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**REPORT**

**ON THE**

**2020 DIAMOND DRILLING AND 2021 LiDAR AND AIRBORNE GEOPHYSICAL SURVEYS OF THE  
BLAKELOCK PROPERTY**

32E/05, 32E/12, 42H/08, and 42H/09

Blakelock and Hoblitzell Townships  
Larder Lake Mining Division, Ontario, Canada

**Latitude:** ~ 49° 28' 10" N  
**Longitude:** ~ 80° 10' 20" W

**Prepared for:**

LaSalle Exploration Corp.

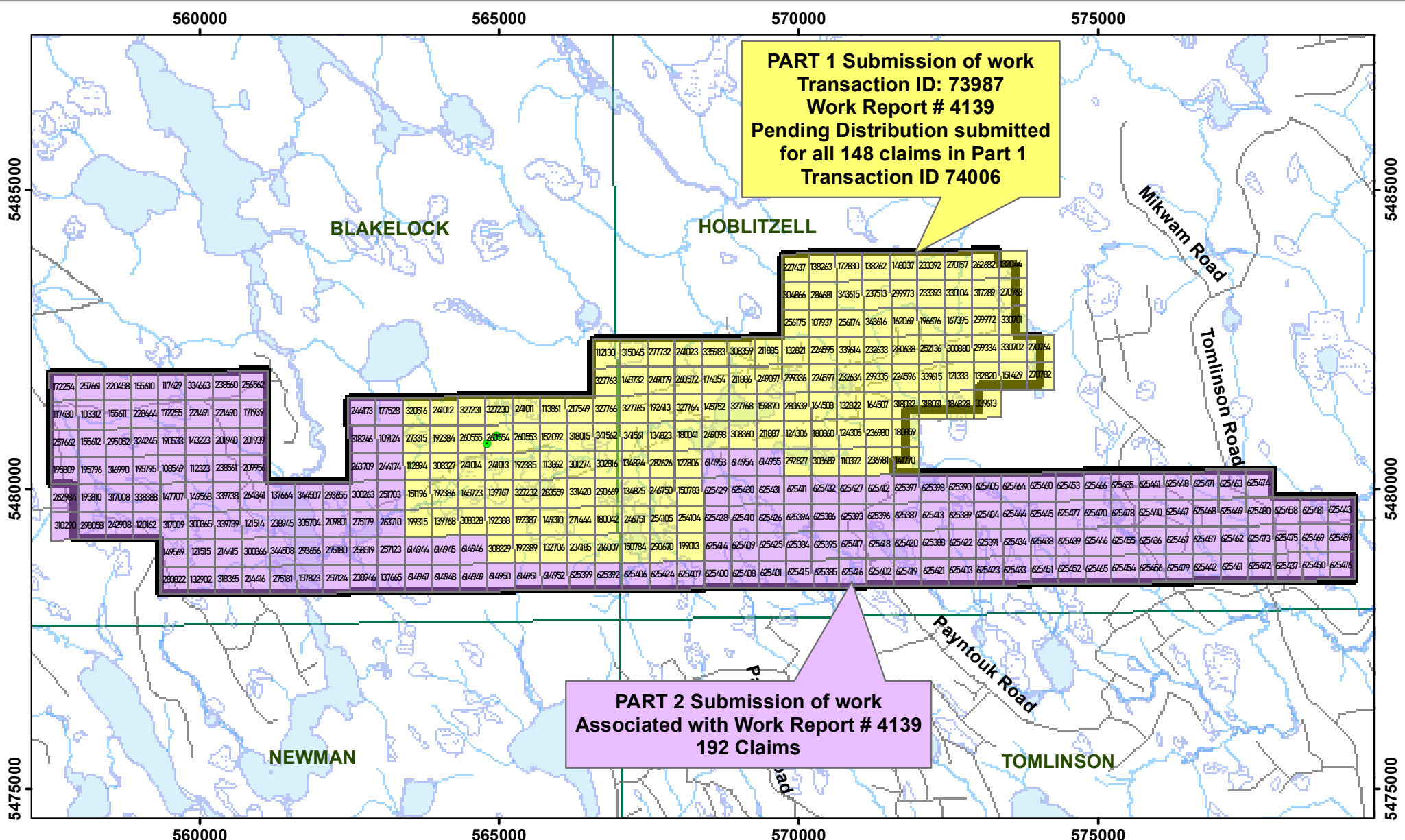
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**Company**

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**Date:** November 5, 2021



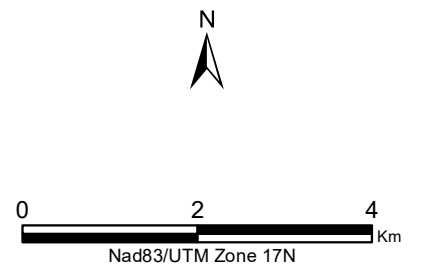
**PART 1 Submission of work**  
**Transaction ID: 73987**  
**Work Report # 4139**  
**Pending Distribution submitted**  
**for all 148 claims in Part 1**  
**Transaction ID 74006**

**PART 2 Submission of work**  
**Associated with Work Report # 4139**  
**192 Claims**



**Legend**

- BLK 2020 DDH Locations
  - BLK Part1 Filing (148 Claims): Report #4139
  - Blk Part2 Filing (192 Claims)
  - Blakelock claims
  - BlakeLock Boundary
- 
- Roads**
  - Trails
  - Gravel Roads
  - Main Roads
  - River
  - Lakes
  - Wetlands
  - Townships



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## 1 SUMMARY

The Blakelock Property (the “Property”) is located approximately 60 km northeast of the town of Cochrane and 140 km northeast of Timmins, Ontario within portions of Blakelock and Hoblitzell Townships. Cochrane has a modest population of ~5300 and offers basic services including hotels, garage/gas, groceries, as well as a hospital/health unit. Additionally, Cochrane is the base for helicopter contractors which offers flight services as well as camp outfitting. The town of Timmins, with approximately 42,000 inhabitants, has a rich history of mining and offers all services required to support exploration programs and mining project development.

The Property consists of 340 contiguous single mining claims totaling 6,977 hectares or 69.77 km<sup>2</sup>. From Timmins, the Property can be accessed via highway 655 north for 75 km to the town of Driftwood and then east to Cochrane along Trans-Canada Highway 11 for 42 km. Setting out from Cochrane, travel east then north-northeast approximately 88 km along highway 652. Year-round access is provided by a graveled secondary road near the southeastern limit of the Property. The Taykwa Tagamou, the Wabun Tribal Council, the Mushkegowuk Council, the Metis First Nation of Ontario, and the Wahgoshig are the closest First Nation communities within a 200-kilometre radius of the Property.

The Property is located within the Larder Lake Mining Division of Ontario and represents an exploration target for both gold and base metals. The Property is 100% owned by LaSalle Exploration Corp. (“LaSalle”) following an agreement with Lake Shore Gold Corp. (“Lake Shore”) and its parent, Pan American Silver Corp. (“Pan American Silver”; formerly, Tahoe Resources Inc.) in 2018. To complete the acquisition, LaSalle must incur qualifying exploration expenditures on the Property of at least \$400,000 on or before December 20, 2021. In addition, Pan American Silver retains a royalty equal to 2% of Net Smelter Returns (“NSR”) on all minerals mined, produced, or otherwise recovered from the Blakelock Property, as defined in, and governed by the Net Smelter Returns Royalty Agreement dated December 14, 2018. The Company retains the right to buyback one half (1%) of the Pan American Silver NSR at any time in the future for a purchase price of \$1,000,000. On June 29, 2021, Maverix Metals Inc. announced the acquisition of the Pan American Silver NSR. There are no other back-in rights, payments or other agreements and encumbrances related to the Property.

Geologically, the Property is located along the western extension of the deformation corridor known as the Casa Berardi Deformation Zone (“CBDZ”) in the northwestern part of the Abitibi Greenstone Belt, Subprovince of the Superior Province within the Canadian Shield. This portion of the belt is composed of meta-volcanic and meta-sedimentary assemblages affected by greenschist facies metamorphism and is moderately deformed. The volcanic and sedimentary sequences are intruded by granitic rocks to the north and south (Ayer et. al, 2009). Owing to the sparse outcrop on the Property, lithological observations have largely been interpreted from diamond drill core (“DDH”) and reverse circulation (“RC”) chips.

Early exploration in area followed the discovery of gold at Nighthawk Lake (1907), Kirkland Lake (1911, Wright-Hargreaves discovery), and the Horne Mine (1920) discovered adjacent to the Cadillac-Larder Break in Quebec. In 1925, discovery of volcanogenic massive sulphide (“VMS”) Cu-Zn mineralization at Normetal, Quebec, focused exploration efforts near the Property. Geophysical surveys, diamond drilling, and reverse circulation drilling have all been carried out by various companies between 1940-2010 on and around the Property.

During the period 2018-2020, previous work by LaSalle included data compilation, historical core review and the filing of a NI 43-101 technical report (Beauregard and Gaudreault, 2019).

In November and December 2020, LaSalle drilled two (2) oriented diamond drill holes on the Property within the Porphyry Creek area totaling 486 metres to test historically intersected mineralization as well as to attempt to better understand possible structural controls on mineralization. Forty-eight (48) oriented structural measurements were gathered from the two (2) holes as the blocky nature of the core limited the number measurements taken. From the limited measurements collected in both holes, the mean foliation / shear orientation has a trend of 260°, but dips steeply to the south in LXB20-001, and moderately to the north in LXB20-002 (moderate dip caused by an outlier measurement with a shallow dip). This east-northeast trend is consistent with the inferred trend of the Casa-Berardi Deformation Zone, which dips steeply to the north.

355 samples core samples were taken and sent for assay highlighted by:

LXB20-001: 0.24 g/t Au over 13.97m from 52.37-66.34m

LXB20-001: 1.48 g/t Au over 2m from 118-120; including 2.42 g/t over 1m from 119.0-120.0m

LXB20-002: 0.31 g/t Au over 2.85m from 184.15-187m

LXB20-002: 0.44 g/t Au over 11.14m from 256-267.14m; including 1.01 g/t over 1.22m from 260.98-262.2m

The results of the 2020 drill program indicate that the mineralized system at Porphyry Creek is still not fully understood. While the alteration, vein style, and sulphide species intersected is consistent with historic drill holes that returned elevated gold values, the results of the 2020 program did not duplicate them. Poor rock quality limited the ability to collect oriented structural measurements.

In May 2021, a LiDAR survey was flown over the property by LiDAR Services International Inc. totaling 170.2 line-km and covering an area of 70 km<sup>2</sup>. Resultant products from this survey included LiDAR point clouds, Bare Earth and Full Feature gridded points, greyscale hillshades of Bare Earth and Full Feature surfaces, 10cm pixel resolution Ortho-mosaic colour digital imagery and an Index Map. LiDAR grids were further processed by GeoVector Management Inc. to generate a digital elevation model (“DEM”) as well as accurate topographic contours using a Geographic System Information software package (QGIS) with a view to aid in future diamond drill program planning and 3D modeling of historic and newly formed datasets.

Additionally in May 2021, A high-resolution helicopter-borne magnetic gradiometer survey was flown over the Property, by Precision GeoSurveys Inc. This survey was flown at 100 m line spacing at a heading of 000°/180° with tie lines being flown at 1000m spacing at a heading of 090°/270°. A total of 771 line-km was flown totalling 69.8 km<sup>2</sup>. Several magnetic images were produced (See Section 8.2 for full list). A first pass interpretation of the Total Magnetic Intensity (“TMI”) and Tilt Derivative (“TDR”) images was conducted by GeoVector Management Inc. to highlight broad and discrete geological features on the Property. This exercise has highlighted prospective structural areas as well as possible geological contacts and will serve as a useful tool to aid in modeling the geology of the Property.

It is recommended that further work include:

- Historic drill hole database review including a section-by-section analysis and review of logged lithology both in the Porphyry Creek area and afield. Update geological maps and cross-sections as required. Generate 3D models of the Porphyry Creek area and the Property as a whole.
- Further processing and interpretation of geophysical data (AMAG and LiDAR) to highlight target areas of lithological contrasts (i.e., small intrusions and magnetic units with locally diminished magnetic signatures) and structural complexity (i.e., intersecting structures and pressure shadows), as well as areas along the extension of the CBDZ.
- Reverse circulation (“RC”) drill hole program on the eastern portion of the Property to follow up on results from previous operators to test continuity and repeatability of elevated values as well as to test the sedimentary package on the southern portion of the Property. This work will help refine existing target areas and define new target areas on the Property.
- Diamond drilling to test the highest priority target areas defined by the interpretation of the geophysical data and results from the RC drilling. It is recommended that oriented core be supplemented with optical televiewer data in areas with poor ground conditions.

The authors consulted and reviewed the public documents filed at the Ontario Ministry of Northern Development (MNDM) and information provided by LaSalle. Significant sections of this report were taken or modified from work reports prepared by previous property owners, as well as publicly filed documents. These historical reports appear to have been authored by qualified professionals, and the information prepared according to standards acceptable to the exploration community at the time.

## 2 INTRODUCTION

The Blakelock Property (the “Property”) consists of 340 single cell mining claims located in NTS sheets 32E/05, 32E/12, 42H/08, and 42H/09 in the Larder Lake Mining Division in northern Ontario. Since entering into an agreement with Lake Shore Gold Corp and its parent Pan American Silver Corp. (formerly Tahoe Resources Inc.) in 2018 by LaSalle Exploration Corp. (“LaSalle”), the Property has seen limited work save for a field visit as part of a due diligence in connection with the NI 43-101 filed in 2019 (Beauregard and Gaudreault, 2019) as well as a historical drill core review. LaSalle has continued to compile data and documents from the public domain filed at the Ministry of Northern Development and Mines (MNDM) as well as data provided by previous owners. This information was used in the writing of this report.

The purpose of this report is to document the 2020 late-fall drill program which comprises two (2) oriented drill holes totalling 486 metres as well as airborne surveys (LiDAR and magnetic gradiometer) conducted in the spring of 2021. Alan Sexton and Adam Findley both worked on the Property in the late-fall of 2020.

### 2.1 Coordinate system

The coordinate system used in all figures and tables are in UTM NAD 83, Zone 17 and the units used are in International System of Units (SI units).

### 2.2 List of Abbreviations

**Table 1 – List of Abbreviations**

Abbreviation or Symbol	Unit or Term
Au	gold
Ag	silver
cm	centimetre
Cu	copper
E	east
EM	electromagnetic
FA/AA	Fire Assay/Atomic Absorption
g/t	gram per metric ton
ICP-AES	Inductively Coupled Plasma – Atomic Emission Spectrometry
kg	kilogram
km	kilometres
km/h	kilometres per hour
LiDAR	Light Detection and Ranging
m	metre
Ma	Million years
mm	millimetre
Moz	million ounces
N	north
NI 43-101	National Instrument 43-101
QA/QC	Quality Assurance/Quality Control
Zn	zinc
°C	degree Celsius



### **3 RELIANCE ON OTHER EXPERTS**

The authors reviewed all available technical documentation relevant to the Blakelock Property and make recommendations based on the information available as well as using input from other geologists who have worked on the Property.

The authors also relied on information provided in historical reports which appear to have been authored by qualified professionals, and the information prepared according to standards acceptable to the exploration community at the time. Significant sections of this report were taken or modified from these works. The authors have no known reason to believe that any of the information used to prepare the report herein is invalid or contains misrepresentations. The authors assume that the reports and other data listed in the "References" section (Section 12) are substantially accurate and complete.

## **4 PROPERTY DESCRIPTION AND LOCATION**

### **4.1 Property Location**

The Blakelock Property (the “Property”) is in Ontario within portions of Blakelock and Hoblitzell Townships, approximately 60 km northeast of Cochrane and 140 km northeast of Timmins, Ontario, and is approximately 60 km west of the Casa Berardi Gold Mine located in northwestern Quebec. The central part of the property is approximately located at UTM (North American Datum (NAD) 83) Zone 17 coordinates 566,500m E and 5,480,500m N (Figures 1).

### **4.2 Mineral Tenure**

The Blakelock Property consists of 340 single cell mining claims and 16 boundary cell claims for a total surface area of 6,977 hectares or 69.77 km<sup>2</sup> (Figure 2). All the claims are active and 100% registered to LaSalle Exploration Corp. Claim details are provided in Appendix A.

### **4.3 Property Description, Ownership and Royalty**

The Property is located within the Larder Lake Mining Division of Ontario and represents an exploration target for both gold and base metals.

On October 25, 2018, LaSalle entered into an agreement with Lake Shore Gold Corp. (“Lake Shore”) and its parent, Pan American Silver Corp. (“Pan American Silver”; formerly, Tahoe Resources Inc.), wherein the Company acquired 100% of its Blakelock Property. To complete the acquisition, LaSalle must incur qualifying Exploration Expenditures on the Property of at least \$400,000 on or before December 20, 2021. In addition, Pan American Silver retains a royalty equal to 2% of Net Smelter Returns (“NSR”) on all minerals mined, produced, or otherwise recovered from the Blakelock Property, as defined in, and governed by the Net Smelter Returns Royalty Agreement dated December 14, 2018. The Company retains the right to buyback one half (1%) of the Pan American Silver NSR at any time in the future for a purchase price of \$1,000,000. On June 29, 2021, Maverix Metals Inc. announced the acquisition of the Pan American Silver NSR.

There are no other back-in rights, payments or other agreements and encumbrances related to the Property.

### **4.4 Property Claim Status**

After the claim to cell conversion process completed by the Ontario government in 2018, the original seventeen (17) Legacy claims converted to 230 cell claims (Tenure ID), covering an area of 3,780 hectares. 110 claims were added via staking in 2020 and 2021 which increased the Property to 340 claims. All claims are currently active (Appendix A) and have expiry dates of November 08, and 28, 2021. The status of the claims was validated at the website of the Ontario Ministry of Northern Development, Mines, Natural Resources and Forestry. There are no surface rights associated with the land holdings.

### **4.5 Permits and Authorization**

The Ontario Mining Act requires exploration plans and permits for exploration to be undertaken on Crown Lands. Once the application has been received, the MNDM circulates the exploration plan and permit to the Environmental Registry and to First Nation communities whose traditional lands may be impacted by the work. The processing periods for exploration plans is 30 days, and 50 days for exploration permits. Consultations with the affected First Nation communities identified by the MNDM are recommended. No exploration plan or permit is required to complete

exploration work on patented mining claims, however, plans and permits are required for completing work on unpatented and leased mining claims.

No right or authorization is required for access to the Property. The Taykwa Tagamou, the Wabun Tribal Council, the Mushkegowuk Council, the Metis First Nation of Ontario, and the Wahgoshig are the closest First Nation communities within a 200-kilometre radius of the Property.

#### 4.5.1 Exploration Plans and Permits Required under the Ontario Mining Act

The active permits on the Property include plan PL-20-000007 which is good for activities such as geophysical surveys, and line cutting (<1.5m width) and expires on March 12, 2022. Additionally, LaSalle was granted a permit (PR-20-000273) for mechanized drilling (assembled weight >150kg) on November 23, 2020. Two holes were drilled in 2020 under this permit which is valid until November 22, 2023.

### 4.6 Environmental Considerations

The authors are unaware of any environmental liabilities associated with the Property. However, the authors have not conducted a thorough inspection of the Property.

**Figure 1 General Location of the Blakelock Property**

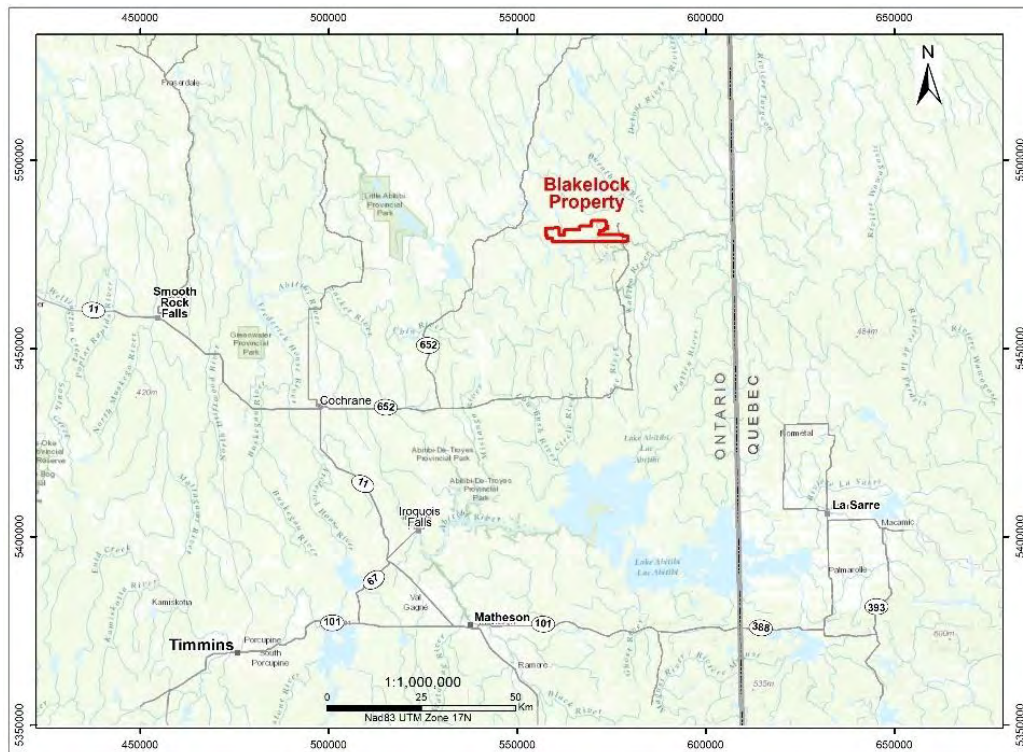
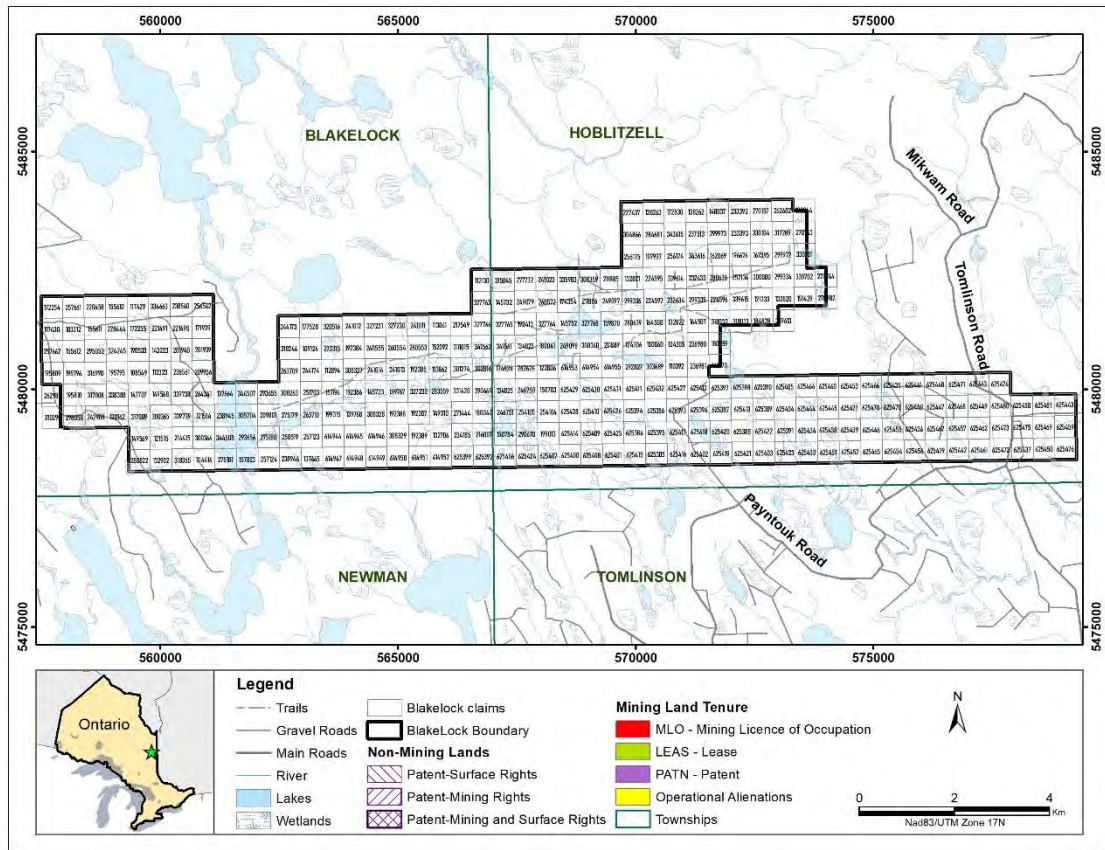


Figure 2 Property location and mineral claims of the Blakelock Property



## **5 ACCESSIBILITY, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY**

### **5.1 Accessibility**

From Timmins, the Property can be accessed via highway 655 north for 75 km to the town of Driftwood and then east to Cochrane along Trans-Canada Highway 11 for 42 km. Setting out from Cochrane, travel east then north-northeast approximately 88 km along highway 652. Year-round access is provided by a graveled secondary road near the southeastern limit of the Property (Figure 3). Limited truck access is available along some logging roads (gravel, sand, and mud tracks) that cross the western part of the Property. For most of the Property, a helicopter is required to move both personnel and equipment.

### **5.2 Local Resources and Infrastructure**

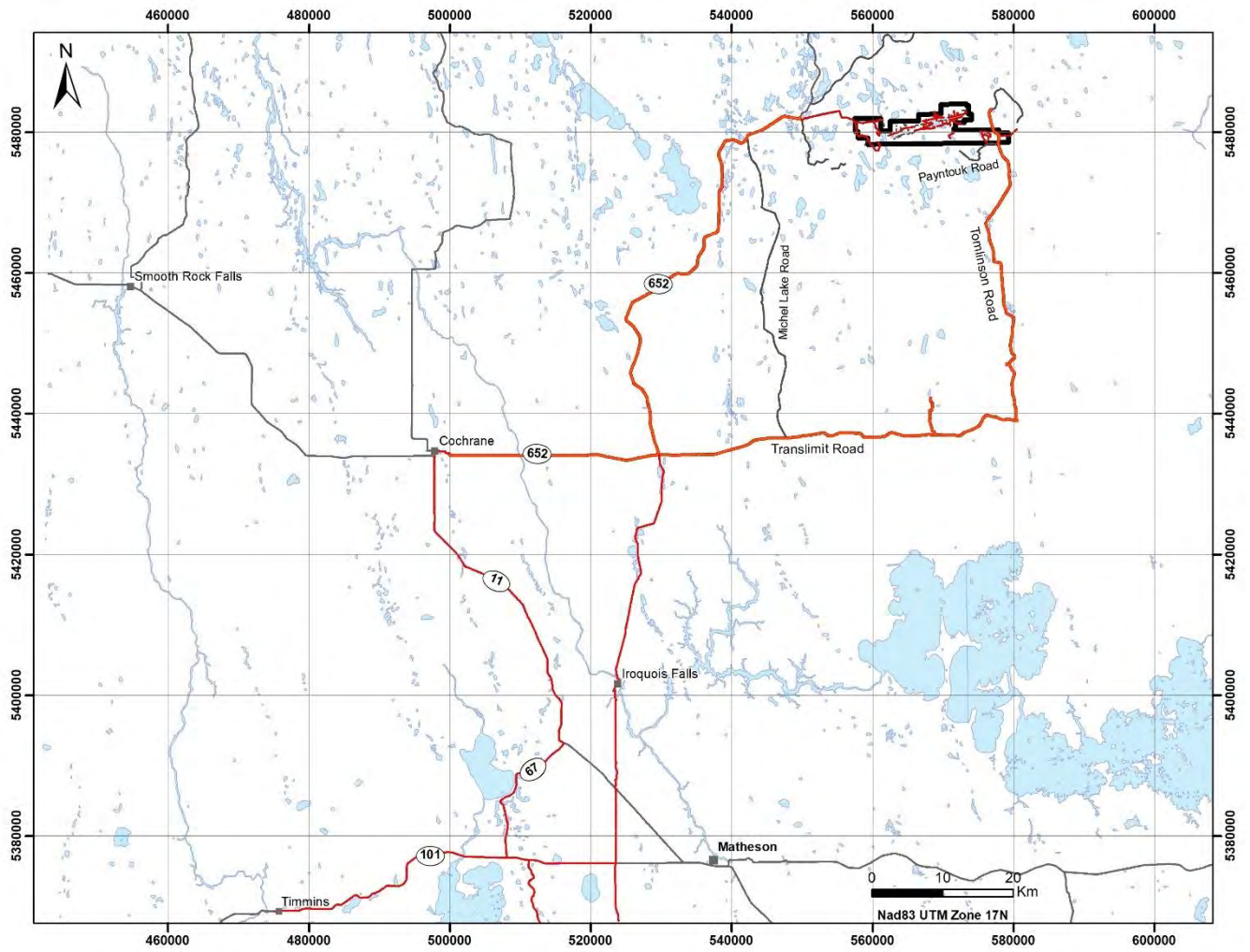
The Abitibi region of northeastern Ontario has an active economy based upon mining, exploration, and forestry products. The region has a long, continuous gold mining history dating back to the gold discoveries in the Timmins, Matachewan, and Kirkland Lake areas in the early 1900's (See Section 6). As a result, a large workforce skilled in mining and exploration is locally available. All related service industries are also locally available. Cochrane has a modest population of ~5,300 and offers basic services including hotels, garage/gas, groceries, as well as a hospital/health unit. Additionally, Cochrane is the base for helicopter contractors which offers flight services as well as camp outfitting. The town of Timmins, with approximately 42,000 inhabitants, has a rich history of mining and offers all services required to support exploration programs and mining development projects.

No surface rights exist over the Property claims with ownership of the land being deemed as "Crown Land". The Property is suitable for the construction of potential tailings storage areas, potential waste disposal areas and potential processing plant sites. However, an environmental impact assessment will have to be carried out in advance of this work.

### **5.3 Climate**

The region has a cool continental type of climate with long cold winters and cool, variable summers. Winter temperatures in the -20°C to -40°C range are common. Summer temperatures average in the +10°C to +20°C range and may reach +30°C. Average winter snow accumulation is 2 to 3 metres. The best operating season for the basic exploration work (prospecting, mapping, line cutting, geophysical and geochemical surveys and stripping) is approximately six (6) months (mid-May to October). Ideal winter drilling conditions last from early January to the end of March.

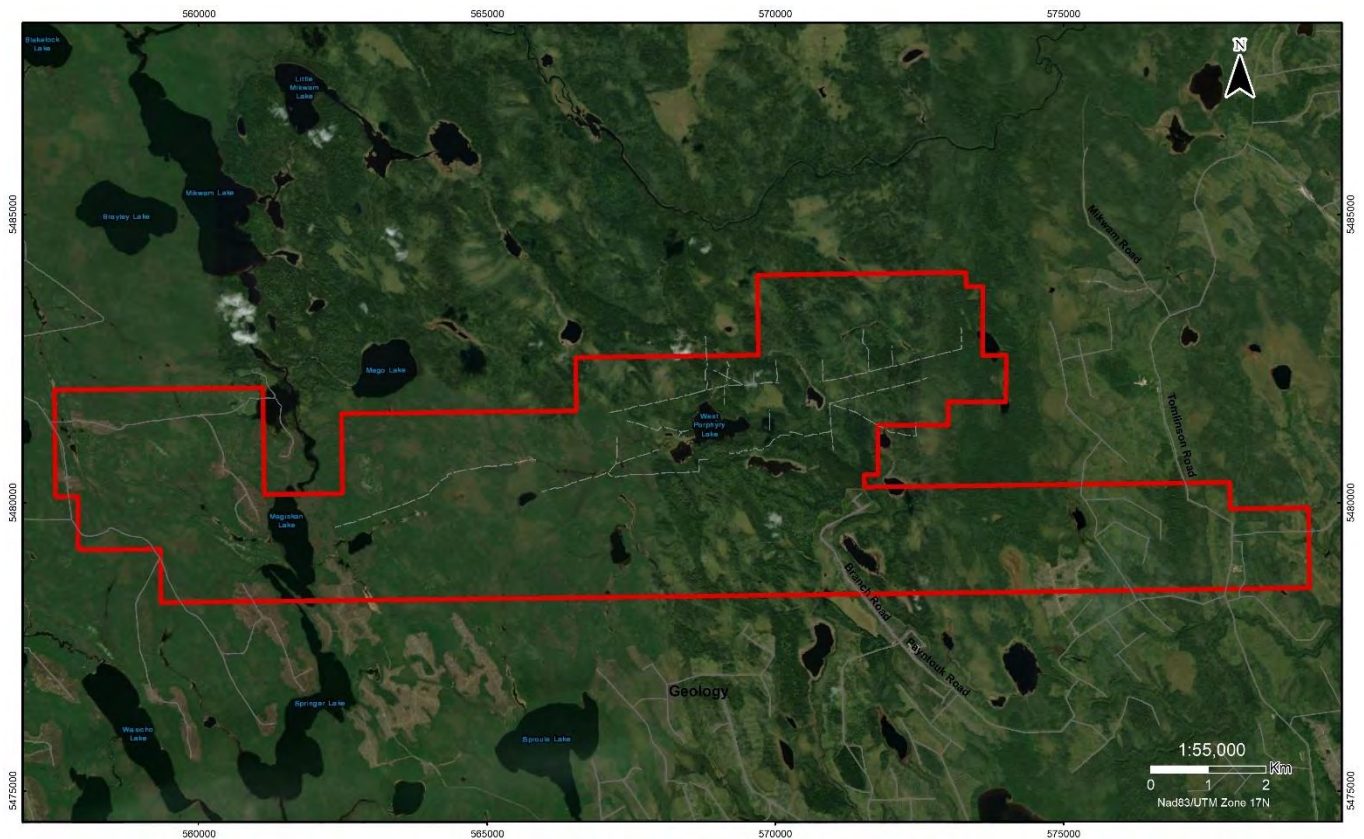
**Figure 3 Accessibility of the Blakelock Property**



## 5.4 Physiography

The Property is forest covered by secondary growth (Figure 4). Sand and gravel resources are somewhat limited – the esker sands are generally very fine-grained above a periglacial lake-washed boulder-strewn till. The area is quite flat and is strewn with small lakes and swamps – a flatness caused by an underlying “clay belt” (locally known as “gumbo clay”). The clay belt represents the bottom of a late ice age periglacial lake - Lake Ojibway (Boissonneau, 1966; Barnett, 1992) deposited during the waning phases of the Wisconsin glaciation. Areas showing glacial outwash fans, eskers, and drumlinoid sandy knobs (often covered by “caribou moss”) give relief to this generally unrelieved flatness. Drumlins were formed on top of Periglacial Lake clays during the Cochrane ice retreat. Ground moraine consisting of clay, boulder clay, sand and gravel can be seen along lakeshores. Outcrops are exceedingly rare. Depending on yearly snow depth, spring-runoff causes shallow flooding of the landscape. Broad shallow ephemeral drainage ditches can be choked with scrub and trees. The Property’s height above sea level is approximately 300 metres.

**Figure 4 Topography of the Blakelock Property**



## 6 PREVIOUS WORK

The Property is located within the Larder Lake Mining Division, Ontario. This Mining Division was created following the discovery of gold in Nighthawk Lake in 1907 (Porcupine Mining District, east of Timmins), at Kirkland Lake in 1911 (Wright-Hargreaves discovery), and after the discovery of gold further east in Quebec adjacent to the Cadillac-Malartic Break (Horne Mine in 1920). In the Abitibi Greenstone Belt, prospectors combed rivers and lakeshores with canoes hunting for further gold and base metal showings, but the extensive drift-covered ridges and valleys left by the Pleistocene Laurentide glacier meant that they could not explore the area in any real detail. The extremely immature surficial cover of the glacial landscape meant that there were no alluvial gold trains in creek bottoms extending from hard-rock mineralization – meaning, that without outcropping mineralization, ore deposits of all kinds were very easily missed. In the Northern Abitibi Greenstone Belt, the lack of substantial outcroppings and the area's general remoteness made early canoe prospecting a rather difficult proposition.

### 6.1 Historical work

- **1925:** The discovery of volcanogenic massive sulphide (“VMS”) Cu-Zn mineralization ~70 km southeast of Blakelock at Normetal, Quebec (10,109,664 tonnes at 0.78% Cu, 5.4% Zn, 65 g/t Ag, 0.9 g/t Au) focused the first prospecting effort in this part of Canada (Beauregard and Gaudreault, 2019).
- **1940:** Hollinger Mines reported outcrop grab samples in the vicinity of West Porphyry Lake with assays recorded as 4.80 and 6.17 g/t Au – the first claims to be staked in the region (Wilson, 1979).
- **1959:** Conwest Exploration Ltd. drilled two (2) holes for 228.6 m in Blakelock Township on airborne electromagnetic (“AEM”) conductors that turned out to be graphite as well as pyrite and pyrrhotite-rich metasediments. No significant values were obtained from the limited sampling (Ref.: Assessment Files # 42H09SE0027, 0030 and 0031).
- **1967:** Texas Gulf is reported to have drilled nine (9) holes for 1,238 m in Tweed and Blakelock Townships for VMS targets. One hole near the western margin of the current Blakelock claim group cut thin sulphide-rich layers (pyrrhotite and pyrite) in metasediments with no significant base metal results. Minor sulphides were reported in two holes SW of West Porphyry Lake (Ref.: Assessment Files #42H08NE0030 and 42H09SE0037).
- **1976:** Hudson Bay Mining and Smelting conducted a HLEM survey in Hoblitzell Township, but no follow-up drilling was reported (Ref.: Assessment Files # 42H09SE5008 to 5014, 42H09SE0025, 0026, 0028 and 0029)
- **1985:** Esso flew an airborne magnetic-EM-resistivity survey that was followed up by a 50-hole reverse-circulation (“RC”) drilling program. Several anomalous gold intersections were found in sandy gravels Ref.: Assessment File # 42H09SE0006)
- **1986:** Esso continued its airborne surveys farther to the west (Ref.: Assessment File # 42H09SE0009).
- **1986:** Deerfoot Resources Inc. carried out an exploration program in the west part of the actual Property. Geophysical surveys (Mag, EM, and IP) and geological mapping with three (3) drill holes (DF-1-86 to DF-3-86) totalling 249.6 metres were completed. A value of 615 ppb Au over 0.61 m was obtained in DDH # DF-3-86 within altered basaltic tuff with 10% pyrite and traces of pyrrhotite (Ref.: Assessment Files # 42H09SE0015, 0016, 0022 and 0024).
- **1987:** Esso cut a large grid and conducted extensive IP, ground magnetometre and VLF-EM surveys. This was then followed by an 82-hole RC drilling program as well as a 16-hole diamond drilling program for 2,104m. Gold-in-overburden anomalies were reported (Ref.: Assessment File # 42H09SE0014).
- **1988:** Esso carried out further gridding, ground geophysical surveys and bored another 11 diamond drill holes for a total of 1,932 m. The Esso exploration programs listed above resulted in 20 diamond drill holes on what is now LaSalle's Blakelock Property. This drill program encountered a significant anomalous zone of gold-silver mineralization associated with an intensely sericitized, quartz-veined and sulphide-mineralized



porphyry (Drill holes: HN88-22, 23, 24, 28, 31 and 43) Mineralization was reported to be associated with mylonitic shear zones and quartz veins with up to 5% sulphides. Sulphide species described in the drill logs including pyrite, sphalerite, galena, molybdenite, chalcopyrite, as well as hessite, native bismuth and native gold. (Ref.: Assessment File # 42H08NE0005)

- **1989-90:** A subsidiary of INCO Ltd. (INCO Exploration and Technical Services Ltd.) acquired property on their own behalf and under joint venture in areas now partly covered by LaSalle's Blakelock Property and drilled six (6) diamond drill holes for 924 m in Blakelock and Hoblitzell Townships (Hannila, 1990). No assays are publicly disclosed on the assessment file drill logs reported to the ministry – a legal practice at that time (Ref.: Assessment Files # 42H08NE8070 and 9312).
- **1990:** Cogema completed two diamond drill holes in the NE corner of the Blakelock Property. The most significant gold value returned was 0.021 g/t Au, but the sampling was not systematic (Ref.: Assessment Files # 32E12SW0034).
- **2004:** Lake Shore Gold completed 27 kilometres of line cutting followed a detailed total field magnetic survey. This survey was realized by Exsics Exploration Ltd. from Timmins, Ontario. The magnetic survey outlined a magnetic high unit that generally matches the intrusive that is thought to crosscut the mafic unit. The survey also outlined several cross structures of which one appears to be a possible fault striking northeast to southwest across the eastern section of the grid. The other cross structure is a major unit striking north to south across the central section of the grid which has also distorted the magnetic survey (Ref.: Assessment File No. 20001888).
- **2006:** Lake Shore Gold completed an Induced Polarization (IP) survey across ten (10) grid lines in the central part of the Property (Porphyry Creek Area). This survey was executed by Exsics Exploration Ltd. from Timmins, Ontario. The IP survey results suggest that there are at least 3 conductive horizons on each of the two groups of survey lines that were covered by the survey (Assessment File No. 20003226).
- **2006:** Lake Shore Gold acquired the Property and conducted exploration and drilling programs. Eight (8) DDHs totalling 2,209.9 metres were completed to follow-up historic gold intersections by Esso (Ref.: Assessment File # 20000001873).
- **2006:** Lake Shore Gold contracted Terraquest Ltd. to fly a detailed 100 m-spaced airborne Magnetic and VLF-EM survey over the Blakelock claim group. A magnetic interpretation of the airborne data was completed for Lake Shore by Hadyn R. Butler (internal Lake Shore consultant's report).
- **2008:** Lake Shore Gold completed a drill program of seven (7) DDHs totalling 2,826.5 metres. The primary goal of this program was to further define the known gold bearing structures within the Porphyry Creek area of the Property (Ref.: Assessment File: 20000005454).
- **2010:** Lake Shore Gold completed a helicopter-supported drill program comprised of six (6) DDHs for a total of 1,747 metres (Ref.: Assessment File # 20000006133). The program was designed for one (1) hole to intercept Esso mineralization and the remainder five (5) holes to test geophysical anomalies. The drilling program confirmed all its targets. Four (4) out of six (6) holes intersected porphyry intrusive phases with some significant auriferous values: BL-10-28 has revealed 28.41 g/t Au over 2.4 m; BL-10-29 with 2.67 g/t Au over 1.0 m; BL- 10-30 with 1.28 g/t Au over 0.7 m; and BL-10-32 with 0.132 g/t Au, 26.03 g/t Ag over 1.7 m.
- **2012:** Lake Shore Gold completed a Mobile Metal Ion (MMI) sampling program on the Property. A total of 641 samples were collected in the central part of the Property. The results from six sampling transects suggest possible base metal and precious metal anomalies are present on one line. Line 564,500 is marked by a multi-sample low- to high-contrast base metal anomaly consisting of Cu and Pb. This anomaly is developed over 1-2 sample lines and is likely open to the east. A second anomaly is possible with a three-sample Zn response noted from the north end of line 564,500. This is a single line anomaly and may also be open to the east (Ref.: Assessment File No. 20010961).

## 6.2 **Work done by LaSalle Exploration Corp.**

- In 2018, LaSalle completed a visit to Lake Shore Gold's core yard to make an inventory of drill core from the Property and review key mineralized intersections.
- In 2019, LaSalle filed a NI 43-101 technical report (Beauregard and Gaudreault, 2019) on the Blakelock Property.

## 7 GEOLOGICAL SETTING

The Blakelock Property (the “Property”) is located within the Abitibi Greenstone Belt. The Abitibi Greenstone Belt (Figure 5; modified from Ayer et al., 2013) comprises east-trending synclines containing volcanic rocks and intervening domes cored by synvolcanic and/or syntectonic plutonic rocks (gabbro-diorite, tonalite and granite), separated by east-trending turbiditic wacke bands (MERQ-OGS, 1984; Ayer et al., 2002a; Daigneault et al., 2004; Goutier and Melançon, 2007). The volcanic and sedimentary strata dip near vertically and are separated by abrupt, variably dipping east-trending faults. Some of these faults (e.g., the Porcupine-Destor Fault) display evidence of overprinting deformation events, including early thrusting and later strike-slip and extension events (Goutier, 1997; Benn and Peschler, 2005; Bateman et al., 2008). Two ages of unconformable successor basins are observed: widely distributed fine-grained clastic rocks in early Porcupine-style basins, followed by Timiskaming-style basins composed of coarser clastic sediments and minor volcanic rocks, largely proximal to major strike-slip faults such as the Porcupine- Destor and Larder Lake–Cadillac fault zones and other similar regional faults in the northern Abitibi Greenstone Belt (Ayer et al., 2002a; Goutier and Melançon, 2007).

The Abitibi Greenstone Belt is intruded by numerous late-tectonic plutons composed mainly of syenite, gabbro and granite, with lesser lamprophyre and carbonatite dykes. The metamorphic grade in the Abitibi Greenstone Belt varies generally from greenschist to subgreenschist facies (Jolly, 1978; Powell et al., 1993; Dimroth et al., 1983; Benn et al., 1994), except in the vicinity of most plutons where the metamorphic grade corresponds mainly to the amphibolite facies (Jolly, 1978).

The geographic limit between the northern and southern parts of the Abitibi Greenstone Belt has no tectonic significance but is similar to the limits between the internal and external zones of Dimroth et al. (1982) and those between the Central Granite- Gneiss and Southern Volcanic zones of Ludden et al. (1986). The boundary between the northern and southern parts passes south of the greywackes of the Chicobi and Scapa groups, with a maximum depositional age of  $2698.8 \pm 2.4$  Ma (Ayer et al., 1998, 2002b).

The Abitibi Subprovince is bounded to the south by the Larder Lake– Cadillac Fault Zone, a major crustal structure that separates the Abitibi and Pontiac Subprovinces (Chown et al., 1992; Mueller et al., 1996; Daigneault et al., 2002, Thurston et al., 2008).

The Abitibi Subprovince is bounded to the north by the Opatica Subprovince, a complex plutonic-gneiss belt formed between 2800 and 2702 Ma (Sawyer and Benn, 1993; Davis et al. 1995). It is mainly composed of strongly deformed and locally migmatized tonalitic gneisses and granitoid rocks (Davis et al., 1995).

### 7.1 Regional Geology

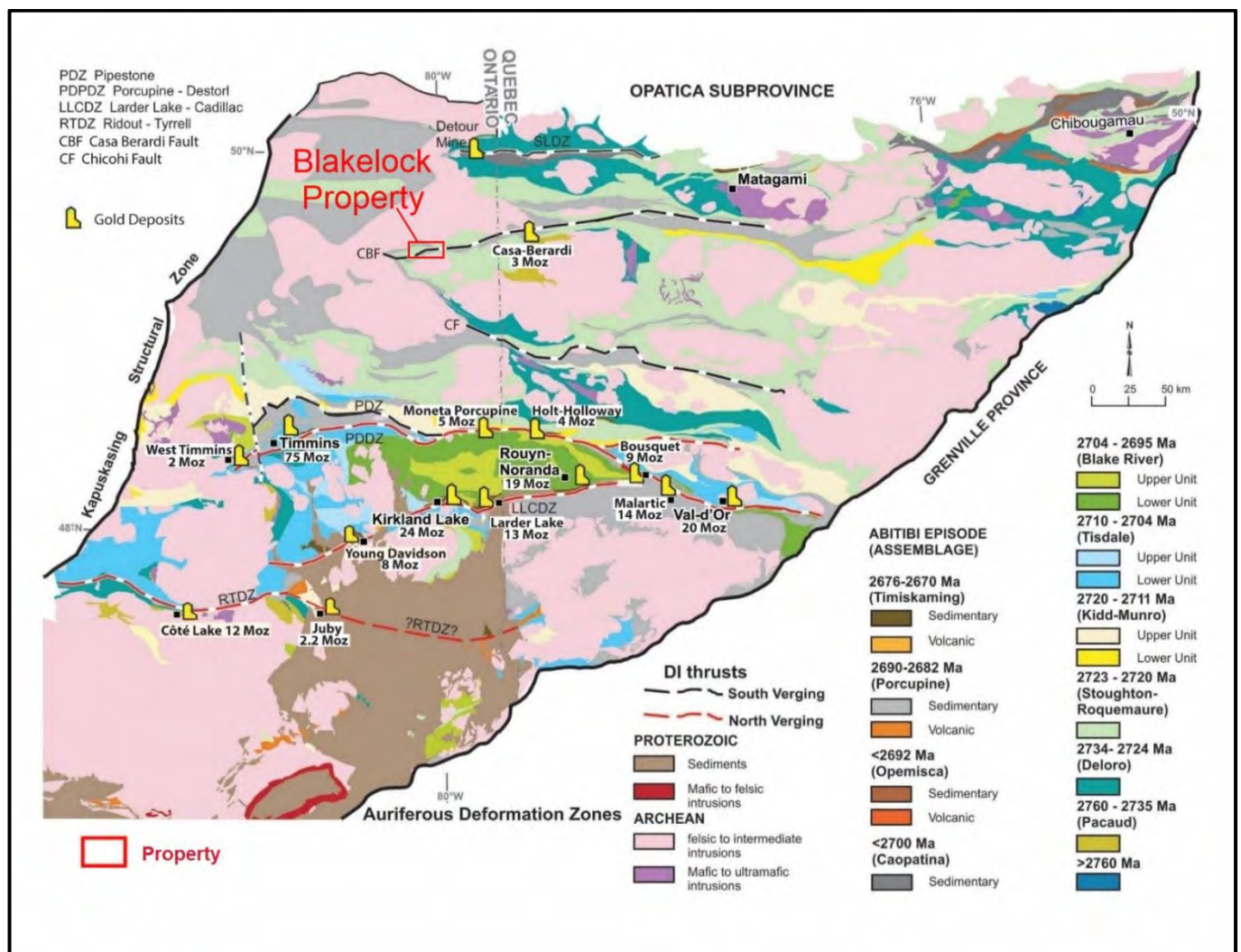
The Property is located along the western extension of the deformation corridor known as the Casa Berardi Deformation Zone (“CBDZ”) in the northwestern part of the Abitibi Greenstone Belt, Subprovince of the Superior Province within the Canadian Shield. This portion of the Belt is composed of meta-volcanic and meta-sedimentary assemblages displaying greenschist facies metamorphism and moderate deformation (Figure 6).

The Pleistocene cover of unconsolidated clay, sand, and gravel is thick and extensive which has hampered previous exploration efforts; bedrock outcrops are few. Bedrock within the area consists of metavolcanics, metasediments, and ultramafic, mafic, and felsic intrusive rocks of Early Precambrian age which are intruded by Early to Late Precambrian diabase dikes (Wilson, 1979). The supracrustal rocks have been altered under conditions of low-grade metamorphism (Winkler 1976). Mineral assemblages in mafic metavolcanics comprise mainly plagioclase, actinolite, and chlorite. Occasional amphibolite containing plagioclase, hornblende, and chlorite suggest, as does the presence of almandine garnet in some metasediments, that at least locally, the higher temperature part of low-grade metamorphism was reached.

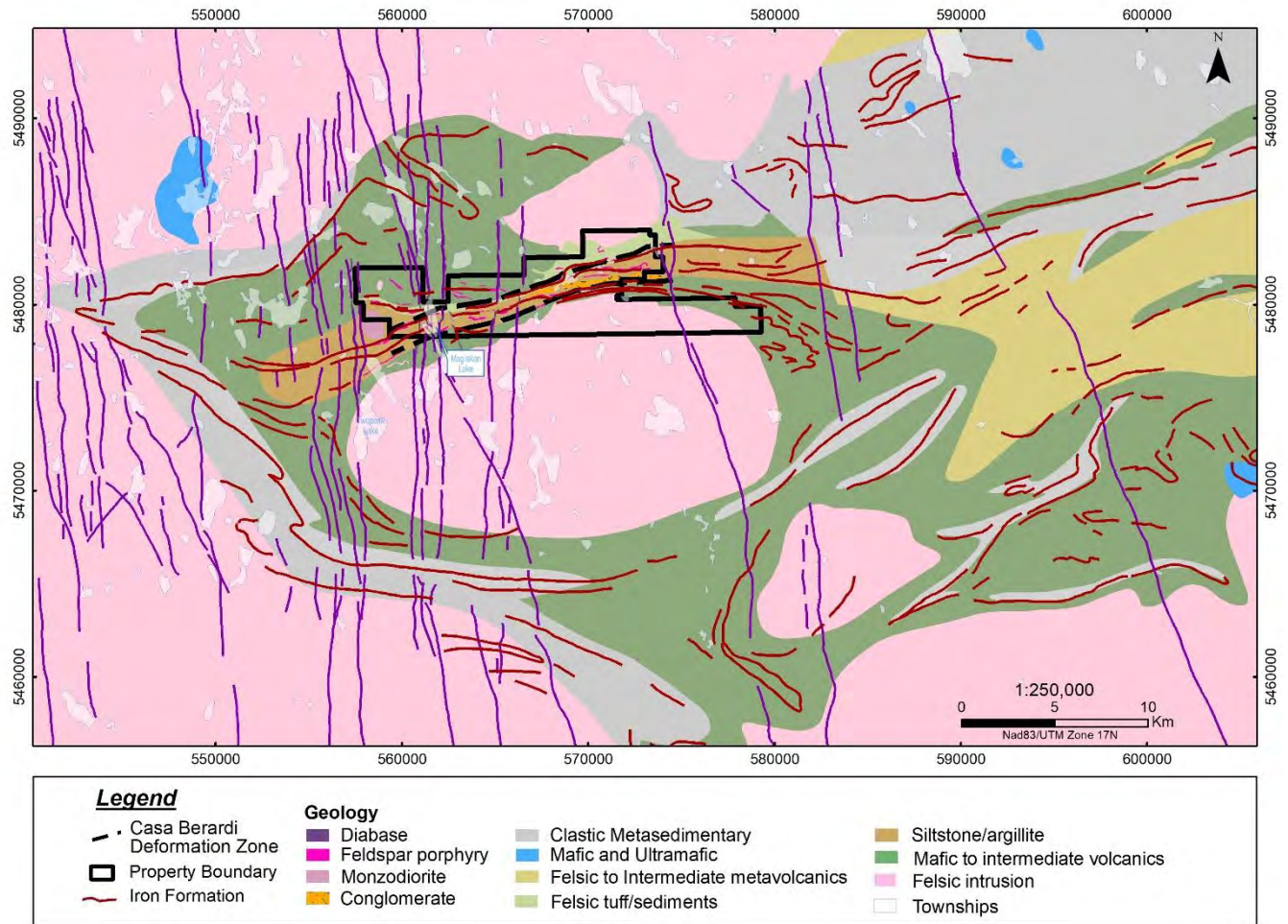
The metavolcanics west of Twopeak Lake are dominantly massive and pillowed mafic flows containing minor feldspar porphyritic units (Figure 6). A minor amount of pyroclastic rock was found 3900 m southwest of Twopeak

Lake. The metavolcanics to the southeast of Magiskan Lake are mafic massive flows; those to the northwest are dominantly mafic pyroclastic rocks above minor massive and pillowed flows. Pyroclastic rocks include thick- to thin-bedded tuff, lapilli-tuff, and lapillstone, and locally felsic to intermediate metavolcanics (Figure 6). Chemical analyses show that the metavolcanics range from calc alkaline, tholeiitic basalt, and andesite. The biotite-rich metasediments at the top of the stratigraphic section are composed of micaceous sandstone, and schist, with some iron formation. The metasediments interbedded with or lying below the mafic metavolcanics are chloritic and comprise conglomerate, sandstone, mudstone, and minor amounts of iron formation. All the metasediments show rhythmic patterns of thick-bedded coarse-grained sedimentary rocks and alternating thin-bedded coarse- and fine-grained sedimentary rocks which suggest that turbidite sedimentation, typical of Early Precambrian (Archean) greenstone belts, occurred. Chemical and clastic sedimentary rocks are present; these two types of rock are commonly intermixed (Wilson, 1979).

**Figure 5 Geological Map of the Abitibi Greenstone Belt**



**Figure 6 Regional Geology of the Blakelock Property**



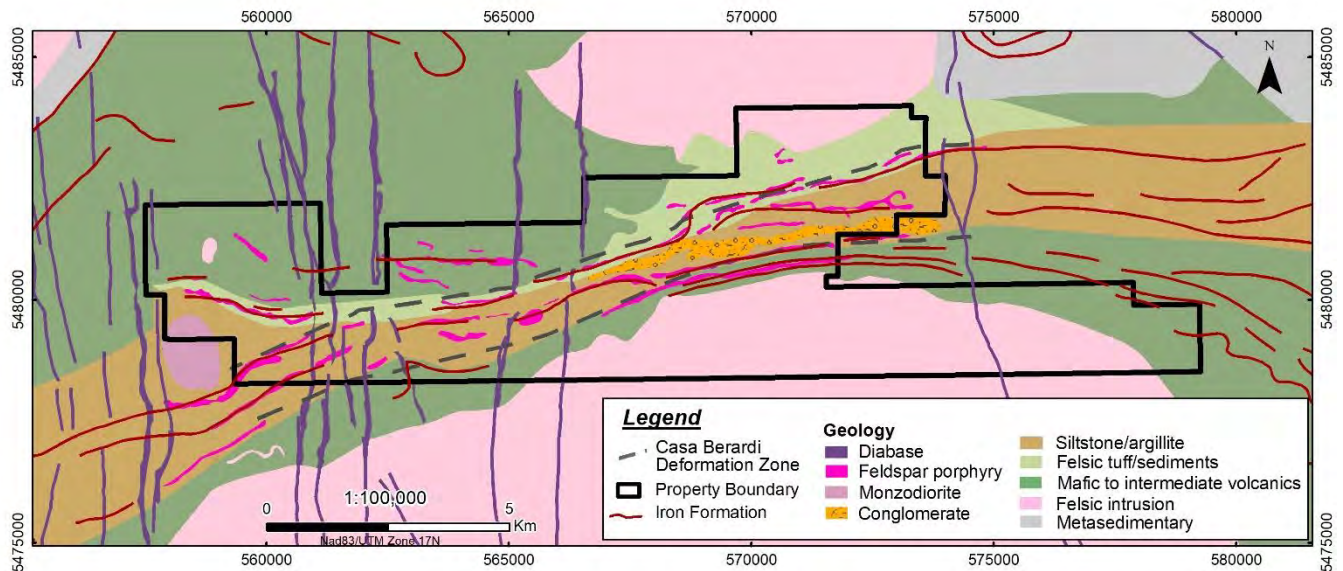
## 7.2 Property Geology

The Property is located along the western extension of the deformation corridor known as the Casa Berardi Deformation Zone (“CBDZ”), which host Hecla’s Casa Berardi Gold Mine (>3.5 Moz) in Quebec some 60 km along strike to the east. Gold mineralization occurs in quartz veins within graphitic pelite and greywacke spatially associated with iron formation interpreted as submarine hydrothermal vent (Dubé et al. 2007).

The volcanic and sedimentary sequences on the Property are intruded by granitic rocks to the north and south (Ayer et al., 2009; Figure 7). Volcanic rocks vary from mafic to intermediate, massive to pillowed units with minor amounts of intermediate-felsic volcanic units observed as tuffs or breccias (Wilson, 1979). Mafic to intermediate dykes locally cut the volcano-sedimentary sequence of the Property. All rocks have been cut by late diabase dykes (Figure 7). All the rocks are described as steeply dipping to the north at 70 degrees and are similar to the mine sequence at Casa Berardi.

The presence of metasedimentary rocks, mafic metavolcanic units, granitic intrusions, localized carbonate alteration, quartz veins and structural features (faults, shears, and folds) together form a favourable geological context for auriferous and base metal mineralization on the Property. The combination of hydrothermal events, metamorphism, and deformation, represent important processes for gold concentration and the formation of world-class gold deposits in greenstone belts and sedimentary rocks in general (e.g., Dubé et al. 2007; Large et al., 2007).

**Figure 7 Geological Map of the Blakelock Property**



## 7.3 Mineralization

### 7.3.1 Deposit Types

Immediate targets of interest on the Blakelock Property are of mesothermal lode gold style (initially defined by Lindgren, 1933; also known as quartz-carbonate vein gold deposits, Wilton, 1997a, 1997b, Dubé and Gosselin, 2007). Large (+1 million ounces) Archean gold deposits may occur in clusters (e.g., around Timmins, Ontario), or as isolated zones (e.g., Hemlo and Musselwhite, Ontario). Although gold deposits may be found in granitoid batholiths (e.g., Renabie, Ontario), most sizeable deposits occur in Greenstone belts.

