



**CANADIAN EXPLORATION SERVICES LTD**

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# **SKEAD HOLDINGS LTD.**

## **VLF EM Survey Over the BEAR LAKE - EAST PROPERTY McGarry Township, Ontario**

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## 1. SURVEY DETAILS

### 1.1 PROJECT NAME

This project is known as the **Bear Lake - East Property**.

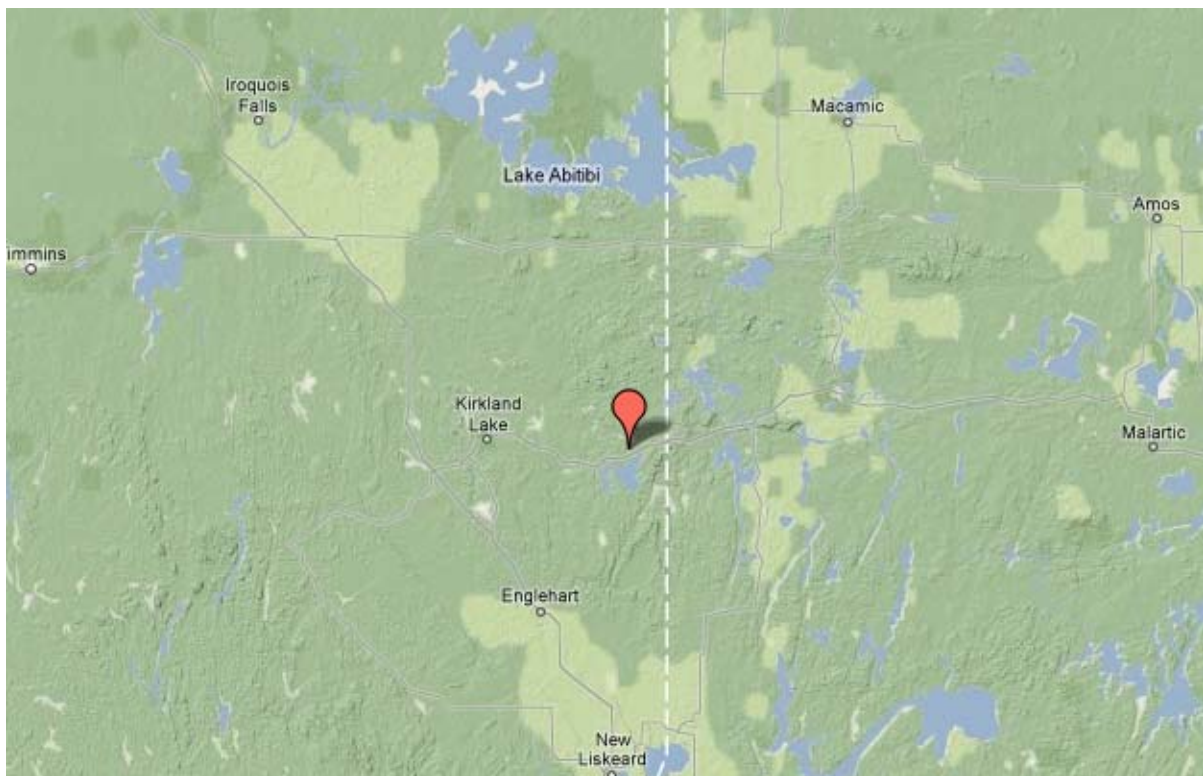
### 1.2 CLIENT

SKEAD HOLDINGS LTD.

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

### 1.3 LOCATION

The Bear Lake - East Property is located approximately 6km east-northeast of Larder Lake, Ontario. The VLF EM Survey traverse area is located in McGarry Township within the Larder Lake Mining Division.



