



NTS 31 M/3-4

**Magnetometer and VLF-EM Surveys  
Assessment Report**

**South Cobalt Silver Project  
South Lorrain Twp.**

**Mhakari Gold Corp.**

**March 2011**

2-48187

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**1.0 SUMMARY:**

From February 6 to 28, 2011, a program of linecutting and geophysical surveying was carried out on the South Cobalt Silver Project on behalf of Mhakari Gold Corp. 141 Davisville Avenue, Suite 506, Toronto, Ontario M4S 1G7. The objective of the work was to map and test a prospective fault assemblage using magnetic and electromagnetic methods with the goal of identifying structurally controlled silver deposits.

David Laronde and D'Arcy Ryan performed the grid work and geophysical surveying on behalf of the contractor Meegwich Consultants Inc. P.O. Box 482, Temagami, Ontario POH 2H0.

A total of 11.70 km of line was cut and surveyed.

**2.0 PROPERTY:**

The 8-unit (128 hectares) property is situated in north-east South Lorrain Tp. close to the historic Silver Centre townsite. It consists of two contiguous unpatented mining claims described below.

<b>Claim No.</b>	<b>Units</b>	<b>Due Date</b>
4213005	7	May 15, 2011
4213006	1	May 15, 2011

Topography on the claim group is rugged with swampy sections covering the low-lying ground. Water for drilling is abundant in nearby ponds.

### **3.0 LOCATION AND ACCESS:**

As the crow flies the property is located 25 km southeast of Cobalt. Easy vehicle access is gained by taking Hwy 567 southeast from Cobalt for 33 km. The highway traverses the east side of the grid while a tertiary road heads west up a large hill then across the west side of claims.

Larder Lake Mining Division            NTS: 31 M/3-4  
South Lorrain Tp.

### **4.0 MAGNETOMETER SURVEY:**

**4.1 Instrumentation:** A Gem Systems GSM-19 overhauser magnetometer serial no. 7052358 was used for the survey. These units have an accuracy of +/- 1/100th of a gamma. 11.70 km was surveyed taking 936 readings at 12.5 meter intervals. An EDA Omni IV base station was used to monitor and correct for the diurnal variation during the course of the survey. This instrument reads to 1/10<sup>th</sup> of a gamma resolution. The base station cycled at 15-second intervals.

**4.2 Survey Results and Interpretation:** The results are presented in contour format on plans at 1:2500 scale.

The magnetic survey reveals the top of a north south trending diabase sill in contact with Archean metavolcanic rock (background 800-900 nT) to the west. Readings up to 3000 nT indicate on surface magnetic mineral content within the diabase. Further east the magnetic background falls to around 700 nT.

The magnetic high is pinched in the middle which might suggest the presence of the east west trending Forneri fault.

A few outliers of mafic intrusive material are noted at the baseline at 50 and 150 N and also on L 150 to 400 S inclusive at 200 W.

**5.0 VLF Electromagnetic Survey:**

A total of 11.70 km was surveyed for a total of 936 readings taken at 12.5 meter stations on lines spaced at 50 and 100 meters. All readings were taken while facing north.

**5.1 Instrumentation:** A Gem Systems Mag/VLF-EM receiver (Ser. No. 7052358) was used for the survey. The in-phase and quadrature components were recorded using VLF transmitting station Cutler, Maine NAA transmitting at 24.0 kHz. The measured quantities are the in-phase and quadrature components of the vertical magnetic field measured as a percentage of horizontal primary field (read to a resolution of +/- 1%).

**5.2 Survey Results:** The results of the survey are presented in profile form on plans at 1:2500 scale.

The VLF-EM survey yielded very little in terms of prospective conductive trends. There is however a very marginally weak response associated with an area of surface trenching at the west boundary of claim 4213006.

Two other responses on L 0 and 100 S further east appear to be related to conductive swamp cover.

**6.0 CONCLUSIONS AND RECOMMENDATIONS:**

The magnetic survey has indicated the contact between the diabase sill and Archea volcanic rock. This is a highly prospective area that indicates that micro-structure may be present. A series of isolated highs trend north south along the inside boundary of claim 4213006 could be indicating small structure or a zone of weakness that allowed the mafic intrusive and possibly silver to penetrate.

