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Elk Lake Mining Company Limited

VLF EM Survey Over the

Mapes-Johnston Property

Mickle Township, Ontario

C Jason Ploeger, B.Sc, P.Geo
May 10, 2016

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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.

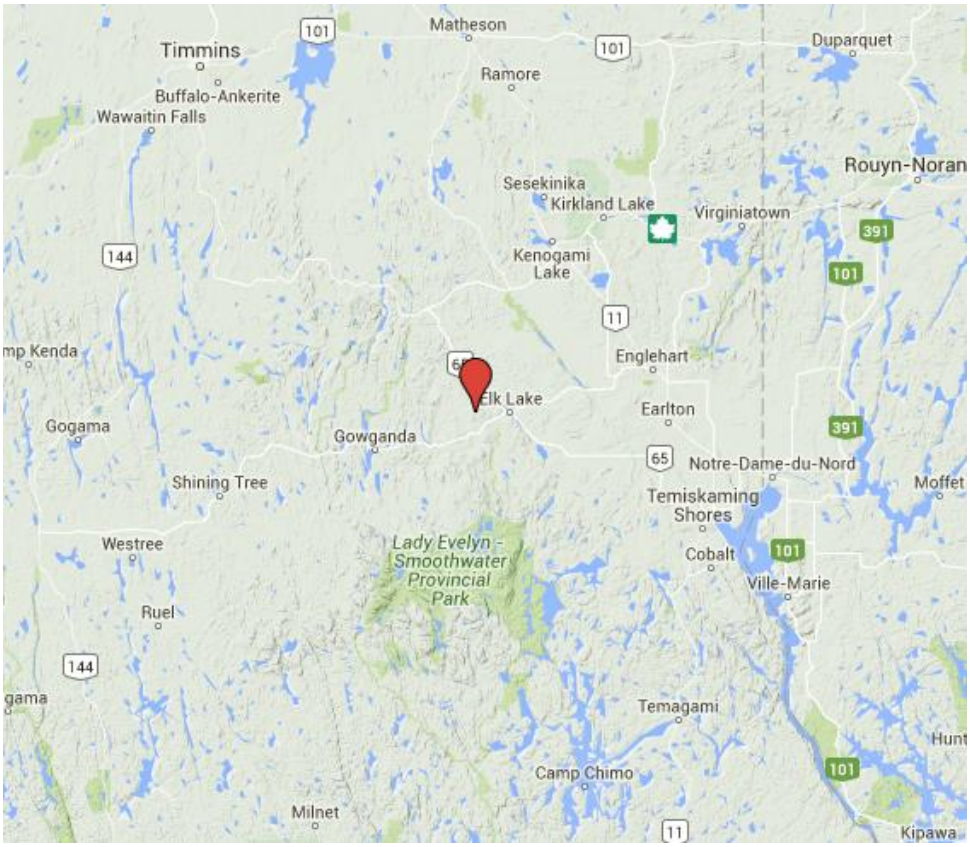


Figure 1: Location of the Mapes-Johnston Property

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 VLF EM operator. GPS waypoints and VLF EM 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.

