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April 1st 2023

Total Field Magnetism Report

**Work Performed by
Dan Patrie Exploration Ltd.
On Behalf of**

Bear Creek Gold Ltd.

In

**Salter Township
Sudbury, Ontario Mining Division**

Brent Patrie

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Report Authors, Contributors & Qualifications

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Gabriel Roy – 17+years Exploration & Geophysics, Mapping & Data Management

Introduction

Bear Creek Gold holds a series of claims within Salter Township. A Total Field Magnetism GPS survey was conducted within 3 noncontiguous multi-cell mining claims (Figure 1, Table 1).

Mining Claims: **625381, 625382, 625383**

Dan Patrie Exploration Ltd. carried out the Total Field Magnetism survey, the work was conducted between the dates of October 15th 2022 to October 22nd 2022. The following report is a summary of the work carried out and the results obtained.

Location and Access

The Project is located within the central and north west area of Salter Township (Mining District of Sudbury, Ontario at NTS NAD 83, UTM Zone 17 T, 409600mE, 5121800mN) approximately 8km north west of Massey, Ontario (Figure 1).

The property can be reached by road and a network of trails departing from Massey, Ontario (Figure 2). Travelling northbound from Massey, the work location is accessed via HWY 553 following the Massey Tote road. From this highway between the 4km-10 km a series of logging roads and trails are used to navigate the area.

Regional Geology & Historical Work

The Massey area lies within the Southern Structural Province of the Canadian Shield. This province is characterized by the occurrence of the Paleoproterozoic Huronian Supergroup, an assemblage of mainly sedimentary and subordinate volcanic rocks that rests unconformably on older Archean rocks of the Superior Province. The Huronian Supergroup forms an arcuate belt extending for a distance of about 450 km from the east shore of Lake Superior to Sudbury and northeast to the Noranda area of Quebec.

The Huronian rocks consist of 4 unconformity bounded mainly sedimentary groups: the Elliot Lake group, the Hough Lake group, the Quirke Lake group and the Cobalt Group (Zolnai et al 1984). The Elliot Lake Group is the only one that contains volcanic rocks. All of the Huronian rocks were folded and faulted during at least one major orogenic event - the Penokian orogeny. Several igneous intrusions are spatially associated with rocks of the Huronian Supergroup. Layered gabbro - Anorthosite intrusions known as the East Bull Lake Suite are localized along the base of the sedimentary pile.

Examples are the East Bull Lake Intrusion and the May Township anorthosite. Nipissing gabbro bodies form dikes and sills that are widespread throughout the Huronian Supergroup. Several granitic to syenitic bodies intrude the Huronian sediments. Rocks in the Southern Province have been folded and faulted during the Penokian orogeny. However a major structure associated with these rocks is the Murray fault. This fault is thought to have been active for about 1 billion years (Card, 1978a) and it has in part controlled the location and distribution of the sedimentary and volcanic rocks. Dip slip movements of 10 to 15 kilometers have been estimated for the Murray fault (Zolnai et al 1984). This fault crosses the southeast corner of the claim.

Copper was first discovered in about 1900 at the Massey mine which lies about 4 km southeast of Salter Township. During the period 1904 - 1917, this mine

produced 633,264 pounds of copper. The property was subsequently idled and various organizations made sporadic attempts to reopen the mine. In 1968, the mine was again put into production only to be closed again in 1971. No production has come from the property since that time.

Historical records indicate that there was no substantial exploration work in the area until 2004, when Terex Resources undertook geophysical surveying and diamond drilling between 2004 and 2006. Numerous geophysical anomalies were identified, with 3 of 12 diamond drill targets producing encouraging results.

During the period of 2011-2012 Mag Copper Ltd completed 5 diamond drill holes on the Massey Copper Property. Two diamond drill holes produced favorable copper values, while a third showed notable gold values. The 2012 "Hawk Exploration Consultants, Massey Copper Property Report" prepared by Hawk Exploration Consultants on behalf of Mag Copper Company, gives the most recent in-depth review of the historical workings and surveys within the Salter & May Township areas.

