

32D04SW0103 2.13696 SKEAD

010

**2.13696**

**MAGNETOMETER & VLF-EM SURVEYS**

**SKEAD & CATHARINE TOWNSHIPS, ONTARIO**

By

**R.A. MacGregor, P. Eng.**

**October 26, 1990**

**RECEIVED**

**NOV 23 1990**

**MINING LANDS SECTION**

*mailed  
Nov 19.*

### INTRODUCTION

Magnetometer and VLF-EM surveys were carried out over traverse lines in Skead and Catharine Townships.

### LOCATION, ACCESS AND OWNERSHIP

The property consists of a block of 10 claims in the north-west corner of Skead Township and the northeast corner of Catherine Township, Ontario. The claims are numbered L1049902 to 1049911 inclusive and are recorded in the name of Skead Holdings Ltd., c/o P.O. Box 1110, Sault Ste. Marie, Ontario.

The claims are crossed by old logging roads passable to trucks which lead from Highway 624, a paved secondary highway, about 8 miles south of Larder Lake, Ontario .

### PREVIOUS EXPLORATION

Past work has consisted largely of geophysical surveys and some trenching. There is little information available on this work.

### TOPOGRAPHY

Most of the claims are underlain by sand plains and eskers with a few pot hole swamps. It is largely flat with gravel ridges and a few outcrops through the sand.

### GEOLOGY

The property is underlain by mafic to ultramafic volcanic rocks.

### SURVEY PROCEDURE

The boundary between Skead and Catharine townships was used as a baseline from which lines were run by pace and compass east and west at approximately 400-foot intervals for the magnetometer survey. The boundary between Catharine and McElroy Townships was also used as a base line and lines run north and south at 400-foot intervals for the VLF-EM survey..

### Survey Procedure (continued)

Magnetometer readings were taken with a Sharpe MF-1 Fluxgate Magnetometer at 100-foot intervals. The looping method was used for control of variation. In this method a base station is selected, and readings taken along lines describing a loop, arriving back at the starting base station in less than two hours. A second loop is then started using either the same base station or another which is tied to the previous loop. Readings are then corrected for diurnal variation by assuming the time between readings is the same and distributing any variation equally among the intervening readings. No correction was applied less than the accuracy of the base station readings.

A VLF-EM survey was run with a Phoenix VLF-2 instrument set to the signal from Cutler, Maine (24.0 KHz). Readings were taken at 100-foot intervals along all the lines, using the procedure outlined in Appendix 1. The looping method was used for control of variation as in the magnetometer survey.

### DISCUSSION OF RESULTS

#### Magnetometer

The magnetometer readings outline the ultramafic rocks as high readings in elongated bodies.

They may represent flows or intrusive sills of ultramafics. The lower magnetic readings are probably underlain by mafic volcanics.

#### VLF-EM

There are a number of north-west trending cross-overs which appear parallel to the serpentinized ultramafics. They may represent contacts between the ultramafics and mafic volcanics or serpentinization within the ultramafics.

Respectfully submitted



October 26, 1990

R.A. MacGregor, P. Eng.

CERTIFICATE

I, Robert A. MacGregor, Certify:

1. I am a Mining Engineer residing at 28 Ford Street, Sault Ste. Marie, Ontario. I have worked as a mining engineer and geologist for the past 20 years.
2. I am a member of the Association of Professional Engineers of the Province of Ontario and a member of the Canadian Institute of Mining and Metallurgy.
3. I attended Queen's University for two years in the Mining Geology course.
4. I am the recorded holder of the mining claims in this report and have personal knowledge of the work performed.

Oct 26/90

Date

Robert

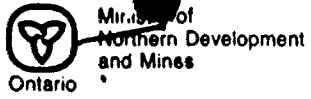


M.L.



