



32D04SW0382 2.9306 PACAUD

010

GEOLOGICAL SURVEY REPORT  
ON THE  
PERRON PROPERTY  
BARRY HOLLINGER FOUR  
PACAUD TOWNSHIP  
LARDER LAKE MINING DIVISION  
DISTRICT OF TIMISKAMING, ONTARIO

FOR

ALEXANDER H. PERRON

RECEIVED

AUG 1 1986

MINING LANDS SECTION

AUGUST 1, 1986

MARY GREER  
GEOLOGICAL TECHNICIAN



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TABLE OF CONTENTS

INTRODUCTION. . . . . 1

PROPERTY DESCRIPTION. . . . . 2

LOCATION AND ACCESS . . . . . 2

PREVIOUS WORK . . . . . 2

SURVEY PROCEDURE. . . . . 2, 3

TOPOGRAPHY. . . . . 3

GENERAL GEOLOGY . . . . . 3

ECONOMIC GEOLOGY. . . . . 3, 4

PRESENTATION OF FIELD OBSERVATIONS. . . . . 5, 6, 7

CONCLUSIONS AND RECOMMENDATIONS . . . . . 8

BIBLIOGRAPHY. . . . . 9

CERTIFICATE . . . . . 10

ILLUSTRATIONS

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

Location Map - (Figure 1 b): . . . . . 2 b)

Accompanying Plan Map. . . . . In Back Pocket

Scale: 1 inch to 200 feet

Date: August 1986

Barry Hollinger Four

Geological Survey

Map No. 86-B4-3

GEOLOGICAL SURVEY REPORT  
ON THE  
PERRON PROPERTY  
BARRY HOLLINGER FOUR  
PACAUD TOWNSHIP  
LARDER LAKE MINING DIVISION  
DISTRICT OF TIMISKAMING, ONTARIO

INTRODUCTION

The Barry Hollinger Four Group was recorded on August 14, 1984, for claim No. L-737417 and April 13, 1984, for claims L-737418 to L-737420 inclusive.

A geophysical grid was subsequently established in October, 1984, and two geophysical surveys were completed over the property in December, 1984.

From July 4 to July 7, 1986, a geological survey was performed, describing topography and any visible outcrops. This work was conducted by and under the active supervision of Mary Greer with Alexander H. Perron assisting.

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

PROPERTY DESCRIPTION

The Barry Hollinger Four consists of four (4) unpatented contiguous mining claims in Pacaud township, Larder Lake Mining Division, District of Timiskaming, Ontario, and are further described as follows:

<u>Claim No.</u>	<u>Township</u>	<u>No. of Claims</u>
L-737417 - L-737420 (inclusive)	Pacaud	4

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 1 a).

LOCATION AND ACCESS

The Barry Hollinger Four Group lies in the middle half of Lot 3, Conc. VI approximately one and one half miles from the village of Boston Creek, which is twelve (12) miles southeast of the town of Kirkland Lake.

