

32D05SW0021 2.8320 CLIFFORD

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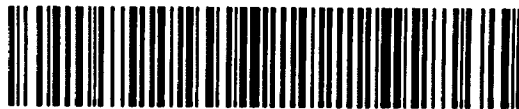
GRID C14  
CLIFFORD TOWNSHIP, ONTARIO  
LARDER LAKE MINING DIVISION  
NTS 32D5

REPORT ON  
MAGNETIC SURVEY

A. JAMES WALKER

April 18, 1985

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AUG - 1 1985  
MINING LANDS SECTION



32D05SW0021 2.8320 CLIFFORD

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ENCLOSURES

Grid C14	Magnetic Survey	Contours 1:5000
	Magnetic Survey	Values 1:5000

## INTRODUCTION

Walker Exploration Ltd. carried out a magnetic survey over a group of 18 claims located on the south boundary and east of centre in Clifford Township, about 20 kilometers north-east of Kirkland Lake.

Linecutting was carried out in January 1985 by Jean Alix Co. Ltd., while the magnetic survey was made March 22nd and 23, 1985 over approximately 32.7 kilometers of line.

The survey was carried out with an EDA PPM300 total field proton magnetometer. An EDA PPM 400 base station magnetometer was used for diurnal control.

## SUMMARY

The magnetic survey shows an east-west trend to the volcanic, with highest values over the mafic intrusives on the easterly section of the grid. Some north-south faulting is likely, as indicated by offsets in the contoured magnetic values.

## PROPERTY

The 18 claim group is located in the south central part of Clifford Township (Claims 803325-803342 inclusive). The group is about 20 kilometers north-east of Kirkland Lake. Access is via a bush road that goes east from the Esker Lake Provincial Park road (about 5 kilometers).

PREVIOUS WORK

A magnetic survey was carried out by Canadex Mining Corporation Ltd. in 1972 covering the easterly 6 claims of the present survey. L. J. Cunningham, Consultant, reports several old pits and trenches were observed. Pyrite mineralization was observed near some magnetic lows, as well as rusty outcrops near a magnetic high. Some drilling by Mining Corporation is mentioned in Mr. Cunningham's report.

GENERAL GEOLOGY - (OGS Geoscience Report 132, Map 2283)

The claim group is mainly drift covered. East-west trending volcanics occur on the property, with intermediate to the south and felsic to the north. Outcrops of quartz gabbro and diorite are found on the east portion of the grid.

SURVEY METHOD

The magnetic survey was performed with an EDA PPM 300 magnetometer, measuring total field to 0.1 gammas. Diurnal control was made by using an EDA base station magnetometer (PPM 400) located on the Esker Lake road to the west. Other grids on this project are tied into this base station, so a common base level for all grids was established.

The magnetometer and base station have solid state memory for storage of values and location of stations read. The units are plugged together each evening and the computer programme allows for automatic diurnal corrections to field values. Corrected data was stored on cassette of an

HP85 computer.

Observations were made at 25 meter intervals on lines 125 meters apart. As well base line and tie lines were read. Values are plotted on a plan at a scale of 1:5000. Contours of values are plotted on a separate sheet at 25 gamma intervals.

#### SURVEY RESULTS

Contours of the values show a general east-west trend with low values to the west. Some isolated magnetic highs (200 to 600 gammas above background) occur to the east of lines 1875 East, and likely represents the mafic intrusive rocks. Offsets in the contour pattern suggests some north-south faulting.

#### CONCLUSIONS

The magnetic survey should provide a good base to relate previous exploration work and future activities such as prospecting and mapping, geochemistry and other geophysics such as VLF-EM.

Respectfully submitted,



A. James Walker, P. Eng.

AJW:sb

SURVEY DATA

Grid C14

Clifford Township, Larder Lake Mining Division, Ontario

Geophysical Contractor - Walker Exploration Ltd.

