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# **ASHLEY GOLD MINES LIMITED**

## **Magnetometer Survey Over the**

### **BEEEMER PROPERTY**

#### **Beemer Township, Ontario**

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## 1. SURVEY DETAILS

### 1.1 PROJECT NAME

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

### 1.2 CLIENT

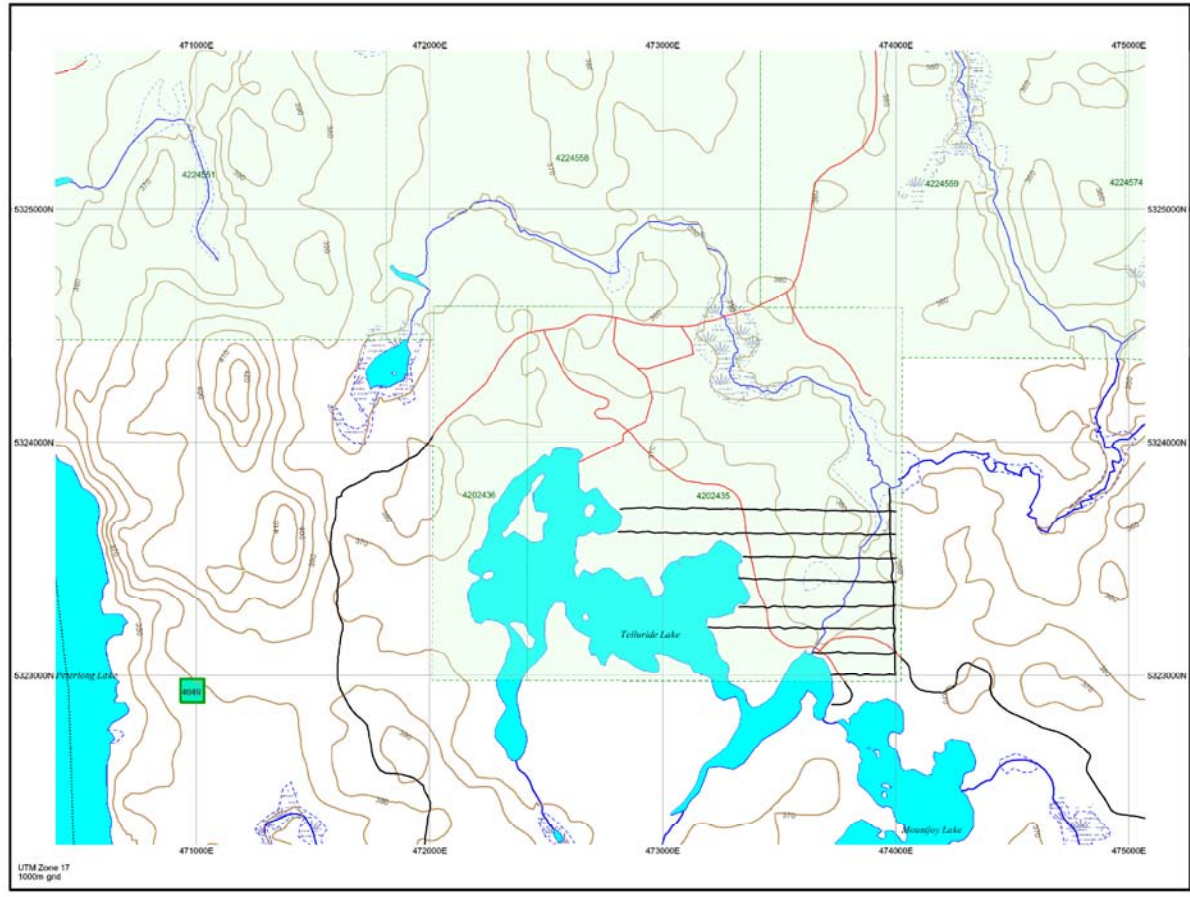
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Larder Lake, Ontario  
P0K1L0

### 1.3 LOCATION

The Beemer Property is located approximately 45km south of Timmins, Ontario. The magnetic traverse area is located in Beemer Township and covers mining claim 4202436 and 4202435, within the Porcupine Mining Division.



