We are committed to providing accessible customer service.
If you need accessible formats or communications supports, please contact us.

Nous tenons à améliorer l’accessibilité des services à la clientèle.
Si vous avez besoin de formats accessibles ou d’aide à la communication, veuillez nous contacter.

CANADIAN EXPLORATION SERVICES LTD

PO Box 219, 14579 Government Road, Larder Lake, Ontario, P0K 1L0, Canada
Phone (705) 643-2345 Fax (705) 643-2191 www.cxsltd.com

# 1074127 Ontario Ltd.

# Magnetometer and VLF EM Surveys Over the

# Coleman Property

# Coleman Township, Ontario

C Jason Ploeger, B.Sc, P.Geo
June 22, 2016

## TABLE OF CONTENTS



## LIST OF APPENDICES



## LIST OF TABLES AND FIGURES

# 1. SURVEY DETAILS

## 1.1 PROJECT NAME

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

## 1.2 CLIENT

1074127 Ontario Ltd.

689 Corsi Hill
Sudbury, ON
P3E 6H7

## 1.3 LOCATION

The Coleman Property is located in Coleman Township approximately 3 km south-east of Cobalt, Ontario. The survey area covers mining claim 4242323 located in Coleman Township, within the Larder Lake Mining Division.

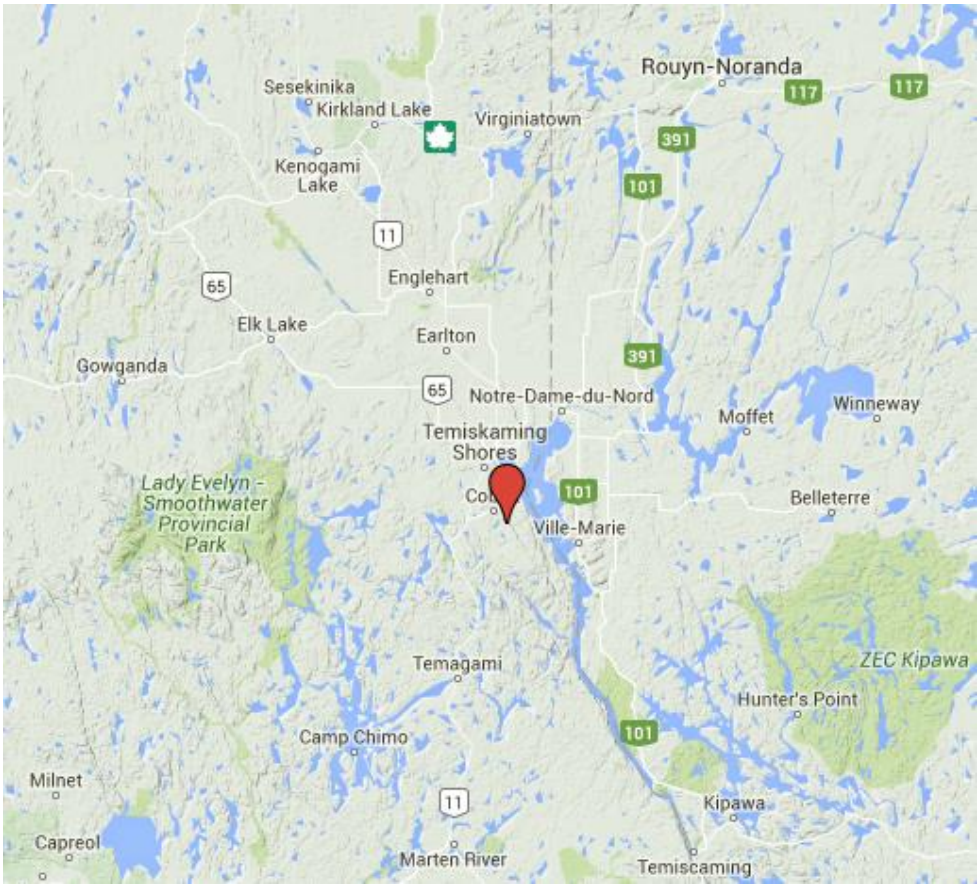



***Figure 1: Location of the Coleman Property***

### 1.4 ACCESS

Access to the property was attained with a 4x4 truck on the Kerr Lake Road. The Kerr Lake Road heads south from the village of Cobalt, Ontario. Approximately 5 kilometers down the Kerr Lake Road, an ATV was required for the remaining 600 meters to the survey area.

### 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 12.5m in front of the magnetometer operator. GPS waypoints , magnetic and VLF EM samples were taken every 12.5m along these controlled traverses. The GPS used was a Garmin GPSMAP 62s with an external antenna for added accuracy.