Approximately 60 km to the east of the Property (Figure 8), the Casa Berardi East and West Gold Mines (owned and operated by Hecla Mining) are located about 5 km apart within the Casa Berardi Deformation Zone (“CBDZ”). At Casa Berardi the gold mineralization is concentrated on the south side of the Casa Berardi (brittle-ductile) fault as complex multi-phase quartz veins and stockworks with sulphides as disseminated pyrite and arsenopyrite. Graphite is common along the fault. The East ore body has a strike length of 400 m at surface decreasing to 200 m strike length at 800 m depth. Gold mineralized zones to the north of the Casa Berardi fault appear to be proximal to basalt-sediment contacts (Hecla Mining website: <https://www.hecla-mining.com/casa-berardi/>).

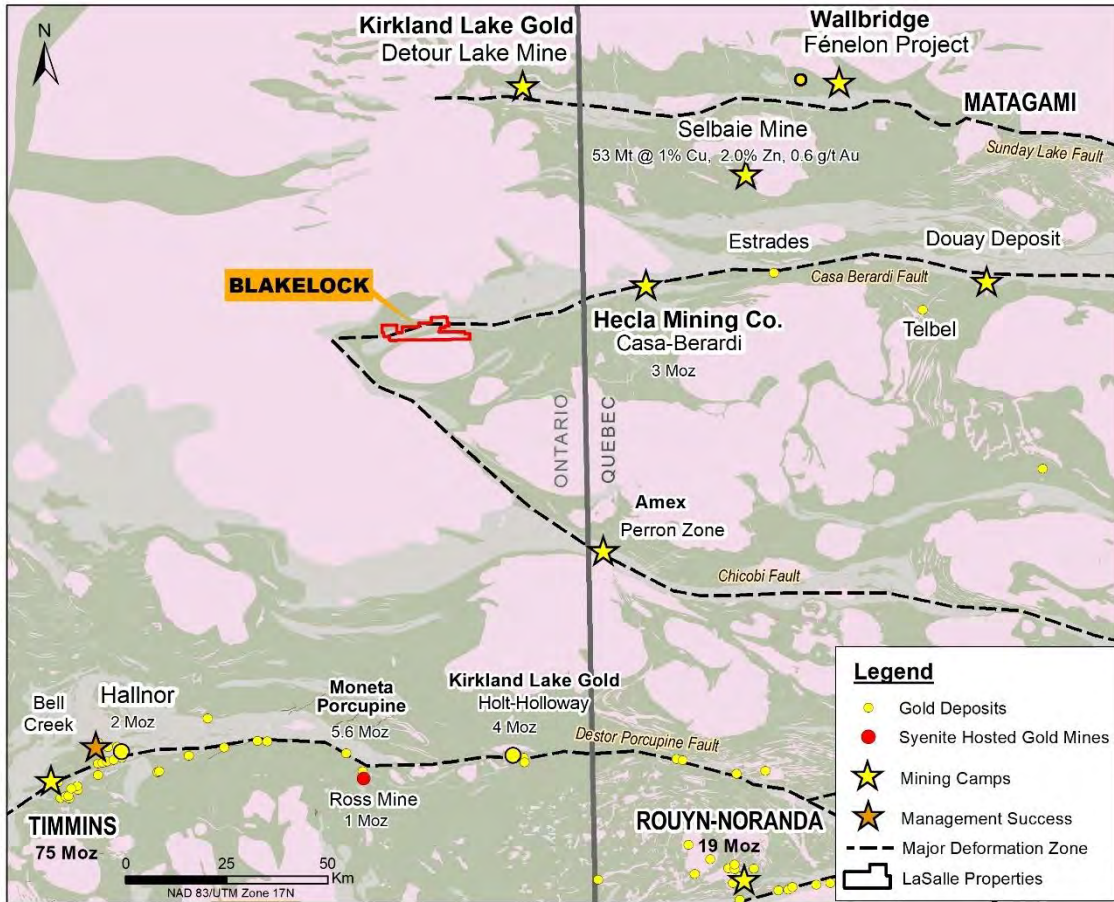
Approximately 85 km further east of the Property (Figure 8), the Douay deposits owned by Maple Gold Mines consist of eight (8) zones. The Douay property consists of a northern assemblage of mafic and felsic pyroclastic and sedimentary rocks, a central assemblage of basalts and gabbros with some felsic rocks that are intruded by the Douay alkaline intrusive complex, and a southern assemblage comprised of basalts with silicious-chemical sediments. Gold mineralization is found in relation to the Douay syenite complex.

At the abandoned Joutel town site, approximately 16 km west-northwest of the Douay deposits, the past producers Eagle Gold Mine and adjoining Telbel Gold Mine of Agnico Eagle Gold Mines occur on the southwest flank of the Harricana River turbidite basin, a unit juxtaposed with the Joutel felsic volcanic complex dated at 2,728 Ma. The Harricana Deformation Zone (“HDZ”) provides the contact between these two assemblages. To the west-northwest, the HDZ merges with and/or becomes parallel to the CBDZ. Discovered in 1962, the Eagle Gold Mine was drilled as a volcanogenic massive sulphide (“VMS”) target based on coincident airborne EM and magnetic anomalies. Gold mineralization occurs as a 2 to 5 m thick pyritic zone between a carbonated felsic tuff, argillite, and chemical sediment package (Joutel felsic volcanic complex) to the southwest, and carbonated argillites (Harricana River complex) to the northeast. Pyrite content is ~20%, as a disseminated and cataclastic sulphide. Fine free gold appears to be associated directly with the pyrite (Beauregard and Gaudreault, 2019).

Some 60 km north of the Property (Figure 8), the Detour greenstone belt (Jackson and Fyon, 1991) is bounded on the north by gneissic and plutonic rocks of the Opatica Subprovince and on the west by the Hopper Lake granitic complex. The Detour Lake Gold Mine occurs on the north limb of an antiform. Underlying units consist of massive and pillowed tholeiitic volcanics and minor komatiites, which are intruded by gabbro, diorite to quartz diorite stocks, as dykes and sills. The whole package being cut by the Sunday Lake Deformation Zone, which is a major, east-west striking structural high strain zone that has been traced over 30 km. The gold mineralization at the deposit is found in the hanging wall to the Sunday Lake Deformation Zone as early, sulphide-poor quartz veins and stockworks overprinted by a sulphide-rich fracture filling in deformed veins, breccias and pillow selvages.

From 1983 to 1997, the old underground Detour Mine was operated by Placer Dome. Detour Gold acquired the Detour Mine Property in January 2007, completed a feasibility study in June 2010 and commenced gold production in February 2013 as an open pit operation. The property is now owned by Kirkland Lake Gold.

**Figure 8 Mineral Deposits of the Northwestern Abitibi Greenstone Belt**





In 1925, the discovery of volcanogenic massive sulphide (“VMS”) Zn-Cu-Ag mineralization circa 70 km SE of Blakelock at Normetal, Quebec focused the first prospecting effort in this part of Canada (Beauregard and Gaudreault, 2019)

Previous reconnaissance exploration efforts in the Blakelock region were directed at volcanogenic massive sulphide (“VMS”) deposits because such deposits can be associated with an anomalous airborne electromagnetic (“AEM”) signature which, in turn, can be seen beneath regional till sheets and clay belts. For instance, approximately 92 km to the north-northeast of the Property, the 2,730 Ma Selbaie Mine (former BHP-Billiton producer), a stratiform and epithermal deposit represents a unique deposit in the Northern Abitibi (Tucker-Barrie and Krogh, 1996).

Less than 60 km east, in the province of Quebec, several VMS discoveries have been identified around the margin of the Mistaouac Batholith Complex, a synvolcanic intrusion. Properties previously held by Cambior Inc. (now IAMGold) cover a mixed volcanic-sedimentary package on the northwest margin of the batholith. Volcanic units comprise felsic pyroclastics with subordinate lavas in contact with a mafic lava sequence. To the west the volcanics are in thrust contact (the Gémini thrust) with a ~100 m thick turbidite sequence (greywacke-siltstone- mudstone) as well as iron formation, and the thrust boundary is commonly marked by graphite. To the east, units dip parallel to the batholith margin but shallow to 45° towards the west. Small felsic stocks and dykes crosscut all units.

The Estrades (Golden Hope) Mine is located approximately 25 km due east of the Casa Berardi Gold Mine, contains a polymetallic mineralization (Au, Ag, Cu and Zn).

### 7.3.2 Gold bearing structure in Porphyry Creek Area – Blakelock Property

Esso’s historic diamond drill program on the Property encountered a significant anomalous zone of gold-silver mineralization associated with an intensely sericitized, quartz- veined and sulphide-mineralized porphyry. This area is referred to as Porphyry Creek (Figure 9). Mineralization was reported to be associated with mylonitic shear zones and quartz veins with up to 5% sulphides. Sulphide species described in the drill logs including pyrite, sphalerite, galena, molybdenite and chalcopyrite, as well as hessite, native bismuth and native gold. Best values obtained 10.9 g/t Au over 10.25 m including 210 g/t over 0.4 m (DDH # HN88-22) and 6.16 g/t Au over 4.55 m (DDH # HN88-28, Ref.: Assessment Files # 42H08NE0005, 42H08NE0016).

Historic drilling by (1988-2010) by Esso Minerals and Lake Shore Gold encountered mineralization that consisted of 50% vuggy to glassy coarse-grained quartz veins and stockworks in association with sulphides that is hosted by porphyritic granodiorite. Late slips and fractures offset in the quartz veins mineralization. The best intersection obtained was 15.68 g/t Au over 1.5 m (DDH # BL06-03).

In the northwest part of the Property some significant gold values were obtained by Placer Dome diamond drilling:

- DDH 346-001: 1.04 g/t Au over 0.87 m;
- DDH 346-002 : 2.16 g/t Au over 1.2 m;

In the northeast part of the Property, on diamond drilling completed by Esso in 1988 returned 1.14 g/t Au over 0.55 m (HN88-21).

Several other holes drilled by Esso and Lake Shore Gold returned some significant values immediately to the south and west of the Porphyry Creek Area:

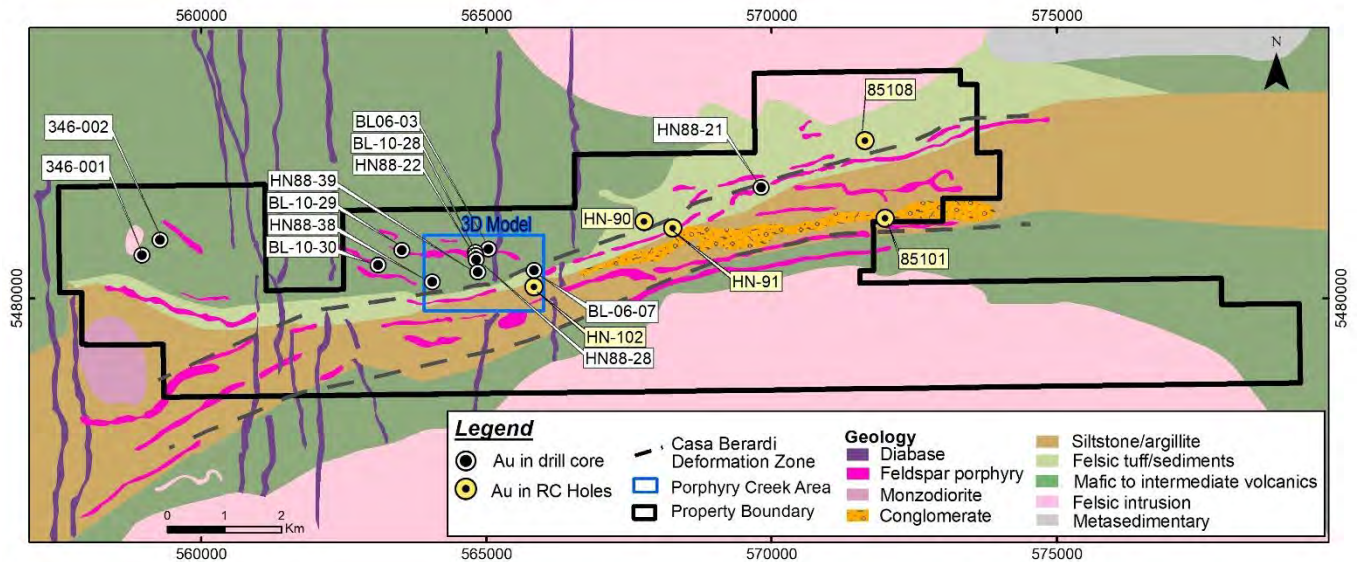
- BL06-07: 1.39 g/t Au over 5.9 m;
- BL-10-29 : 2.67 g/t Au over 1.0 m;
- BL-10-30 : 1.28 g/t Au over 0.7 m;

- HN88-38 : 2.6 g/t Au over 1.5 m;
- HN88-39 : 1.4 g/t Au over 0.8 m.

Several auriferous values were obtained in the reverse circulation drilling on the Property (Figure 9):

- Hole 85108: 5.93 g/t Au in the Matheson Till in the northeast part of the Property;
- Hole 85101: 3.47 g/t Au in the Ojibway II gravel / Matheson Till near the eastern limit of the Property;
- Hole HN-90 and HN-91: 12.7 g/t Au and 6.77 g/t Au in Till in the central part of the Property;
- Hole HN-102: 40.7 g/t Au in the gravel Till in the west central part of the Property;

**Figure 9 Historic Exploration of the Blakelock Property**



## 8 EXPLORATION

LaSalle undertook several initiatives to improve efforts for future exploration programs on the Property. These included a small drill program at the end of 2020 and the flying of LiDAR as well as detailed magnetic surveys in 2021. Due to the paucity of outcrop on the property, remote sensing and geophysical techniques are the best tools to identify structures of potential interest as well as to improve the geological picture of the Property. From a practical standpoint, LiDAR imagery can help to identify new roads/access trails that may aid in minimizing environmental impact during future exploration programs.

### 8.1 2020 Diamond Drilling Program

Between November 20 and December 18, 2020, LaSalle completed 486 metres of drilling on the Property in two (2) oriented, NQ diamond drill holes (Figure 10). LXB20-001 and LXB20-002 were drilled in the Porphyry Creek area to target gold mineralization intersected in historic holes (See Section 6.1) as well as to attempt to better understand the orientation of possible controlling structures. Location and orientation data for the two holes are found in Table 2. Cross-sections showing logged geology and assay results are provided in Appendix B, assay certificates are found in Appendix C, and drill logs are in Appendix D.

The program was completed by RJLL Forage / Drilling based out of Val-d'Or, Québec and was helicopter supported by Expedition Helicopters out of Cochrane, Ontario. Program design, management and Quality Control/Quality Assurance was conducted under the supervision of LaSalle President and CEO Ian Campbell, P. Geo, and Vice-President, Exploration Alan Sexton, P. Geo. GeoVector Management Inc. was retained to supervise and execute all aspects of core logging including core orientation, photography, geology, structural measurements, magnetic susceptibility, sampling, and the insertion of standard/blank material. Standards were obtained from OREAS North America Ltd. and QA/QC results were reviewed by Duncan Studd, P. Geo.

**Table 2 – Summary of Late-Fall 2020 Drill Holes**

Hole ID	Easting	Northing	Elevation (m)	Azimuth	Dip	Length (m)
LXB20-001	564799	5480759.4	316.18	180	-50	162
LXB20-002	564960.2	5480890.9	309.91	180	-50	324

#### 8.1.1 Results

##### 8.1.1.1 Geological Observations

The following rock types were encountered:

- Quartz diorite (Figure 11-A).
- Mafic crystal to lapilli tuff (Figure 11-B).
- Massive mafic volcanic with localized pillow flows (Figure 11-C).
- Porphyritic intermediate intrusive (Figure 11-C).
- Quartz veins up to 30cm thick were hosted exclusively in quartz diorite (Figure 11-D, 11-E).

Pyrite of varying percentages was the dominant sulphide with rare occurrences of a blue-grey unidentified mineral (possibly silver-bearing) in LXB20-001 between 53.4-66.34m. Principal alteration assemblages comprise chlorite, epidote, carbonate, potassium feldspar, biotite, quartz flooding (rare), sericite (rare), and bleaching (rare). Complete drill logs are found in Appendix D.

Figure 10 Plan map of the 2020 Blakelock DDH Program

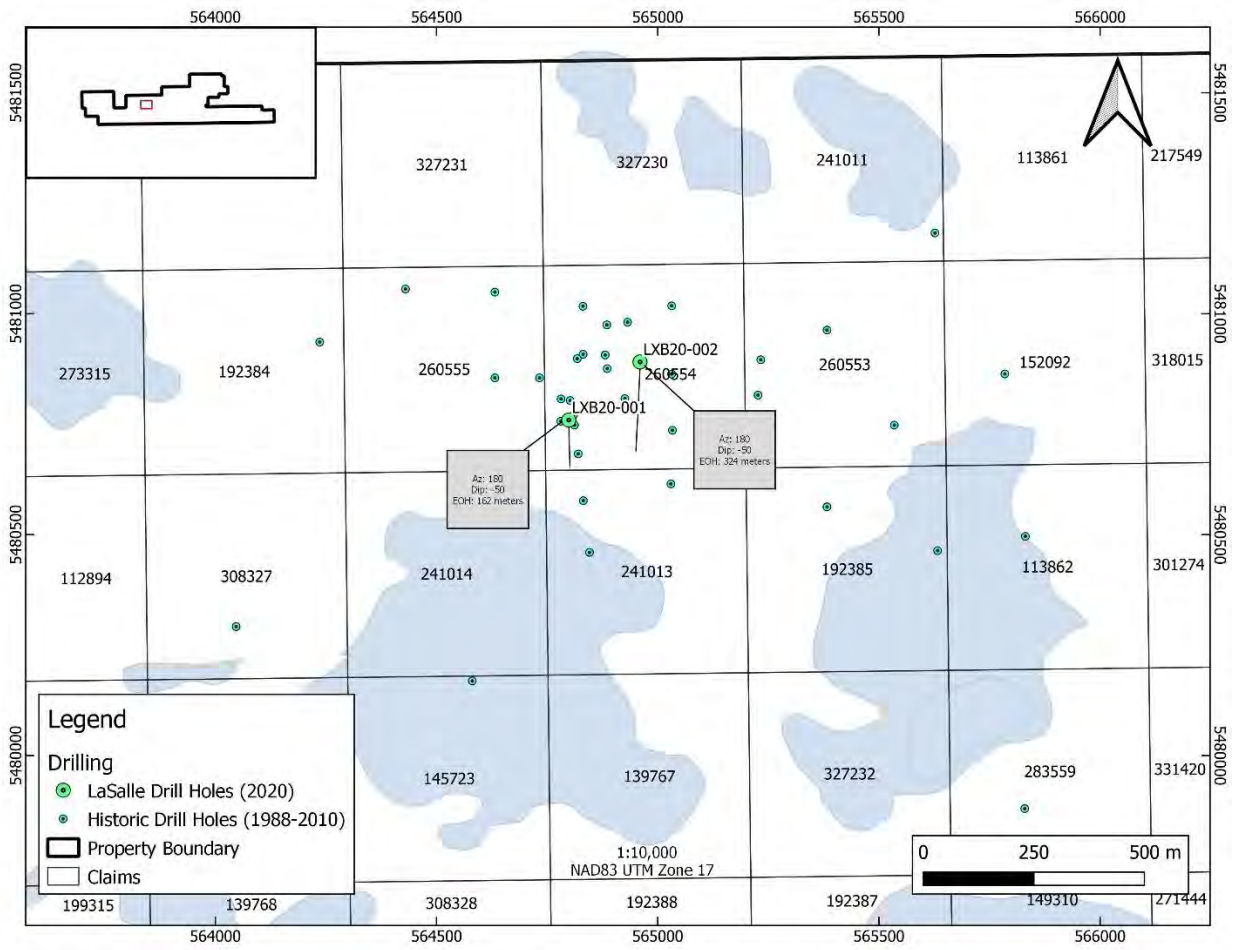
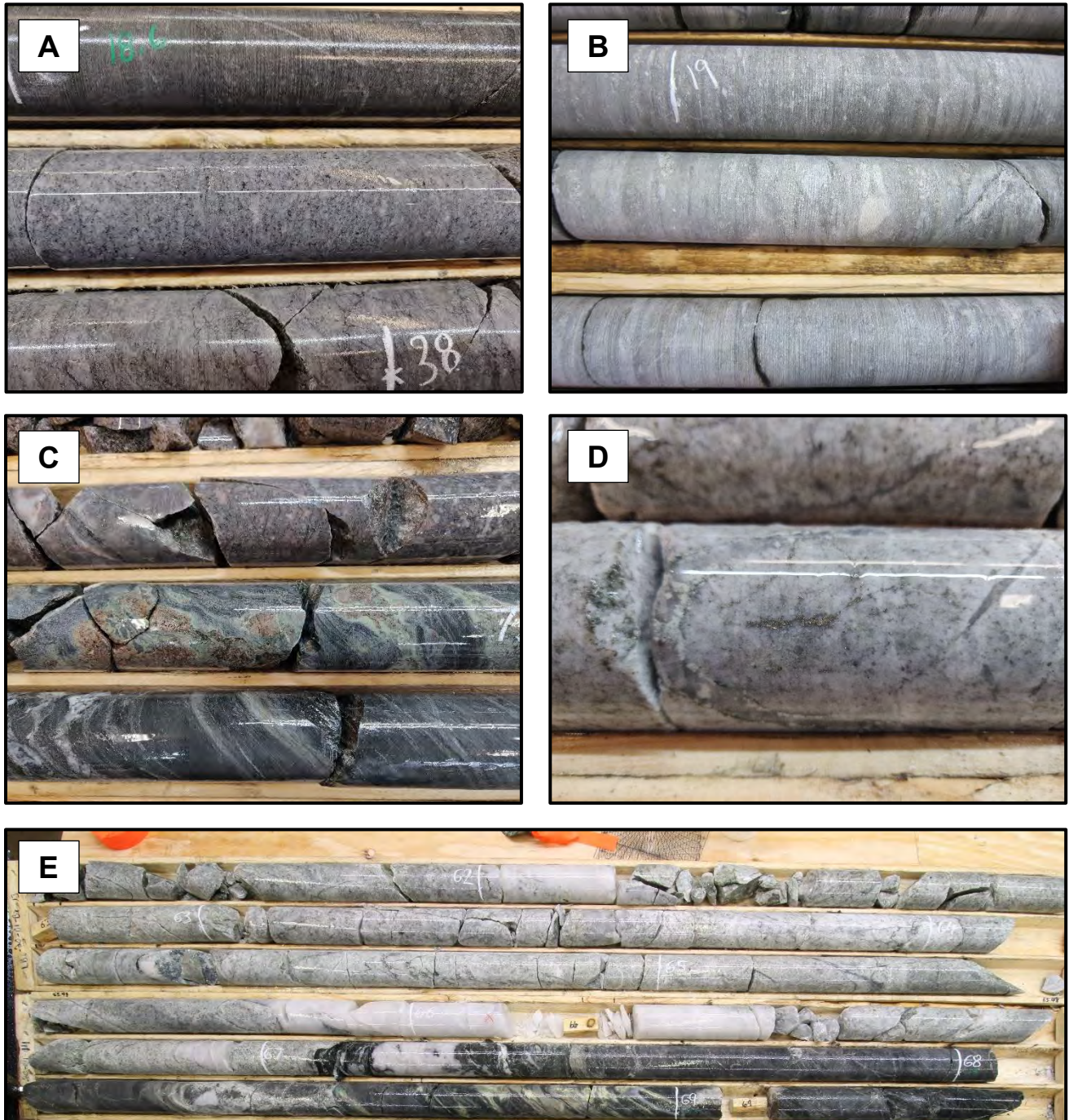


Figure 11 Main rock types intersected in the 2020 drill program



### 8.1.1.2 Structural Geology

Drill holes from the 2020 program were oriented using the DeviCore tool from SurveyTech Instruments and Services based out of Timmins, Ontario. Using this tool, drill contractors marked the bottom of the core barrel (when possible) following a run with a thin red line representing the plane of the core axis. Upon receipt of the core, Geotechnicians would assess the presence and quality of this mark and record it into the database. Following the fitting of the core, Geotechnicians would check if the run 'locked' (lined-up) with the previous run. A reference line would be drawn from mark to mark along the core axis and the line quality would be recorded. Structural measurements were taken using protractors and NQ wrap around protractors on lines of sufficient quality.

Between LXB20-001 and 002, forty-eight (48) oriented structure measurements were collected in total. Of these, only 24 measurements correspond to orientation lines with a high confidence of orientation. This program had limited core orientation success due to poor core competency. From the limited measurements collected in both holes, the mean foliation / shear orientation has a trend of 260°, but dips steeply to the south in LXB20-001, and moderately to the north in LXB20-002 (moderate dip caused by an outlier measurement with a shallow dip). This east-northeast trend is consistent with the inferred trend of the Casa-Berardi Deformation Zone, which dips steeply to the north. Other structures of note include a fracture set with a mean orientation of 272/38°, quartz veins with a mean orientation of 253/40°, and alteration bands with a mean orientation of 269/74°. Based on the limited success of core orientation on this program, it is recommended to supplement oriented core with optical televiewer data in future drill programs. A summary report on oriented core measurements including detailed photos is found in Appendix E

### 8.1.1.3 Significant Intersections from Assay Results

355 samples of half NQ core were taken and sent for assay. Intervals of note include:

**LXB20-001:** 0.24 g/t Au over 13.97m from 52.37-66.34m

**LXB20-001:** 1.48 g/t Au over 2m from 118-120; including 2.42 g/t over 1m from 119.0-120.0m

**LXB20-002:** 0.31 g/t Au over 2.85m from 184.15-187m

**LXB20-002:** 0.44 g/t Au over 11.14m from 256-267.14m; including 1.01 g/t over 1.22m from 260.98-262.2m.

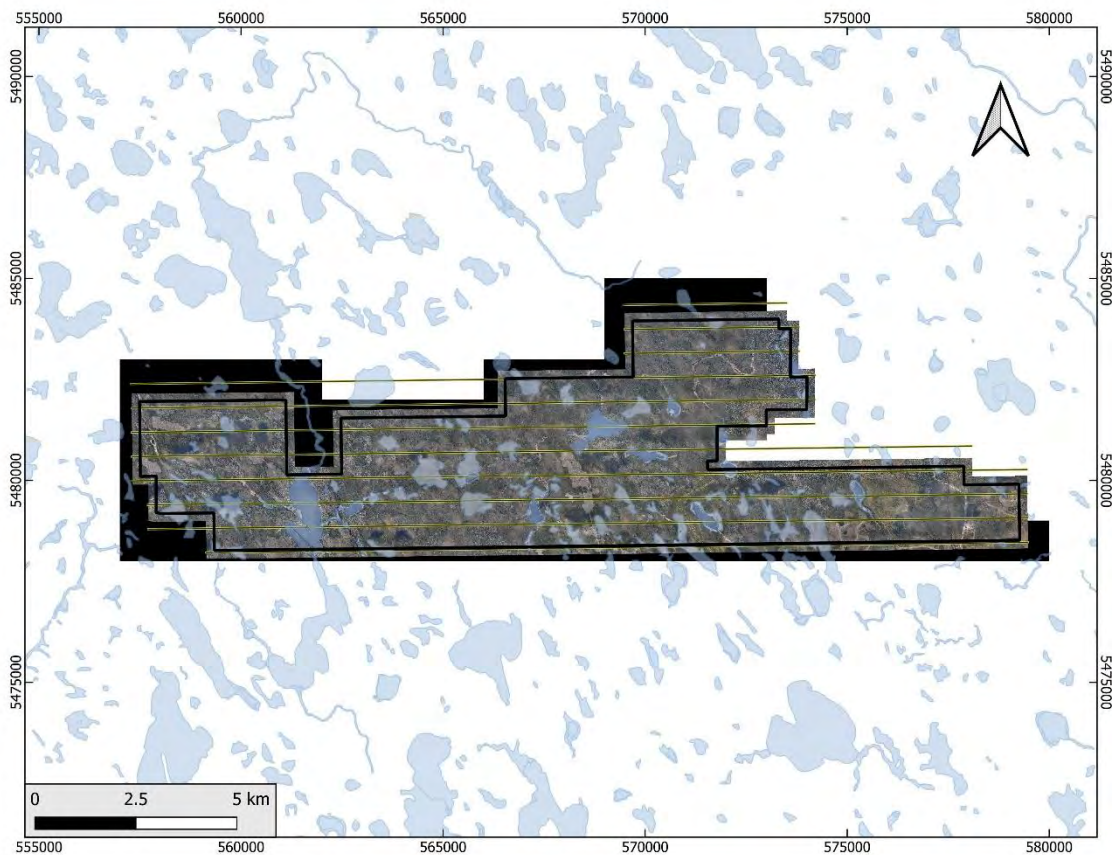
Complete assays are found in Appendix C as well as within each drill log (Appendix D).

## 8.2 2021 LiDAR Survey

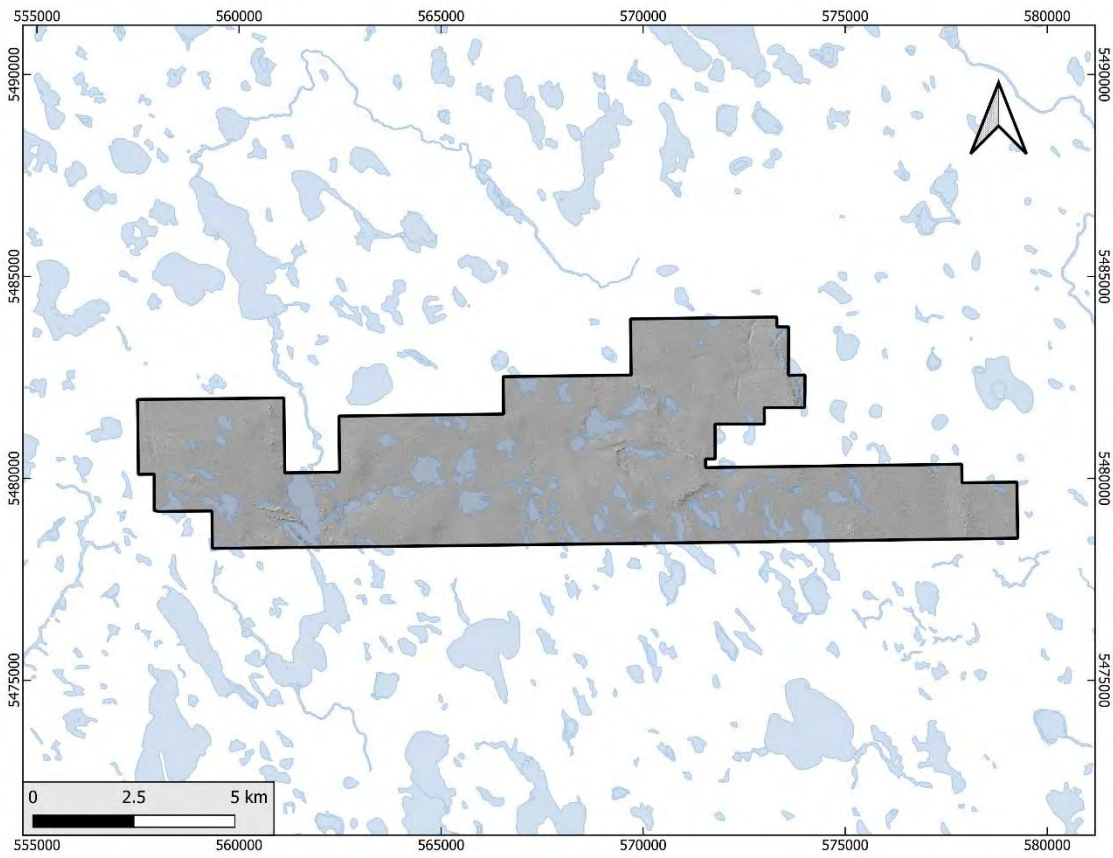
On May 11 and 12, 2021, a LiDAR survey was conducted over the entire Property by LiDAR Services International Inc. (“LSi”) based out of Calgary, Alberta, totalling 170.2 line-km and an area of 70 km<sup>2</sup>. Airborne data was collected at an average flying height of 850 m above ground level and at a forward speed of 215 km/h over 11 flight lines (Figure 12). Data was collected in NAD83 (CSRS) UTM Zone 17N using the vertical datum CGVD2013.

Resultant products from this survey included LiDAR point clouds, Bare Earth and Full Feature gridded points, greyscale hillshades of Bare Earth and Full Feature Surfaces (Figures 13 and 14), Ortho-mosaic colour digital imagery (10cm pixel resolution, Figure 12), and an Index Map. A full description of parameters and deliverables are found in the LSi report in Appendix E.

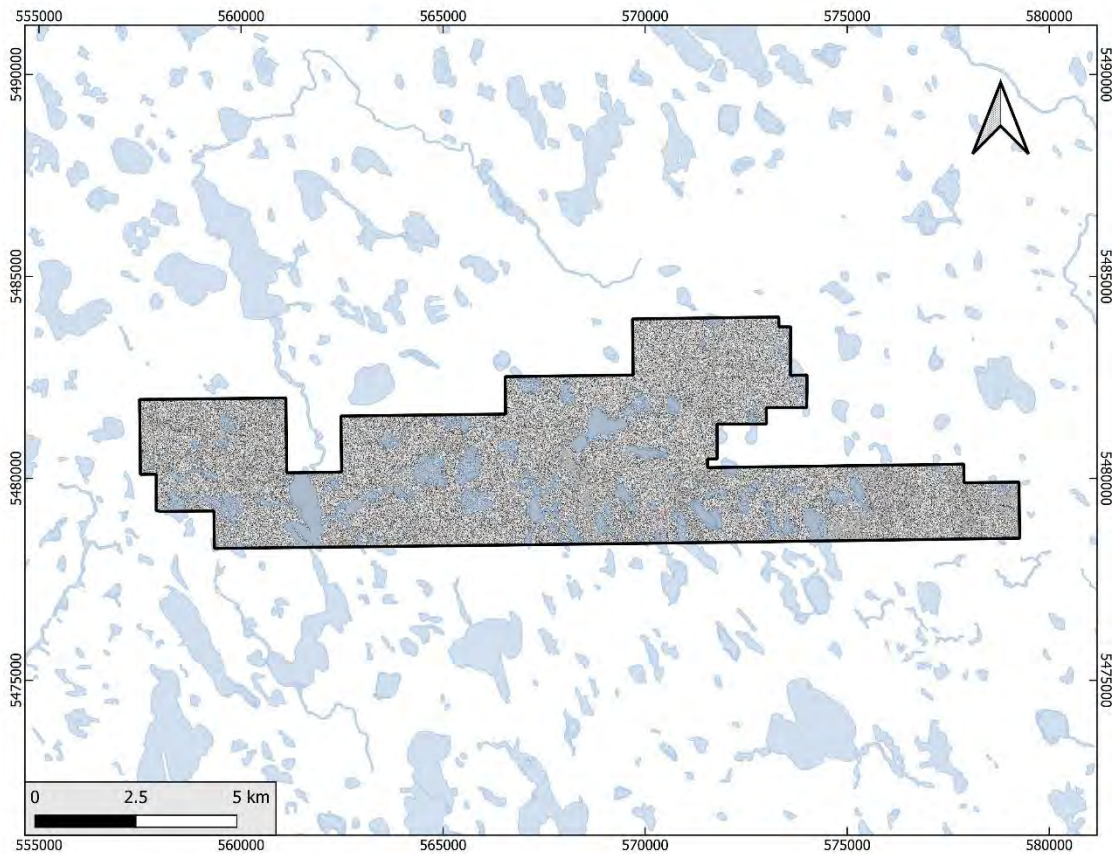
**Figure 12 Flight Lines and Ortho Photos from the 2021 LiDAR survey on the Blakelock Property**



**Figure 13 Bare Earth Image of the Blakelock Property**



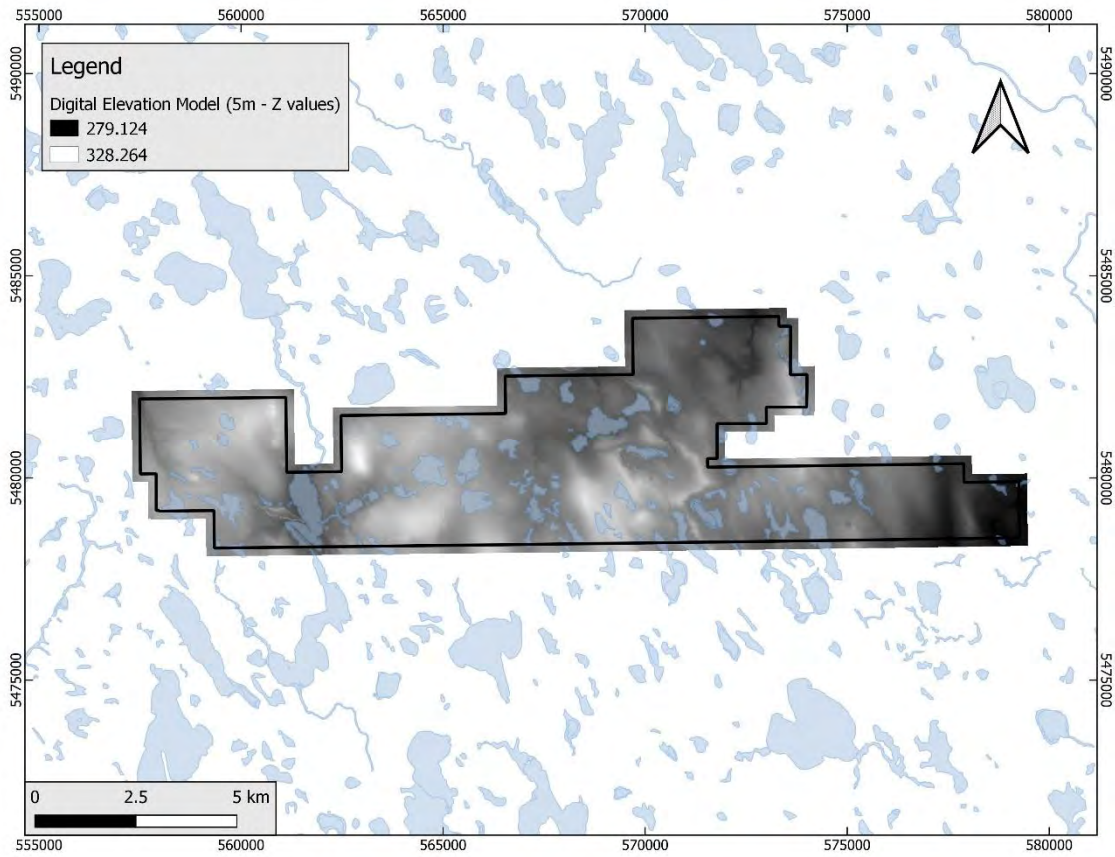


**Figure 14 Full Feature Image of the Blakelock Property**

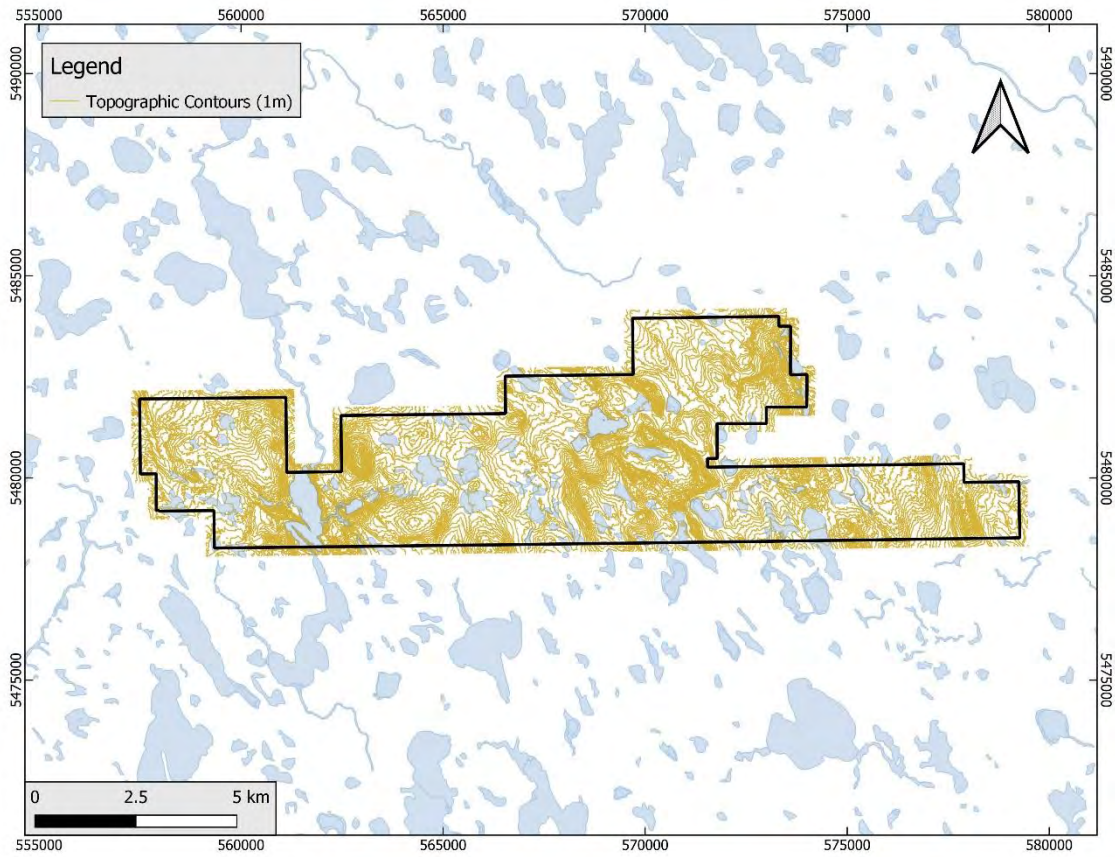
### 8.2.1 Processing of the LiDAR data

A digital elevation model (DEM) and topographic contours were generated by GeoVector Management Inc. in October 2021 to better plan future drill programs and to generate more accurate elevation surfaces, general geological use, and for future 3D modeling exercises. This resulted in Figures 15 and 16. The DEM files were produced in Cloud Compare software. The Bare Earth grid files provided by LSi were loaded into Cloud Compare and merged into a single cloud. The software was then used to convert the point cloud to a 2D raster at a given resolution (in this case, 2 metre and 5 metre resolutions were selected) which were exported as a GeoTIFF file for use in GIS applications. The 5-metre resolution GeoTIFF was loaded into QGIS software, and contours were created from it using QGIS's Contour Raster function. The contours were created at 1-metre spacing. Subsequently, the contour lines were smoothed using the SAGA Line Smoothing function (specifically the included Gaussian Filtering algorithm) in the QGIS Processing Toolbox. Finally, to remove noise from the contour rendering, contours below ~20 metres in total length were removed from the file.

**Figure 15 Digital Elevation Model of the Blakelock Property (5m resolution)**



**Figure 16 Topographic Contours of the Blakelock Property (1m resolution)**



### 8.3 2021 Airborne Geophysics

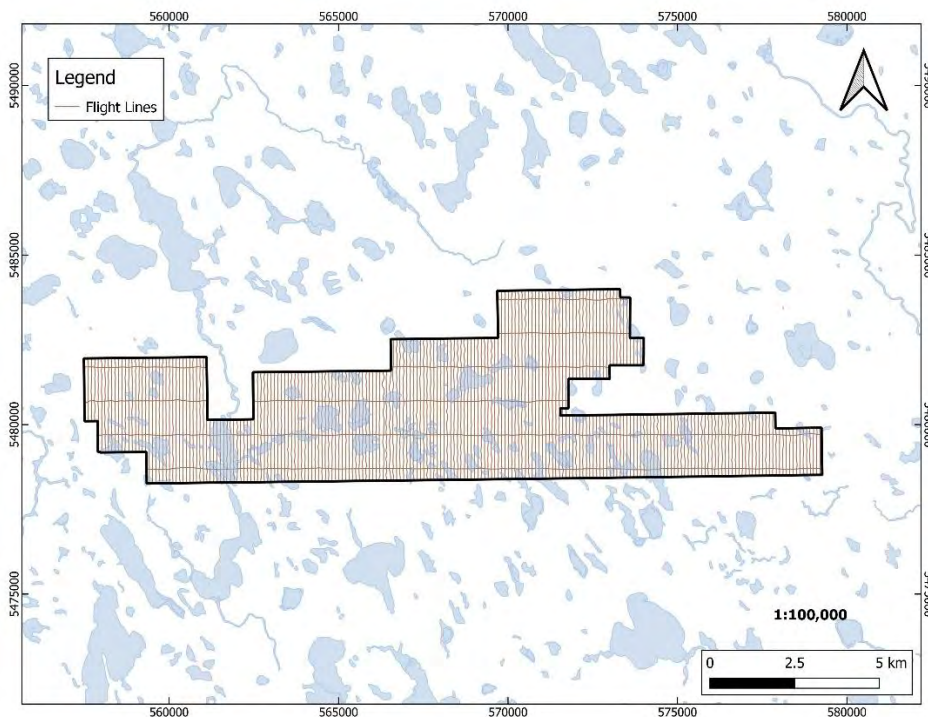
A high-resolution helicopter-borne magnetic gradiometer survey was flown over the Property from May 11 to May 14, 2021, by Precision GeoSurveys Inc. based in Langley, British Columbia. This survey was flown at 100 m line spacing at a heading of 000°/180° with tie lines being flown at 1000m spacing at a heading of 090°/270°. A total of 771 line-km was flown totalling 69.8 km<sup>2</sup> (Figure 17). Data was collected using the geodetic system WGS 84 UTM Zone 17N. As a result of the lack of outcrop on the Property, this survey was initiated to map geological features as well as aid in exploration for mineral deposits.

Resultant grids and maps from the survey include:

- Digital Terrain Model (DTM)
- Total Magnetic Intensity (TMI)
- Residual Magnetic Intensity (RMI)
- Reduced to Magnetic Pole (RTP)
- In-Line Gradient (ILG)
- Cross-Line Gradient (XLG)
- Vertical Gradient (VG)
- Horizontal Gradient (HG)
- Analytical Signal (AS)
- Tilt Derivative (TDR)
- First Vertical Derivative (1VD)
- Gradient enhanced Total Magnetic Intensity (TMIge)
- Gradient enhanced Residual Magnetic Intensity (RMIge)
- Gradient enhanced Reduced to Magnetic Pole (RTPge)

A detailed description of equipment used, survey parameters, and results are found in the Precision GeoSurveys Inc. report in Appendix E

**Figure 17 2021 Airborne Geophysics Flight lines on the Blakelock Property**



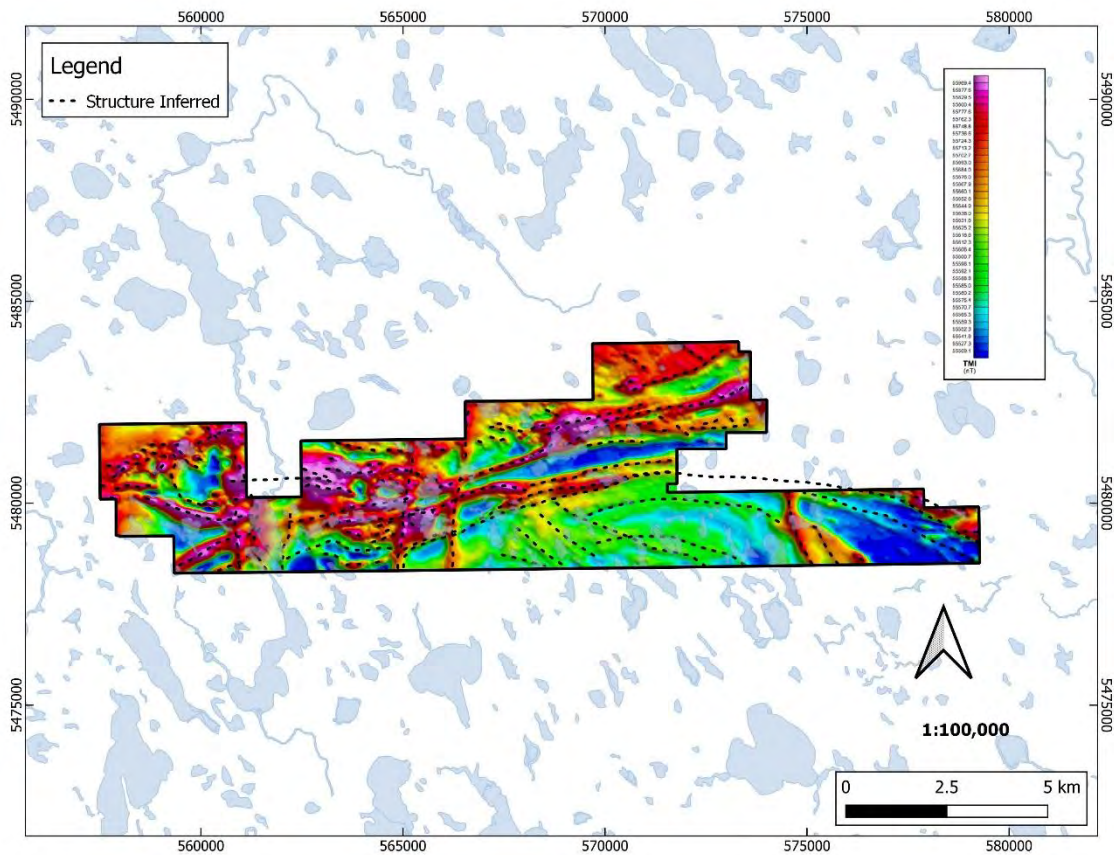
### 8.3.1 Geophysical Interpretation

A 1:25,000 structural interpretation was made of both the Total Magnetic Intensity (TMI) and Tilt Derivative (TDR) images to highlight gross and discrete features on the Property. This interpretation was realized by using QGIS a Geographic Information Systems software using the NAD83 UTM Zone 17 datum. This exercise was completed over several days in October 2021 by GeoVector Management Inc.

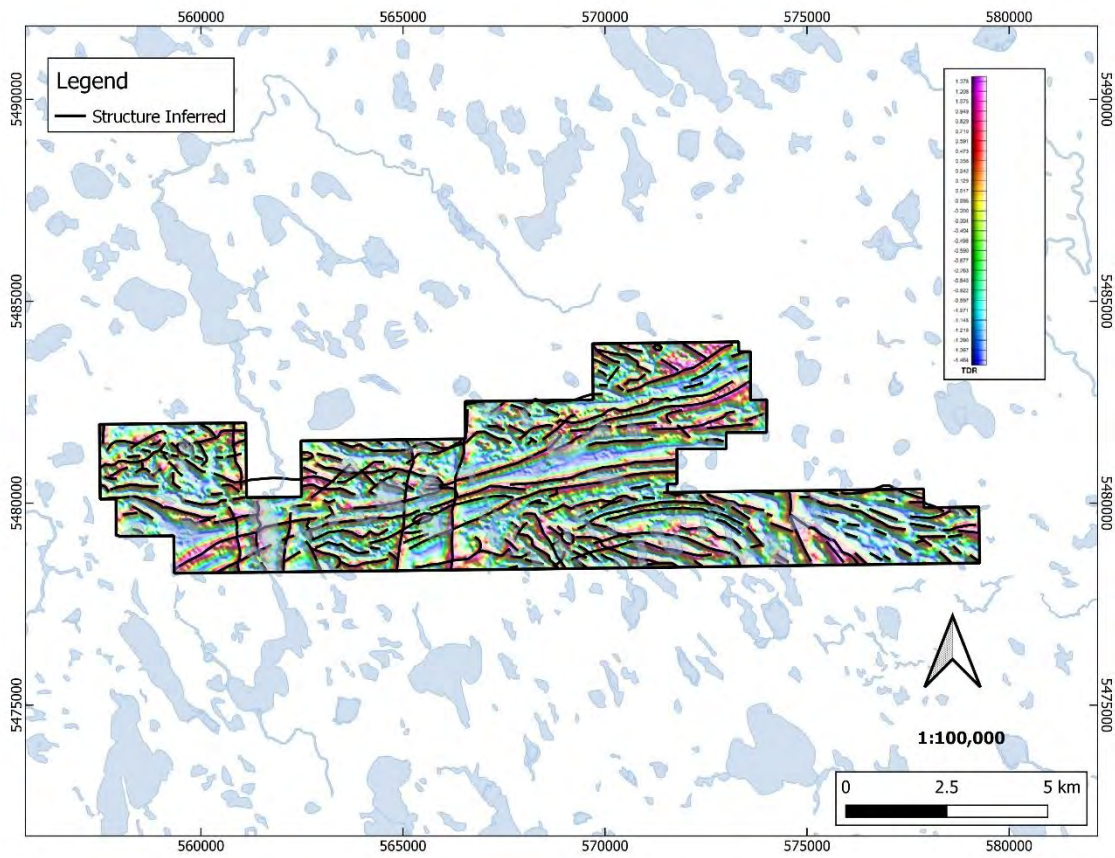
Key findings from this exercise include:

- Figures 18 and 19 outline accurate structures and geological features inferred from magnetic imagery including a large intrusive body on the southeastern portion of the Property. Notably, several magnetic features match up well with the current Property geology (See Section 7.2) including the ~N-S diabase dykes as well as a swarm of porphyritic intrusive units (Figure 20). The interpretation derived from the TDR image shows possible folding at the central portion of the Property as well as several possible plugs/stocks defined by circular features (Figure 18).

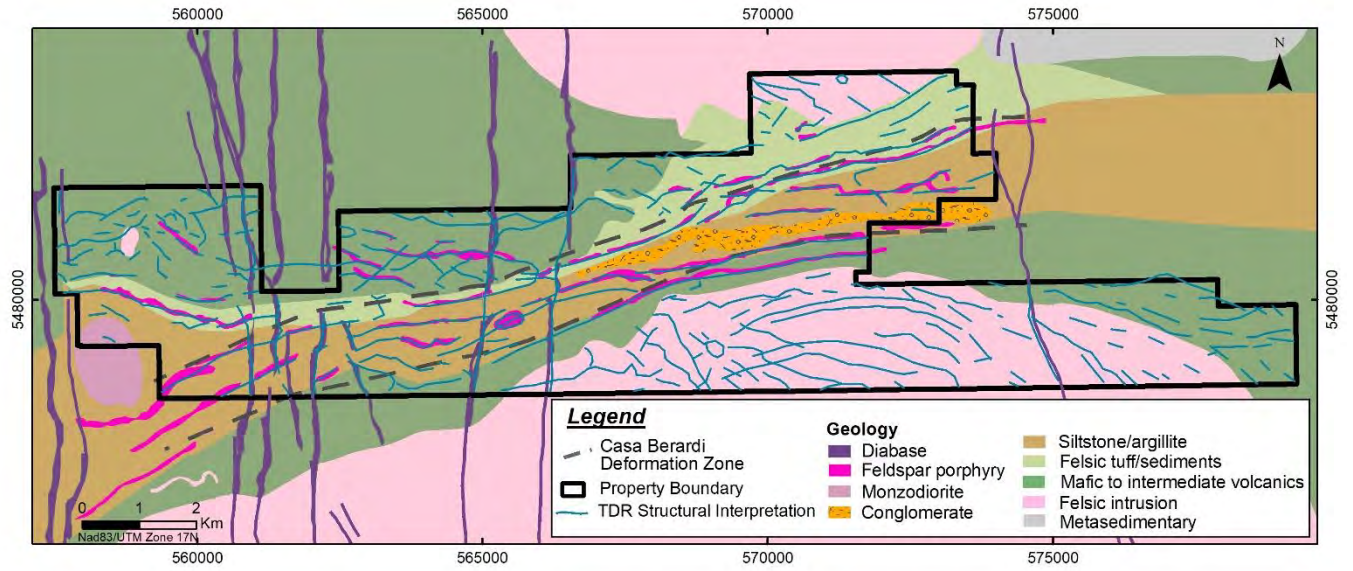
**Figure 18 Structural Interpretation of Total Magnetic Intensity Image of the Blakelock Property**



**Figure 19 Structural Interpretation of Tilt Derivative Image of the Blakelock Property**



**Figure 20 Structural Interpretation on the Blakelock Property Geology**



## 9 PREPARATION, ANALYSIS AND SECURITY

Core logging was conducted in a facility at Expedition Helicopter's hangar located in Cochrane, ON. Sample intervals were clearly marked on core with red wax pencils and a portion of a sample tag having the sample number and barcode was inserted in the box marking the end of the sample interval. Drill core samples were cut by diamond saw with half the core left in the box and the other half placed into clearly marked sample bags along with an ALS sample tag. Blank and certified reference materials were inserted into the sample sequence every ten (10) samples. In addition, ALS routinely inserts certified standards, blanks, and pulp duplicate samples.

Individual sample bags were sealed and placed into rice bags and securely sealed for transportation by GeoVector personnel to ALS Limited sample preparation laboratory in Timmins, ON. This facility is a certified and accredited laboratory service provider, for sample preparation, with analyses being carried out by ALS in Vancouver. All rock samples were prepared by procedures CRU-31 (crush entire sample to 70% <2mm), PUL-32 (pulverize 1000 grams to 85% <75 microns) and SPL-21 (split 250 grams from the entire sample using a riffle splitter). A 30-gram sub-sample from the 250-gram riffle split was analyzed for gold by FA/AA (method Au-AA23), with any samples returning values of 10 g/t gold or higher being re-assayed by FA with a gravimetric finish (method AA-GRA21). All core samples were also analyzed for 33 elements by 4-acid ICP-AES (method ME-ICP61) and any base metals that returned values of 10,000 ppm or greater were assayed by a 4-acid ore grade (method Cu-OG62). Results of all ALS QA/QC samples are reported to LaSalle.



## 10 INTERPRETATION AND CONCLUSION

The Blakelock Property is in Ontario within portions of Blakelock and Hoblitzell Townships, approximately 60 km northeast of Cochrane and 140 km northeast of Timmins within map sheets 32E/05, 32E/12, 42H/08, and 42H/09 of the National Topographic System (NTS). This report on the 2020 and 2021 exploration programs conducted by LaSalle was prepared to satisfy assessment requirements under the Ontario Mining Act. The Blakelock Property consists of 340 single cell mining claims for a total surface area of 6,977 hectares or 69.77 km<sup>2</sup> and is 100% registered to LaSalle.

In the late-fall of 2020, a 486-metre diamond drill program intersected anomalous gold results in the Porphyry Creek area in two (2) NQ diamond drill holes. Additionally, these holes provided structural information relating to foliation fabrics, quartz-veins, and alteration bands. The resultant east-northeast trending foliation fabric is consistent with the inferred trend of the Casa-Berardi Deformation Zone, which dips steeply to the north at the nearby Casa Berardi Mine.

In May 2021, two airborne surveys were conducted over the Property. These comprised a 170.2 line-km LiDAR survey and a 771 line-km magnetic gradiometer survey. The resultant high-quality images served to advance the geological knowledge in the absence of appreciable outcrop on the Property. Additionally, these products will aid in future exploration planning and 3D-modeling.

The Property represents an exploration target for both gold and base metals due to its size and strategic location along the Casa-Berardi Deformation Zone, as well as the gold values returned from recent and historical drilling. The authors believe that the Property has the potential to host significant gold mineralization, and further work is warranted.

## 11 RECOMMENDATIONS

It is recommended that further work include:

- Historic drill hole database review including a section-by-section analysis and review of logged lithology both in the Porphyry Creek area and afield. Update geological maps and cross-sections as required. Generate 3D models of the Porphyry Creek area and the Property as a whole.
- Further processing and interpretation of geophysical data (AMAG and LiDAR) to highlight target areas of lithological contrasts (i.e., small intrusions and magnetic units with locally diminished magnetic signatures) and structural complexity (i.e., intersecting structures and pressure shadows), as well as areas along the extension of the CBDZ.
- Reverse circulation (“RC”) drill hole program on the eastern portion of the Property to follow up on results from previous operators to test continuity and repeatability of elevated values as well as to test the sedimentary package on the southern portion of the Property. This work will help refine existing target areas and define new target areas on the Property.
- Diamond drilling to test the highest priority target areas defined by the interpretation of the geophysical data and results from the RC drilling. It is recommended that oriented core be supplemented with optical televiewer data in areas with poor ground conditions.

