sample Des	criptions	Prope	erty: 000	
Sample Number:	R503971	UTM:	651470 mE	Nad83, Zone 7
Elevation:	1669 m	UTM:	6927039 mN	
Comments:	Historical sample (6	55% Pb) re	elocated and re-samp	led. Comprises quartz veins up to 2 cm wide within fine grained dark green
	andesite. Heavy m	anganese	stained, no anglesite	. Different from rocks on other side. Moderate limonite pits looks to be close
	to source within pr	ominent g	gully on southeastern	side.
Sample Number:	R503972	UTM:	651477 mE	Nad83, Zone 7
Elevation:	1670 m	UTM:	6927043 mN	
Comments:	Semi-massive galer galena. Sample col	a vein ap lected wit	proximately 3 cm wic thin same gully at R50	de with up to 5% pyrite within the quartz, looks to be unassociated with the 03971.
Sample Number:	R503973	UTM:	652353 mE	Nad83, Zone 7
Elevation:	1495 m	UTM:	6927463 mN	
Comments:	White to beige crys up in a 1 x 1 m kill z	talline bu one or or	ll quartz vein taken fr ange soil. Vein is up	rom prominent linear gully granodiorite. Only sample of this kind and was dug to 3 cm wide.
Sample Number:	R503974	UTM:	652292 mE	Nad83, Zone 7
Elevation:	1551 m	UTM:	6927751 mN	
Comments:	Strongly oxidized by and talus kill-like zo talus/soil area. Lar	anded to one. Samp ges samp	boxwork to brecciate ble comprises 3 piece le was up to 4 cm wid	d quartz vein hosting strong goethite and minor limonite pits. Taken from soil composite chip and represents about 1 percent of rock over 10 by 30 m le.
Sample Number:	R503975	UTM:	652286 mE	Nad83, Zone 7
Elevation:	1560 m	UTM:	6927756 mN	
Comments:	Black to dark grey k	oands with	nin silicified intrusive,	/quartz veins. Up to 5 cm in width with strong manganese staining on surface
	and strings of limor	hite. Appe	ears similar to zebra k	panding in sediments. Taken from 30 x 10 m talus/soil slope (kill-zone like).
	Represents less tha	n 1 perce	nt of rock within the	kill zone.

Rock Sample Des	criptions	Prope	rty: 000	
Sample Number: Elevation:	R503976 1559 m	UTM: UTM:	652285 mE 6927755 mN	Nad83, Zone 7
Comments:	Up to 5 cm wide qu with or without wea same slope as R503	artz vein h ak limonite 974 and 7	osting grey euhedra e pits. Surface has d 5. Represents less t	al quartz bands (cavity infilling) and patches of clay to scordite? Stain patches ark grey clasts (about 1 mm wide) with breccia textures. Sample taken from han 1 percent of the rocks within the kill zone.
Sample Number: Elevation:	R503977 1655 m	UTM: UTM:	652068 mE 6927697 mN	Nad83, Zone 7
Comments:	Semi-massive galen a 5 x 3 m kill zone o large saddle with hi also found within sa	a with teti f rusty ora gh gold gra ample and	rahedrite (2%) and n nge soil. Sample tal abs and the strongly up to 4 cm wide.	nalachite staining. Moderate anglesite stain on surface. Sample collected from ken along trend of two prominent linear structures that appear to trend to the r incised gully across big creek, which is extremely oxidized. Minor limonite pits
Sample Number: Elevation:	R503978 1652 m	UTM: UTM:	652066 mE 6927698 mN	Nad83, Zone 7
Comments:	Rusty and limonite with limonite filled	quartz veir pits. Smal	ns taken from same I piece of limonite a	kill zone as R503977. Quartz is generally granular with limonite pits or vuggy bout 2 x 2 cm. Sample comprises a 5 piece composite chip sample.
Sample Number:	R503979	UTM:	651518 mE	Nad83, Zone 7
Elevation:	1679 m	UTM:	6927042 mN	
Comments:	Strongly oxidized lir of a bench at TR-16	nonitic qu -19. Taker	artz vein with abunc n from a 50 cm x 1 n	lant goethite crystals up to 1 x 1 cm. Vein up to 5 cm wide and found on edge n kill zone. And represents about 2 % of rocks in this area.
Sample Number:	R503980	UTM:	651505 mE	Nad83, Zone 7
Elevation:	1681 m	UTM:	6927037 mN	
Comments:	Float sample taken is pitted with limon throughout. Feels h	from surfa ite. Weath neavy in ha	nce at edge of a 10 m nering on edges grad and, good weight to	n wide gully. Limonitic and goethite weathered volcanic on surface. Fresh face ding to 0.5 cm-1 cm goethite crystals in centre. Orange-yellow weathering it.

Rock Sample Des	criptions	Prop	erty: 000	
Sample Number: Elevation:	R503981 1667 m	UTM: UTM:	651420 mE 6927018 mN	Nad83, Zone 7
Comments:	Located in 0.5m x 0 orange weathered o	.5m circl exterior,	e of pebble and large slightly brecciated qu	r volcanics, surrounded by vegetation in the southwest side of saddle. Dark artz vein containing clay altered feldspar?, pyrite and black seams up to 1mm.
Sample Number:	R503982	UTM:	650709 mE	Nad83, Zone 7
Elevation:	1884 m	UTM:	6929386 mN	
Comments:	Strongly epidote alt structure (Big Creek	ered and Fault?).	d pyritiferous quartz-n Rock represents abo	nonzonite. Moderate clay alteration likely caught up within the large fault ut 2 percent of the ridgetop within quartz-monzonite.
Sample Number:	R503983	UTM:	650770 mE	Nad83, Zone 7
Elevation:	1869 m	UTM:	6929352 mN	
Comments:	White to grey weat manganese staining	hering fii g on fract	ne grained intrusive? ure surfaces. Taken f	Strongly silicified and possibly fuchsite? Found within rock. Dendritic rom red stained gossan and represents less than 1 percent of rocks in area.
Sample Number:	R503984	UTM:	650781 mE	Nad83, Zone 7
Elevation:	1864 m	UTM:	6929357 mN	
Comments:	Strong rusty stained pyrite and pyrite we	d quartz- eathering	monzonite crumbling g vuggy. Rock is quart	as a weathering product, likely due to hydrothermal alteration with strong z-monzonite and represents about 1 percent of the 30 by 50 m gossan.
Sample Number:	R503985	UTM:	650781 mE	Nad83, Zone 7
Elevation:	1865 m	UTM:	6929364 mN	
Comments:	20 piece composite of the gossan colou	chip san r anoma	nple of rusty orange v ly.	veathering quartz-monzonite with or without pyrite. Sample is representative
Sample Number:	R503986	UTM:	650791 mE	Nad83, Zone 7
Elevation:	1872 m	UTM:	6929385 mN	
Comments:	20 piece composite weathering. Taken	chip san across e	nple of weakly to moo ntire blonde gossan.	derately clay altered hornblende biotite granodiorite with minor rusty surface

Rock Sample Des	criptions	Prope	rty: 000	
Sample Number:	R503987	UTM:	650792 mE	Nad83, Zone 7
Elevation:	1871 m	UTM:	6929381 mN	
Comments:	10 piece composite about 2-5 percent o	chip samp f the blon	ble of dacite? Dyke t de gossan.	aken across the blonde gossan. Representative sample and dyke represents
Sample Number:	R503988	UTM:	651856 mE	Nad83, Zone 7
Elevation:	1562 m	UTM:	6927148 mN	
Comments:	12 piece composite area. Gossan likely	chip samp a result of	ble across a strongly contact metamorpl	oxidized gossan comprising pyritiferous volcanics with trace galena veining in nism with the intrusion immediately to the east.
Sample Number:	R503989	UTM:	651882 mE	Nad83, Zone 7
Elevation:	1567 m	UTM:	6927507 mN	
Comments:	Bleached with surfa	ce with ot	her rocks of the sam	ne type with strong manganese stained surface hosting radiating black crystals
	(amphibole?) up to	1 x 1 cm.	Taken from felsenm	eer of mixed syenite and quartz-monzonite with rusty weathering. Represents
	about 50 percent of	felsenme	er train. Fine graine	ad to medium grained feldspar-amphibole hornblende granodiorite.
Sample Number:	R503990	UTM:	651877 mE	Nad83, Zone 7
Elevation:	1571 m	UTM:	6927517 mN	
Comments:	Strongly rusty weat	hered and	limonitic quartz vei	n with moderate manganese staining and epidote (or scordite?) staining with
	disseminated pyrite	and asp?	Sample collected f	rom the top of a felsenmeer train along trend of the Saddle Zone and the
	Porphyry hill. Only	sample lik	ke this in the 3 x 20 r	n felsenmeer train. The vein is up to 6 cm wide.
Sample Number:	R503991	UTM:	651938 mE	Nad83, Zone 7
Elevation:	1598 m	UTM:	6927576 mN	
Comments:	Flow banded to stoo moderately argillic a	ckwork ve altered.	ined intrusive with b	lack to dark grey (~ 1 mm wide) bands of sludge. Intrusive rock is weakly to

APPENDIX V

HAND TRENCH CROSS-SECTIONS







652,689 mE 6,925,931 mN

STRA	TEGIC METAL	S LTD.
ARCHER, C	ATHRO & ASSOCIATES	(1981) LIMITED
	TR-16-05	
0	OO PROPERTY	/
0		2 m
U	TM ZONE 8, NAD 83, 115G/0	8 & 09
FILE:/2016/000		DATE: OCTOBER 2016



K291479

Broken ± manganese stained and pyritiferous andesite

> 653,125 mE 6,925,961 mN

_ Broken ± manganese stained and pyritiferous andesite



APPENDIX VI

HERITAGE RESOURCE OVERVIEW ASSESSMENT



Heritage Resource Overview Assessment: OOO Property Class 3 Quartz Exploration Claim Block

(DOCUMENT CONTAINS NO SENSITIVE HERITAGE SITE DATA – SUITABLE TO BE INCLUDED IN YESAA MATERIALS)

> Prepared for: Archer, Cathro & Associates (1981) Limited (acting as agent for Strategic Metals Ltd.) 41 MacDonald Road Whitehorse, Yukon Y1A 4R1

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Report also submitted to: Selkirk First Nation

March 13, 2017

EXECUTIVE SUMMARY

On behalf of Archer, Cathro & Associates (1981) Limited, working as agents for Strategic Metals Ltd., Ecofor Consulting Ltd. conducted a Heritage Resource Overview Assessment (HROA) for the OOO Property Class 3 Quartz Exploration Claim Block. The proposed project involves mineral exploration activities on the OOO Property, which covers approximately 2,591 ha. Proposed development activities include sampling, surveying, prospecting, trenching, and drilling, as well as a temporary camp site. A small portion of the greater claim area (approximately 19 ha) has already been assessed by Historical Resource Impact Assessment (HRIA) under Yukon Heritage Resource Unit permit 16-19ASR (see Mooney and Bennett 2017). This previous assessment was conducted to gain clearance to proceed in priority areas required to facilitate planned 2016 exploration activities. No heritage resources were observed during the HRIA.

The objectives of this HROA assessment study are to assess the heritage resource potential and sensitivity within the remaining previously unassessed portions of the study area. In order to accomplish these objectives, Ecofor has completed a desktop review of the physical/environmental and cultural/historical setting of the study area, and used the data produced by that study to identify areas with elevated potential for encountering previously undocumented heritage resources. High potential is determined through review of multiple factors, including landform, viewshed, proximity to natural resources (e.g. water, food gathering areas, lithic quarries), and proximity to previously recorded heritage resource sites. This methodology is commonly used in cultural resource management and is designed to err on the side of caution by identifying areas of potential concern before the commencement of any ground disturbing activities. Traditional land use information was not collected or reviewed as part of this study.

This HROA identified several areas of heritage potential for surface/subsurface archaeological sites within the study area. Surface/subsurface archaeological site potential areas are typically associated with flat, walkable high elevation ridgelines and level portions of valley bottoms and benches associated with drainages. CMT potential is not significant. Vegetation in the majority of the study area is limited to treeless, dry alpine taxa. Tree cover is limited to a small stand of Douglas Fir located in the southwestern portion of the study area. Vegetation inventory mapping ages this stand at 120 years, but CMTs are not often associated with Douglas Fir. Lands outside these identified areas of elevated potential are considered to have low potential for encountering undocumented heritage resource sites; typically due to significant slope. No previously recorded heritage resource sites are known within the study area, so there are no concerns or areas of potential related to documented sites.

Based on the results of this HROA, Heritage Resources Impact Assessments (HRIAs), consisting of pedestrian survey and shovel testing if warranted, are recommended for several areas of elevated potential for surface/subsurface archaeological sites. No further heritage resource work is recommended outside of these potential areas. Review of this HROA by the Selkirk First Nation, and field participation of Selkirk First Nation representatives in any future fieldwork (e.g. HRIA), is also recommended and encouraged before any development is approved to proceed.

Heritage Resource Overview Assessment: OOO Property Class 3 Quartz Exploration Claim Block

CREDITS

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1.0 INTRODUCTION

On behalf of Archer, Cathro & Associates (1981) Limited, working as agents for Strategic Metals Ltd., Ecofor Consulting Ltd. conducted a Heritage Resource Overview Assessment (HROA) for the OOO Property Class 3 Quartz Exploration Claim Block (Figure 1 and Figure 2). The proposed work area consists of a drilling exploration area in the southeast portion of a mineral exploration claim block located approximately 95 km west northwest of Carmacks, YK and is accessible by helicopter. The claim block footprint covers Apex Mountain in the Dawson Range and includes several named and unnamed drainages, including tributaries to Big Creek, Apex Creek, Selwyn River, and Klotassin River. Big Creek flows along the eastern edge of the claim block and the headwaters of Apex Creek intersect the northeastern corner of the claim. Tributaries of the Selwyn River flow out of the northeastern portion of the claim block area is within the traditional territory of the Selkirk First Nation, and lies within the outfitting concession of Mervyn's Yukon Outfitting Ltd., and within trapping concessions 122 and 131.

