



NAREX Ore Search Consultants Inc.

4900 Sheppard Avenue East, Suite 208, Scarborough
Ontario, Canada M1S 4A7 Tel. (416) 293-2990



41P11SW0242 2.5720 ASQUITH

010

NRX:83/015

TIMMINS GOLD RESOURCES LIMITED

ELECTROMAGNETIC SURVEY

GIBSON-MOORECAMP LAKE PROPERTY

ASQUITH TOWNSHIP

LARDER LAKE MINING DIVISION

DISTRICT OF SUDBURY

ONTARIO

June, 1983

RECEIVED

JUL 29 1983

MINING LANDS SECTION



010C

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Accompanying Maps

Drawing # 2 - Electromagnetic Survey - Scale:1 inch to 200 feet.



A. INTRODUCTION

The Gibson-Moorecamp Lake property consists of five (5) contiguous claims in Asquith Township, Larder Lake Mining Division, District of Sudbury, Ontario. The claims which are held by Timmins Gold Resources Ltd. are L446557, L494562, L507641, L573086, and L573098.

During March 1982, a grid was cut over the property and a subsequent electromagnetic survey was conducted by NAREX Ore Search Consultants Inc.

B. LOCATION AND ACCESS

The claim group is located in central Asquith Twp. immediately east of Highway 560 and the village of Shiningtree, Ontario. Moorecamp and Mac Donald Lakes are major bodies of water which are located at least partly within the boundaries of the claim block.

C. SURVEY AND INSTRUMENT DATA

The surveys were conducted over previously cut north-south lines which are spaced at 400 foot intervals across the property. A total of 7.5 miles of grid and base lines were cut and picketed every 100 feet. The main baseline which is oriented east-west has a length of 4000 feet across the middle of the property.

.../..



Electromagnetic Survey

The electromagnetic survey was carried out using a "Geonics" EM-16 unit. The EM-16 is a sensitive receiver covering the frequency of the V.L.F. (very low frequency) transmitting stations, with a means of measuring the vertical field components. The VLF transmitting stations operating for communication with submarines, have a vertical antenna. The antenna current is thus vertical, creating a concentric horizontal magnetic field around them. When these magnetic fields meet conductive bodies in the ground, secondary fields are set up radiating from these bodies. The EM-16 equipment measures the vertical component of these secondary fields.

The receiver has two inputs with two receiving coils built into the instrument. One coil has a normally vertical axis, and the other, a horizontal one. Secondary fields caused by conductive bodies, are therefore measured by the EM-16 by the angle of dip on the instrument and by measured percentage of the quadrature component (out of phase component) to give a null signal. Any deviation from the zero null position is indicative of a secondary field and therefore, of a possible conductive body.

The transmitting station used for this survey was station NAA (17.8 kHz) Cutler, Maine, U.S.A. Readings were taken every 50 feet along the picketed lines for a total of 709 readings.

.../..



INTERPRETATION OF RESULTS - Electromagnetic Survey (drawing #2)

Several moderate-strength, generally E-W striking conductors were detected by the EM-16 survey.

Conductor A is a weak conductor which traceable over 3,200 feet in claims L573086 and L507641. The quadrature response for this conductor is similar to the inphase component. This suggests a moderate to poor conductive feature which is located under Moorecamp Lake and continues under the creek into MacDonald Lake. Conductor A', which is 700 feet long is probably a off-set continuation of conductor A under MacDonald Lake. This conductor A-A' has a total length of about 4000 feet.

Conductor B is a weak to moderate strength northeasterly striking conductor which is traceable over 800 feet in claims L446557 and L573086.

As in conductor A, the quadrature response is similar to the inphase component, suggesting a feature related to the lake bottom, shoreline and swamp. However, since this conductor is parallel to a shear zone with some sulphides it maybe be a weak sulphide/shear conductor.

Conductor C, is also a weak conductor with a length of 2000 feet, traceable across claims L573098 and part of L446557. The quadrature response is similar to the inphase component suggesting overburden effect a poor conductivity. MacDonald Lake, and as such could be caused by conductive lake-bottom.

.../..




CONCLUSIONS AND RECOMMENDATION:

Conductor A, (400 feet long) and conductor C, (2000 feet long) are generally weakly conductive and are probably largely due to lake-bottom, drainage effect and swamps. Conductor B, (800 feet long) however, is parallel to a shear zone and possibly could represent a shear zone with some sulphides and associated Au-mineralization.

Detailed electromagnetic survey, and additional drilling, may confirm these geophysical interpretations. It is therefore recommended that a program consisting of detailed EM (vertical or horizontal loop) and additional drilling on conductor B, should be carried out since the zone could well represent a shear zone which might contain quartz-veins and/or addition gold mineralization.

