

010



52G15NW0120 52G15NW0073A1 SIXMILE LAKE

2.1587
2.1587

REPORT
ON
A MAGNETOMETER AND A VLF-EM SURVEY
ON
A 16 CLAIM GROUP
6 MILE LAKE AREA - O.D.M. MAP M.2877
PATRICIA MINING DIVISION
ONTARIO

RECEIVED
OCT 4 1974
PROJECTS UNIT

PROPERTY, LOCATION & ACCESS

The property consists of 16 contiguous, unpatented mining claims in the 6 Mile Lake Area of Patricia Mining Division. They are numbered as follows:

Pa 383184 - 91 inclusive

Pa 383195 - 201 "

Located 40 miles north of the Town of Ignace, the property can be reached by water from Highway 599, which extends from Ignace to Sturgeon Lake. A 20 mile trip by water connects with a tractor road which leads from the north shore of Sturgeon Narrows to the property. The tractor road is about 2 miles long.

HISTORY

The claims were initially staked in 1969 by Rio Tinto and Dr. Wahl. The claims have been flown and probably covered by ground geophysics.

The present owners re-staked the ground in 1972.

FIELD PROCEDURE

The old lines were re-established - 2 different grids existed and base stations for the magnetometer were established at 400 foot intervals along the base line. Using the north-south lines, the property was traversed in a series of loops both north and south from the base line.

A McPhar M700 magnetometer and a Crone Radem were the instruments used.

Work was done in June and July, 1974.

INTERPRETATION

Magnetics

From a background of around 500 gammas, readings rise to a maximum of around 1,200 gammas. The magnetic suggests that a wide band of acid volcanics (known to exist to the north of the property) strikes southwesterly across the property. Along the north boundary they extend from the northeast corner of the property westerly to the lake in claim Pa 383187. Intermediate to basic volcanics

are interpreted as underlying claims 383196, 383193 and 383201 in the southeast corner of the property. Similar rocks are suggested at the west end of the property underlying claims 383188-89-90-91.

EM Conductors

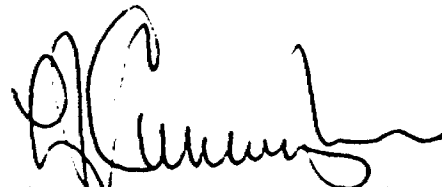
A number of conductors are shown. With one exception, all are weak and considered to be the result of conductive overburden.

In the southeast corner of the block one conductor near the south boundary of claims 383193 and 383201 is stronger and may have economic importance.

