



CANADIAN EXPLORATION SERVICES LTD

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TEMAGAMI GOLD INC.

Magnetometer and VLF EM

Surveys Over the SHERMAN PROPERTY

Strathy Township, Ontario

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1. SURVEY DETAILS

1.1 PROJECT NAME

This project is known as the **Sherman Property**.

1.2 CLIENT

Temagami Gold Inc.
1 Presley Street
Cobalt, Ontario
POJ 1C0

1.3 LOCATION

The Sherman Property is located approximately 5km west of Temagami, Ontario. The survey area is located over portions of mining claims 4275180, 4272803, 4200030 and 4271881, located in Strathy Township, within the Sudbury Mining Division.



Figure 1: Location of the Sherman Property

1.4 ACCESS

Access to the property was attained with a 4x4 truck via the Milne Sherman Mine Road. The Milne Sherman Mine extends west from highway 11, approximately 1.5 kilometers north of Temagami, Ontario. This road was travelled 6 kilometers to the historic Milne Sherman Mine site, where the survey area borders the road.

1.5 SURVEY GRID

The traversed lines were established using a GPS in conjunction with the execution of the survey. The GPS operator would establish sample locations while remaining approximately 25m in front of the magnetometer operator. GPS waypoints, magnetic samples were taken every 25m along these controlled traverses. The GPS used was a Garmin GPSMAP 62s with an external antenna for added accuracy.

