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Tamarack Project
James Bay Lowlands, Ontario

Helicopter High Resolution Airborne Geophysical Survey
2017

Prepared for:

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Prepared by:

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25 November 2018

Summary

The Tamarack Project consists of 236 claims staked by Probe Mines Limited, located in the James Bay Lowlands approximately 300km north of Nakina, Ontario. The sale of Probe Mines Limited to Goldcorp on March 13, 2015 resulted in a new exploration spinoff company, Probe Metals Inc., that contained Probe Mine's chromite, nickel and copper properties in the Ring of Fire mineral belt in the James Bay lowlands.

The area was staked owing to the discovery by Spider Resources of at least four volcanogenic massive sulphide (VMS) deposits, which lie less than 3 kilometers from Probe's boundary.

This report details a helicopter high resolution airborne geophysical survey that was completed from September 18 to September 24, 2017, on the Company's Ring of Fire properties, specifically Black Creek and Tamarack. The Tamarack project is the subject of this report, and a total of 1084 line km were flown over the project area. An exploration plan or permit is not required for this type of work.

The Tamarack Project is underlain by Archaean felsic and felsic to intermediate fragmental and tuffaceous units of the Sachigo Volcanic Belt. In addition to numerous geophysical conductors, the property is also distinguished by the presence of sulphide-mineralized volcanic horizons, identified during drilling, which are highly anomalous in base metals.

The geological and geophysical data suggests that the Tamarack Project has a strong potential for hosting base metal sulphide mineralization of the volcanogenic massive sulphide-type. The property fits a variety of criteria in the descriptive model of VMS deposits, including the presence of felsic volcanics and the presence of other massive sulphide occurrences.

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1. Introduction

This report presents the results of a Helicopter High Resolution Tri-Boom Horizontal Magnetic Gradient Survey that was completed from September 18 to 24 2017, on the Company's Ring of Fire properties, specifically Black Creek and Tamarack. The Tamarack project is the subject of this report. The survery was completed by Terraquest Ltd. In total, 1084 line km were flown over the Tamarack project.

The Tamarack property is part of the Archean Sachigo Volcanic Belt (SVB), located in the James Bay Lowlands of Ontario approximately 300 km north of the town of Nakina, Ontario (Fig. 1.1). The volcanic sequence, in the area of interest, is overlain by a thin sequence of Paleozic sedimentary cover rocks. The area has attracted significant attention over the last 10 to 15 years owing to the initial discovery of volcanogenic massive sulphide (VMS) deposits (Franklin, 2003) by Spider Resources, a junior exploration company previously working in the area. Interest was first generated in the underexplored area following the unexpected diamond drilling discovery of VMS mineralization containing Cu, Pb and Zn and minor Au and Ag, over what were thought to represent kimberlite targets. Following a period of intensive exploration, at least four polymetallic sulphide showings have been discovered near the Probe Metals claims. Prior to the discoveries very little work was undertaken in the area by either government geological surveys or exploration companies, and as a result very little geological information is available. The project comprises 236 unpatented mineral claims. The claims are situated adjacent to numerous mineral occurences, north and along strike within the volcanic package as inferred from airborne magnetic data.

The area is underlain by a mixed sequence of mafic and intermediate volcanics with minor felsic volcanics, clastic metasedimentary rocks and iron formation belonging to the SVB. Significant base metal mineralization is present on the property, and numerous geological and geophysical indicators point to a strong potential for economic VMS-type mineralization within its boundaries.

1.1 Terms of Reference

This report uses standard System International (SI) units, unless otherwise noted. The coordinate system used for georeferencing is UTM NAD 83 (Zone 16) for the McFauld's Lake area, with units of meters, and structural data is given in degrees, using the right hand rule convention (dip is always to the right of the strike measurement). For planar features strike measurement is always given first, followed by dip, and for linear features, such as fold axes, it is dip/dip angle. Some common abbreviations found in the text are defined as follows:

OGS	Ontario Geological Survey
UTM	Universal Trans Mercator (geographic)
NAD	North American Datum (geographic)
SVB	Sachigo Volcanic Belt
VMS	Volcanogenic Massive Sulphide (deposit type)
REE	Rare Earth Elements
g/t	grams per tonne (equivalent to ppm)
ppm/ppb	parts per million/billion
---	Concentrations below detection (for ease in viewing geochemical data)
MSL	Mean Sea Level (0m)
EM	Electromagnetic (geophysics)
AEM	Airborne Electromagnetic (geophysics)
HLEM	Horizontal Loop Electromagnetic (geophysics)
IP	Induced Polarization (geophysics)
TDEM	Time Domain Electromagnetics
γ	Gamma (1 gamma = 1 nanoTesla), magnetic units

1.2 Disclaimer

Geological data and information used in this report have also been gathered from government reports and company websites and provided by Probe Metals Inc. The author has declined use of previous interpretations and relies only on the factual data contained within the published and unpublished documents.

A significant volume of material was taken from press releases of Spider Resources, which contain the following disclaimer:

"*The TSX Venture Exchange has not reviewed and does not accept responsibility for the adequacy or accuracy of this release*".

This report is intended as a technical summary of available factual data for Probe Metals Inc. on its Tamarack Project. The author does not accept responsibility for use by third parties of the material contained in this report outside the scope of the stated objective.

1.3 Property Location and Access

The Tamarack Project falls within the Sachigo Volcanic Belt (SVB) of northern Ontario, and comprises 236 unpatented claims.

Access to the property is by way of float/ski-equipped fixed-wing aircraft or helicopter from one of a number of communities found along Highway 11. Three companies have been used to date, and include Superior Helicopters from Long Lac, Ontario, Expedition Helicopters of Cochrane and Nakina Air Services, located in Nakina, Ontario. Local access to the properties can be achieved by helicopter, or snowmobile in winter. No water access exists for the properties.

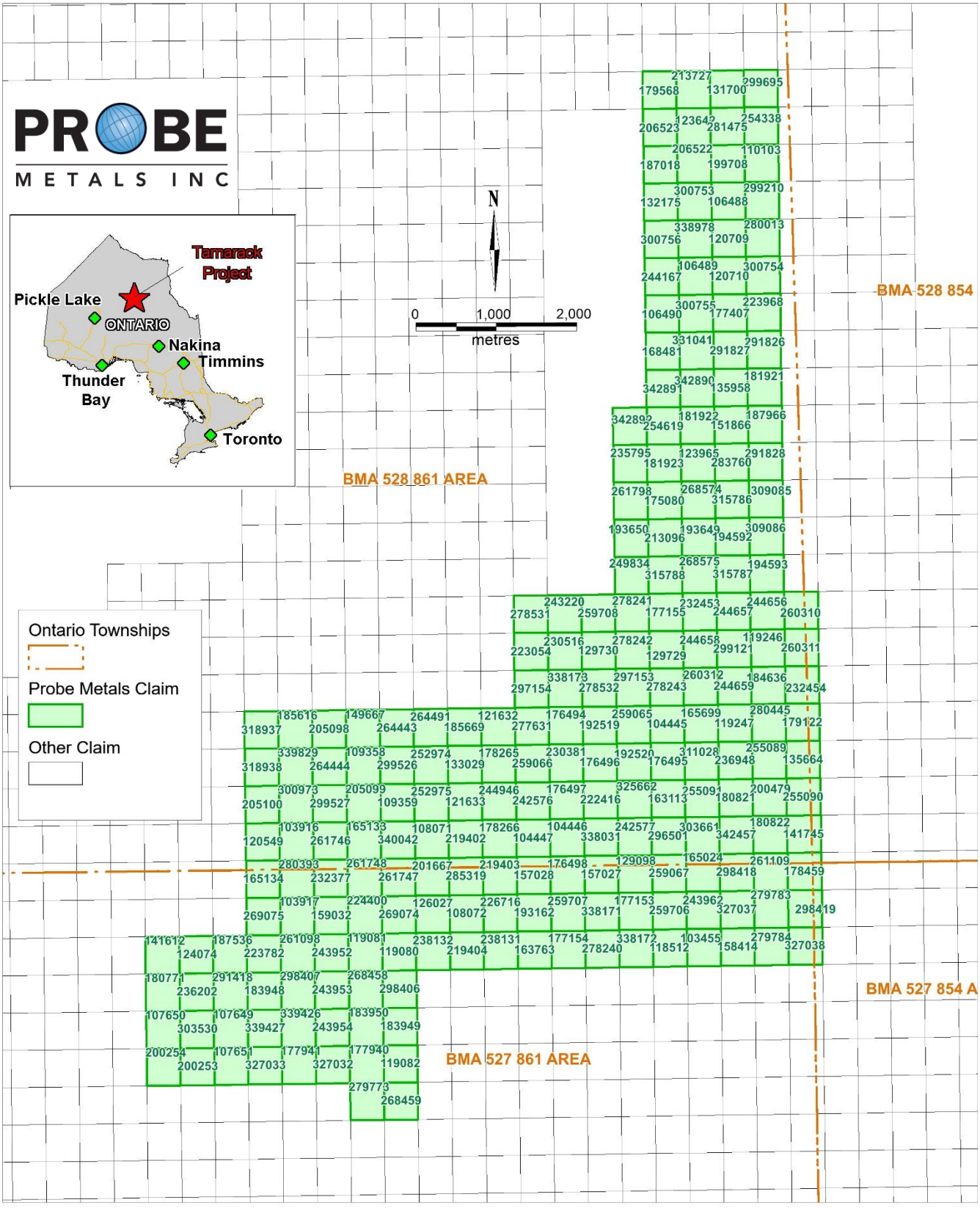

Figure 1.1 Location of the Tamarack Property, James Bay Lowlands, Ontario.

For the current program, to mobilize jet fuel, float plane services were provided by Nakina Air and helicopter services by Expedition Helicopters. Accommodations were provided by the Mukatai Camp.

1.4 Land Tenure

The 236 unpatented claims are listed in Table 1.1 and illustrated in Figure 1.1. All claims are recorded in the name of Probe Metals Inc, and, to the author's knowledge, there are no current or pending challenges to the mineral claims and 100% ownership is maintained by Probe Metals. There are no outstanding nor pending adverse environmental issues attached to the property.

Table 1.1 Land Tenure information for the Tamarack Project

	Claim#	Type	Anniversary Date	Assessment Due	CELL_TYPE	TENURE_S_1
1	103455	Claim	12-08-2018	$ 200.00	Boundary	Active
2	104445	Claim	12-08-2018	$ 400.00	Standard	Active
3	104446	Claim	12-08-2018	$ 400.00	Standard	Active
4	104447	Claim	12-08-2018	$ 400.00	Standard	Active
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6	106489	Claim	12-08-2018	$ 400.00	Standard	Active
7	106490	Claim	12-08-2018	$ 400.00	Standard	Active
8	108071	Claim	12-08-2018	$ 400.00	Standard	Active
9	108072	Claim	12-08-2018	$ 400.00	Standard	Active
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29	141745	Claim	12-08-2018	$ 200.00	Boundary	Active
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35	163763	Claim	12-08-2018	$ 200.00	Boundary	Active
36	165024	Claim	12-08-2018	$ 400.00	Standard	Active
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				$ 79,400.00		

1.5 Topography

The claim blocks are found within the James Bay Lowlands of Ontario, an area characterized by a plain of low relief, which gently slopes towards James Bay to the northeast. Elevation in the property area is approximately 250m above means sea level (MSL), with local variations of typically less than 10m. An exception occurs along the Attawapiskat River, where elevations

can change by up to 30m. Hydrographic features include the Attawapiskat River and numerous small creeks and rivers, although no drainage features are found within the immediate area of the claims. Owing to the thick clay deposits and low relief, the area is poorly drained, resulting in numerous lakes, swamps and muskeg areas. Lakes in the area can reach up to 5km in diameter, with the largest being McFauld's Lake itself, located approximately seven kilometers south of the property.

1.6 Previous Work

No exploitable mineral deposits are known in the area surrounding Tamarack Project, although exploration by Spider Resources suggest the potential for economic base metal (Cu-Pb-Zn) volcanogenic massive sulphide (VMS) deposits is high. The bulk of the previous work data available is taken from public disclosure documents provided by Spider Resources, as no published assessment work is available.

Prior to the discovery of VMS mineralization in the Sachigo Volcanic Belt (SVB) only limited physical examination of the area was undertaken by the Ontario Geological Survey (OGS), and consisted of regional-scale mapping (Thurston *et. al*., 1975) and airborne magnetic surveys (OGS). Owing to topography, geological exposures are scarce and, within the claim boundaries, consist only of Ordovician sedimentary rocks. River cuts found to the west of the properties contain outcrops of mafic flows and mafic intrusives (subvolcanic?) found as layers within meta-granitoid rocks (Thurston *et. al*., 1975). Volcanic horizons typically show subvertical to vertical dips. A provincial airborne magnetics survey provides the most accurate depiction of the subsurface geology, displaying an arcuate belt of layered rocks approximately 100km in length.

The recent interest in the diamond potential of the James Bay Lowlands has triggered a number of regional-scale geochemical surveys in the area (OFR-6097 Spider 3; OFR-6108 James Bay), which evaluate heavy mineral geochemistry of stream sediments. However, the presence of Paleozoic rocks overlying the prospective volcanics tends to nullify the effect of surficial geochemistry for the area.

Most of the information available regarding volcanic rocks in the McFauld's Lake area comes from previous exploration by Probe Mines and Spider Resources, on its adjacent mineral properties. To date diamond drilling by Spider has intersected a number of VMS occurrences, the most notable being McFauld's #1 and #3, which are located less than 3km south of Probe Metals properties. The VMS mineralization was first identified by De Beers Canada Exploration Inc. ("De Beers") in the Fall of 2002, while exploring for kimberlite. Reverse circulation drilling encountered base metal sulphides, i.e., chalcopyrite, sphalerite, associated with volcanic flows consisting of highly altered mafic and felsic lithologies (Franklin, 2003). Metal zonation in sulphide mineralization is poorly developed, however, Cu-rich stringer-style mineralization has been identified in the footwall, while Zn values tend to increase in the hanging wall direction (Franklin, 2003), suggesting that VMS processes are active.

1.7 Deposit Model

A descriptive model of VMS deposits is best applied to the data available for the Tamarack Project and environs. VMS deposits are major sources of copper, zinc, lead, silver and gold, with by-products including tin, cadmium, antimony and bismuth. The deposits belong to a larger class of concordant massive sulphide deposits, which can be considered as having formed through discharge of hydrothermal fluids onto the seafloor. VMS deposits occur exclusively in geological domains containing volcanic rocks extruded on the sea floor, and there is no preferred geotectonic environment, although, like submarine volcanic sequences, they are more commonly found near plate margins (Sawkins, 1976). VMS deposits are not restricted to any geochemically distinct volcanic sequence, although there may be a preferential association with evolved calc-alkaline members (Solomon, 1976). There is a spatial association among VMS deposits, with most occurring in clusters associated with a particular level in the stratigraphic sequence. This "favourable horizon" often contains structural or topographic features responsible for the localization of deposits. The deposits also tend to be associated with felsic volcanic rocks, with approximately 50% related to areas of rhyolitic domes and felsic fragmental rocks. Sedimentary rocks are often an integral part of a VMS terrane, and indicate periods of volcanic quiescence, a break required for the deposition of sulphides from hydrothermal fluids emanating from submarine vents. The deposits themselves display a remarkably consistent mineralogical zonation, probably related to the thermal gradient developed around the vent. The vent itself typically consists of a stockwork system containing the richest Cu ore, while within the sulphide mound itself an outward zonation of Fe-Cu to Fe-Cu-Zn-Pb to Fe-Zn-Pb-Ba and finally Fe-Ba is developed.

The McFauld's Lake area satisfies a number of the requirements for the formation of VMS deposits, being underlain by submarine volcanics, including minor felsic volcanics, and most importantly occurring within the stratigraphic horizon where other massive sulphide deposits have been discovered.

1.8 Regional Geology

The Tamarack Project is located in the Superior Province of Northern Ontario, an area of 1,572,000 km^2, which represents 23% of the earth's exposed Archean crust (Thurston, 1991). The Superior Province is divided into numerous Subprovinces (Fig. 1.2), each bounded by linear faults and characterized by differing lithologies, structural/tectonic conditions, ages and metamorphic conditions. These Subprovinces can be classified as one of four types: 1) Volcano-plutonic, consisting of low-grade metamorphic greenstone belts, typically intruded by granitic magmas, and products of multiple deformation events; 2) Metasedimentary, dominated by clastic sediments and displaying low grade metamorphism at the subprovince boundary and amphibolite to granulite facies towards the centers; 3) Gneissic/plutonic, comprised of tonalitic gneiss containing early plutonic and volcanic mafic enclaves, and larger volumes of granitoid plutons, which range from sodic (early) to potassic (late); and 4) High-grade gneissic subprovinces, characterized by amphibolite to granulite facies igneous and metasedimentary gneisses intruded by tonalite, granodioritic and syenitic magmas (Card and Ciesieliski, 1986).

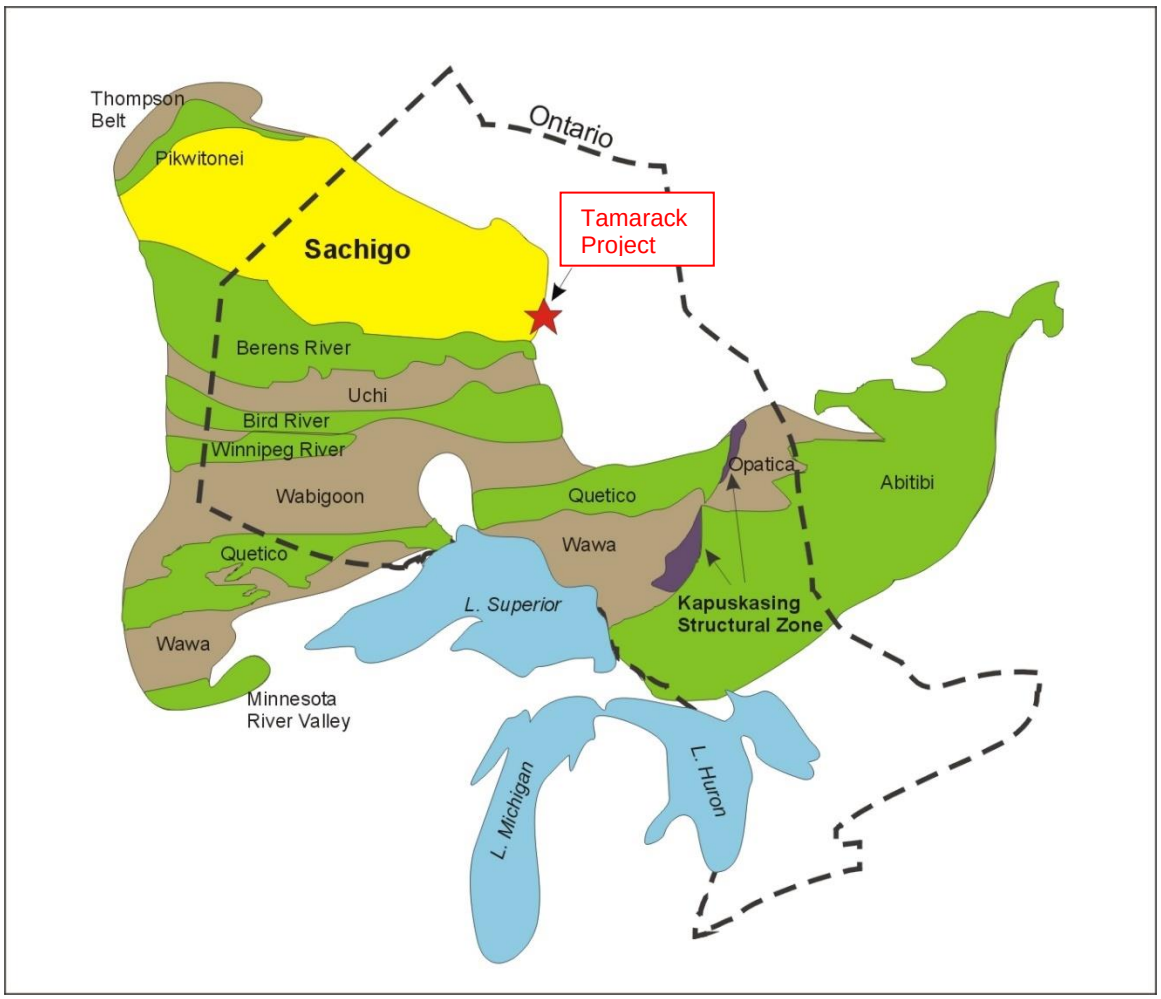

Figure 1.2 The Superior Province, and subprovinces, of Ontario

1.8.1 Sachigo Subprovince

The Sachigo Subprovince represents the northernmost extent of exposed Archean basement rocks of the Superior Province (Fig 1.3). To the west, the Sachigo is bounded by the Trans-Hudson-Orogen (THO) (1.8 Ga), while to the northwest the subprovince is in contact with granitoid and mafic/ultramafic rocks of the Thompson Belt, a collisional zone formed during the THO. To the east, the Sachigo is delimited by the Winisk River Fault, which separates the Superior Province from rocks of the THO Fox River Belt, while the southern limit of the Sachigo subprovince is defined by the Berens River subprovince, a granite-greenstone terrane.

Much less is known about the Sachigo subprovince than the more accessible granite-greenstone belts to the south, with most work concentrating on the handful of isolated greenstone belts found enclosed within the granitic and gneissic units (e.g. Bennet and Riley, 1969; Ayres, 1974; Card and Ciesielski, 1986; Thurston et al., 1991). However, a number of differences can be noted between the greenstone belts of the Sachigo subprovince and younger greenstone terranes to the south, and include some of the oldest ages for greenstones in the Superior Province (2.9

to 3.0 Ga) (Corfu and Wood, 1986; Thurston et al., 1991); and an unusual sequence of quartz-rich metasediments within a sequence of mafic and felsic volcanic rocks (Thurston et al., 1991). The Berens River granite-greenstone subprovince, immediately to the south of the Sachigo, is interpreted to represent a deeply eroded arc or micro continental core, while rocks of the Sachigo are considered remnants of widespread, early (3.0 Ga) sialic crust (Thurston et al., 1991). Geological similarities between the Sachigo, Berens River, and the Uchi subprovince, situated to the south of the Berens River subprovince, have prompted some researches to define an Uchi-Sachigo-Berens River superterrane (Card and Ciesielski, 1986; Thurston et al., 1991).

1.9 Property Geology

Very little is known about the geology of the McFauld's Lake area, with most of the information obtained from recent drilling in the area of the VMS discoveries at the eastern extent of the volcanics (Franklin, 2003). Within the eastern section of the belt, in the area of the claims, a thin (<40m) section of Paleozoic sedimentary rocks, comprised predominantly of limestone, overlies the volcanic package. The volcanic sequence at this location is comprised of highly altered mafic and felsic volcanic rocks, which have in some cases undergone extensive Mg-metasomatism to form talc-magnetite alteration. In most cases this replacement alteration has occurred to such a degree as to make primary lithologies indiscernible, with all units resembling basaltic flows (Franklin, 2003). The hydrothermal character of the talc-magnetite rock has been established to a fair degree of confidence through whole rock geochemical comparisons utilizing major and trace element characteristics, while precursor lithologies have been demonstrated to be a bimodal population of basaltic and rhylotic-dactic volcanic rocks (Franklin, 2003). The character of the felsic sequence suggests that there was significant heat available to the system, which indicates a greater potential for the formation of VMS mineralization in the volcanic strata.

Owing to the buried nature of the volcanics in this area, property-scale structural data is unavailable, however, fine structural features are preserved in core samples, and comprise predominantly folding, varying from open to isoclinal. In layered sequences a weak S1 foliation is developed parallel to sub-parallel to layering, while rare S2 foliations could be discerned oblique to S1, typically 30-35° from the earlier foliation.

1.9.1 Mafic Volcanics

Mafic volcanics comprise a suite of calc-alkaline basalts and chloritic basalts, with some strata being composed of spherulitic varieties (Franklin, 2003). Very little descriptive data is available for the basalts, however, drill sections indicate that it dominates the volcanic sequence in both the hanging wall and footwall sections (Franklin, 2003). The calc-alkaline nature of the basaltic rocks is suggested by high LREE/HREE ratios, however, alteration makes this determination difficult.

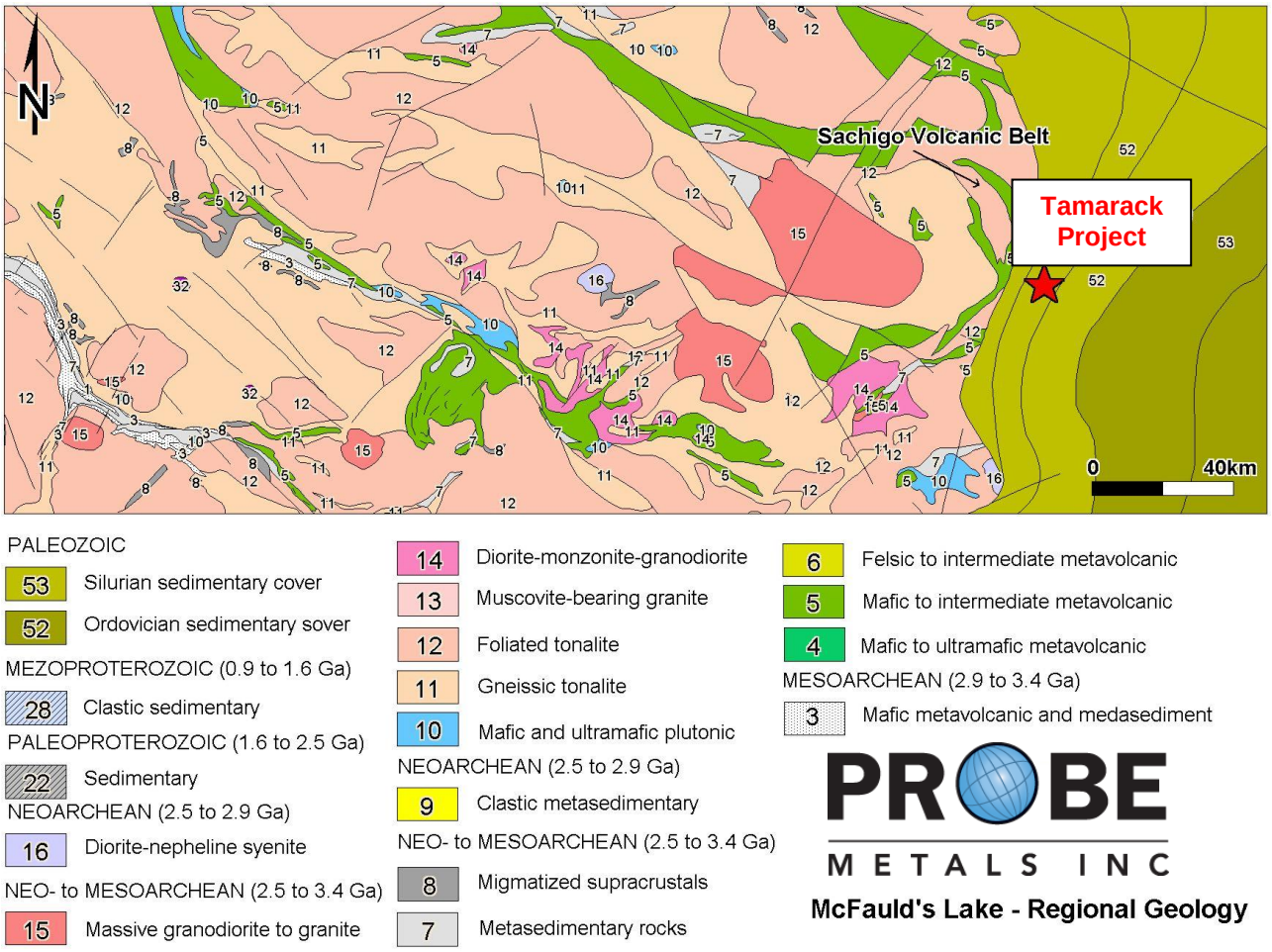

Figure 1.3 – Regional geology of the eastern Sachigo subprovince, McFauld's Lake area

1.9.2 Felsic Volcanics

Original logging of Spider Resources' diamond drill core from the McFauld's area indicated that felsic volcanic rocks were rare in the sequence, however, Franklin (2004) demonstrates geochemically that they occur in much greater quantities than first thought. Although obfuscated by alteration, felsic volcanics occur in both fragmental and massive flow varieties, and can be distinguished from basaltic members through their distinctive REE and immobile element patterns. Their enrichment in REE, and the flat patterns, are indicative of high temperature rhyolites, which are often associated with VMS terranes (Lesher et al., 1986; Franklin, 2003). In drill sections, the felsic volcanics do not correlate well with each other, suggesting they are laterally discontinuous. Within Probe's claims, diamond drilling has identified several felsic volcanic layers comprising predominantly coarse-grained lapilli tuffs and fragmental units, as well as fine-grained ash-fall tuffs. Alteration is present in these units, however preserved sections reveal the highly siliceous nature of the rocks.