RECOMMENDATIONS

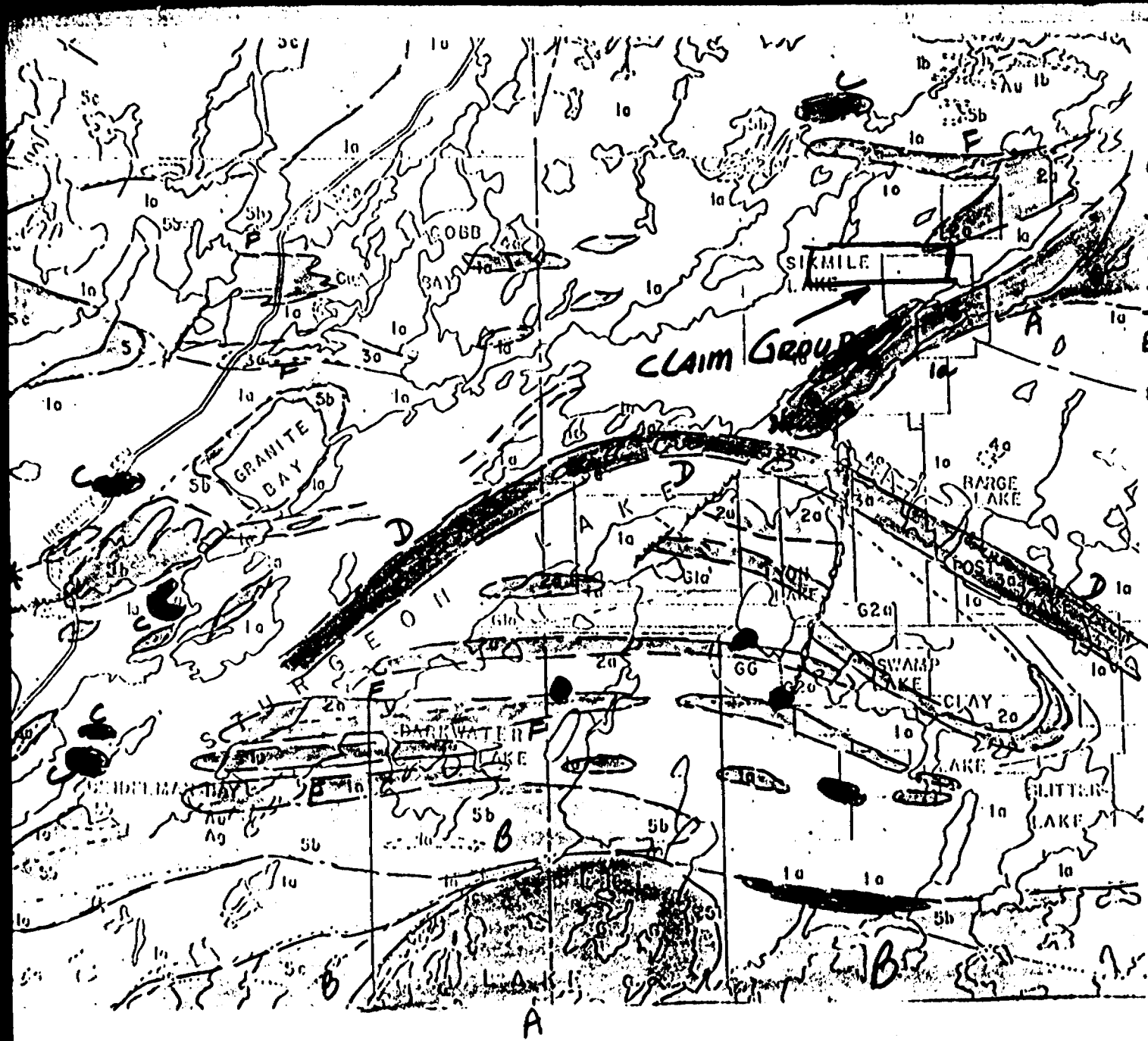
Further investigation by geophysics and examination on the ground is recommended for the conductor that extends from L-4 to L-20 near the south boundary in claims 383193 and 383201.










Signed,



L. J. Cunningham, B.Sc., P.Eng.,
Mining Engineer

Dated at
Kirkland Lake, Ontario
30th September, 1974



- L E G E N D
- A  Syenitic Rocks
 - B  Granitic Rocks
 - C  Basic Intrusive Rocks
 - D  Sedimentary Rocks
 - E  Basic Volcanic Rocks
 - F  Acid Volcanic Rocks
- S Y M B O L S
-  Fault
 -  Axis of Syncline
 -  Ore Body
- Possible Orebody
- Geology from O.D.M. Maps
P.353, P.588-89-90-91, P.670

GENERAL GEOLOGY

STURGEON LAKE AREA
ONTARIO

Scale 1" = 2 miles

23 December, 1971 - L.J.Cunningham
B.Sc., P.Eng.

APPENDIX

The Radem equipment simply utilizes a radio receiver covering the frequency band of VLF transmitter stations scattered over this continent and other parts of the world. These transmitter bases are especially constructed towers which transmit on the VLF frequency (very low frequency) expressly for communication with submarines which they do effectively through depths of salt water. Therefore it is understandable that penetration into rock is substantial should there be no conductive overburden acting as an inhibitor.

