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SOUTH LORRAIN

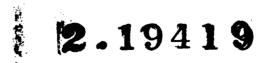
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GROUND GEOPHYSICAL SURVEYS POTHOLE SOUTH PROPERTY Hugh Moore South Lorrain Township

February 1999



GEOSCIENCE ASSESSMENT OFFICE



NTS: 31 M/4

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1.0 INTRODUCTION:

From Dec. 1 to 11, 1998, a program of linecutting and geophysical surveying was carried out on the Pothole South Property held by Hugh Moore of 138 Wellington St. New Liskeard, Ontario POJ 1P0. The geophysical work was executed and reported on by David Laronde of Meegwich Consultants Inc. P.O. Box 482, Temagami, Ontario POH 2HO.

Linecutting: A total of 8870 ft. (2.70 km) of linecutting was done. 7870 ft. was cut from a 1000 ft. baseline running at an azimuth of 0 degrees. The lines were surveyed with total field magnetics and VLF electromagnetics.

2.0 PROPERTY:

The property consists of a one unit claim numbered 1230521 situated in the township of South Lorrain.

3.0 LOCATION AND ACCESS:

The property is located in the historic Silver Centre Mining Camp which is situated some 20 mi. southeast from the town of North

Cobalt along Hwy 567. Good road access to the property from Hwy 567 is via the old road to Silver Centre for approximately 1.0 mi..

4.0 GEOLOGIC SETTING:

For the most part the property is underlain by a band of intermediate to mafic metavolcanics. A north trending contact is apparent along the east boundary of the claim where a Nipissing diabase sill (top) outcrops.

Huronian sediments are mapped only in the extreme northwest corner.

The Forneri fault trends east-northeast along the property north boundary.

5.0 MAGNETOMETER SURVEY:

A total of 8870 ft. was surveyed (354 readings) at 25 foot stations on lines spaced at 200 feet.

5.1 Instrumentation: A GEM Systems GSM -19Magnetometer, Serial no. 58479 was used for the survey. A base station was set up on the property to monitor and correct for the

diurnal variation during the course of the survey. These instruments are micro-processor based and measure the earth's total magnetic field to an accuracy of one-tenth of a gamma.

<u>5.2</u> <u>Survey Results</u>: The results are presented in contour and profile form on plans at 1:2400 scale or 1 in.= 200 ft.

The magnetic survey determines the amount of magnetic mineral in a given rock. Volcanic rock typically has a fairly uniform background. In this case the survey values over the volcanic rock is somewhat disturbed with several irregular shaped responses.

The most obvious feature is a group of 3 semi-massive highs situated right and centre on the grid. The intensity of values range up to 3557 nT. The background value range is 250-350nT.

A more subtle group of highs can be seen on the west side of the baseline near 200 and 400 S. The intensity of values range as high as 1151 nT.

A high is noted in the extreme northeast corner of the grid at the end of L 200 N.

Partial coverage of a low is found along the eastern limits of the surveyed area. This is coincident with the Nipissing diabase and may indicate negatively charged magnetite concentrations.

The remainder of the grid is fairly uniform with values conforming to the background range for the most part. There are a few isolated spikes here and there as well. Some of these could be covered over iron from equipment and machinery used in past workings during the boom years.

6.0 VLF Electromagnetic Survey:

A total of 8870 ft. was surveyed for a total of 180 readings taken at 50 foot stations on lines spaced at 200 feet.

- 6.1 Instrumentation: A Geonics EM-16 VLF-EM receiver was used for the survey. The inphase 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%).
- **6.2** Survey Results: The results of the survey are presented in profile form on plans at a scale of 1:2400 or 1 in. = 200 ft.

VLF surveys tend to pick up topographic and geological noise (overburden filled depressions) as well as prospective mineralized

horizons. Using field notes from the survey and other geological information some of the anomalies may be explained however most of the anomalies should be followed up when in doubt.

The survey picked up three conductors that are discussed as follows:

Conductor A: This anomaly trends northwest near the west claim boundary through the shaft area. It is a relatively weak response having a short strike length of about 400 feet.

Conductor B: A very weak response that is apparent only with interpretation. This response might represent a shift in background values.