The VLF-EM survey picked up a very weak response over an area of historic north trending silver veins. A more detailed approach may define a conductor axis with a silver vein source. Linespacing can be reduced to 10 meters and reading spacing reduced to 6.25 meters. Alternatively an I.P. survey could be done to detect mineralization.

**References**

Geological Map #2361 OGS 1975 Geological Compilation Series  
Scale - 1in to 4 miles

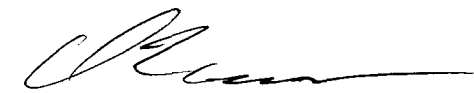
W. H. McIlwaine 1970 Geologic Report 83 - Geology of South Lorrain Twp.

**CERTIFICATE OF AUTHOR**

I, David Laronde of the town of Temagami, Ontario hereby certify:

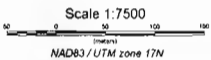
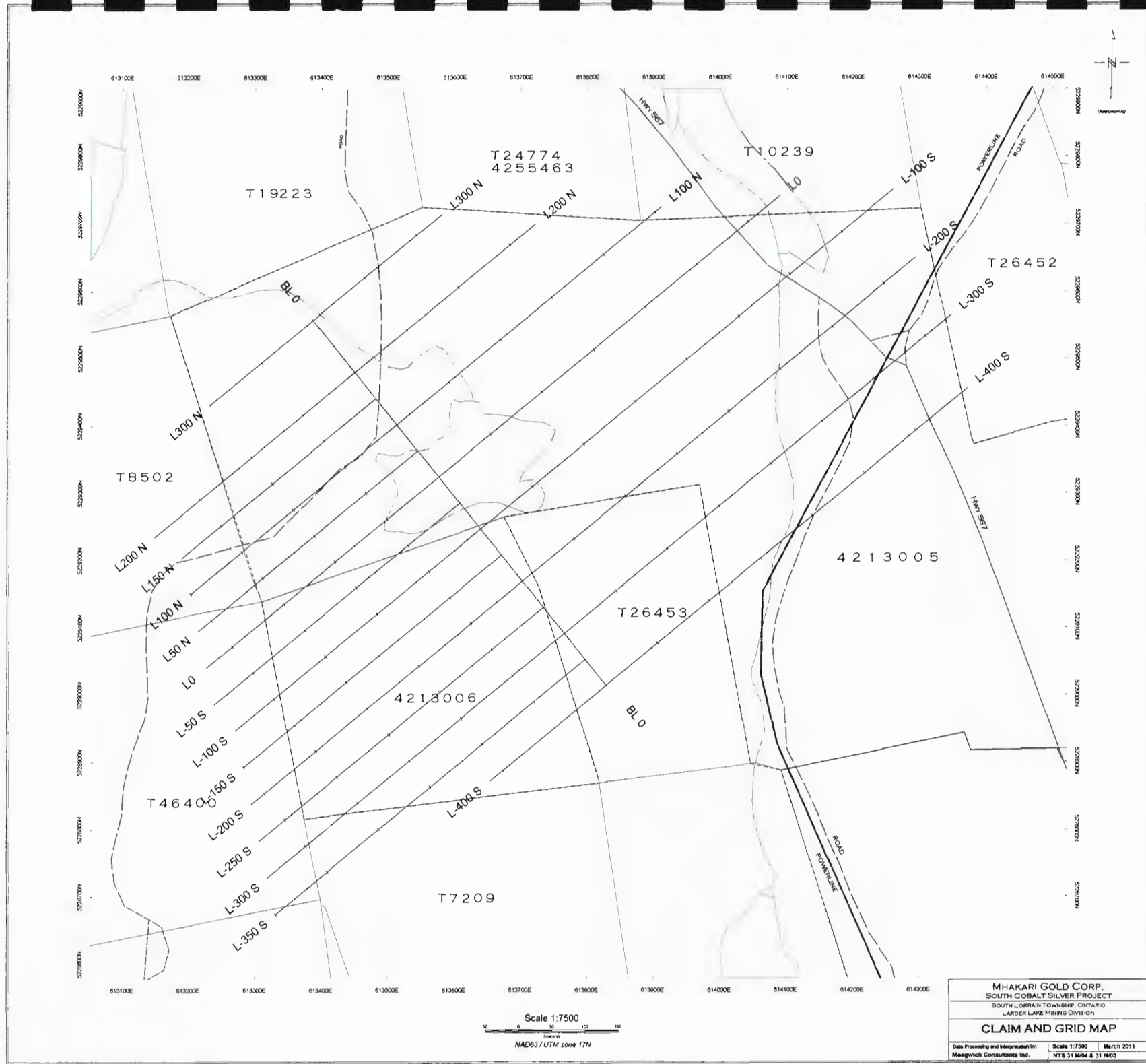
1. That I am a geology technologist and have been engaged in mineral exploration for the past 31 years.
2. That I am a graduate of Cambrian College in Sudbury with a diploma in Geology Engineering Technology 1979.
3. That my knowledge of the property described herein was acquired by field work and documentation.

