

**FINAL REPORT, YUKON MINERAL EXPLORATION PROGRAM (YMEP)**

REPORT ON 2020 ROCK, SOIL and SILT GEOCHEMICAL EXPLORATION, UPPER RACKLA PROJECT

N.T.S. 105D/08, 105C/05

YMEP No: 20-031

**Property Centre:**

BOP: 64° 21' 33" N 134° 0' 55" W (564250, 7137440, NAD 83, Zone 8)  
SWING: 64° 22' 16" N, 134° 16' 32" W (534960, 7135490, NAD 83, Zone 8)  
GRANDMA: 64° 17' 54": N, 134° 1' 29 (547190, 6130630, NAD 83, Zone 8)

**WORK PERFORMED:**

Sept 4 – Sept 11, 2020

BOP 1-60 (YD55201 - YD55260), BOP 61-105 (YD55469 – YD55513), BOP 106 (YD55684)  
BOP 107-112 (YD55515 – YD55520), BOP 113-132 (YE31957 – YE31976)  
BOP 133-204 (YE96679 – YE96750)  
COOL JAZZ 1-36 (YE96807 – YE96818)  
SWING 1-56 (YE96751 – YE96804)  
GRANDMA 1-12 (YE96807 – YE96818)

**Mayo Mining District**

**prepared for:**

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**CENTRAL YUKON, CANADA**

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Effective date: January 14, 2021

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**AURORA GEOSCIENCES**

## TABLE OF CONTENTS

<b>1</b>	<b>SUMMARY</b> .....	<b>1</b>
<b>2</b>	<b>INTRODUCTION</b> .....	<b>3</b>
2.1	TERMS, DEFINITIONS AND UNITS.....	3
<b>3</b>	<b>PROPERTY DESCRIPTION AND LOCATION</b> .....	<b>4</b>
3.1	LOCATION AND DESCRIPTION.....	4
3.2	MINERAL TENURE AND UNDERLYING AGREEMENTS.....	4
<b>4</b>	<b>ACCESSIBILITY, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY</b> .....	<b>12</b>
4.1	TOPOGRAPHY AND VEGETATION.....	12
4.2	ACCESS AND INFRASTRUCTURE.....	12
<b>5</b>	<b>HISTORY</b> .....	<b>12</b>
<b>6</b>	<b>GEOLOGY</b> .....	<b>13</b>
6.1	REGIONAL GEOLOGY.....	13
6.2	PROPERTY GEOLOGY.....	19
6.2.1	<i>Bop Claim Block</i> .....	19
6.2.2	<i>Swing Claim Block</i> .....	19
6.2.3	<i>Grandma Claim Block</i> .....	19
<b>7</b>	<b>MINERALIZATION</b> .....	<b>19</b>
<b>8</b>	<b>DEPOSIT SETTING</b> .....	<b>22</b>
<b>9</b>	<b>EXPLORATION PROGRAM</b> .....	<b>22</b>
9.1	BOP/ COOL JAZZ BLOCK.....	22
9.1.1	<i>Rock sampling</i> .....	22
9.1.2	<i>Soil, Silt Sampling</i> .....	23
9.2	SWING BLOCK.....	32
9.2.1	<i>Rock Sampling</i> .....	32
9.2.2	<i>Silt Sampling</i> .....	32
9.3	GRANDMA BLOCK.....	41
9.3.1	<i>Rock Sampling</i> .....	41
9.3.2	<i>Soil Sampling</i> .....	41
<b>10</b>	<b>SAMPLE PREPARATION, ANALYSIS AND SECURITY</b> .....	<b>50</b>
10.1	ROCK SAMPLING.....	50
10.2	SOIL AND SILT SAMPLING.....	50
<b>11</b>	<b>DISCUSSION AND CONCLUSIONS</b> .....	<b>51</b>
11.1	DISCUSSION.....	51
11.1.1	<i>BOP/ COOL JAZZ Block</i> .....	51
11.1.2	<i>SWING Block</i> .....	51
11.1.3	<i>GRANDMA block</i> .....	52
11.2	CONCLUSIONS.....	52
<b>12</b>	<b>RECOMMENDATIONS</b> .....	<b>53</b>

12.1	RECOMMENDATIONS .....	53
12.2	RECOMMENDED BUDGET.....	54
<b>13</b>	<b>REFERENCES .....</b>	<b>56</b>

## LIST OF FIGURES

FIGURE 1:	LOCATION MAP .....	7
FIGURE 2:	REGIONAL CLAIM MAP, BOP/ COOL JAZZ, SWING AND GRANDMA CLAIM BLOCKS .....	8
FIGURE 3:	CLAIM BLOCK, BOP/ COOL JAZZ BLOCK .....	9
FIGURE 4:	CLAIM MAP, SWING BLOCK .....	10
FIGURE 5:	CLAIM MAP, GRANDMA BLOCK .....	11
FIGURE 6:	REGIONAL GEOLOGY, UPPER RACKLA AREA .....	15
FIGURE 7:	LEGEND, REGIONAL GEOLOGY, UPPER RACKLA AREA.....	16
FIGURE 8:	UPPER RACKLA LOCAL AREA GEOLOGY .....	17
FIGURE 9:	LEGEND, UPPER RACKLA AREA LOCAL GEOLOGY.....	18
FIGURE 10:	BANDED CHALCOPYRITE - MALACHITE MINERALIZATION, OCCURRENCE NW OF FREDDY SHOWING.....	20
FIGURE 11:	MINERALIZED SEDIMENTARY ROCKS (SAMPLE Y646134), NORTHEAST SWING BLOCK.....	21
FIGURE 12:	LIMONITIC BASALT (SAMPLE W612040), GRANDMA BLOCK.....	21
FIGURE 13:	AG VALUES, ROCK SAMPLING, BOP/ COOL JAZZ BLOCK.....	24
FIGURE 14:	CU VALUES, ROCK SAMPLING, BOP/ COOL JAZZ BLOCK .....	25
FIGURE 15:	PB VALUES, ROCK SAMPLING, BOP/ COOL JAZZ BLOCK .....	26
FIGURE 16:	ZN VALUES, ROCK SAMPLING, BOP/ COOL JAZZ BLOCK .....	27
FIGURE 17:	AG VALUES, SOIL SAMPLING, BOP/ COOL JAZZ BLOCK .....	28
FIGURE 18:	CU VALUES, SOIL SAMPLING, BOP/ COOL JAZZ BLOCK.....	29
FIGURE 19:	PB VALUES, SOIL/ SILT SAMPLING, BOP/ COOL JAZZ BLOCK.....	30
FIGURE 20:	ZN VALUES, SOIL SAMPLING, BOP/ COOL JAZZ BLOCK.....	31
FIGURE 21:	AG VALUES, ROCK SAMPLING, SWING BLOCK.....	33
FIGURE 22:	CU VALUES, ROCK SAMPLING, SWING BLOCK.....	34
FIGURE 23:	PB VALUES, ROCK SAMPLING, SWING BLOCK .....	35
FIGURE 24:	ZN VALUES, ROCK SAMPLING, SWING BLOCK .....	36
FIGURE 25:	AG VALUES, SILT SAMPLING, SWING BLOCK.....	37
FIGURE 26:	CU VALUES, SILT SAMPLING, SWING BLOCK.....	38
FIGURE 27:	CU VALUES, SILT SAMPLING, SWING BLOCK.....	39
FIGURE 28:	PB VALUES, SILT SAMPLING, SWING BLOCK .....	39
FIGURE 29:	ZN VALUES, SILT SAMPLING, SWING BLOCK .....	40
FIGURE 30:	AG VALUES, ROCK SAMPLING, GRANDMA BLOCK .....	42
FIGURE 31:	CU VALUES, ROCK SAMPLING, GRANDMA BLOCK.....	43
FIGURE 32:	PB VALUES, ROCK SAMPLING, GRANDMA BLOCK.....	44
FIGURE 33:	ZN VALUES, ROCK SAMPLING, GRANDMA BLOCK.....	45
FIGURE 34:	AG VALUES, SOIL SAMPLING, GRANDMA BLOCK.....	46
FIGURE 35:	CU VALUES, SOIL SAMPLING, GRANDMA BLOCK .....	47
FIGURE 36:	PB VALUES, SOIL SAMPLING, GRANDMA BLOCK .....	48
FIGURE 37:	ZN VALUES, SOIL SAMPLING, GRANDMA BLOCK .....	49

## LIST OF TABLES

TABLE 1:	CLAIM STATUS, BOP/ COOL JAZZ BLOCK, AS OF JAN 11, 2021) .....	5
TABLE 2:	CLAIM STATUS, SWING BLOCK, AS OF JAN 11, 2021 .....	6
TABLE 3:	CLAIM STATUS, GRANDMA BLOCK, AS OF JAN 11, 2021 .....	6

## **APPENDICES**

APPENDIX I .....	STATEMENT OF QUALIFICATIONS
APPENDIX II .....	STATEMENT OF EXPENDITURES
APPENDIX III .....	SAMPLE DESCRIPTIONS AND LOCATIONS
APPENDIX IV .....	ORIGINAL ASSAY CERTIFICATES
APPENDIX V .....	PROPERTY GEOLOGY MAP, BOP 1-132 BLOCK, 2019 PROGRAM

## 1 SUMMARY

In 2020, Aurora Geosciences Ltd. (Aurora) of Whitehorse, Yukon, was contracted by Kootenay Silver Inc. (Kootenay) of Vancouver, BC, to carry out a geological mapping, rock, soil and stream sediment geochemical sampling program over its Upper Rackla property in central Yukon. The property comprises three separate claim blocks: the BOP 1-204/ COOL JAZZ 1-38 block, the SWING 1-56 block and the GRANDMA 1-12 block, located northeast of Keno City, Yukon. The properties comprise a total of 310 claims covering 6,473 hectares (15,988 acres) and are 100% owned by Kootenay.

No previous private-sector exploration has been documented prior to 2019 on the BOP /COOL JAZZ and the SWING blocks. In 1977, Prism Resources Ltd staked the ZAP 1-16 claims in the present GRANDMA block area, eventually expanding this to a 292-unit block in 1978. Prism followed up with geological mapping and rock sampling, excavation of nine trenches, of which two are within the GRANDMA block, and diamond drilling a program of 573.2 m in 5 holes. Trench sampling on the present GRANDMA block returned values up to 73.88% lead (Pb), 1.25% zinc (Zn) and 44.65 opt (1,395 g/t) silver (Ag) across 0.15m, and up to 37.59% Pb, 15.73% Zn and 16.71 opt (522 g/t) Ag from a separate trench. No further work was reported by Prism.

Kootenay based acquisition of these targets mainly on regional geological mapping by the Yukon Geological Survey (YGS), and stream sediment sampling under the “Regional Geochemical Survey” (RGS) program. The BOP 1-132 claims were staked in April 2019, and underwent a three-day reconnaissance-style exploration program later that year. The program led to discovery of the Freddy showing in the “Davis Creek” (unofficial name) catchment, returning values to 20.0% Pb, 1.51% Zn and 405 g/t Ag. The Miles showing to the northwest, also discovered in 2019, returned values up to 6.685% copper (Cu), 0.2508% Pb, 0.1011% Zn and 89.0 g/t Ag. The deposit setting was determined to be of polymetallic vein and/or replacement-style mineralization. The distinct mineral assemblages of these indicates a multi-pulsed mineralizing event of significant temporal duration.

The Upper Rackla property is located along the southern margin of the Proterozoic Ancient North American Continent, comprising layered rocks deposited along the western flank of Laurentia. The oldest basal sedimentary assemblage is the Mesoproterozoic Wernecke Supergroup, divided into three major groups. From oldest to youngest, these are: the Fairchild Lake Group, the Quartet Group and the Gillespie Group. The Quartet Group is a 5-km thick sequence comprising fine clastic sediments with minor interbeds of dolostone towards the top. The overlying Gillespie Lake Group comprises four sequences of siliciclastic - carbonate admixtures overlain by carbonate rocks deposited in a gentle slope environment fringed by a stromatolitic reef complex. This is overlain by intercalated carbonate - siliciclastic rocks, in turn overlain by a carbonate shelf sequence. All Wernecke Supergroup units have been intruded by 1.32 Ga Hart River Formation dioritic to gabbroic dykes, emplaced during a period of crustal extension. The Pinguicula Group, a 2.5-km sequence comprising sandstone interbedded with dolostone, siltstone and shale, overlies Wernecke Supergroup rocks. Neoproterozoic (<1.0 Ga) carbonates, sandstones and siltstone of the Mackenzie Mountains Supergroup overlie the Pinguicula Group.

Mapping in 2019 indicated most of the BOP property is underlain by Quartet Group fine clastic sediments and minor conglomerate. A fault-bounded northeast trending unit of Gillespie Group dolomitic sandstone to dolostone extends across the property. Aerially extensive units of gabbroic dykes and intrusions occur in northern and western areas. Several east-west and ENE – WSW trending faults were identified in the property area, one marking the southwestern boundary of the Gillespie Lake dolostone unit.

Regional mapping by the YGS at the SWING block indicates it is underlain by an assemblage of Gillespie Group fine clastic sediments intercalated with dolomitic sandstone and dolostone, intruded by Hart River Group gabbroic to dioritic intrusions. Regional mapping by the YGS at the GRANDMA block indicates it covers a district-scale south-dipping thrust fault juxtaposing units of Gillespie Group clastic and calcareous metasediments. The fault is marked by the linear southern drainage transecting the claims.

Work in 2020 on the BOP/ COOL JAZZ block comprised rock sampling near the Freddy showing and ridgeline soil sampling and rock sampling in the northeast BOP 1-132 area and the central COOL JAZZ area. At the SWING block, stream silt geochemical sampling combined with rock sampling was done along both branches and the “mainstem” of a stream system in the northern property area. At the GRANDMA block, an arcuate soil sampling traverse combined with rock sampling was completed along two prominent stream valleys. Expenditures for 2020 were about CDN\$73,700.

At the BOP/ COOL JAZZ block, three sites warranting follow-up work were identified from the 2020 program: a newly identified vein-style Cu-Zn occurrence in the Davis Creek basin; the north flank and headwaters of a northeastern stream; and the east flank of a north-flowing creek in the COOL JAZZ block. The Cu-Zn occurrence, located 400 m northwest of the Freddy showing, represents a distinct mineralogical setting formed from a separate hydrothermal fluid pulse. Anomalous Cu-Zn-Pb-Ag values from soil sampling in the northeastern area indicate potential for polymetallic mineralization. Potential for polymetallic mineralization also occurs along the ridgeline east of the creek in the COOL JAZZ block.

The SWING block may host the most prospective target of the three blocks. Along the west branch, anomalous values for Pb, Ag, Cu and particularly Zn indicate a local source. Strongly anomalous Zn values were returned along the entire extent of the west branch and mainstem, indicating potential for multiple zinc occurrences along its course.

At the GRANDMA block, soil and rock sampling revealed a coincident Cu-Pb-Zn-Ag anomaly centered on the apex of the arcuate traverse. Mineralization may have a partial structural control, focused along two property-scale lineaments. Structural control may be most pronounced along the notably linear southern branch. Although the Grandma showing is designated as a Mississippi Valley-Type (MVT) occurrence, the Cu-Ag enriched metallogeny indicates a higher likelihood for polymetallic mineralization.

Further work is recommended for all three claim blocks. In the northeastern part of the BOP 1-132 block, a soil “mini-grid” combined with rock sampling and geological mapping is recommended. Within the Davis Creek basin, further prospecting and rock sampling, including follow-up work on the Cu-Zn occurrence discovered in 2020, is recommended. Further soil and rock sampling is recommended for the eastern flank of the stream in the COOL JAZZ block. At the SWING block, a soil mini-grid, combined with rock sampling and geological mapping, is recommended to cover the anomalous Cu-Pb-Zn values from silt sampling along the west branch of the stream. At the GRANDMA block, a soil geochemical mini-grid is recommended for the apex area of the 2020 traverse.

A total of seven field days are recommended to complete the program. This program is recommended to be heli-supported, and conducted by a four-person crew comprised of two geologists and two geochemical technicians. Total expenditures, including filing fees, are estimated at about \$147,000.

## 2 INTRODUCTION

This report describes the geological mapping, rock, soil and stream sediment geochemical sampling program conducted in September of 2020 for Kootenay Silver Inc. on each of three claim blocks comprising the Upper Rackla property. The three properties, the BOP/COOL JAZZ, SWING and GRANDMA properties, are located from 73 to 80 km NE of Keno City, Yukon.

The project was designed to conduct soil geochemical traverses, combined with rock sampling, on two targets on the BOP/ COOL JAZZ block, and follow up on 2019 prospecting and sampling in the Davis Creek basin. It also was designed to identify, or vector in on, anomalous lead (Pb), zinc (Zn) and sporadic copper (Cu) values from historical regional silt sampling programs on the SWING block. Exploration on the GRANDMA block also focused on a “Minfile” occurrence of possible Mississippi Valley-type (MVT) Pb-Zn-Ag mineralization.

This report also satisfies requirements for a final report for the Target Evaluation module of the Hard Rock type under the Yukon Mineral Exploration Program (YMEP #20-031). Applicable expenditures for YMEP funding total \$56,052.71.

### 2.1 TERMS, DEFINITIONS AND UNITS

All geographic locations in this report are relative to North American Datum 1983. Non-geodetic coordinates are expressed in Universal Transverse Mercator Zone 08N metric coordinates. All measurements are expressed in the metric system unless they are measurements quoted from historic reports expressed in other units of measure. Other abbreviations are defined at point of first use.

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). 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 “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”. Other abbreviations are described at point of first use.



Elemental abbreviations used in this report are:

Au: Gold	Mn: Manganese
Ag: Silver	Mo: Molybdenum
Al: Aluminum	Na: Sodium
As: Arsenic	Ni: Nickel
B: Boron	P: Phosphorous
Ba: Barium	Pb: Lead
Bi: Bismuth	S: Sulphur
Ca: Calcium	Sb: Antimony
Cd: Cadmium	Sc: Scandium
Co: Cobalt	Sr: Strontium
Cr: Chromium	Th: Thorium
Cu: Copper	Ti: Titanium
Fe: Iron	Tl: Thallium
Ga: Gallium	U: Uranium
Hg: Mercury	V: Vanadium
K: Potassium	W: Tungsten
La: Lanthanum	Zn: Zinc

### 3 PROPERTY DESCRIPTION AND LOCATION

#### 3.1 LOCATION AND DESCRIPTION

The Upper Rackla property is comprised of three separate claim blocks (Figure 1). These are: the BOP 1-204 and COOL JAZZ 1-36 block, centered at 64° 21' 33" N 134° 0' 55" W (UTM NAD 83 coordinates 564250E, 7137440N, Zone 8); the SWING 1-56 claims centered at 64° 22' 16" N, 134° 16' 32" W (UTM coordinates 534960E, 7135490N, Zone 8), and the GRANDMA 1-12 claims, centered at 64° 17' 54": N, 134° 1' 29 (UTM coordinates 547190E, 6130630N, Zone 8). The BOP/COOL JAZZ block straddles the boundary of NTS sheets 106C/05 and 106D/08, and the SWING and COOL JAZZ blocks are located within NTS sheet 106D08. The BOP block is geographically centered 125 km NE of Mayo, Yukon, and about 415 km ENE of Whitehorse, Yukon. The BOP block comprises 204 full Yukon quartz mining claims covering 4,261.6 ha (10,526 acres). The SWING property covers 56 full Yukon quartz mining claims covering 1,169.3 ha (2,888.2 acres), and the GRANDMA property comprises 12 claims covering 250.7 ha (619.2 acres).

#### 3.2 MINERAL TENURE AND UNDERLYING AGREEMENTS

All claims 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 28, 2020, although additional claim-years have been added onto all SWING, COOL JAZZ BOP 133-204 and some BOP 1-132 claims. There are no known environmental liabilities associated with the property. A Class 1 Notification application was submitted and in place prior to the program on all three blocks comprising the Upper Rackla property.

Table 1: Claim Status, BOP/ COOL JAZZ block, as of Jan 11, 2021)

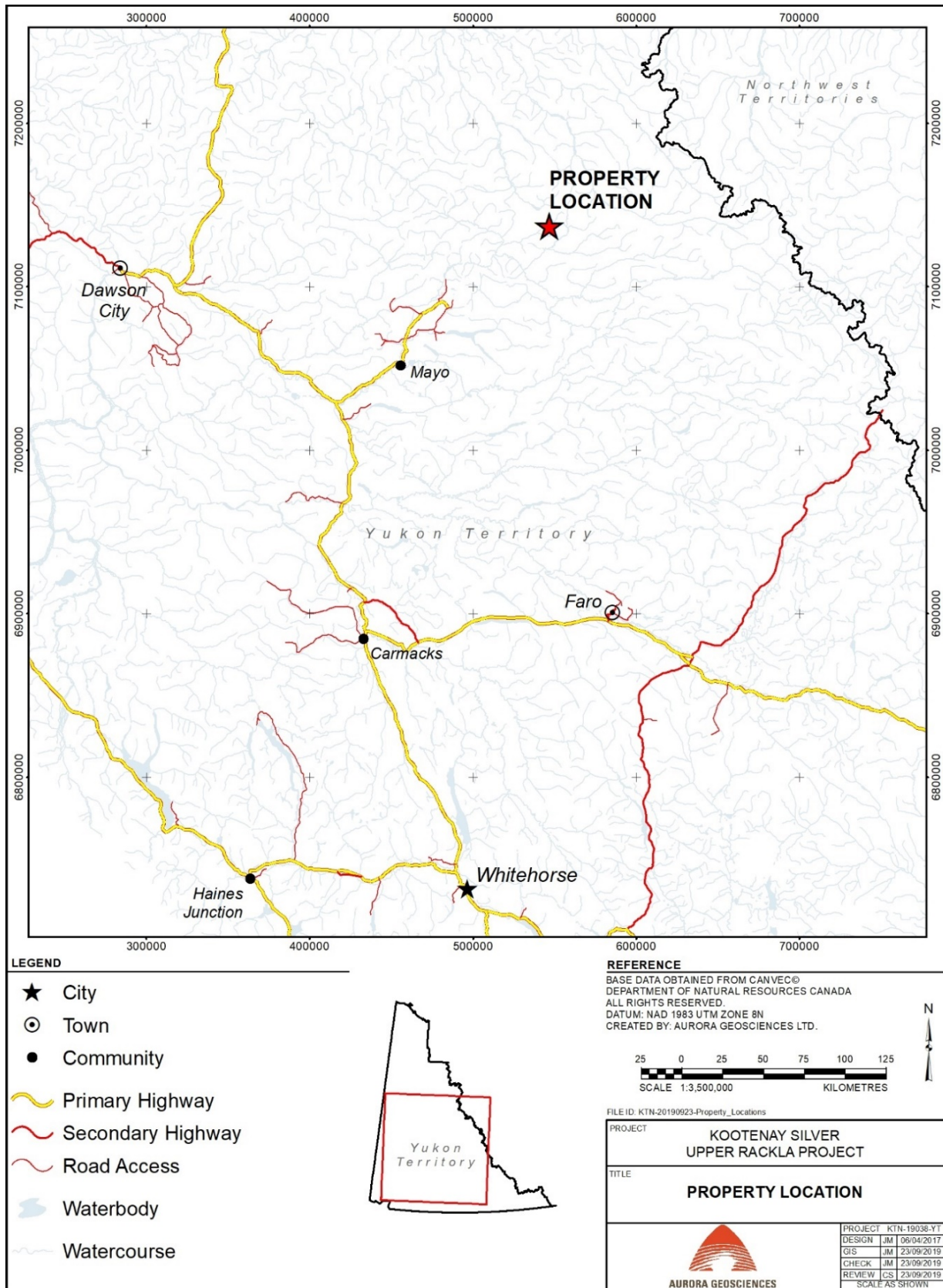
Grant Number	Claim Name	Renewal Years	New Expiry Date
YD55201 - YD55215	BOP 1-15	0	2023-04-26
YD55216	BOP 16	1	2024-04-26
YD55217 - YD55222	BOP 17-22	0	2023-04-26
YD55223 - YD55232	BOP 23 - BOP 32	1	2025-04-26
YD55233	BOP 33	0	2024-04-26
YD55234	BOP 34	1	2025-04-26
YD55235 - YD55240	BOP 35-40	1	2024-04-26
YD55241 - YD55244	BOP 41-44	0	2023-04-26
YD55245 - YD55257	BOP 45-57	1	2025-04-26
YD55258 - YD55260	BOP 58-60	0	2024-04-26
YD55469 - YD55470	BOP 61-62	1	2024-04-26
YD55471 - YD55474	BOP 63-66	0	2023-04-26
YD55475 - YD55491	BOP 67-83	1	2024-04-26
YD55492 - YD55496	BOP 84-88	0	2023-04-26
YD55497 - YD55512	BOP 89 -104	1	2024-04-26
YD55513 - YD55518	BOP 105-110	0	2023-04-26
YD55519 - YD55520	BOP 111-112	1	2024-04-26
YD31957 - YD31970	BOP 113-126	1	2024-04-26
YD31971 - YD31976	BOP 127-132	0	2023-04-26
YE96679 - YE96750	BOP 133 - BOP 204	2	2023-09-23
YE96819 - YE96826	COOL JAZZ 1-8	2	2023-09-23
YE96827 - YE96832	COOL JAZZ 9-14	3	2024-09-23
YE96833 - YE96844	COOL JAZZ 15 - 26	2	2023-09-23
YE96845 - YE96850	COOL JAZZ 27 - 32	3	2024-09-23
YE96851 - YE96854	COOL JAZZ 33 - 36	2	2023-09-23

