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ASSESSMENT REPORT

on the

CAMPING LAKE PROPERTY

Cabin Bay and Camping Lake Townships
Red Lake Mining Division
ONTARIO, CANADA

Located Within NTS Sheets:
52K/11L, 52K/12H, 52K/11E, 52K/11I

Centred at Approximately:
Latitude 50.66020° North by Longitude 93.44397° West

Report Prepared for:

Golden Spike Resources Corp.
94 Linden Court
Port Moody, B.C., Canada V3H 5C1

Report Prepared by:

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RELEASE DATE: May 28, 2021

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1 SUMMARY

1.1 Introduction

This technical report provides the results of a geophysical survey carried out over the Camping Lake Property (Property) for Golden Spike Resources Corp., a Canadian company involved in mineral exploration and development. The Property is located in northwestern Ontario, Canada in the Red Lake Mining Division. The purpose of this report is to fulfill the annual work requirements on the Camping Lake Property.

The Camping Lake Property is characteristic of a greenstone-hosted quartz-carbonate (GQC) gold vein style of mineralization.

1.2 Property Ownership

The Property consists of five multi-cell mining claims covering 2,132.4 ha. The online registry currently shows that the Camping Lake mining claims are 100% owned and registered in the name of Northbound Capital Corp. (Northbound or the Optionor). Northbound entered into a property option agreement with Golden Spike Resources Corp. (the Optionee or Golden Spike) on September 1, 2020, pursuant to which the Optionor can grant and the Optionee can acquire the sole exclusive rights to the title and interest in the Camping Lake Property (the Property) mining claims for the following considerations:

- Make cash payments to the Optionor totalling $75,000, as follows:
  - $25,000 on the effective date; and
  - An additional $50,000 on or before the listing date.
- Issue a total of 1,250,000 shares (Purchase Shares) to the Optionor, as follows:
  - 500,000 shares on or before the listing date; and
  - An additional 750,000 shares on or before the date which is 12 months after the listing date.

If the Optionee chooses to exercise this option and acquires 100% legal and beneficial right and title to and interest in the Camping Lake Property, the Optionor will thereafter be entitled to a 3% net smelter return (NSR) royalty with respect to the Property. This royalty is payable upon the commencement of commercial production; however, the Optionee retains the right to purchase from the Optionor a 2% NSR royalty upon payment of the sum of $1,000,000 to the Optionor at any time.

In addition to the terms outlined here, if at any time the Optionor or an Affiliate of the Optionor acquires, directly or indirectly, any interest in any property which is entirely or partly within 2 km of the outermost boundary of the area-of-Interest (AOI) property (AOI Property), then the Optionor or its Affiliate, as applicable, must disclose the acquisition promptly to the Optionee. The Optionor or its Affiliate, as applicable, within 30 days of receipt of notice of acquisition, may then elect to include the AOI Property within the Property.

At the effective date of this technical report, there are no other known royalties, back-in rights, payments, environmental liabilities, agreements, or other known risks to which the Camping Lake Property is subject.

1.3 Property Description

The Camping Lake Property is located in the Red Lake Mining Division just 20 km northwest of Ear Falls in northwestern Ontario, Canada, within the Cabin Bay and Camping Lake Area Townships. The Property is centered at approximately latitude 50.66020° N and longitude 93.44397° W within the National Topographic System (NTS) map sheets 52K/11L, 52K/12H, 52K/11E and 52K/11I.

To date, surface rights and permitting have not been completed to allow for further preliminary investigations.

The Property is accessible from Winnipeg, Manitoba via Highway 17 to Kenora, Ontario (approximately 209 km). From Kenora, access is approximately 126 km northeast by helicopter or floatplane. Alternatively, the Property is accessible from Kenora to Vermillion Bay (93 km) and then continuing north on Highway 105 for approximately 103 km to Ear Falls, Ontario. The north side of the claims can be reached by travelling 12 km north of Ear Falls along Highway 105 and taking the first left turn onto a logging road and continuing down this road for another 8 km. Claim 554489 (northeast of the Property) is the only claim accessible by logging roads; the remainder of the mining claims are accessible by air or by water.

The Property is located in the Boreal Shield Ecozone where the Canadian Shield and the boreal forest overlap. The topography of the Property is dominated by glacial overburden, and typical glacial features, such as eskers, are common. The terrain is generally flat and gently undulating with an elevation of approximately 350 to 430 masl.

Tree cover consists of spruce, pine, balsam, birch, poplar, and alder. Black spruce and muskeg swamps occupy low-lying areas.

The climate is typical of northwestern Ontario with extreme temperature ranges. A typical temperature range for the winter months is -20 C to -6 °C with extreme lows of -30 C. A typical temperature range for the summer months is 15 °C to 17 C with extreme highs of 30 °C. The average annual rainfall for the area is 516 mm, and the average annual snowfall is 214 cm.

1.4 Status of Exploration

Minimal exploration has been carried out directly on the Camping Lake Property. Gold was first discovered in the Red Lake region in 1925 leading to the development of a transportation route between Sioux Lookout and Red Lake that used barges on the English and Chukuni Rivers. This route opened up the Confederation Lake greenstone belt to prospecting and exploration which resulted in the discovery of several gold deposits which were put into production between 1930 and 1940. The most significant deposit was in the Uchi mining district.

The only known historical work on the Camping Lake Property was completed by Laurentian Goldfields Ltd. (Laurentian) on its Goldpines South Property between 2010 and 2011. The original Goldpines South Property consisted of 144 semi-contiguous claims which covered approximately 22,262 ha. The claims were part of a joint venture agreement (50% owned by Laurentian and 50% by Anglo Gold Ashanti Ltd.).

Laurentian completed three phases of work between 2010 and 2011, including geophysics, geological mapping, prospecting, and geochemical sampling. The work performed by Laurentian did not encompass the entire Camping Lake Property, but various activities did include large portions of the Property.

The Phase 1 work program (2010) consisted of a high-resolution, 7,183 line-km airborne magnetic and VLF-EM survey. The Phase 2 work program (2010) consisted of follow-up work on systematically targeted structures and lithological contacts interpreted from magnetic susceptibility mapping. The Phase 3 work program (2010) consisted of collecting 2,135 infill mobile metal ion (MMI) soil samples and 348 lake sediment samples.

In 2011, Laurentian carried out another work program at its Goldpines South Property. The work consisted of prospecting and a soil- and lake-sediment sampling survey. In total, 2,492 MMI soil samples (11 soil grids with a spacing of 50 m × 100 m and a spacing of 100 m × 200 m over the eastern end of the Goldpines South Property), 144 lake-sediment samples, and 162 rock grab samples were collected. Overall, eight of the originally identified targets showed encouraging results, and this reportedly provided sufficient evidence to proceed with the 20 identified target drill holes.

Since 2011, no further work is known to have been completed on the Camping Lake Property claims area.

On July 18, 2019, the Camping Lake mining claims were staked by Perry English. On July 27, 2020, the mining claims were transferred to Sergio Cattalani, who was the bare trustee for Northbound Capital Corp. On November 17, 2020, the mining claims were transferred to Blair Naughty, and, on November 18, 2020, the claims were transferred to Northbound Capital Corp.

This is an early-stage exploration project; therefore, mineral resource and mineral reserve estimates have not been carried out on the Camping Lake Property at this time.

1.5 Geology

The Camping Lake Property is located within the English River metasedimentary belt of the Superior Province. Most of the Property is underlain by Neoarchean to Mesoarchean (2.5 to 3.2 Ga) rocks which consist of greywackes, siltstones, arkose, argillite, slate, mudstone, marble, chert, iron formation with minor metavolcanics, conglomerates, arenites, paragneiss, and migmatites. The Property lies just south of muscovite-bearing granitic rocks consisting of muscovite-biotite and cordierite-biotite granite and granodiorite-tonalite of similar age.

1.6 Mineralization

Several mineral occurrences are known to occur in the Superior Province, including the following deposit styles (Percival, 2007):

- Iron-formation-hosted gold deposit
- Magmatic Ni-PGE deposit
- Volcanogenic massive sulphide (VMS) deposit
- Rare-element pegmatite deposit
- Orogenic lode-gold deposit

1.7 Conclusions

The Camping Lake Property comprises an early-stage exploration project of merit that warrants further work.

Mineral tenure appears in good standing, and access to the Property has been established to the northeast along unmaintained forestry service roads. Access is also possible via the extensive network of waterways, lakes, and rivers in the local area. The Property is currently amenable to seasonal (summertime) exploration, and year-round operations are possible for future exploration work on the Property.

Limited historical work has been completed within the Property bounds; but preliminary findings by previous operators indicate a potential to deliver favourable exploration results. To date, geochemical sampling is lacking, and, therefore, drilling targets have not been identified yet. Systematic mineral exploration is required across the Property to identify any mineral potential that may be hosted on the Property.

The Camping Lake Property is situated in an economically and socio-politically stable area, and there are currently no known factors that would prevent further exploration or any future potential project development. However, as this is still at an early-stage grass-roots phase of exploration, there is always the risk that the proposed work may not result in the discovery of an economically viable deposit. The author can attest that there are no significant, foreseeable risks or uncertainties to the Property's potential economic viability or continued viability directly arising from the quality of the data provided within this technical report.

1.8 Recommendations

Based on the evaluation of available data, the author recommends a multi-phase exploration program for the Camping Lake Property.

Phase 1 investigations should include the following components:

- Field investigations should commence with a till and bedrock sampling program using a worker-portable drill rig and the collection of 116 systematic till samples on a 500 m × 500 m grid spacing. If possible, the drilling should be advanced below the top of bedrock to develop a coincident sampling of the underlying bedrock.

  Reconnaissance structural mapping, prospecting, and rock geochemical sampling from accessible rock outcroppings should also be completed.

  This base-level coverage should provide the best opportunity to detect any anomalous gold in the till or underlying bedrock. This method will also help trace the origins of the geochemical anomalies up-ice, and the bedrock samples may confirm the source of any mineralization or provide other indications of potential mineralization.

The site work would likely be based out of a remote campsite on or adjacent to the Property or lodging could be offsite; crew and equipment can partially mobilize onto the Property using the 4 × 4 truck-accessible forestry service road. Any access to outlying parts of the Property will require mobilization by boat or canoe to facilitate sampling proximal to the waterways that cross over the site. Some parts of the Property may need to be accessed by helicopter until appropriate site-access roads can be permitted and constructed. Future drilling plans should include wintertime exploration when waterways might provide easier access.

Phase 2 recommendations are conditional on the results of Phase 1, and include the following:

- Follow up field investigations on favourable results from Phase 1 and should include infill till sampling with program of similar scope to Phase 1 field explorations.
- Concurrent trenching may be completed over selected target areas with small portable excavator to complete trenching for enhanced target definition. A two man (operator and sampler), 7-10-day program may feasibly be able to complete up to 10 shallow trenches each up to 50m long for a total of 500 m.
- Where targets of merit are identified from geochemistry and geophysics further Ground geophysics is recommended, this may potentially include ground magnetics, VLF, or IP, with specific techniques determined by the Phase 1 results.

A preliminary budget for future exploration work on the Camping Lake Property is summarized in Table 1-1 below.

Table 1-1: Preliminary Proposed Three-Phase Summary Exploration Budget

Year/Phase	Description	Estimated Cost (CAD$)
1	Exploration program (10-day 4-person) • Base of till / top of bedrock sampling • Prospecting, mapping and sampling • Site visit (QP/Senior Project Manager) • Geochemical analysis and QA/QC • Technical reporting requirements	114,179
2	Exploration program (TBD) • Follow up field exploration – minimum allowance • Ground geophysics - Allowance • Trenching and till sampling - Allowance	 100,000 50,000 200,000
	GRAND TOTAL	**$464,179**

2 INTRODUCTION

2.1 Purpose of Report

This technical report has been prepared for Golden Spike Resources Corp. (Golden Spike) of 94 Linden Court, Port Moody, British Columbia, V3H 5C1. Golden Spike is a Canadian company involved in mineral exploration and development.

This technical report describes the results of the 2020 exploration program completed on the Camping Lake Property. The program included a magnetic gradient geophysical survey of the Property which consisted of 459.34 line-km with a traverse line spacing of 50 m and a tie line spacing of 500 m. This work was coordinated by Longford Exploration Services Ltd. (Longford Exploration) on behalf of Golden Spike.

2.2 Sources of Information

The author has reviewed on geological data obtained from Ontario's provincial government reports and several papers published in scientific journals, as referenced in Section 15 (References) of this report.

The author has reviewed the Ontario Ministry of Energy, Northern Development and Mines (MNDM) publicly available information resources found online for historical property assessment reports and mineral tenure information as well as the Ontario Geological Survey (OGS) digital publication database found online for regional geological data and mineral occurrence information. Climate information was obtained from Environment Canada, and population and local information for the Property area was obtained from Wikipedia website.

This technical report is based on personal examination, by the author, of all available reports and data on the Camping Lake Property. The information, opinions and conclusions contained herein are based on:

- Information available to the author at the time of preparation of this report.
- Assumptions, conditions, and qualifications as set forth in this report.
- Data, reports, and other information supplied by Golden Spike and other third-party sources.
- The author's review of all available reports and legal documents.

The author has not researched property title or mineral rights to the Camping Lake Property and expresses no opinion as to the ownership status of the Property other than verifying the anniversary dates (Table 3-1 in Section 3 of this report) for each claim comprising the Property using the Mineral Lands Administration System (MLAS) website. The author most recently accessed the MLAS website on December 9, 2020.

As of the date of this report, the author is not aware of any material fact or material change with respect to the subject matter of this technical report that is not presented herein, or which the omission to disclose could make this report misleading.

2.3 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 26915 NAD83 UTM Zone 15N unless otherwise stated. A list of abbreviations and acronyms used in this report are shown in Table 2-1.

Table 2-1: Abbreviations and Units of Measure

Description	Abbreviation or Acronym
percent	%
three dimensional	3D
Ontario Mining Act	Act
silver	Ag
area of interest	AOI
gold	Au
degrees Celsius	ºC
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	ºF
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
Camping Lake Property	Camping Lake
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
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
Camping Lake Property	Property
quality assurance/quality control	QA/QC
qualified person	QP
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 Property Location

The Camping Lake Property (Figure 3-1) is located in the Red Lake Mining Division just 20 km northwest of Ear Falls in northwestern Ontario, Canada, within the Cabin Bay and Camping Lake Area Townships. The Property is centered at approximately latitude 50.66020° N and longitude 93.44397° W within the National Topographic System (NTS) map sheets 52K/11L, 52K/12H, 52K/11E and 52K/11I.

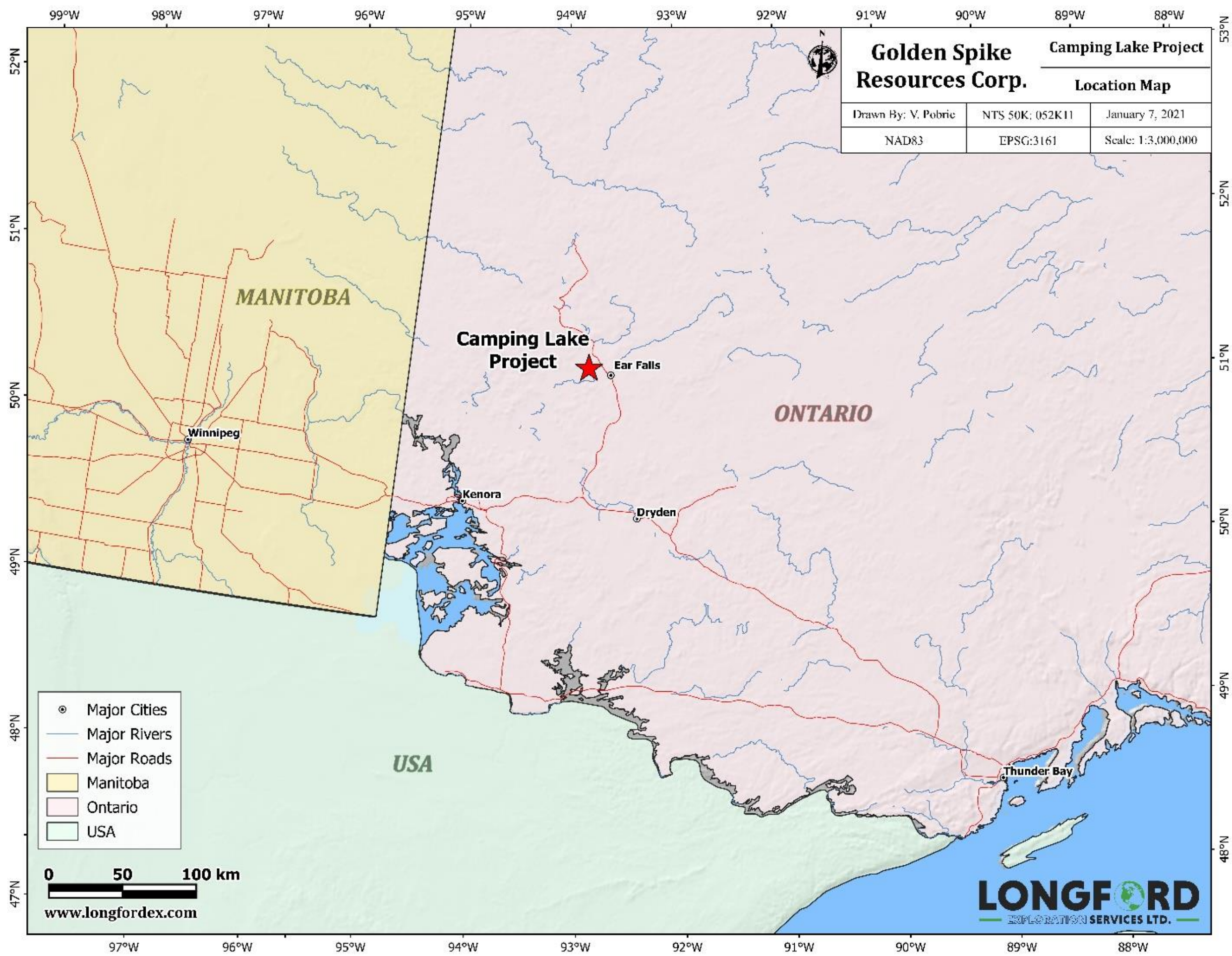

Figure 3-1: Camping Lake Property Location Map

Source: Prepared by Longford Exploration Services, 2020

3.2 Mineral Titles

The Property consists of five multi-cell mining claims (Figure 3-2) in the Red Lake Mining District northwest of Ear Falls totaling approximately 2,132.4 ha. All five mining claims are 100% registered in the name of Northbound Capital Corp. (Northbound or Optionor), and Golden Spike Resources Corp. (Golden Spike or Optionee) may earn 100% interest in the titles upon fulfillment of the terms on the property option agreement dated September 1, 2020.

As of the date of this report, all claims are in good standing. The next claim renewal deadline is July 18, 2021.

At the effective date of this technical report, there are no other known royalties, back-in rights, payments, environmental liabilities, agreements, or other known risks to which the Camping Lake Property is subject.

A complete summary of all mineral tenures comprising the Property is shown in Table 3-1.

Table 3-1: Camping Lake Property Mineral Tenures

Title Number	Holder	Anniversary Date (yyyy-mm-dd)	Status	Area (ha)
554489	Northbound Capital Corp. (100%)	2021-07-18	Active	513.1
554488	Northbound Capital Corp. (100%)	2021-07-18	Active	513.1
554487	Northbound Capital Corp. (100%)	2021-07-18	Active	513.1
554486	Northbound Capital Corp. (100%)	2021-07-18	Active	513.1
554497	Northbound Capital Corp. (100%)	2021-07-18	Active	80.0
			TOTAL	**2,132.4**

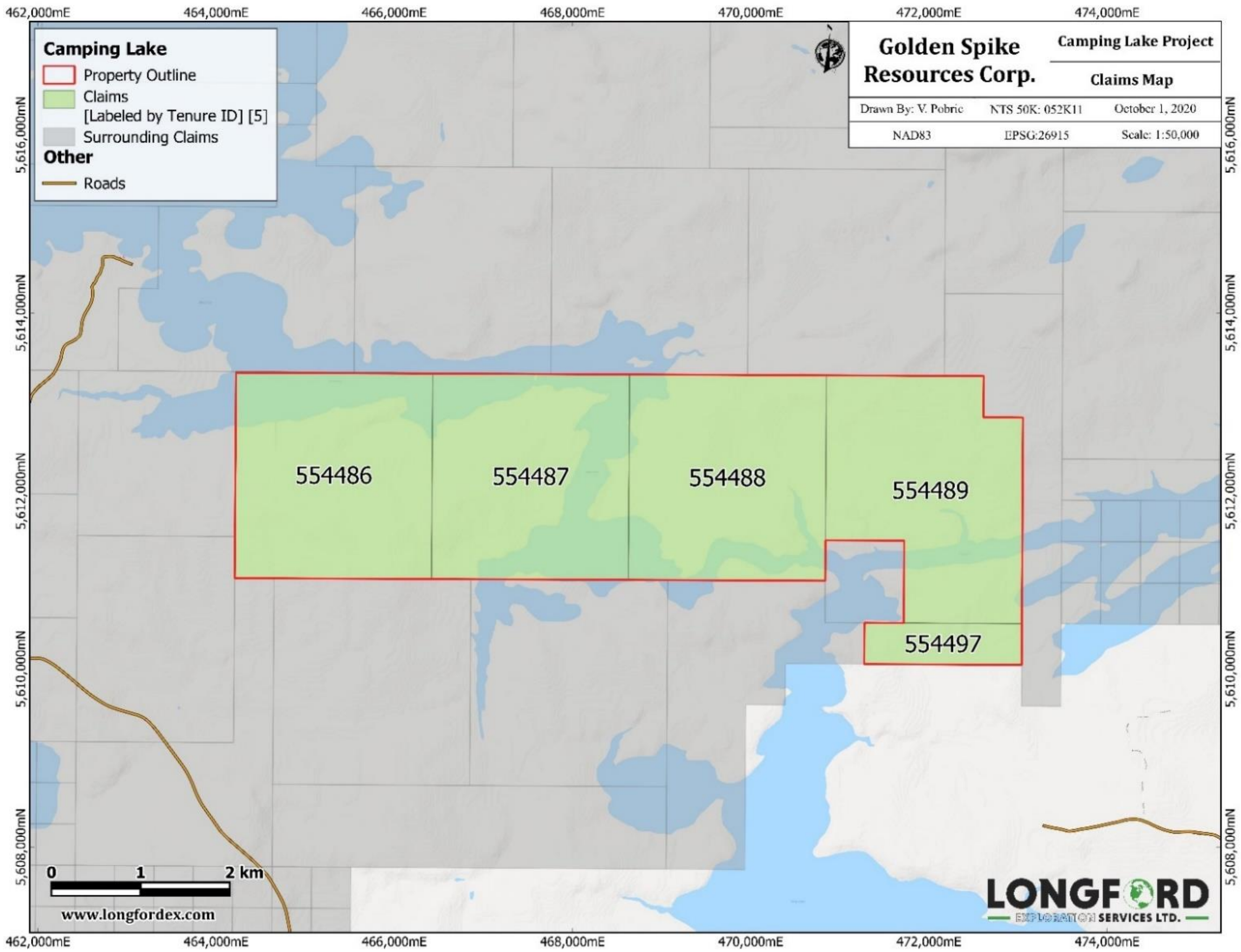

Figure 3-2: Camping Lake Property Claim Map

Source: Prepared by Longford Exploration Services, 2020

3.3 Mineral Rights in Ontario

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

In April 2018, mining claims in Ontario transitioned to an online platform that uses a map designation system. All active, unpatented claims were converted from their legally defined corner-post location to a cell-based grid. A mining claim is now legally defined by its cell position (grid coordinates) on the MLAS Map Viewer. Staking and registering mining claims can now be completed online using the MLAS. The registration fee is $50 per cell. Up to 50 single-cell claims may be registered at one time provided each cell claim shares at least one boundary with another cell in the claim. Multi-cell claims must be registered separately and may consist of a maximum of 25 cell units providing each cell shares at least one cell boundary with another cell in the claim.

To keep the claims in good standing for the following year, the Government of Ontario requires an expenditure of $400 per year per cell claim and a $200 fee per boundary cell claim unit prior to the expiration date. The assessment report must be submitted to the online MLAS by the expiration date.

The holder of a mining claim may obtain a mining lease for that claim, but provisions for surface rights are controlled under the Ontario Mining Act (Act) as work progresses. Surface rights may be sold or granted to a mining operation if the surface rights are necessary to carry out mining operations. If a significant mineralized zone is discovered on a claim, the claim holder may wish to convert the mining claim to a mining lease. Under the Act, this conversion must be completed prior to any mine development. To convert a mining claim to a mining lease, the claim boundaries must be legally surveyed, the holder must engage with affected Indigenous groups, and the holder must submit evidence that a substantial mineral deposit exists. A mining lease is valid for 21 years and can be maintained by paying provincial land taxes (and municipal land taxes if the lease is inside a municipality). Work reports are not required. Any exploration work carried out on a mining lease can be applied as assessment work on contiguous non-leased claims.

Mining leases do not grant ownership of surface rights, but they do grant the holder use of the surface rights. This includes the rights to timber and aggregates unless there is a separate surface rights holder.

3.4 Property Legal Status

The MLAS website confirms that all Property claims as described in Table 3-1 are in good standing at the date of this report and that no legal encumbrances were registered with the Ministry of Energy, Northern Development and Mines against the titles at that date. The author makes no assertion regarding the legal status of the Property. The Property has not been legally surveyed to date and no requirement to do so has existed.

At the effective date of this technical report, there are no other known royalties, back-in rights, payments, environmental liabilities, agreements, or other known risks to which the Camping Lake Property is subject.