32D04SW0103 2.13696 SKEAD

900



DOCUMENT NO. W 9008-278

- Please type or print.
- Refer to Section 77, the Mining Act for assessment work requirements and maximum credits allowed per survey type.
- If number of mining claims traversed exceeds space on this form, attach a list.
- Technical Reports and maps in duplicate should be submitted to Mining Lands Section, Mineral Development and Lands Branch:

Report of Work (Geophysical, Geological and Geochemical Surveys)

**Mining Act**

Type of Survey(s) <b>Magnetometer &amp; EM</b>	Mining Division <b>Larder Lake</b>	Township or Area <b>Skead &amp; Catherine Township</b>
Recorded Holder(s) <b>Skead Holdings Ltd.</b>	Prospector's Licence No. <b>T-1956</b>	
Address <b>c/o P.O. Box 1110, SAULT STE. MARIE, Ont. P6A 5N7</b>	Telephone No. <b>949-5928</b>	
Survey Company <b>Colex Exploration Inc.</b>		
Name and Address of Author (of Geo-Technical Report) <b>R.A. MacGregor, 28 Ford St., Sault Ste. Marie, Ont.</b>		Date of Survey (from & to) <b>02, 06, 90 14, 09, 90</b>

2 13696

Credits Requested per Each Claim in Columns at right

Special Provisions	Geophysical	Days per Claim
For first survey: Enter 40 days. (This includes line cutting)	- Electromagnetic	<b>20</b>
	- Magnetometer	<b>20</b>
For each additional survey: using the same grid: Enter 20 days (for each)	- Other	
	Geological	
	Geochemical	
<b>Man Days</b> Complete reverse side and enter total(s) here	Geophysical	Days per Claim
	- Electromagnetic	
	- Magnetometer	
	- Other	
	Geological	
	Geochemical	
<b>Airborne Credits</b> Note: Special provisions credits do not apply to Airborne Surveys.	Electromagnetic	Days per Claim
	Magnetometer	
	Other	

Mining Claims Traversed (List in numerical sequence)

Mining Claim		Mining Claim		Mining Claim	
Prefix	Number	Prefix	Number	Prefix	Number
L	1049902				
	1049903				
	1049904				
	1049905				
	1049906				
	1049907				
	1049908				
	1049909				
	1049910				
	1049911				

RECEIVED

OCT 01 1990

MINING LANDS SECTION

ONTARIO GEOLOGICAL SURVEY ASSESSMENT FILES FEB 1 1991

Total number of mining claims covered by this report of work.

10

Total miles flown over claim(s)	Recorded Holder or Agent (Signature)
Date <b>Sept. 17/90</b>	<i>[Signature]</i>

Certification Verifying Report of Work

I hereby certify that I have a personal and intimate knowledge of the facts set forth in this Report of Work, having performed the work or witnessed same during and/or after its completion and annexed report is true.

Name and Address of Person Certifying  
**R.A. MacGregor, 28 Ford St., Sault Ste. Marie, Ontario P6A 4N4**

Telephone No. **705-949-5928** Date **Sept. 17/90** Certified By (Signature) *[Signature]*

For Office Use Only

Total Days Cr. Recorded <b>400</b>	Date Recorded <b>Sept 20/90</b>	Mining Recorder <i>[Signature]</i>
	Date Approved as Recorded <b>Jan 22 1991</b>	Provincial Manager, Mining Lands <i>[Signature]</i>

Received Stamp

**RECEIVED**  
**LARDER LAKE**  
**MINING DIVISION**  
**SEP 20 1990**  
TIME **9:28am**



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) MAGNETOMETER & VLF-EM
Township or Area Skead & Catherine Townships
Claim Holder(s) Skead Holdings Ltd.

Survey Company Colex Exploration Inc.
Author of Report R.A. MacGregor,
Address of Author P.O. Box 1110, Sault Ste. Marie, Ont.
Covering Dates of Survey 02/06/90 to 10/26/90
Total Miles of Line Cut \_\_\_\_\_

MINING CLAIMS TRAVERSED
List numerically
L1049902
1049903 (number)
1049904
1049905
1049906
1049907
1049908
1049909
1049910
1049911
TOTAL CLAIMS 10

SPECIAL PROVISIONS CREDITS REQUESTED
Geophysical
-Electromagnetic 20
-Magnetometer 20
-Radiometric
-Other
Geological
Geochemical

