

11, rue Nelson Val d'Or, Qué. J9P 2Z5 Tél.: (819) 825-6263



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REPORT

ON

GEOPHYSICAL WORK

ON THE

SIGNAL GROUP

SWAIN LAKE AREA

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LABRADOR MINING EXPLORATION CO. LTD.

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REJEAN GOSSELIN M.Sc. Consulting Geologist.

26272

March 15, 1984

LOCATION MAP REDL AK PROPERTY DRYDEN 24

1" = IZ miles



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IN POCKET :

Magnetometer survey map. HEM survey map, Maxmin profiles Magnometer survey detailed map. HEM survey detailed map, Maxmin Profiles.

INTRODUCTION

The present report describes the results of the electromagnetic (HEM-MAXMIN) and magnetic surveys that were recently performed on the Signal Group of Labrador Mining and Exploration Co. Ltd, in Swain Lake area, Ontario. The property consists of 24 contiguous mining claims covering an area of approximately 960 acres.

The property has been entirely covered by both the magnetic and electromagnetic (HEM-MAXMIN) surveys.

LOCATION AND ACCESS

The property of Labrador Mining and Exploration Co. Ltd. is located on the northeast shore of Swain Lake, in the Red Lake Mining Division, Northeastern Ontario.

The Signal Group lies at approximately 55 miles northeast of the town of Red Lake. The easiest mean of access is by bush - plane from either Uchi Lake or Confederation Lake (South Bay), where aircraft facilities are available, to Swain Lake that covers a limited area in the southwest part of the property. This represents a distance of approximately 13 air-miles from Confederation Lake (South Bay) and 16 air-miles from Uchi Lake.

GEOLOGY

The property under study is mostly underlain by Archean metasedimentary rocks consisting of mixed greywacke, tuffaceous metasediments, sandstone and conglomerate. Basic volcanic and intrusive rocks are also inferred to occur on the property. The rocks have been metamorphosed to the greenschist facies and are affected by a regional schistosity striking roughly east-west in the area of interest. The rocks have been folded and cut by faults and shears.

- 2 -

One gold showing and one copper showing are reported to occur on the group of claims. They should be located near the southeast shore of Swain Lake in the west-central part of the property.

The geological information, summarized above, has been taken from the Ontario Geological Survey Preliminary Map P.2386. This compilation map at a scale of 1 inch to 2 miles has been prepared by P. C. Thurston and J. R. Bartlett and published in 1981 by the Ontario Ministry of Natural Resources.

GEOPHYSICAL WORK

A grid of lines have been cut to cover all the claims forming the Signal Group. A base line (BL-10+00N), 9600 feet long, was established at an azimuth of 102° with one parallel tie line (TL-16+00N) located 600 meters (1968 feet) to the north. Perpendicular lines at an azimuth of 012° were cut at a spacing of 400 feet except from L-152W to L-180W between the base line and the tie line where 200 foot spaced lines were cut. A total of approximately 24 line-miles were cut and chained with stations every 25 meters (82 feet).

The magnetic and the electromagnetic (HEM-MAXMIN) surveys were carried out along the north-south lines with readings recorded every 25 meters for both surveys. The readings were taken every 3 meters (10 feet) where detail 200-foot spacing lines have been established.

The magnetic survey was conducted with a Geometrics, Unimag <u>II</u> unit. Base stations were located on the base line and the readings were corrected for the diurnal variations. The readings were contoured and the results are presented in pocket on the Magnetometer Survey map, at a scale of 1:2,500, that covers the whole claim group.

- 3 -

A Magnetometer Survey detailed map at a scale of 1:1,000 is also presented in pocket to illustrate the close reading survey done on the 200-foot spaced lines.

The electromagnetic (HEM) survey was conducted with a MAXMIN <u>T</u> instrument using a cable of 25 meters and the frequency of 1777 Hz. The HEM readings were recorded every 25 meters along the lines except for the 200-foot spaced lines where measurements were taken every 3 meters (10 feet). Two MAXMIN Survey maps are presented in pocket; one covering the whole grid at a scale of 1:2,500 and another one at a scale of 1:1,000 that represents the detail surveyed area.

RESULTS

The results of the electromagnetic (HEM-MAXMIN) survey are very disappointing. No anomalies have been detected on the property. The author beleives that a longer cable should have been used.

The magnetic survey was able to detect two features of high magnetic susceptibility. A semicircular feature characterized by background readings above 2000 gammas. was found on the southwest corner of the property, centered over Swain Lake. This magnetic feature may represent the northeast edge of a mafic intrusive body. The second magnetic feature that was detected is a long east-west striking zone that crosses the grid line from L-100W at 7+00N to L-180W at 12+00N. This magnetic anomaly seems to be displaced, possibly by northeast striking faults, in the vicinity of the lines 152W and 160W. This magnetic feature is beleived to represent mafic volcanic rocks surrounded by low magnetic susceptibility sedimentary units.

