GEOLOGICAL SURVEY REPORT

ON THE

PERRONS' INC. PROPERTY

MISEMA EIGHT GRID

CATHARINE TOWNSHIP

LARDER LAKE MINING DIVISION

DISTRICT OF TIMISKAMING, ONTARIO

FOR

ALEXANDER H. PERRON

NOVEMBER 1, 1984

MARY GREER
GEOLOGICAL TECHNICIAN

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ILLUSTRATIONS

GEOLOGICAL SURVEY REPORT
ON THE
PERRONS' INC. PROPERTY
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CATHARINE TOWNSHIP
LARDER LAKE MINING DIVISION
DISTRICT OF TIMISKAMING, ONTARIO

INTRODUCTION

The Misema Eight Grid was recorded on April 15, 1982 and October 8, 1982.

A geophysical grid at a 400 foot line spacing was subsequently established by A. H. Perron in October 1983. During the period of October 1983, two geophysical surveys were completed over the entire group.

In September of 1984 a geological survey was performed by Mary Greer.

All field work, drafting and interpretation was completed by Mary Greer.

The purpose of this report is to briefly describe the outcrops found in said survey.

The outcrops detected are shown on the accompanying plan map, at a scale of one inch to 200 feet, that form an integral part of this report.

PROPERTY DESCRIPTION

The Misema Eight Grid consists of a contiguous block of eight (8), 40 acre, unpatented mining claims located in Catharine Township, Larder Lake Mining Division, District of Timiskaming, Ontario, and are further described as follows:

Claim No.	No. of Claims
L-642535-538 (inclusive)	4
L-664063-066 (inclusive)	4
Total number of claims	8

Ownership of the claim group was attested to by Alexander H. Perron of 103 Government Road East, Kirkland Lake, Ontario, and was not independently ascertained by the writer. (See Figure 1b).

LOCATION AND ACCESS

The Catharine Six Group encompasses the Conc. VI, Lots 8 and 9, 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. Boston Creek is located approximately 15 miles southeast of Kirkland Lake and may be reached via highway 112 and 564.

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

PREVIOUS WORK

Scattered old trenching can be found throughout the property, however no records of these trenches are available.

In June 1981 Amax Minerals Exploration conducted a geological survey over claims L-664063 to L-664066 (inclusive). The survey was by pace and traverse and local outcrop was located and identified. No geophysical surveys were performed, although a geophysical survey was proposed.

In October 1983, an electromagnetic and magnetic survey was performed by Perrons' Inc. (See Regional Assessment Files).

