



32005NW0022 2.8854 THACKERAY

010

REPORT ON
AIRBORNE GEOPHYSICAL SURVEYS
IN
HARKER, ELLIOT, THACKERAY TOWNSHIPS
ONTARIO
FOR
PERREX RESOURCES INC.
BY
H. FERDERBER GEOPHYSICS

NOVEMBER 3, 1985

FENTON SCOTT, P. ENG.

63.126³

INTRODUCTION

An airborne geophysical survey was carried out over a claim group in Harker, Elliot and Thackeray Townships, Cochrane District of Ontario, by H. Ferderber Geophysics.

Data was collected on VLF and magnetometer responses. The survey was flown from a base at Rouyn, Quebec.

PURPOSE OF SURVEY

The survey was designed to provide data which would:

1. Permit an interpretation of geological structure through recording variations in the magnetic mineral content of the formations underlying the survey area.
2. Identify potentially economic mineral concentrations which may have marked variations in accessory magnetic minerals.
3. Identify linear structures, such as major shear zones, which may result in current concentrations of VLF-signals. Such structures may contain economic minerals, notably precious metals.
4. Identify shallow, potentially valuable metallic sulfide deposits whose lower electrical resistance will localize secondary VLF-Em fields.

SURVEY AREA

The survey covered a claim block in Harker, Elliot, and Thackeray Townships, Larder Lake Mining Division, Ontario. The 103 mining claims included in the survey are shown on the maps in an attached pocket.

EQUIPMENT

The aircraft used in this survey was a Cessna 172 owned and operated by H. Ferderber Geophysics. The sensors for geophysical data were mounted in modified wing tip installations.

Magnetometer The instrument used was a GEM GSM - 18 BA proton precession type. The sensitivity of the device was set at 2 gammas at a 1 second sampling. Data was recorded on paper tape on an on-board recorder.

VLF - EM SYSTEMS The instrument used was a Herz 1 A. The total field and vertical resultant field was recorded on analogue tape. The transmitter station for this survey was Seattle, Washington, at a frequency of 24.8 kilohertz. The system is accurate to 1%.

SURVEY METHOD

The aircraft was flown at a terrain clearance of 250 feet, Navigation consisted of reference to an air photo mosaic, with manual fiducials recorded on the mosaic simultaneously with the geophysical tapes.

Line direction was Northwest-Southeast, and line spacing was one-twelfth mile (440 feet) (134 meters).

DATA PRESENTATION

Magnetic Contour Maps Correction of the aeromagnetic data for diurnal variation was by reference to a cross-line. The corrected profiles were then reduced to appropriate field strength intervals, and presented as contours at 20 gamma intervals.

VLF - EM Maps The axes of conductivity were selected on each analogue tape, and transferred to the mosaics with reference to fiducials points. These axes are further discriminated between those conductors showing an increase in total field strength, and those whose position only relates to "crossover" points on the vertical field components.

DISCUSSION OF RESULTS

Magnetometer Survey

Two wide multiple magnetic highs trend northeast across the claim block. These probably reflect variations in magnetite content of dark volcanics.

VLF - EM Survey

Six of the conductor axes are selected as possible bedrock features. These are numbered for identification on the attached map.

1. Fits with a broad magnetic high. The east segment marked (1) may be overburden response, but coincides with an isolated magnetic feature.
2. Is on north flank of magnetic high
3. Isolated, questionable
- 4 & 5. Apparent bedrock features flanking a magnetic high
6. Bedrock feature in magnetic low

A handwritten signature in cursive script, likely reading "R. L. Smith", is written in the lower center of the page.



**GEO PHYSICAL - 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) Airborne VLF-EM and Magnetometer

Township or Area Harker, Elliot, Thackery

Claim Holder(s) Alex H. Perron

Survey Company H. Ferderber Geophysics Ltd.

Author of Report Fenton Scott

Address of Author 17 Malabar Place, Don Mills, Ontario

Covering Dates of Survey 13/09/85 to 14/09/85
(linecutting to office)

Total Miles of Line Cut 77.5

MINING CLAIMS TRAVERSED
List numerically

I. 737975
(prefix) (number)
see attached list

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

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

Magnetometer 30 Electromagnetic 30 Radiometric _____
(enter days per claim)

DATE: Jan. 9, 1986 SIGNATURE: *Fenton Scott*
Author of Report or Agent

Res. Geol. _____ Qualifications _____

Previous Surveys

File No.	Type	Date	Claim Holder

TOTAL CLAIMS 103

OFFICE USE ONLY

If space insufficient, attach list

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 _____ Line spacing _____
Profile scale _____
Contour interval _____

MAGNETIC

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

ELECTROMAGNETIC

~~Instrument~~ _____
Coil configuration _____
Coil separation _____
Accuracy _____
Method: Fixed transmitter Shoot back In line Parallel line
Frequency _____
(specify V.L.F. station)
Parameters measured _____