These transmitter stations transmit in the 17 Kcs. to 26 Kca. range. A station is chosen so that the electromagnetic lines of the horizontally concentric field are perpendicular to the strike of the formations or conductors which are being sought in the region of interest. The numerous VLF stations available make it a simple matter to select the appropriate primary field direction required which was the Seattle, Washington station in the present case. The transmitter station may almost be considered as located at infinity, therefore the primary field is uniform and parallel in a given area.

Coupling due to a secondary induced field is measured by a tilt angle. This is accomplished by turning the receiver around a vertical axis to a position of minimum signal and then tilting around a horizontal axis to a position of no signal or "null". This angle is measured in degrees and the direction of dip is noted. The receiver is marked so that when tilted an arrow on the instrument point toward the axis of the conductor. As the conductive axis is "crossed over" the arrow points vertically down and the dip angle is zero. The degree of tilt or amplitude is generally a measure of the intensity of the conductor. The width between the peaks of the amplitude is generally an indication of the depth of the conductor. The narrower spread of the peak indicating a conductor nearer surface.

The Radem instrument must be used with a great deal of discretion and experience; the frequencies used similarly attenuate buried metallic conductors and strong surficial ionic conductors. The resultant conductive zones may be graphite, sulphides, faults, wet shears or surficial conductive clay.

**DUPLICATE COPY
POOR QUALITY ORIGINAL
TO FOLLOW**

A P P E N D I X

The Radom equipment simply utilizes a radio receiver covering the frequency band of VLF transmitter stations scattered over this continent and other parts of the world. These transmitter bases are especially constructed towers which transmit on the VLF frequency (very low frequency) expressly for communication with submarines which they do effectively through depths of salt water. Therefore it is understandable that penetration into rock is substantial should there be no conductive overburden acting as an inhibitor.

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File 21587

900 GEOLOGICAL - GEOCHEMICAL
TECHNICAL DATA STATEMENT

RECEIVED
OCT 4 1974

PROJECTS UNIT

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 Magnetometer and VLF - EM
Township or Area 6 Mile Lake Area (M2877) Patricia Mining
Claim holder(s) R.A. Gibson - 383184 - 91 Div.
J.K. Lytle - 383194 - 201
Author of Report L. J. Cunningham, B.Sc., P.Eng.,
Address 1 McPhee Avenue, Kirkland Lake, Ontario
Covering Dates of Survey June - September, 1974
(linecutting to office)
Total Miles of Line cut _____

MINING CLAIMS TRAVERSED	
List numerically	
Pa	383184
(prefix)	(number)
	383185
	383186
	383187
	383188
	383189
	383190
	383191
Pa	383194
	383195
	383196
	383197
	383198
	383199
	383200
	383201
TOTAL CLAIMS <u>16</u>	

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

AIRBORNE CREDITS (Special provision credits do not apply to airborne surveys)
Magnetometer _____ Electromagnetic _____ Radiometric _____
(enter days per claim)
DATE 30 Sept 74 SIGNATURE: [Signature]
Author of Report or Agent

PROJECTS SECTION
Res. Geol. _____ Qualifications 63.1603
Previous Surveys 2. MFT geological, mag + EM
performed 1970 different instruments L.D.
Checked by _____ date _____

GEOLOGICAL BRANCH
Approved by _____ date _____
GEOLOGICAL BRANCH
Approved by _____ date _____

OFFICE USE ONLY

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

GEOPHYSICAL TECHNICAL DATA

Number of Readings 780

Profile four intervals Magnetometer - contoured in 100 gamma intervals

VLF - EM ^(specify for each type of survey) Profile 1" = 200'

MAGNETIC Contours at 10° intervals

Instrument McPhar N700

Accuracy Scale constant ± 5 gammas

Diurnal correction method From base stations located every 400 feet along base line, property

Base station location was traversed in series of loops to north & south

All loops were corrected

ELECTROMAGNETIC

Crone Radem

± 15'