Table 2: Claim Status, SWING block, as of Jan 11, 2021

Grant Number(s)	Claim Name(s)	Renewal Years	New Expiry Date
YE96751 - YE96762	SWING 1-12	3	2024-09-23
YE96763 - YE96764	SWING 13-14	2	2023-09-23
YE96765 - YE96778	SWING 15-28	3	2024-09-23
YE96779	SWING 29	2	2023-09-23
YE96780	SWING 30	3	2024-09-23
YE96781	SWING 31	2	2023-09-23
YE96782	SWING 32	3	2024-09-23
YE96783	SWING 33	2	2023-09-23
YE96784	SWING 34	3	2024-09-23
YE96785	SWING 35	2	2023-09-23
YE96786	SWING 36	3	2024-09-23
YE96787	SWING 37	2	2023-09-23
YE96788	SWING 38	3	2024-09-23
YE96789	SWING 39	2	2023-09-23
YE96790	SWING 40	3	2024-09-23
YE96791	SWING 41	2	2023-09-23
YE96792	SWING 42	3	2024-09-23
YE96793 - YE96806	SWING 43-56	2	2023-09-23

Table 3: Claim Status, GRANDMA block, as of Jan 11, 2021

Grant Number(s)	Claim Name(s)	Renewal Years	New Expiry Date
YE96807 - YE96818	GRANDMA 1-12	5	2025-09-23



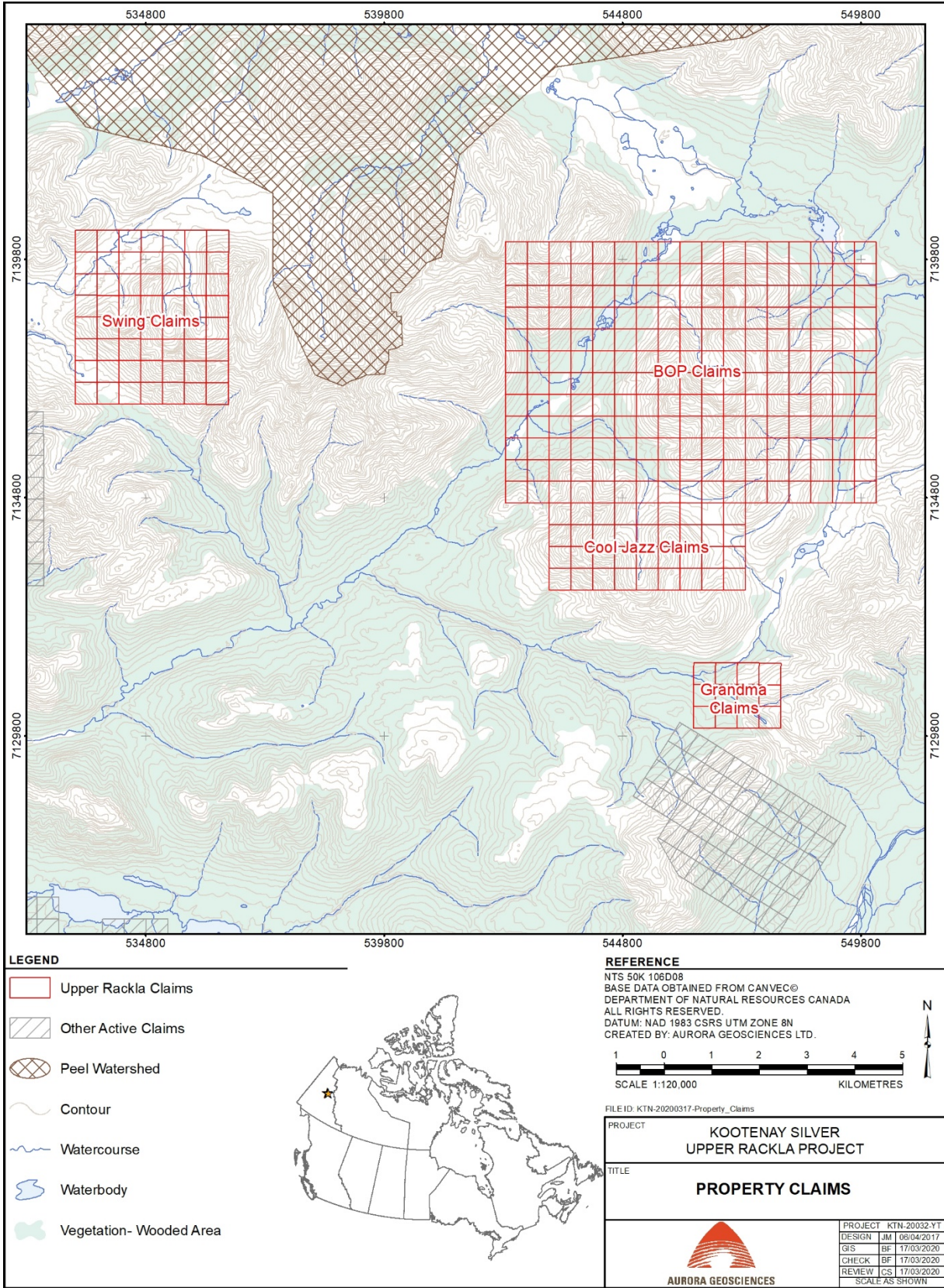


Figure 2: Regional claim map, BOP/ COOL JAZZ, SWING and GRANDMA claim blocks

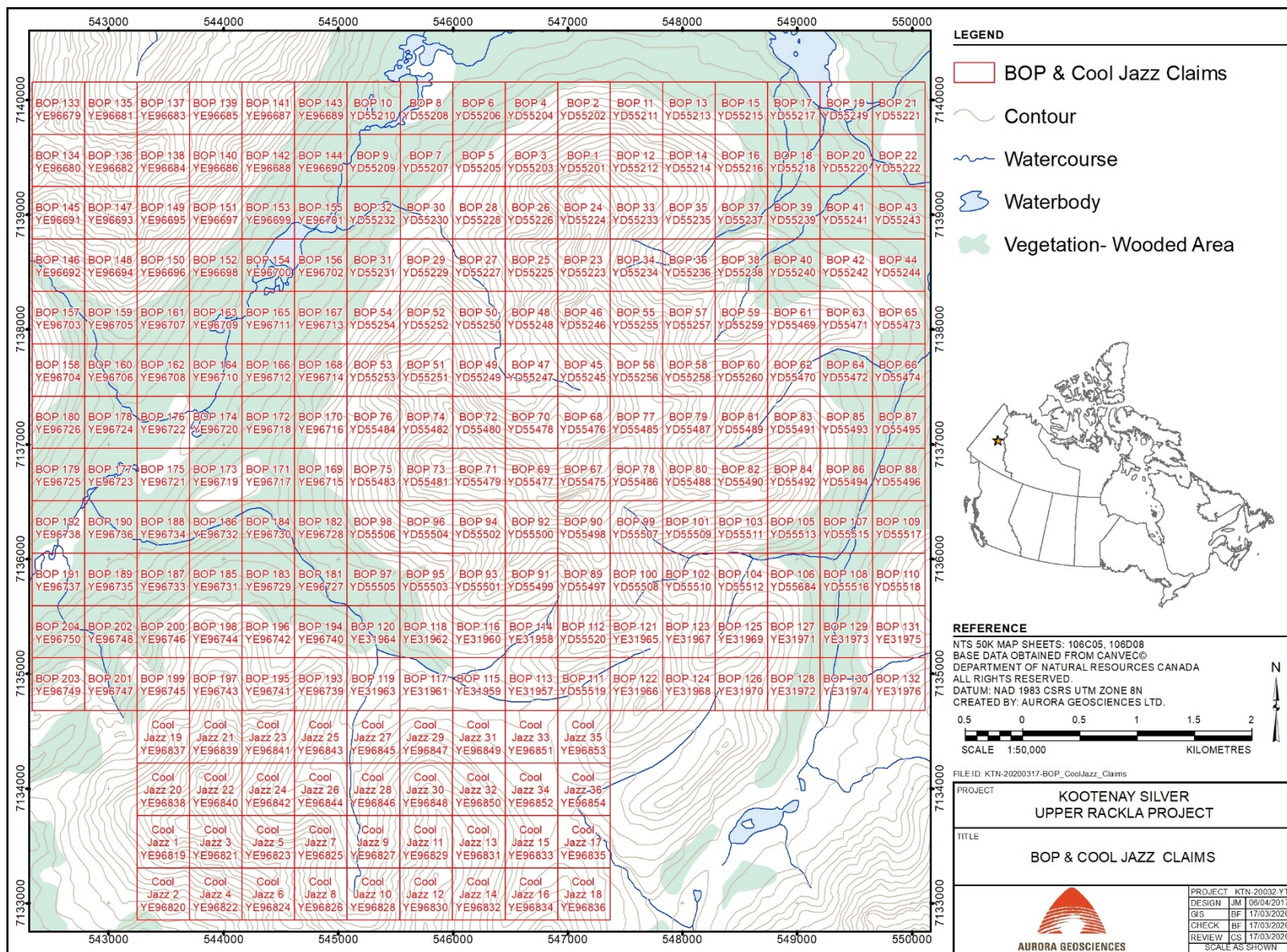


Figure 3: Claim block, BOP/ COOL JAZZ block

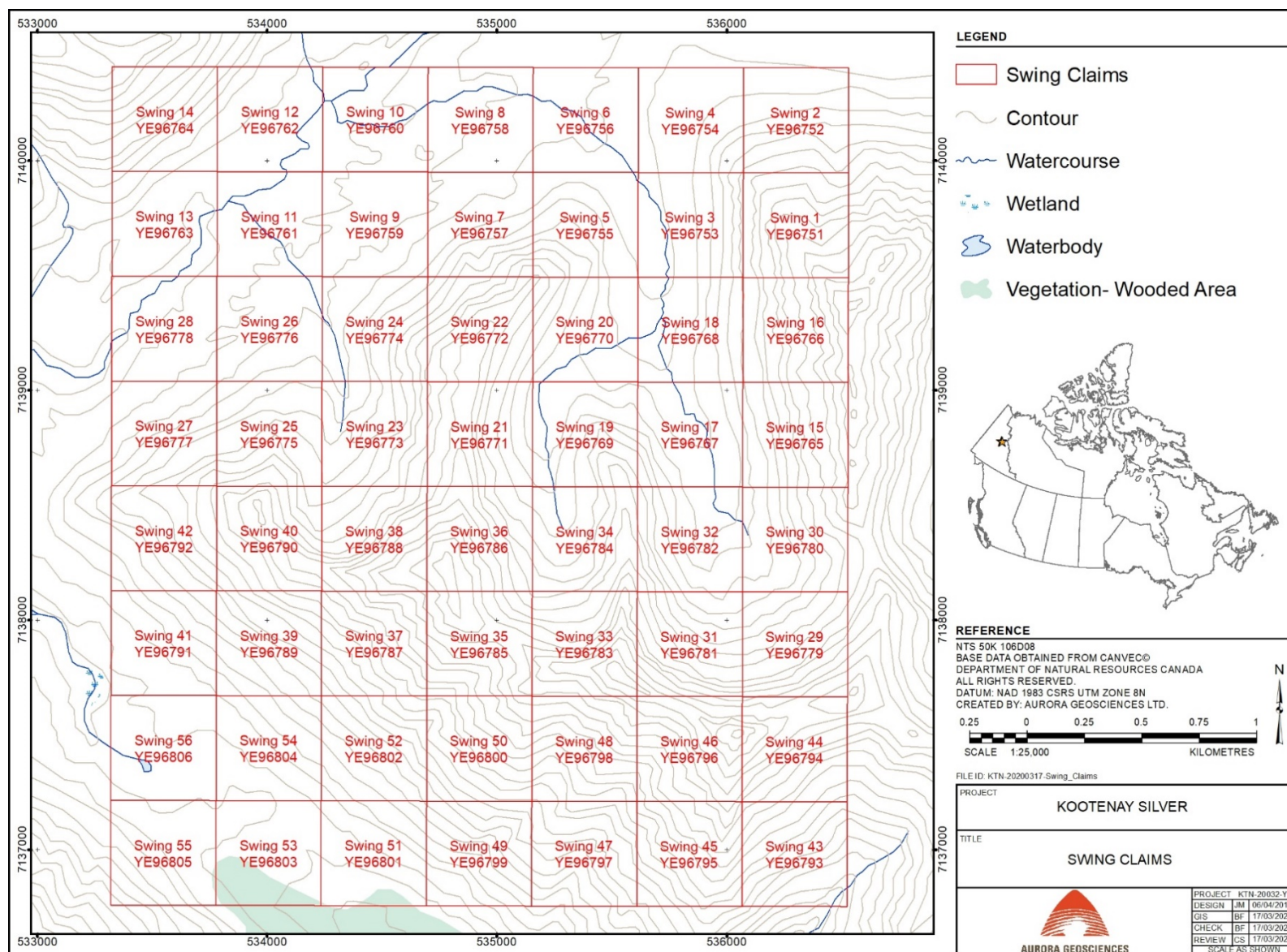


Figure 4: Claim map, SWING block

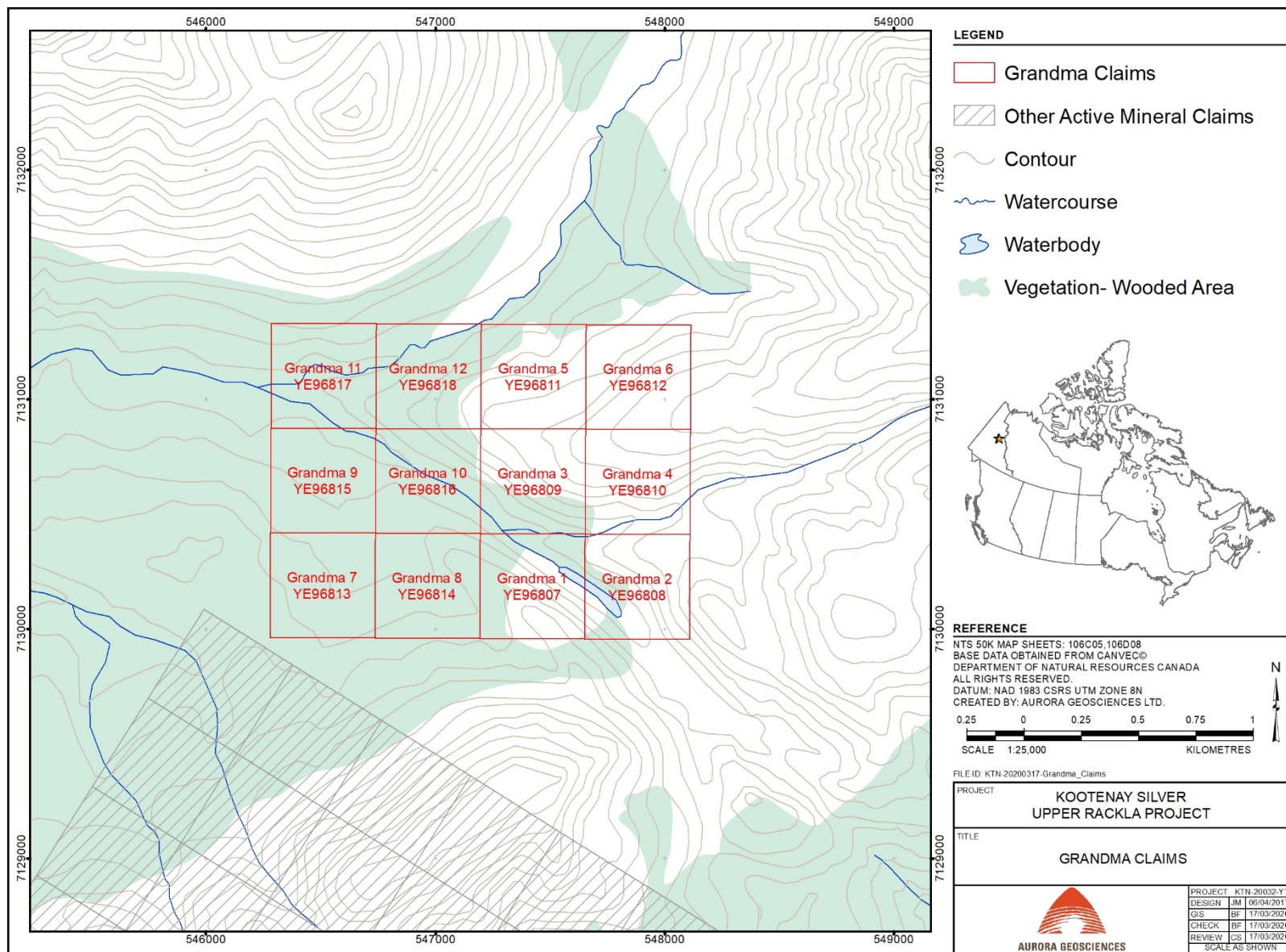


Figure 5: Claim map, GRANDMA block



## 4 ACCESSIBILITY, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

### 4.1 TOPOGRAPHY AND VEGETATION

The BOP 1-204/ COOL JAZZ block covers a mountainous area bounded on all sides by subalpine stream valleys, including the Rackla River along the northern boundary. The block is characterized by rugged 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 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.

The SWING block also covers very rugged terrain, with more moderate terrain along larger drainages. Elevations range from 1,160 m (3,800 feet) to 1,870m (6,135 feet) along ridgelines. Except for extreme south-central areas, the property is covered by tundra vegetation or is essentially unvegetated.

The GRANDMA block covers more moderate terrain with elevations ranging from 1,090 m (3,575 feet) along the main stream valley to 1,375 m (4,510 feet). Western areas and regions along the two prominent streams are covered by subalpine forests; elsewhere the property is covered by tundra vegetation or is essentially unvegetated.

### 4.2 ACCESS AND INFRASTRUCTURE

The property is accessible 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.

There are no previous workings or cultural infrastructure within property boundaries. There is sufficient water from several small streams to service diamond drilling operations. The village of Mayo (2019 population 496 including Keno and Stewart Crossing, Yukon Bureau of Statistics) provides adequate grocery and some hardware and fuel services, as well as accommodations. The village also hosts a serviced airport and government services, including the Mayo mining recording office for the Mayo district.

## 5 HISTORY

No previous private-sector exploration has been documented prior to 2019 on the BOP /COOL JAZZ and the SWING blocks, although numerous polymetallic occurrences in the region have undergone exploration. The area has undergone regional geological mapping by the Yukon Geological Survey, and 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 north-central BOP property area (Section 7).

In 1977, Prism Resources Ltd (Prism) staked the ZAP 1-16 claims in the present GRANDMA block area. Encouraging results led to staking of additional claims, comprising a 292-unit claim block by the early

summer of 1978. Prism followed up with geological mapping and rock sampling, excavation of nine trenches, of which two are within the GRANDMA 1-12 block, and a diamond drilling program of 573.2 m in 5 holes, all on the ZAP claim block (Cavey, 1978). Sampling of Trench G-1 returned values of 73.88% Pb, 1.25% Zn and 44.65 opt (1,395 g/t) Ag across 0.15m. A nearby float sample returned a value of 46.17% Pb, 0.35% Zn and 38.97 opt (1,218 g/t) Ag. Chip sampling of trench G2 returned values of 37.59% Pb, 15.73% Zn and 16.71 opt (522 g/t) Ag; and 0.28% Pb, 0.50% Zn and 0.18 opt (5.6 g/t) Au. No lengths of chip samples were provided. A channel sample of undisclosed length returned 5.78% Pb, 2.50% Zn and 2.12 opt (66.3 g/t) Ag. Although Cavey et al recommended further trenching, no further work was reported by Prism, and no further assessment reports were filed on this target.

The BOP 1-132 claims were staked in April 2019, and underwent a three-day reconnaissance-style exploration program in August 2019. The program led to discovery of the Freddy showing, returning values to 20.0% Pb, 1.51% Zn and 405 g/t Ag; and 577 ppm Cu, 1,941 ppm (0.194%) Pb, >20.0% Zn and 21.9 g/t Ag. The Miles showing to the northwest returned values to 6.685% Cu, 0.2508% Pb, 0.1011% Zn and 89.0 g/t Ag. Stream sediment geochemical sampling along Davis Creek (unofficial name) in the catchment basin of the Freddy showing returned anomalous Cu, Pb and Zn values throughout its extent.

In 2011, the Newmont Corporation conducted regional stream sediment sampling at roughly the same spacing as earlier RGS sampling. Several sample locations are within the claim blocks comprising Kootenay's Upper Rackla property.

## 6 GEOLOGY

### 6.1 REGIONAL GEOLOGY

The Upper Rackla property is located along the southern margin of the Proterozoic Ancient North American Continent. This margin 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 Mesoproterozoic Wernecke Supergroup, a 13-km thick assemblage deposited from about 1.84 Ga to about 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 (approx. 1.32 Ga) Hart River Formation 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 (Schulze, 2020).