1.1 Project Overview and Objectives

The proposed project involves mineral exploration activities on the OOO Property, which covers approximately 2,591 ha. A small portion of the greater claim area (approximately 19 ha) has already been assessed by Historical Resource Impact Assessment (HRIA) under Yukon Heritage Resource Unit permit 16-19ASR (see Mooney and Bennett 2017). This previous assessment was conducted to gain clearance to proceed in priority areas required to facilitate planned 2016 exploration activities and the temporary camp area. No heritage resources were observed during the HRIA.

The objectives of this HROA assessment study are to assess the heritage resource potential and sensitivity within the remaining previously unassessed portions of the study area. In order to accomplish these objectives, Ecofor has completed a desktop review of the physical/environmental and cultural/historical setting of the study area, and used the data produced by that study to identify areas with elevated potential for encountering previously undocumented heritage resources. High potential is determined through review of multiple factors, including landform, viewshed, proximity to natural resources (e.g. water, food gathering areas, lithic quarries), and proximity to previously recorded heritage resource sites. This methodology is commonly used in cultural resource management and is designed to err on the side of caution by identifying areas of potential concern before the commencement of any ground disturbing activities. These data will be used to guide further heritage resource work







and planning decisions within the study area. Traditional land use information was not collected or reviewed as part of this study.

1.2 Report Format

The report begins with a basic outline of the project and the objectives of the work undertaken. The proposed activities and their impacts are then discussed in Section 2.0. Section 3.0 describes the methods employed in assessing the archaeological potential. Section 4.0 provides a description of the physical/environmental and cultural/historical setting of the study area. Section 5.0 presents an evaluation of the heritage resource potential within the various localities being considered within the study area, and Section 6.0 finishes with a summary of this analysis and a series of heritage resource management recommendations for the study area. Three appendices are included at the end of the report. Appendix A presents mapping illustrating and supporting the recommendations, Appendix B presents the Yukon Heritage Resources Policy for Heritage Resource Management on Yukon Lands, and Appendix C presents the Guidelines Respecting the Discovery of Human Remains and First Nation Burial Sites in the Yukon.

2.0 PROPOSED ACTIVITIES WITHIN THE STUDY AREA

The proposed project is a Class III quartz exploration project on the OOO Property (124 claims) located along a system of ridges on Apex Mountain, approximately 62 km from Minto and 97 km from Carmacks. Planned developments and activities stated on the project YESAB public notice include:

- Construction and use of two tent camps (up to 20 people)
- Storage and use of fuel (8,000 L diesel, 600 L gas, 2,000 lbs. propane, 2,000 L jet fuel)
- Waste management (incineration of kitchen waste and removal of special waste)
- Use of pit privies
- Geological mapping, geochemical sampling, and geophysical surveys
- Water withdrawal (80 m³)
- Clearing and removal of vegetative mat (5 m x 5 m, up to 10 clearings per claim)
- Construction of drill pads and sumps
- Diamond, reverse circulation, and rotary air blast drilling (up to 200 holes for each drill type)
- Hand trenching (up to 50 trenches; 10 m long x 1 m wide x 1 m deep)
- Progressive reclamation

Work will be helicopter supported, and entails the use of two heli-portable drills plus water withdrawal for camp use. There is no ground access proposed. The Proponent anticipates activities to occur annually from June to October for five years (2016-2020).

In undertaking these development activities, changes to the environment will occur. Of primary concern from a heritage resource point of view are those activities that include ground disturbance and vegetation clearing. Proper education of all employees and contractors regarding observation, recognition, and preservation of any existing heritage site is strongly encouraged prior to and during any ground disturbing actions. Field inspection by a qualified archaeologist can identify areas where unrecorded subsurface archaeological sites may be present. Field inspections can also record any heritage sites that may be in conflict with the proposed development. Once recorded and assessed, archaeological sites with high significance may be avoided or excavated, to mitigate negative impacts, as necessary. Predicting, finding, recording, and preserving heritage sites is the purpose of the archaeological assessment process. This HROA is the first steps toward achieving this goal.

3.0 METHODOLOGY

This report presents the results of a desktop study designed to predict the potential for encountering heritage resources within the OOO Property Claim Block. The methodology used in this desktop HROA to develop these predictions is described below.

The desktop review relies on two primary lines of evidence, the physical/environmental and cultural/historical setting of the study area:

- 1. The first line of evidence is predicated upon attributes of the physical/environmental setting. These attributes are derived from an analysis of the biogeoclimatic zones, physiography, hydrology, bedrock and surficial geology, and vegetation and wildlife distributions. Aerial photographs will also be reviewed when available. This approach relies on the assumption that specific geographic features, such as elevated landforms (e.g. ridges, knolls, terraces, etc.), water features (e.g. lakes, rivers, creeks, wetlands, and their associated banks/margins), and resource patches (e.g. hunting and foraging locales, quarry sources), can be linked to specific settlement and resource exploitation patterns. Close proximity to these types of landforms is considered to be an indicator of high potential for heritage resources regardless of whether previous heritage resources studies have identified sites of interest in the vicinity.
- 2. The second approach is built upon a review of previous heritage resource management research conducted within the study area and adjacent lands aimed at understanding the area's cultural/historical setting. The review includes a general overview of the culture historical context of the study area, as well as detailed reviews of previous archaeological studies and historical records. In this stage of the analysis, closer proximity to previously recorded heritage resource sites is considered to be evidence for human use of the area, and it is therefore interpreted as an indicator of elevated potential for heritage resources.

The data obtained through these reviews will then be used to assess the potential for development related impacts to both known and previously undocumented heritage resource sites. In terms of the physical/ environmental setting, the analysis will be based upon the criteria described in section 3.1 of this report. A list of potential site types expected for the study area, and the physical/environmental attributes they are expected to be correlated with, are presented below in Section 3.2. The cultural/historical assessment will be based on a general review of the documented Precontact (Section 4.2.1), Protohistoric (4.2.2), and Historic (Section 4.2.3) periods in the broader region and modern First Nations whose traditional territory overlaps with the proposed project area (Section 4.2.4), as well as specific reviews of previous heritage

resource studies, documented archaeological site inventory, and Historic sites on file with the Yukon Government Heritage Resource Unit (Section 4.2.5).

3.1 Landforms and Geographic Features with High Heritage Resource Potential

In addition to the areas around known sites, a number of landforms and landscape features can be used to help identify areas of heightened heritage resource potential. They include:

- 1. Elevated landforms such as valley edges, terraces, ridges, mid-slope benches, and knolls. These landforms are considered areas of potential for heritage resources because they often offer better drained soils, relative proximity to water and game, and larger viewsheds. Elevated landforms with south-facing margins are considered especially high potential because of their warmer temperatures and better airflow which helps reduce insects. These types of landforms are associated with a wide variety of site types including campsites, lookout sites, cache sites, etc.
- 2. Areas within close proximity to water are also considered to be areas of potential for heritage resources. The potential of these areas is bolstered both by human water needs, but also those of large game animals, fish, and bird species. The easy access to water makes these areas ideal for habitation and hunting sites.
- 3. Areas near lithic raw material sources are considered to have potential for heritage resources due to their value as quarry sites.
- 4. Caves, rockshelters, and tors, are listed as possessing increased potential for heritage resources due to possible use as temporary shelters from poor weather, as possible quarries for lithic raw materials, and as special places on the landscape that may be associated with spiritualism, ritual practices, and rock art in traditional cultures.
- 5. Sedimentary rock beds with the potential to contain palaeontological remains.
- 6. A final component of assessing the physical environment is determining the level of previous disturbance in the area. If areas have been severely disturbed in the past it reduces the potential of finding intact archaeological remains. Disturbance can include previous activities such as oil and gas exploration, winter road or airport construction, etc. Disturbance is determined through analysis of the maps and historical information which indicate locations of previous known industrial activities. Professional judgment is used to determine the level of impact resulting from a given disturbance.

3.2 Potential Site Types Expected in Study Area

Eleven broad site types are considered in this heritage resource assessment for their likelihood to be present within the study areas. Definitions of these site types, and the physical/ environmental attributes they are expected to be correlated with, are presented below. These general assumptions are extrapolated from previous archaeological studies and known sites in the larger area. Please note these broad site types overlap and are not mutually exclusive (e.g. a habitation site may also have been used as a hunting or fishing site).

3.2.1 Permanent/Long-Term Habitation Sites

Permanent/long-term habitation sites would indicate prolonged or repeated occupation of a locality. In this area, permanent/long-term habitation sites could be considered those sites which are returned to seasonally year after year, such as a summer campsite. Based on previous archaeological and ethnographic research, these sites are considered most likely to be associated with high, well-drained, south-facing landforms with grassy margins and/or open, pine dominated forests, and good access to water. Essentially, permanent/long-term habitation sites are only expected in optimal locations.

3.2.2 Temporary Habitation Sites

Temporary habitation sites tend to be associated with resource gathering activities such as hunting and foraging, but can sometimes be related to ceremonial activities. Subsistence related sites are typically represented by lithic tools, evidence of tool production/maintenance, hearths, hunting blinds, and possibly faunal remains. Ceremonial sites related to puberty and shamanistic rituals are often represented by cairns, isolated hearths, and lithics. The locations of hunting related temporary habitation sites are heavily influenced by landforms that also attract animals (e.g. water features) or that offer a commanding view of areas where animals are likely to congregate (e.g. elevated lookouts). Foraging related temporary habitation sites will be focused on areas that support commonly foraged resources such as berries. The exact criteria for these sites will vary depending on the resource being foraged. Ceremonial sites will not necessarily be connected to any specific type of resource, but are often found in difficult to reach places such as high elevation ridges and plateaus. One final area of potential for temporary habitation sites is along travel corridors such as trails. Typically, if found along a travel corridor, these sites will also be associated with some other noteworthy geographic feature such as a lookout or clearing (anything to make the area stand out relative to its surroundings).

3.2.3 Quarry Sites

These sites are found in areas where natural stone was quarried for the fabrication of stone tools. Desirable qualities in raw material types for stone tool manufacture include conchoidal fracture properties and low occurrences of internal flaws and inclusions. Such materials are typically found in a number of contexts including natural veins in bedrock, volcanic formations, or in secondary deposits (e.g. riverbeds).

3.2.4 Rock Art Sites

Rock art is man-made markings or etchings/peckings on natural stone surfaces. Rock art tends to be located along major watercourses, trails, or at boundaries of traditional territories.

3.2.5 Fishing Sites

Fishing sites typically include fish weirs or natural narrowing of major rivers and streams where fish could be caught more easily. Some potential also exists in lakes, but most lakes in the study area, besides the Yukon River, are not associated with waterways that are utilized by high yield fish resources such as salmon.

3.2.6 Human Remains

Unexpected human remains are rarely encountered during heritage resource studies, however the potential for their presence always exists, especially in areas where higher densities of people are known to have congregated in the past. Prior to the influence of Christian missionaries, First Nations people would often place graves and spirit houses on prominent points or terraces near village/camp sites, or on low, level ground near trails. Once Christian practices became commonplace, graveyard burials became the norm for most people.

3.2.7 Culturally Modified Trees

Culturally modified trees (CMTs) are trees that have been altered by humans for a variety of purposes including cambium, sap, kindling, and/or bark collection, marking trails (blazes), and communicating messages. Most documented CMTs in the Yukon are pine trees.

3.2.8 Trails

Trails are pedestrian travel routes that may be marked by a well-worn trail bed, blazed trees and/or other CMT types, and/or cairns. Trails are often associated with natural corridors such as rivers and elevated ridges.

3.2.9 Historic Sites

European trading began in the region in the 1840s, and it is likely that Europeans stuck closer to their trading routes (rivers and trails), relying on First Nations to procure items from further away. Gold prospectors have worked within the study area, but their presence would likely post-date AD 1860. As such, Historic Period sites are expected to be most frequently encountered along documented travel corridors and settlement sites. This however, does not preclude the possibility of encountering isolated Historic Period materials associated with early European trapping and prospecting activities. Moreover, artifacts of European origin could have been traded to First Nations persons then transported to locations generally considered to be more indicative of Precontact sites.

3.2.10 Isolated Finds

Isolated finds are small scale archaeological sites, typically of a single artifact. Due to the scale of these sites, they offer little behavioural insight into the people who created them, but they do document human use of the land in the past.

3.2.11 Palaeontological Sites

Palaeontological remains are rare in the study area, but there is potential that they may be encountered. These types of sites are typically found in and near exposed sedimentary rock beds.

4.0 ANALYSIS OF STUDY AREA

The study area is located approximately 95 km west northwest of Carmacks, YK in the traditional territory of the Selkirk First Nation. It is located on NTS Mapsheet 115J/08, and covers approximately 2,591 ha. Significant geographic features include Apex Mountain and several named and unnamed drainages. Big Creek flows along the eastern edge of the claim block and the headwaters of Apex Creek intersect the northeastern corner of the claim. Tributaries streams within the claim feed Big Creek, Apex Creek, Selwyn River, and Klotassin River. Tributaries of the Selwyn River flow out of the northeastern portion of the claim block and the Klotassin River also has its headwaters in the central part of the claim block.

Further information regarding the broader physical/environmental and cultural/historical setting of the study area are presented below.

4.1 Physical/Environmental Setting

The study area is located within Boreal Cordillera Ecozone and the Klondike Plateau Ecoregion. The following Section provides a summary of the Klondike Plateau Ecoregion to provide environmental context to the results of this HROA (see Smith et al. 2004 for full ecozone and ecoregion discussion).

4.1.1 Klondike Plateau Ecoregion

The Klondike Plateau Ecoregion is characterized by smooth topped ridges with some outcrops of exposed rock known as Tors. These ridges are dissected by deep, narrow, V-shaped valleys (Smith et al. 2004). Its boundary conforms fairly well to the Klondike Plateau physiographic subdivision of the Yukon Plateau (Bostock 1948; Mathews 1986), although north of the Willow Hills it does not extend as far eastward. Elevation ranges from approximately 290 m a.s.l. to over 2,000 m a.s.l. with its highest point at the summit of Apex Mountain at 2,026 m a.s.l. (Smith et al. 2004). Most ridges peak at 1,200 to 1,700 m a.s.l., with local relief ranging from 450 to 700 m a.s.l. (Smith et al. 2004). Unlike other ecoregions in the area, this plateau has not been glaciated in the recent past (Smith et al. 2004). The Dawson Range is the most distinct topographic feature within this ecoregion. It also includes the Wellesley Depression in the southwest and part of the Tintina Trench. Several major rivers drain the Klondike Plateau Ecoregion, including Yukon, Klondike, Stewart, Pelly, Fortymile, Nisling, Donjek, White Rivers.

