



52009SE0062 52009SE0042 TARP LAKE

010

BILLITON CANADA LTD.  
PICKLE LAKE PROJECT

METRIC GRID  
CONNELL TOWNSHIP, ONTARIO

NTS 5209

REPORT ON  
MAGNETIC AND VLF-EM SURVEYS

A. James Walker, P. Eng.

February 9, 1985



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ENCLOSURES

- |                 |   |  |
|-----------------|---|--|
| Magnetic Survey | - | Total Field Values                         |
|                 | - | Total Field Contours                       |
|                 | - | Vertical Gradient Values                   |
|                 | - | Vertical Gradient Profiles                 |
| VLF-EM Survey   | - | Dip Angle and Quadrature Values & Profiles |
|                 | - | Filtered Dip Angle Values & Contours       |

## INTRODUCTION

At the request of Mr. John Goodwin, Senior Geologist of Billiton Canada Ltd., Walker Exploration Ltd. contracted to carry out magnetic (total field and gradient) and VLF-EM surveys over 60 mineral claims in the north central part of Connell Township, near Pickle Lake, Ontario. An EDA PPM 500 gradiometer was used for the magnetic survey (total field and vertical gradient) and a Geonics EM16 was used for the VLF-EM survey.

Field work was carried out during the period of December 6th to December 15th, 1984, with approximately 57.1 km of lines surveyed. Linecutting and chaining was carried out by another contractor.

## SUMMARY

The magnetic survey shows a general northeast trend, with several narrow bands of magnetic highs.

The VLF-EM survey shows several subparallel conductors, also trending northeast. Zones of good conductivity likely represent sulphide mineralization, while weaker zones are likely shearing and faulting.

Final interpretation and review of previous work is being carried out by Billiton Canada Ltd. staff.

## PROPERTY

The property is located about 12 km northeast of the village of

Pickle Lake. Highway 808 passes within a few hundred metres of the northwest part of the group of 60 claims (769643-769652 inclusive and 769900-769949 inclusive) located on the north boundary of Connell Township.

#### PREVIOUS WORK

With two former gold producers just south of the property, and the former Umex Copper producer about 15 kilometers to the west, the area has seen considerable exploration over the last 50 years. It is likely airborne magnetics and EM, prospecting, trenching geophysics, geochemistry and drilling has been carried out over the claims. Magnetic and electromagnetic surveys were reported for assessment work in 1972 by James Bay Mining Corporation and in 1977 by Rio Tinto Exploration. Rio Tinto also did some drilling.

#### GEOLOGY

The claims are located along the Pickle Lake "greenstone" belt of mainly Keenatin mafic volcanics, with some interbanded sediments and iron formation. Formation dip steeply and strike north easterly. Gold mineralization is usually associated with iron formation where fractures have been filled with quartz containing chlorite and sulphide mineralization.

#### SURVEY METHODS

The magnetic survey was made with an EDA PPM 500 gradiometer, measuring total field to 0.1 gammas and vertical gradient. Observations were made at 12.5 meter intervals along lines 200 meters apart. Diurnal control was made by using an EDA PPM 400 base station magnetometer, located about 60 metres east of Highway 808 on the drill road that intersects line 16S (on adjoining map of Imperial Grid).

The gradiometer and base station have solid state memory for storage of values and their location, and when plugged together each evening, allows for automatic diurnal corrections. Corrected data was stored on cassette of an HP85 computer. Total field values and contours are plotted on separate sheets, at a scale of 1:5000, at the same base level as the adjoining "Imperial" grid to the west.

Vertical gradient values (gammas per meter) and profiles of values are also plotted on separate sheets.

A Geonics EM16 VLF unit was used for the VLF-EM survey. Section lines were read using the Seattle, Washington transmitter station (NLK 24.8 kHz), while base lines and tie lines were read with the Annapolis, Maryland station (NSS, 21.4 kHz). Dip angle and quadrature values were read in per cent.

Dip angle and quadrature values and profiles of values are plotted on the same sheet. Filtered (Fraser) dip angle values and contours are plotted on a second plan.

#### SURVEY RESULTS

The magnetic survey shows a northeast trend to the formations. The northwest part of the grid has a different magnetic pattern than the southeast portion. Several parallel bands of higher values, traverse the northwest section, with some offsetting suggesting cross faulting.

The gradiometer survey shows high positive values are generally coincident with the total field high values. However, some responses are

negative over some total field highs. Some isolated responses may be due to magnetic boulders.

The VLF-EM survey shows several parallel northeast trending conductors. Two conductors near the base line have the best conductivity, while other shorter zones are generally weak. Most of the conductors appear to be adjacent to the magnetic high units rather than coincident.

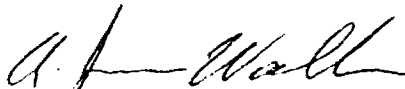
CONCLUSIONS

The northwest part of the grid shows the most magnetic complexity, as well as having the VLF conductors. Some faulting and shearing is suggested by the survey. The strongest VLF conductors likely represent sulphide mineralization.

The surveys will have to be related to previous work (surveys, drilling, geological mapping, etc).

Final interpretation of these surveys will be by the staff of Billiton Canada Ltd.

Respectfully submitted,



A. James Walker, P. Eng.

AJW:sb

SURVEY DATA

Pickle Lake Project - Billiton Canada Ltd.

Connell Township, Ontario

Survey Contractor - Walker Exploration Ltd.