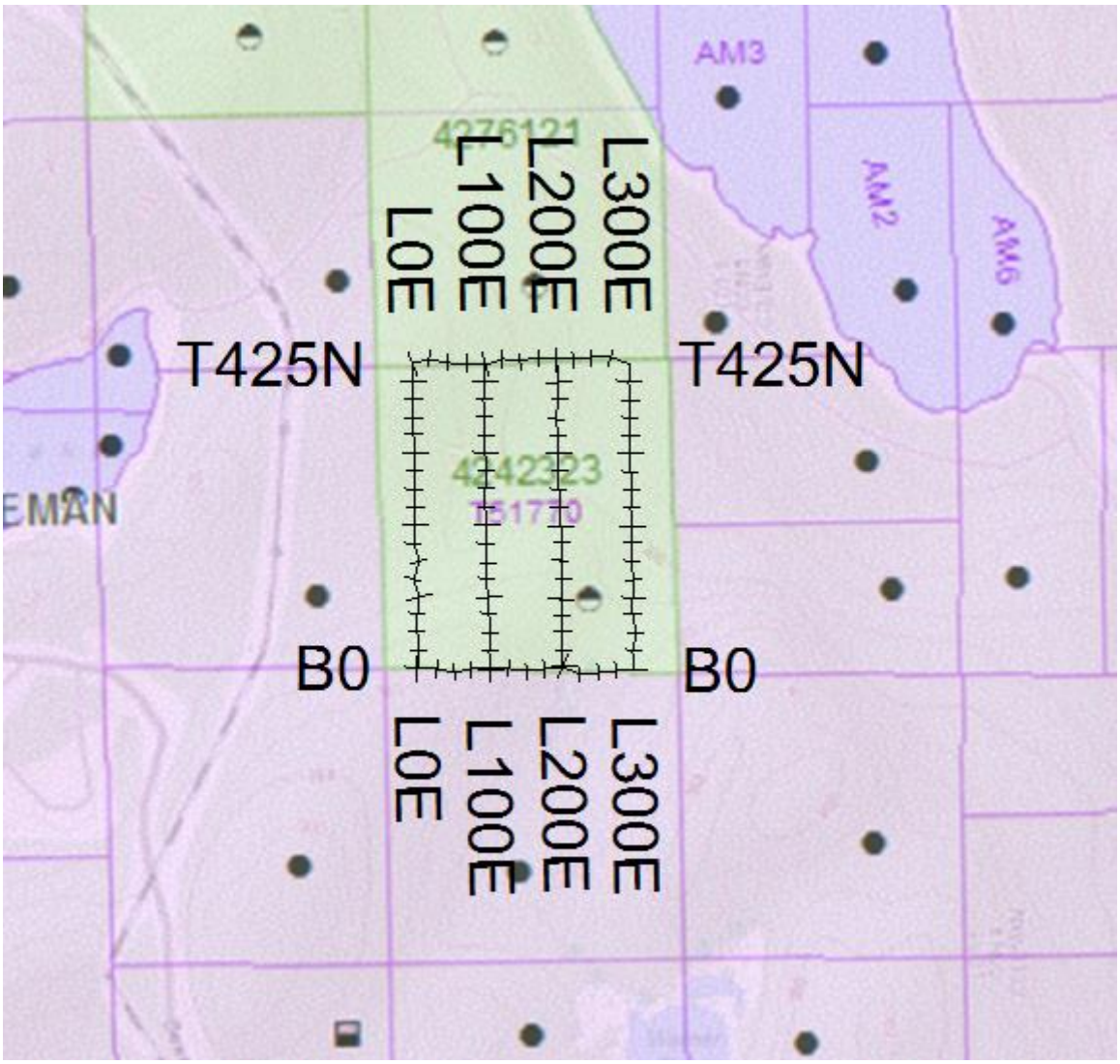



***Figure 2: Claim Map with the Coleman Property Traverses***

## 2. SURVEY WORK UNDERTAKEN

### 2.1 SURVEY LOG

| Date | Description | Line | Min Extent | Max Extent | Total Survey (m) |
|---|---|---|---|---|---|
| June 21, 2016 | Locate survey area and conduct magnetometer and VLF EM surveys. | 0E | 0 | 425N | 425 |
| | | 100E | 0 | 425N | 425 |
| | | 200E | 0 | 425N | 425 |
| | | 300E | 0 | 425N | 425 |
| | | 0N | 0 | 300E | 300 |
| | | 425N | 0 | 300E | 300 |

***Table 1: Survey Log***

### 2.2 PERSONNEL

Bruce Lavalley of Britt, Ontario conducted all the magnetic and VLF EM with Bill Bonney of Kirkland Lake being responsible for the GPS control and GPS waypoint collection.

### 2.3 SURVEY SPECIFICATIONS

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

A total of 2.3 line kilometers of magnetometer and VLF EM was read over the Coleman Property on June 21, 2016. This consisted of 184 magnetometer and VLF samples taken at a 25m sample interval.

