

PO Box 219  
14579 Government Road  
Larder Lake, Ontario  
P0K 1L0, Canada  
Phone (705) 643-1122  
Fax (705) 643-2191

# **SEDEX MINING CORP.**

**Magnetometer and VLF EM  
Surveys  
Over the**

**Ramore Gold  
Playfair Township, Ontario**

**TABLE OF CONTENTS**

<b>1.</b>	<b>SURVEY DETAILS .....</b>	<b>3</b>
1.1	PROJECT NAME.....	3
1.2	CLIENT .....	3
1.3	LOCATION .....	3
1.4	ACCESS .....	3
1.5	SURVEY GRID .....	4
<b>2.</b>	<b>SURVEY WORK UNDERTAKEN .....</b>	<b>5</b>
2.1	SURVEY LOG.....	5
2.2	PERSONNEL .....	5
2.3	SURVEY SPECIFICATIONS.....	5
2.4	ACCURACY AND REPEATABILITY .....	5
<b>3.</b>	<b>OVERVIEW OF SURVEY RESULTS.....</b>	<b>6</b>
3.1	SUMMARY INTERPRETATION.....	6

**LIST OF APPENDICES**

**APPENDIX A: STATEMENT OF QUALIFICATIONS**  
**APPENDIX B: THEORETICAL BASIS AND SURVEY PROCEDURES**  
**APPENDIX C: INSTRUMENT SPECIFICATIONS**  
**APPENDIX D: LIST OF MAPS (IN MAP POCKET)**

**LIST OF TABLES AND FIGURES**

Figure 1: Location of Ramore Gold .....	3
Figure 3: Claim Map with Projected Magnetic Traverses.....	4
Table 1: Survey log.....	5

## 1. SURVEY DETAILS

### 1.1 PROJECT NAME

This project is known as Ramore Gold

### 1.2 CLIENT

SEDEX MINING CORP.  
711-675 West Hastings Street.  
Vancouver, British Columbia  
V6B 1N2

### 1.3 LOCATION

The Ramore Gold is located in Playfair Township approximately 4 km southwest of Ramore, Ontario. The survey area covers a portion of claim numbered L4213861 located in Playfair Township, within the Larder Lake Mining Division.