Covering Dates - Linecutting - January 1985  
Magnetic Survey - March 21-22, 1985  
Drafting - April 9-10, 15, 1985  
Report - April 18, 1985

Line Coverage - Linecutting - 32.7 kilometers  
Magnetic Survey - 32.7 kilometers  
Readings - 1337  
Line spacing - 125 meters  
Station spacing - 25 meters

Crew

Linecutting - Jean Alix Co. Ltd., Val D'Or Quebec  
Magnetic Survey - J. Tough, Bracebridge, Ontario  
D. Miles, London, Ontario  
Drafting - R. T. Marcroft, Mississauga, Ontario  
Field Report - A. J. Walker, Mississauga, Ontario

Instruments

Magnetic Survey - EDA PPM 300 Proton, Total Field  
Direct Reading, 0.1 Gamma  
Solid State Memory  
EDA PPM 400 Base Station Recorder



*File L803323* The Min

Type of Survey(s) <b>Geophysical - Mag</b>		Township or Area <b>Clifford Twp.</b>	
Claim Holder(s) <b>Lac Minerals Ltd.</b>		Prospector's Licence No. <b>T-664</b>	
Address <b>Suite 2105, North Tower, Royal Bank Plaza, P.O. Box #156, Toronto, Ont.</b>			
Survey Company <b>Walker Exploration Ltd.</b>		Date of Survey (from & to) <b>01, 01, 85, 23, 03, 85</b>	Total Miles of line Cut <b>32.7 km</b>
Name and Address of Author (of Geo-Technical report) <b>A. James Walker, 10 Hurontario St., Mississauga, Ont.</b>			

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

Mining Claims Traversed (List in numerical sequence)

Mining Claim		Expend. Days Cr.	Mining Claim		Expend. Days Cr.
Prefix	Number		Prefix	Number	
L	803325				
	803326				
	803327				
	803328				
	803329				
	803330				
	803331				
	803332				
	803333				
	803334				
	803335				
	803336				
	803337				
	803338				
	803339				
	803340				
	803341				
	803342				

RECEIVED  
AUG 20 1985  
MINING DIVISION

LARDER LAKE MINING DIV.  
RECEIVED  
AUG - 6 1985  
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. **18**

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.

For Office Use Only

Total Days Cr. Recorded <b>120</b>	Date Recorded <b>AUG - 6 1985</b>	Mining Recorder <i>[Signature]</i>
Date Approved as Recorded <b>85-08-27</b>	Branch Director <i>[Signature]</i>	

Date **5 July 1985** Recorded Holder or Agency (Signature) *Denise McDermid*

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  
**Denise McDermid, Lac Minerals Ltd., Suite 2105, North Tower, Royal Bank Plaza,  
P.O. Box #156, Toronto, Ont. M5J 2J4**

Date Certified **05 July, 1985.** Certified by (Signature) *Denise McDermid*



**GEOPHYSICAL - GEOLOGICAL - GEOCHEMICAL  
TECHNICAL DATA STATEMENT**

**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) Magnetic  
Township or Area Clifford Twp.  
Claim Holder(s) LAC MINERALS LTD.  
Survey Company Walker Exploration Ltd.  
Author of Report A. James Walker  
Address of Author 10 Hurontario St., Miss., Ont.  
Covering Dates of Survey Jan. 15 - Apr. 18, 1985  
(linecutting to office)  
Total Miles of Line Cut 32.7 Kilometers

**MINING CLAIMS TRAVERSED  
List numerically**

(prefix)	(number)
803325	
803326	
803327	
803328	
803329	
803330	
803331	
803332	
803333	
803334	
803335	
803336	
803337	
803338	
803339	
803340	
803341	
803342	
<b>TOTAL CLAIMS</b> <u>18</u>	

If space insufficient, attach list

**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 \_\_\_\_\_

-Magnetometer 40

-Radiometric \_\_\_\_\_

-Other \_\_\_\_\_

Geological \_\_\_\_\_

Geochemical \_\_\_\_\_

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

Magnetometer \_\_\_\_\_ Electromagnetic \_\_\_\_\_ Radiometric \_\_\_\_\_  
(enter days per claim)