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) _____ VLF-EM _____ Magnetic _____

Instrument(s) _____ Totem 1A _____ GEM GSM 1813A _____
(specify for each type of survey)

Accuracy _____ 1% _____ 2 gammas _____
(specify for each type of survey)

Aircraft used _____ Cessna 172 _____ Cessna 172 _____

Sensor altitude _____ 250 feet _____ 250 feet _____

Navigation and flight path recovery method _____ visual navigation, manual fiducials on
air photo mosaics _____

Aircraft altitude _____ 250 feet _____ Line Spacing _____ 440 feet _____

Miles flown over total area _____ 77.5 _____ Over claims only _____ 103 _____

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 _____

CLAIM LIST (103 Claims)

Harker, Elliot and Thackeray Townships.

L 737975'	738522'	739238'
76'	23'	39'
77'	24'	40'
78'	25'	41'
79'	26'	42'
738054'	27'	43'
55'	28'	44'
56'	29'	45'
57'		46'
58'		760147'
59'		48'
60'		49'
738078'		50'
79'		51'
80'		52'
81'		53'
82'	738601'	54'
83'	02'	55'
84'	03'	56'
85'	04'	
738275'	05'	
76'	06'	
77'	07'	
78'	08'	
79'	09'	
80'	10'	
81'	11'	
82'	12'	
83'	738834'	
84'	35'	
85'	36'	
86'	37'	
87'	38'	
88'	39'	
89'	40'	
90'	41'	
738399'	42'	
400'	43'	
01'	44'	
02'	45'	
03'	739232'	
04'	33'	
05'	34'	
06'	35'	
07'	36'	
08'	37'	



32D05NW0022 2.8854 THACKERAY

900

Mining Lands Section

File No 2.8854

Control Sheet

TYPE OF SURVEY

GEOPHYSICAL

GEOLOGICAL

GEOCHEMICAL

EXPENDITURE

MINING LANDS COMMENTS:

all claims covered

L.S.
601

J. Hurst

Signature of Assessor

Mar 24/86

Date

15/86 The Mining Act 97/04

Type of Survey(s): Airborne VLF-EM and Magnetic
Township or Area: Harker, Elliott, Thackeray

Claim Holder(s): Alexander H. Perron
Prospector's Licence No.: K19026

Address: 103 Government Road East, Kirkland Lake, Ontario P2N 1A9

Survey Company: H. Ferderber Geophysics Ltd.
Date of Survey (from & to): 13 09 85 to 14 09 85
Total Miles of line Cut: 77.5

Name and Address of Author (of Geo-Technical report): Fenton Scott, 17 Malabar Place, Don Mills, Ont. M3P 1A4

Credits Requested per Each Claim in Columns at right

Special Provisions	Geophysical	
	Days per Claim	Expend. Days Cr.
For first survey: Enter 40 days. (This includes line cutting)	- Electromagnetic	
	- Magnetometer	
For each additional survey: using the same grid:	- Radiometric	
Enter 20 days (for each)	- Other	
	Geological	
	Geochemical	

Man Days	Geophysical	
	Days per Claim	Expend. Days Cr.
Complete reverse side and enter total(s) here	- Electromagnetic	
	- Magnetometer	
	- Radiometric	
	- Other	
	Geological	
	Geochemical	

Airborne Credits	Electromagnetic	Magnetometer	Days per Claim
			30
Note: Special provisions credits do not apply to Airborne Surveys.			30
	Radiometric		

Expenditures (excludes power & shipping)

Type of Work Performed: [Blank]

Performed on Claim(s): FEB 04 1986

MINING LANDS SECTION

Calculation of Expenditure Days Credits

Total Expenditures: \$ ÷ 15 = Total Days Credits

Mining Claims Traversed (List in numerical sequence)

Mining Claim			Mining Claim		
Prefix	Number	Expend. Days Cr.	Prefix	Number	Expend. Days Cr.
L	737975				
	see attached list				

LARDEE LAKE MINING DIV
 JAN 13 1986
 7181910110211213141516
 1105

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.

Date: Jan. 9, 1986
 Recorded Holder or Agent (Signature): [Signature]

For Office Use Only

Total Days Cr. Recorded: 5220	Date Recorded: JAN 13 1986	Mining Recorder: [Signature]
Date Approved as Recorded: 86.3.25	Inspector: [Signature]	

Total number of mining claims covered by this report of work. **103**

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: Harry Ferderber, 169 Perreault Avenue, Val d'Or, Quebec J9P 2H1

Date Certified: Jan 9, 1986
 Certified by (Signature): [Signature]

March 19, 1986

File:2.8854

Fenton Scott Management Inc
17 Malabar Place
Don Mills, Ontario
M3B 1A4

Dear Sirs:

RE: Airborne Geophysical (Magnetometer and Electromagnetic)
Surveys submitted on Mining Claims L 737975, et al, in
the Townships of Elliott, Harker and Thackeray

As requested in your letter of March 4, 1986, returned herein
is the VLF plan (in duplicate). Please add the required geometric
factors and return the plans to this office, quoting file 2.8854.