1.9.3 Alteration

Talc-magnetite, which is not a common alteration assemblage associated with VMS deposits, predominates in the sulphide mineralized McFauld's Lake volcanics in the area of the discoveries (Franklin, 2003). Originally mapped as iron formation, Franklin (2003) has shown that talc-magnetite zones were produced by hydrothermal alteration of basalt and rhyolite, caused by Mg-bearing brines in seawater convective cells, and not altered ultramafic rock. This alteration formed talc-magnetite "mounds" at seafloor vents by reaction of low-temperature (90-150°C) hydrothermal fluids with surrounding rocks. A number of geochemical characteristics indicate the hydrothermal origin of the Talc, as opposed to formation through alteration of ultramafic rocks, including low Cr and Ni content and positive Eu anomalies (Franklin, 2003). Alteration in the McFauld's Lake volcanics is distinguished by almost total loss of Na and Ca, and significant enrichment in Mg and Fe, which is typical of VMS alteration geochemistry (Franklin, 2003). More common to rocks within the Probe Metals' section is a strong chloritization and carbonatization of the volcanic units, occasionally with the development of accessory magnetite and biotite.

1.9.4 Mineralization

The McFauld's Lake area contains impressive diamond drill intersections of base and precious metal-bearing massive sulphides, up to 42m wide at McFauld's #3, with significant grades of Cu and Zn. In addition to the A-Zone high grade copper discovery (7.8m @ 3.1% copper) and numerous VMS-style intersections of Probe Metals, eight individual zones have been identified in the area, spaced as far as 14km apart, by Spider Resources (Spider Resources, press releases).

Sulphide mineralization is typical of VMS-style deposition, containing a significant base metal component. To date, drilling suggests that that sulphide mineralization is copper-rich and lead-poor, with Zn:Cu ratios similar to those in the bimodal mafic-dominated Noranda-type deposits (Franklin, 2003). The high Zn:Pb ratios support this comparison, and are in sharp contrast to the younger bimodal felsic and bimodal siliciclastic deposits typical of Kuroko-type and Bathurst-type deposits, respectively.

2. Airborne Geophysical Survey 2017

From September 18 to 24, 2017, Terraquest Ltd completed a Helicopter High Resolution Tri-Boom Horizontal Magnetic Gradient Survey on Probe Metals Ring of Fire properties, specifically Black Creek and Tamarack. The Tamarack project is the subject of this report, and a total of 1084 line km were flown over the property. Traverse lines were oriented north-south at 50m spacing, while control lines were oriented east-west at 500m spacing. The survey was flown using an Astar 350B2.

The location of the survey is illustrated in Figure 2.1. Planning and logistics of the airborne survey was completed by Probe geologists Breanne Beh and Daniel LaFontaine. This report was written by Sharon Allan.

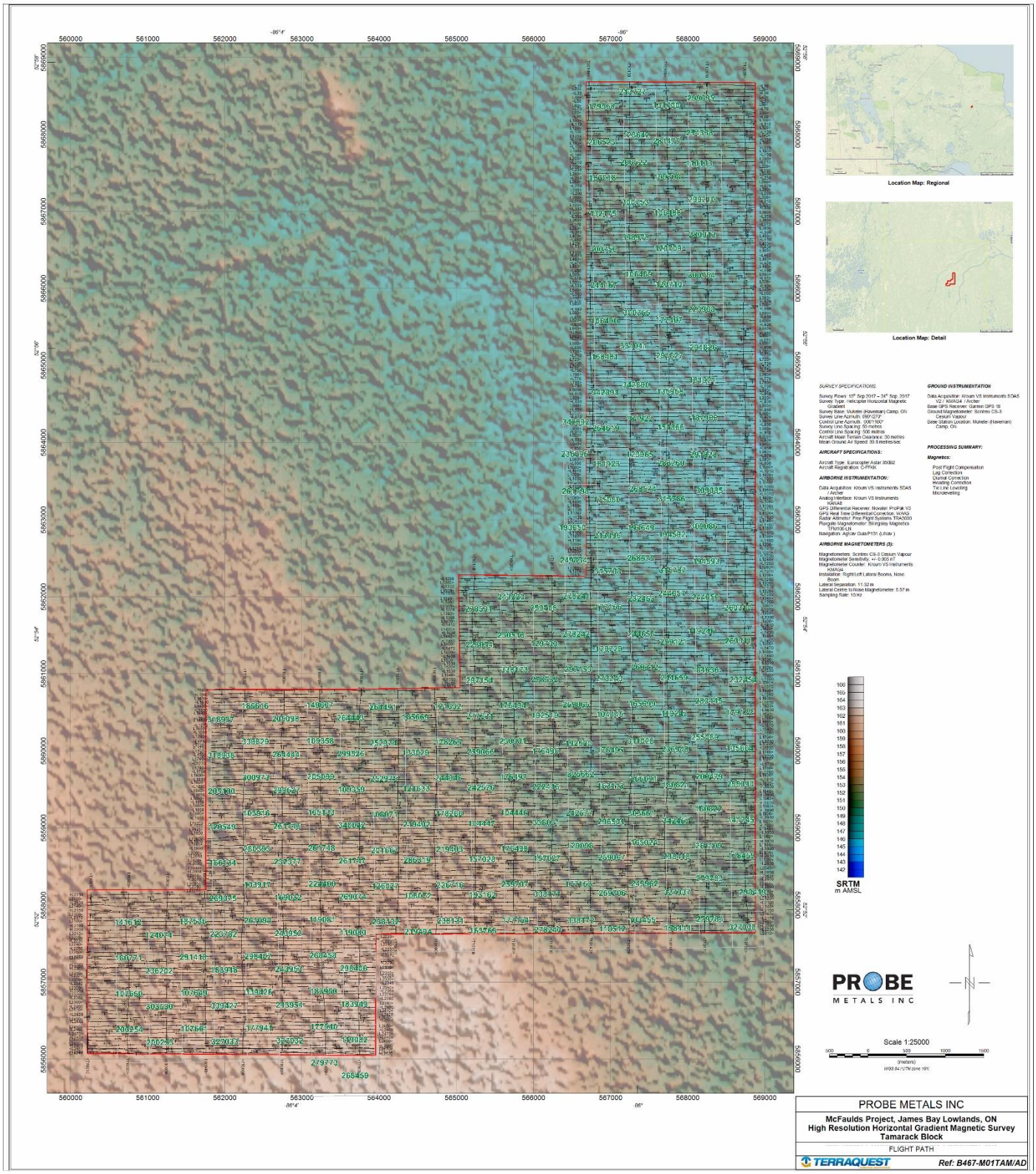

Figure 2.1 – Location Map of the Airborne geophysical survey with flight lines and claims.

The technical details about the acquisition process, quality control and processing can be found in the report submitted by Terraquest that is attached in Appendix I of this report. The Appendix also includes large scale maps of the results.

3. Results and Conclusions

Previous data obtained for the Tamarack Project indicates a strong potential for hosting polymetallic sulphide mineralization of the type typically associated with submarine volcanic environments, i.e., VMS-type, and the property merits further exploration expenditures. Past drilling on the project identified a zone of high-grade copper mineralization of significant width (7.8m @ 3,1%) and a second sulphide zone to the south.

The Thunderbird Anomaly, a mafic intrusion hosting magnetite-rich ferrogabbro which has notable values of V-Ti-Fe mineralization, is located approximately 5 km to the southwest of the property and along strike of the same regional magnetic high feature. Noront Resources's drillhole NOT-11-2G47, located less than 1 km from the claim boundary confirmed V-Ti mineralization of the Thunderbird complex. The drill hole was designed to test a magnetic lineament that had been hypothesized to represent the eastern limb of the funnel or conduit-type structure that fed the main intrusion at Thunderbird.

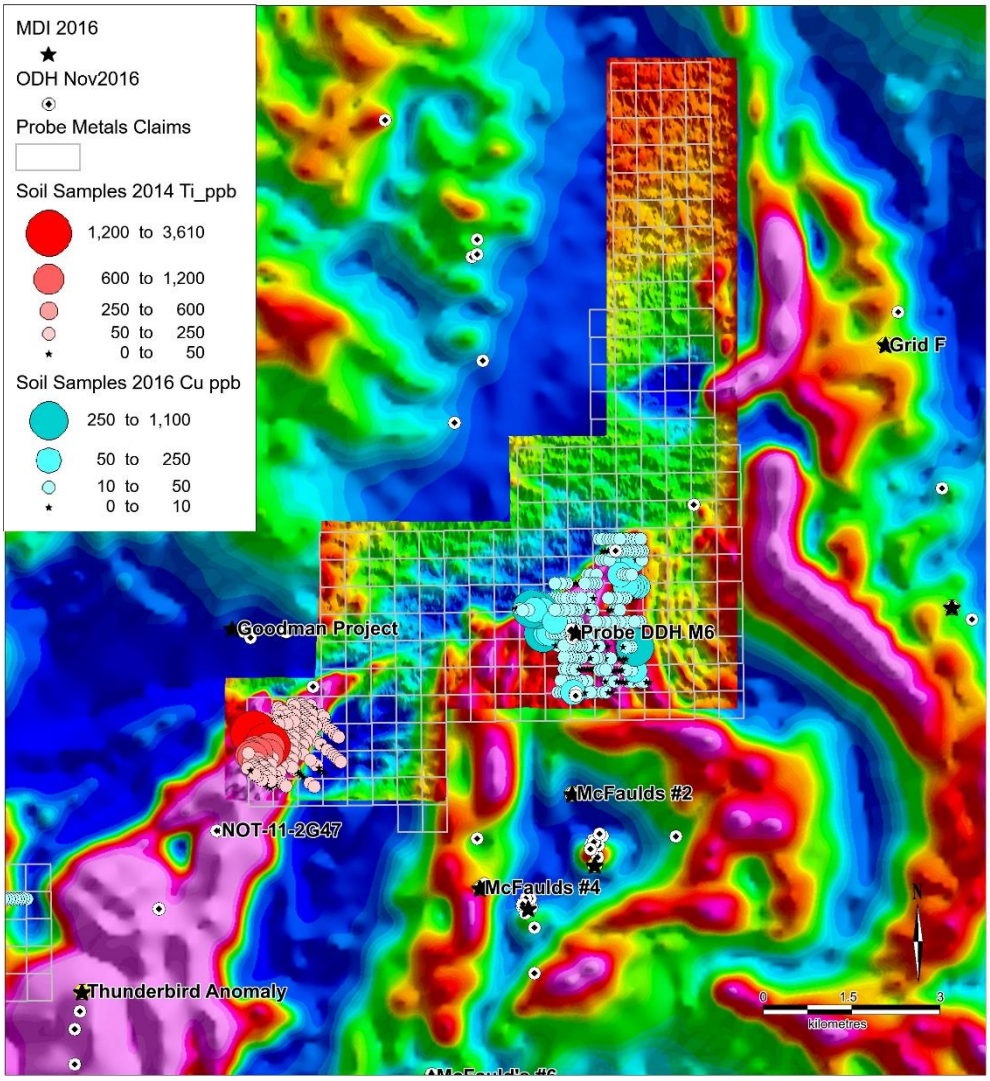

Figure 3.1 – Ring of Fire Showings and Airborne Geophysics with Soil Sample Results

Geochemical surveys completed by Probe in 2014 and 2016 revealed anomalous responses, for VMS style deposits as well as V-Ti style deposits. Further work was warranted based on these results. The current geophysical airborne survey has successfully provided a more detailed picture of the magnetic fabric of the Tamarack project area that will allow for a more comprehensive review of the bedrock features and how they correlate to the numerous mineralized prospects in the region. Additional work on the claims is warranted and recommended to investigate the potential presence of VMS and or V-Ti mineralization.

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APPENDIX I

Helicopter High Resolution Tri-Boom Horizontal Gradient Magnetic Survey

Terraquest Report & Maps

Operations Report for

Helicopter High Resolution Tri-Boom Horizontal Gradient Magnetic Survey

McFaulds Project
James Bay Lowlands, ON

November 6, 2017
Report #: B-467

Requested by
Breanne Beh
Project Manager
Probe Metals Inc

Charles Barrie, Managing Partner
Terraquest Ltd.

Table of Contents

1 Introduction

1.1 Executive Summary

This report describes the specifications and parameters of a helicopter geophysical survey carried out on behalf of:

PROBE METALS INC.
1000 – 56 Temperance Street
Toronto, ON
Canada M5H 3V5

Attention: Breanne Beh, Project Manager Email: bbeh@probemetals.com

The survey was performed by:

TERRAQUEST LTD.,
301-2900 John Street, Markham
ON, Canada
L3R 5G3

Charles Barrie, P.Geo, M.Sc.
Phone: 905-477-2800 ext. 31 Email: cb@terraquest.ca

The purpose of a survey of this type is to collect geophysical data that can be used to prospect directly for economic minerals that are characterized by anomalous magnetic responses. Secondly, the geophysical patterns can be used indirectly for exploration by mapping the geology in detail, including rock types, faults, shear zones, folding, alteration zones and other structures.

To obtain this data, the area was systematically traversed by helicopter along parallel flight lines carrying geophysical equipment housed in a tri-boom configuration. The lines are oriented to intersect the geology and structure so as to provide optimum resolution of the geophysical data.

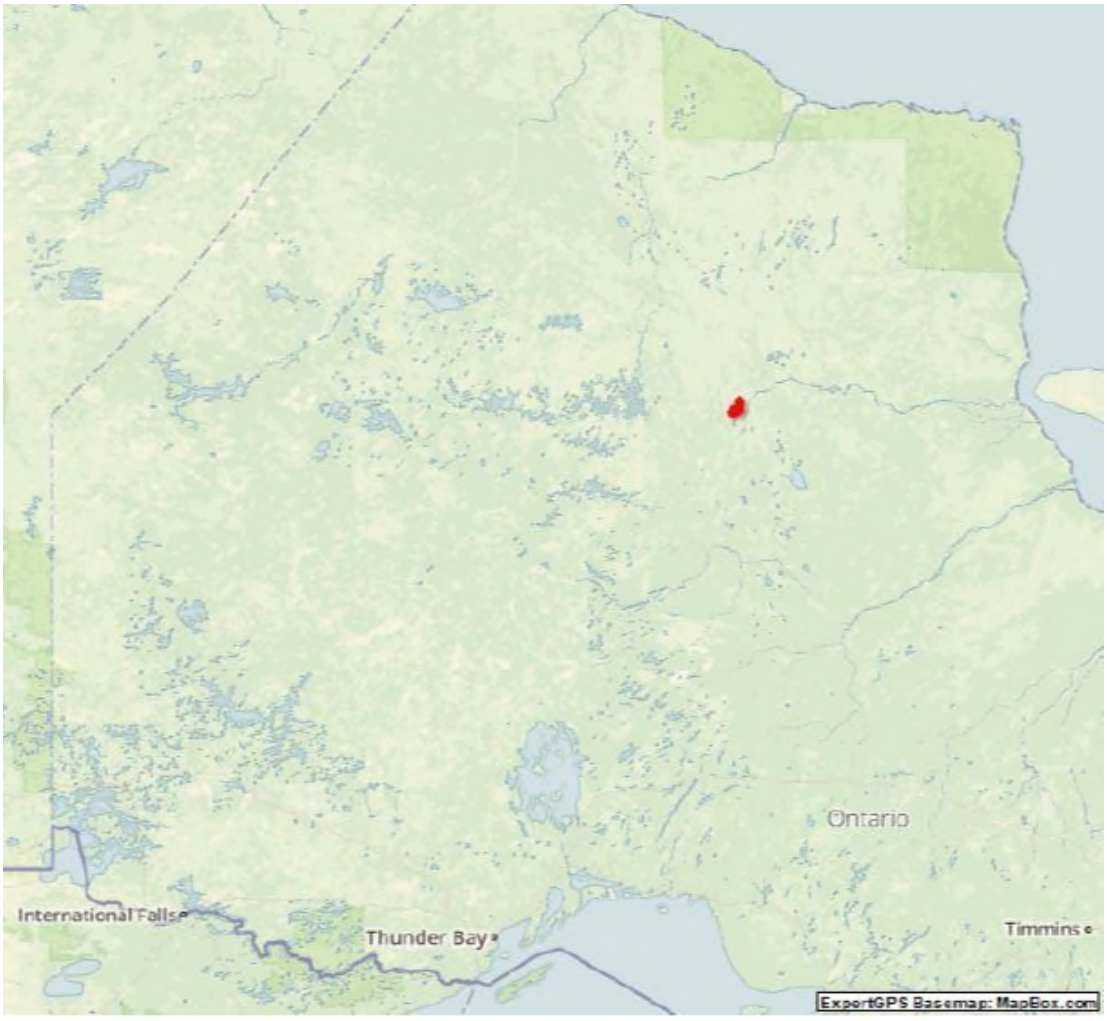
1.2 Location

The McFaulds Project is located in north-central Ontario, along the western edge of the James Bay Lowlands, approximately 450 kilometres northeast of Thunder Bay and 400 kilometers northwest of Moosonee. The Attawapiskat Airport lies 240 kilometres to the east and the Victor Mine Airstrip lies 140 kilometres to the east. The McFaulds Project is comprised of two survey areas referred to as the **Tamarack West** and **Black Creek** Blocks.

The **Tamarack Block** has an irregular shape with 12 corners and the overall maximum dimensions are 7.1 kilometres east-west and 12.6 kilometres north-south. The centre of the area is approximately 52 degrees 53 minutes north and 86 degrees 02 minutes west. The terrain is generally flat to undulating at an elevation of approximately 152 metres above sea level.

The smaller **Black Creek Block** is located 4 kilometres to the southwest of Tamarack West and is rectangular measuring 1.6 kilometres north-south and 1.2 kilometres east-west. The centre of the area is approximately 52 degrees 50 minutes north and 86 degrees 10 minutes west. The terrain is similar.

General Location



Gooogle Image Location

2 SURVEY SPECIFICATIONS

2.1 LINES AND DATA

Parameter	Specification
Helicopter Mean Speed	110.5 km/hr 30.8 m/s
Data Sample Interval	3 metres (10Hz)
Flight-Line Interval :/Azimuth	50 metres : 090 ^{o} /270 ^{o}
Control-Line Interval:/ Azimuth	500 metres : 000 ^{o} /180 ^{o}
Mean Terrain Clearance	30 metres
Production Duration	12 days; Sep 13-24, 2017

2.2 SURVEY KILOMETRAGE

	B467 PROBE METALS INC.: COVERAGE SUMMARY					
	TAMARACK WEST		BLACK CREEK		WHOLE PROJECT	
	NLIN	LKMS	NLIN	LKMS	NLIN	LKMS
LINE	252	981.0	33	39.6	285	1,020.6
TIE	18	103.1	2	3.1	20	106.2
TOTALS	**270**	**1084.1**	**35**	**42.8**	**305**	**1,126.8**

2.3 NAVIGATION SPECIFICATIONS

The satellite navigation system was used to ferry to the survey site and to survey along each line. The survey coordinates were supplied by the client and were used to establish the survey boundaries and the flight lines. Generally, standard GPS provides accuracy for the most part better than 10 metres. Real-time GPS correction using the Hemisphere differential receiver and corrected by WAAS broadcast services for North America generally improves the navigational accuracy to about 3 metres or less in the horizontal plane and 4-5 metres in the vertical direction.

The following are the navigation parameter files used to survey each block.

```
0  B467 Tamarack West
1  U 273
2      561750     5858202       AREA CORNER 1
2      561755     5860797       AREA CORNER 2
2      563711     5860801       AREA CORNER 3
2      565049     5860822       AREA CORNER 4
2      565029     5862286       AREA CORNER 5
2      566681     5862265       AREA CORNER 6
2      566681     5868686       AREA CORNER 7
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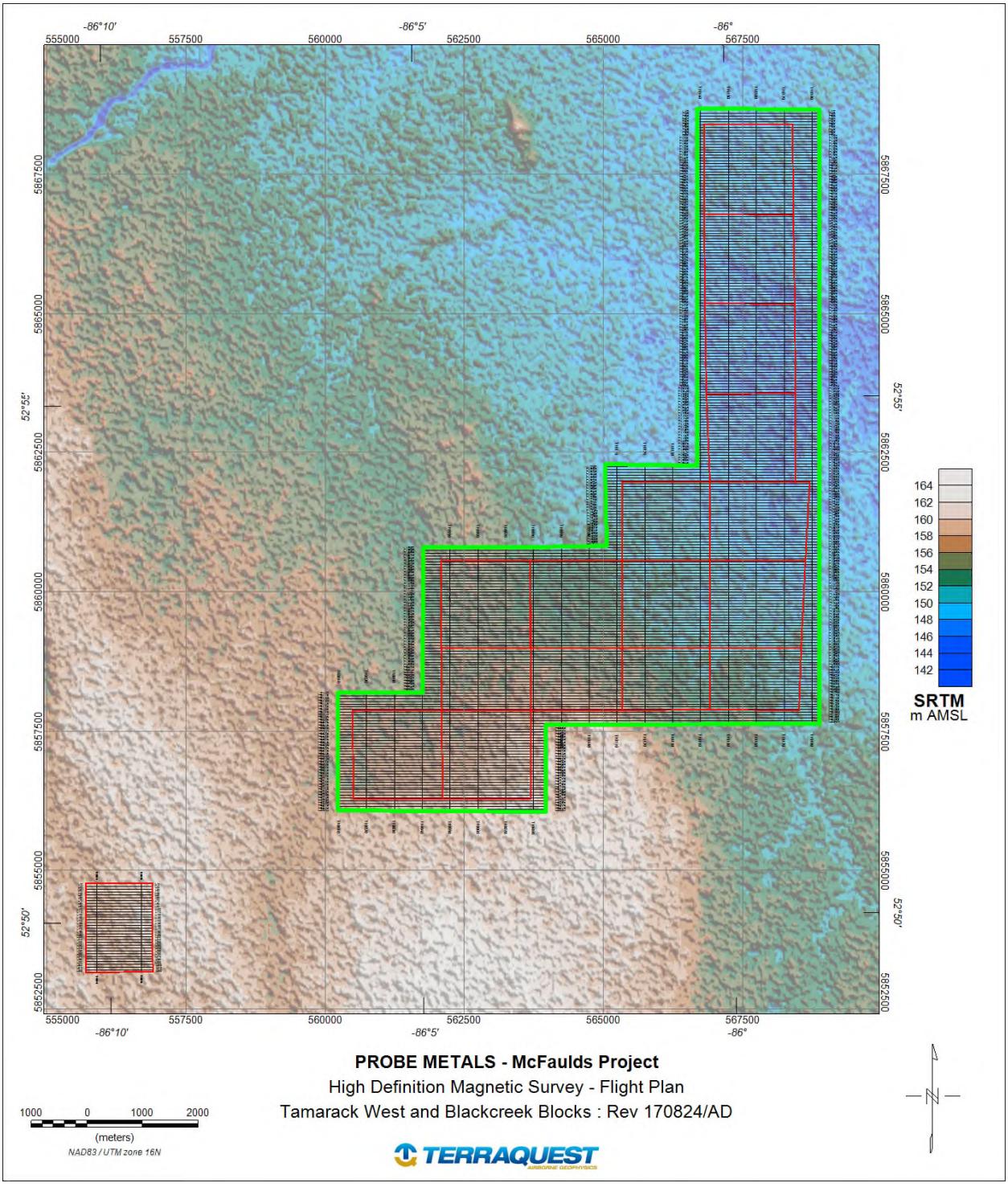
```
2      568872     5868671       AREA CORNER 8
2      568877     5857643       AREA CORNER 9
2      563962     5857622       AREA CORNER 10
2      563952     5856051       AREA CORNER 11
2      560218     5856074       AREA CORNER 12
2      560219     5858197       AREA CORNER 13
2      561750     5858202       AREA CORNER 14
3      561745     5858187  COR1 WAYPOINT 1
4          252                  NUMBER OF LINES
5         50.0                  SPACING, m
8           75                  MAX CROSS TRACK, m
9    0  0  0                    DELTA X/Y/Z
10           1                  LOG FPR EVERY 1 SECS
11 0.9996000000       0.0       0.0 K0, X/Y SHIFT
14           0                  LINES EXTENDED BEYOND AREA
16          10                  FIRST LINE NUMBER
17   561745.0   5858187.0  90.0 MASTER POINT, HEADING
18   561745.0   5858187.0   0.0 TIE LINE MASTER POINT, HEADING
19      500.0         0         TIE LINE SPACING, LINE EXTENSION, m
20 WGS-84      6378137.0   298.257223563 22       ELLIPSOID
21           0                  NO EQUATORIAL CROSSING, N HEMISPHERE
30          20    9600  N  1  8  RS-232 PORT 2 INCOMING FORMAT
31          20    9600  N  1  8  RS-232 PORT OUTGOING FORMAT
38           0                  METRIC SYSTEM
41       0.00                   SYSTEM LAG, Secs.
80        0.00                  PLANNED ALTITUDE, m
83           0                  GPS ALTITUDE FOR VERTICAL BAR
84       0.00        0.00       ALTITUDE COEFFICIENT, OFFSET
85         100                  MAX VERTICAL BAR SCALE
102  UTM                        UTM X/Y SCALE