Covering Dates                      Magnetic Survey Dec. 6-11, 1984  
   VLF-EM Survey Dec. 6-15, 1984  
   Mobilization Dec. 3-5, Dec. 17-19, 1984  
   Drafting & Contouring Jan 5-31, 1985  
   Data & Report Jan. 1-8, Feb. 5-9, 1985

Crew

Magnetic Survey        -        D. Miles, Proton Station, Ontario  
VLF-EM Survey         -        J. Tough, Bracebridge, Ontario  
Drafting                -        R. T. Marcroft, Mississauga, Ontario  
Contouring             -        T. Miles, Proton Station, Ontario  
Data & Report         -        A. James Walker, Oakville, Ontario

Instruments

Magnetometer-Gradiometer    EDA PPM 500, Proton  
   Measuring total field and vertical gradient to 0.1 Gammas  
   Solid State memory

Magnetometer Base Station    EDA PPM 400 Proton  
   Measuring total field to 0.1 Gammas  
   Readings every 30 seconds  
   Solid State Memory  
   Automatic Diurnal Correction of Field Mag Data

VLF-EM

Geonics EM16

Measuring Dip Angle %

Quadrature %

Transmitters

Grid Lines NLK-24.8 kHz

Base Lines NSS-21.4 kHz

NLK Read looking SE

NSS Read looking NE

Linecutting

Contractor - Geocanex Ltd.

covering dates: Nov. 15th - Nov. 28th, 1984

Crew:

R. Morin Val d'Or, Quebec

G. Robert Val d'Or, Quebec

J. Robert Val d'Or, Quebec

G. Deveraux Val d'Or, Quebec

C. Deveraux Val d'Or, Quebec





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900

Mining Lands Section

File No 28071

Control Sheet

TYPE OF SURVEY     GEOPHYSICAL  
                            GEOLOGICAL  
                            GEOCHEMICAL  
                            EXPENDITURE

MINING LANDS COMMENTS:

- 2<sup>nd</sup> line survey and total field mag survey performed  
 in one traverse using same instrument - one survey.  
 - 200 metre line spacing. S.P. requires 125m spacing  
 ∴ credit reduced  $\frac{125}{200} \times$  days requested.

*l.g.d.*

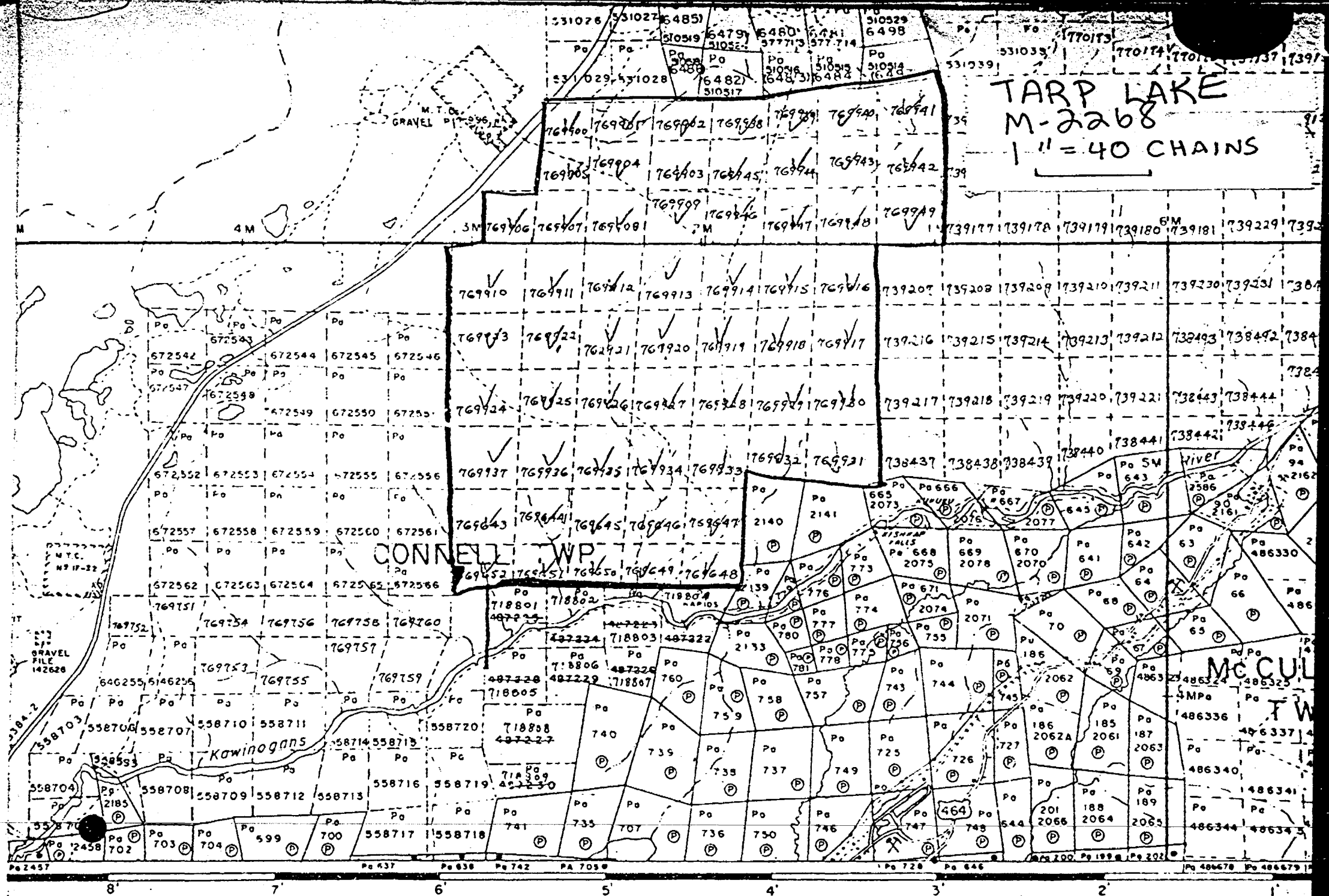
*L.D*

*Doug*

Signature of Assessor

*8/5/85*

Date



TARP LAKE  
M-2268  
1" = 40 CHAINS

CONNELL WP

MCCULL  
T W

8' 7' 6' 5' 4' 3' 2' 1'



**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) VLF-EM, Total Magnetic Field, Vertical Magnetic Gradient

Township or Area Connell Township

Claim Holder(s) Billiton Canada Ltd.

