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2021 ASSESSMENT REPORT

On the

NIPISSING LORRAIN PROPERTY

South Lorrain and Lorrain Townships, Kirkland Mining Division, Ontario, Canada

Located Within:

NTS Sheet 31M04I/31M03L

Centered at Approximately:

Latitude 47°12’43.58” North by Longitude 79°27’22.08” West

Report Prepared For:

Quantum Battery Metals Corp.

800-1199 West Hastings St.
Vancouver, BC, Canada
V6E 3T5

Report Prepared by:

Longford Exploration Services Ltd.

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EFFECTIVE DATE: March 24, 2022

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1 Summary

1.1 Introduction

This technical report provides the results of a prospecting and geochemical soil survey carried out over the Nipissing Lorrain Property (the Property) for Quantum Battery Metals Corp. (formerly known as Quantum Cobalt Inc.) a Canadian company involved in mineral exploration and development. The Property is located in southeastern Ontario, Canada in the Sudbury Mining Division. The purpose of this report is to fulfill the annual work requirements on the Nipissing Lorrain Property.

The Nipissing Lorrain Property is characteristic of a Five-Element Vein style of mineralization

1.2 Property Description

The Nipissing Lorrain Property is located 26 km southeast of the town of Cobalt, near the eastern border of Ontario. Cobalt is the epicentre of past Cobalt mining in Ontario. The district is mining friendly, with a rich history of cobalt and silver production. The Property consists of 38 mineral claims located in the Timiskaming Mining Division totalling 832 hectares (ha). The claims currently show in the online registry as being owned 100% by Quantum Cobalt Inc. (now known as Quantum Battery Metals Corp.).

1.3 Geology

The Nipissing Lorrain Property area is located 26 km south of the historic Cobalt silver mines which includes historically significant Keeley-Frontier, Haileybury, and Bellellen mines. The mines are located in the eastern portion of the Cobalt Embayment and are characterized by Archean meta-volcanics and meta-sedimentary rocks which are unconformably overlain by Proterozoic rocks of the Huronian Supergroup. The Archean and Proterozoic rocks have been intruded by Nipissing Diabase sills on a regional scale, and its distribution may be structurally influenced by faults. A significant regional southeast trending fault system is located within the area and consists of the Montreal River, Cross Lake, and Timiskaming faults. This fault system is believed to be related to mineralization as most of the Ag-Co occurrences in the Cobalt Embayment are concentrated between Cross Lake and Montreal River faults.

The Property overlies the Nipissing diabase sill rocks which outcrop on the Temiskaming lakeshore. A basin-structure is formed by these intrusive rocks and exhibits an east-west trending axis. Underlying this unit is the Cobalt Group sedimentary suite of greywackes and conglomerates of Huronian age which pinch out between the overlying diabase and the underlying Keewatin lava complex. Intruding into the Keewatin lava complex are pre-Huronian age lamprophyre dykes and Algoman granites.

1.4 Mineralization

The Nipissing Lorrain Property has a similar style of mineralization to the Cobalt Silver Mines, which is related to the Nipissing Diabase intrusion and is fault controlled. The typical style of mineralization is consistent with the Five-Element (Co-Ni-As-Ag-Bi) vein assemblage. It has been suggested that the origin and mechanism driving this style of mineralization is related to one of the following: (1) metal-rich aqueous fluids originating from late stage differentiation of the diabase sills and or the parent magma at depth; (2) convectively circulating fluids mobilized from the country rocks during cooling of the diabase intrusive complex; or (3) hydrothermal fluids originating from an unidentified external source unrelated

to the diabase contact areas simply acted as a mechanically favourable host environment during regional faulting.

Cobalt, silver and nickel mineralization occurs over a number of fracture zones and veins within the property. Mineralization is associated with calcite veins within close proximity to diabase sills which occurs as Co-Fe-Ni arsenides, argentite, niccolite and native silver. Silver grades up to 261 g/t, and Cobalt grades up to 14.75% have been reported on the Property.

Mineralization exists in a number of structural orientations throughout the Property. However, it appears to be discontinuous and of a pinch and swell nature. The biggest resource on the Property (staples vein) occurs at the intersection between two crosscutting veins.

1.5 Status of Exploration

Mining and exploration have been sporadic over the Property since 1925. The first shafts were sunk into staples vein in 1925 by Nipissing Mining Co. Ltd. Underground mining continued until 1940 with numerous shafts and 5 levels developed. Total production is reported as 2,507 kg Co, 1597 kg Ni and 10,886 kg Ag from 122 tonnes.

During the 2017 program, the focus was on historical works and their potential for further development. Historical shafts and drifts were visited, and waste dumps analyzed. Samples were taken with visible cobalt bloom in calcite veins, Ag-Co-Ni arsenites, malachite and chalcopyrite. Further rock or bulk samples would be necessary to delineate any average grades within the dump. The highest values returned among rock samples were 83,310 ppm Co, 38, 950 ppm Ni, and 27,550 ppm Cu, all collected within the smaller property area to the east of the main property. Samples returning highest values were all located within the Nipissing Lorrain Quartz Diabase intrusion; and 8 of the 15 samples collected returned values > 10,000 ppm cobalt.

During the 2021 program three previously unsampled historical shafts were located and sampled in addition to waste dumps. The area is characterized by areas of extensive overburden coverage, including abundant large boulders, however, higher elevation ground provides considerable outcrop exposure locally. A total of 19 representative rock samples were collected within the boundaries of the main Property claim block and a total of 38 soil samples were collected within the boundaries of the smaller claim block. Prospecting and soil sampling activities has successfully identified anomalous cobalt values within the main claim block and the smaller claim block of the Property. The best rock sample assays were found in rock Samples 4032372 and 4032374, collected on the southeastern border of the Property, which returned a value of >10,000 ppm Co, respectively. The soil survey has also identified significant cobalt values, overall, the highest values returned was >10,000 ppm Co. The soil survey also identified anomalous values in silver, bismuth, copper, and nickel.

An assessment credit of $20,895.79 is to be applied to this Property for work performed in 2021.

1.6 Conclusions and Recommendations

Mineralization exists in a number of structural orientations throughout the Property but appears to be discontinuous and of a pinch and swell nature. The biggest resource on the Property (staples vein) occurs at the intersection between two cross-cutting veins. Therefore, future exploration should focus on

delineating structures and their potential as mineral terrain traps. Targeting these structures could potentially identify new areas of interest.

The recommended exploration project should consist of a short six-day prospecting, detailed mapping and rock sampling program at a cost of $39,340.35.

2 Introduction and Terms of Reference

2.1 Issuer

The Issuer of this report is Quantum Battery Metals Inc. with offices located at 800-1199 West Hastings St., Vancouver, British Columbia, Canada, and trades on the Canadian Securities Exchange (CSE) under the symbol QBOT.

2.2 Terms of Reference

In September 2021 Longford Exploration Services Ltd. (Longford) was commissioned by Quantum to conduct a prospecting and soil sampling program on the Nipissing Lorrain Property in southeast Ontario, Canada to further assess the Property's prospectivity for cobalt mineralization. This Report is intended to be read in its entirety

2.3 Sources of Information

The author has used Ontario's Ministry of Northern Development and Mines (MNDM) publicly available information resources found online at http://www.mci.mndm.gov.on.ca for historical property assessment reports and mineral tenure information as well as the Ontario Geological Survey's digital publication database found online at http://www.geologyontario.mndm.gov.on.ca/ for regional geological data and mineral occurrence information. Climate information was obtained from Environment Canada, population and local information for the Project area was obtained from http://en.wikipedia.org/wiki/Temagami.

Assessment reports found in the MNDM database with information pertaining to the project can be found in Section 13: References.

2.4 Abbreviations and Units of Measurement

Metric units are used throughout this report and all dollar amounts are reported in Canadian Dollars (CAD$) unless otherwise stated. Coordinates within this report use EPSG 26917 NAD83 UTM Zone 17N unless otherwise stated. The following is a list of abbreviations which may be used in this report:

Table 2.1 Abbreviations and Units of Measurement.

Description	Abbreviation or Acronym
percent	%
three dimensional	3D
Ontario Mining Act	Act
silver	Ag
area of interest	AOI
gold	Au
degrees Celsius	°C
circa	ca.
Canadian dollar	CAD$
Canadian Institute of Mining, Metallurgy and Petroleum	CIM
centimetre	cm
copper	Cu
diamond drill hole	DDH
east	E
electromagnetic	EM
European Petroleum Survey Group	EPSG
degrees Fahrenheit	°F
gram	g
grams per tonne	g/t
billion years ago	Ga
Golden Spike Resources Corp.	Golden Spike
Global Positioning System	GPS
greenstone-hosted quartz-carbonate	GQC
Geological Survey of Canada	GSC
gigawatt hours	GWh
hectare	ha
kilogram	kg
kilometre	km
kilometres per hour	km/hr
potassium feldspar	K-spar
kilovolt	kV
Longford Exploration Services Ltd.	Longford Exploration
metre	m
million years ago	Ma
metres above sea level	masl
Mineral Lands Administration System	MLAS
millimetre	mm
mobile metal ion	MMI
Ministry of Energy, Northern Development and Mines	MNDM
molybdenum	Mo
million ounces	Moz
megapascal	MPa

Description	Abbreviation or Acronym
million tonnes	Mt
Nipissing Lorrain Property	The Property
north	N
not applicable	n/a
North American Datum	NAD
nickel	Ni
Northbound Capital Corp.	Northbound Capital
net smelter return	NSR
National Topographic System	NTS
Ontario Geological Survey	OGS
ounce	oz
ounces per tonne	oz/t
platinum-group elements	PGE
Professional Geoscientist	P. Geo.
parts per billion	ppb
parts per million	ppm
quality assurance/quality control	QA/QC
qualified person	QP
QCV	Quartz Carbonate Vein
south	S
tonne	t
to be determined	TBD
Universal Transverse Mercator	UTM
very low frequency	VLF
volcanogenic massive sulphide	VMS
Versatile Time Domain Electromagnetic	VTEM
west	W
World Geodetic System	WGS
zinc	Zn

3 Property Description and Location

3.1 Location

The Nipissing Lorrain Cobalt property (Figure 3.1) is located 26 km southeast of the town of Cobalt near the eastern border of Ontario. Cobalt is the epicentre of past Cobalt mining in Ontario. The district is mining friendly, with a rich history of cobalt and silver production.

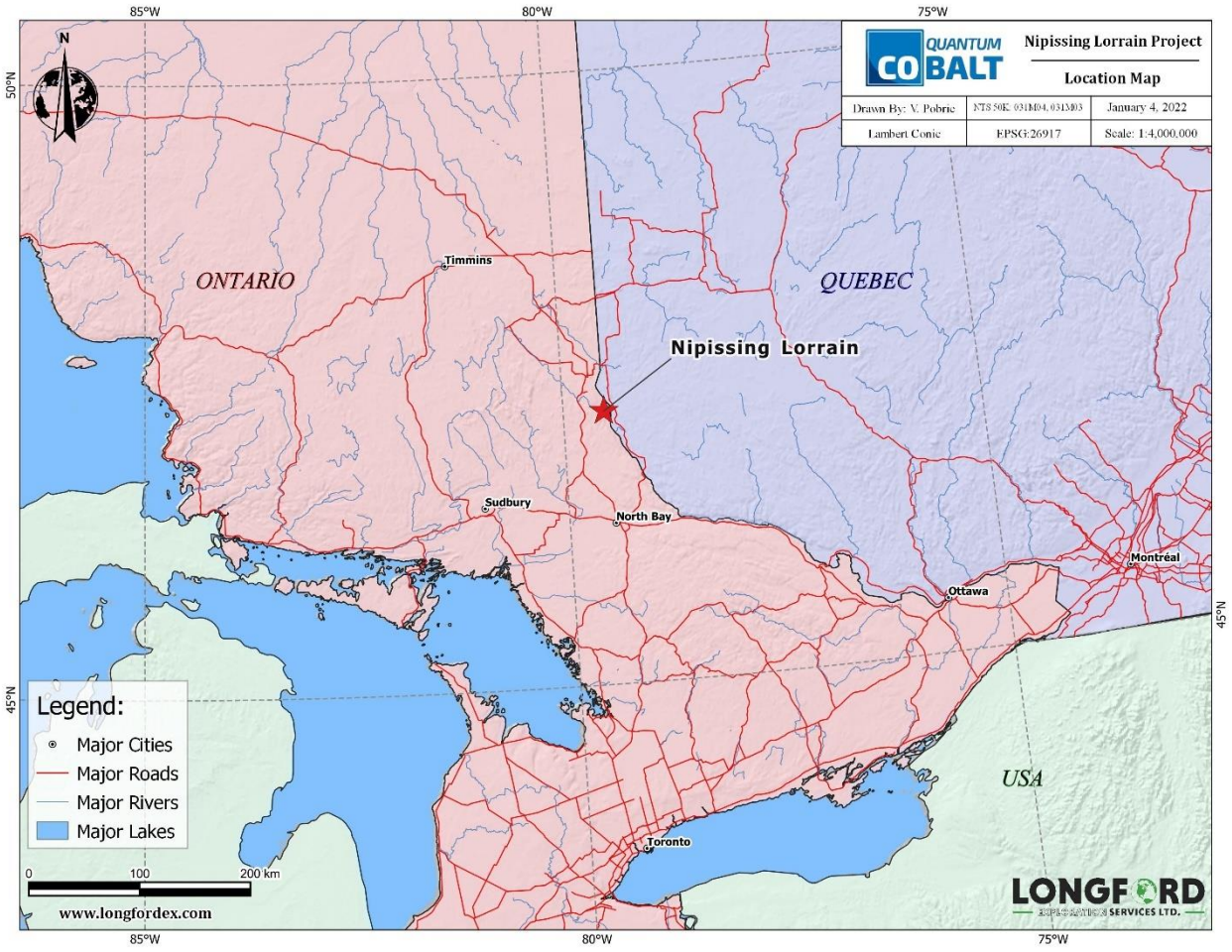

Figure 3.1: Nipissing Lorrain Property Location.

3.2 Mineral Titles

The Property consists of 38 mineral claims (Figure 3.2) located in the Timiskaming Mining Division totalling 832 hectares (ha). The claims currently show in the online registry as being owned 100% by Quantum Cobalt Inc., now known as Quantum Battery Metals Corp. (Table 3.1).

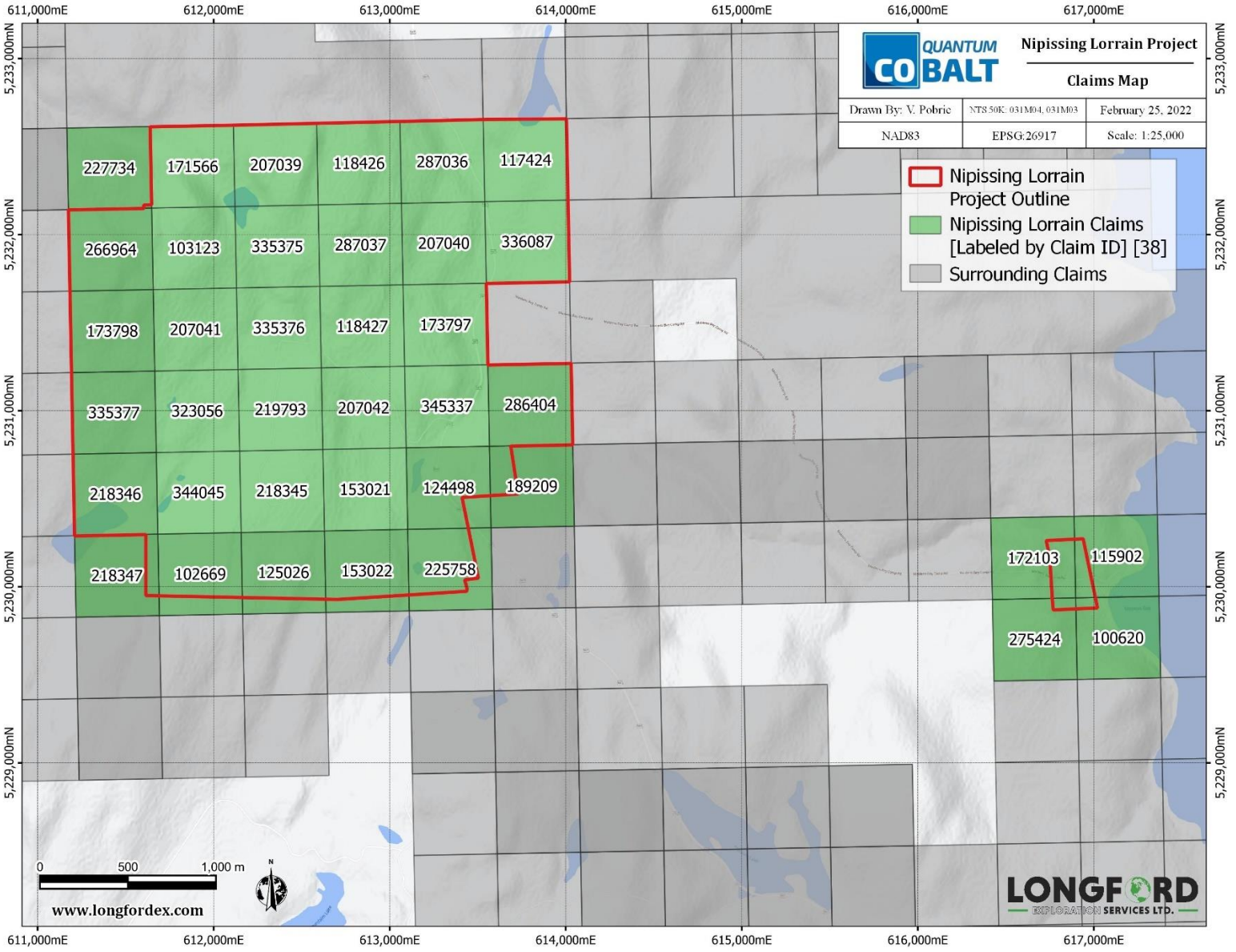

Figure 3.2: Nipissing Lorrain Property Claims.

Table 3.1: Mineral Tenure Summary Table.

Claim ID	Status	Owner	Issue Date	Anniversary Date
100620	Active	(100) Quantum Cobalt Corp.	2018-04-10	2022-06-08
115902	Active	(100) Quantum Cobalt Corp.	2018-04-10	2022-06-08
172103	Active	(100) Quantum Cobalt Corp.	2018-04-10	2022-06-08
275424	Active	(100) Quantum Cobalt Corp.	2018-04-10	2022-06-08
102669	Active	(100) Quantum Cobalt Corp.	2018-04-10	2022-06-28
117424	Active	(100) Quantum Cobalt Corp.	2018-04-10	2022-06-28
125026	Active	(100) Quantum Cobalt Corp.	2018-04-10	2022-06-28
153022	Active	(100) Quantum Cobalt Corp.	2018-04-10	2022-06-28
189209	Active	(100) Quantum Cobalt Corp.	2018-04-10	2022-06-28
218347	Active	(100) Quantum Cobalt Corp.	2018-04-10	2022-06-28
225758	Active	(100) Quantum Cobalt Corp.	2018-04-10	2022-06-28
286404	Active	(100) Quantum Cobalt Corp.	2018-04-10	2022-06-28
336087	Active	(100) Quantum Cobalt Corp.	2018-04-10	2022-06-28
103123	Active	(100) Quantum Cobalt Corp.	2018-04-10	2022-06-30
118426	Active	(100) Quantum Cobalt Corp.	2018-04-10	2022-06-30
118427	Active	(100) Quantum Cobalt Corp.	2018-04-10	2022-06-30
124498	Active	(100) Quantum Cobalt Corp.	2018-04-10	2022-06-30
153021	Active	(100) Quantum Cobalt Corp.	2018-04-10	2022-06-30
171566	Active	(100) Quantum Cobalt Corp.	2018-04-10	2022-06-30
173797	Active	(100) Quantum Cobalt Corp.	2018-04-10	2022-06-30
173798	Active	(100) Quantum Cobalt Corp.	2018-04-10	2022-06-30
207039	Active	(100) Quantum Cobalt Corp.	2018-04-10	2022-06-30
207040	Active	(100) Quantum Cobalt Corp.	2018-04-10	2022-06-30
207041	Active	(100) Quantum Cobalt Corp.	2018-04-10	2022-06-30
207042	Active	(100) Quantum Cobalt Corp.	2018-04-10	2022-06-30
218345	Active	(100) Quantum Cobalt Corp.	2018-04-10	2022-06-30
218346	Active	(100) Quantum Cobalt Corp.	2018-04-10	2022-06-30
219793	Active	(100) Quantum Cobalt Corp.	2018-04-10	2022-06-30
227734	Active	(100) Quantum Cobalt Corp.	2018-04-10	2022-06-30
266964	Active	(100) Quantum Cobalt Corp.	2018-04-10	2022-06-30
287036	Active	(100) Quantum Cobalt Corp.	2018-04-10	2022-06-30
287037	Active	(100) Quantum Cobalt Corp.	2018-04-10	2022-06-30
323056	Active	(100) Quantum Cobalt Corp.	2018-04-10	2022-06-30
335375	Active	(100) Quantum Cobalt Corp.	2018-04-10	2022-06-30
335376	Active	(100) Quantum Cobalt Corp.	2018-04-10	2022-06-30
335377	Active	(100) Quantum Cobalt Corp.	2018-04-10	2022-06-30
344045	Active	(100) Quantum Cobalt Corp.	2018-04-10	2022-06-30
345337	Active	(100) Quantum Cobalt Corp.	2018-04-10	2022-06-30

3.3 Property Legal Status

The Ontario Mining Lands website (https://www.mci.mndm.gov.on.ca) confirms that all claims of the Property as described in Table 3.1 were in good standing at the date of this report and that no legal encumbrances were registered with the Ministry of Northern Development and Mines against the titles at that date. The author makes no assertion with regard to the legal status of the Property. The Property has not been legally surveyed to date and no requirement to do so has existed.

There are no other royalties, back-in rights, environmental liabilities, or other known risks to undertake exploration.

3.4 Mining Claims in Ontario

The holder of an Ontario Prospector's License may prospect or stake a mining claim on crown land, or private property where the crown has mineral rights that is open for staking.

Mining claims in Ontario transitioned to online staking using a map designation system in April of 2018. All active, unpatented claims were converted from their legally defined location by post location to a cell-based grid. Mining claims are now legally defined by their cell position on the MLAS Map Viewer grid coordinates. Mining claim staking and registration is now completed online using the MLAS system and paying a $50 registration fee per cell. Up to 50 single-cell claims may be registered at one time provided that each cell claim being registered shares at least one boundary with the cell of another cell claim being registered. Multi-cell claims must be registered separately and may consist of a maximum of 25 cell units, of which each cell must share a least on cell boundary with another cell in the claim.

The government of Ontario requires expenditures of $400 per year per cell claim and $200 per boundary cell claim unit prior to expiry to keep the claims in good standing for the following year. The assessment report must be submitted by the expiry date using the online MLAS system.

The holder of a mining claim may obtain a mining lease for that claim though surface rights provisions under the Ontario Mining Act control the activity as work progresses. Surface rights may be sold or granted to a mining operation if they are necessary to carry out mining operations.

3.5 Permitting

The Ontario Mining Act requires an Exploration Permit or Plans for exploration on Crown Lands. The permit and plans are obtained from the MNDM. The processing periods are 50 days for a permit and 30 days for a plan while the documents are reviewed by MNDM and presented to the Aboriginal communities whose traditional lands will be impacted by the work. Quantum Cobalt does not have any permits or applications in place at the time of writing.

4 Accessibility, Infrastructure and Climate,

4.1 Accessibility

The Property is accessible by road, 26 km from Cobalt (Figure 4.1). Starting in North Cobalt, follow Highway 567 to silver centre. After travelling 26.85 km, turn left on maiden road and continue for a further 4.35 km. The road passes through the Property with staples vein visible on the right-hand side of the road. Past production makes power and infrastructure abundant within the area.

Road distances from the Property to select cities and ports are summarized in the following Table:

Table 4.1 Driving Distances to the Property.

Location (population)	Description	Road Distance (km)
Cobalt (pop. 1, 118)	Nearest city with services	26
Ottawa (pop. 934, 240)	Nearest international airport	546
North Bay (51, 553)	Mining service centre	182.3
Thunder Bay (pop. 110,000)	Port, mining service center	983

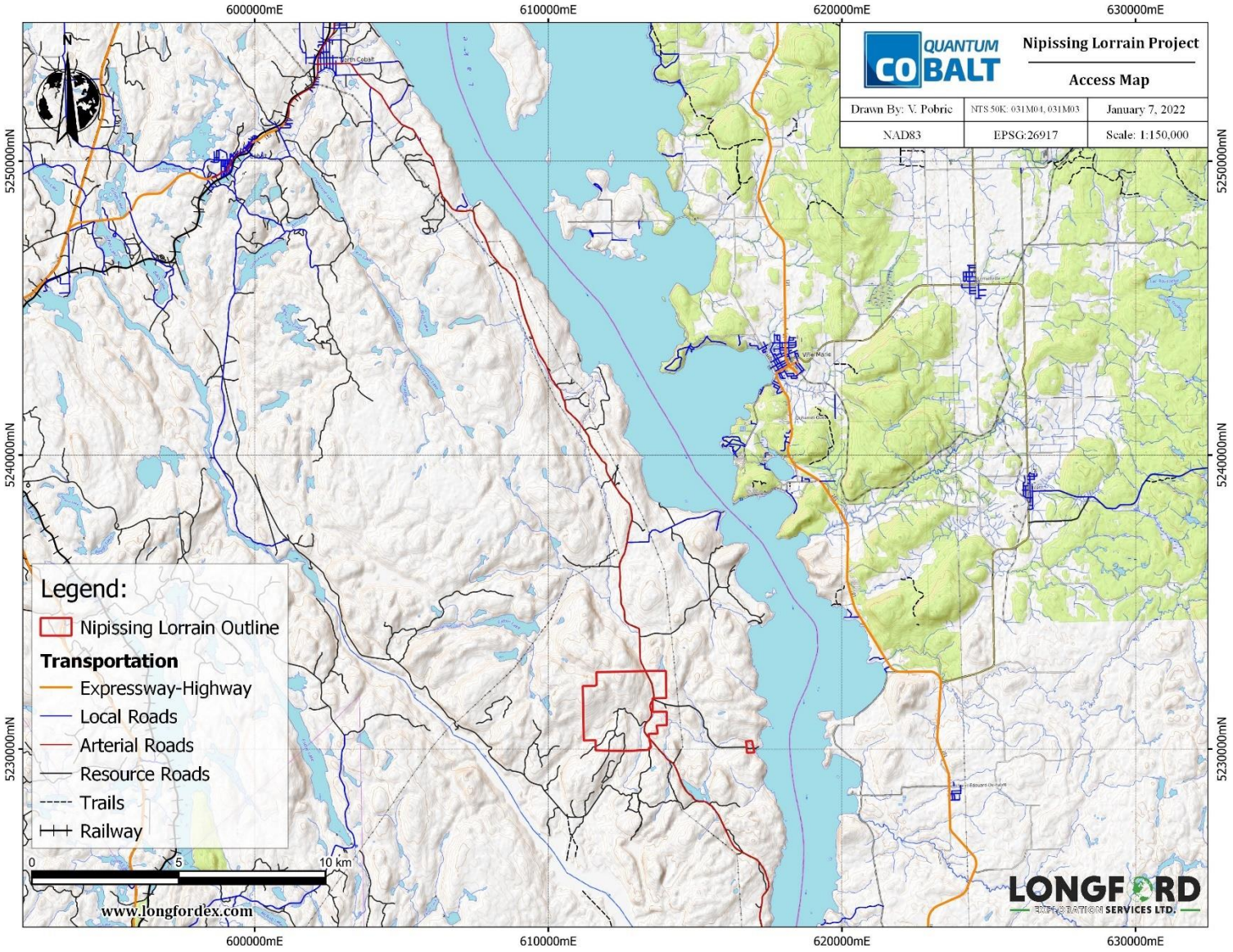

Figure 4.1: Nipissing Lorrain Property Accessibility.

4.2 Climate

There is a local weather observation station located nearby in North Bay. The project area has a humid continental climate typical of the Canadian Shield region with cold, dry winters (34 days below -20°C, 273 cm snowfall). Summers are typically warm with highs of 35°C in July. Average annual rainfall is 775 mm with September being the wettest month and February the driest.

4.3 Local Resources

General and skilled labour is readily available in the City of North Bay (population 51,553). The city is located 182.3 km by road from the project area, and offers year-round charter service, Ontario Provincial Police detachment, ambulance, fuel, lodging, restaurants, and equipment. The closest hospital is located in Temiskaming Shores, 47.8 km north of the claims. LTE cellular service covers the majority of the Property area.

4.4 Infrastructure

The Lower Notch Generating Station is located near the project area, 9.7 km south of Silver Center, Ontario. This station operates a 274 MW capacity transmission line which carries power to eastern areas of Ontario and western areas of Quebec.

4.5 Topography and Vegetation

The Property lies approximately 200 to 400 meters above sea level (asl), with variable rocky terrain, rolling bedrock hills and locally steep ledges and cliffs that are separated by clay and glacial till filled valleys. This area is typical of boreal regions with a predominantly coniferous and mixed-wood forest. The predominant tree species include black and white spruce, jack pine, balsam fir, tamarack, eastern white cedar, poplar, white birch, and alder.

5 History

5.1 Historical Exploration

Mining and exploration have been sporadic over the Property since 1925 (Table 5.1). The first shafts were sunk into staples vein in 1925 by Nipissing Mining Co. Ltd. Underground mining continued until 1940 with numerous shafts and 5 levels developed. Total production is reported as 2,507 kg Co, 1,597 kg Ni and 10,886 kg Ag from 122 tonnes.

From 1961 until 1967, further exploration, sampling and geophysics programs were completed (Figure 6.1). Since then, bulk sampling has been completed on the Staples vein waste pile in 1982 and 1994, which returned bulk sampling grades from 0.05oz/t to 1.25 oz/t Ag (per 20 lb sample) as noted in the Mineral Deposit Inventory for Ontario (MDI31M03NW00011). More recently, the Ontario Geological Survey flew an airborne magnetics survey over the Nipissing Lorrain Property area (Figure 5.1).

Table 5.1 Historical Exploration Summary.

Year	Company	Summary of Notable Work Preformed
1925-1929	Nipissing Mining Co. Ltd.	Shaft sinking and underground development, adit developed, in production
1935	H.G. Miller	Leased to H.G. Miller, in production
1961-1965	Miller Lorrain Mines Ltd.	Dewatering, DD, underground exploration, DD-3-363 ft
1966-1967	Millerfields Silver Corp. Ltd.	Dewatering, mapping, sampling, DD-7868 ft, ground geophysics
1982-1984	Royal Gold & Silver Corporation	Property acquisition, bulk sampling of waste pile
1994	Cobatec Ltd.	Assessment of waste pile

*Source: MDI31M03NW00011

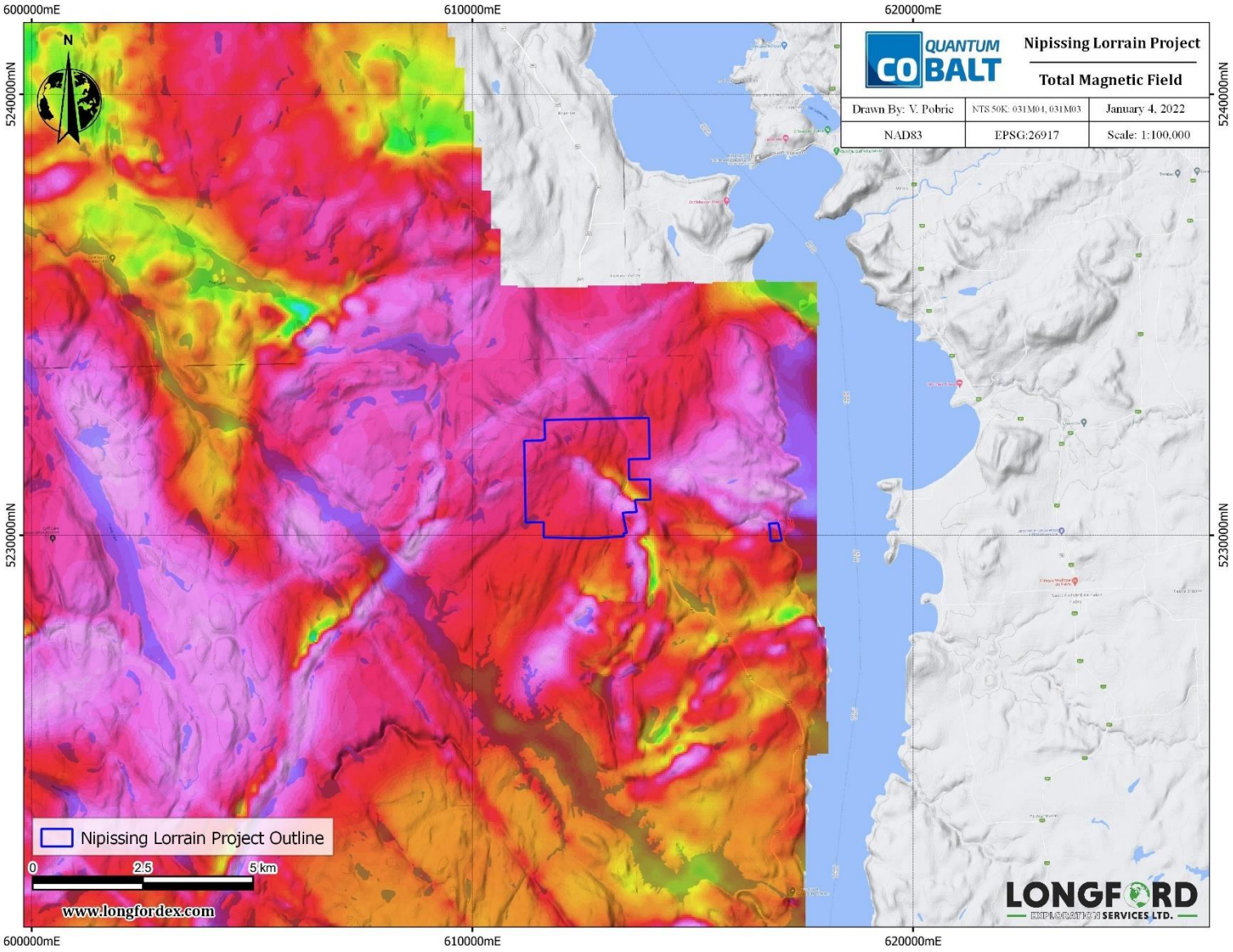

Figure 5.1:Total Magnetic Field over the Nipissing Lorrain Property (OGS 2017).