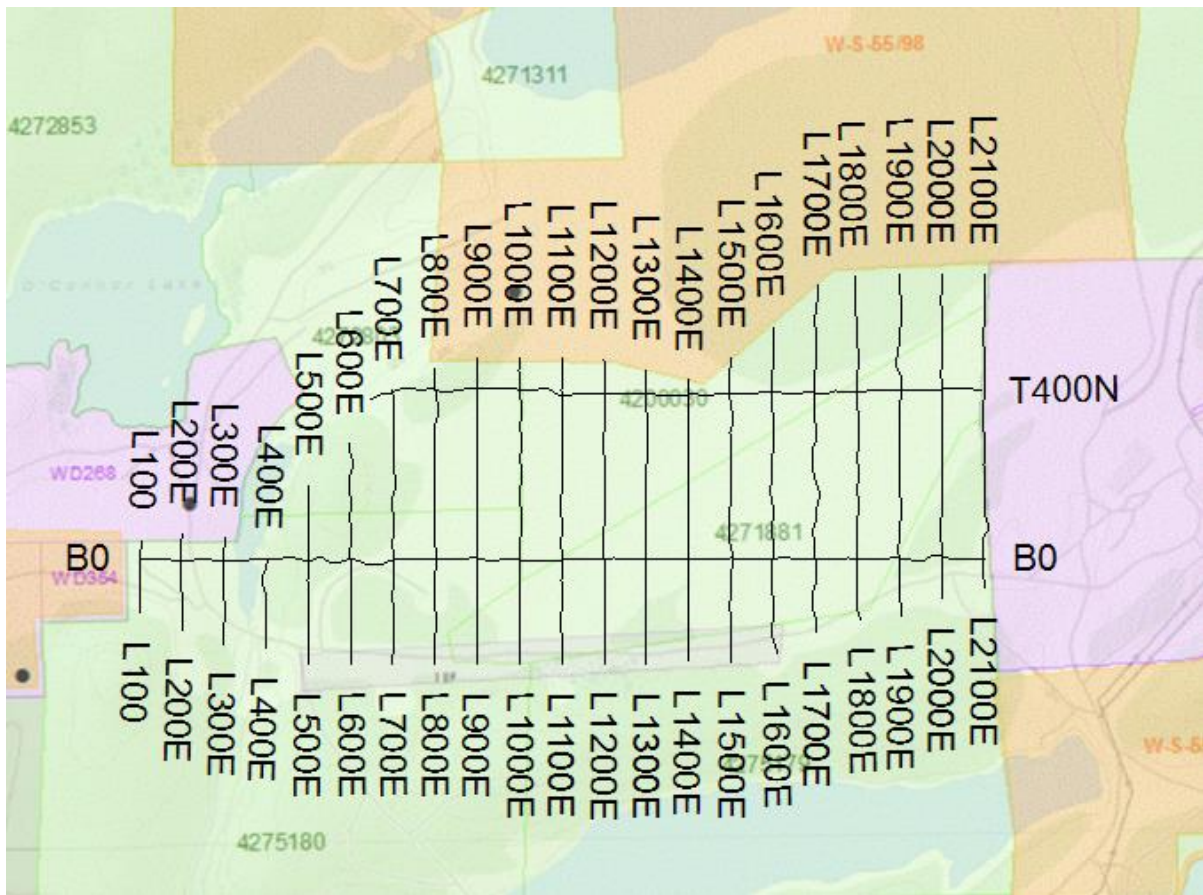


Figure 2: Survey Traverses on Claim Map

2. SURVEY WORK UNDERTAKEN

2.1 SURVEY LOG

Date	Description	Line	Min Extent	Max Extent	Total Survey (km)
October 4, 2016	Locate survey area and perform magnetic and VLF EM surveys.	100E	150S	50N	200
		200E	200S	50N	250
		300E	200S	50N	250
		400E	225S	0	225
		500E	250S	175N	425
		600E	250S	275N	525
		700E	250S	400N	650
		800E	250S	450N	700
		900E	250S	475N	725
		1000E	250S	475N	725
		1100E	250S	475N	725
		1200E	250S	475N	725
		1300E	250S	450N	700
		1400E	250S	425N	675
		1500E	250S	475N	725
		1600E	225S	550N	775
		1700E	175S	650N	825
		1800E	150S	675N	825
		1900E	150S	675N	825
		2000E	100S	675N	775
		2100E	75S	675N	750
		0N	100E	2100E	2000
		400N	650E	2100E	1450

Table 1: Survey Log

2.2 PERSONNEL

Two crews were fielded to perform these surveys. The operators consisted of Jason Ploeger of Larder Lake, Ontario and Claudia Moraga of Britt, Ontario. The GPS navigators consisted of Jordan Potts and Bill Bonney, both of Kirkland Lake, Ontario.

2.3 SURVEY SPECIFICATIONS

The survey was conducted with a GSM-19 v7 Overhauser magnetometer and VLF with a second GSM-19 magnetometer in base station mode for diurnal correction.

A total of 16.485 line kilometers of Magnetometer and VLF EM surveys was read over the Sherman Property on October 4, 2016. This consisted of 658 magnetometer and VLF EM samples taken at a 25-meter sample interval.