Dated at Temagami this 29th day of March 2011.

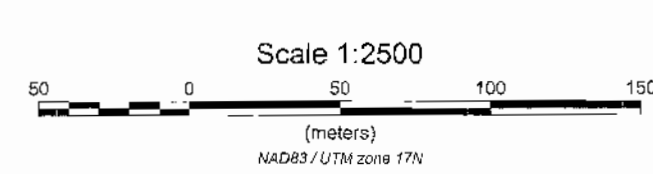
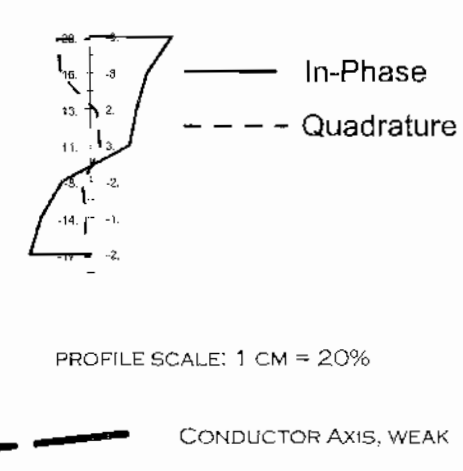
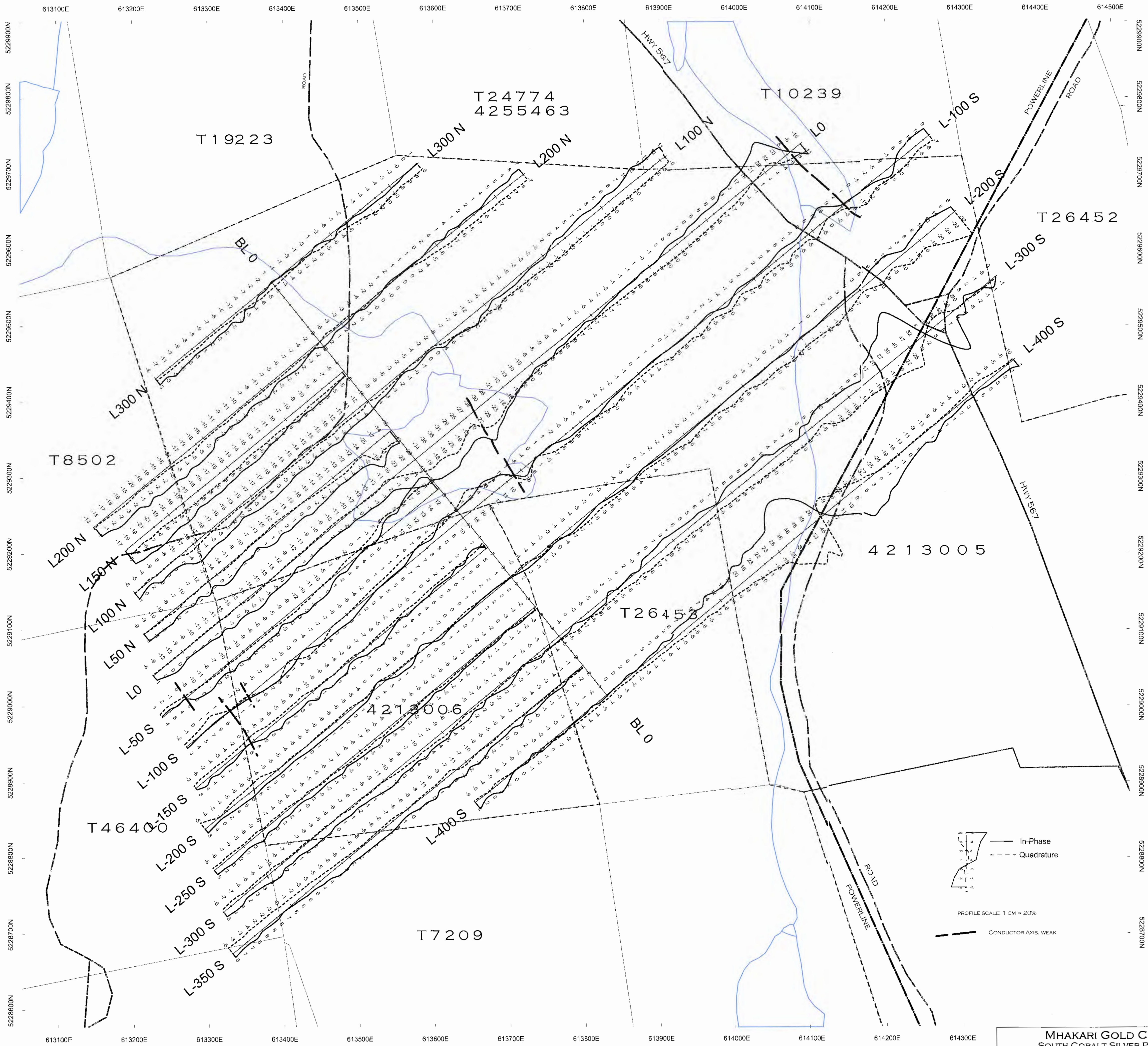
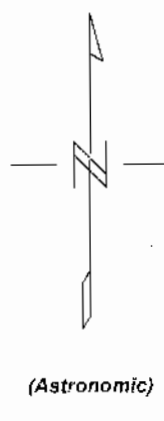


