



52F10NE0106 2.5477 BUTLER LAKE

010

REPORT ON
HORIZONTAL LOOP ELECTROMAGNETIC AND MAGNETIC SURVEYS
ON
BIRCH POINT PROPERTY
WABIGOON LAKE AREA - NORTHWESTERN ONTARIO
FOR
ROYEX STURGEX MINING LTD.
BY
GEOCANEX LTD.

RECEIVED
APR 15 1983
MINING LANDS SECTION

Toronto, Ontario

March, 1983

TABLE OF CONTENTS

	Page
Introduction	1
Location and Access	1
Geology	
Regional	1
Property	1
Figure No. 1 - Location Map	2
Figure No. 2 - Geological Map	3
Economic Mineralization	4
Work Description	4
Personnel	4
Discussion of Results	5
Conclusions and Recommendations	5
References	6
Maps	
No. 1 - HLEM Survey - 444 Hz Frequency	(back of report)
No. 2 - HLEM Survey - 1777 Hz Frequency	(back of report)
No. 3 - Magnetometer Survey	(back of report)

INTRODUCTION

Between February 28th and March 10th, 1983, linecutting, horizontal loop electromagnetic (HLEM) and magnetic (Mag) surveys were carried out by Geocanex Ltd. for Royex Sturgex Mining Ltd. over a ten (10) claim group in the Wabigoon area of Western Ontario. This report summarizes the regional geology of the property area and describes the work that was completed along with a short discussion of the results encountered.

LOCATION AND ACCESS

The claim group is located approximately five kilometres south of the Town of Wabigoon on TransCanada Highway 17. Wabigoon is 20 kilometres east of Dryden, Ontario and 280 kilometres west of Thunder Bay. The claims are partially covered by Wabigoon Lake, and are easily accessible by water. Access to the property during the present program was by snowmobile from Wabigoon. Figure No. 1 shows the general location of the Birch Point property.

GEOLOGY

The area was mapped by J. Satterly in 1939 and 1940, and his report and map are the latest covering the property area. (Satterly 1940)

REGIONAL

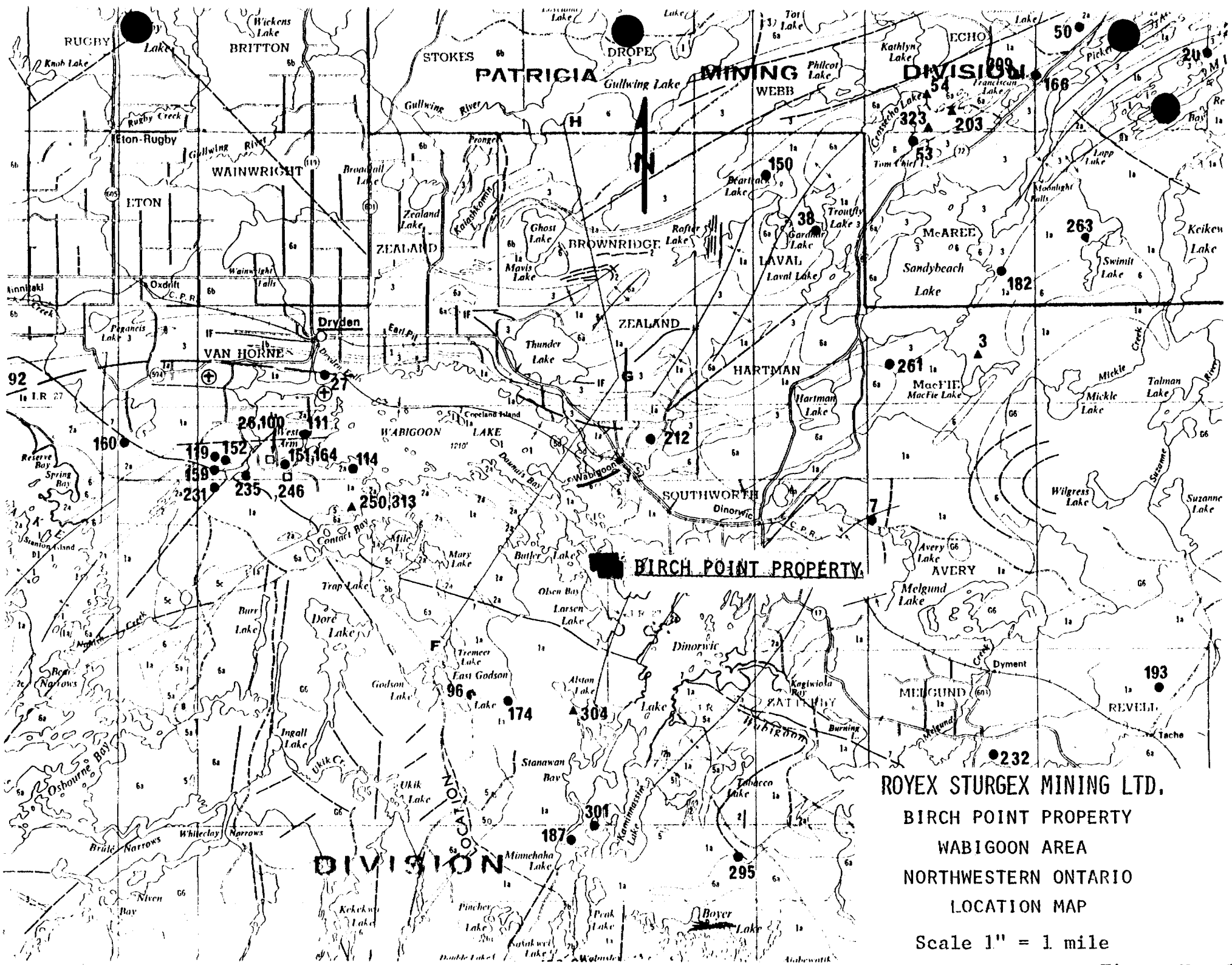
The property lies within the central portion of the Wabigoon greenstone belt. This belt is composed predominantly of mafic to intermediate volcanic rocks with subordinate felsic volcanic rocks. The volcanic assemblages have been intruded by granitic plutonic rocks with subordinate mafic and ultra-mafic intrusive bodies.