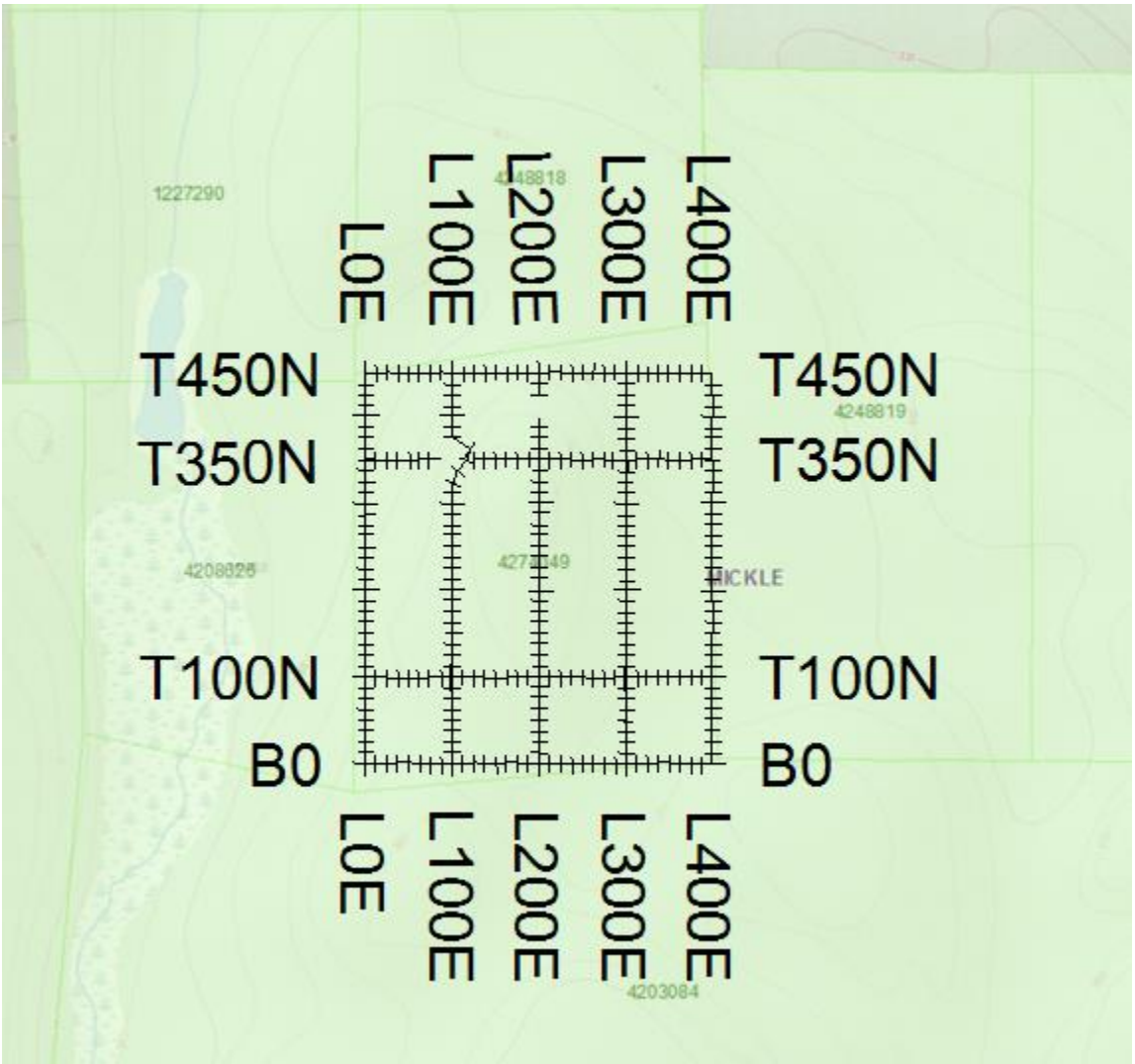


Figure 2: Claim Map with Mapes-Johnston Property Traverses

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 VLF EM 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 VLF EM 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 VLF.

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

3. OVERVIEW OF SURVEY RESULTS

3.1 SUMMARY INTERPRETATION

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.

Tests were done prior to the beginning of the survey to determine which VLF frequencies were available to use. 24kHz (Cutler) did not have a strong enough signal to use. 24.8kHz (Seattle) was available but weak and within the noise threshold. The only VLF station available was 25.2kHz (LaMour).

The VLF survey appeared to indicate a noisy environment, with one distinct crossover.

The one crossover can be seen along tieline 450N at approximately 37.5E. This can also be seen building on line 0E; however, its location is not perfectly defined. This appears as a strong conductor and should be investigated further.

The noisy environment can be seen in all the north-south lines. These tend to line up and strike at 60 degrees and 110 degrees. This may indicate that these are a result of a series of alteration corridors.

