

**YMEP 21-060 REPORT
&
ASSESSMENT REPORT**

describing

2021 SOIL SAMPLING and PROSPECTING

at the

PIKA CLAIMS & TOW PROJECT

PIKA 1 – 20, YD132201 – YD132220

PIKA 31 – 90, YD132231 – YD132290

located at

NTS 116C/2

Latitude 64°4'N; Longitude 140°43'W

Dawson Mining District

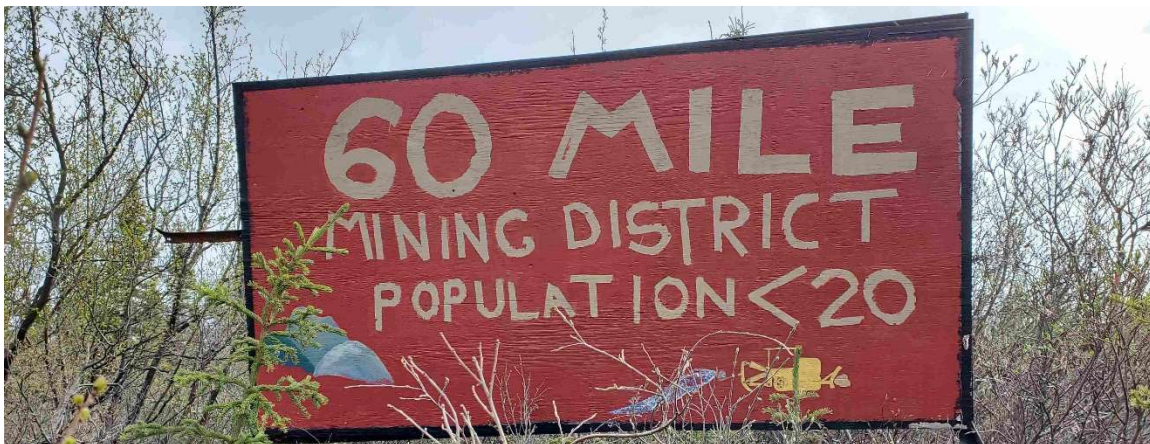
Yukon, CANADA

prepared by claim owner

William D. Mann, M.Sc., P.Geo.

January, 2022

Field Work Performed June 1- 10 & August 30- September 6, 2021



Contents

INTRODUCTION	4
PROPERTY LOCATION, CLAIM DATA AND ACCESS	5
PREVIOUS WORK.....	8
GEOMORPHOLOGY AND VEGETATION	14
GEOLOGY	15
DEPOSIT TYPES.....	22
2021 EXPLORATION PROGRAM.....	25
<i>2021 Regional Prospecting</i>	25
<i>2021 Soil Geochemistry</i>	26
<i>Ah Horizon Soil Geochemistry vs Conventional B-C Soils</i>	27
<i>2021 Prospecting</i>	34
<i>The Cholach Zone</i>	34
<i>2021 Test Pit</i>	35
<i>2021 Portable XRF Utilization</i>	36
<i>Thin Sections</i>	37
SAMPLE PREPARATION, ANALYSES AND SECURITY	37
INTERPRETATION AND CONCLUSIONS	38
RECOMMENDATIONS	38
REFERENCES	40

FIGURES

<u>No.</u>	<u>Description</u>	<u>Page</u>
1	Project Location and Geological Terranes	6
2	Claim Location Map	7
3	Regional Geology focusing on Late Cretaceous structures and rocks	15
4	Project Area geology – YGS 2018, 1:250,000	19
5	Airborne Thorium map with Sixtymile Road pluton	20
6	Conventional Soil Sample Location map	31
7	Ah horizon Soil Sample Location map	32
8	Silver in soil map	33

PLATES

<u>No.</u>	<u>Description</u>	<u>Page</u>
1.	60 Mile Mining District Sign.	1
2.	Geomorphology of the PIKA claims.	14
3.	Indian River formation boulder from project area.	16
4.	Carmacks Volcanic breccia exposed in road quarry on the PIKA claims.	17
5.	Sixtymile Road pluton, clay-altered.	18
6.	Trench 80-3	21
7.	Weathering of pluton in wall of trench 80T-3	24
8.	Swede Dome Quarry vein-fault.	26
9.	Ah Horizon Soil Sample # 5273040.	30
10.	Test Pit 21-1.	36

TABLES

<u>No.</u>	<u>Description</u>	<u>Page</u>
1.	Cholach Zone Cut Grid Line Coordinates	13
2.	Regional Geological Formations	19
3.	Cholach Zone 2010 Conventional Soil vs 2021 Ah Horizon Soil	29
4.	Rock Assay Sample Locations & Descriptions	35

APPENDICES

I	STATEMENT OF QUALIFICATIONS
II	STATEMENT OF EXPENDITURES
III	CERTIFICATES OF ANALYSIS – CONVENTIONAL SOILS
IV	CERTIFICATES OF ANALYSIS – Ah SOILS
V	CERTIFICATES OF ANALYSIS – ROCKS
VI	LOCATION AND DESCRIPTION- CONVENTIONAL SOILS
VII	LOCATION AND DESCRIPTION- Ah SOILS
VIII	LOCATION AND DESCRIPTION- ROCKS
IX	XRF ANALYSIS
X	PETROGRAPHY - Dr. Timothy Liverton

INTRODUCTION

The TOW YMEP project (#21-060) was designed to evaluate an area proximal to the Pika-Sixtymile Fault system and accessible by the Top of the World Highway for intrusion related gold, copper, silver and molybdenum deposits. The project was conducted in two phases, the first in June and the second in late August into September.

The first phase of work, in June included staking 80 PIKA claims and some reconnaissance prospecting on Browns creek, in the Swede Dome area and at the headwaters of California creek. The second phase of work in late August and early September included both conventional soils and an experimental evaluation of Ah horizon soil sampling in the Cholach occurrence area (minfile 116C 135) and to the northeast along the trend of a major fault. Some rock samples were collected, also from the Cholach occurrence area.

Most of the project area is overburden covered, and was not glaciated, so the bedrock geology is only partially understood. The project area is located in Yukon Tanana Terrane proximal to the Sixtymile- Pika fault system, mostly overlain by late Cretaceous Carmacks volcanics and intruded by the 68.7 ma Sixtymile road pluton, a Prospector Mountain suite intrusion. This area is surrounded by placer gold bearing streams and is considered favourable for hosting intrusion related gold, silver, copper and molybdenum mineralization. The area is within the Tintina Gold Belt, lies south of the Tintina Fault and Yukon River in westernmost Yukon Territory, close to the Alaska border. The property comprises 80 PIKA claims staked in 2021 that cover the Cholach occurrence, a silver-rich highly altered pluton.

A few days prospecting in the area outside of the PIKA claims did not inspire further work, with only one soil and three rock samples collected. Most of the 2021 effort was directed to the PIKA claims. Work in 2021 was successful in confirming the prospective nature of the Cholach target and in confirming the suitability of sampling the Ah horizon soils in places where that material is well developed.

Mineralized and altered quartz monzonite was confirmed at the Cholach zone, with soil samples extending the polymetallic anomaly about 300 metres to the west and 100 m to the north and south on the west side, where the anomaly remains open to expansion. 6 samples of float rock were collected from subcrop and in a test pit at the Cholach zone. Rock samples returned moderately anomalous values.

The Cholach zone soil grid was expanded with 55 samples on 3 additional east- west grid lines and one line extension all on the west side of the road, sampled at the conventional B/C horizon. Nine Ah horizon soils were collected at the sites of select highly anomalous conventional soils from 2010 work, all of which returned highly anomalous metal values. In addition, a northeast trending line that approximately follows the trace of a subordinate fault splay of the Pika-Sixtymile fault zone starting just north of the Cholach zone was sampled at both Ah and B/C horizons at 26 stations as an orientation survey.

Highlights of 2021 work include 2.5 ppm Ag and 35.2 ppb Au in conventional soils and 9868 ppb Ag in Ah soils at the Cholach zone.

This report describes a program of claim staking, soil sampling and prospecting designed, performed and supervised by the author and assisted by Mr. Andrew Robinson on June 1- 10 & August 30- September 6, 2021. Five thin sections were prepared to investigate rocks from the Cholach occurrence, which suggests that the intrusion is a monzogranite with strong sericite-clay alteration and a silicified brecciated contact.

PROPERTY LOCATION, CLAIM DATA AND ACCESS

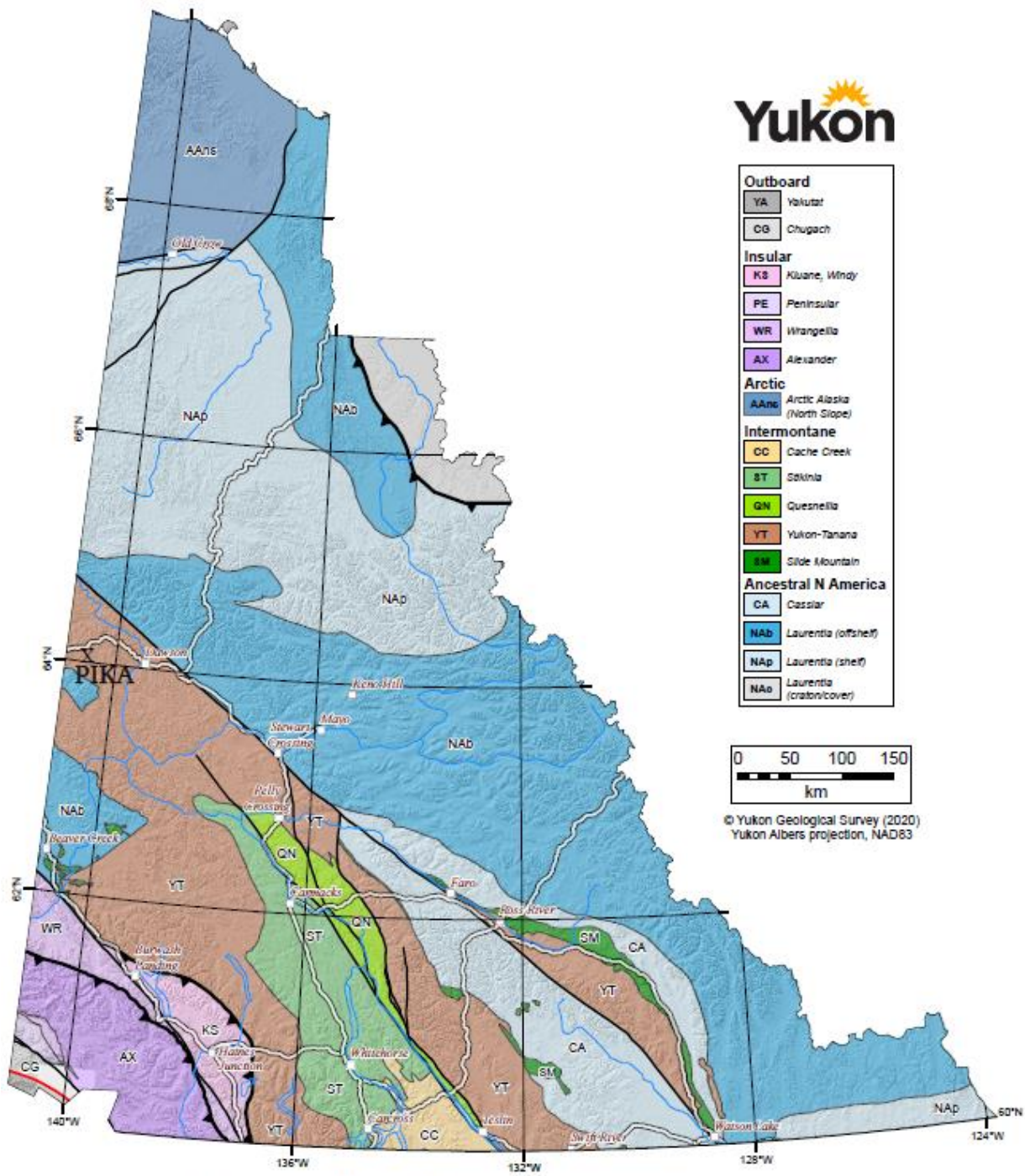
The property consists of 80 PIKA claims which are contiguous and located in western Yukon, centred at latitude 64°5' north and longitude 140°43' west on NTS map sheet 116C/02 (Figure 2). The claims are registered in the name of the claim owner William Mann at the Dawson Mining Recorder. Claim data are listed below while the locations of individual claims are shown in Figure 2.

Claim Name	Grant Number	Expiry Date	Number
PIKA 1 – 20	YD132201 – YD132220	2022 – 06 – 07	20
PIKA 31- 90	YD132231 – YD132290	2022 – 06 - 07	60

* Expiry date excludes 2021 work which will be filed for assessment credit.

The property lies about 62km WNW of Dawson City and 12km east of the border with Alaska. The claims straddle the 60 Mile access road from the Top of the World Highway south about 7km. Access is by the Top of the World Highway from Dawson City, a road distance of about 90km.

The claims cover a southerly trending ridge that separates Big Gold Creek and Five Mile Creek, both southerly draining tributaries of the Sixtymile River which is a tributary of the Yukon River.



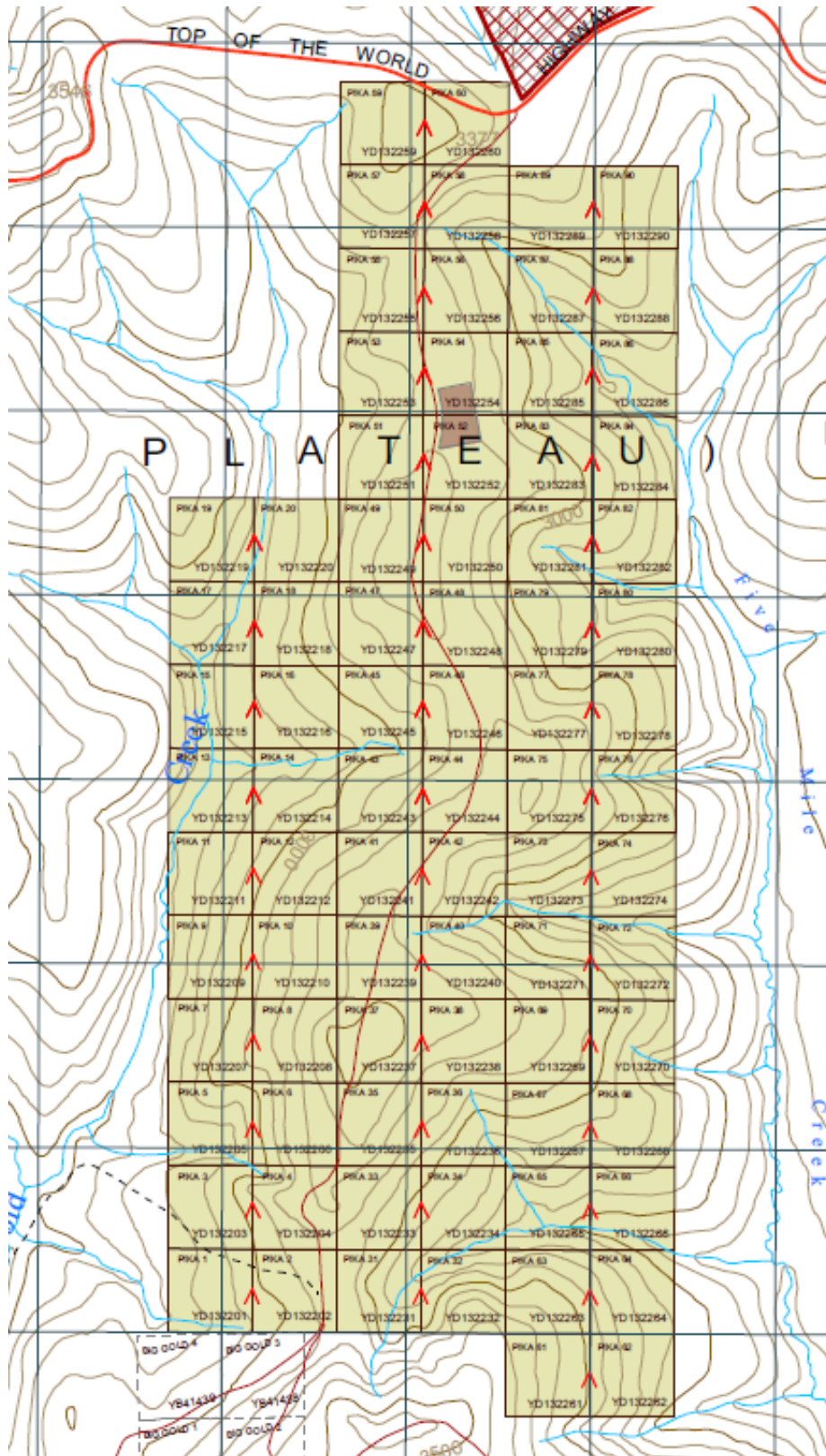
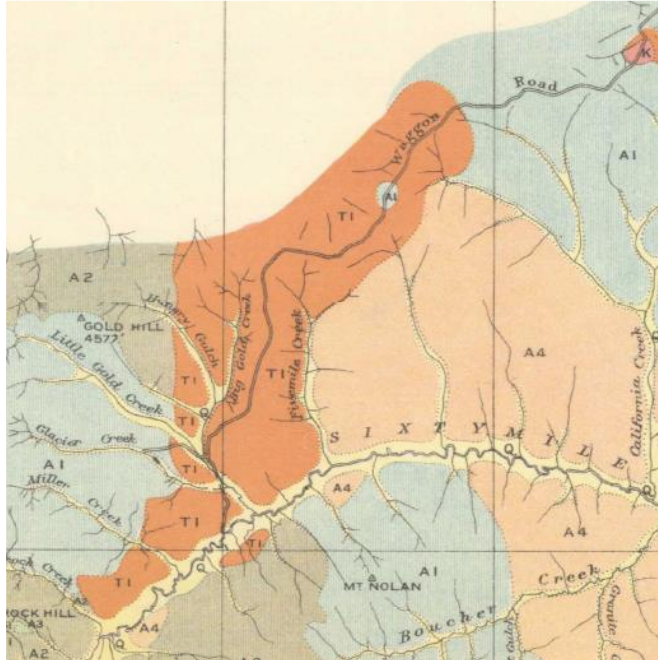


Figure 2. PIKA claims, 116C/2.

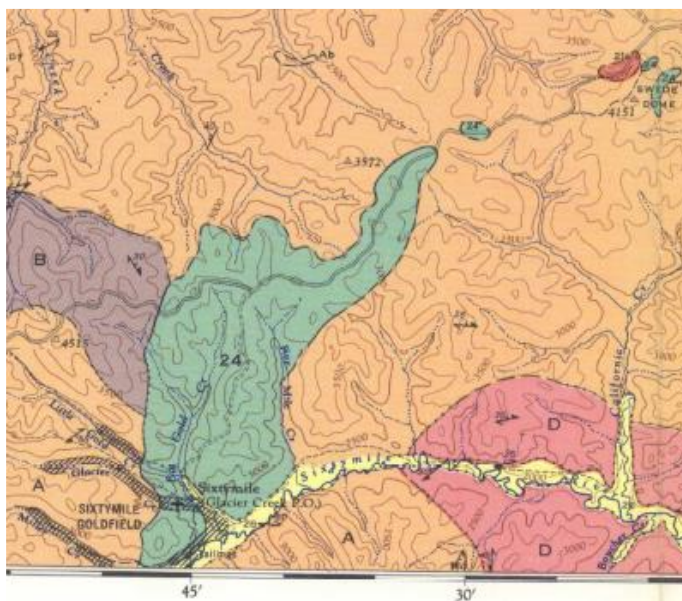
PREVIOUS WORK

1892 Placer gold discovered in the Sixtymile river drainage.

1917 Regional geological mapping was conducted by the Geological Survey of Canada (Cockfield, 1921).



1961 Regional geological mapping was conducted at 1:250,000 scale by the Geological Survey of Canada (Green, 1972).

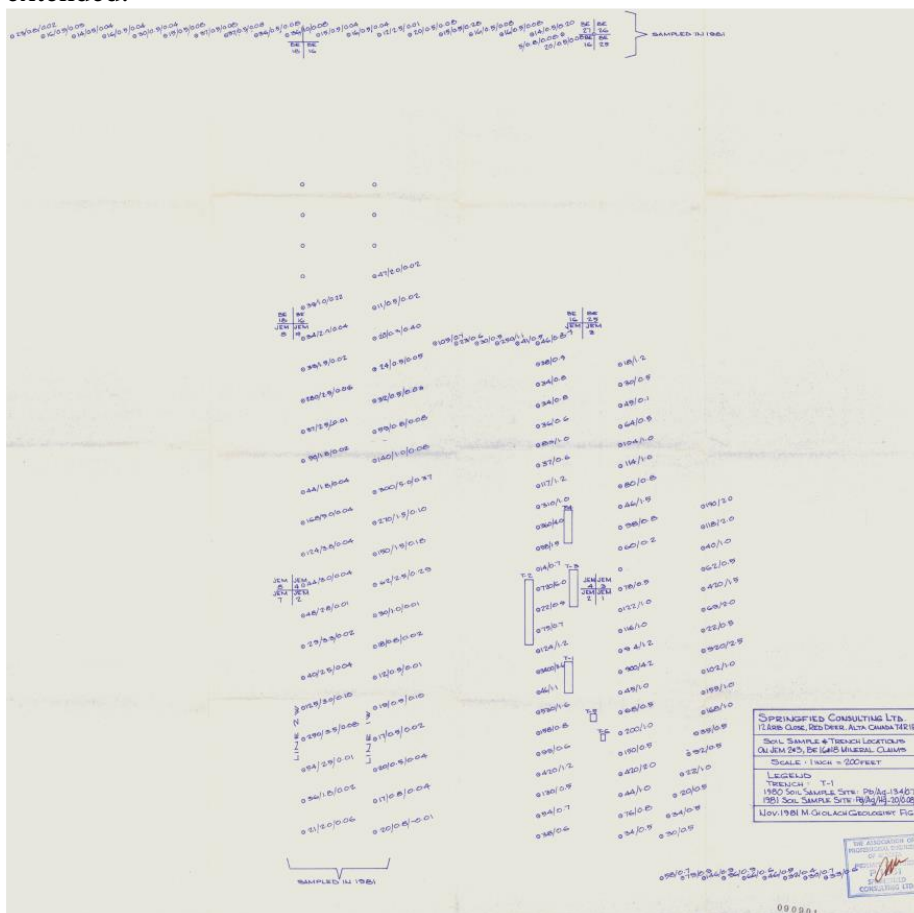


1966 Airborne magnetic survey flown by the Geological Survey of Canada.

1977 Regional stream sediment survey was conducted by the Geological Survey of Canada in the project area (RGS Open File 2365). This work did not identify significant anomalies in streams draining the property.

1980 Springfield Consulting discovered a silver-rich galena veinlet (0.1' width, 75% Pb & 67 oz/ton Ag) on or near the Sixtymile road, hosted in altered granite. The BE & JEM claims were staked, 6 bulldozer trenches were dug close to the road, 79 soil samples were collected from 3 lines spaced about 400' apart, with samples at 100' spacing, analyzed for Pb & Ag (Cholach, 1981a). Reported a NW-SE trending fault structure 1400' wide, with clay-rich gouge and strong soil anomalies. The trenches were reported to be backfilled for safety reasons, however trench 3 appears to still be open in 2021.

1981 57 additional soil samples were collected on the BE & JEM claims by Springfield Consulting, and analyzed for Pb, Hg & Ag (Cholach 1981b). The geochemical anomaly was extended.



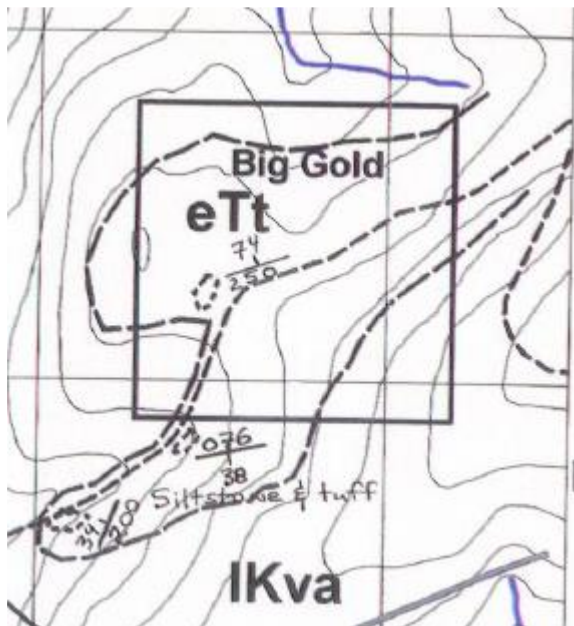
1980 & 1981 Soil grid and trenches, Cholach occurrence.

1988 Age date sampling of the Sixtymile Road pluton by Mortensen returned a zircon U-Pb date of 68.7 ± 0.2 ma.

1992 The Cholach occurrence was staked as part of a larger Big Gold claim block by A. Downes, however these claims lapsed in 1995 with no assessment reports. Bulldozer trenching in 1988 to 1993 is noted in minfile. The remainder of the Big Gold block was later optioned by Kennecott (Hulstein, 1999). Some Big Gold claims remain in good standing, including immediately adjacent to the south of the PIKA claims.

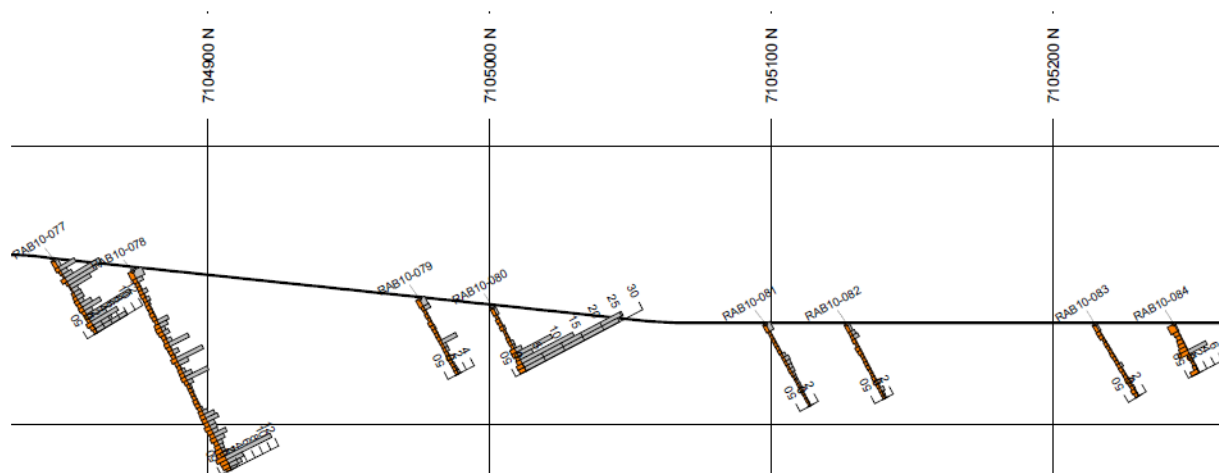
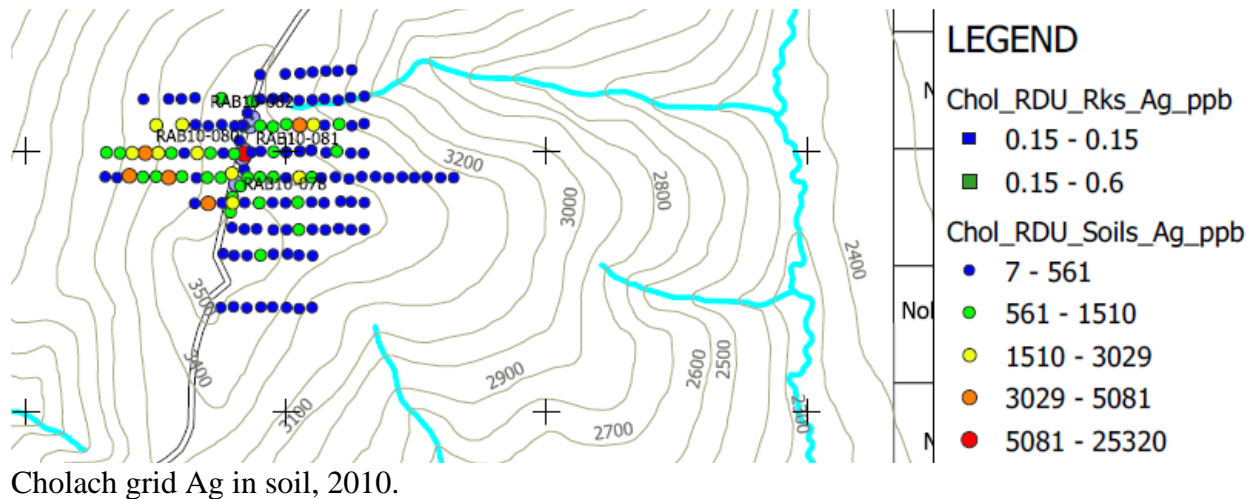
1996 Surficial geological mapping at 1:250,000 scale by Geological Survey of Canada (Duk-Rodkin, 1996).

1999 Age date sampling of the Sixtymile Road pluton by Mortensen returned a zircon U-Pb date of 68.7 ± 0.3 ma, indicating late Cretaceous Prospector Mountain Suite age. A basalt sample collected immediately south of the PIKA claims returned 17.2 ± 0.3 ma by K/Ar dating, indicating Miocene Selkirk Suite volcanics age. Kennecott optioned the Big Gold claims from A. Downes, located immediately south of the current PIKA claims. This claim block covers a small block of Miocene volcanics.



Geology of Big Gold claims, immediately south of current PIKA claims (Hulstein & Anderson, 1999).

2010 The Cholach occurrence and surrounding area was staked by Rackla Resources (CHOL claims) as part of a very large block (915 claims) covering much of the Sixtymile district (Hulstein & Clark, 2011). This work included grid soil geochemistry (36 elements), airborne magnetics with radiometrics and RAB drilling in the Cholach area. The work identified a coherent polymetallic anomaly roughly 500m in diameter that coincides with the subcrop of the Sixtymile road pluton. Gold values were low in the area, and this was the target element. Silver values are commonly elevated in soils and RAB drillholes.



Best results from RAB drilling at Cholach include 4.04 g/t Ag over the entire 30.48 m hole in RAB10- 077, including 6.94 g/t Ag over 7.62 m at the bottom of the hole. Hole RAB10-080 bottomed in 15.0 g/t Ag over 7.62 m, including 24.77 g/t Ag over 3.04 m.

2011 Work by Rackla in the Cholach area included cutting of three lines and an IP survey on those lines (Hulstein, 2012). The work at Cholach was not reported in detail in this report, as the CHOL claims were not renewed. The IP geophysical work was reported in Appendix A to the report. *“The IP-resistivity shows an area of moderate, but elevated chargeability within the central area bounded by resistivity lows on the southwest and northeast on both lines 0 and 250.”*

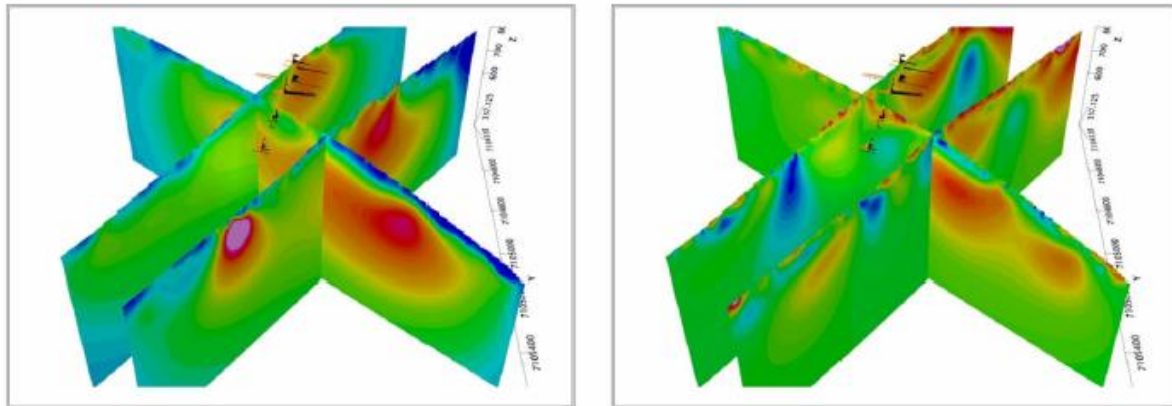


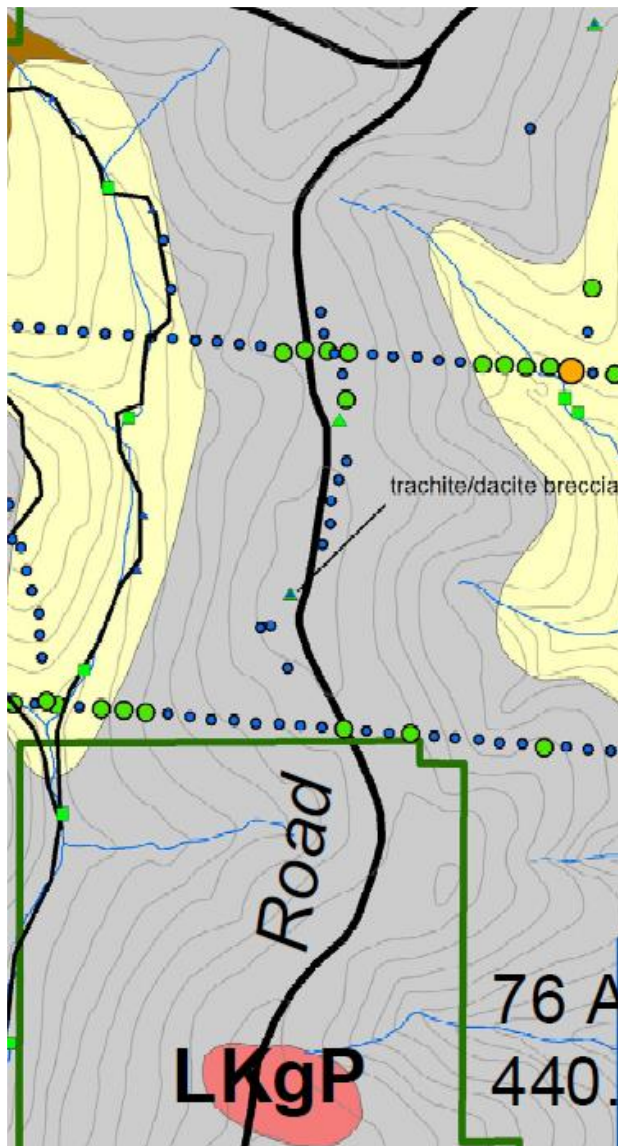
Figure 4-3 Cholach grid 2D recovered chargeability (left) and 2D recovered resistivity (right) with RAB gold and Arsenic results.

