



52F05SE0105 2.5595 ROWAN LAKE

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GEOPHYSICAL REPORT ON THE  
INDUCED POLARIZATION SURVEY  
NOLAN LAKE EXPLORATIONS INC.  
KENORA DISTRICT, ONTARIO

by

J. C. Archibald, B.Sc., Geologist

and

G. Beier, Consulting Geophysicist

**RECEIVED**

JUN 6 1983

MINING LANDS SECTION



52F05SE0105 2.5595 ROWAN LAKE

J. C. ARCHIBALD

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MAPS

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GEOPHYSICAL REPORT ON THE  
INDUCED POLARIZATION SURVEY  
NOLAN LAKE EXPLORATIONS INC.  
KENORA DISTRICT, ONTARIO

I N T R O D U C T I O N

This survey was conducted over the Company's claim group in the Rowan Lake Area, near Kenora, Ontario.

In a ten day period, approximately five miles of Induced Polarization geophysics was completed over the south eastern portion of the property. The survey intended to delineate the eastern extension of the main zone and determine the significance of the V.L.F. Electromagnetic survey results from a previous program.

The results were very encouraging. Three separate parallel zones were picked up as linear trends. Investigation by prospecting determined that one of the linear conductors coincided with the Meston gold showing along the central portion of the property.

Another subparallel zone bordering the northern part of the survey area was characterized by mineralized quartz-ankerite along a zone of shearing.

The third linear was located along the southern portion of the property where previous geophysical surveys indicated conductive overburden. Prospecting in this area turned up a highly altered, carbonated shear zone which is strong and apparently extends to depth.

A plot of these conductors, using  $N = 5$  as the deepest profile, is shown on Plate IIa, accompanying this report.

Due to the success of the survey, further Induced Polarization geophysical work will be necessary to trace the eastern extension of the central and southern conductive zones and determine what their significance is to the known mineralized showings on the property.

PROPERTY

The property consists of twenty contiguous mining claims in the Rowan Lake area of the Kenora Mining District, Northwestern Ontario.

The claims are numbered K-527548 to K-527567 inclusive.

LOCATION AND ACCESS

The property is approximately fifty air miles southeast of Kenora, forty-eight air miles north of Fort Frances and eighteen air miles northeast of Nestor Falls. It is located between Cameron Lake and Rowan Lake, both of which have tourist lodges within three miles of the property.

Access is by float plane from Nestor Falls, which is along the Kenora-Fort Frances Highway #71. A water route can be taken from the highway across Kakagi (Crow) Lake to where a one-mile portage is taken across Cameron Lake. In the winter of 1978-1979 a plowed truck route was made from Nestor Falls across the ice to the end of Kakagi Lake, where a skidoo skid route continued on to and across Cameron Lake, and then into Rowan Lake. For location plan, see Plate I.

TOPOGRAPHY

The south and southeast section of the property is covered by low lying cedar and tag alder swamp. This part of the property, having a scarcity of outcroppings, is generally flat with gentle rises and jack pine knolls.

The north and northwest section of the property has steep hills and terraced rock ridges rising to a height of over one-hundred feet above the lake level. Outcroppings here are abundant and cover over 70% of the area.

Ridges and cliffs are in a northeast to southwest direction, corresponding with the regional geological strike.

## GENERAL GEOLOGY

The bedrock is of Precambrian age. The oldest rocks consist of basic to acid metavolcanics. The younger gabbro, quartz porphyry and quartz-feldspar porphyry have intruded into the metavolcanics. The Nolan Lake Stock, a coarse-grained quartz monzonite batholith, is found to the southeast of the property.

The metavolcanics on the property are moderately to highly sheared and strike N 70-80° E, dipping steeply to the northwest. Around the edges of the batholith are found silicified carbonate zones of alteration in which gold values occur. The silicification strikes in at least three directions and dips at 80°, 115° and flatly.

### Description of Formations

#### 1. Metavolcanics

- a. Basic volcanics - fine grained  
chloritic-amphibole rich
- b. Basic tuff - fine-grained, chloritic (dark green)  
banded
- c. Intermediate tuff - fine-grained, chloritic-  
sericitic, grey/grey-green
- d. Intermediate agglomerate - fine-grained, chloritic,  
acid to intermediate fragment
- e. Andesite - fine-coarse grained, grey-green  
chloritic and carbonatized
- f. Dacite - fine-grained, green-buff, siliceous
- g. Acid tuff - fine-grained, siliceous, banded  
sericitic-carbonatized

### DESCRIPTION OF INSTRUMENT AND SURVEY

The instrument used in the Induced Polarization survey was a McPhar frequency-type, Series 650, I. P. Unit Model 654, operating at 0.3 and 5.0 Hz. The power source was a 2.5 KVa gas powered unit.

Consulting geophysicist, George Beier, and two assistants conducted the survey, covering approximately 5 line miles of grid at 400 foot intervals in the southwestern portion of the property.

The spreads for the survey were laid out at 100 foot intervals over 5 stations and were energized sequentially to produce a 5 channel plot. The depth range using this configuration was approximately 150 to 200 feet vertically below surface.