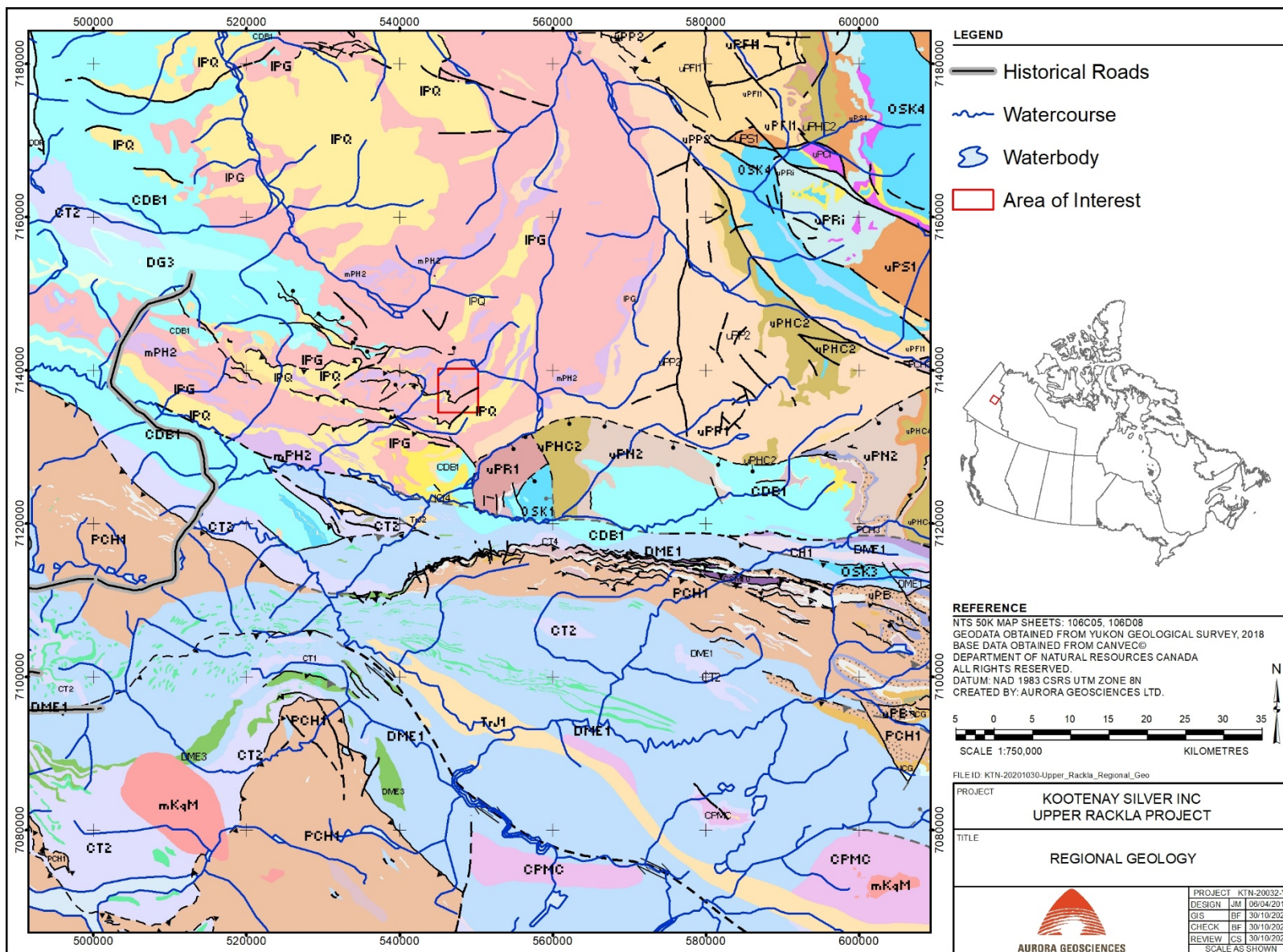


Figure 6: Regional Geology, Upper Rackla area

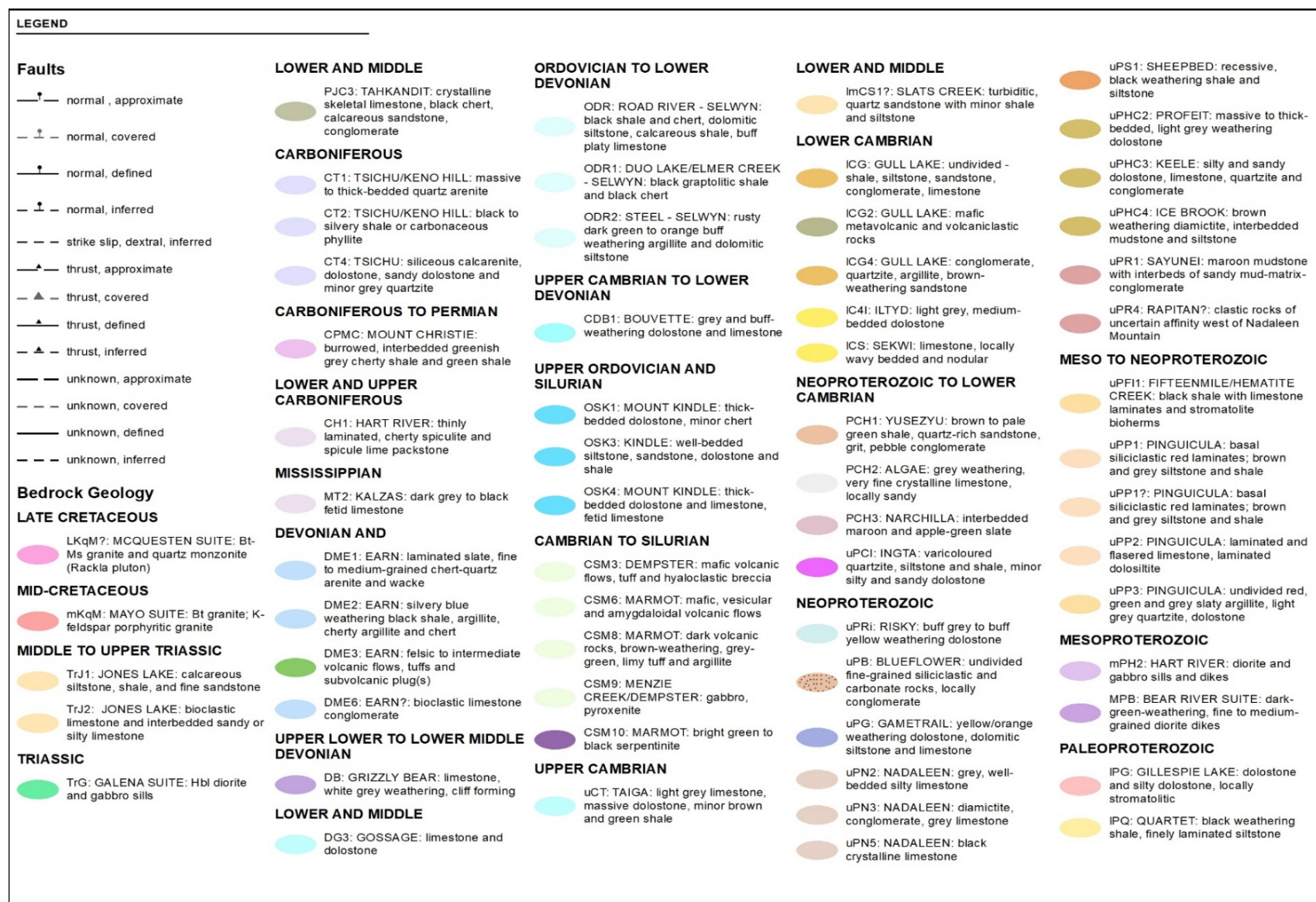


Figure 7: Legend, Regional Geology, Upper Rackla area

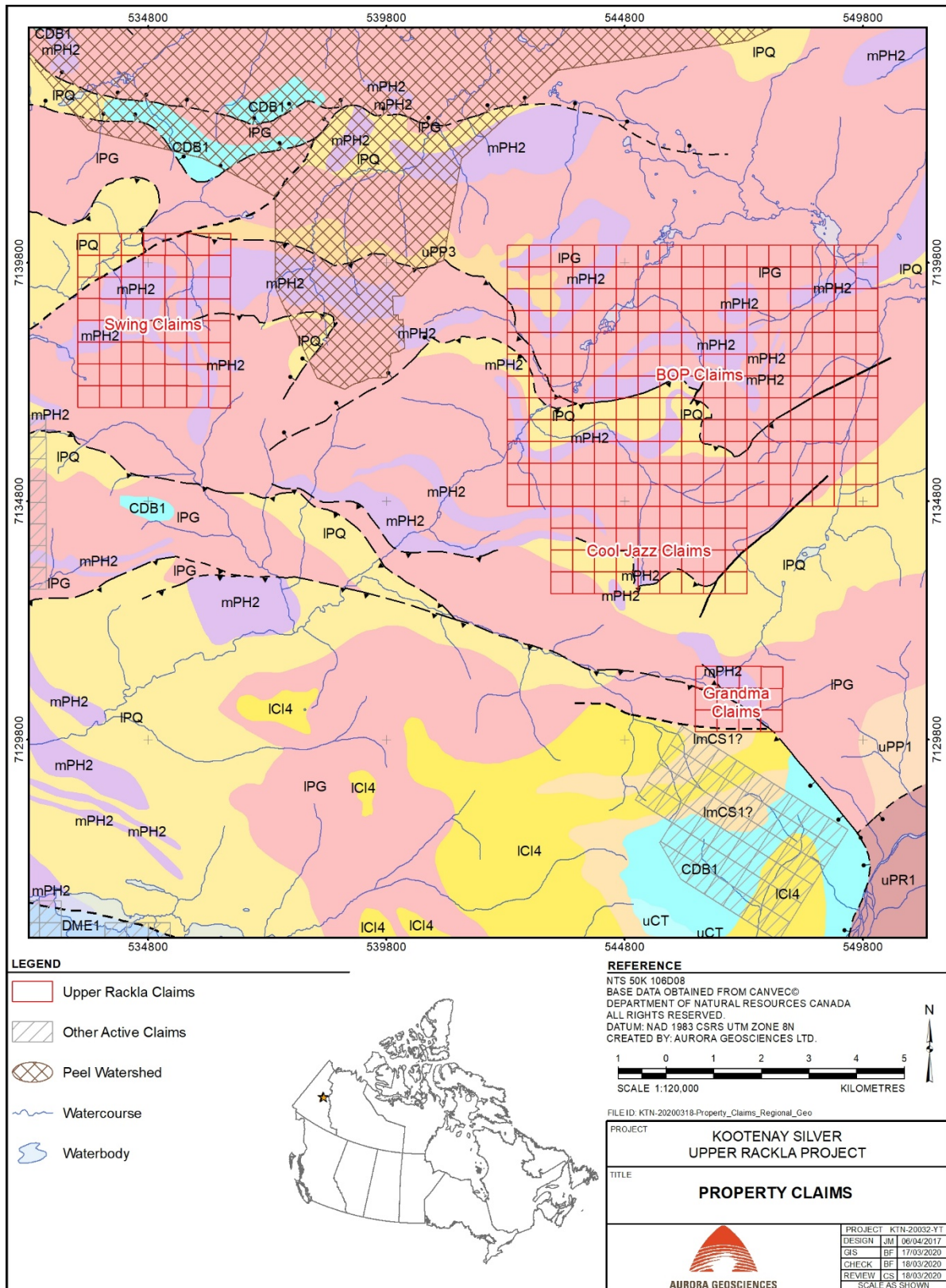


Figure 8: Upper Rackla local area geology












LEGEND	
<b>Faults</b>	
<b>TYPE, SUBTYPE, CONFIDENCE</b>	
—†—	normal, , approximate
—†	normal, , defined
- † -	normal, , inferred
—^—	thrust, , approximate
—^	thrust, , defined
- ^ -	thrust, , inferred
— —	unknown, , approximate
—	unknown, , defined
- - -	unknown, , inferred
<b>Yukon Bedrock Geology</b>	
<b>DEVONIAN AND MISSISSIPPIAN</b>	
	DME1: EARN: laminated slate, fine to medium-grained chert-quartz arenite and wacke
<b>UPPER CAMBRIAN TO LOWER DEVONIAN</b>	
	CDB1: BOUVETTE: grey and buff-weathering dolostone and limestone
<b>UPPER CAMBRIAN</b>	
	uCT: TAIGA: light grey limestone, massive dolostone, minor brown and green shale
<b>LOWER AND MIDDLE CAMBRIAN</b>	
	ImCS1?: SLATS CREEK: turbiditic, quartz sandstone with minor shale and siltstone
<b>LOWER CAMBRIAN</b>	
	IC4I: ILTYD: light grey, medium-bedded dolostone
<b>NEOPROTEROZOIC</b>	
	uPR1: SAYUNEI: maroon mudstone with interbeds of sandy mud-matrix-conglomerate
<b>MESO TO NEOPROTEROZOIC</b>	
	uPP1: PINGUICULA: basal siliciclastic red laminates; brown and grey siltstone and shale
	uPP3: PINGUICULA: undivided red, green and grey slaty argillite, light grey quartzite, dolostone
<b>MESOPROTEROZOIC</b>	
	mPH2: HART RIVER: diorite and gabbro sills and dikes
<b>PALEOPROTEROZOIC</b>	
	IPG: GILLESPIE LAKE: dolostone and silty dolostone, locally stromatolitic
	IPQ: QUARTET: black weathering shale, finely laminated siltstone

Figure 9: Legend, Upper Rackla area local geology

## 6.2 PROPERTY GEOLOGY

### 6.2.1 Bop Claim Block

Mapping in 2019, combined with previous 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 8, Appendix 3). 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 volcanic rocks in the northwestern area near Davis Creek. 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 in southern and eastern areas are more consistently east striking and south dipping, to ESE-WNW striking and SW dipping. 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.

### 6.2.2 Swing Claim Block

The SWING claim block did not undergo surface exploration in 2019. Regional mapping by the YGS indicates this is underlain by an assemblage of Gillespie Group fine clastic sediments intercalated with dolomitic sandstone and dolostone, intruded by Hart River Group gabbroic to dioritic intrusions. A package of Quartet Group fine clastic sediments is thrust fault-bounded along a southwest-trending hinge line.

### 6.2.3 Grandma Claim Block

The GRANDMA block also did not undergo surface exploration in 2019. Regional mapping by the YGS indicates this block covers a district-scale south-dipping thrust fault resulting in significant displacement of local stratigraphy. Within the GRANDMA block, two separate units of Gillespie Group clastic and calcareous metasediments have been juxtaposed along this fault. The assemblage along the northern footwall side includes a smaller unit of Hart River Group diorite to gabbro. The fault is marked by the linear southern drainage transecting the claims. Trenching by Prism in 1978, exposing narrow massive lead-zinc sulphide veining, was completed along the south flank of the fault.

## 7 MINERALIZATION

The 2019 program led to discovery of two mineral occurrences within the BOP 1-132 claim block. These are: the Freddy showing, comprising replacement-style lead-zinc-silver mineralization within calcareous clastic sediments; and the Miles showing, comprising vein and vein-breccia hosted copper - lead -silver mineralization. Grab and composite rock sampling of the Freddy showing returned values up to >20.0% Pb, 1.51% Zn and 405 g/t Ag. Composite grab sampling of the Miles showing returned values up to 6.685%



Cu, 0.2508% Pb and 89.0 g/t Ag. Both are located within the catchment area of Davis Creek, in the northwestern area of the BOP 1-132 block.

Prospecting in 2020 within the Davis Creek watershed led to identification of a vein-style Cu-Pb-Ag prospect roughly 400 m northwest of the Freddy showing. The occurrence comprises shear-hosted sheeted quartz-carbonate hosted vein-style chalcopyrite - sphalerite - malachite mineralization (Figure 10). The occurrence is hosted by fine grained thin-bedded calcareous clastic sediments of the Quartet Group. A similar sample was taken about 15 m to the east, indicating the likely minimum extent of the showing.



**Figure 10: Banded chalcopyrite - malachite mineralization, occurrence NW of Freddy showing.**

On the SWING block, an occurrence of weakly pyritic mineralization hosted by fine grained, silicified sediments was discovered in the northeastern area in 2020. Rock samples show fine foliation as well as fairly pervasive fine fracturing, marked by strong limonitic alteration (Figure 11). This is considered as a “new” discovery.



**Figure 11: Mineralized sedimentary rocks (Sample Y646134), northeast SWING block**

The Grandma 1-12 claims were staked to cover the historic GRANDMA showing, part of a prospect of “Mississippi Valley-type” (MVT) mineralization. In 2020, several widely spaced samples of altered limonitic basalt were obtained, although no specific past workings were located. Figure 12 shows an example of weakly altered limonitic basalt.



**Figure 12: Limonitic basalt (Sample W612040), GRANDMA block**

## 8 DEPOSIT SETTING

The deposit model for this project is vein and fracture filling argentiferous galena-sphalerite-chalcopyrite vein mineralization, commonly called polymetallic veining. This occurs within a district-scale Pb-Zn-Cu-Ag metallogenic province, extending within and directly south of the southern Peel watershed. This metallogenic province hosts more than 100 base metal occurrences, largely polymetallic vein and Mississippi Valley-type (MVT) deposits. These include the Goz Creek Zn-Ag deposit held by Alianza Minerals Ltd., and the North Rackla polymetallic targets explored by Cantex Mine Development Corp.

At the Upper Rackla targets, polymetallic targets include replacement-style banded sulphide mineralization within calcareous units of the Quartet and Gillespie groups. Very high variability of Cu: Pb: Zn ratios within showings, and the striking difference in mineralogy between the Miles and Freddy showings (Section 5), and the new banded chalcopyrite showing northwest of the Freddy showing, indicate a long lived, multi-pulsed system resulting in spatial and temporal zonation. No obvious relationship between occurrences and intrusions is evident; therefore, the genesis is unknown. Mineralization may be orogenic or remobilized from MVT deposits. The significant aerial extent of the metallogenic province indicates strong potential for significant mineralization in an under-explored area, supported by significant polymetallic prospects within Cantex's North Rackla property.

## 9 EXPLORATION PROGRAM

All three blocks underwent geochemical sampling in 2020. At the BOP/ COOL JAZZ block, 28 rock, 1 silt and 80 soil samples were taken. Soil sampling focused on the COOL JAZZ block and the northeast portion of the BOP 1-132 block, where the single silt sample was taken. At the SWING block, 7 rock and 20 silt samples were taken, mainly in the northern part of the block. At the GRANDMA block, 9 rock and 22 soil samples were taken, mainly along the flanks and confluence area of the two main drainages on the property.

The following personnel were employed by Aurora Geosciences Ltd. during the 2020 program:

Anthony Margarit, BSc:	Geologist and Crew Boss
Vincent Vandelft:	Geochemical technician
Stefanie Block:	Geochemical technician
Aron Egilston:	Geochemical technician

Helicopter support was provided by Great Slave Helicopters 2018 Ltd. Total expenditures for the program are calculated at CAD\$73,709.49. Applicable expenditures for YMEP funding total CAD\$56,052.71.

### 9.1 BOP/ COOL JAZZ BLOCK

#### 9.1.1 Rock sampling

Prospecting in the Davis Creek catchment area of the BOP block led to discovery of an occurrence of quartz-carbonate vein-hosted banded chalcopyrite within thin bedded sediments northwest of the Freddy showing (Section 7). Two samples were taken: Sample Y624315 returned a value of 6.36% Cu, 2.14% Zn, 553 ppm Pb and 10.05 g/t Ag; Sample Y624316 returned a value of 0.904% Cu, 1,080 ppm (0.108%) Zn, 923 ppm Pb and 20.40 g/t Ag (Figures 13 through 16, Appendices 3 and 4).

Towards the southwest corner of the COOL JAZZ block, Sample Y624310, taken along a NNE trending ridgeline directly north of a mountain peak, returned a value of 322 ppm Cu, 167 ppm Zn and 3.47 g/t Ag. Sample Y624311 to the NNE returned a value of 202 ppm Cu. Roughly 0.7 km to the ESE, along another ridgeline extending from the peak, Sample Y624304 returned a value of 966 ppm Cu, 985 ppm Pb, 2,050 ppm (0.205%) Zn and 1.055 g/t Ag.

Near the northeast corner of the BOP 1-132 block, Sample Y624301 returned a value of 1,495 ppm (0.1495%) Cu, 306 ppm Pb and 1,530 ppm Zn, at the northeast end of the traverse. Somewhat WSW, along a prominent ridgeline, Sample Y624005 returned 154.5 ppm Cu and 378 ppm Zn.

Three widely spaced samples were taken along a north-south trending ridgeline east of the north-flowing stream in the central COOL JAZZ block. From south to north, these are: Samples W612017, W612023 and W612035. Sample Y612017 returned a value of 73.4 ppm Cu, 520 ppm Pb, 198.5 ppm Zn and 1.07 g/t Ag. Sample Y612023 returned 216.0 ppm Cu and 1.085 g/t Ag with near-background Pb and Zn values. Sample Y612035 returned a value of 137 ppm Cu, 975 ppm Pb, 2,150 ppm Zn and 0.988 g/t Ag.

### **9.1.2 Soil, Silt Sampling**

Soil sampling in 2020 was completed along both flanks of a stream in the northeast portion of the BOP 1-132 block, and along ridgelines flanking a north-flowing stream in the COOL JAZZ block. Soil sampling was done at a 50-metre station spacing where possible, although many sites were omitted due to time constraints or poor site conditions.

Sampling along the northern line in the northeast area, centered on rock sample Y624005, returned the highest combined Cu-Zn-Pb-Ag values, returning values up to 222.0 ppm Cu, 513 ppm Pb, 1,150 ppm Zn and 0.921 g/t Ag (Figures 17 through 20, Appendices 3 and 4). Anomalous values of these elements were returned throughout the sample traverse. Of interest is soil sample Y624162, which returned 146.5 ppm Cu, 494.0 ppm Pb, 991.0 ppm Zn and 1.185 g/t Ag. This was taken almost adjacent to rock sample Y624301 (Section 9.1.1), taken east of the main sampled area.

The single silt sample on the BOP block was taken from a stream downslope of this soil line. This returned elevated values of 113 ppm Cu, 175 ppm Pb, 449 ppm Zn and 0.398 g/t Ag. Soil sampling along the ridge southeast of this stream returned more subdued metal values.

Sampling along the eastern ridgeline of the COOL JAZZ block identified several consecutive sites returning anomalous values up to 222.0 ppm Cu, 346.0 ppm Pb, 212.0 ppm Zn and 3.20 g/t Ag. Rock samples W612017, W612023 and W612035 (Section 9.1.1) were also taken along this ridgeline. Although widely spaced, rock and soil samples returned consistently anomalous values.

Soil sampling along the western COOL JAZZ line returned scattered anomalous values for Cu, Pb, Zn and Ag, mainly along both flanks of the ridges extending from the aforementioned mountain peak. In this area, the highest values for both Pb, (469 ppm) and Zn (575 ppm) were returned from Sample Y624177. Other notable values are 124 ppm Cu from Sample Y624180, and 1.205 g/t Ag from Sample Y624182 (Figures 17 through 20).