Table 1.
Cholach Cut Line Grid
Coordinates

Line	Stn.	Easting	Northing
0	-825	513249	7105595
0	0	513245	7104618
0	1075	513928	7105431
0	1525	514214	7105773
250	-825	513249	7105595
250	0	513438	7104456
250	1500	514397	7105602
750	-825	513249	7105595
750	675	514394	7104628

2500 Kam claims were staked by Seafield Explorations Ltd. covering a huge area between the Rackla ground and the Connaught property of ATAC resources. Some of these claims covered the Sixtymile road north of the CHOL claims that are now the northern part of the PIKA claims. Long linear reconnaissance soil lines were sampled that cross the current PIKA claims. The details of these lines are not publicly available.

2012 The 2500 Kam claims were optioned to 0908937 BC Ltd. A program of soil (auger C horizon), silt, and rock sampling and geology was undertaken to evaluate the claims (Pautler, 2013). The geology of the road metal quarry on the current PIKA claims was mapped as trachite/dacite breccia. This report includes locations and descriptions of rock, soil and silt samples, with little additional detail except for several highly anomalous areas (distal to PIKA) where further work was recommended.



Blue samples are below detection limit for gold. (Figure 11, Pautler, 2013)

2013 Work by 0908937 BC Ltd. on the KAM claims excluded the current PIKA claim area, and the KAM claims were allowed to lapse.

2014 Airborne magnetic fixed wing survey flown at 400m line spacing, 125m above terrain by Goldak Airborne Surveys for the Geological Survey of Canada (Kiss & Coyle, 2014). Much higher precision, accuracy and resolution was achieved compared to the 1966 survey.

2016 Enhanced interpretation of existing RGS stream sediment geochemical data for NTS map sheet 116C (Mackie et al). Yukon Geological Survey, Open File 2016-32, scale 1:250,000.

GEOMORPHOLOGY AND VEGETATION

The PIKA claims are situated in the Klondike Plateau ecoregion, part of the Boreal Cordillera ecozone (Smith et al, 2004). The property lies in an upland area about 40 km southwest of the Tintina Trench. The area features rounded ridges and low peaks which represent the top of an ancient peneplane that has been incised by dendritic drainages. Glaciation has not affected the area. The property covers a southerly trending ridge and is drained by Big Gold Creek and Five Mile Creek, both southerly draining tributaries of the Sixtymile River which is a tributary of the Yukon River.

Local elevations range from about 2400 feet near the creeks on the PIKA claims to over 3377 feet at a hill near the highway. Rock is rare in outcrop, and is mostly confined to steep slopes near creeks, in road cuts and in float. The best outcrop on the claims is present in a road metal quarry located beside the Sixtymile road near the centre of the claims that mined a volcanic breccia. Soil development is poor, and consists of a colluvium veneer of silt, sand and mixed fragments (Duk-Rodkin, 1996). The project lies within the zone of extensive discontinuous permafrost, with north and east facing slopes that are often moss covered and permanently frozen. This presents an obstacle to soil sampling, trenching and road construction. Soil sampling is most effective if conducted in late summer. A blanket of loess is locally present, as is a thin layer of White River ash. Solifluction is apparent on steeper slopes.

Vegetation varies from mature spruce, poplar and birch forests on the lower slopes, thick stunted spruce and buckbrush near tree line, and rare open moss and buckbrush on the ridge top. Precipitation totals about 500mm per year. Temperatures are extreme, with long very cold winters (-30C) and summers that can be hot (+30C).



Plate 2. Geomorphology of the PIKA claims. Looking north, quarry in distance.

GEOLOGY

Geology in the vicinity of the project has not been recently mapped in a comprehensive manner, and is based on field work from 1917 (Cockfield, 1921) and 1961 at 1:250,000 scale (Green, 1972). Some unpublished mapping of the area was conducted in the late 1980s by Mortensen, and more recently by geologists of the UBC Mineral Deposit Research Unit (Allan & Mortensen, 2012). The geological setting has been put into broader context by Colpron (2006) and updated recently by the YGS (Yukon Geological Survey, 2018).

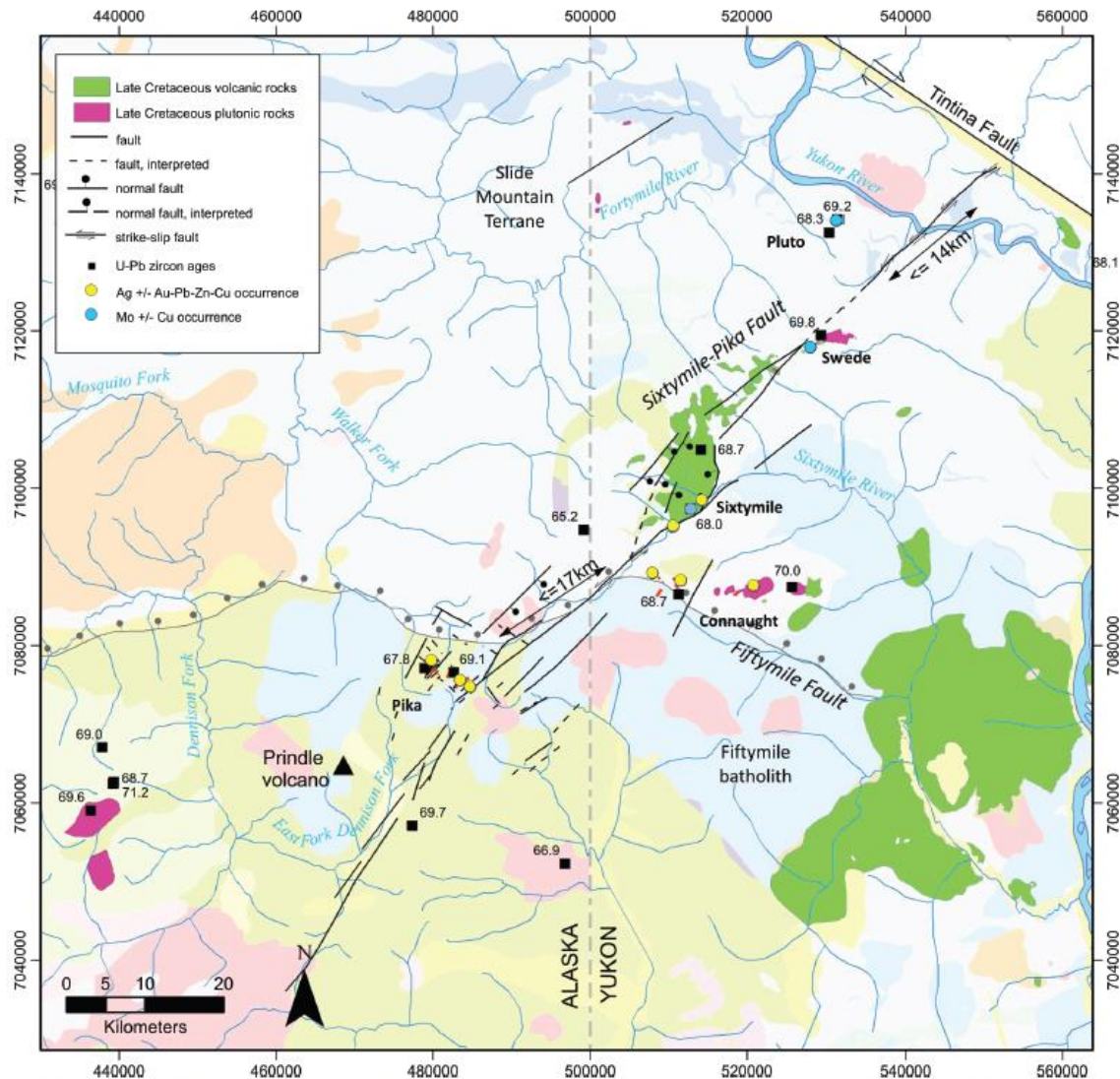


Figure 1. Geologic map of the Sixtymile-Pika area. Basement units are faded out for clarity. The east-west trending normal fault defines the northern flank of the Devonian-Mississippian Fiftyfymile batholith, and is interpreted as a late Early Cretaceous (~110Ma) structure based on Ar-Ar evidence for the exhumation of the Fiftyfymile core complex at this time. This early fault has an apparent sinistral offset of up to 17km along the Sixtymile-Pika fault. A second fault marker is provided by a set of thrust slices of Slide Mountain oceanic rocks in the north-eastern part of the map (thrust faults omitted for clarity). These define approximately 14km of apparent sinistral offset. Because of the shallowly dipping nature of the fault markers, the apparent strike-slip displacement in map view must be treated as a maximum. Projection: NAD83 UTM Zone 7N.

Figure 3. Regional Geology focusing on Late Cretaceous structures and rocks (Allan & Mortensen, 2012).

The property lies in the Yukon Tanana Terrane, southwest of the Tintina Fault. The area lies within the Tintina Gold Belt. The Yukon-Tanana Terrane (YTT) is a terrane of pericratonic affinity which occupies an intermediate position between continental margin rocks of Ancestral North America (Cassiar Terrane, Selwyn Basin) to the east and arc and oceanic terranes accreted in Mesozoic time to the west (Quesnellia, Stikinia and Cache Creek). It consists of polydeformed and metamorphosed Paleozoic metasedimentary and meta-igneous rocks (Colpron, 2006). The Yukon-Tanana comprises thrust sheets that are overlain by klippen of weakly metamorphosed oceanic rocks of the Slide Mountain terrane (which hosts asbestos at Clinton Creek).

At the PIKA claims Yukon Tanana rocks of the Finlayson group include a carbonate unit, light grey to white marble (DMF5) at the northeast part of the claims, along with metasediments, dark grey to black carbonaceous metasedimentary rocks, and metachert (DMF3). The marble unit is targeted as a potential skarn host.

The Yukon Tanana rocks are overlain by a package of Cretaceous sediments and volcanics that have been down dropped by graben faulting. At the base of this package, locally exposed is the lower Cretaceous Indian River (IKlr) clast-supported pebble to cobble conglomerate (plate 3). This unit is thought to be locally enriched in placer gold. The base of the Carmacks volcanics also is locally a sedimentary formation including conglomerate, and it is possible that the conglomerate on the property is part of the Carmacks group.



Plate 3. Indian River formation conglomerate boulder from project area. Or is it basal Carmacks group?

Above the Indian River formation lies the Upper Cretaceous Carmacks Volcanics, mapped in the project area as unit uKC1, augite-olivine basalt and breccia. A complex, poly-phase breccia is well exposed in a road-metal quarry on the claims (Plate 4). This unit has been called a trachyte/dacite breccia (Pautler, 2012). Most of the float observed on the claims appeared to be porphyritic andesite, which is also common in the Carmacks group (as uKC2).



Plate 4. Carmacks Volcanic breccia exposed in road quarry on the PIKA claims.

The Carmacks volcanics are intruded by the Sixtymile Road Pluton, a post-kinematic late Cretaceous granitic unit of the Prospector Mountain suite. This pluton is described by Mortensen (1988) as: “Strongly weathered and decomposed quartz-feldspar porphyry.” He obtained U/Pb zircon age dates of 68.7 +/- .2 and 68.7 +/- .3 Ma in 1988 and 1999 respectively from the pluton. The Prospector Mountain suite age is thought to be about the same as the Carmacks group. Although the Prospector Mountain suite is generally composed of granodiorite or diorite, the Sixtymile Road pluton is more of a monzogranite.

A small outcrop of “alkali olivine basalt with abundant peridotite and schist xenoliths” is found immediately south of the PIKA claims on the Big Gold claims, and Mortensen obtained a K/Ar whole rock date of 17.2 ± 0.3 Ma from this unit, which places it in the Selkirk Volcanics suite. This unit is too small to be shown on the regional geology map, but was mapped by Hulstein & Anderson in 1999.



Plate 5. Sixtymile Road pluton, sericite- clay altered.

A series of northeast trending faults that are secondary to the regional Sixtymile- Pika fault form a half-graben that has dropped the Carmacks group down, and is thought to be associated with porphyry and epithermal mineralization. The Prospector Mountain suite is spatially and probably temporally associated with the fault system and is commonly related to epithermal and porphyry mineralization.

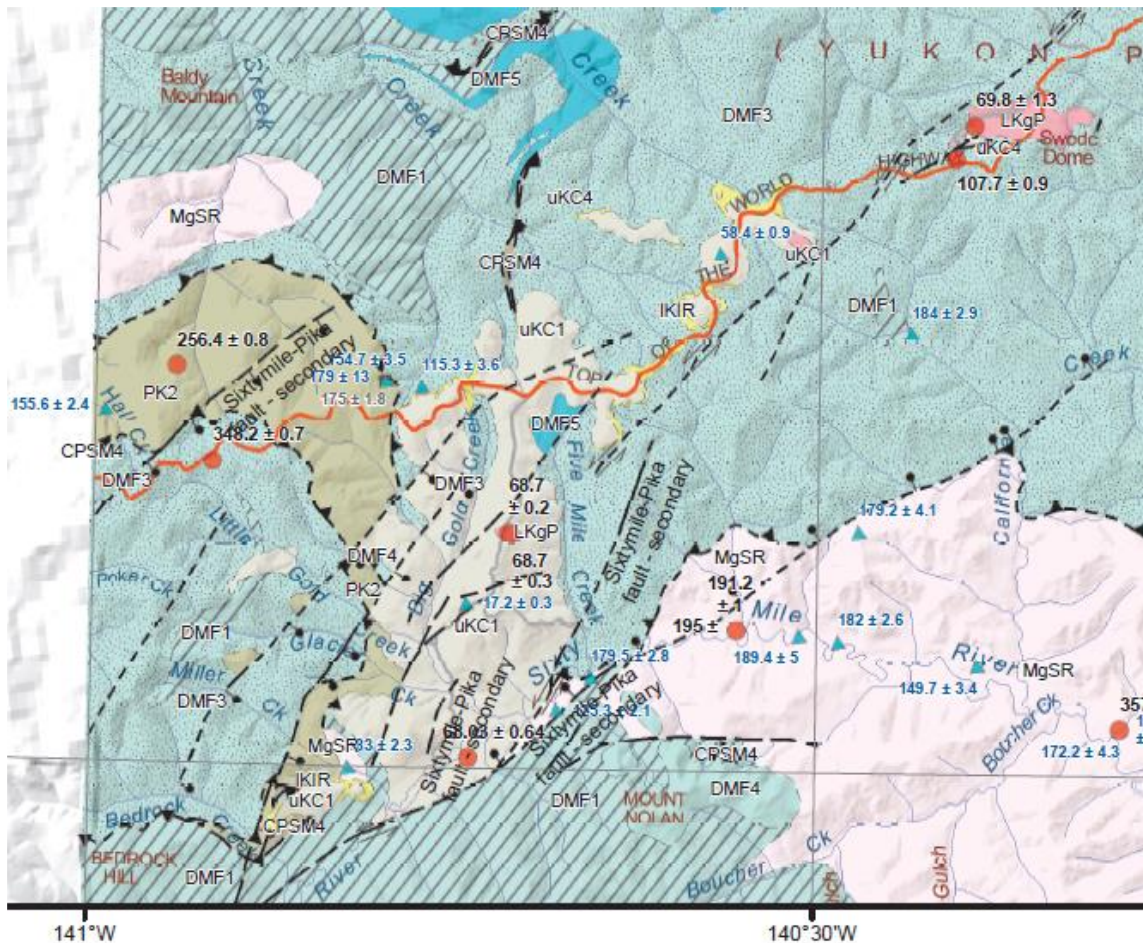


Figure 4. Project area geology (Yukon Geological Survey, 2018).

Table 2.

Regional Geological Formations

Unit	Description
TQS	SELKIRK: columnar jointed, vesicular to massive basalt flows
LKgP	PROSPECTOR MOUNTAIN SUITE: Hbl-Bt granodiorite, Hbl diorite, quartz diorite
uKC1	CARMACKS: augite-olivine basalt and breccia
uKC2	CARMACKS: andesite, porphyry
uKC4	CARMACKS: sandstone, pebble conglomerate, shale, tuff, and coal
IKIR	INDIAN RIVER: clast-supported pebble to cobble conglomerate
PK2	KLONDIKE SCHIST: silvery grey muscovite-chlorite quartz phyllite, micaceous quartzite
CPSM4	SLIDE MOUNTAIN: brown weathering, variably serpentinized ultramafic rocks
MgSR	SIMPSON RANGE SUITE: Hbl-bearing metagranodiorite, metadiorite and metatonalite
DMF1	FINLAYSON: intermediate to mafic volcanic and volcanoclastic rocks
DMF3	FINLAYSON: dark grey to black carbonaceous metasedimentary rocks, metachert
DMF5	FINLAYSON: light grey to white marble, locally crinoidal

A government regional airborne magnetic survey was conducted in 2014 over the project area (Kiss & Coyle, 2014). Much higher precision, accuracy and resolution was achieved compared to the 1966 survey. The 2010 airborne survey conducted by Rackla covers most of the PIKA property, including the Cholach occurrence, and this work was higher resolution than the government survey. The 2014 survey was flown by fixed wing aircraft on 400m spaced lines, while the 2010 survey was helicopter borne, with 200m spaced lines 28m above the ground. Of note the radiometric surveys all show the Sixtymile Road pluton very clearly.

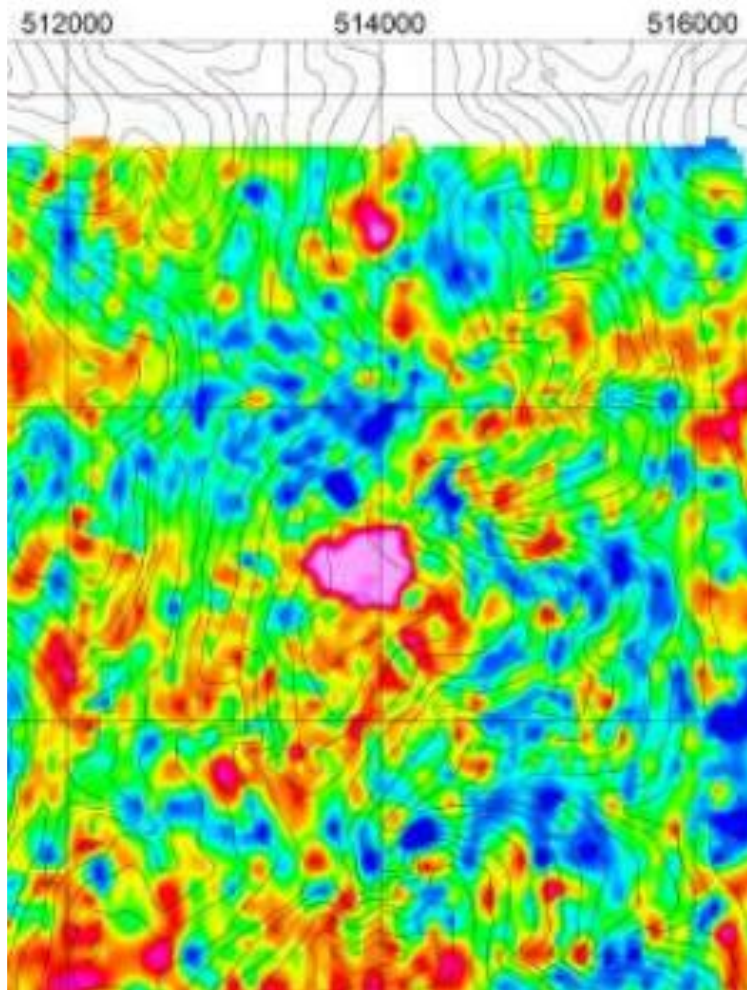


Figure 5. Airborne Thorium map with Sixtymile Road pluton lit up in centre. Map 5, Precision GeoSurveys report, Appendix D, Hulstein & Clark, 2010.

Alteration was noted within the Carmacks volcanics, with limonitic staining of crystalline tuffs and argillic alteration (chalky, soft feldspar) of a large area of Carmacks-age dacite-andesite located on the hilltop immediately southwest of the PIKA property limits (Hulstein, 1999).

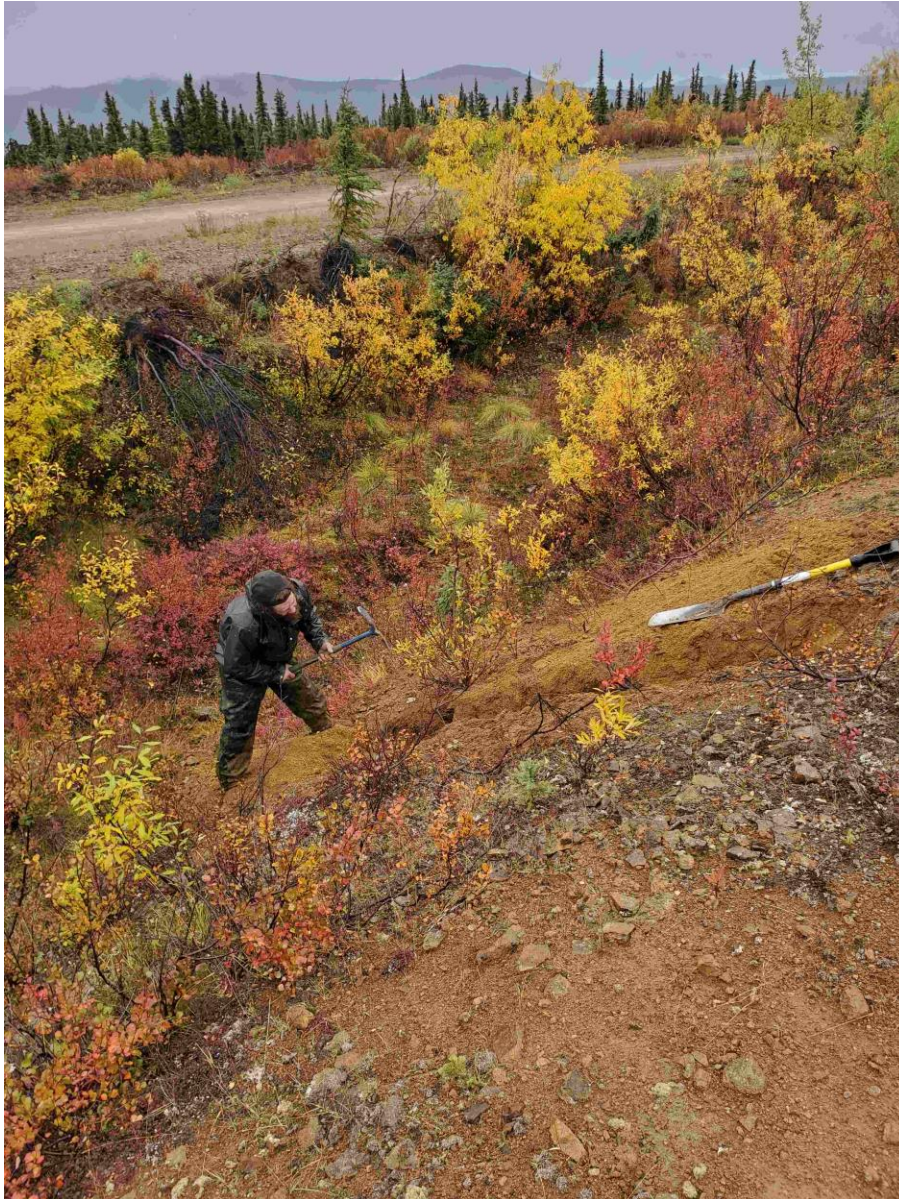


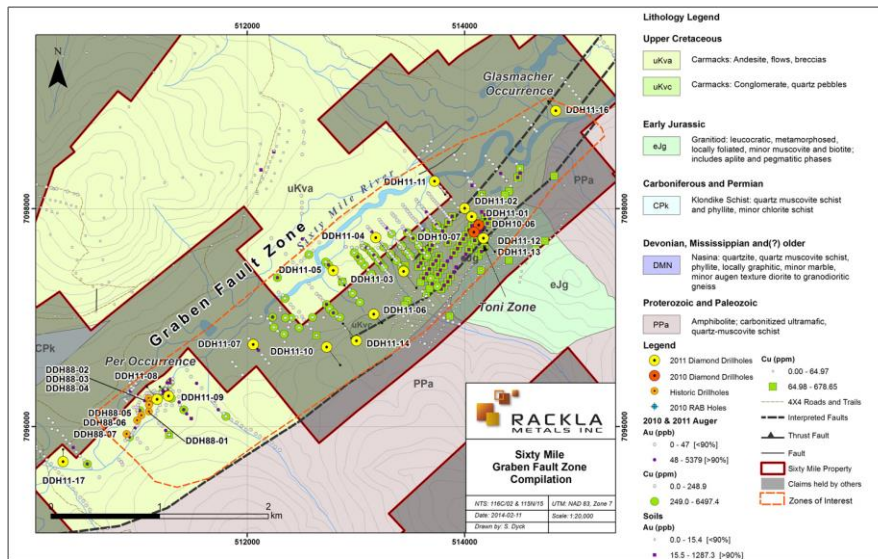
Plate 6. Trench 80-3 beside Sixtymile road. Clay altered and oxidized Prospector Mountain suite intrusion with silver mineralization.

DEPOSIT TYPES

The main target sought by the author is porphyry and intrusion-related epithermal and skarn deposits associated with the Prospector Mountain suite intrusions and the Sixtymile Pika fault zone. The best example of a porphyry of this type is the 72- 67 Ma Taurus- Bluff project of Kenorland Minerals in nearby Alaska. The best example of a skarn of this age is the 70 Ma Peak gold- silver- copper deposits of Contango Ore near Tok, Alaska further southwest near the fault. Epithermal silver- (gold) rich veins are common proximal to the fault, with numerous examples in the Connaught area south of the claims that have been mined as direct-shipping ore. The Connaught project of Atac Resources has Prospector Mountain suite related porphyry, epithermal and skarn zones that are actively being explored.

Immediately south of the claims lies the Sixtymile graben zone along the Sixtymile river valley. This zone is poorly exposed, but has a porphyry system at its core as well as epithermal veins. The mineralized zone covers about 8 km from the Glasmacher (Minfile 116C 153) to the Per (Minfile 115N 041) occurrences. At Glasmacher, “late Cretaceous volcanic flows and pyroclastic rocks underlying placer gravels show evidence of strong hydrothermal alteration, including the presence of alunite and quartz-sericite adularia. Gold is associated with pyrite and arsenopyrite in quartz-barite veinlets which cut silicified and brecciated volcanic rocks. Glasmacher and Friedrich (1992) described four stages of mineralization. Most of the gold appears to have been deposited as inclusions in pyrite during the third stage. Fluid inclusion data indicates that the gold precipitated from a low salinity fluid with a temperature of about 200°C. These authors reported values as high as 12 g/t gold from quartz-sulphide samples”.

At the Per occurrence “... trenching tested a 91 m wide zone of altered andesite containing massive pyrite lenses, quartz stockworks, and disseminated chalcopyrite and galena. Specimens from the trenches assayed up to 26 g/t Au and 42.5 g/t Ag. The highest silver values were obtained 460 m north of the main showing area. ... drillholes intersected granodiorite dykes of probable Late Cretaceous age containing quartz veins and stockworks with pyrite and arsenopyrite. DDH #2 intersected 12 m grading 7.1 g/t Au, including 1.5 m grading 41.1 g/t Au.”



Graben Fault Zone target, along trend southwest from PIKA claims.

On the PIKA claims, it is expected that intrusion-related mineralization lies at depth beneath volcanic cover, except near the Cholach occurrence (minfile 116C 135). Cholach mineralization includes a 3cm wide veinlet with 75% Pb and 2,304 g/t Ag (Cholach, 1981a). RAB drilling returned up to 4.04 g/t Ag over 30.48m over the entire length of hole RAB 10-077 (Hulstein & Clark, 2011). The Cholach zone covers the entirety of the Sixtymile road pluton, a 68.7 ma Prospector Mountain suite altered monzogranite that is roughly 800 m by 500 m in subcrop.

At Cholach mineralization appears from soil geochemical patterns to extend from the intrusion into the surrounding volcanics. As well, the carbonate-rich metamorphic rocks mapped at the northeast part of the claims may be analogous to the host rock at Peak, and probably underlie part of the thin volcanic layer. It is hoped that “Ah” horizon soils can identify mineral deposits through the volcanics by ionic mobilization upwards along faults to the chemically attractive soil layer.

In addition to the intrusion-related mineralization, orogenic gold veins are found in the area, and are thought to be the source of most of the Sixtymile camp placer gold. These could be hosted in the underlying Yukon Tanana rocks.

This area was also explored in the search for VMS mineralization after the discovery of the Kudze Kayah VMS deposit. If the Tintina fault offset is restored, the project area lies proximal to the Finlayson VMS camp where the KZK, Fyre Lake and Wolverine deposits are located. Several minor VMS occurrences are found to the north of the PIKA claims (e.g. Mickey, Mort, Clip) and in nearby Alaska (Dusel-Bacon, 1998). VMS remains a possible target for the area, particularly where Finlayson group metavolcanics are present.

The two streams that drain the PIKA claims have not been major placer gold producers, however

Glasmacher mentions dendritic gold grains in the upper reaches of Little Gold Creek which suggests a local source.



Plate 7. Intense grus weathering of pluton in wall of historical trench 80T-3, beside Sixtymile road. Strong limonitic staining and clay-coated grains indicate phyllic and/or argillic hydrothermal alteration. The Prospector Mountain suite pluton hosts high grade silver- lead veins with a strong polymetallic anomaly similar to those at Connaught.

2021 EXPLORATION PROGRAM

The 2021 “TOW” YMEP project was conducted by the author and senior field technician Andrew Robinson. The objective was to explore an area proximal to the Top of the World Highway, where the Pika- Sixtymile fault system and associated late Cretaceous intrusions are hoped to focus mineralization. The project was divided into two phases to accommodate some staking early in the field season, with a minimum 25 day pause to allow receipt of a Class 1 “Notification” permit required for even very low impact early stage exploration.

The first phase of the field program was conducted between June 1 and June 10, 2021. 80 PIKA claims were staked along the Sixtymile access road immediately south of the Top of the World Highway by two workers over three days. These claims cover the historic “Cholach” minifile occurrence which is anomalous in Ag- Pb (+/-Au). The claims were recorded, then the author conducted solo prospecting of several targets in the area including the Swede Dome area, the California creek headwaters, and the ground around two gold in soil anomalies in the mid Browns creek area. These areas were not considered to warrant further work at this time.

The PIKA claims were explored in phase 2, conducted between August 30 and September 6, 2021. The two workers conducted a combination of conventional B-C horizon soil sampling and more experimental “Ah” horizon soil sampling for three days. Then the author spent an additional day examining the historic trench, cutlines and mineralized rock in the area of the Cholach occurrence.

The project area is accessed by truck to the Top of the World highway from Dawson City. A trailer camp owned by prospector Sandro Frizzi at the head of California creek about 1 km south of the Top of the World Highway was used as a base of operations.

A hand-held XRF device was used to evaluate rock and conventional soil samples before analysis. The program was successful in covering a highly prospective area with claims and confirming the location and character of the known “Cholach” occurrence. The use of “Ah” horizon soil sampling was confirmed to be of use in areas where this horizon is well developed.

A few thin sections were evaluated to firm up the geology of the Cholach zone.

2021 Regional Prospecting

The author conducted solo prospecting of several targets in the area including the Swede Dome area, particularly the road quarry where a Prospector Mountain suite intrusion is blasted and crushed (plate 8). A 25cm wide zone of fracturing and alteration with no apparent vein quartz returned weakly anomalous values in base metals, silver and pathfinder elements. Another day

was spent in the California creek headwaters looking at favourable rocks with weak soil anomalies (O'Brien, 2012b), and another on the ground around two gold in soil anomalies in the mid Browns creek area (O'Brien, 2012a). Rock results are summarized in Table 4, with assay certificates in Appendix V. The areas prospected were not considered to warrant further work at this time.



Plate 8. Swede Dome Quarry vein-fault in Prospector Mountain Suite intrusion.
Sample # 5285522

2021 Soil Geochemistry

Soil sampling is likely to be one of the best method for testing the potential of the ground. A total of 81 conventional B/C horizon soil samples and 35 Ah horizon samples collected in 2021. At the Cholach zone, a 2010 soil survey collect 157 samples spaced 50 m apart on lines spaced 100 m apart (Hulstein & Clark, 2011). The 2021 survey extended the existing survey lines on the west side of the road where permafrost was expected to be less prominent and soil profiles better developed. The Ah soils were collected in part at the sites of highly anomalous polymetallic

values returned in 2010. North of the Cholach zone a line of soils was sampled that roughly followed the trace of a secondary branch fault of the Pika- Sixtymile fault zone. This line was sampled at both the B/C horizon and Ah horizon for comparison.

The 2021 soil samples were located using handheld GPS units, with supplemental navigation by compass. The sites are marked by flagging tape marked with the sample number. Conventional B/C soil samples were collected using Dutch soil augers or shovels. They were placed into Kraft paper bags along with an analytical sample tag. Soil descriptions were recorded in notebooks. Samples were collected as deep as possible, typically between 40 cm and 60 cm deep, occasionally to 75 cm, but sometimes much shallower where very rocky soil and permafrost limited sampling depth. Sample material and sample sites were documented with photographs in some circumstances, however this was sometimes hampered by bad weather and technical difficulties. Conventional B/C sample locations are presented in Figure 6. Certificates of Analysis for conventional soil samples are presented in Appendix III, and sample descriptions presented in Appendix VI. Soil samples from 2021 and 2010 at Cholach are compiled, with silver results shown in Figure 8.

Ah horizon soil samples were marked and recorded as noted above, but typically collected between 10 and 20 cm deep at the contact between mineral and organic soils. The darkest material was collected and placed in Hubco woven bags which allow moisture to evaporate. A sample at least fist sized was collected at each location. Ah horizon soil sample locations are presented in Figure 7. Certificates of Analysis for conventional soil samples are presented in Appendix IV, and sample descriptions presented in Appendix VII.

The 2021 geochemical sampling program was successful, as strong multi-element anomalies were confirmed and expanded upon in the Cholach zone area. The western side of the zone was extended about 300 m west, and 100 m to the north and south. This anomaly remains open to the northwest. The anomaly is apparent for Ag, Mo, Cu, Pb, Zn, Au, Bi, Se, Sb, Hg and As.