***Figure 1: Location of Beemer Property***



**Figure 2: Claim Map with Beemer Property Traverses**

#### 1.4 ACCESS

Access to the property was attained with a 4x4 truck via highway 566 west from Matachewan. From here a forestry road was followed for an additional 75km. The crew then stayed at the Argyle Lake Lodge and commuted from there.

#### 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.

## 2. SURVEY WORK UNDERTAKEN

### 2.1 SURVEY LOG

Date	Description	Line	Min Extent	Max Extent	Total Survey
26 August 2008	Reoccupy south end of property and conduct survey.	0	1725E	2000E	275
		100N	1650E	2000E	350
		200N	1200E	2000E	800
		300N	1325E	2000E	675
		400N	1350E	2000E	650
		500N	1375E	2000E	625
		600N	800E	2000E	1200
		700N	800E	2000E	1200
		2000E	0	800N	800

***Table 1: Survey log***

### 2.2 PERSONNEL

Rod Milligan of Kirkland Lake conducted all the magnetic data collection and Correy Rozell was also responsible for the GPS control and GPS waypoint collection.

### 2.3 SURVEY SPECIFICATIONS

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

A total of 6.575 line kilometers of no grid magnetometer/VLF EM survey was read over the Beemer Property between August 6<sup>th</sup> and 7<sup>th</sup>, 2008. This consisted of 696 magnetometer samples taken.

### 2.4 ACCURACY AND REPEATABILITY

Generally baseline repeatability was within 11nT in low gradient areas. This error was due to the small errors (<5m) generated by the GPS location.

### 3. OVERVIEW OF SURVEY RESULTS

#### 3.1 SUMMARY INTERPRETATION

The Beemer extension grid indicates the possible presence of three magnetic units.

The west portion of the survey area appears as a moderately high magnetic signature. This most likely represents the greenstone. Within this unit a slight magnetically high linear feature can be seen on passing from line 200N at 1450E to line 700N at 1175E. This magnetic feature exhibits a coincident VLF EM signature.

Bisecting north-south through the central region of the survey area appears a magnetically low region with a flanking VLF EM crossover on the east and west edges. This most likely represents a gabbroic intrusion with the VLF EM signatures indicating the contacts.

The east magnetic signature most likely represents a volcanic unit underlain by the above gabbro.

**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 Geophysicists.
5. I have no interest, nor do I expect to receive any interest in the properties or securities of **Ashley Gold Mines Ltd.**
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