## 12 REFERENCES

- Ayer, J.A. 1998, Petrogenesis and tectonic evolution of the Lake of the Woods greenstone belt, western Wabigoon Subprovince, Ontario, Canada; unpublished PhD thesis, University of Ottawa, Ottawa, Ontario, 213p.
- Ayer, J.A., Amelin, Y., Corfu, F., Kamo, S.L., Ketchum, J.W.F., Kwok, K., and Trowell, N., 2002a, Evolution of the southern Abitibi greenstone belt based on U-Pb geochronology: Autochthonous volcanic construction followed by plutonism, regional deformation and sedimentation: *Precambrian Research*, v. 115, p. 63–95.
- Ayer, J.A., Ketchum, J.W.F., and Trowell, N., 2002b, New geochronological and Nd isotopic results from the Abitibi greenstone belt, with emphasis on timing and implications of Late Archean sedimentation and volcanism: Ontario Geological Survey Open File Report 6100, p. 5-1–5-16.
- Ayer, J.A., Chartrand J.E., Duguet M., Rainsford, D.R.B., and Trowell, N.F., 2009, Geological Compilation of the Burntbush-Detour lakes area, Abitibi greenstone belt, Ontario Geological Survey, Preliminary Map P3809, scale 1:100,000.
- Ayer, J.A., Barrett, T.J., Creaser, R.A., Hamilton, M.A., Lafrance, B. and Stott, G.M. 2013. Section 1: Shining Tree and Gowganda Archean gold study and northern Cobalt Embayment proterozoic vein study; report in Results from the Shining Tree, Chester Township and Matachewan Gold Projects and the Northern Cobalt Embayment Polymetallic Vein Project, Ontario Geological Survey, Miscellaneous Release—Data 294.
- Barnett, P.J. 1992, Quaternary Geology of Ontario; in *Geology of Ontario*, Ontario Geological Survey Special Volume 4, Part 2, pp. 1011-1088.
- Bateman, R., Ayer, J.A., and Dube, B., 2008, The Timmins-Porcupine Gold Camp, Ontario: Anatomy of an Archean Greenstone Belt and Ontogeny of Gold Mineralization. *Economic Geology*. 103. 1285-1308. 10.2113/gsecongeo.103.6.1285.
- Beauregard, A-J., and Gaudreault, D., 2019, NI 43-101 Technical Report of the Blakelock Property, Blakelock and Hobiltzel Townships, Larder Lake Mining Division, Ontario, Canada, 75p.
- Benn, K., Miles, W., Ghassemi, M.R., and Gillett, J., 1994, Crustal structure and kinematic framework of the northwestern Pontiac Subprovince, Quebec: An integrated structural and geophysical study: *Canadian Journal of Earth Sciences*, v. 31, p. 271–281.
- Benn, K., and Peschler, A.P., 2005, A detachment fold model for fault zones in the Late Archean Abitibi greenstone belt, Ontario: *Tectonophysics*, v. 400, p. 85–104, doi: 10.1016/j.tecto.2005.02.011.
- Boissonneau, A.N., 1966, Glacial History of Northeastern Ontario, I: The Cochrane-Hearst Area; *Canadian Journal of Earth Sciences*, v.3, pp.559-578.
- Butler, H.R., 2006, Interpretation of airborne magnetic survey, Blakelock Property.
- Chown, E.H., Daigneault, R., Mueller, W., Mortensen, J., 1992, Tectonic evolution of the Northern volcanic zone of the Abitibi belt. *Can. J. Earth Sci.* 29, 2211–2225.
- Daigneault, R., Mueller, W., Chown, E.H., 2002, Oblique Archean subduction: accretion and exhumation of an oceanic arc during dextral transpression, Southern Volcanic Zone, Abitibi Subprovince Canada. *Precambrian Res.* 115, 261–290.
- Daigneault, R., Mueller, W.U., Chown, E.H., 2004, Abitibi greenstone belt plate tectonics: the diachronous history of arc development, accretion and collision. In: Eriksson, P.G., Altermann, W., Nelson, D.R., Mueller,

- W.U., Catuneanu, O. (Eds.), *The Precambrian Earth: Tempos and Events*, Series: *Developments in Precambrian geology*, vol. 12. Elsevier, pp. 88–103.
- Davis, W.J., Machado, N., Gariépy, C., Sawyer, E.W., and Benn, K., 1995, U-Pb geochronology of the Opatika tonalite-gneiss belt and its relationship to the Abitibi greenstone belt, Superior Province, Quebec: *Canadian Journal of Earth Sciences*, v. 32, p. 113–127.
- Dimroth, E., Imreh, L., Rocheleau, M., Goulet, N., 1982, Evolution of the south-central part of the Archean Abitibi Belt, Quebec. Part I. Stratigraphy and paleogeographic model. *Can. J. Earth Sci.* 19, 1729–1758.
- Dimroth, E., Imreh, L., Goulet, N., Rocheleau, M., 1983, Evolution of the south-central part of the Archean Abitibi Belt, Quebec. Part II. Tectonic evolution and geomechanical model. *Can. J. Earth. Sci.* 20, 1355–1373.
- Dubé, B. and Gosselin, P., 2007, Lode gold: Greenstone-hosted quartz-carbonate vein deposits (orogenic, mesothermal, lode gold, shear-zone-related quartz-carbonate or gold-only deposits): *Geol. Surv. Canada, Mineral Deposits of Canada on-line paper*.
- Dubé, B., Gosselin, P., Mercier-Langevin, P., Hannington, M., and Galley, A., 2007. Gold-rich volcanogenic massive sulphide deposits; in *Mineral Deposits of Canada: a Synthesis of Major Deposit-types, District Metallogeny, the Evolution of Geological Provinces, and Exploration Methods*, (ed.) W.D. Goodfellow; Geological Association of Canada, Mineral Deposits Division, Special Publication 5, p. 75–94.
- Goutier, J., 1997. *Géologie de la région de Destor, Québec*. *Min. Res. Nat. Qué., Rap.Géol.* RG 96-13, p. 37
- Goutier, J., Melancon, M., 2007, *Compilation géologique de la Sous-province de l'Abitibi (version préliminaire)*. Ministère des Ressources naturelles et de la Faune, Québec; échelle 1/500 000.
- Jackson, S.L. and Fyon, J.A. 1991, The western Abitibi Subprovince in Ontario; in *Geology of Ontario, Ontario Geological Survey, Special Volume 4, Part 1*, p.405-484.
- Jolly, W.T., 1978, Metamorphic history of the Archean Abitibi belt, *Metamorphism on the Canadian shield*, *Geol. Surv. Can.*, Paper 78-10, pp. 63–78.8.
- Large RR, Maslennikov VV, Robert F, Danyushevsky LV, Chang Z., 2007, Multistage sedimentary and metamorphic origin of pyrite and gold in the giant Sukhoi Log deposit, Lena gold province, Russia. *Econ Geol.* 102:1233–1267, doi: 10.2113/gsecongeo.102.7.1233.
- Ludden, J., Hubert, C., and Gariépy, C., 1986, The tectonic evolution of the Abitibi greenstone belt of Canada: *Geological Magazine*, v. 123, p. 153–166.
- MERQ–OGS, 1984, Lithostratigraphic map of the Abitibi Subprovince; Ontario Geological Survey / Ministère de l'Énergie et des Ressources, Québec, catalogued as 'Map 2484' in Ontario and DV 83-16 in Quebec, scale 1:500 000.
- Mueller, W.U., Daigneault, R., Mortensen, J.K., and Chown, E.H., 1996, Archean terrane docking: Upper crust collision tectonics, Abitibi greenstone belt, Quebec, Canada: *Tectonophysics*, v. 265, p. 127–150, doi: 10.1016/S0040-1951(96)00149-7.
- Powell, W.G., Carmichael, D.M. and Hodgson, C.J., 1993, Thermobarometry in a subgreenschist to greenschist transition in metabasites of the Abitibi greenstone belt, Superior Province, Canada; *Journal of Metamorphic Geology*, v.11, p.165-178.

---

Sawyer, E.W., and Benn, K., 1993, Structure of the high-grade Opatica Belt and adjacent low-grade Abitibi Subprovince, Canada: An Archean Mountain front: *Journal of Structural Geology*, v. 15, p. 1443–1458, doi: 10.1016/0191-8141(93)90005-U.

Thurston, P.C., Ayer, J.A., Goutier, J. and Hamilton, M.A. 2008, Depositional gaps in Abitibi greenstone belt stratigraphy: A key to exploration for syngenetic mineralization; *Economic Geology*, v.103, p.1097-1134.

Tucker Barrie, C., and Krogh T.E., 1996, U-Pb Zircon Geochronology of the Selbaie Cu-Zn-Ag-Au Mine, Abitibi Subprovince, Canada; *Economic Geology*, v.91, pp. 563-575.

Wilson, B.C., 1979, Geology of the Twopeak Lake Area, District of Cochrane; Ontario Geological Survey, Report 184, 38p.

Wilton, D., 1997a, Quartz-Carbonate vein gold deposits, Part 1; Northern Miner, Toronto.

Wilton, D., 1997b, Quartz-Carbonate vein gold deposits, Part 2; Northern Miner, Toronto.

Winkler, (H. G. F.), 1976. *Petrogenesis of Metamorphic rocks*. New York, Heidelberg, Berlin (Springer-Verlag Inc.).

**Assessment Files from MNDM Ontario**

Assessment File: 42H09SE0027  
AFRO Number: 14  
Township or Area: Blakelock  
NTS: 42H08NE, 42H09SE  
Year(s) Work Performed: 1960  
Work Performed For: Conwest Expl Co Ltd

Assessment File: 42H09SE0030  
AFRO Number: 63.1029  
Township or Area: Blakelock  
NTS: 42H09SE  
Year(s) Work Performed: 1959  
Work Performed For: Conwest Expl Co Ltd

Assessment File: 42H09SE0031  
AFRO Number: 63.1028  
Township or Area: Blakelock  
NTS: 42H09SE  
Year(s) Work Performed: 1959 to 1960  
Work Performed For: Conwest Expl Co Ltd

Assessment File: 42H08NE0030  
AFRO Number: 16  
Township or Area: Blakelock  
NTS: 42H08NE  
Year(s) Work Performed: 1967  
Work Report Number: W6708.97871  
Work Performed For: Texas Gulf Sulphur Co

Assessment File: 42H09SE0037  
AFRO Number: 17  
Township or Area: Blakelock  
NTS: 42H09SE  
Year(s) Work Performed: 1967  
Work Performed For: Texas Gulf Sulphur Co

Assessment File: 42H09SE5008  
AFRO Number: W7708-00151  
Township or Area: Blakelock  
NTS: 42H09SE  
Year(s) Work Performed: 1977  
Work Report Number: W7708.00151  
Work Performed For: Hudson Bay Expl & Dev Co Ltd

Assessment File: 42H09SE5009  
AFRO Number: W7708-00150  
Township or Area: Blakelock  
NTS: 42H09SE  
Year(s) Work Performed: 1977  
Work Report Number: W7708.00150  
Work Performed For: Hudson Bay Expl & Dev Co Ltd

Assessment File: 42H09SE5010  
AFRO Number: W7708-00141  
Township or Area: Blakelock  
NTS: 42H09SE  
Year(s) Work Performed: 1977  
Work Report Number: W7708.00141  
Work Performed For: Hudson Bay Expl & Dev Co Ltd.

Assessment File: 42H09SE5011  
AFRO Number: W7708-00108  
Township or Area: Blakelock  
NTS: 42H09SE  
Year(s) Work Performed: 1977  
Work Report Number: W7708.00108  
Work Performed For: Hudson Bay Expl & Dev Co Ltd.

Assessment File: 42H09SE5012  
AFRO Number: W7708-00107  
Township or Area: Blakelock  
NTS 42H09SE  
Year(s) Work Performed: 1977  
Work Report Number: W7708.00107  
Work Performed For: Hudson Bay Expl & Dev Co Ltd

Assessment File: 42H09SE5013  
AFRO Number: W7708-00102  
Township or Area: Blakelock  
NTS: 42H09SE  
Year(s) Work Performed: 1977  
Work Report Number: W7708.00102  
Work Performed For: Hudson Bay Expl & Dev Co Ltd

Assessment File: 42H09SE5014  
AFRO Number: W7708-00100  
Township or Area: Blakelock  
NTS: 42H09SE  
Year(s) Work Performed: 1977  
Work Performed For: Hudson Bay Expl & Dev Co Ltd.

Assessment File: 42H09SE0025  
AFRO Number: 2.9748  
Township or Area: Blakelock NTS: 42H09SE  
Year(s) Work Performed: 1987  
Work Report Number: W8608.00553  
Work Performed For: Mineta Resc Ltd.

Assessment File: 42H09SE0026  
AFRO Number: 2.4963  
Township or Area: Blakelock, Tweed  
NTS: 42H09SE  
Year(s) Work Performed: 1982  
Work Report Number: W8208.00171  
Work Performed For: Utah Mines Ltd.

Assessment File: 42H09SE0028  
AFRO Number: 2.2430  
Township or Area: Blakelock  
NTS: 42H09SE  
Year(s) Work Performed: 1977  
Work Performed For: Hudson Bay Expl & Dev Co Ltd.

Assessment File: 42H09SE0029  
AFRO Number: 2.2406  
Township or Area: Blakelock  
NTS: 42H09SE  
Year(s) Work Performed: 1977  
Work Performed For: Hudson Bay Expl & Dev Co Ltd.

Assessment File: 42H08NE0027  
AFRO Number: 11  
Township or Area: Blakelock  
NTS: 42H08NE  
Year(s) Work Performed: 1976  
Work Performed For: Geophysical Engineering Ltd

Assessment File: 42H08NE0028  
AFRO Number: 10  
Township or Area: Blakelock  
NTS: 42H08NE  
Year(s) Work Performed: 1976  
Work Performed For: Geophysical Engineering Ltd

Assessment File: 42H08NE0029  
AFRO Number: 12  
Township or Area: Blakelock  
NTS: 42H08NE  
Year(s) Work Performed: 1976  
Work Performed For: Geophysical Engineering Ltd

Assessment File: 42H09SE5015  
AFRO Number: W7708-00043  
Township or Area: Blakelock  
NTS: 42H09SE  
Year(s) Work Performed: 1977  
Work Report Number: W7708.00043  
Work Performed For: Geophysical Engineering Ltd.

Assessment File: 42H09SE5016  
AFRO Number: W7708-00031  
Township or Area: Blakelock  
NTS: 42H09SE  
Year(s) Work Performed: 1977  
Work Report Number: W7708.00031  
Work Performed For: Geophysical Engineering Ltd.

Assessment File: 42H09SE5017  
AFRO Number: W7708-00030  
Township or Area: Blakelock  
NTS: 42H09SE



Year(s) Work Performed: 1977  
Work Report Number: W7708.00030  
Work Performed For: Geophysical Engineering Ltd.  
Assessment File: 42H09SE0006  
AFRO Number: 22  
Township or Area: Hoblitzell  
NTS: 42H09SE  
Year(s) Work Performed: 1989  
Work Report Number: W8908.00141  
Work Performed For: Esso Resources Canada Ltd

Assessment File: 42H09SE0009  
AFRO Number: 2.10071  
Township or Area: Blakelock, Hoblitzell  
NTS: 42H09SE  
Year(s) Work Performed: 1986  
Work Report Number: W8708.00189, W8708.00190, W8708.00191  
Work Performed For: Esso Minerals Canada Ltd.

Assessment File: 42H09SE0015  
AFRO Number: 63.5352  
Township or Area: Blakelock, Tweed  
NTS: 42H09SE  
Year(s) Work Performed: 1989  
Work Performed For: Chevron Minerals Ltd

Assessment File: 42H09SE0016  
AFRO Number: 2.10677  
Township or Area: Blakelock  
NTS: 42H09SE  
Year(s) Work Performed: 1987  
Work Report Number: W8708.00432 Work Performed For: Nartico Resc Ltd

Assessment File: 42H09SE0022  
AFRO Number: 2.9782  
Township or Area: Blakelock, Newman  
NTS: 42H09SE  
Year(s) Work Performed: 1987  
Work Report Number: W8608.00546  
Work Performed For: Glen Auden Resc Ltd, Montclerg Resc Ltd.

Assessment File: 42H09SE0023  
AFRO Number: 2.9777  
Township or Area: Blakelock  
NTS: 42H09SE  
Year(s) Work Performed: 1987  
Work Performed For: Goldrock Resc Inc.

Assessment File: 42H09SE0024  
AFRO Number: 2.9775  
Township or Area: Blakelock  
NTS: 42H09SE  
Year(s) Work Performed: 1987  
Work Report Number: W8608.00541  
Work Performed For: Akola Mining Corp, Glen Auden Resc Ltd.

Assessment File: 42H09SE0014  
AFRO Number: 21  
Township or Area: Blakelock  
NTS: 42H09SE  
Year(s) Work Performed: 1988  
Work Report Number: W8908.00001  
Work Performed For: Chevron Minerals Ltd.

Assessment File: 42H08NE0005  
AFRO Number: 24  
Township or Area: Blakelock  
NTS: 42H08NE  
Year(s) Work Performed: 1988  
Work Report Number: W8908.00141  
Work Performed For: Esso Resources Canada Ltd.

Assessment File: 42H08NE0016  
AFRO Number: 23  
Township or Area: Blakelock  
NTS: 42H08NE  
Year(s) Work Performed: 1988  
Work Report Number: W8908.00093  
Work Performed For: Esso Resources Canada Ltd.

Assessment File: 42H08NE8070  
AFRO Number: 28  
Township or Area: Blakelock  
NTS: 42H08NE  
Year(s) Work Performed: 1990  
Work Report Number: W9008.00646  
Work Performed For: Inco Ltd.

Assessment File: 42H08NE9312  
AFRO Number: 24  
Township or Area: Hoblitzell  
NTS: 42H08NE  
Year(s) Work Performed: 1990  
Work Report Number: W9008.00646, W9008.00739  
Work Performed For: Inco Ltd.

Assessment File: 32E12SW0034  
AFRO Number: 2.13517  
Township or Area: Hoblitzell  
NTS: 32E12SW  
Year(s) Work Performed: 1990  
Work Report Number: W9008.00241  
Work Performed For: Cogema Canada Ltd

Assessment File: 20000001873  
AFRO Number: 2.33979  
Township or Area: Blakelock, Newman  
NTS: 42H08NE  
Year(s) Work Performed: 2006 to 2007  
Work Report Number: W0780.00130  
Work Performed For: Lake Shore Gold Corp.

Assessment File: 20000001982  
AFRO Number: 2.34430  
Township or Area: Blakelock  
NTS: 42H08NE  
Year(s) Work Performed: 2006  
Work Report Number: W0780.00497  
Work Performed For: Lake Shore Gold Corp.

Assessment File: 20000005454  
AFRO Number: 2.42972  
Township or Area: Blakelock, Bragg, Hoblitzell, Newman, Tweed  
NTS: 42H08NE, 42H08NW  
Year(s) Work Performed: 2008 to 2009  
Work Report Number: W0980.02568  
Work Performed For: Lake Shore Gold Corp

Assessment File: 20000006133  
AFRO Number: 2.47425  
Township or Area: Blakelock, Bradette, Hoblitzell, Noseworthy  
NTS : 32E05NE, 32E05NW, 32E12SE, 32E12SW, 42H08NE  
Year(s) Work Performed: 2010 to 2011  
Work Report Number: W1180.00229  
Work Performed For: Lake Shore Gold Corp

### 13 CERTIFICATE OF QUALIFICATIONS

I, Alan J. Sexton, M.sc, P.Geo. of 41 Barrhaven Crescent, Nepean, Ontario, hereby certify that:

1. I am currently the VP Exploration of LaSalle Exploration Corp.
2. I am a graduate of Saint Mary's University having obtained the degree of Bachelor of Science – Honours Geology in 1982.
3. I am a graduate of Acadia University having obtained the degree of Masters of Science in Geology in 1988.
4. I have been employed as a geologist for every field season (May – October) from 1979 to 1984. I have been continuously employed as a geologist since May 1985.
5. I am a member in good standing of the:
  - a. Professional Geoscientists of Ontario (PGO), member # 0563
  - b. Northwest Territories and Nunavut Association of Professional Engineers and Geoscientists (NAPEG), member # L1339
  - c. Association of Professional Engineers and Geoscientists of Newfoundland and Labrador (PEGNL), member #04028
6. I was involved with work described in this report.
7. I am responsible for all sections of this assessment report.

Signed and dated this 5th day of November 2021 at Ottawa, Ontario.



Alan Sexton, M.Sc., P. Geo



I, Adam Findley, M.Sc., P.Geo. of 921 Eastboro Avenue, Orleans, ON, hereby certify that:

1. I am a graduate of University of Ottawa having obtained the degree of Bachelor of Science – Honours Geology in 2007.
2. I am a graduate of Queens University having obtained the degree of Masters of Science in Geology in 2010.
3. I have been employed during the 2006-2009 summer field seasons; I have been continually employed as a geologist since 2010.
4. I am a member of the Professional Geoscientists of Ontario (PGO), licence #2852, and use the designation P.Geo. I am a member of the Northwest Territories and Nunavut Association of Professional Engineers and Geoscientists (NAPEG), license L3968.
5. I was involved in work described in this report.
6. I contributed to writing this assessment report.

Signed and dated this 5th day of November 2021 at Ottawa, Ontario.



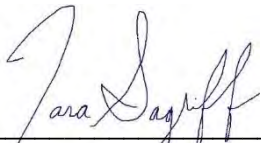
Adam Findley, M.Sc., P. Geo



I, Tara-Lynn M. Sagriff, B.Sc., P.Geo. of 7 Bylot Court, Kanata, Ontario, hereby certify that:

1. I am currently a consulting geologist for LaSalle Exploration Corp.
2. I am a graduate of Carleton University having obtained the degree of Bachelor of Science Geology in 1994.
3. I have been employed as a geologist since May 1994.
4. I am a member in good standing of the Professional Geoscientists of Ontario (PGO), member # 2940
5. I was involved with work described in this report.
6. I contributed to the writing of this assessment report.

Signed and dated this 5<sup>th</sup> Day of November 2021 at Ottawa, Ontario.

A handwritten signature in cursive script that reads "Tara Sagriff". The signature is written in black ink and is positioned above a horizontal line.

Tara Sagriff, B.Sc., P.Geo

I, Duncan Studd, M. Sc., P. Geo. of 51 St Francis Street, Ottawa, Ontario, hereby certify that:

1. I am a resource geologist with GeoVector Management Inc., 10 Green Street Suite 312 Ottawa, Ontario, Canada K2J 3Z6.
2. I am a graduate of Carleton University having obtained the degree of Bachelor of Science - Honours in Geology in 2006 and the degree of Masters of Science in Earth Science in 2010.
3. I have been employed as a geologist from May of 2006 to September of 2008. I have been continuously employed as a geologist since September of 2010.
4. I have been involved in mineral exploration and resource modeling for gold, silver, copper, zinc, nickel, uranium, and platinum/palladium in Canada, USA, Sweden, Norway, Chile, and Mexico at the grass roots to advanced exploration stage since 2006, including resource estimation since 2012.
5. I am a member of the Professional Geoscientists of Ontario (PGO), licence #2290, and use the designation P.Geol. I am a member of the Northwest Territories and Nunavut Association of Professional Engineers and Geoscientists (NAPEG), license L3369.
6. I have read the definition of "Qualified Person" set out in National Instrument 43-101("NI 43-101") and certify that by reason of my education, affiliation of my professional association and past relevant work experience, I fulfill the requirements to be a "Qualified Person" for the purposes of NI 43-101.
7. I was involved with work described in this report.
8. I contributed to the writing of this report.

Signed and dated this 4<sup>th</sup> day of November 2021 at Ottawa, Ontario.



Duncan Studd, M. Sc., P. Geo., GeoVector Management Inc.



**APPENDIX A – CLAIMS OF THE BLAKELOCK PROPERTY**

No.	TENURE ID	LEGACY ID	ANNIVERSARY	AREA (Ha)	TOWNSHIP	HOLDER
1	113861	3005461	2022-01-21	20.97	BLAKELOCK	LaSalle Exploration Corp
2	117430	4209485	2022-03-15	20.97	BLAKELOCK	LaSalle Exploration Corp
3	117429	4209484	2022-03-15	20.97	BLAKELOCK	LaSalle Exploration Corp
4	112130	4209460	2021-11-08	20.97	BLAKELOCK, HOBLITZELL	LaSalle Exploration Corp
5	110392	4209474	2021-11-28	20.98	HOBLITZELL	LaSalle Exploration Corp
6	112894	3005459	2022-01-21	20.98	BLAKELOCK	LaSalle Exploration Corp
7	112323	4209484	2022-03-15	20.98	BLAKELOCK	LaSalle Exploration Corp
8	121514	4209482	2022-03-15	20.98	BLAKELOCK	LaSalle Exploration Corp
9	122806	4209462	2021-11-08	20.98	HOBLITZELL	LaSalle Exploration Corp
10	132044	4209470	2022-03-15	20.97	HOBLITZELL	LaSalle Exploration Corp
11	121515	4209483	2022-03-15	20.98	BLAKELOCK	LaSalle Exploration Corp
12	121333	4209472	2022-03-15	20.97	HOBLITZELL	LaSalle Exploration Corp
13	120162	4209486	2022-03-15	20.98	BLAKELOCK	LaSalle Exploration Corp
14	124306	4209461	2021-11-28	20.98	HOBLITZELL	LaSalle Exploration Corp
15	124305	4209474	2021-11-28	20.98	HOBLITZELL	LaSalle Exploration Corp
16	341562	3005461	2022-01-21	20.98	BLAKELOCK, HOBLITZELL	LaSalle Exploration Corp
17	341561	4209460	2021-11-08	20.98	HOBLITZELL	LaSalle Exploration Corp
18	103312	4209485	2022-03-15	20.97	BLAKELOCK	LaSalle Exploration Corp
19	338388	4209486	2022-03-15	20.98	BLAKELOCK	LaSalle Exploration Corp
20	339613	4209472	2022-03-15	20.97	HOBLITZELL	LaSalle Exploration Corp
21	334663	4209484	2022-03-15	20.97	BLAKELOCK	LaSalle Exploration Corp
22	339615	4209472	2022-03-15	20.97	HOBLITZELL	LaSalle Exploration Corp
23	339614	4209472	2022-03-15	20.97	HOBLITZELL	LaSalle Exploration Corp
24	108549	4209484	2022-03-15	20.98	BLAKELOCK	LaSalle Exploration Corp
25	625388		2022-12-18	20.98	HOBLITZELL	LaSalle Exploration Corp
26	107937	4209473	2022-03-15	20.97	HOBLITZELL	LaSalle Exploration Corp
27	109124	3005459	2022-03-15	20.98	BLAKELOCK	LaSalle Exploration Corp
28	625385		2022-12-18	20.98	HOBLITZELL	LaSalle Exploration Corp
29	625384		2022-12-18	20.98	HOBLITZELL	LaSalle Exploration Corp
30	625387		2022-12-18	20.98	HOBLITZELL	LaSalle Exploration Corp
31	625386		2022-12-18	20.98	HOBLITZELL	LaSalle Exploration Corp
32	339738	4209483	2022-03-15	20.98	BLAKELOCK	LaSalle Exploration Corp
33	343616	4209471	2022-03-15	20.97	HOBLITZELL	LaSalle Exploration Corp
34	625389		2022-12-18	20.98	HOBLITZELL	LaSalle Exploration Corp
35	339739	4209483	2022-03-15	20.98	BLAKELOCK	LaSalle Exploration Corp
36	344507	4209482	2022-03-15	20.98	BLAKELOCK	LaSalle Exploration Corp



No.	TENURE ID	LEGACY ID	ANNIVERSARY	AREA (Ha)	TOWNSHIP	HOLDER
37	331420	3005461	2022-01-21	20.98	BLAKELOCK	LaSalle Exploration Corp
38	343615	4209473	2022-03-15	20.97	HOBLITZELL	LaSalle Exploration Corp
39	344508	4209482	2022-03-15	20.98	BLAKELOCK	LaSalle Exploration Corp
40	625395		2022-12-18	20.98	HOBLITZELL	LaSalle Exploration Corp
41	625394		2022-12-18	20.98	HOBLITZELL	LaSalle Exploration Corp
42	625397		2022-12-18	20.98	HOBLITZELL	LaSalle Exploration Corp
43	625396		2022-12-18	20.98	HOBLITZELL	LaSalle Exploration Corp
44	625391		2022-12-18	20.98	HOBLITZELL	LaSalle Exploration Corp
45	625390		2022-12-18	20.98	HOBLITZELL	LaSalle Exploration Corp
46	625393		2022-12-18	20.98	HOBLITZELL	LaSalle Exploration Corp
47	625392		2022-12-18	20.98	BLAKELOCK, HOBLITZELL	LaSalle Exploration Corp
48	327232	3005460	2022-01-21	20.98	BLAKELOCK	LaSalle Exploration Corp
49	327231	3005460	2022-01-21	20.97	BLAKELOCK	LaSalle Exploration Corp
50	327763	4209460	2021-11-08	20.97	BLAKELOCK, HOBLITZELL	LaSalle Exploration Corp
51	324245	4209485	2022-03-15	20.97	BLAKELOCK	LaSalle Exploration Corp
52	317289	4209470	2022-03-15	20.97	HOBLITZELL	LaSalle Exploration Corp
53	318246	4209480	2022-03-15	20.98	BLAKELOCK	LaSalle Exploration Corp
54	327230	3005460	2022-01-21	20.97	BLAKELOCK	LaSalle Exploration Corp
55	320516	3005459	2022-01-21	20.97	BLAKELOCK	LaSalle Exploration Corp
56	330701	4209470	2022-03-15	20.97	HOBLITZELL	LaSalle Exploration Corp
57	335983	4209461	2021-11-08	20.97	HOBLITZELL	LaSalle Exploration Corp
58	330104	4209471	2022-03-15	20.97	HOBLITZELL	LaSalle Exploration Corp
59	330702	4209470	2022-03-15	20.97	HOBLITZELL	LaSalle Exploration Corp
60	327765	4209460	2021-11-08	20.97	HOBLITZELL	LaSalle Exploration Corp
61	327764	4209460	2021-11-08	20.97	HOBLITZELL	LaSalle Exploration Corp
62	327768	4209461	2021-11-08	20.97	HOBLITZELL	LaSalle Exploration Corp
63	327766	3005461	2022-01-21	20.97	BLAKELOCK, HOBLITZELL	LaSalle Exploration Corp
64	308360	4209461	2021-11-08	20.98	HOBLITZELL	LaSalle Exploration Corp
65	308359	4209461	2021-11-08	20.97	HOBLITZELL	LaSalle Exploration Corp
66	310290	4209486	2022-03-15	20.98	BLAKELOCK	LaSalle Exploration Corp
67	305704	4209482	2022-03-15	20.98	BLAKELOCK	LaSalle Exploration Corp
68	308327	3005459	2022-01-21	20.98	BLAKELOCK	LaSalle Exploration Corp
69	302816	3005461	2022-01-21	20.98	BLAKELOCK, HOBLITZELL	LaSalle Exploration Corp
70	308329	3005460	2022-01-21	20.98	BLAKELOCK	LaSalle Exploration Corp
71	308328	3005460	2022-01-21	20.98	BLAKELOCK	LaSalle Exploration Corp
72	318032	4209472	2022-03-15	20.97	HOBLITZELL	LaSalle Exploration Corp
73	318031	4209472	2022-03-15	20.97	HOBLITZELL	LaSalle Exploration Corp
74	318365	4209483	2022-03-15	20.98	BLAKELOCK	LaSalle Exploration Corp
75	315045	4209460	2021-11-08	20.97	HOBLITZELL	LaSalle Exploration Corp

No.	TENURE ID	LEGACY ID	ANNIVERSARY	AREA (Ha)	TOWNSHIP	HOLDER
76	317008	4209486	2022-03-15	20.98	BLAKELOCK	LaSalle Exploration Corp
77	316990	4209486	2022-03-15	20.98	BLAKELOCK	LaSalle Exploration Corp
78	318015	3005461	2022-01-21	20.98	BLAKELOCK	LaSalle Exploration Corp
79	317009	4209483	2022-03-15	20.98	BLAKELOCK	LaSalle Exploration Corp
80	300365	4209483	2022-03-15	20.98	BLAKELOCK	LaSalle Exploration Corp
81	300263	4209480	2022-03-15	20.98	BLAKELOCK	LaSalle Exploration Corp
82	299972	4209470	2022-03-15	20.97	HOBLITZELL	LaSalle Exploration Corp
83	300366	4209482	2022-03-15	20.98	BLAKELOCK	LaSalle Exploration Corp
84	293655	4209482	2022-03-15	20.98	BLAKELOCK	LaSalle Exploration Corp
85	295052	4209485	2022-03-15	20.97	BLAKELOCK	LaSalle Exploration Corp
86	298058	4209486	2022-03-15	20.98	BLAKELOCK	LaSalle Exploration Corp
87	293656	4209482	2022-03-15	20.98	BLAKELOCK	LaSalle Exploration Corp
88	304866	4209473	2022-03-15	20.97	HOBLITZELL	LaSalle Exploration Corp
89	299336	4209461	2022-03-15	20.97	HOBLITZELL	LaSalle Exploration Corp
90	303689	4209474	2021-11-28	20.98	HOBLITZELL	LaSalle Exploration Corp
91	301274	3005461	2022-01-21	20.98	BLAKELOCK	LaSalle Exploration Corp
92	300880	4209471	2022-03-15	20.97	HOBLITZELL	LaSalle Exploration Corp
93	299973	4209471	2022-03-15	20.97	HOBLITZELL	LaSalle Exploration Corp
94	299335	4209472	2022-03-15	20.97	HOBLITZELL	LaSalle Exploration Corp
95	299334	4209470	2022-03-15	20.97	HOBLITZELL	LaSalle Exploration Corp
96	275180	4209482	2022-03-15	20.98	BLAKELOCK	LaSalle Exploration Corp
97	275179	4209482	2022-03-15	20.98	BLAKELOCK	LaSalle Exploration Corp
98	280638	4209471	2022-03-15	20.97	HOBLITZELL	LaSalle Exploration Corp
99	275181	4209482	2022-03-15	20.98	BLAKELOCK	LaSalle Exploration Corp
100	270782	4209470	2022-03-15	20.97	HOBLITZELL	LaSalle Exploration Corp
101	270764	4209470	2022-03-15	20.97	HOBLITZELL	LaSalle Exploration Corp
102	277732	4209460	2021-11-08	20.97	HOBLITZELL	LaSalle Exploration Corp
103	273315	3005459	2022-01-21	20.98	BLAKELOCK	LaSalle Exploration Corp
104	292827	4209474	2021-11-28	20.98	HOBLITZELL	LaSalle Exploration Corp
105	284681	4209473	2022-03-15	20.97	HOBLITZELL	LaSalle Exploration Corp
106	290670	4209462	2021-11-08	20.98	HOBLITZELL	LaSalle Exploration Corp
107	290669	3005461	2022-01-21	20.98	BLAKELOCK, HOBLITZELL	LaSalle Exploration Corp
108	280822	4209483	2022-03-15	20.98	BLAKELOCK	LaSalle Exploration Corp
109	280639	4209461	2022-03-15	20.97	HOBLITZELL	LaSalle Exploration Corp
110	282626	4209462	2021-11-08	20.98	HOBLITZELL	LaSalle Exploration Corp
111	283559	3005461	2022-01-21	20.98	BLAKELOCK	LaSalle Exploration Corp
112	260554	3005460	2022-01-21	20.98	BLAKELOCK	LaSalle Exploration Corp
113	260553	3005460	2022-01-21	20.98	BLAKELOCK	LaSalle Exploration Corp
114	258519	4209482	2022-03-15	20.98	BLAKELOCK	LaSalle Exploration Corp

No.	TENURE ID	LEGACY ID	ANNIVERSARY	AREA (Ha)	TOWNSHIP	HOLDER
115	260555	3005460	2022-01-21	20.98	BLAKELOCK	LaSalle Exploration Corp
116	257661	4209485	2022-03-15	20.97	BLAKELOCK	LaSalle Exploration Corp
117	256175	4209473	2022-03-15	20.97	HOBLITZELL	LaSalle Exploration Corp
118	260572	4209460	2021-11-08	20.97	HOBLITZELL	LaSalle Exploration Corp
119	257662	4209485	2022-03-15	20.97	BLAKELOCK	LaSalle Exploration Corp
120	271444	3005461	2022-01-21	20.98	BLAKELOCK	LaSalle Exploration Corp
121	263710	3005459	2022-03-15	20.98	BLAKELOCK	LaSalle Exploration Corp
122	270763	4209470	2022-03-15	20.97	HOBLITZELL	LaSalle Exploration Corp
123	270157	4209471	2022-03-15	20.97	HOBLITZELL	LaSalle Exploration Corp
124	262984	4209486	2022-03-15	20.98	BLAKELOCK	LaSalle Exploration Corp
125	262682	4209470	2022-03-15	20.97	HOBLITZELL	LaSalle Exploration Corp
126	263709	4209480	2022-03-15	20.98	BLAKELOCK	LaSalle Exploration Corp
127	264341	4209482	2022-03-15	20.98	BLAKELOCK	LaSalle Exploration Corp
128	249097	4209461	2021-11-08	20.97	HOBLITZELL	LaSalle Exploration Corp
129	242908	4209486	2022-03-15	20.98	BLAKELOCK	LaSalle Exploration Corp
130	249079	4209460	2021-11-08	20.97	HOBLITZELL	LaSalle Exploration Corp
131	249098	4209461	2021-11-08	20.98	HOBLITZELL	LaSalle Exploration Corp
132	246751	4209462	2021-11-08	20.98	HOBLITZELL	LaSalle Exploration Corp
133	246750	4209462	2021-11-08	20.98	HOBLITZELL	LaSalle Exploration Corp
134	244174	3005459	2022-03-15	20.98	BLAKELOCK	LaSalle Exploration Corp
135	244173	4209480	2022-03-15	20.97	BLAKELOCK	LaSalle Exploration Corp
136	257123	4209482	2022-03-15	20.98	BLAKELOCK	LaSalle Exploration Corp
137	252136	4209471	2022-03-15	20.97	HOBLITZELL	LaSalle Exploration Corp
138	256174	4209473	2022-03-15	20.97	HOBLITZELL	LaSalle Exploration Corp
139	257124	4209482	2022-03-15	20.98	BLAKELOCK	LaSalle Exploration Corp
140	254104	4209462	2021-11-08	20.98	HOBLITZELL	LaSalle Exploration Corp
141	251703	3005459	2022-03-15	20.98	BLAKELOCK	LaSalle Exploration Corp
142	256562	4209484	2022-03-15	20.97	BLAKELOCK	LaSalle Exploration Corp
143	254105	4209462	2021-11-08	20.98	HOBLITZELL	LaSalle Exploration Corp
144	236980	4209474	2021-11-28	20.98	HOBLITZELL	LaSalle Exploration Corp
145	237513	4209471	2022-03-15	20.97	HOBLITZELL	LaSalle Exploration Corp
146	238945	4209482	2022-03-15	20.98	BLAKELOCK	LaSalle Exploration Corp
147	236981	4209474	2021-11-28	20.98	HOBLITZELL	LaSalle Exploration Corp
148	232633	4209471	2022-03-15	20.97	HOBLITZELL	LaSalle Exploration Corp
149	233393	4209471	2022-03-15	20.97	HOBLITZELL	LaSalle Exploration Corp
150	234185	3005461	2022-01-21	20.98	BLAKELOCK	LaSalle Exploration Corp
151	232634	4209472	2022-03-15	20.97	HOBLITZELL	LaSalle Exploration Corp
152	241023	4209460	2021-11-08	20.97	HOBLITZELL	LaSalle Exploration Corp
153	241014	3005460	2022-01-21	20.98	BLAKELOCK	LaSalle Exploration Corp

No.	TENURE ID	LEGACY ID	ANNIVERSARY	AREA (Ha)	TOWNSHIP	HOLDER
154	238561	4209484	2022-03-15	20.98	BLAKELOCK	LaSalle Exploration Corp
155	238560	4209484	2022-03-15	20.97	BLAKELOCK	LaSalle Exploration Corp
156	241011	3005460	2022-01-21	20.97	BLAKELOCK	LaSalle Exploration Corp
157	238946	4209482	2022-03-15	20.98	BLAKELOCK	LaSalle Exploration Corp
158	241013	3005460	2022-01-21	20.98	BLAKELOCK	LaSalle Exploration Corp
159	241012	3005459	2022-01-21	20.97	BLAKELOCK	LaSalle Exploration Corp
160	625479		2022-12-18	20.98	HOBLITZELL	LaSalle Exploration Corp
161	625478		2022-12-18	20.98	HOBLITZELL	LaSalle Exploration Corp
162	625481		2022-12-18	20.98	HOBLITZELL	LaSalle Exploration Corp
163	625480		2022-12-18	20.98	HOBLITZELL	LaSalle Exploration Corp
164	625467		2022-12-18	20.98	HOBLITZELL	LaSalle Exploration Corp
165	625466		2022-12-18	20.98	HOBLITZELL	LaSalle Exploration Corp
166	625469		2022-12-18	20.98	HOBLITZELL	LaSalle Exploration Corp
167	625468		2022-12-18	20.98	HOBLITZELL	LaSalle Exploration Corp
168	625463		2022-12-18	20.98	HOBLITZELL	LaSalle Exploration Corp
169	625462		2022-12-18	20.98	HOBLITZELL	LaSalle Exploration Corp
170	625465		2022-12-18	20.98	HOBLITZELL	LaSalle Exploration Corp
171	625464		2022-12-18	20.98	HOBLITZELL	LaSalle Exploration Corp
172	625475		2022-12-18	20.98	HOBLITZELL	LaSalle Exploration Corp
173	625474		2022-12-18	20.98	HOBLITZELL	LaSalle Exploration Corp
174	625477		2022-12-18	20.98	HOBLITZELL	LaSalle Exploration Corp
175	625476		2022-12-18	20.99	HOBLITZELL	LaSalle Exploration Corp
176	625471		2022-12-18	20.98	HOBLITZELL	LaSalle Exploration Corp
177	625470		2022-12-18	20.98	HOBLITZELL	LaSalle Exploration Corp
178	625473		2022-12-18	20.98	HOBLITZELL	LaSalle Exploration Corp
179	625472		2022-12-18	20.98	HOBLITZELL	LaSalle Exploration Corp
180	625451		2022-12-18	20.98	HOBLITZELL	LaSalle Exploration Corp
181	625450		2022-12-18	20.98	HOBLITZELL	LaSalle Exploration Corp
182	625453		2022-12-18	20.98	HOBLITZELL	LaSalle Exploration Corp
183	625452		2022-12-18	20.98	HOBLITZELL	LaSalle Exploration Corp
184	625447		2022-12-18	20.98	HOBLITZELL	LaSalle Exploration Corp
185	625446		2022-12-18	20.98	HOBLITZELL	LaSalle Exploration Corp
186	625449		2022-12-18	20.98	HOBLITZELL	LaSalle Exploration Corp
187	625448		2022-12-18	20.98	HOBLITZELL	LaSalle Exploration Corp
188	625459		2022-12-18	20.98	HOBLITZELL	LaSalle Exploration Corp
189	625458		2022-12-18	20.98	HOBLITZELL	LaSalle Exploration Corp
190	625461		2022-12-18	20.98	HOBLITZELL	LaSalle Exploration Corp
191	625460		2022-12-18	20.98	HOBLITZELL	LaSalle Exploration Corp
192	625455		2022-12-18	20.98	HOBLITZELL	LaSalle Exploration Corp

No.	TENURE ID	LEGACY ID	ANNIVERSARY	AREA (Ha)	TOWNSHIP	HOLDER
193	625454		2022-12-18	20.98	HOBLITZELL	LaSalle Exploration Corp
194	625457		2022-12-18	20.98	HOBLITZELL	LaSalle Exploration Corp
195	625456		2022-12-18	20.98	HOBLITZELL	LaSalle Exploration Corp
196	625435		2022-12-18	20.98	HOBLITZELL	LaSalle Exploration Corp
197	625434		2022-12-18	20.98	HOBLITZELL	LaSalle Exploration Corp
198	625437		2022-12-18	20.98	HOBLITZELL	LaSalle Exploration Corp
199	625436		2022-12-18	20.98	HOBLITZELL	LaSalle Exploration Corp
200	625431		2022-12-18	20.98	HOBLITZELL	LaSalle Exploration Corp
201	625430		2022-12-18	20.98	HOBLITZELL	LaSalle Exploration Corp
202	625433		2022-12-18	20.98	HOBLITZELL	LaSalle Exploration Corp
203	625432		2022-12-18	20.98	HOBLITZELL	LaSalle Exploration Corp
204	625443		2022-12-18	20.98	HOBLITZELL	LaSalle Exploration Corp
205	625442		2022-12-18	20.98	HOBLITZELL	LaSalle Exploration Corp
206	625445		2022-12-18	20.98	HOBLITZELL	LaSalle Exploration Corp
207	625444		2022-12-18	20.98	HOBLITZELL	LaSalle Exploration Corp
208	625439		2022-12-18	20.98	HOBLITZELL	LaSalle Exploration Corp
209	625438		2022-12-18	20.98	HOBLITZELL	LaSalle Exploration Corp
210	625441		2022-12-18	20.98	HOBLITZELL	LaSalle Exploration Corp
211	625440		2022-12-18	20.98	HOBLITZELL	LaSalle Exploration Corp
212	625419		2022-12-18	20.98	HOBLITZELL	LaSalle Exploration Corp
213	625418		2022-12-18	20.98	HOBLITZELL	LaSalle Exploration Corp
214	625421		2022-12-18	20.98	HOBLITZELL	LaSalle Exploration Corp
215	625420		2022-12-18	20.98	HOBLITZELL	LaSalle Exploration Corp
216	625415		2022-12-18	20.98	HOBLITZELL	LaSalle Exploration Corp
217	625414		2022-12-18	20.98	HOBLITZELL	LaSalle Exploration Corp
218	625417		2022-12-18	20.98	HOBLITZELL	LaSalle Exploration Corp
219	625416		2022-12-18	20.98	HOBLITZELL	LaSalle Exploration Corp
220	625427		2022-12-18	20.98	HOBLITZELL	LaSalle Exploration Corp
221	625426		2022-12-18	20.98	HOBLITZELL	LaSalle Exploration Corp
222	625429		2022-12-18	20.98	HOBLITZELL	LaSalle Exploration Corp
223	625428		2022-12-18	20.98	HOBLITZELL	LaSalle Exploration Corp
224	625423		2022-12-18	20.98	HOBLITZELL	LaSalle Exploration Corp
225	625422		2022-12-18	20.98	HOBLITZELL	LaSalle Exploration Corp
226	625425		2022-12-18	20.98	HOBLITZELL	LaSalle Exploration Corp
227	625424		2022-12-18	20.98	HOBLITZELL	LaSalle Exploration Corp
228	625403		2022-12-18	20.98	HOBLITZELL	LaSalle Exploration Corp
229	625402		2022-12-18	20.98	HOBLITZELL	LaSalle Exploration Corp
230	625405		2022-12-18	20.98	HOBLITZELL	LaSalle Exploration Corp
231	625404		2022-12-18	20.98	HOBLITZELL	LaSalle Exploration Corp

No.	TENURE ID	LEGACY ID	ANNIVERSARY	AREA (Ha)	TOWNSHIP	HOLDER
232	625399		2022-12-18	20.98	BLAKELOCK	LaSalle Exploration Corp
233	625398		2022-12-18	20.98	HOBLITZELL	LaSalle Exploration Corp
234	625401		2022-12-18	20.98	HOBLITZELL	LaSalle Exploration Corp
235	625400		2022-12-18	20.98	HOBLITZELL	LaSalle Exploration Corp
236	625411		2022-12-18	20.98	HOBLITZELL	LaSalle Exploration Corp
237	625410		2022-12-18	20.98	HOBLITZELL	LaSalle Exploration Corp
238	625413		2022-12-18	20.98	HOBLITZELL	LaSalle Exploration Corp
239	625412		2022-12-18	20.98	HOBLITZELL	LaSalle Exploration Corp
240	625407		2022-12-18	20.98	HOBLITZELL	LaSalle Exploration Corp
241	625406		2022-12-18	20.98	HOBLITZELL	LaSalle Exploration Corp
242	625409		2022-12-18	20.98	HOBLITZELL	LaSalle Exploration Corp
243	625408		2022-12-18	20.98	HOBLITZELL	LaSalle Exploration Corp
244	221490	4209484	2022-03-15	20.97	BLAKELOCK	LaSalle Exploration Corp
245	220458	4209485	2022-03-15	20.97	BLAKELOCK	LaSalle Exploration Corp
246	224595	4209472	2022-03-15	20.97	HOBLITZELL	LaSalle Exploration Corp
247	221491	4209484	2022-03-15	20.97	BLAKELOCK	LaSalle Exploration Corp
248	211887	4209461	2021-11-08	20.98	HOBLITZELL	LaSalle Exploration Corp
249	211886	4209461	2021-11-08	20.97	HOBLITZELL	LaSalle Exploration Corp
250	217549	3005461	2022-01-21	20.97	BLAKELOCK	LaSalle Exploration Corp
251	216007	3005461	2022-01-21	20.98	BLAKELOCK, HOBLITZELL	LaSalle Exploration Corp
252	614954		2022-10-06	20.98	HOBLITZELL	LaSalle Exploration Corp
253	614953		2022-10-06	20.98	HOBLITZELL	LaSalle Exploration Corp
254	233392	4209471	2022-03-15	20.97	HOBLITZELL	LaSalle Exploration Corp
255	614955		2022-10-06	20.98	HOBLITZELL	LaSalle Exploration Corp
256	224597	4209472	2022-03-15	20.97	HOBLITZELL	LaSalle Exploration Corp
257	224596	4209472	2022-03-15	20.97	HOBLITZELL	LaSalle Exploration Corp
258	227437	4209473	2022-03-15	20.96	HOBLITZELL	LaSalle Exploration Corp
259	228444	4209485	2022-03-15	20.97	BLAKELOCK	LaSalle Exploration Corp
260	195810	4209486	2022-03-15	20.98	BLAKELOCK	LaSalle Exploration Corp
261	195809	4209486	2022-03-15	20.98	BLAKELOCK	LaSalle Exploration Corp
262	199013	4209462	2021-11-08	20.98	HOBLITZELL	LaSalle Exploration Corp
263	196676	4209471	2022-03-15	20.97	HOBLITZELL	LaSalle Exploration Corp
264	192413	4209460	2021-11-08	20.97	HOBLITZELL	LaSalle Exploration Corp
265	192389	3005460	2022-01-21	20.98	BLAKELOCK	LaSalle Exploration Corp
266	195796	4209486	2022-03-15	20.98	BLAKELOCK	LaSalle Exploration Corp
267	195795	4209486	2022-03-15	20.98	BLAKELOCK	LaSalle Exploration Corp
268	214415	4209483	2022-03-15	20.98	BLAKELOCK	LaSalle Exploration Corp
269	209956	4209484	2022-03-15	20.98	BLAKELOCK	LaSalle Exploration Corp
270	211885	4209461	2021-11-08	20.97	HOBLITZELL	LaSalle Exploration Corp

No.	TENURE ID	LEGACY ID	ANNIVERSARY	AREA (Ha)	TOWNSHIP	HOLDER
271	214416	4209482	2022-03-15	20.98	BLAKELOCK	LaSalle Exploration Corp
272	201939	4209484	2022-03-15	20.97	BLAKELOCK	LaSalle Exploration Corp
273	199315	3005459	2022-01-21	20.98	BLAKELOCK	LaSalle Exploration Corp
274	209801	4209482	2022-03-15	20.98	BLAKELOCK	LaSalle Exploration Corp
275	201940	4209484	2022-03-15	20.97	BLAKELOCK	LaSalle Exploration Corp
276	614948		2022-10-06	20.98	BLAKELOCK	LaSalle Exploration Corp
277	614947		2022-10-06	20.98	BLAKELOCK	LaSalle Exploration Corp
278	614950		2022-10-06	20.98	BLAKELOCK	LaSalle Exploration Corp
279	614949		2022-10-06	20.98	BLAKELOCK	LaSalle Exploration Corp
280	614944		2022-10-06	20.98	BLAKELOCK	LaSalle Exploration Corp
281	184828	4209472	2022-03-15	20.97	HOBLITZELL	LaSalle Exploration Corp
282	614946		2022-10-06	20.98	BLAKELOCK	LaSalle Exploration Corp
283	614945		2022-10-06	20.98	BLAKELOCK	LaSalle Exploration Corp
284	192386	3005459	2022-01-21	20.98	BLAKELOCK	LaSalle Exploration Corp
285	192385	3005460	2022-01-21	20.98	BLAKELOCK	LaSalle Exploration Corp
286	192388	3005460	2022-01-21	20.98	BLAKELOCK	LaSalle Exploration Corp
287	192387	3005460	2022-01-21	20.98	BLAKELOCK	LaSalle Exploration Corp
288	614952		2022-10-06	20.98	BLAKELOCK	LaSalle Exploration Corp
289	614951		2022-10-06	20.98	BLAKELOCK	LaSalle Exploration Corp
290	192384	3005459	2022-01-21	20.98	BLAKELOCK	LaSalle Exploration Corp
291	190533	4209484	2022-03-15	20.97	BLAKELOCK	LaSalle Exploration Corp
292	167395	4209471	2022-03-15	20.97	HOBLITZELL	LaSalle Exploration Corp
293	164508	4209472	2022-03-15	20.97	HOBLITZELL	LaSalle Exploration Corp
294	172254	4209485	2022-03-15	20.97	BLAKELOCK	LaSalle Exploration Corp
295	171939	4209484	2022-03-15	20.97	BLAKELOCK	LaSalle Exploration Corp
296	155612	4209485	2022-03-15	20.97	BLAKELOCK	LaSalle Exploration Corp
297	155611	4209485	2022-03-15	20.97	BLAKELOCK	LaSalle Exploration Corp
298	164507	4209472	2022-03-15	20.97	HOBLITZELL	LaSalle Exploration Corp
299	162069	4209471	2022-03-15	20.97	HOBLITZELL	LaSalle Exploration Corp
300	177528	3005459	2022-03-15	20.97	BLAKELOCK	LaSalle Exploration Corp
301	180042	3005461	2022-01-21	20.98	BLAKELOCK, HOBLITZELL	LaSalle Exploration Corp
302	180860	4209474	2021-11-28	20.98	HOBLITZELL	LaSalle Exploration Corp
303	180859	4209474	2021-11-28	20.98	HOBLITZELL	LaSalle Exploration Corp
304	172830	4209473	2022-03-15	20.97	HOBLITZELL	LaSalle Exploration Corp
305	172255	4209484	2022-03-15	20.97	BLAKELOCK	LaSalle Exploration Corp
306	180041	4209460	2021-11-08	20.98	HOBLITZELL	LaSalle Exploration Corp
307	174354	4209461	2021-11-08	20.97	HOBLITZELL	LaSalle Exploration Corp
308	149568	4209483	2022-03-15	20.98	BLAKELOCK	LaSalle Exploration Corp
309	148037	4209471	2022-03-15	20.97	HOBLITZELL	LaSalle Exploration Corp

No.	TENURE ID	LEGACY ID	ANNIVERSARY	AREA (Ha)	TOWNSHIP	HOLDER
310	149310	3005461	2022-01-21	20.98	BLAKELOCK	LaSalle Exploration Corp
311	149569	4209483	2022-03-15	20.98	BLAKELOCK	LaSalle Exploration Corp
312	145752	4209461	2021-11-08	20.97	HOBLITZELL	LaSalle Exploration Corp
313	145732	4209460	2021-11-08	20.97	HOBLITZELL	LaSalle Exploration Corp
314	147707	4209483	2022-03-15	20.98	BLAKELOCK	LaSalle Exploration Corp
315	141770	4209474	2021-11-28	20.98	HOBLITZELL	LaSalle Exploration Corp
316	157823	4209482	2022-03-15	20.98	BLAKELOCK	LaSalle Exploration Corp
317	150784	4209462	2021-11-08	20.98	HOBLITZELL	LaSalle Exploration Corp
318	155610	4209485	2022-03-15	20.97	BLAKELOCK	LaSalle Exploration Corp
319	159870	4209461	2021-11-08	20.97	HOBLITZELL	LaSalle Exploration Corp
320	151196	3005459	2022-01-21	20.98	BLAKELOCK	LaSalle Exploration Corp
321	151429	4209470	2022-03-15	20.97	HOBLITZELL	LaSalle Exploration Corp
322	150783	4209462	2021-11-08	20.98	HOBLITZELL	LaSalle Exploration Corp
323	152092	3005461	2022-01-21	20.98	BLAKELOCK	LaSalle Exploration Corp
324	134823	4209460	2021-11-08	20.98	HOBLITZELL	LaSalle Exploration Corp
325	132902	4209483	2022-03-15	20.98	BLAKELOCK	LaSalle Exploration Corp
326	134825	4209462	2021-11-08	20.98	HOBLITZELL	LaSalle Exploration Corp
327	134824	4209462	2021-11-08	20.98	HOBLITZELL	LaSalle Exploration Corp
328	132821	4209461	2022-03-15	20.97	HOBLITZELL	LaSalle Exploration Corp
329	132820	4209470	2022-03-15	20.97	HOBLITZELL	LaSalle Exploration Corp
330	132706	3005461	2022-01-21	20.98	BLAKELOCK	LaSalle Exploration Corp
331	132822	4209472	2022-03-15	20.97	HOBLITZELL	LaSalle Exploration Corp
332	138263	4209473	2022-03-15	20.96	HOBLITZELL	LaSalle Exploration Corp
333	138262	4209471	2022-03-15	20.97	HOBLITZELL	LaSalle Exploration Corp
334	145723	3005460	2022-01-21	20.98	BLAKELOCK	LaSalle Exploration Corp
335	143223	4209484	2022-03-15	20.97	BLAKELOCK	LaSalle Exploration Corp
336	137665	4209482	2022-03-15	20.98	BLAKELOCK	LaSalle Exploration Corp
337	137664	4209482	2022-03-15	20.98	BLAKELOCK	LaSalle Exploration Corp
338	139768	3005459	2022-01-21	20.98	BLAKELOCK	LaSalle Exploration Corp
339	139767	3005460	2022-01-21	20.98	BLAKELOCK	LaSalle Exploration Corp
340	113862	3005461	2022-01-21	20.98	BLAKELOCK	LaSalle Exploration Corp

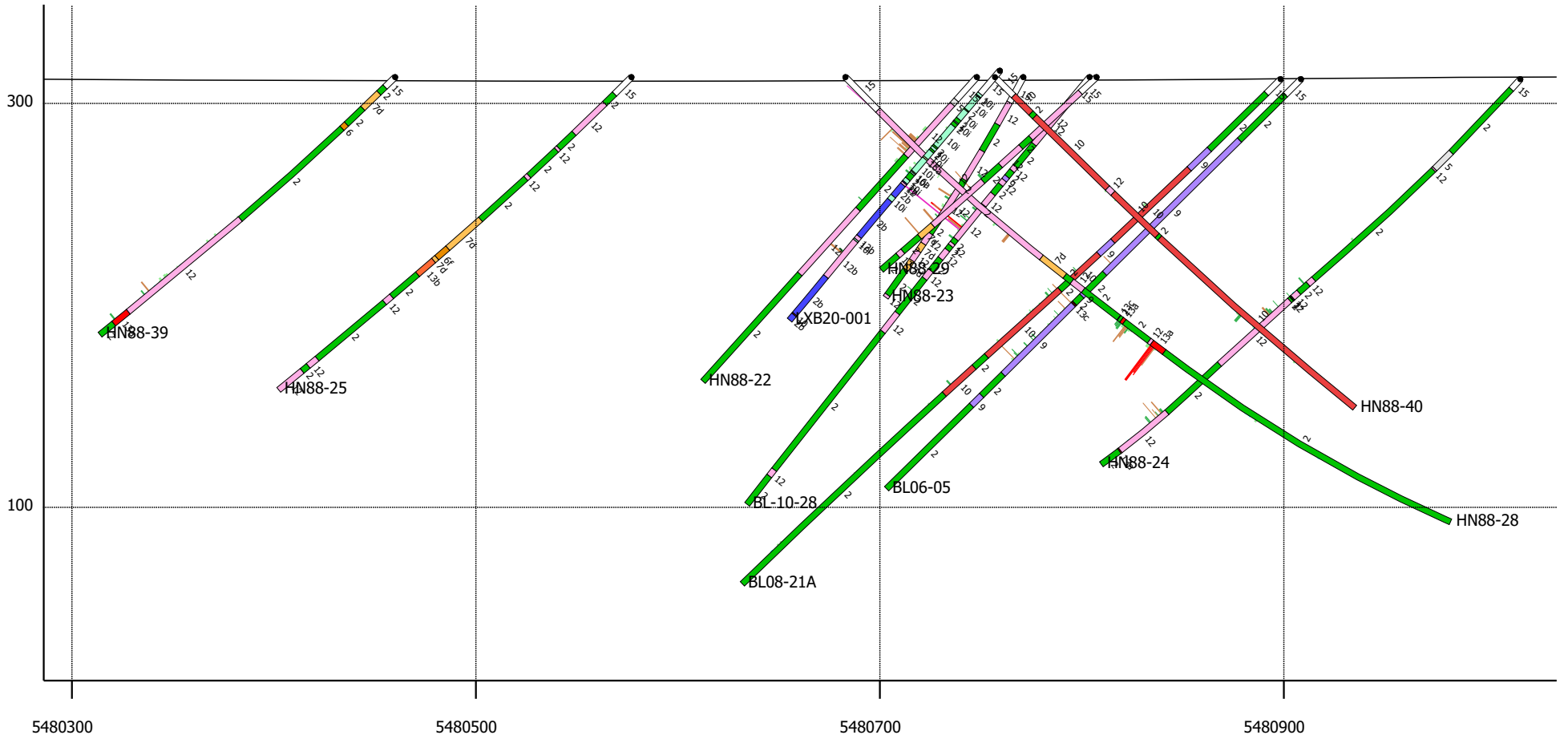


## **APPENDIX B – CROSS SECTIONS OF THE 2020 DIAMOND DRILL HOLES**

S

### Section 564800E, Looking West

N



#### Au\_g\_t

- ≤ 0
- ≤ 0.1
- ≤ 0.2
- ≤ 0.5
- ≤ 1
- ≤ 5
- ≤ 25
- > 25

#### Primary\_Lithology

- |     |      |       |       |      |      |       |      |
|-----|------|-------|-------|------|------|-------|------|
| ■ 1 | ■ 7  | ■ 15  | ■ 13a | ■ 3a | ■ 5d | ■ 9a  | ■ 2m |
| ■ 2 | ■ 9  | ■ 16  | ■ 13b | ■ 4i | ■ 6f | ■ 9b  |      |
| ■ 3 | ■ 10 | ■ 10a | ■ 13c | ■ 4j | ■ 7d | ■ 10i |      |
| ■ 4 | ■ 12 | ■ 10b | ■ 2a  | ■ 4m | ■ 7a | ■ 16a |      |
| ■ 5 | ■ 13 | ■ 12a | ■ 2i  | ■ 5b | ■ 7e | ■ 2b  |      |
| ■ 6 | ■ 14 | ■ 12b | ■ 2l  | ■ 5f | ■ 7h | ■ 2j  |      |