SURVEY PROCEDURE

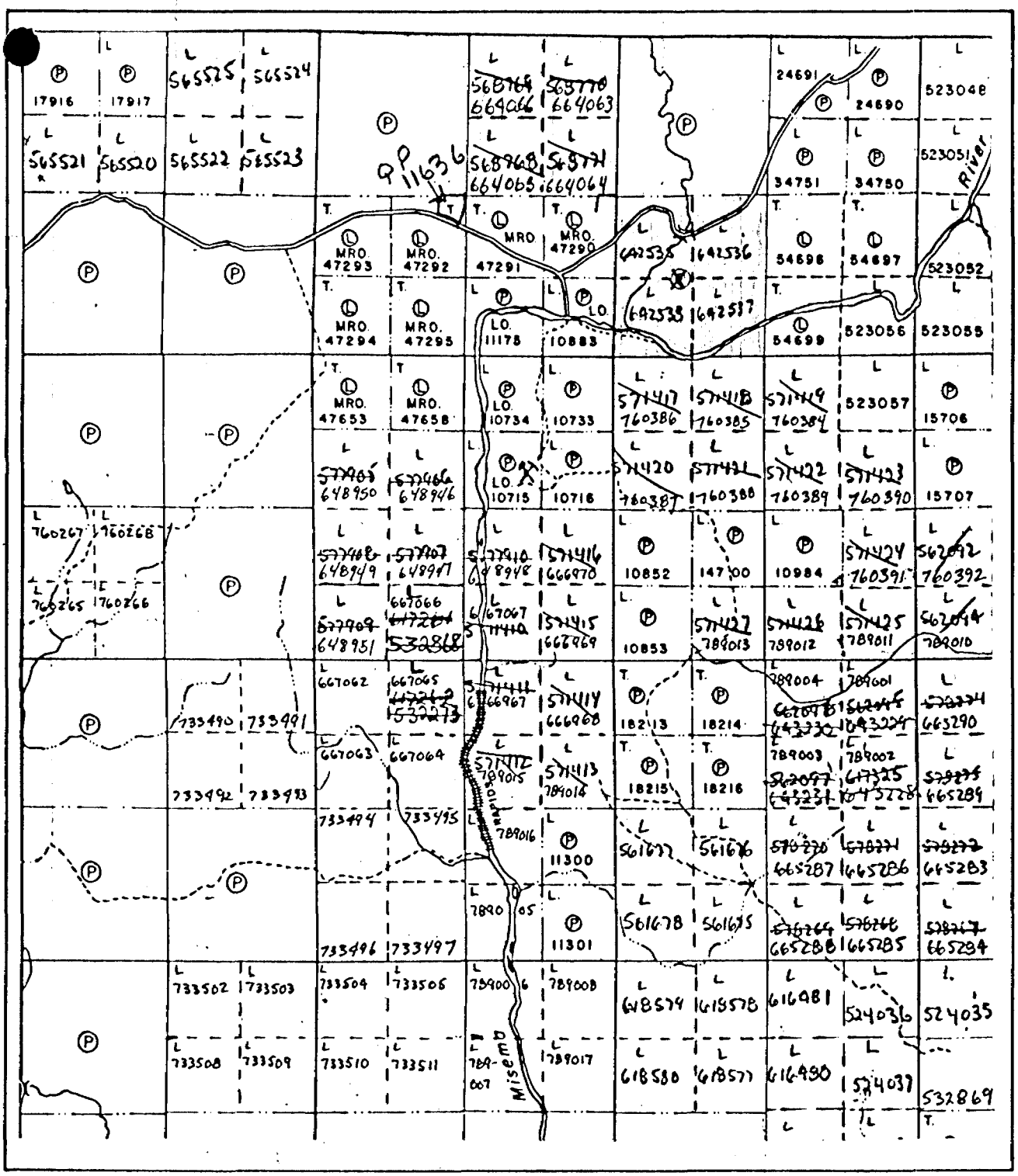
A northwest-southeast baseline was established from the common post of claims L-664064 and L-642535. The baseline was cut 3,150 feet south to the Misema River and extended diagonally northwest for 3,800 feet.

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

Outcrops were noted along the picket lines and compass and traverse lines connected outcrops in between lines, to tie them into the main grid.

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



Claim Location Map

Scale: 1 inch to 1/2 mile

(Taken from a March 1984 claim map)

Figure 1a

Location Map

Miles 10 0 10 20

Figure 1b

difference in elevation averages 75 feet. A slow moving creek passes through the centre of the southeast group with the Misema River flowing west along the southern 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, with some areas of agglomerate found.

ECONOMIC GEOLOGY

Situated to the immediate northeast 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.

PRESENTATION OF FIELD OBSERVATIONS

The field data is presented on a map at a horizontal scale of one inch to 200 feet, Map No. 8-84-3 found in the back pocket of this report.

For the purpose of this presentation, due to the large amount of visible outcrop, the results will be generally described. The topography will also be described in greater detail.

i) Topography:

The general terrain of the property is flat with small seasonal gullies occurring throughout the group. Glacial deposits of sand and gravel were found in the central part of the four (4) southern claims. Two (2) creeks are found in the lower areas between the sand hills. These creeks flow across south into the Misema River which flows west across the property. The northern four (4) claims are covered by spruce and poplar bush with scattered gullies and seasonal creek beds.

ii) Geology:

The rock types found on the Misema Eight grid were pyroclastic volcanic rocks of the Keewatin series. Two different types were noted; one an agglomerate and a dacite or andesite, aphanitic tuff. These rock types are further described as follows:

a) Agglomerate:

The agglomerate is primarily composed of angular to subrounded fragments which vary in size from one foot in diameter to pebble size and smaller.

