

We are committed to providing [accessible customer service](#).

If you need accessible formats or communications supports, please [contact us](#).

Nous tenons à améliorer [l'accessibilité des services à la clientèle](#).

Si vous avez besoin de formats accessibles ou d'aide à la communication, veuillez [nous contacter](#).

**Assessment Report
On the
Longlegged Lake Property
Red Lake Mining Division
Northwestern Ontario
NTS 052K12**

Prepared for:

Silver Dollar Resources Inc.

200 – 551 Howe Street
Vancouver, British Columbia,
Canada, V6C 2C2

Prepared by:

B.Clark, P.Geo



Clark Exploration
Consulting Inc.

**Clark Exploration and Consulting
941 Cobalt Crescent
Thunder Bay, ON
P7B 5Z4**

February 9, 2021

TABLE OF CONTENTS

Item 1: Summary	1
Item 2: Introduction	3
Item 3: Reliance on Other Experts.....	3
Item 4: Property Description and Location.....	4
Item 5: Accessibility, Climate, Local Resources, Infrastructure and Physiography	5
Item 6: History	9
Item 7: Geological Setting and Mineralization.....	11
7.1 Regional Geology	11
7.2 Property Geology	12
7.3 Mineralization.....	14
Item 8: Deposit Types.....	17
Item 9: Exploration.....	18
Item 11: Sample Preparation, Analysis and Security.....	21
Item 12: Data Verification	21
Item 13: Interpretation and Conclusions	22
Item 14: Recommendations	22
14.1: Proposed Budget.....	23
Item 15: References	24
Item 16: Certificate of Qualifications.....	26

List of Figures

Figure 1. Property Location	7
Figure 2. Longlegged Lake Property Claims	8
Figure 3. Regional Geology	15
Figure 4. Property Geology	16
Figure 5. Total Magnetic Intensity (TMI)	20

List of Tables

Table 1. Longlegged Lake Property Claims	4
Table 2. Desmond Cullen Samples	20

Appendix I : High-Resolution Heliborne Magnetic Survey Report

Abbreviations and Units of Measurement

UTM	Universal Transverse Mercator	in	Inch(es)
Au	gold	Kg	Kilogram(s)
%	Percent	m	Metre(s)
<	Less than	Ma	Million years ago,
>	Greater than	m ²	Square metres
cm	Centimetre	mm	Millimetre(s)
Cu	copper	NI 43-101	Canadian National Instrument 43-101
DDH / ddh	Diamond drill hole	P.Geo.	Professional Geoscientist
IP	Induced Polarization	ppb	Parts per billion
GPS	Global positioning system	ppm	Parts per million
ha	Hectare(s)	QA	Quality Assurance
ICP-AAS	Inductively coupled plasma atomic absorption spectroscopy	QC	Quality Control
ICP	Inductively coupled plasma	QP	Qualified Person

Item 1: Summary

Prospectair conducted a heliborne high-resolution magnetic (“MAG”) survey for Silver Dollar Resources Inc. (“Silver Dollar”) on the Longlegged Lake Property in the Red Lake area (Figure 1). The survey was flown from March 25th to April 1st, 2019. One survey block was flown with 25m spaced lines and control lines every 250m for a total of 1,146 l-km. A total of 9 production flights were performed using Prospectairs Robinson R-44, registration C-GBOU. The helicopter and survey crew operated out of Red Lake Airport located 40km north of the block.

Silver Dollar’s Property is located in the Longlegged Lake Area of the Red Lake Mining Division in Northwestern Ontario, approximately 30 km south of the community of Red Lake. The UTM co-ordinates for the approximate centre of the claim block are 441200 E, 5617000 N (NAD 83, Zone 15).

The Property consists of 8 multi-cell mining claims, totalling 127 cells under MLAS, for a total area of 2597 hectares (Table 1).

The Longlegged Lake Property lies within the Superior Province, straddling the suture zone between the east-west trending, Mesoarchean North Caribou and Winnipeg River Terranes to the north and south respectively. More specifically, the property is underlain by rocks assigned to the Uchi subprovince in the north, and the English River subprovince in the south. The English River and Uchi subprovince in the Property area are separated by the Pakwash Lake Fault Zone (“PLFZ”), a major east-west trending fault that is interpreted to splay from the Sydney Lake Fault zone, located south of the property.

On their Longlegged Lake Property, Silver Dollar is focused on identifying and delineating Archean-aged orogenic gold deposits (Groves et al., 1998). Following Kerrich et al. (2000), orogenic gold deposits are typically associated with crustal-scale fault structures, although the most abundant gold mineralization is hosted by lower-order splays from these major structures. Deposition of gold is generally synkinematic, syn- to post-peak metamorphism and is largely restricted to the brittle-ductile transition zone. Host rocks are highly variable, but typically include mafic and ultramafic volcanic rocks, banded iron formation, sedimentary rocks and rarely granitoids.

The previous work on the Longlegged Lake Property has indicated the presence of elevated, or anomalous, gold values in soil samples over an area associated with the Pakwash Lake Fault Zone, which also marks the contact zone between a granodiorite to the north, and mafic volcanic and metasediments to the south. This environment represents a promising geological environment to host gold mineralization. This area should be the main focus of future exploration by Silver Dollar.

It is recommended that an induced polarization survey, additional prospecting, mapping, and soil sampling be conducted, with a focus on the area of the interpreted Pakwash Lake Fault Zone (the "PLFZ"). Target areas identified by the previous and new sampling should be followed up later by mechanical stripping, washing, mapping and sampling, if overburden depths allow. At this time the mechanical stripping is not budgeted, pending results of the prospecting and soil sampling.

If results warrant, selected targets should later be drill tested with wide-spaced shallow holes to test for large-scale alteration and/or mineralization.

A budget of **\$104,300** is recommended to carry out the initial recommended work.

Item 2: Introduction

Prospectair conducted a heliborne high-resolution magnetic (MAG) survey for Silver Dollar on the Longlegged Lake Property in the Red Lake area (Figure 1). The survey was flown from March 25th to April 1st, 2019. One survey block was flown with 25m spaced lines and control lines every 250m for a total of 1,146 l-km. A total of 9 production flights were performed using Prospectairs Robinson R-44, registration C-GBOU. The helicopter and survey crew operated out of Red Lake Airport located 40km north of the block. Total expenditures for the survey were \$85,344 (+HST).

The Longlegged Lake Property lies within the Superior Province, straddling the suture zone between the east-west trending, Mesoproterozoic North Caribou and Winnipeg River Terranes to the north and south respectively. More specifically, the property is underlain by rocks assigned to the Uchi subprovince of the North Caribou terrane in the north, and the English River subprovince in the south. The English River and Uchi subprovinces in the Property area are separated by the Pakwash Lake Fault Zone (the "PLFZ"), a major east-west trending fault that is interpreted to splay from the Sydney Lake Fault Zone, located south of the property.

The Property is located about 30 km south of the municipality of Red Lake, Ontario; gold was first discovered in the Red Lake area in the mid 1920's and by the mid 1930's several producing gold mines were in operation. The belt is recognized for its high-grade, highly profitable gold mines, which include the world class Campbell and Red Lake mines of Goldcorp Inc.

Item 3: Reliance on Other Experts

For the purposes of this report the Author has relied on ownership information provided by Silver Dollar, as well as claim information available on the website of the Ontario Ministry of Energy, Northern Development and Mines (MENDM). The Author has not researched property title or mineral rights for the Property and expresses no opinion as to the ownership status of the Property. The option agreement provided by Silver Dollar for the claims is discussed in Item 4, "Property Description and Location" below, and the claim information from the MENDM website is current as of the effective date of this Report.

The airborne high resolution magnetic survey conducted over the Property that is discussed in "Item 9: Exploration" was done by Prospectair Geosurveys of Gatineau, Quebec, and the discussion of the results of the survey is taken from Dubé's report (2019) as listed in the references.

Item 4: Property Description and Location

Silver Dollar's Longlegged Lake Property is located in the Longlegged Lake Area of the Red Lake Mining Division in northwestern Ontario, approximately 30 km south of the community of Red Lake. The UTM co-ordinates for the approximate centre of the claim block are 441200 E, 5617000 N (NAD 83, Zone 15).

The Property consists of 8 multi-cell mining claims, totalling 127 cells under MLAS, for a total area of 2597 hectares. The claims are listed in Table 1 and are shown in Figure 2.

The proposed exploration program in this report is subject to the guidelines, policies and legislation of the Ontario Ministry of Energy, Northern Development and Mines ("MENDM"), Ontario Ministry of Natural Resources and Federal Department of Fisheries and Oceans regarding surface exploration, stream crossings, and work being carried out near rivers and bodies of water, drilling and sludge disposal, drill casings, capping of holes, storage of core, trenching, road construction, waste and garbage disposal.

No mineral resources, reserves or mines existing prior to the mineralization described in this report are known by the Author to occur on the Property. There are no known environmental liabilities associated with the Property, and there are no other known factors or risks that may affect access, title, or the right or ability to perform work on the Property. The mining claims do not give the claim holder title to or interest in the surface rights on those claims, and as the land is crown land, legal access to the claims is available by public roads which cross the Property.

Table 1. Longlegged Lake Property Claims

Claim No.	Number of Cells	Township/Area	Anniversary Date	Work Required
535013	21	Longlegged Lake	2021-11-15	\$8400
535014	8	Longlegged Lake	2021-11-15	\$3200
541404	11	Longlegged Lake	2022-02-07	\$4400
541405	18	Longlegged Lake	2022-02-07	\$7200
541403	2	Longlegged Lake	2022-02-07	\$800
534277	22	Longlegged Lake	2021-11-05	\$8800
534276	22	Longlegged Lake	2021-11-05	\$8800
534278	23	Longlegged Lake	2021-11-05	\$9200
Total	127			\$50,800

Item 5: Accessibility, Climate, Local Resources, Infrastructure and Physiography

The Property is located approximately 30 km south of the Red Lake Municipality of northwestern Ontario, approximately 565 km by road (430 km direct) northwest of Thunder Bay and approximately 475 km by road (260 km direct) east-northeast of Winnipeg, Manitoba. Red Lake can be reached via Highway 105 from the Trans-Canada Highway 17. Red Lake is also serviced with daily flights from Thunder Bay and Winnipeg.

The Property can be accessed from two different secondary roads from Highway 105. The northern end of the Property can be accessed from the Dixie Lake Road located approximately 15 km south of Red Lake and connected logging roads. The southern and central portion of the Property can be accessed from the Longlegged Lake Forest Access Road that starts from the terminus of Highway 804 just south of Ear Falls. Several logging roads cross the Property across its entire length.

The Red Lake Municipality, with a population of approximately 4,600, comprises six communities: Red Lake, Balmertown, Cochenour, Madsen, McKenzie Island, and Starratt-Olsen. Mining and mineral exploration is the primary industry in the area, with production mainly from Goldcorp's 3100 tonne/day Red Lake gold mine. Other industries include logging and tourism. The Municipality of Red Lake offers a full range of services and supplies for mineral exploration and mining, including both skilled and unskilled labour, bulk fuels, freight, heavy equipment, groceries, hardware, mining supplies, and government support/administrative services. Both wireless and wire line telecommunication services are also locally available.

The Township of Ear Falls is located approximately 42 km east-south east of the Property, with a population of approximately 1000. This town primarily services the local forestry industry and has limited services/supplies.

Hydro One power is available in Red Lake and Ear Falls, with the power line running along Highway 105. There are also two hydro power generating stations located in the Ear Falls area, with Manitou Falls being the closest located approximately 33 km to the east of the Property at the terminus of Highway 804. The current land holdings are sufficient to allow for exploration and there are currently no encumbrances on surface rights on the Property. However, it is beyond the Author's scope to determine whether or not the current land holdings are sufficient for development of infrastructure to sustain a mining operation.

The topography in the area is gentle to moderate with elevations ranging from 360 to about 430 m. Topography is dominated by glacially scoured southwest-trending ridges, typically covered with jack pine and mature poplar trees.

Swamps, marshes, small streams, and small to moderate-size lakes are widespread. Glacial overburden depth is generally shallow, rarely exceeding 20m, and primarily consists of ablation till, minor basal till, minor outwash sand and gravel, and silty-clay glaciolacustrine sediments.