The strongest gold values at Cholach are located on the western side of the road, with three soils from 31.6 to 35.2 ppb Au. One of these gold anomalies was a duplicate of a 2010 sample that returned 164 ppb Au.

The western side of the Border zone is very high in Mo and Cu, with elevated As, Bi and W. Arsenic forms an anomaly about 1000m diameter above 20ppm and up to 177 ppm As, however there is only very weakly elevated gold in soils within this area.

Ah Horizon Soil Geochemistry vs Conventional B-C Soils

Two types of soil samples were collected in 2021 to test the applicability of “Ah” horizon analysis compared to conventional B or C horizon sampling. An orientation survey was

conducted on a line that approximately followed a major fault splay of the Sixtymile- Pika fault just north and northeast of the Cholach zone, where both types of soil were collected. As well, Ah samples were collected from the sites of select highly anomalous polymetallic conventional soil samples identified in 2010 at the Cholach occurrence (Hulstein & Clark, 2011), with result in Table 3. All Ah sample locations are presented in Figure 7.

The idea of using Ah samples was prompted by the presence of a thin (?) volcanic layer along with loess and White River ash that overlies the property. This material is thought to mask the potential geochemical signature of deeper mineralization, along with the presence of thick organic material that tends to preserve permafrost. Many potential soil sample sites do not thaw deeply enough to allow collection of good quality conventional soils.

The use of the Ah horizon to detect deep mineralization was identified by multi-method work in central British Columbia that showed the ability of the humic acid rich material to trap mobile ions by chelation from sources down to 300m depth (Heberlein and Samson, 2010). The use of this method is not common in the Yukon, and use in permafrost terrain is somewhat experimental, although the author was aware of the presence of the Ah horizon in unglaciated parts of the Yukon (Bond and Sanborn, 2006) and the apparently successful use of the Ah horizon for exploration of a porphyry target covered by deep Pre-Reid glacial material along the Big Creek fault by Teck Resources (Berg & Liebrecht, 2013). It is hoped that this technique might also be able to detect anomalies even below the layer of the Carmacks Group volcanics which are present at PIKA.

The Ah layer is the uppermost mineral soil (if less than or equal to 17% organic content). It contains a variable amount of organic material, and in some cases fragments of charcoal. The best quality Ah material is black with a greasy texture, and this is present in many locations on the PIKA claims. However, this material is not always present, so the sample collected in some cases was dark brown, perhaps with little mineral content if located above the ash layer. In a few cases, the top centimeter of B horizon and bottom centimeter of organic layer was collected. Multiple pits had to be dug in some locations seeking good quality Ah material. In other locations there was up to 10 cm of black Ah horizon, in which case the lowermost centimeter or two was sampled. If the organic content of the material is above 17 percent, the horizon should more properly be called the Hh horizon, highly decomposed humic-rich organics (Bond & Sanborn Appendix 4, 2006). Many of the 2021 “Ah” samples were actually “Hh” horizon due to high carbon content, however this is considered to be acceptable, as the distinction between the two horizons is difficult in the field.

Ah horizon samples were collected using a shovel to extract a cylinder of soil about 30 cm deep, and then cutting out the lowermost 1 or 2 cm of Ah horizon for sampling (Plate 9). The Ah samples collected were at least a fist-sized amount, which was placed in a labelled Hubco bag to allow some drying. In some locations a buried Ah layer was present within the B horizon,

indicating previous slope instability, and if present sampled along with the upper layer. An ultra-trace analytical method is used in conjunction with the Ah horizon, which delivers a lower detection limit for some important elements such as Ag, Hg and Bi.

The Ah horizon in some cases has higher metal values than conventional soils, particularly for Ag & Hg, and generally for Co, Mn, Cd. Values for most elements are surprisingly similar in both soil horizons, however Pb and Au are generally much lower in the Ah horizon as might have been predicted based on the low mobility of these metals. Au values are also likely to be sporadic and less reliable due to the smaller analytical sample size, 0.5 g vs 15 g for conventional soil analysis. The use of Ultra Trace analysis appears to be beneficial for identifying patterns of metals and certain indicator elements with lower detection limits such as Ag, Bi and Se. Overall, the Ah horizon sampling was successful in confirming the location and anomalous nature of the Cholach occurrence, returning a strong polymetallic anomaly.

TABLE 3.
Cholach Zone 2010 Conventional Soil Vs 2021 Ah Horizon Soil, Same Sites

TYPE	Sample #	Au ppb	Ag ppb	As ppm	Bi ppm	Cu ppm	Hg ppb	Mo ppm	Pb ppm	Sb ppm	Zn ppm
B/C	1029661	4.5	3722	12	0.12	21.3	234	2.99	280	1.76	255
Ah	5273036	5.1	7016	7	0.08	18.1	367	2.1	91	1.51	182
B/C	1029660	3.1	2241	11	0.17	16.2	79	2.66	249	1.53	225
Ah	5273037	1	1903	2	0.06	9.9	116	1.04	62	1.1	131
B/C	1029245	21.1	2302	103	0.68	26.4	64	4.71	863	2.88	1016
Ah	5273038	6.5	3239	10	0.16	10.7	91	0.64	827	0.59	130
B/C	1029248	6.9	2189	16	0.4	10.3	156	3.24	285	0.97	367
Ah	5273039	12.3	4955	6	0.21	17.9	268	1.88	252	1.62	294
B/C	1029249	11.8	4830	24	0.4	18.6	126	2.55	311	1.57	606
Ah	5273040	9.4	9225	8	0.2	20.0	181	1.36	131	1.2	572
B/C	1029250	10.9	2449	24	0.21	19.0	103	1.52	296	1.16	547
Ah	5273041	10.9	5604	15	0.18	18.4	151	1.61	229	2.18	708
B/C	1029405	6.5	4456	49	0.19	21.7	166	1.68	107	1.87	343
Ah	5273042	11.3	9868	76	0.15	23.4	305	2.18	142	2.57	385
B/C	1029408	164.2	3442	221	1.03	25.2	63	1.27	799	3.54	780
Ah	5273043	55.3	6295	114	0.36	25.2	212	1.54	456	1.85	555
B/C	1029525	14.6	5081	75	0.15	56.7	102	6.53	3023	11.4	2641
Ah	5273044	2.5	4821	9	0.09	18.3	126	1.06	739	1.1	242

The benefits of sampling the Ah horizon compared to conventional B-C horizon soils include the shallower sampling depth that potentially allows collection early in the field season (June), when conventional soils would likely be frozen if covered by an organic layer. In some areas the

conventional soils never thaw deeply enough to allow penetration beneath ash and loess layers. Ah soils are particularly useful in areas with thick (greater than 10 cm) organic soils, but Ah might not be present or well developed when an organic layer is sparse. Therefore, high elevation, gently sloping, north or east facing terrain or valley bottom areas with moss and grass cover or black spruce forests might be best explored using the Ah horizon. The Ah horizon also offers the potential to reveal anomalies from beneath barren cover. One drawback to using the Ah horizon is the lower likelihood of strong gold anomalies in this material due to low solubility, particularly if gold is the main target element. In other areas the Ah horizon may not be present or adequately developed.

Conventional B or C horizon soil samples were collected with either a soil auger or shovel, usually at the maximum depth possible, commonly >20 cm – 60 cm, and with attention given to avoiding loess and volcanic ash contamination. Where sample test lines were established, sample spacing was at approximately 50 m. Shovel sampling was preferable in rocky areas, while the auger was better for deep soils with thick organic cover. Some proposed soil sites returned no sample due to thick organic material lying directly on talus, notably on the steep southwest slopes above Big Gold creek. Permafrost was also locally an impediment to sample collection.



Plate 9. Ah horizon black organic-rich soil above brown B horizon mineral soil. Sample # 5273040.

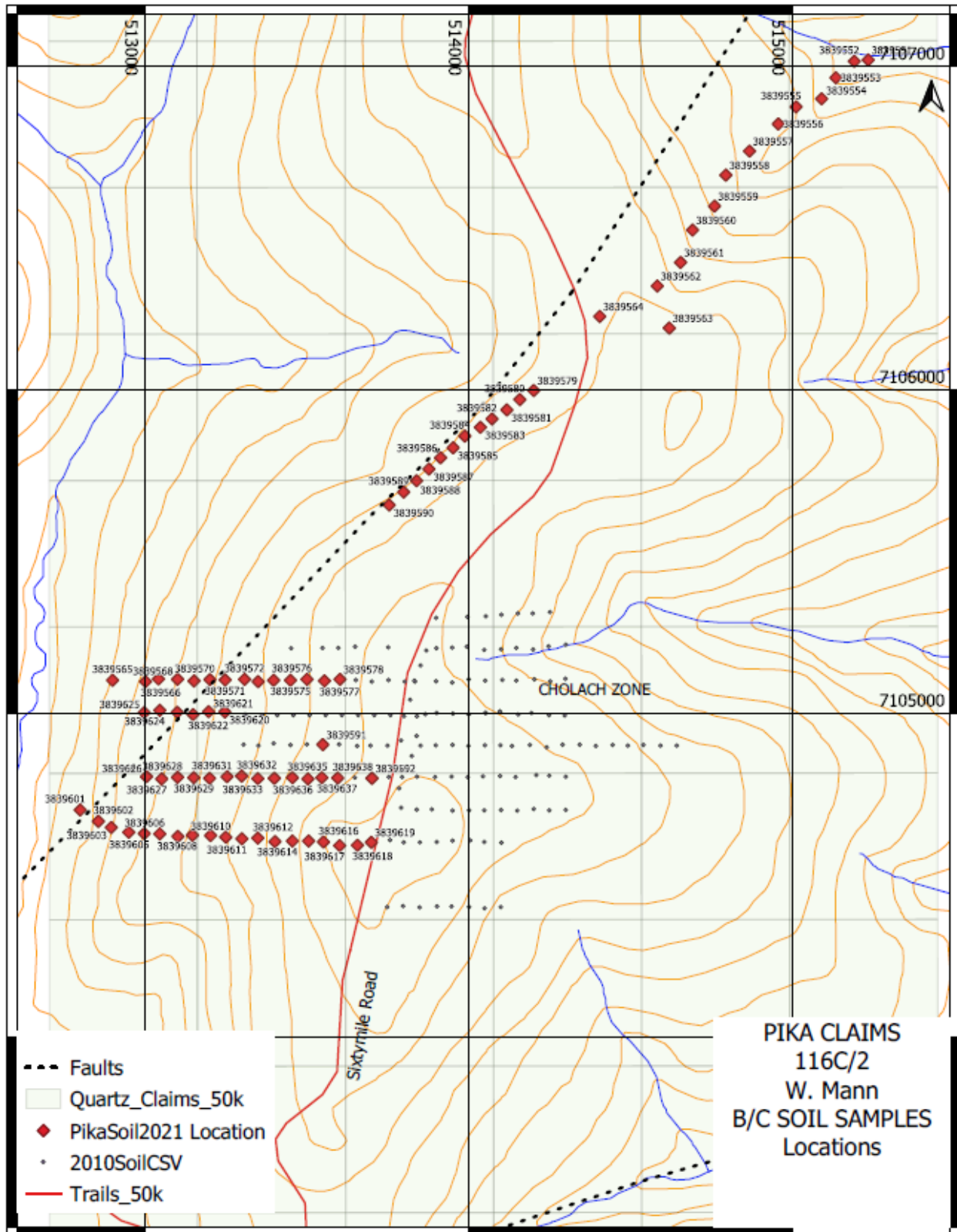


Figure 6. 2021 Conventional Soil Sample Locations, PIKA claims.

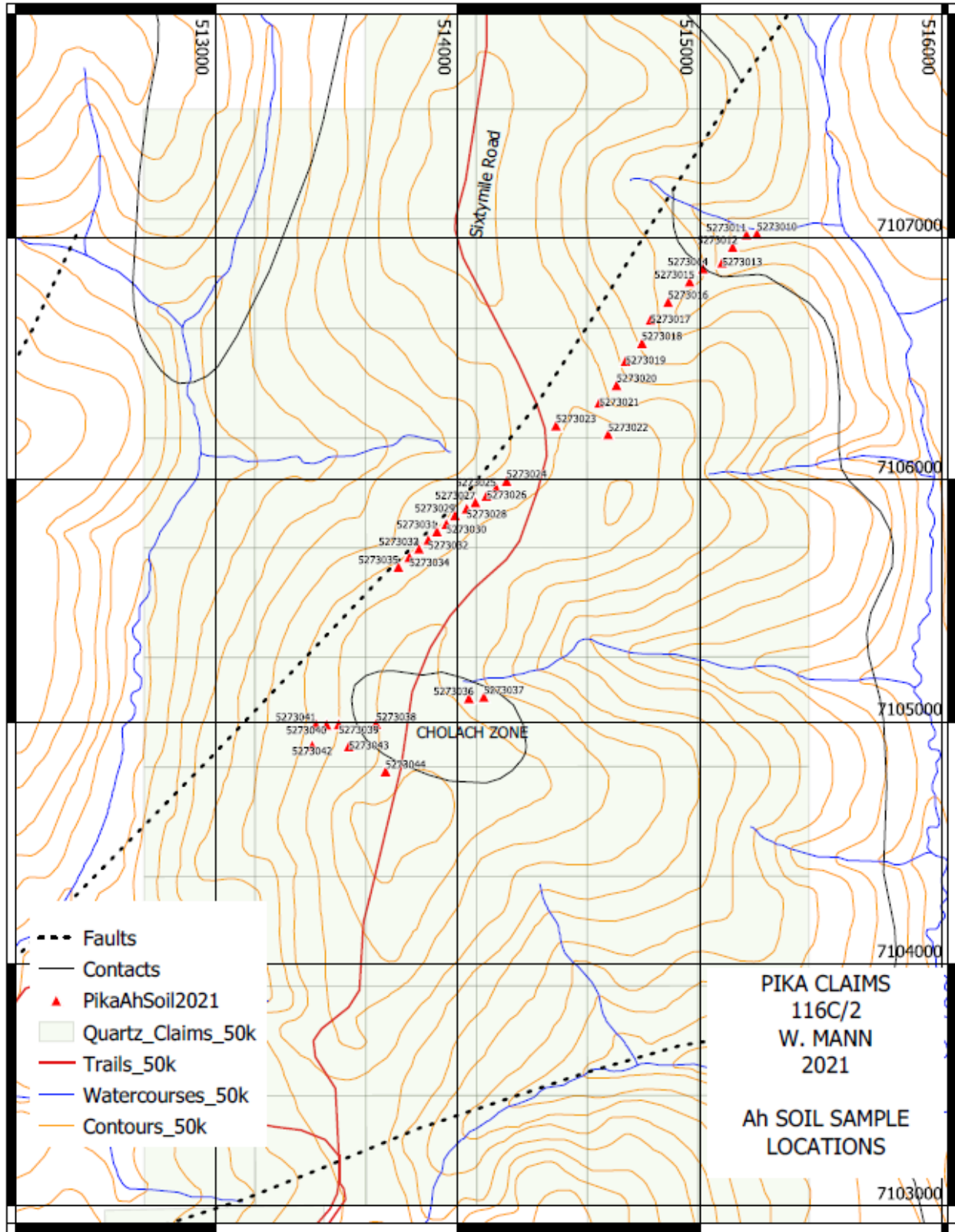


Figure 7. 2021 Ah Horizon Soil Sample Locations.

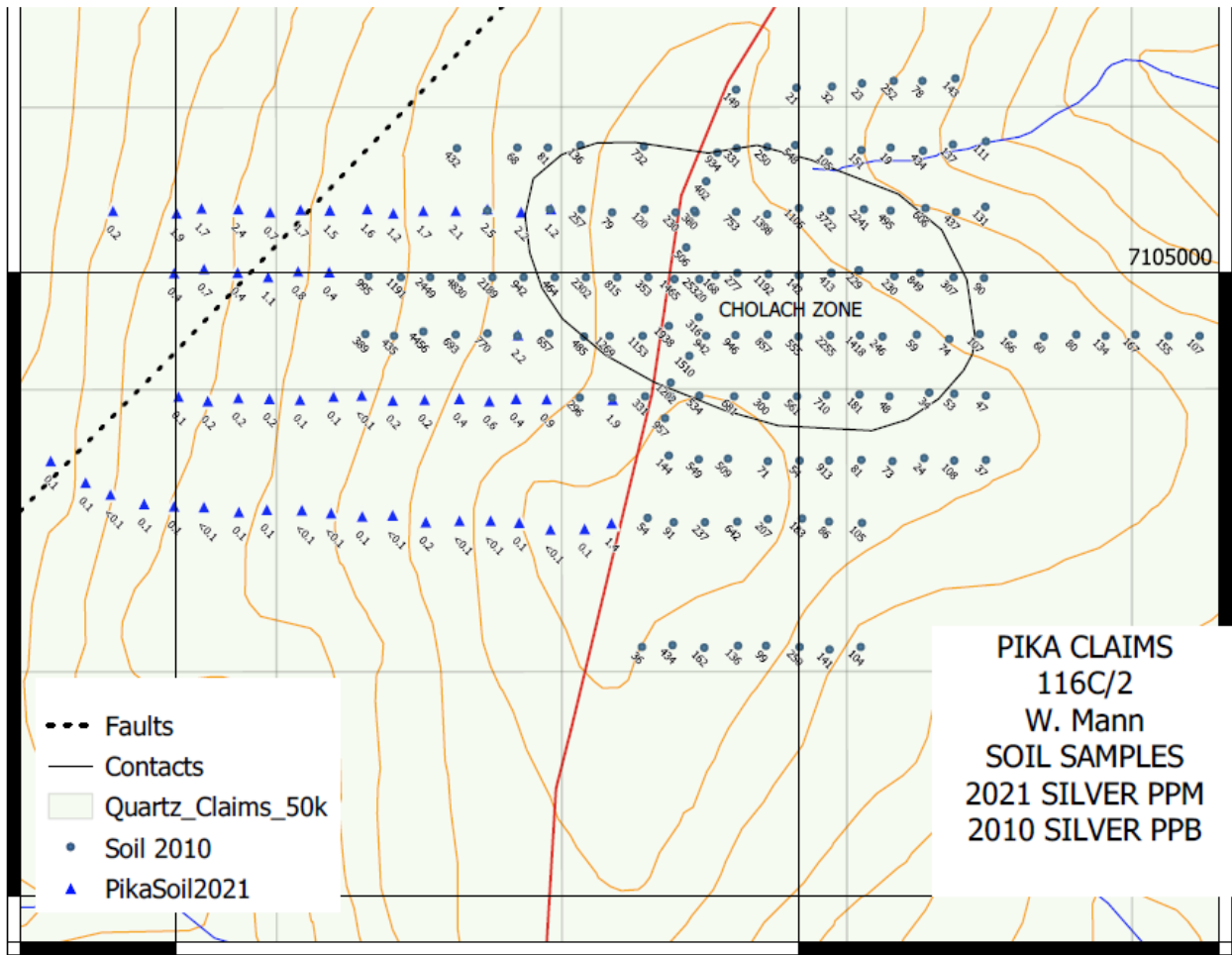


Figure 8. Cholach zone Silver in Soil Compilation, 2010 & 2021.

2021 Prospecting

The author's time was spent prospecting and digging and describing a test pit in the area around the Cholach zone, including the existing bulldozer trench beside the road, and poking around other outcrops on the property and nearby. Several stations along the cut line grid were located by GPS. Assay samples are summarized in Table 4.

Six rocks were submitted for assay from the Cholach zone, three locations each in duplicate. The results are moderately anomalous in various target elements. The road quarry located near the centre of the claims was examined (Plate 4), along with the Sixtymile road pluton that hosts the Cholach occurrence (Plate 5). Five rocks were sent for thin section examination and description.

Locations and descriptions of rock samples and assays are summarized in Table 4. Rock assay certificates with complete analyses are presented in Appendix V, with rock descriptions and locations in Appendix VIII.

The Cholach Zone

The Cholach zone is located on a small pluton that is crossed by the Sixtymile road. The pluton hosts narrow high grade silver- lead veinlets 3cm wide, up to 75% Pb with 2,304 g/t Ag (Cholach, 1981a). RAB drilling returned up to 4.04 g/t Ag over 30.48m over the entire length of hole RAB 10-077, and 15.0 g/t Ag over 7.62 m in hole RAB 10-080 (Hulstein & Clark, 2011). The Cholach zone covers the entirety of the Sixtymile road pluton, a 68.7 ma Prospector Mountain suite altered monzogranite that is roughly 800 m by 500 m in subcrop. A polymetallic soil anomaly coincides with the intrusive subcrop, and locally extends beyond it into the host Carmacks volcanics. The volcanics may be hornfelsed proximal to the intrusion, as the magnetic anomaly is stronger peripheral to the intrusion, and more prominent than the recessive weathering intrusion.

Table 4. PIKA/ TOW ROCKS 2021

Sample	UTM NAD 83		Mo PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Au PPB	NOTES
	ZONE 7 E	N							
<u>PIKA CLAIMS</u>									
5285515	513603	7105104	6.4	18.5	22.4	71	0.2	43.7	Pit 21-1 pebbles, granitic
5285516	513603	7105104	5.2	15.5	27.7	71	0.2	16.1	Pit 21-1 pebbles, granitic
5285517	512818	7105119	5.2	20.9	10.6	24	0.1	7.3	Pyritic volcanic boulders on cutline
5285518	512818	7105119	4.6	20.7	8.2	32	0.1	4.3	Pyritic volcanic boulders on cutline
5285519	513883	5285520	3.9	16.9	7.5	16	0.2	4.2	roadside rusty boulder
5285520	513883	5285520	4.4	15.9	6.3	22	0.1	2.6	roadside rusty boulder
<u>REGIONAL SAMPLES</u>									
5285521	507824	7125695	0.6	2.5	1.5	4	<0.1	1.1	Browns Creek QV boulder
5285522	531896	7119529	4	41	77.5	352	1.2	2	Quarry face vein, 25cm wide
5285523	530160	7118147	11.3	169.8	28.2	310	0.3	1.4	Swede Dome frost boil, rusty

2021 Test Pit

A shallow test pit was dug with a shovel at the site of 2010 soil sample #1029685 with moderate to strong polymetallic anomalies (Plate 10.) This site was selected due to the shallow occurrence of rocky C horizon and relatively easy digging, as well as the granitic nature of the rocks.

The pit depth was 50cm, limited by densely packed larger rocks and possible permafrost. About 15 slightly rusty pebbles represent both samples #5285515 and 5285516, which returned up to 43.7 ppb Au and moderately anomalous base metals and pathfinder elements (see Table 4). Soil sample #3839578 at the same site returned polymetallic anomalies similar to the 2010 values.



Plate 10. Test pit 21-1.

2021 Portable XRF Utilization

A Niton XL3t portable hand-held XRF was used in the field to provide rapid qualitative evaluation of soils and rocks. The information provided by the XRF is potentially useful in confirming anomalous areas, and could be used to adjust soil line locations and lengths.

XRF readings were taken for 30 seconds through the soil sample bags, and high values of Pb, Zn, Cu (and sometimes As & Mo) used as indicators of mineralization. Rock samples were also analyzed by XRF, and this information was used to reduce the number of rock samples submitted for assay. Results of the XRF analysis generally show elevated polymetallic values for samples that later returned high values, as expected. The XRF readings are presented in Appendix IX.

Ah soils were not analyzed by XRF, as low metal values were expected, however metal values are often high enough to be determined using this method.

Thin Sections

Five rock samples from the Cholach zone were selected for thin section evaluation. Rock slabs were sent to Van Petro for thin section preparation, and the sections were then sent to Dr. Tim Liverton for petrographic description and photomicrography. The results of this work are presented in Appendix X.

The Sixtymile road intrusion appears to be a monzogranite, with plagioclase and orthoclase both altered to sericite and clay minerals. Quartz phenocrysts are rounded and embayed. Brecciated pyritic rocks at the contact between the intrusion and intermediate volcanics contain some epidote and amphibole along with silicification, pyrite and trace pyrrhotite. This mineralization may represent a skarn or hornfels. Volcanic fragments in an intrusive hosted breccia indicate that the volcanics are older than the intrusion.

SAMPLE PREPARATION, ANALYSES AND SECURITY

The 2021 samples were placed into rice bags in the field by the author, sealed with zip ties and secured. The samples were transported and delivered directly by the author to the Whitehorse preparation facility of Bureau Veritas Minerals (Acmelab). Bureau Veritas Mineral Laboratories is accredited and certified to the International Organization for Standardization for Quality ISO9001:2008, Environmental Management: ISO14001 and Safety Management OH SAS 18001 and AS4801.

At the Whitehorse preparatory laboratory samples were dried at 60°C. Soil samples were sieved to -80 mesh. Rocks were crushed, then a 250g split was pulverized to 200 mesh. The prepared samples were shipped by BVM to their Vancouver laboratory for analysis.

The rock and conventional soil samples were analyzed by BVM method AQ201 for 36 elements by ICP-MS after digestion of 15g by 1:1:1 aqua regia. The Ah soil samples were analyzed by BVM method AQ250 for 37 elements by Ultratrace ICP-MS after digestion of 0.5g by 1:1:1 aqua regia.

Quality control procedures were implemented at the laboratory, involving the regular insertion of blanks and standards and repeat analyses on the samples. Quality Assurance data is provided for each batch of samples and included with each analytical certificate (Appendices III, IV & V).

There was no evidence of any tampering with the samples during collection or shipping. All sample preparation was conducted by the laboratory.

INTERPRETATION AND CONCLUSIONS

The geology of the PIKA property is only partly understood due to scarce outcrop and limited mapping. The regional northeast trending fault system on the property comprises secondary faults of the Pika- Sixtymile fault, a major crustal scale feature that is dilational, and occurred during the late Cretaceous, a time favourable for mineralization. The property has potential for intrusion-related porphyry, epithermal and skarn mineralization. The Cholach zone soil anomaly remains open to the northwest, and contains both narrow very high grade silver-lead veinlets and potential for bulk tonnage low grade silver. The entire Prospector Mountain suite monzogranite Sixtymile Road intrusion appears to be hydrothermally sericite-clay altered, with disseminated pyritic mineralization and is anomalous with base and precious metals and pathfinder elements.

It is probable that additional intrusive bodies similar to the Sixtymile Road pluton are present on or near the property, or may be present but covered with a thin volcanic layer. The known intrusion is recessive weathering, and may not have been found if the Sixtymile road had not cut right across it. The intrusion(s) may produce precious metal enriched skarns, particularly in the carbonate subunit of the Finlayson group metamorphic rocks that crop out on the northeast part of the claims.

Epithermal mineralization may also be spatially associated with the secondary faults that cross the claims, and with tertiary splays off these faults. Significant faults have been mapped on the property, and are also apparent in the magnetic and radiometric airborne maps. Geophysical anomalies may also reveal additional faults related to mineralization.

RECOMMENDATIONS

The PIKA property covers a large, structurally favourable area with permissive geology to host Prospector Mountain aged late Cretaceous intrusion related Cu- Mo- Au- Ag porphyry, epithermal and skarn deposits. These deposits may be covered by a thin layer of Carmacks age volcanics. A known mineralized occurrence exists on the property at the Cholach zone, a silver enriched, polymetallically anomalous sericite- clay altered monzogranite. Silver- lead veinlets and disseminations are known within the Sixtymile Road pluton in trenches and RAB drill holes at the roadside.

The Cholach zone soil grid should be extended to the northwest. Additional soil samples should be collected along spur ridges on both sides of the road. "Ah" horizon soil sampling is effective, and should be used in areas where conventional B/C horizon sampling is difficult or impossible due to permafrost. The Ah horizon and ultra trace analysis is superior for some elements in this area, particularly silver, mercury and bismuth, and returns similar values to conventional soils for

many other elements. Ah sampling might be most appropriate along recessive fault traces and along stream drainages.

Additional test pits should be dug at the sites of soil samples with the highest target element anomalies. This may reveal mineralized rock in situ.

The property scale geophysical surveys conducted by Rackla in 2010 and 2011 should be scrutinized to find potential subsidiary structures or anomalous bodies that may host mineralization.

The carbonate rich member of the Finlayson group mapped in the northeast part of the claim block should be prospected, and additional soil samples collected in this area. Geological mapping and prospecting should be conducted across the entire area.

The property has good logistics by Yukon standards, with a government maintained road running the length of the claims. Dawson City is little over an hour drive away along the Top of the World highway. Local Sixtymile area placer miners may be able to provide heavy equipment, accommodations or other assistance to exploration on the claims.

Respectfully submitted,

William D. Mann, M.Sc., P.Geo.

REFERENCES

- Allan, M.M., and Mortensen, J.K., 2012.** Structure and Mineralization of the Sixtymile-Pika Fault System. MDRU Yukon Gold Project – May 2012.
- Aurora Geosciences Ltd. and Bruce, J.O., 2020.** Reprocessing of Yukon magnetic data for NTS 116C. Yukon Geological Survey, Open File 2020-41, scale 1:250 000, 4 sheets.
- Berg, A., and Liebrecht, E., 2013.** Teck Resources Ltd. Assessment Report On The 2012 Geochemical Sampling, Geological Mapping And Ground Geophysics The Big Creek Project. Yukon Assessment Report #096463.
- Bond, J.D. and Sanborn, P.T., 2006.** Morphology and geochemistry of soils formed on colluviated weathered bedrock: Case studies from unglaciated upland slopes in west-central Yukon. Open File 2006-19, Yukon Geological Survey.
- Cholach, M.S., 1981a.** Report on the 1980 Exploration Program on the BE and JEM claims. Yukon Assessment Report #090839.
- Cholach, M.S., 1981b.** Report on the 1981 Exploration Program on the BE and JEM claims. Yukon Assessment Report #090901.
- Colpron, M. (compiler), 2006.** Tectonic assemblage map of Yukon-Tanana and related terranes in Yukon and northern British Columbia (1:1,000,000 scale). Yukon Geological Survey, Open File 2006-1.
- Duk-Rodkin, 1996.** Surficial Geology of Dawson, Yukon Territory 116B & C. GSC Open File 3288. Surficial geological map (1:250 000 scale).
- Green, L.H., 1972.** Geology Map 1284A, Geology of Nash Creek, Larsen Creek, and Dawson map areas, Yukon Territory (106D, 116A, 116B, and 116C (E1/ 2)), Operation Ogilvie. 1:250,000 scale map. Geological Survey of Canada Memoir 364.
- Geological Survey of Canada, 1977.** Regional Stream Sediment and Water Geochemical Reconnaissance Data. RGS Open File 2365.
- Heberlein, D.R. and Samson, H., 2010.** An assessment of Soil Geochemical Methods for Detecting Copper-Gold Porphyry Mineralization through Quaternary Glaciofluvial Sediments at the Kwanika Central Zone, North-Central British Columbia, Geoscience BC Report 2010-03, 89 pages.
- Hulstein, R., and Anderson, F., 1999.** Report on the Geological, Geochemical and Geophysical Work on the Mac and Big Gold Claims. Yukon Energy, Mines & Resources. Assessment Report #094030.

- Hulstein, R., and Clark, D., 2011.** Report On the Sixty Mile Property 2010 Geological, Geochemical, Geophysical & Auger, Rab and Diamond Drilling.
- Hulstein, R., 2012.** Report On The Sixty Mile Property 2011 Geophysical Survey & Diamond Drilling. Yukon Assessment Report #096256.
- Kiss, F. and Coyle, M., 2014.** First Vertical Derivative of the Magnetic Field, Aeromagnetic survey of the Dawson Area, NTS 116-B/4, 116-B/5, 116-C/1, 116C/2, 116C/7 and 116-C/8, Yukon; Geological Survey of Canada, Open File 7638; Yukon Geological Survey, Open File 2014-6, Scale 1:100 000.
- Mackie, R., Arne, D. and Pennimpede, C., 2016.** Enhanced interpretation of stream sediment geochemical data for NTS map sheet 116B & 116C. Yukon Geological Survey, Open File 2016-32, scale 1:250 000.
- Mortensen, J.K., 1988.** Geology Southwestern Dawson Map area: Geological Survey of Canada Open-File 1927, scale 1:250,000.
- O'Brien, E., 2012a.** 2011 Geochemical Sampling Program, Browns Creek Property. Yukon Assessment Report #096020.
- O'Brien, E., 2012b.** 2011 Geochemical Sampling Program, Swede Dome Property. Yukon Assessment Report #096021.
- Pautler, J., 2013.** Geochemical and Geological Assessment Report on the 2012 Fifty Mile Project, Sixtymile area. Yukon Assessment Report #096412.
- Pautler, J., 2014.** Geochemical and Geological Assessment Report for the 2013 Program on the Fifty Mile Project, Sixtymile area. Yukon Assessment Report #096706.
- Smith, C.A.S., Meikle, J.C. & Roots, C.F. (editors), 2004.** Ecoregions of the Yukon Territory: Biophysical properties of Yukon landscapes.
- Yukon MINFILE, 2021.** A database of mineral occurrences. Yukon Geological Survey, <https://data.geology.gov.yk.ca/Occurrences/> accessed November 2021.
- Yukon Geological Survey, 2018.** Georeferenced Bedrock Geology 250k maps, 116B & 116C. Updated May 2018. <https://data.geology.gov.yk.ca/Compilation/23#InfoTab>

APPENDIX I**STATEMENT OF QUALIFICATIONS****WILLIAM D. MANN, M.Sc., P.Geo.****19 HAYES CRESCENT, WHITEHORSE, YUKON Y1A 0E1**

1. I am a member in good standing of the Association of Professional Engineers and Geoscientists of BC, Licence #31907.
2. I am a Graduate of Queen's University, 1986, with a Master of Science Degree in Mineral Exploration Geology.
3. I am a Graduate of the University of British Columbia, 1983, with a Bachelor of Science Degree in Geology.
4. I have worked in mineral exploration and mining continuously since 1979.
5. I participated in the work program on the TOW project and PIKA claims in 2021.
6. I am the owner of the PIKA claims.

January 15, 2022

William D. Mann, M.Sc., P.Geo.