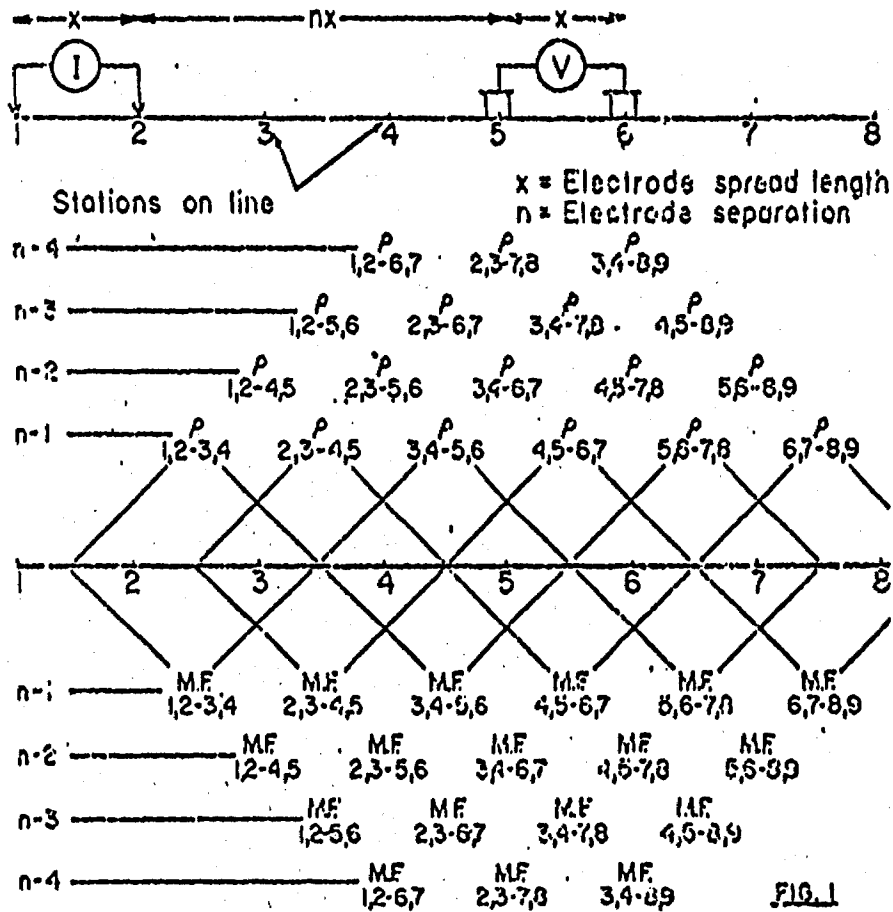
## SURVEY METHOD

The variable frequency I. P. method is well known (see Hallof, 1961) and is particularly suited to field use especially where the I. P. characteristics have not previously been determined. This is because the use of continuous (sequential) frequencies permits filtering at the voltmeter that is not possible in the pulse (time-domain) system. Since the effect of natural noise telluric current variations, etc. can be largely eliminated by this means, it is not necessary that the voltage measured be much larger than the noise level.

One great advantage of this survey method is that calculation and interpretation of results are readily performed day to day in the field and corrective procedures are done in the field while the survey is being done, and not back in the office.

A four electrode dipole-dipole configuration was employed as shown in the following description, after Hallof, 1961.

METHOD USED IN PLOTTING DIPOLE-DIPOLE  
INDUCED POLARIZATION AND RESISTIVITY RESULTS



As shown, with the current applied at two points a distance ( $x$ ) apart and the potential is measured between two other co-linear points a distance ( $x$ ) apart. In the case of our survey, the distance between the nearest current and potential electrode is ( $nx$ ) where ( $n$ ) is a variable integer between 1 and 5 (not 1 and 6 as shown).

For the purpose of our survey the distance used for (x) was 100 feet, this being dictated by the relatively thin overburden (5-50') and the fact that ore potential targets were zones of disseminated pyrite mineralization which might have relatively small dimensions. In short, we decided to search for mineralization occurring at or very near the bedrock-overburden interface. Increasing the value of (x) or 'spreads' to 150 or 200 feet would have the effect of sampling a much larger volume of rock (doubling (x) essentially cubes rock volume) could therefore result in a failure to detect mineralized zones. The maximum depth achieved by our survey was 150 feet in areas of thin overburden, and less (125 feet) in areas of thicker overburden. Thus the maximum vertical scale on the profiles or pseudosections accompanying this report is 150 feet. The complete coverage of a line with an electrode separation (x) consists of several potential measurements from each pair of current electrode sites. The measurements are made with increasing values of (n).

At each current and potential electrode pair, the apparent resistivity is measured, as well as the apparent I. P. (frequency) effect. The polarization parameter measured is the Metal Factor which is equal to  $2K \times 10^5$  (where "K" equals 3.1416) times the change in the apparent conductivity when the frequency of the applied current is changed.

### PLOTTING THE RESULTS AND PRESENTATION

The value of the parameters measured in our I. P. survey are plotted on separate graphs, in a two dimensional array known as a pseudosection. The plotting method is demonstrated on the lower part of Figure I. The values shown in the pseudosections are plotted at the intersection of  $45^{\circ}$  lines originating from the centre point of both the current and potential electrodes. Horizontal rows of values (e.g.  $n=1$ ) are all made with a constant separation and therefore represent a constant depth of detection. The two dimensional data plots are contoured in order to delineate anomalous zones of resistivity, frequency effect and metal factor. The contoured plots should not be considered vertical sections of the electrical properties of the ground since other factors besides the distance ( $x$ ), such as resistivities and geometry also effect the depth. Only through the experience of an operator is it possible to obtain a good approximation of the position, depth and size of a mineralized zone. The horizontal scale of the resultant pseudosections is  $1"=100'$  since this is very suitable for presentation. The reader must keep in mind, as previously discussed, that the vertical scale is exaggerated out of proportion and that it does not exceed  $150'$  down to  $n=5$ , based on results obtained in the field and the experience of the operator.

I. P. resistivity lows are plotted on the geological plan accompanying this report so that the reader may see their relation to geology.

#### DISCUSSION OF RESULTS

The I. P. Survey results were a qualified success. Coupled with the use of prospecting and geological interpretation, at least three prominent linear conductors were outlined. As the enclosed maps show, the zones were designated by letters from 'A' through 'D'.

Several of the zones, such as 'A' and 'B', appear to be a series of lenses or pods that line up in a linear pattern. Zone 'C' may be an extension of Zone 'B' where the conductor splits into two subparallel shears.