The agglomerate weathers a soft grey white and was very difficult

to break. Fresh surfaces could be scratched with a knife and were not magnetic. Small visible grains of pyrite were noted throughout the matrix of the rock which was a greenish grey colour of altered plagioclase, chlorite and quartz.

b) Dacite and andesite aphanitic tuff:

The matrix of this rock was similar to the agglomerate without any pebbles occurring. Occasional phenocrysts of possibly plagioclase were noted.

The rocks examined weathers a light grey with some pock marked weathering. It was easily scratched with a knife, was not magnetic and contained minute visible grains of pyrite in the matrix.

CONCLUSIONS AND RECOMMENDATIONS

Very little outcrop was found on the property. The major proportion being in the southwest corner of claim L-664065. It is here that many old trenches were found. It is recommended that these trenches be opened up, freshened and re-examined.

Respectfully submitted,

Mary Greer

November 1, 1984

Mary Greer
Geological 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 Kirkland Lake, Ontario, do hereby certify:

1) That I am a Geophysical Technician and reside at: 49 McKelvie Avenue, Kirkland Lake, Ont. P2N 2K6.

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 for 18 months.

4) That I have been practising my profession for a period of five (5) years and I am qualified to write this report.

5) That I supervised and participated in this survey.

November 1, 1984
Date

Mary Greer
Mary Greer
Geological Technician

900

Mining Lands Section

File No 2.7379

Control Sheet

TYPE OF SURVEY

____ GEOPHYSICAL

✓ GEOLOGICAL

____ GEOCHEMICAL

____ EXPENDITURE

MINING LANDS COMMENTS:

L.D.

Lgd.

Denis K.

Signature of Assessor

Nov. 6/84

Date

Perrons' Inc.,
103 Government Road East,
Kirkland Lake, Ontario
P2N IA9

REGISTERED MAIL

November 1, 1984

Mr. Fred Matthews,
Lands Administration Branch,
Mining Lands Section,
Ministry of Natural Resources,
Room 6450, Whitney Block,
Queen's Park,
Toronto, Ontario
M7A IW3

Dear Sir:

RE: Geological Survey Report for
Catharine Township
Larder Lake Mining Division

Enclosed herewith please find a duplicate copy of the following:

- Report dated November 1, 1984, by Mary Greer entitled:

  Geological Survey Report
  Perrons' Inc. Property
  Misema Eight Grid
  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

Mary Greer
Geological Technician

MG/p
Encls.

LANDS MAN.

Ministry of Natural Resources
Ontario

Report of Work
(Geophysical, Geological, Geochemical and Expenditures)

Mining Act

#118

2.13379

(File 642535)

Instructions: Please type or print.
If number of mining claims traversed exceeds space on this form, attach a list.
Note: Only days credits calculated in the "Expenditures" section may be entered in the "Expend. Days Cr." columns. Do not use shaded areas below.

Type of Survey(s): GEOLOGICAL W 84 08 446

Township or Area: CATHARINE

Claim Holder(s): ALEX H. PERRON

Prospector's Licence No.: K-19026

Address: 103 GOVERNMENT ROAD EAST, KIRKLAND LAKE, ONT. P2N 1A9

Survey Company: PERRONS' INC.

Date of Survey (from & to): 30 Day | 09 Mo. | 84 Yr. | 12 Day | 01 Mo. | 84 Yr.

Total Miles of line Cut: APPROX. 8 MILES

Name and Address of Author (of Geo Technical report): MARY GREER, 49 McKELVIE AVE., KIRKLAND LAKE, ONT. P2N 2K6

Credits Requested per Each Claim in Columns at right

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

Man Days		Days per Claim
Complete reverse side and enter total(s) here	Geophysical	
	- 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 Claims Traversed (List in numerical sequence)

Prefix	Mining Claim Number	Expend. Days Cr.
L	642535	
	642536	
	642537	
	642538	

Prefix	Mining Claim Number	Expend. Days Cr.