3. OVERVIEW OF SURVEY RESULTS

3.1 SUMMARY

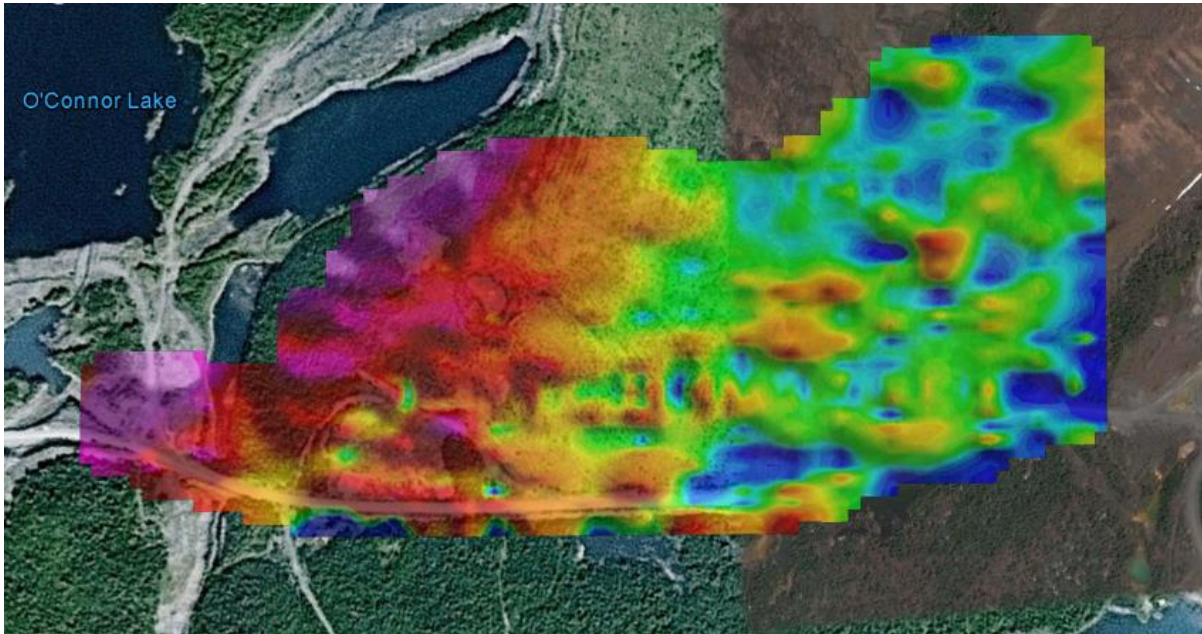


Figure 3: Magnetometer Plan Map on Google

The survey was design to traverse this section in a north-south direction over a portion of the historical mine site. Line 100E at the baseline crossed the entrance to one of the open pits. Sporadic culture was noticed throughout the survey area as would be expected near historic mine sites. This may cause localized cultural noise. A road was noted crossing the southern extent of the survey lines.

Near the opening to the open pit (100E, 0N) the magnetometer was knocked out of tune and had to be re-initialized. This most likely was a result of an extension of the iron formation that was mined from the open pit. The magnetometer was not knocked out of tune on any lines east of line 300.

Overall the magnetic survey indicated a strong magnetic anomaly along the north-west survey traverse area. This magnetic signature most likely represents the strike of the original Milne-Sherman Iron orebody.

Four areas are noted where strong VLF EM. Two of these may be attributed to culture. These are the responses along the southern edge of the survey area. Some road structure was noted in the region around lines 2000E and 2100E through 0 to 200N. The VLF responses in this region are potentially related to this.

The final two VLF responses is noted in the north-east and north-west. The north-

west response appears to be associated with the elevated magnetic response associated with the probable strike of the iron formation. An axis appears to trend parallel to the magnetic trend, which may indicate conductive horizon within the geologic package.

The north-east VLF EM responses occur within a region of low magnetic response. This may indicate the presence of a graphitic horizon within this region.

I would recommend investigating the areas of magnetics and VLF response for their potential sources. A tightly spaced soil sampling program may also be merited to assist in the determination of the sources of these anomalies.

APPENDIX A

STATEMENT OF QUALIFICATIONS

I, C. Jason Ploeger, hereby declare that:

1. I am a professional geophysicist with residence in Larder Lake, Ontario and am presently employed as a Geophysicist and Geophysical Manager of Canadian Exploration Services Ltd. of Larder Lake, Ontario.
2. I am a Practising Member of the Association of Professional Geoscientists, with membership number 2172.
3. I graduated with a Bachelor of Science degree in geophysics from the University of Western Ontario, in London Ontario, in 1999.
4. I have practiced my profession continuously since graduation in Africa, Bulgaria, Canada, Mexico and Mongolia.
5. I am a member of the Ontario Prospectors Association, a Director of the Northern Prospectors Association and a member of the Society of Exploration Geophysicists.
6. I do not have nor expect an interest in the properties and securities of **Temagami Gold Inc.**
7. I am responsible for the final processing and validation of the survey results and the compilation of the presentation of this report. The statements made in this report represent my professional opinion based on my consideration of the information available to me at the time of writing this report.