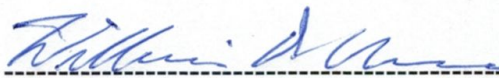
APPENDIX II

TOW Project YMEP 21- 060 Actual Costs 2021					
W.D. Mann		June 1- 10, Aug. 30 - Sept 6, 2021			
		Activity	Units	Rate	Total
<u>PHASE 1 - STAKING & Prospecting</u>					
Labour	W.D. Mann	Staking/ Prospecting	10	500	\$5,000.00
	Andrew Robinson	Staking/ Recording	4.5	350	\$1,575.00
Field Costs	\$100 per worker-day		14.5	100	\$1,450.00
Truck	\$.60 per km	Whitehorse to TOW, return to Clear Creek road	1167	0.6	\$700.20
XRF	Niton XL3t	\$110 per day of use	3	110	\$330.00
<u>PHASE 2 - EXPLORATION</u>			<u>August 30 - September 6, 2021</u>		<u>Pika Claims 116C/2</u>
Labour	W.D. Mann	Sampling/ Prospecting	8	500	\$4,000.00
	Andrew Robinson	Soil Sampling	4	350	\$1,400.00
Field Costs	\$100 per worker-day		12	100	\$1,200.00
Truck	\$.60 per km	Whitehorse to TOW, return	1460	0.6	\$876.00
Assays	conventional	soils - VANI411108	81		\$2,645.05
	Ah soils	VANI411010	35		\$1,120.88
		rocks VANI410198	9		\$349.65
Thin Sections	Postage	shared w/ Taut project, \$22.39*5/13			\$8.61
	VanPetro	shared w/ Taut project, \$528.15*5/13			\$203.15
	T. Liverton	petrography			\$656.25
XRF	Niton XL3t	\$110 per day of use	6	110	\$660.00
Report	W.D. Mann	Writing, Editing, Printing, Maps	6	500	\$3,000.00
TOTAL					\$25,174.79

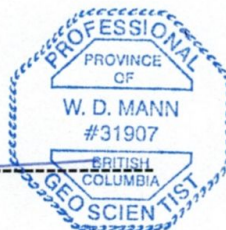
APPENDIX I**STATEMENT OF QUALIFICATIONS****WILLIAM D. MANN, M.Sc., P.Geo.****19 HAYES CRESCENT, WHITEHORSE, YUKON Y1A 0E1**

1. I am a member in good standing of the Association of Professional Engineers and Geoscientists of BC, Licence #31907.
2. I am a Graduate of Queen's University, 1986, with a Master of Science Degree in Mineral Exploration Geology.
3. I am a Graduate of the University of British Columbia, 1983, with a Bachelor of Science Degree in Geology.
4. I have worked in mineral exploration and mining continuously since 1979.
5. I participated in the work program on the TOW project and PIKA claims in 2021.
6. I am the owner of the PIKA claims.

January 15, 2022



William D. Mann, M.Sc., P.Geo.





BUREAU VERITAS MINERAL LABORATORIES
Canada

www.bvna.com/mining-laboratory-serv

Bureau Veritas Commodities Canada Ltd.
9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada
PHONE (604) 253-3158

Client: **Bill Mann**
19 Hayes Cres.
Whitehorse Yukon Y1A 0E1 Canada

Submitted By: Bill Mann
Receiving Lab: Canada-Whitehorse
Received: September 08, 2021
Analysis Start: October 26, 2021
Report Date: November 01, 2021
Page: 1 of 4

CERTIFICATE OF ANALYSIS

WHI21000507.1

CLIENT JOB INFORMATION

Project: TOW
Shipment ID:
P.O. Number
Number of Samples: 81

SAMPLE DISPOSAL

DISP-PLP Dispose of Pulp After 90 days
DISP-RJT-SOIL Immediate Disposal of Soil Reject

Bureau Veritas does not accept responsibility for samples left at the laboratory after 90 days without prior written instructions for sample storage or return.

Invoice To: Bill Mann
19 Hayes Cres.
Whitehorse Yukon Y1A 0E1
Canada

CC:

SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Procedure Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
SS80	81	Dry at 60C sieve 100g to -80 mesh			WHI
AQ201	81	1:1:1 Aqua Regia digestion ICP-MS analysis	15	Completed	VAN
DISPL	81	Disposal of pulps			VAN
SHP01	81	Per sample shipping charges for branch shipments			VAN

ADDITIONAL COMMENTS


JEFFREY CANNON
Geochemistry Department Supervisor

This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signature indicates final approval; preliminary reports are unsigned and should be used for reference only. All results are considered the confidential property of the client. Bureau Veritas assumes the liabilities for actual cost of analysis only. Results apply to samples as submitted.
*** asterisk indicates that an analytical result could not be provided due to unusually high levels of interference from other elements.



Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

Client: **Bill Mann**
19 Hayes Cres.
Whitehorse Yukon Y1A 0E1 Canada

Project: TOW
Report Date: November 01, 2021

Page: 2 of 4

Part: 1 of 2

CERTIFICATE OF ANALYSIS

WHI21000507.1

Method Analyte	Unit	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		MDL	MDL	MDL	MDL	MDL	MDL	MDL	MDL	MDL	MDL	MDL	MDL	MDL	MDL	MDL	MDL	MDL	MDL	MDL	MDL
3839551	Soil	0.3	13.8	7.5	61	<0.1	12.8	7.7	219	1.67	2.0	0.7	2.2	2.9	82	0.2	0.2	0.1	54	0.71	0.084
3839552	Soil	0.6	13.5	8.3	60	<0.1	14.5	9.0	411	2.52	4.7	0.8	1.5	2.5	82	0.1	0.3	0.1	71	0.67	0.087
3839553	Soil	0.9	12.2	8.5	54	<0.1	12.4	8.0	467	2.36	4.6	0.7	1.7	2.1	87	0.1	0.3	0.1	66	0.77	0.072
3839554	Soil	0.9	14.0	8.1	61	<0.1	14.1	8.2	375	2.60	4.5	0.7	1.9	2.3	154	0.2	0.2	0.1	77	0.66	0.071
3839555	Soil	0.8	14.4	8.2	62	<0.1	15.0	8.2	291	2.48	5.5	0.7	1.2	2.5	79	<0.1	0.3	0.1	71	0.58	0.081
3839556	Soil	0.7	14.8	7.5	62	<0.1	14.5	8.4	272	2.41	3.8	0.8	1.2	2.3	75	0.2	0.3	0.1	70	0.67	0.087
3839557	Soil	0.7	13.7	7.5	64	<0.1	17.5	10.0	365	2.77	4.2	0.7	6.8	2.7	103	0.2	0.2	<0.1	78	0.73	0.104
3839558	Soil	0.7	15.6	8.8	62	<0.1	16.7	7.5	247	2.34	5.5	0.8	1.8	2.9	74	0.1	0.3	0.1	63	0.56	0.064
3839559	Soil	0.6	10.1	7.7	46	<0.1	12.3	6.2	217	1.89	3.2	0.6	5.5	2.3	86	0.1	0.2	<0.1	56	0.37	0.050
3839560	Soil	0.7	19.8	10.4	57	0.2	19.3	7.7	342	2.07	3.7	1.1	3.0	2.9	111	0.1	0.3	0.1	58	0.70	0.082
3839561	Soil	0.4	9.7	10.8	52	<0.1	7.9	5.6	400	1.92	2.8	0.6	0.6	2.3	93	0.1	0.2	<0.1	47	0.90	0.088
3839562	Soil	0.4	8.5	7.8	43	<0.1	7.0	7.1	716	2.03	3.1	0.6	0.5	2.3	52	0.1	0.2	<0.1	52	0.92	0.091
3839563	Soil	9.9	26.8	14.2	56	0.2	66.6	8.6	416	2.34	3.8	0.8	0.7	3.1	41	0.2	0.6	0.4	58	0.77	0.094
3839564	Soil	0.5	19.7	8.6	36	0.2	13.2	6.3	275	1.50	1.9	0.8	1.1	1.4	50	0.1	0.5	<0.1	44	0.85	0.092
3839565	Soil	5.2	13.7	48.7	144	0.2	33.9	11.4	653	3.16	24.1	0.8	3.9	2.1	19	0.6	2.1	0.1	67	0.25	0.072
3839566	Soil	2.1	12.6	177.0	332	1.9	18.1	9.5	819	2.46	29.9	0.8	4.2	2.1	30	1.4	1.2	0.3	62	0.39	0.056
3839567	Soil	1.9	13.5	165.0	364	1.7	16.1	9.0	1082	2.45	26.8	1.2	4.2	2.4	27	1.9	1.3	0.3	64	0.40	0.062
3839568	Soil	1.7	13.7	181.1	311	2.4	15.4	9.5	1374	2.36	25.7	1.3	5.9	2.2	27	1.6	1.2	0.3	61	0.36	0.061
3839569	Soil	1.1	8.4	34.3	98	0.7	7.6	3.4	158	1.94	10.7	0.3	0.9	1.7	8	0.3	0.6	0.2	57	0.07	0.022
3839570	Soil	1.5	12.5	183.7	265	1.7	15.2	10.3	987	2.11	13.1	1.3	1.8	2.3	25	1.2	1.0	0.2	58	0.36	0.060
3839571	Soil	1.6	14.7	133.7	233	1.5	14.9	8.7	497	2.45	16.2	1.5	1.7	2.3	24	0.4	0.7	0.3	65	0.35	0.056
3839572	Soil	1.8	12.6	116.9	224	1.6	13.3	9.0	723	2.25	16.0	1.5	3.0	2.7	25	0.8	0.6	0.3	56	0.33	0.068
3839573	Soil	2.0	12.3	124.9	150	1.2	11.8	9.3	910	2.18	14.6	1.7	3.4	2.1	23	0.4	0.6	0.2	57	0.30	0.072
3839574	Soil	2.8	12.2	134.9	173	1.7	11.3	7.5	558	2.56	23.1	1.6	4.8	3.7	20	0.5	0.9	0.2	72	0.29	0.084
3839575	Soil	3.6	14.7	202.2	196	2.1	12.0	6.8	306	3.14	20.4	2.0	3.9	5.5	17	0.6	1.2	0.3	71	0.26	0.084
3839576	Soil	4.7	14.6	224.8	174	2.5	9.3	8.0	432	2.67	22.1	2.6	7.0	6.8	13	0.6	1.3	0.3	46	0.18	0.075
3839577	Soil	5.2	11.8	189.4	210	2.2	9.7	12.6	930	2.92	30.3	2.2	7.7	5.9	17	0.9	1.5	0.4	46	0.27	0.094
3839578	Soil	7.5	18.6	102.4	242	1.2	21.6	7.3	701	3.24	40.4	2.6	9.9	9.3	18	0.6	2.0	0.2	52	0.25	0.080
3839579	Soil	0.5	13.0	9.7	50	<0.1	10.4	8.1	568	2.37	3.4	0.7	<0.5	2.6	277	0.1	0.5	<0.1	60	0.97	0.102
3839580	Soil	4.5	18.3	9.3	60	<0.1	39.2	10.9	482	2.36	4.1	0.9	2.8	3.2	138	0.2	0.5	<0.1	59	0.89	0.086



BUREAU VERITAS MINERAL LABORATORIES
Canada

www.bvna.com/mining-laboratory-serv

Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

Client: **Bill Mann**
19 Hayes Cres.
Whitehorse Yukon Y1A 0E1 Canada

Project: TOW
Report Date: November 01, 2021

Page: 2 of 4

Part: 2 of 2

CERTIFICATE OF ANALYSIS

WHI21000507.1

Method	Analyte	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
Unit		ppm	ppm	%	ppm	%	ppm	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	
MDL		1	1	0.01	1	0.001	1	0.01	0.001	0.01	0.01	0.01	0.1	0.05	1	0.5	0.2	
3839551	Soil	16	23	0.59	238	0.049	1	1.50	0.024	0.04	0.2	0.02	4.8	<0.1	<0.05	5	<0.5	<0.2
3839552	Soil	17	27	0.61	277	0.039	1	1.71	0.021	0.04	0.1	0.04	5.4	<0.1	0.05	6	<0.5	<0.2
3839553	Soil	14	23	0.54	348	0.041	1	1.62	0.023	0.04	0.2	0.02	4.9	<0.1	0.05	5	<0.5	<0.2
3839554	Soil	13	26	0.66	323	0.057	1	1.75	0.032	0.05	0.1	0.03	5.8	<0.1	0.05	6	<0.5	<0.2
3839555	Soil	12	28	0.65	242	0.057	1	1.64	0.025	0.04	0.1	0.03	5.1	<0.1	<0.05	5	0.6	<0.2
3839556	Soil	13	27	0.66	258	0.056	<1	1.69	0.032	0.04	0.1	0.03	5.3	<0.1	0.06	5	<0.5	<0.2
3839557	Soil	14	35	0.85	249	0.055	1	1.75	0.033	0.04	0.1	0.03	6.4	<0.1	<0.05	6	<0.5	<0.2
3839558	Soil	14	29	0.60	267	0.060	<1	1.77	0.023	0.04	0.2	0.03	5.5	<0.1	<0.05	5	<0.5	<0.2
3839559	Soil	11	26	0.49	181	0.073	<1	1.34	0.020	0.04	0.1	0.03	3.5	<0.1	<0.05	5	<0.5	<0.2
3839560	Soil	26	34	0.65	323	0.028	<1	2.06	0.024	0.05	0.1	0.04	6.0	<0.1	0.07	6	<0.5	<0.2
3839561	Soil	19	16	0.58	258	0.011	<1	1.68	0.018	0.03	<0.1	0.02	3.4	<0.1	<0.05	6	<0.5	<0.2
3839562	Soil	18	22	0.68	407	0.006	<1	1.62	0.013	0.05	<0.1	0.01	3.7	<0.1	<0.05	5	<0.5	<0.2
3839563	Soil	24	101	0.57	351	0.016	<1	1.61	0.018	0.10	0.3	0.02	4.3	<0.1	0.06	4	<0.5	<0.2
3839564	Soil	24	22	0.43	584	0.012	1	1.73	0.022	0.05	<0.1	0.05	4.3	<0.1	0.07	5	<0.5	<0.2
3839565	Soil	14	46	0.34	186	0.020	4	1.39	0.010	0.03	0.2	0.07	5.2	0.6	<0.05	5	<0.5	<0.2
3839566	Soil	13	33	0.47	218	0.027	1	1.63	0.014	0.06	0.1	0.06	4.4	0.3	0.06	5	<0.5	<0.2
3839567	Soil	15	32	0.49	319	0.031	<1	1.48	0.013	0.05	0.1	0.05	4.8	0.3	0.06	5	<0.5	<0.2
3839568	Soil	15	31	0.48	252	0.028	1	1.53	0.012	0.05	0.1	0.07	4.8	0.3	0.06	5	<0.5	<0.2
3839569	Soil	7	18	0.25	64	0.032	<1	1.38	0.015	0.04	<0.1	0.03	2.3	0.1	<0.05	6	<0.5	<0.2
3839570	Soil	15	32	0.50	209	0.034	<1	1.51	0.014	0.05	0.1	0.07	5.2	0.2	0.07	5	<0.5	<0.2
3839571	Soil	16	34	0.51	236	0.030	<1	1.66	0.013	0.05	0.1	0.07	5.1	0.3	0.08	5	<0.5	<0.2
3839572	Soil	16	29	0.48	269	0.033	<1	1.54	0.016	0.04	0.1	0.08	4.8	0.3	0.07	5	<0.5	<0.2
3839573	Soil	19	28	0.42	330	0.030	<1	1.49	0.015	0.04	0.1	0.10	4.4	0.4	0.09	5	<0.5	<0.2
3839574	Soil	20	29	0.51	371	0.042	<1	1.49	0.017	0.05	0.1	0.10	4.6	0.4	0.07	5	0.5	<0.2
3839575	Soil	22	31	0.47	367	0.027	1	1.44	0.013	0.05	0.1	0.13	4.6	0.4	0.06	5	0.6	<0.2
3839576	Soil	26	21	0.26	407	0.009	1	1.22	0.016	0.05	<0.1	0.14	4.3	0.5	0.08	4	<0.5	<0.2
3839577	Soil	26	19	0.26	609	0.009	1	1.31	0.010	0.06	0.1	0.18	3.9	0.8	0.10	4	0.7	<0.2
3839578	Soil	35	37	0.28	466	0.012	1	1.42	0.007	0.07	0.1	0.14	5.0	0.8	0.06	4	<0.5	<0.2
3839579	Soil	19	24	0.54	395	0.006	<1	1.86	0.017	0.04	<0.1	0.04	4.5	<0.1	0.09	5	<0.5	<0.2
3839580	Soil	24	68	0.87	265	0.020	<1	1.94	0.019	0.05	0.1	0.04	5.7	<0.1	0.06	6	<0.5	<0.2



Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

Client: **Bill Mann**
19 Hayes Cres.
Whitehorse Yukon Y1A 0E1 Canada

Project: TOW
Report Date: November 01, 2021

Page: 3 of 4

Part: 1 of 2

CERTIFICATE OF ANALYSIS

WHI21000507.1

Method Analyte Unit MDL	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201
	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppb	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	
	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.1	0.5	0.1	1	0.1	0.1	1	0.1	0.01	0.001	
3839581	Soil	0.5	20.7	11.2	62	0.1	17.7	10.1	769	2.28	3.6	1.1	1.2	3.1	84	0.2	0.5	0.1	56	0.88	0.077
3839582	Soil	0.8	27.9	11.0	53	0.1	16.5	8.6	342	2.08	2.7	1.0	0.7	3.0	40	0.2	0.7	<0.1	50	0.76	0.088
3839583	Soil	0.7	19.9	10.7	60	<0.1	16.6	11.0	540	2.67	2.4	0.6	<0.5	3.2	44	0.2	0.5	<0.1	65	0.82	0.098
3839584	Soil	1.0	14.0	8.3	55	<0.1	10.2	9.2	574	2.40	2.9	0.7	<0.5	2.1	48	0.1	0.4	<0.1	60	0.83	0.088
3839585	Soil	0.9	12.7	10.5	53	<0.1	10.5	6.0	154	2.17	5.0	0.7	<0.5	1.9	33	0.1	0.4	<0.1	60	0.46	0.090
3839586	Soil	3.0	13.7	9.4	65	<0.1	13.4	10.9	411	3.09	5.9	0.5	2.7	2.7	45	0.1	0.6	<0.1	74	0.63	0.111
3839587	Soil	2.0	12.8	10.6	59	<0.1	11.4	9.0	752	2.28	5.6	0.7	1.8	2.2	34	0.3	0.8	<0.1	50	0.52	0.082
3839588	Soil	1.8	12.6	13.7	67	0.1	10.5	15.1	630	3.17	8.0	0.6	2.1	2.4	26	0.2	1.2	0.1	60	0.37	0.091
3839589	Soil	1.6	10.2	9.5	46	<0.1	8.7	7.0	345	2.42	7.2	0.5	1.4	1.0	27	<0.1	0.5	0.1	65	0.32	0.085
3839590	Soil	2.2	12.4	11.0	68	<0.1	10.4	8.7	312	2.70	7.4	0.7	2.0	2.0	26	0.3	0.8	0.1	59	0.35	0.090
3839591	Soil	1.2	20.0	427.7	537	2.2	16.0	6.8	500	2.62	109.6	1.1	31.6	3.8	27	2.9	1.9	0.3	69	0.38	0.090
3839592	Soil	1.4	17.1	479.9	373	1.9	17.7	7.5	399	2.86	20.4	0.9	5.3	3.4	20	1.2	1.9	0.1	73	0.25	0.055
3839593	Soil	3.8	79.2	15.6	135	0.3	36.3	13.6	819	3.67	7.4	4.1	9.5	5.5	11	1.0	0.5	0.2	76	0.07	0.074
3839601	Soil	1.0	13.7	10.4	71	0.1	18.5	9.2	340	2.52	6.3	0.7	2.0	2.0	41	0.2	0.4	0.1	68	0.40	0.070
3839602	Soil	1.0	13.0	12.1	68	0.1	17.6	8.5	325	2.43	5.7	0.6	1.7	2.4	42	0.2	0.4	0.1	67	0.35	0.049
3839603	Soil	0.8	10.9	8.0	53	<0.1	14.4	6.3	189	1.95	4.1	0.5	2.7	1.5	28	0.2	0.3	<0.1	55	0.20	0.039
3839604	Soil	1.0	11.1	9.4	51	0.1	15.6	6.3	186	1.95	4.6	0.5	3.7	2.3	30	0.2	0.3	0.1	55	0.22	0.031
3839605	Soil	1.0	16.5	10.7	63	0.1	20.0	8.8	315	2.60	6.0	0.7	5.4	2.5	57	0.2	0.4	0.1	70	0.47	0.062
3839606	Soil	0.9	9.5	8.3	40	<0.1	12.7	4.7	137	2.07	4.3	0.3	33.6	2.2	21	0.1	0.3	0.1	65	0.14	0.019
3839607	Soil	0.7	11.9	9.8	50	0.1	15.7	6.3	151	2.14	4.5	0.5	0.7	2.8	27	<0.1	0.3	0.1	60	0.19	0.024
3839608	Soil	0.8	15.5	9.2	56	0.1	17.2	6.6	154	2.03	4.0	0.6	1.8	1.5	36	0.2	0.3	0.1	54	0.29	0.058
3839609	Soil	0.8	15.6	10.7	60	<0.1	18.2	10.0	316	2.41	6.3	0.6	11.0	3.2	34	0.1	0.4	0.1	64	0.33	0.065
3839610	Soil	0.4	5.2	4.3	21	<0.1	5.7	2.7	76	0.97	2.2	0.2	<0.5	0.9	12	0.1	0.2	<0.1	30	0.09	0.019
3839611	Soil	0.9	17.7	12.9	49	0.1	15.8	7.0	244	2.28	6.4	0.7	3.5	2.2	26	0.2	0.4	0.1	62	0.19	0.033
3839612	Soil	0.9	18.7	14.7	74	<0.1	19.7	9.4	353	2.62	8.1	0.6	3.0	3.5	33	0.2	0.7	0.1	72	0.31	0.068
3839613	Soil	0.8	18.5	11.7	45	0.2	12.7	5.9	257	1.98	5.2	0.6	1.5	1.5	38	<0.1	0.4	0.1	54	0.24	0.048
3839614	Soil	1.1	19.1	9.9	45	<0.1	18.5	8.6	213	2.77	10.2	0.5	2.4	3.2	17	0.2	0.5	0.2	69	0.13	0.029
3839615	Soil	0.2	7.3	3.4	13	<0.1	2.0	1.4	49	0.74	0.7	0.2	<0.5	0.6	9	<0.1	<0.1	<0.1	22	0.06	0.021
3839616	Soil	0.5	9.1	9.6	31	0.1	8.0	3.6	113	1.35	2.7	0.3	1.1	0.6	29	0.2	0.3	<0.1	46	0.16	0.039
3839617	Soil	0.2	4.2	2.8	10	<0.1	1.5	1.5	57	0.59	0.5	0.2	<0.5	0.4	7	<0.1	<0.1	<0.1	21	0.04	0.016



BUREAU VERITAS MINERAL LABORATORIES
Canada

www.bvna.com/mining-laboratory-serv

Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

Client: **Bill Mann**
19 Hayes Cres.
Whitehorse Yukon Y1A 0E1 Canada

Project: TOW
Report Date: November 01, 2021

Page: 3 of 4

Part: 2 of 2

CERTIFICATE OF ANALYSIS

WHI21000507.1

Method Analyte Unit MDL	AQ201 La ppm 1	AQ201 Cr ppm 1	AQ201 Mg % 0.01	AQ201 Ba ppm 1	AQ201 Ti % 0.001	AQ201 B ppm 1	AQ201 Al % 0.01	AQ201 Na % 0.001	AQ201 K % 0.01	AQ201 W ppm 0.1	AQ201 Hg ppm 0.01	AQ201 Sc ppm 0.1	AQ201 Ti ppm 0.1	AQ201 S % 0.05	AQ201 Ga ppm 1	AQ201 Se ppm 0.5	AQ201 Te ppm 0.2																	
																		AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201					
																		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Ti	S	Ga	Se	Te
																		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
3839581	Soil	28	34	0.65	327	0.027	<1	1.84	0.015	0.05	0.1	0.05	6.8	<0.1	0.08	6	<0.5	<0.2																
3839582	Soil	25	28	0.57	615	0.019	<1	1.63	0.018	0.07	0.1	0.03	4.6	<0.1	0.08	5	<0.5	<0.2																
3839583	Soil	27	27	0.77	402	0.018	<1	1.71	0.018	0.07	<0.1	0.02	6.0	<0.1	0.06	6	<0.5	<0.2																
3839584	Soil	17	20	0.50	308	0.011	1	1.43	0.017	0.03	<0.1	0.03	5.0	0.1	0.07	5	<0.5	<0.2																
3839585	Soil	15	23	0.37	248	0.011	<1	1.36	0.015	0.04	<0.1	0.04	4.0	0.1	0.10	4	<0.5	<0.2																
3839586	Soil	18	25	0.58	332	0.025	3	1.54	0.025	0.06	<0.1	0.04	6.1	0.2	<0.05	4	<0.5	<0.2																
3839587	Soil	17	19	0.28	531	0.008	2	1.14	0.011	0.07	<0.1	0.04	4.5	0.2	<0.05	3	<0.5	<0.2																
3839588	Soil	15	21	0.33	413	0.015	3	1.33	0.015	0.07	<0.1	0.04	4.6	0.2	<0.05	3	<0.5	<0.2																
3839589	Soil	8	18	0.36	145	0.026	2	1.42	0.020	0.04	<0.1	0.05	2.4	0.2	0.06	4	<0.5	<0.2																
3839590	Soil	12	19	0.35	343	0.022	2	1.36	0.017	0.06	0.1	0.05	3.7	0.2	0.07	4	<0.5	<0.2																
3839591	Soil	16	37	0.62	212	0.070	2	1.72	0.019	0.07	0.1	0.05	6.0	0.2	0.06	4	<0.5	<0.2																
3839592	Soil	14	32	0.53	172	0.058	1	2.14	0.011	0.06	0.2	0.06	4.2	0.2	<0.05	6	<0.5	<0.2																
3839593	Soil	28	32	0.56	189	0.081	1	1.93	0.007	0.25	<0.1	0.04	3.7	0.3	<0.05	6	0.8	<0.2																
3839601	Soil	12	30	0.57	335	0.052	1	1.96	0.016	0.07	0.1	0.03	4.3	0.1	0.06	6	<0.5	<0.2																
3839602	Soil	12	30	0.54	282	0.062	2	2.02	0.016	0.06	0.2	0.04	4.0	<0.1	0.05	6	<0.5	<0.2																
3839603	Soil	9	25	0.40	193	0.048	<1	1.66	0.015	0.06	0.1	0.04	2.9	<0.1	0.07	5	<0.5	<0.2																
3839604	Soil	9	27	0.40	210	0.058	1	1.64	0.019	0.05	0.1	0.03	2.9	<0.1	0.06	5	<0.5	<0.2																
3839605	Soil	12	36	0.59	285	0.065	2	2.09	0.019	0.06	0.2	0.04	4.6	<0.1	0.07	6	<0.5	<0.2																
3839606	Soil	9	24	0.37	153	0.062	1	1.66	0.014	0.05	0.1	0.02	2.6	<0.1	0.06	6	<0.5	<0.2																
3839607	Soil	11	29	0.43	267	0.067	1	2.01	0.017	0.05	0.2	0.02	3.3	0.1	0.05	6	<0.5	<0.2																
3839608	Soil	11	29	0.44	321	0.050	2	1.92	0.016	0.06	0.2	0.03	3.4	<0.1	0.08	5	<0.5	<0.2																
3839609	Soil	13	31	0.53	283	0.066	1	1.72	0.015	0.05	0.3	0.01	3.8	<0.1	0.06	5	<0.5	<0.2																
3839610	Soil	4	10	0.18	71	0.039	<1	0.60	0.022	0.03	<0.1	0.02	1.2	<0.1	0.08	3	<0.5	<0.2																
3839611	Soil	11	27	0.37	245	0.058	1	2.00	0.016	0.05	0.2	0.03	3.5	0.1	0.05	6	<0.5	<0.2																
3839612	Soil	12	31	0.52	206	0.072	1	1.83	0.016	0.06	0.2	0.04	3.7	<0.1	<0.05	5	<0.5	<0.2																
3839613	Soil	10	23	0.32	213	0.054	2	1.77	0.028	0.05	0.2	0.03	3.2	<0.1	0.07	5	<0.5	<0.2																
3839614	Soil	9	30	0.34	200	0.056	1	2.55	0.012	0.05	0.1	0.05	3.4	0.1	0.08	5	0.8	<0.2																
3839615	Soil	3	5	0.07	28	0.035	<1	0.81	0.026	0.02	<0.1	0.03	0.9	<0.1	0.09	3	<0.5	<0.2																
3839616	Soil	6	17	0.24	76	0.050	1	1.05	0.019	0.04	0.1	0.04	1.6	<0.1	0.10	4	<0.5	<0.2																
3839617	Soil	2	4	0.04	29	0.034	<1	0.55	0.033	0.02	<0.1	0.02	0.7	<0.1	0.08	3	<0.5	<0.2																



BUREAU VERITAS MINERAL LABORATORIES
Canada

www.bvna.com/mining-laboratory-serv

Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

Client: **Bill Mann**
19 Hayes Cres.
Whitehorse Yukon Y1A 0E1 Canada

Project: TOW
Report Date: November 01, 2021

Page: 4 of 4

Part: 1 of 2

CERTIFICATE OF ANALYSIS

WHI21000507.1

	Method Analyte Unit MDL	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.1	0.5	0.1	1	0.1	1	0.1	0.1	2	0.01
3839618	Soil	0.7	9.9	25.5	47	0.1	7.5	3.8	118	1.75	5.7	0.2	1.1	1.0	13	0.3	0.5	<0.1	49	0.09	0.022
3839619	Soil	1.2	15.5	170.1	427	1.4	12.1	8.7	748	2.51	34.8	0.5	6.1	2.1	74	3.0	2.5	0.2	73	0.53	0.096
3839620	Soil	1.1	12.3	55.6	159	0.4	14.7	6.3	316	2.19	13.8	0.6	1.6	3.0	27	0.6	0.8	0.1	57	0.37	0.069
3839621	Soil	1.3	13.7	71.9	188	0.8	16.4	6.8	346	2.30	14.9	0.9	2.5	2.4	31	0.5	0.9	0.2	59	0.35	0.067
3839622	Soil	1.1	15.2	131.3	147	1.1	10.2	4.0	220	1.42	20.5	0.7	2.0	0.9	22	1.6	0.9	<0.1	39	0.21	0.044
3839623	Soil	1.3	5.4	42.5	64	0.4	4.3	2.3	174	1.09	9.2	0.2	2.0	0.9	9	0.4	0.4	<0.1	44	0.07	0.015
3839624	Soil	1.4	14.9	54.0	141	0.7	15.2	7.4	415	2.23	12.4	0.7	3.5	2.1	34	0.7	0.7	0.1	61	0.39	0.051
3839625	Soil	0.4	10.0	6.2	25	0.4	3.1	1.8	71	0.87	1.1	0.2	<0.5	0.4	10	0.4	<0.1	<0.1	28	0.07	0.028
3839626	Soil	0.9	14.2	11.4	68	0.1	18.7	8.0	337	2.49	6.8	0.7	1.2	2.3	30	0.2	0.4	0.1	66	0.32	0.055
3839627	Soil	0.9	16.5	13.6	78	0.2	21.7	8.6	374	2.60	6.9	0.8	1.8	2.4	39	0.2	0.4	0.2	66	0.38	0.060
3839628	Soil	0.8	15.6	14.2	70	0.2	19.6	7.6	280	2.19	6.2	0.8	35.2	2.4	27	0.2	0.5	0.1	58	0.30	0.062
3839629	Soil	0.8	13.9	13.7	69	0.2	18.3	6.8	259	1.95	5.3	0.8	6.1	2.2	37	0.2	0.5	0.2	53	0.42	0.056
3839630	Soil	0.7	14.1	14.3	68	0.1	18.0	6.8	342	2.10	6.3	0.8	4.4	3.5	28	0.2	0.4	0.2	53	0.35	0.067
3839631	Soil	0.6	14.6	17.3	81	0.1	18.4	7.4	264	2.01	4.8	0.9	3.7	3.6	29	0.2	0.5	0.1	56	0.40	0.069
3839632	Soil	0.7	12.4	20.4	77	<0.1	17.7	8.3	332	2.02	6.6	0.7	4.7	3.9	25	0.2	0.5	0.1	60	0.38	0.067
3839633	Soil	0.7	12.3	15.7	71	0.2	14.7	6.3	260	1.78	5.4	0.6	3.1	1.5	32	0.3	0.4	0.1	51	0.36	0.047
3839634	Soil	0.7	15.0	25.2	91	0.2	20.6	9.7	419	2.63	9.2	0.7	3.8	3.1	30	0.2	0.6	0.1	75	0.38	0.071
3839635	Soil	1.0	18.9	29.2	84	0.4	23.5	7.3	292	2.38	9.1	0.9	<0.5	2.8	26	0.1	0.7	0.2	63	0.34	0.067
3839636	Soil	1.0	16.6	29.7	92	0.6	18.6	7.6	508	2.36	9.9	0.8	2.1	2.1	43	0.3	1.1	0.1	63	0.50	0.113
3839637	Soil	1.3	16.6	62.9	169	0.4	19.3	8.1	510	2.67	15.6	0.8	<0.5	3.6	27	0.4	1.0	0.1	73	0.38	0.075
3839638	Soil	0.8	14.4	91.1	250	0.9	15.1	8.3	495	2.49	23.2	0.8	4.2	3.0	27	0.4	1.0	0.1	67	0.33	0.054