DATE: April 25, 1985 SIGNATURE: A. J. Walker  
Author of Report or Agent

Res. Geol. \_\_\_\_\_ Qualifications 63.2234

**Previous Surveys**

File No.	Type	Date	Claim Holder

OFFICE USE ONLY



### GEOPHYSICAL TECHNICAL DATA

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

Number of Stations 1225 Number of Readings 1337  
 Station interval 25 meters Line spacing 125 meters  
 Profile scale \_\_\_\_\_  
 Contour interval 25 gammas

**MAGNETIC**

Instrument EDA PPM 300  
 Accuracy - Scale constant Readout to 0.1 Gammas  
 Diurnal correction method Base station recorder EDA PPM 400  
 Base Station check-in interval (hours) Continuous (15 second)  
 Base Station location and value On Esker Lake Road, just north of north arm of  
 Victoria Lake - 58640 Gammas

**ELECTROMAGNETIC**

Instrument \_\_\_\_\_  
 Coil configuration \_\_\_\_\_  
 Coil separation \_\_\_\_\_  
 Accuracy \_\_\_\_\_  
 Method:  Fixed transmitter  Shoot back  In line  Parallel line  
 Frequency \_\_\_\_\_  
 (specify V.L.F. station)  
 Parameters measured \_\_\_\_\_

**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 \_\_\_\_\_

1985 08 15

File: 2.8320

Mining Recorder  
Ministry of Natural Resources  
4 Government Road East  
Kirkland Lake, Ontario  
P2N 1A2

Dear Sir:

We received reports and maps on August 1, 1985 for a Geophysical (Magnetometer) Survey submitted under Special Provisions (credit for Performance and Coverage) on Mining Claims L 803325, et al, in the Township of Clifford.

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

We do not have a copy of the report of work which is normally filed with your office prior to the submission of this technical data. Please forward a copy as soon as possible.

Yours sincerely,

S.E. Yundt  
Director  
Land Management Branch

Whitney Block, Room 6643  
Queen's Park  
Toronto, Ontario  
M7A 1W3  
Phone:(416)965-4888

A. Barr:mc

cc: Lac Minerals Ltd  
Suite 2105, North Tower  
P.O. Box 156  
Royal Bank Plaza  
Toronto, Ontario  
M5J 2J4  
Attention: Mrs. Denise McDermid



Suite 2105, North Tower  
P.O. Box 156  
Royal Bank Plaza  
Toronto, Canada M5J 2J4  
(416) 865-0722  
Telex No. 06-22145

LAC

Lac Minerals Ltd.

01 August, 1985.

Mr. Ray Pichette,  
Mining Land Section,  
Land Management Branch,  
Ont. Ministry of Natural Resources,  
Room 6610, Whitney Block,  
Queen's Park,  
TORONTO, ONT. M7A 1W3

Dear Sir:

Enclosed please find a duplicate set of assessment work reports covering a total of 152 claims in the Larder Lake mining district. These reports cover our grid numbers A-18, A-47, B-7, B-14, B-17, C-14, M-17, M-21 and M-40.

I have today mailed the Report of Work forms to the Mining Recorder in Kirkland Lake. Hoping this meets with your approval, I am

Yours very truly,  
LAC MINERALS LTD.

(Mrs.) Denise McDermid  
Land Manager

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AUG - 1 1985

**MINING LANDS SECTION**

Encl.

CC: C. Pegg, Exploration Manager  
G. Koleszar, Mining Recorder



Suite 2105, North Tower  
P.O. Box 156  
Royal Bank Plaza  
Toronto, Canada M5J 2J4  
(416) 865-0722  
Telex No. 06-22145

**LAC**

Lac Minerals Ltd.

01 August, 1985.

Mr. G. J. Koleszar,  
Mining Recorder,  
Ont. Ministry of Natural Resources,  
4 Government Road East,  
P.O. Box #984,  
KIRKLAND LAKE, ONT. P2N 1A2

Dear Sir:

Enclosed please find 9 Work Report forms covering 152 claims within your region. The actual reports, maps and technical data sheets have been mailed today to the Land Management Branch in Toronto.