AIRBORNE CREDITS (Special provision credits do not apply to airborne surveys)
Magnetometer Electromagnetic Radiometric
(enter days per claim)

DATE: Oct. 26/90 SIGNATURE: [Signature]
Author of Report or Agent

Res. Geol. Qualifications 2.1102

Previous Surveys
Table with columns: File No., Type, Date, Claim Holder

OFFICE USE ONLY

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 494 VLF 478 Number of Readings 494 478
Station interval 100 feet Line spacing 400 feet
Profile scale 1" = 40"
Contour interval 1000 gammas

MAGNETIC

Instrument Sharpe MF-1 Fluxgate Magnetometer
Accuracy - Scale constant 20 gammas on lowest scale
Diurnal correction method looping method
Base Station check-in interval (hours) 2 hours or less
Base Station location and value various along base line

ELECTROMAGNETIC

Instrument Phoenix VLF-2
Coil configuration N/A
Coil separation N/A
Accuracy +/- 1/4 degree
Method: [X] Fixed transmitter [ ] Shoot back [ ] In line [ ] Parallel line
Frequency Cutler, Maine (24.0 KHz)
Parameters measured Dip angle of the resultant field

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

**R. Mac GREGOR**  
316 WELLINGTON ST WEST  
SAULT STE. MARIE, ONTARIO  
P6A 1J1

Areas Shaded in blue for "Account Customers" / Les espaces ombrés bleus sont à l'usage des clients titulaires d'un compte

Account No. N° de compte Telephone No. N° de téléphone

Sender's name and address Nom et adresse de l'expéditeur

*R. Mac Gregor*

*316 Wellington St W*

*S.S.M., ON* Postal Code Postal

*P6A1J1*

Bill of Lading

Connaissance

TO A Telephone No. N° de téléphone

*Ministry of Northern Develop*

*ment & Mines*

*159 Cedar St*

*Sudbury ON* Postal Code Postal

*P3E6A5*



816512123

COURIER MESSAGERIES



PP 816 512 123 CA

- This Bill of Lading is subject to audit
- Do not mail dangerous goods
- If sender selects "signature not required" option, insurance against loss and damage is waived.

- Ce connaissance est sujet à vérification
- Ne pas poster de matières dangereuses
- Si l'expéditeur opte pour "signature non requise" il renonce au droit de recevoir un remboursement en cas de perte et de dommage.

Sender's signature

Signature de l'expéditeur

*[Signature]*

CANADA POST CORPORATION SOCIÉTÉ CANADIENNE DES POSTES

MINISTRY OF NORTHERN DEVELOPMENT  
AND MINES

159 Cedar Street  
SUDBURY, Ontario P3E 6A5

PRIORITY POST

*4th FLOOR  
MINING LANDS.*

*Handled After  
Cut Off Time*



NOTES

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

SAND AND GRAVEL  
ON MTC PIT NO.230

RF 185 APPLICATION UNDER PUBLIC LANDS ACT

AREAS WITHDRAWN FROM STAKING

- (R<sup>1</sup>) Surface and Mining Rights Withdrawn from Staking, section 36/80 order No. W-83-83
- (R<sup>2</sup>) Surface and Mining Rights Withdrawn from Staking, section 36/80 order No. W-8-85
- (R<sup>3</sup>) Surface and Mining Rights Withdrawn from Staking, section 36/80 order No. W-7-86  
PART OF R3 REOPENED BY ORDER O-19/86 NOV 30/86  
PART OF R3 REOPENED BY ORDER NO. O-110/89 NR  
PART OF R3 REOPENED BY ORDER O-111-90NER A
- (R<sup>4</sup>) Surface and Mining Rights Withdrawn from Staking, section 36/80 order No. W-8-86  
PART OF R4 REOPENED BY ORDER O-19/86L NOV 30/86
- (R<sup>5</sup>) Surface and Mining Rights Withdrawn from Staking, section 36/80 order No. W-9-86  
Part of R5 re-opened O34/86, O33/86, O12/87  
PART OF R5 REOPENED BY O 27 86 NR MAR 30/1986
- (R<sup>6</sup>) Surface and Mining Rights Withdrawn from Staking, section 36/80 order No. W-72-87  
PART OF R6 REOPENED BY O-17/86L NOV 30/86

THE INFORMATION THAT APPEARS ON THIS MAP HAS BEEN COMPILED FROM VARIOUS SOURCES. ACCURACY IS NOT GUARANTEED THOSE INCLUDING TO STAKE MIN.



