REPORT ON

GEOPHYSICAL WORK

ON

KENOGAMING PROPERTY

KENOGAMING TOWNSHIP

FOR

FALCONBRIDGE LIMITED

NTS: 42-A/4 PROJ #: 8191

SEPTEMBER 1990

D. LONDRY
TIMMINS GEOPHYSICS LTD.

SUMMARY AND RECOMMENDATIONS

Magnetic and HLEM surveys were carried out in June 1990, over 29 claims in Kenogaming Township.

The magnetic survey mapped west-northwest trending ultramafic bodies. There are no conductive zones, within 70 metres of the surface, which are detected by the lower EM frequency. Weak quadrature anomalies in the 1777 Hz results reflect poor conductors which may be related to mineralized shear zones. Previous I.P. surveys responded to sulphides in the shear zones and magnetite within the ultramafics.

It is recommended that zones 'A' and 'B' are detailed with a higher frequency HLEM survey.

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INTRODUCTION

During June 1990, magnetic and horizontal loop electromagnetic (HLEM) surveys were carried out for Falconbridge Limited over 29 claims in Kenogaming Township.

The property is located in the north central part of the township, 55 kilometres southwest of the city of Timmins (Figure 1). The claims are numbered as follows:

P 1127395 - P 1127398 inclusive

P 1127631 - P 1127655 inclusive

The property can be accessed from an all weather gravel road which turns south from Highway 101, sixteen kilometres west of the Opishing River.

The field data was collected by J. DerWeduwen, L. Varin and B. Pigeon.

PREVIOUS WORK

A number of companies have carried out previous work on all or part of the Falconbridge property (Table 1). The area has been explored for iron in iron formation, gold in shear zones, and asbestos and nickel in sill-like ultrabasic intrusives.

In 1984 and 1985 Golden Range Resources Inc. carried out an exploration program over 43 claims which covered all of the Falconbridge property. The program consisted of geological mapping, soil sampling, stripping and magnetic, induced polarization (I.P.) and HLEM surveys.

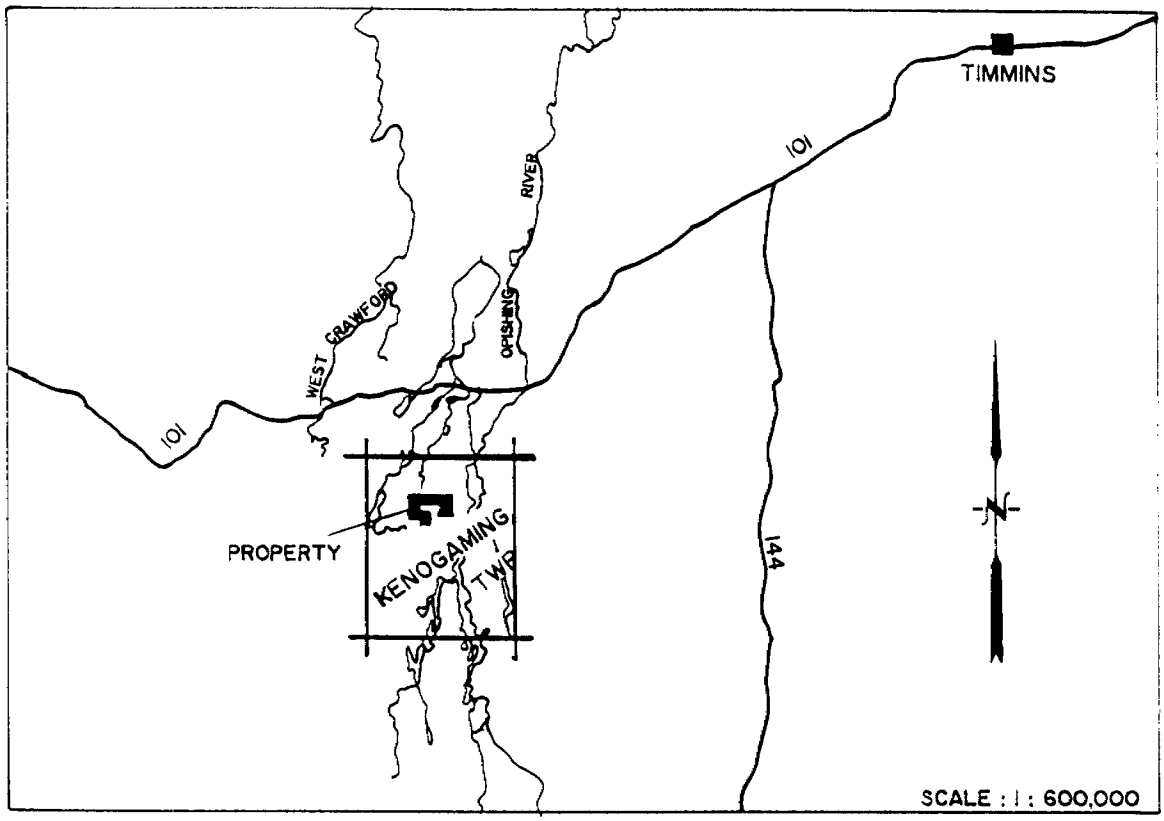

Figure 1 (a). Location Map

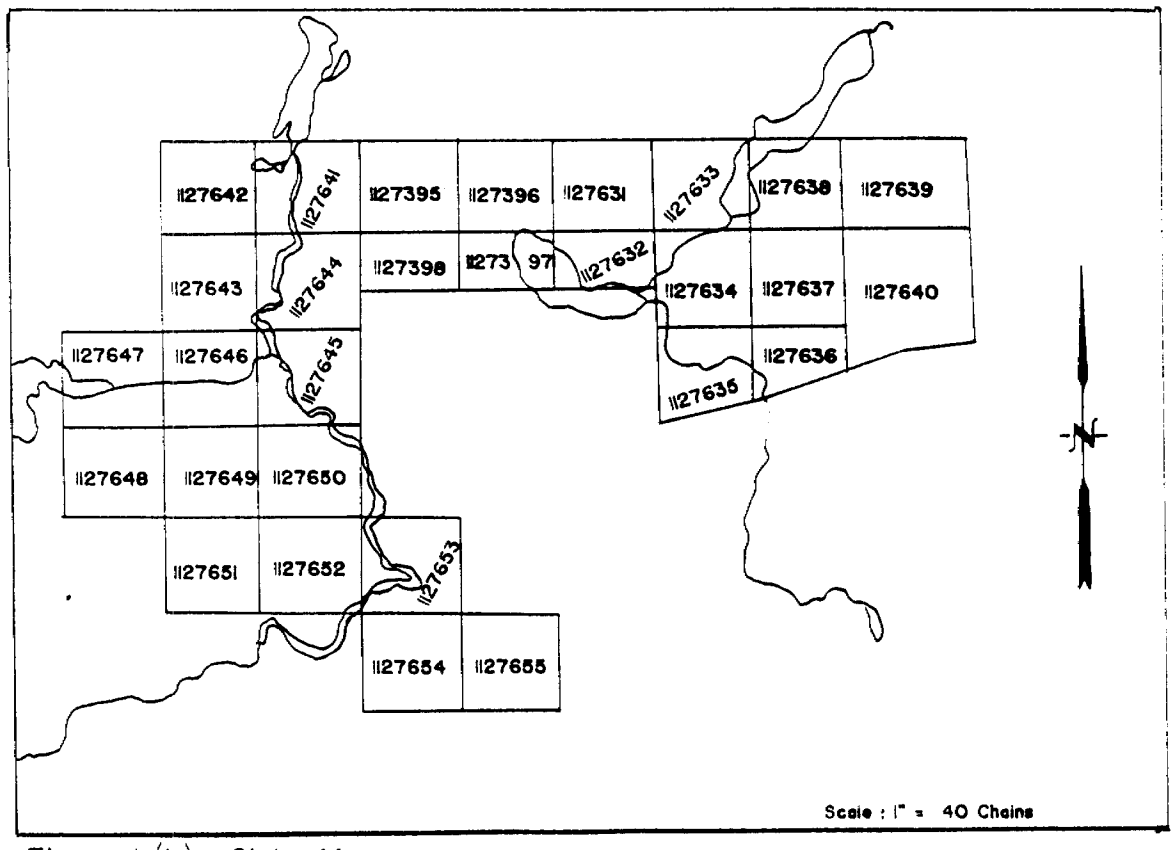

Figure 1 (b). Claim Map

No bedrock conductors were detected in the EM survey. Anomalous IP readings reflected a mineralized shear zone and magnetite in ultramafics.