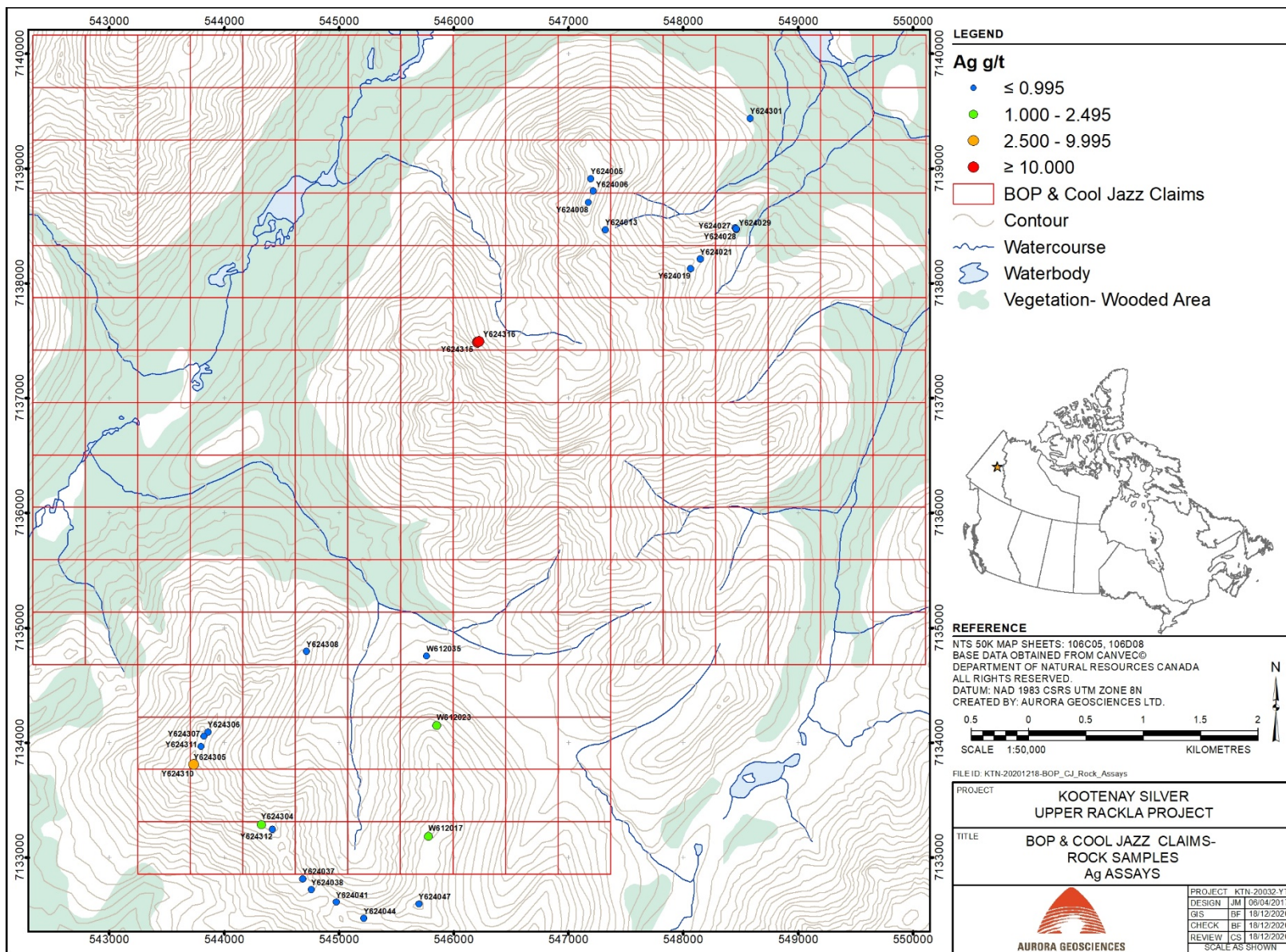


Figure 13: Ag values, rock sampling, BOP/ COOL JAZZ Block

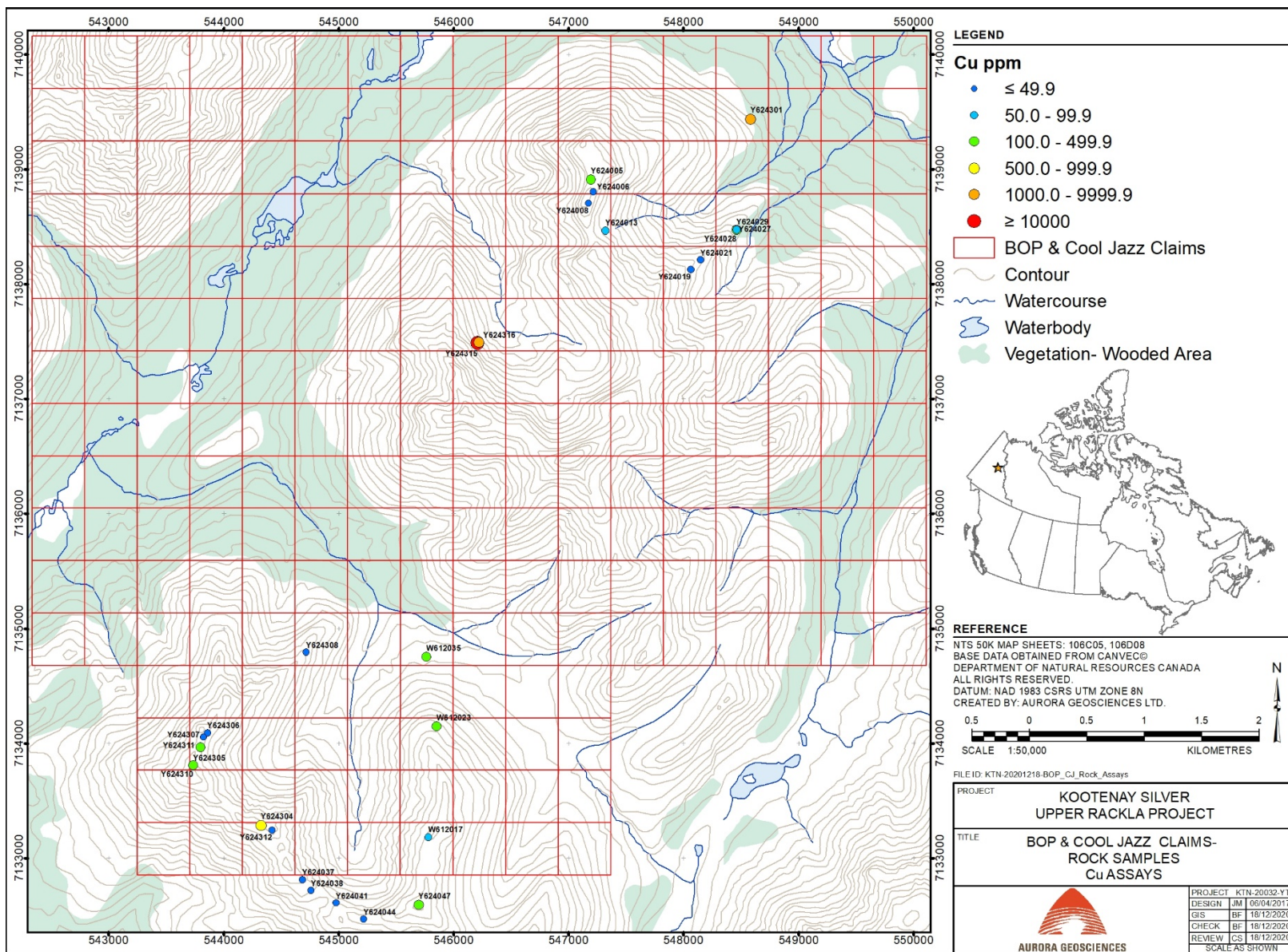


Figure 14: Cu values, rock sampling, BOP/ COOL JAZZ block

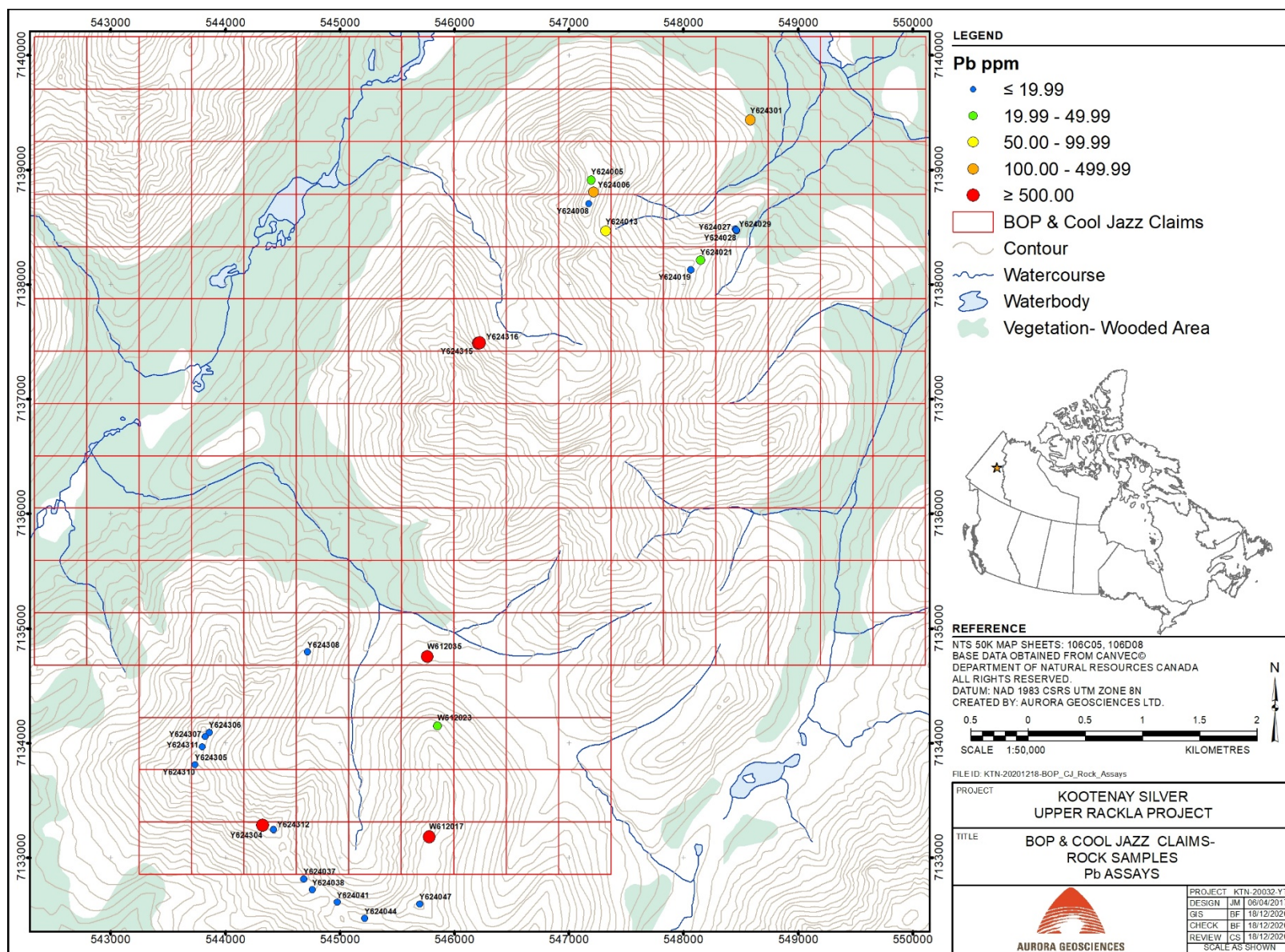


Figure 15: Pb values, rock sampling, BOP/ COOL JAZZ block

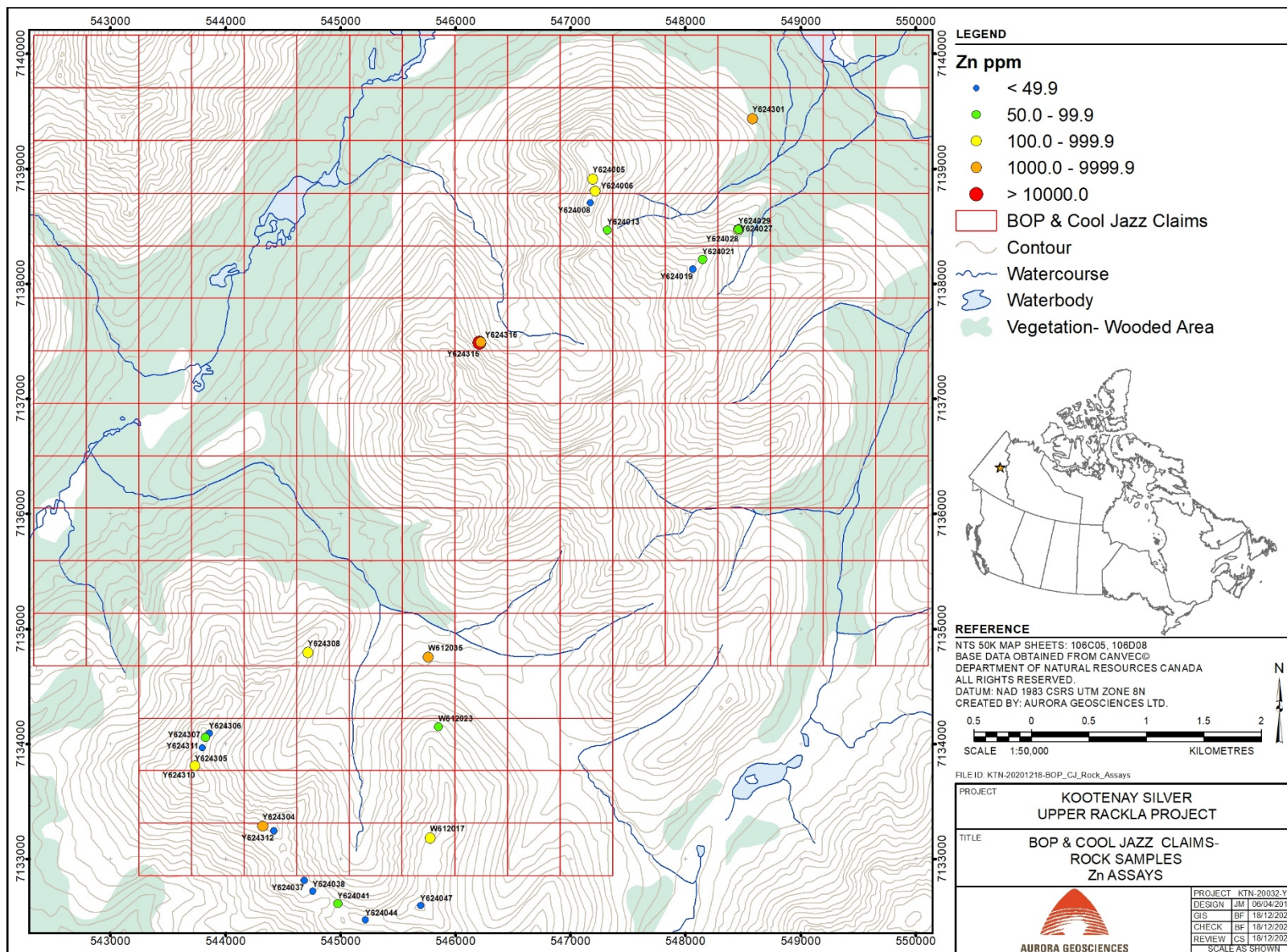


Figure 16: Zn values, rock sampling, BOP/ COOL JAZZ block



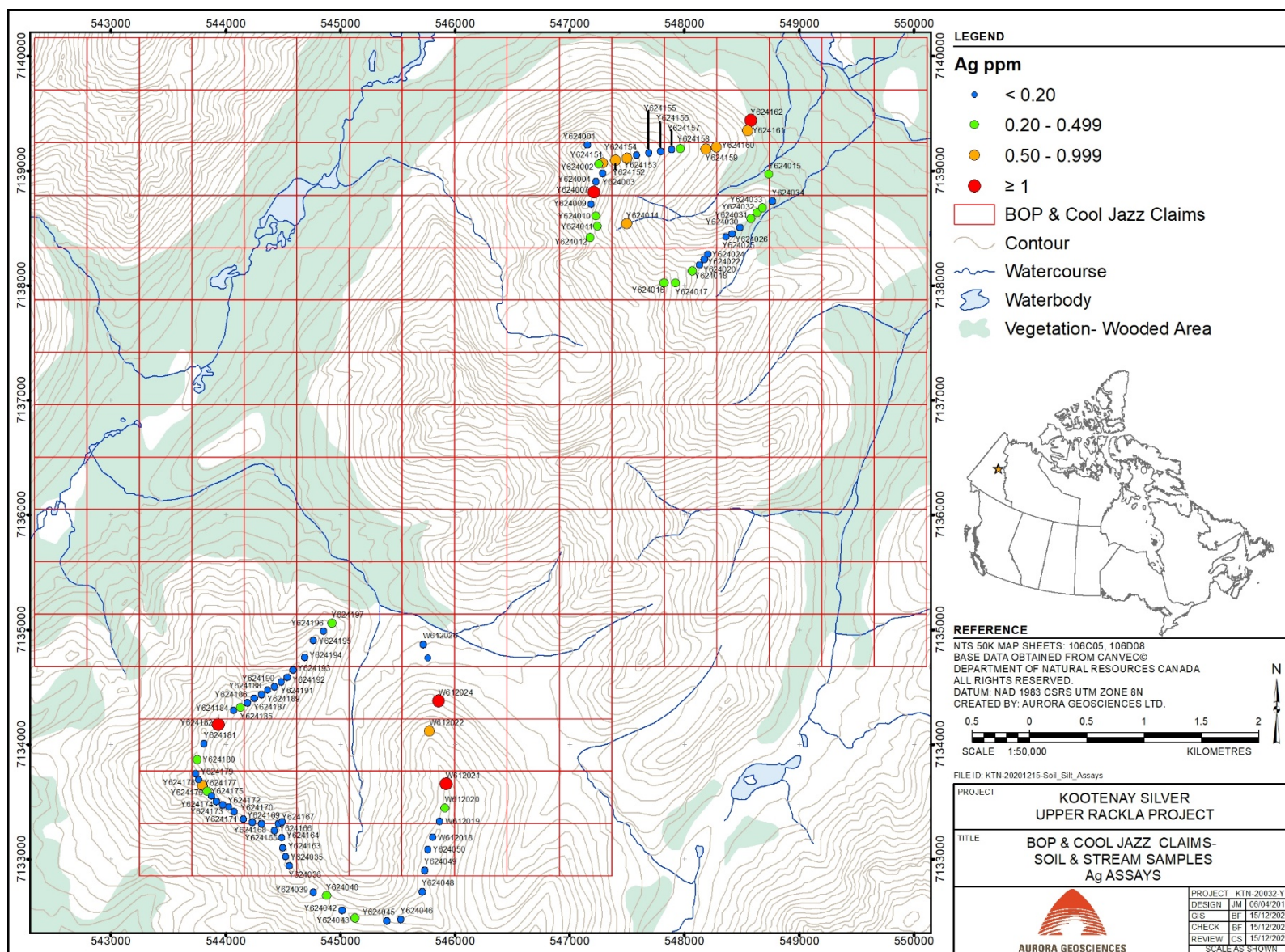


Figure 17: Ag values, soil sampling, BOP/ COOL JAZZ block

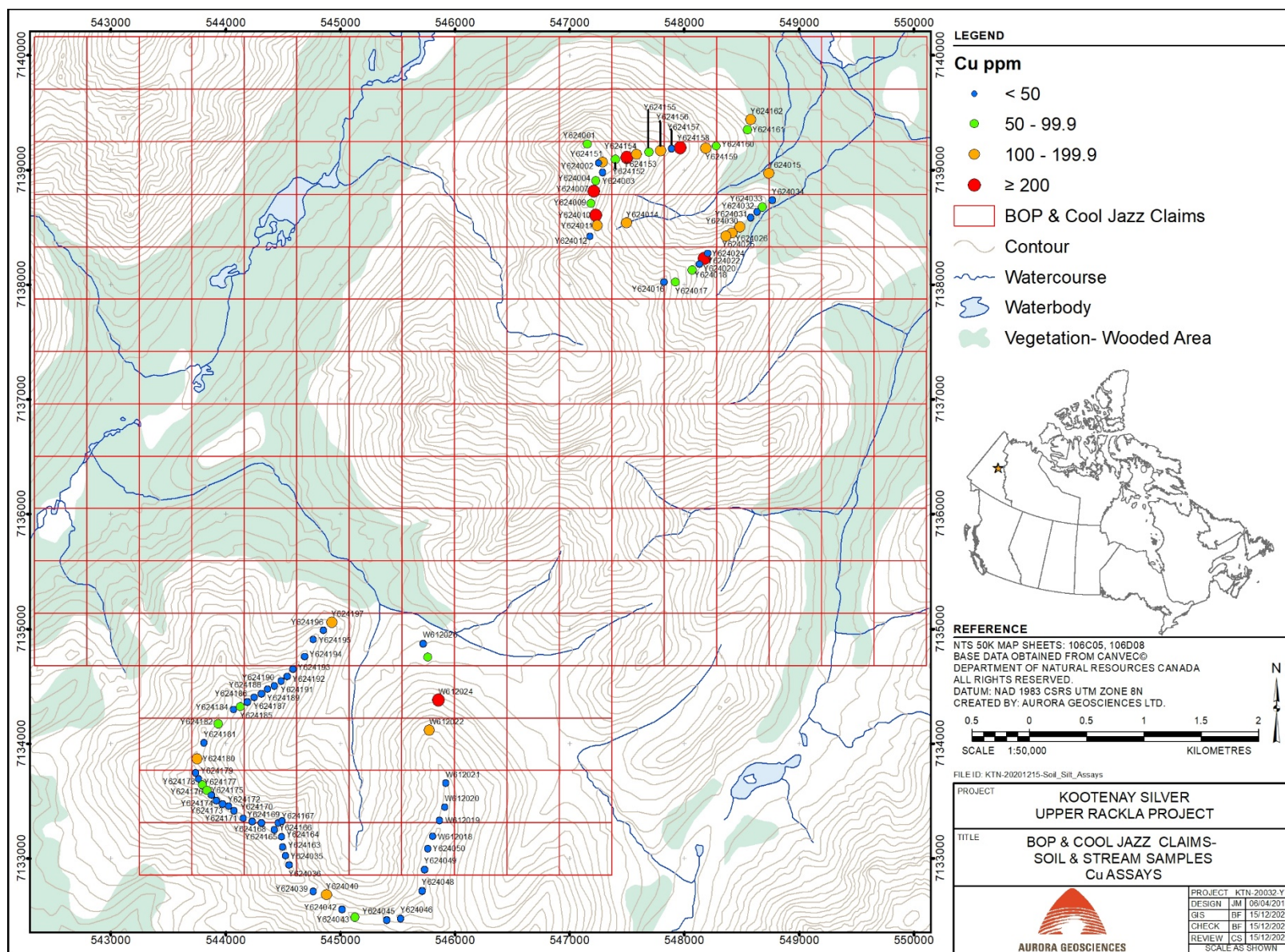


Figure 18: Cu values, soil sampling, BOP/ COOL JAZZ block

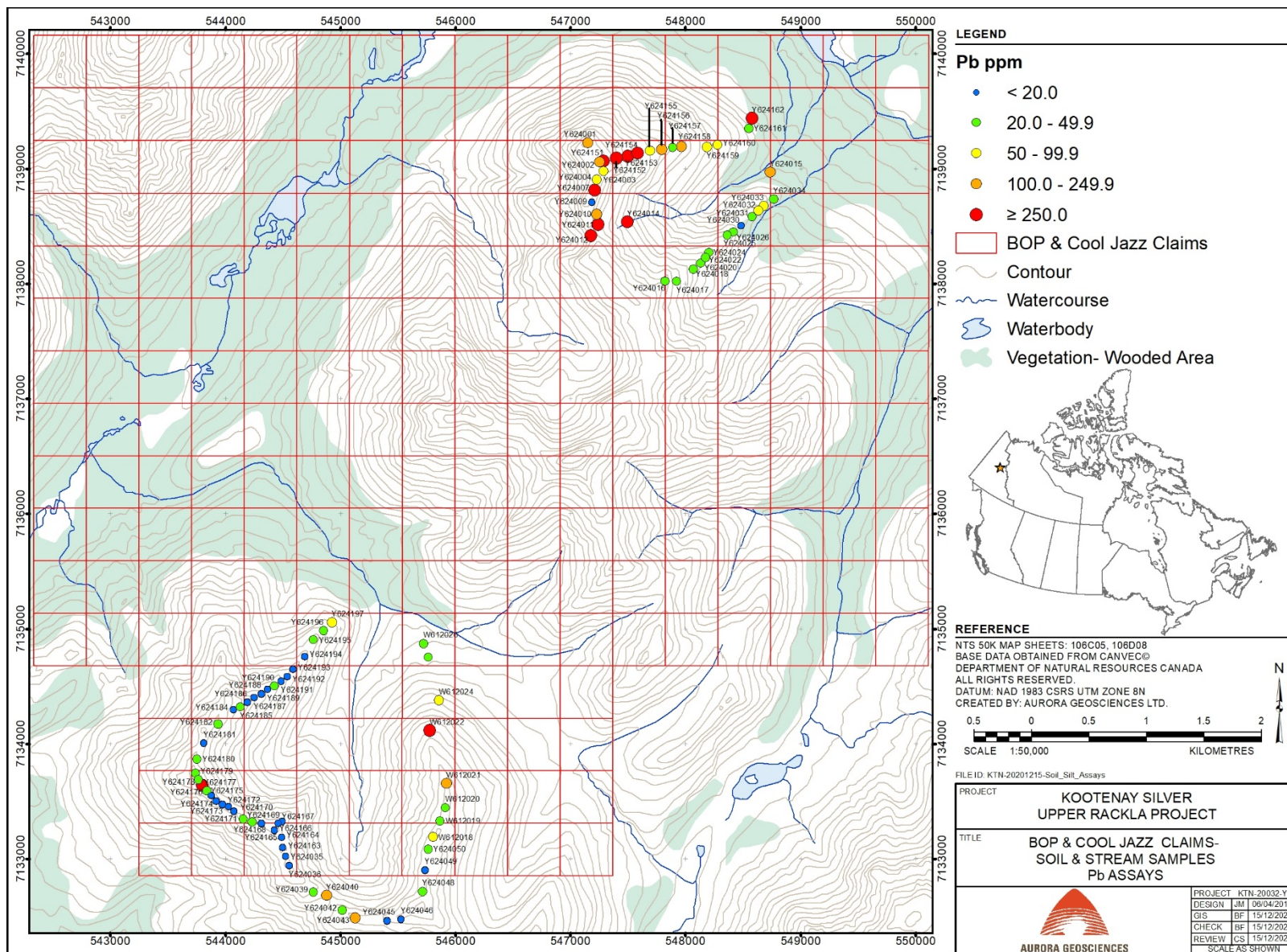


Figure 19: Pb values, soil/ silt sampling, BOP/ COOL JAZZ block

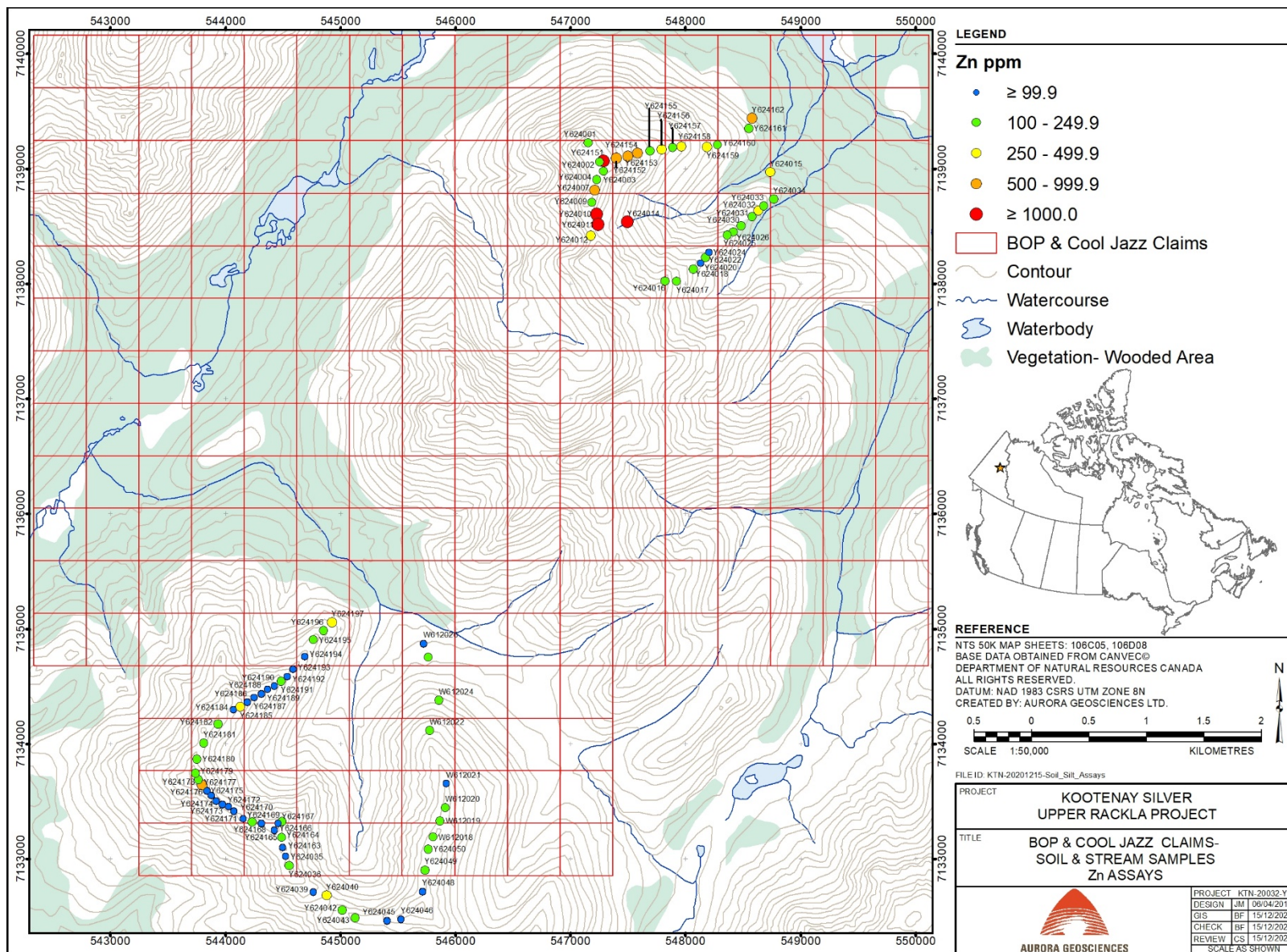


Figure 20: Zn values, soil sampling, BOP/ COOL JAZZ block

## **9.2 SWING BLOCK**

### **9.2.1 Rock Sampling**

Rock sampling at the occurrence in the northeast area of the SWING block returned up to 401.0 ppm Cu, 52.1 ppm Pb and 162.0 ppm Zn (Figures 21 through 24, Appendices 3 and 4). Elsewhere, along the west fork of the stream within the northern SWING block, Sample W612049 returned 443 ppm Zn and background values for the other three elements.

### **9.2.2 Silt Sampling**

Silt geochemical sampling was completed on the SWING block, extending from the midpoint of the west branch and the entire east branch of the aforementioned stream, then along the “mainstem” to the northwest corner of the property. Sampling returned anomalous values of Ag, Cu, Pb and Zn values commencing at Sample W612047 along the west branch, which returned 467 ppm Cu, 123.5 ppm Pb, 2,590 ppm Zn and 1.310 ppm Ag (Figures 25 through 28, Appendices 3 and 4). This sample is adjacent to rock sample W612049, which returned 443 ppm Zn. Silt sample W612048, directly upstream, returned 2,200 ppm Zn and weakly elevated values of the other elements. These results indicate a source of Zn mineralization with lesser Cu, Ag and Pb enrichment proximal to or directly upstream of silt sample W612047. The source may include the area of rock sample W612049.