C. Jason Ploeger, P.Geo., B.Sc.
Geophysical Manager
Canadian Exploration Services Ltd.

Larder Lake, ON
October 5, 2016

APPENDIX B

THEORETICAL BASIS AND SURVEY PROCEDURES

TOTAL FIELD MAGNETIC SURVEY

Base station corrected Total Field Magnetic surveying is conducted using at least two synchronized magnetometers of identical type. One magnetometer unit is set in a fixed position in a region of stable geomagnetic gradient, and away from possible cultural effects (i.e. moving vehicles) to monitor and correct for daily diurnal drift. This magnetometer, given the term 'base station', stores the time, date and total field measurement at fixed time intervals over the survey day. The second, remote mobile unit stores the coordinates, time, date, and the total field measurements simultaneously. The procedure consists of taking total magnetic measurements of the Earth's field at stations, along individual profiles, including Tie and Base lines. A 2 meter staff is used to mount the sensor, in order to optimally minimize localized near-surface geologic noise. At the end of a survey day, the mobile and base-station units are linked, via RS-232 ports, for diurnal drift and other magnetic activity (ionospheric and spheric) corrections using internal software.

For the gradiometer application, two identical sensors are mounted vertically at the ends of a rigid fiberglass tube. The centers of the coils are spaced a fixed distance apart (0.5 to 1.0m). The two coils are then read simultaneously, which alleviates the need to correct the gradient readings for diurnal variations, to measure the gradient of the total magnetic field.

VLF Electromagnetic

The frequency domain VLF electromagnetic survey is designed to measure both the vertical and horizontal in-phase (IP) and Quadrature (OP) components of the anomalous field from electrically conductive zones. The sources for VLF EM surveys are several powerful radio transmitters located around the world which generate EM radiation in the low frequency band of 15-25kHz. The signals created by these long-range communications and navigational systems may be used for surveying up to several thousand kilometres away from the transmitter. The quality of the incoming VLF signal can be monitored using the field strength. A field strength above 5pT will produce excellent quality results. Anything lower indicates a weak signal strength, and possibly lower data quality. A very low signal strength (<1pT) may indicate the radio station is down.

The EM field is planar and horizontal at large distances from the EM source. The two components, electric (E) and magnetic (H), created by the source field are orthogonal to each other. E lies in a vertical plane while H lies at right angles to the direction of propagation in a horizontal plane. In order to ensure good coupling, the strike of possible conductors should lie in the direction of the transmitter to allow the H vector to pass through the anomaly, in turn, creating a secondary EM field.

The VLF EM receiver has two orthogonal aeriels which are tuned to the frequency of the transmitting station. The direction of the source station is located by rotating the sensor around a vertical axis until a null position is found. The VLF EM survey procedure consists of taking measurements at stations along each line on the grid. The receiver is rotated about a horizontal axis, right angles to the traverse and the tilt recorded at the null position.

APPENDIX C

GSM 19



Specifications

Overhauser Performance

- Resolution: 0.01 nT
- Relative Sensitivity: 0.02 nT
- Absolute Accuracy: 0.2nT
- Range: 20,000 to 120,000 nT
- Gradient Tolerance: Over 10,000nT/m
- Operating Temperature: -40°C to +60°C

Operation Modes

- Manual: Coordinates, time, date and reading stored automatically at min. 3 second interval.
- Base Station: Time, date and reading stored at 3 to 60 second intervals.
- Walking Mag: Time, date and reading stored at coordinates of fiducial.
- Remote Control: Optional remote control using RS-232 interface.
- Input/Output: RS-232 or analog (optional) output using 6-pin weatherproof connector.