YEAR	COMPANY	GEOPHYSICS	DRILL HOLES	ASSESSMENT FILE
1985	GOLDEN RANGE RESOURCES LIMITED	MAG,HLEM,IP		T-2751
1983	R.J. SHEPPARD	AMAG,AEM		T-2799
1979	UTAH MINES LTD.	MAG		T-1988
1974	AMOCO CANADA PETROLEUM CO.LTD	MAG		T-1678
1965	JADE OIL AND GAS CO. INC.	MAG,VLEM		T-1138
1964	DELMICO MINES LIMITED	MAG,HLEM		T-992
1947-1954	DUNVEGAN MINES LTD.		#1-#16 N1-N25	T-527

Table 1. Summary of Previous Work

In 1983, Dighem flew VLF-EM and magnetic surveys for R.J. Sheppard over parts of Reeves, Sewell, Penhorwood and Kenogaming Townships. There were only weak, isolated EM anomalies outlined on the Falconbridge property.

In 1979, Utah Mines Limited ran a magnetic survey over 22 claims which surrounded Chabot Lake.

In 1974, Amoco Canada Petroleum Co. Ltd. staked 41 claims between Chabot Lake and Hanrahan Lake. A magnetic survey was carried out and anomalous areas were correlated to ultrabasic intrusives lying conformable to felsic

metavolcanics.

In 1965, Jade Oil and Gas Co. Inc. carried out magnetic and vertical loop electromagnetic (VLEM) surveys on 50 claims which included the present property west of Crawford River.

In 1964, Delmico Mines Limited ran a magnetic survey over 15 claims located to the north and east of Napier Lake.

In 1947, a large claim group, which includes all of the 29 claims covered in this report, was held by Dunvegan Mines Ltd. A geology survey, which included some trenching, was filed in 1947. A second geology survey was carried out in 1951. Sixteen holes were drilled in 1952, and 25 were drilled in 1954. These holes were drilled to locate possible nickel ore in ultrabasic intrusives.

SURVEY DESCRIPTIONS

The grid on the property consists of north-south lines spaced every 100 metres and picketed every 20 metres.

The horizontal loop EM survey was carried out with the Apex Parametrics MaxMin I. This instrument measures the in-phase and quadrature components of the secondary field as a percentage of the primary field. Readings were taken every 20 metres using a coil separation of 120 metres and frequencies of 444 and 1777 Hertz.

The magnetic readings were taken with a Scintrex IGS-2/MP-4. This instrument is a proton precession magnetometer which measures the earth's total magnetic field to an accuracy of 0.1 gammas. Diurnal variations were monitored every 12 seconds with a Scintrex MP-3 base station magnetometer.

MAGNETIC RESULTS

The magnetic results are presented on Map 3 at a scale of 1:5000.

Linear magnetic anomalies, up to 7000 gammas above background, strike east-west to west-northwest. These have been interpreted by previous authors, to reflect magnetite within sill-like ultramafic bodies.

North-south striking Proterozoic diabase dikes are known to be present on the property; however, the magnetic susceptibility of these bodies is much less than the ultramafics and not well mapped by the magnetic data.

HLEM RESULTS

The results of the HLEM survey are presented on maps 1 and 2 at a scale of 1:5000. The profile scale is 1 cm = 20% (444 Hz) and 1 cm = 40% (1777 Hz).

The survey failed to detect a good conductor on the property. Two anomalies labelled 'A' and 'B' on the maps, are weak quadrature responses in the high frequency results; the source of these anomalies have a very poor conductivity. They are located within an area of high magnetic susceptibility in the southwest portion of the property.

The survey also responded to magnetite in the ultramafics. These weak anomalies consist of an inversion in the in-phase component. This inversion is most pronounced when the receiver or transmitter is directly over the zone; a good example of this type of anomaly is located between Lines 2000 and 2200 East at 140 North. There are similar responses over the magnetite bodies in the southwest portion of the property, however, because of the number of them, they

are difficult to interpret in the EM results.

Sept 11, 1990

DATE

J Douglas Londry

DOUG LONDRY
TIMMINS GEOPHYSICS LTD.

APPENDIX A

GEOPHYSICAL TECHNICAL DATA

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

Number of Stations MAG 1873 Number of Readings MAG 2792 HLEM 1849

Station interval 20 m Line spacing 100 m

Profile scale 1 cm = 20% (444 Hz) - 1 cm = 40% (1777 Hz)

Contour interval 250 gammas

MAGNETIC

Instrument Scintrex IGS-2/MP-4

Accuracy – Scale constant ± .1 gammas

Diurnal correction method Scintrex MP-3 Base Station Magnetometer

Base Station check-in interval (hours) 12 seconds

Base Station location and value 100 West - 400 North

58446

ELECTROMAGNETIC

Instrument Apex Parametrics MaxMin I

Coil configuration Horizontal Loop

Coil separation 120 m

Accuracy 1%

Method: ☐ Fixed transmitter ☐ Shoot back ☒ In line ☐ Parallel line

Frequency 444 Hz - 1777 Hz (specify V.L.F. station)

Parameters measured In-phase and quadrature components of secondary field measured as percent of primary field.

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

Ministry of Northern Development and Mines

Ontario

Geophysical-Geological-Geochemical Technical Data Statement

File _____

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

Township or Area KENOGAMING

Claim Holder(s) FALCONBRIDGE LIMITED
P.O.Box 1140, Timmins, Ont. P4N 7H9

Survey Company Timmins Geophysics Ltd.

Author of Report D. Londry

Address of Author P.O.Box 1783, South Porcupine, Ont. P0N 1H0

Covering Dates of Survey June 8/90 - June 22/90
(linecutting to office)

Total Miles of Line Cut 44.3 km

SPECIAL PROVISIONS CREDITS REQUESTED

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

ENTER 20 days for each additional survey using same grid.

	DAYS per claim
Geophysical	
--Electromagnetic	20
--Magnetometer	40
--Radiometric	
--Other	
Geological	
Geochemical	

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

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

DATE: Sept. 11/90 SIGNATURE: D. Londry
Author of Report or Agent

Res. Geol. _____ Qualifications _____

Previous Surveys

File No.	Type	Date	Claim Holder

MINING CLAIMS TRAVERSED
List numerically

SEE ATTACHED LIST
(prefix) (number)

If space insufficient, attach list

TOTAL CLAIMS 29

OFFICE USE ONLY

837 (85/12)

LIST OF CLAIMS = KENOGAMING TOWNSHIP JULY/AUGUST 1990

P 1127395

1127396

1127397

1127398

P 1127631

1127632

1127633

1127634

1127635

1127636

1127637

1127638

1127639

1127640

1127641

1127642

1127643

1137644

1127645

1127646

1127647

1127648

1127649

1127650

P 1127651

1127652

1127653

1127654

1127655

TOTAL CLAIMS: 29

REPORT ON

GEOPHYSICAL WORK

ON

KENOGAMING PROPERTY

KENOGAMING TOWNSHIP

FOR

FALCONBRIDGE LIMITED

NTS: 42-A/4 PROJ #: 8191

APRIL 1991

D. LONDRY
TIMMINS GEOPHYSICS LTD.

SUMMARY AND RECOMMENDATIONS

Magnetic and HLEM surveys were carried out in February 1991, over ice covered areas of the Kenogaming Property. This survey appends the original survey carried out in June 1990.