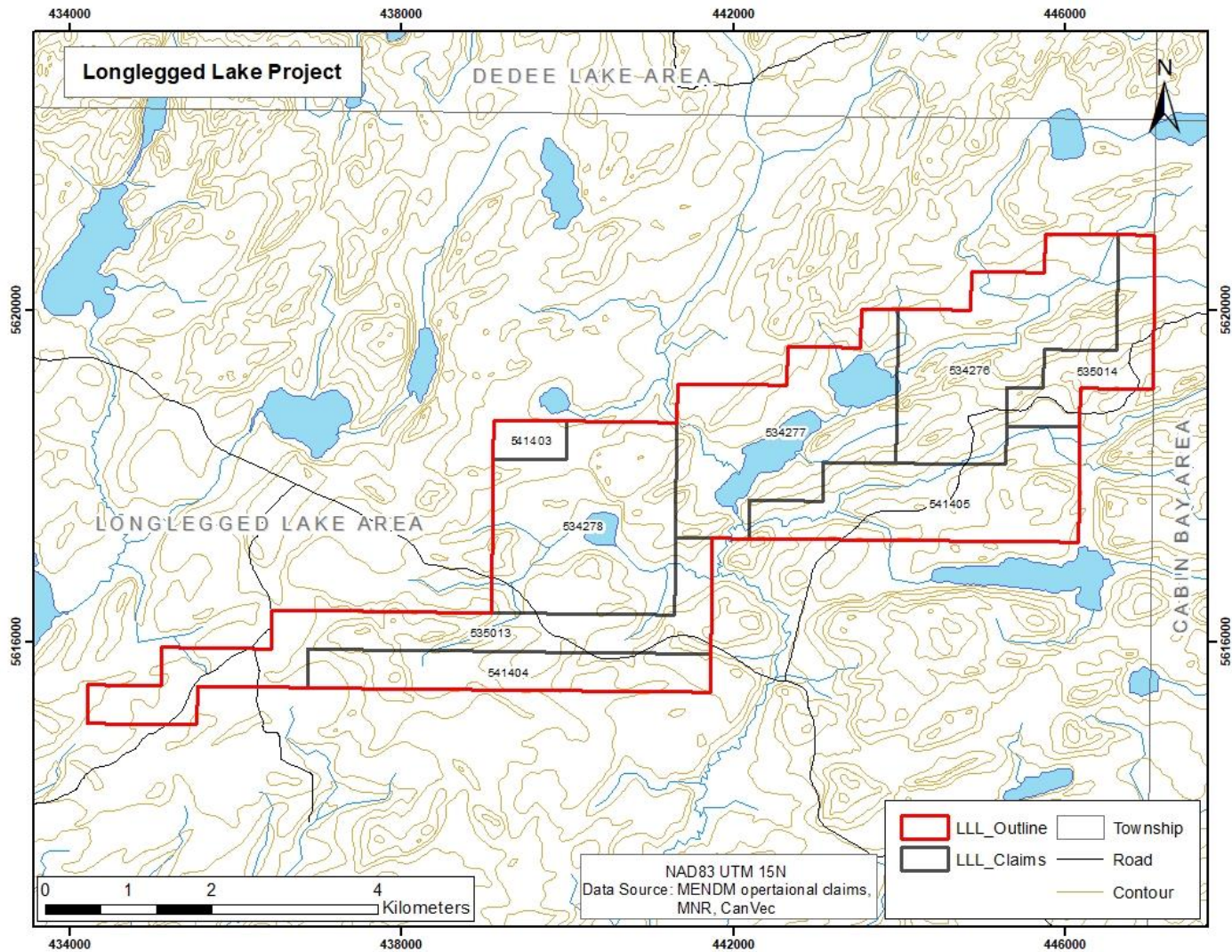
Vegetation consists of thick second growth boreal forest composed of black spruce, jack pine, poplar, and birch.

The climate in the Red Lake area is described as warm-summer humid continental (climate type Dfb according to the Köppen climate classification system). Mean daily temperatures range from -18°C in January to +18°C in July. Annual precipitation averages 70 cm, mainly occurring as summer showers, which includes a total of about two meters of snow. Snow usually starts falling during late October and starts melting during March but is not normally fully melted until late April. Late-season snow in May does occur. Fieldwork and drilling are possible year-round on the property although certain wetter areas are more easily accessible in the winter when frozen.

Figure 1. Property Location



Figure 2. Longlegged Lake Property Claims



Item 6: History

The Longlegged Lake Property has no documented exploration prior to the work by Laurentian Goldfields Ltd. described below, according to the data available in the assessment files archived with the Ontario Ministry of Energy, Northern Development and Mines on the MENDM website:

(www.geologyontario.mndm.gov.on.ca/). Most of the previous work in the area has focussed on the Dixie Zone area currently being explored by Great Bear Resources and BTU Metals, about 10 km to the north of the Property.

2010: Laurentian Goldfields Ltd. staked a large property (approximately 22,940 ha) in the area from December 2009 to January 2010 following the delineation of a large hydrogeochemical anomaly over Pakwash Lake to the east of the current Property. The western limb of Laurentian's property covered about the eastern third of Silver Dollar's Property.

Initial work on Laurentian's property consisted of a high resolution, airborne magnetic and VLF- EM survey completed in March 2010. This survey helped to define the location of the Pakwash Lake Fault Zone ("PLFZ") across the northeast portion of the Property. Phase 2 of the project included comprehensive soil and lake sediment sampling as well as a property-wide mapping and prospecting program, which systematically targeted structures and lithological contacts interpreted from magnetic susceptibility mapping.

Prospecting in the western portion of Laurentian's property recovered slightly anomalous Au samples from within the granodiorite pluton. The soil sampling (using the mobile metal ion, or "MMI" sampling method) yielded several anomalous gold "response ratios" from within the eastern area of Silver Dollar's claims.

2011: In the winter of 2011, Laurentian drilled 9 holes on the ice on Pakwash Lake to test a large lake sediment gold and pathfinder element anomaly, however this part of their property lies about 15 km east of the current Property and is not covered by the current Property which is the subject of this Report.

The drill program was followed up by further MMI soil sampling and rock sampling over nine grids on Laurentian's property, including over the eastern portion of Silver Dollar's Property. The purpose of this sampling was to better define the anomalies by sampling on tighter spacing in order to infill the wider spaced sampling done in 2010. The work was reported by Laurentian to have helped in further defining the gold mineralization on the current Property.

The infill program further delineated anomalous Au on Silver Dollar's Property, particularly north of the PLFZ, although it was stated that further

work was required to “validate these targets to drilling status” (Chiang and Rennie, 2013). Ag anomalies have a stronger response than Au, while there are slightly lower concentrations of As, Mo and W. Bi and Sb were said to be insignificant (Chiang and Rennie, 2013). Only two rock samples appear to have been retrieved from the current Property, with no significant assay results. Figure 4 indicates the location of the anomalous MMI soil samples on Silver Dollar’s Property, as well as the location of the two rock samples retrieved from the Property.

The Author could find no record of Silver Dollar’s Property being staked or any exploration work performed on it subsequent or prior to the work by Laurentian Goldfields described above. No such records exist in the MENDM files. Perry English staked the Property in 2018 and 2019.

ITEM 7: GEOLOGICAL SETTING AND MINERALIZATION

7.1 Regional Geology

The following discussion of the Regional Geology is taken from Render et al. (2011).

The Longlegged Lake Property lies within the Superior Province, straddling the suture zone between the east-west trending, Mesoproterozoic North Caribou and Winnipeg River Terranes to the north and south respectively. More specifically, the Property is underlain by rocks assigned to the Uchi subprovince of the North Caribou terrane in the north, and the English River subprovince in the south.

The Uchi subprovince is a chain of greenstone belts characterized by strongly deformed successions of supracrustal rocks and intrusive complexes formed over protracted periods of rifting and arc magmatism. The Uchi subprovince is one of the more prolific mineral belts in the Superior Province, hosting several major deposits including the world-class Red Lake gold camp. The stratigraphy of the Uchi subprovince indicates that rifting began ca. 2.99 Ga, followed by juvenile and continental arc magmatism at 2.94-2.91, 2.90-2.89, 2.85 and 2.75-2.72 Ga (Percival, 2007). The youngest rocks in the belts are typically coarse clastic sediments that locally contain detrital zircons as young as 2.703 Ga. These strata may be facies equivalents of the marine greywacke successions of the English River subprovince to the south (Percival, 2007).

Multiple regional deformation events have affected the greenstone belts in the Uchi subprovince, producing steep south-dipping composite fabrics. These are constrained by age dating as pre-2.74, 2.73, 2.72 and 2.70 Ga. Regionally, gold mineralization is found to be associated with structures formed prior to 2.712 Ga and with late-stage gold localization after 2.701 Ga (Percival, 2007).

The North Caribou terrane is separated from the Winnipeg River terrane to the south by a narrow east-west trending belt of metasedimentary rocks known as the English River subprovince. These rocks underlie the southern part of the Longlegged Lake Property. They are described regionally as migmatite and diatexite, since much of the belt has been subjected to middle amphibolite facies to low-pressure granulite facies (750-850°C at 0.6-0.7 Mpa) metamorphism; however original sedimentary features are locally preserved. The sedimentary protoliths of the English River schists and migmatites are generally immature, turbiditic greywackes. The turbidites are interpreted to be syn-orogenic flysch successions that were deposited into a forearc basin and subsequently telescoped, forming an accretionary prism at the leading edge of the Winnipeg River terrane. Detrital zircon analysis indicates that the English River sediments were deposited between 2.705 Ga and 2.698 Ga, after cessation of volcanic activity in the adjacent arc terranes. Metamorphism of the sediments has been

dated at 2.691 Ga, which was followed by intrusion of 2.65 Ga volatile-rich pegmatites (Percival, 2007).

Structurally, the English River subprovince is characterized by a well-developed, east-west trending composite foliation fabric defined by migmatitic layering parallel to banding in the metasediment. The fabric is folded by a tight, upright, to weakly asymmetric, north-verging F2 fold system (Hrabi and Cruden, 2001). Macroscale F1 folds are locally identified by their interference with this regional fold system.

The English River subprovince is juxtaposed against the Uchi subprovince to the north by the Sydney Lake – Lake St. Joseph fault. This east-west trending brittle-ductile fault zone is up to 3km wide and is interpreted to be subvertical to steeply south-dipping. The fault is estimated to have a dextral transcurrent displacement of about 30km and a south-side-up vertical displacement of about 2.5 km (Stone, 1981). The timing of movement on the fault zone is constrained by an offset marker that is dated to 2.68 Ga (Bethune et al., 2000).

7.2 Property Geology

The following discussion of the Property Geology is taken from Render et al. (2011), with some revisions by the Author of this Report in order to simplify the discussion and remove items that are not relevant to Silver Dollar's Property.

Uchi Subprovince

Rock units assigned to the Uchi subprovince occurring in the area of the Longlegged Lake Property include mafic to intermediate volcanic rocks and fine-grained, bedded volcanoclastic rocks. The geologic interpretation for the Property itself indicates a felsic intrusive (granodiorite to tonalite) to the north of the Pakwash Lake Fault and metasediments to the south of the fault (see Figure 4). Clastic sedimentary rocks that lie north of the Pakwash Lake Fault zone are assigned to the Uchi subprovince because they are texturally different from the metasedimentary rocks of the adjacent English River subprovince to the south. These sedimentary successions are very similar in composition and may represent facies equivalents that have been juxtaposed during orogenesis.

The sedimentary unit is dominated by gritty fine-grained sandstones and greywacke (containing up to 40% mica). In the north, the unit contains a thick succession of laminated argillite and interbedded argillite and greywacke. These strata host an ironstone succession that was exploited by the past producing Griffith Iron Mine. A thin unit of cobble conglomerate occurs along the trace of the Pakwash Fault. The conglomerate contains rounded clasts of diorite to granodiorite that are supported in a fine-grained, thinly bedded, black matrix. Petrographic analysis of this unit indicates that the matrix may be volcanoclastic

in origin. Interbedded volcanic and sedimentary rocks are observed locally suggesting that the two units were deposited contemporaneously. The sedimentary/volcanic succession is typically strongly foliated and contains metamorphic mineral assemblages including garnet, that are indicative of upper greenschist to lower amphibolite grade metamorphism. The supracrustal rocks are intruded by a granodiorite of undetermined age covering the majority of the north portion of the Property.