***Figure 1: Location of Ramore Gold***

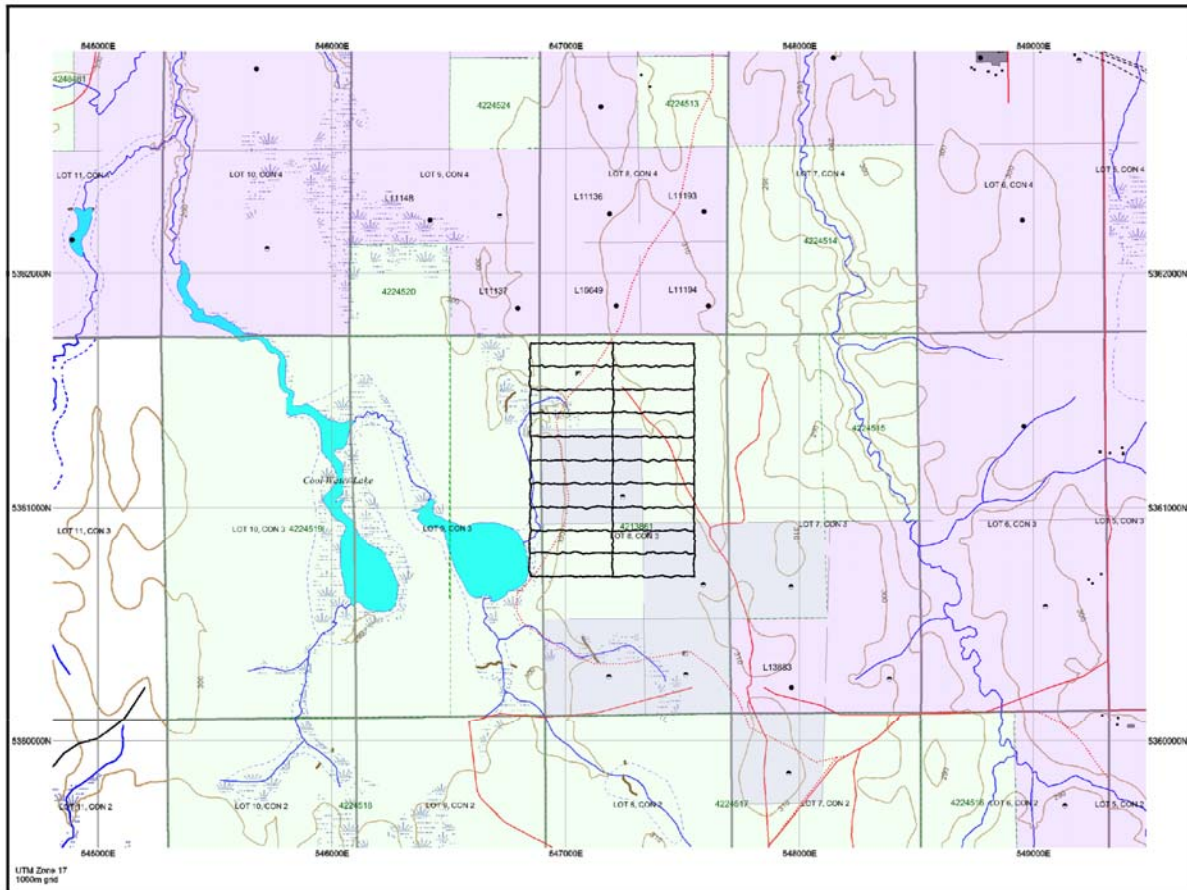
### 1.4 ACCESS

Access to the property was attained with a 4x4 truck via a year-round gravel road. Approximately 1 km south of Ramore Ontario along highway 11 a all season road heads west for 600m than turns south for an additional 3.2 km. From this point snow machines were used for the final 3km through a

series of older forestry access roads.

### 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 and magnetic samples were taken every 25m along these controlled traverses. The GPS used was a Garmin 76 with an external antenna for added accuracy.



***Figure 2: Claim Map with Projected Magnetic Traverses***

## 2. SURVEY WORK UNDERTAKEN

### 2.1 SURVEY LOG

Date	Description	Line	Min Extent	Max Extent	Total Survey (m)
January 26, 2009	Locate survey area and begin survey.	1000N	0	350E	350
		900N	0	700E	700
		800N	0	700E	700
		700N	0	700E	700
		600N	0	700E	700
		500N	0	700E	700
January 27, 2009	Continue survey.	1000N	350E	700E	350
		400N	0	700E	700
		300N	0	700E	700
		200N	0	700E	700
		100N	0	700E	700
		700E	0	1000N	1000
January 28, 2009	Complete survey.	0	0	700E	700
		0	0	1000N	1000
		350E	0	1000N	1000

***Table 1: Survey log***

### 2.2 PERSONNEL

Shane Buckland of Haileybury, Ontario, conducted all the magnetic data collection and Barry Allen of Kirkland Lake was 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 v7 was employed as a base station for diurnal correction.

A total of 10.7 line kilometers of magnetic traverse survey was conducted between January 26<sup>th</sup> and January 28<sup>th</sup>, 2009. This consisted of 856 magnetometer samples taken at 12.5m intervals.

### 2.4 ACCURACY AND REPEATABILITY

Generally baseline repeatability was within 5nT in low gradient areas. This error was due to the small errors (<5m) generated by the GPS location. Errors were also noted with the high gradients in the overlap regions.

### 3. OVERVIEW OF SURVEY RESULTS

#### 3.1 SUMMARY INTERPRETATION

The survey area appears to be underlain by a similar magnetic domain. Through this domain appears a series of north-south striking narrow linear features.