Operating Parameters

- Power Consumption: Only 2Ws per reading. Operates continuously for 45 hours on standby.
- Power Source: 12V 2.6Ah sealed lead acid battery standard, other batteries available
- Operating Temperature: -50°C to +60°C

Storage Capacity

- Manual Operation: 29,000 readings standard, with up to 116,000 optional. With 3 VLF stations: 12,000 standard and up to 48,000 optional.
- Base Station: 105,000 readings standard, with up to 419,000 optional (88 hours or 14 days uninterrupted operation with 3 sec. intervals)
- Gradiometer: 25,000 readings standard, with up to 100,000 optional. With 3 VLF stations: 12,000, with up to 45,000 optional.

Omnidirectional VLF

Performance Parameters: Resolution 0.5% and range to $\pm 200\%$ of total field.
Frequency 15 to 30 kHz.

Measured Parameters: Vertical in-phase & out-of-phase, 2 horizontal components, total field coordinates, date, and time.

Features: Up to 3 stations measured automatically, in-field data review, displays station field strength continuously, and tilt correction for up to $\pm 10^\circ$ tilts.

Dimensions and Weights: 93 x 143 x 150mm and weighs only 1.0kg.

Dimensions and Weights

Dimensions:

Console: 223 x 69 x 240mm

Sensor: 170 x 71mm diameter cylinder

Weight:

Console: 2.1kg

Sensor and Staff Assembly: 2.0kg

Standard Components

GSM-19 magnetometer console, harness, battery charger, shipping case, sensor with cable, staff, instruction manual, data transfer cable and software.

Taking Advantage of a “Quirk” of Physics

Overhauser effect magnetometers are essentially proton precession devices except that they produce an order-of magnitude greater sensitivity. These "supercharged" quantum magnetometers also deliver high absolute accuracy, rapid cycling (up to 5 readings / second), and exceptionally low power consumption.

The Overhauser effect occurs when a special liquid (with unpaired electrons) is combined with hydrogen atoms and then exposed to secondary polarization from a radio frequency (RF) magnetic field. The unpaired electrons transfer their stronger polarization to hydrogen atoms, thereby generating a strong precession signal-- that is ideal for very high-sensitivity total field measurement. In comparison with proton precession methods, RF signal generation also keeps power consumption to an absolute minimum and reduces noise (i.e. generating RF frequencies are well out of the bandwidth of the precession signal).

In addition, polarization and signal measurement can occur simultaneously - which enables faster, sequential measurements. This, in turn, facilitates advanced statistical averaging over the sampling period and/or increased cycling rates (i.e. sampling speeds).

-
- The unique Overhauser unit blends physics, data quality, operational efficiency, system design and options into an instrumentation package that ... exceeds proton precession and matches costlier optically pumped cesium capabilities

APPENDIX C

GARMIN GPS MAP 62S



Physical & Performance:	
Unit dimensions, WxHxD:	2.4" x 6.3" x 1.4" (6.1 x 16.0 x 3.6 cm)
Display size, WxH:	1.43" x 2.15" (3.6 x 5.5 cm); 2.6" diag (6.6 cm)
Display resolution, WxH:	160 x 240 pixels
Display type:	transflective, 65-K color TFT
Weight:	9.2 oz (260.1 g) with batteries
Battery:	2 AA batteries (not included); NiMH or Lithium recommended
Battery life:	20 hours
Waterproof:	yes (IPX7)
Floats:	no
High-sensitivity receiver:	yes

Interface:	high-speed USB and NMEA 0183 compatible
Maps & Memory:	
Basemap:	yes
Preloaded maps:	no
Ability to add maps:	yes
Built-in memory:	1.7 GB
Accepts data cards:	microSD™ card (not included)
Waypoints/favorites/locations:	2000
Routes:	200
Track log:	10,000 points, 200 saved tracks
Features & Benefits:	
Automatic routing (turn by turn routing on roads):	yes (with optional mapping for detailed roads)
Electronic compass:	yes (tilt-compensated, 3-axis)
Touchscreen:	no
Barometric altimeter:	yes
Camera:	no
<u>Geocaching-friendly:</u>	yes (paperless)
<u>Custom maps compatible:</u>	yes
Photo navigation (navigate to geotagged photos):	yes
Outdoor GPS games:	no
Hunt/fish calendar:	yes
Sun and moon information:	yes

