42A01SE8907 2.4887 OTTO

010

NTS 42 A/1

RECEIVED
JUN 14 1982
MINING LANDS SECTION

ASSESSMENT REPORT

VLF-EM Survey

Dyment-Kidston Group C

Otto Township, Larder Lake Mining Division

Tarzwell, Ontario
June 8, 1982

L.M.Dyment

42A01SE8907 2.4887 OTTO

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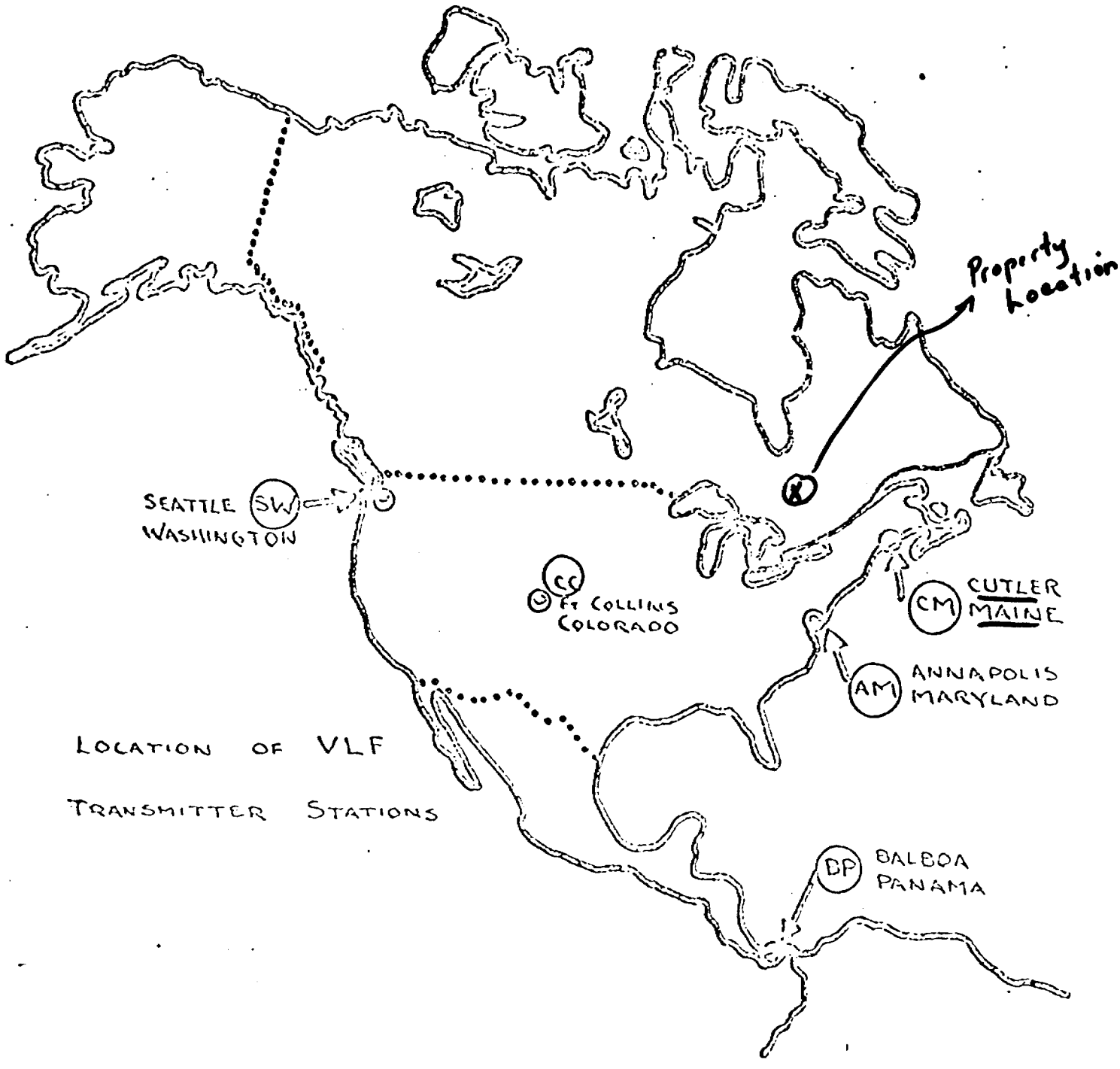
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List of Maps

EM profile map.....in pocket

EM contour map.....in pocket



LOCATION OF VLF

TRANSMITTER STATIONS

Fig. 1.