6 Geological Setting and Mineralization

6.1 Regional geology

The South Lorrain Township is located in the Archean Superior Structural Province and extends into the Southern Province. The Superior Province is the largest Archean craton within the continent of North America and consists of quartz monzonite, quartz diorite, and metamorphosed tonalite (Cookenboo et al. 2003). The last major deformational event to affect this craton occurred during the Kenoran Orogen which took place more than 2.70 Ga (Cookenboo et al. 2003). The Paleoproterozoic Southern Province is comprised of the Huronian Supergroup, located within a folded belt that has been thrust northward to rest upon the Archean craton (Cookenboo et al. 2003). There are four main groups of rocks in this area: Archean basement rocks, flat lying Cobalt Group Sedimentary rocks, diabase sheets or sills and dykes, and meta-sediments (Figure 6.1).

The Temagami area was previously covered by the Laurentide Ice-Sheet, a continental-style glacier, which advanced across the area between 80,000 and 100,000 years ago (Cookenboo et al. 2003). The dominant ice-flow direction in eastern Ontario is towards the southwest and is responsible for many of the landforms that occur in the area (Cookenboo et al. 2003).

The Archean basement rocks consist of steeply dipping (Andrews et al. 1987) faulted and folded meta-volcanics and associated mafic intrusions all of which have been intruded by granitic rocks (McIlwaine 1970). Unconformably overlying the bedrock is the Cobalt Group, a sub-horizontal sedimentary group comprised of the Coleman, Firstbrook, and Lorrain formations. These sediments range from coarse to fine-grained and have variable depth-to-basement (as measured form the surface), likely due to highly irregular basement topography (Andrews et al. 1987).

Intruding all older rock units are the sills and steeply dipping dykes and plugs of the Nipissing Diabase, which have an overall composition of olivine tholeiite (Andrews et al. 1987) and includes gabbros, minor ultramafic rocks, and their green schist facie equivalents (Cookenboo et al. 2003). Regionally they form a basin or dome-like structures called the South Lorrain “diabase dome”. These intrusions are thought to be critical factors associated with the silver-cobalt mineralization in the area (McIlwaine 1970). The sills are horizontal to gently dipping and maintain a fairly uniform thickness of 300-335 m (Andrews et al. 1987) and <500 m wide (Cookenboo et al. 2003). Overlying this unit is a small belt of meta-sediments of unknown age, which are characterized by open folds. To the south of this belt are the paragneisses of the Grenville Province with overlying glacial deposits of variable thicknesses. (McIlwaine 1970).

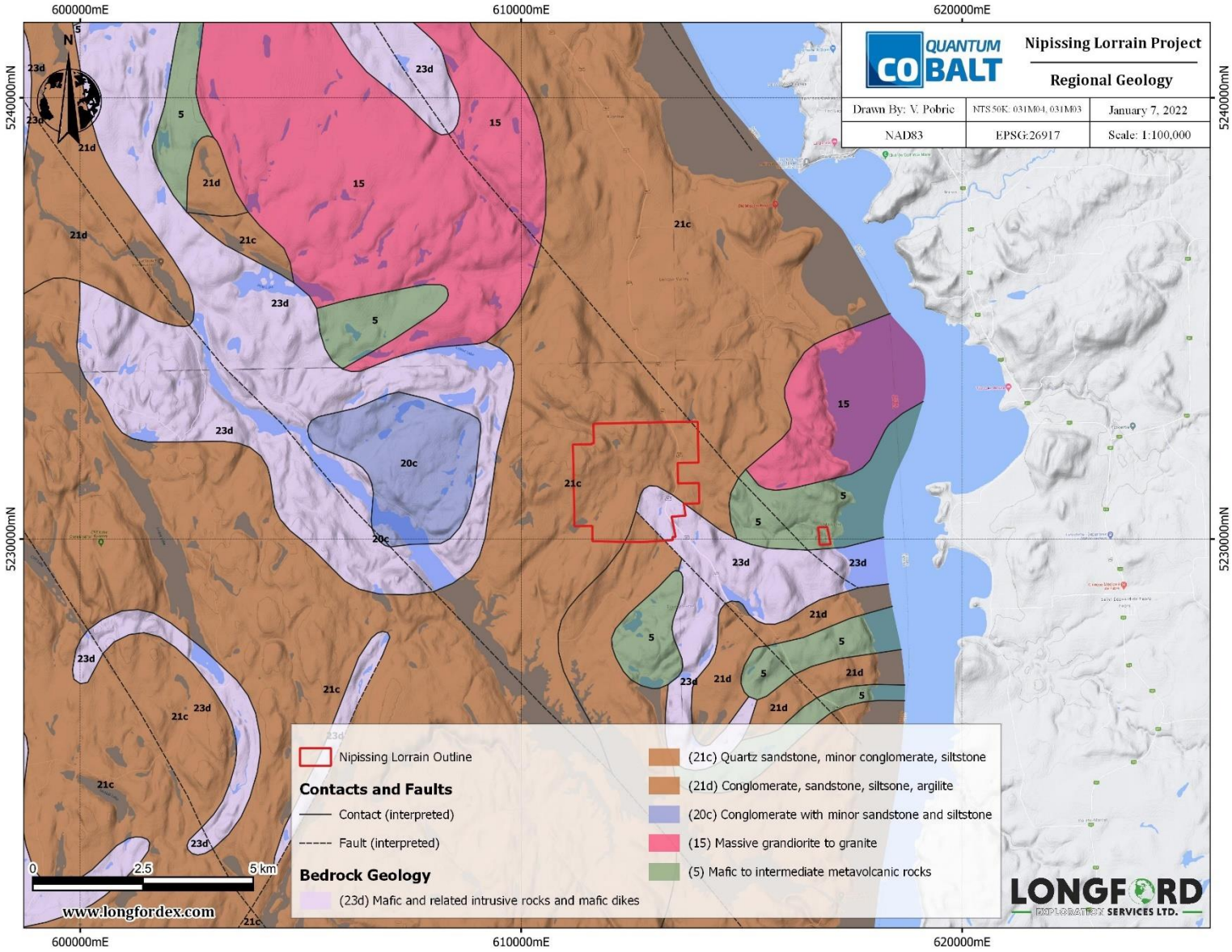

Figure 6.1: Nipissing Lorrain Regional Geology.

6.2 Property Geology

The Nipissing Lorrain Property area is located 26 km south of the historic Cobalt silver mines which includes historically significant Keeley-Frontier, Haileybury, and Bellellen mines. The mines are located in the eastern portion of the Cobalt Embayment (Figure 6.3) and are characterized by Archean meta-volcanics and meta-sedimentary rocks which are unconformably overlain by Proterozoic rocks of the Huronian Supergroup. The Archean and Proterozoic rocks have been intruded by Nipissing Diabase sills on a regional scale, and its distribution may be structurally influenced by faults. A significant regional southeast trending fault system is located within the area and consists of the Montreal River, Cross Lake, and Timiskaming faults. This fault system is believed to be related to mineralization as most of the Ag-Co occurrences in the Cobalt Embayment are concentrated between Cross Lake and Montreal River faults (Faure et al. 2018).

The Property overlies the Nipissing diabase sill rocks which outcrop on the Temiskaming lakeshore (Figure 6.2). A basin-structure is formed by these intrusive rocks and exhibits an east-west trending axis. Underlying this unit is the Cobalt Group sedimentary suite of greywackes and conglomerates of Huronian age which pinch out between the overlying diabase and the underlying Keewatin lava complex (Woolham 1966). Intruding into the Keewatin lava complex are pre-Huronian age lamprophyre dykes and Algoman granites (Woolham 1966).

6.3 Lithology, Structure and Alteration

The lithological units of the project area as well as their respective descriptions have been summarized after McIlwaine (1970) in Figure 6.2 below.

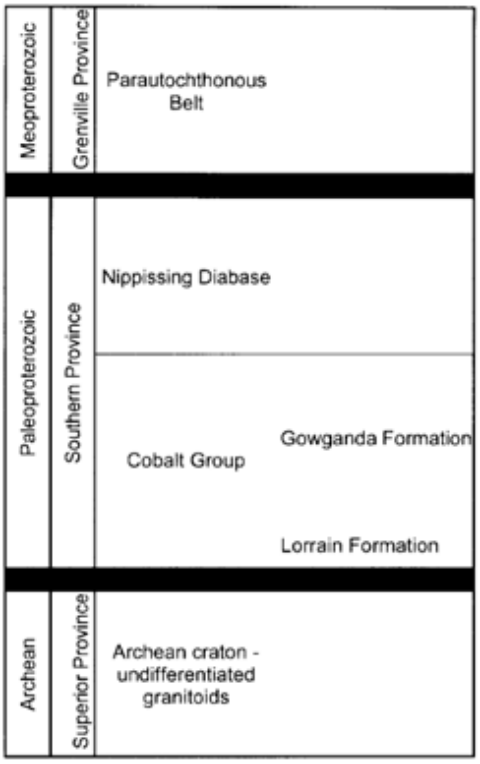

Figure 6.2: Simplified stratigraphic column of the Temagami region (Cookenboo et al. 2003).

Cobalt Group: Proterozoic Huronian Sediments (after McIlwaine 1970)

"A long period of erosion followed the igneous activity of the Archean Era. During this time the Archean topography was greatly modified resulting in a series of basins and corresponding highlands. The Huronian sediments were deposited in the basin areas with the adjacent highlands providing the detrital material.

As originally defined the Cobalt Series (Group) was made up of the Gowganda and Lorrain Formations and upper members (Collins 1917). Thomson (1957, p. 40) modified this classification by introducing the Firstbrook and Coleman Formations which together are the former Gowganda Formation (see Table 3). The present author is employing the names introduced by Thomson (1957). This threefold division was first recognized by Barlow (1899, p. 45 and p. 90 to 104) and further recognized by Miller (1910), and Todd (1925) but it was not until 1957 that a formal nomenclature was introduced (Thomson 1957).

Nearly flat-lying beds of all three formations are found extensively in South Lorrain Township. The contact with the underlying basement is unconformable."

Coleman Formation (after McIlwaine 1970)

"In the nomenclature of Thomson (1957) the Coleman Formation is the lower part of the Gowganda Formation, and is named after Coleman Township, in which the Town of Cobalt is located.

In South Lorrain Township the Coleman Formation occupies most of the eastern half of the map-area. Its estimated maximum thickness is approximately 1,000 feet. More detailed information on the thickness is supplied by diamond-drill cores and underground work; most of this data is from within the diabase dome. Unless otherwise credited all information on drilling is from the files at the Resident Geologist's office of Cobalt, now at Kirkland Lake. A drill hole on claim T34065 southwest of Maidens Lake indicated a vertical thickness of 200 feet, and four holes on T34063 and T34064, nearby, gave thicknesses ranging from 180 to 270 feet. These holes were put down by E. B. E. de Camps in 1949 and 1954. Farther to the northeast a long hole collared near the south shore of Maidens Lake (claim T44062) indicated a vertical thickness of 780 feet, and another hole on the northeast side of the lake gave only 490 feet. Another drill hole southeast of Maidens Lake went through 350 feet of Coleman Formation; the shaft to the east on claim T19297 is reported to have gone through approximately 400 feet of sedimentary rocks before reaching the basement. These and other data (the drill hole data is from assessment files and the drill holes were not found by the author) suggest an irregular basement topography, on which the Coleman Formation was deposited, with the suggestion of a local trough trending east-northeast subparallel to the flanks of the diabase "dome". The only information on thickness outside the diabase "dome" is from a drill hole (not found by author) just north of the north boundary of HR18, northwest of Maidens Lake. Here the thickness was found to be 460 feet. Drilling to the southeast of Maidens Lake by Mining Corporation of Canada (1964) Limited indicated the thickness on their property to be about 100 feet, but this did not represent total thickness. South of the diabase "dome" the author has no information from drilling but using bedding attitudes and topography the author considers that it is in this area that the Coleman Formation reaches its estimated maximum thickness of approximately 1,000 feet. Locally the contact of the Coleman Formation rocks with the Archean basement is irregular, but on a regional basis the outcrops of the formation in South Lorrain Township represent the eastern portion of a northeasterly-trending basin. This basin starts in Riddell Township, to the southwest, and continues northeast through Sunrise

Lake (Riddell Township) through South Lorrain Township to Windy Lake and continues north. The outline of this basin is evident on various maps (see Todd 1925, map; Thomson and Savage 1965). The lack of deformation in the Coleman Formation rocks, except in the vicinity of faults, would indicate that this basin

structure is owing more to basement topography than to post-depositional folding. The rocks of the Coleman Formation are a heterogeneous mixture of greywacke and quartzose siltstone, arkose, argillite, and conglomerate. The quartzose siltstone and greywacke are fine-grained greenish grey rocks consisting of sub-rounded to sub angular grains of quartz, feldspar, and rock fragments in a matrix of chlorite, mica, and silica; minor pebbles may be seen. The arkose is generally brown to pink in colour and slightly more coarse-grained than the quartzose siltstone and greywacke. Conglomerate pebbles, cobbles, and rare boulders (Photos 2 and 3) are generally pink granitic rocks with minor white granite, "greenstone", and diabase. They are generally subangular to sub-rounded and on the average range up to 6 to 8 inches in diameter.

No definite separation of the rock types was possible in mapping owing to their heterogeneous nature. At the top of the formation conglomerate dominates, as evidenced along the east shore of the Matabitchuan River, and to a lesser degree to the north. The beds are generally close to flat-lying, except in the area of faults where they dip steeply. The rocks are schistose close to the Northeast Copper Lake Fault on the north shore of Cooper Lake. Todd (1925) considered these schistose rocks to be Archean, but the author believes they are sheared rocks of the Coleman Formation. The bottom contact of the Coleman Formation is an unconformity, as shown by the nearly vertical dips of the underlying volcanic rocks and flat dips of the overlying sedimentary rocks. The granite forms the basement rock in the southeast

Previous workers have attributed a glacial origin to the Coleman Formation.

Firstbrook Formation (after McIlwaine 1970)

“The Firstbrook Formation was first described by Thomson (1957, p. 41-42) as being the upper part of the Gowganda Formation of Collins (1917). The type locality of the Firstbrook Formation is located in Firstbrook Township, 15 miles northwest of the map-area.

In South Lorrain Township the main area of exposure is a belt, roughly 1/4 to 1/2-mile-wide, striking north for almost the full length of the township, and offset by several faults. The best exposures are on the west shore of Fourbass Lake in central South Lorrain Township, and about 1/2 mile west of Highway 567 in the northern part of the township. A smaller area of outcrop is found north of the Upper Notch power station in northwest South Lorrain Township; to the south there are several out crops, in a north-south belt, that strongly resemble the Firstbrook Formation. The rocks designated Firstbrook Formation just west of Maidens Lake are considered to have been part of the main belt to the west prior to the intrusion of diabase.

The estimated thickness in the main belt varies from 500 to 700 feet, which is less than the 950 feet described by Thomson (1957, p. 41) for the type locality. The Firstbrook Formation is part of the same regional basin described in the section on the Coleman Formation.

The formation consists of laminated or varved, very fine-grained argillite, with alternating greyish red or greyish brown and greyish green layers, and quartzite. The varves are usually more easily seen on the

weathered surface of the outcrop. The argillite is composed mainly of sub-rounded quartz grains, with minor feldspar, set in a chloritic matrix with minor sericite. There are also small amounts of opaque minerals. The quartzite is grey, well bedded and harder than the argillite. It is also fine-grained.

The beds are gently dipping, for the most part, with a maximum dip of 30 degrees, and average dip of 10 to 15 degrees.

No contacts were observed with the underlying Coleman Formation but the contact with the Lorrain Formation appears gradational. Lorrain Formation rocks are more rounded in weathered outcrops than Firstbrook Formation rocks owing to the better-defined bedding in the latter.

Thomson (1966, p. 15-16) has suggested that the laminations or varves are due to seasonal deposition in a lake, possibly of glacial origin."

Lorrain Formation (after McIlwaine 1970)

"The Lorrain Formation was first named by Miller (1910, p. 75) because the type section was found in Lorrain Township. It is the youngest formation of the Cobalt Group in South Lorrain Township.

The Lorrain Formation is the most extensive rock type in the map-area; it covers almost all of the area west of the Montreal and Matabitchuan Rivers, plus several square miles east of the Montreal River in the northern part of the township. The thickness of the formation is estimated to be from O to 1,200 feet. No confirming data is available from drilling.

The main rock types are flat-lying grey feldspathic quartzite, pale green quartzite, and pink arkose. The green quartzite locally grades to white ortho-quartzite. These rocks are fine-grained with lenses of medium- to coarse-grained material, and the occasional quartz-pebble lens. Close to the contacts of diabase dikes the rocks are red owing to the oxidation of ferrous iron to ferric iron. The grains of quartz, the most abundant mineral, are generally rounded; the feldspar grains have been altered; and the matrix is fine-grained silica with minor chlorite.

Beds are massive in the Lorrain Formation and data on bedding is difficult to find. Where bedding planes are found they have a gentle dip, the maximum angle being about 25 degrees. Slickensides were found in several of the shear faces of exposures in the area west of the Montreal River, suggesting deformation by faulting.

No contacts were observed with the underlying formations, but the contacts are assumed to be gradational. A small outcrop north of the Maidens Bay Road is a coarse-grained arkose, with feldspar grains up to a quarter inch; this arkose grades imperceptibly into the underlying granite. The width of the zone of gradation cannot be determined owing to the amount of overburden.

The Lorrain Formation appears to be a shallow water deposit derived from a granitic terrain."

Nipissing Diabase (after McIlwaine 1970)

"Intrusive into all older rocks is a massive unaltered mafic rock named the Nipissing Diabase by Miller (1910).

In South Lorrain Township the diabase is considered by the writer to be all one sheet, with numerous rolls, both major and minor. Local rolls around the mines are shown in Figure 2 (Chart A, back pocket). In the eastern part of the township the diabase is in the form of a dome, with the central part removed by erosion. The axis of this dome strikes north-northeast, and it is interesting to note the sub-parallelism of this axis to the margin of the basin of deposition of the Cobalt Group sedimentary rocks. The south flank of the dome dips steeply southeast, and the northwest and wider flank dips approximately 30 degrees west. The north contact of the northwest flank dips to the south and thus forms a minor basin within the dome. In the western part of the township a diabase dike, 1/4 mile-wide, strikes northeast and widens out to almost 3 miles forming a northerly plunging basin structure. Between the dome and this basin another larger lapolith-like basin is postulated, with a possible feeder below. It is suggested that the dike is the surface expression of this feeder. This western basin is connected to the eastern dome as shown on Map-2194 (back pocket) by the continuity of the diabase 1/4 mile south of Hermit Lake.

In hand specimen the diabase is a typical grey to black, fine- to medium-grained, fresh to slightly altered rock. There are areas of coarse-grained diabase that contain minor amounts of pink feldspar. Varied texture is apparent in certain exposures; a good example is the roadside outcrop approximately l mile southeast of the Upper Notch power station. No detailed petrographic study of the diabase was undertaken. Such studies have been made in the Cobalt area by Hriskevich (1952); Satterly (1928) described the diabase in South Lorrain Township. Microscopic examination of a few thin sections shows it to be mainly a quartz diabase with lath-shaped plagioclase crystals of labradorite composition in a pyroxene groundmass. The quartz is present mainly as micrographic intergrowths with the plagioclase. Minor amounts of opaque oxides, biotite, epidote, and chlorite are also present.

Much of the data on the thickness of the sill are from the area of the main mines; other figures given are mostly inferred. Information from the mines shows the diabase to be from 900 to 1,000 feet thick, with local variations. This figure represents the complete sill where it has been protected from erosion. Areas to the east have been exposed to erosion and the thickness of the sill is less than 900 feet. A drill hole on the north peninsula in Maidens Lake penetrated 95 vertical feet of diabase before encountering the underlying Coleman Formation. Approximately 400 feet south of the north boundary of T29490, east of Maidens Lake, a thickness of 130 feet was found, and on the boundary 200 feet of diabase were intersected. Near the adit on HR63, on the shore of Lake Timiskaming, drilling indicates a thickness of 175 feet and farther to the south, 50 feet. With these data, and taking topography into consideration, a maximum thickness of nearly 500 feet is inferred. The diabase northeast of Maidens Lake is the northern flank of the South Lorrain diabase dome and is considered to be a basin in itself.

A K-Ar age determination on the diabase near Cobalt gave a result of 2,095 million years (Lowden et al. 1963, p. 92). Previous geological maps of South Lorrain Township (Knight 1922, map; Todd 1925, map) have indicated the Nipissing Diabase to be Keweenawan in age, but the diabase must now be considered as pre-Keweenawan."

6.4 Mineralization

The Nipissing Lorrain Property has a similar style of mineralization to the Cobalt Silver Mines, which is related to the Nipissing Diabase intrusion and is fault controlled. The typical style of mineralization is

consistent with the Five-Element (Co-Ni-As-Ag-Bi) vein assemblage. It has been suggested that the origin and mechanism driving this style of mineralization is related to one of the following: (1) metal-rich aqueous fluids originating from late stage differentiation of the diabase sills and or the parent magma at depth; (2) convectively circulating fluids mobilized from the country rocks during cooling of the diabase intrusive complex; or (3) hydrothermal fluids originating from an unidentified external source unrelated to the diabase contact areas simply acted as a mechanically favourable host environment during regional faulting (Andrews et al. 1986).

Cobalt, silver, and nickel mineralization occurs over a number of fracture zones and veins within the Property. Mineralization is associated with calcite veins within close proximity to diabase sills which occurs as Co-Fe-Ni arsenides, argentite, niccolite and native silver. Silver grades up to 261 g/t, and Cobalt grades up to 14.75% have been reported on the Property (Ontario: MDI31M03NW00011 & MDI31M03NW00024).

Mineralization exists in a number of structural orientations throughout the Property. However, it appears to be discontinuous and of a pinch and swell nature. The biggest resource on the Property (staples vein) occurs at the intersection between two crosscutting veins. Therefore, future exploration should focus on delineating structures and their potential as terrain traps.

Alteration associated with ore-formation is evidenced in the wall rocks of the veins where they have been altered during various ore-forming stages. The most notable alteration is hematite staining developed during the earliest stages of hydrothermal activity.

Figure 6.3: Simplified Geology of the Cobalt Embayment Area , illustrating the main zone of mineralization and mining camps (Andrew et al. 1986).

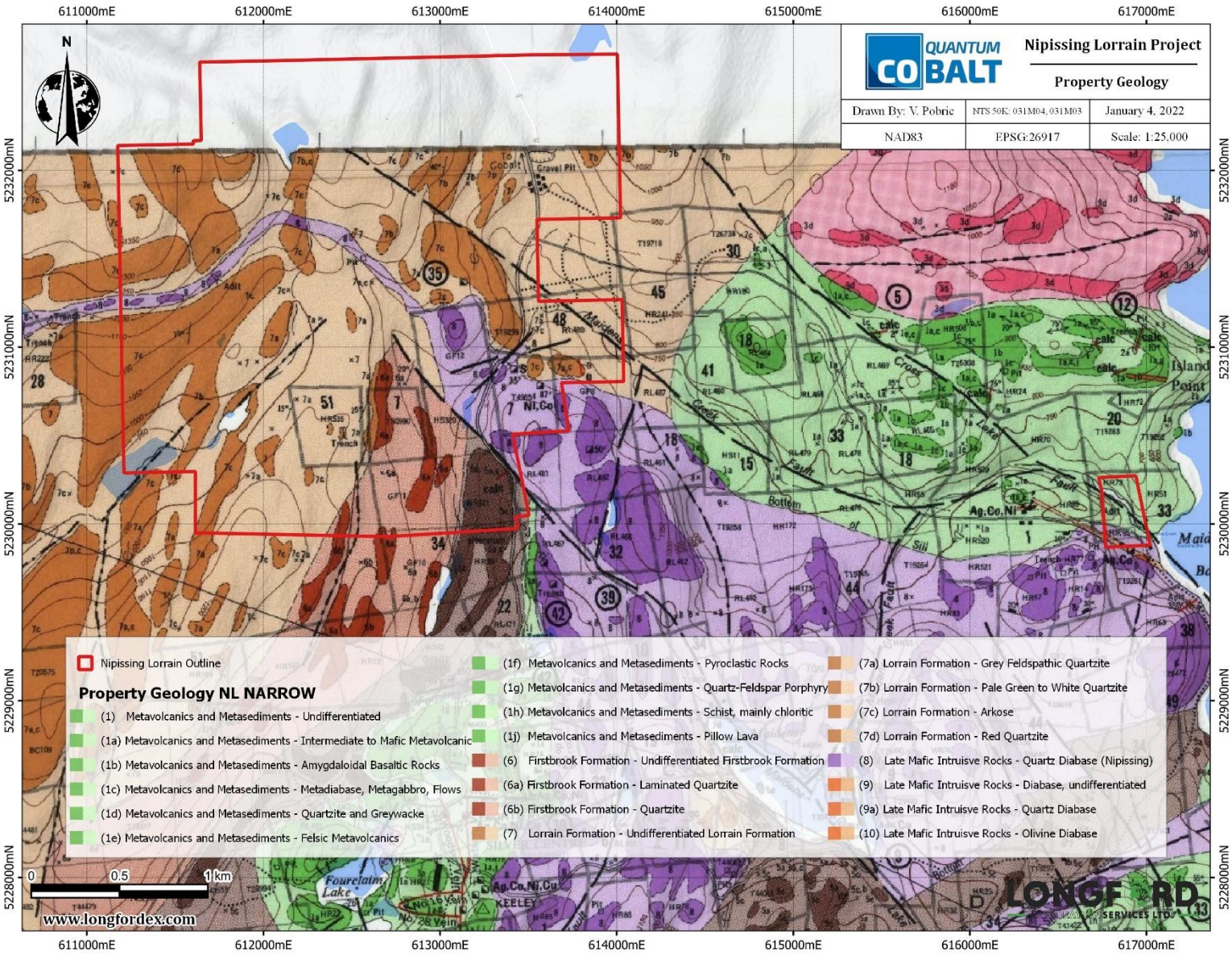

Figure 6.4: Nipissing Lorrain Local Property Geology (ODMNA 1970).

7 Deposit Types

The principal deposit type outlined to-date on the Nipissing Lorrain Property is that of a Five-Element (Co-Ni-As-Ag-Bi) Vein style of deposit. The host rocks for this style of deposit can vary wildly however, there are some characteristics common among some. In a broad sense, host rocks may be characterized as crystalline or sedimentary, usually with little or no interbedded volcanics.

There are several features of host rocks which are important in controlling localization of ore, namely: diabase sills, sulphide-rich strata in crystalline rocks, carbonaceous shales, and sulphide-rich meta-volcanic rocks (Kissin 1992). Sedimentary host rocks are present at Thunder Bay and Cobalt-Gowganda district where some deposits are wholly located within the Nipissing Diabase sills which cut across Archean basement. Some are also located in the shale-rich areas of the Coleman Formation, and others within the Coleman Formation but below the Nipissing Diabase (Kissin 1992). These types of deposits generally occur continentally in areas of rifting or extension, and it is believed that they formed between the early Proterozoic to the Tertiary, as no older deposits are known (Kissin 1992). These deposits appear to have some association with mild propylitic alteration followed by phases of distinct vein assemblages which are deposited by open-space filling (Kissin 1992). This recurrent mineral sequence is visible in most deposits and is summarized as Stage 1: early barren stage, Stage 2: Uraninite stage, Stage 3: Ni-Co arsenide-silver stage, Stage 4: sulphide stage, and Stage 5: late stage. These five stages represent the complete idealized paragenesis sequence, however one or more stages may be absent in any given deposit (Kissin 1992). The genesis style of deposit is difficult to ascertain as the mechanism responsible for its origin may vary from deposit to deposit. Various theories have been proposed and include hydrothermal/magmatic model, hydrothermal/metamorphic model, syngenetic model, and the non-magmatic model. The most plausible and widely applicable model theory is the non-magmatic model whereby the driving mechanism is continental rifting, and the solution is mobilized formational waters, however, this model may not fit every deposit style (Kissin 1992).

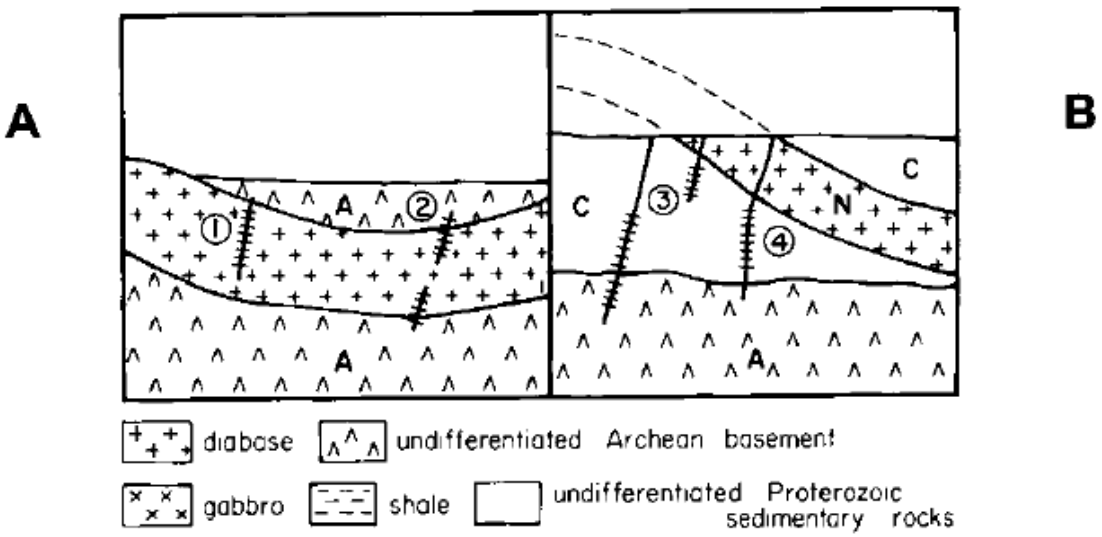

Figure 7.1: Schematic Cross-Section of Relationship of Veins to Geological Units at Cobalt-Gowganda Districtin Ontario, Canada (Kissin 1992).

8 Exploration

8.1 2021 Exploration Program

At the request of Quantum Cobalt Corp., Longford Exploration Services Ltd. mobilized Wade Kornik on September 3. 2021 to complete a short prospecting, mapping, and soil sampling program (Figure 8.1). The field program ran from Sept 3 to Sept 6, 2021.