BUREAU VERITAS
MINERAL LABORATORIES
Canada

www.bvna.com/mining-laboratory-serv

Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

Client: **Bill Mann**
19 Hayes Cres.
Whitehorse Yukon Y1A 0E1 Canada

Project: TOW
Report Date: November 01, 2021

Page: 4 of 4

Part: 2 of 2

CERTIFICATE OF ANALYSIS

WHI21000507.1

Method	Analyte	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
Unit		ppm	ppm	%	ppm	%	ppm	%	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
MDL		1	1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.05	1	0.5	0.2	
3839618	Soil	5	14	0.18	81	0.055	<1	1.14	0.020	0.03	0.1	0.03	1.6	<0.1	0.09	5	<0.5	<0.2
3839619	Soil	14	25	0.56	222	0.066	1	1.61	0.046	0.11	0.2	0.06	4.6	0.1	0.07	5	<0.5	<0.2
3839620	Soil	13	31	0.53	204	0.050	<1	1.49	0.013	0.04	0.2	0.02	4.3	0.2	0.07	4	<0.5	<0.2
3839621	Soil	14	34	0.53	250	0.043	1	1.87	0.016	0.05	0.1	0.05	5.4	0.2	0.11	6	<0.5	<0.2
3839622	Soil	11	18	0.26	131	0.033	1	0.96	0.023	0.03	0.1	0.04	2.8	<0.1	0.10	3	<0.5	<0.2
3839623	Soil	5	11	0.13	46	0.040	1	0.68	0.018	0.03	<0.1	0.01	1.3	<0.1	0.07	5	<0.5	<0.2
3839624	Soil	12	28	0.45	188	0.045	1	1.72	0.017	0.06	0.2	0.04	4.2	0.2	0.07	5	<0.5	<0.2
3839625	Soil	3	7	0.05	41	0.029	<1	0.71	0.022	0.02	<0.1	0.03	0.8	<0.1	0.12	3	<0.5	<0.2
3839626	Soil	13	32	0.50	293	0.053	1	1.77	0.015	0.06	0.2	0.03	4.0	0.1	0.07	5	<0.5	<0.2
3839627	Soil	14	35	0.55	402	0.054	2	2.09	0.017	0.07	0.2	0.04	4.8	0.1	0.08	6	<0.5	<0.2
3839628	Soil	13	32	0.49	334	0.045	1	1.76	0.013	0.06	0.2	0.03	4.1	0.1	0.08	5	<0.5	<0.2
3839629	Soil	14	31	0.46	391	0.054	1	1.75	0.016	0.05	0.2	0.06	3.8	0.1	<0.05	6	0.8	<0.2
3839630	Soil	16	35	0.52	297	0.063	2	1.71	0.013	0.04	0.2	0.04	3.9	0.1	<0.05	5	<0.5	<0.2
3839631	Soil	16	37	0.50	260	0.072	2	1.71	0.015	0.05	0.2	0.04	4.5	0.1	<0.05	6	<0.5	<0.2
3839632	Soil	15	33	0.47	200	0.081	2	1.80	0.013	0.05	0.2	0.04	3.7	0.1	<0.05	5	<0.5	<0.2
3839633	Soil	11	27	0.40	231	0.055	1	1.49	0.014	0.05	0.2	0.05	3.1	<0.1	0.06	5	<0.5	<0.2
3839634	Soil	15	38	0.59	270	0.073	1	2.06	0.015	0.06	0.2	0.04	4.7	0.1	<0.05	6	<0.5	<0.2
3839635	Soil	14	39	0.58	272	0.074	3	2.24	0.018	0.06	0.2	0.05	5.2	0.1	0.06	6	<0.5	<0.2
3839636	Soil	14	38	0.54	265	0.066	<1	1.86	0.017	0.07	0.2	0.07	5.2	0.1	0.07	6	<0.5	<0.2
3839637	Soil	16	37	0.59	239	0.077	<1	2.06	0.015	0.06	0.1	0.04	5.2	0.1	<0.05	5	<0.5	<0.2
3839638	Soil	14	34	0.63	232	0.071	<1	1.84	0.014	0.06	0.1	0.03	5.1	0.2	<0.05	5	0.5	<0.2



QUALITY CONTROL REPORT

WHI21000507.1

Method	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201
Analyte	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	
Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	
MDL	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.1	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001	
Pulp Duplicates																					
3839553	Soil	0.9	12.2	8.5	54	<0.1	12.4	8.0	467	2.36	4.6	0.7	1.7	2.1	87	0.1	0.3	0.1	66	0.77	0.072
REP 3839553	QC	1.0	12.3	8.6	55	<0.1	12.7	8.4	498	2.47	4.6	0.7	3.7	2.1	85	0.1	0.3	0.1	67	0.79	0.071
3839589	Soil	1.6	10.2	9.5	46	<0.1	8.7	7.0	345	2.42	7.2	0.5	1.4	1.0	27	<0.1	0.5	0.1	65	0.32	0.085
REP 3839589	QC	1.5	9.9	9.5	47	<0.1	8.8	7.0	330	2.35	7.0	0.5	1.6	0.8	27	0.1	0.5	0.1	68	0.32	0.087
3839632	Soil	0.7	12.4	20.4	77	<0.1	17.7	8.3	332	2.02	6.6	0.7	4.7	3.9	25	0.2	0.5	0.1	60	0.38	0.067
REP 3839632	QC	0.6	13.6	20.4	75	<0.1	18.3	8.5	321	2.21	7.0	0.7	1.8	3.7	24	0.2	0.5	0.1	59	0.38	0.072
Reference Materials																					
STD BVGEO01	Standard	11.0	4362.0	185.9	1728	2.4	166.9	25.0	675	3.75	118.3	3.6	202.5	16.2	50	6.5	3.8	23.7	77	1.23	0.074
STD DS11	Standard	14.0	145.7	133.4	338	1.6	79.9	13.9	934	3.09	43.3	2.4	77.3	7.9	62	2.3	9.1	11.2	53	0.98	0.068
STD DS11	Standard	15.4	151.3	136.4	384	1.7	81.0	13.9	981	3.19	44.3	2.6	80.3	8.8	69	2.1	8.1	11.8	52	1.14	0.081
STD OREAS262	Standard	0.7	105.9	53.1	144	0.4	60.8	26.4	463	3.07	34.1	1.1	67.4	8.9	32	0.6	6.1	0.9	22	2.74	0.036
STD OREAS262	Standard	0.7	115.9	56.3	151	0.5	63.9	28.2	540	3.51	36.3	1.2	79.2	10.1	35	0.6	6.1	1.0	28	2.94	0.040
STD OREAS262	Standard	0.7	115.9	57.6	154	0.5	70.4	27.8	543	3.46	37.0	1.3	63.1	10.4	35	0.5	4.9	1.1	28	3.06	0.044
STD BVGEO01 Expected		11.2	4415	187	1741	2.53	163	25	733	3.7	121	3.77	219	14.4	55	6.5	3.39	25.6	73	1.3219	0.0727
STD DS11 Expected		14.6	149	138	345	1.71	77.7	14.2	1055	3.1	42.8	2.59	79	7.65	67.3	2.37	8.74	12.2	50	1.063	0.0701
STD OREAS262 Expected		0.68	118	56	154	0.45	62	26.9	530	3.284	35.8	1.22	65	9.33	36	0.61	5.06	1.03	22.5	2.98	0.04
BLK	Blank	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.5	<0.1	<0.5	<0.1	<1	<0.1	<0.1	<0.1	4	<0.01	<0.001
BLK	Blank	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.5	<0.1	<0.5	<0.1	<1	<0.1	<0.1	<0.1	6	<0.01	<0.001
BLK	Blank	<0.1	<0.1	<0.1	<1	<0.1	0.1	<0.1	<1	<0.01	<0.5	<0.1	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01	<0.001



Bureau Veritas Commodities Canada Ltd.
9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada
PHONE (604) 253-3158

Project: TOW
Report Date: November 01, 2021

Page: 1 of 1

Part: 2 of 2

QUALITY CONTROL REPORT

WHI21000507.1

Method	Analyte	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
Unit		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
MDL		1	1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.05	1	0.5	0.2	
Pulp Duplicates																		
3839553	Soil	14	23	0.54	348	0.041	1	1.62	0.023	0.04	0.2	0.02	4.9	<0.1	0.05	5	<0.5	<0.2
REP 3839553	QC	14	23	0.57	352	0.043	<1	1.65	0.024	0.05	0.1	0.03	4.9	<0.1	0.05	5	<0.5	<0.2
3839589	Soil	8	18	0.36	145	0.026	2	1.42	0.020	0.04	<0.1	0.05	2.4	0.2	0.06	4	<0.5	<0.2
REP 3839589	QC	8	18	0.36	152	0.026	2	1.47	0.021	0.04	<0.1	0.04	2.5	0.2	0.08	4	<0.5	<0.2
3839632	Soil	15	33	0.47	200	0.081	2	1.80	0.013	0.05	0.2	0.04	3.7	0.1	<0.05	5	<0.5	<0.2
REP 3839632	QC	14	35	0.51	192	0.084	2	1.60	0.012	0.05	0.2	0.04	3.6	0.1	<0.05	5	<0.5	<0.2
Reference Materials																		
STD BVGEO01	Standard	25	178	1.26	289	0.216	3	2.14	0.188	0.85	5.5	0.09	6.2	0.6	0.75	7	4.8	1.1
STD DS11	Standard	17	59	0.79	345	0.084	8	1.02	0.079	0.36	3.0	0.23	3.1	4.8	0.31	5	2.5	4.7
STD DS11	Standard	19	66	0.93	366	0.103	11	1.29	0.065	0.37	2.9	0.27	3.3	4.8	0.33	5	2.2	4.4
STD OREAS262	Standard	14	42	1.07	238	0.003	3	1.06	0.063	0.27	0.2	0.15	3.1	0.4	0.25	4	<0.5	0.2
STD OREAS262	Standard	18	45	1.13	252	0.003	4	1.27	0.067	0.32	0.2	0.18	3.3	0.5	0.28	4	1.0	0.2
STD OREAS262	Standard	19	45	1.19	249	0.003	5	1.50	0.058	0.30	0.3	0.18	3.6	0.5	0.37	4	<0.5	0.3
STD BVGEO01 Expected		25.9	187	1.2963	260	0.233	3.8	2.347	0.1924	0.89	5.3	0.1	5.97	0.62	0.6655	7.37	4.84	1.02
STD DS11 Expected		18.6	61.5	0.85	385	0.0976		1.1795	0.0762	0.4	2.9	0.26	3.4	4.9	0.2835	5.1	2.2	4.56
STD OREAS262 Expected		15.9	41.7	1.17	248	0.0027	4	1.3	0.071	0.312	0.2	0.17	3.24	0.47	0.253	4.1	0.4	0.23
BLK	Blank	<1	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2
BLK	Blank	<1	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	0.08	<1	<0.5	<0.2
BLK	Blank	<1	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2



Bureau Veritas Commodities Canada Ltd.
9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada
PHONE (604) 253-3158

Client: **Bill Mann**
19 Hayes Cres.
Whitehorse Yukon Y1A 0E1 Canada

Submitted By: Bill Mann
Receiving Lab: Canada-Whitehorse
Received: September 08, 2021
Analysis Start: October 26, 2021
Report Date: October 29, 2021
Page: 1 of 3

CERTIFICATE OF ANALYSIS

WHI21000508.1

CLIENT JOB INFORMATION

Project: TOW
Shipment ID:
P.O. Number
Number of Samples: 35

SAMPLE DISPOSAL

DISP-PLP Dispose of Pulp After 90 days
DISP-RJT-SOIL Immediate Disposal of Soil Reject

Bureau Veritas does not accept responsibility for samples left at the laboratory after 90 days without prior written instructions for sample storage or return.

Invoice To: Bill Mann
19 Hayes Cres.
Whitehorse Yukon Y1A 0E1
Canada

CC:

SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Procedure Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
SS80	35	Dry at 60C sieve 100g to -80 mesh			WHI
AQ250	35	1:1:1 Aqua Regia digestion Ultratrace ICP-MS analysis	0.5	Completed	VAN
DISPL	35	Disposal of pulps			VAN
SHP01	35	Per sample shipping charges for branch shipments			VAN

ADDITIONAL COMMENTS


JEFFREY CANNON
Geochemistry Department Supervisor



Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

Client: **Bill Mann**
19 Hayes Cres.
Whitehorse Yukon Y1A 0E1 Canada

Project: TOW
Report Date: October 29, 2021

Page: 2 of 3

Part: 1 of 2

CERTIFICATE OF ANALYSIS

WHI21000508.1

Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	
	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	
	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	
	0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001	
5273010	AH Soil	1.63	19.51	4.60	45.9	130	12.7	11.3	1677	1.69	4.0	0.9	1.7	0.4	126.0	0.58	0.45	0.09	37	1.58	0.098
5273011	AH Soil	0.81	11.18	6.99	47.6	108	11.6	11.5	772	2.07	3.2	0.8	1.8	0.9	64.6	0.26	0.27	0.11	51	0.47	0.078
5273012	AH Soil	1.29	9.17	5.77	40.9	66	9.1	6.4	205	1.77	3.1	0.5	1.4	0.8	88.2	0.18	0.28	0.09	42	0.68	0.058
5273013	AH Soil	0.82	10.44	6.25	48.6	99	11.9	6.8	239	1.94	3.1	0.6	0.8	1.0	78.3	0.16	0.24	0.10	45	0.49	0.051
5273014	AH Soil	1.28	12.87	3.99	47.5	81	9.3	5.7	229	1.26	2.8	0.5	1.4	0.5	95.8	0.52	0.52	0.07	29	0.86	0.081
5273015	AH Soil	0.97	15.77	5.58	56.2	96	12.4	7.7	470	1.85	3.1	0.7	1.2	0.6	102.8	0.31	0.38	0.09	45	0.93	0.089
5273016	AH Soil	0.66	8.94	5.87	57.1	36	12.9	8.0	208	2.21	3.1	0.4	0.6	1.0	72.6	0.19	0.18	0.08	62	0.42	0.064
5273017	AH Soil	0.66	14.65	6.64	52.5	120	13.5	7.1	214	2.07	4.5	0.8	2.1	1.1	102.0	0.21	0.36	0.12	46	0.81	0.073
5273018	AH Soil	0.82	7.59	3.53	20.1	170	4.9	2.5	65	0.86	1.6	0.5	0.6	0.1	57.4	0.40	0.26	0.06	21	0.26	0.078
5273019	AH Soil	0.63	11.76	4.53	30.5	97	7.8	3.0	142	0.90	1.8	0.6	0.5	0.7	147.5	0.24	0.40	0.07	21	1.32	0.069
5273020	AH Soil	0.59	9.33	5.10	31.3	70	5.9	3.5	261	0.93	2.2	0.4	1.7	0.5	127.4	0.26	0.33	0.07	20	1.62	0.101
5273021	AH Soil	0.72	13.28	2.03	13.6	56	5.5	1.5	542	0.42	1.3	0.2	0.5	0.2	155.4	0.36	0.49	0.04	8	2.54	0.092
5273022	AH Soil	0.67	11.71	6.57	39.6	247	10.2	5.3	233	1.75	1.8	0.6	1.2	0.5	59.4	0.10	0.32	0.11	34	0.71	0.101
5273023	AH Soil	0.48	12.44	5.24	41.1	48	8.9	6.2	184	1.69	1.8	0.5	<0.2	1.0	33.7	0.12	0.26	0.09	38	0.45	0.083
5273024	AH Soil	0.74	13.42	4.77	47.9	98	7.8	5.8	776	1.41	1.8	0.5	0.9	0.7	241.7	0.53	0.50	0.07	30	1.30	0.112
5273025	AH Soil	0.60	16.19	4.26	32.4	102	7.7	5.1	283	1.33	2.7	1.0	1.9	0.6	179.8	0.16	0.51	0.06	31	2.07	0.110
5273026	AH Soil	0.52	23.71	6.84	52.8	191	13.3	5.7	575	1.44	2.8	1.0	1.8	0.8	97.4	0.28	0.70	0.10	31	1.60	0.110
5273027	AH Soil	0.64	17.48	4.92	36.7	184	8.7	3.3	146	1.04	1.3	0.4	1.2	0.3	71.7	0.32	0.36	0.08	20	1.30	0.100
5273028	AH Soil	0.79	14.11	4.90	32.8	84	8.5	4.7	624	1.22	1.8	0.4	0.6	0.4	89.3	0.23	0.37	0.08	24	1.72	0.098
5273029	AH Soil	1.06	10.47	6.34	53.6	58	7.8	8.2	627	2.01	2.9	0.5	0.5	1.3	58.8	0.20	0.36	0.07	45	1.01	0.091
5273030	AH Soil	0.77	11.53	7.57	42.1	76	8.4	7.3	274	1.89	3.8	0.6	1.1	1.0	36.3	0.10	0.32	0.07	42	0.48	0.085
5273031	AH Soil	1.66	12.66	5.06	37.7	83	7.3	10.0	1215	1.59	3.5	0.4	1.0	0.4	65.8	0.26	0.43	0.07	37	0.85	0.104
5273032	AH Soil	1.39	7.68	7.04	45.2	73	6.7	7.8	1202	1.86	4.9	0.4	0.7	1.0	23.0	0.13	0.38	0.09	38	0.31	0.073
5273033	AH Soil	1.47	10.07	9.09	46.4	182	6.6	17.8	1292	2.01	4.8	0.6	1.9	0.2	29.6	0.25	0.82	0.10	40	0.35	0.134
5273034	AH Soil	1.19	10.56	6.73	32.9	107	6.4	9.0	348	1.87	5.0	0.5	1.1	0.2	34.2	0.12	0.53	0.08	34	0.35	0.091
5273035	AH Soil	2.01	9.05	9.79	54.8	111	8.1	9.6	638	2.15	6.4	0.5	0.9	0.5	25.8	0.16	0.57	0.14	44	0.32	0.089
5273036	AH Soil	2.10	18.07	90.81	181.8	7016	11.5	5.6	861	1.42	7.2	3.6	5.1	0.6	42.7	1.55	1.51	0.08	17	0.60	0.172
5273037	AH Soil	1.04	9.93	61.73	130.8	1903	7.3	2.9	553	0.85	2.2	1.5	1.0	0.3	46.2	1.13	1.10	0.06	12	0.62	0.097
5273038	AH Soil	0.64	10.74	826.99	129.6	3239	4.0	1.4	44	0.80	10.4	1.1	6.5	<0.1	12.8	1.37	0.59	0.16	16	0.12	0.055
5273039	AH Soil	1.88	17.90	251.86	293.7	4955	10.8	12.1	3594	1.58	6.2	4.9	12.3	0.4	31.8	3.48	1.62	0.21	17	0.33	0.159



Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada
PHONE (604) 253-3158

Project: TOW
Report Date: October 29, 2021

Page: 2 of 3

Part: 2 of 2

CERTIFICATE OF ANALYSIS

WHI21000508.1

Method	Analyte	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga
Unit		ppm	ppm	%	ppm	%	ppm	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm
MDL		0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	5	0.1	0.02	0.02	0.1
5273010	AH Soil	15.6	16.5	0.38	273.6	0.022	<20	1.15	0.013	0.04	0.1	2.8	0.06	0.10	66	0.4	0.03	2.9
5273011	AH Soil	14.7	22.2	0.50	220.7	0.027	<20	1.60	0.014	0.05	0.1	4.1	0.06	0.04	27	0.3	0.03	4.6
5273012	AH Soil	9.7	17.2	0.40	258.6	0.033	<20	1.23	0.014	0.06	<0.1	3.1	0.05	0.05	45	0.3	0.02	4.0
5273013	AH Soil	10.2	21.1	0.53	231.8	0.038	<20	1.50	0.018	0.05	<0.1	3.6	0.07	0.03	31	0.2	0.03	4.8
5273014	AH Soil	7.4	15.2	0.36	158.0	0.025	<20	0.96	0.013	0.07	<0.1	2.5	0.04	0.07	64	0.3	<0.02	2.8
5273015	AH Soil	12.2	20.7	0.55	228.3	0.037	<20	1.49	0.020	0.05	0.1	3.6	0.06	0.05	61	0.4	<0.02	4.3
5273016	AH Soil	8.0	25.1	0.71	155.7	0.047	<20	1.53	0.022	0.05	<0.1	4.1	0.05	0.02	14	0.2	<0.02	5.2
5273017	AH Soil	13.0	23.5	0.55	227.0	0.048	<20	1.57	0.017	0.05	0.2	4.5	0.07	0.04	34	0.3	0.03	4.8
5273018	AH Soil	8.3	12.0	0.14	94.2	0.028	<20	0.61	0.012	0.07	0.2	1.4	0.03	0.05	112	0.3	<0.02	2.2
5273019	AH Soil	18.4	12.2	0.27	218.0	0.020	<20	0.88	0.009	0.05	<0.1	2.0	0.03	0.07	67	0.3	<0.02	2.5
5273020	AH Soil	13.3	9.6	0.29	261.6	0.012	<20	0.95	0.014	0.07	<0.1	1.7	0.04	0.09	81	0.3	<0.02	3.1
5273021	AH Soil	20.8	5.3	0.13	350.0	0.010	<20	0.39	0.013	0.04	<0.1	0.5	0.03	0.16	72	0.3	<0.02	0.8
5273022	AH Soil	13.8	21.6	0.59	253.2	0.007	<20	1.60	0.009	0.05	<0.1	2.7	0.06	0.07	54	0.4	0.02	4.2
5273023	AH Soil	13.0	17.6	0.49	314.8	0.011	<20	1.50	0.009	0.07	<0.1	3.7	<0.02	0.04	153	0.3	<0.02	5.0
5273024	AH Soil	15.1	13.6	0.37	297.7	0.007	<20	1.25	0.010	0.05	<0.1	2.3	0.05	0.09	53	0.4	0.03	3.6
5273025	AH Soil	19.8	17.2	0.50	203.1	0.013	<20	1.19	0.015	0.05	0.1	2.4	0.04	0.11	57	0.4	<0.02	3.5
5273026	AH Soil	28.1	23.1	0.42	309.6	0.021	<20	1.59	0.013	0.07	0.1	4.1	0.07	0.09	72	0.6	0.02	4.1
5273027	AH Soil	11.9	13.9	0.24	457.7	0.015	<20	0.85	0.013	0.05	<0.1	1.6	0.06	0.12	47	0.4	<0.02	3.0
5273028	AH Soil	16.2	13.2	0.37	350.4	0.013	<20	1.07	0.014	0.04	<0.1	1.8	0.06	0.13	44	0.4	<0.02	3.4
5273029	AH Soil	13.2	16.0	0.46	236.3	0.012	<20	1.18	0.015	0.05	<0.1	3.8	0.07	0.06	41	0.3	0.03	4.1
5273030	AH Soil	13.9	16.5	0.33	221.7	0.014	<20	1.16	0.017	0.04	<0.1	3.3	0.11	0.06	34	0.3	0.02	3.4
5273031	AH Soil	8.0	11.7	0.26	292.3	0.012	<20	0.79	0.013	0.05	<0.1	2.4	0.11	0.12	72	0.4	0.03	2.5
5273032	AH Soil	12.0	14.5	0.22	344.0	0.008	<20	1.07	0.008	0.06	<0.1	3.2	0.19	0.04	53	0.3	0.03	3.0
5273033	AH Soil	9.2	13.7	0.20	343.6	0.006	<20	1.02	0.009	0.06	<0.1	2.9	0.17	0.09	65	0.5	0.07	2.7
5273034	AH Soil	7.2	11.8	0.20	165.6	0.015	<20	0.92	0.014	0.05	0.2	1.6	0.12	0.09	79	0.4	0.07	2.6
5273035	AH Soil	9.5	16.0	0.28	299.1	0.018	<20	1.13	0.012	0.05	0.1	2.4	0.20	0.06	62	0.5	0.05	3.5
5273036	AH Soil	42.9	13.5	0.10	997.1	0.008	<20	0.82	0.008	0.10	<0.1	4.2	0.80	0.14	367	0.6	0.02	1.9
5273037	AH Soil	26.0	7.1	0.11	591.7	0.009	<20	0.49	0.009	0.08	<0.1	1.7	0.18	0.11	116	0.3	<0.02	1.0
5273038	AH Soil	16.8	7.9	0.06	155.4	0.014	<20	0.52	0.017	0.04	<0.1	1.0	0.11	0.04	91	0.3	0.05	2.3
5273039	AH Soil	44.1	20.1	0.14	786.0	0.008	<20	1.01	0.009	0.07	<0.1	4.8	0.38	0.11	268	0.9	0.03	2.3



BUREAU VERITAS MINERAL LABORATORIES
Canada

www.bvna.com/mining-laboratory-serv

Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

Client: **Bill Mann**
19 Hayes Cres.
Whitehorse Yukon Y1A 0E1 Canada

Project: TOW
Report Date: October 29, 2021

Page: 3 of 3

Part: 1 of 2

CERTIFICATE OF ANALYSIS

WHI21000508.1

Method	Analyte	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
		MDL	0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01
5273040	AH Soil	1.36	19.96	130.76	571.6	9225	12.7	3.2	253	1.25	7.9	3.1	9.4	0.3	50.3	7.63	1.20	0.20	20	0.55	0.147
5273041	AH Soil	1.61	18.35	229.47	708.2	5604	16.4	8.5	2591	1.55	15.3	2.0	10.9	0.7	65.5	12.39	2.18	0.18	27	0.65	0.111
5273042	AH Soil	2.18	23.41	142.09	384.6	9868	20.2	13.0	1677	3.04	76.3	2.1	11.3	0.7	93.8	3.93	2.57	0.15	54	1.04	0.139
5273043	AH Soil	1.54	25.22	456.39	554.9	6295	17.5	13.0	1867	2.49	114.2	1.7	55.3	0.7	64.6	7.32	1.85	0.36	47	0.69	0.113
5273044	AH Soil	1.06	18.34	738.70	242.1	4821	9.2	3.5	123	1.16	9.3	1.1	2.5	<0.1	34.3	5.09	1.10	0.09	22	0.30	0.103



BUREAU VERITAS MINERAL LABORATORIES
Canada

www.bvna.com/mining-laboratory-serv

Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

Client: **Bill Mann**
19 Hayes Cres.
Whitehorse Yukon Y1A 0E1 Canada

Project: TOW
Report Date: October 29, 2021

Page: 3 of 3

Part: 2 of 2

CERTIFICATE OF ANALYSIS

WHI21000508.1

Method	Analyte	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga
		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm
		MDL	0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02
5273040	AH Soil	22.4	15.5	0.18	1614.5	0.014	<20	1.04	0.014	0.10	<0.1	2.5	0.20	0.16	181	0.6	0.04	2.9
5273041	AH Soil	19.3	19.3	0.28	875.8	0.019	<20	1.28	0.010	0.07	<0.1	3.7	0.29	0.12	151	0.6	0.04	3.4
5273042	AH Soil	24.2	32.0	0.40	570.4	0.021	<20	2.87	0.015	0.08	0.1	9.0	0.33	0.14	305	0.8	0.04	6.2
5273043	AH Soil	14.7	30.3	0.43	364.4	0.031	<20	2.03	0.016	0.08	<0.1	6.8	0.29	0.14	212	0.7	0.10	5.1
5273044	AH Soil	10.9	14.7	0.16	201.1	0.018	<20	0.96	0.011	0.08	<0.1	1.4	0.10	0.09	126	0.4	0.03	2.9



Bureau Veritas Commodities Canada Ltd.
9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada
PHONE (604) 253-3158

Project: TOW
Report Date: October 29, 2021

Page: 1 of 1

Part: 1 of 2

QUALITY CONTROL REPORT

WHI21000508.1

Method	Analyte	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
Unit		ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
MDL		0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	1	0.01	0.001
Pulp Duplicates																					
5273029	AH Soil	1.06	10.47	6.34	53.6	58	7.8	8.2	627	2.01	2.9	0.5	0.5	1.3	58.8	0.20	0.36	0.07	45	1.01	0.091
REP 5273029	QC	1.06	10.59	6.43	53.9	62	7.9	8.2	639	2.03	2.8	0.5	1.1	1.2	59.4	0.20	0.38	0.07	45	1.02	0.091
Reference Materials																					
STD DS11	Standard	13.36	138.33	122.55	332.0	1818	77.6	14.0	968	2.97	41.8	2.3	54.1	6.9	61.1	2.16	7.87	10.02	47	1.01	0.065
STD OREAS262	Standard	0.59	107.08	50.84	145.3	452	63.0	27.9	516	3.11	34.1	1.1	72.9	8.2	32.3	0.59	3.28	0.90	20	2.73	0.037
STD DS11 Expected		13.9	149	138	345	1710	77.7	14.2	1055	3.1	42.8	2.59	79	7.65	67.3	2.37	7.2	12.2	50	1.063	0.0701
STD OREAS262 Expected		0.68	118	56	154	450	62	26.9	530	3.284	35.8	1.22	65	9.33	36	0.61	3.39	1.03	22.5	2.98	0.04
BLK	Blank	<0.01	<0.01	<0.01	<0.1	<2	<0.1	<0.1	<1	<0.01	<0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<1	<0.01	<0.001



Bureau Veritas Commodities Canada Ltd.
9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada
PHONE (604) 253-3158

Project: TOW
Report Date: October 29, 2021

Page: 1 of 1

Part: 2 of 2

QUALITY CONTROL REPORT

WHI21000508.1

Method	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	
Analyte	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	
Unit	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	
MDL	0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	
Pulp Duplicates																		
5273029	AH Soil	13.2	16.0	0.46	236.3	0.012	<20	1.18	0.015	0.05	<0.1	3.8	0.07	0.06	41	0.3	0.03	4.1
REP 5273029	QC	13.3	16.2	0.46	236.6	0.012	<20	1.20	0.015	0.05	<0.1	3.9	0.08	0.07	45	0.3	0.03	4.1
Reference Materials																		
STD DS11	Standard	16.2	57.2	0.80	380.0	0.086	<20	1.08	0.068	0.38	2.7	3.0	4.76	0.26	217	2.3	4.42	4.6
STD OREAS262	Standard	14.7	42.5	1.12	226.1	0.003	<20	1.19	0.065	0.30	0.1	3.0	0.46	0.25	131	0.5	0.22	3.7
STD DS11 Expected		18.6	61.5	0.85	417	0.0976		1.129	0.0694	0.4	2.9	3.1	4.9	0.2835	260	2.2	4.56	4.7
STD OREAS262 Expected		15.9	41.7	1.17	248	0.003		1.3	0.071	0.312	0.13	3.24	0.47	0.269	170	0.4	0.23	3.9
BLK	Blank	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1



BUREAU VERITAS MINERAL LABORATORIES
Canada

www.bvna.com/mining-laboratory-serv

Bureau Veritas Commodities Canada Ltd.
9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada
PHONE (604) 253-3158

Client: **Bill Mann**
19 Hayes Cres.
Whitehorse Yukon Y1A 0E1 Canada

Submitted By: Bill Mann
Receiving Lab: Canada-Whitehorse
Received: September 08, 2021
Analysis Start: October 09, 2021
Report Date: October 22, 2021
Page: 1 of 2

CERTIFICATE OF ANALYSIS

WHI21000506.1

CLIENT JOB INFORMATION

Project: TOW
Shipment ID:
P.O. Number
Number of Samples: 9

SAMPLE DISPOSAL

DISP-PLP Dispose of Pulp After 90 days
DISP-RJT Dispose of Reject After 60 days

Bureau Veritas does not accept responsibility for samples left at the laboratory after 90 days without prior written instructions for sample storage or return.

Invoice To: Bill Mann
19 Hayes Cres.
Whitehorse Yukon Y1A 0E1
Canada

CC:

SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Procedure Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
PRP70-250	9	Crush, split and pulverize 250 g rock to 200 mesh			WHI
AQ201	9	1:1:1 Aqua Regia digestion ICP-MS analysis	15	Completed	VAN
SLBHP	0	Sort, label and box pulps			WHI
SHP01	9	Per sample shipping charges for branch shipments			VAN

ADDITIONAL COMMENTS


JEFFREY CANNON
Geochemistry Department Supervisor

This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signature indicates final approval; preliminary reports are unsigned and should be used for reference only. All results are considered the confidential property of the client. Bureau Veritas assumes the liabilities for actual cost of analysis only. Results apply to samples as submitted.
*** asterisk indicates that an analytical result could not be provided due to unusually high levels of interference from other elements.



