



320055E0081 2.2326 OSSIAN

010

Report on Mag & EM Surveys

REPORT ON
MAGNETOMETER AND ELECTROMAGNETIC SURVEYS
at
MINEDEL MINES LIMITED
Ossian Twp. Property

INTRODUCTION:

Minedel Mines Limited holds claims in Ossian Township, Larder Lake area, Ontario. During October and November of 1976 magnetometer and electromagnetic surveys were carried out over a portion of the Minedel claims by Projex Limited. The following is a resume of work done and observations made.

PROPERTY:

The Minedel property consists of twenty-three contiguous patented mining claims, and, adjoining to the east, a further ten unpatented contiguous claims recorded in the name of Stephen Vogl, and optioned by Minedel Mines Ltd.

The area covered by the surveys includes all or parts of patented claims #L11133, 11182, 11183, 11184, 11186, 11187, 11189, 12577, 12578 and 12717, and all of unpatented claims #364894 to 364899 inclusive, and 387706 to 387709 inclusive.

The property is situated in north-central Ossian Township, about seven miles north of Virginiatown, Ontario. A good gravel road passes about a thousand feet east of the property, while a dirt road extends to the Ossian Gold Mines shaft, on the patented claims about one-half mile west of the area surveyed.

10 JANUARY, 1977

L.G. PHELAN, M.A.S.C., P. ENG.
PROJEX LIMITED
330 BAY STREET, TORONTO

GENERAL GEOLOGY:

The bulk of the township is underlain by volcanics of intermediate composition. Traversing the north-central part of the township in an east-west direction is a series of beds of felsic volcanics - rhyolite and rhyodacite breccia, agglomerate, and tuff - with a width of about one-half mile. This would appear to be an anticlinal axis, with more mafic volcanics on both limbs. The Minedel claims cover the greater part of this felsic volcanic horizon.

West of the area surveyed is the old Ossian Gold Mine - a gold-bearing quartz vein in sheared rhyolite. Old reports, on work done in the area of this gold occurrence, make frequent reference to copper, zinc and lead mineralization in the rhyolites. The purpose of the present survey was to test for economically mineable concentrations of these base metals in the favorable rhyolite horizon.

WORK DONE:

A 100' x 400' line grid was cut and chained over the optioned claims and parts of the patented claims enumerated above. Base and tie lines were east-west, with north-south picket lines. A total of 20 miles of line were cut, 13 on the optioned claims and 7 on patented land. Linecutting was contracted by Gilles Girard of Rouyn, Quebec, and was done during October 1976.

A magnetometer survey was carried out over all lines cut, with readings taken at 100 foot intervals, and at intervening points where abrupt variations were noted. Again a total of 20 line miles were surveyed, 13 miles on the unpatented claims. Instrument operator was Pierre Morissette, 335 West

Pender Street, Rouyn, Quebec. Instrument used was a Sharpe M.F. 1 flux gate magnetometer, with a sensitivity of 20 gammas per scale division. A base station was established at the east end of the base line. Results, corrected for diurnal variation, were plotted at a scale of one inch to two hundred feet, and contoured. Results are shown on a plan accompanying this report.

For the electromagnetic survey various instruments and configurations were attempted. On the easterly part of the area a Sharpe SE 600 horizontal loop system was tried, using first 200 foot and then 300 foot separation. Results were quite flat. Deep overburden was suspected in this area, so the same equipment and separations were then run over an area of considerable outcrop farther west. Response remained relatively flat. A McPhar V.H.E.M. unit was then brought in and used with the horizontal loop configuration and both 200 and 300 foot coil separations. Results were quite comparable. Since the McPhar unit has two-frequency capability, hence, is somewhat more informative, the survey was completed with this equipment and 200 foot spreads.