32045W103 2.13696 SKEAD

200

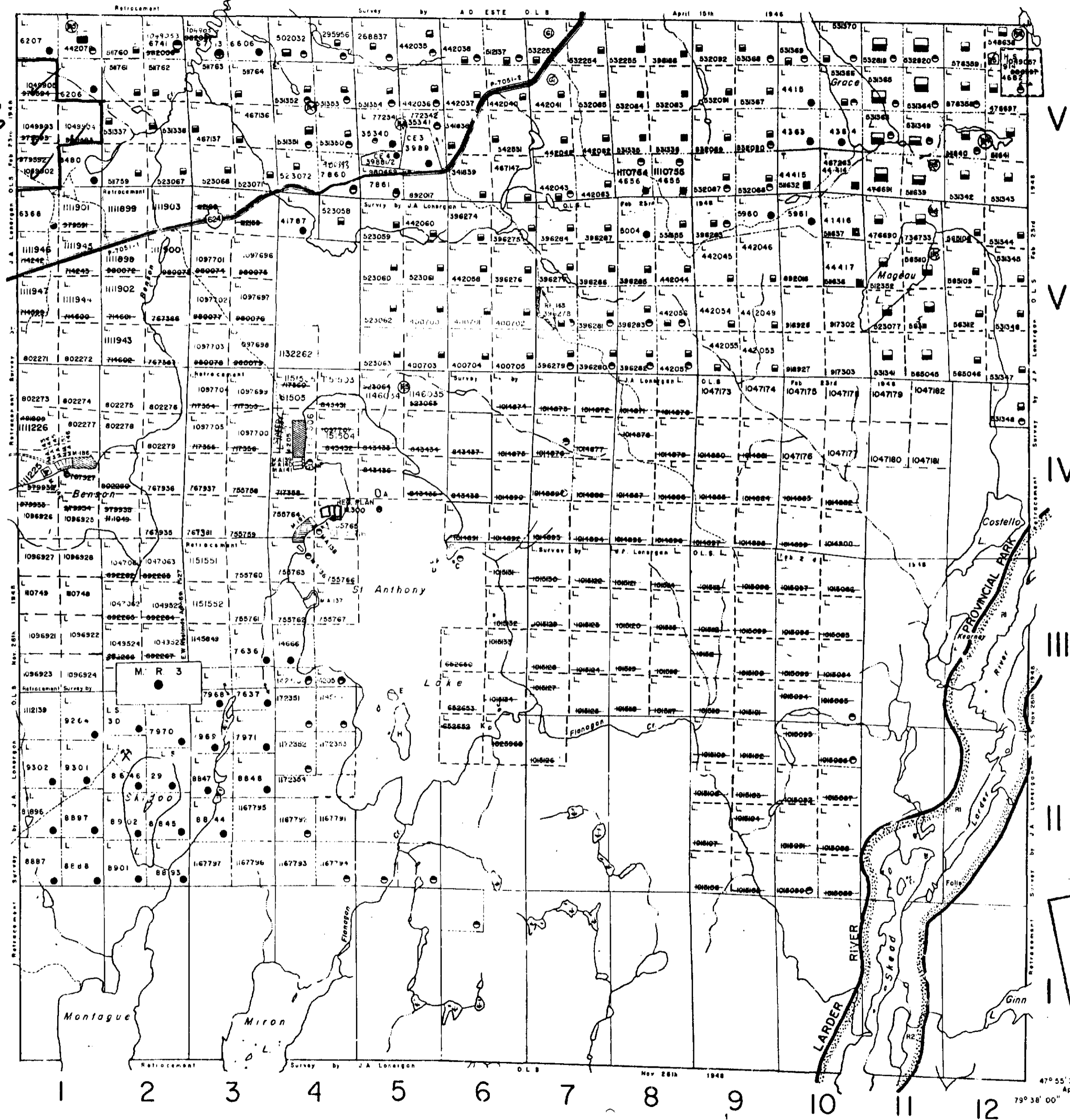
ON THE SURVEY OF THE LANDS SHOWN HEREON.