Fixed transmitter

Shoot back

In line

Parallel line

Seattle, Washington

(specify V.L.F. station)

Parameter measured

GRAVITY

Base station value and location

Elevation accuracy

INDUCED POLARIZATION - RESISTIVITY

Frequency domain

Range

Electrode

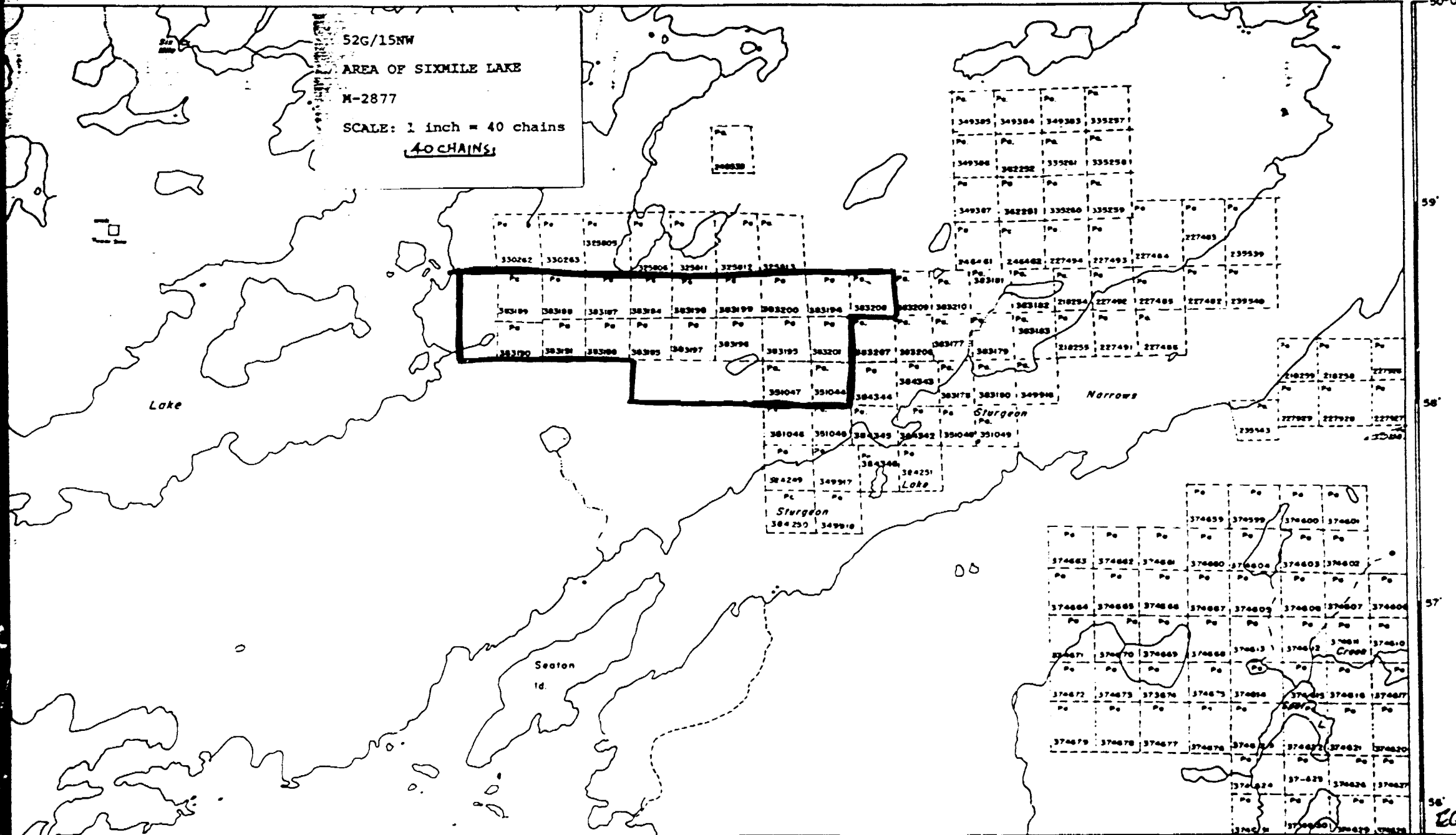
Type

Fourbay Lake M. 2879

90°45'