3.5 Nature of Title to Property

The Camping Lake Property consists of five multi-cell mining claims covering 2,132.4 ha. The online registry currently shows that the Camping Lake mining claims are 100% owned and registered in the name of Northbound Capital Corp. (Northbound or the Optionor). Northbound entered into a property option agreement with Golden Spike Resources (the Optionee or Golden Spike) on September 1, 2020.

As stated in Section 3-2, Golden Spike (Optionee) and Northbound (Optionor) are party to a property option agreement with an effective date of September 1, 2020, pursuant to which the Optionor can grant and the Optionee can acquire the sole exclusive rights to the title and interest in the Camping Lake Property claims for the following considerations:

- Make cash payments to the Optionor totalling $75,000, as follows:
  - $25,000 on the effective date; and
  - An additional $50,000 on or before the listing date.
- Issue a total of 1,250,000 shares (Purchase Shares) to the Optionor, as follows:
  - 500,000 shares on or before the listing date; and
  - An additional 750,000 shares on or before the date which is 12 months after the listing date.

All payments and issuances of shares described here may be accelerated at the Optionee's request. There is no partial vesting of the Property.

If the Optionee chooses to exercise this option and acquires 100% legal and beneficial right and title to and interest in the Camping Lake Property, the Optionor will thereafter be entitled to a 3% net smelter return (NSR) royalty with respect to the Property. This royalty is payable upon the commencement of commercial production; however, the Optionee retains the right to purchase from the Optionor a 2% NSR royalty upon payment of the sum of $1,000,000 to the Optionor at any time.

In addition to the terms outlined here, if at any time the Optionor or an Affiliate of the Optionor acquires, directly or indirectly, any interest in any property which is entirely or partly within 2 km of the outermost boundary of the area-of-interest property (AOI Property), then the Optionor or its Affiliate, as applicable, must disclose the acquisition promptly to the Optionee. The Optionor or its Affiliate, as applicable, within 30 days of receipt of notice of acquisition, may then elect to include the AOI Property within the Property.

At the effective date of this report, there are no other known royalties, back-in rights, payments, environmental liabilities, agreements, or other known risks to which the Camping Lake Property is subject.

3.6 Surface Rights in Ontario

Surface rights are not included with mining claims in Ontario. However, the Act allows licensed prospectors to enter mineral lands to explore for minerals whether the surface is owned privately or by the Crown. Right of entry onto these lands does not include the following: land occupied by a building; the area around a dwelling; any land that is part of an airport or railway; land that is used for a natural gas, oil, or water pipeline corridor; land under cultivation; land that contains an artificial reservoir or dam; protected heritage property; or land in a park. A complete list of restricted lands is available in the Act under article 29 subsection (1).

Miners entering private lands must serve notice in the prescribed manner and compensate the landowner for any loss or damages resulting from the mining activities which include prospecting, mapping, sampling, geophysical surveys, as well as any activities that disturb the surface. A miner must notify the landowner prior to entering the property to prospect, entering the property to stake, creating a closure plan, beginning new exploration activities, or making changes to an existing exploration activity, beginning the construction of a mine, beginning the extraction of minerals, and beginning rehabilitation work. Surface rights owner(s) can be determined by conducting a title search at a Land Registry Office (LRO) or online.

At the effective date of this report, Golden Spike does not hold any surface rights to this Property.

3.7 Permitting

The Act requires that an Exploration Permit or an Exploration Plan is obtained to explore on Crown lands. The permit and plan 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 could be impacted by the work.

In Ontario, an Exploration Permit is required to carry out exploration activities that include:

- Mechanized stripping of an area greater than 100 m^2 within a 200 m radius.
- Use of a drill that weighs more than 150 kg.
- Cutting of lines greater than 1.5 m wide.
- Geophysical surveys requiring the use of a generator.
- Pitting or trenching where excavated volume of rock exceeds 3 m^3 within a 200 m radius.

An Exploration Permit is issued in the name of the recorded claim holder and is usually issued three months after an application is made. Under the present system, notice is given by MNDM to any affected First Nations and Metis groups. Permit applicants are then required to engage with Indigenous groups only if specific issues are raised by those groups. An Exploration Permit is granted for a period of three years. It may include conditions which require the avoidance of certain areas due to wildlife sensitivity or areas that have cultural or spiritual significance.

An Advanced Exploration Permit is required when the discovery of a mineralized zone requires more advanced work, such as bulk sampling or underground development. To apply for this type of permit, the relevant mining claims are usually converted to mining leases, and the approval process is more strenuous, requiring a significant review by MNDM and significant community and First Nations engagement.

At the effective date of this report, Golden Spike does not have any permits or applications in place.

4 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

4.1 Accessibility

The Camping Lake Property is accessible from Winnipeg, Manitoba via Highway 17 to Kenora, Ontario (approximately 209 km). From Kenora, access is approximately 126 km northeast by helicopter or floatplane. Alternatively, the Property is accessible from Kenora to Vermillion Bay (93 km) and then continuing north on Highway 105 for approximately 103 km to Ear Falls, Ontario. The north side of the claims can be reached by travelling 12 km north of Ear Falls along Highway 105 and taking the first left turn onto a logging road and continuing down this road for another 8 km. Claim 554489 (northeast of the Property) is the only claim accessible by (unmaintained) logging roads; the remainder of the mining claims are accessible by air or by water (Figure 4-1).

The closest community is Ear Falls, Ontario (population 995) approximately 20 km southeast of the Property on Highway 105. Red Lake, Ontario (population 4,107) is located 70 km northwest of the Property, and Thunder Bay, Ontario (population 110,200) is 494 km driving distance southeast of the Property (see Table 4-1).

Table 4-1: Driving Distances to the Property

Location (population)	Description	Road Distance (km)
Ear Falls, Ontario (995)	Nearest town with services	20
Red Lake, Ontario (4,107)	Mining service centre and airport	70
Winnipeg, Manitoba (934,240)	Nearest international airport	410
Thunder Bay, Ontario (110,200)	Port and mining service centre	494

Source: 2016 Census Canada, from stats Canada website.

4.2 Climate

The climate is typical of northwestern Ontario with extreme temperature ranges. A typical temperature range for the winter months is -20 C to -6 C with extreme lows of -30 C. A typical temperature range for the summer months is 15 C to 17 C with extreme highs of 30 C. The average annual rainfall for the area is 516 mm, and the average annual snowfall is 214 cm (see Table 4-2).

The nearest active weather station to the Property is 70 km by road at the Red Lake Weather Station.

Based on available data, and knowledge of the general area, an eight-month operating (field) season could reasonably be expected. Year-round drilling operations may be possible if suitable road access can be established to the drill site.

Table 4-2: Climate Data for Red Lake Weather Station

Climate Data	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year Total
Daily Average (°C)	-18.3	-15	-7.4	2.2	9.6	15.1	18.1	17	11	3.7	-5.7	-15.3	1.3
Record High (°C)	14.8	9.5	17.2	30.6	32.7	37.2	35.8	36.1	33.2	27.2	18.3	8.9	-
Record Low (°C)	-45.6	-45.7	-39.6	-28.8	-12.2	-3	1.5	-1.4	-7.2	-15.8	-38.7	-43.9	-
Avg Precipitation (mm)	26.8	17.3	28.4	34	73.4	99	103.4	88.3	83	59.7	42.9	30.2	686.4
Avg Rainfall (mm)	0.3	1.3	6.9	17.7	66.9	98.8	103.4	88.3	82	40.9	8.4	0.7	515.7
Avg Snowfall (cm)	35.5	22.1	26	18.2	7	0.3	0	0	1.1	21.1	42.9	39.4	213.6

Source: 1981 to 2010 Canadian Climate Normals Red Lake station data; 51°04'01.000" N, 93°47'35.000" W, elev. 385.90 m

4.3 Local Resources

General labour is readily available in the town of Red Lake (population 4,107). The town, approximately 70 km by road from the Property, offers services such as an Ontario Provincial Police detachment, hospital, ambulance, fuel, lodging, restaurants, and equipment. The higher elevations of the Property areas are covered by 3G cellular service.

4.4 Infrastructure

Red Lake provides support services, equipment, and skilled labour for both the mineral exploration and mining industries. Rail, national highway, port, and airport services are available out of Thunder Bay. Several outfitting and accommodation services are available in Ear Falls.

Local infrastructure and resources are enough to sustain a modern mining operation. There are large operating underground gold mines in Red Lake as well as several advanced-stage development projects in the area. There is a 115 kV transmission line that extends northwest-southeast from Ear Falls to Pickle Lake; it passes 6 km from the eastern Property boundary.

4.5 Physiography

The Property is located in the Boreal Shield Ecozone where the Canadian Shield and the boreal forest overlap. The topography of the Property is dominated by glacial overburden, and typical glacial features, such as eskers, are common. The terrain is generally flat and gently undulating with an elevation of approximately 350 to 430 masl. The Property is crosscut by the Chukuni River, English River, and the headwaters of Camping Lake (Figure 4-1).

Tree cover consists of spruce, pine, balsam, birch, poplar, and alder. Black spruce and muskeg swamps occupy low-lying areas.

An aerial view of the Property is shown in Figure 4-2.

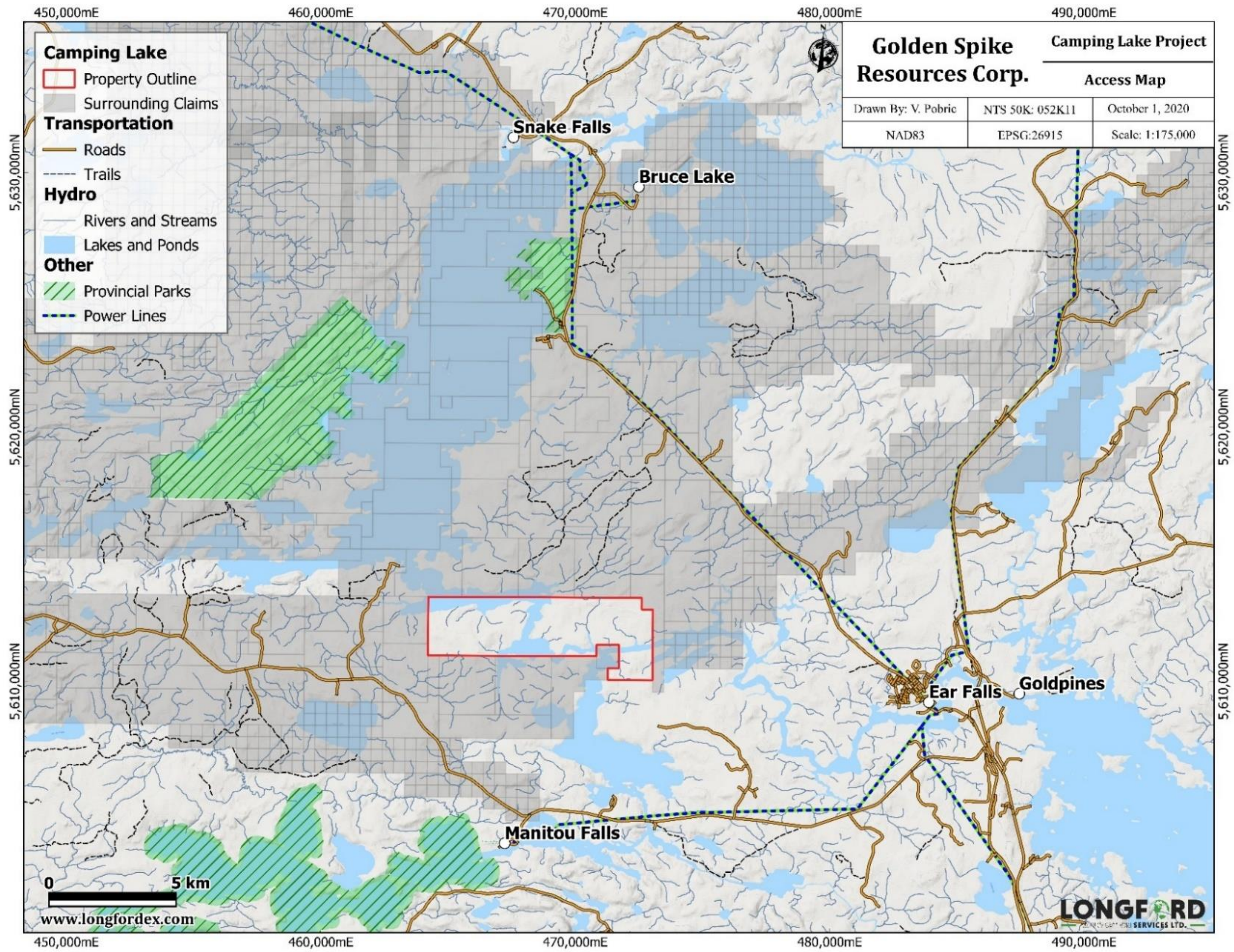

Figure 4-1: Camping Lake Property Accessibility Map

Source: Prepared by Longford Exploration Services, 2020

Figure 4-2: Camping Lake Property Aerial View Facing West

5 HISTORY

5.1 Historical Exploration Activity within the Red Lake District

Minimal to no exploration has been carried out directly on the Camping Lake Property.

Gold was first discovered in the Red Lake region in 1925 leading to the development of a transportation route between Sioux Lookout and Red Lake that used barges on the English and Chukuni Rivers. This route opened up the Confederation Lake greenstone belt to prospecting and exploration which resulted in the discovery of several gold deposits which were put into production between 1930 and 1940. The most significant deposit was in the Uchi mining district.

The Dixie Lake gold prospect, located to the north of the Property, was discovered in the 1940s on the south side of Dixie Creek (previously known as Cariboo Creek) which is approximately 4 km downstream from Dixie Lake (Figure 5-1). A small block of claims was staked by Jack Mitchell & Associates, and these were later optioned to Belgold Mines Ltd. in 1945. Various work was completed in the area, such as surface prospecting, trenching, and a small shallow drilling program.

Between 1940 and 2003, interest continued in the Dixie Lake area. The following work was completed on the Property and in areas that overlap the current Camping Lake Property:

- 1969: Caravelle Mines Ltd. commissioned Questor Surveys Inc. to carry out an airborne magnetic and EM survey over its Dorothy Prospect, which covered the Dixie Lake area. Five targeted VLF conductors were tested by drilling six diamond drill holes.
- 1972: Caravelle Mines Ltd. carried out additional ground magnetic, EM and VLF-EM surveys, and geological mapping.
- 1972 to 1985: several companies acquired claims in the Dixie Lake area, including Kerr-Addison Mines Ltd. (1975), Selco Mining Corporation Ltd. (1976–1977), and St. Joseph Exploration Ltd. (1976–1977).
- 1985: Golden Terrace Resources Corp. conducted an airborne magnetic and EM survey over the Dixie Lake area; however, no follow-up work was carried out. The claims were subsequently optioned by Mutual Resources Ltd. and, in a joint venture with Consolidated Silver Standard Mines Ltd**.,** it carried out prospecting, trenching, geological mapping, various geophysical surveys as well as seven diamond drill holes (depth 465 m). None of the drilling was completed within the current Camping Lake Property boundaries.
- 1989 to 2003: Various companies acquired claims and performed various geophysical programs, prospecting, channel sampling, geological mapping, and diamond drilling. Companies included Teck Resources Limited (1989–1990), Canadian Golden Dragon Resources Ltd. (1996), Sunridge Gold Corp. (2002), and Fronteer Development Group Inc. (2003).

5.2 Historical Exploration Work on the Camping Lake Property

The only known historical work on the Property was completed by Laurentian Goldfields Ltd. (Laurentian) on its Goldpines South Property between 2010 and 2011. The original Goldpines South Property consisted of 144 semi-contiguous claims which covered approximately 22,262 ha. The claims were part of a joint venture agreement (50% owned by Laurentian and 50% by Anglo Gold Ashanti Ltd.)

Laurentian completed three phases of work between 2010 and 2011, including geophysics, geological mapping, prospecting, and geochemical sampling. The work performed by Laurentian did not encompass the entire Property, but various activities did include large portions of the Property.

The Phase 1 work program (March 2010) consisted of a high-resolution, 7,183 line-km airborne magnetic and VLF-EM survey.

The Phase 2 work program (May to June 2010) consisted of follow-up work on systematically targeted structures and lithological contacts interpreted from magnetic susceptibility mapping. The work consisted of a reconnaissance soil and lake sediment sampling program in addition to Property-wide prospecting. In total, 206 rock samples, 1,067 mobile metal ion (MMI) soil samples, and 156 lake sediment samples were collected. This work identified several gold anomalies which were followed up in Phase 3. The most significant anomaly detected in Phase 2 was found in lake sediments in Pakwash Lake and was referred to (by Laurentian) as the “Chukuni anomaly”; samples contained up to 1,980 ppb Au.

The Phase 3 work program (August to October 2010) consisted of collecting 2,135 infill MMI soil samples and 348 lake sediment samples. The survey used a sample grid spacing of 100 m × 200 m to refine the continuity and extent of the previously identified gold anomalies. Subsequent work included the excavation of four exploration trenches, and 117 channel samples were cut from newly exposed bedrock.

No significant concentrations of gold were found in outcrop during all three phases of work.

In 2011, Laurentian carried out another work program (May 17 to June 30) at its Goldpines South Property. The work consisted of prospecting and a soil- and lake-sediment sampling survey. In total, 2,492 MMI soil samples (11 soil grids with a spacing of 50 m × 100 m and a spacing of 100 m × 200 m over the eastern end of the Goldpines South Property), 144 lake-sediment samples, and 162 rock grab samples were collected. Overall, eight of the originally identified targets showed encouraging results, and this reportedly provided sufficient evidence to proceed with the 20 identified target drill holes.

Since 2011, no further work is known to have been completed on the Property claims area.

On July 18, 2019, the Camping Lake claims were staked by Perry English. On July 27, 2020, the claims were transferred to Sergio Cattalani, who was the bare trustee for Northbound Capital Corp. On November 17, 2020, the claims were transferred to Blair Naughty, and, on November 18, 2020, the claims were transferred to Northbound Capital Corp.

The Camping Lake Property is an early-stage exploration project and little exploration work has been completed within the Property bounds; therefore, historical mineral resource and historical mineral reserve estimates have not been carried out on the Camping Lake Property.

Table -5-.1 and Figure 5-1 outline the most recent historical work carried out over the Property, and Figures 5-2 and 5-3 show the regional geophysics (total magnetic field and first-order vertical derivative, respectively).

Table 5-1: Recent Work History on the Camping Lake Property

Year	Operator	Ontario Assessment Record	Source	Work	Description
2010	Laurentian Goldfields Ltd. (50%) and Ashanti Gold Ltd. (50%)	20009804	Render, M., Meade, S., Lengyel, J.W., 2010, Goldpines South Property: Ear Falls, Ontario, Canada, prepared for Laurentian Goldfields Ltd.	Phase 1: High resolution, airborne magnetic and VLF-EM surveys over 7,183 line-km. Phase 2: 206 rock samples, 1,067 MMI soil samples, and 156 lake sediment samples. Phase 3: 2,135 MMI soil samples (500 m × 500 m spacing), 348 lake sediment samples, four exploration trenches, and 117 channel samples.	The intense, Chukuni River sediment gold anomaly (Chukuni anomaly) is coincident with a fault interpreted to be part of the damage zone around the Pakwash Lake. Lake sediment gold anomaly at West Leg is coincident with the Sydney Lake Fault Zone and northwest-southeast-trending second-order faults. Preliminary soil sampling in the extreme south of the Property is encouraging. No significant concentrations of gold were found in outcrop.
2011		20010963	Chiang, M., Rennie, C., 2013, Goldpines South Property: 2011 Summer Exploration Report, prepared for Laurentian Goldfields Ltd.	Prospecting and 2,492 MMI soil samples (50 m × 100 m and 100 m × 200 m spacings), 144 lake-sediment samples (500 m × 500 m spacing and 100 m × 200 m infill spacing), and 162 rock grab samples.	Program successfully refined gold anomalies on the Property. Eight of the original 11 target areas showed encouraging results. Twenty shallow drill targets were proposed.

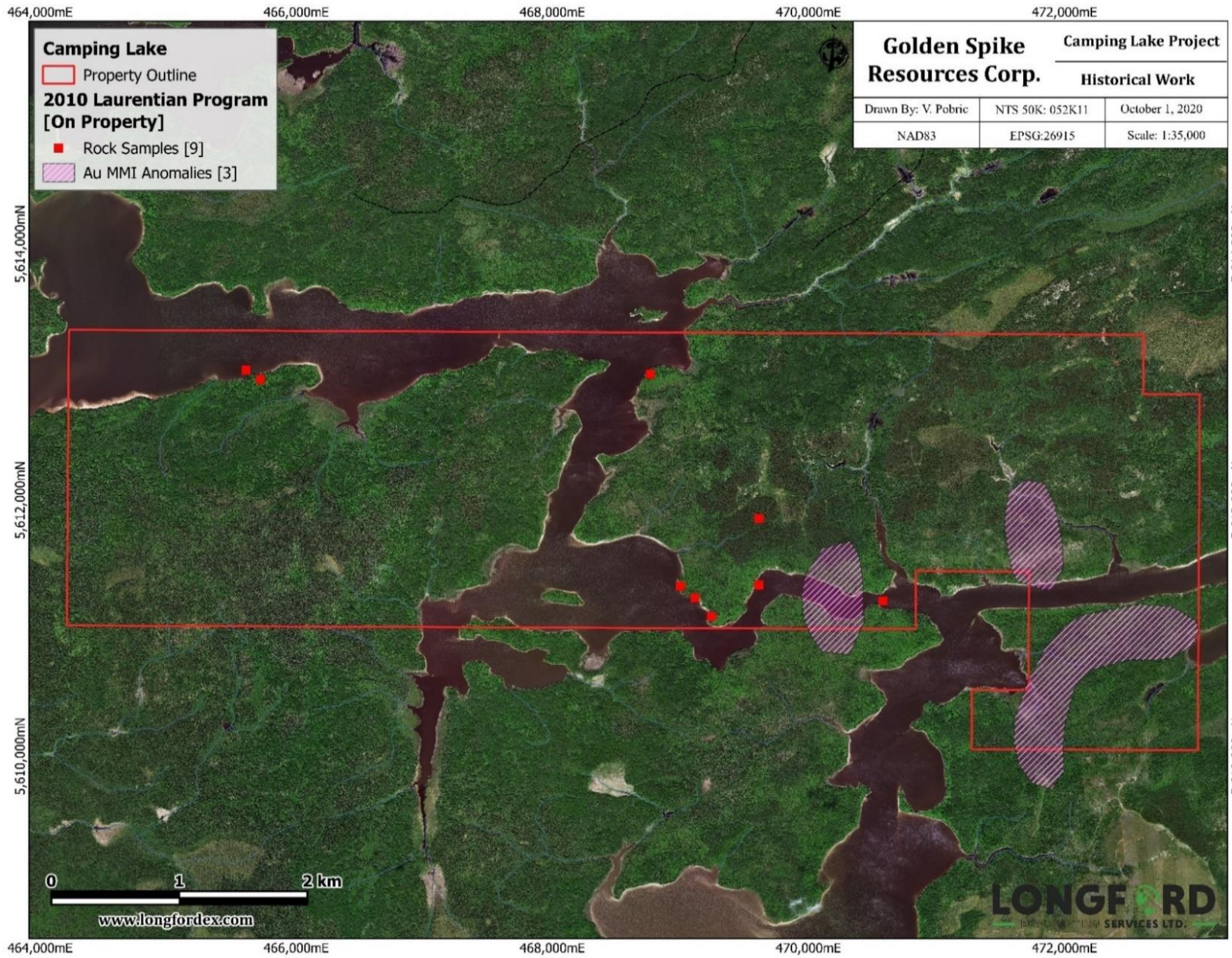

Figure 5-1: Camping Lake Property Historical Work Map

Source: Prepared by Longford Exploration Services, 2020

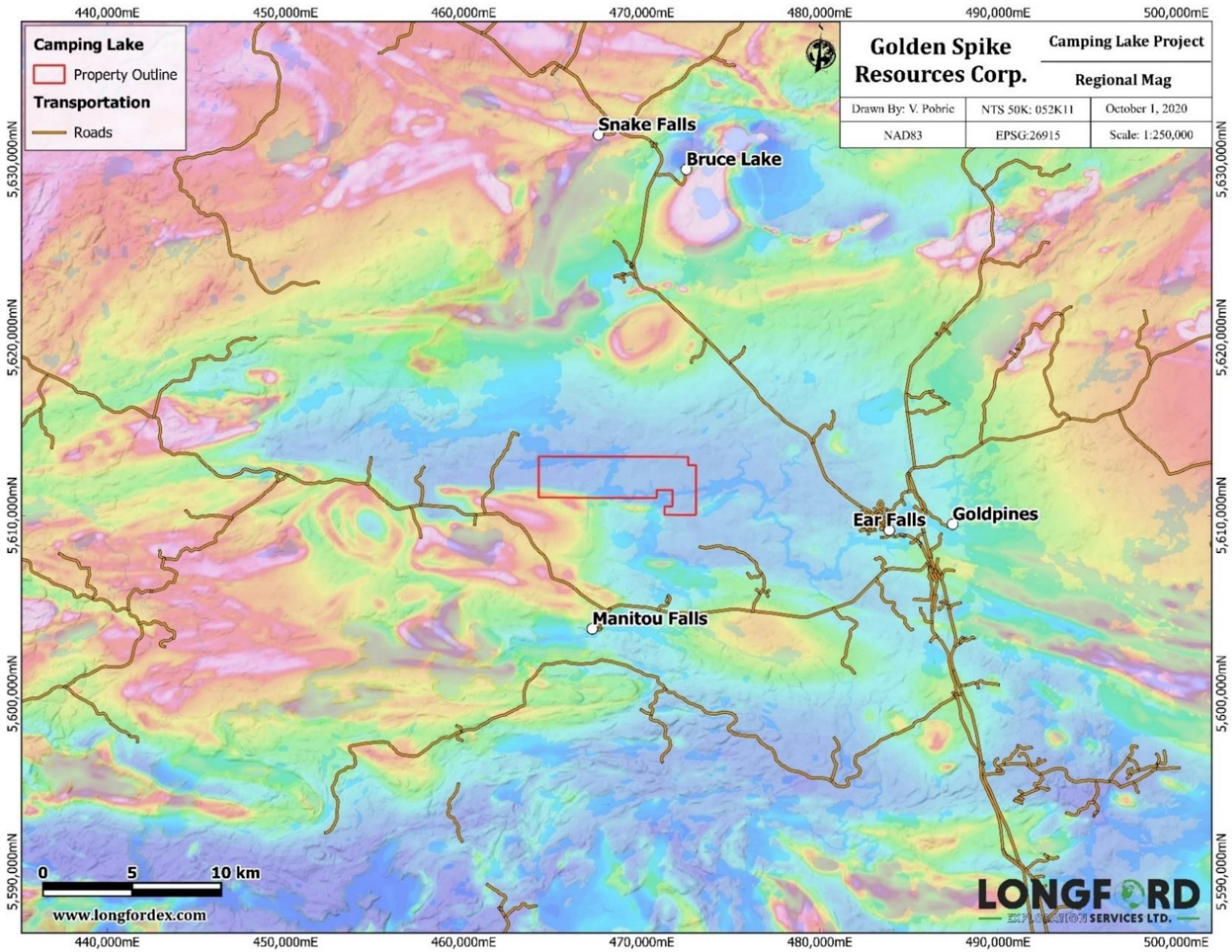

Figure 5-2: Camping Lake Property Regional Geophysics - Total Magnetic Field (TMF)