The HLEM survey did not detect any anomalies, and the magnetic survey extended the trends already outlines in the 1990 survey.

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LIST OF MAPS

INTRODUCTION

During February 1991, magnetic and horizontal loop electromagnetic (HLEM) surveys were carried out for Falconbridge Limited over ice covered areas of a group of claims in Kenogaming Township.

The property is located in the north central part of the township, 55 kilometres southwest of the city of Timmins (Figure 1). Twenty nine of the claims are unpatented and numbered as follows:

P 1127395 - P 1127398 inclusive

P 1127631 - P 1127655 inclusive

The property can be accessed from an all weather gravel road which turns south from Highway 101, sixteen kilometres west of the Opishing River.

The field data was collected by J. DerWeduwen, L. Varin and B. Pigeon.

SURVEY DESCRIPTIONS

The grid on the property consists of north-south lines spaced every 100 metres and picketed every 20 metres.

The horizontal loop EM survey was carried out with the Apex Parametrics MaxMin I. This instrument measures the in-phase and quadrature components of the secondary field as a percentage of the primary field. Readings were taken every 20 metres using a coil separation of 120 metres and frequencies of 444

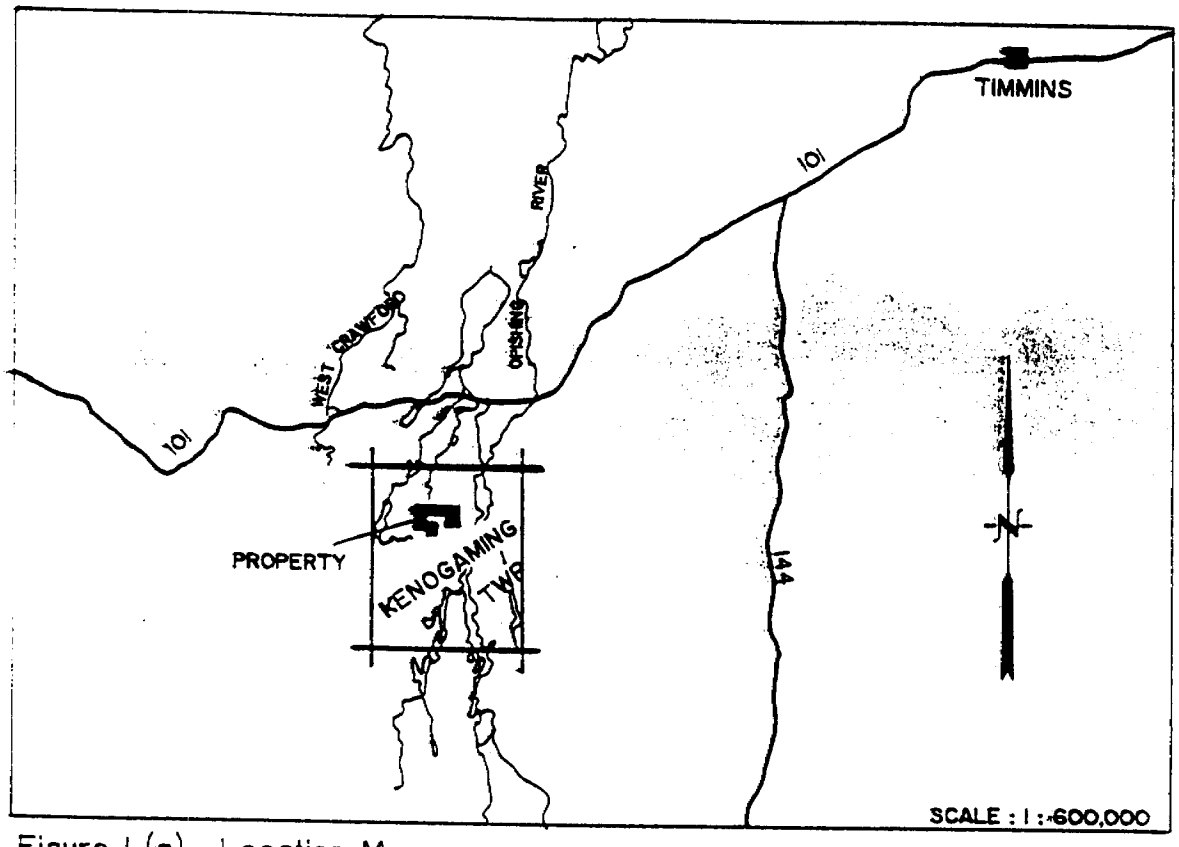

Figure 1 (a). Location Map

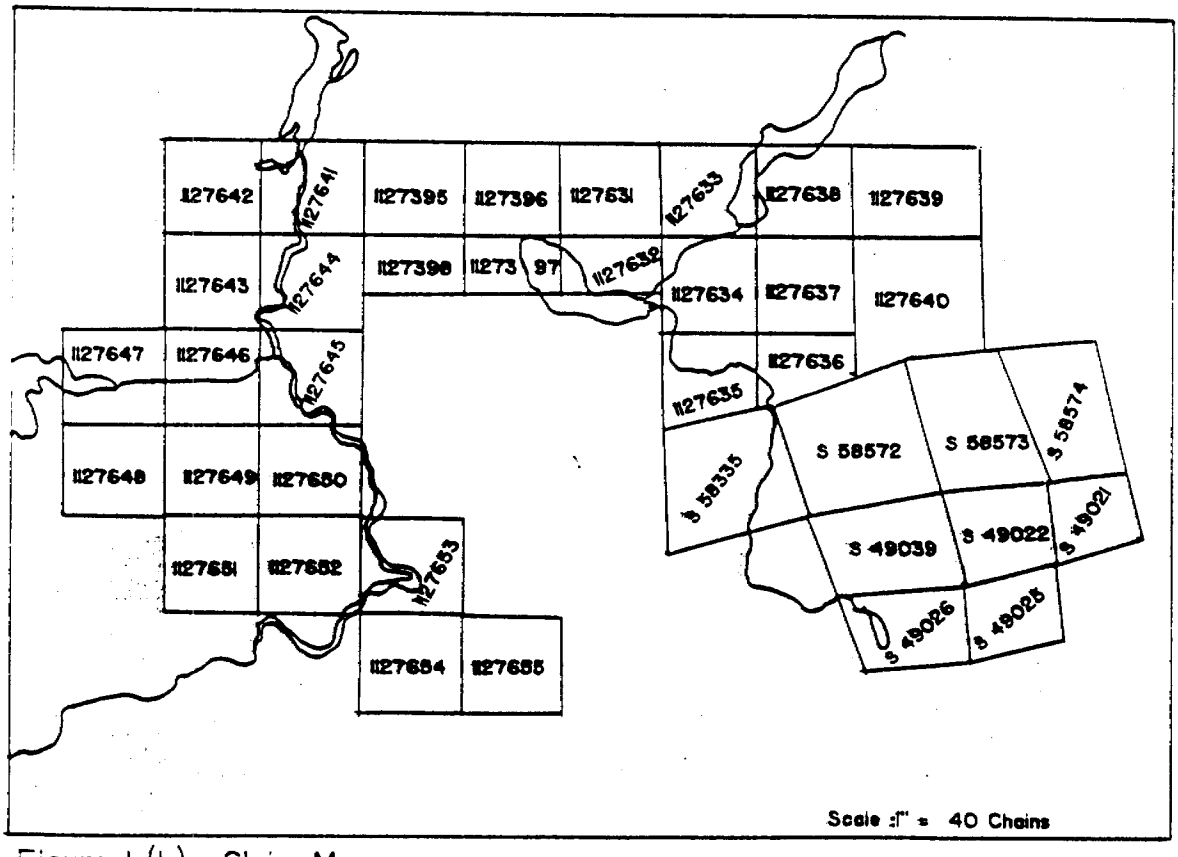

Figure 1 (b). Claim Map

and 1777 Hertz.