50°00'

52G/15NW
 AREA OF SIXMILE LAKE
 M-2877
 SCALE: 1 inch = 40 chains
40 CHAINS



59'

58'

57'

56'

T. S. A. M. 2076

EQ



TECHNICAL ASSESSMENT WORK CREDITS

Recorder Holder Messrs. R. A. Gibson and J. K. Lytle

Township or Area Sixmile Lake

Type of Survey and number of Assessment Days Credits per claim

Mining Claims

Pa. 383184 to 91 inclusive
383194 to 201 "

GEOPHYSICAL

Electromagnetic 20 days

Magnetometer 20 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:

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;



Ontario

Ministry of
Natural
Resources

January 13, 1975

Mr. J. R. Oatway
Regional Director
Ministry of Natural Resources
808 Robertson Street
Kenora, Ontario
P9M 3X7

Dear Sir:

Re: Mining Claims Pa. 383184 et al,
Sixmile Lake, File 2.1587

MINISTRY OF NATURAL RESOURCES
RECEIVED

JAN 17 1975

REGIONAL OFFICE, KENORA

Our file number 2.1587

Your file number

The Geophysical (Electromagnetic & Magnetometer) assessment work credits as shown on the attached statement have been approved as of the above date.

A copy of this letter should be sent to the Mining Recorder who should inform the recorded holder of these mining claims and so indicate on his records.

Similarly a copy of this letter together with the enclosed duplicate technical report and maps should be sent to the Resident Geologist.

Yours very truly,

for
J. R. McGinn
Director
Lands Administration Branch

Whitney Block, Room 1617
Queen's Park
Toronto, Ontario
M7A 1X1
Phone: 416-965-6918

DM/mw

cc: Mr. R. A. Gibson
Thunder Bay, Ontario
cc: Mr. J. K. Lytle
Thunder Bay, Ontario
cc: Mr. L. J. Cunningham
Kirkland Lake, Ontario

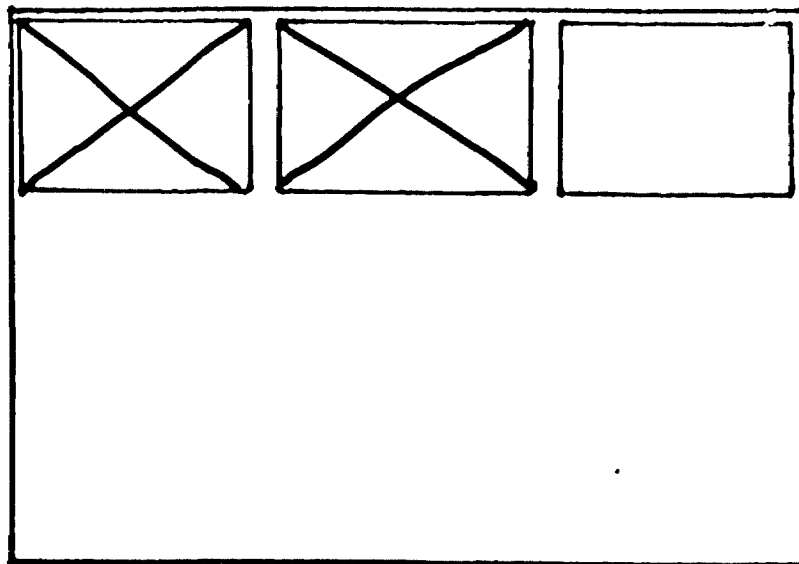
cc: Mining Recorder
Sioux Lookout, Ontario
cc: Resident Geologist
Sioux Lookout, Ontario ✓