Source: Prepared by Longford Exploration Services, 2020

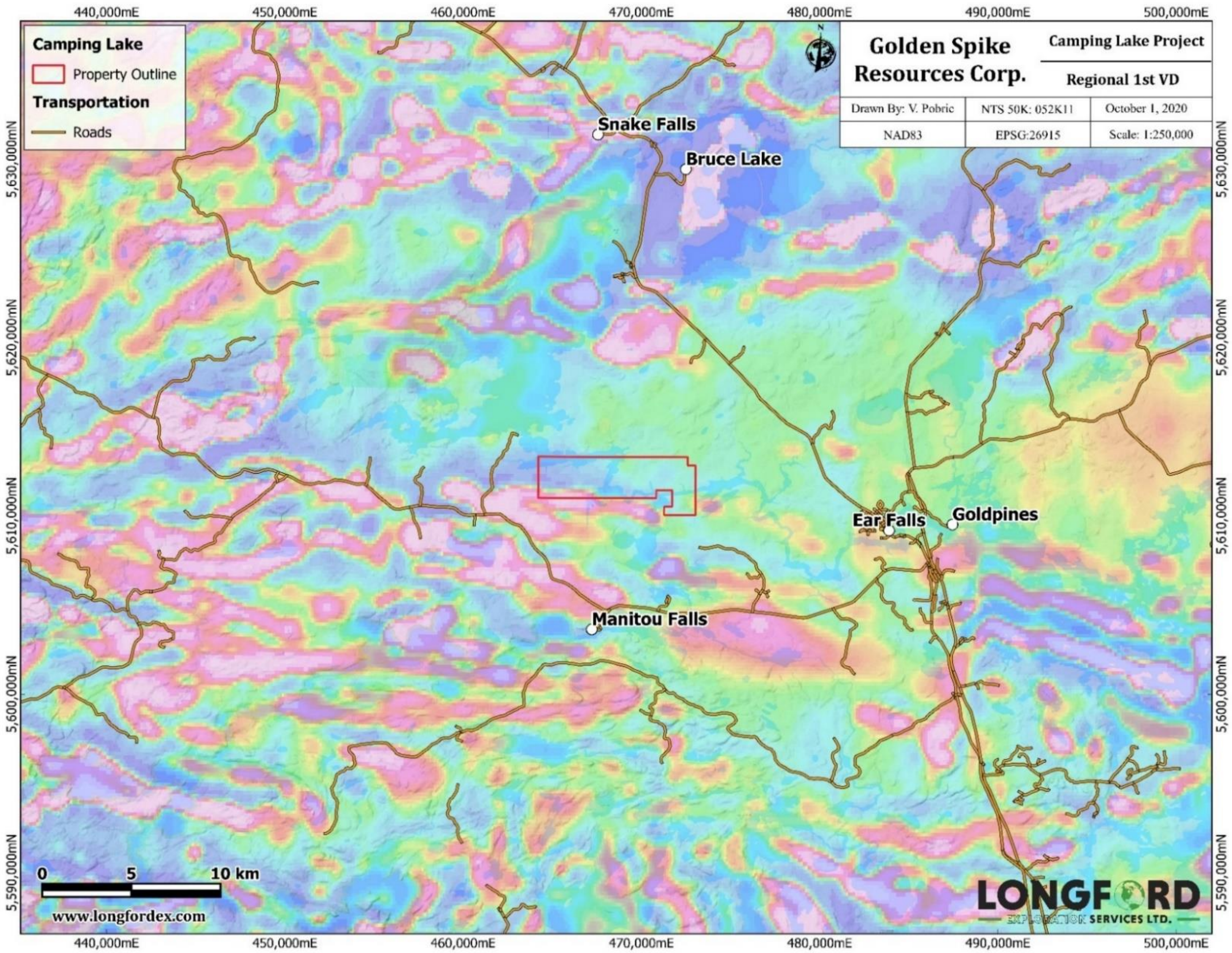

Figure 5-3: Camping Lake Property Regional Geophysics - First Vertical Derivative

Source: Prepared by Longford Exploration Services, 2020

6 GEOLOGICAL SETTING AND MINERALIZATION

6.1 Regional Geology

The Camping Lake Property (Property) is located within the Superior Province, which forms the core of the Canadian Shield. The Superior Province was formed by the successive accretion of orogenic belts in a range of tectonic environments over a period of 1.73 billion years (Percival et al., 2012). The Superior Province is the largest Archean terrestrial craton and covers approximately 1.4 x 10^6 km^2 and consists mainly of Neoarchean rocks (2.8 to 2.5 Ga) which range in metamorphic grade from sub-greenschist facies to granulite facies (Percival et al., 2012). The boundaries of the Superior Province are mainly tectonic in the north, west and southeast (Trans-Hudsonian and Grenvillian orogens), and the south (Penokean orogen) and the northeast (Northern Quebec orogen) are unconformably overlain or overthrust by Paleoproterozoic supracrustal sequences (Card and Poulsen, 1998).

The Superior Province can be divided into the following four regions based on structural and lithological characteristics:

- The Western Superior region consists of the area extending from the Phanerozoic cover in the west and north to Lake Superior in the south and displays characteristic west- to northwest-trending belts with strike lengths up to 1,000 km (Percival et al., 2012).
- The Central Superior region extends from Lake Superior to the Grenville Front to the east, and includes the Eastern Wawa terrane, the Abitibi greenstone belt, and the Transverse Kapuskasing uplift structure.
- The Moyen-Nord region is bound by James Bay on the west, the Grenville Front to the east, and the Hudson Bay terrane to the north and is composed of the Ashuanipi complex, Opinaca belt, and the Opatica terrane.
- The Northeastern Superior region is located to the north of the Moyen-Nord and bound by Hudson Bay and James Bay to the west and the New Quebec orogen to the east.

The Superior Province can be further divided into the following 19 subprovinces which consist of metasedimentary, metamorphic, volcano-plutonic, and plutonic domains (Table 6-1 and Figure 6-1).

The regional geology is shown in Figure 6-2.

Table 6-1: Regions, Subprovinces, and Rock Types of the Superior Province

Region	Subprovince	Rock Type
Western Superior	Sachigo	Volcano-plutonic
	Berens River Belt	Volcano-Plutonic
	Uchi Belt	Volcano-Plutonic
	English River Belt	Metasedimentary
	Winnipeg River	Plutonic
	Wabigoon Belt	Volcano-Plutonic
	Pikwitonei	Metamorphic
Central Superior	Quetico Gneiss Belt	Metasedimentary
	Kapuskasing Uplift	Metamorphic
	Wawa Belt	Volcano-Plutonic
	Abitibi Belt	Volcano-Plutonic
Moyen-Nord	Pontiac	Metasedimentary
	Abitibi	Volcano-Plutonic
	Opatica Belt	Volcano-Plutonic
	Nemiscau	Metasedimentary
	Opinaca Belt	Metasedimentary
Northeastern Superior	Minto	Volcano-Plutonic
	La Grande	Volcano-Plutonic
	Ashuanipi Complex	Metamorphic

Source: Card and Poulsen, 1998

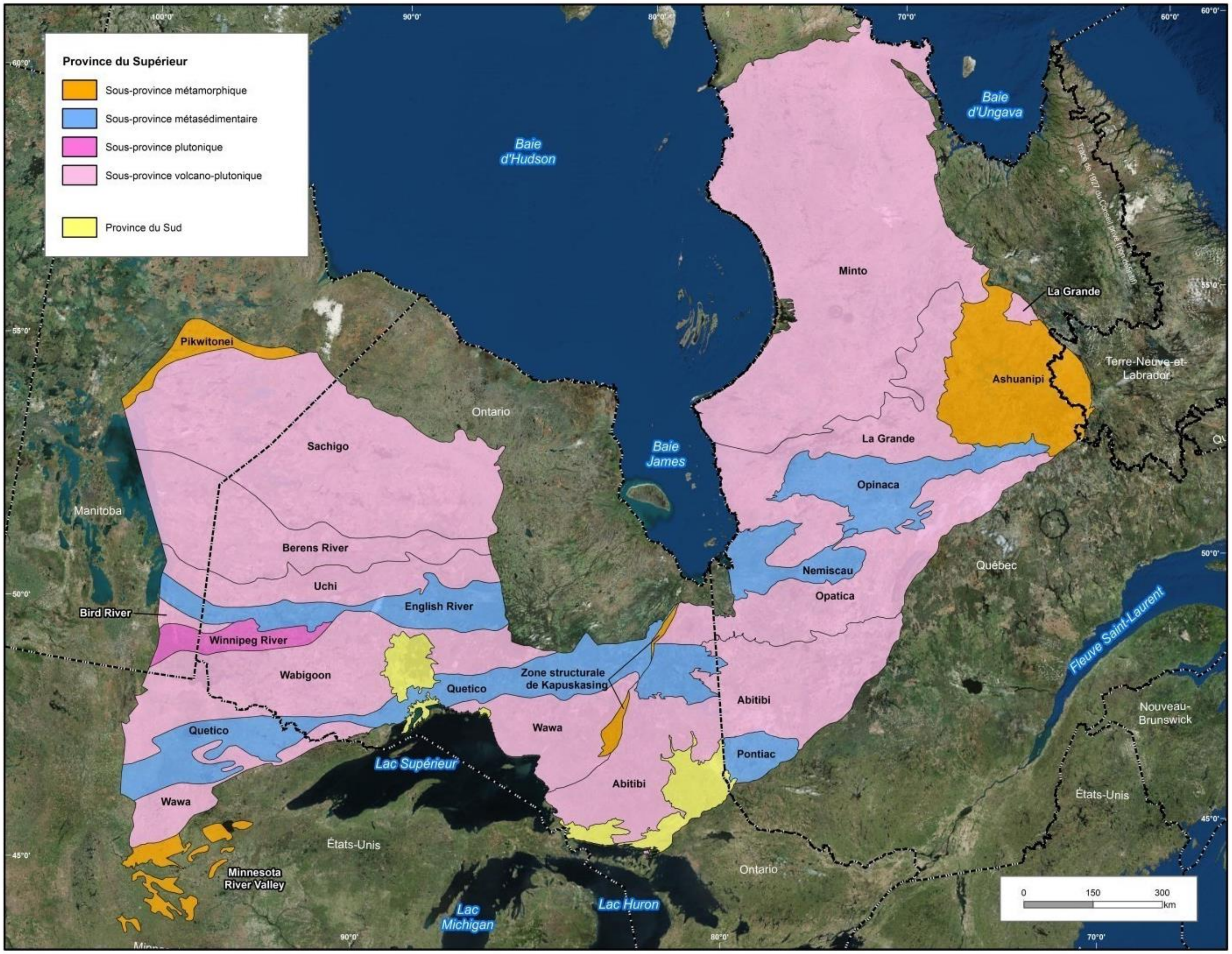

Figure 6-1: Map of the Superior Province and its Subprovinces

Source: Card and Poulsen, 1998

6.1.1 English River Subprovince

The Camping Lake Property lies within the Neoarchean English River subprovince in the western Superior Province. It is an 800 km long by 35 to 190 km wide, west-trending belt of metasedimentary rocks which can be roughly divided into western and eastern portions due to a promontory of the Wabigoon subprovince. The western half of the subprovince is bounded to the south by the Mesoarchean to Neoarchean gneissic and metaplutonic Winnipeg subprovince and the Neoarchean metavolcanics of the Bird River subprovince (Separation Lake greenstone belt). The eastern half of the subprovince is bounded to the south by a block of the central Wabigoon subprovince due to the northeast-striking oblique-sinistral Miniss River Fault (Hrabi and Cruden, 2006). The entire length of the northern boundary of the English River subprovince is bounded by the Mesoarchean to Neoarchean metavolcanics of the Uchi subprovince (Uchi greenstone belt).

The English River subprovince is interpreted to be an accretionary complex, a foreland, or a fore-arc basin that formed and was subsequently deformed between the metavolcanics of the Uchi subprovince to the north and the orthogneiss- and metaplutonic-dominated Winnipeg River to the south during a lengthy transpressive orogeny. It is believed that the deposition, initial metamorphism, and main phase of deformation of the sedimentary rocks of the English River subprovince can be accounted for by the northward-directed subduction and collision of the Winnipeg River subprovince with the Uchi subprovince at ca. >2713–2698 Ma. The extensive tonalite magmatism within the Winnipeg River and English River subprovinces during the same time was likely generated by the subduction of the Wabigoon subprovince (Hrabi and Cruden, 2006).

Metasedimentary rocks represent the predominant outcrop exposures within the English River. Deposition has been characterized as a south-prograding submarine turbidite fan or deltaic fan setting attributed to the compressional assemblage of the Uchi subprovince (Hrabi and Cruden, 2006). These rocks are regionally described as migmatite and diatexite due to mid amphibolite to low granulite facies metamorphism (750–850 °C at 0.6 to 0.7 MPa; Percival and Easton, 2007). The original sedimentary features are locally preserved and are interpreted to be immature, turbiditic greywackes.

The English River subprovince can be divided into two domains: the southern domain is underlain by predominantly granitic intrusives, and the northern domain is predominantly underlain by metasedimentary rocks and derived migmatites (OGS, 1993). Three tectonic rock assemblages have been defined in the English River subprovince. The southern and central parts of the English River subprovince are characterized by tectonic assemblage I, which forms part of the English River plutonic complex. This assemblage is dominated by severely deformed granitoid gneisses marked by isoclinal D1 folds within the gneissic banding and are, therefore, believed to be the oldest rocks present. Tectonic assemblage II forms the metasedimentary migmatite complex within the northern portion of the subprovince. This assemblage is characterized by garnet- and cordierite-bearing metasedimentary gneisses with a high percentage of granitoid leucosomes; restricted to the southern margin of this complex is a narrow band of metavolcanics (Westerman, 1978; OGS, 1993). Tectonic assemblage III ranges from equigranular tonalites through porphyritic granodiorites to equigranular pink granites which have been emplaced throughout the English River subprovince. These intrusions have been proposed to be the temporal equivalents of the “diapiric granitoid intrusions” of the Uchi and Wabigoon subprovinces (Westerman, 1978). Three major plutonic suites (gneissic, sodic and potassic) have been described based on their composition, texture, and style of intrusion. Collectively, these suites comprise 98% of the southern plutonic domain and 30% of the northern domain (OGS, 1993). The mafic intrusive suite (gabbro-diorite to quartz-diorite) is a relatively minor group and comprises only about 4% of the subprovince (OGS, 1993).

Four major phases of deformation are believed to have occurred within the English River subprovince; these consisted of three major folding and foliation forming events and a late period of shearing, faulting, and fracturing (Hrabi and Cruden, 2006).

6.1.2 Regional Mineralization

Several mineral occurrences are known to occur in the Superior Province, including the following styles of deposits (Percival, 2007):

- Iron-formation-hosted gold deposit.
- Magmatic Ni-PGE deposit.
- Volcanogenic massive sulphide (VMS) deposit.
- Rare-element pegmatite deposit.
- Orogenic lode-gold deposit.

6.2 Property Geology

The Camping Lake Property is located within the English River metasedimentary belt of the Superior Province.

The Property is underlain by Neoarchean to Mesoarchean (2.5 to 3.2 Ga) rocks which consist of greywackes, siltstones, arkose, argillite, slate, mudstone, marble, chert, iron formation with minor metavolcanics, conglomerates, arenites, paragneiss, and migmatites. The Property lies just south of muscovite-bearing granitic rocks consisting of muscovite-biotite and cordierite-biotite granite and granodiorite-tonalite of similar age.

The Property geology is shown in Figure 6-3.

6.2.1 Property Mineralization

No significant mineralization has been reported by any of the previous operators.

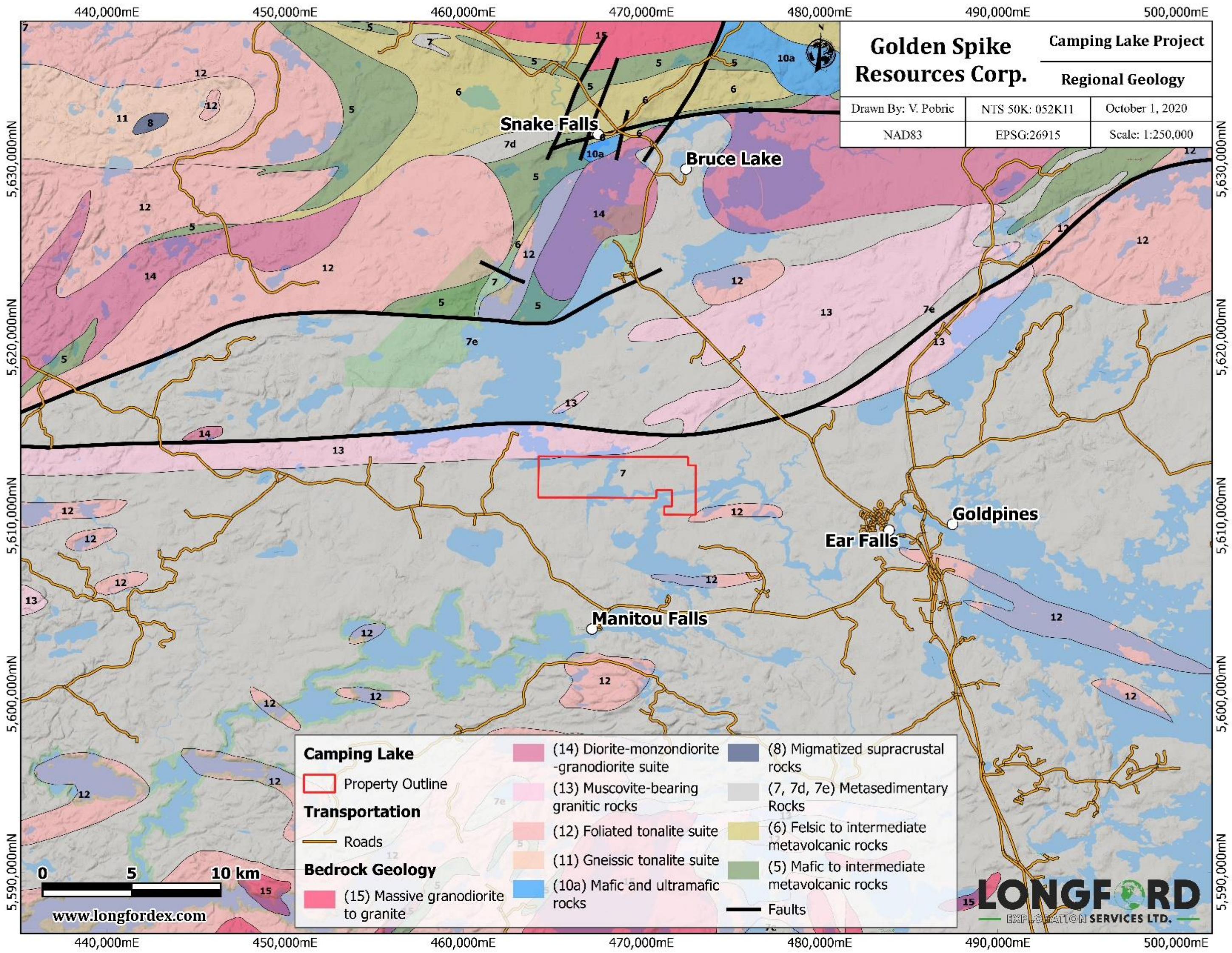

Figure 6-2: Camping Lake Property Regional Geology Map

Source: Prepared by Longford Exploration Services, 2020

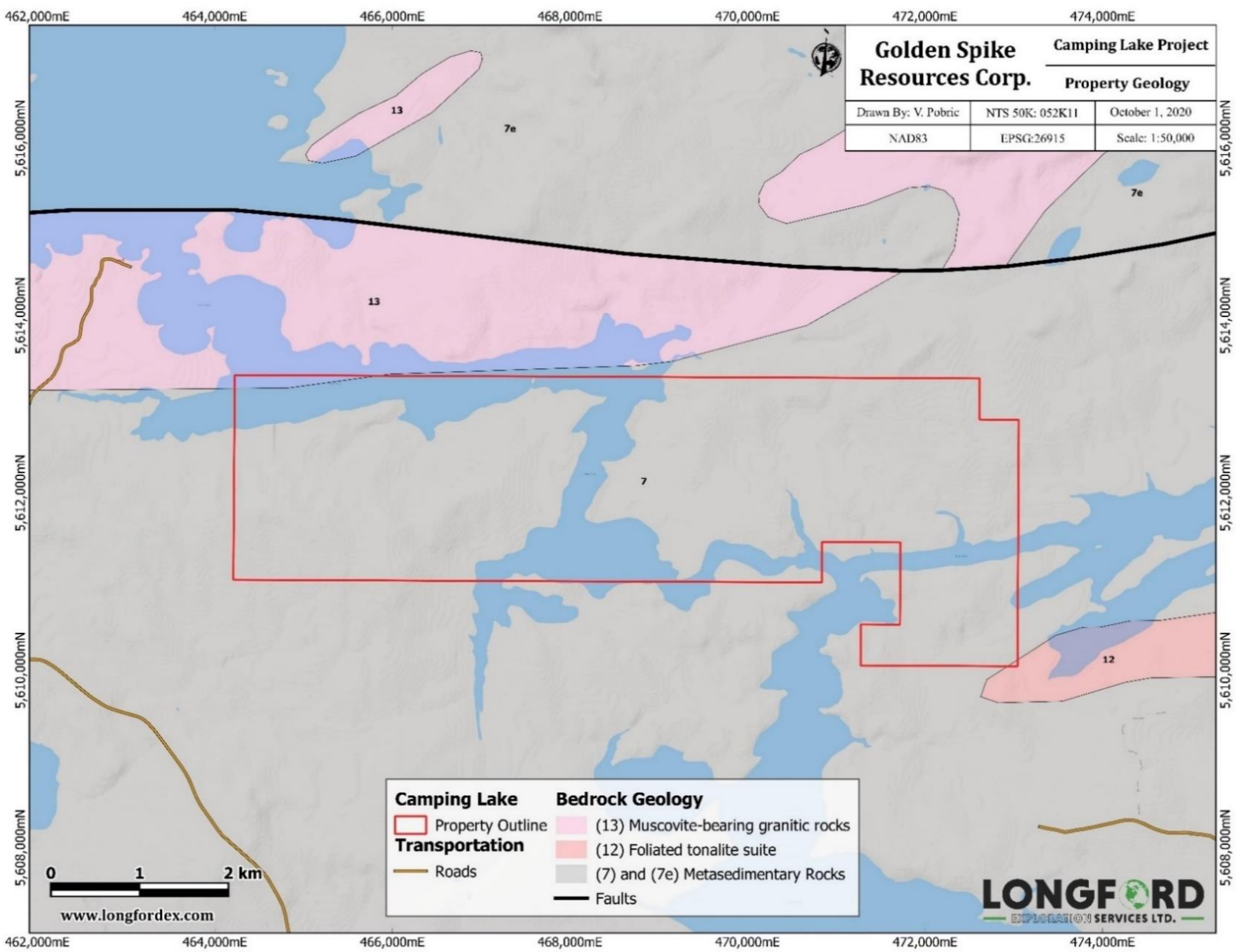

Figure 6-3: Camping Lake Property Geology Map

Source: Prepared by Longford Exploration Services, 2020

7 DEPOSIT TYPES

The Camping Lake Property is located within the English River sub-province of the Superior Craton; therefore, a greenstone-hosted quartz-carbonate (GQC) style of mineralization is anticipated to potentially occur on the Property. Concepts and geological models typical of GQC deposits were applied to the planned mineral exploration on the Camping Lake Property.

7.1 Greenstone-Hosted Quartz-Carbonate-Gold-Vein Style Deposit

The geological setting of the Property is favourable for quartz-carbonate vein-hosted gold mineralization. Dube and Gosselin (2007) provide a detailed overview of the key features and genesis of Canadian examples of this deposit type (Figure 7-1). Generally, quartz-carbonate vein-hosted gold deposits occur in greenstone belts. They are most abundant and significant, in terms of total gold content, in Archean terranes. However, a significant number of world-class deposits are also found in Proterozoic and Paleozoic terranes.

