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BC Geological Survey

Assessment Report  
Title Page and Summary

TYPE OF REPORT [type of survey(s)]: geochemical and geological

TOTAL COST: \$6,888.21

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Date: 2023.03.15 12:08:37 -0700

NOTICE OF WORK PERMIT NUMBER(S)/DATE(S): \_\_\_\_\_ YEAR OF WORK: 2022

STATEMENT OF WORK - CASH PAYMENTS EVENT NUMBER(S)/DATE(S): 5971161

PROPERTY NAME: Carp

CLAIM NAME(S) (on which the work was done): Carp

COMMODITIES SOUGHT: copper

MINERAL INVENTORY MINFILE NUMBER(S), IF KNOWN: \_\_\_\_\_

MINING DIVISION: Cariboo

NTS/BCGS: 093J/12

LATITUDE: 54.651 ° \_\_\_\_\_ ' \_\_\_\_\_ " LONGITUDE: -123.55 ° \_\_\_\_\_ ' \_\_\_\_\_ " (at centre of work)

OWNER(S):

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\_\_\_\_\_  
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PROPERTY GEOLOGY KEYWORDS (lithology, age, stratigraphy, structure, alteration, mineralization, size and attitude):

Upper Cretaceous to Eocene Wolverine Metamorphic Complex, Quesnellia

REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT REPORT NUMBERS: \_\_\_\_\_

36073

TYPE OF WORK IN THIS REPORT	EXTENT OF WORK (IN METRIC UNITS)	ON WHICH CLAIMS	PROJECT COSTS APPORTIONED (incl. support)
GEOLOGICAL (scale, area)			
Ground, mapping			
Photo interpretation	lineament mapping	1093012	\$2,559.38
GEOPHYSICAL (line-kilometres)			
Ground			
Magnetic			
Electromagnetic			
Induced Polarization			
Radiometric			
Seismic			
Other			
Airborne			
GEOCHEMICAL (number of samples analysed for...)			
Soil			
Silt			
Rock			
Other	Vegetation (9) 63 elements	1093012	\$4,328.83
DRILLING (total metres; number of holes, size)			
Core			
Non-core			
RELATED TECHNICAL			
Sampling/assaying			
Petrographic			
Mineralographic			
Metallurgic			
PROSPECTING (scale, area)			
PREPARATORY / PHYSICAL			
Line/grid (kilometres)			
Topographic/Photogrammetric (scale, area)			
Legal surveys (scale, area)			
Road, local access (kilometres)/trail			
Trench (metres)			
Underground dev. (metres)			
Other			
		<b>TOTAL COST:</b>	<b>\$6,888.21</b>

**GEOCHEMICAL AND GEOLOGICAL SURVEY**

**ON THE  
CARP PROPERTY**

**CARIBOO MINING DIVISION**

**NTS 093J/12**

**54.651° N**

**-123.551° W**

**WGS 84**

**OWNER/OPERATOR: DIANA BENZ**

**CLAIMS WORKED:**

1093012

Prepared by: Diana Benz, PhD  
Takom Exploration Ltd.

Date March 15, 2023

## EXECUTIVE SUMMARY

The Carp Property is located within the Nechako Plateau physiographic region of the Interior Plateau approximately 50 kilometres northwest of the district municipality of Fort St James, BC. Local First Nations include the Lheidli T'enneh Nation and the Nak'azdli Band (list is preliminary based on current government information and is not conclusive). The Property is comprised of one mineral tenure, 100% owned by Diana Benz, and totals approximately 280.68 hectares of land within the 093J/12 NTS map sheet. The Property is within an area of gentle relief east of Gates Lake and Muskeg River. This region experiences typical central British Columbia weather with cold, snowy winters and cool to warm summers. Mineral exploration may be conducted on a year-round basis, although at higher elevations, the season may be dependent on the snowpack levels and/or stability.

Historical work within the current Carp Property includes regional airborne magnetic and electromagnetic geophysical surveys, regional mapping and a local Soil-Gas-Hydrocarbon (SGH) survey. In general, the project area sits on a large regional magnetic high with high contrast magnetic contours trending in the northeast-southwest direction. The electromagnetic survey shows a large VTEM (conductive) anomaly underlies the Carp Project while local VTEM low is located to the southeast. In 2016, a local SGH was conducted on the Dark Horse Property to search for a porphyry deposit similar to Mount Milligan. A number of high Redox-Sulfide, Copper and Gold Ratings were noted with the Redox-Sulfide Rating anomaly number 14 located on the current Carp Property.

The Carp Property is located within the Intermontane Tectonic Belt. The main lithological unit recognized within the Project area is the Upper Cretaceous to Eocene Wolverine Metamorphic Complex described as muscovite and biotite schist, paragneiss; minor quartzite and marble as well as undifferentiated granitic pegmatite, granodiorite and rhyolite, amphibolite, calcsilicate and marble.

The geological setting, along with biogeochemical mineralization and alteration within the Project area, may be consistent with a residual melt pegmatite Lithium-Caesium-Tantalum Pegmatite Deposit, although more information is required before determining the deposit model. The geological setting consists of pegmatite rocks located between two regionally mapped faults and a possible small porphyry-type igneous body to the south. The Carp Project is situated on a localized silt sample copper high within notable gold, silver, copper, lead, zinc, cobalt and lithium anomalies found in biogeochemical samples as well as a soil gas hydrocarbon (SGH) Redox-Sulfide Zone anomaly.

The 2022 program consisted of lineament mapping, as well as a field program to groundtruth the follow-up on the regional silt samples, and the historical SGH survey, in order to test the feasibility of a soil sampling grid, and collect biogeochemical samples. One prospector and one forestry specialist/field assistant traversed the Property taking samples, geological observations and photographs. Samples were collected within predefined areas derived from lineament mapping along accessible resource roads and were based on the previous SGH survey. A biogeochemical sampling of lodgepole pine tree needles revealed and confirmed areas anomalous for gold, silver, copper, lead, zinc, cobalt, and lithium.

**Carp Tree Needle Sample Highlights (concentrations are in ppb)**

Sample ID	Zone	Au	Ag	Cu	Pb	Zn	Co	Li
CP22TR01	High Gold, Copper, Lead, Cobalt & Lithium	5.5	44	4070	3800	50900	1770	280
CP22TR04	High Silver	0.7	103	3580	620	62000	332	60
CP22TR09	High Zinc	0.3	15	2540	140	64000	214	40

Future work should focus on exploring the southern portion of the Property, expanding and infilling the biogeochemical grid, an induced polarization/magnetic geophysical survey over the zones of biogeochemical interest followed up by a drilling program to determine till depth, stratigraphy and potential mineralization. Soil sampling within this area is not recommended due to the lack of a well-developed soil horizon and the predominance of till cover.

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## 1. INTRODUCTION

### 1.1 Location and Access

The Carp Property is located within the Cariboo Mining Division of east-central British Columbia (BC) approximately 50 kilometres northwest of the district municipality of Fort St James, 82 kilometres southeast of the district municipality of Mackenzie, 100 kilometres north by northwest of the city of Prince George and 600 km north of Vancouver (Figure 1). Local First Nation traditional territories include the Lheidli T'enneh Nation and the Nak'azdli Band (the list is preliminary based on current government information and is not conclusive). Nearby infrastructure includes a major BC Hydro power line that runs along Highway 97 (Hart Highway) from Mackenzie to Prince George approximately 50 kilometres east of the Property with the BC Hydro Kennedy Substation located south of Mackenzie. Railway lines are located approximately 20 kilometres south with access between Prince George and Fort St James. The Kitimat Deep Water Port Railway Connection is located 340 km west and the Prince Rupert Deep Water Port Railway Connection is 440 km west.

The Carp Property is accessible via resource roads from the unincorporated settlement of Bear Lake. Directions to the Property are as follows: from Prince George, head north approximately 75 km along Highway 97 to Bear Lake. Turn left onto the Davie Muskeg Forest Service Road. At approximately 67.5 kilometres (277 km marker) is a turn-off to the left onto the 8600 Road accessing the Gates Lake Recreation Site. The 8600 Road extends past the Gates Lake Recreation Site to provide access to the centre of the Property.

Helicopter access is also available using charter companies based in Fort St James, Mackenzie and Prince George. Both Mackenzie and Prince George are situated along Highway 97 and each community has a district population between 3,000 and 74,000. Fort St James is located along Highway 27 with a population of approximately 1,500. Most services and supplies are available in all three of these resource-based communities.

Timber harvesting is ongoing and its associated road construction provides access to the local area. Cut blocks of harvested timber are located throughout the Property.

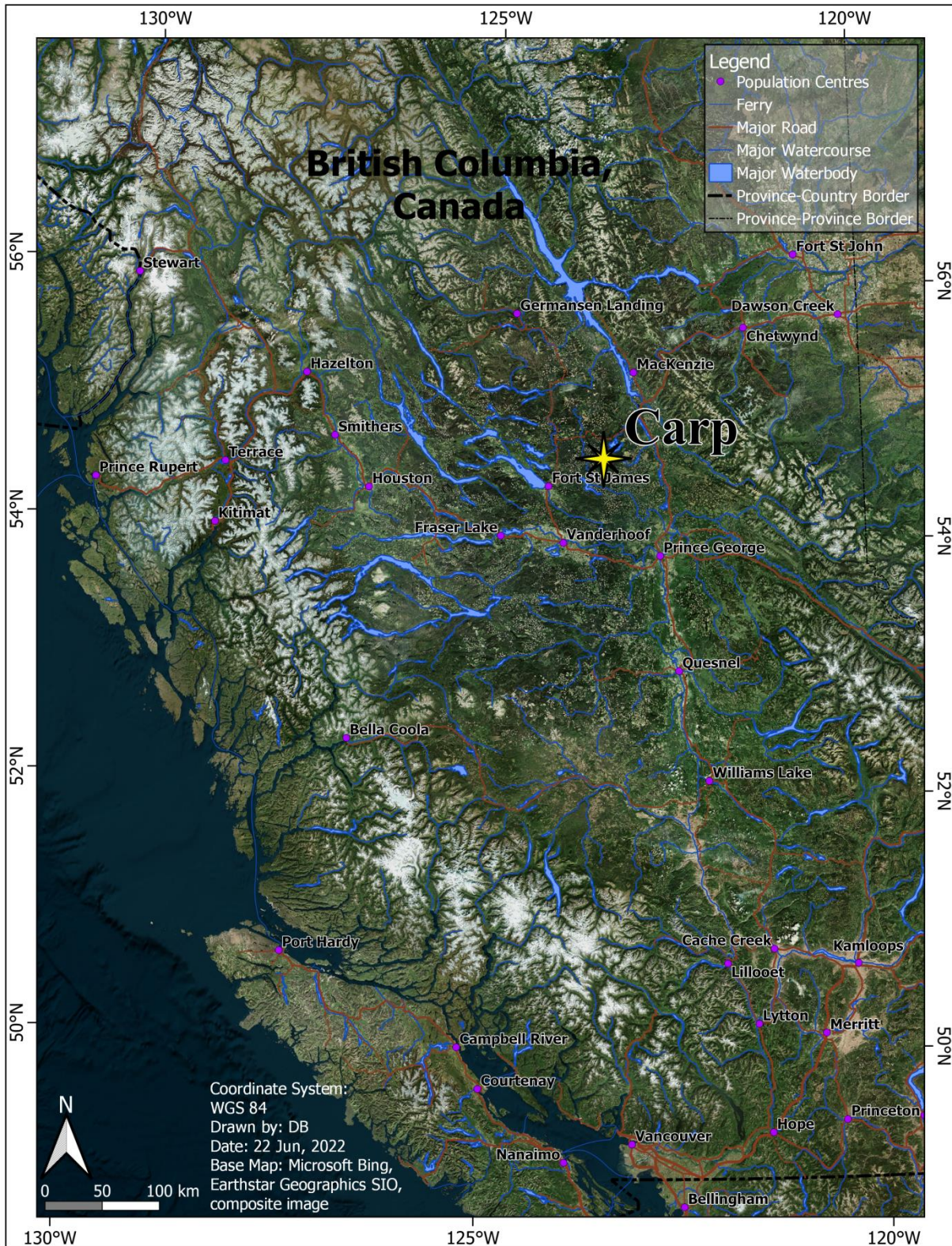


Figure 1 Carp Property Location

## 1.2 Physiography and Climate

The Carp Property is located within the Nechako Plateau physiographic region of the Interior Plateau in central British Columbia (Holland, 1976). The Property is within an area of gentle relief east of Gates Lake and Muskeg River. This area primarily consists of large expanses of flat or gently rolling country that remains almost completely unmarred by watercourse incisions in some areas (Holland, 1976).

Elevations are greater than 880 metres above sea level in the north and less than 880 metres in the southern area of the Property. The most notable topographic feature on the Property is an eastern arm of the Muskeg River in the south.

This area consists of the Sub-Boreal Spruce biogeoclimatic zone at lower elevations and Engelmann Spruce -- Subalpine Fir at higher elevations. Lower elevations are well forested by hybrid white spruce (*Picea engelmannii x glauca*) and subalpine fir (*Abies lasiocarpa*) (Meidinger et al., 1991). Paper birch (*Betula papyrifera*) can be found in moist, rich areas whereas Douglas fir (*Pseudotsuga menziesii*) occurs on warm, dry sites. Lodgepole pine (*Pinus contorta*) stands typically occur in drier areas, within mature forests, as well as in monocultures within forestry re-planted areas. Understories consisting of huckleberry, highbush cranberry, oak fern and devil's club can be found in this region. At higher elevations, the area is well forested by Engelmann spruce (*Picea engelmannii*) and subalpine fir (*Abies lasiocarpa*) (Coupé et al., 1991). Spruce often dominates the canopy of mature stands, while subalpine fir comprises the understory. The shrub layer is poorly to moderately developed with a relatively well-developed herb layer and a moderate moss layer. Many species of wildlife can be found in this area including black and grizzly bears, mountain goats, moose, mule deer, lynx, wolf and many small mammals as well as a variety of birds (Meidinger et al., 1991). There are no known designated wildlife habitat areas that overlap with the Property.

Mineral exploration may be conducted on a year-round basis, depending on the activity, and may be dependent on the snowpack levels and/or stability. The climate is typical of central British Columbia with cold, snowy winters and cool to warm summers. Summer temperatures average a daytime high of 15°Celsius (C) with occasional temperatures reaching the 7°C range. December through February sees average sub-zero temperatures with lows reaching -10°C from November through March. The annual average precipitation is 468 millimetres including winter snowfall. Snowfalls can occur between November and March when snowpack can linger into late June and early July.

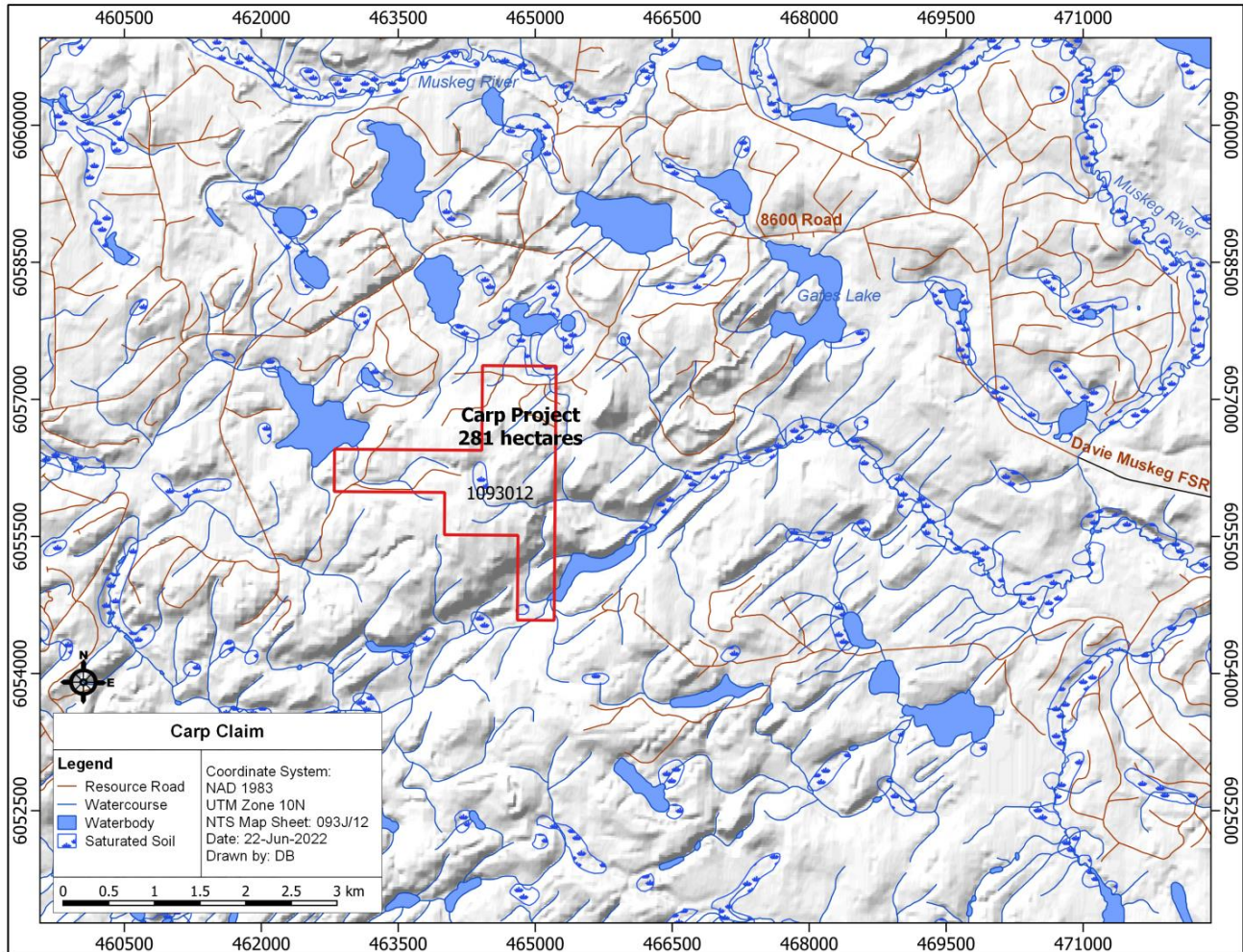
The Carp Project area overlaps with two trapline areas and one outfitter concession.

## 1.3 Property Status and Ownership

The Carp Property is comprised of one mineral tenure covering approximately 280.6806 hectares of land within the 093J/12 NTS map sheet (Figure 2). The Property is located between WGS84 latitudes 54.662° and 54.637° North and longitudes 123.576° and 123.538° West. The centre of the claim block is located at 54.651° North and -123.551° West. The tenure is 100%-owned by Diana Benz with the anniversary date shown in Table 1.

**Table 1 Carp Mineral Tenure**

<u>Tenure No.</u>	<u>Claim Name</u>	<u>Issue Date</u>	<u>Good to Date</u>	<u>Area (ha)</u>
1093012	CARP	2022-FEB-04	2023-FEB-04	280.6806
			Total Area (ha)	280.6806



**Figure 2 Carp Property Mineral Tenures**

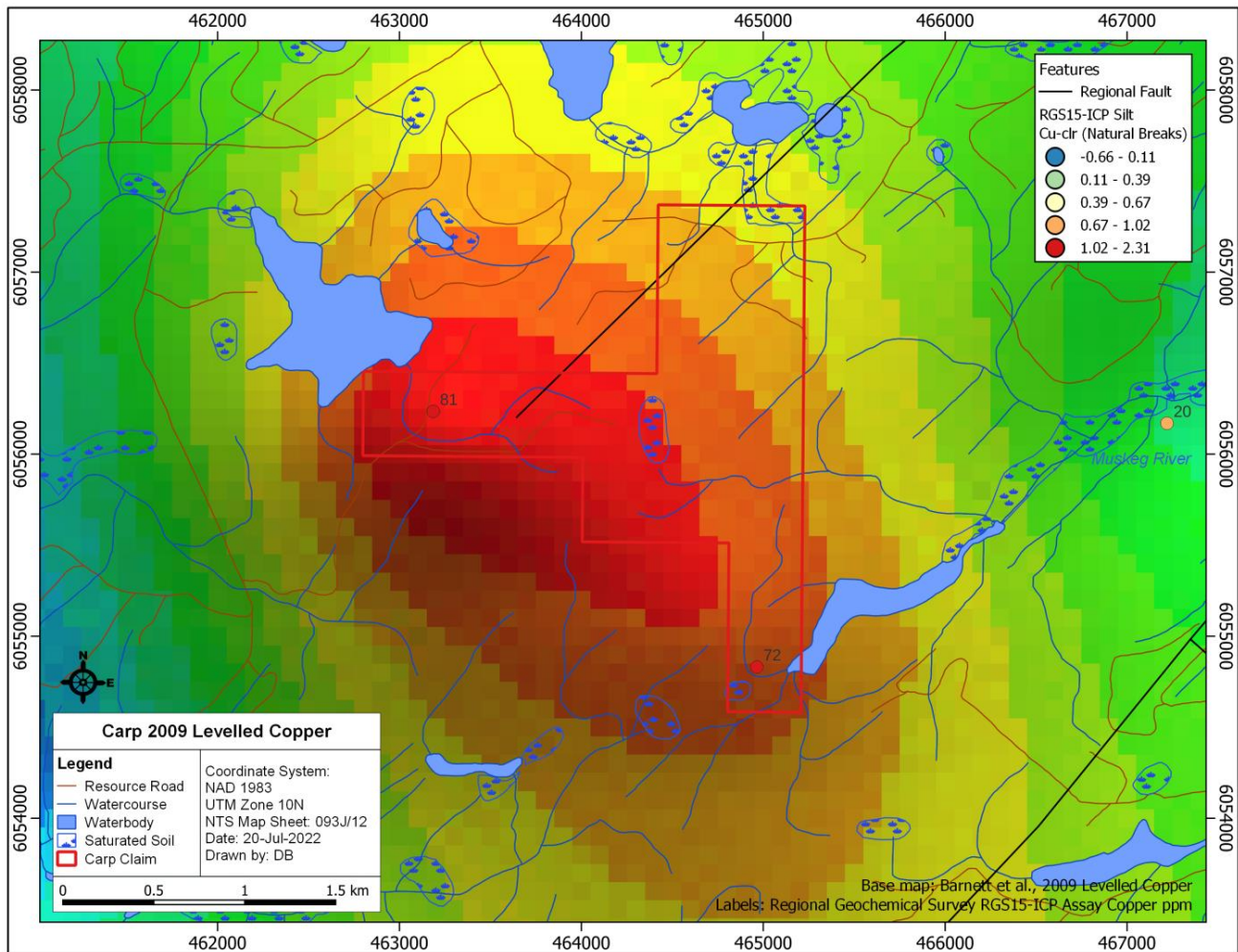
## 2. EXPLORATION HISTORY

The Carp Project lies within the underexplored Quesnellia (Quesnel Terrane or Quesnel Trough) of central British Columbia, also known as Geoscience BC's QUEST (2007-2010) project area and their more recent Central Interior Copper-Gold Research: Surficial Exploration Project (2018-2022). A reconnaissance project, which followed up on magnetic anomalies with selective biogeochemical sampling, was conducted by Placer Dome Inc in 1991 over a large area including the current Carp claims (Goodall and Fox, 1992). The Carp claim is part of a large regional magnetic high with high contrast magnetic contours trending in the northeast-southwest direction. They targeted magnetic contours greater than 4500 gamma and one target was chosen along the southeastern border of the current Carp Claim.

