42A01SE0141 2.4382 OTTO

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ASSESSMENT REPORT

VLF-EM SURVEY

RECEIVED
NOV 27 1981
MINING LANDS SECT.

Dyment-Kidston Group D, Vigrass Lake

Otto Township, Larder Lake Mining Division

Tarzwell, Ontario
November 23, 1981

L.M.Dyment

SUMMARY

The 4 claims comprising two water claims and two land claims were staked in October of 1979. The following summer lines were cut on the land claims and an extension of assessment work of 6 months was requested. During the winter of 1981 the lines were continued onto the lake and geophysical surveys were carried out.

INTRODUCTION

This report is to cover claims 544549, 544544, 544545, and 544546. The geology of the area around Vigrass Lake (formerly Pike Lake) can be found described in the following publications:

1912	E.L.Bruce	Bureau of Mines
1920	Burrows & Hopkins	ODM
1923	Burrows & Hopkins	ODM
1922	GSC Memoir 131	GSC
1948	Jas. E. Thompson	ODM
1972	H.L.Lovell	ODM
1979	L.Jensen field trip	ODM

LOCATION AND ACCESS

The property is located 2KM from the town of Swastika and bordered on the north by Hwy 66.

PREVIOUS WORK

A search of the Kirkland Lake Resident Geologist's assessment files failed to locate any work filed on this ground. Signs of old trenching probably going back to the 1920's are visible but little other work is noticeable.

SURVEY METHOD AND INSTRUMENT DATA

The geophysical survey was conducted over compass and chain lines at 400 ft. intervals with stations every 100 ft. As previously mentioned, a baseline was cut, chained and picketed for good control. The township line between Teck and Lebel has also been surveyed and cut out at that point providing even greater control. The instrument used in the survey is a Crone Radem.

Electromagnetic prospecting methods rely on the measurement of the secondary field generated by conducting bodies in the ground when subjected to a primary electromagnetic field. The Radem VLF-EM method is a passive instrument operating in the very low radio frequency range (17.8-22.3 Khz.), which utilizes powerful radio transmitters at various locations throughout the world as the source of the primary electromagnetic signal. The radiation from these transmitters contains both electric and magnetic componenets which may energize subsurface conductors which in turn will create secondary fields.

In order to obtain maximum coupling with conductive zones, a transmitting station which is roughly on strike with the general geological structure was selected.

The VLF-EM system has proved to be an extremely useful mapping tool in locating faults, shear zones, geological contacts and other conductors due to massive sul-

phides and/or graphite, etc. Its limitations are more evident in areas of flat-lying, highly conductive overburden material, where the relatively high EM frequencies may be severely attenuated, causing not only a loss of depth penetration but innacurate conductivity estimates as well. Conversely, the high frequency has the advantage of being able to detect the more poorly conductive (disseminated) zones of mineralization which may not be seen with the lowere frequency EM systems. In areas of relatively rough topographic relief, steep hills and valleys may give rise to cross-overs which are not necessarily due to changes in ground conductivity. These effects may be minimized by filtering the regional topographic trend from the VLF profiles, or, more simply, by contouring the field strength values obtained.

SURVEY RESULTS

Anomalies A and B are long well defined conductors with good magnetic correlation. Evidence of major shearing is quite pronounced on both the north and south shores as well as on the west end of the lake. The islands between the two conductors are predominantly basaltic komatiite, polysutured and spinifex textured flows and tholeitic basalts. A and B are tentatively interpreted as major shears within the Larder Lake group of rocks.

Anomaly C could be an extension of either A or B and there is evidence of shearing west on the lake shore.

Anomaly D has no magnetic correlation but high field strength.

There are no outcrops in the area of the cross-overs. The sequence of rocks within this claim group is definitely of the Larder Lake group. There is a high probability that this is the graphitic horizon that would make the sequence complete.

Anomaly E is visible on the ground as a small shear zone consisting of brown carbonates, disseminated sulphides and quartz veining.

CONCLUSION

With the exception of Anomaly E, very little surface evidence is available for interpretation and diamond drilling is necessary to complete the picture. To aid the prospector, a Horizontal Loop EM survey will be conducted this winter and further prospecting and geological mapping will continue next spring.