Sampling downstream along the “mainstem” and the east fork returned Cu values from 142.5 to 259.0 ppm, and Pb values from 51.5 to 81.7 ppm. Although no discreet anomalies were identified, these values are considerably above average crustal abundances for these elements. More remarkable are values for Zn, which range from 489 to 679 ppm along the east fork, and from 1,120 to 2,090 ppm downstream of the confluence. The consistently high Zn values indicate the likelihood for other base metal occurrences along the downstream extent of the stream.

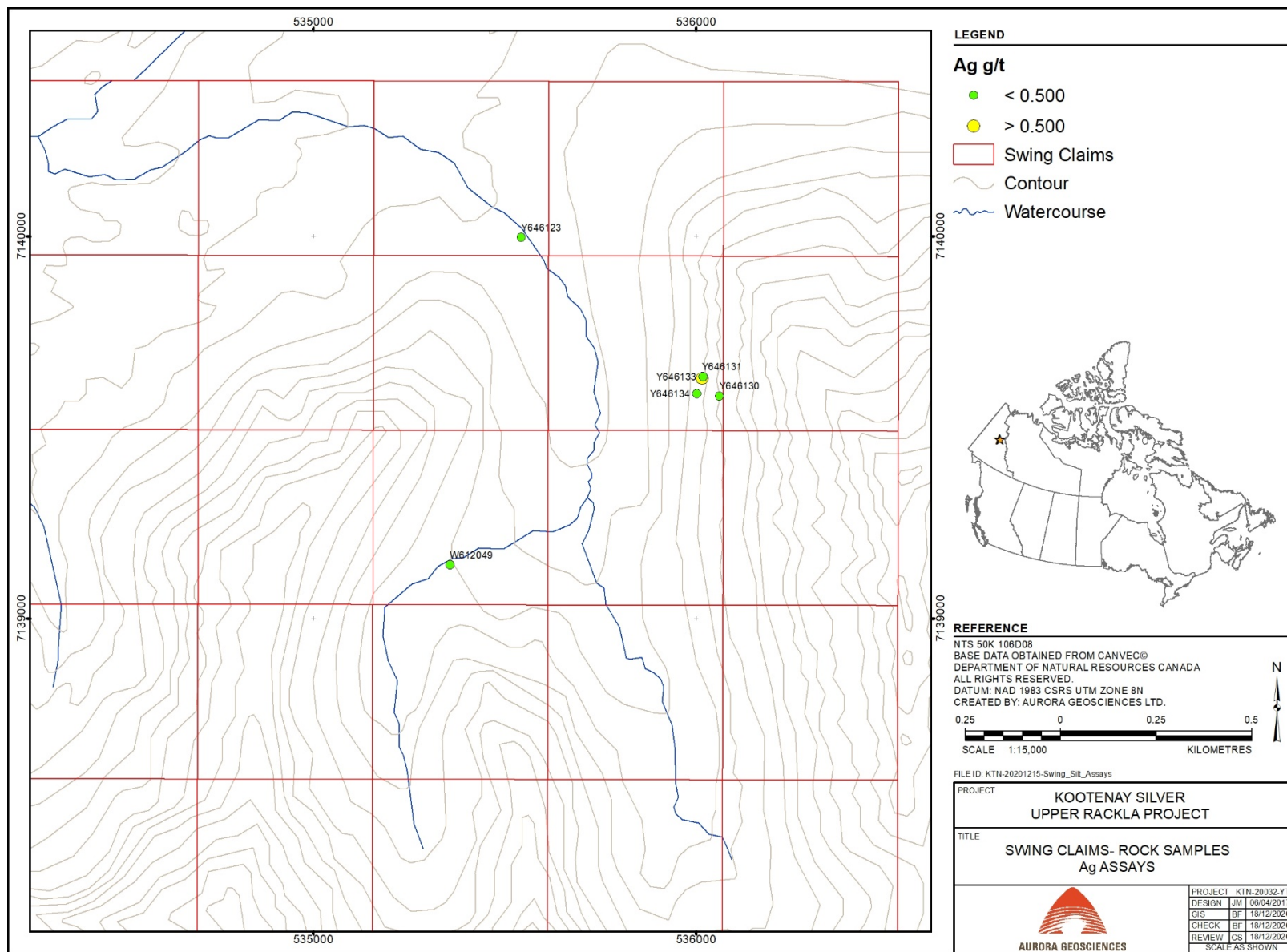


Figure 21: Ag values, rock sampling, SWING block

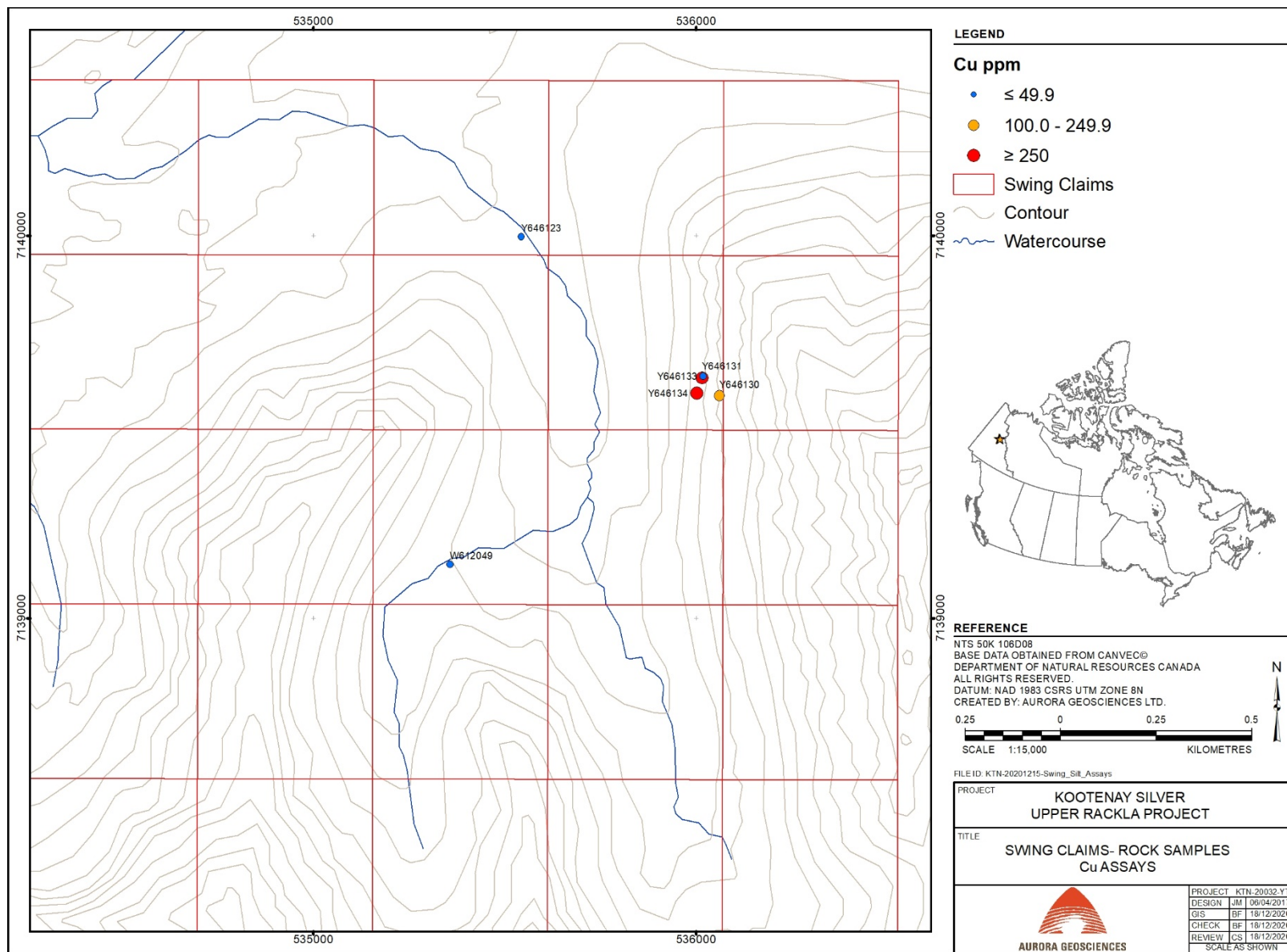


Figure 22: Cu values, rock sampling, SWING block

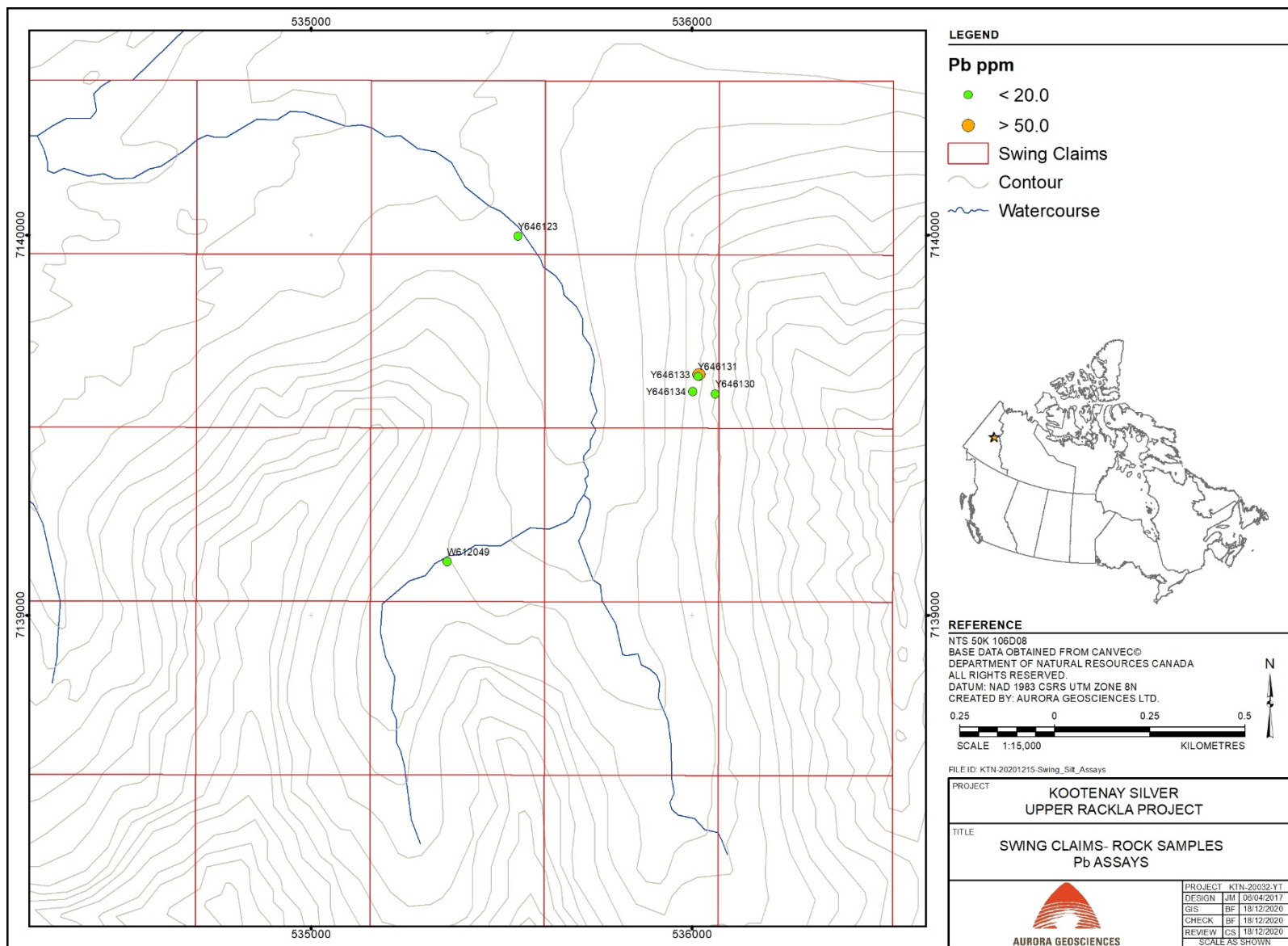


Figure 23: Pb values, rock sampling, SWING block



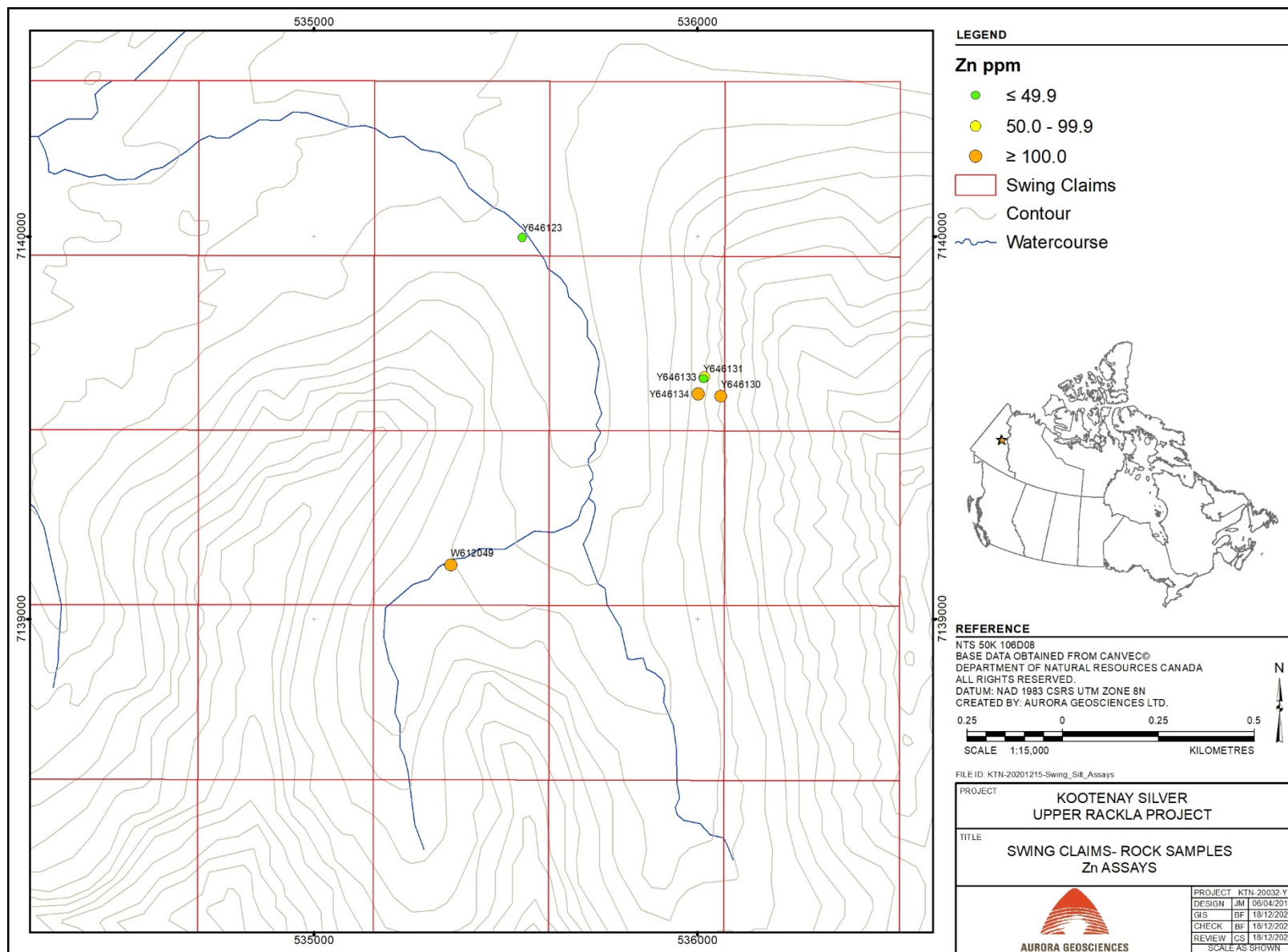


Figure 24: Zn values, rock sampling, SWING block

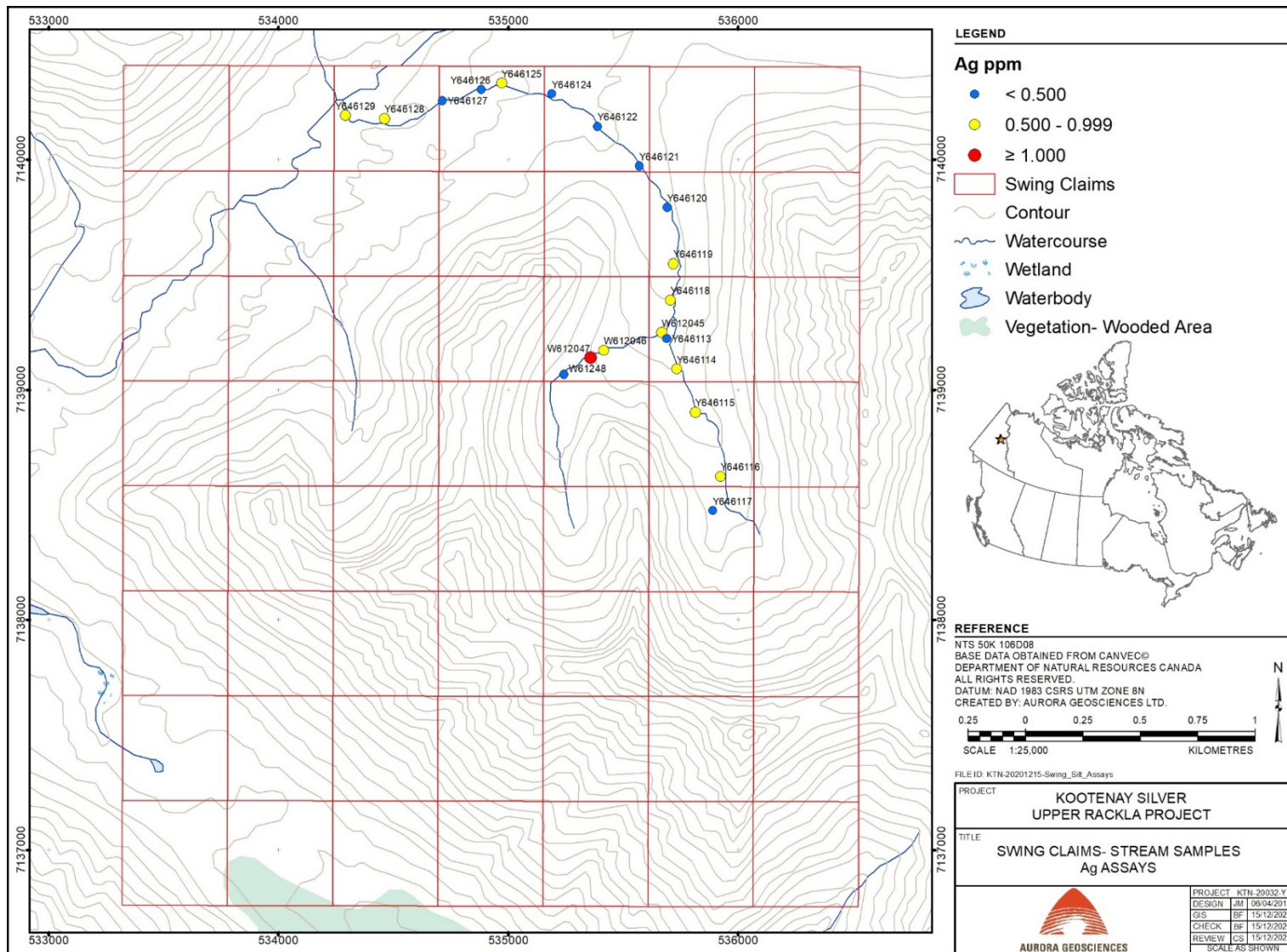


Figure 25: Ag values, silt sampling, SWING block

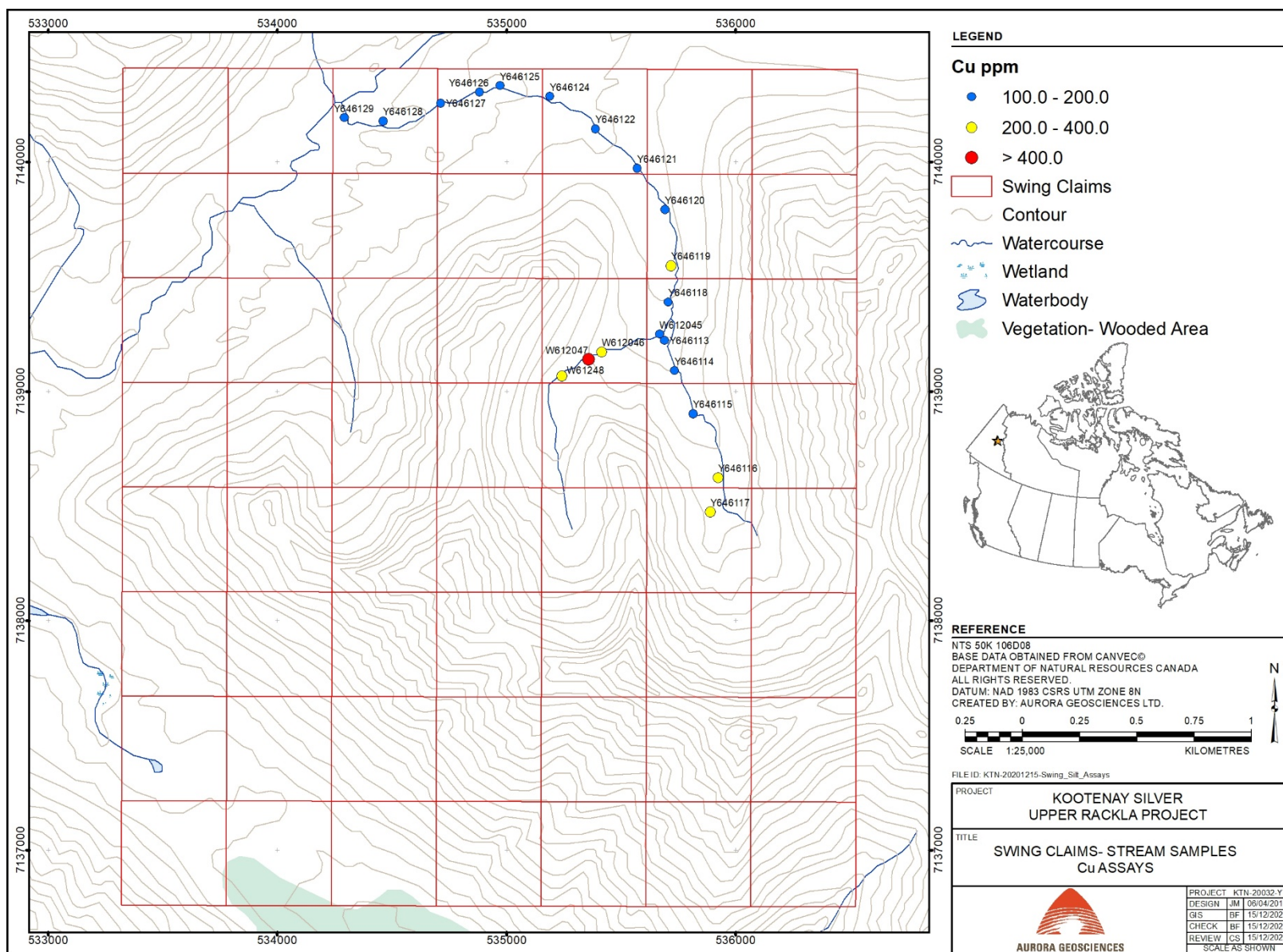


Figure 26: Cu values, silt sampling, SWING block

Figure 27: Cu values, silt sampling, SWING block

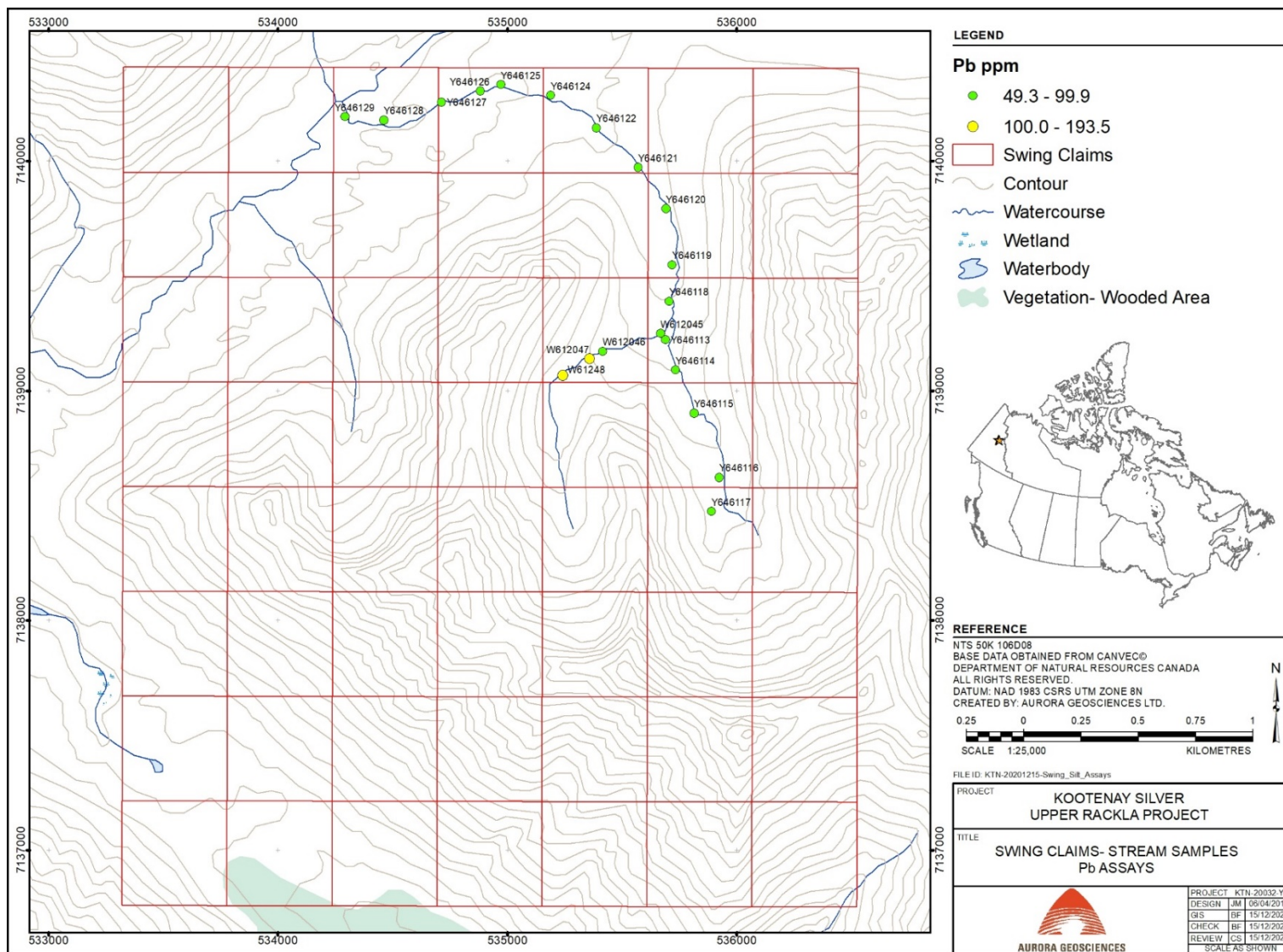


Figure 28: Pb values, silt sampling, SWING block

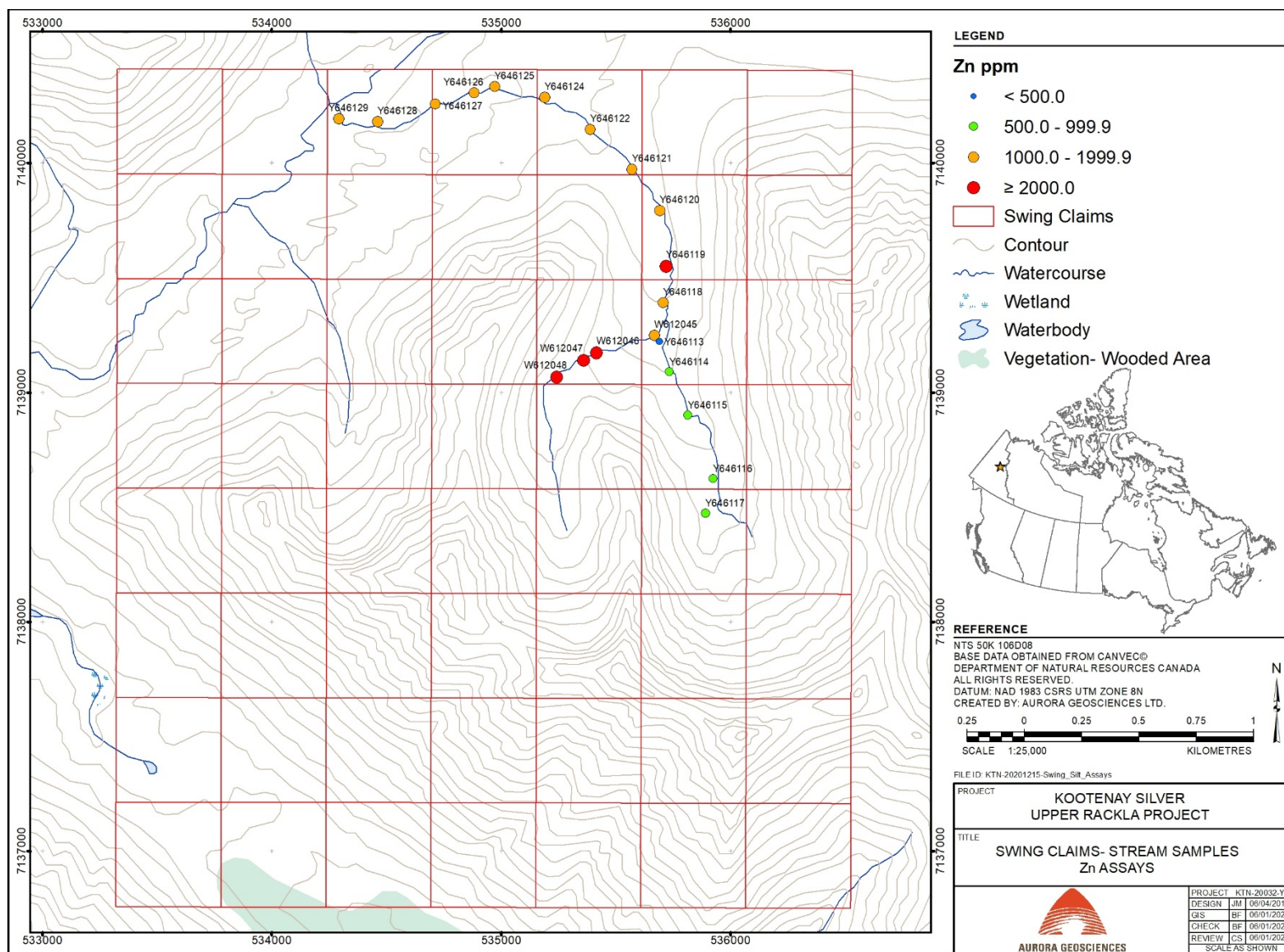


Figure 29: Zn values, silt sampling, SWING block

## **9.3 GRANDMA BLOCK**

### **9.3.1 Rock Sampling**

Rock sampling was done along or close to an arcuate soil sampling traverse in the northern and central areas of the GRANDMA block, as well as the area of the stream confluence near the western corner of the property (Figures 30 through 33, Appendices 3 and 4). Sample Y642302, in the north-central area, returned a value of 1,070 ppm Cu, 172 ppm Zn, 16 ppm Pb and 0.753 g/t Ag. In the central property area, Sample W612036 returned a value of 560 ppb Pb and 1.385 g/t Ag. Roughly 250 m to the northwest, Sample W612040 returned 424 ppm Cu and 170 ppm Zn. The remaining samples did not return significantly anomalous metal values.

### **9.3.2 Soil Sampling**

Soil geochemical sampling along the arcuate traverse returned fairly consistently anomalous Ag, Cu, Pb and Zn values along the central and western portions of both “limbs” (Figures 34 through 37, Appendices 3 and 4). Sampling near the “nose” of the traverse returned elevated Ag and Cu values, the latter particularly along the north limb. Sample W612044, directly at the apex, returned 178 ppm Cu, 221 ppm Pb, 575 ppm Zn and 2.720 g/t Ag. Values for Cu up to 325 ppm were returned from the north limb, and up to 246 ppm from the south limb. Anomalous values up to 179.5 ppm Pb were returned from the north limb, and up to 183.5 ppm from the south limb. Values up to 481.0 ppm Zn were returned from the north limb, and up to 402.2 ppm Zn from the south limb.

