

Ministry of Energy and Mines  
BC Geological Survey

Assessment Report  
Title Page and Summary

TYPE OF REPORT [type of survey(s)]: PROSPECTING

TOTAL COST: 50,546.53

AUTHOR(S): LIAM F CONNOR (Updated by A Randell) SIGNATURE(S): \_\_\_\_\_

NOTICE OF WORK PERMIT NUMBER(S)/DATE(S): N/A YEAR OF WORK: 2021

STATEMENT OF WORK - CASH PAYMENTS EVENT NUMBER(S)/DATE(S): 5856770

PROPERTY NAME: 2 ACES EAST

CLAIM NAME(S) (on which the work was done): 1060816, 1060817, 1060525

COMMODITIES SOUGHT: GOLD, SILVER, COPPER, COBALT, ZINC, LEAD, NICKEL

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

MINING DIVISION: CARIBOO NTS/BCGS: 093A

LATITUDE: 121 ° 00' 47.61 " LONGITUDE: 52 ° 46 '33.52 " (at centre of work)

OWNER(S):

1) HAWKEYE GOLD AN DIAMONDS INC 2) \_\_\_\_\_

MAILING ADDRESS:

202 - 1985 ALBERNI STREET, VANCOUVER,

BC, CANADA, V6G 0A2

OPERATOR(S) [who paid for the work]:

1) AS ABOVE 2) \_\_\_\_\_

MAILING ADDRESS:

AS ABOVE

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

CARIBOO, QUESNELLIA, BARKERVILLE, KOOTENAY TERRANE, PALAEOZOIC, SEDIMENTARY, VOLCANIC, ZINC,

SCHIST, GOOSE PEAK SUCCESSION, COPPER, LIMONITE, COBALT, LEAD, GOLD, SILVER

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

TYPE OF WORK IN THIS REPORT	EXTENT OF WORK (IN METRIC UNITS)	ON WHICH CLAIMS	PROJECT COSTS APPORTIONED (incl. support)
<b>GEOLOGICAL (scale, area)</b>			
<b>Ground, mapping</b>	PROSPECTING TEAM	ALL	10,769.33
<b>Photo interpretation</b>			
<b>GEOPHYSICAL (line-kilometres)</b>			
<b>Ground</b>			
<b>Magnetic</b>			
<b>Electromagnetic</b>			
<b>Induced Polarization</b>			
<b>Radiometric</b>			
<b>Seismic</b>			
<b>Other</b>			
<b>Airborne</b>	DRONE SURVEY	ALL	1,515.94
<b>GEOCHEMICAL (number of samples analysed for...)</b>			
<b>Soil</b>			
<b>Silt</b>	STREAM SEDIMENTS X24	ALL	852.72
<b>Rock</b>	X13	ALL	461.89
<b>Other</b>	XRF X13	ALL	774.41
<b>DRILLING (total metres; number of holes, size)</b>			
<b>Core</b>			
<b>Non-core</b>			
<b>RELATED TECHNICAL</b>			
<b>Sampling/assaying</b>			
<b>Petrographic</b>			
<b>Mineralographic</b>			
<b>Metallurgic</b>			
<b>PROSPECTING (scale, area)</b>			
<b>PREPARATORY / PHYSICAL</b>			
<b>Line/grid (kilometres)</b>			
<b>Topographic/Photogrammetric (scale, area)</b>			
<b>Legal surveys (scale, area)</b>			
<b>Road, local access (kilometres)/trail</b>			
<b>Trench (metres)</b>			
<b>Underground dev. (metres)</b>			
<b>Other</b>			36,172.24
		<b>TOTAL COST:</b>	<b>50,546.53</b>



Assessment Report  
describing  
Geological and Geochemical Surveys  
at the  
2 Aces East Claims, British Columbia

Mineral Claims  
NTS 093A  
Cariboo Mining Division

UTM (NAD83 Zone 10): 634057 E / 5849160 N  
Longitude/Latitude: 121°00'47.61"W / 52°46'33.52"N

Report for:  
Hawkeye Gold & Diamond Inc.  
M 202 – 1985 Alberni Street  
Vancouver, BC  
Canada  
V6G 0A2

Work Performed: between September 23<sup>rd</sup>, 2021, and October 24<sup>th</sup>, 2021

on

Mineral Titles:



<p><b>2 Aces East</b> <b>(619379 E, 5851234 N)</b> <b>(121°00'47.61"W,</b> <b>52°46'33.52"N)</b></p>
<p>1060816, 1060817, 1060525</p>

Authored by:

Liam F. Connor, MESci

SGDS Hive

January 16, 2023



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## 1.0 Introduction

The 2 Aces East claims are located in central British Columbia within the Cariboo Mining Division. The properties are located 20 km directly east of Cariboo Lake and 8 km northwest of Quesnell Lake and is centered on 52°46'33.52"N latitude and 121°00'47.61"W longitude (Fig. 1). Elevations over the property range from 1100 m by Maeford Lake to 2000 m along the ridges of the Three Sisters Mountains in the south.

The 2 Aces East project area is situated within the Barkerville Subterrane (Fig. 3), a subset of the Kootenay Terrane, with which it shares many similarities (Struik, 1986; 1988). The Barkerville Subterrane consists of a late Proterozoic and/or Paleozoic sequence of continental shelf and slope deposits developed adjacent to the craton of Ancestral North America and includes clastic sedimentary rocks along with lesser amounts of volcanic rocks and carbonates. Rocks of the 2 Aces East project area have been metamorphosed from upper greenschist to lower amphibolite facies (Ferri and O'Brien, 2001).

Based on the recommendations from the 2018 magnetic survey completed on the claims (Albano and Mitchell, 2019) and further interpretation completed in 2021 by Campbell & Walker Geophysics Ltd. (Appendix I), Hawkeye Gold & Diamond contracting SGDS Hive to complete an exploration program to help advance their Barkerville Claims including the 2 Aces East project. The work program consisted of geological mapping, rock sampling, pXRF analysis in the field, prospecting, stream sediment sampling, and orthoimage capturing via a Remotely Piloted Aircraft System (RPAS). The work program was completed between September 23rd, 2021, and October 24th, 2021.

Detailed geological mapping (1:1000 scale) of the rock exposure along the northern plateau within the 2 Aces claim. Rock exposure was primarily composed of marble with interbedded phyllites and schists. A notable fault gouge was observed in 2021 with very finely disseminated pyrite and chalcopyrite (<1%). Rock samples assayed 25.6 ppm Cu, 20.0 ppm Co, 27.0 ppm Ni, and 41.0 ppm Zn (Fig. 28). The fault has been mapped historically. Soils sampling from 1988 also highlighted Pb-Zn anomalies along the northern plateau (Craig, 1991). Stream sediment sampling at the base of the northern plateau included a sample of a stream flowing along a gouge



associated with the fault, samples assayed 4719 ppm Zn, 54.8 ppm Pb, 22.7 ppm Cu, 0.13 ppm Ag.

Stream sediment sampling in the south also highlighted a high-grade gold anomaly 1180 ppb Au from a stream running northeastwards off the ridges associated with the Three Ladies Mountain to south (Fig. 28). This area has never been explored as part of the 2 Aces East claim package, nor was the area visited in 2021.

Follow-up work should include expanding and/or resampling the historic soil grids from 1989-1991 (**Pride, 1989; Craig, 1991**). Further mapping and sampling completed during the summer across the northern plateau, as well as sampling the cliff faces along the plateau edge. Stream sediment sampling was not possible on top of the plateau in 2021 due to the snow and ice coverage, this should be completed in the future when the area is snow-free. Follow-up stream sediment sampling to zone in on the gold anomaly in the south is required. Future work should also include rock sampling and mapping in the south along the Three Ladies Mountain ridges and peaks, this must be completed during the peak of summer when snow coverage is minimal.

## 2.0 Location & Access

The 2 Aces East claims are located in central British Columbia within the Cariboo Mining Division. The properties are located 20 km directly east of Cariboo Lake and 8 km northwest of Quesnell Lake and is centered on 52°46'33.52"N latitude and 121°00'47.61"W longitude (**Fig. 1**). Elevations over the property range from 1100 m by Maeford Lake to 2000 m along the ridges of the Three Sisters Mountains in the south. The property is situated within the central part of the Cariboo Mountains, an area that comprises steep and rugged terrane. The project area is occupied by mature stands of spruce, pine, fir, hemlock, and cedar with an understory of thick alder. Extensive timber harvesting has been ongoing on and in the vicinity of the property. The area has a humid continental climate, with mild summers and cold winters. Summer temperatures range from about 15 degrees to a high of 20 degrees Celsius and winter temperatures range from about - 3 degrees to as low as -10 degrees Celsius. Average precipitation for the area is approximately 700 mm with about 200 cm of snowfall during the winter months.

The 2 Aces East claims can be accessed by four-wheel drive vehicle on a network of logging roads from the town of Likely or from the historic mining town of Barkerville. However, the majority of the northern plateau and the far southern peaks of the three ladies' mountains are accessible by helicopter only.

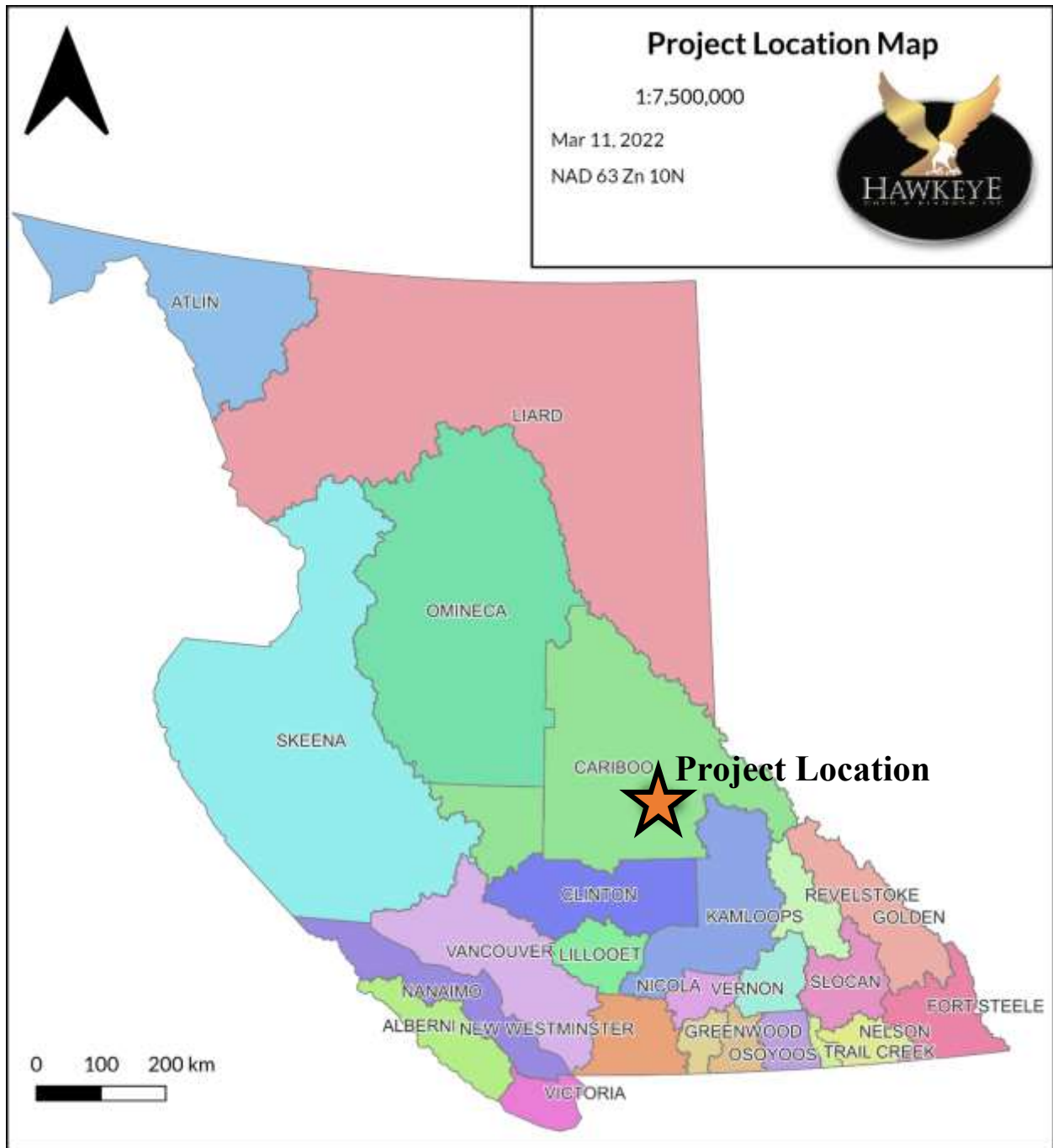


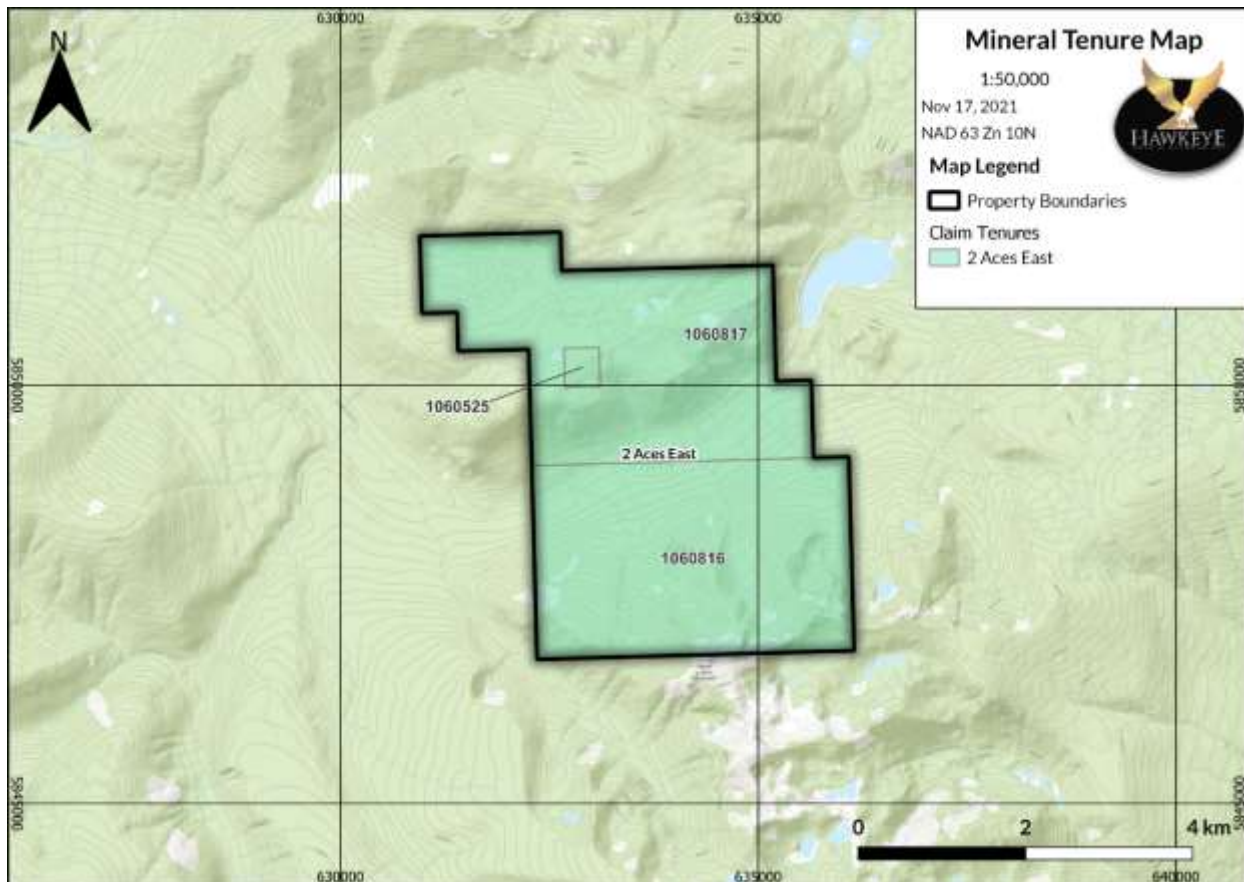
Figure 1: Project location map showing the different Mining Divisions of British Columbia.

### 3.0 Claim Location and Description

The 2 Aces East project consists of three mineral claims across 1,779.89 hectares (ha). All mineral tenures were optioned by Hawkeye Gold & Diamond in 2017. **Table 1** shows the specifics regarding the mineral tenures, **Figure 2** shows the location of the described mineral tenures.

**Table 1:** List of claim details

Mineral Tenure Number	Claim Name	Issue Date	Good To Date	Area (Ha)	Owner Name	Claim Group
1060816	SURRUCA86	28/05/2018	01/04/2021	880.3984	HAWKEYE GOLD & DIAMOND INC.	2 Aces East
1060817	SURRUCA87	28/05/2018	01/04/2021	879.9416	HAWKEYE GOLD & DIAMOND INC.	2 Aces East
1060525	SURRUCA28	10/05/2018	01/04/2021	19.5549	HAWKEYE GOLD & DIAMOND INC.	2 Aces East



**Figure 2:** Mineral Tenure Map of the 2 Aces East Projects.

## 4.0 Exploration History

The following describes the work completed on the 2 Aces East claim group as reported by the BC ARIS database.

The 2-Aces project is located southeast and along trend of the of the Cariboo Gold Belt, host to the worldclass Barkerville gold camp with a rich history of mining dating from the Cariboo gold rush in the 1860's. Recorded gold production from the Cariboo Gold Belt totals more than 4.5 million ounces from alluvial and lode deposits (Mitchell, 2019).

In the 1980s, the BC Geological Survey collected over 4000 stream sediment samples to cover NTS map sheets 93A, 93B, G and N and parts of NTS map sheet 93H. The pulps of these samples were reanalysed by Geoscience BC in 2008 by inductively coupled plasma mass spectrometry (ICP-MS).

In 1988, Cominco prospected the Maeford Lake area (2-Aces East) which resulted in locating float containing pyrite, chalcopyrite and spessartine garnet. Subsequent contour soil and silt sampling upslope from the discovery float detected significant silt and soil anomalies (up to 398 ppm Cu, 1810 ppm Pb and 35,000 ppm Zn) which prompted the staking of the Mae claims (north part of the 2-Aces East property) (Pride, 1989).

In 1989, Cominco collected 1020 soil samples, conducted preliminary 1:5000 scale geological mapping and bulldozer trenched on the 2-Aces East property. (Pride, 1989) reported mineralization consisting of 2 m to 10 m thick garnet-bearing quartz-calc-silicate-amphibolite bands containing pyrite, pyrrhotite, chalcopyrite, sphalerite, galena, magnetite and ilmenite. Three Pb-Zn geochemical anomalies were outlined by the soil sampling survey (Anomalies A, B and C). Anomaly A is defined by a Pb-Zn anomaly 600 m long by 200 m wide with zinc and lead values up to 13,700 ppm and 1130 ppm, respectively. A silt sample collected from a small creek draining the northern part of Anomaly A returned 1810 ppm Pb and 35,000 ppm Zn. Anomaly B is characterized by a 600 x 200 m Pb-Zn anomaly with values ranging up to 880 ppm Pb and 2370 ppm Zn. Anomaly C consists of an 800 x 300 m Pb-Zn anomaly with values ranging up to 900 ppm Zn and 620 ppm Pb. A weakly mineralized float sample from Anomaly B



contained 1.14 % Pb, 0.56 % Zn, 17.6 g/t Ag and 238 ppm Cu (Pride, 1989). In 1991, Cominco collected 272 soil and 42 rock samples from the 2-Aces East property. Rock samples collected from laminated marble containing 3-10 % sphalerite returned up to 6.7 % Zn, 0.48 % Pb and 7.8 g/t Ag. Soil samples collected in 1989 and 1991 defined a broad Pb-Zn anomaly, approximately 1.2 km long by 200 m wide containing up to 13,700 ppm Zn and 1130 ppm Pb (Craig, 1991).

In 2018, an airborne magnetic survey was flown over the 2-Aces East project area. Hawkeye contracted GEOTECH to fly a total of 489 line-km along east-west oriented lines spaced at 100 m apart.

## 5.0 Economic Assessment

The Property is an early exploration stage project. To date, an economic assessment of the Property has yet to be inferred.

## 6.0 Regional and Property Geology

The 2 Aces East project area is situated within the Barkerville Subterrane (**Fig. 3**), a subset of the Kootenay Terrane, with which it shares many similarities (Struik, 1986; 1988). The Barkerville Subterrane consists of a late Proterozoic and/or Paleozoic sequence of continental shelf and slope deposits developed adjacent to the craton of Ancestral North America and includes clastic sedimentary rocks along with lesser amounts of volcanic rocks and carbonates. Rocks of the 2 Aces East project area have been metamorphosed from upper greenschist to lower amphibolite facies (Ferri and O'Brien, 2001).

Rocks of the Barkerville Subterrane were subjected to an early period of ductile deformation that resulted in a westward directed, asymmetrical folds that plunge shallowly to the northwest. Post metamorphic open folds with upright cleavage are superimposed on earlier structures. During Late Cretaceous to Early Tertiary time, the terrane was disrupted by northwest-trending dextral strike-slip faults (Struik, 1988). Northwest- and north-trending faults, with an important normal component and generally apparent right lateral displacements, record extension, probably associated with transcurrent movement. The north striking cross faults are an important control for the gold-bearing vein systems within the Cariboo Gold Belt.

West of the property lies the Quesnel Terrane, which comprises an early Mesozoic Island arc assemblage consisting of basaltic, andesitic, pyroclastic, volcanoclastic and greywacke rocks. The Quesnel Terrane has been thrust west to east onto the Barkerville Subterrane, along the Eureka Thrust Fault. On the north end of the properties and to the east, the Cassiar Terrane, a late Proterozoic to Paleozoic sequence of continental shelf clastic and carbonate rocks have been thrust from east to west onto the Barkerville Subterrane along the Pleasant Valley Thrust Fault (**Fig. 4**).

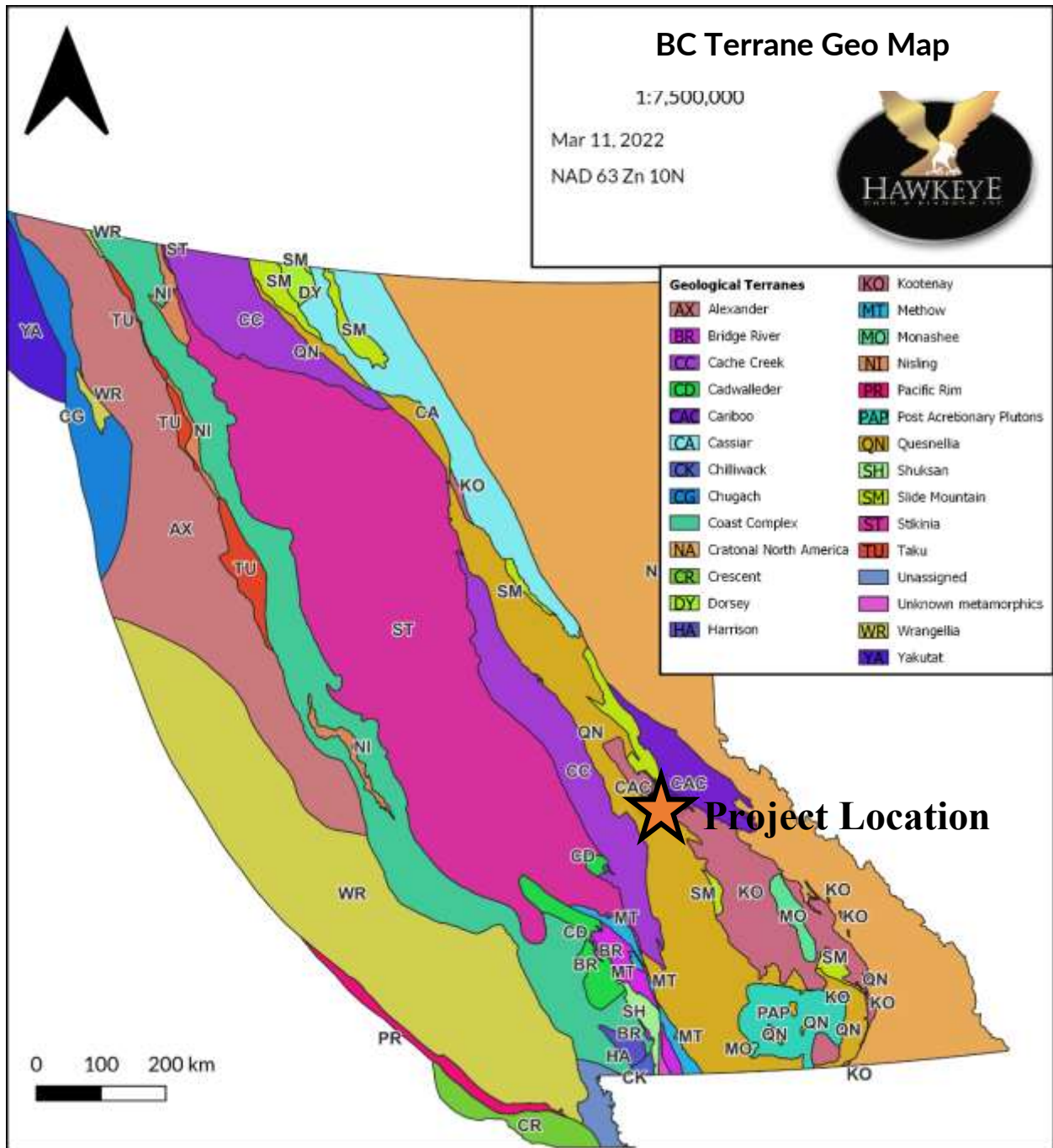


Figure 3: Geological Terrane map of the British Columbia, including the location of the project.

At a property scale, the BCGS (Logan et al., 2010) have mapped the area of the 2 Aces East property as predominately successions belonging to the Snowshoe group. The Downey Succession (uPrPzSD), a series of Neoproterozoic to Paleozoic aged micaceous quartzite, quartzites, phyllite, schist, gneiss and locally includes marble and amphibolite, makes up the majority of the property (**Fig. 4**). The southern peaks of the three Ladies' mountains are composed of a meta-volcanic subset of the Downey Succession (Unit: uPrPzSDv) described as chlorite-actinolite schist, amphibolite, mafic metatuff and locally including phyllite, quartzite, and marble (**Fig. 4**). To the north of the Downey Succession, located along the northern plateau, marbles, schists and gneisses of the Bralco Succession (Unit: PzSB), another succession of the Snowshoe group, outcrops (**Fig. 4**). Along the very northern margin of the 2 Aces property the rocks switch from Paleozoic Snowshoe Group successions to formations of the older, Neoproterozoic aged, Cariboo Group. Within the far northwest of the 2 Aces East claims, the Isaac, Cunningham and Yankee Belle Formations (Unit: uPrCIC) of the Cariboo Group outcrop composed of argillite, shale and slate, and locally phyllite and schist, with minor limestone, dolostone, micaceous quartzite and marble. To the east of unit uPrCIC, is the Yanks Peak, Midas, Mural and Dome Creek Formations of the Cariboo Group composed of quartzite, siltstone, shale, argillite, slate, limestone, dolostone, and marble.

The Cariboo Group has been thrust faulted up to juxtapose its position to the Snowshoe Group. This thrust fault, known as the Pleasant Valley Thrust Fault, has been shown to strike E-W through the very northern margin of the 2 Aces East project (**Fig. 4**). Smaller, un-descriptive, faults have also been mapped, dominantly trending NE-SW (**Fig. 4**).

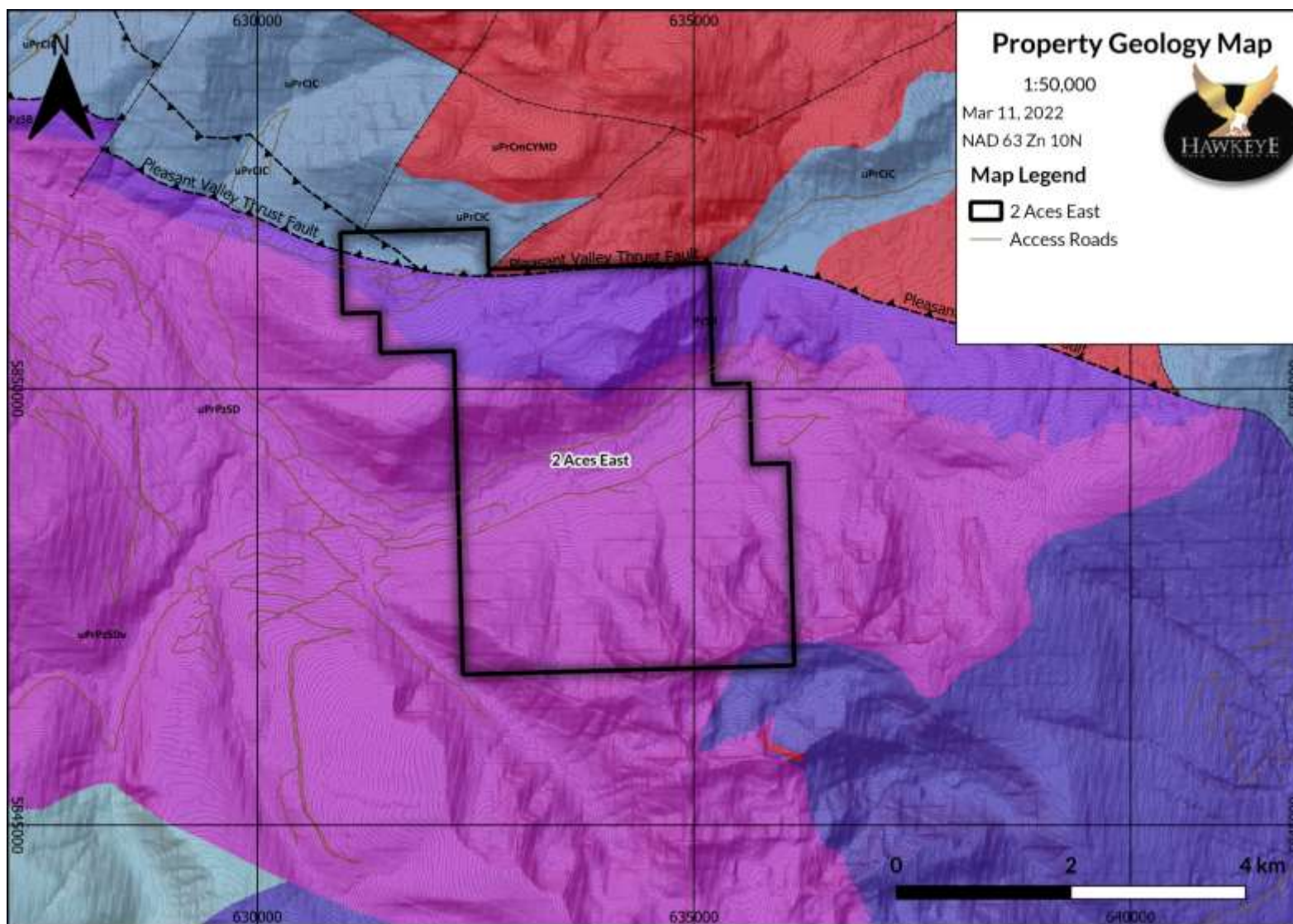


Figure 4: Property-scale geological map of the 2 Aces East claims. Geological legend over leaf. BCGS digitized geological layers (Logan et al., 2010).

## BC Geology

uPrCIC	Cariboo Group - Isaac, Cunningham and Yankee Belle Formations
uPrCmCYMD	Cariboo Group - Yanks Peak, Midas, Mural and Dome Creek Formations
uPrPzS	Snowshoe Group
PSB	Snowshoe Group - Bralco Succession
uPrPzSD	Snowshoe Group - Downey Succession
PzSHR	Snowshoe Group - Harveys Ridge Succession
Pefp	

## BC Faults

-----> Fault

▲-----▲ Thrust fault

## 7.0 2021 Work Program

In 2021, SGDS Hive was contracted by Hawkeye Gold & Diamond to complete an exploration program to help advance their Barkerville Claims including the 2 Aces East project. The work program consisted of geological mapping, rock sampling, pXRF analysis in the field, prospecting, stream sediment sampling, and orthoimage capturing via a Remotely Piloted Aircraft System (RPAS). The work program was completed between September 23<sup>rd</sup>, 2021, and October 24<sup>th</sup>, 2021.

Prior to commencing field work, SGDS Hive completed a detailed desktop study, where all the historical information publicly available on the ARIS database (<https://aris.empr.gov.bc.ca/>) was collected and where possible digitized into GIS compatible data and into numerical databases.

The following reports and data were digitized within the desktop study: From assessment report 19327 (**Pride, 1989**), 1028 soil samples within the valley that cuts ENE-WSW through the 2 Aces West claims, as well as outcrop geological maps and structural points and lineations. In Addition, a further 736 soil samples were digitized from the northern plateau, alongside a geological map on the northern plateau, fault lineations, and structural measurements (**Craig, 1991**).

In the field program of 2021, within the 2 Aces East project, 13 geological observations were made of different outcrops on the property (**Appendix E**) along with 13 rock samples sent to SGS Labs in Burnaby (**Appendix A**), and 13 averaged (3 tests for each sample) pXRF analyses completed in the field (**Appendix C**). The northern plateau of the 2 Aces East is all above 1600m elevation, as such, during the time of the work program, the ground was mostly snow covered with little flowing streams and so no stream sediments were collected on that section of the property. Within the valley in the central portion of the claims, 24 stream sediment samples from 12 stream sediments sample stations were sent to the lab for analyses (**Appendix B**). RPAS captured orthoimagery was planned to be captured across the central valley and northern plateau, however due to poor weather conditions, only a small area of the central valley was collected (47 hectares), and no imagery captured on the northern mapping area (**Appendix D**).

Also, as part of the 2021 Work Program, Campbell & Walker Geophysics Ltd. were contracted by Hawkeye Gold & Diamond prior to completing field work to interpret the airborne magnetic data collected on the 2 Aces East claims in 2018. The details of their interpretation can be viewed in **Appendix I**.

Their analysis and interpretation included a suite of filters and derivatives applied to the aeromagnetic gridded data, followed by a multiscale edge detection, and automated grid ‘fractal’ analysis to identify regions prospective for gold mineralization based upon structural complexity as inferred from magnetics being indicative of significant faults, and/or shears.

They recognised specific areas of interest, identified by Centre for Exploration Targeting grid analysis. For the 2 Aces East claims, the report identifies one somewhat broad feature on the contact occurrence density ‘heatmap’ with a separation into component parts by the occurrence entropy (**Appendix I**; Campbell, 2021). This broad zone was separated into two zones of maximum structural disturbance, one along the northern plateau, which historically returned anomalous Pb-Zn soil values (**Pride, 1989; Craig, 1991**), and another within the central valley and southwards towards the three ladies ridges (**Appendix I**; Campbell, 2021).

The recommendation for the 2 Aces East suggests future work to verify the potential of these areas of interest should include prospecting, surface mapping, geochemical sampling, and ground geophysics (e.g., induced polarization/resistivity) (**Appendix I**; Campbell, 2021). All of which, were the focus of the 2021 field program with the exception of ground geophysics due to the weather conditions as the field portion of the program was completed late in the field season.

## 8.0 Methodology

### 8.1 Geological Survey

Reconnaissance was planned based off historical targets, anomalous zones, and the targets recognised from the 2018 airborne geophysical surveys flown and interpretations made in early 2021 by Campbell & Walker Geophysics Ltd (**Appendix I**; Campbell, 2021). Notable observations, such as physical outcrops or structural measurements, were sketched on a mylar clipboard. Observation and sample stations were located using a Garmin 64st GPS unit, exported using ExpertGPS, and digitized into Microsoft Excel and ESRI ArcGIS/QGIS.

Field stations refer to any observation a field personnel regarded as worth noting with context to geology. Stations range from outcropping lithology types and structural measurements to notable changes in the immediate area (anthropogenic, physiography, vegetation).

### 8.2 Geochemical Survey

Select grab (rock) samples were retrieved during geological reconnaissance (prospecting) and chosen based on observable lithology, mineralization, structure, and/or alteration. Types of select grab samples are based on the proximity to the source (float, subcrop, outcrop).

#### 8.2.1 Sampling Protocol and Analysis

All samples were located using a standard Garmin GPS handheld unit and cataloged using a digital tablet where the information was stored locally on the machine as well as being uploaded to the cloud and stored in a database system accessible by Microsoft Excel. All samples were shipped to SGS Laboratories (“SGS”) in Burnaby, British Columbia. QAQC control to sampling was used for the 2021 geochemical surveys, with field duplicates, lab preparation duplicates, and OREAS standard material were sent to the lab alongside each shipment. A full description of each lab method can be found on SGS’s Geochemistry Guide (SGS, 2020).

### 8.2.2 Select Rock Grabs

Wearing proper PPE for the sampling, a standard rock hammer was used to chip at sample stations. The samples were collected as select grab samples, large fragments of homogenous material at the specific location. Unique sample tags were issued to each individual sample, bagged in medium-sized polyurethane bags, and zip-tied at the sample location site.

### 8.2.3 Chip Samples and pXRF

Small rock chip samples were collected at all stations where a rock/grab sample was collected. These rock chips are used to be representative sample of the sample sent to the assay lab. The team used a portable XRF machine (Olympus Vanta XRF supplied by IMDEX) to collect geochemical data on these chips on the evening they were collected to help guide the field program and recognised possibly important early trends such as host lithologies, alteration and weathering patterns. The pXRF equipment was operated in accordance with NRCan requirements and was desktop mounted with protective radiation shield always attached while in use. A total of three measurements were taken for each rock chip, results were then averaged in the provided Olympus Vanta XRF software.

### 8.2.4 Stream Sediment Sampling

Stream sediment stations were set-up across the projects where suitable to collect stream sediment samples for both precious metal and base metal concentrations. At each sampling station, sediment was sieved and split into a sample with sediment less than 125  $\mu\text{m}$  (sieve size: 120) for a precious metal sample; with sediment between 2000  $\mu\text{m}$  (sieve size: 10) and 125  $\mu\text{m}$  (sieve size: 120) suitable for a base metal sample. All samples were shipped to SGS Laboratories (“SGS”) in Burnaby, British Columbia. Samples of the sediment were taken via scoop method using a shovel; scoops from various sections of the sample area were taken to ensure a representative, composite sample. These were passed through the sieves, and the sieves were shaken aggressively to arrange the sediments by size. Sediments larger than 2000  $\mu\text{m}$  were discarded, while sediments between 2000 and 125  $\mu\text{m}$ , and sediments finer than 125 microns were both sent for analysis. Sediments between 2000 and 125  $\mu\text{m}$  were analysed for base metals by aqua regia digest, and sediments smaller than 125  $\mu\text{m}$  were analysed for



gold by fire assay, and by aqua regia digest for base metals. For QA/QC, field duplicates, lab preparation duplicates, and OREAS standard material was sent to the lab with each shipment. A full description of each lab method can be found on SGS's Geochemistry Guide (SGS, 2020).

### 8.3 RPAS Orthoimagery Acquisition and Processing

A Remotely Piloted Aircraft System (RPAS) was used to capture orthoimagery of select areas to produced merged imagery as well as obtain elevation data to produce a Digital Surface Model (DSM) and Digital Terrain Model (DTM). A DJI Mavic Pro was flown over the areas to capture images which was piloted from the ground and the flight missions designed in Pix4D Capture mobile software. Image processing was completed in Pix4D Mapper for desktop PC. The finished product was then reviewed in ESRI ArcScene 10.7.1 and QGIS 3.22.0.

## 9.0 Results

### 9.1 Geological Mapping and Prospecting

An area approximately 0.875 km<sup>2</sup> was traversed and mapped along the northern plateau within the north half of the 2 Aces East claims (**Appendix E**). The area mapped and sampled consisted of Paleozoic aged, predominately marble, interbedded with local schists, and lesser phyllites of the Bralco Succession of the Snowshoe group. The marble was massive in texture, brilliant white to pale white, rarely micaceous with rare pyrite (**Fig. 5**). Interlayered with the marble, was a foliated biotite schist (**Fig. 6**). Quartzites and phyllites or micaceous pelites (**Fig. 7**) were also found locally within the Marble.

A fault gouge was identified within a stream gully along the northern plateau striking NW-SE. This gully contained fault gouge clays within a silicified quartzite. Disseminated sulphides (chalcopyrite <1%, and pyrite 1%) were noted in chip and rock samples from the outcrop and subcrop.

To the west of the fault, only schists were noted which were micaceous, biotite-poor and likely belonging to the Downey Succession of the Snowshoe Group.

Table 2 details all of the rock samples collected within the 2 Aces East claims.



**Figure 5:** Rock chip of sample C00065051 collected from 2 Aces East. The sample is a marble with very finely disseminated pyrite common within the area mapped in 2021.



**Figure 6:** Rock chip of sample C00065304 collected from 2 Aces East. The sample is a foliated biotite schist common within the area mapped in 2021.



**Figure 8:** Rock chip of sample C00065054 collected from 2 Aces East. The sample is of the silicified clay-quartz gouge with finely disseminated chalcopryrite-pyrite in outcrop.



**Table 2:** Rock sample descriptions from the 2 Aces East claims. -99 signifies values below detection limit. -999 indicates elements that were not analysed. Co:Ni Ratio calculated for those samples were both Co and Ni were analysed and above the lab detection limit.

PROSPECT / TARGET ZONE	SAMPLE TYPE	SAMPLE NUMBER	UTM EASTING	UTM NORTHING	ELEVATION	SAMPLE DESCRIPTION	Au (ppm)	Ag (ppm)	Cu (ppm)	Co (ppm)	Ni (ppm)	Pb (ppm)	Zn (ppm)	Co:Ni Ratio
2 Aces East	ROCK - Grab or Outcrop	C00065051	633624	5850826	1578	Marble	-99	-99	-99	-99	-99	-99	3	-
2 Aces East	ROCK - Grab or Outcrop	C00065052	633633	5850734	1593	Marble	-99	-99	-99	-99	-99	-99	1	-
2 Aces East	ROCK - Grab or Outcrop	C00065053	633506	5850801	1582	Marble	-99	-99	-99	-99	1	32	4	-
2 Aces East	ROCK - Subcrop	C00065054	633358	5850246	1553	Quartzite, with ds sulphide (cpy+py). subcrop in creek inferred fault	-99	-99	25.6	20	22	10	63	0.91
2 Aces East	ROCK - Grab or Outcrop	C00065055	633332	5850246	1560	foliated, jointed quartzite. equicrystalline calcite bearing	-99	-99	-99	-99	2	8	32	-
2 Aces East	ROCK - Grab or Outcrop	C00065057	632720	5850293	1597	schist	-99	-99	14.5	13	26	11	85	0.50
2 Aces East	ROCK - Grab or Outcrop	C00065301	633363	5850735	1572	marble with some quartz veinlets	-99	-99	-99	-99	-99	-99	15	-
2 Aces East	ROCK - Grab or Outcrop	C00065302	633537	5850536	1588	quartzite with small interlayered phyllite	-99	-99	5.7	-99	6	-99	3	-
2 Aces East	ROCK - Grab or Outcrop	C00065303	633436	5850186	1549	white marble	-99	-99	-99	-99	1	-99	13	-
2 Aces East	ROCK - Grab or Outcrop	C00065304	633356	5850247	1557	biotite schist with lenses of quartz	-99	-99	23.9	19	27	16	96	0.70
2 Aces East	ROCK - Grab or Outcrop	C00065305	633327	5850244	1557	Quartzite/marble	0.005	-99	-99	-99	-99	-99	4	-
2 Aces East	ROCK - Grab or Outcrop	C00065307	632441	5849864	1596	micaceous pelite	-99	-99	7.7	1	6	8	13	0.17
2 Aces East	ROCK - Grab or Outcrop	C00065308	632430	5449825	1595	micaceous schist	-99	-99	19.8	7	16	16	73	0.44



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## 9.2 Rock Sample Geochemistry (Lab Assays and pXRF)

Table 4 summarizes the assay results for the rock (grab) samples collected in 2021 from the 2 Aces East claims. In total 13 rocks were sent to the lab. Elevated Copper, Cobalt, Lead and Zinc values were noted. Copper grades range from 5.7 ppm to 47.0 ppm, averaging 23.65 ppm Cu. Cobalt assays ranged from 13 ppm to 33 ppm Co, averaging 20.2 ppm Co. A single Marble rock sample assayed 32 ppm Pb (Sample: C00065053). Lead assays ranged from 4.0 ppm to 32 ppm, averaging 12.86 ppm Pb. Three samples assayed over 80 ppm Zinc, including a micaceous pelite/phyllite assaying 98 ppm Zn (Sample: C00065307), and a biotite schist assaying 96 ppm Zn (Sample: C00065304). The elevated Copper, Cobalt, and Zinc values are associated with fault gouge material found within a steep gully, with disseminated chalcopyrite and pyrite observed in outcrop. This fault has been historically mapped (**Craig, 1991**). The highest-grade lead sample is from a marble outcrop to the northeast of the mapping grid (**Fig. 15**).

For gold, only one sample returned values above the lab detection limit, assaying 0.005 ppm Au (Sample: C00065305). No samples returned above detection limit for silver. Figures 9 – 16 show the distribution of the key assayed elements across the 2 Aces East mapping area. Full assay results can be seen in Appendix A. Rock sample locations are shown in 1:1000 scale in Appendix F.

All the samples that were sent to the lab for assaying, also had a representative rock chip which was analysed in the field via portable XRF (pXRF). The results agree with the lab assays, although appear to on average to return higher Cu, and Co values. Table 5 summarizes the pXRF results for the Seller Creek claims.

Table 5 shows the correlation between pXRF and lab assayed elements. Strong positive correlations were noted between certain elements from the Lab assays. Copper and cobalt ( $R^2 = 0.90$ ), copper and nickel ( $R^2 = 0.73$ ), and copper and zinc ( $R^2 = 0.81$ ) all have moderate to very strong correlations (Table 6). Cobalt was also very strongly correlated with Zinc ( $R^2 = 0.93$ ) (Table 6). There was a moderate correlation with Lead and Nickel ( $R^2 = 0.76$ ), as well as with Lead and Zinc ( $R^2 = 0.72$ ) (Table 6).

**Table 3:** Summary table of 2021 rock sampling program on the 2 Aces East Claims.

<b>2 Aces East - Rock Samples (Lab Assays)</b>							
	<b>Au (ppm)</b>	<b>Ag (ppm)</b>	<b>Cu (ppm)</b>	<b>Co (ppm)</b>	<b>Ni (ppm)</b>	<b>Pb (ppm)</b>	<b>Zn (ppm)</b>
<b># Samples</b>	13.000	13.000	13.000	13.000	13.000	13.000	13.000
<b># Samples (above detection limit)</b>	1.000	0.000	6.000	5.000	9.000	7.000	13.000
<b>Average Grade (mean)</b>	0.005	-	23.650	20.200	15.667	12.857	37.077
<b>Max</b>	0.005	-	47.000	33.000	28.000	32.000	98.000
<b>Min</b>	0.005	-	5.700	13.000	1.000	4.000	1.000

**Table 4:** Summary table of 2021 pXRF analysis completed in the field on the 2 Aces East Claims. pXRF samples are of rock chips taken at the same location, of the same rock outcrop sent to the lab as a rock sample.

<b>2 Aces East (pXRF results)</b>							
	<b>Au (ppm)</b>	<b>Ag (ppm)</b>	<b>Cu (ppm)</b>	<b>Co (ppm)</b>	<b>Ni (ppm)</b>	<b>Pb (ppm)</b>	<b>Zn (ppm)</b>
<b># Samples</b>	13.000	13.000	13.000	13.000	13.000	13.000	13.000
<b># Samples (above detection limit)</b>	0.000	0.000	5.000	2.000	12.000	10.000	10.000
<b>Average Grade (mean)</b>	-	-	68.200	180.000	14.750	12.200	40.400
<b>Max</b>	-	-	129.000	228.000	30.000	31.000	119.000
<b>Min</b>	-	-	28.000	132.000	5.000	2.000	5.000

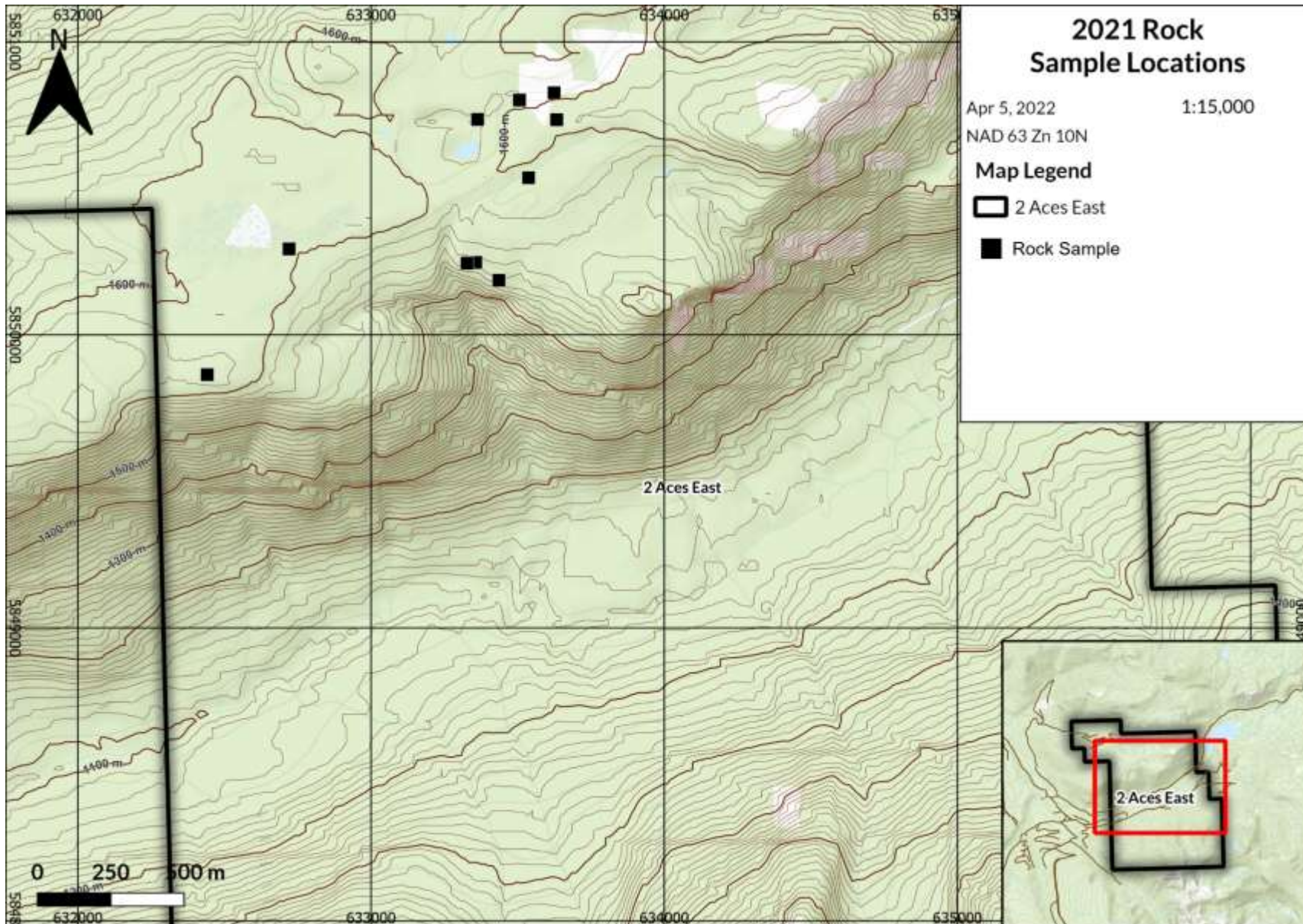


Figure 9: Rock (grab) sample locations within the 2 Aces East claims.

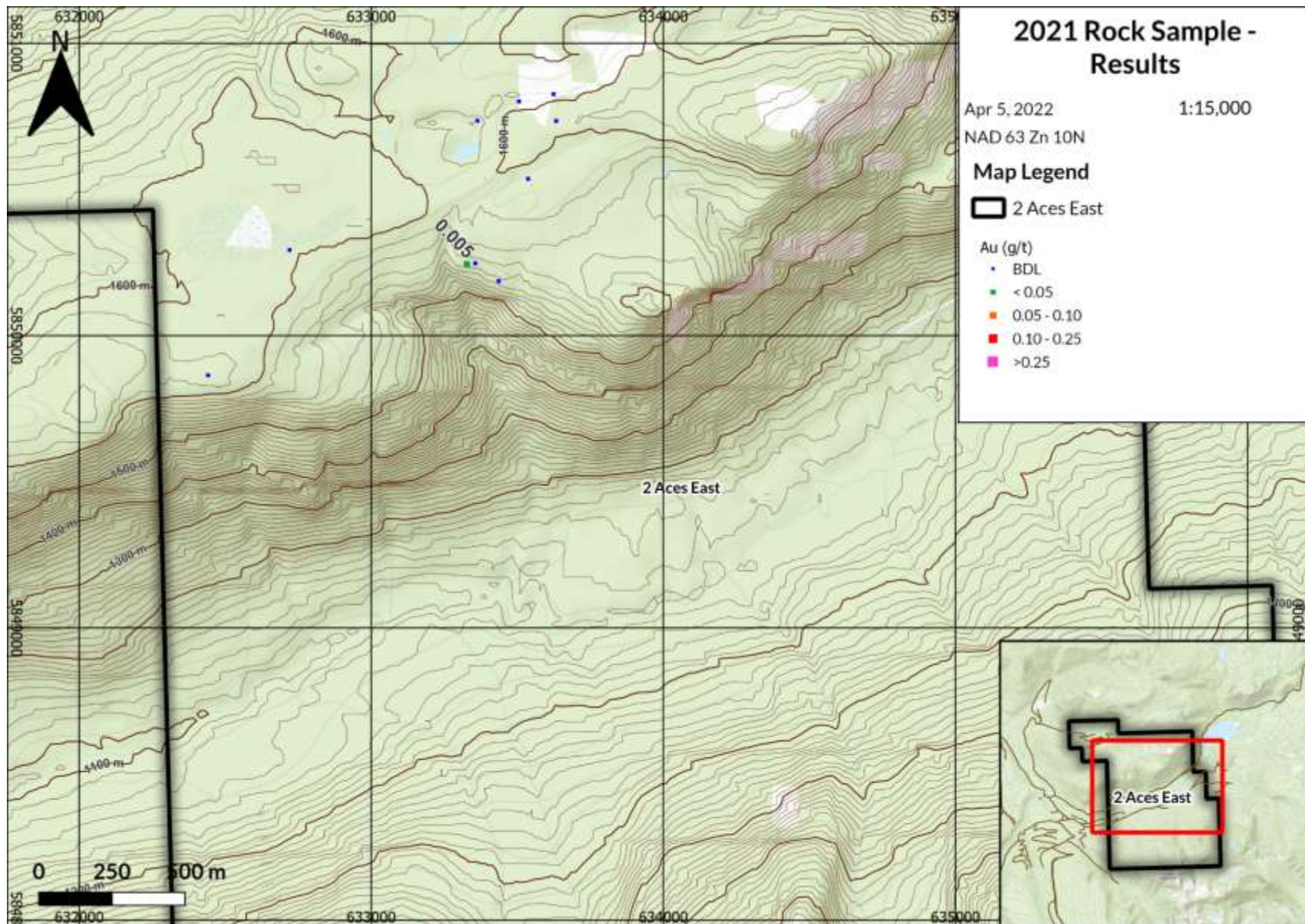


Figure 10: 2021 Gold assay samples within the 2 Acres East claims.

