

32D04SW0278 2.6749 CATHARINE

010

GEOPHYSICAL SURVEY REPORT  
ON THE  
PERRONS' 83 LIMITED PROPERTY

CATHARINE TEN GROUP

CATHARINE TOWNSHIP  
LARDER LAKE MINING DIVISION  
DISTRICT OF TIMISKAMING, ONTARIO

FOR

ALEXANDER H. PERRON

**RECEIVED**

MAY 15 1984

**MINING LANDS SECTION**

MAY 12, 1984

MARY GREER  
GEOPHYSICAL TECHNICIAN



32004SW0278 2.6749 CATHARINE

010C

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Location Map - (Figure 1 a). . . . . 2 a)

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Accompanying Plan Maps . . . . . In Back Pocket

Scale: 1 inch to 200 feet

Date: May 1984

Catharine Ten Group

Ground Magnetometer Survey

West Half

Map No. 84-10W-2

Ground Magnetometer Survey

East Half

Map No. 84-10E-2

GEOPHYSICAL SURVEY REPORT  
ON THE  
PERRONS' 83 LIMITED PROPERTY  
CATHARINE TEN GROUP  
CATHARINE TOWNSHIP  
LARDER LAKE MINING DIVISION  
DISTRICT OF TIMISKAMING, ONTARIO

INTRODUCTION

The Catharine Ten Group was recorded on April 22, 1983.

A geophysical grid at a 400 foot line spacing was subsequently established by A.H. Perron in January 1984. During the period of March 13-17, 1984, a geophysical survey (magnetic) was completed over the entire ten (10) claims. The instrument used for this survey was a Geometrics G-816 Proton Precession Magnetometer.

This work was conducted by Tom Obradovich of Kirkland Lake, Ontario.

All drafting and interpretation was completed by Mary Greer.

The purpose of this report is to briefly describe the results attained in said surveys.

The anomalies detected are shown on the accompanying maps, at

a scale of one inch to 200 feet, that form an integral part of this report.

PROPERTY DESCRIPTION

The Catharine Ten Group consists of a contiguous block of eight, 40 acre, unpatented mining claims located in Catharine Township, Larder Lake Mining Division, District of Timiskaming, Ontario, and are further described as follows:

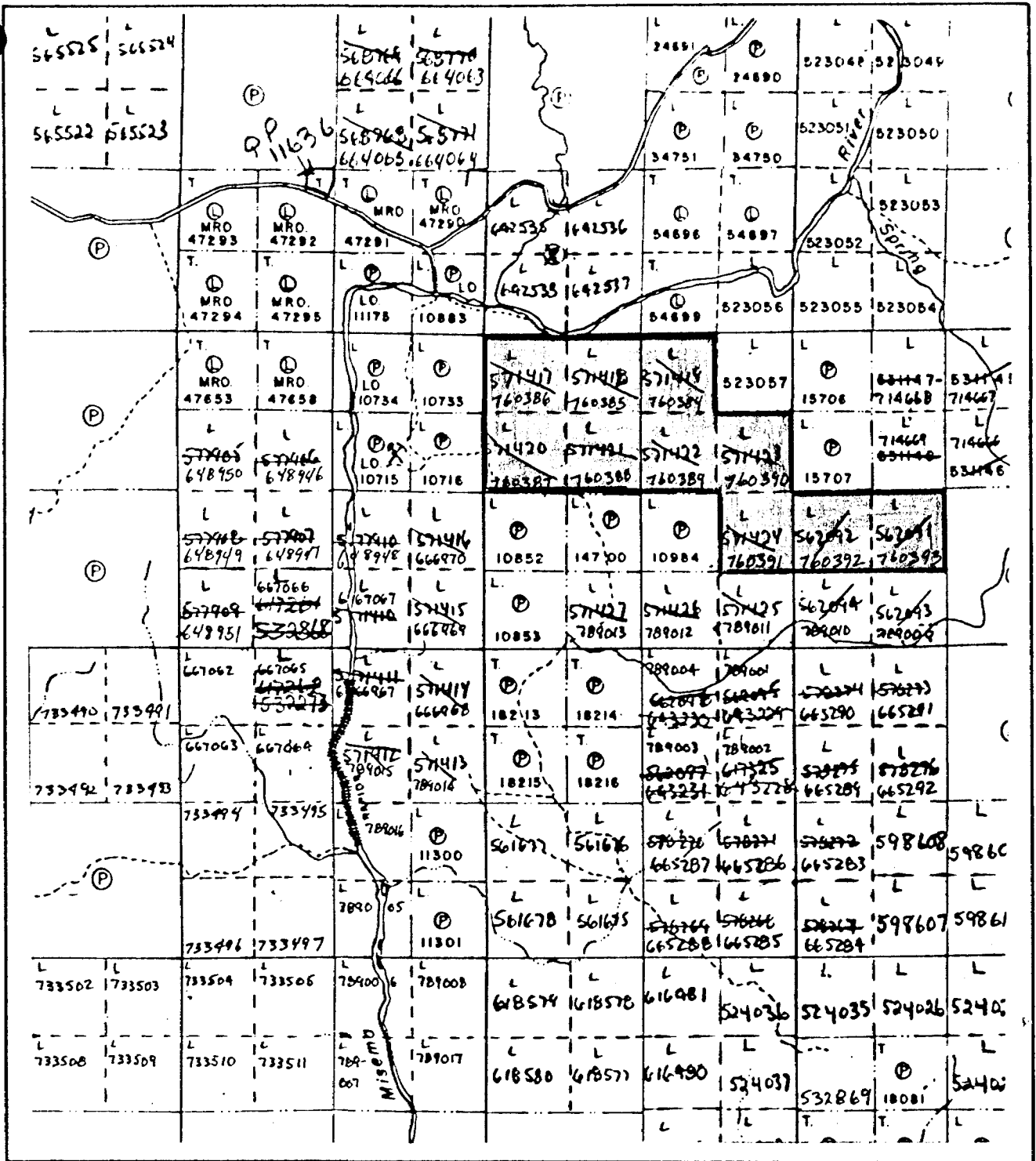
<u>Claim No.</u>	<u>No. of Claims</u>
L-760384 - 760393 (inclusive)	10