BUREAU VERITAS MINERAL LABORATORIES
Canada

www.bvna.com/mining-laboratory-serv

Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

Client: **Bill Mann**
19 Hayes Cres.
Whitehorse Yukon Y1A 0E1 Canada

Project: TOW
Report Date: October 22, 2021

Page: 2 of 2

Part: 1 of 2

CERTIFICATE OF ANALYSIS

WHI21000506.1

Method	Analyte	WGHT	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	
		Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	
		kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%
		MDL	0.1	0.1	0.1	1	0.1	0.1	0.1	0.1	1	0.01	0.5	0.1	0.5	0.1	1	0.1	0.1	0.1	1	0.01
5285515	Rock	0.57	6.4	18.5	22.4	71	0.2	4.3	3.5	389	2.09	18.8	2.2	43.7	14.1	9	0.2	1.7	0.1	28	0.08	
5285516	Rock	0.65	5.2	15.5	27.7	71	0.2	4.6	4.7	686	1.96	18.8	2.2	16.1	12.9	13	0.3	1.5	0.1	31	0.11	
5285517	Rock	0.49	5.2	20.9	10.6	24	0.1	5.8	5.5	246	3.15	4.4	1.2	7.3	7.6	39	0.1	1.0	0.3	86	0.37	
5285518	Rock	0.59	4.6	20.7	8.2	32	0.1	6.4	7.3	292	3.08	3.1	1.1	4.3	7.2	42	0.2	0.8	0.2	100	0.43	
5285519	Rock	0.75	3.9	16.9	7.5	16	0.2	11.1	8.9	111	2.24	3.7	1.4	4.2	9.6	94	<0.1	1.0	<0.1	49	0.93	
5285520	Rock	0.91	4.4	15.9	6.3	22	0.1	9.8	9.0	126	2.22	4.1	1.3	2.6	8.4	125	0.1	1.0	<0.1	50	1.09	
5285521	Rock	0.29	0.6	2.5	1.5	4	<0.1	2.9	0.7	43	0.34	2.2	<0.1	1.1	0.1	<1	<0.1	0.3	<0.1	2	<0.01	
5285522	Rock	0.59	4.0	41.0	77.5	352	1.2	15.1	17.7	6636	5.54	18.2	4.8	2.0	9.4	63	1.6	0.9	0.1	116	0.63	
5285523	Rock	0.73	11.3	169.8	28.2	310	0.3	44.2	5.7	206	11.40	11.8	8.2	1.4	3.5	8	0.6	5.7	0.3	37	0.02	



BUREAU VERITAS MINERAL LABORATORIES
Canada

www.bvna.com/mining-laboratory-serv

Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

Client: **Bill Mann**
19 Hayes Cres.
Whitehorse Yukon Y1A 0E1 Canada

Project: TOW
Report Date: October 22, 2021

Page: 2 of 2

Part: 2 of 2

CERTIFICATE OF ANALYSIS

WHI21000506.1

Method	Analyte	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201
		P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
Unit		%	ppm	ppm	%	ppm	%	ppm	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	
MDL		0.001	1	1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.05	1	0.5	0.2	
5285515	Rock	0.051	14	10	0.03	327	0.001	2	0.54	0.005	0.11	0.2	0.05	2.6	0.5	<0.05	2	<0.5	<0.2
5285516	Rock	0.056	14	9	0.10	350	0.009	3	0.69	0.008	0.15	0.2	0.08	2.7	0.7	<0.05	2	<0.5	<0.2
5285517	Rock	0.109	14	26	1.24	308	0.211	4	1.74	0.107	0.80	0.3	<0.01	7.4	0.8	0.50	6	1.4	<0.2
5285518	Rock	0.122	14	28	1.71	355	0.272	4	1.98	0.121	1.07	0.3	<0.01	8.8	0.9	0.51	7	1.2	<0.2
5285519	Rock	0.105	17	20	0.43	232	0.087	5	1.53	0.218	0.22	0.6	<0.01	3.4	0.7	0.30	4	0.6	<0.2
5285520	Rock	0.117	16	20	0.47	217	0.088	5	1.74	0.229	0.26	0.5	<0.01	3.9	0.4	0.22	5	0.7	<0.2
5285521	Rock	0.003	<1	6	<0.01	6	0.012	<1	0.04	0.002	<0.01	0.4	<0.01	0.1	<0.1	<0.05	<1	<0.5	<0.2
5285522	Rock	0.144	35	10	0.23	102	0.003	2	1.14	0.009	0.27	0.7	0.02	8.6	0.8	<0.05	3	<0.5	<0.2
5285523	Rock	0.301	8	10	0.02	94	<0.001	1	0.59	0.002	0.13	0.2	0.03	2.2	<0.1	<0.05	<1	5.7	<0.2



Bureau Veritas Commodities Canada Ltd.
9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada
PHONE (604) 253-3158

Project: TOW
Report Date: October 22, 2021

Page: 1 of 1

Part: 1 of 2

QUALITY CONTROL REPORT

WHI21000506.1

Method	WGHT	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201
Analyte	Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	
Unit	kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	
MDL	0.01	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.1	0.5	0.1	1	0.1	0.1	0.1	1	0.01	
Core Reject Duplicates																					
5285522	Rock	0.59	4.0	41.0	77.5	352	1.2	15.1	17.7	6636	5.54	18.2	4.8	2.0	9.4	63	1.6	0.9	0.1	116	0.63
DUP 5285522	QC		4.0	40.7	77.3	353	1.2	15.1	17.7	6529	5.47	18.3	4.8	1.9	8.9	63	1.6	1.0	0.1	113	0.62
Reference Materials																					
STD DS11	Standard		14.5	148.6	125.6	340	1.6	80.3	14.5	1026	3.19	40.1	2.4	83.6	7.4	69	2.2	8.1	10.9	52	1.07
STD OREAS262	Standard		0.6	114.4	52.5	150	0.4	63.6	28.2	537	3.28	33.8	1.1	66.4	8.4	35	0.6	5.4	0.9	23	2.92
STD DS11 Expected			14.6	149	138	345	1.71	77.7	14.2	1055	3.1	42.8	2.59	79	7.65	67.3	2.37	8.74	12.2	50	1.063
STD OREAS262 Expected			0.68	118	56	154	0.45	62	26.9	530	3.284	35.8	1.22	65	9.33	36	0.61	5.06	1.03	22.5	2.98
BLK	Blank		<0.1	0.3	0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.5	<0.1	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01
Prep Wash																					
ROCK-WHI	Prep Blank		1.0	5.0	3.7	27	0.2	1.5	3.1	433	1.65	3.9	0.4	<0.5	1.8	17	<0.1	0.6	<0.1	21	0.51



Bureau Veritas Commodities Canada Ltd.
9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada
PHONE (604) 253-3158

Project: TOW
Report Date: October 22, 2021

Page: 1 of 1

Part: 2 of 2

QUALITY CONTROL REPORT

WHI21000506.1

Method		AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	AQ201	
Analyte		P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te	
Unit		%	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	
MDL		0.001	1	1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2	
Core Reject Duplicates																				
5285522	Rock	0.144	35	10	0.23	102	0.003	2	1.14	0.009	0.27	0.7	0.02	8.6	0.8	<0.05	3	<0.5	<0.2	
DUP 5285522	QC	0.143	35	10	0.23	102	0.003	2	1.11	0.009	0.26	0.7	0.02	8.6	0.8	<0.05	4	<0.5	<0.2	
Reference Materials																				
STD DS11	Standard	0.070	18	61	0.84	366	0.096	7	1.21	0.077	0.41	2.8	0.23	3.2	5.0	0.28	5	2.2	4.7	
STD OREAS262	Standard	0.039	18	45	1.17	241	0.003	4	1.43	0.068	0.34	0.2	0.14	3.1	0.5	0.25	4	<0.5	0.2	
STD DS11 Expected		0.0701	18.6	61.5	0.85	385	0.0976		1.1795	0.0762	0.4	2.9	0.26	3.4	4.9	0.2835	5.1	2.2	4.56	
STD OREAS262 Expected		0.04	15.9	41.7	1.17	248	0.0027	4	1.3	0.071	0.312	0.2	0.17	3.24	0.47	0.253	4.1	0.4	0.23	
BLK	Blank	<0.001	<1	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2	
Prep Wash																				
ROCK-WHI	Prep Blank	0.039	6	6	0.43	37	0.069	<1	0.68	0.064	0.07	0.4	<0.01	2.2	<0.1	<0.05	3	<0.5	<0.2	

APPENDIX VI

B/C HORIZON SOIL LOCATIONS AND DESCRIPTIONS

Sample #	Sampler	Date	Easting	Northing	Depth (m)	Colour	Quality	Notes	Mo	Cu	Pb	Zn	Ag	As	Au	Cd	Sb	Bi	Tl
3839551	WDM	2021-08-31	515236	7107019	0.5	Gry-Brn	Mod	loess-rich, permafrost	0.3	13.8	7.5	61	<0.1	2	2.2	0.2	0.2	0.1	<0.1
3839552	WDM	2021-08-31	515193	7107015	0.6	Org-Brn	Mod	loess-rich, permafrost	0.6	13.5	8.3	60	<0.1	4.7	1.5	0.1	0.3	0.1	<0.1
3839553	WDM	2021-08-31	515136	7106964	0.65	Lt-Brn	Good	gritty, permafrost	0.9	12.2	8.5	54	<0.1	4.6	1.7	0.1	0.3	0.1	<0.1
3839554	WDM	2021-08-31	515092	7106899	0.55	Brown	Good	pebbles, saturated	0.9	14	8.1	61	<0.1	4.5	1.9	0.2	0.2	0.1	<0.1
3839555	WDM	2021-08-31	515013	7106874	0.5	Brown	Good	orange flecks, gritty, saturated	0.8	14.4	8.2	62	<0.1	5.5	1.2	<0.1	0.3	0.1	<0.1
3839556	WDM	2021-08-31	514958	7106821	0.4	Brown	Good	gritty, pebbly	0.7	14.8	7.5	62	<0.1	3.8	1.2	0.2	0.3	0.1	<0.1
3839557	WDM	2021-08-31	514869	7106737	0.6	Brown	Good	loess & rocky, moist	0.7	13.7	7.5	64	<0.1	4.2	6.8	0.2	0.2	<0.1	<0.1
3839558	WDM	2021-08-31	514796	7106663	0.5	Gry-Brn	Good	rocky, saturated	0.7	15.6	8.8	62	<0.1	5.5	1.8	0.1	0.3	0.1	<0.1
3839559	WDM	2021-08-31	514761	7106567	0.3	Brown	Mod	rocky	0.6	10.1	7.7	46	<0.1	3.2	5.5	0.1	0.2	<0.1	<0.1
3839560	WDM	2021-08-31	514693	7106493	0.5	Gry-Brn	Good	saturated	0.7	19.8	10.4	57	0.2	3.7	3	0.1	0.3	0.1	<0.1
3839561	WDM	2021-08-31	514656	7106393	0.5	Gry-Brn	Good	dark & light colour, pebbly	0.4	9.7	10.8	52	<0.1	2.8	0.6	0.1	0.2	<0.1	<0.1
3839562	WDM	2021-08-31	514584	7106320	0.6	Lt-Brn	Good	grit & pebbles, saturated	0.4	8.5	7.8	43	<0.1	3.1	0.5	0.1	0.2	<0.1	<0.1
3839563	WDM	2021-08-31	514621	7106190	0.7	Brown	Good	gritty, moist, clay-rich	9.9	26.8	14.2	56	0.2	3.8	0.7	0.2	0.6	0.4	<0.1
3839564	WDM	2021-08-31	514406	7106226	0.6	Gry-Brn	Good	yellow flecks, gritty, clay-rich	0.5	19.7	8.6	36	0.2	1.9	1.1	0.1	0.5	<0.1	<0.1
3839565	WDM	2021-09-01	512900	7105101	0.2	Org-Brn	Poor	angular andesite, rocky	5.2	13.7	48.7	144	0.2	24.1	3.9	0.6	2.1	0.1	0.6
3839566	WDM	2021-09-01	513002	7105097	0.3	Brown	Poor	loess-rich, rock or permafrost	2.1	12.6	177	332	1.9	29.9	4.2	1.4	1.2	0.3	0.3
3839567	WDM	2021-09-01	513042	7105105	0.2	Brown	Mod	Creek Silt, 20cm wide, steep	1.9	13.5	165	364	1.7	26.8	4.2	1.9	1.3	0.3	0.3
3839568	WDM	2021-09-01	513101	7105104	0.4	Brown	Poor	loess-rich, permafrost	1.7	13.7	181.1	311	2.4	25.7	5.9	1.6	1.2	0.3	0.3
3839569	WDM	2021-09-01	513152	7105099	0.2	Org-Brn	Poor	loess-rich, amongst boulders	1.1	8.4	34.3	98	0.7	10.7	0.9	0.3	0.6	0.2	0.1
3839570	WDM	2021-09-01	513201	7105103	0.45	Brown	Mod	gritty, saturated	1.5	12.5	183.7	265	1.7	13.1	1.8	1.2	1	0.2	0.2
3839571	WDM	2021-09-01	513248	7105102	0.4	Brown	Mod	orange flecks, gritty, pebbles	1.6	14.7	133.7	233	1.5	16.2	1.7	0.4	0.7	0.3	0.3
3839572	WDM	2021-09-01	513308	7105104	0.4	Brown	Poor	loess-rich, permafrost	1.8	12.6	116.9	224	1.6	16	3	0.8	0.6	0.3	0.3
3839573	WDM	2021-09-01	513350	7105097	0.6	Brown	Mod	loess-rich, rock or permafrost	2	12.3	124.9	150	1.2	14.6	3.4	0.4	0.6	0.2	0.4
3839574	WDM	2021-09-01	513398	7105101	0.4	Org-Brn	Mod	permafrost	2.8	12.2	134.9	173	1.7	23.1	4.8	0.5	0.9	0.2	0.4
3839575	WDM	2021-09-01	513450	7105101	0.5	Grey	Good	orange-brn B over C, gritty	3.6	14.7	202.2	196	2.1	20.4	3.9	0.6	1.2	0.3	0.4
3839576	WDM	2021-09-01	513501	7105104	0.7	Grey	Good	gritty, duplicate of I029686	4.7	14.6	224.8	174	2.5	22.1	7	0.6	1.3	0.3	0.5
3839577	WDM	2021-09-01	513555	7105099	0.6	Org-Brn	Good	& grey, gritty, permafrost	5.2	11.8	189.4	210	2.2	30.3	7.7	0.9	1.5	0.4	0.8
3839578	WDM	2021-09-01	513603	7105104	0.3	Org-Brn	Good	rocky, duplicate of I029685	7.5	18.6	102.4	242	1.2	40.4	9.9	0.6	2	0.2	0.8
3839579	WDM	2021-09-02	514202	7105997	0.55	Grey	Poor	loess-rich, permafrost	0.5	13	9.7	50	<0.1	3.4	<0.5	0.1	0.5	<0.1	<0.1
3839580	WDM	2021-09-02	514159	7105969	0.75	Gry-Brn	Good	orange flecks	4.5	18.3	9.3	60	<0.1	4.1	2.8	0.2	0.5	<0.1	<0.1
3839581	WDM	2021-09-02	514119	7105937	0.55	Grey	Mod	gritty, permafrost	0.5	20.7	11.2	62	0.1	3.6	1.2	0.2	0.5	0.1	<0.1
3839582	WDM	2021-09-02	514073	7105909	0.7	Org-Brn	Good	buried Ah @ 60cm, permafrost	0.8	27.9	11	53	0.1	2.7	0.7	0.2	0.7	<0.1	<0.1
3839583	WDM	2021-09-02	514037	7105883	0.6	Gry-Brn	Mod	gritty, permafrost	0.7	19.9	10.7	60	<0.1	2.4	<0.5	0.2	0.5	<0.1	<0.1
3839584	WDM	2021-09-02	513989	7105856	0.6	Org-Brn	Good	gritty, permafrost	1	14	8.3	55	<0.1	2.9	<0.5	0.1	0.4	<0.1	0.1
3839585	WDM	2021-09-02	513953	7105820	0.5	Gry-Brn	Mod	gritty, permafrost	0.9	12.7	10.5	53	<0.1	5	<0.5	0.1	0.4	<0.1	0.1

Sample #	Sampler	Date	Easting	Northing	Depth (m)	Colour	Quality	Notes	Mo	Cu	Pb	Zn	Ag	As	Au	Cd	Sb	Bi	Tl
3839586	WDM	2021-09-02	513914	7105789	0.6	Org-Brn	Good	gritty, rocky	3	13.7	9.4	65	<0.1	5.9	2.7	0.1	0.6	<0.1	0.2
3839587	WDM	2021-09-02	513878	7105754	0.6	Org-Brn	Good	gritty, permafrost	2	12.8	10.6	59	<0.1	5.6	1.8	0.3	0.8	<0.1	0.2
3839588	WDM	2021-09-02	513840	7105718	0.5	Grey	Mod	gritty, permafrost	1.8	12.6	13.7	67	0.1	8	2.1	0.2	1.2	0.1	0.2
3839589	WDM	2021-09-02	513800	7105683	0.45	Org-Brn	Mod	gritty, permafrost	1.6	10.2	9.5	46	<0.1	7.2	1.4	<0.1	0.5	0.1	0.2
3839590	WDM	2021-09-02	513755	7105643	0.6	Grey	Good	gritty, permafrost	2.2	12.4	11	68	<0.1	7.4	2	0.3	0.8	0.1	0.2
3839591	WDM	2021-09-03	513550	7104902	0.5	Brown	Good	angular cobbles, saturated	1.2	20	427.7	537	2.2	109.6	31.6	2.9	1.9	0.3	0.2
3839592	WDM	2021-09-03	513702	7104798	0.45	Lt-Brn	Good	angular andesite, moist, clay-rich	1.4	17.1	479.9	373	1.9	20.4	5.3	1.2	1.9	0.1	0.2
3839593	WDM	2021-06-08	507380	7125284	0.3	Brown	Good	Browns Creek, GP duplicate 197.9Au	3.8	79.2	15.6	135	0.3	7.4	9.5	1	0.5	0.2	0.3
3839601	AR	2021-09-01	512800	7104700	0.5	Lt-Brn	Mod	loess-rich, moist	1	13.7	10.4	71	0.1	6.3	2	0.2	0.4	0.1	0.1
3839602	AR	2021-09-01	512856	7104665	0.6	Lt-Brn	Mod	loess-rich, saturated	1	13	12.1	68	0.1	5.7	1.7	0.2	0.4	0.1	<0.1
3839603	AR	2021-09-01	512896	7104646	0.6	Lt-Brn	Poor	rocky, moist	0.8	10.9	8	53	<0.1	4.1	2.7	0.2	0.3	<0.1	<0.1
3839604	AR	2021-09-01	512950	7104631	0.4	Gry-Brn	Mod	rocky	1	11.1	9.4	51	0.1	4.6	3.7	0.2	0.3	0.1	<0.1
3839605	AR	2021-09-01	512998	7104627	0.5	Brown	Mod	pebbles	1	16.5	10.7	63	0.1	6	5.4	0.2	0.4	0.1	<0.1
3839606	AR	2021-09-01	513046	7104626	0.4	Brown	Mod	rocky	0.9	9.5	8.3	40	<0.1	4.3	33.6	0.1	0.3	0.1	<0.1
3839607	AR	2021-09-01	513102	7104618	0.4	Lt-Brn	Good	rocky	0.7	11.9	9.8	50	0.1	4.5	0.7	<0.1	0.3	0.1	0.1
3839608	AR	2021-09-01	513147	7104622	0.5	Lt-Brn	Good	rocky	0.8	15.5	9.2	56	0.1	4	1.8	0.2	0.3	0.1	<0.1
3839609	AR	2021-09-01	513203	7104621	0.6	Brown	Good	pebbles	0.8	15.6	10.7	60	<0.1	6.3	11	0.1	0.4	0.1	<0.1
3839610	AR	2021-09-01	513250	7104616	0.35	Lt-Brn	Mod	pebbles	0.4	5.2	4.3	21	<0.1	2.2	<0.5	0.1	0.2	<0.1	<0.1
3839611	AR	2021-09-01	513300	7104611	0.35	Lt-Brn	Mod	pebbles	0.9	17.7	12.9	49	0.1	6.4	3.5	0.2	0.4	0.1	0.1
3839612	AR	2021-09-01	513349	7104613	0.5	Brown	Good	pebbles, moist	0.9	18.7	14.7	74	<0.1	8.1	3	0.2	0.7	0.1	<0.1
3839613	AR	2021-09-01	513402	7104602	0.4	Brown	Good	pebbles	0.8	18.5	11.7	45	0.2	5.2	1.5	<0.1	0.4	0.1	<0.1
3839614	AR	2021-09-01	513456	7104604	0.3	Org-Brn	Good	pebbles	1.1	19.1	9.9	45	<0.1	10.2	2.4	0.2	0.5	0.2	0.1
3839615	AR	2021-09-01	513506	7104604	0.25	Lt-Brn	Good	rocky	0.2	7.3	3.4	13	<0.1	0.7	<0.5	<0.1	<0.1	<0.1	<0.1
3839616	AR	2021-09-01	513552	7104601	0.2	Brown	Mod	rocky	0.5	9.1	9.6	31	0.1	2.7	1.1	0.2	0.3	<0.1	<0.1
3839617	AR	2021-09-01	513602	7104590	0.15	Gry-Brn	Mod	pebbles	0.2	4.2	2.8	10	<0.1	0.5	<0.5	<0.1	<0.1	<0.1	<0.1
3839618	AR	2021-09-01	513657	7104591	0.15	Org-Brn	Good	rocky	0.7	9.9	25.5	47	0.1	5.7	1.1	0.3	0.5	<0.1	<0.1
3839619	AR	2021-09-01	513700	7104600	0.15	Lt-Brn	Mod	pebbles	1.2	15.5	170.1	427	1.4	34.8	6.1	3	2.5	0.2	0.1
3839620	AR	2021-09-03	513247	7105003	0.6	Lt-Brn	Good	pebbles	1.1	12.3	55.6	159	0.4	13.8	1.6	0.6	0.8	0.1	0.2
3839621	AR	2021-09-03	513197	7105004	0.4	Lt-Brn	Good	pebbles	1.3	13.7	71.9	188	0.8	14.9	2.5	0.5	0.9	0.2	0.2
3839622	AR	2021-09-03	513149	7104995	0.65	Dk Brn	Good	pebbles	1.1	15.2	131.3	147	1.1	20.5	2	1.6	0.9	<0.1	<0.1
3839623	AR	2021-09-03	513100	7105002	0.4	Lt-Brn	Good	pebbles	1.3	5.4	42.5	64	0.4	9.2	2	0.4	0.4	<0.1	<0.1
3839624	AR	2021-09-03	513046	7105008	0.35	Lt-Brn	Mod	rocky, saturated	1.4	14.9	54	141	0.7	12.4	3.5	0.7	0.7	0.1	0.2
3839625	AR	2021-09-03	512998	7105001	0.25	Org-Brn	Good	rocky	0.4	10	6.2	25	0.4	1.1	<0.5	0.4	<0.1	<0.1	<0.1
3839626	AR	2021-09-03	513005	7104803	0.55	Lt-Brn	Mod	rocky	0.9	14.2	11.4	68	0.1	6.8	1.2	0.2	0.4	0.1	0.1
3839627	AR	2021-09-03	513052	7104796	0.5	Lt-Brn	Mod	rocky	0.9	16.5	13.6	78	0.2	6.9	1.8	0.2	0.4	0.2	0.1
3839628	AR	2021-09-03	513101	7104801	0.7	Lt-Brn	Mod	pebbles	0.8	15.6	14.2	70	0.2	6.2	35.2	0.2	0.5	0.1	0.1
3839629	AR	2021-09-03	513151	7104800	0.6	Dk Brn	Mod	rocky	0.8	13.9	13.7	69	0.2	5.3	6.1	0.2	0.5	0.2	0.1
3839630	AR	2021-09-03	513200	7104798	0.45	Brown	Poor	pebbles	0.7	14.1	14.3	68	0.1	6.3	4.4	0.2	0.4	0.2	0.1

Sample #	Sampler	Date	Easting	Northing	Depth (m)	Colour	Quality	Notes	Mo	Cu	Pb	Zn	Ag	As	Au	Cd	Sb	Bi	Tl
3839631	AR	2021-09-03	513254	7104803	0.4	Brown	Poor	pebbles	0.6	14.6	17.3	81	0.1	4.8	3.7	0.2	0.5	0.1	0.1
3839632	AR	2021-09-03	513299	7104805	0.45	Brown	Poor	pebbles, saturated	0.7	12.4	20.4	77	<0.1	6.6	4.7	0.2	0.5	0.1	0.1
3839633	AR	2021-09-03	513349	7104797	0.4	Brown	Poor	pebbles, saturated	0.7	12.3	15.7	71	0.2	5.4	3.1	0.3	0.4	0.1	<0.1
3839634	AR	2021-09-03	513400	7104798	0.5	Brown	Poor	rocky, saturated	0.7	15	25.2	91	0.2	9.2	3.8	0.2	0.6	0.1	0.1
3839635	AR	2021-09-03	513456	7104800	0.6	Brown	Mod	rocky	1	18.9	29.2	84	0.4	9.1	<0.5	0.1	0.7	0.2	0.1
3839636	AR	2021-09-03	513504	7104796	0.5	Dk Brn	Mod	rocky	1	16.6	29.7	92	0.6	9.9	2.1	0.3	1.1	0.1	0.1
3839637	AR	2021-09-03	513547	7104800	0.65	Org-Brn	Good	pebbles	1.3	16.6	62.9	169	0.4	15.6	<0.5	0.4	1	0.1	0.1
3839638	AR	2021-09-03	513596	7104799	0.5	Lt-Brn	Good	pebbles	0.8	14.4	91.1	250	0.9	23.2	4.2	0.4	1	0.1	0.2

UTM NAD 83 ZONE 7

APPENDIX VII

Ah HORIZON SOIL LOCATIONS AND DESCRIPTIONS

Sample #	Sampler	Date	Easting	Northing	Depth (m)	Colour	Quality	Notes	Mo	Cu	Pb	Zn	Ag	As	Au	Cd	Sb	Bi	Ca	Ba	TI	S	Hg
5273010	WDM	2021-08-31	515236	7107019	0.11	BLACK	GOOD	no ash layer on claims	1.63	19.51	4.6	45.9	130	4	1.7	0.58	0.45	0.09	1.58	273.6	0.06	0.1	66
5273011	WDM	2021-08-31	515193	7107015	0.11	Dk Brn	Mod		0.81	11.18	6.99	47.6	108	3.2	1.8	0.26	0.27	0.11	0.47	220.7	0.06	0.04	27
5273012	WDM	2021-08-31	515136	7106964	0.11	Dk Brn	Mod	rooty	1.29	9.17	5.77	40.9	66	3.1	1.4	0.18	0.28	0.09	0.68	258.6	0.05	0.05	45
5273013	WDM	2021-08-31	515092	7106899	0.11	Dk Brn	Poor	1cm at org- mineral contact	0.82	10.44	6.25	48.6	99	3.1	0.8	0.16	0.24	0.1	0.49	231.8	0.07	0.03	31
5273014	WDM	2021-08-31	515013	7106874	0.09	Dk Brn	Mod	rooty	1.28	12.87	3.99	47.5	81	2.8	1.4	0.52	0.52	0.07	0.86	158	0.04	0.07	64
5273015	WDM	2021-08-31	514958	7106821	0.06	Dk Brn	Poor		0.97	15.77	5.58	56.2	96	3.1	1.2	0.31	0.38	0.09	0.93	228.3	0.06	0.05	61
5273016	WDM	2021-08-31	514869	7106737	0.06	Dk Brn	Poor	from exposed tree roots	0.66	8.94	5.87	57.1	36	3.1	0.6	0.19	0.18	0.08	0.42	155.7	0.05	0.02	14
5273017	WDM	2021-08-31	514796	7106663	0.11	Dk Brn	GOOD		0.66	14.65	6.64	52.5	120	4.5	2.1	0.21	0.36	0.12	0.81	227	0.07	0.04	34
5273018	WDM	2021-08-31	514761	7106567	0.16	Dk Brn	Poor		0.82	7.59	3.53	20.1	170	1.6	0.6	0.4	0.26	0.06	0.26	94.2	0.03	0.05	112
5273019	WDM	2021-08-31	514693	7106493	0.17	BLACK	GOOD		0.63	11.76	4.53	30.5	97	1.8	0.5	0.24	0.4	0.07	1.32	218	0.03	0.07	67
5273020	WDM	2021-08-31	514656	7106393	0.12	BLACK	GOOD		0.59	9.33	5.1	31.3	70	2.2	1.7	0.26	0.33	0.07	1.62	261.6	0.04	0.09	81
sample bottom cm where Ah is																							
5273021	WDM	2021-08-31	514584	7106320	0.13	BLACK	GOOD	>2cm	0.72	13.28	2.03	13.6	56	1.3	0.5	0.36	0.49	0.04	2.54	350	0.03	0.16	72
5273022	WDM	2021-08-31	514621	7106190	0.17	BLACK	GOOD		0.67	11.71	6.57	39.6	247	1.8	1.2	0.1	0.32	0.11	0.71	253.2	0.06	0.07	54
5273023	WDM	2021-08-31	514406	7106226	0.08	BLACK	GOOD	15m from road	0.48	12.44	5.24	41.1	48	1.8	<0.2	0.12	0.26	0.09	0.45	314.8	<0.02	0.04	153
5273024	WDM	2021-09-02	514202	7105997	0.17	BLACK	GOOD		0.74	13.42	4.77	47.9	98	1.8	0.9	0.53	0.5	0.07	1.3	297.7	0.05	0.09	53
5273025	WDM	2021-09-02	514159	7105969	0.16	Dk Brn	Poor		0.6	16.19	4.26	32.4	102	2.7	1.9	0.16	0.51	0.06	2.07	203.1	0.04	0.11	57
5273026	WDM	2021-09-02	514119	7105937	0.2	BLACK	GOOD	10cm Ah layer	0.52	23.71	6.84	52.8	191	2.8	1.8	0.28	0.7	0.1	1.6	309.6	0.07	0.09	72
5273027	WDM	2021-09-02	514073	7105909	0.08	BLACK	GOOD		0.64	17.48	4.92	36.7	184	1.3	1.2	0.32	0.36	0.08	1.3	457.7	0.06	0.12	47
5273028	WDM	2021-09-02	514037	7105883	0.15	BLACK	GOOD		0.79	14.11	4.9	32.8	84	1.8	0.6	0.23	0.37	0.08	1.72	350.4	0.06	0.13	44
5273029	WDM	2021-09-02	513989	7105856	0.16	BLACK	GOOD		1.06	10.47	6.34	53.6	58	2.9	0.5	0.2	0.36	0.07	1.01	236.3	0.07	0.06	41
5273030	WDM	2021-09-02	513953	7105820	0.18	BLACK	GOOD		0.77	11.53	7.57	42.1	76	3.8	1.1	0.1	0.32	0.07	0.48	221.7	0.11	0.06	34
5273031	WDM	2021-09-02	513914	7105789	0.11	Dk Brn	Mod		1.66	12.66	5.06	37.7	83	3.5	1	0.26	0.43	0.07	0.85	292.3	0.11	0.12	72
5273032	WDM	2021-09-02	513878	7105754	0.15	Dk Brn	Poor		1.39	7.68	7.04	45.2	73	4.9	0.7	0.13	0.38	0.09	0.31	344	0.19	0.04	53
5273033	WDM	2021-09-02	513840	7105718	0.16	Dk Brn	Mod		1.47	10.07	9.09	46.4	182	4.8	1.9	0.25	0.82	0.1	0.35	343.6	0.17	0.09	65
5273034	WDM	2021-09-02	513800	7105683	0.17	BLACK	GOOD		1.19	10.56	6.73	32.9	107	5	1.1	0.12	0.53	0.08	0.35	165.6	0.12	0.09	79
5273035	WDM	2021-09-02	513755	7105643	0.17	Dk Brn	Mod		2.01	9.05	9.79	54.8	111	6.4	0.9	0.16	0.57	0.14	0.32	299.1	0.2	0.06	62
5273036	WDM	2021-09-03	514046	7105100	0.18	BLACK	GOOD	2010 Anomaly sites	2.1	18.07	90.81	181.8	7016	7.2	5.1	1.55	1.51	0.08	0.6	997.1	0.8	0.14	367
5273037	WDM	2021-09-03	514108	7105105	0.12	BLACK	GOOD		1.04	9.93	61.73	130.8	1903	2.2	1	1.13	1.1	0.06	0.62	591.7	0.18	0.11	116
5273038	WDM	2021-09-03	513663	7104994	0.17	BLACK	GOOD		0.64	10.74	826.99	129.6	3239	10.4	6.5	1.37	0.59	0.16	0.12	155.4	0.11	0.04	91
5273039	WDM	2021-09-03	513508	7104992	0.22	BLACK	GOOD		1.88	17.9	251.86	293.7	4955	6.2	12.3	3.48	1.62	0.21	0.33	786	0.38	0.11	268
5273040	WDM	2021-09-03	513458	7104990	0.12	BLACK	GOOD		1.36	19.96	130.76	571.6	9225	7.9	9.4	7.63	1.2	0.2	0.55	1614.5	0.2	0.16	181
5273041	WDM	2021-09-03	513414	7104993	0.18	BLACK	GOOD		1.61	18.35	229.47	708.2	5604	15.3	10.9	12.39	2.18	0.18	0.65	875.8	0.29	0.12	151
5273042	WDM	2021-09-03	513399	7104904	0.2	BLACK	GOOD		2.18	23.41	142.09	384.6	9868	76.3	11.3	3.93	2.57	0.15	1.04	570.4	0.33	0.14	305
5273043	WDM	2021-09-03	513550	7104902	0.21	BLACK	GOOD	6cm Ah	1.54	25.22	456.39	554.9	6295	114.2	55.3	7.32	1.85	0.36	0.69	364.4	0.29	0.14	212
5273044	WDM	2021-09-03	513702	7104798	0.22	BLACK	GOOD		1.06	18.34	738.7	242.1	4821	9.3	2.5	5.09	1.1	0.09	0.3	201.1	0.1	0.09	126

UTM ZONE 7W

APPENDIX VIII LOCATION AND DESCRIPTION

Sample	UTM NAD 83		PIKA/ TOW ROCKS 2021										WHI21000506										METHOD AQ201	
	ZONE 7		Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	
	E	N	KG	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	%	PPM	PPM	PPB	PPM	PPM	PPM	PPM	PPM	PPM	%	%	
			0.01	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.1	0.5	0.1	1	0.1	0.1	0.1	1	0.01	0.001	
5285515	513603	7105104	0.57	6.4	18.5	22.4	71	0.2	4.3	3.5	389	2.09	18.8	2.2	43.7	14.1	9	0.2	1.7	0.1	28	0.08	0.051	
5285516	513603	7105104	0.65	5.2	15.5	27.7	71	0.2	4.6	4.7	686	1.96	18.8	2.2	16.1	12.9	13	0.3	1.5	0.1	31	0.11	0.056	
5285517	512818	7105119	0.49	5.2	20.9	10.6	24	0.1	5.8	5.5	246	3.15	4.4	1.2	7.3	7.6	39	0.1	1	0.3	86	0.37	0.109	
5285518	512818	7105119	0.59	4.6	20.7	8.2	32	0.1	6.4	7.3	292	3.08	3.1	1.1	4.3	7.2	42	0.2	0.8	0.2	100	0.43	0.122	
5285519	513883	5285520	0.75	3.9	16.9	7.5	16	0.2	11.1	8.9	111	2.24	3.7	1.4	4.2	9.6	94	<0.1	1	<0.1	49	0.93	0.105	
5285520	513883	5285520	0.91	4.4	15.9	6.3	22	0.1	9.8	9	126	2.22	4.1	1.3	2.6	8.4	125	0.1	1	<0.1	50	1.09	0.117	
5285521	507824	7125695	0.29	0.6	2.5	1.5	4	<0.1	2.9	0.7	43	0.34	2.2	<0.1	1.1	0.1	<1	<0.1	0.3	<0.1	2	<0.01	0.003	
5285522	531896	7119529	0.59	4	41	77.5	352	1.2	15.1	17.7	6636	5.54	18.2	4.8	2	9.4	63	1.6	0.9	0.1	116	0.63	0.144	
5285523	530160	7118147	0.73	11.3	169.8	28.2	310	0.3	44.2	5.7	206	11.4	11.8	8.2	1.4	3.5	8	0.6	5.7	0.3	37	0.02	0.301	

La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te	NOTES
PPM	PPM	%	PPM	%	PPM	%	%	%	PPM	PPM	PPM	PPM	%	PPM	PPM	PPM	
1	1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2	
14	10	0.03	327	0.001	2	0.54	0.005	0.11	0.2	0.05	2.6	0.5	<0.05	2	<0.5	<0.2	Pit 21-1 pebbles
14	9	0.1	350	0.009	3	0.69	0.008	0.15	0.2	0.08	2.7	0.7	<0.05	2	<0.5	<0.2	Pit 21-1 pebbles
14	26	1.24	308	0.211	4	1.74	0.107	0.8	0.3	<0.01	7.4	0.8	0.5	6	1.4	<0.2	Pyritic volcanic boulders on cutline
14	28	1.71	355	0.272	4	1.98	0.121	1.07	0.3	<0.01	8.8	0.9	0.51	7	1.2	<0.2	Pyritic volcanic boulders on cutline
17	20	0.43	232	0.087	5	1.53	0.218	0.22	0.6	<0.01	3.4	0.7	0.3	4	0.6	<0.2	roadside rusty boulder
16	20	0.47	217	0.088	5	1.74	0.229	0.26	0.5	<0.01	3.9	0.4	0.22	5	0.7	<0.2	roadside rusty boulder
<1	6	<0.01	6	0.012	<1	0.04	0.002	<0.01	0.4	<0.01	0.1	<0.1	<0.05	<1	<0.5	<0.2	Browns Creek QV boulder
35	10	0.23	102	0.003	2	1.14	0.009	0.27	0.7	0.02	8.6	0.8	<0.05	3	<0.5	<0.2	Quarry face vein
8	10	0.02	94	<0.001	1	0.59	0.002	0.13	0.2	0.03	2.2	<0.1	<0.05	<1	5.7	<0.2	Swede Dome frost boil