The historical exploration work that occurred within the current Carp Project area is listed in Table 2.

**Table 2 Summary of Previous Work**

<u>Year-ARIS- MINFILE</u>	<u>Claim Name- Operator- Author</u>	<u>Exploration Activities</u>
1992- PF860355	Weedon Lake Recce Project – Placer Dome Inc – Goodall & Fox	In 1991, Placer Dome conducted a reconnaissance program in the Weedon Lake area called Project 818. The program consisted of 385 bark, 80 tree top, 4 cones, 6 silt and one rock sample collected from 8 target areas identified as magnetic highs greater than 4,500 gamma based on a regional aerial magnetic survey conducted by Natural Resources Canada. One 4500+ gamma contour was identified southeast of the current Carp claim. No samples were collected within the current Carp claims area.
2009- GBC2009-3	QUEST – Geoscience BC – Barnett & Williams	In 2007 and 2008, Geoscience BC compiled publicly available topographic, geological, geophysical, geochemical and mineral occurrence data over a 150,000 square kilometre area that included the current Carp claim. An airborne gravity and electromagnetic data survey was flown and 2,100 new lake and stream sediment samples as well as 5,000 older stream sediment sample pulps were re-assayed. Barnett & Williams processed the geochemical data to show element values levelled to inferred bedrock. A large copper anomaly occurs within the current Carp claim (Figure 3).
2015- 36073	Dark Horse – KGHM International Ltd & Rio Minerals Ltd - McKinley	In 2015, personnel from KGHM and Rio Minerals travelled to the Dark Horse Property to collect 1,976 soil gas hydrocarbon (SGH) samples, at 1,815 sample sites including 161 field duplicates. The samples were primarily collected along resource roads.  A Mount Milligan style porphyry was the Soil Gas Hydrocarbon (SGH) Pathfinder Class template used for interpreting the results. The results are given a subjective rating, from 0 to 6, relative to the similarities of other SGH signatures from previous research and case studies over known ore bodies. Typically, no other geochemical, geophysical or geological information is given to the lab to assist with the ratings. Overall ratings for the Dark Horse Project included 5.0 out of 6.0 for Apical SGH Anomalies of Possible Copper Zones, a “REDOX” rating of 5.0 out of 6.0, and Apical SGH Anomalies within Redox Zones indicating possible centres of porphyry style deposits with a “SULFIDE” signature rating of 4.0 out of 6.0. A total of 15 Redox-Sulfide Zones were identified with one zone, labelled 14, located within the current Carp claim (Figure 4).



**Figure 3 Copper levelled to regional geology (after Barnett, et al., 2009)**

A Soil Gas Hydrocarbon (SGH) survey is similar to a soil survey in that it uses near-surface material to assist with the identification of areas that may exhibit potential mineralization, however, the samples are assayed for the types of hydrocarbons compounds present rather than an element concentration. The interpretation of the results is based on subjectively identifying anomalies as determined by their shape and the types of compounds known to be related to the type of mineralization or target(s) chosen by a client. This method, therefore, relies on the expertise of the reviewer, a consistent grid of sample locations as well as a known mineralization or deposit model.

The SGH survey on the Dark Horse Property was interpreted based on a Copper-Gold Porphyry target as described in the United States Geological Survey (USGS) Open-File Report 2008-1321 Preliminary Model of Porphyry Copper Deposits (McKinley, 2016). A total of five SGH Pathfinder classes were used: Redox, Sulfide, Copper, Gold and Platinum (Figure 4). The Redox Pathfinder Class (Figure 5) is based on known SGH conditions associated with the deep chlorite-quartz-magnetite-K-feldspar alteration zone of an idealized porphyry copper deposit. The size of the Redox Class anomalies is thought to be relative to the depth of the potential ore body rather than the amount of mineralization. The shape of

the Redox Class anomaly is also thought to be related to depth with symmetrical SGH anomalies depicting centrally-located mineralization directly related to an intrusive source and less symmetrical anomalies associated with porphyry-style mineral fluid precipitation. The Sulfide Class was used to locate the central low total sulfide zone (Figure 6) whereas the Copper Class was used to locate potential ore zones (Figure 7). The Gold Class was used for identifying potential porphyry centres and/or flanks (Figure 8) and the Platinum Class indicated lineaments with the potential for narrow or vein-like structures (Figure 9).

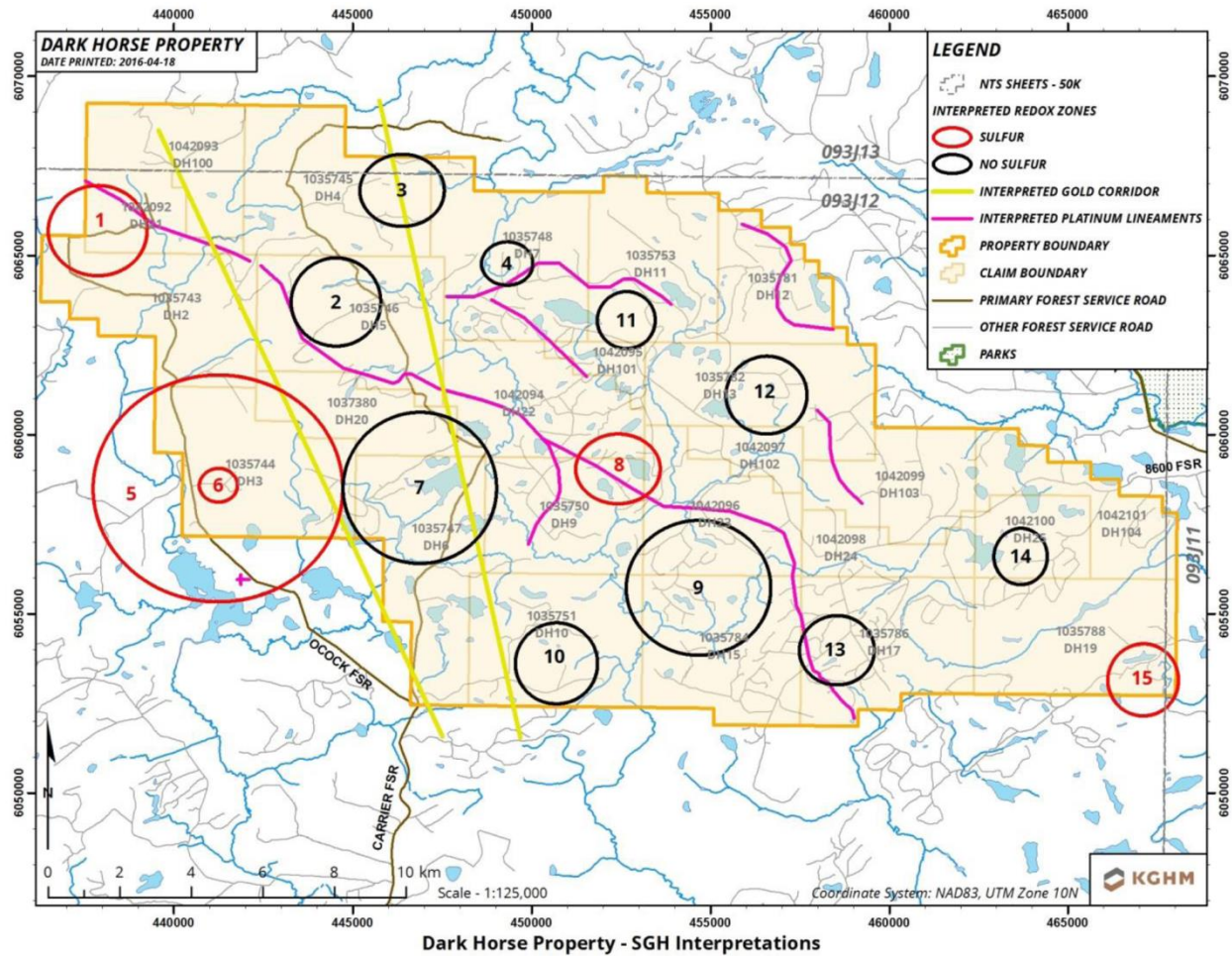
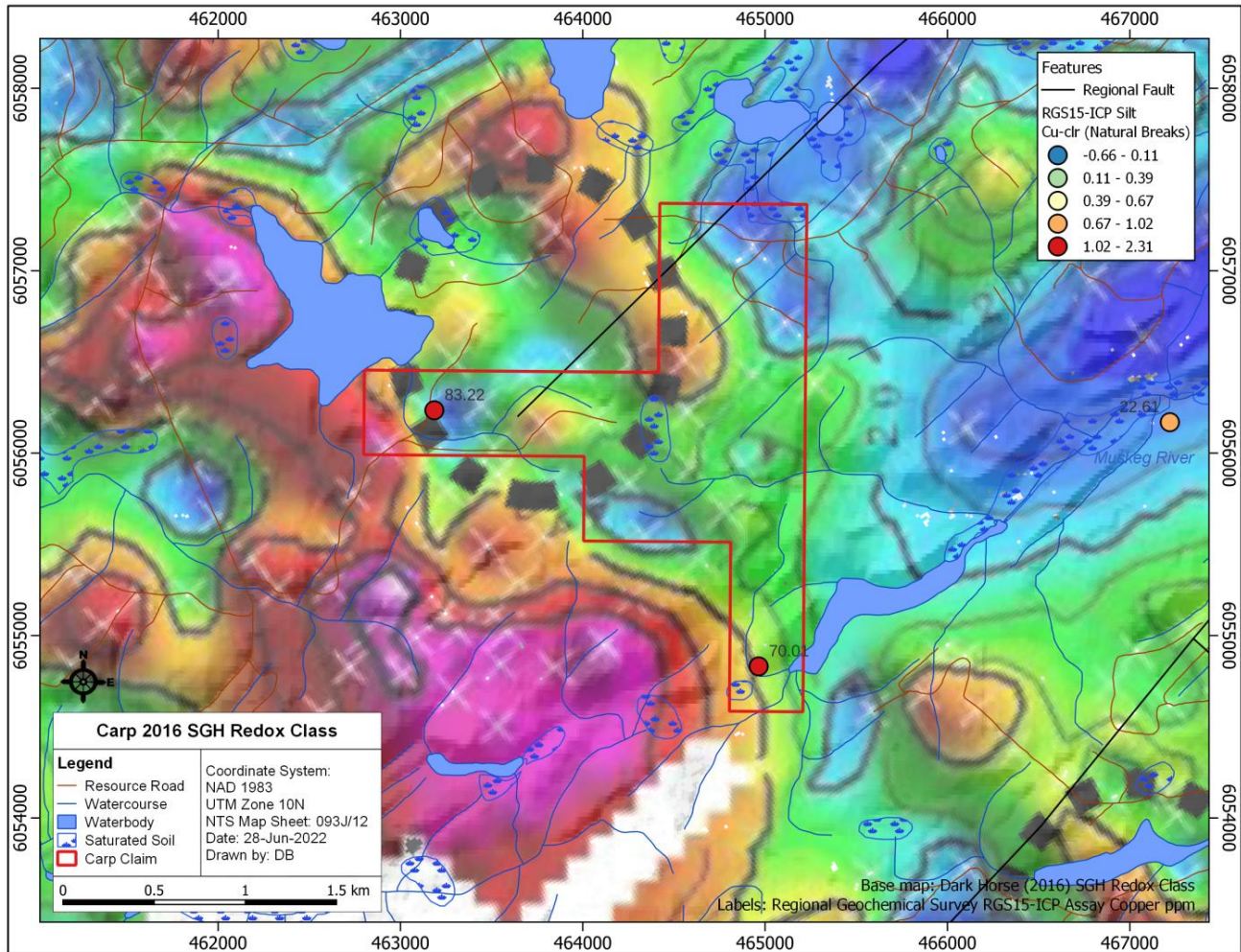
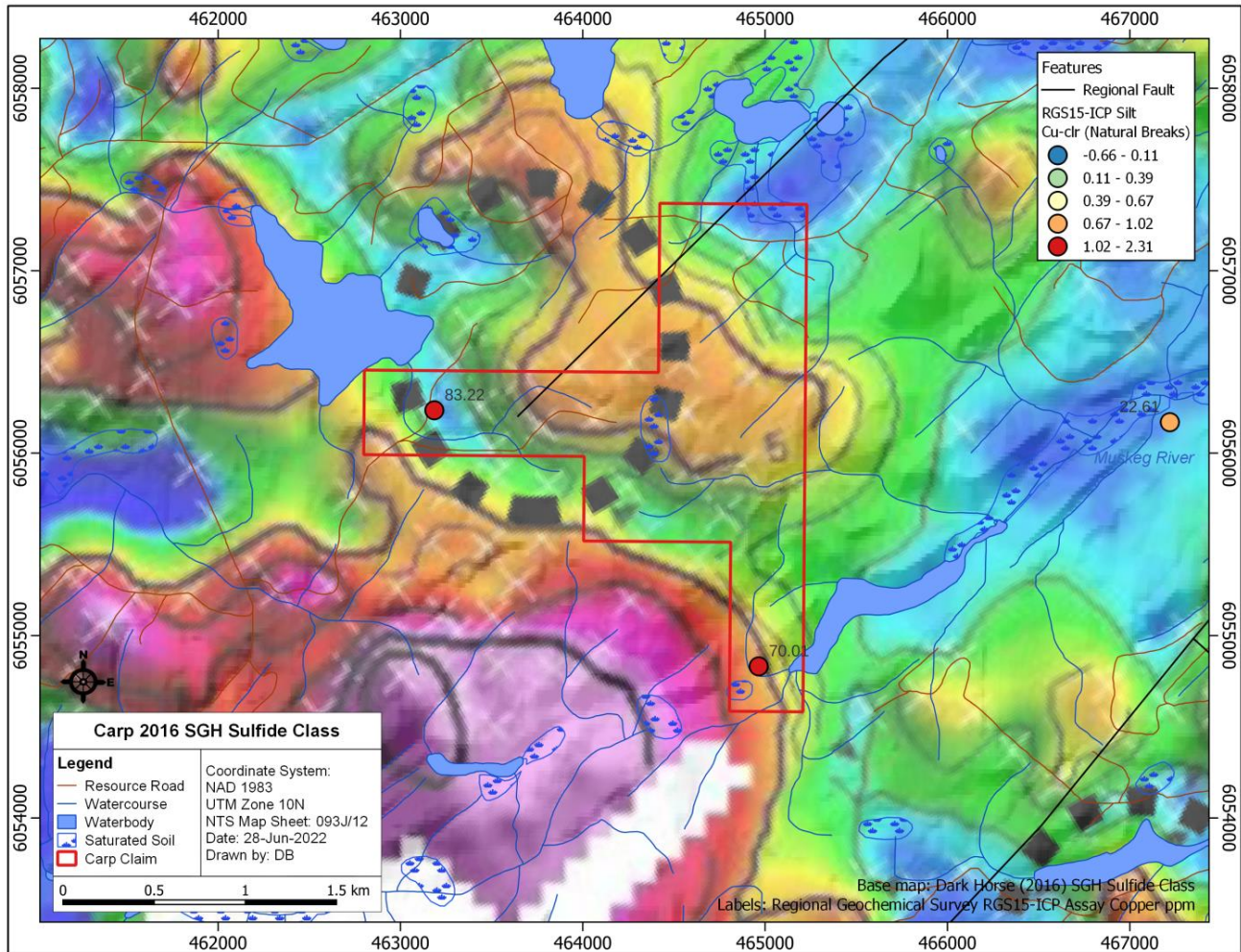


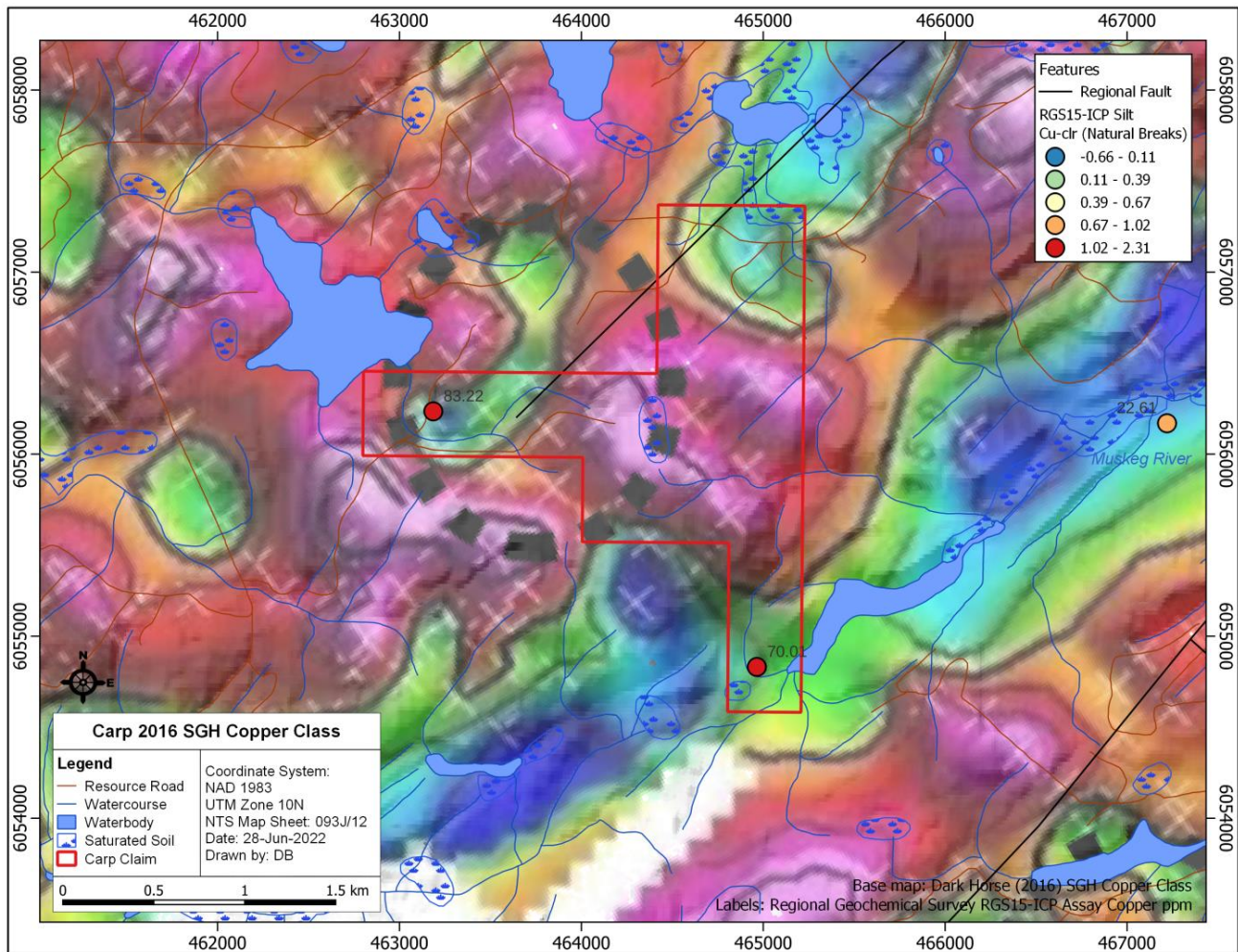
Figure 4 Historical soil gas hydrocarbon survey on the Dark Horse Property (2016) with anomaly 14 overlapping with the current Carp claim. The east end was identified with the potential for Copper-based porphyry deposits as opposed to the west which was identified for Copper-Gold porphyry deposits







**Figure 6 Dark Horse 2016 SGH Sulfide Class results within Carp Project Area showing Regional Geological Survey Copper Values (ppm) – Dotted Line indicates the location of lab-interpreted Redox Class Anomaly**