Certificate

I, Leslie Michael Dyment, residing in the township of Marquis, Ontario, and having a mailing address Jomi Minerals & Expediting Ltd., RR#1, Tarzwell, Ontario, do hereby certify:

(1) That I am a Mining Technician having taken the two year course at Haileybury School of Mines, Haileybury, Ontario,

(2) That I have been employed in all phases of mining exploration and developement for 19 years,

(3) That I did personally accumulate and set forth the facts and knowledge in the accompanying report and maps,

(4) That the accompanying report is true.

Dated January 22, 1981
Tarzwell, Ontario

Leslie Michael Dyment

Ontario

Ministry (

GEOPHYSICAL – GE
TECHNICAL

42A01SE0141 2.4382 OTTO

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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) VLF-EM

Township or Area OTTO

Claim Holder(s) Jocelyne Kidston

Survey Company Jomi Minerals & Exploration Ltd.

Author of Report L. M. Dyment

Address of Author RR#1 MARKWELL, ONT P0K1R0

Covering Dates of Survey 20-7-80 to 4-3-81
(linecutting to office)

Total Miles of Line Cut 3.9

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	40
–Magnetometer	
–Radiometric	
–Other	
Geological	
Geochemical	

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

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

DATE: Nov 23, 1981 SIGNATURE: L M Dyment
Author of Report or Agent

Res. Geol. _____ Qualifications 2.2903

Previous Surveys

File No.	Type	Date	Claim Holder

MINING CLAIMS TRAVERSED
List numerically

(prefix)	(number)
L	544544 ✓
	544545 ✓
	544546 ✓
	544549 ✓

If space insufficient, attach list

LAND MANAGEMENT
RECEIVED
NOV 23 1981
AM 7 8 9 10 11 12 1 2 3 4 5 6 PM

TOTAL CLAIMS 4

OFFICE USE ONLY

837 (5/79)

GEOPHYSICAL TECHNICAL DATA

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

Number of Stations 206 Number of Readings 206

Station interval 100' Line spacing 400'

Profile scale 1" = 40°

Contour interval 20

MAGNETIC

Instrument

Accuracy – Scale constant

Diurnal correction method

Base Station check-in interval (hours)

Base Station location and value

ELECTROMAGNETIC

Instrument VLF Crone Radem

Coil configuration Vertical

Coil separation Infinite

Accuracy Dip angle ± 1/2% Field strength ± 2%

Method: ☒ Fixed transmitter ☐ Shoot back ☐ In line ☐ Parallel line

Frequency Cutler, Maine 17.8 kz
(specify V.L.F. station)

Parameters measured Tilt Angle, Field strength

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

2.4382

1982 07 06 2.4382

Mr. L.M. Dyment
RR #1
Tarzwell, Ontario
P0K 1V0

Dear Sir:

Re: Geophysical (Electromagnetic) Survey submitted on Mining Claims L 544544 et al, in the Twp. of Otto

Enclosed are the plans (in duplicate) for the above-mentioned survey. Please show all claim lines and claim numbers and return the plans to this office.

For futher information, please contact Mr. F.W. Matthews at 416/965-1380.

Yours very truly,

E.F. Anderson
Director
Land Management Branch

Whitney Block, Room 6450
Queen's Park
Toronto, Ontario
M7A 1W3
Phone: 416/965-1316

A.Barr/amc

Encl.

cc: Mining Recorder
Kirkland Lake, Ontario

Ministry of Natural Resources
Ontario

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

The 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.

Type of Survey(s): VLF-EM

Township or Area: OTTO

Claim Holder(s): Jocelyne Kidston

Prospector's Licence No.: K1840

Survey Company: Jomi Minerals & Expediting Ltd.

Survey Dates (linecutting to office): Day 20 Mo. 7 Yr. 80 — Day 4 Mo. 3 Yr. 81

Total Miles of line Cut: 3.9

Name and Address of Author (of Geo-Technical report): L. M. Dyment RR#1 TARZWell, Ont P0K1V0

Special Provisions Credits Requested

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

Man Days

Instructions		Days per Claim
Complete reverse side and enter total(s) here	Geophysical - Electromagnetic	~~40~~
	- Magnetometer	
	- Radiometric	
	- Other	
	Geological	
	Geochemical	

Airborne Credits

Note: Special provisions credits do not apply to Airborne Surveys.		Days per Claim
	Electromagnetic	
	Magnetometer	
	Radiometric	

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.