The magnetic readings were taken with a Scintrex IGS-2/MP-4. This instrument is a proton precession magnetometer which measures the earth's total magnetic field to an accuracy of 0.1 gammas. Diurnal variations were monitored every 12 seconds with a Scintrex MP-3 base station magnetometer.

HLEM RESULTS

The results of the HLEM survey are presented on maps 1 and 2 at a scale of 1:5000. The profile scale is 1 cm = 20% (444 Hz) and 1 cm = 40% (1777 Hz).

No anomalies were outlined in the new survey results.

MAGNETIC RESULTS

The magnetic results are presented on Map 3 at a scale of 1:5000.

The magnetic results extended the patterns already established in the 1990 survey.

MAY 2, 1991

DATE

Douglas Londry

DOUG LONDRY
TIMMINS GEOPHYSICS LTD.

APPENDIX A

Ministry of Northern Development and Mines

Ontario

Geophysical-Geological-Geochemical Technical Data Statement

File _____

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

Township or Area KENOGAMING

Claim Holder(s) FALCONBRIDGE LIMITED

P.O. Box 1140, Timmins, Ontario P4N 7H9

Survey Company Timmins Geophysics Ltd.

Author of Report D.Londry

Address of Author P.O. Box 1783, South Porcupine, Ont. P0N 1H0

Covering Dates of Survey Feb. 22/91 - Mar.11/91
(linecutting to office)

Total Miles of Line Cut 20.6 km

SPECIAL PROVISIONS CREDITS REQUESTED

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

ENTER 20 days for each additional survey using same grid.

	DAYS per claim
Geophysical	
–Electromagnetic	2
–Magnetometer	3.5
–Radiometric	
–Other	
Geological	
Geochemical	

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

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

DATE: MAY 2, 1991 SIGNATURE: Douglas Londry
Author of Report or Agent

Res. Geol. _____ Qualifications _____

Previous Surveys

File No.	Type	Date	Claim Holder

MINING CLAIMS TRAVERSED
List numerically

SEE ATTACHED LIST
(prefix) (number)

If space insufficient, attach list

TOTAL CLAIMS 29

OFFICE USE ONLY

837 (85/12)

GEOPHYSICAL TECHNICAL DATA

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

Number of Stations 1087 Number of Readings MAG - 1087 HLEM - 994

Station interval 20 m Line spacing 100 m

Profile scale 1cm = 20 % (444 Hz) - 1 cm = 40$ (1777 hz)

Contour interval 250 gammas

MAGNETIC

Instrument Scintrex IGS-2/MP-4

Accuracy – Scale constant ± .1 gammas

Diurnal correction method Scintrex MP-3 Base Station Magnetometer

Base Station check-in interval (hours) 12 seconds

Base Station location and value 100 West - 400 North

58446

ELECTROMAGNETIC

Instrument Apex Parametrics MaxMin I

Coil configuration Horizontal Loop

Coil separation 120 m

Accuracy 1%

Method: ☐ Fixed transmitter ☐ Shoot back ☒ In line ☐ Parallel line

Frequency 444 Hz - 1777 Hz

(specify V.L.F. station)

Parameters measured In-phase and quadrature components of secondary field measured as percent of primary field.

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

P	1127395
	1127396
	1127397
	1127398
P	1127631
	1127632
	1127633
	1127634
	1127635
	1127636
	1127637
	1127638
	1127639
	1127640
	1127641
	1127642
	1127643
	1137644
	1127645
	1127646
	1127647
	1127648
	1127649
	1127650

P	1127651
	1127652
	1127653
	1127654
	1127655

TOTAL CLAIMS: 29

Ministry of Northern Development and Mines
Ontario

DOCUMENT No.
W 9160.00100

Mining Act

Report of Work 2.1354.
(Geophysical, Geological and Geochemical S

42A04NW1109 2.13542 KENOGAMING

900

Type of Survey(s): GEOPHYSICAL	Mining Division: PORCUPINE	Township or Area: KENOGAMING TOWNSHIP
Recorded Holder(s): FALCONBRIDGE LIMITED		Prospector's Licence No.: A 21647
Address: P.O.Box 1140, 571 Moneta Ave., Timmins, Ontario P4N 7H9		Telephone No.: 705-267-1188
Survey Company: TIMMINS GEOPHYSICS LTD.		
Name and Address of Author (of Geo-Technical Report): D.LONDRY, P.O.Box 1783, S. PORCUPINE, Ontario P0N 1H0		Date of Survey (from & to): 22 02 91 (Day | Mo. | Yr.) — 11 03 91 (Day | Mo. | Yr.)

Credits Requested per Each Claim in Columns at right

		Days per Claim
Special Provisions For first survey: Enter 40 days. (This includes line cutting) For each additional survey: using the same grid: Enter 20 days (for each)	Geophysical	
	- Electromagnetic	2
	- Magnetometer	3.5
	- Other	
	Geological	
	Geochemical	
Man Days Complete reverse side and enter total(s) here	Geophysical	Days per Claim
	- Electromagnetic	
	- Magnetometer	
	- Other	
	Geological	
	Geochemical	
Airborne Credits Note: Special provisions credits do not apply to Airborne Surveys.		Days per Claim
	Electromagnetic	
	Magnetometer	
	Other	

Total miles flown over claim(s)

Date: MAR 18/91 — Recorded Holder or Agent (Signature): C. Courtemanche

Mining Claims Traversed (List in numerical sequence)

Mining Claim Prefix	Mining Claim Number	Mining Claim Prefix	Mining Claim Number	Mining Claim Prefix	Mining Claim Number
P	1127395	P	1127643		
	1127396		1127644		
	1127397		1127645		
	1127398		1127646		
	1127631		1127647		
	1127632		1127648		
	1127633		1127649		
	1127634		1127650		
	1127635		1127651		
	1127636		1127652		
	1127637		1127653		
	1127638		1127654		
	1127639		1127655		
	1127640				
	1127641				
	1127642				

RECEIVED
APR 17 1991
MINING LANDS SECTION

Total number of mining claims covered by this report of work: 29

Certification Verifying Report of Work

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

Name and Address of Person Certifying: D. Londry, P.O.Box 1783, South Porcupine, Ontario P0N 1H0

Telephone No.: 705-235-4592 — Date: MAR 18/91 — Certified By (Signature): C. Courtemanche

For Office Use Only

PORCUPINE MINING DIVISION RECEIVED ACTG"

Received Stamp: PORCUPINE MINING DIVISION RECEIVED MAR 18 1991 RECORDED MAR 18 1991

Total Days Cr. Recorded	Date Recorded	Mining Recorder
159.5	MAR. 18/91	David Londry
	Date Approved as Recorded	Provincial Manager, Mining Lands
	May 08/91	Ron C Gashinski

1362 (89/06)

~~August 26~~ Sept 24

Ministry of Northern Development and Mines
Ontario

Report of Work
(Geophysical, Geological and Geochemical Surveys)

Mining Act

DOCUMENT No. W 9006·60446

Instructions
- Please type or print.
- Refer to Section 77, the Mining Act for assessment work requirements and maximum credits allowed per survey type.
- If number of mining claims traversed exceeds space on this form, attach a list.
- Technical Reports and maps in duplicate should be submitted to Mining Lands Section, Mineral Development and Lands Branch.

Type of Survey(s)	Mining Division	Township or Area
GEOPHYSICAL	PORCUPINE	KENOGAMING TOWNSHIP

2.13542

Recorded Holder(s): FALCONBRIDGE LIMITED	Prospector's Licence No.: A 21647
Address: P.O. Box 1140, 571 Moneta Ave., Timmins, Ontario P4N 7H9	Telephone No.: 705-267-1188
Survey Company: TIMMINS GEOPHYSICS LTD.	
Name and Address of Author (of Geo-Technical Report): D. Londry, P.O. Box 1783, S. porcupine, Ontario PON 1HO	Date of Survey (from & to): 08 06 90 (Day Mo. Yr.) – 22 06 90 (Day Mo. Yr.)