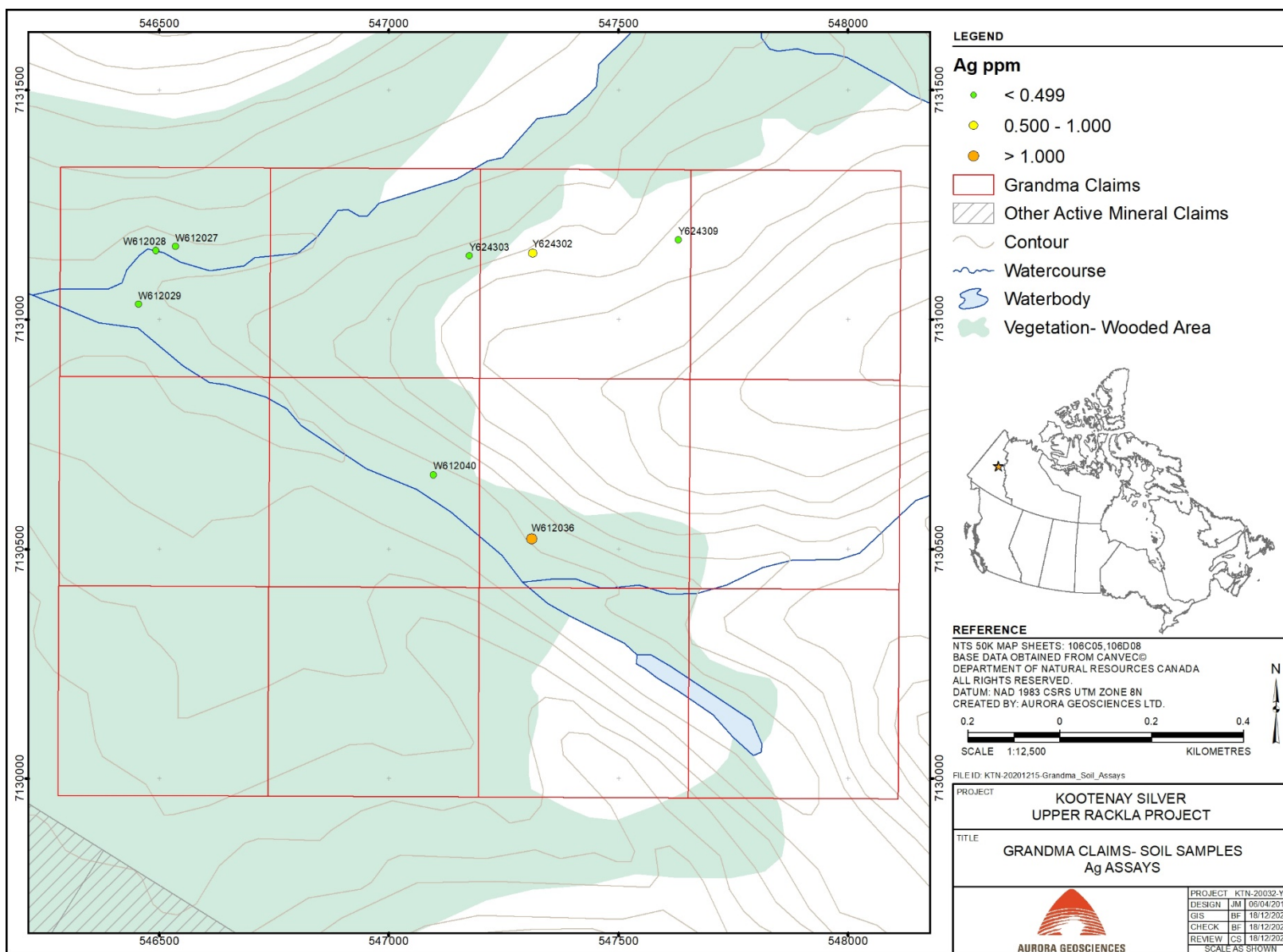


Figure 30: Ag values, rock sampling, GRANDMA block

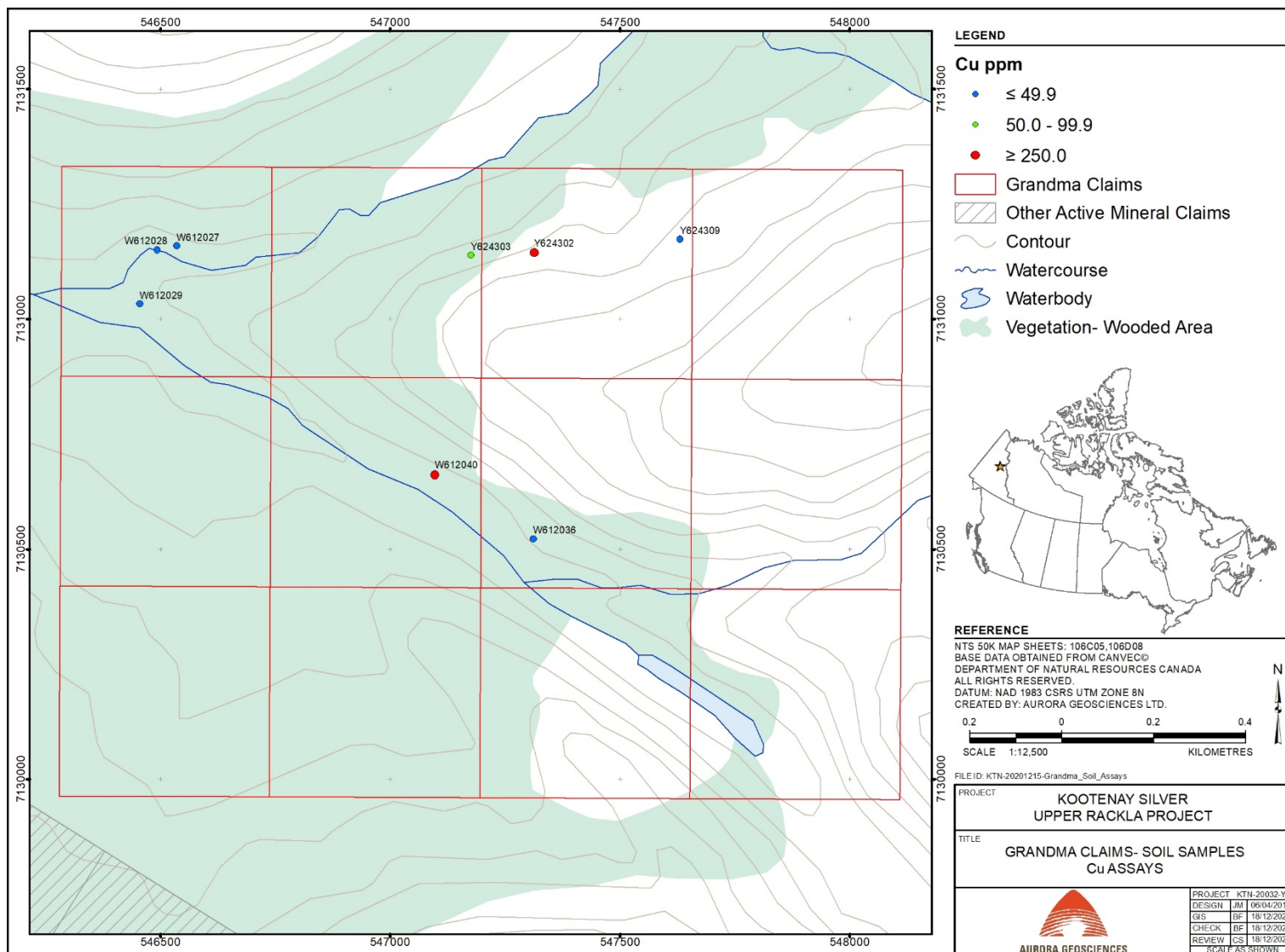


Figure 31: Cu values, rock sampling, GRANDMA block



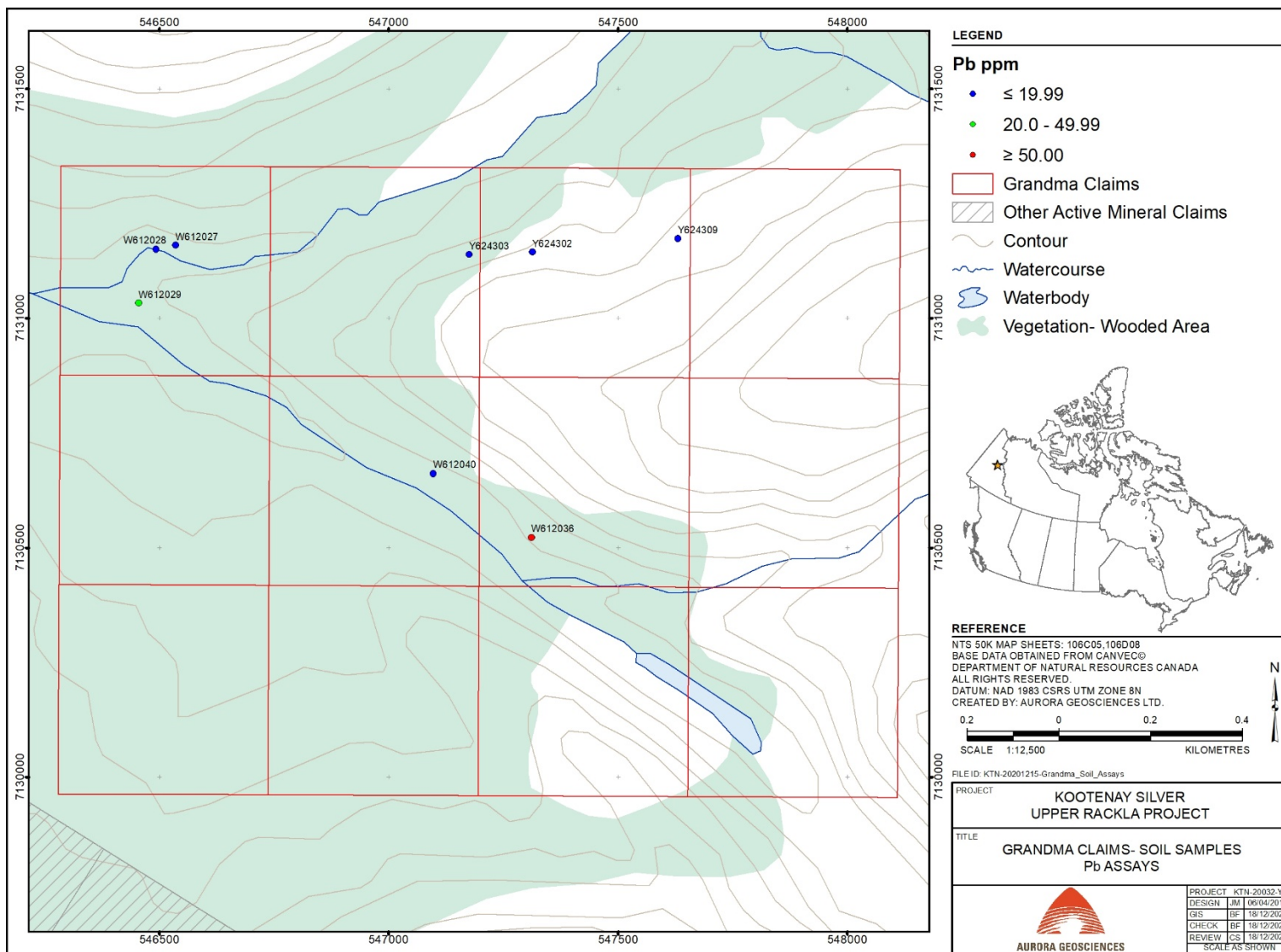


Figure 32: Pb values, rock sampling, GRANDMA block

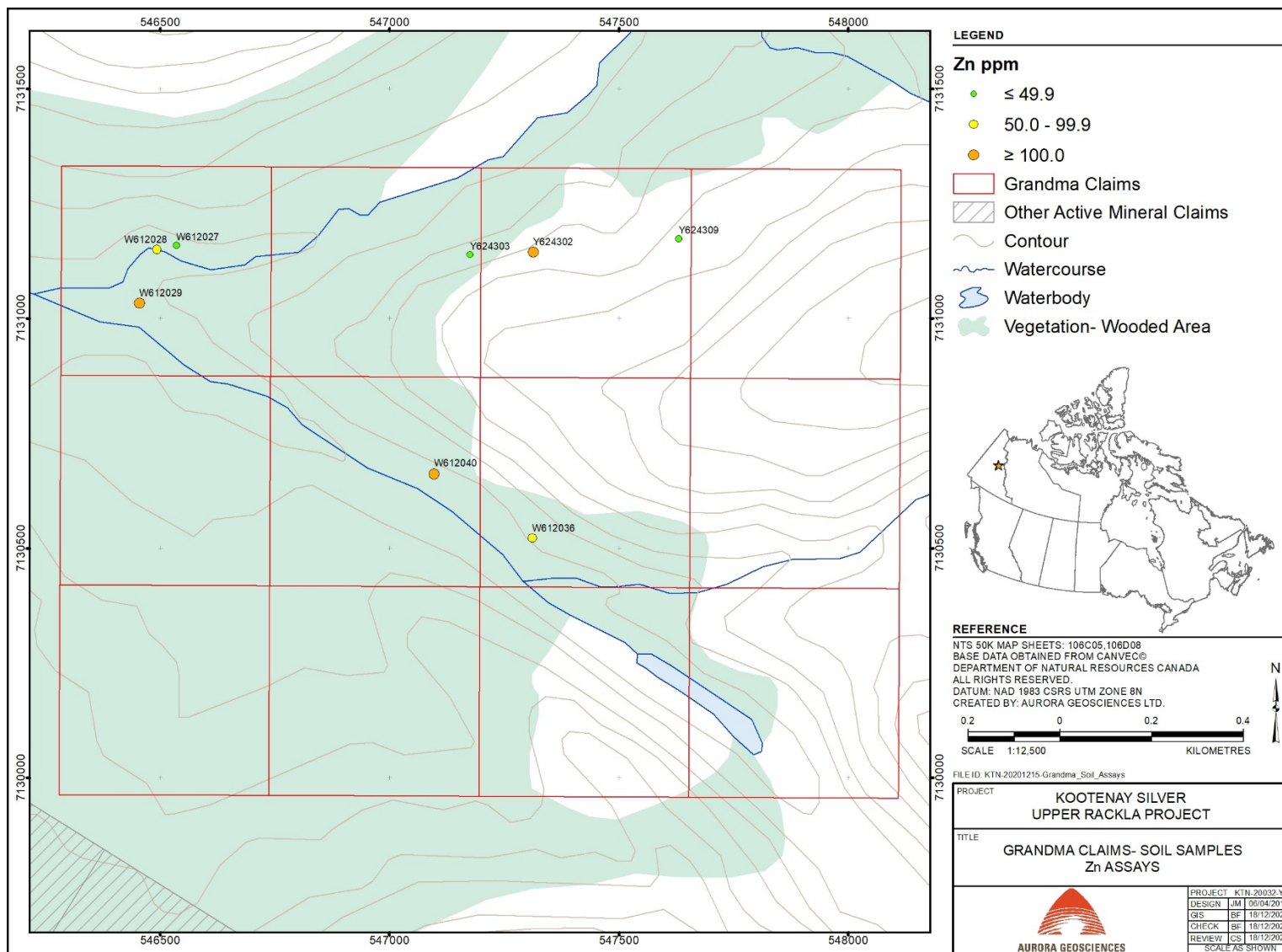


Figure 33: Zn values, rock sampling, Grandma block

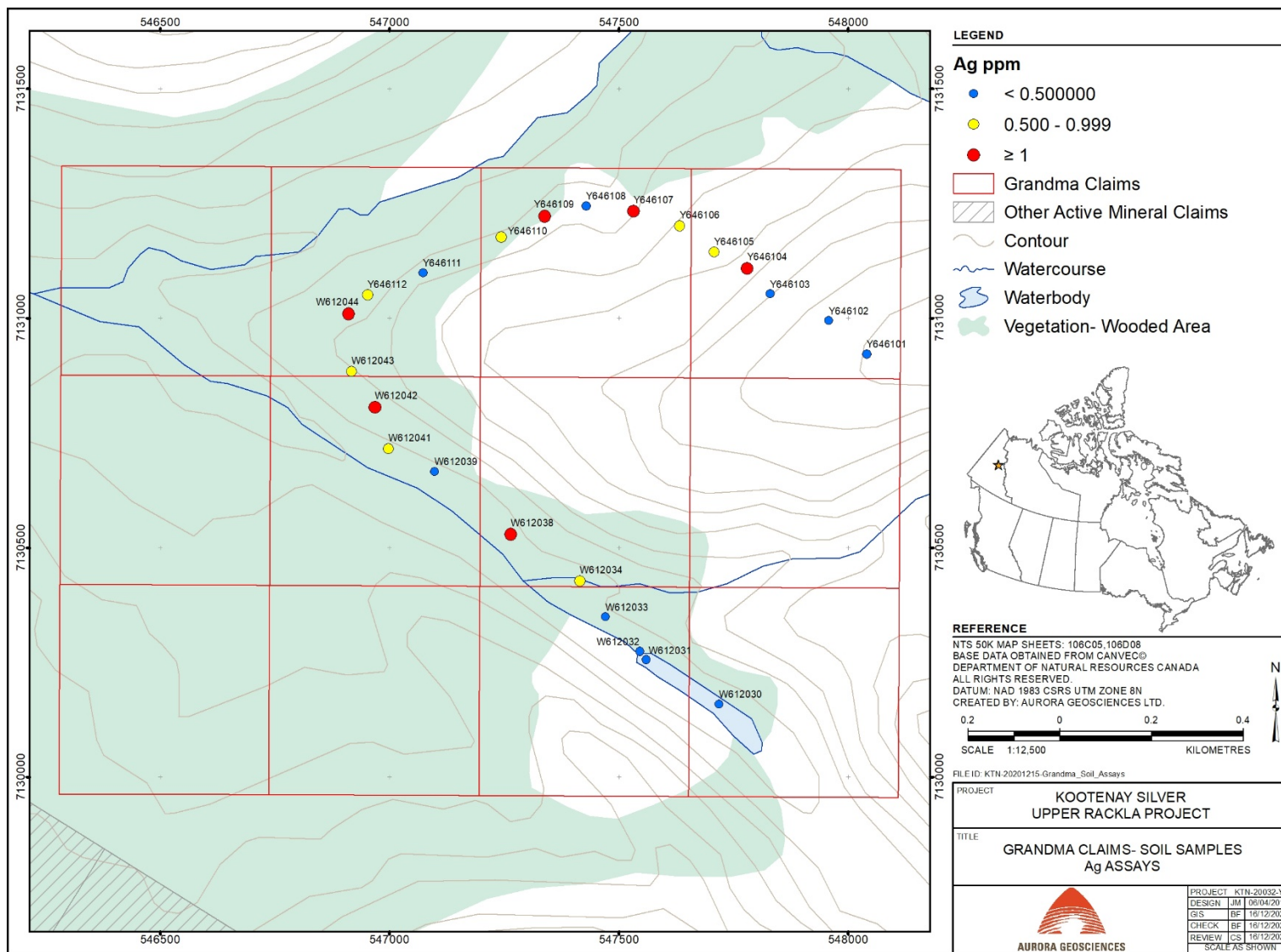


Figure 34: Ag values, soil sampling, GRANDMA block

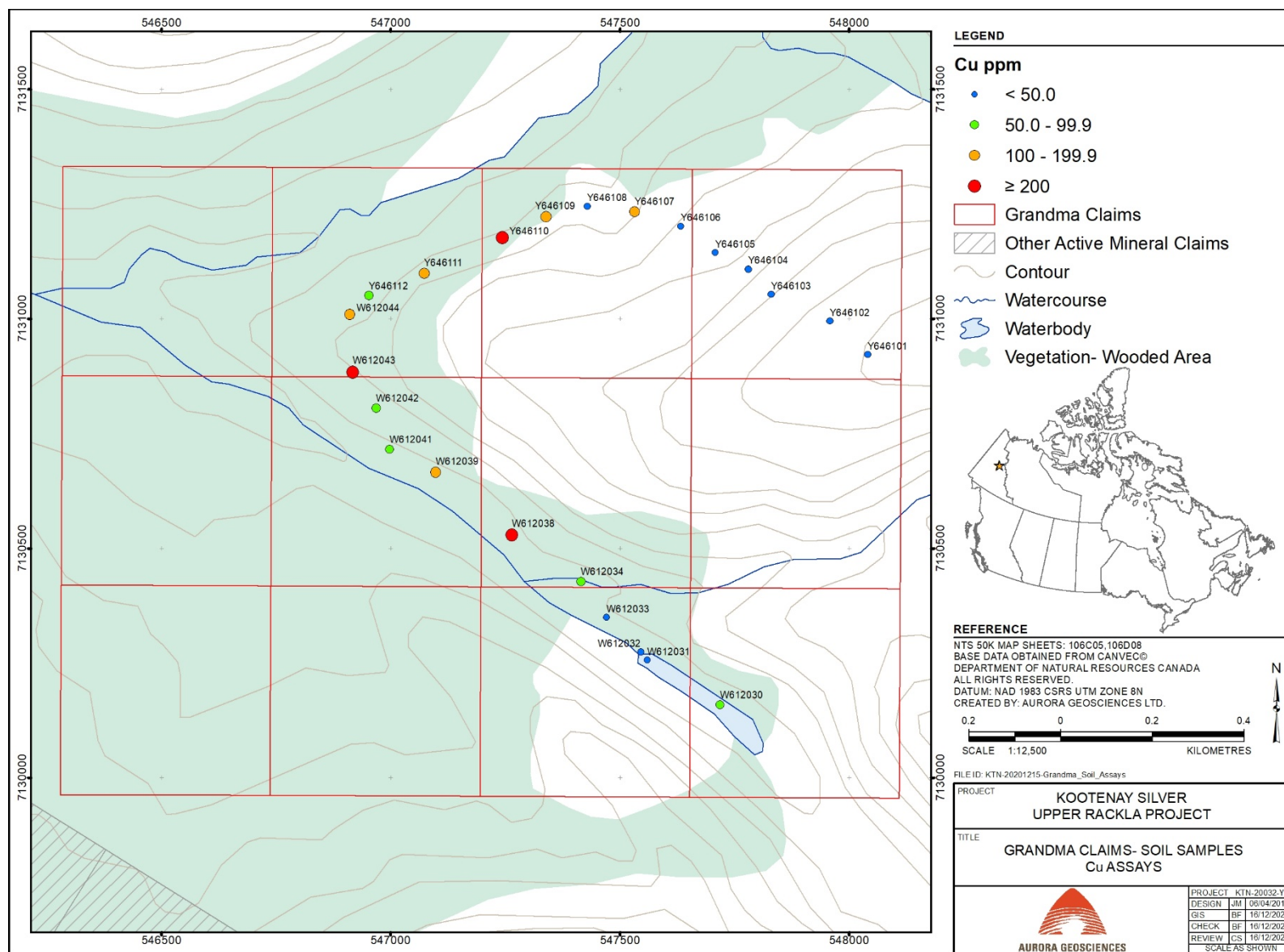


Figure 35: Cu values, soil sampling, GRANDMA block

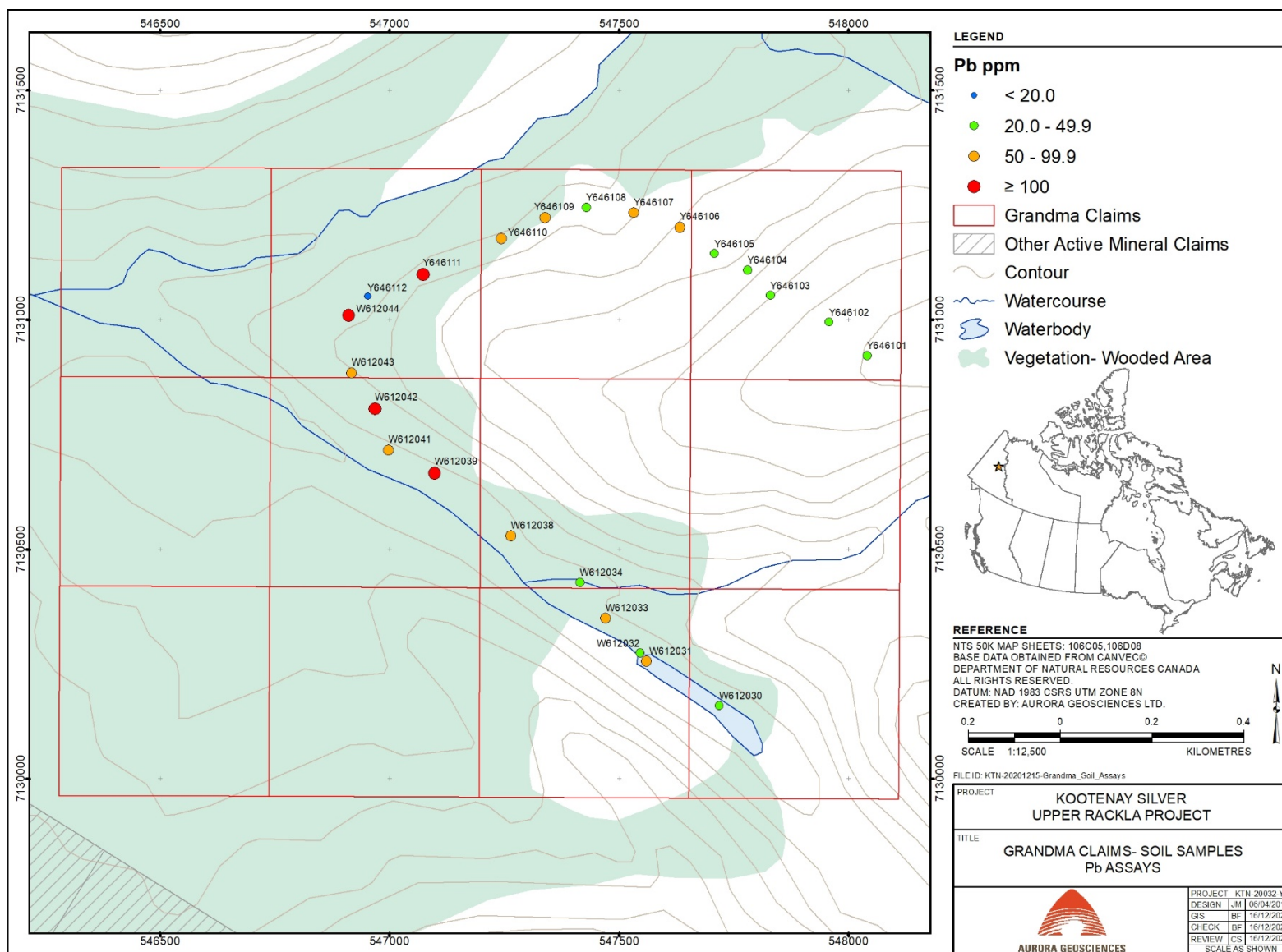


Figure 36: Pb values, soil sampling, GRANDMA block

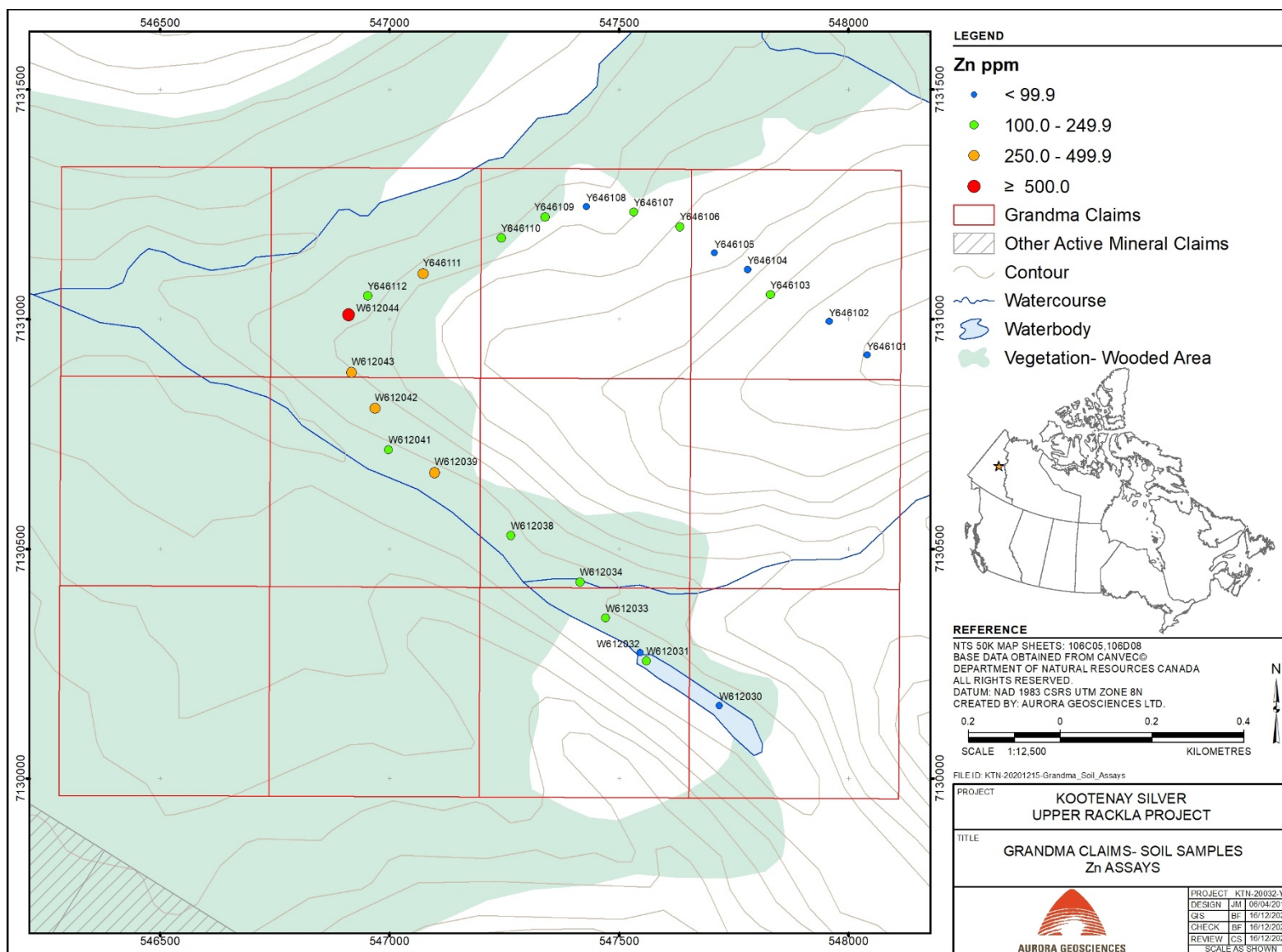


Figure 37: Zn values, soil sampling, GRANDMA block

## 10 SAMPLE PREPARATION, ANALYSIS AND SECURITY

### 10.1 ROCK SAMPLING

All rock samples were collected in the field utilizing an Estwing rock hammer or similar rock hammer. Samples were placed in clear 12" by 20" plastic bags with a sample tag having a unique number placed in the bag and written in indelible ink on the outside of the bag. The sample bag was then wrapped tightly and bound using a cable tie. The sample locations were photographed marked in the field using flagging tape marked with the sample number.

All sample locations were recorded by Global Positioning System (GPS) utilizing Universal Transverse Mercator (UTM) 1983 North American Datum (NAD-83) at the midpoint of the sample. Notes on sample type, UTM locations, including elevation, sample type, date sampled, and sample descriptions focusing on lithology, colour and mineralogy were recorded in a field book, then transferred to an Excel spreadsheet, where they were matched with analytical results. This process was continually re-checked to ensure the correct results are associated with the particular descriptions.

Individual samples were placed in rice bags, with the sample numbers and bag numbers listed on the rice bags, which were also secured with a cable tie. The rice bags were driven by Aurora personnel from site directly to the Whitehorse preparatory lab of ALS Global. At the prep lab, all samples underwent preliminary coarse crushing. This was followed by further crushing so that 70% of the sample could pass through a 2 mm mesh (Prep code CRU-31), followed by splitting utilizing a riffle splitter (Prep code SPL-21). Samples were then pulverized to obtain a 250-gram sample passing through a 75-mesh screen (Procedure Code PUL-31). All samples underwent "Super Trace" Four Acid Digestion and ICP-MS analysis (code MeMS61L) of a 0.25g sample providing analysis for Ag, Al, As, Ba, Be, Bi, Ca, Cd, Ce, Co, Cr, Cs, Cu, Fe, Ga, Ge, Hf, In, K, La, Li, Mg, Mn, Mo, Na, Nb, Ni, P, Pb, Rb, Re, S, Sb, Sc, Se, Sn, Sr, Ta, Te, Th, Ti, Tl, U, V, W, Y, Zn and Zr. Overlimit values for Cu and Zn were re-analyzed by Ore Grade Cu (Prep code Cu-OG62) and Ore Grade Zn (Prep code Zn-OG62) techniques respectively.

### 10.2 SOIL AND SILT SAMPLING

The objective of the soil survey was to collect C horizon samples, although B-C samples were taken where deeper C-horizon material was sparse or unavailable. The sampling procedure employed hand augers to drill through the soil profile and extract C-Horizon material. Detailed descriptions, including horizon sampled, sample depth, depth within horizon sampled, colour, parent material, vegetative cover, topographic position, moisture content and percentages of organics, angular rock fragments, gravel, sand, silt and clay, were recorded for each sample. At each sample site, two photographs were taken; one of the sampled material placed next to the empty Kraft bag, and one of the sample site.

Samples were bagged in paper kraft bags and closed with a cable tie ("Zap Strap"). These were then placed in rice bags for transport to the Whitehorse prep lab of ALS Global, with each rice bag sealed by a cable tie. The mechanism of transport to the lab was the same as for rock samples. At the ALS Global prep lab, all soil samples were dried at 60°C, then sieved through an 80-mesh (180-micron) screen to obtain a 100-gram sample (Prep code SCR-41). All samples underwent "Super trace" four-acid digestion and 0.5-gram ICP-MS analysis (code ME-MS61L) providing analysis for Ag, Al, As, Ba, Be, Bi, Ca, Cd, Ce, Co, Cr, Cs, Cu, Fe,

Ga, Ge, Hf, In, K, La, Li, Mg, Mn, Mo, Na, Nb, Ni, P, Pb, Rb, Re, S, Sb, Sc, Se, Sn, Sr, Ta, Te, Th, Ti, Tl, U, V, W, Y, Zn and Zr.

Stream sediment samples were comprised of silt from several sites across a limited sample area. The UTM NAD 83 coordinates were recorded for each site. The samples were prepared, transported and analyzed as per soil samples.

## 11 DISCUSSION AND CONCLUSIONS

### 11.1 DISCUSSION

#### 11.1.1 BOP/ COOL JAZZ Block

Prospecting, ridgeline soil and rock sampling at the BOP/ COOL JAZZ block focused on both ridgelines flanking a stream in the northeast property corner, and on a north-flowing stream in the central COOL JAZZ block. Also, prospecting and rock sampling took place in the Davis Creek drainage, where an occurrence of banded chalcopyrite mineralization within quartz-carbonate veining was identified (Figure 10). Assay results indicate high zinc values, although sphalerite was not identified in the field. The mineralogy is similar to that identified within downslope quartz boulders in 2019 but distinctly separate from that of the Freddy showing. This indicates that multiple settings of polymetallic mineralization occur within the property, resulting from separate pulses of base metal enriched hydrothermal fluids. Copper-enriched mineralization was also discovered at the Miles showing northeast of the Freddy Showing.

Also, in the northeast area, soil sampling was done along the ridge marking the headwaters of a northeast-flowing creek, and along the ridgeline directly to the north. Results revealed strongly anomalous Pb and Zn values, elevated Cu values and weakly elevated Ag values. Rock sampling returned more subdued to background values, indicating high soil geochemical values originate from undiscovered polymetallic occurrences along the ridgelines. At the northeast end of the traverse, at a low elevation, rock sample Y624301 returned strongly anomalous Cu, Pb and Zn values, and adjacent soil sampling returned similarly anomalous metal values. This indicates a proximal source, separate from those along the ridgeline to the WSW. Lower metal values from soil and rock geochemical sampling along the southern ridgeline indicate lesser potential for significant polymetallic mineral occurrences.

In the COOL JAZZ block, rock and soil sampling along the ridgeline east of the north-flowing stream returned fairly consistently anomalous Cu, Pb and Ag values along its northern extent. Although rock and soil samples were widely spaced, results indicate high potential for discovery of polymetallic occurrences. Zinc values were not significantly elevated, indicating the local mineralogy may represent a subset of Cu-Pb-Ag enrichment. Some potential for polymetallic mineralization also exists near the peak along the western stream flank, although anomalous values are more sporadic.

#### 11.1.2 SWING Block

Rock sampling at the newly identified occurrence in the northeast property area returned weakly to moderately elevated Cu, Zn and Pb values. Although pervasive fine fracturing and strong limonite staining occurs, host rocks have not undergone strong alteration. This is not considered a high-priority occurrence for follow-up work.