APPENDIX IX

PIKA/ TOW PROJECT XRF ANALYSIS

Sample	Reading	Duration	Units	Mo	Mo Error	Zr	Zr Error	Sr	Sr Error	U	U Error	Rb	Rb Error	Th	Th Error	Pb	Pb Error	Au	Au Error
39593	1689	180	ppm	< LOD	4.42	96.7	5.06	40.1	2.86	8.54	5.01	36.93	3.1	< LOD	4.48	< LOD	5.99	< LOD	6.52
5285521	1690	30.13	ppm	< LOD	5.9	< LOD	5.68	< LOD	2.71	< LOD	6.21	< LOD	2.63	< LOD	5.58	< LOD	7.14	< LOD	7.63
5285521	1691	30.12	ppm	< LOD	6.73	< LOD	6.89	< LOD	3.44	< LOD	7.45	< LOD	3.3	< LOD	6.34	< LOD	7.92	< LOD	10.62
5285522	1692	30.13	ppm	< LOD	7.54	128.65	10.19	207.49	9.92	< LOD	16.13	93.36	7.62	15.82	7.62	49.68	11.67	< LOD	12.68
5285523	1693	30.14	ppm	< LOD	7.23	33.5	6.14	23.55	3.76	< LOD	9.82	14.08	3.52	< LOD	8.18	15.15	7.83	< LOD	10.51
39551	1803	30.1	ppm	< LOD	5.76	128.47	7.64	166.51	6.9	< LOD	8.65	20.91	3.18	< LOD	6.1	< LOD	7.09	< LOD	7.67
39552	1804	30.11	ppm	< LOD	5.62	108.78	7.12	150.26	6.49	< LOD	9.02	21.6	3.24	< LOD	6.14	< LOD	6.86	< LOD	7.82
39553	1805	30.07	ppm	7.12	4.09	110.75	7.69	172.63	7.37	< LOD	8.87	23.21	3.42	< LOD	6.3	< LOD	8.35	< LOD	7.48
39554	1806	30.11	ppm	< LOD	6.29	126.44	9.22	410.37	11.57	< LOD	10.82	28.82	3.96	< LOD	6.86	< LOD	8.88	< LOD	7.7
39555	1807	30.13	ppm	< LOD	6.53	157.53	9.54	289.46	9.98	16.69	8.18	26.32	4.12	< LOD	6.98	< LOD	9.04	< LOD	8.09
39556	1808	30.12	ppm	10.22	4.52	139.82	9.1	230.6	9.06	< LOD	10.97	27.51	4.04	< LOD	6.96	< LOD	9.29	< LOD	8.66
39557	1809	30.13	ppm	7.62	4.69	200.82	10.73	288.32	10.38	< LOD	11.79	23.42	4.02	< LOD	7.14	< LOD	8.47	< LOD	9.17
39558	1810	30.14	ppm	< LOD	6.29	158.61	9.23	255.69	9.2	< LOD	10.63	24.23	3.77	< LOD	6.48	< LOD	8.45	< LOD	9.35
39559	1811	30.11	ppm	11.94	4.12	74.78	6.94	193.45	7.69	< LOD	9.76	19.02	3.31	< LOD	6.14	< LOD	7.9	< LOD	6.27
39560	1812	30.15	ppm	< LOD	6.08	117.9	8.07	225.34	8.38	< LOD	9.87	26.91	3.71	< LOD	6.27	< LOD	8.24	< LOD	7.46
39561	1813	30.13	ppm	< LOD	5.87	98.15	7.59	234.35	8.4	< LOD	9.55	22.59	3.44	< LOD	6.14	< LOD	7.75	< LOD	8.56
39562	1814	30.12	ppm	< LOD	5.88	88.8	7.29	177.23	7.49	< LOD	9.93	31.03	3.9	< LOD	6.23	< LOD	8.17	< LOD	8.84
39563	1815	30.07	ppm	< LOD	6.4	227.36	9.99	139.54	6.89	< LOD	9.69	37.36	4.2	< LOD	7.05	10.83	6.33	< LOD	7.55
39564	1816	30.07	ppm	< LOD	6.06	115.32	7.74	175.63	7.37	< LOD	10.14	31.75	3.93	< LOD	6.37	11.28	5.96	< LOD	9.47
39565	1817	30.11	ppm	< LOD	6.17	177.97	8.83	146.29	6.79	< LOD	8.86	15.83	3.07	< LOD	6.03	19.49	6.73	< LOD	8.69
39566	1818	30.08	ppm	< LOD	6.04	196.97	9.02	138.47	6.53	< LOD	9.22	30.59	3.75	< LOD	7.89	92.56	11.54	< LOD	8.96
39567	1819	30.13	ppm	< LOD	6	119.15	7.8	159.66	7.08	< LOD	9.97	40.54	4.26	< LOD	7.94	112.15	12.62	< LOD	9.91
39568	1820	30.14	ppm	< LOD	5.84	173.23	8.13	107.41	5.56	< LOD	8.83	33.14	3.69	< LOD	6.68	62.64	9.42	< LOD	8.21
39569	1821	30.13	ppm	< LOD	5.79	112.17	7.3	128.38	6.2	< LOD	9.08	28.49	3.6	< LOD	6.29	22.15	6.83	< LOD	7.43
39570	1822	30.14	ppm	< LOD	6.51	160.24	9.46	206.32	8.62	< LOD	12.36	67.91	5.73	< LOD	10.55	215.05	18.27	< LOD	11.94
39571	1823	30.13	ppm	< LOD	6.06	165.9	8.78	165.81	7.27	< LOD	10.43	40.64	4.33	< LOD	7.78	73.05	10.75	< LOD	9.25
39572	1824	30.07	ppm	< LOD	5.77	128.05	7.73	160.22	6.88	< LOD	9.21	32.81	3.78	< LOD	6.17	31.11	7.6	< LOD	7.39
39573	1825	30.14	ppm	< LOD	6.13	188.61	8.99	154.03	6.91	< LOD	9.44	32.34	3.86	< LOD	7.41	69.48	10.3	< LOD	9.31
39574	1826	30.12	ppm	< LOD	6.08	213.07	9.4	155.56	6.94	< LOD	9.46	28.33	3.7	< LOD	7.84	114.01	12.63	< LOD	8.88
39575	1827	30.13	ppm	< LOD	6.61	233.75	10.57	195.96	8.3	< LOD	12.04	49.72	5.02	< LOD	8.66	95.88	12.67	< LOD	9.47
39576	1828	30.15	ppm	< LOD	6.28	160.69	8.63	113.52	6.18	< LOD	12.07	65.59	5.4	< LOD	8.97	112.66	13.04	< LOD	9.43
39577	1829	30.13	ppm	6.02	3.93	92.92	6.67	72.04	4.78	< LOD	9.98	42.68	4.25	< LOD	7.33	77.94	10.56	< LOD	8.65
39578	1830	30.12	ppm	< LOD	7.27	189.23	10.27	78.72	5.96	< LOD	15.69	111.14	7.71	14.04	7.8	153.62	16.96	< LOD	12.59
39601	1831	30.14	ppm	< LOD	5.52	89.73	6.44	116.25	5.64	< LOD	7.9	17.63	2.88	< LOD	4.69	< LOD	6.75	< LOD	7.03
39602	1832	30.09	ppm	< LOD	5.98	198.56	9.03	148.87	6.73	< LOD	8.64	24.83	3.42	< LOD	6.19	9.11	5.73	< LOD	6.91
39603	1833	30.12	ppm	< LOD	5.6	92.28	6.68	121.64	5.9	< LOD	8.37	20.45	3.12	< LOD	5.79	< LOD	7.88	< LOD	7.62
39604	1834	30.12	ppm	< LOD	6.13	192.41	9.02	157.2	6.95	< LOD	9.12	24	3.45	< LOD	5.88	< LOD	7.9	< LOD	7.37
39605	1835	30.15	ppm	< LOD	6.42	181.32	9.26	175.42	7.62	< LOD	9.68	21.98	3.53	< LOD	6.35	9.03	5.98	< LOD	8.75

Sample	Reading	Duration	Units	Mo	Mo Error	Zr	Zr Error	Sr	Sr Error	U	U Error	Rb	Rb Error	Th	Th Error	Pb	Pb Error	Au	Au Error
39606	1836	30.12	ppm	< LOD	5.79	142.78	8.01	145.68	6.64	< LOD	8.76	21.26	3.27	< LOD	5.8	< LOD	7.98	< LOD	7.91
39607	1837	30.13	ppm	< LOD	6.59	179.35	9.2	107.31	6.21	< LOD	9.18	16.74	3.26	< LOD	6.29	< LOD	8.18	< LOD	8.62
39608	1838	30.12	ppm	< LOD	5.38	93.24	6.54	111.58	5.57	< LOD	7.86	22.06	3.09	< LOD	5.65	< LOD	7.84	< LOD	7.26
39609	1839	30.13	ppm	< LOD	6.41	176.44	9.35	191.94	8.05	< LOD	9.35	24.03	3.61	< LOD	6.94	< LOD	9.01	< LOD	9.45
39610	1840	30.12	ppm	< LOD	6.55	239.15	10.34	191.85	7.98	< LOD	9.59	23.58	3.6	< LOD	6.76	14.48	6.77	< LOD	8.87
39611	1841	30.13	ppm	< LOD	6.62	196.5	10.06	172.39	7.98	< LOD	9.71	28.2	3.96	< LOD	6.95	< LOD	8.11	< LOD	9
39612	1842	30.12	ppm	< LOD	6.33	210.3	9.98	206.01	8.31	< LOD	9.9	24.64	3.7	< LOD	7.26	10.27	6.26	< LOD	9.06
39613	1843	30.12	ppm	< LOD	6.35	152.85	8.78	165.59	7.47	< LOD	9.55	16.13	3.24	< LOD	6.81	9.29	6.12	< LOD	9.62
39614	1844	30.13	ppm	< LOD	6.15	246.46	9.94	120.17	6.24	< LOD	8.55	18	3.15	< LOD	6.38	< LOD	7.93	< LOD	7.87
39615	1845	30.12	ppm	< LOD	5.68	100.71	7.69	288.16	9.1	< LOD	9.19	22.52	3.33	< LOD	5.83	< LOD	6.96	< LOD	7.95
39616	1846	30.12	ppm	8.51	3.84	88.95	6.6	124.68	5.95	< LOD	7.52	14.25	2.7	< LOD	5.44	10.52	5.52	< LOD	7.87
39617	1847	30.14	ppm	< LOD	5.42	69.06	6.27	173.3	6.81	< LOD	7.79	14.98	2.73	< LOD	5.7	< LOD	7.54	< LOD	7.32
39618	1848	30.12	ppm	< LOD	6.6	290.74	10.97	141.56	6.92	< LOD	9.36	22.52	3.52	< LOD	6.32	19.02	7	< LOD	8.93
39619	1849	30.15	ppm	< LOD	6.96	163.82	11.07	426.1	13.11	< LOD	12.93	38.66	4.97	< LOD	9.45	128.93	15.58	< LOD	10.59
39579	1850	30.1	ppm	< LOD	5.85	95.91	7.58	266.06	8.82	< LOD	9.55	25.96	3.56	< LOD	6.37	< LOD	7.8	< LOD	8.13
39580	1851	30.12	ppm	< LOD	5.98	101.11	7.57	211.47	8.02	< LOD	9.57	28.11	3.68	< LOD	6.43	< LOD	8.31	< LOD	7.53
39581	1852	30.13	ppm	< LOD	5.96	127.89	8.38	241.23	8.72	< LOD	10.46	33.22	4.06	< LOD	6.43	13	6.3	< LOD	8.78
39582	1853	30.13	ppm	< LOD	6.06	147.86	8.45	190.74	7.7	< LOD	10.25	31.17	3.91	< LOD	6.29	< LOD	7.8	< LOD	8.71
39583	1854	30.11	ppm	< LOD	6.1	111.97	7.96	213.12	8.22	< LOD	10.35	33.47	4.05	< LOD	6.76	< LOD	7.99	< LOD	8.37
39584	1855	30.15	ppm	< LOD	5.76	80.81	6.87	177.03	7.23	< LOD	9.44	22.37	3.38	< LOD	6.11	< LOD	7.59	< LOD	8.23
39585	1856	30.14	ppm	< LOD	5.93	121.99	7.74	149.39	6.81	< LOD	10.33	31.97	3.95	< LOD	6.2	< LOD	8.06	< LOD	8.22
39586	1857	30.11	ppm	< LOD	6.15	142.87	8.71	218.27	8.44	< LOD	10.27	36.8	4.22	< LOD	6.95	< LOD	8.26	< LOD	10.1
39587	1858	30.15	ppm	< LOD	6.09	183.17	9.11	186.6	7.67	< LOD	9.62	30.24	3.82	< LOD	5.89	10.94	6.06	< LOD	8.73
39588	1859	30.12	ppm	< LOD	6.25	200.02	9.74	213.85	8.39	< LOD	10.63	31.39	4.05	< LOD	6.91	< LOD	8.83	< LOD	8.31
39589	1860	30.15	ppm	< LOD	5.58	75.12	6.37	139.94	6.29	< LOD	8.08	23.8	3.21	< LOD	5.07	9.83	5.57	< LOD	6.72
39590	1861	30.11	ppm	< LOD	5.9	106.68	7.56	193.41	7.62	< LOD	9.46	29.81	3.73	< LOD	6.6	< LOD	7.79	< LOD	8.04
5285517	1875	30.13	ppm	< LOD	8.17	237.86	13.88	458.56	15.1	< LOD	16.52	69.07	7.03	< LOD	9.25	< LOD	11.81	< LOD	12.18
5285518	1876	30.12	ppm	< LOD	8.33	215.57	12.89	185.16	10.14	< LOD	17.35	74.99	7.59	16.74	8.14	33.02	10.77	< LOD	14.22
5285519	1877	30.13	ppm	< LOD	9.08	247.95	16.21	637.69	19.49	< LOD	22.54	132.09	10.3	20.28	9.38	29.08	11.69	< LOD	14.08
5285520	1878	60.45	ppm	< LOD	9.03	268.93	18.11	1177.7	25.79	< LOD	19.66	31.91	6.06	22.13	8.82	< LOD	14.07	< LOD	14.82

Sample	Se	Se Error	As	As Error	Hg	Hg Error	Zn	Zn Error	W	W Error	Cu	Cu Error	Ni	Ni Error	Co	Co Error	Fe	Fe Error	Mn	Mn Error
39593	< LOD	2.73	7.7	3.43	< LOD	6.16	69.71	10.77	< LOD	44.16	53.76	14.01	< LOD	38.61	< LOD	109	19649.69	258.8	636.52	66.12
5285521	< LOD	3.4	< LOD	5.84	< LOD	8.31	19.97	10.71	< LOD	55.27	< LOD	22.63	< LOD	50.28	< LOD	146.12	19483.51	358.16	374.8	76.07
5285521	< LOD	4.27	< LOD	6.27	< LOD	10.31	28.51	13.6	< LOD	69.4	< LOD	27.44	< LOD	63.17	< LOD	183.69	22391.69	438.13	630.05	105.3
5285522	< LOD	5.48	23.71	10.12	< LOD	11.15	259.33	30.48	< LOD	77.78	37.45	23.25	< LOD	71.94	< LOD	294.91	55937.93	725.4	6775.41	320.12
5285523	< LOD	5.15	10.07	6.68	< LOD	10.74	61.93	18.09	< LOD	80.77	74.09	25.02	< LOD	67.51	354.65	166.16	38018.39	579.12	243.57	86.1
39551	< LOD	3	6.05	3.98	< LOD	7.58	34.86	10.4	< LOD	47.57	24.87	14.64	< LOD	40.65	129.96	55.97	5917.82	183.21	149.56	49.19
39552	< LOD	3.53	< LOD	5.49	< LOD	6.94	26.32	9.59	< LOD	48.24	27.58	14.63	< LOD	41.23	105.71	55.8	6265	186.01	65.99	41.55
39553	< LOD	3.11	< LOD	6.29	< LOD	8.08	27.06	10.53	< LOD	54.23	< LOD	22.37	< LOD	47.09	186.95	71.12	8894.53	235	213.58	58.75
39554	< LOD	3.75	< LOD	6.85	< LOD	8.69	38.19	12.38	< LOD	61.53	39.17	17.87	< LOD	49.62	208.4	83.35	11795.56	279.51	237.36	63.71
39555	< LOD	3.93	< LOD	6.82	< LOD	9.34	29.84	11.91	< LOD	61.92	36.25	18.29	< LOD	53.53	219.01	87.86	12631.44	295.26	299.61	70.47
39556	< LOD	4.02	< LOD	6.97	< LOD	9.68	35.89	12.78	< LOD	66.21	< LOD	25.67	< LOD	51	171.23	90.24	13453.87	308.61	240.18	66.36
39557	< LOD	3.64	< LOD	7.15	< LOD	9.59	35.56	12.71	< LOD	61.24	43.63	19.95	< LOD	54.15	263.51	84.07	9883.58	272.61	222.3	66.41
39558	< LOD	3.64	< LOD	6.52	< LOD	8.4	43.55	12.64	< LOD	59.77	29.53	17.15	< LOD	49.34	170.58	79.35	10811.56	267.62	156.92	56.45
39559	< LOD	3.49	< LOD	5.95	< LOD	8.05	18.19	9.47	< LOD	55.9	33.74	16.32	< LOD	43.44	119.77	48.69	3779.59	153.03	168.92	51.85
39560	< LOD	3.53	< LOD	6.37	< LOD	7.91	34.28	11.34	< LOD	58.83	26	16.09	< LOD	46.39	159.5	66.54	7730.51	219.74	188.13	55.65
39561	< LOD	3.46	< LOD	5.8	< LOD	7.77	23.15	10.08	< LOD	57.25	27.73	15.86	< LOD	45.91	110.24	57.63	6005.97	190.94	81.58	45.11
39562	< LOD	3.84	< LOD	6.46	< LOD	8.67	26.15	10.7	< LOD	59.52	34.4	16.79	< LOD	46.94	177.74	64.4	6911.48	208.75	256.45	61.12
39563	< LOD	3.72	< LOD	7.11	< LOD	8.86	43.33	12.29	< LOD	58.15	< LOD	22.81	< LOD	47.98	119.45	64.77	7043.62	216.27	135.26	52.71
39564	< LOD	3.3	< LOD	6.95	< LOD	8.16	22.91	10.41	< LOD	59.14	< LOD	23.37	< LOD	44.94	147.83	71.44	9497.01	240.89	196.58	57.44
39565	< LOD	3.18	< LOD	8.06	< LOD	8.34	55.43	12.93	< LOD	59.51	30.2	16.36	< LOD	47.11	159.43	62.67	6728.39	204.4	221.84	58.13
39566	< LOD	3.72	< LOD	13.75	< LOD	8.06	114.13	16.28	< LOD	55.82	< LOD	21.6	< LOD	43.31	153.79	59.23	6086.82	191.93	264.2	60.49
39567	< LOD	3.22	< LOD	14.84	< LOD	8.35	181.25	20.05	< LOD	55.24	< LOD	23.16	< LOD	45.48	168.25	74.78	10287.26	251.99	484.73	77.91
39568	< LOD	3.24	< LOD	11.04	< LOD	7.23	117.47	15.52	< LOD	46.88	< LOD	20.83	< LOD	38.78	94.2	47.88	4352.67	156.16	260.32	56.26
39569	< LOD	3.13	9.4	5.69	< LOD	7.25	63.91	12.96	< LOD	49.79	< LOD	21.36	< LOD	42.25	186.84	73.73	10514.63	246.86	151.44	52.18
39570	< LOD	4.29	< LOD	21.12	< LOD	9.32	152.37	20.36	< LOD	65.71	< LOD	26.43	< LOD	53.43	203.7	88.3	12418.59	298	557.79	88.99
39571	< LOD	3.85	14.51	8.71	< LOD	8.81	125.87	17.48	< LOD	57.24	35.18	16.84	< LOD	46.5	< LOD	107.7	10104.3	251.58	258.7	63.43
39572	< LOD	3.45	< LOD	9.2	< LOD	6.95	96.54	14.86	< LOD	48.48	< LOD	21.55	< LOD	42.61	96.86	61.57	7488.43	209.18	306.78	62.7
39573	< LOD	3.2	< LOD	11.91	< LOD	7.72	75.02	13.91	< LOD	52.14	< LOD	22.13	< LOD	45.91	92.59	61.09	7005.31	206.98	265.6	60.92
39574	< LOD	3.26	< LOD	14.97	< LOD	7.84	60.92	12.91	< LOD	51.01	< LOD	22.13	< LOD	45.71	220.27	65.4	7121.78	208.45	270.11	62.28
39575	< LOD	4.19	< LOD	14.89	< LOD	9.02	79.9	15.67	< LOD	62.11	33.22	18	< LOD	49.99	255.06	82.32	10416.33	268.97	134.23	55.23
39576	< LOD	3.86	22.46	10.66	< LOD	8.17	93.11	15.82	< LOD	57.42	< LOD	22.57	< LOD	48.98	126.72	81.92	12438.47	282.8	316.11	69.1
39577	< LOD	3.36	< LOD	12.57	< LOD	7.52	88.63	14.52	< LOD	51.13	< LOD	20.47	< LOD	44.53	< LOD	101.91	9562.93	236.25	555.95	78.74
39578	< LOD	4.51	35.05	14.09	< LOD	10.41	231.34	26.34	< LOD	70.47	< LOD	30.18	< LOD	59.54	< LOD	183.55	22897.42	434.39	1122.22	130.61
39601	< LOD	2.92	< LOD	5.43	< LOD	6.64	31.18	9.77	< LOD	46.34	22.36	13.54	< LOD	39.44	123.27	57.89	7019.28	192.98	118.85	45.1
39602	< LOD	3.23	< LOD	6.61	< LOD	7.56	24.19	9.88	< LOD	51.06	29.82	15.71	< LOD	43.38	140.31	60.22	6524.82	197.71	147.02	50.81
39603	< LOD	2.71	< LOD	6.15	< LOD	6.82	26.85	9.65	< LOD	47.79	< LOD	19.09	< LOD	41.37	139.28	61.66	7600.48	205.16	85.73	43.4
39604	< LOD	3.41	< LOD	5.9	< LOD	7.48	38.68	10.94	< LOD	46.87	< LOD	22.21	< LOD	44.47	106.98	56.14	5656.89	185.47	113.09	47.45
39605	< LOD	3.68	< LOD	6.68	< LOD	8.73	219.77	22.44	< LOD	65.53	45.43	18.29	< LOD	48.55	< LOD	69.72	3543.6	153.88	95.21	46.24

Sample	Se	Se Error	As	As Error	Hg	Hg Error	Zn	Zn Error	W	W Error	Cu	Cu Error	Ni	Ni Error	Co	Co Error	Fe	Fe Error	Mn	Mn Error
39606	< LOD	3.32	< LOD	6.39	< LOD	7.26	16.7	9.32	< LOD	52.04	< LOD	21.16	< LOD	43.65	149.49	71.23	9791.11	240.42	102.48	47.41
39607	< LOD	3.8	< LOD	6.67	< LOD	8.89	309.05	26.68	< LOD	64.83	70.44	20.55	< LOD	47.27	88.02	33.87	1029.69	89.15	119.32	49.16
39608	< LOD	3.09	< LOD	5.91	< LOD	7.25	23.75	9.33	< LOD	49.58	27.48	14.21	< LOD	40.16	108.5	55.9	6485.76	186.68	141.8	46.81
39609	< LOD	3.47	< LOD	7.31	< LOD	8.42	36.16	12.07	< LOD	56.89	31.3	17.4	< LOD	51.03	240.13	88.29	13109.86	295.75	303.18	69.39
39610	4.37	2.89	< LOD	7.37	< LOD	8.23	36.6	11.72	< LOD	58.54	< LOD	23.91	< LOD	50.22	194.28	66.38	6858.07	213.07	150.19	53.26
39611	< LOD	3.74	< LOD	6.79	< LOD	9.03	301.72	27.19	< LOD	64.73	79.13	22.03	< LOD	51.82	169.26	48.27	2370.58	134.4	121.57	51.96
39612	< LOD	3.62	< LOD	7.56	< LOD	9.07	46.67	13.06	< LOD	60.29	< LOD	23.59	< LOD	50.38	231.58	90.5	14048.95	305.37	305.89	69.1
39613	< LOD	3.82	< LOD	6.9	< LOD	8.78	265.22	24.5	< LOD	63.4	73.79	20.31	< LOD	47.16	78.44	38.77	1918	115.98	101.17	46.08
39614	< LOD	3.54	< LOD	6.29	< LOD	7.7	34.03	11.01	< LOD	53.76	< LOD	23.48	< LOD	47.13	136.59	60.87	6347.18	199.69	118.44	48.74
39615	< LOD	2.96	6.24	3.96	< LOD	7.21	33.27	10.36	< LOD	48.47	< LOD	21	< LOD	42.2	< LOD	77.46	5432.48	178.37	183.91	52.14
39616	< LOD	2.94	< LOD	5.93	< LOD	6.89	25.52	9.52	< LOD	47.69	< LOD	20.89	< LOD	39.55	120.48	58.26	6820.05	194.02	133.14	47.71
39617	< LOD	2.81	< LOD	5.55	< LOD	6.55	18.85	8.49	< LOD	45.42	< LOD	19.71	< LOD	40.09	99.65	46.72	4254.68	151.19	129.55	45
39618	< LOD	3.39	< LOD	7.88	< LOD	8.19	43.17	11.96	< LOD	52.11	34.06	17.35	< LOD	46.99	112.34	54.82	4717.81	177.38	102.67	48.21
39619	< LOD	4.48	28.58	12.91	< LOD	10.98	312.94	29.97	< LOD	77.09	< LOD	29.42	< LOD	61.28	< LOD	177.85	21561.91	419.16	576.94	100.17
39579	< LOD	3.51	< LOD	5.81	< LOD	7.9	27.03	10.43	< LOD	58.1	< LOD	21.73	< LOD	44.59	116.62	61.66	7227.12	206.7	175.19	52.99
39580	< LOD	3.4	< LOD	6.35	< LOD	8.43	28.97	10.58	< LOD	53.92	28.05	15.86	< LOD	45.96	134.19	64.73	7696.93	216.18	193.5	55.92
39581	< LOD	3.39	< LOD	7.24	< LOD	7.87	39.16	11.74	< LOD	55.32	< LOD	22.65	< LOD	43.99	141.29	70.8	8993.93	238.5	234.38	61.15
39582	< LOD	3.62	7.19	4.41	< LOD	8.05	37.61	11.29	< LOD	52.33	32.71	16.4	< LOD	47.15	171.33	65.23	7364.1	213.2	138.27	51.26
39583	< LOD	3.38	< LOD	6.52	< LOD	9.02	25.56	10.91	< LOD	60.33	36.17	16.95	< LOD	45.43	149.78	73.08	9630.53	246.5	233.86	61.03
39584	< LOD	3.09	< LOD	5.75	< LOD	8.07	25.72	9.99	< LOD	53.01	< LOD	21.42	< LOD	45.81	115.88	59.58	6724.07	198.74	189.96	53.5
39585	< LOD	3	< LOD	6.52	< LOD	7.9	32.1	10.95	< LOD	53.63	< LOD	22.06	< LOD	45.15	153.46	75.24	10765.33	255.2	115.27	50.66
39586	< LOD	3.23	< LOD	6.33	< LOD	7.94	40.67	12.13	< LOD	51.74	26.15	16.56	< LOD	50.32	207.98	89.13	14159.39	302.66	177.94	58.98
39587	< LOD	3.59	< LOD	6.38	< LOD	8	17.93	9.63	< LOD	55.9	< LOD	23.78	< LOD	46.6	145.21	58.25	5607.67	187.85	116.09	48.71
39588	< LOD	3.62	< LOD	6.75	< LOD	8.85	34.55	11.59	< LOD	58.33	< LOD	24.55	< LOD	49.74	247.89	70.53	7609.97	223.77	276.56	64.79
39589	< LOD	3.37	< LOD	6.46	< LOD	7.03	23	9.3	< LOD	44.29	21.15	14.01	< LOD	39.25	< LOD	96.86	9105.14	224	131.52	48.52
39590	< LOD	3.15	< LOD	6.46	< LOD	7.23	41.8	11.4	< LOD	46.17	< LOD	22.31	< LOD	43.78	< LOD	111.54	11069.97	256.61	213.07	58.36
5285517	< LOD	4.51	< LOD	9.1	< LOD	11.41	< LOD	17.97	< LOD	83.06	< LOD	32.98	109.81	50.43	< LOD	345.15	77248.09	878.09	331.82	113.16
5285518	< LOD	4.65	< LOD	12.35	< LOD	12.78	< LOD	28.57	< LOD	82.31	< LOD	38.83	< LOD	84.49	< LOD	442.01	107654.91	1075.87	278.7	123.53
5285519	< LOD	6.46	< LOD	13.36	< LOD	14.05	< LOD	19.98	< LOD	84.49	< LOD	42.46	< LOD	84.75	< LOD	283.56	38504.36	681.31	519.28	124.88
5285520	< LOD	6.06	< LOD	11.12	< LOD	14.29	< LOD	24.64	< LOD	93.51	< LOD	36.36	< LOD	77.04	234.92	155.99	25515.32	542.72	197.2	90.78

APPENDIX X - PIKA THIN SECTIONS

Five rock slabs from the Cholach zone on the PIKA claims were selected for thin section. The slabs were sent to Van Petro for thin section preparation, and then sent to Dr. Tim Liverton for petrographic examination and photomicrography.



Slabs for P1 – P3. Intrusive- volcanic contact breccia.

Samples P1 to P3 were collected from a boulder pile along a cutline close to the road at: 513818E, 7105119N. Assay samples #5285517 & 5285518 are of these rocks. These rocks are only weakly anomalous in base and precious metals and pathfinder elements.

P1

The size of the thin section does not allow a proper appreciation of its texture. It is likely an igneous breccia composed of a fine-grained volcanic of intermediate composition and a porphyritic, probably sub-volcanic intrusive. Clasts are sub-rounded and an appreciable amount of polygonized quartz is also present as 2mm masses. The intrusive has plagioclase phenocrysts (approximately Ab50%) to 1.5mm long in a fine-grained (0.05mm) feldspathic groundmass. Some clasts have masses of anhedral amphibole (0.5mm) with epidote (0.2mm) and opaques. The fine-grained volcanic has epidote as 0.01-0.02mm crystals. Possible quartz/feldspar proportions are impossible to estimate.

P2

This is similar to P1. About half the section is of anhedral, rather ragged untwinned feldspar and quartz with up to 20% lepidocrocite in anhedral forms, 0.1-1mm across. Some biotite is present. Patches of clay alteration are common. The other half of the slide is 2mm subhedral plagioclase in a fine-grained groundmass (≤ 0.02 mm), which is probably mostly feldspar. This groundmass contains ≤ 0.3 mm euhedral pyrite, and some pyrrhotite, plus approximately 1% fine grained (0.03mm) epidote and finer sericite. Some masses of polygonized quartz surround the intrusive clasts.

P3

A small portion of this section is of a recognizable fine-grained (0.01-0.02mm) volcanic, presumably mostly of feldspar with about 2% epidote in 0.02mm grains. It contains euhedral pyrite, mostly 0.04mm, rarely to 0.2mm to 5% maximum. The other portion of the section is of quartz, polygonized to 0.04mm grains and feldspar - equal amounts, untwinned with a little biotite ($\leq 5\%$) with 2% pyrite. Masses of chlorite-biotite-coarse pyrite (to 2mm anhedral) are included in this. These are up to 5mm across.



Slabs for thin sections P4 & P5. Sixtymile Road Pluton.

Samples P4 & P5 were collected from the old roadside bulldozer trench 80T-3 at approximately 513850E, 7105000N. These rocks are some of the largest and most solid granitic rocks observed in the Cholach area, where outcrop is very rare and alteration and weathering are very strong.

P4

This is a highly altered (? sub-volcanic) intrusive of monzogranite composition. It has embayed quartz phenocrysts to 5mm across, feldspars to 2mm, now heavily altered to clay and sericite. Subhedral muscovite, rather 'ragged' in appearance is

around 1mm. Some remnant pyrite (aggregates to 1mm) is partially altered to Fe hydroxides.

P5

An extremely clay-altered granitic rock. The largest phenocrysts are K-feldspar to 5mm. Plagioclase is also to 5mm and somewhat more abundant. Quartz forms rounded, embayed phenocrysts to 3mm. Smaller feldspar phenocrysts are 0.5mm across. Muscovite, containing considerable amounts of Fe oxides is up to 1.5mm long and $\leq 5\%$ content. The groundmass is of fine-grained feldspar (50% of the rock). Apatite is abundant and zircon rare.

ADDITIONAL NOTE ON NOMENCLATURE

The Streckeisen scheme for igneous rock classification relies on the modal proportions of feldspars and quartz. In rocks where much of the bulk is a fine-grained groundmass, this makes identification inaccurate. Judging the proportion of the groundmass that stains with cobaltinitrite, together with proportion of phenocrysts gives an approximate result, but with heavy clay alteration, this might be skewed toward potassic compositions.

Pika rocks are likely monzogranite. For an accurate classification whole-rock / trace element analysis is best. Whether to use the volcanic or plutonic terms is conjectural since they have half fine-grained groundmass: they are obviously sub-volcanic.

PIKA COBALTINITRITE STAINED SLABS

P4

Most of the phenocrysts in the coarse-grained intrusive have stained, despite some being unequivocal plagioclase. This probably reflects the clay alteration. About half of the groundmass has stained.