Scale: 1:3,000

Vertical exaggeration: 1x

0m

200m



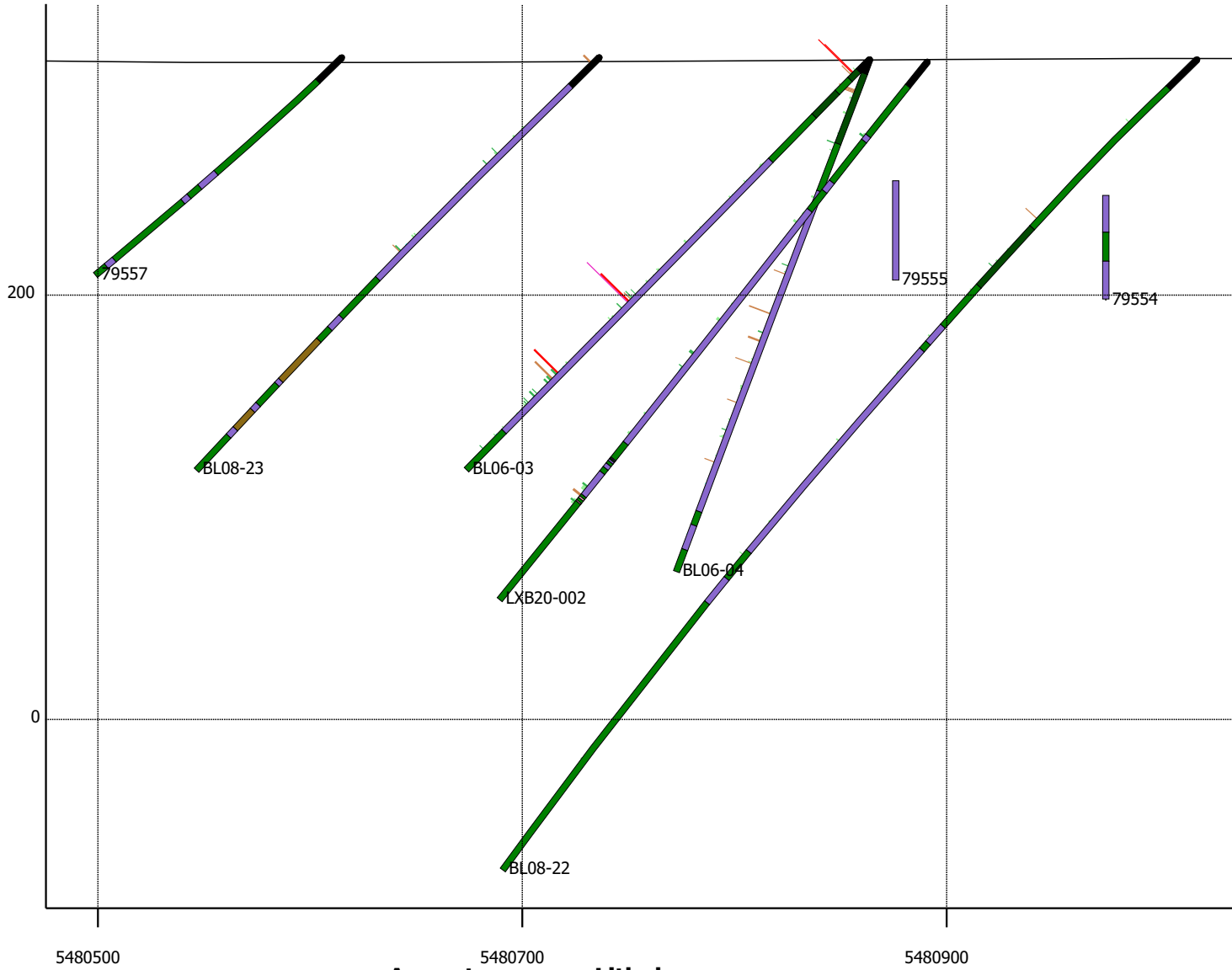
#### Location

S: 564800, 5480286

N: 564800, 5481035

# Section 565000E, Looking West

S N



Scale: 1:3,000  
Vertical exaggeration: 1x



### Au\_g\_t

- ≤ 0
- ≤ 1
- ≤ 0.1
- ≤ 5
- ≤ 0.2
- ≤ 25
- ≤ 0.5
- > 25

### Lithology

- Chert
- Mafics
- Seds
- Felsic Intrusions
- Overburden
- Structure
- Felsics
- Porphyry
- Veins
- Mafic Intrusions
- Schist

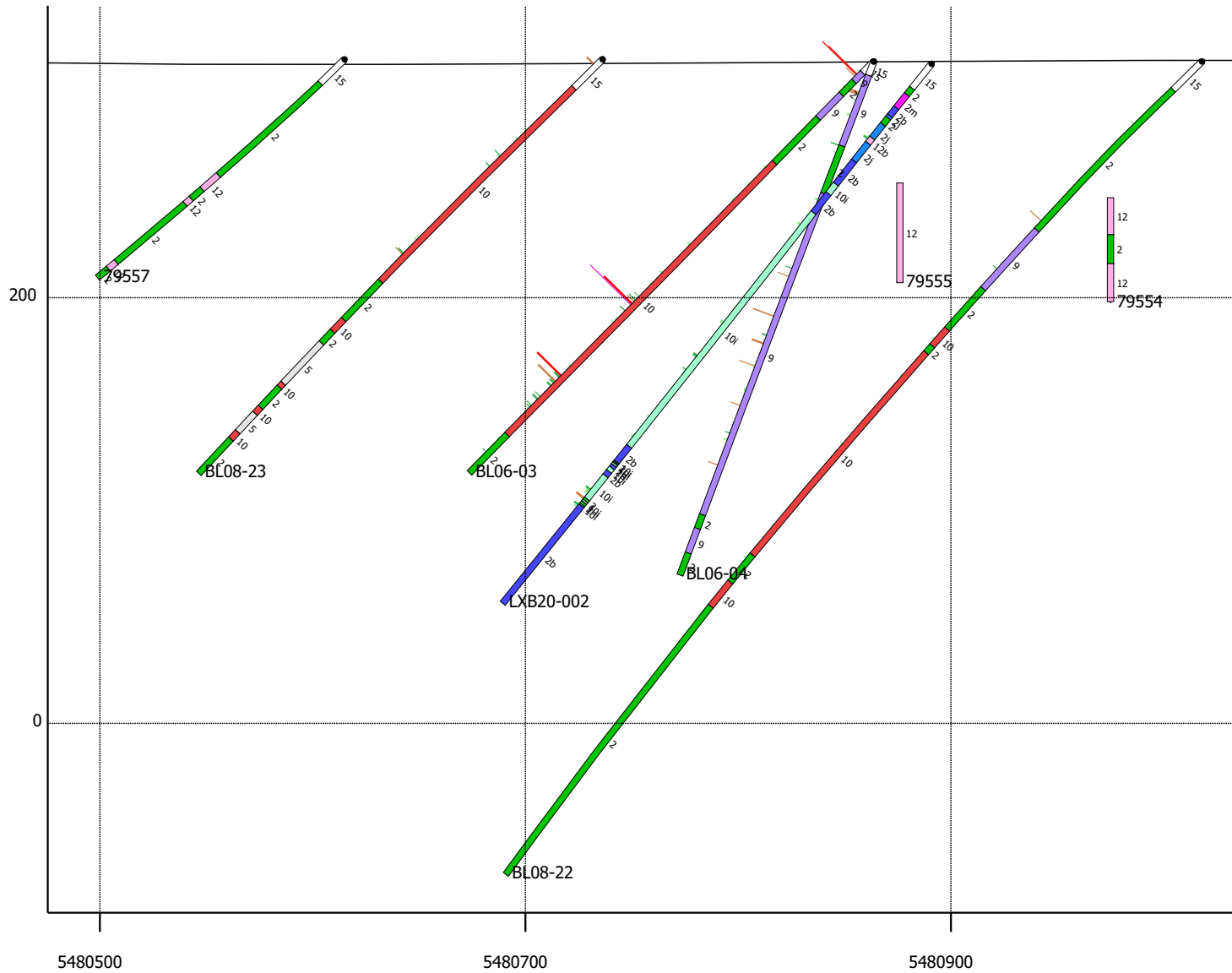
### Location

S: 565000, 5480475  
N: 565000, 5481035

# Section 565000E, Looking West

S

N



Scale: 1:3,000

Vertical exaggeration: 1x

0m

200m



## Au\_g\_t

≤ 0	≤ 1
≤ 0.1	≤ 5
≤ 0.2	≤ 25
≤ 0.5	> 25

## Primary\_Lithology

1	7	15	13a	3a	5d	9a	2m
2	9	16	13b	4i	6f	9b	
3	10	10a	13c	4j	7d	10i	
4	12	10b	2a	4m	7a	16a	
5	13	12a	2i	5b	7e	2b	
6	14	12b	2l	5f	7h	2j	

## Location

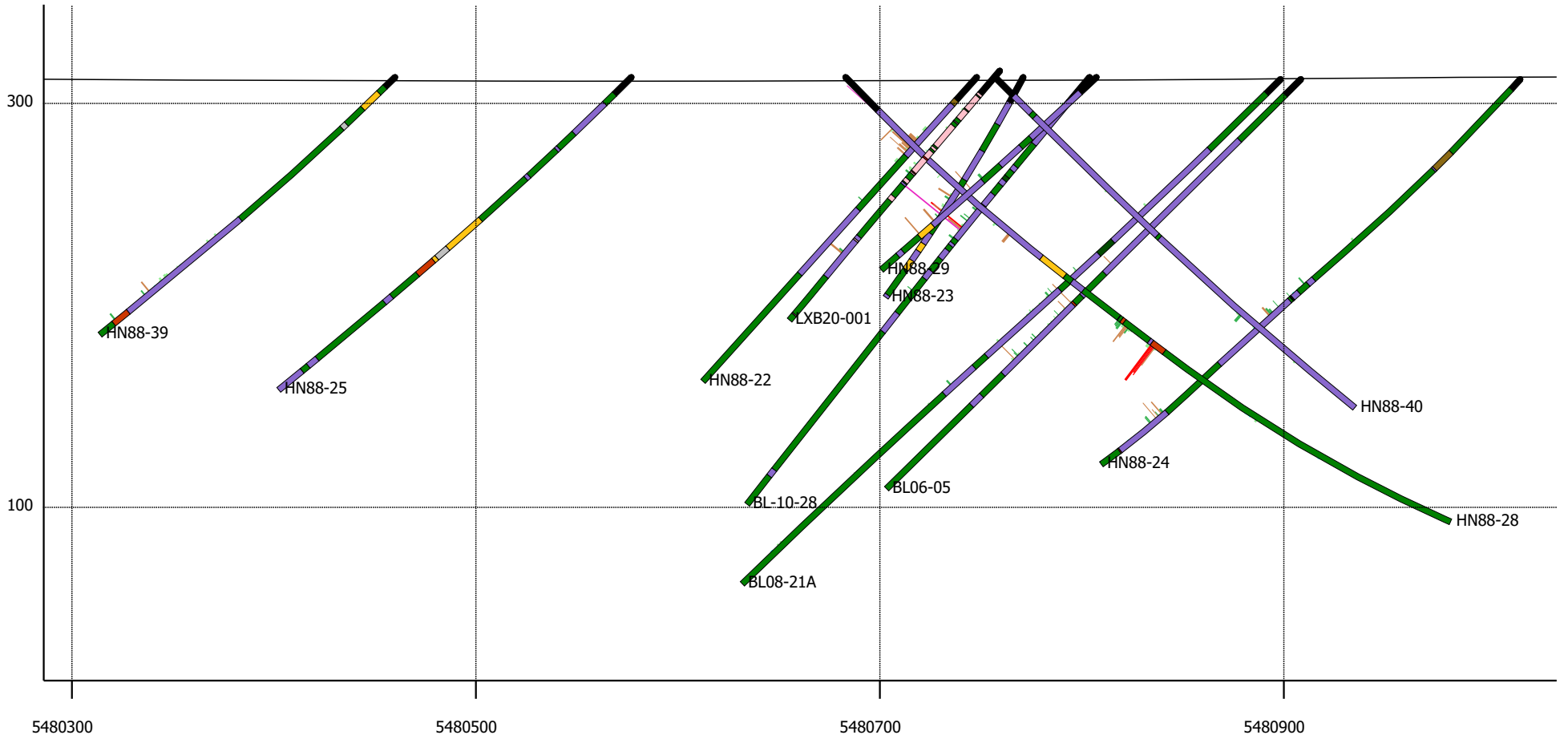
S: 565000, 5480475

N: 565000, 5481035

S

# Section 564800E, Looking West

N



### Au\_g\_t

- ≤ 0
- ≤ 0.1
- ≤ 0.2
- ≤ 0.5
- ≤ 1
- ≤ 5
- ≤ 25
- > 25

### Lithology

- Chert
- Mafics
- Seds
- Felsic Intrusions
- Overburden
- Structure
- Felsics
- Porphyry
- Veins
- Mafic Intrusions
- Schist

Scale: 1:3,000

Vertical exaggeration: 1x

0m

200m



### Location

S: 564800, 5480286

N: 564800, 5481035

## **APPENDIX C – ASSAY CERTIFICATES**



ALS Canada Ltd.  
 2103 Dollarton Hwy  
 North Vancouver BC V7H 0A7  
 Phone: +1 604 984 0221 Fax: +1 604 984 0218  
 www.alsglobal.com/geochemistry

To: **LASALLE EXPLORATION CORPORATION**  
**502-1281 WEST GEORGIA STREET**  
**VANCOUVER BC V6E 3J7**

Page: 1  
 Total # Pages: 4 (A - C)  
 Plus Appendix Pages  
 Finalized Date: 3-FEB-2021  
 Account: LAFEXP

**CERTIFICATE TM20301694**

This report is for 105 samples of Drill Core submitted to our lab in Timmins, ON, Canada on 18-DEC-2020.  
 The following have access to data associated with this certificate:

IAN CAMPBELL	ADAM FINDLEY	ALAN SEXTON
--------------	--------------	-------------

SAMPLE PREPARATION	
ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-21	Sample logging - ClientBarCode
LOG-23	Pulp Login - Rcvd with Barcode
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize up to 250g 85% <75 um

ANALYTICAL PROCEDURES		
ALS CODE	DESCRIPTION	INSTRUMENT
ME-ICP61	33 element four acid ICP-AES	ICP-AES
Au-AA23	Au 30g FA-AA finish	AAS

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

\*\*\*\*\* See Appendix Page for comments regarding this certificate \*\*\*\*\*

**Signature:**   
 Saa Traxler, General Manager, North Vancouver



ALS Canada Ltd.  
 2103 Dollarton Hwy  
 North Vancouver BC V7H 0A7  
 Phone: +1 604 984 0221 Fax: +1 604 984 0218  
 www.alsglobal.com/geochemistry

To: LASALLE EXPLORATION CORPORATION  
 502-1281 WEST GEORGIA STREET  
 VANCOUVER BC V6E 3J7

Page: 2 - A  
 Total # Pages: 4 (A - C)  
 Plus Appendix Pages  
 Finalized Date: 3-FEB-2021  
 Account: LAFEXP

**CERTIFICATE OF ANALYSIS TM20301694**

Sample Description	Method Analyte Units LOD	WEI-21	Au-AA23	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61
		Recvd Wt. kg	Au ppm	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm
B287138		3.35	<0.005	<0.5	7.05	<5	180	0.7	2	4.25	0.9	25	39	165	6.00	20
B287139		2.11	0.006	<0.5	7.29	<5	180	0.7	2	4.80	<0.5	14	23	78	5.30	20
B287140		0.06	1.255	<0.5	7.25	16	90	<0.5	<2	7.77	<0.5	46	171	165	7.88	20
B287141		3.09	0.030	0.6	6.56	5	170	1.0	2	2.31	<0.5	8	31	286	3.80	20
B287142		3.37	0.029	0.5	6.93	<5	150	0.8	<2	7.56	<0.5	25	82	96	6.70	20
B287143		2.47	0.024	0.9	7.69	5	90	0.8	3	9.75	0.6	65	173	322	11.70	20
B287144		2.03	<0.005	<0.5	7.53	<5	180	<0.5	<2	6.88	0.5	59	188	87	12.00	20
B287145		2.94	0.016	<0.5	7.40	<5	600	0.6	<2	3.76	<0.5	18	39	143	4.20	20
B287146		2.21	<0.005	<0.5	8.00	<5	90	<0.5	<2	8.91	<0.5	67	176	111	10.80	20
B287147		2.18	0.081	<0.5	7.72	<5	290	0.9	<2	3.05	<0.5	15	22	40	4.46	20
B287148		2.06	0.335	1.8	6.91	<5	540	1.4	<2	2.09	<0.5	8	11	34	1.75	20
B287149		2.29	0.586	1.7	7.59	<5	760	1.7	<2	2.06	<0.5	5	10	26	1.47	20
B287150		1.15	<0.005	<0.5	0.41	<5	60	<0.5	3	32.6	<0.5	1	2	3	0.16	<10
B287151		2.30	0.170	0.8	7.96	<5	740	1.7	<2	2.04	<0.5	6	9	24	1.71	20
B287152		2.21	0.058	0.5	7.39	<5	370	0.9	<2	3.00	<0.5	16	21	41	4.11	20
B287153		2.13	<0.005	<0.5	7.66	<5	290	0.8	<2	4.43	<0.5	17	23	33	4.61	20
B287154		3.03	0.020	<0.5	7.79	5	370	0.6	2	1.67	<0.5	21	38	83	5.57	20
B287155		1.13	0.017	0.5	7.30	<5	150	0.5	<2	6.30	<0.5	45	228	89	5.38	20
B287156		3.00	0.014	<0.5	8.52	6	140	0.6	<2	7.43	<0.5	44	169	89	5.13	20
B287157		3.47	0.014	<0.5	8.39	<5	120	0.6	<2	7.93	<0.5	45	156	103	5.04	20
B287158		3.44	0.099	<0.5	8.38	5	200	0.5	4	7.27	<0.5	45	159	88	5.54	20
B287159		3.30	0.010	<0.5	8.55	<5	110	0.5	<2	7.26	<0.5	65	166	98	5.26	20
B287160		0.06	8.99	1.3	6.36	35	240	<0.5	5	5.79	<0.5	42	272	145	7.18	20
B287161		3.60	0.015	<0.5	8.60	<5	110	0.5	<2	8.37	<0.5	60	153	81	4.85	20
B287162		3.46	0.033	<0.5	8.76	<5	110	0.6	2	7.67	<0.5	44	153	51	6.03	20
B287163		3.33	0.112	0.5	8.56	<5	90	0.5	<2	6.75	<0.5	42	154	118	4.88	20
B287164		3.30	0.008	0.5	8.64	7	120	0.5	2	6.45	<0.5	54	167	148	5.43	20
B287165		3.08	0.037	0.5	8.30	<5	270	0.7	<2	5.15	<0.5	45	260	101	5.15	20
B287166		2.05	0.024	<0.5	7.85	<5	1290	1.5	<2	1.78	<0.5	6	15	8	1.65	20
B287167		3.23	0.024	<0.5	7.92	5	1390	1.6	<2	1.62	<0.5	6	12	9	1.60	20
B287168		2.52	0.216	0.6	7.75	<5	1240	1.5	<2	1.55	<0.5	7	12	14	1.74	20
B287169		2.17	0.205	0.5	7.53	<5	1220	1.4	3	1.43	<0.5	7	12	8	1.75	20
B287170		1.34	<0.005	<0.5	0.09	<5	20	<0.5	2	33.9	<0.5	2	1	5	0.13	<10
B287171		2.11	0.036	<0.5	7.62	<5	1250	1.5	3	1.74	<0.5	6	11	6	1.61	20
B287172		2.45	0.089	<0.5	7.73	<5	220	0.6	3	5.34	<0.5	45	146	70	4.30	20
B287173		2.89	0.014	0.5	7.60	<5	100	0.6	2	7.20	<0.5	38	104	66	8.30	20
B287174		3.58	0.010	<0.5	7.88	<5	110	0.7	2	6.94	<0.5	41	106	102	8.74	20
B287175		3.61	0.026	<0.5	7.38	<5	100	0.7	<2	6.95	<0.5	38	101	81	8.42	20
B287176		3.53	0.040	<0.5	7.69	6	120	0.7	<2	6.52	<0.5	38	109	86	8.31	20
B287177		2.25	0.023	0.5	7.88	8	140	0.8	2	5.67	<0.5	43	116	119	9.21	20

\*\*\*\*\* See Appendix Page for comments regarding this certificate \*\*\*\*\*





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**CERTIFICATE OF ANALYSIS TM20301694**

Sample Description	Method Analyte Units LOD	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	
		K % 0.01	La ppm 10	Mg % 0.01	Mn ppm 5	Mo ppm 1	Na % 0.01	Ni ppm 1	P ppm 10	Pb ppm 2	S % 0.01	Sb ppm 5	Sc ppm 1	Sr ppm 1	Th ppm 20	Ti % 0.01
B287138		1.15	10	0.70	1815	6	1.53	41	840	5	0.41	<5	14	152	<20	0.45
B287139		0.98	10	0.48	2440	8	1.81	27	780	2	0.15	<5	13	175	<20	0.42
B287140		0.24	<10	4.49	1345	<1	1.63	118	390	6	0.22	<5	41	191	<20	0.57
B287141		1.15	20	0.90	1025	4	2.33	11	330	5	0.44	<5	8	160	<20	0.21
B287142		0.80	10	0.70	2900	3	1.54	63	580	3	0.36	<5	22	153	<20	0.50
B287143		1.08	<10	2.17	2670	32	1.15	150	390	4	0.49	<5	45	225	<20	0.85
B287144		2.42	<10	4.69	1645	17	0.59	149	360	<2	0.19	<5	42	143	<20	0.79
B287145		1.68	10	1.28	855	14	2.48	35	590	<2	0.20	<5	13	174	<20	0.37
B287146		0.92	<10	3.41	2110	4	1.19	165	420	<2	0.26	<5	45	300	<20	0.85
B287147		1.53	10	1.53	545	4	3.38	24	830	6	0.24	<5	13	420	<20	0.42
B287148		0.87	20	0.52	244	5	4.19	7	690	5	0.75	<5	3	819	<20	0.16
B287149		1.15	20	0.48	211	<1	4.76	5	770	7	0.53	<5	2	1180	<20	0.17
B287150		0.15	<10	2.46	119	<1	0.22	<1	80	<2	<0.01	<5	<1	83	<20	<0.01
B287151		1.09	30	0.52	199	<1	4.79	5	790	11	0.68	<5	3	1275	<20	0.17
B287152		1.80	10	1.52	443	5	2.76	24	810	5	0.36	<5	12	470	<20	0.39
B287153		1.10	10	1.04	675	1	2.92	27	830	3	0.08	<5	13	285	<20	0.46
B287154		2.42	20	2.40	662	2	0.72	39	670	2	0.17	<5	13	88	<20	0.38
B287155		1.67	10	2.35	1050	20	1.60	172	770	5	0.39	<5	27	189	<20	0.53
B287156		1.20	10	1.18	1145	23	1.86	135	990	3	0.28	<5	32	213	<20	0.65
B287157		1.20	10	1.16	1220	11	1.60	123	970	<2	0.36	<5	31	204	<20	0.64
B287158		1.77	10	1.57	1010	9	1.29	137	950	<2	0.21	<5	31	206	<20	0.62
B287159		1.21	<10	1.46	955	2	1.39	146	1060	<2	0.18	<5	33	247	<20	0.67
B287160		0.47	<10	4.29	1185	3	1.90	137	410	20	0.48	<5	34	111	<20	0.53
B287161		0.92	10	1.52	1230	7	1.61	121	1050	<2	0.21	<5	34	244	<20	0.66
B287162		0.85	10	1.40	1455	9	1.88	110	1180	2	0.30	<5	32	219	<20	0.66
B287163		0.85	<10	1.04	1075	9	1.90	97	790	5	0.40	<5	32	209	<20	0.66
B287164		1.02	<10	1.19	1075	10	1.85	114	820	<2	0.55	<5	32	206	<20	0.68
B287165		2.32	<10	1.85	997	4	2.63	128	750	<2	0.47	<5	31	280	<20	0.60
B287166		1.72	20	0.59	220	<1	4.19	9	790	8	0.14	<5	3	1360	<20	0.19
B287167		2.47	20	0.56	198	<1	4.31	8	780	8	0.44	<5	3	1275	<20	0.17
B287168		2.29	20	0.53	207	<1	4.28	8	760	10	0.91	<5	3	1140	<20	0.16
B287169		2.20	20	0.50	195	4	4.25	7	720	12	1.04	<5	3	1035	<20	0.14
B287170		0.03	<10	2.15	124	<1	0.04	<1	80	<2	<0.01	<5	<1	87	<20	<0.01
B287171		1.68	20	0.55	214	<1	4.57	6	770	7	0.57	<5	3	1180	<20	0.17
B287172		2.18	<10	1.12	730	12	2.18	98	590	2	0.63	<5	29	280	<20	0.58
B287173		1.10	<10	2.26	1885	7	1.95	46	760	2	0.16	<5	23	373	<20	1.04
B287174		0.84	<10	2.19	2010	11	2.28	47	780	<2	0.36	<5	24	402	<20	1.09
B287175		0.84	<10	2.26	1845	2	2.09	46	740	<2	0.39	<5	23	411	<20	1.02
B287176		1.05	<10	2.24	1745	4	2.18	40	760	<2	0.30	<5	23	411	<20	1.07
B287177		1.43	<10	2.06	1760	4	2.42	52	840	<2	0.38	<5	24	372	<20	1.09



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**CERTIFICATE OF ANALYSIS TM20301694**

Sample Description	Method Analyte Units LOD	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61
		Tl	U	V	W	Zn
		ppm	ppm	ppm	ppm	ppm
		10	10	1	10	2
B287138		<10	<10	101	<10	440
B287139		<10	<10	89	<10	138
B287140		<10	<10	279	<10	86
B287141		10	<10	39	<10	88
B287142		<10	<10	180	<10	63
B287143		<10	<10	391	20	116
B287144		<10	<10	364	<10	116
B287145		<10	<10	96	<10	55
B287146		<10	<10	376	<10	97
B287147		<10	<10	94	<10	77
B287148		<10	<10	32	10	70
B287149		<10	<10	31	10	92
B287150		<10	<10	1	<10	5
B287151		<10	<10	32	10	65
B287152		<10	<10	88	<10	82
B287153		<10	<10	98	20	74
B287154		<10	<10	90	<10	109
B287155		<10	<10	166	10	94
B287156		<10	<10	199	20	86
B287157		<10	<10	201	<10	91
B287158		<10	<10	207	10	103
B287159		<10	<10	210	<10	116
B287160		<10	<10	249	<10	90
B287161		<10	<10	206	30	85
B287162		<10	<10	202	40	82
B287163		<10	<10	204	10	78
B287164		<10	<10	208	<10	109
B287165		<10	<10	199	40	110
B287166		<10	<10	37	<10	55
B287167		<10	<10	37	<10	44
B287168		<10	<10	38	<10	36
B287169		<10	<10	38	<10	32
B287170		<10	<10	1	<10	5
B287171		<10	<10	37	40	36
B287172		<10	<10	186	40	85
B287173		<10	<10	203	10	87
B287174		<10	<10	216	30	107
B287175		<10	<10	198	10	111
B287176		<10	<10	200	10	113
B287177		<10	<10	218	40	140



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**CERTIFICATE OF ANALYSIS TM20301694**

Sample Description	Method Analyte Units LOD	WEI-21	Au-AA23	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61
		Recvd Wt. kg	Au ppm	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm
		0.02	0.005	0.5	0.01	5	10	0.5	2	0.01	0.5	1	1	1	0.01	10
B287178		2.27	0.031	0.7	7.16	<5	110	0.7	2	6.26	<0.5	34	95	61	7.24	20
B287179		3.38	0.054	0.6	7.52	<5	270	1.0	3	5.63	<0.5	32	88	55	5.72	20
B287180		0.06	1.210	0.6	7.05	13	90	<0.5	4	7.58	<0.5	44	171	162	7.64	20
B287181		1.92	0.101	0.6	8.21	<5	450	0.9	<2	4.61	<0.5	36	133	73	7.69	30
B287182		2.02	0.071	<0.5	7.36	<5	1060	1.7	<2	1.52	<0.5	5	10	4	1.35	20
B287183		2.24	0.148	<0.5	7.27	<5	1020	1.7	<2	1.37	<0.5	4	10	4	1.35	20
B287184		2.97	0.261	<0.5	7.34	<5	1130	1.5	2	1.55	<0.5	6	10	4	1.46	20
B287185		2.09	0.029	<0.5	7.49	<5	1020	1.5	<2	1.65	<0.5	6	9	2	1.49	20
B287186		1.82	0.067	<0.5	7.17	<5	1180	1.3	<2	1.42	<0.5	5	9	1	1.45	20
B287187		1.60	0.062	<0.5	7.62	<5	1030	1.5	3	1.52	<0.5	7	10	3	1.66	20
B287188		1.96	0.076	<0.5	7.70	<5	1020	1.7	2	1.12	<0.5	7	10	3	1.82	20
B287189		2.34	0.456	1.0	7.52	<5	1070	1.5	<2	1.43	<0.5	7	11	2	1.77	20
B287190		1.34	<0.005	<0.5	0.07	<5	20	<0.5	3	34.9	<0.5	2	1	1	0.11	<10
B287191		2.11	0.081	<0.5	7.62	<5	1140	1.6	2	1.70	<0.5	9	11	3	1.72	20
B287192		1.61	0.082	<0.5	7.75	<5	1020	1.9	2	1.52	<0.5	6	10	2	1.65	20
B287193		2.86	0.110	0.8	7.80	<5	910	2.1	4	1.55	<0.5	7	10	2	1.61	20
B287194		2.83	0.047	<0.5	7.96	5	1290	1.9	2	1.51	<0.5	6	10	2	1.71	20
B287195		2.99	0.073	<0.5	7.28	<5	1180	1.5	<2	1.08	<0.5	5	10	4	1.42	20
B287196		3.22	0.021	<0.5	7.68	<5	1360	1.7	<2	1.57	<0.5	6	11	6	1.56	20
B287197		2.13	0.056	0.8	7.49	<5	1260	1.7	2	1.20	<0.5	5	10	13	1.55	20
B287198		1.58	0.088	1.2	7.86	<5	1040	1.8	<2	1.24	<0.5	7	9	5	1.64	20
B287199		1.91	0.079	0.9	7.78	<5	1300	1.8	<2	1.46	<0.5	6	11	7	1.66	20
B287200		0.06	8.82	1.4	6.33	31	210	<0.5	2	5.71	<0.5	41	267	144	7.17	20
B287201		1.92	0.241	0.9	7.63	<5	1410	1.6	2	1.79	<0.5	5	14	3	1.65	20
B287202		2.12	0.076	<0.5	7.58	<5	1260	1.7	3	1.53	<0.5	5	11	4	1.40	20
B287203		2.07	0.053	0.7	7.70	<5	1280	1.7	2	1.43	<0.5	5	11	3	1.46	20
B287204		1.98	0.041	0.8	7.56	<5	1160	1.6	5	1.19	<0.5	6	10	6	1.57	20
B287205		2.12	0.079	<0.5	7.90	<5	1250	1.4	<2	1.65	<0.5	4	11	10	1.53	20
B287206		1.76	0.186	0.7	8.10	<5	670	1.3	<2	1.11	<0.5	4	7	4	1.44	20
B287207		2.07	0.043	<0.5	7.06	<5	1220	1.3	<2	1.44	<0.5	3	11	12	1.36	20
B287208		2.95	0.019	<0.5	7.18	<5	1340	1.5	<2	1.62	<0.5	5	29	6	1.61	20
B287209		2.78	0.043	<0.5	7.55	<5	1490	1.4	<2	1.54	<0.5	4	10	2	1.45	20
B287210		1.50	<0.005	<0.5	0.14	<5	20	<0.5	<2	32.7	<0.5	<1	1	1	0.11	<10
B287211		1.95	0.006	<0.5	7.28	<5	1440	1.4	<2	1.77	<0.5	5	16	2	1.50	20
B287212		2.76	0.045	<0.5	7.13	<5	1370	1.4	2	1.60	<0.5	4	10	4	1.40	20
B287213		2.93	0.072	<0.5	7.46	<5	1350	1.5	<2	1.71	<0.5	5	27	4	1.79	20
B287214		2.00	0.029	<0.5	7.59	<5	1380	1.4	<2	1.57	<0.5	5	12	2	1.58	20
B287215		2.15	0.043	<0.5	7.49	<5	1220	1.3	<2	1.54	<0.5	4	13	2	1.61	20
B287216		2.83	0.018	<0.5	7.60	<5	1350	1.4	<2	1.55	<0.5	3	9	2	1.56	20
B287217		2.96	0.028	<0.5	7.50	<5	1310	1.4	<2	1.62	<0.5	5	10	5	1.53	20



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Sample Description	Method Analyte Units LOD	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	
		K % 0.01	La ppm 10	Mg % 0.01	Mn ppm 5	Mo ppm 1	Na % 0.01	Ni ppm 1	P ppm 10	Pb ppm 2	S % 0.01	Sb ppm 5	Sc ppm 1	Sr ppm 1	Th ppm 20	Ti % 0.01
B287178		1.03	<10	1.73	1685	6	1.96	42	770	2	0.36	<5	21	426	<20	0.90
B287179		1.27	10	1.45	1480	8	2.84	38	790	6	0.31	<5	18	533	<20	0.84
B287180		0.23	<10	4.36	1295	<1	1.59	115	380	6	0.21	<5	39	186	<20	0.56
B287181		3.33	10	2.93	1555	5	2.25	46	1150	5	0.23	<5	24	512	<20	1.17
B287182		2.21	20	0.44	209	<1	4.27	6	650	8	0.53	<5	2	1010	<20	0.14
B287183		2.44	20	0.40	184	1	4.14	4	650	5	0.72	<5	2	872	<20	0.13
B287184		2.09	30	0.47	205	11	4.28	4	730	10	0.75	<5	2	961	<20	0.15
B287185		1.86	20	0.49	222	13	4.66	5	790	4	0.67	<5	2	984	<20	0.15
B287186		2.13	20	0.49	186	<1	4.32	5	770	7	0.64	<5	2	941	<20	0.14
B287187		1.99	30	0.49	200	1	4.78	5	780	5	1.04	<5	2	879	<20	0.14
B287188		2.14	20	0.48	168	1	4.96	5	790	7	1.47	<5	2	728	<20	0.14
B287189		2.17	30	0.47	193	2	4.58	6	770	7	1.26	<5	2	846	<20	0.14
B287190		0.01	<10	1.73	120	<1	0.04	1	70	<2	0.01	<5	<1	86	<20	<0.01
B287191		2.00	30	0.55	224	9	4.65	7	860	5	0.89	<5	3	952	<20	0.16
B287192		1.99	30	0.50	213	3	4.91	7	820	10	1.07	<5	3	895	<20	0.14
B287193		1.74	30	0.51	231	3	5.33	6	840	3	0.88	<5	3	784	<20	0.14
B287194		2.54	30	0.56	218	<1	4.88	6	900	8	0.65	<5	3	942	<20	0.16
B287195		2.49	30	0.39	158	1	4.35	6	680	6	0.99	<5	2	653	<20	0.11
B287196		2.58	30	0.50	212	2	4.54	8	830	10	0.52	<5	3	924	<20	0.15
B287197		2.43	30	0.42	185	5	4.58	5	840	27	1.22	<5	3	638	<20	0.13
B287198		1.67	30	0.35	173	13	5.54	7	870	33	1.57	<5	3	550	<20	0.12
B287199		2.23	30	0.46	204	<1	4.74	6	870	22	1.33	<5	3	646	<20	0.13
B287200		0.47	<10	4.29	1165	3	1.90	136	410	16	0.48	<5	33	112	<20	0.52
B287201		2.27	20	0.54	243	<1	4.63	6	830	9	0.88	<5	3	822	<20	0.14
B287202		2.13	20	0.37	202	18	4.80	7	720	11	0.90	<5	2	819	<20	0.12
B287203		1.93	20	0.37	190	2	5.01	5	740	18	1.23	<5	2	778	<20	0.12
B287204		1.62	30	0.39	176	36	5.24	5	750	19	1.35	<5	2	702	<20	0.11
B287205		1.60	20	0.42	234	5	5.33	5	800	9	1.10	<5	2	836	<20	0.12
B287206		0.78	30	0.20	180	1	7.05	8	890	15	1.50	<5	2	595	<20	0.09
B287207		2.22	20	0.45	206	4	4.19	5	680	12	0.72	<5	2	842	<20	0.12
B287208		2.33	30	0.70	256	4	4.27	15	790	15	0.15	<5	3	1025	<20	0.16
B287209		2.73	20	0.50	214	1	4.42	6	750	9	0.23	<5	2	1145	<20	0.15
B287210		0.04	<10	2.10	113	<1	0.07	1	60	<2	<0.01	<5	<1	82	<20	0.01
B287211		2.51	20	0.57	215	<1	4.16	9	760	11	0.02	<5	2	1265	<20	0.16
B287212		2.60	20	0.49	212	<1	4.06	5	720	10	0.09	<5	2	1055	<20	0.15
B287213		2.71	20	0.77	238	<1	4.10	14	850	9	0.31	<5	4	1145	<20	0.18
B287214		2.85	30	0.56	184	<1	4.19	8	790	8	0.20	<5	3	1225	<20	0.17
B287215		2.75	30	0.52	192	<1	4.28	6	740	9	0.74	<5	2	1060	<20	0.14
B287216		3.02	30	0.53	195	<1	4.11	6	780	10	0.25	<5	2	1125	<20	0.16
B287217		2.64	20	0.53	206	<1	4.23	5	760	13	0.41	<5	2	1115	<20	0.15



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CERTIFICATE OF ANALYSIS TM20301694

Sample Description	Method Analyte Units LOD	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61
		Tl	U	V	W	Zn
		ppm	ppm	ppm	ppm	ppm
		10	10	1	10	2
B287178		<10	<10	183	40	95
B287179		<10	<10	160	20	81
B287180		<10	<10	269	<10	83
B287181		<10	<10	221	10	139
B287182		<10	<10	34	<10	23
B287183		<10	<10	30	<10	20
B287184		<10	<10	37	10	33
B287185		<10	<10	39	<10	23
B287186		<10	<10	39	<10	21
B287187		<10	<10	38	10	19
B287188		<10	<10	38	10	22
B287189		<10	<10	36	<10	20
B287190		<10	<10	2	<10	3
B287191		<10	<10	39	10	26
B287192		<10	<10	39	10	23
B287193		<10	<10	39	10	31
B287194		<10	<10	42	<10	40
B287195		<10	<10	32	10	22
B287196		<10	<10	38	<10	34
B287197		<10	<10	38	10	38
B287198		<10	<10	37	10	36
B287199		<10	<10	43	10	40
B287200		<10	<10	247	<10	89
B287201		<10	<10	35	10	31
B287202		<10	<10	33	10	22
B287203		<10	<10	35	10	27
B287204		<10	<10	33	10	33
B287205		<10	<10	28	<10	32
B287206		<10	<10	17	<10	19
B287207		<10	<10	33	<10	29
B287208		<10	<10	40	<10	45
B287209		<10	<10	34	<10	25
B287210		<10	<10	1	<10	8
B287211		<10	<10	32	<10	35
B287212		<10	<10	32	<10	29
B287213		<10	<10	44	<10	49
B287214		<10	<10	35	<10	43
B287215		<10	<10	35	10	31
B287216		<10	<10	37	<10	39
B287217		<10	<10	34	<10	41



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**CERTIFICATE OF ANALYSIS TM20301694**

Sample Description	Method Analyte Units LOD	WEI-21	Au-AA23	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61
		Recvd Wt. kg	Au ppm	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm
		0.02	0.005	0.5	0.01	5	10	0.5	2	0.01	0.5	1	1	1	0.01	10
B287218		2.42	0.127	<0.5	7.14	<5	1320	1.3	<2	1.36	<0.5	4	9	9	1.48	20
B287219		2.44	0.041	<0.5	7.46	<5	1320	1.4	<2	1.68	<0.5	3	10	3	1.56	20
B287220		0.05	1.205	<0.5	7.26	10	90	<0.5	<2	7.91	<0.5	45	167	174	8.09	20
B287221		1.99	0.036	<0.5	7.49	<5	1290	1.3	<2	1.64	<0.5	5	9	7	1.57	20
B287222		2.05	0.045	<0.5	7.63	<5	1420	1.4	2	1.63	<0.5	4	10	2	1.51	20
B287223		3.04	0.031	<0.5	7.25	<5	1280	1.4	2	1.76	<0.5	4	11	3	1.60	20
B287224		2.94	<0.005	<0.5	7.25	<5	1270	1.4	<2	1.52	<0.5	5	11	13	1.60	20
B287225		3.10	0.029	<0.5	7.40	<5	1330	1.5	<2	1.61	<0.5	4	10	6	1.58	20
B287226		1.28	0.048	<0.5	7.50	<5	1340	1.6	<2	1.59	<0.5	5	9	3	1.59	20
B287227		1.57	0.024	<0.5	7.24	<5	1300	1.6	<2	1.54	<0.5	4	9	3	1.55	20
B287228		1.61	0.008	<0.5	7.89	<5	1440	1.8	2	1.61	<0.5	4	10	6	1.64	20
B287229		1.93	0.038	<0.5	7.29	<5	1200	1.3	2	1.47	<0.5	4	11	2	1.50	20
B287230		1.29	<0.005	<0.5	0.07	<5	20	<0.5	2	35.1	<0.5	<1	1	1	0.10	<10
B287231		3.09	0.040	<0.5	7.13	<5	1290	1.2	3	1.44	<0.5	3	10	8	1.43	20
B287232		3.39	0.038	<0.5	6.78	<5	1200	1.0	<2	1.27	<0.5	4	10	8	1.35	20
B287233		2.02	0.073	<0.5	7.07	<5	1210	1.0	<2	1.48	<0.5	4	9	7	1.44	20
B287234		1.81	0.062	<0.5	6.34	<5	1060	1.0	<2	1.24	<0.5	3	15	7	1.37	20
B287235		1.93	0.265	0.7	6.44	<5	1200	1.1	3	1.29	<0.5	3	11	5	1.38	20
B287236		2.00	0.064	<0.5	6.28	<5	1120	1.0	<2	1.29	<0.5	3	11	4	1.19	20
B287237		1.18	0.029	<0.5	6.98	<5	1270	1.3	<2	1.29	<0.5	4	12	11	1.50	20
B287238		1.23	0.016	<0.5	6.54	<5	1190	1.2	<2	1.13	<0.5	4	11	6	1.47	20
B287239		1.68	0.025	<0.5	6.12	<5	1020	1.0	3	0.96	<0.5	3	11	6	1.33	20
B287240		0.06	8.70	1.0	6.23	31	210	<0.5	<2	5.74	<0.5	39	259	147	7.22	20
B287241		1.99	0.005	<0.5	6.32	<5	1120	1.1	<2	1.27	<0.5	3	12	3	1.34	20
B287242		2.30	<0.005	<0.5	6.44	<5	1220	1.1	<2	1.17	<0.5	3	13	4	1.40	20



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**CERTIFICATE OF ANALYSIS TM20301694**

Sample Description	Method Analyte Units LOD	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	
		K %	La ppm	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	S %	Sb ppm	Sc ppm	Sr ppm	Th ppm	Ti %
		0.01	10	0.01	5	1	0.01	1	10	2	0.01	5	1	1	20	0.01
B287218		2.55	30	0.46	180	4	4.21	5	730	14	1.03	<5	2	860	<20	0.11
B287219		2.88	20	0.54	212	<1	4.13	5	760	14	0.48	<5	3	1110	<20	0.15
B287220		0.24	10	4.59	1330	1	1.68	121	380	6	0.23	<5	40	194	<20	0.59
B287221		2.61	30	0.54	198	<1	4.10	6	740	10	0.42	<5	3	1185	<20	0.15
B287222		3.00	30	0.57	187	<1	4.29	6	790	11	0.60	<5	3	1195	<20	0.16
B287223		2.62	20	0.57	223	<1	4.13	7	760	9	0.41	<5	3	1155	<20	0.16
B287224		2.65	30	0.57	209	1	4.17	6	790	14	0.51	<5	3	1125	<20	0.16
B287225		2.66	30	0.57	210	1	4.25	7	790	16	0.34	<5	3	1180	<20	0.17
B287226		2.72	30	0.54	203	<1	4.24	7	770	14	0.37	<5	2	1200	<20	0.17
B287227		2.44	20	0.53	179	<1	4.11	5	760	9	0.40	<5	2	1170	<20	0.16
B287228		2.75	30	0.58	205	<1	4.45	6	820	12	0.25	<5	3	1310	<20	0.19
B287229		2.80	20	0.50	186	<1	4.06	5	780	11	0.19	<5	2	1085	<20	0.15
B287230		0.02	<10	2.10	115	<1	0.03	2	90	<2	0.01	<5	<1	91	<20	<0.01
B287231		2.73	30	0.44	187	<1	3.85	6	720	11	0.72	<5	2	856	<20	0.12
B287232		2.92	20	0.42	164	<1	3.52	4	670	12	0.54	<5	2	836	<20	0.11
B287233		2.67	20	0.46	184	<1	3.76	5	690	14	0.56	5	2	922	<20	0.13
B287234		2.50	20	0.42	169	<1	3.41	4	660	10	0.84	<5	2	664	<20	0.11
B287235		2.64	20	0.42	146	<1	3.18	4	670	22	0.89	<5	2	801	<20	0.12
B287236		2.71	20	0.38	140	<1	3.17	4	650	8	0.56	<5	2	801	<20	0.11
B287237		2.84	30	0.45	172	<1	3.72	6	760	11	0.85	<5	2	816	<20	0.12
B287238		2.74	20	0.38	148	<1	3.64	5	690	13	1.14	<5	2	727	<20	0.10
B287239		2.45	20	0.34	139	1	3.40	5	650	22	1.05	<5	2	591	<20	0.09
B287240		0.46	10	4.30	1155	3	1.90	135	390	18	0.49	<5	33	109	<20	0.54
B287241		2.79	20	0.43	164	<1	3.12	5	660	11	0.19	<5	2	862	<20	0.12
B287242		2.96	20	0.44	166	<1	3.16	5	700	10	0.14	<5	2	873	<20	0.13

\*\*\*\*\* See Appendix Page for comments regarding this certificate \*\*\*\*\*



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Sample Description	Method Analyte Units LOD	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61
		Tl	U	V	W	Zn
		ppm	ppm	ppm	ppm	ppm
		10	10	1	10	2
B287218		<10	<10	32	<10	26
B287219		<10	<10	37	<10	38
B287220		<10	<10	277	<10	87
B287221		<10	<10	35	<10	38
B287222		<10	<10	37	20	31
B287223		<10	<10	37	30	39
B287224		<10	<10	37	<10	46
B287225		<10	<10	36	<10	48
B287226		<10	<10	34	<10	43
B287227		<10	<10	34	<10	38
B287228		10	<10	36	<10	52
B287229		<10	<10	34	<10	42
B287230		<10	<10	1	<10	4
B287231		<10	<10	31	<10	33
B287232		<10	<10	31	<10	37
B287233		<10	<10	33	<10	36
B287234		<10	<10	30	10	32
B287235		<10	<10	32	<10	34
B287236		<10	<10	27	<10	23
B287237		<10	<10	34	<10	35
B287238		<10	<10	33	<10	23
B287239		<10	<10	29	20	29
B287240		<10	<10	240	<10	90
B287241		<10	<10	31	<10	45
B287242		<10	<10	34	<10	43





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CERTIFICATE OF ANALYSIS TM20301694

CERTIFICATE COMMENTS

LABORATORY ADDRESSES

Applies to Method: Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.  
Au-AA23 ME-ICP61

Applies to Method: Processed at ALS Timmins located at Unit 10 - 2090 Riverside Drive, Timmins, ON, Canada.  
CRU-31 CRU-QC LOG-21 LOG-23  
PUL-31 PUL-QC SPL-21 WEI-21



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**CERTIFICATE TM20302764**

This report is for 113 samples of Drill Core submitted to our lab in Timmins, ON, Canada on 21-DEC-2020.  
 The following have access to data associated with this certificate:

IAN CAMPBELL	ADAM FINDLEY	ALAN SEXTON
--------------	--------------	-------------

SAMPLE PREPARATION	
ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-21	Sample logging - ClientBarCode
LOG-23	Pulp Login - Rcvd with Barcode
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-31	Pulverize up to 250g 85% <75 um

ANALYTICAL PROCEDURES		
ALS CODE	DESCRIPTION	INSTRUMENT
ME-ICP61	33 element four acid ICP-AES	ICP-AES
Au-AA23	Au 30g FA-AA finish	AAS

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

\*\*\*\*\* See Appendix Page for comments regarding this certificate \*\*\*\*\*

**Signature:**   
 Saa Traxler, General Manager, North Vancouver



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Sample Description	Method	WEI-21	Au-AA23	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61
	Analyte	Recvd Wt.	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga
Units		kg	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm
LOD																
B287243		2.89	0.022	<0.5	6.87	<5	1150	1.1	<2	1.36	<0.5	4	17	6	1.30	20
B287244		2.81	0.027	<0.5	7.99	<5	1430	1.3	<2	1.75	<0.5	4	22	12	1.45	20
B287245		2.92	0.440	0.5	7.29	<5	1180	1.2	<2	1.65	<0.5	5	20	8	1.52	20
B287246		2.85	0.090	<0.5	6.91	<5	1150	1.2	<2	1.21	<0.5	4	15	14	1.42	20
B287247		2.92	0.034	<0.5	6.83	<5	1180	1.1	<2	1.27	<0.5	4	17	12	1.34	20
B287248		1.89	0.019	<0.5	6.17	<5	1080	0.9	<2	1.16	<0.5	3	14	6	1.23	20
B287249		1.28	0.035	<0.5	6.29	<5	1120	1.0	<2	1.21	<0.5	2	15	7	1.26	20
B287250		1.38	<0.005	<0.5	0.09	<5	20	<0.5	<2	34.0	<0.5	<1	4	<1	0.11	<10
B287251		1.94	0.042	<0.5	6.51	<5	1180	1.0	<2	1.03	<0.5	3	15	10	1.32	20
B287252		1.85	0.021	<0.5	5.40	<5	940	0.8	<2	0.92	<0.5	2	17	5	1.07	20
B287253		2.64	0.123	<0.5	5.84	<5	980	0.9	<2	1.21	<0.5	4	21	4	1.32	20
B287254		2.76	0.011	<0.5	6.59	<5	1060	1.1	<2	1.34	<0.5	3	24	4	1.36	20
B287255		1.88	0.010	<0.5	6.76	<5	1190	1.2	<2	1.49	<0.5	5	19	6	1.55	20
B287256		1.95	0.018	<0.5	6.90	<5	1220	1.1	<2	1.44	<0.5	4	23	10	1.54	20
B287257		2.34	0.199	<0.5	6.44	<5	1090	1.1	<2	0.99	<0.5	3	13	15	1.31	20
B287258		2.60	0.082	<0.5	6.83	<5	1190	1.1	<2	1.54	<0.5	4	15	5	1.53	20
B287259		3.13	0.057	<0.5	6.96	<5	1200	1.2	<2	1.46	<0.5	4	16	3	1.41	20
B287260		0.06	1.185	<0.5	7.34	11	90	<0.5	7	7.91	0.9	45	187	165	7.77	20
B287261		3.07	0.069	<0.5	6.18	<5	1080	1.1	<2	1.38	<0.5	4	18	3	1.24	20
B287262		2.85	0.126	<0.5	7.00	<5	1330	1.1	<2	1.74	<0.5	3	13	5	1.29	20
B287263		3.07	0.534	0.9	6.63	<5	1140	1.0	<2	1.40	<0.5	2	18	14	1.26	20
B287264		2.14	0.080	<0.5	6.89	<5	1200	1.2	<2	1.34	<0.5	3	16	7	1.28	20
B287265		1.49	0.120	<0.5	7.48	<5	1320	1.4	2	1.59	<0.5	4	19	4	1.45	20
B287266		3.00	0.106	<0.5	7.20	<5	1220	1.3	<2	1.57	<0.5	4	14	4	1.42	20
B287267		2.96	0.053	<0.5	7.28	<5	1210	1.3	<2	1.56	<0.5	4	13	2	1.41	20
B287268		1.98	0.083	<0.5	7.31	<5	1420	1.3	<2	1.66	<0.5	4	14	2	1.48	20
B287269		2.31	0.132	<0.5	7.11	<5	1260	1.4	<2	1.56	<0.5	4	16	2	1.40	20
B287270		1.30	<0.005	<0.5	0.07	<5	20	<0.5	<2	31.8	<0.5	<1	1	1	0.12	<10
B287271		1.11	0.514	0.5	5.79	<5	790	1.0	2	2.04	<0.5	3	10	1	1.10	20
B287272		1.96	0.279	<0.5	6.95	<5	1370	1.3	2	1.52	<0.5	4	13	2	1.38	20
B287273		2.40	0.244	<0.5	7.51	<5	1350	1.4	<2	1.59	<0.5	3	14	4	1.40	20
B287274		3.12	0.124	<0.5	7.52	<5	1340	1.4	<2	1.63	<0.5	4	14	3	1.47	20
B287275		2.66	0.076	0.5	7.77	<5	1420	1.5	<2	1.66	<0.5	4	14	7	1.44	20
B287276		2.86	0.092	0.5	7.63	<5	1290	1.4	<2	1.59	<0.5	5	12	9	1.46	20
B287277		3.07	0.033	<0.5	7.43	<5	1340	1.4	<2	1.59	<0.5	5	27	2	1.44	20
B287278		2.93	0.202	<0.5	7.57	<5	1310	1.4	<2	1.64	<0.5	5	14	2	1.53	20
B287279		2.72	0.057	<0.5	7.28	<5	1260	1.3	<2	1.49	<0.5	4	14	1	1.40	20
B287280		0.06	8.65	1.6	6.11	31	210	<0.5	<2	5.46	0.5	38	261	138	6.93	20
B287281		1.80	0.037	<0.5	7.57	<5	1210	1.6	<2	1.11	<0.5	5	18	7	1.64	20
B287282		2.06	0.112	0.5	7.54	<5	1330	1.4	<2	1.52	<0.5	4	12	9	1.45	20



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Sample Description	Method Analyte Units LOD	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	
		K %	La ppm	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	S %	Sb ppm	Sc ppm	Sr ppm	Th ppm	Ti %
B287243		2.53	20	0.46	169	1	3.29	6	650	8	0.20	<5	2	964	<20	0.13
B287244		2.32	20	0.56	203	1	4.23	8	700	13	0.18	<5	3	1265	<20	0.16
B287245		2.17	20	0.52	189	<1	3.79	7	690	7	0.65	<5	2	950	<20	0.14
B287246		2.33	20	0.56	168	<1	3.42	5	730	9	0.55	<5	2	786	<20	0.14
B287247		2.39	20	0.52	167	1	3.32	7	700	12	0.43	<5	2	834	<20	0.14
B287248		2.63	20	0.44	149	<1	2.84	4	640	8	0.41	<5	2	687	<20	0.13
B287249		2.35	20	0.46	165	1	2.99	4	670	14	0.36	<5	2	840	<20	0.13
B287250		0.02	<10	1.37	117	<1	0.03	<1	70	<2	<0.01	<5	<1	88	<20	0.01
B287251		2.66	20	0.46	144	1	3.12	4	670	12	0.71	<5	2	680	<20	0.13
B287252		2.29	20	0.40	132	<1	2.40	4	550	9	0.23	<5	2	572	<20	0.12
B287253		2.33	20	0.41	147	<1	2.68	4	620	5	0.63	<5	2	611	<20	0.13
B287254		2.24	20	0.55	175	1	3.39	8	690	10	0.29	<5	3	787	<20	0.15
B287255		2.38	30	0.60	204	<1	3.27	7	820	10	0.24	<5	3	996	<20	0.17
B287256		2.56	30	0.57	199	1	3.33	7	800	13	0.45	<5	3	812	<20	0.18
B287257		2.21	20	0.48	159	3	3.46	6	760	14	0.70	<5	2	803	<20	0.13
B287258		2.44	20	0.53	190	1	3.31	5	780	8	0.46	<5	3	966	<20	0.16
B287259		2.56	20	0.49	179	1	3.37	6	720	14	0.39	<5	2	1065	<20	0.15
B287260		0.23	10	4.58	1345	<1	1.62	114	400	6	0.22	<5	42	195	<20	0.58
B287261		2.15	20	0.41	178	<1	3.09	6	590	7	0.49	<5	2	831	<20	0.13
B287262		2.51	20	0.46	186	<1	3.32	4	660	10	0.31	<5	2	931	<20	0.15
B287263		2.44	20	0.43	161	<1	3.15	6	620	10	0.43	<5	2	786	<20	0.14
B287264		2.31	20	0.43	168	1	3.34	4	620	12	0.33	<5	2	1020	<20	0.14
B287265		2.53	20	0.52	218	<1	3.67	6	730	9	0.57	<5	2	1080	<20	0.16
B287266		2.53	20	0.48	177	2	3.82	7	690	9	0.54	<5	2	1110	<20	0.14
B287267		2.68	20	0.46	184	1	3.78	7	680	9	0.63	<5	2	1050	<20	0.15
B287268		2.78	20	0.49	178	2	3.88	7	720	9	0.87	<5	2	1205	<20	0.15
B287269		2.75	20	0.45	206	1	3.87	5	660	9	0.81	<5	2	1065	<20	0.14
B287270		0.02	<10	2.40	118	<1	0.03	<1	70	2	<0.01	<5	<1	78	<20	<0.01
B287271		1.64	20	0.35	288	13	3.66	4	540	7	0.85	<5	2	824	<20	0.11
B287272		2.72	20	0.45	156	<1	3.62	5	670	6	0.81	<5	2	1145	<20	0.14
B287273		2.68	20	0.49	171	<1	3.80	6	710	8	0.50	<5	2	1240	<20	0.16
B287274		2.59	20	0.51	173	2	3.90	7	730	11	0.43	<5	2	1200	<20	0.16
B287275		2.67	20	0.52	182	<1	3.97	5	740	12	0.22	<5	2	1280	<20	0.18
B287276		2.50	20	0.49	176	1	4.05	6	730	10	0.28	<5	2	1175	<20	0.17
B287277		2.48	20	0.48	171	1	3.90	5	720	11	0.16	<5	2	1260	<20	0.17
B287278		2.55	20	0.49	188	17	4.09	8	730	10	0.38	<5	2	1180	<20	0.16
B287279		2.66	20	0.47	165	1	3.78	6	680	8	0.19	<5	2	1115	<20	0.15
B287280		0.45	<10	4.12	1105	3	1.84	128	380	16	0.46	7	32	102	<20	0.51
B287281		2.52	30	0.52	156	<1	4.45	8	750	14	0.96	<5	3	881	<20	0.14
B287282		2.62	20	0.50	170	5	4.00	5	720	10	0.37	<5	2	1145	<20	0.15