## 3. OVERVIEW OF SURVEY RESULTS

### 3.1 SUMMARY INTERPRETATION

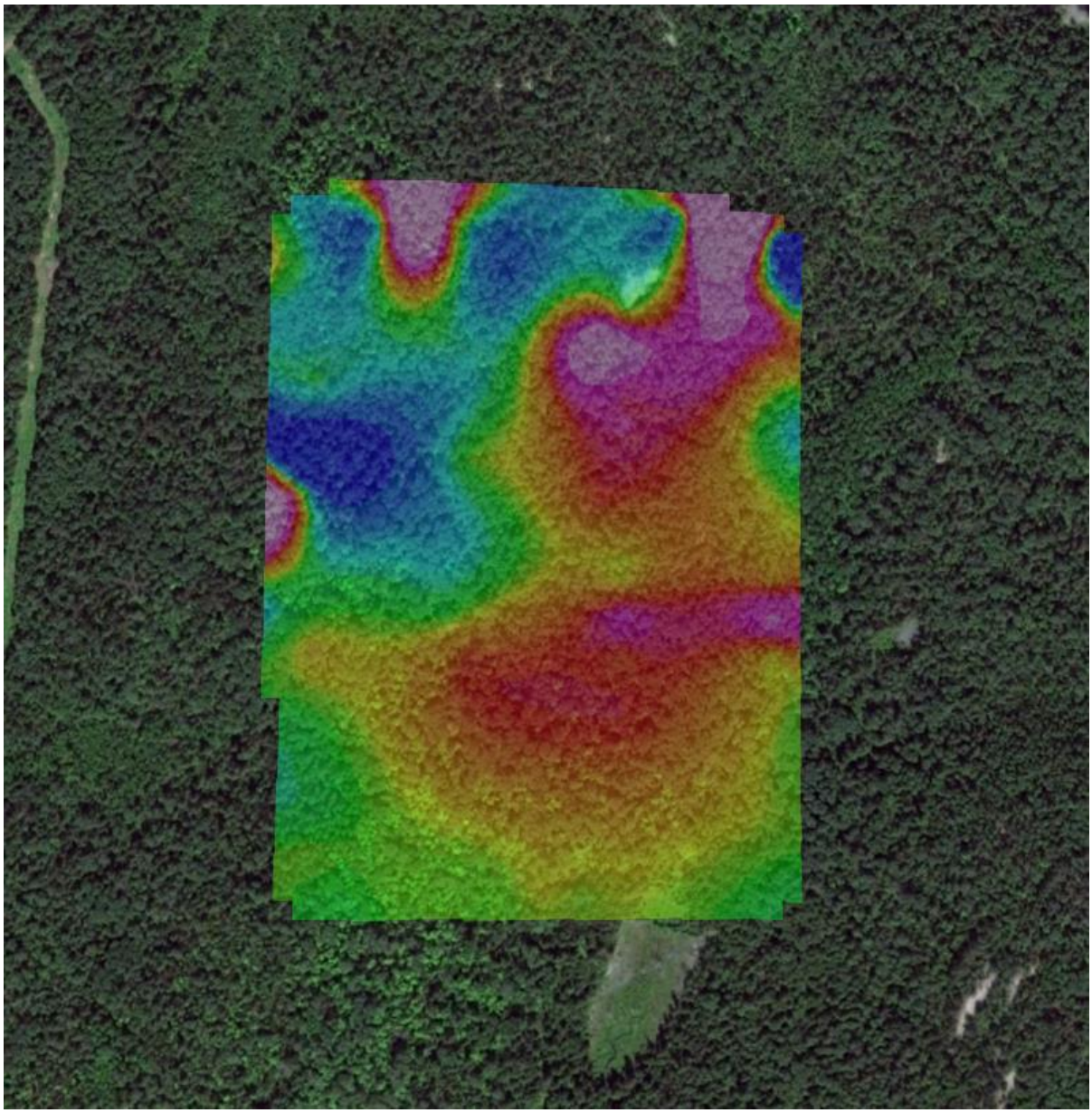


***Figure 3: Google Image with Magnetic Overlay***

The magnetometer/VLF EM survey generated various responses throughout the property.

The magnetic survey indicated the presence of three probable units with the potential of two intrusive, within these. The northern-western unit appears to be a magnetic low region as compared to the remainder of the survey area. This most likely represents a volcanic unit. This has been overprinted in the north-east by a stronger magnetic signature. This overprint most likely indicates the presence of a sedimen-

tary unit. The southern portion of the survey area appears to represent a unit similar to the Nipissing Diabase Sill.

Cutting these magnetic units appears to be two additional linear magnetic features. The first is an east west signature that most likely represents a diabase dike. The second appears to strike north-south. This signature is characterized by and intense magnetic high. This might indicate an iron formation or a magnetite rich dike.