A single rock sample taken along the west branch of the stream in the northern property area returned an elevated zinc value of 443 ppm. This is somewhat east (downstream) of the onset of strongly anomalous Zn values from stream silt sampling. Strongly elevated Zn values were returned from the entire downstream extent of the stream. Anomalous Cu, Pb and Ag values are coincident with the upstream limit of anomalous Zn values, but dissipate downstream. This indicates an undiscovered proximal polymetallic source, particularly enriched in zinc, extending from the upstream limit of sampling to the rock sample location and possibly somewhat farther east.

Lower but consistently elevated values from sampling along the east branch may have resulted from high background metal values within the catchment area, or from multiple smaller polymetallic occurrences. These may also be the potential sources for elevated values for Cu, Pb, and Zn downstream of the confluence. The more pronounced Zn values may have resulted from multiple Zn-enriched occurrences; however lithological background values of this magnitude are unlikely.

### **11.1.3 GRANDMA block**

Soil geochemical sampling results indicate an area of anomalous Cu and Ag values along both limbs of the arcuate traverse. Values for Pb and Zn are more pronounced along the southern limb. This indicates potential for polymetallic mineralized occurrences near the apex and along the southern flank of the traverse, and for Cu - Ag mineralization along the northern flank. A lack of elevated values along the east end of the northern flank indicates mineral potential may be enhanced along structural corridors marked by the streams, particularly the linear south fork.

Although the Grandma occurrence has been described as Mississippi Valley-Type (MVT) mineralization, the presence of elevated Cu and Ag values indicates it is more likely to belong to the polymetallic vein or replacement settings. Mineralization within the SWING and BOP/ COOL JAZZ blocks also likely belongs to these settings.

## **11.2 CONCLUSIONS**

The following conclusions can be made from results of the 2020 field program:

- At the BOP/ COOL JAZZ block, three sites warranting follow-up work were identified. These are: the newly identified vein-style Cu-Zn occurrence in the Davis Creek basin; the north flank and headwaters area of the northeastern stream, and the east flank of the north-flowing creek in the COOL JAZZ block.
- The vein-style Cu-Zn occurrence is located about 400 m northwest of the Freddy showing, but represents a distinct mineralogical setting. Although these are part of the same metallogenic province, this indicates that multiple pulses of hydrothermal fluids, which evolve over time, have resulted in these distinct polymetallic settings.
- The anomalous Cu-Zn-Pb-Ag values from soil sampling in the northeastern area indicate potential for polymetallic mineralization along the northern and western perimeters of the local stream. The most promising area may be the vicinity of rock sample #624301, which returned the highest Cu and Zn values in the area. This sample is located at the northeast end of the traverse, east and downslope of the main geochemical anomalies.

- At the COOL JAZZ block, the northern part of the eastern ridge hosts the highest mineralogical potential of that area. Although rock and soil samples were widely spaced, Cu, Pb and Ag values were consistently elevated. Values for Zn were not significantly elevated, indicating a variation of polymetallic mineralization.
- The SWING block may host the most prospective target of the three blocks. Stream silt values for Cu and Ag are highest at the second-farthest upstream sample along the west stream branch, defining a local source. Values for Pb and particularly Zn are consistently anomalous, indicating a more widespread target.
- At the SWING block, consistently anomalous values, including those from the east branch and the “mainstem”, suggest either a very high background Cu-Pb-Zn mineralogy throughout, or multiple polymetallic sources. The latter is a more likely explanation for the continually strongly anomalous Zn values along the mainstem.
- The occurrence identified from rock sampling in the SWING block is not considered a high priority target.
- At the GRANDMA block, soil and rock sampling revealed a coincident Cu-Pb-Zn-Ag anomaly centered on the apex of an arcuate traverse. Cu and Ag values are somewhat more pronounced along the north limb; Pb and Zn values are more pronounced along the south limb.
- Mineralization at Grandma may have a partial structural control, focused along two property-scale lineaments marked by the two streams. Structural control may be most pronounced along the notably linear southern branch.
- Although the Grandma showing is listed in the Yukon Minfile database as a Mississippi Valley-type occurrence, the Cu-Ag enriched metallogeny indicates a higher likelihood for polymetallic mineralization.

## 12 RECOMMENDATIONS

### 12.1 RECOMMENDATIONS

Further work is recommended for all three claim blocks. At the northeast stream of the BOP/ COOL JAZZ block, a soil “mini-grid”, centered on rock sample #Y624301 and combined with rock sampling and geological mapping, is recommended. The mini-grid will comprise a 100-metre line spacing and 50-metre station spacing, and should comprise 25 to 30 samples. Geological mapping and rock sampling is recommended along the Cu-Pb-Zn anomaly along the western and northern ridgelines.

At the Davis Creek basin, further prospecting and rock sampling, including follow-up work on the Cu-Zn occurrence discovered in 2020, is recommended. A contour soil traverse along the northern flank of the catchment area is recommended. At the COOL JAZZ block, soil sampling, combined with geological mapping and rock sampling along the eastern flank of the north-flowing stream, is recommended to improve sample resolution. Geological mapping and rock sampling is recommended for the ridgelines

marking the southwest boundaries of the catchment area. A total of three days is recommended for the program at the BOP/ COOL JAZZ block.

At the SWING block, a soil mini-grid comprising about 100 samples, is recommended to cover the anomalous Cu-Pb-Zn values along the west fork of the northern stream. This is recommended to be accompanied by rock sampling and geological mapping. Silt sampling at 250-metre intervals is recommended for the unsampled upper extent of the west fork, and for a short stream to the west.

At the GRANDMA block, a mini-grid comprising about 50 samples is recommended for the apex area of the traverse. Prospecting, rock sampling and geological mapping is recommended for the linear south fork of the stream. A single day should be allocated for this block.

A total of seven field days, as well as one weather day and two days for mobilization and de-mobe, are recommended to complete the program. This program is recommended to be done by a four-person crew comprised of two geologists and two geochemical technicians. It will be heli-supported with daily set-outs based from Mayo, Yukon, utilizing an A-Star B2 or B3 helicopter. Total expenditures, including filing fees, are estimated at about \$147,000.