**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](http://www.garmin.com)*

## APPENDIX D

### LIST OF MAPS (IN MAP POCKET)

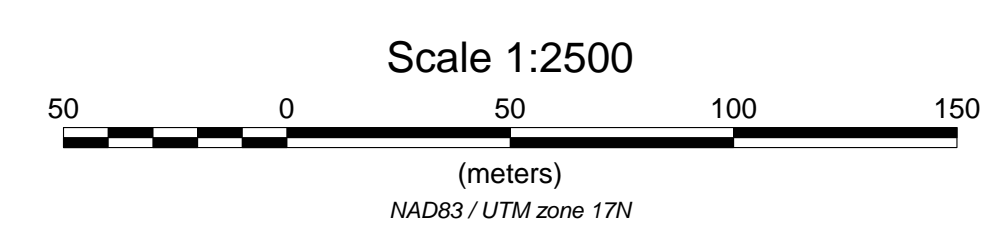
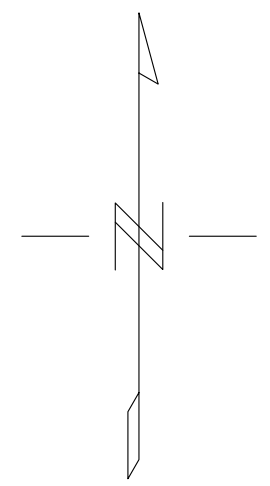
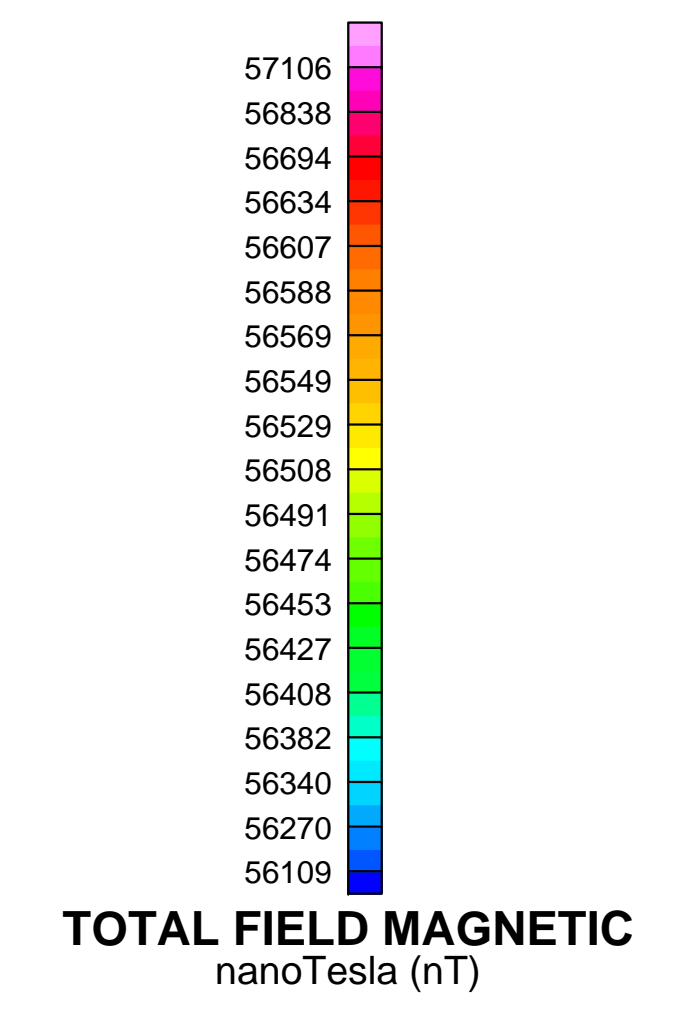
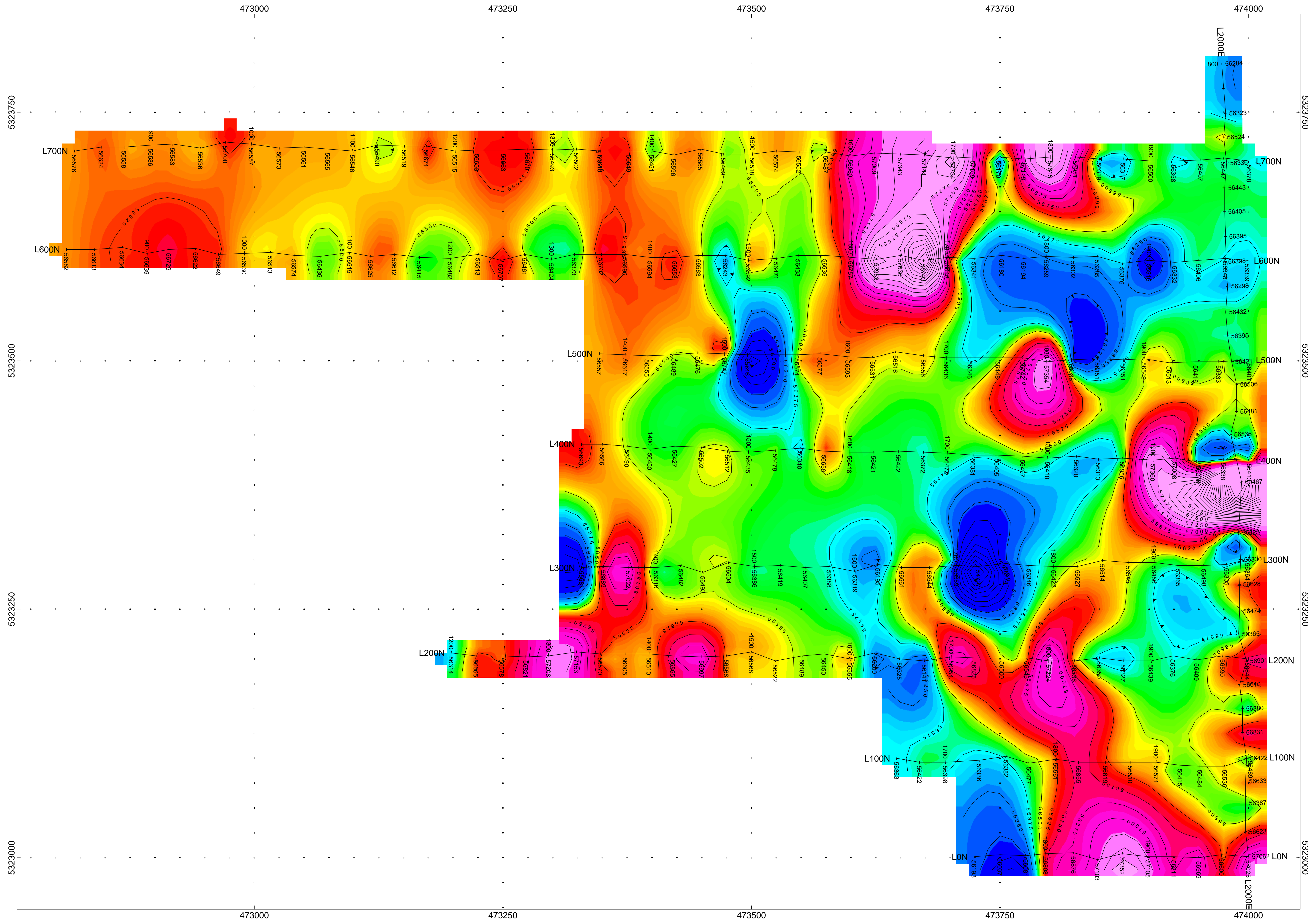
Posted profiled TFM plan map (1:2500)