Survey Company Walker Exploration Ltd.

Author of Report A.J. Walker

Address of Author 10 Hurontario Rd.

Covering Dates of Survey Nov. 15, 1984 - Feb. 9, 1985  
(linecutting to office)

Total Miles of Line Cut 57.1 km (35.48 miles)

**MINING CLAIMS TRAVERSED  
List numerically**

See attached list  
(prefix) (number)

**SPECIAL PROVISIONS  
CREDITS REQUESTED**

ENTER 40 days (includes  
line cutting) for first  
survey.

ENTER 20 days for each  
additional survey using  
same grid.

**Geophysical**

-Electromagnetic 40

-Magnetometer 20

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

-Other 20

Geological \_\_\_\_\_

Geochemical \_\_\_\_\_

**DAYS  
per claim.**

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

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

DATE: 3/5/1985 SIGNATURE: D.R.B. Rainford  
Author of Report or Agent

**RECEIVED**

**MAY 9 1985**

**MINING LANDS SECTION**

**TOTAL CLAIMS** 60

OFFICE USE ONLY

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

**Previous Surveys**

File No.	Type	Date	Claim Holder

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 2284-VLF, 4568-magnetic & gradiometer Number of Readings 2284-VLF, 4568-magnetic & gradiometer
Station interval 25m-VLF, 12.5 magnetic & gradiometer Line spacing 200 metres
Profile scale VLF: 1cm=20%, Gradiometer: 1 cm=50nT/metre
Contour interval Total Magnetic field: 25nT

MAGNETIC

Instrument EDA PPM 500 Magnetometer - Gradiometer
Accuracy - Scale constant 0.1 nT
Diurnal correction method Cycling base station magnetometer (EDA PPM 400)
Base Station check-in interval (hours) 30 second cycling
Base Station location and value 60 metres east of Highway 808 along a drill road intersecting line 16S. Value 60,684.8 nT

ELECTROMAGNETIC

Instrument Geonics EM-16
Coil configuration
Coil separation
Accuracy 1% Inphase, Quadrature
Method: [ ] Fixed transmitter [ ] Shoot back [ ] In line [ ] Parallel line
Frequency NLK 24.8kHz - gridline NSS 21.4kHz - baselines (specify V.L.F. station)
Parameters measured Inphase, Quadrature

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

CONNELL TOWNSHIP-BEST CLAIMS

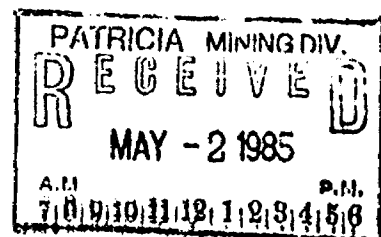
Pa 769900	Pa 769930
Pa 769901	Pa 769931
Pa 769902	Pa 769932
Pa 769903	Pa 769933
Pa 769904	Pa 769934
Pa 769905	Pa 769935
Pa 769906	Pa 769936
Pa 769907	Pa 769937
Pa 769908	Pa 769938
Pa 769909	Pa 769939
Pa 769910	Pa 769940
Pa 769911	Pa 769941
Pa 769912	Pa 769942
Pa 769913	Pa 769943
Pa 769914	Pa 769944
Pa 769915	Pa 769945
Pa 769916	Pa 769946
Pa 769917	Pa 769947
Pa 769918	Pa 769948
Pa 769919	Pa 769949
Pa 769920	Pa 769643
Pa 769921	Pa 769644
Pa 769922	Pa 769645
Pa 769923	Pa 769646
Pa 769924	Pa 769647
Pa 769925	Pa 769648
Pa 769926	Pa 769649
Pa 769927	Pa 769650
Pa 769928	Pa 769651
Pa 769929	Pa 769652

CONNELL TOWNSHIP-BEST CLAIMS

(Days Credit)

(Days Credit)

Pa 769900	80	Pa 769930	80
Pa 769901	80	Pa 769931	80
Pa 769902	80	Pa 769932	80
Pa 769903	80	Pa 769933	80
Pa 769904	80	Pa 769934	80
Pa 769905	80	Pa 769935	80
Pa 769906	80	Pa 769936	80
Pa 769907	80	Pa 769937	80
Pa 769908	80	Pa 769938	80
Pa 769909	80	Pa 769939	80
Pa 769910	80	Pa 769940	80
Pa 769911	80	Pa 769941	80
Pa 769912	80	Pa 769942	80
Pa 769913	80	Pa 769943	80
Pa 769914	80	Pa 769944	80
Pa 769915	80	Pa 769945	80
Pa 769916	80	Pa 769946	80
Pa 769917	80	Pa 769947	80
Pa 769918	80	Pa 769948	80
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Pa 769921	80	Pa 769644	80
Pa 769922	80	Pa 769645	80
Pa 769923	80	Pa 769646	80
Pa 769924	80	Pa 769647	80
Pa 769925	80	Pa 769648	80
Pa 769926	80	Pa 769649	80
Pa 769927	80	Pa 769650	80
Pa 769928	80	Pa 769651	80
Pa 769929	80	Pa 769652	80





Ontario

Ministry of Natural Resources

### Technical Assessment Work Credits

File	2.8071
Date	1985 06 04
Mining Recorder's Report of Work No.	85-90

Recorded Holder	BILLITON CANADA LTD
Township or Area	CONNELL TOWNSHIP, TARP LAKE AREA