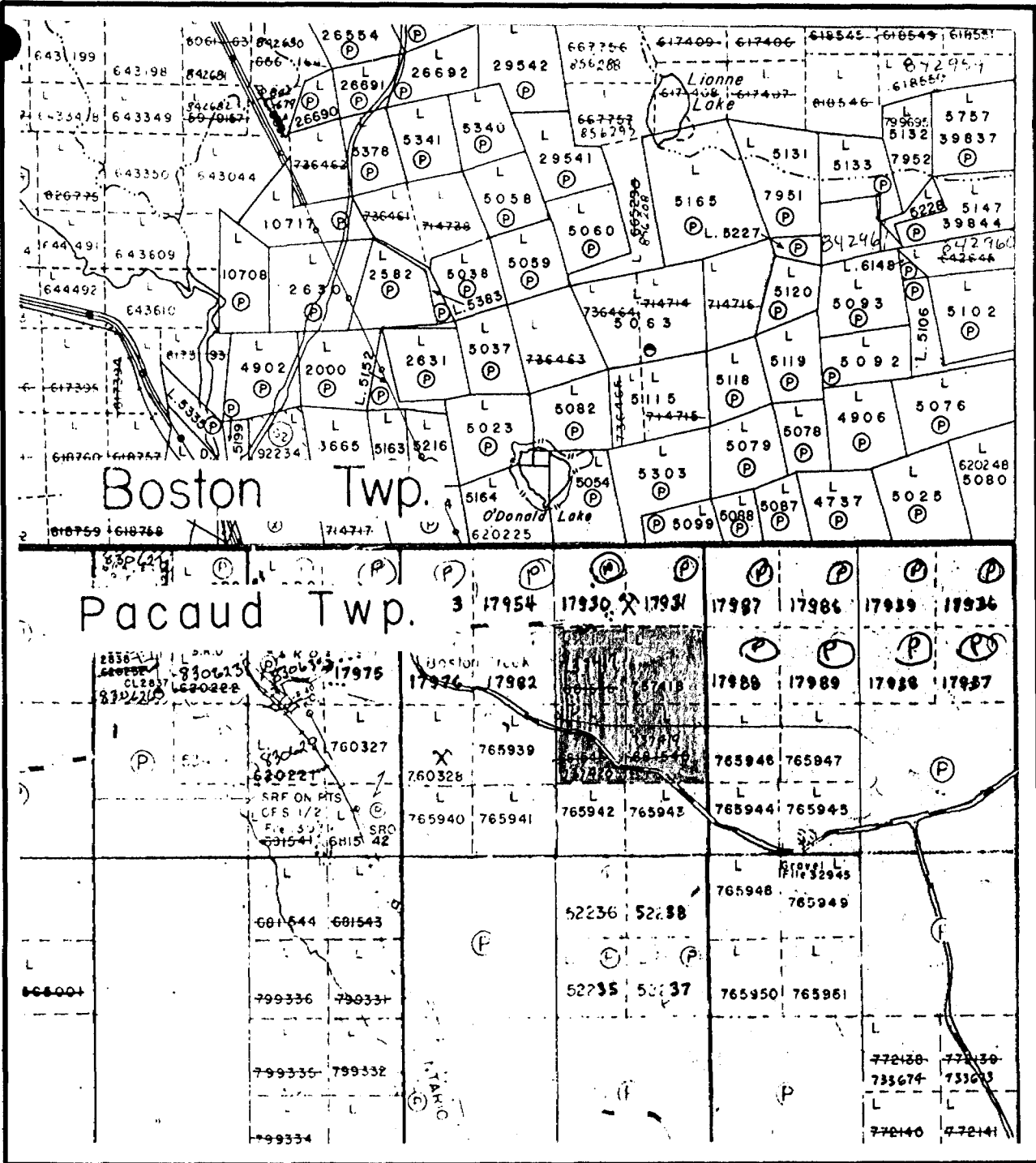
The property is accessible via a secondary road that extends eastward from the village of Boston Creek into the Barry Hollinger Mine site. This road may be reached via highway 112 and highway 564. (See Figure 1 b).

PREVIOUS WORK

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

SURVEY PROCEDURE

A baseline was established south 100 feet east of the Barry Hollinger mine shaft, for a total length of 4,000 feet from the Boston - Pacaud township line.