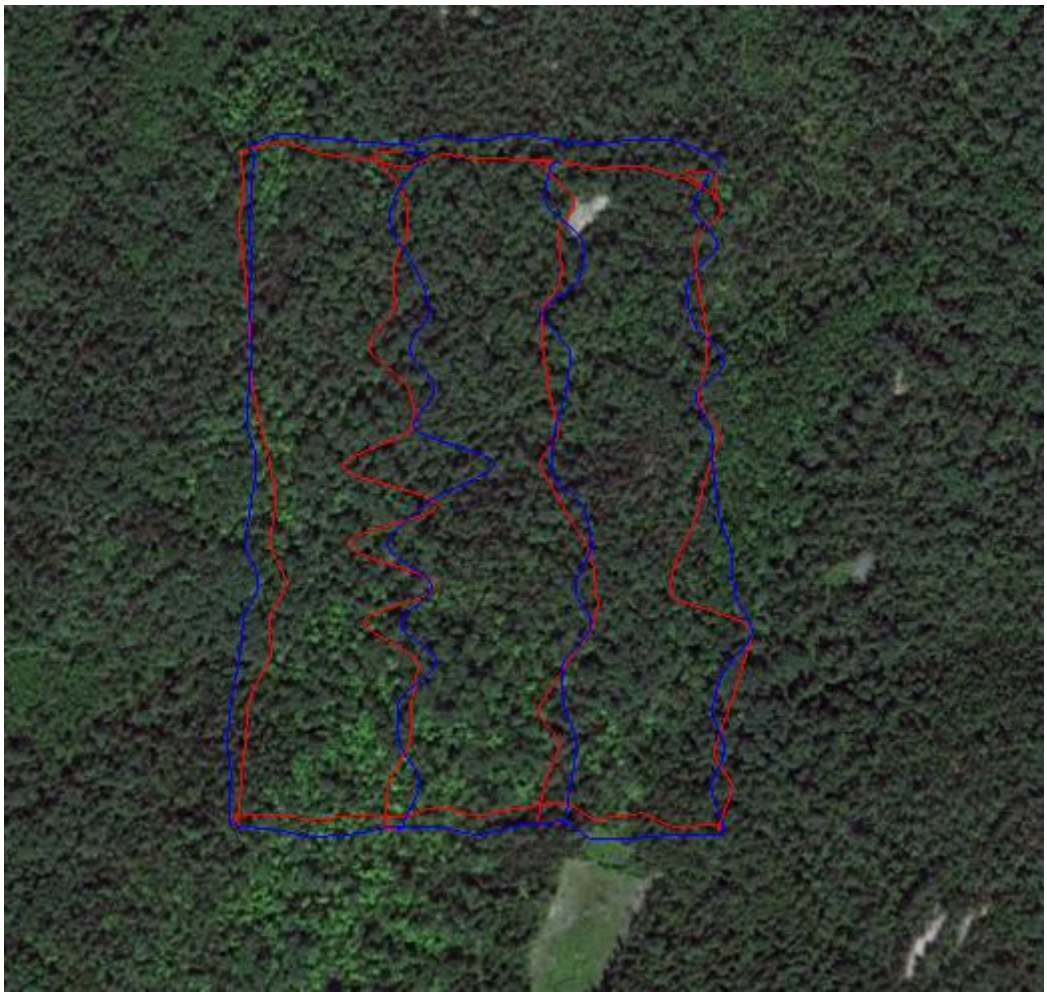


***Figure 4: Google Image with VLF Profiles***

There are numerous VLF EM signatures. The most intense response appears to occur over line 100E between 125N and 275N. Over this stretch it would appear that there is a conductive horizon parallel to the traverse line. A second strong VLF EM response occurs at 125N on line 300E. This is a strong in-phase crossover. These two regions should be investigated through prospecting with an east-west VLF EM survey being conducted in the vicinity of line 100E.

## 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 Practicing 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 1074127 Ontario Ltd.

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
June 22, 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 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 kilometers 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).

## APPENDIX D

### LIST OF MAPS (IN MAP POCKET)

Posted contoured TFM plan map (1:2000)

1) Q2208-1074127-COLEMAN-MAG-CONT

Posted VLF EM profiled plan map (1:2000)