For further information, please contact Susan Hurst at (416)965-4888.

Yours sincerely,

J.C. Smith, Supervisor
Mining Lands Section

Whitney Block, 6th Floor
Queen's Park
Toronto, Ontario
M7A 1W3

Telephone: (416) 965-4888

SH/mc

cc: Alex Perron
103 Government Road East
Kirkland Lake, Ontario
P2N 1A9

H. Ferderber
169 Perreault Avenue
Val d'Or, Quebec
J9P 2H1

Mining Recorder
Kirkland Lake, Ontario
#15/86

Encl.



H. FERDERBER GEOPHYSICS LTD. GEOPHYSICAL & GEOLOGICAL SURVEYS
169 PERRAULT AVENUE, VAL D'OR, QUEBEC J9P 2H1 TELEPHONE 819-824-2075

March 18, 1986

Susan Hurst
Ministry of Northern Development and Mines
Mining Lands Section
Whitney Block, 6th floor
Queen's Park
Totonto, Ontario
M7A 1W3

Re: Airborne Geophysical Surveys
Submitted on Mining Claims L737975
et. al, in Township of Thackery, Elliott
and Harker, File 28854

Dear Ms. Hurst:

The total number of miles flown over the claim group on the
Technical Data statement should be 77.5miles. Sorry for the
error.

Yours truly,

H. Ferderber Geophysics Ltd.

HF/pb

RECEIVED

MAR 21 1986

MINING LANDS SECTION

2.8854

Fenton Scott Management Inc.

17 Malabar Place, Don Mills, Ontario M3B 1A4
416-444-1717

RECEIVED

MAR 07 1986

MINING LANDS SECTION

Ms Susan Hurst
Land Management Branch
Mining Lands Section
Whitney Block, 6th Floor
Queen's Park
Toronto, Ontario
M7A 1W3

March 4, 1986

Dear Ms Hurst:

Your File: 2.8854

Please forward me copies of the pertinent VLF-Em survey Maps for addition of the required geometric factors.

Cordially yours,

Fenton Scott

Fenton Scott

February 20, 1986

File: 2.8854

Mr. Alexander H. Perron
103 Government Road East
Kirkland Lake, Ontario
P2N 1A9

Dear Sir:

RE: Airborne Geophysical (Magnetometer & Electromagnetic)
Surveys submitted on Mining Claims L 737975, et al,
in the Townships of Thackery, Elliott and Harker

In order to complete the above-described submission, please forward (in duplicate) a VLF plan showing the contoured or profiled values.

Also, on the Technical Data statement you state the total number of miles flown was 77.5 and the number of miles flown over the claim group was 103 miles. Please check your records and clarify which figure is correct.

When submitting this information, please quote file 2.8854.

For further information, please contact Susan Hurst at (416) 965-4888.

Yours sincerely,

S.E. Yundt, Director
Land Management Branch

Mining Lands Section
Whitney Block, 6th Floor
Queen's Park
Toronto, Ontario
M7A 1W3

