



**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

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# **SKEAD HOLDINGS LTD.**

## **Magnetometer Survey Over the Cunningham-A Property Cunningham Township, Ontario**

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## 1. SURVEY DETAILS

### 1.1 PROJECT NAME

This project is known as the **Cunningham-A Property**.

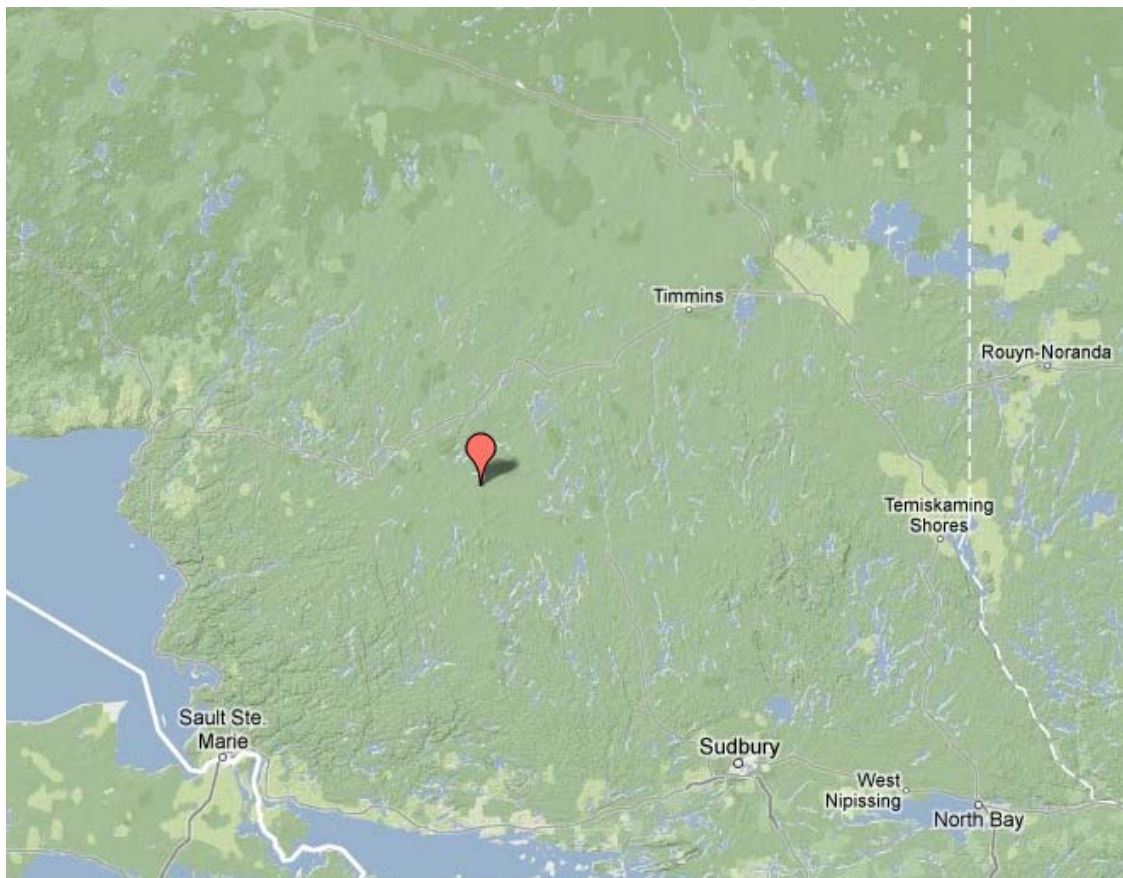
### 1.2 CLIENT

SKEAD HOLDINGS LTD.

28 Ford St.  
Sault Ste. Marie, Ontario  
P6A 4N4

### 1.3 LOCATION

The Cunningham-A Property is located in Cunningham Township approximately 10km northeast of Sultán, Ontario. The survey area covers claims numbered 4259264 and 4259263, located in Cunningham Township, within the Porcupine Mining Division.