Ownership of the aforementioned claims have been attested to by Alexander H. Perron of 103 Government Road East, Kirkland Lake, Ontario, and was not independently ascertained by the writer. (See figure 1a).

LOCATION AND ACCESS

The Catharine Ten Group encompasses Conc. V, Lots 6, 7 and 8, Catharine Township, approximately 12 miles southeast of the town of Kirkland Lake, Ontario.

This property is readily accessible via a secondary road that extends eastward approximately three miles from the village of Boston Creek to the Misema River which can be crossed by canoe. Boston Creek is located approximately 15 miles southeast of Kirkland Lake and may be reached via highway 112 and 564.



## Claim Location Map

Scale: 1 inch to 1/2 mile

(Taken from a May 1984 claim map)

Figure 1a

The aforementioned secondary road is easily travelled by standard drive in the summer and snowmobile in the winter. (See Figure 1b).

#### PREVIOUS WORK

In November 1980, a magnetic survey was carried out for Dome Exploration (Canada) Limited. The magnetic relief and trend was described. Some diamond drilling was also carried out on the property as well as a number of other geophysical surveys. (See Regional Assessment Files).

#### SURVEY PROCEDURE

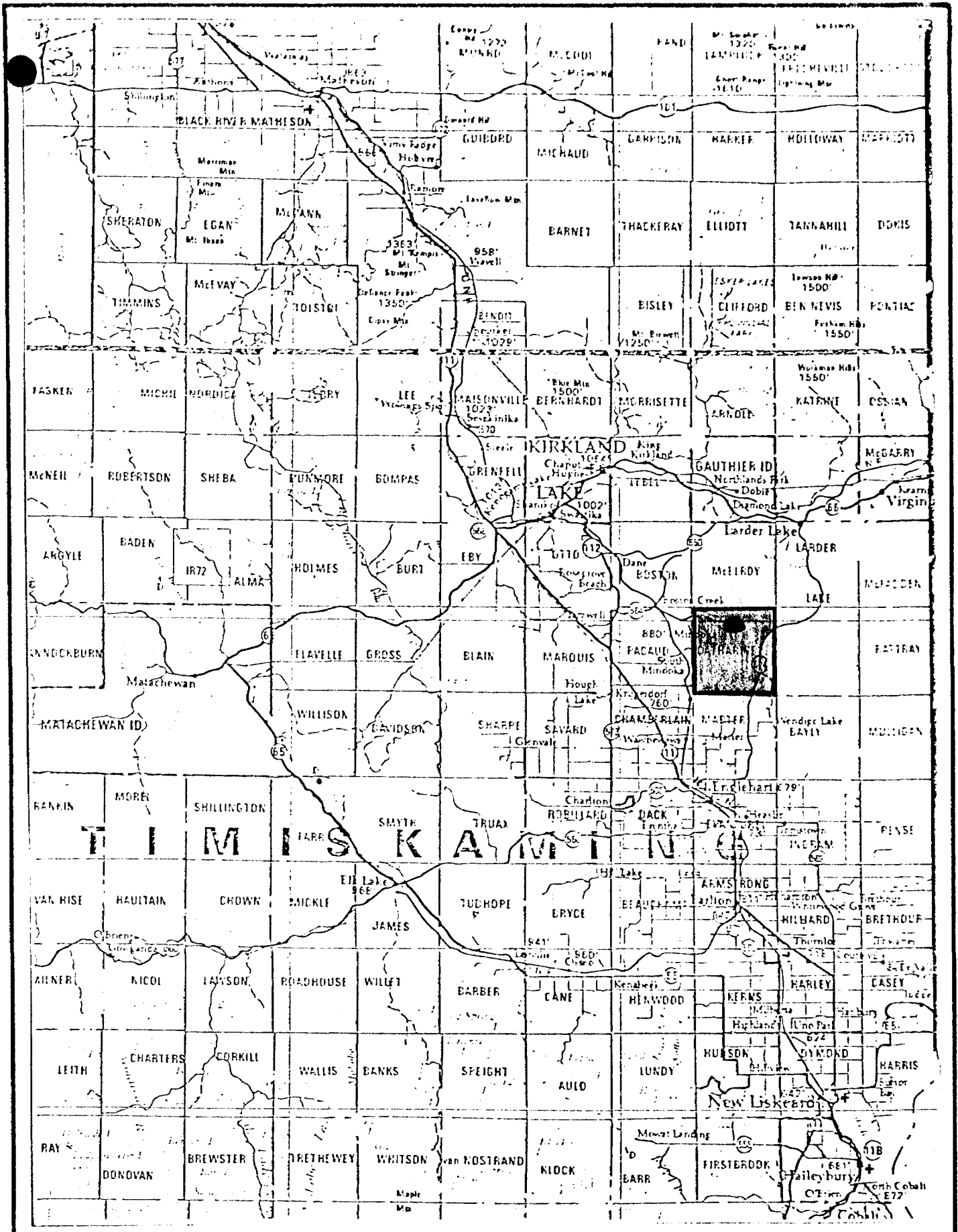
A northwest baseline was established from the common post of claims L-760389 and L-760390.