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 Practicing 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

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 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 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 ±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 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
Geocaching-friendly:	yes (paperless)
Custom maps compatible:	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)

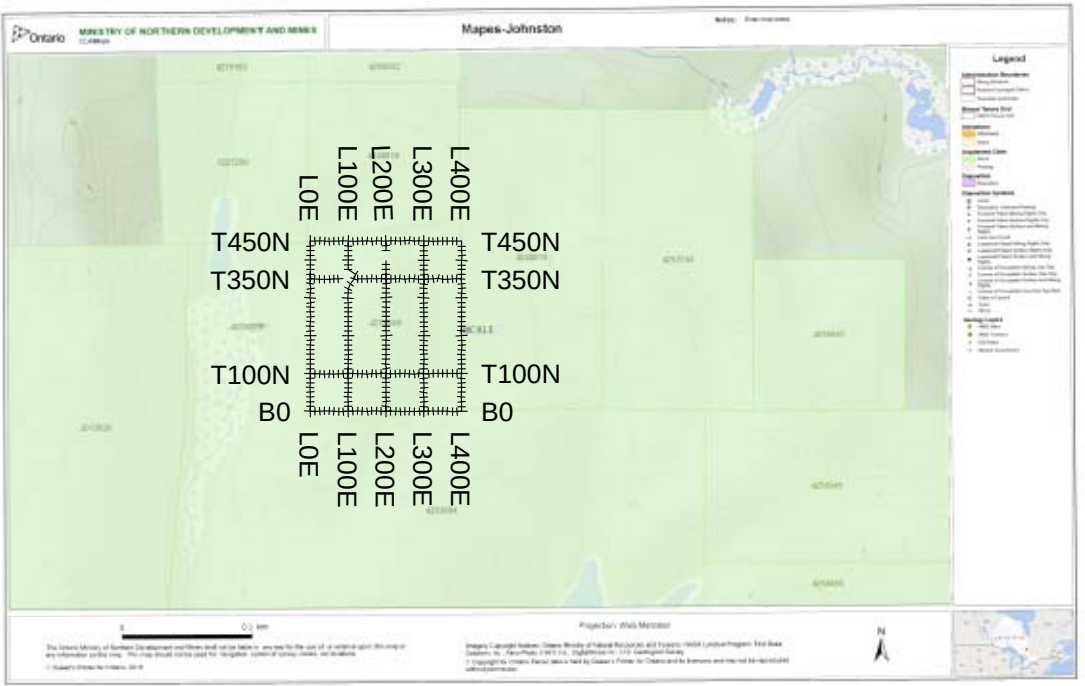
Posted Profiled VLF EM Plan Map (1:2500)