PROPERTY

The rocks in the property area as mapped by Satterly, are composed of massive and pillowed mafic volcanics with minor carbonate sericite schists. Primary bedding features indicate that the rocks trend east-west to slightly south of east. Pillow top determinations indicate that the flows face north.

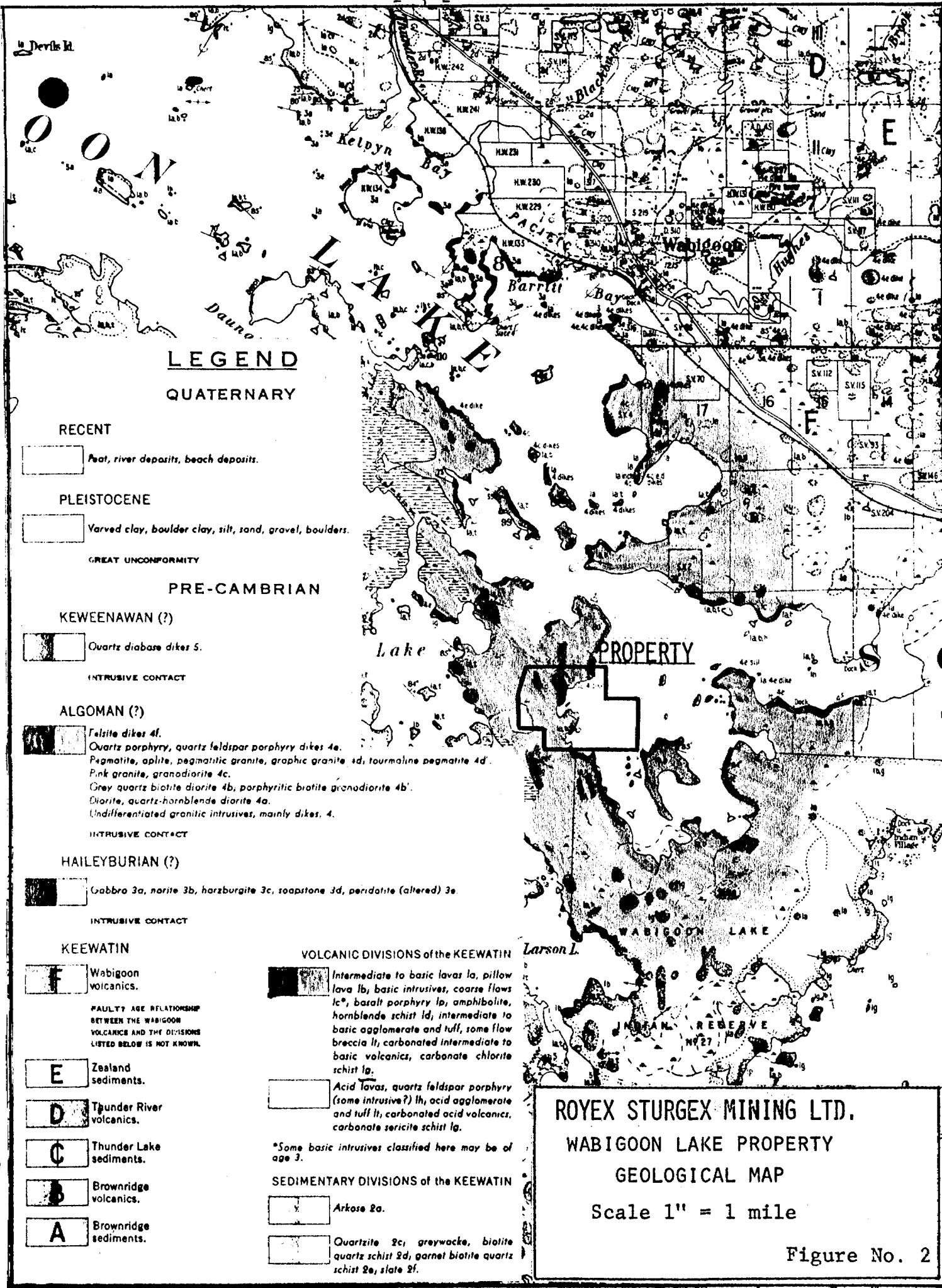
The volcanics have been intruded by quartz biotite, diorite and quartz and quartz-feldspar porphyry in a north west-south east trending stock.