## 12.2 RECOMMENDED BUDGET

	\$
Expeditor:	1,695.00
	\$
Rocks (104 estimated)	5,668.00
	\$
Soils/ silts (270 est.)	14,364.00
	\$
Reference material (Standards)	495.00
	\$
Accommodations	6,750.00
	\$
Supplies	330.00
	\$
Equipment rentals	2,900.00
	\$
Filing Fees	5,750.00
	\$
GIS, assessment report	10,200.00
	\$
<b>Sub-total</b>	<b>133,766.00</b>
	\$
10% Contingency:	13,376.60
	\$
<b>Projected Total:</b>	<b>147,142.60</b>

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Project preparation	\$ 2,000.00
Personnel	\$ 26,500.00
Helicopter, incl. fuel:	\$ 54,464.00
Truck rental, incl. fuel:	\$ 2,650.00
Expeditor:	\$ 1,695.00
Rocks (104 estimated)	\$ 5,668.00
Soils/ silts (270 est.)	\$ 14,364.00
Reference material (Standards)	\$ 495.00
Accommodations	\$ 6,750.00
Supplies	\$ 330.00
Equipment rentals	\$ 2,900.00
Filing Fees	\$ 5,750.00
GIS, assessment report	\$ 10,200.00
<b>Sub-total</b>	<b>\$ 133,766.00</b>
10% Contingency:	\$ 13,376.60
<b>Projected Total:</b>	<b>\$ 147,142.60</b>

## 13 REFERENCES

Colpron, M., Israel, S., Murphy, D., Pigage, L., and Moynihan, D., 2016: Open File 2016-1: Yukon bedrock geology map 2016: Yukon Geological Survey, Energy, Mines and Resources, Government of Yukon.

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

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.

Schulze, C., 2019: "2019 Assessment Report: Geological Mapping, Rock and Silt Geochemical Sampling, Upper Rackla Property". Assessment Report filed with the Mayo Mining Recorder, Energy, mines and Resources, Government of Yukon.

### Websites

Cantex Mine Development Corp: <https://cantex.ca/>

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

Yukon Geological Survey, Mineral Occurrence Finder:  
<https://yukon2.maps.arcgis.com/apps/Solutions/s2.html?appid=c759ea8ef5f748ecbd3e8c920da0ddcc>

Yukon Mining Recorder: <https://yukon.ca/en/mining>

Respectfully submitted,  
Aurora Geosciences Ltd.

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Carl Schulze, BSc, PGeo  
Project Manager

Reviewed by

Name

**Appendix I**

*Statement of Qualifications*

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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 Kootenay Silver Inc. or any of its properties

Dated this 15<sup>th</sup> day of January, 2021 in Whitehorse, Yukon Territory.

Respectfully Submitted,

*Carl Schulze*

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Carl M. Schulze, BSc. P. Geo.



**Appendix II**

*Statement of Expenditures*

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<b>Expense Description</b>	<b>Expense</b>
Personnel, Wages: Senior geologist, 8 days @ \$500/day:	\$ 4,000.00
Personnel, Wages: Technician; 8 days @ \$350/day:	\$ 2,800.00
Personnel, Wages: Technician; 2 x 7 days @ \$350/day:	\$ 4,900.00
Daily field expenses: 30 person-days @ \$100/day:	\$ 3,000.00
Helicopter Expenses (incl. fuel): 11.3 hrs @\$1,995.09/hr	\$ 22,544.55
Truck rental: 15 days @ \$50/day:	\$ 750.00
Truck fuel	\$ 174.11
Field supplies	\$ 429.84
WCB: \$4.73/ \$100 of wages:	\$ 553.41
Assays, Rocks: 48 rocks @ \$65.21 ea.	\$ 3,130.38
Assays: Soils + silts: 159 @ \$48.17 ea.	\$ 7,658.42
GIS, drafting: 25 hours @ \$85/hr:	\$ 2,125.00
Report writing: 40 hours @ \$100/hr:	\$ 4,000.00
	<hr/>
<b>Total:</b>	<b>\$ 56,052.71</b>

**Appendix III**

*Sample Descriptions and Locations*

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Sample Descriptions, 2020 Program, BOP/COOL JAZZ Block

Upper Rackla Project, Kootenay Silver Inc.

Sample ID	Sample Type	UTM Zone	Easting (NAD 83)	Northing (NAD 83)	Date	Photo ID	Description
W612017	Rock	08V	545780	7133183	9-9-2020	Labelled	Fine grained metaseds, limonitic surfaces
W612023	Rock	08V	545853	7134148	9-9-2020		Meta gabbro - possible sulphides
W612035	Rock	08V	545764	7134754			W612035 in assay datafile, W612025 in sample descriptions
Y624005			547196	7138912			Peridotite? Grab sample from vertical fault on ridge top, no sample
Y624006	Rock	08V	547215	7138807	9-6-2020		Quartz vein with possible sulfides approximately 1m wide adjacent to near vertical fault (5-6m)
Y624008	Rock	08V	547172	7138705	9-6-2020		Oddly altered crystalline vuggy quartzite boulders
Y624013	Rock	08V	547323	7138466			Ultra oxidized indistinguishable cobbles in dry streambed
Y624019	Rock	08V	548064	7138129	9-8-2020	Labelled	Blurry photo: quartz-carbonate
Y624021	Rock	08V	548148	7138211	9-8-2020		Bornite stain
Y624027	Rock	08V	548452	7138482	9-8-2020		
Y624028	Rock	08V	548461	7138472	9-8-2020		
Y624029	Rock	08V	548460	7138476	9-8-2020		Large sample
Y624301	Rock	08V	548584	7139436			Quartzite - oxidized
Y624304	Rock	08V	544324	7133284			Quartzite - oxidized
Y624305	Rock	08V	543734	7133809			Quartzite - oxidized
Y624306	Rock	08V	543859	7134093			Quartzite - oxidized
Y624307	Rock	08V	543826	7134055			Quartzite - oxidized
Y624308	Rock	08V	544716	7134793			oxidized gabbro
Y624310	Rock	08V	543734	7133809			
Y624311	Rock	08V	543799	7133964			Quartz Diorite/Monzonite
Y624312	Rock	08V	544422	7133247			Quartzite - oxidized
Y624315	Rock	08V	546206	7137488		Labelled	AM3 Mala outcrop: Malachite-stained quartz-carbonate vein, banded - massive chalcopyrite
Y624316	Rock	08V	546222	7137493		Labelled	Malachite-stained basalt? Possible fine grained sediments
Y624037	Rock	08V	544682	7132815	9-9-2020		Gabbro
Y624038	Rock	08V	544761	7132720	9-9-2020		
Y624041	Rock	08V	544977	7132609	9-9-2020		Quartz calcite
Y624044	Rock	08V	545218	7132469	9-9-2020		
Y624047	Rock	08V	545697	7132595	9-9-2020		
W612018	Soil	08V	545804	7133189			
W612019	Soil	08V	545866	7133331			
W612020	Soil	08V	545911	7133446			
W612021	Soil	08V	545919	7133657			
W612022	Soil	08V	545775	7134118			
W612024	Soil	08V	545857	7134379			
W612025	Soil	08V	545764	7134754			
W612026	Soil	08V	545720	7134873			
Y624001	Soil	08V	547154	7139226			
Y624002	Soil	08V	547254	7139057			

Y624003	Soil	08V	547286	7138977		
Y624004	Soil	08V	547229	7138907		
Y624007	Soil	08V	547213	7138815		
Y624009	Soil	08V	547184	7138709		
Y624010	Soil	08V	547229	7138608		
Y624011	Soil	08V	547243	7138517		
Y624012	Soil	08V	547177	7138421		
Y624014	Soil	08V	547497	7138537		
Y624016	Soil	08V	547822	7138022		
Y624017	Soil	08V	547921	7138020		
Y624018	Soil	08V	548065	7138127		
Y624020	Soil	08V	548131	7138179		
Y624022	Soil	08V	548171	7138231		
Y624023	Soil	08V				
Y624024	Soil	08V	548204	7138271		
Y624025	Soil	08V	548362	7138423		Values included under rocks (WH20224496)
Y624026	Soil	08V	548415	7138449		
Y624030	Soil	08V	548482	7138504		
Y624031	Soil	08V	548580	7138584		
Y624032	Soil	08V	548633	7138636		
Y624033	Soil	08V	548681	7138678		
Y624034	Soil	08V	548765	7138737		
Y624035	Soil	08V	544522	7133019		
Y624036	Soil	08V	544553	7132939		
Y624039	Soil	08V	544764	7132713		
Y624040	Soil	08V	544880	7132681		
Y624042	Soil	08V	545014	7132555		
Y624043	Soil	08V	545126	7132488		
Y624045	Soil	08V	545404	7132464		
Y624046	Soil	08V	545526	7132476		
Y624048	Soil	08V	545712	7132718		
Y624049	Soil	08V	545735	7132904		
Y624050	Soil	08V	545764	7133085		
Y624151	Soil	08V	547289	7139067		
Y624152	Soil	08V	547398	7139093		
Y624153	Soil	08V	547499	7139111		
Y624154	Soil	08V	547586	7139136		
Y624155	Soil	08V	547688	7139156		
Y624156	Soil	08V	547793	7139169		
Y624157	Soil	08V	547887	7139186		
Y624158	Soil	08V	547967	7139195		
Y624159	Soil	08V	548184	7139192		
Y624160	Soil	08V	548280	7139206		
Y624161	Soil	08V	548549	7139353		
Y624162	Soil	08V	548581	7139438		
Y624163	Soil	08V	544499	7133097		
Y624164	Soil	08V	544487	7133187		

Y624165	Soil	08V	544427	7133250			
Y624166	Soil	08V	544457	7133308			
Y624167	Soil	08V	544492	7133327			
Y624168	Soil	08V	544312	7133307			
Y624169	Soil	08V	544229	7133323			
Y624170	Soil	08V	544156	7133346			
Y624171	Soil	08V	544072	7133415			
Y624172	Soil	08V	544028	7133452			
Y624173	Soil	08V	543970	7133474			
Y624174	Soil	08V	543915	7133503			
Y624175	Soil	08V	543873	7133550			
Y624176	Soil	08V	543838	7133592			
Y624177	Soil	08V	543800	7133638			
Y624178	Soil	08V	543765	7133688			
Y624179	Soil	08V	543739	7133744			
Y624180	Soil	08V	543753	7133868			
Y624181	Soil	08V	543810	7134008			
Y624182	Soil	08V	543934	7134173			
Y624184	Soil	08V	544069	7134296			
Y624185	Soil	08V	544129	7134320			
Y624186	Soil	08V	544190	7134362			
Y624187	Soil	08V	544247	7134400			
Y624188	Soil	08V	544311	7134437			
Y624189	Soil	08V	544367	7134475			
Y624190	Soil	08V	544425	7134503			
Y624191	Soil	08V	544485	7134544			
Y624192	Soil	08V	544537	7134584			
Y624193	Soil	08V	544584	7134646			
Y624194	Soil	08V	544686	7134758			
Y624195	Soil	08V	544766	7134903			
Y624196	Soil	08V	544851	7134986			
Y624197	Soil	08V	544925	7135057			
Y624015	Stream	08V	548736	7138970			

Sample Descriptions, 2020 Program, SWING Block

Upper Rackla Project, Kootenay Silver Inc.

Sample ID	Sample Type	UTM Zone	Easting (NAD 83)	Northing (NAD 83)	Date	Photo ID	Description
W612049	Rock	08V	535357	7139141			
Y646130	Rock	08V	536062	7139582	9-11-2020	Labelled	Probable f gr sediments; mod limonite along fractures
Y646131	Rock	08V	536016	7139628		Labelled	Fine grained metasediments, mod. Limonite staining (slate - phyllite)
Y646133	Rock	08V	536018	7139633			Bornite stained gabbro
Y646134	Rock	08V	536002	7139588		Labelled	Fine grained metaseds, limonitic fractures, fine fracturing
Y646123	Rock	08V	535543	7139997			
W612045	Stream	08V	535668	7139250			
W612046	Stream	08V	535416	7139172			
W612047	Stream	08V	535359	7139140			
W612048	Stream	08V	535242	7139068			
Y646113	Stream	08V	535689	7139222			
Y646114	Stream	08V	535733	7139091			
Y646115	Stream	08V	535814	7138903			
Y646116	Stream	08V	535924	7138624			
Y646117	Stream	08V	535890	7138475			
Y646118	Stream	08V	535706	7139390			
Y646119	Stream	08V	535718	7139549			
Y646120	Stream	08V	535692	7139793			
Y646121	Stream	08V	535571	7139974			
Y646122	Stream	08V	535388	7140146			
Y646124	Stream	08V	535189	7140287			
Y646125	Stream	08V	534972	7140333			
Y646126	Stream	08V	534882	7140306			
Y646127	Stream	08V	534713	7140257			
Y646128	Stream	08V	534461	7140180			
Y646129	Stream	08V	534292	7140194			

Sample Descriptions, 2020 Program, GRANDMA Block

**Upper Rackla Project, Kootenay Silver Inc.**

Sample ID	Sample Type	UTM Zone	Easting (NAD 83)	Northing (NAD 83)	Date	Photo ID	Description
W612028	Rock	08V	546493	7131151	9-11-2020	Labelled	Fine grained metasediments, mod. Foliated. Limonitic fractures
W612029	Rock	08V	546455	7131033		Labelled	Carbonate-altered metaseds? Quartz stringers
W612036	Rock	08V	547311	7130522	9-10-2020	Labelled	Blurry photo; limonitic fine sediments?
W612040	Rock	08V	547097	7130662	9-10-2020	Labelled	Probable basalt. Moderately limonitic and weakly carb-altered
W612027	Rock	08V	546535	7131159		Labelled	Quartz vein, carbonate rimming and late qz-carb stockwork. In foliated metaseds?
Y624302	Rock	08V	547313	7131144			Meta Gabbro w/Qtz Calcite veinlets
Y624303	Rock	08V	547175	7131139			Gabbro with chalcopyrite/arsenopyrite
Y624309	Rock	08V	547631	7131174			
W612030	Soil	08V	547718	7130159			
W612031	Soil	08V	547560	7130256			
W612032	Soil	08V	547546	7130274			
W612033	Soil	08V	547471	7130349			
W612034	Soil	08V	547415	7130428			
W612038	Soil	08V	547264	7130529			
W612039	Soil	08V	547098	7130666			
W612041	Soil	08V	546998	7130716			
W612042	Soil	08V	546968	7130806			Originally listed as W642042?
W612043	Soil	08V	546917	7130884			
W612044	Soil	08V	546911	7131010			
Y646101	Soil	08V	548040	7130922			
Y646102	Soil	08V	547958	7130995			
Y646103	Soil	08V	547830	7131053			
Y646104	Soil	08V	547780	7131109			
Y646105	Soil	08V	547708	7131144			
Y646106	Soil	08V	547633	7131202			
Y646107	Soil	08V	547532	7131233			
Y646108	Soil	08V	547428	7131245			
Y646109	Soil	08V	547338	7131223			
Y646110	Soil	08V	547243	7131177			
Y646111	Soil	08V	547073	7131099			
Y646112	Soil	08V	546952	7131051			



**Appendix IV**

*Original Assay Certificates*

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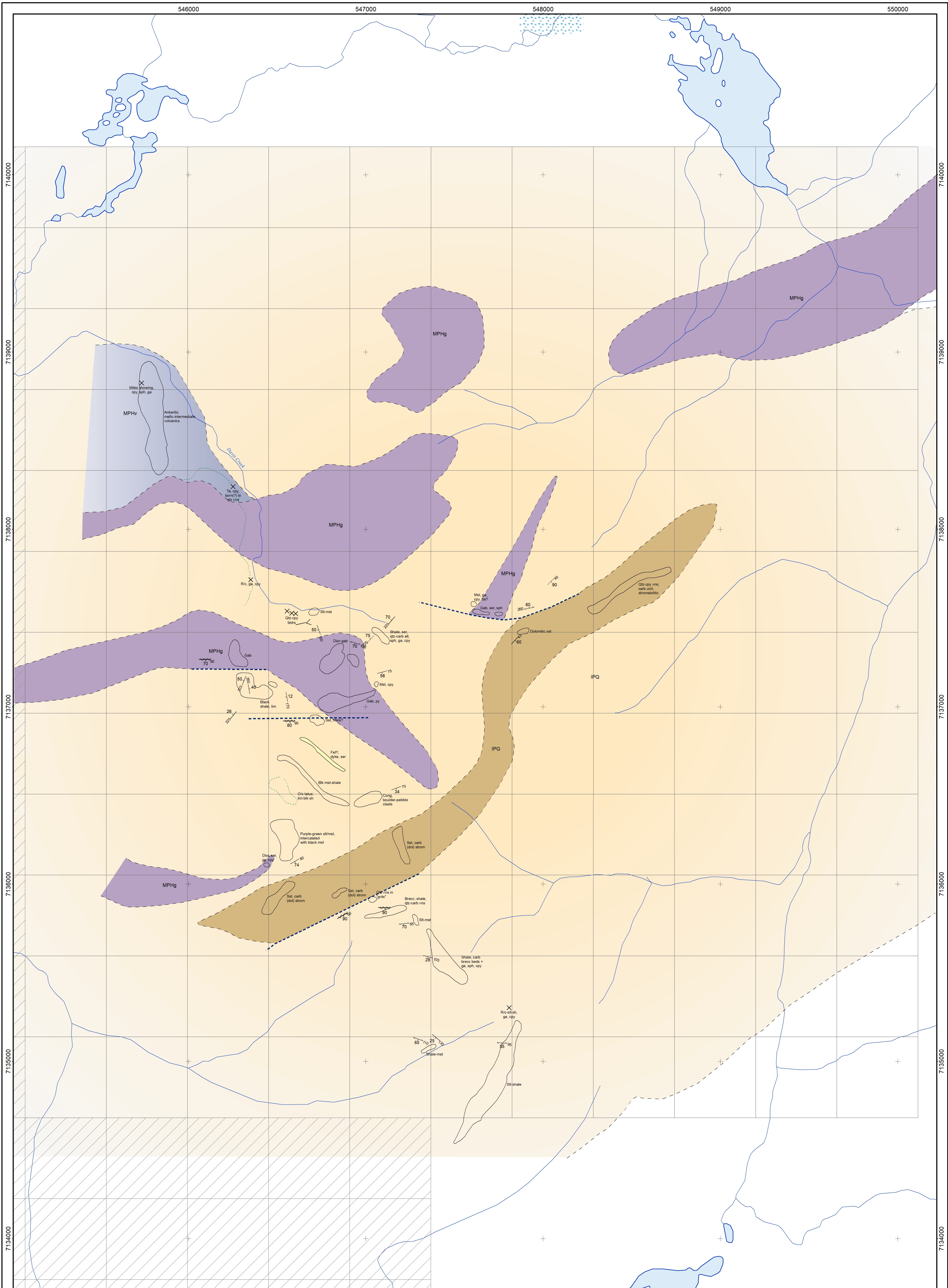
Y646102	0.047	6.1	12.4	1000	1.22	0.341	0.58	0.215	61.3	6.07	69.3	4.58	14.6	3	18.45	0.11	2.44	0.046	1.51	31.6	29.1	0.54	367	2.19	0.892	15.5	16.3	0.041	46.2	73.2	0.0005	0.02	1.54	10	0.425	2.37	127.5	1.09	0.047	8.6	0.49	0.685	2.65	156.5	1.85	11.55	86.7	82
Y646103	0.174	6.56	15.05	830	1.67	0.493	0.8	0.445	86.6	15	79.3	5.97	30.9	4.51	17.35	0.14	1.14	0.073	1.94	42.1	32.1	0.86	1370	1.8	0.876	14.5	29.4	0.103	45.6	104	0.0006	0.05	2.03	11.46	0.371	2.38	195	0.88	0.061	11.65	0.469	0.637	3.22	132	1.785	17.35	122.5	106
Y646104	1.565	4.19	4.81	810	1.27	0.24	2.07	0.294	38.2	7.88	41.2	4.37	32.8	2.23	10.2	0.1	1.505	0.051	0.99	21.3	18.9	0.55	709	0.9	0.575	6.83	17.85	0.186	22.9	52	0.0004	0.21	0.9	9.86	0.702	1.21	136	0.48	0.04	5.97	0.235	0.447	2	68.7	0.858	16.35	54.5	52.1
Y646105	0.899	4.02	5.95	580	1.22	0.249	2.12	0.843	38.4	9.66	40.4	4.66	36.5	2.33	9.74	0.1	1.55	0.046	1.1	20.9	19.3	0.86	718	0.91	0.484	6.79	18.85	0.113	27.2	67.2	0.0004	0.19	1.24	9.43	0.499	1.27	109.5	0.47	0.034	5.94	0.228	0.416	1.93	67.1	0.888	15.25	97.6	50.9
Y646106	0.838	6.91	12.6	980	1.81	0.532	0.65	0.219	65.9	18.75	77.1	7.55	38	4.94	17.7	0.13	2.49	0.092	1.63	32.2	37.8	0.78	1695	2.08	0.979	13.9	27.1	0.072	53.4	84	0.0007	0.04	2	11.75	0.57	2.2	138	0.59	0.059	10.1	0.451	0.668	2.77	146	1.625	13.2	113	85.9
Y646107	1.415	7.65	26.6	810	3.24	1.065	0.74	0.217	91.4	28.2	72.5	15.3	138.5	6.3	19.25	0.2	2.81	0.126	2.59	46.6	36.1	0.87	1750	1.82	0.778	11.85	46.8	0.079	54.2	129.5	0.0011	0.05	4.82	19.25	0.586	2.66	122.5	0.85	0.245	18.15	0.393	0.911	3.73	127.5	1.9	40.8	111.5	96.4
Y646108	0.288	5.9	14.45	970	1.19	0.275	0.61	0.206	57.9	6.7	67	4.29	10.9	3.9	16.35	0.12	2.16	0.05	1.44	29.4	34.1	0.61	136	1.62	0.911	13.65	16.75	0.04	23.5	71.4	0.0005	0.03	1.29	9.05	0.303	2.04	128	0.91	0.047	8.62	0.424	0.594	2.34	139	1.56	10.55	75.8	77.7
Y646109	1.56	6.99	36.4	760	2.17	0.867	1.43	0.356	62.1	21.9	67	13.05	104	5.21	16.85	0.16	2.32	0.139	2.15	31.8	32.4	0.88	1180	4.24	0.713	9.63	47.9	0.113	64	121.5	0.0017	0.1	12.65	18.9	2.18	2.1	130.5	0.67	0.128	12.2	0.316	0.91	6.85	138.5	1.39	30.9	194.5	85.6
Y646110	0.537	5.82	31.3	610	1.81	0.635	1.47	0.444	50.2	20.2	52.9	7.12	32.5	4.56	14.05	0.12	1.965	0.084	1.63	25.7	33.6	0.91	1395	1.83	0.656	9.17	28.2	0.093	68.3	91.7	0.0011	0.09	3.7	16.25	1.665	1.7	101	0.59	0.08	8.34	0.316	0.591	2.5	129.5	1.115	21.4	204	62.3
Y646111	0.397	6.49	17.5	660	1.46	0.344	0.94	0.914	77.4	20.2	74.8	7.14	106.5	5.2	15.7	0.12	2.04	0.087	1.62	23.6	40.6	1.13	858	1.59	0.658	9.47	37.8	0.075	179.5	96.6	<0.0004	0.05	3.23	15.05	0.317	1.85	87.9	0.66	0.065	7.64	0.35	0.657	1.95	158	1.18	12.15	481	65
Y646112	0.945	1.53	2.07	238	0.63	0.115	3.47	3.02	11.15	3.75	12.1	1.42	74.3	0.84	3.44	<0.05	0.59	0.02	0.32	6.21	4.5	0.31	612	1.04	0.248	1.775	9.32	0.138	15.1	14.35	0.0007	0.28	1.31	4.17	0.835	0.39	102.5	0.12	0.019	1.775	0.074	0.14	0.8	20.4	0.309	7.6	230	20.6
Y624090	0.11	6.25	18.2	910	1.44	0.345	0.74	0.231	62.4	12.35	70.8	3.88	47.9	4.34	15.6	0.12	2.45	0.064	1.52	31	30.6	0.75	730	2.61	0.95	13.05	27.6	0.074	32.1	77.5	0.0004	0.04	2.79	12.35	0.754	1.85	143.5	0.88	0.074	9.54	0.437	0.621	2.81	147.5	1.41	14.4	103	77.6



**Appendix V**

*Property Geology Map, BOP 1-132 block, 2019 Program*

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**LEGEND**

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

**Structure**

- Bedding
- Foliation
- Shear/fault

**Lithologies**

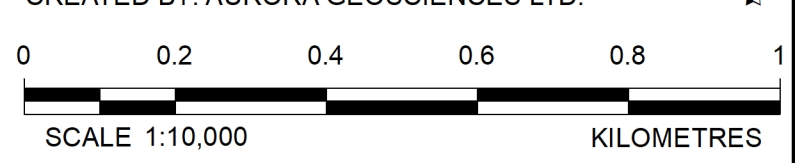
- Late Proterozoic (?) Felsic dykes, sericitic
- Mid-Late Proterozoic (Ectasian) MPHv: Hart River Fm: Mafic volcanics
- MPHg: Hart River Fm: Diorite to gabbro
- Early-Mid Proterozoic (Strathairn) IPQ: Quartet Group: Black shale, mudstone, siltstone, minor conglomerate
- IPG: Gillespie Group: Dolostone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