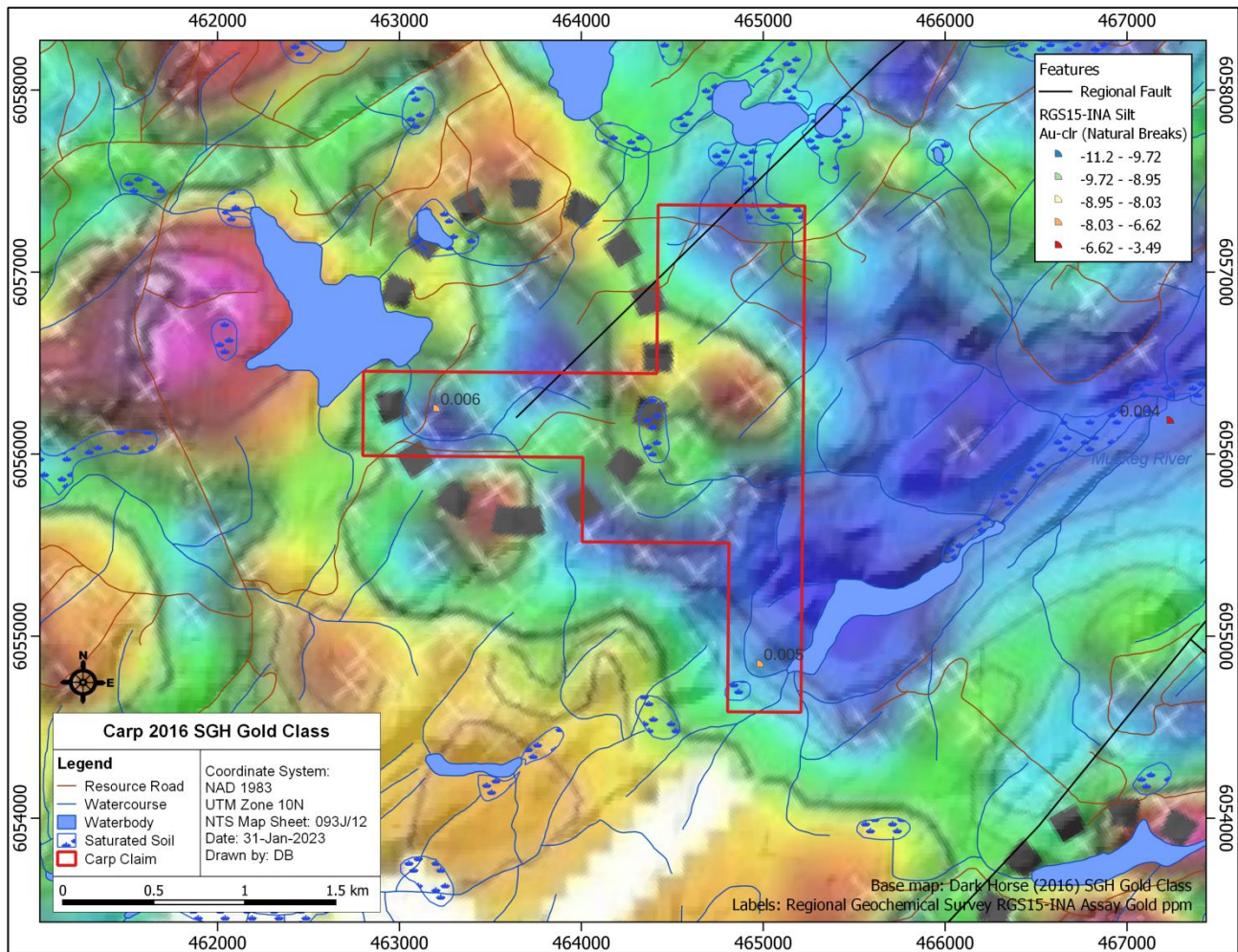
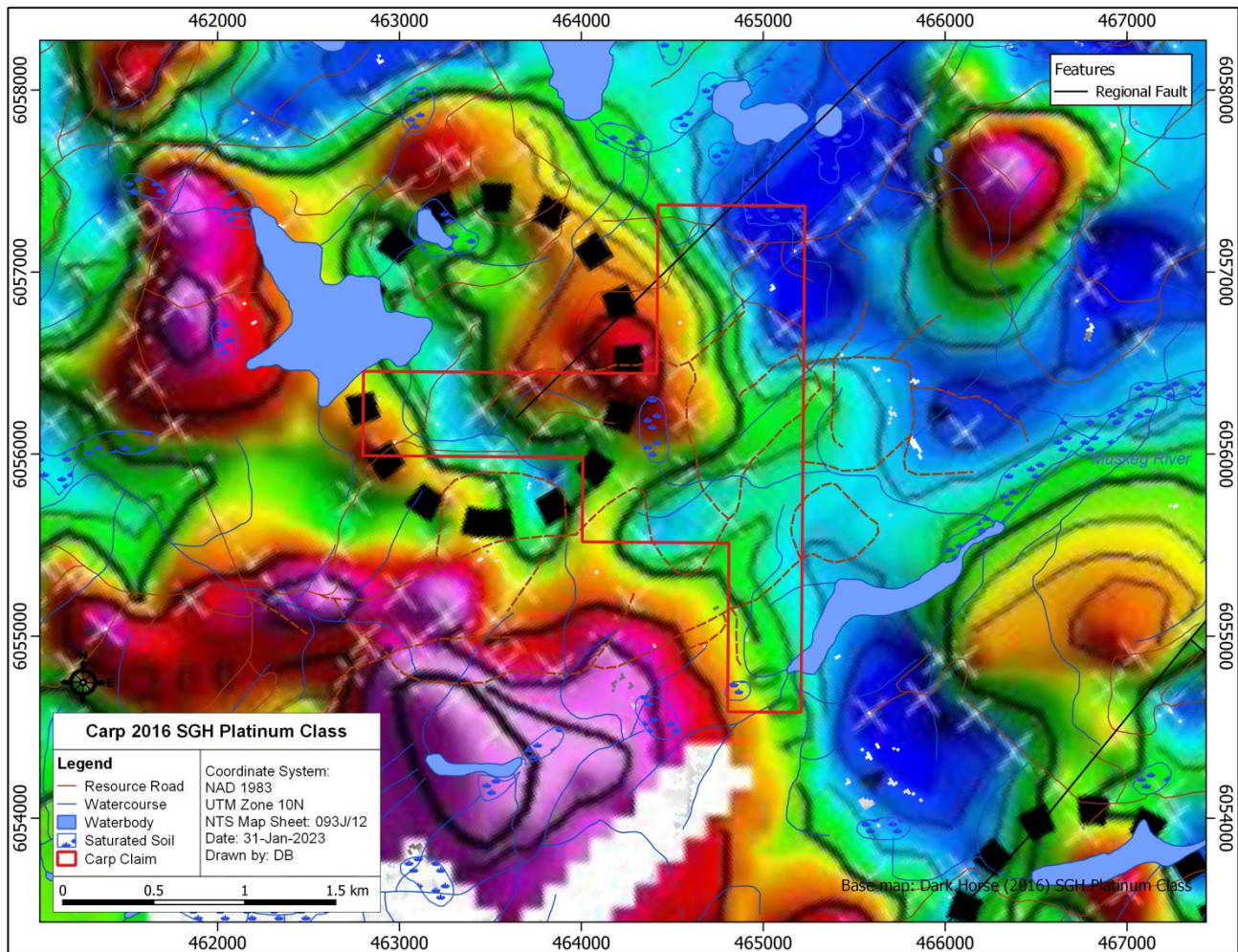


Figure 8 Dark Horse 2016 SGH Gold Class results within Carp Project Area showing Regional Geological Survey Gold Values (ppm) – Dotted Line indicates the location of lab-interpreted Redox Class Anomaly



**Figure 9 Dark Horse 2016 SGH Platinum Class results within Carp Project Area– Dotted Line indicates the location of lab-interpreted Redox Class Anomaly**

Regional geophysical surveys were conducted in the area with survey flight line spacings between 200 and 4000 metres by Natural Resources Canada and Geoscience BC. The resolutions of the geophysical data are too coarse for detailed interpretations within the Carp Project area.

In general, the Carp Project area sits on a high contrast magnetic transitions zone that increases in intensity to the north and southwest (Canada 200 metre magnetic survey in 2018 - first vertical derivative) indicating a change in lithology, structure or lineament (Figure 10). A Versatile Time Domain Electromagnetic (VTEM) and a high-definition airborne gravity survey were flown by Geoscience BC, as part of the Quesnellia Exploration Strategy (QUEST) Project in 2007 and 2008 (4000 metre spacing). These surveys show that the Carp project sits on the transition zone of a conductive anomaly (high to the west and a circular low to the east; Figure 11), and a moderate gravity zone (Figure 12).

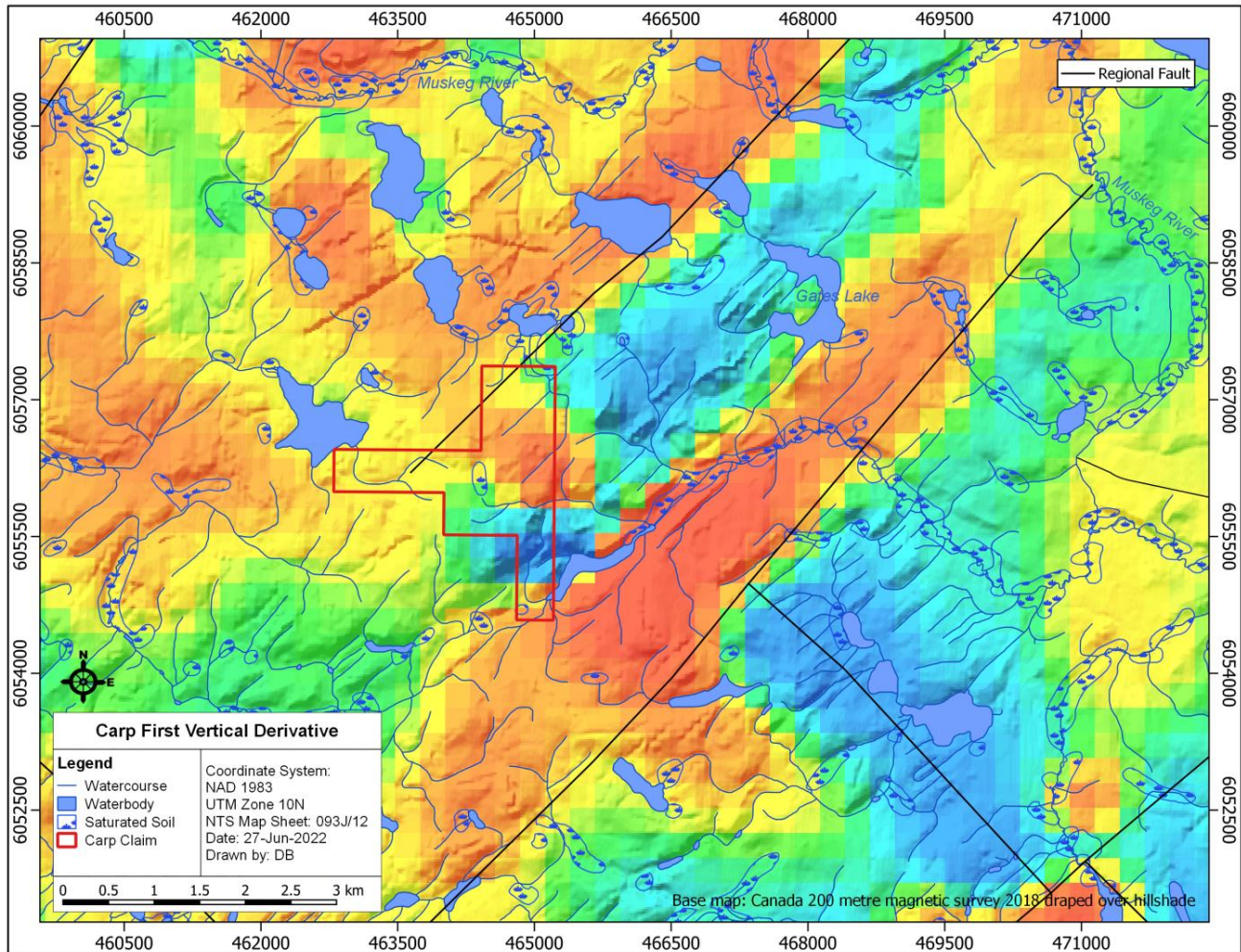


Figure 10 Carp Project Regional First Vertical Derivative Magnetic (2018 Canada 200 meter magnetic survey)

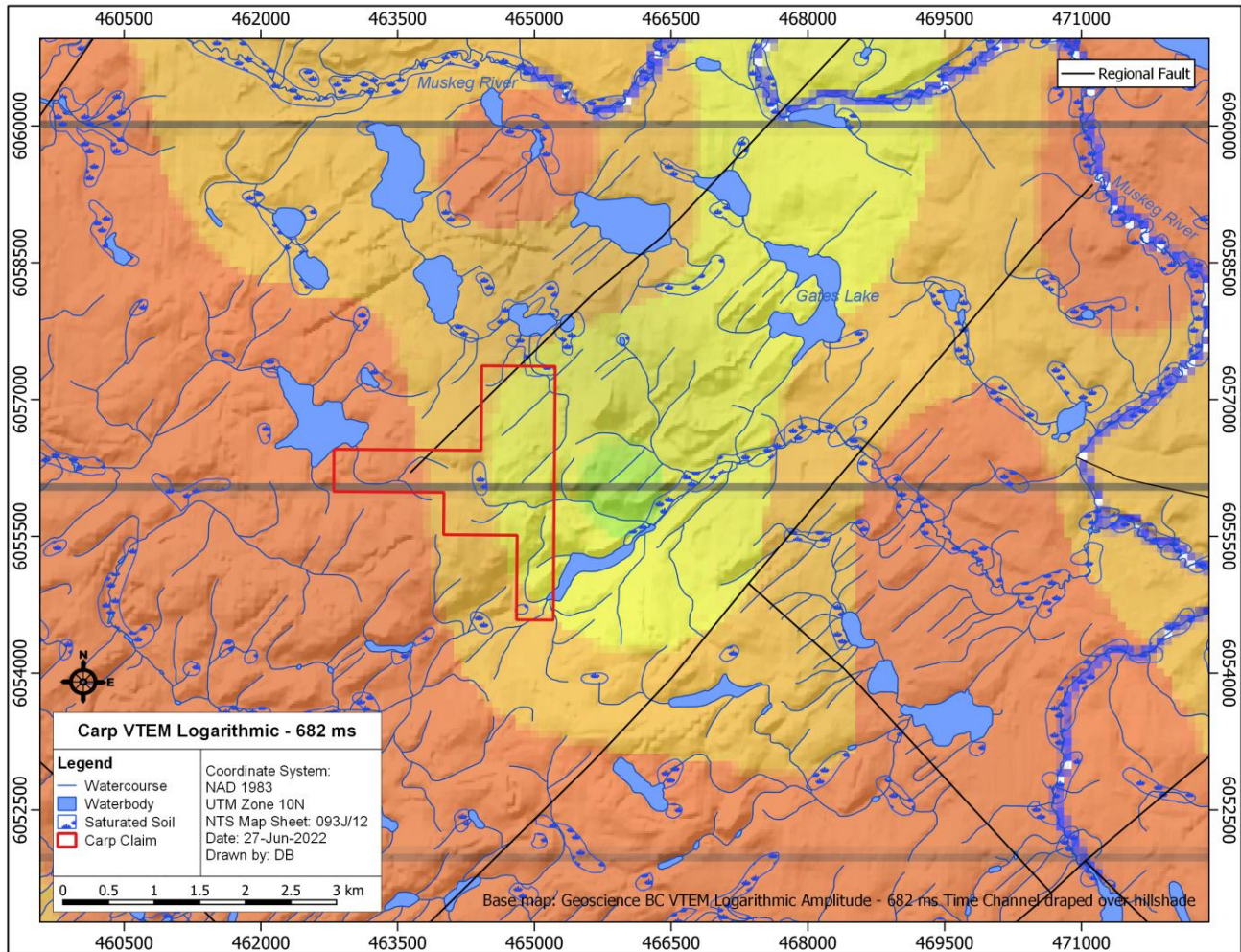
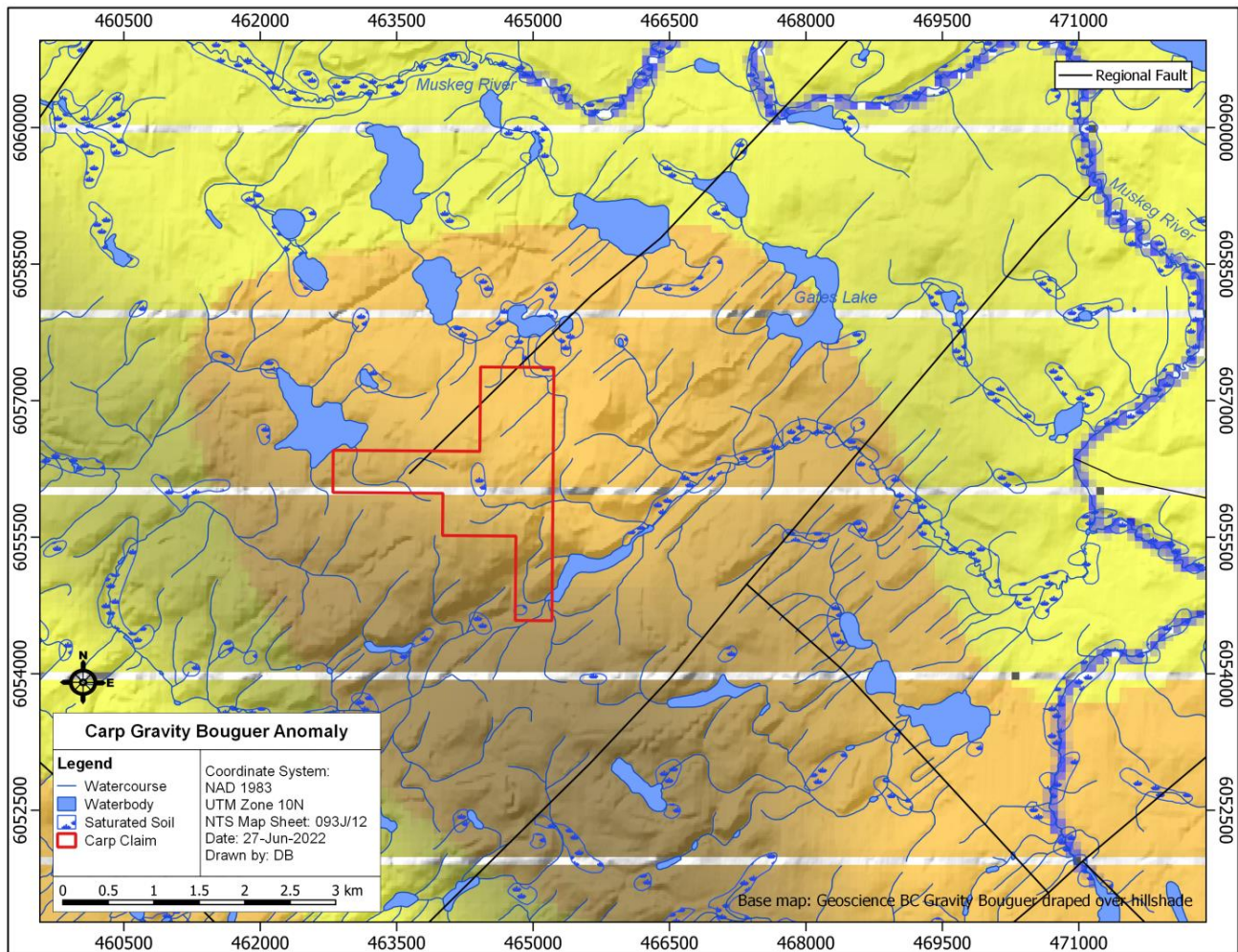


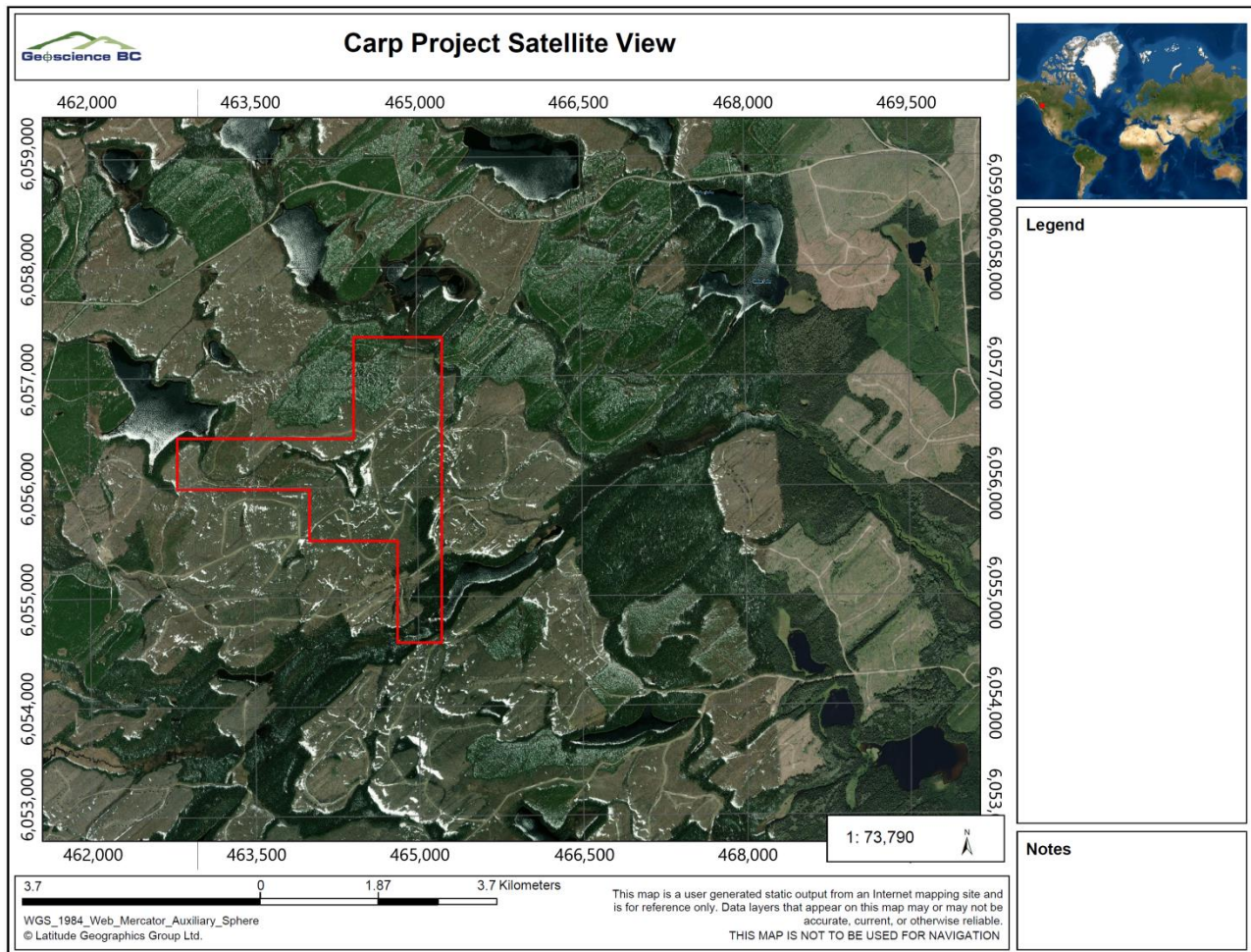
Figure 11 Carp Project VTEM Logarithmic Amplitude – 682 milliseconds (2007 Geoscience BC QUEST 4000 meter electromagnetic survey)



**Figure 12 Carp Project Aeromagnetic Gravity Bouguer Anomaly (2008 Geoscience BC QUEST 4000 meter gravity survey)**

This region continues to rely on active logging and has a long history of mineral exploration. The Carp Project area was logged, and re-planted, within the past 10 years (Figure 13). One open pit, copper-gold mine is located approximately 60 north of the Carp Project. This porphyry mine is called Mount Milligan and is currently owned by Thompson Creek Metals Company Inc., an indirect subsidiary of Centerra Gold Inc. Commercial production at Mount Milligan was achieved in 2014 with 736,000,000 pounds of copper in proven and probable reserves as well as 1,838,000,000 ounces of gold in proven and probable reserves (Fitzgerald et al., 2020).





**Figure 13** Satellite imagery view of the Carp Project area showing extensive logging and re-planting activities.

### 3. ADJACENT PROPERTIES

One project of note is located within approximately 60 kilometres of the Carp Property: Mount Milligan copper-gold alkalic porphyry mine. New Gold Inc and IAMGOLD Corporation currently hold moderately sized claims between 6 and 10 kilometres from the current Carp claim but no significant mineralization has been reported on those Properties and these projects are not listed on their websites.

#### 3.1 Mount Milligan Copper-Gold Mine

The Mount Milligan Mine is approximately 60 kilometres west of Mackenzie, BC and sits along a chain of peaks aligned in a north-south direction. The southern mine tenure boundary is approximately 37 kilometres north of the Carp Property. The Mount Milligan Mine is operated by Centerra Gold Inc. Production at the Mount Milligan Mine began in 2014 with mine site infrastructure including an open mine pit, a concentrator, a tailings storage facility and reclaim water ponds, mineralized stockpiles, a processing plant, workshop, warehouse, administration

building, permanent operations residence, first aid station, emergency vehicle storage, a laboratory, and sewage, as well as water treatment facilities. Power is supplied by a 91-kilometre BC Hydro power line. The mine's concentrate is transported by truck to Mackenzie, transferred to railcars and sent to port storage facilities in Vancouver Wharves of North Vancouver, BC, where it is shipped to customers by ocean transport. The following paragraphs are a summary of Fitzgerald et al., 2020 technical report on the Mount Milligan Mine.