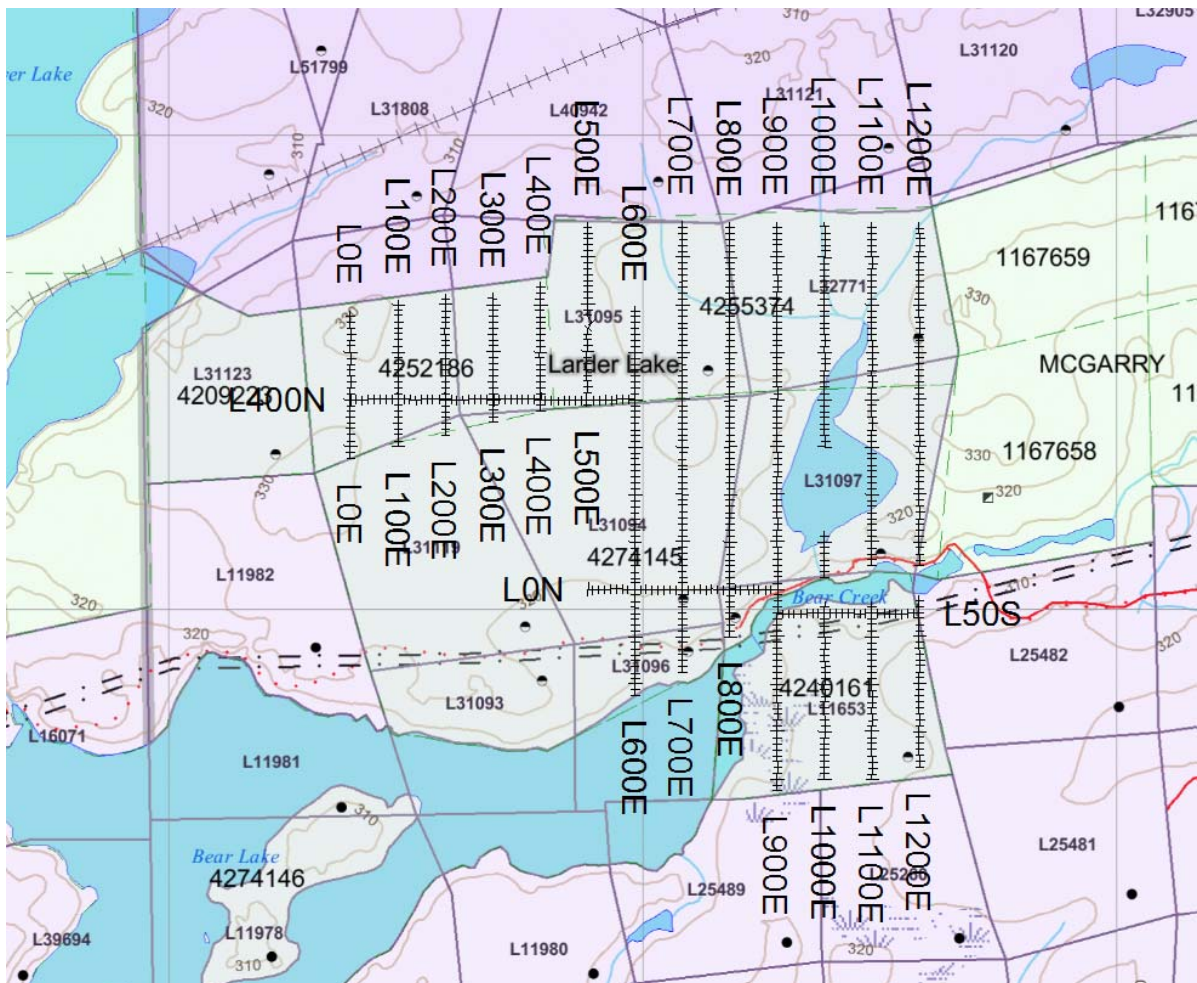
**Figure 1: Location of the Bear Lake - East Property**

## 1.4 ACCESS

Access to the property was via the skidoo trail that heads north from the town of Virginiatown. From the north end of 24<sup>th</sup> Street, the skidoo trail was travelled a distance of 2 kilometers by ATV 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 VLF EM operator. GPS waypoints and VLF 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 Bear Lake – East Property Traverses**

## 2. SURVEY WORK UNDERTAKEN

### 2.1 SURVEY LOG

Date	Description	Line	Min Extent	Max Extent	Total Survey (m)
October 13, 2014	Locate access to survey area and begin survey.	1200E	400S	775N	1175
		1100E	400S	775N	1175
		1000E	400S	775N	1175
		900E	400S	775N	1175
		800E	100S	775N	875
		700E	175S	775N	950
October 14, 2014	Complete survey.	600E	225S	600N	825
		500E	387.5N	775N	387.5
		400E	375N	650N	275
		300E	350N	625N	275
		200E	325N	625N	300
		100E	300N	612.5N	312.5
		0	275N	587.5N	312.5
		50S	900E	1200E	300
		0	500E	900E	400
		400N	0	600E	600

**Table 1: Survey Log**

### 2.2 PERSONNEL

Claudia Moraga of Britt, Ontario, conducted all the VLF EM 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 10.5125 line kilometers VLF EM was read over the Bear Lake - East Property between October 13<sup>th</sup> and 14<sup>th</sup>, 2014. This consisted of 841 VLF EM samples taken at a 12.5m sample interval.