References

- The 2012 "Hawk Exploration Consultants, Massey Copper Property Report" prepared by Hawk Exploration Consultants on behalf of Mag Copper Company
- D. R Hawke MSc, P.Geo. July, 2010, Assessment Report On A Diamond Drilling Program For Trelawney Mining and Exploration Inc. Salter Township Sudbury Mining Division (2005)
- 2001 Geological Report; Hermina Claim 1218049, Salter Township, Sudbury Mining Division

Work Performed, Instrumentation & Personnel

Dan Patrie Exploration Ltd was contracted by Bear Creek Gold Ltd to conduct a Total Field Magnetism survey on three mining claims within Salter Township. The work was performed from October 15th 2022 to October 22nd 2022.

A total of 15.625km of GPS Mag was conducted over three separate claims. The north-west grid totals 4.375km, the north east grid totals 4.5km, and the south-east grid totals 6.75km.

The field survey was carried out by four DPE employees, all from the Sudbury, Ontario area. Justin Abramson, Nathan Murray, Andrew Phillion, and Brad Lemay. Accommodations were based out of Espanola, Ontario for the duration of the field work.

Garmin GPSmap 64 handheld GPS units were used for navigation and the locating of survey points. Three separate grid patterns were followed; TFM readings were taken at 25m intervals, with 100m line separations (**Figure 3**)

Scintrex EnviMag units were employed to conduct the survey. The EnviMag is a total-field magnetometer, using the proton-precession technique to measure the scalar amplitude of the magnetic field vector, measured in NanoTeslas. An additional base station magnetometer was used for correcting any diurnal variations that may have been present during field data collection. Detailed specifications of the EnviMag units are shown in **Figure 6**.

Results Interpretation & Recommendations

Interpretation of the total field magnetics survey is represented in the form of a contour map and satellite overlay (Figures 4 & 5).

The north-west grid produced minor potential targets, while the north-east grid shows a notable anomaly identified along the entirety of line 10050E continuing to intersect eastwards on lines 100150E to 100350E. The south-east grid displays a consistent anomalous zone over the northern half of the grid.

Further geophysics is recommended on all three properties. A more detailed Total Field Magnetism survey at 50 meter line spacing would help further define the anomalous areas.

An accompanying Gradient IP survey would be ideal for identifying the chargeability & resistivity properties within the claim groups and solidify any potential target areas identified in the TFM survey. Afterwards, a sampling program of identified targets from the geophysical surveys would help determine and identify the viability of further exploration, such as, trenching and diamond drilling.