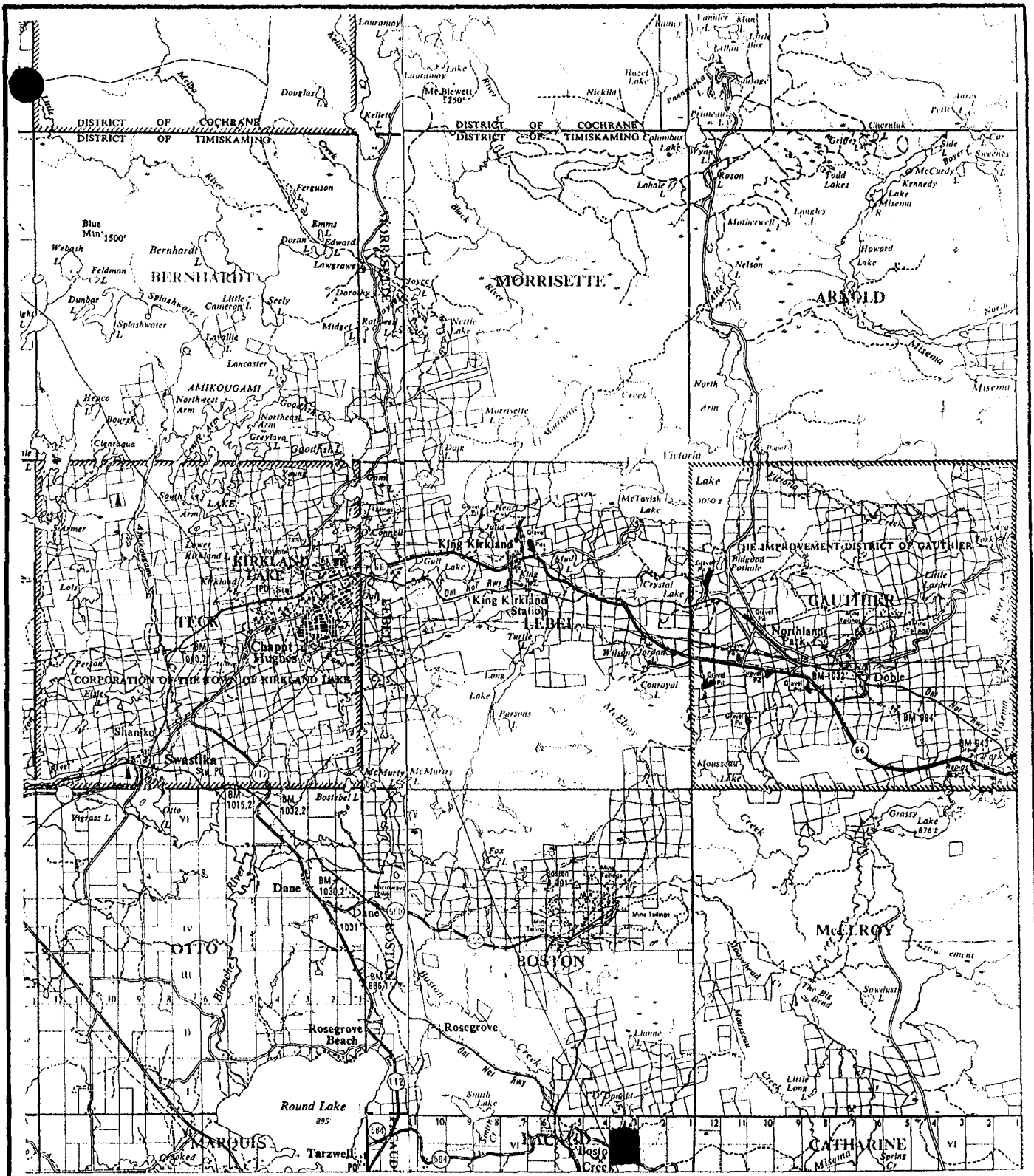


## Claim Location Map

Scale: 1 inch to 1/2 mile

Taken from a June 1986

Figure 1a



Location Map

Figure 1b

A grid system of picket lines 400 feet apart with stations every 100 feet was established at right angles to the baseline. Outcrops were noted along the picket lines and compass and pace traverse lines connected outcrops between the lines, to tie them into the main grid.

#### TOPOGRAPHY

The terrain consists of a low swampy area surrounded by high steep hills, which has a large percentage of exposed outcrop.

The high areas are covered by birch and poplar with spruce, balsam fir and larch occurring in the low areas. Wet areas and alder occurs in the swamp.

#### GENERAL GEOLOGY

According to the O.D.M. Map No. 1957-4 the underlying bedrock consists of basic volcanic lava flows of the Keewatin age. These rock types are primarily gabbroic lava flows and andesite, basalt and pillow lava. The flows appear to be trending northwest-southeast and are facing east.

#### ECONOMIC GEOLOGY

The Perron claim adjoins the Barry Hollinger Gold Mines property to the north and the Bargnesi copper prospect.

The Barry Hollinger was originally known as the Patricia property and was acquired in 1918. The mine was in operation until 1936 and 267,741 tons of ore was milled. Over \$1.6 million dollars in gold and \$3,800. in silver was recovered.



The property is underlain by two series of Keewatin volcanics, which lie in a faulted contact. The Pacaud fault strikes southeast and separates sheared and altered tuffs and tuffaceous sediments on the southwest from basic lava flows on the northeast.