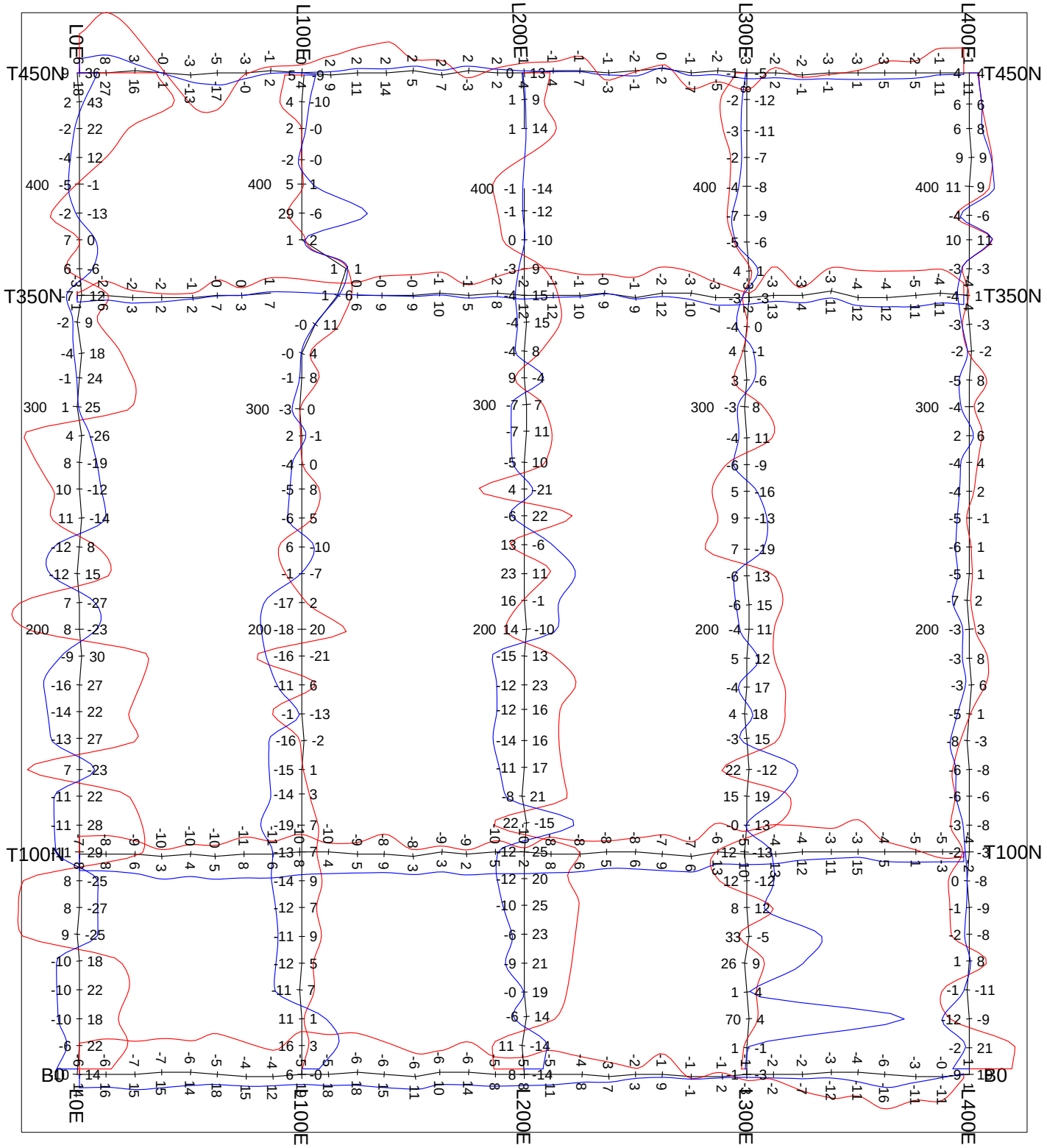
1) Q2193-ELK LAKE-MAPES-VLF-NML

Claim Map with VLF EM Traverses (1:20000)

2) Q2193-ELK LAKE-MAPES-TRAVERSE

TOTAL MAPS = 2


Ontario
MINISTRY OF NORTHERN DEVELOPMENT AND MINES
Mapes-Johnston
Legend
L0E
L100E
L200E
L300E
L400E
T450N
T350N
T100N
B0
L0E
L100E
L200E
L300E
L400E
T450N
T350N
T100N
B0
Projection: Web Mercator
N



Scale 1:2500

25 0 25 50 75 100 125

(meters)

NAD83 / UTM zone 17N

ELK LAKE MINING COMPANY LIMITED

MAPES-JOHNSTON PROPERTY
Mickle Township, Ontario

VLF IN PHASE/OUT PHASE PROFILE
25.2kHz NML - LAMOUR USA

In Phase: Posted Right/Bottom (Red)
Out Phase: Posted Left/Top (Blue)

Vertical Profile Scales: 2.5 %/mm

Station Seperation: 12.5 meters
Posting Level: 0

GSM-19 VLF 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

CANADIAN EXPLORATION SERVICES LTD

Drawing : Q2193-ELK LAKE-MAPES-VLF-NML