Figure 1 – Regional Claim Map

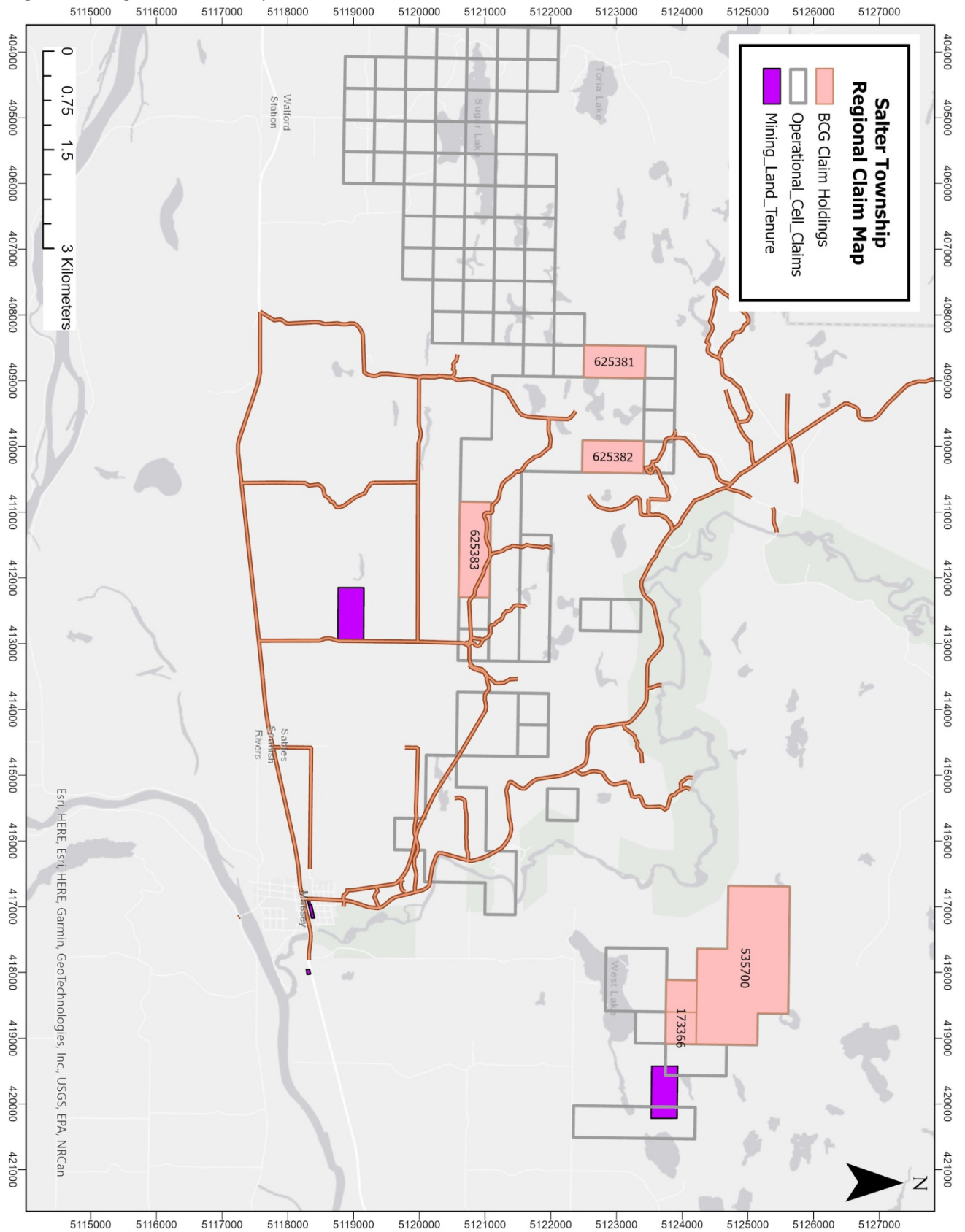


Figure 2 – Salter Township Access Map

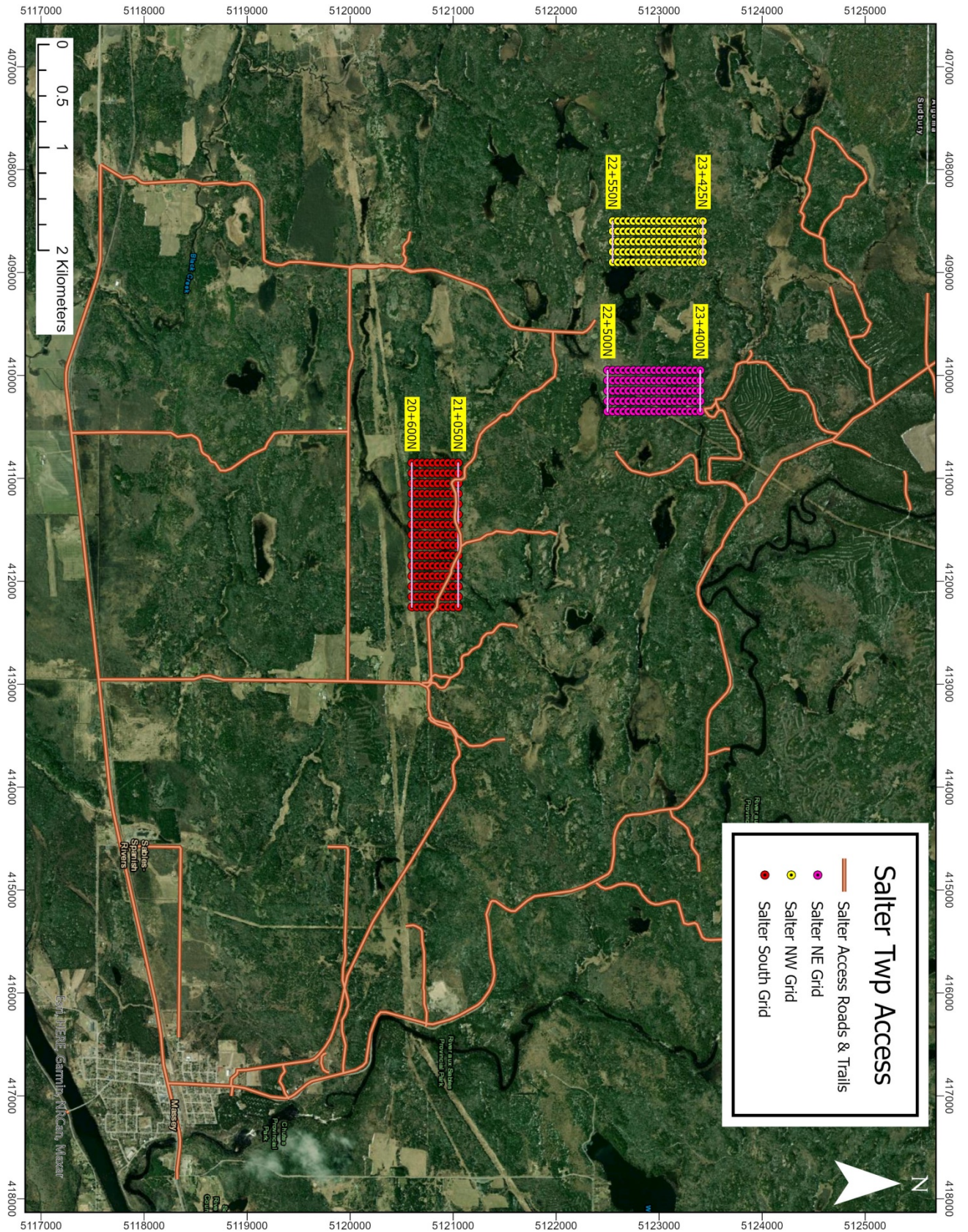


Figure 3 – Salter TFM Grid Map

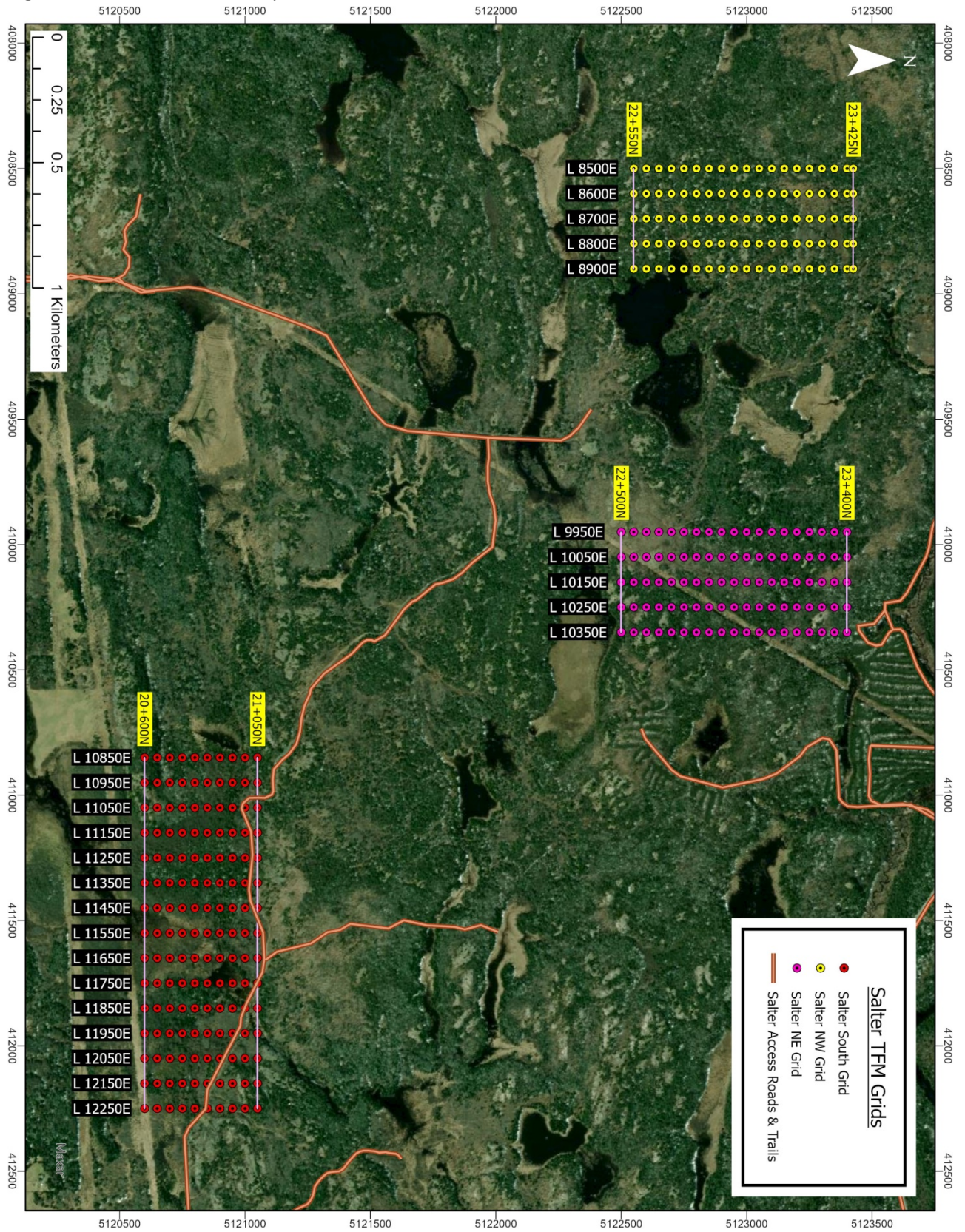


Figure 4 – TFM Contour Plot

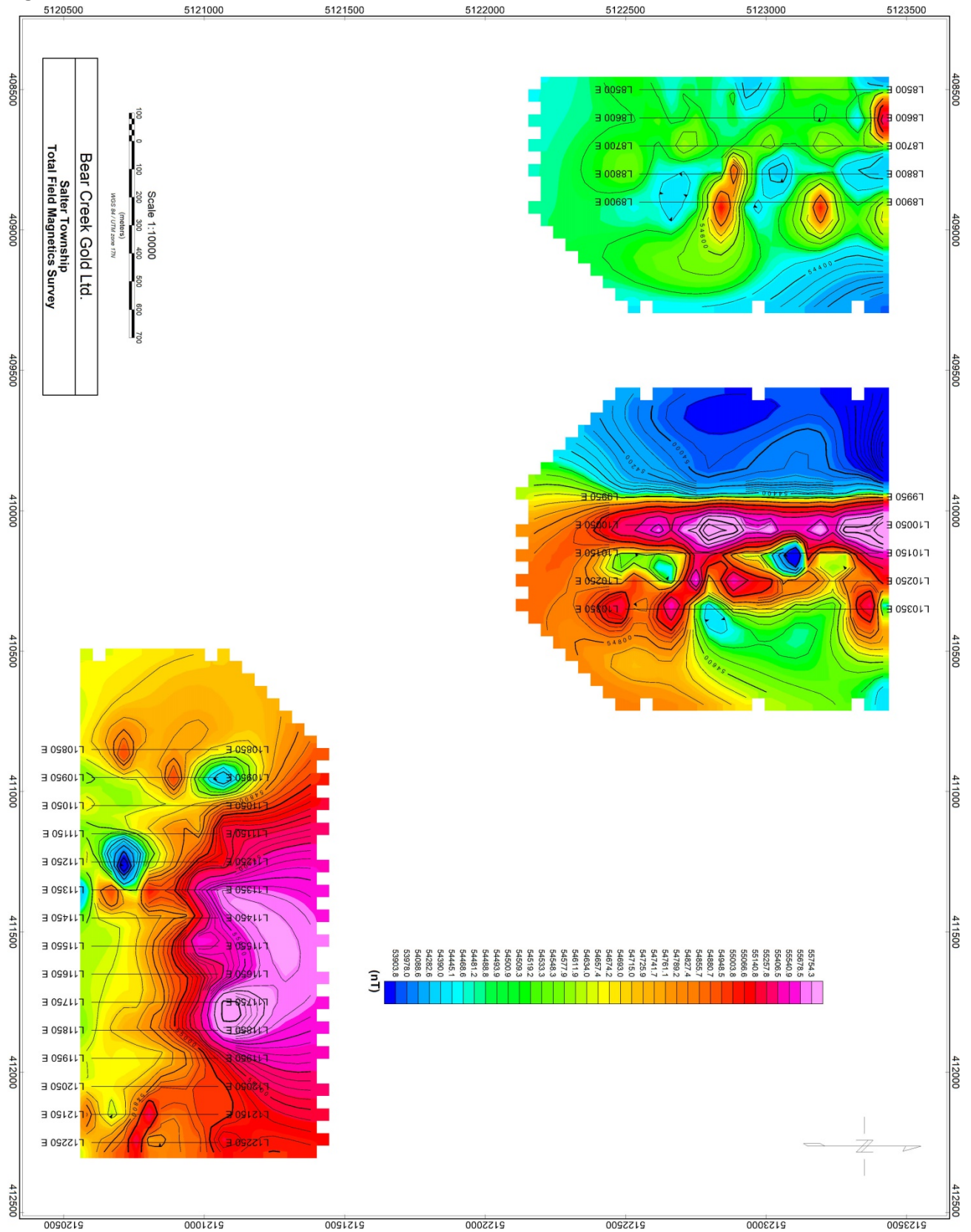


Figure 5 – TFM Overlay Map

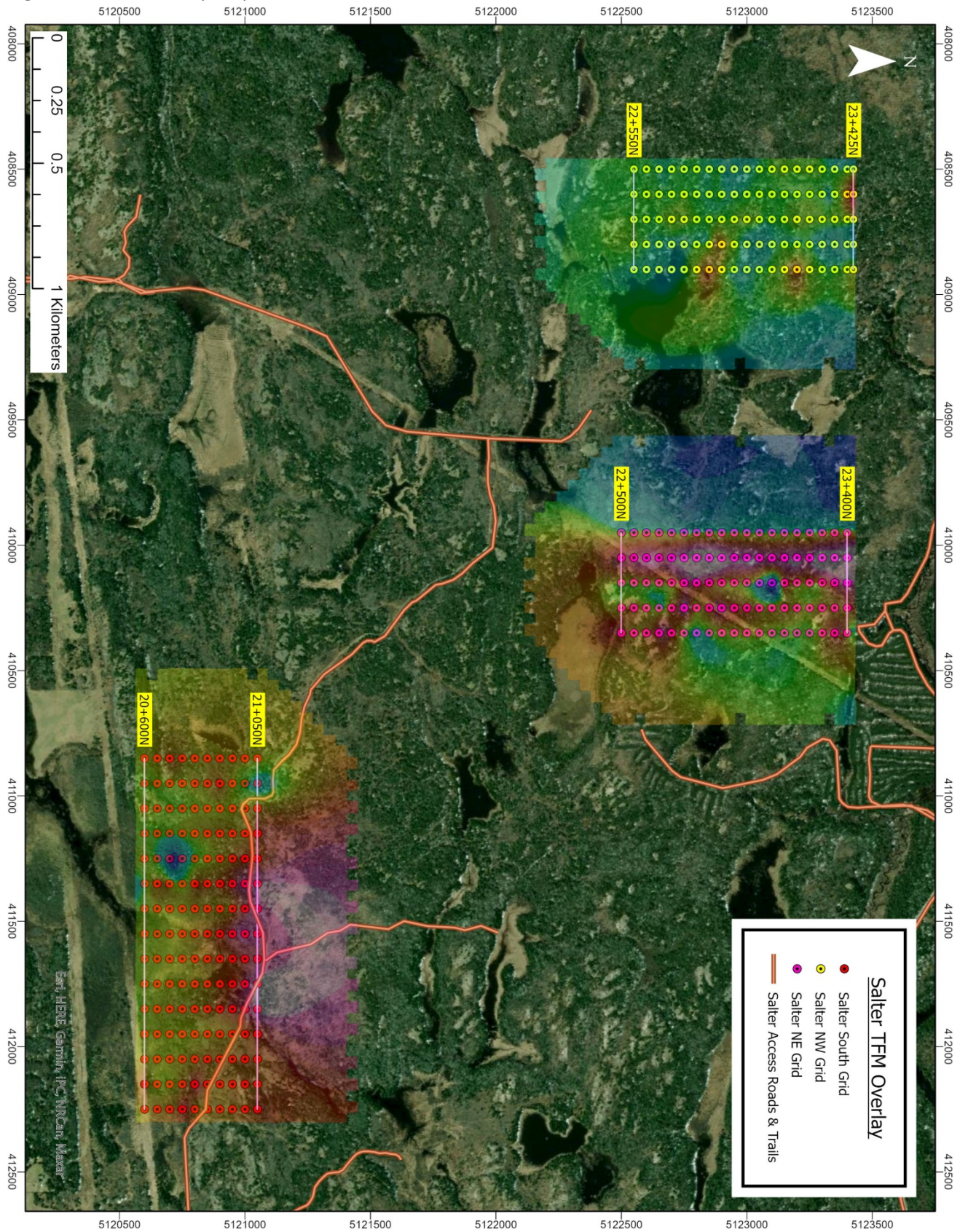


Figure 6 – Instrumentation Specifications



EQUIPMENT

REFERENCE: SCINTREX ENVI MAG BROCHURE

Total Field Operating Range

20,000 to 100,000 nT (gammas)

Total Field Absolute Accuracy:

±1 nT

Sensitivity:

0.1 nT at 2 second sampling rate

Tuning