Results, as plotted on the accompanying one inch to two hundred foot plan, are those obtained with two-hundred foot coil separation throughout. Lines 0, 4, 8, 12, 16, S $\frac{1}{2}$ 20, S $\frac{1}{2}$ 24, 76, 80, 84, 88 and 92 show results obtained using the Sharpe SE 600 unit. Frequency is 1600 hertz and sensitivity is 1% for both inphase and quadrature components. The other lines - 20 to 72, and 96 to 100 - show the high-frequency (2400 hertz) response from the McPhar V.H.E.M. unit. Low frequency (600 hertz) response was noted also at all stations. For purposes of clarity the low frequency results

are reproduced as separate profiles, and only where there is significant variation, i.e. on lines 28 to 56 inclusive. Again the V.H.E.M. sensitivity for both components is 1% of field strength. Instrument generator throughout was Pierre Morissette. Total length of line surveyed was 16 miles, of which 10 miles were on the unpatented claims.

SURVEY RESULTS:

Neither survey produced results that could be considered promising.

The magnetometer survey readings vary from 450 to 820 gammas, with about 80% in the 550 - 650 gamma range; i.e. the area is magnetically very flat, with only a few spot highs and lows. There is little or no contrast between the rhyolites and the intermediate volcanics that lie on either flank. In two areas - circa line 82W and 36W - there is some suggestion of north-south or north-east trending faulting.

The electromagnetic survey did not detect any good strong conductivity of the type that might be considered representative of economic sulfide mineralization. Again throughout most of the area response is quite flat. In the central portion of the survey - lines 28 to 56 W - there is more variation in response. However, even here the results suggest a combination of topographic effects, clay beds, swamp, etc. rather than a bedrock source, and furthermore there is no magnetic correlation at all with these fuzzy and indefinite indications of conductivity.

The magnetic highs detected in earlier work by Mr. Lacombe were relocated. There was, however, no evidence of coincident conductivity.


CONCLUSIONS:

It must be concluded that the magnetometer and electromagnetic surveys have not succeeded in detecting any mineralization of economic interest. Mr. D. Sutherland, P.Eng., Consulting Geophysicist, was requested to study the results, and give a second opinion. He concurred with the above.

No follow-up work to these surveys can be recommended.

Respectfully submitted,

PROJEX LIMITED,



L. G. Phefan, M.A.Sc., P.Eng.,
Consulting Geologist.



Ministry of Natural Resources

File 2,2326

GEOPHYSICAL - GEOLOGICAL - GEOCHEMICAL
TECHNICAL DATA STATEMENT

RECEIVED

MAR 4 - 1977

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.

MINING LANDS SECTION

Type of Survey(s) MAGNETOMETER & ELECTROMAGNETIC
Township or Area OSSIAN
Claim Holder(s) STEPHEN VOGL
Survey Company PROJEX LIMITED
Author of Report L E PHIZAN
Address of Author 330 Bay St Toronto Suite 601
Covering Dates of Survey 1 Oct 76 to 10 Jan 77
(linecutting to office)
Total Miles of Line Cut 13

MINING CLAIMS TRAVERSED	
List numerically	
<u>L</u>	<u>364894</u>
(prefix)	(number)
	<u>364895</u>
	<u>364896</u>
	<u>364897</u>
	<u>364898</u>
	<u>364899</u>
	<u>387706</u>
	<u>387707</u>
	<u>387708</u>
	<u>387709</u>
TOTAL CLAIMS <u>10</u>	

SPECIAL PROVISIONS CREDITS REQUESTED	DAYS per claim
ENTER 40 days (includes line cutting) for first survey.	<u>40</u>
ENTER 20 days for each additional survey using same grid.	<u>20</u>
Geophysical	
--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: 15 Feb 77 SIGNATURE: [Signature]
Author of Report or Agent

Res. Geol. _____ Qualifications 63A. 389.