Would you kindly advise me once the work approvals are recieved. Thanking you in advance, I am

Yours truly,  
LAC MINERALS LTD.

(Mrs.) Denise McDermid  
Land Manager

Encl.

CC: C. Pegg, Exploraiton Manager  
R. Pichette, Land Management Branch ✓

**RECEIVED**

AUG - 1 1985

**MINING LANDS SECTION**

Mining Lands Section

File No 2.8320

Control Sheet

TYPE OF SURVEY

- GEOPHYSICAL
- GEOLOGICAL
- GEOCHEMICAL
- EXPENDITURE

MINING LANDS COMMENTS:

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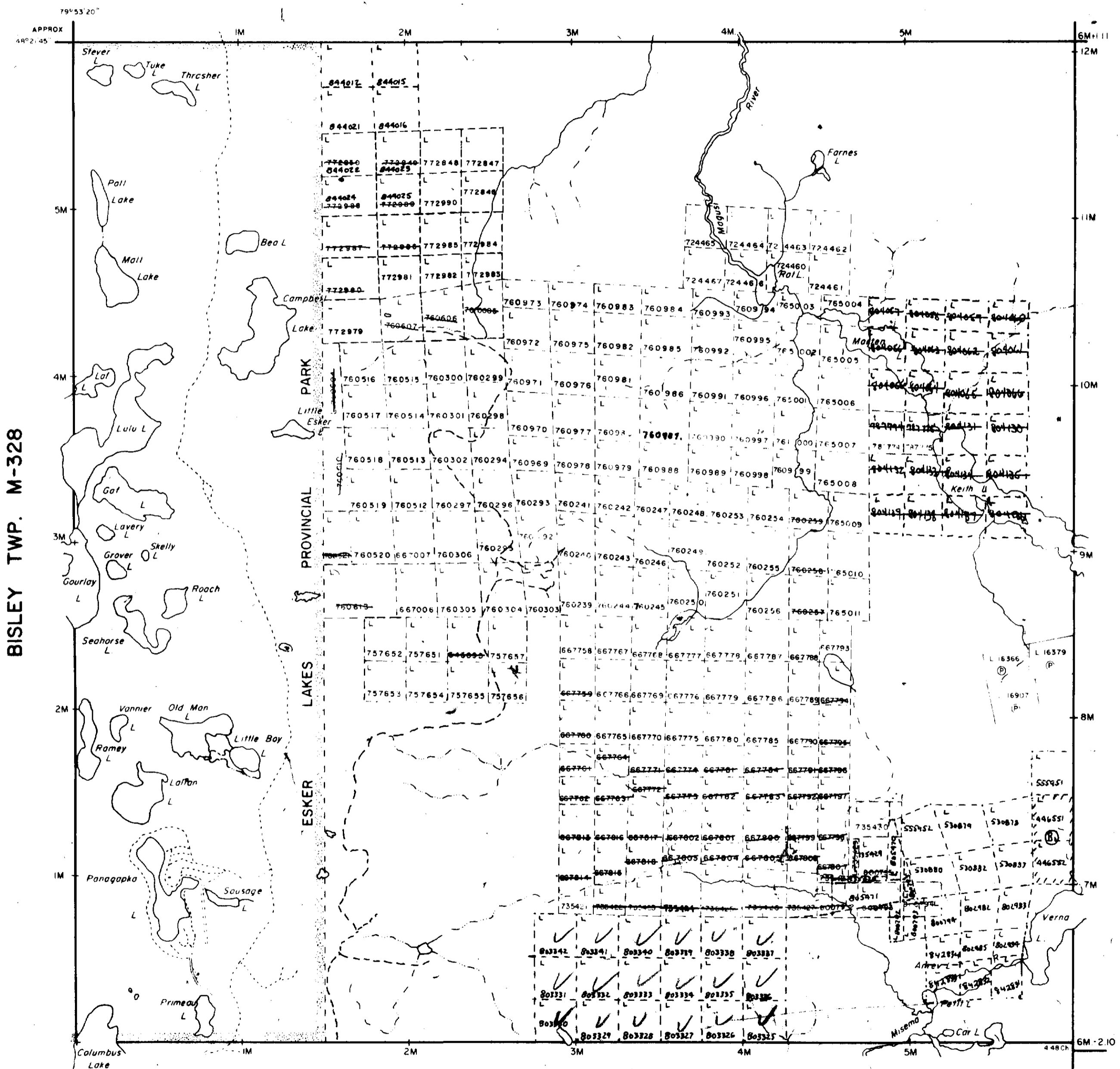
< Clifford >

L.D.  
Lgd.