Telephone: (416) 965-4888

SH/mc

cc: Mining Recorder
Kirkland Lake, Ont.
#528/85

H. Ferderber
169 Perreault Avenue
Val d'Or, Quebec
J9P 2H1

Fenton Scott
17 Malabar Place
Don Mills, Ontario
M3B 1A4

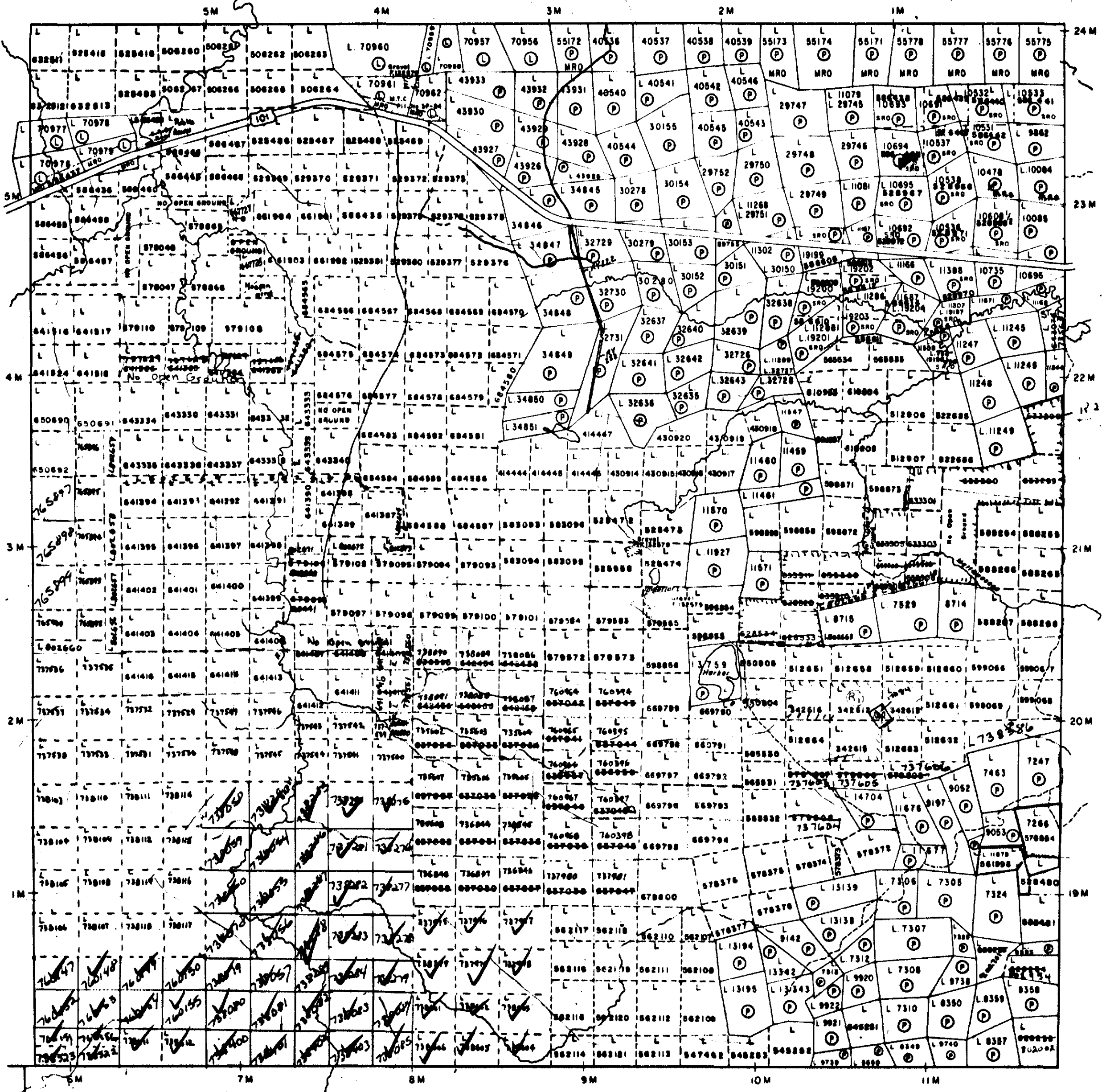
LAMPLUGH TWP. M-358

THE TOWNSHIP OF
OF
Jan. 9/86
HARKER

DISTRICT OF COCHRANE

LARDER LAKE MINING DIVISION

SCALE: 1-INCH 40 CHAINS



GARRISON TWP. M-349

HOLLOWAY TWP. M-356

ELLIOTT TWP. M-347

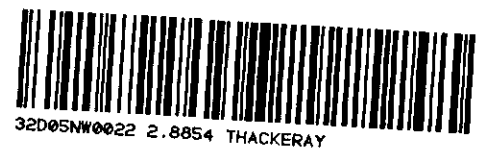
LEGEND

- 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

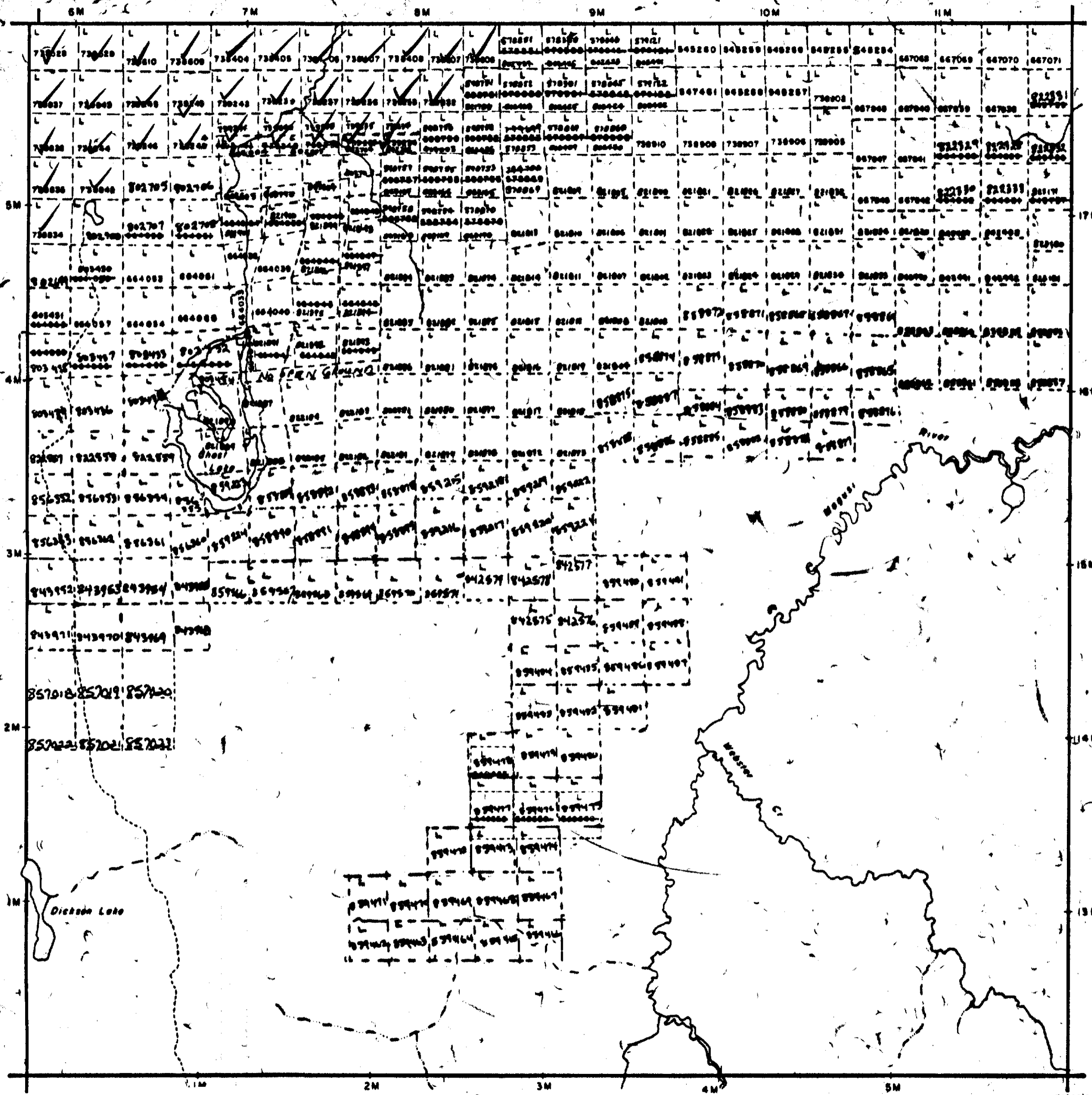
400' Surface Rights reservation along the shores of all lakes and rivers.

Order No.	File	Date	Disposition
(R) NRW/85		March 11-18-85	MRO
(R) NRW/85	See 76/80	Nov 4th 4:00pm	MRO S.R.O. withdrawn



PLAN NO. **M-353**
ONTARIO
MINISTRY OF NATURAL RESOURCES
SURVEYS AND MAPPING BRANCH

HARKER TWP M. 353



NOTES

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

LEGEND

- PATENTED LAND
- PATENTED FOR SURFACE RIGHTS ONLY
- LEASE
- LICENSE OF OCCUPATION
- CROWN LAND SALES
- LOCATED LAND
- CANCELLED
- MINING RIGHTS ONLY
- SURFACE RIGHTS ONLY
- HIGHWAY & ROUTE NO.
- ROADS
- TRAILS
- RAILWAYS
- POWER LINES
- MARSH OR MUSKOG
- MINES

TOWNSHIP OF

ELLIOTT

DISTRICT OF
COCHRANE
LARDER LAKE
MINING DIVISION

SCALE: 1 INCH = 40 CHAINS (1/2 MILE)