PB/cb


Peter Born

June, 1983





41P11SW0242 2.5720 ASQUITH

File _____

300

TO BE ATTACHED AS AN APPENDIX TO TECHNICAL REPORT
FACTS SHOWN HERE NEED NOT BE REPEATED IN REPORT
TECHNICAL REPORT MUST CONTAIN INTERPRETATION, CONCLUSIONS ETC.

Type of Survey(s) Geophysical - Electromagnetic

Township or Area Asquith Twp.

Claim Holder(s) Timmins Gold Resources Ltd.

Survey Company NAREX Ore Search Consultants Inc.

Author of Report Peter Born

Address of Author C#0 Suite208-4900 Sheppard Ave.E.Sc Scarborough

Covering Dates of Survey March 1982 - July 1983
(linecutting to office)

Total Miles of Line Cut 7.5

MINING CLAIMS TRAVERSED
List numerically

(prefix)	(number)
L	446557
L	494562
L	507641
L	573086
L	573098

**SPECIAL PROVISIONS
CREDITS REQUESTED**

DAYS
per claim

ENTER 40 days (includes
line cutting) for first
survey.

ENTER 20 days for each
additional survey using
same grid.

- Geophysical
 - Electromagnetic 20
 - Magnetometer _____
 - Radiometric _____
 - Other _____
- Geological _____
- Geochemical _____

AIRBORNE CREDITS (Special provision credits do not apply to airborne surveys)

Magnetometer _____ Electromagnetic _____ Radiometric _____
(enter days per claim)

DATE: July 7, 1983 SIGNATURE: Peter Born
Author of Report or Agent

Res. Geol. _____ Qualifications 2.3604

Previous Surveys

File No.	Type	Date	Claim Holder

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MINING LANDS SECTION

TOTAL CLAIMS 5

If space insufficient, attach list

OFFICE USE ONLY

GEOPHYSICAL TECHNICAL DATA

GROUND SURVEYS – If more than one survey, specify data for each type of survey

Number of Stations 709 Number of Readings 1418
Station interval 50 feet Line spacing 400 feet
Profile scale 1" to 20%
Contour interval _____

MAGNETIC

Instrument _____
Accuracy – Scale constant _____
Diurnal correction method _____
Base Station check-in interval (hours) _____
Base Station location and value _____

ELECTROMAGNETIC

Instrument GEONICS EM-16
Coil configuration _____
Coil separation _____
Accuracy ± 1%
Method: Fixed transmitter Shoot back In line Parallel line
Frequency 17.8 KHz (Cutler, Maine)
(specify V.L.F. station)
Parameters measured dip angle - inphase + quadrature components

GRAVITY

Instrument _____
Scale constant _____
Corrections made _____

Base station value and location _____

Elevation accuracy _____

INDUCED POLARIZATION RESISTIVITY

Instrument _____
Method Time Domain Frequency Domain
Parameters – On time _____ Frequency _____
– Off time _____ Range _____
– Delay time _____
– Integration time _____
Power _____
Electrode array _____
Electrode spacing _____
Type of electrode _____

SELF POTENTIAL

Instrument _____ Range _____

Survey Method _____

Corrections made _____

RADIOMETRIC

Instrument _____

Values measured _____

Energy windows (levels) _____

Height of instrument _____ Background Count _____

Size of detector _____

Overburden _____

(type, depth - include outcrop map)

OTHERS (SEISMIC, DRILL WELL LOGGING ETC.)

Type of survey _____

Instrument _____

Accuracy _____

Parameters measured _____

Additional information (for understanding results) _____

AIRBORNE SURVEYS

Type of survey(s) _____

Instrument(s) _____

(specify for each type of survey)

Accuracy _____

(specify for each type of survey)

Aircraft used _____

Sensor altitude _____

Navigation and flight path recovery method _____

Aircraft altitude _____ Line Spacing _____

Miles flown over total area _____ Over claims only _____

GEOCHEMICAL SURVEY - PROCEDURE RECORD

Numbers of claims from which samples taken _____

Total Number of Samples _____

Type of Sample _____
(Nature of Material)

Average Sample Weight _____

Method of Collection _____

Soil Horizon Sampled _____

Horizon Development _____

Sample Depth _____

Terrain _____

Drainage Development _____

Estimated Range of Overburden Thickness _____

SAMPLE PREPARATION
(Includes drying, screening, crushing, ashing)

Mesh size of fraction used for analysis _____

General _____

ANALYTICAL METHODS

Values expressed in: per cent
p. p. m.
p. p. b.