A grid system of picket lines 400 feet apart with stations each 100 feet, was established at right angles to the baseline.

Readings were taken at 100 foot intervals on all picket lines and the baseline. The primary magnetic base station was set up at BL 0 + 00 with secondary check stations established at 400 foot intervals along the baseline. The time interval between each secondary base check was within forty-five (45) minutes.

#### TOPOGRAPHY

The general terrain of this property varies from jack pine covered sand ridges to the southeast section of the property, to gently sloping poplar, birch and spruce spotted with small outcrops to the northwest section. The difference in elevation averages 75 feet. The Miséma River flows west along



# Location Map

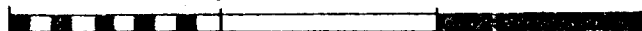
Miles 10

0

10

20

Figure 1b





the northern boundary.

#### GENERAL GEOLOGY

O.D.M. Geological Map, 2043, covering Catharine and Marter townships, at a scale of one inch to one-half mile, indicates that the bedrock is underlain by Keewatin volcanics. This includes intermediate to acidic volcanics that are mainly pyroclastic. The local exposed outcrops are classified as a carbonatized fragmented andesite.

#### ECONOMIC GEOLOGY

Situated to the immediate northwest of the claim group, along the McElroy-Catharine township line, lies the Cathroy-Larder Mine property.

Cathroy-Larder Mines was incorporated in 1943 to succeed Yama Gold Mines. Yama Gold Mines produced 22,250 tons grading 0.14 oz. Au/ton between 1938 to 1942. A new gold zone was discovered by Cathroy-Larder about 1000 feet south of the shaft. After considerable underground development, including surface and underground diamond drilling, ore reserves were calculated at 280,000 tons grading 0.20 oz. Au/ton.

Mirado Nickel optioned the property in 1960 conducting additional surface and underground drilling. In 1980 the property was optioned by Canamax (Amax) and further surface diamond drilling was performed as well as surface stripping over the south ore body.

The rocks within the mine area belong to the Skead-Group which are mainly dacites, andesites, rhyolite flows and pyroclastics. These

rocks are cut by small dikes of syenite, lamprophyre and diorite.

The ore is stratabound within pyroclastic units. The shaft ore body is at or near the upper contact of the Skead pyroclastics. The south ore bodies are approximately 1,500 feet from the top of the Skead group.

The upper contact of the Skead group within the mine area strike about S 70° E and dip steeply north to vertical. The ore zones consist of many narrow quartz-calcite-sulphide and massive sulphide seams. The sulphides are pyrite, chalcopyrite and sphalerite, gold is found in fractures in the pyrite.

## INSTRUMENTATION

### Magnetic Survey:

This system uses a backward motion of spinning protons of a hydrogen atom within a fluid of hydrogen and carbon. These spinning magnetic protons are caused to have two opposite poles by applying a magnetic field using a current within a coil of wire. When the current is stopped, the protons precess about the earth's magnetic field and in turn generate a small current in the wire. This frequency of precession is proportional to the earth's total magnetic field.

This instrument is read directly in gammas which is the absolute value of the earth's total field for that station.

The instrument used for this survey was a Geometrics G-816 Proton Magnetometer, this instrument has a sensitivity of one gamma.

The diurnal variation was monitored by closing each loop at any secondary check station, at a gridline-baseline intersection.

Diurnal corrections were applied by linear distribution of any observed variation over the time between base stations. The corrections were calculated by using a time vs. drift graph.

PRESENTATION AND DISCUSSION OF RESULTS

Magnetic Survey:

The field data is presented on a map at a horizontal scale of one inch to 200 feet, Map No. 84-10W-2 and Map No. 84-10E-2, found in the back pocket of the report.

The magnetic data is illustrated as isomagnetic contours (contour interval 50 gammas) on a map of corrected magnetic values recorded at each station.