Zone 'A' was prospected and follows a linear composed of sheared quartz-ankerite found along a contact between mafic volcanics and an intrusive gabbro unit. Outcrops are spotty and the shear zone is very narrow. Some sulphides are evident with the shearing and quartz-carbonate veining.

Zones 'B' and 'C' lie along the strike direction of the three main mineralized quartz-vein showings on the property. A good conductive response occurs in the area around the Meston showing and may reflect the sulphide content of the quartz-carbonate vein network seen on surface.

The conductor is strong locally and dips steeply to the northwest, similar to the geological units. The other conductive responses along strike are poorly exposed and have not been identified through prospecting although some shearing and quartz-carbonate veining is evident.

Zone 'D' is a strong linear conductor with good possibilities of extending along strike and to depth. The zone was picked up originally through a V.L.F. Electromagnetic survey which due to the wetness and clay cover was labelled as conductive overburden. Recent prospecting uncovered several outcrops over one end of the anomaly which showed the response was due to a wide zone of shearing in a carbonated, mineralized mafic volcanic unit. The volcanics are altered, highly sheared and weathered and follow the strike of I. P. anomaly. Only two lines of survey cut the zone but corresponding low resistivity readings are shown along the southern edge of the survey grid. An extension of the I. P. Survey will be needed in the future to follow the eastern and western extension of this zone.

CONCLUSIONS

The Induced Polarization Survey picked up at least three major linear conductors and several subparallel zones that coincided with the geological structure and the known mineralized showings on the property.

As a result of this survey and the gold mineralization found in samples taken over the zones, further detailed I. P. work will be required .

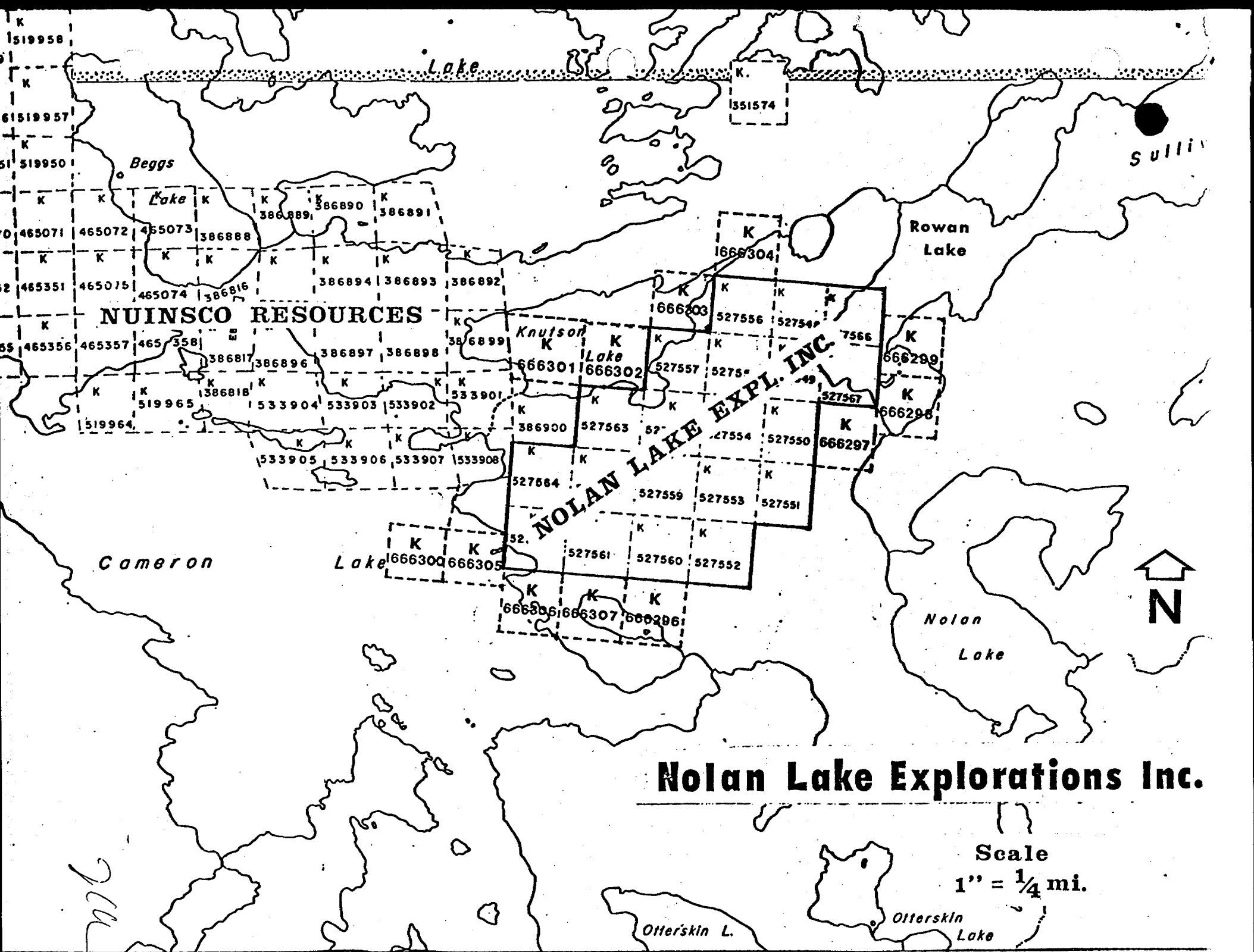
The combination of disseminated pyrite and strong shearing will help in locating extensions of the known conductors. This includes detailed work at 200 foot intervals over the strongest zones to pinpoint the conductors for drilling and sampling purposes. By extending the stations to 300 foot spreads, the survey can also probe deeper to follow the down-dip extension of these zones.

Once drilling is used to test the conductors, down-hole I. P. or Pulse E. M. geophysics could be used to extend the mineralized zones even deeper.