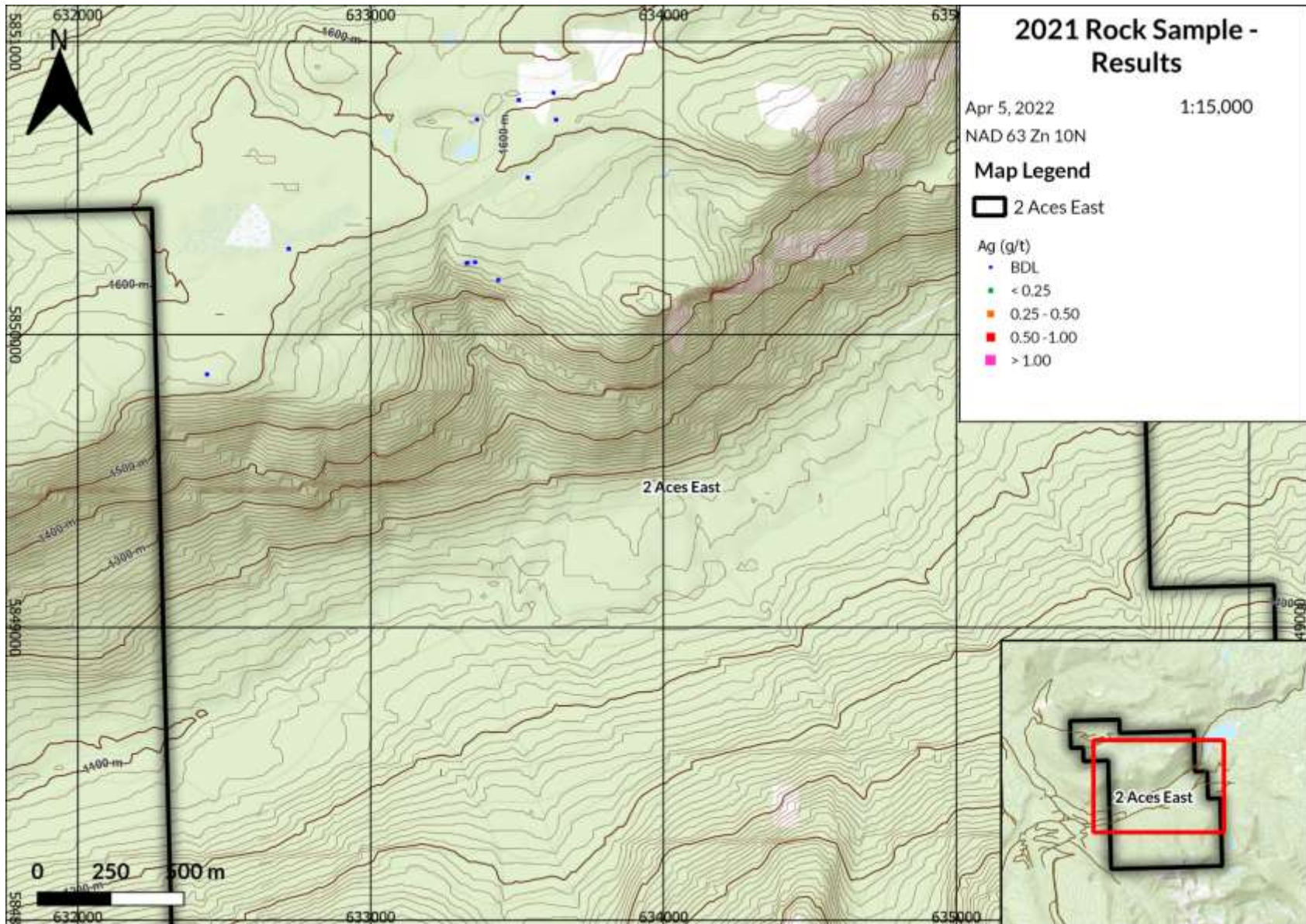


Figure 11: 2021 Silver assay samples within the 2 Acres East claims.

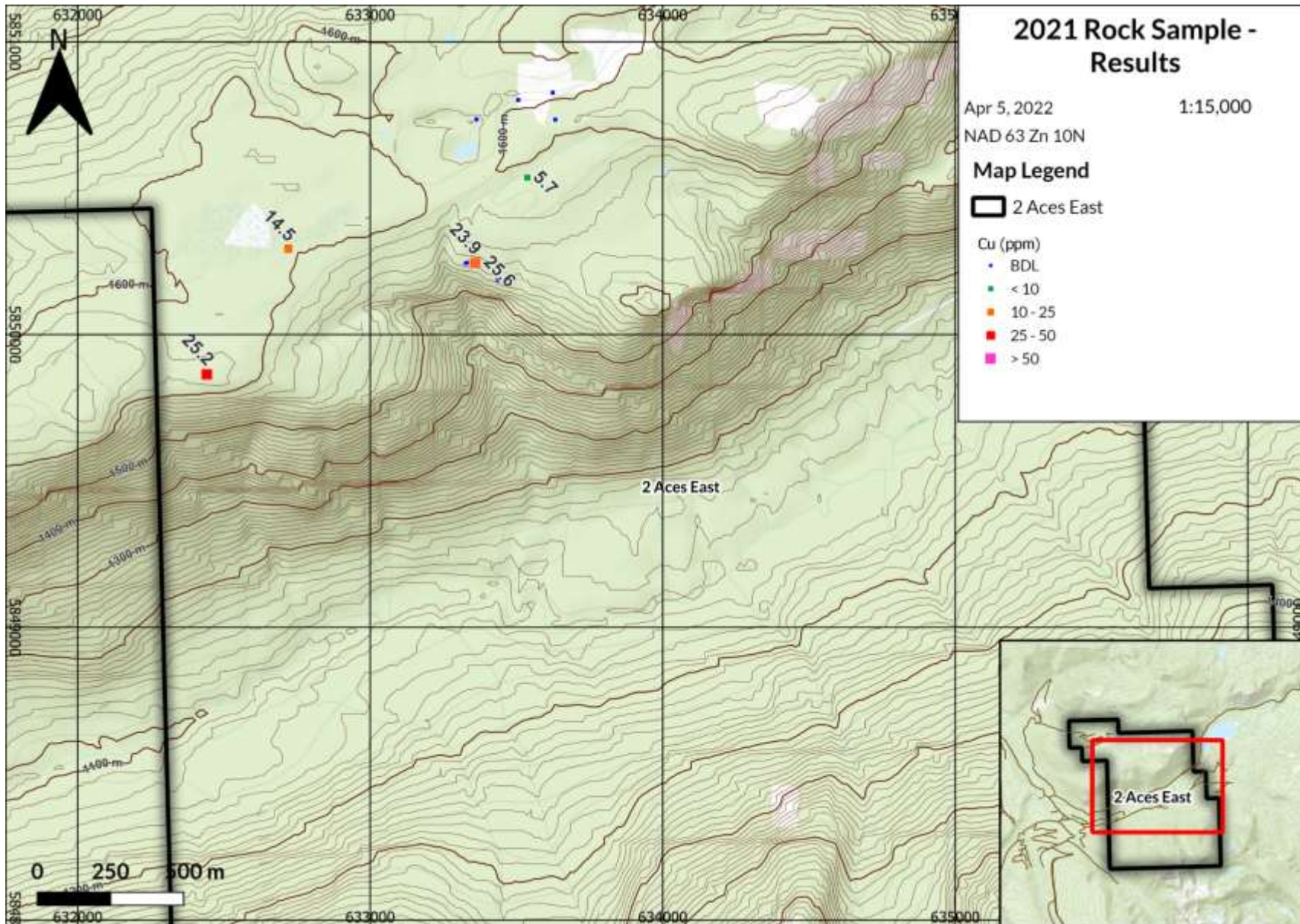


Figure 12: 2021 Copper assay samples within the 2 Aces East claims.

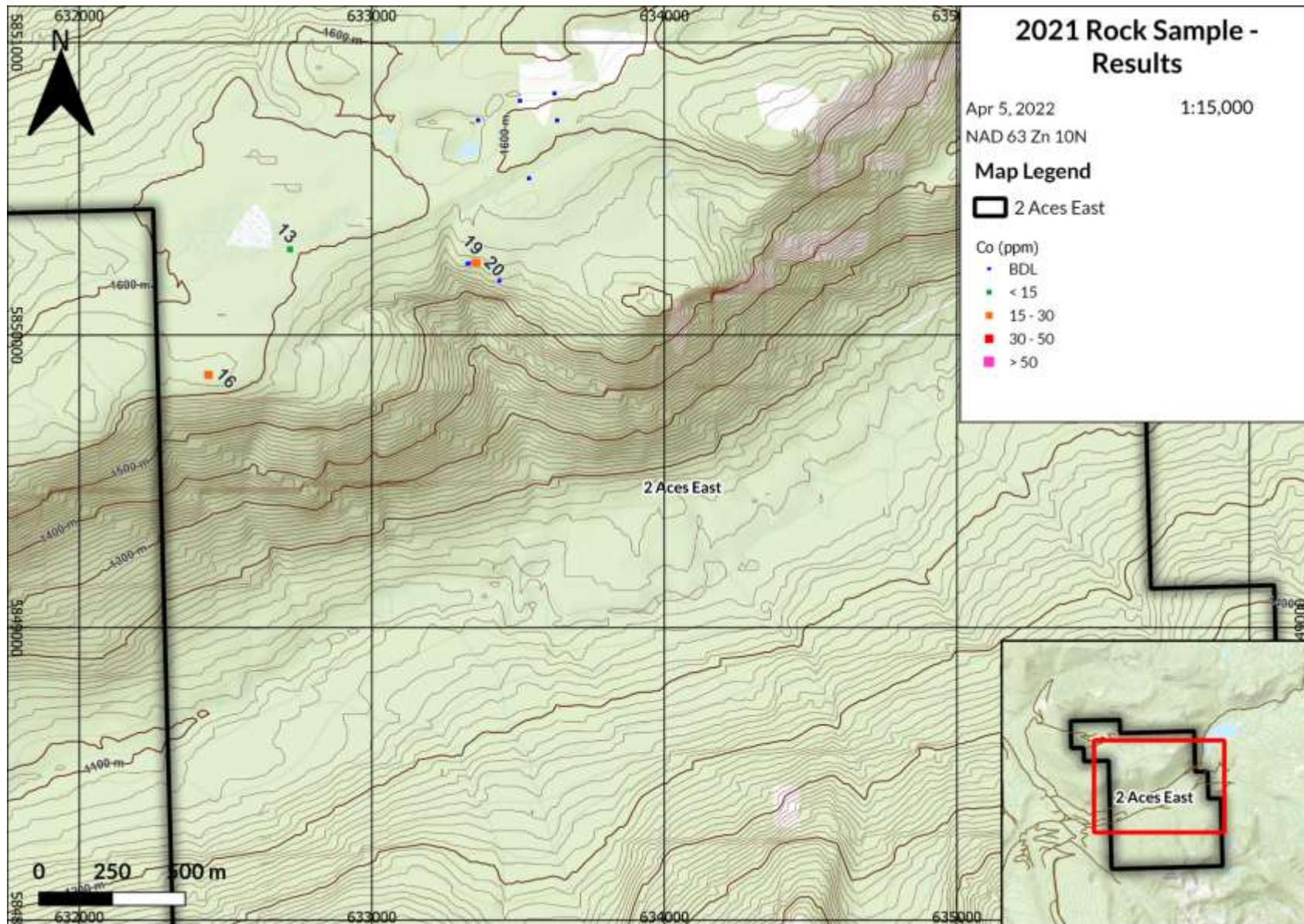


Figure 13: 2021 Cobalt assay samples within the 2 Aces East claims.

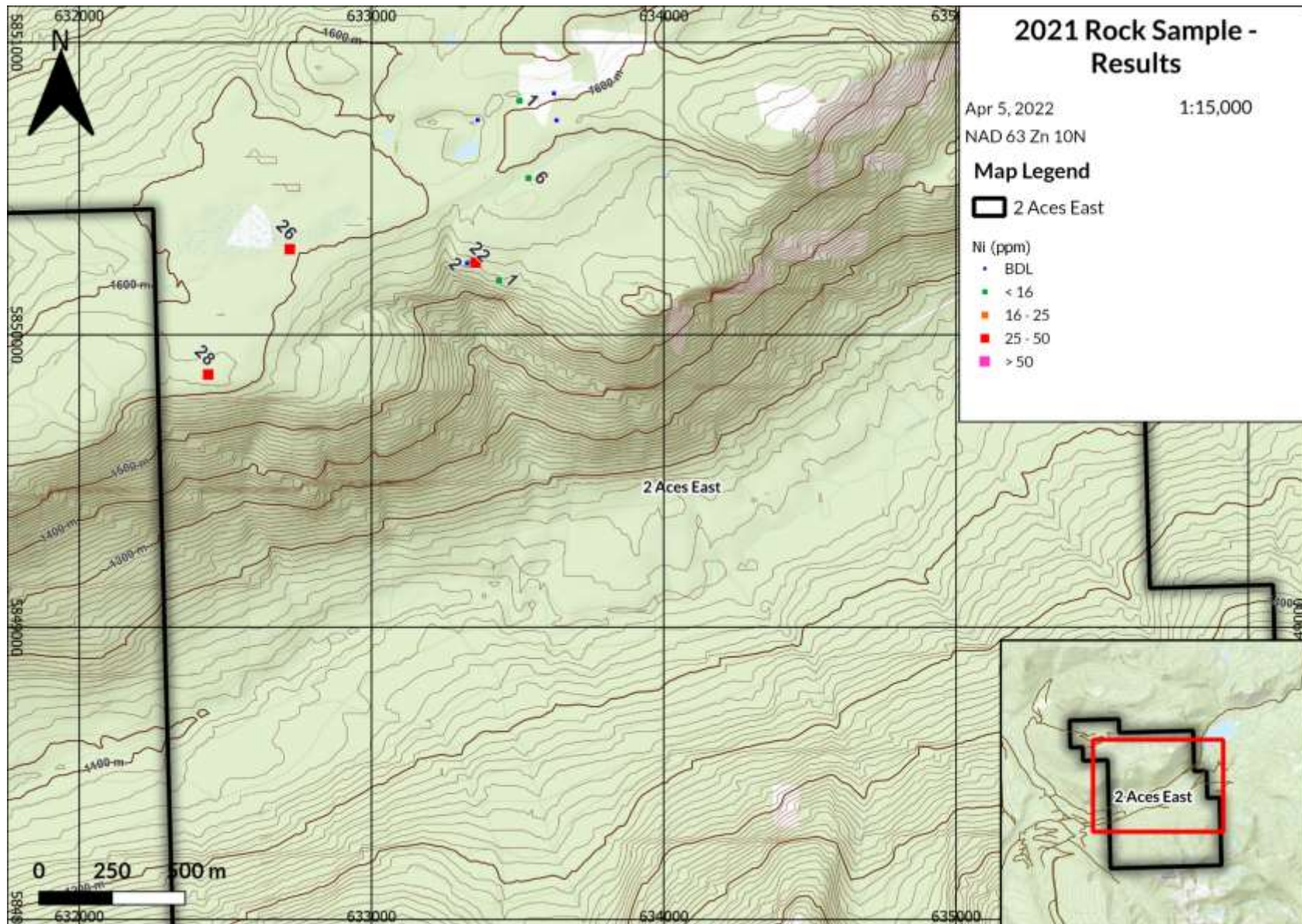


Figure 14: 2021 Nickel assay samples within the 2 Aces East claims.

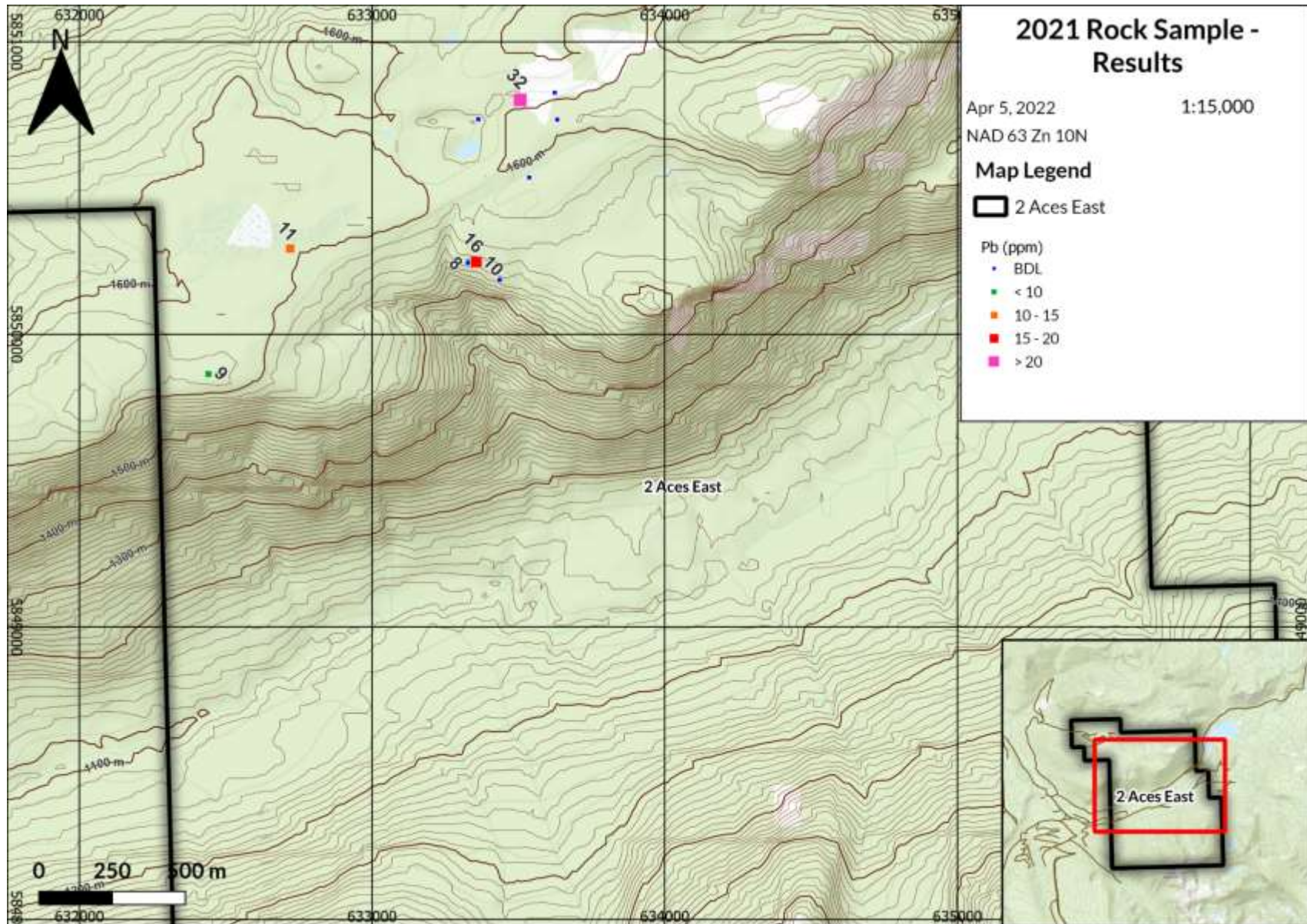


Figure 15: 2021 Lead assay samples within the 2 Aces East claims.

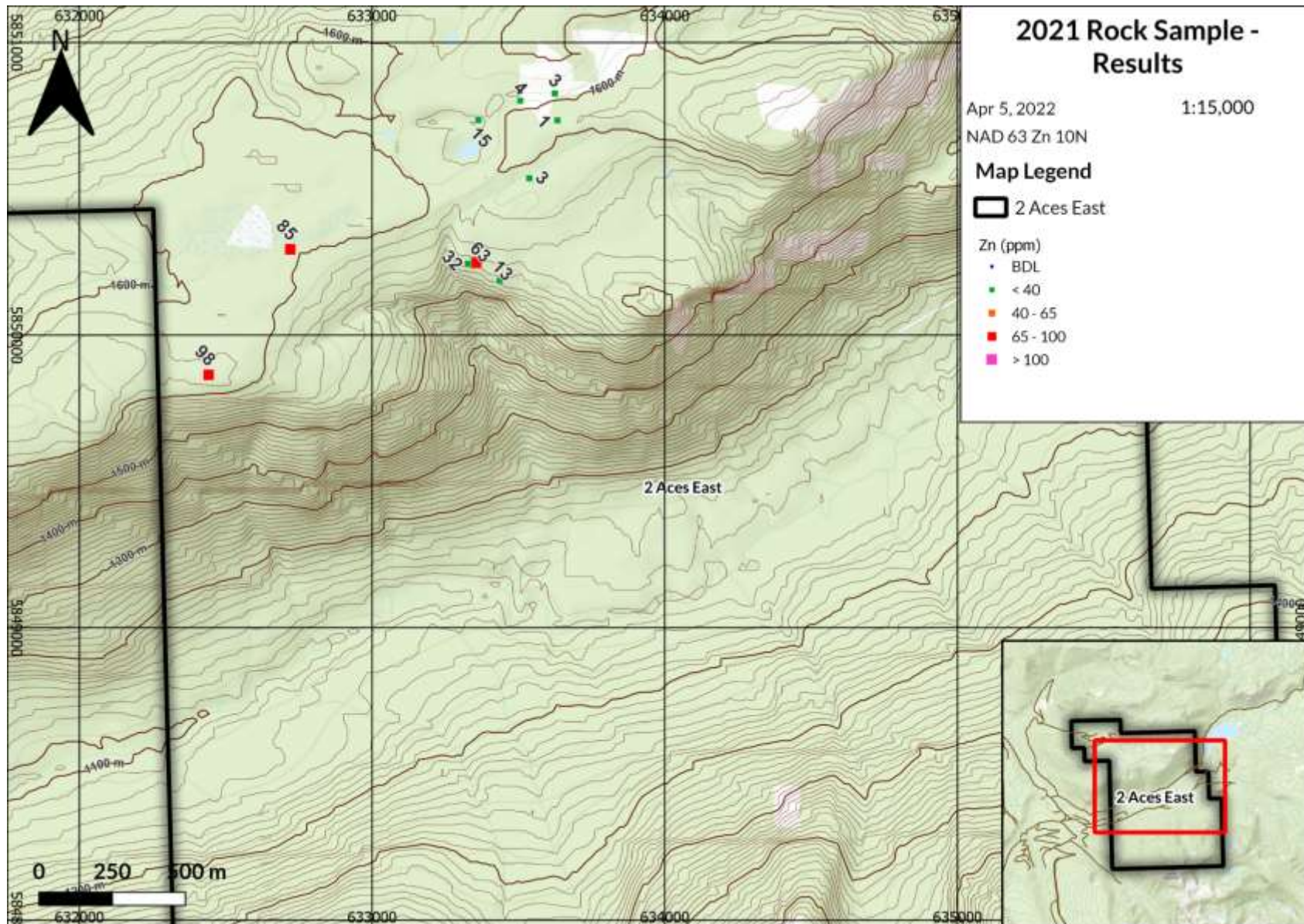


Figure 16: 2021 Zinc assay samples within the 2 Aces East claims.



**Table 5:** Correlation Table for Rock samples from 2 Aces East. Correlation matrix between lab assay elements and pXRF in-field results.

	Au_ppm	Ag_ppm	Cu_ppm	Co_ppm	Ni_ppm	Pb_ppm	Zn_ppm	Co-Ni_Ratio	Au_ppm_XRF	Ag_ppm_XRF	Cu_ppm_XRF	Co_ppm_XRF	Ni_ppm_XRF	Pb_ppm_XRF	Zn_ppm_XRF	Co-Ni_Ratio_XRF
Au_ppm			-0.264667028	-0.227607348	-0.425540128	-0.309875734	-0.2577782	-0.228217721	0.083333333	0.083333333	0.005229048	0.027927751	0.083561645	0.094590795	-0.039550586	-0.123062065
Ag_ppm																
Cu_ppm	-0.264667028		0.896867813	0.731969184	0.540172017	0.806770687	0.891621742	-0.265997736	-0.265997736	0.016441536	-0.038717895	-0.252556586	-0.238492252	-0.157663551	0.540433153	
Co_ppm	-0.227607348	0.896867813		0.671197228	0.683251724	0.932042024	0.997347302	-0.32842671	-0.32842671	-0.119141399	-0.082818294	-0.310843082	-0.255446974	-0.214402552	0.568060254	
Ni_ppm	-0.425540128	0.731969184	0.671197228		0.763076697	0.695225233	0.672582763	-0.244520636	-0.244520636	-0.040549511	-0.076084754	-0.232674917	-0.249462098	-0.08543932	0.376926713	
Pb_ppm	-0.309875734	0.540172017	0.683251724	0.763076697		0.719961994	0.687132471	-0.256053129	-0.256053129	-0.146192414	-0.097261117	-0.238442318	-0.169764127	-0.104832652	0.34431817	
Zn_ppm	-0.2577782	0.806770687	0.932042024	0.695225233	0.719961994		0.945917326	-0.373478648	-0.373478648	-0.199275459	-0.12798301	-0.36158505	-0.302484243	-0.24217843	0.515072297	
Co-Ni_Ratio	-0.228217721	0.891621742	0.997347302	0.672582763	0.687132471	0.945917326		-0.36498659	-0.36498659	-0.155384105	-0.122214309	-0.348430122	-0.292604141	-0.252941771	0.539315358	
Au_ppm_XRF	0.083333333	-0.265997736	-0.32842671	-0.244520636	-0.256053129	-0.373478648	-0.36498659			0.950706215	0.927495321	0.999535314	0.988390829	0.976274995	0.123062065	
Ag_ppm_XRF	0.083333333	-0.265997736	-0.32842671	-0.244520636	-0.256053129	-0.373478648	-0.36498659			0.950706215	0.927495321	0.999535314	0.988390829	0.976274995	0.123062065	
Cu_ppm_XRF	0.005229048	0.016441536	-0.119141399	-0.040549511	-0.146192414	-0.199275459	-0.155384105	0.950706215	0.950706215		0.915554452	0.953362222	0.935568733	0.952364705	0.208461602	
Co_ppm_XRF	0.027927751	-0.038717895	-0.082818294	-0.076084754	-0.097261117	-0.12798301	-0.122214309	0.927495321	0.927495321	0.915554452		0.927414447	0.931853661	0.93532582	0.480139928	
Ni_ppm_XRF	0.083561645	-0.252556586	-0.310843082	-0.232674917	-0.238442318	-0.36158505	-0.348430122	0.999535314	0.999535314	0.953362222	0.927414447		0.990330889	0.977596165	0.126946006	
Pb_ppm_XRF	0.094590795	-0.238492252	-0.255446974	-0.249462098	-0.169764127	-0.302484243	-0.292604141	0.988390829	0.988390829	0.935568733	0.931853661	0.990330889		0.971441752	0.16345202	
Zn_ppm_XRF	-0.039550586	-0.157663551	-0.214402552	-0.08543932	-0.104832652	-0.24217843	-0.252941771	0.976274995	0.976274995	0.952364705	0.93532582	0.977596165	0.971441752		0.203988544	
Co-Ni_Ratio_XRF	-0.123062065	0.540433153	0.568060254	0.376926713	0.34431817	0.515072297	0.539315358	0.123062065	0.123062065	0.208461602	0.480139928	0.126946006	0.16345202	0.203988544		

### 9.3 Stream Sediment Survey Results

Twenty-four stream sediments were collected from twelve sample stations across the 2 Aces East claims. Figures 17 – 24 show the sample locations and distribution of key elements across the 2 Aces East claims. Table 6 details the stream sediment sample highlights.

A single anomalous gold sample was collected from the eastern portion of the claims from a stream originating from the south (**Fig. 18**). The sample assayed 1180 ppb (1.18 ppm) gold (Sample: C00065173). The remaining gold assayed ranged from below detection limit (1 ppb) to 9 ppb gold. An anomalous Zinc value was observed along the north-central portion of the claims, assaying 4719 ppm Zn (Sample: C00065166). This sample was taken from a stream which runs along a fault mapped historically and observed in 2021; chalcopyrite and pyrite were observed within outcrop across a fault gouge, upslope of the anomalous Zn sample (**Fig. 24**). Elevated lead was also observed in this sample, assayed at 54.8 ppm Pb (Sample: C00065166), overall lead assays averaged 11.6 ppm Pb (**Table 6**). Elevated Copper samples were predominantly found along the streams running off the three ladies' mountain ridges to the south (**Fig. 20**). Copper values averaged 22.14 ppm Cu, with a maximum of 58.4 ppm Cu (Sample: C00065185).

Appendix B consists of the full lab assay certificates for the stream sediment samples. Appendix H includes 1:1000 scale maps of the stream sediment sample sites.

**Table 6:** Summary table of 2021 Stream Sediment survey samples from the 2 Aces East claims.

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<b>2 Aces East</b>							
	<b>Au (ppb)</b>	<b>Ag (ppm)</b>	<b>Cu (ppm)</b>	<b>Co (ppm)</b>	<b>Ni (ppm)</b>	<b>Pb (ppm)</b>	<b>Zn (ppm)</b>
<b># Samples</b>	24.000	24.000	24.000	24.000	24.000	24.000	24.000
<b># Samples (above detection limit)</b>	11.000	24.000	24.000	24.000	24.000	24.000	24.000
<b>Average Grade (mean)</b>	110.000	0.050	22.142	16.371	43.133	11.633	398.250
<b>Max</b>	1180.000	0.130	58.400	33.100	97.400	54.800	4719.000
<b>Min</b>	1.000	0.010	10.600	9.400	22.600	2.700	38.000

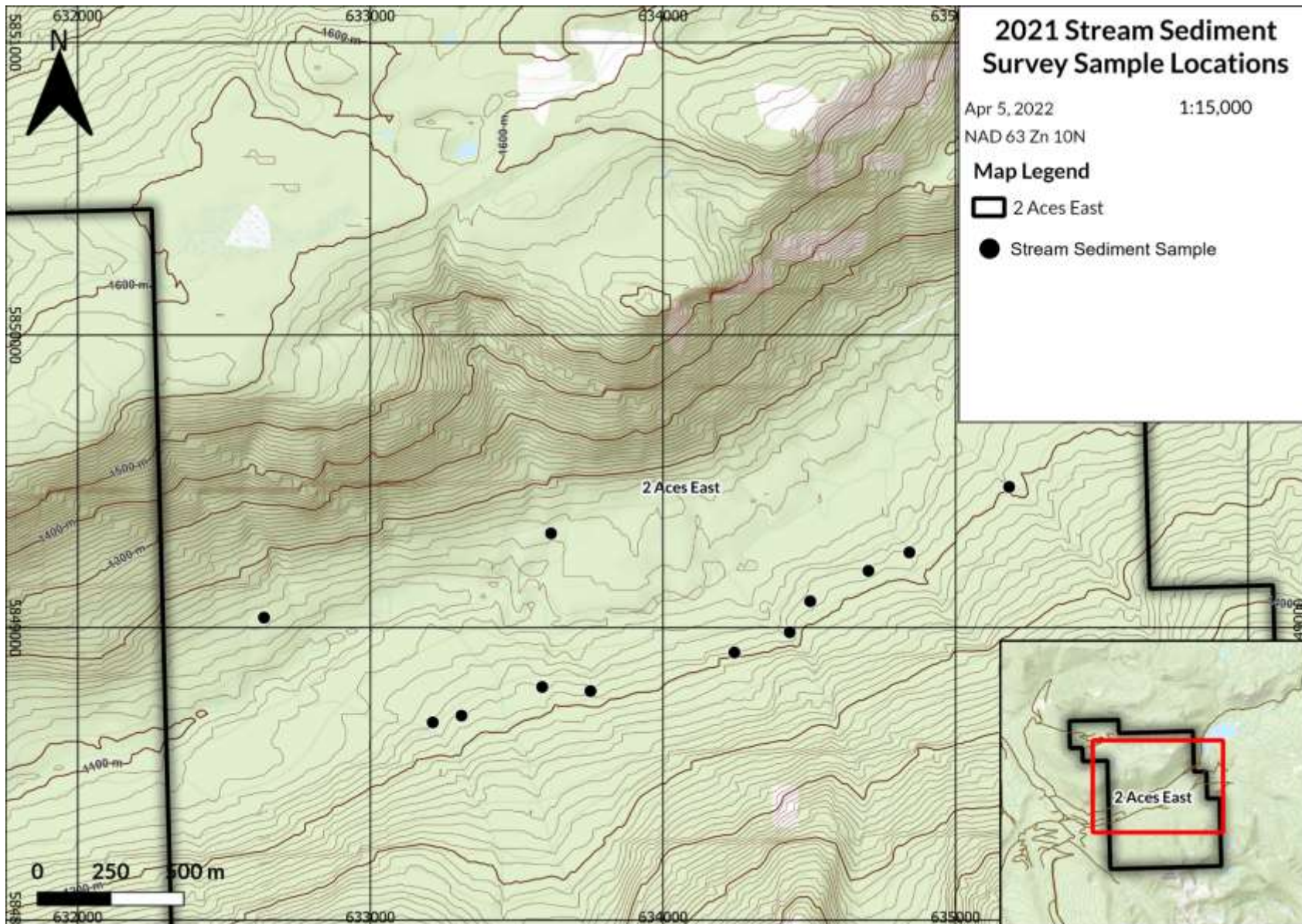


Figure 17: 2021 Stream Sediment Sample Locations within the 2 Aces East claims.

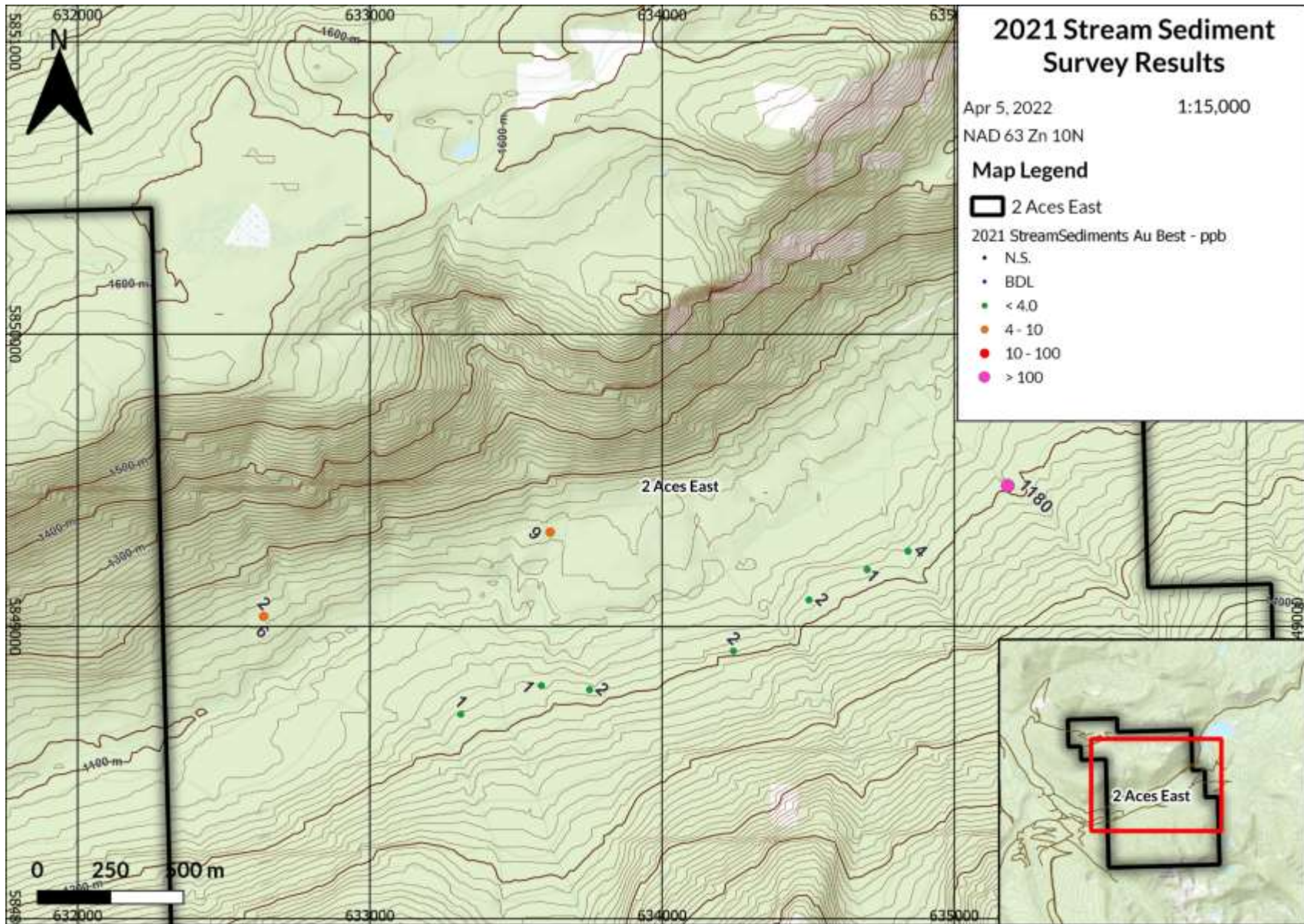


Figure 18: 2021 Stream Sediment Gold Assay Values within the 2 Aces East claims.

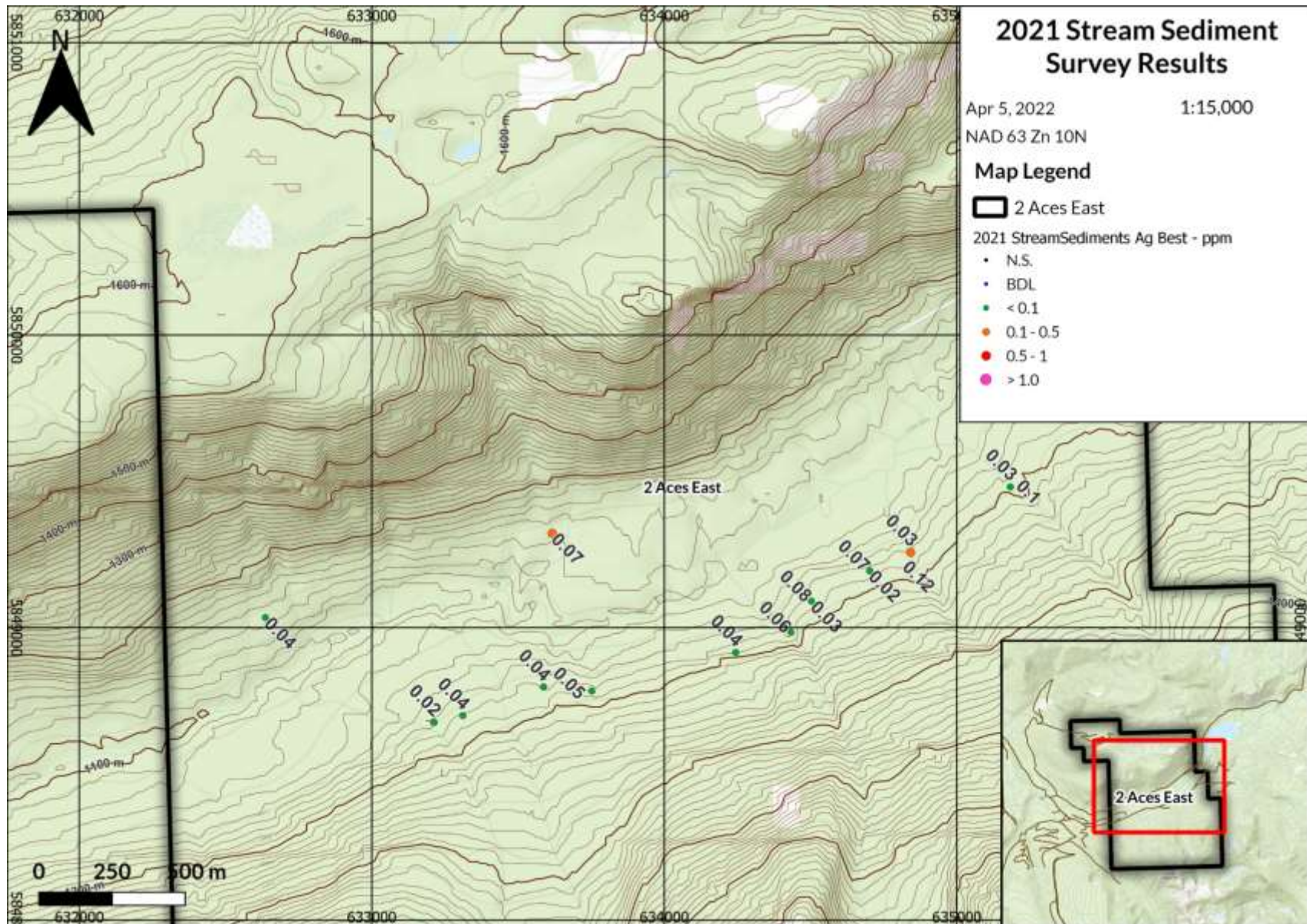


Figure 19: 2021 Stream Sediment Silver Assay Values within the 2 Aces East claims.

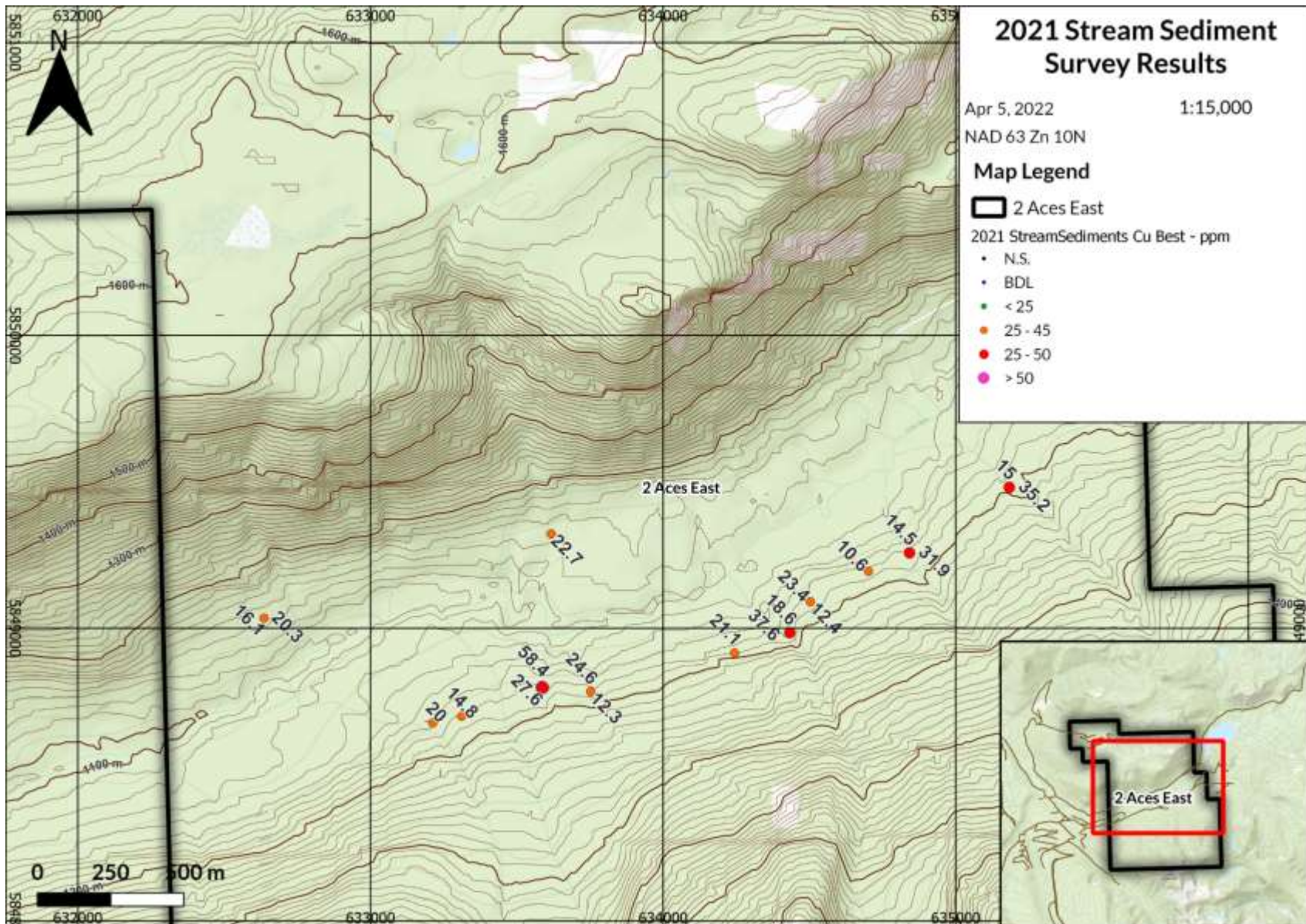


Figure 20: 2021 Stream Sediment Copper Assay Values within the 2 Aces East claims.

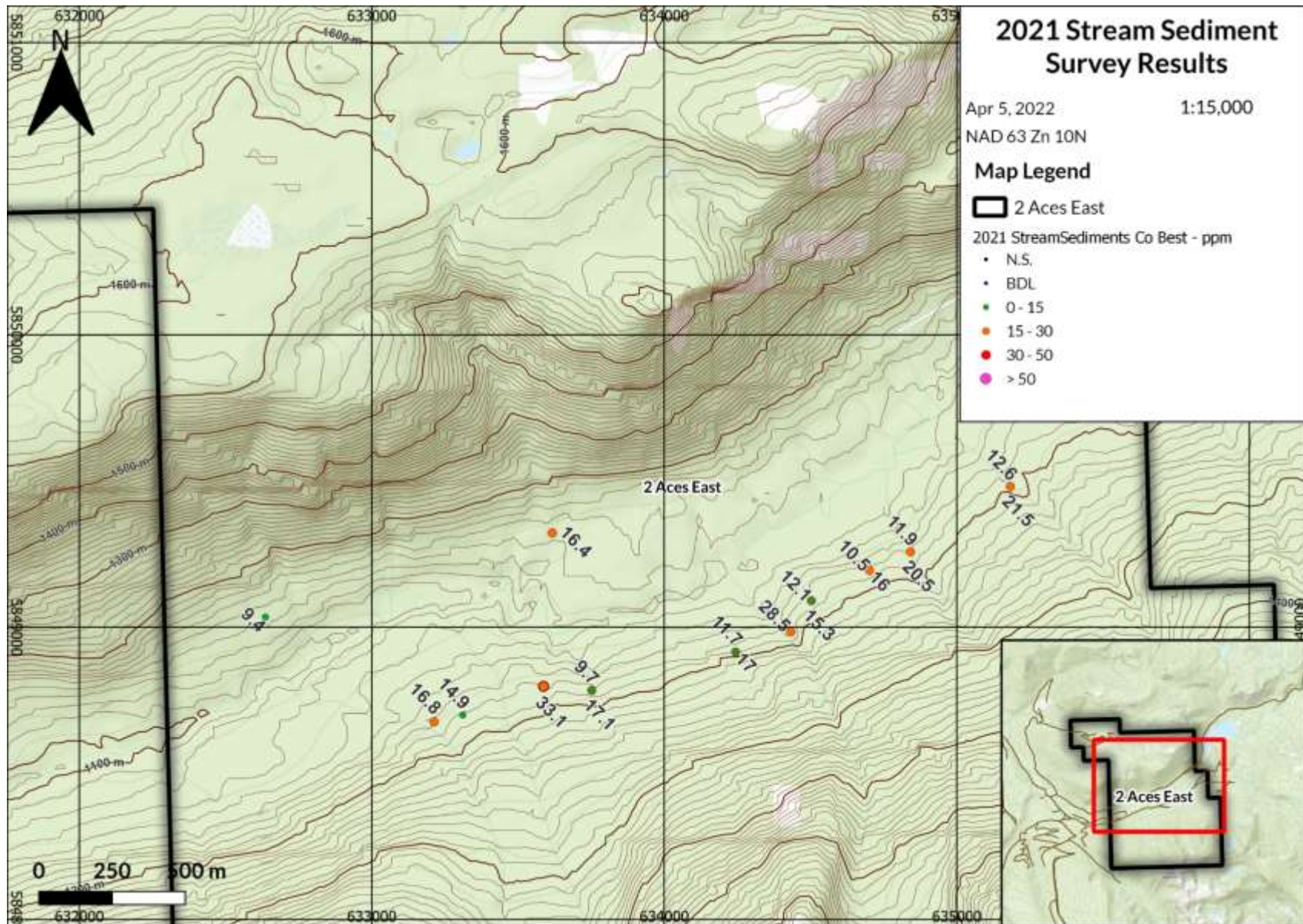


Figure 21: 2021 Stream Sediment Cobalt Assay Values within the 2 Aces East claims.

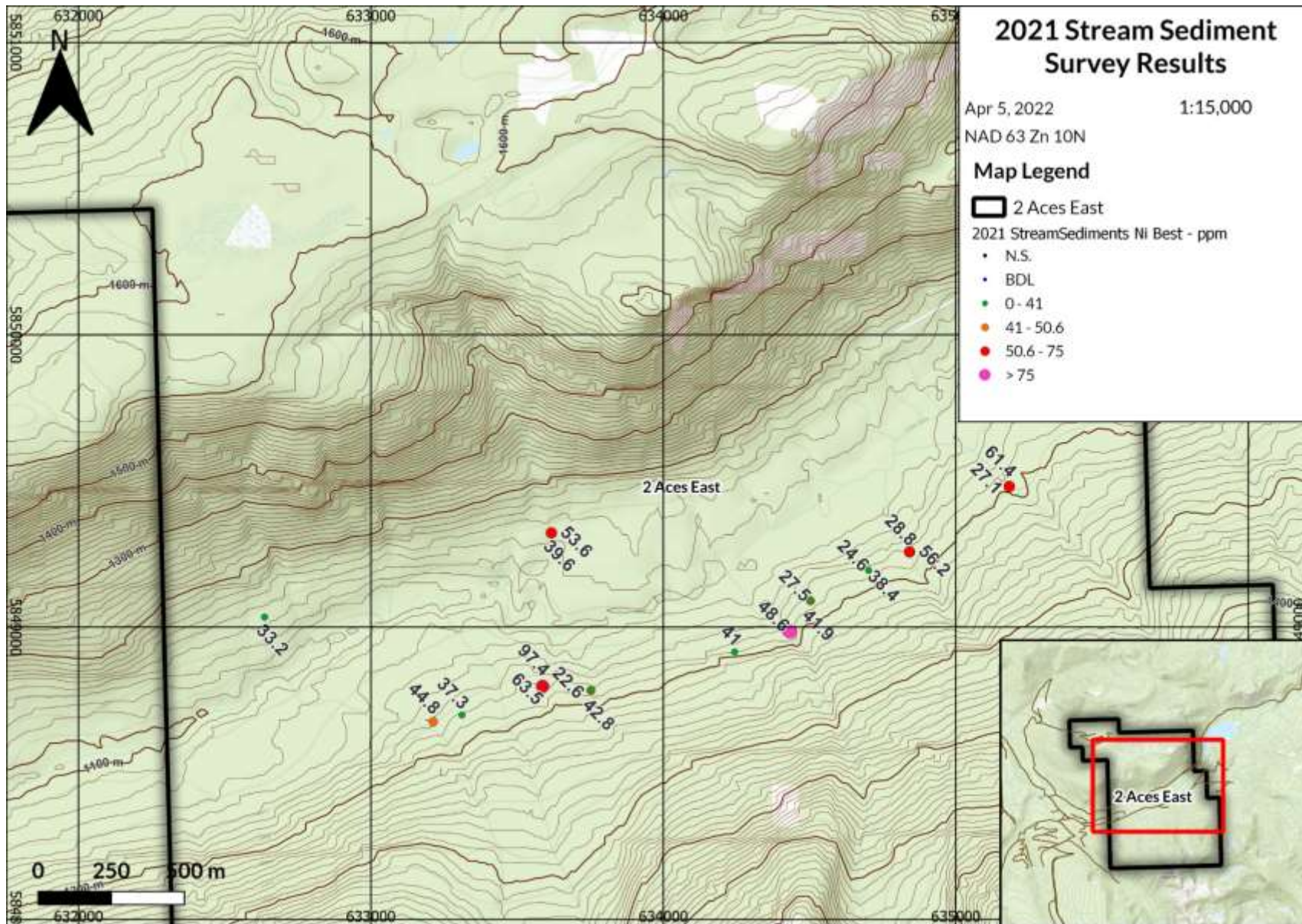


Figure 22: 2021 Stream Sediment Nickel Assay Values within the 2 Aces East claims.

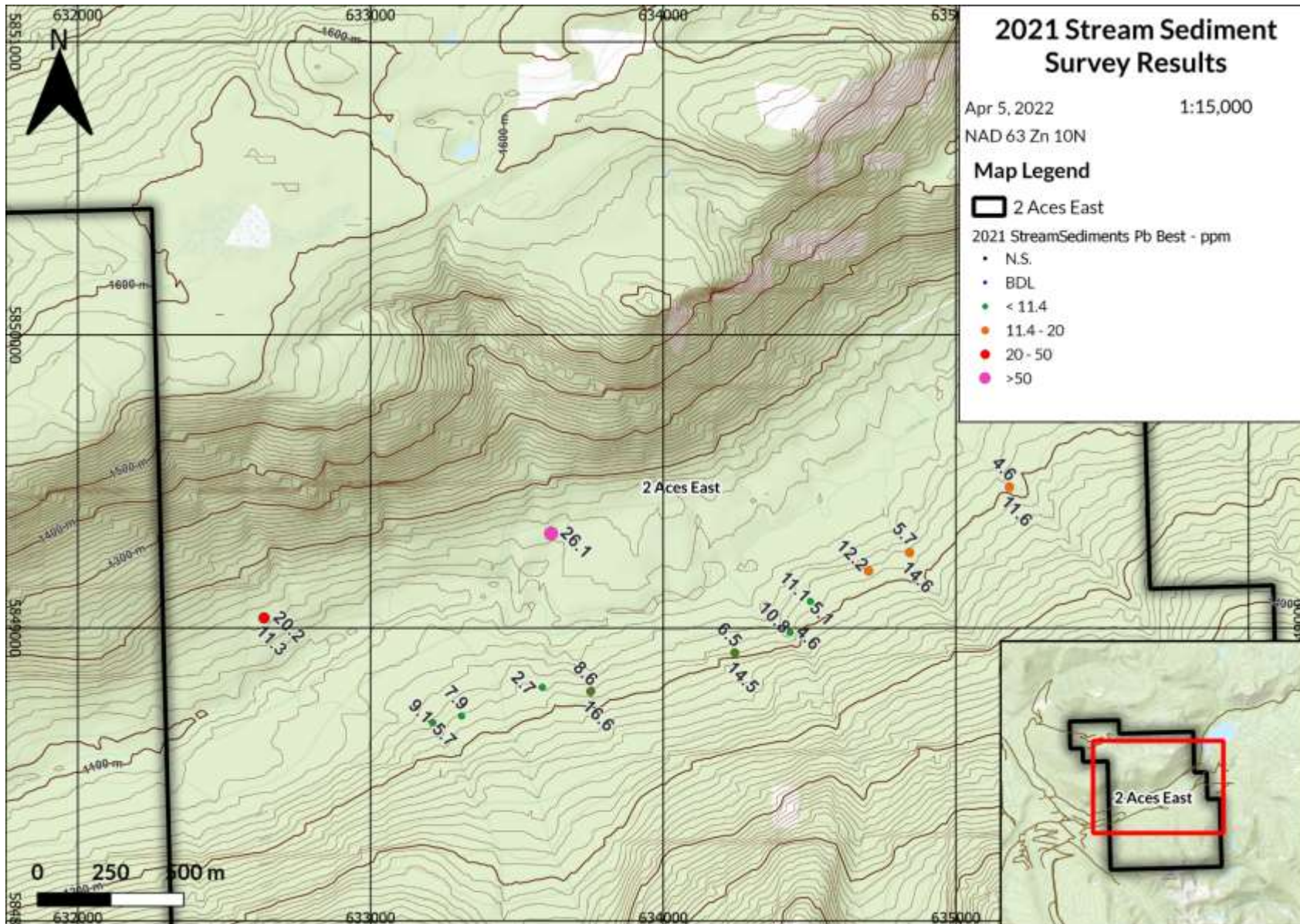


Figure 23: 2021 Stream Sediment Lead Assay Values within the 2 Aces East claims.