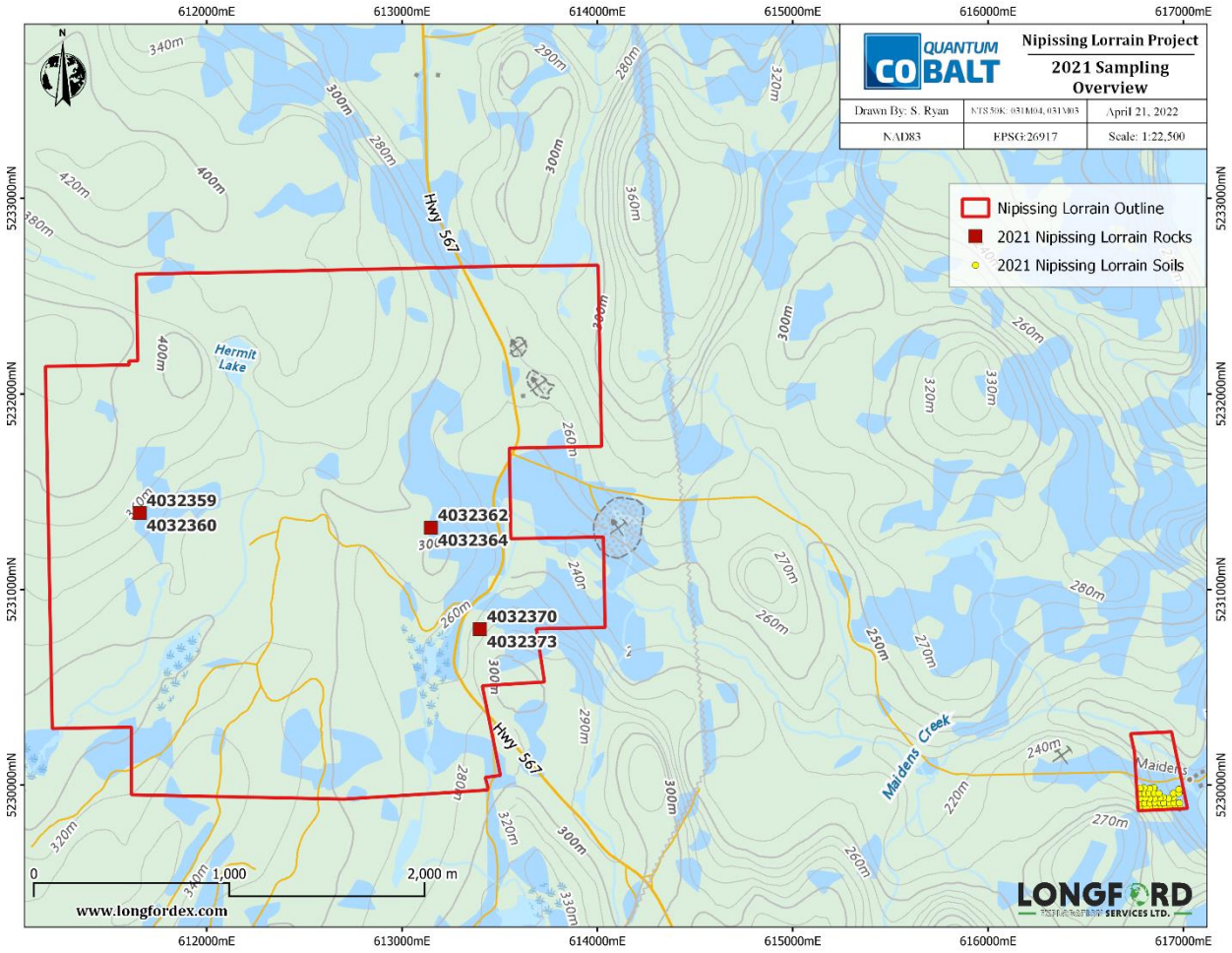

Figure 8.1: Nipissing Lorrain 2021 Sampling Overview.

8.1.1 Prospecting Program

During the 2021 program, the focus was on verifying historical work, such as locating old shafts, adits, re-sampling waste dumps and assessing their potential for further development. Three previously unsampled historical shafts (Figure 8.2) were located and sampled in addition to waste dumps (Figure 8.2).

The area is characterized by areas of extensive overburden coverage, including abundant large boulders, however, higher elevation ground provides considerable outcrop exposure locally.

Four types of bedrock were observed during the program:

- Green reddish Temiskaming conglomerate (only one occurrence observed)
- Buff beige matrix supported clastic (Temiskaming sandstone?)
- Mottled reddish white granitic intrusive (very localized)
- Magnetic Mafic intrusive Diabase, which varied from fine-grained green-grey to green-white coarse-grained with less magnetic signature and reddish green-grey. No evidence of bedding orientation was observed.

Figure 8.2: Nipissing Lorrain Historical Shafts.

8.1.2 Rock Sampling Results

A total of 19 representative rock samples were collected within the boundaries of the main Property claim block and were submitted for analysis (Table 8.1; Figures 8.5 to 8.10) at Bureau Veritas in Vancouver, BC. Rock assay overlimits were tested by aqua-regia ICP-ES (AQ370), however some assay values were above the upper detection limit for cobalt (1%), nickel (10%) and arsenic (10%), respectively. Assay certificates are available in APPENDIX A.

Figure 8.3 below shows an example of the historical waste rock dump located on the Property.

Figure 8.3: Nipissing Lorrain Historical Waste Rock Dump.

Table 8.1: Rock Sample Locations, Assay Results and Descriptions.

Sample No.	Easting	Northing	Lithology	Co (ppm)	Ag (ppm)	Bi (ppm)	Ni (ppm)	Cu (ppm)	As (ppm)	Description
	NAD83 Zone 17									
4032356	611657	5231391	diabase	12	0.15	1.5	25	15	3	irregular 2 cm quartz vein in diabase, pyrite in associate with margin of vein
4032357	611657	5231391	quartz vein	10	0.15	1.5	20	6,590	5	waste rock, high grade sample, mineralized quartz vein (py + cp) at contact between diabase and Temiskaming sedimentary unit
4032358	611657	5231391	quartz vein	313	2.7	10	248	13,310	118	waste rock, high grade sample, mineralized quartz vein (py + cp) at contact between diabase and Temiskaming sedimentary unit
4032359	611657	5231391	quartz vein	62	0.8	5	57	9,562	27	waste rock, high grade sample, mineralized quartz vein (py + cp) at contact between diabase and Temiskaming sedimentary unit
4032360	611657	5231391	quartz vein	185	1.6	15	128	39,220	54	waste rock, high grade sample, mineralized quartz vein (py + cp) at contact between diabase and Temiskaming sedimentary unit
4032361	611657	5231391	quartz vein	137	1.2	17	105	10,990	38	waste rock, high grade sample, mineralized quartz vein (py + cp) at contact between diabase and Temiskaming sedimentary unit
4032362	613148	5231315	diabase	34	0.4	1.5	104	2,184	28	waste rock adjacent shaft, most oxidized material present, py + cp fracture filling in diabase < 1mm wide
4032363	613148	5231315	diabase	27	0.15	14	43	4,533	16	waste rock adjacent shaft, most oxidized material present, py + cp fracture filling in diabase < 1mm wide
4032364	613148	5231315	diabase	23	0.15	1.5	77	542	12	waste rock adjacent shaft, most oxidized material present, py + cp fracture filling in diabase < 1mm wide
4032365	613399	5230797	diabase	26	0.4	1.5	81	11,200	5	blasted area, with py + cp fracture filling in diabase narrow east west fracture zone, < 5 cm wide
4032366	613399	5230797	diabase	4,380	3.8	40	3,257	1,225	8,994	waste rock beside shaft quartz carbonate vein (possibly in shear) host is grey green-red magnetic diabase? Py focused along margins, probable silver content (black oxidation)
4032367	613399	5230797	diabase	251	1.1	3	67	76	308	waste mine rock 3cm vein material in diabase, complex vein with coarse grained pyrite aggregates. Probable silver as black oxidation
4032368	613399	5230797	diabase	111	0.4	1.5	155	722	29	waste mine rock 2 cm vein material in diabase, vein (in shear?) with coarse grained pyrite aggregates. Probable silver as black oxidation
4032369	613399	5230797	diabase	783	0.7	7	1,318	997	2,216	waste rock from mine dump, vein material and margins < 2 cm wide, Py associated with vein margins
4032370	613399	5230797	diabase	114	0.4	1.5	172	34	97	waste rock from mine dump, vein material and margins < 2 cm wide, Py associated with vein margins

Sample No.	Easting	Northing	Lithology	Co (ppm)	Ag (ppm)	Bi (ppm)	Ni (ppm)	Cu (ppm)	As (ppm)	Description
	NAD83 Zone 17									
4032371	613399	5230797	diabase	418	0.6	1.5	268	1,879	172	waste rock from mine dump, vein material and margins < 2 cm wide, Py associated with vein margins
4032372	613399	5230797	diabase	>10,000	3.9	139	>100,000	10,160	>100,000	Silver bloom (green oxidization) high grade sample, py + cp + Ag vein material
4032373	613399	5230797	diabase	7,560	0.6	45	2,289	29	15,000	Cobalt bloom oxidized mine waste rock, associated with quartz carbonate vein
4032374	613399	5230797	diabase	>10,000	1	2,600	>100,000	25	>100,000	Cobalt bloom oxidation from mine waste, high grade sample

Figure 8.4: Nipissing Lorrain Property Rock Samples with Best Results.

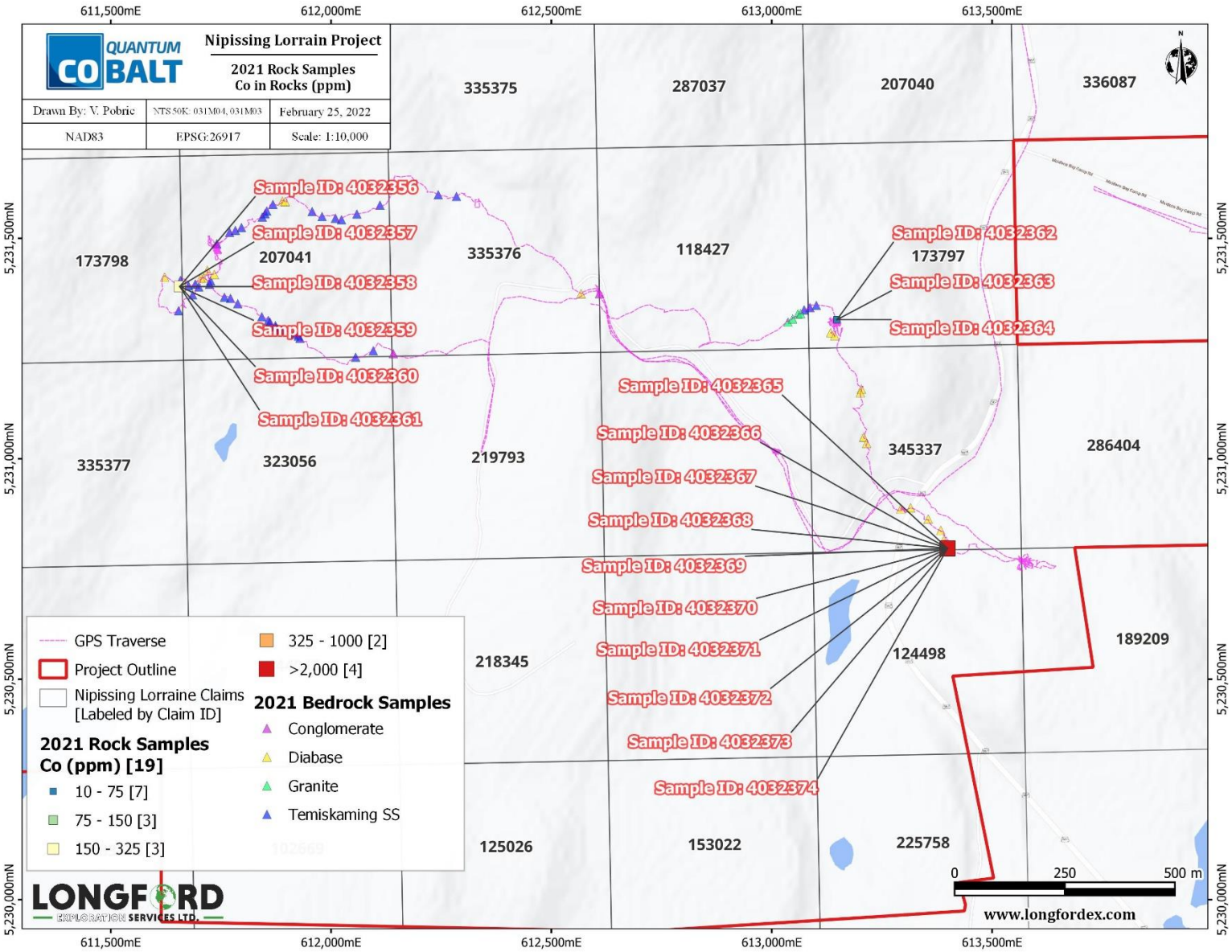

Figure 8.5: 2021 Cobalt in Rock Results (ppm Co).

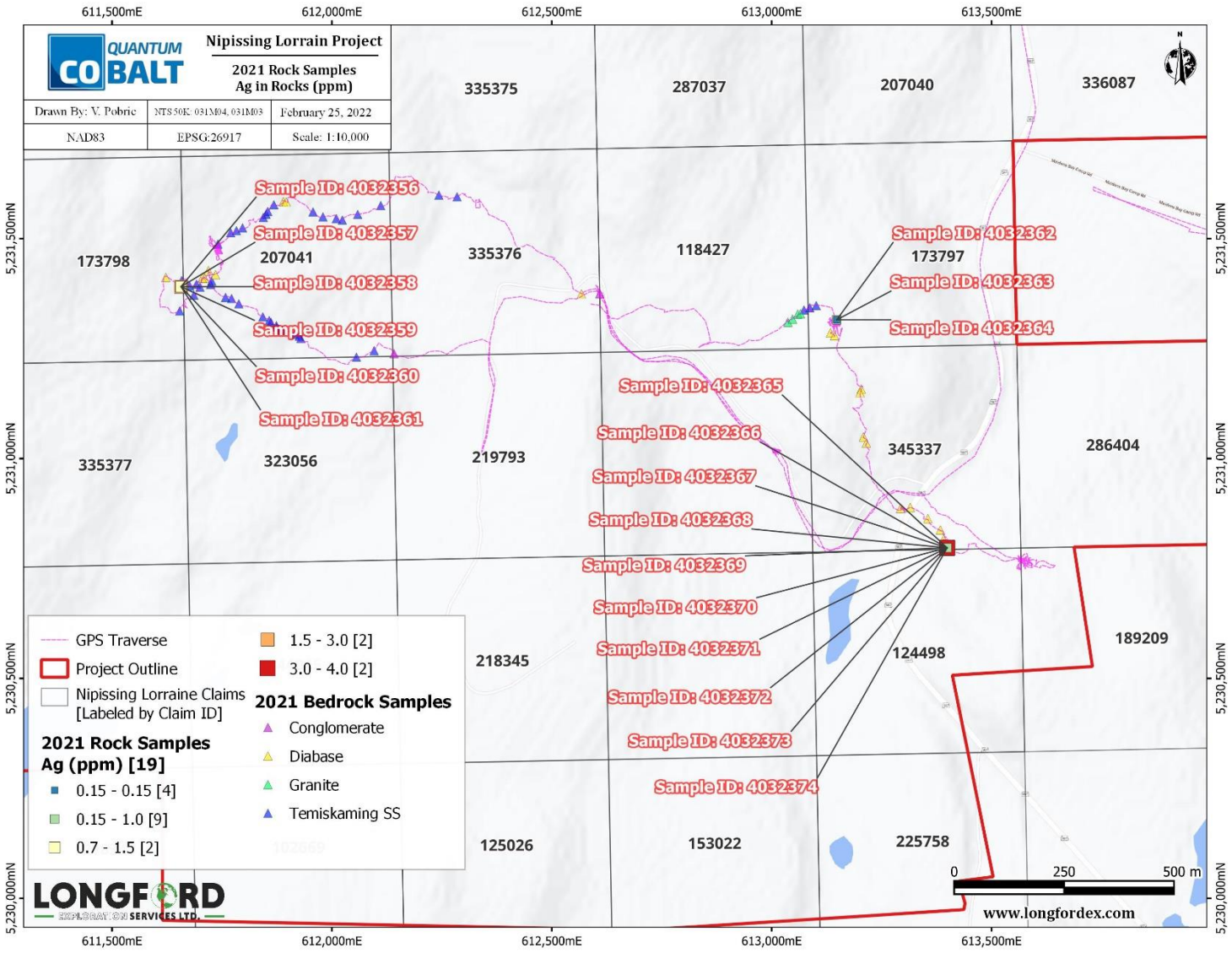

Figure 8.6: 2021 Silver in Rocks (ppm Ag).

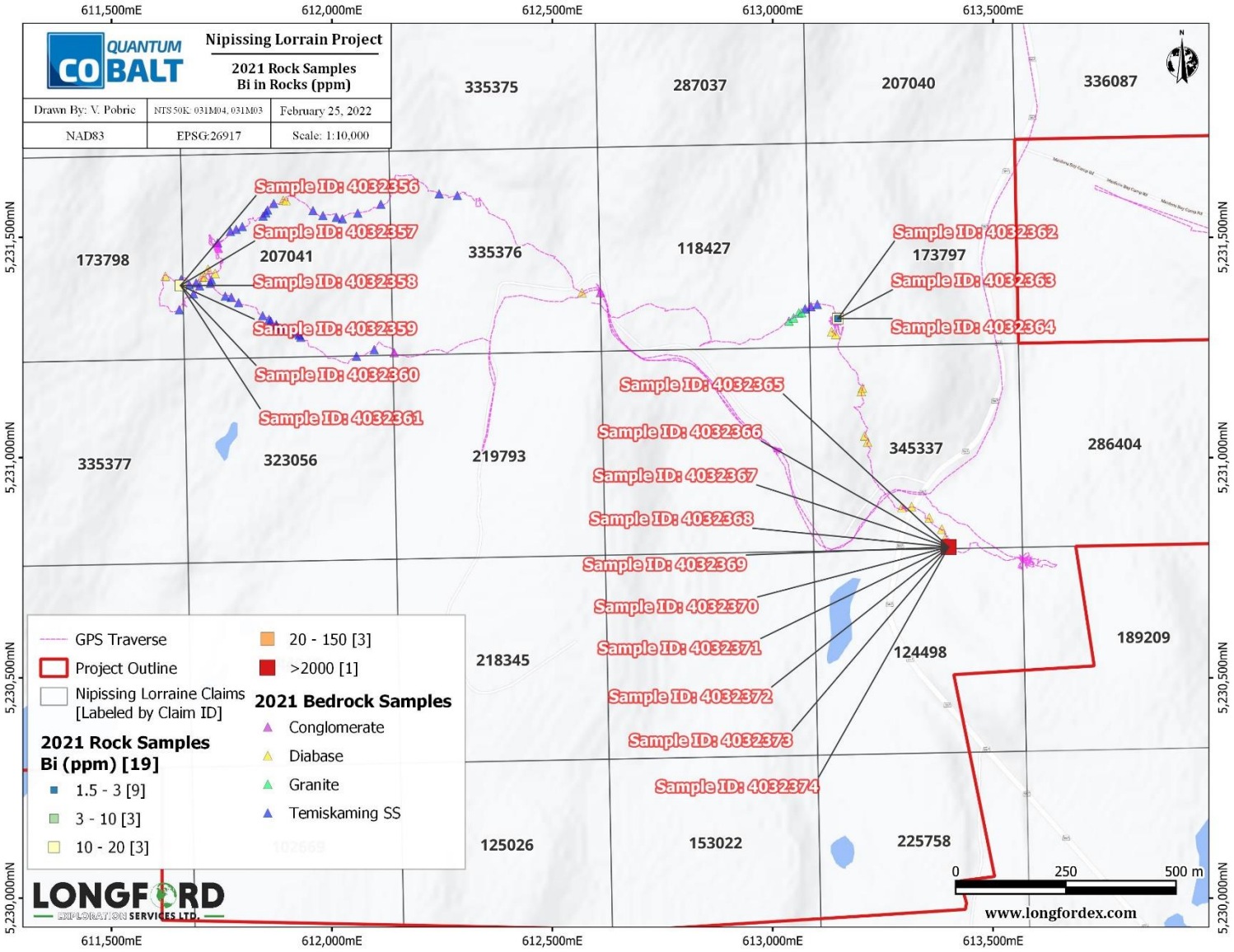

Figure 8.7: 2021 Bismuth in Rocks (ppm Bi).

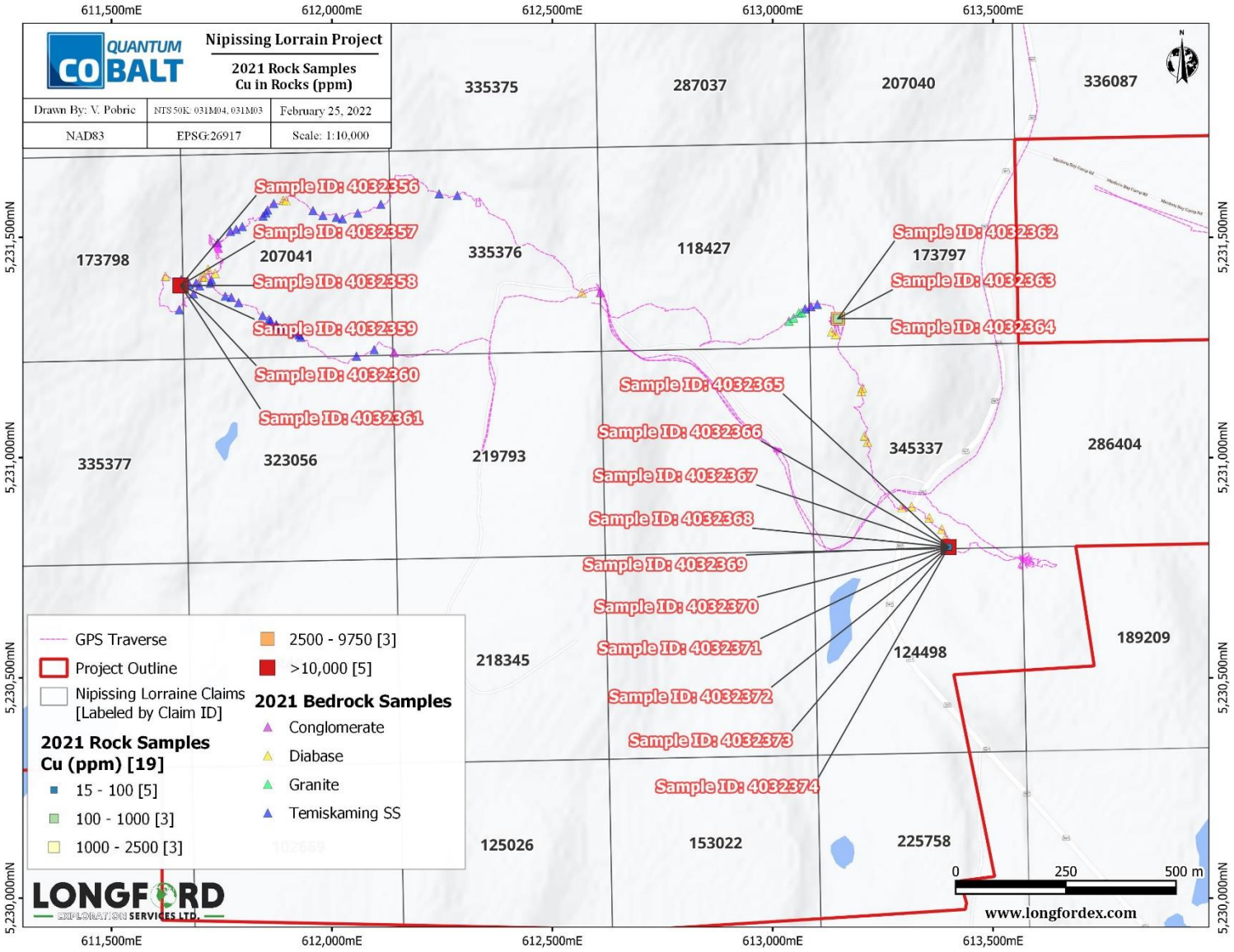

Figure 8.8: 2021 Copper in Rocks (ppm Cu).

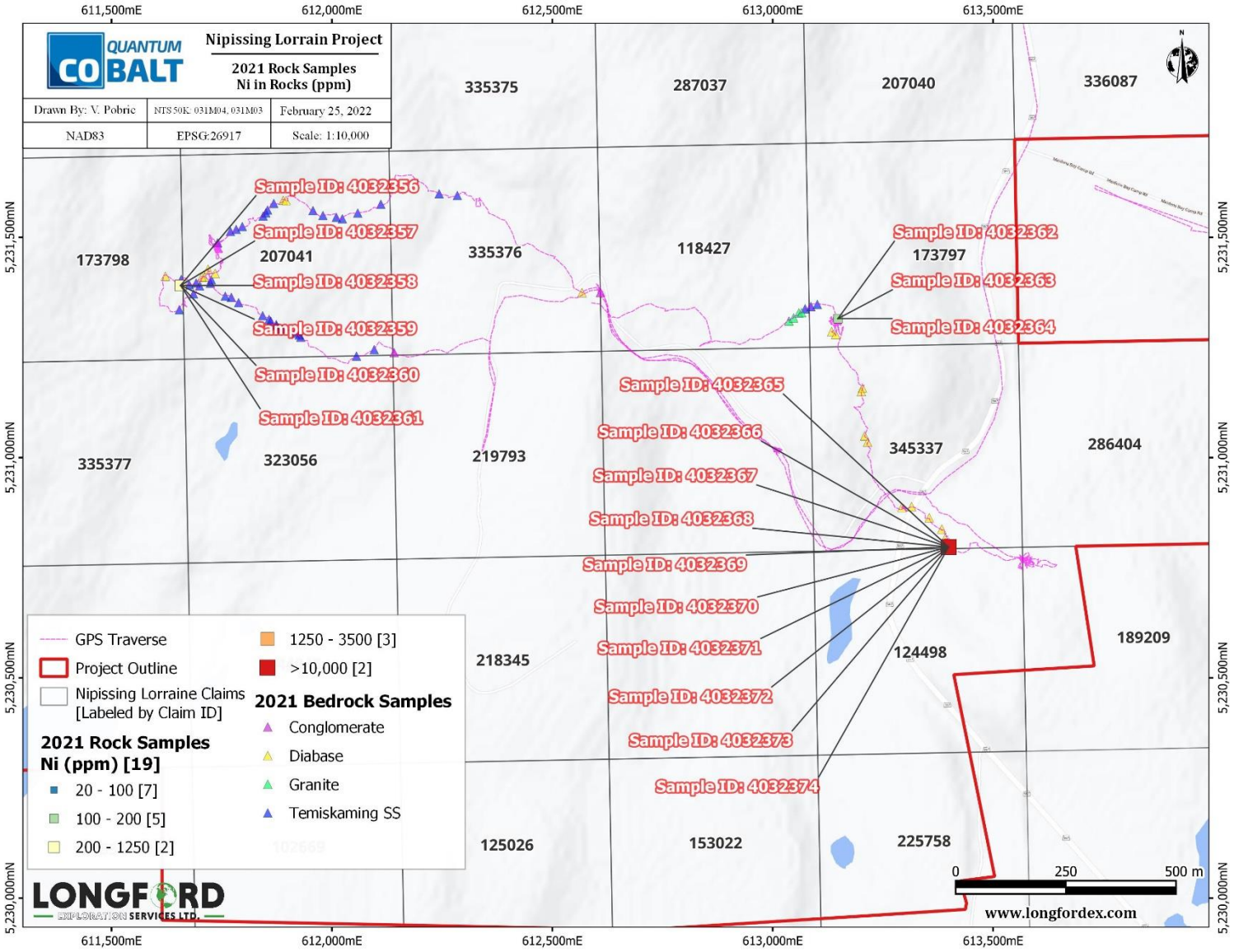

Figure 8.9: 2021 Nickle in Rocks (ppm Ni).

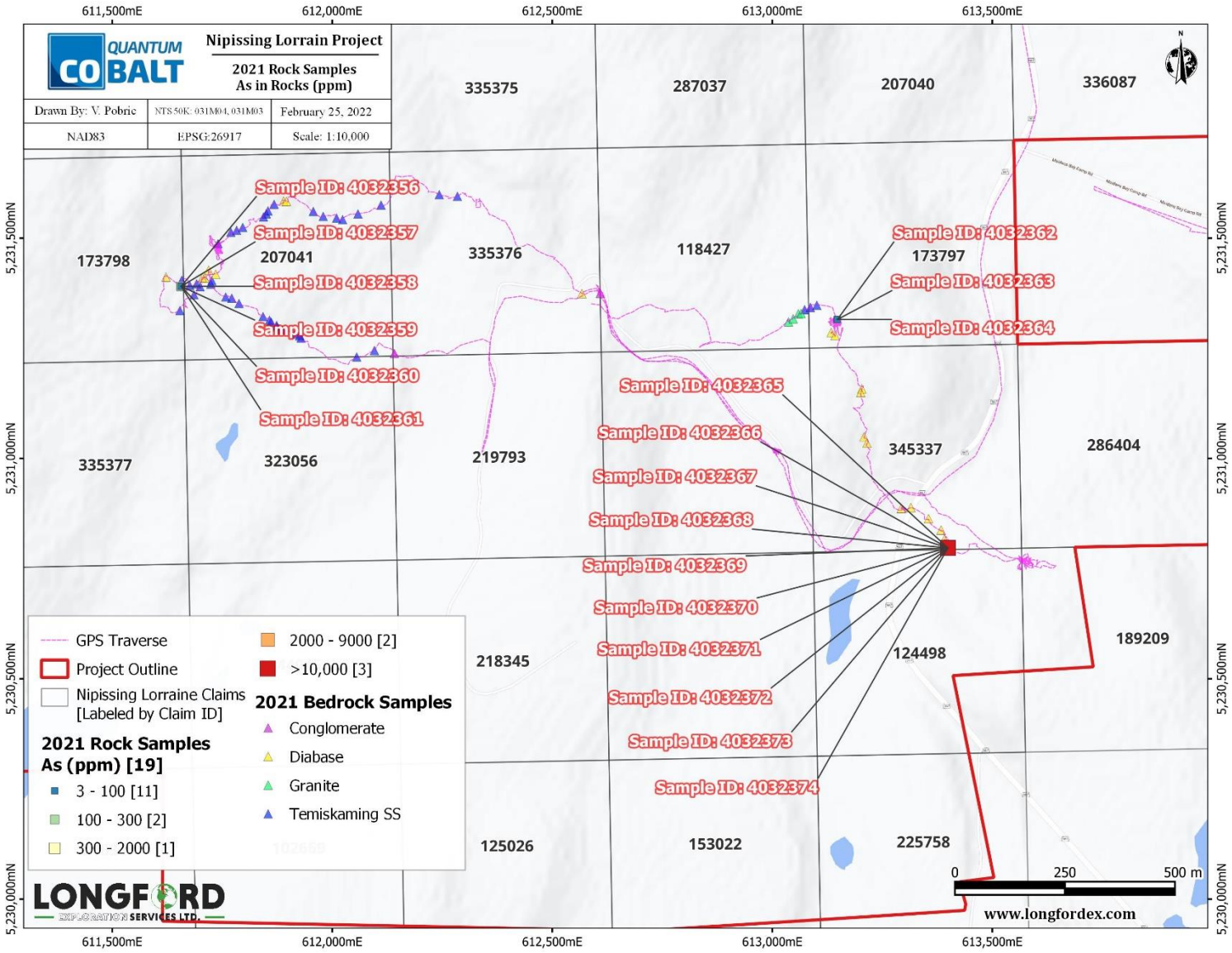

Figure 8.10: Arsenic in Rocks (ppm As).

8.1.3 Geological Mapping

Table 8.2 below outlines the locations of the various rock types that were mapped during the course of the 2021 exploration program.

Table 8.2: Mapped Bedrock Rock-Types.