The magnetic trends appear to have a general northwest-southeast direction. There is little magnetic variation on the east half of the property.

On claim L-760387 there is two (2) magnetic highs which seem to be interrupted by a magnetic low. A magnetic low is also found on the southern part of claim L-760389.

CONCLUSIONS AND RECOMMENDATIONS

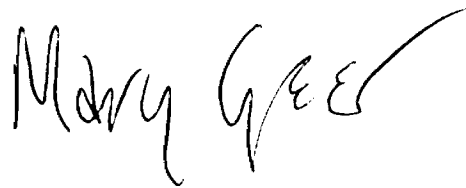
The little variation in the magnetic trends are probably due to a consistent bedrock of all the same type and structure.

The magnetic high, separated by the magnetic low on claim L-760387 may be a structure cut by some intrusion or a fault.

It is recommended that a VLF-EM ground survey be conducted

in this area and a further detailed magnetic survey be carried out with 200 line spacings.

Respectfully submitted

A handwritten signature in cursive script that reads "Mary Greer". The signature is written in dark ink and is positioned to the right of the typed name.

May 12, 1984

Mary Greer  
Geophysical Technician

BIBLIOGRAPHY

James A. Grant

1963: Geological Report No. 18,  
Catharine and Marter Townships:  
Ontario Department of Mines

C E R T I F I C A T E

I, Mary Greer, of Lynden, Ontario, do hereby certify:

1. That I am a Geophysical Technician and reside at:  
49 McKelvie Avenue, Kirkland Lake, Ontario
- 2.- That I graduated from Sir Sandford Fleming College at  
Lindsay, Ontario, in 1978, with a diploma as a Geological  
Technician.
3. That I was employed as a Geophysical Technician by H.E.  
Neal and Associates Limited for 18 months.
4. That I have been practising my profession for a period  
of four (4) years and I am qualified to write this  
report.
5. That I supervised and participated in this survey.

May 12/84  
Date

Mary Greer  
Mary Greer  
Geophysical Technician

2.6749  
The Mining Act



900

Type of Survey(s) **GEOPHYSICAL SURVEY - MAGNETOMETER.**

Claim Holder(s) **ALEXANDER H. PERRON** K 19026

Address **103 Government Rd. E. Kirkland Lake Ontario**

Survey Company **PERRONS ' 83 LTD.** Date of Survey (from & to) Total Miles of line Cut

Name and Address of Author (of Geo-Technical report) **MARY GREER 49 McKelvie Ave. Kirkland Lake Ontario**

Credits Requested per Each Claim in Columns at right

Mining Claims Traversed (List in numerical sequence)

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

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

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

Mining Claim		Expend. Days Cr.	Mining Claim		Expend. Days Cr.
Prefix	Number		Prefix	Number	
L	760384				
	760385				
	760386				
	760387				
	760388				
	760389				
	760390				
	760391				
	760392				
	760393				

**LARDER LAKE MINING DIV.**  
**RECEIVED**  
**APR 18 1984**  
AM 7 18 19 10 11 12 1 2 3 4 5 6 PM

**RECEIVED**  
**MAY 9 1984**  
**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

Total number of mining claims covered by this report of work. 10

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.

**For Office Use Only**

Total Days Cr. Recorded	Date Recorded	Mining Recorder
200	APR 18 1984	<i>[Signature]</i>
	84.7.16	Branch Director

Date **April 16 / 84** Recorded Holder or Agent (Signature) *Mary Greer*

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  
**MARY GREER 49 McKelvie Ave. Kirkland Lake Ontario P2N 2K6**

Date Certified **April 16 / 84** Certified by (Signature) *Mary Greer*





GEOPHYSICAL TECHNICAL DATA

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

Number of Stations 381 Number of Readings 381
Station interval 100 FEET Line spacing
Profile scale
Contour interval 50 GAMMAS

MAGNETIC

Instrument GEOMETRICS G-816 PROTON MAGNETOMETER
Accuracy - Scale constant 1 GAMMA
Diurnal correction method CLOSED LOOPS
Base Station check-in interval (hours) APPROXIMATELY 45 MINUTES
Base Station location and value BL 0 + 00 58635 GAMMAS

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) \_\_\_\_\_

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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\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

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 \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

1984 05 25

Your File: 132  
Our File: 2.6749

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

Dear Sir:

We have received reports and maps for a Geophysical (Magnetometer) Survey submitted under Special Provisions (credit for Performance and Coverage) on Mining Claims L 760384 et al in the Township of Catharine.

This material will be examined and assessed and a statement of assessment work credits will be issued.