Respectfully submitted,

  
J. C. Archibald, B.Sc.

Toronto, Ontario  
16 November 1982



**Nolan Lake Explorations Inc.**

Scale  
1" = 1/4 mi.

*7/11*





52F055E0105 2.5595 ROWAN LAKE

900

2.5595

1983 12 07

Your File: 54-83

Our File : 2.5595

Mining Recorder  
Ministry of Natural Resources  
808 Robertson Street  
P.O. Box 5160  
Kenora, Ontario  
P9N 3X9

Dear Sir:

RE: Geophysical (Induced Polarization) Survey on Mining  
Claims K 527550 et al in the Rowan Lake Area.

---

The Geophysical (Induced Polarization) Survey assessment work credits as listed with my Notice of Intent dated November 8, 1983 have been approved as of the above date.

Please inform the recorded holder of these mining claims and so indicate on your records.

Yours very truly,

E.F. Andereson  
Director  
Land Management Branch  
Whitney Block, Room 6643  
Queen's Park  
Toronto, Ontario  
M7A 1W3  
Phone: 416/965-1380

D. Kinvig:sc

cc: Nolan Lake Exploration Inc  
Toronto, Ontario

cc: Resident Geologist  
Kenora, Ontario

cc: Mr. G.H. Ferguson  
Mining & Lands Commissioner  
Toronto, Ontario



Ontario

Ministry of  
Natural  
Resources

# Technical Assessment Work Credits

File  
2,5595

Date  
1983 11 08

Mining Recorder's Report of  
Work No. 54-83

Recorded Holder <b>NOLAN LAKE EXPLORATIONS INC</b>
Township or Area <b>ROWAN LAKE AREA</b>

Type of survey and number of Assessment days credit per claim	Mining Claims Assessed
<b>Geophysical</b> Electromagnetic _____ days Magnetometer _____ days Radiometric _____ days Induced polarization <u>35</u> days Other _____ days  Section 77 (19) See "Mining Claims Assessed" column  Geological _____ days Geochemical _____ days  Man days <input checked="" type="checkbox"/> Airborne <input type="checkbox"/> Special provision <input type="checkbox"/> Ground <input checked="" type="checkbox"/>  <input type="checkbox"/> Credits have been reduced because of partial coverage of claims.  <input type="checkbox"/> Credits have been reduced because of corrections to work dates and figures of applicant.	K 527550 527553-54 527559 to 62 inclusive 527564-65

**Special credits under section 77 (16) for the following mining claims**

**No credits have been allowed for the following mining claims**

not sufficiently covered by the survey       Insufficient technical data filed

K 527551-52

The Mining Recorder may reduce the above credits if necessary in order that the total number of approved assessment days recorded on each claim does not exceed the maximum allowed as follows: Geophysical — 80; Geological — 40; Geochemical — 40; Section 77 (19)—60:

1983 11 30

Your File: 54-83

Our File : 2.5595

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

*Kenora*

Dear Sir:

RE: Geophysical (Induced Polarisation) Survey on  
Mining Claims K 527550 et al in the Rowan  
Lake Area

The Geophysical (Induced Polarization Survey assessment  
work credits as listed with my Notice of Intent dated  
November 8, 1983 have been approved as of the above date.

Please inform the recorded holder of these mining claims  
and so indicate on your records.

Yours very truly,

E.F. Anderson  
Director  
Land Management Branch

Whitney Block, Room 6643  
Queen's Park  
Toronto, Ontario  
M7A 1W3  
Phone: 416/965-1380

D. Kinvig:sc

cc: Nolan Lake Exploration Inc  
Toronto, Ontario

cc: Resident Geologist  
~~Kirkland Lake, Ontario~~

*Kenora*



*Nov. 23/83*

Your file: 54-83

Our file: 2.5595

1983 11 08

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

Dear Sir:

Enclosed are two copies of a Notice of Intent with statements listing a reduced rate of assessment work credits to be allowed for a technical survey. Please forward one copy to the recorded holder of the claims and retain the other. In approximately fifteen days from the above date, a final letter of approval of these credits will be sent to you. On receipt of the approval letter, you may then change the work entries on the claim record sheets.

For further information, if required, please contact Mr. F.W. Matthews at 416/965-1380.

Yours very truly,

E.F. Anderson  
Director  
Land Management Branch

Whitney Block, Room 6450  
Queen's Park  
Toronto, Ontario  
M7A 1W3  
Phone: 416/965-1316

*2/10*  
D. Kinvig:mc

Encls:

cc: Nolan Lake Exploration Inc  
Suite 806  
88 University Avenue  
Toronto, Ontario  
M5J 1T6

cc: Mr. G.H. Ferguson  
Mining & Lands Commissioner  
845 Toronto, Ontario



Ontario

Ministry of  
Natural  
Resources

Notice of Intent  
for Technical Reports

1983 11 08  
2.5595  
54-83

An examination of your survey report indicates that the requirements of The Ontario Mining Act have not been fully met to warrant maximum assessment work credits. This notice is merely a warning that you will not be allowed the number of assessment work days credits that you expected and also that in approximately 15 days from the above date, the mining recorder will be authorized to change the entries on his record sheets to agree with the enclosed statement. Please note that until such time as the recorder actually changes the entry on the record sheet, the status of the claim remains unchanged.

If you are of the opinion that these changes by the mining recorder will jeopardize your claims, you may during the next fifteen days apply to the Mining and Lands Commissioner for an extension of time. Abstracts should be sent with your application.

If the reduced rate of credits does not jeopardize the status of the claims then you need not seek relief from the Mining and Lands Commissioner and this Notice of Intent may be disregarded.