File No.	Type	Date	Claim Holder

OFFICE USE ONLY

RECEIVED

MAR 4 1977

PROJECTS UNIT

If space insufficient, attach list

GEOPHYSICAL TECHNICAL DATA

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

Number of Stations MAG = 654 EM = 450 Number of Readings MAG = 698 EM = 672
Station interval 100' Line spacing 400'
Profile scale 1" = 100'
Contour interval 400, 500, 550, 600, 650, 700, 800

MAGNETIC

Instrument SHARPE MFI
Accuracy - Scale constant 20% / scale deviation
Diurnal correction method RUN BASELINE FWD & BACK - CHECK BASELINE ON EACH LOOP
Base Station check-in interval (hours) TWICE DAILY
Base Station location and value ZERO ON BASE LINE - 560y

ELECTROMAGNETIC

Instrument SHARPE SE600 & McPHARVHEM
Coil configuration HORIZONTAL LOOP
Coil separation 200'
Accuracy 1%
Method: Fixed transmitter Shoot back In line Parallel line
Frequency SE600 = 1600 h. VHEM = 2400 & 600 h.
(specify V.L.F. station)
Parameters measured In phase & quadrature components

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 _____

PONTIAC TWP - M.382

THE TOWNSHIP

OF
2.2326

OSSIAN

DISTRICT OF
TIMISKAMING

LARDER LAKE
MINING DIVISION

SCALE: 1-INCH 40 CHAINS

LEGEND

- PATENTED LAND (P)
- CROWN LAND SALE (C.S.)
- LEASES (L)
- LOCATED LAND (Loc.)
- LICENSE OF OCCUPATION (L.O.)
- MINING RIGHTS ONLY (M.R.O.)
- SURFACE RIGHTS ONLY (S.R.O.)
- ROADS
- IMPROVED ROADS
- KING'S HIGHWAYS
- RAILWAYS
- POWER LINES
- MARSH OR MUSKEG
- MINES
- CANCELLED (C)

NOTES

400' surface rights reservation around all lakes and rivers

Summer resort locations patented for surface rights only shown thus (P)

Areas withdrawn from staking under Section 43 of the Mining Act (R.S.O. 1970)

Order No.	File	Date	Disposition
43	W.64/74 96371	4/12/74	S.R.O.