Yours sincerely,

S.E. Yundt  
Director  
Land Management Branch

Whitney Block, Room 6643  
Queen's Park  
Toronto, Ontario  
M7A 1W3  
Phone: (416) 965-6918

A. Barr:sc

cc: Alexander H. Perron  
103 Government Rd East  
Kirkland Lake, Ontario  
P2N 2E8

cc: Mary Greer  
49 McKelvie Avenue  
Kirkland Lake, Ont  
P2N 2K6

49 McKelvie Avenue,  
Kirkland Lake, Ontario  
P2N 2K6

REGISTERED MAIL

May 12, 1984

Mr. Fred Matthews,  
Lands Administration Branch,  
Mining Lands Section,  
Ministry of Natural Resources,  
Room 6450, Whitney Block,  
Queen's Park,  
Toronto, Ontario  
M7A 1W3

Dear Sir:

RE: Technical Report for  
Catharine Township  
Larder Lake Mining Division

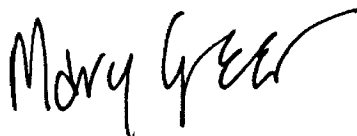
Enclosed herewith please find a duplicate copy of the following:

- Report dated May 12, 1984, by Mary Greer entitled:

Geophysical Survey Report  
On the Perrons' 83 Limited Property  
Catharine Ten Group  
Catharine Township  
Larder Lake Mining Division  
District of Timiskaming, Ontario

I trust this is the information required to correspond with the  
Report of Work filed concerning the above noted township.

Yours truly,



Mary Greer  
Geophysical Technician

MG/p  
Encl.1

Mining Lands Section

File No 26749

Control Sheet

TYPE OF SURVEY

- GEOPHYSICAL
- GEOLOGICAL
- GEOCHEMICAL
- EXPENDITURE

MINING LANDS COMMENTS:

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*L.D.*

*Dennis King*  
Signature of Assessor

*July 10/84*  
Date

2.6749

Mag.

L-760384

✓

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760393

✓

D.K.

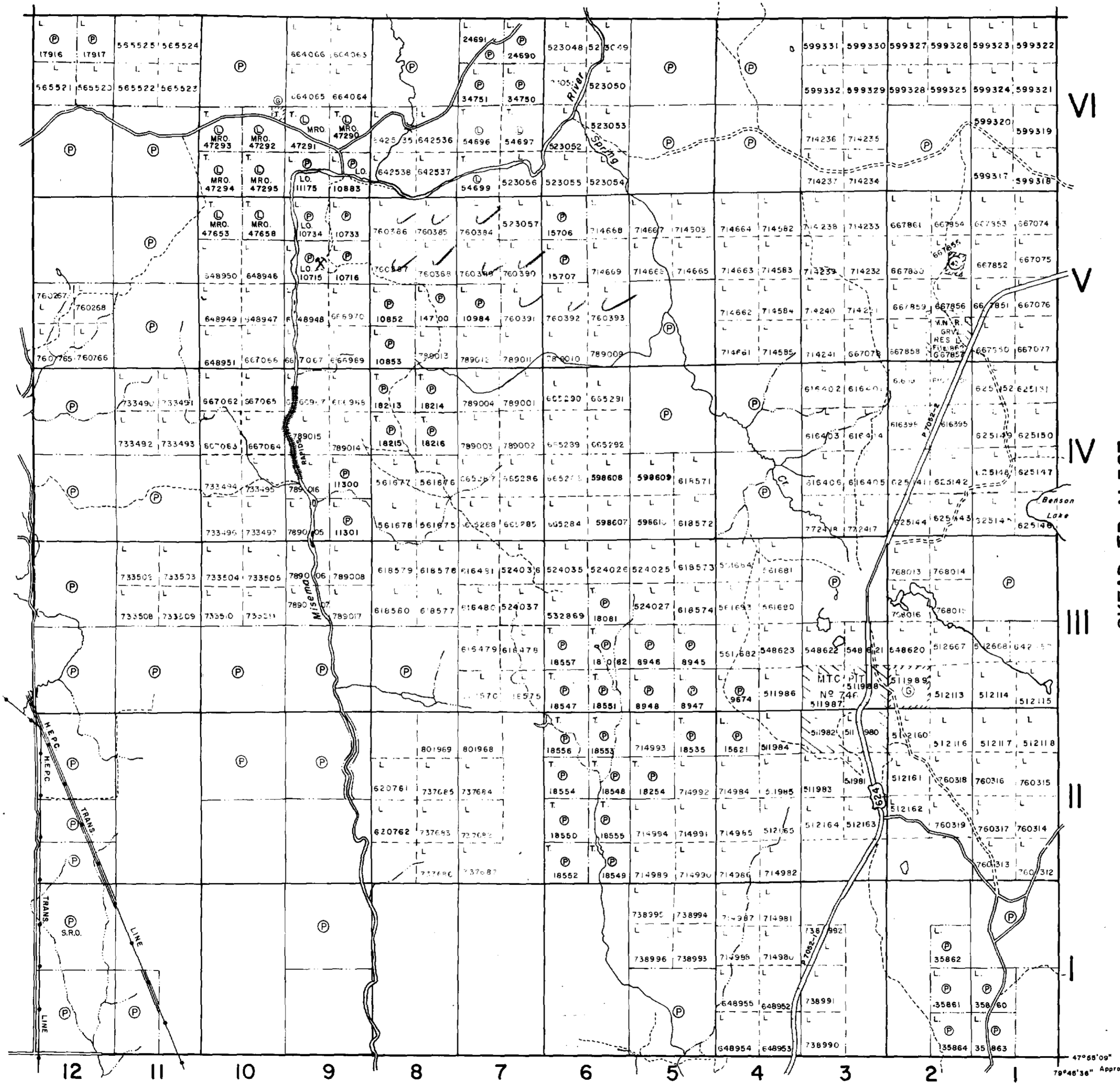


McELROY TP. M. 366

PACAUD TP. M. 380

SKEAD TP. M. 387

MARTER TP. M. 543



NOTES

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

43

File	Date	Disposition
W. 54/74 26940	10/10/74	S.R.O.