Type of survey and number of Assessment days credit per claim	Mining Claims Assessed
Geophysical Electromagnetic _____ days Magnetometer <u>13</u> days Radiometric _____ days Induced polarization _____ days Other _____ days Section 77 (19) See "Mining Claims Assessed" column Geological _____ days Geochemical _____ days Man days <input type="checkbox"/> Airborne <input type="checkbox"/> Special provision <input checked="" type="checkbox"/> Ground <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> Credits have been reduced because of partial coverage of claims. <input type="checkbox"/> Credits have been reduced because of corrections to work dates and figures of applicant.	PA 769643 to 652 inclusive 769900 to 940 inclusive 769942 to 949 inclusive

Special credits under section 77 (16) for the following mining claims

10 DAYS MAGNETOMETER  
P 769941

No credits have been allowed for the following mining claims

not sufficiently covered by the survey       Insufficient technical data filed

NO EXTRA CREDITS ARE ALLOWABLE FOR THE GRADIOMETER SURVEY. THE TOTAL FIELD MAGNETOMETER AND VERTICAL GRADIENT MAGNETIC SURVEYS ARE PERFORMED IN THE SAME TRAVERSE USING THE SAME INSTRUMENT AND ARE CONSIDERED TO BE, FOR ASSESSMENT PURPOSES, ONE SURVEY.

The Mining Recorder may reduce the above credits if necessary in order that the total number of approved assessment days recorded on each claim does not exceed the maximum allowed as follows: Geophysical — 80; Geological — 40; Geochemical — 40; Section 77 (19) — 60;



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Natural  
Resources

**Technical Assessment  
Work Credits**

File 2.8071
Mining Recorder's Report of Work No. 85-90

Date  
1985 06 04

Recorded Holder BJLLITON CANADA LTD
Township or Area CONNELL TOWNSHIP, TARP LAKE AREA

Type of survey and number of Assessment days credit per claim	Mining Claims Assessed
<b>Geophysical</b> Electromagnetic _____ 25 days Magnetometer _____ days Radiometric _____ days Induced polarization _____ days Other _____ days Section 77 (19) See "Mining Claims Assessed" column Geological _____ days Geochemical _____ days Man days <input type="checkbox"/> Airborne <input type="checkbox"/> Special provision <input checked="" type="checkbox"/> Ground <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> Credits have been reduced because of partial coverage of claims. <input type="checkbox"/> Credits have been reduced because of corrections to work dates and figures of applicant.	PA 769643 to 652 inclusive 769900 to 940 inclusive 769942 to 949 inclusive

Special credits under section 77 (16) for the following mining claims

20 DAYS ELECTROMAGNETIC  
PA 769941

No credits have been allowed for the following mining claims

not sufficiently covered by the survey       Insufficient technical data filed

The Mining Recorder may reduce the above credits if necessary in order that the total number of approved assessment days recorded on each claim does not exceed the maximum allowed as follows: Geophysical — 80; Geological — 40; Geochemical — 40; Section 77 (19) — 80.





Em	Mag	Em	Mag	Em	Mag
769 920	✓	769 920	✓	769 940	✓
921	✓	921	✓	941	2/4
922	✓	922	✓	942	✓
923	✓	923	✓	943	✓
924	✓	924	✓	944	✓
925	✓	925	✓	945	✓
926	✓	926	✓	946	✓
927	✓	927	✓	947	✓
928	✓	928	✓	948	✓
929	✓	929	✓	949	✓
930	✓	930	✓	769 <del>648</del>	✓
931	✓	931	✓	644	✓
932	✓	932	✓	645	✓
933	✓	933	✓	646	✓
934	✓	934	✓	647	✓
935	✓	935	✓	648	✓
936	✓	936	✓	649	✓
937	✓	937	✓	650	✓
938	✓	938	✓	651	✓
939	✓	939	✓	652	✓

**Billiton Canada Ltd.**

Suite 1006  
141 Adelaide Street West  
Toronto, Ontario M5H 3L9

Telephone (416) 362-6624  
Telex 06-23518

<b>RECEIVED</b>	
Land Management Branch	
CIRCULATE	<input type="checkbox"/>
COMMENTS PLEASE	<input type="checkbox"/>
BY	
<b>MAY -7 1985</b>	
S. E. YUNDT	
J. R. MORTON	
J. C. SMITH	
W. L. GOOD	

May 3, 1985

Mrs. S.E. Yundt  
Director Land Management Branch  
Whitney Block, Room 6643  
Queen's Park  
Toronto, Ontario  
M7A 1W3

Dear Mrs Yundt:

Please find attached two copies of a report on Magnetic and VLF-EM surveys - Metric grid, Connell Township, Ontario. A report of work has already been sent to the Mining Recorder in Sioux Lookout. Trusting that this is satisfactory.

Yours truly,

BILLITON CANADA LTD.

D.R.B. Rainsford  
Geophysicist

DRBR:mam  
Attachment



Ministry of  
Natural  
Resources

*June 19/85*

1985 06 04

Your File: 85-90  
Our File: 2.8071

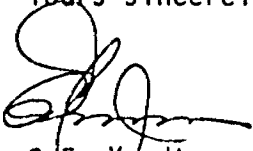
Mining Recorder  
Ministry of Natural Resources  
P.O. Box 309  
Sioux Lookout, Ontario  
POV 2T0

Dear Sir:

Enclosed are two copies of a Notice of Intent with statements listing a reduced rate of assessment work credits to be allowed for a technical survey. Please forward one copy to the recorded holder of the claims and retain the other. In approximately fifteen days from the above date, a final letter of approval of these credits will be sent to you. On receipt of the approval letter, you may then change the work entries on the claim record sheets.