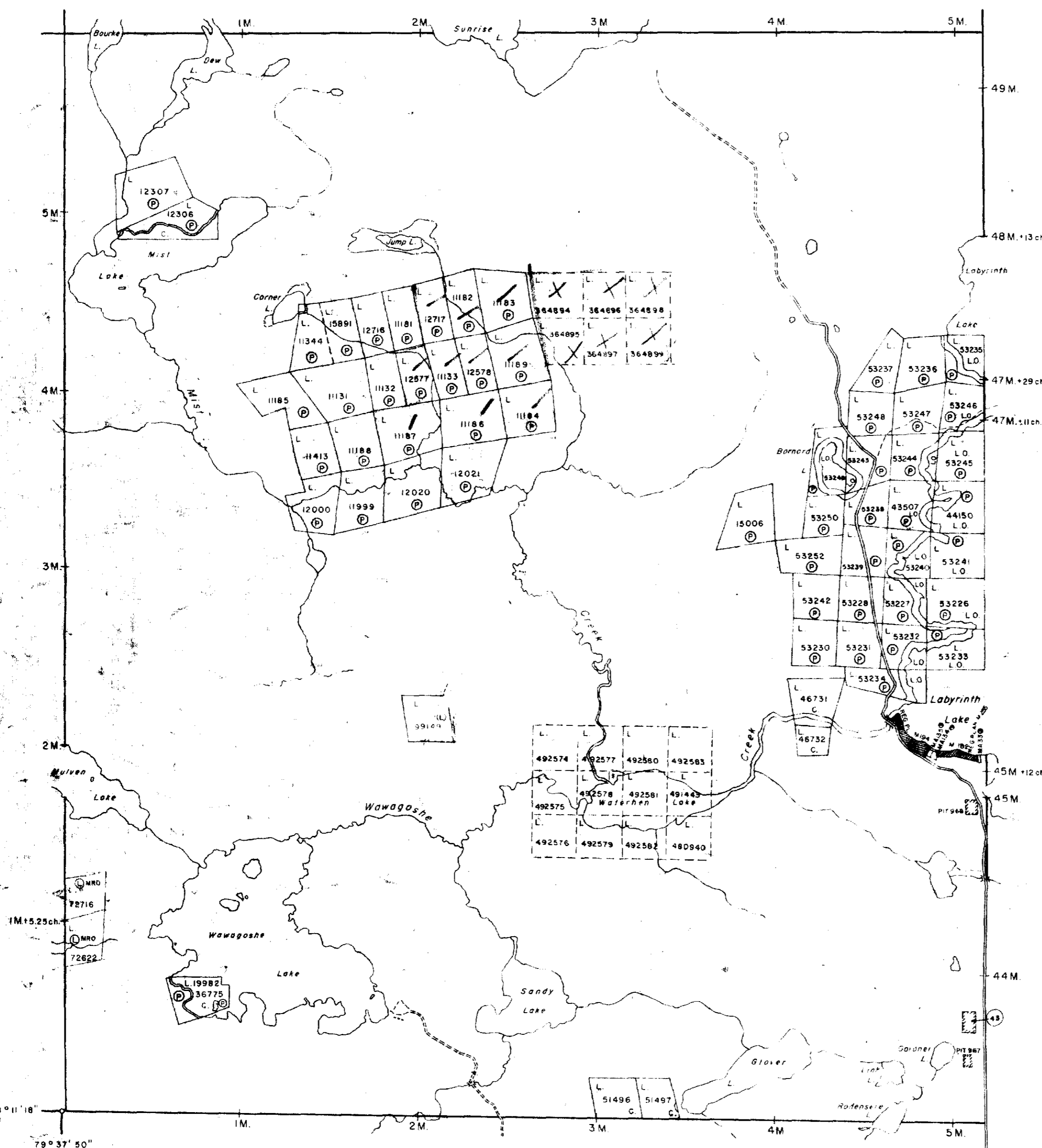
DATE OF ISSUE
MAR - 7 1977
SURVEYS AND MAPPING
BRANCH

PLAN NO. M.378

ONTARIO
MINISTRY OF NATURAL RESOURCES