The climate in the Klondike Plateau has a strong seasonal variation. Mean annual temperatures are -5°C, but it is also home to the coldest recorded temperature in North America at -62.8°C (Smith et al. 2004). Mean temperatures for January are -23 to -32°C, and in July from 10 to 15°C

(Smith et al. 2004). Precipitation is moderate with annual amounts of 300 to 500 cm, with generally higher levels in the southeast compared to the northwest (Smith et al. 2004). The winter months have mean amounts of 10 to 20 mm while the summer months can expect rainfall amounts of 50 to 90 mm (Smith et al. 2004). The heaviest precipitation originates from rain showers and thunderstorms in the summer months. Paleoclimate reconstruction from the southern Yukon indicates higher temperatures and/or drier conditions from 6,700 to 4,700 before present (BP), followed by a long period of reduced temperatures and/or increased precipitation (Farnell et al. 2000). A warm period is speculated from 1,440 BP to 1,030 BP, followed by the colder temperatures of the Little Ice Age.

The ecoregion's bedrock geology constitutes a large part of the Yukon–Tanana Terrane, a composite of crust blocks that include former volcanic island arc and continental shelf depositional environments (Mortensen 1992). These metasedimentary rocks are intruded and overlapped by granitic and volcanic rocks, and overlain by fault-bounded slices of serpentinized ultramafic rock of the Slide Mountain Terrane (Smith et al. 2004). This base has been exposed and weathered for at least 15 million years, resulting in the creation of tors atop broad ridges mantled with fields of large angular, frost-heaved rock fragments (Smith et al. 2004). Volcanic processes have also contributed to the Klondike Plateau bedrock geology. The gold that the Klondike is famous for largely originates from quartz veins (Knight et al. 1994) that have been eroded and the gold concentrated by pre-Ice Age rivers (>3 Ma) in placer deposits. The principal formation containing placer gold is the White Channel gravel, but a few bedrock gold veins have also been documented in the ecoregion (Mortensen et al. 1992). This bedrock bound gold and the placer gold deposits are actively sought by the mining industry. Copper and chrysotile asbestos have also been the focus of mining efforts in the Klondike (Smith et al. 2004).

Surface cover is dominated by colluvium, with alluvium and glacial outwash terraces found along major river systems (Smith et al. 2004). Colluvial sediments in the lower valleys tend to be thick, silty, and often capped with peat or mud whereas upland colluvium tends to be rubble from degraded bedrock (Smith et al. 2004). Aeolian silts are also common at the surface in many areas, and periglacial features, such as cryoplanation terraces, patterned ground and solifluction lobes, can be found at higher elevations (Smith et al. 2004).

The modern Klondike Plateau Ecoregion is largely unglaciated, with the exception of localized glaciers that originate from the headwaters of the Sixtymile River Valley, and local peaks in the eastern Dawson Range and Kluane Ranges into the Wellesley Basin (Smith et al. 2004). However, the topography and hydrology have been impacted by glacial processes in the past, including the formation/disappearance and resulting outwash of Glacial Lake Yukon >3 Ma and Glacial Lake
Dawson during the Reid Glaciation (Smith et al. 2004). The McConnell Glaciation was restricted to mountain valleys beyond this ecoregion, but outwash from affected areas did flow through the Klondike Plateau Ecoregion and related deposits are found in the lower Klondike River Valley (Smith et al. 2004).

The flora of the Klondike Plateau ranges from boreal forest in the valleys and low slopes, to alpine and tundra on the ridge crests. Black and white spruce forests dominate this ecoregion, in both pure and mixed stands (Smith et al. 2004). Other tree types include balsam poplar, paper birch, pine, water birch, and trembling aspen. Foliose lichens, Reindeer lichen, black spruce sphagnum, and feathermoss dominate the ground layer while shrub birch, willow, Labrador tea, alder, alpine blueberry, and ericaceous ground shrubs dominating the shrub layer. The highest frequency of lightning strikes in the Yukon occurs in this ecoregion. Forest stands are often taken by fire disturbance, with young immature stands more common than mature stands over much of the ecoregion (Smith et al. 2004).

The wildlife in the area contains barren-ground and woodland caribou (namely the Fortymile Caribou herd). Other mammals native to the area include moose, black bear, grizzly bear, wolf, mule deer, lynx, wolverine, marten, woodchuck, and snowshoe hare (Smith et al. 2004). This ecoregion was historically one of the more biologically productive in the Yukon. The Fortymile Caribou herd was estimated at having been as large as 500,000 in the mid-19th century and ranged from Fairbanks, AK to Whitehorse, YT. However, in 2001 the herd was estimated at only 40,000 individuals. Many factors have contributed to this decline, including wildfires, overharvesting, and food limitations. A management plan has been put into place in an attempt to rebuild the herd and restore the once highly active biological productive ecoregion.

4.2 Cultural/Historical Setting

The culture history for this larger area can be broken down into three broad periods: Precontact, Protohistoric, and Historic. Much has been written about the Klondike Gold Rush and the history of the Dawson area but less effort has been put into investigating and recording the Precontact Period. To provide context for the likely cultural resources that may be found within the study area, the following section presents an overview of the culture history for the broader region including the central/southern Yukon and Northern British Columbia. Many researchers have reviewed the culture history of this broader area and presented the information using a variety of terms and temporal ranges (Clark 1981; West 1996; Workman 1978; J. V. Wright 1995, 1999).

4.2.1 Precontact Period (>11,000 BP to ca. AD 1700s)

The earliest Precontact occupation, which dates to early post-glacial times, is known as the Northern Cordilleran Tradition (Clark 1983; Hare 1995). The earliest Northern Cordilleran Tradition occupation known at present is a site located near Beaver Creek, dated to 10,670 BP (Heffner 2002). The majority of sites appear to date older than 7,000 to 8,000 BP. The Northern Cordilleran Tradition, with some overlap, predates the introduction of microlithic technology from Alaska into the interior of the central and southern Yukon (Clark 1983; Hare 1995).

The Northern Cordilleran Tradition was followed by the Little Arm Phase, which dates from 7,000 to 4,500 BP (Clark and Gotthardt 1999; Workman 1978) and can be defined by the use of microlithic technologies. After about 4,500 BP, there is less evidence of microblade use in the Yukon, and an increase in the use of notched projectile points and a variety of scraping and carving tools. This new tool industry is known as the Taye Lake Phase in southwest Yukon, or more broadly in Yukon and Alaska as the Northern Archaic Tradition (Hare 1995; Workman 1978).

The most recent archaeological culture of southern Yukon is that of the Aishihik Phase (Workman 1978). This phase is thought to be a cultural development from the earlier Taye Lake culture, although there are some significant differences in technology. The most notable is the introduction of the bow and arrow, replacing a type of throwing spear known as an atlatl (Hare et al. 2004). These Aishihik Phase sites are found above the White River Volcanic Ash layer (also known as White River Tephra) that is dated to about 1,250 BP (Clague et al. 1995).

The Aishihik Phase has been evaluated as ranging from approximately AD 750 to AD 1750, and also includes the use of native copper tools, stemmed projectile points, and gorges. Also indicative of the Aishihik Phase are small stemmed Kavik points, end and side scrapers, and ground adzes (Hare 1995). The poor preservation of organic materials makes the task of diet reconstruction more difficult than at the coastal sites, but there is evidence of continued use of a variety of large and small mammals, fish, and birds. In the high elevations of the southern Yukon ice patches, examples of the transition from the older atlatl technology to the bow and arrow use has been clearly documented by recent finds (Hare at al. 2004). The shift to the new technology was a rather abrupt one at roughly AD 750 based on a good sample of preserved and dated atlatl dart shafts and bow and arrow remains.

4.2.2 Protohistoric Period (ca. AD 1700s to ca. AD 1847)

The Protohistoric Period, as presented here, can be defined by the appearance of non-native goods, other early trade items, and foreign (western or eastern) influences, but not the documented accounts of non-native peoples themselves. As such, it spans the time between the

first introduction of non-native influences or artifacts, and the recording of first hand or primary written accounts. Other indicators of the Protohistoric Period are the arrival of the first non-native diseases and information concerning non-natives. Unlike other cultural periods with more specific temporal ranges it is difficult and perhaps impossible to determine when the first 'outside' influences from Russian, Asian, European, or other more distant cultures began to impact First Nations people in the Yukon interior.

Some of these far reaching effects may have been passed along from Russian exploration in the early and mid-1700s (Veniaminov 1984) and other Asian and European (Andreev 1944, Quimby 1985) exploration and contact with coastal communities. The Chilkat Tlingit from the Northwest Coast travelled and traded with many interior First Nation peoples throughout this Protohistoric Period including the Northern Tutchone from the Dawson and Mayo areas and occasionally the Mountain Dene people from as far away as Fort Norman on the Mackenzie River. The Tlingit protected and controlled the trading routes into the interior and fiercely defended those routes when they were threatened. News of early non-native explorers and traders would have travelled inland along with foreign items such as metals, cloths, glass beads, and later tobacco and other goods.

In some of the earliest cases the impacts of these foreign cultures could have had significant impacts even without the presence of the foreigners themselves. Such is the case for what is call 'drift-iron' whereby metals and other materials from Asian or European shipwreck wash ashore in wood debris. Historical accounts of shipwrecks have been reported in the mid-1700s, but much earlier wrecks were possible. Metals and other foreign trade items have been derived from ship wrecks off what is now British Columbia, Southeast Alaska, and perhaps the Northwest Alaska as well.

Of particular regional interest in this Protohistoric Period was the recent find of a Chinese coin along the proposed extension of the Freegold Road (Mooney 2011). This coin was minted in China during the rule of Qing (Ch'ing) dynasty Emperor Sheng Zu (AD 1662-1722) (Hartill 2005:291). It is uncertain how this coin arrived in the Yukon, but it may have travelled by one of two more likely scenarios. One method could have been Chinese to Russian to Coastal Tlingit to Northern Tutchone trading prior to the historic period in the central Yukon. The second may have involved later historic introduction by Chinese placer miners, prospectors, labourers, or immigrants perhaps between the late 1800s and early to mid-1900s.

4.2.3 Historic Period (ca. AD 1847 to the Present)

During the early years of this period the Russians were expanding their exploration and trade network along the Pacific coast and up the major rivers of the Alaskan interior, while the British were exploring eastward into what would become Canada's Northwest and Yukon Territories, as well as Alaska. In the 1840s, representatives of the Hudson Bay Company established trading posts near the study area. The first was at the confluence of the Yukon and the Porcupine Rivers, northwest of the current project area, where in 1847 John Bell established Fort Yukon. The next year Robert Campbell established Fort Selkirk southeast of the project area on the upper Yukon River and then relocated to an improved location in 1851. This upset the Chilkat native trading population from the coastal area, who had controlled trade to the interior for many generations, and by 1852 increasing supply-line pressures, trade competition from the Chilkat traders, and flooding forced the Anglo traders to flee.

In 1867, US Secretary of State William Seward was able to focus increasing American interests, and he convinced the United States Senate to purchase Alaska from Russia. Soon after the purchase, the US Army sent Captain Raymond up the Yukon River on the first stern-wheel steamer to reach Fort Yukon (Grauman 1977). Raymond surveyed the location of Fort Yukon and proved that it was within US territory. The British sold the Fort to the U.S. Government and relocated east across the 141st Meridian.

The inland fur industry continued to drive exploration and settlement into the late 1800s, but mining would shift the focus to the placer gold found in streams and alluvial deposits. Mining in the second half of the nineteenth century was a risky, but often lucrative enterprise. The impacts of mining would spread quickly and drastically change the project area.

Mineral prospecting and mining efforts in the second half of the nineteenth century were in some ways very dependent on the existing infrastructure of the fur trading and missionary efforts. As the competition for the inland fur trade grew, so would the number of stern-wheelers on the Yukon River. These steamers could better supply the small number of trading posts along the Yukon and its tributaries and reduce the risk of prospectors running short of supplies. Therefore, more of the fur traders and other explorers turned their attention to search for gold and other minerals. Three key prospectors to the north were L.S. (Jack) McQuesten, Al Mayo, and Arthur Harper. They wrote to miners in the United States to encourage them to come north. They also established outposts along the Yukon River, including Fort Reliance, established in 1874 near the confluence of the Klondike River (what would become Dawson City) (A. A. Wright 1976).

Harper and another man may have been the first to travel up the Fortymile River in search of gold in 1881 (Buzzell 2003). They collected a very rich sample, but were unable to relocate the exact location. In 1886, McQuesten, Harper, and Mayo built a post on the confluence of the Stewart and Yukon Rivers which provided supplies for additional prospectors. Also in 1886, Howard Franklin made a richer find on the Fortymile River. Others rushed in and these claims along the Fortymile River attracted miners from across Central and Eastern Alaska, and even Southeast Alaska. Fortymile was the first town to grow to over a thousand people by the mid-1890s (Buzzell 2003), and in 1887 the Stewart River post was deserted. Some prospectors that did not find easy success in Fortymile returned to the Stewart and continued work in the area. In 1890, Harper re-established a trading post at the site of the old HBC post at Selkirk as interest in the area grew. This was followed by Jack Dalton who developed a series of existing First Nation trails from tide water at Haines Alaska, into Fort Selkirk. Then, on August 16, 1896, George Carmack, Skookum Jim, and Tagish Charlie discovered a very rich claim on Bonanza Creek, a tributary to the Klondike River near Dawson. This discovery sparked one of the largest gold rushes in history.

It would take almost a year for the news of the Klondike gold fields to spread south, even to places relatively close by in southeast Alaska. Most of the prospectors and traders in the Alaskan and Yukon interior had already converged on the Dawson area during the winter and spring, and supplies ran dangerously low. That would quickly change in the summer of 1897 and spring of 1898 as new towns and supply posts sprang up along the Gold Rush routes to cash in on the increased demand.

The population of Dawson City grew very fast and in 1898 reached a peak of over 30,000. However, the boom period did not last long and the vast majority of population moved on very quickly with the news of other discoveries and hopes of other bonanzas. The Gold Rush period saw greatly increased steamer traffic on the entire Yukon River drainage basin and across the interior. Just prior to the Gold Rush there were only a few steamers, while at its peak there would be hundreds of vessels working the rivers. These shallow draft steamers were supported by a network of wood camps, shipyards, and a large workforce which kept the river traffic moving. This network provided the infrastructure backbone for trading posts, fish camps, missionaries, and mail routes, while meeting the needs of the growing number of prospectors and traders.