CONCLUSIONS AND RECOMMENDATIONS

The electromagnetic (HEM-MAXMIN) survey failed to indicate conductive zones on the Signal Group of Labrador Mining Exploration Co. Ltd. Two magnetic features have been outlined by the magnetic survey. One of them seems to be displaced by northeast striking faults.

An electromagnetic (VLF-EM16) survey using two transmitting stations (NAA and NSS) and an induced polarization survey should be performed on the property, specially in the southeast quarter of the claim group in order to outline favorable structures for gold mineralizations. Intense prospecting, detailed geological mapping and soil geochemical sampling are also recommended to define drill targets.

REJEAN GOSSELIN, M.Sc. Consulting Geologist.

March 15, 1984

CERTIFICATE

THIS IS TO CERTIFY THAT: - I am resident of Val D'or, province of Québec since 1979.

- I have been engaged in mining exploration since 1979 and have been consulting as a professional geologist since 1979.

- I am graduate of Université Laval in Québec City (M.Sc, Geol.)

- I am a member of the Association des Géologues du Québec, of the Prospectors and Developers Association, of the Canadian Institute of Mining and Metallurgy and also director of the Québec Prospectors Association.

- This report is based on the date furnished by C.D.I. Surveys lnc. and beleived to be reliable, and on the author's experience on gold exploration.

- I have not received, directly or indirectly, or expect to receive any interest direct or indirect in Signal Group, Property of Labrador Mining Exploration Co. Ltd.

BY: 9

REJEAN GOSSELIN, M.Sc. Consulting Geologist.

March 15, 1984



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File No 2.6583

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Mining Lands Section

Control Sheet

TYPE OF SURVEY

_____ GEOPHYSICAL

____ GEOLOGICAL

____ GEOCHEMICAL

EXPENDITURE

MINING LANDS COMMENTS:

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Signature of Assessor

01/06/84

Date

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Your File: Our File: 2.6583

Albert Scott Rivett Mining Recorder Ministry of Natural Resources Ontario Government Building Box 5003 Red Lake, Ontario POV 2M0

Dear Sir:

We have received reports and maps for a Geophysical (Electromagnetic and Magnetometer) Survey submitted under Special Provisions (credit for Performance and Coverage) on Mining Claims KRL 696802 et al in the Area of Shabumeni Lake.

This material will be examined and assessed and a statement of assessment work credits will be issued.

We do not have a copy of the report of work which is normally filed with you prior to the submission of this technical data. Please forward a copy as soon as possible.

Yours sincerely,

S.E. Yundt Director Land Management Branch

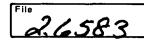
Whitney Block, Room 6643 Queen's Park Toronto, Ontario M7A 1W3 Phone:(416)965-6918

A.Barr:mc

- cc: Labrador Mining and Exploration Company Limited Suite 4600 Toronto Dominion Centre M5K 1E5
- cc: Rejean Gosselin ll Rue Nelson Val d'Or, Quebec J9P 225



Geotechnical Report Approval



Mining Lands Comments

Ministry of Natural

Resources

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To: Geophysics				
Comments				
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To: Geology - Ex	penditures			
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C.B. Ross

President

LABRADOR MINING AND EXPLORATION COMPANY LIMITED

Executive Office

4600 Toronto-Dominion Centre Toronto, Ontario M5K 1E5 (416) 947-4000

April 3, 1984

REGISTERED MAIL

Mining Lands 99 Wellesley Street West Whitney Block, Room 6610 Queen's Park Toronto, Ontario M7A 1W3

Dear Sir,

Pursuant to our recently submitted "Report of Work" forms, please find enclosed duplicate copies of the following reports:

"Report on Geophysical Work on the Shelter Group - Caviar Lake Area of Labrador Mining Exploration Company Limited" - Rejean Gosselin

"Report on Geophysical Work on the Signal Group - Swain Lake Area of Labrador Mining Exploration Company Limited - Rejean Gosselin.

We trust these meet with your approval.

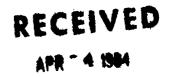
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Yours truly,