Within the southeast quadrant of the survey area a magnetic high occurs. This occurrence appears broad in nature is unconstrained to the south. This may represent an alteration zone or a series of north south magnetically high features. The survey area should be extended to cover this to the southeast.

Near the central region of the survey area appears a strong VLF EM conductive axis. This axis appears to flank the eastern edge of one of the linear magnetic features. This may indicate the contact; however may also indicate mineralization.

**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 president 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 and a member of the Association of Exploration Geophysicist.
5. I do not have an interest in the properties and/or securities of **SEDEX MINING CORP.**
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  
January 2009



C. Jason Ploeger, B.Sc. (geophysics)  
President 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 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 76



#### GPS Performance

Receiver: WAAS-enabled, 12 parallel channel GPS receiver continuously tracks and uses up to 12 satellites to compute and update your position

#### Navigation Features

- Waypoints/icons:** 500 with name and graphic symbol, 10 nearest (automatic), 10 proximity
- Routes:** 50 reversible routes with up to 50 points each, plus MOB and TracBack® modes
- Tracks:** Automatic track log; 10 saved tracks let you retrace your path in both directions
- Trip computer:** Current speed, average speed, resettable max. speed, trip timer and trip distance
- Alarms:** Anchor drag, approach and arrival, off-course, proximity waypoint, shallow water and deep water
- Tables:** Built-in celestial tables for best times to fish and hunt, sun and moon rise, set and location
- Map datums:** More than 100 plus user datum
- Position format:** Lat/Lon, UTM/UPS, Maidenhead, MGRS, Loran TDs and other grids, including user grid

#### Acquisition times

- Warm:** Approximately 15 seconds
- Cold:** Approximately 45 seconds
- AutoLocate®:** Approximately 2 minutes
- Update rate:** 1/second, continuous

#### GPS accuracy

- Position:** < 15 meters, 95% typical\*
- Velocity:** 0.05 meter/sec steady state

#### WAAS accuracy

- Position:** < 3 meters, 95% typical\*
- Velocity:** 0.05 meter/sec steady state

#### Power

- Source:** Two "AA" batteries (not included)
- Battery Life:** Up to 16 hours

#### Physical

- Size:** 2.7"W x 6.2"H x 1.2"D (6.9 x 15.7 x 3.0 cm)
- Weight:** 7.7 ounces

#### Display

- 1.6"W x 2.2"H (4.1 x 5.6 cm)
- 180 x 240 pixels, high-contrast
- FSTN with bright backlighting

<b>Case:</b>	Fully gasketed, high-impact plastic alloy, waterproof to IEC 529 IPX7 standards
<b>Interfaces:</b>	RS232 with NMEA 0183, RTCM 104 DGPS data format and proprietary Garmin®
<b>Antenna:</b>	Built-in quadrifilar, with external antenna connection (MCX)
<b>Differential:</b>	DGPS (USCG and WAAS capable)
<b>Temperature range:</b>	5°F to 158°F (-15°C to 70°C)
<b>Dynamics:</b>	6 g's
<b>User data storage:</b>	Indefinite, no memory battery required