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Sample Description	Method Analyte Units LOD	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61
		Tl	U	V	W	Zn
		ppm	ppm	ppm	ppm	ppm
		10	10	1	10	2
B287243		<10	<10	31	<10	43
B287244		<10	<10	34	<10	50
B287245		<10	<10	30	<10	35
B287246		<10	<10	34	<10	34
B287247		<10	<10	33	<10	38
B287248		<10	<10	30	<10	36
B287249		<10	<10	30	<10	40
B287250		10	<10	1	<10	3
B287251		<10	<10	31	<10	32
B287252		<10	<10	25	<10	30
B287253		<10	<10	31	<10	22
B287254		<10	<10	33	<10	34
B287255		<10	<10	37	<10	44
B287256		<10	<10	36	<10	43
B287257		<10	<10	34	<10	33
B287258		<10	<10	33	<10	39
B287259		<10	<10	32	<10	34
B287260		10	<10	282	<10	87
B287261		<10	<10	28	40	23
B287262		<10	<10	31	<10	34
B287263		<10	<10	28	<10	31
B287264		<10	<10	28	10	34
B287265		<10	<10	34	20	21
B287266		<10	<10	31	10	26
B287267		<10	<10	31	10	20
B287268		<10	<10	33	10	18
B287269		<10	<10	32	20	15
B287270		<10	<10	<1	<10	5
B287271		<10	<10	14	70	6
B287272		<10	<10	30	10	15
B287273		<10	<10	33	10	23
B287274		<10	<10	33	10	32
B287275		<10	<10	33	10	41
B287276		<10	<10	33	50	41
B287277		<10	<10	31	10	38
B287278		<10	<10	32	10	38
B287279		<10	<10	31	10	37
B287280		<10	<10	234	<10	85
B287281		<10	<10	37	10	32
B287282		<10	<10	31	10	37



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Sample Description	Method Analyte Units LOD	WEI-21	Au-AA23	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61
		Recvd Wt. kg	Au ppm	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm
		0.02	0.005	0.5	0.01	5	10	0.5	2	0.01	0.5	1	1	1	0.01	10
B287283		2.19	0.017	<0.5	7.41	<5	1330	1.5	<2	1.53	<0.5	4	14	4	1.44	20
B287284		1.57	0.055	<0.5	7.43	<5	1300	1.5	<2	1.56	<0.5	4	13	9	1.46	20
B287285		1.54	0.044	<0.5	6.70	<5	470	1.3	<2	1.36	<0.5	2	15	5	1.10	20
B287286		2.04	0.051	<0.5	7.69	<5	1320	1.5	<2	1.59	<0.5	3	17	4	1.47	20
B287287		2.53	0.135	<0.5	7.70	<5	1420	1.5	<2	1.60	<0.5	5	12	11	1.55	20
B287288		2.87	0.008	<0.5	8.09	<5	1420	1.5	<2	1.76	<0.5	4	17	13	1.59	20
B287289		3.14	0.007	<0.5	7.77	<5	1450	1.5	<2	1.58	<0.5	4	15	10	1.50	20
B287290		1.50	<0.005	<0.5	0.36	<5	50	<0.5	2	31.3	<0.5	<1	1	1	0.12	10
B287291		1.37	0.052	4.4	6.84	<5	980	1.5	11	1.08	<0.5	3	9	17	1.32	20
B287292		2.03	0.033	1.3	7.73	<5	1430	1.6	2	1.27	<0.5	4	12	14	1.41	20
B287293		1.89	0.015	0.8	7.64	<5	1400	1.9	2	1.27	<0.5	4	11	9	1.32	20
B287294		1.78	0.036	0.6	7.26	<5	1390	1.6	<2	1.29	<0.5	4	21	20	1.34	20
B287295		2.08	0.081	1.2	7.31	<5	1180	1.5	2	1.18	<0.5	5	14	23	1.40	20
B287296		1.72	0.079	1.0	7.32	<5	980	1.5	<2	1.14	<0.5	6	43	12	1.66	20
B287297		2.12	0.327	1.9	7.67	<5	1380	1.5	2	1.37	<0.5	5	10	18	1.45	20
B287298		2.01	0.026	0.6	7.62	<5	1630	1.4	<2	1.32	<0.5	4	11	16	1.39	20
B287299		2.19	0.041	<0.5	7.31	<5	1380	1.4	<2	1.47	<0.5	4	12	5	1.37	20
B287300		0.06	8.73	1.6	6.00	30	200	<0.5	<2	5.44	0.6	38	266	135	6.84	20
B287301		1.82	0.027	<0.5	7.14	<5	1270	1.3	<2	1.33	<0.5	4	12	5	1.35	20
B287302		2.02	0.109	0.5	7.02	<5	1280	1.3	2	1.49	<0.5	5	14	8	1.39	20
B287303		2.00	0.082	0.5	6.78	<5	1280	1.1	2	1.38	<0.5	4	12	2	1.27	20
B287304		1.83	0.017	<0.5	4.80	<5	840	0.8	<2	1.00	<0.5	3	15	2	1.02	10
B287305		1.97	0.033	<0.5	5.64	<5	1030	0.9	<2	1.11	<0.5	3	12	1	1.20	20
B287306		1.89	0.054	<0.5	7.04	<5	1250	1.3	<2	1.50	<0.5	5	13	2	1.54	20
B287307		1.99	0.056	<0.5	7.35	<5	1390	1.3	<2	1.68	<0.5	4	11	6	1.42	20
B287308		1.54	0.087	<0.5	6.90	<5	1260	1.2	2	1.65	<0.5	7	12	3	2.08	20
B287309		2.02	0.260	0.7	7.97	<5	1320	1.7	4	2.82	<0.5	8	16	20	2.50	20
B287310		1.66	<0.005	<0.5	0.07	<5	30	<0.5	<2	31.6	<0.5	<1	1	<1	0.14	<10
B287311		2.37	0.361	0.9	7.52	<5	1260	1.6	2	2.78	<0.5	8	15	13	2.44	20
B287312		1.79	0.058	<0.5	7.96	<5	1250	1.6	2	2.79	<0.5	7	16	10	2.43	20
B287313		1.76	0.044	0.5	7.30	<5	1240	1.4	2	3.08	<0.5	7	14	10	2.38	20
B287314		1.99	0.068	0.5	7.83	<5	1240	1.6	<2	2.69	<0.5	7	14	8	2.42	20
B287315		2.58	0.135	<0.5	8.29	<5	1140	1.7	<2	3.01	<0.5	8	21	13	2.56	20
B287316		2.57	0.059	0.6	7.78	<5	180	0.7	<2	6.30	<0.5	33	103	56	6.88	20
B287317		3.35	0.031	0.6	7.94	<5	170	0.9	<2	6.16	<0.5	35	114	62	6.62	20
B287318		3.24	0.051	0.6	7.93	<5	120	0.9	<2	5.52	<0.5	33	122	43	6.19	20
B287319		3.58	0.016	0.5	8.00	<5	110	0.9	<2	6.55	<0.5	33	128	45	6.76	20
B287320		0.06	1.215	0.7	7.14	6	90	<0.5	<2	7.44	<0.5	43	168	163	7.79	20
B287321		2.18	0.017	0.5	7.95	<5	130	0.8	<2	6.43	<0.5	38	130	49	8.29	20
B287322		3.32	0.025	0.5	7.57	<5	170	0.8	<2	5.72	<0.5	30	116	88	7.54	20



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Sample Description	Method Analyte Units LOD	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	
		K %	La ppm	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	S %	Sb ppm	Sc ppm	Sr ppm	Th ppm	Ti %
B287283		2.59	20	0.49	175	<1	4.12	5	720	9	0.44	<5	2	1160	<20	0.15
B287284		2.64	20	0.52	201	<1	4.00	6	730	12	0.37	<5	2	1035	<20	0.15
B287285		1.13	20	0.36	195	1	4.85	4	650	10	0.80	<5	2	679	<20	0.12
B287286		2.61	20	0.49	193	<1	4.33	7	730	9	0.71	<5	2	1045	<20	0.15
B287287		2.57	20	0.51	192	39	4.24	6	750	11	0.59	<5	2	1165	<20	0.15
B287288		2.63	20	0.55	199	<1	4.33	8	800	17	0.29	<5	3	1280	<20	0.17
B287289		2.58	20	0.51	169	<1	4.09	5	750	15	0.29	<5	2	1265	<20	0.16
B287290		0.12	<10	1.48	105	<1	0.20	<1	70	2	<0.01	<5	<1	79	<20	<0.01
B287291		1.70	20	0.38	132	3	4.28	4	590	37	1.00	<5	2	731	<20	0.10
B287292		2.32	20	0.43	153	<1	4.59	5	660	26	0.90	<5	2	964	<20	0.11
B287293		2.31	20	0.45	148	1	4.68	5	650	22	0.91	<5	2	1000	<20	0.12
B287294		2.05	20	0.47	164	<1	4.30	7	640	15	0.85	<5	3	866	<20	0.12
B287295		2.01	20	0.38	148	8	4.53	5	640	23	1.08	<5	2	786	<20	0.10
B287296		1.88	30	0.40	150	1	4.68	7	710	22	1.37	<5	2	679	<20	0.11
B287297		2.30	20	0.41	163	<1	4.37	7	750	30	1.06	<5	2	921	<20	0.12
B287298		2.77	30	0.46	169	<1	4.15	5	760	22	0.83	<5	2	945	<20	0.13
B287299		2.77	20	0.46	178	<1	3.88	7	730	14	0.36	<5	2	1100	<20	0.14
B287300		0.44	<10	4.03	1095	3	1.81	127	380	16	0.45	5	32	100	<20	0.50
B287301		2.21	20	0.43	175	<1	4.31	5	730	10	0.76	<5	2	904	<20	0.13
B287302		2.35	20	0.40	184	33	4.24	3	720	12	0.86	<5	2	978	<20	0.12
B287303		2.54	20	0.42	159	<1	3.84	4	610	9	0.39	<5	2	1020	<20	0.12
B287304		2.02	20	0.30	124	<1	2.40	3	480	6	0.34	<5	1	608	<20	0.08
B287305		2.39	20	0.37	130	<1	2.87	2	550	5	0.46	<5	2	817	<20	0.11
B287306		2.47	20	0.48	179	8	3.96	4	720	8	0.91	<5	2	1045	<20	0.13
B287307		2.78	20	0.51	202	<1	3.96	4	780	10	0.62	<5	2	1070	<20	0.14
B287308		2.97	20	0.46	213	<1	3.66	7	700	13	1.80	<5	2	913	<20	0.12
B287309		2.71	20	0.90	449	1	3.77	7	1030	8	0.53	<5	5	1195	<20	0.22
B287310		0.02	<10	1.95	112	<1	0.04	5	70	<2	0.02	<5	<1	81	<20	<0.01
B287311		2.65	20	0.85	442	<1	3.66	6	1000	7	0.75	<5	5	1165	<20	0.21
B287312		2.32	30	0.94	458	<1	3.81	7	1030	6	0.52	<5	5	1110	<20	0.22
B287313		2.73	20	0.86	417	<1	3.66	5	1000	5	0.65	<5	5	865	<20	0.21
B287314		2.44	20	0.94	445	<1	3.64	4	1020	6	0.42	<5	5	1070	<20	0.23
B287315		1.59	30	0.94	483	<1	3.80	7	1080	8	0.14	<5	5	1300	<20	0.24
B287316		1.20	10	2.04	1515	6	2.41	36	780	2	0.22	<5	23	536	<20	1.05
B287317		1.52	10	2.09	1480	5	2.38	39	1000	2	0.22	<5	23	523	<20	1.09
B287318		1.22	10	2.10	1700	6	2.61	38	1270	2	0.24	<5	22	549	<20	1.11
B287319		0.77	10	1.65	2140	2	2.28	43	1260	<2	0.31	<5	23	405	<20	1.12
B287320		0.24	<10	4.35	1300	1	1.62	115	360	4	0.20	<5	39	183	<20	0.57
B287321		1.03	10	2.35	2730	2	2.39	44	1200	<2	0.29	5	23	387	<20	1.15
B287322		1.33	10	2.48	2420	9	2.33	42	1150	3	0.31	<5	21	503	<20	1.05

\*\*\*\*\* See Appendix Page for comments regarding this certificate \*\*\*\*\*



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CERTIFICATE OF ANALYSIS TM20302764

Sample Description	Method Analyte Units LOD	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61
		Tl	U	V	W	Zn
		ppm	ppm	ppm	ppm	ppm
		10	10	1	10	2
B287283		<10	<10	31	<10	38
B287284		<10	<10	34	10	41
B287285		<10	<10	20	420	14
B287286		<10	<10	33	70	26
B287287		<10	<10	33	10	41
B287288		<10	<10	34	<10	54
B287289		<10	<10	32	<10	45
B287290		<10	<10	<1	<10	3
B287291		<10	<10	27	<10	25
B287292		<10	<10	34	10	29
B287293		<10	<10	33	10	25
B287294		<10	<10	32	<10	30
B287295		<10	<10	30	100	27
B287296		<10	<10	29	10	26
B287297		<10	<10	32	10	61
B287298		<10	<10	33	10	35
B287299		<10	<10	30	20	36
B287300		<10	<10	234	<10	84
B287301		<10	<10	29	20	30
B287302		<10	<10	29	10	33
B287303		<10	<10	28	40	30
B287304		<10	<10	22	<10	22
B287305		<10	<10	26	<10	19
B287306		<10	<10	32	10	21
B287307		<10	<10	34	10	29
B287308		<10	<10	34	10	17
B287309		<10	<10	57	40	47
B287310		<10	<10	1	20	2
B287311		<10	<10	51	140	40
B287312		<10	<10	52	10	46
B287313		<10	<10	53	<10	41
B287314		<10	<10	53	10	52
B287315		<10	<10	54	<10	55
B287316		<10	<10	201	10	112
B287317		<10	<10	202	20	114
B287318		<10	<10	196	20	119
B287319		<10	<10	200	10	118
B287320		<10	<10	270	<10	85
B287321		<10	<10	206	10	135
B287322		10	<10	187	10	120





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**CERTIFICATE TM20295154**

This report is for 137 samples of Drill Core submitted to our lab in Timmins, ON, Canada on 14-DEC-2020.  
 The following have access to data associated with this certificate:

IAN CAMPBELL	ADAM FINDLEY	ALAN SEXTON
--------------	--------------	-------------

SAMPLE PREPARATION	
ALS CODE	DESCRIPTION
WEI-21	Received Sample Weight
LOG-21	Sample logging - ClientBarCode
LOG-23	Pulp Login - Rcvd with Barcode
CRU-QC	Crushing QC Test
PUL-QC	Pulverizing QC Test
CRU-31	Fine crushing - 70% <2mm
SPL-21	Split sample - riffle splitter
PUL-32	Pulverize 1000g to 85% < 75 um

ANALYTICAL PROCEDURES		
ALS CODE	DESCRIPTION	INSTRUMENT
Au-AA23	Au 30g FA-AA finish	AAS
Au-GRA21	Au 30g FA-GRAV finish	WST-SIM
ME-ICP61	33 element four acid ICP-AES	ICP-AES

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

\*\*\*\*\* See Appendix Page for comments regarding this certificate \*\*\*\*\*

Signature:   
 Saa Traxler, General Manager, North Vancouver



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**CERTIFICATE OF ANALYSIS TM20295154**

Sample Description	Method Analyte Units LOD	WEI-21	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61
		Recvd Wt. kg	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	K %
		0.02	0.5	0.01	5	10	0.5	2	0.01	0.5	1	1	1	0.01	10	0.01
B287001		2.09	<0.5	7.67	8	970	1.4	<2	1.25	<0.5	11	31	13	2.35	20	1.31
B287002		0.83	0.5	8.04	<5	740	0.8	<2	2.16	<0.5	34	119	140	7.55	20	3.31
B287003		1.80	<0.5	7.82	<5	1310	1.4	<2	0.92	<0.5	6	14	15	1.74	20	1.88
B287004		1.82	<0.5	8.04	<5	1400	1.5	<2	0.87	<0.5	6	14	9	2.48	20	2.48
B287005		1.69	<0.5	7.63	<5	1400	1.4	<2	0.61	<0.5	7	12	9	2.14	20	2.36
B287006		1.66	<0.5	7.66	<5	1380	1.4	<2	0.61	<0.5	8	13	9	1.94	20	2.67
B287007		1.55	<0.5	7.63	<5	1260	1.6	<2	0.62	<0.5	7	15	11	1.69	20	1.61
B287008		1.58	<0.5	7.57	<5	1380	1.2	<2	0.54	<0.5	6	12	66	1.63	20	2.17
B287009		2.39	<0.5	7.72	5	1260	1.3	<2	0.66	<0.5	6	16	38	1.88	20	1.81
B287010		1.10	<0.5	0.18	<5	30	<0.5	<2	31.6	<0.5	<1	4	<1	0.18	<10	0.04
B287011		1.54	<0.5	7.68	<5	1390	1.2	2	0.91	<0.5	6	12	14	1.83	20	1.67
B287012		1.03	<0.5	7.33	<5	1290	1.2	<2	2.29	<0.5	30	102	11	7.47	30	4.29
B287013		1.54	0.6	7.72	<5	1270	1.4	<2	1.56	<0.5	6	12	5	1.87	20	1.17
B287014		1.81	<0.5	7.48	5	1130	1.3	<2	2.65	<0.5	11	28	13	2.65	20	1.91
B287015		1.45	<0.5	7.68	<5	1440	1.4	2	1.42	<0.5	5	14	6	1.70	20	2.29
B287016		1.59	0.5	7.38	<5	1260	1.3	6	1.24	<0.5	5	14	9	1.68	20	1.70
B287017		2.43	<0.5	7.43	<5	1270	1.3	<2	1.35	<0.5	6	14	12	1.77	20	1.84
B287018		1.91	<0.5	7.40	<5	460	0.9	<2	6.91	<0.5	27	74	46	5.65	20	1.41
B287019		1.68	<0.5	7.30	<5	220	0.8	<2	5.78	<0.5	33	82	75	6.58	20	1.74
B287020		0.06	<0.5	7.05	10	90	<0.5	<2	7.57	0.5	44	169	162	7.62	20	0.23
B287021		0.96	<0.5	8.19	<5	480	1.3	<2	1.41	<0.5	8	11	6	2.28	20	0.50
B287022		1.95	<0.5	7.35	<5	470	0.8	<2	4.68	<0.5	29	68	46	6.43	20	2.23
B287023		1.99	<0.5	6.86	<5	300	0.8	<2	2.97	<0.5	15	21	23	4.01	20	1.85
B287024		2.48	<0.5	7.32	<5	1120	1.5	<2	1.77	<0.5	6	11	3	1.73	20	1.39
B287025		1.87	<0.5	7.62	<5	1240	1.5	3	1.62	<0.5	6	12	4	1.75	20	1.66
B287026		1.71	<0.5	7.32	<5	1300	1.5	<2	0.95	<0.5	5	10	5	1.83	20	1.99
B287027		1.80	<0.5	7.40	<5	1380	1.6	2	0.69	<0.5	6	10	2	1.87	20	2.14
B287028		1.83	<0.5	7.42	<5	1310	1.4	<2	0.99	<0.5	5	11	3	1.76	20	2.55
B287029		1.72	<0.5	7.37	<5	1520	1.5	2	1.07	<0.5	4	9	3	1.66	20	2.59
B287030		0.78	<0.5	0.48	<5	410	<0.5	<2	32.3	<0.5	<1	8	2	0.43	<10	0.15
B287031		1.82	<0.5	7.54	<5	1330	1.5	<2	0.72	<0.5	4	11	5	1.68	20	2.57
B287032		1.76	<0.5	7.29	<5	1530	1.5	<2	0.71	<0.5	6	10	5	1.72	20	2.47
B287033		1.84	<0.5	7.41	<5	1350	1.5	2	0.90	<0.5	5	14	11	1.74	20	2.48
B287034		1.49	<0.5	7.16	<5	1360	1.5	<2	0.74	<0.5	5	12	14	1.64	20	2.44
B287035		1.44	0.5	7.20	<5	1300	1.5	<2	0.95	<0.5	6	15	70	1.85	20	2.44
B287036		1.91	0.8	7.59	<5	1390	1.6	<2	0.62	<0.5	5	11	86	1.80	20	2.48
B287037		1.82	<0.5	7.24	<5	1340	1.5	3	0.53	<0.5	5	13	57	1.74	20	2.18
B287038		1.81	<0.5	7.55	<5	380	0.9	<2	4.03	<0.5	31	78	80	6.13	20	3.59
B287039		0.96	5.2	7.18	<5	580	1.2	11	1.00	<0.5	7	16	93	2.09	20	0.94
B287040		0.06	1.0	6.13	30	210	<0.5	<2	5.69	<0.5	37	265	146	7.11	10	0.46



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**CERTIFICATE OF ANALYSIS TM20295154**

Sample Description	Method Analyte Units LOD	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	
		La	Mg	Mn	Mo	Na	Ni	P	Pb	S	Sb	Sc	Sr	Th	Ti	Tl
		ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm
		10	0.01	5	1	0.01	1	10	2	0.01	5	1	1	20	0.01	10
B287001		30	0.84	240	1	4.60	21	1020	9	0.50	<5	6	1015	<20	0.24	<10
B287002		10	2.89	802	5	2.46	114	1780	10	0.05	<5	27	646	<20	0.73	10
B287003		30	0.62	130	1	4.28	8	940	12	0.26	<5	3	1275	<20	0.18	<10
B287004		30	0.61	1445	<1	4.10	7	920	11	0.33	<5	3	1310	<20	0.18	<10
B287005		30	0.59	461	<1	4.44	7	960	18	1.04	<5	3	1110	<20	0.16	<10
B287006		30	0.65	157	1	4.09	8	1150	6	0.71	<5	3	914	<20	0.19	<10
B287007		30	0.62	112	<1	4.65	7	920	15	0.84	<5	3	1120	<20	0.15	<10
B287008		20	0.53	106	1	4.20	4	870	10	0.55	<5	3	1035	<20	0.14	<10
B287009		30	0.58	165	1	4.56	7	880	8	0.93	<5	3	984	<20	0.15	<10
B287010		<10	2.16	119	<1	0.10	3	80	<2	<0.01	<5	<1	80	<20	<0.01	<10
B287011		30	0.59	168	1	4.56	7	900	7	0.94	<5	3	1095	<20	0.16	<10
B287012		10	2.85	743	1	1.41	106	1590	10	2.51	<5	23	507	<20	0.54	<10
B287013		30	0.59	244	6	4.94	8	860	13	1.14	<5	3	1105	<20	0.14	<10
B287014		20	0.89	414	3	4.20	23	1010	9	0.98	<5	7	992	<20	0.22	<10
B287015		20	0.57	200	1	4.37	6	870	11	0.77	<5	3	1165	<20	0.15	<10
B287016		30	0.53	187	4	4.63	6	850	8	1.11	<5	3	982	<20	0.13	<10
B287017		30	0.56	214	3	4.37	7	800	9	0.96	<5	3	1035	<20	0.15	<10
B287018		20	1.50	1260	2	3.06	77	1260	3	0.60	<5	20	620	<20	0.52	10
B287019		10	1.96	1335	1	3.19	84	1270	6	0.61	<5	23	415	<20	0.57	10
B287020		10	4.40	1270	1	1.60	112	370	5	0.21	<5	39	188	<20	0.57	<10
B287021		30	0.51	344	32	6.25	10	940	3	2.08	<5	3	761	<20	0.10	<10
B287022		10	2.29	997	1	2.59	70	1180	<2	0.56	<5	20	389	<20	0.57	<10
B287023		10	1.49	460	1	2.49	23	740	<2	0.18	<5	11	335	<20	0.40	10
B287024		20	0.54	195	<1	4.44	5	780	6	0.86	<5	3	1190	<20	0.15	<10
B287025		30	0.56	203	2	4.42	5	850	7	0.75	<5	3	1220	<20	0.17	<10
B287026		30	0.55	571	7	4.42	8	870	12	0.57	<5	2	1170	<20	0.16	<10
B287027		30	0.54	291	1	4.32	6	860	16	0.95	<5	3	1125	<20	0.16	<10
B287028		30	0.52	366	<1	3.94	6	800	9	0.42	<5	2	1140	<20	0.16	<10
B287029		30	0.54	185	<1	3.88	7	810	12	0.19	<5	2	1235	<20	0.18	<10
B287030		<10	1.47	114	<1	0.15	2	100	<2	0.01	<5	2	88	<20	0.05	<10
B287031		30	0.53	137	<1	3.91	5	810	12	0.26	<5	2	1190	<20	0.17	<10
B287032		30	0.53	183	<1	4.09	7	820	12	0.44	<5	2	1195	<20	0.16	<10
B287033		30	0.60	164	1	4.21	6	880	10	0.46	<5	3	1135	<20	0.17	<10
B287034		30	0.53	126	1	4.04	7	820	14	0.35	<5	2	1155	<20	0.16	<10
B287035		30	0.62	191	1	4.09	8	860	17	0.52	<5	3	1120	<20	0.18	<10
B287036		30	0.57	196	1	4.39	8	900	15	0.67	<5	3	1085	<20	0.17	<10
B287037		30	0.54	131	1	4.39	6	880	16	0.83	<5	3	950	<20	0.15	<10
B287038		10	3.35	937	7	2.52	67	1320	13	0.40	<5	22	478	<20	0.54	<10
B287039		20	0.59	193	65	4.79	10	880	64	1.56	<5	4	720	<20	0.12	<10
B287040		10	4.23	1155	3	1.87	133	390	18	0.48	<5	32	107	<20	0.53	10



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Sample Description	Method Analyte Units LOD	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	Au-AA23	Au-GRA21
		U	V	W	Zn	Au	Au
		ppm 10	ppm 1	ppm 10	ppm 2	ppm 0.005	ppm 0.05
B287001		<10	59	<10	49	0.014	
B287002		<10	203	<10	124	0.036	
B287003		<10	41	<10	45	0.006	
B287004		<10	37	<10	42	0.009	
B287005		<10	35	<10	35	0.052	
B287006		<10	41	<10	41	0.018	
B287007		<10	42	<10	39	0.020	
B287008		<10	38	<10	38	0.022	
B287009		<10	41	<10	32	0.037	
B287010		<10	1	<10	3	<0.005	
B287011		<10	41	<10	23	0.031	
B287012		<10	212	10	173	0.076	
B287013		<10	43	<10	28	0.305	
B287014		<10	62	<10	51	0.037	
B287015		<10	36	<10	34	0.017	
B287016		<10	38	<10	29	0.054	
B287017		<10	37	<10	37	0.052	
B287018		<10	152	<10	86	0.022	
B287019		<10	163	<10	94	0.050	
B287020		<10	268	<10	80	1.245	
B287021		<10	32	<10	18	0.207	
B287022		<10	147	<10	89	0.090	
B287023		<10	82	<10	65	0.008	
B287024		<10	33	<10	27	0.082	
B287025		<10	35	<10	29	0.112	
B287026		<10	32	<10	32	0.320	
B287027		<10	35	10	29	0.150	
B287028		<10	31	<10	41	0.036	
B287029		<10	32	<10	48	0.027	
B287030		<10	16	<10	8	<0.005	
B287031		<10	33	<10	46	0.036	
B287032		<10	32	<10	44	0.066	
B287033		<10	36	<10	55	0.018	
B287034		<10	32	<10	54	0.019	
B287035		<10	37	<10	56	0.096	
B287036		<10	39	<10	66	0.154	
B287037		<10	35	<10	49	0.098	
B287038		<10	172	<10	114	0.039	
B287039		<10	39	<10	65	0.297	
B287040		<10	238	<10	89	8.73	



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Sample Description	Method Analyte Units LOD	WEI-21	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	
		Recvd Wt. kg	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	K %
		0.02	0.5	0.01	5	10	0.5	2	0.01	0.5	1	1	1	0.01	10	0.01
B287041		0.90	0.8	6.26	<5	520	1.1	5	1.40	<0.5	6	21	28	2.00	20	0.86
B287042		2.18	0.6	6.62	<5	510	1.1	<2	4.46	<0.5	32	74	44	5.97	20	3.05
B287043		1.56	5.2	6.92	<5	760	1.3	12	0.58	<0.5	15	44	29	3.49	20	1.84
B287044		0.95	14.1	3.43	<5	480	0.6	30	0.16	<0.5	2	19	13	1.11	10	0.83
B287045		1.88	9.2	6.00	<5	990	1.1	18	0.30	<0.5	3	15	32	1.53	20	1.74
B287046		1.55	2.7	6.96	<5	1220	1.3	7	0.79	<0.5	5	14	49	1.60	20	2.11
B287047		1.61	2.1	7.13	<5	1220	1.2	4	0.98	<0.5	4	12	20	1.65	20	1.97
B287048		1.03	1.9	1.29	<5	200	<0.5	6	0.18	<0.5	1	16	5	0.53	<10	0.25
B287049		1.62	2.7	7.04	<5	1170	1.2	4	1.00	<0.5	3	12	15	1.58	20	1.95
B287050		1.02	<0.5	0.07	<5	20	<0.5	<2	33.8	<0.5	<1	2	1	0.11	<10	0.01
B287051		1.80	1.0	7.19	<5	1190	1.3	6	1.38	<0.5	3	11	11	1.64	20	2.27
B287052		1.93	2.0	7.43	<5	1130	1.4	2	1.50	<0.5	4	12	14	1.64	20	2.38
B287053		2.09	2.5	7.24	<5	1070	1.2	5	1.40	<0.5	4	12	23	1.60	20	1.92
B287054		1.78	23.2	5.29	<5	540	0.9	57	1.27	<0.5	3	14	9	1.43	10	0.95
B287055		2.22	1.4	6.00	<5	580	1.1	2	1.45	<0.5	4	17	7	1.69	20	1.23
B287056		1.83	6.2	6.86	<5	290	1.2	12	1.44	<0.5	4	13	6	1.66	20	0.50
B287057		2.07	6.5	7.15	<5	1020	1.3	12	1.61	<0.5	4	11	19	1.82	20	1.35
B287058		1.34	13.5	1.35	<5	380	<0.5	31	0.42	<0.5	1	17	4	0.77	<10	0.17
B287059		1.18	5.9	5.94	<5	920	1.1	9	1.55	<0.5	4	27	6	1.82	20	0.83
B287060		0.06	2.6	5.50	68	310	0.6	<2	0.65	<0.5	28	332	160	3.40	10	1.26
B287061		2.03	4.3	6.59	<5	250	0.9	13	5.29	<0.5	22	92	69	4.09	20	2.63
B287062		2.49	0.8	7.49	<5	620	1.0	<2	5.17	<0.5	26	52	92	4.13	20	1.75
B287063		2.50	0.9	8.35	<5	380	1.0	<2	7.25	0.6	55	234	171	6.01	20	2.12
B287064		1.82	0.7	8.06	<5	1320	1.4	<2	1.77	<0.5	7	14	21	2.08	30	1.77
B287065		1.77	<0.5	7.36	<5	1340	1.3	<2	1.59	<0.5	6	14	9	1.71	20	2.03
B287066		1.16	0.5	7.96	<5	650	1.0	2	6.90	<0.5	46	233	157	5.14	20	2.95
B287067		2.09	<0.5	7.50	<5	1060	1.5	<2	2.00	<0.5	8	20	44	1.99	20	1.53
B287068		3.19	0.7	7.66	<5	260	0.8	<2	9.50	0.6	41	143	154	9.60	20	1.40
B287069		3.50	<0.5	7.86	<5	180	0.6	<2	5.73	<0.5	44	155	93	4.96	20	1.24
B287070		1.21	<0.5	0.06	<5	20	<0.5	<2	31.2	<0.5	<1	1	1	0.13	<10	0.01
B287071		2.67	<0.5	8.16	<5	190	0.7	<2	5.63	<0.5	41	149	79	5.14	20	1.91
B287072		3.45	<0.5	8.46	<5	140	0.7	<2	8.79	0.6	63	199	88	6.71	20	0.92
B287073		2.25	<0.5	8.84	<5	150	0.9	<2	7.77	0.5	83	482	87	6.80	20	1.29
B287074		1.25	<0.5	7.56	<5	270	0.8	<2	6.33	<0.5	55	358	108	6.48	20	2.14
B287075		2.24	<0.5	7.55	<5	1390	1.6	<2	1.74	<0.5	6	25	11	1.79	20	2.07
B287076		2.74	<0.5	7.54	<5	1280	1.6	<2	1.58	<0.5	6	16	8	1.75	20	1.93
B287077		2.21	<0.5	7.81	<5	370	0.7	<2	6.51	<0.5	48	198	86	5.52	20	1.79
B287078		3.02	<0.5	8.04	<5	120	0.6	<2	6.11	<0.5	50	258	91	5.23	20	0.89
B287079		3.36	<0.5	8.09	<5	180	0.7	<2	5.55	0.5	45	168	94	5.21	20	1.49
B287080		0.06	0.5	7.18	8	90	<0.5	<2	7.69	0.7	45	178	168	7.88	20	0.24



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Sample Description	Method Analyte Units LOD	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	
		La	Mg	Mn	Mo	Na	Ni	P	Pb	S	Sb	Sc	Sr	Th	Ti	Tl
		ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%
		10	0.01	5	1	0.01	1	10	2	0.01	5	1	1	20	0.01	10
B287041		20	0.74	255	4	3.86	12	670	17	1.01	<5	5	640	<20	0.13	<10
B287042		10	3.61	946	<1	2.02	90	1210	14	1.29	<5	20	492	<20	0.45	<10
B287043		20	1.86	211	46	3.98	47	950	50	1.87	<5	9	581	<20	0.21	<10
B287044		10	0.21	61	6	1.88	3	390	160	0.52	<5	1	258	<20	0.06	<10
B287045		20	0.41	84	9	3.50	7	710	104	0.93	<5	2	586	<20	0.11	<10
B287046		30	0.44	130	3	4.02	7	800	49	0.94	<5	2	726	<20	0.12	<10
B287047		30	0.46	169	3	4.25	5	830	17	0.96	<5	2	723	<20	0.12	<10
B287048		<10	0.06	58	6	0.82	1	130	13	0.20	<5	<1	100	<20	0.02	<10
B287049		30	0.46	152	4	4.32	6	820	21	1.01	<5	2	706	<20	0.12	<10
B287050		<10	1.67	103	<1	0.03	<1	70	<2	0.01	<5	<1	85	<20	<0.01	<10
B287051		30	0.51	195	13	4.20	6	810	29	1.07	<5	3	719	<20	0.12	<10
B287052		30	0.45	210	1	4.29	6	830	48	1.32	<5	3	586	<20	0.12	<10
B287053		30	0.47	209	11	4.37	5	770	29	1.12	<5	2	627	<20	0.11	<10
B287054		20	0.28	205	3	3.54	4	540	418	1.18	<5	2	414	<20	0.08	<10
B287055		20	0.28	217	3	4.09	4	670	22	1.58	<5	2	315	<20	0.08	<10
B287056		20	0.27	217	42	5.37	6	800	49	1.55	<5	2	272	<20	0.09	<10
B287057		30	0.45	210	103	4.42	6	790	94	1.52	<5	3	497	<20	0.11	<10
B287058		10	0.07	94	103	0.89	1	140	204	0.34	<5	<1	84	<20	0.02	<10
B287059		20	0.58	211	86	3.76	13	660	75	1.49	<5	3	448	<20	0.10	<10
B287060		10	2.31	360	11	0.25	132	170	17	0.12	6	20	34	<20	0.21	<10
B287061		10	1.59	705	22	1.51	67	720	27	1.27	<5	17	276	<20	0.40	<10
B287062		10	0.68	893	16	2.44	53	860	12	1.03	<5	17	408	<20	0.48	<10
B287063		<10	1.04	1540	14	2.62	154	830	9	1.05	6	36	346	<20	0.73	<10
B287064		30	0.69	318	4	4.48	7	1020	15	0.85	<5	3	1040	<20	0.18	<10
B287065		30	0.58	245	1	4.04	7	870	12	0.30	<5	3	1100	<20	0.17	<10
B287066		<10	0.78	1545	2	2.17	142	880	14	0.50	6	31	576	<20	0.65	<10
B287067		20	0.48	336	1	4.07	10	760	11	0.61	<5	4	1075	<20	0.18	<10
B287068		10	1.01	3300	7	0.85	111	880	2	0.41	5	33	208	<20	0.58	<10
B287069		<10	2.15	946	3	1.91	128	930	6	0.26	<5	27	233	<20	0.60	<10
B287070		<10	2.05	111	<1	0.03	1	70	<2	<0.01	<5	<1	77	<20	0.01	<10
B287071		<10	2.42	1055	3	2.12	123	1060	4	0.25	<5	27	236	<20	0.70	<10
B287072		10	1.13	2030	4	1.59	161	940	3	0.35	6	34	222	<20	0.80	<10
B287073		<10	1.12	2020	6	2.01	384	900	3	0.47	<5	36	260	<20	0.82	<10
B287074		10	1.07	1555	6	1.42	215	730	5	0.47	<5	31	320	<20	0.68	<10
B287075		30	0.57	280	<1	4.03	14	830	11	0.24	<5	3	1265	<20	0.21	<10
B287076		30	0.61	255	1	4.06	8	820	9	0.32	<5	3	1155	<20	0.20	<10
B287077		10	1.26	1625	3	1.96	126	900	3	0.39	<5	34	334	<20	0.74	<10
B287078		10	1.61	1385	3	2.25	195	940	2	0.37	5	33	263	<20	0.71	<10
B287079		<10	2.19	972	2	2.51	124	940	4	0.32	<5	30	282	<20	0.68	<10
B287080		<10	4.47	1325	1	1.63	119	390	7	0.21	5	41	187	<20	0.58	<10



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Sample Description	Method Analyte Units LOD	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	Au-AA23	Au-GRA21
		U	V	W	Zn	Au	Au
		ppm 10	ppm 1	ppm 10	ppm 2	ppm 0.005	ppm 0.05
B287041		<10	44	<10	64	0.089	
B287042		<10	152	<10	159	0.194	
B287043		<10	81	10	96	0.240	
B287044		<10	25	<10	50	0.371	
B287045		<10	30	<10	46	0.188	
B287046		<10	33	10	50	0.139	
B287047		<10	38	10	46	0.162	
B287048		<10	6	<10	8	0.081	
B287049		<10	35	<10	41	0.266	
B287050		<10	1	<10	5	<0.005	
B287051		<10	35	<10	40	0.051	
B287052		<10	49	10	38	0.215	
B287053		<10	35	10	32	0.242	
B287054		<10	21	<10	27	0.448	
B287055		<10	25	10	29	0.173	
B287056		<10	24	10	16	0.218	
B287057		<10	39	10	36	0.491	
B287058		<10	8	<10	4	0.400	
B287059		<10	40	<10	40	0.149	
B287060		<10	145	10	62	>10.0	13.80
B287061		<10	139	10	125	0.546	
B287062		<10	136	10	113	0.243	
B287063		<10	246	70	133	0.070	
B287064		<10	47	<10	75	0.148	
B287065		<10	39	<10	56	0.023	
B287066		<10	225	<10	98	0.024	
B287067		<10	39	<10	54	0.060	
B287068		<10	208	<10	106	0.026	
B287069		<10	199	<10	120	0.015	
B287070		<10	1	<10	4	<0.005	
B287071		<10	205	<10	121	0.038	
B287072		<10	241	<10	88	0.036	
B287073		<10	258	<10	75	0.024	
B287074		<10	221	<10	77	0.024	
B287075		<10	41	<10	54	0.008	
B287076		<10	40	<10	44	0.007	
B287077		<10	234	<10	78	0.020	
B287078		<10	219	<10	82	0.007	
B287079		<10	215	10	117	<0.005	
B287080		<10	280	<10	87	1.245	



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Sample Description	Method Analyte Units LOD	WEI-21	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	
		Recvd Wt. kg	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	K %
		0.02	0.5	0.01	5	10	0.5	2	0.01	0.5	1	1	1	0.01	10	0.01
B287081		2.15	<0.5	7.89	<5	240	0.6	<2	4.42	<0.5	47	164	82	5.16	20	2.08
B287082		2.35	<0.5	7.79	<5	100	0.6	<2	7.18	<0.5	43	165	93	4.48	20	0.93
B287083		3.56	<0.5	8.48	<5	80	0.6	<2	8.58	0.5	49	174	84	5.21	20	0.78
B287084		3.26	<0.5	8.35	<5	130	0.5	<2	5.82	0.5	48	200	77	4.96	20	0.89
B287085		3.44	<0.5	7.89	<5	180	0.5	<2	5.33	<0.5	44	162	83	4.73	20	1.11
B287086		3.36	<0.5	8.30	<5	210	0.7	<2	5.93	0.5	48	174	82	5.48	20	1.89
B287087		3.47	<0.5	8.06	<5	130	0.5	<2	7.93	<0.5	47	177	89	4.88	20	1.20
B287088		3.52	0.5	8.38	<5	140	0.6	<2	8.05	0.5	47	177	117	5.25	20	1.29
B287089		2.23	<0.5	7.82	<5	150	0.6	<2	6.78	<0.5	41	168	125	4.84	20	1.24
B287090		1.41	<0.5	0.07	<5	20	<0.5	<2	33.3	<0.5	1	2	1	0.12	<10	0.01
B287091		1.77	<0.5	8.20	<5	180	0.7	<2	7.16	<0.5	46	187	119	4.57	20	1.54
B287092		2.60	<0.5	8.34	<5	220	0.6	<2	7.17	0.5	46	187	70	5.54	20	1.94
B287093		2.24	<0.5	7.89	<5	150	0.5	<2	6.61	0.5	47	182	85	5.19	20	1.28
B287094		2.22	<0.5	7.82	<5	380	0.7	<2	4.96	<0.5	41	144	51	6.31	20	2.13
B287095		2.20	<0.5	8.23	<5	180	0.6	<2	6.68	0.5	44	162	84	5.92	20	1.42
B287096		3.40	<0.5	8.16	<5	180	0.6	2	6.79	0.5	45	186	82	5.34	20	1.31
B287097		2.83	0.5	7.77	<5	150	0.6	<2	7.13	<0.5	43	163	73	5.60	20	2.22
B287098		1.81	<0.5	7.82	<5	1300	1.5	5	1.60	<0.5	5	12	7	1.73	20	1.71
B287099		1.91	<0.5	7.97	<5	1320	1.5	4	1.70	<0.5	5	11	9	1.66	20	2.28
B287100		0.06	1.0	6.17	32	210	<0.5	<2	5.48	0.5	39	262	138	6.87	20	0.45
B287101		1.58	<0.5	7.54	<5	1090	1.5	2	1.36	<0.5	5	12	16	1.56	20	1.67
B287102		1.56	<0.5	8.03	<5	1430	1.5	2	1.63	<0.5	4	14	8	1.62	20	2.45
B287103		2.65	<0.5	7.82	<5	1430	1.5	2	1.64	<0.5	4	24	10	1.57	20	2.38
B287104		1.42	<0.5	7.63	<5	1400	1.5	<2	1.62	<0.5	5	13	7	1.67	20	2.43
B287105		2.31	<0.5	7.71	<5	1330	1.3	<2	1.71	<0.5	5	11	12	1.80	20	2.18
B287106		1.98	<0.5	7.36	<5	1380	1.1	<2	1.48	<0.5	5	17	5	1.63	20	2.67
B287107		2.15	<0.5	7.95	<5	1430	1.1	<2	1.49	<0.5	6	10	4	1.75	20	2.73
B287108		2.34	<0.5	7.69	<5	1140	1.2	<2	2.32	<0.5	10	46	40	2.42	20	2.38
B287109		2.07	1.2	7.73	<5	1300	1.2	2	1.63	<0.5	5	11	6	1.73	20	2.22
B287110		1.22	<0.5	0.14	<5	20	<0.5	<2	32.4	<0.5	<1	2	1	0.13	<10	0.04
B287111		2.04	3.9	7.71	<5	1240	1.3	<2	1.69	<0.5	6	11	5	1.73	20	2.12
B287112		2.28	<0.5	7.69	<5	1360	1.2	<2	1.47	<0.5	5	13	6	1.60	20	2.39
B287113		1.87	<0.5	8.01	<5	1420	1.2	<2	1.56	<0.5	5	11	4	1.66	20	2.56
B287114		2.31	<0.5	7.78	<5	1420	1.1	<2	1.45	<0.5	4	12	6	1.58	20	2.60
B287115		2.04	<0.5	7.88	<5	1120	1.3	<2	1.73	<0.5	4	12	5	1.72	20	1.48
B287116		2.02	<0.5	7.26	<5	1070	1.2	2	1.61	<0.5	4	11	5	1.54	20	1.35
B287117		2.14	<0.5	7.51	<5	1290	1.3	<2	1.64	<0.5	4	12	4	1.69	20	2.17
B287118		2.07	<0.5	7.70	<5	1080	1.4	4	1.73	<0.5	4	11	6	1.64	20	1.77
B287119		2.01	<0.5	7.45	<5	1110	1.4	3	1.39	<0.5	5	16	5	1.54	20	1.94
B287120		0.06	<0.5	7.28	13	90	<0.5	<2	7.67	0.5	45	173	162	7.77	20	0.24





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Sample Description	Method Analyte Units LOD	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	
		La	Mg	Mn	Mo	Na	Ni	P	Pb	S	Sb	Sc	Sr	Th	Ti	Tl
		ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm
		10	0.01	5	1	0.01	1	10	2	0.01	5	1	1	20	0.01	10
B287081		<10	2.99	768	3	2.31	139	950	<2	0.16	6	26	208	<20	0.68	<10
B287082		<10	0.99	920	2	1.97	127	930	2	0.17	<5	30	191	<20	0.65	<10
B287083		<10	0.86	945	2	1.92	139	1050	<2	0.16	7	31	208	<20	0.70	<10
B287084		<10	2.41	872	3	2.36	141	1060	2	0.09	7	29	238	<20	0.68	<10
B287085		<10	2.11	910	2	2.55	129	980	3	0.12	<5	28	234	<20	0.66	<10
B287086		<10	2.24	851	4	2.23	143	940	7	0.30	7	30	275	<20	0.71	<10
B287087		<10	1.06	947	3	1.61	139	950	5	0.15	<5	30	198	<20	0.68	<10
B287088		<10	0.94	849	2	1.70	143	960	4	0.14	<5	31	223	<20	0.72	<10
B287089		<10	0.85	739	2	1.88	128	910	2	0.15	<5	29	271	<20	0.65	<10
B287090		<10	1.52	115	1	0.03	2	60	<2	<0.01	<5	<1	80	<20	0.01	<10
B287091		<10	0.94	878	5	2.05	136	970	2	0.24	5	31	316	<20	0.70	<10
B287092		<10	1.27	882	4	1.60	144	970	<2	0.68	5	31	322	<20	0.71	<10
B287093		<10	1.67	864	4	1.59	137	980	4	0.08	<5	28	285	<20	0.71	<10
B287094		10	2.92	892	6	1.59	106	1000	3	0.49	<5	25	297	<20	0.60	<10
B287095		<10	2.03	1080	3	1.79	127	1110	3	0.21	<5	30	350	<20	0.69	<10
B287096		<10	1.43	964	3	1.85	125	1020	3	0.20	<5	29	287	<20	0.72	<10
B287097		<10	1.25	1190	2	1.34	113	870	6	0.20	5	28	260	<20	0.64	<10
B287098		20	0.54	247	<1	4.21	6	820	8	0.31	<5	3	1205	<20	0.19	<10
B287099		20	0.53	251	<1	4.16	6	810	10	0.38	<5	3	1245	<20	0.19	<10
B287100		10	4.15	1130	2	1.83	127	400	17	0.48	<5	32	107	<20	0.51	<10
B287101		20	0.48	225	<1	4.66	6	780	11	1.03	<5	2	965	<20	0.14	<10
B287102		20	0.54	222	<1	4.23	5	810	11	0.22	<5	3	1340	<20	0.19	10
B287103		30	0.52	212	<1	4.20	6	810	10	0.36	<5	3	1340	<20	0.18	10
B287104		20	0.52	209	<1	4.03	6	800	9	0.35	<5	2	1275	<20	0.18	<10
B287105		30	0.57	248	1	3.98	7	860	8	0.47	<5	3	1245	<20	0.19	10
B287106		30	0.58	202	<1	3.73	6	840	3	0.38	<5	3	902	<20	0.20	10
B287107		30	0.62	214	<1	3.91	6	910	4	0.42	<5	3	871	<20	0.21	<10
B287108		20	0.90	327	<1	3.68	27	860	7	1.19	<5	9	792	<20	0.29	<10
B287109		20	0.51	206	<1	4.24	6	780	8	0.82	<5	3	1080	<20	0.17	<10
B287110		<10	1.67	107	<1	0.08	<1	70	<2	<0.01	<5	<1	82	<20	<0.01	<10
B287111		20	0.51	230	<1	4.26	7	780	9	0.94	<5	2	1145	<20	0.15	<10
B287112		20	0.54	196	<1	4.19	5	780	8	0.79	<5	2	965	<20	0.17	<10
B287113		20	0.63	218	<1	4.24	5	810	8	0.57	<5	3	1010	<20	0.18	10
B287114		30	0.58	203	<1	4.08	5	800	5	0.58	<5	2	975	<20	0.18	<10
B287115		30	0.56	224	<1	4.53	6	820	6	0.71	<5	3	1070	<20	0.18	10
B287116		20	0.49	199	<1	4.34	4	730	6	0.77	<5	2	935	<20	0.16	<10
B287117		20	0.48	198	<1	4.07	4	750	8	1.01	<5	2	1040	<20	0.16	<10
B287118		20	0.52	207	<1	4.49	6	800	7	1.02	<5	2	1025	<20	0.16	<10
B287119		20	0.58	176	<1	4.07	8	710	5	0.65	<5	3	852	<20	0.16	<10
B287120		<10	4.48	1325	<1	1.63	116	380	7	0.22	<5	41	193	<20	0.58	<10



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Sample Description	Method Analyte Units LOD	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	Au-AA23	Au-GRA21
		U	V	W	Zn	Au	Au
		ppm 10	ppm 1	ppm 10	ppm 2	ppm 0.005	ppm 0.05
B287081		<10	214	<10	149	<0.005	
B287082		<10	200	<10	105	<0.005	
B287083		<10	226	<10	106	<0.005	
B287084		<10	214	<10	108	<0.005	
B287085		<10	199	<10	111	0.005	
B287086		<10	223	10	126	<0.005	
B287087		<10	215	<10	114	<0.005	
B287088		<10	224	<10	118	0.006	
B287089		<10	209	<10	98	0.005	
B287090		<10	1	<10	4	<0.005	
B287091		<10	220	<10	97	0.018	
B287092		<10	218	<10	112	0.109	
B287093		<10	221	<10	120	0.009	
B287094		<10	180	<10	109	0.021	
B287095		<10	214	<10	112	0.017	
B287096		<10	217	<10	123	0.011	
B287097		<10	192	<10	119	0.068	
B287098		<10	40	10	49	0.012	
B287099		<10	41	<10	49	0.034	
B287100		<10	240	<10	85	8.84	
B287101		<10	39	10	43	0.078	
B287102		<10	35	<10	53	0.020	
B287103		<10	34	<10	47	0.015	
B287104		<10	35	<10	49	0.025	
B287105		<10	38	<10	46	0.037	
B287106		<10	40	<10	45	0.007	
B287107		<10	42	10	46	0.015	
B287108		<10	69	10	55	0.073	
B287109		<10	40	10	32	0.557	
B287110		<10	1	<10	3	<0.005	
B287111		<10	39	10	33	2.42	
B287112		<10	37	<10	34	0.017	
B287113		<10	42	<10	38	0.013	
B287114		<10	38	10	35	0.015	
B287115		<10	39	<10	34	0.058	
B287116		<10	36	<10	24	0.042	
B287117		<10	37	10	25	0.035	
B287118		<10	37	10	30	0.054	
B287119		<10	37	10	32	0.018	
B287120		<10	279	<10	83	1.265	



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Sample Description	Method Analyte Units LOD	WEI-21	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	
		Recvd Wt. kg	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	K %
		0.02	0.5	0.01	5	10	0.5	2	0.01	0.5	1	1	1	0.01	10	0.01
B287121		1.79	<0.5	7.93	<5	1210	1.3	<2	1.56	<0.5	4	13	3	1.49	20	2.11
B287122		2.03	<0.5	7.90	<5	1360	1.4	2	1.54	<0.5	5	12	3	1.42	20	2.09
B287123		2.02	<0.5	7.83	<5	1280	1.4	<2	1.65	<0.5	4	13	3	1.48	20	1.87
B287124		2.25	<0.5	8.20	<5	1410	1.5	<2	1.90	<0.5	4	13	3	1.54	20	1.69
B287125		1.66	<0.5	7.47	<5	1110	1.4	<2	2.20	<0.5	7	28	10	1.78	20	1.67
B287126		1.82	<0.5	7.81	<5	1040	1.4	<2	2.03	<0.5	6	14	6	1.87	20	1.30
B287127		1.88	<0.5	7.84	<5	360	1.1	<2	6.00	<0.5	33	113	148	7.44	20	1.70
B287128		3.45	<0.5	8.33	<5	140	0.9	<2	6.59	<0.5	33	109	119	9.27	20	1.05
B287129		3.54	<0.5	8.15	<5	90	0.8	2	6.56	<0.5	31	119	136	10.30	20	0.82
B287130		1.32	<0.5	0.07	<5	20	<0.5	<2	33.4	<0.5	<1	2	1	0.14	<10	0.01
B287131		3.27	<0.5	8.22	<5	170	0.8	<2	5.32	<0.5	41	125	93	8.21	20	1.46
B287132		3.04	<0.5	8.52	<5	220	0.6	<2	4.07	<0.5	39	148	94	5.13	20	1.40
B287133		3.43	<0.5	8.48	<5	270	0.5	5	4.88	<0.5	50	169	133	5.65	20	1.25
B287134		3.18	<0.5	8.30	<5	190	<0.5	<2	5.09	<0.5	53	158	141	5.75	20	1.27
B287135		3.24	<0.5	8.81	<5	270	0.6	<2	5.74	<0.5	56	228	113	5.35	20	1.28
B287136		1.07	<0.5	8.30	<5	540	1.5	<2	2.29	<0.5	16	25	9	2.10	20	0.79
B287137		3.29	<0.5	8.81	<5	150	0.5	<2	6.45	<0.5	51	209	159	7.78	20	0.94



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		La	Mg	Mn	Mo	Na	Ni	P	Pb	S	Sb	Sc	Sr	Th	Ti	Tl
		ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%
		10	0.01	5	1	0.01	1	10	2	0.01	5	1	1	20	0.01	10
B287121		20	0.62	195	<1	4.25	8	650	8	0.43	6	3	860	<20	0.16	<10
B287122		20	0.59	177	<1	4.24	5	680	8	0.50	<5	2	1165	<20	0.16	<10
B287123		20	0.55	191	<1	4.29	6	680	5	0.67	<5	2	1165	<20	0.16	<10
B287124		20	0.51	231	<1	4.59	6	740	6	0.37	<5	2	1370	<20	0.17	<10
B287125		20	0.53	301	2	3.93	16	780	4	0.53	<5	5	1090	<20	0.21	10
B287126		20	0.57	326	<1	4.31	7	830	2	0.60	<5	3	1090	<20	0.19	10
B287127		10	1.65	2140	6	2.43	69	850	3	0.91	<5	27	420	<20	0.57	<10
B287128		10	1.98	2810	5	1.72	75	900	3	0.72	<5	29	344	<20	0.56	<10
B287129		10	2.63	2800	5	1.23	74	950	3	1.26	<5	29	383	<20	0.59	<10
B287130		<10	1.81	113	<1	0.03	<1	70	<2	<0.01	<5	<1	82	<20	0.01	10
B287131		10	3.24	1675	2	1.15	82	890	<2	0.82	<5	32	476	<20	0.61	10
B287132		10	3.05	735	<1	1.74	99	820	<2	0.32	<5	31	314	<20	0.69	<10
B287133		10	2.84	877	<1	1.97	118	660	<2	0.51	<5	32	299	<20	0.72	<10
B287134		<10	2.62	911	<1	1.78	128	650	3	0.50	<5	32	233	<20	0.65	<10
B287135		<10	1.48	1440	1	1.96	163	650	<2	0.49	<5	34	376	<20	0.71	<10
B287136		30	0.61	389	<1	4.06	13	810	2	0.56	<5	4	820	<20	0.22	<10
B287137		<10	1.76	2310	1	1.27	123	770	2	0.67	<5	37	374	<20	0.69	<10

\*\*\*\*\* See Appendix Page for comments regarding this certificate \*\*\*\*\*



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**CERTIFICATE OF ANALYSIS TM20295154**

Sample Description	Method Analyte Units LOD	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	Au-AA23	Au-GRA21
		U	V	W	Zn	Au	Au
		ppm 10	ppm 1	ppm 10	ppm 2	ppm 0.005	ppm 0.05
B287121		<10	34	<10	31	0.019	
B287122		<10	33	10	22	0.056	
B287123		<10	33	<10	23	0.070	
B287124		<10	34	<10	34	0.011	
B287125		<10	50	10	32	0.015	
B287126		<10	39	10	36	0.010	
B287127		<10	168	10	110	0.030	
B287128		<10	172	<10	111	<0.005	
B287129		<10	183	<10	112	0.005	
B287130		<10	1	<10	3	<0.005	
B287131		<10	200	<10	110	<0.005	
B287132		<10	206	<10	114	<0.005	
B287133		<10	244	<10	131	<0.005	
B287134		<10	214	<10	132	<0.005	
B287135		<10	230	<10	123	0.038	
B287136		<10	43	<10	42	0.098	
B287137		<10	227	<10	93	0.069	



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**CERTIFICATE OF ANALYSIS TM20295154**

CERTIFICATE COMMENTS	
	<b>LABORATORY ADDRESSES</b>
Applies to Method:	Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada. Au-AA23 Au-GRA21 ME-ICP61
Applies to Method:	Processed at ALS Timmins located at Unit 10 - 2090 Riverside Drive, Timmins, ON, Canada. CRU-31 CRU-QC LOG-21 LOG-23 PUL-32 PUL-QC SPL-21 WEI-21



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**CERTIFICATE OF ANALYSIS TM20302764**