Easting	Northing	Elev. (m)	Rock Type
611929	5231273	326	Temiskaming Sandstone
611926	5231278	327	Temiskaming Sandstone
611916	5231282	330	Temiskaming Sandstone
611887	5231292	337	Temiskaming Sandstone
611879	5231294	338	Temiskaming Sandstone
611875	5231299	339	Temiskaming Sandstone
611873	5231302	339	Temiskaming Sandstone
611861	5231310	340	Temiskaming Sandstone
611857	5231314	341	Temiskaming Sandstone
611843	5231322	342	Temiskaming Sandstone
611788	5231352	345	Temiskaming Sandstone
611772	5231364	346	Temiskaming Sandstone
611758	5231366	351	Temiskaming Sandstone
611724	5231396	356	Temiskaming Sandstone
611726	5231403	357	Temiskaming Sandstone
611692	5231396	361	Temiskaming Sandstone
611676	5231392	366	Temiskaming Sandstone
611658	5231404	366	Temiskaming Sandstone
611654	5231335	360	Temiskaming Sandstone
611686	5231371	358	Temiskaming Sandstone
611700	5231390	358	Temiskaming Sandstone
611741	5231487	356	Temiskaming Sandstone
611770	5231513	357	Temiskaming Sandstone
611783	5231518	355	Temiskaming Sandstone
611797	5231524	353	Temiskaming Sandstone
611844	5231548	349	Temiskaming Sandstone
611850	5231555	350	Temiskaming Sandstone
611854	5231562	351	Temiskaming Sandstone
611868	5231577	350	Temiskaming Sandstone
611957	5231561	339	Temiskaming Sandstone
611979	5231549	341	Temiskaming Sandstone
612010	5231545	337	Temiskaming Sandstone
612024	5231542	333	Temiskaming Sandstone
612058	5231555	335	Temiskaming Sandstone
612111	5231575	334	Temiskaming Sandstone
612243	5231599	333	Temiskaming Sandstone
612285	5231595	330	Temiskaming Sandstone
613074	5231338	320	Temiskaming Sandstone

Easting	Northing	Elev. (m)	Rock Type
613087	5231343	320	Temiskaming Sandstone
613101	5231348	315	Temiskaming Sandstone
612609	5231375	317	Conglomerate
612141	5231238	319	Conglomerate
612096	5231245	321	Temiskaming Sandstone
612056	5231230	315	Temiskaming Sandstone
611719	5231427	358	Diabase
611710	5231409	359	Diabase
611622	5231411	366	Diabase
611705	5231410	356	Diabase
611735	5231418	353	Diabase
611889	5231584	351	Diabase
611896	5231583	347	Diabase
613134	5231286	306	Diabase
613143	5231279	306	Diabase
613204	5231158	317	Diabase
613201	5231149	319	Diabase
613209	5231049	306	Diabase
613215	5231035	299	Diabase
613293	5230886	280	Diabase
613315	5230888	281	Diabase
613355	5230863	288	Diabase
613384	5230837	288	Diabase
613392	5230817	284	Diabase
613400	5230798	289	Diabase
612567	5231374	317	Diabase
613037	5231310	313	Granite
613048	5231317	313	Granite
613059	5231328	317	Granite
613066	5231329	315	Granite

8.1.4 Soil Sampling Results

A total of 38 soil samples were collected within the boundaries of the smaller claim block and were submitted for analysis (Table 8.3; Figures 8.11 to 8.16) at Bureau Veritas in Vancouver, BC. assay certificates are available in APPENDIX B.

Soil sampling was carried out on a small claim group centered on a historical shaft area. It was not possible to collect samples due to a thick layer of mine waste rock. The higher elevation areas had very poor soil development, while the lower elevations were more akin to clay.

Table 8.3: Soil Sample Locations, Assay Results and Descriptions.

Sample No.	Easting	Northing	Elv. (m)	Colour	Grain Size	Soil Horizon	Depth (cm)	Co (ppm)	Ni (ppm)	Cu (ppm)	Ag (ppm)
	NAD83 Zone 17										
4032375	616981	5229883	211	brown	fine	B	10	11.1	19.4	12.2	2.7
4032376	616956	5229885	211	brown	fine	B	10	22.1	67.6	35.8	0.3
4032377	616931	5229885	214	brown	fine	B	10	50.6	61.7	57.8	1.6
4032378	616901	5229887	215	brown	fine	B	10	93.6	74.8	41.9	0.9
4032379	616878	5229881	224	brown	fine	B	10	10.6	23.3	24.8	0.2
4032380	616857	5229882	237	brown	fine	B	10	7	16.6	13.9	0.4
4032381	616829	5229881	243	brown	fine	B	10	8.6	19.5	25.1	0.6
4032382	616808	5229884	248	brown	fine	B	10	41.1	43.9	88.9	1
4032383	616776	5229886	249	brown	fine	B	10	3.6	29.1	74.9	0.4
4032384	616777	5229906	238	brown	fine	B	10	16.7	45.7	35.9	0.3
4032385	616803	5229906	228	brown	fine	B	10	10.6	35.3	27.7	0.4
4032386	616829	5229907	219	brown	fine	B	10	2.7	11.9	30.8	0.1
4032387	616856	5229910	212	brown	fine	B	10	19.8	41.9	47.3	0.5
4032388	616881	5229908	207	brown	fine	B	10	16.3	42.6	27.1	0.3
4032389	616900	5229908	205	brown	fine	B	10	672.6	482	118.6	4.5
4032390	616930	5229907	204	brown	fine	B	10	122.6	164.4	359.1	1.5
4032391	616952	5229907	203	brown	fine	B	10	14.5	41.8	24.9	0.2
4032392	616980	5229908	201	brown	fine	B	10	12.6	42.3	26.2	0.2
4032393	616950	5229936	204	brown	fine	B	10	>10,000	28,570	549.1	31.3
4032394	616924	5229931	207	brown	fine	B	10	713.8	482	770.9	57.6
4032395	616898	5229936	208	brown	fine	B	10	135.4	149.8	43.4	0.6
4032396	616881	5229934	208	brown	fine	B	10	22.6	45.6	21.8	0.7
4032397	616854	5229932	210	brown	fine	B	10	14.4	43.2	16.5	0.3
4032398	616829	5229931	217	brown	fine	B	10	14.6	48	29.8	0.3
4032399	616805	5229933	221	brown	fine	B	10	20	60	28.6	0.05
4032400	616777	5229931	228	brown	fine	B	10	11	31.7	15.8	0.1
4032401	616776	5229956	223	brown	fine	B	10	11.9	37.2	15.7	0.3
4032402	616803	5229956	223	brown	fine	B	10	8.7	25.5	12.3	0.05
4032403	616825	5229957	218	brown	fine	B	10	12.4	36.9	19.9	0.1

Sample No.	Easting	Northing	Elv. (m)	Colour	Grain Size	Soil Horizon	Depth (cm)	Co (ppm)	Ni (ppm)	Cu (ppm)	Ag (ppm)
	NAD83 Zone 17										
4032404	616852	5229958	214	brown	fine	B	10	7.9	25.6	8.9	0.05
4032405	616875	5229957	211	brown	fine	B	10	1,250.6	358	1,795	100
4032406	616950	5229957	206	brown	fine	B	10	708	366.4	519.8	25.1
4032407	616977	5229958	198	brown	fine	B	10	11.4	34.3	30	0.8
4032408	616977	5229977	190	brown	fine	B	10	18.7	47.2	54.2	2.3
4032409	616850	5229986	198	brown	fine	B	10	20.8	56.8	37.1	0.5
4032410	616829	5229982	205	brown	fine	B	10	19.3	53.9	33	0.2
4032411	616801	5229985	213	brown	fine	B	10	19.9	59.2	29.1	0.05
4032412	616780	5229983	215	brown	fine	B	10	19.9	58.7	29.6	0.1

Figure 8.11: Nipissing Lorrain Property Best Soil Samples with Best Results.

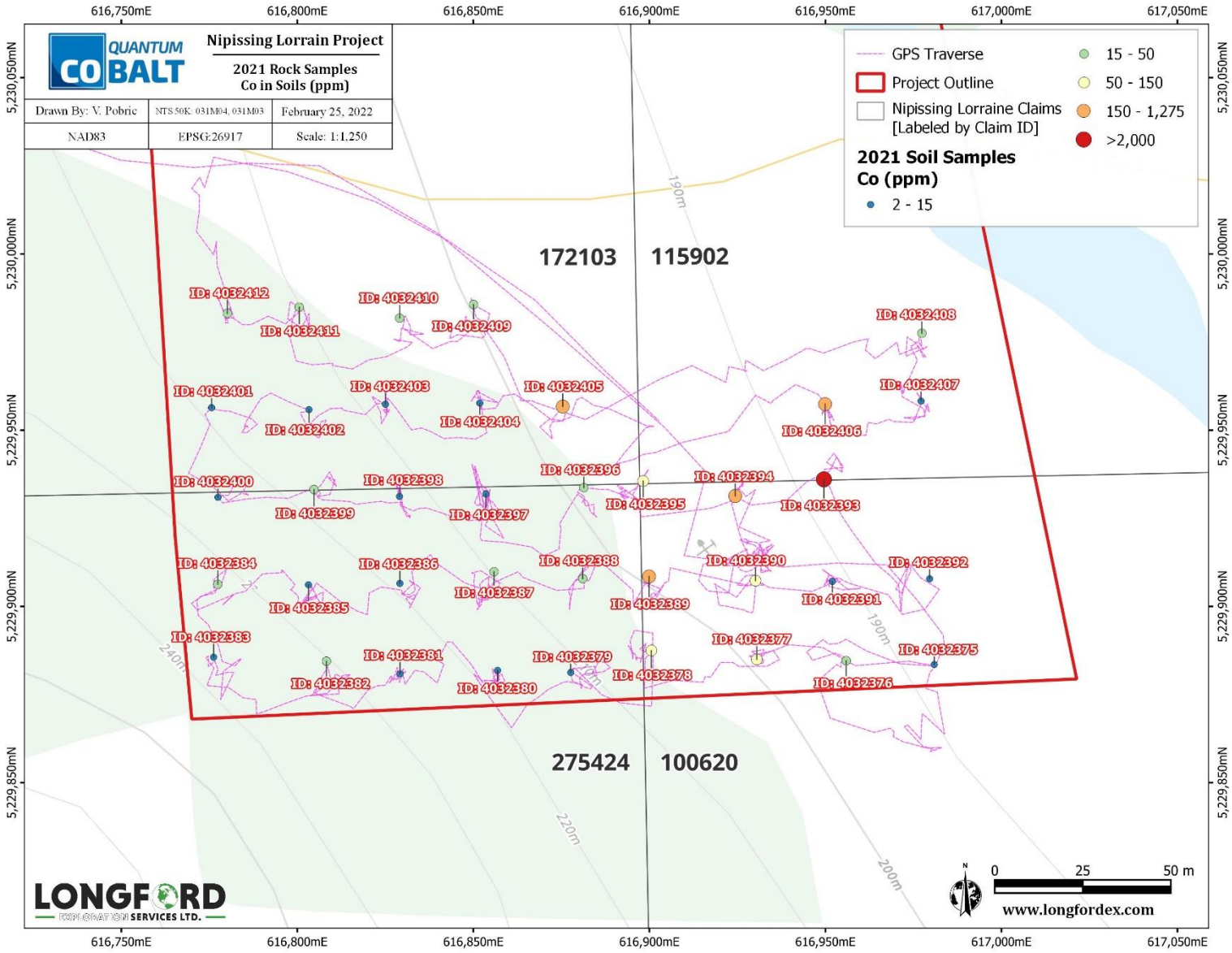

Figure 8.12: 2021 Cobalt in Soils (ppm Co).

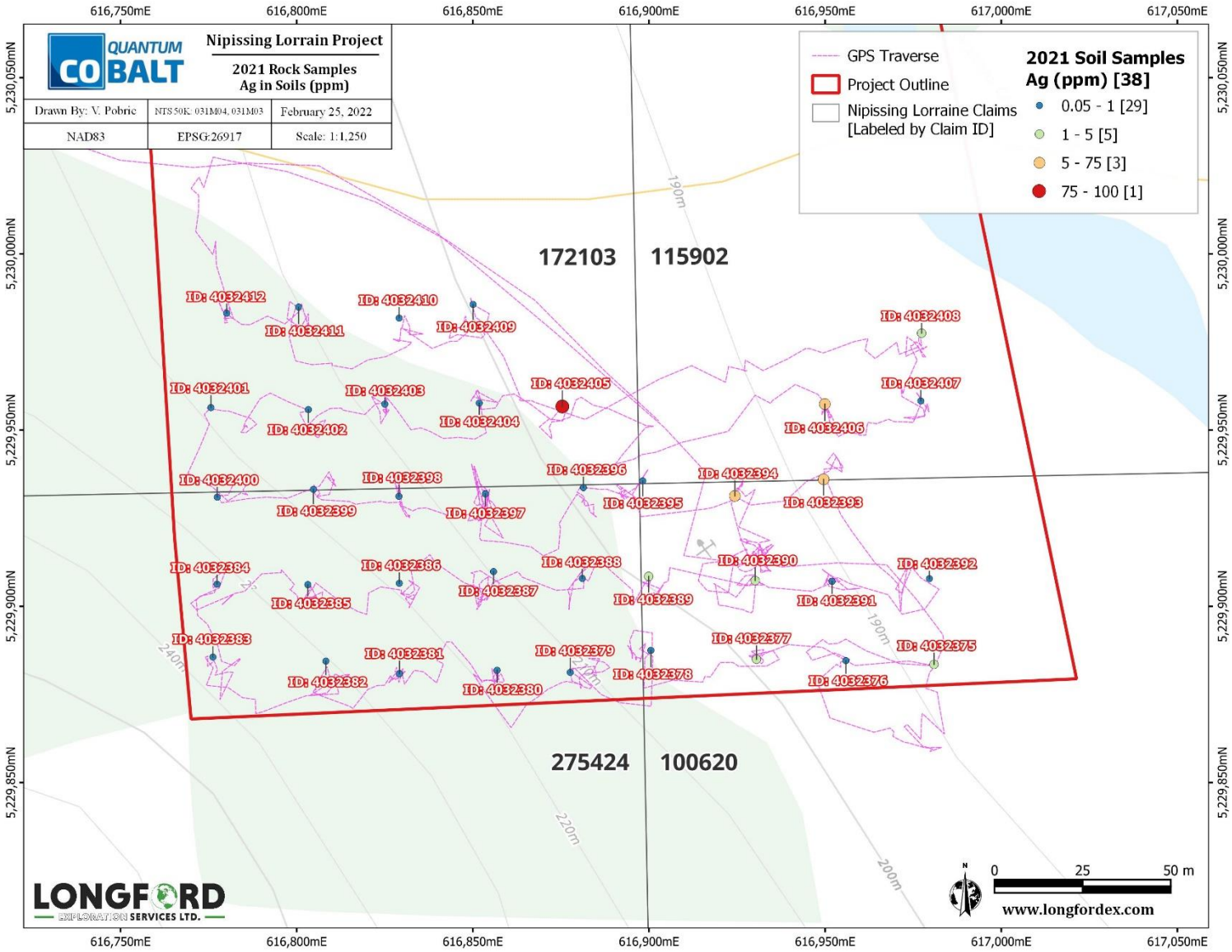

Figure 8.13: 2021 Silver in Soils (ppm Ag).

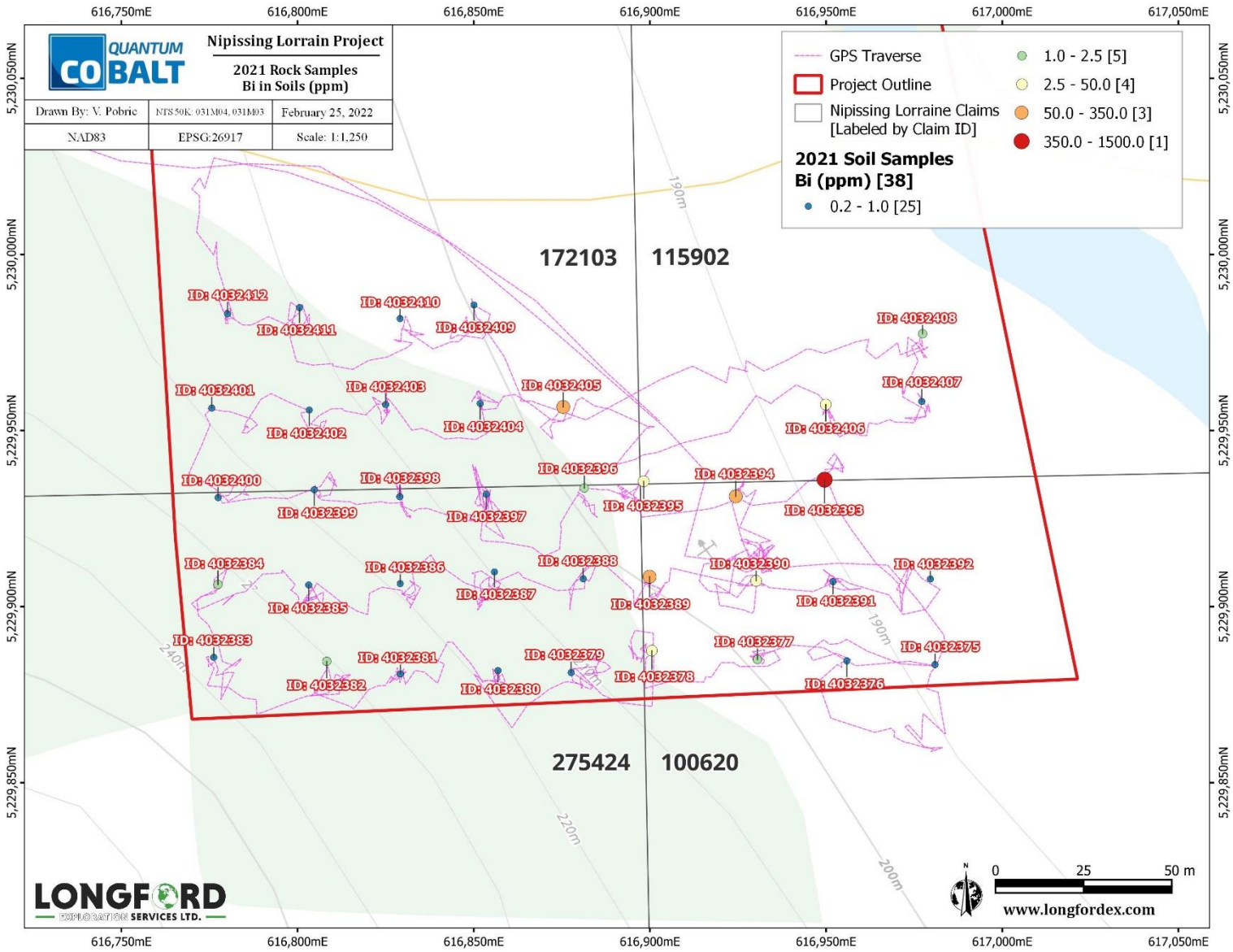

Figure 8.14: 2021 Bismuth in Soils (ppm Bi).

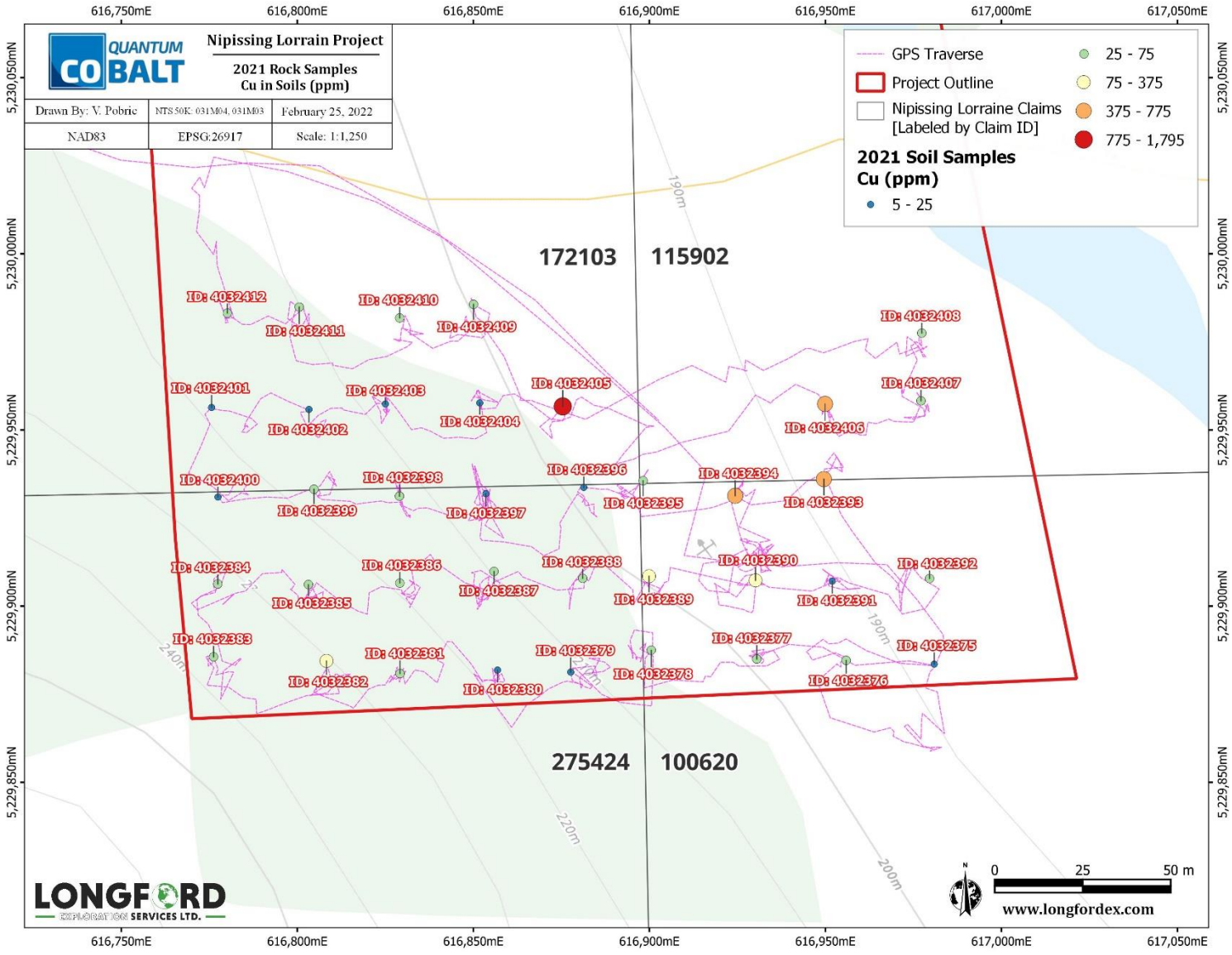

Figure 8.15: 2021 Copper in Soils (ppm Cu).

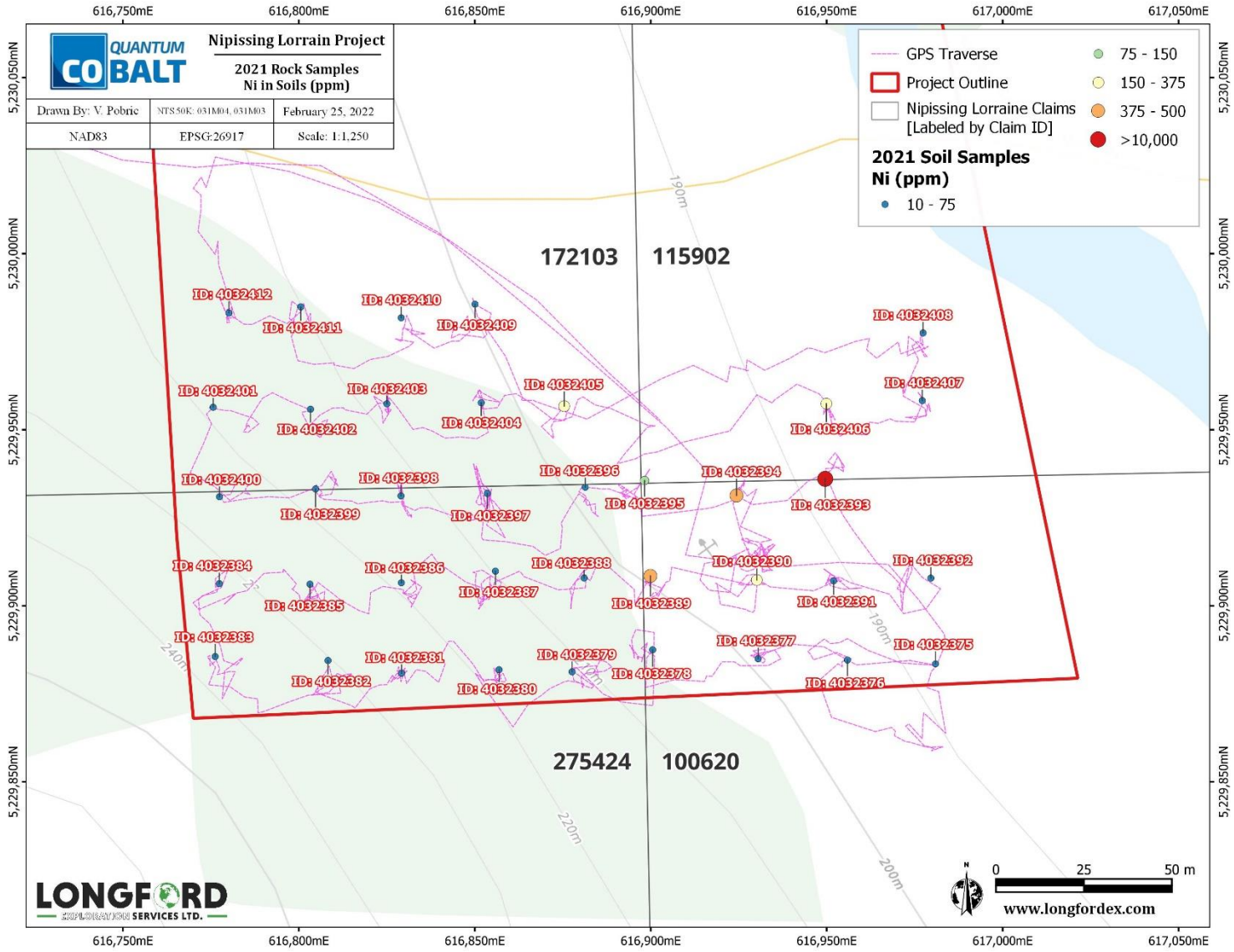

Figure 8.16: 2021 Nickle in Soils (ppm Ni).

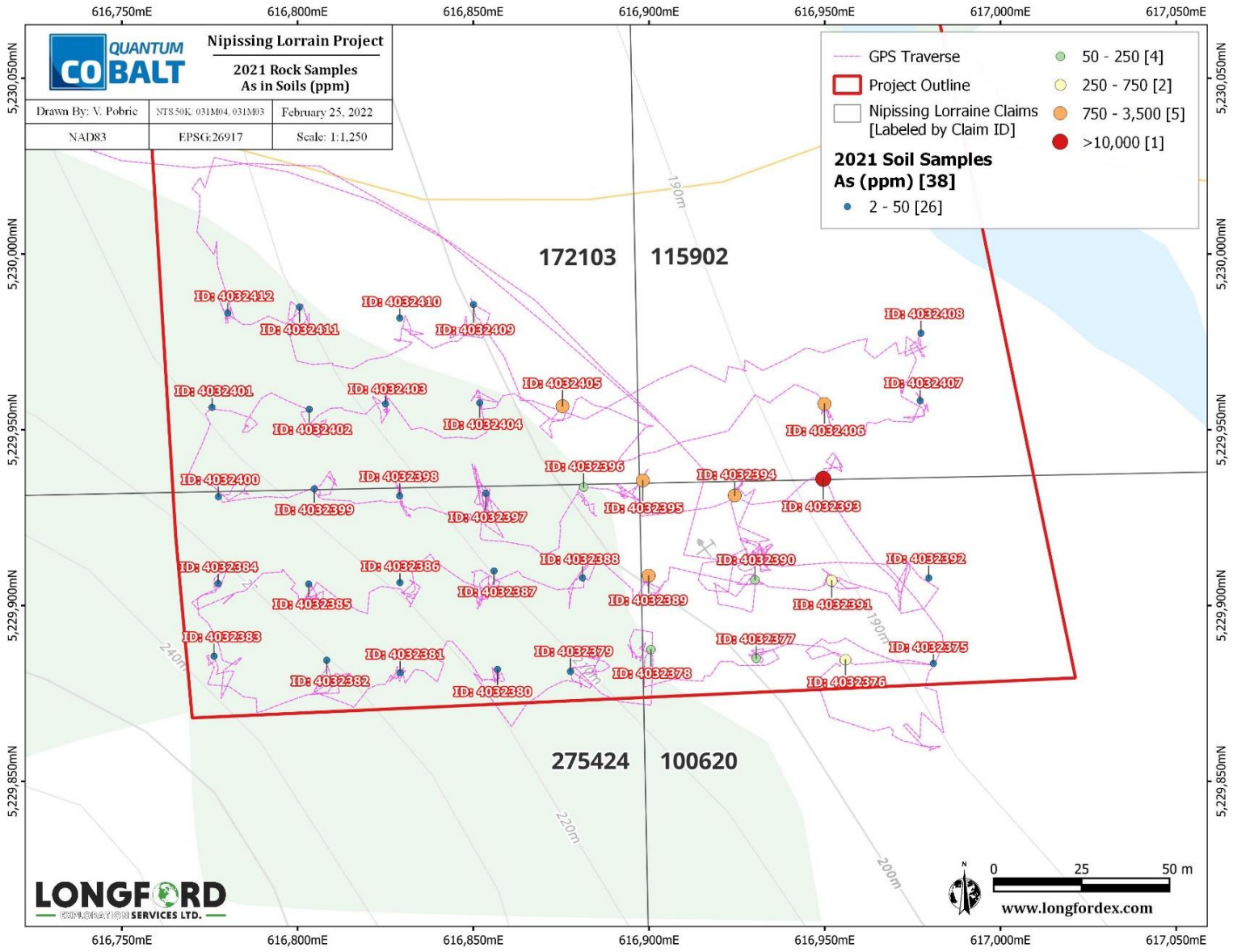

Figure 8.17: Arsenic in Soils (ppm As).

9 Statement of Costs

The following table describes the costs of the work program which are eligible for assessment credit. The amount being applied for is $20,895.79.

Table 9.1: Nipissing Lorrain Property 2021 Statement of Costs.

DATE: March 22, 2022

LONGFORD EXPLORATION

SEND TO:
Quantum Battery Metals Corp.
400-837 West Hastings Street
Vancouver, BC, V6C 3N6

Longford Exploration Services
675-355 Burrard Street
Vancouver, BC
Canada V6C 2G8
778-809-7009

2021 Nipissing Lorrain Exploration Invoice

Personnel		Days/ hours	Rate		Line Total
Project Manager	James Rogers	1	$	800.00	$ 800.00
Senior Geologist	Sept 3rd to Sept 6, 2021	4	$	1,000.00	$ 4,000.00
					$ -
	Person days	4	**Cat. Total**		**$ 4,800.00**
Food and Lodging		days	Rate		Line Total
Food	per diem	4	$	55.00	$ 220.00
Camping Gear		4	$	150.00	$ 600.00
			Cat. Total		**$ 820.00**
Transportation		Units/Days	Unit Price		Line Total
Truck	1 ton with safety and recovery gear	4	$	150.00	$ 600.00
Fuel	per km for truck	1000	$	0.65	$ 650.00
			Cat. Total		**$ 1,250.00**
Equipment Rentals		Days	Unit Price		Line Total
Misc Hand tools	Hammers, picks, mattocks, shovels, axes,	4	$	20.00	$ 80.00
Electronics Kit	GPS, inreach units with unlimited plans, 1	4	$	30.00	$ 120.00
					$ -
			Cat. Total		**$ 200.00**
Consumable		Units	Unit Price		Line Total
Field / Office Consumables	per field man day	4	$	30.00	$ 120.00
			Cat. Total		**$ 120.00**
Analytical		Units	Unit Price		Line Total
Analysis	BV Timmins - Soil SS80, AQ300	38	$	20.00	$ 760.00
Analysis	BV Timmins-Rock-PRP70-250, AQ300, FA530	19	$	45.00	$ 855.00
Sample Shipping	transcol	1	$	500.00	$ 500.00
			Cat. Total		**$ 2,115.00**
Mobilization		Units	Unit Price		Line Total
Mobilization		1	$	1,000.00	$ 1,000.00
			Cat. Total		**$ 1,000.00**
Report		Units	Unit Price		Line Total
GIS, Data Compilation		1	$	2,000.00	$ 2,000.00
Report and Work Filing		1	$	5,000.00	$ 5,000.00
			Cat. Total		**$ 7,000.00**

Subtotal	$	17,305.00
Management 15%	$	2,595.75
Subtotal	$	19,900.75
GST	$	995.04
TOTAL	**$**	**20,895.79**

10 Sample Preparation, Analysis, and Security

10.1 2021 Sampling Procedure

During the 2021 program a total of 19 rock samples and 38 soil samples were collected. These samples were collected to enable detailed description out of the field and were collected and secured in a manner where sample integrity and provenance is maintained for future analytical procedures.