*Specifications obtained from [www.garmin.com](http://www.garmin.com)*

## APPENDIX D

### LIST OF MAPS (IN MAP POCKET)

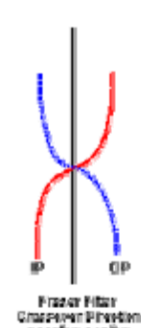
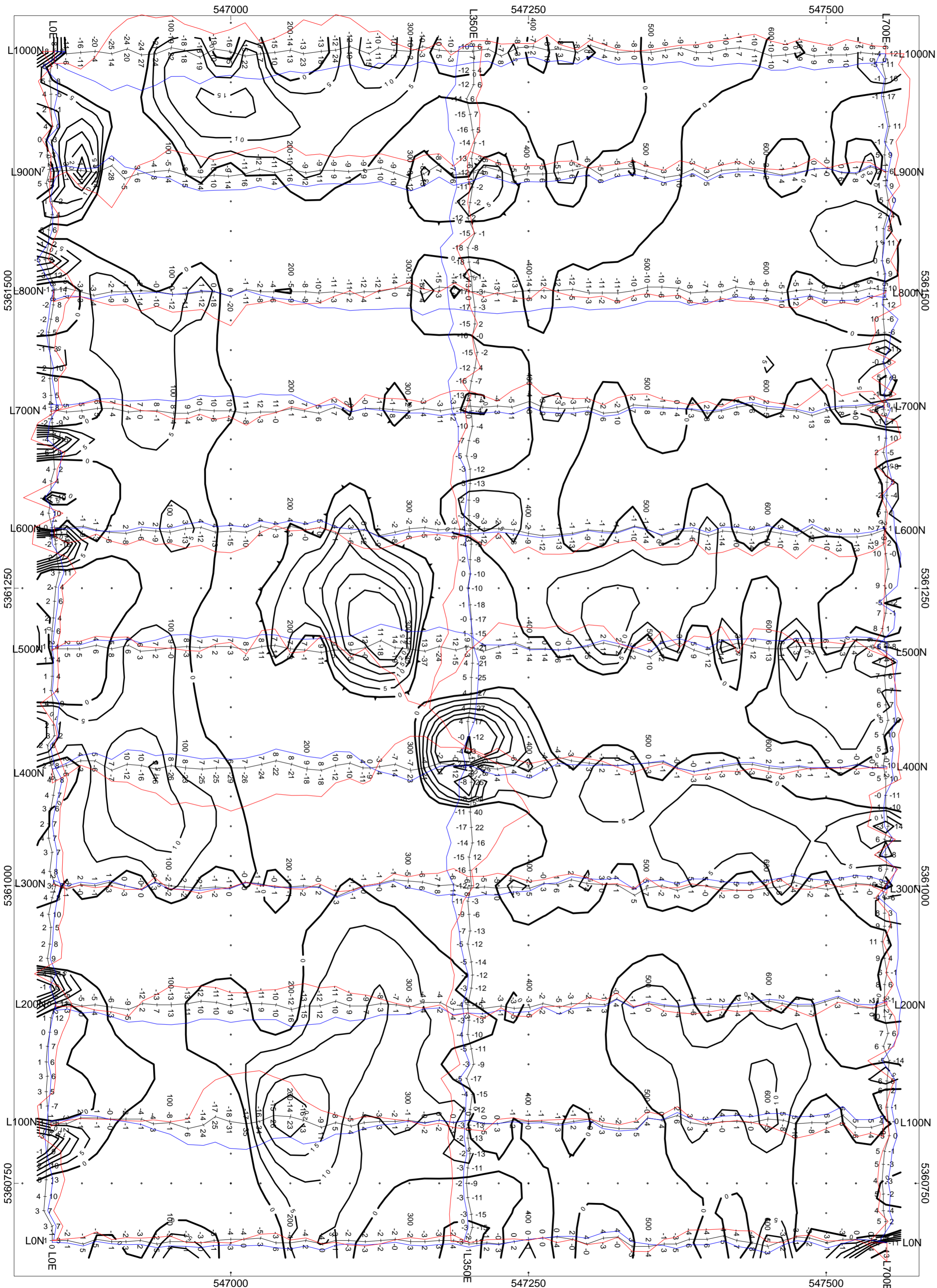
Posted contoured TFM plan map (1:2500)

- 1) SEDEX MINING-RAMORE GOLD-MAG-CONT

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

- 2) SEDEX MINING-RAMORE GOLD -VLF-NAA
- 3) SEDEX MINING-RAMORE GOLD -VLF-NML

**TOTAL MAPS=3**



**SEDEX MINING CORP.**

**RAMORE GOLD  
Playfair Township, Quebec**

VLF IN PHASE/OUT PHASE PROFILE  
VLF FRASER FILTERED CONTOURED PLAN MAP  
25.2kHz NML - La Mourie, North Dakota, 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