The deposits of this type are structurally controlled, complex epigenetic deposits hosted in deformed and metamorphosed terranes. They consist of simple to complex networks of gold-bearing, laminated quartz-carbonate fault-fill veins in moderately to steeply dipping, compressional brittle-ductile shear zones and faults, with locally associated extensional veins and hydrothermal breccias. They are dominantly hosted by mafic volcanic rocks metamorphosed at greenschist to amphibolite facies conditions and formed at depths of 5 to 10 km.

Main ore minerals include native gold with pyrite, pyrrhotite and chalcopyrite in decreasing amounts. Sulphide minerals typically constitute less than 5% of the ore body. Main gangue minerals include quartz and carbonate with variable amounts of white micas, chlorite, tourmaline, and sometimes scheelite.

Quartz-vein textures vary according to the nature of the host structure. Extensional veins typically show quartz and carbonate fibres at a high angle to the vein walls and with multiple stages of mineral growth. Laminated veins are usually composed of massive fine-grained layers. When present in laminated veins, mineral fibres are sub-parallel to vein walls. Individual vein thicknesses vary from a few centimetres to up to 10 m, and their length varies from 10 m to up to 1,000 m. The vertical extent of orebodies commonly exceeds 1 km and, in a few cases, reaches 2.5 km.

The gold-bearing shear zones and faults associated with quartz-carbonate vein-hosted deposits commonly display a complex geometry with anastomosing and/or conjugate arrays. Laminated quartz-carbonate veins typically infill the central part of, and are subparallel to, the host structures. Extensional veins are either confined within shear zones, in which case they are relatively small and sigmoidal in shape, or they extend outside the shear zone and are planer and laterally much more extensive.

Exploration for this deposit type is well understood, based on a rich history of discovery over approximately a century. On a continental scale, this type of gold deposit is typically distributed along crustal scale fault zones characterized by several increments of strain, and, consequently, multiple generations of steeply dipping foliations and folds resulting in a complex deformational history. These crustal-scale deformation zones represent the main hydrothermal pathway towards higher crustal levels.

Critically, however, deposits are often spatially and genetically associated with second- and third-order compressional reverse-oblique to oblique high-angle shear/strain zones that are best developed within 5 km of the first-order structure, often in its hanging wall. In many cases, brittle faults also host major zones of gold mineralization.

On a district scale, large gold camps are commonly associated with curvatures, flexures, and dilatational jogs along major compressional fault zones, such as the Porcupine-Destor fault in Timmins. Regional unconformities distributed along major faults or stratigraphic discontinuities are also typical of large gold camps. The presence of other deposit types in a district, such as volcanogenic massive sulphide deposits and/or magmatic nickel-copper deposits, is also commonly thought to be a favourable factor.

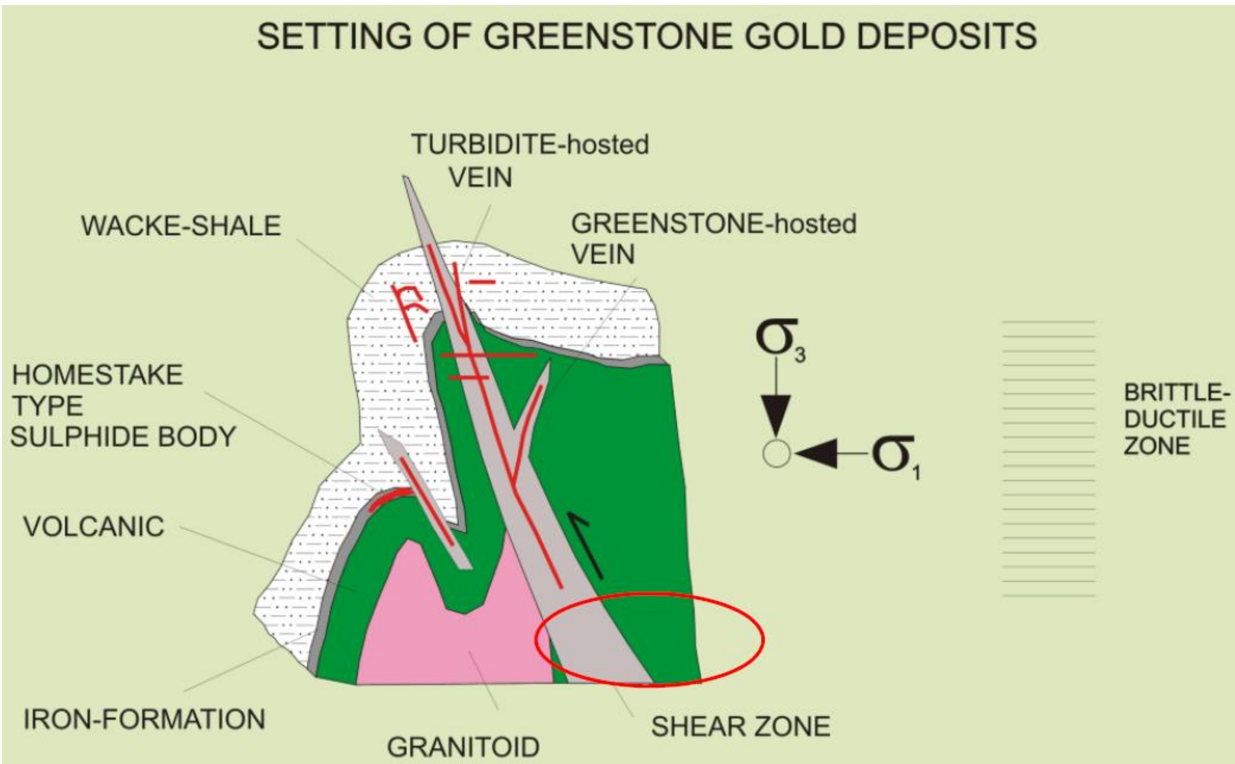

Figure 7-1: Setting of GQC Gold-Vein Deposits

Source: Dube and Gosselin, 2007

8 EXPLORATION

8.1 2020 Magnetic Gradient Geophysical Survey

In 2020, Longford Exploration, on behalf of Golden Spike, commissioned Axiom Exploration Group Ltd. (Axiom) to carry out a helicopter-borne triaxial magnetic gradiometer survey over the Camping Lake Property. The survey was flown between September 23 and September 28, 2020, and covered a total survey block of 459.34 line-km, with a traverse line spacing of 50 m and a tie line spacing of 500 m (see Table 8-1).

The final survey deliverables included all raw helicopter-borne magnetic data, including base-station data, a final levelled dataset which included all measured gradients, and the following maps (Figures 9-1 to 9-6, respectively): analytical signal (AS), measured horizontal gradient (MHG), measured vertical gradient (MVG), residual magnetic intensity (RMI), total magnetic intensity (TMI), and a line path map with base-station locations.

Table 8-1: 2020 Axiom Heliborne Magnetic Gradiometer Survey Parameters

Survey Block	Line Type	Line Spacing (m)	Flight Direction (°)	Actual Line-km Flown
Camping Lake	Traverse	50	000–180°	421.84
	Tie	500	090–270°	37.50
			Total	459.34

8.1.1 2020 Magnetic Gradient Data Acquisition Procedures

During the survey, the helicopter was maintained at a mean altitude of 53.5 m above the ground with an average survey speed of 90 km/hr. The triaxial system consists of three GSMP-35A, high-precision, potassium magnetometers mounted on a tri-directional bird that is towed by an R44 helicopter platform. The tri-directional bird was towed with a 30 m cable to ensure adequate separation between the helicopter and the magnetic survey platform.

The onboard operator was responsible for monitoring the system's integrity. The operator also maintained a detailed flight log during the survey, tracking the flight times as well as any unusual geophysical or topographic features. Magnetic data-quality checks were performed in the field and during any points which lacked sufficient georeferenced data. Any data that were excessively noisy were removed.

All post-field data processing was carried out by Axiom personnel using Geosoft Oasis montaj, Microsoft Excel software and programming languages. Base-station readings were processed and filtered to remove sudden spikes; these filtered data were then used for diurnal correction. Final maps were positioned using the WGS 1984 Datum, and the survey geodetic GPS positions were projected to map using the Universal Transverse Mercator (UTM) projection.

To the author's knowledge, the data acquisition procedures are suitable and typical for this type of geophysical survey work. The post-processing resultant map images are shown in Figures 8-1 to 8-6.

8.1.2 2020 Magnetic Gradient Survey Interpretation

The magnetic gradiometer survey identified a distinct area of highly magnetic rocks southwest of the Property simultaneously occurring along a strong east-west lineament, possibly representing a significant local structural discontinuity or fault. Both the lineament and magnetic-high coincide with mapped occurrences of tonalite, which trends in a general, easterly direction towards Ear Falls. This trend is supported by regional magnetics, as shown in Figures 8-2 and 8-3.

Areas of mapped metasedimentary rocks show a typical variable low-response magnetism over the Property. Predominantly east-trending subordinate lineaments emanate from the principal east-west lineament and appear to segment areas of high and low magnetic response within metasedimentary rocks. These subordinate lineaments may represent fault splay structures and appear to dissipate to the east away from the principal lineament.

Along the north of the survey area, a weak northwest-oriented segmentation of magnetic response can be inferred. This orientation is roughly parallel to mapped structures and magnetic lineaments known to exist north of the Property and may represent a more discrete regional structural fabric.

Generally, a favorable pattern of potential intersecting structures and magnetic discontinuities can be observed across the survey area. It is unclear at this time whether the interpreted lineaments represent fault structures; therefore, further ground truth-mapping and geophysical interpretations are required to substantiate these preliminary interpretations.

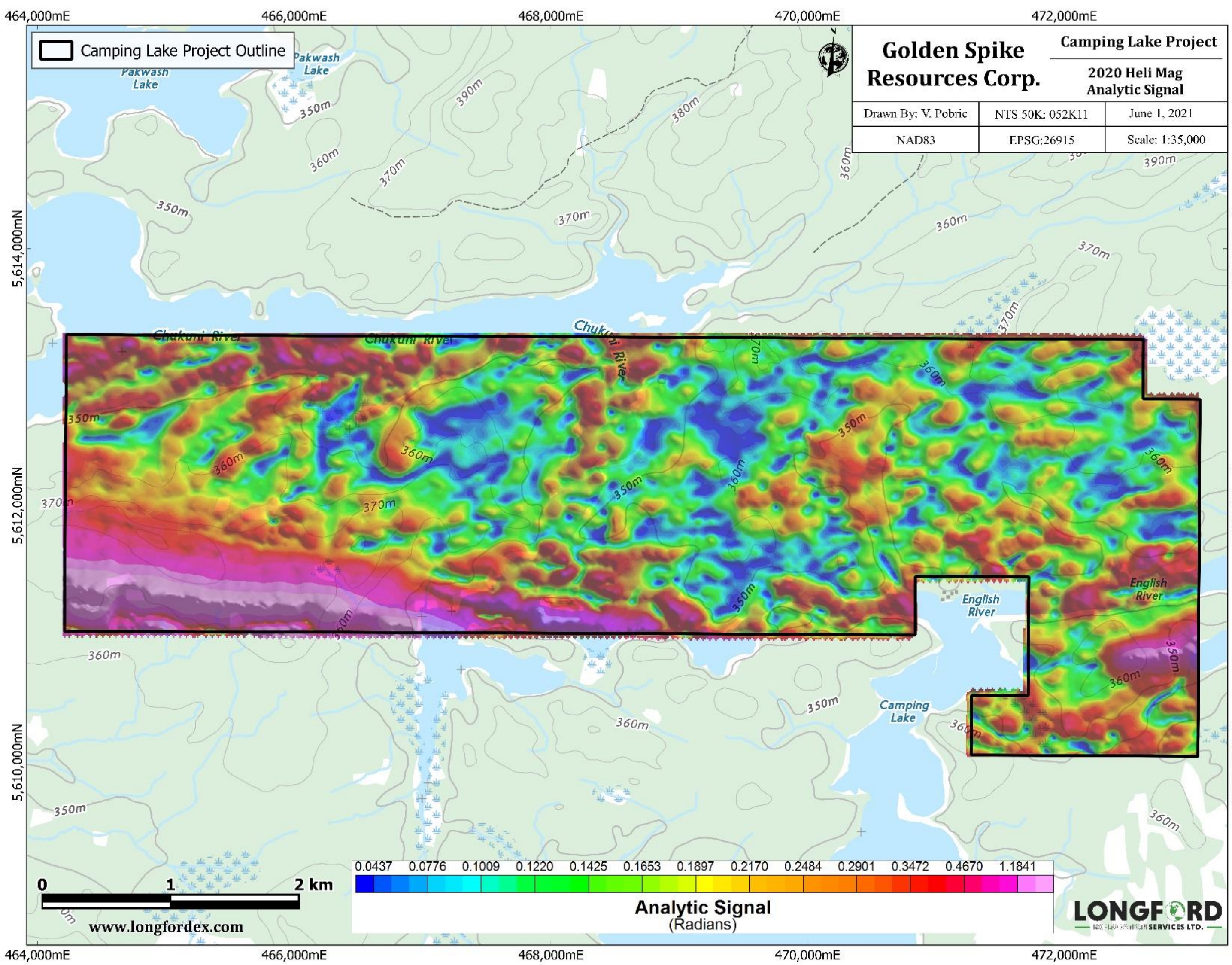

Figure 8-1: 2020 Magnetic Gradiometer Survey - Analytical Signal (Radians)

Source: Prepared by Longford Exploration Services, 2020

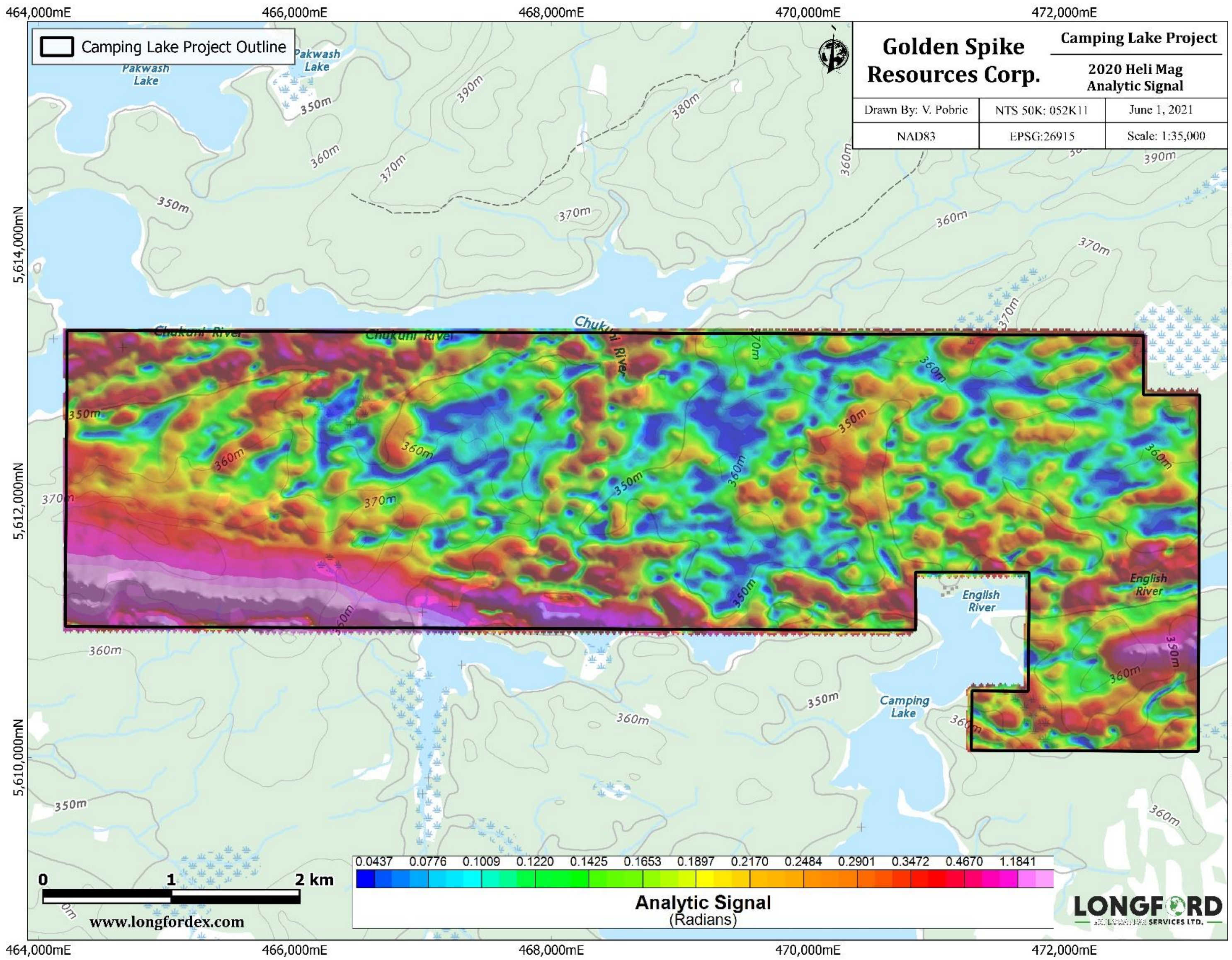

Figure 8-2: 2020 Magnetic Gradiometer Survey - Measured Horizontal Gradient (nT/m)

Source: Prepared by Longford Exploration Services, 2020

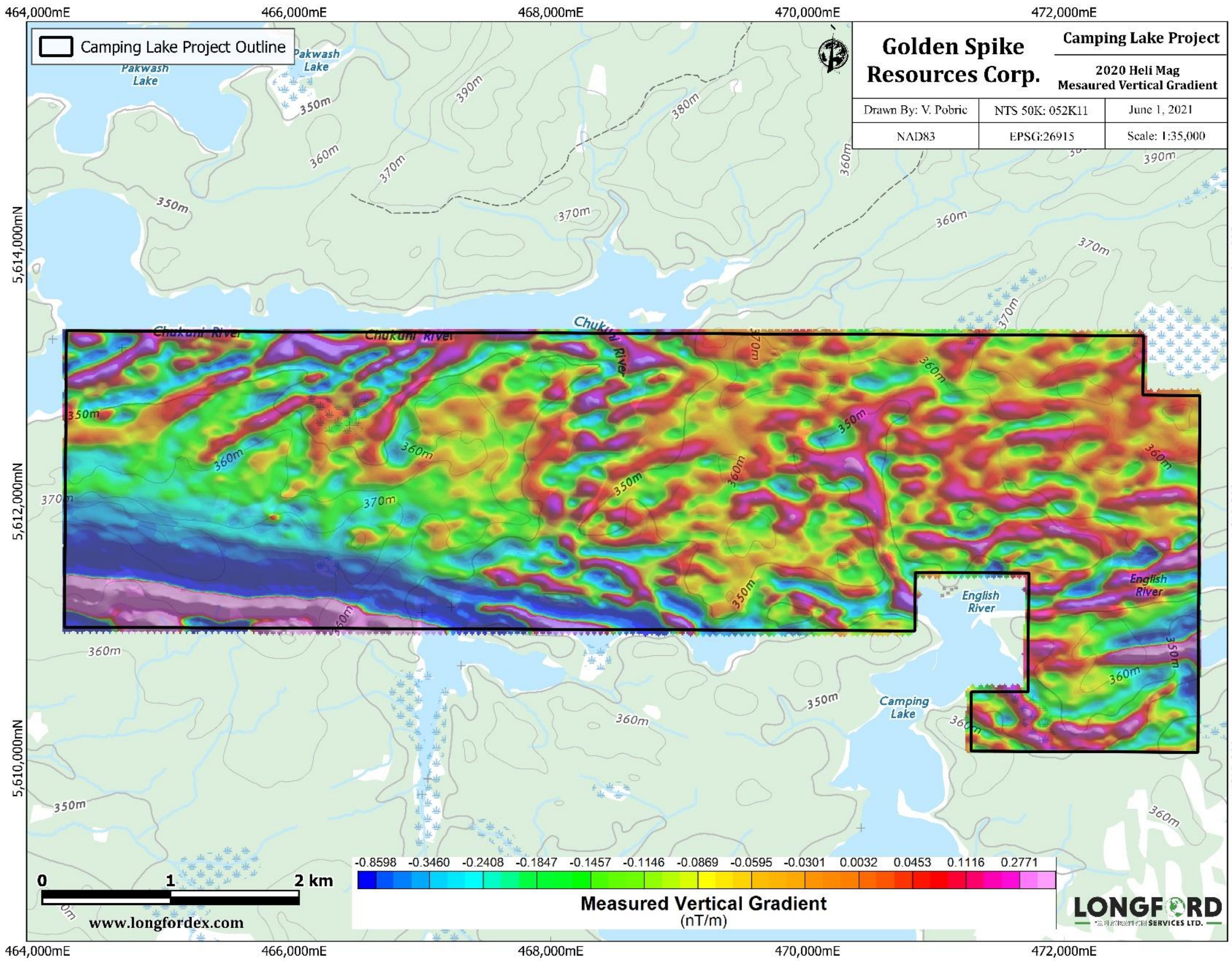

Figure 8-3: 2020 Magnetic Gradiometer Survey - Measured Vertical Gradient (nT/m)

Source: Prepared by Longford Exploration Services, 2020

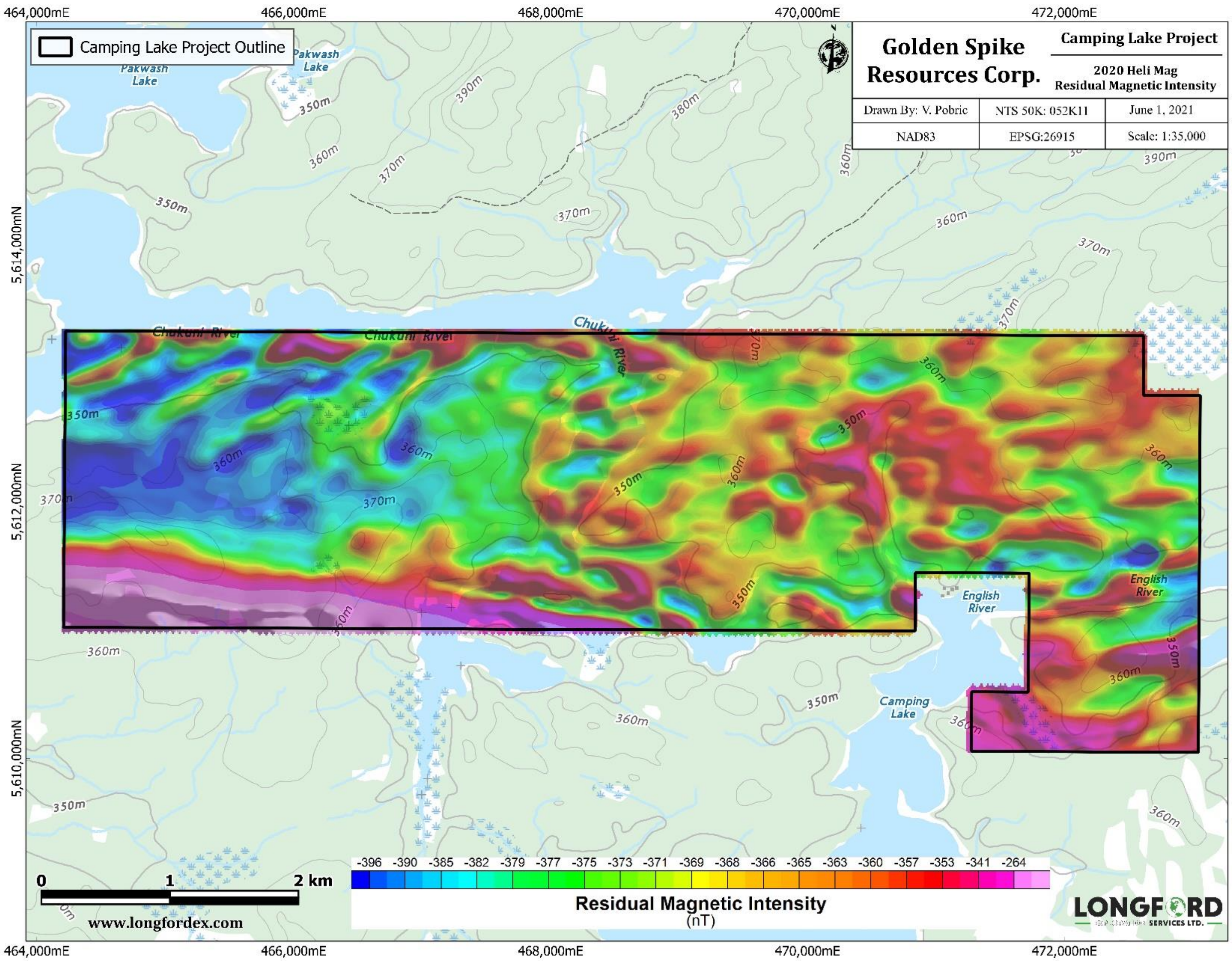

Figure 8-4: 2020 Magnetic Gradiometer Survey - Residual Magnetic Intensity (nT)