Conductor C: This anomaly is found near the southern boundary of a beaver pond immediately to the north. This is also a marginal response.

7.0 CONCLUSIONS AND RECOMMENDATIONS:

The semi-massive magnetic highs east and central on the grid may be outlining an ultramafic intrusive. Toward the west side the subtler highs might be indicating the same unit only less of it. The intrusive may have occupied a zone of weakness relating to the Forneri Fault a few hundred feet north.

The low at the east boundary is likely diabase and there is abundant outcrop in that sector.

There is little response from the VLF-EM survey. The anomalies are marginal and weak. Conductor A is co-incident with underground workings that trend along a prospective vein. The workings would be water filled and might produce an EM conductor. Out of the other two conductors, only Conductor C should be followed up.

The coupling angle for the VLF-EM survey was poor for north trending conductors. There is no transmitting station to the south within range.

Follow-up work:

- Determine if the mineralized zones can be traced with magnetics.
 If so then intermediate lines are warranted to further define limits of the ultramafic intrusive.
- 2. Re-run the VLF-EM survey with a portable transmitter Geonics Tx-27 which could be run down the road to the east of the grid. Laying out and picking up the 1 km. of antenna wire and running the grid lines could be accomplished by one man in one day or run a horizontal loop EM survey to map conductors and structure.
- 3. Geochemical survey and geological mapping.
- 4. Explore the ultramafic for base metals.