2) Q2208-1074127-COLEMAN-VLF-NAA

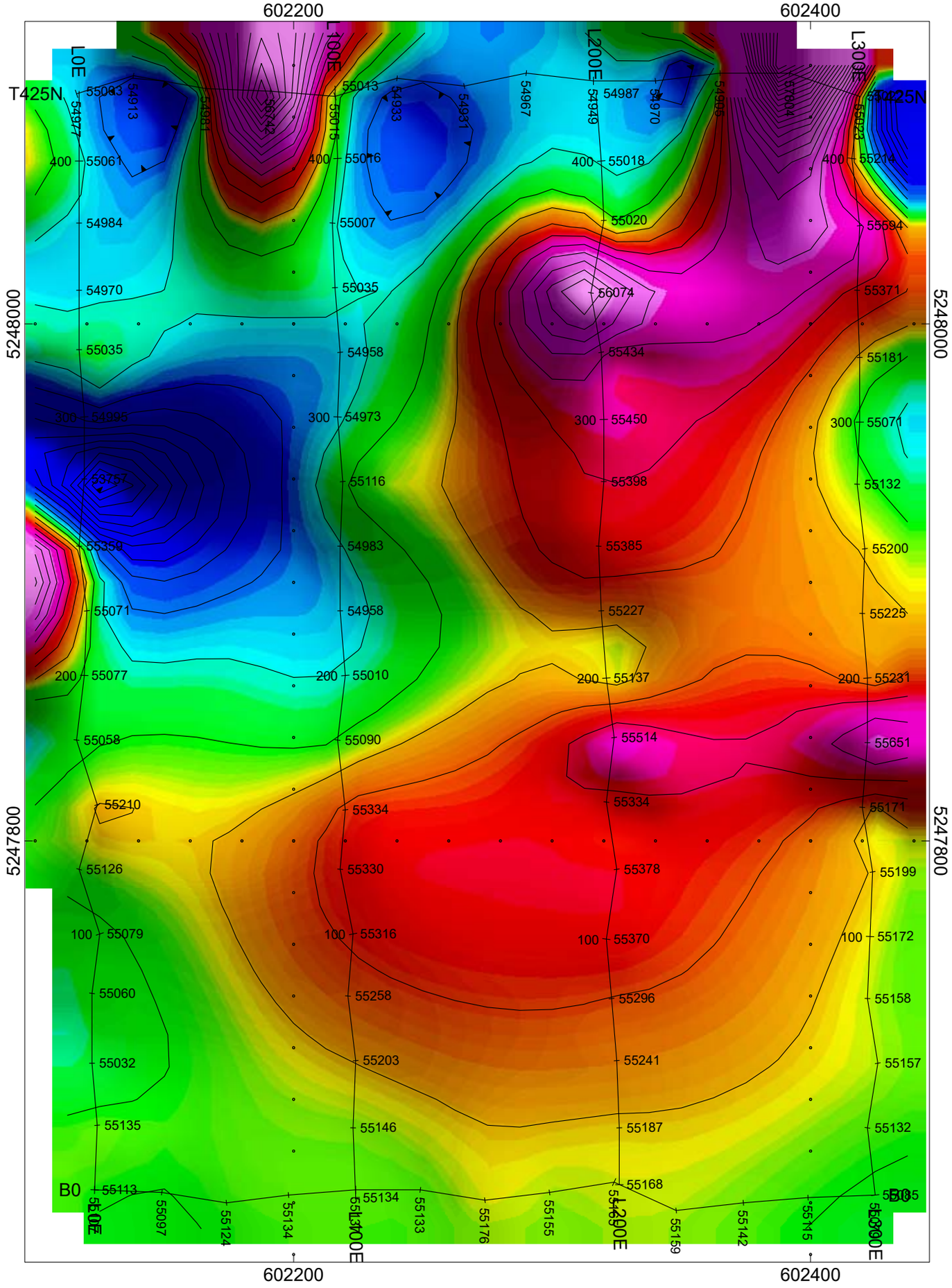
Summary Interpretation plan map (1:2000)

3) Q2208-1074127-COLEMAN-INTERP

Claim Map with Magnetic Traverses (1:25000)

