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PATRICK DICK

Magnetometer and VLF EM Surveys Over the

VALLEY LAKE GRID
Wabikoba Lake Area
Marathon, Ontario

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1. SURVEY DETAILS

1.1 PROJECT NAME

This project is known as the Valley Lake Property.

1.2 CLIENT

Patrick Dick
P.O. Box 862
Graham Crescent
Marathon, ON
P0T 2E0

1.3 LOCATION

The Valley Lake Property is located in the Wabikoba Lake Area within the Thunder Bay Mining Division. The property is located approximately 33km east of Marathon and is comprised of mining claims numbered 42246299, 4246102 and 4246300.

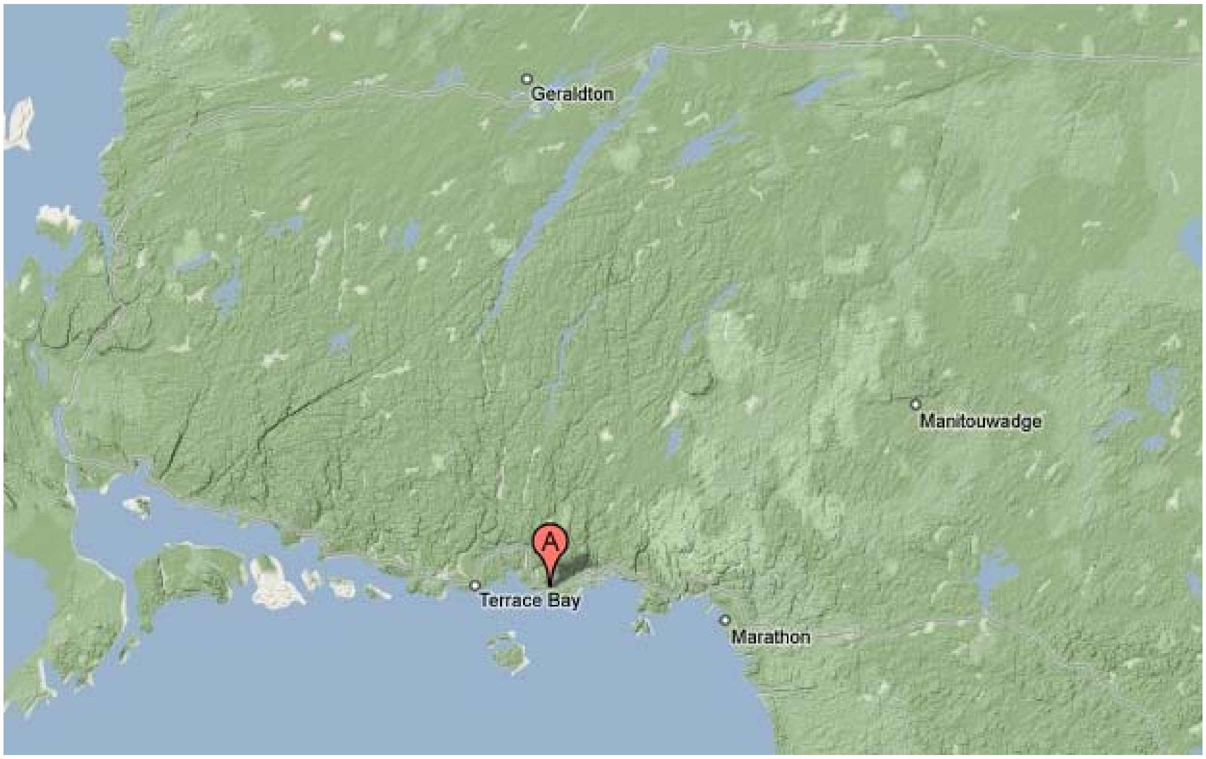

Figure 1: General Location of Valley Lake Grid

1.4 ACCESS

The property is best reached by driving 29 kilometers north on highway 614 from its intersection with highway 17. From here, a forestry access road heads in a westerly then southerly direction. This access road is used for an additional 21km to the survey area.

1.5 SURVEY GRID

The grid was established prior to survey execution and consisted of 5.975 line kilometers of cut grid lines. The grid lines were spaced at 100 meter intervals with the stations picketed at 25m intervals with a baseline running at 90°N for a distance of 1800m.