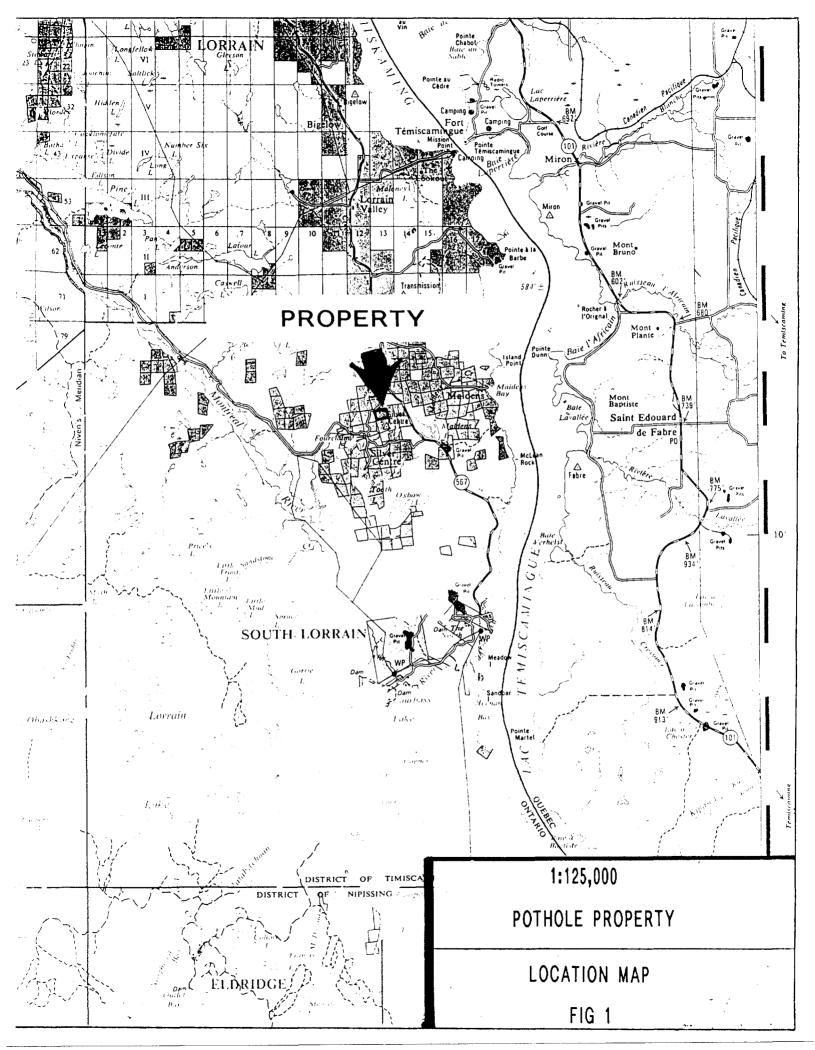
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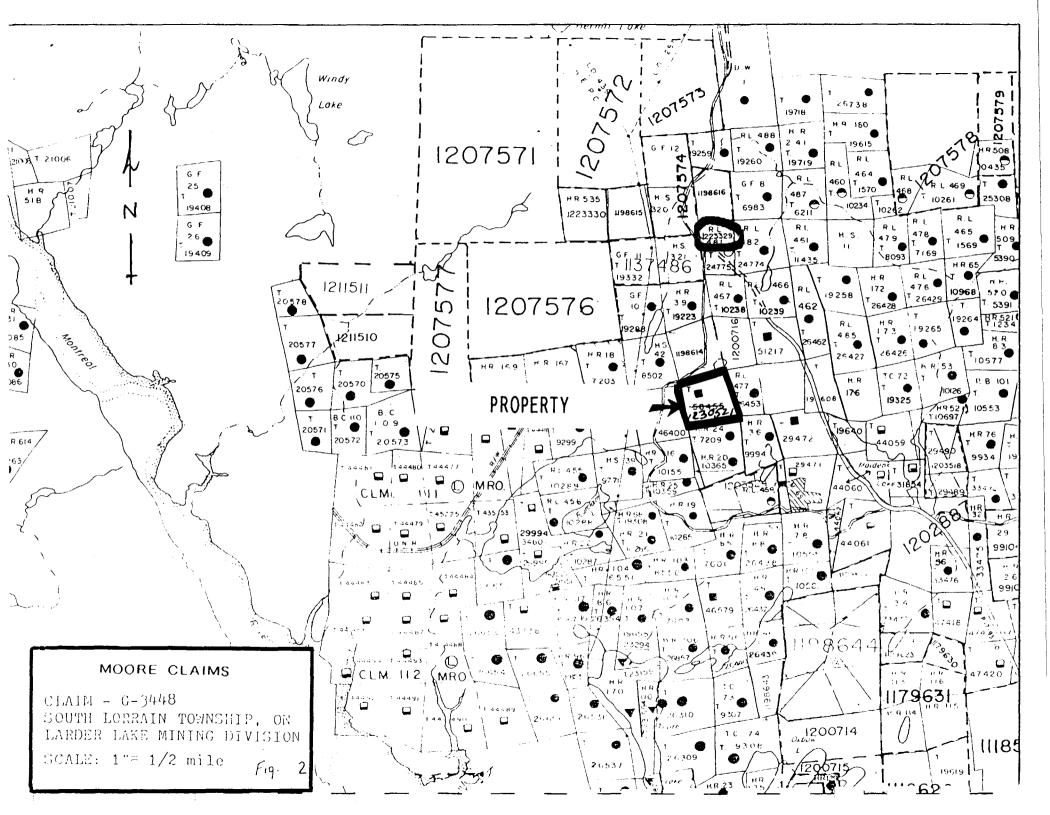
Ontario Geological Survey Map 2361 Geological Compilation Series

1970 Geological Report No. 83 Geology of South Lorrain Tp.

CERTIFICATE OF AUTHOR

3.	with a diploma in Geology Engineering Technology 1979. That my knowledge of the property described herein
3.	was acquired by field work and documentation.
Dated at Ter	magami this 10th day of February 1999.
David Laron	de





VLF-EM GEONICS

EM16 SPECIFICATIONS

MEASURED QUANTITY Inphase and quad-phase components

of vertical magnetic field as a percentage of horizontal primary field. (i.e. tangent of the tilt

angle and ellipticity).

SENSITIVITY Inphase: ±150%

Quad-phase: ± 40%

RESOLUTION ±1%

OUTPUT Nulling by audio tone. Inphase in-

dication from mechanical inclinometer and quadphase from a graduated dial.

OPERATING FREQUENCY 15-25 kHz (15-30 kHz optional) VLF

Radio Band. Station selection done by

means of plug-in units.

OPERATOR CONTROLS ON/OFF switch, battery test push

button, station selector switch,

audio volume control, quadrature dial,

inclinometer.

