

42A10NW0558 2.13382 DUNDONALD

010

2.13382

REPORT ON
GEOPHYSICAL WORK
ON
GREEN HOUSE CLAIMS
DUNDONALD TOWNSHIP
FOR
FALCONBRIDGE LIMITED

NTS: 42-A/10

PROJ #8186

RECEIVED

JUN 20 1990

MINING LANDS SECTION

JUNE 1990

S. TAYLOR
TIMMINS GEOPHYSICS LTD.

SUMMARY AND RECOMMENDATIONS

HLEM and Magnetic surveys were carried out in April 1990, over six claims in Dundonald Township.

The HLEM survey was strongly affected by the cultural features on the property (power line, railway); no bedrock conductors were located.

The magnetic survey located an east-west feature of high relief in the northern portion of the property. Previous work has shown this to represent a peridotite intrusion in a host rock comprised of sedimentary and andesitic volcanic rocks.

It is recommended that a IP survey be carried out over the magnetic high to determine if disseminated pyrrhotite mineralization occurs at the andesite-intrusive contact.

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INTRODUCTION

During April of 1990, magnetic and horizontal loop electromagnetic (HLEM) surveys were carried out for Falconbridge Limited over six claims in Dundonald Township.

The property is located approximately forty kilometres north-east of the city of Timmins, in the Porcupine Mining Division. It is situated in the N1/2 Concession III, Lot 2, and S1/2 Concession III NE1/4 and SE1/4 Lot 3, Dundonald Township (Figure 1). Access was made via Highway 67, which passes through the southern and eastern edges of the survey area.

The claims are numbered as follows:

P 1127891 - P 1127894 inclusive

P 1127842 - P 1127843 inclusive

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

PREVIOUS WORK

Table 1 is a summary of the previous work carried out over all or part of the property covered in this report.

Interest in this area began in the 1930's when the Alexo Mine, located near the Dundonald-Clergue Township line, extracted massive nickel and copper ore from the contact of an andesite volcanic unit and a peridotite intrusive.