The general geology is shown on Figure No. 2.



ROYEX STURGEX MINING LTD.
 BIRCH POINT PROPERTY
 WABIGOON AREA
 NORTHWESTERN ONTARIO
 LOCATION MAP
 Scale 1" = 1 mile

Figure No. 1



LEGEND

QUATERNARY

RECENT

Feat, river deposits, beach deposits.

PLEISTOCENE

Varved clay, boulder clay, silt, sand, gravel, boulders.

GREAT UNCONFORMITY

PRE-CAMBRIAN

KEWEENAWAN (?)

Quartz diabase dikes 5.

INTRUSIVE CONTACT

ALGOMAN (?)

Felsite dikes 4f.
 Quartz porphyry, quartz feldspar porphyry dikes 4a.
 Pegmatite, aplite, pegmatitic granite, graphic granite 4d, tourmaline pegmatite 4d'.
 Pink granite, granodiorite 4c.
 Grey quartz biotite diorite 4b, porphyritic biotite granodiorite 4b'.
 Diorite, quartz-hornblende diorite 4a.
 Undifferentiated granitic intrusives, mainly dikes, 4.

INTRUSIVE CONTACT

HAILEYBURIAN (?)

Gabbro 3a, norite 3b, harzburgite 3c, soapstone 3d, peridotite (altered) 3e.

INTRUSIVE CONTACT

KEEWATIN

Wabigoon volcanics.

FAULT? ARE RELATIONSHIP BETWEEN THE WABIGOON VOLCANICS AND THE DIVISIONS LISTED BELOW IS NOT KNOWN.

Zealand sediments.

Thunder River volcanics.

Thunder Lake sediments.

Brownridge volcanics.

Brownridge sediments.

VOLCANIC DIVISIONS of the KEEWATIN

Intermediate to basic lavas 1a, pillow lava 1b, basic intrusives, coarse flows 1c, basalt porphyry 1d, amphibolite, hornblende schist 1d, intermediate to basic agglomerate and tuff, some flow breccia 1f, carbonated intermediate to basic volcanics, carbonate chlorite schist 1g.

Acid lavas, quartz feldspar porphyry (some intrusive?) 1h, acid agglomerate and tuff 1i, carbonated acid volcanics, carbonate sericite schist 1g.

*Some basic intrusives classified here may be of age 3.

SEDIMENTARY DIVISIONS of the KEEWATIN

Arkose 2a.

Quartzite 2c, greywacke, biotite quartz schist 2d, garnet biotite quartz schist 2e, slate 2f.

ROYEX STURGEX MINING LTD.
WABIGOON LAKE PROPERTY
GEOLOGICAL MAP
 Scale 1" = 1 mile
 Figure No. 2

ECONOMIC MINERALIZATION

A gold showing, known as the Pidgeon-Wabigoon Lake Prospect (Beard, R.C., 1976) occurs near the lake shore in the south west part of the property. The showing was not located during the present survey, however, the general location is near the north boundary of Claim 486988.

The showing is described as a mineralized quartz vein in mafic volcanics. Three drill holes were reported to intersect the vein with assays ranging up to 0.19 ounces per ton gold. The vein is reported to be from one foot to ten feet wide.

WORK DESCRIPTION

The present program involved the following work:

Linecutting - 15.7 kilometres
HLEM surveys - 14.1 kilometres
Mag. surveys - 15.6 kilometres

The grid baseline was oriented N 55°W and lines were cut at 100 metre intervals.

The HLEM survey was performed with a Max-Min II unit employing a coil separation of 300 feet. Readings of "in-phase" and "quadrature" were taken at 25 metre intervals at two frequencies; 444 Hz and 1777 Hz. Tests for phase mixing were carried out each day.

The magnetometer survey was carried out with a Geometrics G816 proton precession magnetometer with a sensitivity of one gamma. Readings of total field were taken at 25 metre intervals along all grid lines and the baseline. Diurnal and drift corrections were applied by repeat readings along the baseline. A corrected set of baseline readings was established by the loop method.

The two frequencies of HLEM results and the magnetic values are presented on Maps numbered 1, 2, and 3; the scales of which are 1:2500.

PERSONNEL

Personnel involved in the work were:

R. Gillick	Geophysicist	3-12 Judge Ave. North Bay
R. Usarewicz	Operator	3-12 Judge Ave. North Bay
C. Usarewicz	Operator	3-12 Judge Ave. North Bay

DISCUSSION OF RESULTS

The magnetometer results illustrate several anomalous zones within a generally low magnetic background. One such feature displays an arcuate shape following the lake shore from between lines 2E and 3E on the base line along line 3E to 2+00S where it swings west to line 1E. No EM conduction appears to be associated with this magnetic anomaly.

A second magnetic anomaly occurs along the south boundary on lines 5E and 6E. This magnetic anomaly is of moderate to low intensity, and has a fair to good EM conductor flanking it to the north.