English River Subprovince

Metasedimentary rocks of the English River subprovince underlie the southern part of the Longlegged Lake Property. This unit includes psammitic to pelitic rocks that are variably recrystallized, strongly foliated and banded. Mineralogically the unit is fairly homogeneous; its mineral assemblage consists dominantly of quartz and biotite with minor feldspar. Garnet commonly occurs as a porphyroblast phase indicating amphibolite facies metamorphism. The crystals range in size from 1mm to 3cm. The modal proportions of quartz and biotite are variable, which is attributed to the mud content of the original sedimentary rock. Although sedimentary layering is not preserved, compositional banding defined by biotite content occurs at the decimetre to metre-scale and is interpreted to reflect a protolith consisting of interbedded mudstone and muddy sandstone. This is consistent with regional interpretations of the English River as a flyshoid greywacke succession.

The metasediment is intruded by pegmatite dykes that are dominantly tonalitic in composition, consisting of plagioclase, quartz and biotite. Accessory phases locally noted include garnet, beryl, and tourmaline. Lesser granitic pegmatite occurs in some portions of the claim area. It contains K-feldspar, plagioclase, quartz, biotite and muscovite. The dykes range from cm-wide stringers to small plutons several meters in diameter. They are consistently parallel to the main foliation in the rock but the degree to which the dykes are transposed is variable. Throughout most of the claim area pegmatite dykes are demonstrably infolded with deformed metasediment, describing tight, weakly asymmetrical fold wave trains. In high strain zones, dykes are commonly dismembered and boudinaged with fabric in the surrounding metasediment wrapping around the deformed dyke. At some localities, highly transposed dykes form regular banding to the extent that these portions of the unit may be characterized as metatexite.

Structure

The English River and Uchi subprovinces in the Property area are separated by the Pakwash Lake Fault, a major east-west trending fault that is interpreted to splay from the Sydney Lake Fault zone, located south of the Property.

The Pakwash Lake Fault Zone (PLFZ) branches off the Sydney Lake Fault Zone west of the Property near the eastern end of Longlegged Lake. Within the

Property the fault zone trends northeast-southwest and dips moderately to steeply toward the south (Figure 4). The PLFZ is tightly constrained by mapping, but fault rocks are rarely exposed, suggesting that along much of its length it is a narrow zone of deformation, and may be a brittle discontinuity.

Within the Property the fault lies roughly parallel to the edge of the granodiorite pluton, separating interbedded greywacke and mafic volcanic rocks in the contact zone to the north from coarsely recrystallized banded metasediment of the English River subprovince to the south (Figure 4).

7.3 Mineralization

As of the writing of this Report, there is no record of any gold or sulphide mineralization being found on Silver Dollar's Longlegged Lake Property, although this could be due in part to the fact that previous work suggests there is very little outcrop. The lack of outcrop was confirmed by two days of prospecting work conducted by Desmond Cullen (Clark Exploration Consulting Inc.) on June 8th and 9th, 2019. The only indication of gold mineralization is suggested by the MMI soil geochemistry described in "Item 6: History".

Figure 3. Regional Geology

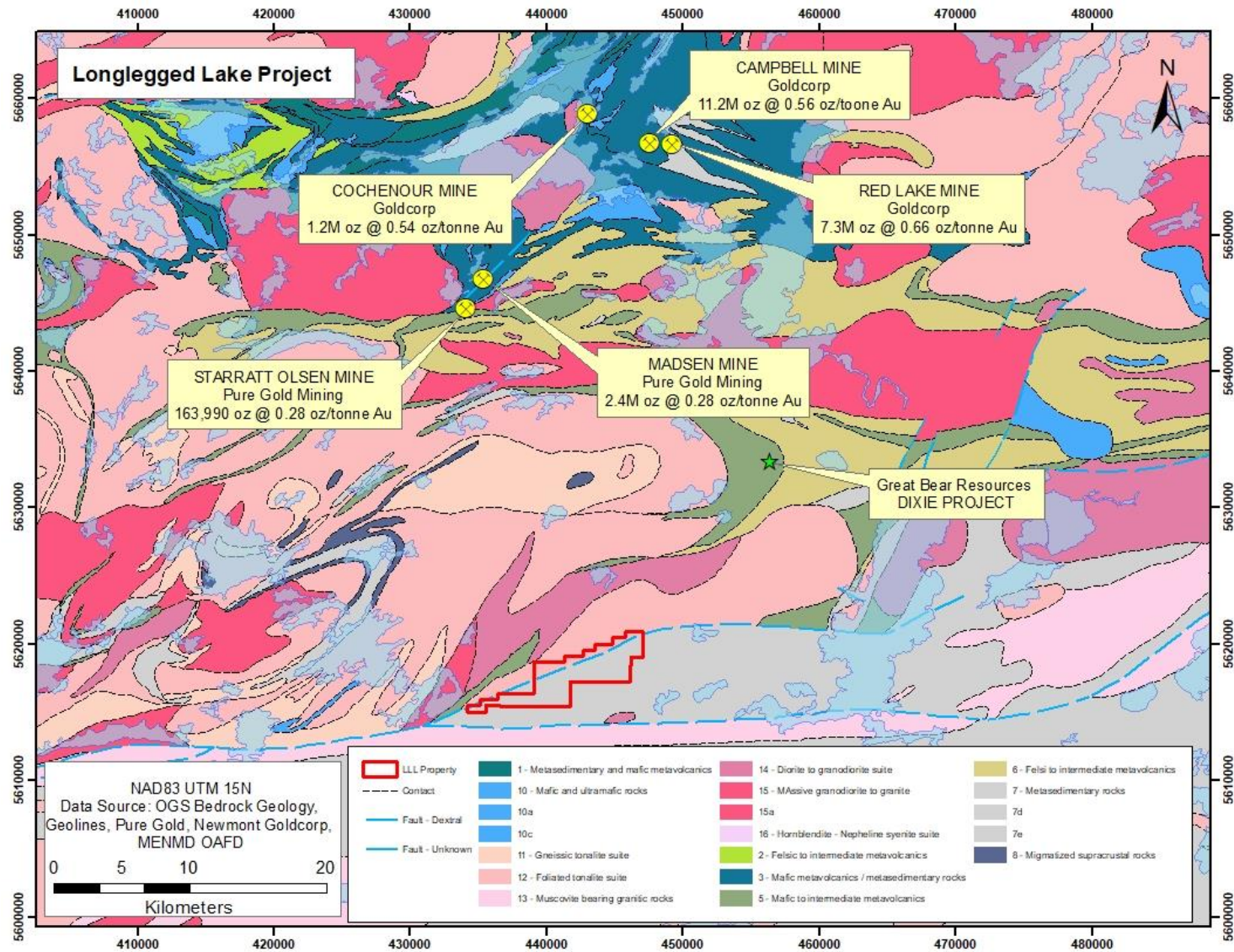
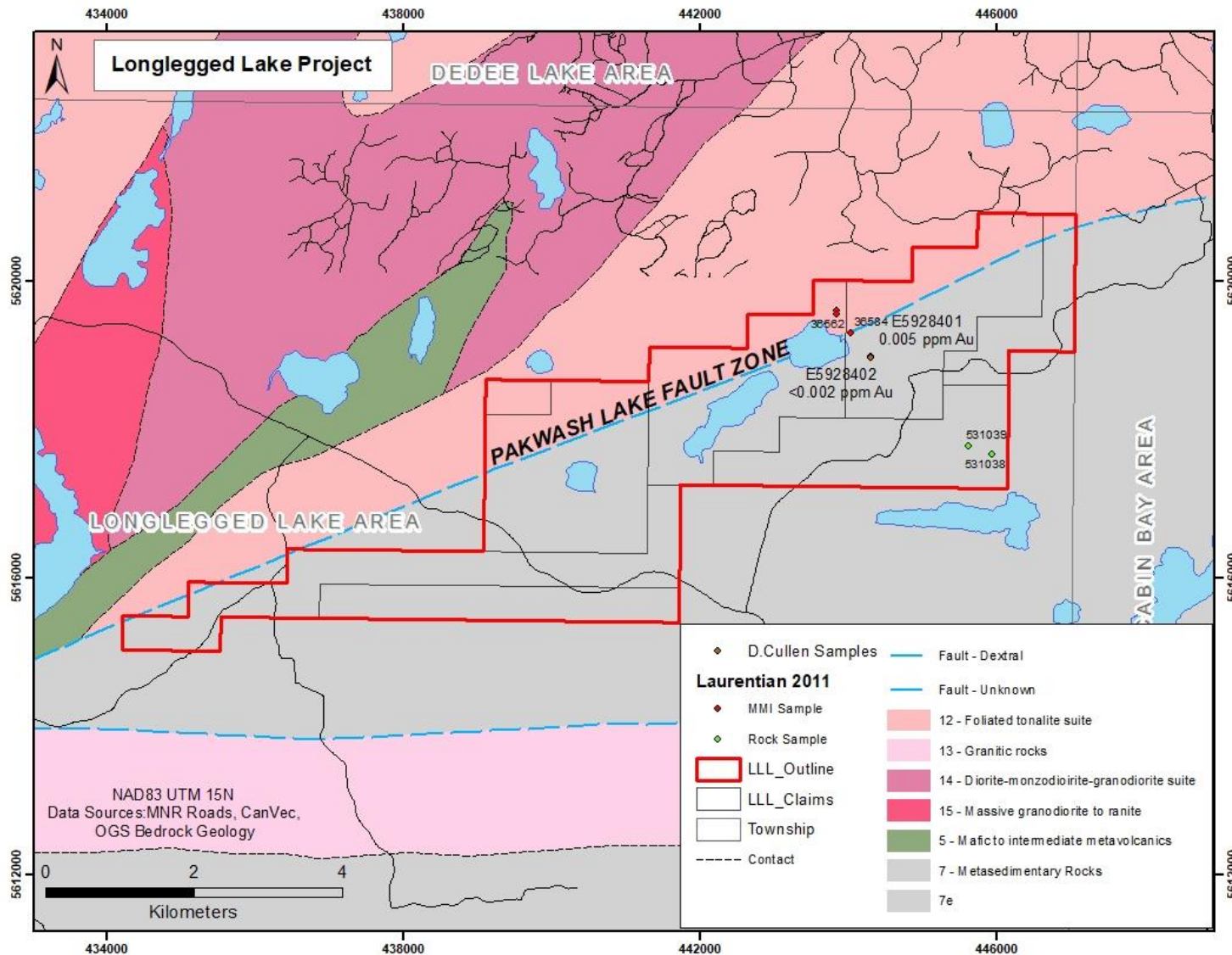


Figure 4. Property Geology



Item 8: Deposit Types

On their Longlegged Lake Property, Silver Dollar is focused on identifying and delineating Archean-aged orogenic gold deposits as defined by Groves et al. (1998). Following Kerrich et al. (2000), orogenic gold deposits are typically associated with crustal-scale fault structures, although the most abundant gold mineralization is hosted by lower-order splays from these major structures. Deposition of gold is generally syn-kinematic, syn- to post-peak metamorphism and is largely restricted to the brittle-ductile transition zone. However, deposition over a much broader range of 200–650°C and 1–5 kbar has been demonstrated. Host rocks are highly variable, but typically include mafic and ultramafic volcanic rocks, banded iron formation, sedimentary rocks and rarely granitoids. Alteration mineral assemblages are dominated by quartz, carbonate, mica, albite, chlorite, pyrite, scheelite and tourmaline, although there is much inter-deposit variation.

The local geology fits the model for the style of mineralization found at the Eleonore deposit of Goldcorp in northern Quebec (total reserves and resources of 35,220,000 tonnes at 6.3 g/T Au), where mineralization occurs in polydeformed sedimentary rocks near a subprovince boundary and near a quartz diorite stock. The Author has been unable to verify this information, and the information is not necessarily indicative of the mineralization that is the subject of the technical report.