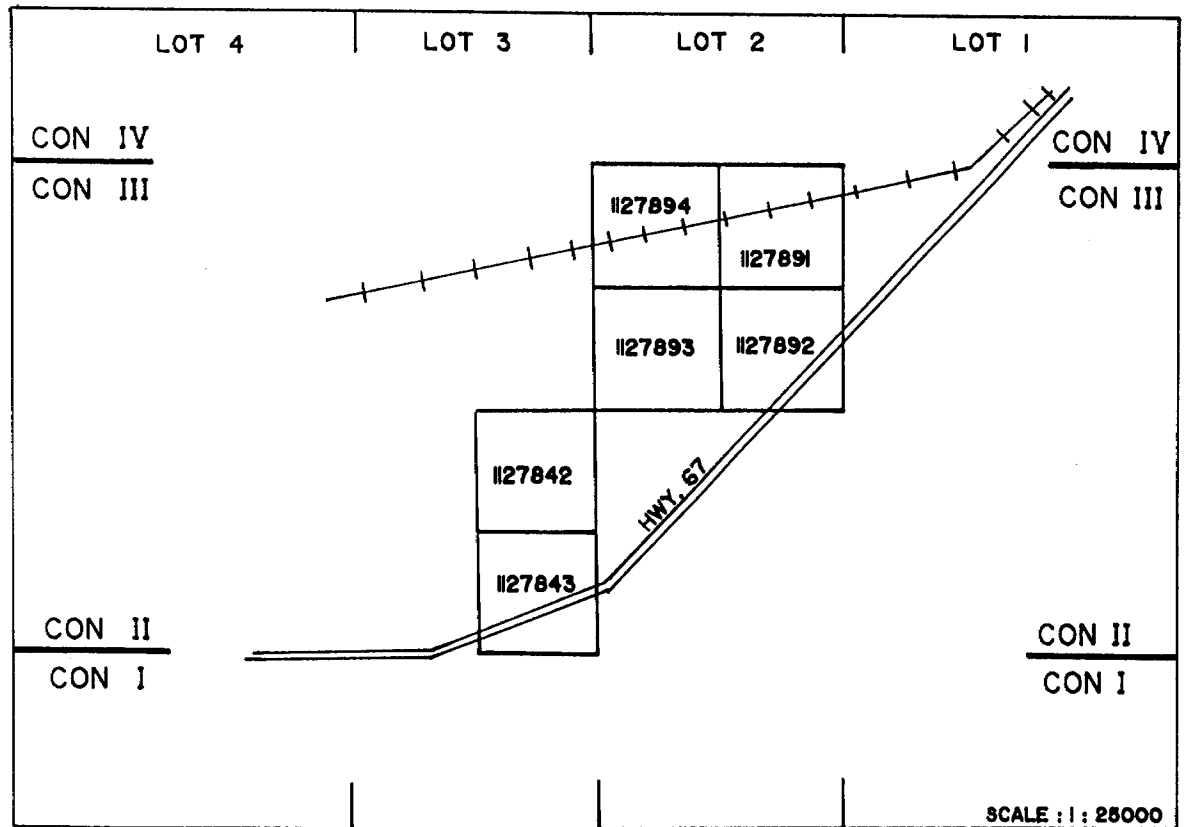


Figure 1 (a). Claim Map

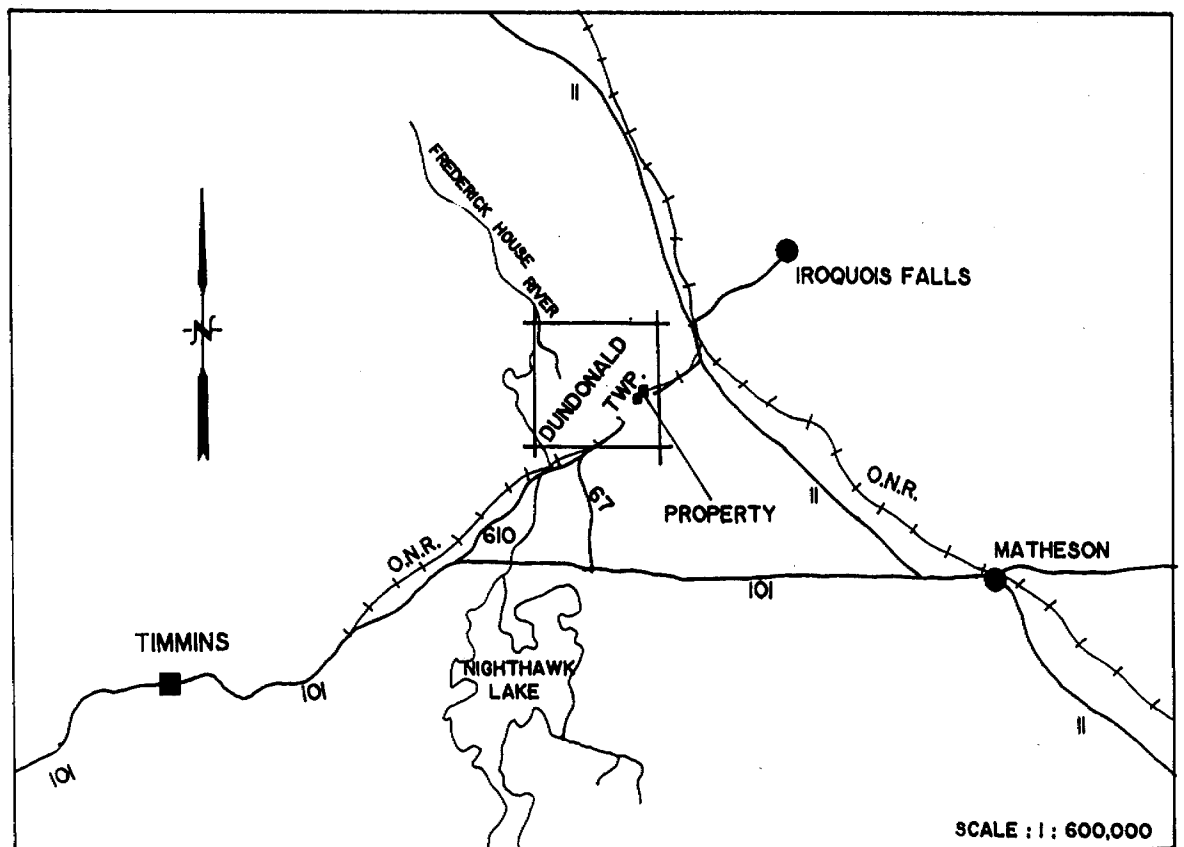


Figure 1 (b). Location Map

YEAR	COMPANY	GEOPHYSICS	DRILL HOLES	ASSESSMENT FILE
1984	KIDD CREEK MINES LTD.	GEOLOGY		T-2646
1973	ASARCO EXPLORATION CO. of CANADA	EM-25		T-1516
1971	DOME EXPLORATION (Canada) LIMITED	TURAM MAG		T-81
1953	ALEXO NICKEL/NORANDA MINES	MAG,VLEM	#3	T-345

Table 1: Summary of Previous Work

Disseminated pyrrhotite-nickel ore was also located within the intrusive unit near the contact.

In 1953, Noranda Mines carried out magnetic and VLEM surveys over claims held by Alexo Nickel. Part of the area covered included the present claims P1127892 and P1127893. No EM anomalies were located; a magnetic high was drilled in 1954 and determined to be peridotite intrusive in a sediment and andesite host.

In 1971, Dome Exploration (Canada) Limited carried out Turam (666 Hz) and magnetic surveys. No EM anomalies were located.

In 1973, Asarco Exploration Company of Canada carried out an EM-25 survey. This is a vertical loop method which uses a Turam-type transmitter loop. The operating frequency was 50 Hz, and it was anticipated that it would locate conductors beneath the overburden which the higher frequency Turam survey had failed to penetrate. No conductors were located.

In 1984, Kidd Creek Mines Limited filed a geology report over a larger property which includes all of the present six claims. No outcrop was located, but based on regional geology maps and nearby outcrop, the geology was

interpreted to be mafic and felsic volcanics with a dunite peridotite intrusion.

SURVEY DESCRIPTIONS

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

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

The magnetic survey was carried out 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. The diurnal drift was monitored every 12 seconds with a Scintrex MP-3 base station magnetometer.

HLEM RESULTS

The HLEM results are plotted on maps 1 and 2 at a scale of 1:5000. Anomalous readings, present at the northern and southern edges of the property, are due to cultural features (a railway and power lines). Erratic readings near the southern edge are caused by large metallic debris in the vicinity of the greenhouse on Line 1700 West. No anomalies which might represent bedrock conductors were outlined.

MAGNETIC RESULTS

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