Demick  
Signature of Assessor

Aug. 22 / 85  
Date

ELLIOTT TWP. M-347



ARNOLD TWP. M-321

NOTES

400 surface rights reservation along the shores of all lakes and rivers.  
 (R) SEC 36/80 Order No. W15/85 Date Disposition April 10/87 MR 65A

August 1/85

LEGEND

- PATENTED LAND
- PATENTED LEASE (LEASE ONLY)
- LEASE
- LEASE OF OCCUPATION
- CROWN LAND SALE
- LOCATED LAND
- CANCELLED
- MINING RIGHTS ONLY
- SURFACE RIGHTS ONLY
- HIGHWAY & ROUTE
- ROADS
- TRAILS
- RAILWAYS
- POWER LINES
- MATCH OR MUSKET
- MINES

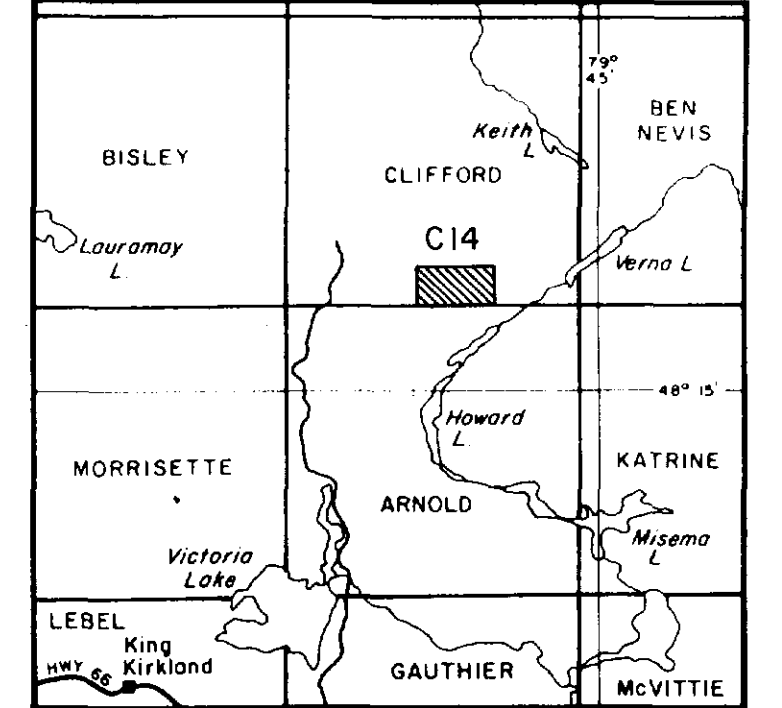
TOWNSHIP OF  
**CLIFFORD**  
 DISTRICT OF  
**COCHRANE**  
 LARDER LAKE  
 MINING DIVISION  
 SCALE 1 INCH = 40 CHAINS (1/2 MILE) #15

BY: R.W. NOBLE  
 DATE: DEC 9, 71  
 PLAN NO: **M-338**

ONTARIO  
 MINISTRY OF NATURAL RESOURCES  
 SURVEY OF LANDS AND MINES



Handwritten notes at the bottom of the map area.



**LEGEND**

- Grid line with 25m stations.....
- Located claim post and line.....
- Swamp, Creek, Lakeshore.....
- Instrument..... EDA PPM-300
- Base station..... EDA PPM-400
- Values above base level of 58,000 gammas
- Contour interval..... 25 gammas
- 25 gamma contour.....
- 100 gamma contour.....
- 500 gamma contour.....
- Depression.....