4.2.4 Modern First Nations

The Selkirk First Nation is part of the Northern Tutchone language and culture group. In the past, the Tutchone peoples were highly mobile, travelling in small groups in order to exploit the

greatest number of resources. They would modify their movements depending on the patterns of large game animals and fish, or in later years to trade their furs with Westerners. In the summer, small domestic units gathered together to catch fish so that they could dry and store it for the winter months. By mid-summer several family groups moved upland together in order to kill large game mammals that they would dry and store in caches scattered in a variety of areas. From there some units moved away independently during the coldest months to trap and live off of the cached foods. The leanest months were March and April. In spring, several units often came together at this point to catch spawning whitefish or trap muskrat and beaver. May was the most plentiful month, with migrating waterfowl, fat ground squirrels, larger and more abundant fish, as well as the arrival of the Coastal Tlingit traders (McClellan 1981).

The principal ethnographic descriptions of the Tutchone are available in Cruikshank (1974, 1975), Johnson and Raup (1964), McClellan (1950, 1964, 1970a, 1970b, 1975), and Tanner (1966). Additional information on camp and village locations can be found in Schwatka (1885). Although villages were not inhabited year round, people would return to good fishing and/or hunting spots year after year. This would eventually change with the influence of Westerners. Watercraft were constructed for use, however during the summer months Tutchone people preferred to walk overland, rather than brave the sudden winds on the large lakes or the treacherous river rapids. Boats were not the preferred method of transport.

The modern Selkirk First Nation is based out of Pelly Crossing. The Selkirk First Nation were previously known as the Hućha Hudän people, meaning Flatland People, due to the landscape in the Fort Selkirk area where the land is flat on both sides of the river (Selkirk First Nation 2017). Prior to the construction of the Klondike Highway, the people of the Selkirk First Nation camped for portions of the year at Minto and Fort Selkirk (Selkirk First Nation 2017). The area of Fort Selkirk played a key role as a gathering spot to trade but also for social gatherings and interactions between a wide variety of people. Many First Nations people across the interior would gather there to trade, share stories and information, and build long term relationships including marriages. After Fort Selkirk was established, the area continued to serve as a focal point and a somewhat more sedentary meeting place and community. The far reaching seasonal rounds of travel and resource collection continued but the Fort Selkirk community began to grow with the presence of missionaries, government officials, traders, trappers, miners, and cemeteries. In July 1997, the Selkirk First Nation signed their land claim agreement at Minto Landing and become the 7th self-governing First Nation in the Yukon.

4.2.5 Previous Heritage Investigations

Only one permitted heritage resource study has been under taken within the study area. This study, conducted under Yukon Government Heritage Resource Unit permit 16-19ASR (see Mooney and Bennett 2017), assessed a 19 ha portion of the OOO Property claim to facilitate planned early stage exploration activities. No heritage resources were encountered during the 16-19ASR assessment.

No additional studies, archaeological sites, or historic sites have been documented in the area immediately surrounding the study area.

5.0 RESULTS

Upon review of the physical/environmental and cultural/historical data presented throughout Section 4.0 of this document, topographic maps, geological maps, and aerial photographs, as well as interviewing Ecofor staff who participated in the HRIA of the OOO Property Class 3 Quartz Exploration Claim Block 2016 priority area (permit 16-19ASR; see Mooney and Bennett 2017), the potential for encountering previously undocumented heritage resources, or impacting known heritage sites, was assessed. This review identified several areas of heritage potential for surface/subsurface archaeological sites. Surface/subsurface archaeological site potential areas are typically associated with flat, walkable high elevation ridgelines and level portions of valley bottoms and benches associated with drainages. CMT potential is not significant. Vegetation in the majority of the study area is limited to treeless, dry alpine taxa. Tree cover is limited to a small stand of Douglas Fir located in the southwestern portion of the study area. Vegetation inventory mapping ages this stand at 120 years, but CMTs are not often associated with Douglas Fir. Lands outside these identified areas of elevated potential are considered to have low potential for encountering undocumented heritage resource sites; typically due to significant slope. No previously recorded heritage resource sites are known within the study area, so there are no concerns or areas of potential related to documented sites.

Mapping illustrating the identified potential areas is presented in Appendix A. An assessment of the potential for encountering each of the eleven site types outlined in Section 3.2 of this report is presented in Table 1.

It should be noted that although all efforts were made during the production of this report to make its assessment of heritage resource potential as comprehensive and accurate as possible, the methods employed provide relatively coarse resolution. As such, small undocumented areas of heritage resource potential may be present within the study area that were not captured by this overview. Moreover, there is always a possibility that chance finds of heritage resources will be made in areas of low perceived potential. If such areas or finds are encountered at any point during development, all work in the find area should cease and staff at the Yukon Government Heritage Resources Unit should be contacted immediately.

Site Type	Potential	Comments
Permanent/	Moderate	Permanent/long-term habitation tend to be located near significant
Long-Term		landscape features that provide optimal places for campsites.
Habitation		Several such landscape features/camping places are present within
		the study area around the periphery of the claim block in association
		with the Klotassin River, Selwyn River, and tributaries of Apex Creek
		and Big Creek.
Temporary	Moderate-	The probability of finding temporary habitation sites is moderate-
Habitation	High	high based on many of the same landscape features/camping places
		cited for long-term campsites, specifically the areas associated with
		the Klotassin River, Selwyn River, and tributaries of Apex Creek and
		Big Creek.
Quarry Sites	Low-	Review of geological bedrock mapping shows the major rocks
	Moderate	present in the study area are granodiorite, granite, quartz diorite,
		diorite, basalt, and andesite. Although basalt is present within the
		study area, it is typically not of knappable quality. That said, there
		is limited potential for small outcrops of higher quality basalt or
		other knappable volcanic rocks. Some potential also exists for
		knappable rocks in river and streambeds.
Rock Art	Low	The potential for rock art is considered to be low, but some potential
Sites		exists in higher elevation areas such as on Apex Mountain.
Fishing Sites	Low-	The potential for finding fishing sites along the Klotassin River,
	Moderate	Selwyn River, and tributaries of Apex Creek and Big Creek is
		evaluated as low-moderate. If such sites are present, they will likely
		overlap with temporary/long-term habitation sites.
Human	Low	Organic preservation conditions in the study area is not considered
Remains		to be favorable for the preservation of human remains, however
		there is a small chance of encountering isolated Historic Period
		graves.
Culturally	Low to	The majority of the study area is treeless, and the one small forested
Modified	none	area is dominated by taxa not typically associated with CMTs. There
Trees		is no significant potential for CMTs.
Trails	Low-	Significant travel corridors are unlikely to have crossed the central
	Moderate	portions of the study area due to its steep, mountainous nature.
		However, there is some potential for local access trails into the study
		area, especially in association with the Klotassin River, Selwyn River,
		and tributaries of Apex Creek and Big Creek.
Historic	Low-	The potential for Historic Period materials in the study area is low-
	Moderate	moderate. If such sites are present they will likely be related to past
		prospecting activities.

Table 1: Assessment of the probability of encountering predicted site types.

Site Type	Potential	Comments
Isolated	Moderate-	The potential for isolated finds exists throughout the study area. If
Finds	High	other site types are present, the probability of identifying additional
		associated isolated finds in their vicinity will be elevated.
Palaeonto-	Low	The study area is located within an area of volcanic-sourced
logical Sites		bedrock. As such, the potential for palaeontological remains is low.
		However, there is a chance of Pleistocene palaeontological finds in
		sedimentary zones along the Klotassin River, Selwyn River, and
		tributaries of Apex Creek and Big Creek.

Table 1: Assessment of the probability of encountering predicted site types (continued).

6.0 SUMMARY AND RECOMMENDATIONS

The goal of this study was to identify areas of archaeological potential within the OOO Property Class 3 Quartz Exploration Claim Block. This was accomplished through a detailed review of the physical/environmental setting, cultural/historical setting, and previous heritage studies/identified sites within the study area. Through this review, several areas of heritage potential for surface/subsurface archaeological sites were identified. Surface/subsurface archaeological site potential areas are typically associated with flat, walkable high elevation ridgelines and level portions of valley bottoms and benches associated with drainages. CMT potential is not significant. Vegetation in the majority of the study area is limited to treeless, dry alpine taxa. Tree cover is limited to a small stand of Douglas Fir located in the southwestern portion of the study area. Vegetation inventory mapping ages this stand at 120 years, but CMTs are not often associated with Douglas Fir. Lands outside these identified areas of elevated potential are considered to have low potential for encountering undocumented heritage resource sites; typically due to significant slope. No previously recorded heritage resource sites are known within the study area, so there are no concerns or areas of potential related to documented sites. All areas of elevated potential are illustrated in Appendix A.

Heritage resource management recommendations for the OOO Property Class 3 Quartz Exploration Claim Block directly follow the assessment of heritage resource potential discussed in Section 5.0. These recommendations include:

- 1. Heritage Resource Impact Assessments (HRIAs) are recommended for areas with elevated heritage resource potential before any development be approved to proceed within them. Should additional areas of potential be identified within a proposed development area during HRIA work, they should be assessed following the same standards recommended for the areas of potential identified in this report. HRIA work should be conducted under a Class 2 archaeological research permit issued by the Heritage Resources Unit of Yukon Tourism and Culture. HRIAs should, at minimum, include provisions for surficial survey and subsurface testing within the boundaries of the HRIA area identified in this document and any associated areas of potential that are identified in the field which are at risk of being impacted by proposed developments. Additional recommendations may be made following an HRIA depending on the results obtained.
- 2. No Further Work (NFW) is recommended in areas identified as having low heritage resource potential prior to allowing development. However, development should only be allowed to proceed on the condition that all chance finds of heritage resource materials be reported immediately to the Heritage Resources Unit of Yukon Tourism and

Culture, and that all work at the location of a chance find cease until the Heritage Resources Unit is able to assess the finds and issue a response (clearance to proceed or requirements for avoidance/further mitigative work). If chance finds include human remains the guidelines provided in Appendices B and C should be followed.

It is also recommended that this HROA report be submitted to the Selkirk First Nation for review and consultation with regard to traditional knowledge/ land use. Moreover, if further heritage resource work is conducted within the OOO Property Class 3 Quartz Exploration Claim Block, it is recommended that representatives from the Selkirk First Nation be given opportunity to participate in any field investigations.

Should future HRIA work be conducted, all heritage resource sites identified, whether new or revisited, should be recorded as per the requirements outlined in the Yukon Archaeological Sites Regulation (O.I.C. 2003/73). Once recorded/revisited, specific heritage resource management recommendations should be made for each site that reflect the potential impacts associated with the proposed development that spurred the HRIA.

Lastly, although all efforts were made during the production of this report to make its assessment of heritage resource potential as comprehensive and accurate as possible, the methods employed provide relatively coarse resolution. As such, small undocumented areas of heritage resource potential may be present within the study area. Moreover, there is always a possibility that chance finds of heritage resources will be made in areas of low perceived potential. The recommendations contained herein are intended to be used for planning purposes. Should intensive development be proposed for areas within the OOO Property Class 3 Quartz Exploration Claim Block in the future, further assessment, focused on the specific footprint of the proposed development is recommended.

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APPENDIX A: Project Mapping





APPENDIX B: Yukon Heritage Resources Policy for Heritage Resource Management on Yukon Lands



Operational Policy for Heritage Resources Management on Yukon Lands

This document has been developed to communicate the Yukon Government's position on ownership and management of heritage resources in the context of the development assessment and review process in the Yukon. The Operational Policy for Heritage Resources Management is based in the provisions of the Yukon First Nations Umbrella Final Agreement (UFA), Chapter 13 and the enabling legislation: the Yukon *Historic Resources Act*, and the Inuvialuit Final Agreement. In the implementation of the legislation, Yukon Government is acting to protect and manage heritage resources on behalf of all Yukoners.

Ownership and Management Authority – Moveable Heritage Resources

Yukon Government is identified as the responsible authority for heritage resource management on nonsettlement (Yukon) lands based on the specific provisions concerning ownership of moveable heritage resources in the UFA, Chapter 13 (13.3.3):

• Government owns all moveable and documentary heritage resources that are not "ethnographic resources directly related to culture and history of Yukon First Nation people".

Significant management direction is provided by the UFA in the use of the term '**moveable**' in connection with heritage resources. Anticipating the requirement to manage heritage resources in future land developments and activities, the option to move heritage resources with the objective of protection is fundamental in the UFA Chapter 13.

Ownership and Management - Heritage Sites

UFA 13.8.1 Ownership and management of Heritage Sites in a Yukon First Nation's Traditional Territory shall be addressed in that Yukon First Nation Final Agreement. Examples of heritage sites that have been identified in First Nation Final Agreements: Fort Selkirk, Forty Mile, Rampart House, Lansing Post, Tagish Post, Canyon City, Lapierre House, Tr'ochëk.

With the exception of heritage sites set out in FNFA as per 13.8.1, heritage sites and non-moveable heritage resources (structures/built heritage) are governed by Laws of General Application (*Historic Resources Act*). Ownership vests in Yukon Government.

Designation of Heritage Sites under the *Historic Resources Act* ensures sites are protected from activity or development impacts. Sites or areas of historical significance in theYukon, beyond those listed in FNFA, may also be nominated for designation under the HRA. The nominations are reviewed by the Yukon Heritage Resources Board, who then recommends to the Minister that a site be designated as a Yukon Historic Site.

Heritage Resources – Definitions

The UFA Chapter 13 does not provide definitions of heritage resources, but makes the distinction among types of heritage resources as follows (13.3.6.): ethnographic objects directly related to the culture and history of Yukon Indian People, palaeontological objects, and archaeological objects. Definitions for these terms are provided in *Historic Resources Act* (Part 6 Historic Objects and Human Remains – Definitions). Generally, palaeontological objects are the fossil remains of ancient plants and animals; archaeological objects are abandoned objects that are older than 45 years. For operational purposes, "**moveable ethnographic objects directly related to the culture and history of Yukon Indian People**" (UFA 13.3.2) are objects that were

known to have been owned or used by First Nations individuals or families within living memory¹. 'Direct' indicates the line of ownership for the object is unbroken or can be reconstructed. As per UFA 13.3.5 – if an object cannot readily be determined to be ethnographic, it is held in custody by Yukon Government until its nature has been determined.