Rock samples collected were located by GPS in NAD83 UTM Zone 17N, the sample location was recorded in field notebooks, an assay sample tag book and as a waypoint on a Garmin 60CSX GPS unit. Each sample was collected into its own 18" x 12" poly bag labeled with the locale (i.e., "Nipissing Lorrain") and a unique 7-character sample ID (i.e., E5471266) assigned from a barcoded Tyvek sample book. A tear-out tag with the barcode and unique sample ID was inserted in the bag with the sample and the bag sealed with a cable tie in the field. The sample locations are marked in the field with orange flagging type and the unique sample ID number written on the tape.

A similar process was carried out for recording the soil sample data however soils were collected carefully by following strict guidelines. The grid soil sampling program that was carried out collected 38 soil samples and across the southwestern portion of the Property. Grid soil sampling was carried at 25 m intervals with a 25 m line spacing. All sample locations were recorded using a hand-held GPS unit. Sample sites were marked using aluminum tags labelled with the sample number affixed to a 50 cm wooden lath that was driven into the ground. The majority of soil samples were collected from approximately 10 cm deep holes using hand-held geo-tools. Each soil sample was placed into individually labelled Kraft paper bags. No duplicate samples were collected during this program. Soil samples were then sent to Bureau Veritas in Vancouver, BC to be dried and screened to -200 microns. The fine fractions were then analyzed using an aqua regia digestion and using inductively coupled plasma-mass spectroscopy technique (ICP-MS).

10.2 Sampling Preparation and Analysis

The rock and soil samples collected during the 2021 prospecting and soil sampling program were submitted for analysis at Bureau Veritas Mineral Laboratories in Vancouver, BC., on September 3, 2021, for the following processes:

Table 10.1: Analytical Methods Descriptions.

Sample Type	No. of Samples	Procedure Code	Description
Rock	19	PRP70-250	Crush, split and pulverize 250 g rock to 200 mesh
Rock	19	AQ300, AQ370, FA430	1:1:1 Aqua Regia digestion ICP-ES analysis; Lead Collection Fire - Assay Fusion - AAS Finish
Soil	38	SS80, AQ200, AQ370	1:1:1 Aqua Regia digestion ICP-MS analysis; 1:1:1 Aqua Regia digestion ICP-ES analysis

10.1 Adequacy of Procedures

All sample collection and analysis performed by the Longford Exploration field crew are in general conformance with industry best practices and are in accordance with typical CIM standards.

11 Interpretation and Conclusions

Prospecting and soil sampling activities on the Nipissing Lorrain Property in 2021 has successfully identified anomalous cobalt values within the main claim block and the smaller claim block of the Property. All rock samples were collected within the central portion of the main claim block. The best rock sample assays were found in rock Samples 4032372 and 4032374, collected on the southeastern border of the Property, which returned a value of >10,000 ppm Co (Table 11.1), respectively. The soil survey has also identified significant cobalt values, overall, the highest values returned was >10,000 ppm Co (Table 11.2). The soil survey also identified anomalous values in silver, bismuth, copper, and nickel.

Rock samples collected on the main claim block, in all three sampling areas, returned elevated concentrations of cobalt, silver, bismuth, nickel, copper and arsenic. Cobalt values ranged between 12 ppm Co and > 10,000 ppm Co, silver returned 0.15 ppm Ag to 3.8 ppm Ag, bismuth ranged between 1.5 ppm Bi and 2,600 ppm Bi, nickel returned between 20 ppm Ni and >100,000 ppm Ni, copper returned between 15 ppm and 39,220 ppm Cu, and arsenic returned between 3 and > 100,000 ppm As. Prospecting has located three new historical shafts on the smaller claim block.

Background threshold values for soils were calculated using soil samples collected during the 2021 program (38 soil samples) which is an extremely small sample size. The 97th percentile is a commonly used benchmark for determining potentially anomalous values within a large dataset, meaning that the top 3% of values within a geochemical population could be considered anomalous values. Threshold values are normally calculated using a very large set of samples; therefore, the calculated background and anomalous values in Table 11.3 will not be considered, but have been included for completeness. It is also important to consider the underlying bedrock lithology, as different rock types naturally contain varying elemental concentrations (Table 11.4).

The soil sampling program successfully identified a multi-element soil anomaly in the southern portion of the small claim block (Figure 11.1), this is not surprising as the soil grid was centered on an area known to have historical shafts. Based on the values returned from the 38 soil samples collected, 9 were anomalous in cobalt with values ranging between 93.6 ppm Co to > 10,000 ppm Co, 15 samples were anomalous in silver with assays ranging between 0.6 ppm Ag and 100 ppm Ag, 18 samples were anomalous in bismuth with assays ranging between 0.5 ppm Bi to 1,413.7 ppm Bi, 5 samples were anomalous in copper with assays ranging between 359.1 ppm Cu and 1,795 ppm Cu, 32 samples were anomalous in arsenic with assays ranging between 4 ppm and 6,500 ppm As, and 5 samples were anomalous in nickel with values ranging between 359 ppm Ni and 28,570 ppm Ni.

All soil samples were collected from soils overlying the Nipissing Diabase (intermediate rock type). Considering the underlying geology of the soil grid against the calculated threshold values for determining background vs. anomalous values, the calculated elemental values do appear to be elevated for the respective underlying, rock types. This area had very poor soil development in the higher elevation areas, and areas of lower elevation were more akin to clay. Poor soil development in some areas prevented sample collection.

Based on observations made in the field along with assay results for both rock and soils during the 2021 field program, significant signs of cobalt mineralization have been identified in the southern portion of the small claim block and central portion of the main claim bock. Therefore, it is recommended that the next program focus efforts north of the 2021 soil sampling grid, by extending the soil grid to the north and to continue prospecting and mapping the main claim block.

Table 11.1: Statistical Analysis of 2021 Rock Sample Results (n=19).

Element	Mean (ppm)	Std. Dev. (ppm)	Max (ppm)	Min (ppm)	Range (ppm)	Mode (ppm)	Median (ppm)
Cobalt	1,812.95	3,455.46	10,000.00	10.00	9,990.00	10,000.00	137.00
Silver	1.06	1.16	3.90	0.15	3.75	0.15	0.60
Bismuth	153.00	593.44	2,600.00	1.50	2,598.50	1.50	5.00
Nickle	10,969.16	31,386.22	100,000.00	20.00	99,980.00	100,000.00	128.00
Copper	5,962.79	9,298.43	39,220.00	15.00	39,205.00	N/A	1,879.00
Arsenic	11,953.79	31,265.88	100,000.00	3.00	99,997.00	5.00	54.00

Table 11.2: Statistical Analysis of 2021 Soil Sample Results (n=38).

Element	Mean (ppm)	Std. Dev. (ppm)	Max (ppm)	Min (ppm)	Range (ppm)	Mode (ppm)	Median (ppm)
Cobalt	373.11	1,625.72	10,000.00	2.70	9,997.30	10.60	17.70
Silver	6.23	19.10	100.00	0.05	99.95	0.30	0.40
Bismuth	50.61	233.43	1,413.70	0.20	1,413.50	0.50	0.50
Copper	135.09	323.82	1,795.00	8.90	1,786.10	N/A	29.90
Nickle	838.26	4,621.86	28,570.00	11.90	28,558.10	482.00	44.75
Arsenic	1,945.03	10,588.66	65,400.00	1.80	65,398.20	6.80	10.45

Table 11.3: Threshold Values Calculated Using Nipissing Lorrain 2021 Soil Sample Results (n=38).

Percentiles	Co (ppm)	Ag (ppm)	Bi (ppm)	Cu (ppm)	Ni (ppm)	As (ppm)
25th percentile	11.08	0.20	0.38	24.05	33.65	4.80
50th percentile	17.70	0.40	0.50	29.90	44.75	10.45
75th percentile	36.48	0.98	2.03	52.48	61.28	150.68
95th percentile	1,688.07	59.72	382.47	822.10	1,886.40	6,467.70
97.5 percentile	8,512.60	92.79	1,229.17	1,620.90	23,795.04	54,854.22

Table 11.4: Abundance Levels or Background of Elements in Common Rocks (GSNL, N.D).

Element	Crust (ppm)	Mafic (ppm)	Intermediate (ppm)	Felsic (ppm)
Cobalt	25	50	10	1
Silver	0.07	0.1	0.07	0.04
Bismuth	0.17	0.15	-	0.1
Nickle	75	150	20	0.5
Copper	55	100	30	10
Arsenic	1.8	2	2	1.5

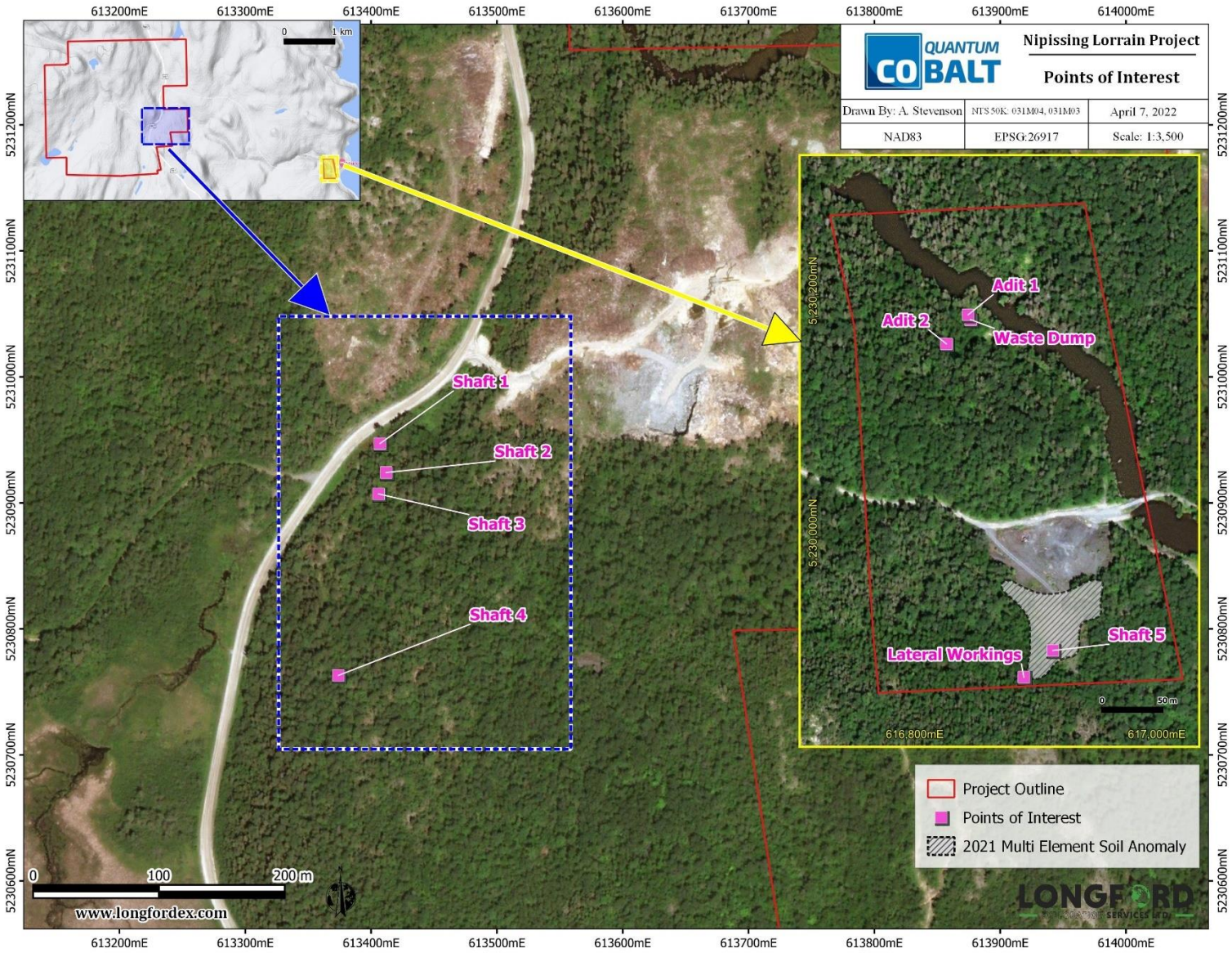

Figure 11.1: Historical Shafts, Adits, and 2021 Multi-Element Soil Anomaly Locations.

12 Recommendations

In 2017 and 2021 Longford Exploration Services Ltd. identified significant cobalt mineralization on the Nipissing Lake Property. A program comprised of geochemical soil sampling, prospecting, and detailed structural mapping is highly recommended at a cost of $39,340.35.

A crew of three aims to complete a 6-day field program (including one day of travel) on the Nipissing Lorrain Cobalt Property (Table 12.1). The program will consist of general prospecting, geological mapping, and rock/soil sampling.

Geological mapping and prospecting, in conjunction with a highly detailed (15 m X 15 m) soil geochemistry survey of the eastern claim block will serve to delineate the extent of surface metal anomalism in soil and identify potential structural host to mineralization in outcrop. The proposed work area is largely within the eastern claim block and is presented in Figure 12.1 below.

12.1 Proposed Exploration Budget

Table 12.1: 2022 Proposed Exploration Budget.

DATE: February 25, 2022

LONGFORD EXPLORATION SERVICES LTD.

Quantum Battery Metals Corp.
400-837 West Hastings Street
Vancouver, BC
Canada, V6C 3N6

Longford Exploration Services Ltd.
675-355 Burrard Street
Vancouver, BC
Canada V6C 0B2

2022 Nipissing Lorrain Proposal

Personnel			Days	Rate		Line Total
	Geologist	Project Manager	6	$ 800.00	$	4,800.00
	Field Assistant		6	$ 400.00	$	2,400.00
	Field Assistant		6	$ 400.00	$	2,400.00
		Total Days:	18	**Cat. Total**	**$**	**9,600.00**
Food and Lodging			Units	Rate		Line Total
	Food and Groceries	Per diem	18	$ 75.00	$	1,350.00
	Lodging	Temagami	18	$ 120.00	$	2,160.00
				Cat. Total	**$**	**3,510.00**
Transportation			Units/Days	Unit Price		Line Total
	Trucks		6	$ 150.00	$	900.00
	Fuel	per km for truck	500	$ 0.65	$	325.00
				Cat. Total	**$**	**1,225.00**
Equipment Rentals			Units	Unit Price		Line Total
	Electronics Kit	Radio, Sat phone, GPS, per person p/d	18	$ 20.00	$	360.00
	Hand Tools	Hammers, shovels, axes, soil augers	18	$ 20.00	$	360.00
	Canoe/ Kayak		12	$ 60.00	$	720.00
	Chain saw and PPE		5	$ 25.00	$	125.00
				Cat. Total	**$**	**1,565.00**
Consumable			Units	Unit Price		Line Total
	Field / Office Consumables		18	$ 35.00	$	630.00
				Cat. Total	**$**	**630.00**
Analytical			Units	Unit Price		Line Total
	Analysis - Rock	PRP70-250, AQ250	30	$ 35.00	$	1,050.00
	Analysis - Soil	SS80, AQ250	300	$ 25.00	$	7,500.00
	Sample Shipping		1	$ 1,000.00	$	1,000.00
				Cat. Total	**$**	**9,550.00**
Mobilisation			Units	Unit Price		Line Total
	Positioning Fee		3	$ 500.00	$	1,500.00
				Cat. Total	**$**	**1,500.00**
Pre and Post Fieldwork			Units	Unit Price		Line Total
	Assessment report and work filing		1	$ 5,000.00	$	5,000.00
				Cat. Total	**$**	**5,000.00**
				Estimated Subtotal	$	32,580.00
				Management 15%	$	4,887.00
				Subtotal	$	37,467.00
				GST 5%	$	1,873.35
				Total	$	39,340.35

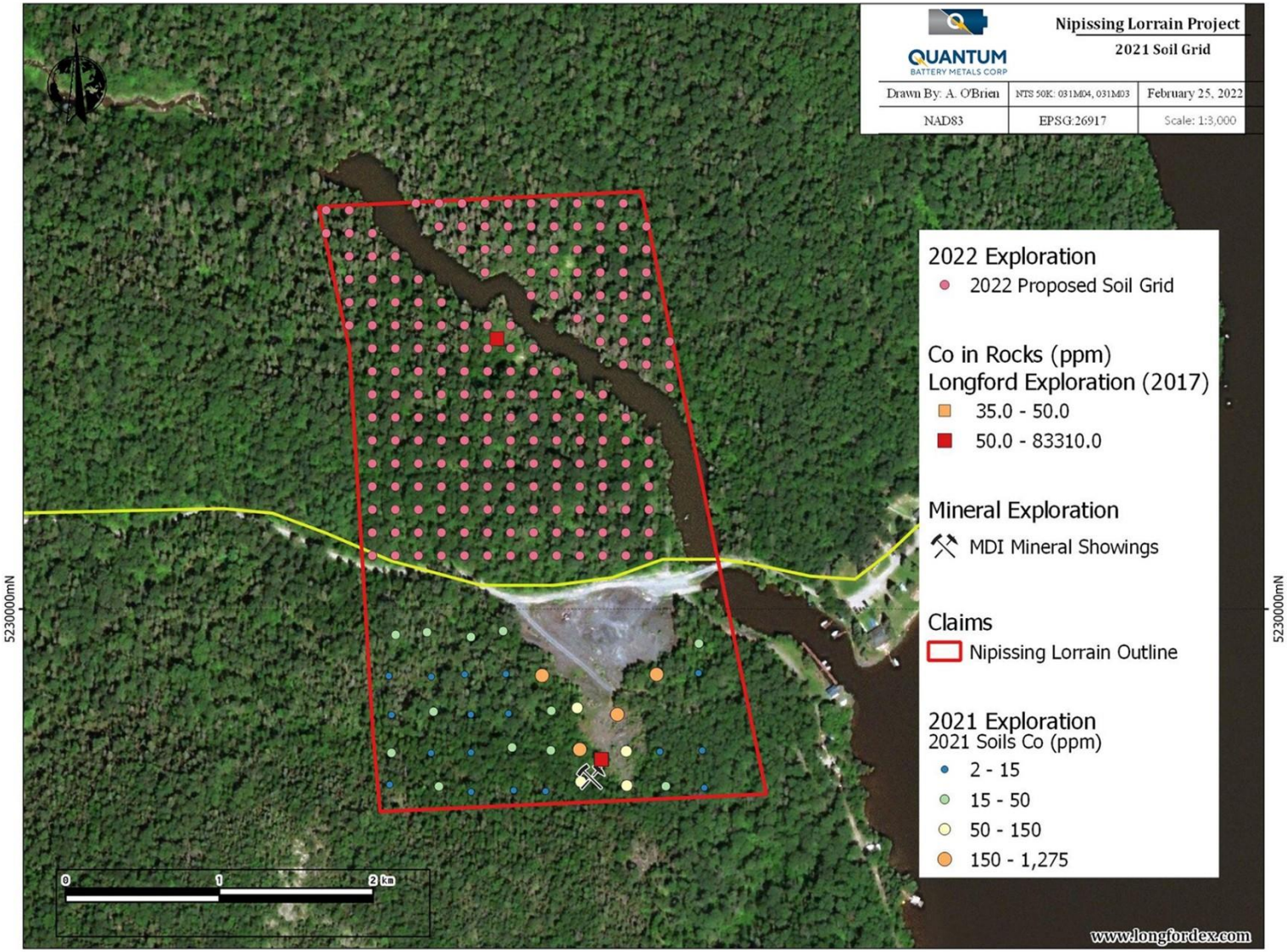

Figure 12.1: 2022 Proposed Soil Grid.

13 References

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Woolham, R.W., (1966), Report on the Geophysical Surveys, South Lorrain Township, Prepared for Millerfields Silver Corp. Ltd., April 27, 1966

14 Statement of Qualification

I, Sarah Ryan, of 141 Eastbourne Cres, St John's, NL, Canada do hereby certify the following:

- I graduated from Memorial University of Newfoundland with a degree in Earth Sciences in 2018, and I have practiced my profession continuously since 2018.
- From 2018 to present I have been working in Canada in mineral exploration and have been actively involved in projects in BC, YK, NWT, ON, QC and NL.
- I am registered as a G.I.T with PEG-NL and I am in good standing.
- I am a Consulting Geologist and have been so since 2018.
- I am the author of the Assessment Report entitled: "2021 Assessment Report on the Nipissing Lorrain Property, Ontario, Canada", effective date March 24, 2022.

March 24, 2022

Sarah Ryan, G.I.T., B.Sc., B.B.S. Date

LONGFORD
EXPLORATION SERVICES LTD.

2021 Nipissing Lorrain Property Work Program Daily Log

Crew: Wade Kornik

Program Duration: September 3rd to Sept 6, 2021

Sept 3rd to Sept 4th, 2021, Overview:
Located and sampled 3 historical shafts previously not sampled, collected a total of 19 rock samples and mapped bedrock along tracks. Extensive overburden coverage including abundant large boulders, high ground provides considerable outcrop exposure locally.

Four types of bedrock likely:
Green reddish Temiskaming conglomerate (only one occurrence observed)
Buff beige matrix supported clastic (Temiskaming sandstone?)
Mottled reddish white granitic intrusive (very localized)
Magnetic Mafic intrusive Diabase. No attempt was made to subdivide this unit. It varies from fine grained green grey to green-white coarse grained with less magnetic signature and reddish green-grey. All called diabase. No evidence of bedding orientation was observed.

Sept 3rd was spent prospecting and mapping the mid-western to central portion of the main claim block.

Sept 4th: was spent prospecting and mapping the mid-eastern portion of the main claim block.

Sept 5th, Soil Sampling.
Collected a total of 38 soil samples on the small claim block. Sample grid located in the vicinity of a historical shaft and therefore, some sample points were not taken due to thick layer of mine waste rock. The higher elevation areas have very poor soil development, lower elevations are clay like

Sept 6, 2021: Was spent compiling data and prepping samples for submission to laboratory, followed by demobilization.

APPENDIX A: 2021 Rock Sample Assay Certificates

BUREAU VERITAS MINERAL LABORATORIES Canada

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

Client: **Longford Exploration Services Ltd.**
Marine Building, Unit 1680
355 Burrard St.
Vancouver British Columbia V6C 2G8 Canada

Submitted By: Ryan Versloot
Receiving Lab: Canada-Timmins
Received: September 15, 2021
Analysis Start: September 29, 2021
Report Date: November 17, 2021
Page: 1 of 2

CERTIFICATE OF ANALYSIS TIM21003983.1

CLIENT JOB INFORMATION

Project: Lorraine
Shipment ID:
P.O. Number
Number of Samples: 19

SAMPLE DISPOSAL

PICKUP-PLP Client to Pickup Pulps
PICKUP-RJT Client to Pickup Rejects

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

SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Procedure Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
PRP70-250	19	Crush, split and pulverize 250 g rock to 200 mesh			TIM
SLBHP	19	Sort, label and box pulps			TIM
SHP01	19	Per sample shipping charges for branch shipments			TIM
FA430	19	Lead Collection Fire - Assay Fusion - AAS Finish	30	Completed	VAN
AQ300	19	1:1:1 Aqua Regia digestion ICP-ES analysis	0.5	Completed	VAN

ADDITIONAL COMMENTS

Invoice To: Longford Exploration Services Ltd.
Marine Building, Unit 1680
355 Burrard St.
Vancouver British Columbia V6C 2G8
Canada

CC: Vedran Pobric

BRITISH COLUMBIA CERTIFIED ASSAYER
MARCUS LAU
Production Manager

This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signature indicates final approval; preliminary reports are unsigned and should be used for reference only.
All results are considered the confidential property of the client. Bureau Veritas assumes the liabilities for actual cost of analysis only. Results apply to samples as submitted.
"*" asterisk indicates that an analytical result could not be provided due to unusually high levels of interference from other elements.

BUREAU VERITAS MINERAL LABORATORIES Canada

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Marine Building, Unit 1680
355 Burrard St.
Vancouver British Columbia V6C 2G8 Canada

Project: Lorraine
Report Date: November 17, 2021

CERTIFICATE OF ANALYSIS TIM21003983.1

Method		WGHT	FA430	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300
Analyte		Wgt	Au	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Th	Sr	Cd	Sb	Bi	V	Ca
Unit		kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%
MDL		0.01	0.005	1	1	3	1	0.3	1	1	2	0.01	2	8	2	1	0.5	3	3	1	0.01
4032356	Drill Core	1.23	0.016	<1	15	10	48	<0.3	25	12	366	2.45	3	<8	<2	3	<0.5	<3	<3	52	0.05
4032357	Drill Core	0.97	0.012	<1	6590	6	7	<0.3	20	10	52	2.34	5	<8	<2	3	<0.5	<3	<3	1	0.01
4032358	Drill Core	0.58	0.411	<1	>10000	6	6	2.7	248	313	36	21.28	118	<8	<2	2	<0.5	<3	10	1	<0.01
4032359	Drill Core	1.26	0.120	<1	9562	5	5	0.8	57	62	51	5.40	27	<8	<2	3	<0.5	<3	5	2	0.01
4032360	Drill Core	1.05	0.142	<1	>10000	5	15	1.6	128	185	46	13.03	54	<8	<2	3	<0.5	<3	15	3	<0.01
4032361	Drill Core	0.96	0.086	<1	>10000	10	9	1.2	105	137	60	6.16	38	<8	<2	3	<0.5	<3	17	5	0.01
4032362	Drill Core	0.70	0.015	<1	2184	6	67	0.4	104	34	766	7.34	28	<8	<2	1	<0.5	<3	<3	243	0.18
4032363	Drill Core	1.04	0.007	<1	4533	9	12	<0.3	43	27	171	4.74	16	<8	4	1	<0.5	<3	14	66	0.03
4032364	Drill Core	0.94	0.008	2	542	5	44	<0.3	77	23	552	5.16	12	<8	<2	1	<0.5	<3	<3	194	0.07
4032365	Drill Core	1.02	0.005	<1	>10000	<3	45	0.4	81	26	351	12.18	5	<8	4	2	<0.5	<3	<3	51	0.18
4032366	Drill Core	1.14	0.973	8	1225	34	16	3.8	3257	>2000	3723	12.97	8994	<8	3	19	<0.5	8	40	148	4.30
4032367	Drill Core	0.75	0.016	2	76	20	55	1.1	67	251	1768	7.84	308	<8	<2	50	<0.5	<3	3	66	14.50
4032368	Drill Core	1.17	<0.005	1	722	6	14	0.4	155	111	7976	12.34	29	<8	<2	25	<0.5	<3	<3	211	7.44
4032369	Drill Core	0.91	0.008	4	997	4	11	0.7	1318	783	7008	2.97	2216	<8	<2	61	<0.5	3	7	29	20.78
4032370	Drill Core	0.87	<0.005	<1	34	4	20	0.4	172	114	6501	12.75	97	<8	<2	29	<0.5	<3	<3	305	7.37
4032371	Drill Core	0.79	<0.005	<1	1879	<3	14	0.6	268	418	8250	14.15	172	<8	<2	25	0.5	<3	<3	223	8.29
4032372	Drill Core	1.15	0.087	6	>10000	23	17	3.9	>10000	>2000	1247	8.68	>10000	<8	<2	13	<0.5	336	139	109	2.56
4032373	Drill Core	1.04	<0.005	51	29	12	46	0.6	2289	>2000	9021	7.36	>10000	<8	3	30	<0.5	3	45	178	8.80
4032374	Drill Core	0.80	0.047	<1	25	23	8	1.0	>10000	>2000	4316	4.12	>10000	<8	14	11	<0.5	1182	>2000	73	3.48

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Marine Building, Unit 1680
355 Burrard St.
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Project: Lorraine
Report Date: November 17, 2021

Page: 2 of 2 Part: 2 of 2

CERTIFICATE OF ANALYSIS TIM21003983.1

	Method	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300
	Analyte	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	S	Hg	Tl	Ga	Sc
	Unit	%	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	%	ppm	ppm	ppm	ppm
	MDL	0.001	1	1	0.01	1	0.001	20	0.01	0.01	0.01	2	0.05	1	5	5	5
4032356	Drill Core	0.005	2	23	1.34	5	0.016	<20	1.17	0.02	0.02	<2	<0.05	<1	<5	5	<5
4032357	Drill Core	<0.001	<1	3	0.03	3	<0.001	<20	0.04	0.01	<0.01	<2	2.10	<1	<5	<5	<5
4032358	Drill Core	<0.001	<1	4	<0.01	2	<0.001	<20	<0.01	<0.01	<0.01	<2	>10	<1	10	<5	<5
4032359	Drill Core	0.001	2	4	0.02	3	<0.001	<20	0.03	0.01	0.01	<2	5.83	<1	<5	<5	<5
4032360	Drill Core	0.002	<1	2	0.05	2	<0.001	<20	0.08	0.02	0.02	8	>10	<1	6	<5	<5
4032361	Drill Core	0.002	<1	7	0.06	2	<0.001	<20	0.10	0.03	0.02	<2	6.46	<1	<5	<5	<5
4032362	Drill Core	0.028	1	216	4.13	2	0.148	<20	4.42	0.06	<0.01	<2	0.21	<1	<5	11	31
4032363	Drill Core	0.015	4	34	2.09	7	0.003	<20	2.51	0.06	0.08	<2	0.46	<1	<5	10	<5
4032364	Drill Core	0.023	2	183	2.96	2	0.025	<20	3.16	0.05	0.02	<2	0.06	<1	<5	13	17
4032365	Drill Core	0.102	10	3	4.07	9	0.016	<20	4.81	0.03	0.02	<2	0.93	<1	7	25	27
4032366	Drill Core	0.063	14	<1	4.18	3	0.014	<20	3.42	0.02	0.09	<2	5.46	<1	<5	29	23
4032367	Drill Core	0.010	62	<1	1.45	18	0.015	<20	1.87	<0.01	0.22	<2	1.21	<1	<5	19	7
4032368	Drill Core	0.154	15	<1	6.38	9	0.017	<20	4.41	0.02	0.16	<2	1.06	<1	<5	35	27
4032369	Drill Core	0.062	30	1	1.30	2	0.005	<20	0.90	0.02	0.02	<2	0.48	<1	<5	6	11
4032370	Drill Core	0.261	18	<1	7.65	<1	0.015	<20	5.62	<0.01	0.06	<2	0.46	<1	5	48	33
4032371	Drill Core	0.119	12	<1	6.15	2	0.010	<20	4.17	0.01	0.05	<2	3.29	<1	<5	35	28
4032372	Drill Core	0.098	16	26	2.11	<1	0.012	<20	2.41	0.02	0.06	2	4.24	<1	<5	20	37
4032373	Drill Core	0.054	6	3	6.15	3	0.007	<20	2.52	0.03	0.03	<2	0.38	<1	<5	20	31
4032374	Drill Core	0.014	6	51	2.32	<1	0.009	66	1.10	0.01	0.04	<2	1.80	4	<5	7	33

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Page: 1 of 2 Part: 1 of 2

QUALITY CONTROL REPORT TIM21003983.1

	Method	WGHT	FA430	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300
	Analyte	Wgt	Au	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Th	Sr	Cd	Sb	Bi	V	Ca
	Unit	kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%
	MDL	0.01	0.005	1	1	3	1	0.3	1	1	2	0.01	2	8	2	1	0.5	3	3	1	0.01
Pulp Duplicates																					
4032358	Drill Core	0.58	0.411	<1	>10000	6	6	2.7	248	313	36	21.28	118	<8	<2	2	<0.5	<3	10	1	<0.01
REP 4032358	QC			<1	>10000	10	6	2.8	249	314	35	21.57	122	<8	<2	2	<0.5	<3	9	1	<0.01
REP 4032374	QC			<1	25	24	8	0.9	>10000	>2000	4215	4.09	>10000	<8	14	11	<0.5	1157	>2000	71	3.34
Core Reject Duplicates																					
4032374	Drill Core	0.80	0.047	<1	25	23	8	1.0	>10000	>2000	4316	4.12	>10000	<8	14	11	<0.5	1182	>2000	73	3.48
DUP 4032374	QC		0.062	<1	59	23	8	0.9	>10000	>2000	4271	4.10	>10000	<8	14	11	<0.5	1155	>2000	71	3.40
Reference Materials																					
STD BVGEO01	Standard			10	4279	187	1621	2.6	156	24	669	3.60	117	<8	13	53	5.8	<3	22	71	1.24
STD DS11	Standard			15	146	129	338	2.0	77	13	1001	3.13	44	<8	7	67	2.2	9	9	48	1.04
STD OREAS262	Standard			<1	121	53	151	0.7	65	27	541	3.42	37	<8	9	37	0.6	3	<3	22	2.89
STD OREAS262	Standard			<1	113	54	143	0.6	64	26	515	3.22	39	<8	8	34	0.6	<3	<3	21	2.73
STD OREAS263	Standard		0.217																		
STD OREAS232	Standard		0.879																		
STD OREAS263	Standard		0.217																		
STD OXG140	Standard		1.022																		
STD OXN155	Standard		7.730																		
STD OXN155	Standard		7.379																		
STD DS11 Expected				13.9	156	138	345	1.71	81.9	14.2	1055	3.2082	42.8		7.65	67.3	2.37	7.2	12.2	50	1.063
STD BVGEO01 Expected				10.8	4415	187	1741	2.53	163	25	733	3.7	121		14.4	55	6.5	2.2	25.6	73	1.3219
STD OREAS262 Expected					118	56	154	0.45	62	26.9	530	3.284	35.8		9.33	36	0.61	3.39		22.5	2.98
STD OREAS232 Expected			0.902																		
STD OXN155 Expected			7.776																		
STD OREAS263 Expected			0.214																		
STD OXG140 Expected			1.019																		
BLK	Blank			<1	<1	<3	<1	<0.3	<1	<1	<2	<0.01	<2	<8	<2	<1	<0.5	<3	<3	<1	<0.01
BLK	Blank			<1	<1	<3	<1	<0.3	1	<1	<2	<0.01	3	<8	<2	<1	<0.5	<3	<3	<1	<0.01
BLK	Blank		<0.005																		
BLK	Blank		<0.005																		

