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CANADIAN EXPLORATION SERVICES LTD

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Elk Lake Mining Company Limited

Magnetometer Survey Over the

Mapes-Johnston Property

Mickle Township, Ontario

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1. SURVEY DETAILS

1.1 PROJECT NAME

This project is known as the **Mapes-Johnston Property**.

1.2 CLIENT

Elk Lake Mining Company Ltd.
P.O. Box 219
14579 Government Road
Larder Lake, Ontario
P0K 1K0

1.3 LOCATION

The Mapes-Johnston Property is located in Mickle Township approximately 7 km west of Elk Lake, Ontario. The survey area covers parts of claim 4274049 located within the Larder Lake Mining Division.



Figure 1: Location of the Mapes-Johnston Property

1.4 ACCESS

Access to the property was attained with a 4x4 truck via a gravel road. The traverse area is located approximately 5km west of Elk Lake on highway 560 then an additional 5km along the Silverclaim Lake access road. From this point an ATV was used along trail to Boland Lake where for an additional 500m.

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, 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.

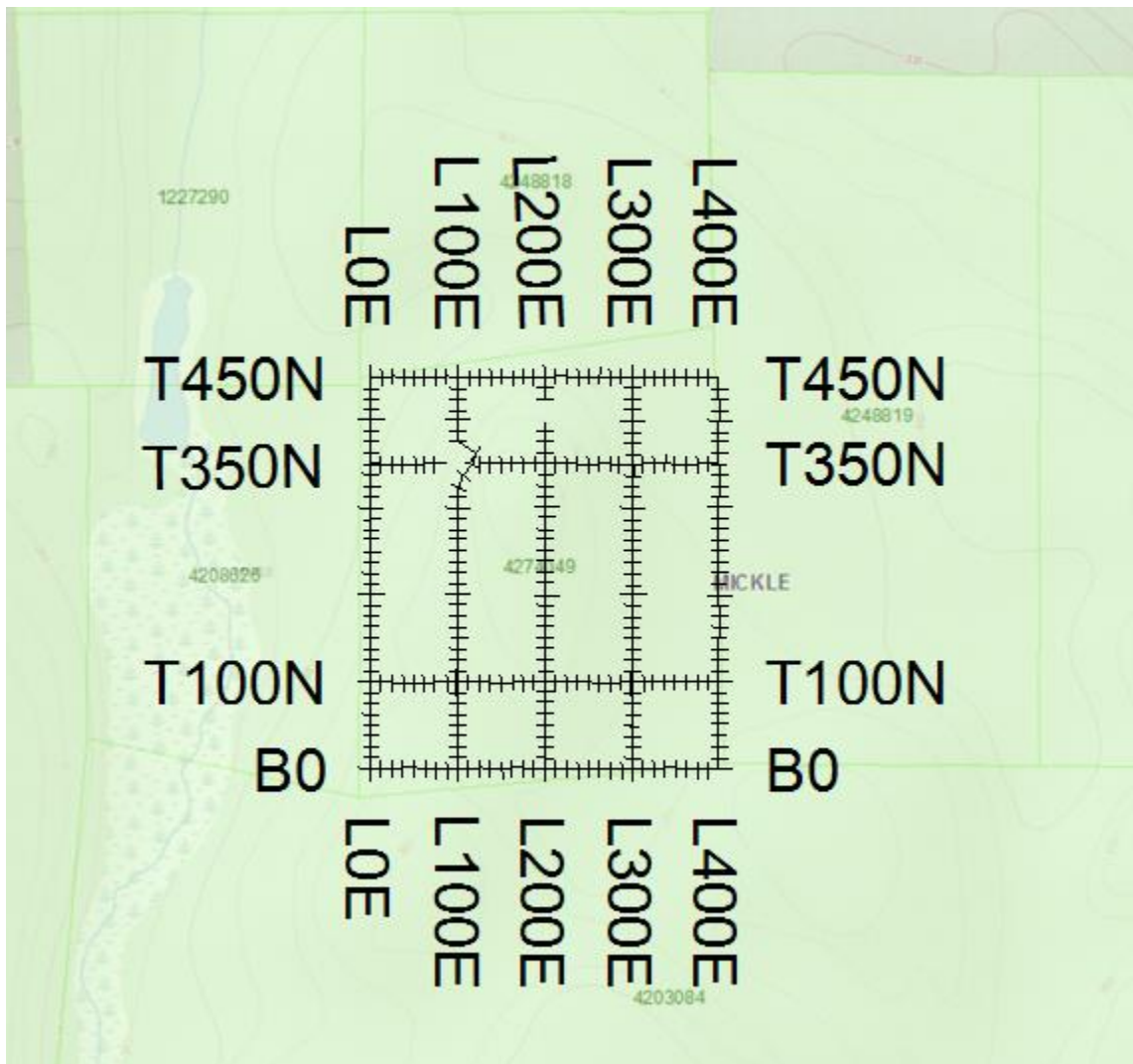


Figure 2: Claim Map with Mapes-Johnston Property Traverses

2. SURVEY WORK UNDERTAKEN

2.1 SURVEY LOG

| Date | Description | Line | Min Extent | Max Extent | Total Survey (m) |
|-------------|---|------|------------|------------|------------------|
| May 9, 2016 | Locate survey area and perform magnetic survey. | 0E | 0N | 450N | 450 |
| | | 100E | 0N | 450N | 450 |
| | | 200E | 0N | 450N | 450 |
| | | 300E | 0N | 450N | 450 |
| | | 400E | 0N | 450N | 450 |
| | | 0N | 0 | 400E | 400 |
| | | 100N | 0 | 400E | 400 |
| | | 350N | 0 | 400E | 400 |
| | | 450N | 0 | 400E | 400 |

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 being 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 magnetometer in base station mode for diurnal correction.

A total of 3.85 line kilometers of magnetometer was read over the Mapes-Johnston Property on May 9th, 2016. This consisted of 308 magnetometer samples taken at a 12.5m sample interval.