Source: Prepared by Longford Exploration Services, 2020

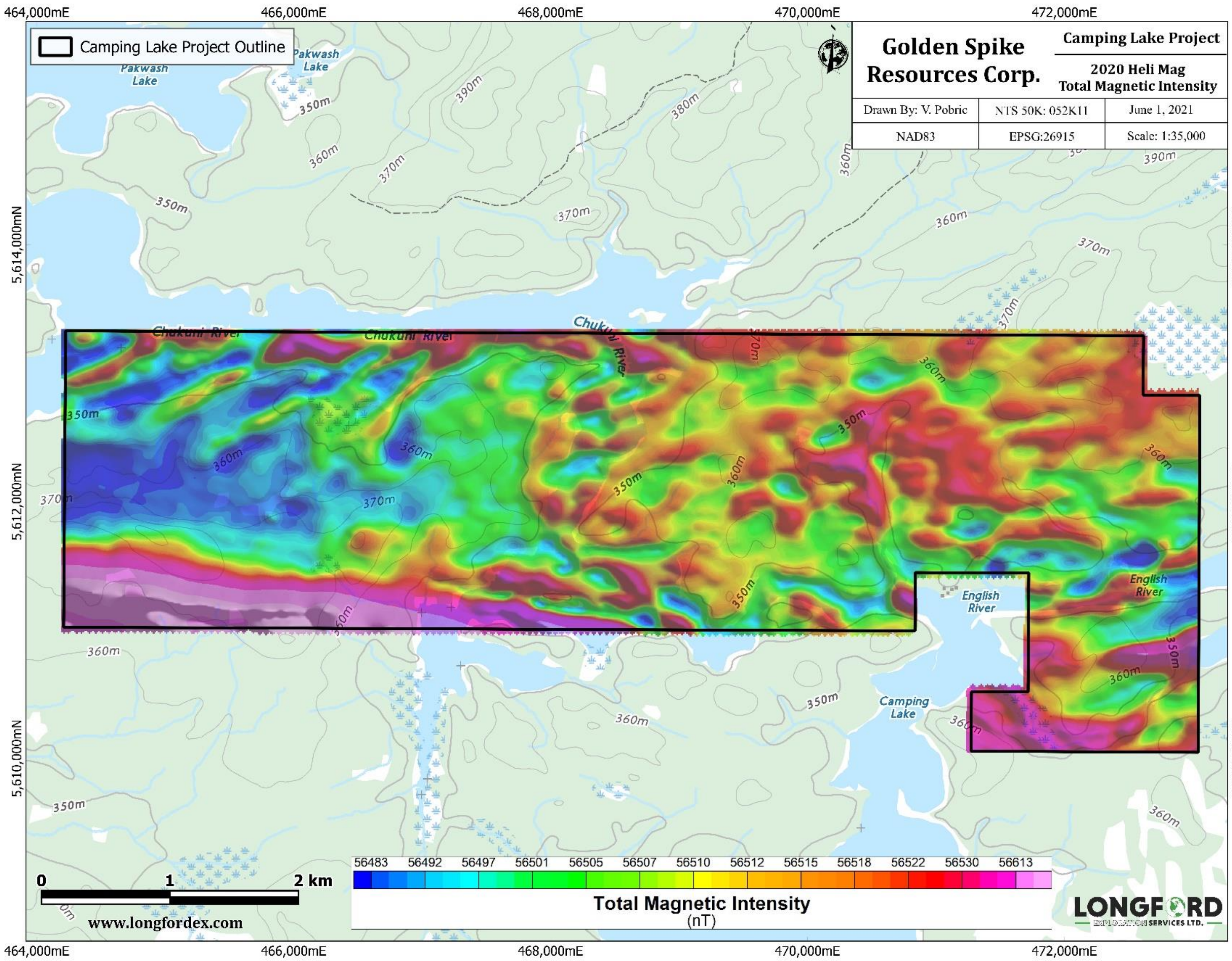

Figure 8-5: 2020 Magnetic Gradiometer Survey - Total Magnetic Intensity (nT)

Source: Prepared by Longford Exploration Services, 2020

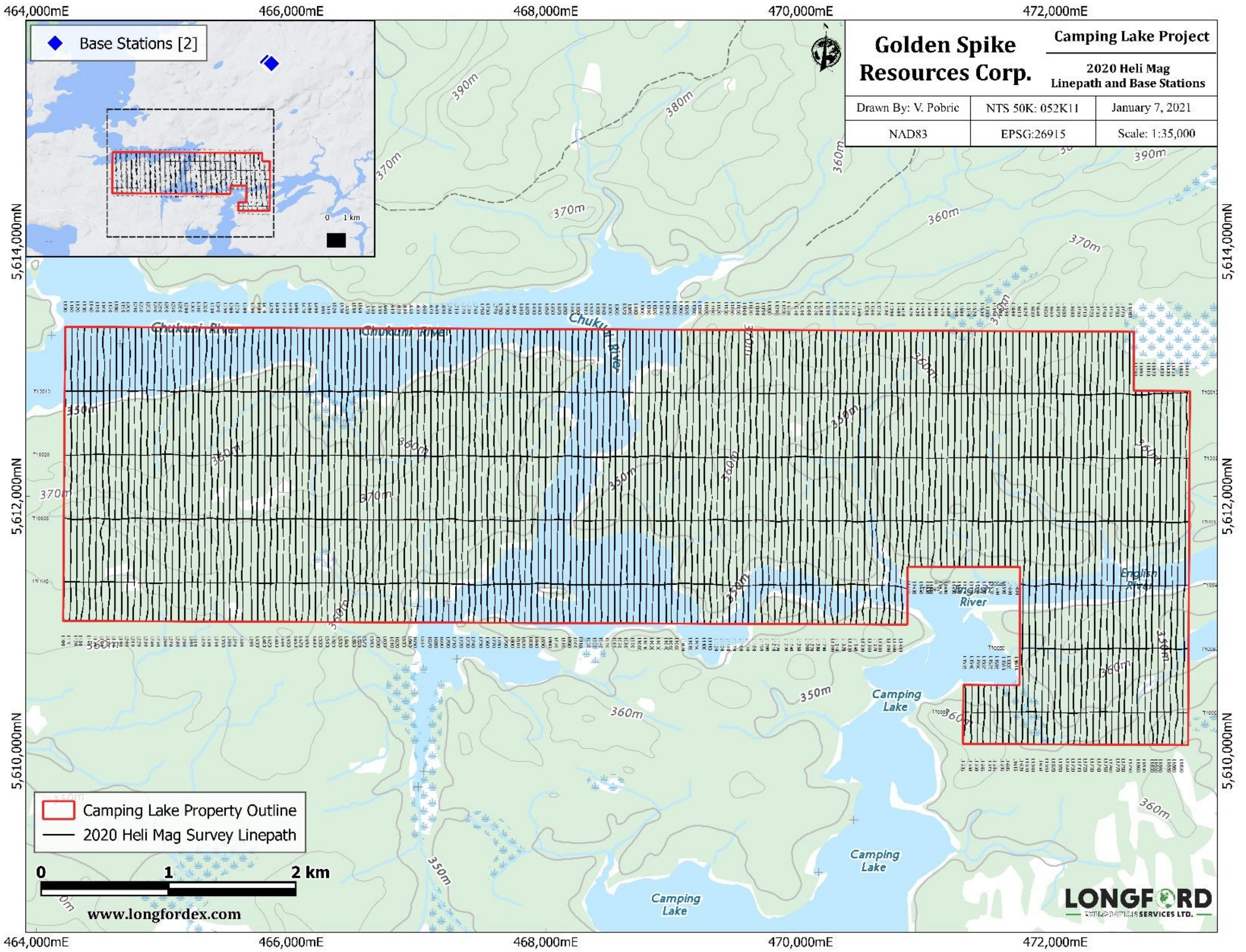

Figure 8-6: 2020 Magnetic Gradiometer Survey -Line Path Map with Base-Station Locations

Source: Prepared by Longford Exploration Services, 2020

10 SAMPLE PREPARATION, ANALYSIS, AND SECURITY

Golden Spike has not performed any field work or sample collection at the Camping Lake Property, and, therefore, there are no sample preparation, analysis, or security protocols to report.

11 ADJACENT PROPERTIES

There are no notable properties directly adjacent to the Camping Lake Property. However, notable properties in the district include PureGold Mining Inc.'s (PureGold) Red Lake Mine and Pacton Gold Inc.'s Red Lake Gold Project, Bounty Gold Corp.'s Madsen-Medicine Stone Gold Project, Great Bear Resources Ltd.'s Dixie Lake Property, and BTU Metals Corp.'s Dixie Halo Property. Only Golden Goliath Resources Ltd.'s (Golden Goliath) Kwai Property is discussed here because it is the most advanced project within close proximity to the Camping Lake Property (see Figure 11-1).

The Camping Lake Property is located 11.5 km (by air) southeast of the Golden Goliath Kwai Property. The Kwai Property straddles the suture zone between the east-west-trending North Cariboo and Winnipeg River terranes and is underlain by rocks of the Uchi subprovince in the north and the English River subprovince in the south. These subprovinces are separated by the Pakwash fault, a major east-west-trending splay off the Sydney Lake Fault Zone. The Kwai Property is underlain by mafic to intermediate volcanic rocks and fine-grained, interbedded volcaniclastic rocks in the north and psammitic to pelitic metasediments to the south. Mineralization mainly occurs within colourless to smoky grey quartz veins up to 10 cm wide and 1 to 4 m long (Cullen et al., 2019). Golden Goliath reported that two channel samples from both the north and south ends of the Kwai Trench returned 662 ppb Au and 468 ppb Au, respectively, over 1 m (Cullen et al., 2019).

The information regarding Golden Goliath's Kwai Property was derived from the technical report titled "Technical Report on the Kwai Property: Red Lake Mining Division, Northwestern Ontario" with an effective date of March 1, 2019, and filed on SEDAR under Golden Goliath's profile. The author has been unable to independently verify this information, and, therefore, this information is not necessarily indicative of the mineralization on the Camping Lake Property.

A reference for the gold grades at PureGold shown on Figure 11-1 is available on the PureGold website at https://puregoldmining.ca/our-mine/reserve-resources/ (viewed October 1, 2020).

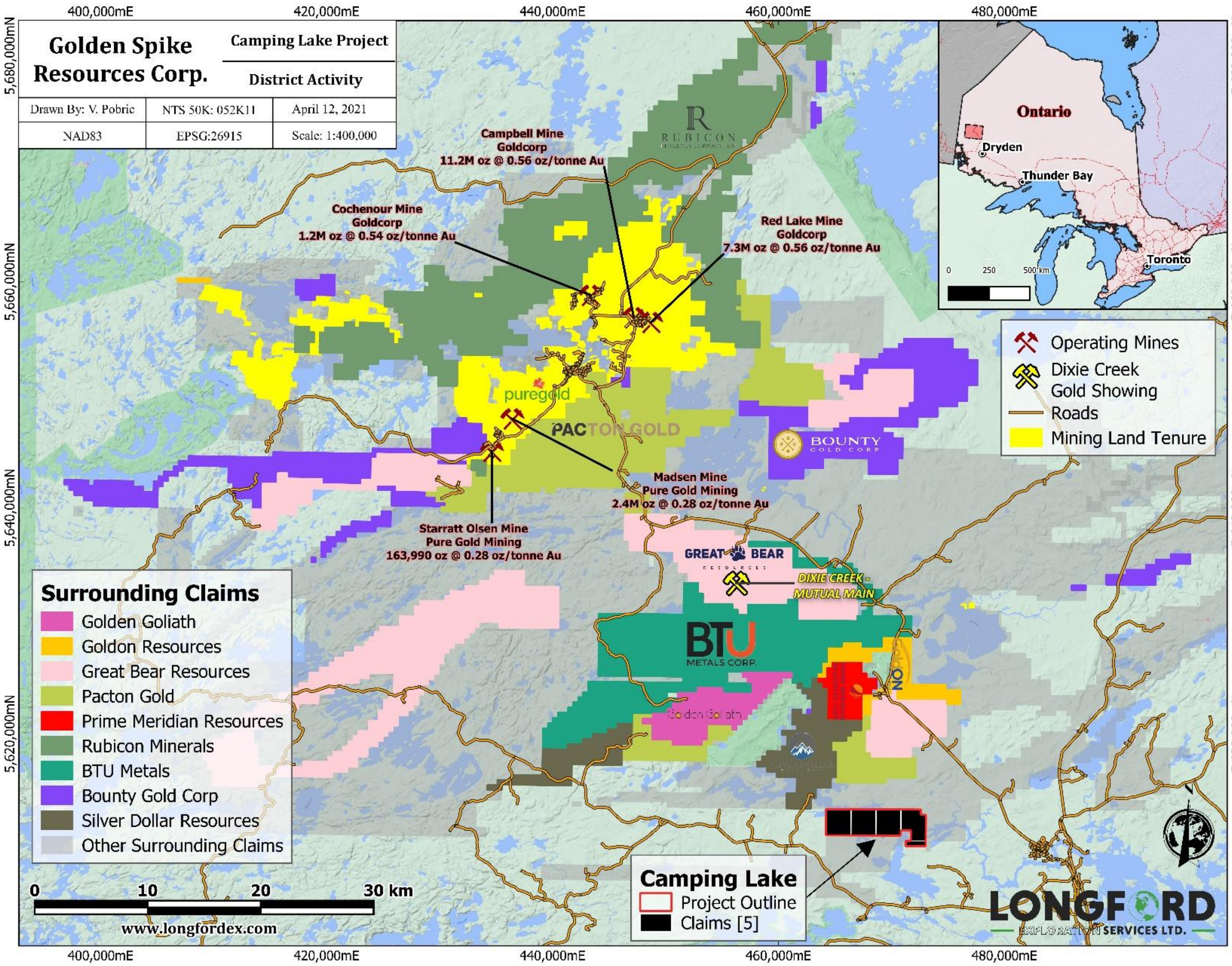

Figure 11-1: Camping Lake Property Surrounding Mineral Properties

Source: Prepared by Longford Exploration Services, 2020

12 OTHER RELEVANT DATA AND INFORMATION

The author is not aware of any other relevant information that is not already included in this report.

13 INTERPRETATION AND CONCLUSIONS

The Camping Lake Property comprises an early-stage exploration project of merit that warrants further work.

Mineral tenure appears in good standing, and access to the Property has been established to the northeast along unmaintained forestry service roads. Access is also possible via the extensive network of waterways, lakes, and rivers in the local area. The Property is currently amenable to seasonal (summertime) exploration, and year-round operations are possible for future exploration work on the Property.

Limited historical work has been completed within the Property bounds; but preliminary findings by previous operators indicate a potential to deliver favourable exploration results. To date, geochemical sampling is lacking, and, therefore, drilling targets have not been identified yet. Systematic mineral exploration is required across the Property to identify any mineral potential that may be hosted on the Property.

The Camping Lake Property is situated in an economically and socio-politically stable area, and there are currently no known factors that would prevent further exploration or any future potential project development. However, as this is still at an early-stage grass-roots phase of exploration, there is always the risk that the proposed work may not result in the discovery of an economically viable deposit. The author can attest that there are no significant, foreseeable risks or uncertainties to the Property's potential economic viability or continued viability directly arising from the quality of the data provided within this technical report.

14 RECOMMENDATIONS

14.1 Proposed Exploration Programs

Based on the evaluation of available data, the author recommends a multi-phase exploration program for the Camping Lake Property.

Phase 1 investigations should include the following components:

- Field investigations should commence with a till and bedrock sampling program (Figure 14-1) using a worker-portable drill rig and the collection of 116 systematic till samples on a 500 m × 500 m grid spacing. If possible, the drilling should be advanced below the top of bedrock to develop a coincident sampling of the underlying bedrock.
- Reconnaissance structural mapping, prospecting, and rock geochemical sampling from accessible rock outcroppings should also be completed.

This base-level coverage should provide the best opportunity to detect any anomalous gold in the till or underlying bedrock. This method will also help trace the origins of the geochemical anomalies up-ice, and the bedrock samples may confirm the source of any mineralization or provide other indications of potential mineralization.

The site work would likely be based out of a remote campsite on or adjacent to the Property or lodging could be offsite; crew and equipment can partially mobilize onto the Property using the 4 × 4 truck-accessible forestry service road. Any access to outlying parts of the Property will require mobilization by boat or canoe to facilitate sampling proximal to the waterways that cross over the site. Some parts of the Property may need to be accessed by helicopter until appropriate site-access roads can be permitted and constructed. Future drilling plans should include wintertime exploration when waterways might provide easier access.

Phase 2 recommendations are conditional on the results of Phase 1, and include the following:

- Follow up field investigations on favourable results from Phase 1 and should include infill till sampling with program of similar scope to Phase 1 field explorations.
- Concurrent trenching may be completed over selected target areas with small portable excavator to complete trenching for enhanced target definition. A two man (operator and sampler), 7-10-day program may feasibly be able to complete up to 10 shallow trenches each up to 50m long for a total of 500 m.
- Where targets of merit are identified from geochemistry and geophysics further Ground geophysics is recommended, this may potentially include ground magnetics, VLF, or IP, with specific techniques determined by the Phase 1 results.

14.2 Preliminary Budget

A preliminary budget for future exploration work on the Camping Lake Property is summarized in Table 14-1, and a more detailed breakdown of Phase 1 work is provided in Table 14-2.

Table 14-1: Preliminary Proposed Three-Phase Summary Exploration Budget

Year/Phase	Description	Estimated Cost (CAD$)
1	Exploration program (10-day 4-person) • Base of till / top of bedrock sampling • Prospecting, mapping and sampling • Site visit (QP/Senior Project Manager) • Geochemical analysis and QA/QC • Technical reporting requirements	114,179
2	Exploration program (TBD) • Follow up field exploration – minimum allowance • Ground geophysics - Allowance • Trenching and till sampling - Allowance	100,000 50,000 200,000
	GRAND TOTAL	**$464,179**

Table 14-2: Phase 1 Proposed Detailed Exploration Budget

DATE: May 28, 2021

LONGFORD EXPLORATION SERVICES LTD.

SEND TO:
Golden Spike Resources Corp.
94 Linden Court
Port Moody, BC
V3H 5C1

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

2021 Camping Lake Proposal-Phase 1

Personnel		Days	Rate	Line Total
Project Manager -		10	$ 800.00	$ 8,000.00
Geologist -		10	$ 700.00	$ 7,000.00
Junior Geologist		10	$ 600.00	$ 6,000.00
Field Assistant / Medic -		10	$ 500.00	$ 5,000.00
P.Geo -	Site visit	2	$ 1,000.00	$ 2,000.00
	total person-days	42	**Cat. Total**	**$ 28,000.00**
Food and Lodging		Units	Rate	Line Total
Food and Groceries	per diem	42	$ 75.00	$ 3,150.00
Lodging	En route to/from field	10	$ 125.00	$ 1,250.00
Lodging	Wall tent camp rental OR Pascagama	32	$ 125.00	$ 4,000.00
			Cat. Total	**$ 8,400.00**
Transportation		Units/Day	Unit Price	Line Total
Truck	1 ton with safety and recovery gear	7	$ 140.00	$ 980.00
Trailer	18' 7000lb covered trailer	7	$ 50.00	$ 350.00
Fuel	per km for truck	2500	$ 0.65	$ 1,625.00
Mob/demob	YVR-YVO inc. flights, taxis, baggage	5	$ 1,500.00	$ 7,500.00
Local outfitters	on site boat/trail transportation	10	$ 500.00	$ 5,000.00
Helicopter	Allowance (site reconnaissance & set outs)	1	$ 5,000.00	$ 5,000.00
			Cat. Total	**$ 20,455.00**
Equipment Rentals		Units	Unit Price	Line Total
Worker-Portable Drill Rig	X model	10	$ 500.00	$ 5,000.00
Canoe kit	x 2	14	$ 40.00	$ 560.00
Electronics Kit	Radios, Sat phones, GPS, per man day	42	$ 30.00	$ 1,260.00
Chain Saw	inc. fuel, oil, PPE x 2	20	$ 25.00	$ 500.00
			Cat. Total	**$ 7,320.00**
Consumable		Units	Unit Price	Line Total
Field / Office Consumables	per worker day, buckets, lids, poly bags, markers, batteries, standards, notebooks, sieves	42	$ 25.00	$ 1,050.00
			Cat. Total	**$ 1,050.00**
Analytical		Units	Unit Price	Line Total
Analysis - Rock	Gold ICP-MS, Bureau Veritas	75	$ 44.00	$ 3,300.00
Analysis - Till	Gold ICP-MS, Bureau Veritas	100	$ 44.00	$ 4,400.00
Analysis - Till	Au grain count + classification	100	$ 200.00	$ 20,000.00
Sample Shipping	X pallets to Ottawa	3	$ 750.00	$ 2,250.00
			Cat. Total	**$ 29,950.00**
Pre/Post Field		Units	Unit Price	Line Total
Preparation	Data comp, detailed proposal, permitting	1	$ 5,000.00	$ 5,000.00
Final report for work filing	Results compilation, GIS and map making, final report writing and signoff	1	$ 10,000.00	$ 10,000.00
			Cat. Total	**$ 15,000.00**
			Estimated Sub Total	**$ 110,175.00**
			Management 15%	$ 16,526.25
			Contingency 15%	$ 19,005.19
			Sub Total	**$ 145,706.44**
			GST 5%	$ 7,285.32
			Total	**$ 152,991.76**

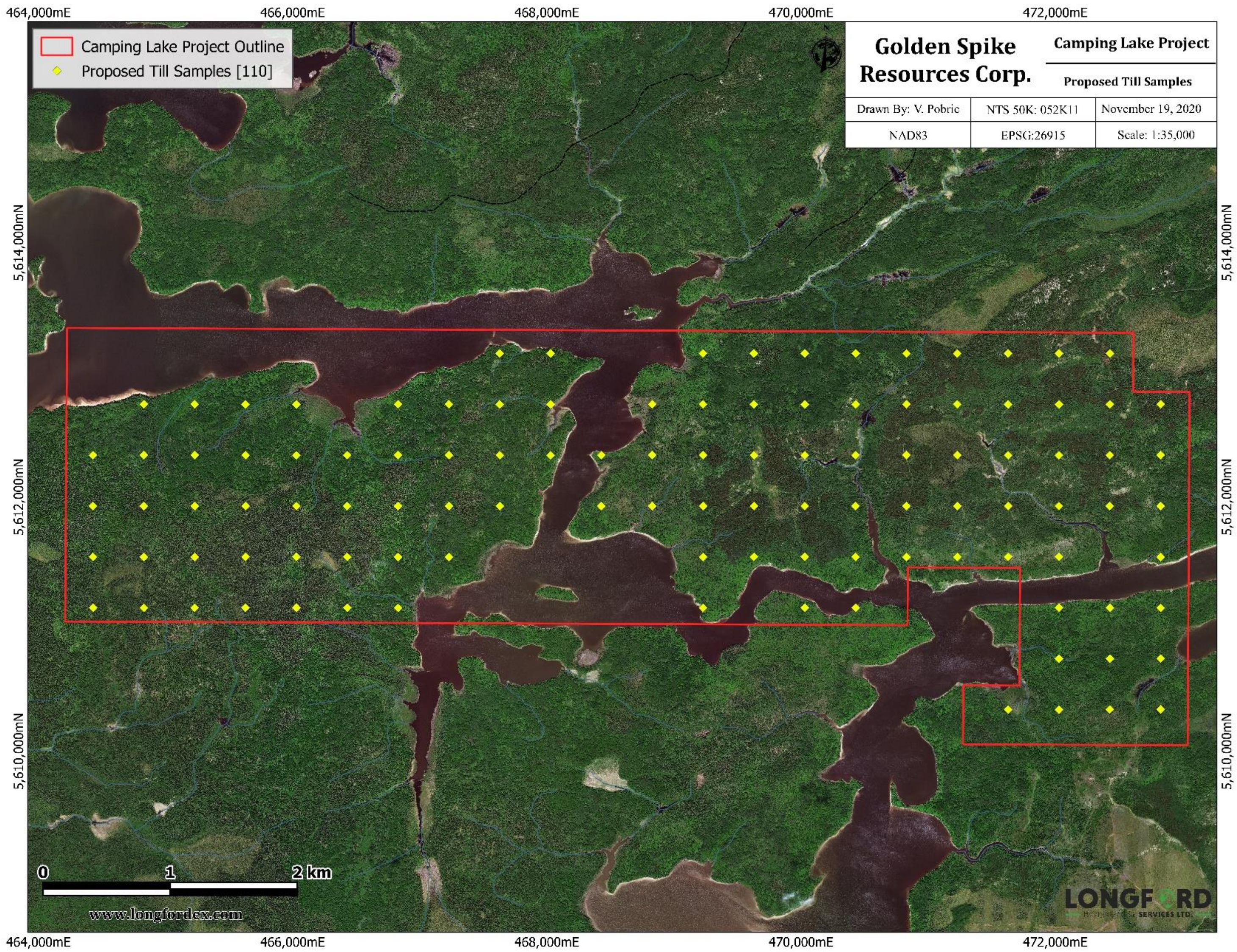

Figure 14-1: Camping Lake Property Proposed Till and Bedrock Sampling Layout

Source: Prepared by Longford Exploration Services, 2020

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16 STATEMENT OF QUALIFICATIONS

16.1 Sarah Ryan

I, Sarah Ryan, of 675-355 Burrard Street, Vancouver, British Columbia, 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: "Assessment Report on the Camping Lake Property, Ontario, Canada", effective date May 28, 2021.

May 28 2021

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

17 HELI-BORNE TRIAXIAL MAGNETIC GRADIOMETER SURVEY REPORT

Helicopter-borne Triaxial Magnetic Gradiometer Survey

Camping Lake, Ontario, Canada

LONGFORD EXPLORATION

Prepared for:

Longford Exploration

Attention To: James Rogers

Prepared By:

Axiom Exploration Group Ltd.

