

**2019 ASSESSMENT REPORT**

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GEOLOGICAL MAPPING, ROCK AND SILT GEOCHEMICAL SAMPLING, UPPER RACKLA PROPERTY

YD55201 – YD55260, BOP 1-60; YD55469 – YD55513, BOP 69-105;  
YD55684, BOP 106; YD55515 – YD55520, BOP 107-112;  
YE31957 – YE31976, BOP 113-132

N.T.S. 106C/05 and 106D/08  
MAYO MINING DISTRICT

**Property Centre:**  
64°21'33" N 134° 0'55" W

**WORK PERFORMED:**  
August 9 to August 13, 2019

**Prepared for:**  
Kootenay Silver Inc.

**Report prepared by:**  
Aurora Geosciences Ltd.



**TECHNICAL REPORT**  
2019 Assessment Report  
**Upper Rackla Property**

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YD55684, BOP 106; YD55515 – YD55520, BOP 107-112;  
YE31957 – YE31976, BOP 113-132  
MAYO MINING DISTRICT  
**YUKON, CANADA**

**Kootenay Silver Inc.**  
Suite 1650 - 1075 West Georgia Street.  
Vancouver, British Columbia  
V6E 3C9  
Tel: 604-601-5650

Aurora Geosciences Ltd.  
34A Laberge Rd  
Whitehorse, Yukon  
Y1A 5T6  
Tel: 867.668-7672  
Fax: 867.393-3577  
[www.aurorageosciences.com](http://www.aurorageosciences.com)

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Author  
Carl Schulze, P.Geol.



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## 1 SUMMARY

In April 2019, Kootenay Silver Inc. (Kootenay) commissioned Aurora Geosciences Ltd (Aurora) to stake the BOP 1-132 claim block, comprising the Upper Rackla property, in central Yukon. In August 2019, Kootenay contracted Aurora to conduct a three-day preliminary program of geological mapping, prospecting, rock and silt geochemical sampling across prospective areas of the claim block. The crew comprised a project geologist and junior geologist employed by Aurora, and a professional prospector employed by Kootenay. The property was accessed daily by helicopter from the village of Mayo.

The Upper Rackla property is located at 64°21'33" N 134°00'55" W, on NTS sheets 106C/05 and 106D/08. The property is geographically centered 125 km NE of Mayo, Yukon. As of August 2019, the property comprised 132 full Yukon quartz mining claims covering 2,756.2 Ha (6,807 acres). All claims are 100% owned by Kootenay. There are no underlying agreements, royalties or encumbrances, or environmental liabilities on the property. No significant past exploration has occurred in the immediate property area, although high-grade polymetallic mineralization has been identified and explored at the North Rackla Project, staked by Cantex Mine Development Corp. (Cantex) in 2012. The main North Rackla showing is located about 19 km northeast of the northeast corner of the BOP claim block.

The Upper Rackla property is characterized by rugged, locally inaccessible terrain, with elevations ranging from just under 915 m along the Rackla River to 1,830 m in the south-central property area. The property is affected by a dry-summer sub-arctic climate, with warm summers, very cold winters, and fairly light precipitation which is somewhat dependant on elevation. The field season extends from mid-June to mid-September, with some variance due to elevation.

The Upper Rackla property is located along the southern margin of the Proterozoic Ancient North American Continent, comprising layered rocks, mainly sediments, deposited along the western flank of western Laurentia. The oldest basal sedimentary stratigraphy is the Wernecke Supergroup, a 13-km thick Mesoproterozoic assemblage. From oldest to youngest, the Wernecke Supergroup comprises the Fairchild Lake, Quartet and Gillespie stratigraphic groups, of which the Quartet and Gillespie groups underlie the BOP block. The Quartet Group comprises fine clastic sediments with minor interbeds of orange-weathering dolostone. The Gillespie Lake Group comprises fine grained siliciclastic - carbonate admixtures, overlain by gentle slope carbonate rocks fringed by a stromatolitic reef complex, then by intercalated carbonate - siliciclastic rocks and in turn by carbonate shelf rocks. All Wernecke Supergroup units have been intruded by the 1.32 Ba Hart River Formation diorite to gabbro dykes.

Mapping in 2019, indicated most of the property area is underlain by Quartet group fine grained clastic rocks. A fault-bounded NE-SW trending sigmoidal unit of Gillespie Group dolostone, including stromatolitic horizons, extends across the property area. Aerially extensive units of dioritic to gabbroic dykes and intrusions occur in northern and western areas and include a coeval unit of mafic volcanic rocks in the northwestern area.

Several east-west and ENE - WSW trending faults were identified, one marking the southwestern boundary of the Gillespie Lake dolostone unit. Shear zones are mainly east-west striking and steeply south-dipping, indicating a property-scale structural lineation. Bedding measurements are highly variable, indicating complex folding, particularly in central areas.

Three mineralized showings: the Freddy, Miles and Blue Ridge showings were discovered in 2019. The Freddy showing, located along the south wall of a cirque in the west-central property area, comprises

replacement-style massive galena and sphalerite within a brecciated lens of Quartet Group calcareous siltstone to mudstone. Grab sampling returned values up to 87 ppm copper (Cu), > 20.0% lead (Pb), 1.51% zinc (Zn) and 405 g/t silver (Ag).

The Miles showing, located towards the west property boundary, is comprised of quartz vein to vein breccia-hosted clotty to semi-massive chalcopyrite and galena, with minor late massive silver-bearing galena veins within Hart River Formation mafic volcanic rocks. Composite grab sampling returned values up to 6.685% Cu, 0.251% Pb, 0.101% Zn and 89.0 g/t Ag from quartz-chalcopyrite veining, and a value of >20.0% Pb and 1,014 g/t Ag from silver-bearing galena veining.

Sampling of the Blue Ridge showing, hosted by Quartet Group fine clastic sediments with minor carbonate interbeds in the south-central property area, returned values up to 3,288 ppm (0.329%) Cu, 7,757 ppm Pb, 9,969 ppm Zn and 20.0 g/t Ag. A value of 1.156% Cu was returned from a separate sample within the zone. Minor polymetallic mineralization was identified elsewhere across the property.

Three stream silt geochemical surveys were completed; the first along “Davis Creek” (local name) in the northwest quadrant, and two along upper forks of a stream in the south-central area. Davis Creek, the catchment area of which hosts the Freddy showing, was selected due to strongly anomalous metal values from RGS stream sediment sampling. The 2019 survey returned anomalous Cu values throughout its extent, strongly anomalous Pb values along its lower extent, and strongly anomalous Zn values from the central extent. More subdued but slightly elevated Cu, Pb and Zn values were returned from the southern traverses.

A preliminary age relationship of mineralization was established, comprising early replacement style Pb-Zn sulphide mineralization followed by quartz-chalcopyrite veining superimposed by centimetre-style silver-bearing galena veining. The lack of mid-late Cretaceous Tintina Gold Belt intrusive rocks indicates a probable orogenic setting for mineralization.

A program of property-wide geological mapping, rock sampling and prospecting, ridge-and-spur and contour soil geochemical sampling, and stream sediment sampling is recommended for 2020. This would involve four field personnel, comprising two geologists and two field technicians, and would be helicopter-supported by daily set outs from Mayo. The program would be completed in nine field days. Total estimated costs, including mobilization, two weather days, assaying, contingency and report writing, are approximately CDN\$190,550.

## 2 INTRODUCTION

### 2.1 INTRODUCTION

This assessment report summarizes the preliminary results of a geochemical silt surveying, geological mapping and prospecting program conducted on Kootenay Silver Inc's Upper Rackla property. A total of 29 silt samples and 47 rock samples were collected during three days of field operations (August 10-12, 2019), with an additional two days for mobilization and demobilization.

This report was written to satisfy the assessment requirements under the mining regulations of the Energy, Mines and Resources, Government of Yukon and filed with the Mayo Mining Recorder. Mr. Carl Schulze, PGeo, is the Qualified Person for the project and was on site for the entire duration of the project.

### 2.2 TERMS, DEFINITIONS AND UNITS

All costs contained in this report are in Canadian dollars (CDN\$) unless indicated otherwise. Distances are reported in millimetres (mm), centimetres (cm), metres (m) and kilometres (km). Weights are reported in grams (g) or kilograms (kg). Units of area are measured in hectares (ha), of which 1 hectare is 100 m<sup>2</sup>, and equivalent to 2.47 acres (ac). Some historical distances are reported in feet (ft) or miles (mi), and historical weights in troy ounces (oz.) or pounds (lbs). Temperatures are reported in degrees Celsius (°C), whereby 0°C is the freezing point of water.

The term "GPS" refers to "Global Positioning System" with co-ordinates reported in UTM NAD 83 projection, Zone 8.

A "reference sample" is a sample of known concentration of specific metals. A "standard sample", is a type of reference sample, in this case with known concentrations of copper (Cu), molybdenite (Mo), silver (Ag) and gold (Au), with the Certified Value or "Recommended Value" determined from an average of results from several independent laboratories. These are utilized to determine the accuracy of laboratory analysis. Another sample type is a "blank sample", of known very low, normally sub-detection metal grades, that tests for the degree of contamination, if any, occurring through the analytical process.

A "ton" refers to a short ton, or 2,000 lbs. A "tonne" (t) refers to a metric tonne, which is 1,000 kg or 2,204 lbs. The term "ppm" refers to parts per million, which is equivalent to grams per metric tonne (g/t); the term "ppb" refers to parts per billion. Some historic grades are reported in "oz./ton" which is ounces per short ton. "Ma" refers to million years. The symbol "%" refers to weight percent unless otherwise stated.

ICP-AES stands for "inductively coupled plasma atomic emission spectroscopy". ICP-ES stands for "Inductively coupled plasma emission spectroscopy", and AA stands for "atomic absorption". "QA/QC" refers to "Quality Assurance/ Quality Control".

Elemental abbreviations used in this report are:

Au: Gold	Mn: Manganese
Ag: Silver	Mo: Molybdenum
Al: Aluminum	Na: Sodium
As: Arsenic	Nb: Niobium
B: Boron	Ni: Nickel
Ba: Barium	P: Phosphorous
Be: Beryllium	Pb: Lead
Bi: Bismuth	Pd: Palladium
Ca: Calcium	Pt: Platinum
Cd: Cadmium	Rb: Rubidium
Ce: Cerium	Re: Rhenium
Co: Cobalt	S: Sulphur
Cr: Chromium	Sb: Antimony
Cs: Cesium	Sc: Scandium
Cu: Copper	Se: Selenium
Fe: Iron	Sn: Tin
Ga: Gallium	Sr: Strontium
Ge: Germanium	Ta: Tantalum
Hf: Hafnium	Te: Tellurium
Hg: Mercury	Th: Thorium
In: Indium	Ti: Titanium
K: Potassium	Tl: Thallium
La: Lanthanum	U: Uranium
Li: Lithium	V: Vanadium
Mg: Magnesium	W: Tungsten
Y: Yttrium	Zn: Zinc
Zr: Zirconium	

### 3 PROPERTY DESCRIPTION AND LOCATION

#### 3.1 LOCATION AND DESCRIPTION

The Upper Rackla property is located at 64°21'33" N 134°00'55" W, on NTS sheets 106C/05 and 106D/08 (Figure 1). The property is geographically centered 125 km NE of Mayo, Yukon, and about 415 km ENE of Whitehorse, Yukon. As of August 10, 2019, the property comprised 132 full Yukon quartz mining claims as a single 11 x 12-unit block covering 2,756.2 Ha (6,807 acres).

#### 3.2 MINERAL TENURE AND UNDERLYING AGREEMENTS

All claims were commissioned to be staked directly by Kootenay Silver Inc., (Kootenay) and are 100% owned by Kootenay. There are no underlying agreements, royalties or encumbrances on the property.

Table 1 lists the claim status as of October 31, 2019.

**Table 1: Claim Status, BOP 1-132 claims**

<b>Grant Numbers</b>	<b>Claim Names</b>	<b>Expiry Date</b>
YD55201-YD55222	BOP 1-22	2023-04-26
YD55223-YD55232	BOP 23-32	2024-04-26
YD55233	BOP 33	2023-04-26
YD55234	BOP 34	2024-04-26
YD55235 - YD55244	BOP 35-44	2023-04-26
YD55245 - YD55260	BOP 45-60	2024-04-26
YD55469 - YD55470	BOP 61-62	2024-04-26
YD55471 - YD55474	BOP 63-66	2023-04-26
YD55475 - YD55491	BOP 67-83	2024-04-26
YD55492 - YD55496	BOP 84-88	2023-04-26
YD55497 - YD55512	BOP 89-104	2024-04-26
YD55513	BOP 105	2023-04-26
YD55684	BOP 106	2023-04-26
YD55515 - YD55518	BOP 107-110	2023-04-26
YD55519 - YD55520	BOP 111-112	2024-04-26
YE31957 - YD31970	BOP 113-126	2024-04-26
YE31971 - YE31976	BOP 127-132	2023-04-26

### **3.3 ENVIRONMENTAL LIABILITIES AND PERMITTING**

There are no known environmental liabilities associated with the property. At present, no permits are in place for exploration on the Upper Rackla property. Activities completed during the 2019 program did not require permitting.



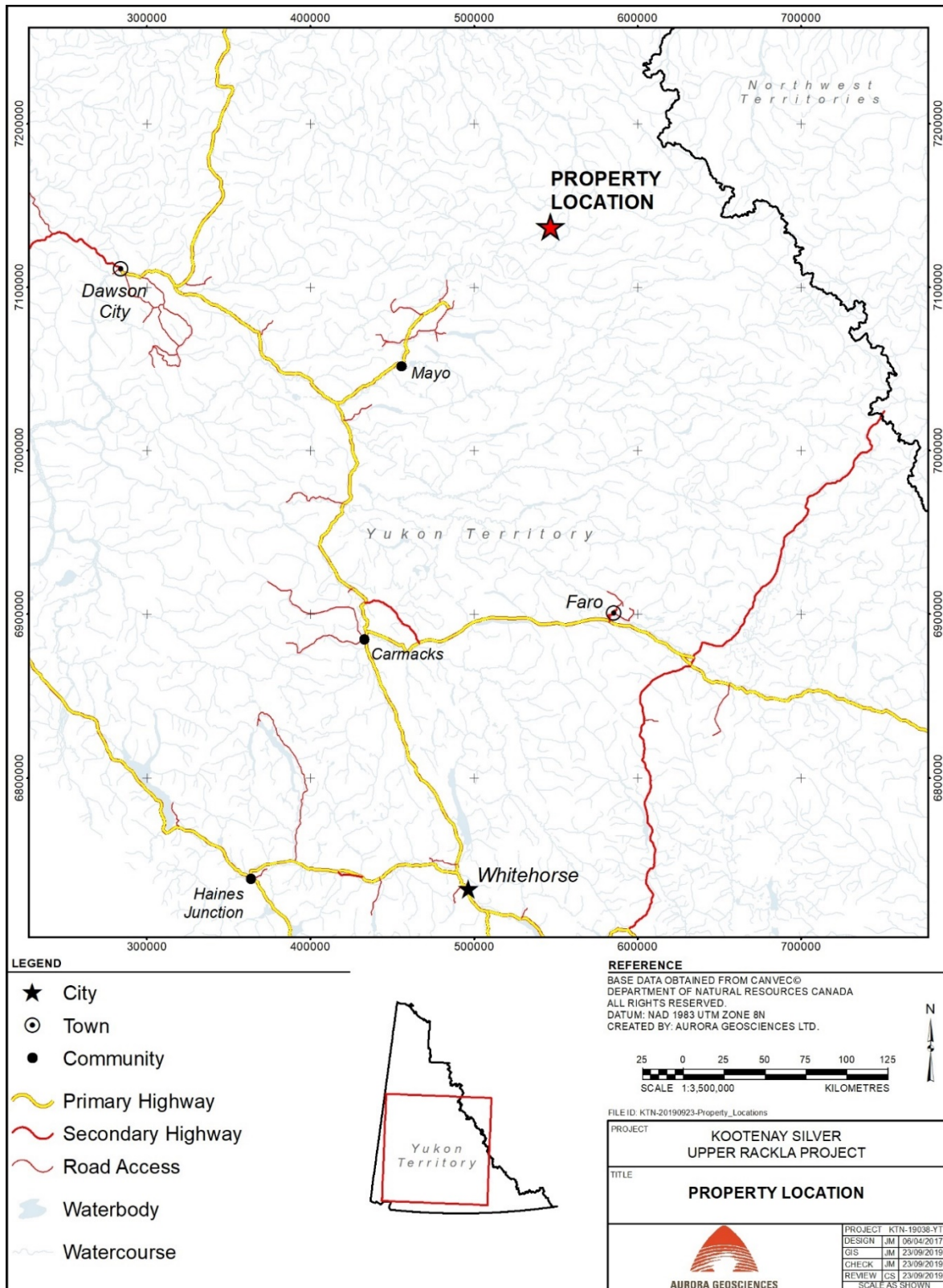


Figure 1: Property Location map



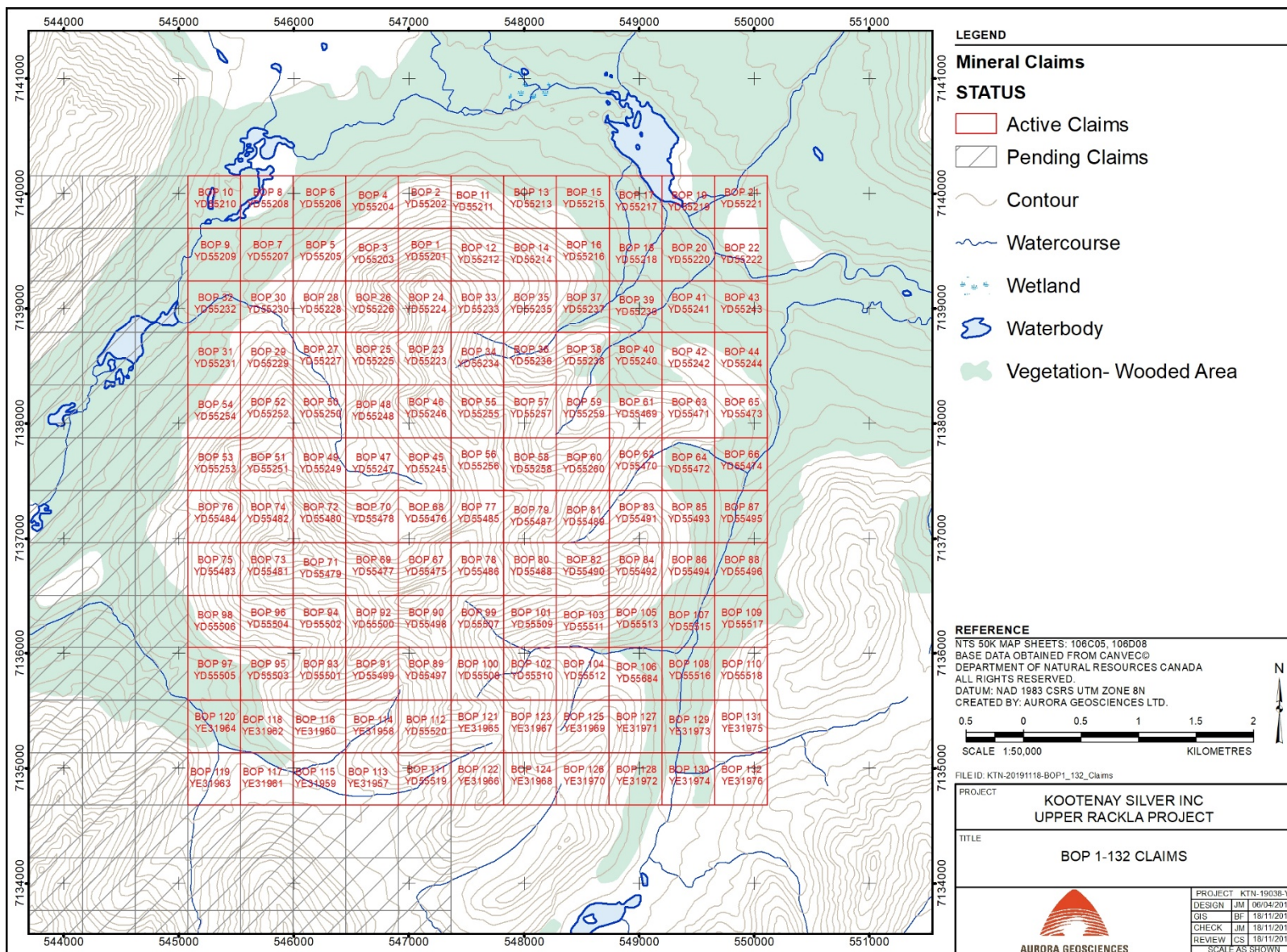


Figure 2: Claim Tenure Map (November, 2019)

## **4 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY**

### **4.1 TOPOGRAPHY, ELEVATION AND VEGETATION**

The Upper Rackla property covers a mountainous area bounded on all sides by subalpine stream valleys, including the Rackla River along the northern boundary. The property is characterized by rugged, locally inaccessible terrain, although much of the eastern and southern area is marked by fairly moderate terrain. Elevations range from just under 915m (3,000 feet) along the Rackla River up to 1,830 m (6,000 feet) in the south-central property area. Lowland areas along property boundaries are covered by subalpine boreal forest, comprising subalpine fir, black and white spruce, and poplar along drier south and west-facing slopes. Areas from about 1,220 m to 1,450 m (4,000 – 4,750 feet) are covered by intermittent buckbrush and shrubby vegetation, while areas above 1,450 m are marked by alpine tundra or are unvegetated.

### **4.2 ACCESS**

The property can be reached by helicopter from the Mayo airport, with potential for fuel depots to be established along the Silver Trail extending from the village of Mayo to Keno City, or along local access roads extending north or east from Keno City.