SURVEYS AND MAPPING BRANCH

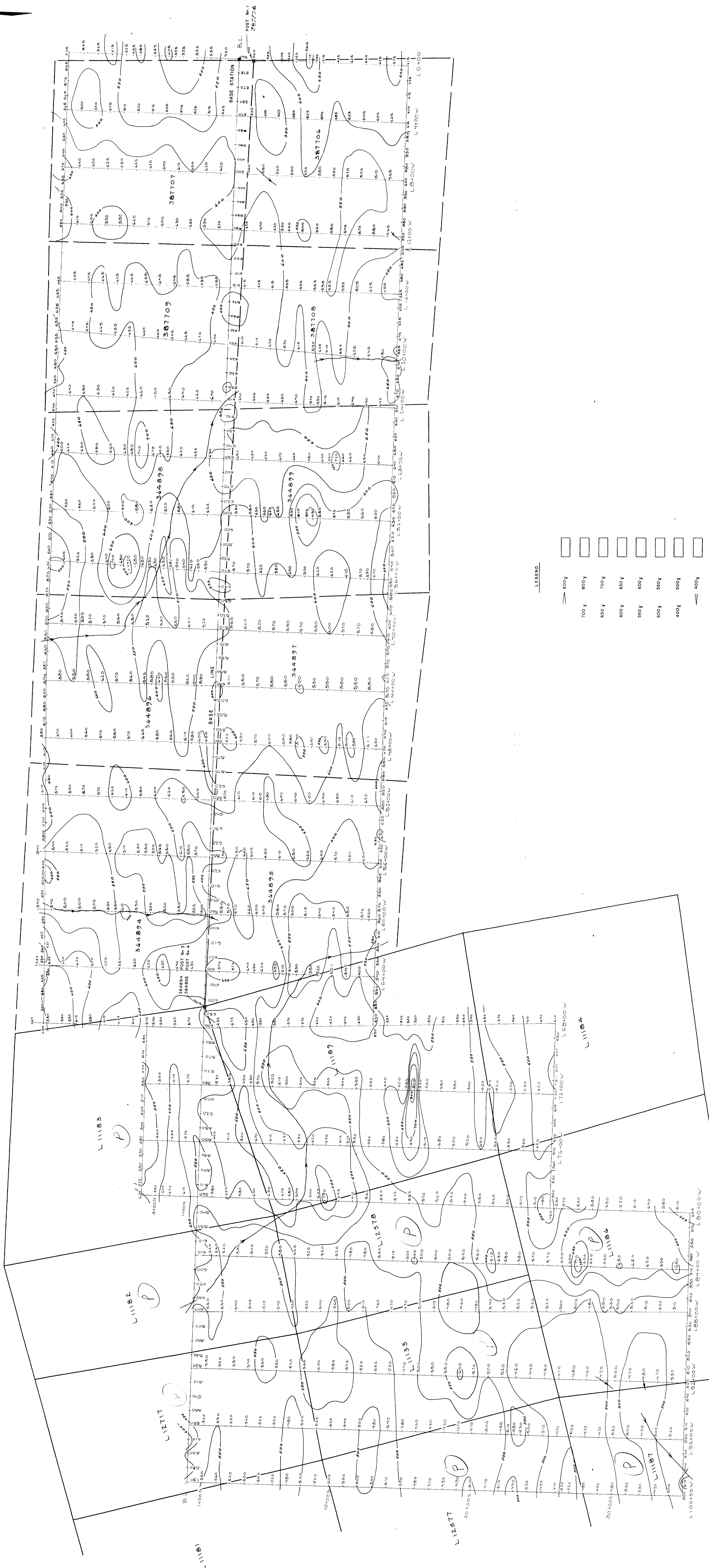
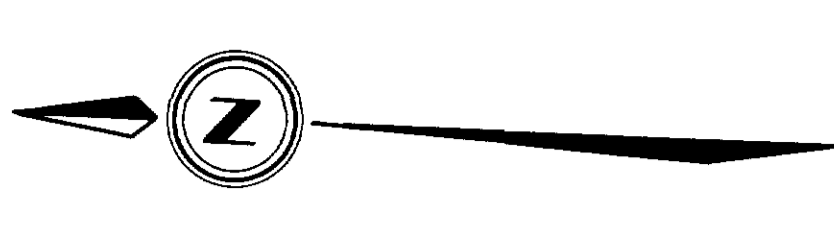
KATRINE TWP - M.357