- 1) ASHLEY GOLD-BEEMER EXT-MAG-CONT

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

- 2) ASHLEY GOLD-BEEMER EXT-VLF-NAA

**TOTAL MAPS=2**



**ASHLEY GOLD MINES LTD.**

**BEEMER EXT**  
Beemer 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: 125nT

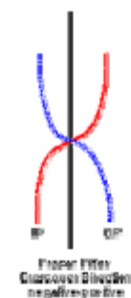
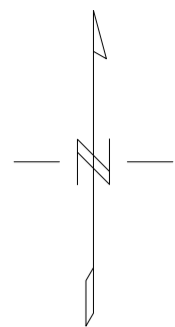
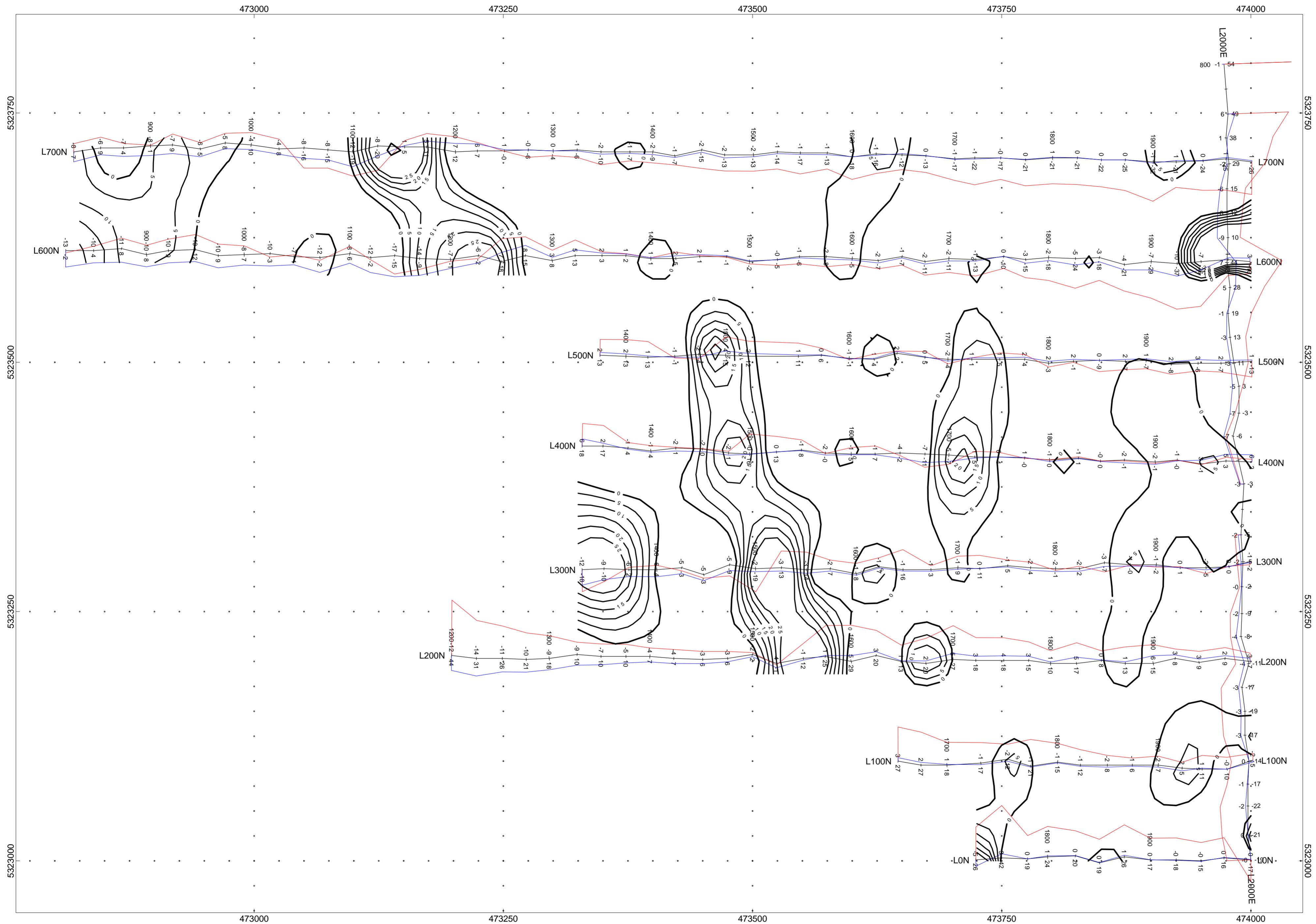
GSM-19 OVERHAUSER MAGNETOMETER/VLF v7

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Receiver Operated By: Rod Milligan  
GPS Operated By: Barry Allen  
Processed by: C. Jason Ploeger, B.Sc.  
Map Drawn By: Belinda Bailey  
August 26, 2008

**LARDER**  
GEOPHYSICS LTD.  
(705) 643-1122

Drawing :ASHLEY GOLD-BEEMER EXT-MAG-CONT



**ASHLEY GOLD MINES LTD.**  
**BEEMER EXT**  
**Beemer 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: 2%/mm  
 Contour Interval: 0, 5, 10, 15, 20, 25, 50, 100

Station Separation: 25 meters  
 Posting Level: 0

GSM-19 OVERHAUSER MAGNETOMETER/VLF v7

Receiver Operated By: Rod Milligan  
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Drawing :ASHLEY GOLD-BEEMER EXT-VLF-NAA