SUMMARY

During the summer of 1980 a program of linecutting was carried out. In the Spring of 1982 the lines were cleaned and a VLF-EM survey was conducted. Some lines were lengthened to allow for coverage of areas not covered before by the claim holders in their prospecting in the past.

INTRODUCTION

The property was originally staked by the present holder in the Fall of 1979 after the release of OGS airborne EM maps. Some claims were allowed to lapse at different times and restaked. Numerous 6, 5, and 4 channel animalies are indicated on the property.

LOCATION AND ACCESS

The claims are located in the North half of Lot 5 Concession 6 in Otto Township, (626774, 626770, 636 795, 626772). Access is quite easy as the claim group is bounded on the East by Highway 11 and is approximately four miles South from the town of Kirkland Lake.

PREVIOUS WORK

A search of the Kirkland Lake District Geologist's

files showed that International Nickel Company Limited had drilled a hole in the NW part of the property in the late 1960's in the search for nickel and filed the drill log in the district office. The location of the drill hole and the log itself, in the author's opinion, remain ambiguous.

It was also noted that in 1975-76 Noranda did a Fluxgate Magnetometer and Horizontal Loop EM survey although the property was not covered by these surveys in its entirety. Noranda also drilled two X-ray holes in the area of Cu,Zn,Ag surface showings. Numerous pits and trenches were noted.

In the summer of 1980 the OGS conducted a bedrock and basal till drill program. Hole Number 80-45 which is on the Eastern boundary of the claim group was described as having base metal potential and the ground in this area deserving of detailed prospecting (quote from Ian Thompason report).

SURVEY METHOD

A grid was cut utilizing where possible the old Noranda grid which was entirely grown in. Lines were cut to cover the entire property which was not the case with the old Noranda grid. A base station was established at Bl 4E for control in the field strength survey. All topography and pits were noted to aid in the interpretation.

SURVEY RESULTS

Numerous ground conductors were mapped during the survey as an aid to locating the 11 conductors shown by the OGS airborne survey.

Conductor A

Not located by Noranda because of their cable separation(?). Evidence of oxide an sulphide Iron Formation.

Conductor B

Strong conductor with good field strength. No outcropping found for this conductor although there is evidence of banded chert to the South of it and graphitic argillites to the North of it. Assays of Cu,Zn and Ag obtained within the argillites.

Conductor C

Excellent conductor with good field strength correlation. Inco stated in the drill log on file at Resident Geologist's that they encountered graphitic schist. There was evidence of graphite, dark quartz and shearing as well as sulphides found along its length during prospecting.

Conductor D

Short conductor (found only on two lines). Requires further prospecting.

Conductor E

Another short conductor requiring further prospecting.

Conductor F

Possible extension of Conductor C. The

crossover on L16E is drift covered although on L18E the outcropping shows argillites similar to those of the OGS overburden drilling in hole #80-45. Sulphides can be seen in the argillites.

Conductor G

Weak crossover and drift covered. Possible extension of Conductor B although field strength contours tend to disprove this.

CONCLUSION AND RECOMMENDATIONS

A proton Mag survey should be conducted over the entire property prior to detailed geological mapping and prospecting planned for the Fall when the leaves are off the trees.