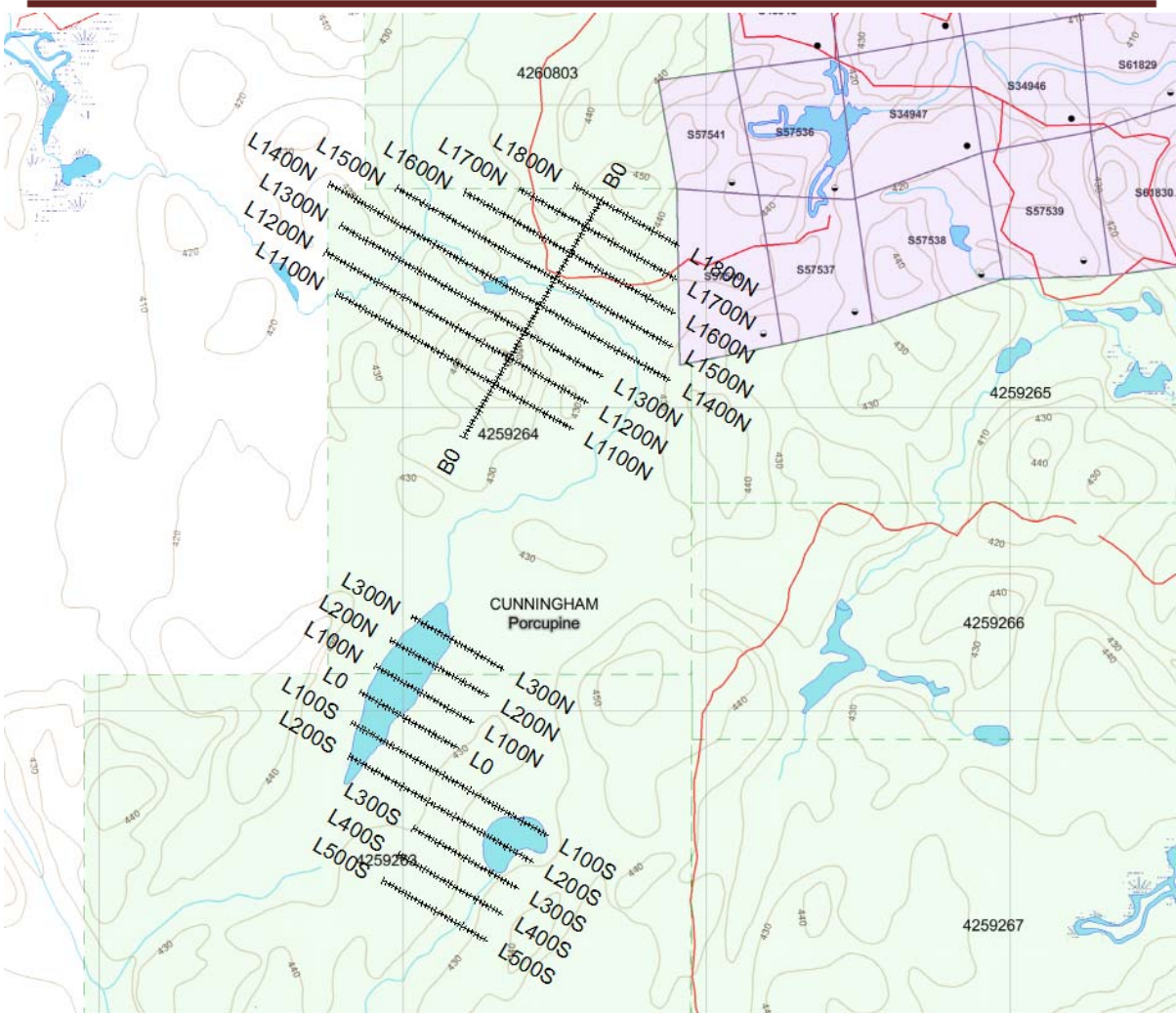
***Figure 1: Location of the Cunningham-A Property***

#### **1.4 ACCESS**

Access to the property was attained with a 4x4 truck on Highway 129 for approximately 28 km southeast from the Town of Chapleau to Regional Rd 667 for approximately 47km east. From that point, snowmachines were used to travel for an additional 20km north and east on a series of old logging roads to the beginning of the property.