0  B467 Black Creek
1  U 273
2      555822     5854610       AREA CORNER 1
2      557016     5854610       AREA CORNER 2
2      557022     5853000       AREA CORNER 3
2      555822     5853000       AREA CORNER 4
2      555822     5854610       AREA CORNER 5
3      556898     5853174  COR1 WAYPOINT 1
4           33                  NUMBER OF LINES
5         50.0                  SPACING, m
8           75                  MAX CROSS TRACK, m
9    0  0  0                    DELTA X/Y/Z
10           1                  LOG FPR EVERY 1 SECS
11 0.9996000000       0.0       0.0 K0, X/Y SHIFT
14           0                  LINES EXTENDED BEYOND AREA
16          10                  FIRST LINE NUMBER
17   555822.0   5854610.0  90.0 MASTER POINT, HEADING
18   556700.0   5853174.0   0.0 TIE LINE MASTER POINT, HEADING
19      800.0         0         TIE LINE SPACING, LINE EXTENSION, m
20 WGS-84      6378137.0   298.257223563 22       ELLIPSOID
21           0                  NO EQUATORIAL CROSSING, N HEMISPHERE
30          20    9600  N  1  8  RS-232 PORT 2 INCOMING FORMAT
31          20    9600  N  1  8  RS-232 PORT OUTGOING FORMAT
38           0                  METRIC SYSTEM
41       0.00                   SYSTEM LAG, Secs.
80        0.00                  PLANNED ALTITUDE, m
83           0                  GPS ALTITUDE FOR VERTICAL BAR
84       0.00        0.00       ALTITUDE COEFFICIENT, OFFSET
85         100                  MAX VERTICAL BAR SCALE
102  UTM                        UTM X/Y SCALE
```

2.4 NAVIGATIONAL FLIGHT PLAN MAP

The following map shows the planned survey and control lines for navigational purposes for the Tamarack West Block and the smaller Black Creek Block.



2.5 FLOWN FLIGHT PATH MAP

The actual final flight path maps for the Tamarack West and Black Creek Blocks are shown in Final Maps Section 7.2.13.

2.6 TOLERANCES - REFLIGHT

2.6.1 Traverse Line Interval

Re-flights would take place if the flight line separation of the final differentially corrected flight path is greater than 1.25 of the intended line separation over a distance greater than 1 kilometre along the line.

2.6.2 Terrain Clearance:

According to contract specifications, the aircraft mean terrain clearance was to be smoothly maintained where possible at 40 metres MTC in a drape mode controlled by altimeter. With an experienced crew on this survey it was possible to safely achieve 30 metres MTC. Re-flights would be done if the final differentially corrected altitude deviated from the specified flight altitude by +/-10m over a distance of 3 kilometres or more if, in the pilot's opinion, it was safe to do so.

2.6.3 Diurnal Variation:

Diurnal activity in the survey was limited to 3.0 nT peak to peak deviation from a 1-minute chord.

2.6.4 GPS Data:

GPS data included at least 4 satellites for navigation and flight path recovery. There were no significant gaps in any of the digital data including GPS and magnetic data.

2.6.5 Radio Transmission:

The aircraft pilot makes no radio transmission that interferes with magnetic response.

2.6.6 Sample Density:

A reflight is required if the sample density along one or more of the survey lines exceeds 10 metres over a cumulative total of 1000 metres for the magnetic survey.

3 AIRBORNE GEOPHYSICAL EQUIPMENT

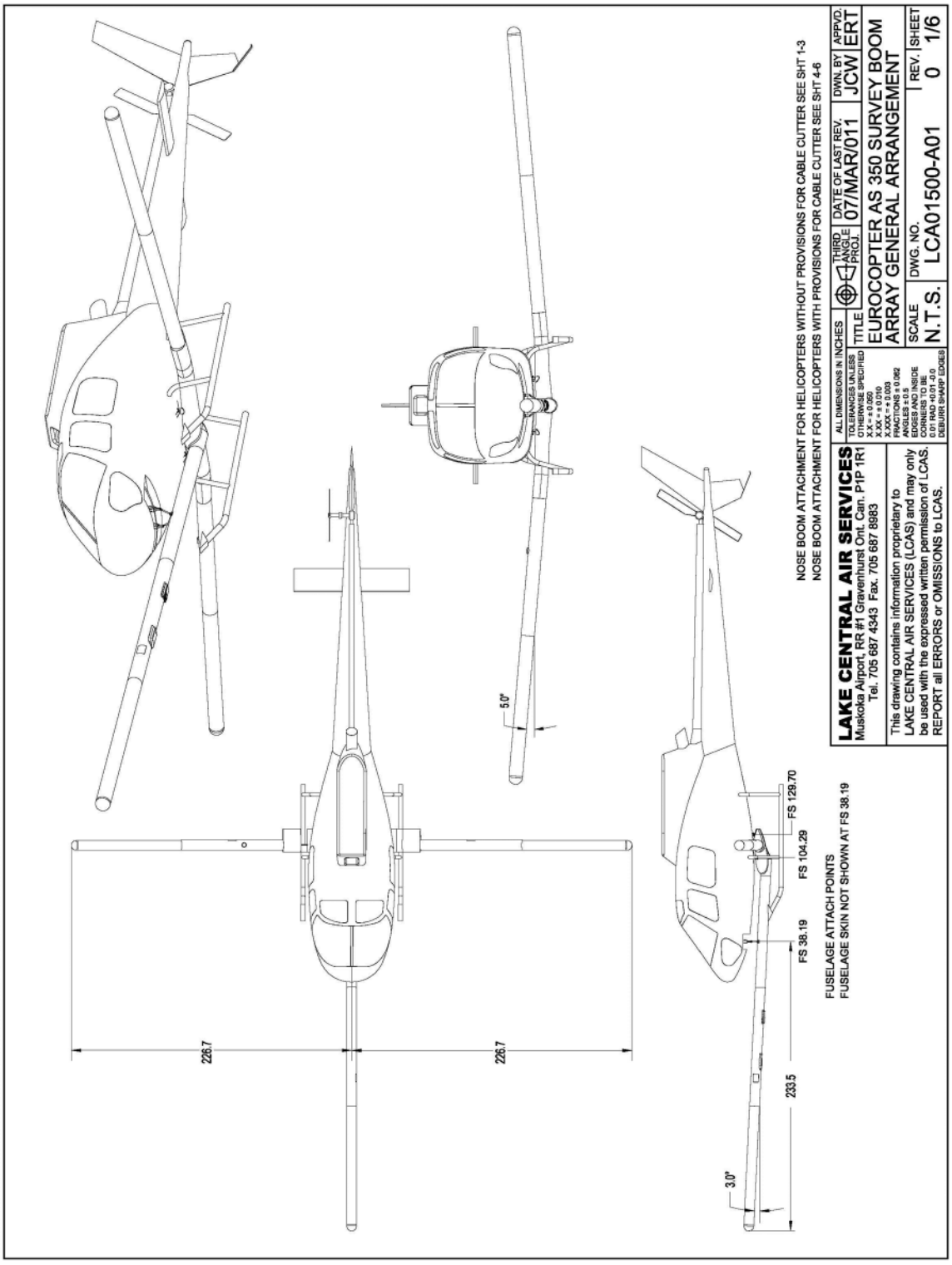
The primary airborne geophysical equipment includes three high sensitivity cesium vapour magnetometers mounted in three horizontal booms attached to the aircraft structure. Ancillary support equipment includes a tri-axial fluxgate magnetometer, data acquisition system, radar altimeter, GPS receiver with a real-time correction service, and a navigation system. The navigation system comprises a left/right indicator for the pilot and a screen showing the survey area, planned flight lines, and the real time flight path. All data were collected and stored by the data acquisition system. The following provides detailed equipment specifications:

3.1 EQUIPMENT SUMMARY

Helicopter	Astar 350B2, registration C-FFKK
Equipment:	
Magnetometer	Scintrex : CS-3 Cesium Vapour (3)
Magnetic Counter	Kroum VS : KMAG4
Analog processer	Kroum VS : KANA8
3-axis Magnetometer	Billingsley: TFM100-LN
GPS Receiver	Novatel Propak V.3 DGPS with WAAS real time correction
Radar Altimeter	Free Flight Systems TRA3000
Data Acquisition	Archer: handheld computer using Kroum VS: SDAS software
Navigation	AgNav: Guia/LiNav P151
Magnetic Specifications:	
Nose Boom	5.57 metres (from point of intersection)
Transverse Booms (2)	11.32 metres (total lateral separation)
Output Sample Rate	10 Hz
4^{th} difference noise envelope	0.10 nT
Sensor Sensitivity	0.005 nT

3.2 SURVEY AIRCRAFT

The survey aircraft for this project was a Eurocopter Astar 350B2, registration C-FFKK, sub-contracted from Heli Explore in La Sarre, PQ. The aircraft has been specifically modified with a 5.57 metre long nose boom and two transverse booms with total separation of 11.32 metres. These are attached to the aircraft structure. The boom assembly is fully approved by Transport Canada, manufactured by Lake Central Air Services and supplied by Terraquest Ltd.


NOSE BOOM ATTACHMENT FOR HELICOPTERS WITHOUT PROVISIONS FOR CABLE CUTTER SEE SHT 1-3
NOSE BOOM ATTACHMENT FOR HELICOPTERS WITH PROVISIONS FOR CABLE CUTTER SEE SHT 4-6
LAKE CENTRAL AIR SERVICES
Muskoka Airport, RR #1 Gravenhurst Ont. Can. P1P 1R1
Tel. 705 687 4343 Fax. 705 687 8983
This drawing contains information proprietary to LAKE CENTRAL AIR SERVICES (LCAS) and may only be used with the expressed written permission of LCAS. REPORT all ERRORS or OMISSIONS to LCAS.
ALL DIMENSIONS IN INCHES
TOLERANCES UNLESS OTHERWISE SPECIFIED
X.X = ± 0.050
X.XX = ± 0.010
X.XXX = ± 0.003
FRACTIONS = ± 0.062
ANGLES = ± 0.5
EDGES ARE TO BE SLIGHTLY BROKEN AND TO HAVE 0.01 RAD +0.01 -0.0 DEBURR SHARP EDGES
TITLE
EUROCOPTER AS 350 SURVEY BOOM ARRAY GENERAL ARRANGEMENT
THIRD ANGLE PROJ.
DATE OF LAST REV. 07/MAR/011
DWN. BY JCW
APPVD. ERT
SCALE N.T.S.
DWG. NO. LCA01500-A01
REV. 0
SHEET 1/6
FUSELAGE ATTACH POINTS
FUSELAGE SKIN NOT SHOWN AT FS 38.19
FS 38.19
FS 104.29
FS 129.70
226.7
226.7
233.5
5.0"
3.0"

3.3 SURVEY EQUIPMENT AND SPECIFICATIONS:

3.3.1 High Sensitivity Magnetometer

Thee high-resolution cesium vapour magnetometers, manufactured by Scintrex are mounted in a 5.57 metre nose boom and two transverse booms with a total transverse sensor separation of 11.32 metres. A fluxgate tri-axial magnetometer, model TFM100-LN by Billingsley Magnetics Ltd., is mounted in front of the mid-section of the nose boom to monitor aircraft manoeuvre and magnetic interference and provides data for post-flight compensation.

Type of Magnetometer Sensor	Cesium Vapour
Model	CS-3
Manufacturer	Scintrex Ltd.
Resolution	0.001 nT counting at 0.1 per second
Sensitivity	+/- 0.005 nT
Dynamic Range	15,000 to 100,000 nT
Fourth Difference	0.02 nT
Recorded Sample Rate	0.05 seconds
Noise Envelope	0.10nT

3.3.2 Tri-Axial Fluxgate Magnetic Sensor

Tri-Axial Fluxgate Magnetic Sensor	(for compensation, mounted in nose boom)
Model	TFM100-LN
Manufacturer	Billingsley Magnetics
Description	Low noise miniature tri-axial fluxgate magnetometer
Axial Alignment	> Orthogonality > +/- 0.5 degree
Accuracy	< +/- 0.75% of full scale (0.5% typical)
Field Measurement	+/- 100,000 nanotesla
Linearity	< +/- 0.0035% of full scale
Sensitivity	100 microvolt/nanotesla
Noise	< 14 picotesla RMS/–Hz @ 1 Hz
Recorded Sample Rate	0.05 seconds

3.3.3 Radar Altimeter

Altimeter	Radar
Model	TRA3000
Manufacturer	Free Flight Systems
Type	Single horn
Range	0 – 2500 ft
Accuracy	+ 5ft for 0-100 ft; 5% 100-500ft
Calibrate Accuracy	1%
Output	Digital for pilot, converted to analog for data acquisition
Recorded Sample Rate	0.05 seconds

3.3.4 Data Acquisition System

Data Acquisition System	Handheld computer
Software	SDAS
Manufacturer	Kroum VS
Operating System	iPAQ Pocket PC
Microprocessor	Archer handheld computer
Ports	RS232 COM ports data input
Recorded Sample Rate	0.05 seconds

3.3.5 Analog Processor

Analog Processor	KANA8 standalone module
Manufacturer	Kroum VS
Channels / Input	8 independent analog channels
Processing	Separate 24-bit delta sigma ADC and signal conditioning circuitry for each channel
Time Synchronization	GPS UTC each sample, and PPS signal
Overlay	Video text overlay

3.3.6 Magnetometer Processor

Magnetometer Counter	4 input, stand-alone module
Model	KMAG4
Manufacturer	KROUM VS
Input Range	10,000 – 100,000 nT
Relative Resolution	3.85 ppb
Sampling Rates	Selectable 1 to 1,000 per second: 0.05 seconds
Reference Frequency	260 MHz
Bandwidth	Selectable 0.7, 1.0 or 2.0 Hz
Modes	SyncIn, SyncOut, RS232 Ports, PPS

3.3.7 Navigation System

Navigation System	Stand-alone module
Model	Guia P151
Manufacturer	AgNav Inc.
Software	LiNav software
Microprocessor	CPU Board Pentium: 166Mhz, 16MB
Ports	USB Memory stick, 4 RS232 I/O ports
Graphic Display	Full colour sunlight readable LED array 28x30 lines
Pilot Display	position, left/right/vertical, navigational info
Recording Media	standard hard drive, USB memory stick
Sampling	Selectable sampling for each input type: 1.0, 0.5, 0.25, 0.2, 0.1, 0.05 seconds (magnetometers at 0.05 seconds)

3.3.8 GPS Differential Receiver

GPS Receiver	Differential GPS
Model	Propak Ver 3, OEM4 receiver board
Manufacturer	Novatel
Channels	12 L1L2 kinematic grade; plus raw pseudo-range data
Position Update	0.5 second for navigation
Correction Service	Real time correction – WAAS
Sample Rate	0.1 seconds
Accuracy	~ 3 meters
Recorded Sample Rate	0.1 seconds

4 Base Station Equipment

4.1 BASE STATION MAGNETOMETER & GPS

High sensitivity magnetic base station data was provided by a split beam cesium vapour magnetometer logging onto a computer and with time synchronization from a GPS base station receiver. The magnetometer was similar to the type used in the aircraft, a cesium magnetometer manufactured by Scintrex. The magnetometer processor was a KMAG manufactured by Kroum VS Instruments and the data logger was a PDA by Archer. The counter was powered by a 10VAC 50/60hz to 30VDC 3.0 amp power supply with an internal 12VDC fan. The logging software SDAS-1 was written by Kroum VS Instrument Ltd. specifically for handheld pc hardware. It supports real time graphics with selectable windows (uses two user selectable scales, coarse and fine). Time recorded was taken from the base GPS receiver. Magnetic data was logged at 1Hz. Data collection was by RS232 recording ASCII string and stored on flash card.

Magnetometer Type	Cesium Vapour (high sensitivity)
Model	CS-3
Manufacturer	Scintrex Ltd.
Sensitivity	0.005 nT
Resolution	0.001 nT
Dynamic Range	15,000 – 120,000 nT
GPS model	GPS 18
GPS manufacturer	Garmin

5 TESTS AND CALIBRATIONS

5.1 MAGNETIC COMPENSATION CALIBRATION

Compensation calibration tests were performed to determine the magnetic influence of aircraft maneuvers and the effectiveness of the aircraft compensation method. The aircraft flew a square pattern in the four survey directions at a high altitude over a magnetically quiet area and perform pitches (± 5°), rolls (± 10°) and yaws (± 5°). The FOM calibration was performed at the Muketei base camp on the September 19, 2017.

Successful removal of helicopter maneuver related magnetic signal was verified prior to start of survey operations and quantified by calculating the resulting magnetic signal improvement ratios based on a statistical analysis (Standard Deviation evaluation) of the raw and compensated data from each maneuver group (Pitch, Roll and Yaw) for each sensor. See ***Section 7.2.1*** for further discussion of magnetic compensation and ***Appendix III*** for the summary of calibration results.

5.2 RADAR ALTIMETER CALIBRATION

The radar altimeter was calibrated at the Muketei base camp on the September 19, 2017. Raw radar altimeter data (in mV) was collected from a vertical ascent over a fixed ground reference location and correlated with corrected GPS altimetry to calculate calibration factors. See ***Appendix IV***.

6 LOGISTICS

6.1 PERSONNEL

The contractor and subcontractor supplied the following properly qualified and experienced personnel to carry out the survey and to reduce, compile and report on the data:

Field:	Pilot	Ian Simmons
	Equipment Configuration	James Bursey
	Operator/Field Manager	Greg Luus
	QC processor (office)	Allen Duffy
Office:	Final Data Processor	Allen Duffy
	Manager	Charles Barrie

6.2 FIELD REPORTING

The helicopter was subcontracted from Heli Explore Inc. in La Sarre, PQ and the fuel was supplied by Meridian Fuels Inc. Cochrane, ON. The base of operations was Muketei (Haveman) Camp located 21 kilometres southwest of the Tamarack Block. The Operator installed and flight tested the geophysical equipment in La Sarre, PQ September 13-17, 2017.

The helicopter and crew mobilized to the base of operations on September 18th, performed the calibrations on September 19th and completed the survey in 5 days from September 20th to 24th. There were no weather or standby days. Flights were cut short on 2 days due to high wind. There were no problems with any of the equipment. The survey data were approved on Sept 24th and the helicopter and crew demobilized in the afternoon.

The Terraquest survey operator provided daily survey reports and the geophysicist provided preliminary data and images throughout the survey. All members of the field crew worked together to achieve a flexible and efficient operation that was capable of meeting the client's objectives.

The summary of operations is shown below and details are shown in Appendix 9.2.

6.3 BASE OF OPERATIONS

Prior to the survey, airborne equipment was installed and tested in La Sarre, PQ. The base of operations for the survey was Muketei (Haverman) Camp located 21 kilometres southwest of Tamarack Block.

6.4 SUMMARY OF OPERATIONS

TERRAQUEST LIMITED

TERRAQUEST PROJECT REFERENCE : B467 / PROBE Metals Inc / McFaulds Project - Summer, 2017

PROJECT DETAILS:	
CLIENT	Probe Metals Inc.
PROJ NAME	McFaulds Project
TQ REF	B467
BASE	Muketei Camp, ON [UTC -5h DST:ON]
OPS START	13-Sep-17

CREW:	
Project Manager (Office)	Charles Barrie
Project Geophysicist	Allen Duffy
Field Manager	Greg Luus
Pilot	Ian Simmons (HELI EXPLORE)
Pilot	
Pilot	
AME	
Operator	Greg Luus
Operator	

CURRENT STATUS: 24-Sep-17 C-FFKK

TOTAL DAYS	INSTALL	OPS DAYS	LKM/DAY	COMPL (%)	TOTAL FLT TIME	TOTAL PRD TIME
12	3.5	8.5	132.6	100.00%	27:09:00	10:12:18

OVERALL PRODUCTION SUMMARY: Summary Date 24-Sep-17