If your survey was submitted and assessed under the "Special Provision-Performance and Coverage" method and you are of the opinion that a re-appraisal under the "Man-days" method would result in the approval of a greater number of days credit per claim, you may, within the said fifteen day period, submit assessment work breakdowns listing the employees names, addresses and the dates and hours they worked. The new work breakdowns should be submitted direct to the Lands Management Branch, Toronto. The report will be re-assessed and a new statement of credits based on actual days worked will be issued.



FWM

Report of Work  
(Geophysical, Geological,  
Geochemical and Expenditures)

- 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.

#54-83

2.5595

The Mining Act

Type of Survey(s) <b>INDUCED POLARIZATION SURVEY</b>		Township or Area <b>Rowan Lake Area, Kenora</b> <i>M-2580</i>
Claim Holder(s) <b>NOLAN LAKE EXPLORATIONS INC.</b>		Prospector's Licence No. <b>T 901</b>
Address <b>806 - 88 University Avenue, TORONTO, Ontario. M5J 1T6</b>		
Survey Company <b>G. F. Beier &amp; Associates</b>	Date of Survey (from & to) <b>18 10 82 03 11 82</b> Day   Mo.   Yr.   Day   Mo.   Yr.	Total Miles of line Cut <b>5</b>
Name and Address of Author (of Geo-Technical report) <b>J. C. Archibald, 9 Glen Castle Street, Toronto, Ontario. M4R 1Z5</b>		

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

Mining Claims Traversed (List in numerical sequence)

Mining Claim		Expend. Days Cr.	Mining Claim		Expend. Days Cr.
Prefix	Number		Prefix	Number	
			<b>K</b>	<b>527560</b>	<b>20</b>
				<b>527561</b>	<b>20</b>
				<b>527562</b>	<b>20</b>
				<b>527564</b>	<b>20</b>
				<b>527565</b>	<b>20</b>
				<b>527550</b>	<b>20</b>
				<b>527551</b>	<b>20</b>
				<b>527552</b>	<b>20</b>
				<b>527553</b>	<b>20</b>
				<b>527554</b>	<b>20</b>
				<b>527559</b>	<b>20</b>

**RECEIVED**  
JUN 6 1988  
MINING LANDS SECTION

*See revised map & prospect*

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.

527548

Total number of mining claims covered by this report of work. **11**

Date **February 15/83** Recorded Holder or Agent (Signature) *J. C. Archibald*

For Office Use Only

Total Days Cr. Recorded **220** Date Recorded **MARCH 31/83** Mining Recorder *[Signature]*

Date Approved as Recorded \_\_\_\_\_ Branch Director \_\_\_\_\_

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  
**J. C. Archibald, 9 Glen Castle Street, Toronto, Ontario. M4R 1Z5**

*1st Rec'd Feb 28/83* Date Certified **February 15, 1983** Certified by (Signature) *J. C. Archibald*

## Assessment Work Breakdown

Man Days are based on eight (8) hour Technical or Line-cutting days. Technical days include work performed by consultants, draftsmen, etc..

Type of Survey												
Technical Days	X	7	=	Technical Days Credits	+	Line-cutting Days	=	Total Credits	+	No. of Claims	=	Days per Claim
<input style="width: 50px; height: 20px;" type="text"/>		<input style="width: 20px; height: 20px;" type="text" value="7"/>		<input style="width: 50px; height: 20px;" type="text"/>		<input style="width: 50px; height: 20px;" type="text"/>		<input style="width: 50px; height: 20px;" type="text"/>		<input style="width: 50px; height: 20px;" type="text"/>		<input style="width: 50px; height: 20px;" type="text"/>

Type of Survey												
Technical Days	X	7	=	Technical Days Credits	+	Line-cutting Days	=	Total Credits	+	No. of Claims	=	Days per Claim
<input style="width: 50px; height: 20px;" type="text"/>		<input style="width: 20px; height: 20px;" type="text" value="7"/>		<input style="width: 50px; height: 20px;" type="text"/>		<input style="width: 50px; height: 20px;" type="text"/>		<input style="width: 50px; height: 20px;" type="text"/>		<input style="width: 50px; height: 20px;" type="text"/>		<input style="width: 50px; height: 20px;" type="text"/>

Type of Survey												
Technical Days	X	7	=	Technical Days Credits	+	Line-cutting Days	=	Total Credits	+	No. of Claims	=	Days per Claim
<input style="width: 50px; height: 20px;" type="text"/>		<input style="width: 20px; height: 20px;" type="text" value="7"/>		<input style="width: 50px; height: 20px;" type="text"/>		<input style="width: 50px; height: 20px;" type="text"/>		<input style="width: 50px; height: 20px;" type="text"/>		<input style="width: 50px; height: 20px;" type="text"/>		<input style="width: 50px; height: 20px;" type="text"/>

Type of Survey												
Technical Days	X	7	=	Technical Days Credits	+	Line-cutting Days	=	Total Credits	+	No. of Claims	=	Days per Claim
<input style="width: 50px; height: 20px;" type="text"/>		<input style="width: 20px; height: 20px;" type="text" value="7"/>		<input style="width: 50px; height: 20px;" type="text"/>		<input style="width: 50px; height: 20px;" type="text"/>		<input style="width: 50px; height: 20px;" type="text"/>		<input style="width: 50px; height: 20px;" type="text"/>		<input style="width: 50px; height: 20px;" type="text"/>

**INDUCED POLARIZATION SURVEY**

Field Work: 15 days X 10 hr. days X 3 men = 55 Technical days

Ian R. Mickle, 40 Willow Beach, Amherstburg, Ontario. N9V 2Y8

Robert I. Ferguson, #316-260 Wellesley St. East, Toronto. M4X 1G6

(Off.&Field) George F. Beier, 11 Moccasin Trail, Don Mills, Ont. M3C 1Y5

(Office) John C. Archibald, 9 Glen Castle Street, Toronto, Ont. M4R 1Z5

September 16, 1983

2.5595

88 Nolan Lake Explorations Inc  
Suite 806  
808 University Avenue  
Toronto, Ontario  
M5J 1T6

Dear Sir:

RE: Geophysical (Induced Polarization)  
Survey on mining claims K 527560 et al  
in the Rowan Lake Area

---

Returned herein is the plan (in duplicate) for the above-described survey.