RECEIVED
OCT - 4 1984
AM 7 8 9 10 11 12 1 2 3 4 5 6 PM

Expenditures (excludes power stripping)

Type of Work Performed:

Performed on Claim(s):

Calculation of Expenditure Days Credits

Total Expenditures: $ ÷ 15 = Total Days Credits

Instructions: Total Days Credits may be apportioned at the claim holder's choice. Enter number of days credits per claim selected in columns at right.

Total number of mining claims covered by this report of work: 4

For Office Use Only

Total Days Cr. Recorded: 80

Date Recorded: OCT 4 1984

Mining Recorder:

Date Approved as Recorded: Nov 7/84

Branch Director:

Date: Oct 1-4/84

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

Date Certified: Oct 4/84

Certified by (Signature): Mary Greer

1362 (81/9)

LANDS MAN -

Ministry of Natural Resources Ontario

Report of Work
(Geophysical, Geological, Geochemical and Expenditures)

#119

(file 664063)

Mining Act

Instructions: Please type or print.
If number of mining claims traversed exceed space on this form, attach a list.
Note: - Only days credits calculated in the "Expenditures" section may be entered in the "Expend. Days Cr." columns.
- Do not use shaded areas below.

Type of Survey(s): GEOLOGICAL W 84 08 449

Township or Area: CATHARINE

Claim Holder(s): ALEX H. PERRON

Prospector's Licence No.: K-19026

Address: 103 GOVERNMENT ROAD EAST, KIRKLAND LAKE, ONT. P2N IA9

Survey Company: PERRONS' INC.

Date of Survey (from & to): 30 09 84 | 12 01 84 (Day | Mo. | Yr. | Day | Mo. | Yr.)

Total Miles of line Cut: APPROX. 8 MILES

Name and Address of Author (of Geo-Technical report): MARY GREER, 49 McKELVIE AVE., KIRKLAND LAKE, ONT. P2N 2K6

Credits Requested per Each Claim in Columns at right

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

Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.	Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.
L	664063				
	664064				
	664065				
	664066				

LARDER LAKE MINING DIV.
RECEIVED
OCT - 4 1984
AM 7 8 9 10 11 12 1 2 3 4 5 6 PM

Expenditures (excludes power stripping)

Type of Work Performed

Performed on Claim(s)

Calculation of Expenditure Days Credits

Total Expenditures: $ ÷ 15 = Total Days Credits:

Instructions
Total Days Credits may be apportioned at the claim holder's choice. Enter number of days credits per claim selected in columns at right.

Total number of mining claims covered by this report of work: 4

For Office Use Only		
Total Days Cr. Recorded: 160	Date Recorded: OCT 4 1984	Mining Recorder: [illegible]
	~~Date Approved as Recorded~~ Nov 7/84	~~Branch Director~~ [illegible]

Date: Oct. 4/84

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

Date Certified: Oct. 4/84

Certified by (Signature): Mary Greer

1362 (81/9)

Ontario

Ministry of Natural Resources

File _____

GEOPHYSICAL – GEOLOGICAL – GEOCHEMICAL TECHNICAL DATA STATEMENT

TO BE ATTACHED AS AN APPENDIX TO TECHNICAL REPORT
FACTS SHOWN HERE NEED NOT BE REPEATED IN REPORT
TECHNICAL REPORT MUST CONTAIN INTERPRETATION, CONCLUSIONS ETC.

Type of Survey(s) GEOLOGICAL SURVEY

Township or Area CATHARINE

Claim Holder(s) ALEXANDER H. PERRON
103 GOVERNMENT RD. E., KIRKLAND LAKE, ONT. P2N 1A9

Survey Company PERRONS' INC.