Sample Description	Method Analyte Units LOD	WEI-21	Au-AA23	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	
		Recvd Wt. kg	Au ppm	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm
		0.02	0.005	0.5	0.01	5	10	0.5	2	0.01	0.5	1	1	1	0.01	10
B287323		2.53	0.159	0.7	6.60	<5	410	1.0	<2	5.90	<0.5	30	82	117	8.13	20
B287324		0.97	0.022	<0.5	7.70	<5	720	1.4	<2	1.99	<0.5	8	22	13	2.13	20
B287325		1.22	0.099	0.7	7.71	<5	670	0.8	<2	5.97	<0.5	34	113	107	6.31	20
B287326		1.95	0.038	<0.5	8.17	<5	1310	1.5	<2	1.77	<0.5	7	13	2	1.89	20
B287327		3.37	0.057	0.5	8.02	<5	450	1.0	<2	4.91	<0.5	33	121	76	7.55	20
B287328		2.36	0.051	<0.5	7.77	<5	1060	1.4	2	1.89	<0.5	7	17	4	2.08	20
B287329		2.15	0.019	<0.5	7.97	<5	1450	1.4	<2	1.73	<0.5	5	12	2	1.67	20
B287330		1.49	<0.005	<0.5	0.25	<5	40	<0.5	<2	31.8	<0.5	<1	3	4	0.23	<10
B287331		2.82	0.177	0.6	7.72	<5	320	0.8	<2	4.02	<0.5	15	29	35	4.30	20
B287332		2.93	0.096	0.5	7.63	<5	340	0.8	<2	5.22	<0.5	28	92	49	5.83	20
B287333		2.09	0.039	<0.5	7.83	<5	1300	1.6	3	1.64	<0.5	5	12	3	1.56	20
B287334		3.05	0.021	<0.5	7.92	<5	1320	1.7	<2	1.85	<0.5	5	11	3	1.61	20
B287335		3.08	0.012	0.5	8.29	<5	1610	1.6	<2	1.82	<0.5	5	12	4	1.80	20
B287336		2.95	0.008	<0.5	8.11	<5	1430	1.6	6	1.70	<0.5	5	16	3	1.67	20
B287337		2.90	0.016	<0.5	7.72	<5	1440	1.6	2	1.71	<0.5	4	12	8	1.64	20
B287338		2.15	0.038	<0.5	7.47	5	1450	1.6	<2	1.73	<0.5	4	12	5	1.59	20
B287339		1.87	0.154	<0.5	7.68	<5	570	1.8	<2	3.08	<0.5	13	34	34	3.13	20
B287340		0.06	8.82	0.9	6.24	32	210	<0.5	<2	5.81	0.6	40	269	142	7.11	10
B287341		2.03	0.657	<0.5	7.65	<5	710	1.8	<2	1.84	<0.5	8	20	2	2.14	20
B287342		2.08	0.490	<0.5	7.64	<5	830	1.7	2	2.65	<0.5	13	45	17	3.43	20
B287343		1.92	0.482	<0.5	7.70	<5	770	1.8	<2	2.70	<0.5	8	26	5	2.37	20
B287344		2.02	0.237	<0.5	7.17	<5	440	1.7	<2	1.83	<0.5	5	12	2	1.59	20
B287345		2.02	0.108	<0.5	7.42	<5	540	1.7	<2	2.07	<0.5	5	11	1	1.69	20
B287346		2.44	1.010	0.6	6.59	<5	460	1.4	<2	5.43	<0.5	22	23	45	7.51	20
B287347		2.17	0.161	<0.5	6.33	<5	140	1.2	<2	3.23	<0.5	8	13	18	2.99	20
B287348		3.05	0.193	<0.5	7.60	<5	400	1.4	<2	4.81	<0.5	19	30	26	5.02	20
B287349		1.48	0.393	<0.5	7.63	<5	310	1.4	2	3.95	<0.5	22	33	10	4.04	20
B287350		1.19	<0.005	<0.5	0.06	<5	20	<0.5	<2	35.0	<0.5	<1	2	<1	0.11	<10
B287351		2.10	0.607	<0.5	7.44	<5	380	1.2	4	5.46	0.5	31	133	168	6.22	20
B287352		2.26	0.413	<0.5	7.61	<5	310	1.4	6	5.72	<0.5	39	232	55	6.82	20
B287353		2.01	0.118	<0.5	7.52	<5	390	0.7	2	6.53	0.5	41	266	110	7.81	20
B287354		2.32	0.117	<0.5	7.74	<5	270	0.9	<2	5.56	<0.5	39	112	91	8.44	20
B287355		2.40	<0.005	<0.5	8.21	<5	190	0.7	2	6.22	0.7	47	125	82	8.79	20



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**CERTIFICATE OF ANALYSIS TM20302764**

Sample Description	Method Analyte Units LOD	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	
		K %	La ppm	Mg %	Mn ppm	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	S %	Sb ppm	Sc ppm	Sr ppm	Th ppm	Ti %
		0.01	10	0.01	5	1	0.01	1	10	2	0.01	5	1	1	20	0.01
B287323		1.98	10	2.00	2080	14	2.35	32	950	4	0.93	<5	14	612	<20	0.70
B287324		1.11	30	0.73	385	1	4.41	8	980	4	0.22	<5	4	1085	<20	0.27
B287325		1.98	10	1.62	1485	2	2.46	44	1410	8	0.70	<5	21	744	<20	1.08
B287326		1.36	30	0.64	267	<1	4.56	6	940	7	0.25	<5	3	1390	<20	0.24
B287327		2.42	10	1.96	1720	2	2.65	45	1100	5	0.45	<5	21	627	<20	1.06
B287328		1.60	20	0.68	304	1	4.19	9	870	6	0.37	<5	4	1015	<20	0.27
B287329		1.79	30	0.59	210	<1	4.29	4	870	10	0.34	<5	3	1375	<20	0.22
B287330		0.07	<10	2.27	115	<1	0.11	6	100	<2	0.04	<5	1	83	<20	0.04
B287331		1.60	10	1.26	730	3	3.29	28	870	3	0.47	<5	18	455	<20	0.53
B287332		1.92	10	2.34	1225	11	2.20	50	1170	2	0.26	<5	18	525	<20	0.90
B287333		1.83	20	0.54	231	<1	4.26	3	790	10	0.26	<5	3	1140	<20	0.19
B287334		2.36	30	0.56	224	5	4.48	4	820	9	0.69	<5	2	1280	<20	0.17
B287335		2.65	30	0.61	215	<1	4.49	6	920	11	0.52	<5	3	1480	<20	0.20
B287336		2.38	30	0.59	208	<1	4.50	6	880	10	0.40	<5	3	1365	<20	0.19
B287337		2.44	20	0.57	205	1	4.52	5	880	11	0.90	<5	3	1335	<20	0.17
B287338		2.00	20	0.57	224	1	4.24	7	820	13	0.89	<5	3	1190	<20	0.14
B287339		1.78	20	1.16	773	15	4.78	23	900	7	0.60	<5	10	840	<20	0.39
B287340		0.46	10	4.34	1165	3	1.89	131	400	21	0.48	<5	33	110	<20	0.52
B287341		1.05	30	0.63	353	<1	5.12	9	880	6	1.11	<5	4	956	<20	0.19
B287342		1.39	20	1.00	636	66	4.75	17	870	7	1.17	<5	8	949	<20	0.40
B287343		1.17	20	0.73	542	36	4.93	11	860	5	1.14	<5	5	1045	<20	0.25
B287344		0.74	20	0.49	354	167	5.13	5	770	5	1.14	<5	3	906	<20	0.15
B287345		0.88	30	0.57	420	1	5.19	6	890	5	1.23	<5	3	1005	<20	0.16
B287346		2.07	10	1.37	1625	37	2.99	31	650	8	3.71	<5	15	626	<20	0.36
B287347		0.66	20	0.56	793	33	4.57	7	670	3	1.94	<5	4	508	<20	0.13
B287348		2.01	10	1.31	1165	21	3.70	39	860	4	1.91	<5	18	688	<20	0.46
B287349		1.09	10	0.87	805	57	4.72	42	1000	4	2.74	<5	16	648	<20	0.38
B287350		0.01	<10	1.77	111	<1	0.03	<1	80	<2	0.01	<5	<1	85	<20	<0.01
B287351		1.99	10	2.49	1755	94	3.33	82	990	8	1.58	<5	22	480	<20	0.57
B287352		1.83	10	1.88	1610	201	3.56	115	610	4	1.44	<5	27	1090	<20	0.68
B287353		2.11	10	2.25	2210	7	1.36	154	610	6	0.40	<5	27	385	<20	0.70
B287354		1.56	10	1.82	2240	2	2.18	46	800	6	0.81	<5	23	350	<20	1.08
B287355		1.07	<10	1.76	2320	4	1.60	72	750	6	0.35	<5	24	422	<20	1.19





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**CERTIFICATE OF ANALYSIS TM20302764**

Sample Description	Method Analyte Units LOD	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61	ME-ICP61
		Tl	U	V	W	Zn
		ppm	ppm	ppm	ppm	ppm
		10	10	1	10	2
B287323		<10	<10	147	40	107
B287324		<10	<10	56	<10	52
B287325		<10	<10	177	<10	135
B287326		<10	<10	41	<10	49
B287327		<10	<10	192	10	121
B287328		<10	<10	51	20	40
B287329		<10	<10	39	10	37
B287330		<10	<10	10	<10	4
B287331		<10	<10	127	10	52
B287332		<10	10	159	<10	116
B287333		<10	<10	36	10	40
B287334		<10	<10	35	10	32
B287335		<10	<10	40	10	47
B287336		<10	<10	37	10	46
B287337		<10	<10	36	10	29
B287338		<10	<10	37	10	28
B287339		<10	<10	96	30	59
B287340		<10	<10	245	10	89
B287341		<10	<10	43	20	35
B287342		<10	<10	90	50	56
B287343		<10	<10	53	20	29
B287344		<10	<10	32	30	15
B287345		<10	<10	38	30	16
B287346		<10	<10	120	50	66
B287347		<10	<10	45	80	20
B287348		<10	<10	132	40	60
B287349		<10	<10	95	50	36
B287350		<10	<10	1	<10	4
B287351		<10	<10	166	40	119
B287352		10	<10	196	80	115
B287353		<10	<10	179	50	136
B287354		<10	<10	205	50	129
B287355		<10	<10	221	10	139



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CERTIFICATE OF ANALYSIS TM20302764

CERTIFICATE COMMENTS

LABORATORY ADDRESSES

Applies to Method: Processed at ALS Vancouver located at 2103 Dollarton Hwy, North Vancouver, BC, Canada.  
Au-AA23 ME-ICP61

Applies to Method: Processed at ALS Timmins located at Unit 10 - 2090 Riverside Drive, Timmins, ON, Canada.  
CRU-31 CRU-QC LOG-21 LOG-23  
PUL-31 PUL-QC SPL-21 WEI-21

## **APPENDIX D – DRILL LOGS**



Geotechnical Information

Interval			Recovery		RQD		Orientation					Comment	
From (m)	To (m)	Interval (m)	Recovered Core (m)	Total Core Recovery %	CORE >10cm	RQD %	Mark Depth	Mark Quality	Lock Angle	Line Quality	Line extended from previous run (Y/N)		
15.00	18.00	3.00	2.37	79.0%	1.44	48.0%	18.00	0.00					Short Run, Broken Core, Blocky Ground
18.00	21.00	3.00	3.00	100.0%	2.29	76.3%	21.00	0.00					Broken Core, Blocky Ground, Assumed 3m run
21.00	24.00	3.00	3.00	100.0%	2.49	83.0%	24.00	0.00					Broken Core, Blocky Ground, Assumed 3m run
24.00	27.00	3.00	3.00	100.0%	1.67	55.7%	27.00	0.00					Broken Core, Blocky Ground, Assumed 3m run
27.00	30.00	3.00	3.00	100.0%	0.92	30.7%	30.00	0.00					Broken Core, Blocky Ground, Assumed 3m run
30.00	33.00	3.00	3.00	100.0%	2.13	71.0%	33.00	0.00					
33.00	36.00	3.00	3.00	100.0%	2.22	74.0%	36.00	0.00					
36.00	39.00	3.00	3.00	100.0%	2.10	70.0%	39.00	4.00					
39.00	42.00	3.00	3.00	100.0%	1.95	65.0%	42.00	0.00					
42.00	45.00	3.00	3.00	100.0%	0.73	24.3%	45.00	0.00					
45.00	48.00	3.00	3.00	100.0%	0.60	20.0%	48.00	0.00					
48.00	51.00	3.00	3.00	100.0%	1.54	51.3%	51.00	4.00					
51.00	54.00	3.00	3.00	100.0%	1.46	48.7%	54.00	3.00					
54.00	57.00	3.00	3.00	100.0%	1.69	56.3%	57.00	0.00					
57.00	60.00	3.00	3.00	100.0%	1.06	35.3%	60.00	0.00					
60.00	63.00	3.00	3.00	100.0%	2.06	68.7%	63.00	0.00					
63.00	66.00	3.00	3.00	100.0%	1.68	56.0%	66.00	0.00					
66.00	69.00	3.00	3.00	100.0%	1.92	64.0%	69.00	0.00					
69.00	72.00	3.00	3.00	100.0%	1.83	61.0%	72.00	0.00					
72.00	75.00	3.00	3.00	100.0%	1.68	56.0%	75.00	0.00					
75.00	78.00	3.00	3.00	100.0%	2.61	87.0%	78.00	0.00					
78.00	81.00	3.00	3.00	100.0%	2.41	80.3%	81.00	0.00					
81.00	84.00	3.00	3.00	100.0%	0.98	32.7%	84.00	0.00					
84.00	87.00	3.00	3.00	100.0%	2.65	88.3%	87.00	0.00					
87.00	90.00	3.00	3.00	100.0%	2.41	80.3%	90.00	0.00					
90.00	93.00	3.00	3.00	100.0%	2.71	90.3%	93.00	0.00					
93.00	96.00	3.00	3.00	100.0%	2.56	85.3%	96.00	0.00					
96.00	99.00	3.00	3.00	100.0%	2.26	75.3%	99.00	0.00					
99.00	102.00	3.00	3.00	100.0%	1.98	66.0%	102.00	4.00					Drew a line back from 102m to 101m, and forward to 102.5
102.00	105.00	3.00	3.00	100.0%	2.67	89.0%	105.00	0.00					
105.00	108.00	3.00	3.00	100.0%	2.54	84.7%	108.00	3.00					
108.00	111.00	3.00	3.00	100.0%	1.25	41.7%	111.00	0.00					
111.00	114.00	3.00	3.00	100.0%	1.41	47.0%	114.00	0.00					
114.00	117.00	3.00	3.00	100.0%	2.22	74.0%	117.00	0.00					
117.00	120.00	3.00	3.00	100.0%	2.23	74.3%	120.00	3.00					
120.00	123.00	3.00	3.00	100.0%	1.65	55.0%	123.00	4.00					
123.00	126.00	3.00	3.00	100.0%	1.84	61.3%	126.00	4.00					
126.00	129.00	3.00	3.00	100.0%	2.20	73.3%	129.00	0.00					
129.00	132.00	3.00	3.00	100.0%	1.88	62.7%	132.00	4.00					
132.00	135.00	3.00	3.00	100.0%	1.74	58.0%	135.00	0.00					
135.00	138.00	3.00	3.00	100.0%	2.75	91.7%	138.00	4.00					
138.00	141.00	3.00	3.00	100.0%	2.39	79.7%	141.00	0.00					
141.00	144.00	3.00	3.00	100.0%	2.70	90.0%	144.00	3.00					
144.00	147.00	3.00	3.00	100.0%	2.49	83.0%	147.00	0.00					
147.00	150.00	3.00	3.00	100.0%	2.60	86.7%	150.00	4.00	1.00	4.00			
150.00	153.00	3.00	3.00	100.0%	2.84	94.7%	153.00	3.00		4.00	Y		No lock angle with next run, extended from previous run
153.00	156.00	3.00	3.00	100.0%	2.61	87.0%	156.00	0.00					
156.00	159.00	3.00	3.00	100.0%	2.89	96.3%	159.00	0.00					
159.00	162.00	3.00	3.00	100.0%	2.74	91.3%	162.00	0.00					
<b>Final Recovery (m):</b>			<b>161.37</b>										
<b>Missing Core (m):</b>			<b>0.63</b>										
<b>Average RQD (%)</b>			<b>67.80%</b>										

Box Intervals

Box Number	From	To	Interval	Comments
1	14.9	18.98	4.08	
2	18.98	22.61	3.63	
3	22.61	26.33	3.72	
4	26.33	30	3.67	
5	30	34.07	4.07	
6	34.07	38.3	4.23	
7	38.3	42.36	4.06	
8	42.36	45.95	3.59	
9	45.95	49.66	3.71	
10	49.66	53.4	3.74	
11	53.4	57.38	3.98	
12	57.38	61.46	4.08	
13	61.46	65.48	4.02	
14	65.48	69.41	3.93	
15	69.41	73.31	3.9	
16	73.31	77.43	4.12	
17	77.43	81.35	3.92	
18	81.35	85.39	4.04	
19	85.39	89.55	4.16	
20	89.55	93.6	4.05	
21	93.6	97.77	4.17	
22	97.77	102.03	4.26	
23	102.03	106.4	4.37	
24	106.4	110.51	4.11	
25	110.51	114.85	4.34	
26	114.85	118.67	3.82	
27	118.67	122.35	3.68	
28	122.35	126.32	3.97	
29	126.32	130.33	4.01	
30	130.33	134.45	4.12	
31	134.45	138.55	4.1	
32	138.55	142.74	4.19	
33	142.74	147	4.26	
34	147	151.35	4.35	
35	151.35	155.55	4.2	
36	155.55	159.76	4.21	
37	159.76	162	2.24	EOH

Magnetic Susceptibility

Depth (m)	MS, $\chi$ (1 KHz)	Depth (m)	MS, $\chi$ (1 KHz)	Depth (m)	MS, $\chi$ (1 KHz)
15	0.02	65.5	0.49	116	0
15.5	0.42	66	0.49	116.5	0
16	0.2	66.5	1.04	117	0
16.5	28.1	67	0.15	117.5	0
17	3.38	67.5	5.13	118	0
17.5	1.17	68	20	118.5	0
18	0.27	68.5	39.1	119	0
18.5	0.95	69	45.3	119.5	0.13
19	1.15	69.5	62.4	120	0
19.5	0	70	97.8	120.5	0
20	0.09	70.5	0.29	121	0
20.5	0.04	71	0.49	121.5	0
21	0.15	71.5	1.06	122	0
21.5	0.2	72	0.64	122.5	0
22	0.07	72.5	3.45	123	0
22.5	0.11	73	24.9	123.5	0.07
23	0	73.5	2.48	124	0
23.5	0	74	9.05	124.5	0
24	0	74.5	68.1	125	0.04
24.5	0.18	75	112	125.5	0
25	0.07	75.5	7.12	126	0
25.5	0.33	76	8.01	126.5	0
26	0	76.5	1.26	127	0
26.5	0.11	77	1.08	127.5	0
27	0.04	77.5	2.21	128	0
27.5	0.09	78	1.55	128.5	0
28	0.04	78.5	2.17	129	0
28.5	0.11	79	180	129.5	0
29	0.09	79.5	98.1	130	0
29.5	0.09	80	39.2	130.5	0
30	0.04	80.5	40.4	131	0
30.5	0	81	114	131.5	0.24
31	0.29	81.5	10.7	132	0
31.5	0.09	82	1.39	132.5	3.41
32	73.6	82.5	0.24	133	0.31
32.5	72.2	83	0.53	133.5	0.33
33	41.2	83.5	1.84	134	139
33.5	0.27	84	16.9	134.5	127
34	15.6	84.5	37.7	135	2.57
34.5	47.1	85	18.6	135.5	475
35	18.7	85.5	55.1	136	243
35.5	0.77	86	3.56	136.5	4.49
36	0.09	86.5	1.48	137	197
36.5	0	87	11	137.5	4.14
37	0	87.5	31.4	138	146
37.5	0.18	88	4.6	138.5	0.51
38	0	88.5	1.59	139	0.2
38.5	0	89	1.08	139.5	0.27
39	0	89.5	37.5	140	0.18
39.5	0	90	30.6	140.5	0.24
40	0	90.5	31.8	141	0.2
40.5	0.71	91	34.3	141.5	0
41	1.3	91.5	19.7	142	0.27
41.5	0.82	92	1.11	142.5	1.31
42	1.15	92.5	2.19	143	3.08
42.5	1.17	93	5.4	143.5	1.61
43	0.51	93.5	4.45	144	0.29
43.5	0.18	94	26.1	144.5	0.51
44	2.9	94.5	1.88	145	0.69
44.5	0.31	95	4.09	145.5	0.75
45	0.27	95.5	34.9	146	0.33
45.5	0.29	96	1.75	146.5	0.93
46	1.97	96.5	18.8	147	0.31
46.5	0.44	97	5.47	147.5	1.79
47	0.35	97.5	33.4	148	3.19
47.5	2.41	98	54.9	148.5	0.24
48	0.49	98.5	15.7	149	0.31
48.5	0.75	99	31.2	149.5	0.31
49	0.2	99.5	12.8	150	0.62
49.5	2.98	100	13.7	150.5	0.33
50	0.4	100.5	4.87	151	0.33
50.5	0.51	101	4.05	151.5	0.07
51	0.4	101.5	30.9	152	0.02
51.5	29.8	102	0.89	152.5	0.49
52	0.31	102.5	0.64	153	0.29
52.5	0.15	103	15	153.5	0.38
53	0.69	103.5	1.5	154	0.4
53.5	0.31	104	7.48	154.5	1.35
54	0.55	104.5	0.8	155	18.6
54.5	0.71	105	2.12	155.5	4.69
55	0.27	105.5	3.21	156	1.11
55.5	0.42	106	7.92	156.5	2.17
56	0.57	106.5	70.7	157	1.88
56.5	0.64	107	11.3	157.5	1.7
57	0.84	107.5	14.4	158	1.5
57.5	0.15	108	0.29	158.5	0.04
58	0.4	108.5	2.9	159	0.93
58.5	0.53	109	0.44	159.5	39.8
59	0.55	109.5	0.07	160	3.63
59.5	0.18	110	0.02	160.5	1.24
60	0.35	110.5	0.07	161	2.94
60.5	0.62	111	3.5	161.5	1.08
61	0.75	111.5	0.07	162	0.71
61.5	1.11	112	0.15		
62	0.35	112.5	0		
62.5	0.46	113	0		
63	0.6	113.5	3.05		
63.5	0.93	114	0.15		
64	0.97	114.5	0.29		
64.5	0.15	115	0.4		
65	0.2	115.5	0.13		

EOH





## Alteration

From (m)	To (m)	Alt Min 1 Type	Alt Min 1 Intensity	Alt Min 1 Texture	Alt Min 2 Type	Alt Min 2 Intensity	Alt Min 2 Texture	Alt Min 3 Type	Alt Min 3 Intensity	Alt Min 3 Texture	Alt Other Type	Alt Other Intensity	Alt Other Texture	Comments
15	16.34	chl	1	iff										
16.34	16.9	chl	1	pe										
16.9	19.9	chl	1	iff										
19.9	21.1	chl	1	iff	kf	1	pe							
21.1	25.35	chl	1	iff										
25.35	25.91	chl	1	pe	cb	1	pa							
25.91	31.45	sil	1	pe	cb	1	pa	chl	1	iff				
31.45	31.89	cb	3	iff										
31.89	32.79	ep	2	pa	cb	2	iff							
32.79	33.33	cb	1	iff										
33.33	33.91	chl	1	sv	cb	1	pe							around carb veins
33.91	35.79	cb	1	iff	cb	1	pe							
40.42	43.8	kf	1	iff	chl	1	iff	cb	1	pe				
43.8	45.11	kf	1	iff	kf	1	pe	chl	1	iff				
45.11	49.07	chl	1	iff										
49.07	49.94	bt	2	pe	chl	2	pe	cb	1	iff				
49.94	51.34	chl	1	iff	sil	1	pe							
51.34	52.37	bt	2	pe	chl	2	pe	cb	1	iff				
52.37	52.9	sil	1	pe	chl	1	iff							
52.9	53.1	bt	2	pe	chl	2	pe	cb	1	iff				
53.1	53.4	sil	1	pe	chl	1	iff							
53.7	56.56	sil	1	pe	chl	1	iff							
57.32	62	sil	2	pe	chl	2	iff	cb	1	iff				
62.23	65.79	sil	2	pe	chl	2	iff	cb	1	iff				
66.34	67.1	sil	1	pe	chl	1	iff							
67.1	68.23	chl	1	iff	cb	1	pa							
68.23	68.3	ser	1	pa										
68.3	68.52	ble	2	sv										Possible albite halo around down dip quartz vein cutting the dyke
68.52	70.15	ep	2	pa										patchy to banded locally
70.15	70.42	chl	1	iff										
70.42	70.8	ble	2	sv										Possible albite halo around down dip quartz veins
70.8	72.49	kf	1	pa	chl	1	iff							
72.49	73.06	ep	1	pa	cb	2	pa	hem	1	sv				Hem vs kspar thin along cal vn selvages
73.06	74.14	kf	1	pa	chl	1	iff							
74.14	74.3	cb	2	pa										
74.3	76.11	ep	2	ba										Strong Fe-carb spatially associated w/ epi bands
76.11	78.3	chl	1	iff										
78.3	81.53	ep	2	ba										Locally strong fe-carb spatially associated w/ epi bands
81.53	84.17	kf	1	pa										weak to absent
84.17	87.2	ep	1	pa	chl	1	iff							
89.12	91.6	ep	2	pa										Locally strong fe-carb spatially associated w/ epi bands
91.6	95.87	ep	1	pa	cb	1	pa							weak bands in 2b
95.87	102.6	ep	2	pa										Locally strong fe-carb spatially associated w/ epi bands
103.59	103.74	kf	2	sv										Overprinting host diorite. Appears as halo to hairline down dip fractures
103.74	106.3	ep	1	pa										
108.1	108.52	kf	1	pa										
108.52	109.1	kf	2	pa										
109.1	117.69	kf	1	pa										
117.69	117.89	chl	1	ba	ble	1	ba							
119.8	123.7	sil	1	pe										weak silica overprint
123.7	124.95	sil	2	pe										moderate silica overprint, appears to be related to an increase in vein %
124.95	125.46	sil	1	pe										
125.46	126.75	sil	2	pe										
126.75	129.7	sil	1	iff	chl	1	iff							
129.7	130.93	sil	2	pe	cb	1	iff							
130.93	131.3	kf	1	pe	cb	1	iff							
131.3	131.88	kf	2	pe	cb	1	iff							
131.88	132.23	kf	1	pe										
132.23	132.74	kf	2	pe	cb	1	iff							

From (m)	To (m)	Alt Min 1 Type	Alt Min 1 Intensity	Alt Min 1 Texture	Alt Min 2 Type	Alt Min 2 Intensity	Alt Min 2 Texture	Alt Min 3 Type	Alt Min 3 Intensity	Alt Min 3 Texture	Alt Other Type	Alt Other Intensity	Alt Other Texture	Comments
132.74	135.3	cb	1	iff	chl	1	iff							
135.3	136.7	ble	1	ba	cb	1	iff							
136.7	139.94	ble	2	ba	cb	1	iff							
139.94	141.94	ble	1	iff	cb	1	iff							
141.94	158.10	cb	1	iff										fracture-fill carbonate alteration
158.66	162	cb	1	iff										very weak fracture-fill carbonate alteration



Structural Intervals

From (m)	To (m)	Structure	Intensity	Comments
69.93	70.07	ftg	3	Section of pillowed mafic volcanic preserving clay-cal rich gouge (flt?), gouge represents about 40% of the interval
79	80.04	fcs	1	Series of hairline fractures (10/m), continuous and cutting penetrative S2 fabric, fractures cut and are cut by later quartz-veins, @15-25 TCA, localized cal fill +/- chl
87.2	87.3	ftg	3	Section exposes clay-cal rich gouge parallel to and cross-cutting fabric. Makes up 25% of the interval
133.74	141.94	S2	2	Weak to moderate foliation defined by a spaced cleavage, fracture sets and flattened grains. Volcanics below this interval contains very little - no foliation

## Structural Measurements

Depth (m)	Structure	Intensity	Alpha	Beta	Gamma	Strike/Trend	Dip/Plunge	Dip Direction	Comment
16.34	gcu	1	29						
16.8	S2	2	33						
16.9	gc		34						Sharp contact
18.3	fr	1	23						Pyrite-fill fracture that crosscuts vein
18.32	QZV	1	44						
19.44	S2	1	41						Foliation + quartz vein
19.62	fr	1	34						Conjugate fracture
19.63	fr	1	42						Conjugate fracture
19.95	fr	1	19						Chlorite-fill fracture
21.7	S2	2	32						
25.35	gc		35						Sharp contact
25.38	QZV	2	35						
25.65	S2	2	38						
25.91	gc		46						
27.2	gc		27						Minor 2a; sharp contact
27.36	gc		30						Minor 2a; sharp contact
28	QZV	1	43						
29.15	S2	1	45						
31.45	gc		34						Sharp Contact
31.77	gc		45						Minor 2a - sharp contact
33	QCV	2	33						long limb of folded QCV
33.1	QCV	2	56						
33.33	gc		69						sharp intrusive contact
33.6	CAV	2	48						CAV rimmed with chl
33.91	gc		67						sharp intrusive contact
34.3	S2	2	58						spaced cleavage + mm-thick veins
34.03	QCV	1	58						
35.69	S2	2	50						spaced cleavage + flattening of possible volcanoclastic fragments + S0
35.79	gc		76						sharp intrusive contact
36.85	S2	2	52						spaced cleavage
37.9	S2	1	43						spaced cleavage + fracture set orientation
40.2	S2	1	58						fracture set orientation
40.7	QZV	1	53						conjugate vein
40.71	QZV	1	25						conjugate vein
41.6	QZV	1	44						massive vein
43.15	QZV	1	49						
47.1	S2	1	37						weak spaced cleavage
49.07	gc		44						sharp contact
49.2	S2	3	27						strong spaced cleavage + veinlets
50.45	QZV	2	27						weakly folded
51.45	QZV	2	35						pinch and swell quartz vein ("string of pearls texture").
51.46	S2	3	37						strong spaced cleavage
51.7	S2	3	34						strong spaced cleavage
52	QCV	2	12						boudinaged QCV (clipped by drill hole, so dips in both directions)
52.37	gc		30						moderately sheared contact
53.7	QZV	3	37						massive quartz vein with blue-grey mineral
54.51	QZV	3	10						Core axis // quartz vein that dips in both directions. Cross-cuts earlier blue-grey veins
54.75	QZV	2	42						earlier blue-grey quartz vein
55.1	QZV	1	11						smoky grey vein
56.56	QZV	3	28						upper contact of 16a - massive quartz vein with blue-grey mineral
57.32	QZV	3	12						lower contact of 16a - massive quartz vein with blue-grey mineral
57.7	S2	1	26						weak spaced cleavage
61	QZV	1	38						smoky grey vein - mineralized
62	QZV	3	21						massive quartz vein with blue-grey mineral
62.23	QZV	3	18						massive quartz vein with blue-grey mineral
65.3	fcs	1	22						Fracture set with quartz+chlorite+pyrite fill
65.79	QZV	3	22						massive quartz vein with blue-grey mineral
66.44	QZV	1	37						Blue-grey QZV that is cross-cut by massive veins
67.1	gc	1	46						sharp contact
67.48	S2	2	45						weak to moderately developed fabric obscured by calcite fracture fill network
68.3	gc	1	80						
68.52	gc	1	49						
68.82	S2	2	37						moderately to strongly developed fabric
69.93	ftg	3	60						clay-cal gouge
70.02	ftg	3	58						clay-cal gouge sub-parallel to wallrock foliation
70.28	S2	2	75						moderately developed fabric, possible patchy ser (brown overprint)
72.49	gc		47						
72.94	S2	2	43						Moderately developed fabric in 2b cut by network of fractures
73.06	gc		51						
74.14	gc		41						
74.3	S2	2	35						moderately developed fabric, mm-scale bands, lclly epi-fe-carb bands deformed
75.72	S2	2	44						moderately developed fabric, mm-scale bands, lclly epi-fe-carb bands deformed (ptygmatic), cut by late qtz-veins in places
76.62	S2	2	38						moderate to strongly developed fabric, alternating light and dark bands in 2b, stretched py along foliation not uncommon
78.3	S2	2	47						moderately developed fabric, deformed Fe-carb-epi bands not uncommon
79.1	fcs	1	19						hairline fractures cutting foliated 2b
81.15	S2	2	34						moderately developed fabric punctuated by light and dark bands, mm-spaced, Fe-carb-epi bands boudinaged/deformed by the fabric with possible clockwise (apparent dextral) deformation sense defined by rotated Fe-carb clast (PHOTO); or by the pressure shadows around the clast
81.53	gc		57						
81.97	S2	1	39						weakly developed fabric in 10 defined by biotite alignment, cut by late quartz-veins (@55 TCA)
82.1	S2	1	45						weakly developed fabric defined by biotite alignment

Depth (m)	Structure	Intensity	Alpha	Beta	Gamma	Strike/Trend	Dip/Plunge	Dip Direction	Comment
83.66	S2	1	46						weakly developed fabric in intrusive, defined by biotite alignment exposed over 17cm, cut by late, white quartz-veins (having pink selvages)
84.17	gc		57						
84.47	S2	2	42						well developed fabric, alternating light and dark bands (lcl epi alt), cut by network of hairline calcite veinlets
86.15	S2	2	53						Well developed fabric in mafics
87.2	ftg	3	62						clay-cal rich, fabric //
87.3	ftg	3	38						clay-cal rich, x-cuts fabric
89.8	S2	2	42						moderately developed fabric, mm-spaced cut by late hairline fractures (@28 TCA)
92.91	S2	1	42						weak to moderately developed fabric - less intense than up the hole
96.68	S2	2	34						well developed fabric, boudinaged bands preserved downhole from measurement
101.38	S2	2	28	342		71.9	79.1	161.9	No confidence in line/mark quality for this measurement
101.82	S2	2	33	336		68.0	85.2	158.0	well developed fabric exposed uphole and downhole
102.4	S2	2	27	344		73.5	77.8	163.5	No confidence in line/mark quality for this measurement
103.42	S2	2	38	324		240.4	86.9	330.4	No confidence in line/mark quality for this measurement
103.59	gcu		44	317		238.1	79.3	328.1	upper contact of intrusive dyke; no confidence in line/mark quality for this oriented run
103.74	gcl		42	21		283.5	86.7	13.5	lower contact of intrusive dyke; no confidence in line/mark quality for this oriented run
105.35	S2	2	23						well developed fabric in mafic volcanic, banded
107.76	gc		34						
108.84	S2	1	35						weakly developed fabric exposed in porphyry defined by alignment of biotite
109.75	gc		52						
110.56	gc		24						
111.04	QCV	1	74						
111.28	QCV	1	38						
114.73	QCV	1	34						
116.5	QCV	1	39						
117.69	gc		46						
117.75	S2	2	38						
117.89	gc		37						
120.6	QCV	1	76						
121.78	QCV	1	82						
122.11	QCV	1	79						
123.77	QCV	1	83						blue-grey vein that is cross-cut and offset by a fracture
123.78	fr	2	57						Fracture that cuts and displaces a quartz vein. Apparent dextral displacement along fracture
123.85	QCV	1	83						
124.35	QCV	1	39						
124.5	QCV	1	28						
127.54	S2	1	56						spaced cleavage
127.88	QCV	1	73						
130.05	fcs	2	32						
132.12	QZV	1	56						
133.74	gc		35						
133.98	QZV	1	54						
134.35	CAV	2	42						"wormy" carbonate veins (dominant orientation)
134.95	gc		41						dyke contact
136.48	fcs	2	8						Stacked fracture set, sub-parallel TCA
136.7	S2	2	36						
140.25	S2	1	32						
140.75	fr	1	21						conjugate fracture - contains carbonate fracture-fill
140.76	fr	1	26						conjugate fracture - contains carbonate fracture-fill
143.7	fr	1	9						low angle fracture set - filled with beige mineral
143.85	fr	1	39						fracture set - filled with beige mineral
146.3	ab	1	27	280		203.2	75.8	293.2	Band defined by pyrite, carb, and light-colouration. Possible pillow selvage.
146.62	ab	2	56	6		271.5	74.4	1.5	Band defined by pyrite, carb, and light-colouration. Possible pillow selvage.
147	fr	1	30	98		342.8	62.7	72.8	fracture, locally brecciated, filled with beige mineral + carb
147.14	cv	1	23	96		346.9	68.9	76.9	carb+qtz veinlet
147.24	S2	1	13	280		194.0	86.5	284.0	very weak foliation (?) - defined by a weak spaced cleavage
147.5	ab	1	43	288		219.5	68.2	309.5	chlorite-rich band independent of a vein (possible pillow feature)
147.61	fr	2	37	292		217.9	74.7	307.9	fracture set, locally brecciated, filled with beige mineral + carb
147.8	fd	2	56	132		326.6	29.2	56.6	Core-scale asymmetric fold long limb
147.81	fd	2	24	129		11.7	46.9	101.7	Core-scale asymmetric fold short limb
147.82	fd	2	61	141		315.3	24.5	45.3	Core-scale asymmetric fold long limb
147.821	fas	1	88	318		266.1	42.0	356.1	Inferred axial plane
147.9	fr	1	41	28		288.9	86.2	18.9	weak fracture with calcite
148.52	QZV	1	67	72		296.4	51.6	26.4	blue-grey quartz veinlet - crosscut and truncated by a carb filled fracture
148.54	fr	1	29	37		119.9	85.1	209.9	fracture with carb+qtz fill
148.74	QZV	1	65	121		308.6	33.9	38.6	blue-grey quartz veinlet - crosscut and truncated by a carb filled fracture
148.76	fr	1	39	286		215.5	70.2	305.5	fracture with carb+qtz fill
148.9	fr	1	61	248		221.8	38.5	311.8	fracture with carb+qtz fill that cross-cuts a pinch & swell blue-grey qtz vein
149.1	ab	2	28	72		326.7	79.7	56.7	bleached halo - possible pillow selvage
150.4	cv	2	27	359		87.1	76.5	177.1	Weakly brecciated carb vein + bleached halo
150.54	fr	1	47	126		340.9	35.3	70.9	fracture filled with beige mineral + carb
151.8	cv	2	32	14		100.0	82.4	190.0	massive, 1 cm thick CV
152.53	fr	1	31	85		333.4	69.9	63.4	fracture with carb+qtz fill
153.5	QZV	2	29						blue-grey quartz veinlet - crosscut and truncated by a carb filled fracture
154.8	ab	1	66						alternating bleached and non-bleached bands (possible primary features)
156.3	QZV	1	38						quartz veinlet
157.9	fr	1	11						stacked fracture set (sub-parallel TCA)
158.1	gc		68						
158.3	QZV	1	14						blue-grey quartz veinlet
158.6	QZV	1	47						blue-grey quartz veinlet
161.85	QZV	1	32						fracture-fill with quartz (2mm thick)









Surveys

Hole #	Date Measured	Shift	Depth (m)	Azimuth	Corrected Azimuth	Dip	Magnetic Field	Dev	Temp (deg C)	Comments
LXB20-001	3-Dec-12		36.0	189.71	178.06	-49.59	54400	74.15		
LXB20-001	4-Dec-12	D	87.0	190.22	178.57	-49.65	56674	72.48		
LXB20-001	4-Dec-12	N	138.0	174.94	163.29	-49.49				Possible tool error
LXB20-001	4-Dec-12		162.0	189.71	178.06	-49.48	55818	72.83		







Box Intervals

Box Number	From	To	Interval	Comments
1	14.68	17.46	2.78	
2	17.46	21.65	4.19	
3	21.65	25.85	4.2	
4	25.85	30.02	4.17	
5	30.02	34.21	4.19	
6	34.21	38.38	4.17	
7	38.38	42.7	4.32	
8	42.7	46.94	4.24	
9	46.94	51.2	4.26	
10	51.2	55.44	4.24	
11	55.44	59.54	4.1	
12	59.54	63.68	4.14	
13	63.68	67.69	4.01	
14	67.69	71.84	4.15	
15	71.84	75.26	3.42	
16	75.26	79.12	3.86	
17	79.12	83.44	4.32	
18	83.44	87.77	4.33	
19	87.77	91.44	3.67	
20	91.44	94.91	3.47	
21	94.91	98.72	3.81	
22	98.72	102.6	3.88	
23	102.6	106.33	3.73	
24	106.33	110.1	3.77	
25	110.1	113.98	3.88	
26	113.98	117.88	3.9	
27	117.88	121.75	3.87	
28	121.75	125.69	3.94	
29	125.69	129.73	4.04	
30	129.73	133.57	3.84	
31	133.57	137.57	4	
32	137.57	142.1	4.53	2ft lost core in this box
33	142.1	145.6	3.5	
34	145.6	149.13	3.53	
35	149.13	153.02	3.89	
36	153.02	157	3.98	
37	157	161.1	4.1	
38	161.1	165.16	4.06	
39	165.16	169.27	4.11	
40	169.27	173.34	4.07	
41	173.34	177.36	4.02	
42	177.36	181.44	4.08	
43	181.44	185.58	4.14	
44	185.58	189.28	3.7	
45	189.28	193.34	4.06	
46	193.34	197.3	3.96	
47	197.3	200.89	3.59	
48	200.89	204.93	4.04	
49	204.93	208.72	3.79	
50	208.72	212.25	3.53	
51	212.25	216.22	3.97	
52	216.22	220.33	4.11	
53	220.33	224.46	4.13	
54	224.46	228.5	4.04	
55	228.5	232.59	4.09	
56	232.59	236.83	4.24	
57	236.83	241.05	4.22	
58	241.05	245.2	4.15	
59	245.2	249.15	3.95	
60	249.15	253	3.85	
61	253	257.1	4.1	
62	257.1	261.17	4.07	
63	261.17	265.25	4.08	
64	265.25	269.43	4.18	
65	269.43	273.76	4.33	
66	273.76	278.07	4.31	
67	278.07	282.23	4.16	
68	282.23	286.59	4.36	
69	286.59	290.9	4.31	
70	290.9	295.25	4.35	
71	295.25	299.26	4.01	
72	299.26	303.44	4.18	
73	303.44	307.85	4.41	
74	307.85	312.17	4.32	
75	312.17	316.5	4.33	
76	316.5	320.7	4.2	
77	320.7	324	3.3	EOH











From (m)	To (m)	Min 1 Type	Min 1 Texture	Min 1 %	Min 2 Type 1	Min 2 Texture	Min 2 %	Min 3 Type 1	Min 3 Texture	Min 3 %	Min Other	Min Other Texture	Min Other %	Comments
205.97	213.63	py	do	3	py	if	2							
213.63	215.14	py	if	1										
215.14	219.42	py	if	1	py	do	2							
219.42	221.81	py	do	3	py	if	2							fg py filling between xtals of the matrix as well as along fractures, sporadic stringers not uncommon (aggregates of py in discontinuous fractures)
221.81	224.84	py	if	2										fg-mg aggregates along fractures, sporadically distributed
224.84	229.29	py	do	0.75	py	if	0.5							isolated fractures hosting up to 1% py (@75 TCA)
229.29	231.7	py	if	1										
231.7	236.4	py	do	0.25										
236.4	238.04	py	if	1										1-2% fg-mg filling fractures in mafic volcanics
238.04	238.67	py	if	3										py also disseminated in minor intermediate dyke from 238.04-238.20m
238.67	241.4	py	if	0.5										
241.4	242.28	py	if	2										
242.28	244.46	py	do	0.5	py	if	0.5							
244.46	247.06	py	if	1										
247.06	255.27	py	do	3	py	if	1							2-5% fg py throughout host, filling between grains of the matrix +/- bio; fg py also filling fractures (lcl series of fractures @70TCA) + chl
255.27	260.98	py	if	5	py	do	5							fg-mg py disseminated throughout the interval up to 10% (and 15% in minor mafic segments); also hosted in variably oriented fractures from 30-60 TCA; rare mafic clots hosting 3-5% fg py
260.98	262.2	py	do	10	py	bl	5							5-15% fg-mg py, filling along and deformed by S2 fabric (blebby appearance), mg-cg py more disseminated in the interval with the highest concentration between 261.70-262.20m
262.2	263.12	py	do	2	py	in	3							py 5-10%, fg, irregular to cubic shaped disseminated throughout, in pits and micro fractures in wallrock as well as in late fractures + chl
263.12	264.48	py	ba	5	py	do	1							5-10% fg-mg py forming bands/stringers // to S2
264.48	265.14	py	ba	5										3-5% fg-mg py forming bands, py irregular shaped
265.14	266.9	py	ba	1	py	do	1							fg pyrite forming parallel to weakening S2 fabric as well as disseminated in the wallrock
266.9	269.29	py	do	1										fg-mg py 1-2% decreasing down the hole to trace levels
269.29	279.6	py	bl	1	po	bl	0.5							blebby to massive py +/- po along pillow margins. Fg diss py <1% through unit
279.6	295.5	py	do	0.5										weaker py, fg to small blebs, diss through unit
295.5	299	py	sr	1	po	do	0.1							1-2% py associated with qtz/carb str. Minor po towards end, disseminated and blebby <1%.
299	308.7	po		5	py		3	cp	bl	0.5				po/py +/- cp forming along pillow margins massive- blebby. Blebby py through out unit, patchy.
308.7	324	py	bl	0.5	po	bl	0.1							blebby py concentrated near pillow margins and w/in chl str, min is patchy through remainder of unit. Po is blebby, along pillow margins elongated and oriented to margin

Structural Intervals

From (m)	To (m)	Structure	Intensity	Comments
16.33	17.15	S2	2	moderately developed fabric, py xtals forming bands // to foliation, lighter coloured wall rock w/ biotite altered bands
18.6	19.97	S2	2	weak to moderately developed fabric punctuated by elongate/deformed lapilli
67.53	72.34	S2	2	weak to strongly developed shear fabric w/ the strongest segment from 71.78-72.34m; localized flattening of vesicles
78.01	79.12	S2	2	moderate to strongly developed fabric, patchy ser alteration, disseminated py (lclly stretched), finely banded in places, intensity decreases away from upper contact; includes fragments of massive quartz-vein (fabric wrapping around vein)
84.4	87.46	S2	1	overall weak fabric with localized moderately developed zones from 87.11-87.46m; strong biotite overprint +/- fg py fill, cut by late quartz-veins
109.18	109.76	fcs	2	series of sub-parallel hairline to mm-scale, chl filled fractures +/- py cutting altered diorite
110.1	140.76	QZV	1	1% quartz-veins both between 20-30 TCA and 40-60 TCA, broadly spaced w/ red selvages; the second domain seems to cut the downdip veins;dull grey veins offset locally by late hairline fractures filled with chl
140.76	146.32	QZV	3	~5-10% quartz-veins, downdip (20-30 TCA), as well as 40-80 TCA veins, conjugate veins locally, domain two seems to cut the downdip veins; all veins offset by late hairline fractures
146.32	146.66	shz	2	Moderate to strongly developed fabric, rounded to flattened feldspars, fg py along S2
146.66	153.5	QZV	3	~10-15% quartz-veins: domain 1 (20-30 TCA) and domain 2 (40-80 TCA, largely between 40-60 TCA); all veins cut by hairline fractures filled with chl-py
157.12	178.2	QZV	3	10-15% quartz-veins, milimetric to 4cm thick, closely spaced becoming more broadly spaced over the final 2m, dull-grey, white, laminated (dominantly between 39-59 TCA); offset by late chl-py filled fractures; lclly 0-20 TCA veins present (discontinuously) and are cut and cut the dominant vein orientations; veins cut all alteration intensities
184.15	184.7	shz	1	overall weak shear however margins have a well developed fabric (ser altered) w/ S2 - 65-66; similar to 146.32-146.66m, primary textures all but overprinted w/ silica, strong fracturing with chl-py
184.7	203.94	QZV	1	vein density dropped off to ~1-2%, average vein orientation between 30-45 TCA; broadly spaced
213.68	221.18	QZV	2	~5-10% quartz-veins, white, with several near core axis parallel veins exposed from 217.97-220.03m; vein orientations range from 19-45 TCA (dominantly between 19-26 TCA), and are up to 1.1cm thick
255.27	255.6	S2	2	moderately to strongly developed fabric in minor mafic within a broad intermediate intrusive unit (S2 - 60 TCA)
260.98	266.88	S2	2	moderate to strongly developed fabric within the mafic units > intermediate intrusives weakening down the hole from 266.58-266.88m then the unit becomes more massive to pillowed

## Structural Measurements

Depth (m)	Structure	Intensity	Alpha	Beta	Gamma	Strike/Trend	Dip/Plunge	Dip Direction	Comment
16.5	S2	2	79						moderately developed fabric in biotite altered mafic volcanic host
18.6	gc		66						
19.75	S2	2	72						weak to moderately developed fabric in lapilli tuff
26.56	gc		61						
31.38	gc		73						
32.65	gc		81						
36.8	QCV	2	68	252					white-grey, 1-2% fg py along uphole margins
39.5	QZV	2	31	270					semi-continuous white qtz-vein
40.48	QZV	2	54	264					white-translucent w/ 2% fg-mg py filling fractures and along the selvages
44.69	gc		66						
46.25	QZV	2	21	180					Part of a vein set from 45.30-46.33m
47.81	gc		65	185					
47.92	S2	1	55	185					weakly developed fabric, fg py locally stretched by the foliation
52.05	S2	1	46						weakly developed fabric in xtu
57.74	S2	1	59						
58.44	gc		76						
58.45	ftg	2	76						chl rich fault gouge emplaced at contact
58.71	S2	2	63						moderately developed foliation fabric highlighted by deformed calcite stringers
59.27	S2	1	78						weak to moderate fabric in altered pillowed volcanics
60.62	S2	1	75						weak to moderate fabric in altered pillowed volcanics
62.49	S2	1	79						weak to moderate fabric in altered pillowed volcanics
67.61	S2	1	66						
69.6	S2	1	25						
72.09	S2	2	81						well developed, mm-spaced fabric approaching contact with intrusive downhole, patchy ser downhole
72.34	gc		65						
77.69	fr	3	36	165	240				quartz rich fracture plane hosts aggregates of mg py, as well as excises a slip surface; inferred bottom of core
78.01	gc		67						
78.65	S2	2	62						
84.45	S2	2	63						
85.14	S2	2	57						
87.21	S2	2	65						
87.71	gcu		42						sharp upper contact of intermediate intrusive
88.15	gcl		78						sharp lower contact of intermediate intrusive
89.1	S2	1	68						
90.91	QZV		51						ksapr along vein selvage
92.37	QZV		36						
94.7	QZV		53						
95.35	QZV		52						
99.81	fcs	2	56						series of parallel chlorite filled fractures (possible foliation fabric), host rock having 3-5% fg py
104.3	QZV		0						white-pink qtz-feldspar vein cutting kspar altered host; fg-mg py filling fractures
109.18	fcs	2	40						series of hairline to 2mm fractures cutting altered intermediate intrusive, fractures filled with chlorite +/- py, parallel fractures spaced on the order of 0.5-10cm
115.5	QZV	3	12						
110.2	QZV	3	0						qtz-vein cut by later qtz-vein (54 TCA); vein is continuous but is broken/boundinaged at the downhole end w/ fragments rounded in the host rock
119.66	gcu		36	310					upper contact of late porphyry dyke; no line confidence
119.9	gcl		26	326					lower contact of late porphyry dyke; no line confidence
120.48	QZV	3	19						
121.84	gcl		75						lower contact of mafic xenolith; upper contact is spun
122.02	QZV	3	64						
122.36	QZV	3	55						
124.85	QZV	3	56						continuous qtz-vein that cuts a quartz vein oriented at 21 TCA
126.15	QZV	3	50						dull grey vein xc host
130.16	QZV	3	68						dull grey vein xc host
130.57	QZV	3	51						dull grey vein xc host
133.17	S2	1	30						weak fabric defined by alignment of biotite xtals in the host
134.17	QZV	3	9						near downdip vein xc host
135.84	S2	1	41						weak fabric defined by alignment of biotite xtals in the host possibly overprinting an early ~20 TCA fabric
135.88	S2	1	39						weak fabric defined by alignment of biotite xtals in the host possibly overprinting an early ~20 TCA fabric
135.9	S2	1	27						weak fabric defined by alignment of biotite xtals possibly overprinted by a 39-41 TCA foliation fabric
136.4	QZV	3	43						(137 TCA), dull grey vein, xc host as well as an earlier qtz-vein oriented @45 TCA
138.21	QZV	3	26						pink selvages (kspar) offset by hairline fracture down the axis (apparent dextral sense)
141.28	QZV	3	56						dominant orientation of a dull quartz-vein set w/ kspar selvages cutting host
143.33	QZV	3	34						dull grey vein xc host w/ think kf selvage, cut and offset by hairline fracture + chl and py
146.45	S2	3	56						mm-spaced strong fabric exposed between 146.32-146.66m, includes dislocated w/ deformed quartz-veins as well as weak patchy ser
147.7	QZV	3	29						part of a series of closely spaced, sub-parallel from 147.65-148.24m
149.5	fcs	3	48						exposure of sub-parallel chl-py filled fractures cutting bleached diorite from 149.5-149.75m, fractures 1-2cm apart, cutting early quartz-veins
151	QZV	3	27						thickest exposure of dull white quartz vein, laminated, part of a section with 10-15% sub-parallel veins cutting diorite (0-50 TCA)
156.94	QZV	3	22						dull grey vein, hem vs kspar halo
157.68	QZV	3	39						dull grey, possible hem halo
160.32	QZV	3	69						dull grey, possible hem halo
161.53	QZV	3	42						dull grey, possible hem halo
163.68	QZV	3	53						white-grey, part of a high density set of quartz-veins
166.5	QZV	3	31						dull, white-grey, cuts diorite
169.84	QZV	3	57						dull, white-grey, cuts diorite
172.29	QZV	3	55						cut and offset (apparent right lateral) by a later quartz vein @6 TCA
174.95	QZV	3	49						white, laminated to bx vein

Depth (m)	Structure	Intensity	Alpha	Beta	Gamma	Strike/Trend	Dip/Plunge	Dip Direction	Comment
175.75	QZV	3	56						white, dull grey vein
184.15	S2	3	65						spatially associated w/ ser alteration; well laminated, mm-spaced
184.7	S2	3	66						spatially associated w/ ser alteration; well laminated, mm-spaced
185.8	S2	3	55						mm-spaced, strong fabric, disseminated py +/- cal //, exposed over 7cm
188.25	fr	2	43	92					hairline chl filled fracture, part of a set of parallel fractures exposed down the hole to 184.35m, NO line confidence
192.04	QZV	3	53						dull grey/white, 6mm thick
196.23	S2	2	60						finely laminated, mm-spaced fabric, hosting 1% fg py + weak cb alt; very blocky section of core, relatively unaltered compared to intervals above and below
197.55	QZV	3	16						3mm, continuous qtz vein, typical vein of that domain, cuts host + rare py along selvages
200.36	fr	3	30	32					continuous chl filled fracture cutting altered host; conjugate + sub-parallel fractures appear up and down the hole from 199.80-200.64m; NO LINE CONFIDENCE
202.23	QZV	3	26						typical dull qtz-vein cutting host, 6mm, kspar-hem selvage
214.16	QZV	3	45						typical dull qt-vein cutting host
218.16	QZV	3	21						white, continuous, cut by chlorite filled fractures
220.12	QZV	3	26						
222.89	S2	3	77						strong penetrative fabric from 222.81-223.48m, feldspar xtals of the matrix are weakly flattened and aligned within the fabric
229.29	gc		76						
233.17	gcu		61						upper contact of minor intermediate dyke
233.19	gcl		60						lower contact of minor intermediate dyke
233.46	S2	1	70						weak fabric in mafic volcanics, lclly biotite banded
236.79	S2	1	53						weak to moderate fabric highlighted by flattened and roated vesicles
238.04	gcu		65						upper contact of moderately altered intermediate dyke (lower contact is broken/spun)
238.67	gc		45						
238.8	QZV	3	64						white-translucent vein cutting intermediate intrusive as well as low angle vein
238.88	QZV	3	19						white-translucent qtz-vein cutting intermediate intrusive, is cut by previous entry as well as chl-py filled fracture
239.05	QZV	3	46						white-translucent qtz-vein cutting intermediate intrusive
239.22	gc		43						
239.8	gc		54						
240.17	QZV	3	10						semi-continuous, white-translucent vein cutting intermediate intrusive from 239.90-240.29m
242.27	gc		54						
244.46	gc		22						
246.43	gcu		40						upper contact of an intermediated dyke from 246.43-246.47m
246.62	gcu		44						upper contact of an intermediated dyke from 246.62-246.69m
247.06	gc		40						
253.46	fr	2	70						discontinuous hairline fracture filled with fg py, part of a fracture set from 253.44-253.49m spaced on the order of 2cm
253.76	fr	2	65						discontinuous fracture filled with chl/py
254.18	fr	2	45						chl filled fracture cutting host
254.4	QZV	3	45						discontinuous qtz-vein cutting diorite
255.3	S2	1	60						
255.91	S2	2	61						
256.9	S2	1	46						series of parallel fractures hosting deformed fg py
257.58	S2	1	50						weak fabric in minor mafic volcanic unit within a broad intermediate intrusive
258.47	S2	2	73						
259.52	fcs	1	46						series of hairline fractures w/ chl-py from 259.49-259.56m
260.98	gc		78						
261.09	S2	1	67						weakly developed fabric in mafic unit, with the intensity picking up down the hole (includes boudinaged quartz-veins)
262.2	gc		77						
263.12	gc		47						
263.28	S2	2	63	324					No line confidence, measured off line extended back from 264m block (no lock)
263.76	S2	2	47	345					No line confidence, measured off line extended back from 264m block (no lock)
264.14	S2	2	60	346					No line confidence, measure off line extended forward from 264m block; hosts aggregates of fg py forming a stringer
264.48	gc		75						
264.9	S2	2	58						
265.14	gc		55						
265.2	S2	3	67						
265.5	QZV	3	85						qtz vein, broken contact, with kspar-hem
265.6	S2	2	63						weaker foliation to prev starting at ctc of qtz vein.
265.9	S2	3	63						same fol as prev, intensifying up to 266.9
270.7	QZV	3	70						qtz vein, with minor chl clasts included
276.45	QZV	3	76						qtz str, massive, clear margins
279.25	sr	2	60	33					qtz/cav vein, w/ biotite banding, weak margins
279.67	sr	3	52	33					cav vein 1-2mm wide strong margins, low confidence line extended over
280.3	ab	2	49	19					biotite banding at pillow margin, minor carb/qtz 5cm wide, low confidence line extended over
287.79									
291.73	QZV	3	32						white qz vein, 3mm wide
293.9	sr	3	38	120					white qtz sr 2 mm wide. Low confidence
294.3	sr	3	43	20					low confidence line extended over. Qt/py sr
297.44	sr	3	33						carb str, 30 tca, 1-2mm thick, high intensity over 1.8 m
305.9	QCV	3	69						milky-cream qt-crb vein, chl in between cleav. 1% diss py
311.21	vei	2	57						mass. Po/cpy vein, broken with po whisps 1-2cm surrounding.
312.73	QCV	2	73						frav vein, smoky grey qtz, 1-2% diss py
314.46	vei	1	70						po/py +/- cp vein along edge of biotite band of alt.
315.96	cav	3	39						fracture filled cav vein, can see xl formation
320.9	s1	2	60						moderate fol 5-10 cm before getting weak again









Surveys

Hole #	Date Measured	Shift	Depth (m)	Azimuth	Corrected Azimuth	Dip	Magnetic Field	Dev
LXB20-002	10-12-2020	N	21.0	193.62	181.97	-51.21	55701	74.02
LXB20-002	11-12-2020	N	72.0	194.36	182.71	-51.92	55360	73.25
LXB20-002	11-12-2020	D	123.0	193.52	181.87	-51.85	55343	73.63
LXB20-002	12-12-2020	N	174.0	194.46	182.81	-51.64	55252	73.84
LXB20-002	13-12-2020	D	225.0	195.97	184.32	-51.37	55256	73.91
LXB20-002	14-12-2020	D	276.0	193.77	182.12	-51.09	55532	73.45
LXB20-002	15-12-2020	D	324.0	195.55	183.90	-50.88	55252	73.82



## **APPENDIX E – CONTRACTORS' REPORTS**

## Oriented Structures from LXB20-001

### Summary

A total of 28 oriented structure measurements were collected from the drill hole. Of these, 22 measurements had a line confidence of 4 (one run with a perfect lock angle). The remainder have a line confidence of 0. These were collected from short lines drawn back from a drillers mark on more competent pieces of core in an effort to collect more “oriented” data.

### Measured Structures

Six types of oriented structure measurements were collected from hole, which include:

- **Alteration bands**

Cream / beige coloured bands, locally chlorite-rich bands, found within the mafic volcanic unit (**Plate 1**). These structures likely represent altered pillow margins, and therefore may have no common orientation unless flattened into alignment within a foliation. Four measurements were collected and don't plot in a cluster (**Figure 1a**). However, they do plot on a great circle suggesting they may be folded (?); more data is needed to confirm this. The pole to the great circle (possible fold axis) has an orientation of  $68^\circ \rightarrow 343$ , and the mean orientation of alteration bands is  $253/68^\circ$ .