Please show on the plans the kind of units measured. Also, please have the author of the report sign each plan and return them to this office quoting file 2.5595.

For further information, please contact Mr. F.W. Matthews at (416)965-1380.

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

S. Hurst:mc

Encl.

cc: Mining Recorder  
Kenora, Ontario





June 30/83.

Mining Lands Comments

- Map not signed.
- Kind of units measured not indicated on plan.

To: Geophysics **R. Barlow.**

Comments

Approved     Wish to see again with corrections

Date: **Sept 1/83**    Signature: **[Signature]**

To: Geology - Expenditures

Comments

Approved     Wish to see again with corrections

Date:    Signature:

To: Geochemistry

Comments

**L.D.**

Approved     Wish to see again with corrections

Date:    Signature:

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

#54.83 527548

1983 06 21

2.5595

Mr. Wade Mathew  
Mining Recorder  
Ministry of Natural Resources  
808 Robertson Street  
Box 5160  
Kenora, Ontario  
P9N 3X9

Dear Sir:

We have received reports and maps for a Geophysical (Induced Polarization) survey submitted under Special Provisions (Credit for Performance and Coverage) on mining claims K527560 et al in the Area of Rowan Lake.

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:mc

cc: Nolan Lake Explorations Inc  
806-88 University Avenue  
Toronto, Ontario  
M5J 1T6

cc: J.C. Archibald  
9 Glen Castle Street  
Toronto, Ontario  
M5J 1T6

ASSESSMENT WORK BREAKDOWN

GEOLOGICAL SURVEY + Induced Polarization SURVEY

1. Type of Survey -----  
 2. Township or Area Rowan Lake Area  
 3. Numbers of Mining Claims Traversed by Survey 31 of 32 (one lake claim)  
K666296 through to 666307 and K 527548 through to K 527567 by geol-  
ogical survey ; Claims K 527550 to 554 , K527558 to 562 and K527564 and 565  
by the I.P.geophysical survey

4. Number of Miles of Line Cut 16 Flown         

\*5. Number of Stations Established 1065

\*6. Make and type of Instrument Used         

\*7. Scale Constant or Sensitivity         

\*8. Frequency Used and Power Output         

9. Summary of Assessment Credits (details on reverse side)

Total 8 hour Technical Days (Include Consultants, Draughting etc.) 115.6

Total 8 hour Line-Cutting Days 95.9

Calculation

$$\frac{115.6}{\text{Technical}} \times 7 = \frac{809.2}{\text{Line-cutting}} + \frac{95.9}{\text{Line-cutting}} = \frac{905.1}{\text{Number of claims}} \div \frac{32}{\text{Assessment credits per claim}} = \frac{28.3}{\text{Assessment credits per claim}}$$

The dates listed on this form represent working time spent entirely within the limits of the above listed claims  Check  
 If otherwise, please explain 1½ days spent travelling to property from Toronto for crews is included in total days

Dated: Feb.15,1983.

Signed: J.L. Archibald

- Note: (A) \* Complete only if applicable.  
 (B) Complete list of names, addresses and dates on reverse side.  
 (C) Submit separate breakdown for each type of survey.  
 (D) Submit in duplicate.

ASSESSMENT WORK BREAKDOWN

10 Hr. Work days

1. FIELD WORK

<u>Type of Work</u>	<u>Name &amp; Address</u>	<u>Dates Worked</u>	<u>Number of 8 hour days</u>
Geophysicist	George F. Beier 11 Mocassin Trail Don Mills, Ont.	Oct. 18 to Nov. 3/82	21.2
Helper	Ian Mickle 40 Willow Beach, Amherstberg, Ont. N9V 2Y8	Oct. 20/82 to Nov. 3	21.2
Helper	Robert Ferguson 245 Rose Pk., Dr., Toronto, Ont. M4T 1R6	Oct. 20/82 to Nov. 3	21.2

2. CONSULTANTS (Geological)

<u>Name &amp; Address</u>	<u>Dates Worked (specify in field or office)</u>	<u>Number of 8 hour days</u>
J C Archibald - Office 9 Glen Castle St. Toronto, Ont.	Oct. 6, 7, 17/82 ; Nov. 10, 12, 15, 16, Dec. 3, Field: Oct. 18 to Nov. 3/82	7 20
D. Hunter P O Box 324 Millbrook, Ontario.	LOA 160 Field: Oct. 18 to Nov. 3/82.	20

3. DRAUGHTSMAN, TYPING, OTHERS (specify)

<u>Name &amp; Address</u>	<u>Type of Work</u>	<u>Dates Worked</u>	<u>Number of 8 hour days</u>
D. P. Archibald 702- 100 Adelaide St. West Totonto, Ont. M5H1S3	Typing	Dec. 14, 15, 20	3

TOTAL 8 HOUR TECHNICAL DAYS 115.6

4. LINE-CUTTING

<u>Name</u>	<u>Address</u>	<u>Dates Worked</u>	<u>Number of 8 hour days</u>
John A. Jamieson	Box 111 Notre Dame Du Nord Quebec J0Z 3B0	Oct. 19 to Nov. 1/82 Sept. 27 to Oct. 11	17.5 19
Ian Mickle	40 Willow Beach; Amherstberg; Ont. N9V 2Y8	Oct. 3 to Oct. 19/82.	21.2
Rob Ferguson	245 Rose Pk. Dr., Totonto, Ont. M4T 1R6	Oct. 3 to Oct. 19/82.	21.2
B. Jamieson	Box 1111 Notre Dame du Nord, P. Q. J0Z 3B0	Sept. 27 to Oct. 11/82.	19