POWER SUPPLY 6 disposable 'AA' cells.

DIMENSIONS 53 x 21.5 x 28 cm

WEIGHT Instrument: 1.8 kg

Shipping: 8.35 kg

CAUTION:

EM16 inclinometer may be damaged by exposure to temperatures below -30°c. Warranty does not cover inclinometers damaged by such exposure.

GEM SYSTEM GSM-19 WALKING MAG

INSTRUMENT SPECIFICATIONS

MAGNETOMETER / GRADIOMETER

Resolution:

0.01 nT (gamma), magnetic field and gradient.

Accuracy:

0.2 nT over operating range.

Range:

20,000 to 120,000 nT.

Gradient Tolerance:

Over 10,000 nT/m

Operating interval:

Power Requirements:

3 seconds minimum, faster optional. Readings initiated from keyboard,

external trigger, or carriage return via RS-232-C.

Input/Output:

6 pin weatherproof connector, RS-232C, and (optional) analog output. 12 V, 200 mA peak (during polarization), 30 mA standby. 300mA peak

in gradiometer mode.

Power Source:

Internal 12 V, 2.6 Ah sealed lead-acid battery standard, others op-

tional. An External 12V power source can also be used.

Battery Charger:

Input: 110 VAC, 60 Hz. Optional 110/220 VAC, 50/60 Hz.

Output: dual level charging.

Operating Ranges:

Temperature: -40 °C to +60 °C.

Battery Voltage: 10.0 V minimum to 15V maximum.

Humidity: up to 90% relative, non condensing.

Storage Temperature:

-50°C to +65°C

Display:

LCD: 240 x 64 pixels, or 8 x 30 characters. Built in heater for opera-

tion below -20°C

Dimensions:

Console: 223 x 69 x 240mm.

Sensor staff: 4 x 450mm sections.

Sensor: 170 x 71mm dia.

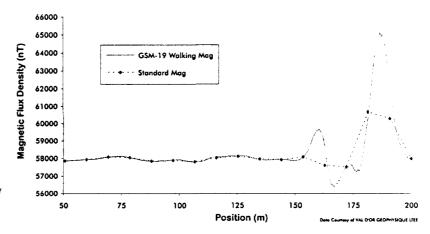
Weight: Console 2.1kg, Staff 0.9kg, Sensors 1.1kg each.

"Walking" Magnetometer / Gradiometer

GEM Systems pioneered the GSM-19's innovative "Walking" option that enables acquisition of nearly continuous data on survey lines. Similar to an airborne survey in principle, data is recorded at discrete time intervals (up to 2 readings per second) as the instrument travels along the line. At each major survey picket (fiducial), the operator touches a designated key. The Walking Mag automatically assigns a linearly interpolated coordinate to all intervening readings.

A main benefit of the Walking option is that the high sample density improves definition of geologic structures. And because the operator can record data on a near-continuous basis, the Walking Mag increases survey efficiency and minimizes field expenditures -- especially for highly detailed ground-based surveys.

Near-Continuous Surveys Improve Definition of Magnetic Anomalies



As shown above, near-continuous measurements increase definition. Results from a GSM-19 "Walking Mag" (273 readings over 150 m with 2 sec. cycle time) were compared with results from a standard magnetometer (13 readings over 150m).



Declaration of Assessment Work Performed on Mining Land

Mining Act, Subsection 66(2) and 66(3), R.S.O. 1990

900

Transaction Number (office use) 9980.003 lessessment Files Research In

(2) and 66(3) of the Mining Act. Under section 8 of the Mining Act, it and correspond with the mining land holder. Questions about this opment and Mines, 3rd Floor, 933 Ramsey Lake Road, Sudbury,

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tario, P3I	31M03NW2004	2.19419	SOUTH LORRAIN	

structions: - For work performed on Crown Lands before recording a claim, use form 0240.