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### 3. OVERVIEW OF SURVEY RESULTS

#### 3.1 SUMMARY INTERPRETATION

Four apparent axis appear over the survey area. These tend to exhibit an east-northeast strike direction. These axis appear to parallel the geology in the region. These axis may indicate interbedded mineralization, graphitic horizons or a deformation pattern.

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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  
March 10, 2015

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## APPENDIX B

### THEORETICAL BASIS AND SURVEY PROCEDURES

#### VLF EM SURVEY

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.



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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 Profiled Plan Map (1:2500)

- 1) SKEAD-BEAR EAST-VLF-NAA

Claim Map with Magnetic Traverses (1:20000)

- 2) SKEAD-BEAR EAST-GRID

**TOTAL MAPS = 2**

Date / Time of Issue: Tue Mar 10 10:45:10 EST 2015

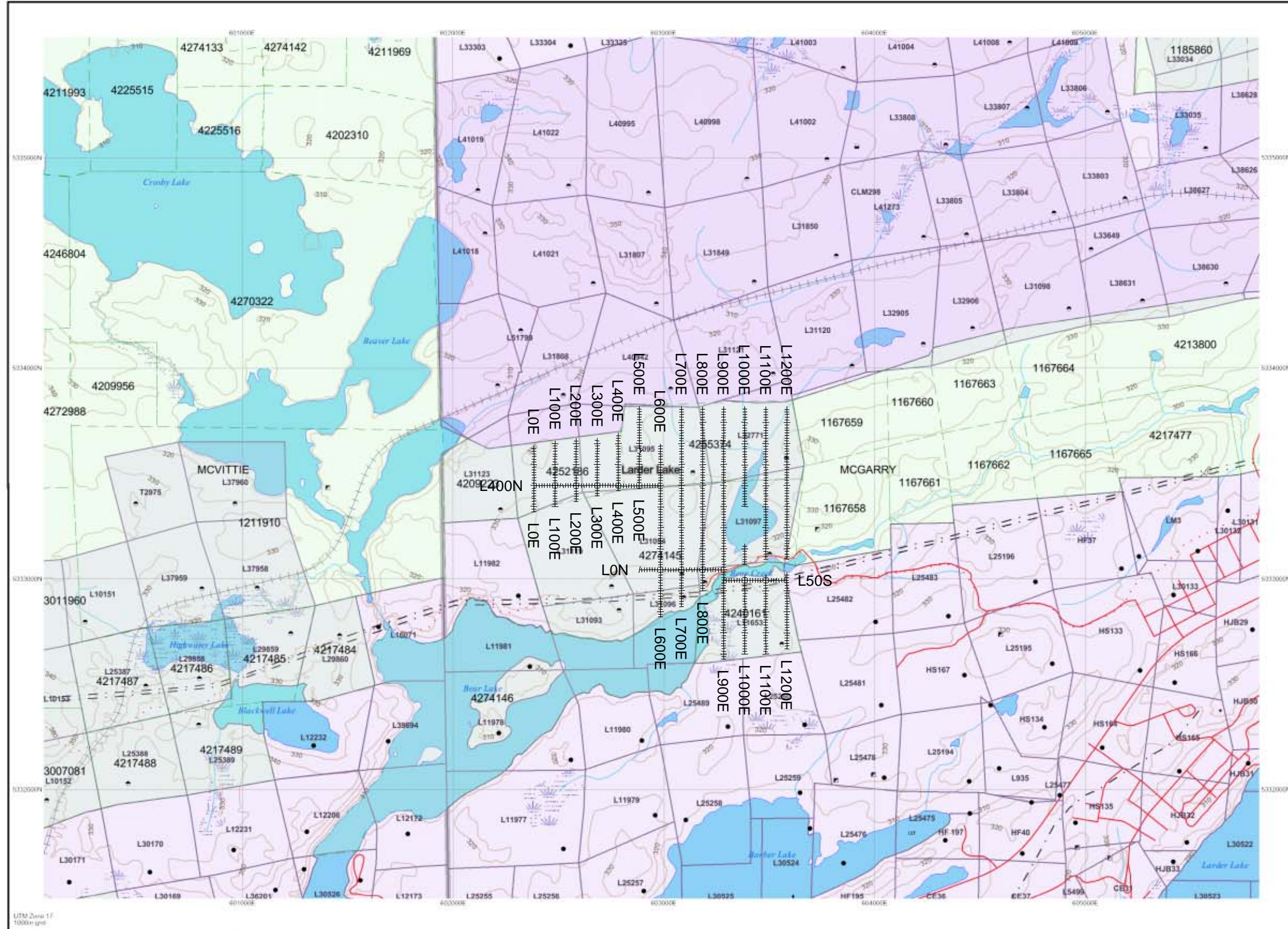
TOWNSHIP / AREA  
MCGARRY

PLAN  
G-3678

ADMINISTRATIVE DISTRICTS / DIVISIONS

Mining Division  
Land Titles/Registry Division  
Ministry of Natural Resources District

