



41P14NE0087 2.1319 HALLIDAY

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2.1319

RECEIVED

OCT 5 - 1973

PROJECTS
SECTION

Report on
Geophysical Survey

of

LARCHE AND ROUSSEAU GROUPS

HALLIDAY TOWNSHIP

LARDER LAKE MINING DIVISION

ONTARIO

by

E. J. Ballantyne

Newmont Mining Corporation of Canada Limited

October 1st, 1973

INTRODUCTION

This report contains the results of vertical-loop (broadside) electromagnetic (EM) surveys carried out as part of a larger survey during the period of March 1st to March 27th, 1973. The objective of this work was detection of massive sulphide mineralization.

LOCATION

The area covered by this report consists of 32 contiguous unpatented mining claims described in the attached Technical Data Statements.

Access to the property is by bush lumber roads approximately 50 miles south of Timmins to Campbell Lake. Chartered aircraft are available from South Porcupine.

A location map is presented on the geophysical maps.

GENERAL GEOLOGY

The rocks in the area are Keewatin-type volcanics as described in O.D.M. General Report 79 (1970), "Geology of Halliday & Midlothian Townships," by E. G. Bright. The volcanics are mainly rhyolite agglomerates, tuffs and andesites.

The strike of the rocks in the area is considered to be east-west.

FIELD PROCEDURE

A north-south grid was cut and controlled by east-west base lines. A line spacing of 400 feet and a station interval of 100 feet was employed on the grid. In anomalous areas, the station spacing was reduced to 50 feet.

The electromagnetic survey was conducted using the transmitter coil oriented with its plane in a vertical position and in an east-west direction. The dip angle of the receiving coil was measured on the line 400 feet east of the transmitter coil. The dip angle for two frequencies (600 and 2,400 Hz) were measured.

INTERPRETATION

Three electromagnetic anomalies were noted on this survey and are labeled A, B and C.

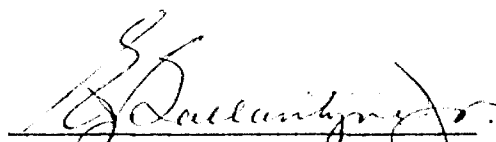
Anomaly A is approximately 2,800 feet long and exhibits poor conductivity. Near vertical dips are indicated.

Anomaly B is approximately 3,000 feet long and appears to have poor conductivity. Its proximity to Anomaly C makes interpretation difficult.

Anomaly C exhibits the best conductivity and is over 8,000 feet long. One drill hole is reported to have been drilled from the island in the vicinity of Line 12E, 10 to 14N. Pyrite stratigraphy was encountered.

SUMMARY AND RECOMMENDATIONS

Three anomalies were found in the course of the survey, only one having good conductivity. Prior to drilling, all three zones should be checked with gravity to determine if any excess mass is associated with the conductors.


E. J. Ballantyne, Jr.

October 1st, 1973





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900

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 Geophysical (EM)

Township or Area Halliday

Claim holder(s) John Larche

721 Churchill Street, Timmins, Ontario

Author of Report E. J. Ballantyne, Newmont Mining Corp.

Address Box 105, Commerce Court, Toronto, Ontario

Covering Dates of Survey March 1 to 27, 1973
(linecutting to office)

Total Miles of Line cut 4.7

MINING CLAIMS TRAVERSED
List numerically

(prefix) (number)

L 255478

L 255477

L 255476

L 291995

L 291999

L 292000

SPECIAL PROVISIONS
CREDITS REQUESTED

ENTER 40 days (includes
line cutting) for first
survey.

ENTER 20 days for each
additional survey using
same grid.

Geophysical

- Electromagnetic

- Magnetometer

- Radiometric

- Other

Geological

Geochemical

DAYS
per claim

40

J

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

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

DATE: _____ SIGNATURE: E. J. Ballantyne
Author of Report

PROJECT'S SECTION

Res. Geol. _____ Qualifications on this file 2.809

Previous Surveys L.D.

Checked by _____ date _____

GEOLOGICAL BRANCH _____

Approved by _____ date _____

GEOLOGICAL BRANCH _____

Approved by _____ date _____

TOTAL CLAIMS 6

OFFICE USE ONLY

If space insufficient, attach list

GEOPHYSICAL TECHNICAL DATA

GROUND SURVEYS

Number of Stations 285 Number of Readings 570 (2 freq.)
Station interval 100'
Line spacing 400'
Profile scale or Contour intervals 40° per inch
(specify for each type of survey)

MAGNETIC

Instrument _____
Accuracy - Scale constant _____
Diurnal correction method _____
Base station location _____