#### **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 and magnetic 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 Cunningham-A Property Traverses**

## 2. SURVEY WORK UNDERTAKEN

### 2.1 SURVEY LOG

Date	Description	Line	Min Extent	Max Extent	Total Survey (m)
December 14, 2014	Locate survey area and begin survey.	500S	500E	900E	400
		400S	500E	900E	400
December 16, 2014	Continue survey.	300S	500E	900E	400
		200S	200E	900E	700
		100S	150E	900E	750
		0	125E	500E	375
		100N	125E	500E	375
		200N	125E	500E	375
		300N	150E	500E	350
December 17, 2014	Continue survey.	1100N	600W	300E	900
		1200N	700W	300E	1000
		1300N	400W	300E	700
		1400N	400W	300E	700
December 18, 2014	Continue survey.	1400N	300E	500E	200
		1500N	600W	450E	1050
		1600N	400W	400E	800
		1700N	250W	350E	600
		1800N	100W	300E	400
		0E	900N	1800N	900
December 19, 2014	Complete survey.	1400N	800W	400W	400
		1300N	700W	400W	300

**Table 1: Survey Log**

### 2.2 PERSONNEL

Claudia Moraga of Britt, Ontario, conducted all the magnetic data collection with Bruce Lavalley also of Britt, Ontario responsible for GPS control and waypoint collection.