The Mount Milligan Mine is a silica-saturated alkalic copper-gold porphyry deposit within the Quesnel Terrane of the North American Cordillera. The mine area is primarily underlain by Upper Triassic volcanic rocks of the Witch Lake succession intruded by Early Jurassic to Cretaceous rocks of the Mount Milligan intrusive complex. Two styles of mineralization have been identified at Mount Milligan: early-stage porphyry gold-copper and late-stage high-gold/low-copper. The early-stage mineralization primarily consists of chalcopyrite and pyrite with potassic alteration and early-stage veins spatially associated with composite monzonite porphyry stocks, hydrothermal breccia and narrow dyke/breccia complexes. Late-stage high-gold/low-copper mineralization is a structurally controlled pyritic style of mineralization associated with carbonate-phyllitic alteration and intermediate- to late-stage veins spatially associated with faults, fault breccia and faulted lithological contacts. The late-stage mineralization tends to crosscut and overprint early-stage mineralization. The mineralization is associated with composite monzonite stocks, their brecciated margins and variably altered volcanic rocks. The combined Measured and Indicated Mineral Resources total 125.4 million tonnes at 0.19 % copper and 0.35 grams per tonne of gold containing 517 million pounds of copper and 1.4 million ounces of gold. The Inferred Mineral Resources total 3.7 million tonnes at 0.12 % copper and 0.46 grams per tonne of gold containing 10 million pounds of copper and 0.05 million ounces of gold based on the December 31, 2019, estimation using a conceptual open pit shell with metal prices at 3.50CDN per pound copper and 1,500 CDN per ounce gold (Fitzgerald et al., 2020).

#### **4. GEOLOGICAL SETTING**

The metallogeny of British Columbia is primarily linked to the tectonic evolution of the Canadian Cordillera (Clarke et al., 2018). The sequence of events for its formation includes the welding of allochthonous (derived at a distance) terranes to the western margin of ancestral North America resulting in deformation and post-accretionary tectonism and magmatism. The Northwest Region of British Columbia intersects with the Cordilleran orogeny and is comprised of 1) the autochthonous (formed at present position) and parautochthonous (intermediate character between auto- and allochthonous) carbonate and siliciclastic strata of ancestral North America; 2) Intermontane terranes including the Slide Mountain back-arc basin, Yukon-Tanana rifted pericratonic arc, Quesnel and Stikine volcanic arcs, as well as the Cache Creek oceanic terrane; 3) the Alexander Terrane (a large composite crustal fragment); 4) post-accretionary rocks; and 5) younger overlying rocks (Clarke et al., 2018). The accretion of the allochthonous terranes to each other and North America occurred within the Jurassic. Post-accretion plutonic suites as well as Jurassic, and younger, syn- to post-accretionary siliciclastic deposits mosaic this area.

## 4.1 Regional Geology

The Carp Property is located within the Intermontane Tectonic Belt. The Intermontane Belt is a partly collisional tectonic belt comprised of a series of accreted terranes. The largest of these terranes is Stikinia, which underlies a significant portion of central-west British Columbia. The second largest terrane is the Quesnellia which underlies the south and central portions of British Columbia. The Carp Project is located within Quesnellia (or Quesnel Trough).

Quesnellia is a Late Palaeozoic chain of volcanic activity (i.e., arc) that formed above a subducting tectonic plate (Logan et al., 2011). Supracrustal rocks primarily consist of Upper Triassic volcanic to volcanoclastic rocks. Secondary constituents of the Quesnellia include the Nicola and Takla Groups of shoshonitic and pyroxene-phyric basalts as well as minor phyllite. Late Triassic to Early Jurassic calc-alkaline and alkaline intrusions commonly occur within this Terrane.

Regional mapping conducted in the Carp Property area shows that the Quesnellia is represented by the Upper Cretaceous to Eocene Wolverine Metamorphic Complex (Figure 14). This paragneiss metamorphic rock consists of muscovite and biotite schist, paragneiss; minor quartzite and marble as well as undifferentiated granitic pegmatite, granodiorite and rhyolite, amphibolite, calcsilicate and marble. The ages are based on the metamorphic rocks with a proposed protolith related to the Windermere Group: an Ordovician to a Silurian collection of conglomerates, dolomite and quartzite (after Cui, et al., 2017).

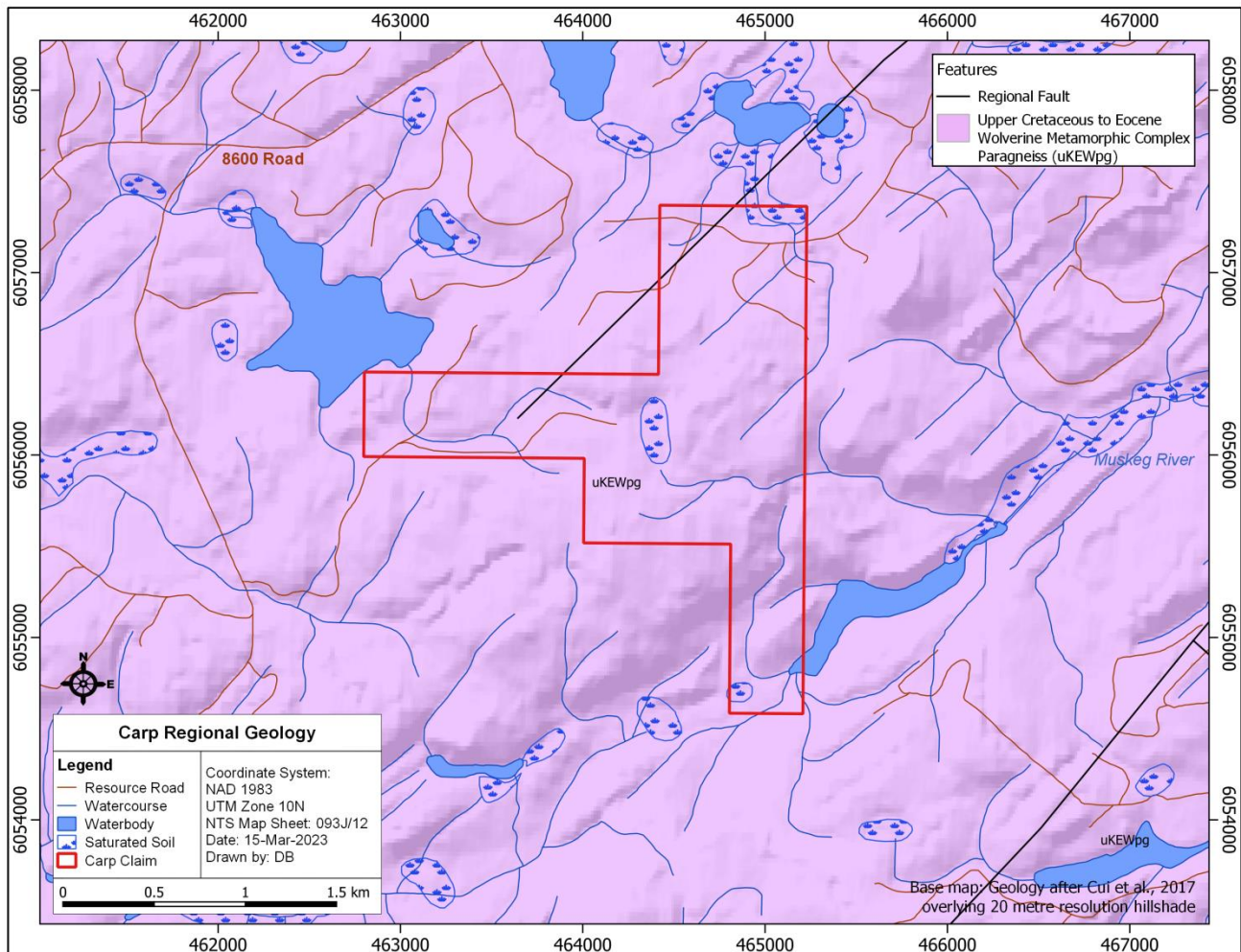


Figure 14 Carp Property Regional Geology (after Cui et al., 2017)

## 4.2 Property Geology

Property-scale mapping was conducted on the Dark Horse Property in 2015 (McKinley, 2016). They found that the majority of the area was covered by a continuous overburden sequence of Quaternary sediments comprised of glacial till ranging from 2 to over 10 metres thick. No outcrop was located in the current Carp claim. Towards the western part of the Dark Horse claim, the bedrock geology was mapped as granodioritic intrusive rock interpreted as Middle to Upper Triassic strata of the Takla Group. The Takla Group consists of sediments overlain by thick sequences of Later Triassic alkali volcanism and associated extrusive volcanic and volcanoclastic rocks. Outcrop located to the east, within Carp Lake Park, was mapped as part of the Wolverine Metamorphic Complex pegmatite (McKinley, 2016).

### 4.2.1 Surficial Geology

The Carp Property is located within an area of the Nechako Plateau with gentle relief. Glacial deposits, within the Nechako Plateau, occur in variable thicknesses as

hummocky, kettled, fluted or relatively flat topography (Levson and Giles, 1997). Surficial geology within the Carp Property was mapped as a till blanket (Tb; NRCan, 2014). The thickness of till within the Nechako Plateau range from less than one metre following bedrock ridges and steep slopes to several tens of metres of till in valleys and down-ice (lee) directions of bedrock high points. Within valleys oriented at high angles to the regional ice direction, till thicknesses may reach greater than 10 metres in depth. Basal tills often unconformably overlie bedrock, rarely overlie older deposits and seldom occur at the surface. Glacigenic debris flow and glaciofluvial deposits overlie the majority of the area with colluvial diamicton (poorly sorted sediment of various particle sizes within a matrix of mud or sand) occurring on steep slopes (Levson and Giles, 1997). Morainal sediments also tend to be buried within valleys by glaciofluvial, fluvial and organic sediments.

#### **4.2.2 Mineralization and Alteration**

No known previous exploration work describing mineralization or alteration was conducted in the area before 2015.

#### **4.2.3 Geological Model**

The style of mineralization thought to occur on the Carp Property is currently unknown. Previous explorers in this area have searched for porphyry copper-gold deposits similar to Mount Milligan. Since this area is extensively covered with quaternary deposits and the host rock is currently unknown (i.e., has not been drilled) and estimated to be pegmatite, a porphyry, skarn and/or pegmatite deposit-type model are possibilities. Figure 15 shows an idealized model of the depth relationship between different deposits and environments.

##### **4.2.3.1 Porphyry Systems**

Three different classes of porphyry systems occur within BC: alkalic silica undersaturated porphyry (copper, gold [silver]), calcalkaline quartz-bearing porphyry (copper  $\pm$  molybdenum  $\pm$  gold) and low fluorine-type molybdenum porphyry (Panteleyev, 1995a; Panteleyev, 1995b; Blaine and Hart, 2012). These three classes of porphyries are derived from hydrothermal fluids generated near the top of a cooling magma body at depths between 1 and 5 kilometres (Figure 15).

Copper  $\pm$  molybdenum  $\pm$  gold (silver) bearing hydrothermal fluids move up and outward from the magma body into the surrounding rock (Panteleyev, 1995b). Hydrothermal alteration of the host rock intrusions and wall rocks is spatially, temporally and genetically associated with the mineralization (Robb, 2005). This fluid creates a fracture network within the surrounding rock and produces the characteristic stockwork texture of porphyry deposits. As the hydrothermal fluid moves further from the magma body, it cools and ore minerals begin to crystallize out into the fracture network. Regional or district-scale zoning can occur in porphyry deposits which results in a porphyry core associated with proximal skarns to distal polymetallic veins as well as replacement deposits (Berger et al., 2008). Porphyry copper deposits can also be associated with high-sulfidation epithermal deposits, late/distal intermediate-sulfidation polymetallic base metal and precious element veins as well as distal disseminated gold deposits.

Alkalic porphyries commonly occur in orogenic belts, at convergent plate boundaries, where oceanic volcanic island arcs overlie oceanic crust (Panteleyev, 1995a). These types of porphyries are associated with alkalic intrusive bodies (gabbro, diorite and monzonite to nepheline-syenite). The geochemical signature of alkalic porphyries may consist of titanium, vanadium, phosphorous, fluorine, barium, strontium, rubidium, niobium, tellurium, lead, zinc and platinum group elements (PGE-platinum, palladium, rhodium, iridium, osmium and ruthenium) with gold, silver and minor copper. Cupriferous alkalic porphyries can occur and do not typically contain economic molybdenum contents. Calcalkaline porphyries, however, occur at convergent plate boundaries in association with subduction-related magmatism and range in composition from calcalkaline quartz-diorite to granodiorite and quartz-monzonite (Panteleyev, 1995b). A northwest BC example of an alkalic porphyry is the Galore Creek deposit (Clarke et al., 2018).

The Galore Creek alkalic intrusions are typically small and are from the Late Triassic to Early Jurassic volcanic island assemblages of the Nicola, Takla and Stuhini Groups (Logan and Koyanagi, 1994). The alteration and mineralization assemblages at the Galore Creek deposit both contemporaneously and spatially overlap as shown in Table 3. The mineralization tends to occur within alkaline magmatic centres with a central potassic or sodic-potassic plagioclase zone that grades outwards to a propylitic zone. These zones are often overprinted by retrograde metasomatic alteration. Multiple intrusive pulses are often in evidence as porphyritic textures, intrusive breccia and hydrothermal breccia (Logan and Koyanagi, 1994). The majority of the copper and gold is hosted within magnetite breccia and disseminated magnetite; both of which are associated with potassic alteration. These deposits are typically enriched in copper + gold and are silver-rich when compared to calcalkalic systems.

**Table 3 Alteration and Mineral Assemblages at Galore Creek Central Zone (after Logan and Koyanagi, 1994)**

<b>Alteration</b>	<b>Minerals</b>	<b>Sulfides/Sulfate</b>
<b>Potassic</b>	K-feldspar + Ti-biotite + magnetite	Bornite + chalcopyrite > pyrite
<b>Propylitic</b>	Chlorite + calcite ± albite ± epidote	Pyrite + chalcopyrite
<b>Calcsilicate</b>	Ti-andradite + epidote + albite ± diopside	Anhydrite

Geochemical zoning in calcalkalic systems typically occur as a barren to low-grade pyritic core surrounded by a halo of pyrite with peripheral copper, lead, zinc, gold, molybdenum and silver-bearing veins. Peripheral enrichment in these deposits may include lead, zinc, manganese, vanadium, antimony, arsenic, selenium, tellurium, cobalt, barium and rubidium. An example of a calcalkalic porphyry in northwest BC is the Schaft Creek deposit (Clarke et al., 2018).

Low fluorine-type porphyries occur in relation to arc-continent and continent-continent subduction zones (Sinclair, 1995). The geochemical signature of low fluorine-type porphyries typically exhibits anomalous molybdenum, copper, tungsten and fluorine in host rocks close to and overlying mineralization while anomalous molybdenum, tungsten, fluorine, copper, lead, zinc and silver occur in peripheral zones up to several kilometres. An example of a low-fluorine porphyry is the Endako Molybdenum Mine in central BC (Clarke et al., 2018).

#### 4.2.3.2 Skarn

Skarn deposits form during contact or regional metamorphism (Robb, 2005). These types of deposits are the metasomatic replacement of carbonate rocks by calc-silicate mineral assemblages. This process typically occurs as a result of contact metamorphism and metamorphism of a granitic intrusion into carbonate rocks. Skarn deposits include a diversity of deposit types and geochemical associations including W, Sn, Mo, Cu, Fe, Pb-Zn and Au ores with associated geochemical anomalies of Co, As, Sb, Bi, Mo, W, F, Sn, Cd, Te and Ni (Ray, 1998; Ray, 1995b; Ray, 1995a). Skarn deposits, for example, occur within the Hedley Gold Skarn District in Southern BC (Ray and Dawson, 1994).

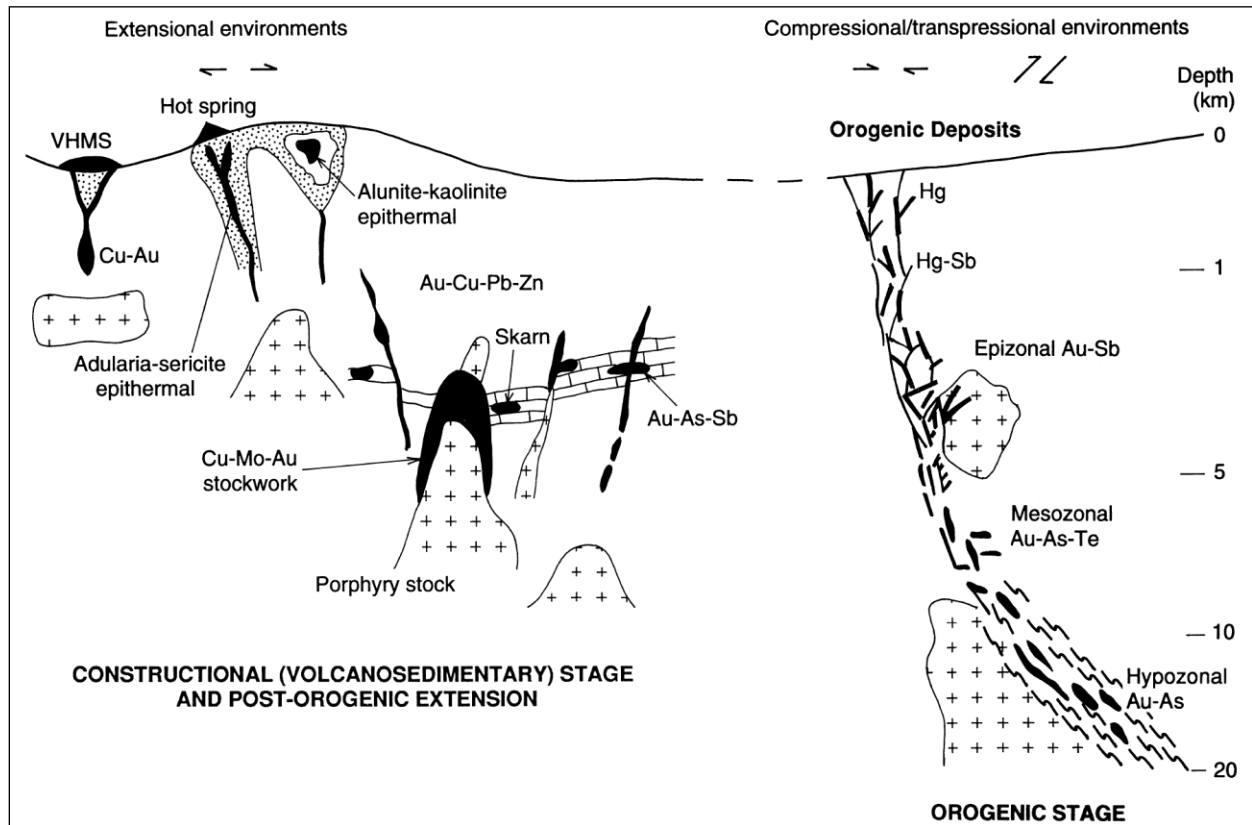


Figure 15 Idealized Deposit Models Showing Relational Depths and Environments (Groves et al., 1998)

#### 4.2.3.1 Lithium-Caesium-Tantalum Pegmatites

Pegmatites form as a partial melt of magma that may have formed in the presence of magmatic aqueous fluid (Robb, 2005). Pegmatite deposits are typically distinguished in terms of chemistry and rare metal abundance as Lithium-Caesium-Tantalum or Niobium-Yttrium-Fluorine pegmatites (Müller et al., 2022). A new pegmatite scheme by Wise et al. (2022, in Müller et al., 2022) suggests distinguishing the formation between two pegmatite groups: pluton-related and pluton-unrelated (Figure 16). Pluton-related pegmatite deposits are defined as the

Residual Melts of Granite Magmatism – RMG pegmatites while pluton-unrelated pegmatite deposits are formed by the partial melting (anatexis) of meta-igneous and/or meta-sedimentary protoliths – DPA pegmatites or Direct Products of Anatexis. These classes are further divided into the typical source of granite chemistry, the geological setting of the pegmatite source and their geochemical signature (Table 4).

There are also reports of possible genetic relationships between pegmatites and gold-bearing quartz veins (Bradley et al., 2017) as well as veinlets of metal sulfide minerals including copper and lead (Faure et al., 1984).