ELECTROMAGNETIC

Instrument McPhar VHEM
Coil configuration Vertical loop Tx-dip angle system
Coil separation 400'
Accuracy 1°
Method: Fixed transmitter Shoot back In line Parallel line
Frequency 600 and 2,400 Hz
(specify V.I.F. station)
Parameters measured Dip angle

GRAVITY

Instrument _____
Scale constant _____
Corrections made _____
Base station value and location _____
Elevation accuracy _____

INDUCED POLARIZATION - RESISTIVITY

Instrument _____
Time domain _____ Frequency domain _____
Frequency _____ Range _____
Power _____
Electrode array _____
Electrode spacing _____
Type of electrode _____

Show instrument technical data in each space for type of survey submitted or indicate "not applicable"

GEOPHYSICAL TECHNICAL DATA

GROUND SURVEYS

Number of Stations 491 Number of Readings 982 (2 freq.)
Station interval 100'
Line spacing 400'
Profile scale or Contour intervals 40 degrees per inch
(specify for each type of survey)

MAGNETIC

Instrument
Accuracy - Scale constant
Diurnal correction method
Base station location

ELECTROMAGNETIC

Instrument McPhar VHEM
Coil configuration Vertical loop Tx-dip angle system
Coil separation 400'
Accuracy 1 degree
Method: Fixed transmitter Shoot back In line Parallel line
Frequency 600 and 2,400 Hz
Parameters measured Dip angle
(specify V.L.F. station)

GRAVITY

Instrument
Scale constant
Corrections made
Base station value and location

Elevation accuracy

INDUCED POLARIZATION - RESISTIVITY

Instrument
Time domain Frequency domain
Frequency Range
Power
Electrode array
Electrode spacing
Type of electrode

GEOPHYSICAL TECHNICAL DATA

GROUND SURVEYS

Number of Stations 241 Number of Readings 482 (2 freq.)
Station interval 100'
Line spacing 400'
Profile scale or Contour intervals 40° per inch
(specify for each type of survey)

MAGNETIC

Instrument _____
Accuracy - Scale constant _____
Diurnal correction method _____
Base station location _____

ELECTROMAGNETIC

Instrument McPhar VHEM
Coil configuration Vertical loop Tx-dip angle system
Coil separation 400'
Accuracy 1°
Method: Fixed transmitter Shoot back In line Parallel line
Frequency 600 and 2,400 Hz
(specify V.L.F. station)

Parameters measured Dip Angle

GRAVITY

Instrument _____
Scale constant _____
Corrections made _____
Base station value and location _____

Elevation accuracy _____

INDUCED POLARIZATION - RESISTIVITY

Instrument _____
Time domain _____ Frequency domain _____
Frequency _____ Range _____
Power _____
Electrode array _____
Electrode spacing _____
Type of electrode _____

GEOPHYSICAL - GEOLOGICAL - GEOCHEMICAL
TECHNICAL DATA STATEMENT

RECEIVED

OCT 5 - 1973

PROJECTS
SECTION

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TECHNICAL REPORT MUST CONTAIN INTERPRETATION, CONCLUSIONS ETC.

Type of Survey Geophysical EM

Township or Area Halliday

Claim holder(s) A. Rousseau

721 Church St., Timmins, Ontario

Author of Report E. J. Ballantyne, Newmont Mining Corp.

Address Box 105, Commerce Court, Toronto

Covering Dates of Survey March 1 to 27, 1973
(linecutting to office)

Total Miles of Line cut 8.5

MINING CLAIMS TRAVERSED
List numerically

L	353654
(prefix)	(number)
L	353655
L	353656
L	353657
L	353658
L	353659
L	353660
L	353661
L	353662
L	353663

If space insufficient, attach list

<u>SPECIAL PROVISIONS</u> <u>CREDITS REQUESTED</u>	DAYS per claim
ENTER 40 days (includes line cutting) for first survey.	Geophysical <u>40</u>
ENTER 20 days for each additional survey using same grid.	- Electromagnetic _____
	- Magnetometer _____
	- Radiometric _____
	- Other _____
	Geological _____
	Geochemical _____

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

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

DATE: _____ SIGNATURE: E. J. Ballantyne
Author of Report or Agent

PROJECTS SECTION

Res. Geol. _____ Qualifications 2.809

Previous Surveys _____

Checked by _____ date _____

GEOLOGICAL BRANCH _____

Approved by _____ date _____

GEOLOGICAL BRANCH _____

Approved by _____ date _____

TOTAL CLAIMS 10

OFFICE USE ONLY

Show instrument technical data in each space for type of survey submitted or indicate "not applicable"

GEOPHYSICAL TECHNICAL DATA

GROUND SURVEYS

Number of Stations 459 Number of Readings 918 (2 freq.)
 Station interval 100'
 Line spacing 400'
 Profile scale or Contour intervals 40° per inch
(specify for each type of survey)