4) Q2208-1074127-COLEMAN-GRID

**TOTAL MAPS = 4**




# 1074127 ONTARIO LTD.

## COLEMAN PROPERTY
## ColemanTownship, Ontario

TOTAL FIELD MAGNETIC CONTOURED PLAN MAP
Base Station Corrected

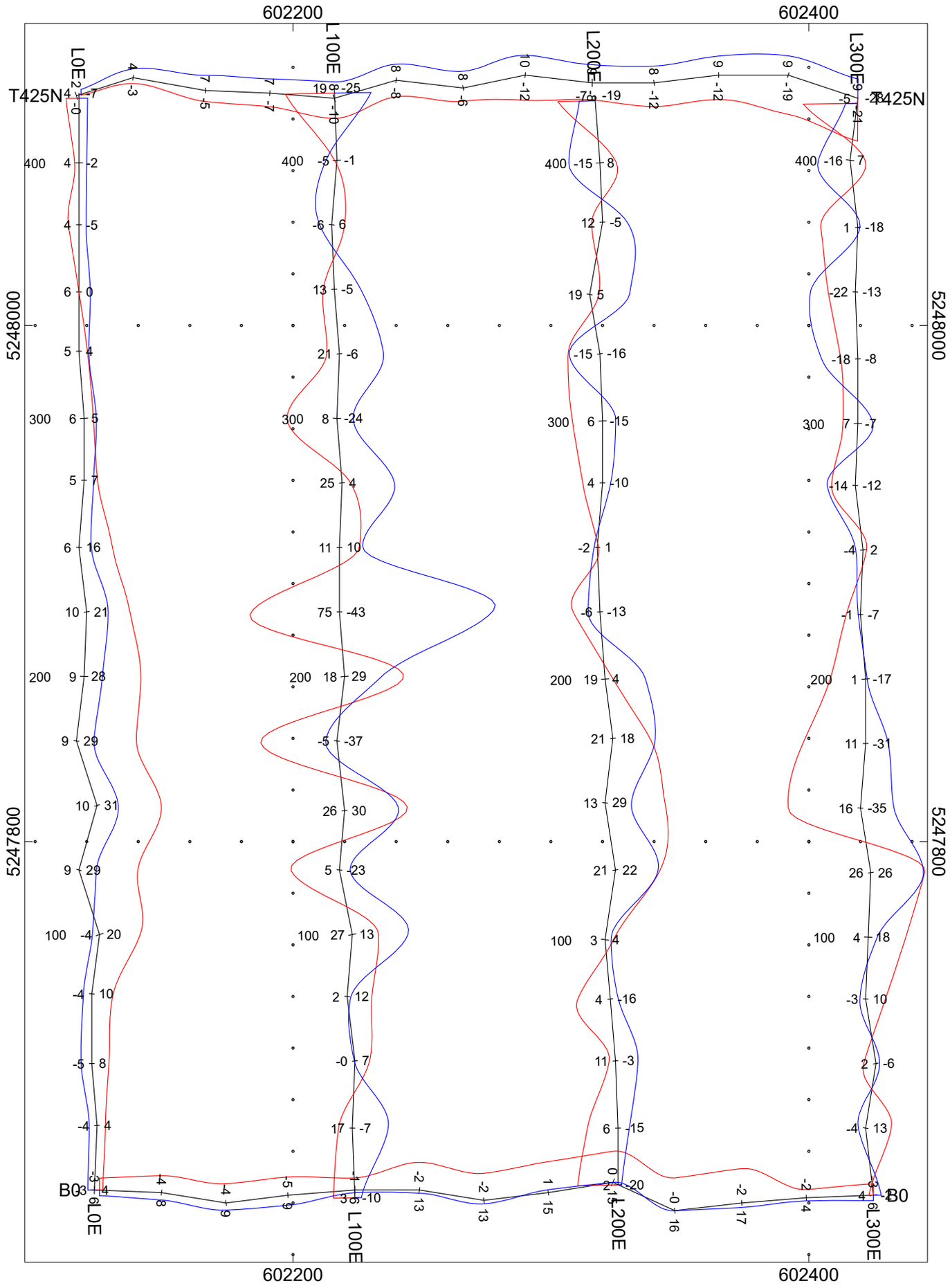
Posting Level: 0nT
Field Inclination/Declination: 74degN/12degW
Station Seperation: 25 meters
Total Field Magnetic Contours: 100 nT

GSM-19 OVERHAUSER MAGNETOMETER/VLF v7

Receiver Operated By: Bruce Lavalley
GPS Operated By: Bill Bonney
Processed by: Jason Ploeger
Map Drawn By: C Jason Ploeger, B.Sc.
June 2016

CANADIAN EXPLORATION SERVICES LTD

*Drawing: Q2208-1074127-COLEMAN-MAG-CONT*




# 1074127 ONTARIO LTD.

## COLEMAN PROPERTY
## ColemanTownship, Ontario

VLF IN PHASE/OUT PHASE PROFILE PLAN MAP
24.0kHz NAA - CUTTLER USA

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

Vertical Profile Scales: 2.5 %/mm
Contour Interval:

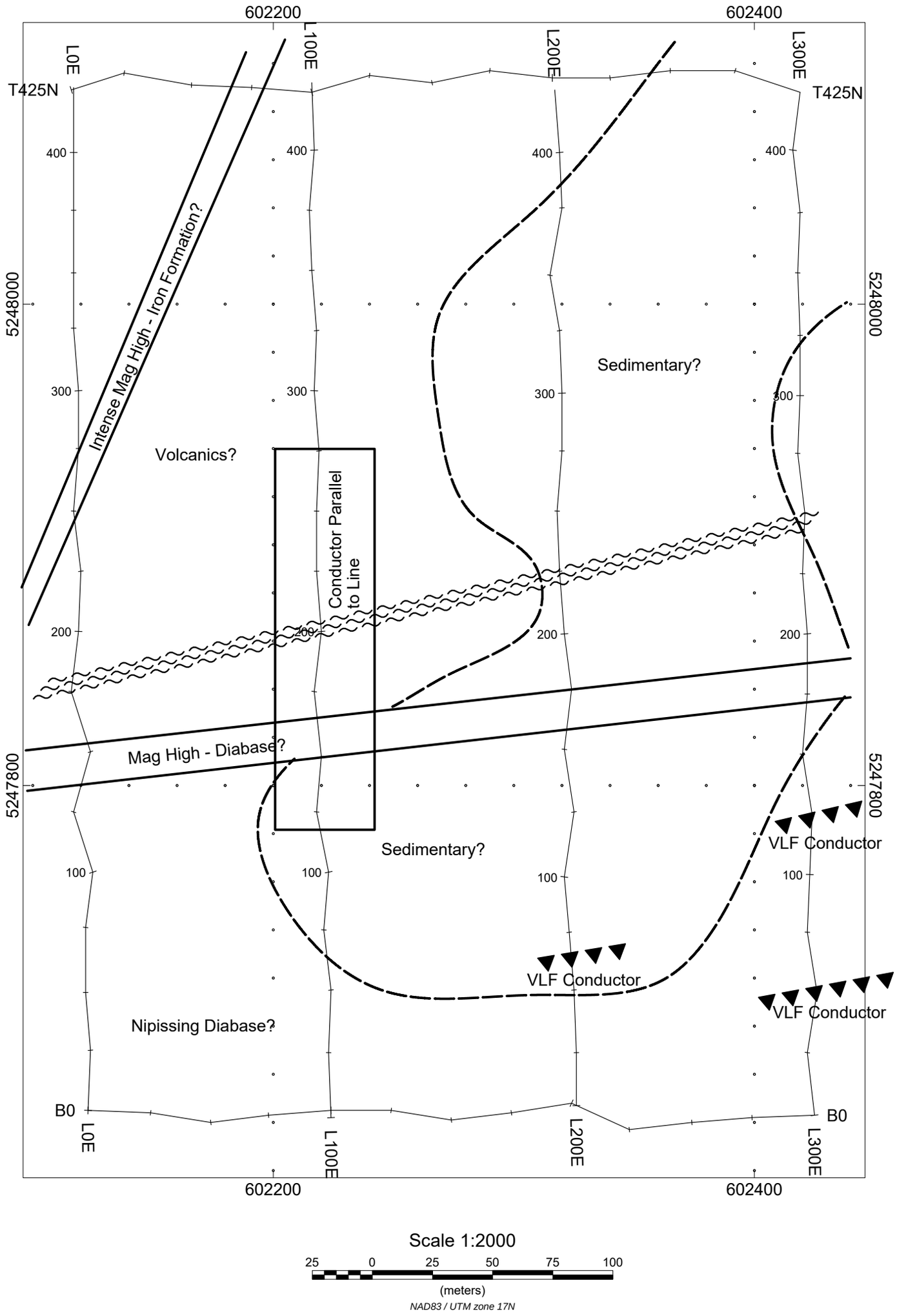
Station Seperation: 25 meters
Posting Level: 0

GSM-19 OVERHAUSER MAGNETOMETER/VLF v7

Receiver Operated By: Bruce Lavalley
GPS Operated By: Bill Bonney
Processed by: Jason Ploeger
Map Drawn By: C Jason Ploeger, B.Sc.
June 2016

CANADIAN EXPLORATION SERVICES LTD

*Drawing: Q2208-1074127-COLEMAN-VLF-NAA*




Scale 1:2000

25 0 25 50 75 100

(meters)