CRONE GEOPHYSICS LIMITED

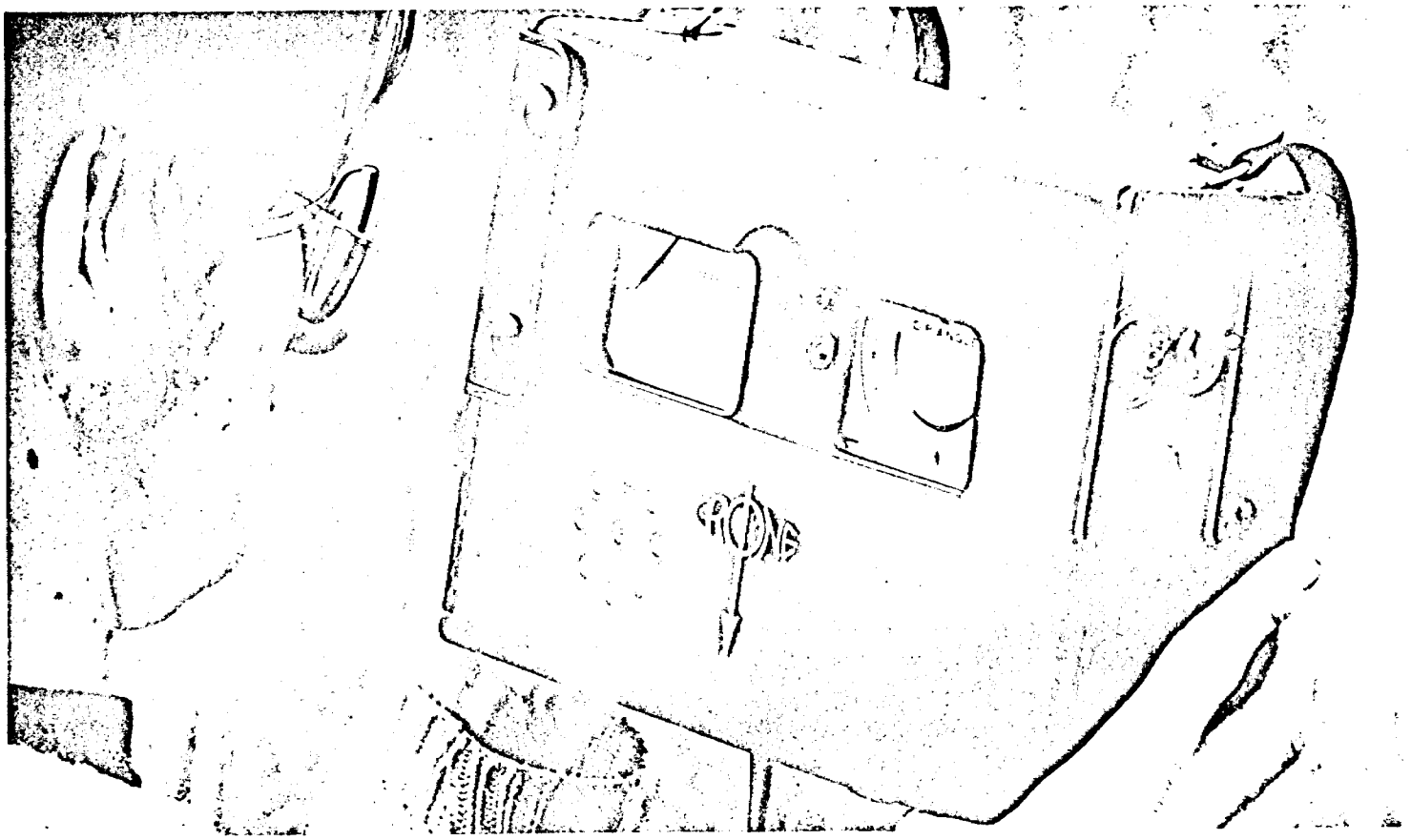
3607 WOLFEDALE ROAD,
MISSISSAUGA, ONTARIO,
CANADA,
L5C 1V8

Phone: (416) 270-0096

Cable: CRONGEO, TORONTO

RADEM

AN EM RECEIVER MEASURING THE FIELD STRENGTH, DIP ANGLE AND QUADRATURE COMPONENTS OF THE VLF COMMUNICATION STATIONS



This is a rugged, simple to operate, ONE MAN EM unit. It can be used without line cutting and is thus ideally suited for GROUND LOCATION OF AIRBORNE CONDUCTORS and the CHECKING OUT OF MINERAL SHOWINGS. This instrument utilizes higher than normal EM frequencies and is capable of detecting DISSEMINATED SULPHIDE DEPOSITS and SMALL SULPHIDE BODIES. it accurately isolates BANDED CONDUCTORS and operates through areas of HIGH HYDRO NOISE. The method is capable of deep penetration but due to the high frequency used its penetration is limited in areas of clay and conductive overburden.

The DIP ANGLE measurement detects a conductor from a considerable distance and is used primarily for locating conductors. The FIELD STRENGTH measurement is used to define the shape and attitude of the conductor.