Protection of Heritage Resources

Accidental discovery of heritage resources (UFA 13.8.7) – heritage resources discovered during construction or excavation are protected under Laws of General Application (*Historic Resources Act, Mining Land Use Regulations; Land Use Regulations*). The *Historic Resources Act* (64) prohibits destruction or alteration of a heritage resource except in accordance with a historic resources permit.

Report of Findings

Historic Resources Act Part 6 Report of Findings:

71(1) Every person who finds an object that is or that likely is a historic object, or remains that are or that likely are human remains, shall immediately report the find to the Minister.

(2) If the object is found on settlement land the finder shall also report the find to the Yukon first Nation which governs the settlement land.

Quartz and Placer Mining Land Use Regulations - E Historic objects and burial grounds

9. Any sites containing archaeological objects, palaeontological objects or human remains or burial sites discovered in the course of carrying out an operation must be immediately marked and protected from further disturbance and, as soon as practicable, the discovery reported to the Chief (of Mining Land Use).

In respect of UFA 13.4.8, 13.7.1, Yukon Government provides to First Nations archaeological, palaeontological and historic site inventories and research reports on heritage resources found in their traditional territories.

First Nation Burial Sites

Procedures to manage and protect First Nation burial sites have been established by the Yukon Government and Yukon First Nations: "Guidelines Respecting the Discovery of Human Remains and First Nation Burial Sites in the Yukon". <u>http://www.tc.gov.yk.ca/pdf/respecting_guidelines.pdf</u>. General provisions include:

- Restrict access to preserve dignity of the site
- Newly discovered sites/accidental discovery
 - o RCMP/Chief Coroner to be informed
 - o If determined to be a First Nation burial, First Nation to be informed
 - o general rule no further disturbance

Heritage Resource Assessment and Permits

Standard archaeological impact assessment and mitigation procedures are followed to guide heritage resources assessment in the Yukon. The Government of British Columbia Archaeological Impact Assessment Guidelines are the recommended guideline for Yukon and are comparable to standards used in other Canadian jurisdictions: http://www.tsa.gov.bc.ca/archaeology/docs/impact_assessment_guidelines/in dex.htm

Heritage assessments ideally are undertaken in cooperation with affected First Nations. Archaeological consultants are required to communicate with affected First Nations prior to undertaking field research. A First Nation may choose not to provide oral history or traditional knowledge input to the consultant, however. In such cases, the First Nations may keep confidential information on traditional use areas, subsistence resources and

¹ Ethnographic objects of themselves may not be informative of ownership. Many historic objects (for example, guns, axes, knives) were used equally by all Yukoners and attribution of ownership (for example to Nacho Nyak Dun vs. Selkirk First Nation vs. a non-First Nation trapper) cannot be made without direct knowledge of who made or used the object or in whose former camp the object was found. Therefore knowledge or memory of historic use is critical in determining if the objects are ethnographic.

cultural values and work independently with the Yukon Environmental and Socio-Economic Review board to ensure concerns with these values are addressed for a particular project.

Under the *Yukon Environmental and Socio-Economic Assessment Act*, heritage resource assessment is generally required for all activities that will impact or will potentially impact heritage resources. All heritage resource assessments are required to be carried out under permit:

Historic Resources Act

62 No person shall search or excavate for historic objects or human remains except in accordance with a historic resources permit. *S.Y. 1991, c.8, s.61*.

Archaeological Sites Regulation

3. No person shall survey and document the characteristics of an archaeological site without a Class 1 or Class 2 permit.

4. No person shall excavate, alter, or otherwise disturb an archaeological site, or remove an archaeological object from an archaeological site, without a Class 2 permit.

APPENDIX C: Guidelines Respecting the Discovery of Human Remains and First Nation Burial Sites in the Yukon

Guidelines Respecting the Discovery of Human Remains and First Nation Burial Sites in the Yukon

With approvals as of August 1999

This document was prepared pursuant to provisions of Yukon First Nation Final Agreements and the Yukon Transboundary Agreement with the Gwich'in Tribal Council



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Introduction and Background

The treatment of every burial site requires respect. Legislation of various types protects burial sites and cemeteries from being disturbed. Government agencies and First Nations keep and consult records of known sites so that land use plans or proposals can avoid such sites.

There are many historic and First Nation graves in the Yukon however which are no longer marked and which may be disturbed accidentally through land use or development. Other sites may be disturbed by natural forces, such as erosion, leading to the exposure of human remains.

As more people travel in backcountry areas, for work or pleasure, it is expected that the number of such discoveries may increase. It is important therefore to have guidelines for reporting, investigating and managing such sites in a coordinated and effective manner, to give them proper respect.

Yukon First Nation (YFN) Final Agreements (Section 13.9.0) and the transboundary agreement with the Gwich'in Tribal Council (Tetlit Gwich'in) (Section 9.5) require the development of procedures to protect and manage YFN or TG burial sites, and specify certain actions when such sites are discovered.

Consistent with these obligations, these guidelines were developed at two workshops held jointly in March and October 1998, involving First Nation Elders, heritage and implementation staff, the RCMP, Coroner and other Yukon and federal government officials.

Purpose

To provide direction on the reporting, identification, treatment and disposition of human remains found outside of recognized cemeteries in the Yukon, to ensure these remains are respected and protected consistent with legislation and Yukon land claims agreements.

Scope and Application

These guidelines apply to anyone who discovers human remains or grave goods outside of recognized cemeteries in the Yukon, and to the Yukon, Federal and First Nation government officials involved in protecting and caring for such sites.

The guidelines reflect existing practices in many ways. They do not replace legislation or regulations protecting burial sites, but are intended to integrate obligations contained in Yukon land claim agreements with land use permitting regimes and the Development Assessment Process . These guidelines may apply on Settlement Lands at the discretion of each First Nation. Government approval is required for management plans for sites on non-Settlement Land.

Existing known burial sites that are marked or otherwise recorded are protected by existing legislation. Management plans for these sites may be developed on a case by case basis.

Burial sites discovered within the boundaries of a designated heritage site may be subject to the management plan for that site.

The guidelines do not apply within National Historic Sites or National Parks. Parks Canada has its own guidelines respecting burial sites and human remains.

Evaluation and Revision of Guidelines

The implementation of these guidelines will be evaluated as necessary to ensure that they are fulfilling their purpose.

GUIDING PRINCIPLES

All human remains, and items found at graves (grave offerings, markers etc.) shall be treated with respect and dignity regardless of their cultural affiliation.

Actions taken following the discovery of sites will be consistent with Yukon and transboundary land claim agreement provisions respecting Yukon First Nation and Tetlit Gwich'in Burial Sites.

Each discovery will be handled on a case by case basis in consultation with the affected parties, in a coordinated and timely manner.

Definitions - see Appendix 1 References - see Appendix 2 Land claims provisions - see Appendix 3

Guidelines Respecting the Discovery of Human Remains and First Nation Burial Sites

See also Figure 1.

These guidelines cover five steps: discovery and notification; site protection and investigation; investigation and reporting; and site disposition or management agreements. A final step, arbitration, is provided for where no disposition agreement is reached.

1. Discovery and Notification

If human burial remains are accidentally discovered the following guidelines apply:

- a) The finder will immediately cease any further activity at the site and report the site to the RCMP.
- b) *If the finder is operating under a land use licence or permit*, the site must also be reported immediately to the land manager/permitting authority, as set out on the permit. The land manager/permitting authority shall confirm that the site is reported to the RCMP.
- c) Based on the information it receives, the RCMP will notify: 1) the Coroner's office if the site is of a forensic or criminal nature; or 2) both the First Nation(s) in whose Traditional Territory the Site is located and the Heritage Branch, if the site is a suspected historic or First Nation burial site.

2. Site Protection and Identification

- a) the land manager/permitting authority shall take reasonable measures to protect the site from environmental factors and any form of unauthorized interference or disturbance.
- b) based on the evidence reported at the scene, the RCMP/Coroner will investigate the site and make a preliminary determination as to the nature of the remains.
- c) *if the site is of a criminal or forensic nature* (potential crime scene or missing person), then the Coroner's office and police will assume authority over the site/remains.
- d) Heritage Branch may recommend that an archaeologist assist police or coroner in the preliminary assessment of the site.
- e) *If the site is not of police/coroner interest* then the Director, Heritage Branch, the affected First Nation(s) and the land manager will assume interim responsibility for protection and investigation of the site. If it's a suspected First Nation site, the Heritage Branch and First Nation would assume this responsibility.
- f) the Director, Heritage Branch, the affected First Nation(s) and land manager shall take reasonable measures to restrict access and ensure that the human remains and any grave offerings are not further disturbed pending the investigation and identification of the remains. The RCMP may be consulted about protecting the site.

Figure 1

Guidelines respecting the Discovery of Human Remains and First Nation* Burial Sites

2. Site Protection and Investigation -protection/no disturbance or access

If not a criminal matter, Heritage Branch takes lead with affected FN or transboundary group. RCMP may assist if requested.

• First Nation, Minister

• permitting authority - person may continue activity with FN consent. If consent is not provided, proceed according to terms and conditions of arbitrator(UFA 26.7.0 TG Ch.18)

or

- rebury, relocate or remove remains
- *restrict/specify access if necessary and possible*
- may designate existing or new site as burial site/cemetery or heritage site
- management plan (jointly prepared/approved by FN and Government on Non-Settlement Lands)

Maps, inventories, reports, plans, agreements.

g) Where human remains are at risk of being destroyed or damaged, the Minister of Tourism for Heritage may issue a stop work order prohibiting any further activities and may make an agreement with the First Nation or the Tetlit Gwich'in or land owner or user for any investigation, excavation, examination and preservation and removal of the remains, consistent with land claim provisions. (s.72, *Historic Resources Act- This would address concerns about unknown remains.*)

Existing site inventories, land use records, affected First Nations and community elders, and military authorities, should be consulted as soon as possible about possible identification of the remains.

Some examination of the site/remains may be required to determine its cultural affiliation and age, and whether or not the site is modern or historic.

3. Investigation and Reporting

- a) The Heritage Branch/land manager will direct an archaeologist or qualified examiner to carry out an investigation under any required permits, in consultation with the affected First Nation and other affected parties, to make an initial report citing, if possible*, the cultural affiliation of the human remains.
- b) Within a reasonable time to be specified by the Minister, and the affected First Nation(s), the archaeologist or qualified examiner shall deliver a written report and any notification not yet made, to:
 - the Minister, and the affected First Nation(s) if appropriate;
 - the Director of the Heritage Branch;
 - the land manager/permitting authority;
 - any other representative of the interred, if known.
- c) The written report shall attempt *to identify:
 - the representative group of the interred;
 - the geographic boundaries of the site;
 - the grave offerings or other heritage resources that may be associated with the remains or the site.
- d) The archaeologist or examiner may, with the agreement of the proper authority and the representative of the interred, if known, remove all or part of the human remains for further analysis or for temporary custody where the remains may otherwise be at risk.

e) Any exhumation, examination and reburial of human remains from a YFN/TG burial site shall be at the discretion of the affected YFN/TG; and if ordered by an arbitrator pursuant to land claim provisions, will be done or supervised by the YFN or Tetlit Gwich'in.

*it is often difficult to determine the cultural ancestry or affiliation of fragmentary human remains

3.1 Reporting

- a) If the site is determined to be a Yukon First Nation Burial Site, or Tetlit Gwich'in burial site, the appropriate representative will be contacted in writing to provide further direction on the disposition of the remains. *
- b) A person carrying out Government or First Nation authorized activity where a First Nation site is discovered can continue that activity with the consent of the First Nation in whose Traditional Territory the Yukon site is located. The consent of the Tetlit Gwich'in is required if the site is in the Tetlit Gwich'in primary use area. If consent is denied, the person can seek terms and conditions from an arbitrator about continuing the activity (see Section 5).
- c) If after the final report, the human remains are found to be those of a different aboriginal people than those mentioned previously, the proper authority of that group shall be notified in order that they may assume the role of the representative.
- d) Where a site is **not** found to be a Yukon First Nation or Tetlit Gwich'in burial site, or a military or mariner's burial site, the Director, Heritage Branch may publish notice of the discovery in a newspaper or other public notice seeking information on the remains.

4. Site Disposition Agreement (Management Plan)

4.1 When the site or remains are identified

- a) The site shall not be disturbed and the Director, Heritage Branch or First Nation if on Settlement Land, shall initiate discussions towards entering into a site disposition agreement with the representative of the interred.
- b) If the site is a Yukon First Nation Burial Site or a Tetlit Gwich'in burial site on non-settlement land, there must be joint approval of the site management plan by the Yukon First Nation in whose Traditional Territory the site is located and the Government. If the site is a Tetlit Gwich'in burial site located off Tetlit Gwich'in land but in the primary use area, the management plan must be jointly approved by the Tetlit Gwich'in and the Government.
- c) Decisions regarding reburial, relocation or other disposition should be determined on a case by case basis in consultation with those concerned and in a timely manner.

Site disposition agreements shall determine such things as:

1. the interim care of the human remains;

- 2. the scope and extent of analysis to be performed on the human remains, if any;
- 3. the exact location of the place where the human remains are to remain or to be interred;
- 4. the style and manner of disinterment, if applicable;
- 5. the style and manner of reinterment, if applicable;
- 6. the time period in which disinterment and reinterment is to take place;
- 7. the procedures relating to, and the final disposition of any grave offerings discovered with the human remains and any additional analysis of them;
- 8. the provision for future maintenance of the cemetery or site where the human remains are to be located;
- 9. access to the site and ways to prevent disturbance;
- 10. any other issue agreed upon.

*it is often difficult to determine the cultural ancestry or affiliation of fragmentary human remains

4.2 When no representative is identified or no disposition is specified:

If disposition is not specified by a representative, or the remains are not claimed or no affiliation is established within a reasonable time, the Minister, or First Nation if on Settlement Land, shall with the necessary permits and approvals provide for the following disposition:

- a) cover and leave the remains where they were found and have the site recorded as a burial site/ heritage site, if on land suitable for a burial site; or
- b) have the remains disinterred and reinterred in the nearest appropriate cemetery; or
- c) remove the remains from the site for analysis and may have them reinterred in a recognized cemetery or;
- d) may act as the temporary repository of the remains.