Cu, Pb, Zn, Ni, Co, Ag, Mo, As, -(circle)

Others _____

Field Analysis (_____ tests)

Extraction Method _____

Analytical Method _____

Reagents Used _____

Field Laboratory Analysis

No. (_____ tests)

Extraction Method _____

Analytical Method _____

Reagents Used _____

Commercial Laboratory (_____ tests)

Name of Laboratory _____

Extraction Method _____

Analytical Method _____

Reagents Used _____

General _____

Instructions: - Please type or print.
 - If number of mining claims traversed exceeds space on this form, attach a list.
 Note: - Only days credits calculated in the "Expenditures" section may be entered in the "Expend. Days Cr." columns.
 - Do not use shaded areas below.

The Mining Act **2.5720**

Type of Survey(s) *Geophysical - ELECTROMAGNETIC* Township or Area *ASQUITH TWP.*

Claim Holder(s) *TIMMINS GOLD RESOURCE LTD. & 117455 (CANADA LIMITED)* Prospector's Licence No. *T 1166*

Address *208-4900 SHEPPARD AVE E, SCARBOROUGH, ONT M1S 4A7.*

Survey Company *VAREX ORE SEARCH CONSULTANTS INC.* Date of Survey (from & to) *8/01/83 to 05/08/82* Total Miles of line Cut *7.5*

Name and Address of Author (of Geo-Technical report) *PETER BORN - 208-4900 Sheppard Ave E. Scarborough, Ont. M1S 4A7.*

Credits Requested per Each Claim in Columns at right

Special Provisions	Geophysical	Days per Claim
For first survey: Enter 40 days. (This includes line cutting)	- Electromagnetic	20
For each additional survey: using the same grid: Enter 20 days (for each)	- Magnetometer	
	- Radiometric	
	- Other	
	Geological	<i>20</i>
Man Days Complete reverse side and enter total(s) here	Geophysical	Days per Claim
	- Electromagnetic	
	- Magnetometer	
Airborne Credits Note: Special provisions credits do not apply to Airborne Surveys.	Electromagnetic	Days per Claim
	Magnetometer	
	Radiometric	

Mining Claims Traversed (List in numerical sequence)

Mining Claim		Expend. Days Cr.	Mining Claim		Expend. Days Cr.
Prefix	Number		Prefix	Number	
L	446557				
	444562				
	57641				
	573086				
	573098				

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LARDER LAKE MINING DIV.
 JUL - 5 1983
 AM 7 8 9 10 11 12 1 2 3 4 5 6 PM

Expenditures (excludes power stripping)

Type of Work Performed

Performed on Claim(s)

Calculation of Expenditure Days Credits

Total Expenditures \$ + 15 = Total Days Credits

Instructions
 Total Days Credits may be apportioned at the claim holder's choice. Enter number of days credits per claim selected in columns at right.

Total number of mining claims covered by this report of work. **5**

Date *June 28/83* Recorded Holder or Agent (Signature) *Peter Born*

For Office Use Only

Total Days Cr. Recorded *100* Date Recorded *July 14, 1983* Mining Recorder *[Signature]*

Date Approved as Recorded *83. 11. 29* Branch Officer *[Signature]*

Certification Verifying Report of Work

I hereby certify that I have a personal and intimate knowledge of the facts set forth in the Report of Work annexed hereto, having performed the work or witnessed same during and/or after its completion and the annexed report is true.

Name and Postal Address of Person Certifying *PETER BORN - 208-4900 Sheppard Ave. E. Scarborough, Ont.*

Date Certified *June 28/1983* Certified by (Signature) *Peter Born*



Ministry of
Natural
Resources

Geotechnical
Report
Approval

File
2.5720

aug 18/83

Mining Lands Comments

O.K.

To: Geophysics *R. Barlow*

Comments		
<input checked="" type="checkbox"/> Approved <input type="checkbox"/> Wish to see again with corrections	Date <i>Sept 21/83</i>	Signature <i>R Barlow</i>

To: Geology - Expenditures

Comments		
<input type="checkbox"/> Approved <input type="checkbox"/> Wish to see again with corrections	Date	Signature

To: Geochemistry

Comments		
<input type="checkbox"/> Approved <input type="checkbox"/> Wish to see again with corrections	Date	Signature <i>H.D.</i>

To: Mining Lands Section, Room 6462, Whitney Block. (Tel: 5-1380)

August 8, 1983

2.5720

Mining Recorder
Ministry of Natural Resources
4 Government Road East
P.O. Box 984
Kirkland Lake, Ontario
P2N 1A2

Dear Sir:

We have received reports and maps for a Geophysical (Electromagnetic) survey submitted under Special Provisions (credit for Performance and Coverage) on Mining Claims L 446557 et al in the Township of Asquith.