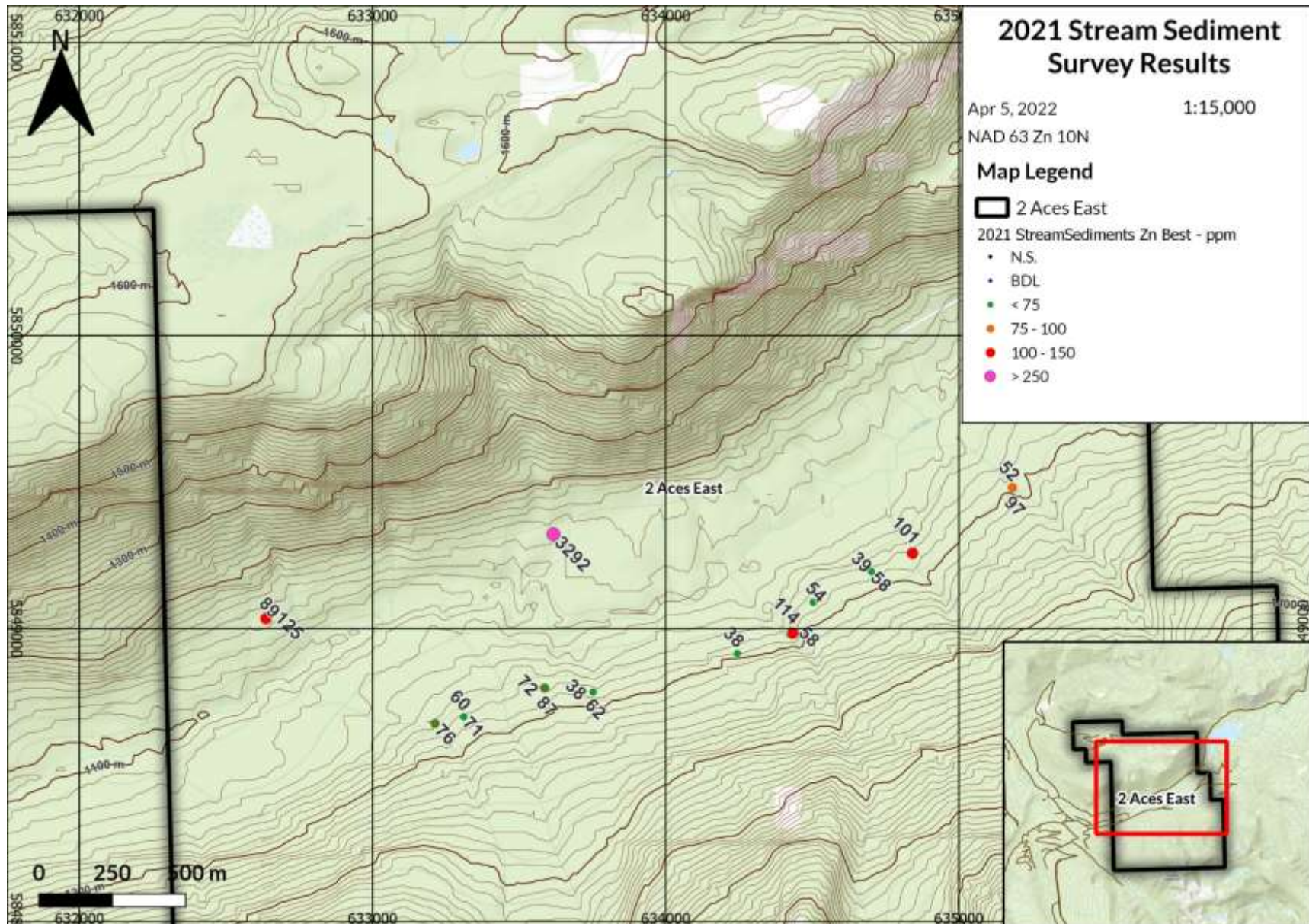


Figure 24: 2021 Stream Sediment Zinc Assay Values within the 2 Aces East claims.

## 9.4 RPAS Orthoimagery and DSM/DTM models

A total of 46.98 hectares of orthoimagery was captured by the RPAS across the 2 Aces East claims (**Fig. 27**). A total of 646 images were taken and stitched together in Pix4D Mapper software to create the final orthoimagery (**Fig. 28**). The Average Ground Sampling Distance (GSD) was 4.32cm. The software successfully modelled a Digital Surface Model (DSM) out of the captured imagery (**Fig. 29**). The original flight plans were to cover the entire central portion of the claims where the stream sediment survey was conducted and the northern plateau where the majority of the 2021 rock sampling has taken place, however due to weather conditions the remainder of the flights were abandoned. This should be followed up in the future.

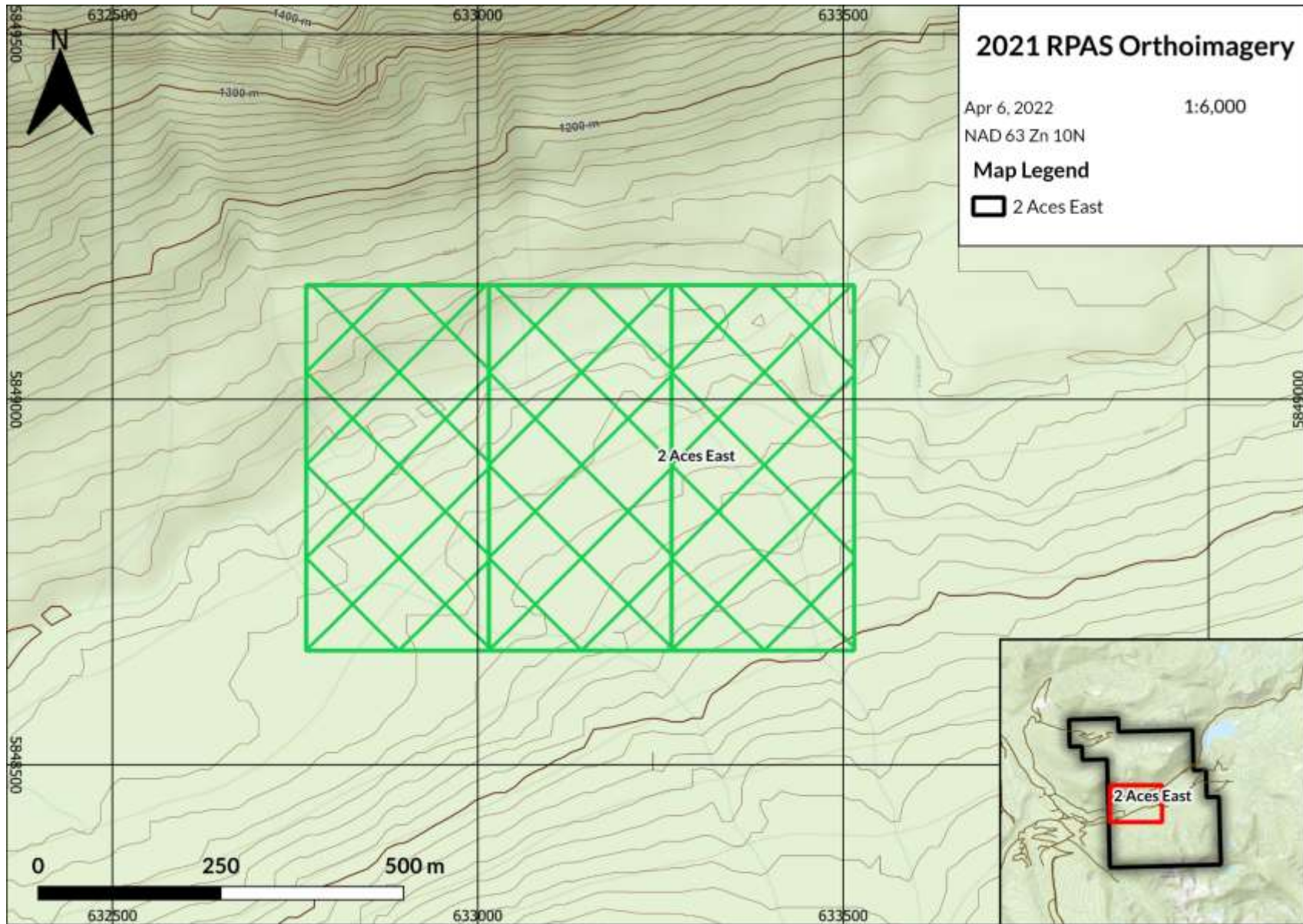


Figure 25: RPAS flight mission orthoimagery grids across the Seller Creek claims.

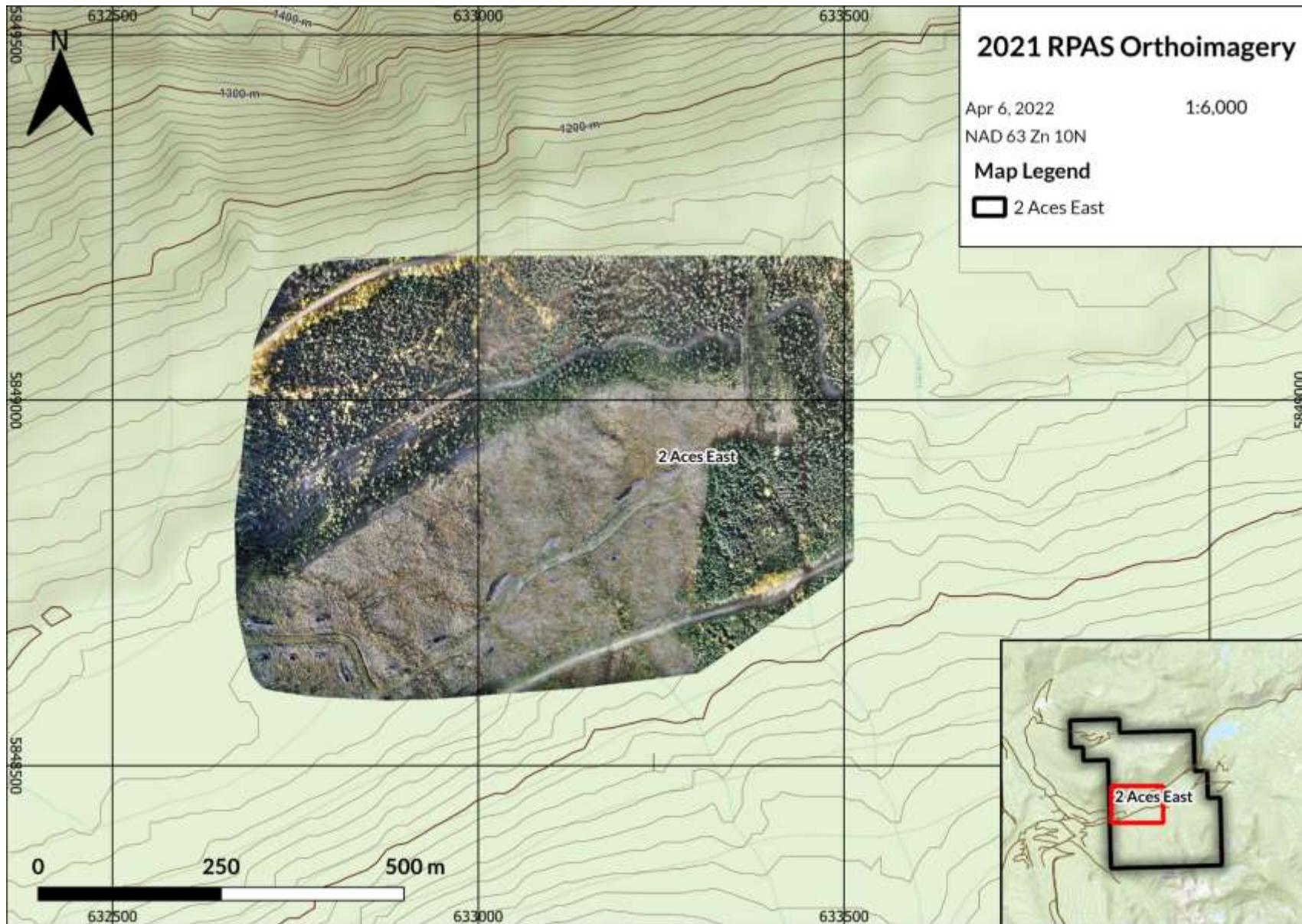


Figure 26: RPAS-acquired orthoimagery mozaic from 1917 images covering 213 hectares collected in 2021 on the Seller Creek claims.

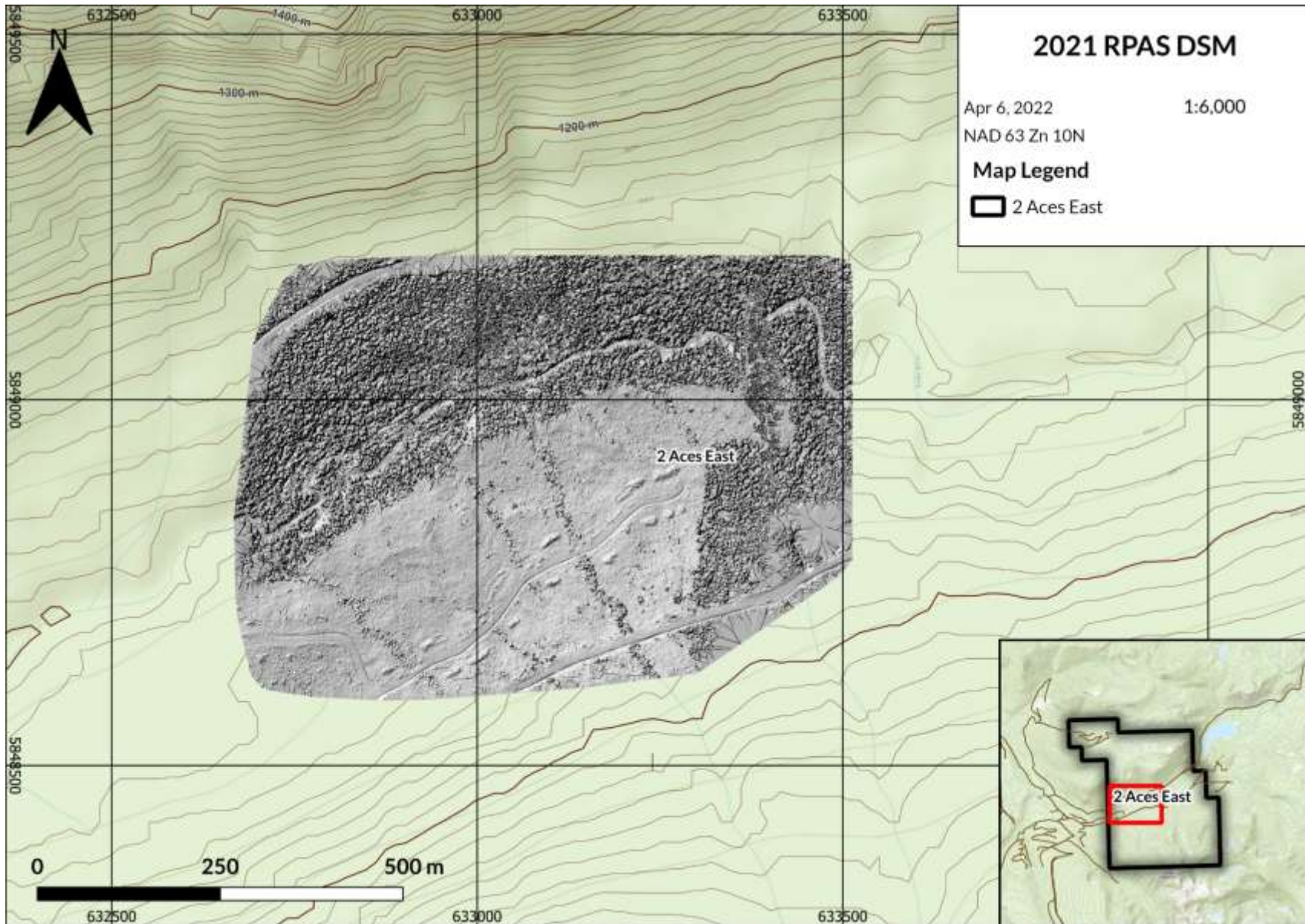


Figure 27: Computed Digital Surface Model (DSM) collected in 2021 on the Seller Creek claims.

## 10.0 Interpretation

From the 2021 work program completed and the results obtained from 2 Aces East claims, the Author believes the following interpretations are valid and warrant following up:

The geological mapping completed along the northern plateau compliments and agreed with the historical mapping completed by Cominco in 1991 (**Craig, 1991**). In 2021, a fault which had been previously mapped was observed with outcrop and subcrop of silicified clay-quartz fault gouge with disseminated sulphides (namely pyrite and chalcopyrite although in very quantities <1%). Samples from the fault gouge and outcrop adjacent assayed up to 25.6 ppm Cu, 20.0 ppm Co, 27.0 ppm Ni, and 41.0 ppm Zn (**Fig. 28**). Stream sediment sampling from the stream running along the fault gouge in the valley also yielded anomalous results including 4719 ppm Zn, 54.8 ppm Pb, 22.7 ppm Cu, 0.13 ppm Ag. From the 2018 airborne magnetic data collected, a notable mag-low linear feature can be observed in the south (**Fig. 29**), this may be an offset continuation of the fault to the north, or a different structure yet to be sampled.

The stream sediment sampling also highlighted a high-grade gold anomaly 1180 ppb Au from a stream running northeastwards off the ridges associated with the Three Ladies Mountain to south (**Fig. 28**). This area has never been explored as part of the 2 Aces East claim package, nor was the area visited in 2021. Follow-up stream sediment sampling to zone in on the gold anomaly should be a focus in the future.

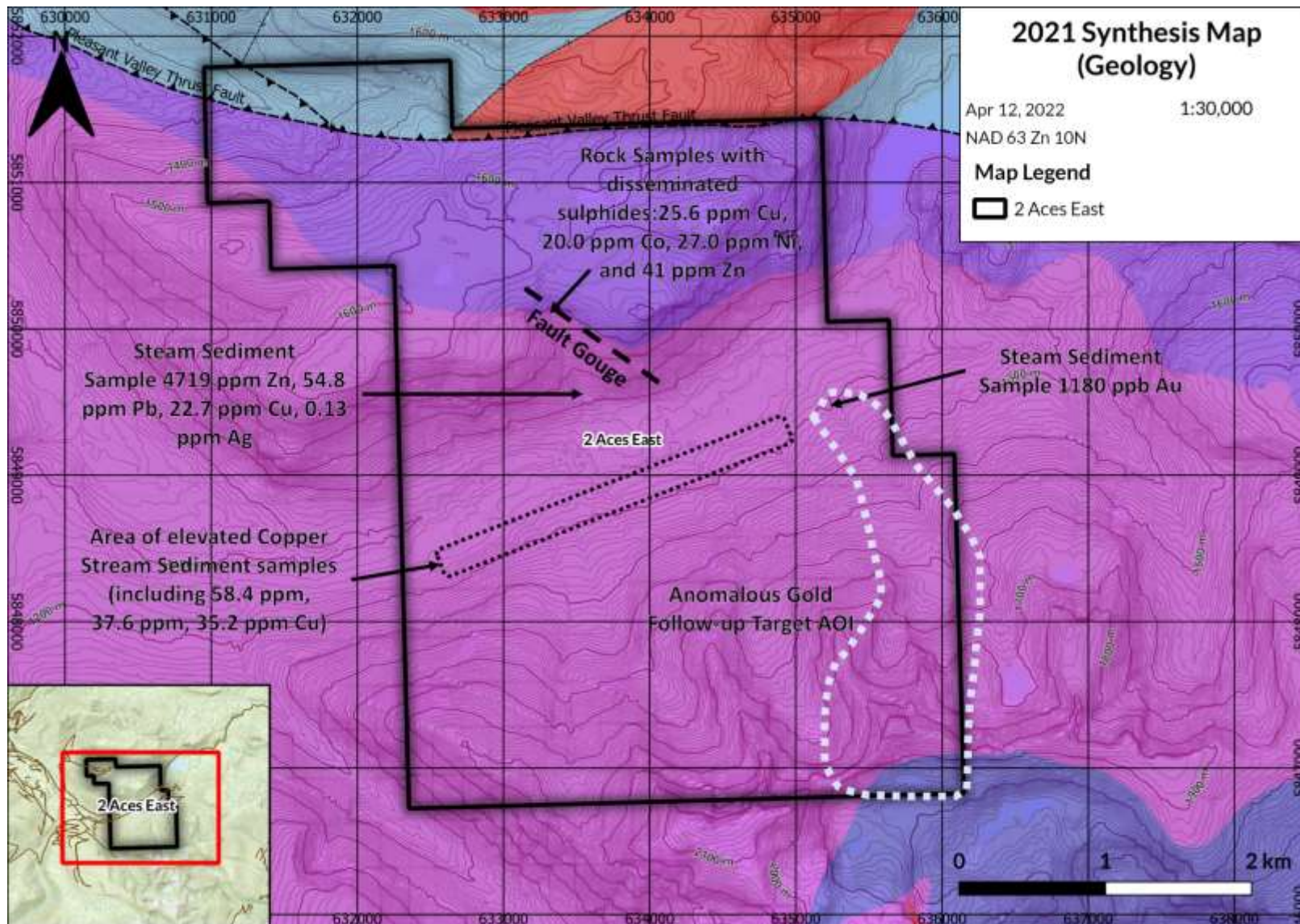


Figure 28: Geology synthesis map of the Seller Creek claims focussed on the area mapped in 2021. The geology legend is the same as Figure 4.

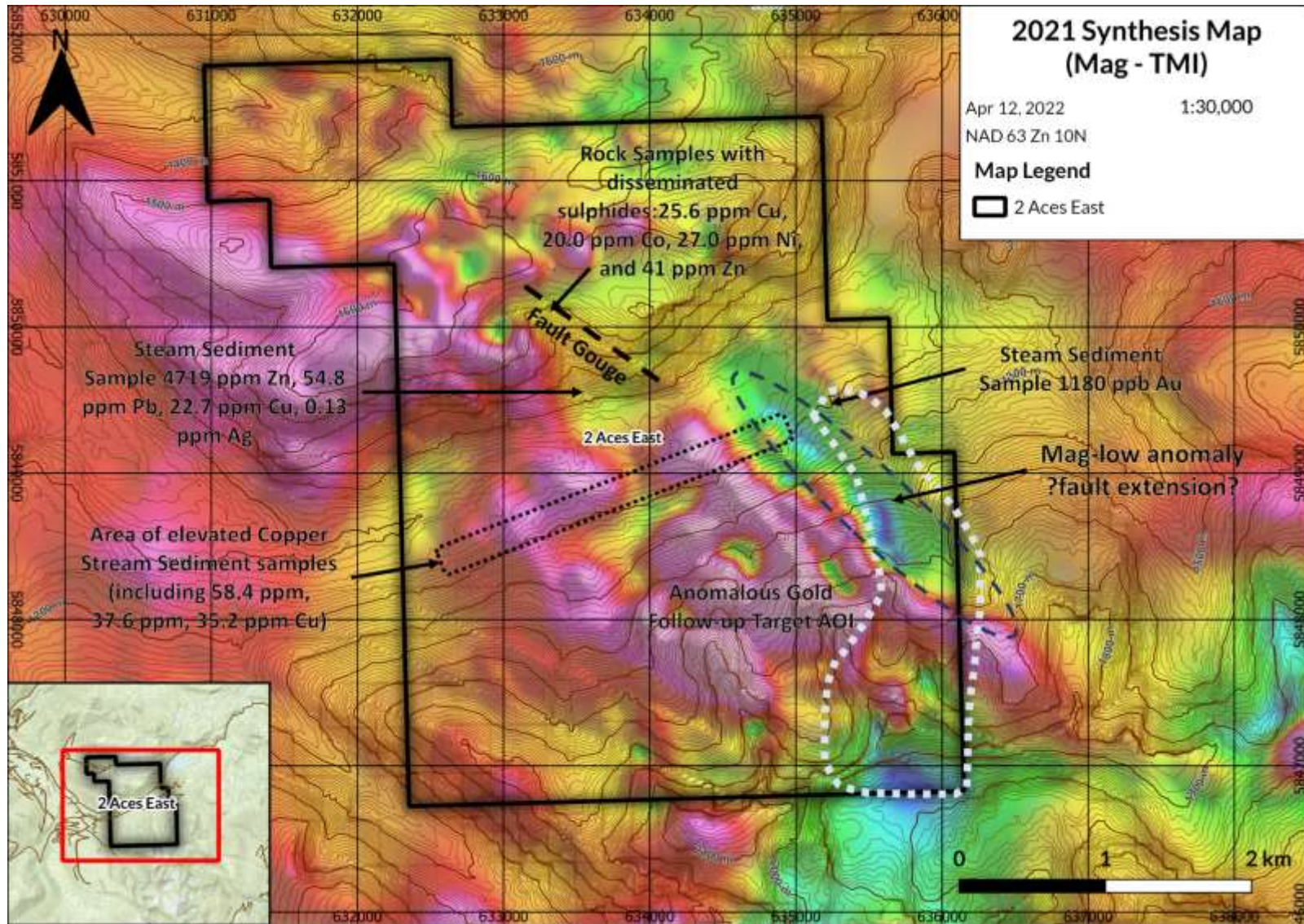


Figure 29: Total Magnetic Intensity (TMI) synthesis map of the Seller Creek claims focussed on the area mapped in 2021. Magnetic data from the 2018 survey.

## 11.0 Conclusions & Recommendations

The Author recommends the following exploration work program based on the results and interpretations of the 2021 exploration program:

Detailed geological mapping (1:1000 scale) of the rock exposure along the northern plateau within the 2 Aces claim. Rock exposure was primarily composed of marble with interbedded phyllites and schists. A notable fault gouge was observed in 2021 with very finely disseminated pyrite and chalcopyrite (<1%). Rock samples assayed 25.6 ppm Cu, 20.0 ppm Co, 27.0 ppm Ni, and 41.0 ppm Zn (Fig. 28). The fault has been mapped historically. Soils sampling from 1988 also highlighted Pb-Zn anomalies along the northern plateau (**Pride, 1989; Craig, 1991**). Stream sediment sampling at the base of the northern plateau included a sample of a stream flowing along a gouge associated with the fault, samples assayed 4719 ppm Zn, 54.8 ppm Pb, 22.7 ppm Cu, 0.13 ppm Ag. The fault is observed within the 2018 airborne magnetic data collected as a yellow-green mag-low. It could be interpreted that a notable mag-low linear feature can be observed in the south (Fig. 29), which may be an offset continuation of the fault to the north, or a different structure yet to be sampled. Follow-up work should include expanding and/or resampling the historic soil grids from 1989-1991 (**Pride, 1989; Craig, 1991**). Further mapping and sampling completed during the summer across the northern plateau, as well as sampling the cliff faces along the plateau edge. Stream sediment sampling was not possible on top of the plateau in 2021 due to the snow and ice coverage, this should be completed in the future when the area is snow-free.

Stream sediment sampling in the south also highlighted a high-grade gold anomaly 1180 ppb Au from a stream running northeastwards off the ridges associated with the Three Ladies Mountain to south (**Fig. 28**). This area has never been explored as part of the 2 Aces East claim package, nor was the area visited in 2021. Follow-up stream sediment sampling to zone in on the gold anomaly should be a focus in the future. Future work should also include rock sampling and mapping in the south along the Three Ladies Mountain ridges and peaks, this must be completed during the peak of summer when snow coverage is minimal. This would be a helicopter-supported work program.

## 12.0 References

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## 13.0 Statement of Qualifications

I, Liam F. Connor, of 1215 Arawana Road, Naramata, British Columbia, Canada, hereby certify that:

- 1) I am a graduate of Cardiff University, Wales with a Masters in Earth Sciences (MESci, Exploration and Resource Geology, 2019).
- 2) I have been employed in the Mining and Metals industry for 3 years and have been exploring for gold, silver, copper and base metals in British Columbia, Ontario, and the Yukon Territories, Canada for SGDS Hive, a geological consultancy based in Vancouver, British Columbia.
- 3) I am a Fellow of the Geological Society (FGS) a recognised position with the Geological Society of London (License # 0001028047)
- 4) I am not aware of any material fact of material change with respect to the subject matter of this report that is not reflected in the report, the omission to disclose which makes the report misleading.
- 5) I have no direct or indirect interest in the property described herein, nor do I expect to receive any.
- 6) I am the author of the report entitled: Assessment Report describing Geological and Geochemical Surveys at the 2 Aces East Claims, British Columbia, dated January 16, 2023

Dated in Naramata, British Columbia January 16, 2023

Liam F. Connor, MESci, FGS

**Table 7. Geological mapping station location and notes**

STATION ID	PROSPECT / TARGET ZONE	COORDINATE SYSTEM	UTM ZONE	UTM EASTING	UTM NORTHING	ELEVATION	DESCRIPTION
LC21_HWG_2AC_001	2 Aces	NAD 83	10N	633624	5850826	1578	marble
LC21_HWG_KCK_002	2 Aces	NAD 83	10N	633633	5850734	1593	Marble
LC21_HWG_2AC_003	2 Aces	NAD 83	10N	633506	5850801	1582	marble
LC21_HWG_2AC_004	2 Aces	NAD 83	10N	633358	5850246	1553	Quartzite, with ds sulphide (cpy+py). subcrop in creek inferred fault
CA21_HWG_2AC_006	2 Aces	NAD 83	10N	633332	5850246	1560	foliated, jointed quartzite. equicrystalline calcite bearing
LC21_HWG_2AC_007	2 Aces	NAD 83	10N	632720	5850293	1597	schist1
CA21_HWG_2AC_007	2 Aces	NAD 83	10N	633373	5850334	1584	massive marble
CA21_HWG_2AC_008	2 Aces	NAD 83	10N	633398	5850407	1590	micaceous schistose schist with thin to thick quartzite veining
CA21_HWG_2AC_001	2 Aces	NAD 83	10N	633363	5850735	1572	marble with some quartz veinlets
CA21_HWG_2AC_002	2 Aces	NAD 83	10N	633537	5850536	1588	quartzite with small interlayered phyllite
CA21_HWG_2AC_003	2 Aces	NAD 83	10N	633436	5850186	1549	white marble

**Table 8. Stream Sediments sampling location**

Sample Number	Coordinate System	UTM Zone	UTM Easting	UTM Northing	Elevation
C00065163	NAD 83	10N	632636	5849034	1141
C00065164	NAD 83	10N	632636	5849034	1141
C00065165	NAD 83	10N	633617	5849322	1148
C00065166	NAD 83	10N	633617	5849322	1148
C00065167	NAD 83	10N	634433	5848984	1161
C00065168	NAD 83	10N	634433	5848984	1161
C00065169	NAD 83	10N	633213	5848676	1164
C00065170	NAD 83	10N	633213	5848676	1161
C00065171	NAD 83	10N	633311	5848699	1175
C00065172	NAD 83	10N	633311	5848699	1175
C00065173	NAD 83	10N	635183	5849481	1186
C00065174	NAD 83	10N	635183	5849481	1186
C00065175	NAD 83	10N	634842	5849257	1181
C00065176	NAD 83	10N	634842	5849257	1181
C00065177	NAD 83	10N	634702	5849194	1173
C00065178	NAD 83	10N	634702	5849194	1173
C00065179	NAD 83	10N	634503	5849090	1172
C00065180	NAD 83	10N	634503	5849090	1172
C00065181	NAD 83	10N	634244	5848915	1192
C00065182	NAD 83	10N	634244	5848915	1192
C00065183	NAD 83	10N	633752	5848783	1164
C00065184	NAD 83	10N	633752	5848783	1164
C00065185	NAD 83	10N	633587	5848797	1165
C00065186	NAD 83	10N	633587	5848797	1165



## 14.0 Statement of Costs

Exploration Work type	Comment	Days		
Personnel Name (Position)	Field Days (Actual Days)	Days	Rate	Subtotal
L. Connor (Project Geologist)	September 22, 2021	1	\$645.58	\$645.58
J. Moffat (Geotechnician)	September 22, 2021	1	\$490.00	\$490.00
L. Connor (Project Geologist)	October 3 and 24 Travel (.25 each day)	.5	\$577.50	\$288.75
L. Connor (Project Geologist)	2 Aces Field Days Oct 4 - .25 Oct 10 - 1 Oct 11 - .25 Oct 12 - 1 Oct 18 - .25 Oct 23 -.25	3	\$682.50	\$2047.50
D. Ramirez (Geologist)	October 3 and 24 Travel (.25 each day)	.5	\$472.50	\$236.25
D. Ramirez (Geologist)	2 Aces Field Days Oct 4 - .25 Oct 10 - 1 Oct 11 - .25 Oct 12 - 1 Oct 23 -.25	2.5	\$577.50	\$1443.75
C. Austin (Geotechnician)	October 2 and 24 Travel (.25 each day)	.5	\$420.00	\$210.00
C. Austin (Geotechnician)	2 Aces Field Days Oct 7 - 1 Oct 9 - 1 Oct 10 - 1 Oct 12 - 1 Oct 17 -.5 Oct 18 - .5	5	\$525.00	\$2625.00
J. Moffat (Geotechnician)	October 2 and 24 Travel (.25 each day)	.5	\$420.00	\$210.00
J. Moffat (Geotechnician)	2 Aces Field Days	3.5	\$525.00	\$1837.50
Andrew Randell (Professional Geoscientist)	Travel Oct 15 and 18 (.25 each day)	.5	\$945.00	\$472.50
Andrew Randell	2 Aces Field Days	.25	\$1050.00	\$262.50



(Professional Geoscientist)	Oct 16 .25			
Total Field Work				\$10769.33

Office Studies	Personnel – Office Only	Units	Rate	Subtotal
Category	Name	Hours (Unless Indicated)		
Literature Search	L. Connor (Project Geologist)	.75	\$73.50	\$55.12
Database Compilation	L. Connor (Project Geologist)	17.75	\$73.50	\$1304.62
Database Compilation	D. Ramirez (Geologist)	25.75	\$52.50	\$1351.87
Database Compilation	C. Austin (Geotechnician)	39	\$42.00	\$1638.00
Database Compilation	J. Moffat (Geotechnician)	1	\$42.00	\$42.00
Database Compilation	K. Jurykovsky (Geotechnician)	6	\$42.00	\$252.00
Reprocessing of Data	J. Moffat (Geotechnician)	3	\$42.00	\$126.00
Reprocessing of Data	C. Austin (Geotechnician)	16	\$42.00	\$672.00
General Research	J. Sly (Office Manager)	.5	\$42.00	\$21.00
General Research	Andrew Randell (Professional Geoscientist)	3.25	\$136.50	\$443.62
General Research	C. Austin (Geotechnician)	5	\$42.00	\$210.00
Report Preparation	L. Connor (Project Geologist)	80	\$73.50	\$5880.00
Report Preparation	C. Austin (Geotechnician)	20	\$42.00	\$840.00
Report Preparation	C. Campbell (Campbell & Walker Geophysics Ltd.)	Days 2.375	\$1575.00	\$3740.63
Total				\$16576.86

Remote Sensing	Area in Hectares			
Aerial Photography	Drone Rental, Flight Costs and	1.0	\$1515.94	\$1515.94



	data processing			
Total				\$1515.94

Geochemical Surveying	Number of Samples	No.	Rate	Subtotal
Stream Sediment	24	24	\$35.53	\$852.72
Rock	13	13	\$35.53	\$461.89
XRF	13	13	\$59.57	\$774.41
Total				\$2089.02

Transportation		No.	Rate	Subtotal
Truck Rental	Actual Cost	1	\$1375.95	\$1375.95
Fuel	Actual Cost	1	\$555.38	\$555.38
Helicopter	Hours	10	\$1102.50	\$11025.00
Fuel	Litres / Hour	1095.16	\$1.62	\$1782.37
Landing Fees	Actual Cost	1	\$34.46	\$34.46
Total				\$14773.16

Accommodation and Food	Rates Per Day of Actual Cost			
Accommodation	Actual Cost	1	\$1343.52	\$1343.52
Meals	Actual Cost	1	\$736.71	\$736.71
				\$2080.23

Miscellaneous				
Travel Communications	Actual Cost	1	\$14.01	\$14.01
Total				\$14.01

Equipment Rentals				
Field Gear	Hammers, Safety Gear, Winter Gear, Field Comms	1	\$382.35	\$382.35
Satellite Phone		1	\$32.69	\$32.69
Total				\$415.04

Other				
5% Admin on Wages	\$9175.00	1	\$507.94	\$507.94
10% on expenses	\$3283.37	1	\$344.75	\$344.75
10% on	\$12768.34	1	\$1340.67	\$1340.67



Helicopter				
10% on XRF Rental	\$1131.89	1	\$119.58	\$119.58
Total				\$2312.94

Total Program: \$50,546.53

APPENDIX A – ROCK SAMPLE ASSAY CERTIFICATES



## ANALYSIS REPORT BBM21-14351

To STRATA GEODATA SERVICES LTD  
ANDY RANDELL  
UNIT 330  
470 GRANVILLE STREET  
VANCOUVER V6C 1V4  
BC  
CANADA

Order Number	21HWG-001	Date Received	26-Oct-2021
Submission Number	*BBY* SGDS HIVE/21HWG-001/26	Date Analysed	21-Nov-2021 - 30-Jan-2022
Rocks		Date Completed	30-Jan-2022
Number of Samples	26	SGS Order Number	BBM21-14351

### Methods Summary

Number of Sample	Method Code	Description
26	G_WGH_KG	Weight of samples received
26	GE_FAA30V5	Au, FAS, exploration grade, AAS, 30g-5ml
26	GE_ICP40Q12	4 Acid Digest (HCL/HCLO4/HF/HNO3), ICP, 0.2g-12ml

Authorised Signatory

John Chiang  
Laboratory Operations Manager



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**WARNING:** The sample(s) to which the findings recorded herein (the "Findings") relate was(were) drawn and / or provided by the Client or by a third party acting at the Client's direction. The Findings constitute no warranty of the sample's representativeness of any goods and strictly relate to the sample(s). The Company accepts no liability with regard to the origin or source from which the sample(s) is/are said to be extracted. The findings report on the samples provided by the client and are not intended for commercial or contractual settlement purposes.

- not analysed | -- element not determined | I.S. insufficient sample | L.N.R. listed not received

30-Jan-2022 11:55PM BBM\_U0019267604

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MIN-M\_COA\_ROW-Last Modified Date: 05-Nov-2019



Order Number 21HWG-001  
 Submission Number \*BBY\* SGDS HIVE/21HWG-001/26  
 Rocks  
 Number of Samples 26

**ANALYSIS REPORT BBM21-14351**

Element Method	WTKG G_WGH_KG	@Au GE_FAA30V5	@Ag GE_ICP40Q12	@Al GE_ICP40Q12	@As GE_ICP40Q12	@Ba GE_ICP40Q12
Lower Limit	0.01	5	2	0.01	3	1
Upper Limit	--	10,000	100	15	10,000	10,000
Unit	kg	ppb	ppm m / m	%	ppm m / m	ppm m / m
C00065051	2.39	<5	<2	0.03	<3	6
C00065052	1.99	<5	<2	0.01	<3	5
C00065053	3.04	<5	<2	0.13	<3	41
C00065054	2.41	<5	<2	2.46	5	17
C00065055	2.73	<5	<2	0.26	<3	192
C00065056	-	<5	<2	0.25	<3	189
C00065057	1.40	<5	<2	8.95	<3	722
C00065058	2.24	<5	<2	0.09	<3	19
C00065059	2.06	<5	<2	9.69	<3	427
C00065060	2.44	<5	<2	10.36	<3	522
C00065301	2.67	<5	<2	0.02	<3	36
C00065302	1.80	<5	<2	0.54	<3	245
C00065303	2.45	<5	<2	0.06	<3	17
C00065304	2.54	<5	<2	8.97	<3	287
C00065305	2.33	5	<2	0.17	<3	31
C00065306	0.09	209	<2	7.82	35	782
C00065307	1.68	<5	<2	9.85	<3	886
C00065308	1.92	<5	<2	7.87	16	31
C00065230	1.35	7	<2	0.28	14	21
C00065231	1.58	<5	<2	9.32	<3	1160
C00065232	1.38	<5	<2	0.64	5	91
C00065233	1.58	<5	<2	1.24	<3	150
C00065234	1.58	<5	<2	5.65	<3	767
C00065235	1.42	<5	4	0.02	<3	4
C00065236	1.67	<5	<2	6.96	<3	4976
C00065237	-	<5	<2	7.06	<3	5017
*Std SL105	-	4970	-	-	-	-
*Blk BLANK	-	<5	-	-	-	-
*Std OREAS 503d	-	653	-	-	-	-

- not analysed | -- element not determined | I.S. insufficient sample | L.N.R. listed not received



Order Number 21HWG-001  
 Submission Number \*BBY\* SGDS HIVE/21HWG-001/26  
 Rocks  
 Number of Samples 26

## ANALYSIS REPORT BBM21-14351

Element Method	WTKG G_WGH_KG	@Au GE_FAA30V5	@Ag GE_ICP40Q12	@Al GE_ICP40Q12	@As GE_ICP40Q12	@Ba GE_ICP40Q12
Lower Limit	0.01	5	2	0.01	3	1
Upper Limit	--	10,000	100	15	10,000	10,000
Unit	kg	ppb	ppm m / m	%	ppm m / m	ppm m / m
*Rep C00065055	-	<5	-	-	-	-
*Blk BLANK	-	<5	-	-	-	-
*Std SN106	-	8210	-	-	-	-
*Rep C00065236	-	<5	-	-	-	-
*Std OREAS 601b	-	-	50	6.36	288	290
*Std OREAS 520	-	-	<2	5.67	165	464
*Blk BLANK	-	-	<2	<0.01	<3	<1

Element Method	@Be GE_ICP40Q12	@Bi GE_ICP40Q12	@Ca GE_ICP40Q12	@Cd GE_ICP40Q12	@Co GE_ICP40Q12	@Cr GE_ICP40Q12
Lower Limit	0.5	5	0.01	1	1	1
Upper Limit	2,500	10,000	15	10,000	10,000	10,000
Unit	ppm m / m	ppm m / m	%	ppm m / m	ppm m / m	ppm m / m
C00065051	<0.5	<5	>15.00	<1	<1	<1
C00065052	<0.5	<5	>15.00	<1	<1	1
C00065053	<0.5	<5	>15.00	<1	<1	2
C00065054	0.8	<5	0.35	<1	20	42
C00065055	<0.5	<5	>15.00	<1	<1	20
C00065056	<0.5	<5	>15.00	<1	<1	19
C00065057	2.3	<5	0.24	<1	13	81
C00065058	<0.5	<5	<0.01	<1	<1	52
C00065059	2.9	<5	0.44	<1	4	92
C00065060	2.8	<5	0.48	<1	3	93
C00065301	<0.5	<5	>15.00	<1	<1	2
C00065302	1.2	<5	0.02	<1	<1	76
C00065303	<0.5	<5	>15.00	<1	<1	2
C00065304	2.7	<5	0.29	<1	19	96
C00065305	<0.5	<5	>15.00	<1	<1	13
C00065306	2.8	<5	1.03	<1	37	105

- not analysed | -- element not determined | I.S. insufficient sample | L.N.R. listed not received



Order Number 21HWG-001  
 Submission Number \*BBY\* SGDS HIVE/21HWG-001/26  
 Rocks  
 Number of Samples 26

**ANALYSIS REPORT BBM21-14351**

Element	@Be	@Bi	@Ca	@Cd	@Co	@Cr
Method	GE_ICP40Q12	GE_ICP40Q12	GE_ICP40Q12	GE_ICP40Q12	GE_ICP40Q12	GE_ICP40Q12
Lower Limit	0.5	5	0.01	1	1	1
Upper Limit	2,500	10,000	15	10,000	10,000	10,000
Unit	ppm m / m	ppm m / m	%	ppm m / m	ppm m / m	ppm m / m
C00065307	2.5	<5	0.40	<1	16	78
C00065308	0.5	<5	6.67	<1	33	27
C00065230	<0.5	<5	<0.01	<1	2	48
C00065231	2.7	<5	0.17	<1	13	100
C00065232	<0.5	<5	<0.01	<1	<1	57
C00065233	<0.5	<5	0.02	<1	1	38
C00065234	1.6	<5	0.02	<1	10	81
C00065235	<0.5	86	<0.01	<1	<1	23
C00065236	2.4	<5	0.62	<1	<1	120
C00065237	2.5	<5	0.64	<1	<1	132
*Std OREAS 601b	2.1	14	0.82	2	3	21
*Std OREAS 520	1.0	<5	3.93	<1	214	30
*Blk BLANK	<0.5	<5	<0.01	<1	<1	<1

Element	@Cu	@Fe	@K	@La	@Li	@Mg
Method	GE_ICP40Q12	GE_ICP40Q12	GE_ICP40Q12	GE_ICP40Q12	GE_ICP40Q12	GE_ICP40Q12
Lower Limit	0.5	0.01	0.01	0.5	1	0.01
Upper Limit	10,000	15	15	10,000	10,000	15
Unit	ppm m / m	%	%	ppm m / m	ppm m / m	%
C00065051	<0.5	0.09	0.01	0.5	<1	0.51
C00065052	<0.5	0.02	<0.01	<0.5	<1	0.92
C00065053	<0.5	0.12	0.03	1.8	1	0.67
C00065054	25.6	3.31	0.07	17.0	32	0.84
C00065055	<0.5	0.17	0.11	2.7	1	0.42
C00065056	<0.5	0.17	0.11	2.7	1	0.40
C00065057	14.5	5.83	3.43	24.7	47	1.24
C00065058	0.8	0.87	0.04	<0.5	<1	<0.01
C00065059	20.8	5.42	2.59	35.6	30	1.21
C00065060	17.9	5.29	2.92	44.8	31	1.29

- not analysed | -- element not determined | I.S. insufficient sample | L.N.R. listed not received



Order Number 21HWG-001  
 Submission Number \*BBY\* SGDS HIVE/21HWG-001/26  
 Rocks  
 Number of Samples 26

## ANALYSIS REPORT BBM21-14351

Element Method	@Cu GE_ICP40Q12	@Fe GE_ICP40Q12	@K GE_ICP40Q12	@La GE_ICP40Q12	@Li GE_ICP40Q12	@Mg GE_ICP40Q12
Lower Limit	0.5	0.01	0.01	0.5	1	0.01
Upper Limit	10,000	15	15	10,000	10,000	15
Unit	ppm m / m	%	%	ppm m / m	ppm m / m	%
C00065301	<0.5	0.61	0.02	1.6	2	12.61
C00065302	5.7	1.26	0.25	2.0	4	0.06
C00065303	<0.5	0.32	0.02	<0.5	1	13.31
C00065304	23.9	5.32	2.77	27.3	42	1.29
C00065305	<0.5	0.10	0.08	1.5	1	0.54
C00065306	93.8	4.26	2.83	46.6	37	1.04
C00065307	25.2	5.95	2.67	42.2	34	1.44
C00065308	47.0	6.84	0.12	3.9	9	2.64
C00065230	9.4	4.40	0.05	1.7	<1	0.05
C00065231	32.8	6.32	3.08	57.7	32	1.01
C00065232	7.5	1.23	0.27	10.7	<1	0.02
C00065233	<0.5	1.37	0.49	16.1	2	0.07
C00065234	14.1	3.77	1.99	48.7	21	0.61
C00065235	0.6	0.55	<0.01	<0.5	<1	<0.01
C00065236	240	2.33	2.57	32.5	31	1.30
C00065237	226	2.39	2.60	31.5	32	1.32
*Std OREAS 601b	989	2.20	2.34	34.1	23	0.09
*Std OREAS 520	2988	>15.00	3.56	83.1	19	1.17
*Blk BLANK	1.2	<0.01	<0.01	<0.5	<1	<0.01

Element Method	@Mn GE_ICP40Q12	@Mo GE_ICP40Q12	@Na GE_ICP40Q12	@Ni GE_ICP40Q12	@P GE_ICP40Q12	@Pb GE_ICP40Q12
Lower Limit	2	1	0.01	1	0.01	2
Upper Limit	10,000	10,000	15	10,000	15	10,000
Unit	ppm m / m	ppm m / m	%	ppm m / m	%	ppm m / m
C00065051	53	<1	<0.01	<1	0.01	<2
C00065052	16	<1	<0.01	<1	<0.01	<2
C00065053	62	3	0.01	1	0.04	32
C00065054	376	3	0.70	22	0.01	10

- not analysed | -- element not determined | I.S. insufficient sample | L.N.R. listed not received



Order Number 21HWG-001  
 Submission Number \*BBY\* SGDS HIVE/21HWG-001/26  
 Rocks  
 Number of Samples 26

**ANALYSIS REPORT BBM21-14351**

Element Method	@Mn GE_ICP40Q12	@Mo GE_ICP40Q12	@Na GE_ICP40Q12	@Ni GE_ICP40Q12	@P GE_ICP40Q12	@Pb GE_ICP40Q12
Lower Limit	2	1	0.01	1	0.01	2
Upper Limit	10,000	10,000	15	10,000	15	10,000
Unit	ppm m / m	ppm m / m	%	ppm m / m	%	ppm m / m
C00065055	65	<1	0.01	2	<0.01	8
C00065056	64	<1	<0.01	2	<0.01	8
C00065057	362	1	1.21	26	0.05	11
C00065058	88	10	<0.01	6	<0.01	<2
C00065059	552	3	1.00	9	0.05	15
C00065060	547	2	1.04	7	0.05	16
C00065301	537	<1	<0.01	<1	<0.01	<2
C00065302	129	6	0.01	6	<0.01	<2
C00065303	238	<1	<0.01	1	0.01	<2
C00065304	565	2	0.66	27	0.03	16
C00065305	55	<1	0.02	<1	0.01	<2
C00065306	505	<1	0.42	86	0.05	36
C00065307	1498	<1	0.82	28	0.05	9
C00065308	1280	<1	1.56	28	0.05	4
C00065230	167	5	0.02	9	0.06	3
C00065231	307	2	0.23	34	0.13	15
C00065232	98	4	0.02	5	<0.01	2
C00065233	180	3	0.04	11	0.03	3
C00065234	228	3	0.14	29	0.05	15
C00065235	58	5	<0.01	3	<0.01	42
C00065236	78	7	0.17	15	0.46	9
C00065237	89	6	0.17	15	0.40	9
*Std OREAS 601b	206	5	1.84	6	0.03	296
*Std OREAS 520	2264	61	1.40	73	0.08	6
*Blk BLANK	<2	<1	<0.01	<1	<0.01	<2

- not analysed | -- element not determined | I.S. insufficient sample | L.N.R. listed not received



Order Number 21HWG-001  
 Submission Number \*BBY\* SGDS HIVE/21HWG-001/26  
 Rocks  
 Number of Samples 26

**ANALYSIS REPORT BBM21-14351**

Element	@S	@Sb	@Sc	@Sn	@Sr	@Ti
Method	GE_ICP40Q12	GE_ICP40Q12	GE_ICP40Q12	GE_ICP40Q12	GE_ICP40Q12	GE_ICP40Q12
Lower Limit	0.01	5	0.5	10	0.5	0.01
Upper Limit	5	10,000	10,000	10,000	10,000	15
Unit	%	ppm m / m	ppm m / m	ppm m / m	ppm m / m	%
C00065051	0.01	<5	<0.5	<10	1187	<0.01
C00065052	0.01	<5	<0.5	<10	2903	<0.01
C00065053	0.02	<5	<0.5	<10	1541	<0.01
C00065054	<0.01	<5	3.9	<10	63.1	0.17
C00065055	0.02	<5	<0.5	<10	886	<0.01
C00065056	0.02	<5	<0.5	<10	878	<0.01
C00065057	0.01	<5	17.6	<10	89.4	0.67
C00065058	<0.01	<5	<0.5	<10	0.6	<0.01
C00065059	0.02	<5	18.8	<10	144	0.56
C00065060	0.04	<5	19.5	<10	163	0.64
C00065301	<0.01	<5	<0.5	<10	478	<0.01
C00065302	<0.01	<5	0.9	<10	4.1	0.02
C00065303	<0.01	<5	<0.5	<10	130	<0.01
C00065304	0.01	<5	18.1	<10	114	0.52
C00065305	0.01	<5	<0.5	<10	736	<0.01
C00065306	0.15	13	14.4	<10	48.7	0.35
C00065307	<0.01	<5	19.1	<10	99.3	0.45
C00065308	<0.01	<5	32.3	<10	196	0.62
C00065230	<0.01	<5	<0.5	<10	3.3	<0.01
C00065231	<0.01	<5	19.6	<10	83.2	0.40
C00065232	<0.01	<5	0.8	<10	7.8	0.02
C00065233	<0.01	<5	2.3	<10	11.8	0.08
C00065234	<0.01	<5	9.7	<10	51.0	0.28
C00065235	<0.01	<5	<0.5	<10	<0.5	<0.01
C00065236	<0.01	<5	11.0	<10	202	0.16
C00065237	<0.01	<5	11.1	<10	206	0.10
*Std OREAS 601b	1.49	25	3.4	<10	228	0.13
*Std OREAS 520	1.01	<5	17.4	<10	104	0.47
*Blk BLANK	<0.01	<5	<0.5	<10	<0.5	<0.01

- not analysed | -- element not determined | I.S. insufficient sample | L.N.R. listed not received



Order Number 21HWG-001  
 Submission Number \*BBY\* SGDS HIVE/21HWG-001/26  
 Rocks  
 Number of Samples 26

**ANALYSIS REPORT BBM21-14351**

Element	@V	@W	@Y	@Zn	@Zr
Method	GE_ICP40Q12	GE_ICP40Q12	GE_ICP40Q12	GE_ICP40Q12	GE_ICP40Q12
Lower Limit	2	10	0.5	1	0.5
Upper Limit	10,000	10,000	10,000	10,000	10,000
Unit	ppm m / m	ppm m / m	ppm m / m	ppm m / m	ppm m / m
C00065051	<2	<10	0.6	3	<0.5
C00065052	<2	<10	<0.5	1	<0.5
C00065053	<2	<10	1.4	4	0.6
C00065054	25	<10	9.6	63	1.4
C00065055	11	<10	1.6	32	0.9
C00065056	10	22	1.5	32	1.1
C00065057	123	<10	12.7	85	11.9
C00065058	2	<10	<0.5	2	<0.5
C00065059	109	<10	13.0	75	12.9
C00065060	118	<10	10.6	82	14.0
C00065301	19	<10	0.8	15	<0.5
C00065302	9	<10	<0.5	3	1.0
C00065303	<2	<10	0.6	13	<0.5
C00065304	124	<10	9.9	96	8.2
C00065305	9	<10	0.9	4	0.7
C00065306	108	<10	21.6	134	132
C00065307	111	<10	19.9	98	48.6
C00065308	279	<10	24.6	65	26.7
C00065230	4	<10	0.8	25	2.2
C00065231	127	<10	10.1	64	55.9
C00065232	6	<10	1.9	8	8.6
C00065233	17	<10	2.8	33	9.8
C00065234	62	<10	13.5	44	38.2
C00065235	<2	71	<0.5	1	<0.5
C00065236	538	<10	17.4	75	68.9
C00065237	534	<10	17.8	75	42.6
*Std OREAS 601b	12	<10	10.1	304	181
*Std OREAS 520	264	29	19.6	20	139
*Blk BLANK	<2	<10	<0.5	2	<0.5

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Order Number 21HWG-001  
Submission Number \*BBY\* SGDS HIVE/21HWG-001/26  
Rocks  
Number of Samples 26

## ANALYSIS REPORT BBM21-14351

SGS Canada Minerals Burnaby conforms to the requirements of ISO/IEC17025 for specific tests as listed on their scope of accreditation found at <https://www.scc.ca/en/search/laboratories/sgs>  
Tests and Elements marked with an "@" symbol in the report denote ISO/IEC17025 accreditation.

- not analysed | -- element not determined | I.S. insufficient sample | L.N.R. listed not received

## APPENDIX B – STREAM SEDIMENT SAMPLE ASSAY CERTIFICATES



# ANALYSIS REPORT BBM21-14379

To STRATA GEODATA SERVICES LTD  
ANDY RANDELL  
UNIT 330  
470 GRANVILLE STREET  
VANCOUVER V6C 1V4  
BC  
CANADA

Order Number	21HWG-011	Date Received	26-Oct-2021
Submission Number	*BBY* SGDS HIVE / 21HWG-011 / 24	Date Analysed	22-Nov-2021 - 24-Jan-2022
Sediments		Date Completed	30-Jan-2022
Number of Samples	24	SGS Order Number	BBM21-14379

## Methods Summary

Number of Sample	Method Code	Description
24	G_WGH_KG	Weight of samples received
24	GE_ICP21B20	Aqua Regia Digest (HCL/HNO3), ICP-AES, 0.25g-20mL
24	GE_IMS21B20	Aqua Regia Digest (HCL/HNO3), ICP-MS, 0.25g-20ml

Authorised Signatory

John Chiang  
Laboratory Operations Manager



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**WARNING:** The sample(s) to which the findings recorded herein (the "Findings") relate was(were) drawn and / or provided by the Client or by a third party acting at the Client's direction. The Findings constitute no warranty of the sample's representativeness of any goods and strictly relate to the sample(s). The Company accepts no liability with regard to the origin or source from which the sample(s) is/are said to be extracted. The findings report on the samples provided by the client and are not intended for commercial or contractual settlement purposes.