HEARST TP. M.354

2.13696

CATHARINE TP. M.336

BAYLY TP. M.323



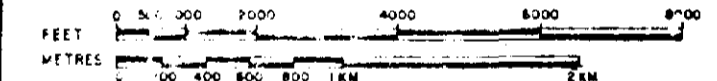
LEGEND

- HIGHWAY AND ROUTE NO.
- OTHER ROADS
- TRAILS
- SURVEYED LINES  
TOWNSHIPS, BASF LINES, ETC.
- UNSURVEYED LINES  
LOT LINES  
PARCEL BOUNDARY  
MINING CLAIMS ETC.
- RAILWAY AND RIGHT OF WAY
- UTILITY LINES
- NON-PERENNIAL STREAM
- FLOODING OR FLOODING RIGHTS
- SUBDIVISION
- ORIGINAL SHORELINE
- MARSH OR MUSKEG
- MINES

DISPOSITION OF CROWN LANDS

- | TYPE OF DOCUMENT                | SYMBOL |
|---------------------------------|--------|
| PATENT, SURFACE & MINING RIGHTS | ●      |
| SURFACE RIGHTS ONLY             | ○      |
| MINING RIGHTS ONLY              | ○      |
| LEASE, SURFACE & MINING RIGHTS  | ○      |
| SURFACE RIGHTS ONLY             | ○      |
| MINING RIGHTS ONLY              | ○      |
| LICENCE OF OCCUPATION           | ○      |
| CROWN LAND SALE                 | CS     |
| ORDER-IN-COUNCIL                | UC     |
| RESERVATION                     | ○      |
| CANCELLED                       | ○      |
| SAND & GRAVEL                   | ○      |

SCALE: 1 INCH = 40 CHAINS



ACRES	HECTARES
40	16

TOWNSHIP

**SKEAD**

DATE OF ISSUE  
DEC 8 1990  
LARDER LAKE  
MINING RECORDER'S OFFICE

DISTRICT  
TIMISKAMING  
DIVISION  
LARDER LAKE

Ministry of Natural Resources

Ontario Surveys and Mapping Branch

Date 10/4/74

Plan No.

Whitney Block  
Queen's Park, Toronto

M.387

McELROY TP

NOTES

400 surface rights only, no mining, no lakes and rivers.

AREAS WITHDRAWN FROM DISPOSITION

- M.R.O. - MINING RIGHTS ONLY
- S.R.O. - SURFACE RIGHTS ONLY
- M.+S. - MINING AND SURFACE RIGHTS

Description Order No. Date Disposition File

NOTICE OF FORESTRY ACTIVITY

THIS TOWNSHIP / AREA FALLS WITHIN THE  
TIMISKAMING MANAGEMENT UNIT  
AND MAY BE SUBJECT TO FORESTRY OPERATIONS.  
THE MNR UNIT FORESTER FOR THIS AREA CAN BE  
CONTACTED AT: P.O. BOX 129  
SWASTIKA, ONT.  
POK ITO  
705-642-3222

LEGEND

- PATENTED LAND
- PATENTED FOR SURFACE RIGHTS ONLY
- LEASE
- LICENSE OF OCCUPANCY
- CROWN LAND SALES
- LOCATED LAND
- CANCELLED
- MINING RIGHTS ONLY
- SURFACE RIGHTS ONLY
- HIGHWAY & ROUTE NO.
- ROADS
- TRAILS
- RAILWAYS
- POWER LINES
- MARS: OR MUSKEG
- MINES