Fully solid state. Manual or automatic, keyboard selectable

Cycling (Reading) Rates

0.5, 1 or 2 seconds

Gradiometer Option

Includes a second sensor, 1/2m (20 inch) staff extender and processor module.

VLF Option

Includes a VLF sensor and harness assembly

'WALKMAG' Mode

continuous reading, cycling as fast as 0.5 seconds

Digital Display

LCD "Super Twist", 240 x 64 dots graphics, 8 line x 40 characters alphanumerics

Display Heater

Thermostatically controlled, for cold weather operations

Keyboard Input

17 keys, dual function, membrane type

Notebook Function

32 characters, 5 user-defined MACRO's for quick entry

Standard Memory

Total Field Measurements: 28,000 readings

Gradiometer Measurements: 21,000 readings

Base Station Measurements: 151,000 readings

VLF Measurements: 4,500 readings for 3 frequencies

Expanded Memory

Total Field Measurements: 140,000 readings

Gradiometer Measurements: 109,000 readings

Base Station Measurements: 750,000 readings

VLF Measurements: 24,000 readings for 3 frequencies

Real-Time Clock

Records full date, hours, minutes and seconds with 1 second resolution, ±1 second stability over 24 hours

Digital Data Output

RS-232C interface, 600 to 57,600 Baud, 7 or 8 data bits, 1 start, 1 stop bit, no parity format. Selectable carriage