Item 9: Exploration

Prospectair conducted a heliborne high-resolution magnetic (MAG) survey for Silver Dollar on the Longlegged Lake Property in the Red Lake area (Figure 1). The survey was flown from March 25th to April 1st, 2019. One survey block was flown with 25m spaced lines and control lines every 250m for a total of 1,146 l-km. A total of 9 production flights were performed using Prospectairs Robinson R-44, registration C-GBOU. The helicopter and survey crew operated out of Red Lake Airport located 40km north of the block. The following discussion of the results of the survey is taken from the “High-Resolution Heliborne Magnetic Survey” report (Dubé, 2019). See Appendix I for the full report and technical specifications on the high-resolution magnetic survey.

“The southeastern half of the survey area is generally characterized by magnetically depressed background values and settled signal variations, which is typical of an environment dominated by meta-sedimentary rocks. The northwestern half depicts slightly stronger magnetic background values that could relate to felsic/intermediate intrusive or volcanic rocks. These two areas are roughly separated by a strong magnetic lineament possibly pertaining to a mafic dyke or to a horizon enriched in magnetic minerals. The strongest anomaly of the survey is found at the southeastern tip of the block and could also relate to a mafic intrusion or a magnetic horizon.

The majority of magnetic lineaments found in the block are trending from E-W to NE-SW, except in a few areas where outlier lineaments are rather striking NW-SE or N-S. In general terms, magnetic lineaments are related to rock formations that are enriched in magnetic minerals (magnetite and/or pyrrhotite). Several lineaments are also curved, suggesting that folding and possibly shearing occurred in the area.

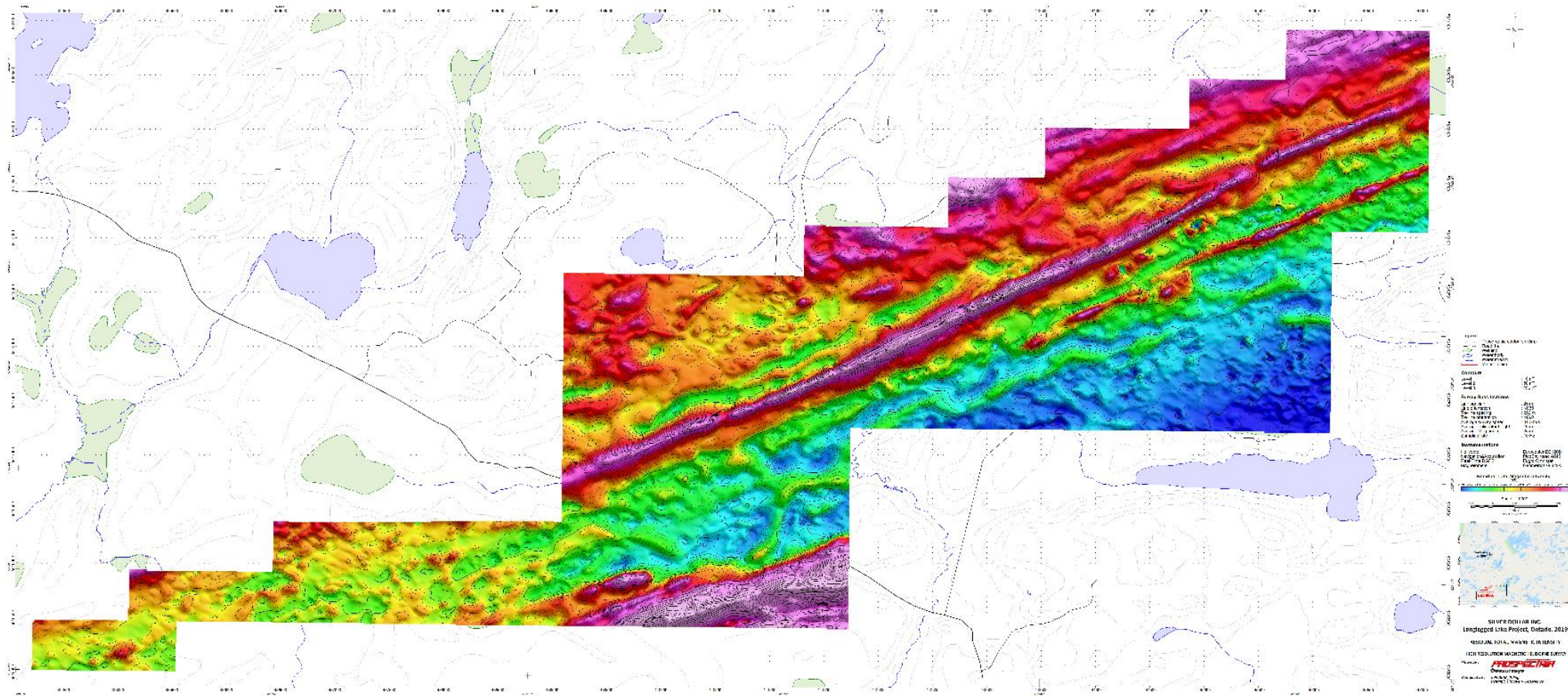
Throughout the block, it is possible to detect structural features offsetting observed magnetic lineaments and causing abrupt interruption or changes of the magnetic response. These features are typically caused by faults, fractures and shear zones. If they are thought to be favorable structures in the exploration context of the Longlegged Lake project, they should be paid particular attention and should be the object of a comprehensive structural interpretation, which is beyond the scope of this report.”

Limited prospecting work was conducted by Desmond Cullen on June 8th and 9th, 2019. The Property was traversed at various locations, and while very little outcrop was found, there was enough to confirm the geology reported by Laurentian and 2 rock samples were taken for assay, with the results presented in Table 2. The sample locations are shown on Figure 4.

Table 2. Desmond Cullen Samples

Sample No.	UTMs (NAD 83, Zone 15)		Rock Sample Description	Assay (Au ppm)
	Easting	Northing		
E5928401	444318	5618978	Fine grained metasediment; medium to dark grey; moderate bedding/foliation at 60° azimuth, sub-vertical to steeply south dip; no sulphides	0.005
E5928402	444315	5618963	Fine grained metasediment with weak gneissic texture; medium to dark grey; moderate bedding/foliation at 60° azimuth, sub-vertical to steeply south dip; sample has approximately 75% quartz vein with minor calcite; no sulphides	<0.002

Figure 5: Total Magnetic Intensity (TMI)



Item 11: Sample Preparation, Analysis and Security

During the prospecting work completed by Desmond Cullen on June 8 and 9th, 2020, rock samples were collected and placed in plastic bags which had a duplicate tag inserted and sealed with tape. Analysis was completed by AGAT Laboratories in Mississauga, Ontario. Desmond Cullen transported the samples to the AGAT Laboratories preparation facility in Thunder Bay, Ontario, where the samples are crushed and prepped for assay. A pulverized sub-sample is then shipped to AGAT Laboratories in Mississauga, Ontario for assay analysis. Samples were analyzed for Au by 50 g fire assay with ICP-AAS finish.

AGAT Laboratories' website states that it employs top quality assurance professionals who strive to improve the overall quality of service that it provides. This Quality Assurance Department monitors the operations of the company and ensures compliance with internationally recognized standards, policies and procedures.

AGAT Laboratories is accredited for specific tests as listed in the laboratory's current scope of accreditation by the following organizations:

- The Standards Council of Canada (SCC)
- The Canadian Association for Laboratory Accreditation (CALA) and
- SAI Global

AGAT Laboratories is accredited, for specific tests, to the following standard:

- ISO/IEC 17025:2005.

AGAT Laboratories is certified to the following standard:

- ISO 9001:2015

Item 12: Data Verification

The data presented in this Report has come primarily from the assessment files available at the Ontario Ministry of Energy, Northern Development and Mines. The Author has reviewed the assessment files referred to in this report. Assay certificates for drilling were not normally present prior to 1990 when the Ontario Mining Act was amended, requiring the inclusion of the certificates if they were used for assessment. The Author can verify that the information has been presented accurately as reported in those files and reports.

There were no limitations placed on the Author in conducting the verification of the data or the Property visit. The Author's opinion is that the data sets are adequate for the reliance on and completion of the Report.

Item 13: Interpretation and Conclusions

The previous work on the Longlegged Lake Property has indicated the presence of elevated, or anomalous, gold values in soil samples over an area associated with the Pakwash Lake Fault Zone, which also marks the contact zone between a granodiorite to the north, and mafic volcanic and metasediments to the south. This environment represents a promising geological setting to host gold mineralization. This area should be the main focus of future exploration by Silver Dollar.

As this Property is still a grassroots Property, with little previous exploration, there is always a substantial risk that the work proposed may not result in advancing the Property under current market conditions.

Item 14: Recommendations

It is recommended that an induced polarization survey, additional prospecting, mapping, and soil sampling be conducted, with a focus on the area of the interpreted Pakwash Lake Fault Zone (the "PLFZ"). Target areas identified by the previous and new sampling should be followed up later by mechanical stripping, washing, mapping and sampling, if overburden depths allow. At this time the mechanical stripping is not budgeted, pending results of the prospecting and soil sampling.

If results warrant, selected targets should later be drill tested with wide-spaced shallow holes to test for large-scale alteration and/or mineralization.

A budget of **\$104,300** is recommended to carry out the initial recommended work.

14.1: Proposed Budget

Mapping, Prospecting and Sampling	
Geologist for 14 days @ \$700/day	9,800
Technician/helper for 14 days @ \$300/day	4,200
14 days room and board for 2 @ 300/day	4,200
Transportation	
truck, gas	
14 days @ \$125/day	1,750
Soil Geochemical Sampling	
2 technicians for 14 days @ \$300/day	8,400
14 days room and board for 2 @ 300/day	4,200
Transportation	
truck, gas	
14 days @ \$125/day	1,750
Assays 200 @ \$35/sample	7,000
Line Cutting	
20 km @ \$900/km	18,000
Induced Polarization Survey	
20 km @ \$1500/km	30,000
Reports and Maps	5,000
Contingencies	<u>10,000</u>
Total Proposed Budget	\$104,300

Item 15: References

Note: Notations listed in the references below in the format “AFRI 20011328” refer to assessment files archived with the Ontario Ministry of Energy, Northern Development and Mines on the MNDM website (www.geologyontario.mndm.gov.on.ca/).

Bethune, K., Helmstaedt, H., and McNicoll, V.M., 2000, U-Pb geochronology bearing on the timing and nature of deformation along the Miniss River Fault; in Harrap, R.M., and H. Helmstaedt, H., eds., Western Superior Transect Seventh Annual Workshop: Lithoprobe Report 77, p 8-12.

Chiang, M., and Labrenz, D., 2013. Goldpines North Property Fall 2012 Exploration Report, Ear Falls Area, Ontario, Canada; *prepared for* Laurentian Goldfields Ltd. AFRI 20012211.

Chiang, M., and Rennie, C., 2013. Goldpines North Property Summer 2011 Exploration Report, Ear Falls Area, Ontario, Canada; *prepared for* Laurentian Goldfields Ltd. AFRI 20011980.

Dubé, J., 2019. Technical Report, High-Resolution Heliborne Magnetic Survey, Longlegged Lake Project, Red Lake Area, Red Lake Mining Division, Ontario, 2019.

Great Bear Resources website, 2020. <https://greatbearresources.ca/projects/red-lake-camp-ontario/dixie/>

Golden Goliath Resources website, 2020. <https://www.goldengoliath.com/properties/canada/kwai/>

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

Hrabi, B., and Cruden, A. R., 2001, Three-dimensional geometry of the English River subprovince in the Separation Lake-Longlegged Lake area; in Harrap, R.M., and H. Helmstaedt, H., eds., Western Superior Transect Seventh Annual Workshop: Lithoprobe Report 80, Lithoprobe Secretariat, University of British Columbia, p146-148.

Kerrich, R., Goldfarb, R. J., Groves, D. I., and Garwin, S., 2000. The geodynamics of world-class gold deposits: Characteristics, space-time distribution, and origins: *Reviews in Economic Geology*, v. 13, p. 501-551.