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

Total miles flown over claim(s).

Date: July 26/90 — Recorded Holder or Agent (Signature): [signature]

Mining Claims Traversed (List in numerical sequence)

Prefix	Number	Prefix	Number	Prefix	Number
P	1127395	P	1127642		
	1127396		1127643		
	1127397		1127644		
	1127398		1127645		
			1127646		
P	1127631		1127647		
	1127632		1127648		
	1127633		1127649		
	1127634		1127650		
	1127635		1127651		
	1127636		1127652		
	1127637		1127653		
	1127638		1127654		
	1127639		1127655		
	1127640				
	1127641				

RECORDED JUL 26 1990

RECEIVED JUL 30 1990 MINING LANDS SECTION

Total number of mining claims covered by this report of work. 29

Certification Verifying Report of Work

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

Name and Address of Person Certifying: D. Londry, P.O. Box 1783, S. Porcupine, Ontario PON 1HO

Telephone No.	Date	Certified By (Signature)
705-235-4592	July 19, 1990	[signature]

For Office Use Only

Total Days Cr. Recorded	Date Recorded	Mining Recorder
1740	JULY 26/90	[signature] Mining Recorder
	Date Approved as Recorded: See Revised	Provincial Manager, Mining Lands: Work Statement

Received Stamp: RECEIVED JUL 26 1990

Ministry of Northern Development and Mines

Ontario

Geophysical-Geological-Geochemical Technical Data Statement

File _____

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Type of Survey(s) GEOPHYSICAL

Township or Area KENOGAMING **2.13542**

Claim Holder(s) FALCONBRIDGE LIMITED

P.O.Box 1140, Timmins, Ont. P4N 7H9

Survey Company Timmins Geophysics Ltd.

Author of Report D. Londry

Address of Author P.O.Box 1783, South Porcupine, Ont. P0N 1H0

Covering Dates of Survey June 8/90 - June 22/90 (linecutting to office)

Total Miles of Line Cut 44.3 km

SPECIAL PROVISIONS CREDITS REQUESTED

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ENTER 20 days for each additional survey using same grid.

	DAYS per claim
Geophysical	
--Electromagnetic	20
--Magnetometer	40
--Radiometric	
--Other	
Geological	
Geochemical	

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

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

DATE: Sept 11/90 SIGNATURE: D. Londry
Author of Report or Agent

Res. Geol. _____ Qualifications 2.2289

Previous Surveys

File No.	Type	Date	Claim Holder

MINING CLAIMS TRAVERSED
List numerically

SEE ATTACHED LIST
(prefix) (number)

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TOTAL CLAIMS 29

OFFICE USE ONLY

837 (85/12)

GEOPHYSICAL TECHNICAL DATA

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

Number of Stations MAG 1873 Number of Readings MAG 2792 HLEM 1849

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Contour interval 250 gammas

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Accuracy – Scale constant ± .1 gammas

Diurnal correction method Scintrex MP-3 Base Station Magnetometer

Base Station check-in interval (hours) 12 seconds

Base Station location and value 100 West - 400 North

58446

ELECTROMAGNETIC

Instrument Apex Parametrics MaxMin I

Coil configuration Horizontal Loop

Coil separation 120 m

Accuracy 1%

Method: ☐ Fixed transmitter ☐ Shoot back ☒ In line ☐ Parallel line

Frequency 444 Hz - 1777 Hz
(specify V.L.F. station)

Parameters measured In-phase and quadrature components of secondary field measured as percent of primary field.

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

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– Integration time

Power

Electrode array

Electrode spacing

Type of electrode

LIST OF CLAIMS = KENOGAMING TOWNSHIP JULY/AUGUST 1990

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	1137644
	1127645
	1127646
	1127647
	1127648
	1127649
	1127650
P	1127651
	1127652
	1127653
	1127654
	1127655

TOTAL CLAIMS: 29

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 _____

_____

_____

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_____

_____

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_____

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 _____

_____

_____

_____

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_____

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_____

_____

Ontario

Ministry of Northern Development and Mines

Geophysical-Geological-Geochemical Technical Data Statement

File _____

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

Township or Area KENOGAMING

Claim Holder(s) FALCONBRIDGE LIMITED

P.O. Box 1140, Timmins, Ontario P4N 7H9

Survey Company Timmins Geophysics Ltd.

Author of Report D.Londry

Address of Author P.O. Box 1783, South Porcupine, Ont. P0N 1H0

Covering Dates of Survey Feb. 22/91 - Mar.11/91 (linecutting to office)

Total Miles of Line Cut 4.0 km

SPECIAL PROVISIONS CREDITS REQUESTED

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

ENTER 20 days for each additional survey using same grid.

	DAYS per claim
Geophysical	
--Electromagnetic	2
--Magnetometer	3.5
--Radiometric	
--Other	
Geological	
Geochemical	

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

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

DATE: MAY 2,1991 SIGNATURE: D. Londry
Author of Report or Agent

Res. Geol. _____ Qualifications _____

Previous Surveys

File No.	Type	Date	Claim Holder

MINING CLAIMS TRAVERSED
List numerically

SEE ATTACHED LIST

(prefix) (number)

If space insufficient, attach list

TOTAL CLAIMS 29

OFFICE USE ONLY

837 (85/12)

GEOPHYSICAL TECHNICAL DATA

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

Number of Stations 1087 Number of Readings MAG - 1087 HLEM - 994

Station interval 20 m Line spacing 100 m

Profile scale 1cm = 20 % (444 Hz) - 1 cm = 40$ (1777 hz)

Contour interval 250 gammas

MAGNETIC

Instrument Scintrex IGS-2/MP-4

Accuracy – Scale constant ± .1 gammas

Diurnal correction method Scintrex MP-3 Base Station Magnetometer

Base Station check-in interval (hours) 12 seconds

Base Station location and value 100 West - 400 North

58446

ELECTROMAGNETIC

Instrument Apex Parametrics MaxMin I

Coil configuration Horizontal Loop

Coil separation 120 m

Accuracy 1%

Method: ☐ Fixed transmitter ☐ Shoot back ☒ In line ☐ Parallel line

Frequency 444 Hz - 1777 Hz

(specify V.L.F. station)

Parameters measured In-phase and quadrature components of secondary field measured as percent of primary field.

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 _____

_____

_____

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General _____

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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 _____

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Ontario

Ministry of Northern Development and Mines

Ministère du Développement du Nord et des Mines

Mining Lands Section
159 Cedar Street, 4th Floor
SUDBURY, Ontario
P3E 6A5

Telephone: (705) 670-7264
Fax: (705) 670-7262

Your File: W9006.60446
Our File : 2.13542

November 7, 1990

Mining Recorder
Ministry of Northern Development and Mines
60 Wilson Avenue
TIMMINS, Ontario
P4N 2S7

Dear Madam/Sir:

RE: Notice of Intent dated October 1, 1990 for Geophysical (Electromagnetic & Magnetometer) Survey submitted on Mining Claims P 1127395 et al in Kenogaming Twp.

The assessment work credits, as listed with the above mentioned Notice of Intent have been approved as of the above date.

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

Yours sincerely

R.C. Gashinski
A/Provincial Manager, Mining Lands
Mines and Minerals Division

LJ/dvl
Enclosure

cc: Mr. W.D. Tieman
Mining and Lands Commissioner
Toronto, Ontario

Resident Geologist
Timmins, Ontario

Falconbridge Limited
Timmins, Ontario

D. Londry
South Porcupine, Ontario

Ministry of Northern Development and Mines

Ontario

Technical Assessment Work Credits

File: 2.13542

Date: Oct. 1/90

Mining Recorder's Report of Work No.: W9006.60446

Recorded Holder: Falconbridge Limited

Township or Area: Kenogaming Twp.