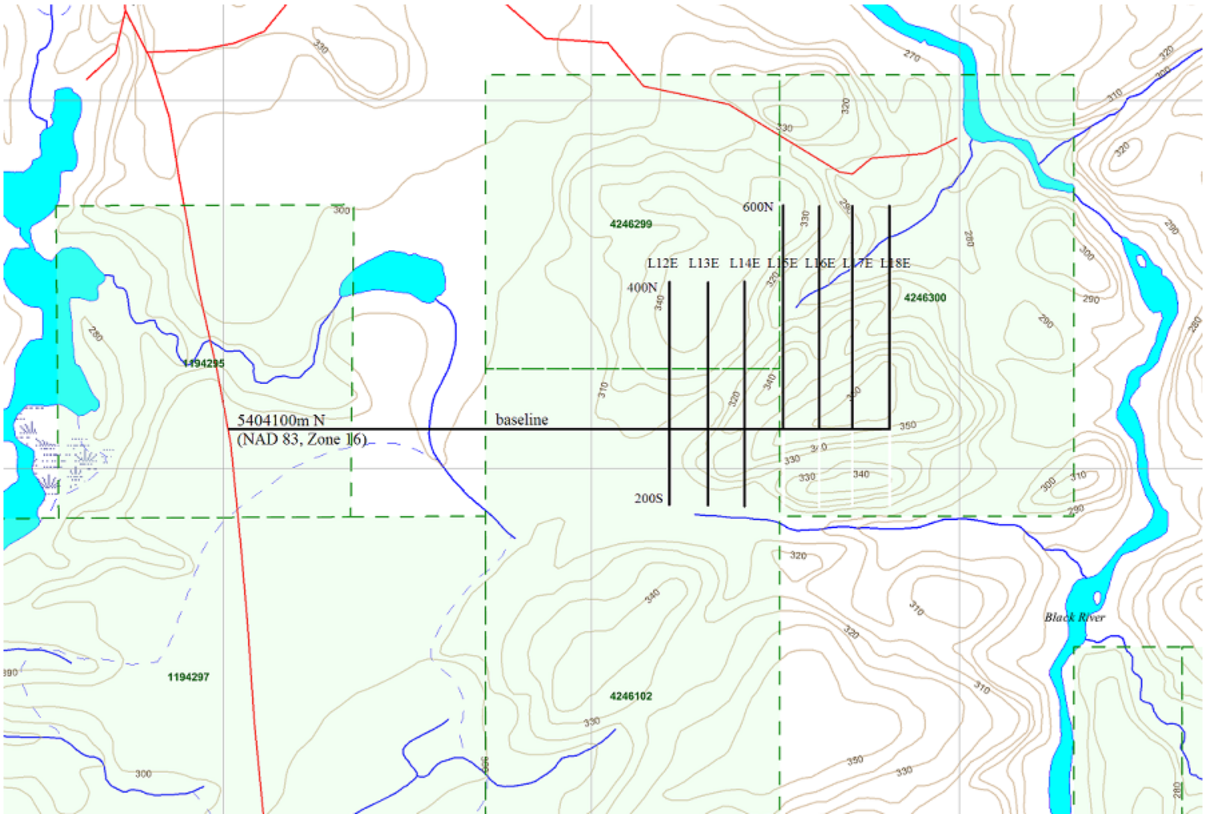

Figure 2: Claim Map with Valley Lake Grid

2. SURVEY WORK UNDERTAKEN

2.1 Survey Log

Date	Description	Line	Min Extent	Max Extent	Total Survey (m)
20 August 2010	Locate survey area and read grid.	1200E	200S	400N	600
		1300E	175S	400N	575
		1400E	200S	400N	600
		1500E	0	600N	600
		1600E	0	600N	600
		1700E	0	600N	600
		1800E	0	600N	600
		0	0	1800E	1800

Table 1: Survey Log

2.2 Personnel

Jason Ploeger of Larder Lake, Ontario, conducted all of the magnetic and VLF EM data collection.

2.3 Survey Specifications

The magnetic and VLF EM surveys were conducted with a GSM-19 v7 Overhauser magnetometer with a second GSM-19 v7 Overhauser magnetometer as base station for diurnal correction.

A total of 5.975 line kilometers of magnetometer/VLF EM survey was read on the 20th of August, 2010. This consisted of approximately 478 magnetometer/VLF EM samples with a 12.5m sample interval.