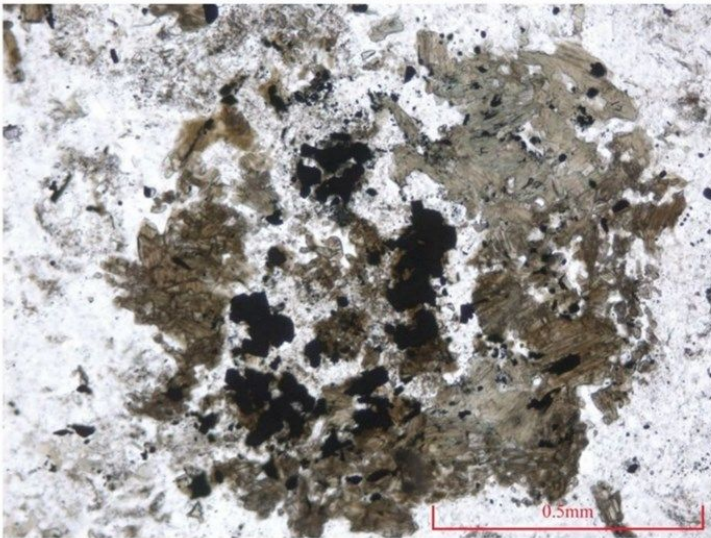
P5

Only a few, clearly orthoclase phenocrysts have stained. 70% of the phenocrysts are plagioclase. At least half of the groundmass has stained.



Contact between coarse intrusive and fine-grained volcanic. Crossed polarizers, 1mm scale bar.

P1-5,0xp



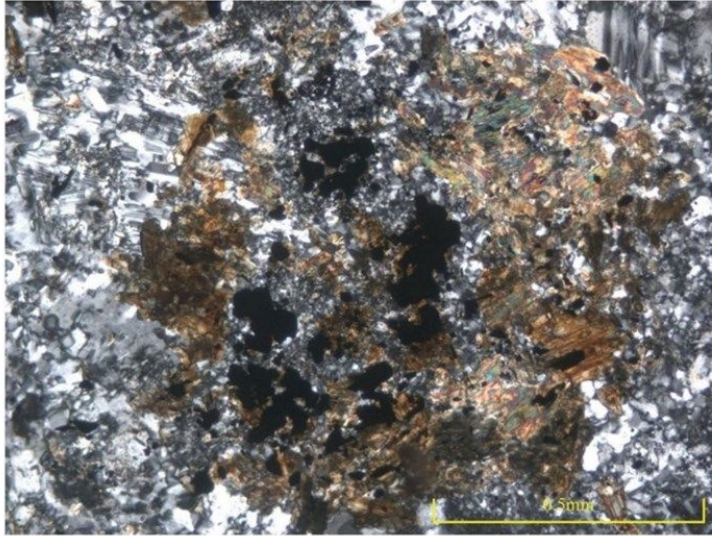
Cluster of amphiboles, epidote and opaques in the intrusive. Plane polarized light.

P1-10pp



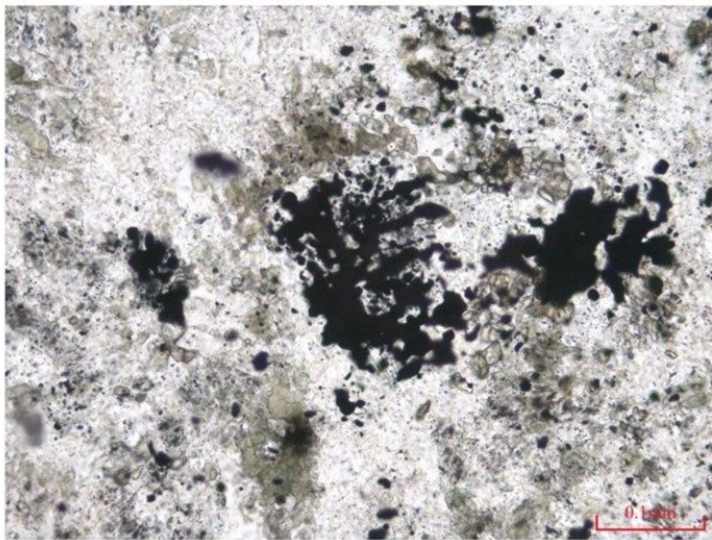
Plagioclase in the intrusive.

P1-10xp



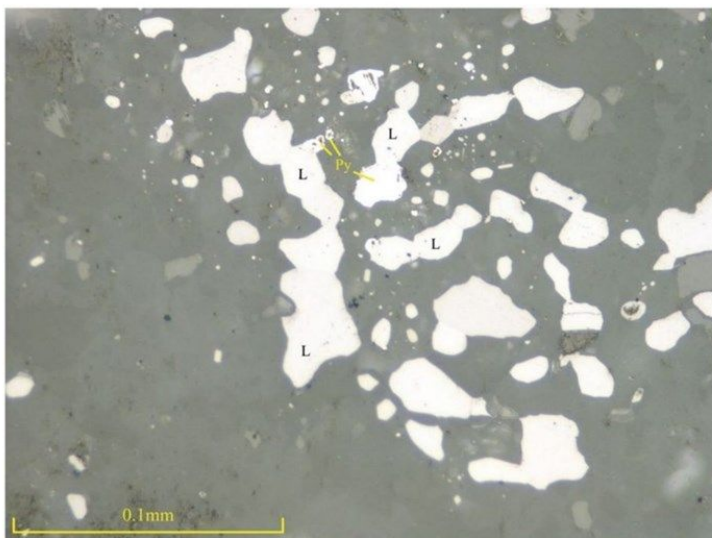
Cluster of amphiboles and opaques.
Crossed polarizers.

P1-10xp2



Opaques with epidote. Plane
polarized light.

P1-20pp



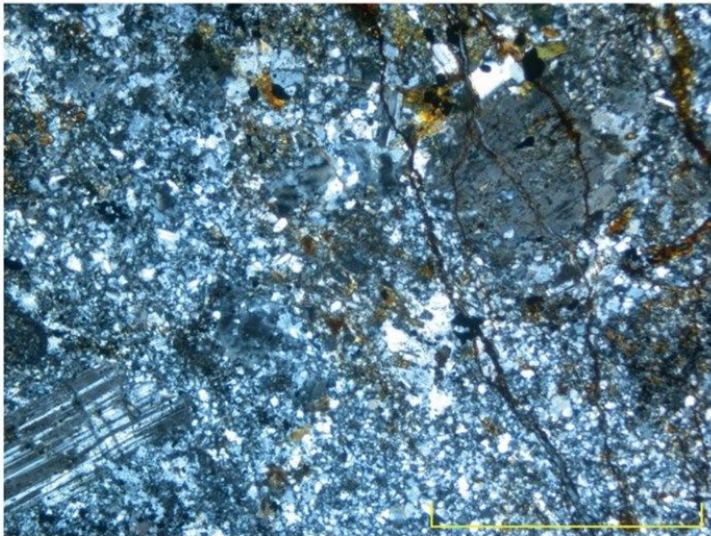
Opaques: 3 pyrite grains, the
remainder is lepidocrocite.
Reflected light, polarizers at 87
degrees.

P1-50xpin



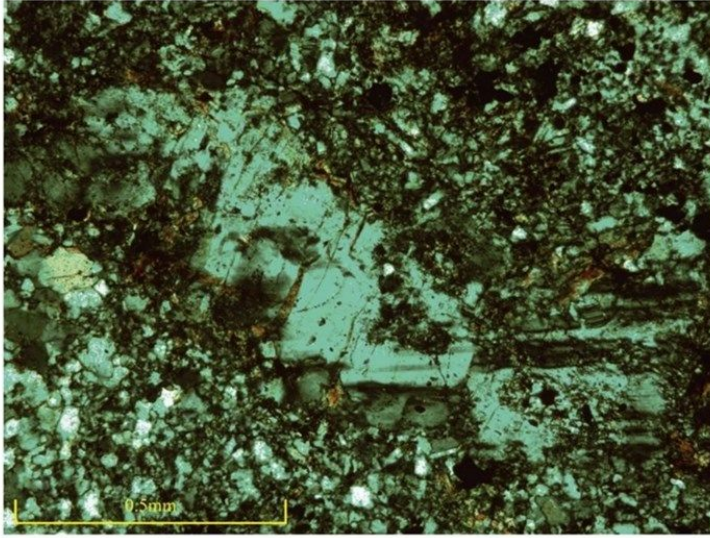
Coarser grained lithofacies:
Plagioclase in fine-grained
groundmass. Crossed
polarizers, 1mm scale bar.

P1-5,0xp3



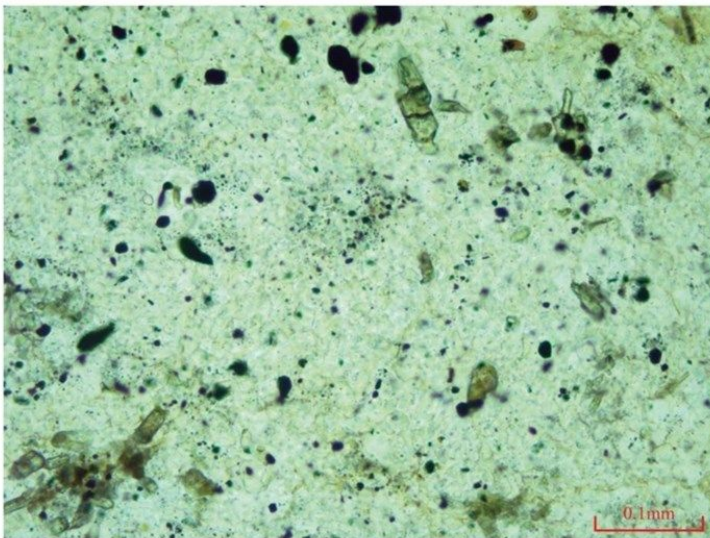
Plagioclase, orthoclase
and fracturing.
Crossed polarizers,
1mm scale bar.

P1-5,0xp2



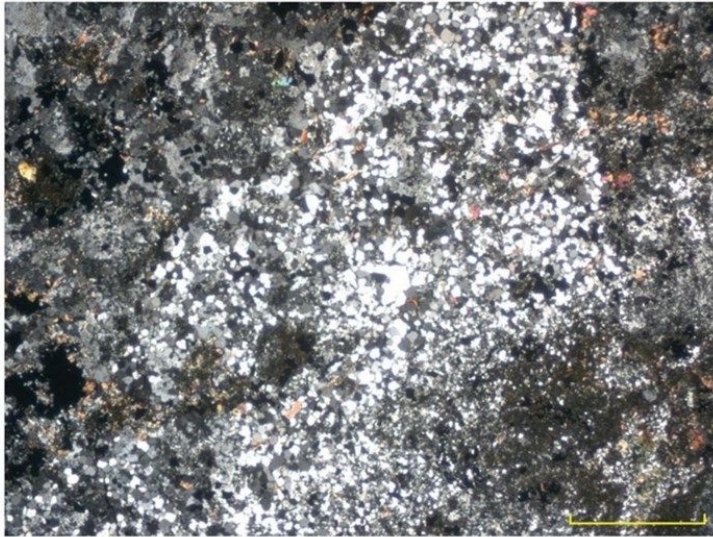
Fractured plagioclase at the edge of the fine-grained lithofacies. Crossed polarizers.

P1-10xp3



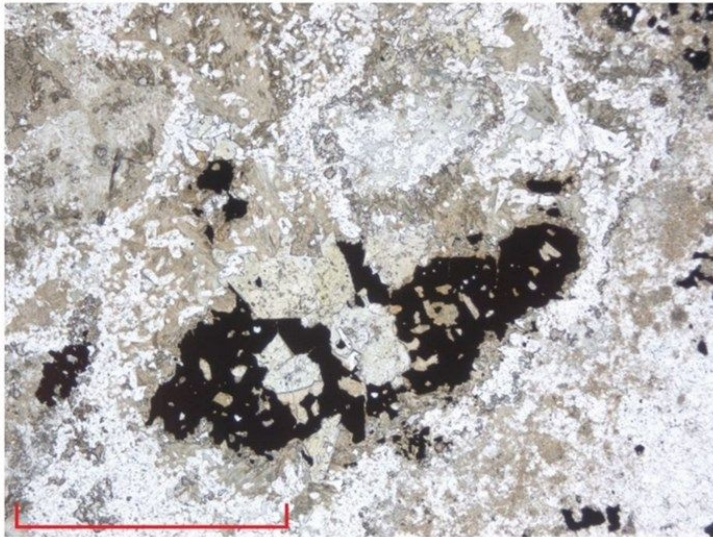
Fine-grained lithofacies: groundmass with epidote crystals. Plane polarized light.

P1-20pp2



P2-2,5xp

Polygonized quartz in the coarser material.
Crossed polarizers, 1mm scale bar.



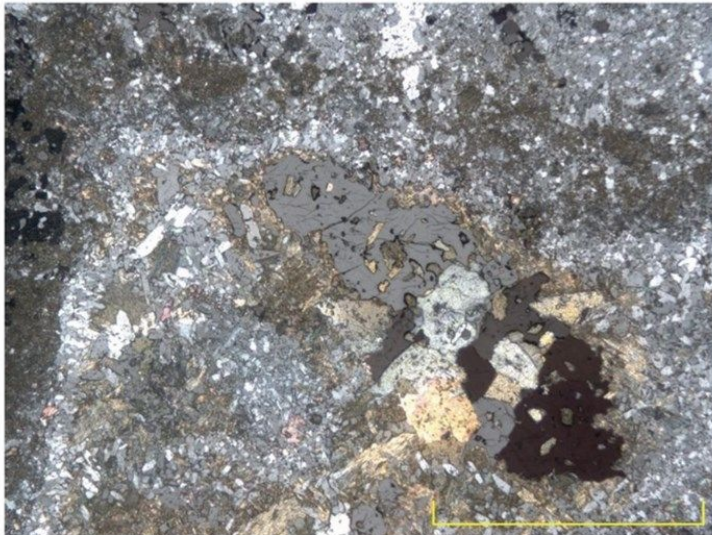
P2-5,0pp

Epidote, chlorite and pyrite.
Plane polarized light, 1mm scale bar.



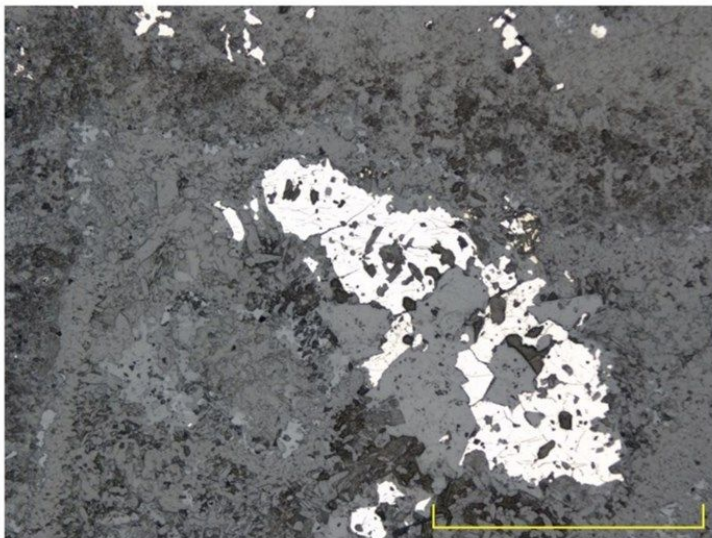
P2-5,0xp

Same field as above, crossed polarizers.



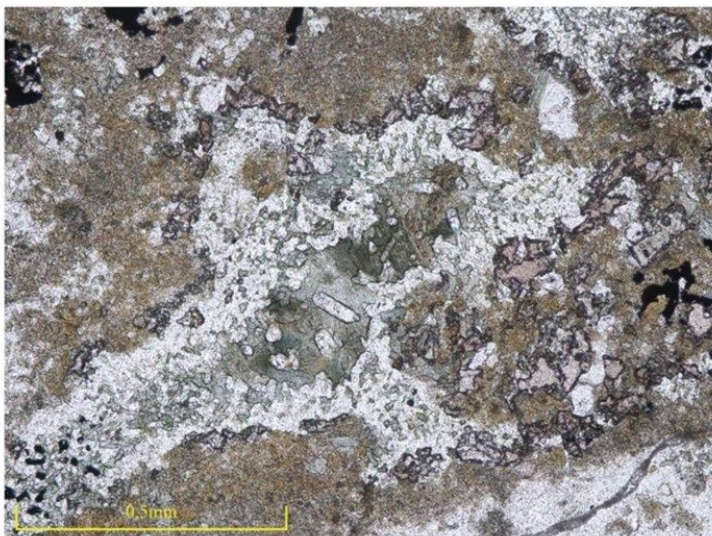
P2-5,0xpin

Sulphide in the finer-grained material is anisotropic i.e, it is pyrrhotite. Reflected light, polarizers at 87 degrees. 1mm scale bar.



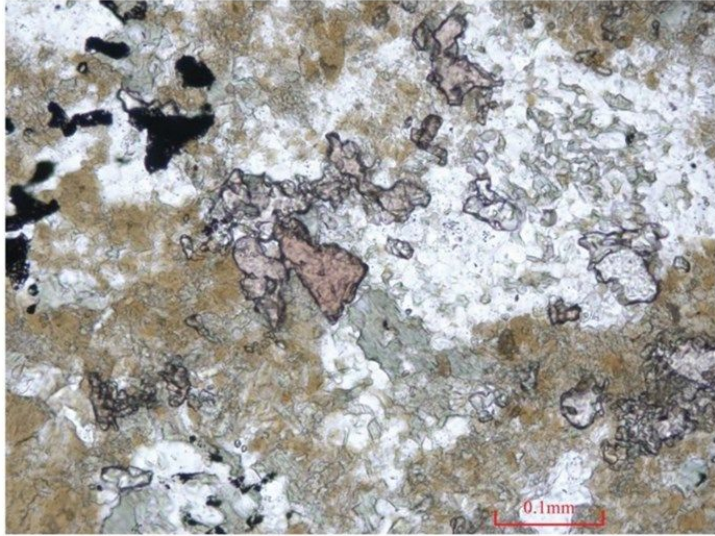
P2-5,0ppin

Same field in p.p. reflected light



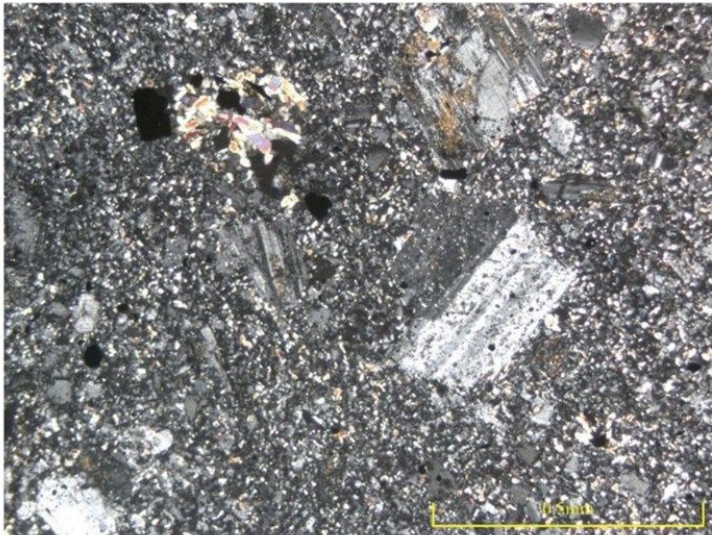
P2-10pp

Chlorite, carbonates and some feldspar. Field adjacent to P2-20pp. Plane polarized light.



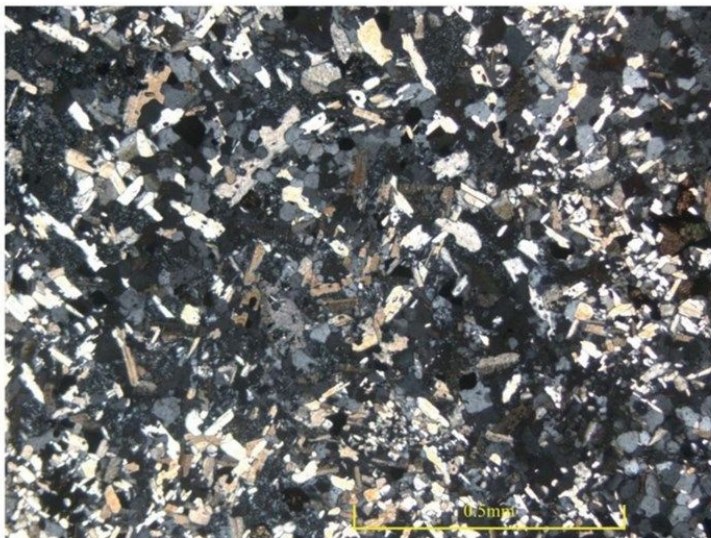
Rhodochrosite alteration.
Plane polarized light.

P2-20pp



Plagioclase and quartz in
the fine-grained material.
Crossed polarizers, 1mm
scale bar.

P2-10xp2



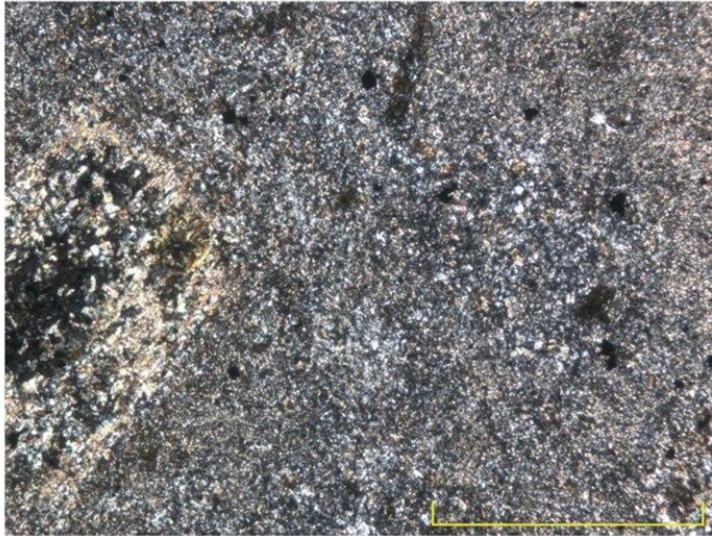
Detail of a patch of
sericite alteration.
Crossed polarizers.

P2-10xp3



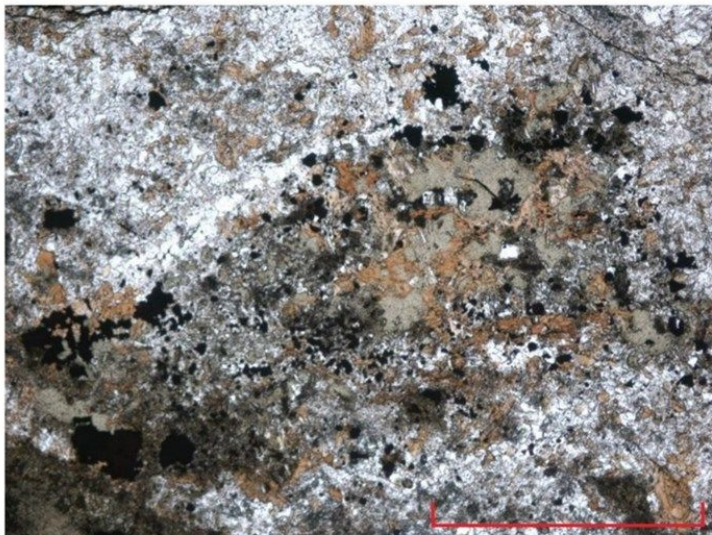
Amphibole included in
epidote. Crossed
polarizers, 1mm
scale bar.

P2-10xp



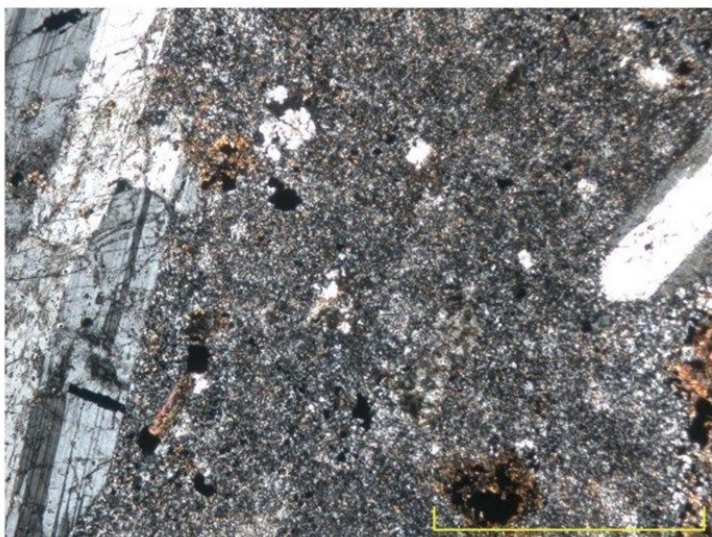
Fine-grained groundmass and sericitized plagioclase. Crossed polarizers, 1mm scale bar.

P3-5,0xp



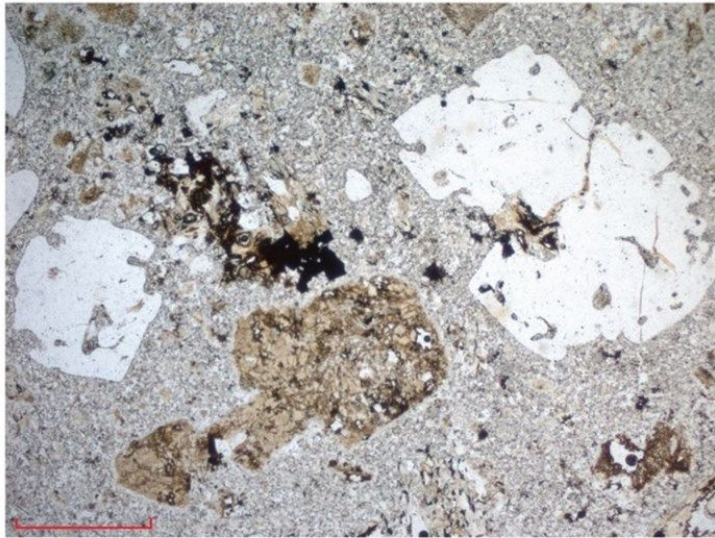
Muscovite, chlorite and epidote. Plane polarized light, 1mm scale bar.

P3-5,0pp



Very slightly altered plagioclase in fine-grained groundmass. Crossed polarizers, 1mm scale bar.

P3-5,0xp2



Embayed quartz phenocrysts and
clay-altered plagioclase.
Plane polarized light, 1mm
scale bar.

P4-2,5pp



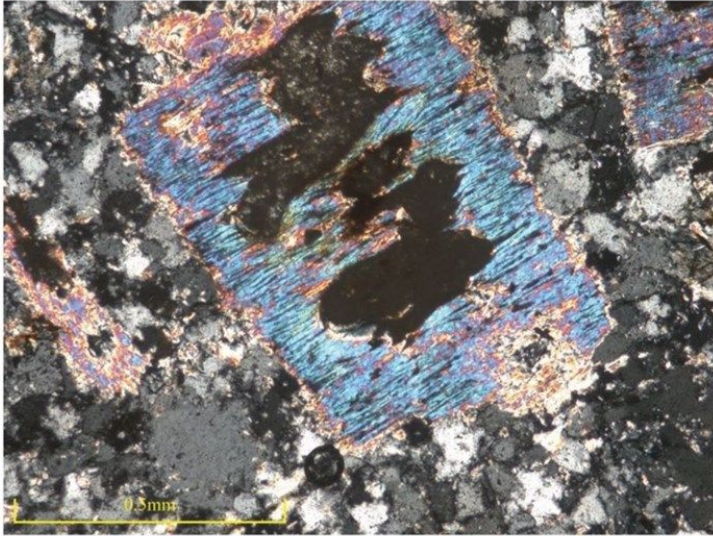
Embayed quartz phenocryst and
clay-altered plagioclase.
Crossed polarizers, 1mm
scale bar.

P4-2,5xp



Muscovite, epidote and
opaques with altered
plagioclase. Crossed
polarizers, 1mm scale bar.

P4-10xp2



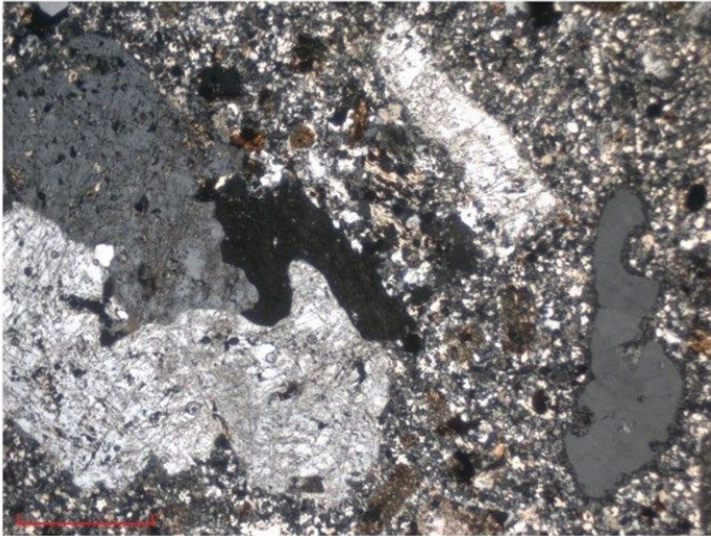
Muscovite with epidote and opaques. Crossed polarizers, 1mm scale bar.

P4-10xp2



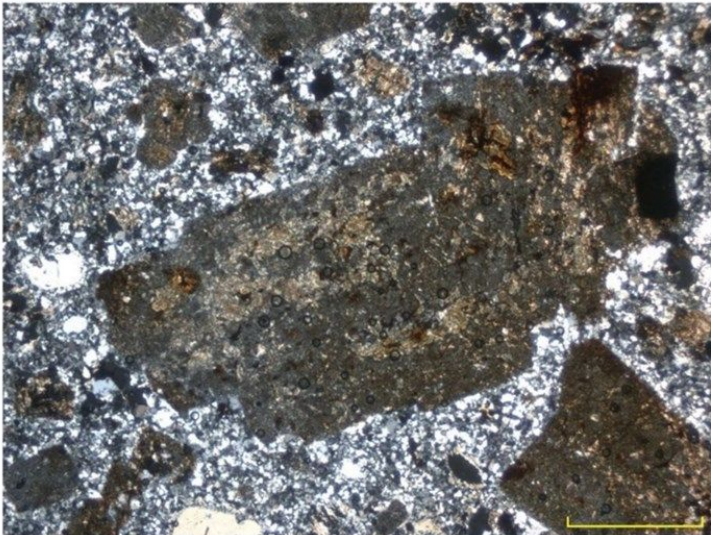
Fe-hydroxides after pyrite.
Plane polarized light.

P4-10pp



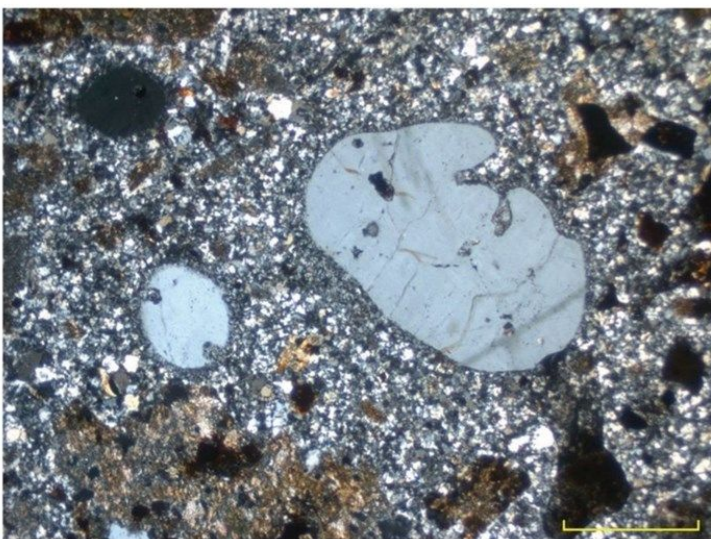
K-feldspar, plagioclase and quartz. Crossed polarizers, 1mm scale bar.

P5-2,5xp



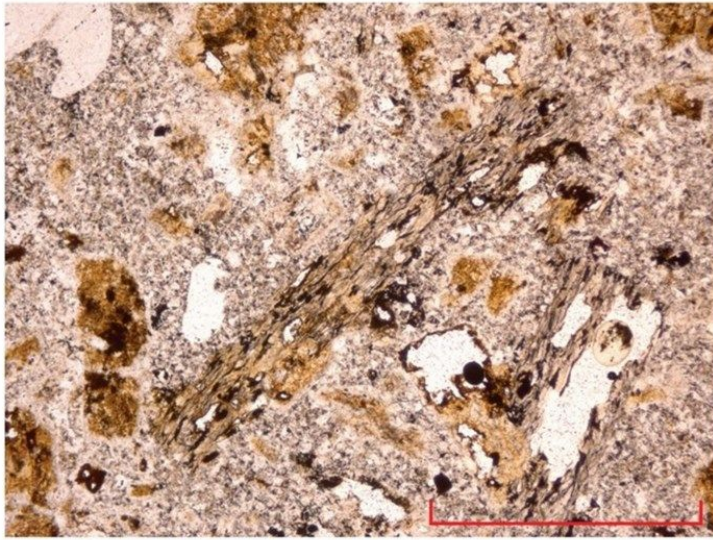
Clay-altered plagioclase. Crossed polarizers, 1mm scale bar.

P5-2,5xp2



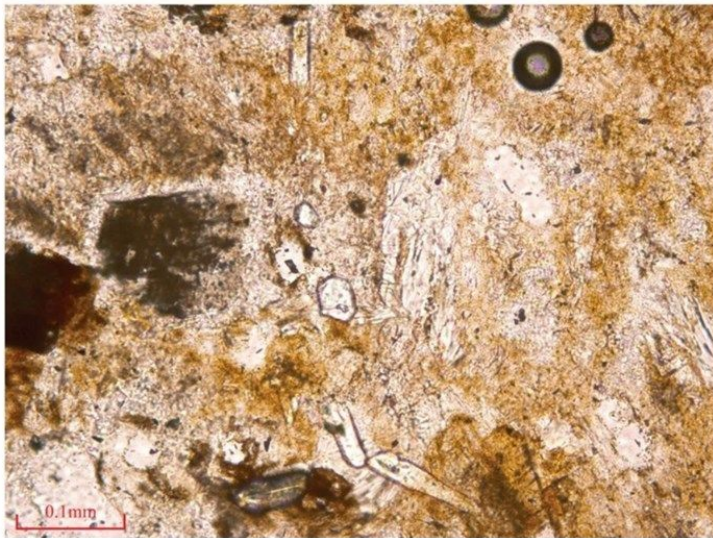
Rounded, embayed quartz. Crossed polarizers, 1mm scale bar.

P5-2,5xp3



Muscovite and clay alteration.
Plane polarized light, 1mm
scale bar.

P5-5,0pp2



Apatite crystals.
Plane polarized light.

P5-20pp