A circular shaped magnetic anomaly resembling an intermediate to mafic intrusion is situated on lines 8E and 9E to the east of the previously mentioned magnetic anomaly. No conduction is apparent here, though.

A weak broadish magnetic anomaly projects from the west onto the northern part of the claims. This terminates before it reaches the lake. This could represent a mafic unit in the stratigraphy or a dioritic intrusion.

A north-south fault is envisaged extending from the north boundary between lines 1E and 2E, to the extreme south end of line 8E.

Apart from the EM conductor along the south boundary mentioned earlier, there is a second prominent EM feature occurring on lines 5E to 7E. These responses show fair to good conductivity but have a disjointed strike extent. This may have some relationship to the proposed fault in the vicinity.

CONCLUSIONS AND RECOMMENDATIONS

The geophysical surveys conducted on the Birch Point property has outlined two EM conductors, one of which has a flanking magnetic anomaly association. Several separate magnetic anomalies indicative of intermediate to mafic intrusive rocks have been depicted. One magnetic anomaly describes an arcuate form which may represent a fold. This occurs just north of an old gold occurrence.

It is recommended that a through interpretation of the geophysics be completed, and the anomalous features be correlated with the geology prior to embarking on any drill programme.

Respectfully submitted,

R.E. Gillick

David 2/15/67

G. B. Burton

REFERENCES

Satterly, J., 1941, Geology of the Dryden-Wabigoon Area, Vol. I
Part II Fiftieth Annual Report, Ontario
Department of Mines

Beard, R.C. and Garratt, G.L., 1976 - Gold Deposits of the
Kenora-Fort Frances Area, Mineral Resources
Circular 16, Ontario Department of Mines.



52F10NE0106 2.5477 BUTLER LAKE

900

33-83

2.5777

1983 04 21

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 (Electromagnetic & Magnetometer) Survey submitted under Special Provisions (credit for Performance and Coverage) on Mining Claims K 486985 et al in the Area of Butler 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:sc

cc: Robert Fairservice
Dryden, Ontario

cc: Geocanex Limited
Toronto, Ontario
Attn: Garth Burton & Robert E. Gillick.



The Mining Act

2.5477

Type of Survey(s) **Electromagnetic, Magnetic** Township or Area **Butler Lake Area M-2723**

Claim Holder(s) **Robert Fairservice** Prospector's Licence No. **S-3169**

Address **P.O. Box 644, Dryden, Ontario P8N 2Z3**

Survey Company **GEOCANEX LTD.** Date of Survey (from & to) **28 Day | 2 Mo. | 83 Yr. | 22 Day | 3 Mo. | 83 Yr.** Total Miles of line Cut **15.7 km.**

Name and Address of Author (of Geo-Technical report) **Garth B. Burton and Robert E. Gillick 700-11 Adelaide St. W Toronto M5H 1L9**

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

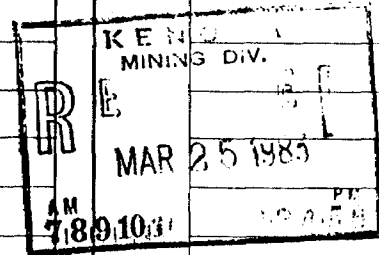
Mining Claims Traversed (List in numerical sequence)

Mining Claim		Expend. Days Cr.	Mining Claim		Expend. Days Cr.
Prefix	Number		Prefix	Number	
K	486985				
	486986				
	486987				
	486988				
	560929				
	560930				
	560931				
	560932				
	560933				
	560934				

RECEIVED

MAR 15 1983

MINING LANDS SECTION



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.

486985

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

10

Date **22 March '83** Recorded Holder or Agent (Signature) *G. Burton*

For Office Use Only

Total Days Cr. Recorded **600** Date Recorded **Mar 25/83** Mining Recorder *[Signature]*

Date Approved as Recorded **88.08.12** District Director *[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 **Garth B. Burton 700-11 Adelaide St. West Toronto M5H 1L9**

Date Certified **22 March 83** Certified by (Signature) *G. Burton*



May 21/83

Mining Lands Comments

OK!

To: Geophysics *Mr. R. Barlow*

Comments

<input checked="" type="checkbox"/> Approved	<input type="checkbox"/> Wish to see again with corrections	Date <i>Aug 9/83</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

L.D.

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

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



Ministry of Natural Resources

File _____

GEOPHYSICAL - GEOLOGICAL - GEOCHEMICAL
TECHNICAL DATA STATEMENT

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) Magnetic and Electromagnetic

Township or Area Butler Lake Area

Claim Holder(s) Robert Fairservice

Survey Company Geocanex Ltd.