Percival, J.A., 2007, Geology and metallogeny of the Superior Province, Canada, in Goodfellow, W.D., ed., Mineral Deposits of Canada: A Synthesis of Major Deposit Types, District Metallogeny, the Evolution of the Geological Provinces, and Exploration Methods; Geological Association of Canada, Mineral Deposits Division, Special Publication No. 5, p. 903-928.

Render, M., Meade, S.R., Lengyel, J.W.P., 2010. Goldpines North Property, Ear Falls Area, Ontario, Canada; *prepared for* Laurentian Goldfields Ltd. AFRI 20009807.

Render, M., Meade, S.R., Lengyel, J.W.P., 2011. Goldpines North Property Drilling Report, Ear Falls Area, Ontario, Canada; *prepared for* Laurentian Goldfields Ltd. AFRI 20011328.

Sedar website, 2020, <https://www.sedar.com/FindCompanyDocuments.do>

Stone, D., 1981, The Sydney Lake fault zone in Ontario and Manitoba, Canada. Ph.D. thesis: University of Toronto, Toronto Canada.

ITEM 16: CERTIFICATE OF QUALIFICATIONS

Brent Clark
941 Cobalt Crescent
Thunder Bay, Ontario
Canada, P7B 5Z4
Telephone: 807-622-3284, Fax: 807-622-4156
Email: brent@clarkexploration.com

CERTIFICATE OF QUALIFIED PERSON

I, Brent Clark, P. Geo. (#3188), do hereby certify that:

1. I am a consulting geologist with an office at 941 Cobalt Crescent, Thunder Bay, Ontario.
2. I graduated with the degree of Honours Bachelor of Earth Science (Geology) from Carleton University, Ottawa, Ontario in 2014. I have worked on gold projects in Northwestern Ontario, and Australia.
3. "Assessment Report" refers to the report titled ""Assessment Report on the Longlegged Lake Property, Red Lake Mining Division, Northwestern Ontario", dated February 9, 2021.
4. I am a registered Professional Geoscientist with the Association of Professional Geoscientists of Ontario (#3188).
5. I have worked as a Geologist since my graduation from university.
6. I am the author of this report and responsible for all sections of the Assessment Report.
7. As of the date of this certificate, and to the best of my knowledge, information and belief, the Assessment Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated this 9th day of February 2021.

"Brent Clark"

Brent Clark, P.Geol.

APPENDIX I
High Resolution Heliborne Magnetic Survey
Longlegged Lake Property

Technical Report

High-Resolution Heliborne Magnetic Survey

***Longlegged Lake Project,
Red Lake area, Red Lake Mining Division, Ontario, 2019***

***Silver Dollar Inc.
200 – 551 Howe St.
Vancouver, BC, Canada
V6C 2C2***



Prospektair Geosurveys

Dynamic Discovery Geoscience



Prepared by:
Joël Dubé, P.Eng.

May 2019

Dynamic Discovery Geoscience
7977 Décarie Drive
Ottawa, ON, K1C 3K3
jdube@ddgeoscience.ca
819.598.8486



Survey flown by :

PROSPECTAIR

CP 1832 Succ. Hull
Gatineau, Québec J8X 3Y8
(819)661-2029
Fax: 1.866.605.3653
contact@prospectair.ca

Table of Contents

I. INTRODUCTION 5

II. SURVEY EQUIPMENT 9

 AIRBORNE MAGNETOMETER 9

Geometrics G-822A 9

 REAL-TIME DIFFERENTIAL GPS 9

Omnistar DGPS 9

 AIRBORNE NAVIGATION AND DATA ACQUISITION SYSTEM 9

Pico-Envirotec AGIS-XP system 9

 MAGNETIC BASE STATION 9

GEM GSM-19 9

 ALTIMETERS 10

Free Flight Radar Altimeter 10

Digital Barometric Pressure Sensor 10

 SURVEY HELICOPTER 10

Robinson R-44 (registration C-GBOU) 10

III. SURVEY SPECIFICATIONS 11

 DATA RECORDING 11

 TECHNICAL SPECIFICATIONS 11

IV. SYSTEM TESTS 12

 MAGNETOMETER SYSTEM CALIBRATION 12

 INSTRUMENTATION LAG 12

V. FIELD OPERATIONS 13

VI. DIGITAL DATA COMPILATION 14

 MAGNETOMETER DATA 14

General 14

Tilt Angle Derivative 14

Gridding 15

 RADAR ALTIMETER DATA 15

 POSITIONAL DATA 15

 TERRAIN DATA 16

VII. RESULTS AND DISCUSSION 16

VIII. FINAL PRODUCTS 21

 DIGITAL LINE DATA 21

 MAPS 21

 GRIDS 22

 PROJECT REPORT 22

IX. STATEMENT OF QUALIFICATIONS 23

X. APPENDIX A – SURVEY BLOCK OUTLINE 24

XI. APPENDIX B – PROPERTY CLAIMS NUMBERS COVERED BY THE SURVEY 25

FIGURES

FIGURE 1:	GENERAL SURVEY LOCATION	5
FIGURE 2:	SURVEY LOCATION AND BASE OF OPERATION.....	6
FIGURE 3:	SURVEY LINES AND LONGLEGGED LAKE PROPERTY CLAIMS	8
FIGURE 4:	C-GBOU ROBINSON R-44 AT RED LAKE AIRPORT	10
FIGURE 5:	EXAMPLE OF A MAGNETIC BASE STATION SETUP	13
FIGURE 6:	RESIDUAL TOTAL MAGNETIC INTENSITY WITH EQUAL AREA COLOR DISTRIBUTION	17
FIGURE 7:	RESIDUAL TOTAL MAGNETIC INTENSITY WITH LINEAR COLOR DISTRIBUTION	18
FIGURE 8:	FIRST VERTICAL DERIVATIVE OF TMI	19
FIGURE 9:	TILT ANGLE DERIVATIVE.....	20

TABLES

TABLE 1:	SURVEY BLOCK PARTICULARS.....	6
TABLE 2:	TECHNICAL SPECIFICATIONS OF THE R-44 ROBINSON HELICOPTER	10
TABLE 3:	MAG LINE DATA CHANNELS.....	21
TABLE 4:	MAPS DELIVERED	21
TABLE 5:	GRIDS DELIVERED	22

I. INTRODUCTION

Prospectair conducted a heliborne high-resolution magnetic (MAG) survey for the mineral exploration company Silver Dollar Inc. on its Longlegged Lake Property located in the Red Lake area, Red Lake Mining Division, Province of Ontario (Figure 1). The survey was flown from March 25th to April 1st 2019.

Figure 1: General Survey Location

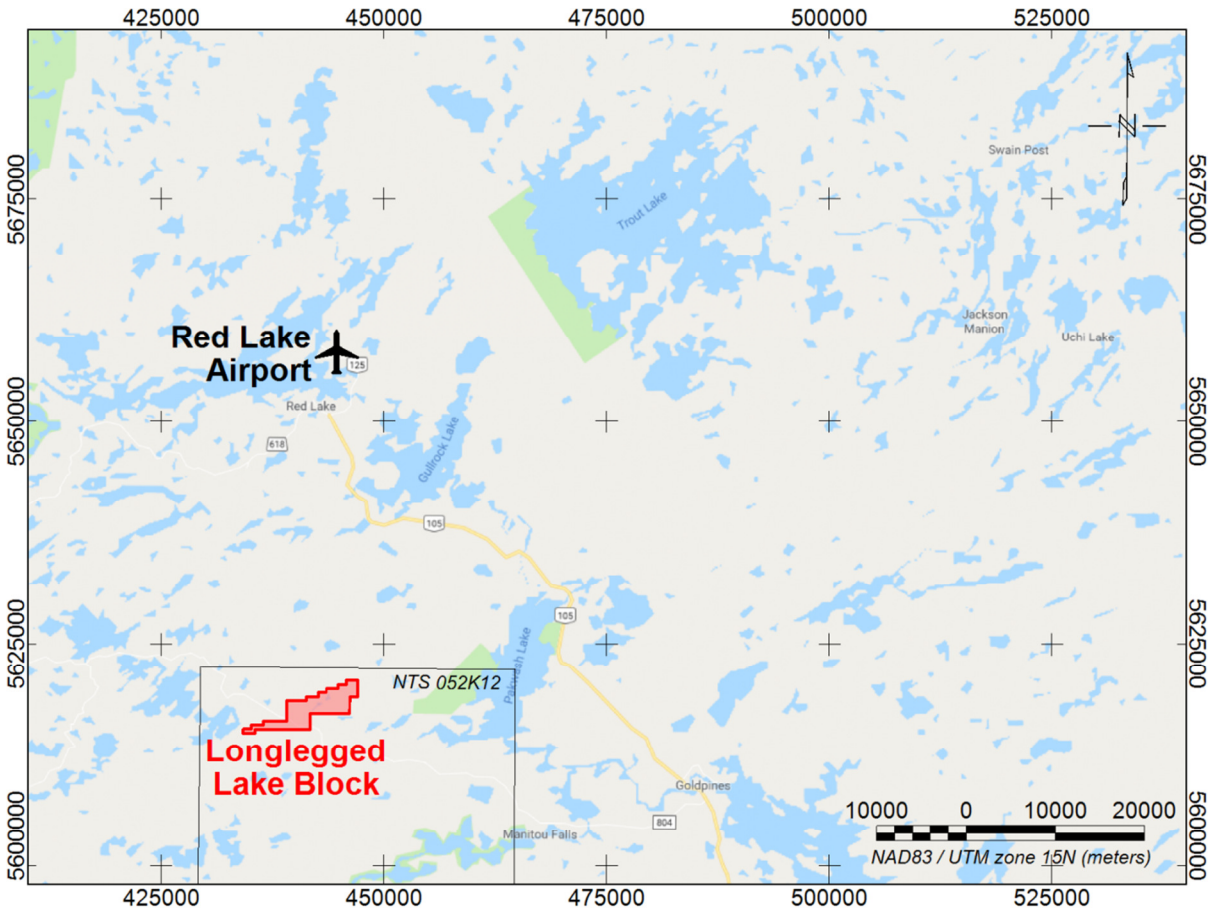


One survey block was flown for a total of 1,146 l-km. A total of 9 production flights were performed using Prospectair’s Robinson R-44, registration C-GBOU. The helicopter and survey crew operated out of the Red Lake Airport located 40 km north of the block (Figure 2).