- not analysed | -- element not determined | I.S. insufficient sample | L.N.R. listed not received



Order Number 21HWG-011  
 Submission Number \*BBY\* SGDS HIVE / 21HWG-011 /  
 24 Sediments  
 Number of Samples 24

**ANALYSIS REPORT BBM21-14379**

Element Method Lower Limit Upper Limit Unit	WTKG G_WGH_KG 0.01 -- kg	@Al GE_ICP21B20 0.01 15 %	@Ba GE_ICP21B20 5 10,000 ppm m / m	@Ca GE_ICP21B20 0.01 15 %	@Cr GE_ICP21B20 1 10,000 ppm m / m	@Cu GE_ICP21B20 0.5 10,000 ppm m / m
C00065164	0.07	1.54	99	0.55	36	20.3
C00065165	0.25	1.15	270	4.93	22	13.7
C00065166	0.04	1.44	337	9.42	29	22.7
C00065167	0.47	1.82	118	1.02	71	18.6
C00065168	0.03	2.71	228	2.33	103	37.6
C00065169	0.34	2.09	143	0.69	59	20.0
C00065170	0.04	2.51	207	1.54	74	24.5
C00065171	0.39	1.48	104	0.44	42	14.5
C00065172	0.04	2.03	173	1.25	63	19.7
C00065173	0.22	1.88	89	0.53	39	10.8
C00065174	0.03	2.73	243	1.29	82	35.2
C00065175	0.31	1.45	107	1.09	39	14.3
C00065176	0.03	2.97	266	1.75	85	31.9
C00065177	0.25	1.42	115	3.00	37	10.0
C00065178	0.04	2.13	243	2.58	62	21.7
C00065179	0.03	2.77	318	1.41	77	23.4
C00065180	0.34	1.26	136	0.33	35	12.4
C00065181	0.05	2.61	177	2.59	77	21.1
C00065182	0.37	1.20	66	2.07	37	13.3
C00065183	0.03	2.52	178	2.69	64	24.6
C00065184	0.36	0.92	50	2.84	21	11.7
C00065185	0.04	2.74	304	3.49	138	58.4
C00129411	-	I.S.	I.S.	I.S.	I.S.	I.S.
C00129412	0.09	2.29	142	3.27	68	165
*Blk BLANK	-	<0.01	<5	<0.01	<1	<0.5
*Std OREAS 502c	-	1.95	385	1.06	68	7805
*Std OREAS 260	-	1.48	144	0.88	54	46.0
*Blk BLANK	-	<0.01	<5	<0.01	<1	<0.5

- not analysed | -- element not determined | I.S. insufficient sample | L.N.R. listed not received



Order Number 21HWG-011  
 Submission Number \*BBY\* SGDS HIVE / 21HWG-011 /  
 24 Sediments  
 Number of Samples 24

**ANALYSIS REPORT BBM21-14379**

Element	@Fe	@K	@Li	@Mg	@Mn	@Na
Method	GE_ICP21B20	GE_ICP21B20	GE_ICP21B20	GE_ICP21B20	GE_ICP21B20	GE_ICP21B20
Lower Limit	0.01	0.01	1	0.01	2	0.01
Upper Limit	15	15	10,000	15	10,000	15
Unit	%	%	ppm m / m	%	ppm m / m	%
C00065164	3.42	0.42	22	0.75	576	0.05
C00065165	2.56	0.24	19	2.92	448	0.02
C00065166	2.40	0.37	18	5.31	578	0.06
C00065167	4.17	0.24	28	1.11	569	0.09
C00065168	5.54	0.47	36	1.37	968	0.16
C00065169	4.05	0.43	34	1.24	507	0.07
C00065170	4.50	0.57	31	1.11	724	0.14
C00065171	2.86	0.30	28	0.87	301	0.05
C00065172	3.61	0.46	27	0.90	527	0.10
C00065173	4.70	0.24	30	0.77	1099	0.05
C00065174	4.81	0.53	46	1.09	1127	0.11
C00065175	3.20	0.23	27	0.71	493	0.05
C00065176	4.82	0.59	40	1.04	1053	0.12
C00065177	3.53	0.20	20	0.71	668	0.06
C00065178	4.61	0.38	24	1.00	918	0.12
C00065179	5.52	0.50	33	0.78	1164	0.15
C00065180	2.69	0.16	30	0.64	439	0.03
C00065181	6.30	0.46	25	0.92	1120	0.18
C00065182	3.73	0.15	20	0.62	453	0.05
C00065183	5.83	0.53	27	0.70	974	0.15
C00065184	2.42	0.14	18	0.48	293	0.03
C00065185	6.42	0.43	29	1.74	803	0.23
C00129411	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
C00129412	10.54	0.11	12	2.34	3481	0.16
*Blk BLANK	<0.01	<0.01	<1	<0.01	<2	<0.01
*Std OREAS 502c	4.43	1.03	31	1.21	370	0.19
*Std OREAS 260	3.84	0.30	22	0.60	461	0.09
*Blk BLANK	<0.01	<0.01	<1	<0.01	<2	<0.01

- not analysed | -- element not determined | I.S. insufficient sample | L.N.R. listed not received



Order Number 21HWG-011  
 Submission Number \*BBY\* SGDS HIVE / 21HWG-011 /  
 24 Sediments  
 Number of Samples 24

**ANALYSIS REPORT BBM21-14379**

Element	@P	@S	@Sr	@Ti	@V	@Zn
Method	GE_ICP21B20	GE_ICP21B20	GE_ICP21B20	GE_ICP21B20	GE_ICP21B20	GE_ICP21B20
Lower Limit	0.01	0.01	0.5	0.01	1	1
Upper Limit	15	5	10,000	15	10,000	10,000
Unit	%	%	ppm m / m	%	ppm m / m	ppm m / m
C00065164	0.13	<0.01	27.0	0.24	25	125
C00065165	0.04	0.03	81.0	0.07	17	3292
C00065166	0.10	0.07	142	0.10	24	4719
C00065167	0.14	0.02	48.4	0.20	59	58
C00065168	0.50	0.05	101	0.45	86	114
C00065169	0.08	<0.01	33.1	0.23	53	76
C00065170	0.30	0.02	65.8	0.42	70	74
C00065171	0.07	<0.01	19.1	0.14	36	60
C00065172	0.30	0.04	53.2	0.28	54	71
C00065173	0.06	<0.01	20.4	0.15	35	51
C00065174	0.20	0.06	72.5	0.23	61	97
C00065175	0.06	<0.01	62.5	0.13	37	51
C00065176	0.22	0.04	118	0.28	67	101
C00065177	0.06	<0.01	123	0.17	38	39
C00065178	0.22	0.02	117	0.33	59	58
C00065179	0.17	0.05	88.8	0.40	66	75
C00065180	0.05	<0.01	21.9	0.09	33	54
C00065181	0.24	0.02	132	0.55	85	56
C00065182	0.08	<0.01	84.7	0.13	44	38
C00065183	0.20	0.04	142	0.36	56	62
C00065184	0.05	<0.01	100	0.05	18	38
C00065185	0.70	0.05	83.2	0.66	130	87
C00129411	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
C00129412	0.23	2.90	92.5	0.13	89	97
*Blk BLANK	<0.01	<0.01	<0.5	<0.01	<1	<1
*Std OREAS 502c	0.10	0.82	66.3	0.35	113	105
*Std OREAS 260	0.04	0.08	14.7	<0.01	21	129
*Blk BLANK	<0.01	<0.01	<0.5	<0.01	<1	<1

- not analysed | -- element not determined | I.S. insufficient sample | L.N.R. listed not received



Order Number 21HWG-011  
 Submission Number \*BBY\* SGDS HIVE / 21HWG-011 /  
 24 Sediments  
 Number of Samples 24

**ANALYSIS REPORT BBM21-14379**

Element	@Zr	@Ag	@As	@Be	@Bi	@Cd
Method	GE_ICP21B20	GE_IMS21B20	GE_IMS21B20	GE_IMS21B20	GE_IMS21B20	GE_IMS21B20
Lower Limit	0.5	0.01	1	0.1	0.02	0.01
Upper Limit	10,000	100	10,000	100	10,000	10,000
Unit	ppm m / m	ppm m / m	ppm m / m	ppm m / m	ppm m / m	ppm m / m
C00065164	2.5	0.04	3	0.4	0.76	0.11
C00065165	1.0	0.03	7	0.4	0.41	2.44
C00065166	0.9	0.13	8	0.7	1.10	5.81
C00065167	1.9	0.03	1	0.5	0.12	0.07
C00065168	2.3	0.06	2	0.8	0.26	0.19
C00065169	1.7	0.02	<1	0.5	0.15	0.08
C00065170	2.0	0.03	<1	0.7	0.24	0.12
C00065171	1.2	0.01	1	0.4	0.12	0.06
C00065172	1.5	0.04	<1	0.6	0.20	0.12
C00065173	2.4	0.02	<1	0.4	0.15	0.09
C00065174	1.8	0.10	<1	0.7	0.26	0.21
C00065175	1.2	0.02	<1	0.4	0.20	0.08
C00065176	1.7	0.12	<1	0.9	0.31	0.21
C00065177	1.7	0.01	<1	0.4	0.17	0.07
C00065178	1.6	0.07	1	0.6	0.23	0.14
C00065179	2.0	0.08	<1	0.7	0.25	0.20
C00065180	0.9	0.02	<1	0.3	0.11	0.09
C00065181	2.7	0.04	3	0.7	0.30	0.17
C00065182	1.4	0.02	2	0.3	0.12	0.07
C00065183	2.6	0.05	2	0.8	0.27	0.16
C00065184	0.9	0.02	<1	0.3	0.12	0.05
C00065185	3.6	0.05	2	0.7	0.16	0.20
C00129411	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
C00129412	22.1	0.96	3121	0.3	0.18	0.20
*Blk BLANK	<0.5	<0.01	<1	<0.1	<0.02	<0.01
*Std OREAS 502c	11.3	0.78	54	0.4	0.68	0.34
*Std OREAS 260	15.9	0.14	11	1.1	0.54	0.21
*Blk BLANK	<0.5	<0.01	<1	<0.1	<0.02	<0.01

- not analysed | -- element not determined | I.S. insufficient sample | L.N.R. listed not received



Order Number 21HWG-011  
 Submission Number \*BBY\* SGDS HIVE / 21HWG-011 /  
 24 Sediments  
 Number of Samples 24

**ANALYSIS REPORT BBM21-14379**

Element	@Ce	@Co	@Cs	@Ga	@Ge	@Hf
Method	GE_IMS21B20	GE_IMS21B20	GE_IMS21B20	GE_IMS21B20	GE_IMS21B20	GE_IMS21B20
Lower Limit	0.05	0.1	0.05	0.1	0.1	0.05
Upper Limit	1,000	10,000	1,000	10,000	10,000	500
Unit	ppm m / m	ppm m / m	ppm m / m	ppm m / m	ppm m / m	ppm m / m
C00065164	59.79	12.7	5.40	5.1	0.1	<0.05
C00065165	38.28	15.2	2.70	3.9	0.1	<0.05
C00065166	54.39	16.4	2.80	4.4	0.1	<0.05
C00065167	28.04	18.6	2.39	6.5	0.1	<0.05
C00065168	89.04	28.5	4.48	9.3	0.2	<0.05
C00065169	34.98	16.8	2.64	7.4	0.1	<0.05
C00065170	86.99	17.1	2.68	8.2	0.2	<0.05
C00065171	28.06	12.7	2.28	5.4	<0.1	<0.05
C00065172	69.44	14.9	2.65	6.8	0.1	<0.05
C00065173	34.25	12.6	2.17	5.2	0.1	<0.05
C00065174	79.41	21.5	4.86	8.5	0.1	<0.05
C00065175	28.32	11.9	2.19	5.0	0.1	<0.05
C00065176	83.97	20.5	4.44	9.3	0.2	<0.05
C00065177	27.08	10.5	1.54	4.4	0.2	<0.05
C00065178	74.87	16.0	2.97	7.1	0.2	<0.05
C00065179	107	15.3	3.12	8.3	0.2	<0.05
C00065180	26.29	12.1	2.10	4.6	<0.1	<0.05
C00065181	124	17.0	2.66	8.2	0.2	<0.05
C00065182	27.07	11.7	1.79	4.3	0.1	<0.05
C00065183	106	17.1	2.72	7.7	0.2	<0.05
C00065184	24.31	9.7	1.59	3.1	0.1	<0.05
C00065185	68.61	33.1	4.84	10.8	0.2	<0.05
C00129411	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
C00129412	21.24	27.7	2.33	7.3	0.2	0.45
*Blk BLANK	<0.05	<0.1	<0.05	<0.1	<0.1	<0.05
*Std OREAS 502c	55.56	12.8	9.02	8.6	0.3	0.41
*Std OREAS 260	67.95	33.2	3.49	4.9	0.1	0.41
*Blk BLANK	<0.05	<0.1	<0.05	<0.1	<0.1	<0.05

- not analysed | -- element not determined | I.S. insufficient sample | L.N.R. listed not received



Order Number 21HWG-011  
 Submission Number \*BBY\* SGDS HIVE / 21HWG-011 /  
 24 Sediments  
 Number of Samples 24

**ANALYSIS REPORT BBM21-14379**

Element Method Lower Limit Upper Limit Unit	@Hg GE_IMS21B20 0.01 100 ppm m / m	@In GE_IMS21B20 0.02 500 ppm m / m	@La GE_IMS21B20 0.1 10,000 ppm m / m	@Lu GE_IMS21B20 0.01 1,000 ppm m / m	@Mo GE_IMS21B20 0.05 10,000 ppm m / m	@Nb GE_IMS21B20 0.05 1,000 ppm m / m
C00065164	<0.01	<0.02	36.0	0.15	1.00	2.08
C00065165	0.04	<0.02	22.3	0.12	0.56	1.36
C00065166	0.12	<0.02	50.2	0.31	1.09	2.49
C00065167	<0.01	<0.02	13.9	0.11	0.77	2.47
C00065168	0.03	0.04	47.9	0.24	1.46	12.26
C00065169	<0.01	<0.02	17.5	0.10	0.93	2.44
C00065170	0.01	0.03	45.4	0.23	1.31	9.39
C00065171	<0.01	<0.02	14.0	0.06	1.51	2.67
C00065172	0.02	0.02	38.0	0.17	1.17	8.21
C00065173	<0.01	<0.02	16.7	0.26	1.01	1.59
C00065174	0.04	0.03	45.3	0.23	2.50	5.91
C00065175	<0.01	<0.02	15.1	0.10	0.82	1.98
C00065176	0.04	0.03	50.0	0.28	2.03	6.79
C00065177	<0.01	<0.02	13.4	0.17	0.62	1.74
C00065178	0.01	0.03	40.5	0.24	1.32	6.79
C00065179	0.05	0.03	56.2	0.25	3.06	9.02
C00065180	<0.01	<0.02	13.3	0.06	0.60	1.83
C00065181	0.03	0.04	63.2	0.33	1.92	10.90
C00065182	<0.01	<0.02	13.7	0.12	0.44	2.25
C00065183	0.04	0.03	54.9	0.35	2.89	9.22
C00065184	<0.01	<0.02	12.4	0.11	0.45	1.35
C00065185	<0.01	0.05	35.8	0.24	1.93	13.96
C00129411	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
C00129412	0.02	0.04	12.5	0.16	3.38	0.41
*Blk BLANK	<0.01	<0.02	<0.1	<0.01	<0.05	<0.05
*Std OREAS 502c	0.05	0.06	28.6	0.22	223	2.00
*Std OREAS 260	0.04	0.03	34.9	0.14	0.43	0.06
*Blk BLANK	<0.01	<0.02	<0.1	<0.01	<0.05	<0.05

- not analysed | -- element not determined | I.S. insufficient sample | L.N.R. listed not received



Order Number 21HWG-011  
 Submission Number \*BBY\* SGDS HIVE / 21HWG-011 /  
 24 Sediments  
 Number of Samples 24

**ANALYSIS REPORT BBM21-14379**

Element	Ni	@Pb	@Rb	@Sb	@Sc	@Se
Method	GE_IMS21B20	GE_IMS21B20	GE_IMS21B20	GE_IMS21B20	GE_IMS21B20	GE_IMS21B20
Lower Limit	0.5	0.2	0.2	0.05	0.1	1
Upper Limit	10,000	10,000	10,000	10,000	10,000	1,000
Unit	ppm m / m	ppm m / m	ppm m / m	ppm m / m	ppm m / m	ppm m / m
C00065164	33.2	20.2	68.6	0.07	3.6	<1
C00065165	39.6	26.1	32.2	0.06	2.6	<1
C00065166	53.6	54.8	34.8	0.18	3.9	2
C00065167	48.6	4.6	22.6	<0.05	5.2	<1
C00065168	76.1	10.8	38.9	0.18	8.3	1
C00065169	42.1	5.7	50.6	<0.05	5.0	<1
C00065170	44.8	9.1	48.1	0.18	7.1	1
C00065171	30.4	4.6	39.4	<0.05	3.3	<1
C00065172	37.3	7.9	41.5	0.15	5.3	<1
C00065173	27.1	4.3	24.6	<0.05	9.6	<1
C00065174	61.4	11.6	49.7	0.21	6.9	2
C00065175	28.8	5.7	29.3	<0.05	4.2	<1
C00065176	56.2	14.6	55.8	0.25	8.0	1
C00065177	24.6	4.9	22.8	<0.05	6.1	<1
C00065178	38.4	12.2	39.2	0.15	6.5	<1
C00065179	41.9	11.1	40.2	0.24	7.8	1
C00065180	27.5	5.1	23.5	<0.05	2.9	<1
C00065181	41.0	14.5	38.9	0.17	8.7	<1
C00065182	26.9	6.3	23.3	<0.05	3.7	<1
C00065183	42.8	16.6	42.7	0.22	7.1	<1
C00065184	22.6	8.1	20.9	<0.05	1.9	<1
C00065185	97.4	5.4	33.1	0.19	12.6	1
C00129411	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
C00129412	91.5	9.1	6.7	4.38	8.3	3
*Blk BLANK	<0.5	<0.2	<0.2	<0.05	<0.1	<1
*Std OREAS 502c	33.8	11.0	121	4.57	7.4	3
*Std OREAS 260	72.6	29.7	24.9	1.37	3.5	<1
*Blk BLANK	<0.5	<0.2	<0.2	<0.05	<0.1	<1

- not analysed | -- element not determined | I.S. insufficient sample | L.N.R. listed not received



Order Number 21HWG-011  
 Submission Number \*BBY\* SGDS HIVE / 21HWG-011 /  
 24 Sediments  
 Number of Samples 24

**ANALYSIS REPORT BBM21-14379**

Element	@Sn	@Ta	@Tb	@Te	@Th	@Tl
Method	GE_IMS21B20	GE_IMS21B20	GE_IMS21B20	GE_IMS21B20	GE_IMS21B20	GE_IMS21B20
Lower Limit	0.3	0.05	0.02	0.05	0.1	0.02
Upper Limit	1,000	10,000	10,000	1,000	10,000	10,000
Unit	ppm m / m	ppm m / m	ppm m / m	ppm m / m	ppm m / m	ppm m / m
C00065164	0.4	<0.05	0.63	<0.05	11.7	0.47
C00065165	<0.3	<0.05	0.55	<0.05	5.5	0.20
C00065166	0.5	<0.05	1.51	<0.05	4.4	0.24
C00065167	0.5	<0.05	0.35	<0.05	4.1	0.14
C00065168	1.2	<0.05	1.04	<0.05	11.2	0.23
C00065169	0.6	<0.05	0.35	<0.05	6.7	0.29
C00065170	1.1	<0.05	0.93	<0.05	13.3	0.29
C00065171	0.4	<0.05	0.27	<0.05	5.4	0.24
C00065172	0.8	<0.05	0.74	<0.05	10.1	0.26
C00065173	0.3	<0.05	0.42	<0.05	6.4	0.17
C00065174	0.8	<0.05	0.80	<0.05	10.9	0.35
C00065175	0.4	<0.05	0.31	<0.05	4.8	0.16
C00065176	0.9	<0.05	0.99	<0.05	9.8	0.34
C00065177	0.3	<0.05	0.32	<0.05	4.7	0.13
C00065178	0.8	<0.05	0.80	<0.05	10.3	0.26
C00065179	1.1	<0.05	1.08	<0.05	11.1	0.26
C00065180	<0.3	<0.05	0.25	<0.05	3.9	0.14
C00065181	1.2	<0.05	1.24	<0.05	17.5	0.24
C00065182	<0.3	<0.05	0.30	<0.05	4.8	0.13
C00065183	1.0	<0.05	1.09	<0.05	14.4	0.24
C00065184	<0.3	<0.05	0.29	<0.05	4.6	0.12
C00065185	1.6	<0.05	0.98	<0.05	7.0	0.21
C00129411	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
C00129412	0.7	<0.05	0.50	0.18	2.6	0.07
*Blk BLANK	<0.3	<0.05	<0.02	<0.05	<0.1	<0.02
*Std OREAS 502c	2.6	<0.05	0.56	0.48	16.7	0.67
*Std OREAS 260	0.6	<0.05	0.56	0.09	11.8	0.23
*Blk BLANK	<0.3	<0.05	<0.02	<0.05	<0.1	<0.02

- not analysed | -- element not determined | I.S. insufficient sample | L.N.R. listed not received



Order Number 21HWG-011  
 Submission Number \*BBY\* SGDS HIVE / 21HWG-011 /  
 24 Sediments  
 Number of Samples 24

**ANALYSIS REPORT BBM21-14379**

Element	@U	@W	@Y	@Yb
Method	GE_IMS21B20	GE_IMS21B20	GE_IMS21B20	GE_IMS21B20
Lower Limit	0.05	0.1	0.05	0.1
Upper Limit	10,000	10,000	10,000	100
Unit	ppm m / m	ppm m / m	ppm m / m	ppm m / m
C00065164	1.75	11.0	13.81	1.1
C00065165	0.76	2.0	13.21	0.9
C00065166	0.98	1.1	39.04	2.3
C00065167	0.75	0.9	8.38	0.8
C00065168	2.29	2.2	22.56	1.7
C00065169	1.09	0.2	8.63	0.7
C00065170	2.94	0.9	21.49	1.6
C00065171	0.84	0.1	5.78	0.4
C00065172	2.36	0.7	16.36	1.3
C00065173	0.84	5.9	13.92	1.7
C00065174	2.39	1.3	18.74	1.6
C00065175	0.71	0.4	7.43	0.7
C00065176	2.19	0.7	23.11	1.9
C00065177	0.76	1.4	9.45	1.1
C00065178	2.04	3.3	18.04	1.6
C00065179	3.82	1.4	21.49	1.7
C00065180	0.79	0.3	5.00	0.4
C00065181	3.10	2.3	25.53	2.1
C00065182	0.71	0.5	7.79	0.8
C00065183	2.47	1.1	26.93	2.4
C00065184	0.66	0.1	7.51	0.7
C00065185	1.98	1.4	23.39	1.8
C00129411	I.S.	I.S.	I.S.	I.S.
C00129412	0.90	1.3	13.63	1.1
*Blk BLANK	<0.05	<0.1	<0.05	<0.1
*Std OREAS 502c	4.50	3.5	15.23	1.4
*Std OREAS 260	1.41	<0.1	12.23	1.0
*Blk BLANK	<0.05	<0.1	<0.05	<0.1

- not analysed | -- element not determined | I.S. insufficient sample | L.N.R. listed not received



Order Number 21HWG-011  
Submission Number \*BBY\* SGDS HIVE / 21HWG-011 /  
24 Sediments  
Number of Samples 24

## ANALYSIS REPORT BBM21-14379

SGS Canada Minerals Burnaby conforms to the requirements of ISO/IEC17025 for specific tests as listed on their scope of accreditation found at <https://www.scc.ca/en/search/laboratories/sgs>

Tests and Elements marked with an "@" symbol in the report denote ISO/IEC17025 accreditation.

- not analysed | -- element not determined | I.S. insufficient sample | L.N.R. listed not received



# ANALYSIS REPORT BBM21-14384

To STRATA GEODATA SERVICES LTD  
ANDY RANDELL  
UNIT 330  
470 GRANVILLE STREET  
VANCOUVER V6C 1V4  
BC  
CANADA

Order Number	21HWG-010	Date Received	26-Oct-2021
Submission Number	*BBY* SGDS HIVE/ 21HWG-010 / 26	Date Analysed	22-Nov-2021 - 28-Feb-2022
Sediments		Date Completed	28-Feb-2022
Number of Samples	26	SGS Order Number	BBM21-14384

## Methods Summary

Number of Sample	Method Code	Description
26	G_WGH_KG	Weight of samples received
26	GE_FAI30V5	Au, Pt, Pd, FAS, exploration grade, ICP-AES, 30g-5mL
26	GE_ARM3V25	2 Acid leach (HCL/HNO3), ICP-MS

Authorised Signatory

John Chiang  
Laboratory Operations Manager



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- not analysed | -- element not determined | I.S. insufficient sample | L.N.R. listed not received



Order Number 21HWG-010  
 Submission Number \*BBY\* SGDS HIVE/ 21HWG-010 / 26  
 Sediments  
 Number of Samples 26

**ANALYSIS REPORT BBM21-14384**

Element Method	WTKG G_WGH_KG	@Au GE_FAI30V5	Ag GE_ARM3V25	As GE_ARM3V25	Au GE_ARM3V25	Ba GE_ARM3V25
Lower Limit	0.01	1	0.02	0.5	1	0.5
Upper Limit	--	10,000	70	2,000	500	5,000
Unit	kg	ppb	ppm m / m	ppm m / m	ppb	ppm m / m
C00065163	0.24	1	0.03	2.4	2	64.2
C00065164	0.07	6	I.S.	I.S.	I.S.	I.S.
C00065165	0.25	9	0.07	6.9	3	226
C00065166	0.04	I.S.	I.S.	I.S.	I.S.	I.S.
C00065167	0.47	<1	0.04	1.5	<1	124
C00065168	0.03	I.S.	I.S.	I.S.	I.S.	I.S.
C00065169	0.34	<1	0.02	0.8	<1	148
C00065170	0.04	I.S.	I.S.	I.S.	I.S.	I.S.
C00065171	0.39	1	<0.02	0.9	1	107
C00065172	0.04	I.S.	I.S.	I.S.	I.S.	I.S.
C00065173	0.22	1180	0.03	0.6	84	111
C00065174	0.03	I.S.	I.S.	I.S.	I.S.	I.S.
C00065175	0.31	3	0.03	0.7	4	108
C00065176	0.03	I.S.	I.S.	I.S.	I.S.	I.S.
C00065177	0.25	<1	0.02	0.8	1	122
C00065178	0.04	I.S.	I.S.	I.S.	I.S.	I.S.
C00065179	0.03	I.S.	I.S.	I.S.	I.S.	I.S.
C00065180	0.34	2	0.03	0.9	<1	129
C00065181	0.05	2	I.S.	I.S.	I.S.	I.S.
C00065182	0.37	<1	0.03	2.7	<1	74.7
C00065183	0.03	I.S.	I.S.	I.S.	I.S.	I.S.
C00065184	0.36	<1	0.04	1.2	2	58.4
C00065185	0.04	I.S.	I.S.	I.S.	I.S.	I.S.
C00065186	0.40	<1	0.05	1.6	1	264
C00129409	-	<1	0.04	1.6	<1	255
C00129410	0.09	5800	0.92	>2000	>500	70.1
*Blk BLANK	-	-	<0.02	<0.5	<1	<0.5
*Std OREAS 151b	-	-	0.55	28.6	61	69.3
*Std OREAS 905	-	-	0.52	29.0	378	227

- not analysed | -- element not determined | I.S. insufficient sample | L.N.R. listed not received



Order Number 21HWG-010  
 Submission Number \*BBY\* SGDS HIVE/ 21HWG-010 / 26  
 Sediments  
 Number of Samples 26

**ANALYSIS REPORT BBM21-14384**

Element	WTKG	@Au	Ag	As	Au	Ba
Method	G_WGH_KG	GE_FAI30V5	GE_ARM3V25	GE_ARM3V25	GE_ARM3V25	GE_ARM3V25
Lower Limit	0.01	1	0.02	0.5	1	0.5
Upper Limit	--	10,000	70	2,000	500	5,000
Unit	kg	ppb	ppm m / m	ppm m / m	ppb	ppm m / m
*Std OREAS 261	-	-	0.20	16.6	41	170
*Blk BLANK	-	1	-	-	-	-
*Std OREAS 680	-	155	-	-	-	-
*Std OREAS 45h	-	44	-	-	-	-
*Rep C00129409	-	3	-	-	-	-
*Blk BLANK	-	2	-	-	-	-
*Blk BLANK	-	-	<0.02	<0.5	<1	<0.5
*Rep C00065176	-	-	I.S.	I.S.	I.S.	I.S.
*Std OREAS 261	-	-	0.19	17.1	40	164
*Std OREAS 905	-	-	0.49	30.0	372	243
*Std OREAS 151b	-	-	0.55	33.9	69	74.1

Element	Be	Bi	Cd	Ce	Co	Cs
Method	GE_ARM3V25	GE_ARM3V25	GE_ARM3V25	GE_ARM3V25	GE_ARM3V25	GE_ARM3V25
Lower Limit	0.02	0.01	0.02	0.05	0.1	0.01
Upper Limit	500	500	1,000	1,000	1,000	1,000
Unit	ppm m / m	ppm m / m	ppm m / m	ppm m / m	ppm m / m	ppm m / m
C00065163	0.26	0.58	0.07	22.76	9.4	4.08
C00065164	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
C00065165	0.35	0.38	2.02	26.79	14.9	2.36
C00065166	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
C00065167	0.37	0.11	0.06	14.67	17.9	2.25
C00065168	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
C00065169	0.54	0.12	0.07	26.26	13.9	2.55
C00065170	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
C00065171	0.37	0.10	0.05	22.79	11.4	2.28
C00065172	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
C00065173	0.52	0.16	0.09	35.88	12.4	2.43
C00065174	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.

- not analysed | -- element not determined | I.S. insufficient sample | L.N.R. listed not received



Order Number 21HWG-010  
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**ANALYSIS REPORT BBM21-14384**

Element	Be	Bi	Cd	Ce	Co	Cs
Method	GE_ARM3V25	GE_ARM3V25	GE_ARM3V25	GE_ARM3V25	GE_ARM3V25	GE_ARM3V25
Lower Limit	0.02	0.01	0.02	0.05	0.1	0.01
Upper Limit	500	500	1,000	1,000	1,000	1,000
Unit	ppm m / m	ppm m / m	ppm m / m	ppm m / m	ppm m / m	ppm m / m
C00065175	0.42	0.13	0.07	23.16	10.1	2.05
C00065176	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
C00065177	0.40	0.16	0.06	21.26	9.5	1.60
C00065178	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
C00065179	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
C00065180	0.32	0.09	0.08	19.52	10.6	1.88
C00065181	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
C00065182	0.31	0.12	0.07	20.94	11.2	1.86
C00065183	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
C00065184	0.35	0.13	0.06	24.30	9.7	1.72
C00065185	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
C00065186	0.42	0.07	0.11	16.67	21.6	3.23
C00129409	0.40	0.06	0.11	16.32	21.2	3.12
C00129410	0.36	0.16	0.23	20.62	29.6	2.79
*Blk BLANK	<0.02	<0.01	<0.02	<0.05	<0.1	<0.01
*Std OREAS 151b	0.23	0.38	0.56	14.92	11.7	1.23
*Std OREAS 905	0.94	5.65	0.32	69.07	14.7	1.10
*Std OREAS 261	1.31	0.60	0.26	25.99	36.2	3.43
*Blk BLANK	<0.02	<0.01	<0.02	<0.05	<0.1	<0.01
*Rep C00065176	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
*Std OREAS 261	1.31	0.54	0.29	40.26	29.9	3.44
*Std OREAS 905	1.02	5.62	0.37	86.47	12.8	1.28
*Std OREAS 151b	0.28	0.39	0.70	18.65	11.3	1.40

Element	Cu	Dy	Er	Eu	Ga	Gd
Method	GE_ARM3V25	GE_ARM3V25	GE_ARM3V25	GE_ARM3V25	GE_ARM3V25	GE_ARM3V25
Lower Limit	0.5	0.01	0.01	0.01	0.05	0.01
Upper Limit	5,000	1,000	1,000	1,000	1,000	1,000
Unit	ppm m / m	ppm m / m	ppm m / m	ppm m / m	ppm m / m	ppm m / m

- not analysed | -- element not determined | I.S. insufficient sample | L.N.R. listed not received



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Element	Cu	Dy	Er	Eu	Ga	Gd
Method	GE_ARM3V25	GE_ARM3V25	GE_ARM3V25	GE_ARM3V25	GE_ARM3V25	GE_ARM3V25
Lower Limit	0.5	0.01	0.01	0.01	0.05	0.01
Upper Limit	5,000	1,000	1,000	1,000	1,000	1,000
Unit	ppm m / m	ppm m / m	ppm m / m	ppm m / m	ppm m / m	ppm m / m
C00065163	16.1	1.58	0.64	0.47	4.31	2.17
C00065164	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
C00065165	9.9	2.62	1.08	0.80	3.20	3.51
C00065166	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
C00065167	15.9	1.14	0.50	0.36	5.28	1.43
C00065168	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
C00065169	18.4	1.40	0.71	0.43	6.03	1.67
C00065170	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
C00065171	14.8	1.12	0.55	0.36	4.72	1.43
C00065172	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
C00065173	15.0	2.40	1.55	0.53	5.03	2.35
C00065174	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
C00065175	14.5	1.29	0.71	0.41	4.17	1.68
C00065176	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
C00065177	10.6	1.45	0.85	0.39	3.94	1.57
C00065178	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
C00065179	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
C00065180	12.1	0.91	0.44	0.33	3.90	1.27
C00065181	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
C00065182	14.7	1.32	0.74	0.39	3.90	1.62
C00065183	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
C00065184	12.3	1.64	0.97	0.45	3.03	1.87
C00065185	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
C00065186	27.6	1.26	0.69	0.50	7.53	1.47
C00129409	26.5	1.23	0.67	0.49	7.51	1.44
C00129410	167	3.04	1.64	0.64	7.18	3.45
*Blk BLANK	<0.5	<0.01	<0.01	<0.01	<0.05	<0.01
*Std OREAS 151b	1812	2.20	1.07	0.58	7.31	2.34
*Std OREAS 905	1611	1.62	0.43	0.86	5.52	3.47

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Order Number 21HWG-010  
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Element	Cu	Dy	Er	Eu	Ga	Gd
Method	GE_ARM3V25	GE_ARM3V25	GE_ARM3V25	GE_ARM3V25	GE_ARM3V25	GE_ARM3V25
Lower Limit	0.5	0.01	0.01	0.01	0.05	0.01
Upper Limit	5,000	1,000	1,000	1,000	1,000	1,000
Unit	ppm m / m	ppm m / m	ppm m / m	ppm m / m	ppm m / m	ppm m / m
*Std OREAS 261	66.8	2.43	1.10	0.70	4.45	3.27
*Blk BLANK	<0.5	<0.01	<0.01	<0.01	<0.05	<0.01
*Rep C00065176	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
*Std OREAS 261	62.7	2.47	1.33	0.80	4.14	3.39
*Std OREAS 905	1511	1.85	0.61	1.00	5.58	4.00
*Std OREAS 151b	1827	2.37	1.36	0.64	8.18	2.52

Element	Hf	Hg	Ho	In	La	Li
Method	GE_ARM3V25	GE_ARM3V25	GE_ARM3V25	GE_ARM3V25	GE_ARM3V25	GE_ARM3V25
Lower Limit	0.01	0.02	0.01	0.005	0.05	0.1
Upper Limit	1,000	1,000	1,000	1,000	1,000	2,000
Unit	ppm m / m	ppm m / m	ppm m / m	ppm m / m	ppm m / m	ppm m / m
C00065163	0.03	<0.02	0.24	0.010	16.99	19.1
C00065164	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
C00065165	0.02	0.04	0.40	0.009	19.31	13.5
C00065166	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
C00065167	0.01	<0.02	0.18	0.012	7.50	23.4
C00065168	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
C00065169	0.05	<0.02	0.24	0.013	11.37	38.8
C00065170	I.S.	I.S.	I.S.	I.S.	I.S.	R_ Sequence Error
C00065171	0.03	<0.02	0.19	0.011	10.09	30.7
C00065172	I.S.	I.S.	I.S.	I.S.	I.S.	R_ Sequence Error
C00065173	0.03	0.04	0.48	0.013	15.03	38.8
C00065174	I.S.	I.S.	I.S.	I.S.	I.S.	R_ Sequence Error
C00065175	0.02	<0.02	0.23	0.011	10.92	29.1
C00065176	I.S.	I.S.	I.S.	I.S.	I.S.	R_ Sequence Error
C00065177	0.02	<0.02	0.28	0.010	9.11	21.8

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Element	Hf	Hg	Ho	In	La	Li
Method	GE_ARM3V25	GE_ARM3V25	GE_ARM3V25	GE_ARM3V25	GE_ARM3V25	GE_ARM3V25
Lower Limit	0.01	0.02	0.01	0.005	0.05	0.1
Upper Limit	1,000	1,000	1,000	1,000	1,000	2,000
Unit	ppm m / m	ppm m / m	ppm m / m	ppm m / m	ppm m / m	ppm m / m
C00065178	I.S.	I.S.	I.S.	I.S.	I.S.	R_Sequence Error
C00065179	I.S.	I.S.	I.S.	I.S.	I.S.	R_Sequence Error
C00065180	<0.01	<0.02	0.15	0.009	8.61	33.3
C00065181	I.S.	I.S.	I.S.	I.S.	I.S.	R_Sequence Error
C00065182	0.02	<0.02	0.24	0.010	9.29	22.3
C00065183	I.S.	I.S.	I.S.	I.S.	I.S.	R_Sequence Error
C00065184	0.01	<0.02	0.31	0.009	10.80	21.6
C00065185	I.S.	I.S.	I.S.	I.S.	I.S.	R_Sequence Error
C00065186	0.02	<0.02	0.24	0.020	7.14	35.8
C00129409	0.02	<0.02	0.23	0.020	6.18	35.0
C00129410	0.29	<0.02	0.57	0.047	9.77	13.8
*Blk BLANK	<0.01	<0.02	<0.01	<0.005	<0.05	<0.1
*Std OREAS 151b	0.08	<0.02	0.36	0.068	6.95	5.6
*Std OREAS 905	0.78	<0.02	0.18	0.531	40.12	3.4
*Std OREAS 261	0.43	0.07	0.38	0.025	14.31	21.5
*Blk BLANK	<0.01	<0.02	<0.01	<0.005	<0.05	<0.1
*Rep C00065176	I.S.	I.S.	I.S.	I.S.	I.S.	R_Sequence Error
*Std OREAS 261	0.46	0.07	0.44	0.026	17.11	24.4
*Std OREAS 905	1.10	<0.02	0.25	0.583	37.19	4.8
*Std OREAS 151b	0.12	0.02	0.45	0.077	7.11	7.5

Element	Lu	Mn	Mo	Nb	Nd	Ni
Method	GE_ARM3V25	GE_ARM3V25	GE_ARM3V25	GE_ARM3V25	GE_ARM3V25	GE_ARM3V25
Lower Limit	0.002	0.5	0.02	0.02	0.03	0.5
Upper Limit	1,000	5,000	2,000	1,000	1,000	5,000
Unit	ppm m / m	ppm m / m	ppm m / m	ppm m / m	ppm m / m	ppm m / m

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Element	Lu	Mn	Mo	Nb	Nd	Ni
Method	GE_ARM3V25	GE_ARM3V25	GE_ARM3V25	GE_ARM3V25	GE_ARM3V25	GE_ARM3V25
Lower Limit	0.002	0.5	0.02	0.02	0.03	0.5
Upper Limit	1,000	5,000	2,000	1,000	1,000	5,000
Unit	ppm m / m	ppm m / m	ppm m / m	ppm m / m	ppm m / m	ppm m / m
C00065163	0.061	269	0.99	0.19	13.21	28.0
C00065164	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
C00065165	0.091	366	0.56	0.41	20.24	34.3
C00065166	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
C00065167	0.060	425	0.70	0.29	7.35	43.5
C00065168	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
C00065169	0.070	379	0.74	0.42	10.69	33.5
C00065170	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
C00065171	0.052	263	0.61	0.69	9.56	26.4
C00065172	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
C00065173	0.224	839	1.02	0.34	14.37	26.5
C00065174	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
C00065175	0.082	371	0.68	0.50	10.43	23.3
C00065176	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
C00065177	0.118	450	0.59	0.34	9.02	21.3
C00065178	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
C00065179	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
C00065180	0.047	360	0.50	0.57	8.33	23.1
C00065181	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
C00065182	0.096	352	0.42	0.61	9.30	23.8
C00065183	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
C00065184	0.120	297	0.43	0.59	10.68	21.4
C00065185	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
C00065186	0.075	461	0.88	0.63	7.52	64.9
C00129409	0.073	442	0.88	0.48	7.19	63.5
C00129410	0.167	3609	3.36	0.11	13.19	96.0
*Blk BLANK	<0.002	<0.5	0.02	<0.02	<0.03	<0.5
*Std OREAS 151b	0.115	264	54.59	0.04	9.38	14.2
*Std OREAS 905	0.026	345	3.34	0.09	29.81	8.5

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Element	Lu	Mn	Mo	Nb	Nd	Ni
Method	GE_ARM3V25	GE_ARM3V25	GE_ARM3V25	GE_ARM3V25	GE_ARM3V25	GE_ARM3V25
Lower Limit	0.002	0.5	0.02	0.02	0.03	0.5
Upper Limit	1,000	5,000	2,000	1,000	1,000	5,000
Unit	ppm m / m	ppm m / m	ppm m / m	ppm m / m	ppm m / m	ppm m / m
*Std OREAS 261	0.124	493	0.60	<0.02	13.34	84.7
*Blk BLANK	<0.002	<0.5	<0.02	<0.02	<0.03	<0.5
*Rep C00065176	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
*Std OREAS 261	0.144	451	0.47	<0.02	17.85	70.8
*Std OREAS 905	0.035	323	2.66	0.07	34.67	8.2
*Std OREAS 151b	0.143	285	56.60	0.05	10.25	13.8

Element	Pb	Pr	Rb	Re	Sb	Sc
Method	GE_ARM3V25	GE_ARM3V25	GE_ARM3V25	GE_ARM3V25	GE_ARM3V25	GE_ARM3V25
Lower Limit	0.2	0.01	0.05	0.001	0.02	0.1
Upper Limit	1,000	1,000	1,000	100	1,000	1,000
Unit	ppm m / m	ppm m / m	ppm m / m	ppm m / m	ppm m / m	ppm m / m
C00065163	11.3	2.98	56.00	0.004	0.05	2.5
C00065164	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
C00065165	24.7	4.22	27.77	0.003	0.05	2.1
C00065166	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
C00065167	4.2	1.63	21.46	0.002	<0.02	3.3
C00065168	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
C00065169	5.3	2.28	44.15	0.001	0.05	4.2
C00065170	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
C00065171	4.4	2.02	35.46	<0.001	0.03	3.2
C00065172	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
C00065173	4.6	3.11	23.13	0.002	0.06	10.0
C00065174	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
C00065175	5.3	2.20	24.97	0.001	0.03	3.6
C00065176	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
C00065177	4.9	1.88	20.28	0.002	0.04	5.1
C00065178	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
C00065179	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.

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Order Number 21HWG-010  
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Element	Pb	Pr	Rb	Re	Sb	Sc
Method	GE_ARM3V25	GE_ARM3V25	GE_ARM3V25	GE_ARM3V25	GE_ARM3V25	GE_ARM3V25
Lower Limit	0.2	0.01	0.05	0.001	0.02	0.1
Upper Limit	1,000	1,000	1,000	100	1,000	1,000
Unit	ppm m / m	ppm m / m	ppm m / m	ppm m / m	ppm m / m	ppm m / m
C00065180	4.7	1.74	19.21	<0.001	0.03	2.6
C00065181	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
C00065182	6.5	1.92	21.64	0.001	0.03	3.4
C00065183	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
C00065184	8.6	2.25	21.02	0.002	0.03	2.2
C00065185	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
C00065186	2.7	1.51	20.50	0.002	0.05	6.5
C00129409	2.5	1.49	20.22	0.001	0.05	6.4
C00129410	8.9	2.33	5.58	0.005	7.06	9.0
*Blk BLANK	<0.2	<0.01	<0.05	<0.001	<0.02	<0.1
*Std OREAS 151b	43.2	1.85	22.02	0.152	0.78	9.1
*Std OREAS 905	15.5	7.81	17.29	<0.001	1.17	1.6
*Std OREAS 261	35.6	2.83	18.83	0.001	2.95	3.4
*Blk BLANK	<0.2	<0.01	<0.05	<0.001	<0.02	<0.1
*Rep C00065176	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
*Std OREAS 261	34.7	3.60	17.56	0.002	2.70	3.5
*Std OREAS 905	16.7	8.21	17.41	0.001	1.18	1.8
*Std OREAS 151b	47.4	1.87	22.56	0.198	0.82	11.6

Element	Se	Sm	Sn	Sr	Ta	Tb
Method	GE_ARM3V25	GE_ARM3V25	GE_ARM3V25	GE_ARM3V25	GE_ARM3V25	GE_ARM3V25
Lower Limit	0.5	0.02	0.05	0.1	0.01	0.005
Upper Limit	2,500	1,000	1,000	1,000	1,000	1,000
Unit	ppm m / m	ppm m / m	ppm m / m	ppm m / m	ppm m / m	ppm m / m
C00065163	<0.5	2.53	0.25	13.1	<0.01	0.257
C00065164	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
C00065165	<0.5	4.08	0.22	84.5	<0.01	0.407
C00065166	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
C00065167	<0.5	1.49	0.24	39.3	<0.01	0.180

- not analysed | -- element not determined | I.S. insufficient sample | L.N.R. listed not received



Order Number 21HWG-010  
 Submission Number \*BBY\* SGDS HIVE/ 21HWG-010 / 26  
 Sediments  
 Number of Samples 26

**ANALYSIS REPORT BBM21-14384**

Element	Se	Sm	Sn	Sr	Ta	Tb
Method	GE_ARM3V25	GE_ARM3V25	GE_ARM3V25	GE_ARM3V25	GE_ARM3V25	GE_ARM3V25
Lower Limit	0.5	0.02	0.05	0.1	0.01	0.005
Upper Limit	2,500	1,000	1,000	1,000	1,000	1,000
Unit	ppm m / m	ppm m / m	ppm m / m	ppm m / m	ppm m / m	ppm m / m
C00065168	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
C00065169	<0.5	2.03	0.41	28.0	<0.01	0.256
C00065170	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
C00065171	<0.5	1.87	0.33	17.4	<0.01	0.216
C00065172	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
C00065173	<0.5	2.60	0.31	22.1	<0.01	0.391
C00065174	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
C00065175	<0.5	2.02	0.27	60.9	<0.01	0.241
C00065176	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
C00065177	<0.5	1.79	0.26	134	<0.01	0.258
C00065178	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
C00065179	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
C00065180	<0.5	1.66	0.22	19.4	<0.01	0.186
C00065181	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
C00065182	<0.5	1.86	0.26	93.1	<0.01	0.249
C00065183	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
C00065184	<0.5	2.25	0.18	121	<0.01	0.290
C00065185	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
C00065186	<0.5	1.54	0.36	37.2	<0.01	0.227
C00129409	<0.5	1.51	0.36	36.5	<0.01	0.227
C00129410	3.5	3.31	0.86	94.6	<0.01	0.532
*Blk BLANK	<0.5	<0.02	<0.05	<0.1	<0.01	<0.005
*Std OREAS 151b	3.0	2.28	0.96	37.0	<0.01	0.307
*Std OREAS 905	2.0	4.89	1.04	11.9	<0.01	0.325
*Std OREAS 261	<0.5	3.34	0.44	18.8	<0.01	0.383
*Blk BLANK	<0.5	<0.02	<0.05	<0.1	<0.01	<0.005
*Rep C00065176	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
*Std OREAS 261	<0.5	4.03	0.49	17.7	<0.01	0.484
*Std OREAS 905	2.4	5.78	1.24	12.2	<0.01	0.486

- not analysed | -- element not determined | I.S. insufficient sample | L.N.R. listed not received



Order Number 21HWG-010  
 Submission Number \*BBY\* SGDS HIVE/ 21HWG-010 / 26  
 Sediments  
 Number of Samples 26

**ANALYSIS REPORT BBM21-14384**

Element	Se	Sm	Sn	Sr	Ta	Tb
Method	GE_ARM3V25	GE_ARM3V25	GE_ARM3V25	GE_ARM3V25	GE_ARM3V25	GE_ARM3V25
Lower Limit	0.5	0.02	0.05	0.1	0.01	0.005
Upper Limit	2,500	1,000	1,000	1,000	1,000	1,000
Unit	ppm m / m	ppm m / m	ppm m / m	ppm m / m	ppm m / m	ppm m / m
*Std OREAS 151b	3.4	2.52	1.16	43.7	<0.01	0.407

Element	Te	Th	Tl	U	W	Y
Method	GE_ARM3V25	GE_ARM3V25	GE_ARM3V25	GE_ARM3V25	GE_ARM3V25	GE_ARM3V25
Lower Limit	0.02	0.01	0.01	0.01	1	0.02
Upper Limit	1,000	1,000	1,000	1,000	100	1,000
Unit	ppm m / m	ppm m / m	ppm m / m	ppm m / m	ppm m / m	ppm m / m
C00065163	<0.02	6.97	0.33	1.01	5	6.81
C00065164	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
C00065165	<0.02	4.02	0.15	0.59	1	12.73
C00065166	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
C00065167	<0.02	2.75	0.11	0.47	<1	4.78
C00065168	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
C00065169	<0.02	5.44	0.32	0.86	<1	5.49
C00065170	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
C00065171	<0.02	5.25	0.25	0.77	<1	4.42
C00065172	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
C00065173	<0.02	7.40	0.20	0.92	5	11.58
C00065174	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
C00065175	<0.02	3.92	0.16	0.57	<1	5.63
C00065176	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
C00065177	<0.02	3.44	0.15	0.58	1	7.13
C00065178	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
C00065179	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
C00065180	<0.02	3.47	0.13	0.66	<1	3.47
C00065181	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
C00065182	<0.02	3.74	0.14	0.55	<1	5.69
C00065183	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
C00065184	<0.02	4.22	0.13	0.60	<1	8.39

- not analysed | -- element not determined | I.S. insufficient sample | L.N.R. listed not received



Order Number 21HWG-010  
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 Sediments  
 Number of Samples 26

**ANALYSIS REPORT BBM21-14384**

Element	Te	Th	Tl	U	W	Y
Method	GE_ARM3V25	GE_ARM3V25	GE_ARM3V25	GE_ARM3V25	GE_ARM3V25	GE_ARM3V25
Lower Limit	0.02	0.01	0.01	0.01	1	0.02
Upper Limit	1,000	1,000	1,000	1,000	100	1,000
Unit	ppm m / m	ppm m / m	ppm m / m	ppm m / m	ppm m / m	ppm m / m
C00065185	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
C00065186	<0.02	1.68	0.17	0.52	<1	5.11
C00129409	<0.02	1.66	0.16	0.51	<1	5.03
C00129410	0.20	2.23	0.06	0.76	<1	14.40
*Blk BLANK	<0.02	0.01	<0.01	<0.01	<1	<0.02
*Std OREAS 151b	0.09	2.70	0.12	0.66	<1	11.02
*Std OREAS 905	0.06	7.83	0.09	1.88	<1	5.24
*Std OREAS 261	0.08	10.55	0.26	1.33	<1	11.27
*Blk BLANK	<0.02	0.01	<0.01	<0.01	<1	<0.02
*Rep C00065176	I.S.	I.S.	I.S.	I.S.	I.S.	I.S.
*Std OREAS 261	0.11	10.07	0.29	1.27	<1	10.87
*Std OREAS 905	0.07	8.16	0.11	2.68	<1	6.25
*Std OREAS 151b	0.08	2.67	0.14	0.64	<1	11.38

Element	Yb	Zn	Zr
Method	GE_ARM3V25	GE_ARM3V25	GE_ARM3V25
Lower Limit	0.01	1	0.1
Upper Limit	1,000	5,000	1,000
Unit	ppm m / m	ppm m / m	ppm m / m
C00065163	0.54	89	0.9
C00065164	I.S.	I.S.	I.S.
C00065165	0.84	2738	0.4
C00065166	I.S.	I.S.	I.S.
C00065167	0.49	43	0.3
C00065168	I.S.	I.S.	I.S.
C00065169	0.53	67	0.4
C00065170	I.S.	I.S.	I.S.
C00065171	0.39	55	0.3
C00065172	I.S.	I.S.	I.S.
C00065173	1.51	52	0.6

- not analysed | -- element not determined | I.S. insufficient sample | L.N.R. listed not received



Order Number 21HWG-010  
 Submission Number \*BBY\* SGDS HIVE/ 21HWG-010 / 26  
 Sediments  
 Number of Samples 26

## ANALYSIS REPORT BBM21-14384

Element	Yb	Zn	Zr
Method	GE_ARM3V25	GE_ARM3V25	GE_ARM3V25
Lower Limit	0.01	1	0.1
Upper Limit	1,000	5,000	1,000
Unit	ppm m / m	ppm m / m	ppm m / m
C00065174	I.S.	I.S.	I.S.
C00065175	0.58	44	0.3
C00065176	I.S.	I.S.	I.S.
C00065177	0.82	37	0.5
C00065178	I.S.	I.S.	I.S.
C00065179	I.S.	I.S.	I.S.
C00065180	0.33	49	0.1
C00065181	I.S.	I.S.	I.S.
C00065182	0.66	36	0.8
C00065183	I.S.	I.S.	I.S.
C00065184	0.83	38	0.4
C00065185	I.S.	I.S.	I.S.
C00065186	0.54	72	0.5
C00129409	0.52	71	0.5
C00129410	1.21	93	15.0
*Blk BLANK	<0.01	<1	<0.1
*Std OREAS 151b	1.01	224	2.6
*Std OREAS 905	0.24	56	34.8
*Std OREAS 261	1.02	116	20.5
*Blk BLANK	<0.01	<1	<0.1
*Rep C00065176	I.S.	I.S.	I.S.
*Std OREAS 261	0.99	123	17.8
*Std OREAS 905	0.28	64	40.9
*Std OREAS 151b	1.09	260	3.5

SGS Canada Minerals Burnaby conforms to the requirements of ISO/IEC17025 for specific tests as listed on their scope of accreditation found at <https://www.scc.ca/en/search/laboratories/sgs>  
 Tests and Elements marked with an "@" symbol in the report denote ISO/IEC17025 accreditation.