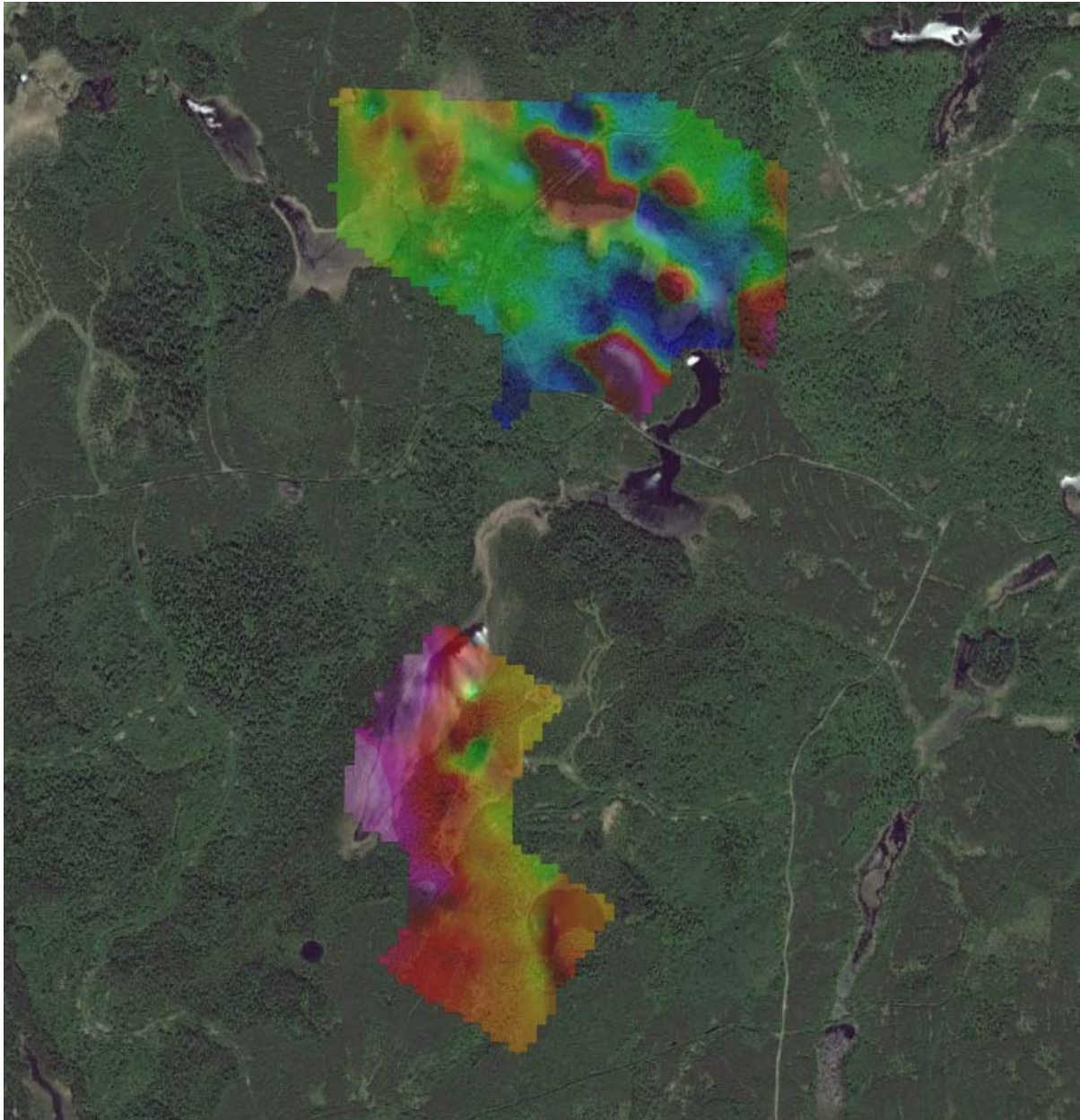
### 2.3 SURVEY SPECIFICATIONS

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 12.075 line kilometers of magnetometer was read over the Cunningham-A Property between December 14<sup>th</sup> and 19<sup>th</sup>, 2014. This consisted of 966 magnetometer samples taken at a 12.5m sample interval.

### 3. OVERVIEW OF SURVEY RESULTS

#### 3.1 SUMMARY INTERPRETATION



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

Grid A can be broken into two separate grids, North and South. These two grids appear to exhibit two different magnetic signatures.

The southern grid appears to represent two magnetic units. The west part of this grid appears as a strongly elevated magnetic signature. The strength of this signature resembles that which is expected with an ultramafic. East of this unit appears to be a consistent moderate magnetic response. This most likely represents a mafic volcanic.

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The northern grid exhibits a more chaotic magnetic signature. This signature most likely indicates the existence of three geologic units. The underlying unit appears to be a more consistent magnetic signature. This signature most likely represents a mafic volcanic unit. Overlying this unit to the north-east appears a slightly elevated magnetic signature. This most likely represents a metasediment. The south-east region appears as a strong magnetically high and low anomaly group. This group indicates a strongly magnetic region which most likely represents a region of ultramafics.

I would recommend cutting a grid over the areas of potential ultramafics. From there, I would perform an IP survey along with an MMI survey to better identify regions of higher mineral potential.



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## 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 Practising 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 **Skead Holdings 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  
January 19, 2015

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## 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.

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**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.