Larder Lake  
TIMISKAMING  
KIRKLAND LAKE



TOPOGRAPHIC

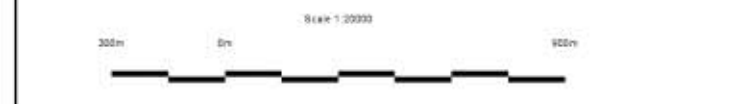
- Administrative Boundaries
- Township
- Concession Lot
- Provincial Park
- Indian Reserve
- Cliff, Pt & Pile
- Contour
- Mine Shaft
- Mine Headframe
- Highway
- Road
- Trail
- Natural Gas Pipeline
- Utility
- Tower

Land Tenure

- Freehold Patent
  - Surface And Mining Rights
  - Surface Rights Only
  - Mining Rights Only
- Leasehold Patent
  - Surface And Mining Rights
  - Surface Rights Only
  - Mining Rights Only
- License of Occupation
  - Uses Not Specified
  - Surface And Mining Rights
  - Surface Rights Only
  - Mining Rights Only
- Land Use Permit
- Order In Council (Not open for staking)
- Other Power Lease Agreement

CLIFFORD	BEN NEWE	PONTIAC
ARNOLD	KATRINE	ODIAN
GAUTHIER	MORTIE	MCGARRY
MCELROY	HEARST	MCFADDEN
CATHARINE	BREAD	RAITRAY

- 1234567 Mining Claim
- 1234567 Filed Only Mining Claims
- 1234 Areas Withdrawn from Disposition
  - Mining Act Withdrawal Types
  - Surface And Mining Rights Withdrawn
  - Surface Rights Only Withdrawn
  - Mining Rights Only Withdrawn
  - Order In Council Withdrawal Types
  - Surface And Mining Rights Withdrawn
  - Surface Rights Only Withdrawn
  - Mining Rights Only Withdrawn
- IMPORTANT NOTICES



LAND TENURE WITHDRAWAL DESCRIPTIONS (list may not be complete)

Identifier	Type	Date	Description
W-L-C1632a	Wise	Mar 25, 2005	<a href="http://www.mnrdm.gov.on.ca/mines/lands/ivreg/borwast/2005/borwast/mw/withdrawals/wp1632a-08_e.html">http://www.mnrdm.gov.on.ca/mines/lands/ivreg/borwast/2005/borwast/mw/withdrawals/wp1632a-08_e.html</a> W-L-C1632a CNT M&S withdrawal S 30 Mining Act RSO 1995 25/03/05 Boundary generally depicts area withdrawn. Click to view actual area.

Those wishing to stake mining claims should consult with the Provincial Mining Recorders' Office of the Ministry of Northern Development and Mines for additional information on the status of the lands shown herein. This map is not intended for navigational, survey, or land title determination purposes as the information shown on this map is compiled from various sources. Completeness and accuracy are not guaranteed. Additional information may also be obtained through the local Land Titles or Registry Office, or the Ministry of Natural Resources.