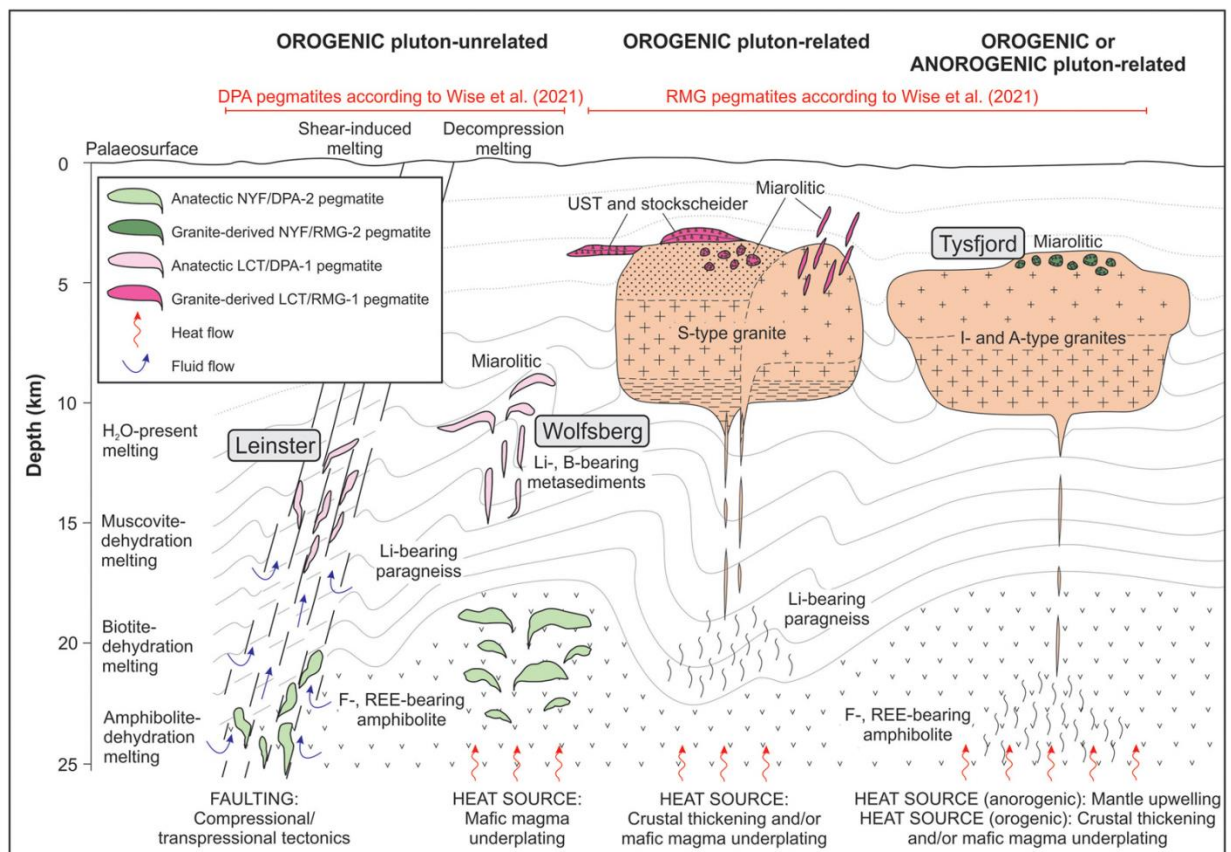


Figure 16 Schematic representation of the geological setting on the formation of pegmatites in pluton-related and pluton-unrelated scenarios (after Wise et al., 2022, in Muller et al., 2022)



**Table 4 Summarized characteristics of pegmatite deposits (after Wise et al., 2022 in Müller et al., 2022)**

<b>Residual Melt Granite (RMG) Pegmatites</b>			
<b>Sub-Class Group</b>	<b>RMG – Group 1</b>	<b>RMG – Group 2</b>	<b>RMG – Groups 1 + 2</b>
Source Granite	S-type	A-type	I-type
Granite Chemistry	Peraluminous	Peralkaline and metaluminous to mildly peraluminous	Peraluminous to metaluminous
Setting	Interior to marginal	Interior to marginal	Interior to marginal
Geochemical Signatures	Be, Nb, Ta, P, Sn, Li, and Cs	REE, Be, Nb, and F	B, Be, REE, Nb, Ti, Li, and Ca
<b>Direct Product Anatexis (DPA) Pegmatites</b>			
<b>Sub-Class Group</b>	<b>DPA – Group 1</b>	<b>DPA – Group 2</b>	<b>DPA – Group 3</b>
Source Rock	Granulite to amphibolite facies metasediments and meta-igneous rocks of granitic S-type signature	Granulite to amphibolite facies F-rich amphibolites and meta-igneous rocks of granitic A-type signature	Granulite to amphibolite facies metagreywackes and meta-igneous Al-rich rocks
Setting	Segregations of anatectic melts	Segregations of anatectic melts	Segregations of anatectic melts
Geochemical Signature	Be, Nb, Ta, P, and Li	REE, U, and Be	Al, Be, and B

## **5. 2022 EXPLORATION PROGRAM - GEOCHEMICAL AND GEOLOGICAL SURVEY**

### **5.1 Survey Overview**

The 2022 geochemical sampling and mapping survey consisted of 1 day and was conducted on September 24<sup>th</sup> by one prospector and one forestry specialist/field assistant. The purpose of the 2022 program was to follow up on regional geochemistry, lineament mapping and historical SGH sampling. A soil sample was attempted within the Gold Class Zone in the central east Carp. The soil sample area consisted of a thin organic layer underlain by white to pale grey till composed of very fine silt, sand and clay with significant cobblestones (Figure

17). Due to the difficulty of accurately identifying a soil horizon and the predominance of cobblestone that hindered digging, a soil survey in this area would be difficult to accomplish.



**Figure 17 Attempted soil sample at CP22TR04 and example ground cover photo at CP22TR03**

A total of 10 vegetation samples were collected for biogeochemical assaying during the 2022 field season. One soil sample was collected but not assayed. All samples collected during the 2022 field season were selected, sealed and shipped to Activation Labs in Kamloops, BC. All samples were selected by the site manager. The vegetation samples were placed within labelled, sturdy Kraft paper sampling bags.

The samples were placed into a sturdy, cardboard box before shipping. All sample packaging for transport was overseen by the site manager and documented with sample names, sample type, assay type, shipping date, shipping ID, and the number of boxes. Samples were transported by the crew from the Project Area to Prince George, BC before shipping to the lab via Canada Post.

All the samples chosen for biogeochemical analysis were prepped and assayed at Activation Laboratories Ltd. in Kamloops, BC. The vegetation samples were dried and macerated using the B2 sample preparation package: drying and macerating. The macerated plant material was assayed using the 2G biogeochemical assay package: un-ashed material is dissolved in acid before analysis by 63 element ICP-MS. All the samples were disposed of by the lab. The assay certificates are located in Appendix B: Certificates of Analysis.

### **5.1.1 Vegetation Sampling Protocol**

First-year needle samples from lodgepole pine (*Pinus contorta*) were chosen as the sample material (Figure 18) due to the young age of the majority of the trees (<20 years), the extensive monoculture of lodgepole pine replanted after harvesting and the time of year (early Fall). Outer bark samples were not a viable option since the trees were too

young to have a thick enough bark layer from which to collect material without accidentally collecting inner bark material.

The vegetation samples were collected by foot with vehicular assistance. The sample locations were chosen to be collected at approximately 200-metre intervals to cross-section the project area and to coincide with previously mapped lineaments as well as sample locations from the 2015 historical soil-gas hydrocarbon (SGH) survey. Healthy lodgepole pine trees were chosen and the first-year needle samples were collected, by pinching or twisting off the new growth, from chest height around the circumference of the tree and its neighbours, as needed, for a sample weighing approximately 30 grams. The new growth was a uniform green colour.

All sample sites were flagged with biodegradable flagging tape and marked with the sample number. The sample sites were recorded using hand-held GPS units (accuracy 1-10 m) and the following information is recorded on all-weather paper: sample ID, easting, northing, elevation and a short description: replanted/natural, tissue, tree age, tree height, tree trunk diameter and ground cover.



**Figure 18 First-year needles sampled from a lodgepole pine tree showing material sampled (green needles in sample bag on left) and location that needles were gathered (white circular dots on twig to the right).**

### 5.1.2 Data Verification

All GPS units were downloaded to a laptop using DNR Garmin®. The GPS information was transferred into a Microsoft Excel® spreadsheet and the remaining sample information underwent manual data entry. The database was checked by the site project lead while in the field, and again in the office. A second check of the database was conducted when the results were merged with the database. The third and final check of the database was performed by the author of the report.

All the vegetation samples were processed and analyzed by Activation Labs Ltd. Verification of assays was performed by the lab using internal QA/QC procedures of duplicates, blanks and proprietary reference standards. A rigorous quality assurance/quality control (QA/QC) program including blanks, standards and duplicates was not conducted. Ideally, at least 20 to 30 of each type of QC sample would be inserted into the sample stream to acquire a statistical representation of the quality of the data.

## 5.2 Property Lineament Mapping

To help assess where to focus exploration activities, a manual Digital Elevation Model (DEM) lineament mapping exercise was conducted. Lineaments are extensive linear features that represent zones of structural weakness such as shear zones/faults, rift valleys, truncation of outcrops, fold axial traces, fractures and joints; as well as topographic, vegetation, or soil changes. This activity is useful in mineral exploration to identify areas related to potential mineralization and changes in lithology. A multi-directional light-source method was used on 20-metre resolution, geo-rectified derived digital elevation models downloaded from the Natural Resources Canada Geospatial Data Extraction website (<https://maps.canada.ca/czs/index-en.html>).

Eight shaded relief images were generated using the QGIS Hillshade tool from light sources at azimuths of 0°, 45°, 90°, 135°, 180°, 225°, 270° and 315°, a vertical angle of 40°, and a Z-factor of 0.00001395. QGIS Raster Calculator was used to create two rasters by adding the 0°, 45°, 90° and 135° (east) to highlight negative relief structures and then adding the 180°, 225°, 270° and 315° (west) to create positive relief structures. The compiled hillshade maps were then digitized based on areas of high contrast and compared to satellite imagery for man-made artifacts such as roads and powerlines. The manually mapped lineaments are displayed in Figure 19.

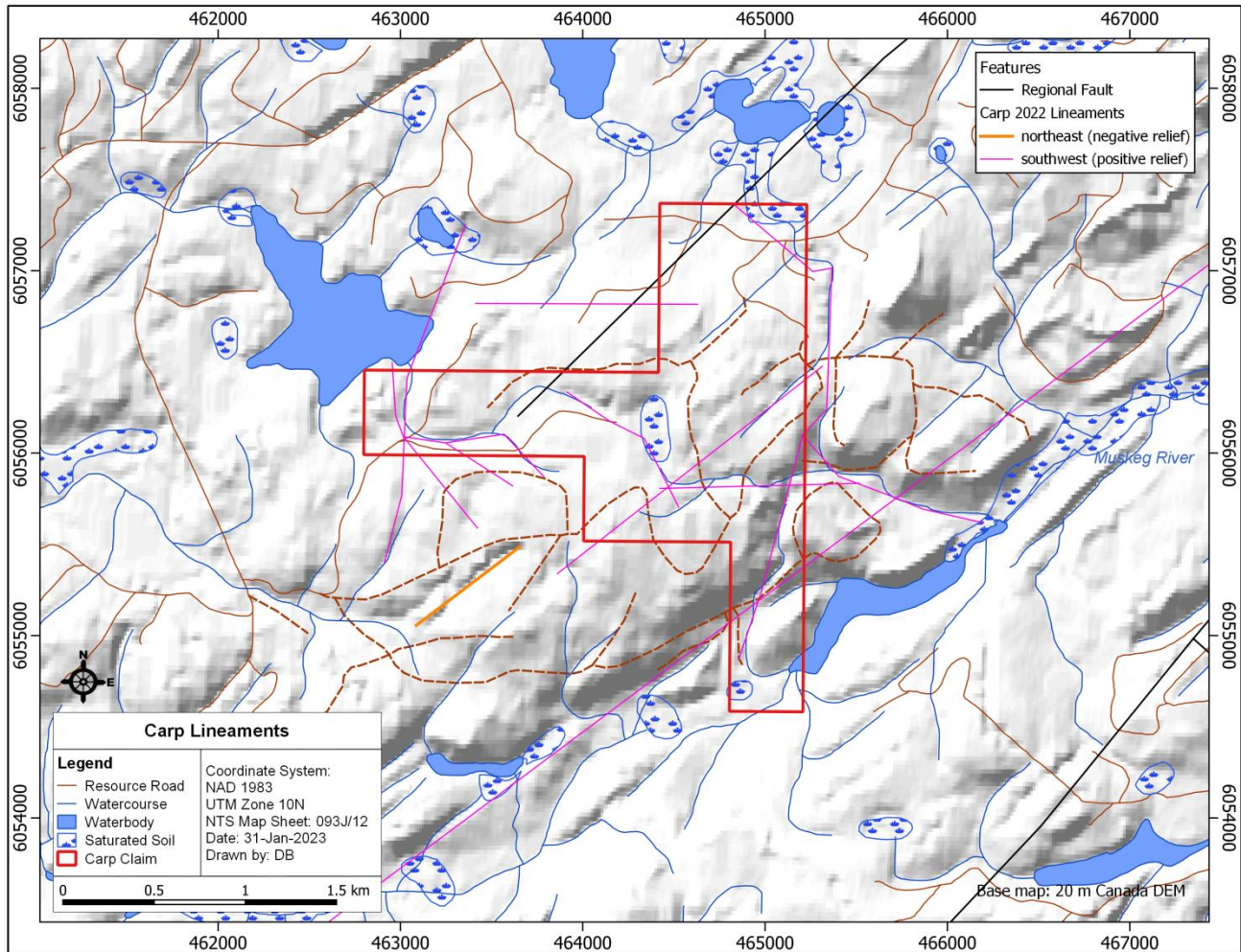


Figure 19 Manual lineament mapping using multi-directional hillshade models from 20-metre DEM

### 5.3 Geochemical Results

The 2022 geochemical survey on the Carp Property took place on September 24<sup>th</sup> by one prospector and one forestry specialist/field assistant. The property was traversed by foot with vehicular assistance. The traverse areas are based on lineament mapping, regional stream sediment sample locations and the historical SGH survey. The main element of interest is copper. A total of 10 vegetation samples were collected (Figure 20). The sample descriptions are located in Appendix A with assay certificates in Appendix B.

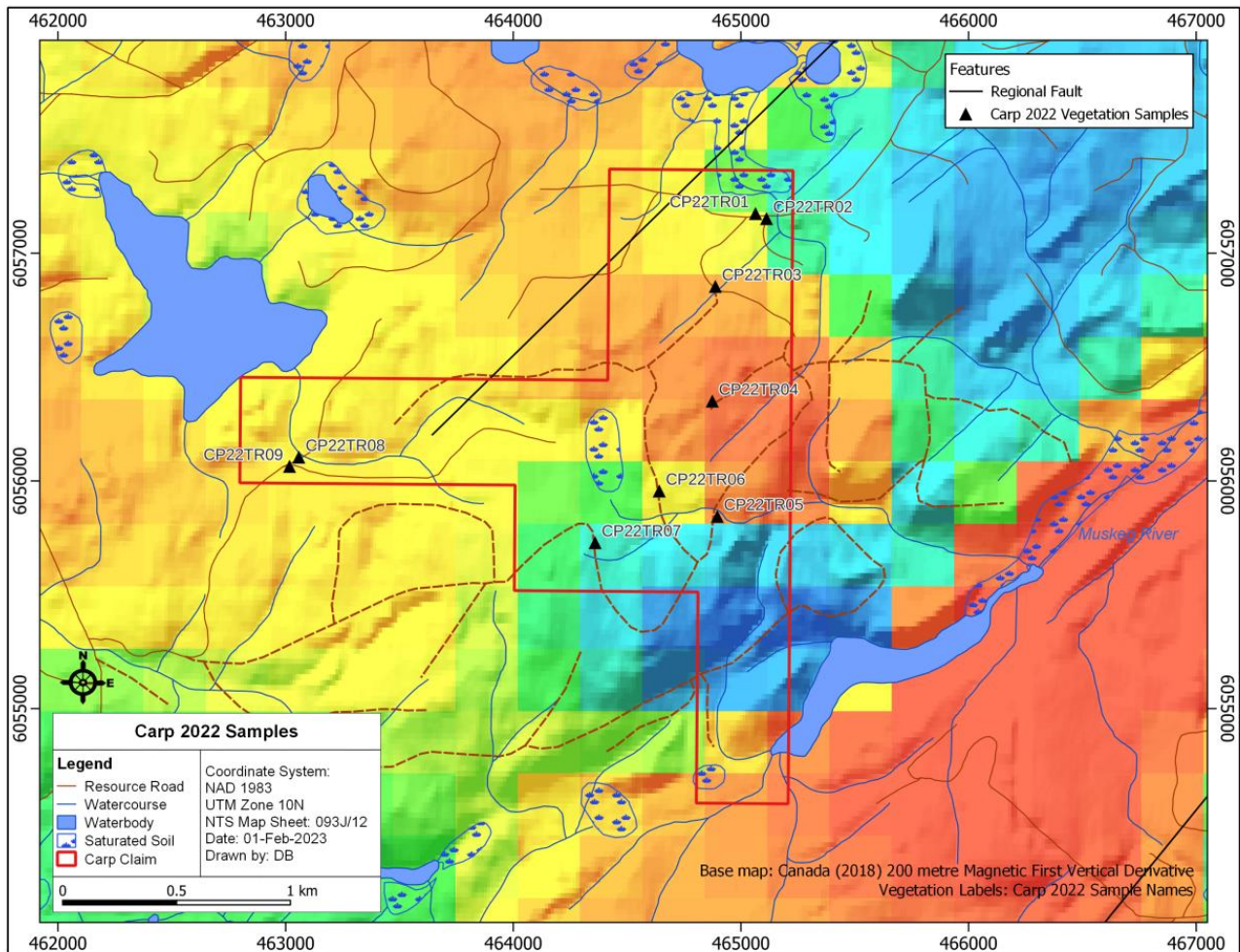


Figure 20 Carp Project sample names and locations

### 5.3.1 Vegetation Samples

Exploratory data analysis (EDA) of the 10 lodgepole pine needle samples collected during the 2022 exploration program includes a summary table. This information is used to determine the composition of the data, discover anomalies and determine pathfinder relationships unique to the area in which the samples were collected. Due to the small number of samples collected (<30) no further statistical analyses were performed.

The summary table includes sample count, detection limits, quantiles, minimum (Min)-maximum (Max) values, standard deviation (SD), mean absolute deviation (MAD) and the coefficient of variation (CV) (Table 5). These summary statistics assist in determining the character of the data.

**Table 5 Carp 2022 Needle Sample Summary (below detection limit values were replaced by half the detection limit for each element). NA = not applicable, DL= detection limit, Min = minimum, Max = maximum, SD = standard deviation, MAD = mean absolute deviation and CV = coefficient of variation.**

Element	Units	Count	DL	% < and > DL	Min	25%	Median (50%)	Mean	95%	99%	Max	SD	MAD	CV
Ag	ppb	10	3	0.00%	15	27	33	39	79	98	103	25	9	0.6
Al	ppm	10	4	0.00%	201	273	314	374	700	712	715	179	57	0.5
As	ppb	10	10	0.00%	160	215	425	1084	3915	5423	5800	1719	245	1.6
Au	ppb	10	0.2	10.0%	0.1	0.3	0.4	1.3	4.3	5.3	5.5	1.7	0.2	1.4
B	ppm	10	1	0.00%	7	9	10	11	15	15	15	3	2	0.2
Ba	ppb	10	100	0.00%	1100	1725	2850	3050	5595	5919	6000	1654	1150	0.5
Be	ppb	10	30	100%	2	2	2	2	2	2	2	0	0	0.0
Bi	ppb	10	2	0.00%	3	4	7	17	58	80	86	25	4	1.5
Ca	ppm	10	25	0.00%	1570	1870	2045	2220	3149	3214	3230	538	225	0.2
Cd	ppb	10	6	0.00%	137	161	181	232	357	377	382	91	36	0.4
Ce	ppb	10	15	0.00%	57	106	207	300	866	1165	1240	348	101	1.2
Co	ppb	10	4	0.00%	172	215	287	452	1269	1670	1770	484	81	1.1
Cr	ppb	10	100	0.00%	1800	2775	3150	3770	7120	8704	9100	2036	650	0.5
Cs	ppb	10	0.2	0.00%	5.5	7.7	12.6	20.5	51.5	65.3	68.7	19.3	6.4	0.9
Cu	ppb	10	50	0.00%	2540	2843	3185	3264	4153	4207	4220	553	390	0.2
Dy	ppb	10	0.5	0.00%	2.2	3.5	5.4	9.0	25.3	32.1	33.8	9.6	2.3	1.1
Er	ppb	10	0.4	0.00%	0.9	1.7	2.4	4.4	12.4	15.3	16.0	4.7	0.9	1.1
Eu	ppb	10	0.2	0.00%	0.7	1.1	2.3	3.7	10.4	14.2	15.2	4.3	1.5	1.2
Fe	ppm	10	3	0.00%	110	180	303	548	1758	2392	2550	731	138	1.3
Ga	ppb	10	4	0.00%	9	31	54	85	267	345	365	105	21	1.2
Gd	ppb	10	0.4	0.00%	4.1	5.1	9.2	14.7	41.4	56.0	59.6	16.7	4.1	1.1
Ge	ppb	10	3	40.0%	2	2	5	6	16	20	21	6	3	1.1
Hf	ppb	10	0.4	0.00%	0.9	2.9	4.0	5.2	12.5	17.1	18.3	4.8	1.5	0.9
Hg	ppb	10	2	0.00%	3	4	6	6	9	9	9	2	2	0.4
Ho	ppb	10	0.2	10.0%	0.1	0.5	0.9	1.5	4.2	5.6	5.9	1.7	0.5	1.2
In	ppb	10	0.2	30.0%	0.1	0.1	0.3	0.4	1.1	1.4	1.5	0.4	0.2	1.1
K	ppm	10	10	0.00%	5190	5443	5995	6154	7720	8112	8210	940	585	0.2
La	ppb	10	10	0.00%	30	50	100	146	420	564	600	168	50	1.2
Li	ppb	10	10	0.00%	30	40	55	82	213	267	280	75	15	0.9
Lu	ppb	10	0.5	70.0%	0.25	0.25	0.25	0.50	1.37	1.87	2.00	0.55	0.00	1.1
Mg	ppm	10	2	0.00%	1210	1318	1385	1430	1713	1807	1830	176	90	0.1
Mn	ppb	10	100	0.00%	193000	296000	369000	420000	666650	674930	677000	175343	111000	0.4
Mo	ppb	10	10	0.00%	230	400	435	495	907	1142	1200	268	70	0.5
Na	ppm	10	5	0.00%	5	8	11	11	19	22	23	5	3	0.4
Nb	ppb	10	2	0.00%	5	9	16	23	67	89	95	27	7	1.2
Nd	ppb	10	5	0.00%	25	41	82	114	328	446	476	133	41	1.2
Ni	ppb	10	50	0.00%	3240	3490	3895	4224	5879	6192	6270	994	555	0.2
P	ppm	10	4	0.00%	1190	1280	1285	1353	1537	1587	1600	127	60	0.1
Pb	ppb	10	50	0.00%	140	258	335	764	2567	3553	3800	1101	150	1.4
Pd	ppb	10	0.2	100%	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0
Pr	ppb	10	1	0.00%	6	10	21	29	82	110	117	33	11	1.1

**Carp 2022 Geochemical and Geological Survey**

Element	Units	Count	DL	% < and > DL	Min	25%	Median (50%)	Mean	95%	99%	Max	SD	MAD	CV
Pt	ppb	10	0.2	70.0%	0.1	0.1	0.1	0.1	0.3	0.3	0.3	0.1	0.0	0.5
Rb	ppb	10	10	0.00%	1400	2408	2895	2728	3716	3863	3900	779	430	0.3
Re	ppb	10	0.2	90.0%	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.0	0.0	0.3
Sb	ppb	10	10	50.0%	1	1	5	10	37	47	50	15	5	1.5
Se	ppb	10	100	50.0%	1	1	50	110	300	300	300	128	50	1.2
Sm	ppb	10	1	0.00%	5	7	12	20	60	78	82	23	6	1.2
Sn	ppb	10	50	80.0%	25	25	25	35	77	96	100	24	0	0.7
Sr	ppb	10	40	0.00%	1100	1505	2720	2643	4336	4699	4790	1216	985	0.5
Ta	ppb	10	0.2	0.00%	0.3	0.5	0.7	0.8	1.4	1.7	1.8	0.4	0.2	0.6
Tb	ppb	10	0.2	0.00%	0.4	0.6	1.4	1.8	5.0	6.4	6.7	1.9	0.8	1.0
Te	ppb	10	8	60.0%	4	4	4	7	12	12	12	4	0	0.6
Th	ppb	10	2	0.00%	21	73	92	124	315	436	466	124	23	1.0
Ti	ppb	10	150	0.00%	1560	3545	6010	8973	24800	32720	34700	9769	3015	1.1
Tl	ppb	10	1	50.0%	0.5	0.5	0.8	2.1	6.6	6.9	7.0	2.4	0.3	1.2
Tm	ppb	10	0.1	20.0%	0.05	0.20	0.35	0.57	1.72	2.18	2.30	0.68	0.23	1.2
U	ppb	10	1	0.00%	1	2	5	7	19	25	26	7	3	1.1
V	ppb	10	10	0.00%	140	210	445	677	2089	2834	3020	860	215	1.3
W	ppb	10	25	60.0%	13	13	13	39	127	167	177	52	0	1.3
Y	ppb	10	2	0.00%	10	16	31	46	126	157	165	47	16	1.0
Yb	ppb	10	0.4	0.00%	0.7	1.0	1.9	4.0	12.1	15.5	16.3	4.9	1.1	1.2
Zn	ppb	10	400	0.00%	44600	50600	53050	53840	63100	63820	64000	6456	4650	0.1
Zr	ppb	10	20	0.00%	40	80	105	157	422	580	620	168	35	1.1
Ag	ppb	10	3	0.00%	15	27	33	39	79	98	103	25	9	0.6
Al	ppm	10	4	0.00%	201	273	314	374	700	712	715	179	57	0.5
As	ppb	10	10	0.00%	160	215	425	1084	3915	5423	5800	1719	245	1.6
Au	ppb	10	0.2	10.0%	0.1	0.3	0.4	1.3	4.3	5.3	5.5	1.7	0.2	1.4
B	ppm	10	1	0.00%	7	9	10	11	15	15	15	3	2	0.2
Ba	ppb	10	100	0.00%	1100	1725	2850	3050	5595	5919	6000	1654	1150	0.5
Be	ppb	10	30	100%	2	2	2	2	2	2	2	0	0	0.0
Bi	ppb	10	2	0.00%	3	4	7	17	58	80	86	25	4	1.5
Ca	ppm	10	25	0.00%	1570	1870	2045	2220	3149	3214	3230	538	225	0.2

EDA indicates there is insufficient assay data for beryllium, lutetium, palladium, platinum, rhenium, tin, tellurium, and tungsten due to greater than 50 percent of the population below the detection limits (DL) of the assay method. The standard deviation (SD) and Mean Absolute Deviation (MAD) values indicate that aluminum, arsenic, gold, bismuth, cerium, cobalt, chromium, caesium, dysprosium, erbium, iron, gallium, gadolinium, hafnium, holmium, lanthanum, lithium, molybdenum, niobium, neodymium, lead, praseodymium, samarium, thorium, titanium, thulium, vanadium, yttrium, ytterbium, and zirconium vary greatly from the mean with significant outliers. Significant outliers often are associated with alteration, mineralization and/or changes in lithology.