Underground operations were carried out primarily on the No. 7 vein, although twelve (12) veins were found on the property.

The No. 7 vein strikes N 57° E and dips 70° SE. The presence of gold depends largely on the quartz and is found as irregular lenses in the vein.

The mine workings are primarily in basic lavas and the shaft is in Keewatin diabase. The mine is developed to the 2,250 foot level and a two compartment shaft extends from surface to the 1,000 foot level with a three compartment winze from the 1,000 foot level to the 2,250 foot level.

The Bargnesi property lying directly across from O'Donald Lake consists of a main showing of a quartz-carbonate vein stockwork which occurs in massive, dark green, dioritic lava. The property was worked through 1937 to 1956.

PRESENTATION OF FIELD OBSERVATIONS

The field data is presented on a map at a horizontal scale of one inch to 200 feet, Map No.: 86-B4-3, found in the back pocket of this report.

For the purpose of this presentation, refer to the accompanying plan map for the outcrop locations, the topography will be described in greater detail.

i) Topography:

The property is divided in half diagonally by a creek in a low swamp. The southwestern corner consists of a high elongated hill covered with poplar and birch with some exposed outcrop. This hill slopes north from the swamp and levels off approximately parallel to the road. The bush found on this hill is open poplar, birch, regeneration birch and mountain maple.

The low wet area is very flat and has numerous creeks, better described as water channels, throughout. On the northern part of claim L-737417 there is a tailings pond, which was deposited there by the Barry Hollinger Mine, found just north of the property. This tailings is the primary reason for the poor drainage, another factor is the four small beaver ponds which block the flow of the water.

The beaver pond found near the baseline at L 24 + 00 S is the main pond backing up the water, although the pond itself is small. This wet area can easily be traversed since it is covered in heavy grass.

The northeastern part of the claim group has rocky knolls ri-

sing steeply out of the swamp. These knolls have a large amount of exposed outcrop and are covered by mixed bush, being primarily spruce and jackpine on the exposed rock.

The knolls are further divided by two areas of wet swamp which extend northeast perpendicular from the main swamp.

ii) Geology:

Several types of exposed outcrops were found on the Barry Four property. The primary outcrop being of the Keewatin age and a small amount of the Algomian Age.

The rock types found of the Keewatin Series are andesite, basalt and pillow lava, dioritic, diabasic and gabbroic lava and sheared basic lava. These rock types are basic to intermediate volcanics. Also part of this series are acid volcanics, consisting of acid tuff and cherty tuff as well as tuff, tuffaceous sediments and altered equivalents.

The rock type of the Algomian age was a syenite porphyry.

a) Basic and Intermediate Volcanics

These rocks are primarily composed of lava flows, which were found to be massive, dark green rock with a mixture of fine to coarse grained textures. Well exposed pillows were noted, one area of pillows was L 24 + 00 S 8 + 00 E. At L 20 + 00 S 3 + 00 E a coarse grained dark green rock was noted. This may possible be the interior of a thick flow.

b) Acid Volcanics

These rock types were found as narrow interbedded bands of acid tuff and cherty tuff in the basic flows. They occurred as a fine grained grey rock, weathering a chalky white on exposed surface.

They occurred in small amounts and were thinly bedded.

Also found occurring in a larger amount were tuff, tuffaceous sediments and altered equivalents. These were a dark grey fine grained rock. They weathered a soft dark grey brown on exposed surfaces. On the southern part of the group, primarily around L 28 + 00 S and L 24 + 00 S to the west, these rocks were labelled as altered equivalents. They were found to be dark grey in colour but weathered to lighter shades of grey or green grey. They could be classified as a chlorite-epidote schist as they were well stratified but appeared to be sheared and metamorphosed.

c) Algoman-Syenite Porphyry

These rocks were light pink with large crystals of alkali feldspar. It was exposed as narrow dikes intruding the country rock.

iii) Structural Geology:

The major geological structure occurring on the claims is the Pacaud Fault. This Fault was found to occur along the edge of the north sloping hill and the low area. Recognizable signs of the fault were not easily seen on any exposed outcrop. The topography does suggest the presence of a major fault as well as the differences in lithology on each side of the swamp.