DATE OF ISSUE  
JUL 5 1981  
Ministry of Natural Resources  
TORONTO

LEGEND

- PATENTED LAND (P or ●\*)
- PATENTED FOR SURFACE RIGHTS ONLY (●\*)
- LEASE (L)
- LICENSE OF OCCUPATION (L.O.)
- CROWN LAND SALES (C.S.)
- LOCATED LAND (Loc.)
- CANCELLED (C.)
- MINING RIGHTS ONLY (M.R.O.)
- SURFACE RIGHTS ONLY (S.R.O.)
- HIGHWAY & ROUTE NO. (17)
- ROADS (—)
- TRAILS (---)
- RAILWAYS (—+—)
- POWER LINES (—+—+—)
- MARSH OR MUSKEG (—+—+—)
- MINES (M)
- QUARRY PERMIT (Q)
- \*used only with summer resort locations or when space is limited

TOWNSHIP OF

**CATHARINE**

DISTRICT OF  
TIMISKAMING

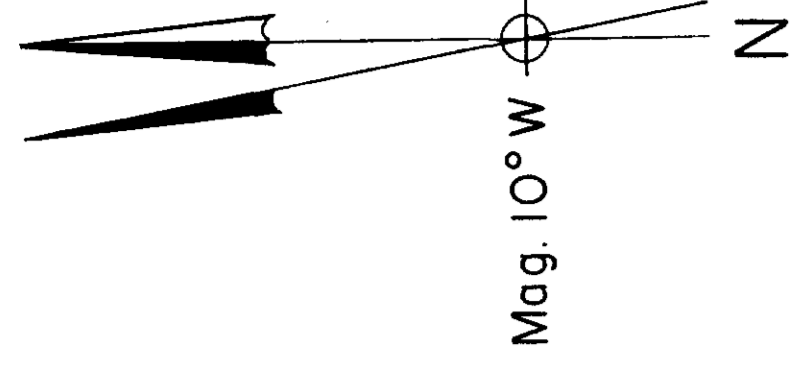
LARDER LAKE  
MINING DIVISION

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

DR. K.K.I. PLAN NO. **M. 336**  
DATE JUNE '72

ONTARIO  
MINISTRY OF NATURAL RESOURCES  
SURVEYS AND LAND INFORMATION





CON. VI

CON. V

CATHARINE

L 4+00 W  
L 0+00



**SYMBOLS**

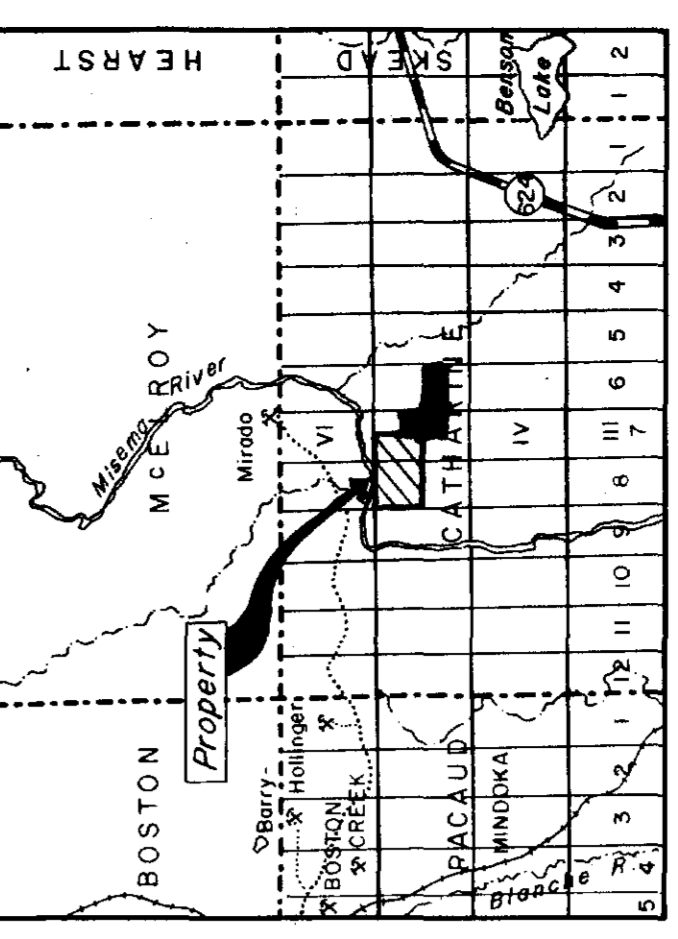
- Base station ○
- Isomagnetic contours —
- Claim post ■
- Claim line - - -