*NAD83 / UTM zone 17N*

# 1074127 ONTARIO LTD.

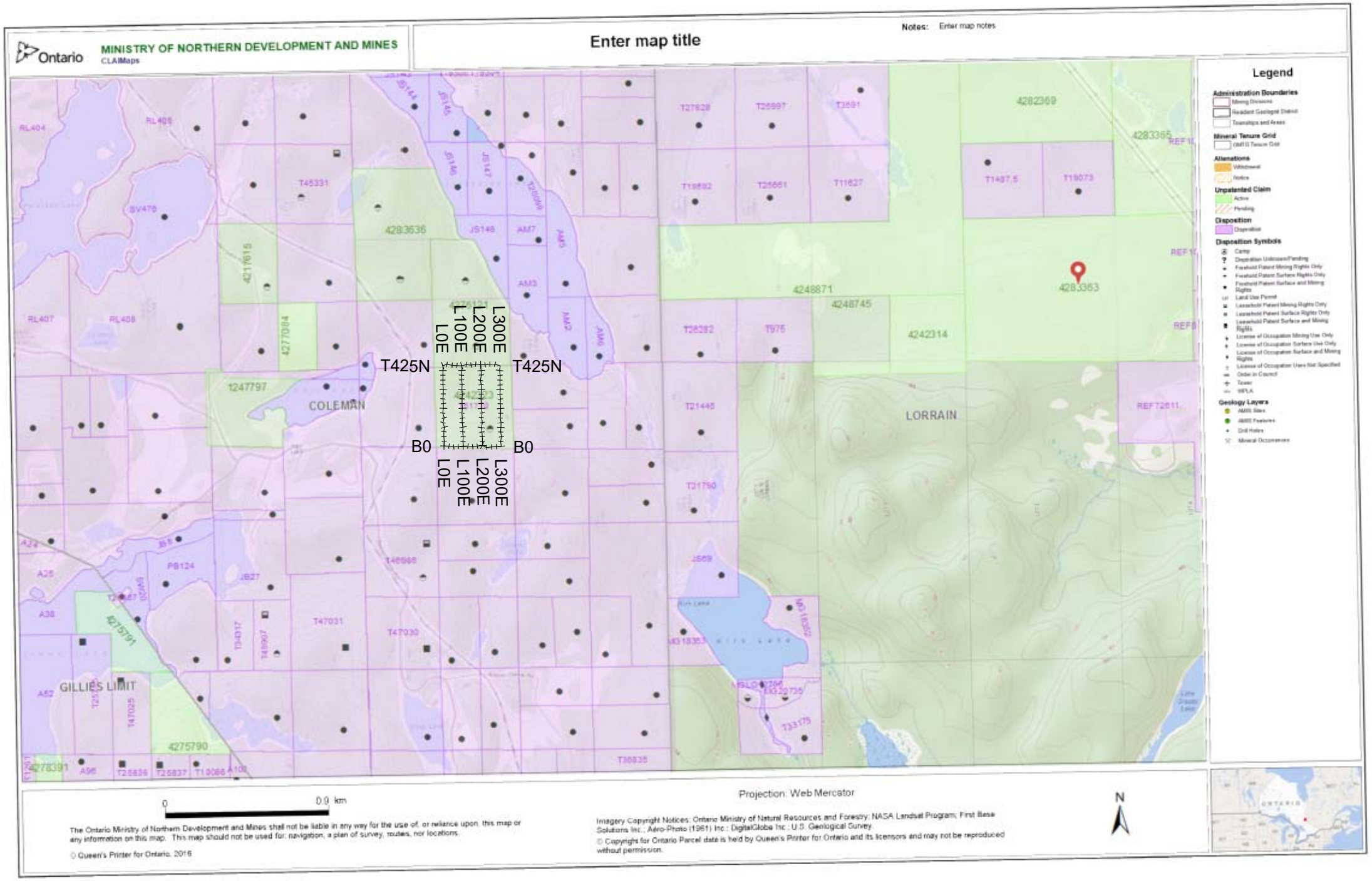
## COLEMAN PROPERTY
## ColemanTownship, Ontario

SUMMARY INTERPRETATION
Magnetometer and VLF EM Surveys

Receiver Operated By: Bruce Lavalley
GPS Operated By: Bill Bonney
Processed by: Jason Ploeger
Map Drawn By: C Jason Ploeger, B.Sc.
June 2016

CANADIAN EXPLORATION SERVICES LTD

*Drawing: Q2208-1074127-COLEMAN-INTERP*


Ontario
MINISTRY OF NORTHERN DEVELOPMENT AND MINES
CLAIMaps
Enter map title
Notes: Enter map notes
Legend
Administration Boundaries
Mineral Tenure Grid
Alienations
Withdrawal
Notice
Unpatented Claim
Active
Pending
Disposition
Disposition
Disposition Symbols
Camp
Disposition Unknown/Pending
Freehold Patent Mining Rights Only
Freehold Patent Surface Rights Only
Freehold Patent Surface and Mining Rights
Land Use Permit
Leasehold Patent Mining Rights Only
Leasehold Patent Surface Rights Only
Leasehold Patent Surface and Mining Rights
License of Occupation Mining Use Only
License of Occupation Surface Use Only
License of Occupation Surface and Mining Rights
License of Occupation Uses Not Specified
Order in Council
Tower
WPLA
Geology Layers
AMIS Sites
AMIS Features
Drill Holes
Mineral Occurrences
T425N
T425N
B0
B0
L0E
L100E
L200E
L300E
L0E
L100E
L200E
L300E
COLEMAN
LORRAIN
GILLIES LIMIT
4283636
4283369
4283365
4248871
4248745
4242314
1247797
4275791
4275790
4278391
0
0.9 km
Projection: Web Mercator
N
The Ontario Ministry of Northern Development and Mines shall not be liable in any way for the use of, or reliance upon, this map or any information on this map. This map should not be used for: navigation, a plan of survey, routes, nor locations.
© Queen's Printer for Ontario, 2016
Imagery Copyright Notices: Ontario Ministry of Natural Resources and Forestry; NASA Landsat Program; First Base Solutions Inc.; Aero-Photo (1961) Inc.; DigitalGlobe Inc.; U.S. Geological Survey
© Copyright for Ontario Parcel data is held by Queen's Printer for Ontario and its licensors and may not be reproduced without permission.