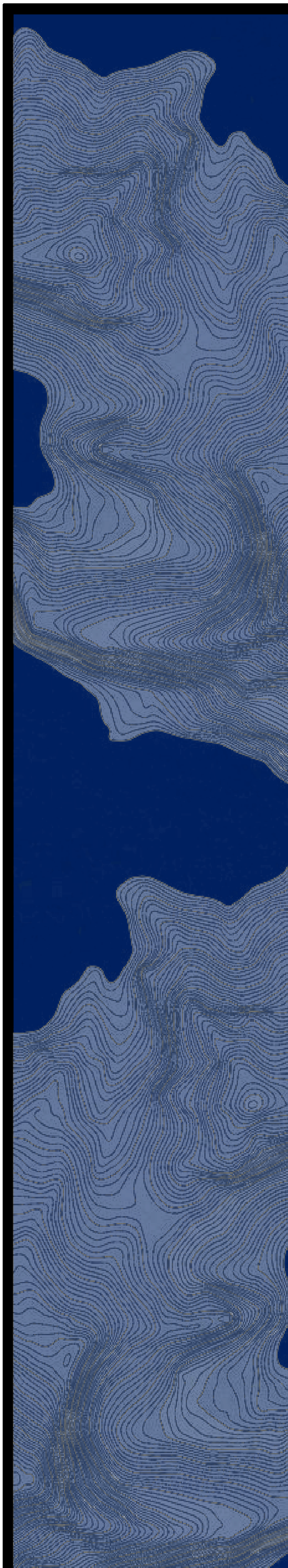
Suite 101 - 3239 Faithfull Avenue
Saskatoon, SK, Canada

AXIOM EXPLORATION

Project #20.5038.LEX

Peter Dueck, MBA., P.Geo.
Chase Wood, M.Sc., G.I.T.
Tanya Coetzee, B.Sc., G.I.T.

October 7, 2020



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AXIOM

1. INTRODUCTION

From September 23rd to September 28th, 2020 Axiom Exploration Group Ltd. ('Axiom') carried out a helicopter-borne triaxial magnetic gradiometer survey over the Camping Lake Project. The total survey coverage across the block consisted of 459.34 line-kms with a traverse line spacing of 50m and tie line spacing of 500m.

The triaxial system consists of three GSMP-35A high precision potassium magnetometers mounted on a tri-directional bird that is towed by a R44 helicopter platform. The tri-directional bird was towed with a 100' cable to ensure adequate separation between the helicopter and the magnetic survey platform.

Quality control and quality assurance were completed daily during the acquisition phase to ensure all field data collected was at a high standard. Final processing and leveling were completed post acquisition

Final deliverables from the survey include:

- All raw helicopter-borne magnetic data including base station data
- A final leveled dataset which includes all measured gradients
- Map products including:

  - Total Magnetic Intensity (TMI) Map
  - Residual Magnetic Intensity (RMI) Map
  - Analytic Signal (AS) Map
  - Measured Vertical Gradient (MVG) Map
  - Measured Horizontal Gradient (MHG) Map
  - Line Path Map with Base Stations Locations

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

1.1. LOCATION & ACCESS

The general location area is the western area of the province of Ontario, Canada (Figure 1). The immediate project areas are centered approximately 50km SSE of Red Lake, Ontario. The property was accessed by helicopter from the abandoned airstrip close to Pakwash Lake (Figure 2).

- NTS Sheet(s): Maclellan Block – 052K/12, 052K/11

Figure 1: General Location Area[1]

[1] © 2000-2009 Her Majesty the Queen in Right of Canada, Natural Resources Canada

Figure 2: Project Location as shown on Google Earth

2. PROJECT SPECIFICS

Axiom works in partnership with Access Helicopters to offer our triaxial helicopter-borne geophysical surveys. Access Helicopters has an extensive aviation background specializing in precision long line.

Personnel and support staff that were directly involved in this project including the data processing and QA/QC are listed in Table 1.

Table 1: Project Personnel & Support Staff

Pilot-In-Command (PIC)	Julian Gfeller
Secondary Pilot	Stephanie Wilson
Geophysicist	Peter Dueck
Project Manager	Stephanie Wilson
Supporting Staff	Jeff Scott, Peter Dueck, Tanya Coetzee

For the duration of the project, the crew stayed at the Pakwash Lodge. Each morning the crew would travel to the abandoned airstrip to ensure that the triaxial magnetometer was operating as expected. Ferry's to the survey block was relatively short.

2.1. TOPOGRAPHICAL RELIEF & CULTURAL FEATURES

The main portion of the survey area has moderate topographical relief as shown in Figure 3. The largest topographic deviations are located at the edges of the local lakes. The mean bird height for the survey block is 53.5m AGL, while the mean bird height for the Maclellan survey block is 53.5m AGL.

There were limited cultural features across the grid, but there is a built-up area is the "square cut-out" section of the block. For this reason, some minor flight line deviations were planned, as well as slight increases in altitude. The entire survey block was able to be collected safely and effectively even throughout this cultural area. Upon close examination of the data, the powerlines were not evident and cultural artifacts in the data are at a minimum.

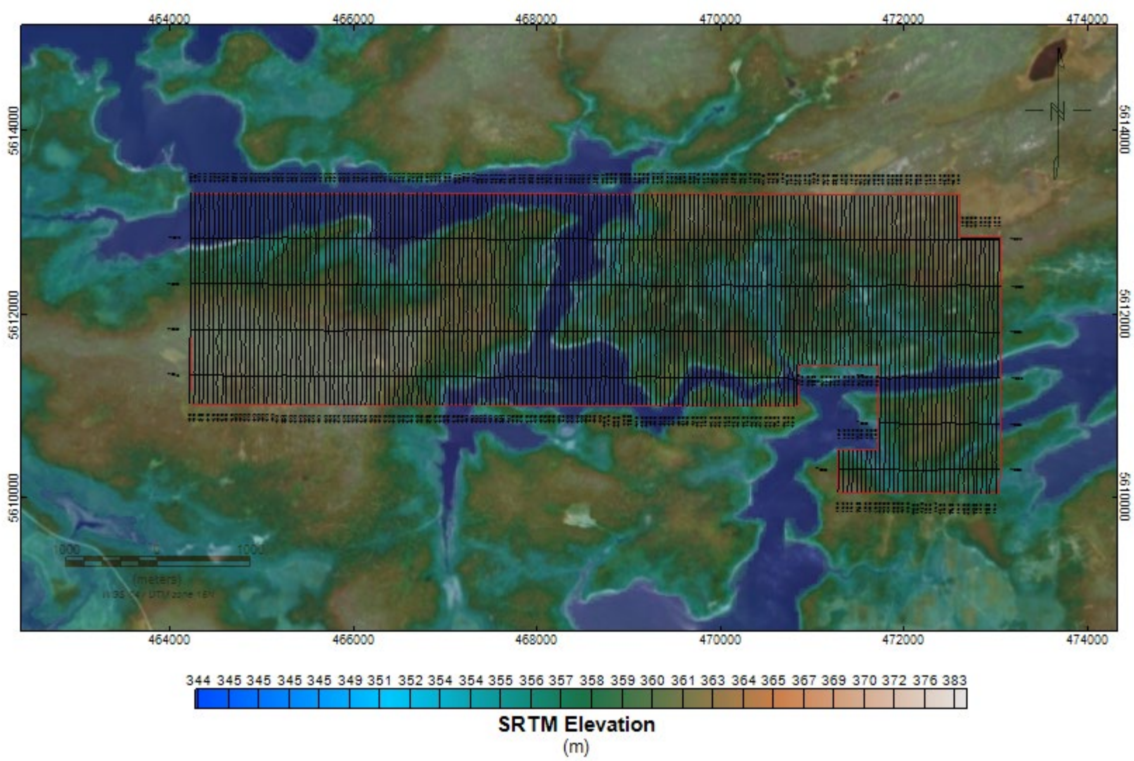

Figure 3: SRTM Topography (1 Arc-Second)

2.2. SURVEY PARAMETERS

From September 23rd to September 28th, 2020 Axiom Exploration Group Ltd. ('Axiom') carried out a helicopter-borne triaxial magnetic gradiometer survey over the Camping Lake Project. The total survey coverage across the block consisted of 459.34 line-kms with a traverse line spacing of 50m and tie line spacing of 500m.

The triaxial system consists of three GSMP-35A high precision potassium magnetometers mounted on a tri-directional bird that is towed by a R44 helicopter platform. The tri-directional bird was towed with a 100' cable to ensure adequate separation between the helicopter and the magnetic survey platform.

Further survey parameters for each individual block can be found in Table 2 and **Error! Reference source not found.**.

Table 2: Survey Parameters

Survey Block	Line Type	Line Spacing (m)	Flight Direction (Degrees)	Actual Line-kms Flown
Camping Lake	Traverse	50	000° - 180°	*421.84*
	Tie	500	090° - 270°	*37.50*
			Total:	**459.34**

The final survey was defined by the boundary coordinates shown in Table 3.

Table 3: Survey Area Coordinates

WGS 84 UTM Zone 15N	
Easting	***Northing***
464225	5613331
472615	5613293
472617	5612830
473056	5612829
473043	5610049
471277	5610060
471276	5610522
471719	5610521
471723	5611445
470841	5611450
470836	5610997
464210	5611023
464225	5613331

2.3. Survey Equipment

Base Station

Two GEM's GSM-19 (Overhauser) magnetometers were used for this survey in their "Base" mode of operations. Each magnetometer is equipped with a high-resolution (.07m) integrated GPS. Each base station was recording at 3 second intervals and was used to do the final diurnal corrections.

Location information for the base stations is included in Table 4 while instrument specifications are included in Table 5.

Table 4: Base Station Information

Base Station	Easting (m)	Northing (m)	Coordinate System
#1 - 8062827	472910	5618383	WGS84 UTM Zone 15N
#2 - 6031851	4733136	5618300	WGS84 UTM Zone 15N

Table 5: Base Station Specifications

Sensitivity	0.022 nT @ 1 reading per sec. 0.05 nT @ 1 reading every 4 sec.	**Gradient Tolerance**	Over 10,000 nT/m
		Dynamic Range	20,000 to 120,000 nT
Resolution	0.01 nT	**Absolute Accuracy**	± 0.1 nT @ 1 Hz

Figure 4: Base Station Setup

2.4. Towed Triaxial Magnetometer System

The triaxial system consists of three GSMP-35U high precision potassium magnetometers mounted on a tri-directional bird that is towed by a R44 helicopter platform. The tri-directional bird was towed with a 100’ cable to ensure adequate separation between the helicopter and the magnetic survey platform. Technical specifications of the GSMP-35U are included in Table 6.

Table 6: GSMP-35U Specifications

Sensitivity	0.0002 nT @ 1 Hz	Gradient Tolerance	Over 50,000 nT/m
Heading Error	± 0.05 nT	Dynamic Range	15,000 to 120,000 nT
Resolution	0.001 nT	Absolute Accuracy	± 0.1 nT @ 1 Hz

The triaxial system includes a GPS for recording measurement location, radar altimeter for recording measurement height as well as an Inertial Measurement Unit (‘IMU’) for recording the roll, pitch, and yaw of the unit in flight. The sensor was set to record at a rate of 10 Hz.

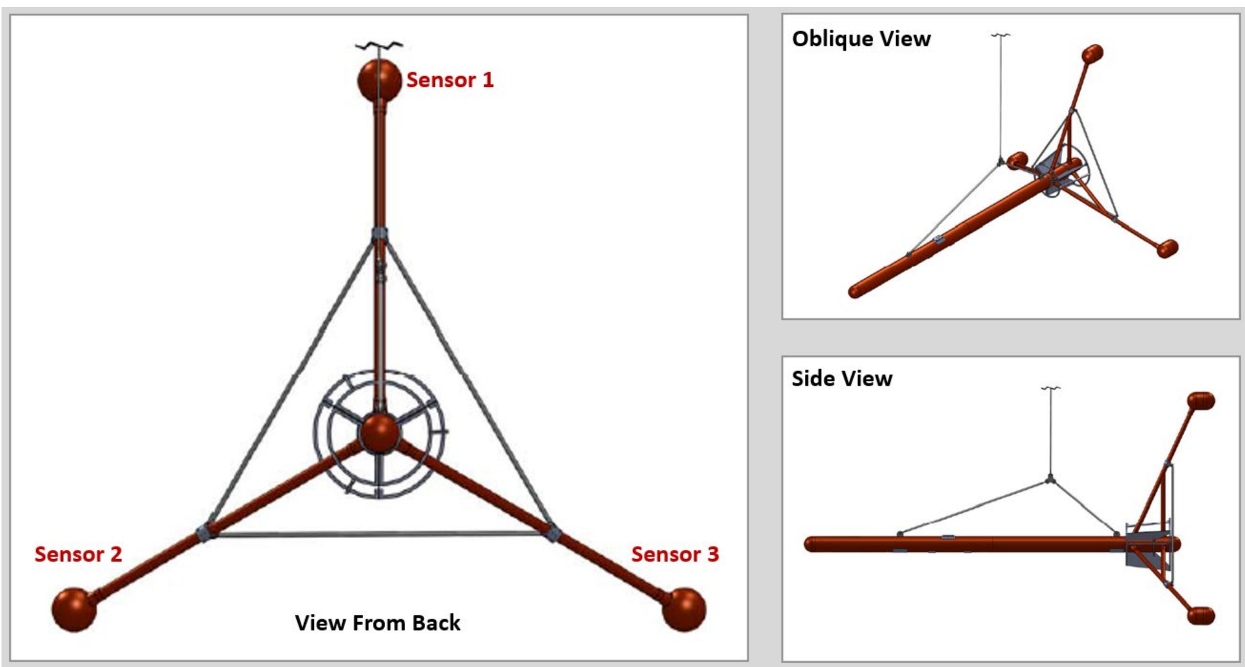

Figure 5: Triaxial System Configuration

The GEM Data Acquisition Software (GEM DAS) uses a Panasonic Tough-Book PC as data acquisition system to configure, control, store, and display data in real-time. Both the GEM DAS and GEMLink software utilities use RS232 interface to communicate with the GEM Systems Potassium Magnetometer(s) via internal bird Multiplexer (MUX). The MUX has internal flash memory to store the survey data in real-time. The GEM DAS software allows entry of survey information, personnel and equipment involved which will be saved to the header of each saved file.

2.5. SURVEY AIRCRAFT

A four-seat Robinson R44 Raven II helicopter was used for the survey. These helicopters are high performing, reliable and easy to maintain. R44s have a two-bladed rotor system, T-bar cyclic and the latest in Robinson technology including streamlined instrument panels and crashworthy bladder fuel tanks.

The R44's aerodynamic fuselage optimizes airspeed and fuel economy. Hydraulic controls eliminate feedback forces and provide responsive handling. A low tail-rotor tip speed, newly designed muffler and large cambered tail reduce flyover noise.

The R44 Raven II helicopter are powered by Lycoming's IO-540 fuel injected engine. Additional specifications for the R44 Raven II are shown below in Table 7.

Table 7: Helicopter Specifications

Aircraft Type	R44 Raven II Helicopter
Registration	CGKZV
Range	2.5 hrs
Survey Speed	90 km/hr (Terrain Dependent)
Fuel Type	100 LL
Fuel Consumption	56 L/hr

Unlike other external load survey systems in the industry, because Axiom Exploration utilizes a radar altimeter on the bird instead of the helicopter, this allows the pilot a precise altitude of the bird. Figure 6 shows the complete helicopter and triaxial setup.

Figure 6: Helicopter & Triaxial Surveying Setup

2.6. ON-BOARD GPS EQUIPMENT

The Satloc Bantam provides state-of-the-art GPS guidance for aerial applicators. The Satloc Bantam complete system includes CPU with 2 USB drives, a 9″ touch screen, A21 antenna and external L7 lightbar. Satloc AirTrac™ guidance software displays a real-time moving map that provides visual guidance and shows key features such as swaths covered, field boundaries, skips and overlaps, mark points, waypoints, and polygons.

The onboard GPS is collecting information separate from the triaxial system. This GPS data is cross referenced for quality control and redundancy. The accurate on-board GPS equipment, designed specifically for aviation, allows us to survey precise patterns, reducing fuel and flight time.

Figure 7: Typical Helicopter Configuration

3. DATA PROCESSING

In general, all typical magnetic QA/QC and data processing techniques have been applied to the data. All post-field data processing was carried out using Geosoft Oasis Montaj and Microsoft Excel software/ programing languages. Presentation of final maps used QGIS and/or Geosoft's Oasis Montaj. Results were gridded using minimum curvature method and a grid cell size of approximately 1/3 of flight line spacing.

The geophysical images accompanying this report are positioned using the WGS 1984 Datum. The survey geodetic GPS positions have been projected to map using the Universal Transverse Mercator (UTM) projection.

The magnetic data was first quality checked in the field and any points lacking sufficient georeferenced data or which were excessively noisy were removed. The resulting data was processed as mosaics throughout the survey area as data was collected daily. A combination of all data formed the finalized results including lines that were re-flown due to weak, noisy, or insufficient magnetic signal. The corrected profile data were interpolated into a grid using the minimum curvature technique with a grid size of approximately 1/3 of flight line spacing. All final maps have a normalized color interval.

The base station readings were initially processed and filtered to remove sudden spikes. The filtered data were then used for diurnal correction. This correction removes all time-varying magnetic errors related to the diurnal variation of the earth's magnetic field.

Lag error results when the survey positioning system location is significantly different from the physical sensor location. A lag correction simply adjusts the time base of the physical readings to match the positioning data. Because the GPS is located at the front of the towed array, only a minor lag correction needs to be applied (typically 1-2 fiducials).

Heading errors are related to the magnetic field of the survey platform, which varies as a function of survey direction. A heading correction corrects data for systematic shifts in the data that change with the survey direction. Due to the low heading error of the GSMP-35U magnetometers, heading biases were negligible. For this reason, no heading correction needed to be applied

After finishing interpolation, initial processing may subject the data to a non-linear filter with a wavelength limit of 3-4 fiducials and tolerance of 0.001. This filter removes extra high frequency features which mostly occur because the sensor is in the dead zone. This usually occurs due to sudden changes in sensor orientation, effect of ferro-metallic objects, or the influence of weather conditions on the sensor. This filter smooths out noise and high frequency features. This filtering is only applied if required.

After leveling the data using the tie lines, to mitigate the corrugation effect associated with gaps between the data lines, the data was micro-leveled. This task was done by applying a high pass butterworth filter with the threshold of four times the line spacing followed by a directional cosine filter perpendicular to the line direction. The resulted noise channel was then subtracted from the leveled values to microlevel the data. All levelling was undertaken using Geosoft's Oasis Montaj software. The finalized result of the leveling and micro-leveling processes is the final deliverable that should be used for any interpretation or integration techniques moving forward.

4. MAGNETIC MAPS & DERIVED DATA PRODUCTS

4.1. TOTAL MAGNETIC FIELD

Based on the flight lines of the drone, the total magnetic field map grid was created by interpolating the filtered magnetic data. The Total Magnetic Field (TMF) data collected in flight was profiled on screen along with a fourth difference channel calculated from the TMF. Spikes were removed manually where indicated by the fourth difference. The purpose of this map is to highlight geological structures by their magnetic signature or their magnetic contrast with their surroundings.

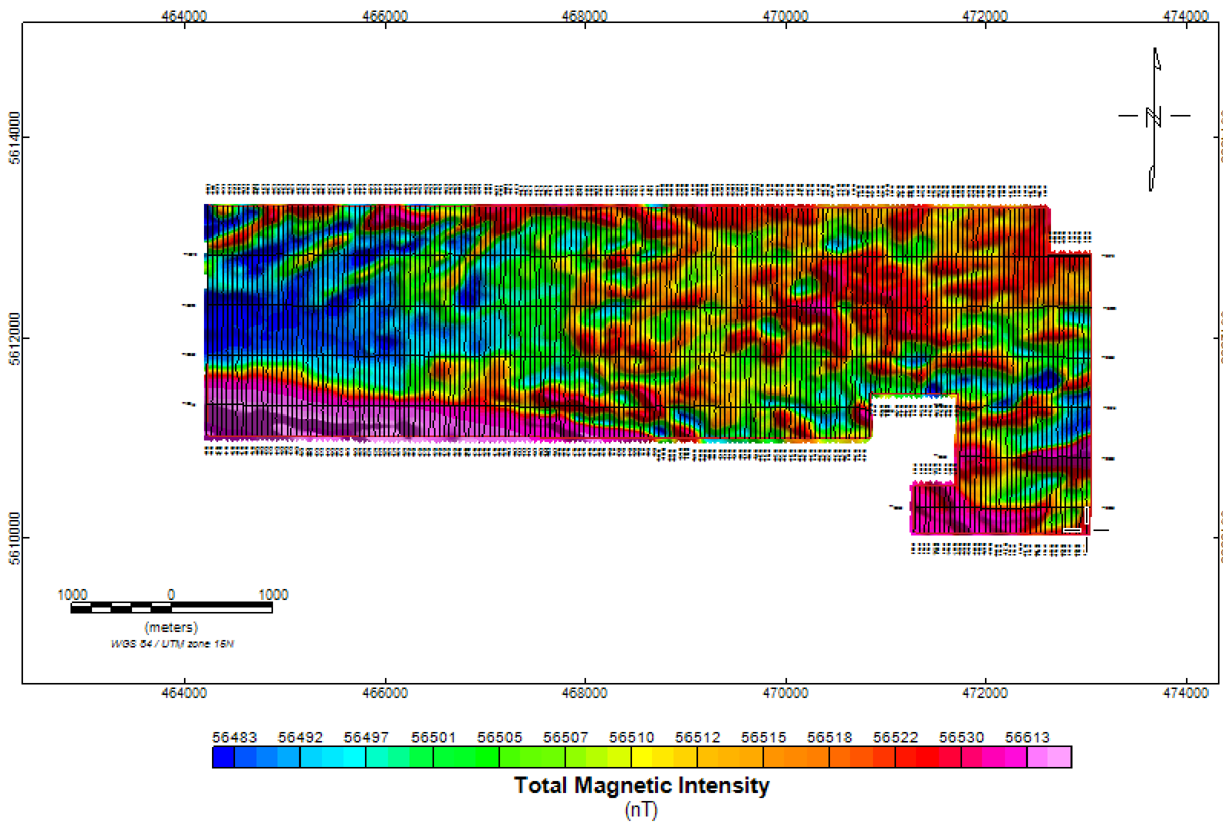

Figure 8: Total Magnetic Intensity (TMI)

4.2. RESIDUAL MAGNETIC INTENSITY

The residual magnetic intensity (RMI) was calculated from the total magnetic field, the diurnal, and the regional magnetic field. The total magnetic field was measured, the diurnal was measured from the ground station and the regional magnetic field was calculated from the International Geomagnetic Reference Field (IGRF 2015). The IGRF is the empirical representation of Earth's magnetic field as a function of time, and in the absence of any crustal or external sources. The model employs the spherical harmonics expansion of the scalar potential in geocentric coordinates. The IGRF model coefficients are based on all available data sources including geomagnetic measurements from observatories, ships, aircrafts and satellites.

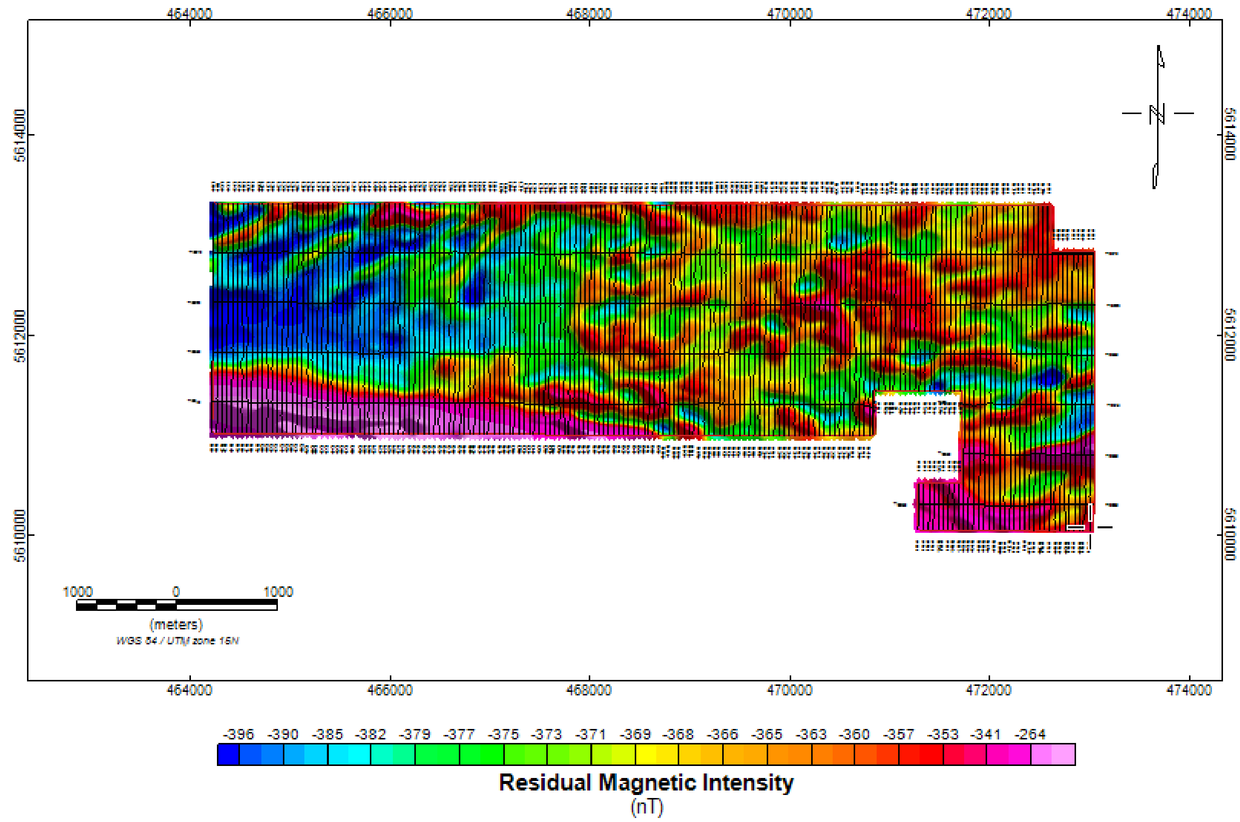

Figure 9: Residual Magnetic Intensity (RMI)

4.3. ANALYTIC SIGNAL

The analytic signal is the square root of the sum of the squares of the derivatives in the x, y, and z directions:

$$Analytical\ Signal = \sqrt{dx * dx + dy * dy + dz * dz}$$

Mapped highs in the calculated analytic signal of the magnetic parameter locate the anomalous source body edges and corners (e.g. contacts, fault/shear zones, etc.). Analytic signal maxima are located directly over faults and contacts, regardless of structural dip, and independently of the direction of the induced and/or remnant magnetizations. The analytic signal is also useful in locating the edges of magnetic source bodies, particularly where remnant magnetic signals and/or low magnetic latitude complicates interpretation.