\*Used only with symbols, loc. locations or when space is limited

TOWNSHIP OF

CATHARINE

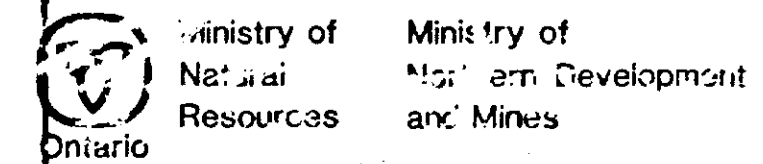
DISTRICT OF  
TIMISKAMING

LARDER LAKE  
MINING DIVISION

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

DR. DATE JULY 1990 PLAN NO. G-3615

DATE OF ISSUE  
SEP 27 1990



PROJECT OPERATIONS

PACAUD TP

SKEAD TP

MARTER TP



32045W103 2.13696 SKEAD

36W	32W	28W	24W	20W	16W	12W	8W	4W	0
5200	15000	1000	300	320	320	3000	4500	4000	900
3000	55,000	1500	560	360	320	1500	5400	4000	3800
1650	8500	5000	1000	360	300	780	3000	5500	7100
1200	2800	5500	1600	420	300	420	1000	3700	1800
1000	3000	5000	5000	620	420	220	420	1000	1750
740	2000	4000	12,000	820	340	340	150	260	280
780	940	4000	2000	1175	540	280	280	280	240
1100	280	5300	6200	3400	760	220	180	140	120
2050	480	5000	5000	4800	1350	480	100	60	140
4200	720	2000	2400	4400	2200	1100	240	(60)	(80)
5500	1000	340	2500	3800	2800	2200	1050	(60)	(40)
4800	1500	260	1500	4500	3500	3300	2425	420	280
4300	2400	300	760	4700	3300	2600	4600	2000	760
3000	6500	660	480	2900	2000	6100	4900	5000	3700
1800	8300	1550	320	1300	1100	4000	5000	3800	2000
1000	6100	1725	820	720	840	3400	5000	2450	1000
920	3200	5600	2175	940	1000	2775	1675	3100	520
1000	1800	3000	4700	1100	1700	100	420	1925	500
1700	1100	1275	5200	2000	3400	680	340	660	80
3000	1050	800	2600	2725	5000	1250	720	210	140
4300	1225	780	980	1000	5000	1600	780	240	260
4000	2000	920	360	540	3800	2700	760	280	680
3500	2700	1600	260	520	2100	4000	720	2000	2000
4000	3600	2500	380	440	1000	5300	1075	6500	5200
3300	4000	2500	1000	360	620	3100	1250	5000	3800
2100	4300	3000	1150	940	460	1350	560	680	660
1200	4100	2300	1600	1500	500	720	460	0	80
									260
									0
									100
									100
									(40)
									(50)
									(80)
									(100)
									(20)
									(50)
									120
									880
									2200
									7100
									8100
									(8000)
									1275
									1150
									260
									100
									180
									580
									1075
									135
									380
									740
									5400

4E	8E	12E
660	750	1000
760	2000	4300
1500	1000	2000
2800	2000	2350
1600	4500	2600
1800	1700	1700
620	520	480
690	360	620
850	440	475
1300	1075	1500
5200	1500	1250
7600	3500	2000
5800	8500	5100
1650	6400	6000
420	1925	3400
50	1650	1200
(100)	390	490
(150)	100	940
(120)	120	900
(140)	120	1700
(100)	80	640
(80)	520	(300)
(20)	0	370
(50)	(100)	340
(420)	(280)	560
(560)	(360)	640
(20)	180	1250
2500	3500	2700
16,000	4900	4300
7500	4500	4900
5500	3600	5500
1500	6700	6000
910	4000	4600
280	2700	3000
120	2800	2175
140	2500	1700
260	1100	1375
580	690	1250
1000	1000	1300
560	1350	1300

16E	20E	24E
4300	3100	2700
6800	3300	2100
3600	3400	2100
1750	3500	2200
1300	3500	2500
1450	3500	2600
2000	4000	2500
2400	4000	2600
2700	4000	2800
3200	4000	2800
3600	4100	3200
4000	4200	3750
4200	4400	3600