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	544544				
	544545				
	544546				
	544549				

LARDER L.A.E. MINING DIV.
RECEIVED
OCT 13 1981
AM 7 8 9 10 11 12 1 2 3 4 5 6 PM

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

For Office Use Only

Total Days Cr. Recorded: 160

Date Recorded: OCT 13 1981

Date Approved as Recorded: Aug 5/82 for

Mining Recorder

Regional/Branch Director

Report Completed

Date of Report: Oct 12/81

Recorded Holder or Agent (Signature): Jocelyne Kidston

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:
L.M. DYMENT
RR#1 TARZWELL. ONT.

Date Certified: Oct 12/81

Certified by (Signature): L.M. Dyment

1362 (81/2)

RECEIVED
OCT 26 1981
MINING LANDS SECTION

Ministry of
Natural
Resources

Ontario

Your file:

Our file: 2.4382

RECEIVED
JUL 23 1982
MINING LANDS SECTION

1982 07 06

Mr. L.M. Dyment
RR #1
Tarzwell, Ontario
P0K 1V0

Dear Sir:

Re: Geophysical (Electromagnetic) Survey submitted on
Mining Claims L 544544 et al, in the Twp. of Otto

Enclosed are the plans (in duplicate) for the above-mentioned survey. Please show all claim lines and claim numbers and return the plans to this office.

For futher information, please contact Mr. F.W. Matthews at 416/965-1380.

Yours very truly,

E.F. Anderson
Director
Land Management Branch

Whitney Block, Room 6450
Queen's Park
Toronto, Ontario
M7A 1W3
Phone: 416/965-1316

for A.Barr/amc

Encl.

cc: Mining Recorder
Kirkland Lake, Ontario

Ministry of Natural Resources
Ontario

Geotechnical Report Approval

File 2.4382

Mining Lands Comments

- no claim lines or numbers
- anything else.

☑ To: Geophysics Mr. Barlow.

Comments

☑ Approved ☐ Wish to see again with corrections | Date June 15/82 | Signature R. Barlow

☐ To: Geology - Expenditures

Comments

☐ Approved ☐ Wish to see again with corrections | Date | Signature

☐ To: Geochemistry

Comments

☐ Approved ☐ Wish to see again with corrections | Date | Signature

☐ To: Mining Lands Section, Room 6462, Whitney Block. (Tel: 5-1380)

1593 (81/10)

1981 12 15 2.4382

Mining Recorder's Office
Ministry of Natural Resources
P.O. Box 984
4 Government Road East
Kirkland Lake, Ontario
P2N 1A2

Dear Sir;

We have received reports and maps for a Geophysical (Electromagnetic) survey submitted under Special Provisions (credit for Performance and Coverage) on mining claims L 544544 et al in the Township of Otto.

This material will be examined and assessed and a statement of assessment work credits will be issued.

Yours very truly

E.F. Anderson
Director
Land Management Branch

Whitney Block, Room 6450
Queen's Park
Toronto, Ontario
M7A 1W3
Phone 416/965-1380

J. Skura

Jomi Minerals & Expediting Ltd.,
Tarzwell, Ontario

TECK TP. - M.392

EBY TP. - M.345

BOSTON TP. - M.332

MARQUIS TP. - M.362

12 11 10 9 8 7 6 5 4 3 2 1

VI V IV III II I

THE TOWNSHIP OF OTTO

DISTRICT OF TIMISKAMING

LARDER LAKE MINING DIVISION

SCALE: 1-INCH=40 CHAINS

LEGEND

PATENTED LAND	● or Ⓟ
CROWN LAND SALE	C.S.
LEASES	Ⓛ
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.
PATENTED S.R.O.	◒