TOTAL 8 HOUR LINE-CUTTING DAYS 95.9

M-5280

ENAL IAWOR

082S-M

ATIKWA LAKE (GRAPNEL BAY) M.2629

AREA OF  
**ROWAN LAKE**  
 DISTRICT OF  
 KENORA  
 KENORA  
 MINING DIVISION  
 SCALE: 1-INCH = 40 CHAINS

**LEGEND**

- PATENTED LAND ● or ⊙
- CROWN LAND SALE C.S.
- LEASES L
- LOCATED LAND Loc.
- LICENSE OF OCCUPATION L.O.
- MINING RIGHTS ONLY M.R.O.
- SURFACE RIGHTS ONLY S.R.O.
- ROADS
- IMPROVED ROADS
- KING'S HIGHWAYS
- RAILWAYS
- POWER LINES
- MARSH OR MUSKEG
- MINES
- CANCELLED
- PATENTED S.R.O.

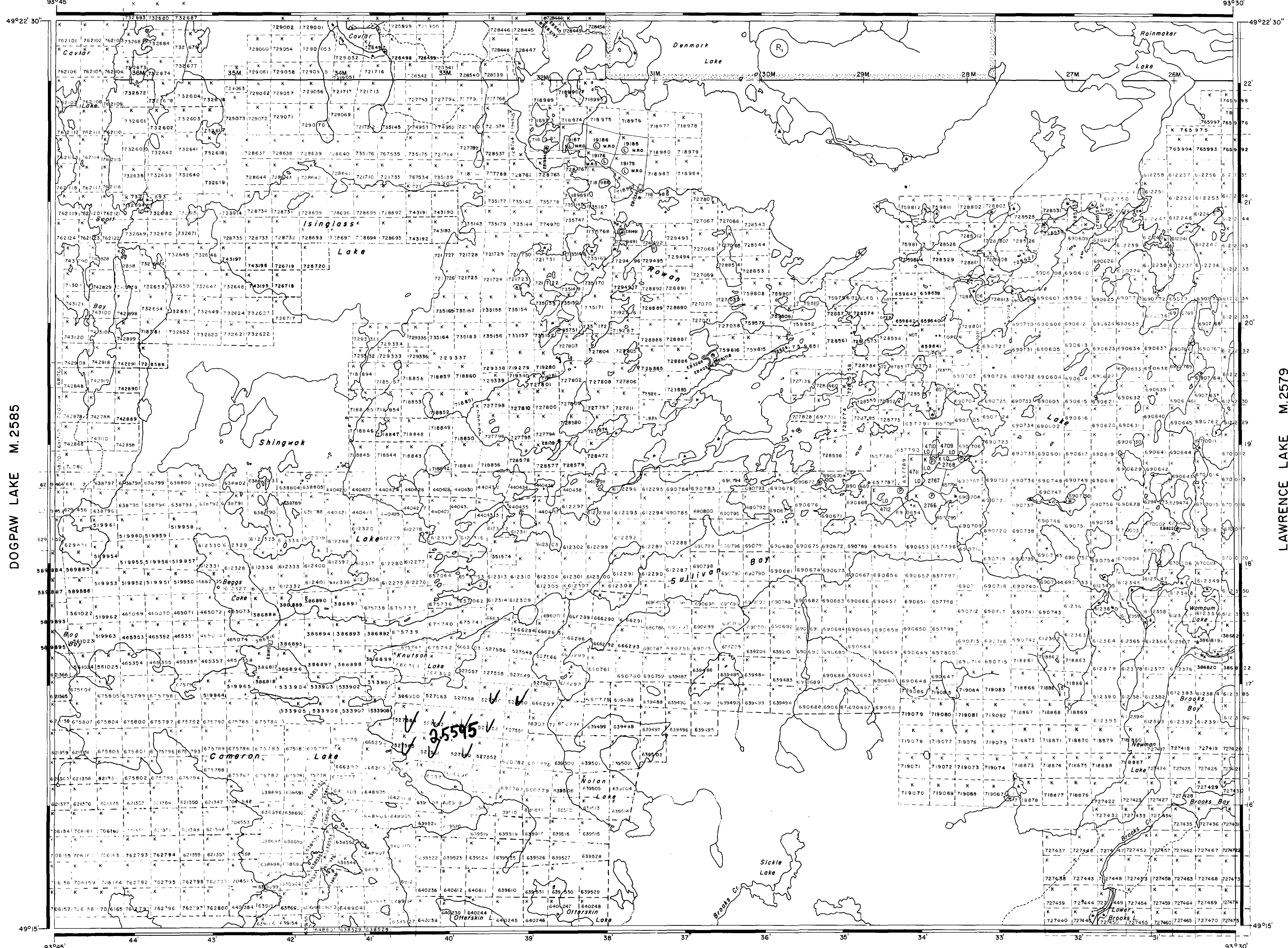
**NOTES**

400' Surface Rights Reservation along the shores of all lakes and rivers.