DR. JBR
DATE 20 Aug 71

PLAN NO. M. 347

ONTARIO

MINISTRY OF NATURAL RESOURCES

SURVEYS AND MAPPING BRANCH

CLIFFORD TWP M. 338



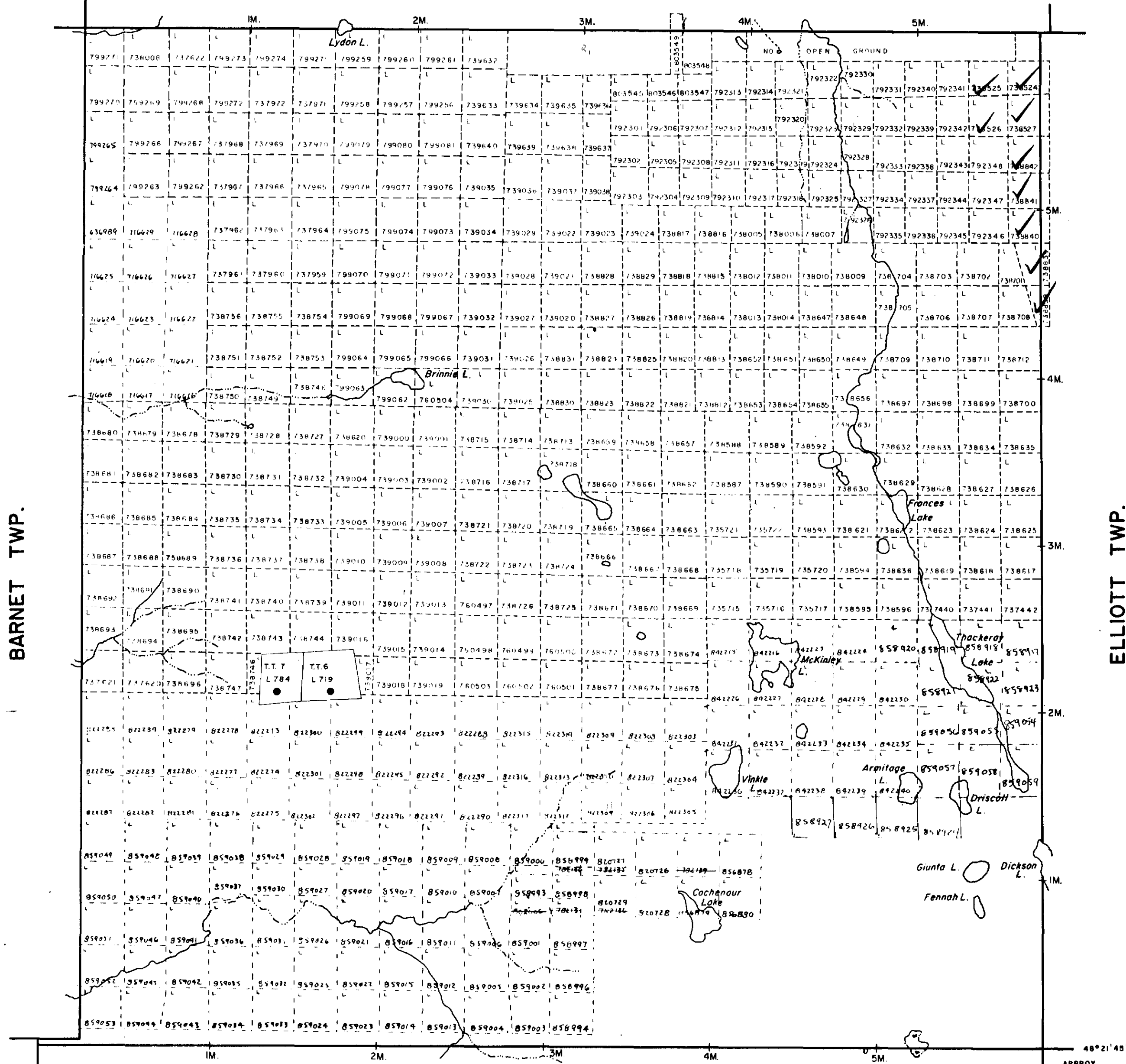
REFERENCES

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
1.	NW 4/3/83	04/2/85	M.R. & S.R.	

GARRISON TWP.



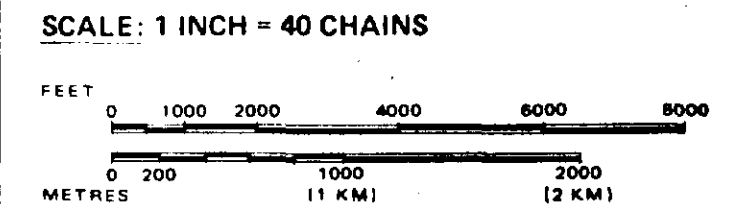
LEGEND

- 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	OC
RESERVATION	⊙
CANCELLED	⊖
SAND & GRAVEL	⊙

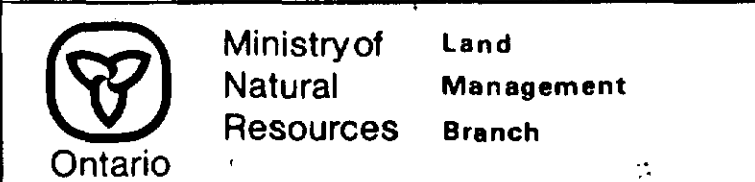
NOTE: MINING RIGHTS IN PARCELS PATENTED PRIOR TO MAY 6, 1913, VESTED IN ORIGINAL PATENTEE BY THE PUBLIC LANDS ACT, R.S.O. 1970, CHAP. 380, SEC. 63, SUBSEC. 1.