NOTES

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

DATE OF ISSUE
AUG - 4 1982
Ministry of Natural Resources
TORONTO

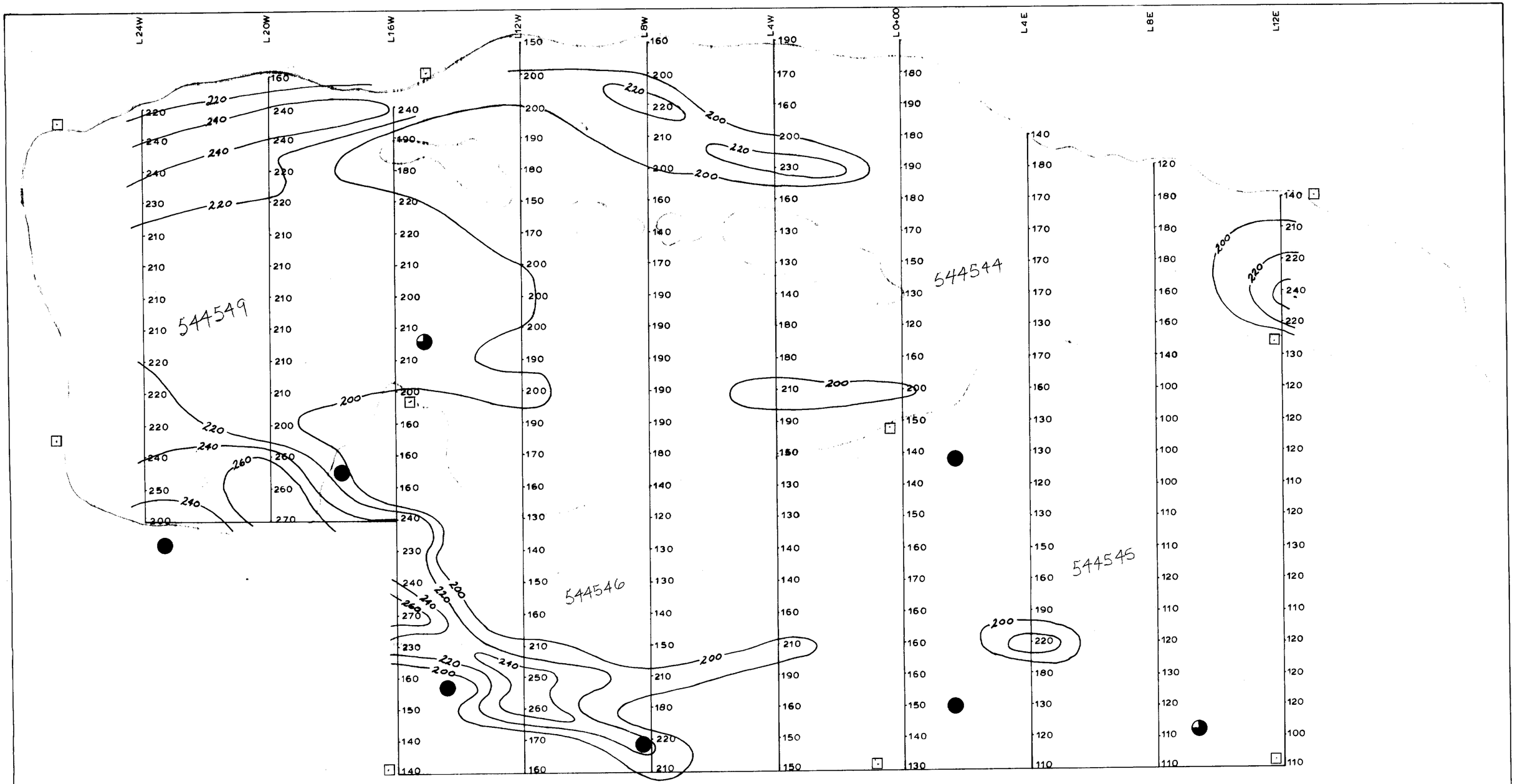
24382

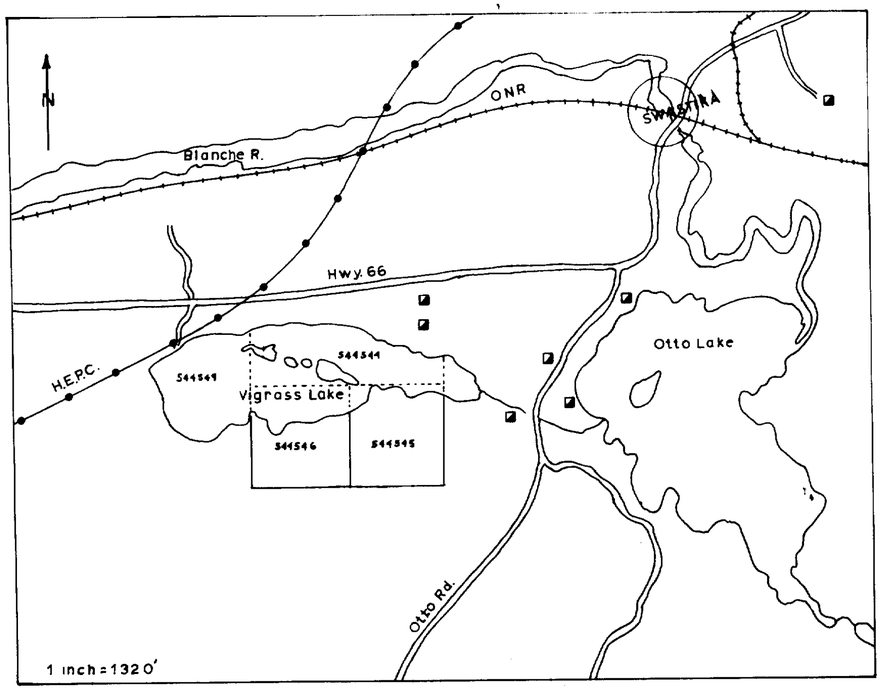
PLAN NO.- M-379

ONTARIO
MINISTRY OF NATURAL RESOURCES
SURVEYS AND MAPPING BRANCH

42A01SE0141 2.4382 OTTO

200





LOCATION MAP

VLF-EM FIELD STRENGTH CONTOURS

DYMENT-KIDSTON Group D

Otto twp.