Author of Report MARY GREER

Address of Author 49 MCKELVIE AVENUE, KIRKLAND LAKE, ONT. P2N 2K6

Covering Dates of Survey SEPT. 30/84 - OCT. 12/84
(linecutting to office)

Total Miles of Line Cut 8 MILES (APPROXIMATELY)

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	40
Geochemical	

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

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

DATE: November 1/84 SIGNATURE: Mary Greer
Author of Report or Agent

Res. Geol. _____ Qualifications _____

Previous Surveys

File No.	Type	Date	Claim Holder

OFFICE USE ONLY

MINING CLAIMS TRAVERSED
List numerically

(prefix)	(number)
L	642535
L	642536
L	642537
L	642538
L	664063
L	664064
L	664065
L	664066

If space insufficient, attach list

RECEIVED
NOV 06 1984
MINING LANDS SECTION

TOTAL CLAIMS 8

837 (5/79)

GEOPHYSICAL TECHNICAL DATA

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

Number of Stations 337 Number of Readings

Station interval 100 FEET Line spacing 400 FEET

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

Instrument

Method [ ] Time Domain [ ] Frequency Domain

Parameters - On time Frequency

- Off time Range

- Delay time

- Integration time

RESISTIVITY

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_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

2.7379

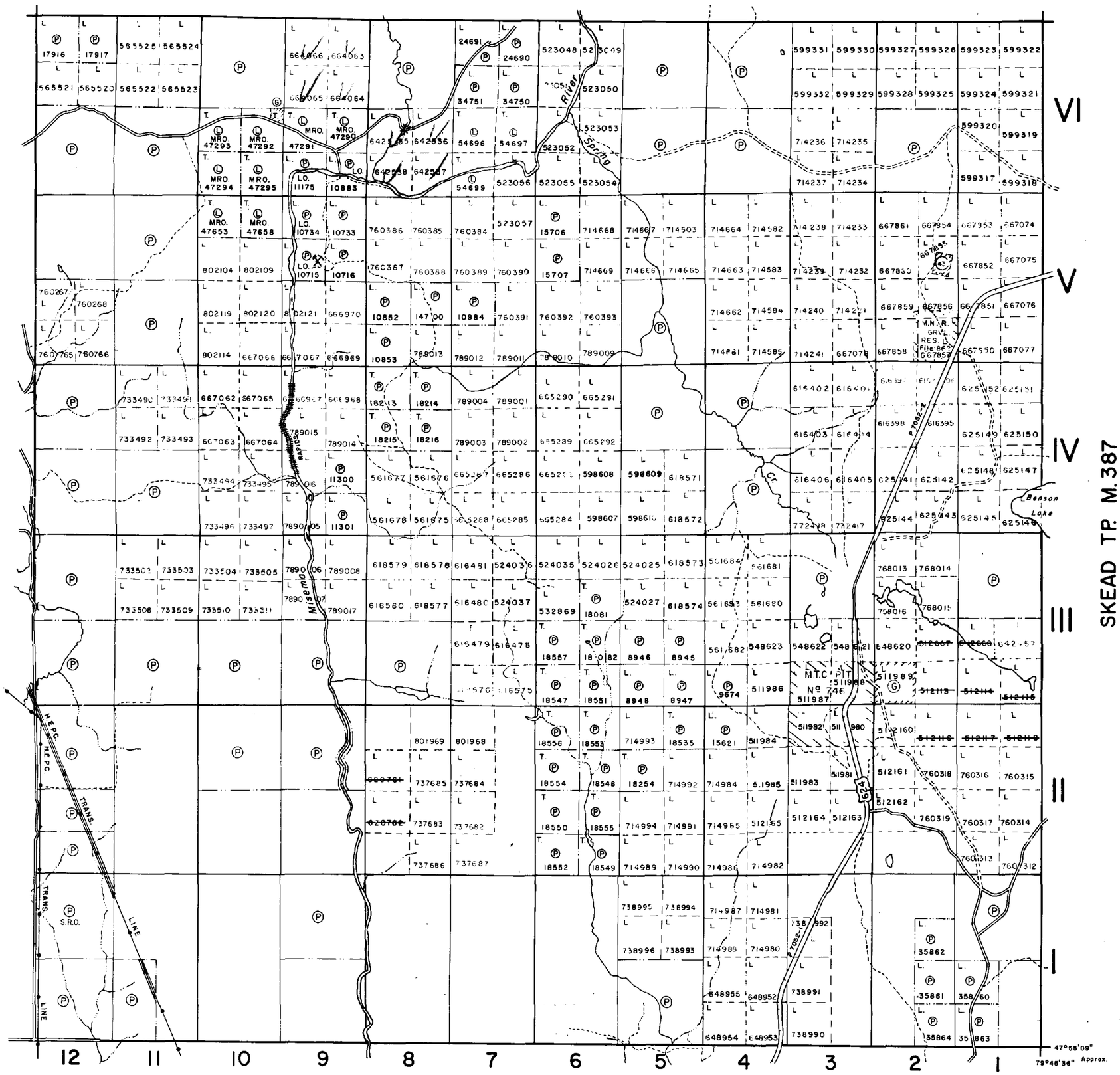
	Fed.			Fed.		
L-642535	✓		664063	✓		
36	✓		64	✓		
37	✓		65	✓		
642538	✓		664066	✓		
						O.K.