Author of Report R. Gillick & G. B. Burton

Address of Author 700-11 Adelaide St. W Toronto M5H 1L9

Covering Dates of Survey Feb. 28-March 22, 1983
(linecutting to office)

Total Miles of Line Cut 15.7 kilometres

MINING CLAIMS TRAVERSED
List numerically

K 486985
(prefix) (number)

486986

486987

486988

560929

560930

560931

560932

560933

560934

If space insufficient, attach list

RECEIVED

APR 15 1983

MINING LANDS SECTION

TOTAL CLAIMS 10

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 _____
- Magnetometer _____
- Radiometric _____
- Other _____
- Geological _____
- Geochemical _____

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

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

DATE: 22 March '83 SIGNATURE: G. Burton
Author of Report or Agent

Res. Geol. _____ Qualifications ok

Previous Surveys

File No.	Type	Date	Claim Holder

OFFICE USE ONLY

GEOPHYSICAL TECHNICAL DATA

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

Number of Stations _____ Number of Readings _____
Station interval 25 metres Line spacing 100 metres
Profile scale EM 1"=10%
Contour interval Mag. 25, 100, 200 and 500 gammas

MAGNETIC

Instrument Geometric G-816
Accuracy - Scale constant 1 gamma
Diurnal correction method looping
Base Station check-in interval (hours) 1 1/2 - 2 hours
Base Station location and value along base line

ELECTROMAGNETIC

Instrument Apex MaxMin II
Coil configuration coplanar
Coil separation 300 feet
Accuracy + 2%
Method: Fixed transmitter Shoot back In line Parallel line
Frequency 444 Hz and 1777 Hz
(specify V.L.F. station)
Parameters measured Inphase and quadrature

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 _____



Ministry of
Natural
Resources

Your file:

1983.04.14

Our file:

Land Management Branch
Mining Lands Section
Ministry of Natural Resources
Room 6450, Whitney Block
Queen's Park
TORONTO, Ontario
M7A 1W3

RECEIVED

APR 15 1983

MINING LANDS SECTION

ATTENTION: F. W. Matthews

Dear Mr. Matthews

Enclosed please find report of work #33-83 filed by Geocanex Ltd. for Robert Fairservice, along with technical reports and maps. Please ensure that our file number eg. #33-83 is marked on all acknowledgement letters. Thank you.

Yours truly

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

Telephone: 807-468-3111

MEL/jr

MR

Encls.

AREA OF

BUTLER LAKE

DISTRICT OF
KENORA

KENORA
MINING DIVISION

SCALE: 1-INCH = 40 CHAINS

LEGEND

- | | |
|-----------------------|--------|
| PATENTED LAND | Ⓟ |
| CROWN LAND SALE | C.S. |
| LEASES | Ⓛ |
| 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 | C. |

NOTES

400' Surface rights reservation along the shores of all lakes and rivers.

All islands in Wabigoon Lake withdrawn from staking under Sec 39 Sub. C. of Mining Act.

DATE OF ISSUE

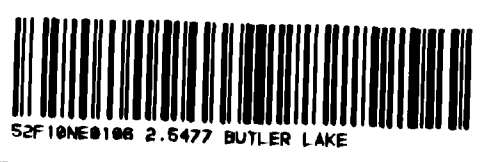
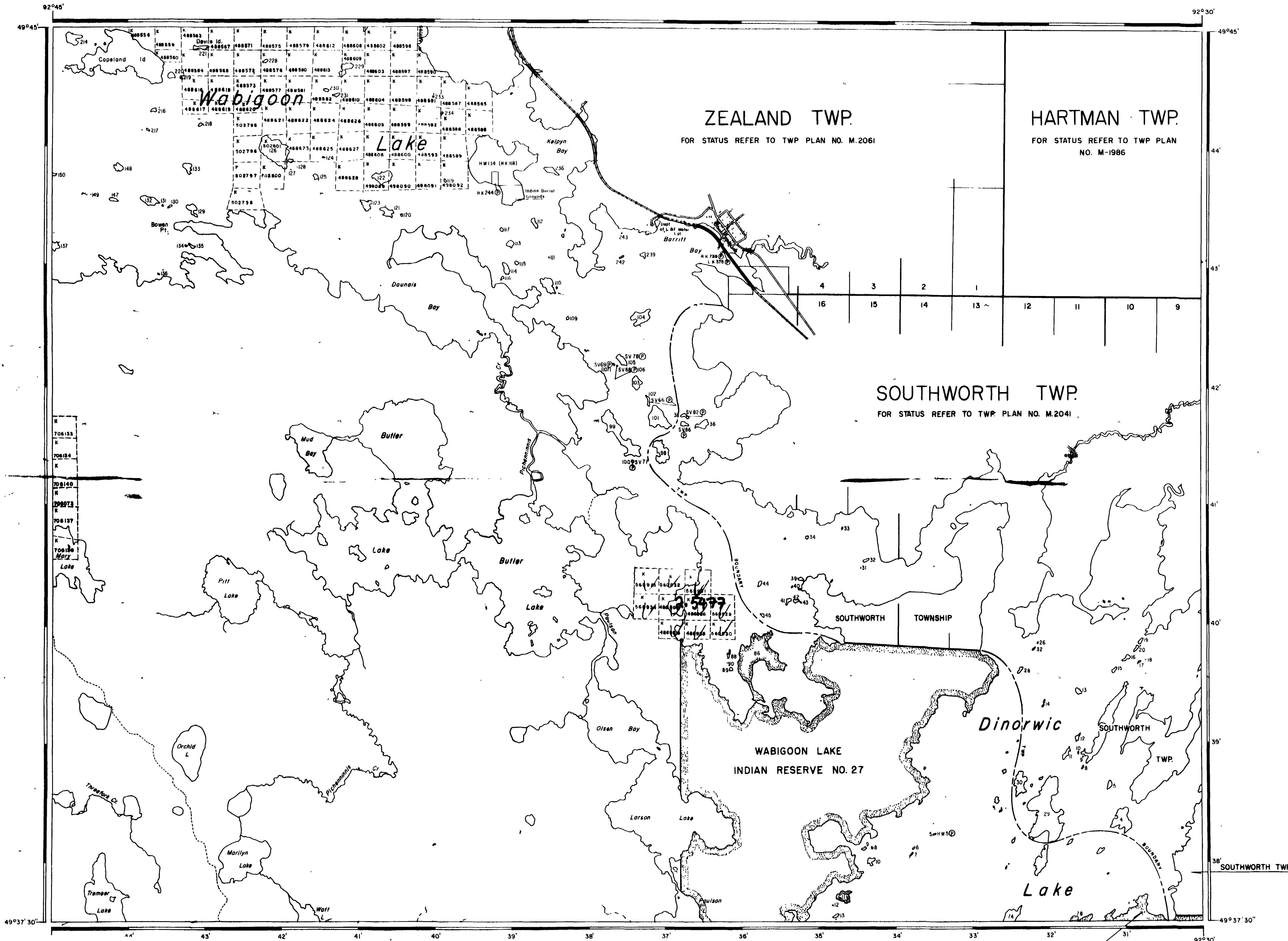
AUG 10 1983