MAGNETIC

Instrument _____
 Accuracy - Scale constant _____
 Diurnal correction method _____
 Base station location _____

ELECTROMAGNETIC

Instrument McPhar VHEM
 Coil configuration Vertical loop Tx - dip angle system
 Coil separation 400'
 Accuracy 1°
 Method: Fixed transmitter Shoot back In line Parallel line
 Frequency 600 and 2,400 Hz
(specify V.L.F. station)
 Parameters measured Dip angle

GRAVITY

Instrument _____
 Scale constant _____
 Corrections made _____
 Base station value and location _____

Elevation accuracy _____

INDUCED POLARIZATION - RESISTIVITY

Instrument _____
 Time domain _____ Frequency domain _____
 Frequency _____ Range _____
 Power _____
 Electrode array _____
 Electrode spacing _____
 Type of electrode _____



ONTARIO

TECHNICAL ASSESSMENT WORK CREDITS

Recorder Holder John Larche and A. Rousseau

Township or Area Halliday Township

Type of Survey and number of
Assessment Days Credits per claim

GEOPHYSICAL

Electromagnetic 40 days

Magnetometer days

Radiometric days

Induced Polarization days

GEOLOGICAL days

GEOCHEMICAL days

Man days Airborne

Special Provision Ground

NOTICE OF INTENT TO BE ISSUED

- Credits have been reduced because of partial coverage of claims.
- Credits have been reduced because of corrections to work dates and figures of applicant.
- NO CREDITS have been allowed for the following mining claims as they were not sufficiently covered by the survey:

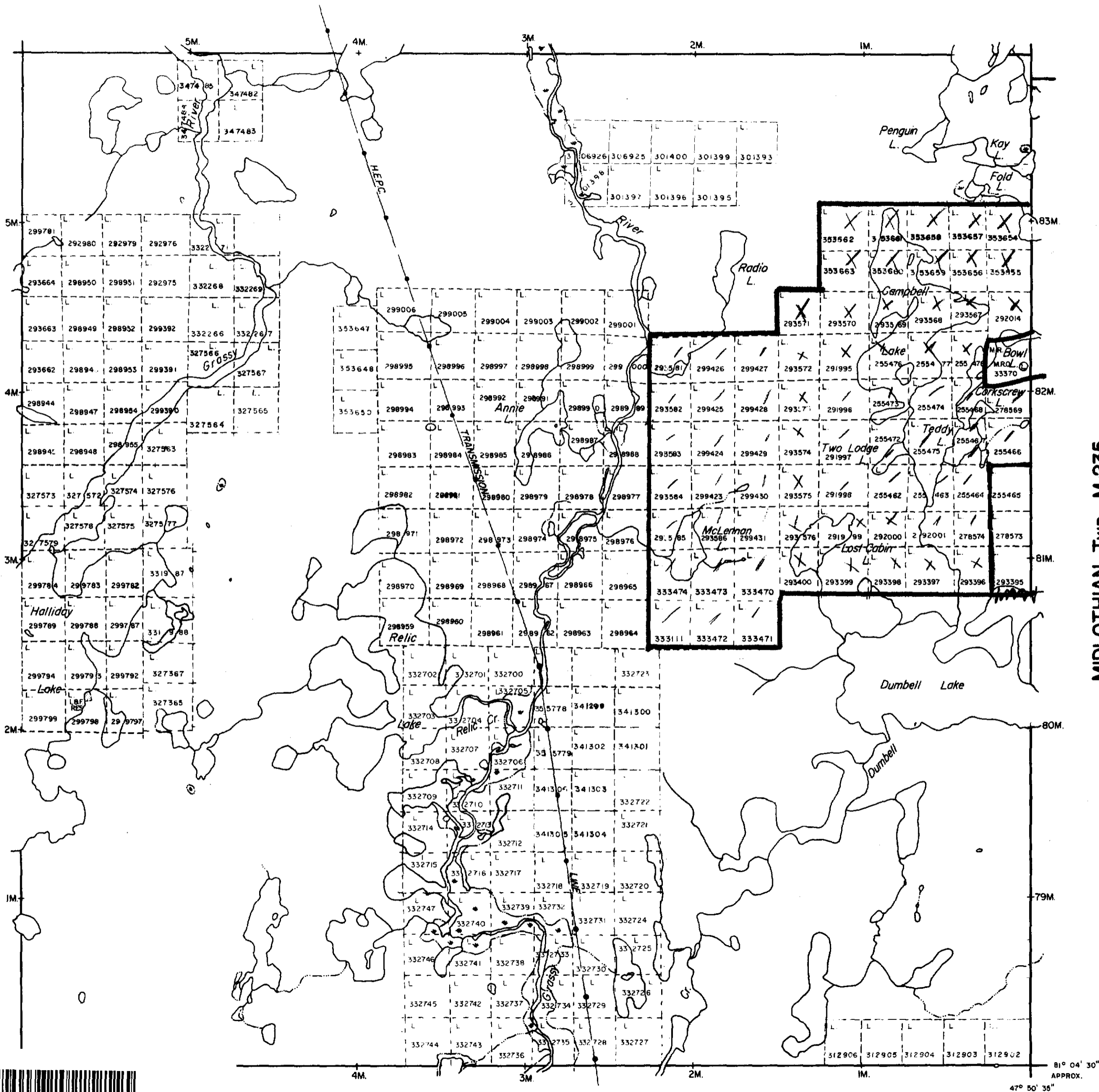
Mining Claims	
L. 255462 to 64 inclusive	
255466 to 68	"
255472 to 78	"
278569	
278574	
291995 to 292001 inclusive	
292014	
293396 to 400 inclusive	
293567 to 76	"
353654 to 63	"