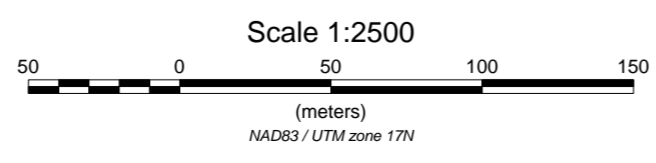
Station Separation: 12.5 meters  
Posting Level: 0

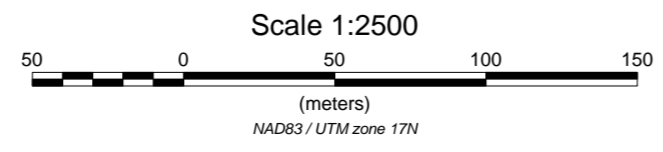
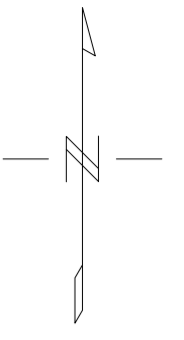
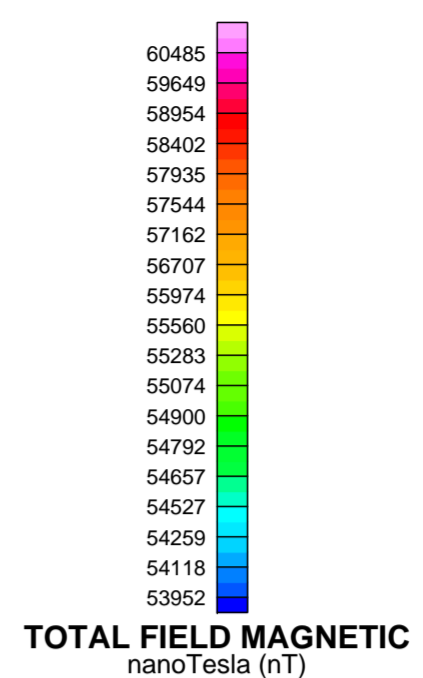
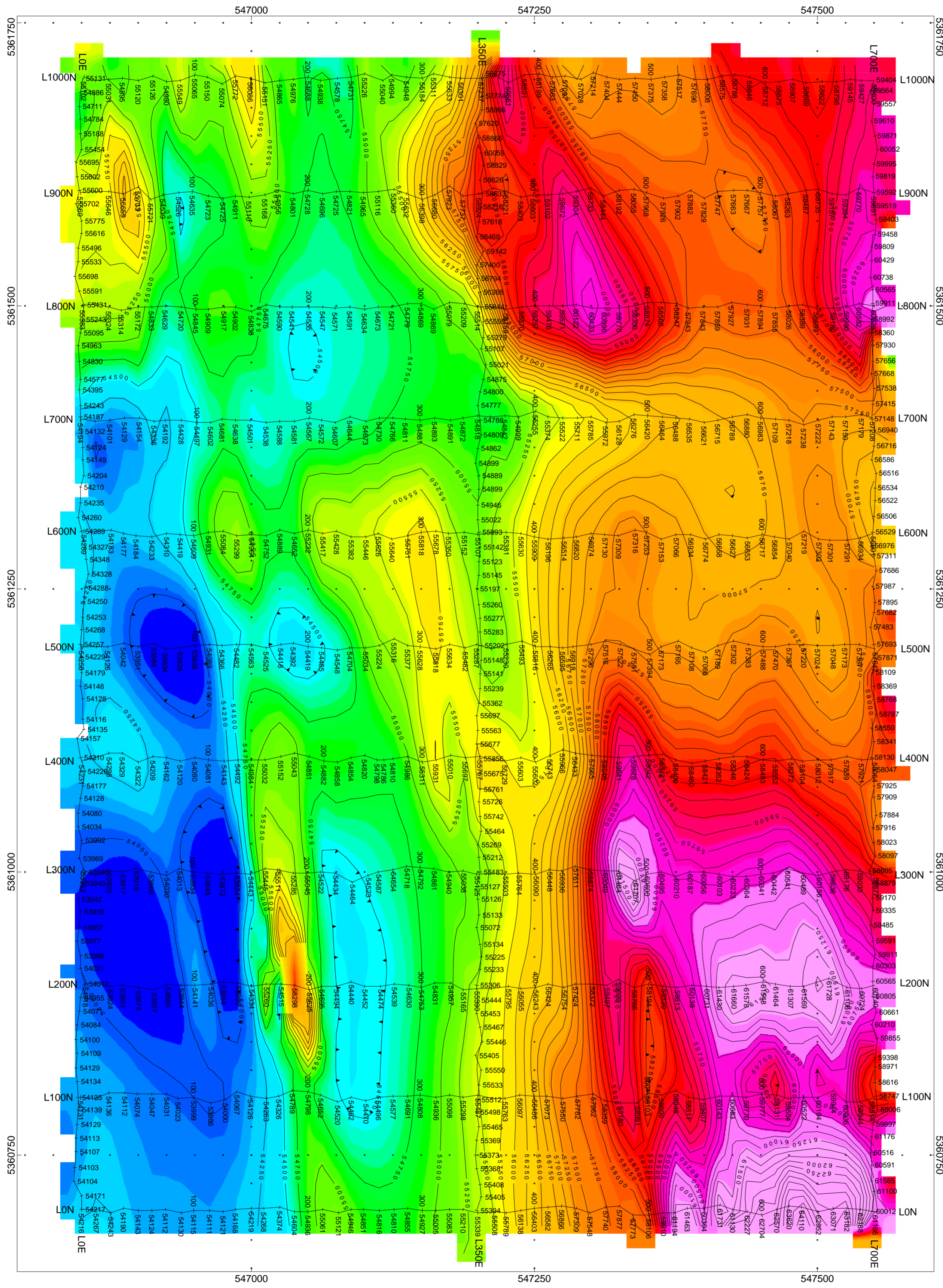
GSM-19 OVERHAUSER MAGNETOMETER/VLF v7