return delay (0-999 ms) to accommodate slow peripherals. Handshaking is done by X-on/X-off. High speed Binary Dump. Selectable formats for easy interfacing to commercial software packages.

Analog Output

0-999 mV full scale output voltage with keyboard selectable range of 1, 10, 100, 1000 or 10,000 full scale

Power Supply

Rechargeable 'Camcorder' type, 2.3 Ah, Lead-acid battery

12 Volts at 0.65 Amp for magnetometer, 1.2 Amp for gradiometer

External 12 Volt input for base station operations

Optional external battery pouch for cold weather operations

Battery Charger

110 Volt-230 Volt, 50/60 Hz

Operating Temperature Range

Standard: -40° to 60°C

Dimensions & Weight

Console: 250mm x 152mm x 55mm (10" x 6" x 2.25")
2.45 kg (5.4 lbs) with rechargeable battery

Magnetic Sensor: 70mm x 175mm (2.75" d x 7")
1 kg (2.2 lbs)

Gradiometer Sensor: 70mm x 675mm (2.75" d x 26.5")
(with staff extender) 1.15 kg (2.5 lbs)

Sensor Staff: 25mm x 2m (1" d x 76")
.8 kg (1.75 lbs)

VLF Sensor Head: 140mm x 130mm (5.5" d x 5.1")
.9 kg (2 lbs)

VLF Sensor: 280mm x 190mm x 75mm (11" x 7.5" x 3")
1.7 kg (3.7 lbs)

Options

Base Station Accessories Kit

GPS

Software Packages

Training Programs

SCINTREX

SCINTREX



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