Type of survey and number of Assessment days credit per claim	Mining Claims Assessed
Geophysical	P 1127395 - 398 incl.
Electromagnetic 18 days	1127631 - 655 incl.
Magnetometer 36.5 days	
Radiometric ____ days	
Induced polarization ____ days	
Other ____ days	
Section 77 (19) See "Mining Claims Assessed" column	
Geological ____ days	
Geochemical ____ days	
Man days ☐ Airborne ☐	
Special provision ☒ Ground ☒	
☒ Credits have been reduced because of partial coverage of claims.	
☐ Credits have been reduced because of corrections to work dates and figures of applicant.	

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

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; Geologocal - 40; Geochemical - 40; Section 77(19) - 60.

828 (85/12)

REFERENCE

AREAS WITHDRAWN FROM DISPOSITION

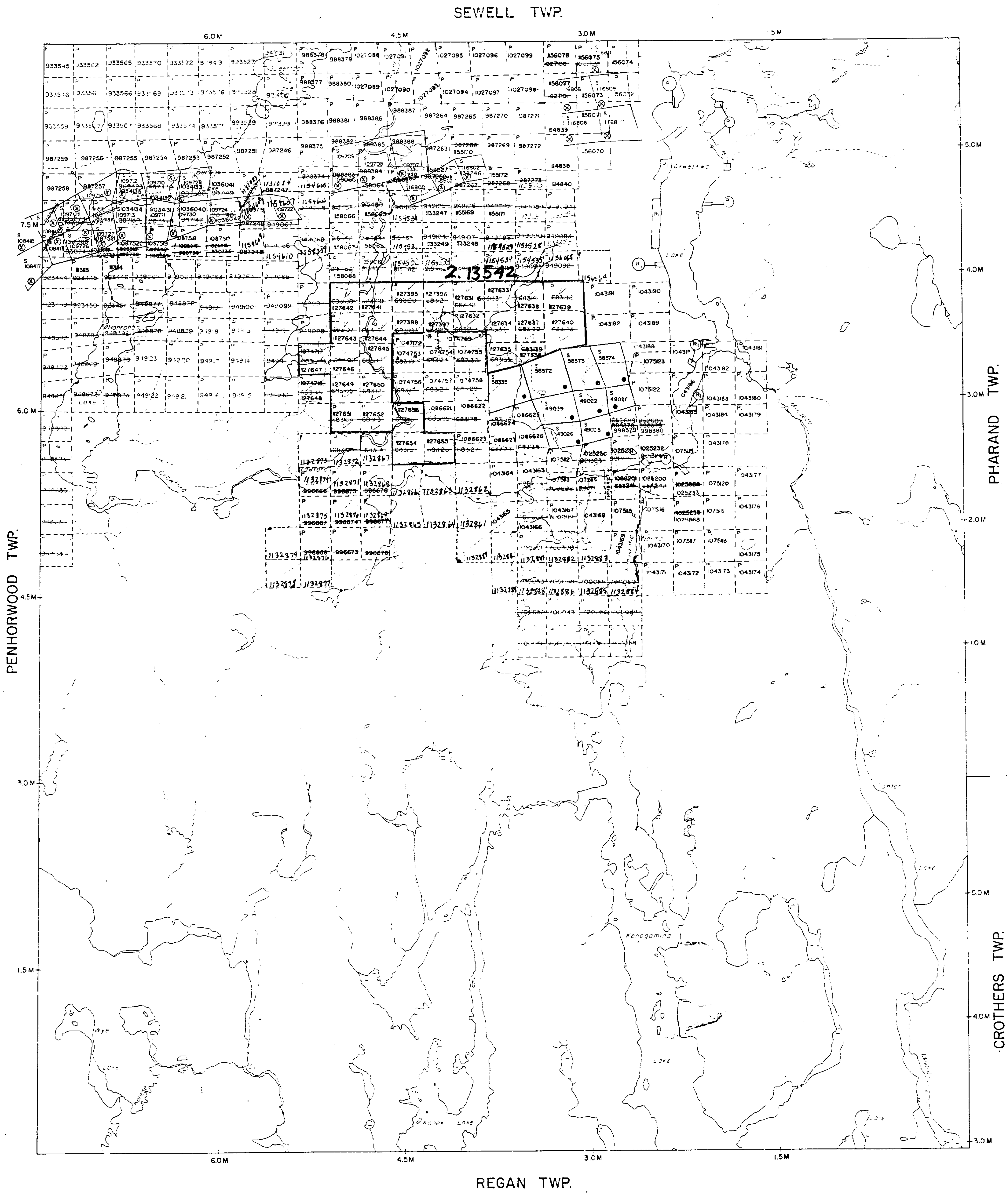
M.R.O. – MINING RIGHTS ONLY
S.R.O. – SURFACE RIGHTS ONLY
M.+ S. – MINING AND SURFACE RIGHTS

Description	Order No.	Date	Disposition	File

42A04NW1109 2.13542 KENOGAMING

200

THE INFORMATION THAT APPEARS ON THIS MAP HAS BEEN COMPILED FROM VARIOUS SOURCES, AND ACCURACY IS NOT GUARANTEED. THOSE WISHING TO STAKE MINING CLAIMS SHOULD CONSULT WITH THE MINING RECORDER, MINISTRY OF NORTHERN DEVELOPMENT AND MINES, FOR ADDITIONAL INFORMATION ON THE STATUS OF THE LANDS SHOWN HEREON.



LEGEND

HIGHWAY AND ROUTE No.
OTHER ROADS
TRAILS
SURVEYED LINES
TOWNSHIPS, BASE LINES, ETC.
LOTS, MINING CLAIMS, PARCELS, ETC.
UNSURVEYED LINES
LOT LINES
PARCEL BOUNDARY
MINING CLAIMS ETC.
RAILWAY AND RIGHT OF WAY
UTILITY LINES
NON-PERENNIAL STREAM
FLOODING OR FLOODING RIGHTS
SUBDIVISION OR COMPOSITE PLAN
RESERVATIONS
ORIGINAL SHORELINE
MARSH OR MUSKEG
MINES
TRAVERSE MONUMENT

DISPOSITION OF CROWN LANDS

TYPE OF DOCUMENT	SYMBOL
PATENT, SURFACE & MINING RIGHTS	●
" , SURFACE RIGHTS ONLY	◓
" , MINING RIGHTS ONLY	◒
LEASE, SURFACE & MINING RIGHTS	■
" , SURFACE RIGHTS ONLY	⬒
" , MINING RIGHTS ONLY	⬓
LICENCE OF OCCUPATION	▼
ORDER-IN-COUNCIL	OC
RESERVATION	®
CANCELLED	⊗
SAND & GRAVEL	Ⓢ

NOTE: MINING RIGHTS IN PARCELS PATENTED PRIOR TO MAY 6, 1913, VESTED IN ORIGINAL PATENTEE BY THE PUBLIC LANDS ACT, R.S.O. 1970, CHAP. 380, SEC. 63, SUBSEC.