*Plate 1. Core photograph from LXB20-001 at 146-147m depth. Note the beige-coloured alteration bands on the bottom section of core; likely represent pillow margin features.*

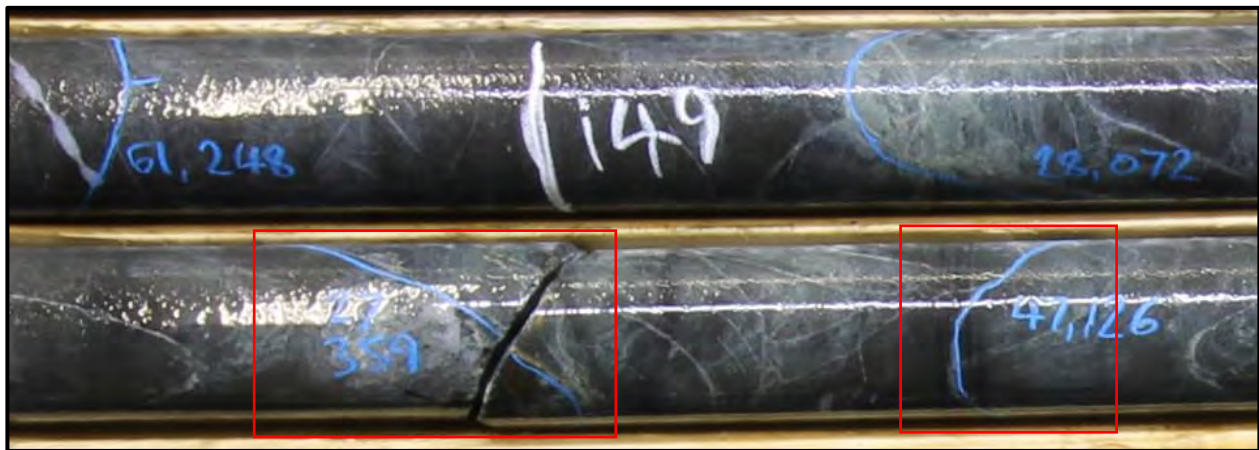
- **Carbonate veins**

Three carbonate vein measurements were collected, and these measurements also plotted well on a great circle (**Figure 1b**). This generation of vein may have formed in conjugate sets, which would plot on a great circle. However, more data is required to confirm this relationship. The pole to the great circle (possible intersection lineation of

conjugate carbonate vein set) has an orientation of  $64^\circ \rightarrow 115$ , and the mean orientation of carb veins is  $065/70^\circ$ .

- **Fracture sets (chlorite-filled or beige mineral-filled)**

Eight fracture set measurements were collected, and these do not plot in a well-defined cluster (**Plate 2, Figure 1c**). The majority of measurements plot loosely around a great circle, providing possible evidence for conjugate fracture sets, with a pole to the great circle orientation of  $57^\circ \rightarrow 002$  (similar orientation as the pole to great circle of the alt bands; possible structural symmetry?). The mean orientation of fractures is  $272/38^\circ$ .



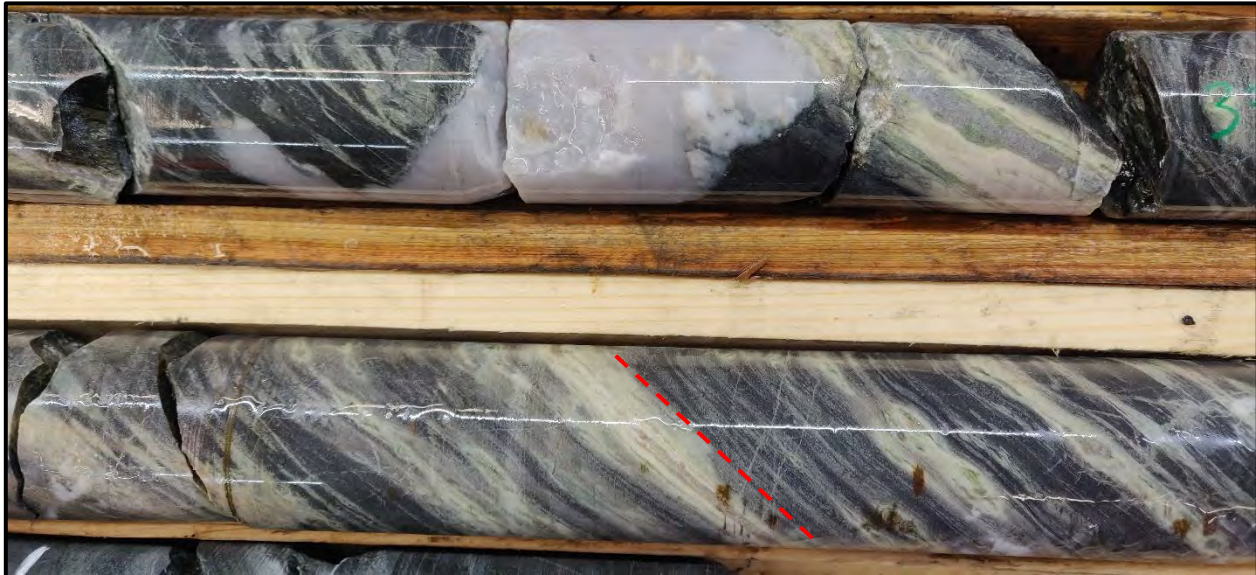
*Plate 2. Core photograph from LXB20-001 at 150-151m depth. Fracture sets (filled with beige mineral  $\pm$  chlorite) outlined by red rectangles.*

- **Quartz veins**

Two quartz vein measurements were collected, with a mean vector orientation of  $302/43^\circ$  (**Figure 1d**). These appear to have a different orientation compared to the carb veins, and may have formed in a different deformation event.

- **Foliation (S2)**

One foliation measurement (very weak cleavage) was collected with a line quality of 4 ( $194/87^\circ$ ; **Figure 1d**). The remaining four measurements were collected from short segments of oriented core with a line quality of 0, however these measurements were taken from high-strain mafic volcanics with a strong foliation / banding (**Plate 3**). The mean S2 orientation from these measurements is  $077/76^\circ$ , which appears to be consistent with the inferred trend of the Case Beradi DZ, but dips steeply to the south instead of north.



*Plate 3. Core photograph from LXB20-001 at 90-91m depth. Dashed red line outlines the strong compositional banding that defines S2.*

- **Geological contacts**

Two contact measurements were collected with a mean orientation of  $261/82^\circ$ , which has a similar trend as the mean S2, but dips steeply to the north (**Figure 2b**).

### **Evidence for folds**

A core-scale, open-close asymmetric fold that plunges shallowly to the NE was documented in the one run of core with a line quality of 4 (147-150 m; **Figure 3**). The physical measurement of the hinge and limbs using the "snowbank method" corresponded well with the calculated hinge (pole to best-fit great circle), and alpha and beta measurements of limbs.

### **Possible Kinematic Indicators**

Some possible kinematic indicators were documented in the high-strain mafic volcanics, and include rotated clasts and pressure shadows around porphyroclasts (**Plate 4**). When making KI interpretations, one would have to assume that you're looking parallel to parallel to the motion plane (parallel to any stretching lineations if present). Unfortunately none of the core was oriented in this section, so bottom of core is unknown. As a result, an apparent reverse or normal sense can be inferred based on where the 'bottom' of core is inferred. Hopefully oriented core can be retrieved from high-strain zones in future, allowing for KI data to be collected.

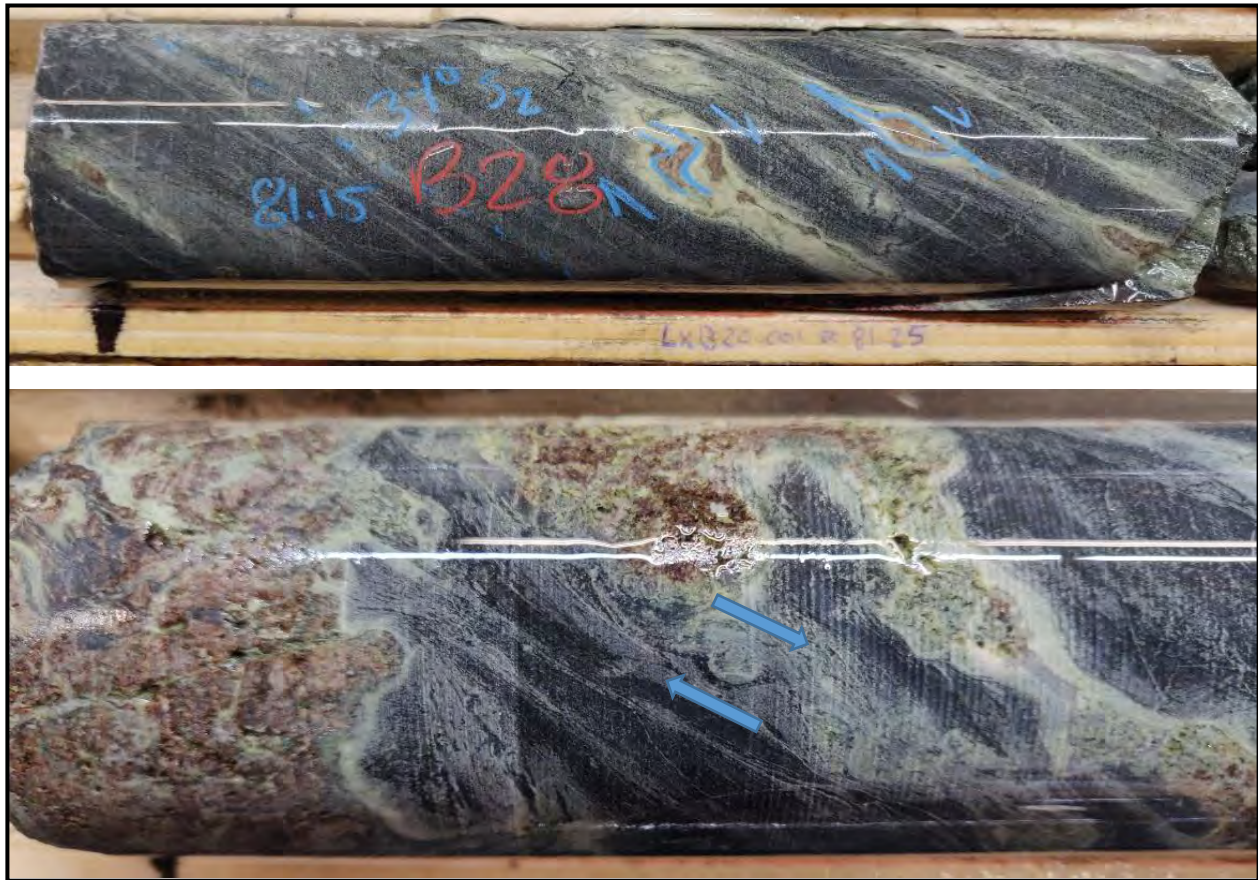


Plate 4. Core photograph from LXB20-001 at 74-77 m depth. Possible kinematic indicators were documented in the high-strain mafic volcanics, and include rotated clasts and pressure shadows around porphyroclasts.



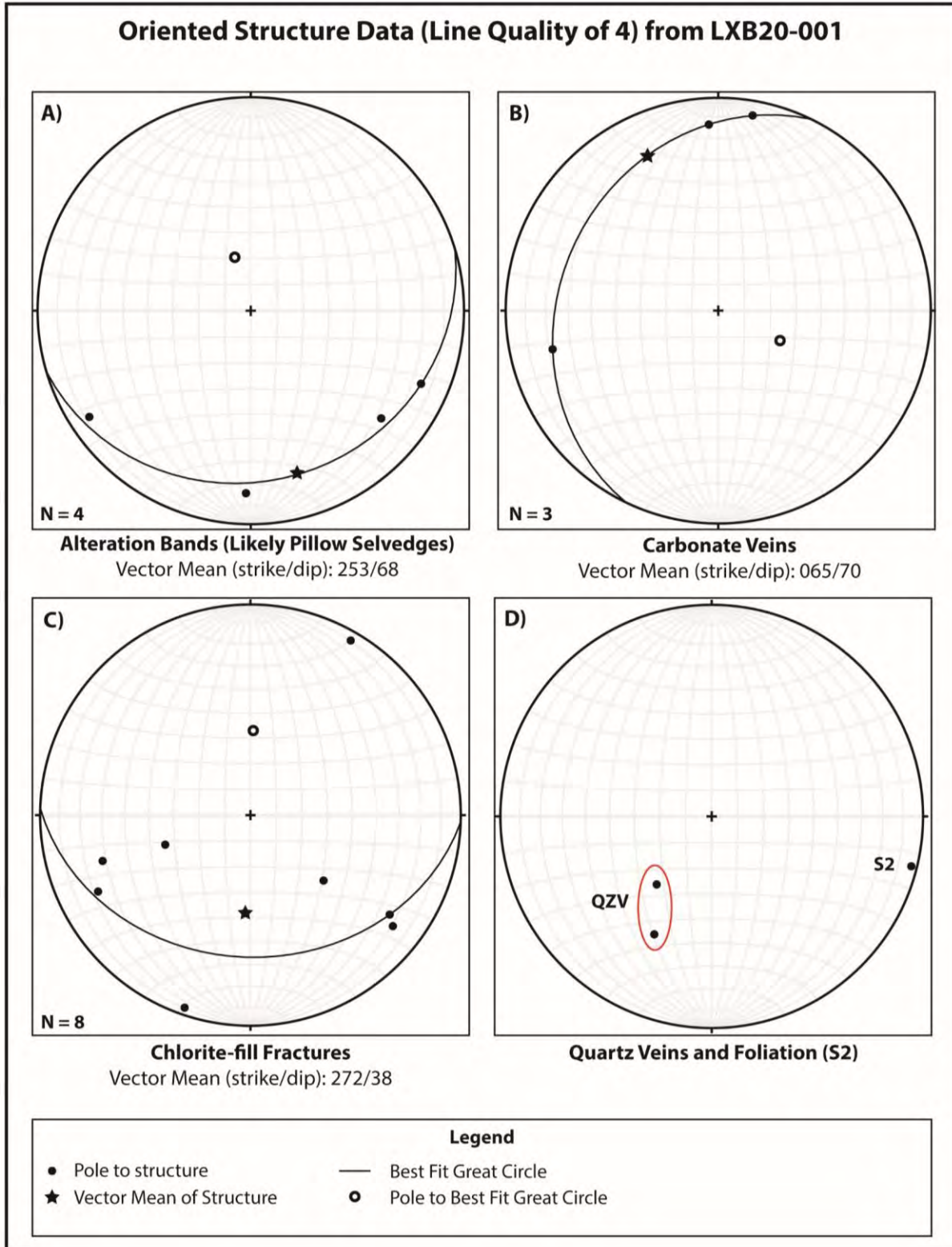


Figure 1. Stereonet analysis of oriented structure measurements from LXB20-001, with a line confidence of 4. A) alteration band measurements, B) carbonate vein measurements, C) fractures, often chlorite-filled or filled with a beige mineral, and D) quartz veins and S2 measurements.

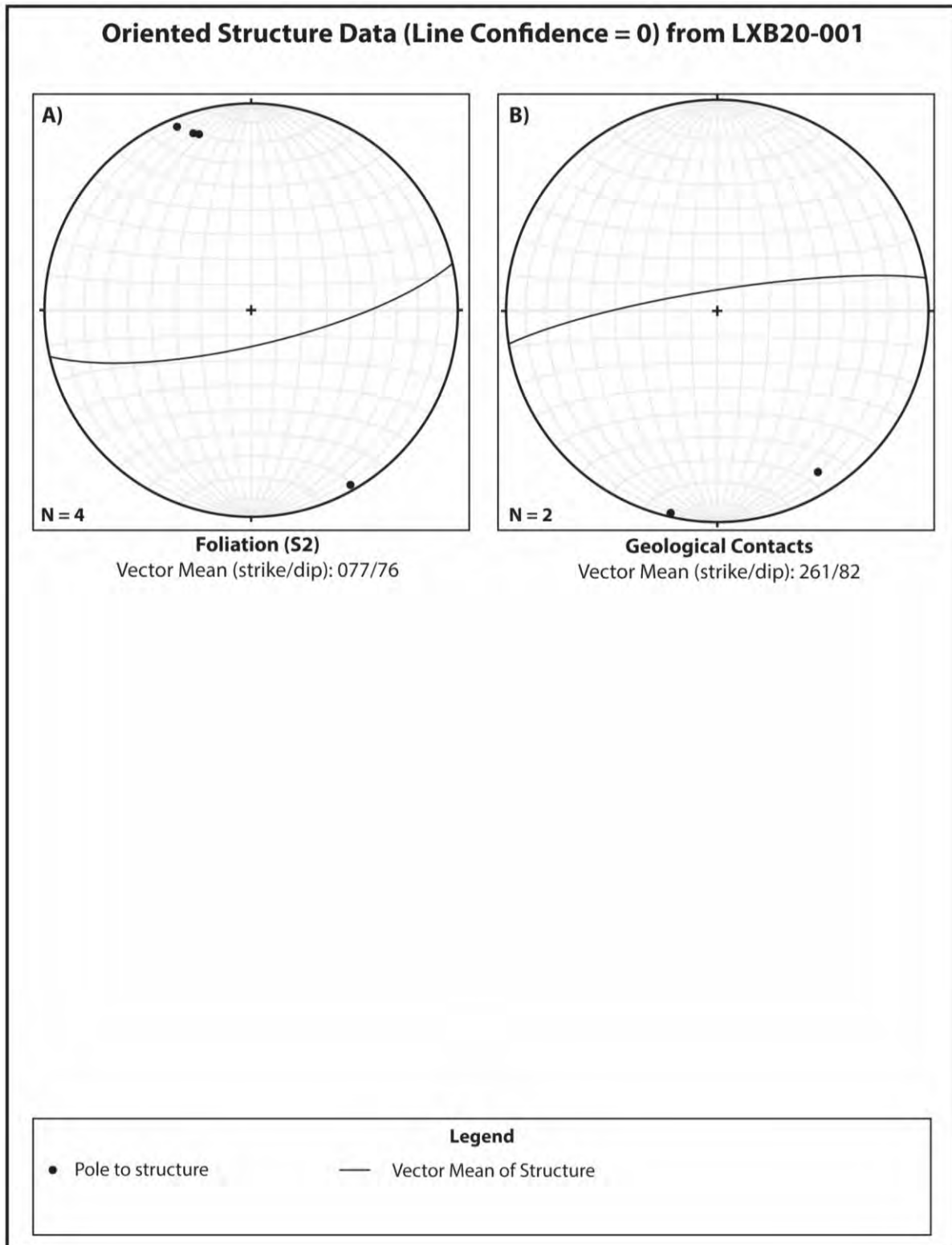
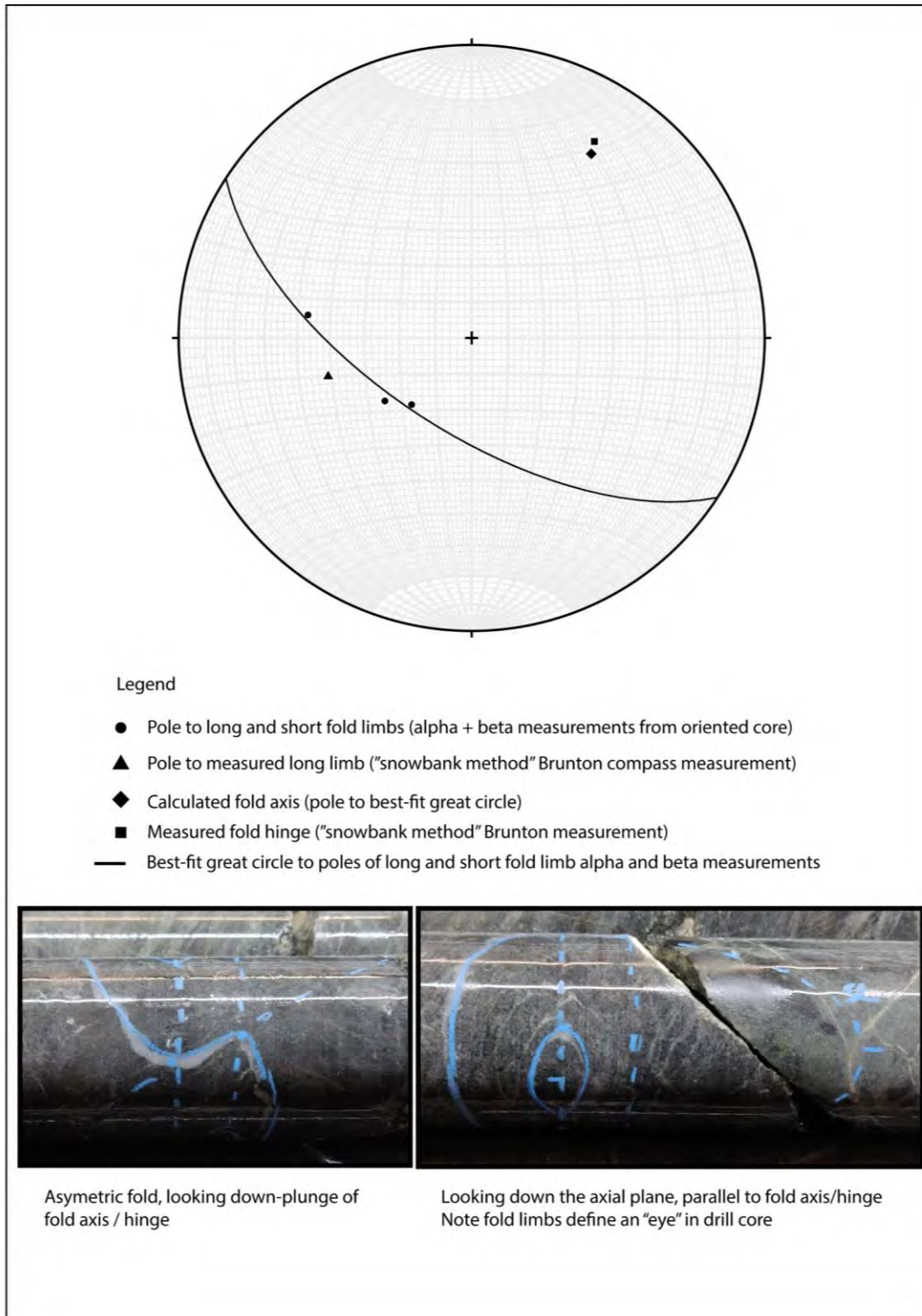


Figure 2. Stereonet analysis of oriented structure measurements from LXB20-001, with a line confidence of 0. A) foliation (S2) measurements, B) geological contacts measurements.



**Figure 3.** Stereonet analysis of oriented structure measurements from LXB20-001. Core-scale, open-close asymmetric fold that plunges shallowly to the NE. The physical measurement of the hinge and limbs using the "snowbank method" corresponded well with the alpha and beta measurements of limbs, and the calculated hinge (pole to best-fit great circle).

# LaSalle Exploration Corp.

## Blakelock Site A



# LiDAR Survey Report

May 2021



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# 1. Survey Summary

---

LiDAR Services International Inc. (LSI) performed an aerial LiDAR & Imagery survey for LaSalle Exploration Corp. in May 2021 of the Blakelock A mines site totaling approximately 70 square kilometers in Ontario. Airborne data was collected and delivered with the following parameters:

- MATRIX LiDAR system installed in a Cessna 182 airplane owned and operated by Terrasaurus Ltd. of Kelowna, British Columbia
- Airborne data was collected in two flights from May 11 – 12, 2021 based out of the Cochrane, ON Airport
- LiDAR data and imagery were collected at an average flying height of 850 m above ground level and a forward speed of 215 km/h
- Riegl LMS Q780 laser pulsed at a rate of 400 kHz, resulting in a computed average laser ground point spacing equal to 0.45 m and an average point density of 5.0 points/m<sup>2</sup>
- Horizontal Datum: NAD83(CSRS) in meters
- Vertical Datum: CGVD2013 orthometric heights in meters
- Map Projection: UTM Zone 17N (Central Meridian = -81 degrees longitude)
- Deliverables included:
  - LiDAR point clouds classified to Ground, DTM Key Point, Low Vegetation (0 – 1 m) and High Vegetation (>1 m) in LAS v1.2 format.
  - Bare Earth and Full Feature gridded points at 1 m spacing in ASCII XYZ format.
  - Greyscale hillshades of Bare Earth and Full Feature surfaces at 1 m pixel resolution in GeoTIFF format.
  - Ortho-mosaicked colour digital imagery with 10 cm pixel resolution in compressed ECW and GeoTIFF formats
  - Index map in DWG format

## 2. MATRIX LiDAR System

---

### **2.1 MATRIX Installation**

The MATRIX LiDAR system was installed in a Cessna 182 airplane, shown in Figure 1, owned and operated by Terrasaurus Ltd. of Kelowna, British Columbia.



**Figure 1: Cessna 182 with MATRIX LiDAR System**

The Riegl LMS Q780 laser scanner, inertial measurement unit, digital camera, computers and data storage devices were mounted to the floor in the rear of the aircraft, as shown in Figure 2. The GPS antenna was mounted on top of the fuselage and the operator controlled the MATRIX system with a laptop from the front passenger seat. Transport Canada has approved the installation of the MATRIX LiDAR system into this survey aircraft.

Key sensors utilized in the MATRIX installation for the LiDAR survey include:

- Riegl LMS Q780 laser scanner and data recorder
- NovAtel SPAN-SE dual frequency GPS receiver
- IXSEA AIRINS 200 Hz Inertial Measurement Unit (IMU)
- Canon EOS-5DS 50 megapixel digital frame downward camera



**Figure 2: Q780 Laser, IMU and Computers Mounted in Cessna 182**



### 3. Survey Control

---

To ensure accurate absolute and relative positioning of the LiDAR data during data collection, kinematic differential GPS (DGPS) surveying techniques were used. DGPS involves having a static GPS receiver collecting data at a known ground control point in the vicinity of the project area simultaneously with the collection of the kinematic GPS from the aircraft. After the mission, during the post processing, the static and kinematic sets of raw GPS data were combined together and processed, resulting in an accurate positioning solution of the aircraft.

In support of the LiDAR survey, LSI established a control point at the Cochrane Airport (CYCM). Coordinates for this point were determined by referencing two nearby continuously operating CAN-NET stations (*TIM3* and *CIRO*) and fixing their published coordinates.



**Figure 3: CYCN Control Point**



**Figure 4: Control Point Network**

The coordinates and elevations shown in Table 1 were used to position the LiDAR and imagery data. All control points and data deliverables are in the NAD83(CSRS), UTM Zone 17 projection with orthometric heights in the CGVD2013 datum.

**Table 1: LiDAR Control Coordinates (NAD83(CSRS), UTM Zone 17N, CGVD2013)**

Control Point	Latitude	Longitude	Easting (m)	Northing (m)	Orthometric Height (m)
CYCN	49 06 20.72461	-81 00 23.34812	499526.633	5439212.396	261.454
TIM3	48 28 37.70154	-81 22 40.71966	472065.561	5369403.475	289.560
CIRO	48 45 20.87937	-80 41 29.64425	522669.574	5400355.663	284.482

## 4. Data Collection

---

### **4.1 Airborne LiDAR Survey**

The LiDAR and imagery data of the Blakelock A project area was collected in two flight missions on May 11 and 12, 2021, based out of the Cochrane Airport. The project consisted of pre-planned flight lines flown at an average height of 850 m above ground level and a forward speed of 215 km/h. The Riegl LMS Q780 laser pulsed at a rate of 400 kHz and the laser scanned at a rate of 134 Hz, resulting in an average point spacing of 0.45 m or 5.0 points per square meter. The Canon EOS-5DS digital camera took a photo every 3.9 seconds resulting in 60% forward overlap between consecutive photos.



**Figure 5: Blakelock A Project Area and Flight Lines**

## **4.2 Data Quality Control and Validation**

LiDAR calibration passes were flown over the Cochrane Airport at the start of each survey flight. The calibration passes allow for the determination and verification of the roll, pitch and heading misalignment angles between the IMU measurement axis and the laser sensor. The calibration passes consisted of multiple flight lines flown at orthogonal and parallel headings at the project flying height and speed. During post processing, the flight line relative accuracies were determined and confirmed the high quality of the IMU-laser boresight alignment and the trajectory solutions.

Ground check points were also collected at the Cochrane Airport to help verify the absolute accuracy of the LiDAR data. The check points were collected on foot with a pole-mounted GPS antenna as shown in Figure 6, and post-processed in a DGPS solution referenced to the same control point as the project sites.



**Figure 6: Ground Check Point Collection**

The ground points were classified from each calibration pass to create triangulated surface models which were compared to the independently observed ground check points. The average resulting residuals and statistics from the calibration passes are tabulated as follows:

Flight	Flightline	Avg dZ (m)	Min dZ (m)	Max dZ (m)	Avg Mag (m)	RMS (m)	Std Dev (m)
JD131FIt1	1	-0.022	-0.052	0.004	0.022	0.026	0.014
	2	-0.010	-0.028	0.008	0.011	0.013	0.009
	3	-0.027	-0.048	-0.010	0.027	0.029	0.011
	4	-0.018	-0.040	-0.001	0.018	0.020	0.008
JD132FIt1	1	0.038	-0.027	0.079	0.040	0.044	0.022
	2	-0.004	-0.026	0.021	0.009	0.012	0.011
	3	-0.002	-0.038	0.022	0.010	0.013	0.013
	4	-0.005	-0.025	0.024	0.011	0.013	0.012
JD132FIt2	1	0.010	-0.010	0.026	0.012	0.014	0.010
	2	-0.037	-0.060	-0.016	0.037	0.038	0.010
	3	-0.019	-0.048	0.000	0.019	0.022	0.011
	4	-0.011	-0.029	0.007	0.012	0.014	0.009
	<b>Total</b>	<b>-0.009</b>	<b>-0.060</b>	<b>0.079</b>	<b>0.019</b>	<b>0.024</b>	<b>0.022</b>

The tested fundamental vertical accuracy of the LiDAR data for the project was better than 10 cm at a 95% confidence interval.

## 5. Data Processing and Deliverables

---

The LiDAR data and imagery for the Blakelock A project area were delivered to LaSalle Exploration Corp. with the following specifications:

- Horizontal Datum: NAD83(CSRS) in meters
- Vertical Datum: CGVD2013 orthometric heights in meters
- Mapping Projection: UTM Zone 17N (central meridian -81 degrees longitude)
- LiDAR LAS v1.2 point clouds classified to Ground, DTM Key Point, Low Vegetation (up to 1 m above ground) and High Vegetation (greater than 1 m above ground)
- Bare Earth and Full Feature grid points at 1 meter spacing in ASCII XYZ format
- Greyscale hillshades of Bare Earth and Full Feature surfaces at 1 m pixel resolution in GeoTIFF format
- Ortho-mosaic color digital imagery with 10 cm pixel resolution in compressed ECW and GeoTIFF formats
- Index map in DWG format

## **5.1 LiDAR Point Clouds**

### **5.1.1 LiDAR Tiles**

Unclassified point clouds were generated for each individual flight line from the raw laser data, the GPS-IMU post-processed solution and the measured system calibration parameters. The point clouds were then imported into 1km x 1km tiles covering the project area using Terrasolid software. The number for each tile was derived from the southwest corner coordinate of the tile, i.e. Tile 5785479 has a southwest corner coordinate of E: 578000m, N: 5479000m.

The LAS v1.2 point clouds were delivered with the following feature codes:

- 2: Ground
- 3: Low Vegetation (0 to 1 meter above ground)
- 5: High Vegetation (greater than 1 meter above ground)
- 8: DTM Key Point

### **5.1.2 Ground Points**

An initial automatic ground classification was applied to the tiles. The automatic ground macro classified ground points using a sequence of steps that identifies the lowest LiDAR point in an area and then finds neighboring ground points based on user-specified iteration angles and tolerances. After the automatic ground classification, trained technicians inspected those points and either added or removed points from the *Ground* class that were incorrectly classified by the automatic ground macro. This was done using the Terrasolid suite of LiDAR editing tools in the MicroStation environment.

### **5.1.3 DTM Key Points**

After completion of the manual ground editing, *DTM Key Points* were classified from the *Ground* point class. The automatic *DTM Key Point* classification selects key points from the *Ground* class and chooses neighboring *Ground* points using a horizontal tolerance of 10 m and a vertical tolerance of 10 cm. That is, the maximum horizontal distance between *DTM Key Points* is 10 m and the maximum vertical distance is 10 cm. The points that were not selected for the *DTM Key Points* were left in the *Ground* class.

The *DTM Key Points* are a subset of the *Ground* points taken directly from the *Ground* class. The *DTM Key Point* class typically has up to 90% less points than the original *Ground* class, depending on the terrain. ***Because the DTM Key Points are taken from the Ground class, it is important that the Ground class never be used by itself. Either the DTM Key Point class can be used alone, or the DTM Key Point and Ground classes can be used together.*** The *DTM Key Point* and *Ground* classes together will produce the maximum possible terrain detail, with the largest number of points.

### 5.1.3 Vegetation

The remaining non-ground points were then classified into two separate classes: *Low Vegetation* (0 m to 1 m above ground) and *High Vegetation* (greater than 1 m above ground). The vegetation classes contain all objects and structures above the ground, including buildings, transmission lines, bridges, fences, vehicles and piles of non-earth materials.

## 5.2 Grid Points

Bare Earth grid points were created at a 1-meter interval for each tile and delivered in ASCII XYZ format. The Bare Earth grid point elevations were derived from a Triangulated Irregular Network (TIN) surface model of the *DTM Key Point* and *Ground* classes in the LiDAR point cloud tiles.

Full Feature grid points were also created at a 1-meter interval for each tile and delivered in ASCII XYZ format. The Full Feature grid point elevations were derived from the highest point in the *High Vegetation* class within each 1-meter cell. The Bare Earth grid point elevations were applied for cells having no *High Vegetation* points.



### **5.3 Hillshades**

Geo-referenced grayscale raster images with a 1 m pixel size were delivered in GeoTIFF format. The Bare Earth hillshade images were derived from the Bare Earth grid points and the Full Feature hillshade images were derived from the Full Feature grid points. The hillshades were created using a 315 degree sun azimuth and 45 degree sun angle.

### **5.4 Orthoimage Mosaics**

Geo-referenced colour digital orthoimage mosaics with 10 cm pixel size were delivered in compressed ECW and GeoTIFF formats. The mosaics were divided into tiles using the same tile structure as the LiDAR tiles and trimmed to the project boundary. The compressed ECW tiles were created using a 5:1 compression ratio.

LSI greatly appreciates the opportunity to have performed the Blakelock Site A LiDAR survey, and is available for any questions or comments regarding the survey or the contents of this report.

LiDAR Services International Inc.  
110, 7777 – 10 St. N.E.  
Calgary, Alberta T2E 7J2

Phone: (403) 517-3130  
Fax: (403) 291-5390  
Website: [www.lidarservices.ca](http://www.lidarservices.ca)



## Data Recovery Request

Data collected and delivered by LSI will remain available on the FTP link provided for a period of one year. After this period, any request for access to the data will be subject to a fee based on the work required to complete retrieval, and any requested reprocessing. Please submit the completed form to [info@lidarservices.ca](mailto:info@lidarservices.ca).

Access is available to the hiring client only. All other requests must include a letter authorizing the release of data, or proof of transfer of ownership of the hiring client to accompany this request.

Hiring Client	LaSalle Exploration Corp.
Original PO#	N/A
LSI Reference Number	21-424
Date of Original Delivery	June 7, 2021

Contact Name: \_\_\_\_\_

Company: \_\_\_\_\_

Contact phone/email: \_\_\_\_\_

Date Required: \_\_\_\_\_

Data Requested: \_\_\_\_\_

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By signing below, I acknowledge that I am an authorized signatory of the company, and understand that the above information is provided to obtain a quote on retrieval of archived information.

\_\_\_\_\_  
Printed Name/Title

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature

## AIRBORNE GEOPHYSICAL SURVEY REPORT



**Blakelock Survey Block**  
Cochrane, Ontario  
**LaSalle Exploration Corp.**

Precision GeoSurveys Inc.

[www.precisiongeosurveys.com](http://www.precisiongeosurveys.com)  
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June 2021  
Job# 21146

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## 1.0 Introduction

This report outlines the geophysical survey operations and data processing procedures taken during the high resolution helicopter-borne magnetic gradiometer survey flown over the Blakelock survey block for LaSalle Exploration Corp. The survey block is located in northeastern Ontario (Figure 1) and it was flown from May 11 to May 14, 2021.

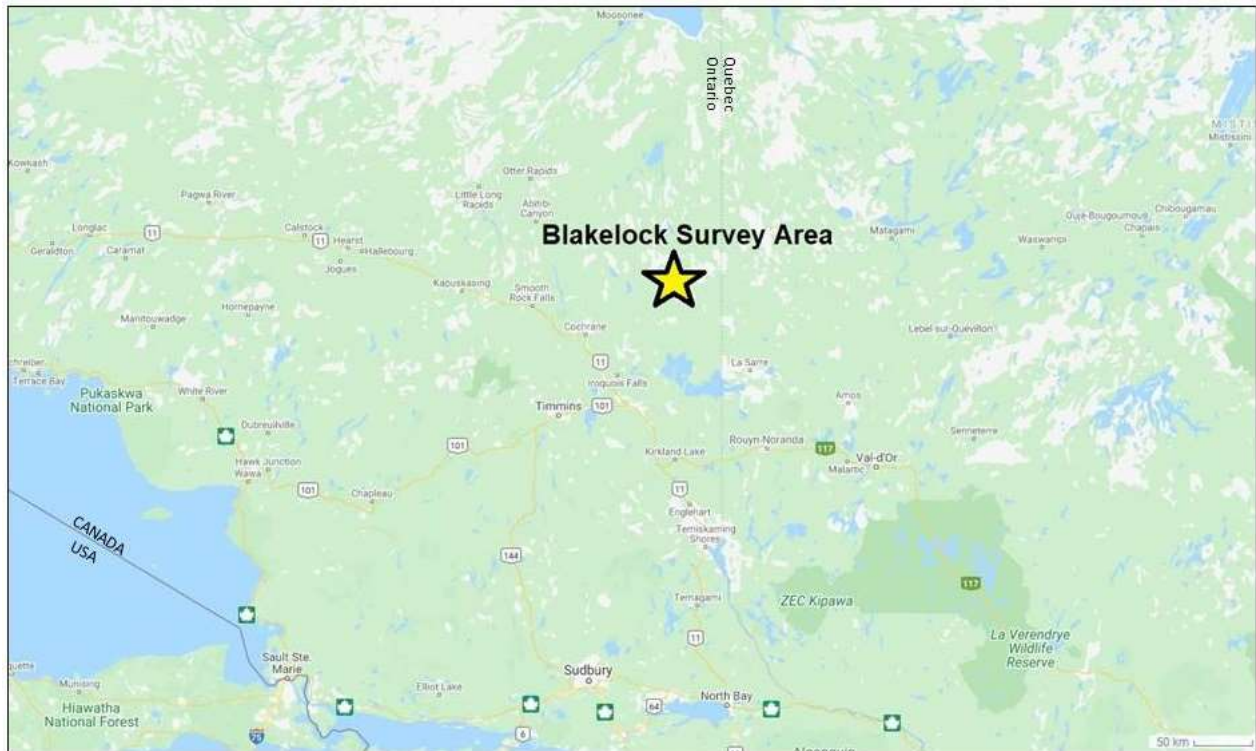


Figure 1: Blakelock survey located in northeastern Ontario.

### 1.1 Survey Area

The Blakelock survey block is centered approximately 145 km northeast of Timmins and 85 km northeast of Cochrane, Ontario (Figure 2).



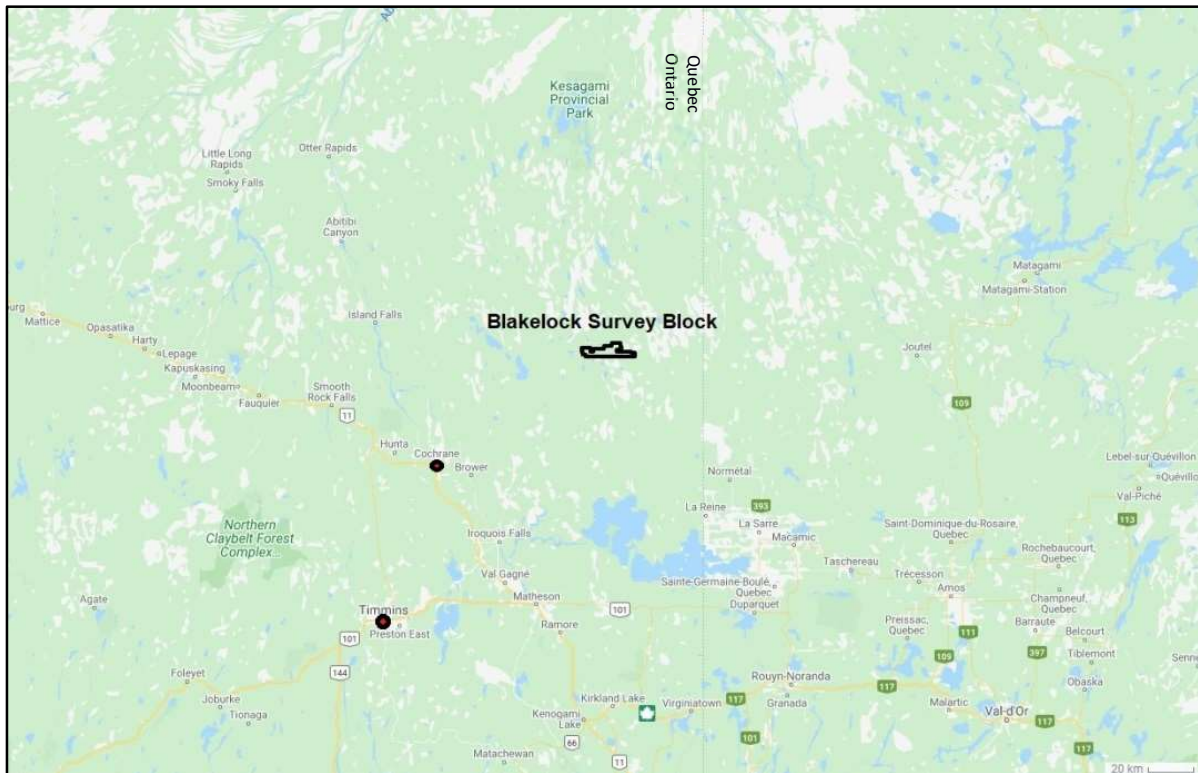


Figure 2: Blakelock survey block northeast of Timmins and Cochrane, Ontario.

Blakelock was flown at 100 m line spacing at a heading of 000°/180°; tie lines were flown at 1000 m spacing at a heading of 090°/270° (Figure 3).

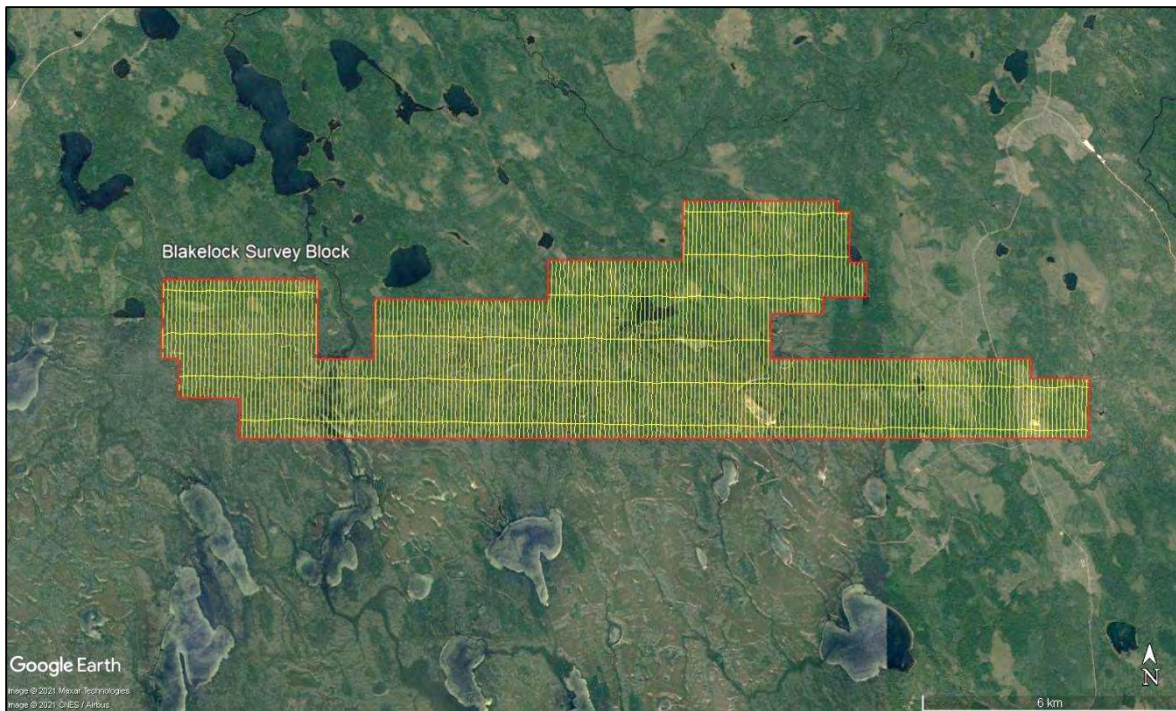


Figure 3: Plan View – Blakelock survey block with actual flight lines in yellow and survey block boundary in red.

## 1.2 Survey Specifications

The geodetic system used for the geophysical survey was WGS 84 in UTM Zone 17N. A total of 771 line km was flown over one block with a total area of 69.8 km<sup>2</sup> (Table 1). An additional 1 km was flown to retain data from flight lines flown outside the survey block margins for efficiency. Polygon coordinates for the Blakelock survey block are specified in Appendix A.

Survey Block	Area (km <sup>2</sup> )	Line Type	No. of Lines Planned	No. of Lines Completed	Line Spacing (m)	Line Orientation (UTM grid)	Total Planned Line km	Total Actual km Flown
Blakelock	69.8	Survey	218	218	100	000°/180°	698	699
		Tie	6	6	1000	090°/270°	72	72
		<b>Total:</b>	<b>224</b>	<b>224</b>			<b>770</b>	<b>771</b>

Table 1: Survey flight line specifications for Blakelock.

## 2.0 Geophysical Data

Geophysical data are collected in a variety of ways and are used for many purposes including aiding in the determination of geology, mineral deposits, oil and gas deposits, geotechnical investigations, contaminated land sites, and UXO (unexploded ordnance) detection.

For the purposes of this survey, airborne gradient magnetic data were collected to serve in geological mapping and exploration for mineral deposits.

### 2.1 Magnetic Data

Magnetic surveying is the most common airborne geophysical technology used for both mineral and hydrocarbon exploration. Aeromagnetic surveys measure and record the total intensity of the magnetic field at the magnetometer sensor, which is a combination of the desired geomagnetic field as well as influences from the constantly varying solar wind and the aircraft's magnetic field. By subtracting temporal and aircraft magnetic effects, the resulting aeromagnetic maps show the spatial distribution and relative abundance of magnetic minerals - most commonly the iron oxide mineral magnetite - in the upper levels of Earth's crust, which in turn are related to lithology, structure, and alteration of bedrock. Survey specifications, instrumentation, and interpretation procedures depend on the objectives of the survey. Magnetic surveys are typically performed for:

- Geological Mapping - to aid in mapping lithology, structure, and alteration.
- Depth to Basement Mapping - for exploration in sedimentary basins or mineralization associated with the basement surface.

### 2.1.1 Gradient Magnetic Data

In addition to high resolution total magnetic field data, horizontal and vertical magnetic gradient data were collected by using a triaxial magnetic gradient bird-type system. Direct measurement of the magnetic gradient has the following benefits:

- Enhanced definition of near-surface anomalies.
- Emphasis on short wavelength spatial components of magnetic anomalies from horizontal variations of the gradients.
- Attenuation of long wavelength spatial components associated with regional trends and large scale anomalies.
- Reduction of high frequency temporal variations in the Earth's magnetic field due to micro-pulsations.
- Immunity to diurnal fluctuations.
- Reduction of aircraft/sensor movement errors.

## 3.0 Aircraft and Equipment

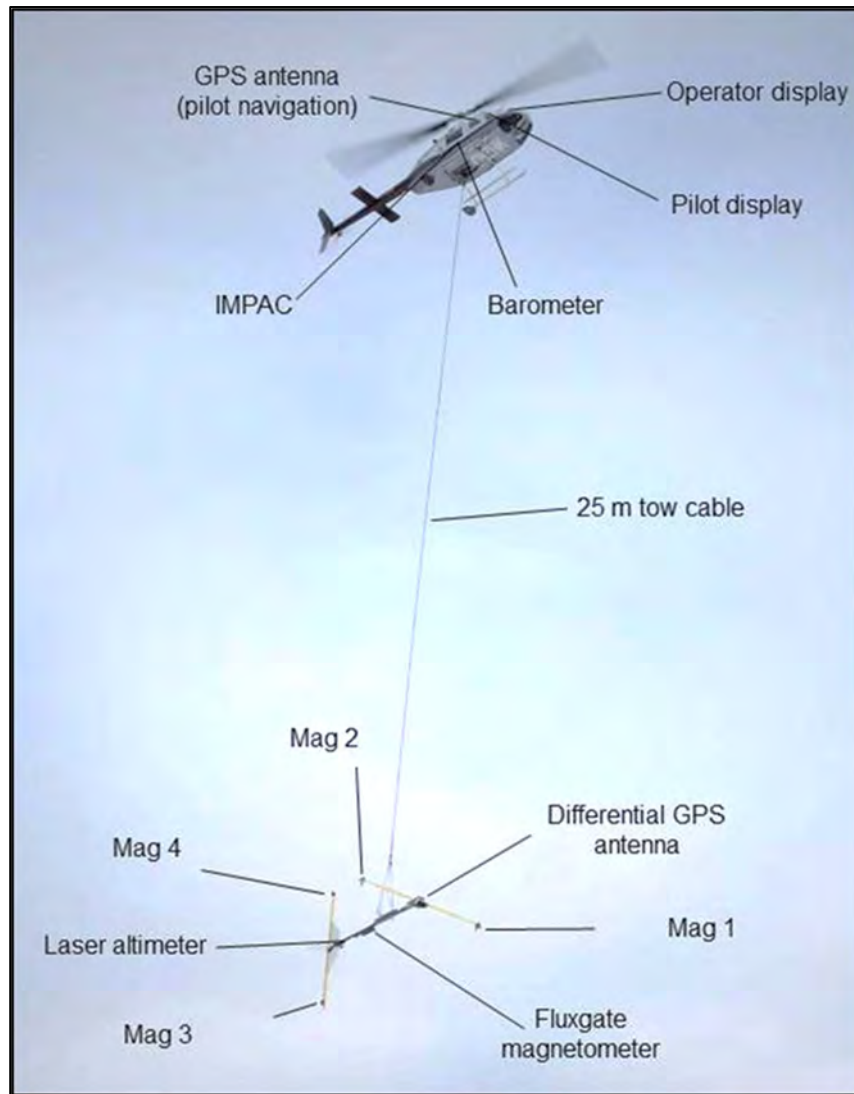
All geophysical and subsidiary equipment were carefully installed on an aircraft by Precision GeoSurveys to collect gradient magnetic data.

### 3.1 Aircraft

Precision GeoSurveys flew the survey using a Bell 206 Jet Ranger helicopter, registration C-FQCK.

### 3.2 Geophysical Equipment

The survey aircraft (Figure 4) was equipped with a slung bird-type triaxial magnetic gradient system, data acquisition system, GPS navigation systems, pilot guidance unit (PGU), laser altimeter, barometer, and fluxgate magnetometer. In addition, two magnetic base stations were used to record temporal magnetic variations. Technical specifications for the geophysical equipment are provided in Appendix B.



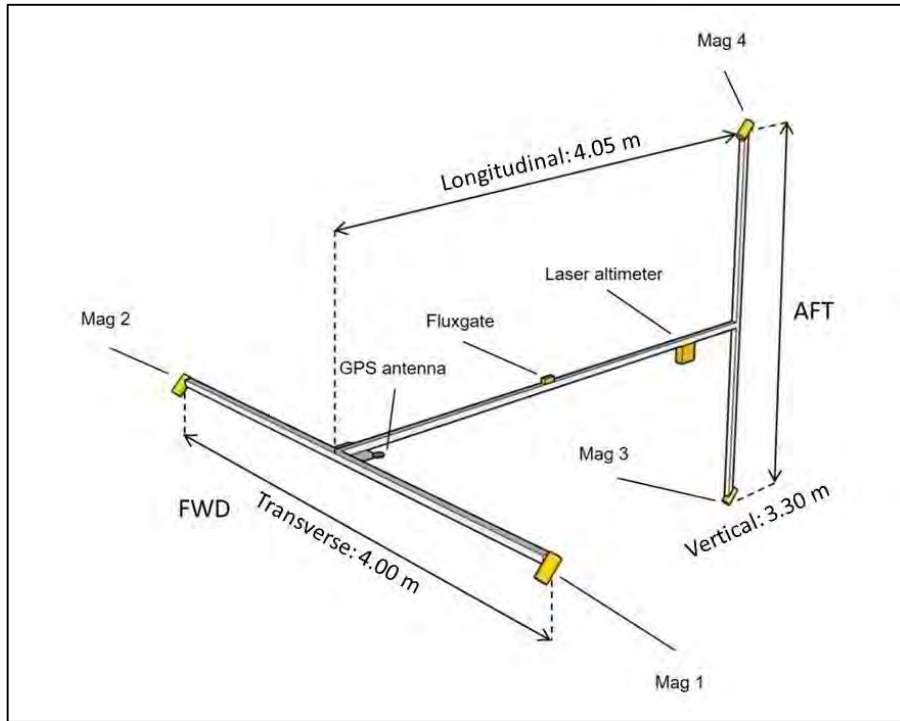
**Figure 4:** Survey helicopter equipped with geophysical equipment and the triaxial magnetic gradient bird-type configuration slung 25 m below the helicopter.

### 3.2.1 Triaxial Gradiometer

The primary geophysical technology used on this survey was a slung magnetic gradiometer, custom designed and manufactured by Precision GeoSurveys. The gradiometer bird is constructed completely from non-magnetic and non-conductive materials and provides the required sensor separation for triaxial gradient measurements in stable flight, while incorporating a laser altimeter, fluxgate magnetometer, and a GPS antenna. It is attached to the helicopter by a 25 m long tow cable that eliminates magnetic interference from the aircraft and holds the weight of the system. A shear pin is used as a safety weak link. Magnetic, laser altimeter, attitude, and GPS data are transmitted to the helicopter by wires routed along the tow cable. By design, this gradiometer separates the electronic equipment from the magnetic sensors to allow for cleaner

data collection unaffected by electronic noise and the aircraft’s magnetic fields. The bird weighs approximately 80 kg and can be disassembled into multiple components for ease of transport.

In total, the gradiometer (Figure 5) contains four Scintrex CS-3 cesium vapor magnetic sensors individually measuring the total magnetic intensity at their respective positions (Table 2). The unique arrangement of the sensors allows direct measurement of the geomagnetic field in the X (cross-line) gradient axis with the two forward sensors (Mag 1 and Mag 2) and the Z (vertical) gradient axis with the two aft sensors (Mag 3 and Mag 4).



**Figure 5:** Schematic diagram of magnetic gradiometer system showing triaxial sensor separations. Not to scale.

Position	Location	Model	Serial Number
Mag 1	Forward left	Scintrex CS-3	0706248
Mag 2	Forward right	Scintrex CS-3	2010625
Mag 3	Aft lower	Scintrex CS-3	2105647
Mag 4	Aft upper	Scintrex CS-3	0712302

**Table 2:** Magnetometer details.

### 3.2.2 IMPAC

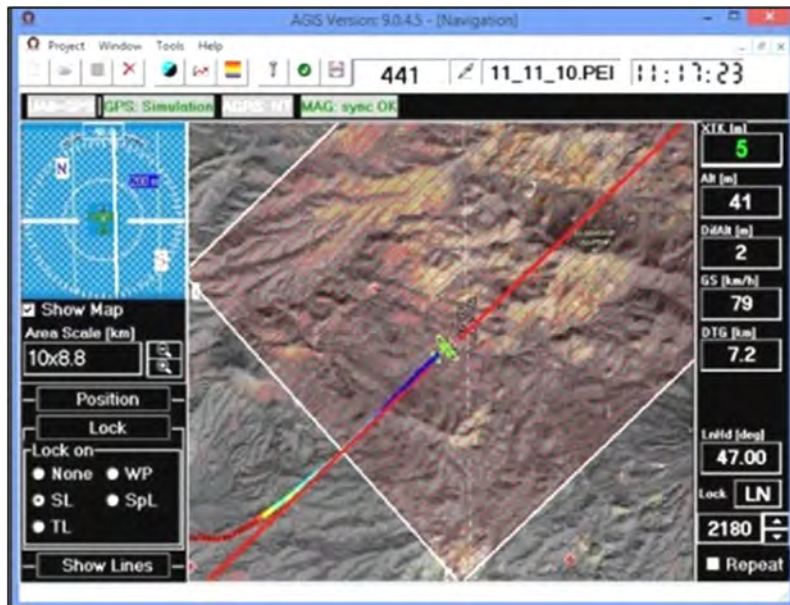
The Integrated Multi-Parameter Acquisition Console (IMPAC) (Figure 6), manufactured by Nuvia Dynamics Inc. (previously Pico Envirotec Inc.), is the main computer used in integrated data recording, data synchronizing, providing real-time quality control data for the geophysical operator display, and the generation of navigation information for the pilot and operator display systems.



**Figure 6:** IMPAC data acquisition system.

IMPAC uses the Microsoft Windows operating system and geophysical parameters are based on Nuvia's Airborne Geophysical Information System (AGIS) software. Depending on survey specifications, information such as magnetic field, electromagnetic response, total gamma count, counts of various radioelements (K, U, Th, etc.), cosmic radiation, barometric pressure, atmospheric humidity, temperature, aircraft attitude, navigation parameters, and GPS status can all be monitored on the AGIS on-board display (Figure 7).

While in flight, raw magnetic response, magnetic fourth difference, compensated and uncompensated data, radiometric spectra, EM response, aircraft position, survey altitude, cross track error, and other parameters are recorded and can be viewed by the geophysical operator for immediate QC (quality control). Additional software allows for post or real time magnetic compensation and radiometric calibration.



**Figure 7:** AGIS operator display showing real time flight line recording and navigation parameters. Additional windows display real-time geophysical data to operator.

### 3.2.3 GPS Navigation System

A Hemisphere R120 GPS receiver and a Novatel GPS antenna on the aircraft integrated with the AGIS navigation system and pilot display (PGU) provide accurate navigational information and control. A Hemisphere R330 GPS receiver (Figure 8) located in the helicopter connected to a Novatel GPS antenna located on the triaxial magnetic gradient bird airframe provide accurate position data for the bird independent of pilot navigation. The R120 and R330 GPS receivers support fast updates and outputs messages at a rate of up to 20 Hz (20 times per second); delivering sub-meter positioning accuracy in three dimensions. They support GNSS (GPS/GLONASS) L1 and L2 signals.

The Hemisphere receivers support differential correction methods including L-Band, RTK, SBAS, and Beacon. They employ innovative Hemisphere GPS Eclipse SureTrack technology, which allows modeling the phase on satellites that the airborne unit is currently tracking. With SureTrack technology, dropouts are reduced and speed of the signal reacquisitions is increased; enhancing accurate positioning when base corrections are not available.

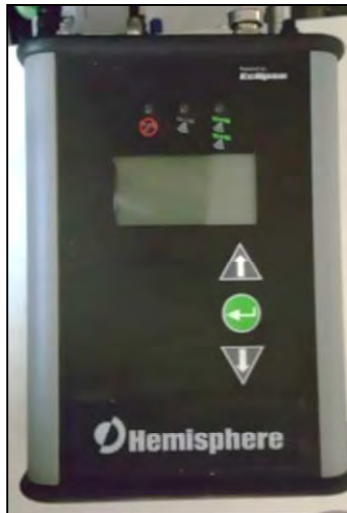


Figure 8: Hemisphere R330 GPS receiver.

### 3.2.4 Pilot Guidance Unit

Steering and elevation (ground clearance) information is continuously provided to the pilot by the Pilot Guidance Unit (PGU). The graphical display is mounted on top of the aircraft's instrument panel, remotely from the data acquisition system. The PGU is the primary navigation aid (Figure 9) to assist the pilot in keeping the aircraft on the planned flight path, heading, speed, and at the desired ground clearance.

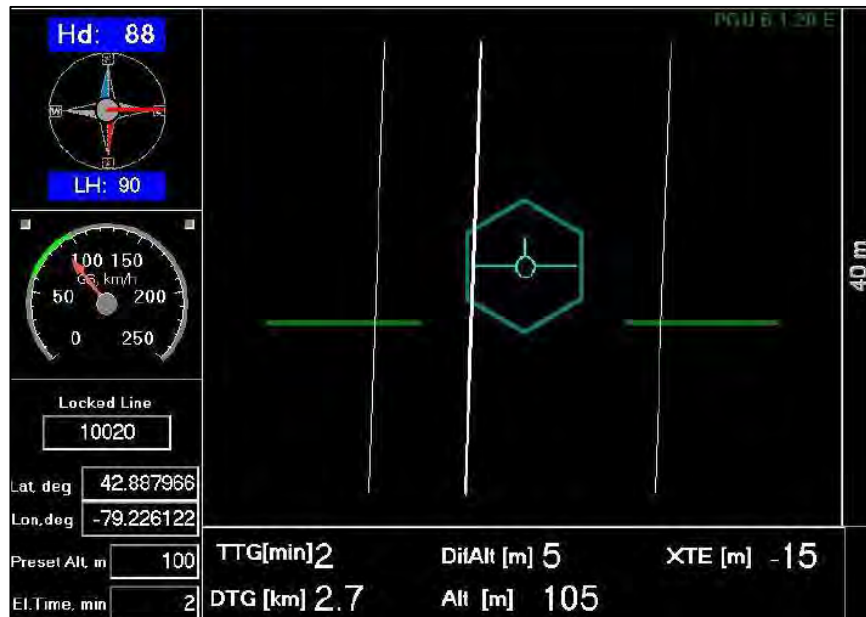


Figure 9: PGU screen displaying navigation information.