During the 2019 program, the property was accessed by a Hughes 520 helicopter contracted from Fireweed Helicopters Ltd. at Dawson City, Yukon. Supplies and personnel were driven from Whitehorse to Mayo on August 9<sup>th</sup>, returning on August 13<sup>th</sup>. The helicopter flew from Dawson City to Mayo on August 9<sup>th</sup> and provided daily set outs and pickups from Mayo during August 10 – 12, returning to Dawson on the evening of August 12. The helicopter remained on site during the day to facilitate movement of personnel.

### **4.3 LOCAL RESOURCES**

The property is large enough to host mining and mineral processing infrastructure and has sufficient water from several small streams to service diamond drilling operations. The village of Mayo (area population 496, Yukon Bureau of Statistics) is road-accessible via the Silver Trail (Yukon Highway 11) extending from the North Klondike Highway. The town has an available work force, including some local tradespeople and heavy equipment operators. Mayo also provides adequate grocery and some hardware and fuel services, as well as accommodations. The town also hosts a serviced airport and government services, including the Mayo mining recording office for the Mayo district. Helicopter services are intermittently available during the field season.

### **4.4 CLIMATE**

The property is affected by a dry-summer sub-arctic climate (Wikipedia, 2019). Average Mayo July high and low temperatures are 22.8° C and 9.4° C, respectively, and average January temperatures are -18.0° C and -28.2° C, respectively. Total annual precipitation averages 313.5 mm, with 203.8 mm rain and 160.6 cm snow. The climate at the property is cooler and wetter than that of Mayo, with increasing precipitation and decreasing temperatures with elevation. The field season extends from mid-June to mid-September, with some variance due to elevation.

## 5 HISTORY

No previous private-sector exploration has been documented for the BOP 1-132 block, although numerous proximal polymetallic occurrences have undergone exploration. The area has undergone regional geological mapping by the Yukon Geological Survey. It has also undergone stream sediment sampling under the “Regional Geochemical Survey” (RGS) program. This survey revealed several geochemically anomalous values for base metals, particularly along Davis Creek in the northwest property area (Section 7.2).

## 6 GEOLOGY

### 6.1 REGIONAL GEOLOGY

The Upper Rackla property is located along the southern margin of the Proterozoic Ancient North American Continent. This comprises layered rocks, predominantly sediments, deposited along the western flank of western Laurentia, a craton represented by the Canadian Shield (Israel et al).

The oldest basal sedimentary stratigraphy is comprised of the Wernecke Supergroup, a 13-km thick assemblage deposited in the Mesoproterozoic from about 1.84 Ba to >1.4 Ga (Delaney, 1985). The Wernecke Supergroup is divided into three major groups; from oldest to youngest, these are the Fairchild Lake Group, the Quartet Group and the Gillespie Group. Delaney (1985) has subdivided the Fairchild Lake Group into five formations, the first three comprising fine grained basinal sediments supplied by a major river, the fourth consisting of shallow marine shelf sediments, and the fifth deposited in an anoxic basin fringed by a carbonate shelf. The overlying Quartet Group is a 5-km thick sequence comprising siltstone, mudstone, fine sandstone and claystone (Delaney) with minor interbeds of orange-weathering dolostone towards the top of the sequence (Colpron et al, 2016). The Quartet Group is overlain by the 4-km thick Gillespie Lake Group, comprising seven formations. The lower four of these are composed of fine grained siliciclastic – carbonate admixtures that were deposited in a progressively deepening basin. The fifth is comprised of carbonate rocks deposited in a gentle slope environment fringed by a stromatolitic reef complex. This is overlain by intercalated carbonate - siliciclastic rocks and in turn overlain by rocks deposited on a carbonate shelf (Delaney).

All Wernecke Supergroup units have been intruded by later Ectasian-aged Hart River Formation (about 1.32 Ga) diorite to gabbro dykes, emplaced during a period of crustal extension (Israel et al). Minor felsic dykes of unknown age also occur within the Wernecke Supergroup. The Pinguicula Group, a 2.5-km sequence comprising sandstone interbedded with dolostone, siltstone and shale deposited on an erosional surface, overlies Wernecke Supergroup rocks. Neoproterozoic (<1.0 Ga) carbonates, sandstones and siltstone of the Mackenzie Mountains Supergroup overlie the Pinguicula Group in the eastern part of the Ancient North American Continent.



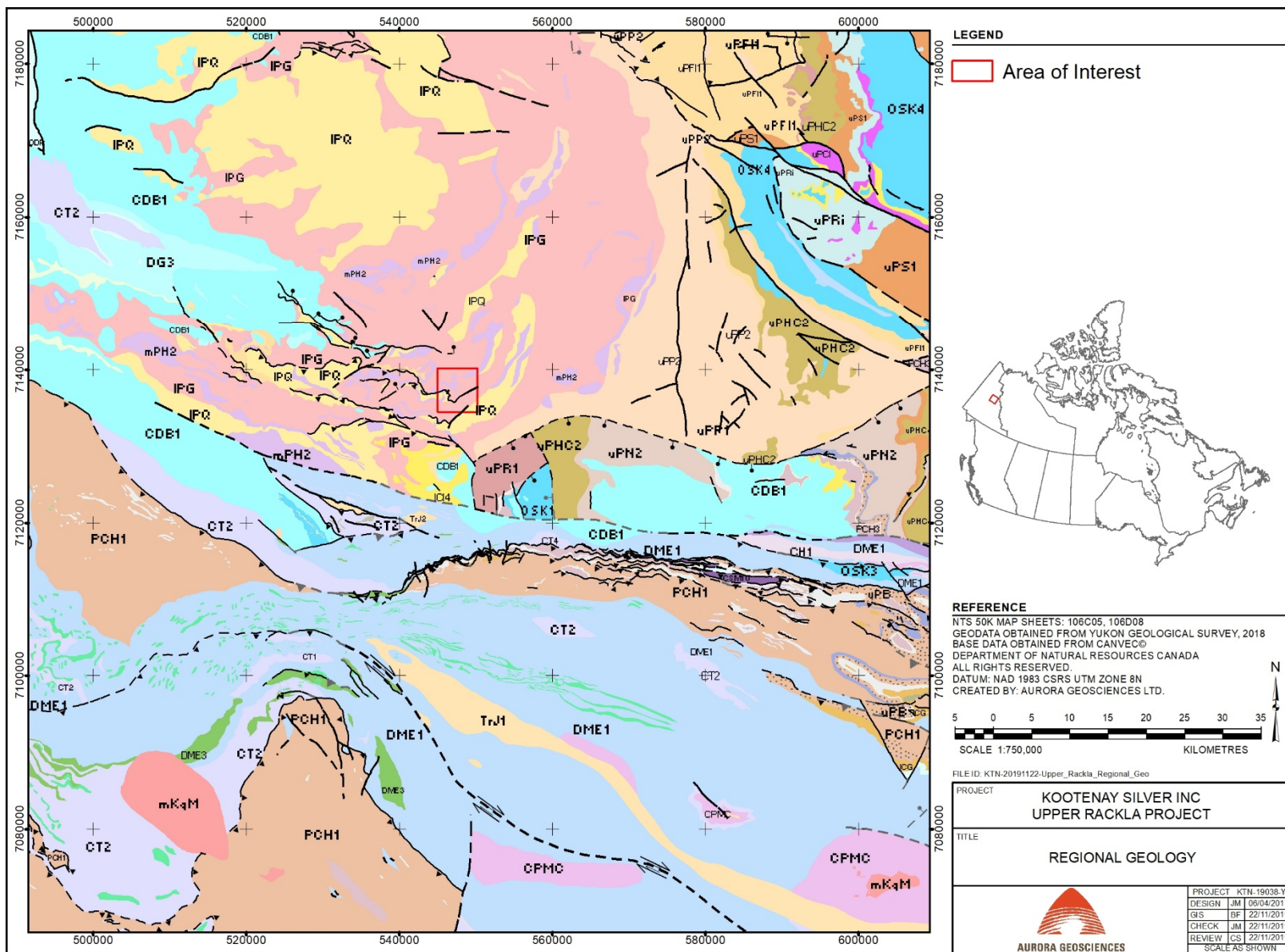


Figure 3: Regional Geology Map, Upper Rackla area

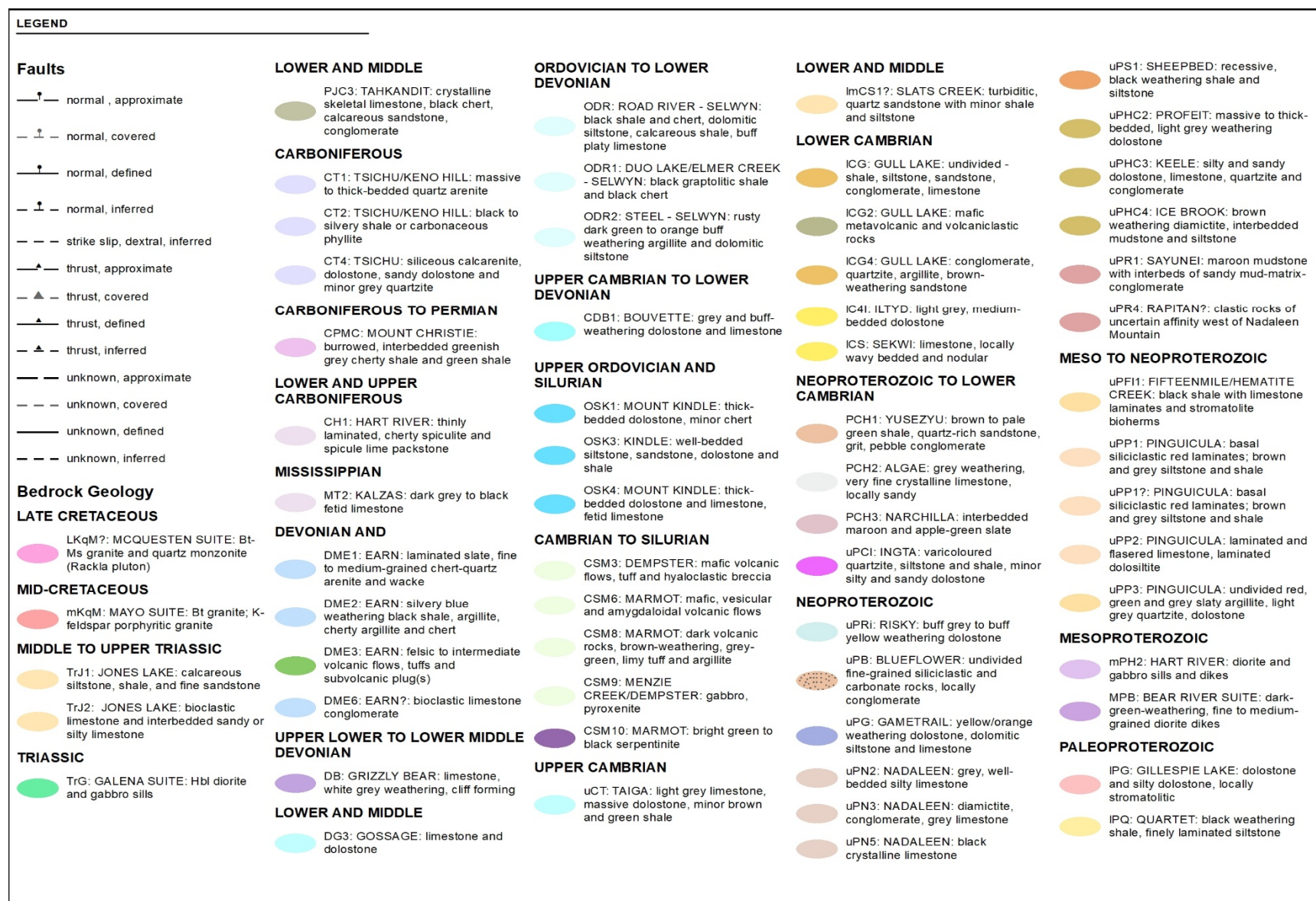


Figure 4: Regional Geology Legend

## 6.2 PROPERTY GEOLOGY

Mapping in 2019, combined with geological mapping by the Yukon Geological Survey (YGS), indicates the majority of the property area is underlain by siltstone, mudstone and shale, with minor conglomerate of the Quartet group (Figure 5). A fault-bounded northeast-southwest trending sigmoidal unit of Gillespie Group dolomitic sandstone to dolostone, including stromatolitic horizons, extends across the property area. Aerially extensive units of dioritic to gabbroic dykes and intrusions occur in northern and western areas. Mapping in 2019 indicates the presence of coeval reddish-brown carbonate-altered mafic flow rocks in the northwestern area near Davis Creek (local name). A narrow felsic dyke is located in the west-central property area.

Several east-west and ENE – WSW trending faults were identified in the property area, one of which marks the southwestern boundary of the Gillespie Lake dolostone unit. Another broadly arcuate fault marks the southern terminus of a gabbroic unit, indicating faulting post-dates mafic dyke emplacement. Shear orientations throughout the property are east-west striking and steeply south-dipping to vertical, indicating a structural lineation throughout the property area. Bedding measurements are highly variable in the west-central property area, indicating complex folding, but are more consistently east striking, south dipping, to ESE-WNW striking, SW dipping in southern and eastern areas. Directly south of Davis Creek, bedding exhibits a younging orientation to the west, although this may vary with fold orientation. Foliation measurements are typically east-west striking and steeply south dipping.



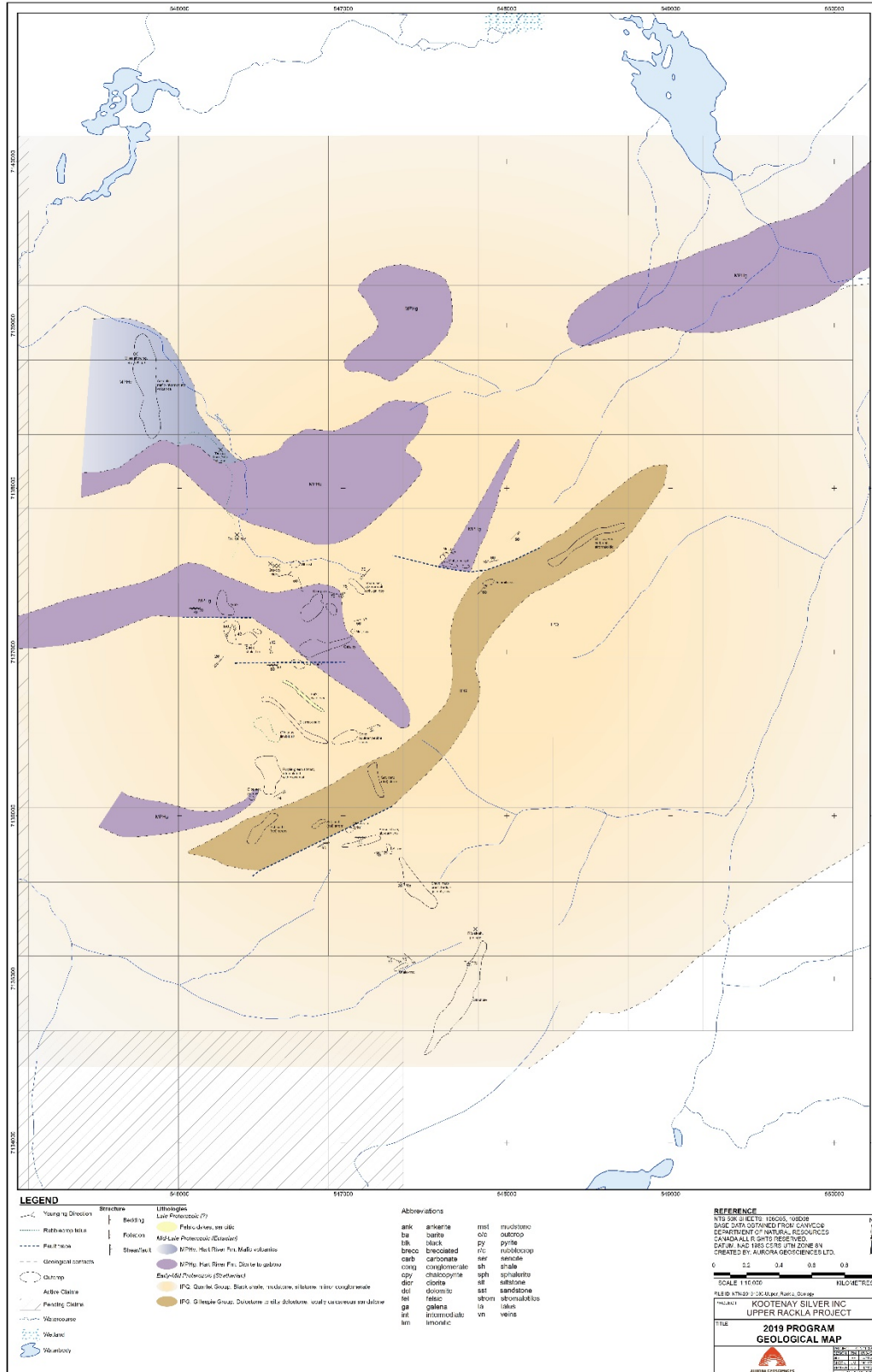


Figure 5: Property Geology map, 2019 Program

### 6.3 MINERALIZATION

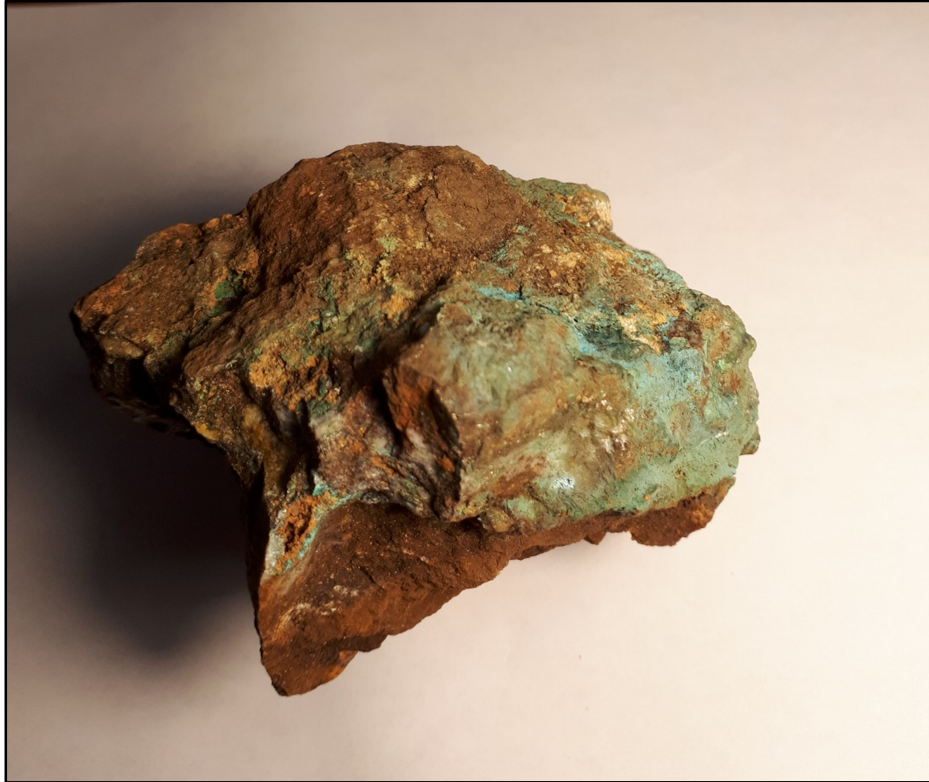
The 2019 program led to discovery of three mineralized showings: the Freddy, Miles and Blue Ridge showings. The Freddy showing, extending across a length of 33 m, is comprised of replacement-style fine grained massive to semi-massive galena and sphalerite within brecciated calcareous siltstone to mudstone (Figure 6). The showing is hosted by a calcareous lens within Quartet Group fine clastic sediments, directly adjacent to a sill of fine grained, amygdaloidal basalt, possibly representing a subvolcanic gabbro. Replacement-style massive sulphides occur as breccia clasts up to 1 cm in length, and as bands up to 3 cm in width. Stringer and disseminated style mineralization also occur. Sulphide mineralization is associated with strong silicification and minor calcite and carbonate veining.



**Figure 6: Sample 1903612: massive galena (>20% Pb, 405 g/t Ag), Freddy Showing**

The Miles showing is comprised of clotty to semi-massive chalcopyrite, clotty galena, and azurite and malachite within quartz vein and vein breccia hosted by Hart River Formation dolomitized mafic volcanic rocks (Figure 7). Lesser centimeter-scale massive galena was also identified. The showing also includes areas of banded quartz-dolomite veining with disseminated to semi-banded chalcopyrite (Figure 8). Although the known aerial extent is very limited, time constraints did not allow for comprehensive exploration of the target.





**Figure 7: Sample R1903555 (6.69% Cu), Miles Showing**



**Figure 8: Banded quartz-carbonate veining (0.423% Cu, 0.485% Pb), Miles Showing**

The Blue Ridge showing is comprised of several rock grab samples returning anomalous Pb, Zn, Cu ± Ag values returned over 900 metres along a ridge in the south-central property area. The showing is located within Quartet Group light grey to pale green thin bedded shale, with mineralization specifically hosted within or proximal to carbonate lenses to 30 cm in width. Carbonate lenses are commonly brecciated and have undergone dolomitization and silicification. Sulphide mineralization comprises disseminated and fracture-filling galena, sphalerite and chalcopyrite.

Minor occurrences of chalcopyrite and galena have been identified throughout the project area. The south wall of the cirque, hosting the Freddy showing, also hosts an occurrence of clotty sphalerite and lesser chalcopyrite within quartz-carbonate veining near the headwaters of Davis Creek. Abundant large talus float quartz vein boulders with disseminated and fracture-filling chalcopyrite were identified along the south side of Davis Creek.