An east-west feature of high magnetic relief was outlined in the northern half of the property. Based on previous work, the magnetics map a peridotite intrusive in a host comprised of sedimentary and andesitic volcanic rocks. Nickel-copper ore is known to exist at the peridotite-andesite contact east of the property and it is recommended that this contact be further studied for possible disseminated mineralization. An induced polarization (IP) survey is recommended.

June 13, 1990
DATE

Sharon Taylor
S. TAYLOR
TIMMINS GEOPHYSICS LTD.

APPENDIX A

60399

DOCUMENT NO.
W 9006.60



Mining Act (Geophysical, Geological and Geochemical) **2.13382**

900

Type of Survey(s) Geophysical	Mining Division Porcupine	Township or Area Dundonald Twp
Recorded Holder(s) Falconbridge Limited	Prospector's Licence No. A21647	
Address 571 Moneta Ave., Box 1140, Timmins, Ontario P4N 7H9,		Telephone No. (705) 267-1188
Survey Company Timmins Geophysics Ltd.		Date of Survey (from & to) 15 Day 03 Mo 90 10 Day 04 Mo 90
Name and Address of Author (of Geo-Technical Report) Sharon Taylor, P.O. Box 1783, South Porcupine, ON P0N 1H0		

Special Provisions	Geophysical	Days per Claim
For first survey:	- Electromagnetic	20
Enter 40 days. (This includes line cutting)	- Magnetometer	40
For each additional survey; using the same grid:	- Other	
Enter 20 days (for each)	Geological	
	Geochemical	
Man Days	Geophysical	Days per Claim
Complete reverse side and enter total(s) here	- Electromagnetic	
	- Magnetometer	
	- Other	
	Geological	
	Geochemical	
Airborne Credits		Days per Claim
Note: Special provisions credits do not apply to Airborne Surveys.	Electromagnetic	
	Magnetometer	
	Other	
Total miles flown over claim(s).		
Date June 18, 1990	Recorded Holder or Agent's Signature <i>A. Coutts</i>	

Mining Claim		Mining Claim		Mining Claim	
Prefix	Number	Prefix	Number	Prefix	Number
P	1127842				
	1127843				
	1127891				
	1127892				
	1127893				
	1127894				

RECEIVED
JUL 03 1990
MINING LANDS SECTION

RECORDED
JUN 18 1990

ONTARIO GEOLOGICAL SURVEY
ASSESSMENT FILES
OFFICE
JUL 12 1990
RECEIVED

Total number of mining claims covered by this report of work. 6

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
A1 Coutts, 571 Moneta Ave., Box 1140, Timmins, Ontario P4N 7H9

Telephone No. **(705) 267-1188** Date **June 18, 1990** Certified By (Signature) *A. Coutts*

For Office Use Only

Total Days Cr. Recorded 360	Date Recorded JUNE 18/90	Mining Recorder <i>[Signature]</i>
Date Approved as Recorded 11 July 90	Mining Registrar Provincial Manager, Mining Lands <i>[Signature]</i>	

RECEIVED
JUN 18 1990
1:50 PM



Ministry of
Northern Development
and Mines

2.13382⁸¹⁸⁶

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.