- not analysed | -- element not determined | I.S. insufficient sample | L.N.R. listed not received

## APPENDIX C – PORTABLE X-RAY FLUORESCENCE (PXRF) RESULTS

SAMPLE NUMBER	PROSPECT / TARGET ZONE	Date	Time	Test Label	Units	Mg Concentration	Al Concentration	Si Concentration
C00065051	2 Aces	11/10/2021	0.41576388889		1 PPM	-99	2935	8231
C00065052	2 Aces	11/10/2021	0.42354166667		2 PPM	-99	3109	7194
C00065053	2 Aces	11/10/2021	0.42834490741		3 PPM	5786	16676	33461
C00065054	2 Aces	11/10/2021	0.43280092593		4 PPM	6717	9929	90669
C00065055	2 Aces	11/10/2021	0.43791666667		5 PPM	2639	6680	13397
C00065301	2 Aces	10/10/2021	0.74114583333		1 PPM	65388	5896	14874
C00065302	2 Aces	10/10/2021	0.74476851852		2 PPM	9432	10445	124133
C00065302	2 Aces	10/10/2021	0.7475		3 PPM	5020	45360	100367
C00065303	2 Aces	10/10/2021	0.75079861111		4 PPM	71992	5796	16503

<b>P Concentr ation</b>	<b>S Concentr ation</b>	<b>K Concentr ation</b>	<b>Ca Concentr ation</b>	<b>Ti Concentr ation</b>	<b>V Concentr ation</b>	<b>Cr Concentr ation</b>	<b>Mn Concentr ation</b>	<b>Fe Concentr ation</b>	<b>Co Concentr ation</b>
104	-99	465	392016	621	-99	55	85	1780	-99
129	154	427	229217	185	-99	-99	36	574	-99
275	50	2838	314679	765	-99	77	83	6518	-99
476	547	621	11039	390	-99	40	2294	24346	-99
209	81	1259	333133	566	-99	77	136	2060	-99
364	553	999	214702	-99	-99	46	562	8158	-99
2404	833	1266	2470	94	-99	31	52	59773	-99
953	467	29807	899	5290	101	186	129	29587	-99
585	660	663	209094	-99	-99	33	248	4010	-99

Ni Concentration	Cu Concentration	Zn Concentration	As Concentration	Se Concentration	Rb Concentration	Sr Concentration	Y Concentration	Zr Concentration	Nb Concentration
16	-99	-99	2	-99	-99	1336	-99	8	-99
6	-99	5	-99	-99	-99	1993	-99	18	-99
17	-99	9	-99	-99	2	1164	-99	13	-99
29	121	51	17	-99	1	62	20	77	-99
16	-99	119	-99	-99	1	652	-99	6	-99
6	-99	11	-99	-99	-99	379	-99	2	-99
6	129	5	2	1	-99	1	-99	2	-99
11	43	26	2	1	437	52	13	174	14
8	-99	5	-99	-99	-99	97	-99	-99	-99



W Concentration	Au Concentration	Hg Concentration	Pb Concentration	Bi Concentration	Th Concentration	U Concentration	LE Concentration	Sample ID	Project No
-99	-99	5	3	-99	18	-99	592298	C00065051	Hawkeye Gold
13	-99	-99	4	-99	13	-99	756898	C00065052	Hawkeye Gold
-99	-99	-99	10	-99	8	-99	617493	C00065053	Hawkeye Gold
-99	-99	3	19	-99	10	-99	852455	C00065054	Hawkeye Gold
-99	-99	6	8	-99	10	-99	638607	C00065055	Hawkeye Gold
-99	-99	-99	2	-99	-99	-99	688043	C00065301	Hawkeye Gold
10	-99	-99	-99	33	-99	-99	788848	C00065302	Hawkeye Gold
29	-99	5	10	22	-99	-99	773858	C00065302	Hawkeye Gold
-99	-99	-99	-99	-99	-99	-99	690296	C00065303	Hawkeye Gold

Sample Type	Operator	Notes	COORDINATE SYSTEM	UTM ZONE	UTM EASTING	UTM NORTHING	ELEVATION	PRIMARY LITHOLOGY
Chip	DR	.	NAD 83	10N	633624	5850826	1578	Marble - MAR
Chip	DR	.	NAD 83	10N	633633	5850734	1593	Marble - MAR
Chip	DR	.	NAD 83	10N	633506	5850801	1582	Marble - MAR
Chip	DR	.	NAD 83	10N	633358	5850246	1553	Quartzite - QZT
Chip	DR	.	NAD 83	10N	633332	5850246	1560	Quartzite - QZT
Chip	DR	.	NAD 83	10N	633363	5850735	1572	Marble - MAR
Chip	DR	Quartz	NAD 83	10N	633537	5850536	1588	Quartzite - QZT
Chip	DR	Schist	NAD 83	10N	633537	5850536	1588	Quartzite - QZT
Chip	DR	Schist	NAD 83	10N	633436	5850186	1549	Marble - MAR

# APPENDIX D – RPAS ORTHOIMAGERY AND DSM/DTM PROCESSING REPORT

- !** **Important:** Click on the different icons for:
- ?** Help to analyze the results in the Quality Report
  - i** Additional information about the sections

**💡** Click [here](#) for additional tips to analyze the Quality Report

## Summary i

Project	2Aces
Processed	2021-10-27 19:28:46
Camera Model Name(s)	FC220_4.7_4000x3000 (RGB)
Average Ground Sampling Distance (GSD)	4.32 cm / 1.70 in
Area Covered	0.470 km <sup>2</sup> / 46.9774 ha / 0.18 sq. mi. / 116.1439 acres
Time for Initial Processing (without report)	02h:04m:11s

## Quality Check i

<b>?</b> <b>Images</b>	median of 59055 keypoints per image	✓
<b>?</b> <b>Dataset</b>	616 out of 646 images calibrated (95%), all images enabled, 6 blocks	⚠
<b>?</b> <b>Camera Optimization</b>	2.69% relative difference between initial and optimized internal camera parameters	✓
<b>?</b> <b>Matching</b>	median of 10162.4 matches per calibrated image	✓
<b>?</b> <b>Georeferencing</b>	yes, no 3D GCP	⚠

## **?** Preview i

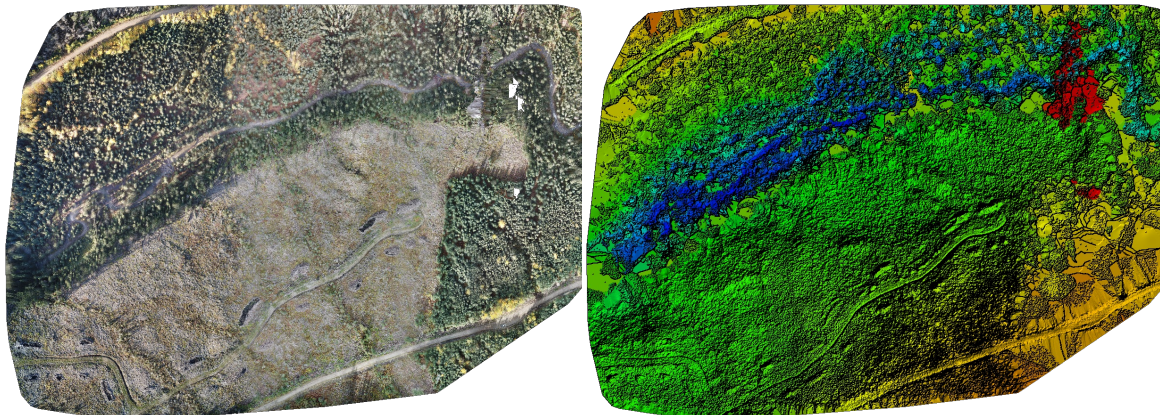


Figure 1: Orthomosaic and the corresponding sparse Digital Surface Model (DSM) before densification.

## Calibration Details i

Number of Calibrated Images	616 out of 646
Number of Geolocated Images	646 out of 646

## Initial Image Positions

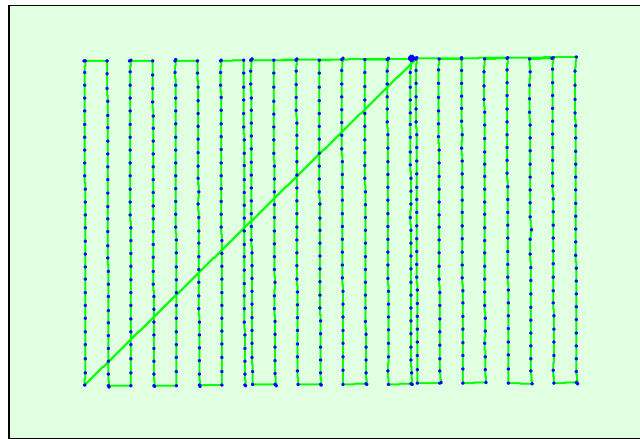


Figure 2: Top view of the initial image position. The green line follows the position of the images in time starting from the large blue dot.

## Computed Image/GCPs/Manual Tie Points Positions

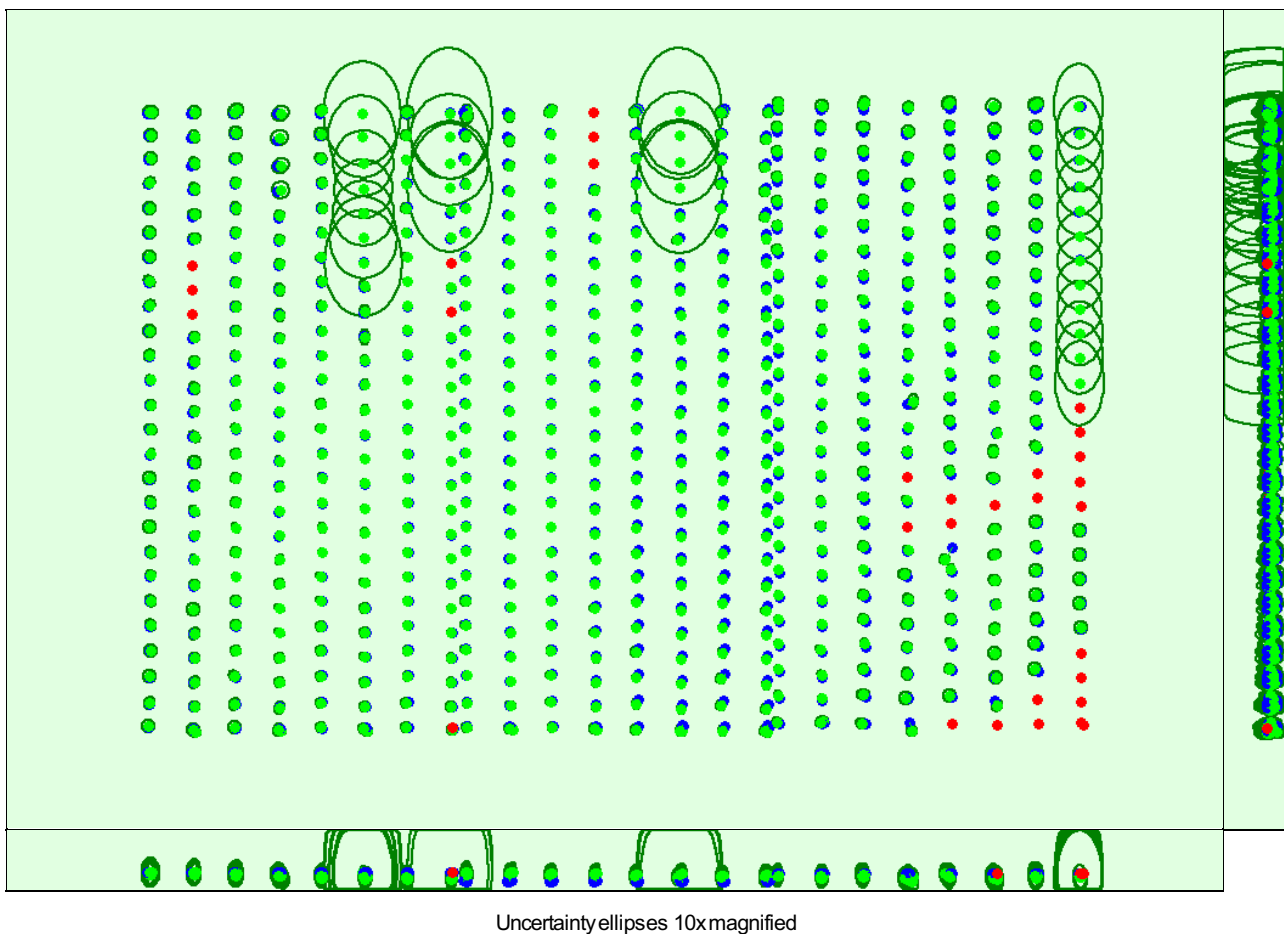


Figure 3: Offset between initial (blue dots) and computed (green dots) image positions as well as the offset between the GCPs initial positions (blue crosses) and their computed positions (green crosses) in the top-view (XY plane), front-view (XZ plane), and side-view (YZ plane). Red dots indicate disabled or uncalibrated images. Dark green ellipses indicate the absolute position uncertainty of the bundle block adjustment result.

## Absolute camera position and orientation uncertainties

	X[m]	Y[m]	Z[m]	Omega [degree]	Phi [degree]	Kappa [degree]
Mean	0.465	0.502	0.977	2.438	0.349	2.193
Sigma	0.458	0.625	1.180	14.533	1.285	14.503

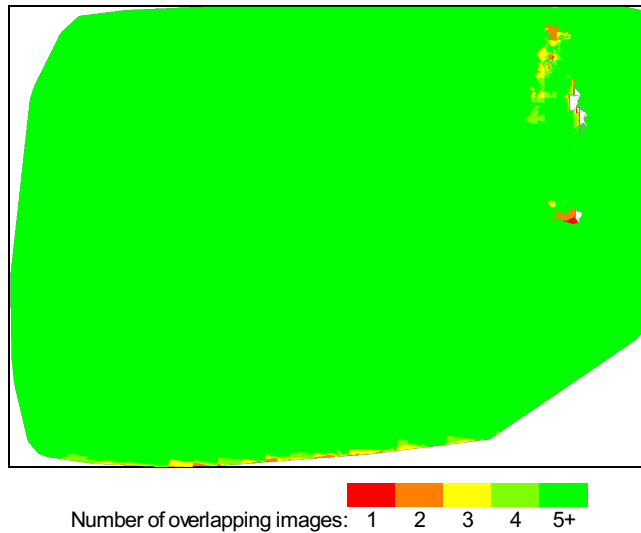


Figure 4: Number of overlapping images computed for each pixel of the orthomosaic. Red and yellow areas indicate low overlap for which poor results may be generated. Green areas indicate an overlap of over 5 images for every pixel. Good quality results will be generated as long as the number of keypoint matches is also sufficient for these areas (see Figure 5 for keypoint matches).

## Bundle Block Adjustment Details

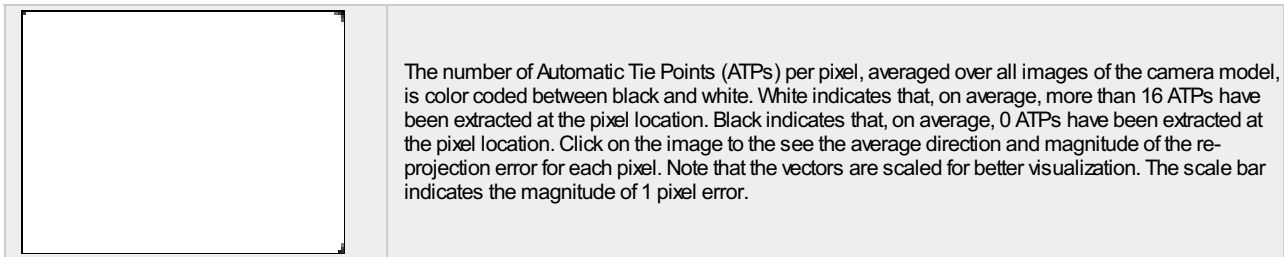
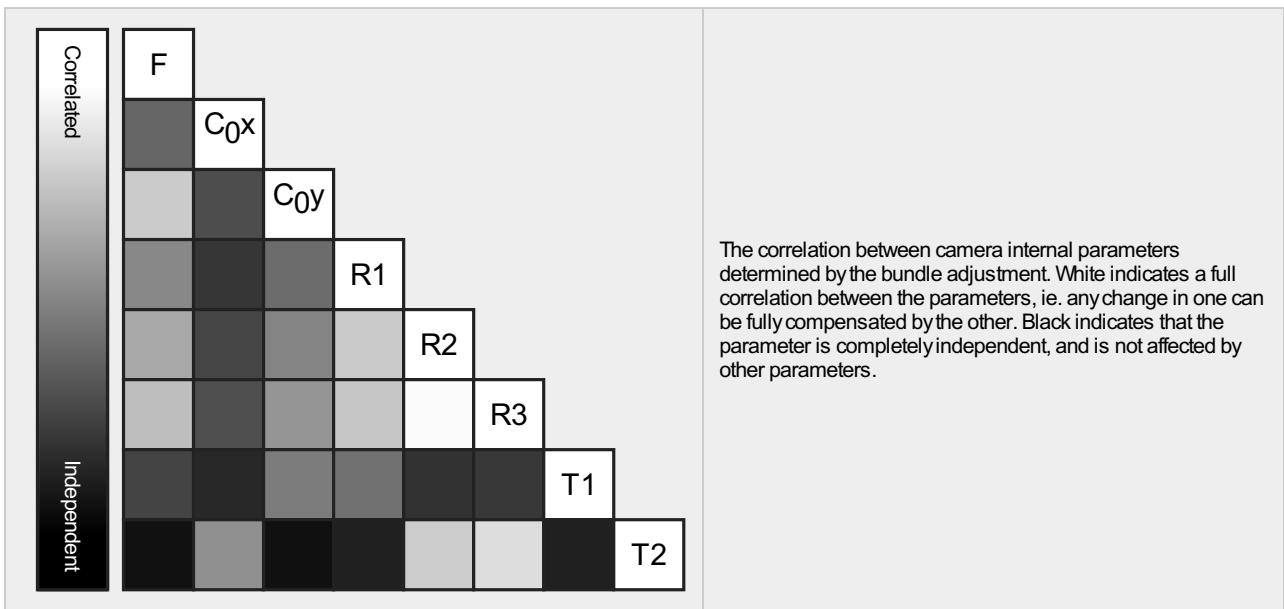
Number of 2D Keypoint Observations for Bundle Block Adjustment	7809683
Number of 3D Points for Bundle Block Adjustment	2732518
Mean Reprojection Error [pixels]	0.213

### Internal Camera Parameters

FC220\_4.7\_4000x3000 (RGB). Sensor Dimensions: 6.327 [mm] x 4.745 [mm]

EXIF ID: FC220\_4.7\_4000x3000

	Focal Length	Principal Point x	Principal Point y	R1	R2	R3	T1	T2
Initial Values	3073.410 [pixel] 4.861 [mm]	1917.790 [pixel] 3.033 [mm]	1485.800 [pixel] 2.350 [mm]	0.033	-0.086	0.078	0.000	-0.001
Optimized Values	3156.353 [pixel] 4.992 [mm]	1969.015 [pixel] 3.114 [mm]	1486.679 [pixel] 2.352 [mm]	0.052	-0.132	0.132	-0.001	0.000
Uncertainties (Sigma)	8.423 [pixel] 0.013 [mm]	0.371 [pixel] 0.001 [mm]	0.476 [pixel] 0.001 [mm]	0.001	0.002	0.003	0.000	0.000



## 2D Keypoints Table

	Number of 2D Keypoints per Image	Number of Matched 2D Keypoints per Image
Median	59055	10162
Mn	42881	21
Max	77241	45116
Mean	60138	12678

## 3D Points from 2D Keypoint Matches

	Number of 3D Points Observed
In 2 Images	1766231
In 3 Images	482719
In 4 Images	202088
In 5 Images	104824
In 6 Images	60175
In 7 Images	35642
In 8 Images	22248
In 9 Images	15441
In 10 Images	11004
In 11 Images	8033
In 12 Images	5743
In 13 Images	4250
In 14 Images	3208
In 15 Images	2439
In 16 Images	1797
In 17 Images	1434
In 18 Images	1131
In 19 Images	865
In 20 Images	694
In 21 Images	564
In 22 Images	413

In 23 Images	379
In 24 Images	295
In 25 Images	241
In 26 Images	194
In 27 Images	149
In 28 Images	108
In 29 Images	79
In 30 Images	35
In 31 Images	46
In 32 Images	24
In 33 Images	13
In 34 Images	5
In 35 Images	3
In 36 Images	4

## 2D Keypoint Matches

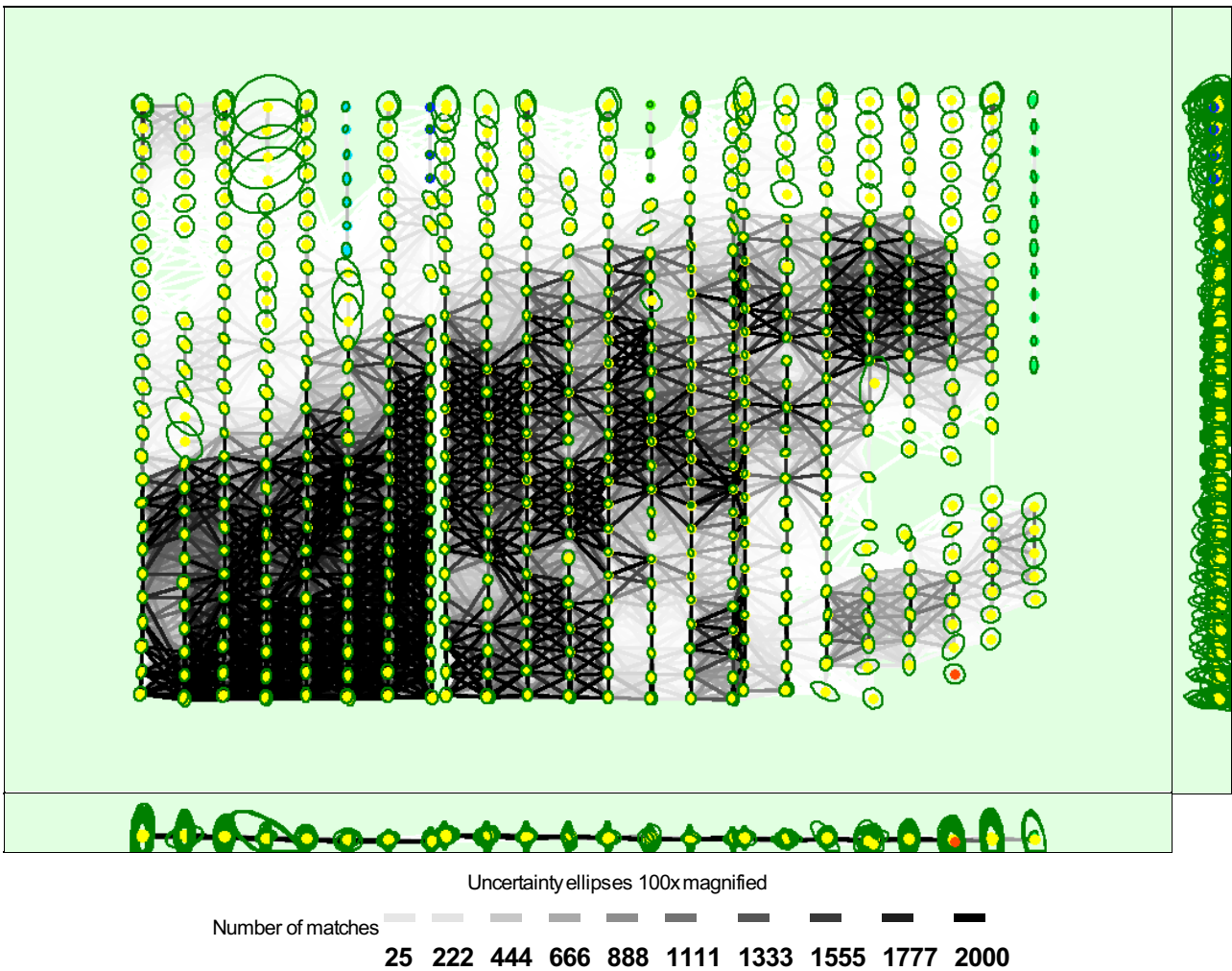


Figure 5: Computed image positions with links between matched images. The darkness of the links indicates the number of matched 2D keypoints between the images. Bright links indicate weak links and require manual tie points or more images. Dark green ellipses indicate the relative camera position uncertainty of the bundle block adjustment result.

## Relative camera position and orientation uncertainties

	X[m]	Y[m]	Z[m]	Omega [degree]	Phi [degree]	Kappa [degree]
Mean	0.051	0.061	0.086	0.069	0.050	0.039
Sigma	0.030	0.033	0.048	0.201	0.029	0.205

# Geolocation Details



## Absolute Geolocation Variance



Min Error [m]	Max Error [m]	Geolocation Error X [%]	Geolocation Error Y [%]	Geolocation Error Z [%]
-	-15.00	0.00	0.00	0.00
-15.00	-12.00	0.00	0.00	0.00
-12.00	-9.00	0.00	0.00	0.00
-9.00	-6.00	0.00	0.00	6.66
-6.00	-3.00	0.16	5.52	26.95
-3.00	0.00	47.40	47.24	3.41
0.00	3.00	52.27	37.01	39.12
3.00	6.00	0.16	9.90	22.89
6.00	9.00	0.00	0.16	0.97
9.00	12.00	0.00	0.16	0.00
12.00	15.00	0.00	0.00	0.00
15.00	-	0.00	0.00	0.00
<b>Mean [m]</b>		-0.000005	-0.000003	-0.000099
<b>Sigma [m]</b>		0.982816	1.958489	3.927044
<b>RMS Error [m]</b>		0.982816	1.958489	3.927044

Min Error and Max Error represent geolocation error intervals between -1.5 and 1.5 times the maximum accuracy of all the images. Columns X, Y, Z show the percentage of images with geolocation errors within the predefined error intervals. The geolocation error is the difference between the initial and computed image positions. Note that the image geolocation errors do not correspond to the accuracy of the observed 3D points.

## Relative Geolocation Variance



Relative Geolocation Error	Images X [%]	Images Y [%]	Images Z [%]
[-1.00, 1.00]	99.84	99.68	100.00
[-2.00, 2.00]	100.00	100.00	100.00
[-3.00, 3.00]	100.00	100.00	100.00
<b>Mean of Geolocation Accuracy [m]</b>	5.000000	5.000000	10.000000
<b>Sigma of Geolocation Accuracy [m]</b>	0.000000	0.000000	0.000000

Images X, Y, Z represent the percentage of images with a relative geolocation error in X, Y, Z.

Geolocation Orientational Variance	RMS [degree]
Omega	91.899
Phi	11.101
Kappa	89.237

Geolocation RMS error of the orientation angles given by the difference between the initial and computed image orientation angles.

# Initial Processing Details



## System Information



Hardware	CPU: Intel(R) Core(TM) i5-8265U CPU @ 1.60GHz RAM: 16GB GPU: Intel(R) UHD Graphics 620 (Driver: 27.20.100.8478)
Operating System	Windows 10 Home, 64-bit

## Coordinate Systems



Image Coordinate System	WGS 84 (EGM96 Geoid)
Output Coordinate System	NAD83 / UTM zone 10N (EGM96 Geoid)

## Processing Options



Detected Template	3D Maps
Keypoints Image Scale	Full, Image Scale: 1
Advanced: Matching Image Pairs	Aerial Grid or Corridor
Advanced: Matching Strategy	Use Geometrically Verified Matching: no
Advanced: Keypoint Extraction	Targeted Number of Keypoints: Automatic
Advanced: Calibration	Calibration Method: Standard Internal Parameters Optimization: All External Parameters Optimization: All Rematch: Auto, no

## Point Cloud Densification details



### Processing Options



Image Scale	multiscale, 1/2 (Half image size, Default)
Point Density	Optimal
Minimum Number of Matches	3
3D Textured Mesh Generation	yes
3D Textured Mesh Settings:	Resolution: Medium Resolution (default) Color Balancing: no
LOD	Generated: no
Advanced: 3D Textured Mesh Settings	Sample Density Divider: 1
Advanced: Image Groups	group1
Advanced: Use Processing Area	yes
Advanced: Use Annotations	yes
Time for Point Cloud Densification	02h:35m:04s
Time for Point Cloud Classification	NA
Time for 3D Textured Mesh Generation	26m:28s

### Results



Number of Processed Clusters	6
Number of Generated Tiles	4
Number of 3D Densified Points	44210265
Average Density (per m <sup>3</sup> )	26

## DSM, Orthomosaic and Index Details



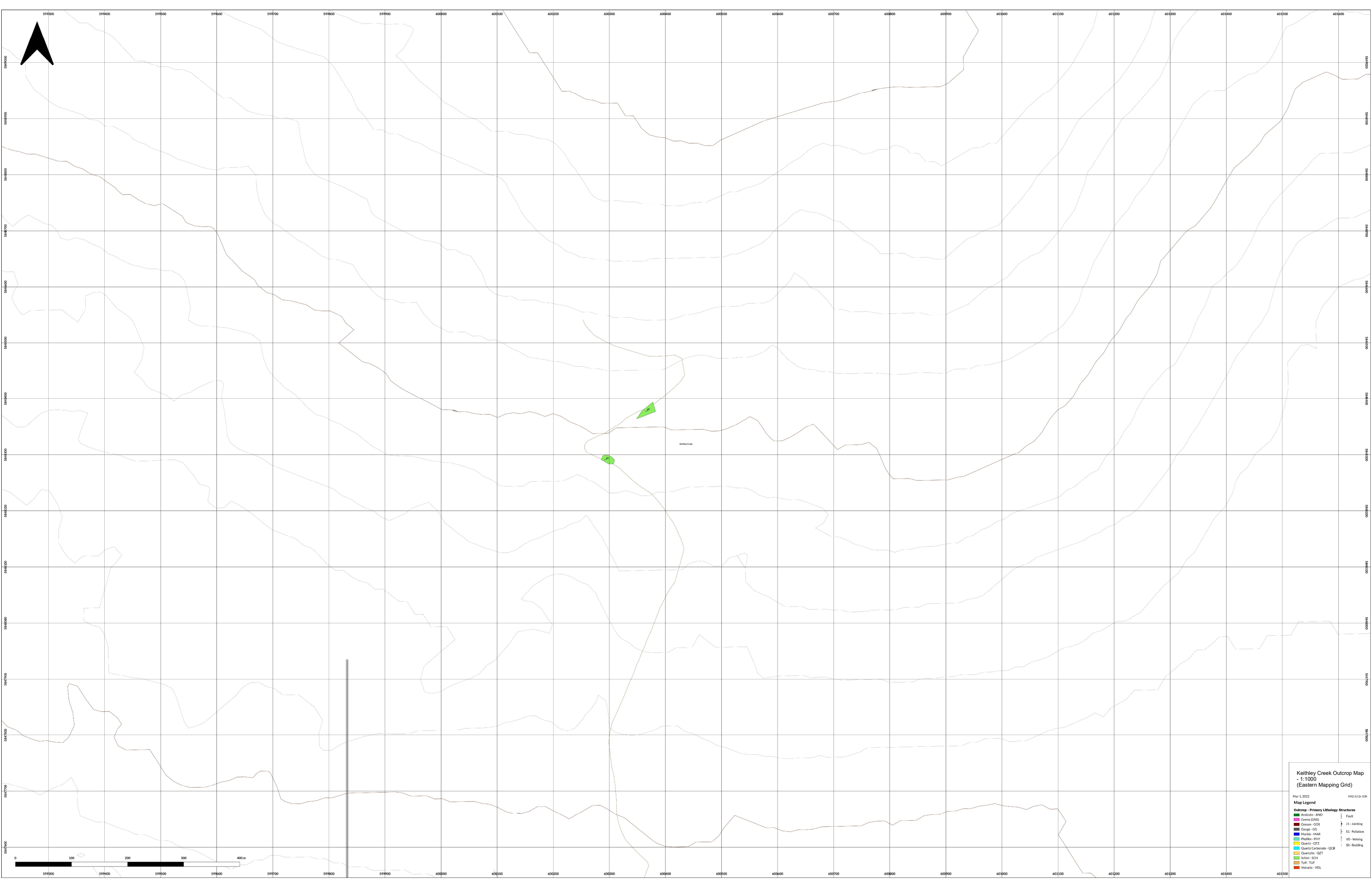
### Processing Options



DSM and Orthomosaic Resolution	1 x GSD (4.32 [cm/pixel])
DSM Filters	Noise Filtering: yes Surface Smoothing: yes, Type: Sharp
Raster DSM	Generated: yes Method: Inverse Distance Weighting Merge Tiles: yes
Orthomosaic	Generated: yes Merge Tiles: yes GeoTIFF Without Transparency: no Google Maps Tiles and KML: no
Time for DSM Generation	48m:12s
Time for Orthomosaic Generation	01h:17m:02s

Time for DTM Generation	00s
Time for Contour Lines Generation	00s
Time for Reflectance Map Generation	00s
Time for Index Map Generation	00s

APPENDIX E – 1:1000 SCALE OUTCROP MAPS

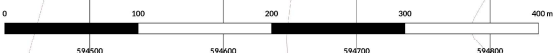
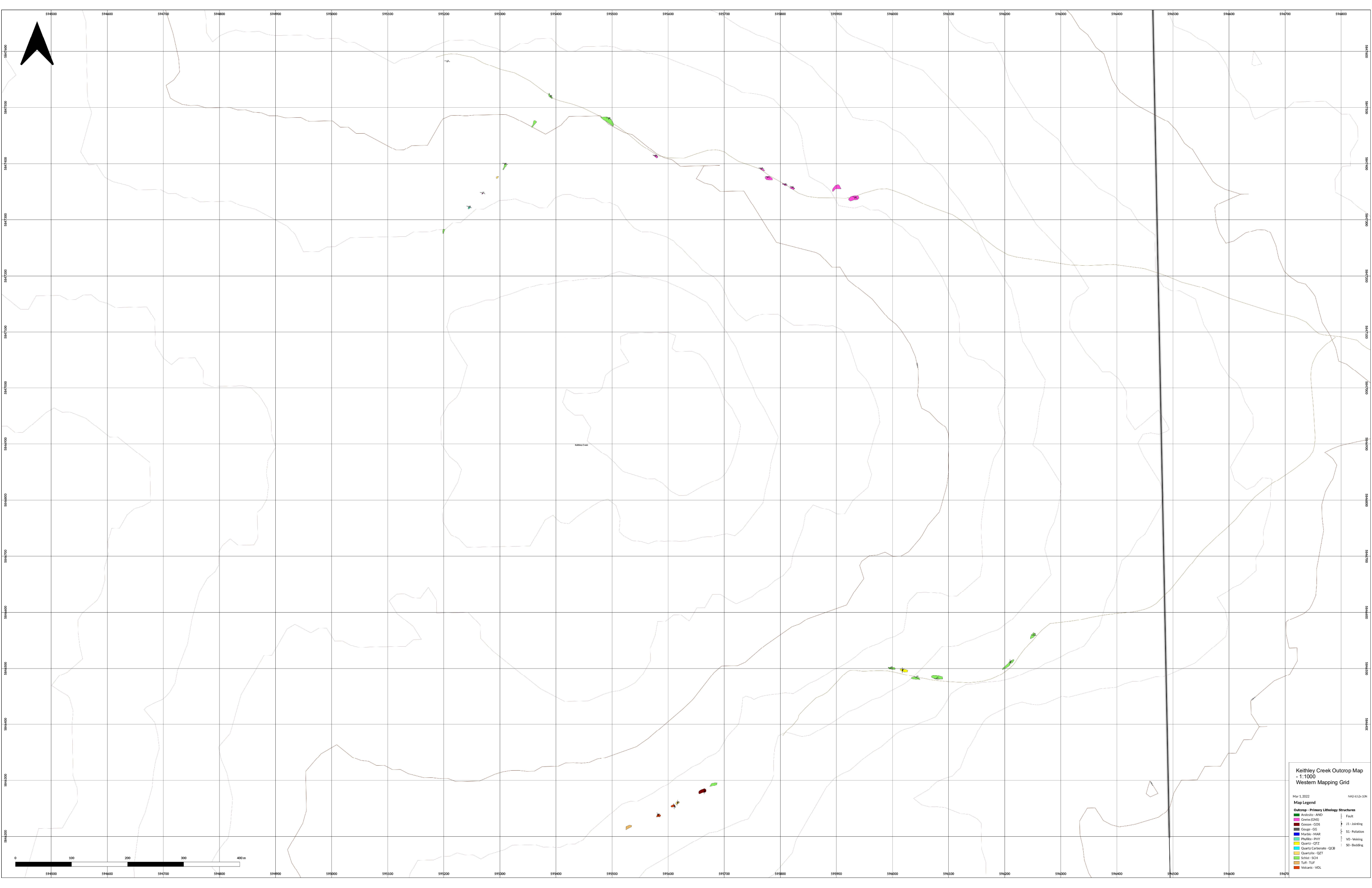


**Keithley Creek Outcrop Map**  
- 1:1000  
(Eastern Mapping Grid)

Mar 1, 2023 NAD 83 2D 10M

**Map Legend**

<b>Outcrop - Primary Lithology Structures</b>	<b>Fault</b>
Andesite - AND	J1 - Joining
Granite - GNS	S1 - Folding
Gneiss - GCS	VD - Veiling
Gouge - GG	S0 - Bedding
Marble - MAR	
Phyllite - PHY	
Quartz - QTZ	
Quartz Carbonate - QCB	
Quartzite - QZT	
Schist - SCH	
Tuff - TUF	
Volcanic - VOL	

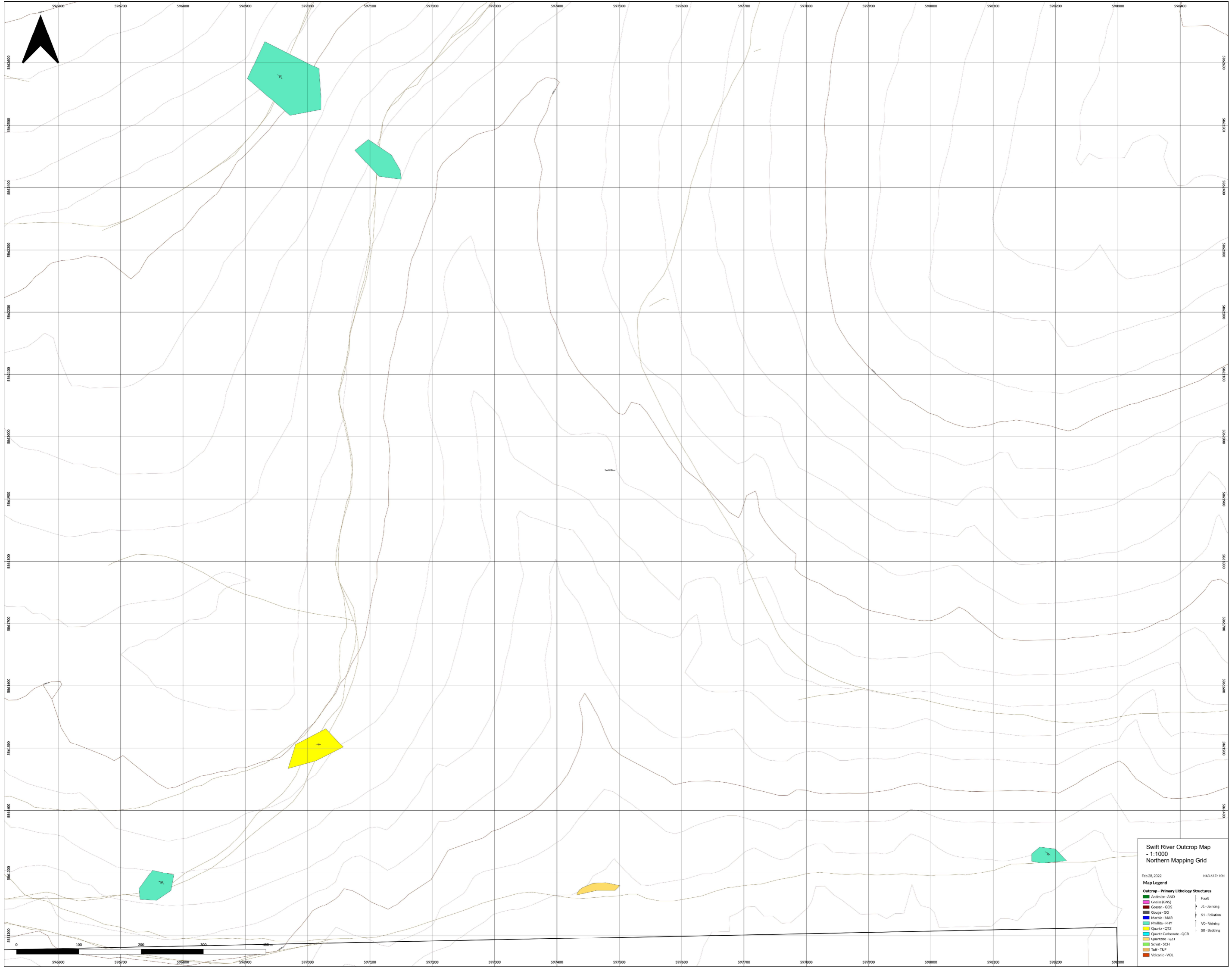


**Keithley Creek Outcrop Map**  
 -1:1000  
 Western Mapping Grid

Mar 1, 2023 NAD 83 UTM 10N

**Map Legend**

<b>Outcrop - Primary Lithology Structures</b>	<b>Fault</b>
Andite - AND	I1 - Joining
Green - GNS	S1 - Folding
Gneiss - GCS	VD - Veiling
Gouge - GG	SD - Bedding
Marble - MAR	
Phyllite - PHF	
Quartz - QTZ	
Quartz Carbonate - QCB	
Quartzite - QZT	
Schist - SCH	
Tuff - TUF	
Volcanic - VOL	

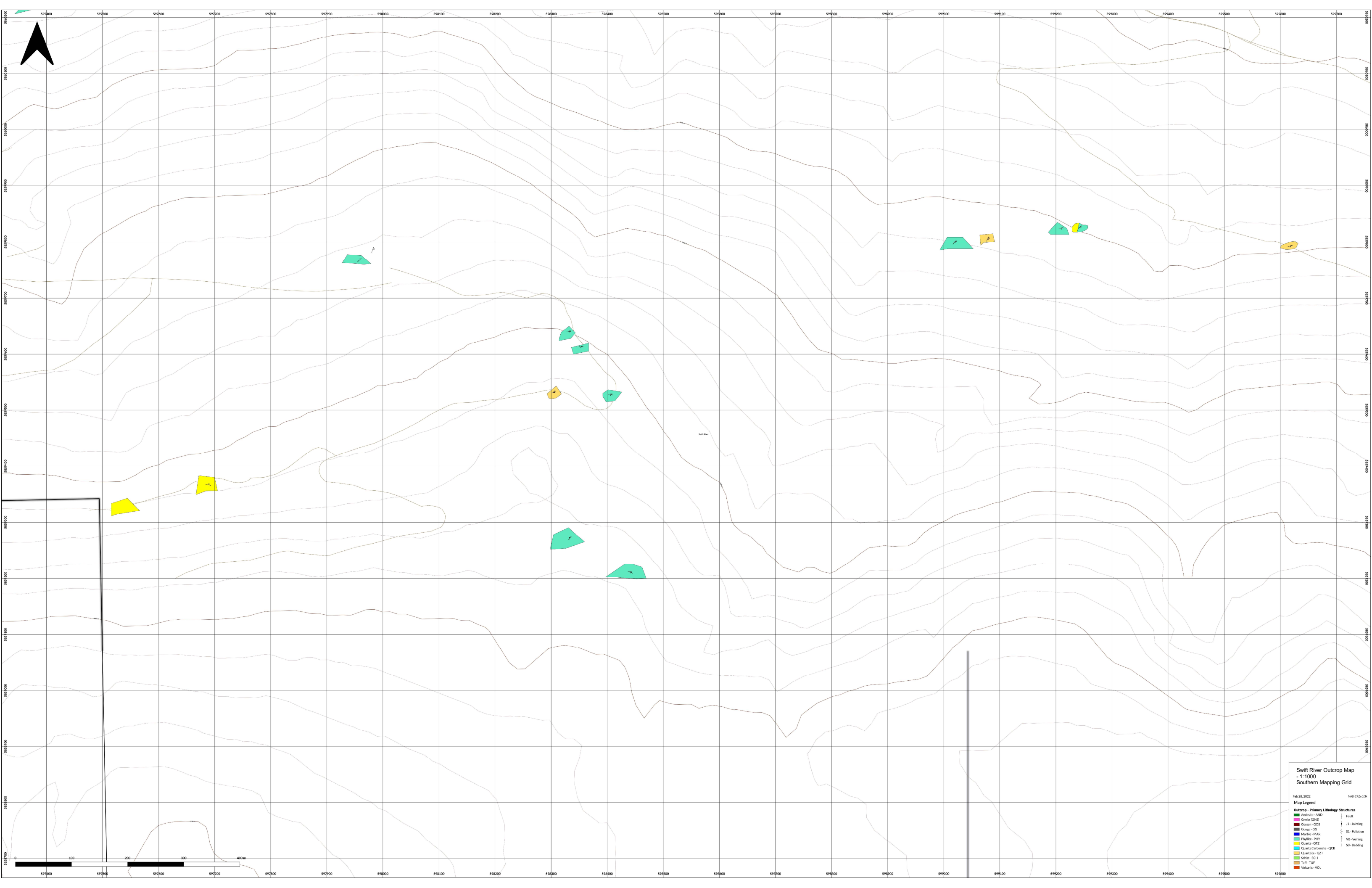


**Swift River Outcrop Map**  
 - 1:1000  
 Northern Mapping Grid

Feb 28, 2022 NAD 83 ZN 50N

**Map Legend**

Andesite - AND	Fault
Gneiss - GNS	J1 - Jointing
Gossan - GOS	S1 - Foliation
Gouge - GG	VD - Veining
Marble - MAR	SO - Bedding
Phyllite - PHY	
Quartz - QTZ	
Quartz Carbonate - QCB	
Quarzite - QQT	
Schist - SCH	
Tuff - TUF	
Volcanic - VOL	



**Swift River Outcrop Map**  
 -1:1,000  
 Southern Mapping Grid

Feb 28, 2023 NAD 83 2D 10'

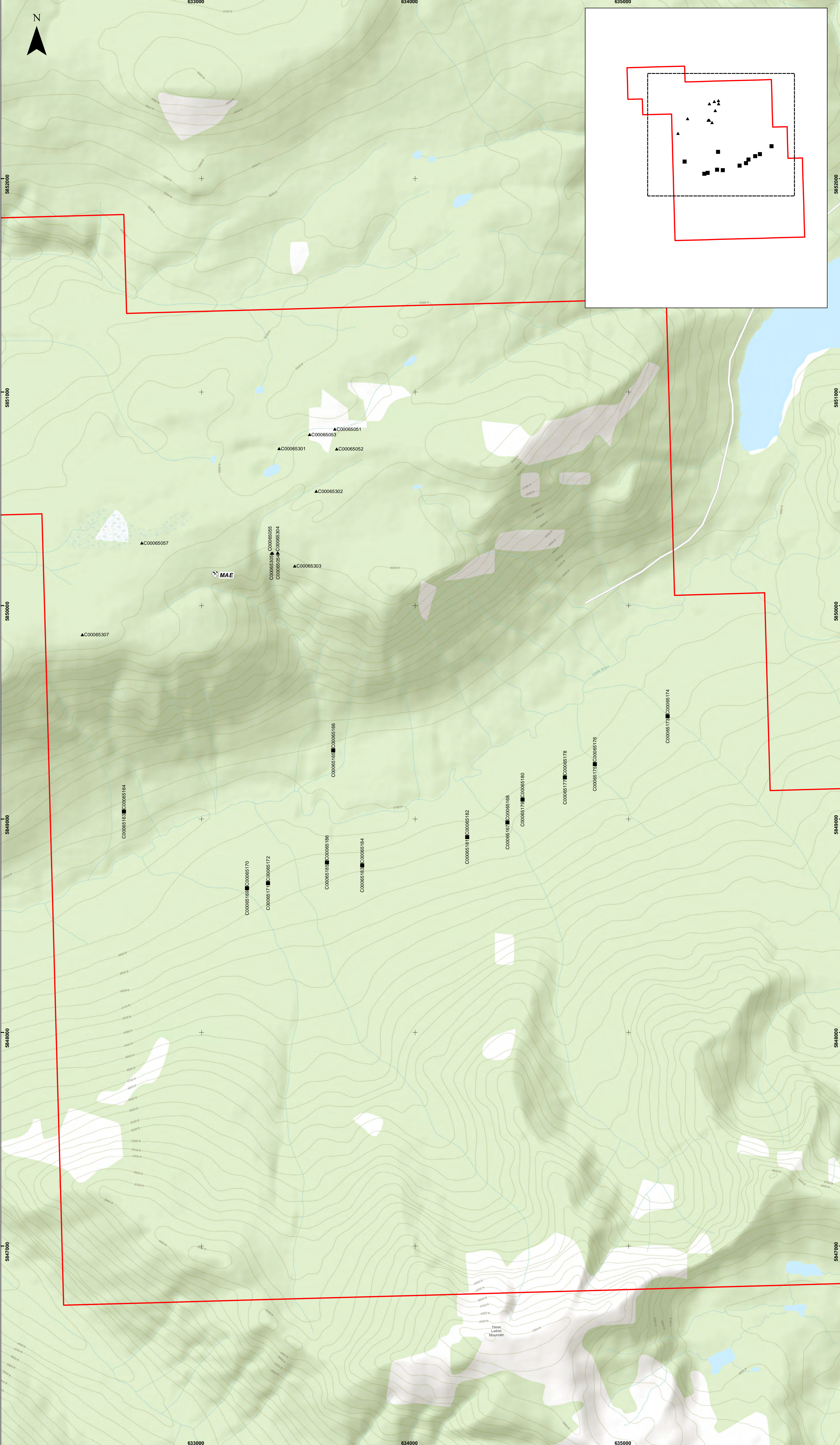
**Map Legend**

<b>Outcrop - Primary Lithology Structures</b>	<b>Fault</b>
Andesite - AND	1:1 - Joining
Granite (GNS)	1:1 - Folding
Granite - GOS	VD - Noting
Gneiss - GG	SD - Bedding
Marble - MAR	
Phyllite - PHY	
Quartz - QTZ	
Quartzite - QZT	
Schist - SCH	
Tuff - TUF	
Volcanic - VOL	

APPENDIX F – ROCK SAMPLE LOCATION MAPS

APPENDIX G - PXRF SAMPLE LOCATION MAPS

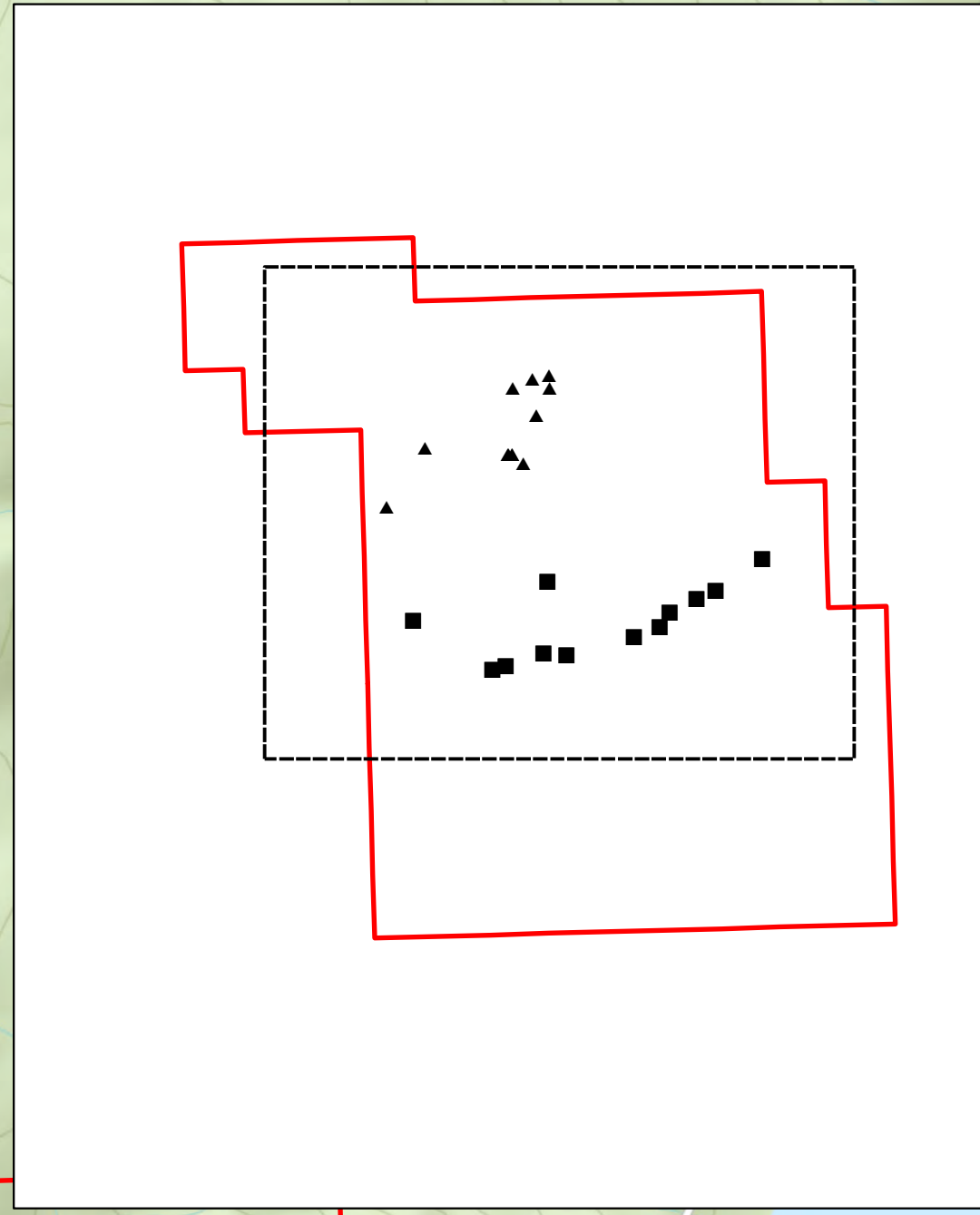
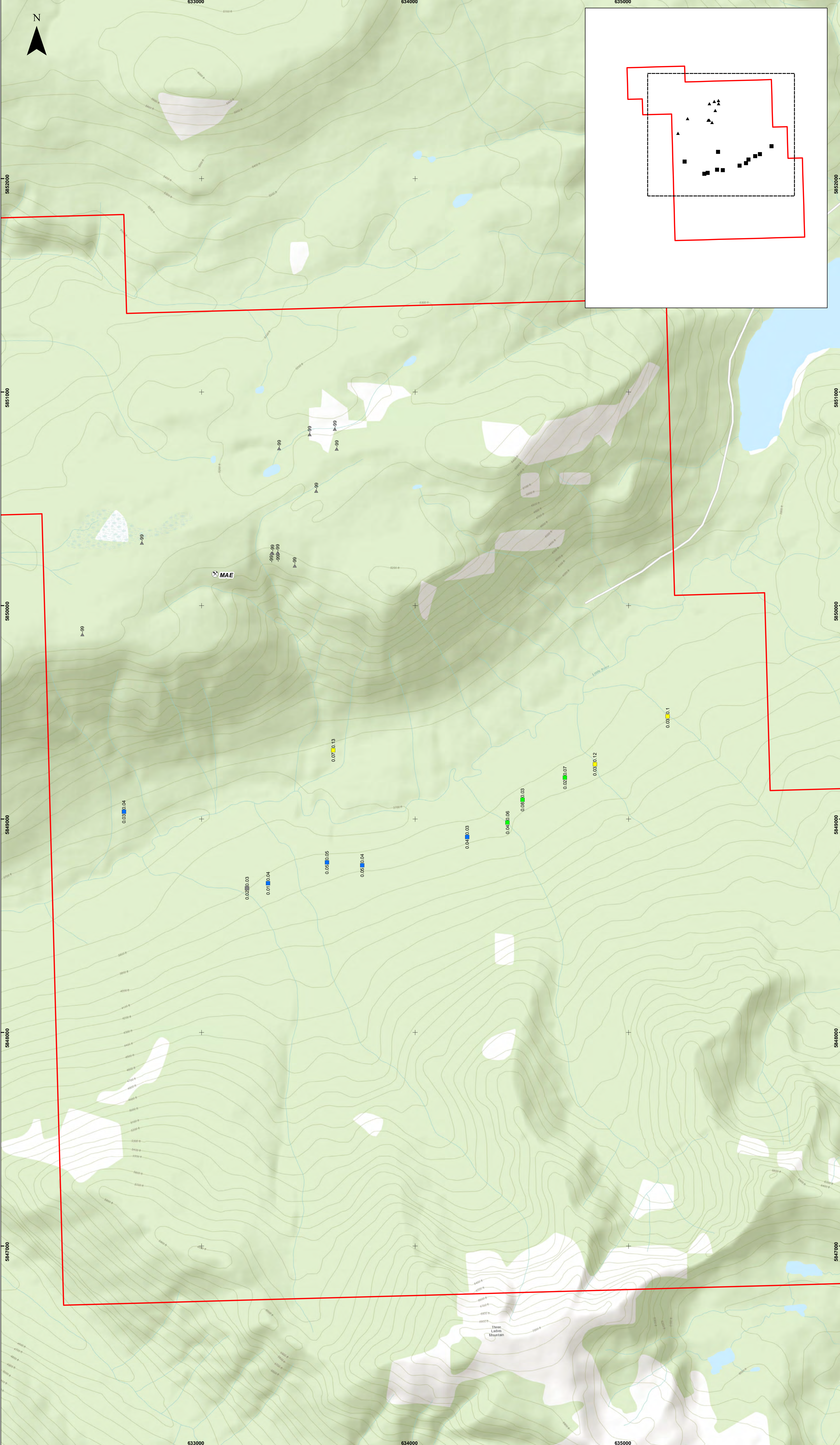
APPENDIX H - STREAM SEDIMENT SAMPLE LOCATION MAPS



- ▲ 2022 Rock Sample Location
- 2022 Sediment Sample Location
- ⊗ Minfile Occurrences
- ▭ 2 Acres East Tenure Outline

**2 Acres East Property  
2022 Rock Sample &  
2022 Sediment Sample  
Location Map**

0 100 200  
Meters  
1:8,000  
NAD83 UTM Zone 10N  
Date: 2022-12-22



⊗ Minfile Occurrences

▭ 2 Acres East Tenure Outline

**2022 Rock Sample Silver Results - Lab Analysis**

▲ < Detection Limit (-99)