PROVINCE OF QUEBEC



McGARRY TWP - M.369



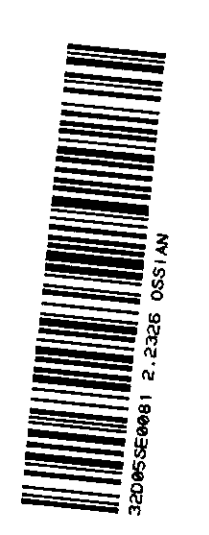


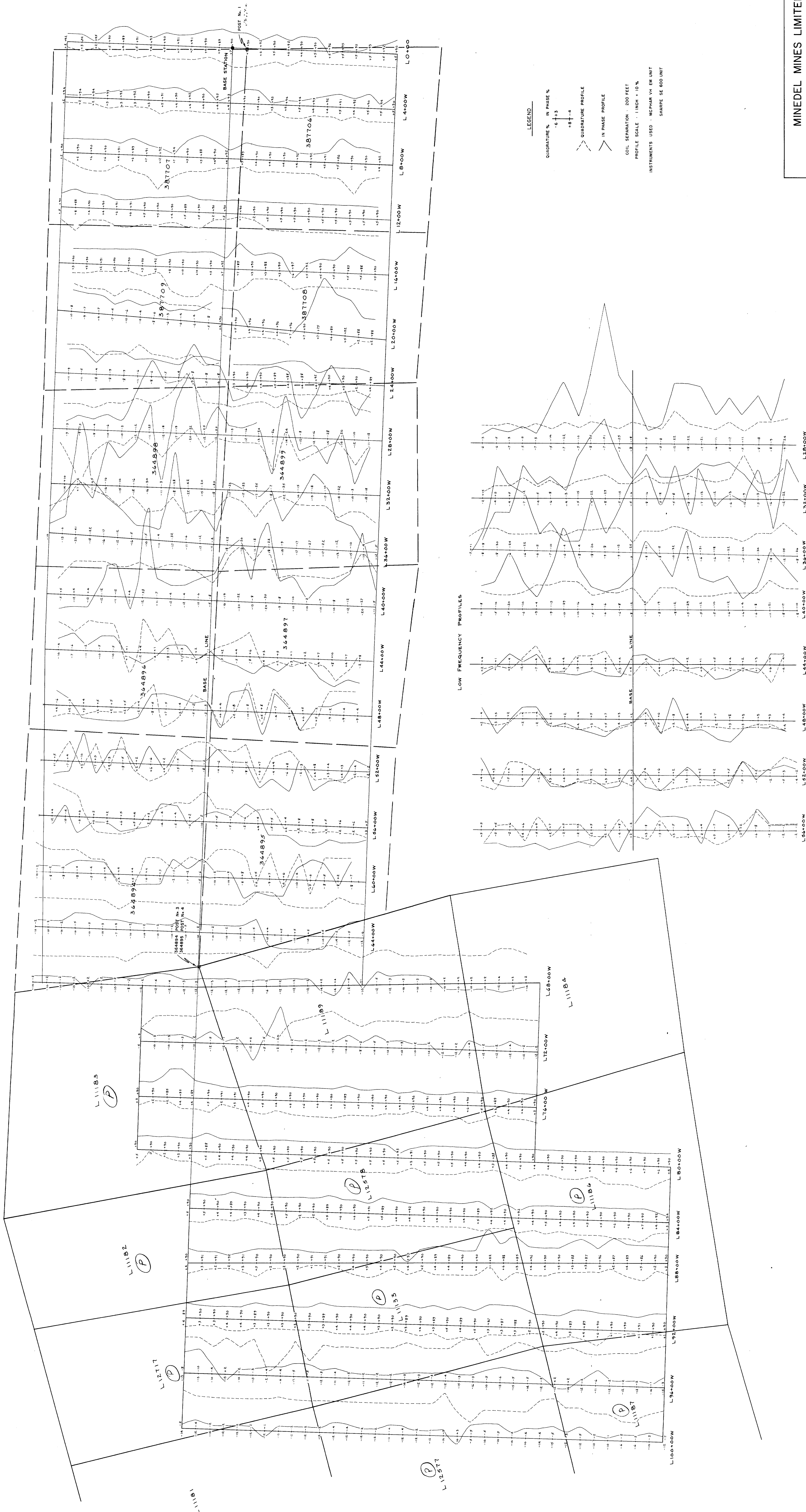
LEGEND

	600y
	700 y
	800 y
	900 y
	1000 y
	1100 y
	1200 y
	1300 y
	1400 y
	1500 y
	1600 y
	1700 y
	1800 y
	1900 y
	2000 y