**INSTRUMENTATION**

GEOMETRICS G816  
 PROTON MAGNETOMETER  
 Contour interval 50 gammas  
 Contoured by: Mary Greer

**KEY MAP**

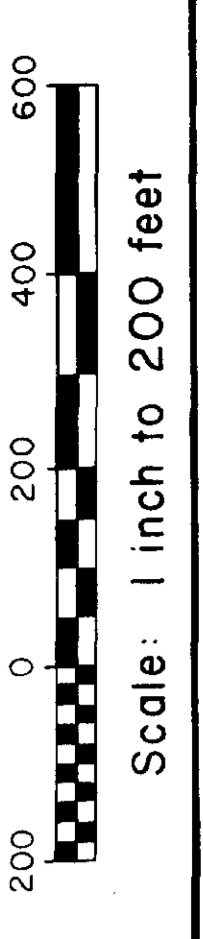
(Scale 1 inch to 2 miles)



Mary Greer

**CATHARINE TEN GROUP**

**GROUND MAGNETOMETER SURVEY - EAST HALF**  
 CATHARINE TOWNSHIP  
 LARDER LAKE MINING DIVISION  
 DISTRICT OF TIMISKAMING, ONTARIO

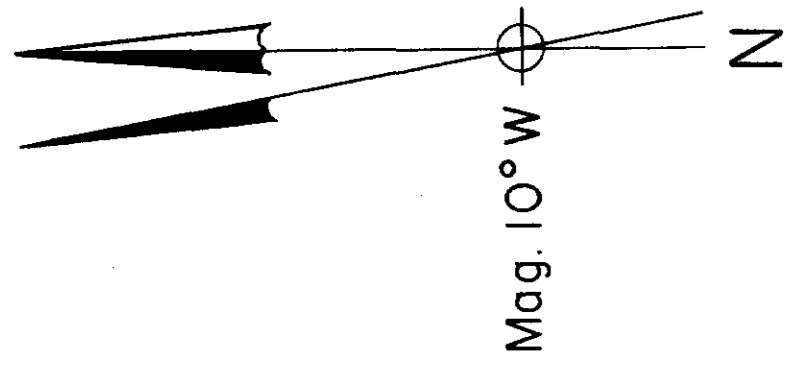


**PERRONS' 83 LTD.**  
 KIPPKLAND LAKE CANADA  
 Drawn by: Mary Greer | Map No. S-470 | Date: May, 1984  
 26749

LOT 5

LOT 6

LOT 7



**SYMBOLS**

- Base station ○
- Isomagnetic contours —
- Claim post ■
- Claim line - - -
- River ———

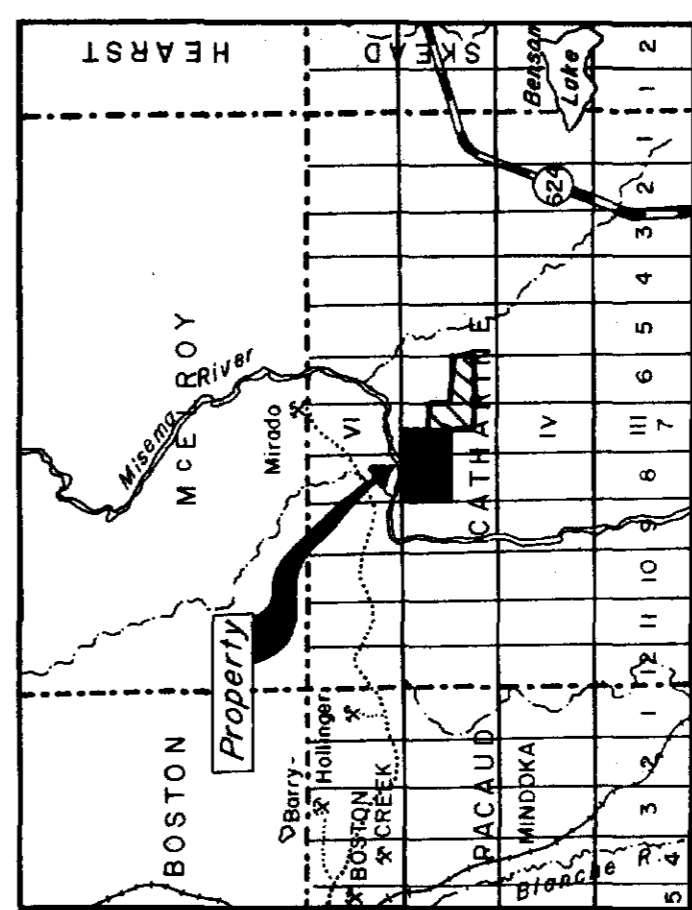
**INSTRUMENTATION**

GEOMETRICS G816  
 PROTON MAGNETOMETER  
 Contour interval 150 gammas

Contoured by: Mary Greer

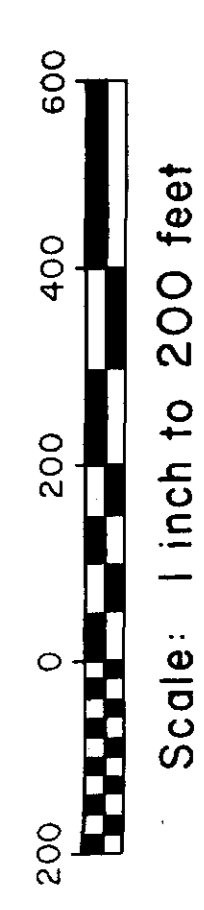
**KEY MAP**

(Scale: 1 inch to 2 miles)