David Laronde



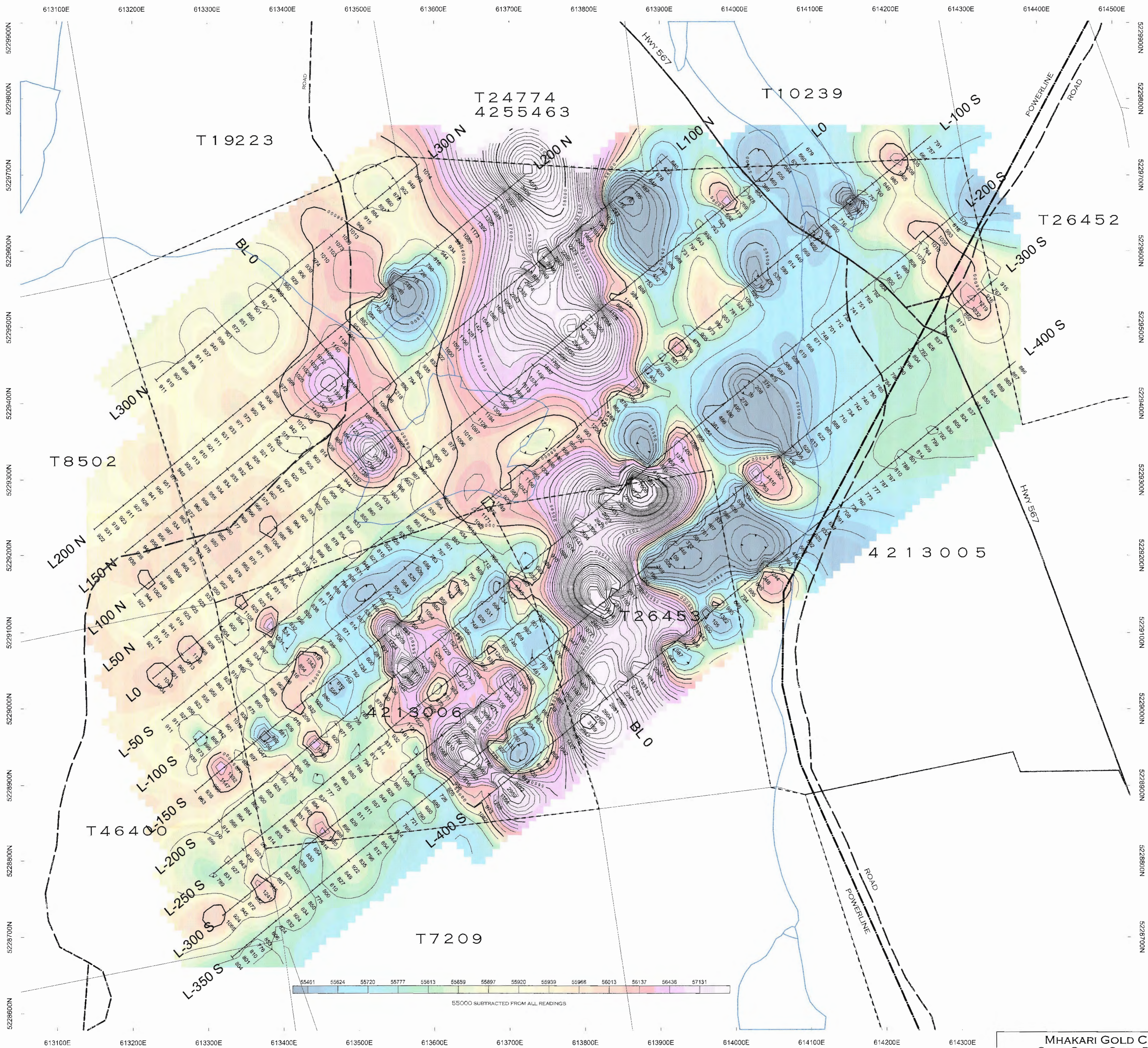
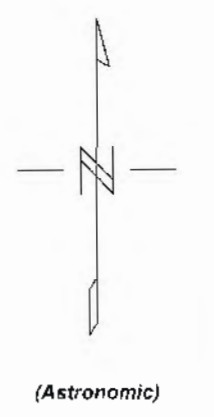