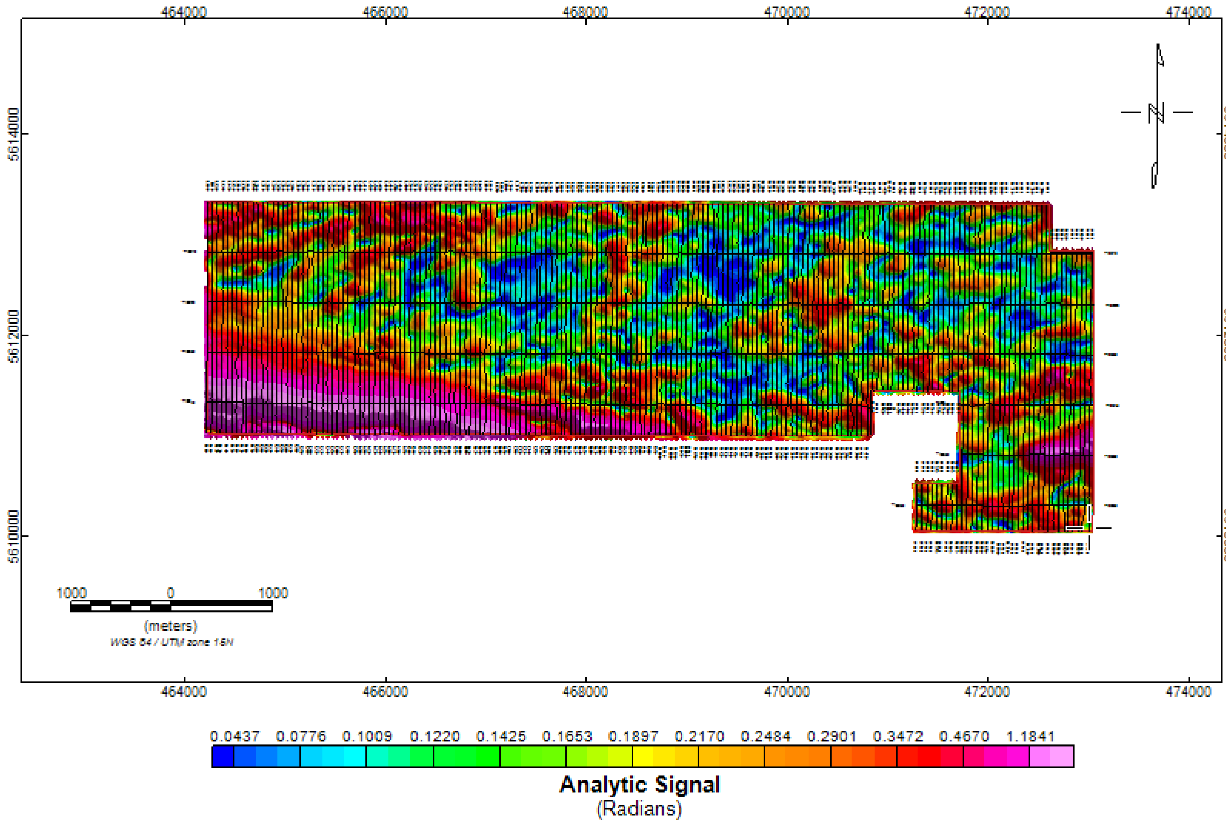

Figure 10: Analytic Signal (AS)

4.4. HORIZONTAL & VERTICAL GRADIENT

Geophysical surveys usually detect features with high magnetic susceptibility and/or high electrical conductivity. Some objects will be magnetic, but others have negligible magnetic susceptibility. When the anomalies are expected to be magnetic, measurements of variations in the strength of Earth's magnetic field often produce excellent results. However, because of the many ferrous objects and electrical sources of magnetic fields, total field anomaly maps may be too complicated to interpret, or subtle variations may be overwhelmed by larger features. A gradient survey is often a better choice under these conditions because the magnetic field gradient varies more rapidly than total field strength and it, therefore, provides higher spatial resolution[2].

In addition to higher spatial resolution, temporal variations are automatically eliminated because the measured parameter is a difference of two total field measurements. Therefore, the base station measurements and subsequent data corrections normally required for total field surveys are not required. If the goal is to map variations in geological materials, then more subtle trends in magnetic response must be observed.

The purpose of these types of measurements are to eliminate the long wavelength signatures and make sharp features more detectable, such as the edges of magnetic bodies. The gradient information is used to delineate the contacts between large-scale magnetic domains because its value is zero over vertical contacts.

The vertical magnetic gradient is directly measured with separate magnetometers vertically spaced apart. With the triaxial configuration, the average of the two bottom sensors is taken to create a single measurement where it is not physically equivalent to having the magnetometers vertically above each other. This data is then divided by the vertical separation of the measurement points. Because the horizontal magnetometers are within the same plane, the horizontal distance is now used for the final results. Of course, all horizontal and vertical gradients have been corrected using the pitch, roll and yaw data measured directly from the triaxial array.

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[2] https://www.eoas.ubc.ca/ubcgif/iag/foundations/method-summ_files/gradmag-notes.htm

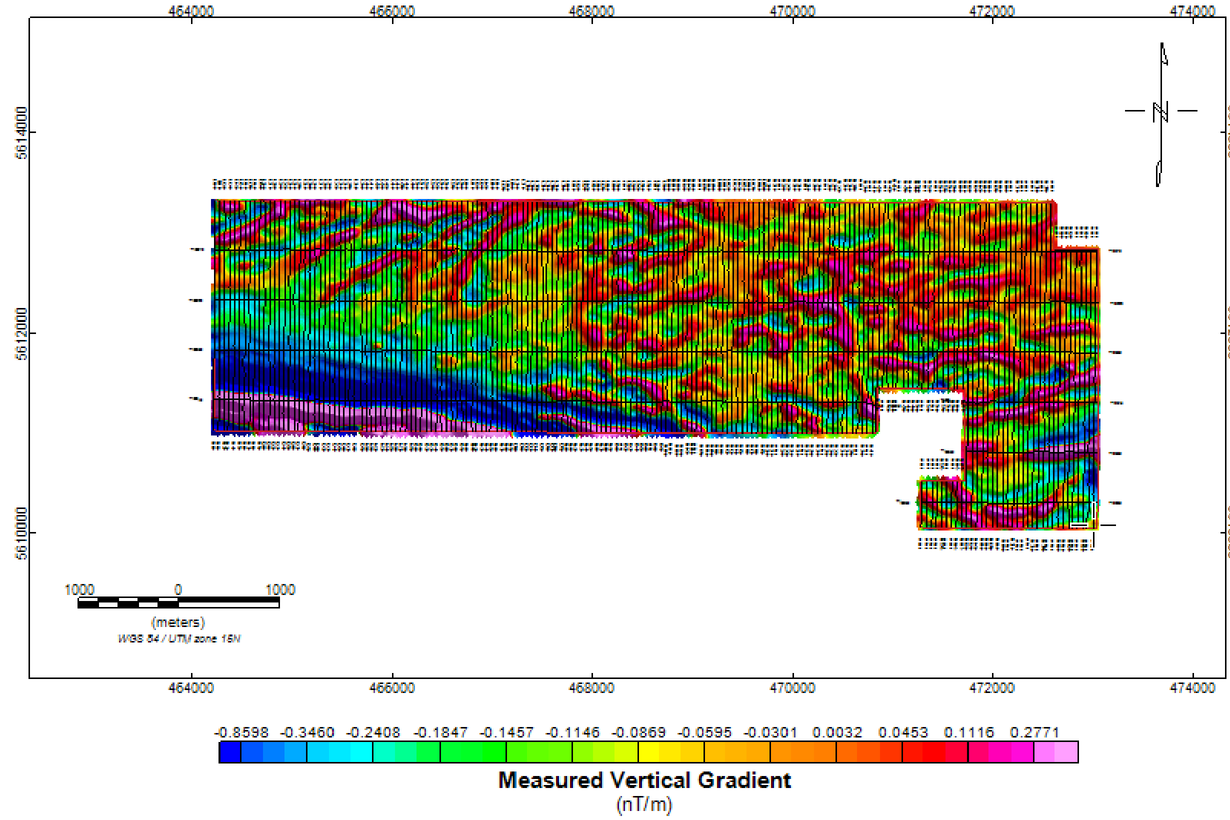


Figure 11: Measured Vertical Gradient (MVG)

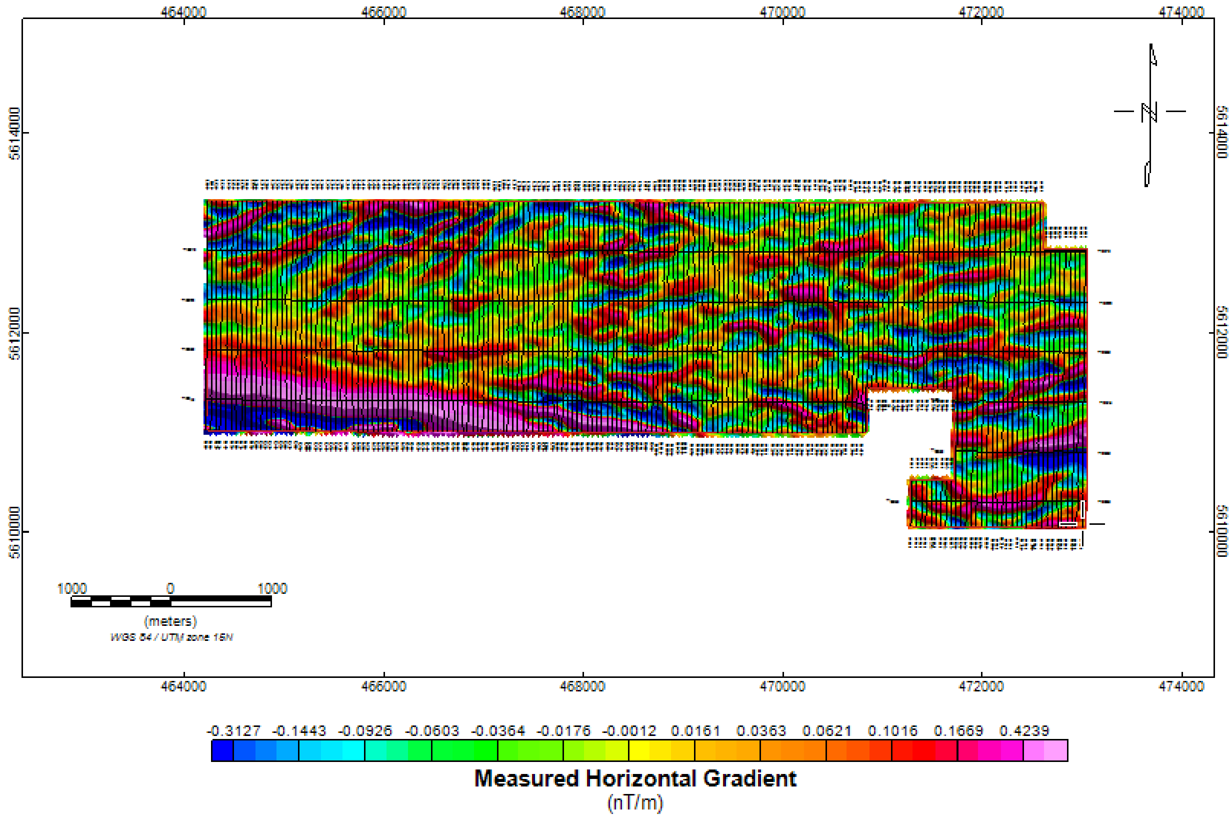


Figure 12: Measured Horizontal Gradient (MHG)

5. DELIVERABLES

5.1. DATABASE

All data is typically delivered in either Geosoft Database ('GDB') or simple formats such as .txt or csv. The data deliverables are client specific to best suit their needs and software requirements. Regardless of software, a database is supplied to the client with the following channel descriptions:

Table 8: Database Channel Descriptions

Parameter	Description	Unit
UTM_East	UTM easting (WGS84)	meters
UTM_North	UTM northing (WGS84)	meters
time	Gnss time stamp	hhmmss.ss
latitude	Latitude (WGS84)	decimal degrees
longitude	Longitude (WGS84)	decimal degrees
MSL_Height	Magnetometer height (Meters Above Sea Level)	meters
AGL	Magnetometer height (Meters Above Ground Level)	meters
Base	Raw Base Station Readings	nT
Base_Filt	Low Pass Filtered Base Station	nT
Dist	Distance Between Subsequent Readings	m
Yaw	IMU yaw reading	Degrees
Pitch	IMU pitch reading	Degrees
Roll	IMU roll reading	Degrees
nT1	Sensor 1 Magnetic field readings (Raw)	nT
nT2	Sensor 2 Magnetic field readings (Raw)	nT
nT3	Sensor 3 Magnetic field readings (Raw)	nT
nT1_Corr	Diurnal correction has been applied on the nT channel on Sensor 1	nT
nT2_Corr	Diurnal correction has been applied on the nT channel Sensor 2	nT
nT3_Corr	Diurnal correction has been applied on the nT channel Sensor 3	nT
nT_Raw	Averaged Magnetic Value for all three sensors	nT
nT_Final	Final leveled and micro-leveled data	nT
IGRF	The total magnetic field corrected by International Geomagnetic Reference Field at GPS altitude	nT
Inc	Inclination of the total field based on International Geomagnetic Reference Field at GPS altitude	Deg

Dec	Declination of the total field based on International Geomagnetic Reference Field at GPS altitude	Deg
RMI	Residual Magnetic Intensity Values	nT
AS	Analytic Signal	Radians
MHG	Measured Horizontal Gradient	nT/m
MVG	Measured Vertical Gradient	nT/m

5.2. Maps (Appendix B)

All maps are presented in the coordinate / projection system WGS84 Datum, UTM Zone 14N. A list of maps provided are as follows:

- Total Magnetic Intensity (TMI) Map
- Residual Magnetic Intensity (RMI) Map
- Analytic Signal (AS) Map
- Measured Vertical Gradient (MVG) Map
- Measured Horizontal Gradient (MHG) Map
- Line Path Map with Base Stations Locations

6. Conclusions

Axiom Exploration successfully completed a helicopter-borne triaxial magnetic gradiometer survey in the Camping Lake area for Longford Exploration. The survey consisted of a total of 459.34 line-kms flown across a single survey block.

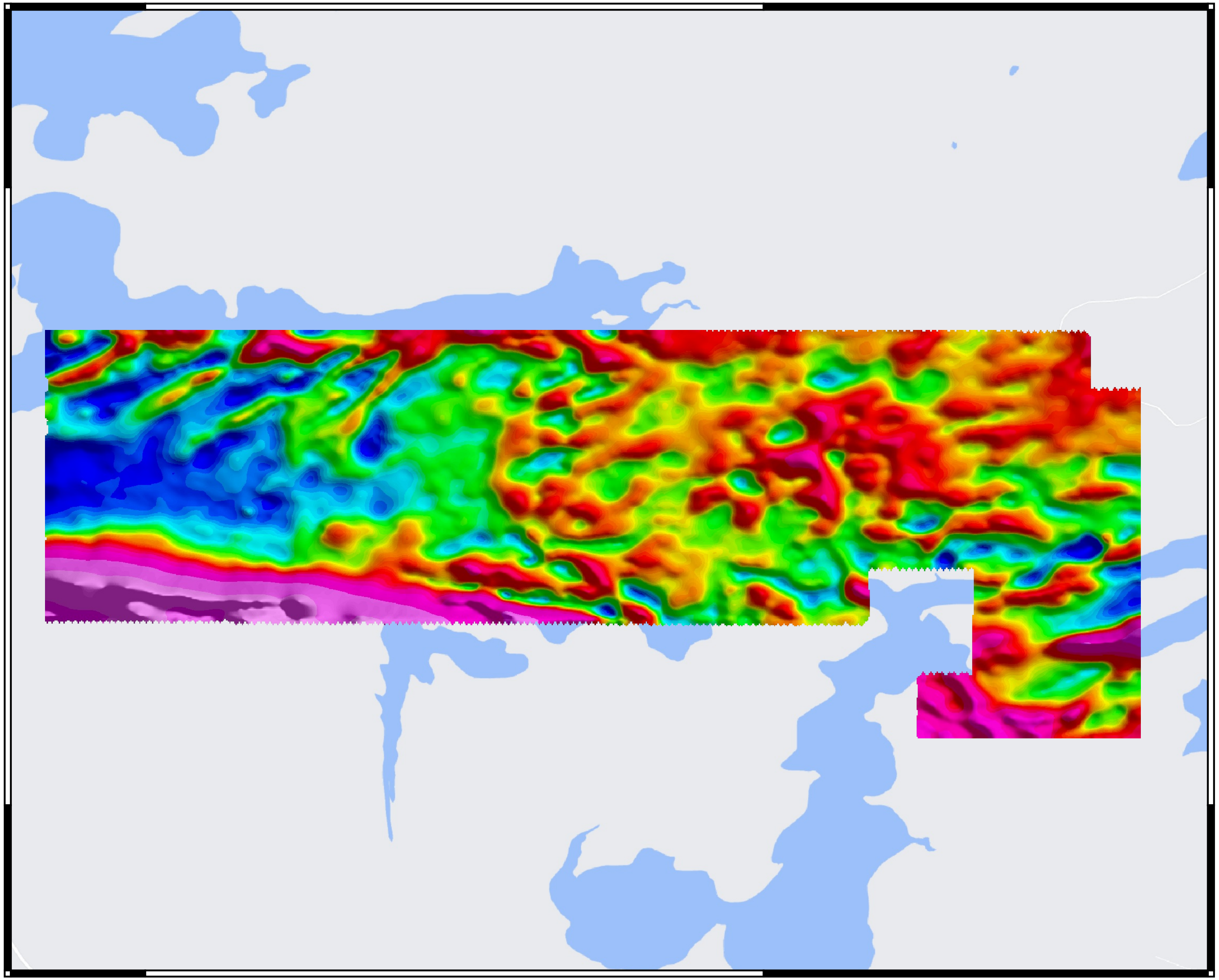
Ultimately, the magnetic data collected was very successful in delineating and defining targets for further investigations. It should be noted that all geophysical interpretations need to be vetted with geology and other relevant information for optimal results.

Respectfully submitted,

Peter Dueck, P.Geo.

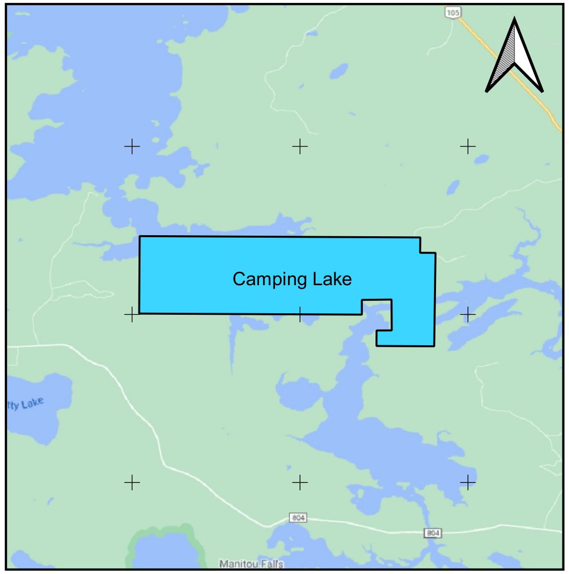
CBO & Principal Geophysicist
Axiom Exploration Group Ltd.

APPENDIX A: FINAL MAGNETIC MAPS



A X IOM
G R O U P

Project Area



NOTES:

SURVEY
-Date of Survey: Sept 23rd to 28th, 2020
-Projection: NAD83 UTM Zone 15N
-Survey type: Helicopter-borne using R44
-Survey Line Spacing: 50m @ 0-180
-Tie Line Spacing : 500m @ 90-270

Camping Lake

INSTRUMENTS
-Base Magnetometer: GEM GSM-19
-Helicopter Magnetometer: GEM 3 Sensor Triaxial Gradiometer

1 2 3 km

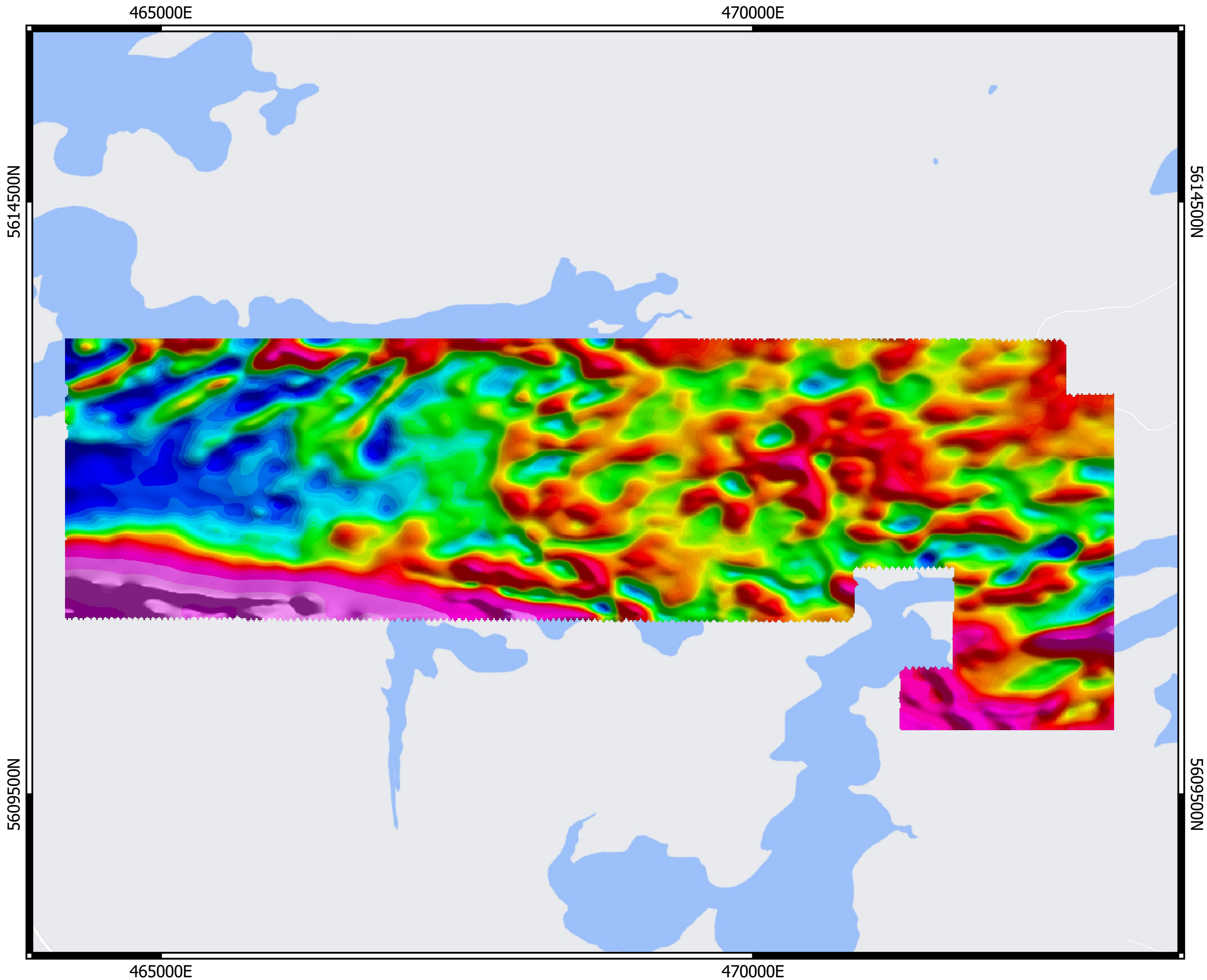
56483 56492 56497 56501 56505 56507 56510 56512 56515 56518 56522 56530 56613

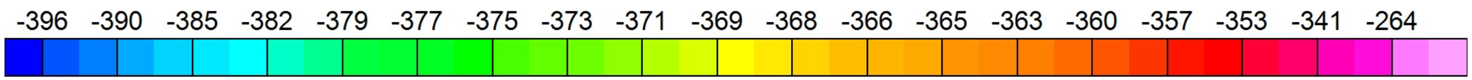
Total Magnetic Intensity
(nT)

Helicopter Triaxial Magnetic Gradiometer Survey
Total Magnetic Intensity (TMI) - Camping Lake
1:50 000

Longford Exploration Camping Lake, Ontario, Canada	Flown and processed by: Axiom Group Date: Oct 13, 2020 Job Number: 20.5038.LEX