	PLAN NLIN	PLAN LKMS	FLOWN NLIN	FLOWN LKMS	REMAIN	COMPL (%)	REFLT
TOTAL	305	1126.88	305	1126.88		100.00%	3.74
LINE	285	1020.63	285	1020.63		100.00%	
TIE	20	106.24	20	106.24		100.00%	
BORDER							

C-FFKK DAY CLASS SUMMARY

CALIBRATION	1.0
EQUIPMENT	
INSTALL	3.5
MAINT (SCHED)	
MAINT (UNSCHED)	
MOB/DEMOB	1.5
SETUP	
SURVEY	3.5
TESTING	0.5
WEATHER	0.5
DIURNAL	
STANDBY/TQ	0.5
STANDBY	
TOTAL	11.0

C-FFKK SURVEY STATS

	DAY	PROJECT
FLIGHT HOURS	3:40:00	27:09:00
SURVEY HOURS	1:23:51	10:12:18
LKMS ACCEPT	161.21	1126.88
LKMS REJECT		3.74
LKMS REFLT		3.74
LKMS % TOTAL	14.31%	100.00%

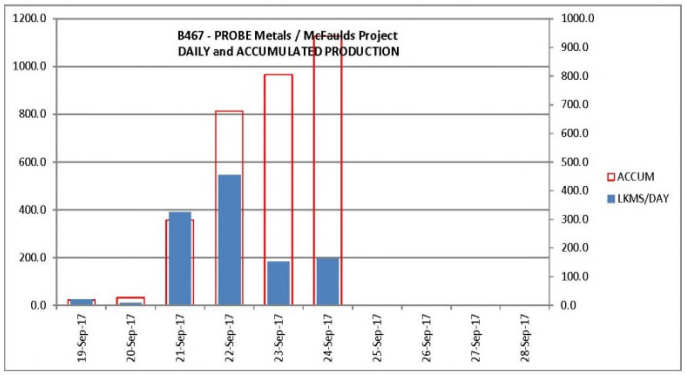
SUMMARY BY FLIGHT:

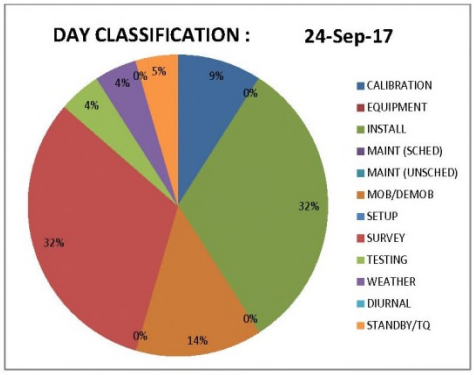
FLIGHT	NLIN	ALL	PART	REJECT	REFLT	COMPL (%)	FLT TIME	PRD TIME
14	35	42.78				3.80%	1:08:00	0:21:47

SUMMARY BY BLOCK:

SUMMARY DATE: 24-Sep-17

NAME	CODE	PLAN NLIN	PLAN LKMS	FLOWN NLIN	FLOWN LKMS	COMPL (%)	REFLT
Tamarack West	TAM	270	1084.10	270	1084.10	100.00%	3.74
Black Creek	BLK	35	42.78	35	42.78	100.00%	

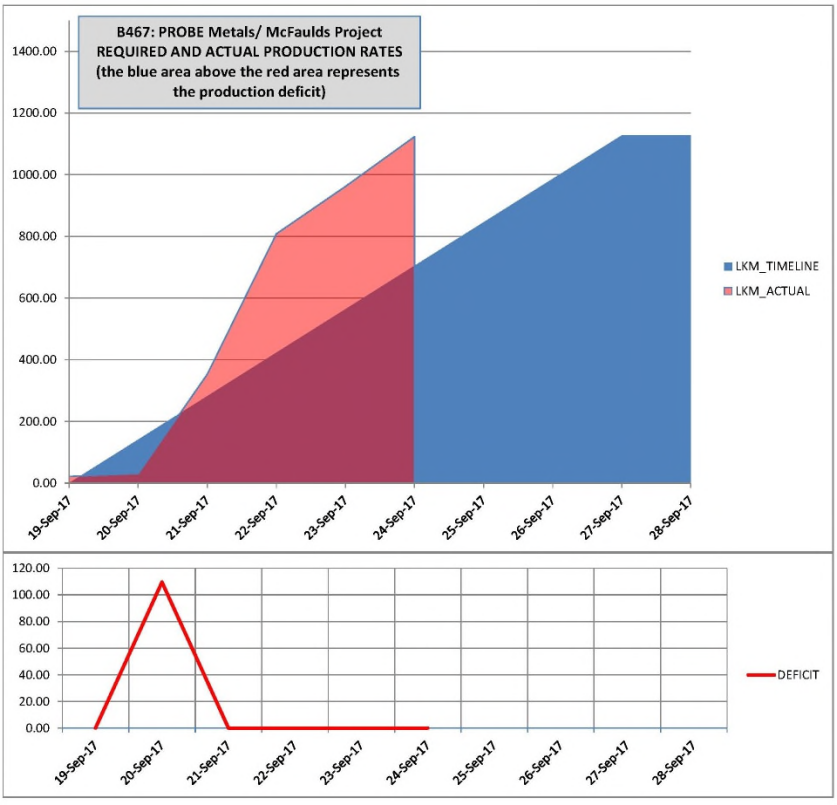




AC	DATE	COUNT	CLASS (by half day)		LKMS	ACCUM	COMMENT
TERRAQUE	13-Sep-17	1	INSTALL	INSTALL			Greg Luus in Las Sarre for equip install: installed delayed: missing parts and no helii
C-FFKK	14-Sep-17	2	INSTALL	INSTALL			Greg Luus in Las Sarre for equip install: installed delayed: missing parts and no helii
C-FFKK	15-Sep-17	3	INSTALL	INSTALL			C-FFKK arrives installation site approx 12:30pm - blades removed for hangar installation; AC mods started by AME. Missing parts arrived on site: side booms prepped for install
C-FFKK	16-Sep-17	4	INSTALL	INSTALL			Installation continues
C-FFKK	17-Sep-17	5	INSTALL	TESTING			Installation completed; local test flight in afternoon
C-FFKK	18-Sep-17	6	MOB/DEMOB	MOB/DEMOB			Ferry to camp: La Sarre -> Moosonee; Moosonee -> Muketei (camp)
C-FFKK	19-Sep-17	7	CALIBRATION	CALIBRATION	21.74	21.7	RADCAL and FOM attempt (flight FKK004); FOM procedures refined - second FOM in afternoon (FKK005) - data analysis and assessment through evening
C-FFKK	20-Sep-17	8	STANDBY/TQ	SURVEY	9.50	31.2	AM: finish data assessment, clear AC to start production
C-FFKK	21-Sep-17	9	SURVEY	SURVEY	325.88	357.1	
C-FFKK	22-Sep-17	10	SURVEY	SURVEY	454.93	812.0	
C-FFKK	23-Sep-17	11	WEATHER	SURVEY	153.62	965.7	AM: WX (low ceilings, rain) clears by PM; PM flight FKK012
C-FFKK	24-Sep-17	12	SURVEY	MOB/DEMOB	161.21	1126.9	Data acquisition completed - DEMOB initiated in afternoon

TERRAQUEST PROJECT REFERENCE : B467 / PROBE Metals Inc / McFaulds Project - Summer, 2017	Total LKMS	Rate (LKMS/DAY)	Days To Complete	Days To Deadline
				27-Sep-17
24-Sep-17				3
Overall	1126.9	132.6	0	
Last 7 Days	1126.9	161.0	0	
Last 14 Days	1126.9	93.9	0	
Last 30 Days	1126.9	93.9	0	
REQUD RATE TO COMPLETE :		0.0	3	

Currrent FP Block Totals :	C-FFKK	1126.9
		0.0
	Total:	1126.9



7 Data Processing

7.1 DATA QUALITY CONTROL

The field data were sent to a geophysicist by ftp site to be examined after each production day to inspect the data for quality control and tolerances. All data were approved and checked for continuity and integrity. Partially processed magnetic data were gridded to produce preliminary plots throughout the survey period. The ***digital terrain model*** (see Final Maps section 7.2.13) was calculated by subtracting the radar altimeter values from the GPS values.

The GPS data had some minor, random offsets in the order of about 3 metres (vertically) presumably due to intermittent reception of the WAAS correction data; these have been corrected during processing and shown in the final data base as ALTFIX channel.

7.2 FINAL MAGNETIC DATA PROCESSING

7.2.1 Post Flight Magnetic Compensation

In helicopter mounted boom systems, the close proximity of the helicopter to the magnetic sensors can result in considerable deviations in the measured magnetic signatures. These deviations are largely due to positioning of the sensors relative to the aircraft and the resulting motion induced interaction with the earth's magnetic field and aircraft.

Utilizing data from the onboard tri-axial (Fluxgate) magnetometer (which measures the three orthogonal field components - Vx, Vy, Vz), motion related noise originating from the helicopter can be modeled using polynomial fitting. The resulting calculated motion component can be subtracted from the measured magnetic signal to largely neutralize the effect of the aircraft. This operation is referred to as magnetic compensation.

The coefficients for the polynomial model are determined during a special calibration flight (see **Section 5.1** and **Appendix III**). During the calibration flight, the aircraft flies in each of the four primary survey line directions performing a set of three discrete maneuver groups (Pitch, Roll and Yaw). This provides information allowing full computation of aircraft effect in the designated headings.

Using the direction specific coefficients determined during the calibration and applying them to the measured fluxgate data, aircraft influence is modeled (and subsequently subtracted from the raw magnetic) data using the following 18-term polynomial:

$$\mathbf{S} = C_1 *X + C_2*Y + C_3*Z + C_4*X^2 + C_5*X*Y + C_6*X*Z + C_7*Y^2 + C_8*Y*Z + C_9*Z^2 + C_{10}*X*(X_{(n+1)}-X_{(n-1)}) + C_{11}*X * (Y_{(n+1)} - Y_{(n-1)}) + C_{12}*X * (Z_{(n+1)}- Z_{(n-1)}) + C_{13}*Y * (X_{(n+1)}- X_{(n-1)}) + C_{14}*Y * (Y_{(n+1)}-Y_{(n-1)}) + C_{15}*Y * (Z_{(n+1)}- Z_{(n-1)}) + C_{16}*Z * (X_{(n+1)}-X_{(n-1)}) + C_{17}*Z *(Y_{(n+1)}-Y_{(n-1)}) + C_{18}*Z * (Z_{(n+1)}-Z_{(n-1)})$$

where:

S	calculated aircraft component of the measured magnetic data
X,Y,Z	are the fluxgate directional components (Vx, Vy, Vz)
C_1, C_2, … C_{18}	are the compensation coefficients for the given sensor
(n+1), (n+1)	designate next/previous values in the time series

See ***Appendix III*** for a tabulation of the compensation coefficients used in the post flight correction of the magnetic data.

7.2.2 Lag Correction of Total Magnetic Field

The evaluation of the magnetic lag factor was accomplished by acquiring survey data flown in opposite directions over a distinct magnetic anomaly. The measured factor was -0.2 seconds for the Nose Magnetic sensor and 0.1 seconds for the transverse boom tip sensors.

7.2.3 Diurnal Data

Magnetic data recovered from the Diurnal Base Station were scrutinized for spurious readings (data spikes) and any obvious cultural interference. Any such features were manually removed and the data re-interpolated (Akima spline) to maintain a continuous record. Prior to application to the airborne magnetic data, the diurnal data were treated with a 60 sec convolution filter to reduce instrument measurement noise and local high frequency effects

7.2.4 Diurnal Correction

Production data were pre-levelled for diurnal magnetic activity by subtracting the time synchronized base station magnetic readings and then adding in the averaged base diurnal value for the entire survey (57081 nT).

7.2.5 Rotor Effect Removal

There is no detrimental rotor noise on the Astar 350B2 helicopter.

7.2.6 Heading Correction of Total Magnetic Field

Magnetic heading effects were determined for the Traverse and Tie line directions by comparing the diurnally corrected survey data in reciprocal directions. The resulting heading effect was removed prior to magnetic leveling.

7.2.7 Total Magnetic Field (TMI) Tie-Traverse Line Intersection Leveling

Tie-Traverse line intersection leveling was applied to the Traverse line data (using the "pre-levelled" Tie Line data). Using the Geosoft Oasis implementation of this procedure, an initial table of tie-traverse line intersection differences is compiled (together with supporting ancillary parameters such as local gradient, etc.) and intersection data loaded into the processing databases. In a series of iterative leveling passes, outlier intersection values are either disabled or modified to refine and finalize the overall result.

7.2.8 Total Magnetic Field (TMI) Micro-Leveling

Leveling imperfections may still exist in the intersection leveled data due to large variations in terrain clearance necessitated by the rough terrain typical of the survey area and, to a much lesser extent, incomplete removal of diurnal influences in sections of lines between intersection points. These errors are removed by application of a micro-leveling procedure whereby highly directional filtering identifies and removes residual noise correlated with the traverse line direction.

7.2.9 Calculated Vertical Derivative of the Total Magnetic Intensity

The First Vertical Derivative was calculated using a 2D FFT operator on the finalized TMI data grid. Unwanted, high frequency "ringing" in the resulting 1VD grid was minimized by concurrent application of a Butterworth Low Pass filter keyed to the main traverse line spacing (50 metres).

7.2.10 Calculation of Measured Horizontal Gradients

Terraquest solves the spatial mathematical relationship of the three total field measurements (left, right and nose) by using the accurate location of the three magnetic sensors in space to directly calculate the East-West and North-South gradients, referenced to geographic north, at each point along the survey line.

Both gradients were then median-leveled to remove bias; followed by mild micro-leveling to remove any remaining imperfections. Following this, the East-West and North-South gradients were gridded using bi-directional (Akima spline) interpolation at a cell size of 10 metres.

Additionally, the aircraft referenced horizontal gradients are calculated and provided as separate data channels. These gradients are referred to as Transverse and Longitudinal gradients and are calculated referenced to line direction. The measured transverse and longitudinal gradients provide an improved rendition of the shorter wavelengths in magnetic field than the residual magnetic field measured by the nose sensor alone. This is because the direction and amplitude of the field's total horizontal gradient can be determined using the 2 measured gradients, providing information regarding the behaviour of the magnetic field in-between traverse lines. Thus, it is useful to incorporate the gradient data in the preparation of the residual magnetic field grid.

7.2.11 Reconstructed Total Magnetic Field

Data grids of the measured horizontal gradients were used to generate the Reconstructed Total Magnetic Field using the 2D FFT process described by J. B. Nelson (Nelson, 1994). This product (RTF) has the advantage of being un-affected by magnetic diurnal activity and is characterized by improved near surface resolution, though longer magnetic spatial wavelengths are not represented due to measurement resolution limitations in the magnetometers. The resulting data units (expressed as pseudo nanoTesla) are not true nT; approximate conversion to true nT may be accomplished by application of scaling factor if required.

Nelson, J.B., 1994, Levelling total-field aeromagnetic data with measured horizontal gradients: Geophysics, 59, 1166-1170

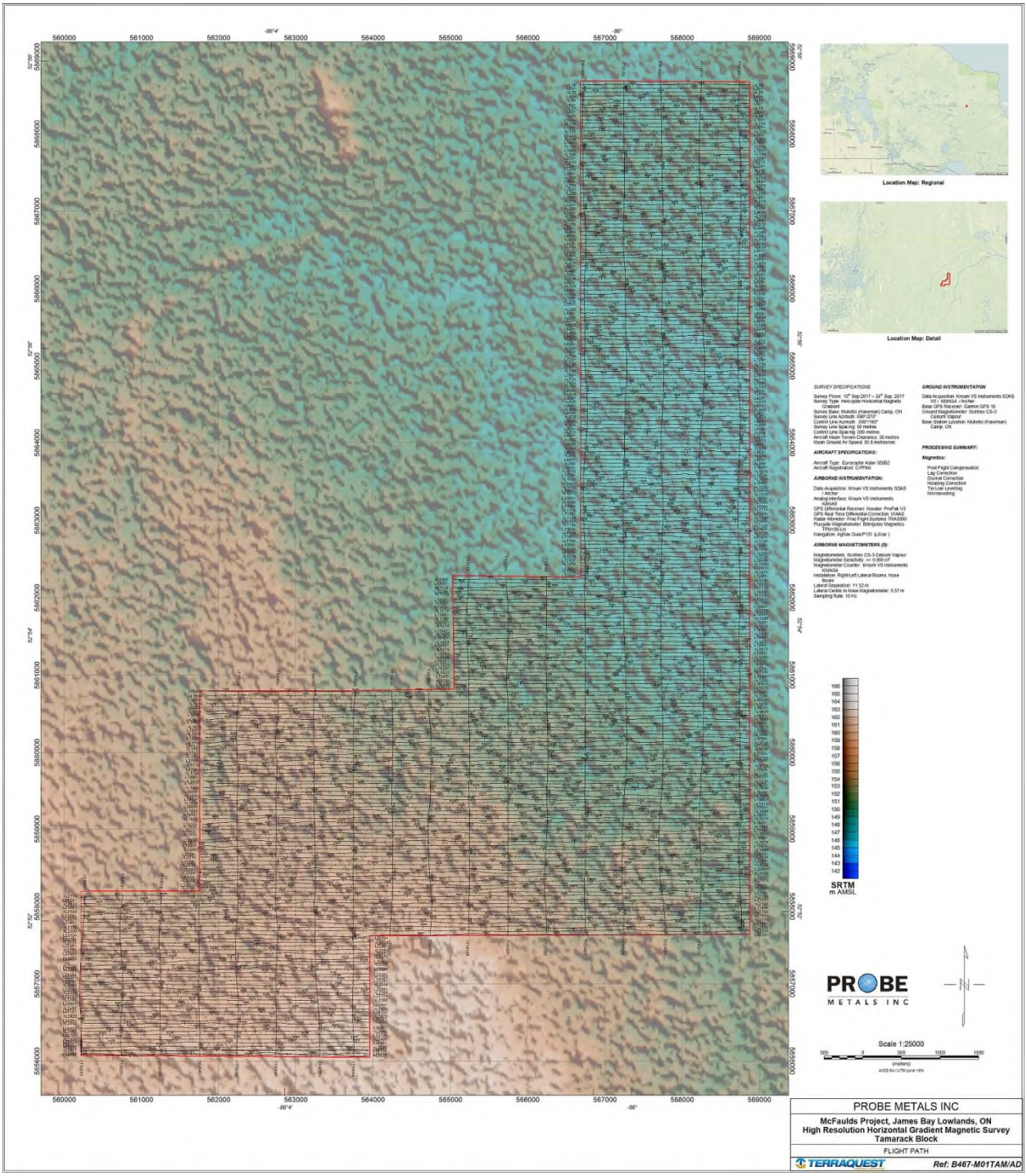
7.2.12 Data Grids

The data grids of each geophysical parameter were created using bi-directional (Akima spline) interpolation at a cell size of 10 metres.

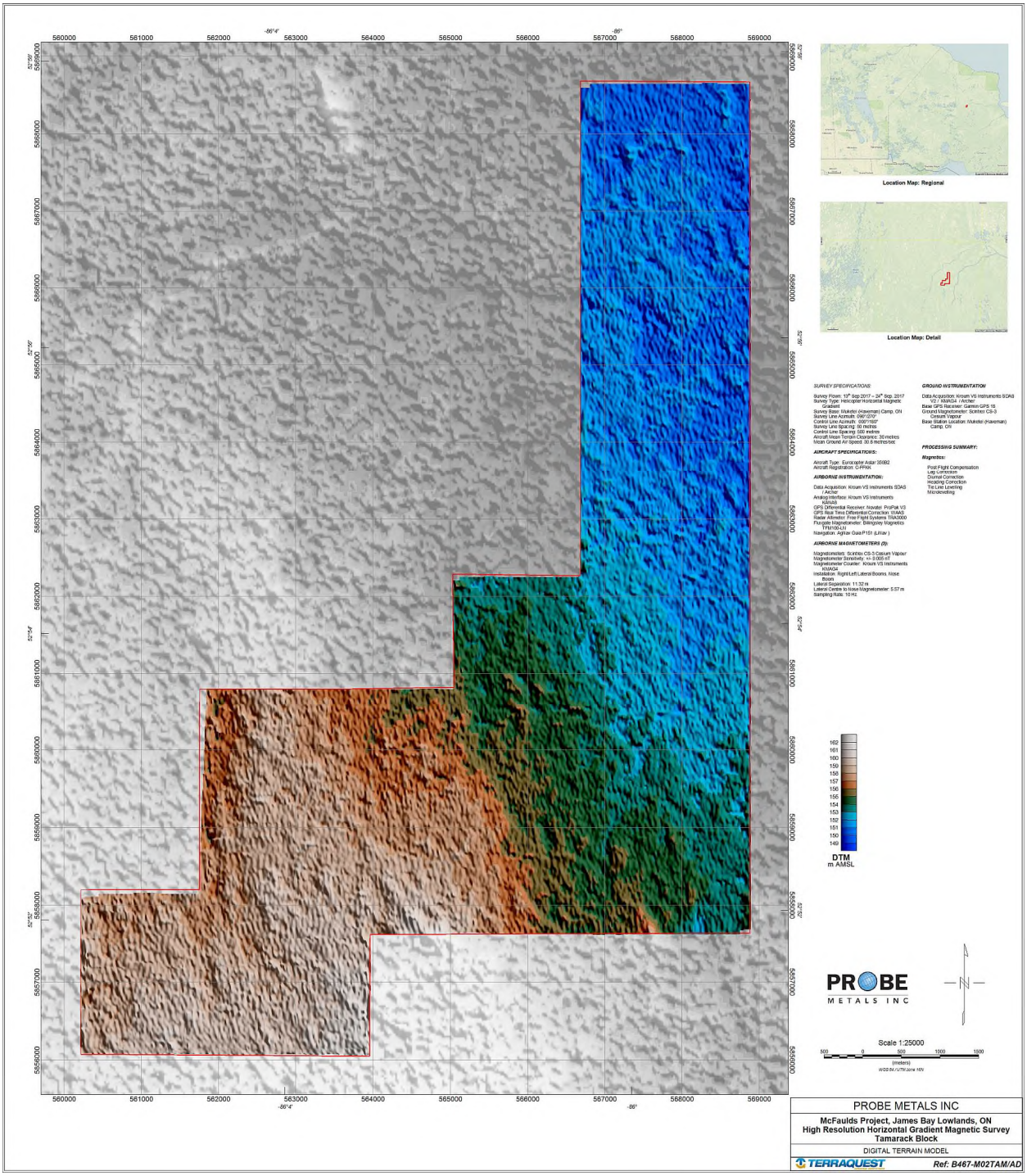
7.2.13 Final Maps

Low resolution images of the final processed maps are shown as follows:

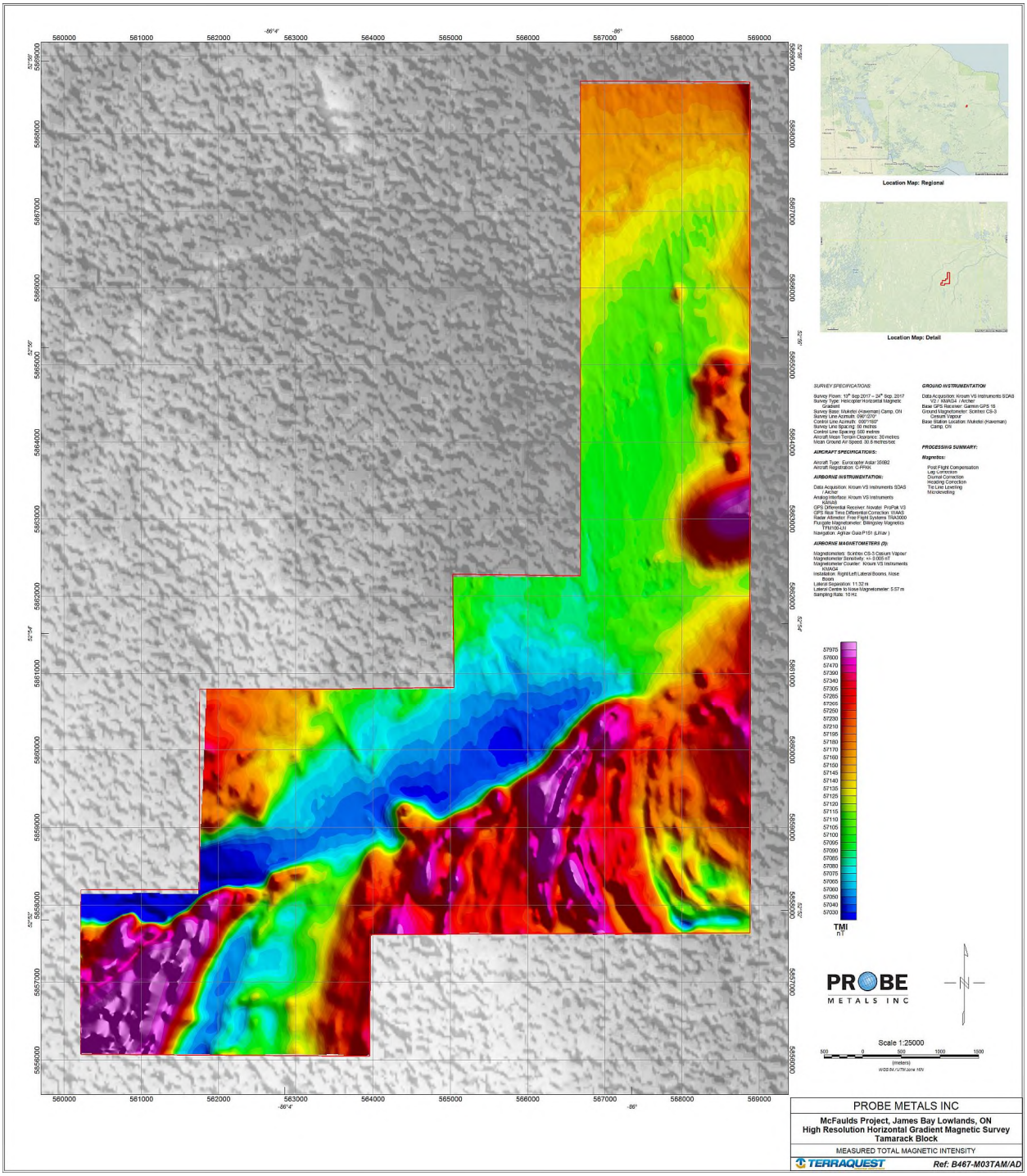
TAMARACK WEST BLOCK *(final maps are 1:25,000 scale)*



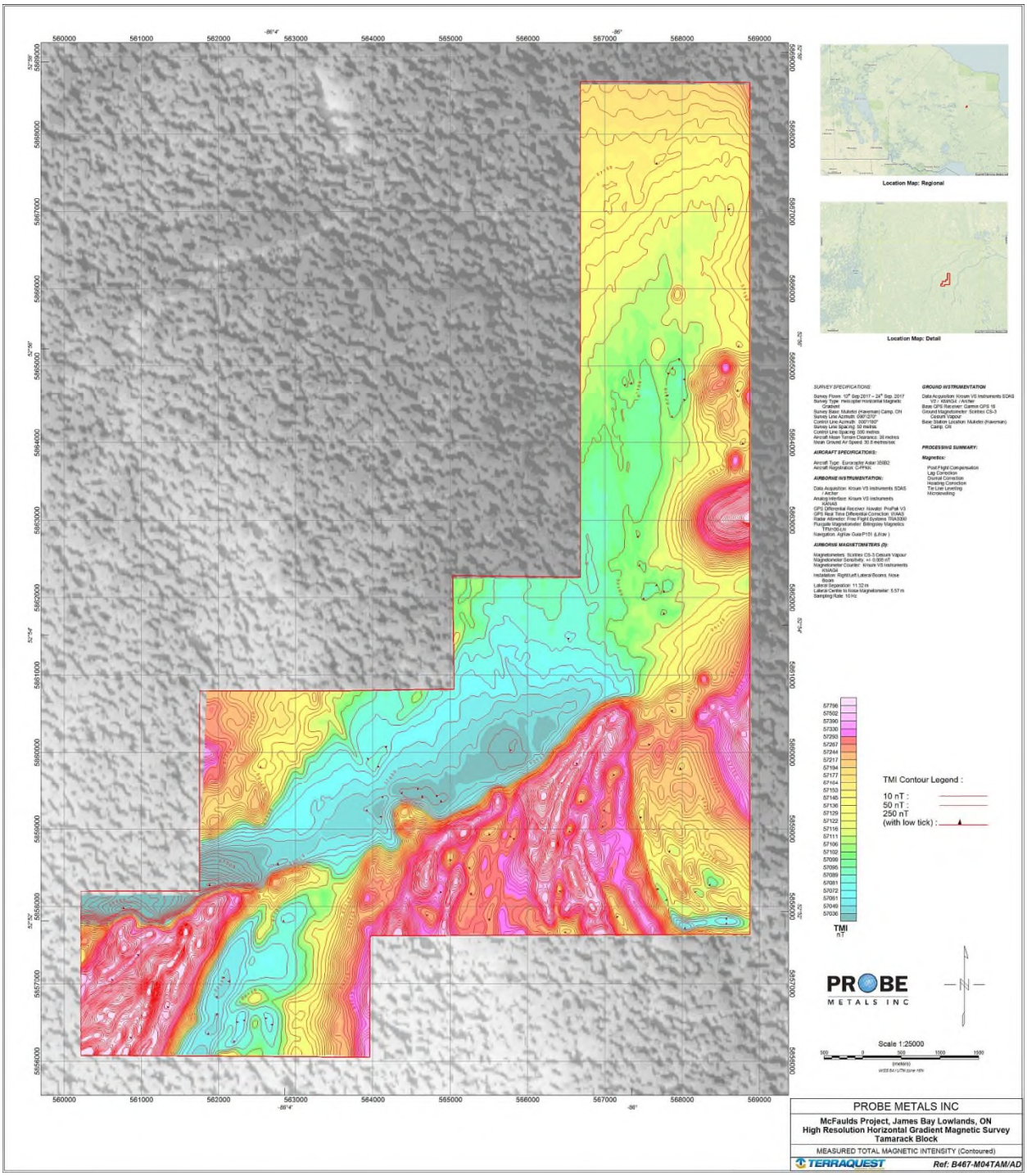
Flight Path



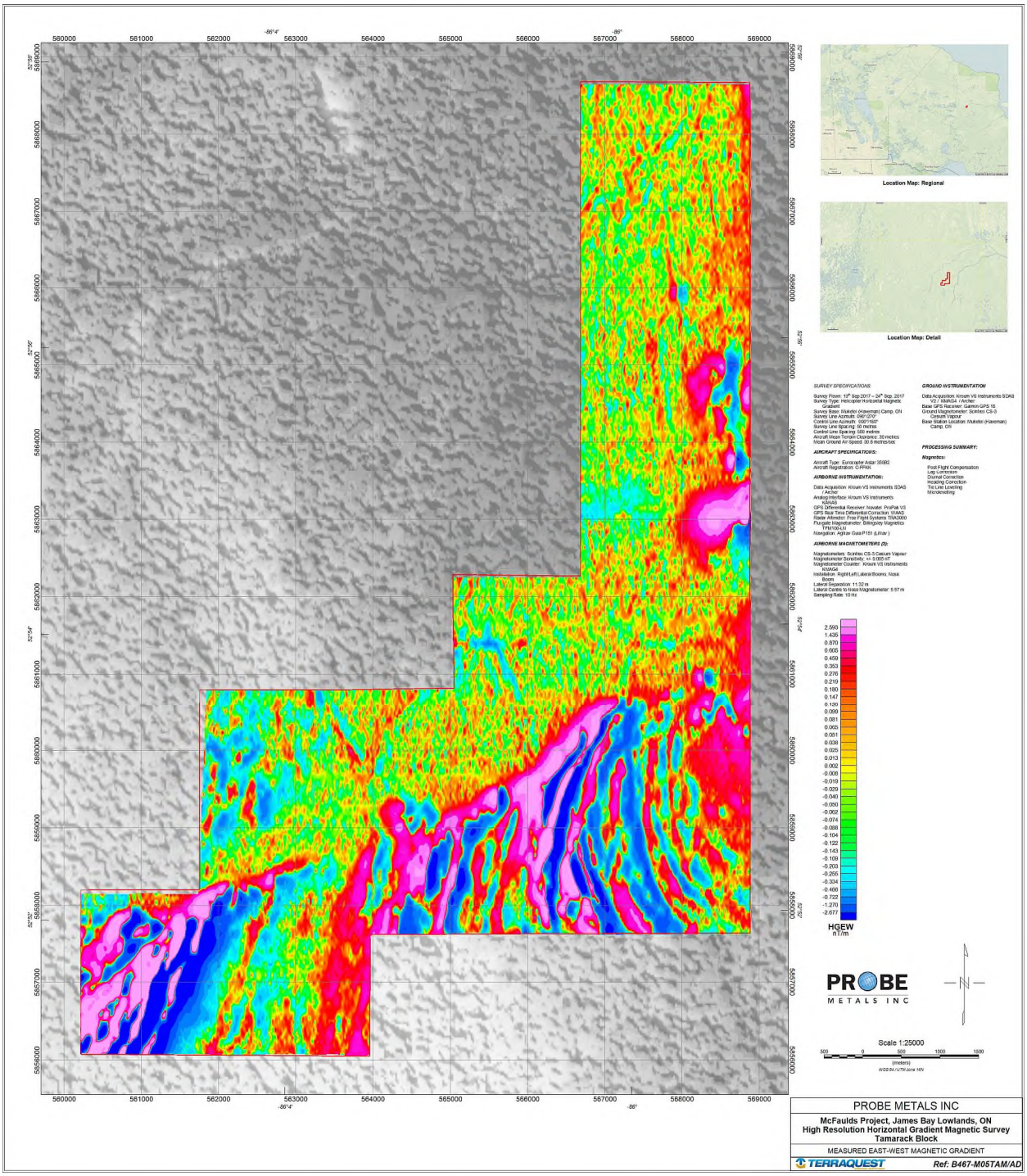
Digital Terrain Model (metres above mean sea level)



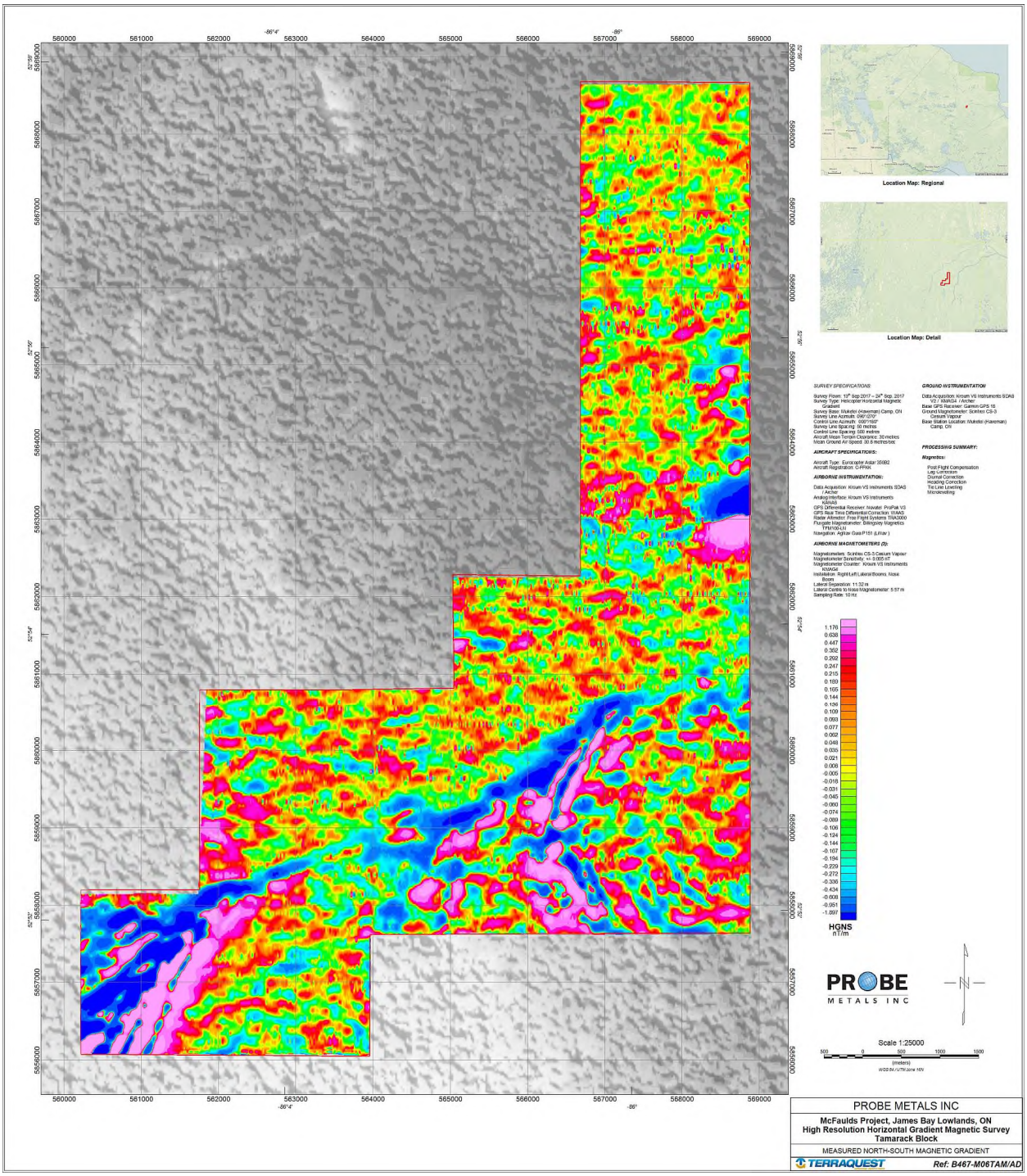
Total Magnetic Intensity: Colour Shaded Image – TMI (nT)



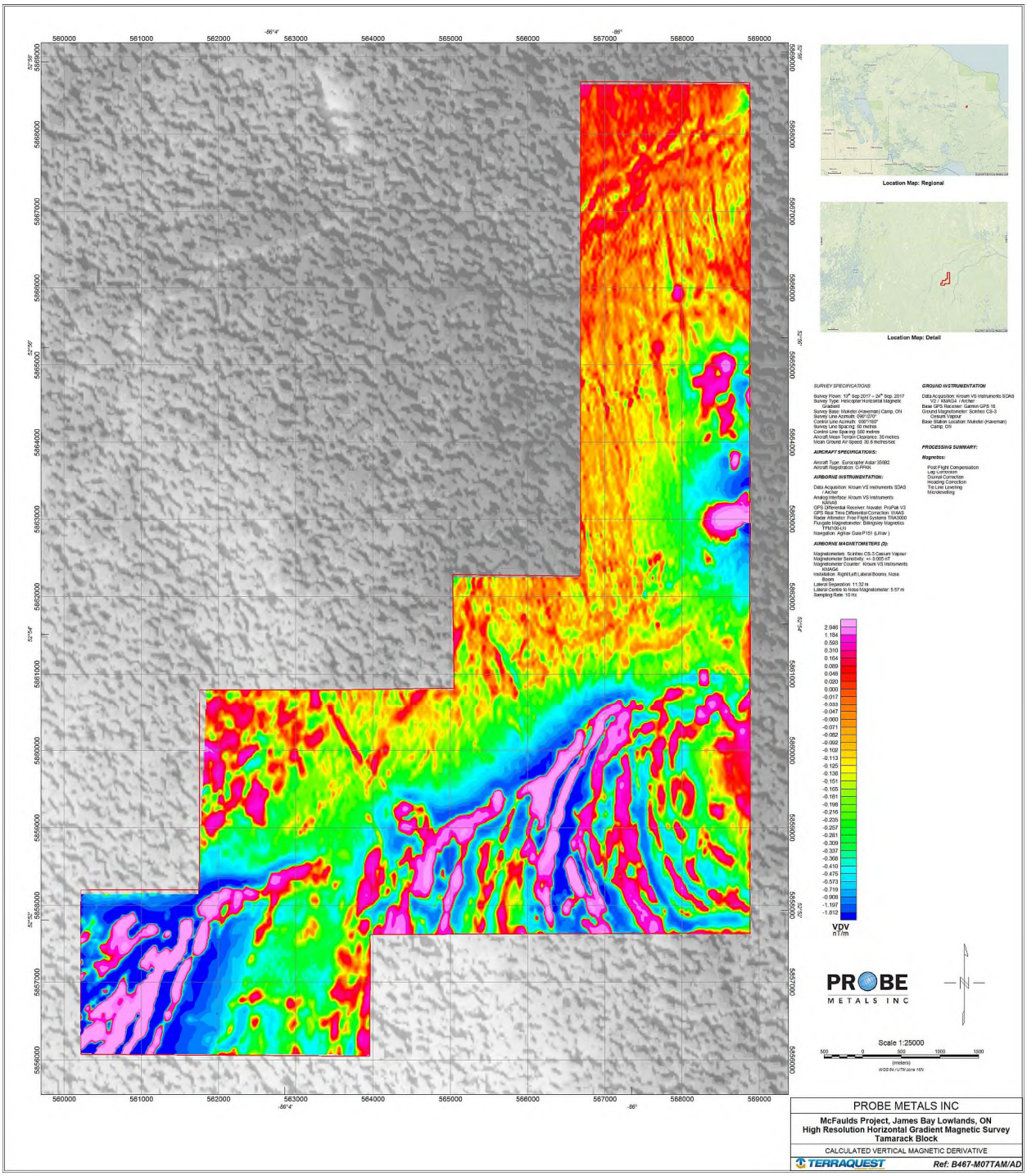
Total Magnetic Intensity: Colour Image and Contoured – TMI (nT)



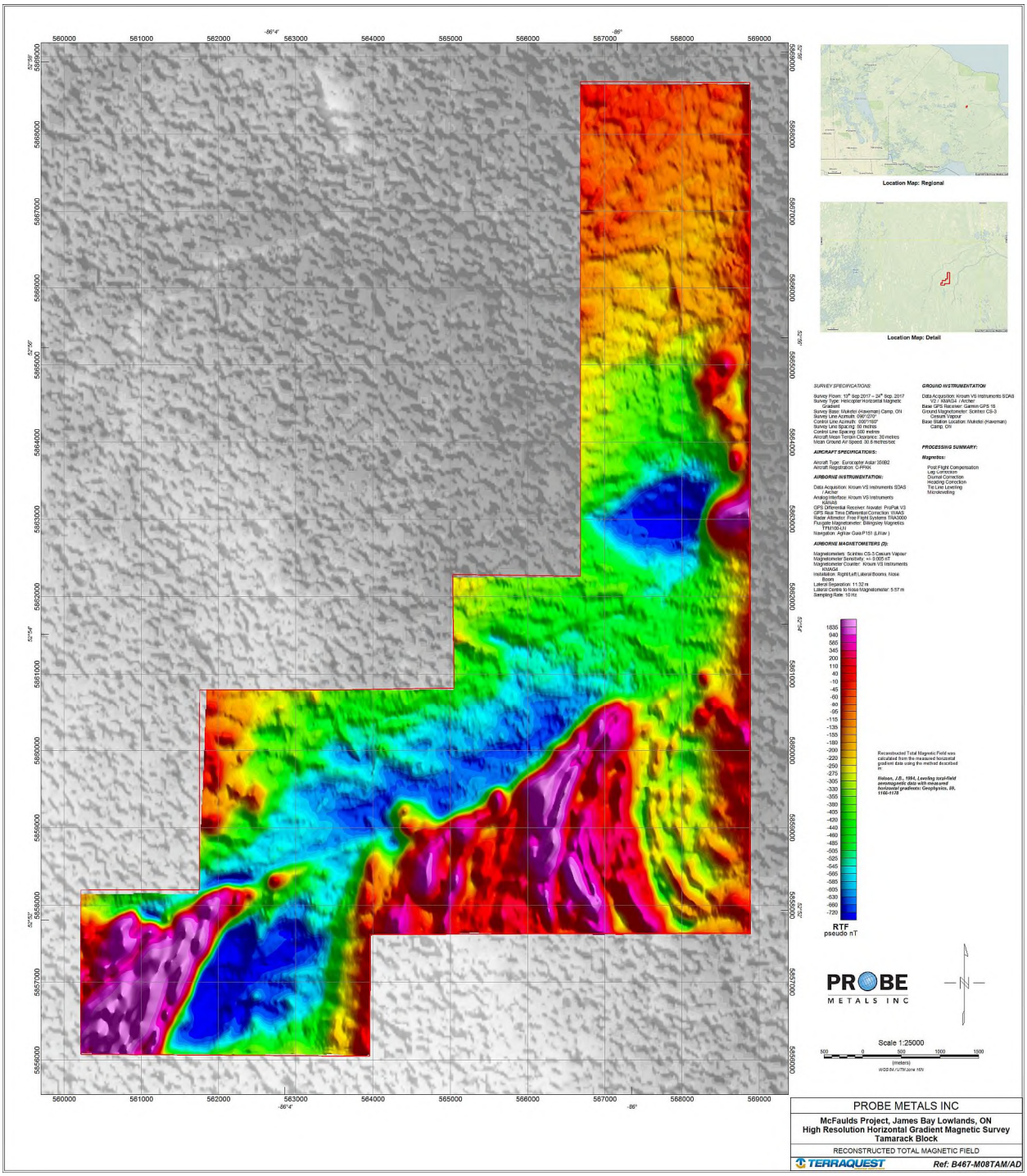
Measured East-West Horizontal Gradient (nT/m)



Measured North-South Horizontal Gradient (nT/m)



Calculated Vertical Derivative of TMI (nT/m)



Reconstructed Total Magnetic Field (pseudo nT)

7.3 LIST OF FINAL PRODUCTS

Two colour copies of the following maps were produced for the Tamarack West (TAM) and Black Creek (BLK) Blocks:

Tamarack West (TAM) Block (1:25,000 scale)

- B467-M01TAM_FP: Flight Path on Satellite Digital Terrain Model (m)
- B467-M02TAM_DTM: Digital Terrain Model (m)
- B467-M03TAM_TMI: Total Magnetic Intensity – Colour Image and Shaded (nT)
- B467-M04TAM_TMICNT: Total Magnetic Intensity – Colour Image and Contoured (nT)
- B467-M05TAM_HGEW: Measured East-West Horizontal Magnetic Gradient (nT/m)
- B467-M06TAM_HGNS: Measured North-South Horizontal Magnetic Gradient (nT/m)
- B467-M07TAM_VDV: Calculated Vertical Derivative of TMI (nT/m)
- B467-M08TAM_RTF: Reconstructed Total Magnetic Field (pseudo nT)

Black Creek (BLK) Block (1:5,000 scale)

- B467-M01BLK_FP: Flight Path on Satellite Digital Terrain Model (m)
- B467-M02BLK_DTM: Digital Terrain Model (m)
- B467-M03BLK_TMI: Total Magnetic Intensity – Colour Image and Shaded (nT)
- B467-M04BLK_TMICNT: Total Magnetic Intensity – Colour Image and Contoured (nT)
- B467-M05BLK_HGEW: Measured East-West Horizontal Magnetic Gradient (nT/m)
- B467-M06BLK_HGNS: Measured North-South Horizontal Magnetic Gradient (nT/m)
- B467-M07BLK_VDV: Calculated Vertical Derivative of TMI (nT/m)
- B467-M08BLK_RTF: Reconstructed Total Magnetic Field (pseudo nT)

The following archive digital products were produced on DVD:

- Database in GEOSOFT GDB format (compatible with 4.1 or higher)
- Digital grid archives in GEOSOFT GRD format
- Map Images in JPEG format
- Readme file
- Operations Report in PDF format

8 SUMMARY

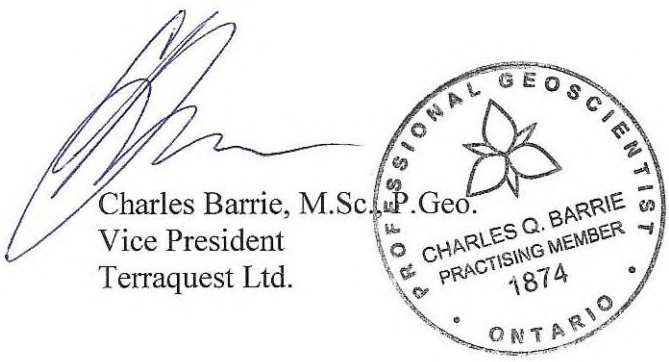
A helicopter, high sensitivity horizontal gradient magnetometer survey was performed over the Tamarack West and Black Creek Blocks located in the McFaulds Lake area, James Bay Lowland. The main survey specifications were: 50 metre line intervals, 500 metre control line intervals and 30 metre mean terrain clearance. Three high sensitivity magnetometer sensors were mounted in three horizontal booms on the underside of the helicopter, one in each transverse boom and one in the nose boom. The GPS location and magnetic data sample points (10 Hz) were at approximately 3 metres along the flight lines. The main base of operation was at the Muketei Camp located approximately 21 kilometres southwest of the Tamarack West Block. A high sensitivity magnetic and a GPS base station set up at the Camp recorded the diurnal magnetic activity and reference GPS time during the survey for adherence to survey tolerances.