P

Mining Act

Report of Work
(Geophysical, Geological and Geochemical Surveys)

Type of Survey(s) Geophysical	Mining Division Porcupine	Township or Area Dundonald Twp
Recorded Holder(s) Falconbridge Limited	Prospector's Licence No. A21647	
Address 571 Moneta Ave., Box 1140, Timmins, Ontario P4N 7H9,	Telephone No. (705) 267-1188	
Survey Company Timmins Geophysics Ltd.	Date of Survey (from & to) 15 Day 03 Mo. 90 Yr. 10 Day 04 Mo. 90 Yr.	
Name and Address of Author (of Geo-Technical Report) Sharon Taylor, P.O. Box 1783, South Porcupine, ON PON 1H0		

Credits Requested per Each Claim in Columns at right

Mining Claims Traversed (List in numerical sequence)

Special Provisions	Geophysical	Days per Claim	Mining Claim		Mining Claim		Mining Claim	
			Prefix	Number	Prefix	Number	Prefix	Number
For first survey: Enter 40 days. (This includes line cutting)	- Electromagnetic	20	P	1127842 ✓				
	- Magnetometer	40		1127843 ✓				
For each additional survey: using the same grid: Enter 20 days (for each)	- Other			1127891 ✓				
	Geological			1127892 ✓				
	Geochemical			1127893 ✓				
				1127894 ✓				
Man Days Complete reverse side and enter total(s) here	- Electromagnetic							
	- Magnetometer							
	- Other							
	Geological							
	Geochemical							
Airborne Credits Note: Special provisions credits do not apply to Airborne Surveys.	Electromagnetic	Days per Claim						
	Magnetometer							
	Other							
Total miles flown over claim(s).								
Date June 18, 1990	Recorded Holder or Agent's Signature <i>C. Coutts</i>						Total number of mining claims covered by this report of work. 6	

PROXY

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 reports.

Name and Address of Person Certifying
C. Coutts, 571 Moneta Ave., Box 1140, Timmins, Ontario P4N 7H9

Telephone No. (705) 267-1188 Date June 18, 1990 Certified By (Signature) *C. Coutts*

For Office Use Only

Total Days Cr. Recorded	Date Recorded	Mining Recorder
	Date Approved as Recorded	Provincial Manager, Mining Lands

RECEIVED
JUN 18 1990
1:50 PM



2. 13382

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 DUNDONALD TOWNSHIP
Claim Holder(s) Falconbridge Limited
P.O. BOX 1140, Timmins, Ontario P4N 7H9
Survey Company TIMMINS GEOPHYSICS LTD.
Author of Report Sharon Taylor
Address of Author P.O.Box 1783, South Porcupine, Ont. P0N 1H0
Covering Dates of Survey March 15 - April 10, 1990
Total Miles of Line Cut 14.9 km

MINING CLAIMS TRAVERSED List numerically
Table with columns for prefix and number, listing claims 1127842 through 1127894.

SPECIAL PROVISIONS CREDITS REQUESTED
Table with columns for Geophysical, Geological, Geochemical and DAYS per claim.

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

DATE: June 13, 1990 SIGNATURE: Sharon Taylor
Author of Report or Agent

Res. Geol. Qualifications 2.8510

Previous Surveys
Table with columns: File No., Type, Date, Claim Holder

OFFICE USE ONLY

If space insufficient, attach list

TOTAL CLAIMS 6

GEOPHYSICAL TECHNICAL DATA

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

Number of Stations 560 Number of Readings MAG 619 HLEM 481
Station interval 20 m Line spacing 100 m
Profile scale 444 Hz = 20% -- 1777 Hz = 40%
Contour interval 100 gammas

MAGNETIC

Instrument Scintrex IGS-2/MP-4
Accuracy - Scale constant +/- .1
Diurnal correction method Scintrex MP-3 Base Station Magnetometer
Base Station check-in interval (hours) 12 seconds
Base Station location and value LINE 1800 WEST - 3300 NORTH
58505 gammas

ELECTROMAGNETIC

Instrument Apex Parametrics MaxMin I
Coil configuration Horizontal Loop
Coil separation 120 m
Accuracy 1%
Method: [] Fixed transmitter [] Shoot back [x] 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 _____

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 _____

REFERENCES

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. 42/60			S.R.O.	32269
SEC. 43/70	W. 66/75	1/12/75	M.+S.	1593
NKO 31/85		22/7/85	M.+S.R.	

SAND AND GRAVEL

- M.T.C. PIT 1284
- M.T.C. PIT 1274

NOTES

PART OF THIS TOWNSHIP SOUTH AND EAST OF FREDERICK HOUSE LAKE LIES WITHIN THE MUNICIPALITY OF THE CITY OF TIMMINS

WITNESS POSTS FOR CLAIMS STAKED OUT COVERING LAND UNDER THE WATERS OF FREDERICK HOUSE LAKE IN DUNDONALD TWP. SHOULD NOT BE ERECTED OR PLANTED IN EVELYN TWP.