CONCLUSIONS AND RECOMMENDATIONS

The major structural fault provides an area of focus for any auriferous zones. Other structural faults are found perpendicular to the Pacaud Fault and may offer further areas of exploration. The contacts between the volcanics and the syenite porphyries should be stripped and sampled for gold. A drill program should also be established to confirm any gold anomalies at depth which may be related to the Barry Hollinger Gold Mine found north of the property.

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.

Mary Greer  
Geological Technician

August 1, 1986

BIBLIOGRAPHY

Sixty-sixth Annual Report of the  
Ontario Department of Mines

Volume LXVI, Part 5, 1957

Geology of Boston Township and part of  
Pacaud Township by K.D. Lawton

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, Ontario, 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 have been continuously engaged in my profession for  
the past six (6) years and I am qualified to write this  
report.
- 4) That I supervised and participated in this survey.

August 1 / 1986  
Date

Mary Greer  
Mary Greer  
Geophysical Technician



32D04SW0382 2.9306 PACAUD

900

Mining Lands Section

File No 2.9306

Control Sheet

TYPE OF SURVEY

GEOPHYSICAL

GEOLOGICAL

GEOCHEMICAL

EXPENDITURE

MINING LANDS COMMENTS:

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*hd  
1991.*

*Dennis K.*

Signature of Assessor

*Aug. 6/86.*

Date





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

*Lands Management*  
# *255AB6*  
*293010*

Mining Act

- 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.

Aug 27

Type of Survey(s) <b>GEOLOGICAL</b>		Township or Area <b>PACAUD</b>
Claim Holder(s) <b>ALEXANDER H. PERRON</b>		Prospector's Licence No. <b>K-19026</b>
Address <b>103 GOVERNMENT ROAD EAST, KIRKLAND LAKE, ONT. P2N 1A9</b>		
Survey Company <b>PERRONS</b>	Date of Survey (from & to) <b>04 07 86   07 07 86</b> <small>Day Mo. Yr. Day Mo. Yr.</small>	Total Miles of line Cr. <b>APPROX. 4-5 MILES</b>
Name and Address of Author (of Geo-Technical report) <b>MARY GREER, 103 GOVERNMENT ROAD EAST, KIRKLAND LAKE, ONT. P2N 1A9</b>		

Credits Requested per Each Claim in Columns at right

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	Days per Claim
	- Electromagnetic	
	- Magnetometer	
	- Radiometric	
	- Other	
	Geological	<b>40</b>
	Geochemical	
Man Days Complete reverse side and enter total(s) here	Geophysical	Days per Claim
	- Electromagnetic	
	- Magnetometer	
	- Radiometric	
	- Other	
Airborne Credits	Days per Claim	
Note: Special provisions credits do not apply to Airborne Surveys.		

Mining Claims Traversed (List in numerical sequence)

Mining Claim		Expend. Days Cr.	Mining Claim		Expend. Days Cr.
Prefix	Number		Prefix	Number	
L	737417				
	737418				
	737419				
	737420				

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AUG 27 1986

MINING CLAIMS SECTION

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JUL 8 1986  
8:40 am

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.

For Office Use Only

Total Days Cr. Recorded  Date Recorded  Mining Recorder

Date Approved as Recorded  Inspector

Date  Recorded Holder or Agent (Signature)

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, 103 GOVERNMENT RD. EAST, KIRKLAND LAKE, ONT. P2N 1A9**

Date Certified  Certified by (Signature)



GEOPHYSICAL TECHNICAL DATA

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

Number of Stations 147 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 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)

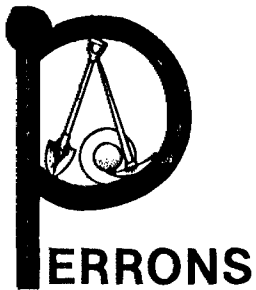
Name of Laboratory \_\_\_\_\_

Extraction Method \_\_\_\_\_

Analytical Method \_\_\_\_\_

Reagents Used \_\_\_\_\_

General \_\_\_\_\_  
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103 GOVERNMENT ROAD EAST - KIRKLAND LAKE, ONTARIO - P2N 1A9 - (705) 567-7057