LARDER LAKE MINING DIVISION

DISTRICT OF TIMISKAMING

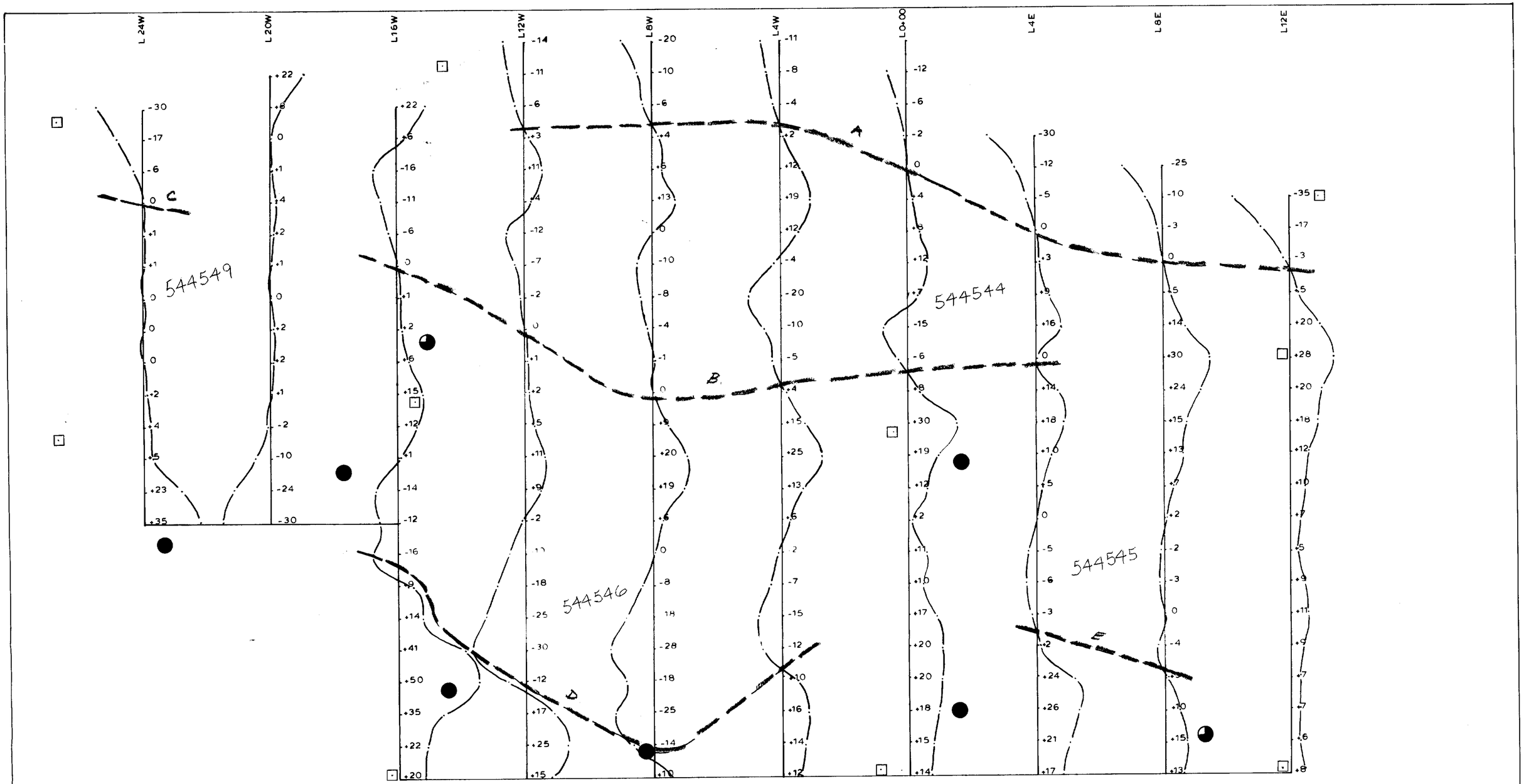
LEGEND

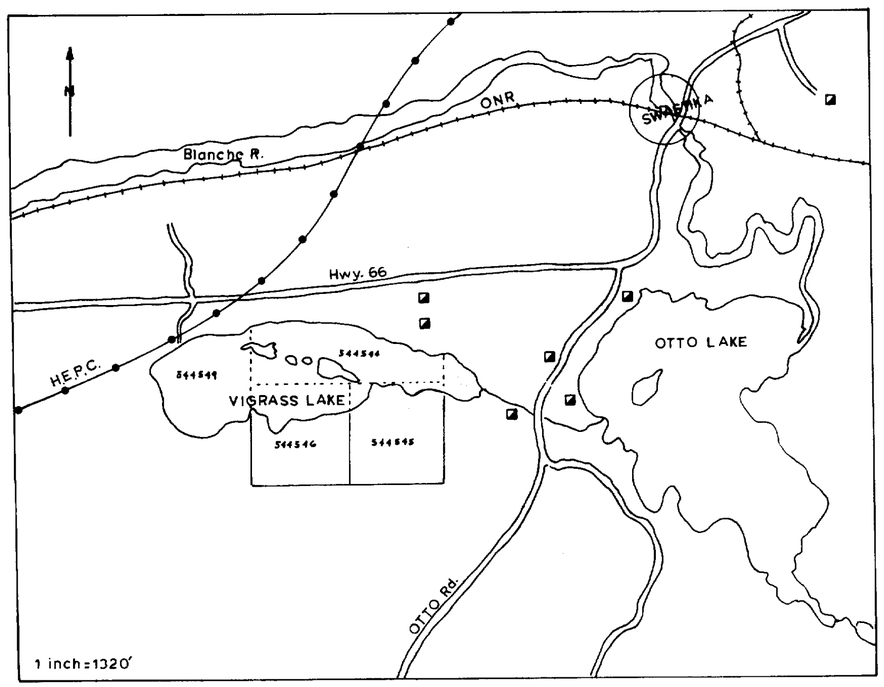
Instrument: Crone Radem
Base station: △
Station used: Cutler Maine
Survey by JOMI MINERALS & EXPEDITING LTD.
● 6channel AEM annomaly
SCALE: 1 inch = 200 ft.

24382
duplicate

Nov 23/81

42A015E0141 2.4382 OTTO





LOCATION MAP

VLF-EM DIP ANGLE PROFILES
DYMENT-KIDSTON GROUP D
Otto twp.

LARDER LAKE MINING DIVISION
DISTRICT OF TIMISKAMING

LEGEND

Scale: 1 inch = 200 ft.
1 inch = 40°
Station used: Cutler Maine
Instrument: Crone Radem
Dip angle of Resultant field in degrees
In-Phase ·——·——·
Survey by JOMI MINERALS & EXPEDITING LTD.
● 6 channel AEM anomaly

south − | north +

42A01SE0141 2.4382 OTTO

2.4382