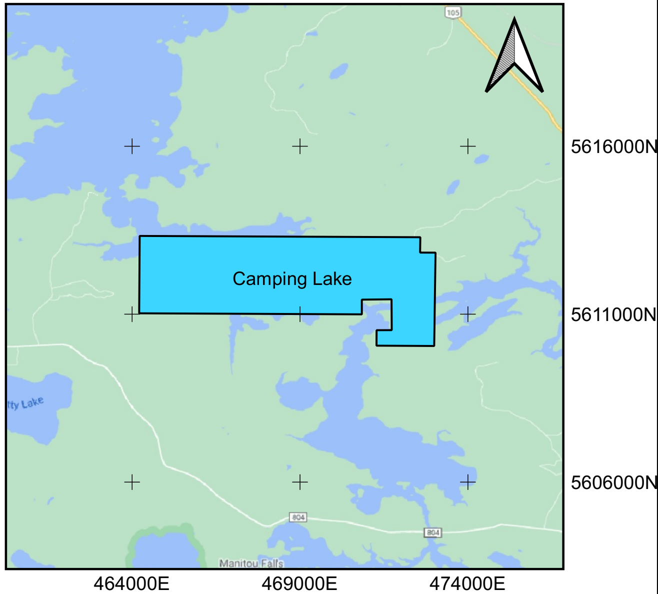
AXIOM GROUP





Residual Magnetic Intensity
(nT)

Project Area

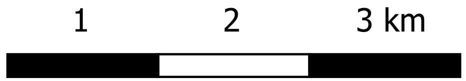


NOTES:

SURVEY
-Date of Survey: Sept 23rd to 28th, 2020
-Projection: NAD83 UTM Zone 15N
-Survey type: Helicopter-borne using R44
-Survey Line Spacing: 50m @ 0-180
-Tie Line Spacing : 500m @ 90-270

Camping Lake

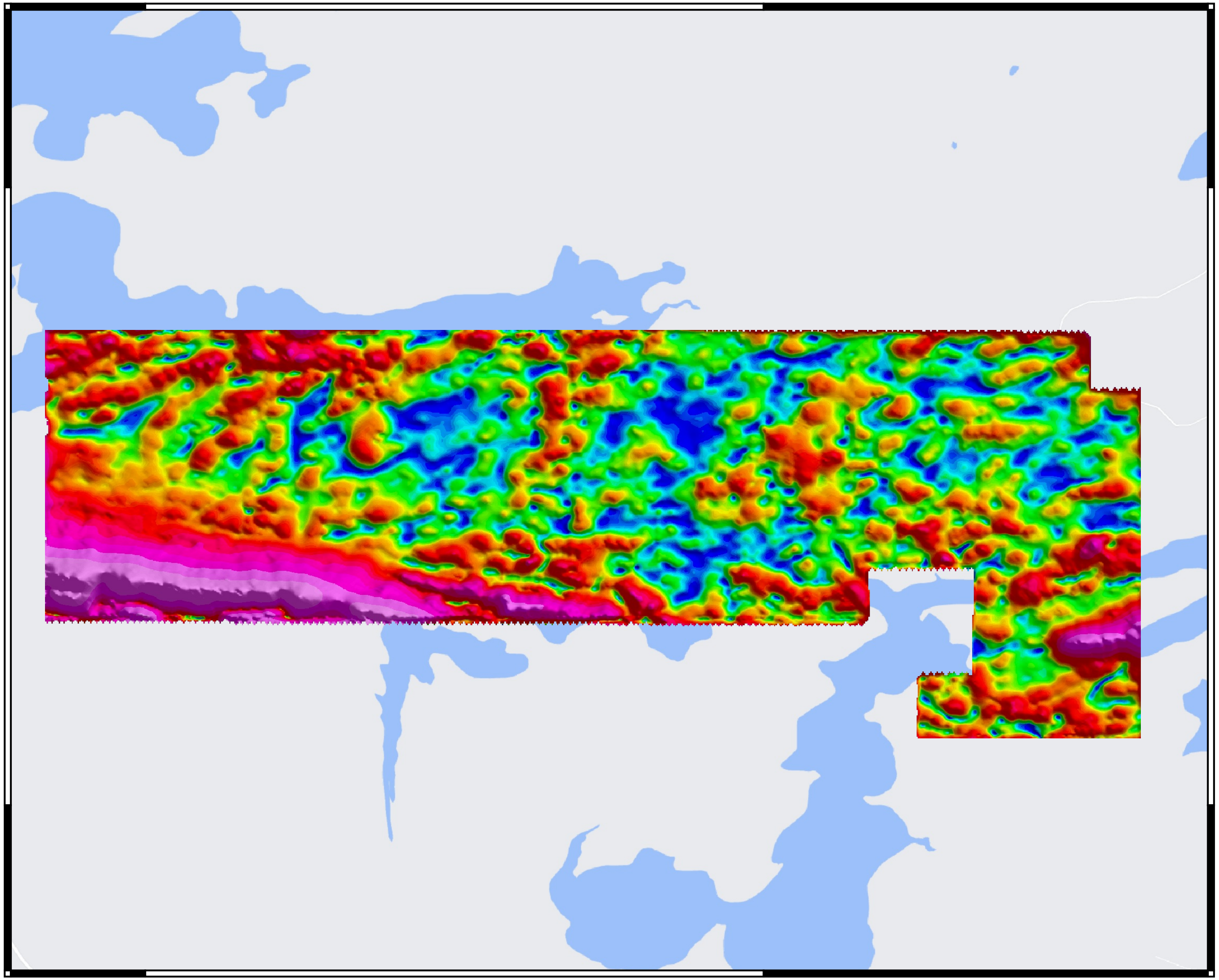
INSTRUMENTS
-Base Magnetometer: GEM GSM-19
-Helicopter Magnetometer: GEM 3 Sensor Triaxial Gradiometer



Helicopter Triaxial Magnetic Gradiometer Survey
Residual Magnetic Intensity (RMI) - Camping Lake
1:50 000

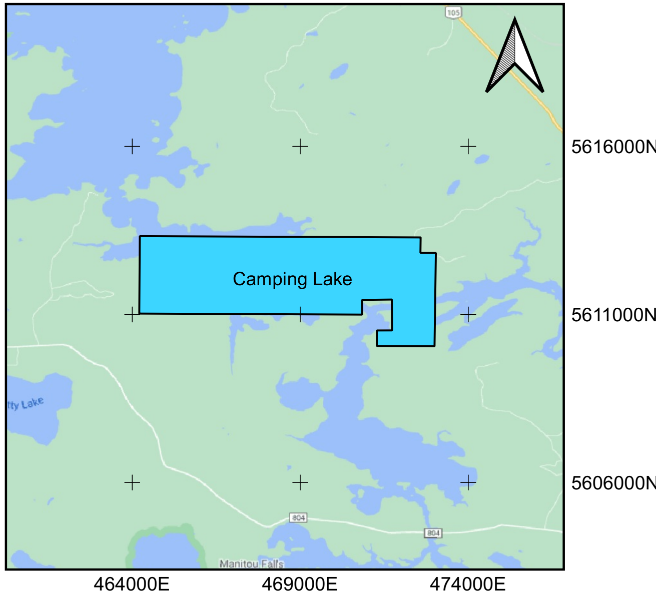
Longford Exploration
Camping Lake, Ontario,
Canada

Flown and processed by:
Axiom Group
Date: Oct 13, 2020
Job Number: 20.5038.LEX



AXIOM GROUP

Project Area



NOTES:

SURVEY
-Date of Survey: Sept 23rd to 28th, 2020
-Projection: NAD83 UTM Zone 15N
-Survey type: Helicopter-borne using R44
-Survey Line Spacing: 50m @ 0-180
-Tie Line Spacing : 500m @ 90-270

INSTRUMENTS
-Base Magnetometer: GEM GSM-19
-Helicopter Magnetometer: GEM 3 Sensor Triaxial Gradiometer

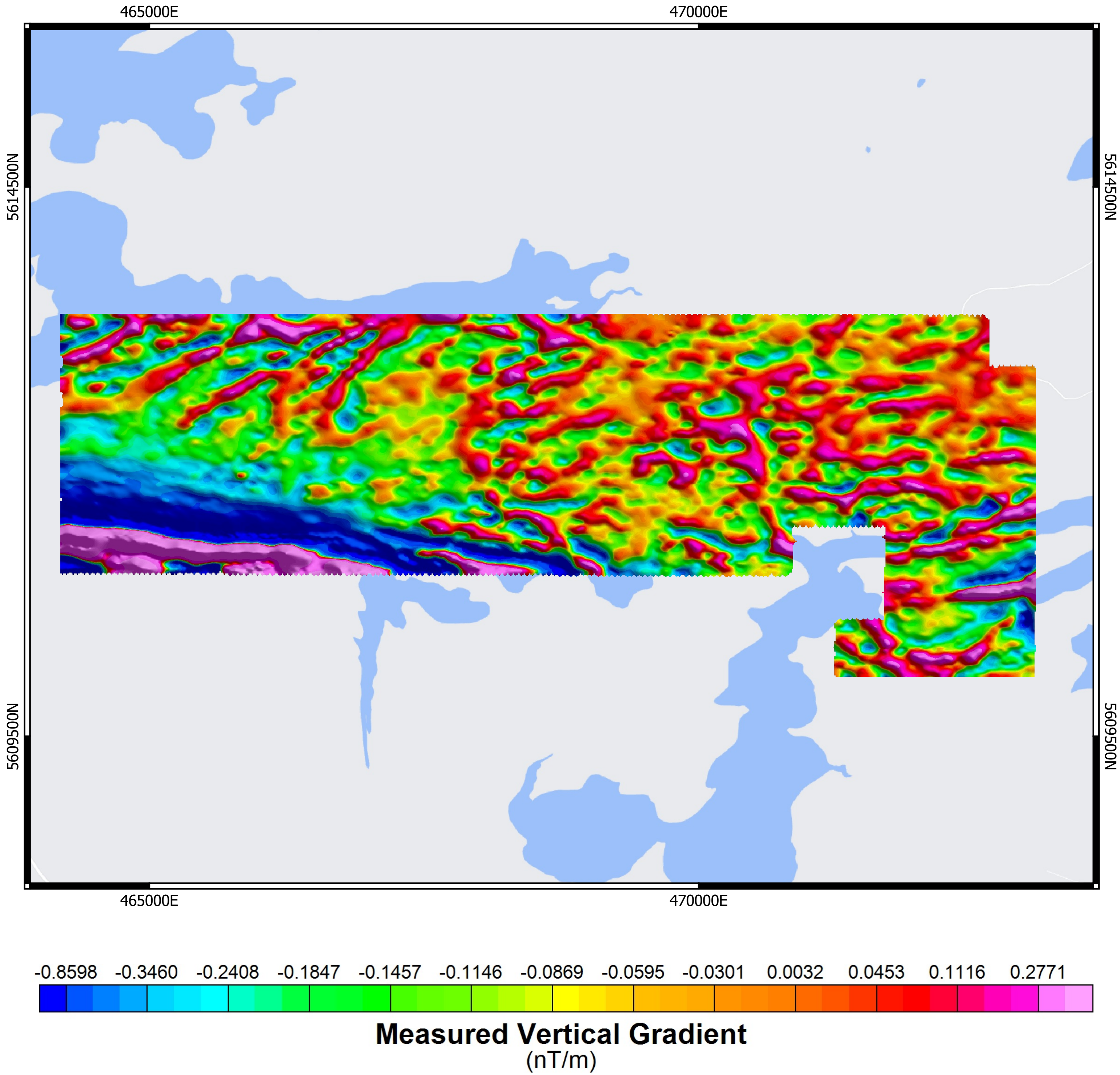
Camping Lake

1 2 3 km

Analytic Signal
(Radians)

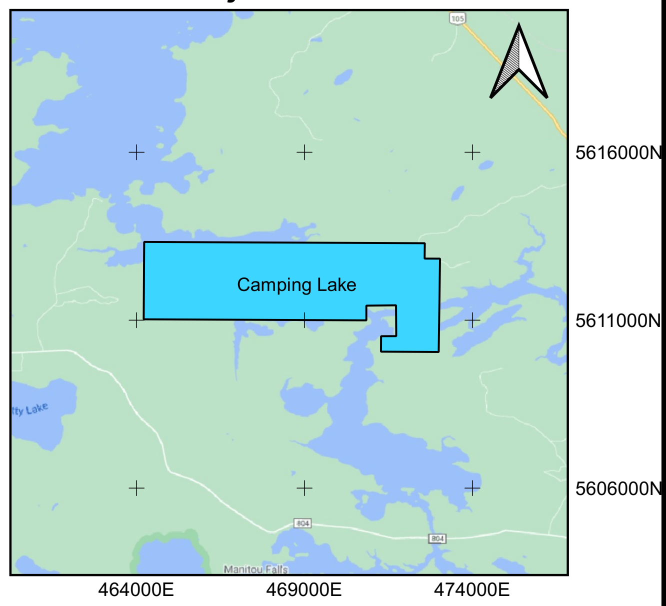
Helicopter Triaxial Magnetic Gradiometer Survey
Analytic Signal (AS) - Camping Lake
1:50 000

Longford Exploration Camping Lake, Ontario, Canada	Flown and processed by: Axiom Group Date: Oct 13, 2020 Job Number: 20.5038.LEX



AXIOM GROUP

Project Area



NOTES:

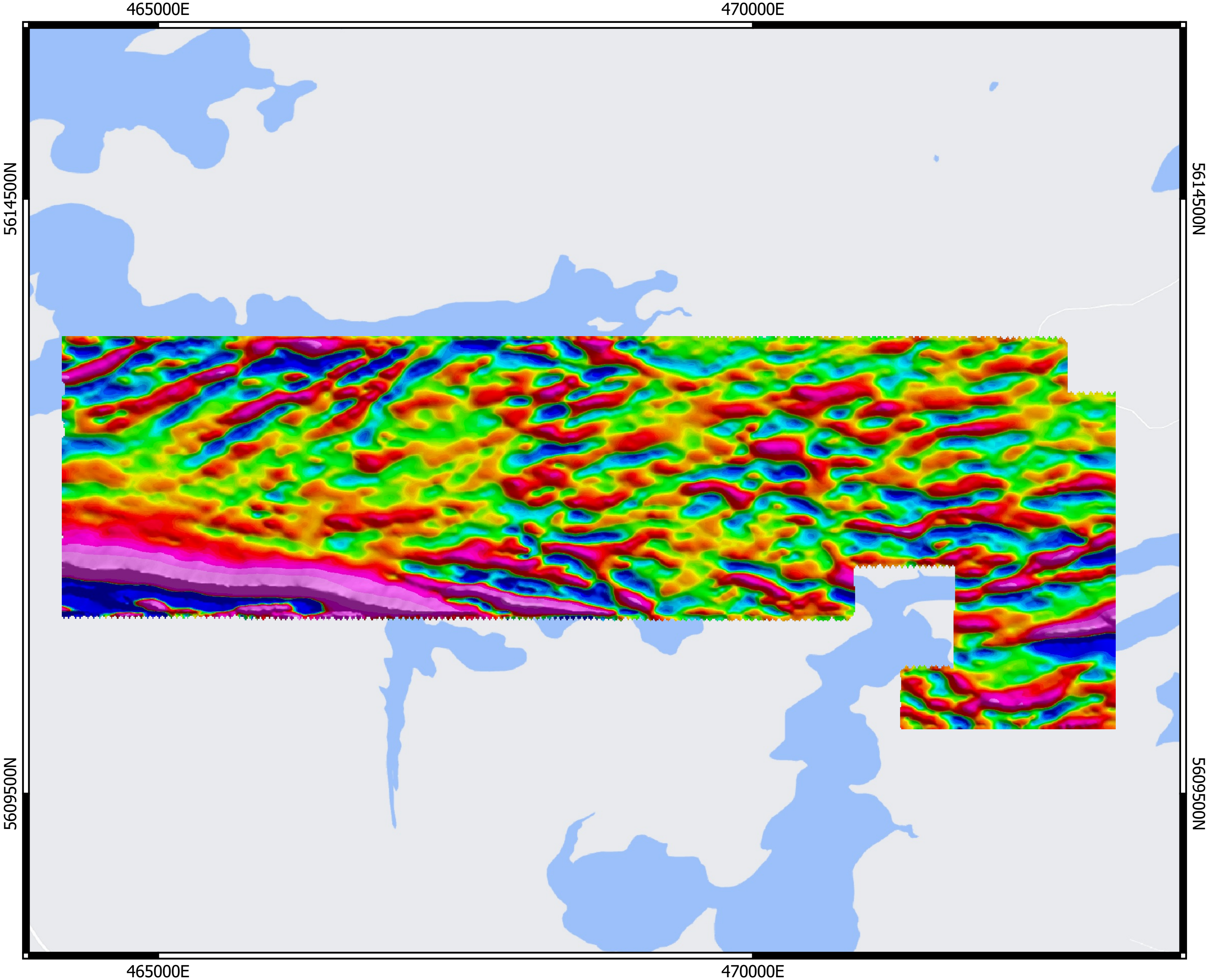
Camping Lake

SURVEY
- Date of Survey: Sept 23rd to 28th, 2020
- Projection: NAD83 UTM Zone 15N
- Survey type: Helicopter-borne using R44
- Survey Line Spacing: 50m @ 0-180
- Tie Line Spacing : 500m @ 90-270

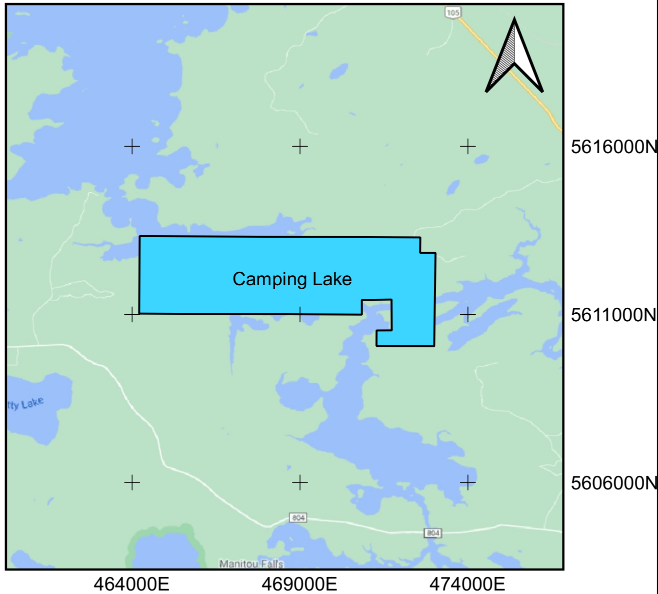
INSTRUMENTS
- Base Magnetometer: GEM GSM-19
- Helicopter Magnetometer: GEM 3 Sensor Triaxial Gradiometer

1 2 3 km

Helicopter Triaxial Magnetic Gradiometer Survey Measured Vertical Gradient (MVG) - Camping Lake 1:50 000	
Longford Exploration Camping Lake, Ontario, Canada	Flown and processed by: Axiom Group Date: Oct 13, 2020 Job Number: 20.5038.LEX



Project Area



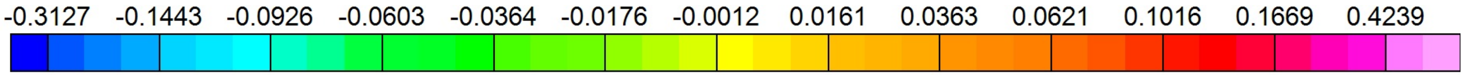
NOTES:

Camping Lake

SURVEY
-Date of Survey: Sept 23rd to 28th, 2020
-Projection: NAD83 UTM Zone 15N
-Survey type: Helicopter-borne using R44
-Survey Line Spacing: 50m @ 0-180
-Tie Line Spacing : 500m @ 90-270

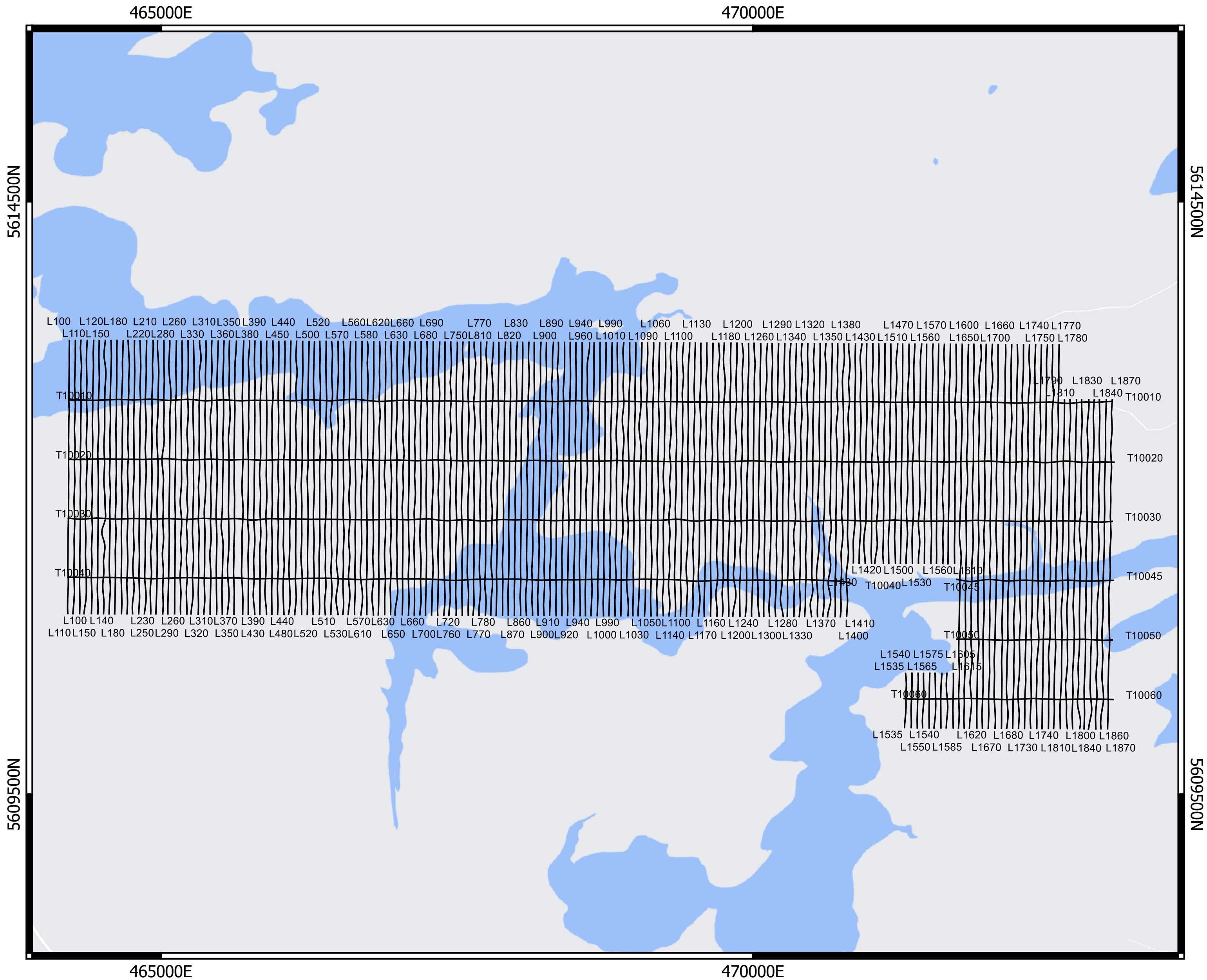
INSTRUMENTS
-Base Magnetometer: GEM GSM-19
-Helicopter Magnetometer: GEM 3 Sensor Triaxial Gradiometer

1 2 3 km

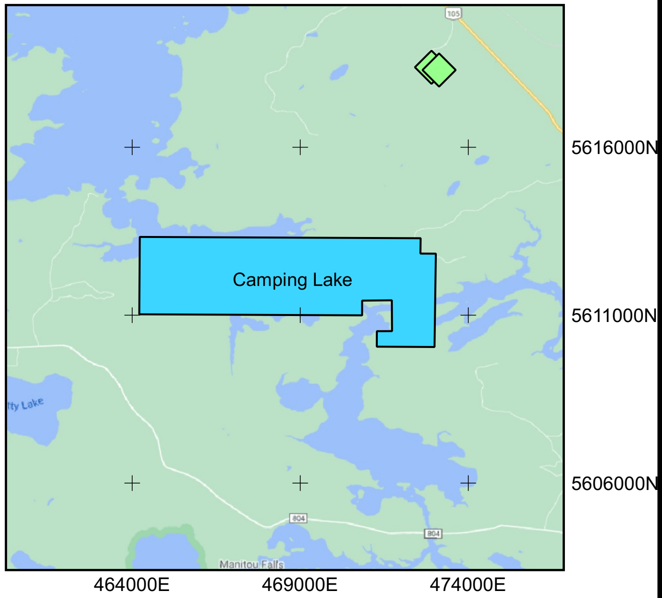


Measured Horizontal Gradient
(nT/m)

Helicopter Triaxial Magnetic Gradiometer Survey Measured Horizontal Gradient (MHG) - Camping Lake 1:50 000	
Longford Exploration Camping Lake, Ontario, Canada	Flown and processed by: Axiom Group Date: Oct 13, 2020 Job Number: 20.5038.LEX



Project Area



NOTES:

Basestation

SURVEY
-Date of Survey: Sept 23rd to 28th, 2020
-Projection: NAD83 UTM Zone 15N
-Survey type: Helicopter-borne using R44
-Survey Line Spacing: 50m @ 0-180
-Tie Line Spacing : 500m @ 90-270

INSTRUMENTS
-Base Magnetometer: GEM GSM-19
-Helicopter Magnetometer: GEM 3 Sensor Triaxial Gradiometer

1 2 3 km

Base Station	Easting (m)	Northing (m)	Coordinate System
#1 - 8062827	472910	5618383	WGS84 UTM Zone 15N
#2 - 6031851	4733136	5618300	WGS84 UTM Zone 15N

Helicopter Triaxial Magnetic Gradiometer Survey
Flight Paths
1:50 000

Longford Exploration
Camping Lake, Ontario, Canada

Flown and processed by:
Axiom Group
Date: Oct 13, 2020
Job Number: 20.5038.LEX