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## AMADOR GOLD CORP.

# Magnetometer and VLF EM Surveys Over the

James Portion
SILVERSTRIKE PROPERTY
James Township, Ontario

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### 1. SURVEY DETAILS

### 1.1 PROJECT NAME

This project is known as the Silverstrike Property – James Portion

### 1.2 CLIENT

AMADOR GOLD CORP.

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

### 1.3 LOCATION

The James Portion is located in James Township approximately 3.5 km north-west of Elk Lake, Ontario. The survey area covers a portion of claims numbered 4224610, 4217617 and 4211941 located in the northern part of James Township, within the Larder Lake Mining Division.

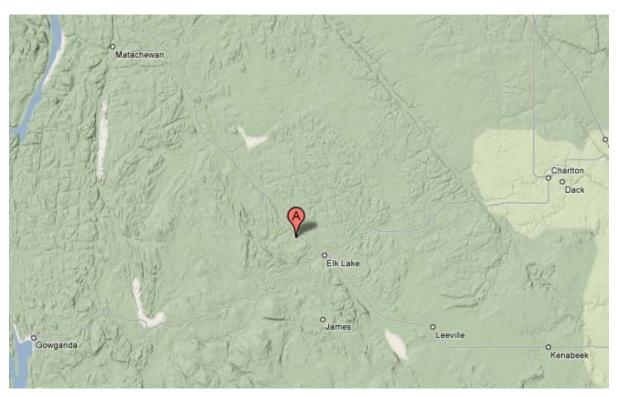


Figure 1: Location of Silverstrike Property

### 1.4 Access

Access to the property was attained with a 4x4 truck via highway 65, 4 kilometers north of the town north of the town of Elk Lake, Ontario. From this point the truck was parked and a 400 m traverse was made west 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 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.

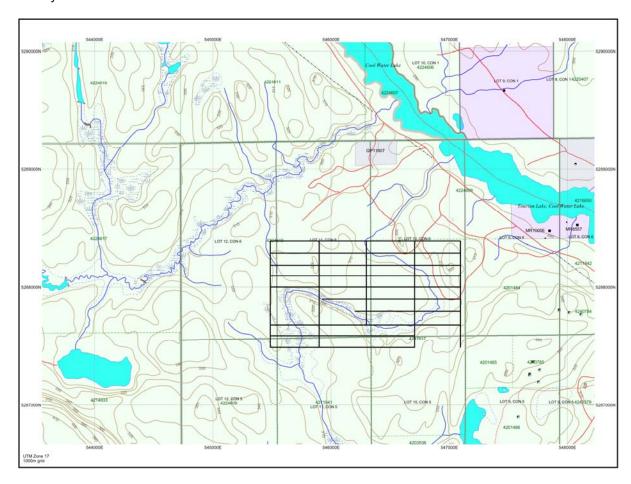


Figure 2: Claim Map with Projected Magnetic Traverses



### 2. SURVEY WORK UNDERTAKEN

### 2.1 SURVEY LOG

Date	Description	Line	Min Ex-	Max	<b>Total Survey</b>
	_		tent	Extent	(m)
					, ,
31 July 2008	Locate survey area and begin survey.	900N	800E	1600E	800
31 July 2006	Locate survey area and begin survey.	800N	800E	1600E	800
		700N	800E	1600E	800
		600N	800E	1600E	800
		500N	800E	1600E	800
		400N	800E	1600E	800
		300N	800E	1600E	800
		200N	800E	1600E	800
1 August 2008	Continue survey area is extremely				
	flooded and wet making progress difficult.				
	Unable to read portions of scheduled				
	survey area.	1600E	0	900N	900
		1200E	0	900N	900
		800E	200N	900N	700
		600N	0	800E	800
		500N	0	800E	800
		400N	400E	800E	400
		300N	675E	800E	125
5 August 2008	Complete scheduled survey.	400E	0	900N	900
	_	0	0	900N	900
		900N	0	800E	800
		800N	0	800E	800
		700N	0	800E	800
		200N	0	800E	800
		100N	0	1200E	1200
		0	0	1200E	1200

Table 1: Survey log

### 2.2 PERSONNEL

Dan Chartier of Larder Lake, Ontario conducted the magnetic data collection and Keegan Sullivan of Kirkland Lake, Ontario was responsible for the GPS control and GPS waypoint collection.