- Please type or print in ink

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Hugh A 38 Wellingron	1,0085	Telephone Number
		705-647.5179
New LISKEM	ns On. PosiPo	Fax Number 705-647-8714
		Client Number CLN 171975
\$		Telephone Number
		Fax Number
Type of work performed: Cl	heck (✓) and report on only ONE of the follow	ving groups for this declaration.
Geotechnical: prospecting, assays and work under sect	tion 18 (regs) trenching and ass	
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Geophysical Si	4- 2.72 km, C 2.60 unveys - MAG X VLEEND 2 days & 200/day	Commodity
	1 / /	Total \$ Value of Work Claimed 2,067
Work From Dec 1/98	To DEC 11 /98 Year Day Month Year	NTS Reference
Positioning System Data (if available)	Township/Area South LORRAIN	Mining Division KLK
NTS: 31M4	M or G-Plan Number 3 4 4 8	Resident Geologist, District Kikland Lake
	o copies of your technical report.	re linked for assigning work;
Person or companies who	prepared the technical report (Attach a list	t if necessary)
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Statement of Costs for Assessment Credit

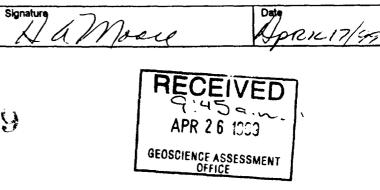
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onal information collected on this form is obtained under the sulhority of subsection 6 (1) of the Assessment Work Regulation 6/96. Under section 8 of the Mining his information is a public record. This information will be used to review the assessment work and correspond with the mining land holder. Questions about this tion should be directed to a Provincial Mining Recorder, Ministry of Northern Development and Mines, 3rd Floor, 933 Ramsey Lake Road, Sudbury, Ontario, P3E

Work Type	Units of work Depending on the type of work, list the number of hours/day worked, metres of drilling, idiometres of grid line, number of samples, etc.	Cost Per Unit of work	Total Cost
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Setup -:	2 Trips	5000.	5000
Food and	Lodging Costs	<u> </u>	
			116.00
2. If work is filed after two years and u	rmance is claimed at 100% of the above Top to five years after performance, it can on situation applies to your claims, use the cale	ly be claimed at 50% of the T	
TOTAL VALUE OF ASSESSMENT WO	•		worked claimed.
	to verify expenditures claimed in this state ction/clarification. If verification and/or corr	ment of costs within 45 days	of a
Certification verifying costs: i	, do heraby certify, that the amounts slarred while conducting assessment work on		
Declaration of Work form as(recorded	I holder, agent, or state company position with signing authorit	I am authorized to make	this certification.

0212 (03/97)

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Ministry of **Northern Development** and Mines

38 WELLINGTON STREET NORTH

Ministère du Développement du Nord et des Mines

Ontario

Geoscience Assessment Office 933 Ramsey Lake Road May 31, 1999 6th Floor

Sudbury, Ontario P3E 6B5

Submission Number: 2.19419

Telephone: (888) 415-9846 (877) 670-1555

Visit our website at:

www.gov.on.ca/MNDM/MINES/LANDS/mlsmnpge.htm

Dear Sir or Madam:

BOX 746

P0J-1P0

HUGH ALLEN MOORE

NEW LISKEARD, Ontario

Status

Subject: Transaction Number(s):

W9980.00278 Deemed Approval

We have reviewed your Assessment Work submission with the above noted Transaction Number(s). The attached summary page(s) indicate the results of the review. WE RECOMMEND YOU READ THIS SUMMARY FOR THE DETAILS PERTAINING TO YOUR ASSESSMENT WORK.

If the status for a transaction is a 45 Day Notice, the summary will outline the reasons for the notice, and any steps you can take to remedy deficiencies. The 90-day deemed approval provision, subsection 6(7) of the Assessment Work Regulation, will no longer be in effect for assessment work which has received a 45 Day Notice. Allowable changes to your credit distribution can be made by contacting the Geoscience Assessment Office within this 45 Day period, otherwise assessment credit will be cut back and distributed as outlined in Section #6 of the Declaration of Assessment work form.

Please note any revisions must be submitted in DUPLICATE to the Geoscience Assessment Office, by the response date on the summary.

If you have any questions regarding this correspondence, please contact Steve Beneteau by e-mail at steve.beneteau@ndm.gov.on.ca or by telephone at (705) 670-5855.