The data were subjected to careful final processing to produce 2 copies of the following colour maps each for the Tamarack West Block (1:25,000 scale) and Black Creek Block (1:25,000 scale) as follows:

a) **Flight Path** and **Digital Terrain Map**

b) **Magnetics**:
Total Magnetic Intensity (TMI) - Colour Image and Shaded
Total Magnetic Intensity (TMI) - Colour Image and Contoured
Measured East-West Horizontal Magnetic Gradient (HGEW)
Measured North-South Horizontal Magnetic Gradient (HGNS)
Calculated Vertical Derivative of TMI (VDV)
Reconstructed Total Magnetic Field (RTF)

Respectfully Submitted,



Charles Barrie, M.Sc., P.Geo.
Vice President
Terraquest Ltd.

9 APPENDICES

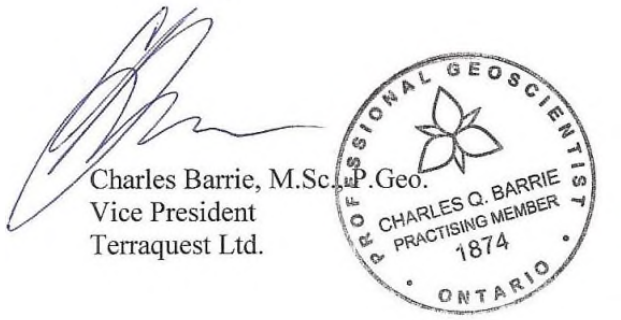
9.1 APPENDIX I - CERTIFICATE OF QUALIFICATION

I, Charles Barrie, certify that I:

1) am registered as a Fellow with the Geological Association of Canada, as P. Geo. with the Association of Professional Geoscientists of Ontario and work professionally as a geologist,
2) hold an Honours degree in Geology from McMaster University, Canada, obtained in 1977,
3) hold an M.Sc. in Geology from Dalhousie University, Canada, obtained in 1980,
4) am a member of the Prospectors and Developers Association of Canada,
5) am a member of the Canadian Institute of Mining , Metallurgy and Petroleum,
6) have worked as a geologist for over thirty years,
7) am employed by and am an owner of Terraquest Ltd., specializing in high sensitivity airborne geophysical surveys, and
8) have prepared this operations and specifications report pertaining to airborne data collected by Terraquest Ltd.

Markham, Canada

Signed



Charles Barrie, M.Sc., P.Geo.
Vice President
Terraquest Ltd.

9.2 APPENDIX II – OPERATIONS SUMMARY

Daily Report from Last Day of Survey

B467: PROBE METALS INC:McFAULDS PROJECT: DAILY REPORT

TERRAQUEST AIRBORNE GEOPHYSICS			C-FFKK	DATE	24-Sep-17
PROJECT REF: B464	**PROBE METALS INC - McFaulds Project (Summer, 2017)**				
AIRCRAFT :	Eurocopter AS 350B Reg C-FFKK	**INSTRUMENTATION:**	HGRAD MAGNETICS (HM3 Triple Boom mount)		
BASE:	Muketei Camp, ON	**AIRPORT:**	Camp (UTC -5, DST ON)		SUMMER 2017

Crew:	
Project Manager (Office)	Charles Barrie
Project Geophysicist	Allen Duffy
Field Manager (onsite)	Greg Luus
Pilot (onsite)	Ian Simmons
Pilot (onsite)	
Pilot (onsite)	
Operator (onsite)	Greg Luus
Operator (onsite)	
Operator (onsite)	

Overall Day Class Summary	
CALIBRATION	1.0
EQUIPMENT	
INSTALL	4.5
MAINT (SCHED)	
MAINT (UNSCHED)	
MOB/DEMOB	1.5
SETUP	
SURVEY	3.5
TESTING	0.5
WEATHER	0.5
DIURNAL	
STANDBY/TQ	0.5
STANDBY	
TOTAL	12.0

Weather:

Calm and overcast in the morning, rain starting at noon and continuing into the evening.
High: 16.5 C / Low 10.0 C
Sunrise: 7:35 (from GPS) / Sunset: 19:38 (from GPS)

Observations: ***DAY CLASSIFICATION:*** **SURVEY** **MOB/DEMOB** ***(by half day)***

AM: Flight FKK013 (finishes TAMARCK block) and FKK014 (BLACKCREEK) **completes data acquisition for the project.** Arrangements for DEMOB initiated in afternoon (Equipment packing, Camp close-up, personnel demob, etc.)

Flight Summary: *Note: TUP/TDN times in local time*

FLIGHT	DATE	TYPE	TIME UP	TIME DOWN	FLIGHT TIME	FROM	TO	CREW
13	24-Sep-17	SURVEY	7:37:00	10:09:00	2:32:00	MUKETEI	MUKETEI	Simmons, Luus
14	24-Sep-17	SURVEY	10:34:00	11:42:00	1:08:00	MUKETEI	MUKETEI	Simmons, Luus

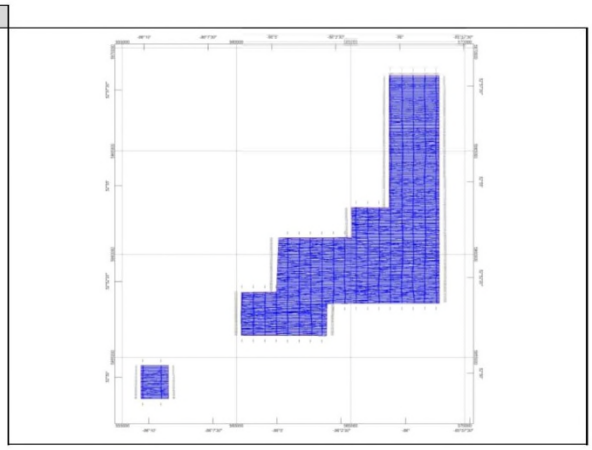
Production Summaries: *Note: start/end times in UTC*

FLIGHT	DATE	LKMS	START	END	PROD TIME
13	24-Sep-17	118.43	11:54:13	13:45:44	1:51:31
14	24-Sep-17	42.78	14:45:50	15:35:01	0:49:11
	TOTAL:	161.21			2:40:42

Overall Production Summary	PLAN		FLOWN				
	NLIN	LKMS	NLIN	LKMS	REMAIN	COMPL (%)	REFLT
TOTAL	305	1126.88	305	1126.88		100.00%	3.74
LINE	285	1020.63	285	1020.63		100.00%	
TIE	20	106.24	20	106.24		100.00%	
BORDER							

Survey Stats / Completion Map:

	DAY	PROJECT
FLIGHT HOURS	3:40:00	27:09:00
SURVEY HOURS	1:23:51	10:12:18
LKMS ACCEPT	161.2	1126.9
LKMS REJECT		3.7
LKMS REFLT		3.7
LKMS % TOTAL	14.31%	100.00%



B467: PROBE METALS INC:McFAULDS PROJECT: DAILY REPORT

QA/QC SUMMARY

NAV/ALT

FKK013: no issues - average clearance 25.0m AGL; average ground speed 31.8 m/sec
FKK014: no issues - average clearance 28.4m AGL; average ground speed 32.6 m/sec

DIURNAL	**BASE 1**	11:39:13	14:06:58
	BASE 2		

FKK013: no issues - all activity within spec - BASE 1 continuous coverage for flight.
FKK014: no issues - all activity within spec - BASE 1 continuous coverage for flight.

MAGNETICS

FKK013: all data within spec (isolated spikes in MAG3 - edited in TF3CMPED chn - L140, L390)
FKK014: all data within spec (isolated spike in MAG3 - edited in TF3CMPED chn - L110)

RADIOMETRICS

N/A

EM / VLF

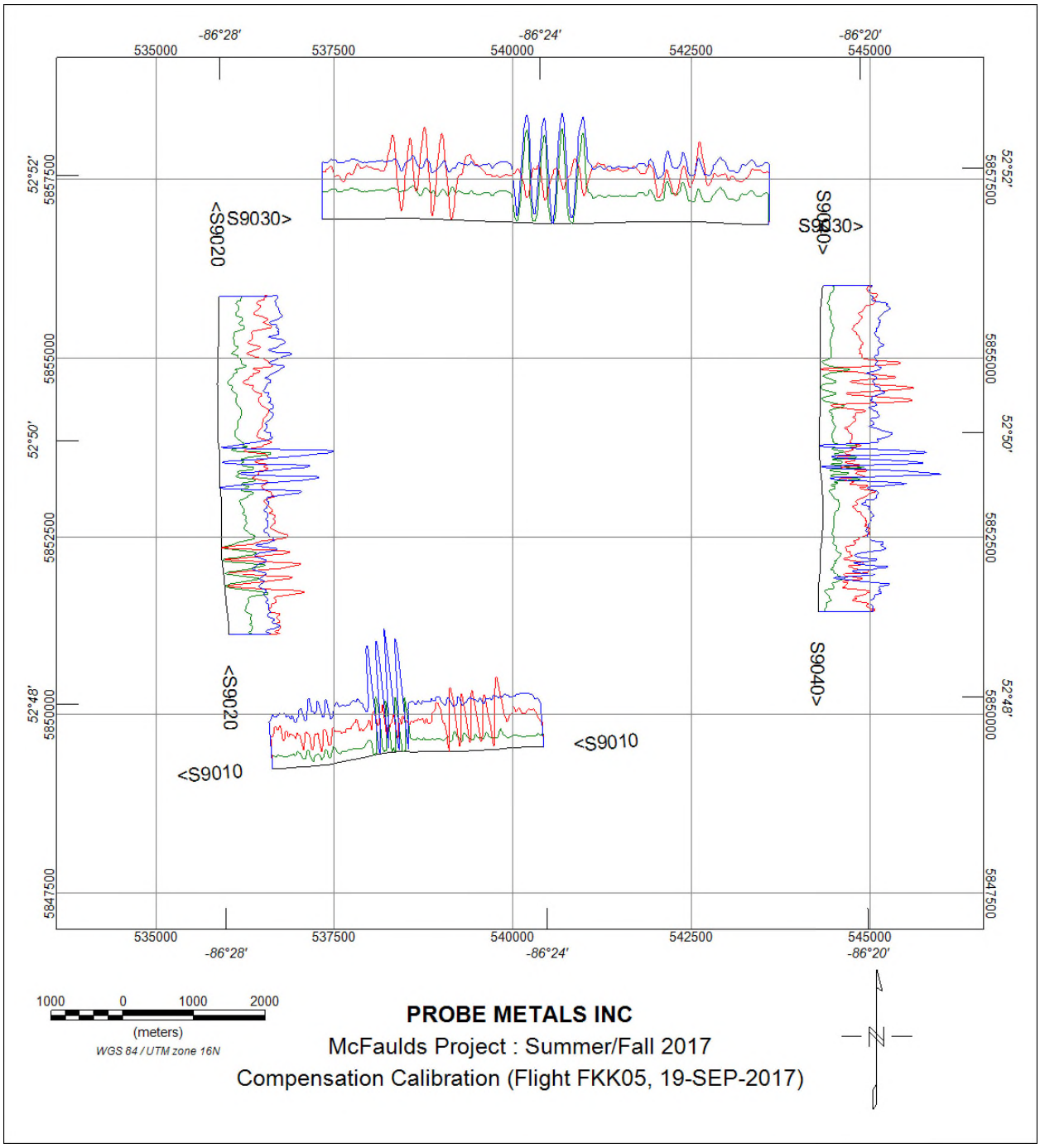
N/A

Line List

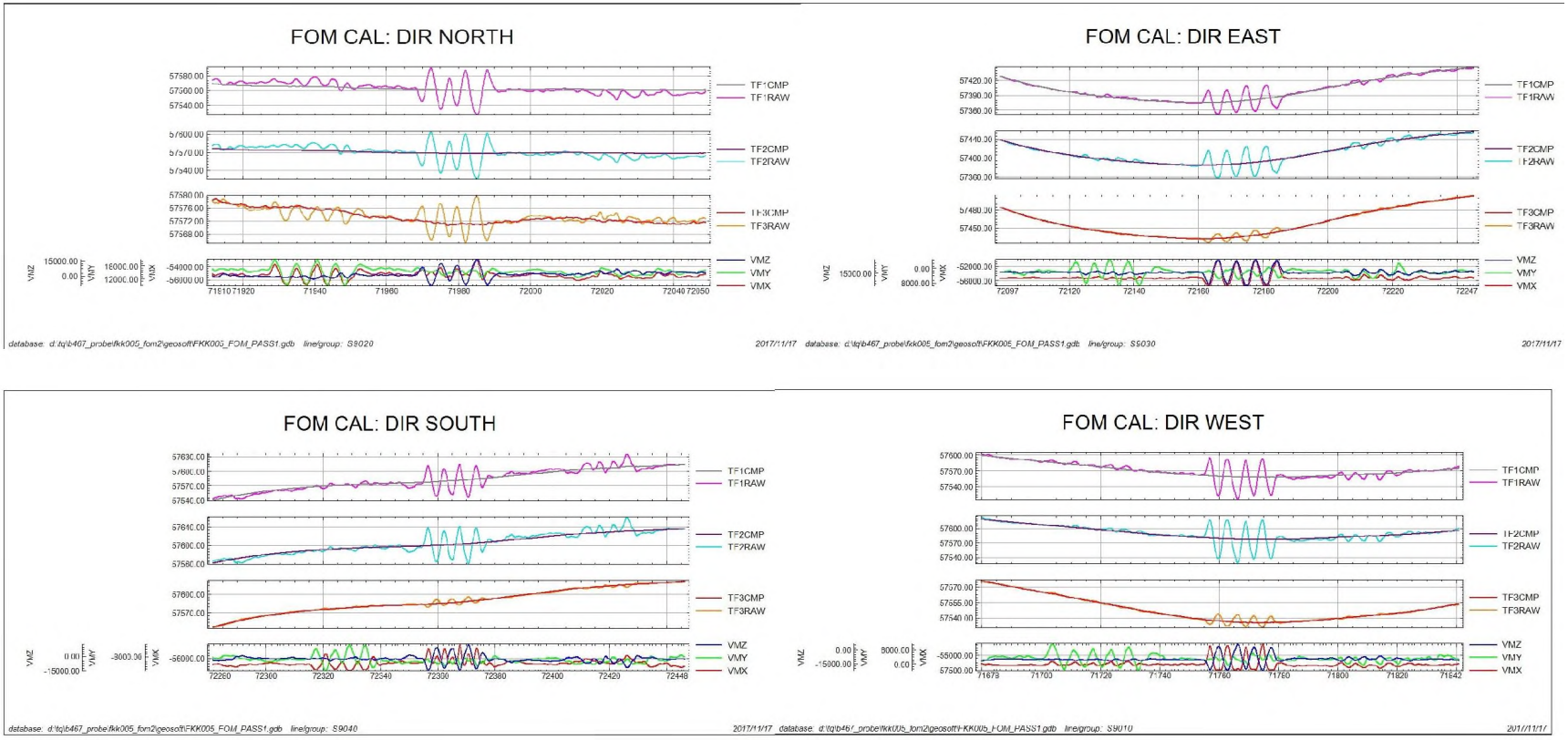
FLIGHT	LNUM	LKMS	ACCEPT	STATUS	REJECT	UTC-START	UTC-END	PROD TIME
TAMARACK BLOCK:								
13	10	2.19	2.19	FULL		13:44:43	13:45:44	0:01:02
13	20	2.19	2.19	FULL		13:42:37	13:43:41	0:01:04
13	30	2.19	2.19	FULL		13:37:45	13:38:51	0:01:05
13	40	2.19	2.19	FULL		13:35:50	13:36:56	0:01:07
13	50	2.19	2.19	FULL		13:33:50	13:35:00	0:01:10
13	60	2.19	2.19	FULL		13:31:49	13:33:02	0:01:13
13	70	2.19	2.19	FULL		13:29:55	13:31:05	0:01:10
13	80	2.19	2.19	FULL		13:27:46	13:29:00	0:01:15
13	90	2.19	2.19	FULL		13:25:47	13:26:56	0:01:09
13	100	2.19	2.19	FULL		13:23:37	13:24:47	0:01:09
13	110	2.19	2.19	FULL		13:21:39	13:22:43	0:01:04
13	120	2.19	2.19	FULL		13:19:35	13:20:41	0:01:06
13	130	2.19	2.19	FULL		13:17:48	13:18:53	0:01:05
13	140	2.19	2.19	FULL		13:15:46	13:16:54	0:01:08
13	150	2.19	2.19	FULL		13:13:43	13:14:48	0:01:05
13	160	2.19	2.19	FULL		13:11:43	13:12:52	0:01:09
13	170	2.19	2.19	FULL		13:09:47	13:10:51	0:01:05
13	180	2.19	2.19	FULL		13:07:45	13:08:49	0:01:04
13	190	2.19	2.19	FULL		13:05:52	13:06:55	0:01:03
13	200	2.19	2.19	FULL		13:03:35	13:04:49	0:01:13
13	210	2.19	2.19	FULL		13:01:32	13:02:40	0:01:08
13	220	2.19	2.19	FULL		12:59:34	13:00:43	0:01:09
13	230	2.19	2.19	FULL		12:57:33	12:58:39	0:01:07
13	240	2.19	2.19	FULL		12:55:31	12:56:44	0:01:13
13	250	2.19	2.19	FULL		12:53:30	12:54:39	0:01:09
13	260	2.19	2.19	FULL		12:51:34	12:52:44	0:01:10
13	270	2.19	2.19	FULL		12:49:13	12:50:22	0:01:09
13	280	2.19	2.19	FULL		12:47:16	12:48:30	0:01:14
13	290	2.19	2.19	FULL		12:45:15	12:46:20	0:01:05
13	300	2.19	2.19	FULL		12:43:00	12:44:12	0:01:12
13	310	2.19	2.19	FULL		12:41:01	12:42:09	0:01:08
13	320	2.19	2.19	FULL		12:38:52	12:40:08	0:01:15
13	330	2.19	2.19	FULL		12:36:43	12:37:50	0:01:07
13	340	2.19	2.19	FULL		12:34:45	12:35:52	0:01:07
13	350	2.19	2.19	FULL		12:32:33	12:33:46	0:01:12
13	360	2.19	2.19	FULL		12:30:36	12:31:49	0:01:13
13	370	2.19	2.19	FULL		12:28:36	12:29:44	0:01:08
13	380	2.19	2.19	FULL		12:26:31	12:27:49	0:01:18
13	390	2.19	2.19	FULL		12:24:32	12:25:33	0:01:02
13	400	2.19	2.19	FULL		12:22:23	12:23:39	0:01:16
13	410	2.19	2.19	FULL		12:20:28	12:21:32	0:01:04
13	420	2.19	2.19	FULL		12:18:23	12:19:37	0:01:14
13	430	2.19	2.19	FULL		12:16:32	12:17:38	0:01:06
13	440	2.19	2.19	FULL		12:14:25	12:15:43	0:01:17
13	450	2.19	2.19	FULL		12:12:30	12:13:34	0:01:04
13	460	2.19	2.19	FULL		12:10:24	12:11:38	0:01:14
13	470	2.19	2.19	FULL		12:08:36	12:09:40	0:01:05
13	480	2.19	2.19	FULL		12:06:29	12:07:43	0:01:14
13	490	2.19	2.19	FULL		12:04:25	12:05:32	0:01:07
13	500	2.19	2.19	FULL		12:02:14	12:03:34	0:01:20
13	510	2.19	2.19	FULL		12:00:19	12:01:23	0:01:04
13	520	2.19	2.19	FULL		11:58:17	11:59:30	0:01:13
13	530	2.19	2.19	FULL		11:56:19	11:57:22	0:01:02
13	540	2.19	2.19	FULL		11:54:13	11:55:26	0:01:13
BLACKCREEK BLOCK:								
14	10	1.20	1.20	FULL		15:30:13	15:30:50	0:00:37
14	20	1.20	1.20	FULL		15:28:53	15:29:34	0:00:41
14	30	1.20	1.20	FULL		15:27:29	15:28:07	0:00:38
14	40	1.20	1.20	FULL		15:26:11	15:26:51	0:00:41
14	50	1.20	1.20	FULL		15:24:50	15:25:27	0:00:38
14	60	1.20	1.20	FULL		15:23:31	15:24:12	0:00:41
14	70	1.20	1.20	FULL		15:22:05	15:22:46	0:00:41
14	80	1.20	1.20	FULL		15:20:45	15:21:26	0:00:40
14	90	1.20	1.20	FULL		15:19:17	15:19:54	0:00:37
14	100	1.20	1.20	FULL		15:17:50	15:18:32	0:00:42
14	110	1.20	1.20	FULL		15:16:24	15:16:59	0:00:35
14	120	1.20	1.20	FULL		15:15:06	15:15:45	0:00:39
14	130	1.20	1.20	FULL		15:13:34	15:14:10	0:00:36
14	140	1.20	1.20	FULL		15:12:03	15:12:43	0:00:40
14	150	1.20	1.20	FULL		15:10:25	15:11:00	0:00:35
14	160	1.20	1.20	FULL		15:08:54	15:09:30	0:00:37
14	170	1.20	1.20	FULL		15:07:26	15:08:00	0:00:33
14	180	1.20	1.20	FULL		15:05:58	15:06:34	0:00:36
14	190	1.20	1.20	FULL		15:04:27	15:05:03	0:00:37
14	200	1.20	1.20	FULL		15:03:11	15:03:47	0:00:35
14	210	1.20	1.20	FULL		15:01:52	15:02:23	0:00:31
14	220	1.20	1.20	FULL		15:00:29	15:01:08	0:00:38
14	230	1.20	1.20	FULL		14:59:05	14:59:39	0:00:34
14	240	1.20	1.20	FULL		14:57:42	14:58:18	0:00:36
14	250	1.20	1.20	FULL		14:56:22	14:56:54	0:00:32
14	260	1.20	1.20	FULL		14:55:06	14:55:40	0:00:34
14	270	1.20	1.20	FULL		14:53:45	14:54:18	0:00:33
14	280	1.20	1.20	FULL		14:52:23	14:52:57	0:00:34
14	290	1.20	1.20	FULL		14:51:03	14:51:39	0:00:36
14	300	1.20	1.20	FULL		14:49:39	14:50:17	0:00:38
14	310	1.20	1.20	FULL		14:48:20	14:48:53	0:00:33
14	320	1.20	1.20	FULL		14:47:03	14:47:40	0:00:37
14	330	1.20	1.20	FULL		14:45:50	14:46:22	0:00:32
14	10010	1.60	1.60	FULL		15:32:17	15:33:05	0:00:48
14	10020	1.60	1.60	FULL		15:34:09	15:35:01	0:00:52

9.3 APPENDIX III – MAGNETIC COMPENSATION CALIBRATION

Flight Path showing maneuvers for the compensation calibration flight performed on site (19th September 2017):



The following figure presents Raw/Compensated Magnetic Data after application of the calculated compensation coefficients. TF1, TF2 and TF3 represent the left, right and nose magnetometers respectively. Vector (Fluxgate) components are the bottom profiles in each group:



The following table summarizes Standard Deviations for each Sensor/Maneuver group and the resulting improvement ratios achieved in the magnetic compensation. Note the successful compensation of the dominant ROLL maneuvers (as indicated by the high improvement ratios):

MANOEUVRE	LINE	DIR	SD: RAW			SD: COMPENSATED			IMPROVEMENT RATIOS*		
			TF1RAW	TF2RAW	TF3RAW	TF1CMP	TF2CMP	TF3CMP	TF1-IR	TF2-IR	TF3-IR
PITCHES	9010	WEST	1.9621	1.4704	0.3533	0.0412	0.0836	0.0985	**47.6**	**17.6**	**3.6**
	9020	NORTH	3.3967	3.2118	1.4772	0.1246	0.0673	0.1436	**27.3**	**47.8**	**10.3**
	9030	EAST	1.3274	2.0710	0.5886	0.0878	0.0660	0.0857	**15.1**	**31.4**	**6.9**
	9040	SOUTH	2.3622	1.8256	0.6363	0.0705	0.0957	0.0924	**33.5**	**19.1**	**6.9**
ROLLS	9010	WEST	21.1530	24.5002	3.3453	0.0598	0.0893	0.0685	**354.0**	**274.3**	**48.9**
	9020	NORTH	15.3850	18.7897	3.5345	0.0883	0.0674	0.1466	**174.3**	**278.6**	**24.1**
	9030	EAST	14.6542	17.8625	4.3491	0.1313	0.0759	0.0837	**111.6**	**235.4**	**52.0**
	9040	SOUTH	18.1830	21.2768	3.1248	0.0911	0.0847	0.0776	**199.5**	**251.3**	**40.3**
YAWS	9010	WEST	3.5963	3.8127	0.4262	0.0974	0.1222	0.0868	**36.9**	**31.2**	**4.9**
	9020	NORTH	2.9236	3.3153	0.5984	0.1716	0.1065	0.1534	**17.0**	**31.1**	**3.9**
	9030	EAST	2.4299	3.8296	0.9958	0.1386	0.1104	0.0993	**17.5**	**34.7**	**10.0**
	9040	SOUTH	6.6810	7.2451	1.1773	0.2618	0.1000	0.0587	**25.5**	**72.5**	**20.1**

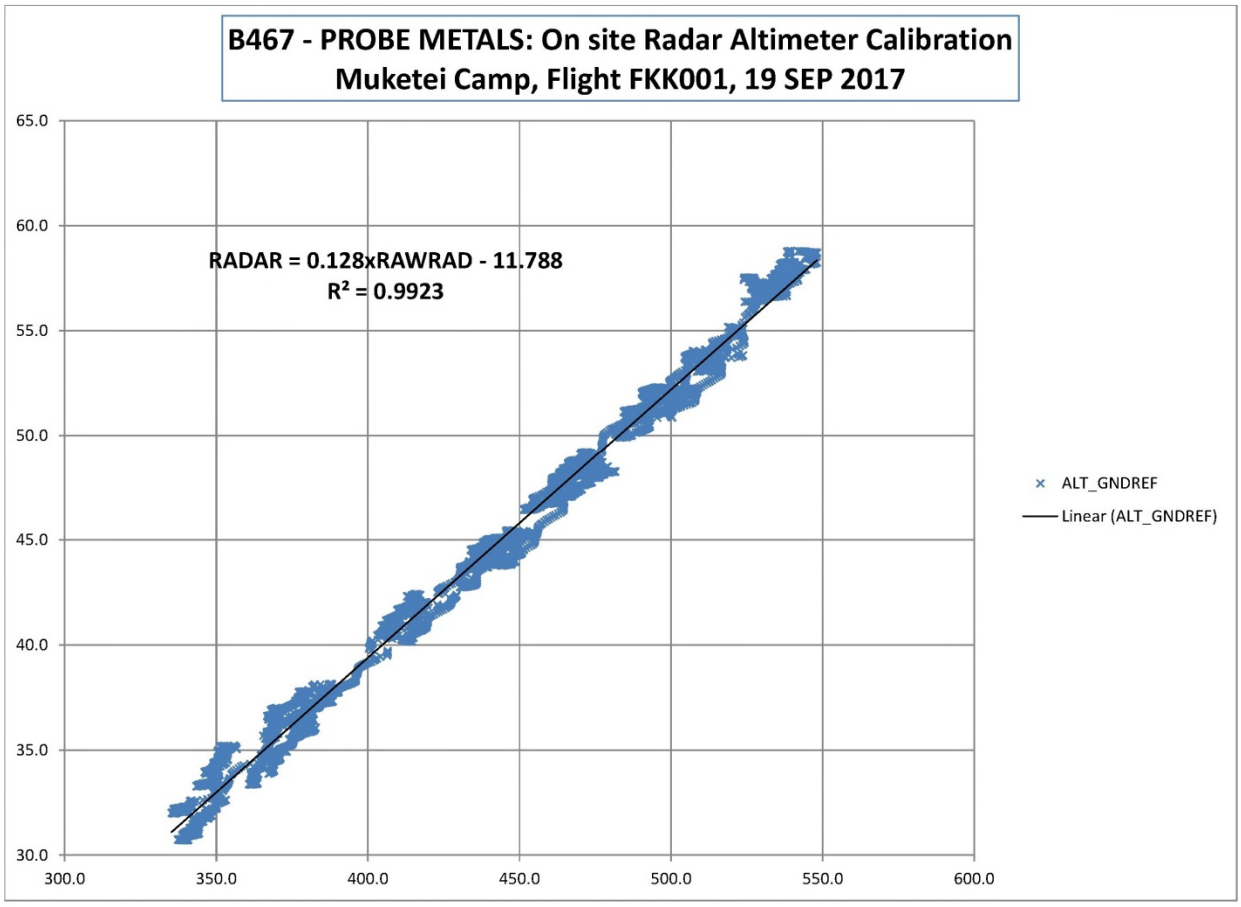
* Note: Improvement ratio defined as SD_{RAW}/SD_{CMP}; an improvement ratio of 1.0 indicates neutral compensation (i.e. no effective removal of manoeuvre effect)

Table of Compensation Coefficients for each sensor in each direction for post flight compensation:

DIR	COEFF	TF1 (LEFT)	TF2 (RIGHT)	TF3 (NOSE)		DIR	COEFF	TF1 (LEFT)	TF2 (RIGHT)	TF3 (NOSE)
NORTH	C_1	42.8645	10.7132	-55.7692		**WEST**	C_1	-509.6799	-430.6061	-247.6725
	C_2	102.3024	29.2545	-123.9190			C_2	-126.8022	-141.7268	17.3119
	C_3	-149.4060	-197.3886	7.9721			C_3	-201.5074	-200.3288	-22.3569
	C_4	5.3463	-4.3752	-61.4612			C_4	-192.3958	-156.3426	-99.5081
	C_5	70.0166	22.2023	-112.7724			C_5	-157.0638	-144.2713	15.6684
	C_6	-4.9124	-24.7809	-16.5830			C_6	-55.7790	-26.2408	-50.9658
	C_7	-25.6670	-19.5270	64.2233			C_7	87.2976	64.3323	71.6355
	C_8	-2.0703	-5.0924	23.2900			C_8	-11.9433	-15.9927	-3.4645
	C_9	20.3743	23.5939	-2.1402			C_9	112.0159	97.5800	31.5736
	C_{10}	7.2397	-77.4063	135.3286			C_{10}	-51.5577	-24.9365	-29.2745
	C_{11}	-19.2268	21.3476	-53.3309			C_{11}	-14.1081	8.7508	-1.8363
	C_{12}	109.3061	91.5278	-5.4676			C_{12}	78.1602	98.3223	-17.7696
	C_{13}	56.5987	-248.7143	498.6019			C_{13}	-19.7463	137.3982	-254.8018
	C_{14}	-24.2384	55.6327	-158.6734			C_{14}	-33.5623	-41.5052	-54.8191
	C_{15}	104.9634	-22.3566	25.0608			C_{15}	-3.4313	104.0279	-69.4885
	C_{16}	11.9030	-73.0404	-124.0998			C_{16}	-97.8190	-100.3574	83.7677
	C_{17}	-77.0052	-25.5795	-50.8188			C_{17}	2.4114	-2.8228	5.4451
	C_{18}	16.3587	23.3964	20.6951			C_{18}	-37.1813	-30.7505	15.7435
SOUTH	C_1	-1724.7340	-986.3713	-654.0854		**EAST**	C_1	-31.1920	-48.5670	6.1582
	C_2	-232.5553	-34.2479	-201.4226			C_2	-72.5896	-1.8416	109.5897
	C_3	-149.1816	-181.4476	15.9582			C_3	-154.0927	-139.5240	31.0676
	C_4	-582.5013	-344.8637	-218.4114			C_4	-28.6606	-25.0110	-20.8564
	C_5	-261.9700	-35.1549	-201.6963			C_5	-95.8047	-2.3574	96.3237
	C_6	-2.1133	-6.6063	-11.6746			C_6	-10.5220	29.4866	1.1180
	C_7	276.9275	164.9475	118.1916			C_7	-4.0455	-1.0379	33.6870
	C_8	1.5111	-11.9192	1.1473			C_8	35.0455	-4.1692	-38.7911
	C_9	331.6828	194.6419	110.4842			C_9	32.7136	26.0915	-12.8229
	C_{10}	-10.5000	39.3610	-22.7729			C_{10}	-46.6534	-41.9888	-13.8372
	C_{11}	-9.4826	21.5292	3.4566			C_{11}	-59.7495	-4.8694	-19.1449
	C_{12}	55.4835	80.9430	-5.7220			C_{12}	78.8797	94.6723	-18.6733
	C_{13}	-201.6898	-297.3423	-24.1031			C_{13}	138.5963	354.1393	14.0388
	C_{14}	-67.2393	-92.7911	7.8358			C_{14}	10.8988	35.9862	36.1914
	C_{15}	126.4202	52.7664	-47.3497			C_{15}	107.5304	-51.6885	0.4429
	C_{16}	-4.4037	-79.4611	-44.5555			C_{16}	-107.4184	-57.7204	33.5135
	C_{17}	-16.6133	-85.6802	1.4169			C_{17}	-157.2844	-32.3714	-57.0108
	C_{18}	-23.7723	2.6542	-26.3239			C_{18}	36.5586	7.3744	-22.6878

9.4 APPENDIX IV – RADAR ALTIMETER CALIBRATION

The radar altimeter was calibrated by performing an ascent over a fixed ground reference point and correlating the resulting corrected GPS altitude clearances (in metres) with the raw radar altimeter data (in mV):



9.5 APPENDIX V – DATA ARCHIVES ("ReadMe" file)

TERRAQUEST LTD: Final Project Data Archive ==========