For further information, if required, please contact Mr. R.J. Pichette at 416/965-4888.

Yours sincerely,

  
S.E. Yundt  
Director  
Land Management Branch

Whitney Block, Room 6643  
Queen's Park  
Toronto, Ontario  
M7A 1W3

f D. Isherwood:mc

Encls.

cc: Billiton Canada Ltd  
Suite 1006  
141 Adelaide Street West  
Toronto, Ontario  
M5H 3L9  
Attention: D.R.B. Rainsford

cc: A.J. Walker  
10 Hurontario Street  
Mississauga, Ontario  
L5G 3G7

cc: Mr. G.H. Ferguson  
Mining & Lands Commissioner  
Toronto, Ontario



Ministry of  
Natural  
Resources

Notice of Intent  
for Technical Reports

1985 06 04

2.8071/85-90

An examination of your survey report indicates that the requirements of The Ontario Mining Act have not been fully met to warrant maximum assessment work credits. This notice is merely a warning that you will not be allowed the number of assessment work days credits that you expected and also that in approximately 15 days from the above date, the mining recorder will be authorized to change the entries on his record sheets to agree with the enclosed statement. Please note that until such time as the recorder actually changes the entry on the record sheet, the status of the claim remains unchanged.

If you are of the opinion that these changes by the mining recorder will jeopardize your claims, you may during the next fifteen days apply to the Mining and Lands Commissioner for an extension of time. Abstracts should be sent with your application.

If the reduced rate of credits does not jeopardize the status of the claims then you need not seek relief from the Mining and Lands Commissioner and this Notice of Intent may be disregarded.

If your survey was submitted and assessed under the "Special Provision-Performance and Coverage" method and you are of the opinion that a re-appraisal under the "Man-days" method would result in the approval of a greater number of days credit per claim, you may, within the said fifteen day period, submit assessment work breakdowns listing the employees names, addresses and the dates and hours they worked. The new work breakdowns should be submitted direct to the Land Management Branch, Toronto. The report will be re-assessed and a new statement of credits based on actual days worked will be issued.

1985 06 26

Your File: 85-90  
Our File: 2.8071

Mining Recorder  
Ministry of Natural Resources  
P.O. Box 309  
Sioux Lookout, Ontario  
POV 2T0

Dear Sir:

RE: Notice of Intent dated June 4, 1985  
Geophysical (Electromagnetic & Magnetometer)  
Survey on Mining Claims PA 769643, et al,  
in Connell Township and Tarp Lake Area

---

The assessment work credits, as listed with the  
above-mentioned Notice of Intent, have been approved  
as of the above date.

Please inform the recorded holder of these mining  
claims and so indicate on your records.

Yours sincerely,

S.E. Yundt  
Director  
Land Management Branch

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

D. Isherwood:mc

cc: Billiton Canada Ltd  
Suite 1006  
141 Adelaide Street West  
Toronto, Ontario  
M5H 3L9  
Attention: D.R.B. Rainsford

cc: A.J. Walker  
10 Huron Street  
Mississauga, Ontario  
L5G 3G7  
cc: Mr. G.H. Ferguson  
Mining & Lands Commissioner  
Toronto, Ontario  
cc: Resident Geologist  
Sioux Lookout, Ontario

Encl.

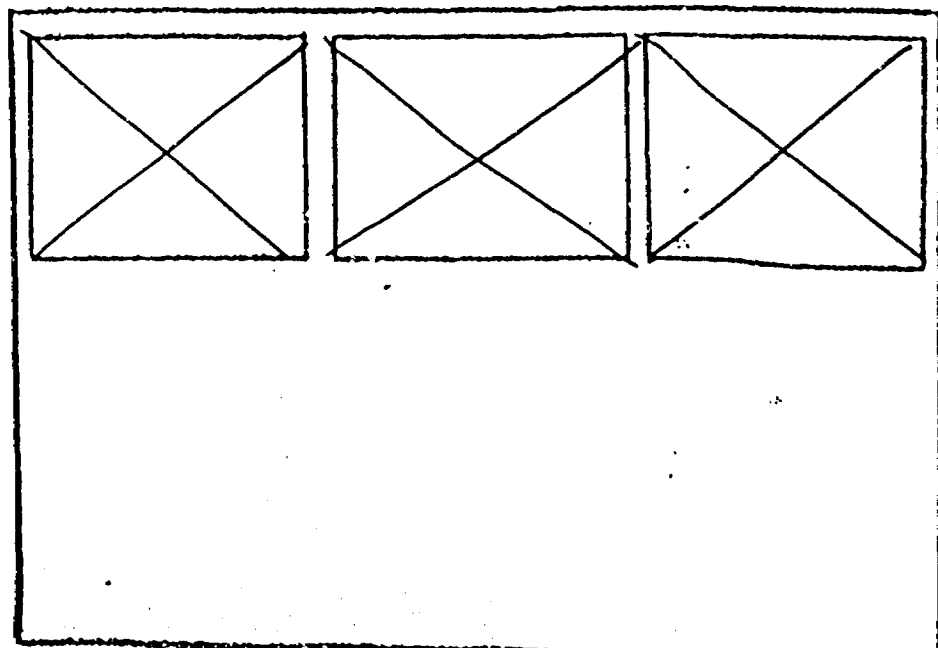
SEE ACCOMPANYING  
MAP(S) IDENTIFIED AS

520/09SE-0042, #1-3

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LOCATED IN THE MAP  
CHANNEL IN THE FOLLOWING  
SEQUENCE (X)