Yours sincerely,

ORIGINAL SIGNED BY

Blair Kite

Supervisor, Geoscience Assessment Office

Mining Lands Section

Work Report Assessment Results

Submission Number:

2.19419

Date Correspondence Sent: May 31, 1999

Assessor: Steve Beneteau

Transaction Number

First Claim

Number Township(s) / Area(s)

Status

Approval Date

W9980.00278

1230521

SOUTH LORRAIN

Deemed Approval

May 31, 1999

Section:

14 Geophysical MAG 14 Geophysical VLF

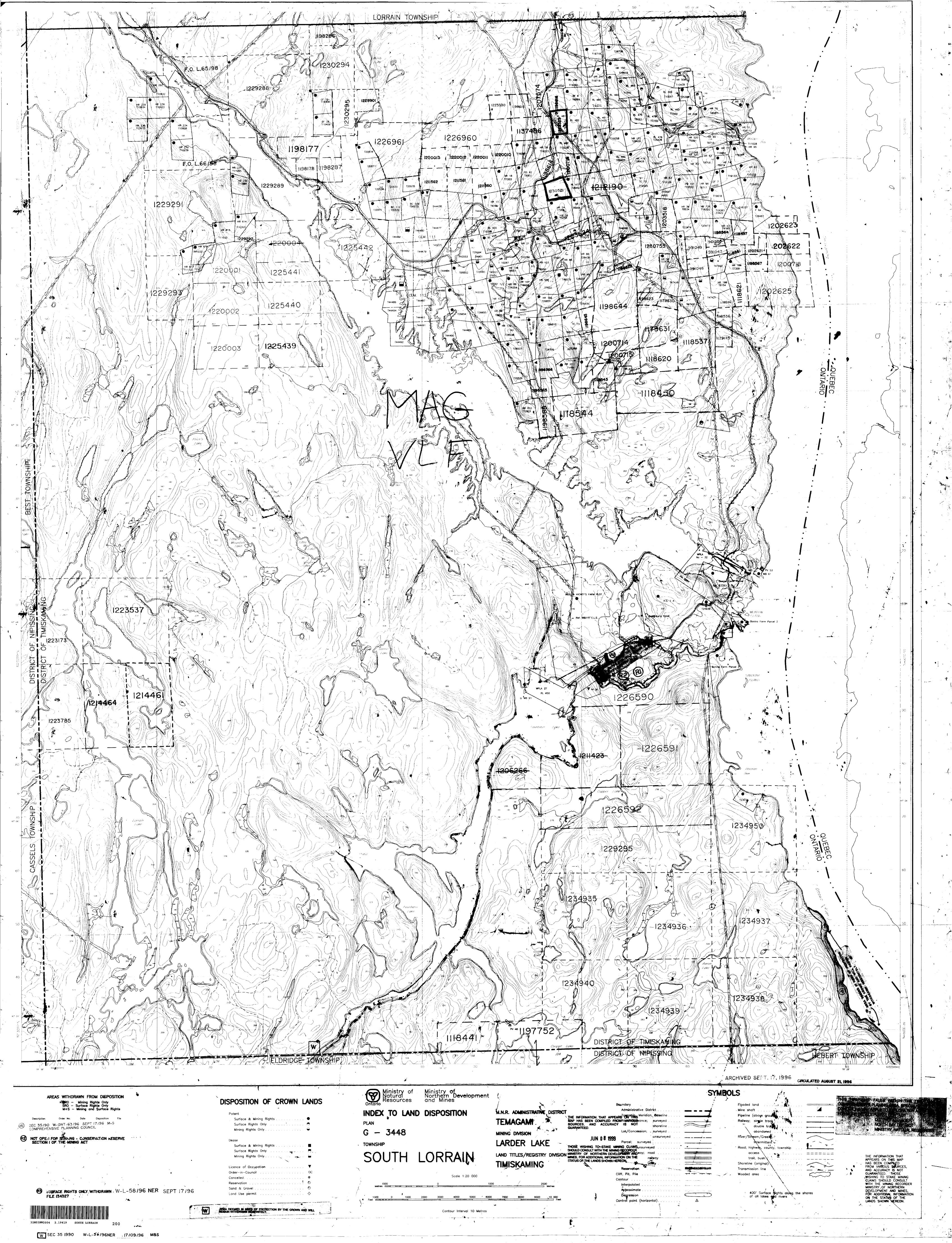
Correspondence to:

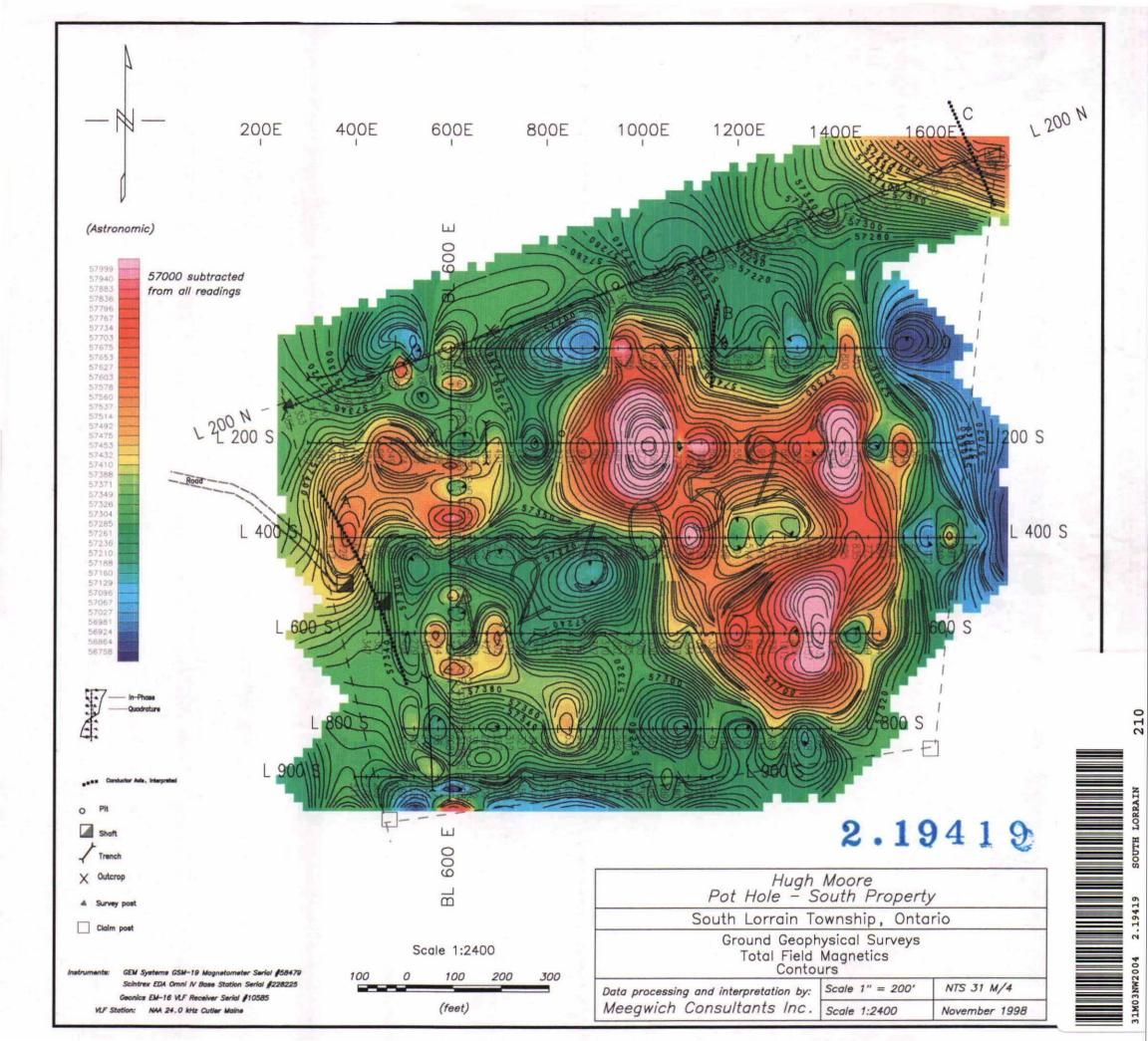
Resident Geologist Kirkland Lake, ON

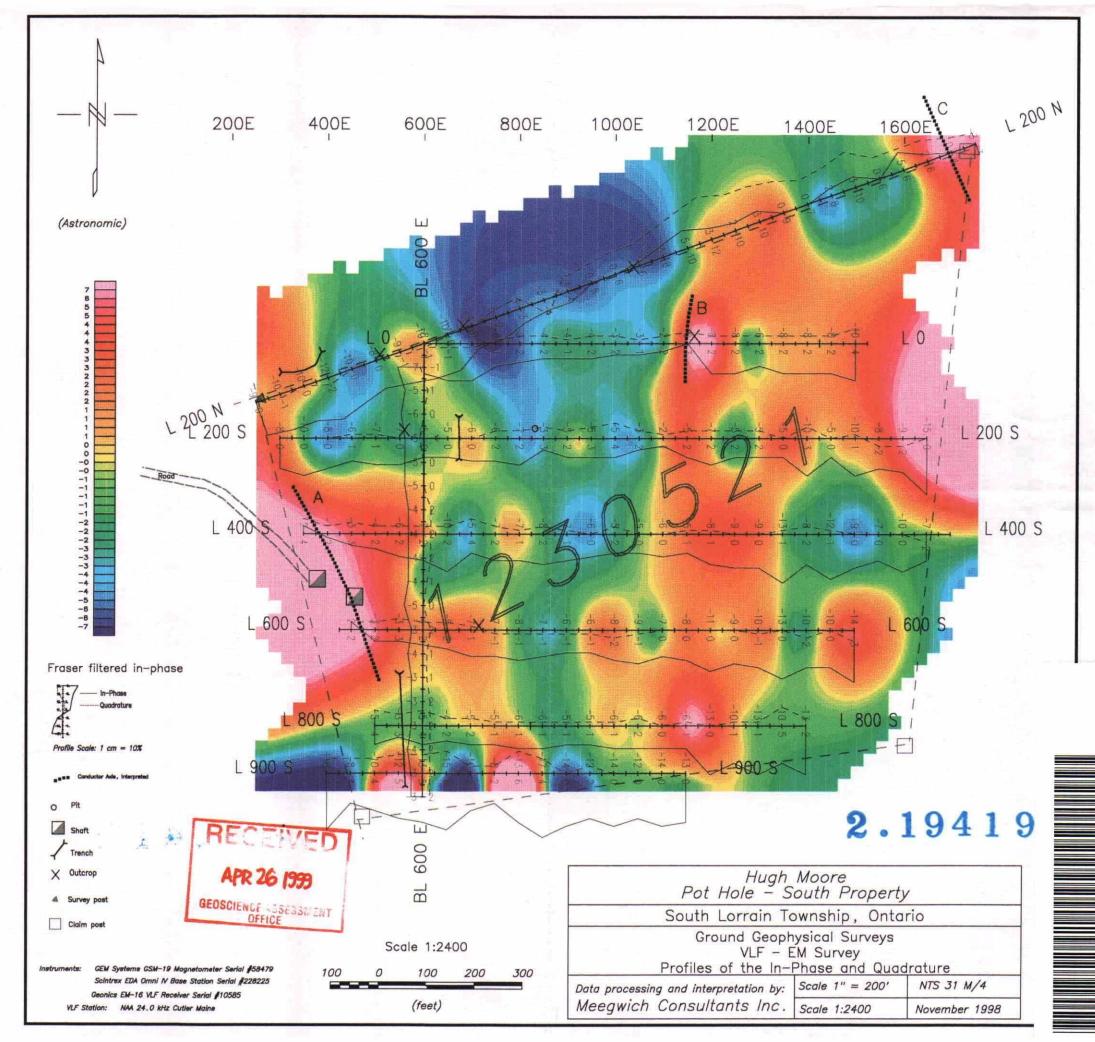
Assessment Files Library Sudbury, ON

Recorded Holder(s) and/or Agent(s):

HUGH ALLEN MOORE NEW LISKEARD, Ontario







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