3. OVERVIEW OF SURVEY RESULTS

3.1 SUMMARY INTERPRETATION

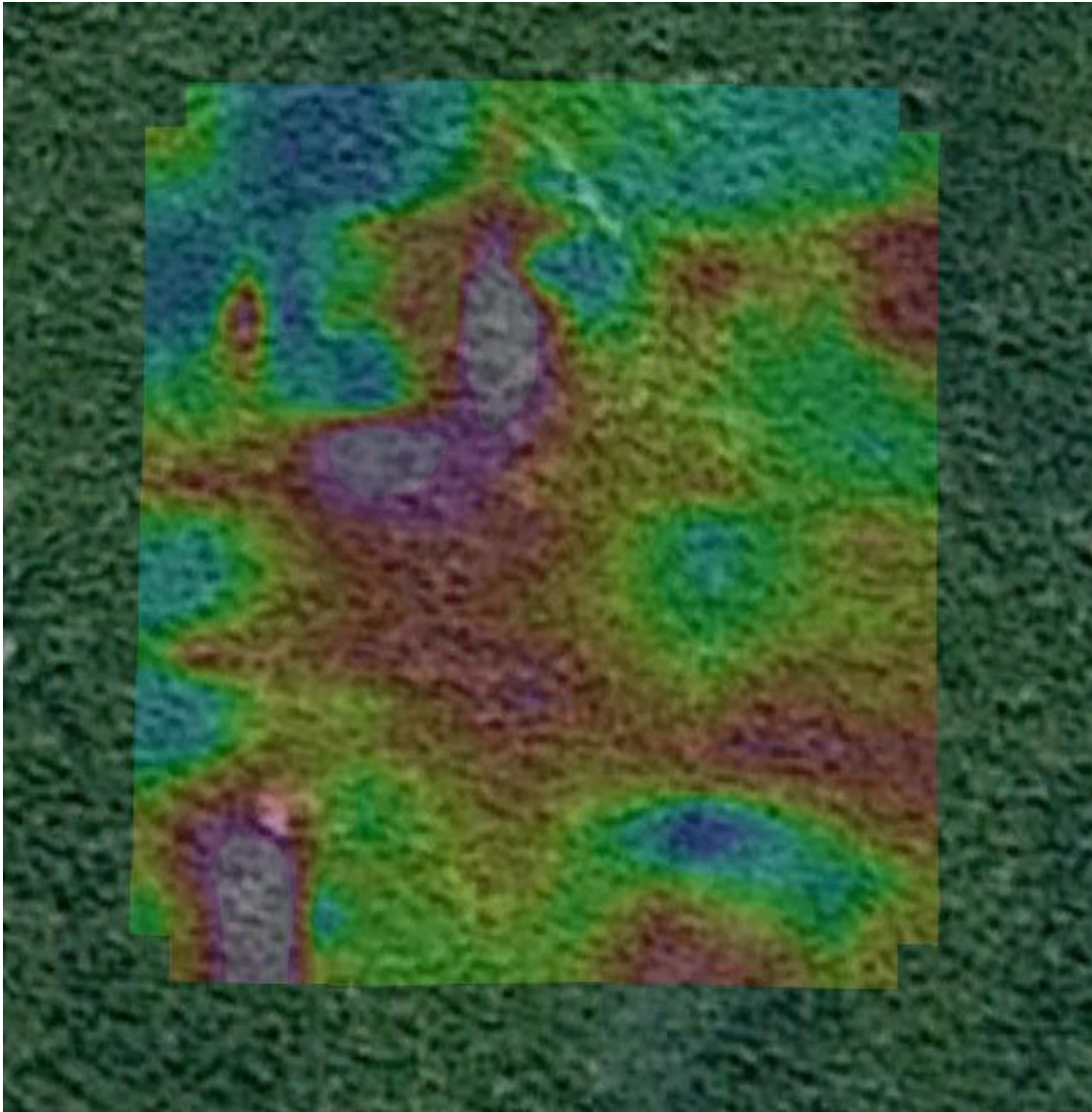


Figure 3: Google Image with Magnetic Overlay

The magnetic survey indicates the presence of two magnetically elevated anomalies along with multiple magnetic trends and offsets. Culture in the form of a historic mine was noted on the property. This appeared to be constrained to within 100 meters of the south-west corner, however, numerous trenches were noted throughout the survey area.

Two magnetic trends appear to cross the property at approximately 60 degrees. These appear as slightly elevated magnetic trends. These trends appear to be offset by two south-east trending magnetic low features. These most likely indicate the presence of late structural features.

The magnetic anomalies appear in the south-west corner and central part of the survey area. The south-west anomaly may be related to the historic mining activity and culture previously noted. However, this may also be a result of an increase in magnetite and marker for the favorable alteration pattern.

The second magnetic anomaly occurs in the central region of the survey area. This is a similar magnetic high to the south-west corner; however, does not exhibit culture. This may indicate an area to target future exploration work.

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 **Elk Lake Mining Company 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
May 10, 2016

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.

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).

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 |
| 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*

APPENDIX D

LIST OF MAPS (IN MAP POCKET)