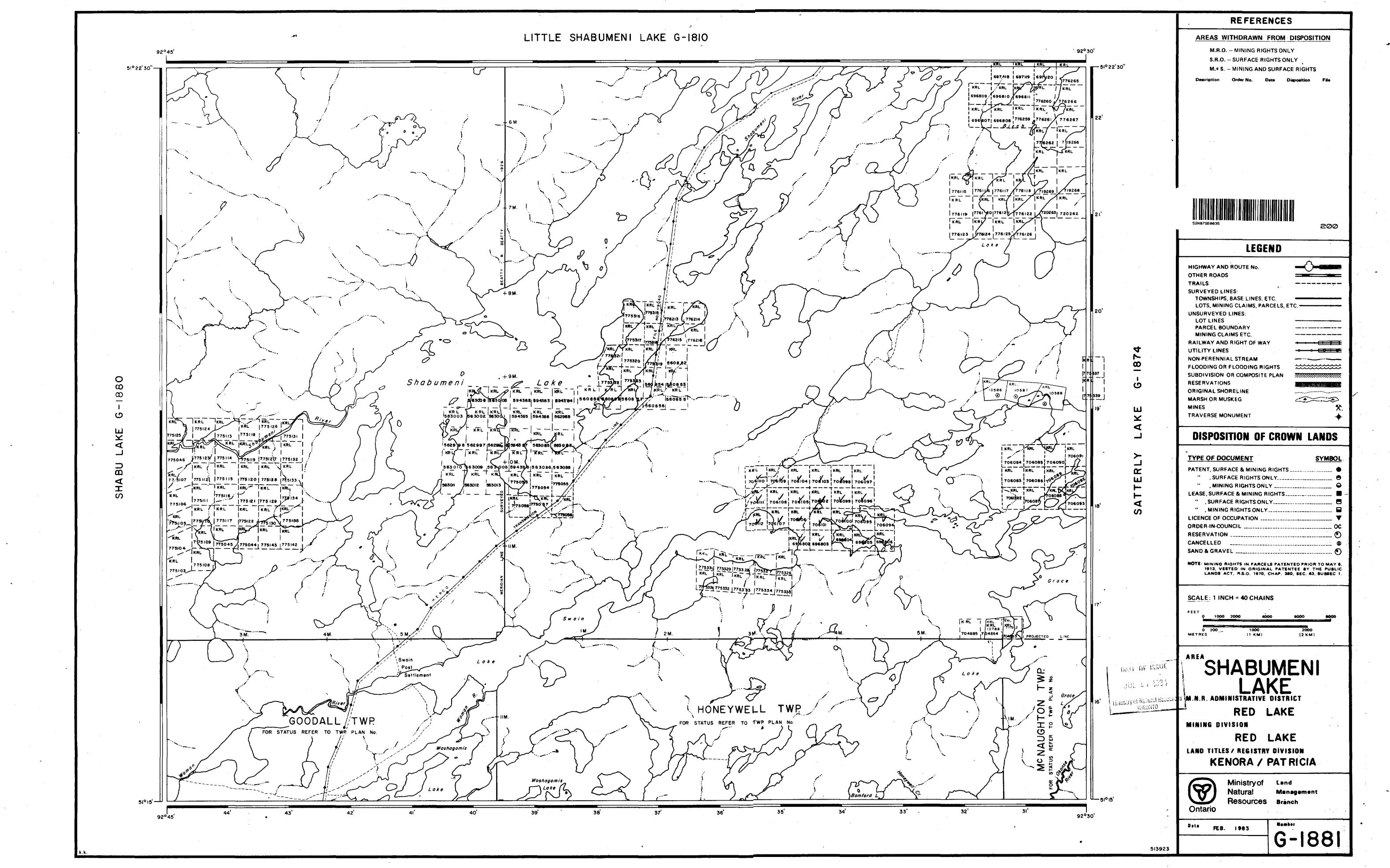
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J. McDonald Labrador Exploration Ontario Limited



JMcD:jc Enclosures MINING LANDS SECTION

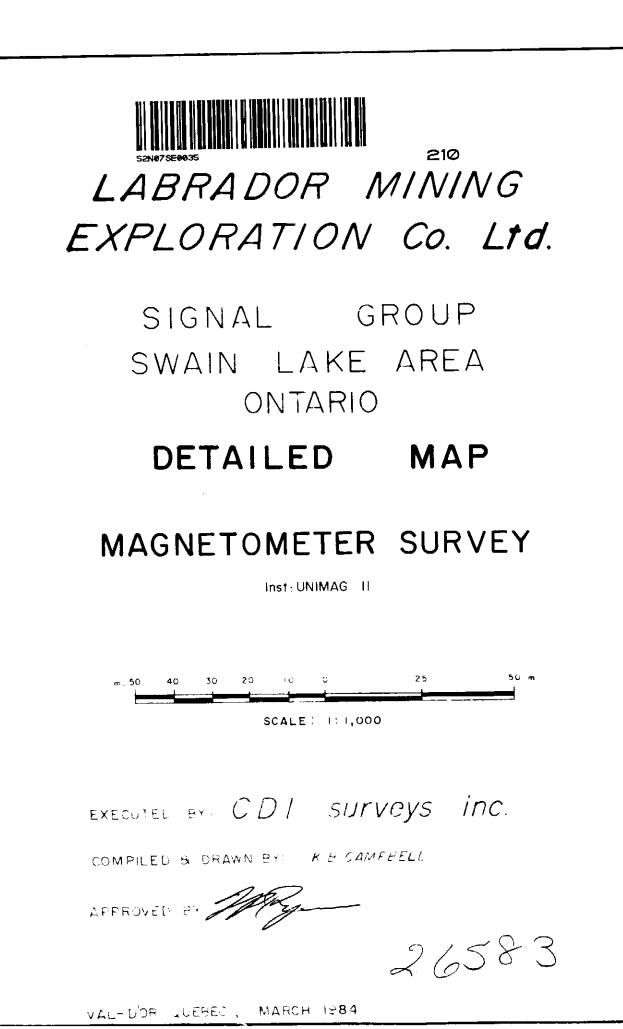
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