The CV values show that the variance is high for arsenic, gold, bismuth, cerium, cobalt, caesium, dysprosium, erbium, europium, iron, gallium, gadolinium, germanium, hafnium, holmium, indium, lanthanum, lithium, niobium, neodymium, lead,



praseodymium, antimony, selenium, samarium, terbium, thorium, titanium, thallium, thulium, uranium, vanadium, tungsten, yttrium, ytterbium, and zirconium. Large CV values (high variance) are often associated with alteration, mineralization and/or changes in lithology.

The highlights of the needle samples include the discovery of anomalous and high-contrast areas for gold, silver, copper, lead, zinc, cobalt and lithium (Table 6). The maps displaying sample name, gold, silver, copper, lead, zinc, cobalt and lithium are located in Figures 21 through 27 and is for display purposes only: due to the compositional nature of geochemical data, in the form of ratios not free to vary independently (Aitchison, 2005), multi-element associations should not be assumed in this context.

The information for all the samples is located in Appendix A: Sample Descriptions and Appendix B: Certificates of Analysis.

**Table 6 Carp Needle Sample Highlights (concentrations are in ppb)**

Sample ID	Zone	Au	Ag	Cu	Pb	Zn	Co	Li
CP22TR01	High Gold, Copper, Lead, Cobalt & Lithium	5.5	44	4070	3800	50900	1770	280
CP22TR04	High Silver	0.7	103	3580	620	62000	332	60
CP22TR09	High Zinc	0.3	15	2540	140	64000	214	40

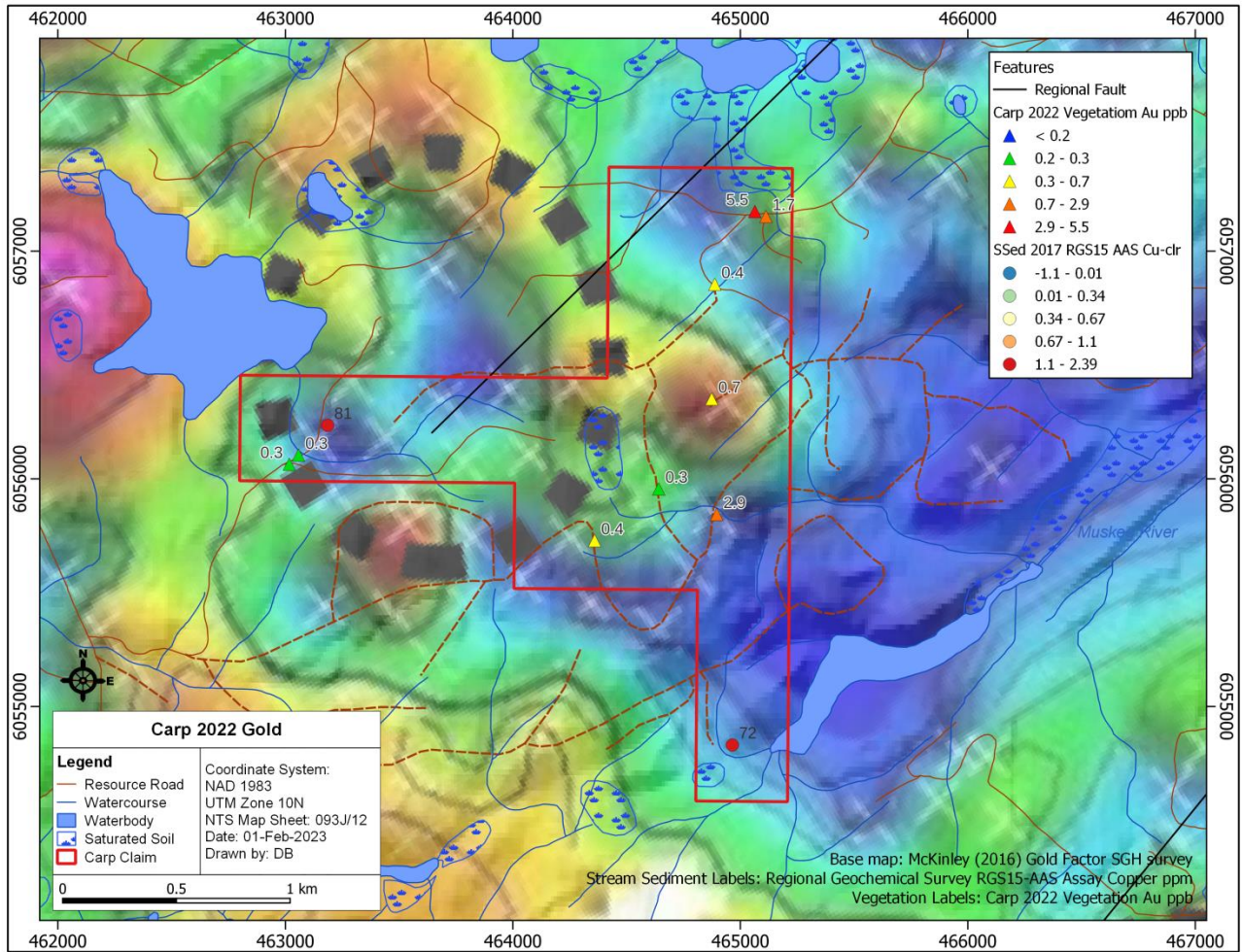


Figure 21 Carp 2022 Gold in Lodgepole Pine Needles with McKinley (2016) Gold Factor SGH Results base map

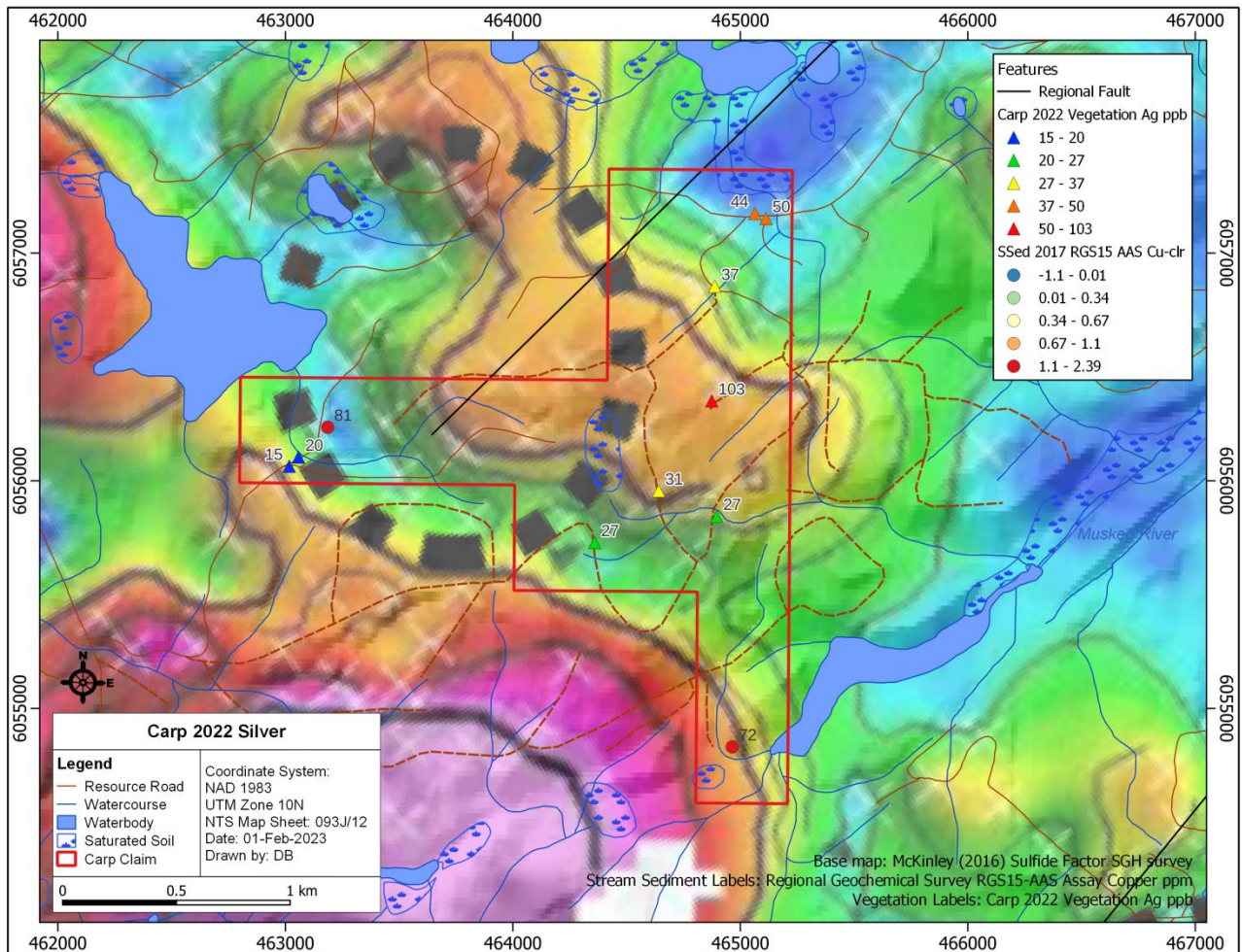


Figure 22 Carp 2022 Silver in Lodgepole Pine Needles with McKinley (2016) Sulfide Factor SGH Results base map

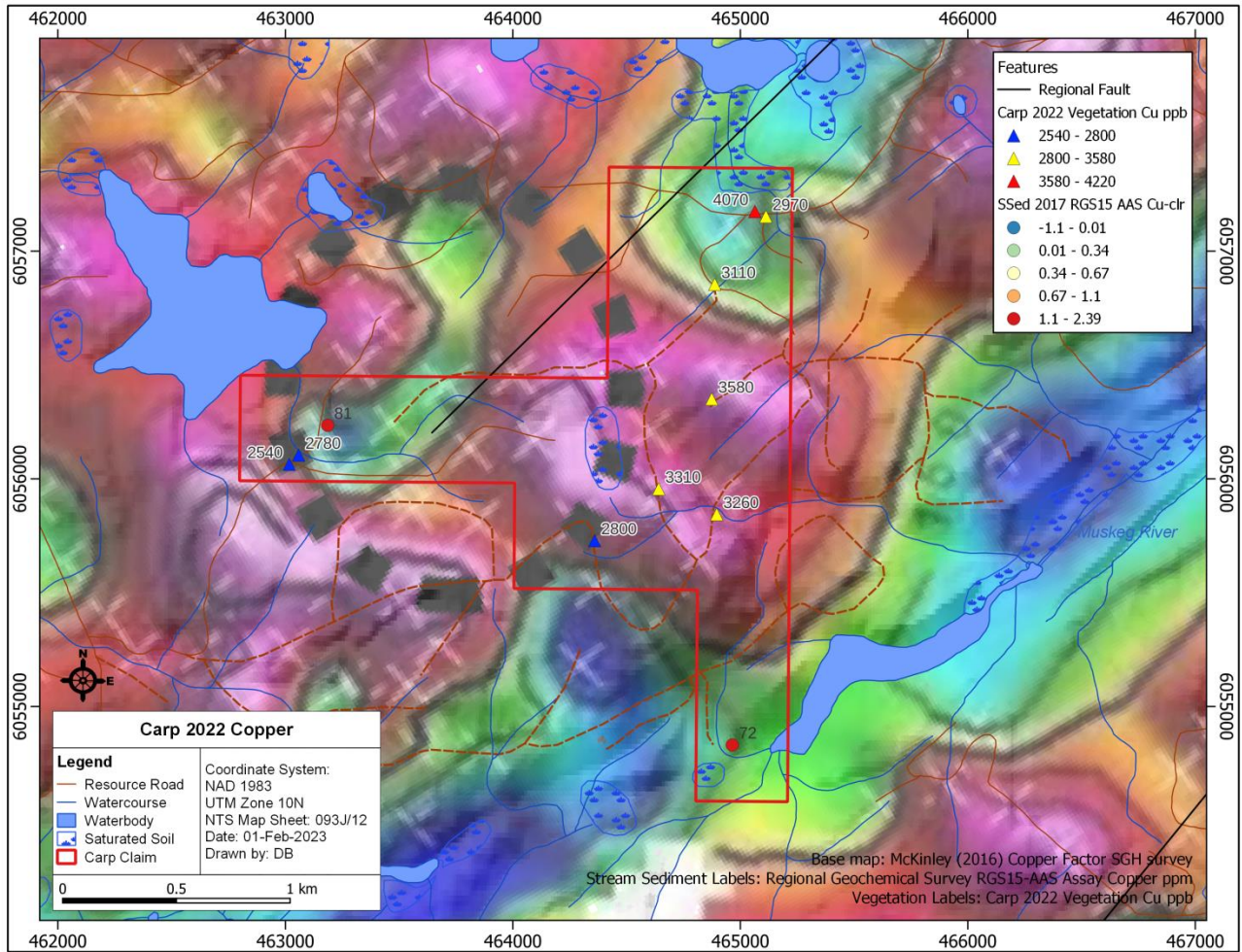


Figure 23 Carp 2022 Copper in Lodgepole Pine Needles with McKinley (2016) Copper Factor SGH Results base map

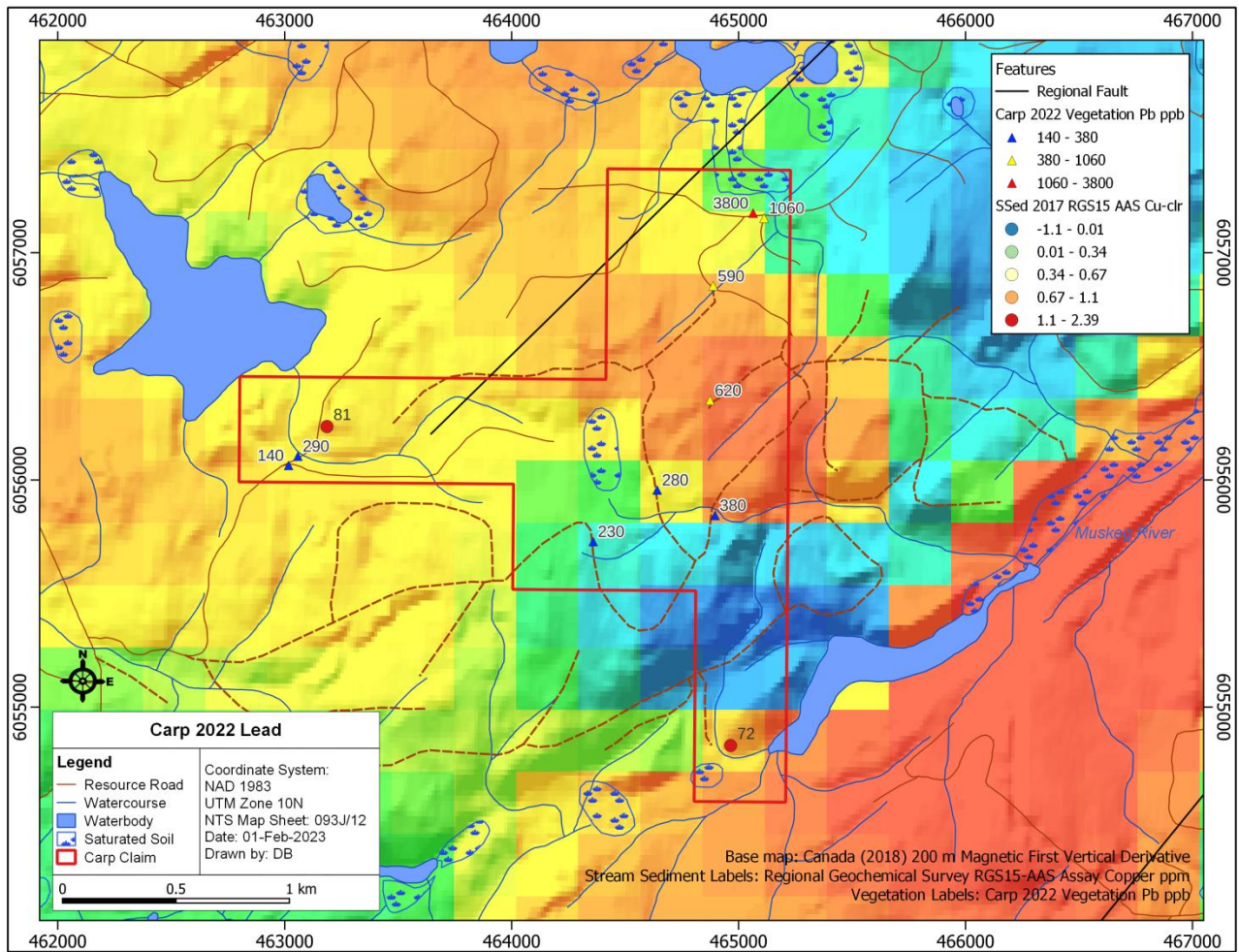


Figure 24 Carp 2022 Lead in Lodgepole Pine Needles with Natural Resources Canada (2018) 200 m Magnetic First Vertical Derivative base map

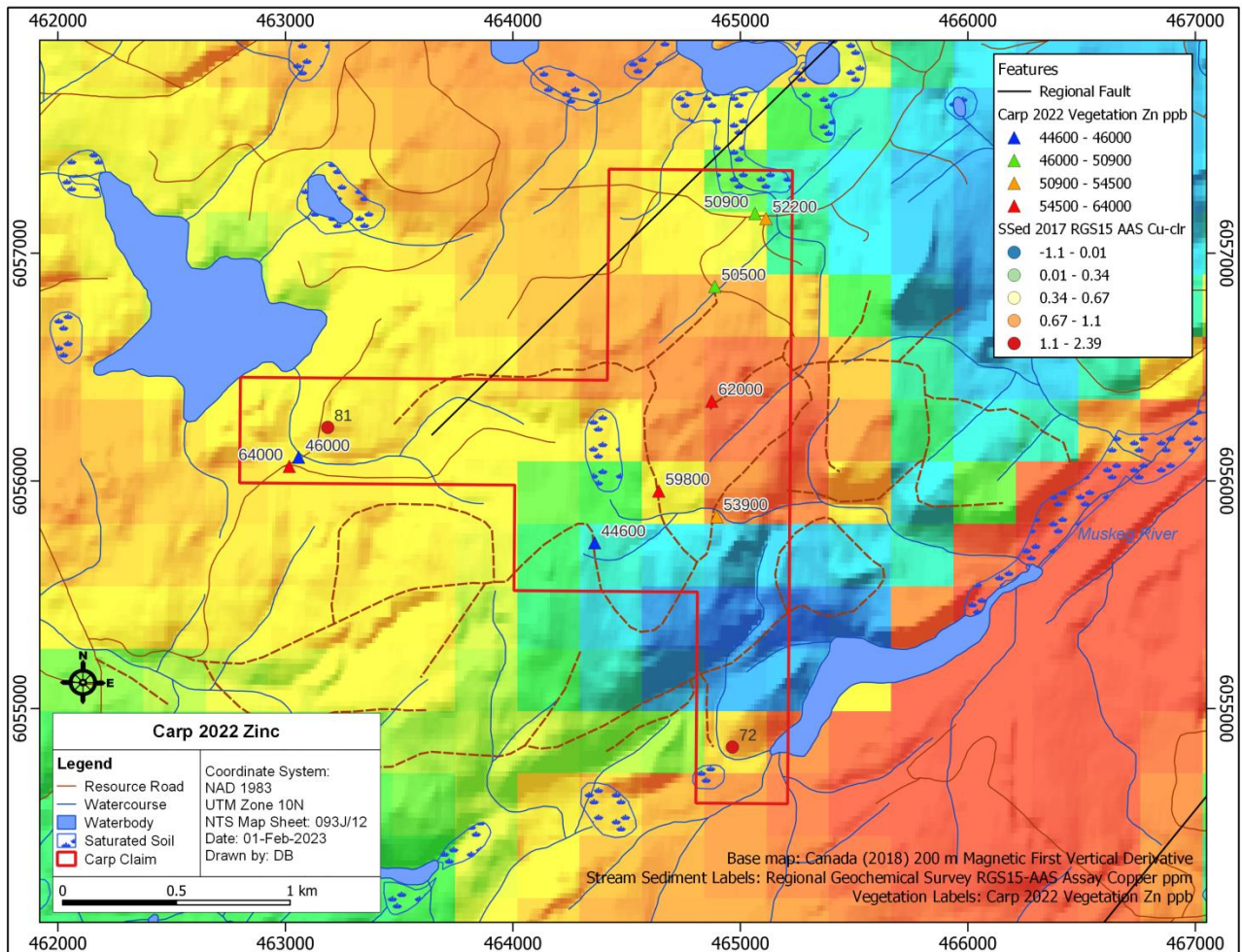


Figure 25 Carp 2022 Zinc in Lodgepole Pine Needles with Natural Resources Canada (2018) 200 m Magnetic First Vertical Derivative base map