**2022 Sediment Sample Silver Results - Lab Analysis**

■ < 0.03 ppm Ag

■ 0.03 - 0.05 ppm Ag

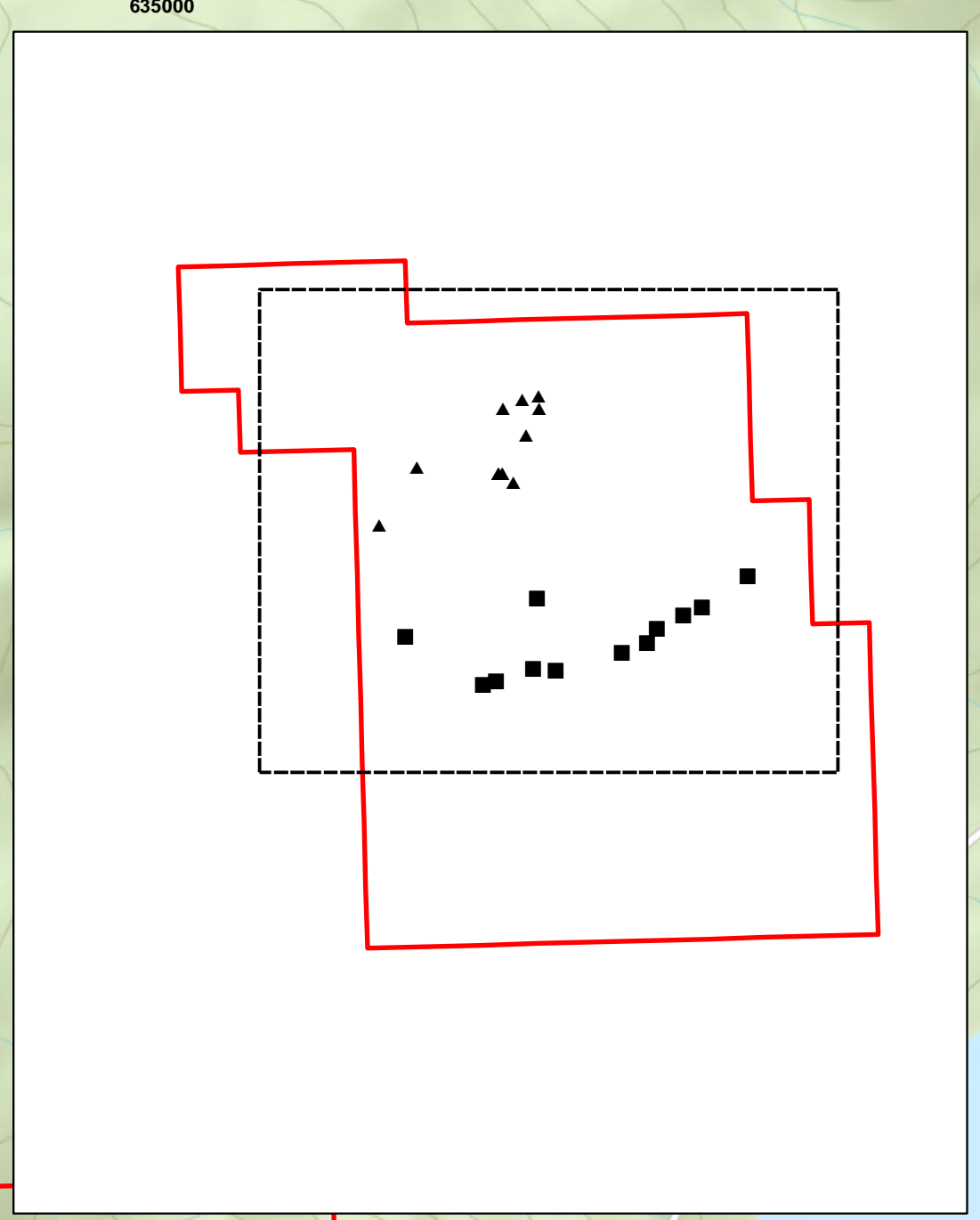
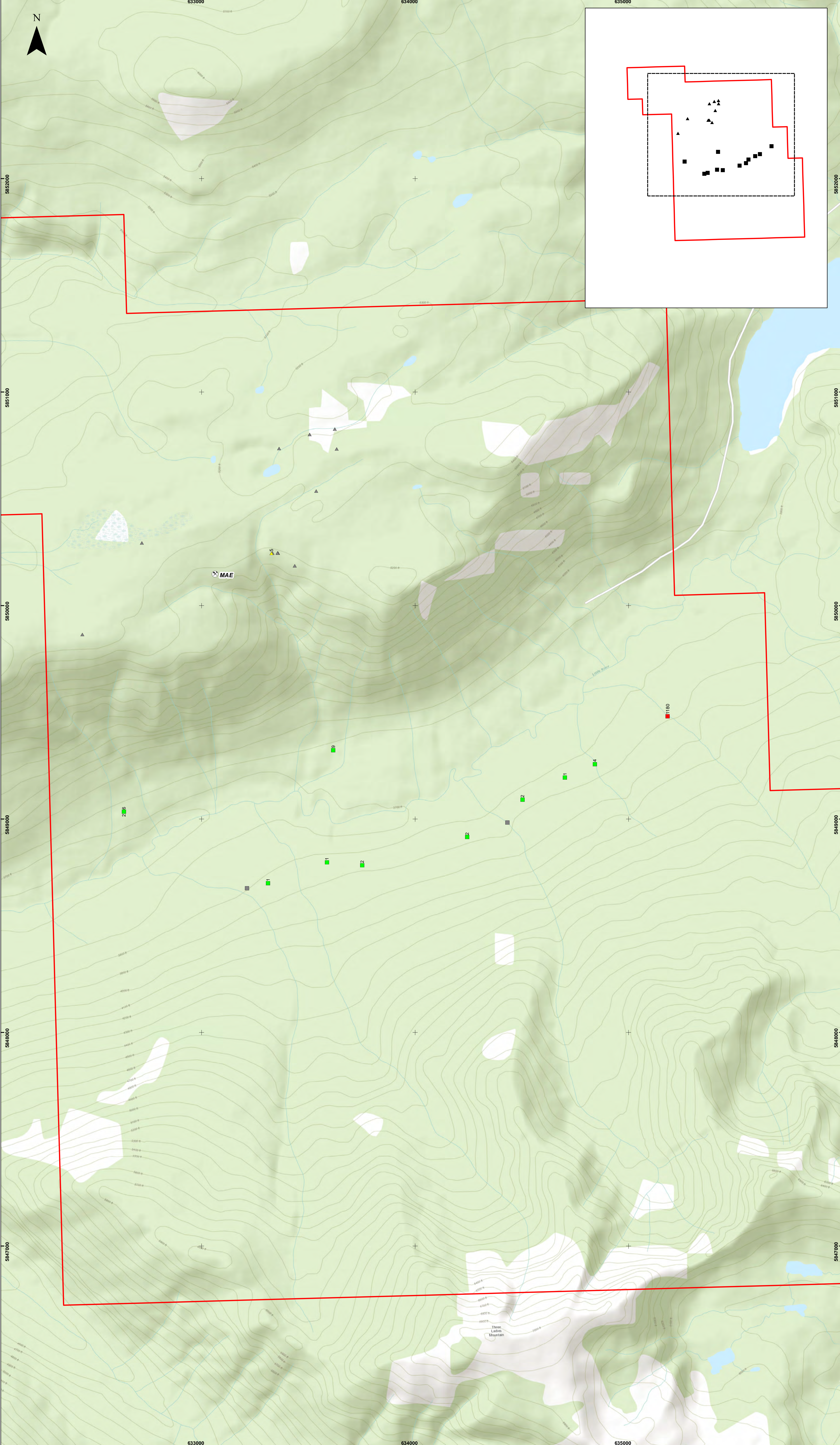
■ 0.05 - 0.08 ppm Ag

■ > 0.08 ppm Ag

**2 Acres East Property 2022 Rock Sample & 2022 Sediment Sample Silver Results - Lab Results**

0 100 200  
Meters

1:8,000  
NAD83 UTM Zone 10N  
Date: 2022-12-22



⊗ Minfile Occurrences

▭ 2 Acres East Tenure Outline

**2022 Rock Sample Gold Results - Lab Analysis**

- ▲ < Detection Limit (-99)
- ▲ 5 ppb Au

**2022 Sediment Sample Gold Results - Lab Analysis**

- < Detection Limit (-9999)
- 1 - 9 ppb Au
- 1180

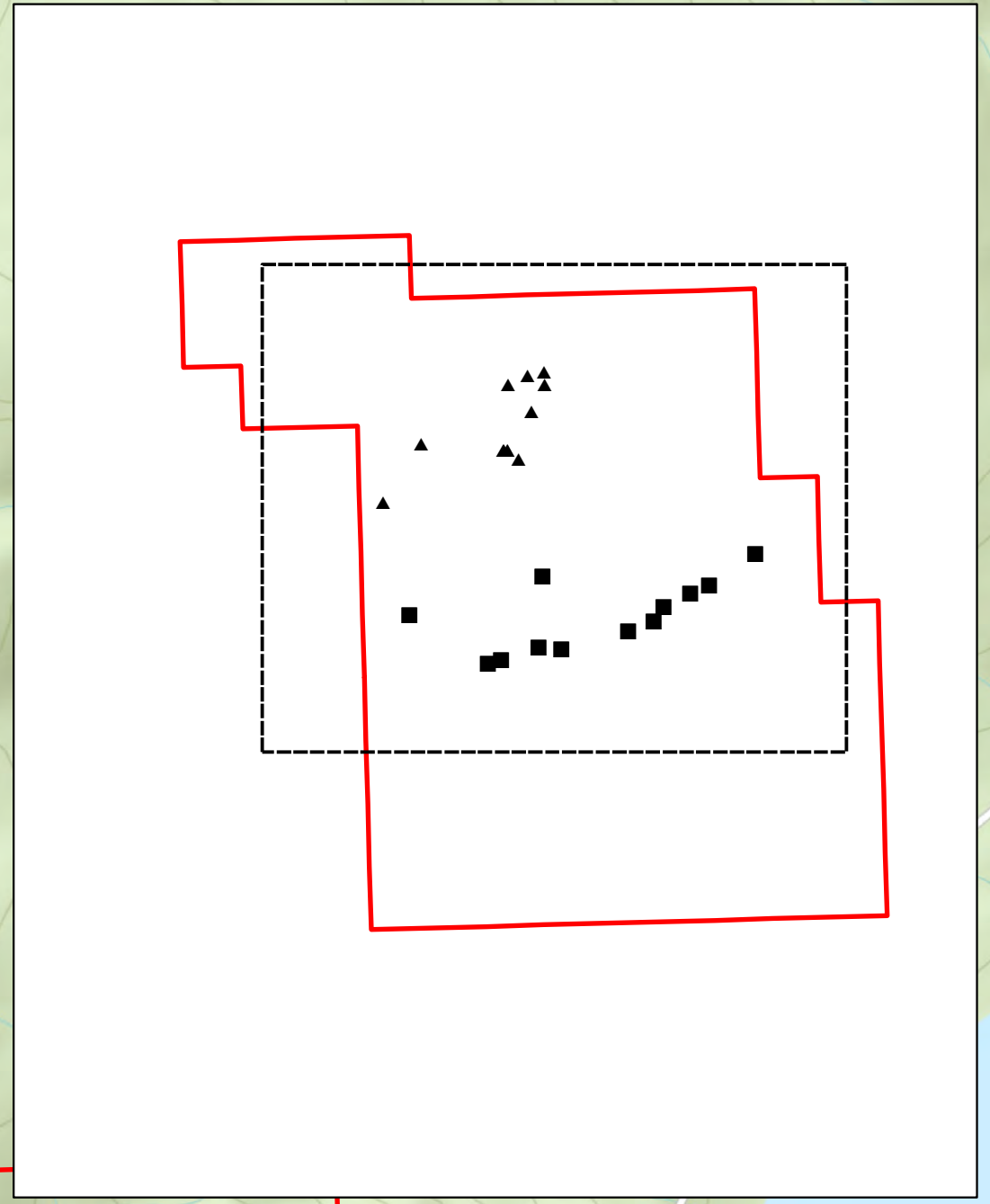
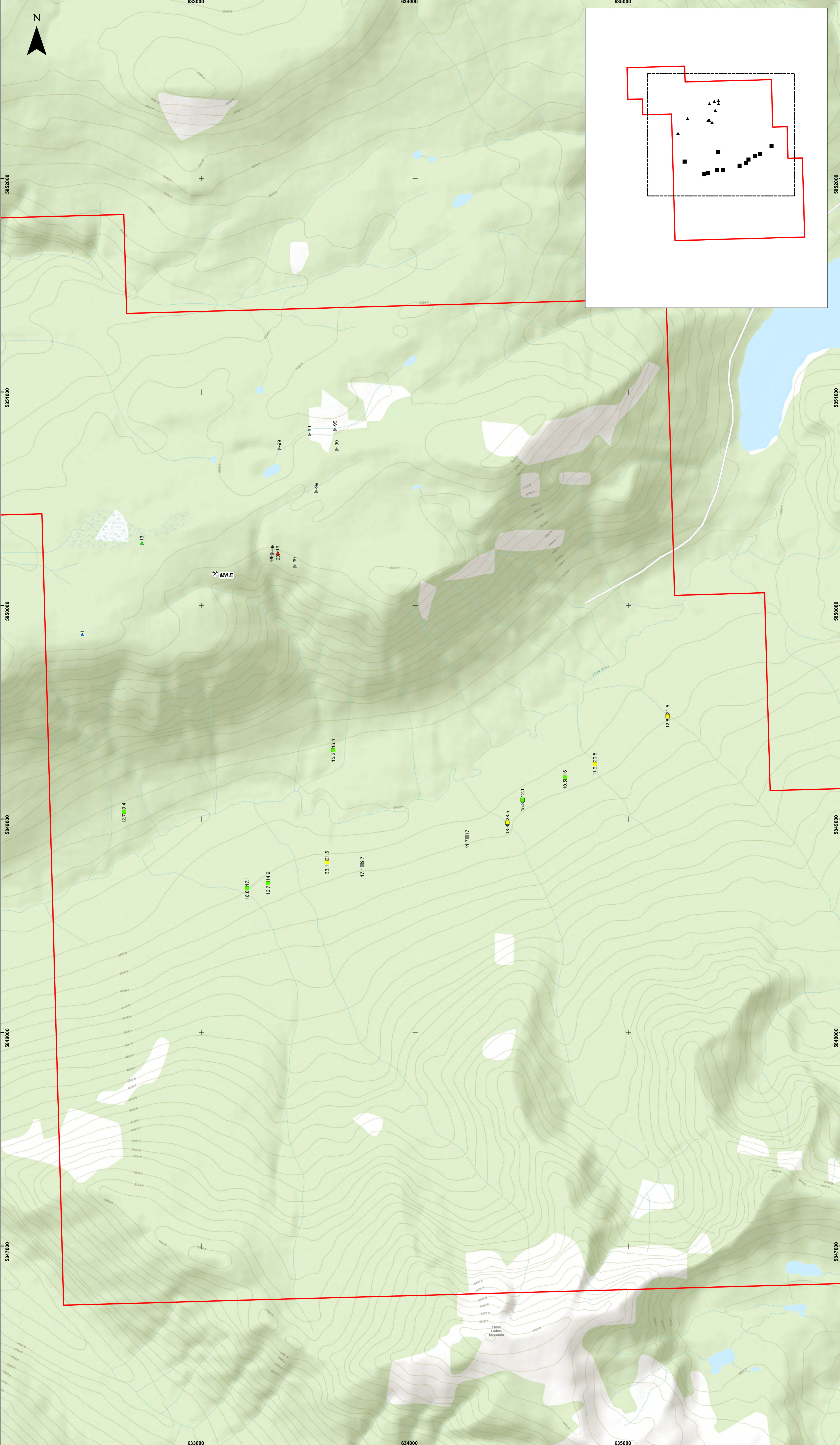
**2 Acres East Property 2022 Rock Sample & 2022 Sediment Sample Gold Results - Lab Results**

0 100 200  
Meters

1:8,000  
NAD83 UTM Zone 10N  
Date: 2022-12-22



Prepared by:  
SGDS HIVE



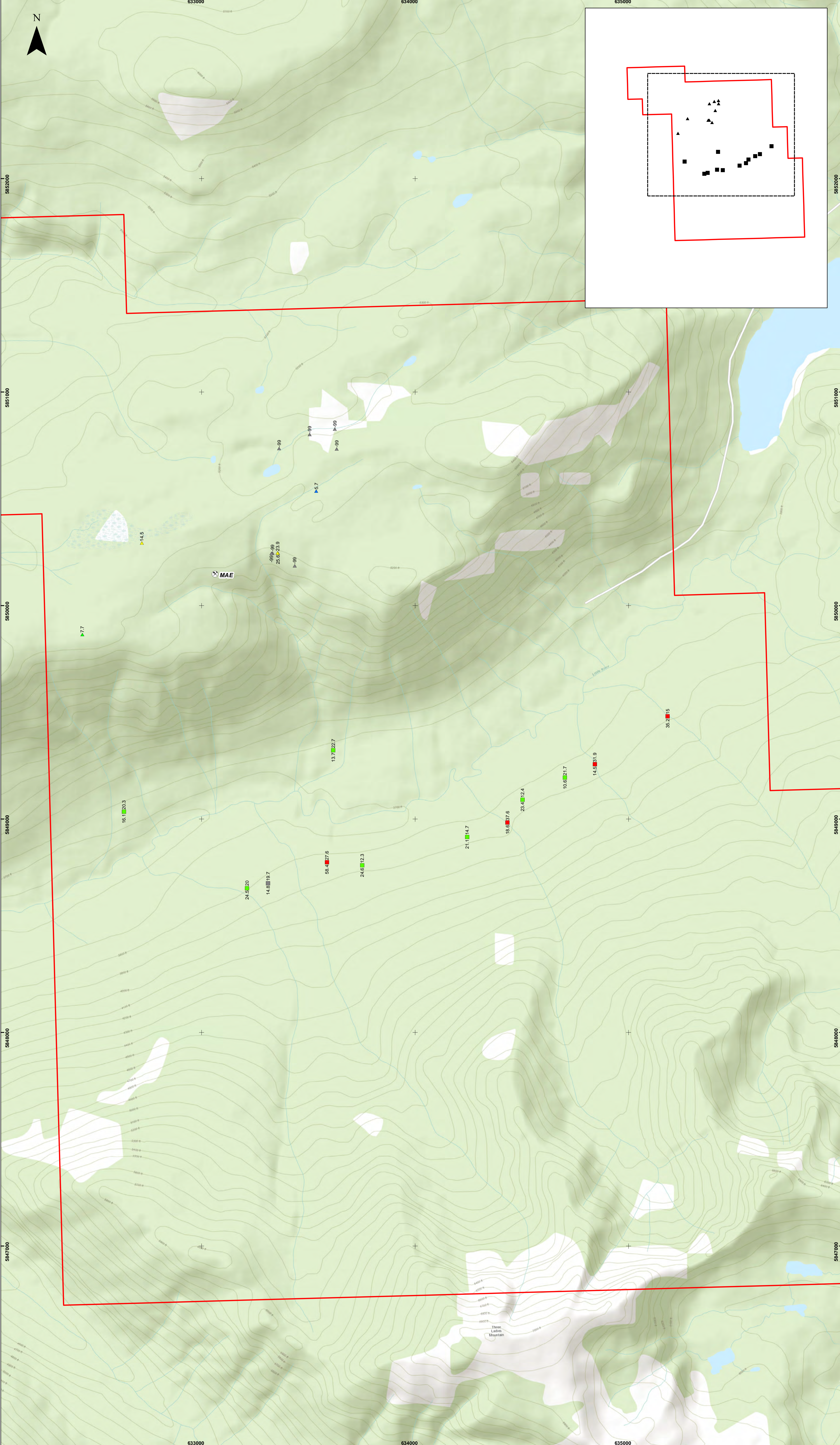
Minfile Occurrences  
 2 Acres East Tenure Outline  
**2022 Rock Sample Cobalt Results - Lab Analysis**  

- < Detection Limit (-99)
- 1 ppm Co
- 13 ppm Co
- 19 ppm Co
- 20 ppm Co

**2022 Sediment Sample Cobalt Results - Lab Analysis**  

- < 12 ppm Co
- 12 - 20 ppm Co
- > 20 ppm Co

**2 Acres East Property 2022 Rock Sample & 2022 Sediment Sample Cobalt Results - Lab Results**  
 0 100 200 Meters  
 1:8,000  
 NAD83 UTM Zone 10N  
 Date: 2022-12-22



⊗ Minfile Occurrences  
 2 Acres East Tenure Outline

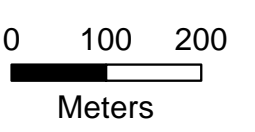
**2022 Rock Sample Copper Results - Lab Analysis**

- ▲ < Detection Limit (-99)
- ▲ Detection Limit - 7 ppm Cu
- ▲ 7 - 14 ppm Cu
- ▲ > 14 ppm Cu

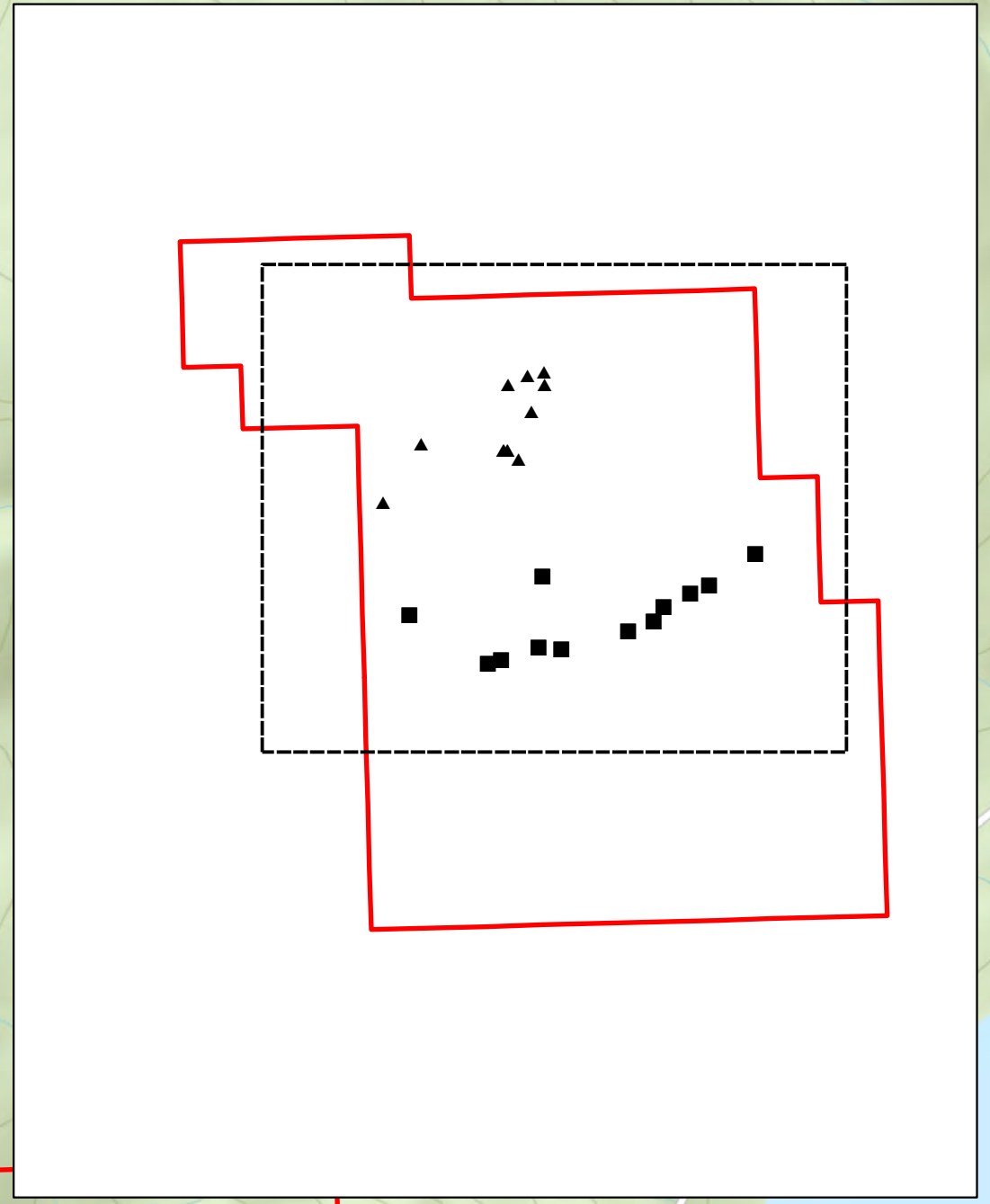
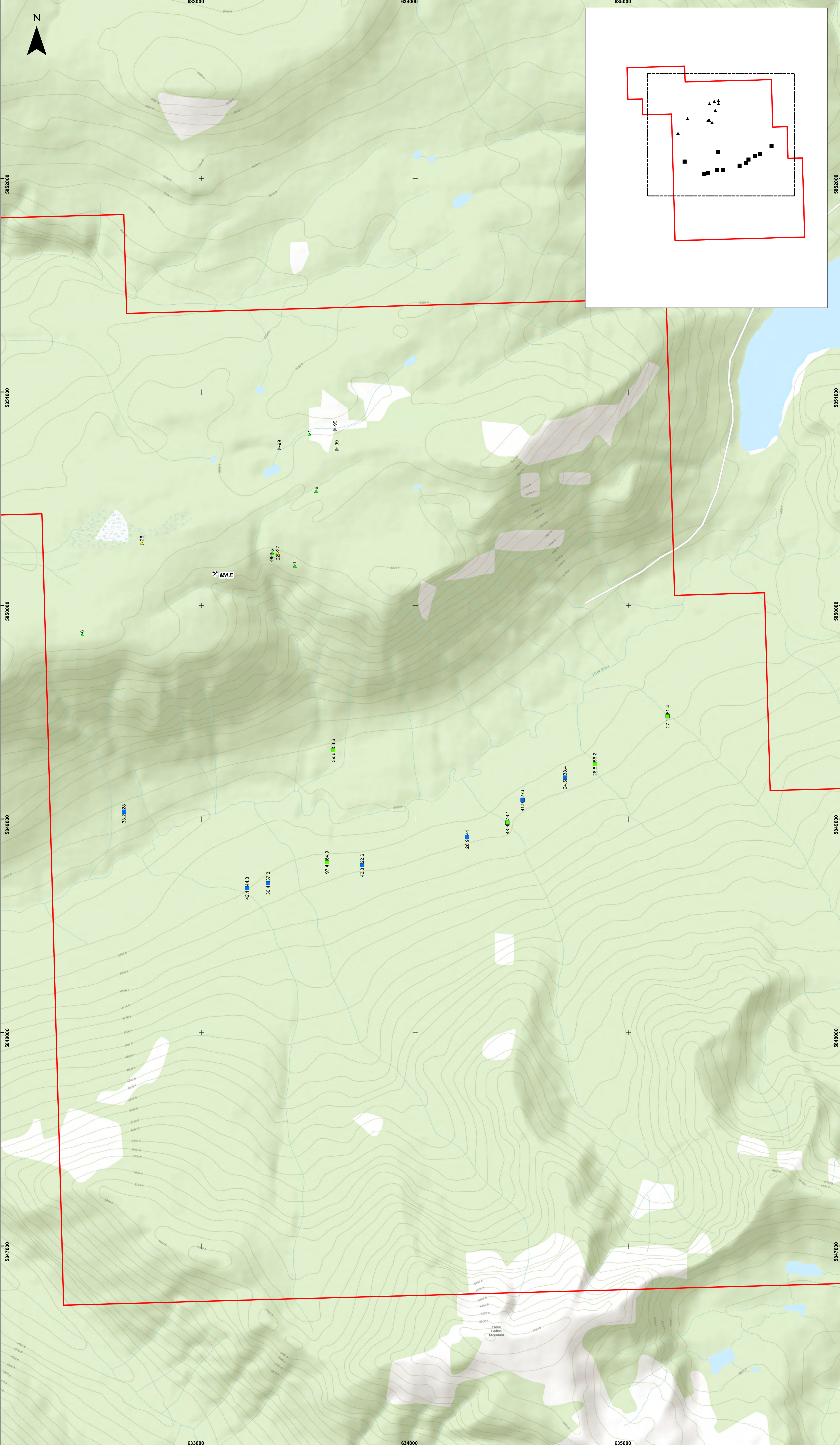
**2022 Sediment Sample Copper Results - Lab Analysis**

- < 20 ppm Cu
- 20 - 30 ppm Cu
- > 30 ppm Cu

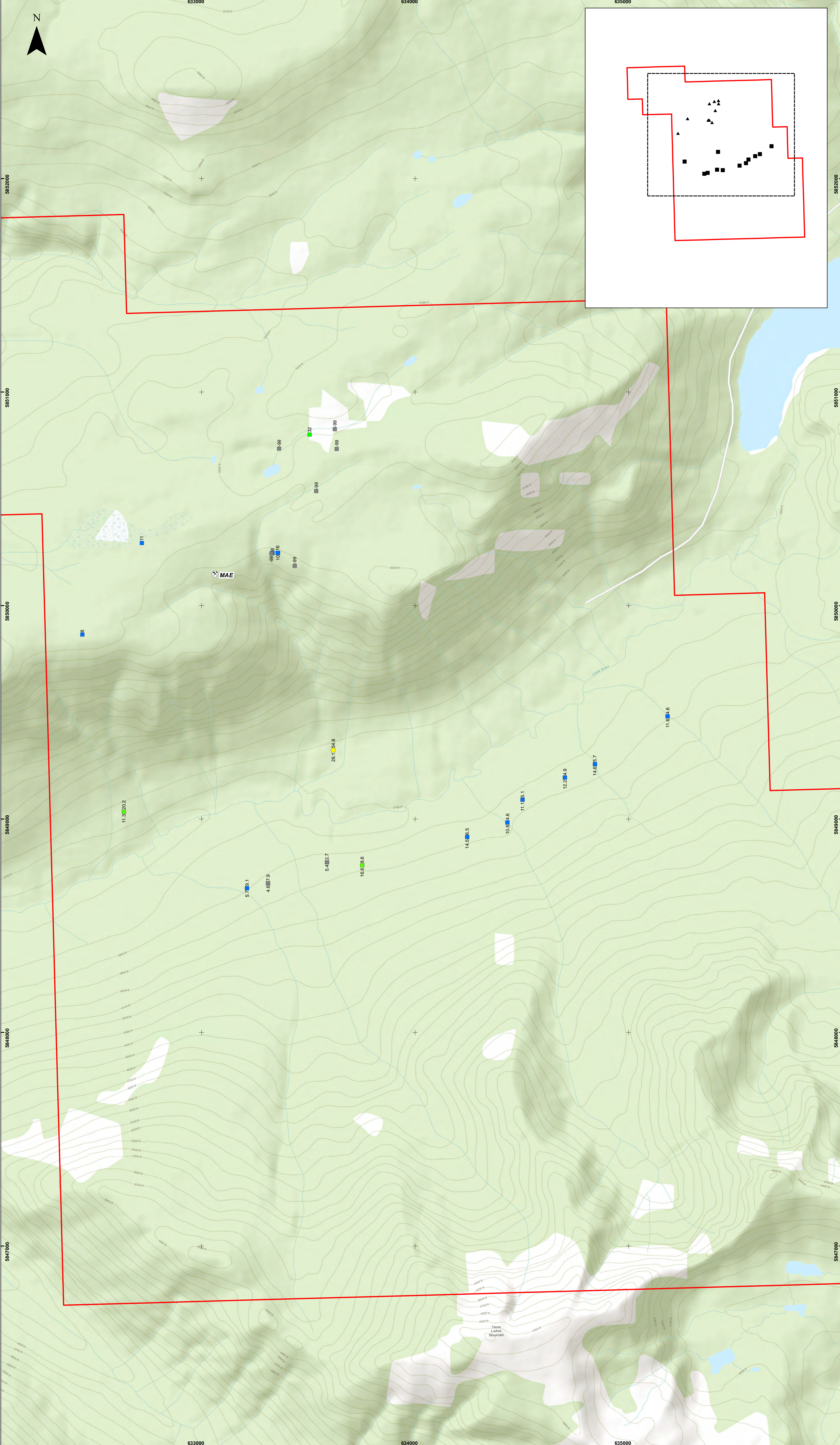
**2 Acres East Property 2022 Rock Sample & 2022 Sediment Sample Copper Results - Lab Results**



1:8,000  
 NAD83 UTM Zone 10N  
 Date: 2022-12-22



Minfile Occurrences  
 2 Acres East Tenure Outline  
**2022 Rock Sample Nickel Results - Lab Analysis**  
 < Detection limit (-99)  
 1 - 6 ppm Ni  
 22 - 27 ppm Ni  
**2022 Sediment Sample Nickel Results - Lab Analysis**  
 < 25 ppm Ni  
 25 - 50 ppm Ni  
 > 50 ppm Ni  
**2 Acres East Property 2022 Rock Sample & 2022 Sediment Sample Nickel Results - Lab Results**  
 0 100 200 Meters  
 1:8,000  
 NAD83 UTM Zone 10N  
 Date: 2022-12-22



5852000  
5851000  
5850000  
5849000  
5848000  
5847000



633000

634000

635000

633000

634000

635000

- Minfile Occurrences
- 2 Acres East Tenure Outline

**2022 Rock Sample Lead Results - Lab Analysis**

- < Detection Limit (-99)
- 8 - 16 ppm Pb
- 32 ppm Pb

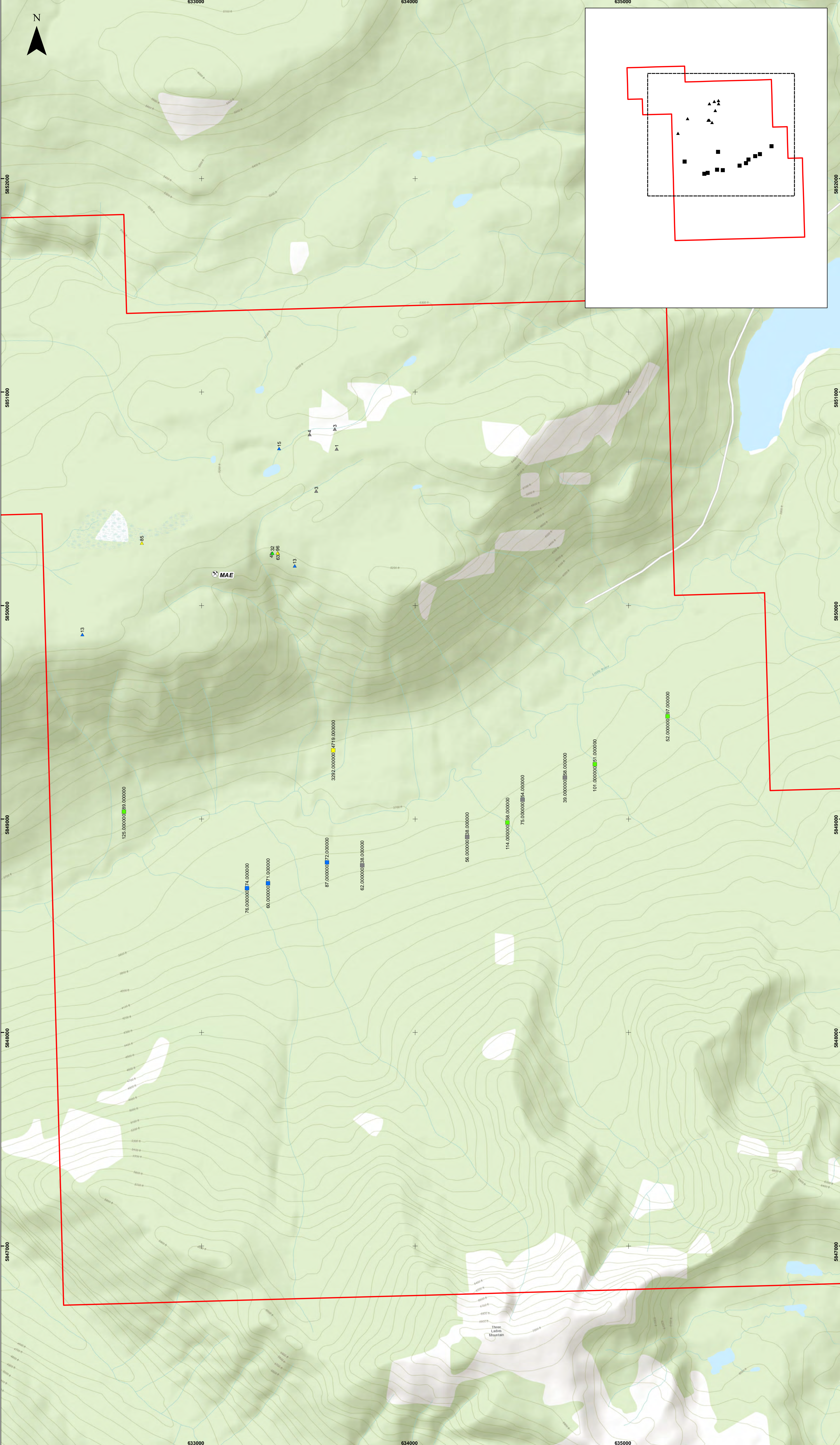
**2022 Sediment Sample Lead Results - Lab Analysis**

- < 9 ppm Pb
- 9 - 16 ppm Pb
- 16 - 26 ppm Pb
- > 26 ppm Pb

**2 Acres East Property 2022 Rock Sample & 2022 Sediment Sample Lead Results - Lab Results**

0 100 200  
Meters

1:8,000  
NAD83 UTM Zone 10N  
Date: 2022-12-22



**2 Acres East Tenure Outline**

**Minfile Occurrences**

**2022 Rock Sample Zinc Results - Lab Analysis**

- ▲ < 5 ppm Zn
- ▲ 5 - 30 ppm Zn
- ▲ 30 - 60 ppm Zn
- ▲ > 60 ppm Zn

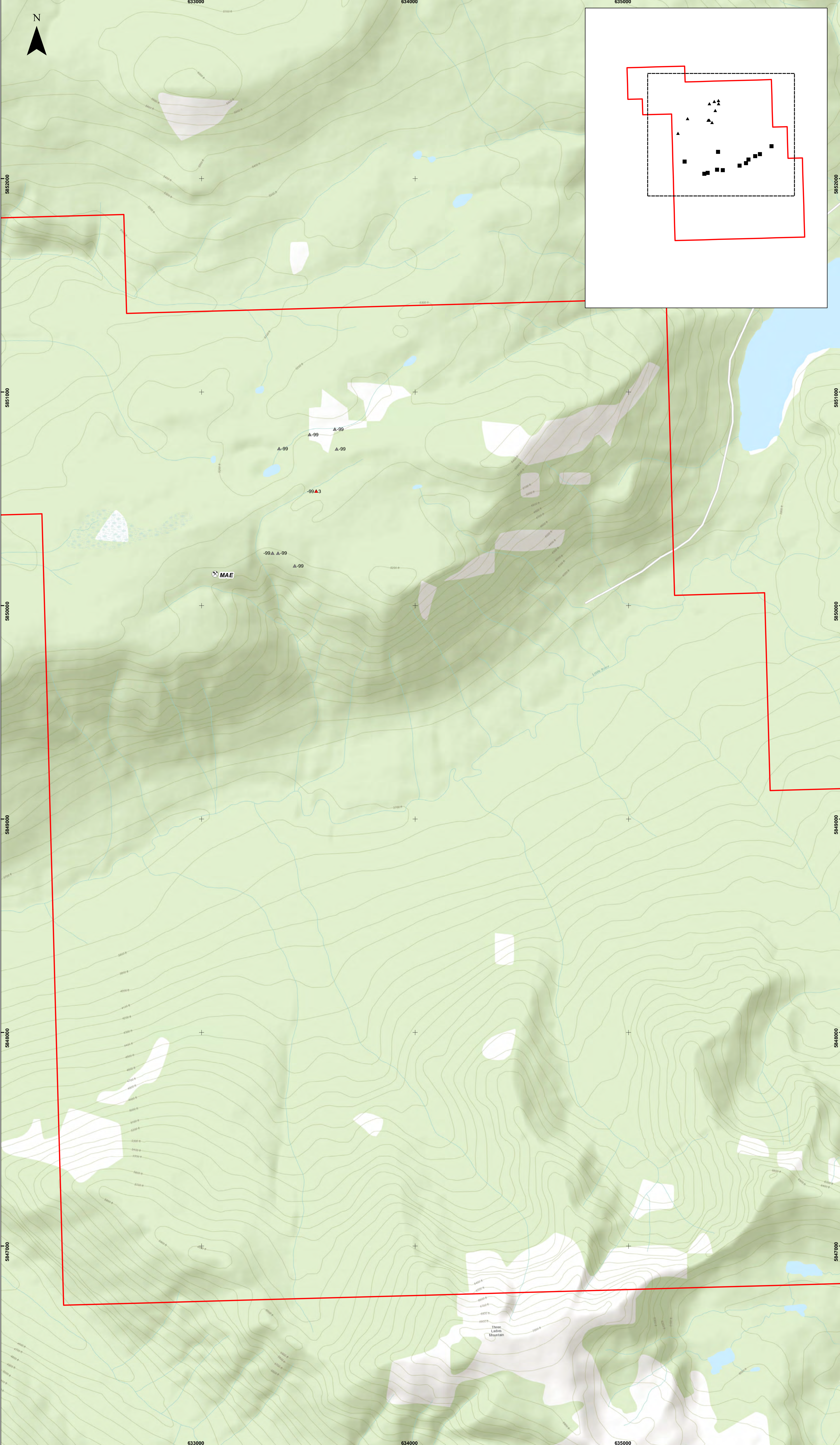
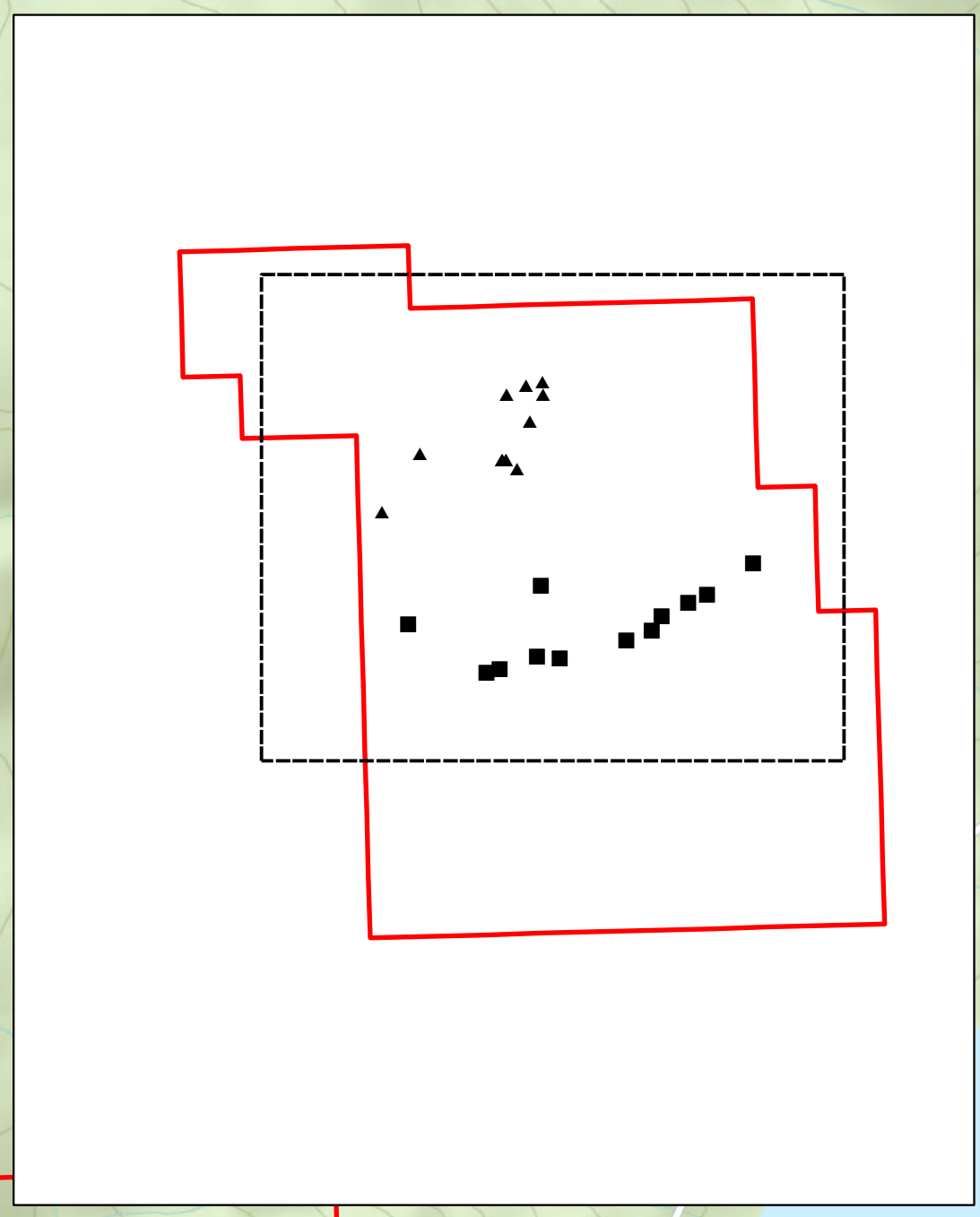
**2022 Sediment Sample Zinc Results - Lab Analysis**

- < 60 ppm Zn
- 60 - 90 ppm Zn
- 90 - 125 ppm Zn
- > 125 ppm Zn

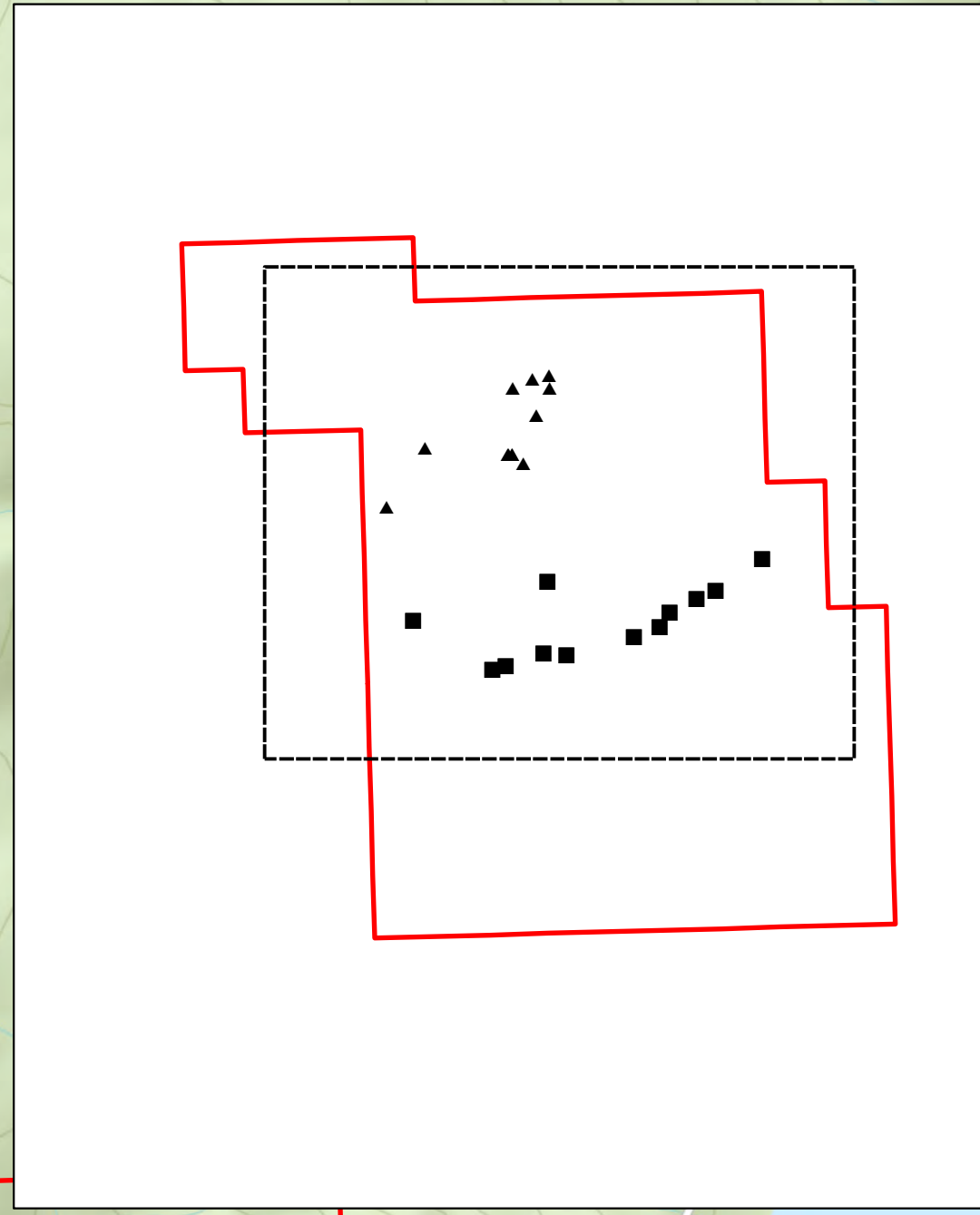
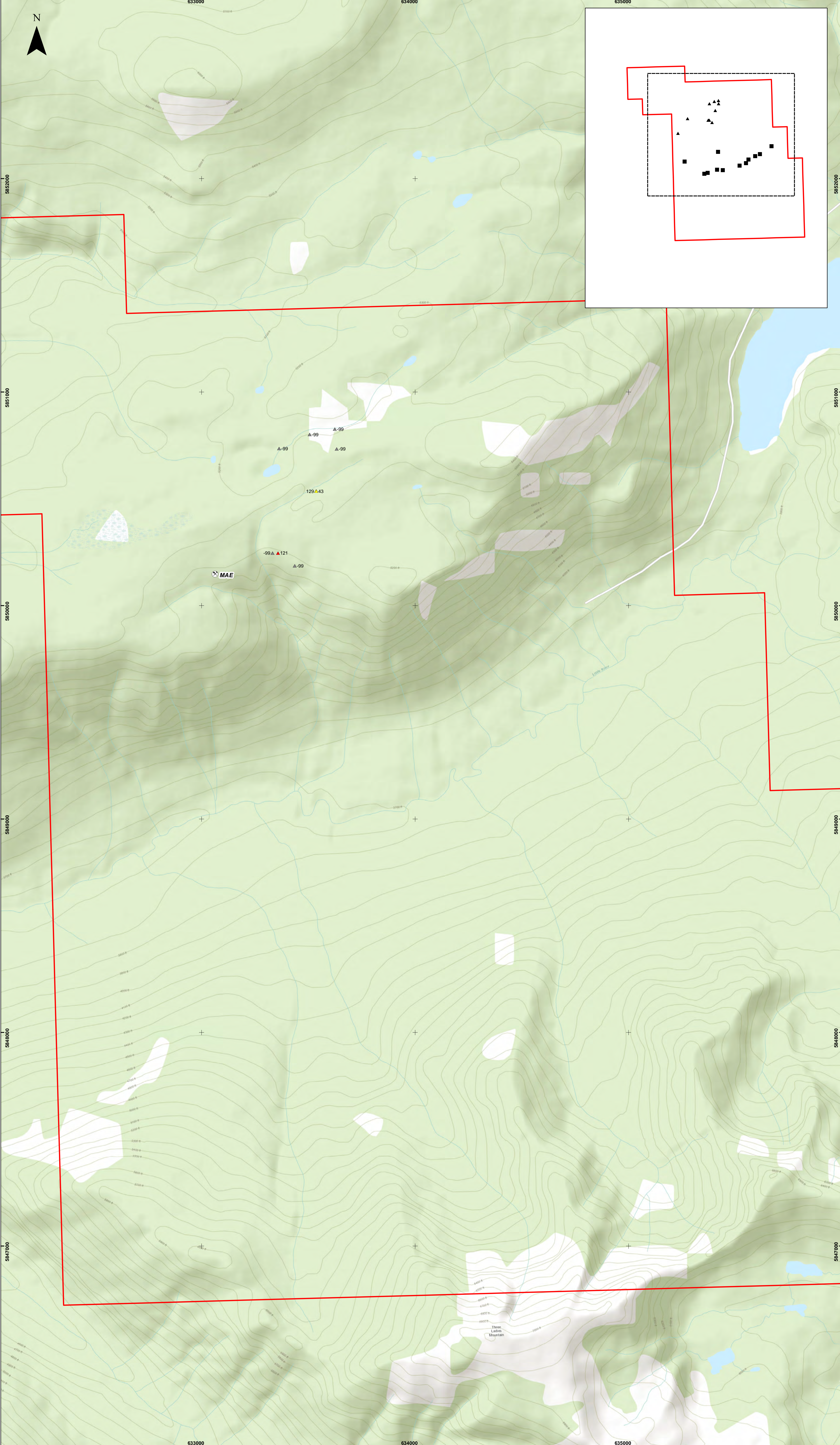
**2 Acres East Property 2022 Rock Sample & 2022 Sediment Sample Zinc Results - Lab Results**

0 100 200  
Meters

1:8,000  
NAD83 UTM Zone 10N  
Date: 2022-12-22

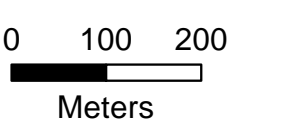


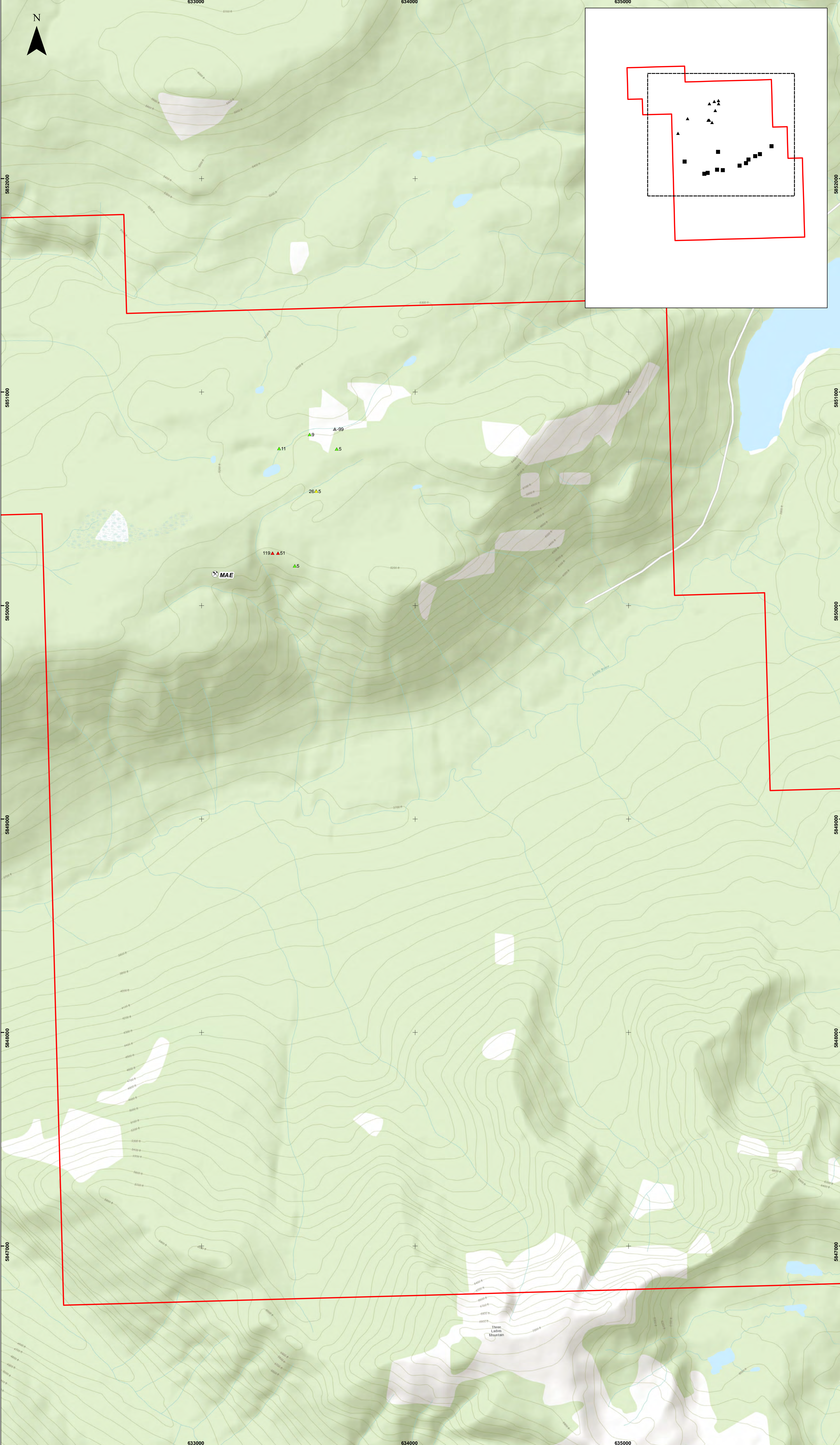
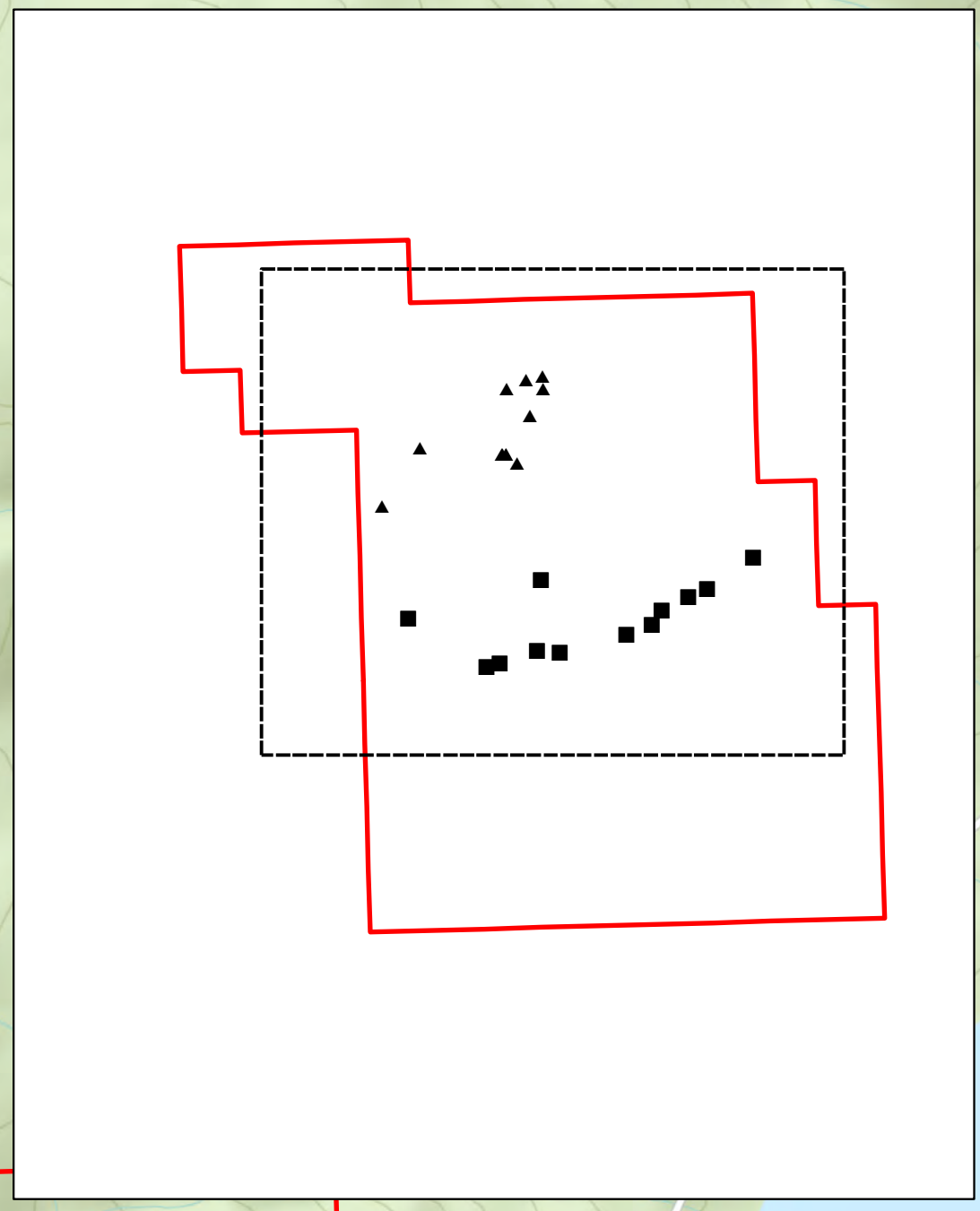
- Minfile Occurrences
- 2 Aces East Tenure Outline
- 2022 Rock Sample Silver Results - XRF Analysis**
- < Lower Detection (-99)
- 3 ppm Ag
- 2 Aces East Property 2022 Rock Sample Silver Results - XRF Results**
- 0 100 200  
Meters
- 1:8,000  
NAD83 UTM Zone 10N  
Date: 2022-12-23