FLOODING RIGHTS ON FREDERICK HOUSE LAKE RESERVED TO ONTARIO HYDRO TO CONTOUR ELEV. 903', L.D. 7128, FILE 64518, VOL. 2

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

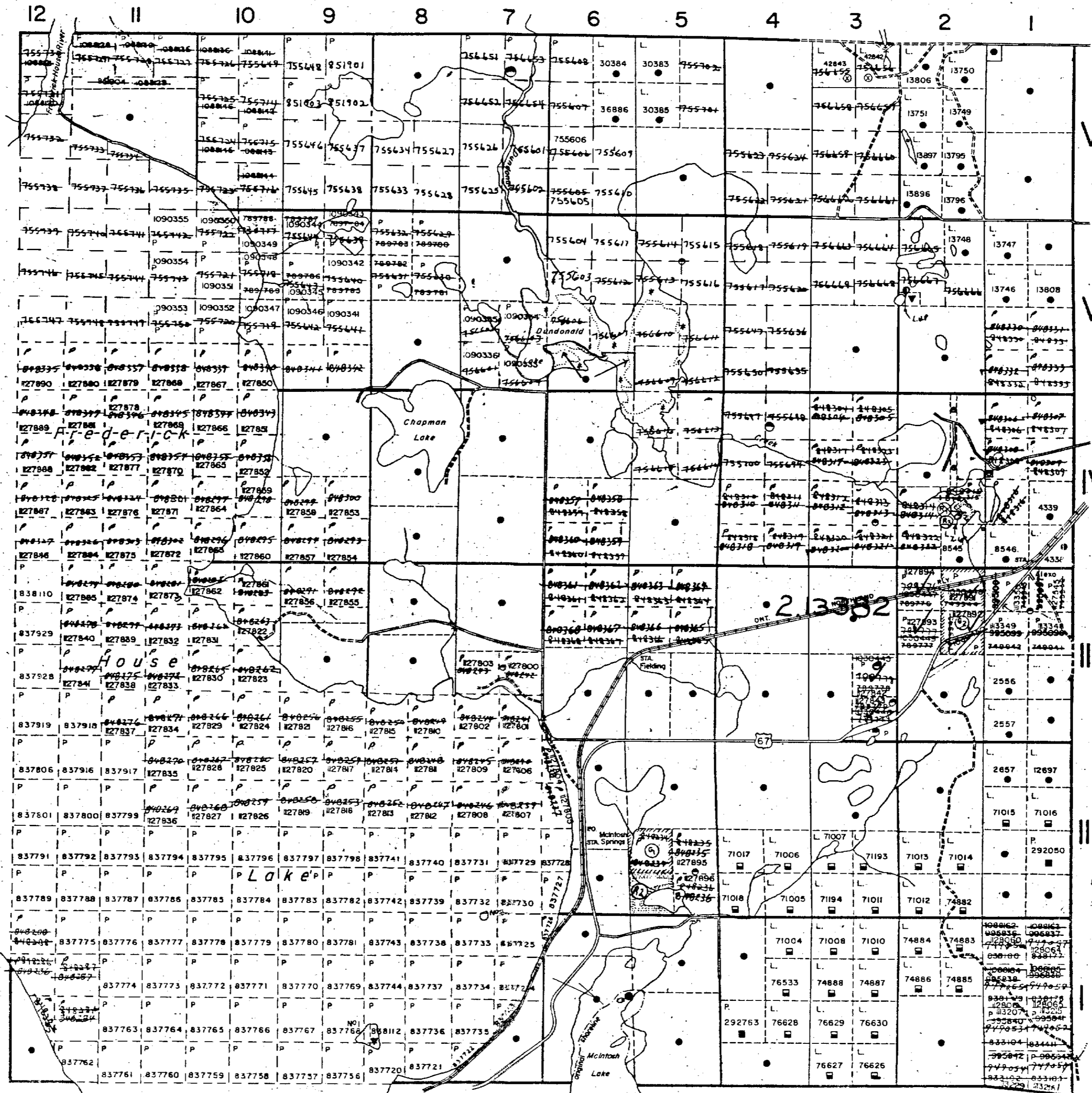
① LUP (LAND USE PERMIT)



200

RECEIVED MAY 3, 1985

McCART TWP.



GERMAN TWP.

LEGEND

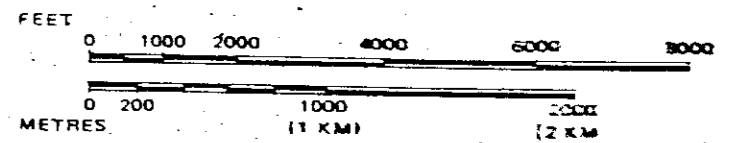
- HIGHWAY AND ROUTE No.
- OTHER ROADS
- TRAILS
- SURVEYED LINES:
 - TOWNSHIPS, BASE LINES, ETC.
 - LOTS, MINING CLAIMS, PARCELS, ETC.
- UNSURVEYED LINES:
 - LOT LINES
 - PARCEL BOUNDARY
 - MINING CLAIMS ETC.
- RAILWAY AND RIGHT OF WAY
- UTILITY LINES
- NON-PERENNIAL STREAM
- FLOODING OR FLOODING RIGHTS
- 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	
RESERVATION	
CANCELLED	
SAND & GRAVEL	

NOTE: MINING RIGHTS IN PARCELS PATENTED PRIOR TO MAY 2, 1913, VESTED IN ORIGINAL PATENTEE BY THE PUBLIC LANDS ACT, R.S.O. 1970, CHAP. 380, SEC. 61 SUBSEC. 1