SPECIFICATIONS

SOURCE OF PRIMARY FIELD: VLF Communication Stations 12 to 24K hz

NUMBER OF STATIONS: 7 switch selectable

STATIONS AVAILABLE: The seven stations my be selected from:

Code	Station & Location	Frequency
CM	Cutler, Maine	17.8 KHz
SW	Seattle, Washington	18.6 KHz
AM	Annapolis, Maryland	21.4 KHz
H	Laulualei, Hawaii	23.4 KHz
BOF	Bordeaux, France	15.1 KHz
E	Rugby, England	16.0 KHz
MS	Gorki, Russia	17.1 KHz
OD	Odessa (Black Sea)	15.6 KHz
NC	Australia, N.W.C.	22.3 KHz
YJ	Yosamai, Japan	17.4 KHz
HN	Hegaland, Norway	17.6 KHz
TJ	Tokyo, Japan	20.0 KHz
BA	Buenos Aires	23.6 KHz

CHECK THAT STATION IS TRANSMITTING: Audible signal from speaker.

PARAMETERS MEASURED:

(1) DIP ANGLE in degrees of the magnetic field component, from the horizontal, of the major axis of the polarization ellipse. Detected by a minimum on the field strength meter and read from an inclinometer with a range of ± 90° and an accuracy of ± ½°.

(2) FIELD STRENGTH (total or horizontal) of the magnetic component of the VLF field, (amplitude of the major axis of the polarization ellipse). Measured as a percent of normal field strength established at a base station. Accuracy ± 2% dependent on signal. Meter has two ranges: 0 — 300% and 0 — 600%.

(3) OUT-OF-PHASE component of the magnetic field, perpendicular in direction to the resultant field, as a percent of normal field strnegth, (amplitude of the minor axis of the polarization ellipse). This is the minimum reading of the Field Strength meter obtained when measuring the dip angle. Accuracy ± 2%.

OPERATING TEMPERATURE RANGE: -30°C (-20°F) to +50°C (120°F)

DIMENSIONS AND WEIGHT: 9 x 19 x 27cm — 2.7Kg (6 lb)

SHIPPING: Instrument with foam lined wooden case,
shipping wt. — 6.0Kg (13 lb)

BATTERIES: 2 of 9 volt — Eveready 216
Average life expectancy — 20 hours for continuous operation

UNITS AVAILABLE ON A RENTAL OR PURCHASE BASIS.
CONTRACT SERVICES AVAILABLE FOR FIELD SURVEYS.

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 Geochem

42A01SE8907 2.4887 OTTO

900

Type of Survey(s) VLF-E

Claim Holder(s) Leslie Michael Dyment

Survey Company Temi Minerals Exploration Ltd.

Name and Address of Author (of Geo-Technical report) L. M. Dyment RR#1 TARTAN ROAD ONT

Area TO 42A/15E

Prospector's Licence No. K18462

Survey Dates (linecutting to office) 10 Day | 5 Mo. | 82 Yr. | 12 Day | 5 Mo. | 82 Yr.

Total Miles of line Cut 2.4887

"...days credits calculated in the ...xpenditures" section may be entered the "Expend. Days Cr." columns. ...o not use shaded areas below.

Special Provisions Credits Requested

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

Man Days

Instructions		Days per Claim
Complete reverse side and enter total(s) here	Geophysical	
	- Electromagnetic	
	- 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)

Prefix	Mining Claim Number	Expend. Days Cr.
	626772	
	626774	
	626795	

Prefix	Mining Claim Number	Expend. Days Cr.

RECEIVED
JUN 22 1982
MINING LANDS SECTION

LARDER LAKE MINING DIV.
RECEIVED
JUN - 8 1982
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. 3

For Office Use Only

Total Days Cr. Recorded	Date Recorded	Mining Recorder
60	JUN - 8 1982	
	Date Approved as Recorded 83:06:08	Regional/District Director

Report Completed

Date of Report June 8, 1982

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

L.M. Dyment RR#1 TARTAN ROAD ONT

Date Certified June 8, 1982

Certified by (Signature)

Ontario — Geochemical and Expenditures — The Mining Act 2.4887 — Funds Advanced

(file L626770)

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: Leslie Michael Dyment

Prospector's Licence No.: 418402

Survey Company: Tomi Minerals & Expediting Ltd.