## **7 WORK PROGRAM**

In 2019, a three-person crew conducted a reconnaissance-style program of geological mapping, prospecting, rock and silt geochemical sampling across prospective areas of the property. The program was helicopter-supported daily from Mayo, and the crew stayed at local lodgings in Mayo. The program took place over a three-day period from Aug 10 - 12, with two additional days for mobilization and demobilization. The specific areas targeted were: Davis Creek, draining the northwest quadrant of the property, and the upper branches of a west-flowing stream along the south property boundary. Three silt sample traverses were completed along these drainages. Prospecting focused mainly along the upper reaches of Davis Creek, a drainage in the east-central area, and ridgelines in the central and south-central project areas.

The catchment area of Davis Creek underwent intensive prospecting and rock sampling, particularly the cirque marking the upper limit of the catchment area. A total of 25 rock samples were acquired from this area. Two rock samples were taken from the east branch catchment of the southern stream, nine from the ridgeline or upper catchment of the west branch of this stream, and one from the next catchment to the west. Nine samples were also retrieved from ridgelines and upper areas of another catchment in the east-central area.

Geological mapping was also completed across the northwest and south-central catchment areas. Rock grab and composite grab samples were taken where warranted in the field. Rock sampling and geological mapping were completed concurrently with silt sampling.

### **7.1 ROCK SAMPLE RESULTS**

A total of 47 rock samples were acquired in 2019. The highest grade Pb and Zn values were returned from the Freddy showing, which comprises replacement-style massive sulphide mineralization within calcareous siltstone to mudstone. Sample results showed a very high variability in Pb: Zn ratios, as well as in Ag and Cu content. Sample #1903612 returned 87 ppm Cu, > 20.0% Pb, 1.51% Zn and 405 g/t Ag, while Sample #1903635 returned 577 ppm Cu, 1,941 ppm (0.194%) Pb, >20.0% Zn and 21.9 g/t Ag. Samples enriched in Zn show a strong correlation with elevated Cd values and anomalous to strongly anomalous Hg values. The high variability indicates a zonation or banding of sulphide mineralization. Figure 9 shows rock sample locations and Figures 10 through 13 show the value ranges for Cu, Pb, Zn and Ag, respectively.

Anomalous base metal values were also returned from samples taken elsewhere within the cirque hosting the Freddy showing and the headwaters of Davis Creek. Sampling of Hart River Group diorite dykes and proximal fine clastic sediments, about 500m east of the Freddy showing, returned values ranging from 14 ppm Cu, 106 ppm Pb, 171 ppm Zn and 0.4 g/t Ag from Sample #1903605, up to 2,628 ppm (0.263%) Cu, 624 ppm Pb, 1.27% Zn and 2.6 g/t Ag. Sampling of large quartz talus float boulders along the south wall of the cirque returned values of 128 ppm Cu, 2,917 ppm Pb, 730 ppm Zn and 1.9 g/t Ag (Sample #1903548), and 3,389 ppm Cu, 61 ppm Pb, 86 ppm Zn and 2.2 g/t Ag (Sample #1903547).

The Miles showing is comprised mainly of quartz-chalcopyrite veining in fractured to brecciated mafic volcanics. Grab and composite grab sampling returned values from 0.857% Cu, 0.176% Pb, 0.112% Zn and 47.6% Ag (Sample #1903556), up to 6.685% Cu, 0.2508% Pb, 0.1011% Zn and 89.0 g/t Ag (Sample #1903555). The showing includes a “select composite grab” sample of a centimeter-scale galena vein, returning values of 608 ppm Cu, >20.0% Pb, 188 ppm Zn and 1,014 g/t Ag (Sample #1903667).

Sampling along the Blue Ridge showing, also returned a very pronounced range of base metal values, as well as a pronounced range in base metal ratios. Values for Cu range from 3 up to 11,560 ppm (1.156%), values for Pb range from 103 up to 7,757 ppm, values for Zn range from 106 up to 9,969 ppm and values for Ag range from <0.3 up to 20.0 g/t. The majority of samples were taken slightly downslope along the southwest flank of the ridge, which forms the catchment area of the western fork of the stream where stream silt sampling was also completed (Figures 9 - 13).

Sampling along the eastern ridgeline returned only sporadic anomalous base metal and Ag values, including: 1.561% Cu and 4.4 g/t Ag from Sample #1903623, 4.8 g/t Ag from Sample #1903624, and 3,846 ppm Cu and 8.5% Ag from Sample #1903625. Low to background Au values were returned across the property.



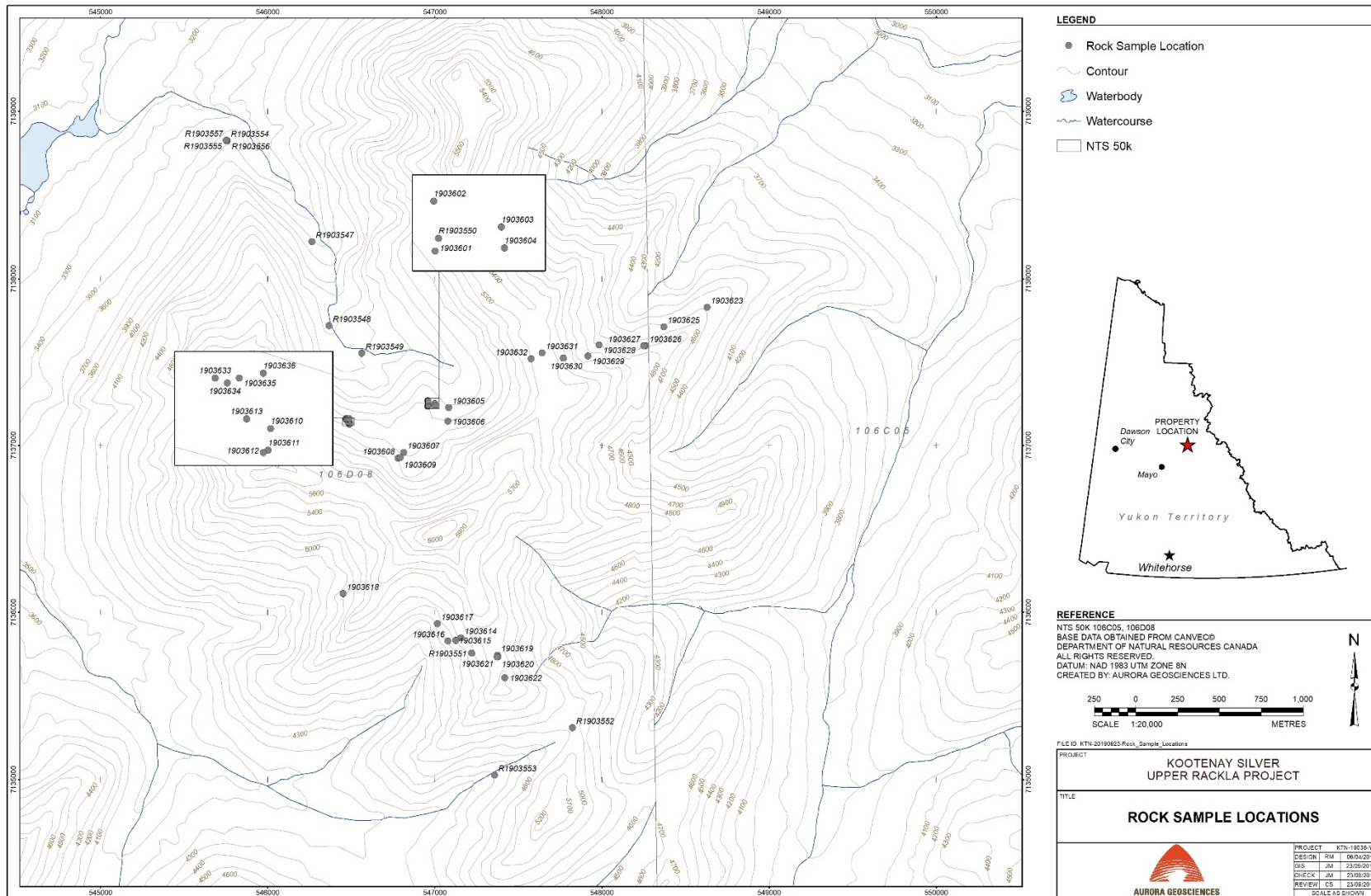


Figure 9: Rock Sample locations, 2019 Program

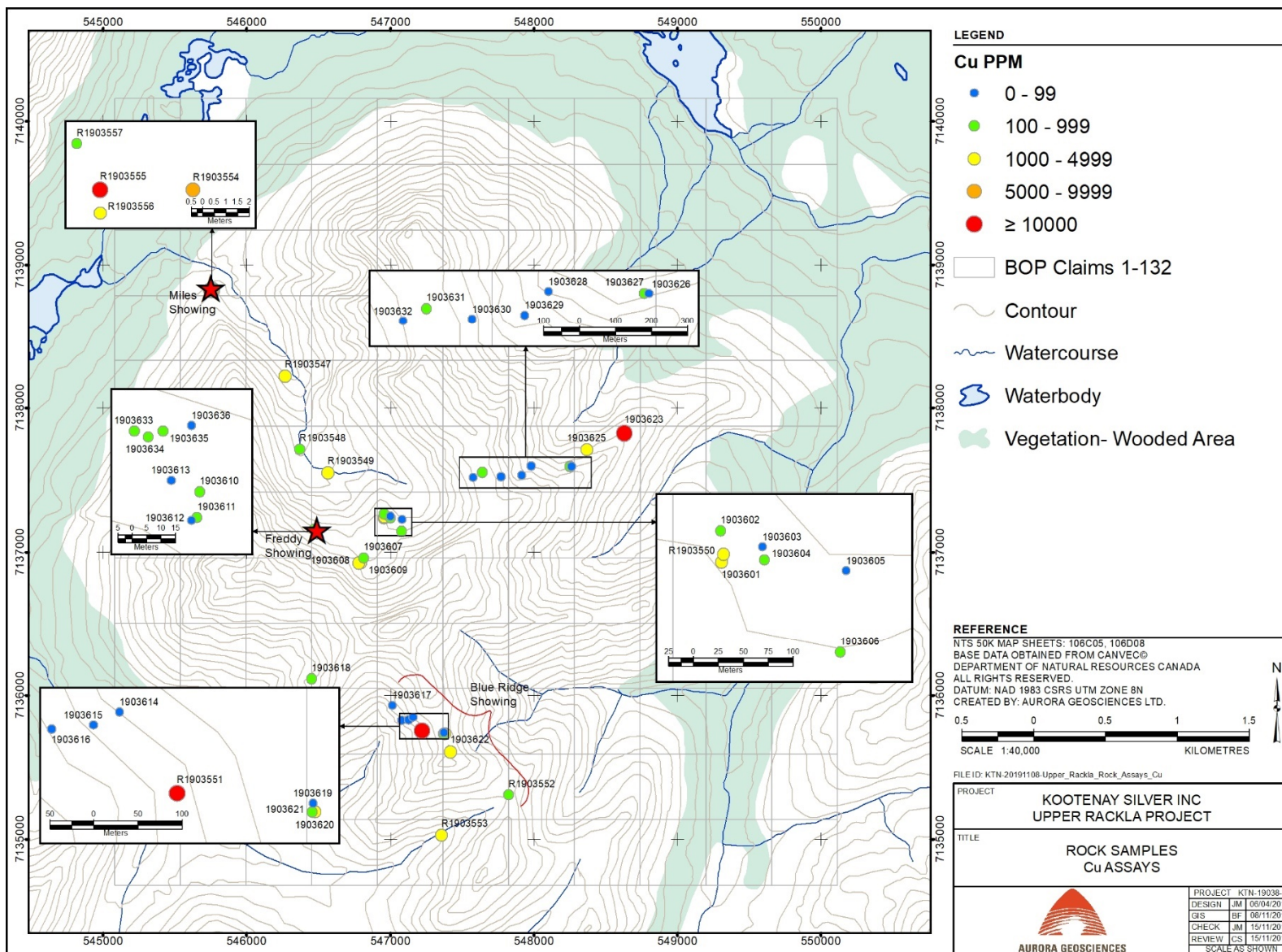


Figure 10: Cu Value ranges, 2019 rock sampling program



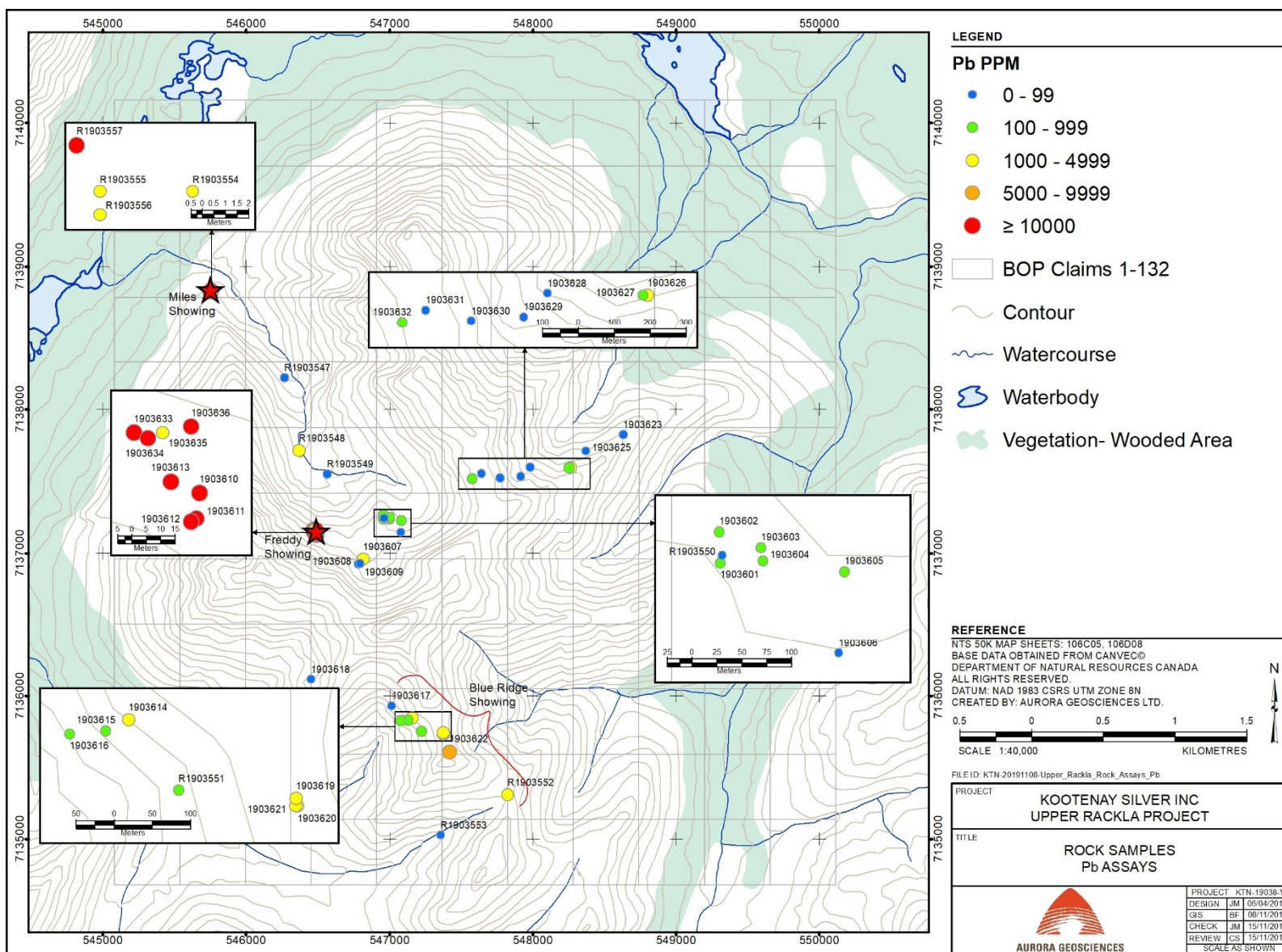


Figure 11: Pb sample value ranges, 2019 rock sampling program

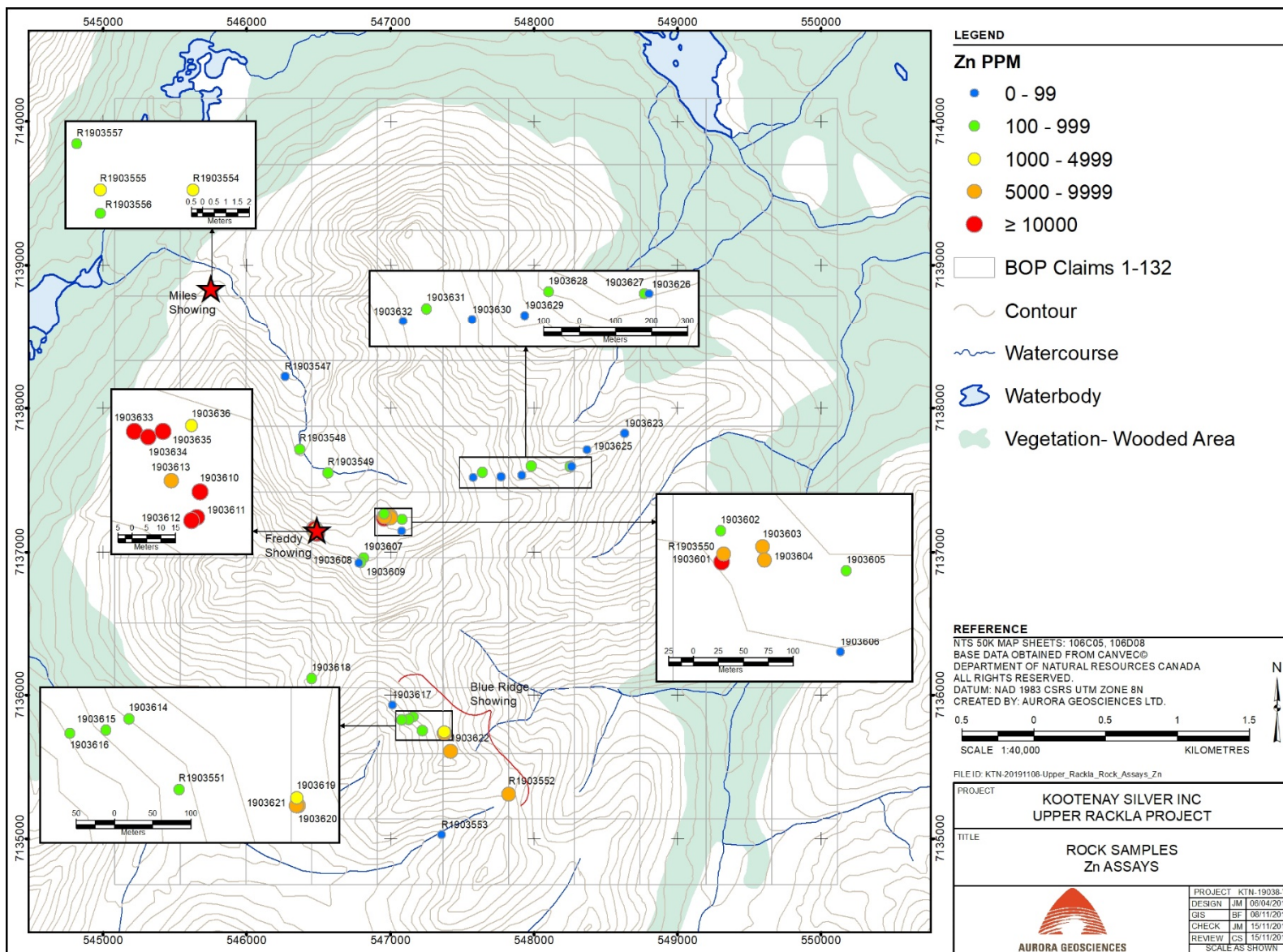


Figure 12: Zn sample value ranges, 2019 rock sampling program



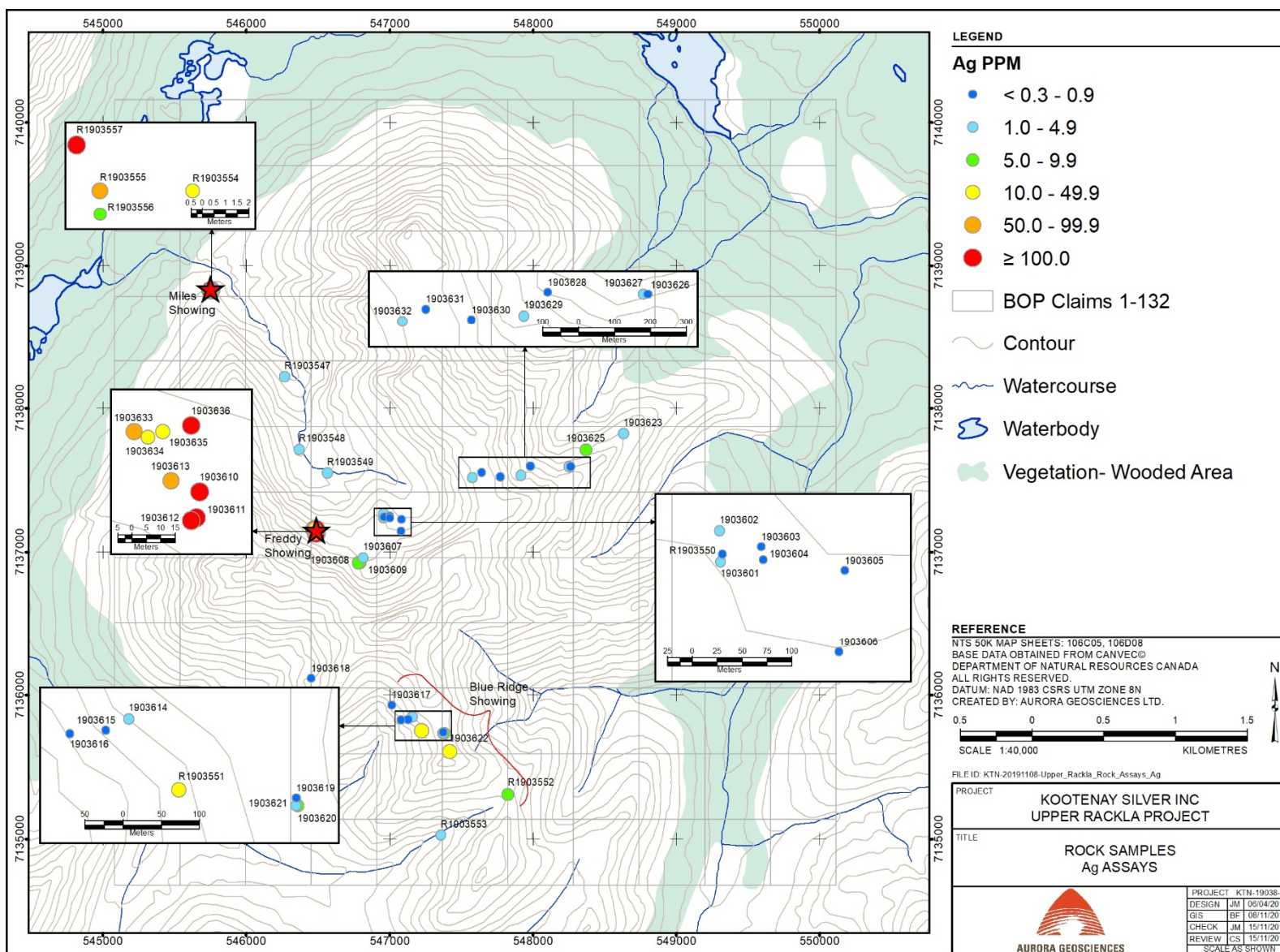


Figure 13: Ag sample value ranges, 2019 rock sampling program



## 7.2 SILT SAMPLING PROGRAM

A total of 29 silt geochemical samples were taken in 2019 (Figure 14). Sampling along Davis Creek revealed consistently anomalous Cu, Pb and Zn values (Figures 15 through 17), although Ag values were only slightly elevated (Figure 18). Copper values were uniformly anomalous along the mainstem, ranging from 208 to 305 ppm (Figure 15). Values for Pb show a progressive downstream increase, ranging from 74 ppm towards the source to 392 ppm along its lower extent, with a moderate increase in values from the lowermost four samples (Figure 16). Values for Zn along the mainstem range from 773 to 1,594 ppm, and show a progressive increase, reaching a maximum in the central extent, and decreasing slightly downstream of that. Sampling from a left tributary, downslope from the Freddy showing, returned a value of 2,322 ppm Zn. Values for Ag along the mainstem ranged from 0.4 g/t to 0.9 g/t, and the Ag value for a left tributary draining the Freddy showing area was 1.4 g/t Ag.