(Where the remains were found on Settlement Land but are not considered First Nations remains, the Government may remove the remains in consultation with the First Nation.)

5. Arbitration

a) If no disposition agreement or management plan is reached within a reasonable time the matter may be referred to arbitration for settlement. If this matter concerns a Yukon First Nation Burial Site, this shall be done pursuant to 26.7.0 of the UFA; or Chapter 18, if the matter concerns a Tetlit Gwich'in site in the primary use area.

6. Records

- a) A record of the site and a report of the discovery and disposition plan shall by kept by the Government and the affected First Nation(s)/representative for future reference to protect the site.
- b) Access to information about discovered sites will be addressed in any site management plan developed under these guidelines, and will be protected under the *Access to Information and Protection of Privacy Act*, and the *Historic Resources Act* or *any similar First Nations legislation*.

Appendix 1

Definitions

burial site

the location of any human grave or remains that have been interred, cremated or otherwise placed, and include ossuaries, single burials, multiple burials; rock cairns; cave or cache burials etc. not situated within a cemetery

First Nation Burial Site

This refers to a Yukon First Nation Burial Site or a Tetlit Gwich'in burial site, which is defined as: a place outside a recognized cemetery where the remains of a cultural ancestor of a Yukon Indian Person (or the Tetlit Gwich'in) have been interred, cremated or otherwise placed."

[from the Definitions section of the Umbrella Final Agreement for the Council for Yukon Indians (now Council of Yukon First Nations) and the Transboundary Agreement between Canada and the Gwich'in Tribal Council]

human remains

mean the remains of a dead human body and include partial skeletons, bones, cremated remains and complete human bodies that are found outside a recognized cemetery" (*adapted from Historic Resources Act*)

grave offering

any object or objects associated with the human remains which may reflect the religious practices, customs or belief system of the interred.

historic

under the Historic Resources Act this generally means something older than 45 years.

land manager

Agency responsible for the administration of the land on which the site is located. For example, currently territorial parks are managed by Yukon Parks and Outdoor Recreation; gravel pits and rural airports are administered by Community and Transportation Services. Settlement Land is administered by the First Nation. Private land is administered by the land owner. (Burial sites may not be disturbed on any land without proper authorization.)

Recognized cemetery

a defined area of land that is set aside for the burial of human bodies.

representative

means a descendant of the interred or of the person whose remains are found, or where no descendant survives or is identified, an official representative of the appropriate First Nation in whose Traditional Territory the burial site is located or the closest culturally affiliated group, religious denomination, military or marine authority as evidenced by the location or mode of burial.

Where no representative can be determined the Minister shall act as the representative on Non-Settlement Lands and on Settlement Lands at the discretion and with the consent of the First Nation

representative group

means the appropriate Yukon First Nation or the closest culturally affiliated group, religious denomination, military or marine authority as evidenced by mode and style of burial which is willing to act as a representative.

Site disposition agreement

means a written agreement to be reached between the Director of the Heritage Branch and the representative of the interred regarding the disposition of the remains, including any disinterment and reinterment, and management plan

Management plan

means a plan to identify the roles of the representative, Government and land owner or manager respecting the care and protection of the site, including a consideration of site records, site access, and ways to protect a site from disturbance.

Appendix 2

References

The following include requirements to protect burial sites and were considered in the development of these Guidelines.

Umbrella and Yukon First Nation Final Agreements, Sections 13.9.0 and 26.7.0, and Implementation Plans
Yukon Transboundary Agreement (Gwich'in Tribal Council), Sections 9 and 18, and Implementation Plan
Yukon Historic Resources Act, Part 6
Criminal Code
Cemeteries and Burial Sites Act
Coroner's Act
Territorial Land Use Regulations
Yukon Archaeological Sites Regulations
Yukon Placer Mining Act, and Regulations
Yukon Surface Rights Act
Vital Statistics Act
Appendix 3

Land Claims Provisions Relating to Burial Sites

13.9.0 Yukon First Nation Burial Sites*

- 13.9.1 Government and Yukon First Nations shall each establish procedures to manage and protect Yukon First Nation Burial Sites which shall:
 - 13.9.1.1 restrict access to Yukon First Nation Burial Sites to preserve the dignity of the Yukon First Nation Burial Sites;
 - 13.9.1.2 where the Yukon First Nation Burial Site is on Non-Settlement Land, require the joint approval of Government and the Yukon First Nation in whose Traditional Territory the Yukon First Nation Burial Site is located for any management plans for the Yukon First Nation Burial Site; and
 - 13.9.1.3 provide that, subject to 13.9.2, where a Yukon First Nation Burial Site is discovered, the Yukon First Nation in whose Traditional Territory the Yukon First Nation Burial Site is located shall be informed, and the Yukon First Nation Burial Site shall not be further disturbed.
- 13.9.2 Where a Person discovers a Yukon First Nation Burial Site in the course of carrying on an activity authorized by Government or a Yukon First Nation, as the case may be, that Person may carry on the activity with the agreement of the Yukon First Nation in whose Traditional Territory the Yukon First Nation Burial Site is located.
- 13.9.3 In the absence of agreement under 13.9.2, the Person may refer the dispute to arbitration under 26.7.0 for a determination of the terms and conditions upon which the Yukon First Nation Burial Site may be further disturbed.
- 13.9.4 Any exhumation, examination, and reburial of human remains from a Yukon First Nation Burial Site ordered by an arbitrator under 13.9.3 shall be done by, or under the supervision of, that Yukon First Nation.
- 13.9.5 Except as provided in 13.9.2 to 13.9.4, any exhumation, scientific examination and reburial of remains from Yukon First Nation Burial Sites shall be at the discretion of the affected Yukon First Nation.
- 13.9.6 The management of burial sites of a transboundary claimant group in the Yukon shall be addressed in that Transboundary Agreement.

*This is an excerpt from the <u>Umbrella Final Agreement between Canada, the Council for Yukon</u> <u>Indians and the Government of the Yukon</u> (1993),Ch. 13, pp. 128-129, and subsequent Yukon First Nation Final Agreements.

9.5. Tetlit Gwich'in Burial Sites*

9.5.1 Government and Tetlit Gwich'in shall each establish procedures to manage and protect Tetlit Gwich'in burial sites which shall:

(a) restrict access to Tetlit Gwich'in burial sites to preserve the dignity of Tetlit Gwich'in burial sites;

(b) where the Tetlit Gwich'in burial site is outside the primary use area (*Fort McPherson Group Trapping Area*), require the joint approval of government and the Yukon First Nation in whose traditional territory the Tetlit Gwich'in burial site is located for any management plans for the Tetlit Gwich'in burial site;

(c) where the Tetlit Gwich'in burial site is on land in the primary use area which is not Tetlit Gwich'in Yukon land, require the joint approval of government and the Tetlit Gwich'in for any management plans for the Tetlit Gwich'in burial site; and

(d) provide that, subject to 9.5.2, where a Tetlit Gwich'in burial site is discovered, the Yukon First Nation in whose traditional territory the Tetlit Gwich'in burial site is located or the Tetlit Gwich'in, if the Tetlit Gwich'in burial site is in the primary use area, shall be informed and the Tetlit Gwich'in burial site shall not be further disturbed.

- 9.5.2 Where a person discovers a Tetlit Gwich'in burial site in the course of carrying on an activity authorized by government, a Yukon First Nation or the Tetlit Gwich'in, as the case may be, that person may carry on the activity with the agreement of the Yukon First Nation in whose traditional territory the Tetlit Gwich'in burial site is located or the Tetlit Gwich'in if the Tetlit Gwich'in burial site is in the primary use area.
- 9.5.3 In the absence of agreement under 9.5.2, the person may refer the dispute to arbitration under chapter 18 of this appendix for a determination of the terms and conditions upon which the Tetlit Gwich'in burial site may be further disturbed.
- 9.5.4 Any exhumation, examination and reburial of human remains from a Tetlit Gwich'in burial site ordered by an arbitrator under 9.5.3 shall be done by, or under the supervision of, the Tetlit Gwich'in.
- 9.5.5. Except as provided in 9.5.2 to 9.5.4, any exhumation, scientific examination and reburial of remains from Tetlit Gwich'in burial sites shall be at the discretion of the Tetlit Gwich'in.

*This is an excerpt from <u>Appendix C - Yukon Transboundary Agreement between Canada and the</u> <u>Gwich'in Tribal Council, (1992)</u>, p. 32. **APPENDIX VII**

HERITAGE RESOURCE IMPACT ASSESSMENT



Heritage Resource Impact Assessment: OOO Property Class 3 Quartz Exploration (16-19ASR)

(To Be Included in YESAB Materials - No Sensitive Site Data)

Prepared for: Archer, Cathro & Associates (1981) Limited. (acting as agent for Strategic Metals Ltd.) 41 MacDonald Road Whitehorse, Yukon Y1A 4R1

> Prepared by: Ecofor Consulting Ltd. 6B-151 Industrial Road Whitehorse, Yukon Y1A 2V3

Report also submitted to: Selkirk First Nation

March 2, 2017

EXECUTIVE SUMMARY

On behalf of Archer, Cathro & Associates (1981) Limited, working as agents for Strategic Metals Ltd., Ecofor Consulting Ltd. conducted a Heritage Resource Impact Assessment (HRIA) for the OOO Property Class 3 Quartz Exploration claim. The proposed project involves mineral exploration activities on the OOO property, which covers approximately 2,591 ha. The 2016 exploration area includes approximately 19 ha in the southeastern corner of the claim block covering ridgelines and associated slopes running roughly east-west. Proposed development activities include sampling, surveying, prospecting, trenching, and drilling, as well as a temporary camp site. The temporary camp site will be located at the eastern edge of the proposed work area, overlooking a tributary of Big Creek. Note: All specific geographic references to heritage site locations, photographs, and some site details have been removed from this YESAB ready version of this report so that it can be issued publicly while protecting sensitive site data.

Ecofor staff assessed the proposed work area by pedestrian survey with helicopter support. Five Shovel Test Locations (STLs) were excavated in areas identified as having high potential for subsurface archaeological material; generally located on level terrain along a prominent ridgeline or on rocky outcrops. No heritage resources were identified through this work. The remainder of the proposed work area is assessed as having low potential for subsurface archaeological material due to the steeply sloped terrain.

There was minimal evidence of previous disturbance identified during the pedestrian survey, with the exception of some hand trenching and associated backfilling has been conducted throughout the proposed work area. These geologically tested areas are located on sloped terrain with low potential for subsurface archaeological material.

Based on these results, no further heritage resource assessment is recommended for the proposed 2016 work area. If work is scheduled to occur outside of the proposed work area assessed under this permit, an HRIA is recommended. Moreover, if chance finds of heritage resources are made within the assessed area during development all work in the area should cease immediately and they should be reported to the Yukon Government Heritage Resources Unit to obtain further guidance. Moreover, if any additional claims are added to the claim block, then those new areas are also required to be reviewed for possible impacts to heritage resources. This follow-up heritage review may be conducted through desktop overview and/or field study.

Heritage Resource Impact Assessment: OOO Property Class 3 Quartz Exploration (16-19ASR)

CREDITS

Permit Holder:	James Mooney, MA
Report Author:	James Mooney, MA Tim Bennett, MA
Field Crew:	James Mooney, MA (Ecofor) Alex Gunn, BA (Ecofor) Sheilynn Alfred-Hager (SFN)
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1.0 INTRODUCTION

On behalf of Archer, Cathro & Associates (1981) Limited, working as agents for Strategic Metals Ltd., Ecofor Consulting Ltd. conducted a Heritage Resource Impact Assessment (HRIA) for the OOO Property Class 3 Quartz Exploration claim (Figure 1). The proposed work area consists of a drilling exploration area in the southeast portion of a mineral exploration claim block located approximately 95 km west northwest of Carmacks, YK and is accessible by helicopter. Within the claim block, the 2016 work area assessed under Permit 16-19 ASR is limited to a ridgeline and associated slopes atop a mountain peak in the southeast corner of the larger claim block (see Figure 1). The claim block footprint covers Apex Mountain in the Dawson Range and includes several named and unnamed drainages, including tributaries to Big Creek, Apex Creek, Selwyn River, and Klotassin River. Big Creek flows along the eastern edge of the claim block and the headwaters of Apex Creek intersect the northeastern corner of the claim. Tributaries of the Selwyn River flow out of the northeastern portion of the claim block and the Klotassin River also has its headwaters in the central part of the claim block. The 2016 proposed work area is in the southeastern corner of the claim block, and is drained by a series of tributaries of Big Creek. The claim block area is within the traditional territory of the Selkirk First Nation. Note: All specific geographic references to heritage site locations, photographs, and some site details have been removed from this YESAB ready version of this report so that it can be issued publicly while protecting sensitive site data.

1.1 Project Overview

The proposed project involves mineral exploration activities on the OOO property, which covers approximately 2,591 ha. The 2016 exploration area includes approximately 19 ha in the southeastern corner of the claim block covering ridgelines and associated slopes running roughly east-west. Proposed development activities include sampling, surveying, prospecting, trenching, and drilling, as well as a temporary camp site. The temporary camp site will be located at the eastern edge of the proposed work area, overlooking a tributary of Big Creek.

1.2 Personnel

The project area was assessed by Ecofor employees James Mooney (permit holder) and Alex Gunn. First Nations representatives Sheilynn Alfred-Hager (SFN) also participated in the fieldwork.



1.3 Report Format

Following this introduction in Section 1.0, Section 2.0 provides a discussion of the environmental setting that the study area is located within, Section 3.0 discusses the culture history of the area in which the proposed development is located, Section 4.0 details the methodologies employed in completing this work, Section 5.0 presents the results of this HRIA, Section 6.0 provides a summary and recommendations for the ongoing management of heritage resources within the assessed project area, and Section 7.0 closes the report with a listing of references cited. Three appendices are included at the end of this report¹. Appendix A shows project mapping, Appendix B provides project photographs, and Appendix C provides the project field notes.

¹ Note: These appendices have been removed from this YESAB ready version of this report so that it can be issued publicly while protecting sensitive site data.