TOWNSHIP JAN 10 1986

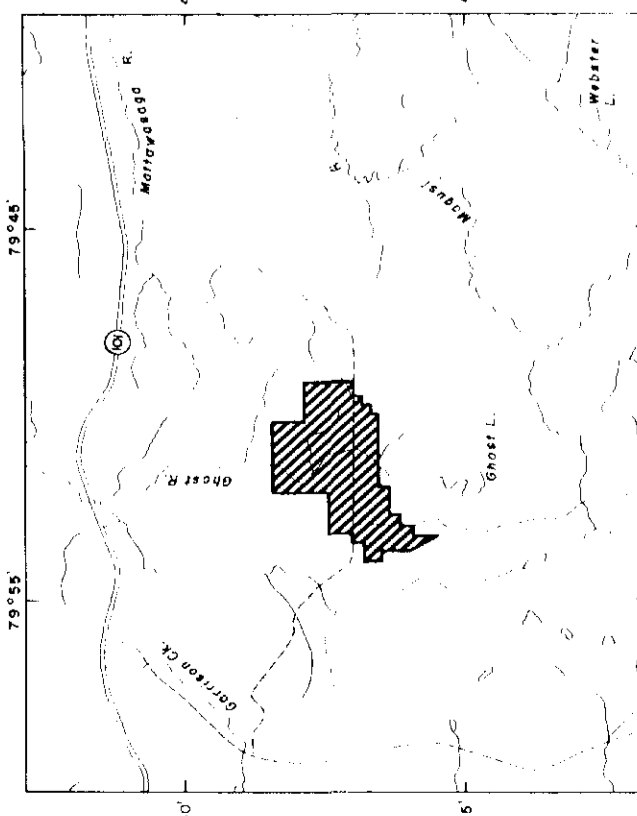
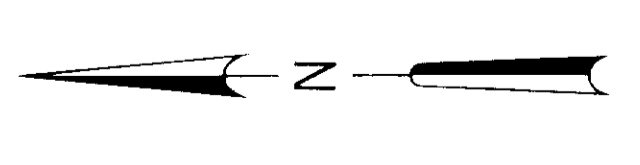
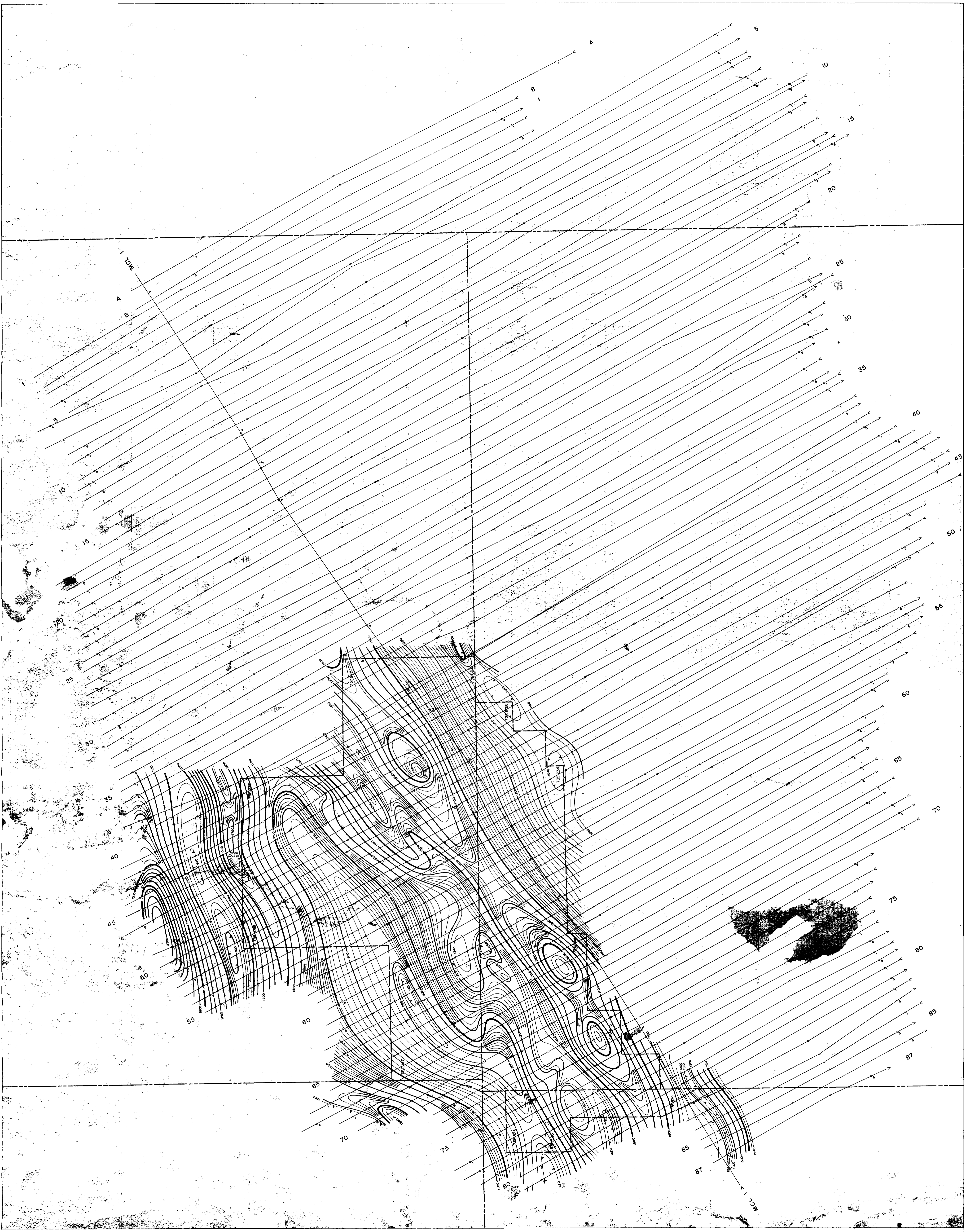
THACKERAY