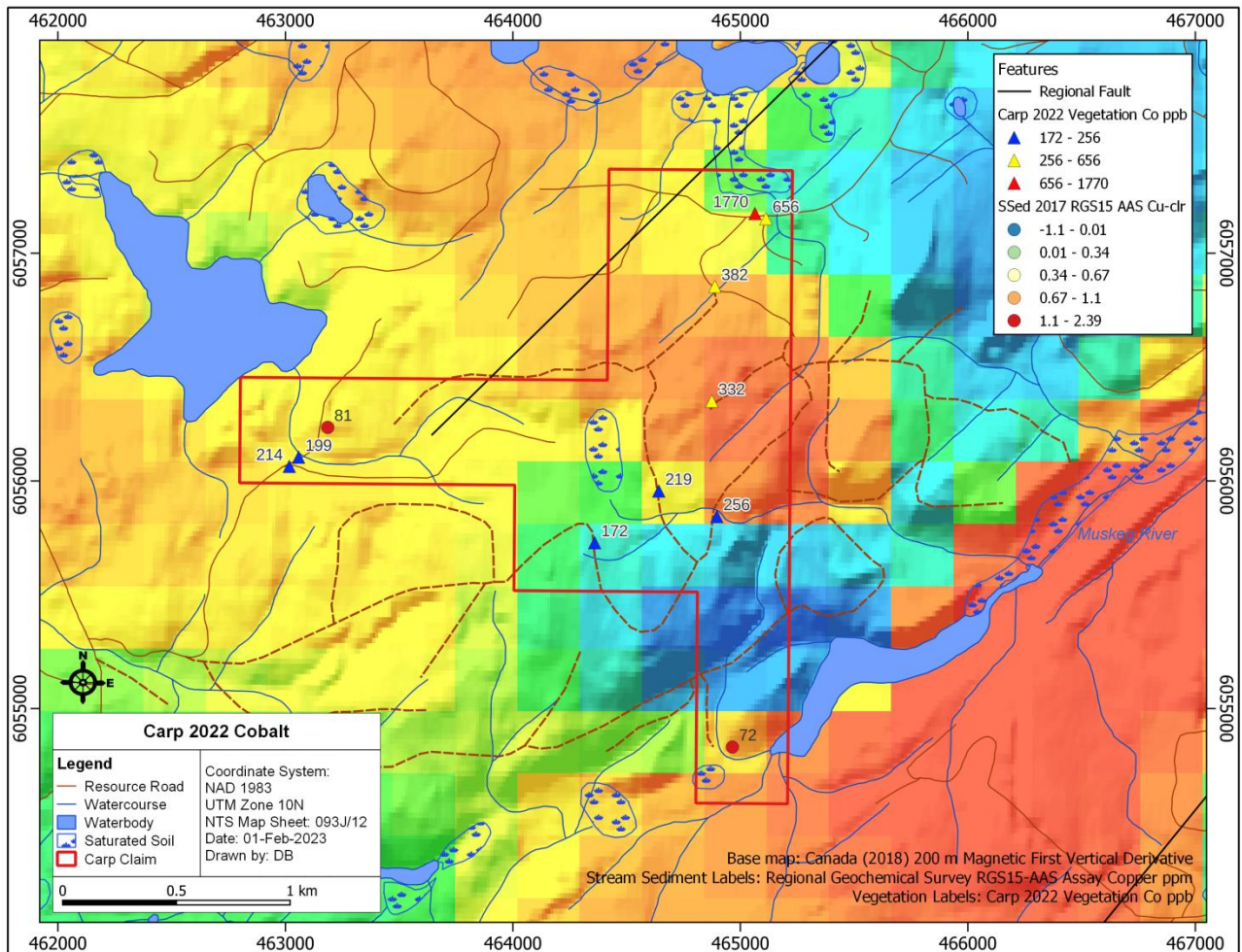


Figure 26 Carp 2022 Cobalt in Lodgepole Pine Needles with Natural Resources Canada (2018) 200 m Magnetic First Vertical Derivative base map

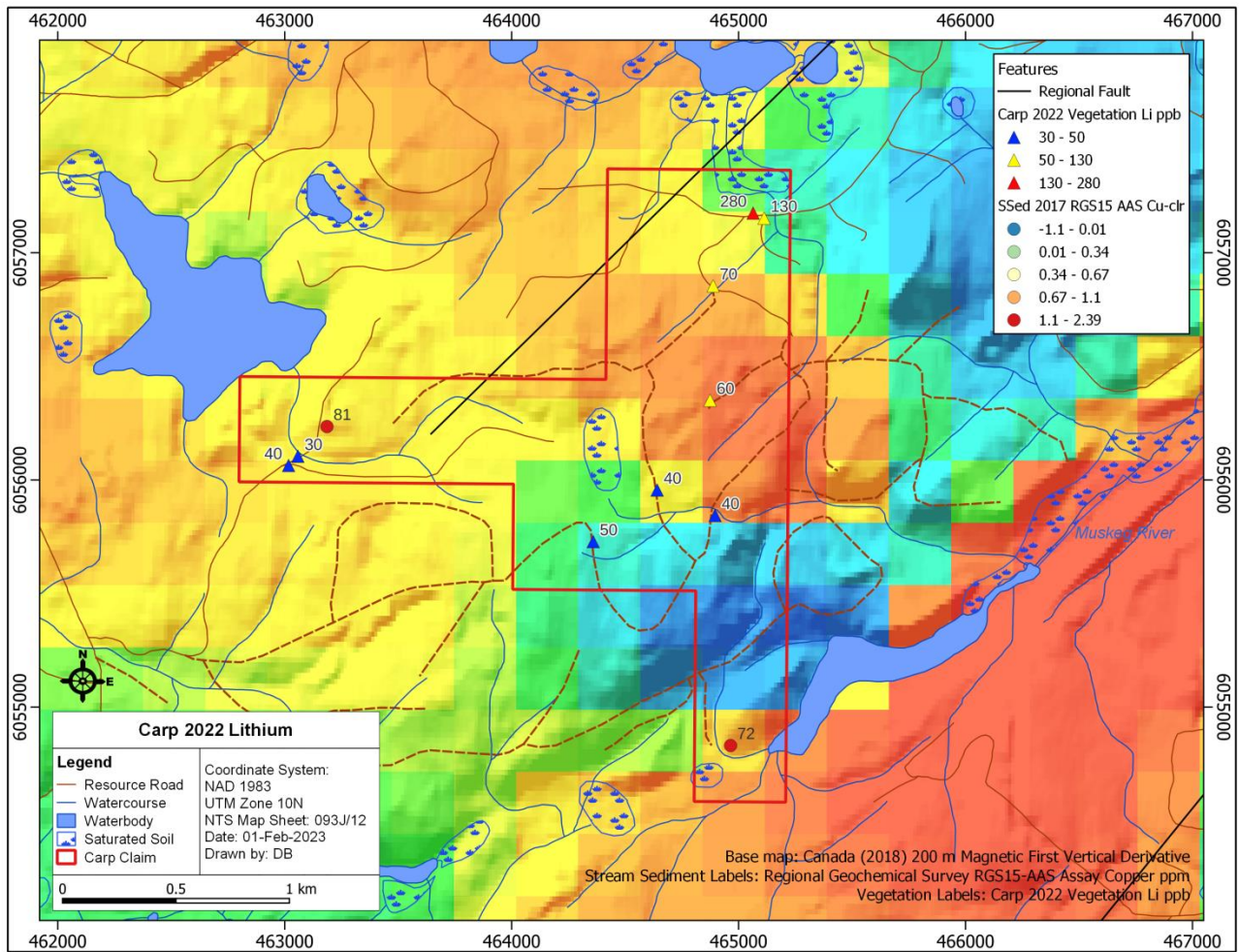


Figure 27 Carp 2022 Lithium in Lodgepole Pine Needles with Natural Resources Canada (2018) 200 m Magnetic First Vertical Derivative base map



## 5.1 Property Geology Mapping

Preliminary surface mapping in the Fall of 2022 revealed that the Carp Project primarily consists of unconsolidated till with a thin organic layer and very little evidence of a B-horizon (Figure 28). No visible outcrop was located within the areas visited.



Figure 28 Soil profile at CP22TR04 and example ground cover photo at CP22TR03 showing little to no organic cover or B horizon

## 5.2 Summary of Exploratory Work

A vegetation and reconnaissance sampling program was carried out on the Carp Property on September 24<sup>th</sup>. A total of 10 samples were taken over this period including one sample collected outside the current claim boundary. The Property consists of one mineral tenure covering approximately 281 hectares of land within the Lheidli T'enneh Nation and the Nak'azdli Band traditional territories (the list is preliminary based on current government information and is not conclusive). The Property is located within an area of gentle relief east of the Muskeg River within central BC and is approximately 50 kilometres northwest of Fort St James, BC. The property can be accessed via a resource road network from Fort St James.

The Carp Property lies within the Quesnel Trough of the Intermontane Tectonic Belt. The regionally mapped lithological units recognized within the Carp Property area consist of Upper Cretaceous to Eocene Wolverine Metamorphic Complex's muscovite and biotite schist, paragneiss; minor quartzite and marble as well as undifferentiated granitic pegmatite, granodiorite and rhyolite, amphibolite, calcsilicate and marble.

Preliminary biogeochemical sampling within the Project returned high contrast to anomalous values which may be consistent with an RMG - Group 1 pegmatite deposit or a Lithium-Caesium-Tantalum Pegmatite Deposit, although more information should be collected before determining the deposit model. The geochemical data collected shows anomalous to high contrast niobium, tantalum, tin and lithium; as well as gold, copper, silver, lead, zinc and cobalt. The Project area is situated within a large regional magnetic

high with high contrasting magnetic contours trending in a northeast-southwest direction. A magnetic anomaly, greater than 4500 gamma, was historically targeted as a possible igneous intrusion along the southeastern border of the current Carp Claim and may be a possible source for the pegmatite deposit model. Regional stream and sediment sampling, levelled to the geological information by Barnett & Williams (2009) support the location of a high copper prospect.

One prospector and one forestry specialist/field assistant traversed the Property taking samples, geological observations and photographs. Samples were collected within predefined areas based on lineament mapping as well as historical exploration and regional sampling programs. Vegetation sampling was consistent with previous findings with anomalous to high contrast copper and gold.

## 6. CONCLUSIONS AND RECOMMENDATIONS

The Carp Property is located within the Nechako Plateau physiographic region of the Interior Plateau approximately 50 kilometres northwest of the district municipality of Fort St James, BC. This area is within the Quesnel Trough and is actively being explored for porphyry-style copper-gold mineralization. One project of note is located within approximately 60 kilometres of the Carp Property: Mount Milligan Copper-Gold Porphyry Mine.

Historical work within the current Carp Property includes regional airborne aeromagnetic and electromagnetic geophysical surveys. The regional geophysical surveys are coarsely detailed for the size of the project area, but they showed a 4500+ gamma magnetic contour southeast of the current Carp claim thought to be a porphyry-type anomaly, an NW-SE trending magnetic low following the regionally mapped fault, as well as a conductive anomaly (high to the west and a circular low to the east) with a moderate gravity zone. A Soil-Gas-Hydrocarbon (SGH) survey was completed in 2015 on the historical Dark Horse Property which partially overlaps with the current Carp Project. Their results were interpreted based on a Mount Milligan style porphyry and the current Carp Project overlaps with their identified anomaly number 14.

In general, the Carp Project appears prospective for residual melt pegmatite Lithium-Caesium-Tantalum mineralization although this style of mineralization is not commonly found within this area of BC. The closest known lithium pegmatite projects are located to the south in the Cariboo Gold District and include Fe Battery Metals Corp Augustus Lithium Property and MGX Minerals' GC Lithium Pegmatite Project. More work on mapping the structure, mineralization and alteration found in the area is required to build a deposit model on which to base future exploration programs.

Based on the 2022 field observations and examination of the results, a geophysical survey and expanded/infill biogeochemical sample grid, as well as the development of a Quality Assurance/Quality Control (QA/QC) program for any sampling program with greater than 300 of one type of sample taken are recommended.

The future work recommended includes:

- A biogeochemical sampling program, to be conducted in late September to try to ensure biogeochemical consistency, and designed to explore the entire Property, with priority focused on vegetation samples to infill and expand the knowledge of the gold, copper and lithium anomalies and how they relate to the geophysical data.
- Accessing the southern portion of the Property for exploration of any outcrop, as well as the collection of stream sediment and biogeochemical samples.
- Ground induced-polarization and magnetic geophysical surveys over the primary biogeochemical anomalies would also be warranted to map potential alteration zones and structures.
- After identifying potential structures with the geophysical surveys, plan a drill program to investigate the areas where biogeochemical anomalies intersect with geophysical structures.

## 7. STATEMENT OF COSTS

**Carp 2022 September 24, 10 vegetation samples were collected with 1 sample was collected off-claims**

<b>Personnel (Name)* / Position</b>	<b>Field Days</b>	<b>Days</b>	<b>Rate</b>	<b>Subtotal*</b>	<b>Totals</b>
Diana Benz; Project Manager	September 24 (half day)	0.5	\$650.00	\$325.00	
Dave Zajac; Forestry/Field Assist.	September 24 (half day)	0.5	\$300.00	\$150.00	
				\$475.00	<b>\$475.00</b>
<b>Office Studies</b>	<b>List Personnel</b>	<b>Unit/Hours</b>	<b>Rate</b>	<b>Subtotal*</b>	
Pre-field Mapping	Diana Benz	3.0	\$81.25	\$243.75	
Pre-field Research/Program Plan/Lineament Mapping	Diana Benz	25.0	\$81.25	\$2,031.25	
Report Writing	Diana Benz	35	\$81.25	\$2,843.75	
				\$5,118.75	<b>\$5,118.75</b>
<b>Geochemical Surveying</b>	<b>Lab</b>	<b>No.</b>	<b>Rate</b>	<b>Subtotal</b>	
Vegetation	<i>Activation Laboratories</i>	9	\$52.82	\$475.34	
				\$475.34	<b>\$475.34</b>
<b>Transportation</b>		<b>Days/Unit/Hours/km</b>	<b>Rate</b>	<b>Subtotal</b>	
Diana Benz; Project Manager	September 24 (half day)	0.5	\$650.00	\$325.00	
Dave Zajac; Forestry/Field	September 24 (half day)	0.5	\$300.00	\$150.00	
Freight	Sample shipment to Kamloops	1.0		\$14.12	
Truck fuel	Jeep	1.0		\$111.61	
Truck km use	Jeep	278.1	\$0.53	\$147.39	
				\$748.12	<b>\$748.12</b>
<b>Accommodation &amp; Food</b>	<b>Rates per day</b>	<b>Days</b>	<b>Rate</b>	<b>Subtotal</b>	
Meals	2 person, 2 meals	1	\$69.20	\$69.20	
				\$69.20	<b>\$69.20</b>
<b>Equipment Rentals</b>		<b>Number</b>	<b>Rate</b>	<b>Subtotal</b>	
Field Sampling Supplies	sample bags, zip ties, flagging, office supplies, etc.	9	\$0.20	\$1.80	
				\$1.80	<b>\$1.80</b>
<b>TOTAL Expenditures</b>					<b>\$6,888.21</b>

## 8. REFERENCES

Aitchison, J. (2005). A concise guide to compositional data analysis. Department of Statistics Universit of Glasglow.

Barnett, C.T. and Williams, P.M. (2009). Using Geochemistry and Neural Networks to map Geology under Glacial Cover. Geoscience BC Project 2008-003.

Berger, B.R., R.A. Ayuso, J.C. Wynn, and R.R. Seal (2008). Preliminary model of porphyry copper deposits. Open File Report 2008-1321. United States Geological Survey. URL: [https://pubs.usgs.gov/of/2008/1321/pdf/OF081321\\_508.pdf](https://pubs.usgs.gov/of/2008/1321/pdf/OF081321_508.pdf).

Blaine, F.A. and Hart, C.J.R. (2012): Geochemical-exploration models for porphyry deposits in British Columbia; in Geoscience BC Summary of Activities 2011, Geoscience BC, Report 2012-1, p. 29–40.

Bradley, D.C., McCauley, A.D., and Stillings, L.M. (2017). Mineral-deposit model for lithium-cesium-tantalum pegmatites: U.S. Geological Survey Scientific Investigations Report 2010–5070–O, 48 p., <https://doi.org/10.3133/sir20105070O>.

Clarke, G. Britton, J., Jago, P., Katay, F. and Northcote, B. (2018). Exploration and Mining in British Columbia, 2016: A summary. In: Provincial Overview of Exploration and Mining in British Columbia, 2016. British Columbia Ministry of Energy and Mines, British Columbia Geological Survey, Information Circular 2018-1, pp. 1-29.

Coupé, R., Stewart, A.C. and Wikeem, B.M. (1991). Chapter 15 Engelmann Spruce – Subalpine Fir Zone. In: D. Meidinger & J. Pojar (Eds.). Special Report Series #6 Ecosystems of British Columbia (pp. 223-236). Victoria, BC: Ministry of Forests Research Branch.

Cui, Y., Miller, D., Schiarizza, P., and Diakow, L.J., 2017. British Columbia digital geology. British Columbia Ministry of Energy, Mines and Petroleum Resources, British Columbia Geological Survey Open File 2017-8, 9p. Data version 2019-12-19.

Faure, Gunter, and Felder, R.P., 1984, Lithium-bearing pegmatite and bismuth-antimony-lead-copper-bearing veinlets on Mount Madison, Byrd Glacier area: Antarctic Journal of the U.S., v. 19, no. 5, p. 13–14.

Fitzgerald, J., Jago, C.P., Jankovic, S., Simonian, B., Taylor, C. and Borntraeger, B. (2020). Technical Report on the Mount Milligan Mine North-Central British Columbia. Centerra Gold Inc.

Goodall, G.N. and Fox, P.E. (1992). Project 818 1991 Reconnaissance Program Weedon Lake Area, BC. Placer Dome Inc. BCGS File PF860355.

Groves, D.I., Goldfarb, R.J., Gebre-Mariam, M., Hagemann, S.G. and Rober, F. (1998). Orogenic gold deposits: A proposed classification in the context of the crustal distribution and relationship to other gold deposit types. *Ore Geology Reviews*, 13, p. 7-27.

Holland, S.S. (1976). Landforms of British Columbia, a physiographic outline. British Columbia Department of Mines and Petroleum Resources. Bulletin 48, 138 p.

Levson, V.M. and T.R. Giles (1997). Quaternary geology and till geochemistry in the Nechako and Fraser Plateau, Central British Columbia (NTS 93C/1, 8, 9, 10; F/2, 3, 7; L/16; M/1). Paper 1997-2. Ministry of Employment and Investment.

Logan, J.M. and Koyanagi, V.M. (1994). Geology and Mineral Deposits of the Galore Creek Area (104G/3,4). Ministry of Energy, Mines and Petroleum Resources Bulletin 92, 96 p.

Logan, J.M. and Schiarizza, P. (2011). Geology of the Quesnel and Stikine terranes and associated porphyry deposits. Geoscience BC Workshop: Exploration Undercover; a practical example using the QUEST study area. [accessed June 2022]. [https://www.geosciencebc.com/i/pdf/Presentations/UnderCoverWS2011/Talk\\_4\\_Schiarizza.pdf](https://www.geosciencebc.com/i/pdf/Presentations/UnderCoverWS2011/Talk_4_Schiarizza.pdf)

Müller, A., Reimer, W., Wall, F. & Williamson, B., Menuge, J., Brönnner, M., Haase, C., Brauch, K., Pohl, C., Lima, A., Teodoro, A., Cardoso-Fernandes, J., Roda-Robles, E., Harrop, J., Smith, K., Wanke, D., Unterweissacher, T., Hopfner, M., Schröder, M., Rausa, A. (2022). GREENPEG - Exploration for pegmatite minerals to feed the energy transition: First steps towards the Green Stone Age. Geological Society, London, Special Publications. 526. SP526-2021. 10.1144/SP526-2021-189.

McKinley, B. (2016). Spatiotemporal Geochemical Hydrocarbon Survey Report on the Dark Horse Property. ARIS Report Number 36073. KGHM International Ltd. Rep

Meidinger, D., Pojar, J. and Harper, W.L. (1991). Chapter 14 Sub-Boreal Spruce Zone. In: D. Meidinger & J. Pojar (Eds.). Special Report Series #6 Ecosystems of British Columbia (pp. 209-221). Victoria, BC: Ministry of Forests Research Branch.

NRCan (2014). Surficial Geology of Canada. Natural Resources Canada, Geological Survey of Canada, Canadian Geoscience Map 195. [accessed June 2021] <https://geoscan.nrcan.gc.ca/starweb/geoscan/servlet.starweb?path=geoscan/fulle.web&search1=R=295462>

Panteleyev, A. (1995a). "Porphyry Cu+/-Mo+/-Au". In: Selected British Columbia Mineral Deposit Profiles, Volume 1 - Metallics and Coal, ed. by D.V. Lefebure and G.E. Ray. Open File 1995-20. British Columbia Ministry of Employment and Investment, pp. 87–92.

Panteleyev, A. (1995b). "Porphyry Cu-Au: Alkalic". In: Selected British Columbia Mineral Deposit Profiles. Vol. 1 – Metallics and Coal. Open File 1995-20. Victoria, BC: British Columbia Ministry of Energy of Employment and Investment, pp. 83–86.

Ray, G. E. and G. L. Dawson (1994). The Geology and Mineral Deposits of the Hedley Gold Skarn District, Southern B.C. Bulletin 87. Province of British Columbia Ministry of Energy, Mines and Petroleum Resources, Mineral Resources Division, Geological Survey Branch. URL: <http://www.empr.gov.bc.ca/Mining/Geoscience/PublicationsCatalogue/BulletinInformation/BulletinsAfter1940/Pages/Bulletin87.aspx>.

Ray, G.E. (1995a). "Cu Skarns". In: Selected British Columbia Mineral Deposit Profiles, Volume 1 - Metallics and Coal. Ed. by D.V. Lefebure and G.E. Ray. Open File 1995-20. British Columbia Ministry of Employment and Investment, pp. 59–60.

Ray, G.E. (1995b). "Pb-Zn Skarns". In: Selected British Columbia Mineral Deposit Profiles, Volume 1 - Metallics and Coal. Ed. by D.V. Lefebure and G.E. Ray. Open File 1995-20. British Columbia Ministry of Employment and Investment, pp. 61–62.

Ray, G.E. (1998). "Au Skarns". In: Geological Fieldwork 1997. British Columbia Ministry of Employment and Investment, pp. 24H-1 to 24H-4.

Robb, L.J. (2005). Ore Forming Processes. Malden, MA: Blackwell Science.

Wise, M.A., Müller, A. and Simmons, W.B. (2022). A proposed new mineralogical classification system for granitic pegmatites. The Canadian Mineralogist, 60, <https://doi.org/10.3749/canmin.1800006>.