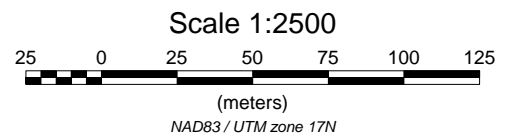
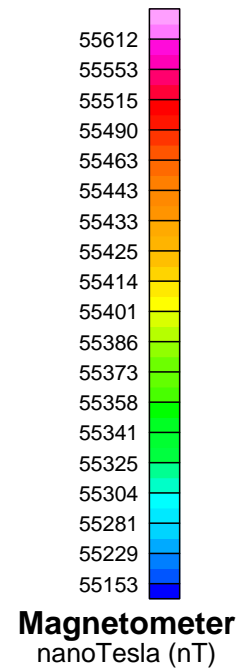
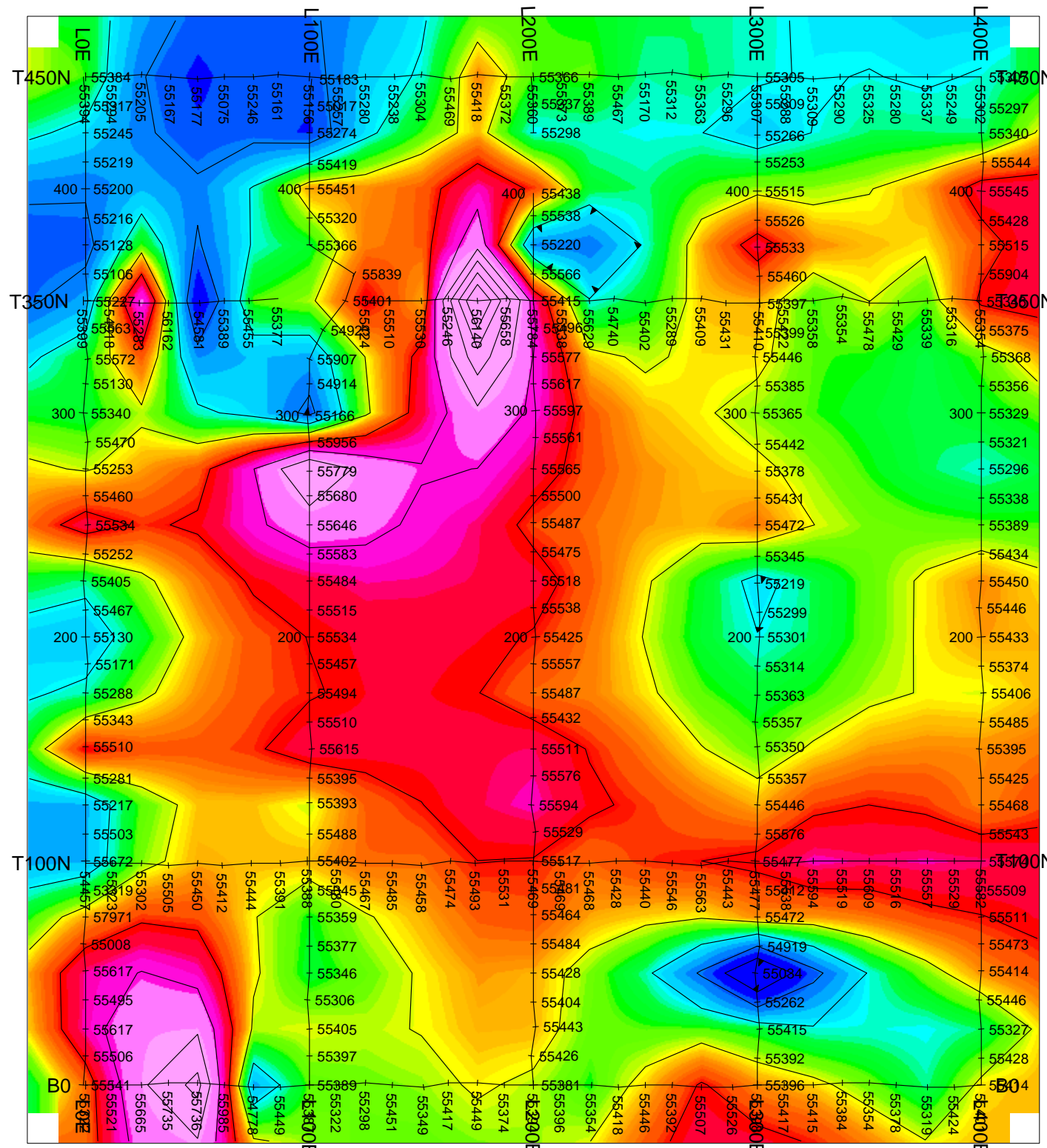
Posted contoured TFM plan map (1:2500)

- 1) Q2193-ELK LAKE-MAPES-MAG-CONT

Claim Map with Magnetic Traverses (1:20000)

- 2) Q2193-ELK LAKE-MAPES-TRAVERSE

TOTAL MAPS = 2



ELK LAKE MINING COMPANY LIMITED

**MAPES-JOHNSON PROPERTY
Mickle 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 v7

Receiver Operated By: Claudia Moraga
GPS Operated By: Bruce Lavalley
Processed by: C Jason Ploeger
Map Drawn By: C Jason Ploeger, P.Geo
May 2016



Drawing : Q2193-ELK LAKE-MAPES-MAG-CONT