2.13696

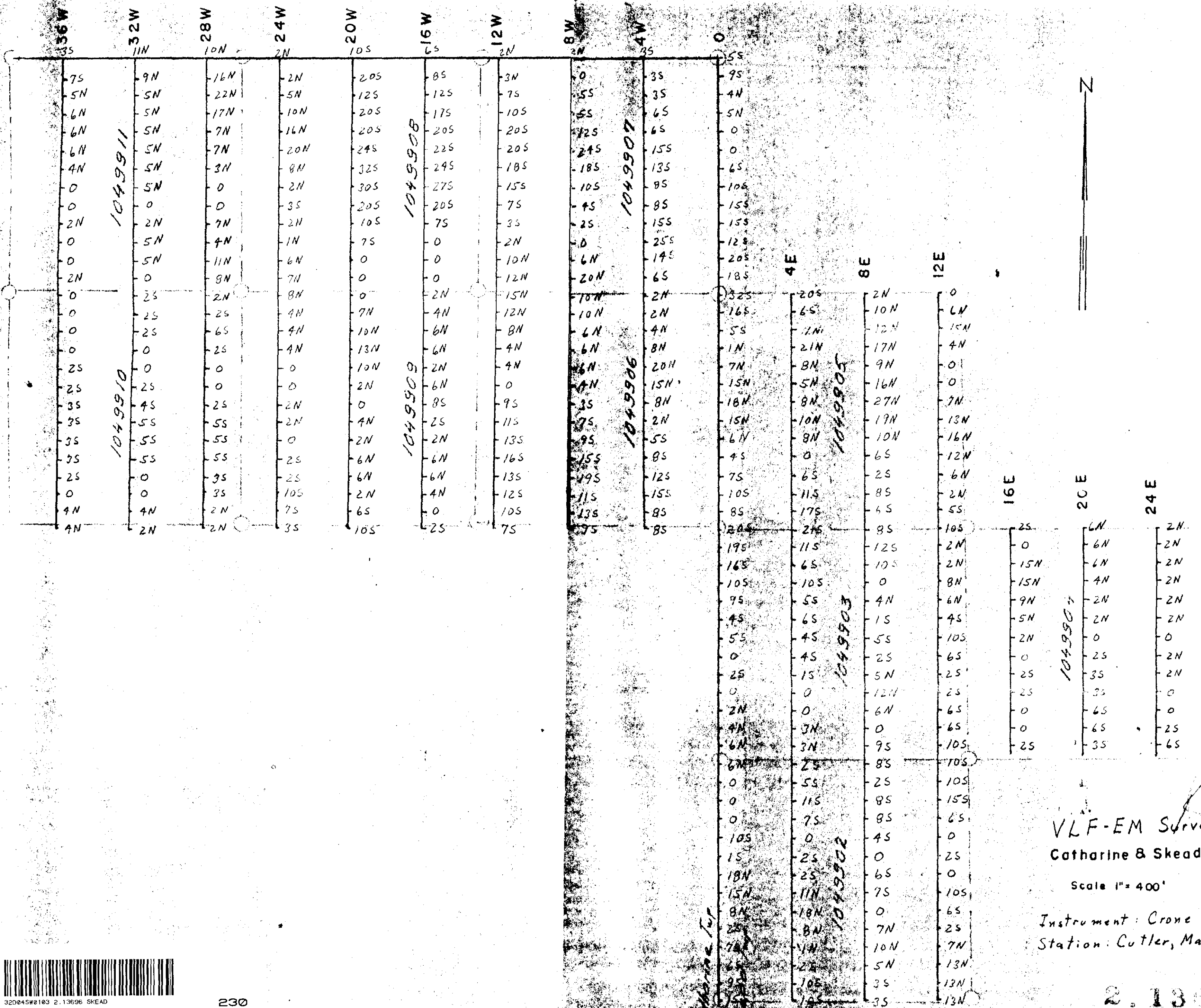
Magnetometer Survey

Catharine & Skead Twp.

Scale 1" = 400'

Instrument: Sharpe MF-1





VLF-EM Survey

Catharine & Sked Twp.

Scale 1" = 400'

Instrument: Crone Radem  
 Station: Cutler, Maine 24.0 KHz

2.13696