2.0 ENVIRONMENTAL SETTING

The Klondike Plateau Ecoregion is characterized by smooth topped ridges with some outcrops of exposed rock known as Tors. These ridges are dissected by deep, narrow, V-shaped valleys (Smith et al. 2004). Its boundary conforms fairly well to the Klondike Plateau physiographic subdivision of the Yukon Plateau (Bostock 1948; Mathews 1986), although north of the Willow Hills it does not extend as far eastward. Elevation ranges from approximately 290 m a.s.l. to over 2,000 m a.s.l. with its highest point at the summit of Apex Mountain at 2,026 m a.s.l. (Smith et al. 2004). Most ridges peak at 1,200 to 1,700 m asl, with local relief ranging from 450 to 700 m a.s.l. (Smith et al. 2004). Unlike other ecoregions in the area, this plateau has not been glaciated in the recent past (Smith et al. 2004). The Dawson Range is the most distinct topographic feature within this ecoregion. It also includes the Wellesley Depression in the southwest and part of the Tintina Trench. Several major rivers drain the Klondike Plateau Ecoregion, including Yukon, Klondike, Stewart, Pelly, Fortymile, Nisling, Donjek, White Rivers.

The climate in the Klondike Plateau has a strong seasonal variation. Mean annual temperatures are -5°C, but it is also home to the coldest recorded temperature in North America at -62.8°C (Smith et al. 2004). Mean temperatures for January are -23 to -32°C, and in July from 10 to 15°C (Smith et al. 2004). Precipitation is moderate with annual amounts of 300 to 500 cm, with generally higher levels in the southeast compared to the northwest (Smith et al. 2004). The winter months have mean amounts of 10 to 20 mm while the summer months can expect rainfall amounts of 50 to 90 mm (Smith et al. 2004). The heaviest precipitation originates from rain showers and thunderstorms in the summer months. Paleoclimate reconstruction from the southern Yukon indicates higher temperatures and/or drier conditions from 6,700 to 4,700 before present (BP), followed by a long period of reduced temperatures and/or increased precipitation (Farnell et al. 2000). A warm period is speculated from 1,440 BP to 1,030 BP, followed by the colder temperatures of the Little Ice Age.

The ecoregion's bedrock geology constitutes a large part of the Yukon–Tanana Terrane, a composite of crust blocks that include former volcanic island arc and continental shelf depositional environments (Mortensen 1992). These metasedimentary rocks are intruded and overlapped by granitic and volcanic rocks, and overlain by fault-bounded slices of serpentinized ultramafic rock of the Slide Mountain Terrane (Smith et al. 2004). This base has been exposed and weathered for at least 15 million years, resulting in the creation of tors atop broad ridges mantled with fields of large angular, frost-heaved rock fragments (Smith et al. 2004). Volcanic processes have also contributed to the Klondike Plateau bedrock geology. The gold that the Klondike is famous for largely originates from quartz veins (Knight et al. 1994) that have been

eroded and the gold concentrated by pre-Ice Age rivers (>3 Ma) in placer deposits. The principal formation containing placer gold is the White Channel gravel, but a few bedrock gold veins have also been documented in the ecoregion (Mortensen et al. 1992). This bedrock bound gold and the placer gold deposits are actively sought by the mining industry. Copper and chrysotile asbestos have also been the focus of mining efforts in the Klondike (Smith et al. 2004).

Surface cover is dominated by colluvium, with alluvium and glacial outwash terraces found along major river systems (Smith et al. 2004). Colluvial sediments in the lower valleys tend to be thick, silty, and often capped with peat or mud whereas upland colluvium tends to be rubble from degraded bedrock (Smith et al. 2004). Aeolian silts are also common at the surface in many areas, and periglacial features, such as cryoplanation terraces, patterned ground and solifluction lobes, can be found at higher elevations (Smith et al. 2004).

The modern Klondike Plateau Ecoregion is largely unglaciated, with the exception of localized glaciers originating from the headwaters of the Sixtymile River Valley, and local peaks in the eastern Dawson Range and Kluane Ranges into the Wellesley Basin (Smith et al. 2004). However, the topography and hydrology have been impacted by glacial processes in the past, including the formation/disappearance and resulting outwash of Glacial Lake Yukon >3 Ma and Glacial Lake Dawson during the Reid Glaciation (Smith et al. 2004). The McConnell Glaciation was restricted to mountain valleys beyond this ecoregion, but outwash from affected areas did flow through the Klondike Plateau Ecoregion and related deposits are found in the lower Klondike River Valley (Smith et al. 2004).

The flora of the Klondike Plateau ranges from boreal forest in the valleys and low slopes, to alpine and tundra on the ridge crests. Black and white spruce forests dominate this ecoregion, in both pure and mixed stands (Smith et al. 2004). Other tree types include balsam poplar, paper birch, pine, water birch, and trembling aspen. Foliose lichens, Reindeer lichen, black spruce sphagnum, and feathermoss dominate the ground layer while shrub birch, willow, Labrador tea, alder, alpine blueberry, and ericaceous ground shrubs dominating the shrub layer. The highest frequency of lightning strikes in the Yukon occurs in this ecoregion. Forest stands are often taken by fire disturbance, with young immature stands more common than mature stands over much of the ecoregion (Smith et al. 2004).

The wildlife in the area contains barren-ground and woodland caribou (namely the Fortymile caribou herd). Other mammals native to the area include moose, black bear, grizzly bear, wolf, mule deer, lynx, wolverine, marten, woodchuck, and snowshoe hare (Smith et al. 2004). This ecoregion was historically one of the more biologically productive in the Yukon. The Fortymile

caribou herd was estimated at having been as large as 500,000 in the mid-19th century and ranged from Fairbanks, AK to Whitehorse, YT. However, in 2001 the herd was estimated at only 40,000 individuals. Many factors have contributed to this decline, including wildfires, overharvesting, and food limitations. A management plan has been put into place in an attempt to rebuild the herd and restore the once highly active biological productive ecoregion.

3.0 CULTURAL HISTORY

The culture history for this larger area can be broken down into three broad periods: Precontact, Protohistoric, and Historic. Much has been written about the Klondike Gold Rush and the history of the Dawson area but less effort has been put into investigating and recording the Precontact Period. To provide context for the likely cultural resources that may be found within the study area, the following section presents an overview of the culture history for the broader region including the central/southern Yukon and Northern British Columbia. Many researchers have reviewed the culture history of this broader area and presented the information using a variety of terms and temporal ranges (Clark 1981; West 1996; Workman 1978; J. V. Wright 1995, 1999).

3.1 Precontact Period (>11,000 BP to ca. AD 1700s)

The earliest Precontact occupation, which dates to early post-glacial times, is known as the Northern Cordilleran Tradition (Clark 1983; Hare 1995). The earliest Northern Cordilleran Tradition occupation known at present is a site located near Beaver Creek, dated to 10,670 BP (Heffner 2002). The majority of sites appear to date older than 7,000 to 8,000 BP. The Northern Cordilleran Tradition, with some overlap, predates the introduction of microlithic technology from Alaska into the interior of the central and southern Yukon (Clark 1983; Hare 1995).

The Northern Cordilleran Tradition was followed by the Little Arm Phase, which dates from 7,000 to 4,500 BP (Clark and Gotthardt 1999; Workman 1978) and can be defined by the use of microlithic technologies. After about 4,500 BP, there is less evidence of microblade use in the Yukon, and an increase in the use of notched projectile points and a variety of scraping and carving tools. This new tool industry is known as the Taye Lake Phase in southwest Yukon, or more broadly in Yukon and Alaska as the Northern Archaic Tradition (Hare 1995; Workman 1978).

The most recent archaeological culture of southern Yukon is that of the Aishihik Phase (Workman 1978). This phase is thought to be a cultural development from the earlier Taye Lake culture, although there are some significant differences in technology. The most notable is the introduction of the bow and arrow, replacing a type of throwing spear known as an atlatl (Hare et al. 2004). These Aishihik Phase sites are found above the White River Volcanic Ash layer (also known as White River Tephra) that is dated to about 1,250 BP (Clague et al. 1995).

The Aishihik Phase has been evaluated as ranging from approximately AD 750 to AD 1750, and also includes the use of native copper tools, stemmed projectile points, and gorges. Also indicative of the Aishihik Phase are small stemmed Kavik points, end and side scrapers, and ground adzes (Hare 1995). The poor preservation of organic materials makes the task of diet

reconstruction more difficult than at the coastal sites, but there is evidence of continued use of a variety of large and small mammals, fish, and birds. In the high elevations of the southern Yukon ice patches, examples of the transition from the older atlatl technology to the bow and arrow use has been clearly documented by recent finds (Hare at al. 2004). The shift to the new technology was a rather abrupt one at roughly AD 750 based on a good sample of preserved and dated atlatl dart shafts and bow and arrow remains.

3.2 Protohistoric Period (ca. AD 1700s to ca. AD 1847)

The Protohistoric Period, as presented here, can be defined by the appearance of non-native goods, other early trade items, and foreign (western or eastern) influences, but not the documented accounts of non-native peoples themselves. As such, it spans the time between the first introduction of non-native influences or artifacts, and the recording of first hand or primary written accounts. Other indicators of the Protohistoric Period are the arrival of the first non-native diseases and information concerning non-natives. Unlike other cultural periods with more specific temporal ranges it is difficult and perhaps impossible to determine when the first 'outside' influences from Russian, Asian, European, or other more distant cultures began to impact First Nations people in the Yukon interior.

Some of these far reaching effects may have been passed along from Russian exploration in the early and mid-1700s (Veniaminov 1984) and other Asian and European (Andreev 1944, Quimby 1985) exploration and contact with coastal communities. The Chilkat Tlingit from the Northwest Coast travelled and traded with many interior First Nation peoples throughout this Protohistoric Period including the Northern Tutchone from the Dawson and Mayo areas and occasionally the Mountain Dene people from as far away as Fort Norman on the Mackenzie River. The Tlingit protected and controlled the trading routes into the interior and fiercely defended those routes when they were threatened. News of early non-native explorers and traders would have travelled inland along with foreign items such as metals, cloths, glass beads, and later tobacco and other goods.

In some of the earliest cases the impacts of these foreign cultures could have had significant impacts even without the presence of the foreigners themselves. Such is the case for what is called 'drift-iron' whereby metals and other materials from Asian or European shipwreck wash ashore in wood debris. Historical accounts of shipwrecks have been reported in the mid-1700s, but much earlier wrecks were possible. Metals and other foreign trade items have been derived from shipwrecks off what is now British Columbia, Southeast Alaska, and perhaps the Northwest Alaska as well.

Of particular regional interest in this Protohistoric Period was the recent find of a Chinese coin along the proposed extension of the Freegold Road (Mooney 2011). This coin was minted in China during the rule of Qing (Ch'ing) dynasty Emperor Sheng Zu (AD 1662-1722) (Hartill 2005:291). It is uncertain how this coin arrived in the Yukon, but it may have travelled by one of two more likely scenarios. One method could have been Chinese to Russian to Coastal Tlingit to Northern Tutchone trading prior to the historic period in the central Yukon. The second may have involved later historic introduction by Chinese placer miners, prospectors, labourers, or immigrants perhaps between the late 1800s and early to mid-1900s.

3.4 Modern First Nations

The Selkirk First Nation (SFN) is part of the Northern Tutchone language and culture group. In the past, the Tutchone peoples were highly mobile, travelling in small groups in order to exploit the greatest number of resources. They would modify their movements depending on the patterns of large game animals and fish, or in later years to trade their furs with Westerners. In the summer, small domestic units gathered together to catch fish so that they could dry and store it for the winter months. By mid-summer several family groups moved upland together in order to kill large game mammals that they would dry and store in caches scattered in a variety of areas. From there some units moved away independently during the coldest months to trap and live off of the cached foods. The leanest months were March and April. In spring, several units often came together at this point to catch spawning whitefish or trap muskrat and beaver. May was the most plentiful month, with migrating waterfowl, fat ground squirrels, larger and more abundant fish, as well as the arrival of the Coastal Tlingit traders (McClellan 1981).

The principal ethnographic descriptions of the Tutchone are available in Cruikshank (1974, 1975), Johnson and Raup (1964), McClellan (1950, 1964, 1970a, 1970b, 1975), and Tanner (1966). Additional information on camp and village locations can be found in Schwatka (1885). Although villages were not inhabited year round, people would return to good fishing and/or hunting spots year after year. This would eventually change with the influence of Westerners. Watercraft were constructed for use, however during the summer months Tutchone people preferred to walk overland, rather than brave the sudden winds on the large lakes or the treacherous river rapids. Boats were not the preferred method of transport.

The modern SFN is based out of Pelly Crossing. The SFN were previously known as the Hućha Hudän people, meaning Flatland People, due to the landscape in the Fort Selkirk area where the land is flat on both sides of the river (Selkirk First Nation 2017). Prior to the construction of the Klondike Highway, the people of the SFN camped for portions of the year at Minto and Fort

Selkirk (Selkirk First Nation 2017). The area of Fort Selkirk played a key role as a gathering spot to trade but also for social gatherings and interactions between a wide variety of people. Many First Nations people across the interior would gather there to trade, share stories and information, and build long term relationships including marriages. After Fort Selkirk was established, the area continued to serve as a focal point and a somewhat more sedentary meeting place and community. The far reaching seasonal rounds of travel and resource collection continued but the Fort Selkirk community began to grow with the presence of missionaries, government officials, traders, trappers, miners, and cemeteries. In July 1997, the SFN signed their land claim agreement at Minto Landing and became the 7th self-governing First Nation in the Yukon.

3.3 Historic Period (ca. AD 1847 to the Present)

During the early years of this period the Russians were expanding their exploration and trade network along the Pacific coast and up the major rivers of the Alaskan interior, while the British were exploring eastward into what would become Canada's Northwest and Yukon Territories, as well as Alaska. In the 1840s, representatives of the Hudson Bay Company established trading posts near the study area. The first was at the confluence of the Yukon and the Porcupine Rivers, northwest of the current project area, where in 1847 John Bell established Fort Yukon. The next year Robert Campbell established Fort Selkirk southeast of the project area on the upper Yukon River and then relocated to an improved location in 1851. This upset the Chilkat native trading population from the coastal area, who had controlled trade to the interior for many generations, and by 1852 increasing supply-line pressures, trade competition from the Chilkat traders, and flooding forced the Anglo traders to flee.