Survey Dates (linecutting to office): 11 Day | 5 Mo. | 82 Yr. | 12 Day | 5 Mo. | 82 Yr.

Total Miles of line Cut:

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

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	
	- 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.
L	626770	

Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.

RECEIVED MAY 26 1982 MINING LANDS SECTION

LARDER LAKE MINING DIV. RECEIVED MAY 12 1982 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: 1

For Office Use Only

Total Days Cr. Recorded: 20

Date Recorded: MAY 12 1982

Date Approved as Recorded: 82.06.08

Mining Recorder

(Recorded Grants Division)

Report Completed

Date of Report: May 12/82

Recorded Holder or Agent (Signature): L. M. Dyment

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 P0K1V0

Date Certified: MAY 12/82

Certified by (Signature): L. M. Dyment

1362 (81/2)

Ontario

Ministry of Natural Resources

File _____

GEOPHYSICAL – GEOLOGICAL – GEOCHEMICAL TECHNICAL DATA STATEMENT

RECEIVED
JUN 14 1982
MINING LANDS SECTION

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) L.M. DYMENT

Survey Company JOMI MINERALS & EXPEDITING LTD.
Author of Report L.M DYMENT
Address of Author RR#1 TARZWELL, ONT
Covering Dates of Survey MAY 10 - 13 (linecutting to office)
Total Miles of Line Cut 4.5

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	20
--Magnetometer	
--Radiometric	
--Other	
Geological	
Geochemical	

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

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

DATE: JUNE 8/82 SIGNATURE: _____
Author of Report or Agent

Res. Geol. _____ Qualifications 2 2703

Previous Surveys

File No.	Type	Date	Claim Holder

MINING CLAIMS TRAVERSED
List numerically

(prefix)	(number)
	626774
	626772
	636795
	626770

If space insufficient, attach list

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 243 Number of Readings 237

Station interval 100 ft Line spacing 400 ft

Profile scale 1 inch = 40 degrees

Contour interval 130 + 10

MAGNETIC

Instrument

Accuracy – Scale constant

Diurnal correction method

Base Station check-in interval (hours)

Base Station location and value

ELECTROMAGNETIC

Instrument Crone Radem

Coil configuration Vertical

Coil separation Infinite

Accuracy ± 2%

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

Frequency Cutler Maine
(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

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 _____

_____

_____

_____

_____

_____

_____

_____

_____

_____

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 _____

_____

_____

_____

_____

_____

_____

_____

_____

Ministry of Natural Resources
Ontario

Geotechnical Report Approval

File 2.4887

Mining Lands Comments

☑ To: Geophysics W.R. Barlow

Comments

☑ Approved ☐ Wish to see again with corrections | Date 29/8 3 | Signature

☐ To: Geology - Expenditures

Comments

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

☐ To: Geochemistry

Comments

I.P.

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

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

1593 (81/10)

1982 07 05 @2.4887

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

Dear Sir:

We have received reports and maps for a Geophysical (Electromagnetic) survey submitted under Special Provisions (credit forPerformance and Coverage) on mining claims L 626770 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: 416/965-1316

J. Skura/sc

c.c. L.M. Dyment
R.R. #1
Tarzwell, Ontario

				L.M.							2.4887
			L-60240	✓							
			60240	✓							
			[illegible]	✓							
			[illegible]	...							
											O.K.

TECK TP. - M.392

EBY TP. - M.345

BOSTON TP. - M.332

MARQUIS TP. - M.362

THE TOWNSHIP OF OTTO

DISTRICT OF TIMISKAMING

LARDER LAKE MINING DIVISION

SCALE: 1-INCH=40 CHAINS

LEGEND

PATENTED LAND	● or (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.
PATENTED S.R.O.	