Ministry of Natural Resources
TORONTO

NATIONAL TOPOGRAPHIC SERIES 52 F 10

PLAN NO. **M.2723**

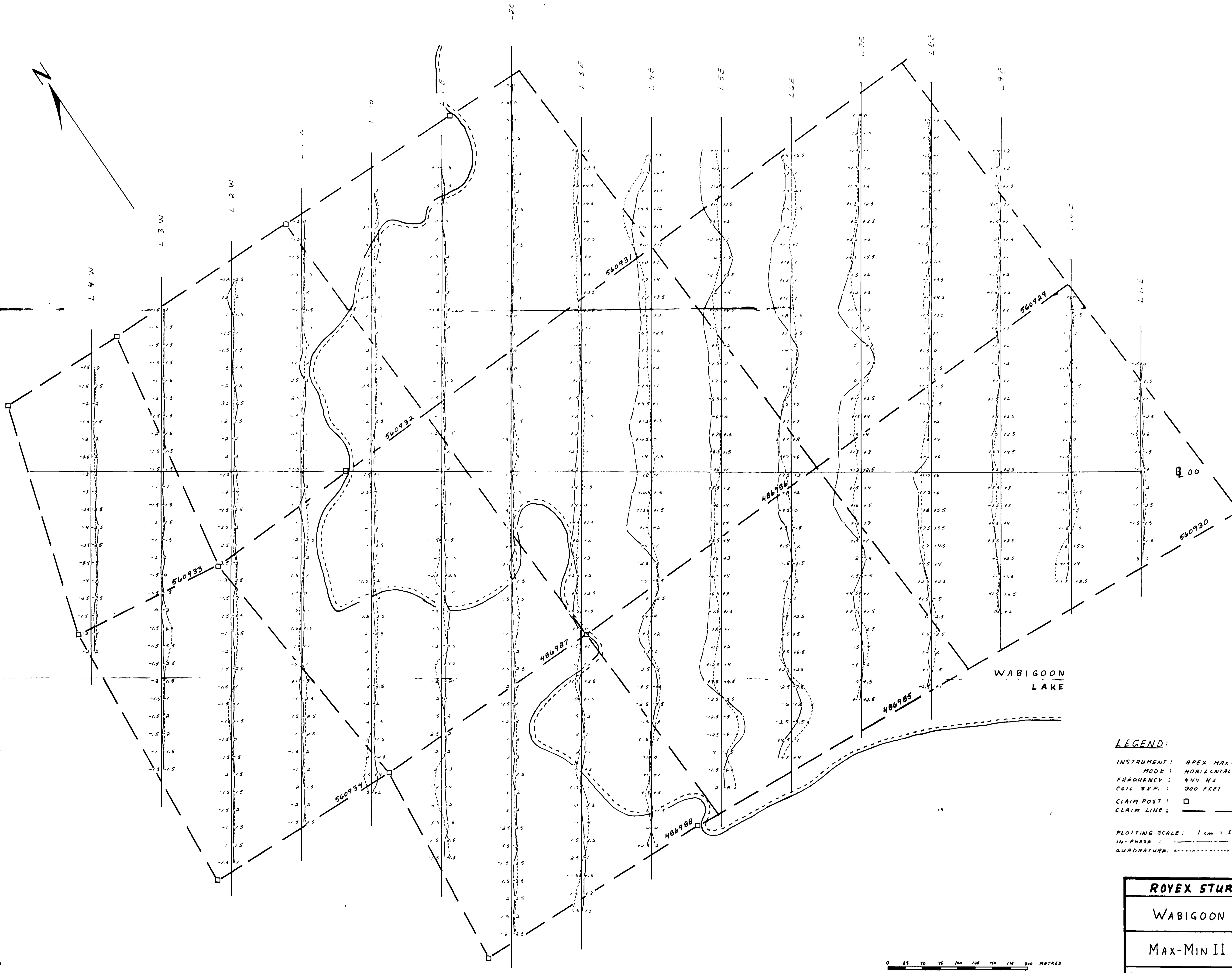
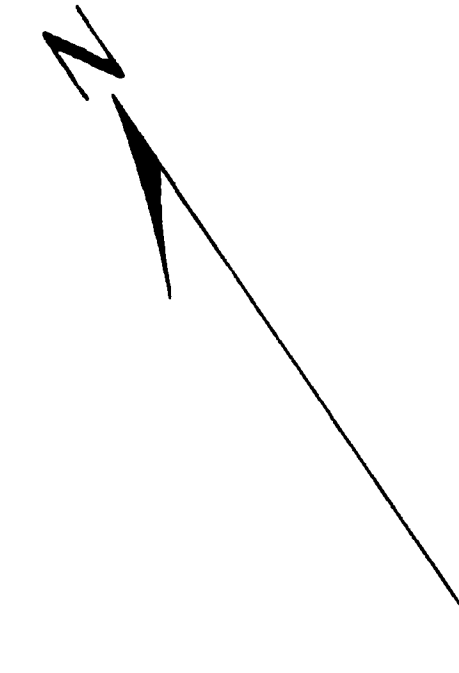
ONTARIO
MINISTRY OF NATURAL RESOURCES
SURVEYS AND MAPPING BRANCH