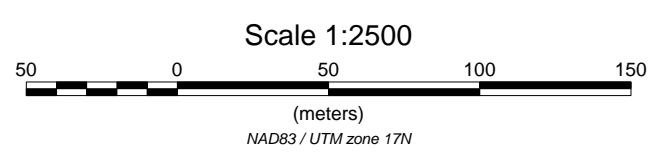
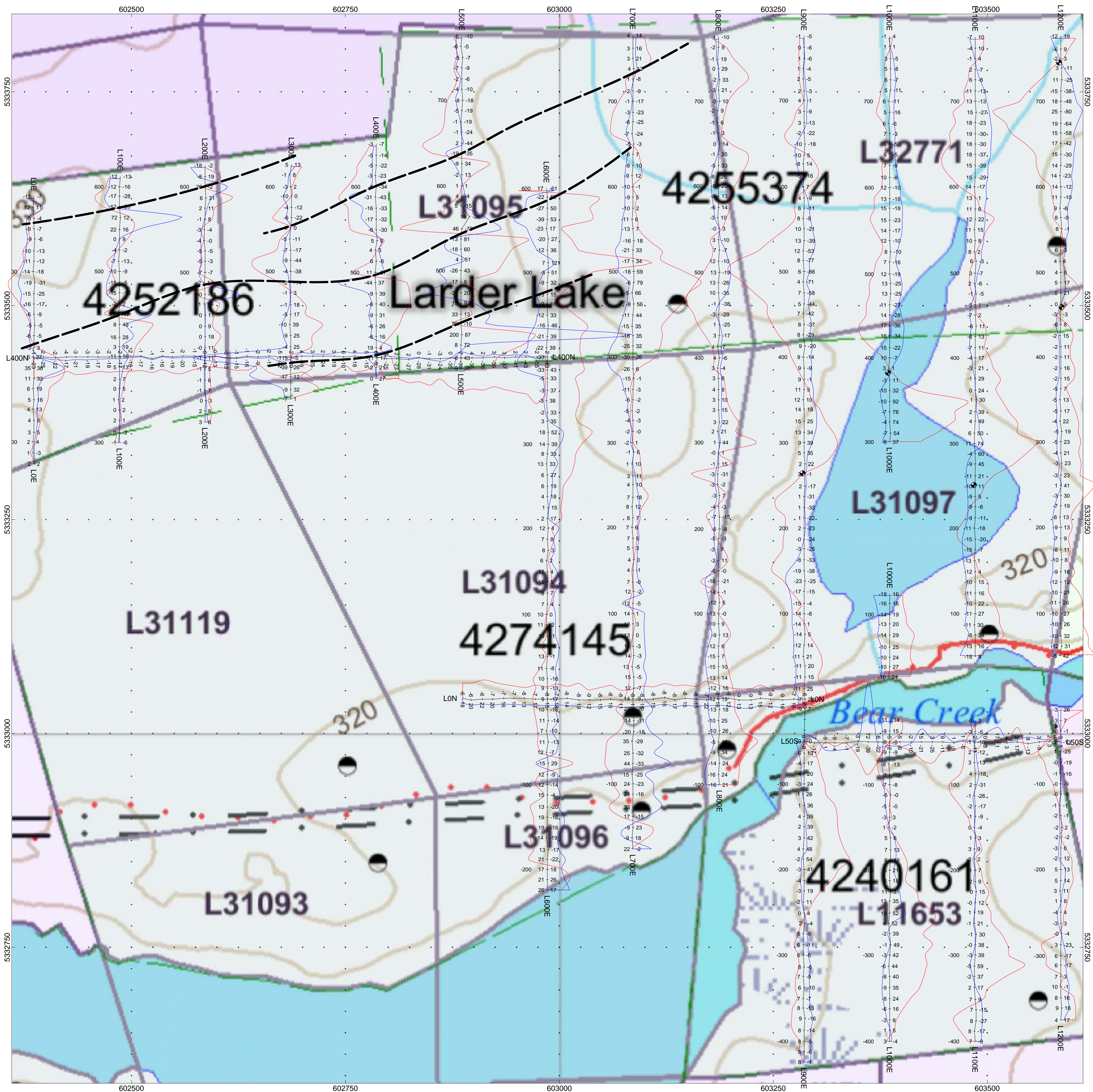
The information shown is derived from digital data available in the Provincial Mining Recorders' Office at the time of downloading from the Ministry of Northern Development and Mines web site.

General Information and Limitations  
 Contact Information:  
 Provincial Mining Recorders' Office  
 Water Green Mill Centre 933 Ramsey Lake Road  
 Sudbury ON P0E 1B5  
 Home Page: [www.mnrdm.gov.on.ca/MNDM/MINES/LANDS/misrmapge.htm](http://www.mnrdm.gov.on.ca/MNDM/MINES/LANDS/misrmapge.htm)

Toll Free  
 Tel: 1 (888) 415-8645 ext 574  
 Fax: 1 (877) 670-1444

Map Datum: NAD 83  
 Projection: UTM 18 degree  
 Topographic Data Source: Land Information Ontario  
 Mining Land Tenure Source: Provincial Mining Recorders' Office

This map may not show unregistered land tenure and interests in land including certain patents, leases, easements, right of ways, flooding rights, licences, or other forms of disposition of rights and interest from the Crown. Also certain land tenure and land uses that restrict or prohibit free entry to stake mining claims may not be illustrated.



**SKEAD HOLDINGS LTD.**

**BEAR LAKE - EAST PROPERTY**  
McGarry Township, Ontario

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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: 2.5 %/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

Receiver Operated By: Bruce Lavalley GPS Operated By: Claudia Moraga Processed by: Claudia Moraga Map Drawn By: C Jason Ploeger March 2015	
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Drawing: SKEAD-BEAR EAST-VLF-NAA