SCALE: 1 INCH = 40 CHAINS



TOWNSHIP

DUNDONALD

M.N.R. ADMINISTRATIVE DISTRICT

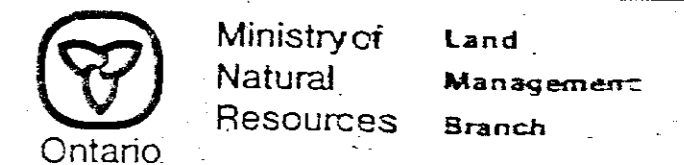
COCHRANE

MINING DIVISION

PORCUPINE

LAND TITLES / REGISTRY DIVISION

COCHRANE

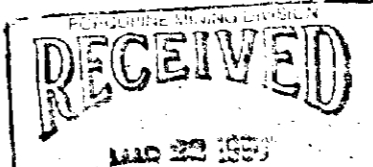


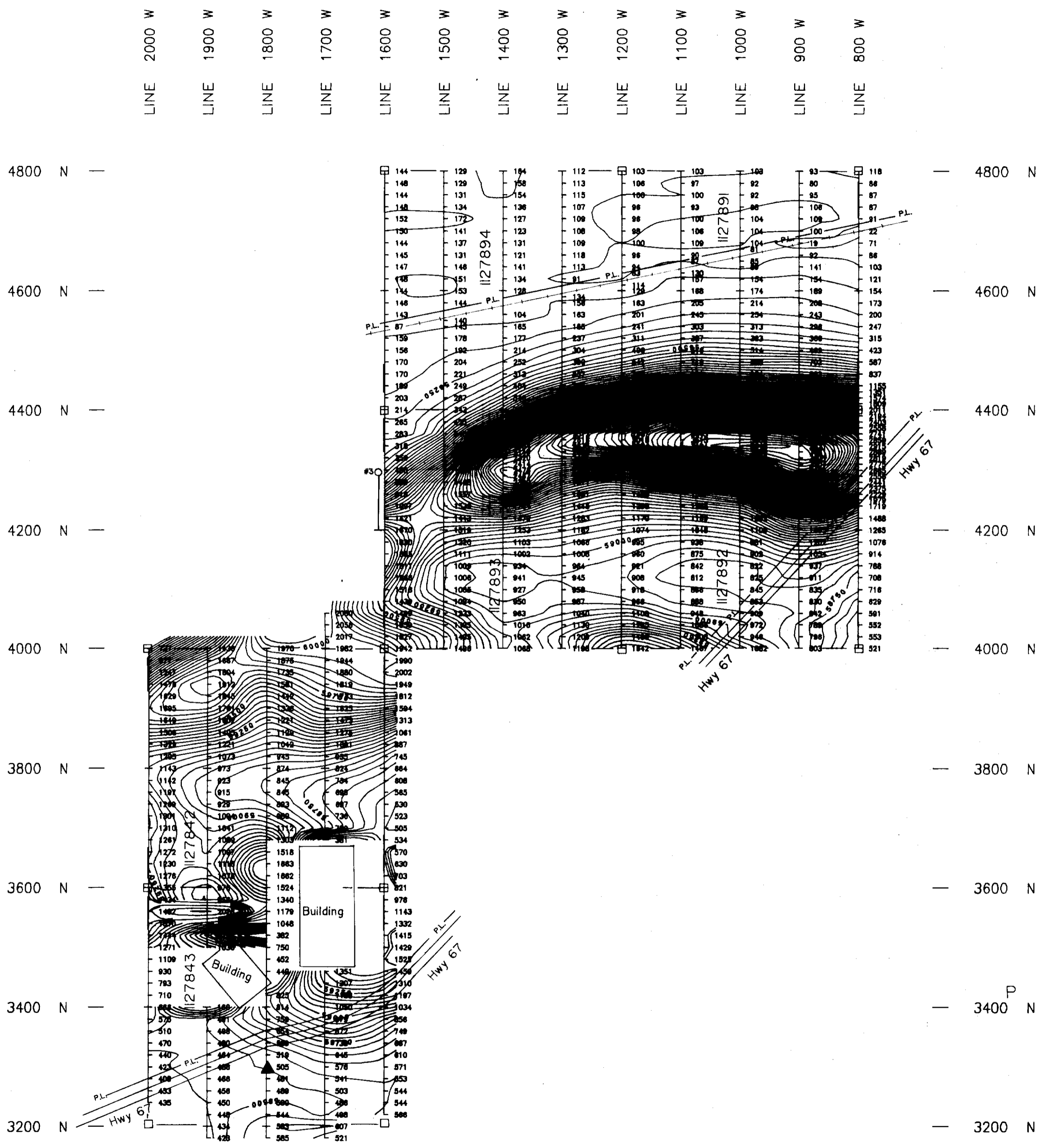
Date MARCH, 1985

Number

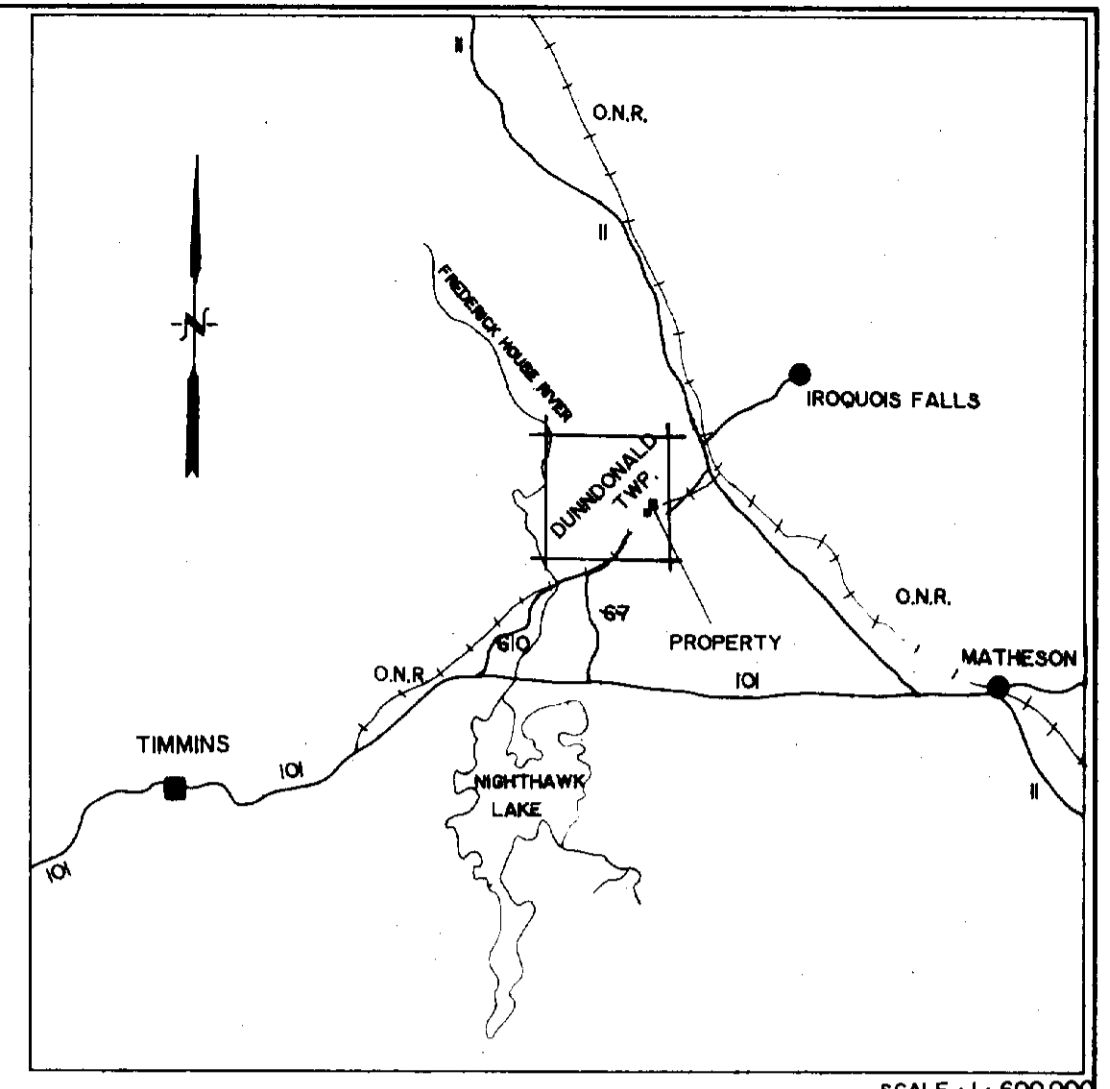
By D. Van-Hill
By J. L. ...