200

496923

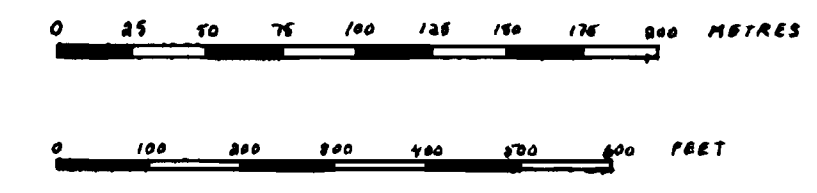
6100 N
5700 N
4700 N
3700 N
2700 N
1700 N
700 N
000
1400 S
2400 S
3400 S
4400 S
5400 S
6400 S
7400 S



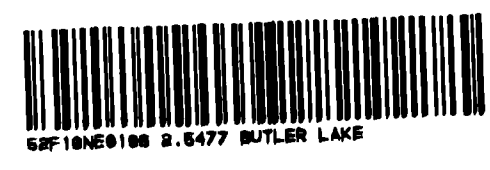
LEGEND:
 INSTRUMENT: APEX MAX-MIN II
 MODE: HORIZONTAL LOOP
 FREQUENCY: 444 HZ
 COIL SEP.: 300 FEET
 CLAIM POST: □
 CLAIM LINE: - - - - -
 PLOTTING SCALE: 1 cm = 10% (± 10 METERS OF LINE)
 IN-PHASE: (NUMERIC VALUE ON WEST SIDE OF LINE)
 QUADRATURE: (NUMERIC VALUE ON EAST SIDE OF LINE)