Values for Cu, Pb, Zn and Ag from silt sampling along the southern streams were much more subdued than for Davis Creek. Along the west fork, values for Cu range from 39 - 53 ppm, values for Pb range from 27 - 31 ppm, values for Zn range from 77 - 113 ppm, and values for Ag range from <0.3 - 0.5 g/t (Figures 15 - 18). Along the east fork, values for Cu range from 35 - 94 ppm, values for Pb range from 19 - 75 ppm, values for Zn range from 97 - 165 ppm, and values for Ag range from <0.3 - 0.8 g/t. Although these base metal and Ag metal values are at, or slightly above, crustal abundance averages, no significantly anomalous values were returned. The values likely reflect high background metal values in the area.

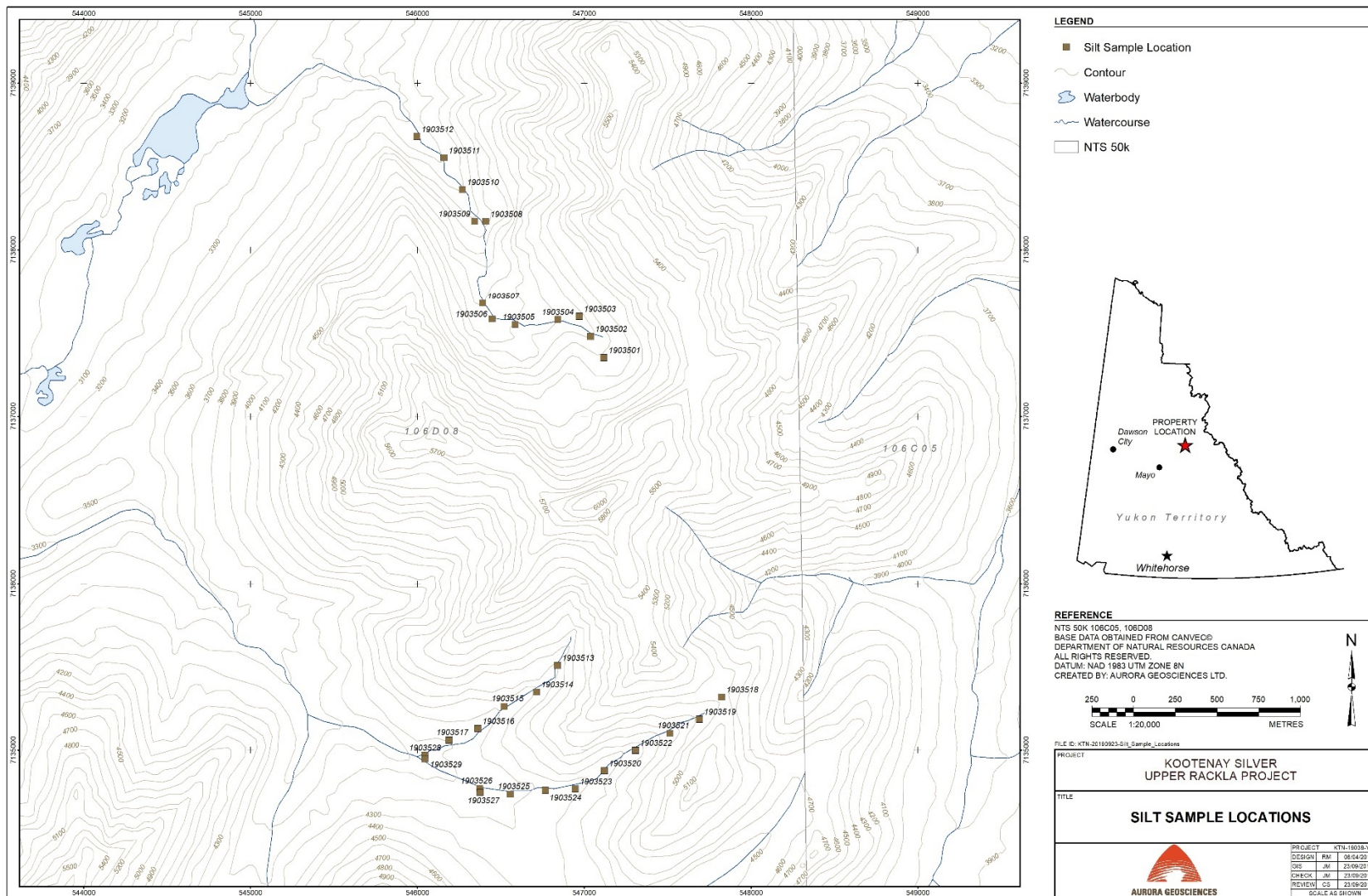


Figure 14: Silt sample locations, 2019 program



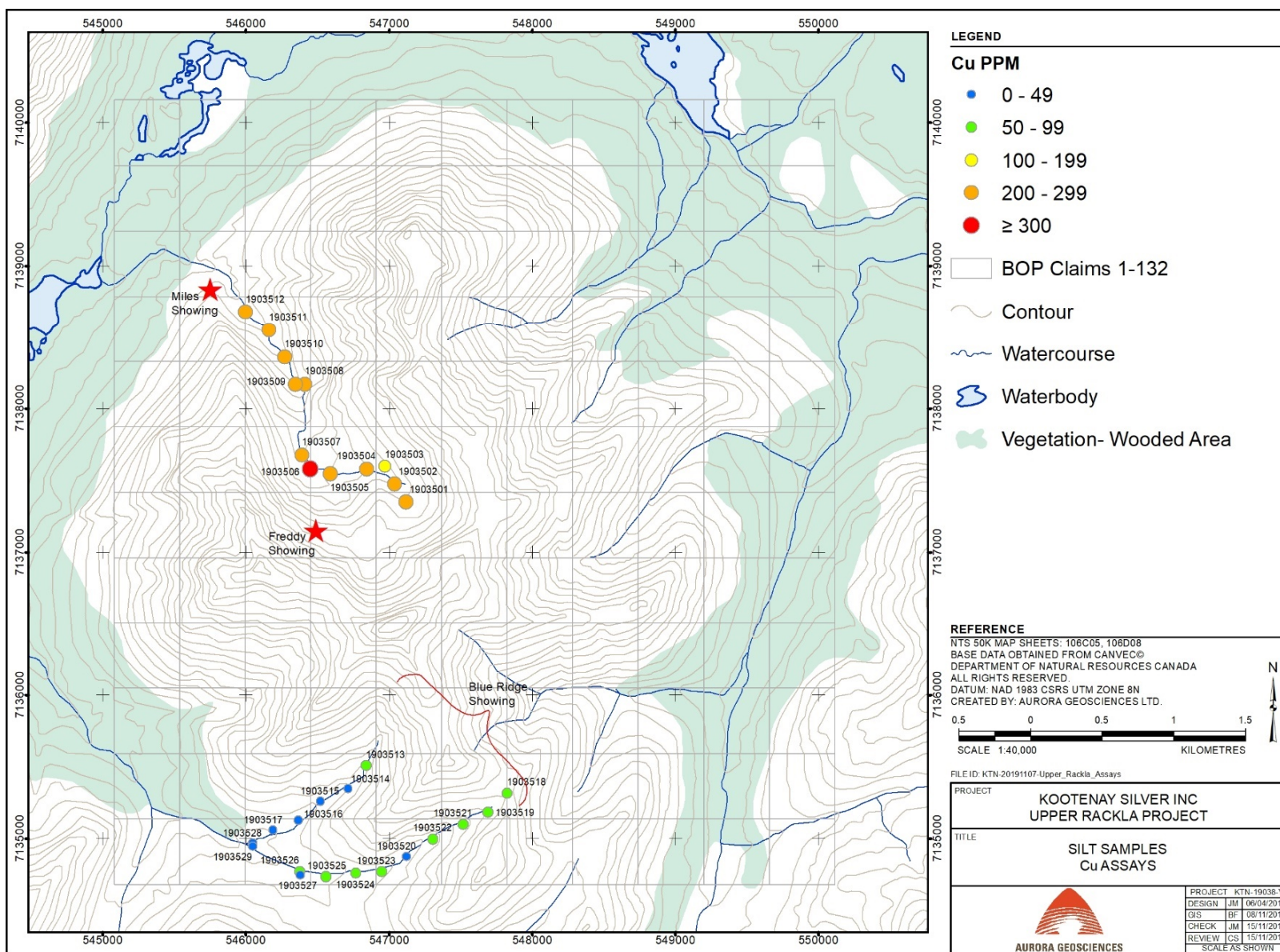


Figure 15: Cu sample value ranges, 2019 silt sampling program



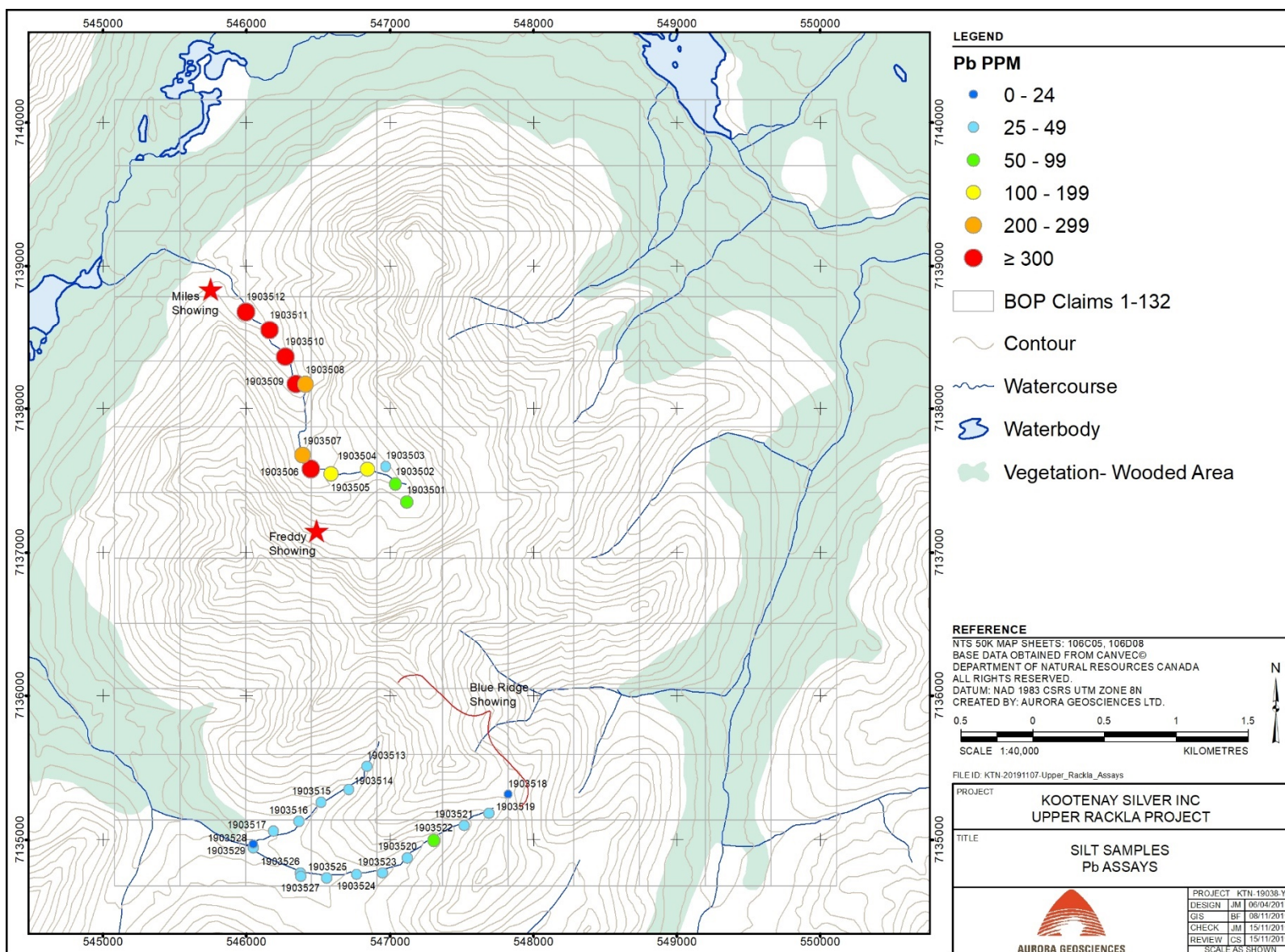


Figure 16: Pb sample value ranges, 2019 silt sampling program



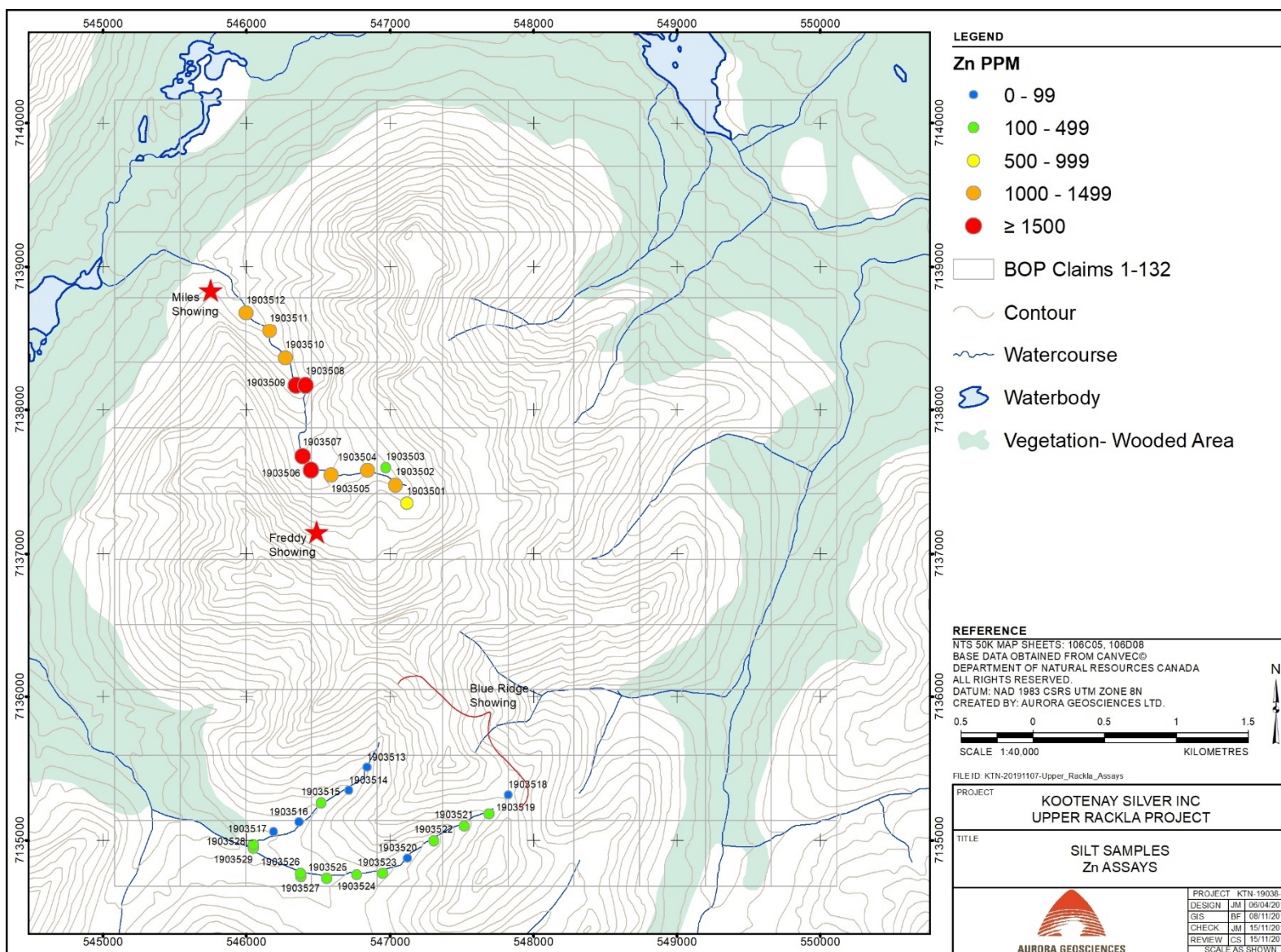


Figure 17: Zn sample value ranges, 2019 silt sampling program



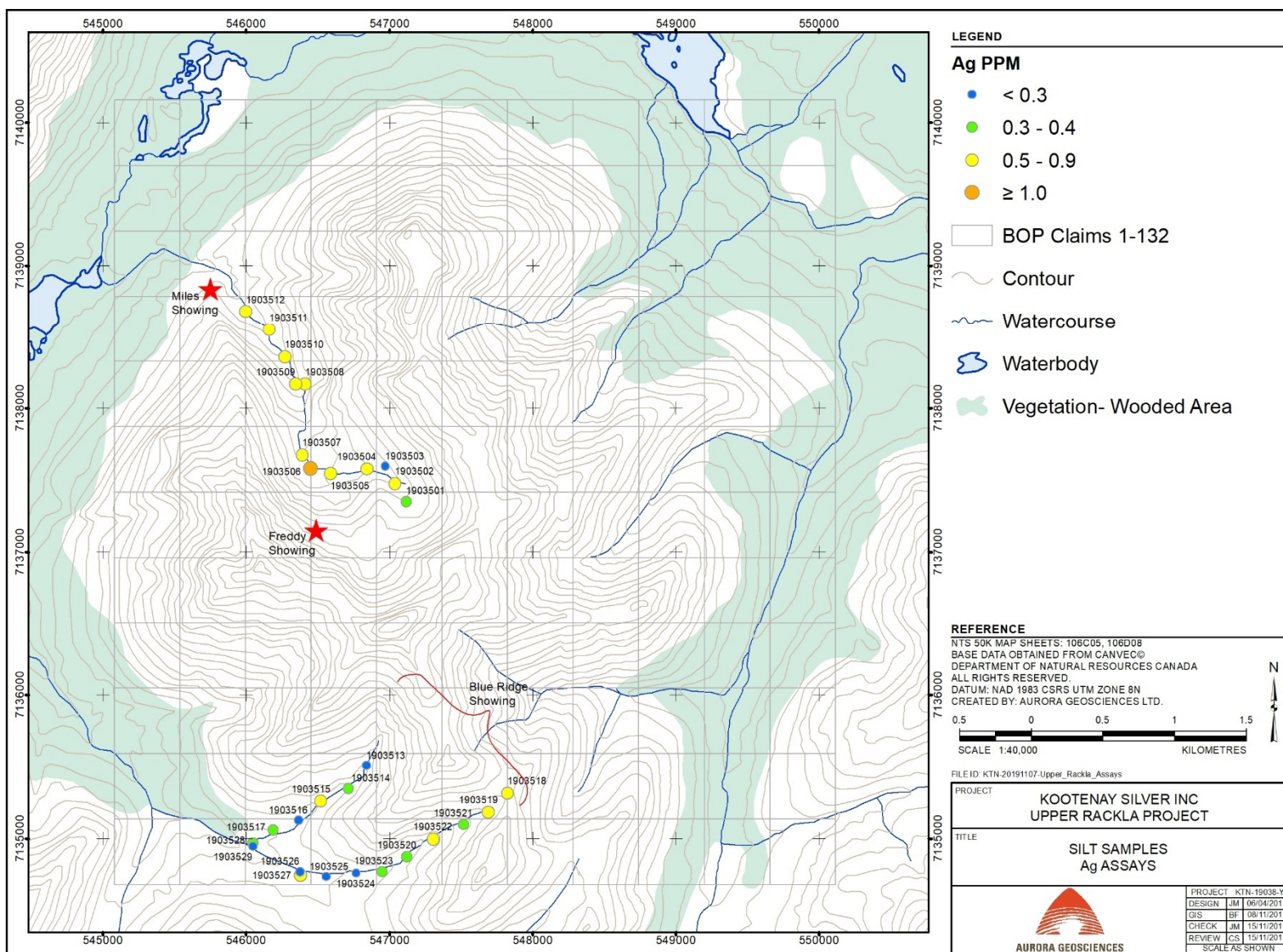


Figure 18: Ag sample value ranges, 2019 silt sampling program

### 7.3 CREW AND EQUIPMENT, SILT SAMPLING PROGRAM

The following crew members conducted the 2019 prospecting, rock and silt sampling program on the Upper Rackla property:

**Table 2: 2019 crew, Upper Rackla silt sampling project**

Carl Schulze	Geologist, Project Manager,	August 9 - 13, 2019
Davin Hofmann	Geologist	August 9 - 13, 2019
Shawn Kennedy	Prospector (Kootenay Silver)	August 9 - 13, 2019

The crew was equipped with the following instruments and equipment:

**Table 3: Instruments and equipment utilized, 2019 silt sampling program**

Data Processing	1	Computer: geologist's software package
Survey Equipment	4	Sampling tools including "geotools" Sampling supplies including rock sample "poly" bags, soil bags (Hubco type), shipment bags (rice type) and assay tag books
	4	Non-differential GPS, Suunto MC-2 compasses
Communication	4	Handheld VHF radios
	1	SAT phone – Iridium
	1	Garmin "InReach" communication device
Safety	4	Bear Safety (Bangers, Spray)
Support	1	Office box and equipment repair tools

#### 7.3.1 Grid and Line Specifications

Silt samples were obtained on a systematic basis, at roughly 250-metre intervals along the stream "mainstem" and tributaries. If a confluence occurred within 50m of the upcoming 250-metre interval, samples were taken from both the mainstem and the tributary, far enough upstream of the confluence along both streams to ensure no cross-contamination occurred.