**AREAS WITHDRAWN FROM DISPOSITION**

M.R.O. - MINING RIGHTS ONLY  
 S.R.O. - SURFACE RIGHTS ONLY  
 M.+S. - MINING AND SURFACE RIGHTS

Description	Order No.	Date	Disposition	File
SEC 36/80	W 16/83	28/6/83	M.S.	50521



LAWRENCE LAKE M.2579

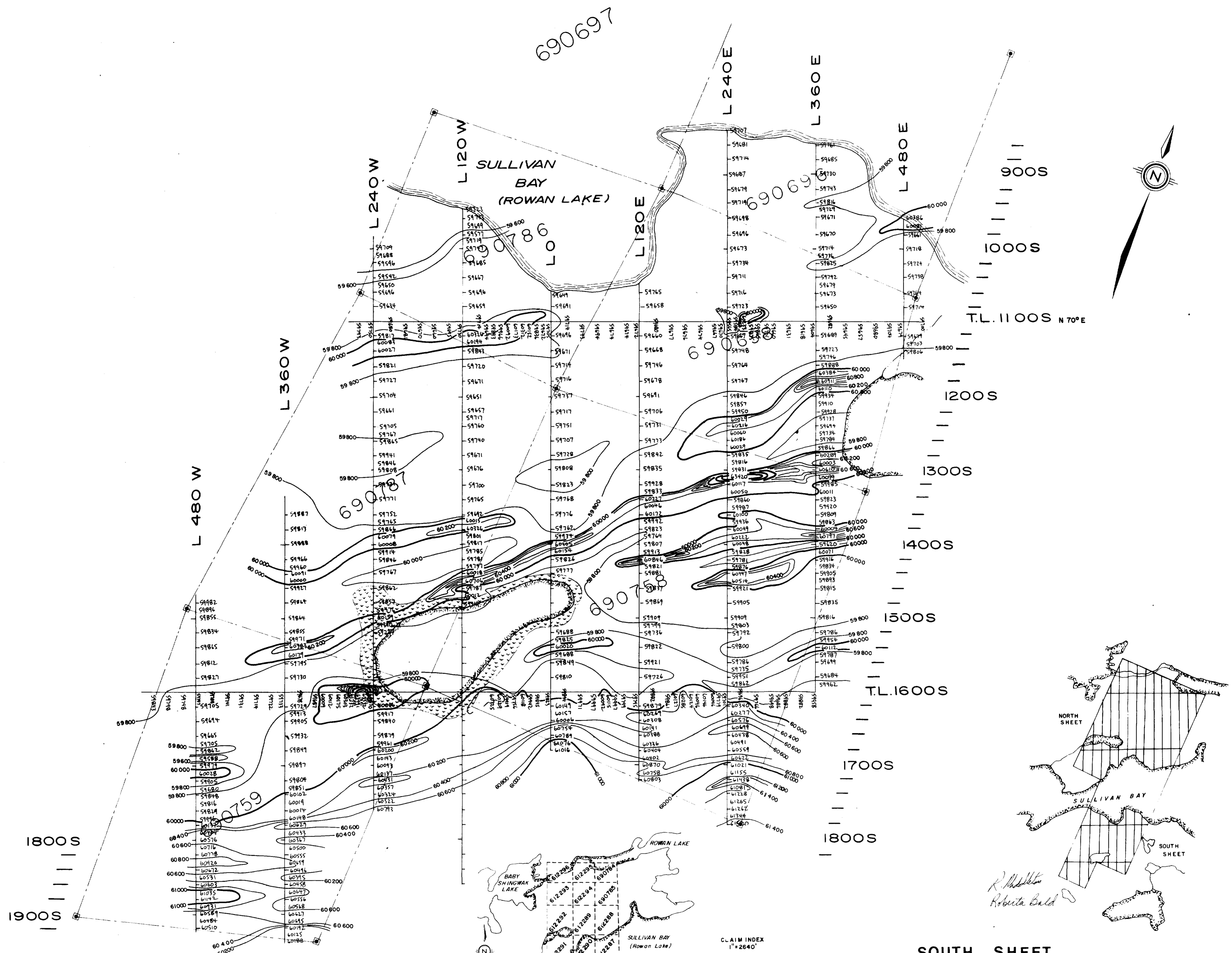
DOGPAW LAKE M.2585

BROOKS LAKE M.2473

NATIONAL TOPOGRAPHIC SERIES 52F5  
**PLAN NO. M.2580**  
 ONTARIO  
 MINISTRY OF NATURAL RESOURCES  
 SURVEYS AND MAPPING BRANCH










MAGNETOMETER SURVEY  
 Proton Precession Magnetometer  
 Total field 59,500 nt  
 Instrument: GEOMETRICS G-816  
 Operator: G. Dubroy  
 Survey date: OCT. 83  
 Plotted by: D.H.

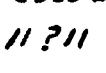
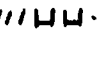

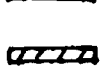

REVISIONS		ROBERT S. MIDDLETON EXPLORATION SERVICES INC.	
		for <b>CHARGER RESOURCES LTD</b>	
		Title ROWAN LAKE AREA KENORA MINING DIVISION	
		CONTOURED MAGNETIC DATA	
Date: DEC. 83	Scale: 1:2500	N.T.S.: 52 F/5	
Drawn: CJ	Approved:	File: M-28	

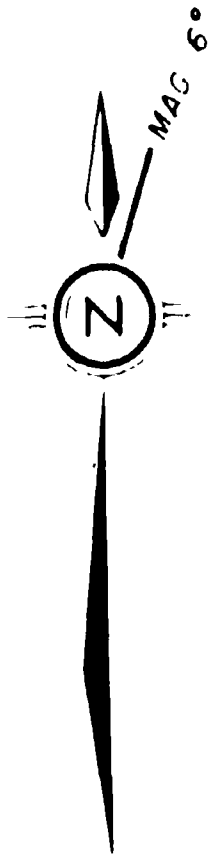


**Legend**

-  0 - 100 PA/2π (ohm ft)
-  100 - 150
-  150 - 200

**Anomaly Strength**

-  - weak
-  - weak to med.
-  - med. to strong
-  - strong
-  - excellent



KNUTSON LAKE

ROWAN LAKE

CAMERON LAKE

Zone 'A'

Zone 'B'

Zone 'C'

Zone 'D'

**Induced Polarization Survey  
Nolan Lake Explorations Inc.**

N = 5

**District of Kenora, Ont.**

0 200 400 600 800 feet

*J. C. ...*  
25593



52-055E0105 2 5505 ROWAN LAKE