Tide tables:	yes
Area calculation:	yes
Custom POIs (ability to add additional points of interest):	yes
Unit-to-unit transfer (shares data wirelessly with similar units):	yes
Picture viewer:	yes
Garmin Connect™ compatible (online community where you analyze, categorize and share data):	yes

- *Specifications obtained from www.garmin.com*

APPENDIX D

LIST OF MAPS (IN MAP POCKET)

Posted profiled TFM plan map (1:2500)

1) Q2251-TEMAGAMI-SHERMAN-MAG-CONT

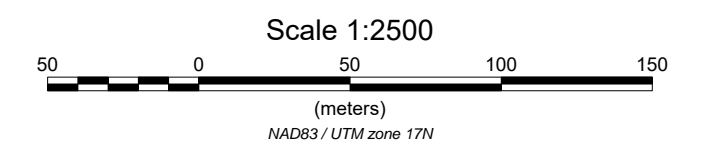
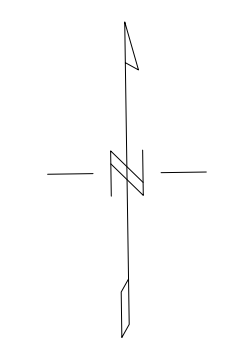
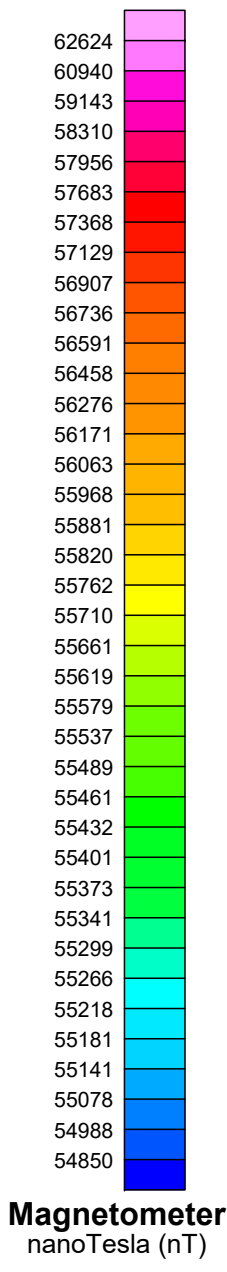
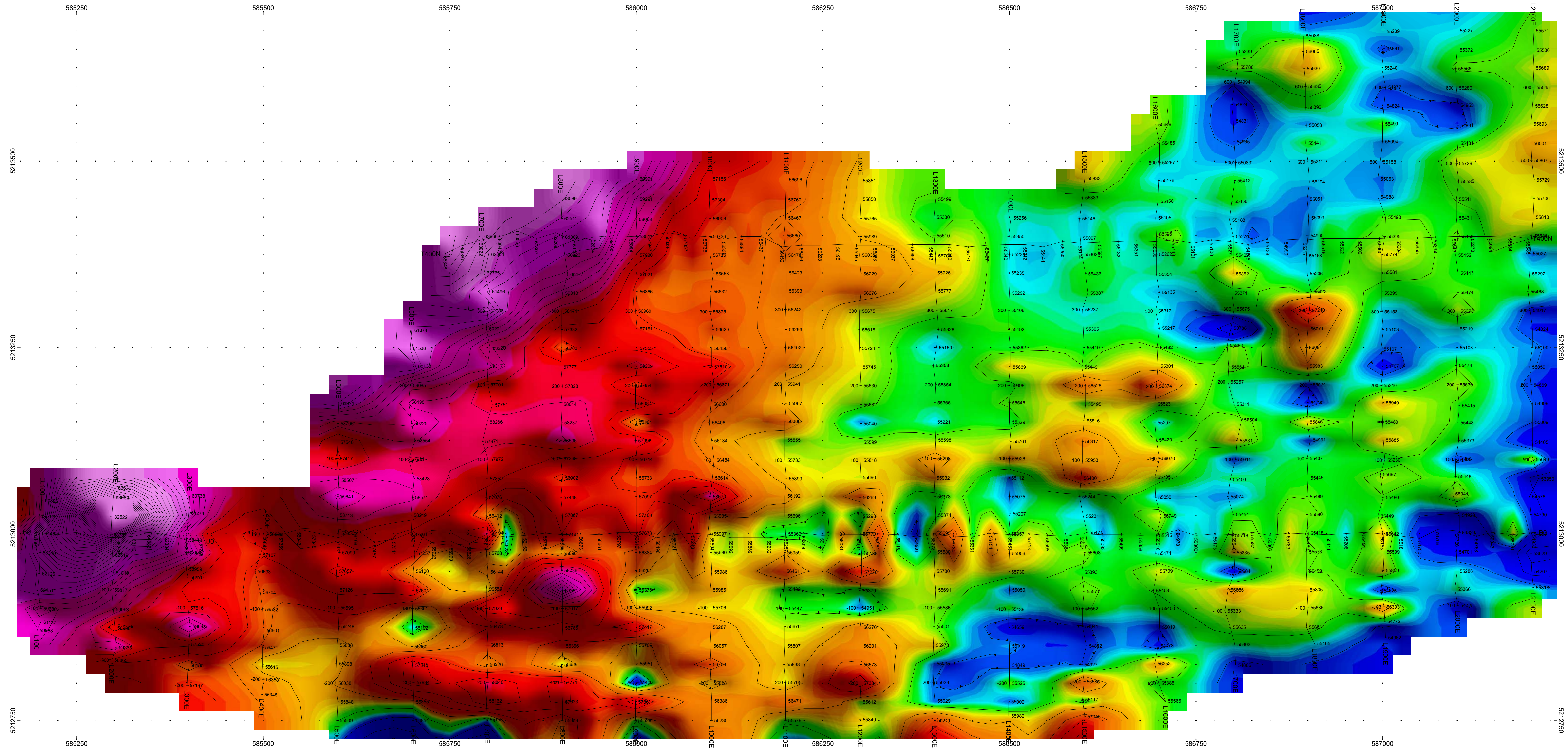
Posted profiled Fraser Filtered VLF EM plan map (1:2500)