PGU information is displayed on a full VGA 600 x 800 pixel 7 inch (17.8 cm) LCD display. The CPU for the PGU is contained in a PC-104 console and uses Microsoft Windows operating system control, with input from the GPS antenna on the aircraft, laser altimeter, and AGIS.



### 3.2.5 Laser Altimeter

Terrain clearance is measured by an Opti-Logic RS800 Rangefinder laser altimeter (Figure 10) attached to the belly of the forward magnetometer boom. The RS800 laser is a time-of-flight sensor that measures distance by a rapidly modulated and collimated laser beam that creates a dot on the target surface. The maximum range of the laser altimeter is 700 m off natural surfaces with accuracy of  $\pm 1$  m on 1 x 1 m diffuse target with 50% ( $\pm 20\%$ ) reflectivity. Within the sensor unit, reflected signal light is collected by the lens and focused onto a photodiode. Through serial communications and digital outputs, ground clearance data are transmitted to an RS-232 compatible port and recorded and displayed by the AGIS and PGU at 10 Hz in meters.

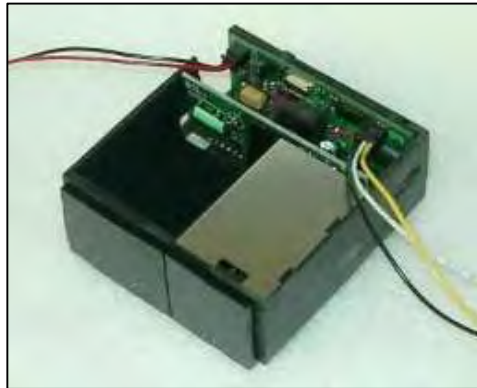


Figure 10: Opti-Logic RS800 Rangefinder laser altimeter.

### 3.2.6 Magnetometer

The survey was flown with four Scintrex CS-3 split-beam cesium vapor magnetometers (Figure 11) mounted in a non-magnetic and non-conductive slung bird-type configuration. The magnetometers were oriented at 45 degrees with respect to the horizontal to couple with local magnetic field at the Blakelock survey area.



Figure 11: View of CS-3 cesium vapor magnetometers.

### 3.2.7 Fluxgate Magnetometer

As the survey helicopter flies along a survey line, small attitude changes (pitch, roll, and yaw) are recorded by a triaxial fluxgate magnetometer (Figure 12). The fluxgate consists of three magnetic sensors, X, Y, and Z, operating independently and simultaneously. Each sensor has an analog output corresponding to the directional component of the ambient magnetic field along its axis. Response of the sensors is proportional to the cosine of the angle between the applied field and the sensor's sensitive axis.



Figure 12: Billingsley TFM100G2 triaxial fluxgate magnetometer.

### 3.2.8 Magnetic Base Station

Temporal variations of Earth's magnetic field, particularly diurnal, were monitored and recorded by two GEM GSM-19T base station magnetometers. They were operated at all times while airborne data were being collected. The base stations were located in an area with low magnetic gradient, away from electric power transmission lines and moving ferrous objects, such as motor vehicles, that could affect the survey data integrity.

The GEM GSM-19T magnetometer (Figure 13) with integrated GPS time synchronization uses proton precession technology with absolute accuracy of  $\pm 0.20$  nT and sensitivity of 0.15 nT at 1 Hz. Base station magnetic data were recorded on internal solid-state memory and downloaded onto a field laptop computer using a serial cable and GEMLink 5.4 software. Profile plots of the base station readings were generated, updated, and reviewed at the end of each survey day.



Figure 13: GEM GSM-19T proton precession magnetometer.

## 4.0 Survey Operations

The survey was flown from May 11 to May 14, 2021 in cloudy and windy conditions. The experience of the pilot ensured that data quality objectives were met, and that safety of the flight crew was never compromised given the potential risks involved in airborne geophysical surveying. Field processing and quality control checks were performed daily.

### 4.1 Operations Base and Crew

The base of operation for the Blakelock survey was at Cochrane, Ontario, southwest of the survey block.

Precision's geophysical crew consisted of four members (Table 3):

Crew Member	Position
Devin Landis	Helicopter survey pilot
Jonathan Passiniemi	Geophysical operator and electronics technician
Shawn Walker, M.Sc., P.Geo.	Geophysicist – data processor, mapping, and reporting (off-site)
Jenny Poon, B.Sc., P.Geo.	Geophysicist – reporting (off-site)

**Table 3:** List of survey crew members.

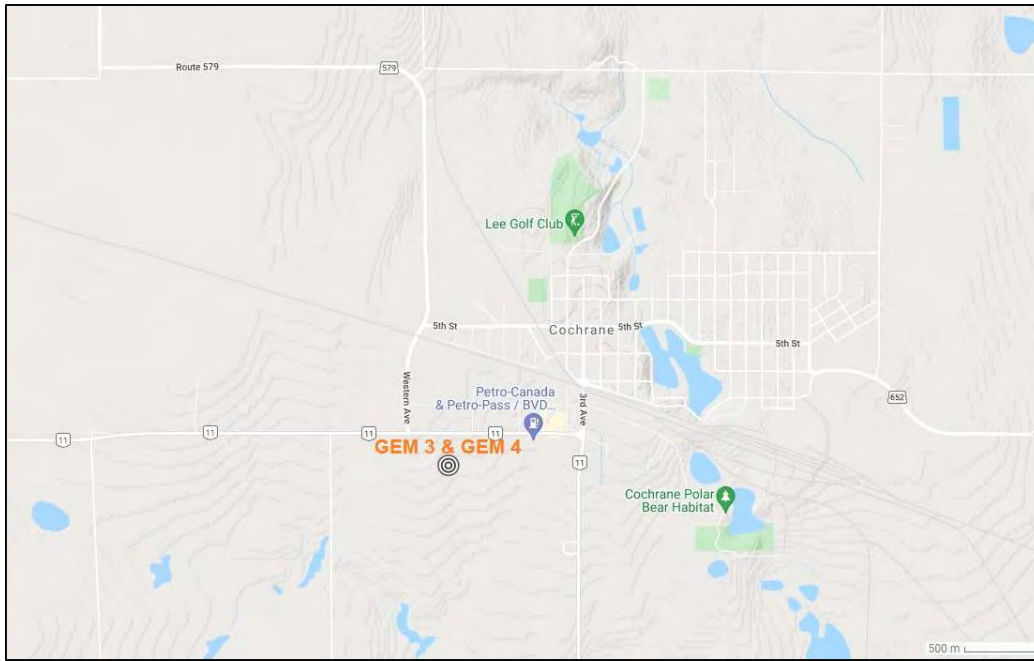
### 4.2 Magnetic Base Station Specifications

Changes in the Earth's magnetic field over time, such as diurnal variations, magnetic pulsations, and geomagnetic storms, were measured and recorded by two stationary GEM GSM-19T proton precession magnetometers. The magnetic base stations were installed in an area (Table 4; Figures 14 and 15) of low magnetic noise away from metallic items such as ferromagnetic objects, vehicles, and power lines that could affect the base stations and ultimately the survey data.

Station Name	Easting/Northing	Latitude/Longitude	Datum/Projection
GEM 3 S/N 5081669	496923 m E 5433781 m N	49° 3' 24.80" N 81° 2' 31.63" W	WGS 84, Zone 17N
GEM 4 S/N 2065370	496927 m E 5433766 m N	49° 3' 24.34" N 81° 2' 31.42" W	WGS 84, Zone 17N

**Table 4:** Magnetic base station locations.

Magnetic readings were reviewed at regular intervals to ensure that no airborne data were collected during periods of high magnetic activity (greater than 10 nT change per minute).



**Figure 14:** GEM 3 and GEM 4 magnetic base stations located southwest of the survey block.



**Figure 15:** GEM 3 (left) and GEM 4 (right) magnetic base stations at Cochrane, Ontario.

### 4.3 Field Processing and Quality Control

Survey data were transferred from the aircraft's data acquisition system onto a USB memory stick and copied onto a field data processing laptop on a flight by flight basis. The raw data files in PEI binary data format were converted into Geosoft GDB database format. Using Geosoft Oasis Montaj 9.9.1, the data were inspected to ensure compliance with contract specifications (Table 5; Figures 16 to 18).

Parameter	Specification	Tolerance
Position	Line Spacing	Flight line deviation within 8 m L/R from ideal flight path. No exceedance for more than 1 km.
	Height	Nominal flight height of 40 m above ground level (AGL) with tolerance of $\pm 10$ m. No exceedance for more than 1 km, provided deviation is not due to tall trees, topography, mitigation of wildlife/livestock harassment, cultural features, or other obstacles beyond the pilot's control.
	GPS	GPS signals from four or more satellites must be received at all times, except where signal loss is due to topography. No exceedance for more than 1 km.
Magnetics	Temporal/Diurnal Variations	Non-linear temporal magnetic variations within 10 nT of a linear chord of length 5 minutes.
	Normalized 4 <sup>th</sup> Difference	Magnetic data within 0.01 nT peak to peak. No exceedance for distances greater than 1 km or more, provided noise is not due to geological or cultural features.

Table 5: Contract survey specifications.

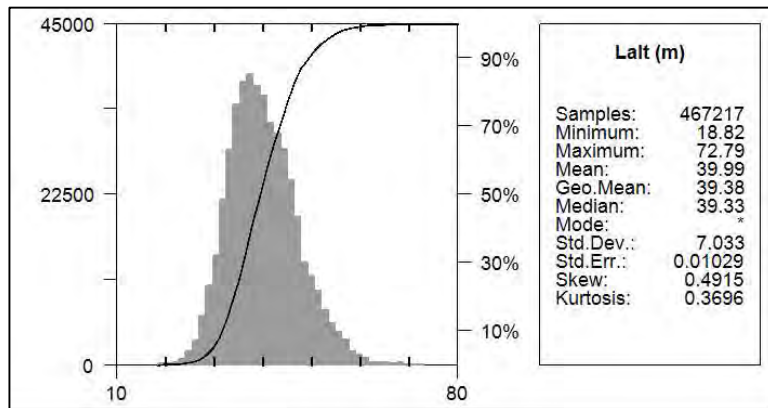


Figure 16: Histogram showing survey bird elevation vertically above ground.

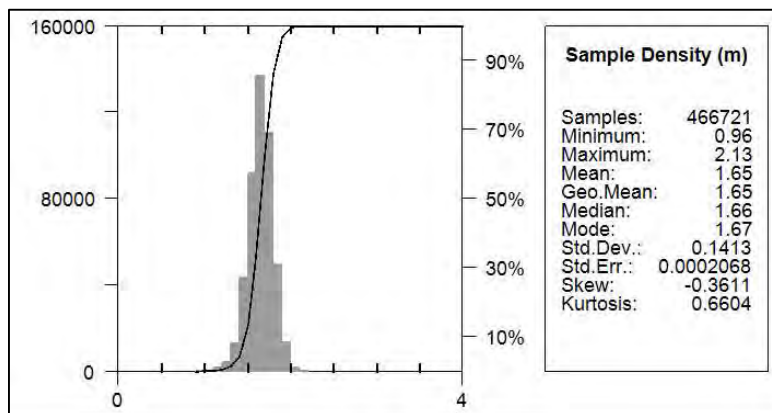


Figure 17: Histogram showing magnetic sample density. Horizontal distance in meters between adjacent measurement locations; magnetic sample frequency 20 Hz.

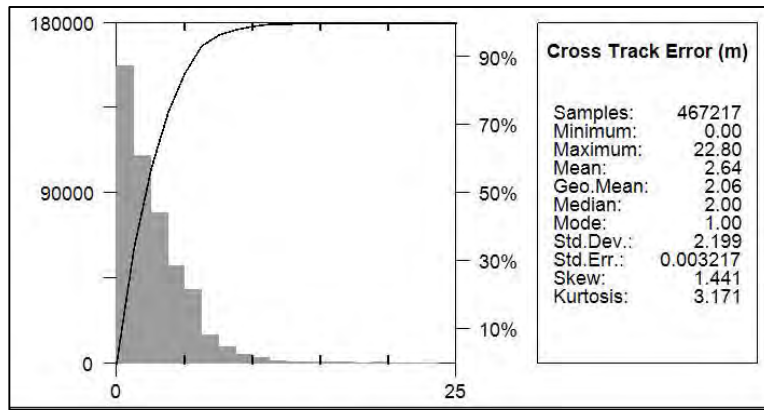


Figure 18: Histogram showing cross track error of survey bird.

## 5.0 Data Acquisition Equipment Checks

Equipment tests and calibrations were conducted for the laser altimeter and magnetometers at the start of the survey to ensure compliance with contract specifications and to deliver high quality airborne geophysical data. A lag test was conducted for both the laser altimeter and magnetometers. For the airborne magnetometers, a heading error test was flown.

### 5.1 Laser Altimeter Calibration

The Opti-Logic RS800 laser altimeter used on the survey helicopter was tested and calibrated in accordance with manufacturer's instructions prior to starting the survey. This ensured that heights reported by the laser were accurate within the normal survey operating range.

### 5.2 Lag Test

A lag test was performed to determine the difference in time the digital reading was recorded for the magnetometers and laser altimeter with the position fix time that the fiducial of the reading was obtained by the GPS system resulting from a combination of system lag and different locations of the various sensors and the GPS antenna. The test was flown in reciprocal headings over identifiable features at survey speed and height to isolate position changes. The resulting data (Table 6) were used to correct for time and position.

Instrument	Source	Lag Fiducial	Correction (sec)
Mag 1	Logging equipment	38	1.9
Mag 2	Logging equipment	38	1.9
Mag 3	Logging equipment	38	1.9
Mag 4	Logging equipment	38	1.9
Laser	Sharp gully	6	0.3

Table 6: Survey lag correction values. Laser altimeter resampled to 20 Hz.

### 5.3 Heading Correction Test

Optically pumped magnetometers are subject to small errors in the reported total magnetic intensity depending on the direction of flight. For a gradient survey, this heading error is determined for each of the four survey flight directions by comparing the average total magnetic intensity for all four sensors with the average total magnetic intensity reported by the individual sensors. These four differences are then averaged, and the same heading correction is applied to all four sensors in the four flight directions, so that the gradient measurements are not affected. Results of the heading correction analysis are summarized in Table 7.

Heading	Heading Correction (nT)
000°	2.28
090°	-2.38
180°	-2.81
270°	2.91
<b>Total:</b>	<b>0.00</b>

**Table 7:** Heading correction data.

## 6.0 Data Processing

After all data were collected, several procedures were undertaken to ensure that the data met a high standard of quality. All magnetic data recorded by the AGIS were converted into Geosoft or ASCII file formats using Nuvia Dynamics software. Further processing (Figure 19) was carried out using Geosoft Oasis Montaj 9.9.1 geophysical processing software along with proprietary processing algorithms.

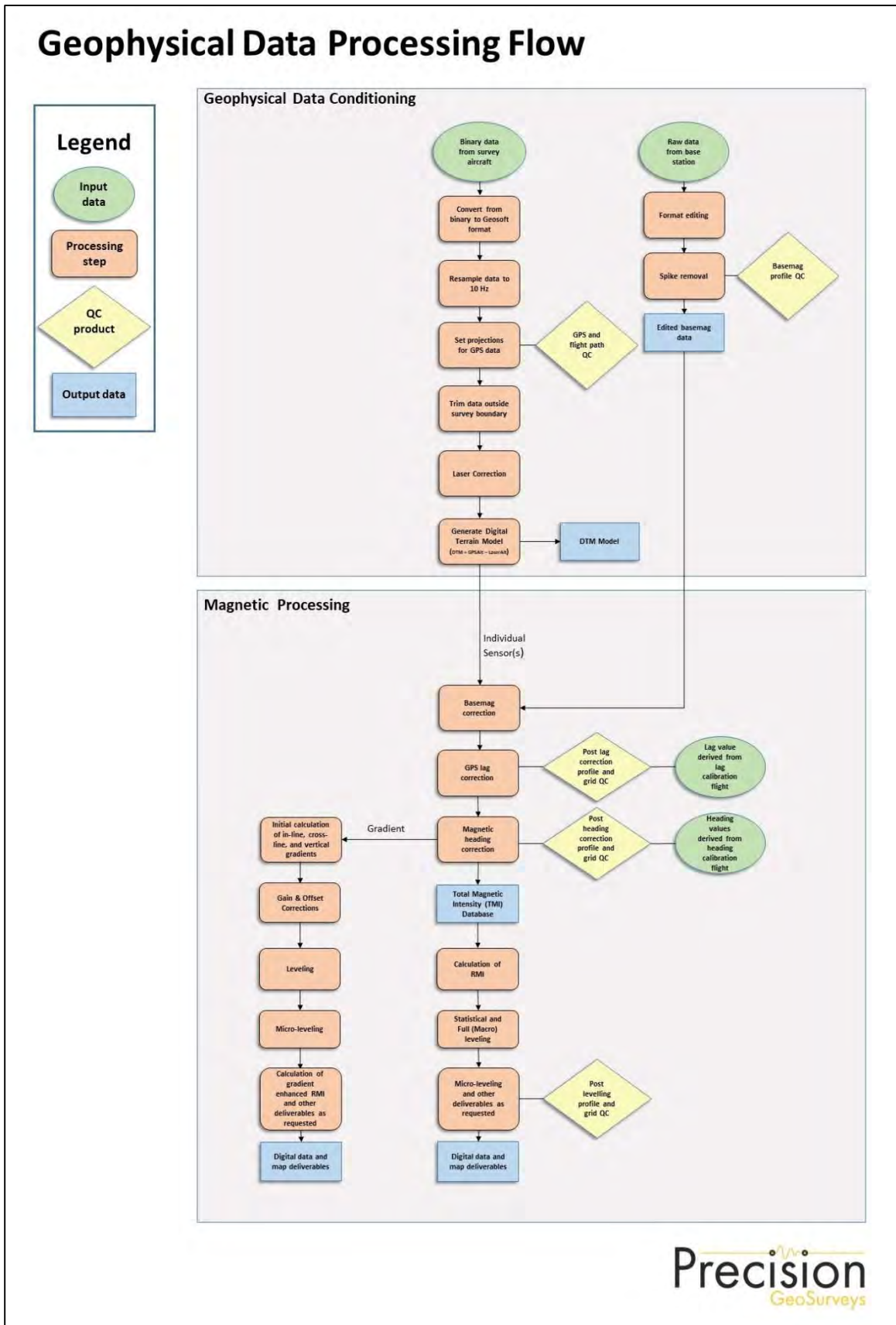


Figure 19: Magnetic data processing flow.



## **6.1 Position Corrections**

In order to collect high resolution geophysical data, the location at which the data were collected and recorded must be accurate.

### **6.1.1 Lag Correction**

A correction for lag error was applied to the geophysical data recorded at each individual sensor to compensate for the combination of lag in the recording system and the sensing instrument flying in a different location from the GPS antenna, as determined during the lag test. Validity of the lag corrections was confirmed by the absence of grid corrugations in adjoining reciprocal lines.

## **6.2 Flight Height and Digital Terrain Model**

Laser altimeters are unable to provide valid data over glassy water or fog which dissipate the laser so that a “zero” reading is obtained. In these cases, estimates of correct height are inserted manually. Dense vegetation generates high frequency variations from leaf and branch reflections. A Rolling Statistics filter is applied to the lag corrected (0.3 seconds lag) laser altimeter data to remove vegetation clutter followed by a Low Pass filter to smooth out the laser altimeter profile to eliminate isolated high frequency noise and generate a surface closely corresponding to the actual ground profile.

A Digital Terrain Model (DTM) channel was calculated by subtracting the processed laser altimeter data from the filtered GPS altimeter data defined by the WGS 84 ellipsoidal height. DTM accuracy is affected by the geometric relationship between the GPS antenna and the laser altimeter as well as flight attitude of the aircraft, slope of the ground, sample density, and satellite geometry.

## **6.3 Magnetic Processing**

Magnetic data from each individual sensor were corrected for temporal variations (including diurnal) and lag. The data were examined for magnetic noise and spikes, which were removed as required. The background magnetic field, International Geomagnetic Reference Field (IGRF) of the Earth was removed. Survey and tie line data of the resulting residual magnetic field were leveled. Magnetic gradients in the X, Y, and Z axes were determined to provide in-line, cross-line, and vertical gradients, respectively.

### 6.3.1 Temporal Variation Correction

The intensity of Earth's magnetic field varies with location and time. The time variable, known as diurnal or more correctly temporal variation, is removed from the recorded airborne data to provide the desired magnetic field at a specified location. Magnetic data from base station GEM 4 were used for correcting the airborne magnetic survey data, and GEM 3 data were retained for backup. The data were edited, plotted, and merged into a Geosoft database (.GDB) on a daily basis.

Base station measurements were averaged to establish a magnetic reference datum of 55468.13 nT. Magnetic deviations relative to the reference datum were used to calculate the observed variations of the Earth's magnetic field over time. The airborne magnetic data were then corrected for temporal variations by subtracting the base station deviations from the data collected on the aircraft, effectively removing the effects of diurnal and other temporal variations.

### 6.3.2 Heading Correction

For each survey heading, changes in the apparent magnetic field due to instrumental heading error are measured and recorded. These values are used to construct a heading table (.TBL) file. For the entire dataset, the overall average magnetic field value was calculated. For each of the four headings, the averages were calculated and then compared to the overall average to determine four values which were used to correct heading and offset errors in each flight direction for each magnetometer.

### 6.3.3 IGRF Removal

The International Geomagnetic Reference Field (IGRF) model is the empirical representation of Earth's dynamic magnetic field (main core field without external sources) collected and disseminated from satellite data and from magnetic observatories around the world. The IGRF has historically been revised and updated every five years by a group of modellers associated with the International Association of Geomagnetism and Aeronomy (IAGA).

The initial unlevelled Residual Magnetic Intensity (RMI) was calculated by taking the difference between the 13<sup>th</sup> generation IGRF (IGRF-13, released in December 2019) and the non-levelled Total Magnetic Intensity (TMI) to create a more valid model of individual near-surface magnetic anomalies. This model is independent of time to allow for other magnetic data (previous or future) to be more easily incorporated into each survey database.

### 6.3.4 Leveling and Micro-leveling

Small inconsistencies in flight height and line orientation result in small spatial variabilities in magnetic intensity measured at the intersection points of survey lines and tie lines. Using the initial Residual Magnetic Intensity (RMI) data from the average of Mag 1 and Mag 2 (TMI with the IGRF removed), RMI data from survey and tie lines were leveled to each other. Two types of leveling were applied to the corrected data: conventional leveling and micro-leveling. There were two components to conventional leveling: statistical leveling to level tie lines and full leveling to level survey lines. The statistical leveling method corrected the SL/TL intersection errors that follow a specific pattern or trend. Through the error channel, an algorithm calculated a least-squares trend line and derived a trend error curve, which was then added to the channel to be leveled. The second component was full leveling. This adjusted the magnetic value of the survey lines so that all lines matched the trended tie lines at each intersection point.

Following statistical leveling, micro-leveling was applied to the corrected conventional leveled data. This iterative grid-based process removed low amplitude components of flight line noise that still remained in the data after tie line and survey line leveling and resulted in fully leveled RMI data.

## 6.4 Magnetic Gradient

When magnetic values are obtained simultaneously from two or more sensors at a fixed separation, gradient of the magnetic field can be measured. Dividing the difference in magnetic values between the sensors by the distance between the sensors yields the magnetic gradient. The units are commonly reported as nT/m and, by convention, positive magnetic polarity is defined as to the north and east, and negative to the south and west. For vertical gradient, positive is defined as downwards. The sensors and the separations that were used to determine the various gradients are listed in Table 8.

Direction	Sensors	Separation (m)
Lateral (X)	Mag 1 and Mag 2	4.00
Longitudinal (Y)	Sequential TMI values (Average of Mag 1 and Mag 2)	1.65*
Vertical (Z)	Mag 3 and Mag 4	3.30

**Table 8:** Magnetic sensor relationship used to calculate magnetic gradients. Total magnetic intensity (TMI) was determined as the average of Mag 1 and Mag 2, and successive values of the TMI were used to determine the longitudinal (Y axis) gradient.

\*average separation between sequential TMI values shown; actual value varied according to aircraft speed.

Because the magnetic field gradient varies more rapidly than total field strength, magnetic gradient provides higher spatial resolution, especially for shallow sources that are smaller than the survey line spacing or linear sources that are parallel to flight lines. Magnetic gradients, as compared to

total magnetic intensities, have the additional benefits of being less sensitive to temporal variations and aircraft/sensor movement errors.

#### 6.4.1 Horizontal Gradients

Horizontal magnetic gradients were determined in the in-line (Y axis) and cross-line (X axis) directions. Mag 1 (left) and Mag 2 (right) were used for both directions so that elevations were consistent in both axes. Gradients were calculated with respect to the magnetometer array with units provided as nT/m.

In-line gradient (ILG) is determined from successive average magnetic values of Mag 1 and Mag 2 referenced to the distance between data points in accordance with the following formula:

$$ILG = \frac{a(i + 1) - a(i - 1)}{d(i + 1) + d(i - 1)}$$

where:  $a$  is the average total magnetic intensity of Mag 1 and Mag 2  
 $d$  is the distance between measurements  
 $i$  is the record number for the sample location

Cross-line gradient (XLG) was measured directly by dividing the difference between Mag 1 and Mag 2 by the sensor separation in accordance with the following formula:

$$XLG = \frac{\text{Mag 1} - \text{Mag 2}}{d_x}$$

where:  $d_x$  is the transverse sensor separation, 4.00 m

Gain corrections were applied to the initial cross-line gradient. Overall, Mag 1 and Mag 2 should produce the same total magnetic field. If the ratio of the TMI between the sensors does not equal one, a gain correction needs to be applied to account for instrument error and asymmetric magnetic fields. The mean of the ratio between the TMI values for Mag 1 and Mag 2 for each line was calculated and applied to each Mag 2 value along the line. The cross line gradient was then recalculated from the gain-corrected Mag 2 values.

After correcting for gain in the cross-line gradient, offset corrections were applied. Offsets were determined by subtracting the first difference of the gain-corrected cross-line gradient from the gain-corrected gradient to reduce line-to-line errors (striping) in the gradient grid. The resulting data were then micro-leveled to remove any remaining striping.

Total Horizontal Gradient (HG) is the magnitude of the combined in-line and cross-line gradients. It is used to estimate contact locations of magnetic bodies at shallow depths, reveal anomaly textures, and highlight anomaly-pattern discontinuities.

Horizontal Gradient (HG) is calculated as:

$$HG(x, y) = \sqrt{ILG^2 + XLG^2}$$

where: *ILG* is the in-line gradient  
*XLG* is the cross-line gradient

#### 6.4.2 Vertical Gradient

Vertical gradient (Z axis) is useful for enhancing shorter wavelength signals; therefore, edges of magnetic anomalies are highlighted, and deep geologic sources in the data are suppressed.

Vertical gradient is determined directly with respect to the magnetometer array of Mag 3 (lower) and Mag 4 (upper) with units provided as nT/m as follows:

$$Vertical\ Gradient = \frac{Mag\ 3 - Mag\ 4}{d_z}$$

where:  $d_z$  is the vertical sensor separation, 3.30 m

#### 6.4.3 Analytic Signal

Analytic Signal (AS) is the magnitude of the total magnetic gradient in three axes, determined as the square root of the sum of the squares of the measured horizontal gradients (in-line and cross-line) and vertical gradient. Analytic signal is useful in locating the edges of magnetic source bodies.

If  $M$  is the magnetic field, then Analytic Signal (AS) is calculated as:

$$AS(x, y, z) = \sqrt{\left(\frac{\partial M}{\partial x}\right)^2 + \left(\frac{\partial M}{\partial y}\right)^2 + \left(\frac{\partial M}{\partial z}\right)^2}$$

#### 6.4.4 Tilt Derivative

The Tilt Derivative (TDR) was applied to the Total Magnetic Intensity (TMI). Variations of anomaly amplitude are minimized in order to enhance subtle features. Therefore, weak magnetic anomalies are highlighted.

The tilt derivative is calculated by:

$$TDR = \tan^{-1} \left[ \frac{\left( \frac{\partial M}{\partial z} \right)}{\sqrt{\left( \frac{\partial M}{\partial x} \right)^2 + \left( \frac{\partial M}{\partial y} \right)^2}} \right]$$

where:  $M$  is the magnetic field

$\frac{\partial}{\partial z}$  is the vertical derivative

$\frac{\partial}{\partial x}$  is the horizontal derivative in the x-direction

$\frac{\partial}{\partial y}$  is the horizontal derivative in the y-direction

#### 6.4.5 Calculation of First Vertical Derivative

First Vertical Derivative (1VD) is the first order vertical derivative of the leveled Reduced to Magnetic Pole (RTP) data determined from RMI. It is the vertical rate of change in the magnetic field per unit distance (m). The vertical gradient is used to enhance shorter wavelength signals; therefore, edges of magnetic anomalies are highlighted, and deep geologic sources in the data are suppressed.

The filter,  $L$ , used to produce the  $n^{\text{th}}$  vertical derivative is described by:

$$L(r) = r^n$$

where:  $r$  is the radial component in the wavenumber domain

#### 6.4.6 Gradient Enhanced Magnetic Intensity

Using the measured gradients (in-line and cross-line directions), the initial enhanced Total Magnetic Intensity (TMIge) was generated. A Butterworth high-pass filter was applied to this initial enhanced TMI to extract the short wavelength signals and a low-pass filter was applied to the measured TMI to extract the long wavelength signals. These wavelengths are then summed together to generate the final enhanced Total Magnetic Intensity. By subtracting the IGRF, the gradient enhanced Residual Magnetic Intensity (RMIge) was generated.

#### 6.4.7 Gradient Enhanced Reduction to Magnetic Pole

Gradient enhanced Reduced to Magnetic Pole (RTPge) data were determined from the gradient enhanced Residual Magnetic Intensity (RMIge) data. The RTP filter was applied in the Fourier

domain and rotates the observed magnetic inclination and declination field to what the field would look like at the north magnetic pole, to allow observation of magnetic trends and patterns independent of magnetic inclination and declination.

Inclination and declination were calculated by using the “Date” channel. The derived values were used in the following formula:

$$RTP(\theta) = \frac{[\sin(I) - I \cdot \cos(I) \cdot \cos(D - \theta)]^2}{[\sin^2(I_a) + \cos^2(I_a) \cdot \cos^2(D - \theta)] \cdot [\sin^2(I) + \cos^2(I) \cdot \cos^2(D - \theta)]}$$

where:  $I$  is geomagnetic inclination in ° from horizontal

$D$  is geomagnetic declination in ° azimuth from magnetic north

$I_a$  is the inclination for amplitude correction (never less than  $I$ ). Default is  $\pm 20^\circ$ . If  $|I_a|$  is specified to be less than  $|I|$ , it is set to  $I$

## 7.0 Deliverables

Blakelock survey block data are presented as digital databases, maps, and a logistics report.

### 7.1 Digital Data

Digital files have been provided in three formats:

- GDB file for use in Geosoft Oasis Montaj,
- XYZ file,
- CSV Excel comma separated file.

Full descriptions of the digital data and contents are included in Appendix C.

#### 7.1.1 Grids

The digital data were represented as grids as listed below:

- Digital Terrain Model (DTM)
- Total Magnetic Intensity (TMI)
- Residual Magnetic Intensity (RMI) – removal of IGRF from TMI
- Reduced to Magnetic Pole (RTP) – reduced to magnetic pole of RMI
- In-Line Gradient (ILG)
- Cross-Line Gradient (XLG)
- Vertical Gradient (VG)
- Horizontal Gradient (HG) – total magnitude of the horizontal gradients (in-line and cross-line)

- Analytic Signal (AS)
- Tilt Derivative (TDR) of TMI
- First Vertical Derivative (1VD) of RTP
- Gradient enhanced Total Magnetic Intensity (TMIge)
- Gradient enhanced Residual Magnetic Intensity (RMIge)
- Gradient enhanced Reduced to Magnetic Pole (RTPge) – reduced to magnetic pole of RMIge

Magnetic data were gridded and displayed using the following Geosoft parameters:

- Gridding method: minimum curvature
- Grid cell size: 25 m
- Low-pass desampling factor: 2
- Tolerance: 0.001
- % pass tolerance: 99.99
- Maximum iterations: 100

The gradient and gradient enhanced magnetic grids were drawn with a wet-look colour shade and all other magnetic grids were drawn with a histogram-equalized colour shade. All maps were shaded with the sun illumination inclination at 45° and declination at 045°. DTM grid was drawn with a linear topographic colour scale.

## 7.2 KMZ

Gridded digital data were exported into .KMZ files which can be displayed using Google Earth. The grids can be draped onto topography and rendered to give a 3D view.

## 7.3 Maps

Digital maps were created for the Blakelock survey block. The following map products were prepared:

Overview Maps (colour images with elevation contour lines):

- Actual flight lines
- DTM

Magnetic Maps (colour images with elevation contour lines):

- TMI, with actual flight lines and topographic features
- TMI
- RMI
- RTP of RMI



- ILG
- XLG
- VG
- HG
- AS
- TDR
- 1VD of RTP

Gradient Enhanced Magnetic Maps (colour images with elevation contour lines):

- TMIge
- RMIge
- RTPge of RMIge

All survey maps were prepared in WGS 84 and UTM Zone 17N.

#### **7.4 Report**

A pdf copy of the logistics report is included along with digital data and maps. The report provides information on the data acquisition procedures, data processing, and presentation of the Blakelock survey block data.

## **8.0 Conclusions and Recommendations**

The Blakelock survey resulted in the collection of 771 line km of high resolution gradient magnetic data over one survey block. The data have been processed and plotted on maps as a representation of the magnetic features of the survey area.

Geophysical data processing, particularly leveling and data interpolation routines, may tend to smooth the original data so that resolution is reduced. In addition, gridding algorithms are not always able to properly calculate grids where flight height between adjacent flight lines varied due to cultural obstacles or steep terrain, where geological structures are acute to flight lines, where line spacing exceeds the size of the causative anomaly, or near grid margins as in “edge effects.” Therefore, subtle geophysical features in gridded and derivative-enhanced products or near the survey margins may introduce artifacts and must be evaluated with discretion.

The airborne geophysical data were acquired to map the geophysical characteristics of the survey area, which are in turn related to the distribution of magnetic minerals in the Earth. Magnetic patterns correspond to the concentration and distribution of magnetite and other magnetic minerals in Earth’s subsurface. Therefore, the geophysical data will be useful in mapping lithology, structure, and alteration, which will benefit mineral exploration initiatives and geological studies.

Geophysical data are rarely a direct indication of mineral deposits and therefore interpretation and careful integration with existing and new geological, geochemical, and other geophysical data are recommended to maximize value from the survey investment.

Respectfully submitted,  
Precision GeoSurveys Inc.

Jenny Poon, P.Geo.  
Shawn Walker, P.Geo.  
June 2021

**Appendix A**  
*Polygon Coordinates*

## Blakelock – WGS 84 Zone 17N

Latitude (deg N)	Longitude (deg W)	Easting (m)	Northing (m)
49.50417	79.98743	573311	5483997
49.50197	79.98747	573311	5483753
49.50194	79.98348	573600	5483753
49.49113	79.98371	573600	5482551
49.49118	79.97814	574003	5482562
49.48389	79.97829	574003	5481751
49.48401	79.99212	573001	5481751
49.48037	79.99220	573001	5481346
49.48050	80.00905	571780	5481345
49.47274	80.00921	571780	5480482
49.47081	80.00925	571780	5480267
49.47084	79.92491	577890	5480354
49.46666	79.92500	577890	5479890
49.46666	79.90597	579269	5479910
49.45416	79.90625	579269	5478520
49.45417	80.18125	559339	5478268
49.46249	80.18111	559339	5479193
49.46269	80.20098	557899	5479200
49.47083	80.20084	557899	5480105
49.47084	80.20652	557488	5480101
49.48750	80.20625	557488	5481954
49.48750	80.15596	561130	5481993
49.47083	80.15625	561130	5480140
49.47087	80.13772	562472	5480160
49.48333	80.13751	562472	5481545
49.48334	80.08138	566537	5481594
49.49167	80.08123	566537	5482520
49.49167	80.03774	569686	5482560
49.50417	80.03750	569686	5483949

## **Appendix B**

### *Equipment Specifications*

- GEM GSM-19T Proton Precession Magnetometer (Magnetic Base Station)
- Hemisphere R120 GPS Receiver
- Hemisphere R330 GPS Receiver
- Opti-Logic RS800 Rangefinder Laser Altimeter
- Setra Model 276 Barometric Pressure Sensor
- Scintrex CS-3 Survey Magnetometer
- Billingsley TFM100G2 Ultra Miniature Triaxial Fluxgate Magnetometer
- Nuvia Dynamics IMPAC data recorder system (for navigation and geophysical data acquisition)

**GEM GSM-19T Proton Precession Magnetometer (Magnetic Base Station)**

<b>Sensitivity</b>	0.15 nT @ 1 Hz
<b>Resolution</b>	0.01 nT (gamma), magnetic field and gradient
<b>Absolute Accuracy</b>	±0.2 nT @ 1 Hz
<b>Operating Range</b>	20,000 nT to 120,000 nT
<b>Gradient Tolerance</b>	Over 7,000 nT/m
<b>Operating Ranges</b>	Temperature: -40°C to +50°C Battery Voltage: 10.0 V minimum to 15 V maximum Humidity: up to 90% relative, non-condensing
<b>Storage Temperature</b>	-50°C to +50°C
<b>Dimensions</b>	Console: 223 x 69 x 40 mm Sensor Staff: 4 x 450 mm sections Sensor: 170 x 71 mm dia. Weight: console 2.1 kg, sensor and staff assembly 2.2 kg
<b>Integrated GPS</b>	Yes

**Hemisphere R120 GPS Receiver**

<b>GPS Sensor</b>	Receiver Type	L1, C/A code, with carrier phase smoothing (Patented COAST technology during differential signal outage)
	Channels	12-channel, parallel tracking (10-channel when tracking SBAS)
	Update Rate	Up to 20 Hz position
	Cold Start Time	<60 s
	SBAS Tracking	2-channel, parallel tracking
	Horizontal Accuracy	<0.02 m 95% confidence (RTK 1, 2) <0.28 m 95% confidence (L-Dif 1, 2) <0.6 m 95% confidence (DGPS 1,3) <2.5 m 95% confidence (autonomous, no SA1)
	Differential Options	SBAS, Autonomous, External RTCM, RTK, OmniSTAR (HP/XP)
<b>Beacon Sensor Specifications</b>	Channels	2-channel, parallel tracking
	Frequency Range	283.5 to 325 kHz
	MSK Bit Rates	50, 100, and 200 bps
<b>L-Band Sensor</b>	Channels	Single channel
	Frequency Range	1530 MHz to 1560 MHz
	Satellite Selection	Manual or Automatic (based on location)
	Startup and Satellite Reacquisition Time	15 seconds typical
<b>Communications</b>	Serial Ports	2 full duplex RS232C
	Baud Rates	4800 – 115200
	USB Ports	1 Communications
	Correction I/O Protocol	RTCM SC-104
	Data I/O Protocol	NMEA 0183
	Timing Output	1 PPS (HCMOS, active high, rising edge sync, 10 kΩ, 10 pF load)
	Raw Data	Proprietary binary (RINEX utility available)
<b>Environmental</b>	Operating Temperature	-30°C to +70°C
	Storage Temperature	-40°C to +85°C
	Humidity	95% non-condensing
<b>Power GPS Sensor</b>	Input Voltage Range	8 to 36 VDC
	Power Consumption	3 Watts
	Current Consumption	< 250 mA @ 12 VDC
	Antenna Voltage Output	5.0 VDC

<sup>1</sup>Depends on multipath environment, number of satellites in view, satellite geometry and ionospheric activity.<sup>2</sup>Up to 5 km baseline length.<sup>3</sup>Depends also on baseline length.

**Hemisphere R330 GPS Receiver**

<b>GPS Sensor</b>	Receiver Type	L1 and L2 RTK with carrier phase	
	Channels	12 L1CA GPS 12 L1P GPS 12 L2P GPS 12 L2C GPS 12 L1 GLONASS (with subscription code) 12 L2 GLONASS (with subscription code) 3 SBAS or 3 additional L1CA GPS	
	Update Rate	10 Hz standard, 20 Hz available	
	Cold Start Time	<60 s	
	Warm Start Time 1	30 s (valid ephemeris)	
	Warm Start Time 2	30 s (almanac and RTC)	
	Hot Start Time	10 s typical (valid ephemeris and RTC)	
	Reacquisition	<1 s	
	Differential Options	SBAS, Autonomous, External RTCM, RTK, OmniSTAR (HP/XP)	
	<b>Horizontal Accuracy</b>		RMS (67%)
RTK <sup>1,2</sup>		10 mm + 1 ppm	20 mm + 2 ppm
OmniSTAR HP <sup>1,3</sup>		0.1 m	0.2 m
SBAS (WAAS) <sup>1</sup>		0.3 m	0.6 m
Autonomous, no SA <sup>1</sup>		1.2 m	2.5 m
<b>L-Band Sensor</b>	Channel	Single channel	
	Frequency Range	1530 MHz to 1560 MHz	
	Satellite Selection	Manual or Automatic (based on location)	
	Startup and Satellite Reacquisition Time	15 seconds typical	
<b>Communications</b>	Serial Ports	2 full duplex RS232	
	Baud Rates	4800 – 115200	
	USB Ports	1 Communications, 1 Flash Drive data storage	
	Correction I/O Protocol	Hemisphere GPS proprietary, RTCM v2.3 (DGPS), RTCM v3 (RTK), CMR, CMR+NMEA 0183, Hemisphere GPS binary	
	Timing Output	1 PPS (HCMOS, active high, rising edge sync, 10 kΩ, 10 pF load)	
	Event Marker Input	HCMOS, active low, falling edge sync, 10 kΩ	
<b>Environmental</b>	Operating Temperature	-40°C to +70°C	
	Storage Temperature	-40°C to +85°C	
	Humidity	95% non-condensing	
<b>Power GPS Sensor</b>	Input Voltage Range	8 to 36 VDC	
	Consumption, RTK	<3.5 W (0.30 A @ 12 VDC typical)	
	Consumption, OmniSTAR	<4.3 W (0.36 A @ 12 VDC typical)	

<sup>1</sup> Depends on multipath environment, number of satellites in view, satellite geometry and ionospheric activity.<sup>2</sup> Depends also on baseline length.<sup>3</sup> Requires a subscription from OmniSTAR.



**Opti-Logic RS800 Rangefinder Laser Altimeter**

<b>Accuracy</b>	±1 m on 1x1 m <sup>2</sup> diffuse target with 50% reflectivity, up to 700 m
<b>Resolution</b>	0.2 m
<b>Communication Protocol</b>	RS232-8, N, 1 ASCII characters
<b>Baud Rate</b>	19200
<b>Data Raw Counts</b>	~200 Hz
<b>Data Calibrated Range</b>	~10 Hz
<b>Data Rate</b>	~200 Hz raw counts for un-calibrated operation; ~10 Hz for calibrated operation (averaging algorithm seeks 8 good readings)
<b>Calibrated Range Units</b>	Feet, Meters, Yards
<b>Laser</b>	Class I (eye-safe), 905 nm ± 10 nm
<b>Power</b>	7 - 9 VDC conditioned required, current draw at full power (~ 1.8 W)
<b>Laser Wavelength</b>	RS100 905 nm ± 10 nm
<b>Laser Divergence</b>	Vertical axis – 3.5 mrad half-angle divergence; Horizontal axis – 1 mrad half-angle divergence; (approximate beam “footprint” at 100 m is 35 cm x 5 cm)
<b>Dimensions</b>	32 x 78 x 84 mm (lens face cross section is 32 x 78 mm)
<b>Weight</b>	<227 g (8 oz)
<b>Casing</b>	RS100/RS400/RS800 units are supplied as OEM modules consisting of an open chassis containing optics and circuit boards. Custom housings can be designed and built on request.

**Setra Model 276 Barometric Pressure Sensor**

<b>Performance</b>	Accuracy RSS <sup>1</sup> (at constant temp)	±0.25% FS <sup>2</sup>
	Non-Linearity (BSFL)	±0.22% FS
	Hysteresis	0.05% FS
	Non-Repeatability	0.05% FS
	Thermal Effects <sup>3</sup>	Compensated range: 0°C to +55°C (+30°F to +130°F) Zero shift (over compensated range): 1% FS Span shift (over compensated range): 1% FS
	Resolution	Infinite, limited only by output noise level (0.0005% FS)
	Time Constant	10 msec to reach 90% final output with step function pressure input
	Long Term Stability	0.25% FS / 6 months
<b>Environmental</b>	Temperature	Operating <sup>4</sup> : -18°C to +79°C (0°F to +175°F) Storage: -55°C to +121°C (-65°F to +250°F)
	Vibration	2 g from 5 Hz to 500 Hz
	Shock	50 g (Operating, 1/2 sine 10 ms)
	Acceleration	10 g
<b>Electrical</b>	Circuit	3-Wire <sup>5</sup> (Exc, Out, Com)
	Power Consumption	0.20 W (24 VDC)
	Output Impedance	5 Ω
	Output Noise	<200 μV RMS (0 to 100 Hz)

<sup>1</sup> RSS of non-linearity, hysteresis, and non-repeatability.

<sup>2</sup> FS = 300 mb for 800 – 1100 mb range; 500 for 600 – 1100 mb range; and 20 PSI for 0 to 20 PSIA.

<sup>3</sup> Units calibrated at nominal 70°F. Maximum thermal error computed from this datum.

<sup>4</sup> Operating temperature limits of the electronics only. Pressure media temperatures may be considerable higher or lower.

<sup>5</sup> The separate leads for +EXC, -EXC, +Out, -Out are commoned internally. The shield is connected to the case. For best performance, either the -Exc or -Out should be connected to the case. Unit is calibrated at the factory with -Exc connected to the case. The insulation resistance between all signal leads are tied together and case ground is 10

**Scintrex CS-3 Magnetometer**

<b>Operating Principal</b>	Self-oscillating split-beam Cesium Vapor (non-radioactive <sup>133</sup> Cs)
<b>Operating Range</b>	15,000 nT to 105,000 nT
<b>Gradient Tolerance</b>	40,000 nT/m
<b>Operating Zones</b>	15° to 75° and 105° to 165°
<b>Hemisphere Switching</b>	a) Automatic b) Electronic control actuated by the control voltage levels (TTL/CMOS) c) Manual
<b>Sensitivity</b>	0.0006 nT $\sqrt{\text{Hz}}$ rms
<b>Noise Envelope</b>	Typically 0.002 nT peak to peak, 0.1 to 1 Hz bandwidth
<b>Heading Error</b>	$\pm 0.20$ nT (inside the optical axis to the field direction angle range 15° to 75° and 105° to 165°)
<b>Absolute Accuracy</b>	<2.5 nT throughout range
<b>Output</b>	a) Continuous signal at the Larmor frequency which is proportional to the magnetic field (proportionality constant 3.49857 Hz/nT) sine wave signal amplitude modulated on the power supply voltage b) Square wave signal at the I/O connector, TTL/CMOS compatible
<b>Information Bandwidth</b>	Only limited by the magnetometer processor used
<b>Sensor Head</b>	Diameter: 63 mm (2.5") Length: 160 mm (6.3") Weight: 1.15 kg (2.6 lb)
<b>Sensor Electronics</b>	Diameter: 63 mm (2.5") Length: 350 mm (13.8") Weight: 1.5 kg (3.3 lb)
<b>Cable, Sensor to Sensor Electronics</b>	3 m (9' 8"), lengths up to 5 m (16' 4") available
<b>Operating Temperature</b>	-40°C to +50°C
<b>Humidity</b>	Up to 100%, splash proof
<b>Supply Power</b>	24 to 35 VDC
<b>Supply Current</b>	Approx. 1.5 A at start up, decreasing to 0.5 A at 20°C
<b>Power Up Time</b>	Less than 15 minutes at -30°C

**Billingsley TFM100G2 Ultra Miniature Triaxial Fluxgate Magnetometer**

<b>Axial Alignment</b>	Orthogonality better than $\pm 1^\circ$
<b>Input Voltage Options</b>	15 to 34 VDC @ 30 mA
<b>Field Measurement Range Options</b>	$\pm 100 \mu\text{T} = \pm 10 \text{ V}$
<b>Accuracy</b>	$\pm 0.75\%$ of full scale (0.5% typical)
<b>Linearity</b>	$\pm 0.015\%$ of full scale
<b>Sensitivity</b>	100 $\mu\text{V/nT}$
<b>Scale Factor Temperature Shift</b>	0.007% full scale/ $^\circ\text{C}$
<b>Noise</b>	$\leq 12 \text{ pT rms}/\sqrt{\text{Hz}}$ @ 1 Hz
<b>Output Ripple</b>	3 mV peak to peak @ 2 <sup>nd</sup> harmonic
<b>Analog Output at Zero Field</b>	$\pm 0.025 \text{ V}$
<b>Zero Shift with Temperature</b>	$\pm 0.6 \text{ nT}/^\circ\text{C}$
<b>Susceptibility to Perming</b>	$\pm 8 \text{ nT}$ shift with $\pm 5 \text{ Gs}$ applied
<b>Output Impedance</b>	$332 \Omega \pm 5\%$
<b>Frequency Response</b>	3 dB @ $> 500 \text{ Hz}$ (to $> 4 \text{ kHz}$ wide band)
<b>Over Load Recovery</b>	$\pm 5 \text{ Gs}$ slew $< 2 \text{ ms}$
<b>Random Vibration</b>	$> 20 \text{ G rms}$ 20 Hz to 2 kHz
<b>Temperature Range</b>	$-55^\circ\text{C}$ to $+85^\circ\text{C}$
<b>Acceleration</b>	$> 60 \text{ G}$
<b>Weight</b>	100 g
<b>Size</b>	3.51 cm x 3.23 cm x 8.26 cm
<b>Connector</b>	Chassis mounted 9 pin male "D" type

**Nuvia Dynamics IMPAC data recorder system**

(for navigation and geophysical data acquisition)

<b>Functions</b>	Integrated Multi-Parameter Airborne Console (IMPAC) with integrated dual Global Positioning System Receiver (GPS) and all necessary navigation guidance software. Inputs for geophysical sensors - portable gamma ray spectrometer GRS-10/AGRS, MMS4/MMS8 Magnetometer, Herz Totem-2A, A/D converter, temperature/humidity probe, barometric pressure probe, and laser/radar altimeter. Output for the multi-parameter PGU (Pilot Guidance Unit)
<b>Display</b>	Monitor display 600 x 800 pixels; customized keypad and operator keyboard. Multi-screen options for real-time viewing of all data inputs, fiducial points, flight line tracking, and GPS channels by operator
<b>Navigation</b>	Pilot/operator navigation guidance. Software supports preplanned survey flight plan, along survey lines, way-points, preplanned drape profile surfaces
<b>Data Sampling</b>	Sensor dependent
<b>Data Synchronization</b>	Synchronized to GPS position. Supports dual GPS
<b>Data File</b>	PEI Binary data format
<b>Storage</b>	80 GB
<b>Software</b>	DataView: Allows fast data verification and conversion of PEI binary data to Geosoft GBN or ASCII formats MAPConv: For survey preparation, calibration and conversion of maps, and survey plot after data acquisition MAGComp: For calculation of magnetic compensation coefficients AGRS/GRS10 Calibration: High voltage adjustment, linearity correction coefficients calculation, and communication test support AGIS: Real time data acquisition and navigation system. Displays chart/spectrum view in real-time for fast data Quality Control (QC)
<b>Electrical</b>	Multiple ethernet connections, RS232 serial ports, USB ports, and 16-bit differential analog input channels. It can support up to 4 magnetometer sensors
<b>Power Requirement</b>	24 VDC

## **Appendix C**

### *Digital File Descriptions*

- Magnetic Database
- Geosoft Grids
- Maps

**Magnetic Database:**

Abbreviations used in the GDB/XYZ files listed below:

<b>CHANNEL</b>	<b>UNITS</b>	<b>DESCRIPTION</b>
<b>X_WGS84</b>	m	UTM Easting – WGS84 Zone 17N
<b>Y_WGS84</b>	m	UTM Northing – WGS84 Zone 17N
<b>Lat_deg</b>	Decimal degree	Latitude – WGS84
<b>Lon_deg</b>	Decimal degree	Longitude – WGS84
<b>Date</b>	yyyy/mm/dd	Dates of the survey flight(s) – Local
<b>FLT</b>		Flight number(s)
<b>LineNo</b>		Line numbers
<b>STL</b>		Number of satellite(s)
<b>GPSfix</b>		1 = non-differential 2 = WAAS/SBAS differential
<b>Heading</b>	degree	Heading of the aircraft
<b>GPStime</b>	HH:MM:SS	GPS time (UTC)
<b>Geos_m</b>	m	Geoidal separation
<b>XTE_m</b>	m	Cross track error
<b>Galt</b>	m	GPS height – WGS84 Zone 17N (ASL)
<b>Lalt</b>	m	Laser altimeter readings (AGL)
<b>DTM</b>	m	Digital Terrain Model
<b>Sample_Density</b>	m	Horizontal distance in meters between adjacent measurement locations; sample frequency is 20 Hz
<b>Speed_km_hr</b>	km/hr	Ground speed of aircraft in km/hr
<b>basemag</b>	nT	Base station temporal variation data
<b>IGRF</b>	nT	International Geomagnetic Reference Field, IGRF-13
<b>Declin</b>	Decimal degree	Calculated declination of magnetic field
<b>Inclin</b>	Decimal degree	Calculated inclination of magnetic field
<b>Mag1_Head</b>	nT	Mag 1 – Diurnal, lag, and heading corrected
<b>Mag2_Head</b>	nT	Mag 2 – Diurnal, lag, and heading corrected
<b>Mag3_Head</b>	nT	Mag 3 – Diurnal, lag, and heading corrected
<b>Mag4_Head</b>	nT	Mag 4 - Diurnal, lag, and heading corrected
<b>TMI</b>	nT	Total Magnetic Intensity (average of Mag 1 and Mag 2)
<b>RMI</b>	nT	Residual Magnetic Intensity (average of Mag 1 and Mag 2)
<b>ILG</b>	nT/m	In-Line Gradient (Mag 1 and Mag 2)
<b>XLG</b>	nT/m	Cross-Line Gradient (Mag 1 and Mag 2)
<b>VG</b>	nT/m	Vertical Gradient (Mag 3 and Mag 4)
<b>HG</b>	nT/m	Total horizontal gradient (in-line and cross-line)
<b>TMIge</b>	nT	Gradient enhanced Total Magnetic Intensity
<b>RMIge</b>	nT	Gradient enhanced Residual Magnetic Intensity

**Grids:**

Blakelock, WGS 84 Datum, Zone 17N, cell size at 25 m

<b>FILE NAME</b>	<b>DESCRIPTION</b>
21146_Blakelock_DTM_25m.grd	Digital Terrain Model gridded at 25 m cell size
21146_Blakelock_TMI_25m.grd	Total Magnetic Intensity gridded at 25 m cell size
21146_Blakelock_RMI_25m.grd	Residual Magnetic Intensity gridded at 25 m cell size
21146_Blakelock_RTP_25m.grd	Reduced to Magnetic Pole of RMI gridded at 25 m cell size
21146_Blakelock_ILG_25m.grd	Measured In-Line Gradient (Mag 1 and Mag 2) gridded at 25 m cell size
21146_Blakelock_XLG_25m.grd	Measured Cross-Line Gradient (Mag 1 and Mag 2) gridded at 25 m cell size
21146_Blakelock_VG_25m.grd	Measured Vertical Gradient (Mag 3 and Mag 4) gridded at 25 m cell size
21146_Blakelock_HG_25m.grd	Total Horizontal Gradient (in-line and cross-line) gridded at 25 m cell size
21146_Blakelock_AS_25m.grd	Analytic Signal (in-line, cross-line, and vertical gradients) gridded at 25 m cell size
21146_Blakelock_TDR_25m.grd	Tilt Derivative of TMI gridded at 25 m cell size
21146_Blakelock_1VD_25m.grd	First Vertical Derivative of RTP gridded at 25 m cell size
21146_Blakelock_TMIge_25m.grd	Gradient enhanced Total Magnetic Intensity (in-line, cross-line, and vertical gradients) gridded at 25 m cell size
21146_Blakelock_RMIge_25m.grd	Gradient enhanced Residual Magnetic Intensity (in-line, cross-line, and vertical gradients) gridded at 25 m cell size
21146_Blakelock_RTPge_25m.grd	Gradient enhanced Reduced to Magnetic Pole of RMIge gridded at 25 m cell size



Maps:

Blakelock, WGS 84 Datum, Zone 17N (jpegs, pdfs, and georeferenced pdf)

Plate Number	Plate Name	FILE NAME	DESCRIPTION
1	FL	21146_Blakelock_ActualFlightLines	Plotted actual flown flight lines
2	DTM	21146_Blakelock_DTM_25m	Digital Terrain Model gridded at 25 m cell size
3	TMI_wFL	21146_Blakelock_TMI_wFL_25m	Total Magnetic Intensity gridded at 25 m cell size with actual flown flight lines
4	TMI	21146_Blakelock_TMI_25m	Total Magnetic Intensity gridded at 25 m cell size
5	RMI	21146_Blakelock_RMI_25m	Residual Magnetic Intensity gridded at 25 m cell size
6	RTP	21146_Blakelock_RTP_25m	Reduced to Magnetic Pole of RMI gridded at 25 m cell size
7	ILG	21146_Blakelock_ILG_25m	Measured In-Line Gradient gridded at 25 m cell size
8	XLG	21146_Blakelock_XLG_25m	Measured Cross-Line Gradient gridded at 25 m cell size
9	VG	21146_Blakelock_VG_25m	Measured Vertical Gradient gridded at 25 m cell size
10	HG	21146_Blakelock_HG_25m	Total Horizontal Gradient (in-line and cross-line) gridded at 25 m cell size
11	AS	21146_Blakelock_AS_25m	Analytic Signal (in-line, cross-line, and vertical gradients) gridded at 25 m cell size
12	TDR	21146_Blakelock_TDR_25m	Tilt Derivative of TMI gridded at 25 m cell size
13	1VD	21146_Blakelock_1VD_25m	First Vertical Derivative of RTP gridded at 25 m cell size
14	TMIge	21146_Blakelock_TMIge_25m	Gradient enhanced Total Magnetic Intensity gridded at 25 m cell size
15	RMIge	21146_Blakelock_RMIge_25m	Gradient enhanced Residual Magnetic Intensity gridded at 25 m cell size
16	RTPge	21146_Blakelock_RTPge_25m	Gradient enhanced Reduced to Magnetic Pole of RMIge gridded at 25 m cell size

## **Plates**

### *Blakelock Survey Block*

- Plate 1: Blakelock – Actual Flight Lines (FL)
- Plate 2: Blakelock – Digital Terrain Model (DTM)
- Plate 3: Blakelock – Total Magnetic Intensity with Actual Flight Lines (TMI\_wFL)
- Plate 4: Blakelock – Total Magnetic Intensity (TMI)
- Plate 5: Blakelock – Residual Magnetic Intensity (RMI)
- Plate 6: Blakelock – Reduced to Magnetic Pole (RTP)
- Plate 7: Blakelock – In-Line Gradient (ILG)
- Plate 8: Blakelock – Cross-Line Gradient (XLG)
- Plate 9: Blakelock – Vertical Gradient (VG)
- Plate 10: Blakelock – Horizontal Gradient (HG)
- Plate 11: Blakelock – Analytic Signal (AS)
- Plate 12: Blakelock – Tilt Derivative (TDR)
- Plate 13: Blakelock – First Vertical Derivative (1VD) of RTP
- Plate 14: Blakelock – Gradient Enhanced Total Magnetic Intensity (TMIge)
- Plate 15: Blakelock – Gradient Enhanced Residual Magnetic Intensity (RMIge)
- Plate 16: Blakelock – Gradient Enhanced Reduced to Magnetic Pole (RTPge) of RMIge