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.

Areas withdrawn from staking under Section [illegible] of the Mining Act

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

DATE OF ISSUE
OCT 12 1984
Ministry of Natural Resources
TORONTO

LEGEND

PATENTED LAND	Ⓟ or ●
PATENTED FOR SURFACE RIGHTS ONLY	◑
LEASE	Ⓛ
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	
QUARRY PERMIT	Ⓠ

*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 '78	

ONTARIO
MINISTRY OF NATURAL RESOURCES
SURVEYS AND MAPPING BRANCH

32D04SW0277 2.7379 CATHARINE

Township Line

McELROY TOWNSHIP

CATHARINE TOWNSHIP

L 36·00 W

L 32·00 W

L 28·00 W

L 24·00 W

L 20·00 W

L 16·00 W

L 12·00 W

L 8·00 W

L 4·00 W

L 4·00 E

L 8·00 E

L 12·00 E

L 16·00 E

L 20·00 E

L 24·00 E

L 28·00 E

L 32·00 E

CON. VI

L 664062

L 664063

L 664064

L 664065

L 642535

L 642536

L 642538

Lot 9

Lot 8

N

SYMBOLS

- Outcrop
- Trench
- River — Creek
- Forest boundary
- Alder
- Spruce, balsam fir
- Jack pine
- Poplar, birch
- Claim post
- Claim line
- Primary access road
- Secondary access road

LEGEND

QUATERNARY

Pleistocene

- Clay, sand and gravel indicated by the lighter colours on map

PRECAMBRIAN

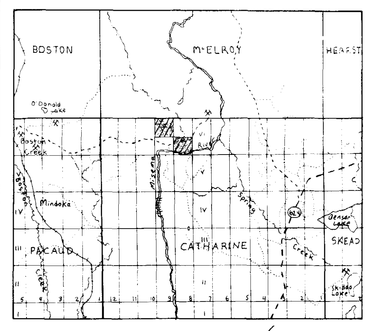
Keewatin

2 — Dacite and andesite, aphanitic tuff

1. — Agglomerate

KEY MAP

(Scale 1 inch to 2 miles)



MISEMA EIGHT GRID

27379

GEOLOGICAL SURVEY

CON. VI LOTS 8 & 9
CATHARINE TOWNSHIP
LARDER LAKE MINING DIVISION
DISTRICT OF TIMISKAMING, ONTARIO

200 0 200 400 feet

1 inch to 200 feet

PERRONS' 83 LIMITED
KIRKLAND LAKE CANADA

Drawn by: Mary Greer	Drawing No. 8-84-3	Date: October 1984

210