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Project: Lorraine
Report Date: November 17, 2021

Page: 1 of 2 Part: 2 of 2

QUALITY CONTROL REPORT TIM21003983.1

	Method	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300
	Analyte	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	S	Hg	Tl	Ga	Sc
	Unit	%	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	%	ppm	ppm	ppm	ppm
	MDL	0.001	1	1	0.01	1	0.001	20	0.01	0.01	0.01	2	0.05	1	5	5	5
Pulp Duplicates																	
4032358	Drill Core	<0.001	<1	4	<0.01	2	<0.001	<20	<0.01	<0.01	<0.01	<2	>10	<1	10	<5	<5
REP 4032358	QC	<0.001	<1	4	<0.01	1	<0.001	<20	<0.01	<0.01	<0.01	<2	>10	<1	9	<5	<5
REP 4032374	QC	0.014	6	50	2.27	<1	0.009	55	1.06	<0.01	0.04	<2	1.82	3	<5	19	32
Core Reject Duplicates																	
4032374	Drill Core	0.014	6	51	2.32	<1	0.009	66	1.10	0.01	0.04	<2	1.80	4	<5	7	33
DUP 4032374	QC	0.015	6	49	2.30	<1	0.009	58	1.09	0.01	0.04	<2	1.79	3	<5	14	33
Reference Materials																	
STD BVGEO01	Standard	0.071	22	150	1.23	315	0.223	<20	2.18	0.18	0.85	4	0.63	<1	<5	5	5
STD DS11	Standard	0.070	17	56	0.84	429	0.090	<20	1.12	0.07	0.39	3	0.28	<1	<5	<5	<5
STD OREAS262	Standard	0.040	17	41	1.21	259	0.003	<20	1.29	0.07	0.31	<2	0.27	<1	<5	<5	<5
STD OREAS262	Standard	0.037	15	39	1.14	232	0.003	<20	1.14	0.06	0.28	<2	0.25	<1	<5	<5	<5
STD OREAS263	Standard																
STD OREAS232	Standard																
STD OREAS263	Standard																
STD OXG140	Standard																
STD OXN155	Standard																
STD OXN155	Standard																
STD DS11 Expected		0.0701	18.6	61.5	0.85	417	0.0976	6	1.129	0.0694	0.4	2.9	0.2835	0.3	4.9	4.7	3.1
STD BVGEO01 Expected		0.0727	25.9	171	1.2963	340	0.233		2.347	0.1924	0.89	3.5	0.6655			7.37	5.97
STD OREAS262 Expected		0.04	15.9	41.7	1.17	248	0.003		1.3	0.071	0.312		0.269			3.9	3.24
STD OREAS232 Expected																	
STD OXN155 Expected																	
STD OREAS263 Expected																	
STD OXG140 Expected																	
BLK	Blank	<0.001	<1	<1	<0.01	<1	<0.001	<20	<0.01	<0.01	<0.01	<2	<0.05	<1	<5	<5	<5
BLK	Blank	<0.001	<1	<1	<0.01	<1	<0.001	<20	<0.01	<0.01	<0.01	<2	<0.05	<1	<5	<5	<5
BLK	Blank																
BLK	Blank																

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BUREAU VERITAS MINERAL LABORATORIES Canada

www.bvna.com/mining-laboratory-serv

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

Client: **Longford Exploration Services Ltd.**
Marine Building, Unit 1680
355 Burrard St.
Vancouver British Columbia V6C 2G8 Canada

Project: Lorraine
Report Date: November 17, 2021

Page: 2 of 2 Part: 1 of 2

QUALITY CONTROL REPORT TIM21003983.1

		WGHT	FA430	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300
		Wgt	Au	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Th	Sr	Cd	Sb	Bi	V	Ca
		kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%
		0.01	0.005	1	1	3	1	0.3	1	1	2	0.01	2	8	2	1	0.5	3	3	1	0.01
BLK	Blank		0.005																		
Prep Wash																					
ROCK-TIM	Prep Blank		<0.005	<1	2	<3	25	<0.3	<1	3	402	1.73	<2	<8	3	22	<0.5	<3	<3	21	0.54
ROCK-TIM	Prep Blank		<0.005	<1	2	5	24	<0.3	<1	3	387	1.66	<2	<8	3	22	<0.5	<3	<3	22	0.57

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QUALITY CONTROL REPORT TIM21003983.1

		AQ300 P % 0.001	AQ300 La ppm 1	AQ300 Cr ppm 1	AQ300 Mg % 0.01	AQ300 Ba ppm 1	AQ300 Ti % 0.001	AQ300 B ppm 20	AQ300 Al % 0.01	AQ300 Na % 0.01	AQ300 K % 0.01	AQ300 W ppm 2	AQ300 S % 0.05	AQ300 Hg ppm 1	AQ300 Tl ppm 5	AQ300 Ga ppm 5	AQ300 Sc ppm 5
BLK	Blank																
Prep Wash																	
ROCK-TIM	Prep Blank	0.037	6	2	0.43	61	0.072	<20	0.81	0.09	0.08	<2	<0.05	<1	<5	<5	<5
ROCK-TIM	Prep Blank	0.036	6	4	0.40	61	0.080	<20	0.84	0.09	0.09	<2	<0.05	<1	<5	<5	<5

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Client: **Longford Exploration Services Ltd.**
Marine Building, Unit 1680
355 Burrard St.
Vancouver British Columbia V6C 2G8 Canada

Submitted By:	Ryan Versloot
Receiving Lab:	Canada-Timmins
Received:	September 15, 2021
Analysis Start:	September 29, 2021
Report Date:	February 16, 2022
Page:	1 of 2

CERTIFICATE OF ANALYSIS TIM21003983.2

CLIENT JOB INFORMATION

Project:	Lorraine
Shipment ID:	
P.O. Number	
Number of Samples:	19

SAMPLE DISPOSAL

PICKUP-PLP	Client to Pickup Pulps
PICKUP-RJT	Client to Pickup Rejects

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

SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Procedure Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
PRP70-250	19	Crush, split and pulverize 250 g rock to 200 mesh			TIM
SLBHP	19	Sort, label and box pulps			TIM
SHP01	19	Per sample shipping charges for branch shipments			TIM
FA430	19	Lead Collection Fire - Assay Fusion - AAS Finish	30	Completed	VAN
AQ300	19	1:1:1 Aqua Regia digestion ICP-ES analysis	0.5	Completed	VAN
AQ370	19	1:1:1 Aqua Regia digestion ICP-ES analysis	1	Completed	VAN

ADDITIONAL COMMENTS

Version 2 - client requesting to have Ni, Co, As, Cu and Bi over limits - added AQ370

Invoice To: Longford Exploration Services Ltd.
Marine Building, Unit 1680
355 Burrard St.
Vancouver British Columbia V6C 2G8
Canada

CC: Vedran Pobric

SOFIA DEVOTA
XRF Manager

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All results are considered the confidential property of the client. Bureau Veritas assumes the liabilities for actual cost of analysis only. Results apply to samples as submitted.
"*" asterisk indicates that an analytical result could not be provided due to unusually high levels of interference from other elements.

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Report Date: February 16, 2022

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CERTIFICATE OF ANALYSIS TIM21003983.2

Method		WGHT	FA430	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300
Analyte		Wgt	Au	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Th	Sr	Cd	Sb	Bi	V	Ca
Unit		kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%
MDL		0.01	0.005	1	1	3	1	0.3	1	1	2	0.01	2	8	2	1	0.5	3	3	1	0.01
4032356	Drill Core	1.23	0.016	<1	15	10	48	<0.3	25	12	366	2.45	3	<8	<2	3	<0.5	<3	<3	52	0.05
4032357	Drill Core	0.97	0.012	<1	6590	6	7	<0.3	20	10	52	2.34	5	<8	<2	3	<0.5	<3	<3	1	0.01
4032358	Drill Core	0.58	0.411	<1	>10000	6	6	2.7	248	313	36	21.28	118	<8	<2	2	<0.5	<3	10	1	<0.01
4032359	Drill Core	1.26	0.120	<1	9562	5	5	0.8	57	62	51	5.40	27	<8	<2	3	<0.5	<3	5	2	0.01
4032360	Drill Core	1.05	0.142	<1	>10000	5	15	1.6	128	185	46	13.03	54	<8	<2	3	<0.5	<3	15	3	<0.01
4032361	Drill Core	0.96	0.086	<1	>10000	10	9	1.2	105	137	60	6.16	38	<8	<2	3	<0.5	<3	17	5	0.01
4032362	Drill Core	0.70	0.015	<1	2184	6	67	0.4	104	34	766	7.34	28	<8	<2	1	<0.5	<3	<3	243	0.18
4032363	Drill Core	1.04	0.007	<1	4533	9	12	<0.3	43	27	171	4.74	16	<8	4	1	<0.5	<3	14	66	0.03
4032364	Drill Core	0.94	0.008	2	542	5	44	<0.3	77	23	552	5.16	12	<8	<2	1	<0.5	<3	<3	194	0.07
4032365	Drill Core	1.02	0.005	<1	>10000	<3	45	0.4	81	26	351	12.18	5	<8	4	2	<0.5	<3	<3	51	0.18
4032366	Drill Core	1.14	0.973	8	1225	34	16	3.8	3257	>2000	3723	12.97	8994	<8	3	19	<0.5	8	40	148	4.30
4032367	Drill Core	0.75	0.016	2	76	20	55	1.1	67	251	1768	7.84	308	<8	<2	50	<0.5	<3	3	66	14.50
4032368	Drill Core	1.17	<0.005	1	722	6	14	0.4	155	111	7976	12.34	29	<8	<2	25	<0.5	<3	<3	211	7.44
4032369	Drill Core	0.91	0.008	4	997	4	11	0.7	1318	783	7008	2.97	2216	<8	<2	61	<0.5	3	7	29	20.78
4032370	Drill Core	0.87	<0.005	<1	34	4	20	0.4	172	114	6501	12.75	97	<8	<2	29	<0.5	<3	<3	305	7.37
4032371	Drill Core	0.79	<0.005	<1	1879	<3	14	0.6	268	418	8250	14.15	172	<8	<2	25	0.5	<3	<3	223	8.29
4032372	Drill Core	1.15	0.087	6	>10000	23	17	3.9	>10000	>2000	1247	8.68	>10000	<8	<2	13	<0.5	336	139	109	2.56
4032373	Drill Core	1.04	<0.005	51	29	12	46	0.6	2289	>2000	9021	7.36	>10000	<8	3	30	<0.5	3	45	178	8.80
4032374	Drill Core	0.80	0.047	<1	25	23	8	1.0	>10000	>2000	4316	4.12	>10000	<8	14	11	<0.5	1182	>2000	73	3.48

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Client: **Longford Exploration Services Ltd.**
Marine Building, Unit 1680
355 Burrard St.
Vancouver British Columbia V6C 2G8 Canada

Project: Lorraine
Report Date: February 16, 2022

Page: 2 of 2 Part: 2 of 3

CERTIFICATE OF ANALYSIS TIM21003983.2

	Method	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ370	AQ370	AQ370	AQ370
	Analyte	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	S	Hg	Tl	Ga	Sc	Mo	Cu	Pb	Zn
	Unit	%	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	%	ppm	ppm	ppm	ppm	%	%	%	%
	MDL	0.001	1	1	0.01	1	0.001	20	0.01	0.01	0.01	2	0.05	1	5	5	5	0.001	0.001	0.01	0.01
4032356	Drill Core	0.005	2	23	1.34	5	0.016	<20	1.17	0.02	0.02	<2	<0.05	<1	<5	5	<5	<0.001	0.001	<0.01	<0.01
4032357	Drill Core	<0.001	<1	3	0.03	3	<0.001	<20	0.04	0.01	<0.01	<2	2.10	<1	<5	<5	<5	<0.001	0.628	<0.01	<0.01
4032358	Drill Core	<0.001	<1	4	<0.01	2	<0.001	<20	<0.01	<0.01	<0.01	<2	>10	<1	10	<5	<5	<0.001	1.331	<0.01	<0.01
4032359	Drill Core	0.001	2	4	0.02	3	<0.001	<20	0.03	0.01	0.01	<2	5.83	<1	<5	<5	<5	<0.001	0.960	<0.01	<0.01
4032360	Drill Core	0.002	<1	2	0.05	2	<0.001	<20	0.08	0.02	0.02	8	>10	<1	6	<5	<5	<0.001	3.922	<0.01	<0.01
4032361	Drill Core	0.002	<1	7	0.06	2	<0.001	<20	0.10	0.03	0.02	<2	6.46	<1	<5	<5	<5	<0.001	1.099	<0.01	<0.01
4032362	Drill Core	0.028	1	216	4.13	2	0.148	<20	4.42	0.06	<0.01	<2	0.21	<1	<5	11	31	<0.001	0.216	<0.01	<0.01
4032363	Drill Core	0.015	4	34	2.09	7	0.003	<20	2.51	0.06	0.08	<2	0.46	<1	<5	10	<5	<0.001	0.481	<0.01	<0.01
4032364	Drill Core	0.023	2	183	2.96	2	0.025	<20	3.16	0.05	0.02	<2	0.06	<1	<5	13	17	<0.001	0.056	<0.01	<0.01
4032365	Drill Core	0.102	10	3	4.07	9	0.016	<20	4.81	0.03	0.02	<2	0.93	<1	7	25	27	<0.001	1.120	<0.01	<0.01
4032366	Drill Core	0.063	14	<1	4.18	3	0.014	<20	3.42	0.02	0.09	<2	5.46	<1	<5	29	23	<0.001	0.128	<0.01	<0.01
4032367	Drill Core	0.010	62	<1	1.45	18	0.015	<20	1.87	<0.01	0.22	<2	1.21	<1	<5	19	7	<0.001	0.008	<0.01	<0.01
4032368	Drill Core	0.154	15	<1	6.38	9	0.017	<20	4.41	0.02	0.16	<2	1.06	<1	<5	35	27	<0.001	0.075	<0.01	<0.01
4032369	Drill Core	0.062	30	1	1.30	2	0.005	<20	0.90	0.02	0.02	<2	0.48	<1	<5	6	11	<0.001	0.101	<0.01	<0.01
4032370	Drill Core	0.261	18	<1	7.65	<1	0.015	<20	5.62	<0.01	0.06	<2	0.46	<1	5	48	33	<0.001	0.004	<0.01	<0.01
4032371	Drill Core	0.119	12	<1	6.15	2	0.010	<20	4.17	0.01	0.05	<2	3.29	<1	<5	35	28	<0.001	0.195	<0.01	<0.01
4032372	Drill Core	0.098	16	26	2.11	<1	0.012	<20	2.41	0.02	0.06	2	4.24	<1	<5	20	37	<0.001	1.016	<0.01	<0.01
4032373	Drill Core	0.054	6	3	6.15	3	0.007	<20	2.52	0.03	0.03	<2	0.38	<1	<5	20	31	0.005	0.003	<0.01	<0.01
4032374	Drill Core	0.014	6	51	2.32	<1	0.009	66	1.10	0.01	0.04	<2	1.80	4	<5	7	33	<0.001	0.003	<0.01	<0.01

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Page: 2 of 2 Part: 3 of 3

CERTIFICATE OF ANALYSIS TIM21003983.2

	Method	AQ370	AQ370	AQ370	AQ370	AQ370	AQ370	AQ370	AQ370	AQ370	AQ370	AQ370	AQ370	AQ370	AQ370	AQ370	AQ370	AQ370	AQ370	AQ370	AQ370
	Analyte	Ag	Ni	Co	Mn	Fe	As	Sr	Cd	Sb	Bi	Ca	P	Cr	Mg	Al	Na	K	W	Hg	S
	Unit	ppm	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
	MDL	2	0.001	0.001	0.01	0.01	0.01	0.001	0.001	0.001	0.01	0.01	0.001	0.001	0.01	0.01	0.01	0.01	0.001	0.001	0.05
4032356	Drill Core	<2	0.003	0.001	0.04	2.45	<0.01	<0.001	<0.001	<0.001	<0.01	0.06	0.004	0.002	1.39	1.21	0.02	0.03	<0.001	<0.001	<0.05
4032357	Drill Core	<2	0.002	<0.001	<0.01	2.26	<0.01	<0.001	<0.001	<0.001	<0.01	0.01	<0.001	<0.001	0.03	0.04	0.01	<0.01	<0.001	<0.001	2.13
4032358	Drill Core	2	0.024	0.030	<0.01	20.03	0.01	<0.001	<0.001	<0.001	<0.01	<0.01	<0.001	<0.001	<0.01	<0.01	<0.01	<0.01	<0.001	<0.001	23.96
4032359	Drill Core	<2	0.006	0.006	<0.01	5.37	<0.01	<0.001	<0.001	<0.001	<0.01	0.01	0.001	<0.001	0.02	0.03	0.01	0.01	<0.001	<0.001	5.97
4032360	Drill Core	<2	0.013	0.018	<0.01	12.18	<0.01	<0.001	<0.001	<0.001	<0.01	<0.01	0.002	<0.001	0.05	0.08	0.02	0.02	<0.001	<0.001	14.30
4032361	Drill Core	<2	0.011	0.013	<0.01	6.01	<0.01	<0.001	<0.001	<0.001	<0.01	0.01	0.002	0.001	0.06	0.11	0.04	0.02	<0.001	<0.001	6.58
4032362	Drill Core	<2	0.011	0.004	0.08	7.60	<0.01	<0.001	<0.001	<0.001	<0.01	0.22	0.029	0.022	4.42	4.42	0.07	0.01	<0.001	<0.001	0.23
4032363	Drill Core	<2	0.005	0.003	0.02	5.21	<0.01	<0.001	<0.001	<0.001	<0.01	0.03	0.016	0.004	2.32	2.75	0.10	0.11	<0.001	<0.001	0.52
4032364	Drill Core	<2	0.008	0.002	0.06	5.57	<0.01	<0.001	<0.001	<0.001	<0.01	0.08	0.024	0.020	3.21	3.31	0.08	0.02	<0.001	<0.001	0.07
4032365	Drill Core	<2	0.009	0.003	0.04	12.55	<0.01	<0.001	<0.001	<0.001	<0.01	0.20	0.107	<0.001	4.49	4.87	0.05	0.02	<0.001	<0.001	1.14
4032366	Drill Core	3	0.326	0.438	0.40	13.41	1.01	0.002	<0.001	0.001	<0.01	4.73	0.068	<0.001	4.54	3.36	0.03	0.10	<0.001	<0.001	6.36
4032367	Drill Core	<2	0.007	0.024	0.20	8.78	0.03	0.006	<0.001	<0.001	<0.01	16.56	0.013	<0.001	1.56	1.91	<0.01	0.24	<0.001	<0.001	1.39
4032368	Drill Core	<2	0.016	0.012	0.90	12.84	<0.01	0.003	<0.001	<0.001	<0.01	8.73	0.164	<0.001	6.90	4.25	0.03	0.17	<0.001	<0.001	1.24
4032369	Drill Core	<2	0.120	0.073	0.75	3.14	0.22	0.006	<0.001	<0.001	<0.01	23.07	0.065	<0.001	1.30	0.84	0.02	0.02	<0.001	<0.001	0.57
4032370	Drill Core	<2	0.018	0.012	0.72	13.42	0.01	0.003	<0.001	<0.001	<0.01	9.01	0.288	<0.001	8.41	5.50	0.01	0.06	<0.001	<0.001	0.53
4032371	Drill Core	<2	0.027	0.041	0.92	14.60	0.02	0.003	<0.001	<0.001	<0.01	9.65	0.126	<0.001	6.65	3.96	0.01	0.05	<0.001	<0.001	3.77
4032372	Drill Core	3	>10	>1	0.12	8.93	>10	0.001	<0.001	0.040	0.01	2.73	0.097	<0.001	2.14	2.24	0.03	0.07	<0.001	<0.001	4.90
4032373	Drill Core	<2	0.233	0.756	1.01	8.09	1.50	0.003	<0.001	<0.001	<0.01	10.15	0.058	<0.001	6.75	2.52	0.05	0.03	<0.001	<0.001	0.44
4032374	Drill Core	<2	>10	>1	0.42	4.61	>10	0.001	<0.001	0.126	0.26	3.57	0.015	<0.001	2.33	1.00	0.01	0.05	<0.001	<0.001	2.11

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355 Burrard St.
Vancouver British Columbia V6C 2G8 Canada

Project: Lorraine
Report Date: February 16, 2022

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QUALITY CONTROL REPORT TIM21003983.2

	Method	WGHT	FA430	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300
	Analyte	Wgt	Au	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Th	Sr	Cd	Sb	Bi	V	Ca
	Unit	kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%
	MDL	0.01	0.005	1	1	3	1	0.3	1	1	2	0.01	2	8	2	1	0.5	3	3	1	0.01
Pulp Duplicates																					
4032358	Drill Core	0.58	0.411	<1	>10000	6	6	2.7	248	313	36	21.28	118	<8	<2	2	<0.5	<3	10	1	<0.01
REP 4032358	QC			<1	>10000	10	6	2.8	249	314	35	21.57	122	<8	<2	2	<0.5	<3	9	1	<0.01
4032362	Drill Core	0.70	0.015	<1	2184	6	67	0.4	104	34	766	7.34	28	<8	<2	1	<0.5	<3	<3	243	0.18
REP 4032362	QC																				
REP 4032374	QC			<1	25	24	8	0.9	>10000	>2000	4215	4.09	>10000	<8	14	11	<0.5	1157	>2000	71	3.34
Core Reject Duplicates																					
4032374	Drill Core	0.80	0.047	<1	25	23	8	1.0	>10000	>2000	4316	4.12	>10000	<8	14	11	<0.5	1182	>2000	73	3.48
DUP 4032374	QC		0.062	<1	59	23	8	0.9	>10000	>2000	4271	4.10	>10000	<8	14	11	<0.5	1155	>2000	71	3.40
Reference Materials																					
STD BVGEO01	Standard			10	4279	187	1621	2.6	156	24	669	3.60	117	<8	13	53	5.8	<3	22	71	1.24
STD CDN-ME-9A	Standard																				
STD CDN-ME-14A	Standard																				
STD DS11	Standard			15	146	129	338	2.0	77	13	1001	3.13	44	<8	7	67	2.2	9	9	48	1.04
STD OREAS262	Standard			<1	121	53	151	0.7	65	27	541	3.42	37	<8	9	37	0.6	3	<3	22	2.89
STD OREAS262	Standard			<1	113	54	143	0.6	64	26	515	3.22	39	<8	8	34	0.6	<3	<3	21	2.73
STD OREAS263	Standard		0.217																		
STD OREAS232	Standard		0.879																		
STD OREAS263	Standard		0.217																		
STD OXG140	Standard		1.022																		
STD OXN155	Standard		7.730																		
STD OXN155	Standard		7.379																		
STD DS11 Expected				13.9	156	138	345	1.71	81.9	14.2	1055	3.2082	42.8		7.65	67.3	2.37	7.2	12.2	50	1.063
STD BVGEO01 Expected				10.8	4415	187	1741	2.53	163	25	733	3.7	121		14.4	55	6.5	2.2	25.6	73	1.3219
STD OREAS262 Expected					118	56	154	0.45	62	26.9	530	3.284	35.8		9.33	36	0.61	3.39		22.5	2.98
STD OREAS232 Expected			0.902																		
STD OXN155 Expected			7.776																		
STD OREAS263 Expected			0.214																		
STD OXG140 Expected			1.019																		

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Marine Building, Unit 1680
355 Burrard St.
Vancouver British Columbia V6C 2G8 Canada

Project: Lorraine
Report Date: February 16, 2022

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QUALITY CONTROL REPORT TIM21003983.2

	Method	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ370	AQ370	AQ370	AQ370
	Analyte	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	S	Hg	Tl	Ga	Sc	Mo	Cu	Pb	Zn
	Unit	%	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	%	ppm	ppm	ppm	ppm	%	%	%	%
	MDL	0.001	1	1	0.01	1	0.001	20	0.01	0.01	0.01	2	0.05	1	5	5	5	0.001	0.001	0.01	0.01
Pulp Duplicates																					
4032358	Drill Core	<0.001	<1	4	<0.01	2	<0.001	<20	<0.01	<0.01	<0.01	<2	>10	<1	10	<5	<5	<0.001	1.331	<0.01	<0.01
REP 4032358	QC	<0.001	<1	4	<0.01	1	<0.001	<20	<0.01	<0.01	<0.01	<2	>10	<1	9	<5	<5				
4032362	Drill Core	0.028	1	216	4.13	2	0.148	<20	4.42	0.06	<0.01	<2	0.21	<1	<5	11	31	<0.001	0.216	<0.01	<0.01
REP 4032362	QC																	<0.001	0.216	<0.01	<0.01
REP 4032374	QC	0.014	6	50	2.27	<1	0.009	55	1.06	<0.01	0.04	<2	1.82	3	<5	19	32				
Core Reject Duplicates																					
4032374	Drill Core	0.014	6	51	2.32	<1	0.009	66	1.10	0.01	0.04	<2	1.80	4	<5	7	33	<0.001	0.003	<0.01	<0.01
DUP 4032374	QC	0.015	6	49	2.30	<1	0.009	58	1.09	0.01	0.04	<2	1.79	3	<5	14	33	<0.001	0.007	<0.01	<0.01
Reference Materials																					
STD BVGEO01	Standard	0.071	22	150	1.23	315	0.223	<20	2.18	0.18	0.85	4	0.63	<1	<5	5	5				
STD CDN-ME-9A	Standard																	<0.001	0.658	<0.01	<0.01
STD CDN-ME-14A	Standard																	0.001	1.205	0.49	2.98
STD DS11	Standard	0.070	17	56	0.84	429	0.090	<20	1.12	0.07	0.39	3	0.28	<1	<5	<5	<5				
STD OREAS262	Standard	0.040	17	41	1.21	259	0.003	<20	1.29	0.07	0.31	<2	0.27	<1	<5	<5	<5				
STD OREAS262	Standard	0.037	15	39	1.14	232	0.003	<20	1.14	0.06	0.28	<2	0.25	<1	<5	<5	<5				
STD OREAS263	Standard																				
STD OREAS232	Standard																				
STD OREAS263	Standard																				
STD OXG140	Standard																				
STD OXN155	Standard																				
STD OXN155	Standard																				
STD DS11 Expected		0.0701	18.6	61.5	0.85	417	0.0976	6	1.129	0.0694	0.4	2.9	0.2835	0.3	4.9	4.7	3.1				
STD BVGEO01 Expected		0.0727	25.9	171	1.2963	340	0.233		2.347	0.1924	0.89	3.5	0.6655			7.37	5.97				
STD OREAS262 Expected		0.04	15.9	41.7	1.17	248	0.003		1.3	0.071	0.312		0.269			3.9	3.24				
STD OREAS232 Expected																					
STD OXN155 Expected																					
STD OREAS263 Expected																					
STD OXG140 Expected																					

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Project: Lorraine
Report Date: February 16, 2022

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QUALITY CONTROL REPORT TIM21003983.2

	Method	AQ370	AQ370	AQ370	AQ370	AQ370	AQ370	AQ370	AQ370	AQ370	AQ370	AQ370	AQ370	AQ370	AQ370	AQ370	AQ370	AQ370	AQ370	AQ370	AQ370
	Analyte	Ag	Ni	Co	Mn	Fe	As	Sr	Cd	Sb	Bi	Ca	P	Cr	Mg	Al	Na	K	W	Hg	S
	Unit	ppm	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
	MDL	2	0.001	0.001	0.01	0.01	0.01	0.001	0.001	0.001	0.01	0.01	0.001	0.001	0.01	0.01	0.01	0.01	0.001	0.001	0.05
Pulp Duplicates																					
4032358	Drill Core	2	0.024	0.030	<0.01	20.03	0.01	<0.001	<0.001	<0.001	<0.01	<0.01	<0.001	<0.001	<0.01	<0.01	<0.01	<0.01	<0.001	<0.001	23.96
REP 4032358	QC																				
4032362	Drill Core	<2	0.011	0.004	0.08	7.60	<0.01	<0.001	<0.001	<0.001	<0.01	0.22	0.029	0.022	4.42	4.42	0.07	0.01	<0.001	<0.001	0.23
REP 4032362	QC	<2	0.011	0.003	0.08	7.57	<0.01	<0.001	<0.001	<0.001	<0.01	0.22	0.028	0.021	4.41	4.37	0.07	<0.01	<0.001	<0.001	0.23
REP 4032374	QC																				
Core Reject Duplicates																					
4032374	Drill Core	<2	>10	>1	0.42	4.61	>10	0.001	<0.001	0.126	0.26	3.57	0.015	<0.001	2.33	1.00	0.01	0.05	<0.001	<0.001	2.11
DUP 4032374	QC	<2	>10	>1	0.42	4.68	>10	0.001	<0.001	0.124	0.26	3.62	0.016	<0.001	2.35	1.01	0.01	0.05	<0.001	<0.001	2.05
Reference Materials																					
STD BVGEO01	Standard																				
STD CDN-ME-9A	Standard	3	0.916	0.017	0.07	11.78	<0.01	0.005	<0.001	<0.001	<0.01	1.23	0.060	0.013	2.91	1.98	0.27	0.18	<0.001	<0.001	3.43
STD CDN-ME-14A	Standard	41	0.002	0.017	0.06	16.70	0.01	<0.001	0.009	0.002	<0.01	0.29	0.013	0.002	0.88	1.05	0.02	0.34	<0.001	<0.001	16.29
STD DS11	Standard																				
STD OREAS262	Standard																				
STD OREAS262	Standard																				
STD OREAS263	Standard																				
STD OREAS232	Standard																				
STD OREAS263	Standard																				
STD OXG140	Standard																				
STD OXN155	Standard																				
STD OXN155	Standard																				
STD DS11 Expected																					
STD BVGEO01 Expected																					
STD OREAS262 Expected																					
STD OREAS232 Expected																					
STD OXN155 Expected																					
STD OREAS263 Expected																					
STD OXG140 Expected																					

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Report Date: February 16, 2022

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QUALITY CONTROL REPORT TIM21003983.2

		WGHT	FA430	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300	AQ300
		Wgt	Au	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Th	Sr	Cd	Sb	Bi	V	Ca
		kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%
		0.01	0.005	1	1	3	1	0.3	1	1	2	0.01	2	8	2	1	0.5	3	3	1	0.01
STD CDN-ME-9A Expected																					
STD CDN-ME-14A Expected																					
BLK	Blank			<1	<1	<3	<1	<0.3	<1	<1	<2	<0.01	<2	<8	<2	<1	<0.5	<3	<3	<1	<0.01
BLK	Blank			<1	<1	<3	<1	<0.3	1	<1	<2	<0.01	3	<8	<2	<1	<0.5	<3	<3	<1	<0.01
BLK	Blank		<0.005																		
BLK	Blank		<0.005																		
BLK	Blank		0.005																		
BLK	Blank																				
Prep Wash																					
ROCK-TIM	Prep Blank		<0.005	<1	2	<3	25	<0.3	<1	3	402	1.73	<2	<8	3	22	<0.5	<3	<3	21	0.54
ROCK-TIM	Prep Blank		<0.005	<1	2	5	24	<0.3	<1	3	387	1.66	<2	<8	3	22	<0.5	<3	<3	22	0.57

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QUALITY CONTROL REPORT TIM21003983.2