SCALE: 1 INCH = 40 CHAINS

FEET 0 1000 2000 4000 6000 8000
METRES 0 200 1000 2000 (2 KM)

NOTE

Ⓟ PROPOSED COTTAGING AREAS NOT OPEN FOR ... DEC 22/89

TOWNSHIP

KENOGAMING

M.N.R. ADMINISTRATIVE DISTRICT

TIMMINS

MINING DIVISION

PORCUPINE

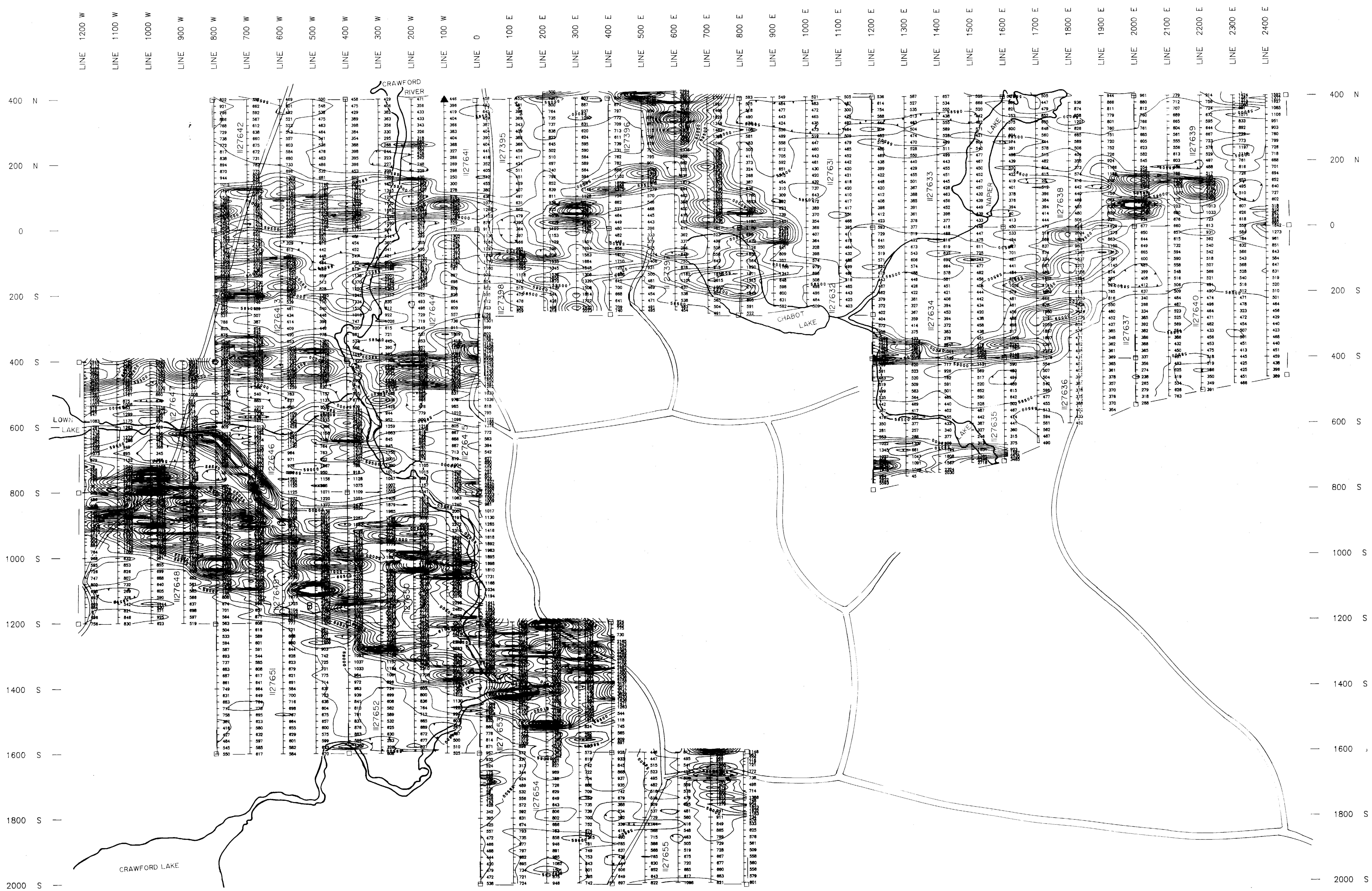
LAND TITLES / REGISTRY DIVISION

SUDBURY

Ontario Ministry of Natural Resources — Land Management Branch

Date APRIL 1985

Number G-3239



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LINE 1200 E
LINE 1300 E
LINE 1400 E
LINE 1500 E
LINE 1600 E
LINE 1700 E
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LINE 1900 E
LINE 2000 E
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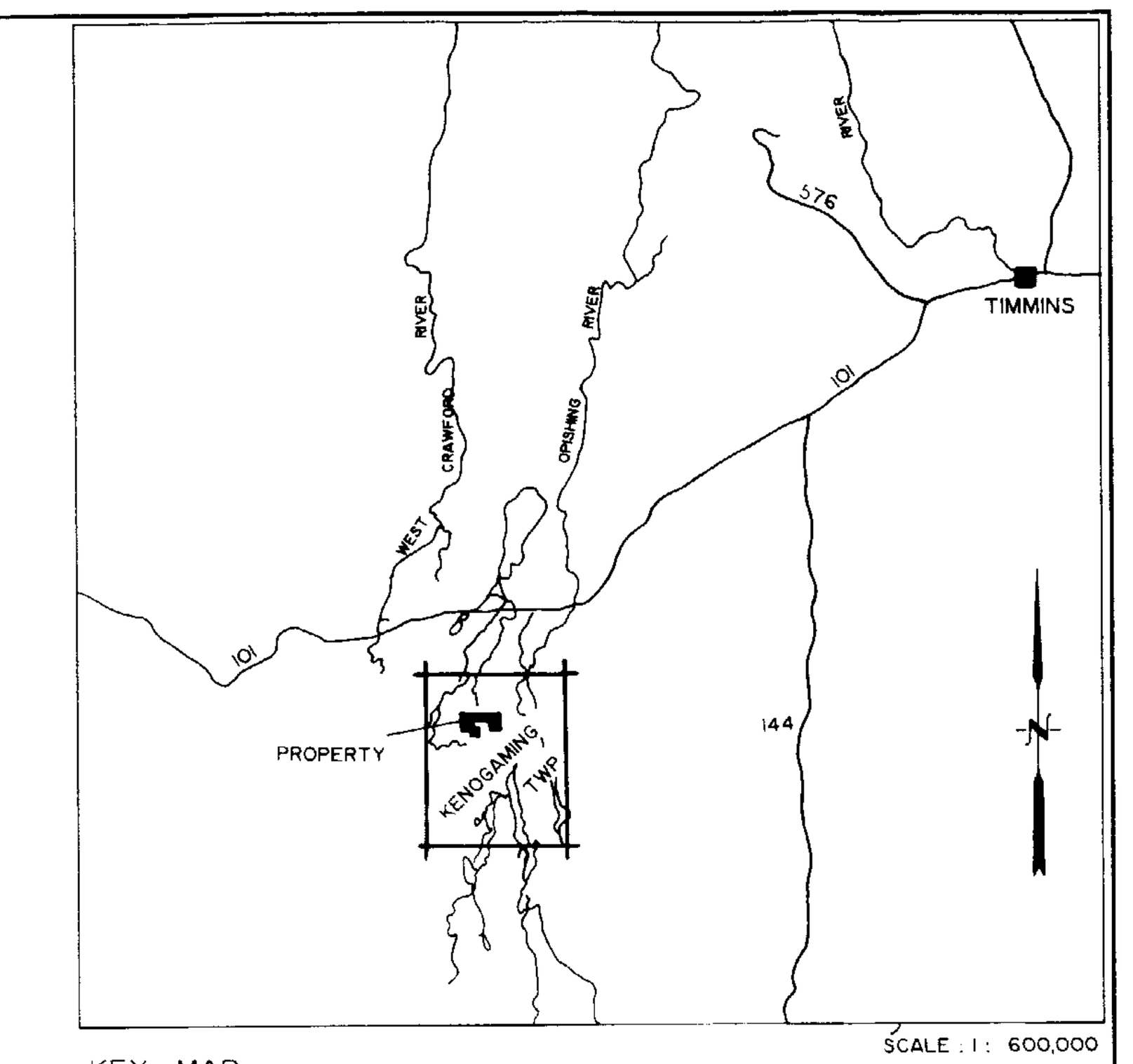
2000 S
CRAWFORD RIVER
CHABOT LAKE
NAPIER LAKE
CRAWFORD LAKE
LOWN LAKE