## 9. STATEMENT OF QUALIFICATIONS

I, Diana M. Benz, certify that:

1. I am the President of Takom Exploration Ltd., a mineral exploration consulting company located at 12925 Chief Lake Road, Prince George, BC.
2. I am the author of the assessment report titled Geochemical and Geological Survey on the Carp Property.
3. I graduated from the University of British Columbia in 1997 with a B.Sc. in Biology, an M.Sc. in Earth Sciences from the University of Windsor in 2006 and a Ph.D. in Natural Resources and Environmental Studies from the University of Northern British Columbia in 2017.
4. I have worked in the diamonds and base/precious metals exploration industry since 1996 (27 years) on projects located across Canada (BC, YT, NWT, ON) and Greenland, as well as, remotely through a BC-based office on projects located in the South America, Africa, Eurasia, Australia, the Middle East and Nevada, USA.

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Diana M. Benz, PhD

Takom Exploration Ltd.



## **Appendix A**

### **SAMPLE DESCRIPTIONS**

Carp Project 2022 Needle Samples

Sample	Property	Date	Sampler	Northing	Easting	Elevation	Zone	Datum	Accuracy_m	Type	Tissue	Age_yr
CP22TR01	Carp	24-Sep-2022	DB	6057174.35	465064.21	876.80	10N	NAD83	0	lodgepole pine	needles	12+
CP22TR02	Carp	24-Sep-2022	DB	6057152.16	465112.55	883.12	10N	NAD83	0	lodgepole pine	needles	12+
CP22TR03	Carp	24-Sep-2022	DB	6056854.01	464887.94	903.21	10N	NAD83	0	lodgepole pine	needles	12+
CP22TR04	Carp	24-Sep-2022	DB	6056350.58	464874.43	937.82	10N	NAD83	0	lodgepole pine	needles	7+
CP22TR05	Carp	24-Sep-2022	DB	6055843.65	464896.50	914.24	10N	NAD83	0	lodgepole pine	needles	5+
CP22TR06	Carp	24-Sep-2022	DB	6055955.58	464641.26	924.00	10N	NAD83	0	lodgepole pine	needles	5+
CP22TR07	Carp	24-Sep-2022	DB	6055728.55	464359.49	941.74	10N	NAD83	0	lodgepole pine	needles	5+
CP22TR08	Carp	24-Sep-2022	DB	6056104.19	463057.93	886.71	10N	NAD83	0	lodgepole pine	needles	12+
CP22TR09	Carp	24-Sep-2022	DB	6056063.79	463016.95	894.04	10N	NAD83	0	lodgepole pine	needles	10+
CP22TR10	Carp	24-Sep-2022	DB	6059672.20	468475.07	870.28	10N	NAD83	0	lodgepole pine	needles	9+

Carp Project 2022 Needle Samples

Sample	Health	Height_m	Diameter_cm	Note	ShippingID
CP22TR01	bit pitchy	5	5	till	CP 0412848550251050
CP22TR02	good	6	7	till	CP 0412848550251050
CP22TR03	orange needles near bottom	7	7	till	CP 0412848550251050
CP22TR04	good	2.5	2	till, by soil, in newer cut block Au high	CP 0412848550251050
CP22TR05	good	2.5	3	till	CP 0412848550251050
CP22TR06	good	3	2	till	CP 0412848550251050
CP22TR07	good	4.5	3	till	CP 0412848550251050
CP22TR08	good	5	5	till, no creek flow, lots organic cover	CP 0412848550251050
CP22TR09	good	4	4	till	CP 0412848550251050
CP22TR10	good	5	3	till, logging road north claim	CP 0412848550251050

Carp Project 2022 Needle Samples

Sample	ShippingOverseer	ShippingDate	Lab	Certificate	Cert_Date	Method	Lab_ID	Ag_ppb	Al_ppm	As_ppb	Au_ppb
CP22TR01	DB	13-Oct-2022	Act Labs	A22-15318	18-Nov-2022	AR-MS	CP22TR01	44	715	5800	5.5
CP22TR02	DB	13-Oct-2022	Act Labs	A22-15318	18-Nov-2022	AR-MS	CP22TR02	50	681	1610	1.7
CP22TR03	DB	13-Oct-2022	Act Labs	A22-15318	18-Nov-2022	AR-MS	CP22TR03	37	326	850	0.4
CP22TR04	DB	13-Oct-2022	Act Labs	A22-15318	18-Nov-2022	AR-MS	CP22TR04	103	244	910	0.7
CP22TR05	DB	13-Oct-2022	Act Labs	A22-15318	18-Nov-2022	AR-MS	CP22TR05	27	270	550	2.9
CP22TR06	DB	13-Oct-2022	Act Labs	A22-15318	18-Nov-2022	AR-MS	CP22TR06	31	396	260	0.3
CP22TR07	DB	13-Oct-2022	Act Labs	A22-15318	18-Nov-2022	AR-MS	CP22TR07	27	314	200	0.4
CP22TR08	DB	13-Oct-2022	Act Labs	A22-15318	18-Nov-2022	AR-MS	CP22TR08	20	201	300	0.3
CP22TR09	DB	13-Oct-2022	Act Labs	A22-15318	18-Nov-2022	AR-MS	CP22TR09	15	281	160	0.3
CP22TR10	DB	13-Oct-2022	Act Labs	A22-15318	18-Nov-2022	AR-MS	CP22TR10	34	314	200	< 0.2

Carp Project 2022 Needle Samples

Sample	B_ppm	Ba_ppb	Be_ppb	Bi_ppb	Ca_ppm	Cd_ppb	Ce_ppb	Co_ppb	Cr_ppb	Cs_ppb	Cu_ppb	Dy_ppb	Er_ppb	Eu_ppb
CP22TR01	9	6000	< 30	86	1990	137	1240	1770	9100	68.7	4070	33.8	16	15.2
CP22TR02	10	5100	< 30	24	3230	176	410	656	4700	26.6	2970	11.8	6.1	4.1
CP22TR03	8	3100	< 30	15	2240	326	282	382	3800	25.4	3110	5.9	2.6	3
CP22TR04	14	2600	< 30	12	2390	309	281	332	3800	30.5	3580	6.8	2.4	4.2
CP22TR05	7	2100	< 30	8	1810	157	179	256	3300	14.5	3260	4.9	1.5	1.5
CP22TR06	10	1200	< 30	4	1570	153	102	219	2500	5.5	3310	2.8	1.5	0.9
CP22TR07	9	1600	< 30	5	1830	382	105	172	2700	6.9	2800	3.6	2.1	1
CP22TR08	12	3900	< 30	6	3050	319	107	199	3000	8.5	2780	3.4	2.4	1.4
CP22TR09	11	1100	< 30	3	1990	186	57	214	1800	7.4	2540	2.2	0.9	0.7
CP22TR10	15	3800	< 30	4	2100	173	234	318	3000	10.6	4220	14.9	8.1	4.5

Carp Project 2022 Needle Samples

Sample	Fe_ppm	Ga_ppb	Gd_ppb	Ge_ppb	Hf_ppb	Hg_ppb	Ho_ppb	In_ppb	K_ppm	La_ppb	Li_ppb	Lu_ppb	Mg_ppm	Mn_ppb
CP22TR01	2550	365	59.6	21	18.3	9	5.9	1.5	5370	600	280	2	1830	193000
CP22TR02	791	148	19.1	10	5.5	8	1.9	0.6	5910	200	130	0.6	1400	677000
CP22TR03	428	61	11.5	4	2.7	5	1.2	0.3	5660	140	70	< 0.5	1300	654000
CP22TR04	462	68	10.5	5	5.5	6	1.2	0.7	7120	140	60	< 0.5	1450	317000
CP22TR05	292	50	7.8	5	4.3	3	0.6	< 0.2	6080	90	40	< 0.5	1510	299000
CP22TR06	172	24	5.2	< 3	3.3	4	0.4	0.3	6190	50	40	< 0.5	1370	481000
CP22TR07	159	27	5	< 3	2.5	7	0.6	0.2	5270	50	50	< 0.5	1210	421000
CP22TR08	202	43	5.1	5	3.6	4	0.4	< 0.2	5190	50	30	< 0.5	1570	259000
CP22TR09	110	9	4.1	< 3	0.9	3	< 0.2	< 0.2	6540	30	40	< 0.5	1290	604000
CP22TR10	314	57	19	< 3	5.4	9	2.2	0.2	8210	110	80	0.6	1370	295000

Carp Project 2022 Needle Samples

Sample	Mo_ppb	Na_ppm	Nb_ppb	Nd_ppb	Ni_ppb	P_ppm	Pb_ppb	Pd_ppb	Pr_ppb	Pt_ppb	Rb_ppb	Re_ppb	Sb_ppb	Se_ppb
CP22TR01	1200	23	95	476	6270	1190	3800	< 0.2	117	0.2	2350	< 0.2	50	300
CP22TR02	550	13	33	148	3810	1260	1060	< 0.2	40	< 0.2	2880	< 0.2	20	200
CP22TR03	480	11	19	102	3640	1280	590	< 0.2	26	< 0.2	3490	< 0.2	10	< 100
CP22TR04	530	13	19	106	3440	1440	620	< 0.2	27	< 0.2	3900	0.2	10	200
CP22TR05	430	8	13	66	4410	1290	380	< 0.2	17	< 0.2	3100	< 0.2	< 10	300
CP22TR06	430	5	7	37	4750	1460	280	< 0.2	9	< 0.2	1400	< 0.2	< 10	< 100
CP22TR07	390	8	8	41	3980	1280	230	< 0.2	10	0.2	1600	< 0.2	10	< 100
CP22TR08	440	10	10	41	3300	1280	290	< 0.2	11	< 0.2	2580	< 0.2	< 10	100
CP22TR09	230	9	5	25	3240	1450	140	< 0.2	6	< 0.2	3070	< 0.2	< 10	< 100
CP22TR10	270	14	22	98	5400	1600	250	< 0.2	25	0.3	2910	< 0.2	< 10	< 100

Carp Project 2022 Needle Samples

Sample	Sm_ppb	Sn_ppb	Sr_ppb	Ta_ppb	Tb_ppb	Te_ppb	Th_ppb	Ti_ppb	Tl_ppb	Tm_ppb	U_ppb	V_ppb	W_ppb	Y_ppb	Yb_ppb
CP22TR01	82	100	3630	1.8	6.7	< 8	466	34700	6	2.3	26	3020	177	165	16.3
CP22TR02	33	< 50	3780	1	2.2	< 8	112	12700	7	0.7	10	950	66	64	6.3
CP22TR03	14	< 50	2750	0.9	1.5	< 8	94	7180	2	0.5	6	540	< 25	36	2
CP22TR04	19	< 50	2690	0.8	1.7	12	131	7330	2	0.4	6	550	26	36	2.6
CP22TR05	9	< 50	2150	0.7	1.2	12	115	4840	< 1	0.3	4	350	< 25	25	1.8
CP22TR06	7	50	1290	0.5	0.4	12	69	2540	< 1	0.2	2	180	< 25	15	0.8
CP22TR07	7	< 50	1280	0.3	0.7	< 8	59	3450	< 1	< 0.1	2	190	45	15	1.4
CP22TR08	6	< 50	4790	0.7	0.6	< 8	85	3830	< 1	0.2	2	270	< 25	18	0.9
CP22TR09	5	< 50	1100	0.3	0.4	< 8	21	1560	< 1	< 0.1	1	140	< 25	10	0.7
CP22TR10	19	< 50	2970	0.5	2.9	12	89	11600	1	1	6	580	< 25	79	6.9



Carp Project 2022 Needle Samples

Sample	Zn_ppb	Zr_ppb
CP22TR01	50900	620
CP22TR02	52200	180
CP22TR03	50500	110
CP22TR04	62000	140
CP22TR05	53900	100
CP22TR06	59800	80
CP22TR07	44600	70
CP22TR08	46000	80
CP22TR09	64000	40
CP22TR10	54500	150

## **Appendix B**

### **CERTIFICATES OF ANALYSIS**



Report No.: A22-15318
Report Date: 18-Nov-22
Date Submitted: 19-Oct-22
Your Reference: Carp

Takom Exploration Ltd.
12925 Chief Lake Rd.
Prince George BC V2K 5K1
Canada

ATTN: Diana Benz

CERTIFICATE OF ANALYSIS

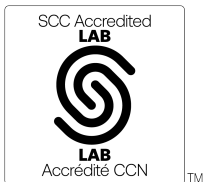
10 Vegetation samples were submitted for analysis.

Table with 2 columns: Analytical package(s) requested, Testing Date. Row 1: 2G, Unashed Vegetation ICP/MS, 2022-11-11 14:07:55

REPORT A22-15318

This report may be reproduced without our consent. If only selected portions of the report are reproduced, permission must be obtained. If no instructions were given at time of sample submittal regarding excess material, it will be discarded within 90 days of this report. Our liability is limited solely to the analytical cost of these analyses. Test results are representative only of material submitted for analysis.

Notes:



LabID: 266

ACTIVATION LABORATORIES LTD.
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CERTIFIED BY:

Handwritten signature of Mark Vandergeest

Mark Vandergeest
Quality Control Coordinator

Analyte Symbol	Ag	Al	As	Au	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu	Dy	Er	Eu	Fe	Ga	Gd	Ge	Hf
Unit Symbol	ppb	ppm	ppb	ppb	ppm	ppb	ppb	ppb	ppm	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppm	ppb	ppb	ppb	ppb
Lower Limit	3	4	10	0.2	1	100	30	2	25	6	15	4	100	0.2	50	0.5	0.4	0.2	3	4	0.4	3	0.4
Method Code	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
CP22TR01	44	715	5800	5.5	9	6000	< 30	86	1990	137	1240	1770	9100	68.7	4070	33.8	16.0	15.2	2550	365	59.6	21	18.3
CP22TR02	50	681	1610	1.7	10	5100	< 30	24	3230	176	410	656	4700	26.6	2970	11.8	6.1	4.1	791	148	19.1	10	5.5
CP22TR03	37	326	850	0.4	8	3100	< 30	15	2240	326	282	382	3800	25.4	3110	5.9	2.6	3.0	428	61	11.5	4	2.7
CP22TR04	103	244	910	0.7	14	2600	< 30	12	2390	309	281	332	3800	30.5	3580	6.8	2.4	4.2	462	68	10.5	5	5.5
CP22TR05	27	270	550	2.9	7	2100	< 30	8	1810	157	179	256	3300	14.5	3260	4.9	1.5	1.5	292	50	7.8	5	4.3
CP22TR06	31	396	260	0.3	10	1200	< 30	4	1570	153	102	219	2500	5.5	3310	2.8	1.5	0.9	172	24	5.2	< 3	3.3
CP22TR07	27	314	200	0.4	9	1600	< 30	5	1830	382	105	172	2700	6.9	2800	3.6	2.1	1.0	159	27	5.0	< 3	2.5
CP22TR08	20	201	300	0.3	12	3900	< 30	6	3050	319	107	199	3000	8.5	2780	3.4	2.4	1.4	202	43	5.1	5	3.6
CP22TR09	15	281	160	0.3	11	1100	< 30	3	1990	186	57	214	1800	7.4	2540	2.2	0.9	0.7	110	9	4.1	< 3	0.9
CP22TR10	34	314	200	< 0.2	15	3800	< 30	4	2100	173	234	318	3000	10.6	4220	14.9	8.1	4.5	314	57	19.0	< 3	5.4

Analyte Symbol	Hg	Ho	In	K	La	Li	Lu	Mg	Mn	Mo	Na	Nb	Nd	Ni	P	Pb	Pd	Pr	Pt	Rb	Re	Sb	Se
Unit Symbol	ppb	ppb	ppb	ppm	ppb	ppb	ppb	ppm	ppb	ppb	ppm	ppb	ppb	ppb	ppm	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Lower Limit	2	0.2	0.2	10	10	10	0.5	2	100	10	5	2	5	50	4	50	0.2	1	0.2	10	0.2	10	100
Method Code	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
CP22TR01	9	5.9	1.5	5370	600	280	2.0	1830	193000	1200	23	95	476	6270	1190	3800	< 0.2	117	0.2	2350	< 0.2	50	300
CP22TR02	8	1.9	0.6	5910	200	130	0.6	1400	677000	550	13	33	148	3810	1260	1060	< 0.2	40	< 0.2	2880	< 0.2	20	200
CP22TR03	5	1.2	0.3	5660	140	70	< 0.5	1300	654000	480	11	19	102	3640	1280	590	< 0.2	26	< 0.2	3490	< 0.2	10	< 100
CP22TR04	6	1.2	0.7	7120	140	60	< 0.5	1450	317000	530	13	19	106	3440	1440	620	< 0.2	27	< 0.2	3900	0.2	10	200
CP22TR05	3	0.6	< 0.2	6080	90	40	< 0.5	1510	299000	430	8	13	66	4410	1290	380	< 0.2	17	< 0.2	3100	< 0.2	< 10	300
CP22TR06	4	0.4	0.3	6190	50	40	< 0.5	1370	481000	430	5	7	37	4750	1460	280	< 0.2	9	< 0.2	1400	< 0.2	< 10	< 100
CP22TR07	7	0.6	0.2	5270	50	50	< 0.5	1210	421000	390	8	8	41	3980	1280	230	< 0.2	10	0.2	1600	< 0.2	10	< 100
CP22TR08	4	0.4	< 0.2	5190	50	30	< 0.5	1570	259000	440	10	10	41	3300	1280	290	< 0.2	11	< 0.2	2580	< 0.2	< 10	100
CP22TR09	3	< 0.2	< 0.2	6540	30	40	< 0.5	1290	604000	230	9	5	25	3240	1450	140	< 0.2	6	< 0.2	3070	< 0.2	< 10	< 100
CP22TR10	9	2.2	0.2	8210	110	80	0.6	1370	295000	270	14	22	98	5400	1600	250	< 0.2	25	0.3	2910	< 0.2	< 10	< 100

Analyte Symbol	Sm	Sn	Sr	Ta	Tb	Te	Th	Ti	Tl	Tm	U	V	W	Y	Yb	Zn	Zr
Unit Symbol	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Lower Limit	1	50	40	0.2	0.2	8	2	150	1	0.1	1	10	25	2	0.4	400	20
Method Code	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
CP22TR01	82	100	3630	1.8	6.7	< 8	466	34700	6	2.3	26	3020	177	165	16.3	50900	620
CP22TR02	33	< 50	3780	1.0	2.2	< 8	112	12700	7	0.7	10	950	66	64	6.3	52200	180
CP22TR03	14	< 50	2750	0.9	1.5	< 8	94	7180	2	0.5	6	540	< 25	36	2.0	50500	110
CP22TR04	19	< 50	2690	0.8	1.7	12	131	7330	2	0.4	6	550	26	36	2.6	62000	140
CP22TR05	9	< 50	2150	0.7	1.2	12	115	4840	< 1	0.3	4	350	< 25	25	1.8	53900	100
CP22TR06	7	50	1290	0.5	0.4	12	69	2540	< 1	0.2	2	180	< 25	15	0.8	59800	80
CP22TR07	7	< 50	1280	0.3	0.7	< 8	59	3450	< 1	< 0.1	2	190	45	15	1.4	44600	70
CP22TR08	6	< 50	4790	0.7	0.6	< 8	85	3830	< 1	0.2	2	270	< 25	18	0.9	46000	80
CP22TR09	5	< 50	1100	0.3	0.4	< 8	21	1560	< 1	< 0.1	1	140	< 25	10	0.7	64000	40
CP22TR10	19	< 50	2970	0.5	2.9	12	89	11600	1	1.0	6	580	< 25	79	6.9	54500	150

Analyte Symbol	Ag	Al	As	Au	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu	Dy	Er	Eu	Fe	Ga	Gd	Ge	Hf
Unit Symbol	ppb	ppm	ppb	ppb	ppm	ppb	ppb	ppb	ppm	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppm	ppb	ppb	ppb	ppb
Lower Limit	3	4	10	0.2	1	100	30	2	25	6	15	4	100	0.2	50	0.5	0.4	0.2	3	4	0.4	3	0.4
Method Code	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
CLV-1 Meas					11	49700			5920			463							1280				
CLV-1 Cert					11	49300			5940			494							1400				
CLV-2 Meas					37	21900																	
CLV-2 Cert					43	22500																	
CDV-1 Meas	9	1490	1300	2.3	16	8700		20	19300	40	4370	2020	12100	121	8630				2670	599		30	46.2
CDV-1 Cert	9	1500	1300	2.3	12	8500		20	19400	40	4350	2000	12100	121	8610				2560	600		30	46
Method Blank	< 3	< 4	< 10	< 0.2	< 1	< 100	< 30	< 2	< 25	< 6	< 15	< 4	400	< 0.2	< 50	< 0.5	< 0.4	< 0.2	< 3	< 4	< 0.4	< 3	< 0.4

Analyte Symbol	Hg	Ho	In	K	La	Li	Lu	Mg	Mn	Mo	Na	Nb	Nd	Ni	P	Pb	Pd	Pr	Pt	Rb	Re	Sb	Se
Unit Symbol	ppb	ppb	ppb	ppm	ppb	ppb	ppb	ppm	ppb	ppb	ppm	ppb	ppb	ppb	ppm	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Lower Limit	2	0.2	0.2	10	10	10	0.5	2	100	10	5	2	5	50	4	50	0.2	1	0.2	10	0.2	10	100
Method Code	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
CLV-1 Meas				1820				1230	573000	2150	133				588	11000				2140			
CLV-1 Cert				1760				1240	571000	2180	134				581	11100				2230			
CLV-2 Meas																						22.8	
CLV-2 Cert																						23.0	
CDV-1 Meas	41			1760	2300	560		1300	386000	200	60	60		6440	383	1350				2650		30	300
CDV-1 Cert	41			1800	2310	560		1310	413000	200	60	60		6400	400	1330				2600		30	300
Method Blank	< 2	< 0.2	< 0.2	< 10	< 10	< 10	< 0.5	2	< 100	< 10	< 5	< 2	< 5	< 50	< 4	< 50	< 0.2	< 1	< 0.2	< 10	< 0.2	< 10	< 100



Analyte Symbol	Sm	Sn	Sr	Ta	Tb	Te	Th	Ti	Tl	Tm	U	V	W	Y	Yb	Zn	Zr
Unit Symbol	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Lower Limit	1	50	40	0.2	0.2	8	2	150	1	0.1	1	10	25	2	0.4	400	20
Method Code	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS	AR-MS
CLV-1 Meas			29800		17.4						90700					76900	
CLV-1 Cert			28500		17.0						98500					74000	
CLV-2 Meas																	
CLV-2 Cert																	
CDV-1 Meas		110	124000			13	595	29900			181	4420		1420		21700	1290
CDV-1 Cert		80	122000			40	610	30000			170	4200		1410		23300	1290
Method Blank	< 1	< 50	< 40	< 0.2	< 0.2	13	< 2	< 150	< 1	< 0.1	< 1	< 10	< 25	< 2	< 0.4	< 400	< 20