NOTES

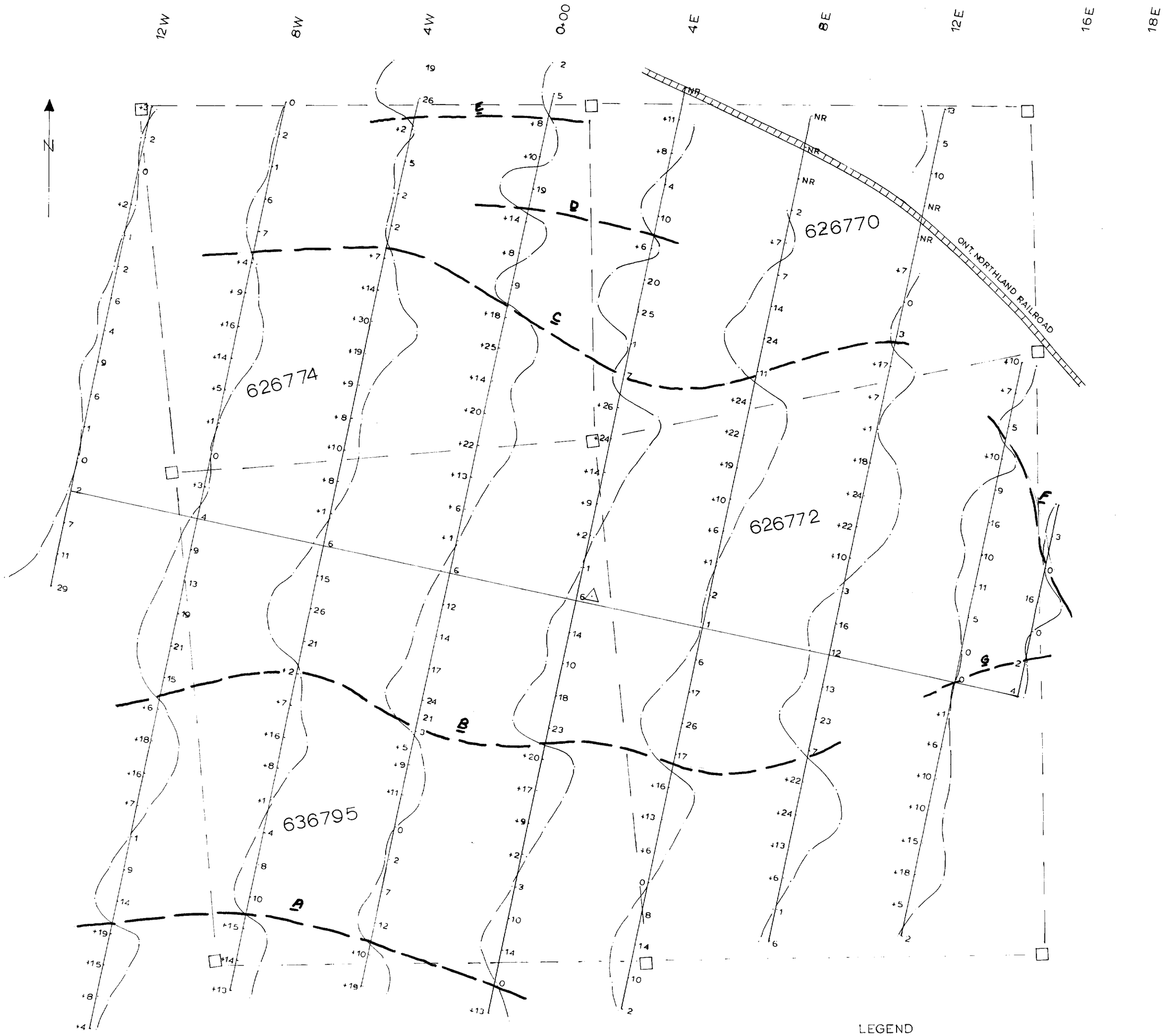
400' surface rights reservation along the shores of all lakes and rivers.