The Mining Recorder may reduce the above credits if necessary in order that the total number of approved assessment days recorded on each claim does not exceed the maximum allowed as follows: Geophysical - 80; Geological - 40; Geochemical - 40;

HUTT Twp. M-943

NOTES

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



MINING LANDS -
DATE OF ISSUE
OCT 9 1973
MINISTRY
OF NATURAL RESOURCES

LEGEND

- PATENTED LAND (P or *)
 - PATENTED FOR SURFACE RIGHTS ONLY (P or *)
 - 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 (X)
- *used only with summer resort locations or when space is limited

TOWNSHIP OF

HALLIDAY

DISTRICT OF SUDBURY 2.1319

LARDER LAKE
MINING DIVISION

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

DR. RWN
DATE FEB. 2, 71.

PLAN NO. **M-910**

ONTARIO



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200

MOND Twp. M-870

81° 04' 30"
APPROX.
47° 50' 35"



Mining Claims
L.293581 to 86 inclusive
299423 to 31 " "

Received credits for
EM and Mag on
File 2-1292

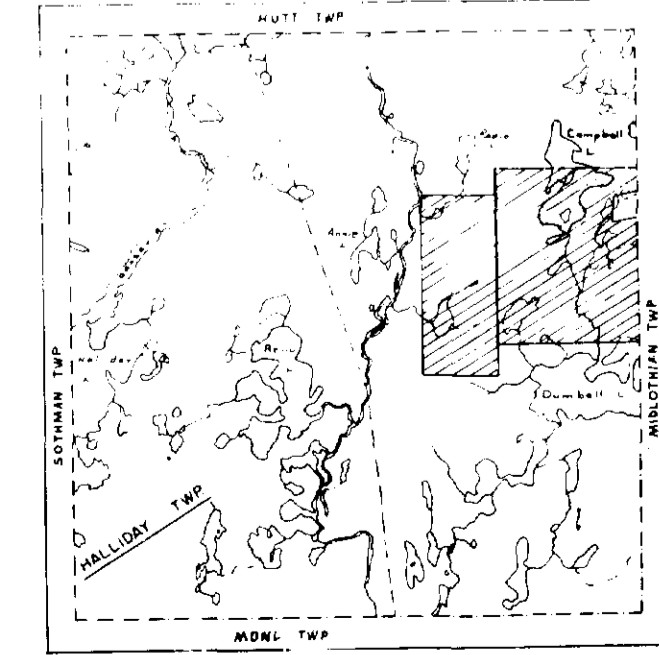
Mining Claims
L.333111
333470 to 74 inclusive

Received credits for
EM and Mag on
File 2-1293

LEGEND

- TOWNSHIP BOUNDARY
- LAKES AND RIVERS
- PICKET AND BASE LINES
- ANOMALY AXIS
- CLAIM POST

- INSTRUMENT: ALPHA THEM
Stipulation Technique (400' N.R. Stipulation)
- LOW FREQUENCY (600 Hz)
 - HIGH FREQUENCY (2400 Hz)
 - REVERSAL
 - PLOTTING CONVENTION
 - CROSSOVER
- Scale: 1" = 4000'



NEWMONT MINING CORPORATION OF CANADA LIMITED
CAMPBELL LAKE - LARCHE ROUSSEAU PROPERTY
VERTICAL LOOP E.M. SURVEY

FILE NO. 234
N.T.S. NO. 41-P-14
SURVEYED BY FLEAGITT, D'ARNO, & HOLZMAN
DRAWN BY FLEAGITT, E & CAMPBELL
DATE: MAY 973