August 1, 1986

REGISTERED MAIL

Mr. Arthur Barr,  
LANDS ADMINISTRATION BRANCH,  
MINING LANDS SECTION,  
MINISTRY OF NATURAL RESOURCES,  
ROOM 6450, WHITNEY BLOCK,  
QUEEN'S PARK,  
TORONTO, ONTARIO  
M7A 1W3

RECEIVED

AUG - 5 1986

Dear Sir:

RE: Geological Survey Report for  
Pacaud Township  
LARDER LAKE MINING DIVISION

MINING LANDS SECTION

Enclosed herewith please find a duplicate copy of the following:

- Report dated August 1, 1986, by Mary Greer entitled:

Geological Survey Report  
Perron Property  
Barry Hollinger Four  
Pacaud 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,

PERRONS

Mary Greer  
Geological Technician

MG/p  
Encls.

# PACAUD

DISTRICT OF TIMISKAMING

LARDER LAKE MINING DIVISION

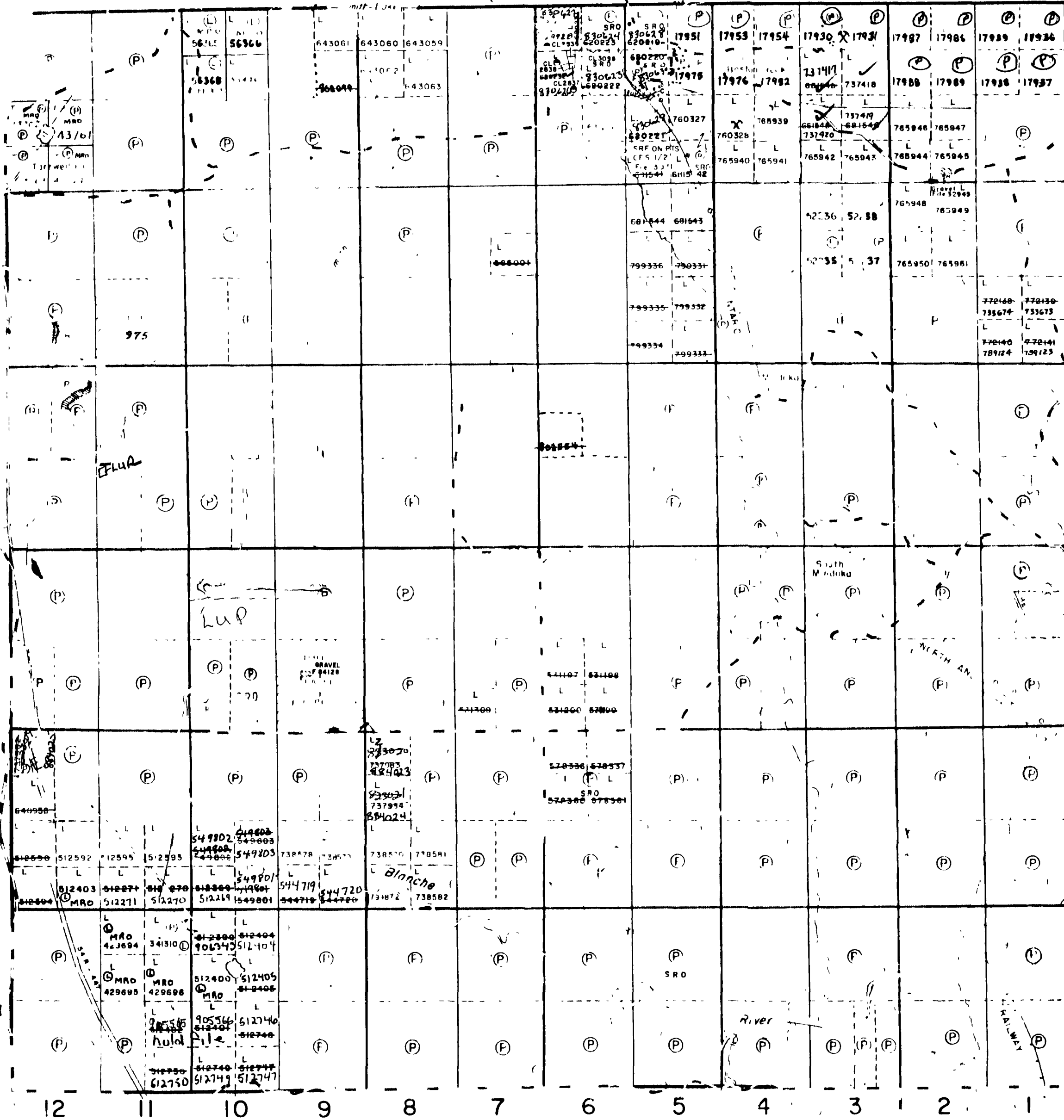
SCALE 1-INCH = 40 CHAINS

### LEGEND

- PATENTED LAND
- CROWN LAND SALE
- LEASES
- LOCATED LAND
- LICENSE OF OCCUPATION
- MINING RIGHTS ONLY
- SURFACE RIGHTS ONLY
- ROADS
- IMPROVED ROADS
- KING'S HIGHWAYS
- RAILWAYS
- POWER LINES
- MARSH OR MUSKEG
- MINES
- CANCELLED

### NOTES

- 400' Surface rights reservation around all lakes and rivers
- (P) SRO shown in...



VI

V

IV

III

II

I

Catharine Twp.

Chamberlain Twp.

PLAN NO. M.380.

ONTARIO  