MHAKARI GOLD CORP. SOUTH COBALT SILVER PROJECT SOUTH LORRAIN TOWNSHIP, ONTARIO LARDER LAKE MINING DIVISION		
<b>CLAIM AND GRID MAP</b>		
Date Processing and Interpretation by: Meagwich Consultants Inc.	Scale 1:7500	March 2011
		NTS 31 M04 & 31 M03

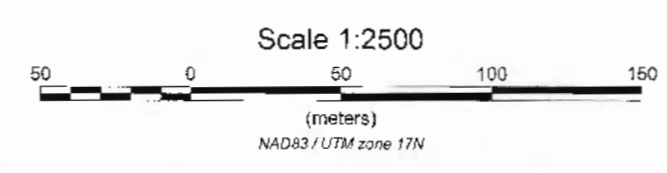


Instruments:  
GEM Systems GSM-19 MAG/VLF Serial #7052358  
GEM Systems GSM-19 Magnetometer Serial #56479  
VLF Station: NAA 24.0 kHz Cutler Maine

<b>MHAKARI GOLD CORP.</b>		
<b>SOUTH COBALT SILVER PROJECT</b>		
SOUTH LORRAIN TOWNSHIP, ONTARIO		
LARDER LAKE MINING DIVISION		
VLF - EM SURVEY		
PROFILES OF IN-PHASE AND QUADRATURE		
Data Processing and Interpretation by:	Scale 1:2500	March 2011
Meegwich Consultants Inc.	NTS 31 M/04 & 31 M/03	



Instruments:  
GEM Systems GSM-19 MAG/VLF Serial #7052358  
GEM Systems GSM-19 Magnetometer Serial #58479  
VLF Station: NAA 24.0 kHz Cutler Maine



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SOUTH LORRAIN TOWNSHIP, ONTARIO		
LARDER LAKE MINING DIVISION		
GROUND MAGNETOMETER SURVEY		
TOTAL FIELD CONTOURS		
Data Processing and Interpretation by:	Scale 1:2500	March 2011
Meegwich Consultants Inc.	NTS 31 M/04 & 31 M/03	