13N  
T.L. 12+60N

12N

11N

10N

9N

8N

7N

6N

5N

4N

3N

2N

1N



CLIFFORD TWP.  
ARNOLD TWP.

**GRID C14**  
CLIFFORD TOWNSHIP  
Larder Lake M.D., Ontario

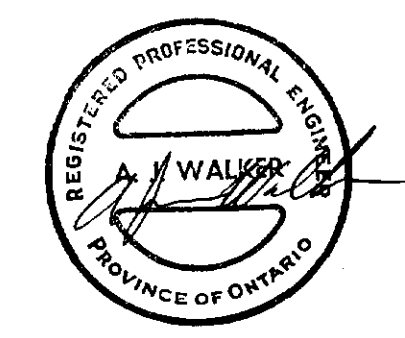
**Magnetometer Survey**  
**TOTAL FIELD**  
**MAGNETIC CONTOURS**

Scale 1:5000

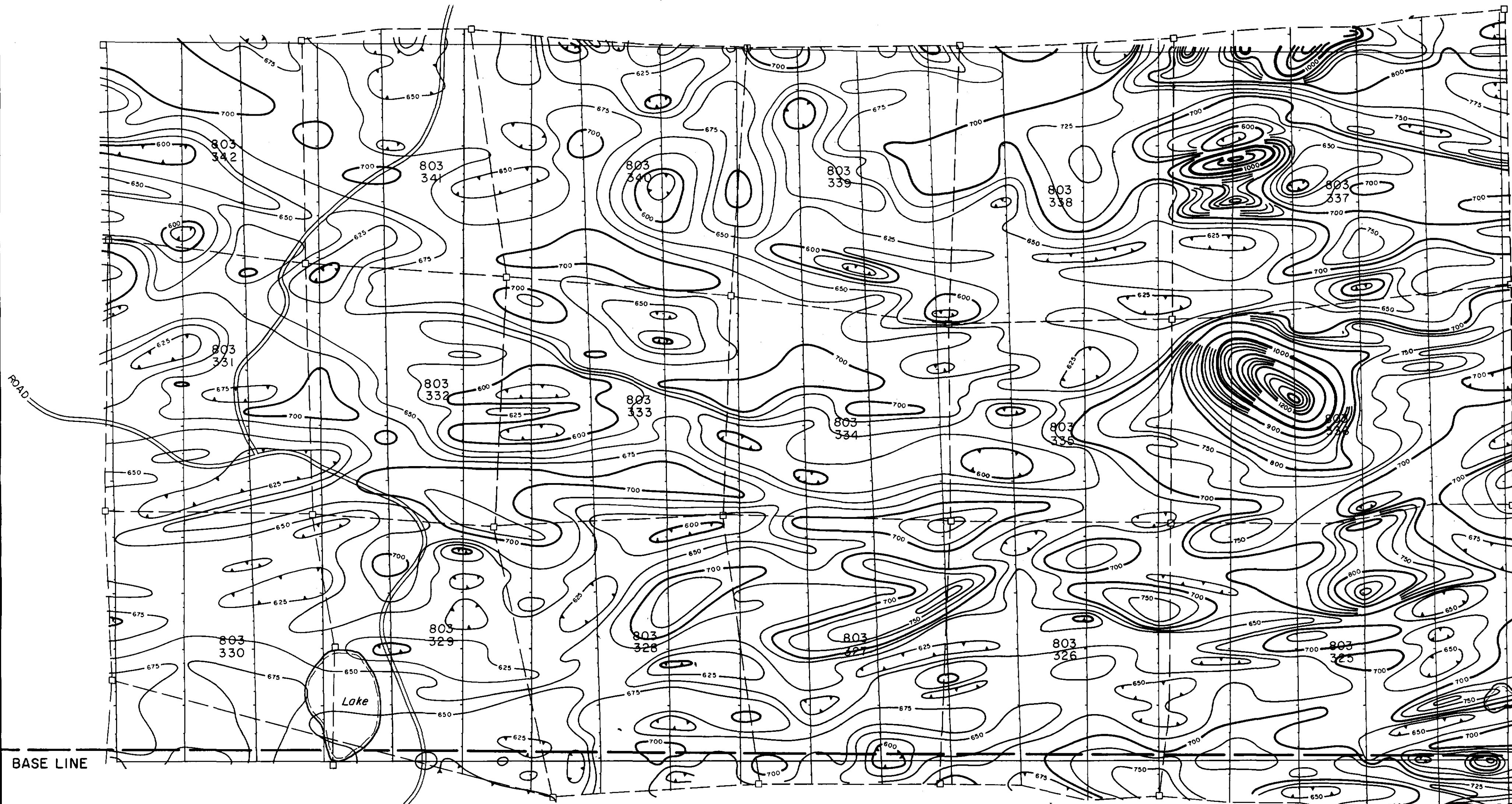


WALKER EXPLORATION LTD.  
Survey Contractor  
Mississauga, Ontario

April 1985