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## 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 MAP 62S



Physical & Performance:	
Unit dimensions, WxHxD:	2.4" x 6.3" x 1.4" (6.1 x 16.0 x 3.6 cm)
Display size, WxH:	1.43" x 2.15" (3.6 x 5.5 cm); 2.6" diag (6.6 cm)
Display resolution, WxH:	160 x 240 pixels
Display type:	transflective, 65-K color TFT
Weight:	9.2 oz (260.1 g) with batteries
Battery:	2 AA batteries (not included); NiMH or Lithium recommended
Battery life:	20 hours
Waterproof:	yes (IPX7)
Floats:	no
High-sensitivity receiver:	yes
Interface:	high-speed USB and NMEA 0183 compatible

Maps & Memory:	
Basemap:	yes
Preloaded maps:	no
Ability to add maps:	yes
Built-in memory:	1.7 GB
Accepts data cards:	microSD™ card (not included)
Waypoints/favorites/locations:	2000
Routes:	200
Track log:	10,000 points, 200 saved tracks

Features & Benefits:	
Automatic routing (turn by turn routing on roads):	yes (with optional mapping for detailed roads)
Electronic compass:	yes (tilt-compensated, 3-axis)
Touchscreen:	no
Barometric altimeter:	yes
Camera:	no
<u>Geocaching-friendly:</u>	yes (paperless)
<u>Custom maps compatible:</u>	yes
Photo navigation (navigate to geotagged photos):	yes
Outdoor GPS games:	no
Hunt/fish calendar:	yes
Sun and moon information:	yes
Tide tables:	yes
Area calculation:	yes

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Custom POIs (ability to add additional points of interest):	yes
Unit-to-unit transfer (shares data wirelessly with similar units):	yes
Picture viewer:	yes
Garmin Connect™ compatible (online community where you analyze, categorize and share data):	yes

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

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## **APPENDIX D**

### **LIST OF MAPS (IN MAP POCKET)**

Posted contoured TFM plan map (1:5000)