```
Client: PROBE METALS INC.
Project: McFaulds Project
Type: Heliborne Horizontal Gradient Magnetics
Operations: Summer/Fall, 2017
Survey Base: Muketei Camp, ON
Archive Version: 171117
Prepared By: Allen Duffy

1. Data Organisation:

\---B467ARC_171117
    +---DATA
    |   +---BLACKCREEK
    |   |       B467ARC_BLACKCREEK_171117.gdb
    |   |
    |   \---TAMARACK
    |           B467ARC_TAMARACK_171117.gdb
    |
    +---GRIDS - Geosoft GRD format @ 10m cell size, bi-directional spline interpolation
    |   +---BLACKCREEK
    |   |       BLK_DTM.grd,gi   : Digital Terrain model (m AMSL)
    |   |       BLK_HGEW.grd,.gi : Measured East West horizontal magnetic gradient (nT/m)
    |   |       BLK_HGNS.grd,.gi : Measured North South horizontal magnetic gradient (nT/m)
    |   |       BLK_RTF.grd,.gi  : Reconstructed Total Field (pseudo nT)
    |   |       BLK_TMI.grd,.gi  : Measured Total Magnetic Intensity (nT)
    |   |       BLK_VDV.grd,.gi  : Calculated first vertical magnetic derivative (nT/m)
    |   |
    |   \---TAMARACK
    |           TAM_DTM.grd,.gi  : Digital Terrain model (m AMSL)
    |           TAM_HGEW.grd,.gi : Measured East West horizontal magnetic gradient (nT/m)
    |           TAM_HGNS.grd,.gi : Measured North South horizontal magnetic gradient (nT/m)
    |           TAM_RTF.grd,gi   : Reconstructed Total Field (pseudo nT)
    |           TAM_TMI.grd,.gi  : Measured Total Magnetic Intensity (nT)
    |           TAM_VDV.grd,gi   : Calculated first vertical magnetic derivative (nT/m)