#### 7.3.2 Survey Specifications

At each site, stream sediment material was taken from several sub-sites to comprise a single sample.

All samples were described in the field utilizing the following parameters: Sample name, sample location (UTM-NAD 83), width and steepness of stream, colour, whether sample was of "mossmat", percent fines (<2 mm), presence of significant concentration of organics, date, sampler, and comments where applicable. At each site, a picture of the sampled material and a picture of the sample site were taken.

#### 7.3.3 Sampling Discussion

Due to the limited three-day time frame of the program, targeted selection of particular streams for silt sampling and areas prospective for rock sampling was undertaken. Three streams were selected based

on zinc (Zn), copper (Cu) and lead (Pb) values from RGS stream silt sampling near their outflows into larger water courses. The first was a stream draining the northwestern property area, and the other two were the west and east forks of a stream draining the south-central property area (Figure 14). A total of 12 silt samples was collected from the northwestern stream, 10 were taken from the west fork, and 7 were taken from the east fork of the southern stream.

### 7.3.4 Analysis

Silt samples were submitted for analysis to the Whitehorse prep lab of Bureau Veritas Commodities Canada Ltd. (BV). Silt samples were dried at 60°C and sieved to -180 microns (80-mesh), retaining both fractions. “Pulps” were then sent to the Vancouver lab of BV for fire assay and multi-element ICP-ES analysis. There, a 0.5g split underwent 1:1:1 aqua regia digestion and analyzed by ICP-ES for the following 33 elements: Mo, Cu, Pb, Zn, Ag, Ni, Co, Mn, Fe, As, Th, Sr, Cd, Sb, Bi, V, Ca, P, La, Cr, Mg, Ba, Ti, B, Al, Na, K, W, S, Hg, Tl, Ga and Sc. A separate 30g split underwent fire assay fusion for Au, Pt and Pd, and was then analyzed by ICP-ES.

A standard sample immediately followed by a blank sample, all supplied by Canadian Resource Laboratories of Langley, British Columbia, were placed into the sample sequence at approximately 20-sample intervals. A total of 2 “Standard” samples and 2 blank samples of reference material were inserted into the silt sample stream. Table 3 lists the types of standards utilized.

**Table 4: QAQC materials used in the 2019 silt sampling program**

QAQC Type	Identifier
Standard	CDN-ME-1308
Blank	CDN-BL-10

Reference material “standard” CDN-ME-1308 provided known values for Au, Ag, Cu, Pb and Zn. All values returned for these fell within the 2-standard deviation (2SD) range, confirming reliability of results. Blank sample material was provided for Au, Ag, Pt and Pd, and all values returned were below the known values of <0.01 g/t for Au, Pt and Pd, and <0.5 g/t for Ag. Values for Cu, Zn and Pb were not provided, although all were at crustal abundance “background” levels.

### 7.3.5 Preliminary Data Products

Digital copies of all silt sample location data have been supplied in.xlsx file format within this report. Detailed silt and rock location maps have also been supplied digitally.

## 7.4 PROSPECTING, ROCK SAMPLING, GEOLOGICAL MAPPING

### 7.4.1 Crew and Equipment

The following crew members conducted the 2019 prospecting, geological mapping, rock and silt sampling program on the Upper Rackla property:

**Table 5: 2019 Crew, Upper Rackla prospecting program**

Carl Schulze	Geologist, Project Manager,	August 9 - 13, 2019
Davin Hofmann	Geologist	August 9 - 13, 2019
Shawn Kennedy	Prospector (Kootenay Silver)	August 9 - 13, 2019



The crew was equipped with the following instruments and equipment:

**Table 6: Instruments and equipment utilized, 2019 rock sampling program**

Data Processing	1	Computer: geologist's software package
Survey Equipment	4	Sampling tools including "geotools" Sampling supplies including rock sample "poly" bags, soil bags (Hubco type), shipment bags (rice type) and assay tag books
	4	Non-differential GPS, Suunto MC-2 compasses
Communication	4	Handheld VHF radios
	1	SAT phone – Iridium
	1	Garmin "InReach" communication device
Safety	4	Bear Safety (Bangers, Spray)
Support	1	Office box and equipment repair tools

#### 7.4.2 Prospecting Methodology

Rock sampling, of both outcrop and proximal talus float, was completed where applicable, with particular focus on mineralized and/or altered rock outcrop or float. Where multiple pieces of very similar float occur in a small area, "composite grab" samples were taken to obtain a more representative sample. A 0.3-metre chip sample was taken at one location towards the outflow of the northwestern stream.

At each site, rock samples were described utilizing the following criteria: sample location (UTM, NAD 83), sample type (grab, composite grab, etc.), length (if chip sample), material sampled (outcrop, rubblecrop, float, etc.), sample description, colour, rock type (descriptive), protolith, percent quartz vein, percent sulphides, sulphide texture, oxidation degree, degree of carbonate alteration, degrees of other alteration types, structural features, and comments, if any. Samples taken by Mr. Kennedy were described as to location (UTM, NAD 83), elevation and detailed description under "Comments".

Samples were placed in poly bags in the field and labelled and sealed with a cable tie (Zap Strap). A representative sample was taken at many sample sites. The field location was marked by flagging tape with an attached "butter tag" and included a sample number. A photograph of the sample site and a close-up of the actual sample were taken.

A standard sample immediately followed by a blank sample, all supplied by Canadian Resource Laboratories of Langley, British Columbia, were placed into the sample stream at approximately 20-sample intervals. A total of 3 Standard samples and 3 blank samples were inserted into the sample stream. Table 3 lists the types of standards utilized.

**Table 7: QAQC materials used in the 2019 prospecting program**

QAQC Type	Identifier
Standard	CDN-ME-1308
Blank	CDN-BL-10

"Standard" reference material analysis returned one Cu value slightly exceeding the upper 2SD limit, indicating Cu values from that branch may slightly over-estimate true values. All other Cu values, and all

Pb, Zn and Ag values, were within the 2SD ranges per respective element. Blank sample material was provided for Au, Ag, Pt and Pd, and all values returned were below the known values of <0.01 g/t for Au, Pt and Pd, and <0.5 g/t for Ag. Values for Cu, Zn and Pb were not provided, although all were at crustal abundance “background” levels.

### **7.4.3 Prospecting Discussion**

Prospecting and rock sampling revealed several targets with potential for follow-up work. Results are described in Section 7.1.

### **7.4.4 Analysis**

Rock samples were crushed so that 90% passed through a 2mm screen, then split and pulverized to obtain a 250g sample of which 85% passed through a 75-micron ( $\mu$ ) screen (prep code PRP90-250). Then, a 0.5g sample underwent 33-element ICP-ES analysis by 1:1:1 Aqua Regia digestion for: Mo, Cu, Pb, Zn, Ag, Ni, Co, Mn, Fe, As, Th, Sr, Cd, Sb, Bi, V, Ca, P, La, Cr, Mg, Ba, Ti, B, Al, Na, K, W, S, Hg, Tl, Ga and Sc. (Prep code AQ300). Also, a 50g sample underwent Au, platinum (Pt) and palladium (Pd) analysis by lead collection fire assay by ICP (Prep code FA350). “Overlimits” for Cu, Pb, Zn and Ag underwent subsequent analysis of a 0.5g sample by aqua regia digestion (Prep code AR404).

### **7.4.5 Preliminary Data Products**

Digital copies of all sample location data have been supplied in .xlsx file formats with this report. Detailed rock sample location maps have also been supplied digitally in addition to the maps included in the report.

## **8 INTERPRETATION AND CONCLUSIONS**

### **8.1 INTERPRETATIONS**

Preliminary geological mapping was done only across southern and northwestern property areas and cannot be considered as representative of the property. Mapping in 2019 indicates the property is underlain mainly by Quartet Group fine clastic sediments, with a NE – SW trending sigmoidal unit of Gillespie Group dolomites and carbonates extending across the central area. This does not conform to regional mapping which indicates Gillespie Group sediments are dominant in the property area. Previous regional mapping identified minor carbonate units within upper portions of the Quartet Group, which may correspond with the small carbonate lenses in the Davis Creek cirque.

Rock sampling led to discovery of two mineralized showings, the Freddy and Miles showings, and one area of anomalous base metal values from rock sampling, called the Blue Ridge showing. The Freddy showing, identified in two sites across 33 metres, comprises massive to stringer-hosted silver-bearing galena  $\pm$  sphalerite mineralization, with lesser chalcopyrite. Sulphide mineralization at the northwestern exposure of the Freddy showing is somewhat more vein-associated. Host rocks in the cirque are dominantly Quartet Group fine clastic sediments with narrow lenses of calcareous sediments. These lenses are the host units for replacement-style mineralization marking the Freddy showing.

Sample results from the Freddy showing reveal a very high range in all combinations of ratios of Cu, Pb and Zn, and values for Ag, Hg and Cd correspond somewhat more closely with those of Zn. The northwestern site is slightly more enriched in Zn, whereas the southeastern site has somewhat enhanced Pb values. This indicates a high degree of banding or zonation within the showing area. The Upper Rackla

River area is known to host polymetallic veining, as opposed to Sedex or VMS-style mineralization. Mineralized banding is likely the result of several pulses of hydrothermal fluids with varying metal ion content, resulting in multiple bands of sulphide mineralization, each with a distinct mineralogy.

The Miles showing is hosted by dolomitized red-brown weathering mafic volcanic rocks, and has a very limited aerial extent, although further exploration is required to confirm its extent. The mineralogy is dominated by quartz vein-hosted chalcopyrite, with subordinate galena and sphalerite. The showing includes examples of banded quartz-carbonate veining with thin-banded sulphides, largely along the margins of the individual centimetre-scale quartz bands. The mineralogy is distinct from the Freddy showing, although both showings indicate multiple pulses of metal-bearing fluids. A late galena-bearing vein occurs along a small shear zone visible in several boulders. Although its age relationship has not been confirmed, it appears to post-date quartz-chalcopyrite vein emplacement.

At the Blue Ridge showing, several thin brecciated carbonate lenses, to 30 cm in width, host fracture-controlled and disseminated chalcopyrite, galena and sphalerite. Anomalous base metal values elsewhere along the ridge are hosted by quartz-carbonate veining, which may include the carbonate “lenses”. Ratios of Cu: Pb  $\pm$  Zn are considerably higher than at the Freddy showing.

Silt geochemical sampling returned strongly anomalous Cu, Pb and Zn values throughout the extent of Davis Creek. Values for Zn are highest along the central part of the watercourse, downstream of the Freddy showing, although the significant lateral extent of the anomalous silt values indicates the presence of further zinc occurrences. Values for Pb are highest considerably downstream of the Freddy showing, indicating the presence other Pb-bearing mineral occurrences along the lower extent of the creek. A strongly anomalous Pb value from a “left” tributary draining the south flank, and a subdued Pb value from a “right” tributary indicate the south wall of the cirque is the most prospective, including unexplored portions between the Freddy and Miles showings.

The 2019 program led to the determination of a preliminary age relationship of the varying mineralized settings. Replacement-style Pb-Zn-Ag mineralization was emplaced during early pulses of fluid movement, mainly in reactive calcareous beds, closely followed by emplacement of vein-associated Pb-Zn-Ag mineralization. Vein-hosted chalcopyrite-dominated sulphide assemblages and associated hydrous copper carbonates, including metre-scale quartz-chalcopyrite veining, were emplaced during a subsequent phase. This was followed by a late pulse of massive silver-bearing galena veining, to date located only at the Miles showing.

The widespread distribution of base-metal  $\pm$  silver mineralization throughout the Upper Rackla to upper Wind River areas indicates a district to regional-scale base metal mineralizing event of significant temporal duration. A lack of proximal Tintina Gold Belt intrusions indicates polymetallic mineralization is of orogenic origin. RGS stream sediment sampling returned elevated to anomalous Cu-Pb-Zn-Ag values from all drainages within the BOP 1-132 claim block, indicating potential for further mineralized occurrences throughout the property. Highly anomalous values from Davis Creek indicate its catchment area, particularly the southern and eastern cirque walls, is the most prospective to host polymetallic mineralization.

## 8.2 CONCLUSIONS

The following conclusions can be made from the results of the 2019 program:

- The BOP 1-132 claims are underlain mainly by Quartet Group fine clastic sediments with minor carbonate interbeds. A NE-SW trending sigmoidal unit of Gillespie Group dolomitic rocks, locally stromatolitic, and calcareous sediments occurs in the central property area. All units are crosscut by Hart River Group diorite to gabbro dykes and sills.
- The small calcareous units and lenses within the Quartet group clastic sediments provide the host for replacement-style massive to stringer-style silver-bearing galena-chalcopyrite mineralization. This is the setting for the Freddy showing along the south wall of the Davis Creek cirque.
- Silt geochemical results indicate the south wall of the Davis Creek cirque is the most prospective for base metal mineralization. The downstream, northwestern portion may have the highest mineral potential.
- The Miles showing, comprising quartz-chalcopyrite veining, is of limited aerial extent, although further work is required to confirm this. This is a distinct setting from the Freddy showing.
- The 2019 program was able to establish a preliminary age relationship of mineralization. Replacement style Pb-Zn sulphide mineralization is cut by vein-style Pb-Zn sulphides, which may have been roughly coeval. Quartz-chalcopyrite veining may have been emplaced subsequently to this, in turn followed by centimetre-style silver-bearing galena veining.
- Elevated Cu, Pb, Zn  $\pm$  Ag values from RGS indicate potential for polymetallic mineralization throughout the BOP 1-132 block. The Davis Creek drainage, particularly the south wall of the Davis Creek cirque, is the most prospective.
- A lack of proximal Tintina Gold Belt intrusions indicates mineralization is of orogenic origin.

## 9 RECOMMENDATIONS

### 9.1 RECOMMENDATIONS

A program of property-wide geological mapping, rock sampling, prospecting, ridge-and-spur and contour soil geochemical sampling, and stream sediment sampling is recommended for 2020. This would include three days of intensive prospecting, geological mapping and rock sampling along the south wall of the Davis Creek cirque.

The program is recommended to comprise four field personnel, consisting of two geologists and two field technicians, supported by a B-2 A-Star helicopter conducting daily set outs from Mayo. Some savings could be incurred if lodging farther to the northeast can be secured. The program is recommended to be completed in a total of nine field days, with two additional weather days and two mobilization days to and from Mayo.

Total estimated costs, including contingency and report writing, are approximately CDN\$188,800.00

## 9.2 RECOMMENDED BUDGET

Type of Expense	Proposed cost
Personnel, including preparation and wrap-up costs	\$ 39,980.00
Helicopter, including fuel	\$ 66,411.00
Sampling, including "reference material"	\$ 19,878.00
Accommodations, meals and groceries	\$ 11,300.00
Truck rental, truck fuel and expediting	\$ 6,710.00
Other rentals	\$ 2,665.00
Field office supplies	\$ 600.00
Filing Fees	\$ 3,300.00
GIS and digitizing	\$ 2,550.00
<b>Field total:</b>	<b>\$ 153,394.00</b>
Field report	\$ 2,500.00
Assessment report, incl. data compilation, drafting	\$ 8,100.00
<b>Sub-total</b>	<b>\$ 163,994.00</b>
10% contingency	\$ 16,399.40
10% mark-up, third party payment	\$ 10,148.90
<b>Estimated total</b>	<b>\$ 190,542.30</b>



## 10 REFERENCES

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Delaney, G.D., 1985. The Middle Proterozoic Wernecke Supergroup, Wernecke Mountains, Yukon Territory. Unpublished PhD thesis, University of Western Ontario, London, Ontario.

Hart, C., The Geological Framework of the Yukon Territory, Yukon Geological Survey

Israel, S., Colpron, M., Roots, C., and Fraser, T. "Overview of Yukon Geology". Yukon Geological Survey.

### Websites

Cantex Mine Development Corp: <http://cantex.ca/wp-content/uploads/2019/11/2019-11-05-Exploration-update.pdf>

Wikipedia, 2019 (Mayo, Yukon): [https://en.wikipedia.org/wiki/Mayo,\\_Yukon](https://en.wikipedia.org/wiki/Mayo,_Yukon)

Yukon Geological Survey: <https://mapservices.gov.yk.ca/GeoYukon/>

Yukon Mining Recorder: <http://www.yukonminingrecorder.ca/>

Effective Date: November 28, 2019

Respectfully submitted,  
Aurora Geosciences Ltd.

*Carl Schulze*

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Carl Schulze, B.Sc., P.Geo.  
Project Manager

**Appendix I**

Statement of Qualifications



I, Carl Schulze, BSc, with business and residence addresses in Whitehorse, Yukon Territory do hereby certify that:

1. I am a graduate of Lakehead University with a B.Sc. degree in Geology obtained in 1984.
2. I am a Professional Geoscientist registered with the Association of Professional Engineers and Geoscientists of British Columbia (registration number 25393), Association of Professional Geoscientists of Ontario (registration no. 1966) and with the Northwest Territories and Nunavut Association of Professional Engineers and Geoscientists (NAPEG, registration number L3359).
3. I have been employed in mineral exploration as a geologist since 1984, primarily on projects in the Yukon Territory, Northwest Territories, Nunavut, Alaska and British Columbia.
4. I supervised the work described in this report and wrote this report.
5. I have no interest, direct or indirect, nor do I hope to receive any interest, direct or indirect, from Silver Range Resources or any of its properties.

Dated this 28<sup>th</sup> day of November 2019, in Whitehorse, Yukon Territory.

Respectfully Submitted,

*Carl Schulze*

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Carl M. Schulze, BSc. P. Geo.