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

Yours very truly,

E.F. Anderson
Director
Land Management Branch

Whitney Block, Room 6450
Queen's Park
Toronto, Ontario
M7A 1W3
Phone: 416/965-1380

A. Barr:sc

cc: Timmins Gold Resources Limited
117455 Canada Limited
208 - 4900 Sheppard Ave East
Scarborough, Ontario
M1S 4A7

2.5720

E.M.

L-446557

✓

494562

✓

507641

✓

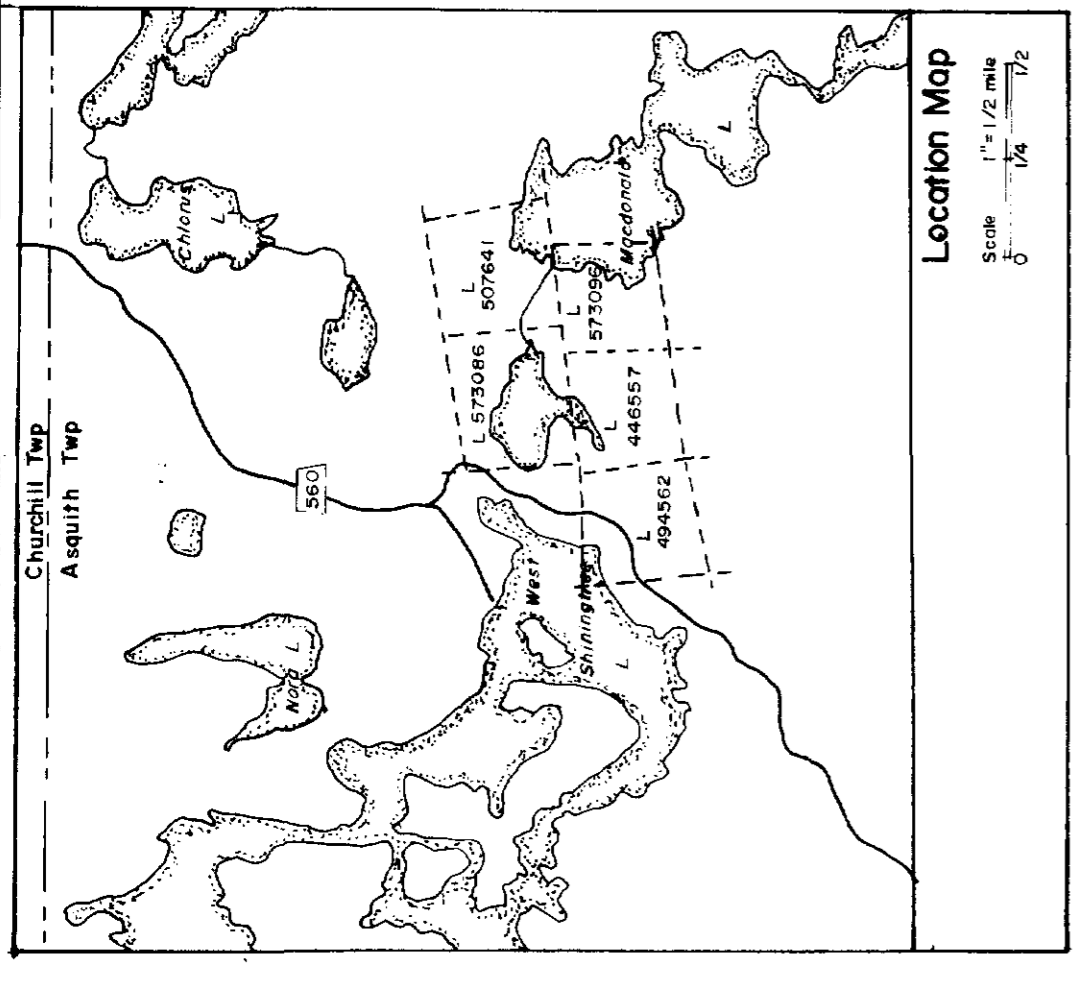
573086

✓

573098

✓

D.K.



STATION NAA 178 KHZ
 PROFILES IN PHASE QUADRATURE
 SCALE 1 inch to 200 feet
 1 inch to 20%
 0' 200' 400'
 0% 20% 40%
 EM-16 conductor axis
 DDH

GIBSON - MOORECAMP LAKE PROPERTY
ELECTROMAGNETIC SURVEY
 OPERATOR: PETER BORN
 INSTRUMENT: GEONICS EM-16
 DATE: March, 1982
 SCALE: 1:2400
 MAP NO: 2
 PROJECT: NAREX