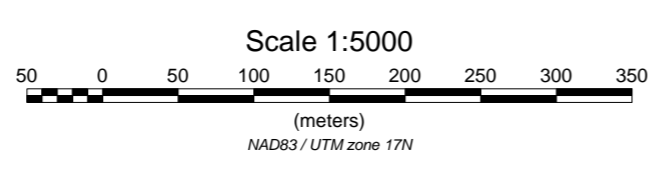
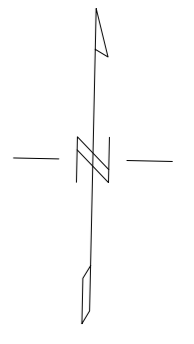
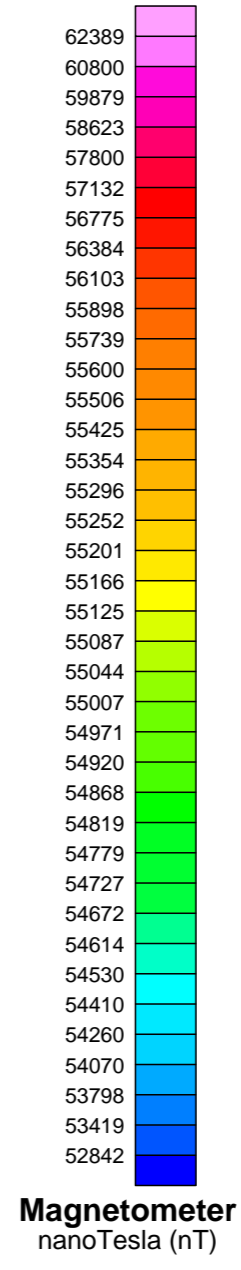
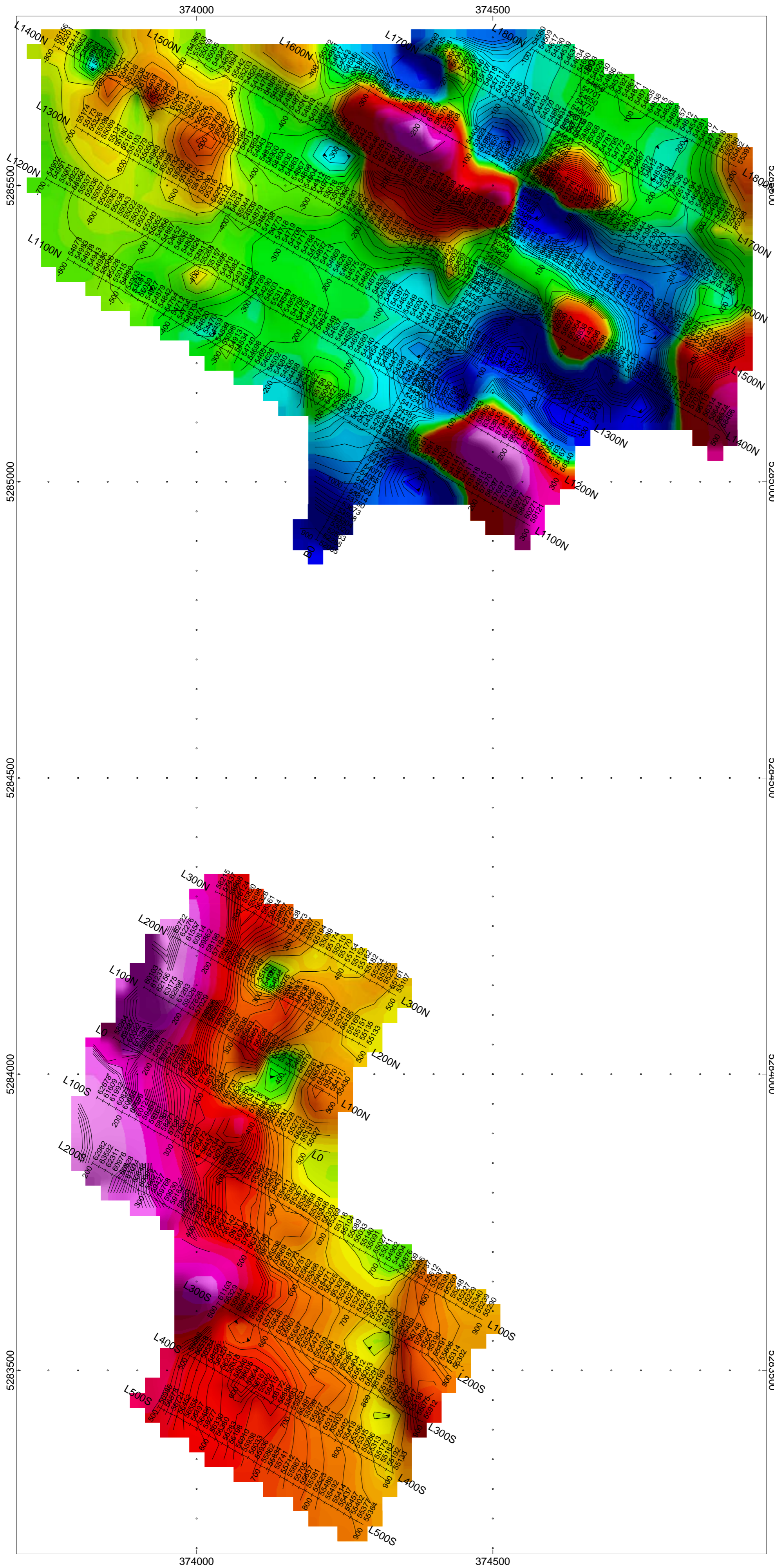
1) SKEAD-CUNNINGHAM-A-MAG-CONT

Claim Map with Magnetic Traverses (1:20000)

2) SKEAD-CUNNINGHAM-A-GRID

**TOTAL MAPS = 2**





**SKEAD HOLDINGS LTD.**  
**CUNNINGHAM-A PROPERTY**  
**Cunningham Township, Ontario**

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: 100nT  
GSM-19 OVERHAUSER MAGNETOMETER/VLF v7

Receiver Operated By: Claudia Moraga  
GPS Operated By: Bruce Lavalley  
Processed by: Jason Ploeger  
Map Drawn By: C Jason Ploeger, PGeo  
January 2015