## Appendix II

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Silt Sample Descriptions and Data  
*Kootenay Silver Inc.*  
*Aurora Geosciences Ltd.*

**Silt Sample Descriptions, 2019 Field Program, BOP 1-132 claims  
KTN-19070-YT (Kootenay Silver, Inc.)**

Sample ID	UTM Easting	UTM Northing	Zone	Stream Grade	Stream Width (m)	Colour	% Fines	Date	Sampler	Comments
1903501	547118	7137350	8	Gentle	1.0	light brown	90	10-Aug	DH/CS	Mossmat sample
1903502	547039	7137477	8	Gentle	1.2	med brown	90	10-Aug	DH/CS	Mossmat sample
1903503	546971	7137598	8	Gentle	0.6	light brown	>95	10-Aug	DH/CS	Tributary from north
1903504	546842	7137579	8	Moderate-steep	1.2	med brown	85	10-Aug	DH/CS	Mossmat sample
1903505	546587	7137548	8	Moderate	1.0	dark brown		10-Aug	DH/CS	Mossmat sample
1903506	546450	7137582	8	Moderate-steep	0.3	light brown	>95	10-Aug	DH/CS	Trib, S side, largely mossmat
1903507	546391	7137678	8	Gentle-mod	2.5	dark brown	70	10-Aug	DH/CS	Mossmat sample
1903508	546411	7138171	8	Moderate	1.5	dark brown	65	10-Aug	DH/CS	High organics, mossmat sample
1903509	546345	7138171	8	Moderate	2.5	dark brown	65	10-Aug	DH/CS	High organics, mossmat sample
1903510	546269	7138362	8	Moderate-steep	2.5	light brown	70	10-Aug	DH/CS	Mossmat, sparse silt
1903511	546160	7138552	8	Gentle-mod	3.0	light brown	70	10-Aug	DH/CS	High organics, mossmat sample
1903512	545997	7138679	8	Moderate-steep	2.5	med brown	55	10-Aug	DH/CS	Mossmat, moderate organics
1903513	546840	7135507	8	Steep	0.3	light brown	40	11-Aug	DH/CS	Mossmat, near headwaters
1903514	546715	7135348	8	Moderate	0.4	light brown	55	11-Aug	DH/CS	Mossmat, possibly mixed with soil
1903515	546521	7135261	8	Gentle	0.4	light brown	50	11-Aug	DH/CS	Mossmat
1903516	546363	7135129	8	Gentle	0.5	med brown	40	11-Aug	DH/CS	Mossmat, mainly coarse sand to gravel
1903517	546190	7135060	8	Gentle-mod	0.2	dark brown	65	11-Aug	DH/CS	Mossmat
1903518	547825	7135317	8	Mod-steep	0.3	dark brown	45	11-Aug	DH/CS	Dry
1903519	547690	7135185	8	Moderate	0.4	dark brown	70	11-Aug	DH/CS	Mossmat, intermittent small waterfalls
1903520	547121	7134876	8	Moderate	0.4	light brown	60	11-Aug	DH/CS	Mossmat, shale fragments
1903521	547515	7135100	8	Steep	0.6	dark brown	70	11-Aug	DH/CS	Mossmat
1903522	547307	7134998	8	Steep	0.5	dark brown	60	11-Aug	DH/CS	Rare silt in crevasses in outcrop
1903523	546947	7134769	8	Gentle-mod	0.7	med brown	40	11-Aug	DH/CS	Mossmat, 40% organics
1903524	546768	7134760	8	Gentle-mod	1.5	med brown	50	11-Aug	DH/CS	Dry, mossmat, high organics
1903525	546558	7134736	8	Gentle	0.8	grey-brown	50	11-Aug	DH/CS	Mossmat
1903526	546374	7134771	8	Gentle	0.3	med-brown	80	11-Aug	DH/CS	Abundant silt
1903527	546377	7134748	8	Moderate-gentle	0.5	med-brown	85	11-Aug	DH/CS	Tributary; mossmat, mod-high organics
1903528	546046	7134969	8	Gentle	0.3	med-brown	90	11-Aug	DH/CS	Distributary, boggy
1903529	546046	7134947	8	Gentle	0.4	med-brown	75	11-Aug	DH/CS	Fairly high organics
1903530									DH/CS	Standard CDN ME1308
1903531									DH/CS	CDN BL 10
1903532									DH/CS	Standard CDN ME1308
1903533									DH/CS	CDN BL 10



**Appendix III**

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Rock Sample Descriptions and Data  
*Kootenay Silver Inc.*  
*Aurora Geosciences Ltd.*



**Appendix IV**

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Geology Station Data and Descriptions  
*Kootenay Silver Inc.*  
*Aurora Geosciences Ltd.*

**KTN-19070-YT Geology Waypoint Descrip U Rackla  
2019 Program**

NB. Excludes sample locations

Waypoint ID	UTM Easting	UTM Northing	Waypoint Descrip	Lithology	Modification	Colour	Structural type	Struct meas.	Struct type 2	Struct meas. 2	Carb alt (1-3)	Other Alt	Date	Sampler
WPUR001	547100	7137402	Outcrop	Shale	Thin-med bedded	Grey	Bedding	225 -75				L2	10-Aug	CS
WPUR002	546706	7137552	Outcrop	Silt - Mudstone	Thin bedded	Grey	Bedding	160 -50	Younging	WSW			10-Aug	CS
WPUR003	547290	7135824	Outcrop	Silt - Mudstone	Thin bedded		Bedding	085 -70	F2 Foliation	Crenulated	C1		11-Aug	CS
WPUR004	547815	7135092	Outcrop	Shale	Fine fissile texture	green-grey	Foliation	095 -55					11-Aug	CS
WPUR005	547375	7135047	Outcrop	Shale - mudstone	Mod-strong foliation	Grey	Foliation	110 -65	Bedding	130 -25			11-Aug	CS



**Appendix V**

Original Assay Certificates

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

**Client:** **Aurora Geosciences Ltd. (Whitehorse)**  
34A Laberge Road  
Whitehorse Yukon Y1A 5Y9 Canada

Submitted By: Carl Schulze  
Receiving Lab: Canada-Whitehorse  
Received: August 14, 2019  
Report Date: September 03, 2019  
Page: 1 of 3

# CERTIFICATE OF ANALYSIS

WHI19000376.1

## CLIENT JOB INFORMATION

Project: KTN-19070-YT  
Shipment ID:  
P.O. Number  
Number of Samples: 55

## SAMPLE DISPOSAL

STOR-PLP Store After 90 days Invoice for Storage  
STOR-RJT Store After 60 days Invoice for Storage

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: Aurora Geosciences Ltd. (Whitehorse)  
34A Laberge Road  
Whitehorse Yukon Y1A 5Y9  
Canada

CC: Jim McDonald

## SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Procedure Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
PRP90-250	47	Crush (>90%), split and pulverize 250g rock to 200 mesh			WHI
AQ300	53	1:1:1 Aqua Regia digestion ICP-ES analysis	0.5	Completed	VAN
SHP01	53	Per sample shipping charges for branch shipments			VAN
FA350	53	50g lead collection fire assay analysis by ICP	50	Completed	VAN
EN002	53	Environmental disposal charge-Fire assay lead waste			VAN
SLBHP	6	Sort, label and box pulps			WHI
AR404	13	Aqua Regia Digestion 0.5g / 200 mL (SCH)	0.5	Completed	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.



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9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

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Whitehorse Yukon Y1A 5Y9 Canada

Project: KTN-19070-YT

Report Date: September 03, 2019

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# CERTIFICATE OF ANALYSIS

# WHI19000376.1

Method	WGHT	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300
Analyte	Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	
Unit	kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	
MDL	0.01	1	1	3	1	0.3	1	1	2	0.01	2	2	1	0.5	3	3	1	0.01	0.001	1	
R1903545	Rock Pulp	0.12	127	4157	5581	4373	48.9	199	25	1640	5.60	559	4	82	32.6	59	3	198	3.43	0.065	74
R1903546	Rock Pulp	0.12	4	20	<3	30	<0.3	7	3	591	2.49	<2	<2	31	<0.5	<3	<3	23	0.79	0.039	5
R1903547	Rock	1.23	<1	3389	61	86	2.2	29	26	1431	2.25	34	<2	10	<0.5	3	1169	15	2.70	0.012	2
R1903548	Rock	0.95	<1	128	2917	730	1.9	71	25	771	4.07	80	<2	2	1.5	22	4	83	0.34	0.004	<1
R1903549	Rock	0.96	<1	2132	49	122	4.2	8	6	1739	1.52	358	<2	31	<0.5	4	9	13	5.92	0.004	8
R1903550	Rock	1.30	<1	1269	91	6657	0.9	25	23	2313	3.06	15	<2	38	19.5	4	<3	33	4.60	0.015	2
R1903551	Rock	0.51	2	>10000	103	196	13.5	27	16	361	9.58	56	<2	2	<0.5	<3	7	2	0.02	0.009	4
R1903552	Rock	0.94	2	717	2765	5395	5.1	7	16	>10000	3.57	8	<2	121	16.3	4	13	6	5.12	0.028	11
R1903553	Rock	0.78	<1	1735	25	23	1.4	6	4	534	1.10	<2	<2	3	<0.5	<3	<3	3	0.03	0.005	5
R1903554	Rock	0.79	<1	8569	1761	1120	47.6	10	3	1109	3.12	8	<2	6	2.6	51	13	42	1.99	0.005	1
R1903555	Rock	0.78	<1	>10000	2508	1011	89.0	23	9	702	9.96	4	<2	2	1.5	6	78	119	0.69	0.014	5
R1903556	Rock	1.05	<1	4234	4850	630	8.7	14	6	2554	2.76	4	<2	35	1.9	4	<3	35	6.37	0.002	2
R1903557	Rock	0.83	<1	608	>10000	188	>100	1	2	29	1.20	43	<2	<1	4.6	867	597	7	0.02	0.002	<1
1903600	Rock	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.
1903601	Rock	0.68	<1	2628	624	>10000	2.6	45	33	2947	3.46	9	<2	92	34.9	6	<3	7	7.14	0.014	1
1903602	Rock	0.80	3	130	431	611	2.0	144	83	67	6.73	349	<2	2	0.6	3	<3	77	0.12	0.043	2
1903603	Rock	0.86	<1	45	640	9693	0.9	76	39	932	2.24	43	3	40	23.4	5	<3	30	5.02	0.037	2
1903604	Rock	0.48	13	207	919	8757	0.7	7	8	648	0.82	11	5	15	32.9	4	<3	24	0.98	0.095	9
1903605	Rock	0.51	3	14	106	171	0.4	4	1	96	0.68	9	<2	3	<0.5	<3	<3	5	0.27	0.038	<1
1903606	Rock	0.54	31	603	8	88	0.9	135	17	209	4.07	8	7	7	<0.5	<3	<3	120	0.45	0.201	40
1903607	Rock	0.92	<1	383	2743	408	1.6	20	12	1428	2.30	<2	<2	18	1.4	<3	<3	71	2.03	0.020	1
1903608	Rock	0.61	8	2850	83	83	5.1	47	22	345	5.07	10	6	2	<0.5	<3	<3	98	0.34	0.132	18
1903609	Rock	0.65	7	3631	25	131	5.6	52	33	823	6.17	9	26	30	0.8	<3	<3	122	7.96	0.597	19
1903610	Rock	0.87	1	745	>10000	>10000	>100	85	347	854	3.08	18	3	43	380.8	146	<3	61	4.22	0.027	<1
1903611	Rock	0.65	7	134	>10000	>10000	>100	16	31	256	0.89	2	4	8	67.4	216	<3	34	0.67	0.058	<1
1903612	Rock	0.56	1	87	>10000	>10000	>100	24	32	154	0.57	4	<2	5	35.7	407	<3	17	0.68	0.027	<1
1903613	Rock	0.57	2	15	>10000	7344	56.2	21	23	65	0.98	8	<2	2	18.0	32	<3	88	0.15	0.069	14
1903614	Rock	0.46	<1	3	1596	154	1.8	36	21	405	3.68	6	6	2	<0.5	<3	<3	26	0.06	0.029	16
1903615	Rock	0.52	2	77	172	107	<0.3	75	20	1559	5.42	90	5	2	<0.5	20	<3	21	0.01	0.022	28
1903616	Rock	0.34	4	82	102	106	<0.3	29	13	1462	5.06	7	9	2	<0.5	<3	<3	17	0.03	0.037	27



Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

Client: **Aurora Geosciences Ltd. (Whitehorse)**

34A Laberge Road  
Whitehorse Yukon Y1A 5Y9 Canada

Project: KTN-19070-YT

Report Date: September 03, 2019

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# CERTIFICATE OF ANALYSIS

## WHI19000376.1

Method	Analyte	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	FA350	FA350	FA350	AR404	AR404	AR404
		Cr	Mg	Ba	Ti	B	Al	Na	K	W	S	Hg	Tl	Ga	Sc	Au	Pt	Pd	Ag	Cu	Pb
Unit		ppm	%	ppm	%	ppm	%	%	ppm	%	ppm	ppm	ppm	ppm	ppb	ppb	ppb	ppm	%	%	
MDL		1	0.01	1	0.001	20	0.01	0.01	0.01	2	0.05	1	5	5	5	2	3	2	2	0.001	0.01
R1903545	Rock Pulp	62	1.95	179	0.092	<20	1.48	0.09	0.26	14	2.00	2	<5	<5	<5	1309	32	139			
R1903546	Rock Pulp	14	0.52	58	0.080	<20	1.05	0.06	0.08	<2	0.05	<1	<5	<5	<5	4	<3	3			
R1903547	Rock	3	1.29	20	<0.001	<20	0.45	0.01	0.20	<2	0.54	<1	<5	<5	<5	17	5	9			
R1903548	Rock	18	0.07	38	0.001	<20	0.61	<0.01	0.07	<2	<0.05	<1	<5	<5	7	9	<3	10			
R1903549	Rock	<1	0.34	7	<0.001	<20	0.31	0.01	0.02	<2	0.27	<1	<5	<5	12	25	<3	2			
R1903550	Rock	21	2.19	149	0.002	<20	0.81	<0.01	0.29	<2	0.28	2	<5	<5	15	4	8	6			
R1903551	Rock	4	0.03	25	<0.001	<20	0.28	<0.01	0.10	2	1.10	<1	<5	<5	<5	41	<3	<2	12	1.566	0.01
R1903552	Rock	8	1.43	83	<0.001	<20	0.41	0.02	0.10	<2	0.12	4	<5	<5	<5	9	<3	4			
R1903553	Rock	3	0.12	25	0.001	<20	0.30	0.01	0.11	<2	0.06	<1	<5	<5	<5	5	<3	<2			
R1903554	Rock	<1	1.57	10	0.002	<20	0.62	0.02	0.04	<2	0.98	2	<5	<5	<5	9	<3	4			
R1903555	Rock	3	2.15	7	0.004	<20	1.87	<0.01	0.04	14	3.00	<1	<5	5	9	41	8	17	82	6.685	0.24
R1903556	Rock	11	3.44	133	0.006	<20	0.44	0.02	0.07	<2	0.64	<1	<5	<5	29	8	<3	3			
R1903557	Rock	3	0.04	5	<0.001	<20	0.06	<0.01	<0.01	<2	>10	2	<5	<5	<5	35	7	4	1014	0.061	>20
1903600	Rock	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.			
1903601	Rock	3	2.93	17	<0.001	<20	0.17	<0.01	0.15	<2	0.62	2	<5	<5	20	4	4	8	2	0.253	0.06
1903602	Rock	12	0.49	37	0.007	<20	0.99	<0.01	0.56	<2	5.78	<1	<5	<5	6	28	24	28			
1903603	Rock	9	2.16	30	0.002	<20	0.40	<0.01	0.36	<2	0.60	2	<5	<5	13	4	17	20			
1903604	Rock	3	0.35	27	0.002	<20	0.37	<0.01	0.28	<2	0.29	2	<5	<5	<5	4	<3	4			
1903605	Rock	3	0.13	11	<0.001	<20	0.13	<0.01	0.09	<2	0.16	<1	<5	<5	<5	5	<3	3			
1903606	Rock	21	2.92	34	0.006	<20	3.30	<0.01	0.44	<2	<0.05	<1	<5	6	<5	13	<3	<2			
1903607	Rock	3	0.98	18	0.177	1082	1.58	0.03	0.04	<2	<0.05	<1	<5	6	<5	9	8	10			
1903608	Rock	22	3.26	6	0.005	<20	3.04	<0.01	<0.01	<2	0.24	<1	<5	6	<5	7	<3	5			
1903609	Rock	29	4.58	4	0.030	<20	4.14	<0.01	<0.01	<2	0.58	<1	<5	13	14	9	4	29			
1903610	Rock	32	0.68	31	0.003	<20	0.80	<0.01	0.14	<2	8.66	35	<5	6	<5	44	8	16	98	0.076	9.10
1903611	Rock	14	0.06	67	0.001	<20	0.19	<0.01	0.13	<2	4.47	9	<5	<5	<5	21	<3	8	198	0.011	19.31
1903612	Rock	17	0.05	48	0.002	<20	0.14	<0.01	0.12	<2	7.00	3	<5	<5	<5	26	8	<2	405	0.009	>20
1903613	Rock	34	0.55	38	0.006	<20	0.92	<0.01	0.39	<2	1.73	2	<5	<5	7	15	26	27	57	<0.001	8.11
1903614	Rock	22	1.28	235	0.002	<20	1.97	<0.01	0.29	<2	<0.05	<1	<5	<5	<5	4	<3	<2			
1903615	Rock	10	0.06	92	0.002	<20	0.47	<0.01	0.28	<2	<0.05	<1	<5	<5	6	3	<3	2			
1903616	Rock	11	0.13	59	0.002	<20	0.65	<0.01	0.35	<2	<0.05	<1	<5	<5	<5	4	<3	<2			





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Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

**Client:** **Aurora Geosciences Ltd. (Whitehorse)**

34A Laberge Road  
Whitehorse Yukon Y1A 5Y9 Canada

Project: KTN-19070-YT

Report Date: September 03, 2019

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# CERTIFICATE OF ANALYSIS

WHI19000376.1

Method	AR404	
Analyte	Zn	
Unit	%	
MDL	0.01	
R1903545	Rock Pulp	
R1903546	Rock Pulp	
R1903547	Rock	
R1903548	Rock	
R1903549	Rock	
R1903550	Rock	
R1903551	Rock	0.02
R1903552	Rock	
R1903553	Rock	
R1903554	Rock	
R1903555	Rock	0.10
R1903556	Rock	
R1903557	Rock	0.02
1903600	Rock	
1903601	Rock	1.27
1903602	Rock	
1903603	Rock	
1903604	Rock	
1903605	Rock	
1903606	Rock	
1903607	Rock	
1903608	Rock	
1903609	Rock	
1903610	Rock	16.47
1903611	Rock	3.64
1903612	Rock	1.51
1903613	Rock	0.73
1903614	Rock	
1903615	Rock	
1903616	Rock	



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Page: 3 of 3

Part: 1 of 3

# CERTIFICATE OF ANALYSIS

## WHI19000376.1

Method	WGHT	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300
Analyte	Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	
Unit	kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	
MDL	0.01	1	1	3	1	0.3	1	1	2	0.01	2	2	1	0.5	3	3	1	0.01	0.001	1	
1903617	Rock	0.48	<1	63	77	49	<0.3	8	2	113	1.67	11	3	<0.5	9	<3	8	0.01	0.010	23	
1903618	Rock	0.47	<1	513	26	120	0.9	53	36	706	8.05	<2	<2	11	<0.5	<3	<3	335	2.07	0.049	6
1903619	Rock	0.66	<1	70	2372	4332	0.9	14	19	>10000	6.77	4	<2	158	19.3	3	<3	9	9.92	0.022	4
1903620	Rock	0.66	<1	1405	4070	9181	5.2	21	42	>10000	5.83	11	3	65	38.7	5	7	14	4.48	0.020	4
1903621	Rock	0.72	<1	138	3376	5660	1.3	15	27	>10000	6.74	9	<2	168	27.2	<3	<3	13	10.30	0.021	3
1903622	Rock	0.51	<1	3288	7757	9969	20.0	16	27	>10000	4.42	5	<2	87	35.4	5	41	15	4.08	0.053	8
1903623	Rock	0.48	1	>10000	48	62	4.4	12	14	3555	5.33	4	<2	41	<0.5	<3	<3	2	9.79	0.006	6
1903624	Rock	0.55	<1	54	5180	26	4.8	5	3	3231	3.46	<2	<2	158	<0.5	5	3	<1	11.17	<0.001	3
1903625	Rock	0.54	3	3846	18	8	8.5	16	14	229	8.82	104	<2	1	<0.5	<3	<3	<1	0.03	0.002	<1
1903626	Rock	0.83	<1	79	1306	36	0.4	5	3	3959	2.88	2	<2	50	<0.5	<3	<3	1	12.29	0.006	12
1903627	Rock	0.97	4	127	181	144	4.0	247	207	829	25.69	284	<2	6	<0.5	14	65	122	1.13	0.028	2
1903628	Rock	0.67	9	16	9	657	<0.3	126	38	1375	10.14	67	<2	2	<0.5	<3	<3	147	0.12	0.038	5
1903629	Rock	0.81	3	46	10	8	1.9	18	4	80	1.02	22	<2	3	<0.5	<3	<3	4	0.05	0.019	7
1903630	Rock	0.53	<1	78	5	17	0.6	13	6	37	0.58	123	<2	<1	<0.5	43	<3	8	0.02	0.007	3
1903631	Rock	0.50	<1	229	<3	194	<0.3	57	28	1300	6.82	12	<2	18	0.5	<3	<3	155	4.90	0.033	6
1903632	Rock	0.85	<1	21	377	23	1.8	6	5	44	2.33	182	<2	5	<0.5	9	<3	21	0.01	0.014	11
1903633	Rock	0.59	5	144	>10000	>10000	65.6	29	43	141	1.07	19	<2	1	110.1	64	<3	36	0.18	0.039	2
1903634	Rock	1.35	9	305	>10000	>10000	30.7	97	169	759	2.03	4	3	43	267.9	79	<3	25	5.10	0.055	<1
1903635	Rock	0.62	3	577	1941	>10000	21.9	178	481	963	4.21	27	<2	23	616.2	123	<3	64	3.93	0.014	<1
1903636	Rock	0.50	13	8	>10000	3834	>100	15	4	36	0.45	3	4	2	8.6	106	<3	11	0.14	0.067	8
1903637	Rock Pulp	0.12	125	4047	5580	4241	47.6	194	24	1597	5.46	535	3	82	31.7	57	<3	194	3.35	0.063	72
1903638	Rock Pulp	0.12	4	20	<3	31	<0.3	7	4	584	2.50	<2	<2	31	<0.5	<3	<3	23	0.77	0.039	5
1903639	Rock Pulp	0.12	123	3973	5368	4193	48.7	189	24	1574	5.36	532	3	80	31.3	56	<3	192	3.31	0.062	72
1903640	Rock Pulp	0.12	4	20	<3	30	<0.3	7	3	563	2.40	<2	2	29	<0.5	<3	<3	22	0.73	0.037	5
1903641	Rock	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.



Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

Client: **Aurora Geosciences Ltd. (Whitehorse)**

34A Laberge Road  
Whitehorse Yukon Y1A 5Y9 Canada

Project: KTN-19070-YT

Report Date: September 03, 2019

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# CERTIFICATE OF ANALYSIS

## WHI19000376.1

Method	Analyte	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	FA350	FA350	FA350	AR404	AR404	AR404
		Cr	Mg	Ba	Ti	B	Al	Na	K	W	S	Hg	Tl	Ga	Sc	Au	Pt	Pd	Ag	Cu	Pb
		ppm	%	ppm	%	ppm	%	%	%	ppm	%	ppm	ppm	ppm	ppm	ppb	ppb	ppb	ppm	%	%
		MDL	1	0.01	1	0.001	20	0.01	0.01	0.01	2	0.05	1	5	5	5	2	3	2	2	0.001
1903617	Rock	7	0.02	15	0.001	<20	0.25	0.01	0.14	<2	<0.05	<1	<5	<5	3	<3	5				
1903618	Rock	38	4.87	23	0.029	<20	5.03	<0.01	0.13	<2	0.05	<1	<5	17	27	3	21	22			
1903619	Rock	8	3.15	30	<0.001	<20	0.46	0.01	0.14	<2	0.41	3	<5	<5	4	<3	2				
1903620	Rock	11	1.56	41	0.001	<20	1.07	<0.01	0.10	<2	0.99	7	<5	5	<5	8	<3	<2			
1903621	Rock	11	3.10	26	0.001	<20	0.72	0.01	0.08	<2	0.63	4	<5	<5	5	<3	<2				
1903622	Rock	14	2.18	130	0.003	<20	1.48	0.01	0.18	<2	0.72	5	<5	6	<5	19	<3	<2			
1903623	Rock	2	4.16	14	<0.001	<20	0.16	<0.01	0.14	4	0.32	<1	<5	<5	8	<3	<2	6	1.561	0.01	
1903624	Rock	<1	5.45	7	<0.001	<20	<0.01	0.02	0.01	<2	0.08	<1	<5	<5	4	<3	2				
1903625	Rock	3	0.02	8	<0.001	<20	0.04	<0.01	0.02	<2	<0.05	<1	<5	<5	13	<3	<2				
1903626	Rock	1	5.69	12	<0.001	<20	0.14	<0.01	0.12	<2	<0.05	<1	<5	<5	3	<3	<2				
1903627	Rock	79	2.27	10	0.004	<20	3.00	<0.01	0.16	<2	>10	<1	<5	<5	10	77	8	9			
1903628	Rock	12	0.09	134	0.001	<20	0.75	<0.01	0.13	<2	<0.05	<1	<5	<5	24	3	14	14			
1903629	Rock	5	0.02	10	<0.001	<20	0.14	<0.01	0.08	<2	<0.05	<1	<5	<5	5	<3	<2				
1903630	Rock	7	0.01	8	0.001	<20	0.39	<0.01	0.04	<2	0.11	<1	<5	<5	5	3	5				
1903631	Rock	48	3.47	14	0.002	<20	1.99	<0.01	0.18	<2	<0.05	<1	<5	5	15	5	16	17			
1903632	Rock	5	0.01	52	0.001	<20	0.32	<0.01	0.32	<2	0.52	<1	<5	<5	36	5	11				
1903633	Rock	27	0.34	20	0.003	<20	0.40	<0.01	0.17	<2	3.10	8	<5	<5	9	17	17	67	0.014	6.74	
1903634	Rock	11	0.09	8	0.002	<20	0.20	<0.01	0.09	<2	6.18	27	<5	<5	32	5	5	30	0.030	2.42	
1903635	Rock	31	0.48	12	0.002	<20	0.57	<0.01	0.08	*	>10	>50	<5	<5	47	7	10	21	0.060	0.19	
1903636	Rock	13	0.03	16	0.001	<20	0.25	<0.01	0.19	<2	2.46	1	<5	<5	12	<3	<2	109	<0.001	13.41	
1903637	Rock Pulp	62	1.90	251	0.091	<20	1.45	0.09	0.26	9	1.93	2	<5	<5	954	25	104				
1903638	Rock Pulp	14	0.52	58	0.076	<20	1.04	0.06	0.08	<2	0.05	<1	<5	<5	6	<3	<2				
1903639	Rock Pulp	61	1.87	256	0.089	<20	1.42	0.09	0.25	9	1.91	2	<5	<5	1403	36	155				
1903640	Rock Pulp	14	0.50	54	0.073	<20	1.00	0.06	0.08	<2	0.05	<1	<5	<5	2	<3	6				
1903641	Rock	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.			



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Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

**Client:** **Aurora Geosciences Ltd. (Whitehorse)**

34A Laberge Road

Whitehorse Yukon Y1A 5Y9 Canada

Project: KTN-19070-YT

Report Date: September 03, 2019

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## CERTIFICATE OF ANALYSIS

WHI19000376.1

Method	AR404	
Analyte	Zn	
Unit	%	
MDL	0.01	
1903617	Rock	
1903618	Rock	
1903619	Rock	
1903620	Rock	
1903621	Rock	
1903622	Rock	
1903623	Rock	<0.01
1903624	Rock	
1903625	Rock	
1903626	Rock	
1903627	Rock	
1903628	Rock	
1903629	Rock	
1903630	Rock	
1903631	Rock	
1903632	Rock	
1903633	Rock	3.89
1903634	Rock	11.96
1903635	Rock	>20
1903636	Rock	0.34
1903637	Rock Pulp	
1903638	Rock Pulp	
1903639	Rock Pulp	
1903640	Rock Pulp	
1903641	Rock	





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

# QUALITY CONTROL REPORT

WHI19000376.1

Method	WGHT	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300
Analyte	Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	
Unit	kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	
MDL	0.01	1	1	3	1	0.3	1	1	2	0.01	2	2	1	0.5	3	3	1	0.01	0.001	1	
Pulp Duplicates																					
R1903548	Rock	0.95	<1	128	2917	730	1.9	71	25	771	4.07	80	<2	2	1.5	22	4	83	0.34	0.004	<1
REP R1903548	QC		<1	126	2861	714	1.8	70	24	763	4.01	79	<2	2	1.4	22	<3	81	0.34	0.004	<1
R1903555	Rock	0.78	<1	>10000	2508	1011	89.0	23	9	702	9.96	4	<2	2	1.5	6	78	119	0.69	0.014	5
REP R1903555	QC																				
1903612	Rock	0.56	1	87	>10000	>10000	>100	24	32	154	0.57	4	<2	5	35.7	407	<3	17	0.68	0.027	<1
REP 1903612	QC																				
1903624	Rock	0.55	<1	54	5180	26	4.8	5	3	3231	3.46	<2	<2	158	<0.5	5	3	<1	11.17	<0.001	3
REP 1903624	QC		<1	53	5035	25	4.7	5	3	3176	3.43	<2	<2	155	<0.5	5	4	<1	11.02	<0.001	4
1903627	Rock	0.97	4	127	181	144	4.0	247	207	829	25.69	284	<2	6	<0.5	14	65	122	1.13	0.028	2
REP 1903627	QC																				
1903633	Rock	0.59	5	144	>10000	>10000	65.6	29	43	141	1.07	19	<2	1	110.1	64	<3	36	0.18	0.039	2
REP 1903633	QC																				
1903636	Rock	0.50	13	8	>10000	3834	>100	15	4	36	0.45	3	4	2	8.6	106	<3	11	0.14	0.067	8
REP 1903636	QC																				
Core Reject Duplicates																					
1903616	Rock	0.34	4	82	102	106	<0.3	29	13	1462	5.06	7	9	2	<0.5	<3	<3	17	0.03	0.037	27
DUP 1903616	QC		4	83	86	104	<0.3	31	13	1531	5.73	7	6	2	<0.5	<3	<3	21	0.04	0.037	27
Reference Materials																					
STD BVGEO01	Standard		10	4461	193	1716	3.3	166	24	711	3.80	117	13	55	5.9	<3	25	73	1.33	0.072	24
STD DS11	Standard		15	147	137	339	1.8	78	13	1002	3.13	43	7	66	2.1	8	11	49	1.05	0.069	17
STD DS11	Standard		15	151	142	353	1.7	80	13	1039	3.16	44	7	69	2.2	8	11	50	1.07	0.073	18
STD OREAS134B	Standard																				
STD OREAS133A	Standard																				
STD OREAS134B	Standard																				
STD OREAS133A	Standard																				
STD OREAS262	Standard		<1	113	51	143	0.5	63	26	514	3.28	35	8	35	<0.5	4	<3	21	2.93	0.037	15
STD OREAS262	Standard		<1	116	54	147	0.5	64	27	535	3.30	35	8	35	<0.5	3	<3	22	3.04	0.038	15
STD OREAS262	Standard		<1	119	57	153	0.4	63	26	541	3.32	36	10	35	0.5	3	<3	22	3.04	0.039	16



# QUALITY CONTROL REPORT

WHI19000376.1

Method	Analyte	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	FA350	FA350	FA350	AR404	AR404	AR404
		Cr	Mg	Ba	Ti	B	Al	Na	K	W	S	Hg	Tl	Ga	Sc	Au	Pt	Pd	Ag	Cu	Pb
Unit		ppm	%	ppm	%	ppm	%	%	%	ppm	%	ppm	ppm	ppm	ppm	ppb	ppb	ppb	ppm	%	%
MDL		1	0.01	1	0.001	20	0.01	0.01	0.01	2	0.05	1	5	5	5	2	3	2	2	0.001	0.01
Pulp Duplicates																					
R1903548	Rock	18	0.07	38	0.001	<20	0.61	<0.01	0.07	<2	<0.05	<1	<5	<5	7	9	<3	10			
REP R1903548	QC	19	0.06	37	0.001	<20	0.60	<0.01	0.07	<2	<0.05	<1	<5	<5	7						
R1903555	Rock	3	2.15	7	0.004	<20	1.87	<0.01	0.04	14	3.00	<1	<5	5	9	41	8	17	82	6.685	0.24
REP R1903555	QC															39	6	16			
1903612	Rock	17	0.05	48	0.002	<20	0.14	<0.01	0.12	<2	7.00	3	<5	<5	<5	26	8	<2	405	0.009	>20
REP 1903612	QC																		402	0.008	>20
1903624	Rock	<1	5.45	7	<0.001	<20	<0.01	0.02	0.01	<2	0.08	<1	<5	<5	<5	4	<3	2			
REP 1903624	QC	<1	5.35	7	<0.001	<20	<0.01	0.02	0.01	<2	0.08	<1	<5	<5	<5						
1903627	Rock	79	2.27	10	0.004	<20	3.00	<0.01	0.16	<2	>10	<1	<5	<5	10	77	8	9			
REP 1903627	QC															85	8	7			
1903633	Rock	27	0.34	20	0.003	<20	0.40	<0.01	0.17	<2	3.10	8	<5	<5	<5	9	17	17	67	0.014	6.74
REP 1903633	QC																		67	0.013	6.76
1903636	Rock	13	0.03	16	0.001	<20	0.25	<0.01	0.19	<2	2.46	1	<5	<5	<5	12	<3	<2	109	<0.001	13.41
REP 1903636	QC															11	<3	<2			
Core Reject Duplicates																					
1903616	Rock	11	0.13	59	0.002	<20	0.65	<0.01	0.35	<2	<0.05	<1	<5	<5	<5	4	<3	<2			
DUP 1903616	QC	14	0.16	73	0.001	<20	0.99	<0.01	0.50	<2	<0.05	<1	<5	<5	<5	4	<3	4			
Reference Materials																					
STD BVGE001	Standard	174	1.31	345	0.231	<20	2.37	0.18	0.90	3	0.68	<1	<5	8	5						
STD DS11	Standard	53	0.84	420	0.093	<20	1.17	0.07	0.40	2	0.28	<1	<5	<5	<5						
STD DS11	Standard	61	0.85	442	0.093	<20	1.20	0.08	0.41	3	0.29	<1	<5	<5	<5						
STD OREAS134B	Standard																		205	0.132	13.48
STD OREAS133A	Standard																		98	0.032	4.98
STD OREAS134B	Standard																		205	0.129	13.62
STD OREAS133A	Standard																		98	0.031	5.05
STD OREAS262	Standard	37	1.16	255	0.003	<20	1.29	0.07	0.30	<2	0.26	<1	<5	<5	<5						
STD OREAS262	Standard	38	1.18	256	0.002	<20	1.32	0.07	0.30	<2	0.27	<1	<5	<5	<5						
STD OREAS262	Standard	45	1.19	260	0.003	<20	1.36	0.07	0.33	<2	0.27	<1	<5	5	<5						



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

**Client:** **Aurora Geosciences Ltd. (Whitehorse)**  
34A Laberge Road  
Whitehorse Yukon Y1A 5Y9 Canada

Project: KTN-19070-YT  
Report Date: September 03, 2019

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# QUALITY CONTROL REPORT

WHI19000376.1

Method	AR404	
Analyte	Zn	
Unit	%	
MDL	0.01	
Pulp Duplicates		
R1903548	Rock	
REP R1903548	QC	
R1903555	Rock	0.10
REP R1903555	QC	
1903612	Rock	1.51
REP 1903612	QC	1.50
1903624	Rock	
REP 1903624	QC	
1903627	Rock	
REP 1903627	QC	
1903633	Rock	3.89
REP 1903633	QC	3.89
1903636	Rock	0.34
REP 1903636	QC	
Core Reject Duplicates		
1903616	Rock	
DUP 1903616	QC	
Reference Materials		
STD BVGE001	Standard	
STD DS11	Standard	
STD DS11	Standard	
STD OREAS134B	Standard	17.60
STD OREAS133A	Standard	10.65
STD OREAS134B	Standard	17.92
STD OREAS133A	Standard	10.82
STD OREAS262	Standard	
STD OREAS262	Standard	
STD OREAS262	Standard	



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

**Client: Aurora Geosciences Ltd. (Whitehorse)**  
34A Laberge Road  
Whitehorse Yukon Y1A 5Y9 Canada

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# QUALITY CONTROL REPORT

WHI19000376.1

		WGHT	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	
		Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Th	Sr	Cd	Sb	Bi	V	Ca	P	La
		kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm
		0.01	1	1	3	1	0.3	1	1	2	0.01	2	2	1	0.5	3	3	1	0.01	0.001	1
STD PD05	Standard																				
STD PD05	Standard																				
STD PD05	Standard																				
STD PG04	Standard																				
STD PG04	Standard																				
STD PG04	Standard																				
STD BVGEO01 Expected			10.8	4415	187	1741	2.53	163	25	733	3.7	121	14.4	55	6.5	2.2	25.6	73	1.3219	0.0727	25.9
STD DS11 Expected			13.9	156	138	345	1.71	81.9	14.2	1055	3.2082	42.8	7.65	67.3	2.37	7.2	12.2	50	1.063	0.0701	18.6
STD OREAS262 Expected				118	56	154	0.45	62	26.9	530	3.284	35.8	9.33	36	0.61	3.39		22.5	2.98	0.04	15.9
STD OREAS134B Expected																					
STD OREAS133A Expected																					
STD PD05 Expected																					
STD PG04 Expected																					
BLK	Blank		<1	<1	<3	<1	<0.3	<1	<1	<2	<0.01	<2	<2	<1	<0.5	<3	<3	<1	<0.01	<0.001	<1
BLK	Blank		<1	<1	<3	<1	<0.3	<1	<1	<2	<0.01	<2	<2	<1	<0.5	<3	<3	<1	<0.01	<0.001	<1
BLK	Blank		<1	<1	<3	<1	<0.3	<1	<1	<2	<0.01	<2	<2	<1	<0.5	<3	<3	<1	<0.01	<0.001	<1
BLK	Blank																				
BLK	Blank																				
BLK	Blank																				
BLK	Blank																				
BLK	Blank																				
Prep Wash																					
ROCK-WHI	Prep Blank		<1	2	<3	30	<0.3	1	3	500	1.90	<2	2	23	<0.5	<3	<3	24	0.66	0.040	6
ROCK-WHI	Prep Blank		1	2	<3	26	<0.3	<1	3	471	1.88	<2	2	24	<0.5	<3	<3	23	0.65	0.038	6





# QUALITY CONTROL REPORT

WHI19000376.1

		AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	FA350	FA350	FA350	AR404	AR404	AR404	
		Cr	Mg	Ba	Ti	B	Al	Na	K	W	S	Hg	Tl	Ga	Sc	Au	Pt	Pd	Ag	Cu	Pb
		ppm	%	ppm	%	ppm	%	%	%	ppm	%	ppm	ppm	ppm	ppm	ppb	ppb	ppb	ppm	%	%
		1	0.01	1	0.001	20	0.01	0.01	0.01	2	0.05	1	5	5	5	2	3	2	2	0.001	0.01
STD PD05	Standard															538	452	629			
STD PD05	Standard															529	448	616			
STD PD05	Standard															522	439	614			
STD PG04	Standard															1018	931	1254			
STD PG04	Standard															1024	956	1271			
STD PG04	Standard															1009	939	1234			
STD BVGEO01 Expected		171	1.2963	340	0.233		2.347	0.1924	0.89	3.5	0.6655			7.37	5.97						
STD DS11 Expected		61.5	0.85	417	0.0976	6	1.129	0.0694	0.4	2.9	0.2835	0.3	4.9	4.7	3.1						
STD OREAS262 Expected		41.7	1.17	248	0.003		1.204	0.071	0.312		0.253			3.73	3.24						
STD OREAS134B Expected																			204	0.1363	13.31
STD OREAS133A Expected																			96.9	0.0324	4.86
STD PD05 Expected																519	430	596			
STD PG04 Expected																996	910	1210			
BLK	Blank	<1	<0.01	<1	<0.001	<20	<0.01	<0.01	<0.01	<2	<0.05	<1	<5	<5	<5						
BLK	Blank	<1	<0.01	<1	<0.001	<20	<0.01	<0.01	<0.01	<2	<0.05	<1	<5	<5	<5						
BLK	Blank	<1	<0.01	<1	<0.001	<20	<0.01	<0.01	<0.01	<2	<0.05	<1	<5	<5	<5						
BLK	Blank																		<2	<0.001	<0.01
BLK	Blank																		<2	<0.001	<0.01
BLK	Blank															3	<3	2			
BLK	Blank															3	<3	<2			
BLK	Blank															3	<3	3			
Prep Wash																					
ROCK-WHI	Prep Blank	3	0.47	67	0.086	<20	0.87	0.08	0.09	<2	<0.05	<1	<5	<5	<5	3	<3	6			
ROCK-WHI	Prep Blank	2	0.43	67	0.090	<20	0.85	0.10	0.10	<2	<0.05	<1	<5	6	<5	3	<3	5			



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

**Client:** **Aurora Geosciences Ltd. (Whitehorse)**  
34A Laberge Road  
Whitehorse Yukon Y1A 5Y9 Canada

Project: KTN-19070-YT  
Report Date: September 03, 2019

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# QUALITY CONTROL REPORT

WHI19000376.1

		AR404 Zn % 0.01
STD PD05	Standard	
STD PD05	Standard	
STD PD05	Standard	
STD PG04	Standard	
STD PG04	Standard	
STD PG04	Standard	
STD BVGEO01	Expected	
STD DS11	Expected	
STD OREAS262	Expected	
STD OREAS134B	Expected	17.7
STD OREAS133A	Expected	10.6
STD PD05	Expected	
STD PG04	Expected	
BLK	Blank	
BLK	Blank	
BLK	Blank	
BLK	Blank	<0.01
BLK	Blank	<0.01
BLK	Blank	
BLK	Blank	
BLK	Blank	
Prep Wash		
ROCK-WHI	Prep Blank	
ROCK-WHI	Prep Blank	



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

**Client:** **Aurora Geosciences Ltd. (Whitehorse)**  
34A Laberge Road  
Whitehorse Yukon Y1A 5Y9 Canada

Submitted By: Carl Schulze  
Receiving Lab: Canada-Whitehorse  
Received: August 14, 2019  
Report Date: August 30, 2019  
Page: 1 of 3

## CERTIFICATE OF ANALYSIS

WHI19000377.1

### CLIENT JOB INFORMATION

Project: KTN-19070-YT  
Shipment ID:  
P.O. Number  
Number of Samples: 33

### SAMPLE DISPOSAL

STOR-PLP Store After 90 days Invoice for Storage  
STOR-RJT-SOIL Store Soil Reject - RJSV Charges Apply

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

### SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Procedure Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
DY060	33	Dry at 60C			WHI
SS80	29	Dry at 60C sieve 100g to -80 mesh			WHI
FA330	33	Fire assay fusion Au Pt Pd by ICP-ES	30	Completed	VAN
EN002	33	Environmental disposal charge-Fire assay lead waste			VAN
AQ300	33	1:1:1 Aqua Regia digestion ICP-ES analysis	0.5	Completed	VAN
SVRJT	29	Save all or part of Soil Reject			WHI
SHP01	33	Per sample shipping charges for branch shipments			VAN
SLBHP	4	Sort, label and box pulps			WHI

### ADDITIONAL COMMENTS

Invoice To: Aurora Geosciences Ltd. (Whitehorse)  
34A Laberge Road  
Whitehorse Yukon Y1A 5Y9  
Canada

CC: Jim McDonald



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.