### 2.3 SURVEY SPECIFICATIONS

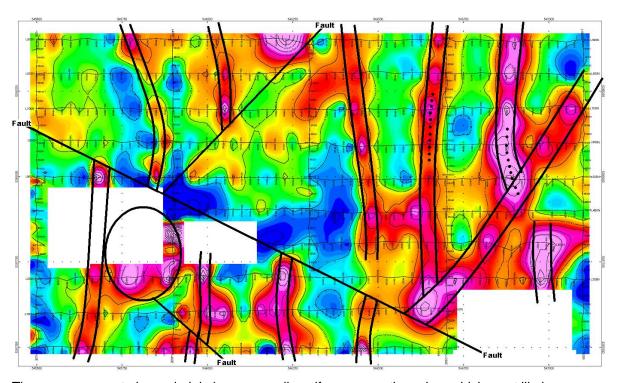
The survey was conducted with a GSM-19 v7 Overhauser magnetometer with a second GSM-19 v7 Overhauser magnetometer employed as a base station mode for diurnal correction.

A total of 18.425 line kilometers of magnetic and VLF EM traverse survey was conducted between July 31<sup>st</sup> and August 5<sup>th</sup>, 2008. This consisted of 737 magnetometer samples taken at 25m intervals.



### 3. OVERVIEW OF SURVEY RESULTS

### 3.1 SUMMARY INTERPRETATION



The area appears to be underlain by a generally uniform magnetic regime which most likely represents the granites of the Round Lake Batholith. Through this magnetic region are numerous north-south magnetic linear features. These features most likely represent a north-south dike swarm such as the Matachewan Dike system.

Two magnetic trends of note appear within the survey area. The first trend appears as a magnetically high region in the south-west quadrant of the survey area. This area was flooded so the extent of the magnetic signature was not surveyed in the summer months. This appears to be a larger magnetically high signature with a magnetic dipole flanking the north side. This may indicate the presence of a later intrusion or chemical differentiation within the potential granite system. It should be investigated further by prospecting and a more detailed magnetometer survey after the water system freezes.

The second notable magnetic system strikes north-easterly on the eastern portion of the survey area. This magnetically high feature appears to truncate and offset the potential dike system indicating a later source. This may represent a shear structure with plastic deformation or a late intrusive. This area should also be investigated by prospecting.

Two VLF EM axes appear over the survey area. Both appear to correlate to the north-south magnetically high trends and most likely are associated with the potential diabase dike swarm.



### **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 the Society of Exploration Geophysicists.
- 5. I do have an interest in the properties and securities of **AMADOR GOLD CORP**, but I have no interest in this property.
- 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 November 2008

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 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 inphase (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 15-25 kHz. 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 standards 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 orderof 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 Current speed, average speed, resettable max. speed, trip timer and trip distance Trip computer: and deep water

Alarms: Anchor drag, approach and arrival, off-course, proximity waypoint, shallow 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

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

**Power** 

Two "AA" batteries (not included) Source:

**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



Case: Fully gasketed, high-impact plastic alloy, waterproof to IEC 529 IPX7 standards Interfaces: RS232 with NMEA 0183, RTCM 104 DGPS data format and proprietary Garmin®

Antenna: Built-in quadrifilar, with external antenna connection (MCX)

**Differential:** DGPS (USCG and WAAS capable) **Temperature range:** 5°F to 158°F (-15°C to 70°C)

**Dynamics**: 6 g's

**User data storage:** Indefinite, no memory battery required

Specifications obtained from www.garmin.com



### **APPENDIX D**

### LIST OF MAPS (IN MAP POCKET)

Posted profiled TFM plan map (1:2500)