- Minfile Occurrences
- 2 Acres East Tenure Outline
- 2022 Rock Sample Copper Results - XRF Analysis**
- < Detection Limit (-99)
- Detection Limit - 40 ppm Cu
- 40 - 100 ppm Cu
- > 100 ppm Cu

**2 Acres East Property  
2022 Rock Sample  
Copper Results - XRF Results**





585000  
5851000  
5852000  
5853000  
5854000  
5855000  
5856000  
5857000  
5858000  
5859000  
5860000  
5861000  
5862000  
5863000  
5864000  
5865000  
5866000  
5867000  
5868000  
5869000  
5870000

633000  
634000  
635000

- Minfile Occurrences
- 2 Acres East Tenure Outline

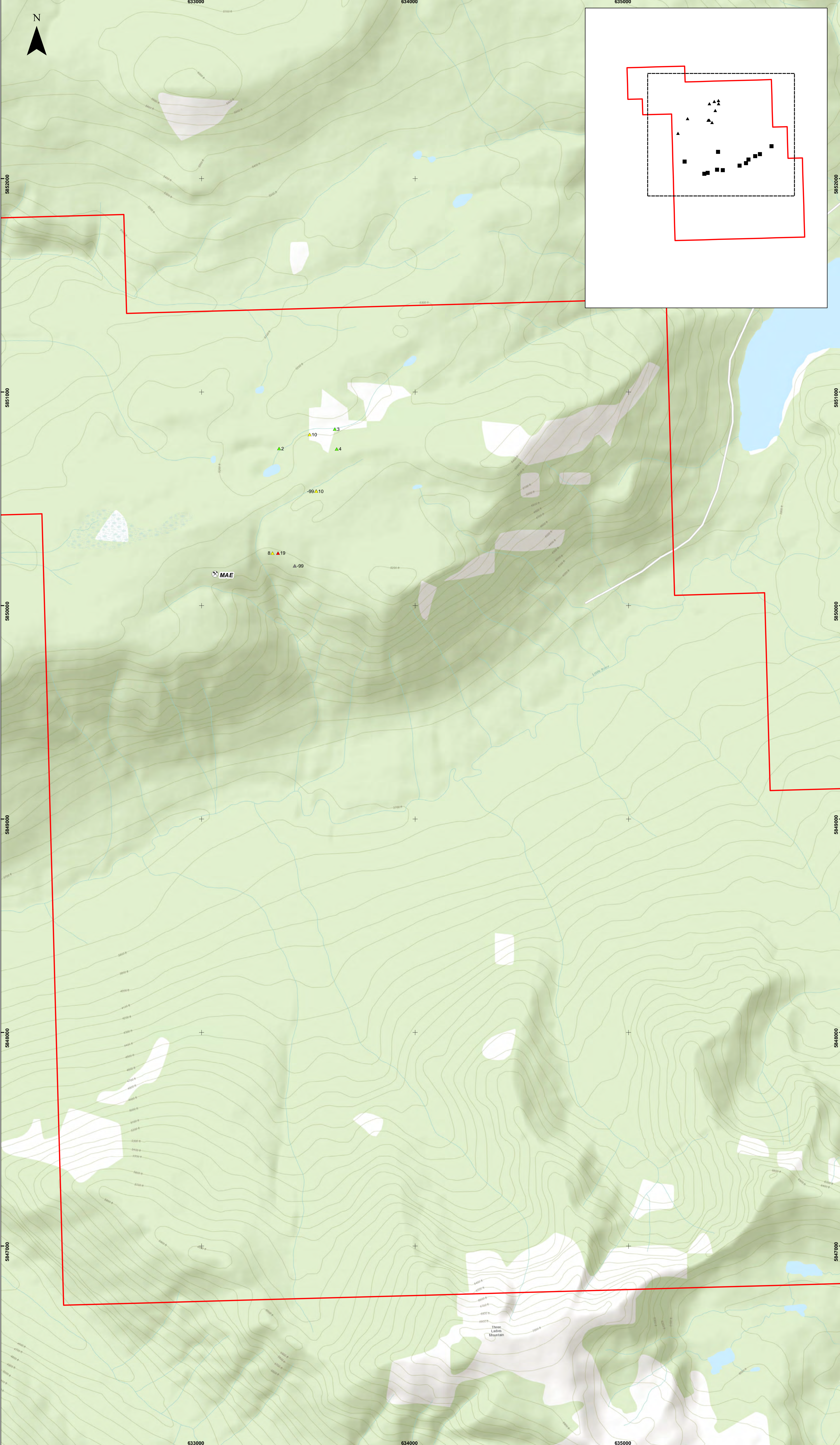
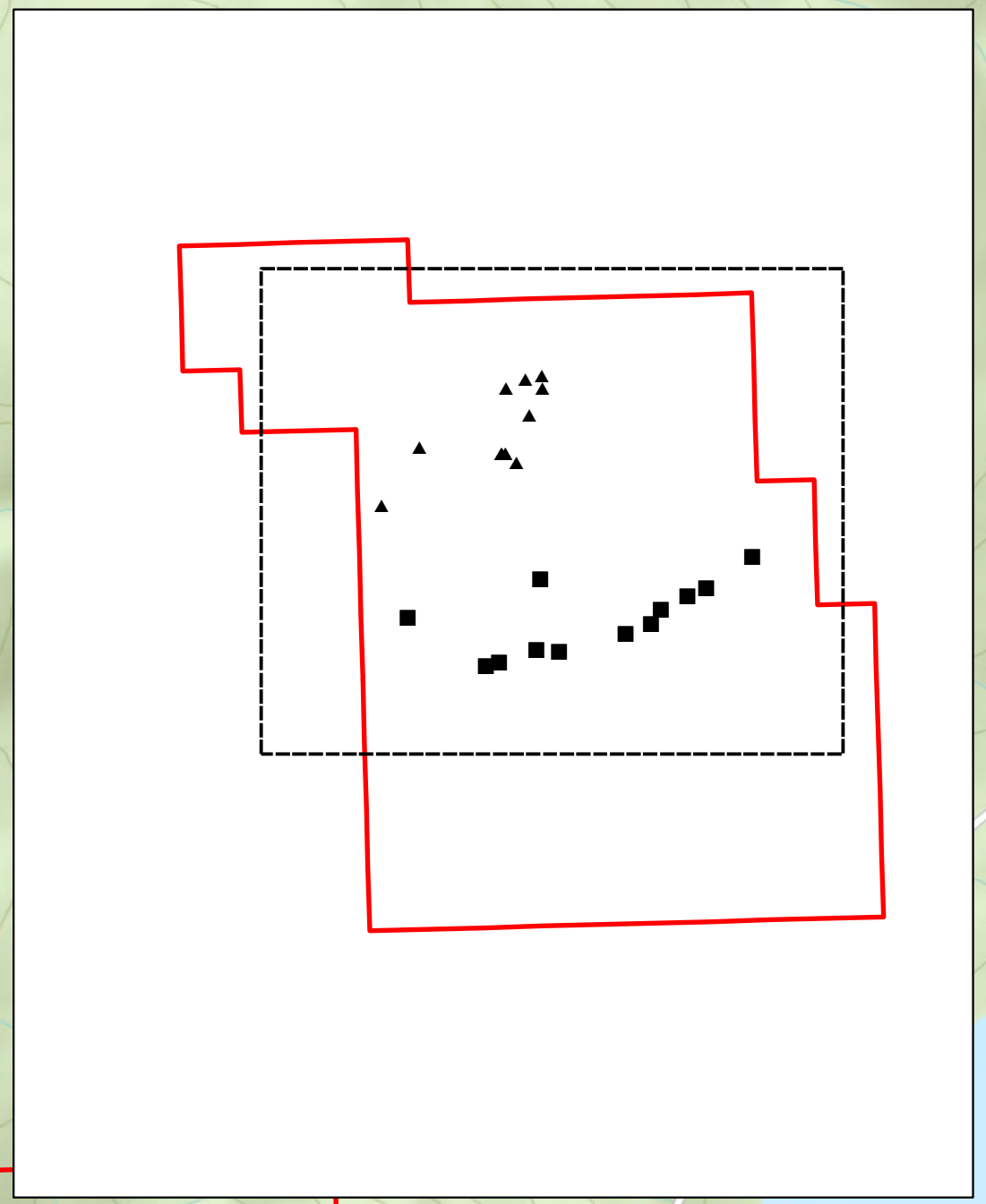
**2022 Rock Sample Zinc Results - XRF Analysis**

- < Detection Limit (-99)
- Detection Limit - 25 ppm Cu
- 25 - 50 ppm Cu
- > 50 ppm Cu

**2 Acres East Property 2022 Rock Sample Zinc Results - XRF Results**

0 100 200  
Meters

1:8,000  
NAD83 UTM Zone 10N  
Date: 2022-12-23

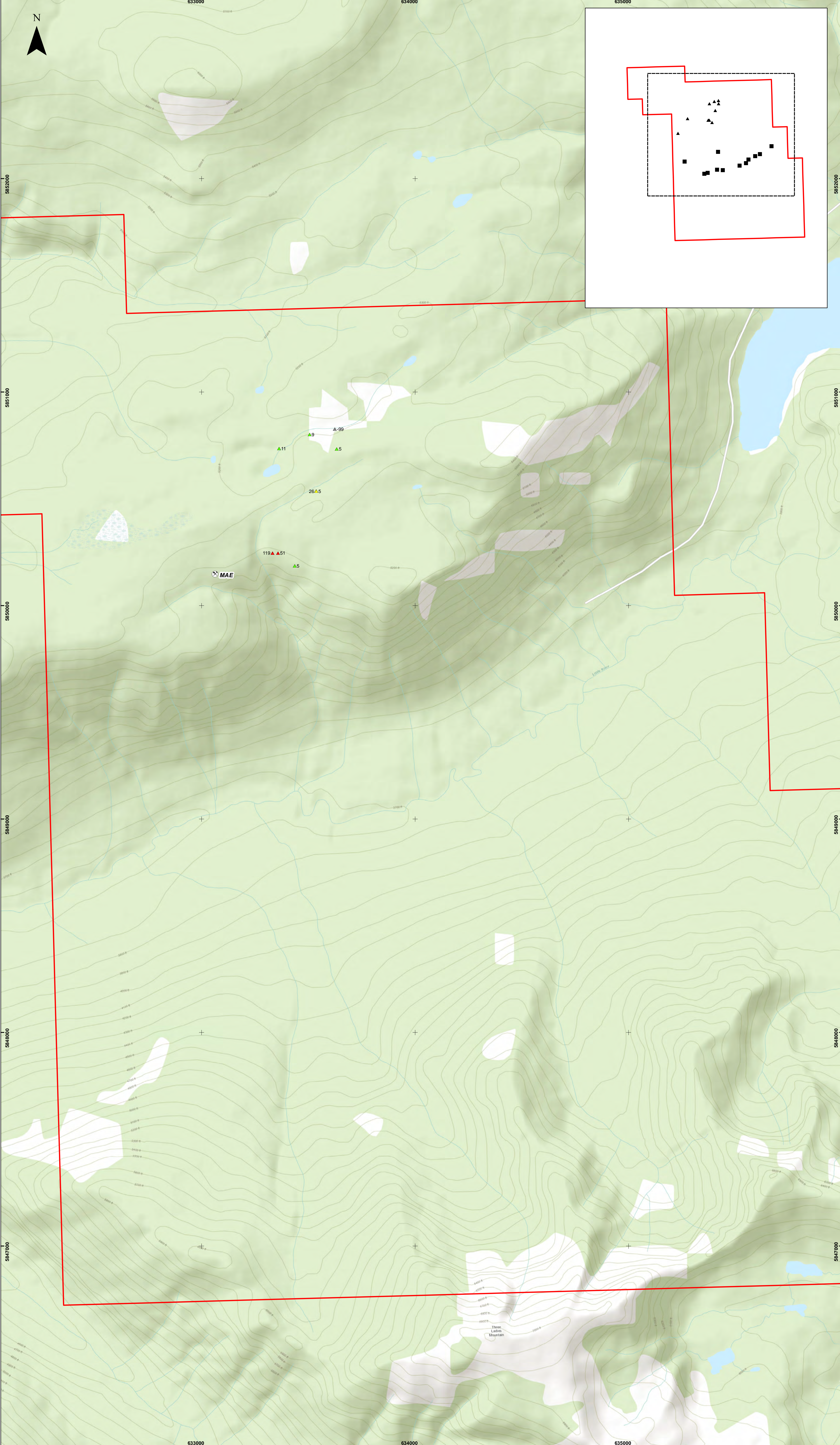
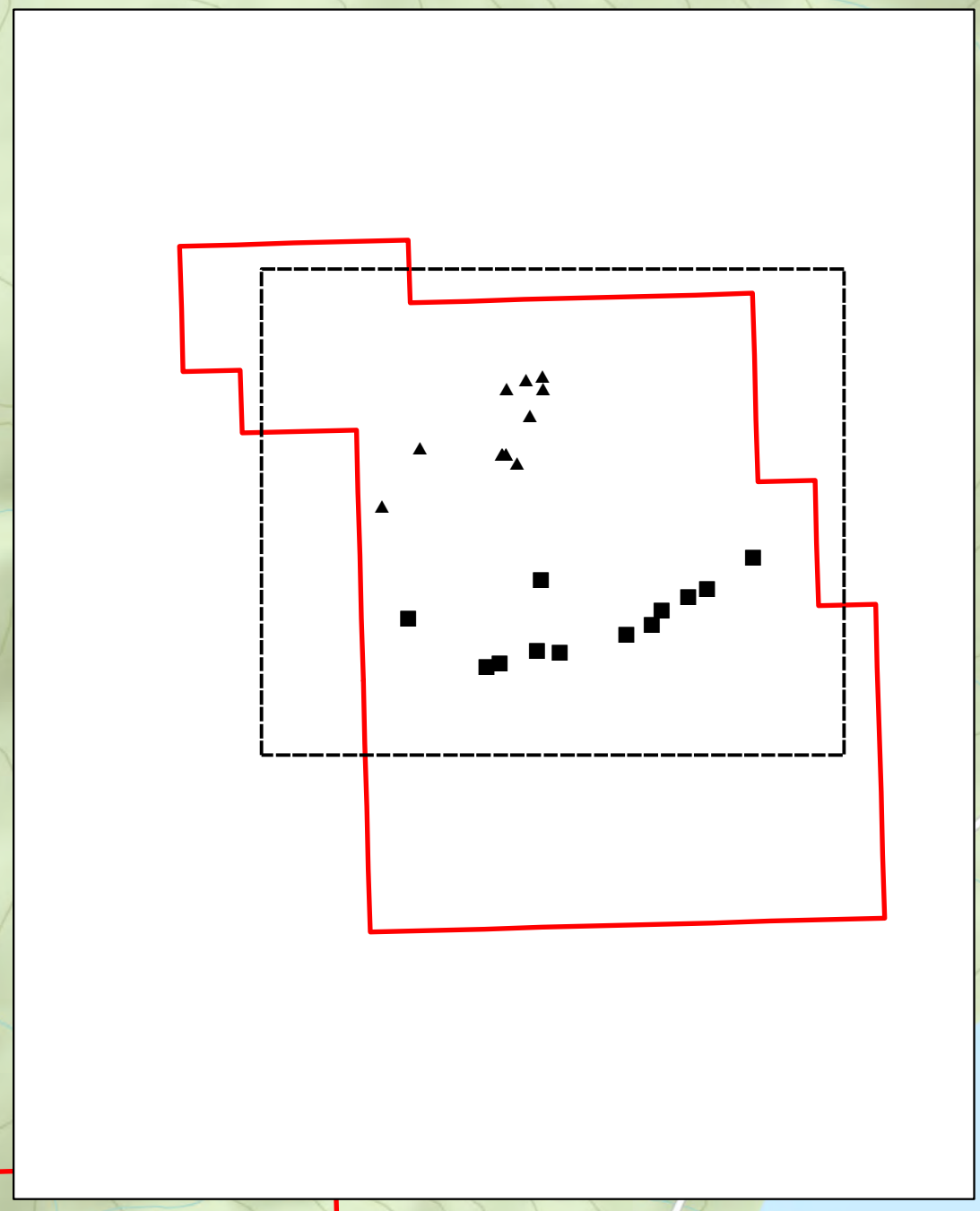


- Minfile Occurrences
- 2 Acres East Tenure Outline
- 2022 Rock Sample Lead Results - XRF Analysis**
- < Detection Limit (-99)
- Detection Limit - 5 ppm Pb
- 5 - 10 ppm Pb
- > 10 ppm Pb

**2 Acres East Property 2022 Rock Sample Lead Results - XRF Results**

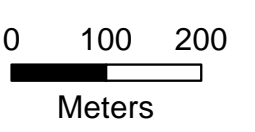
0 100 200  
Meters

1:8,000  
NAD83 UTM Zone 10N  
Date: 2022-12-23



- Minfile Occurrences
- 2 Acres East Tenure Outline
- 2022 Rock Sample Zinc Results - XRF Analysis**
- < Detection Limit (-99)
- Detection Limit - 25 ppm Cu
- 25 - 50 ppm Cu
- > 50 ppm Cu

**2 Acres East Property  
2022 Rock Sample  
Zinc Results - XRF Results**



APPENDIX I - CAMPBELL AND WALKER 2021 GEOPHYSICAL REPORT 2  
ACES EAST (2 ACES).

**2 ACES PROPERTY  
ASSESSMENT REPORT**

**AEROMAGNETIC SURVEY**

**CARIBOO MINING DIVISION  
BRITISH COLUMBIA**

**121° 17' 4.5" W, 52° 45' 28.6" N to 120° 58' 37.8" W, 52° 52' 15.8" N  
615,760 mE, 5,846,723 mN to 636,150 mE, 5,859,844 mN  
NTS MAP SHEETS: 093A/14-15**

**PREPARED FOR:**

**Hawkeye Gold & Diamond Inc.**

**SUITE 202, 1985 ALBERNI STREET  
VANCOUVER, BRITISH COLUMBIA V6G 0A2**

**PREPARED BY:**

**C. CAMPBELL, P.GEO., GEOPHYSICIST**

**SUBMITTED: 08 OCTOBER MARCH 2021**



**Campbell & Walker**  
**Geophysics Ltd.**

## SUMMARY

A combined magnetic and gamma-ray spectrometry survey over the 2 Aces property of Hawkeye Gold & Diamond Inc. acquired approximately 502 line-km of helicopter-borne geophysical data over a 7-day period in November–December 2018. The survey covers 10 active and good-standing claims amounting to approximately 5,394 ha located in the Cariboo Mining District, British Columbia.

The magnetic survey has provided valuable structural and geological information. A suite of filters and derivatives have been applied to the aeromagnetic gridded data, followed by a multiscale edge detection and automated grid ‘fractal’ analysis to identify regions prospective for gold mineralization based upon structural complexity as inferred from magnetics being indicative of significant faults, shears.

Due to the relatively high costs and slow progress, ground geophysics should be constrained in terms of follow-up to the investigation of discrete target zones themselves representing anomalous soil geochemistry and/or airborne geophysical anomalies.

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- Appendix A      Geotech Ltd., January 2019, Report on a helicopter-borne aeromagnetic geophysical survey, Project GL180345, 23 p.

# 1 INTRODUCTION

A helicopter-borne magnetic survey was flown over the 2 Aces claims by Geotech Ltd. for Hawkeye Gold & Diamond Inc. The airborne geophysics was undertaken and completed in 7 days of actual flying spread over a longer period, November 16 to December 07, 2018; final results were delivered in January 2019. A subsequent interpretation and report of this data was completed by Campbell & Walker Geophysics Ltd. in September–October 2021. The survey coverage amounts to 502.410 line-kilometres spread over 5,033.7 hectares.

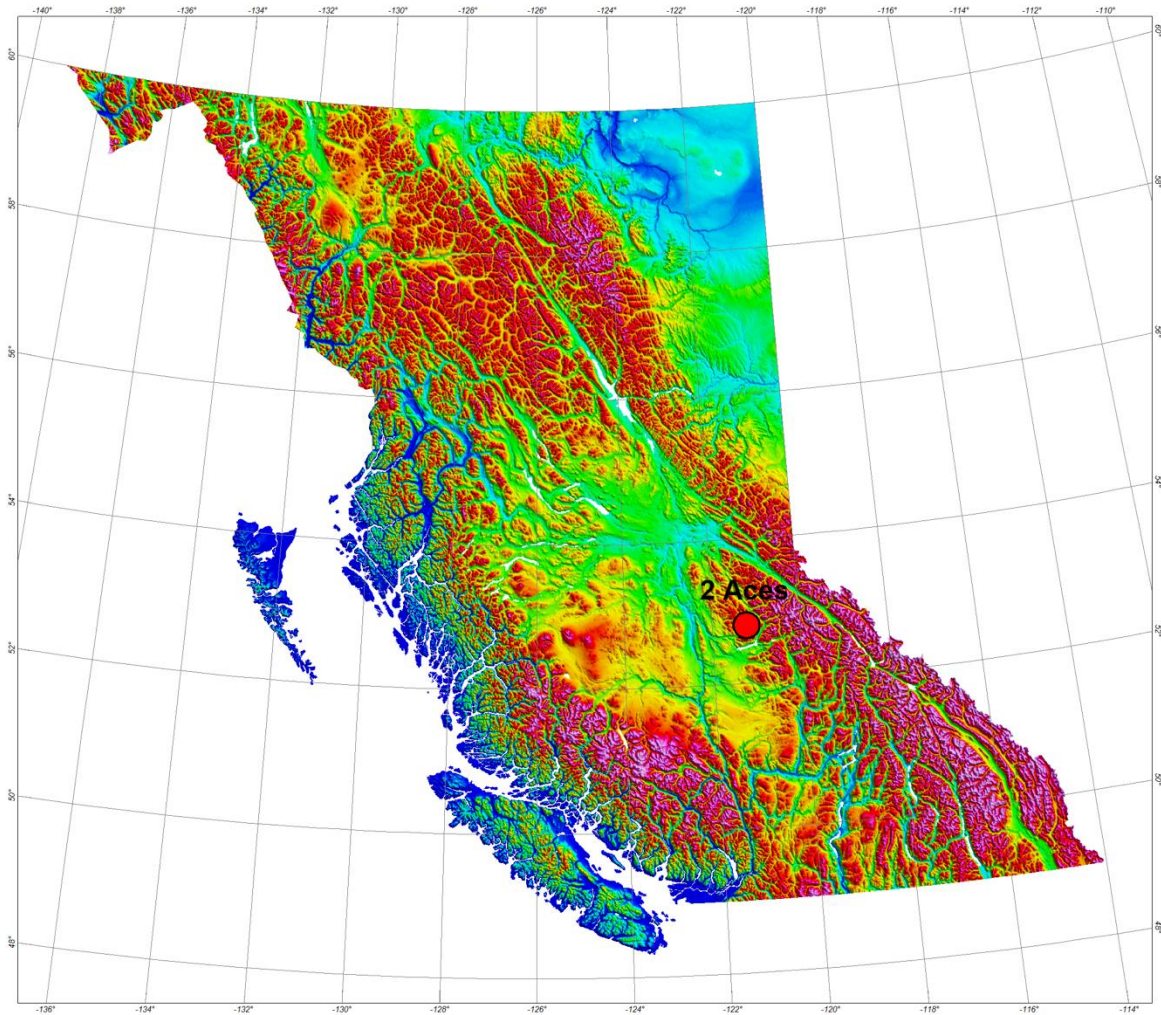


Figure 1. Location Map

## 2 AIRBORNE GEOPHYSICS

### 2.1 Acquisition and Processing

As stated in the Introduction, Geotech Ltd. was contracted to carry out a program of detailed airborne magnetics in November–December, 2018; The program was completed in 7 days of actual flying spread over a 3-week period. Technical issues at mobilization and in the initial start-up calibration/test flights plus inclement weather adversely impacted the overall production. A total of 502.410 line-kilometres was acquired on traverse lines oriented 090°/270° at 150 m intervals tied by 000°/360° control lines at 1,500 m spacing. Mean terrain clearance achieved was 72.4 m, approximately equivalent to half the traverse line spacing.

The base of operations for this airborne program was the airstrip at Likely, southwest of the survey block. Data was acquired using an Aerospatiale A-Star 350 B2, registration C-GXAH, at a nominal (contractual) height of 75 m, mean terrain clearance. The relatively rugged terrain and requirements for safe operations given the weather conditions precluded significantly lower flying heights.

Projection and Datum Specifications for East and West:

Map projection	NUTM10
Datum	WGS84
Central meridian	123° West
False Easting	500000 m
False Northing	0 m
Scale Factor	0.9996 m

The aeromagnetic data was subjected to standard heading, lag, and diurnal corrections; tie-line levelling and micro-levelling were then applied, followed finally by an IGRF correction. A calculated vertical gradient and digital elevation model were additionally generated by the Contractor.

## 2.2 Data Presentation and Imaging

The digital files have been provided in two formats, both as a Geosoft \*.gdb file and as ASCII \*.xyz files. Full descriptions of the digital data and contents are included in the contractor's report (Appendix A).

The digital data were gridded after standard processing and corrections and presented as Geosoft \*.grd grid files, as listed below:

- Total Magnetic Intensity (TMI)
- Calculated Vertical Gradient (CVG) - first vertical derivative of TMI
- Digital Elevation Model (DEM)

Representative images are shown following for each survey; additional maps/images are provided by the Contractor as \*.pdf files in in Appendix A.

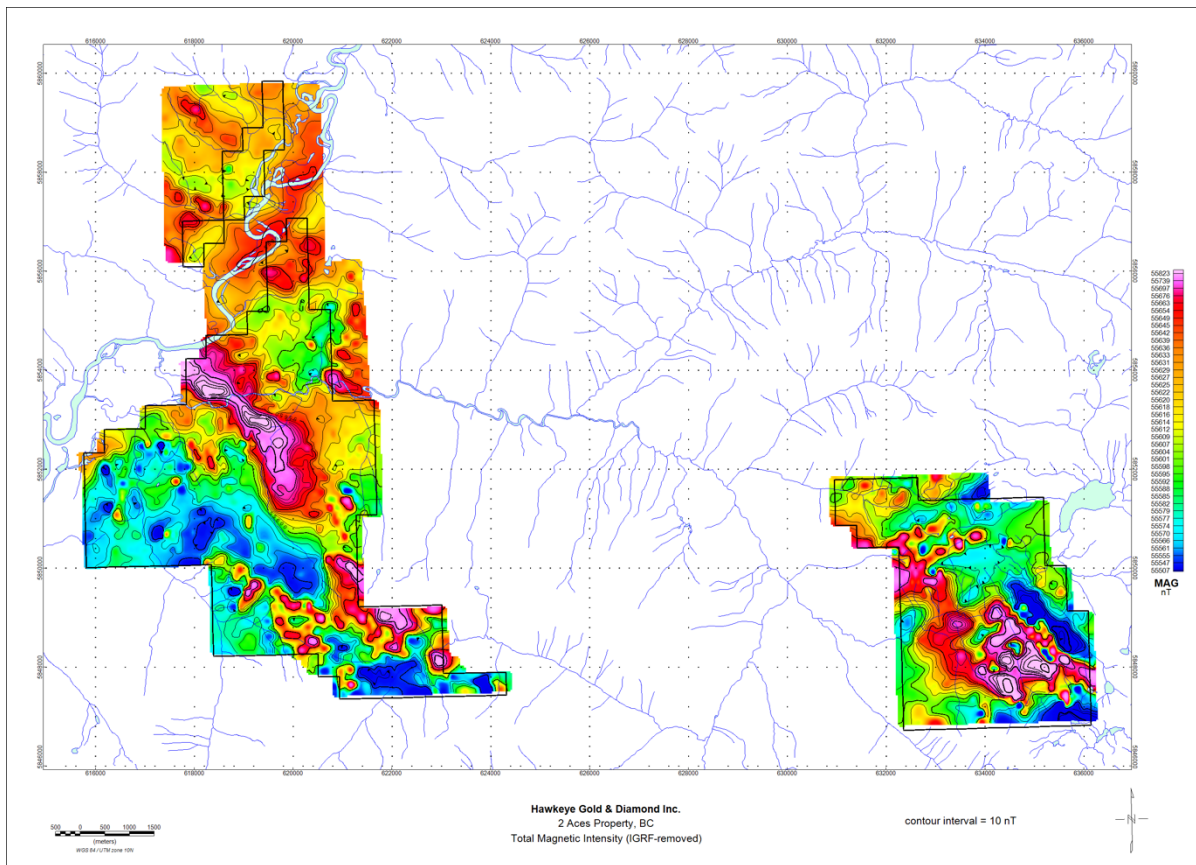


Figure 2. Residual Magnetic Intensity (total field w/ IGRF removed)

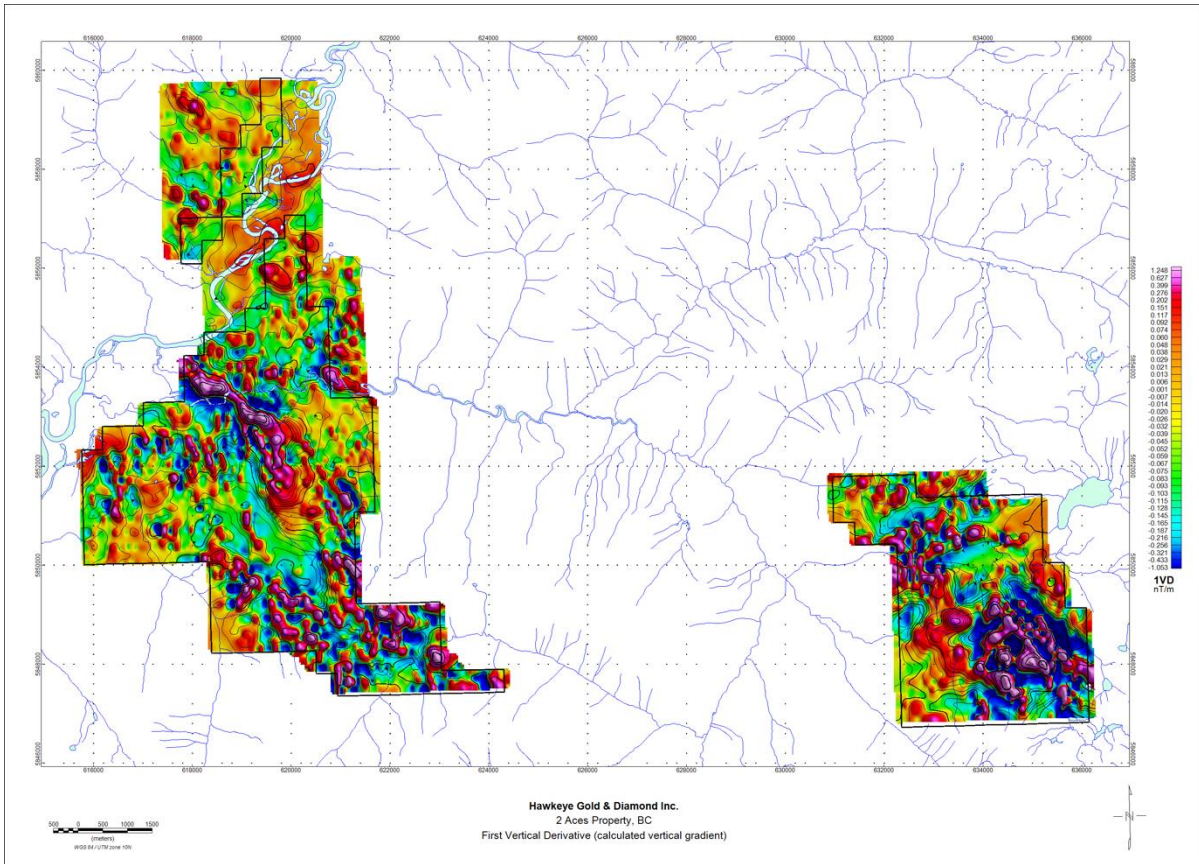


Figure 3. First Vertical Derivative (calculated vertical gradient)

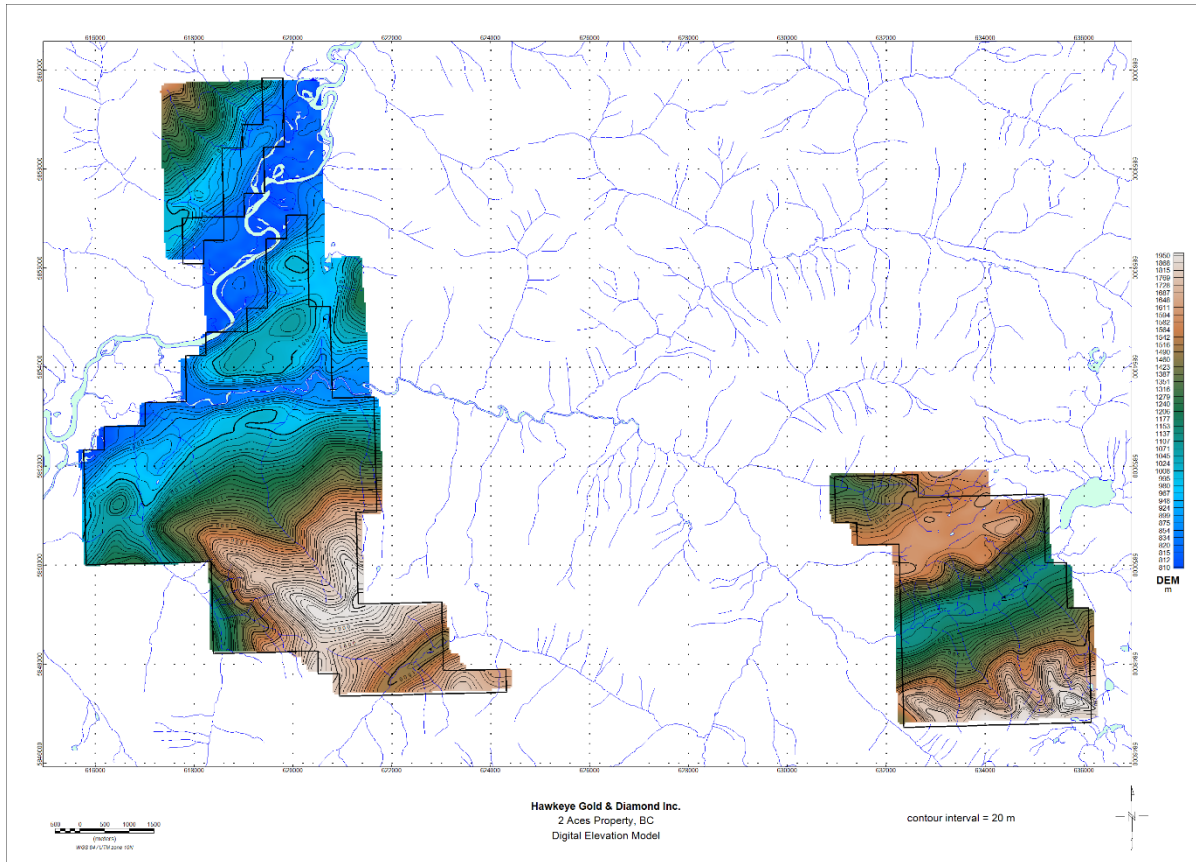


Figure 4. Digital Elevation Model

## 2.3 Interpretation

The aeromagnetic grids and images were examined particularly with a view to delineating and extracting indications of possible structural fabric on the premise that structural analysis plays a key role in resource exploration. Almost all styles of mineral deposits and hydrocarbon accumulations are controlled either directly or indirectly by some form of structural focus.

The reduced-to-pole ('RTP') grid often if not normally comprises the basis for these analyses. RTP is a fundamental process which, in most situations, yields imagery representing the geometry of magnetic rock units better than TMI data. Its physical basis is sourced in potential field theory (Baranov and Naudy, 1957) and where it can be successfully applied numerically it is considered a 'must' for the interpreter; in essence, the dipolar nature of magnetic anomalies is removed and peak RTP magnetic values relate more closely to the centre of magnetic rock bodies and asymmetries in the RTP imagery more closely reflect true dips and plunges (Isles and Rankin, 2013).

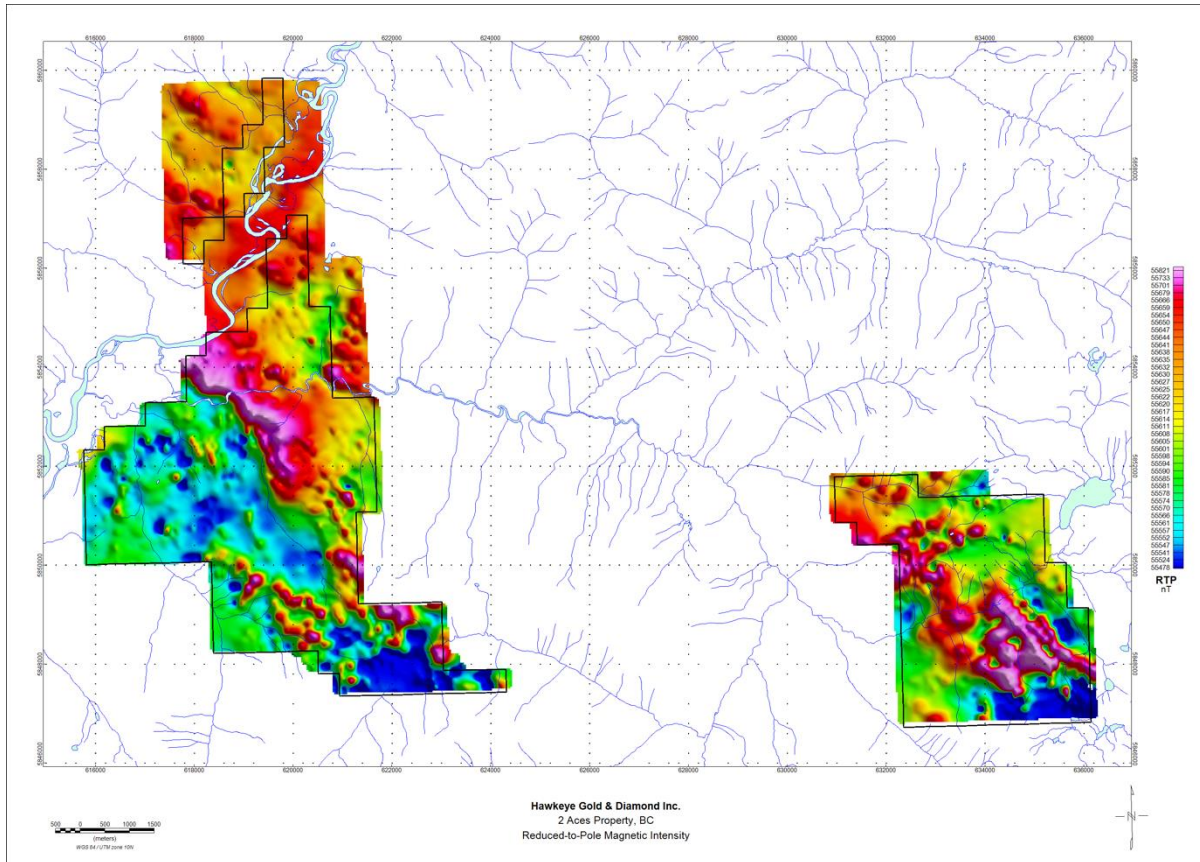


Figure 5. Reduced-to-Pole Magnetic Intensity

The goal of RTP is to simplify magnetic maps – essentially making them appear to be more like gravity maps. In practice, RTP is complicated because anomalies may be rotated by tectonism, rocks of different ages may be reverse or normally polarized and related factors. A further complication arises as the essentially 2D FFT is being here applied in an area of significant topographic relief (i.e., ~1,200 m), inherently non-2 dimensional and thus non-conforming to the underlying assumptions of a 2D fourier operator. Although the derivatives in this study are all based on the reduced-to-pole magnetic intensity, some caution as to precise locations of specific features should be exercised. However, as the mean inclination of the Earth’s field on the 2 Aces property is ~73.1° (considered to be a relatively ‘high’ inclination), large displacements of anomalies are not anticipated.

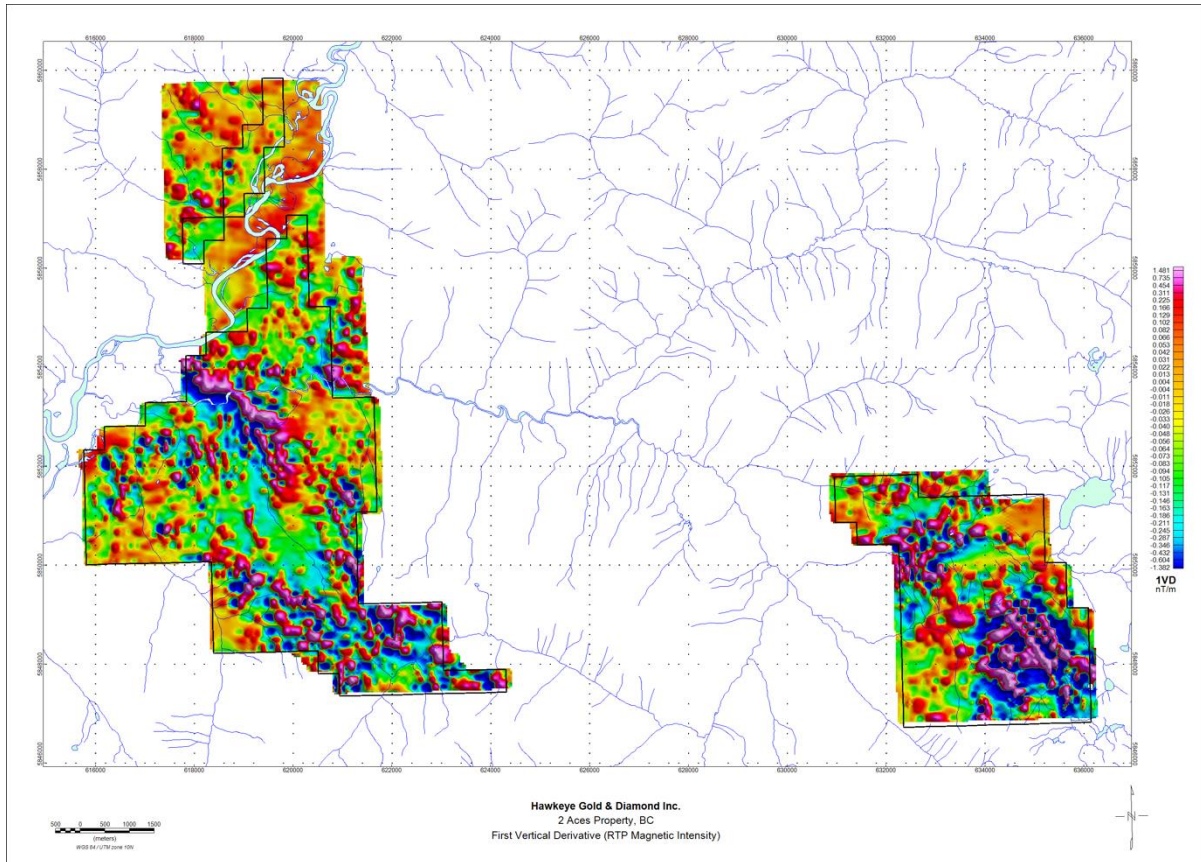


Figure 6. First Vertical Derivative (RTP Magnetic Intensity)

The RTP magnetic intensity was passed through several derivatives and filters, selected images shown above and following. The first vertical derivative or 1VD (shown above) is a common high-pass filter; both northwest and cross-cutting northeast linear features are accordingly mapped. The total horizontal derivative or THD (shown below) yields further information, with a maxima on both flanks of a feature as opposed to the 1VD single maxima.

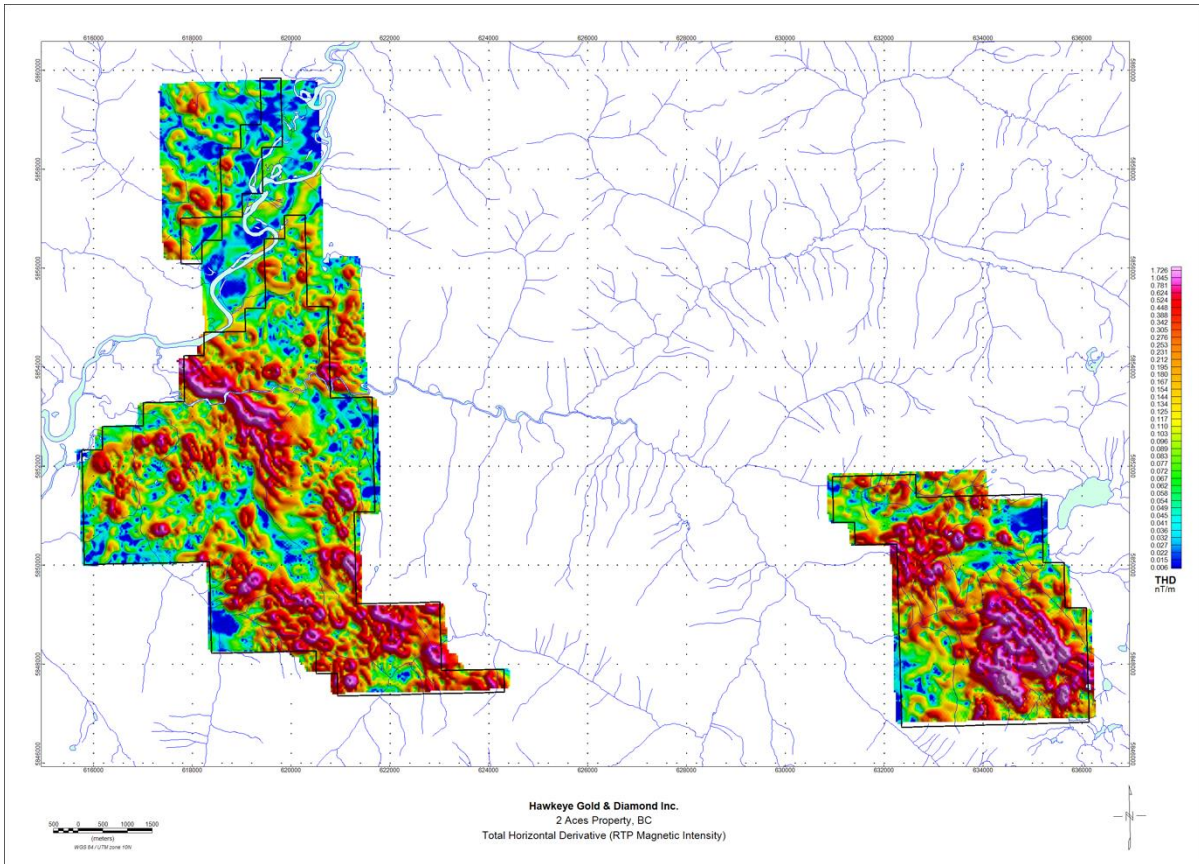


Figure 7. Total Horizontal Derivative (RTP Magnetic Intensity)

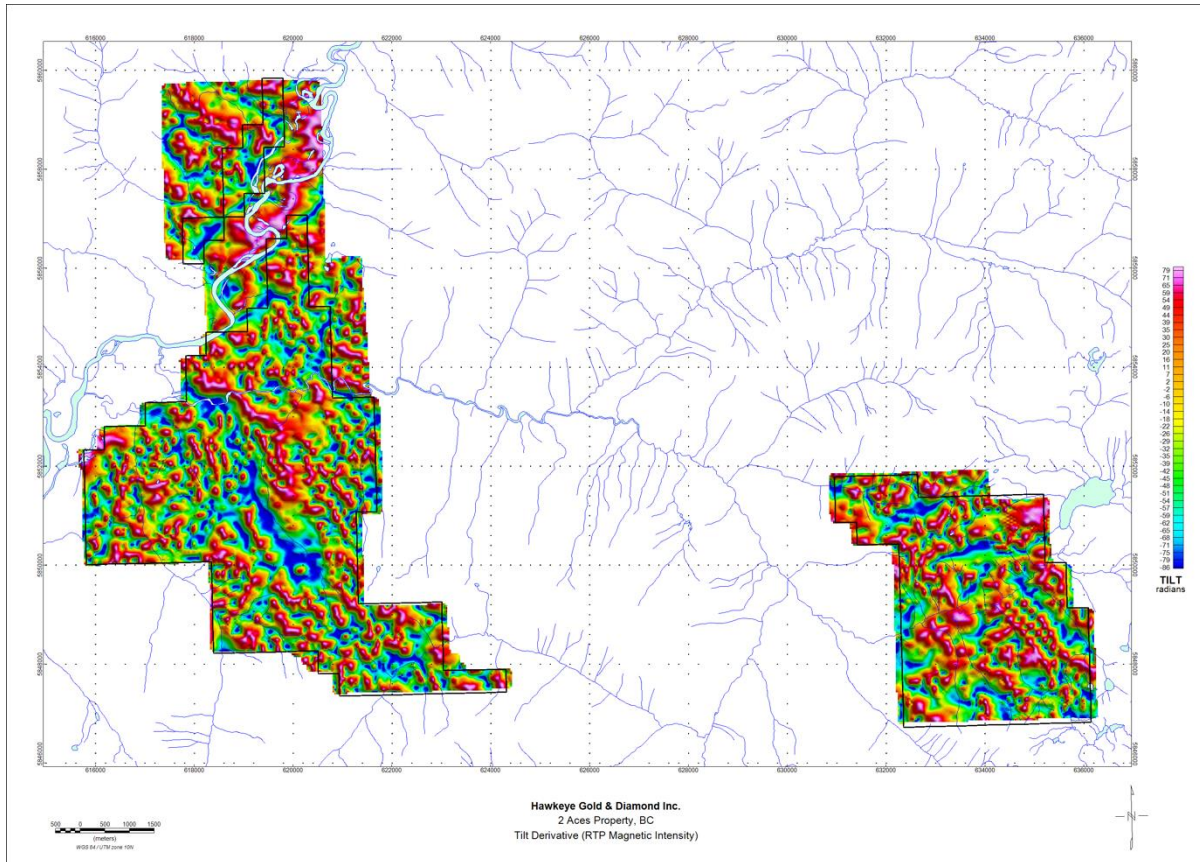


Figure 8. Tilt Derivative

Another common derivative or filter is the 'tilt derivative' or TDR (Miller and Singh, 1994) this is the arctan of the 1VD/THD. Because it is derived from a ratio, it has a normalized data intensity range. The TDR produces patterns similar to the 1VD and THD grid images, but portrays responses from deeper and shallower sources with similar amplitudes and may therefore be confusing. The positive phase only of the TDR is also shown below, helping to emphasize positive magnetization.

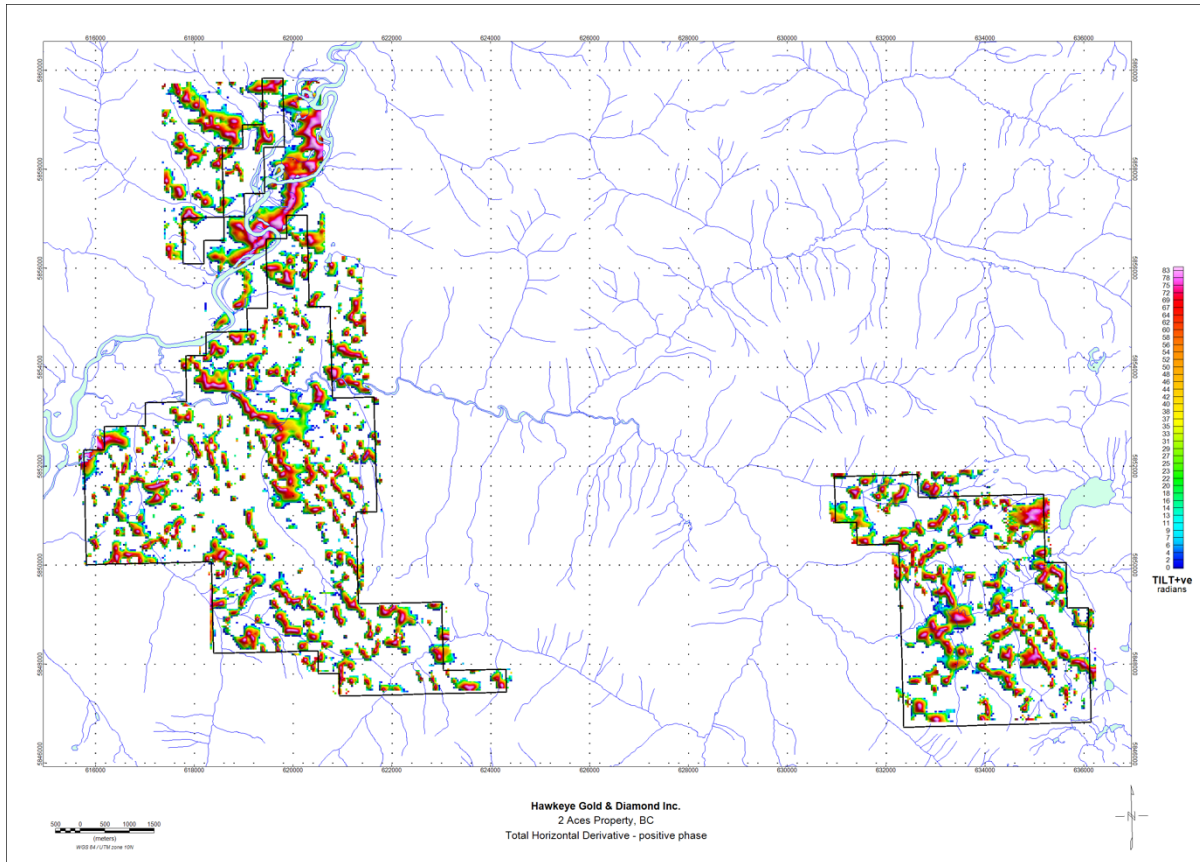


Figure 9. Tilt Derivative – positive phase only

### New Enhancement Filters (Shi and Butt, 2004)

Besides the standard 1VD, THD, TDR and AS, etc., new enhancement filters for geological mapping have been developed for the purpose of enhancing weak magnetic anomalies from near-surface sources while simultaneously enhancing low-amplitude, long-wavelength magnetic anomalies from deep-seated or regional sources.