G. Burton

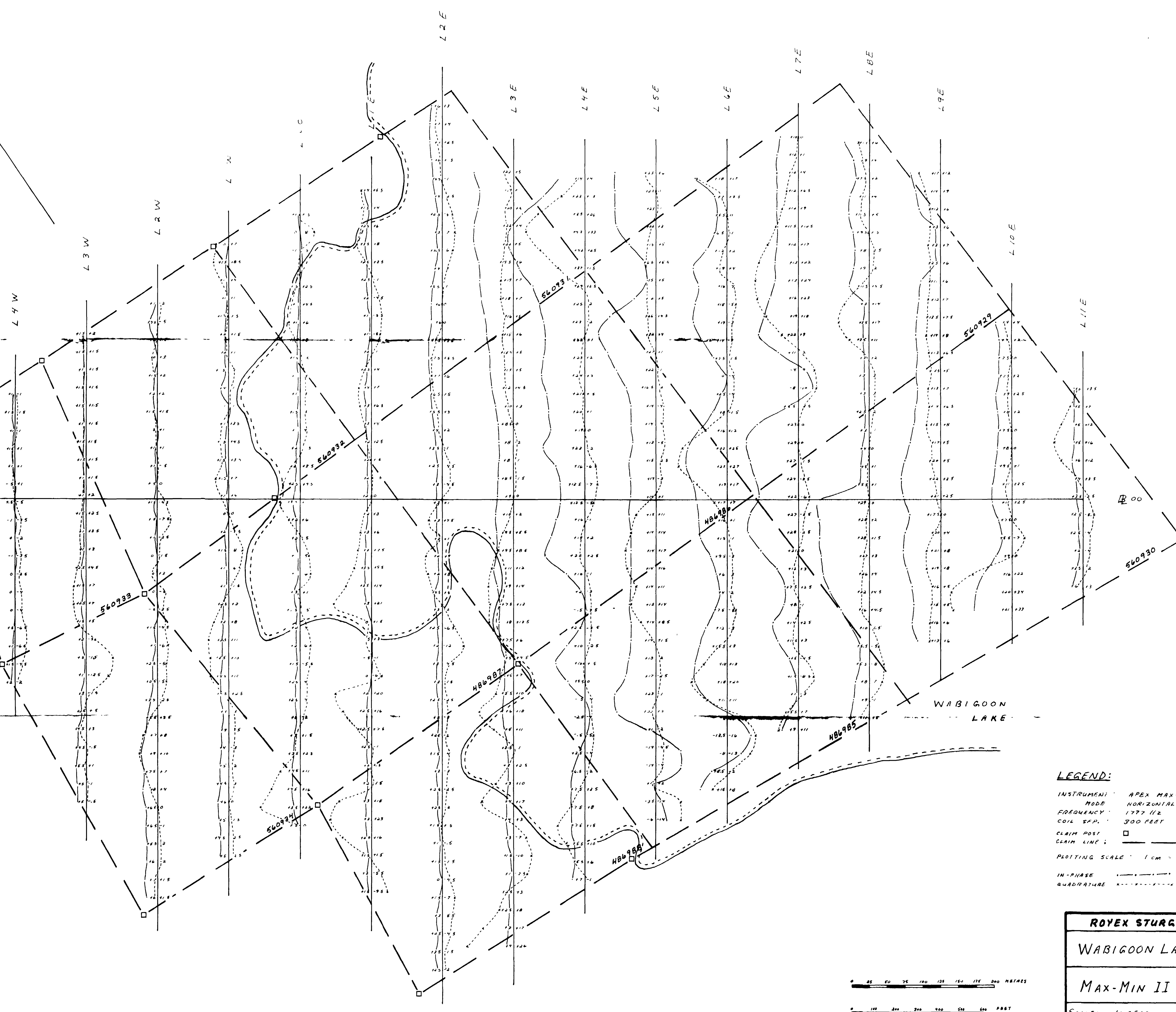
WABIGOON LAKE



ROYEX STURGX MINING LTD.	
WABIGOON LAKE GRID	
MAX-MIN II SURVEY (444HZ)	
SCALE: 1 : 2500	N.T.S.: 52 F/10
DRAWN BY: R G	WORK BY: GEOCANEX
DATE: MARCH, 1983	MAP No: 1.

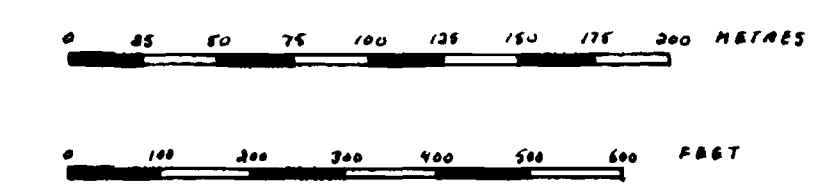


6100 N
5100 N
4100 N
3100 N
2100 N
1100 N
00
1100 S
2100 S
3100 S
4100 S
5100 S
6100 S
7100 S



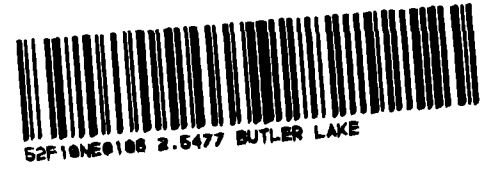
LEGEND:
 INSTRUMENT: APEX MAX-MIN II
 MODE: HORIZONTAL LOOP
 FREQUENCY: 1777 HZ
 COIL SEP.: 300 FEET
 CLAIM POST: □
 CLAIM LINE: ————
 PLOTTING SCALE: 1 CM = 10% (2' TO WEST OF LINE)
 IN-PHASE: ———— (NUMERIC VALUE ON WEST SIDE OF LINE)
 QUADRATURE: - - - - - (NUMERIC VALUE ON EAST SIDE OF LINE)

J. Burton



ROYEX STURGEON MINING LTD.	
WABIGOON LAKE GRID	
MAX-MIN II SURVEY (1777 HZ)	
SCALE: 1:2500	N.T.S: 52 F/10
DRAWN BY: R G	WORK BY: GEOCANEX
DATE: MARCH, 1983	MAP No: 2

25777



6+00 N
5+00 N
4+00 N
3+00 N
1+00 N
0+00
1+00 S
2+00 S
3+00 S
4+00 S
5+00 S
6+00 S
7+00 S



LEGEND:
 INSTRUMENT: GEOMETRICS G816 PROTON PRESSION MAGNETOMETER
 CLAIM POST: □
 CLAIM LINE: - - - - -
 LAKE SHORE: ~~~~~
 PLOTTED VALUES = TOTAL FIELD MINUS 60,000 GAMMAS
 CONTOURED AT: 0, 25, 50, 100, 150, 200, 250, 300, 400, 500, 600, 700, 800, 900, 1000, 1200, 1500, 2000 GAMMAS

J. Burton

ROYEX STURGEX MINING LTD.	
WABIGOON LAKE GRID	
TOTAL FIELD MAGNETICS	
SCALE: 1:2500	NTS.: 52 F/10
DRAWN BY: RG	WORK BY: GEOCANEX
DATE: MARCH, 1983	MAP No. 3