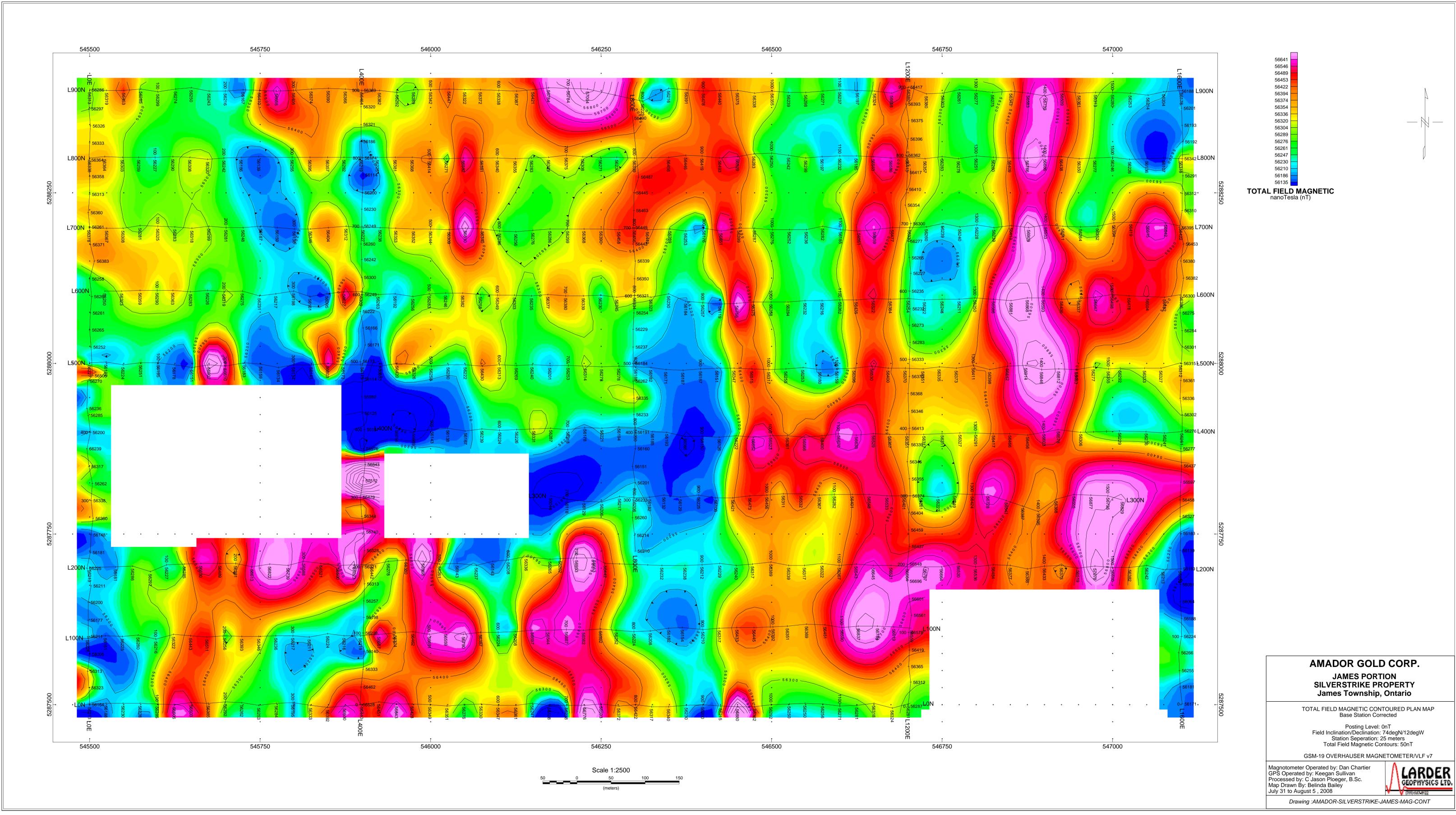
1) AMADOR-SILVERSTRIKE-JAMES-MAG-CONT

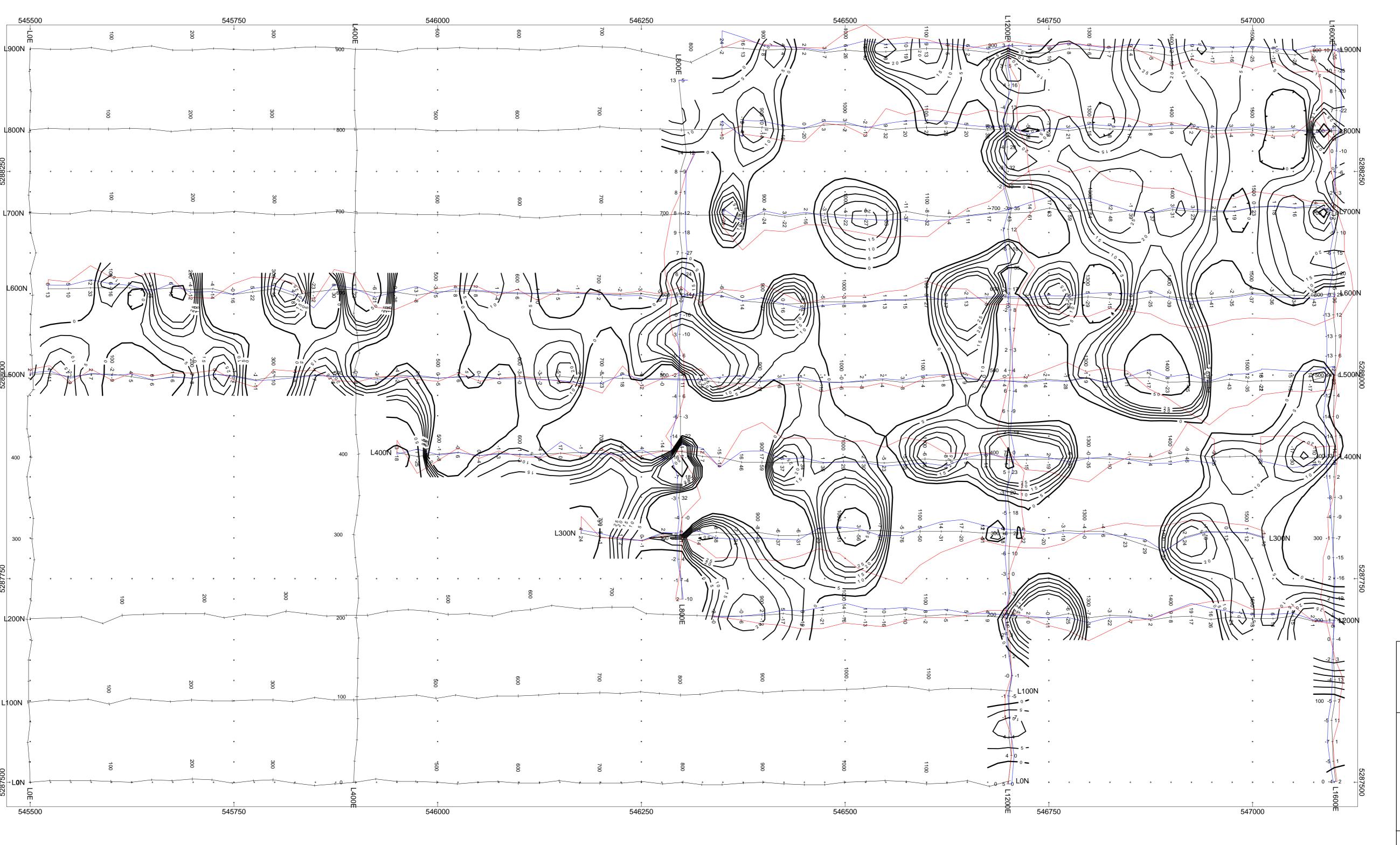
Posted profiled VLF EM Fraser Filtered plan map (1:2500)

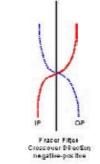
2) AMADOR-SILVERSTRIKE-JAMES-VLF-NAA

**TOTAL MAPS=2** 









## AMADOR GOLD CORPORATION

JAMES PORTION SILVERSTRIKE PROPERTY James Township, Ontario

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: 3%/mm Contour Interval: 0, 5, 10, 15, 20, 25, 50, 100

> Station Seperation: 25 meters Posting Level: 0

GSM-19 OVERHAUSER MAGNETOMETER/VLF v7

Magnotometer Operated by: Dan Chartier GPS Operated by: Keegan Sullivan Processed by: C Jason Ploeger, B.Sc. Map Drawn By: Belinda Bailey July 31 to August 5, 2008

LARDER GEOPHYSICS LTD.

Drawing :AMADOR-SILVERSTRIKE-JAMES-VLF-NAA