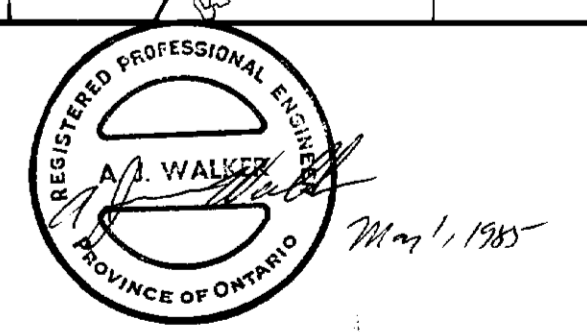
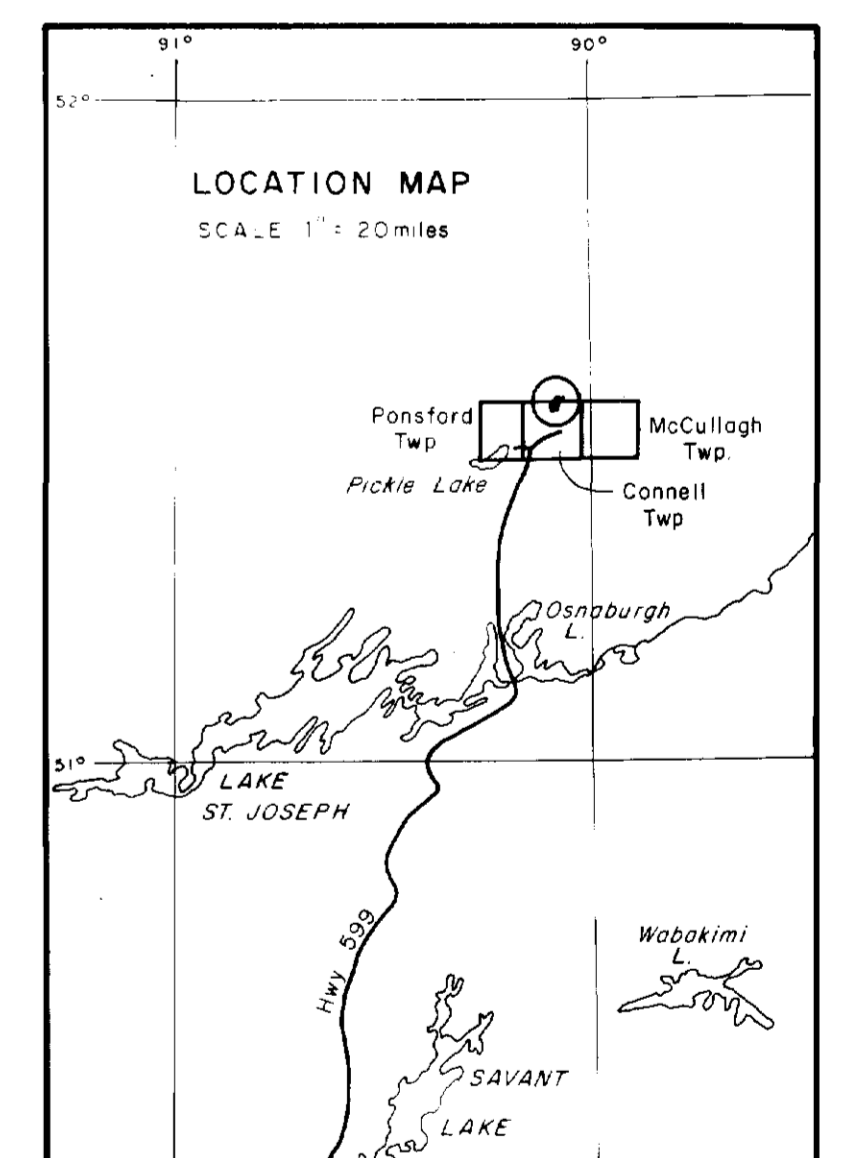
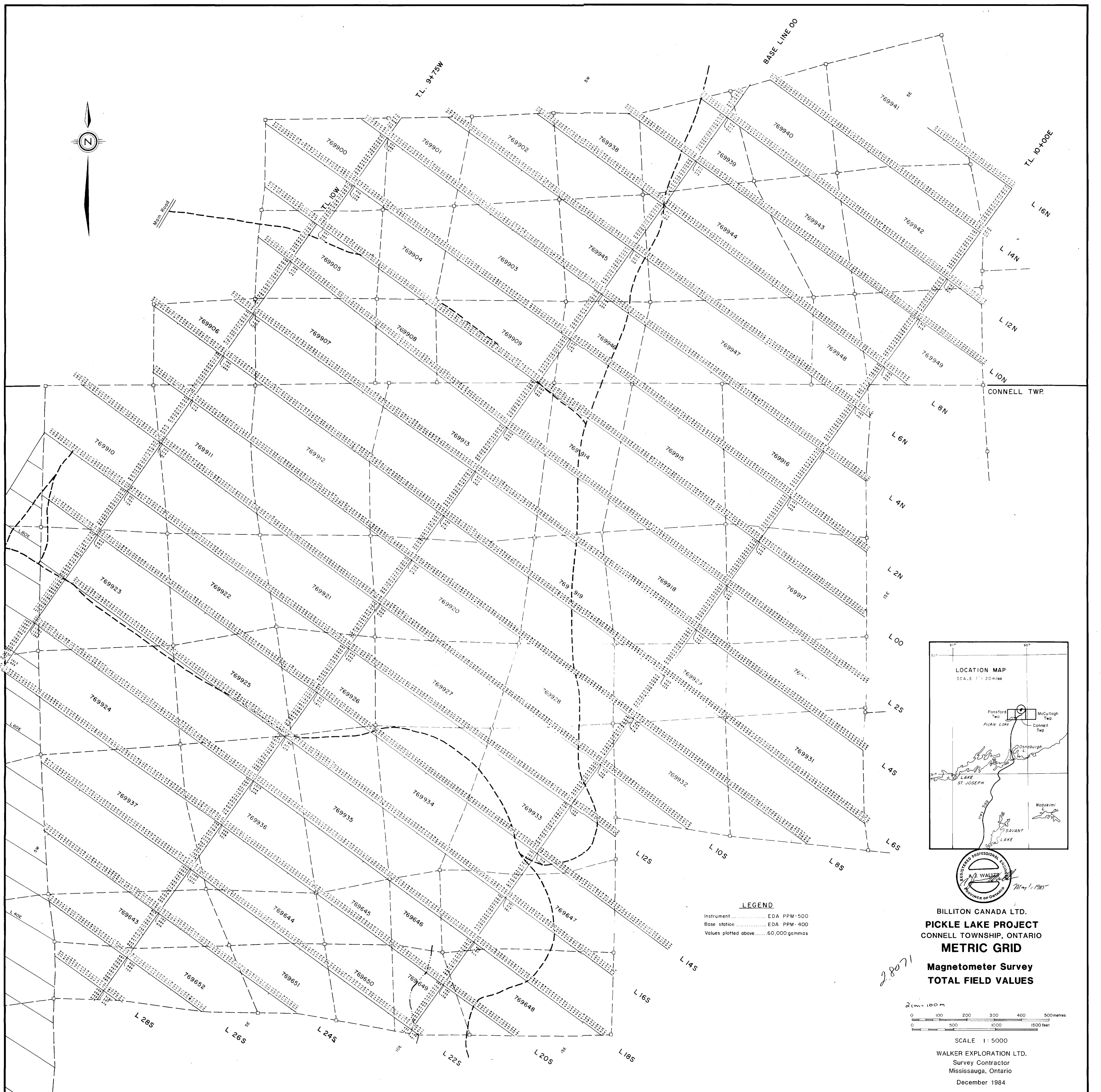