Magnetometer Operated by: Shane Buckland  
GPS Operated by: Barry Allen  
Processed by: C Jason Ploeger, B.Sc.  
Map Drawn By: Belinda Bailey  
January 26 to 28, 2009



Drawing : SEDEX MINING-RAMORE GOLD-VLF-NAA





**SEDEX MINING CORP.**

**RAMORE GOLD**  
Playfair Township, Quebec

TOTAL FIELD MAGNETIC CONTOURED PLAN MAP  
Base Station Corrected

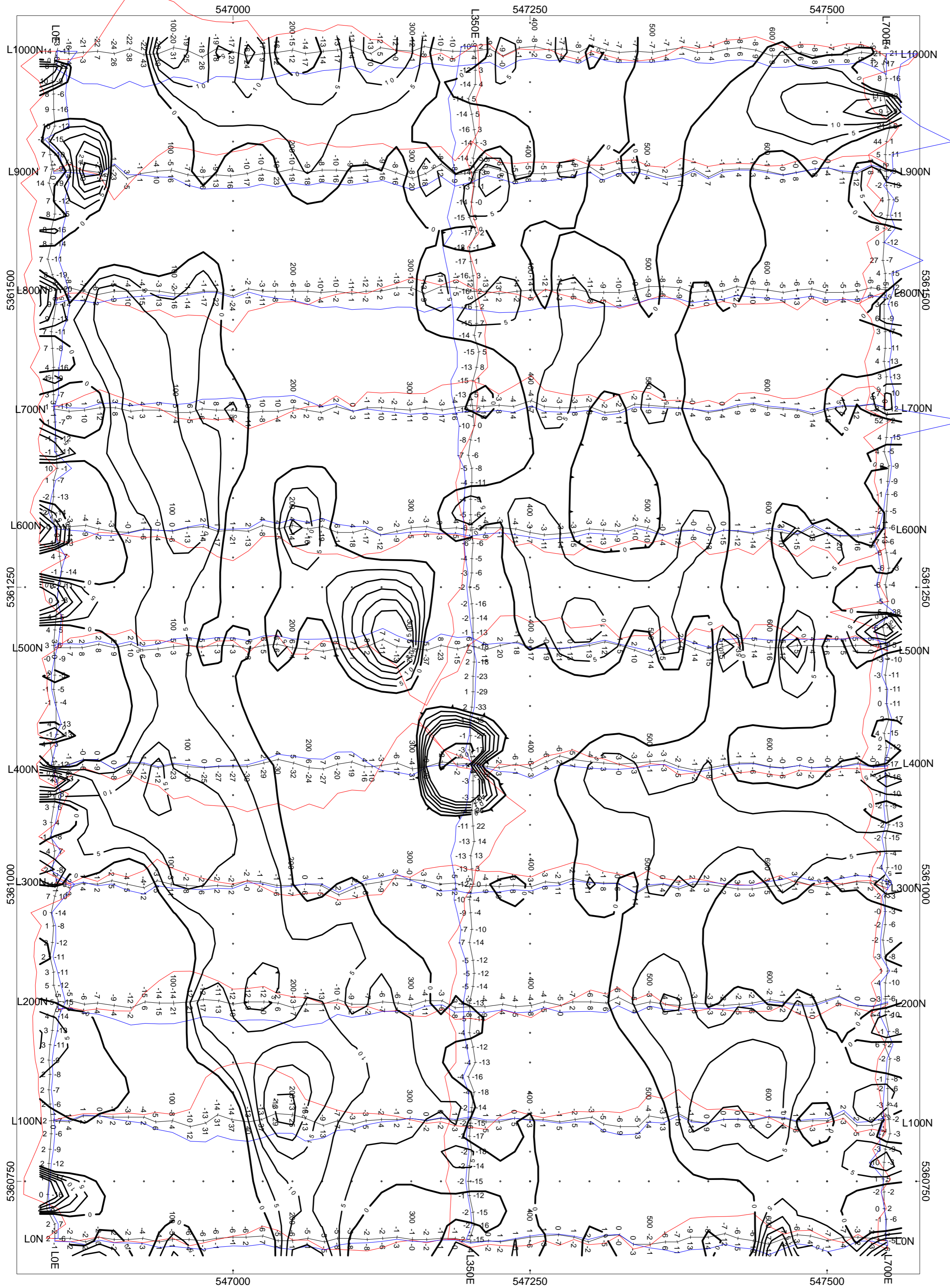
Posting Level: 0nT  
Field Inclination/Declination: 74degN/12degW  
Station Separation: 12.5 meters  
Total Field Magnetic Contours: 250nT

GSM-19 OVERHAUSER MAGNETOMETER/VLF v7

Magnetometer Operated by: Shane Buckland  
GPS Operated by: Barry Allen  
Processed by: C Jason Ploeger, B.Sc.  
Map Drawn By: Belinda Bailey  
January 26 to 28, 2009

**LARDER**  
GEOPHYSICS LTD.  
(781) 643-1122

Drawing : SEDEX MINING-RAMORE GOLD-MAG-CONT



**SEDEX MINING CORP.**

**RAMORE GOLD  
Playfair Township, Quebec**

VLF IN PHASE/OUT PHASE PROFILE  
VLF FRASER FILTERED CONTOURED PLAN MAP  
24.0kHz NAA - CUTLER, 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 Separation: 12.5 meters  
Posting Level: 0

GSM-19 OVERHAUSER MAGNETOMETER/VLF v7

Magnetometer Operated by: Shane Buckland  
GPS Operated by: Barry Allen  
Processed by: C Jason Ploeger, B.Sc.  
Map Drawn By: Belinda Bailey  
January 26 to 28, 2009



Drawing : SEDEX MINING-RAMORE GOLD-VLF-NAA