3. OVERVIEW OF SURVEY RESULTS

3.1 Summary Interpretation

The magnetic response almost appears to contradict the geological mapping in the region. This is mainly the result of the intense structural spider web at this location along with a late east west intrusive magnetic low feature.

The magnetically depressed east west feature appears to strike from 100N of line 1800E through to 250N on line 1300E. Line 1200E appears to exhibit the same magnetic depression but it appears to have migrated to the north approximately 50m. This magnetic depression most likely indicates the presence of a late intrusive dike. The shift may indicate a structural feature.

The linear magnetic low feature appears to truncate a strong VLF EM axis which strikes from line 1800E at 575N through to line 1400E at 325N. This feature appears to be associated with a slight rise in magnetic response which may indicate the presence of mineralization.

North of this VLF EM axis appears to exhibit a more uniform magnetic response. This may indicate a more stable geological unit such as a pluton.

A second but weaker VLF EM axis exists striking from 1300E at 0 through 1800E at 350N. Again, this axis exhibits a weak rise in magnetic response which may indicate a second mineralized region.

This survey area was small and would be better understood with a larger grid being cut. Any geologic showings in the region should be plotted on the magnetic and VLF EM maps to determine if there is an association that would better target future exploration programs.

APPENDIX A

STATEMENT OF QUALIFICATIONS

I, C. Jason Ploeger, hereby declare that:

1. I am a geophysicist (non-professional) with residence in Larder Lake, Ontario and am presently employed as geophysical manager of Larder Geophysics Ltd. of Larder Lake, Ontario.

2. I graduated with a Bachelor of Science degree in geophysics from the University of Western Ontario, in London Ontario, in 1999.

3. I have practiced my profession continuously since graduation in Africa, Bulgaria, Canada, Mexico and Mongolia.

4. 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.

5. I do not have nor expect an interest in the properties and securities of **Patrick Dick.**

6. 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.

Larder Lake, ON
August 2010

C. Jason Ploeger, B.Sc. (geophysics)
Geophysical Manager of Larder Geophysics Ltd.

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 sferic) 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 aerials 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 ±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 ±10° 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 D

LIST OF MAPS (IN MAP POCKET)

Posted contoured TFM plan map (1:2500)

1) DICK-VALLEY-MAG-CONT

Posted profiled/fraser filtered contoured VLF plan maps (1:2500)

2) DICK-VALLEY-VLF-NML

TOTAL MAPS=2

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VALLEY LAKE PROPERTY
Wabikoba Lake Area
Marathon, Ontario

TOTAL FIELD MAGNETIC CONTOURED PLAN MAP
Base Station Corrected

Posting Level: 0nT
Field Inclination/Declination: 74.7degN/5.9degW
Station Seperation: 25 meters
Total Field Magnetic Contours: 100nT

GSM-19 OVERHAUSER MAGNETOMETER/VLF v7

Receiver Operated By: Jason Ploeger
Processed by: C Jason Ploeger, B.Sc.
Map Drawn By: C Jason Ploeger, B.Sc.
August 2010

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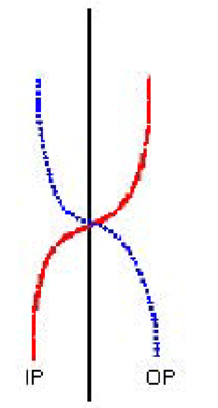
Drawing : DICK-VALLEY-MAG-CONT



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VALLEY LAKE GRID
Wabikobe Lake Area
Marathon, Ontario

VLF IN PHASE/OUT PHASE PROFILED PLAN MAP
25.2kHz NML - LAMOURE USA

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

Vertical Profile Scales: 2%/mm
Contour Interval: 0, 5, 10, 15, 20, 25, 50, 100

Station Seperation: 12.5 meters
Posting Level: 0

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Drawing : DICK-VALLEY-VLF-NML

Scale 1:2500

50 0 50 100 150

(meters)

NAD83 / UTM zone 16N

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VALLEY LAKE GRID
Wabikobe Lake Area
Marathon, Ontario

VLF IN PHASE/OUT PHASE PROFILED PLAN MAP
25.2kHz NML - LAMOURE USA

In Phase: Posted Right/Bottom (Red)
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