Table 1: Survey block particulars

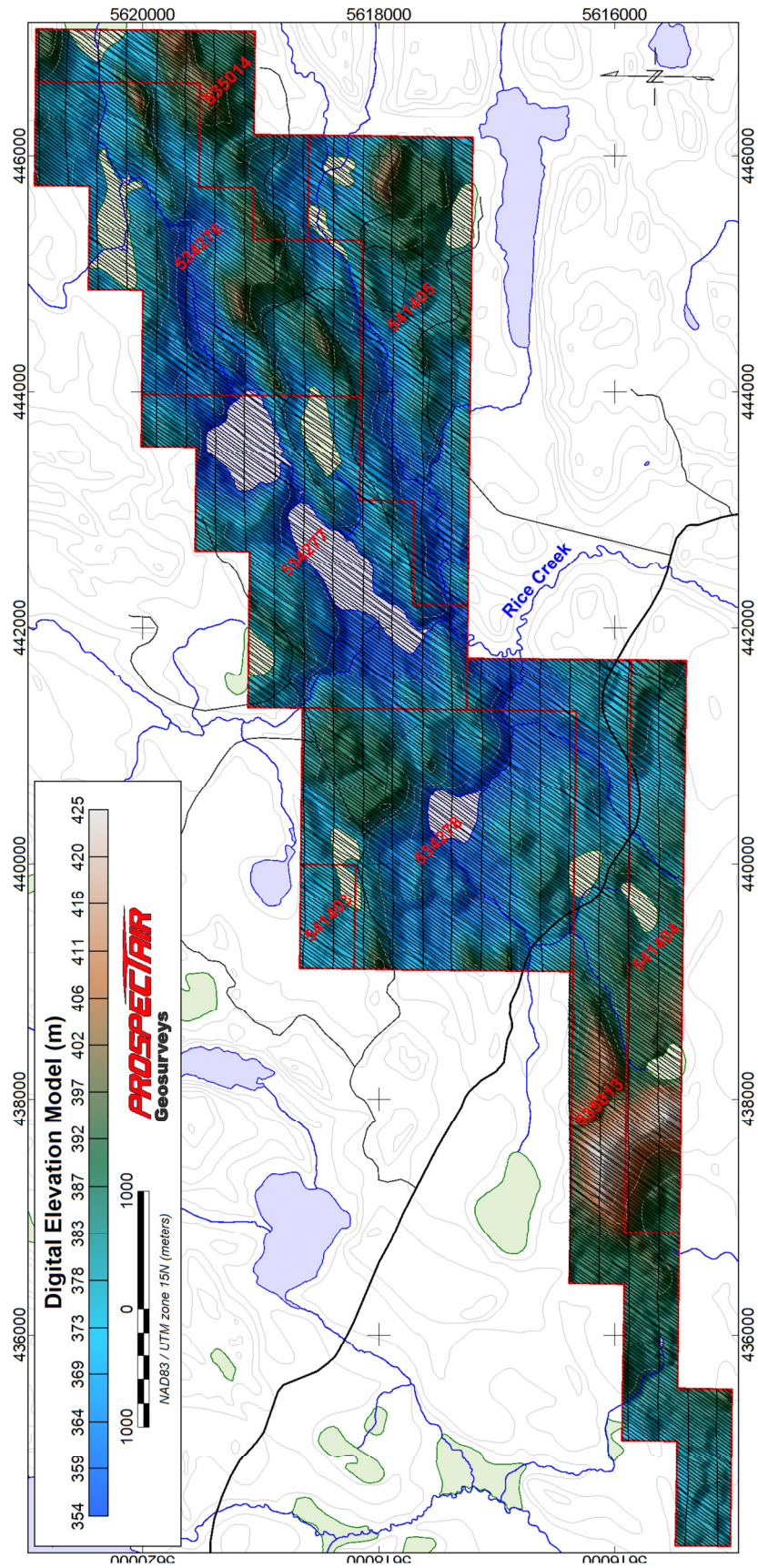
Block	NTS Mapsheet	Line-km flown	Flight numbers	Dates Flown
Longlegged Lake	052K12	1,146 l-km	Flt 1 to 9	March 25 th to April 1 st

Figure 2: Survey Location and base of operation



The Longlegged Lake block was flown with traverse lines at 25 m spacing and control lines spaced every 250 m. The survey lines were oriented N035 and control lines were flown at an azimuth of N090. The average height above ground of the helicopter was 46 m and the magnetic sensor was at 25 m. The average survey flying speed was 31.5 m/s. The survey area is covered by forest, lakes and wetlands, and, aside from a few dispersed hills, the topography is mostly gently undulating, which are fairly typical characteristics of the area near Red Lake. The elevation is ranging from 354 to 425 m above mean sea level (MSL). The Rice Creek crosses the survey block in its center. The Property can be easily accessed by the main road continuing further west from Road 804, passed Manitou Falls. The block is located approximately 40 km west of Ear Falls and 35 km south of Red Lake. Coordinates outlining the survey block are given in Appendix A, with respect to NAD-83 datum, UTM projection zone 15N. The location of the Longlegged Lake Property claims (in red) and of the survey lines is shown on Figure 3. The Property claims numbers are also listed in Appendix B.

Figure 3: Survey lines and Longlegged Lake Property claims



II. SURVEY EQUIPMENT

Prospectair provided the following instrumentation for this survey:

Airborne Magnetometer

Geometrics G-822A

The heliborne system used a non-oriented (strap-down) optically-pumped Cesium split-beam sensor. These magnetometers have a sensitivity of 0.005 nT and a range of 15,000 to 100,000 nT with a sensor noise of less than 0.02 nT. The heliborne sensor was mounted in a bird made of non-magnetic material located 21 m below the helicopter when flying. Total magnetic field measurements were recorded at 10 Hz in the aircraft.

Real-Time Differential GPS

Omnistar DGPS

Prospectair uses an OmniStar differential GPS navigation system to provide real-time guidance for the pilot and to position data to an absolute accuracy of better than 5 m. The *Omnistar* receiver provides real-time differential GPS for the Agis on-board navigation system. The differential data set was relayed to the helicopter via the Omnistar network appropriate geosynchronous satellite for the survey location. The receiver optimizes the corrections for the current location.

Airborne Navigation and Data Acquisition System

Pico-Envirotec AGIS-XP system

The Airborne Geophysical Information System (AGIS-XP) is advanced, software driven instrument specifically designed for mobile aerial or ground geophysical survey work. The AGIS instrumentation package includes an advanced navigation system, real-time flight path information that is displayed over a map image of the area, and reliable data acquisition software. Thanks to simple interfacing, the radar and barometric altimeters and the Geometrics magnetometer are easily integrated into the system and digitally recorded. Automatic synchronization to the GPS position and time provides very close correlation between data and geographical position. The AGIS is equipped with a software suite allowing easy maintenance, upgrades, data QC, and project and survey area layout planning.

Magnetic Base Station

GEM GSM-19

A GEM GSM-19 Overhauser magnetometer, a computer workstation and a complement of spare parts and equipment serve as the base station. Prospectair establish the base station in a secure location with low magnetic noise. The GSM-19 magnetometer has resolution of 0.01 nT, and 0.2 nT accuracy over its operating range of 20,000- to 100,000 nT. The ground system was recording magnetic data at 1 Hz.

Altimeters

Free Flight Radar Altimeter

The Free Flight radar altimeter measures height above ground to a resolution of 0.5 m and an accuracy of 5% over a range up to 2,500 ft. The radar altimeter data is recorded and sampled at 10 Hz.

Digital Barometric Pressure Sensor

The barometric pressure sensor measures static pressure to an accuracy of ± 4 m and resolution of 2 m over a range up to 30,000 ft above sea level. The barometric altimeter data are sampled at 10 Hz.

Survey helicopter

Robinson R-44 (registration C-GBOU)

The survey was flown using Prospectair's Robinson R-44 helicopter that handles efficiently the light equipment load and the survey range for magnetic surveys. Table 2 presents the helicopter technical specifications and capacity, and the aircraft is shown in Figure 4.

Table 2: **Technical specifications of the R-44 Robinson helicopter**

Item	Specification
Powerplant	One 195kW (260hp) Textron Lycoming O-540
Rate of climb	1,000 ft/min
Cruise speed	223 km/h – 120 kts
Service ceiling	14,000 ft
Range with no reserve	645 km
Empty weight	635 kg
Maximum takeoff weight	1,090 kg

Figure 4: **C-GBOU Robinson R-44 at Red Lake Airport**



III. SURVEY SPECIFICATIONS

Data Recording

The following parameters were recorded during the course of the survey:

In the helicopter:

- GPS positional data: (time, latitude, longitude, altitude, heading and accuracy (PDOP)) recorded at intervals of 0.1 s;
- Total magnetic field: recorded at intervals of 0.1 s;
- Pressure as measured by the barometric altimeter at intervals of 0.1 s;
- Terrain clearance as measured by the radar altimeter at intervals of 0.1 s;

At the base and remote magnetic ground stations:

- Total magnetic field: recorded at intervals of 1 s;
- GPS time recorded every 1s to synchronize with airborne data.

Technical Specifications

The data quality control was performed on a daily basis. The following technical specifications were adhered to:

- *Height* – 50m mean terrain clearance for the helicopter except in areas where Transport Canada regulations prevent flying at this height, or as deemed by the pilot to ensure safety. Traverse lines and control lines must be flown at the same altitude at points of intersection; the altitude tolerances are limited to no more than 30 m difference between traverse lines and control lines.
- *Airborne Magnetometer Data* – A 0.5 nT noise envelope not to be exceeded for more than 500 m line-length without a reflight.
- *Diurnal Specifications* – A maximum tolerance of 5.0 nT (peak to peak) deviation from a long chord of one minute at the base station.
- *Flying Speed* – The average ground speed for the survey aircraft should be 120 kph. The acceptable high limit is 180 kph over flat topography.
- *Radar Altimeter* – minimal accuracy of 5%, minimum range of 0-2500 m.
- *Barometer* – Absolute air pressure to 0.1 kPa.
- *Flight Path Following* – The line spacing not to vary by more than 30% from the ideal spacing over a distance of more than 300 m, except as required for aviation safety.

For Longlegged Lake Block:

Traverse lines: Azimuth N035, 25 m spacing.

Control Lines: Azimuth N090, 250 m spacing.

IV. SYSTEM TESTS

Magnetometer System Calibration

The survey configuration using a bird towed 21 m below any magnetic piece of the helicopter allows the simplification of the magnetic calibration requirement. Consequently, heading error and aircraft movement noise was considered negligible and no correction was applied to the data.

Instrumentation Lag

The magnetometer lag is a combination of two factors: 1) the time difference between when a reading is sensed, and when that value is recorded by the acquisition system, and 2) the time taken for the sensor to arrive at the location of the GPS antenna. The second factor is defined by the physical distance between the GPS antenna and any given sensor, and the speed of the aircraft. The average total magnetic lag value for the AGIS acquisition system has been calculated to 1.95 s for this survey.

V. FIELD OPERATIONS

The survey operations were conducted out of the Red Lake Airport from March 25th to April 1st, 2019. The data acquisition required 9 flights. At the end of each production day, the data were sent to the Dynamic Discovery Geoscience office via internet. The data were then checked for Quality Control to ensure they fulfilled contractual specifications. The full dataset was inspected prior to provide authorization for the field crew to demobilize. The GSM-19 magnetic base station was set up close to the airport, in a magnetically quiet area, at latitude 51.0707886°N, longitude 93.7950150°W. The survey pilot was Pierre Larose and the survey system technician was Jonathan Drolet.

Figure 5: **Example of a magnetic base station setup**



VI. DIGITAL DATA COMPILATION

Data compilation including editing and filtering, quality control, and final data processing was performed by Joël Dubé, P.Eng. Processing was performed on high performance desktop computers optimized for quick daily QC and processing tasks. Geosoft software Oasis Montaj version 9.3.3 was used.

Magnetometer Data

General

The airborne magnetometer data, recorded at 10 Hz, were plotted and checked for spikes and noise on a flight basis. An average of 1.95 second lag correction was applied to the data to correct for the time delay between detection and recording of the airborne data.

Ground magnetometer data were recorded at 1 sample per second and interpolated by a spline function to 10 Hz to match airborne data. Data were inspected for cultural interference and edited where necessary. Low-pass filtering was deemed necessary on the ground station magnetometer data to remove minor high frequency noise. The diurnal variations were removed by subtracting the ground magnetometer data to the airborne data and by adding back the average of the ground magnetometer value.

Levelling corrections were performed using intersection statistics from traverse and tie lines. After statistical levelling was considered satisfactory, decorrugation was applied on the data to completely remove any subtle non-geological features oriented in the direction of the traverse lines.

Once the Total Magnetic Intensity (TMI) was gridded, its First Vertical Derivative (FVD) and Second Vertical Derivative (SVD) were calculated to enhance narrow and shallow geological features. Finally, the component of the normal Earth's magnetic field, described by the International Geomagnetic Reference Field (IGRF), has been removed from the TMI to yield the residual TMI.

Tilt Angle Derivative

In order to enhance the subtle magnetic features some more, the Tilt Angle Derivative (TILT) was also computed for this project.

It has been shown that it is possible to use the Tilt Angle Derivative to estimate both the location and depth of magnetic sources (Salem et al., 2007).