G-3240





CON IV
CON III



KEY MAP

SCALE : 1 : 600,000



- Instrument : Scintrex IGS-2/MP-4
 Type : Total Field Proton Precession
 Contour Interval : 50 gammas
 Datum Level : 58000 gammas
 Claimposts :
- Unlocated:
 - ▲ Base Station
 - P.L. — Power Line
 - +—+— Railroad
 - DDH

CON III
CON II

FALCONBRIDGE LIMITED	
MAGNETIC SURVEY GREENHOUSE CLAIMS DUNDONALD TOWNSHIP	
2.13382	
NTS : 42-A/10	PROJ. # : 8186
SCALE : 1 : 5000	DATE : FEBRUARY 1990
FILE : 90DUNDON.MAG	<i>Sharon Taylor</i>
WORK BY :	Timmins Geophysics Ltd.

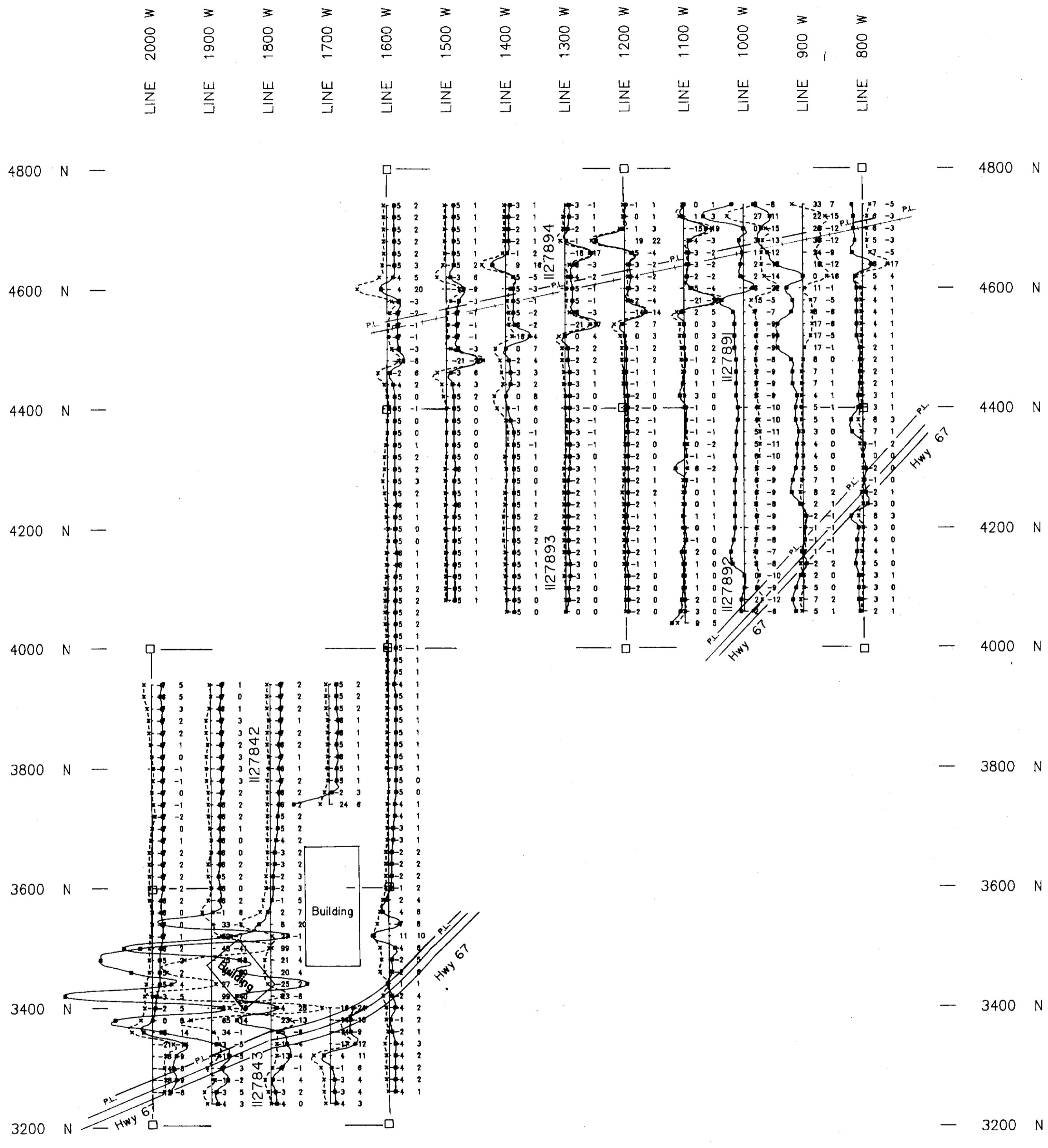


210

LOT 3

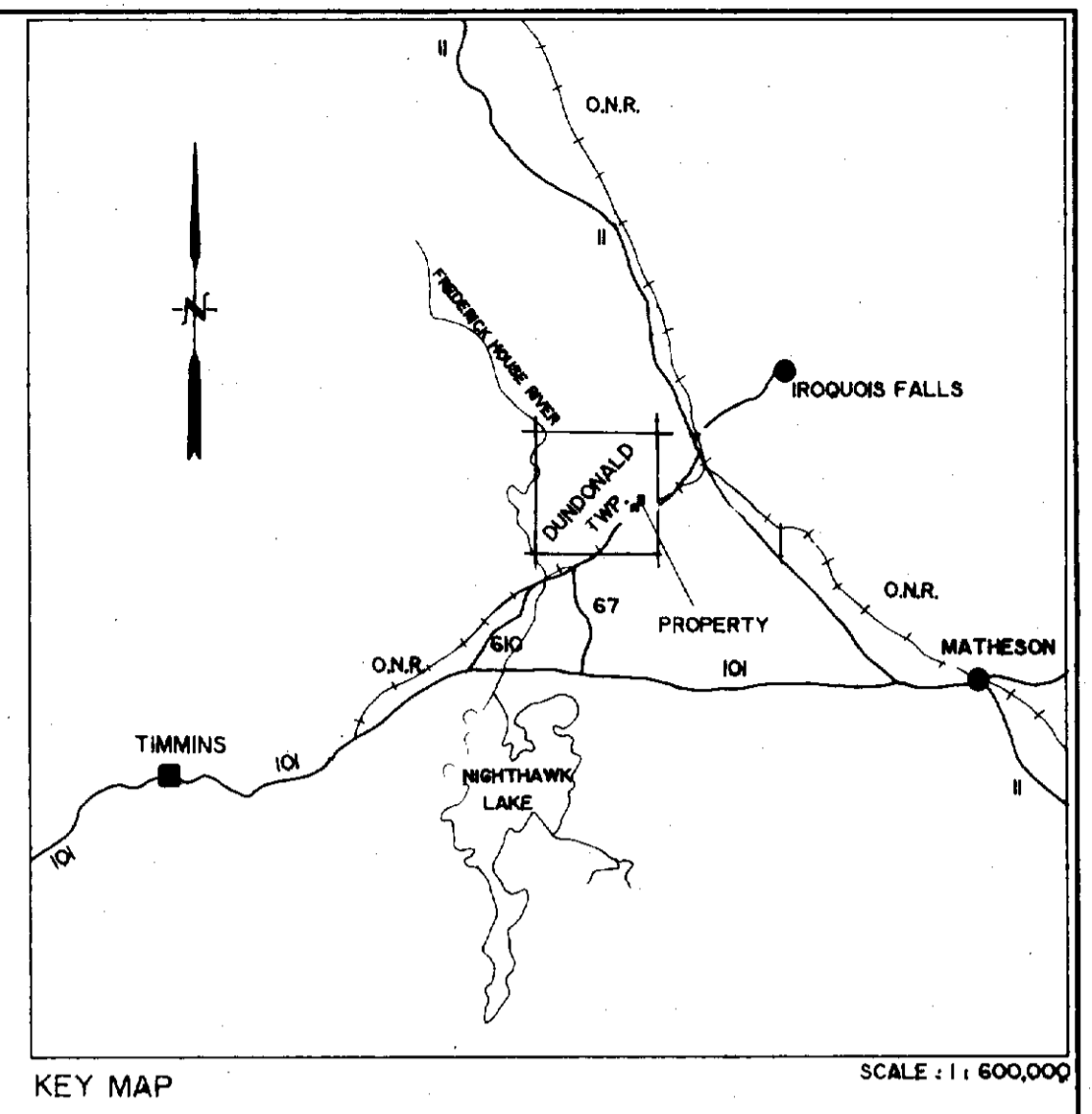
LOT 2

LOT 1

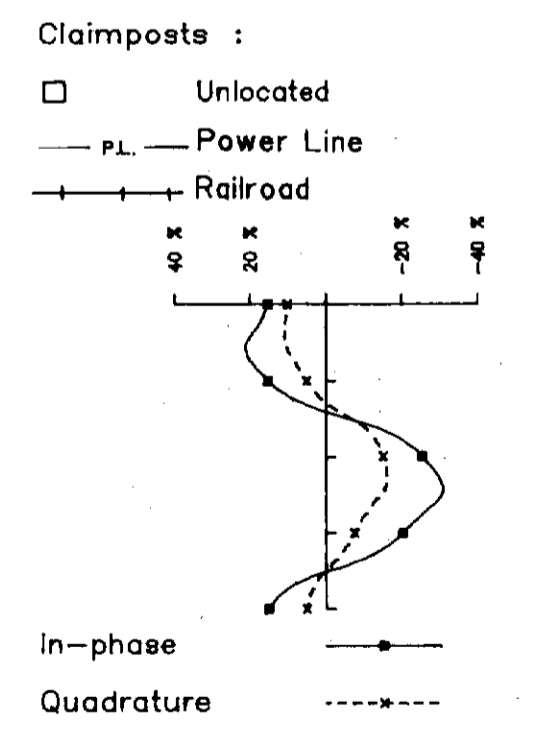


CON IV
CON III

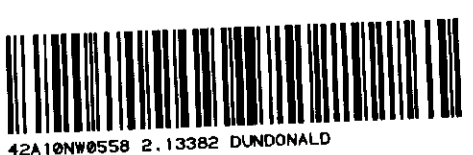
CON III
CON II



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



FALCONBRIDGE LIMITED	
HLEM SURVEY GREENHOUSE CLAIMS DUNDONALD TOWNSHIP 2.13382	
NTS : 42-A/10	PROJ. # : 8186
SCALE : 1: 5000	DATE : APRIL 1990
FILE : DUNDON.HL	<i>Shawn Taylor</i>
WORK BY :	Timmins Geophysics Ltd.