		AQ300 P % 0.001	AQ300 La ppm 1	AQ300 Cr ppm 1	AQ300 Mg % 0.01	AQ300 Ba ppm 1	AQ300 Ti % 0.001	AQ300 B ppm 20	AQ300 Al % 0.01	AQ300 Na % 0.01	AQ300 K % 0.01	AQ300 W ppm 2	AQ300 S % 0.05	AQ300 Hg ppm 1	AQ300 Tl ppm 5	AQ300 Ga ppm 5	AQ300 Sc ppm 5	AQ370 Mo % 0.001	AQ370 Cu % 0.001	AQ370 Pb % 0.01	AQ370 Zn % 0.01
STD CDN-ME-9A Expected																		0.00033	0.654	0.003	0.0096
STD CDN-ME-14A Expected																		0.0015	1.24	0.488	2.97
BLK	Blank	<0.001	<1	<1	<0.01	<1	<0.001	<20	<0.01	<0.01	<0.01	<2	<0.05	<1	<5	<5	<5				
BLK	Blank	<0.001	<1	<1	<0.01	<1	<0.001	<20	<0.01	<0.01	<0.01	<2	<0.05	<1	<5	<5	<5				
BLK	Blank																				
BLK	Blank																				
BLK	Blank																				
BLK	Blank																	<0.001	<0.001	<0.01	<0.01
Prep Wash																					
ROCK-TIM	Prep Blank	0.037	6	2	0.43	61	0.072	<20	0.81	0.09	0.08	<2	<0.05	<1	<5	<5	<5	<0.001	<0.001	<0.01	<0.01
ROCK-TIM	Prep Blank	0.036	6	4	0.40	61	0.080	<20	0.84	0.09	0.09	<2	<0.05	<1	<5	<5	<5	<0.001	<0.001	<0.01	<0.01

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Page: 2 of 2 Part: 3 of 3

QUALITY CONTROL REPORT TIM21003983.2

		AQ370 Ag ppm 2	AQ370 Ni % 0.001	AQ370 Co % 0.001	AQ370 Mn % 0.01	AQ370 Fe % 0.01	AQ370 As % 0.01	AQ370 Sr % 0.001	AQ370 Cd % 0.001	AQ370 Sb % 0.001	AQ370 Bi % 0.01	AQ370 Ca % 0.01	AQ370 P % 0.001	AQ370 Cr % 0.001	AQ370 Mg % 0.01	AQ370 Al % 0.01	AQ370 Na % 0.01	AQ370 K % 0.01	AQ370 W % 0.001	AQ370 Hg % 0.001	AQ370 S % 0.05
STD CDN-ME-9A Expected		3.3	0.912	0.0165	0.066	11.73	0.00125	0.006	0	0.00014	0.0002	1.37	0.0583	0.0134	2.84	2.21	0.309	0.1813	0	0	3.34
STD CDN-ME-14A Expected		42.3	0.0018	0.017	0.0589	17.29	0.0105	0.00036	0.0088	0.0024	0.0096	0.298	0.0127	0.0019	0.8787	1.14	0.0264	0.359		0.0015	16.52
BLK	Blank																				
BLK	Blank																				
BLK	Blank																				
BLK	Blank																				
BLK	Blank																				
BLK	Blank	<2	<0.001	<0.001	<0.01	<0.01	<0.01	<0.001	<0.001	<0.001	<0.01	<0.01	<0.001	<0.001	<0.01	<0.01	<0.01	<0.01	<0.001	<0.001	<0.05
Prep Wash																					
ROCK-TIM	Prep Blank	<2	<0.001	<0.001	0.04	1.60	<0.01	0.002	<0.001	<0.001	<0.01	0.57	0.037	<0.001	0.40	0.82	0.08	0.09	<0.001	<0.001	<0.05
ROCK-TIM	Prep Blank	<2	<0.001	<0.001	0.04	1.67	<0.01	0.002	<0.001	<0.001	<0.01	0.61	0.037	<0.001	0.40	0.90	0.11	0.11	<0.001	<0.001	<0.05

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APPENDIX B: 2021 Soil Sample Assay Certificates

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Client: **Longford Exploration Services Ltd.**
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Vancouver British Columbia V6C 2G8 Canada

Submitted By: Ryan Versloot
Receiving Lab: Canada-Timmins
Received: September 15, 2021
Analysis Start: October 06, 2021
Report Date: October 15, 2021
Page: 1 of 3

CERTIFICATE OF ANALYSIS TIM21003982.1

CLIENT JOB INFORMATION

Project: Lorraine
Shipment ID:
P.O. Number
Number of Samples: 38

SAMPLE DISPOSAL

DISP-PLP Dispose of Pulp After 90 days
DISP-RJT Dispose of Reject After 60 days

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

SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Procedure Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
DY060	38	Dry at 60C		Completed	TIM
SS80	38	Dry at 60C sieve 100g to -80 mesh			TIM
SHP01	38	Per sample shipping charges for branch shipments			TIM
SVRJT	38	Save all or part of Soil Reject			TIM
AQ200	38	1:1:1 Aqua Regia digestion ICP-MS analysis	0.5	Completed	VAN

ADDITIONAL COMMENTS

Invoice To: Longford Exploration Services Ltd.
Marine Building, Unit 1680
355 Burrard St.
Vancouver British Columbia V6C 2G8
Canada

CC:
Vedran Pobric

JEFFREY CANNON
Geochemistry Department Supervisor

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All results are considered the confidential property of the client. Bureau Veritas assumes the liabilities for actual cost of analysis only. Results apply to samples as submitted.
"*" asterisk indicates that an analytical result could not be provided due to unusually high levels of interference from other elements.

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Project: Lorraine
Report Date: October 15, 2021

CERTIFICATE OF ANALYSIS TIM21003982.1

	Method	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200
	Analyte	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
	MDL	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.1	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001
4032375	Soil	0.3	12.2	7.8	36	2.7	19.4	11.1	166	1.17	16.1	0.3	1.0	1.8	13	<0.1	0.3	0.5	23	0.24	0.050
4032376	Soil	1.6	35.8	17.6	131	0.3	67.6	22.1	971	2.33	568.5	0.5	<0.5	3.2	47	0.5	1.0	0.5	48	1.15	0.055
4032377	Soil	1.2	57.8	19.4	111	1.6	61.7	50.6	512	2.25	56.7	0.5	1.9	5.1	25	0.3	0.4	2.1	44	0.78	0.079
4032378	Soil	0.8	41.9	23.7	102	0.9	74.8	93.6	400	1.71	172.2	0.4	1.9	3.0	20	0.2	0.4	6.5	35	0.46	0.066
4032379	Soil	0.6	24.8	20.3	141	0.2	23.3	10.6	599	1.19	6.7	0.3	<0.5	1.2	13	0.5	<0.1	0.5	23	0.22	0.081
4032380	Soil	0.3	13.9	13.4	41	0.4	16.6	7.0	96	0.86	3.9	0.3	0.7	1.5	12	0.1	<0.1	0.5	20	0.20	0.024
4032381	Soil	0.8	25.1	37.9	78	0.6	19.5	8.6	266	1.03	6.8	0.4	1.0	1.1	14	0.5	0.1	0.7	29	0.25	0.046
4032382	Soil	2.8	88.9	46.7	156	1.0	43.9	41.1	699	3.03	25.0	1.8	1.1	0.8	20	0.7	0.3	1.7	65	0.34	0.156
4032383	Soil	1.0	74.9	79.6	112	0.4	29.1	3.6	148	0.76	4.0	0.2	0.7	0.4	15	1.5	0.4	0.9	30	0.38	0.104
4032384	Soil	1.0	35.9	48.4	107	0.3	45.7	16.7	344	2.08	14.7	0.4	<0.5	1.9	17	0.4	0.2	2.1	47	0.34	0.078
4032385	Soil	0.6	27.7	16.0	72	0.4	35.3	10.6	233	1.46	5.0	0.4	2.0	1.8	17	0.3	<0.1	0.4	27	0.30	0.075
4032386	Soil	0.3	30.8	47.7	52	0.1	11.9	2.7	162	0.44	2.0	0.3	<0.5	0.5	16	0.8	<0.1	0.6	11	0.22	0.025
4032387	Soil	0.6	47.3	17.6	112	0.5	41.9	19.8	956	2.16	8.9	0.7	0.8	1.9	24	0.3	<0.1	0.5	38	0.52	0.101
4032388	Soil	0.3	27.1	12.6	205	0.3	42.6	16.3	850	2.31	6.5	0.6	0.9	3.2	27	0.3	<0.1	0.3	47	0.54	0.068
4032389	Soil	0.9	118.6	87.6	190	4.5	482.0	672.6	562	2.82	888.6	0.6	5.7	3.1	18	0.5	1.5	54.5	44	0.67	0.080
4032390	Soil	4.7	359.1	67.9	173	1.5	164.4	122.6	738	4.80	177.6	0.2	6.6	0.8	23	0.5	0.7	8.6	83	1.19	0.099
4032391	Soil	1.2	24.9	13.2	61	0.2	41.8	14.5	381	1.68	261.5	0.4	<0.5	1.6	27	0.2	0.5	0.5	35	0.50	0.043
4032392	Soil	0.5	26.2	12.3	70	0.2	42.3	12.6	406	2.21	39.4	0.5	<0.5	3.5	24	<0.1	0.1	0.3	41	0.38	0.051
4032393	Soil	5.9	549.1	129.3	323	31.3	>10000	>2000	1692	4.57	>10000	2.7	58.9	1.7	18	2.0	44.2	1413.7	115	1.40	0.070
4032394	Soil	3.0	770.9	134.9	223	57.6	482.0	713.8	879	5.16	1072.7	0.9	12.0	2.2	37	1.2	8.6	54.9	93	1.33	0.083
4032395	Soil	0.5	43.4	104.8	96	0.6	149.8	135.4	426	2.06	762.8	0.5	<0.5	2.2	26	0.1	0.8	5.4	40	0.48	0.040
4032396	Soil	0.3	21.8	11.7	62	0.7	45.6	22.6	352	1.99	86.1	0.4	0.5	3.1	26	0.1	0.1	1.6	41	0.46	0.041
4032397	Soil	0.4	16.5	11.4	89	0.3	43.2	14.4	383	2.24	10.6	0.4	<0.5	2.6	26	0.2	<0.1	0.8	44	0.46	0.070
4032398	Soil	0.3	29.8	11.9	114	0.3	48.0	14.6	799	2.33	6.8	0.5	<0.5	2.0	30	0.3	<0.1	0.4	46	0.60	0.063
4032399	Soil	0.2	28.6	10.0	74	<0.1	60.0	20.0	662	3.47	5.0	0.5	<0.5	7.1	38	<0.1	<0.1	0.4	72	0.63	0.045
4032400	Soil	0.4	15.8	10.4	70	0.1	31.7	11.0	393	1.74	5.3	0.3	<0.5	2.2	24	0.2	<0.1	0.3	35	0.44	0.060
4032401	Soil	0.4	15.7	10.6	64	0.3	37.2	11.9	391	1.76	4.2	0.3	0.7	2.4	21	<0.1	<0.1	0.3	38	0.33	0.039
4032402	Soil	0.3	12.3	8.7	72	<0.1	25.5	8.7	290	1.57	3.5	0.3	<0.5	2.8	18	0.1	<0.1	0.2	33	0.30	0.043
4032403	Soil	0.4	19.9	10.7	91	0.1	36.9	12.4	711	1.77	17.4	0.4	<0.5	2.7	21	0.2	<0.1	0.2	35	0.38	0.053
4032404	Soil	0.2	8.9	6.7	64	<0.1	25.6	7.9	198	1.59	2.1	0.3	<0.5	3.1	16	<0.1	<0.1	0.2	32	0.25	0.038

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Marine Building, Unit 1680
355 Burrard St.
Vancouver British Columbia V6C 2G8 Canada

Project: Lorraine
Report Date: October 15, 2021

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CERTIFICATE OF ANALYSIS TIM21003982.1

	Method	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200
	Analyte	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
	Unit	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
	MDL	1	1	0.01	1	0.001	20	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2
4032375	Soil	8	32	0.32	24	0.053	<20	0.93	0.007	0.06	<0.1	0.08	1.6	<0.1	0.06	3	<0.5	<0.2
4032376	Soil	14	74	0.90	87	0.102	<20	1.92	0.018	0.18	0.1	0.14	3.8	0.1	0.09	7	0.6	<0.2
4032377	Soil	20	84	0.76	67	0.106	<20	1.74	0.021	0.25	0.3	0.19	4.4	0.2	0.07	5	<0.5	<0.2
4032378	Soil	11	57	0.55	37	0.069	<20	1.16	0.010	0.10	0.1	0.14	2.5	<0.1	0.08	4	<0.5	<0.2
4032379	Soil	8	33	0.33	62	0.033	<20	1.14	0.012	0.08	<0.1	0.06	1.5	<0.1	0.09	5	<0.5	<0.2
4032380	Soil	9	33	0.26	32	0.044	<20	0.68	0.007	0.04	0.2	0.07	1.5	<0.1	0.08	3	<0.5	<0.2
4032381	Soil	9	40	0.25	63	0.046	<20	0.71	0.007	0.06	0.1	0.07	1.2	0.1	0.09	4	<0.5	<0.2
4032382	Soil	25	56	0.43	115	0.036	<20	2.62	0.011	0.10	0.2	0.20	1.9	0.2	0.13	11	1.5	<0.2
4032383	Soil	5	22	0.07	99	0.003	<20	0.65	0.017	0.08	<0.1	0.15	0.2	<0.1	0.18	3	1.0	<0.2
4032384	Soil	8	88	0.74	85	0.082	<20	1.41	0.009	0.08	0.2	0.07	2.2	<0.1	0.08	6	<0.5	<0.2
4032385	Soil	9	57	0.52	64	0.045	<20	1.32	0.010	0.06	0.1	0.05	2.1	<0.1	0.07	4	<0.5	<0.2
4032386	Soil	8	23	0.09	116	0.020	<20	0.48	0.005	0.04	<0.1	0.03	0.9	<0.1	0.09	3	<0.5	<0.2
4032387	Soil	19	66	0.66	69	0.052	<20	1.55	0.011	0.09	<0.1	0.05	3.3	0.1	0.11	5	<0.5	<0.2
4032388	Soil	19	74	0.85	81	0.112	<20	1.82	0.018	0.14	<0.1	0.05	3.9	0.1	0.07	6	<0.5	<0.2
4032389	Soil	17	102	1.04	57	0.071	<20	1.58	0.016	0.14	0.2	1.08	3.9	0.1	0.11	5	<0.5	<0.2
4032390	Soil	12	179	2.82	28	0.129	<20	2.46	0.056	0.11	1.8	7.20	6.9	0.2	0.13	7	<0.5	<0.2
4032391	Soil	10	63	0.69	40	0.072	<20	1.38	0.011	0.08	<0.1	0.10	2.6	<0.1	0.12	5	<0.5	<0.2
4032392	Soil	15	71	0.89	67	0.119	<20	2.10	0.017	0.15	<0.1	0.04	3.9	0.1	0.10	7	<0.5	<0.2
4032393	Soil	25	179	2.37	39	0.032	<20	2.22	0.010	0.06	0.1	3.07	12.9	0.1	0.18	9	2.1	<0.2
4032394	Soil	26	354	3.84	24	0.124	<20	2.54	0.014	0.10	0.5	4.00	7.6	0.2	0.25	9	0.8	<0.2
4032395	Soil	13	74	0.86	50	0.095	<20	1.73	0.017	0.09	<0.1	0.20	3.8	<0.1	0.06	6	<0.5	<0.2
4032396	Soil	14	67	0.77	56	0.116	<20	1.61	0.021	0.13	<0.1	0.07	3.9	<0.1	0.07	6	<0.5	<0.2
4032397	Soil	11	70	0.79	66	0.108	<20	1.92	0.014	0.11	<0.1	0.05	3.8	<0.1	0.08	7	<0.5	<0.2
4032398	Soil	13	80	0.87	90	0.097	<20	1.88	0.019	0.09	<0.1	0.05	3.8	0.1	0.08	7	<0.5	<0.2
4032399	Soil	17	106	1.30	127	0.196	<20	2.78	0.036	0.28	<0.1	0.02	7.5	0.2	<0.05	10	<0.5	<0.2
4032400	Soil	9	54	0.61	64	0.089	<20	1.37	0.015	0.09	<0.1	0.03	2.7	<0.1	0.06	5	<0.5	<0.2
4032401	Soil	10	59	0.61	51	0.086	<20	1.47	0.013	0.06	<0.1	0.03	3.1	<0.1	<0.05	5	<0.5	<0.2
4032402	Soil	11	47	0.58	42	0.097	<20	1.26	0.013	0.08	<0.1	0.03	2.7	<0.1	0.06	4	<0.5	<0.2
4032403	Soil	14	56	0.71	61	0.096	<20	1.64	0.015	0.10	<0.1	0.04	3.3	<0.1	0.08	5	<0.5	<0.2
4032404	Soil	10	48	0.60	39	0.099	<20	1.35	0.012	0.07	<0.1	0.02	2.9	<0.1	0.07	5	<0.5	<0.2

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Client: **Longford Exploration Services Ltd.**
Marine Building, Unit 1680
355 Burrard St.
Vancouver British Columbia V6C 2G8 Canada

Project: Lorraine
Report Date: October 15, 2021

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CERTIFICATE OF ANALYSIS TIM21003982.1

	Method	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200
	Analyte	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
	MDL	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.1	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001
4032405	Soil	4.8	1795.0	512.0	389	>100	358.0	1250.6	1697	9.32	3366.0	1.7	26.9	1.3	28	1.5	20.6	328.2	230	3.05	0.056
4032406	Soil	2.1	519.8	108.8	196	25.1	366.4	708.0	953	5.75	844.1	0.9	5.2	2.6	17	1.0	2.4	30.6	104	1.16	0.078
4032407	Soil	0.4	30.0	8.2	35	0.8	34.3	11.4	371	1.90	10.3	0.4	10.9	5.4	19	<0.1	<0.1	0.9	40	0.38	0.051
4032408	Soil	1.0	54.2	13.3	71	2.3	47.2	18.7	486	2.32	33.7	0.5	0.6	5.8	24	0.1	0.2	1.8	47	0.97	0.065
4032409	Soil	0.4	37.1	14.5	85	0.5	56.8	20.8	840	2.86	8.1	0.5	0.7	5.9	38	0.2	<0.1	0.5	61	0.72	0.074
4032410	Soil	0.4	33.0	15.4	109	0.2	53.9	19.3	775	3.06	4.0	0.5	<0.5	6.7	35	0.2	<0.1	0.4	66	0.68	0.062
4032411	Soil	0.3	29.1	12.6	102	<0.1	59.2	19.9	642	3.35	1.8	0.6	2.0	6.7	38	0.2	<0.1	0.2	75	0.54	0.034
4032412	Soil	0.3	29.6	14.7	106	0.1	58.7	19.9	596	3.55	2.6	0.6	1.2	7.4	41	0.2	<0.1	0.3	77	0.61	0.047

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Project: Lorraine
Report Date: October 15, 2021

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CERTIFICATE OF ANALYSIS TIM21003982.1

	Method	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200
	Analyte	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
	Unit	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
	MDL	1	1	0.01	1	0.001	20	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2
4032405	Soil	19	311	5.61	37	0.120	<20	4.64	0.025	0.09	0.3	21.17	18.1	0.2	0.30	17	0.9	<0.2
4032406	Soil	29	340	4.60	27	0.125	<20	2.93	0.017	0.08	0.3	1.88	9.4	0.2	0.21	11	0.8	<0.2
4032407	Soil	21	55	0.62	54	0.101	<20	1.26	0.017	0.13	<0.1	0.09	4.3	<0.1	0.06	4	<0.5	<0.2
4032408	Soil	22	78	1.11	80	0.108	<20	1.50	0.028	0.23	<0.1	0.14	5.1	0.2	0.09	6	<0.5	<0.2
4032409	Soil	34	95	1.15	107	0.147	<20	2.33	0.036	0.21	<0.1	0.07	6.3	0.2	0.09	8	<0.5	<0.2
4032410	Soil	20	93	1.27	112	0.169	<20	2.39	0.034	0.25	0.1	0.06	6.7	0.2	0.06	8	<0.5	<0.2
4032411	Soil	18	109	1.29	103	0.205	<20	2.83	0.035	0.29	<0.1	0.03	7.4	0.2	<0.05	10	<0.5	<0.2
4032412	Soil	15	112	1.29	117	0.201	<20	2.94	0.037	0.32	<0.1	0.02	7.2	0.2	<0.05	10	<0.5	<0.2

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Project: Lorraine
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QUALITY CONTROL REPORT TIM21003982.1

	Method	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200
	Analyte	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
	MDL	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.1	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001
Pulp Duplicates																					
4032391	Soil	1.2	24.9	13.2	61	0.2	41.8	14.5	381	1.68	261.5	0.4	<0.5	1.6	27	0.2	0.5	0.5	35	0.50	0.043
REP 4032391	QC	1.2	24.5	13.3	60	0.1	41.7	14.3	371	1.64	254.4	0.3	0.5	1.6	27	0.1	0.6	0.5	37	0.54	0.039
Reference Materials																					
STD DS11	Standard	15.9	161.0	135.7	331	1.9	84.0	13.9	1049	3.16	47.0	2.6	52.4	8.1	63	2.5	6.3	10.6	54	1.08	0.059
STD DS11	Standard	14.6	142.9	141.8	339	1.6	81.8	14.1	920	3.15	45.4	2.4	91.8	8.2	63	2.1	7.9	11.4	52	0.98	0.067
STD OREAS262	Standard	0.6	129.2	56.9	156	0.5	70.7	29.4	556	3.43	40.0	1.2	55.9	9.5	34	0.7	2.4	1.0	24	3.04	0.043
STD OREAS262	Standard	0.6	108.1	57.6	143	0.4	63.7	28.5	480	3.27	35.4	1.2	66.8	9.6	34	0.6	3.2	1.0	23	2.93	0.038
STD DS11 Expected		13.9	149	138	345	1.71	77.7	14.2	1055	3.1	42.8	2.59	79	7.65	67.3	2.37	7.2	12.2	50	1.063	0.0701
STD OREAS262 Expected		0.68	118	56	154	0.45	62	26.9	530	3.284	35.8	1.22	65	9.33	36	0.61	3.39	1.03	22.5	2.98	0.04
BLK	Blank	<0.1	<0.1	<0.1	<1	<0.1	0.1	0.1	<1	<0.01	0.8	<0.1	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01	<0.001
BLK	Blank	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.5	<0.1	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01	<0.001

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BUREAU VERITAS MINERAL LABORATORIES Canada

www.bureauveritas.com/um

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

Client: **Longford Exploration Services Ltd.**
Marine Building, Unit 1680
355 Burrard St.
Vancouver British Columbia V6C 2G8 Canada

Project: Lorraine
Report Date: October 15, 2021

Page: 1 of 1 Part: 2 of 2

QUALITY CONTROL REPORT TIM21003982.1

	Method	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200
	Analyte	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
	Unit	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
	MDL	1	1	0.01	1	0.001	20	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2
Pulp Duplicates																		
4032391	Soil	10	63	0.69	40	0.072	<20	1.38	0.011	0.08	<0.1	0.10	2.6	<0.1	0.12	5	<0.5	<0.2
REP 4032391	QC	9	63	0.76	43	0.073	<20	1.44	0.014	0.08	<0.1	0.11	2.9	<0.1	0.14	5	<0.5	<0.2
Reference Materials																		
STD DS11	Standard	18	62	0.87	447	0.097	<20	1.15	0.073	0.36	2.7	0.25	3.4	5.1	0.32	5	2.0	4.5
STD DS11	Standard	18	60	0.79	415	0.093	<20	1.07	0.065	0.37	3.2	0.24	3.1	4.9	0.29	5	2.0	4.5
STD OREAS262	Standard	17	44	1.31	272	0.003	<20	1.25	0.076	0.30	0.1	0.17	3.6	0.5	0.35	4	<0.5	0.2
STD OREAS262	Standard	16	44	1.11	247	0.003	<20	1.21	0.061	0.29	0.1	0.14	3.2	0.4	0.24	3	<0.5	0.3
STD DS11 Expected		18.6	61.5	0.85	417	0.0976		1.129	0.0694	0.4	2.9	0.26	3.1	4.9	0.2835	4.7	2.2	4.56
STD OREAS262 Expected		15.9	41.7	1.17	248	0.003		1.3	0.071	0.312	0.13	0.17	3.24	0.47	0.269	3.9	0.4	0.23
BLK	Blank	<1	<1	<0.01	<1	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2
BLK	Blank	<1	<1	<0.01	<1	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2

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BUREAU VERITAS MINERAL LABORATORIES Canada

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

Client: **Longford Exploration Services Ltd.**
Marine Building, Unit 1680
355 Burrard St.
Vancouver British Columbia V6C 2G8 Canada

Submitted By:	Ryan Versloot
Receiving Lab:	Canada-Timmins
Received:	September 15, 2021
Analysis Start:	October 06, 2021
Report Date:	February 16, 2022
Page:	1 of 3

CERTIFICATE OF ANALYSIS TIM21003982.2

CLIENT JOB INFORMATION

Project:	Lorraine
Shipment ID:	
P.O. Number	
Number of Samples:	38

SAMPLE DISPOSAL

DISP-PLP	Dispose of Pulp After 90 days
DISP-RJT	Dispose of Reject After 60 days

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

SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Procedure Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
DY060	38	Dry at 60C		Completed	TIM
SS80	38	Dry at 60C sieve 100g to -80 mesh			TIM
SHP01	38	Per sample shipping charges for branch shipments			TIM
SVRJT	38	Save all or part of Soil Reject			TIM
AQ200	38	1:1:1 Aqua Regia digestion ICP-MS analysis	0.5	Completed	VAN
AQ370	38	1:1:1 Aqua Regia digestion ICP-ES analysis	1	Completed	VAN

ADDITIONAL COMMENTS

Version 2 - Client requesting to have Ni, Co, and As over limits - Added AQ370

Invoice To: Longford Exploration Services Ltd.
Marine Building, Unit 1680
355 Burrard St.
Vancouver British Columbia V6C 2G8
Canada

CC:
Vedran Pobric

BRITISH COLUMBIA CERTIFIED ASSAYER
Marcus Lau
MARCUS LAU
Production Manager

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All results are considered the confidential property of the client. Bureau Veritas assumes the liabilities for actual cost of analysis only. Results apply to samples as submitted.
"*" asterisk indicates that an analytical result could not be provided due to unusually high levels of interference from other elements.

BUREAU VERITAS MINERAL LABORATORIES Canada

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Vancouver British Columbia V6C 2G8 Canada

Project: Lorraine
Report Date: February 16, 2022

Page: 2 of 3 Part: 1 of 4

CERTIFICATE OF ANALYSIS TIM21003982.2

	Method	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200
	Analyte	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
	MDL	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.1	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001
4032375	Soil	0.3	12.2	7.8	36	2.7	19.4	11.1	166	1.17	16.1	0.3	1.0	1.8	13	<0.1	0.3	0.5	23	0.24	0.050
4032376	Soil	1.6	35.8	17.6	131	0.3	67.6	22.1	971	2.33	568.5	0.5	<0.5	3.2	47	0.5	1.0	0.5	48	1.15	0.055
4032377	Soil	1.2	57.8	19.4	111	1.6	61.7	50.6	512	2.25	56.7	0.5	1.9	5.1	25	0.3	0.4	2.1	44	0.78	0.079
4032378	Soil	0.8	41.9	23.7	102	0.9	74.8	93.6	400	1.71	172.2	0.4	1.9	3.0	20	0.2	0.4	6.5	35	0.46	0.066
4032379	Soil	0.6	24.8	20.3	141	0.2	23.3	10.6	599	1.19	6.7	0.3	<0.5	1.2	13	0.5	<0.1	0.5	23	0.22	0.081
4032380	Soil	0.3	13.9	13.4	41	0.4	16.6	7.0	96	0.86	3.9	0.3	0.7	1.5	12	0.1	<0.1	0.5	20	0.20	0.024
4032381	Soil	0.8	25.1	37.9	78	0.6	19.5	8.6	266	1.03	6.8	0.4	1.0	1.1	14	0.5	0.1	0.7	29	0.25	0.046
4032382	Soil	2.8	88.9	46.7	156	1.0	43.9	41.1	699	3.03	25.0	1.8	1.1	0.8	20	0.7	0.3	1.7	65	0.34	0.156
4032383	Soil	1.0	74.9	79.6	112	0.4	29.1	3.6	148	0.76	4.0	0.2	0.7	0.4	15	1.5	0.4	0.9	30	0.38	0.104
4032384	Soil	1.0	35.9	48.4	107	0.3	45.7	16.7	344	2.08	14.7	0.4	<0.5	1.9	17	0.4	0.2	2.1	47	0.34	0.078
4032385	Soil	0.6	27.7	16.0	72	0.4	35.3	10.6	233	1.46	5.0	0.4	2.0	1.8	17	0.3	<0.1	0.4	27	0.30	0.075
4032386	Soil	0.3	30.8	47.7	52	0.1	11.9	2.7	162	0.44	2.0	0.3	<0.5	0.5	16	0.8	<0.1	0.6	11	0.22	0.025
4032387	Soil	0.6	47.3	17.6	112	0.5	41.9	19.8	956	2.16	8.9	0.7	0.8	1.9	24	0.3	<0.1	0.5	38	0.52	0.101
4032388	Soil	0.3	27.1	12.6	205	0.3	42.6	16.3	850	2.31	6.5	0.6	0.9	3.2	27	0.3	<0.1	0.3	47	0.54	0.068
4032389	Soil	0.9	118.6	87.6	190	4.5	482.0	672.6	562	2.82	888.6	0.6	5.7	3.1	18	0.5	1.5	54.5	44	0.67	0.080
4032390	Soil	4.7	359.1	67.9	173	1.5	164.4	122.6	738	4.80	177.6	0.2	6.6	0.8	23	0.5	0.7	8.6	83	1.19	0.099
4032391	Soil	1.2	24.9	13.2	61	0.2	41.8	14.5	381	1.68	261.5	0.4	<0.5	1.6	27	0.2	0.5	0.5	35	0.50	0.043
4032392	Soil	0.5	26.2	12.3	70	0.2	42.3	12.6	406	2.21	39.4	0.5	<0.5	3.5	24	<0.1	0.1	0.3	41	0.38	0.051
4032393	Soil	5.9	549.1	129.3	323	31.3	>10000	>2000	1692	4.57	>10000	2.7	58.9	1.7	18	2.0	44.2	1413.7	115	1.40	0.070
4032394	Soil	3.0	770.9	134.9	223	57.6	482.0	713.8	879	5.16	1072.7	0.9	12.0	2.2	37	1.2	8.6	54.9	93	1.33	0.083
4032395	Soil	0.5	43.4	104.8	96	0.6	149.8	135.4	426	2.06	762.8	0.5	<0.5	2.2	26	0.1	0.8	5.4	40	0.48	0.040
4032396	Soil	0.3	21.8	11.7	62	0.7	45.6	22.6	352	1.99	86.1	0.4	0.5	3.1	26	0.1	0.1	1.6	41	0.46	0.041
4032397	Soil	0.4	16.5	11.4	89	0.3	43.2	14.4	383	2.24	10.6	0.4	<0.5	2.6	26	0.2	<0.1	0.8	44	0.46	0.070
4032398	Soil	0.3	29.8	11.9	114	0.3	48.0	14.6	799	2.33	6.8	0.5	<0.5	2.0	30	0.3	<0.1	0.4	46	0.60	0.063
4032399	Soil	0.2	28.6	10.0	74	<0.1	60.0	20.0	662	3.47	5.0	0.5	<0.5	7.1	38	<0.1	<0.1	0.4	72	0.63	0.045
4032400	Soil	0.4	15.8	10.4	70	0.1	31.7	11.0	393	1.74	5.3	0.3	<0.5	2.2	24	0.2	<0.1	0.3	35	0.44	0.060
4032401	Soil	0.4	15.7	10.6	64	0.3	37.2	11.9	391	1.76	4.2	0.3	0.7	2.4	21	<0.1	<0.1	0.3	38	0.33	0.039
4032402	Soil	0.3	12.3	8.7	72	<0.1	25.5	8.7	290	1.57	3.5	0.3	<0.5	2.8	18	0.1	<0.1	0.2	33	0.30	0.043
4032403	Soil	0.4	19.9	10.7	91	0.1	36.9	12.4	711	1.77	17.4	0.4	<0.5	2.7	21	0.2	<0.1	0.2	35	0.38	0.053
4032404	Soil	0.2	8.9	6.7	64	<0.1	25.6	7.9	198	1.59	2.1	0.3	<0.5	3.1	16	<0.1	<0.1	0.2	32	0.25	0.038