The Edge filter group highlights edges surrounding both shallow and deeper magnetic sources. The results are used to infer the location of the boundaries of magnetized lithologies.

The Block filter group has the effect of transforming the data into “zones” which, similar to image classification systems, segregate anomalous zones into apparent lithological categories. Both filter groups change the textural character of a dataset and thereby facilitate interpretation of geological structures. Representative images of the Edge and Block group are shown following:

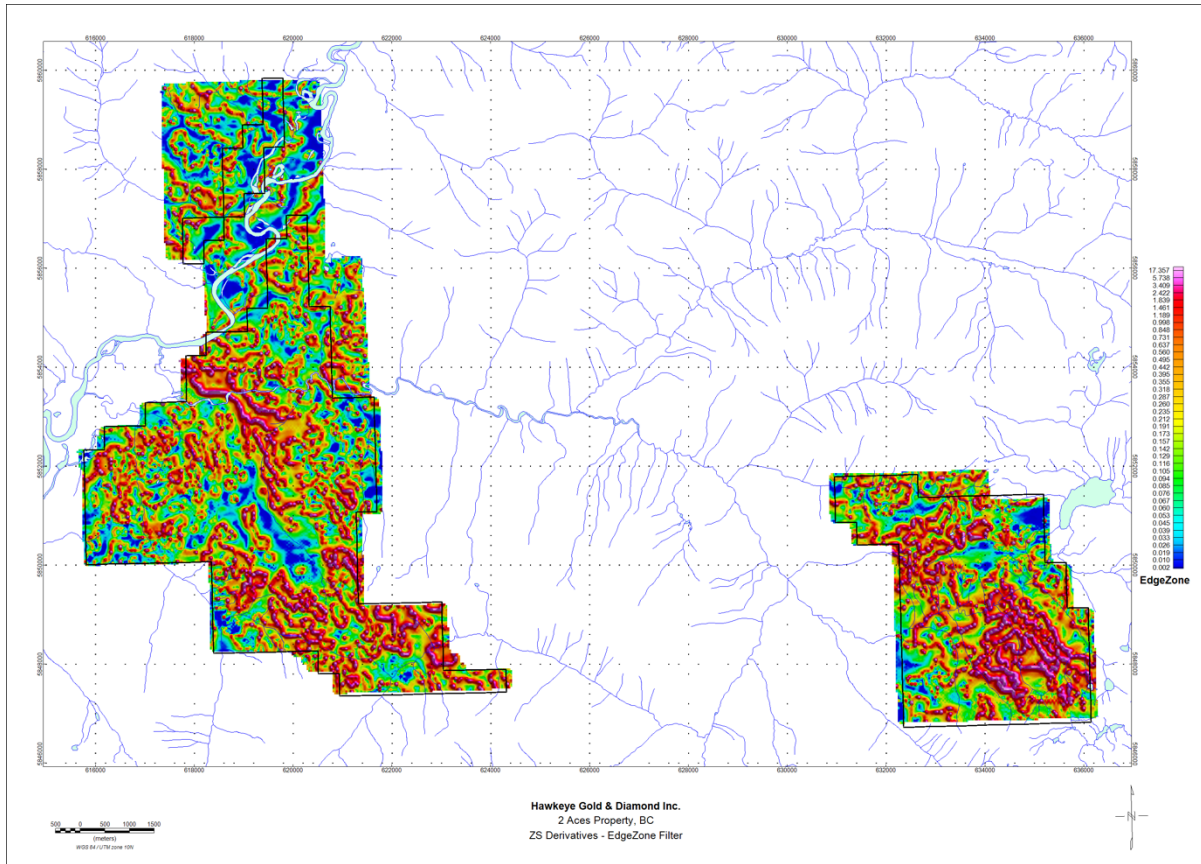


Figure 10. ZS EdgeZone Filter (Edge/EdgeZone group)

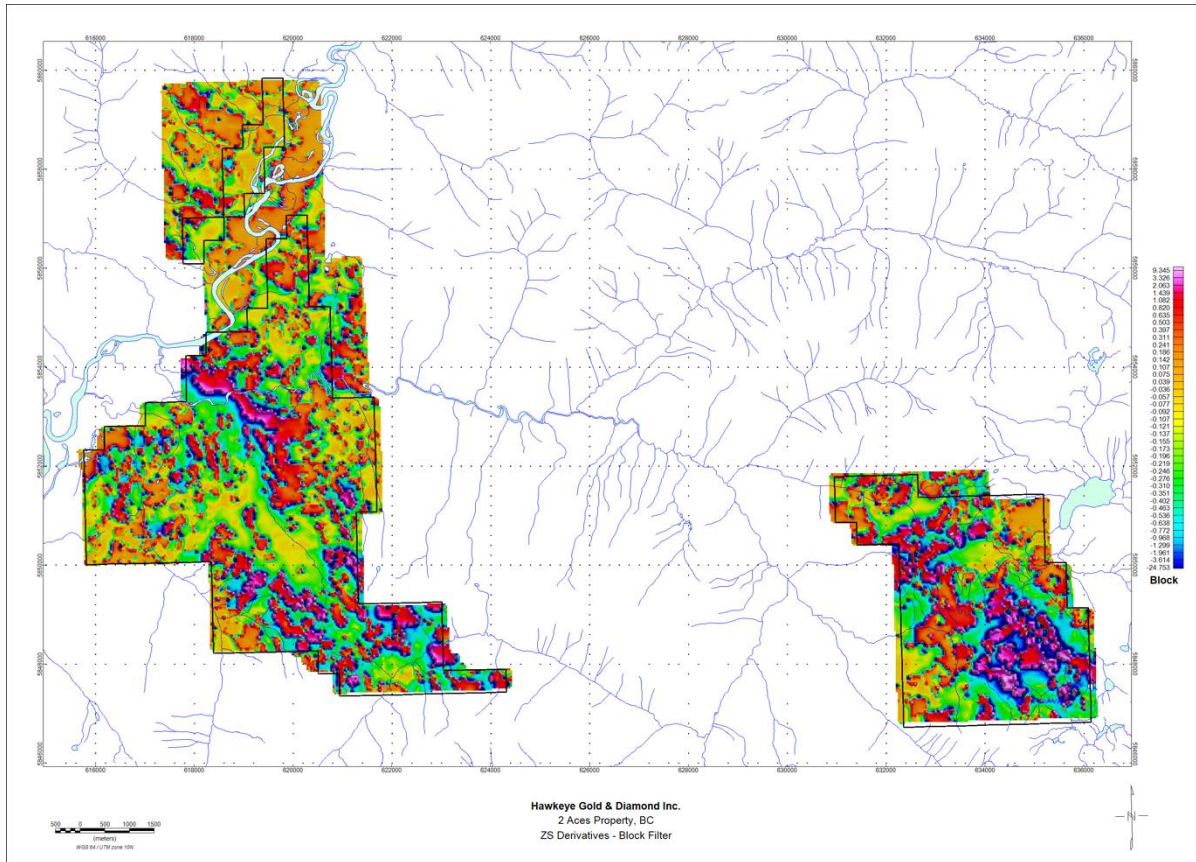


Figure 11. ZS Block Filter (Area/Block/Plateau group)

### Structural Analysis: Multiscale Edge Detection ('worms')

A two-pronged approach was taken to identify and map magnetic 'fabric' ... multiscale edge detection (also known as 'worms') as described by Milligan et al, 2004 as well as a fractal analysis as described by Holden et al, 2008. Current implementation (Intrepid software) of multiscale edge analysis includes the use of Euler 'worms' which provide a view of structural geology obtained directly from potential field geophysical data. The method is based on Fourier techniques for continuation, reduction-to-pole and total horizontal derivatives coupled with automatic edge detection.

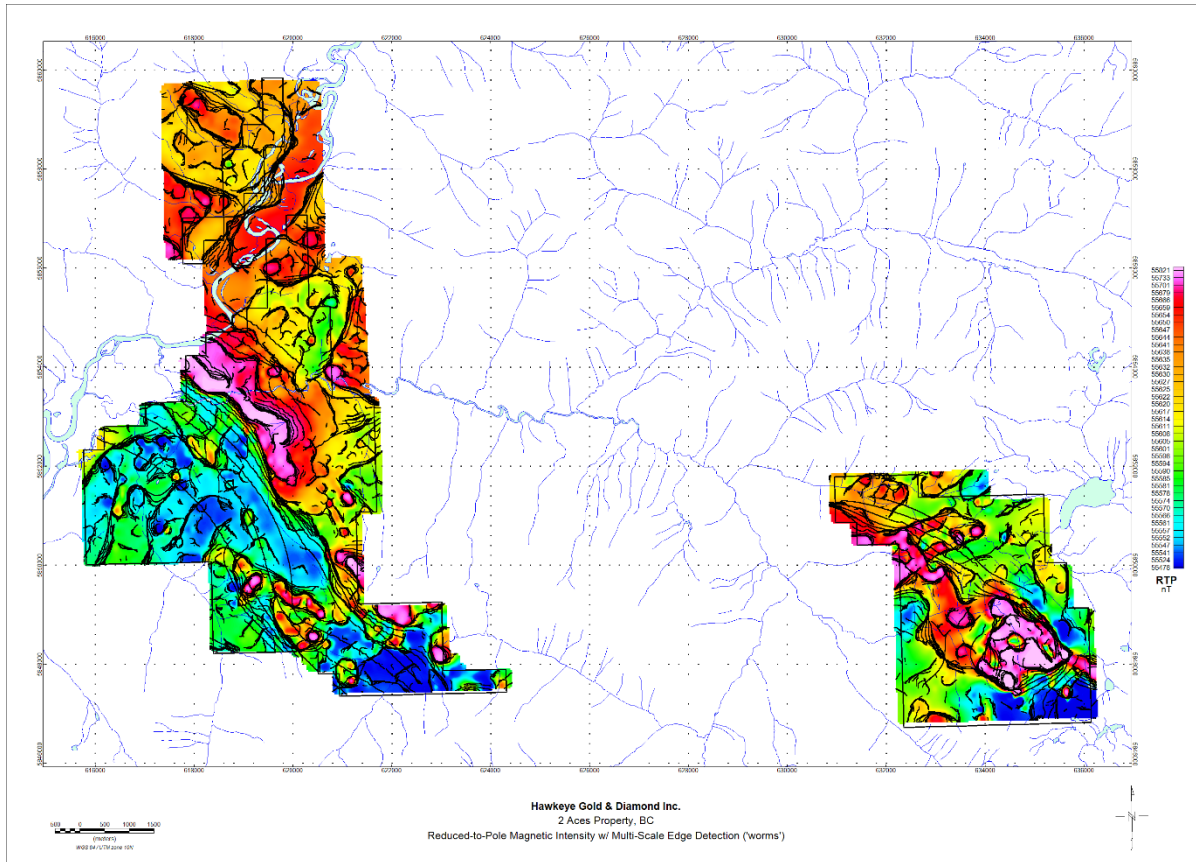


Figure 12. Multiscale Edge Detection 'worms' overlain on RTP Magnetic Intensity

The analysis of lineaments is of fundamental importance to understanding geological structures and the stress regimes in which they are produced. Automatic analysis of lineaments has previously been done with information mapped from remotely sensed data, using either satellite-based imagery or aerial photographs. Potential field data may also be analyzed in terms of their lineament content. Edge detection and automatic trend analysis using gradients in such data are methods for producing unbiased estimates of sharp lateral changes in physical properties of rocks. The assumption is made that the position of the maxima in the horizontal gradient of gravity or magnetic data represents the edges of the source bodies, although this should be used with caution. Such maxima can be detected and mapped as points, providing the interpreter with an unbiased estimate of their positions. The process of mapping maxima as points can be extended to many different levels of upward continuation, thus providing sets of points that can be displayed in three dimensions, using the height of upward continuation as the z-dimension.

Multi-scale edge detection was substantially developed by CSIRO in Perth in the late 1990s (Archibald *et al*, 1999). It combines wavelet analysis, potential field edge detection and upward continuation to attempt to recover the horizontal location of property contrast interfaces, and to characterize their extension in depth. The *Intrepid* software implementation of this technique is shown above on the interpretation map, Figure 12. The combination of 'worms' and pseudocolour magnetic intensity, (above) and derived derivatives of the magnetic intensity, highlight structural fabric of the Seller Creek property.

### Structural Analysis: CET Grid Analysis

The Centre for Exploration Targeting (CET) grid analysis (via a Geosoft plugin) provides tools for texture analysis, lineation detection and vectorization, leading to both structural complexity and orientation entropy 'heatmaps' shown on following images. Au mineralization is known to occur near major crustal breaks manifesting as large-scale shear zones, which act as conduits for mineralizing fluids; mineralization occurs in regions of structural complexity adjacent to the shear zones. Progressing towards the automatic detection of such regions, the CET grid analysis system:

- Delineates zones of magnetic discontinuity that correspond to both lithological boundaries and shear zones using a combination of texture analysis and symmetry feature detection techniques
- Examines the data using fractal analysis to find areas nearby with a complex magnetic expression (zones of structural complexity).
- The most prospective areas are those where inferred structural complexity occurs adjacent to the regions of magnetic discontinuity.
- This approach may have merit in this instance, with the applicability at Silver Ivan to be based upon correlation of known and/or inferred geology to the derived structural complexity and orientation entropy 'heat maps.'

The contact occurrence density (COD) process generates a heat map that highlights high density of structural contacts, which include junctions and intersections of different structures and locations where structures have significant orientation changes.

Given an input of vectorized structures/trends (in this case, the multiscale edge detection 'worms', pairs of line segments are analyzed to determine if they meet or intersect at an angle that is greater than a specified threshold. Each of these contact locations are then marked and used to cast a 2D Gaussian vote towards the overall Contact Occurrence Density in the resulting heatmap.

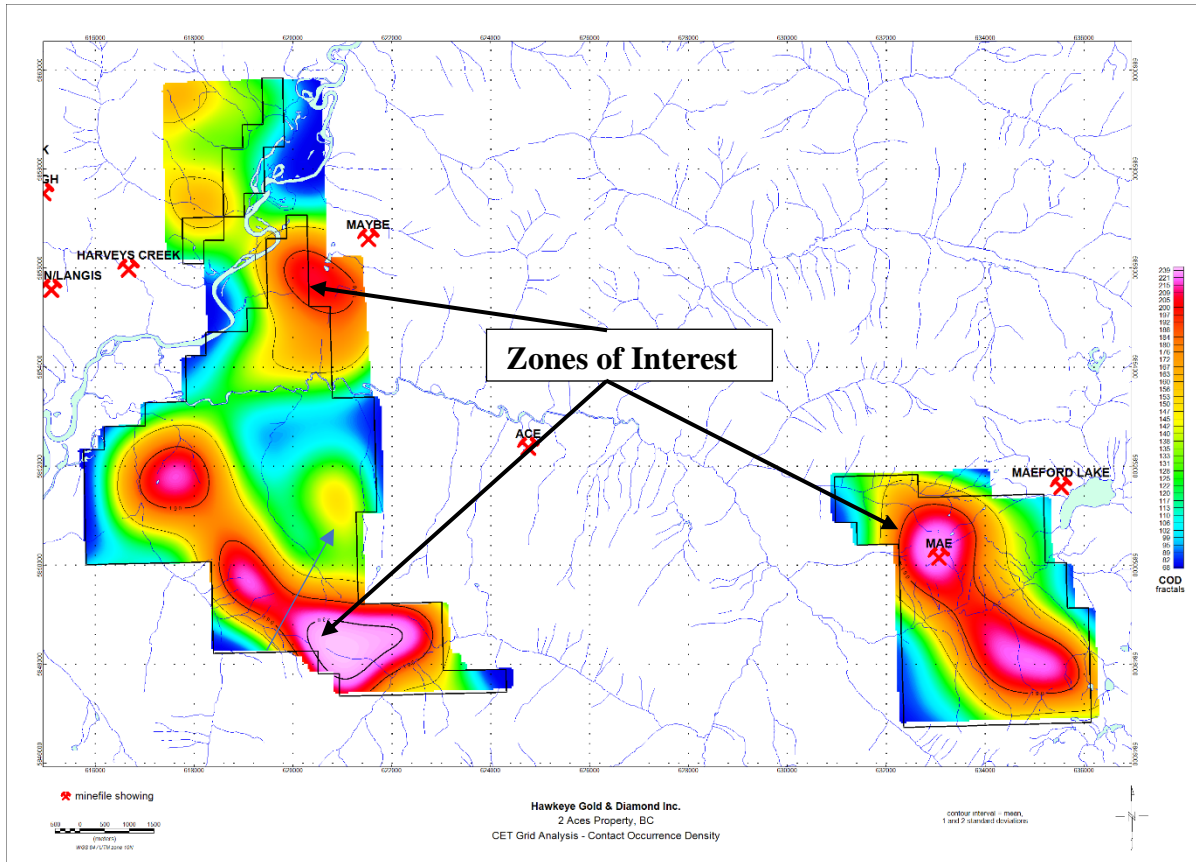


Figure 13. CET Grid Analysis: Contact Occurrence Density w/ 1 & 2 STD above means

Anomalous contact occurrences arbitrarily delineated by the 1 and 2 standard deviation contours on Figure 13 above; the anomaly coincident with the Mae Pb-Zn is area of interest ('AOI') as is the southeast extension. The strong NW-trending zone on the western group of claims is similarly noteworthy. These zones imply the presence of notable fractal intensity and in turn, significant structural breakage.

Orientation Entropy (OE) highlights regions where structures occur over a wide range of orientations, thus indicating areas of potential structural complexity. OE is based on the same fractal analysis / phase symmetry as the COD. The output grid comprises real values indicating the entropy of nearby structure orientations, centred about each cell. Regions of high entropy are considered to exhibit high statistical randomness, and thus areas of potential structural complexity.

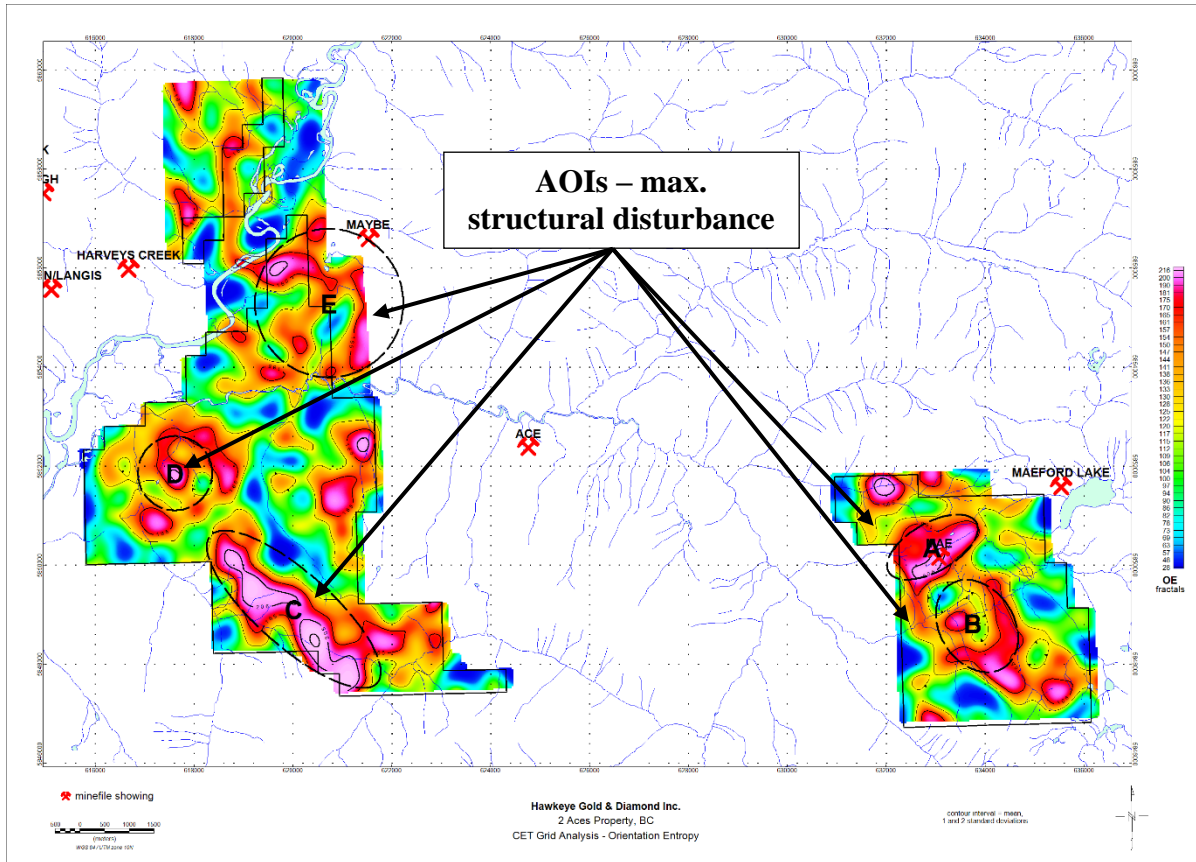


Figure 14. CET Grid Analysis: Orientation Entropy w/ 1 and 2 STDs above mean

Anomalous 'entropy' (e.g., 1 & 2 standard deviations above the mean, shown as heavy black contours) delineates regions of significant magnetic (i.e., geologic, including shear zones and lithological boundaries) discontinuity. If we accept that fault/shear zones play a role in the potential mineralization in the Cariboo gold camp, then the elliptical polygons mapped on the orientation entropy heat map should similarly reflect regions of significant structural complexity with high prospectivity for gold mineralization.

A single main area of interest, Zone A, in the eastern section coincides with the Mae Pb-Zn showing and lays proximal if not in, the Pleasant Valley thrust. A possible southeast extension of this is indicated as zone B. A very strong disturbance is mapped to the east as Zone C; an inferred northwest extension, Zone D, appears to be approximately circular. Zone E has some characteristics of a ring-like feature, although it lays mostly off the claim block. All these are presented as significant zones of structural complexity.

### 3 CONCLUSIONS AND RECOMMENDATIONS

A helicopter-borne magnetic and gamma-ray spectrometry survey over the 2 Aces property of Hawkeye Gold & Diamond Inc. acquired approximately 502 line-km of helicopter-borne geophysical data in November–December 2018. The survey covers 10 active and good-standing claims amounting to approximately 5,394 ha located in the Cariboo Mining District, British Columbia. All claims are assigned 100% to Hawkeye Gold & Diamond Inc.

The magnetic survey has provided valuable structural and geological information. A suite of filters and derivatives have been applied to the aeromagnetic gridded data, followed by a multiscale edge detection and automated grid ‘fractal’ analysis to identify regions prospective for gold mineralization based upon structural complexity as inferred from magnetics being indicative of significant faults, shears.

Specific areas of interest are identified by Centre for Exploration Targeting grid analysis: three somewhat broad features on the contact occurrence density ‘heatmap’ with an separation into component parts by the occurrence entropy; note that some degree of overlap exists between these two outputs.

Future work to verify the potential of these areas of interest should include prospecting, surface mapping, geochemical sampling and ground geophysics (e.g., induced polarization/resistivity).

The property remains a challenge in terms of inclement weather patterns, rugged terrain, and heavy undergrowth. Considerations for future work include both ground geophysics as well as extensive soils geochemistry and geological prospecting.

Due to the relatively high costs and slow progress, ground geophysics should be constrained in terms of follow-up to the investigation of discrete target zones themselves representing anomalous soil geochemistry and/or airborne geophysical anomalies.

## 4 STATEMENT OF QUALIFICATIONS

I, Christopher J. Campbell, B.Sc., M.B.A., P.Geo., with business address of 4505 Cove Cliff Road, North Vancouver British Columbia V7G 1H7, hereby certify that:

- I am a graduate (1972) of the University of British Columbia, with a Bachelor of Science degree in Geophysics.
- I am a graduate (1986) of the University of Denver, with a Masters of Business Administration.
- I am a registered member in good standing of the Association of Professional Engineers and Geoscientists of British Columbia.
- I have practised my profession for approximately 49 years in Canada (British Columbia, Alberta, Saskatchewan, Manitoba, Ontario, Quebec, Newfoundland and Labrador, Yukon, Northwest Territories, and Nunavut), United States of America, Australia, Russia, and Africa.
- I have no interest, direct or indirect, in the properties or securities of Hawkeye Gold & Diamond Inc., or in any of their related companies or joint venture partners anywhere in Canada.
- Dated at North Vancouver, British Columbia, this 8<sup>th</sup> day of October 2021.



Christopher Campbell, B.Sc., M.B.A., P.Geo.

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APPENDIX A:

GEOTECH LTD., JANUARY 2019, REPORT ON A HELICOPTER-BORNE  
AEROMAGNETIC GEOPHYSICAL SURVEY, PROJECT GL180345



# HELISTINGER

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REPORT ON A HELICOPTER-BORNE AEROMAGNETIC  
GEOPHYSICAL SURVEY

PROJECT: 2 ACES  
LOCATION: LIKELY, BRITISH COLUMBIA  
FOR: HAWKEYE GOLD & DIAMONDS INC.  
SURVEY FLOWN: NOVEMBER – DECEMBER 2018  
PROJECT: GL180345

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## EXECUTIVE SUMMARY

### 2 Aces Blocks LIKELY, BRITISH COLUMBIA

From November 16<sup>th</sup> to December 7<sup>th</sup>, 2018 Geotech Ltd. carried out a helicopter-borne geophysical survey over the 2 Aces Blocks situated near Likely, British Columbia.

The principal geophysical sensor was a caesium magnetometer. Ancillary equipment included a GPS navigation system, radar altimeter and laser altimeter. A total of 502 line-kilometres of geophysical data were acquired during the survey.

In-field data quality assurance and preliminary processing were carried out on a daily basis during the acquisition phase. Preliminary and final data processing, including generation of final digital data and map products were undertaken from the office of Geotech Ltd. in Aurora, Ontario.

The processed survey results are presented as the following maps:

- Total Magnetic Intensity (TMI),
- Calculated Vertical Gradient (CVG)
- Digital Terrain Model (DEM)

The survey report describes the procedures for data acquisition, description of equipment processing, final image presentation and the specifications for the digital data set.



## 1.2 SURVEY AND SYSTEM SPECIFICATIONS

The survey area was located approximately 27 kilometres northeast of Likely, British Columbia (Figure 2).

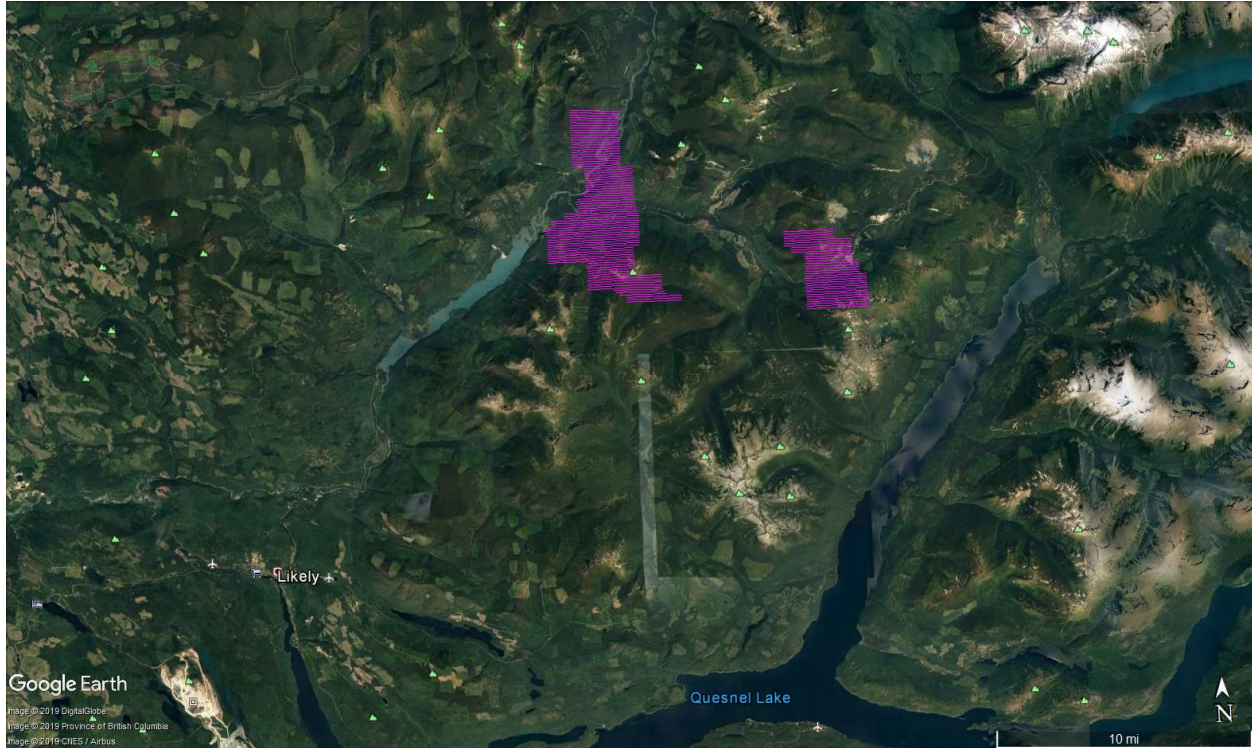


Figure 2: Survey area locations on Google Earth.

The survey was flown in an east to west ( $N 90^{\circ} E$  azimuth) direction, with traverse line spacing of 150 as depicted in Figure 3. Tie lines were flown perpendicular to the traverse lines. For more detailed information on the flight spacing and direction see Table 1.

### 1.3 TOPOGRAPHIC RELIEF AND CULTURAL FEATURES

Topographically, the survey area exhibits a moderate relief with an elevation ranging from 808 to 2032 metres above mean sea level over an area of 60 square kilometres.

There are various rivers and streams running through the survey area which connect various lakes and wetlands. There are no visible signs of culture such as roads and buildings located in the survey area. (Figure 3)

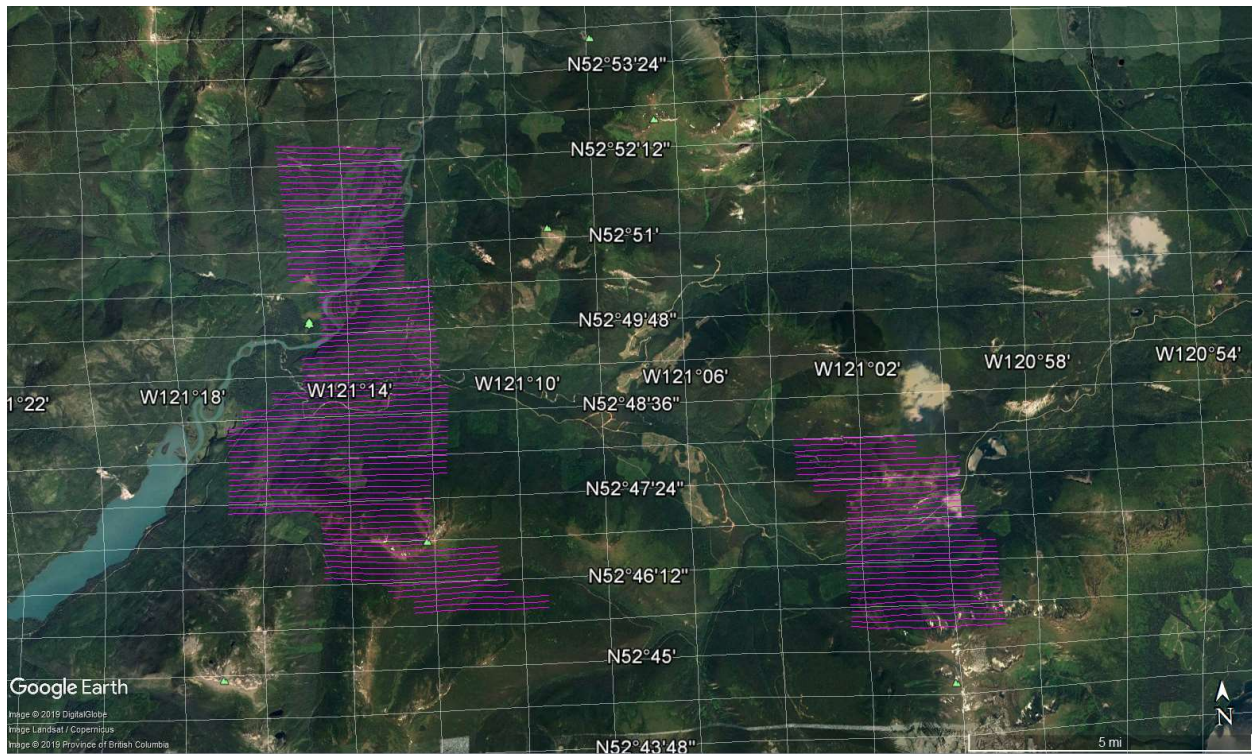


Figure 3: Flight path over a Google Earth Image.

## 2. DATA ACQUISITION

### 2.1 SURVEY AREA

The survey area (see Figure 3 and Appendix A) and general flight specifications are as follows:

**Table 1: Survey Specifications**

Survey Blocks	Line spacing (m)	Area (Km <sup>2</sup> )	Planned <sup>1</sup> Line-km	Actual Line-km	Flight direction	Line numbers
2 Aces & 2 Aces East	Traverse: 150	60	489	502	N 90° E / N 270° E	L3020 – L6330
	Tie: 1500				N 0° E / N 180° E	T5000 – T7020
TOTAL		60	489	502		

Survey area boundaries co-ordinates are provided in Appendix B.

### 2.2 SURVEY OPERATIONS

Survey operations were based out of Likely, British Columbia from November 16<sup>th</sup> until December 7<sup>th</sup> 2018. The following table shows the timing of the flying.

**Table 2: Survey schedule**

Date	Comments
2018-11-16	Crew arrived in Okotoks, AB. Completed local logistics.
2018-11-17	Commenced system assembly.
2018-11-18	Completed system assembly.
2018-11-19	Commenced system testing, mag issue observed during testing. Commenced troubleshooting and located source, requested part from the office.
2018-11-20	Crew received shipment from the office.
2018-11-21	Replaced part, completed test line. Unable to complete high altitude test flights due to extreme high winds at altitude, will complete once onsite. Ground crew commenced mobilization towards Likely, BC.
2018-11-22	Ground crew arrived onsite, Heli arrival delayed due to weather.
2018-11-23	Heli arrival delayed due to weather, tested base stations.
2018-11-24	Heli arrived on site in the afternoon, completed recon flight, will re-adjust flying height due to 120-130ft trees in the survey area. Unable to complete test flights due to low ceilings.
2018-11-25	No test flights completed due to weather, low ceilings.
2018-11-26	No test flights completed due to weather, rain throughout the day.
2018-11-27	No test flights completed due to weather, rain and low ceilings throughout the day.
2018-11-28	Late start due to weather, crew was able to complete high altitude test flights, system cleared for production.
2018-11-29	1 short production flight completed in the morning, aborted due to low ceilings, once weather improved 2nd production flight completed in the afternoon, 267km flown.
2018-11-30	Late start due to weather, 2 production flights completed, 249km flown.
2018-12-01	Late start due to weather, 2 production flights completed, 222km flown.
2018-12-02	Late start due to weather, 1 production flight completed, 138km flown.
2018-12-03	2 short production flights completed, 53km flown. Some troubleshooting required.
2018-12-04	Completed troubleshooting, test flight completed, 9km flown.

<sup>1</sup> Note: Actual Line kilometres represent the total line kilometres in the final database. These line-km normally exceed the Planned Line-km, as indicated in the survey NAV files.

2018-12-05	Attempted production flight but aborted due to weather, low ceilings throughout the day.
2018-12-06	3 production flights completed, 355km flown.
2018-12-07	3 production flights completed, 169km flown. Flight Path Completed.

## 2.3 FLIGHT SPECIFICATIONS

During the survey the helicopter was maintained at a mean altitude of 73 metres above the ground with a nominal survey speed of 140 km/hour.

The on-board operator was responsible for monitoring the system integrity. The operator also maintained detailed flight logs during the survey, tracking the times of the flight as well as any unusual geophysical or topographic features.

On return of the aircrew to the base camp the survey data was transferred from a compact flash card (PCMCIA) to the data processing computer. The data were then uploaded via ftp to the Geotech office in Aurora for daily quality assurance and quality control by qualified personnel.

## 2.4 AIRCRAFT AND EQUIPMENT

### 2.4.1 SURVEY AIRCRAFT

The survey was flown using an Aerospatiale A-Star 350 B2, registration C-GXAH. The helicopter is owned and operated by Yellowhead Helicopters. Installation of the geophysical and ancillary equipment was carried out by a Geotech Ltd crew.

### 2.4.2 AIRBORNE MAGNETOMETER

The magnetic sensor utilized for the survey was Geometrics optically pumped cesium vapour magnetic field sensor was installed inside the stinger. The sensitivity of the magnetic sensor is 0.01 nanoTesla (nT) at a sampling interval of 0.025 seconds or at sampling frequency of 40Hz.

### 2.4.3 MAGNETIC COMPENSATION SYSTEM

The magnetic data were compensated in real-time using an RMS Instruments AARC510 Compensator, utilizing a three-axis (XYZ) Fluxgate magnetometer to measure roll, pitch and yaw movements of the survey aircraft. A 26-term model of the aircraft magnetic noise was determined during a pre-survey test flight, removing permanent, induced, and eddy current fields from the airborne magnetic measurements. The efficacy of this compensation was tested with a Figure of Merit (FOM) test; the total FOM was determined to be 1.071 nT (Appendix D).

### 2.4.4 ALTIMETER

A Terra TRA 3000/TRI 40 radar altimeter was used to record terrain clearance.

### 2.4.5 VIDEO CAMERA

A colour 550 High-Resolution camera with auto gain control, 550 line resolution was used with a standard 3.6mm lens. Digital files provided with resolution of 768 by 494 at selectable 1-30 frames per second.

### 2.4.1 LASER ALTIMETER

A Schmitt Industries AR300 laser altimeter was used. Altitude range 0.5 to 300m and accuracy  $\pm 5$ cm.



Figure 4: System Configuration.

#### 2.4.2 GPS NAVIGATION SYSTEM

The navigation system used was a Geotech PC104 based navigation system utilizing a NovAtel's WAAS (Wide Area Augmentation System) enabled GPS receiver, Geotech navigation software, a full screen display with controls in front of the pilot to direct the flight and a NovAtel GPS antenna mounted on the helicopter tail (Figure 4). As many as 11 GPS and two WAAS satellites may be monitored at any one time. The positional accuracy or circular error probability (CEP) is 1.8 m; with WAAS active, it is 1.0 m. The co-ordinates of the Blocks were set-up prior to the survey and the information was fed into the airborne navigation system.

### 2.4.3 DIGITAL ACQUISITION SYSTEM

A Geotech data acquisition system recorded the digital survey data on an internal compact flash card. Data is displayed on an LCD screen as traces to allow the operator to monitor the integrity of the system. The data type and sampling interval as provided in Table 3.

**Table 3:** Acquisition Sampling Rates

Data Type	Sampling
Magnetometer	0.025 sec
GPS Position	0.2 sec
Pressure and Temperature	1 sec
Radar Altimeter	0.2 sec

### 2.5 BASE STATION MAGNETOMETER

A dedicated computer including a high sensitivity base station cesium magnetometer and a GPS system to record the GPS time together with the magnetic data was employed to record diurnal magnetic activity. A Geometrics G822B high-sensitivity caesium vapour magnetometer and integrated GPS unit for accurate time synchronization was used with 10Hz data output. Digital recordings of the ground magnetometer were recorded at all times during the survey. The digital data include the date, an absolute value of the magnetic field, and GPS time with accurate synchronization to the aircraft data acquisition system.

The base station magnetometer sensor was installed near the landing site, away from electric transmission lines and moving ferrous objects such as motor vehicles. The base station data were backed-up to the data processing computer at the end of each survey day.

### 2.6 GPS GROUND BASE STATION

A dedicated Novatel PROPAK-V3\_TR20 GPS receiver and a dedicated ground based GPS antenna was used with a 10Hz Raw GPS data recording. Post-flight differential GPS data processing utilizing Novatel GrafNav 8.3 software was used to produce sub-meter accuracy of the airborne system location at 10Hz sampling interval.

### 3. PERSONNEL

The following Geotech Ltd. personnel were involved in the project.

#### FIELD:

Project Manager:	Shauna-Lee Hewitt (Office)
Data QC:	Dmitriy Danchenko (Office)
Crew chief:	Juan Carlos Florez Osorio
Operator:	n/a

The survey pilot and the mechanical engineer were employed directly by the helicopter operator – Yellowhead Helicopters.

Pilot:	Jason Cyr
Mechanical Engineer:	n/a

#### OFFICE:

Preliminary Data Processing:	Dmitriy Danchenko
Final Data Processing:	TaiChyi Shei
Data QA/QC:	Zihao Han Kanita Khaled
Reporting/Mapping:	Joseli Soares

Processing and Interpretation phases were carried out under the supervision of Alexander Prikhodko, P.Geo, PhD, and Director of Geophysics. The customer relations were looked after by Jean M. Legault.

## 4. DATA PROCESSING AND PRESENTATION

Data compilation and processing were carried out by the application of Geosoft Oasis Montaj and programs proprietary to Geotech Ltd.

### 4.1 FLIGHT PATH

The flight path, recorded by the acquisition program as WGS 84 latitude/longitude, was converted into the WGS84 Datum, UTM Zone 10 North coordinate system in Oasis Montaj.

The flight path was drawn using linear interpolation between x, y positions from the navigation system. Positions are updated every second and expressed as UTM easting's (x) and UTM northing's (y).

### 4.2 MAGNETIC DATA

The processing of the magnetic data involved a correction for diurnal variations by using the digitally recorded ground base station magnetic values. The base station magnetometer data was edited and merged into the Geosoft GDB database on a daily basis. The aeromagnetic data was corrected for diurnal variations by subtracting the observed magnetic base station deviations.

Tie line levelling was carried out by adjusting intersection points along traverse lines. A micro-levelling procedure was applied to remove persistent low-amplitude components of flight-line noise remaining in the data.

The corrected magnetic data was interpolated between survey lines using a random point gridding method to yield x-y grid values for a standard grid cell size of 37.5 metres at the mapping scale. The Minimum Curvature algorithm was used to interpolate values onto a rectangular regular spaced grid.

## 5. DELIVERABLES

### 5.1 SURVEY REPORT

The survey report describes the data acquisition, processing, and final presentation of the survey results. The survey report is provided in two paper copies and digitally in PDF format.

### 5.2 MAPS

Final maps were produced at scale of 1:15,000 for best representation of the survey size and line spacing. The coordinate/projection system used was WGS84 Datum, UTM Zone 10 North. All maps show the flight path trace and topographic data; latitude and longitude are also noted on maps.

The preliminary and final results of the survey are presented as a colour TMI contour map and vertical derivative colour maps.

- Maps at 1:15,000 in Geosoft MAP format, as follows:

GL180345_15K_TMI_2Aces:	Total Magnetic Intensity (TMI)
GL180345_15k_CVG_ 2Aces:	Calculated Vertical Gradient (CVG)
GL180345_15k_DEM_ 2Aces:	Digital Elevation Model (DEM)

- Maps are also presented in PDF format.
- The topographic data base was derived from 1:50,000 Natural Resources Canada NTDB data [www.geogratis.ca](http://www.geogratis.ca)
- A Google Earth file *GL180345\_Hawkeye\_SellerCreek.kml* showing the flight path of the Blocks is included. Free versions of Google Earth software from: <http://earth.google.com/download-earth.html>

### 5.3 DIGITAL DATA

Two copies of the data on DVD were prepared to accompany the report. Each DVD contains a digital file of the line data in GDB Geosoft Montaj format as well as the maps in Geosoft Montaj Map and PDF format.

- DVD structure.

Data contains databases, grids and maps, as described below.  
 Report contains a copy of the report and appendices in PDF format.

Databases in Geosoft GDB format, containing the channels listed in Table 4.

**Table 4:** Geosoft GDB Data Format

Channel Name	Description
X	X Easting Positional data (meters) – WGS84 UTM 10N
Y	Y Northing Positional data (meters) – WGS84 UTM 10N
Z	GPS antenna elevation (meters – ASL)
Longitude	WGS84 GPS longitude (decimal degrees) from x
Latitude	WGS84 GPS latitude (decimal degrees) from y
Date	Flight Date (YYYY/MM/DD)
gtime	UTC time, second of the day
Fiducial	Sample Number
Flight	Survey Flight Number
Radar	Aircraft Terrain Clearance from Radar altimeter (metres)
DEM	Digital elevation model derived from Radar altimeter (metres)
Flux_X	Vector Magnetometer X Component (nT)
Flux_Y	Vector Magnetometer Y Component (nT)
Flux_Z	Vector Magnetometer Z Component (nT)
TFCMP1	Raw Total Compensated Magnetic field (nT)
Mag1	De-spiked and compensated Total Magnetic field (nT)
Basemag	Magnetic diurnal variation (nT)
Mag2	Diurnal corrected Total Magnetic field (nT)
Mag3	Final Levelled Total Magnetic field (nT)
CVG	First Vertical Derivative of Total Magnetic field (nT/m)

- Grids in Geosoft GRD and GeoTIFF format, as follows:

GL180345\_TMI\_2Aces: Total magnetic intensity (nT)  
 GL180345\_CVG\_2Aces: Calculated Vertical Derivative of TMI (nT/m)  
 GL180345\_DEM\_2Aces: Digital Elevation Model (metres)

A Geosoft .GRD file has a .GI metadata file associated with it, containing grid projection information. A grid cell size of 37.5 metres was used.

## 6. CONCLUSIONS AND RECOMMENDATIONS

A helicopter-borne geophysical survey has been completed over the 2 Aces Blocks situated near Likely, British Columbia.

The total area coverage is 60 km<sup>2</sup>. Total survey line coverage 502 line kilometres. The principal sensor was a high-sensitivity caesium magnetometer. Results have been presented as contour colour images at a scale of 1:15,000. A formal Interpretation has not been included or requested.

Based on the geophysical results obtained a formal magnetic interpretation is recommended and can be completed by Geotech. This includes the structural interpretation and 3D magnetic inversion and geological integration.

Respectfully submitted<sup>2</sup>,



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Dmitriy Danchenko  
**Geotech Ltd.**



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Tai-chyi Shei  
**Geotech Ltd.**



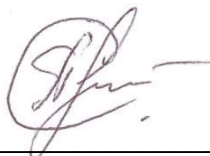
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Kanita Khaled, P.Geo  
**Geotech Ltd.**



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Joseli Soares  
**Geotech Ltd.**



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Alexander Prikhodko, P.Geo, PhD  
**Geotech Ltd.**



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Zihao Han  
**Geotech Ltd.**

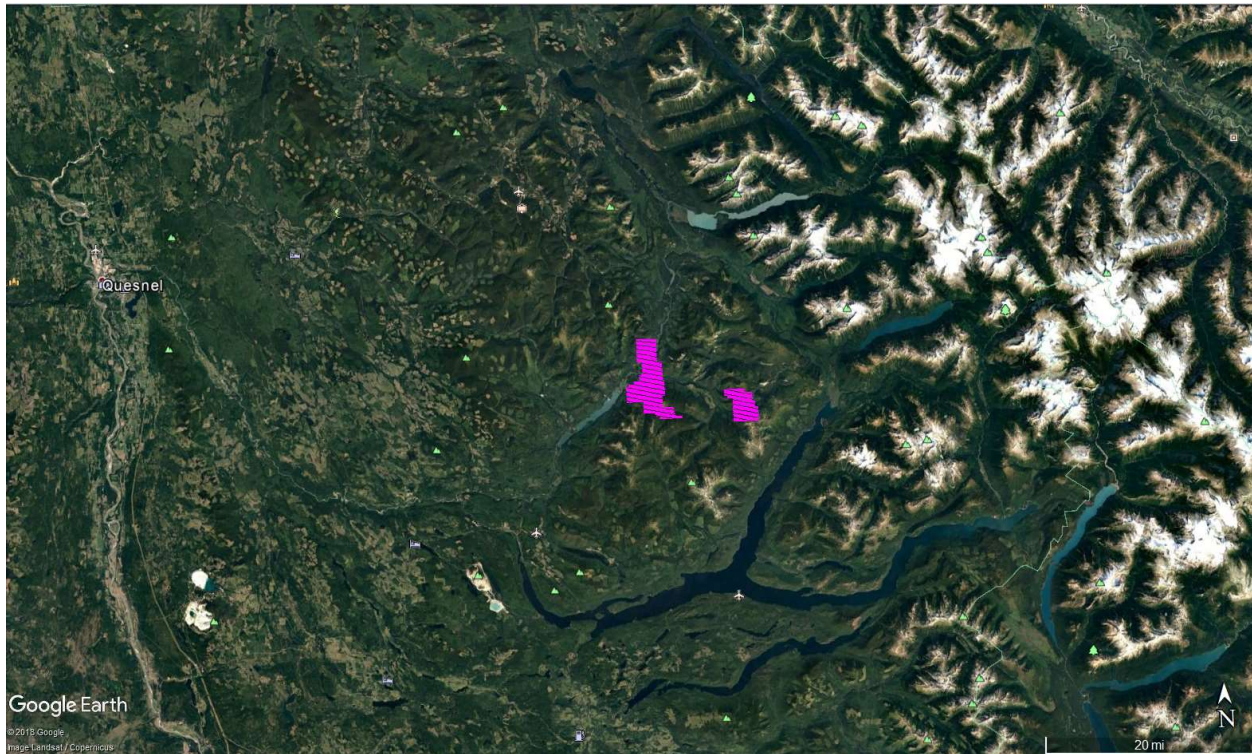
January, 2019.

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<sup>2</sup> Final data processing of the EM and magnetic data were carried out by Tai-chyi Shei, from the office of Geotech Ltd. in Aurora, Ontario, under the supervision of Alexander Prikhodko, P.Geo.

## APPENDIX A

### SURVEY AREA LOCATION MAP



Overview of the Survey Area

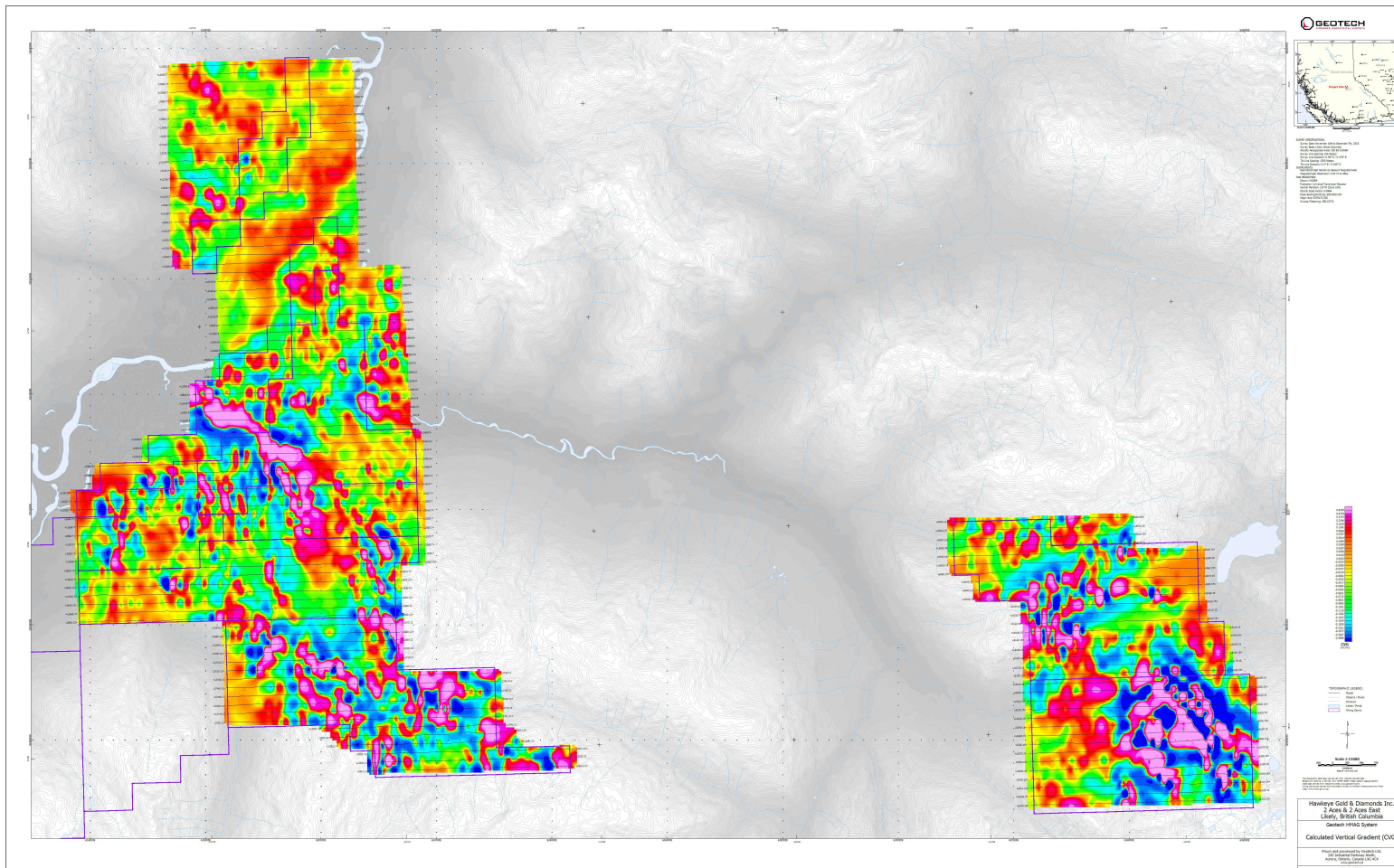
## APPENDIX B

### SURVEY AREA COORDINATES

(WGS 84, UTM Zone 10 North)

2 Aces		2 Aces East	
X	Y	X	Y
615746	5850050	633949	5851867
615663	5852290	630950	5851787
616095	5852331	630975	5850859
616136	5852803	631397	5850870
616876	5852824	634559	5850408
616938	5853297	632252	5850431
617718	5853297	632291	5849040
617698	5854180	632354	5846723
617944	5854201	636150	5846827
618171	5856133	636085	5849145
617513	5856194	635663	5849133
617266	5859770	635637	5850060
620534	5859749	635216	5850048
620678	5856215	635177	5851438
621397	5856235	633968	5854554
621582	5853420	633949	5851867
621787	5851057		
621397	5850954		
621397	5849186		
623082	5849166		
623144	5848262		
623390	5848180		
623411	5847933		
624418	5847871		
624459	5847440		
620842	5847419		
620780	5847871		
620102	5847871		
619979	5848262		
618458	5848282		
618314	5850009		





Calculated Vertical Gradient (CVG)



## APPENDIX D

### FIGURE OF MERIT TEST

The Figure of Merit test was performed immediately after the compensation solution was acquired during a high-altitude test near Dragon, BC, on November 28, 2018.

During the test, the aircraft duplicates the roll, pitch and yaw maneuvers performed during the compensation test in all four survey directions. The absolute errors from each of the 12 manoeuvres are summed, and should be less than 2.0nT to confirm adequate compensation.

Figure of Merit result:

#### Total Field 1 (Stinger Sensor)

Direction	Roll	Pitch	Yaw	Total
0	0.118	0.125	0.088	<b>0.331</b>
90	0.088	0.079	0.098	<b>0.265</b>
180	0.109	0.068	0.086	<b>0.263</b>
270	0.063	0.075	0.074	<b>0.212</b>
<b>Total</b>	<b>0.378</b>	<b>0.347</b>	<b>0.346</b>	<b>1.071</b>

FOM = 1.071 nT