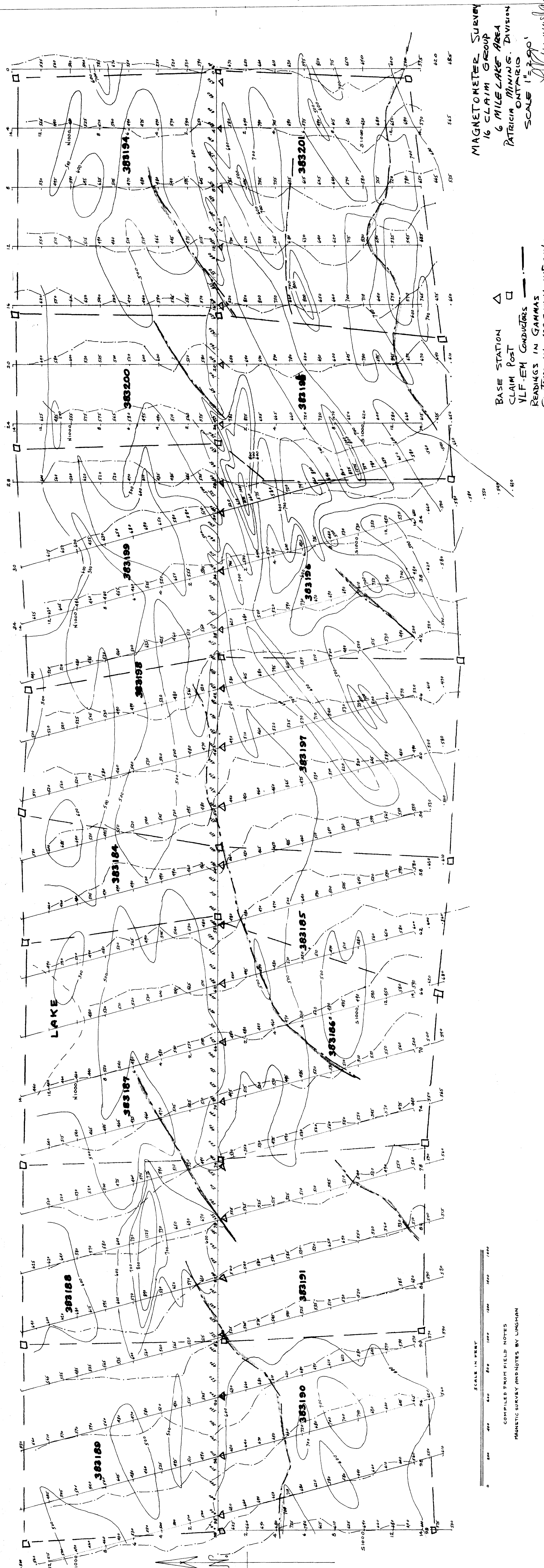
SEE ACCOMPANYING
MAP(S) IDENTIFIED AS

526 / 15 NW - 0073 - A # 1 - 2

LOCATED IN THE MAP
CHANNEL IN THE
FOLLOWING SEQUENCE

(X)





MAGNETOMETER SURVEY
 16 CLAIM GROUP
 6 MILE LAKE AREA
 PATRICIA MINING DIVISION
 ONTARIO
 SCALE 1" = 200'

BASE STATION \triangle
 CLAIM POST \square
 VLF-EM CONDUCTORS ———
 READINGS IN GAMMAS
 CONTOURS IN 100 GAMMA INTERVALS.