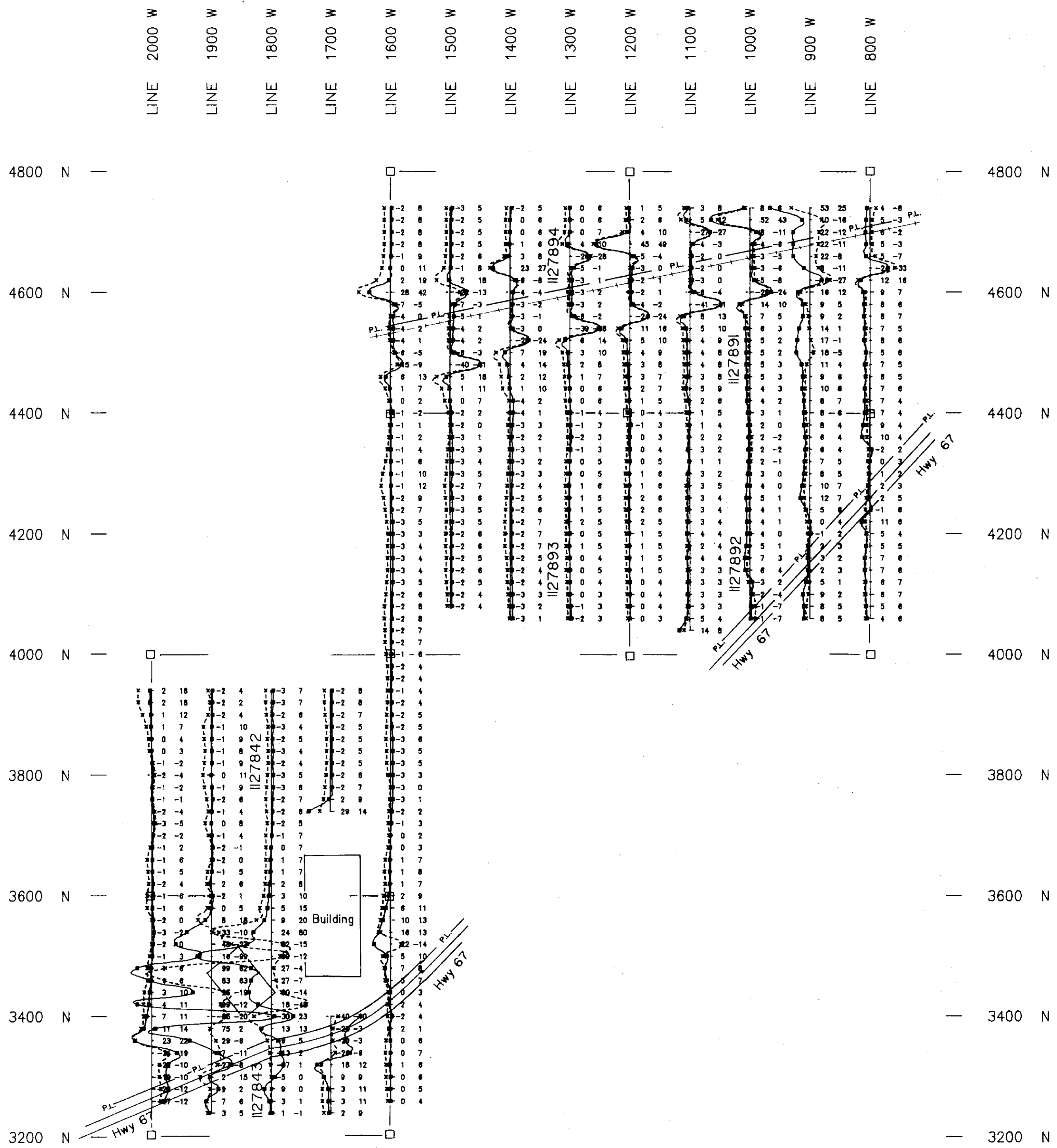


220

LOT 3

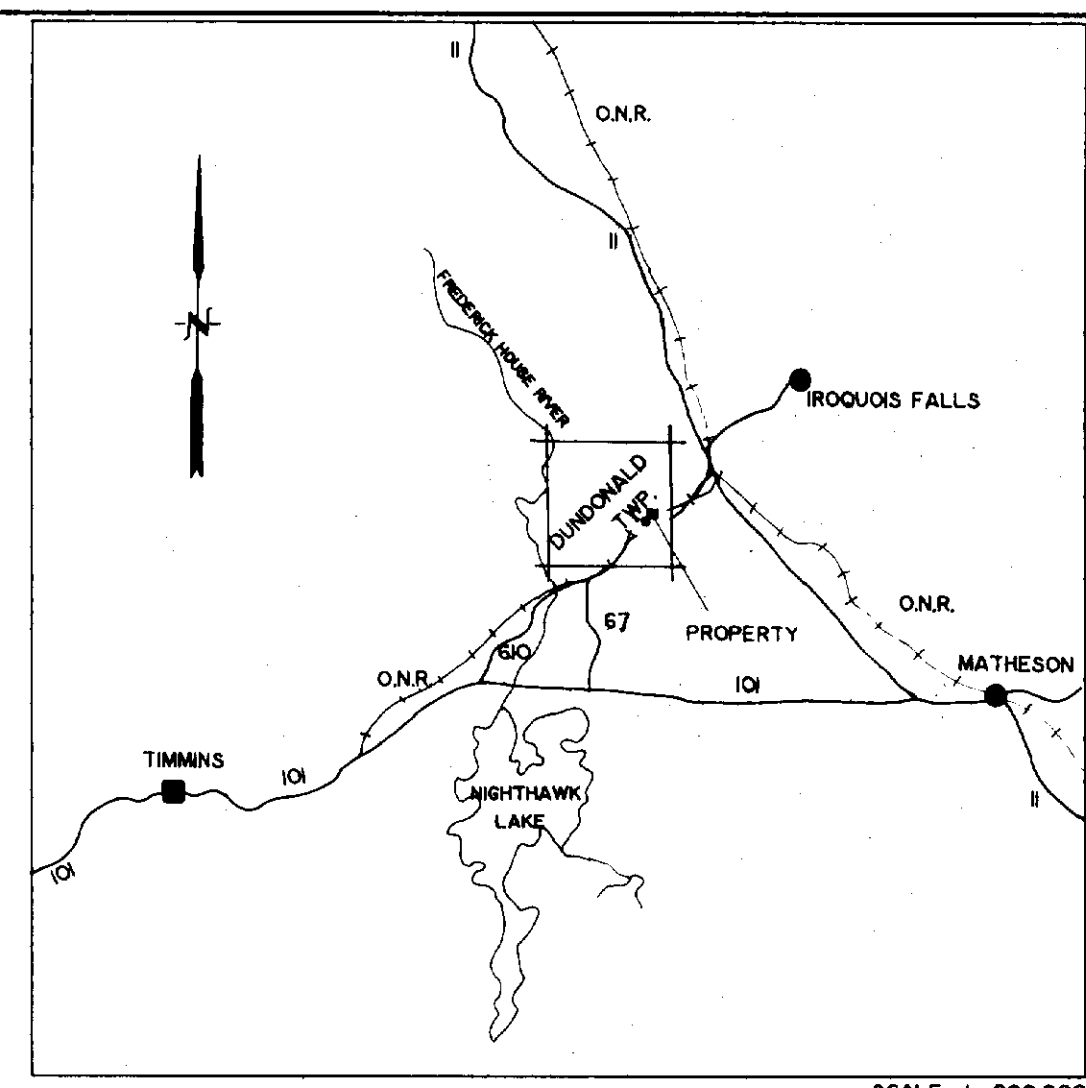
LOT 2

LOT 1



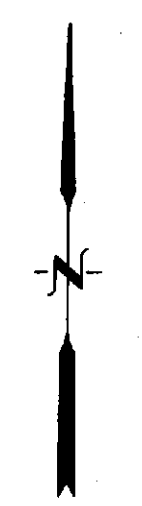
CON IV
CON III

CON III
CON II



KEY MAP

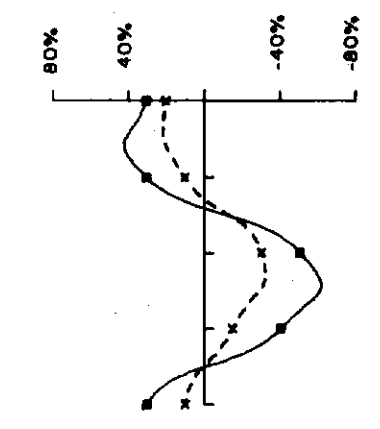
SCALE : 1 : 600,000



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

Claimposts :

- Unlocated
- P.L. — Power Line
- +— Railroad



In-phase
Quadrature

FALCONBRIDGE LIMITED

HLEM SURVEY
 GREENHOUSE CLAIMS
 DUNDONALD TOWNSHIP

2.13382

NTS : 42-A/10	PROJ. # : 8186
SCALE : 1: 5000	DATE : APRIL 1990
FILE : DUNDON.HL	Sharon Taylor
WORK BY :	Timmins Geophysics Ltd.



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LOT 3

LOT 2

LOT 1