MINISTRY OF NATURAL RESOURCES  
SURVEYS AND MAPPING BRANCH



32D045W0382 2.0308 PACAUD

200

RECEIVED: August 14-1984

J.P.



### SYMBOLS

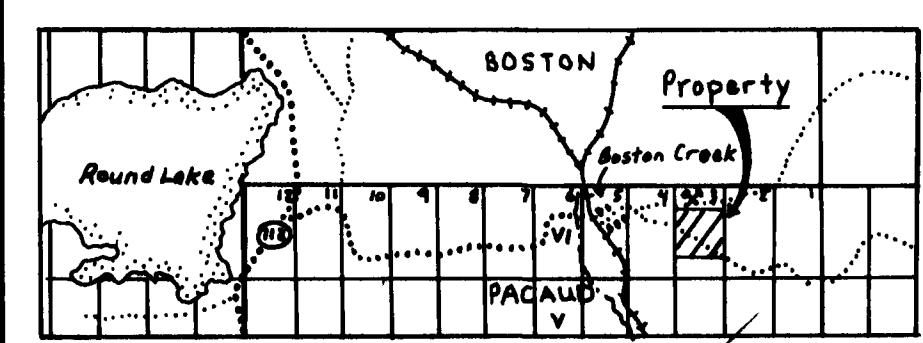
- |                     |  |                 |  |
|---------------------|--|-----------------|--|
| Outcrop             |  | Pillows         |  |
| Spruce              |  | Wet area        |  |
| Jackpine            |  | Alder           |  |
| Claim line          |  | Claim post      |  |
| Bush road           |  | Traverse line   |  |
| Beaver pond and dam |  | Forest boundary |  |

### LEGEND

- CENOZOIC**
- RECENT and PLEISTOCENE - Clay, Sand, Gravel, Boulders
- PRECAMBRIAN**
- ALGOMAN - Syenite porphyry, Lamprophyre
  - POST KEEWATIN - Diorite
  - KEEWATIN - Basic to intermediate volcanics
- 
- Acid volcanics, Tuff, Quartzite

### KEY MAP

29306

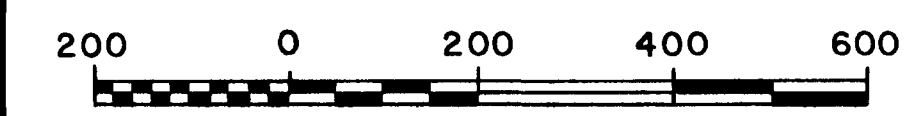


*Mary Greer*

## BARRY HOLLINGER FOUR

### GEOLOGICAL SURVEY

PACAUD TOWNSHIP  
 LARDE LAKE MINING DIVISION  
 DISTRICT OF TIMISKAMING, ONTARIO



Scale: 1 inch to 200 feet

# PERRONS'

KIRKLAND LAKE CANADA

Drawn by: Mary Greer Map No.: 86-84 Date: July 1981

L 16+00 S  
 L 20+00 S  
 L 24+00 S  
 L 28+00 S  
 L 32+00 S  
 L 36+00 S