M.N.R. ADMINISTRATIVE DISTRICT
KIRKLAND LAKE
MINING DIVISION
LARDER LAKE
LAND TITLES / REGISTRY DIVISION
COCHRANE



Date JANUARY, 1985 Number G-3220





LEGEND
 CONTOUR INTERVAL 20 GAMMAS
 500 GAMMA
 400 GAMMA
 300 GAMMA
 200 GAMMA
 MAGNETIC LOW
 BASE VALUE 58,000 GAMMAS



H. FERDERBER GEOPHYSICS LTD.
 THACKERY, HARKER ELLIOTT TWP. - COCHRANE DISTRICT ONT.
PERREX RESOURCES INC.
 AIRBORNE MAGNETIC SURVEY
 GHOST RIVER AREA
 1:1320 38 D/9 35E SEPT. 1985
 F. SCOTT
 SCALE 1:1320 1 M
 47-5-8-85

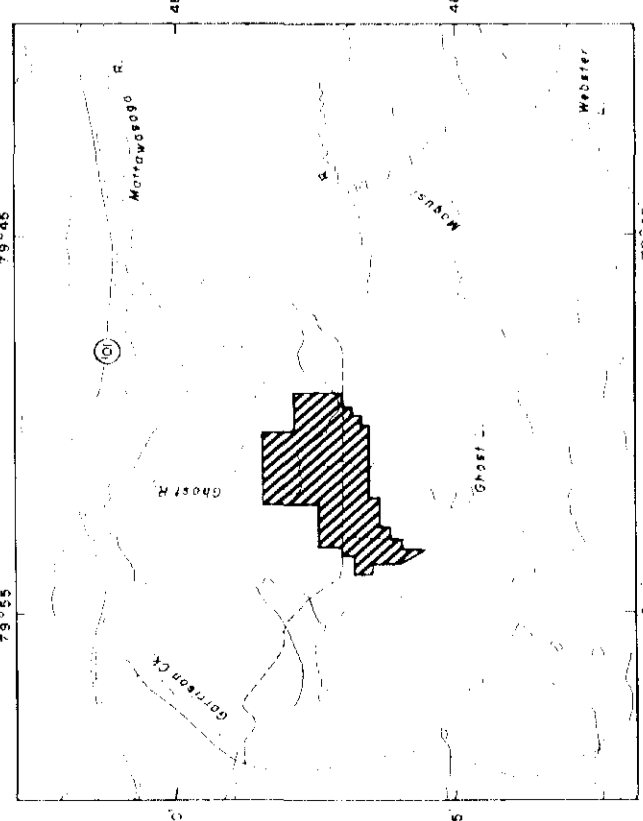
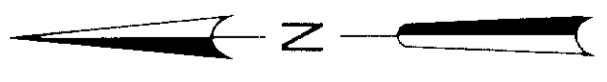
WARNING

THE NUMBERS SHOWN AT EACH CONDUCTOR AXIS LOCATION ARE A FUNCTION OF THE RESISTIVITY OF THE SURROUNDING MEDIUM AND THE RELATIVE FIELD GEOMETRY IN RELATION TO THE ESTIMATOR COILS.

THESE NUMBERS ARE PRESENTED ON DIRECT INSPECTION OF THE COASTAL DEPARTMENT OF MINES, IN ORDER TO COMPLY WITH THE SURVEY ASSESSMENT REG.

THERE IS NO RELATIONSHIP BETWEEN THE NUMBERS AND THE RESISTIVITY OF THE SURROUNDING MEDIUM. THESE NUMBERS CAN NOT BE USED TO DISCRIMINATE BETWEEN THE FEATURES INDICATED ON THIS MAP.

$\frac{1}{2}$ "Peak to Peak" angular field distortion (%)
 $\frac{1}{4}$ "90° field distortion (%)



LEGEND

CONDUCTOR AXIS WITH SURFACE FIELD

INTERPRETATION

CYPERAREN RESPONSE

BEADOCK RESPONSE



H. FERDERBER GEOPHYSICS LTD.

THACKERY, MARTIN, ELLIOTT TWP'S - COCHRANE DISTRICT ONT.

PEREX RESOURCES INC.

AIRBORNE V.L.F.-EM SURVEY

GHOST RIVER AREA

SYDNEY, ONT. F. SCOTT 32 D/5 SEPT. 1985

SCALE 1:1200 100' 200' 400' 800' PLATE 1 V