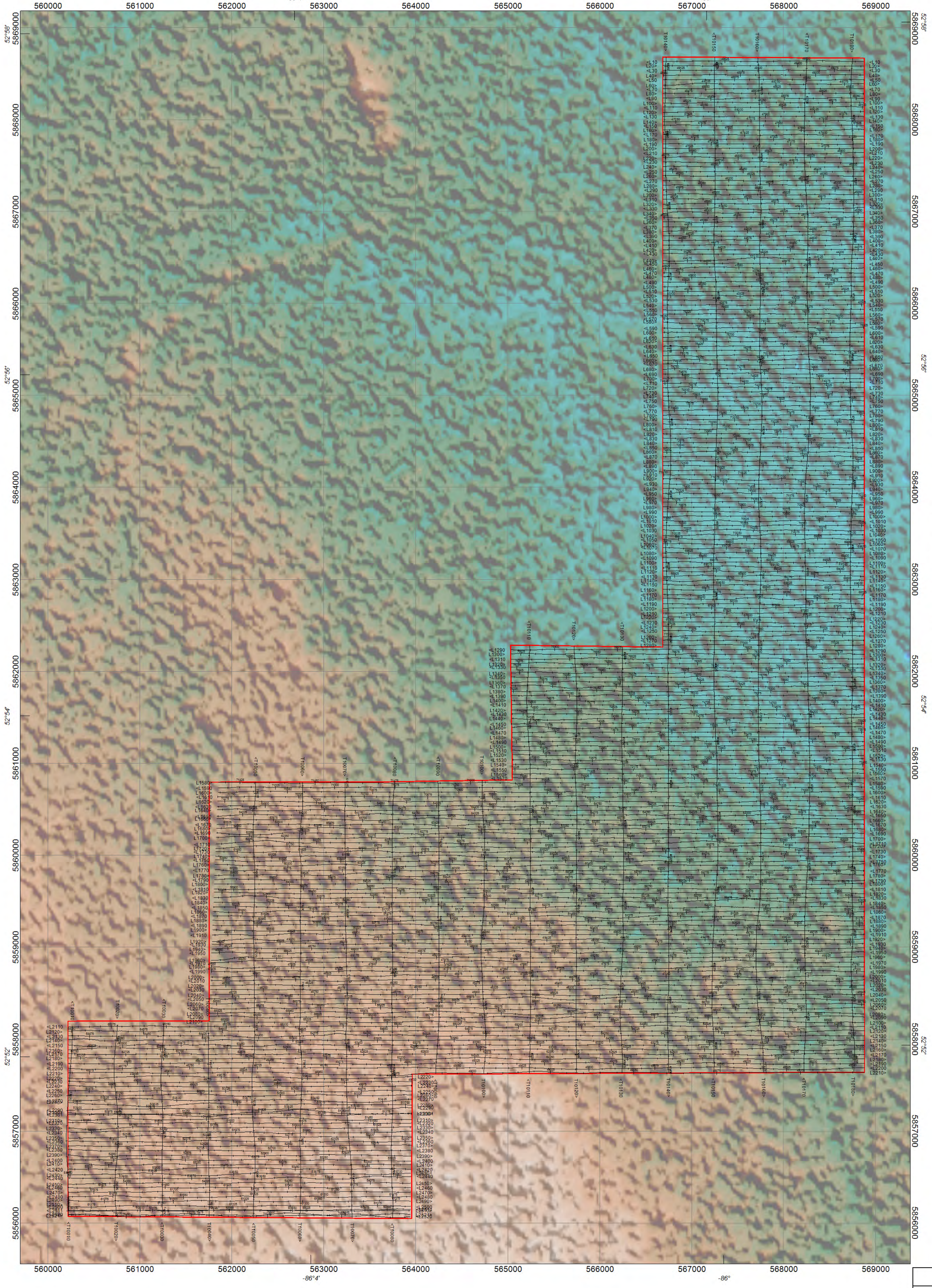
    |
    +---MAPS
    |   +---BLACKCREEK
    |   |       M01BLK_FP.jpg
    |   |       M02BLK_DTM.jpg
    |   |       M02BLK_TMI.jpg
    |   |       M04BLK_TMICNT.jpg
    |   |       M05BLK_HGEW.jpg
    |   |       M06BLK_HGNS.jpg
    |   |       M07BLK_VDV.jpg
    |   |       M08BLK_RTF.jpg
    |   |
    |   \---TAMARACK
    |           M01TAM_FP.jpg
    |           M02TAM_DTM.jpg
    |           M03TAM_TMI.jpg
    |           M04TAM_TMICNT.jpg
    |           M05TAM_HGEW.jpg
    |           M06TAM_HGNS.jpg
```

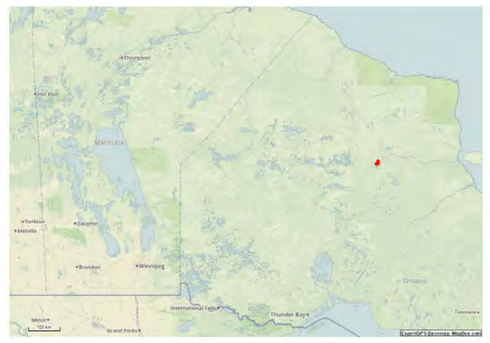
```
|           M07TAM_VDV.jpg
|           M08TAM_RTF.jpg
|
+---README
|       B467ARC_DataArchive.ReadMe (this file)
|
\---REPORT
        B467-Probe Metals-heli3-report.pdf
```

2. Database Contents: B467ARC_BLACKCREEK_171117.gdb, B467ARC_TAMARACK_171117.gdb

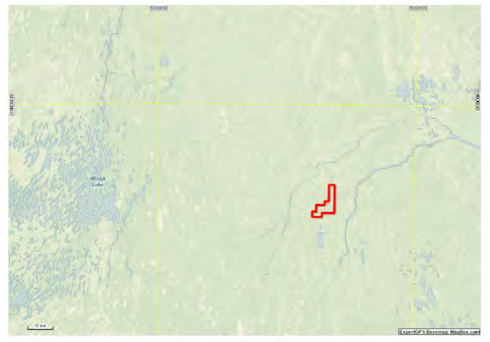
Data sampled at 10Hz ...

X_UTM16N_WIN	:	UTM Easting - WGS84, UTM Zone 16N (metres)
Y_UTM16N_WIN	:	UTM Northing - WGS84, UTM Zone 16N (metres)
FLIGHT	:	Flight Number
DATE	:	Flight Date (DD/MM/YYYY format - ASCII)
FID	:	Fiducial (UTC seconds)
TIME	:	UTC TIME (hh:mm:ss.ss format)
AZIMUTH	:	Aircraft Azimuth (0 - 360°)
RADAR	:	Radar Altimeter (metres AGL)
ALT	:	WGS84 Altitude (metres AMSL)
ALTFIX	:	WGS84 Altitude - offsets removed (metres AMSL)
DTMFNL	:	Final, corrected Digital Terrain Model (metres AMSL)
LAT	:	Latitude (decimal degrees)
LON	:	Longitude (decimal degrees)
DIURNAL	:	Raw Base Station Diurnal data (nT)
DIUEDIT	:	Edited Base Station Diurnal data (nT)
VMTF	:	Fluxgate Total Field (calculated, nT)
VMX	:	Fluxgate X component (nT)
VMY	:	Fluxgate Y component (nT)
VMZ	:	Fluxgate Z component (nT)
TF1RAW	:	Raw measured TMI (nT) - Left Boom
TF2RAW	:	Raw measured TMI (nT) - Right Boom
TF3RAW	:	Raw measured TMI (nT) - Nose Stinger
TF1CMP	:	Compensated,measured TMI (nT) - Left Boom
TF2CMP	:	Compensated,measured TMI (nT) - Right Boom
TF3CMP	:	Compensated,measured TMI (nT) - Nose Stinger
TF3FNL	:	Final, corrected measured TMI (nT) - Nose Stinger
HGEW	:	Final, corrected, lagged East-West mag gradient (nT/m)
HGNS	:	Final, corrected, lagged North-South mag gradient (nT/m)
ACHGXD	:	Measured, aircraft referenced Cross Track magnetic gradient
ACHGYD	:	Measured, aircraft referenced Along Track magnetic gradient





Location Map: Regional



Location Map: Detail

SURVEY SPECIFICATIONS:

Survey Flown: 13th Sep 2017 – 24th Sep, 2017
Survey Type: Helicopter Horizontal Magnetic Gradient
Survey Base: Muketei (Haveman) Camp, ON
Survey Line Azimuth: 090°/270°
Control Line Azimuth: 000°/180°
Survey Line Spacing: 50 metres
Control Line Spacing: 500 metres
Aircraft Mean Terrain Clearance: 30 metres
Mean Ground Air Speed: 30.8 metres/sec

AIRCRAFT SPECIFICATIONS:

Aircraft Type: Eurocopter Astar 350B2
Aircraft Registration: C-FFKK

AIRBORNE INSTRUMENTATION:

Data Acquisition: Kroum VS Instruments SDAS / Archer
Analog Interface: Kroum VS Instruments KANA8
GPS Differential Receiver: Novatel ProPak V3
GPS Real Time Differential Correction: WAAS
Radar Altimeter: Free Flight Systems TRA3000
Fluxgate Magnetometer: Billingsley Magnetics TFM100-LN
Navigation: AgNav Guia P151 (LiNav)

AIRBORNE MAGNETOMETERS (3):

Magnetometers: Scintrex CS-3 Cesium Vapour
Magnetometer Sensitivity: +/- 0.005 nT
Magnetometer Counter: Kroum VS Instruments KMAG4
Installation: Right/Left Lateral Booms, Nose Boom
Lateral Separation: 11.32 m
Lateral Centre to Nose Magnetometer: 5.57 m
Sampling Rate: 10 Hz

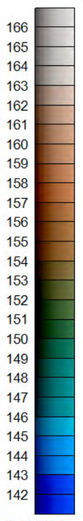
GROUND INSTRUMENTATION

Data Acquisition: Kroum VS Instruments SDAS V2 / KMAG4 / Archer
Base GPS Receiver: Garmin GPS 18
Ground Magnetometer: Scintrex CS-3 Cesium Vapour
Base Station Location: Muketei (Haveman) Camp, ON

PROCESSING SUMMARY:

Magnetics:

Post Flight Compensation
Lag Correction
Diurnal Correction
Heading Correction
Tie Line Levelling
Microlevelling



SRTM
m AMSL

PROBE METALS INC

Scale 1:25000

500 0 500 1000 1500
(meters)

WGS 84 / UTM zone 16N

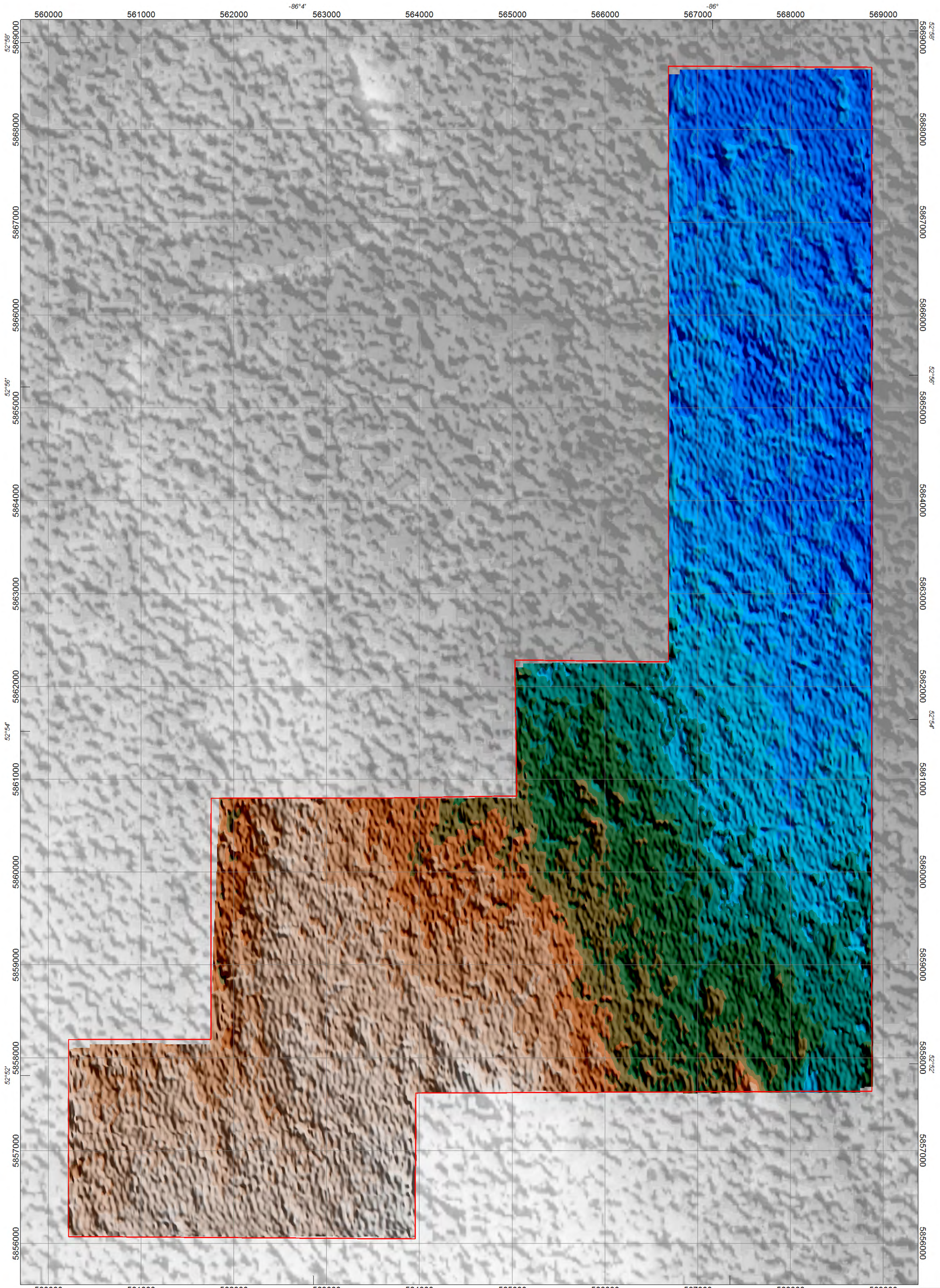
PROBE METALS INC

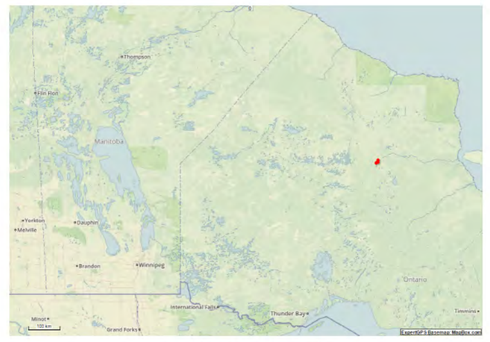
McFaulds Project, James Bay Lowlands, ON
High Resolution Horizontal Gradient Magnetic Survey
Tamarack Block

FLIGHT PATH

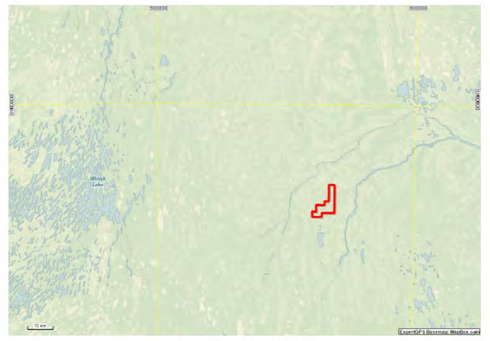
TERRAQUEST

Ref: B467-M01TAM/AD





Location Map: Regional



Location Map: Detail

SURVEY SPECIFICATIONS:

Survey Flown: 13th Sep 2017 – 24th Sep, 2017
Survey Type: Helicopter Horizontal Magnetic Gradient
Survey Base: Muketei (Haveman) Camp, ON
Survey Line Azimuth: 090°/270°
Control Line Azimuth: 000°/180°
Survey Line Spacing: 50 metres
Control Line Spacing: 500 metres
Aircraft Mean Terrain Clearance: 30 metres
Mean Ground Air Speed: 30.8 metres/sec

AIRCRAFT SPECIFICATIONS:

Aircraft Type: Eurocopter Astar 350B2
Aircraft Registration: C-FFKK

AIRBORNE INSTRUMENTATION:

Data Acquisition: Kroum VS Instruments SDAS / Archer
Analog Interface: Kroum VS Instruments KANA8
GPS Differential Receiver: Novatel ProPak V3
GPS Real Time Differential Correction: WAAS
Radar Altimeter: Free Flight Systems TRA3000
Fluxgate Magnetometer: Billingsley Magnetics TFM100-LN
Navigation: AgNav Guia P151 (LiNav)

AIRBORNE MAGNETOMETERS (3):

Magnetometers: Scintrex CS-3 Cesium Vapour
Magnetometer Sensitivity: +/- 0.005 nT
Magnetometer Counter: Kroum VS Instruments KMAG4
Installation: Right/Left Lateral Booms, Nose Boom
Lateral Separation: 11.32 m
Lateral Centre to Nose Magnetometer: 5.57 m
Sampling Rate: 10 Hz

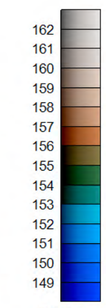
GROUND INSTRUMENTATION

Data Acquisition: Kroum VS Instruments SDAS V2 / KMAG4 / Archer
Base GPS Receiver: Garmin GPS 18
Ground Magnetometer: Scintrex CS-3 Cesium Vapour
Base Station Location: Muketei (Haveman) Camp, ON

PROCESSING SUMMARY:

Magnetics:

Post Flight Compensation
Lag Correction
Diumal Correction
Heading Correction
Tie Line Levelling
Microlevelling



DTM
m AMSL

PROBE METALS INC

Scale 1:25000

500 0 500 1000 1500
(meters)
WGS 84 / UTM zone 16N

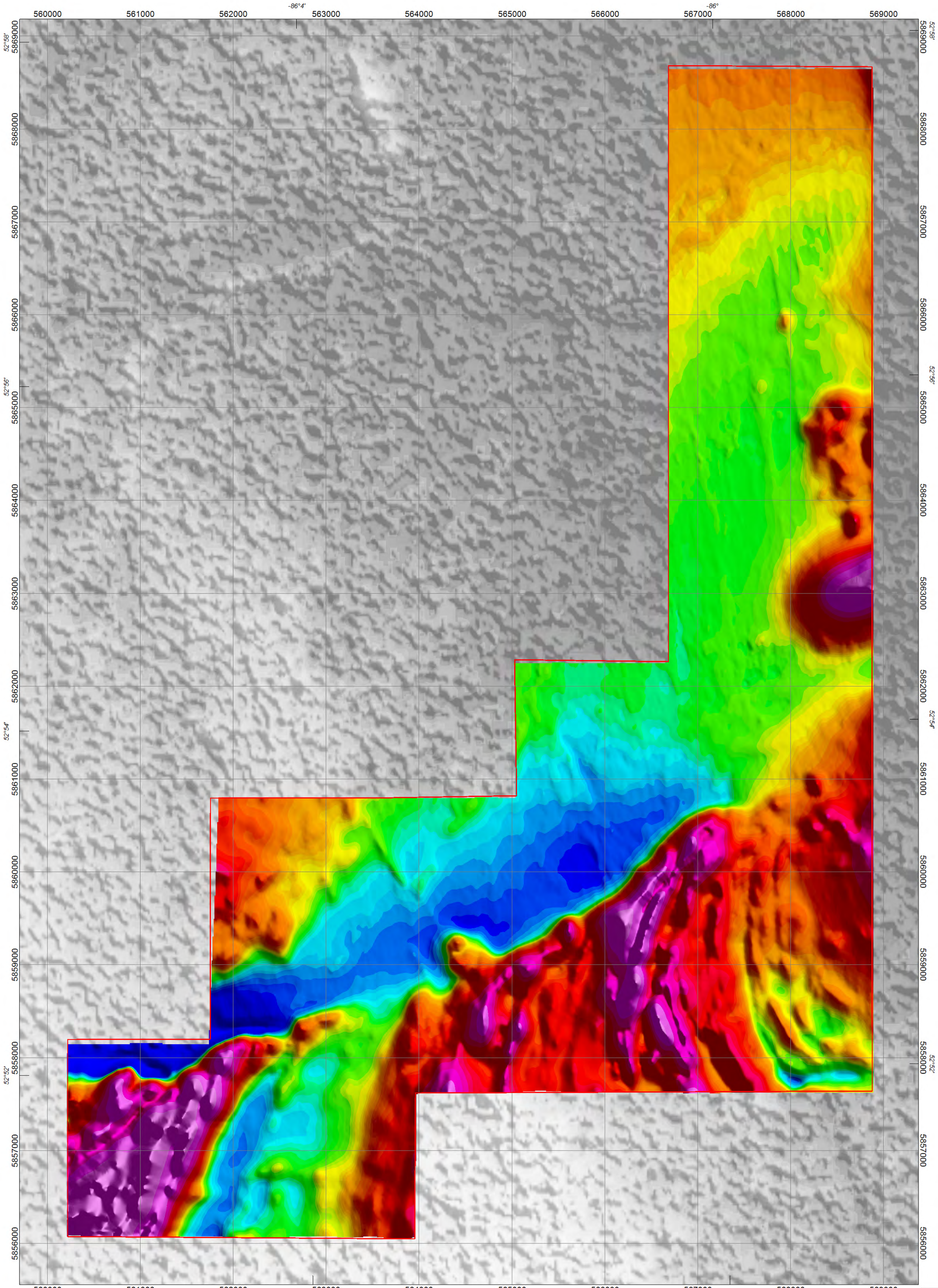
PROBE METALS INC

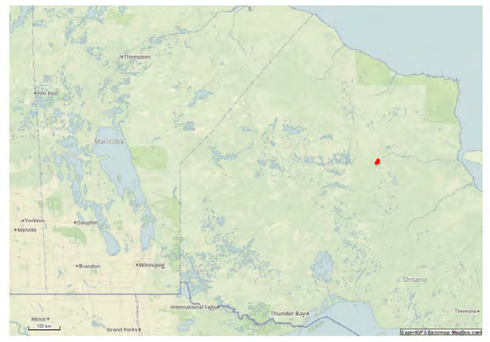
McFaulds Project, James Bay Lowlands, ON
High Resolution Horizontal Gradient Magnetic Survey
Tamarack Block

DIGITAL TERRAIN MODEL

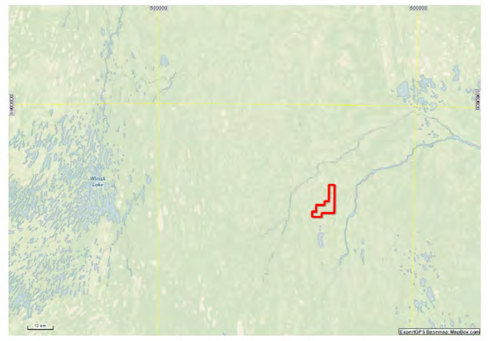
TERRAQUEST AIRBORNE GEOPHYSICS

Ref: B467-M02TAM/AD





Location Map: Regional



Location Map: Detail

SURVEY SPECIFICATIONS:

Survey Flown: 13th Sep 2017 – 24th Sep, 2017
Survey Type: Helicopter Horizontal Magnetic Gradient
Survey Base: Muketei (Haveman) Camp, ON
Survey Line Azimuth: 090°/270°
Control Line Azimuth: 000°/180°
Survey Line Spacing: 50 metres
Control Line Spacing: 500 metres
Aircraft Mean Terrain Clearance: 30 metres
Mean Ground Air Speed: 30.8 metres/sec

AIRCRAFT SPECIFICATIONS:

Aircraft Type: Eurocopter Astar 350B2
Aircraft Registration: C-FFKK

AIRBORNE INSTRUMENTATION:

Data Acquisition: Kroum VS Instruments SDAS / Archer
Analog Interface: Kroum VS Instruments KANA8
GPS Differential Receiver: Novatel ProPak V3
GPS Real Time Differential Correction: WAAS
Radar Altimeter: Free Flight Systems TRA3000
Fluxgate Magnetometer: Billingsley Magnetics TFM100-LN
Navigation: AgNav Guia P151 (LiNav)

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Magnetometer Sensitivity: +/- 0.005 nT
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Installation: Right/Left Lateral Booms, Nose Boom
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Lateral Centre to Nose Magnetometer: 5.57 m
Sampling Rate: 10 Hz

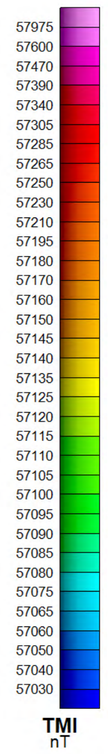
GROUND INSTRUMENTATION

Data Acquisition: Kroum VS Instruments SDAS V2 / KMAG4 / Archer
Base GPS Receiver: Garmin GPS 18
Ground Magnetometer: Scintrex CS-3 Cesium Vapour
Base Station Location: Muketei (Haveman) Camp, ON

PROCESSING SUMMARY:

Magnetics:

Post Flight Compensation
Lag Correction
Diumal Correction
Heading Correction
Tie Line Levelling
Microlevelling



PROBE METALS INC

Scale 1:25000

500 0 500 1000 1500

(meters)

WGS 84 / UTM zone 16N

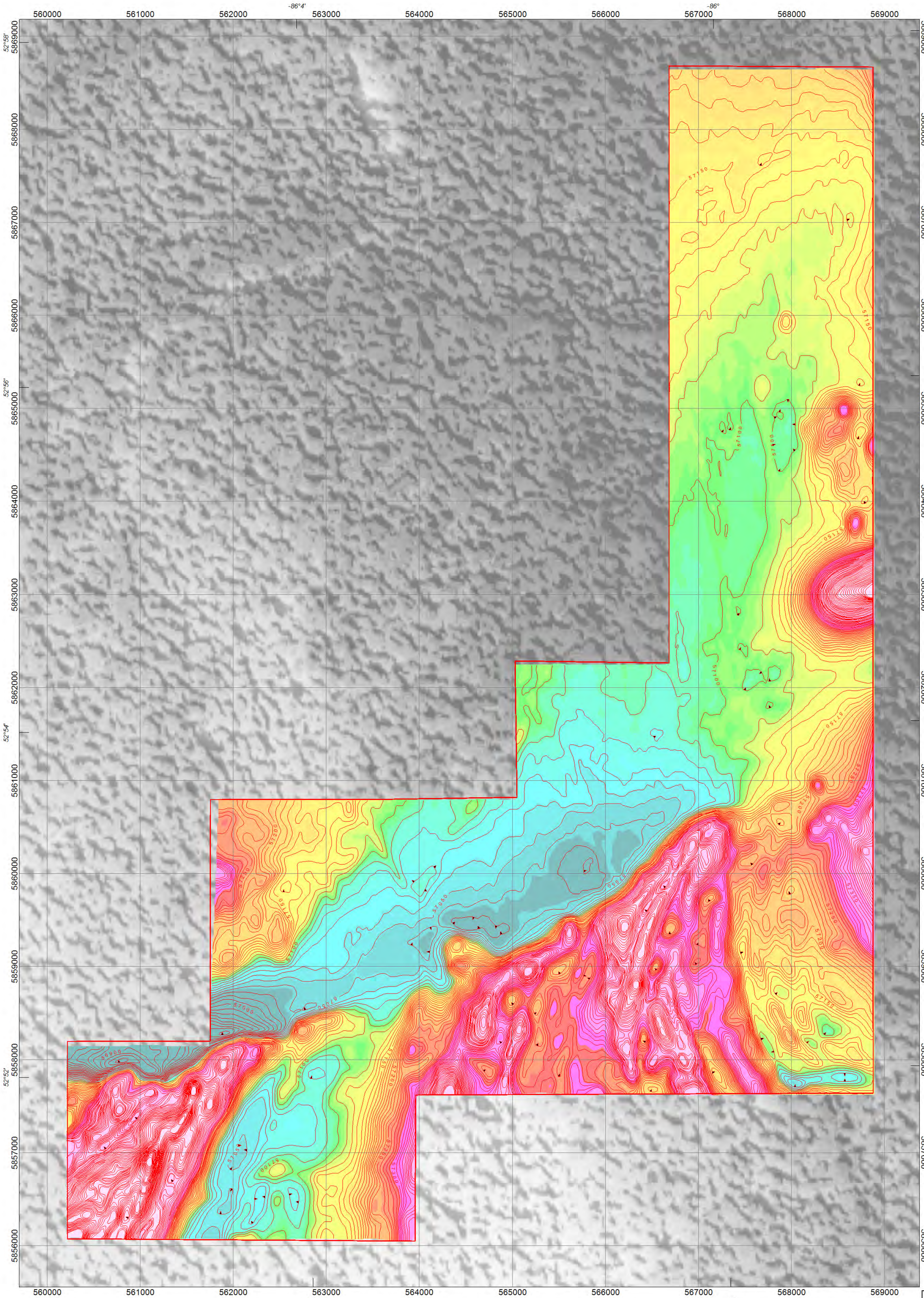
PROBE METALS INC

McFaulds Project, James Bay Lowlands, ON
High Resolution Horizontal Gradient Magnetic Survey
Tamarack Block

MEASURED TOTAL MAGNETIC INTENSITY

TERRAQUEST AIRBORNE GEOPHYSICS

Ref: B467-M03TAM/AD



Location Map: Regional

Location Map: Detail

SURVEY SPECIFICATIONS:

Survey Flown: 13th Sep 2017 – 24th Sep, 2017
Survey Type: Helicopter Horizontal Magnetic Gradient
Survey Base: Muketei (Haveman) Camp, ON
Survey Line Azimuth: 090°/270°
Control Line Azimuth: 000°/180°
Survey Line Spacing: 50 metres
Control Line Spacing: 500 metres
Aircraft Mean Terrain Clearance: 30 metres
Mean Ground Air Speed: 30.8 metres/sec

AIRCRAFT SPECIFICATIONS:

Aircraft Type: Eurocopter Astar 350B2
Aircraft Registration: C-FFKK

AIRBORNE INSTRUMENTATION:

Data Acquisition: Kroum VS Instruments SDAS / Archer
Analog Interface: Kroum VS Instruments KANA8
GPS Differential Receiver: Novatel ProPak V3
GPS Real Time Differential Correction: WAAS
Radar Altimeter: Free Flight Systems TRA3000
Fluxgate Magnetometer: Billingsley Magnetics TFM100-LN
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Magnetometer Sensitivity: +/- 0.005 nT
Magnetometer Counter: Kroum VS Instruments KMAG4
Installation: Right/Left Lateral Booms, Nose Boom
Lateral Separation: 11.32 m
Lateral Centre to Nose Magnetometer: 5.57 m
Sampling Rate: 10 Hz

GROUND INSTRUMENTATION

Data Acquisition: Kroum VS Instruments SDAS V2 / KMAG4 / Archer
Base GPS Receiver: Garmin GPS 18
Ground Magnetometer: Scintrex CS-3 Cesium Vapour
Base Station Location: Muketei (Haveman) Camp, ON

PROCESSING SUMMARY:

Magnetics:

Post Flight Compensation
Lag Correction
Diurnal Correction
Heading Correction
Tie Line Levelling
Microlevelling

57798
57502
57390
57330
57293
57267
57244
57217
57194
57177
57164
57153
57145
57136
57129
57122
57116
57111
57106
57102
57099
57095
57089
57081
57072
57061
57049
57036

TMI
nT

TMI Contour Legend :

10 nT :
50 nT :
250 nT (with low tick) :

PROBE
METALS INC

Scale 1:25000

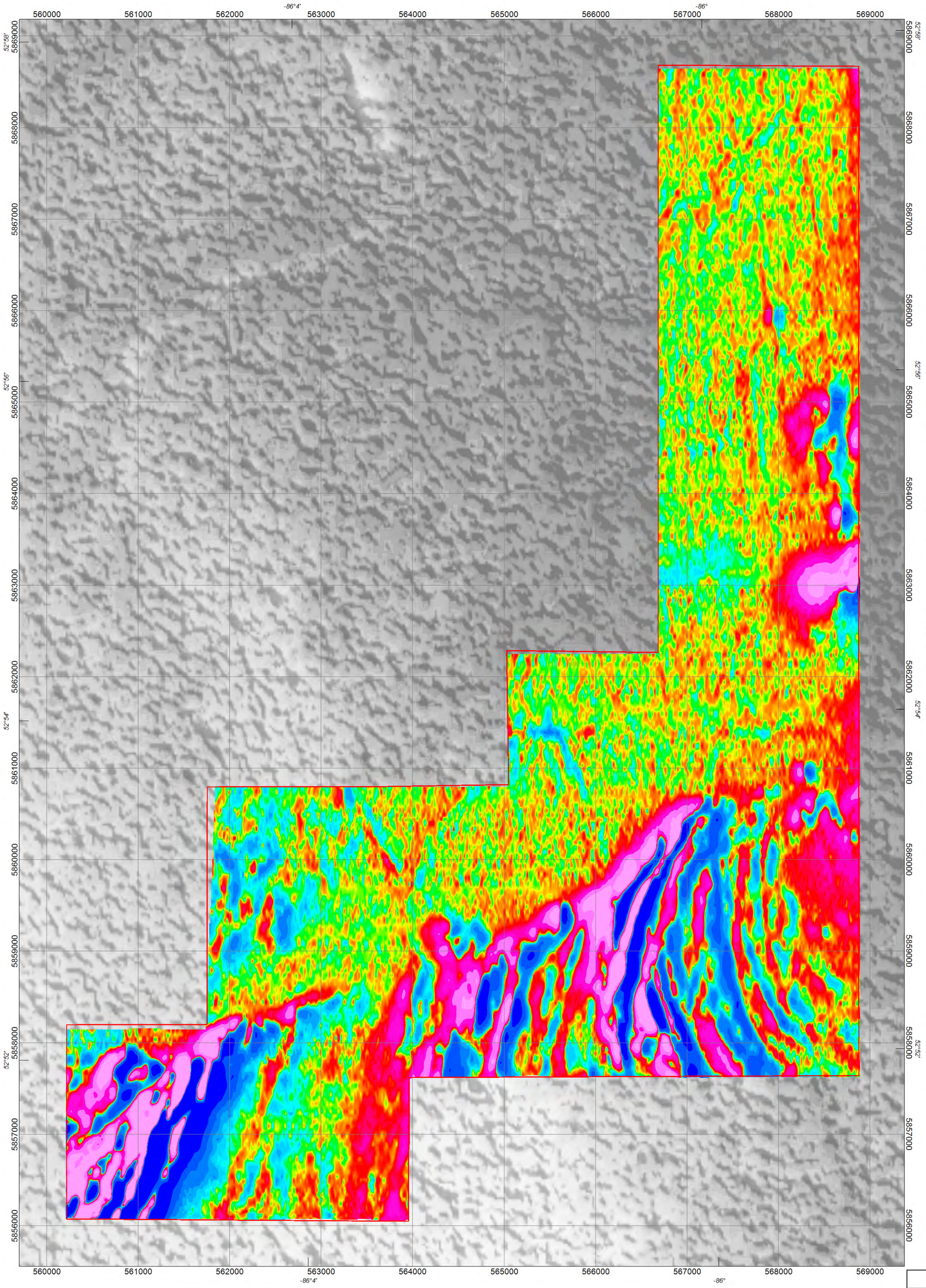
500 0 500 1000 1500
(meters)
WGS 84 / UTM zone 16N

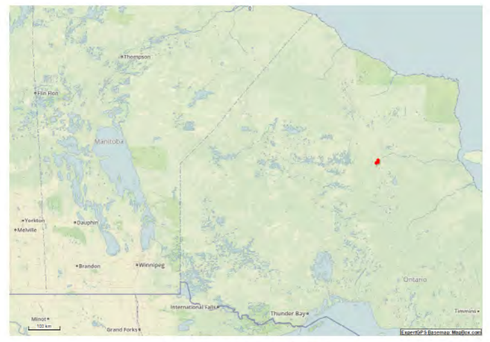
PROBE METALS INC

McFaulds Project, James Bay Lowlands, ON
High Resolution Horizontal Gradient Magnetic Survey
Tamarack Block

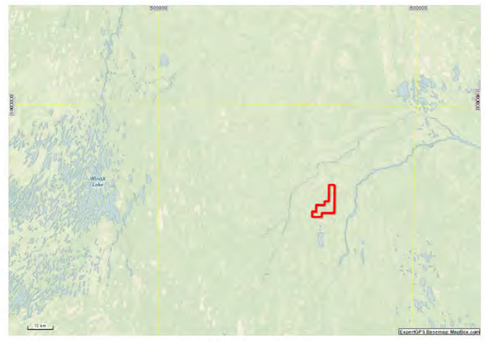
MEASURED TOTAL MAGNETIC INTENSITY (Contoured)

TERRAQUEST ***Ref: B467-M04TAM/AD***





Location Map: Regional



Location Map: Detail

SURVEY SPECIFICATIONS:

Survey Flown: 13th Sep 2017 – 24th Sep, 2017
Survey Type: Helicopter Horizontal Magnetic Gradient
Survey Base: Muketei (Haveman) Camp, ON
Survey Line Azimuth: 090°/270°
Control Line Azimuth: 000°/180°
Survey Line Spacing: 50 metres
Control Line Spacing: 500 metres
Aircraft Mean Terrain Clearance: 30 metres
Mean Ground Air Speed: 30.8 metres/sec

AIRCRAFT SPECIFICATIONS:

Aircraft Type: Eurocopter Astar 350B2
Aircraft Registration: C-FFKK

AIRBORNE INSTRUMENTATION:

Data Acquisition: Kroum VS Instruments SDAS / Archer
Analog Interface: Kroum VS Instruments KANA8
GPS Differential Receiver: Novatel ProPak V3
GPS Real Time Differential Correction: WAAS
Radar Altimeter: Free Flight Systems TRA3000
Fluxgate Magnetometer: Billingsley Magnetics TFM100-LN
Navigation: AgNav Guia P151 (LiNav)

AIRBORNE MAGNETOMETERS (3):

Magnetometers: Scintrex CS-3 Cesium Vapour
Magnetometer Sensitivity: +/- 0.005 nT
Magnetometer Counter: Kroum VS Instruments KMAG4
Installation: Right/Left Lateral Booms, Nose Boom
Lateral Separation: 11.32 m
Lateral Centre to Nose Magnetometer: 5.57 m
Sampling Rate: 10 Hz

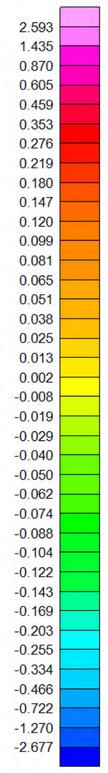
GROUND INSTRUMENTATION

Data Acquisition: Kroum VS Instruments SDAS V2 / KMAG4 / Archer
Base GPS Receiver: Garmin GPS 18
Ground Magnetometer: Scintrex CS-3 Cesium Vapour
Base Station Location: Muketei (Haveman) Camp, ON

PROCESSING SUMMARY:

Magnetics:

Post Flight Compensation
Lag Correction
Diurnal Correction
Heading Correction
Tie Line Levelling
Microlevelling



HGEW
nT/m

PROBE METALS INC

Scale 1:25000

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(meters)
WGS 84 / UTM zone 16N

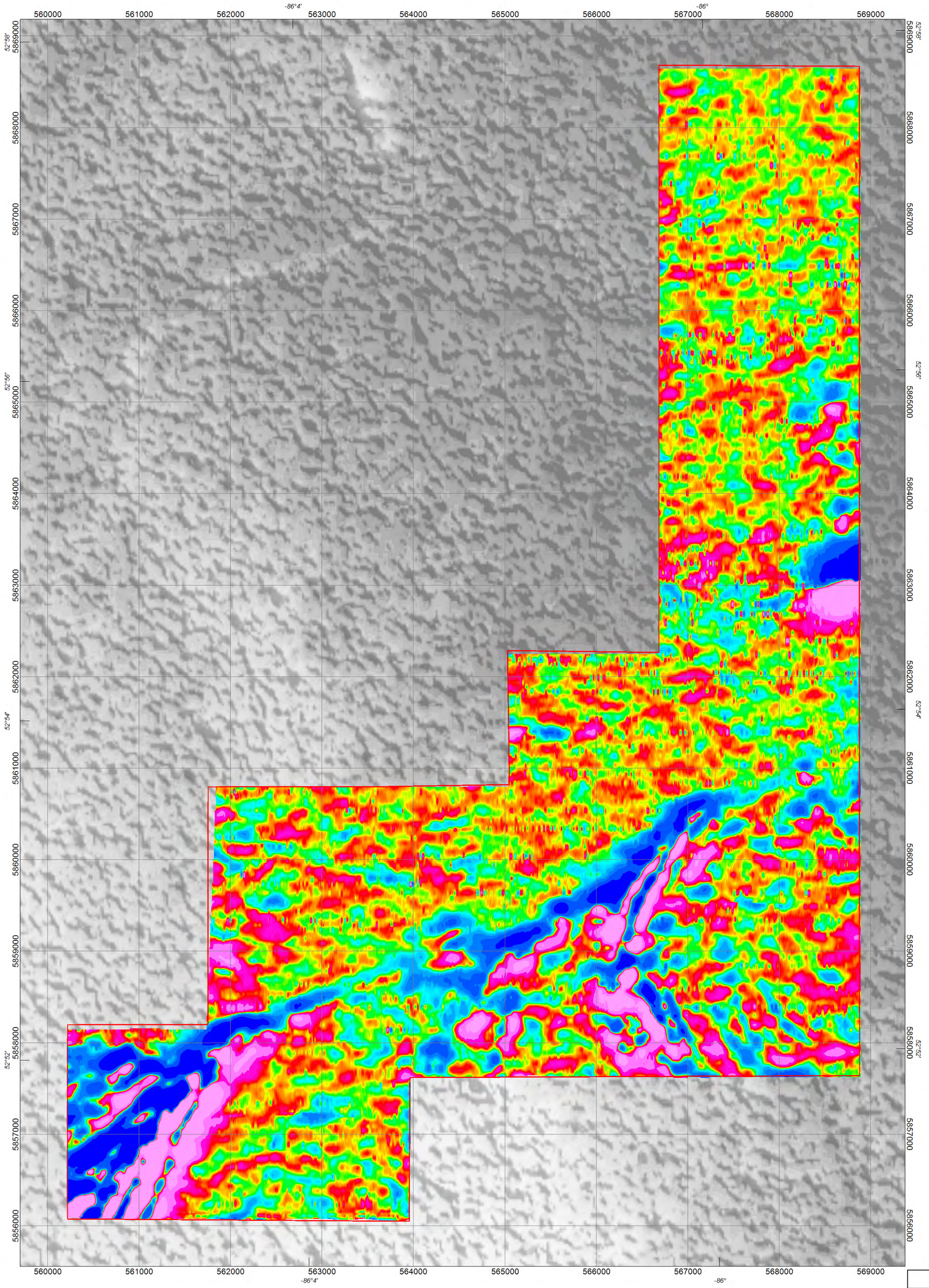
PROBE METALS INC

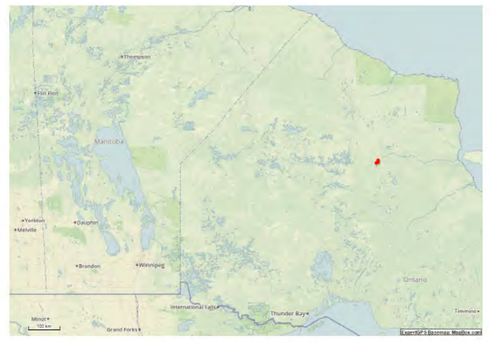
McFaulds Project, James Bay Lowlands, ON
High Resolution Horizontal Gradient Magnetic Survey
Tamarack Block

MEASURED EAST-WEST MAGNETIC GRADIENT

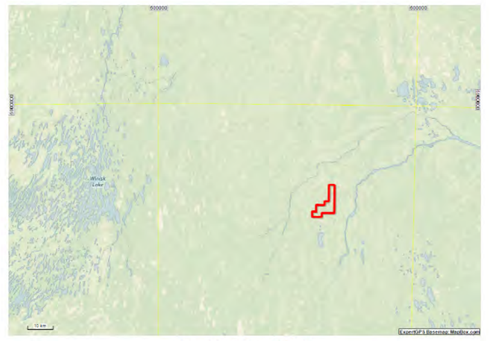
TERRAQUEST AIRBORNE GEOPHYSICS

Ref: B467-M05TAM/AD





Location Map: Regional



Location Map: Detail

SURVEY SPECIFICATIONS:

Survey Flown: 13th Sep 2017 – 24th Sep, 2017
Survey Type: Helicopter Horizontal Magnetic Gradient
Survey Base: Muketei (Haveman) Camp, ON
Survey Line Azimuth: 090°/270°
Control Line Azimuth: 000°/180°
Survey Line Spacing: 50 metres
Control Line Spacing: 500 metres
Aircraft Mean Terrain Clearance: 30 metres
Mean Ground Air Speed: 30.8 metres/sec

AIRCRAFT SPECIFICATIONS:

Aircraft Type: Eurocopter Astar 350B2
Aircraft Registration: C-FFKK

AIRBORNE INSTRUMENTATION:

Data Acquisition: Kroum VS Instruments SDAS / Archer
Analog Interface: Kroum VS Instruments KANA8
GPS Differential Receiver: Novatel ProPak V3
GPS Real Time Differential Correction: WAAS
Radar Altimeter: Free Flight Systems TRA3000
Fluxgate Magnetometer: Billingsley Magnetics TFM100-LN
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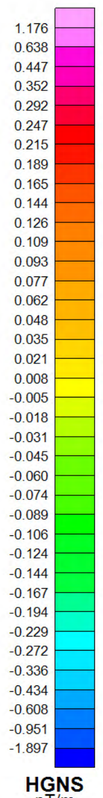
Base Station Location: Muketei (Haveman) Camp, ON

PROCESSING SUMMARY:

Magnetics:

Post Flight Compensation
Lag Correction
Diurnal Correction
Heading Correction
Tie Line Levelling
Microlevelling



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Scale 1:25000

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(meters)

WGS 84 / UTM zone 16N

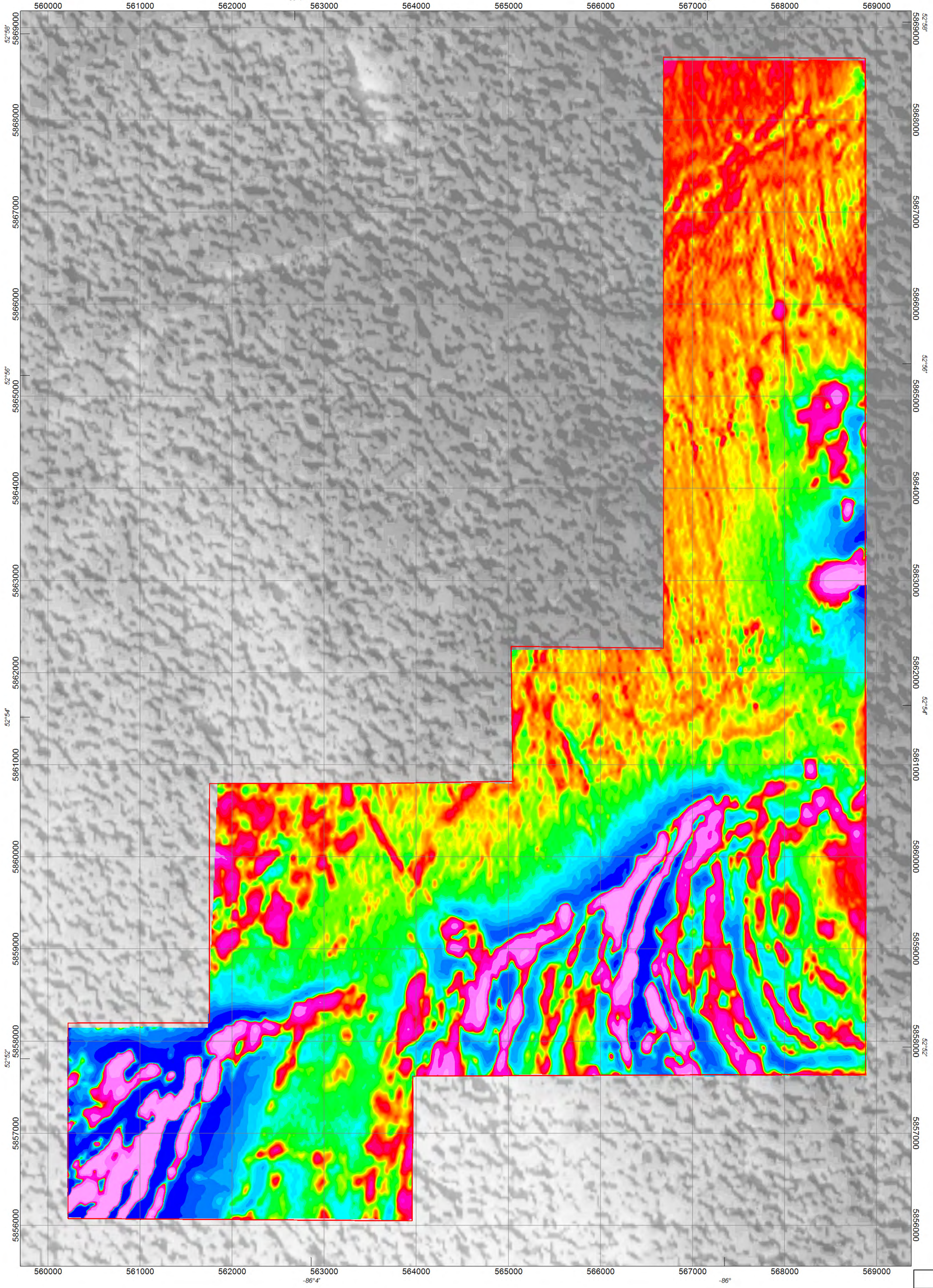
PROBE METALS INC

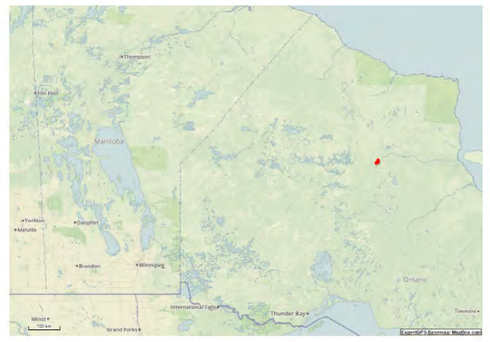
McFaulds Project, James Bay Lowlands, ON
High Resolution Horizontal Gradient Magnetic Survey
Tamarack Block

MEASURED NORTH-SOUTH MAGNETIC GRADIENT

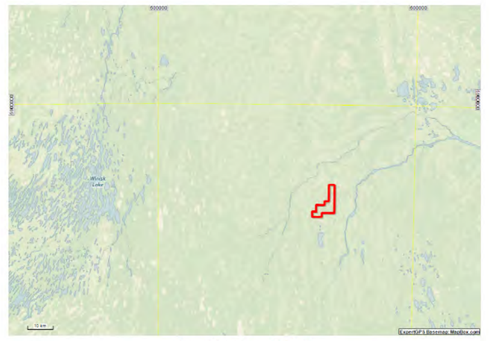
TERRAQUEST AIRBORNE GEOPHYSICS

Ref: B467-M06TAM/AD





Location Map: Regional



Location Map: Detail

SURVEY SPECIFICATIONS:

Survey Flown: 13th Sep 2017 – 24th Sep, 2017
Survey Type: Helicopter Horizontal Magnetic Gradient
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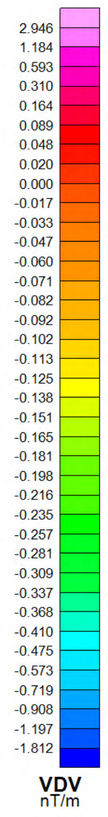

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Scale 1:25000

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(meters)

WGS 84 / UTM zone 16N

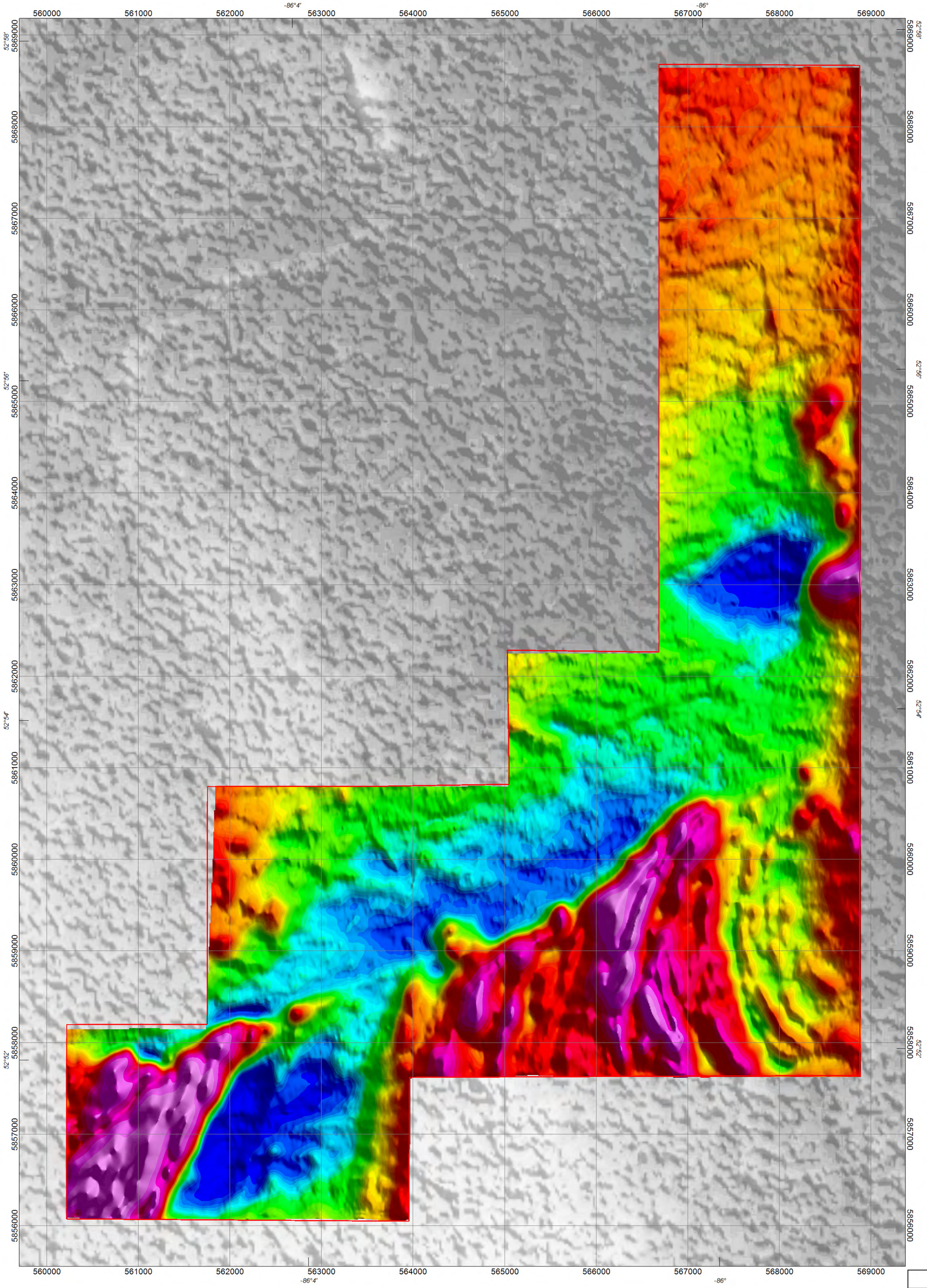
PROBE METALS INC

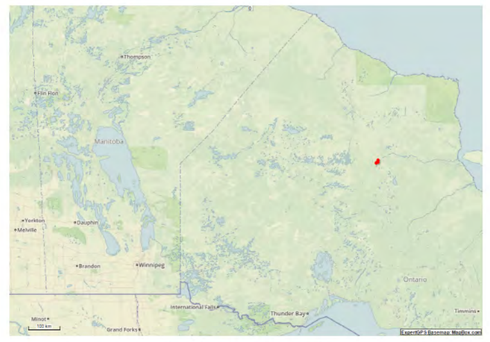
McFaulds Project, James Bay Lowlands, ON
High Resolution Horizontal Gradient Magnetic Survey
Tamarack Block

CALCULATED VERTICAL MAGNETIC DERIVATIVE

TERRAQUEST AIRBORNE GEOPHYSICS

Ref: B467-M07TAM/AD





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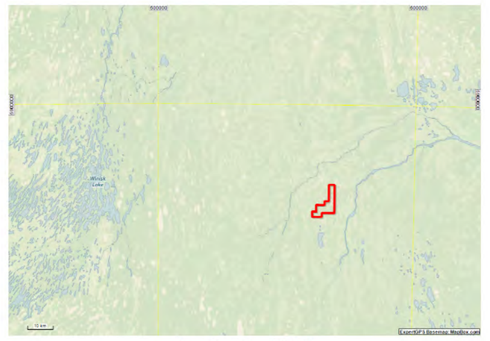

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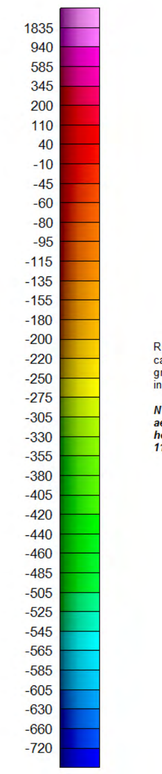

RTF
pseudo nT

Reconstructed Total Magnetic Field was calculated from the measured horizontal gradient data using the method described in:

Nelson, J.B., 1994, Leveling total-field aeromagnetic data with measured horizontal gradients: Geophysics, 59, 1166-1170

PROBE METALS INC

Scale 1:25000

500 0 500 1000 1500
(meters)
WGS 84 / UTM zone 16N

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High Resolution Horizontal Gradient Magnetic Survey
Tamarack Block

RECONSTRUCTED TOTAL MAGNETIC FIELD

TERRAQUEST AIRBORNE GEOPHYSICS

Ref: B467-M08TAM/AD