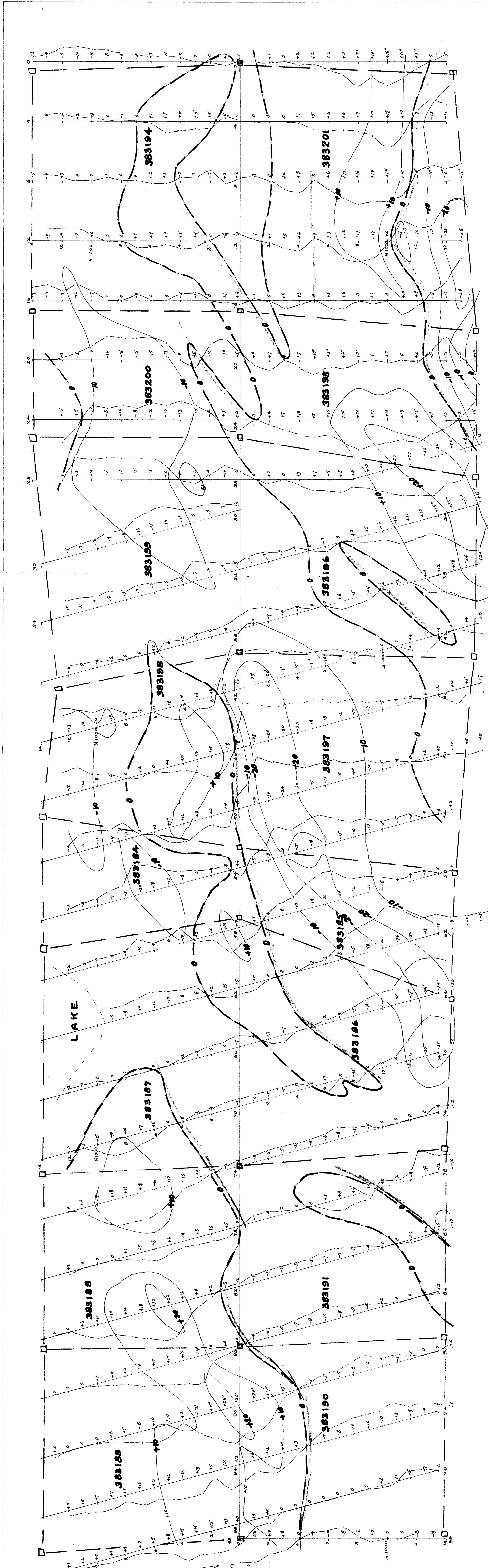
SCALE IN FEET
 0 200 400 600 800 1000 1200 1400 1600
 COMPILED FROM FIELD NOTES
 MAGNETIC SURVEY AND NOTES BY LINGMAN

MAGN. GRID 2 08 74-98

526/15NW-0073-A1 #1



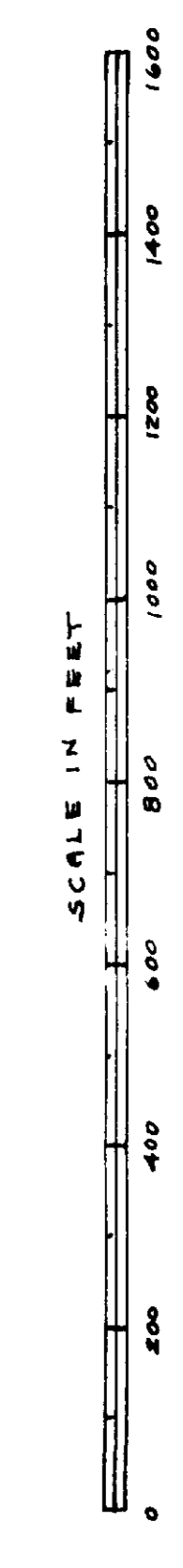
2000



526/15 NW-0073-A1 #2

VLF-EM SURVEY
 16 CLAIM GROUP
 6 MILE LAKE AREA
 PATRICIA MINING DIVISION
 ONTARIO
 SCALE 1" = 200'

EM CONDUCTOR ———
 READINGS IN DEGREES
 PLOTTED IN PROFILE + CONTOURED (0 INTERVAL)
 SCALE 1" = 20'



COMPILED FROM FIELD NOTES AND SKETCHES
 RADEM VLF DIP SURVEY AND NOTES BY WILLIAM WILSON

GRID 2
 RADEM VLF SEATTLE
 74-98