In 1867, US Secretary of State William Seward was able to focus increasing American interests, and he convinced the United States Senate to purchase Alaska from Russia. Soon after the purchase, the US Army sent Captain Raymond up the Yukon River on the first stern-wheel steamer to reach Fort Yukon (Grauman 1977). Raymond surveyed the location of Fort Yukon and proved that it was within US territory. The British sold the Fort to the U.S. Government and relocated east across the 141st Meridian.

The inland fur industry continued to drive exploration and settlement into the late 1800s, but mining would shift the focus to the placer gold found in streams and alluvial deposits. Mining in the second half of the nineteenth century was a risky, but often lucrative enterprise. The impacts of mining would spread quickly and drastically change the project area.

Mineral prospecting and mining efforts in the second half of the nineteenth century were, in some ways, very dependent on the existing infrastructure of the fur trading and missionary efforts. As the competition for the inland fur trade grew, so would the number of stern-wheelers on the Yukon River. These steamers could better supply the small number of trading posts along the Yukon and its tributaries and reduce the risk of prospectors running short of supplies. Therefore, more of the fur traders and other explorers turned their attention to search for gold and other minerals. Three key prospectors to the north were L.S. (Jack) McQuesten, Al Mayo, and Arthur Harper. They wrote to miners in the United States to encourage them to come north. They also established outposts along the Yukon River, including Fort Reliance, established in 1874 near the confluence of the Klondike River (what would become Dawson City) (A. A. Wright 1976).

Harper and another man may have been the first to travel up the Fortymile River in search of gold in 1881 (Buzzell 2003). They collected a very rich sample, but were unable to relocate the exact location. In 1886, McQuesten, Harper, and Mayo built a post on the confluence of the Stewart and Yukon Rivers which provided supplies for additional prospectors. Also in 1886, Howard Franklin made a richer find on the Fortymile River. Others rushed in and these claims along the Fortymile River attracted miners from across Central and Eastern Alaska, and even Southeast Alaska. Fortymile was the first town to grow to over a thousand people by the mid-1890s (Buzzell 2003), and in 1887 the Stewart River post was deserted. Some prospectors that did not find easy success in Fortymile returned to the Stewart and continued work in the area. In 1890, Harper re-established a trading post at the site of the old HBC post at Selkirk as interest in the area grew. This was followed by Jack Dalton who developed a series of existing First Nation trails from tide water at Haines Alaska, into Fort Selkirk. Then, on August 16, 1896, George Carmack, Skookum Jim, and Tagish Charlie discovered a very rich claim on Bonanza Creek, a tributary to the Klondike River near Dawson. This discovery sparked one of the largest gold rushes in history.

It would take almost a year for the news of the Klondike gold fields to spread south, even to places relatively close by in southeast Alaska. Most of the prospectors and traders in the Alaskan and Yukon interior had already converged on the Dawson area during the winter and spring, and supplies ran dangerously low. That would quickly change in the summer of 1897 and spring of 1898 as new towns and supply posts sprang up along the Gold Rush routes to cash in on the increased demand.

The population of Dawson City grew very fast and in 1898 reached a peak of over 30,000. However, the boom period did not last long and the vast majority of population moved on very quickly with the news of other discoveries and hopes of other bonanzas. The Gold Rush period saw greatly increased steamer traffic on the entire Yukon River drainage basin and across the interior. Just prior to the Gold Rush there were only a few steamers, while at its peak there would be hundreds of vessels working the rivers. These shallow draft steamers were supported by a network of wood camps, shipyards, and a large workforce which kept the river traffic moving. This network provided the infrastructure backbone for trading posts, fish camps, missionaries, and mail routes, while meeting the needs of the growing number of prospectors and traders.

3.5 Previous Heritage Investigations

Consultation with staff at Yukon Heritage revealed that no previous heritage resource studies have investigated lands within the proposed project area and that no heritage resource sites are known within or near the proposed project area boundaries.

4.0 METHODOLOGY

Heritage resources potential was determined by identifying site presence indicators using a variety of resources including landscape features (e.g. waterbodies, wetlands, and watercourses), topographic mapping, Yukon Archaeological Sites Database, aerial photographs, and orthographic images where possible. The known sites databases were used to determine if sites were located in or near the project area. Spatial and topographic mapping was used to locate waterbodies, watercourses, wetlands, and landforms that may indicate areas or corridors that have higher potential for heritage sites. Aerial photographs, topographic maps, and orthographic images were used to determine prominent topography with high potential for heritage resources. The in-field assessment was conducted throughout the proposed work area by pedestrian survey with helicopter support. Transects were recorded by GPS. Landforms determined to possess potential for buried heritage resources were subsurface tested by 35 cm x 35 cm shovel tests. Tested areas were marked with GPS waypoints and sketch maps were drawn. If cultural materials were identified then the sites were recorded, materials were collected, cleaned, and interpreted, and data was submitted for Borden numbers to record the sites. Illustrative representations of the work area, site locations, and photographs of the sites discussed in this report are presented in the attached maps and photodocumentation.

5.0 RESULTS

This HRIA focused on the 2016 OOO Property exploration area, an area which includes approximately 19 ha of the total 2,591 ha claim in the southeastern corner of the claim block. Overall the development area was found to be predominantly steeply sloping (Photo 1 and Photo 2). The major drainages associated with the claim block lie outside the 2016 work area footprint, except for a series of tributaries of Big Creek, which intersect the work area. However, five areas were assessed to possess elevated potential for subsurface heritage resources and shovel tested. These areas are referred to in this report as shovel test locations (STLs) 1 through 5. The results obtained at each STL are summarized below.

5.1 STL 1

STL 1 (Photo 3) is located in the western portion of the proposed work area on a level portion of a northeast-southwest running ridgeline. In total, nine shovel tests were excavated. Sediments consisted of rocky decomposing bedrock with a silt rich A horizon (Photo 4). All shovel tests were negative for heritage resources.

5.2 STL 2

STL 2 (Photo 5) is located in the eastern portion of the proposed work area on a level portion of the same ridgeline as STL 1. In total, five shovel tests were excavated. Sediments encountered were rocky and shallow before giving way to bedrock; consistent with the stratigraphy observed in STL 1 (Photo 6). All shovel tests were negative for heritage resources.

5.3 STL 3

STL 3 (Photo 7) is located southeast of the proposed work area on a small rocky outcrop. Due to the small size of the landform, only two shovel tests were excavated at this location. Sediments consisted of a dark brown silt with grass, roots, and rock inclusions (Photo 8). All shovel tests were negative for heritage resources.

5.4 STL 4

STL 4 (Photo 9) is located on a prominent rocky outcrop southeast of the proposed work area. This STL only consisted of one shovel test because of the small size of the outcrop. Sediments consisted of a dark brown silt with grass, roots, and rock inclusions (Photo 10). No heritage resources were observed.

5.5 STL 5

STL 5 (Photo 11) is located on a level break in slope overlooking a tributary of Big Creek to the northeast. This location is immediately southeast of the potential camp site location for the proposed work area, and extends east outside of the claim block boundary. In total, 23 shovel tests were excavated. Sediments were consistent with STL 1 and STL 2; consisting predominantly of rocky, decomposing bedrock covered in an organic horizon (Photo 12). All shovel tests were negative for heritage resources.

6.0 SUMMARY AND RECOMMENDATIONS

Pedestrian survey was conducted throughout the proposed work area. These lands primarily consist of a steeply sloping ridgeline and were mostly assessed as having low potential for heritage resources. The exception to this trend was found at five relatively flat localities which were assessed as having elevated potential for subsurface heritage resources. The five STLs discussed in the results section of this report were excavated at these elevated potential areas. In total, 40 shovel tests were excavated; however, no heritage resources were recovered during testing.

Based on these results, no further heritage resource assessment is recommended for the proposed 2016 work area. If work is scheduled to occur outside of the proposed work area assessed under this permit, an HRIA is recommended. Moreover, if chance finds of heritage resources are made within the assessed area during development all work in the area should cease immediately and they should be reported to the Yukon Government Heritage Resources Unit to obtain further guidance. Moreover, if any additional claims are added to the claim block, then those new areas are also required to be reviewed for possible impacts to heritage resources. This follow-up heritage review may be conducted through desktop overview and/or field study.

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APPENDIX A: Project Mapping – NOT INCLUDED IN YESAB READY/PUBLIC VERSION OF REPORT

APPENDIX B: Photographs – NOT INCLUDED IN YESAB READY/PUBLIC VERSION OF REPORT

APPENDIX C: Field Notes – NOT INCLUDED IN YESAB READY/PUBLIC VERSION OF REPORT



10 6,926,000 mN 58 45 85 MESOZOIC Weakly to moderately clay altered hornblende-biotite granodiorite and dacite dykes (Blonde gossan). Pyritiferous and silicified/clay altered hornblende-biotite granodiorite (Orange gossan). Massive and thinly bedded fine grained dark green andesite flows, hornblende or augite porphyritic andesite +/- feldspar phenocrysts and fine grained basalt. Medium to coarse grained hornblende-biotite syenite, quartz-monzonite and hornblende-biotite granodiorite with feldspar phenocrysts up to 2 cm. -8 — · — · Linear Outcrop Subcrop STRATEGIC METALS LTD. Felsenmeer/talus FIGURE 5 ARCHER, CATHRO & ASSOCIATES (1981) LIMITED — · · — Limit of 2016 mapping **PROPERTY GEOLOGY** Inferred Contact **000 PROPERTY** Fracture × 500 m UTM ZONE 7, NAD 83, 115J/08 Bulk sample for age dating FILE: ...2016/000 DATE: OCTOBER 2016

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Sample ID	Au (g/t)	As (ppm)	Ag (g/t)	Pb (%)	Cu (%)	Zn (%)	Mo (ppm)	Sb (ppm)	Bi (ppm)
K291402*	0.00	13	17.4	0.22	0.29	0.00	1.23	13	7
к291403*	0.02	37	8.2	0.24	0.47	0.01	0.98	25	0
К291408*	0.06	885	11.2	0.09	0.32	0.02	3070	8	250
K291411*	0.13	126	26.1	0.15	0.01	0.01	3.79	80	32
R503951*	0.18	98	1470	1.75	0.03	0.06	5.02	1730	109
R503952*	0.13	447	65.8	0.23	0.02	0.12	1.81	455	2
R503953*	0.13	201	6.9	0.16	0.02	0.10	2.95	245	0
R503954*	0.27	770	251	2.02	0.03	0.07	11.35	830	5
R503955*	0.54	217	2490	45.78	0.21	0.09	1.18	7410	9
R503958*	0.03	16	35.9	0.42	0.75	0.02	2.75	92	6
R503959*	0.00	19	5.4	0.01	0.42	0.01	3.31	6	1
R503961*	0.00	13	11.1	0.30	0.21	0.01	1.98	19	1
R503962*	0.06	22	13.7	0.02	0.25	0.00	25.80	9	18
R503964*	0.00	22	54.5	0.18	0.01	0.03	0.12	96	10
R503965*	1 53	1235	564	13.95	0.10	0.19	6.00	1585	2
R503966*	0.21	250	677	2.9.55	0.03	0.39	24 50	101	25100
R503967★	0.21	230	2 5	0.01	0.03	0.38	1 02	7	23100
R503967 *	2.00	23 072	11 /	0.01	0.15	0.02	96.00	140	25
8503070*	2.23	5/5	0.7	0.04	0.00	0.01	30.00	140	103
R502071 ★	0.10	35	1510	57.91	0.00	2.00	2.75	1710	24
R503971"	0.19	40	1625	57.51	0.09	2.39	0.50	2010	54
PE02074 *	0.17	91	1035	51.93	0.21	5.42	2.30	107	59
R503974**	0.82	269	59.3	0.47	0.03	0.05	4.34	12/	59
R503976 *	0.27	268	52.1	0.90	0.03	0.01	2.87	1/9	38
K503977 *	1.81	16	13/0	75.18	0.53	0.04	0.51	/32	414
R503978 *	1.09	3110	59.7	2.60	0.05	0.11	2.98	94	15
R503983 ×	0.15	98	3.6	0.01	0.19	0.04	0.44	2	141
R503990 ×	2.16	12350	388	17.15	0.43	0.16	26.70	1125	24
K283895	0.10	490	8.2	0.12	0.00	0.08	0.90	31	3
K283896	1.06	740	319	22.77	0.01	0.30	7.79	300	80
K283897	0.11	360	7.2	0.61	0.01	0.68	7.24	50	2
K283898	0.06	239	11.3	0.58	0.01	3.43	2.91	35	5
K283899	0.02	102	384	4.95	0.11	0.38	0.58	796	2
K283900	0.20	149	2950	19.70	0.51	0.16	2.11	5850	20
Q934551	0.89	82	2390	58.36	0.32	0.35	0.56	3410	49
Q934553	0.08	228	704	6.62	0.10	0.05	47.00	1725	19
Q934554	0.80	1015	6680	30.22	0.26	0.02	30.40	9060	32
Q934555	0.09	413	425	0.73	0.11	0.09	130	1195	24
R608477	0.06	211	23.3	0.03	1.58	0.02	1.92	16	208
R608489	0.13	288	2.8	0.02	0.00	0.09	1.60	34	1
R608490	0.21	845	7.2	0.15	0.01	0.23	9.23	69	4
R608491	0.00	27	1.1	0.00	0.40	0.04	4.74	13	1
R608492	0.01	110	3.2	0.01	0.48	0.01	0.71	8	103
R608493	0.05	272	26.7	0.01	0.67	0.02	2.09	16	91
H005	0.01	200	53.0	1.38	NA	NA	NA	NA	NA
H007	5.01	640	0.5	0.03	NA	NA	NA	NA	NA
H010	0.46	300	33.1	35.40	NA	NA	NA	NA	NA
H011	3.64	50	90.0	2.03	NA	NA	NA	NA	NA
H012	0.00	750	10.0	22.10	NA	NA	NA	NA	NA
H014	6.55	0	34.0	0.04	NA	NA	NA	NA	NA
H015	0.79	46	0.9	0.03	NA	NA	NA	NA	NA
H017	0.79	46	56.5	65.10	NA	NA	NA	NA	NA
	1								