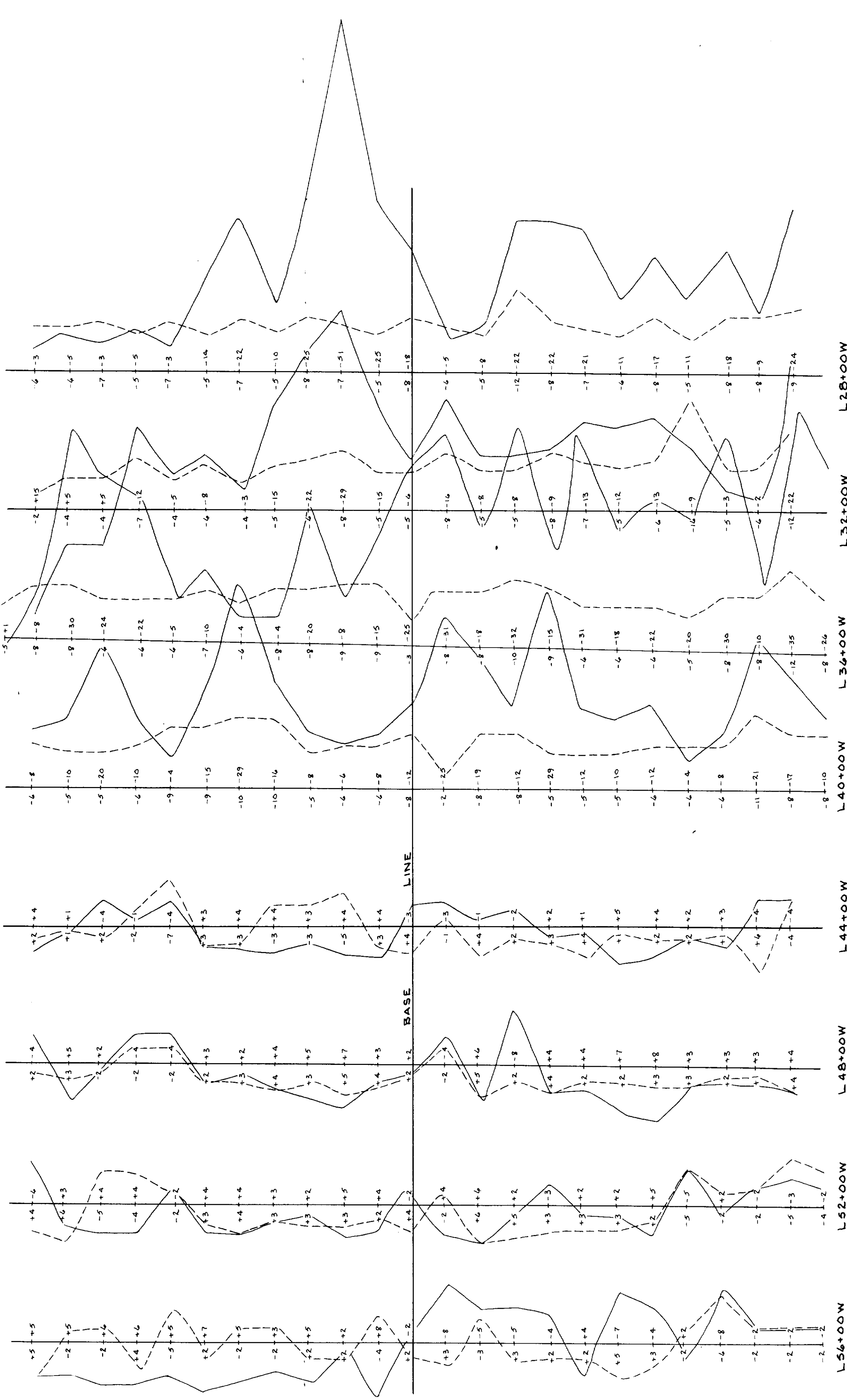
INSTRUMENT USED: SNAPE MF 1 VERTICAL COMPONENT FLUASITE MAGNETOMETER

MINEDEL MINES LIMITED
OSSIAN TOWNSHIP PROPERTY - ONTARIO
MAGNETOMETER SURVEY
SCALE: 1 inch = 200 Feet
PERFORMED BY: [Signature]
DATE: DEC. 1976
PROJECT LIMITED: 330 BAY ST. TORONTO





LOW FREQUENCY PROFILES



LEGEND
 QUADRATURE % IN PHASE %
 IN PHASE PROFILE

COIL SEPARATION : 200 FEET
 PROFILE SCALE : 1 INCH = 10 %
 INSTRUMENTS USED : MCPHAR VM EM UNIT
 SHARPE SE 600 UNIT

MINEDEL MINES LIMITED
 OSSIAN TOWNSHIP PROPERTY - ONTARIO
 ELECTROMAGNETIC SURVEY
 SCALE : 1 inch = 200 Feet
 PERFORMED BY : [Signature]
 DATE : DEC. 1976
 PROJECT LIMITED : 330 BAY ST. TORONTO