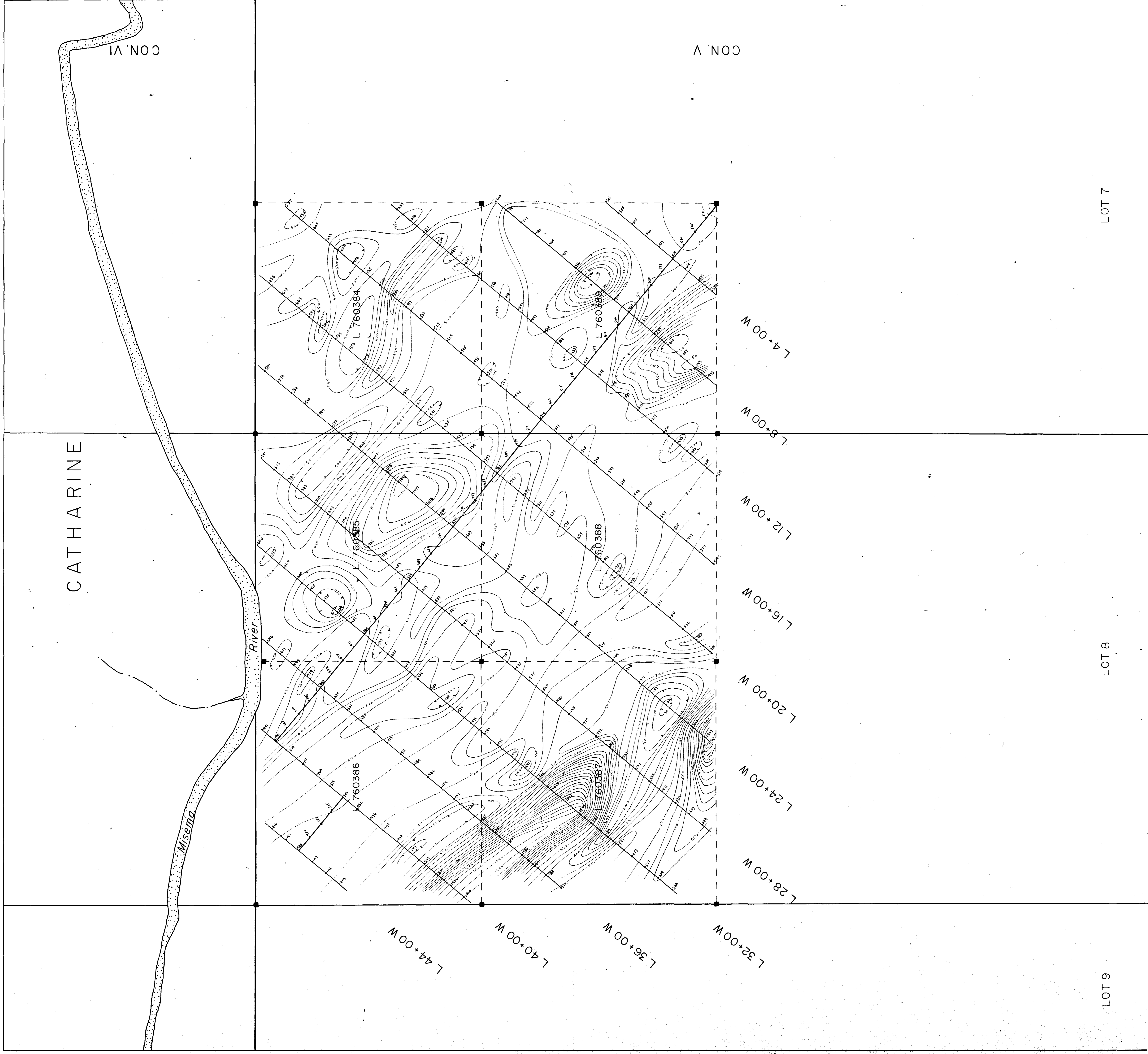


Mary Greer

**CATHARINE TEN GROUP**  
**GROUND MAGNETOMETER SURVEY - WEST HALF**  
 CATHARINE TOWNSHIP  
 LARDER LAKE MINING DIVISION  
 DISTRICT OF TIMISKAMING, ONTARIO



**PERRONS' 83 LTD.**  
 KIRKLAND LAKE CANADA  
 Drawn by: Mary Greer Map No. W 2 Date: May 1984



LOT 9

LOT 8

LOT 7