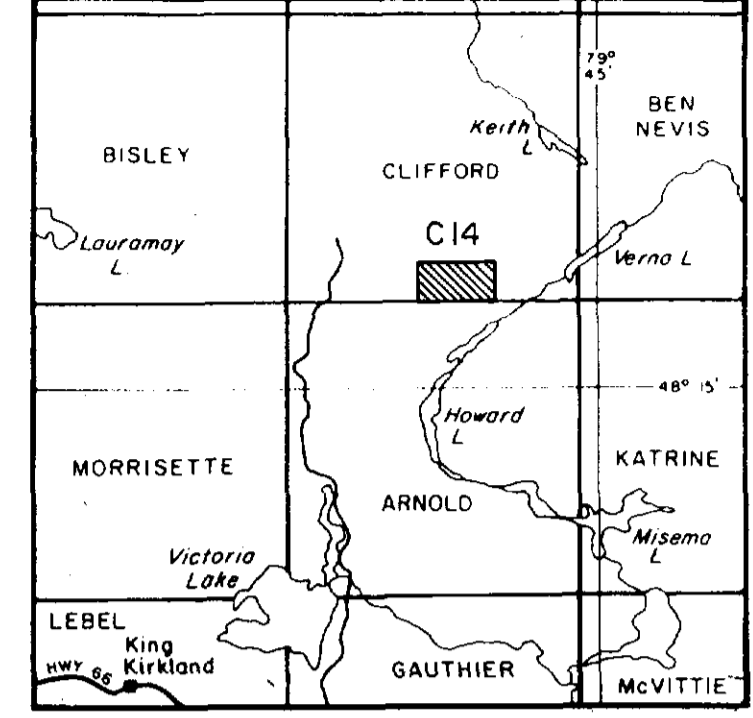
28320



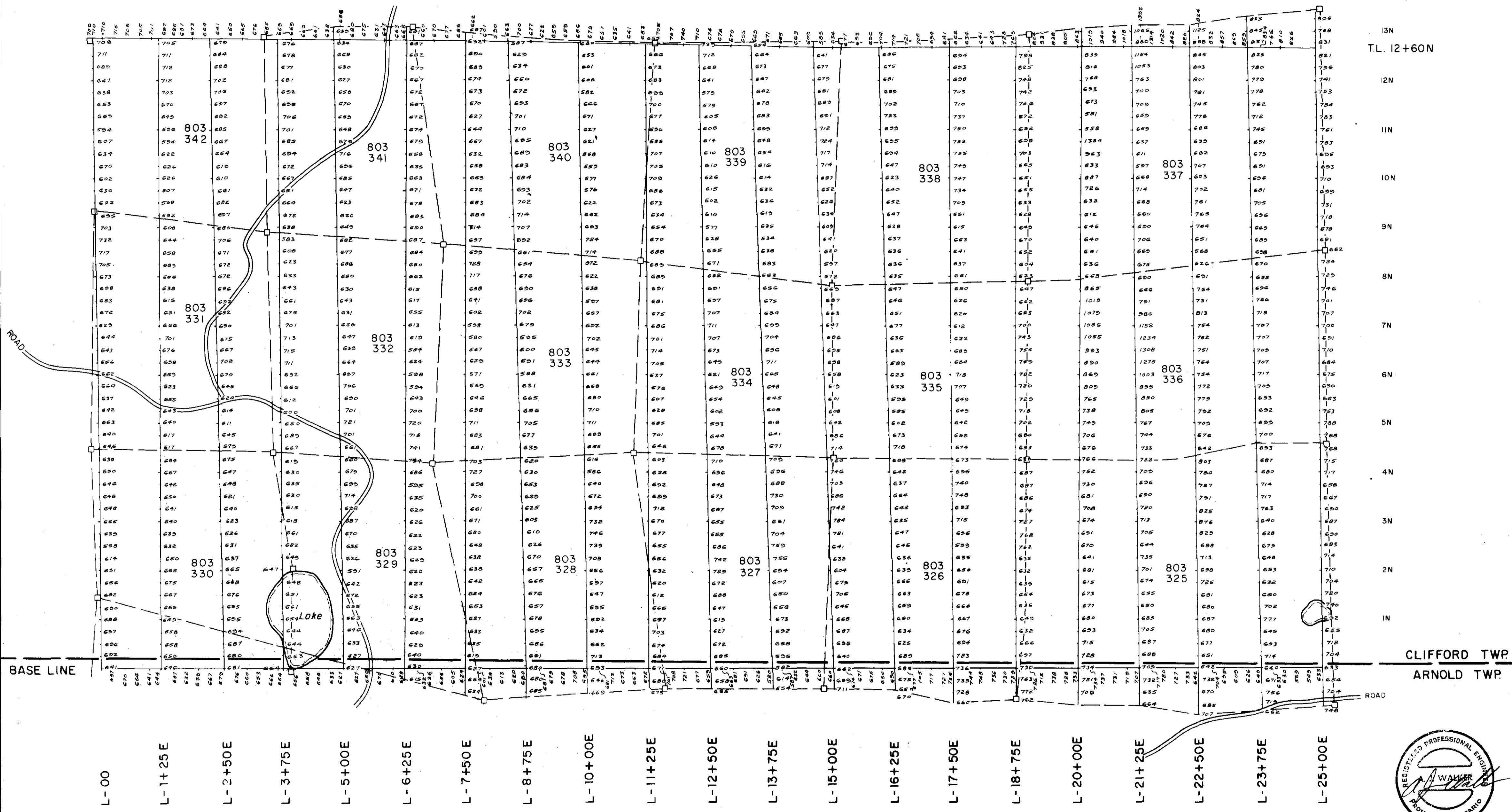
BASE LINE

L-00 L-1+25E L-2+50E L-3+75E L-5+00E L-6+25E L-7+50E L-8+75E L-10+00E L-11+25E L-12+50E L-13+75E L-15+00E L-16+25E L-17+50E L-18+75E L-20+00E L-21+25E L-22+50E L-23+75E L-25+00E





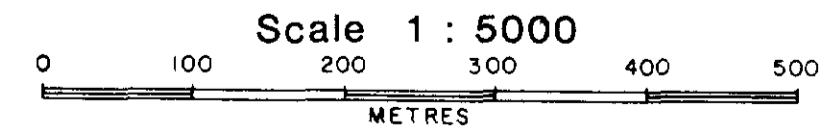
**LEGEND**  
 Grid line with 25m stations .....  
 Located claim post and line .....  
 Swamp, Creek, Lakeshore .....  
 Instrument ..... EDA PPM-300  
 Base station ..... EDA PPM-400  
 Values above base level of 58,000 gammas



CLIFFORD TWP.  
 ARNOLD TWP.

**GRID C14**  
 CLIFFORD TOWNSHIP  
 Larder Lake M.D., Ontario

**Magnetometer Survey**  
**TOTAL FIELD**  
**MAGNETIC READINGS**



Scale 1:5000  
 WALKER EXPLORATION LTD.  
 Survey Contractor  
 Mississauga, Ontario  
 April 1985

28320