DATE OF ISSUE
JUN - 1 1983
Ministry of Natural Resources
TORONTO

PLAN NO.- M-379

ONTARIO
MINISTRY OF NATURAL RESOURCES
SURVEYS AND MAPPING BRANCH

42A01SE8907 2.4887 OTTO



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

LARDER LAKE MINING DIVISION
DISTRICT OF TIMISKAMING

LEGEND

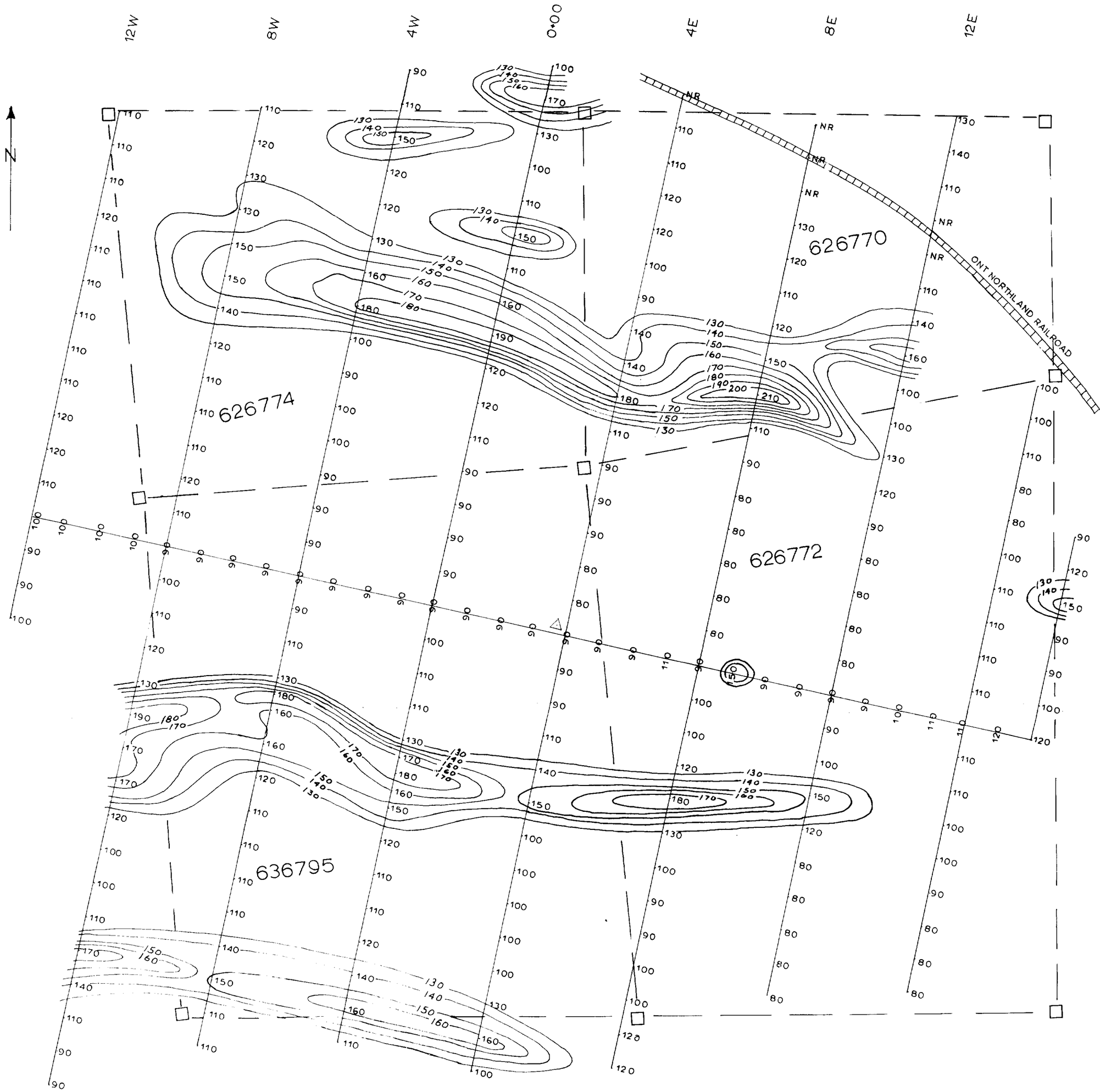
Scale: 1 inch = 200 ft.
1 inch = 40°
Station: Cutler Maine
Instrument: Crone Radem
Survey by: JOMI MINERALS & EXPEDITING LTD.

DIP ANGLE OF RESULTANT FIELD IN DEGREES

south	north
-	+

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7/8/82



VLF-EM FIELD STRENGTH CONTOURS
DYMENT-KIDSTON Group C
Otto twp.

LARDER LAKE MINING DIVISION
DISTRICT OF TIMISKAMING

LEGEND

Instrument: Crone Radem
Base station: Δ
Station used: Cutler Maine
Survey by: JOM MINERALS & EXPEDITING LTD.
SCALE 1inch=200ft

2.4887

Eng. 7/8/82

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