KEY MAP

Claimposts :

□ Unlocated

— — —Anomaly (1777 Hz)

▲ Base Station

Instrument : Scintrex IGS-2/MP-4

Type : Total Field Proton Precession

Contour Interval : 250 gammas

Datum Level : 58000 gammas

2.13542

FALCONBRIDGE LIMITED	
MAGNETIC SURVEY	
KENOGAMING TOWNSHIP KENOGAMING TOWNSHIP	
NTS: 42-A/5	PROJ#: 8191
SCALE : 1: 5000	DATE : MARCH 1991
FILE : KENASS.MAG	
WORK BY : *Timmins Geophysics Ltd.*	

210

Claimposts :

□ Unlocated

Instrument : Apex Parametrics MaxMin I
Frequency : 444 Hz
Coil Separation : 120 Metres
Profile Scale : 1 cm = 20%

In-phase ——●——
Quadrature ----●----

2.13542

FALCONBRIDGE LIMITED	
HLEM SURVEY	
KENOGAMING PROPERTY KENOGAMING TOWNSHIP	
NTS: 42-A/5	PROJ#: 8191
SCALE : 1: 5000	DATE : APRIL 1991
FILE : KENOGASS.HL	
WORK BY : *Timmins Geophysics Ltd.*	

A — Conductor Axis

M — Magnetite Anomaly

Claimposts :

□ Unlocated

Instrument : Apex Parametrics MaxMin I
Frequency : 1777 Hz
Coil Separation : 120 Metres
Profile Scale : 1 cm = 20%

In-phase
Quadrature

2.13542

FALCONBRIDGE LIMITED	
HLEM SURVEY	
KENOGAMING PROPERTY	
KENOGAMING TOWNSHIP	
NTS: 42-A/5	PROJ#: 8191
SCALE : 1: 5000	DATE : APRIL 1991
FILE : KENOGASS.HL	
WORK BY : *Timmins Geophysics Ltd.*	

LINE 1200 W | LINE 1100 W | LINE 1000 W | LINE 900 W | LINE 800 W | LINE 700 W | LINE 600 W | LINE 500 W | LINE 400 W | LINE 300 W | LINE 200 W | LINE 100 W | LINE 0 | LINE 100 E | LINE 200 E | LINE 300 E | LINE 400 E | LINE 500 E | LINE 600 E | LINE 700 E | LINE 800 E | LINE 900 E | LINE 1000 E | LINE 1100 E | LINE 1200 E | LINE 1300 E | LINE 1400 E | LINE 1500 E | LINE 1600 E | LINE 1700 E | LINE 1800 E | LINE 1900 E | LINE 2000 E | LINE 2100 E | LINE 2200 E | LINE 2300 E | LINE 2400 E

400 N
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1400 S
1600 S
1800 S
2000 S

CRAWFORD RIVER
CHABOT LAKE
NAPIER LAKE
LOWN LAKE
CRAWFORD LAKE

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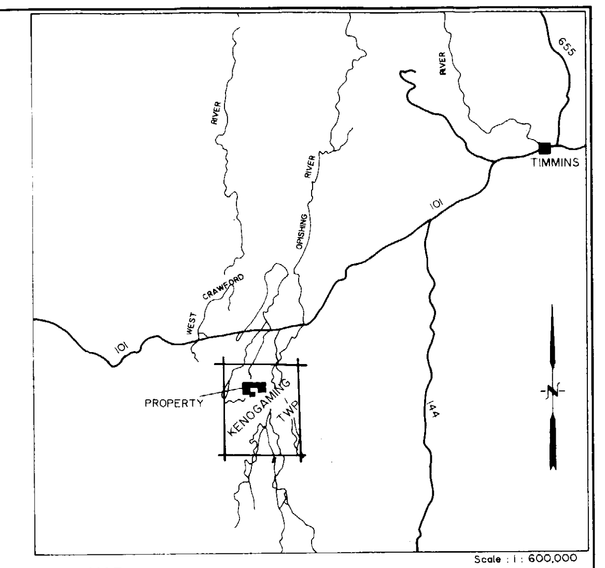

KEY MAP

Instrument : Scintrex IGS-2/MP-4
Type : Total Field Proton Precession
Contour Interval : 250 gammas
Datum Level : 58000 gammas
Claimposts :
Unlocated
HLEM Anomaly 1777 Hz
Base Station

2.13542

FALCONBRIDGE LIMITED
MAGNETIC SURVEY
CENTRAL KENOGAMING PROPERTY
KENOGAMING TOWNSHIP

NTS : 42-A/5 PROJ # : 8191
SCALE : 1: 5000 DATE : JUNE,1990
FILE : KENASS.MAG
WORK BY : Timmins Geophysics Ltd.

42A04NW1189 2.13542 KENOGAMING

KEY MAP

Instrument : Apex Parametrics MaxMin I
Frequency : 444 Hz
Coil Separation : 120 metres
Profile Scale : 1 cm = 20%
Claimposts :
☐ Unlocated

In-phase
Quadrature

2.13542

FALCONBRIDGE LIMITED
HLEM SURVEY
CENTRAL KENOGAMING PROPERTY
KENOGAMING TOWNSHIP

NTS : 42-A/5
PROJ # : 8191
SCALE : 1: 5000
DATE : JUNE 1990
FILE : KENASS.HL
WORK BY : *Timmins Geophysics Ltd.*

42A04NW1109 2.13542 KENOGAMING

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LINE 2400 E

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1800 S
2000 S

CRAWFORD RIVER
CHABOT LAKE
MAPIER LAKE
LOWN LAKE
CRAWFORD LAKE

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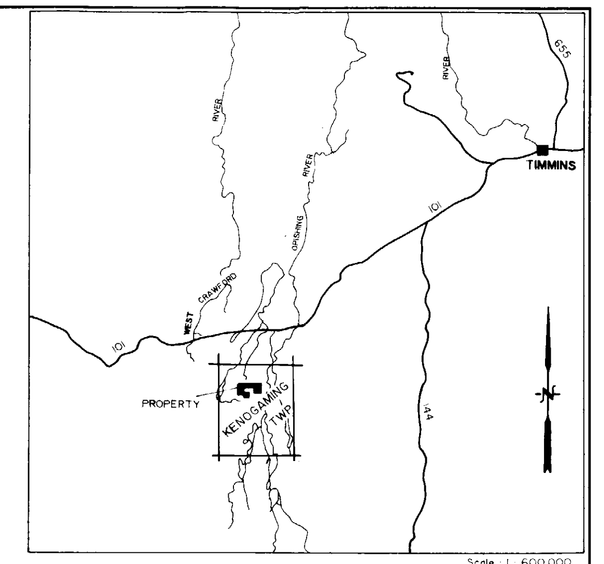
A
B
M

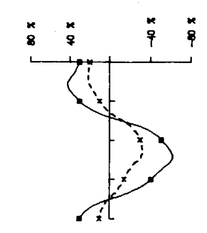


KEY MAP
Scale 1 : 600,000

N

A — Conductor Axis
M — Magnetite Anomaly

Instrument : Apex Parametrics MaxMin I
Frequency : 1777 Hz
Coil Separation : 120 metres
Profile Scale : 1 cm = 40%
Claimposts :
□ Unlocated



In-phase
Quadrature

2.13542

FALCONBRIDGE LIMITED

HLEM SURVEY

CENTRAL KENOGAMING PROPERTY

KENOGAMING TOWNSHIP

NTS : 42-A/5 PROJ # : 8191

SCALE : 1: 5000 DATE : JUNE 1990

FILE : KENASS.HL

WORK BY : *Timmins Geophysics Ltd.*

42A05NW1199 2.13542 KENOGAMING

260