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PHONE (604) 253-3158

Client: **Longford Exploration Services Ltd.**
Marine Building, Unit 1680
355 Burrard St.
Vancouver British Columbia V6C 2G8 Canada

Project: Lorraine
Report Date: February 16, 2022

CERTIFICATE OF ANALYSIS TIM21003982.2

	Method	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ370	AQ370	AQ370
	Analyte	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te	Mo	Cu	Pb
	Unit	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	%	%	%
	MDL	1	1	0.01	1	0.001	20	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2	0.001	0.001	0.01
4032375	Soil	8	32	0.32	24	0.053	<20	0.93	0.007	0.06	<0.1	0.08	1.6	<0.1	0.06	3	<0.5	<0.2	<0.001	0.001	<0.01
4032376	Soil	14	74	0.90	87	0.102	<20	1.92	0.018	0.18	0.1	0.14	3.8	0.1	0.09	7	0.6	<0.2	<0.001	0.003	<0.01
4032377	Soil	20	84	0.76	67	0.106	<20	1.74	0.021	0.25	0.3	0.19	4.4	0.2	0.07	5	<0.5	<0.2	<0.001	0.005	<0.01
4032378	Soil	11	57	0.55	37	0.069	<20	1.16	0.010	0.10	0.1	0.14	2.5	<0.1	0.08	4	<0.5	<0.2	<0.001	0.004	<0.01
4032379	Soil	8	33	0.33	62	0.033	<20	1.14	0.012	0.08	<0.1	0.06	1.5	<0.1	0.09	5	<0.5	<0.2	<0.001	0.002	<0.01
4032380	Soil	9	33	0.26	32	0.044	<20	0.68	0.007	0.04	0.2	0.07	1.5	<0.1	0.08	3	<0.5	<0.2	<0.001	0.001	<0.01
4032381	Soil	9	40	0.25	63	0.046	<20	0.71	0.007	0.06	0.1	0.07	1.2	0.1	0.09	4	<0.5	<0.2	<0.001	0.002	<0.01
4032382	Soil	25	56	0.43	115	0.036	<20	2.62	0.011	0.10	0.2	0.20	1.9	0.2	0.13	11	1.5	<0.2	<0.001	0.008	<0.01
4032383	Soil	5	22	0.07	99	0.003	<20	0.65	0.017	0.08	<0.1	0.15	0.2	<0.1	0.18	3	1.0	<0.2	<0.001	0.007	<0.01
4032384	Soil	8	88	0.74	85	0.082	<20	1.41	0.009	0.08	0.2	0.07	2.2	<0.1	0.08	6	<0.5	<0.2	<0.001	0.003	<0.01
4032385	Soil	9	57	0.52	64	0.045	<20	1.32	0.010	0.06	0.1	0.05	2.1	<0.1	0.07	4	<0.5	<0.2	<0.001	0.002	<0.01
4032386	Soil	8	23	0.09	116	0.020	<20	0.48	0.005	0.04	<0.1	0.03	0.9	<0.1	0.09	3	<0.5	<0.2	<0.001	0.003	<0.01
4032387	Soil	19	66	0.66	69	0.052	<20	1.55	0.011	0.09	<0.1	0.05	3.3	0.1	0.11	5	<0.5	<0.2	<0.001	0.004	<0.01
4032388	Soil	19	74	0.85	81	0.112	<20	1.82	0.018	0.14	<0.1	0.05	3.9	0.1	0.07	6	<0.5	<0.2	<0.001	0.003	<0.01
4032389	Soil	17	102	1.04	57	0.071	<20	1.58	0.016	0.14	0.2	1.08	3.9	0.1	0.11	5	<0.5	<0.2	<0.001	0.011	<0.01
4032390	Soil	12	179	2.82	28	0.129	<20	2.46	0.056	0.11	1.8	7.20	6.9	0.2	0.13	7	<0.5	<0.2	<0.001	0.039	<0.01
4032391	Soil	10	63	0.69	40	0.072	<20	1.38	0.011	0.08	<0.1	0.10	2.6	<0.1	0.12	5	<0.5	<0.2	<0.001	0.002	<0.01
4032392	Soil	15	71	0.89	67	0.119	<20	2.10	0.017	0.15	<0.1	0.04	3.9	0.1	0.10	7	<0.5	<0.2	<0.001	0.002	<0.01
4032393	Soil	25	179	2.37	39	0.032	<20	2.22	0.010	0.06	0.1	3.07	12.9	0.1	0.18	9	2.1	<0.2	<0.001	0.055	0.01
4032394	Soil	26	354	3.84	24	0.124	<20	2.54	0.014	0.10	0.5	4.00	7.6	0.2	0.25	9	0.8	<0.2	<0.001	0.076	0.01
4032395	Soil	13	74	0.86	50	0.095	<20	1.73	0.017	0.09	<0.1	0.20	3.8	<0.1	0.06	6	<0.5	<0.2	<0.001	0.004	<0.01
4032396	Soil	14	67	0.77	56	0.116	<20	1.61	0.021	0.13	<0.1	0.07	3.9	<0.1	0.07	6	<0.5	<0.2	<0.001	0.002	<0.01
4032397	Soil	11	70	0.79	66	0.108	<20	1.92	0.014	0.11	<0.1	0.05	3.8	<0.1	0.08	7	<0.5	<0.2	<0.001	0.001	<0.01
4032398	Soil	13	80	0.87	90	0.097	<20	1.88	0.019	0.09	<0.1	0.05	3.8	0.1	0.08	7	<0.5	<0.2	<0.001	0.003	<0.01
4032399	Soil	17	106	1.30	127	0.196	<20	2.78	0.036	0.28	<0.1	0.02	7.5	0.2	<0.05	10	<0.5	<0.2	<0.001	0.003	<0.01
4032400	Soil	9	54	0.61	64	0.089	<20	1.37	0.015	0.09	<0.1	0.03	2.7	<0.1	0.06	5	<0.5	<0.2	<0.001	0.001	<0.01
4032401	Soil	10	59	0.61	51	0.086	<20	1.47	0.013	0.06	<0.1	0.03	3.1	<0.1	<0.05	5	<0.5	<0.2	<0.001	0.001	<0.01
4032402	Soil	11	47	0.58	42	0.097	<20	1.26	0.013	0.08	<0.1	0.03	2.7	<0.1	0.06	4	<0.5	<0.2	<0.001	<0.001	<0.01
4032403	Soil	14	56	0.71	61	0.096	<20	1.64	0.015	0.10	<0.1	0.04	3.3	<0.1	0.08	5	<0.5	<0.2	<0.001	0.001	<0.01
4032404	Soil	10	48	0.60	39	0.099	<20	1.35	0.012	0.07	<0.1	0.02	2.9	<0.1	0.07	5	<0.5	<0.2	<0.001	<0.001	<0.01

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Project: Lorraine
Report Date: February 16, 2022

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CERTIFICATE OF ANALYSIS TIM21003982.2

	Method	AQ370	AQ370	AQ370	AQ370	AQ370	AQ370	AQ370	AQ370	AQ370	AQ370	AQ370	AQ370	AQ370	AQ370	AQ370	AQ370	AQ370	AQ370	AQ370	AQ370
	Analyte	Zn	Ag	Ni	Co	Mn	Fe	As	Sr	Cd	Sb	Bi	Ca	P	Cr	Mg	Al	Na	K	W	Hg
	Unit	%	ppm	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
	MDL	0.01	2	0.001	0.001	0.01	0.01	0.01	0.001	0.001	0.001	0.01	0.01	0.001	0.001	0.01	0.01	0.01	0.01	0.001	0.001
4032375	Soil	<0.01	2	0.002	<0.001	0.02	1.08	<0.01	0.001	<0.001	<0.001	<0.01	0.25	0.046	0.003	0.31	0.80	0.01	0.06	<0.001	<0.001
4032376	Soil	0.01	<2	0.006	0.002	0.10	2.26	0.06	0.005	<0.001	<0.001	<0.01	1.15	0.059	0.007	0.87	1.82	0.02	0.20	<0.001	<0.001
4032377	Soil	<0.01	3	0.006	0.005	0.05	2.27	<0.01	0.003	<0.001	<0.001	<0.01	0.84	0.074	0.008	0.89	1.60	0.03	0.27	<0.001	<0.001
4032378	Soil	<0.01	<2	0.007	0.008	0.04	1.66	0.02	0.002	<0.001	<0.001	<0.01	0.49	0.066	0.005	0.58	1.16	0.02	0.11	<0.001	<0.001
4032379	Soil	0.01	<2	0.002	<0.001	0.06	1.12	<0.01	0.002	<0.001	<0.001	<0.01	0.27	0.081	0.003	0.32	1.02	0.02	0.10	<0.001	<0.001
4032380	Soil	<0.01	<2	0.002	<0.001	0.01	0.85	<0.01	0.001	<0.001	<0.001	<0.01	0.22	0.024	0.003	0.27	0.65	<0.01	0.05	<0.001	<0.001
4032381	Soil	<0.01	<2	0.002	<0.001	0.03	1.07	<0.01	0.002	<0.001	<0.001	<0.01	0.28	0.050	0.004	0.26	0.70	<0.01	0.07	<0.001	<0.001
4032382	Soil	0.01	<2	0.004	0.004	0.07	3.05	<0.01	0.002	<0.001	<0.001	<0.01	0.38	0.167	0.005	0.43	2.51	0.01	0.13	<0.001	<0.001
4032383	Soil	<0.01	<2	0.003	<0.001	0.01	0.78	<0.01	0.002	<0.001	<0.001	<0.01	0.39	0.130	0.002	0.08	0.70	0.03	0.08	<0.001	<0.001
4032384	Soil	<0.01	<2	0.004	0.001	0.04	2.04	<0.01	0.002	<0.001	<0.001	<0.01	0.38	0.076	0.008	0.70	1.32	0.01	0.09	<0.001	<0.001
4032385	Soil	<0.01	<2	0.003	<0.001	0.02	1.44	<0.01	0.002	<0.001	<0.001	<0.01	0.37	0.073	0.005	0.50	1.16	0.01	0.07	<0.001	<0.001
4032386	Soil	<0.01	<2	0.001	<0.001	0.02	0.48	<0.01	0.002	<0.001	<0.001	<0.01	0.25	0.024	0.002	0.09	0.46	<0.01	0.05	<0.001	<0.001
4032387	Soil	<0.01	<2	0.004	0.002	0.10	2.14	<0.01	0.003	<0.001	<0.001	<0.01	0.55	0.098	0.006	0.65	1.50	0.01	0.11	<0.001	<0.001
4032388	Soil	0.02	<2	0.004	0.002	0.09	2.37	<0.01	0.003	<0.001	<0.001	<0.01	0.57	0.078	0.007	0.86	1.82	0.02	0.16	<0.001	<0.001
4032389	Soil	0.02	10	0.046	0.061	0.06	2.81	0.09	0.002	<0.001	<0.001	<0.01	0.72	0.080	0.010	1.06	1.54	0.02	0.17	<0.001	<0.001
4032390	Soil	0.02	<2	0.016	0.012	0.08	5.04	0.02	0.003	<0.001	<0.001	<0.01	1.34	0.100	0.018	2.71	2.34	0.06	0.12	<0.001	<0.001
4032391	Soil	<0.01	<2	0.004	0.001	0.04	1.63	0.02	0.003	<0.001	<0.001	<0.01	0.57	0.041	0.006	0.70	1.33	0.02	0.09	<0.001	<0.001
4032392	Soil	<0.01	<2	0.004	0.001	0.04	2.14	<0.01	0.003	<0.001	<0.001	<0.01	0.46	0.050	0.007	0.84	1.91	0.02	0.18	<0.001	<0.001
4032393	Soil	0.03	25	2.857	>1	0.18	4.87	6.54	0.002	<0.001	0.006	0.15	1.51	0.072	0.018	2.54	2.20	0.01	0.07	<0.001	<0.001
4032394	Soil	0.02	54	0.048	0.064	0.09	5.30	0.11	0.004	<0.001	0.001	<0.01	1.34	0.084	0.034	4.05	2.56	0.02	0.11	<0.001	<0.001
4032395	Soil	<0.01	<2	0.013	0.013	0.04	2.12	0.07	0.003	<0.001	<0.001	<0.01	0.50	0.040	0.007	0.88	1.60	0.02	0.11	<0.001	<0.001
4032396	Soil	<0.01	<2	0.004	0.002	0.04	1.99	<0.01	0.003	<0.001	<0.001	<0.01	0.49	0.042	0.006	0.76	1.53	0.03	0.14	<0.001	<0.001
4032397	Soil	<0.01	<2	0.004	0.001	0.04	2.27	<0.01	0.003	<0.001	<0.001	<0.01	0.51	0.068	0.007	0.77	1.87	0.02	0.14	<0.001	<0.001
4032398	Soil	0.01	<2	0.004	0.001	0.08	2.47	<0.01	0.004	<0.001	<0.001	<0.01	0.76	0.070	0.008	0.90	2.04	0.02	0.13	<0.001	<0.001
4032399	Soil	<0.01	<2	0.006	0.002	0.07	3.49	<0.01	0.005	<0.001	<0.001	<0.01	0.75	0.044	0.011	1.37	2.93	0.05	0.33	<0.001	<0.001
4032400	Soil	<0.01	<2	0.003	0.001	0.04	1.72	<0.01	0.003	<0.001	<0.001	<0.01	0.51	0.062	0.005	0.60	1.33	0.02	0.11	<0.001	<0.001
4032401	Soil	<0.01	<2	0.003	0.001	0.04	1.75	<0.01	0.003	<0.001	<0.001	<0.01	0.41	0.036	0.006	0.64	1.41	0.02	0.08	<0.001	<0.001
4032402	Soil	<0.01	<2	0.003	<0.001	0.03	1.57	<0.01	0.002	<0.001	<0.001	<0.01	0.37	0.045	0.005	0.56	1.23	0.02	0.10	<0.001	<0.001
4032403	Soil	<0.01	<2	0.003	0.001	0.07	1.69	<0.01	0.003	<0.001	<0.001	<0.01	0.40	0.049	0.005	0.63	1.42	0.02	0.12	<0.001	<0.001
4032404	Soil	<0.01	<2	0.002	<0.001	0.02	1.58	<0.01	0.002	<0.001	<0.001	<0.01	0.32	0.038	0.005	0.55	1.33	0.02	0.09	<0.001	<0.001

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Bureau Veritas Commodities Canada Ltd.
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Client: **Longford Exploration Services Ltd.**
Marine Building, Unit 1680
355 Burrard St.
Vancouver British Columbia V6C 2G8 Canada

Project: Lorraine
Report Date: February 16, 2022

CERTIFICATE OF ANALYSIS TIM21003982.2

		Method	AQ370
		Analyte	S
		Unit	%
		MDL	0.05
4032375	Soil		<0.05
4032376	Soil		0.06
4032377	Soil		<0.05
4032378	Soil		<0.05
4032379	Soil		<0.05
4032380	Soil		<0.05
4032381	Soil		<0.05
4032382	Soil		0.08
4032383	Soil		0.07
4032384	Soil		<0.05
4032385	Soil		<0.05
4032386	Soil		<0.05
4032387	Soil		<0.05
4032388	Soil		<0.05
4032389	Soil		0.05
4032390	Soil		0.09
4032391	Soil		<0.05
4032392	Soil		<0.05
4032393	Soil		0.14
4032394	Soil		0.16
4032395	Soil		<0.05
4032396	Soil		<0.05
4032397	Soil		<0.05
4032398	Soil		<0.05
4032399	Soil		<0.05
4032400	Soil		<0.05
4032401	Soil		<0.05
4032402	Soil		<0.05
4032403	Soil		<0.05
4032404	Soil		<0.05

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355 Burrard St.
Vancouver British Columbia V6C 2G8 Canada

Project: Lorraine
Report Date: February 16, 2022

CERTIFICATE OF ANALYSIS TIM21003982.2

	Method	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200
	Analyte	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
	MDL	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.1	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001
4032405	Soil	4.8	1795.0	512.0	389	>100	358.0	1250.6	1697	9.32	3366.0	1.7	26.9	1.3	28	1.5	20.6	328.2	230	3.05	0.056
4032406	Soil	2.1	519.8	108.8	196	25.1	366.4	708.0	953	5.75	844.1	0.9	5.2	2.6	17	1.0	2.4	30.6	104	1.16	0.078
4032407	Soil	0.4	30.0	8.2	35	0.8	34.3	11.4	371	1.90	10.3	0.4	10.9	5.4	19	<0.1	<0.1	0.9	40	0.38	0.051
4032408	Soil	1.0	54.2	13.3	71	2.3	47.2	18.7	486	2.32	33.7	0.5	0.6	5.8	24	0.1	0.2	1.8	47	0.97	0.065
4032409	Soil	0.4	37.1	14.5	85	0.5	56.8	20.8	840	2.86	8.1	0.5	0.7	5.9	38	0.2	<0.1	0.5	61	0.72	0.074
4032410	Soil	0.4	33.0	15.4	109	0.2	53.9	19.3	775	3.06	4.0	0.5	<0.5	6.7	35	0.2	<0.1	0.4	66	0.68	0.062
4032411	Soil	0.3	29.1	12.6	102	<0.1	59.2	19.9	642	3.35	1.8	0.6	2.0	6.7	38	0.2	<0.1	0.2	75	0.54	0.034
4032412	Soil	0.3	29.6	14.7	106	0.1	58.7	19.9	596	3.55	2.6	0.6	1.2	7.4	41	0.2	<0.1	0.3	77	0.61	0.047

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Project: Lorraine
Report Date: February 16, 2022

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CERTIFICATE OF ANALYSIS TIM21003982.2

		Method	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ370	AQ370	AQ370
		Analyte	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te	Mo	Cu	Pb
		Unit	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	%	%	%
		MDL	1	1	0.01	1	0.001	20	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2	0.001	0.001	0.01
4032405	Soil		19	311	5.61	37	0.120	<20	4.64	0.025	0.09	0.3	21.17	18.1	0.2	0.30	17	0.9	<0.2	<0.001	0.183	0.05
4032406	Soil		29	340	4.60	27	0.125	<20	2.93	0.017	0.08	0.3	1.88	9.4	0.2	0.21	11	0.8	<0.2	<0.001	0.051	0.01
4032407	Soil		21	55	0.62	54	0.101	<20	1.26	0.017	0.13	<0.1	0.09	4.3	<0.1	0.06	4	<0.5	<0.2	<0.001	0.002	<0.01
4032408	Soil		22	78	1.11	80	0.108	<20	1.50	0.028	0.23	<0.1	0.14	5.1	0.2	0.09	6	<0.5	<0.2	<0.001	0.005	<0.01
4032409	Soil		34	95	1.15	107	0.147	<20	2.33	0.036	0.21	<0.1	0.07	6.3	0.2	0.09	8	<0.5	<0.2	<0.001	0.003	<0.01
4032410	Soil		20	93	1.27	112	0.169	<20	2.39	0.034	0.25	0.1	0.06	6.7	0.2	0.06	8	<0.5	<0.2	<0.001	0.003	<0.01
4032411	Soil		18	109	1.29	103	0.205	<20	2.83	0.035	0.29	<0.1	0.03	7.4	0.2	<0.05	10	<0.5	<0.2	<0.001	0.003	<0.01
4032412	Soil		15	112	1.29	117	0.201	<20	2.94	0.037	0.32	<0.1	0.02	7.2	0.2	<0.05	10	<0.5	<0.2	<0.001	0.003	<0.01

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CERTIFICATE OF ANALYSIS TIM21003982.2

	Method	AQ370	AQ370	AQ370	AQ370	AQ370	AQ370	AQ370	AQ370	AQ370	AQ370	AQ370	AQ370	AQ370	AQ370	AQ370	AQ370	AQ370	AQ370	AQ370	AQ370
	Analyte	Zn	Ag	Ni	Co	Mn	Fe	As	Sr	Cd	Sb	Bi	Ca	P	Cr	Mg	Al	Na	K	W	Hg
	Unit	%	ppm	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
	MDL	0.01	2	0.001	0.001	0.01	0.01	0.01	0.001	0.001	0.001	0.01	0.01	0.001	0.001	0.01	0.01	0.01	0.01	0.001	0.001
4032405	Soil	0.04	678	0.036	0.123	0.17	9.35	0.35	0.003	<0.001	0.005	0.03	3.13	0.053	0.031	5.38	4.15	0.04	0.11	<0.001	0.002
4032406	Soil	0.02	22	0.035	0.066	0.10	5.91	0.09	0.002	<0.001	<0.001	<0.01	1.21	0.075	0.034	4.24	2.81	0.02	0.09	<0.001	<0.001
4032407	Soil	<0.01	<2	0.003	0.001	0.04	1.82	<0.01	0.002	<0.001	<0.001	<0.01	0.43	0.049	0.005	0.61	1.25	0.02	0.15	<0.001	<0.001
4032408	Soil	<0.01	2	0.004	0.002	0.05	2.28	<0.01	0.003	<0.001	<0.001	<0.01	1.07	0.062	0.007	1.05	1.63	0.04	0.27	<0.001	<0.001
4032409	Soil	<0.01	<2	0.005	0.002	0.09	2.93	<0.01	0.005	<0.001	<0.001	<0.01	0.86	0.071	0.009	1.18	2.21	0.04	0.28	<0.001	<0.001
4032410	Soil	<0.01	<2	0.005	0.002	0.08	3.02	<0.01	0.004	<0.001	<0.001	<0.01	0.75	0.058	0.009	1.16	2.38	0.04	0.29	<0.001	<0.001
4032411	Soil	0.01	<2	0.006	0.002	0.07	3.49	<0.01	0.004	<0.001	<0.001	<0.01	0.57	0.038	0.010	1.32	2.89	0.04	0.31	<0.001	<0.001
4032412	Soil	0.01	<2	0.006	0.002	0.07	3.64	<0.01	0.004	<0.001	<0.001	<0.01	0.65	0.049	0.011	1.36	3.03	0.04	0.35	<0.001	<0.001

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Project: Lorraine
Report Date: February 16, 2022

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CERTIFICATE OF ANALYSIS TIM21003982.2

		Method	AQ370
		Analyte	S
		Unit	%
		MDL	0.05
4032405	Soil		0.23
4032406	Soil		0.12
4032407	Soil		<0.05
4032408	Soil		<0.05
4032409	Soil		<0.05
4032410	Soil		<0.05
4032411	Soil		<0.05
4032412	Soil		<0.05

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Vancouver British Columbia V6C 2G8 Canada

Project: Lorraine
Report Date: February 16, 2022

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QUALITY CONTROL REPORT TIM21003982.2

	Method	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200
	Analyte	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
	Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%
	MDL	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.1	0.5	0.1	1	0.1	0.1	0.1	2	0.01	0.001
Pulp Duplicates																					
4032388	Soil	0.3	27.1	12.6	205	0.3	42.6	16.3	850	2.31	6.5	0.6	0.9	3.2	27	0.3	<0.1	0.3	47	0.54	0.068
REP 4032388	QC																				
4032391	Soil	1.2	24.9	13.2	61	0.2	41.8	14.5	381	1.68	261.5	0.4	<0.5	1.6	27	0.2	0.5	0.5	35	0.50	0.043
REP 4032391	QC	1.2	24.5	13.3	60	0.1	41.7	14.3	371	1.64	254.4	0.3	0.5	1.6	27	0.1	0.6	0.5	37	0.54	0.039
Reference Materials																					
STD CDN-ME-9A	Standard																				
STD CDN-ME-14A	Standard																				
STD CDN-ME-9A	Standard																				
STD CDN-ME-14A	Standard																				
STD DS11	Standard	15.9	161.0	135.7	331	1.9	84.0	13.9	1049	3.16	47.0	2.6	52.4	8.1	63	2.5	6.3	10.6	54	1.08	0.059
STD DS11	Standard	14.6	142.9	141.8	339	1.6	81.8	14.1	920	3.15	45.4	2.4	91.8	8.2	63	2.1	7.9	11.4	52	0.98	0.067
STD OREAS262	Standard	0.6	129.2	56.9	156	0.5	70.7	29.4	556	3.43	40.0	1.2	55.9	9.5	34	0.7	2.4	1.0	24	3.04	0.043
STD OREAS262	Standard	0.6	108.1	57.6	143	0.4	63.7	28.5	480	3.27	35.4	1.2	66.8	9.6	34	0.6	3.2	1.0	23	2.93	0.038
STD DS11 Expected		13.9	149	138	345	1.71	77.7	14.2	1055	3.1	42.8	2.59	79	7.65	67.3	2.37	7.2	12.2	50	1.063	0.0701
STD OREAS262 Expected		0.68	118	56	154	0.45	62	26.9	530	3.284	35.8	1.22	65	9.33	36	0.61	3.39	1.03	22.5	2.98	0.04
STD CDN-ME-9A Expected																					
STD CDN-ME-14A Expected																					
BLK	Blank	<0.1	<0.1	<0.1	<1	<0.1	0.1	0.1	<1	<0.01	0.8	<0.1	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01	<0.001
BLK	Blank	<0.1	<0.1	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	<0.5	<0.1	<0.5	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01	<0.001
BLK	Blank																				
BLK	Blank																				

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BUREAU VERITAS MINERAL LABORATORIES Canada

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Client: **Longford Exploration Services Ltd.**
Marine Building, Unit 1680
355 Burrard St.
Vancouver British Columbia V6C 2G8 Canada

Project: Lorraine
Report Date: February 16, 2022

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QUALITY CONTROL REPORT TIM21003982.2

	Method	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ200	AQ370	AQ370	AQ370
	Analyte	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te	Mo	Cu	Pb
	Unit	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	%	%	%
	MDL	1	1	0.01	1	0.001	20	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2	0.001	0.001	0.01
Pulp Duplicates																					
4032388	Soil	19	74	0.85	81	0.112	<20	1.82	0.018	0.14	<0.1	0.05	3.9	0.1	0.07	6	<0.5	<0.2	<0.001	0.003	<0.01
REP 4032388	QC																		<0.001	0.003	<0.01
4032391	Soil	10	63	0.69	40	0.072	<20	1.38	0.011	0.08	<0.1	0.10	2.6	<0.1	0.12	5	<0.5	<0.2	<0.001	0.002	<0.01
REP 4032391	QC	9	63	0.76	43	0.073	<20	1.44	0.014	0.08	<0.1	0.11	2.9	<0.1	0.14	5	<0.5	<0.2			
Reference Materials																					
STD CDN-ME-9A	Standard																		<0.001	0.658	<0.01
STD CDN-ME-14A	Standard																		0.001	1.205	0.49
STD CDN-ME-9A	Standard																		<0.001	0.652	<0.01
STD CDN-ME-14A	Standard																		0.001	1.206	0.50
STD DS11	Standard	18	62	0.87	447	0.097	<20	1.15	0.073	0.36	2.7	0.25	3.4	5.1	0.32	5	2.0	4.5			
STD DS11	Standard	18	60	0.79	415	0.093	<20	1.07	0.065	0.37	3.2	0.24	3.1	4.9	0.29	5	2.0	4.5			
STD OREAS262	Standard	17	44	1.31	272	0.003	<20	1.25	0.076	0.30	0.1	0.17	3.6	0.5	0.35	4	<0.5	0.2			
STD OREAS262	Standard	16	44	1.11	247	0.003	<20	1.21	0.061	0.29	0.1	0.14	3.2	0.4	0.24	3	<0.5	0.3			
STD DS11 Expected		18.6	61.5	0.85	417	0.0976		1.129	0.0694	0.4	2.9	0.26	3.1	4.9	0.2835	4.7	2.2	4.56			
STD OREAS262 Expected		15.9	41.7	1.17	248	0.003		1.3	0.071	0.312	0.13	0.17	3.24	0.47	0.269	3.9	0.4	0.23			
STD CDN-ME-9A Expected																			0.00033	0.654	0.003
STD CDN-ME-14A Expected																			0.0015	1.24	0.488
BLK	Blank	<1	<1	<0.01	<1	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2			
BLK	Blank	<1	<1	<0.01	<1	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2			
BLK	Blank																		<0.001	<0.001	<0.01
BLK	Blank																		<0.001	<0.001	<0.01

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Vancouver British Columbia V6C 2G8 Canada

Project: Lorraine
Report Date: February 16, 2022

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QUALITY CONTROL REPORT TIM21003982.2

	Method	AQ370	AQ370	AQ370	AQ370	AQ370	AQ370	AQ370	AQ370	AQ370	AQ370	AQ370	AQ370	AQ370	AQ370	AQ370	AQ370	AQ370	AQ370	AQ370	AQ370
	Analyte	Zn	Ag	Ni	Co	Mn	Fe	As	Sr	Cd	Sb	Bi	Ca	P	Cr	Mg	Al	Na	K	W	Hg
	Unit	%	ppm	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
	MDL	0.01	2	0.001	0.001	0.01	0.01	0.01	0.001	0.001	0.001	0.01	0.01	0.001	0.001	0.01	0.01	0.01	0.01	0.001	0.001
Pulp Duplicates																					
4032388	Soil	0.02	<2	0.004	0.002	0.09	2.37	<0.01	0.003	<0.001	<0.001	<0.01	0.57	0.078	0.007	0.86	1.82	0.02	0.16	<0.001	<0.001
REP 4032388	QC	0.02	<2	0.004	0.002	0.09	2.37	<0.01	0.003	<0.001	<0.001	<0.01	0.58	0.079	0.007	0.86	1.82	0.02	0.16	<0.001	<0.001
4032391	Soil	<0.01	<2	0.004	0.001	0.04	1.63	0.02	0.003	<0.001	<0.001	<0.01	0.57	0.041	0.006	0.70	1.33	0.02	0.09	<0.001	<0.001
REP 4032391	QC																				
Reference Materials																					
STD CDN-ME-9A	Standard	<0.01	3	0.916	0.017	0.07	11.78	<0.01	0.005	<0.001	<0.001	<0.01	1.23	0.060	0.013	2.91	1.98	0.27	0.18	<0.001	<0.001
STD CDN-ME-14A	Standard	2.98	41	0.002	0.017	0.06	16.70	0.01	<0.001	0.009	0.002	<0.01	0.29	0.013	0.002	0.88	1.05	0.02	0.34	<0.001	<0.001
STD CDN-ME-9A	Standard	<0.01	3	0.885	0.017	0.07	11.59	<0.01	0.006	<0.001	<0.001	<0.01	1.37	0.060	0.014	2.89	2.19	0.31	0.19	<0.001	<0.001
STD CDN-ME-14A	Standard	3.02	42	0.002	0.017	0.06	17.18	0.01	<0.001	0.009	0.003	<0.01	0.31	0.014	0.002	0.90	1.12	0.03	0.37	<0.001	<0.001
STD DS11	Standard																				
STD DS11	Standard																				
STD OREAS262	Standard																				
STD OREAS262	Standard																				
STD DS11 Expected																					
STD OREAS262 Expected																					
STD CDN-ME-9A Expected		0.0096	3.3	0.912	0.0165	0.066	11.73	0.00125	0.006		0	0.00014	0.0002	1.37	0.0583	0.0134	2.84	2.21	0.309	0.1813	0	0
STD CDN-ME-14A Expected		2.97	42.3	0.0018	0.017	0.0589	17.29	0.0105	0.00036	0.0088	0.0024	0.0096	0.298	0.0127	0.0019	0.8787	1.14	0.0264	0.359		0.0015
BLK	Blank																				
BLK	Blank																				
BLK	Blank	<0.01	<2	<0.001	<0.001	<0.01	<0.01	<0.01	<0.001	<0.001	<0.001	<0.01	<0.01	<0.001	<0.001	<0.01	<0.01	<0.01	<0.01	<0.001	<0.001
BLK	Blank	<0.01	<2	<0.001	<0.001	<0.01	<0.01	<0.01	<0.001	<0.001	<0.001	<0.01	<0.01	<0.001	<0.001	<0.01	<0.01	<0.01	<0.01	<0.001	<0.001

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QUALITY CONTROL REPORT TIM21003982.2

		Method	AQ370
		Analyte	S
		Unit	%
		MDL	0.05
Pulp Duplicates			
4032388	Soil		<0.05
REP 4032388	QC		<0.05
4032391	Soil		<0.05
REP 4032391	QC		
Reference Materials			
STD CDN-ME-9A	Standard		3.43
STD CDN-ME-14A	Standard		16.29
STD CDN-ME-9A	Standard		3.36
STD CDN-ME-14A	Standard		16.29
STD DS11	Standard		
STD DS11	Standard		
STD OREAS262	Standard		
STD OREAS262	Standard		
STD DS11 Expected			
STD OREAS262 Expected			
STD CDN-ME-9A Expected			3.34
STD CDN-ME-14A Expected			16.52
BLK	Blank		
BLK	Blank		
BLK	Blank		<0.05
BLK	Blank		<0.05

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