When two body of different magnetic susceptibility are in contact, the vertical and horizontal gradients along a horizontal line perpendicular to the vertical contact are governed by the following equations:

$$\delta M / \delta h = 2KFc(z_c / (h^2 + z_c^2))$$

$$\delta M / \delta z = 2KFc(h / (h^2 + z_c^2))$$

where

K = susceptibility contrast

F = magnetic field's strength

$c = 1 - \cos^2(\text{field Inclination})\sin^2(\text{field Declination})$

h = location along an horizontal axis perpendicular to the contact

z_c = contact depth

$\delta M/\delta h = \text{sqrt}((\delta M/\delta x)^2 + (\delta M/\delta y)^2)$

The Tilt Angle (θ) is defined as

$\theta = \tan^{-1}[(\delta M/\delta z)/(\delta M/\delta h)]$

By substitution of the gradients we get

$\theta = \tan^{-1}[h/z_c]$

This has two main implications for any given anomaly:

- 1- The 0° angle line is located directly above the contact between a magnetic source and the surrounding rock. This allow for accurate estimation of source location.
- 2- The distance between the 0° and the $+45^\circ$ contour lines as well as the distance between the -45° and the 0° contour lines are equal to the depth of the source at the contact. This allow for a direct estimation of the depth of the source of the anomaly. The depth estimated with this method is actually the distance between the magnetic sensor and the top of the source. Knowing that the sensor was 25 m above the ground in average enables direct depth estimates.

In practice, the signal originating from multiple sources at different depth within a same area will cause juxtaposition of the Tilt Angle values, and complicate location and depth estimation. Nevertheless, the method remains an excellent tool for rapid assessment of sources characteristics, without the need for complex assumptions to be made or heavy computer requirements, as is the case with 3D Euler deconvolution or 3D data inversions.

Gridding

The magnetic data were interpolated onto a regular grid using a bi-directional gridding algorithm to create a two-dimensional grid equally incremented in x and y directions. The final grids of the magnetic data were created with 10 m grid cell size, appropriate for the survey lines spaced at 25 m. Traverse lines were used in the gridding process.

Radar Altimeter Data

The terrain clearance measured by the radar altimeter in metres was recorded at 10 Hz. The data were filtered to remove high frequency noise using a 1 sec low pass filter. The final data were plotted and inspected for quality.

Positional Data

Real time DGPS correction provided by Omnistar was applied to the recorded GPS positional data.

Positional data were originally recorded at 10 Hz sampling rate in geographic longitude and latitude with respect to the WGS-84 datum. The delivered data locations are provided in X and Y using the UTM projection zone 15 North, with respect to the NAD-83 datum. Altitude data were initially recorded relative to the GRS-80 ellipsoid, but are delivered as orthometric heights (MSL elevation).

Terrain Data

Terrain elevation data are computed from the altitude of the helicopter, given by DGPS recordings, and the radar altimeter data.

VII. RESULTS AND DISCUSSION

The residual Total Magnetic Intensity (TMI) of the Longlegged Lake block, presented in Figure 6, is relatively settled and varies over a limited range of 712 nT, with an average of -124 nT and a standard deviation of 82 nT.

The southeastern half of the survey area is generally characterized by magnetically depressed background values and settled signal variations, which is typical of an environment dominated by meta-sedimentary rocks. The northwestern half depicts slightly stronger magnetic background values that could relate to felsic/intermediate intrusive or volcanic rocks. These two areas are roughly separated by a strong magnetic lineament possibly pertaining to a mafic dyke or to a horizon enriched in magnetic minerals. The strongest anomaly of the survey is found at the southeastern tip of the block and could also relate to a mafic intrusion or a magnetic horizon. The stronger anomalies are best seen on Figure 7 which shows the residual TMI data with a linear color distribution.

The majority of magnetic lineaments found in the block are trending from E-W to NE-SW, except in a few areas where outlier lineaments are rather striking NW-SE or N-S. In general terms, magnetic lineaments are related to rock formations that are enriched in magnetic minerals (magnetite and/or pyrrhotite). Several lineaments are also curved, suggesting that folding and possibly shearing occurred in the area.

Throughout the block, it is possible to detect structural features offsetting observed magnetic lineaments and causing abrupt interruption or changes of the magnetic response. These features are typically caused by faults, fractures and shear zones. If they are thought to be favorable structures in the exploration context of the Longlegged Lake project, they should be paid particular attention and should be the object of a comprehensive structural interpretation, which is beyond the scope of this report.

Shorter wavelength anomalies are greatly enhanced on the FVD (Figure 8) and on the TILT (Figure 9) products. Since the FVD attenuates longer wavelength anomalies, and the TILT enhances very weak amplitude anomalies, they are the preferred products for structural interpretation.