FOR ADDITIONAL  
INFORMATION

SEE MAPS:

520/09SE-0042 # 4-6

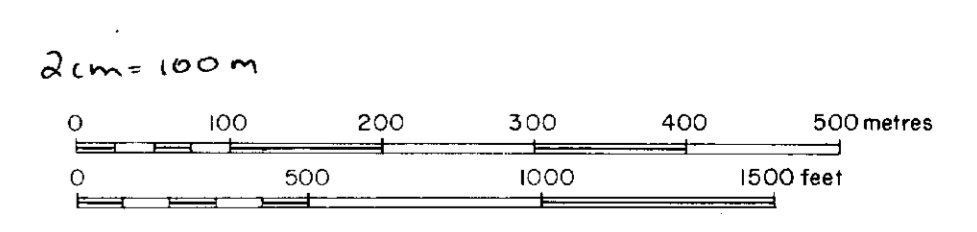




**LEGEND**  
Instrument ..... EDA PPM-500  
Base station ..... EDA PPM-400  
Values plotted above ..... 60,000 gammas

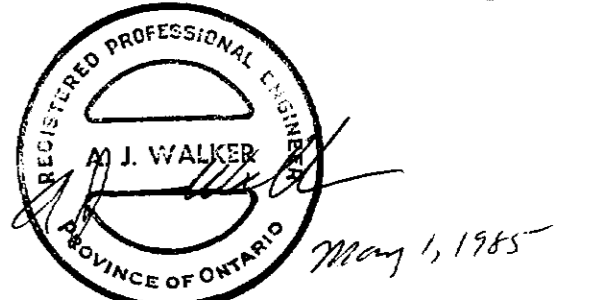