2) Q2251-TEMAGAMI-SHERMAN-VLF-NAA

Traverse Lines on Claim Map (1:25000)

3) Q2251-TEMAGAMI-SHERMAN-TRAVERSE

TOTAL MAPS=3



TEMAGAMI GOLD INC.

SHERMAN PROPERTY
Strathy Township, Ontario

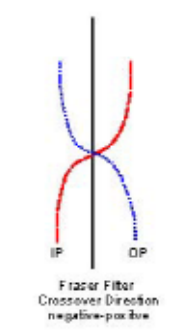
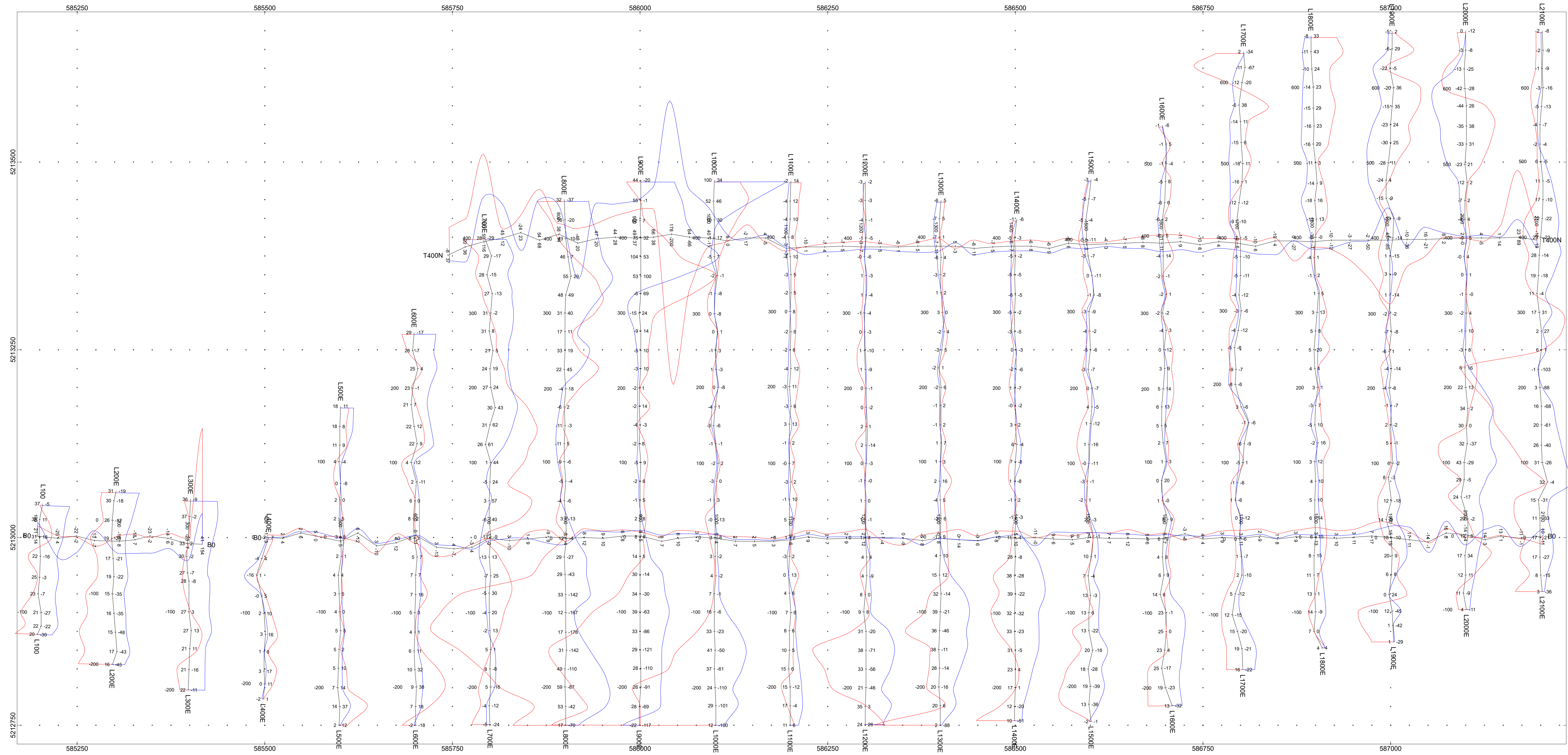
TOTAL FIELD MAGNETIC CONTOURED PLAN MAP
Base Station Corrected

Posting Level: 0nT
Field Inclination/Declination: 74degN/12degW
Station Separation: 25 meters
Total Field Magnetic Contours: 500nT

GSM-19 OVERHAUSER MAGNETOMETER v7

Operated By: Claudia Moraga, Jason Ploeger
GPS Operated By: Bill Bonney, Jordan Potts
Processed by: C Jason Ploeger, P.Geo.
Map Drawn By: C Jason Ploeger, P.Geo.
October 2016





TEMAGAMI GOLD INC.

SHERMAN PROPERTY
Strathy Township, Ontario

VLF IN PHASE/OUT PHASE PROFILE
24.0kHz NAA - CUTLER USA

In Phase: Posted Right/Bottom (Red)
Out Phase: Posted Left/Top (Blue)

Vertical Profile Scales: 2.5 %/mm
Station Separation: 25 meters
Posting Level: 0

GSM-19 VLF v7

Operated By: Claudia Moraga, Jason Ploeger
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October 2016



Drawing: Q2251-TEMAGAMI-SHERMAN-VLF-NAA