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Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

Client: **Aurora Geosciences Ltd. (Whitehorse)**

34A Laberge Road  
Whitehorse Yukon Y1A 5Y9 Canada

Project: KTN-19070-YT

Report Date: August 30, 2019

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# CERTIFICATE OF ANALYSIS

WHI19000377.1

Method Analyte	Unit	MDL	FA330	FA330	FA330	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300		
			Au	Pt	Pd	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Th	Sr	Cd	Sb	Bi	V	Ca
			ppb	ppb	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	
			2	3	2	1	1	3	1	0.3	1	1	2	0.01	2	2	1	0.5	3	3	1	0.01
1903501	Silt		13	5	19	10	275	74	773	0.4	118	40	3130	4.68	30	<2	20	3.5	<3	<3	64	6.94
1903502	Silt		12	6	10	10	287	97	1354	0.5	148	44	3069	5.34	35	<2	19	4.4	<3	<3	71	4.64
1903503	Silt		8	6	16	6	115	48	376	<0.3	47	19	940	4.24	19	<2	15	1.7	<3	<3	95	0.52
1903504	Silt		12	8	17	13	282	107	1331	0.6	163	45	2997	5.69	45	2	19	4.8	<3	<3	73	4.09
1903505	Silt		12	5	11	12	274	140	1418	0.6	154	41	2875	5.60	45	3	18	5.2	<3	<3	77	3.76
1903506	Silt		14	7	16	18	305	367	2322	1.4	172	52	1371	6.15	117	3	19	8.5	5	<3	83	0.73
1903507	Silt		14	3	15	12	289	284	1514	0.8	121	41	1575	5.53	77	3	15	5.9	3	<3	98	1.75
1903508	Silt		13	7	16	9	268	255	1573	0.9	122	40	1781	5.18	76	3	16	6.3	<3	<3	98	2.03
1903509	Silt		13	5	22	8	258	347	1594	0.9	116	37	1255	4.88	70	3	14	6.9	<3	<3	102	1.32
1903510	Silt		13	8	15	7	236	392	1497	0.9	92	35	1089	4.95	74	4	13	6.0	<3	<3	112	0.96
1903511	Silt		15	6	12	7	223	354	1431	0.8	89	35	979	4.94	73	3	12	5.0	3	<3	119	1.02
1903512	Silt		14	7	38	6	208	334	1271	0.8	81	32	812	4.75	62	3	11	3.9	<3	<3	118	0.88
1903513	Silt		7	<3	5	2	53	28	86	<0.3	25	16	1359	3.45	11	<2	9	<0.5	<3	<3	34	0.19
1903514	Silt		9	4	8	2	42	33	96	0.4	23	12	1005	3.03	10	<2	15	<0.5	<3	<3	36	0.58
1903515	Silt		6	<3	8	2	48	31	113	0.5	28	13	1135	3.15	11	<2	14	<0.5	<3	<3	33	0.60
1903516	Soil		7	4	3	2	40	27	94	<0.3	26	11	687	2.84	10	<2	11	<0.5	<3	<3	28	0.52
1903517	Soil		10	<3	8	1	39	28	77	0.4	24	10	479	2.52	8	<2	13	<0.5	<3	<3	25	0.63
1903518	Soil		10	<3	6	1	94	19	97	0.8	19	6	356	2.38	6	<2	42	<0.5	<3	<3	28	0.98
1903519	Soil		9	<3	5	1	75	30	168	0.6	18	8	1027	2.37	6	<2	57	0.5	<3	<3	25	1.22
1903520	Soil		6	<3	4	1	45	44	93	0.4	18	15	2745	2.97	8	<2	23	<0.5	<3	<3	34	0.36
1903521	Soil		8	<3	6	1	62	49	178	0.4	25	15	1781	3.65	10	<2	36	0.5	<3	<3	34	0.59
1903522	Soil		9	<3	8	1	76	75	178	0.7	26	17	2174	3.72	10	<2	42	0.6	<3	<3	30	0.70
1903523	Soil		6	<3	8	<1	55	46	127	0.4	26	16	1276	3.61	9	<2	25	<0.5	<3	<3	30	0.43
1903524	Soil		7	<3	7	1	56	40	124	<0.3	27	16	1387	3.75	9	2	21	<0.5	<3	<3	31	0.34
1903525	Soil		8	<3	9	<1	50	45	116	<0.3	25	15	1617	3.57	8	<2	22	<0.5	<3	<3	30	0.39
1903526	Soil		8	<3	10	2	50	44	128	<0.3	25	16	1352	3.47	8	<2	20	<0.5	<3	<3	30	0.37
1903527	Soil		8	<3	7	5	32	33	165	0.5	28	11	1094	2.94	11	<2	18	1.0	<3	<3	39	0.70
1903528	Soil		8	<3	3	1	36	22	108	0.4	25	10	442	2.49	8	<2	17	<0.5	<3	<3	36	0.60
1903529	Soil		7	<3	5	2	35	29	125	0.3	25	10	417	2.51	6	<2	21	0.6	<3	<3	34	0.57
1903530	Rock Pulp		1364	30	149	119	4060	5466	4234	46.6	187	23	1615	5.13	511	3	80	33.0	54	<3	194	3.26





Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

**Client:** Aurora Geosciences Ltd. (Whitehorse)

34A Laberge Road  
Whitehorse Yukon Y1A 5Y9 Canada

Project: KTN-19070-YT

Report Date: August 30, 2019

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# CERTIFICATE OF ANALYSIS

WHI19000377.1

Method Analyte Unit MDL	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300
	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	S %	Hg ppm	Tl ppm	Ga ppm	Sc ppm	
1903501 Silt	0.075	13	25	4.71	79	0.027	<20	1.41	<0.01	0.05	<2	<0.05	<1	<5	6	6	
1903502 Silt	0.093	16	31	3.46	99	0.024	<20	1.71	<0.01	0.08	<2	0.06	<1	<5	6	8	
1903503 Silt	0.113	14	45	1.25	294	0.029	<20	2.58	<0.01	0.09	<2	0.06	<1	<5	7	7	
1903504 Silt	0.104	18	32	3.18	118	0.023	<20	1.83	<0.01	0.08	<2	0.07	<1	<5	7	8	
1903505 Silt	0.106	19	33	3.10	116	0.026	<20	1.87	<0.01	0.09	<2	0.07	<1	<5	7	8	
1903506 Silt	0.162	23	36	1.72	84	0.021	<20	2.72	<0.01	0.13	<2	0.14	<1	<5	6	9	
1903507 Silt	0.115	23	38	2.48	91	0.030	<20	2.32	<0.01	0.10	<2	0.08	<1	<5	7	8	
1903508 Silt	0.098	20	38	2.61	89	0.033	<20	2.16	<0.01	0.09	<2	0.07	<1	<5	8	8	
1903509 Silt	0.101	18	46	2.36	82	0.032	<20	2.21	<0.01	0.09	<2	0.08	<1	<5	8	8	
1903510 Silt	0.094	19	48	2.37	82	0.037	<20	2.30	<0.01	0.09	<2	0.08	<1	<5	7	9	
1903511 Silt	0.093	18	54	2.59	90	0.041	<20	2.40	<0.01	0.10	<2	0.09	<1	<5	8	8	
1903512 Silt	0.087	18	53	2.52	75	0.042	<20	2.38	<0.01	0.09	<2	0.08	<1	<5	7	8	
1903513 Silt	0.080	20	24	0.56	121	0.015	<20	1.55	<0.01	0.10	<2	<0.05	<1	<5	<5	<5	
1903514 Silt	0.092	16	26	0.69	191	0.013	<20	1.58	<0.01	0.10	<2	0.08	<1	<5	<5	<5	
1903515 Silt	0.089	17	25	0.76	208	0.014	<20	1.46	<0.01	0.11	<2	0.07	<1	<5	<5	<5	
1903516 Soil	0.086	16	23	0.74	176	0.012	<20	1.33	<0.01	0.10	<2	0.07	<1	<5	<5	<5	
1903517 Soil	0.092	14	24	0.70	192	0.012	<20	1.27	<0.01	0.09	<2	0.09	<1	<5	<5	<5	
1903518 Soil	0.151	17	34	0.73	95	0.017	<20	1.89	0.01	0.09	<2	0.17	<1	<5	<5	<5	
1903519 Soil	0.165	16	36	0.71	107	0.013	<20	2.04	<0.01	0.09	<2	0.24	<1	<5	<5	<5	
1903520 Soil	0.094	16	24	0.62	188	0.010	<20	1.65	<0.01	0.10	<2	0.08	<1	<5	<5	<5	
1903521 Soil	0.103	19	32	0.89	132	0.015	<20	2.23	<0.01	0.10	<2	0.10	<1	<5	<5	<5	
1903522 Soil	0.093	19	31	1.04	148	0.015	<20	2.21	<0.01	0.14	<2	0.11	<1	<5	<5	6	
1903523 Soil	0.073	21	28	1.02	113	0.015	<20	1.93	<0.01	0.11	<2	0.06	<1	<5	5	<5	
1903524 Soil	0.070	21	27	1.03	124	0.014	<20	1.95	<0.01	0.10	<2	<0.05	<1	<5	<5	<5	
1903525 Soil	0.062	20	27	0.97	125	0.015	<20	1.85	<0.01	0.10	<2	<0.05	<1	<5	<5	<5	
1903526 Soil	0.082	19	27	0.98	116	0.014	<20	1.88	<0.01	0.10	<2	<0.05	<1	<5	<5	<5	
1903527 Soil	0.150	13	30	0.66	332	0.014	<20	1.93	<0.01	0.09	<2	0.10	<1	<5	<5	<5	
1903528 Soil	0.092	14	26	0.64	275	0.016	<20	1.40	<0.01	0.08	<2	0.07	<1	<5	<5	<5	
1903529 Soil	0.100	15	27	0.71	205	0.017	<20	1.61	<0.01	0.09	<2	0.08	<1	<5	<5	<5	
1903530 Rock Pulp	0.061	74	60	1.90	295	0.088	<20	1.45	0.08	0.26	7	1.93	2	<5	7	<5	



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Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

**Client:** **Aurora Geosciences Ltd. (Whitehorse)**

34A Laberge Road

Whitehorse Yukon Y1A 5Y9 Canada

Project: KTN-19070-YT

Report Date: August 30, 2019

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# CERTIFICATE OF ANALYSIS

WHI19000377.1

Method	FA330	FA330	FA330	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	
	Au	Pt	Pd	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Th	Sr	Cd	Sb	Bi	V	Ca	
Analyte	ppb	ppb	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	
Unit	ppb	ppb	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	
MDL	2	3	2	1	1	3	1	0.3	1	1	2	0.01	2	2	1	0.5	3	3	1	0.01	
1903531	Rock Pulp	5	<3	3	4	19	<3	28	<0.3	7	4	568	2.37	<2	<2	29	<0.5	<3	<3	21	0.74
1903532	Rock Pulp	1404	35	153	118	4050	5620	4225	47.0	189	24	1612	5.12	518	3	79	32.9	58	<3	187	3.28
1903533	Rock Pulp	7	<3	7	4	19	<3	28	<0.3	7	4	558	2.36	2	<2	28	<0.5	<3	<3	21	0.74



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Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

**Client:** Aurora Geosciences Ltd. (Whitehorse)

34A Laberge Road  
Whitehorse Yukon Y1A 5Y9 Canada

Project: KTN-19070-YT

Report Date: August 30, 2019

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# CERTIFICATE OF ANALYSIS

WHI19000377.1

Method	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300
Analyte	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	S	Hg	Tl	Ga	Sc	
Unit	%	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	%	ppm	ppm	ppm	ppm	
MDL	0.001	1	1	0.01	1	0.001	20	0.01	0.01	0.01	2	0.05	1	5	5	5	
1903531	Rock Pulp	0.036	5	15	0.49	55	0.069	<20	1.00	0.06	0.07	<2	0.05	<1	<5	<5	
1903532	Rock Pulp	0.061	73	60	1.89	364	0.087	20	1.43	0.08	0.26	8	1.95	2	<5	7	<5
1903533	Rock Pulp	0.036	5	16	0.48	55	0.068	<20	0.97	0.06	0.07	<2	<0.05	<1	<5	<5	<5



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

**Client: Aurora Geosciences Ltd. (Whitehorse)**  
34A Laberge Road  
Whitehorse Yukon Y1A 5Y9 Canada

Project: KTN-19070-YT  
Report Date: August 30, 2019

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# QUALITY CONTROL REPORT

WHI19000377.1

Method	Analyte	FA330	FA330	FA330	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300
		Au	Pt	Pd	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	Th	Sr	Cd	Sb	Bi	V	Ca
Unit		ppb	ppb	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%
MDL		2	3	2	1	1	3	1	0.3	1	1	2	0.01	2	2	1	0.5	3	3	1	0.01
Pulp Duplicates																					
1903507	Silt	14	3	15	12	289	284	1514	0.8	121	41	1575	5.53	77	3	15	5.9	3	<3	98	1.75
REP 1903507	QC	19	7	28																	
1903515	Silt	6	<3	8	2	48	31	113	0.5	28	13	1135	3.15	11	<2	14	<0.5	<3	<3	33	0.60
REP 1903515	QC				2	46	31	110	0.4	28	13	1116	3.08	11	<2	13	<0.5	<3	<3	32	0.57
Reference Materials																					
STD DS11	Standard				14	145	130	332	1.6	75	12	1004	3.02	41	7	65	2.2	7	10	47	1.02
STD OREAS262	Standard				<1	117	54	149	0.5	61	26	532	3.21	35	8	35	0.7	<3	<3	21	2.90
STD PD05	Standard	519	439	609																	
STD PG04	Standard	1022	927	1245																	
STD DS11 Expected					13.9	156	138	345	1.71	81.9	14.2	1055	3.2082	42.8	7.65	67.3	2.37	7.2	12.2	50	1.063
STD OREAS262 Expected						118	56	154	0.45	62	26.9	530	3.284	35.8	9.33	36	0.61	3.39		22.5	2.98
STD PD05 Expected		519	430	596																	
STD PG04 Expected		996	910	1210																	
BLK	Blank				<1	<1	<3	<1	<0.3	<1	<1	<2	<0.01	<2	<2	<1	<0.5	<3	<3	<1	<0.01
BLK	Blank	4	<3	7																	



# QUALITY CONTROL REPORT

WHI19000377.1

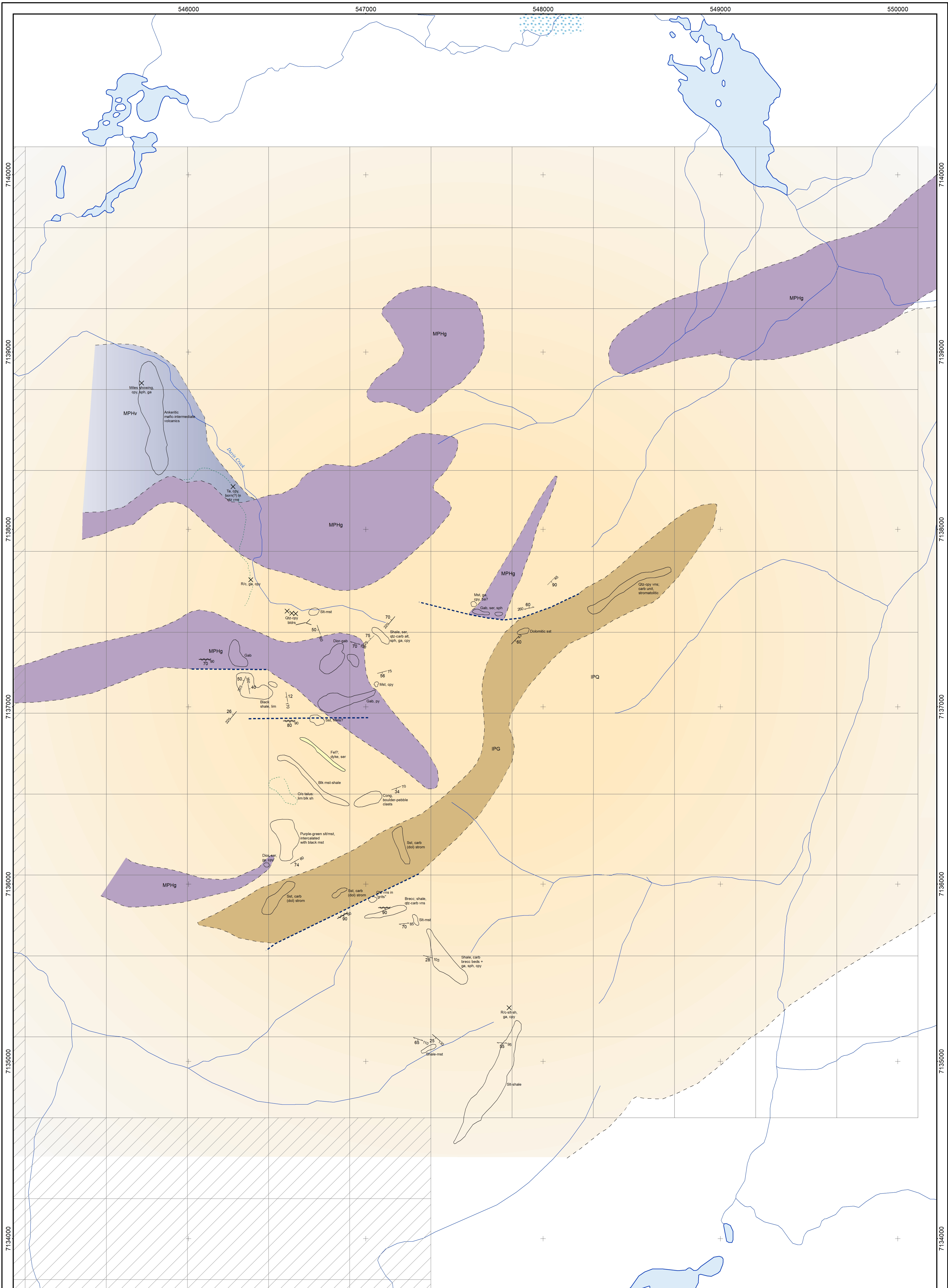
Method	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300
Analyte	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	S	Hg	Tl	Ga	Sc	
Unit	%	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	%	ppm	ppm	ppm	ppm	
MDL	0.001	1	1	0.01	1	0.001	20	0.01	0.01	0.01	2	0.05	1	5	5	5	
Pulp Duplicates																	
1903507 Silt	0.115	23	38	2.48	91	0.030	<20	2.32	<0.01	0.10	<2	0.08	<1	<5	7	8	
REP 1903507 QC																	
1903515 Silt	0.089	17	25	0.76	208	0.014	<20	1.46	<0.01	0.11	<2	0.07	<1	<5	<5	<5	
REP 1903515 QC	0.085	17	25	0.74	204	0.014	<20	1.44	<0.01	0.10	<2	0.07	<1	<5	<5	<5	
Reference Materials																	
STD DS11 Standard	0.067	16	57	0.82	420	0.087	<20	1.14	0.07	0.39	2	0.28	<1	<5	<5	<5	
STD OREAS262 Standard	0.037	15	42	1.17	245	0.003	<20	1.27	0.07	0.30	<2	0.26	<1	<5	<5	<5	
STD PD05 Standard																	
STD PG04 Standard																	
STD DS11 Expected	0.0701	18.6	61.5	0.85	417	0.0976	6	1.129	0.0694	0.4	2.9	0.2835	0.3	4.9	4.7	3.1	
STD OREAS262 Expected	0.04	15.9	41.7	1.17	248	0.003		1.204	0.071	0.312		0.253			3.73	3.24	
STD PD05 Expected																	
STD PG04 Expected																	
BLK Blank	<0.001	<1	<1	<0.01	<1	<0.001	<20	<0.01	<0.01	<0.01	<2	<0.05	<1	<5	<5	<5	
BLK Blank																	



**Appendix VI**

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Figure 5, 100% size  
*Kootenay Silver Inc.*  
*Aurora Geosciences Ltd.*



**LEGEND**

- Younging Direction
- Rubblecrop talus
- Fault trace
- Geological contacts
- Outcrop
- Active Claims
- Pending Claims
- Watercourse
- Wetland
- Waterbody

**Structure**

- Bedding
- Foliation
- Shear/fault

**Lithologies**

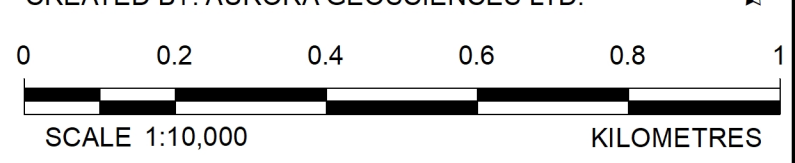
- Late Proterozoic (?)
  - Felsic dykes, sericitic
- Mid-Late Proterozoic (Ectasian)
  - MPHv: Hart River Fm: Mafic volcanics
  - MPHg: Hart River Fm: Diorite to gabbro
- Early-Mid Proterozoic (Strathairn)
  - IPQ: Quartet Group: Black shale, mudstone, siltstone, minor conglomerate
  - IPG: Gillespie Group: Dolostone to silty dolostone, locally calcareous sandstone

**Abbreviations**

- |       |              |       |               |
|-------|--------------|-------|---------------|
| ank   | ankerite     | mst   | mudstone      |
| ba    | barite       | o/c   | outcrop       |
| blk   | black        | py    | pyrite        |
| brecc | brecciated   | r/c   | rubblecrop    |
| carb  | carbonate    | ser   | sericite      |
| cong  | conglomerate | sh    | shale         |
| cpy   | chalcopyrite | sph   | sphalerite    |
| dior  | diorite      | silt  | siltstone     |
| dol   | dolomite     | sst   | sandstone     |
| fel   | felsic       | strom | stromatolites |
| ga    | galena       | ta    | talus         |
| int   | intermediate | vn    | veins         |
| lim   | limonitic    |       |               |

**REFERENCE**

NTS 50K SHEETS: 106C05, 106D08  
 BASE DATA OBTAINED FROM CANVEC®  
 DEPARTMENT OF NATURAL RESOURCES  
 CANADA ALL RIGHTS RESERVED.  
 DATUM: NAD 1983 CSRS UTM ZONE 8N  
 CREATED BY: AURORA GEOSCIENCES LTD.



PROJECT	KOOTENAY SILVER INC UPPER RACKLA PROJECT	
TITLE	<b>2019 PROGRAM GEOLOGICAL MAP</b>	
PROJECT	KTN-10036-NT	
DESIGN	RM	08/04/2017
DWG	RF	12/11/2019
CHECK	JM	14/11/2019
REVIEW	CS	14/11/2019
SCALE AS SHOWN		



AURORA GEOSCIENCES

**Appendix VI**

Statement of Expenditures

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Rock Samples: 53 @ \$52.64/sample:	\$ 2,790.58
Silt Samples: 33 @ \$50.00/sample:	\$ 1,650.00
Standard samples*:	\$ 261.58
Personnel: Project Geologist: 7 days @ \$900/day:	\$ 6,300.00
Personnel: Junior Geologist: 5 days @ \$600/day:	\$ 3,000.00
Personnel: Prospector: 7 days @ \$750/day:	\$ 5,250.00
Helicopter, incl. fuel: 9.1 hrs @ \$1,721.87/hr*:	\$15,669.00
Accommodations, meals and groceries*:	\$ 2,588.75
Truck rental: 5 days @ \$250/day:	\$ 1,250.00
Truck fuel*:	\$ 132.76
Field supplies*:	\$ 131.65
Travel, prospector*:	\$ 660.00
Field gear rentals: 5 days @205/day:	\$ 1,025.00
Report writing, including digitization and GIS:	<u>\$ 7,550.00</u>
Total:	\$48,258.74

\*Includes 10% surcharge