Figure 6: Residual Total Magnetic Intensity with equal area color distribution

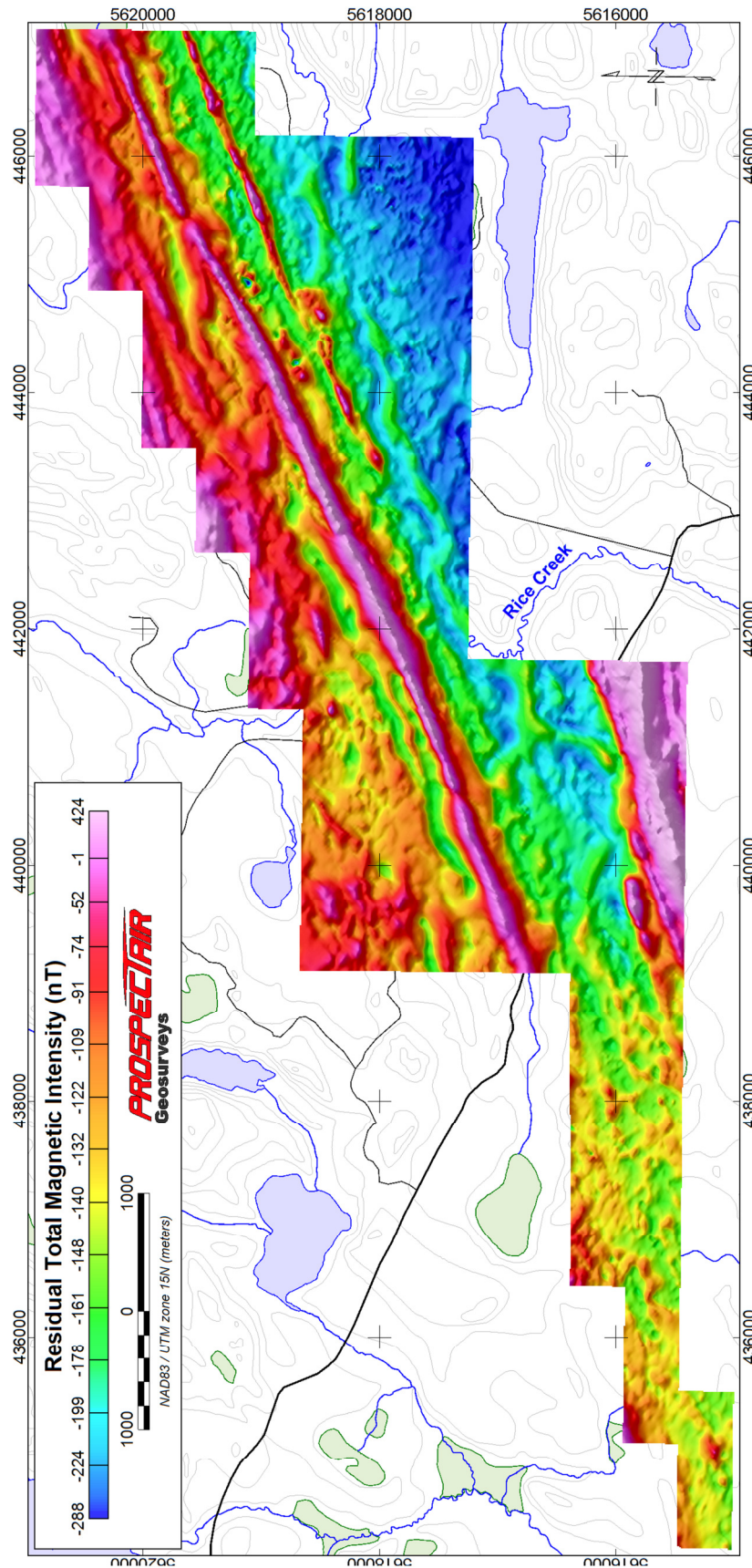


Figure 7: Residual Total Magnetic Intensity with linear color distribution

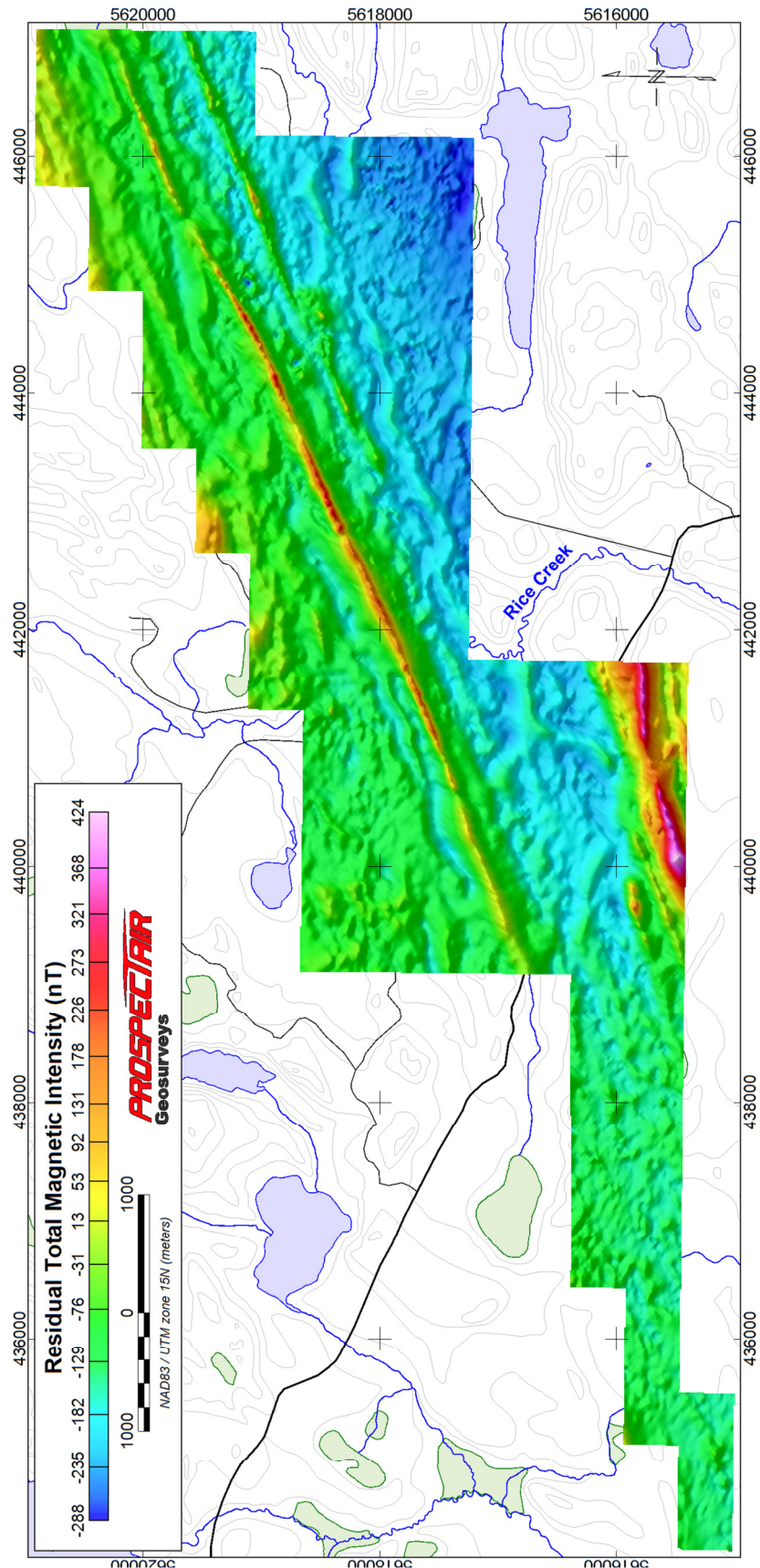


Figure 8: First Vertical Derivative of TMI

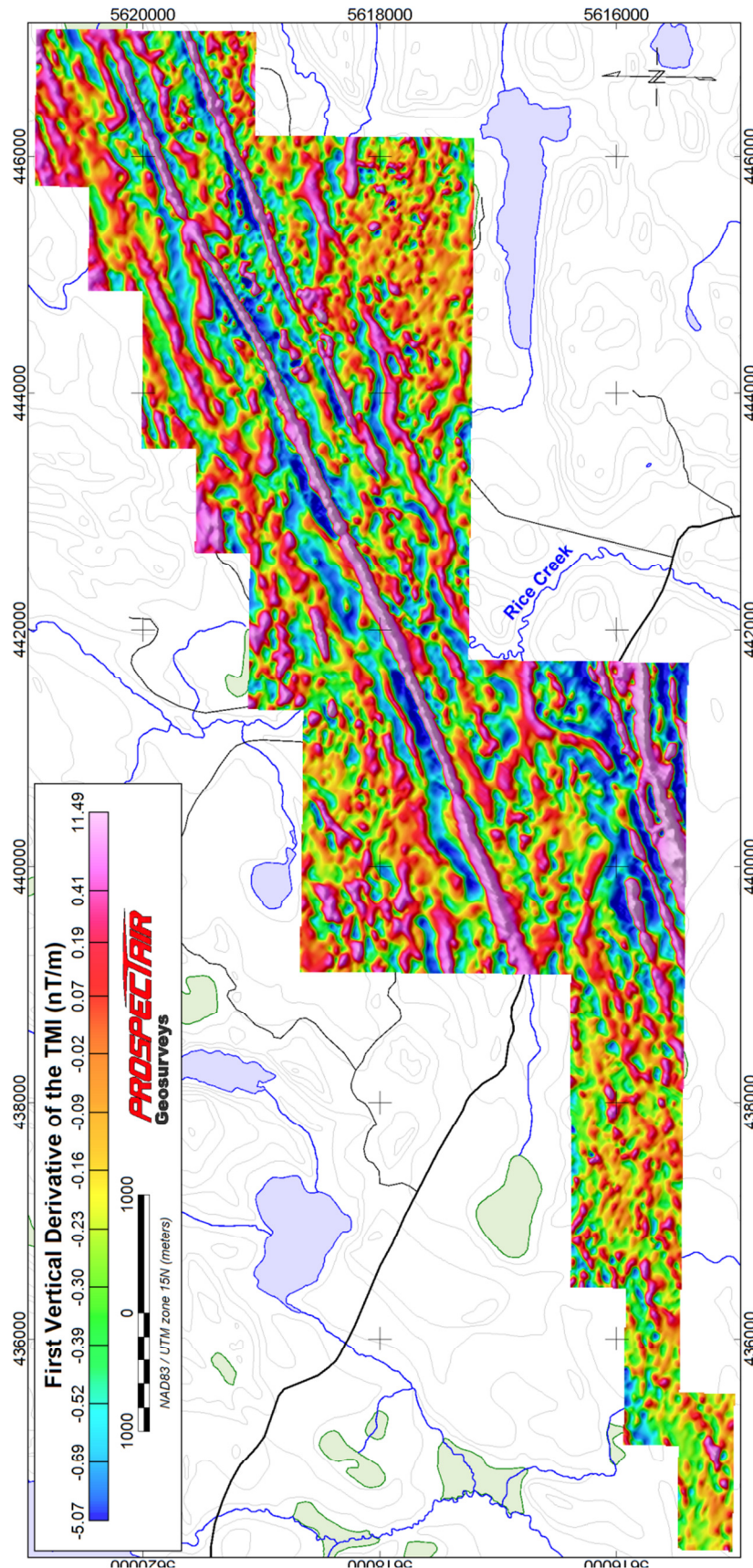
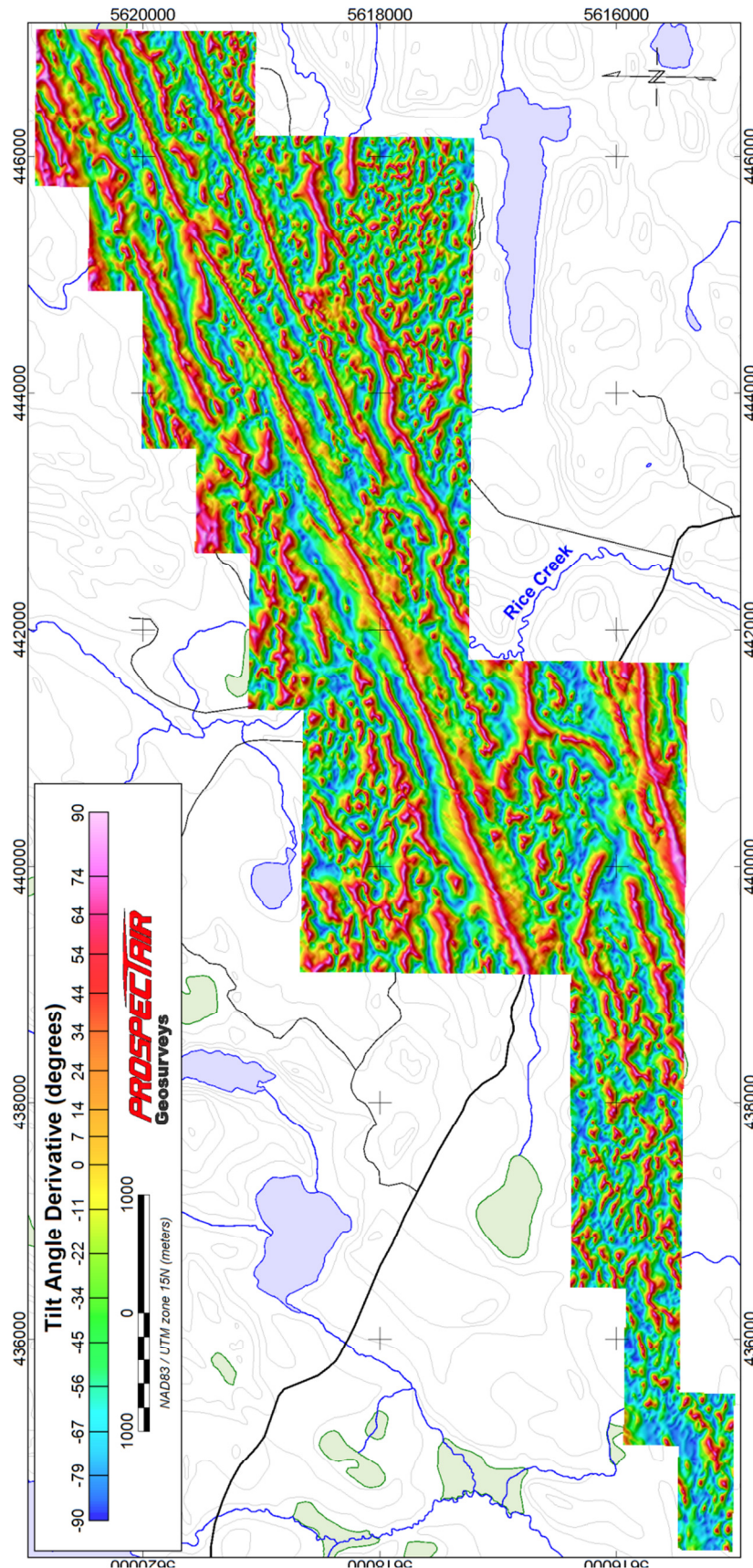


Figure 9: Tilt Angle Derivative



VIII. FINAL PRODUCTS

Digital Line Data

The Geosoft database is provided with the channels detailed in Table 3.

Table 3: **MAG line data channels**

No.	Name	Description	Units
1	UTM_X	UTM Easting, NAD-83, Zone 15N	m
2	UTM_Y	UTM Northing, NAD-83, Zone 15N	m
3	Lat_deg	Latitude in decimal degrees	Deg
4	Long_deg	Longitude in decimal degrees	Deg
5	Gtm_sec	Second since midnight GMT	Sec
6	Radar	Ground clearance given by the radar altimeter	m
7	CDED_DEM	CDED Digital Elevation Model (w.r.t. MSL)	m
8	Terrain	Calculated Digital Elevation Model (w.r.t. MSL)	m
9	GPS_Z	Helicopter altitude (w.r.t. MSL)	m
10	Mag_Raw	Raw magnetic data	nT
11	Mag_Lag	Lagged magnetic data	nT
12	Gnd_mag	Base station magnetic data	nT
13	Mag_Cor	Magnetic data corrected for diurnal variation	nT
14	TMI	Fully levelled Total Magnetic Intensity	nT
15	TMIres	Residual TMI (IGRF removed)	nT

Maps

All maps are referred to NAD-83 datum in the UTM projection Zone 15 North, with coordinates in metres. Maps are at a 1:10,000 scale and are provided in PDF, PNG and Geosoft MAP formats for the products detailed in Table 4.

Table 4: **Maps delivered**

No.	Name	Description
1	DEM+FlightPath+Claims	Digital Elevation Model with flight path and property claims
2	TMI	Residual Total Magnetic Intensity
3	FVD	First Vertical Derivative of the TMI
4	TILT	Tilt Angle Derivative

Grids

All grids are referred to NAD-83 in the UTM projection Zone 15 North, with coordinates in metres. Grids are provided in Geosoft GRD format, with a 10m grid cell size, as well as in the Geotiff format for the products listed in Table 5.

Table 5: **Grids delivered**

No.	Name	Description	Units
1	DEM	CDED Digital Elevation Model	m
2	Terrain	Calculated Digital Elevation Model	m
3	TMI	Total Magnetic Intensity	nT
4	FVD	First Vertical Derivative of TMI	nT/m
5	SVD	Second Vertical Derivative of TMI	nT/m ²
6	TMIres	Residual TMI (IGRF removed)	nT
7	TILT	Tilt Angle Derivative	Degree

Project Report

The report is submitted in PDF format.

Respectfully submitted,



Joël Dubé, P.Eng.

May 17th, 2019

IX. STATEMENT OF QUALIFICATIONS

Joël Dubé
7977 Décarie Drive
Ottawa, ON, Canada, K1C 3K3

Telephone: 819.598.8486
E-mail: jdube@ddgeoscience.ca

I, Joël Dubé, P.Eng., do hereby certify that:

1. I am a Professional Engineer specialized in geophysics, President of Dynamic Discovery Geoscience Ltd., registered in Canada.
2. I earned a Bachelor of Engineering in Geological Engineering in 1999 from the École Polytechnique de Montréal.
3. I am an Engineer registered with the Ordre des Ingénieurs du Québec, No. 122937, and a Professional Engineer with Professional Engineers Ontario, No. 100194954 (CofA No. 100219617), with the Association of Professional Engineers and Geoscientists of New Brunswick, No. L5202 (CofA No. F1853), with the Association of Professional Engineers of Nova Scotia, No. 11915 (CofC No. 51099), and with Engineers Geoscientists Manitoba, No. 43414. (CofA No. 6897).
4. I have practised my profession for 20 years in exploration geophysics.
5. I have not received and do not expect to receive a direct or indirect interest in the properties covered by this report.

Dated this 17th of May, 2019



Joël Dubé, P.Eng. #100194954

X. Appendix A – Survey block outline

Longlegged Lake Block

Easting	Northing
435536	5615009
434210	5615023
434215	5615450
434242	5615489
435093	5615479
435099	5615486
435104	5615942
436429	5615926
436434	5616391
437197	5616385
437440	5616387
437640	5616387
437854	5616389
437970	5616393
438679	5616396
438850	5616395
439083	5616388
439110	5618674
441316	5618649
441321	5619112
442641	5619098
442645	5619103
442645	5619103
442650	5619555
442654	5619561
443532	5619551
443537	5620015
444858	5620001
444860	5620003
444865	5620456
444871	5620464
445747	5620455
445752	5620918
447078	5620904
447059	5619053
447055	5619048
446177	5619057
446158	5617204
441745	5617251
441724	5615404
441720	5615398
435543	5615470

XI. Appendix B – Property claims numbers covered by the survey

Tenure number	Holder
535013	(100) PERRY VERN ENGLISH
535014	(100) PERRY VERN ENGLISH
541403	(100) PERRY VERN ENGLISH
541404	(100) PERRY VERN ENGLISH
541405	(100) PERRY VERN ENGLISH
534276	(100) PERRY VERN ENGLISH
534277	(100) PERRY VERN ENGLISH
534278	(100) PERRY VERN ENGLISH