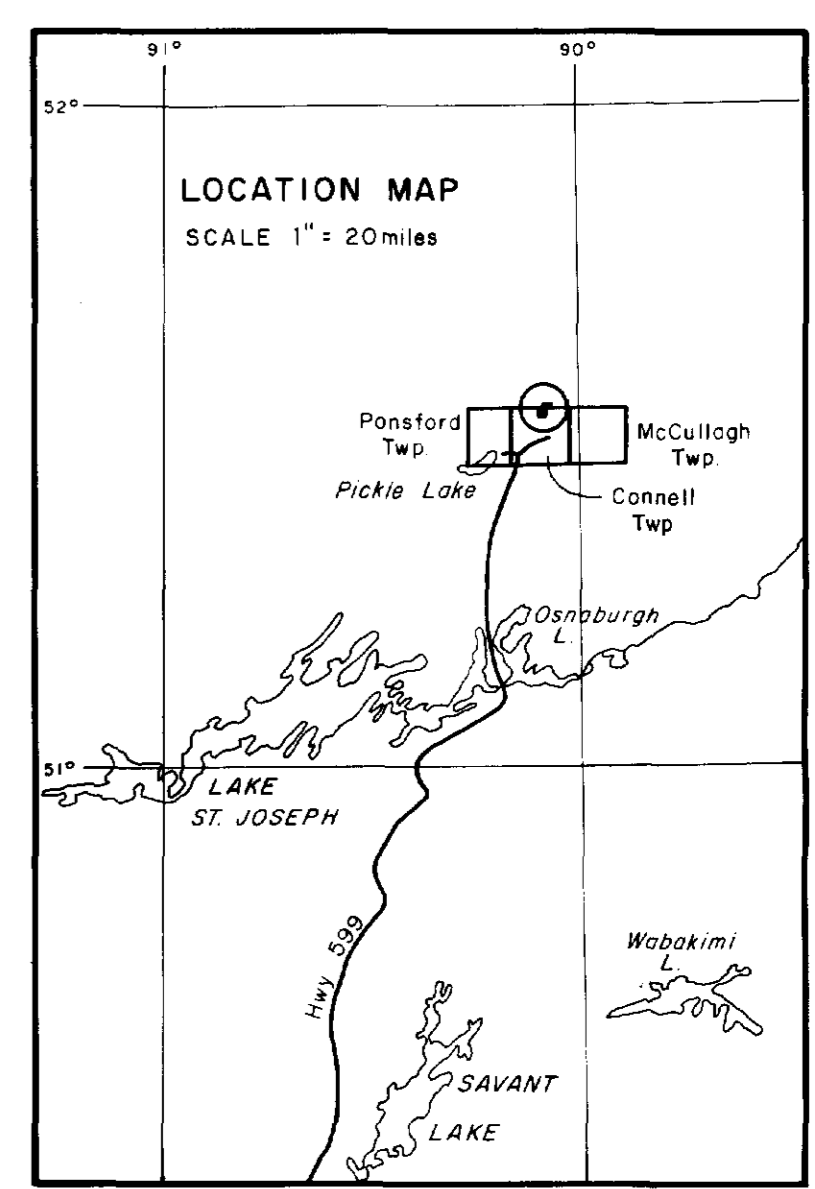
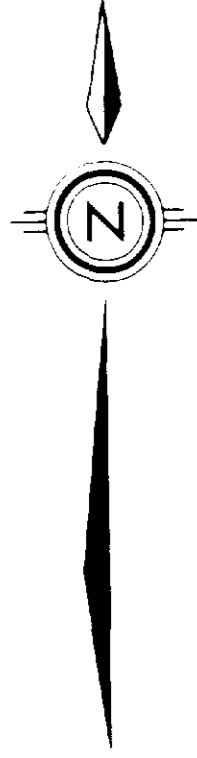
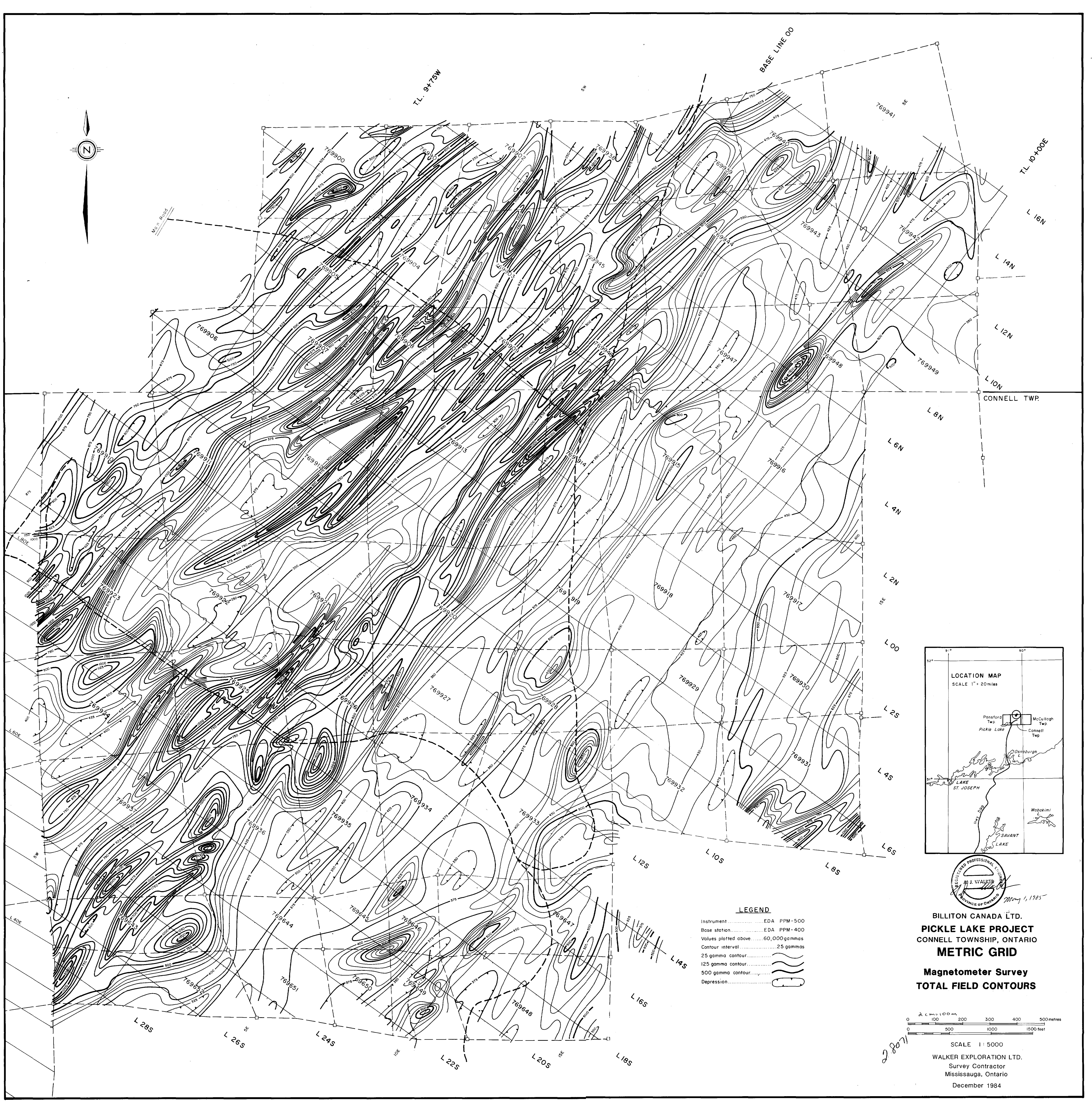
**BILLITON CANADA LTD.**  
**PICKLE LAKE PROJECT**  
CONNELL TOWNSHIP, ONTARIO  
**METRIC GRID**  
**Magnetometer Survey**  
**TOTAL FIELD VALUES**

28071



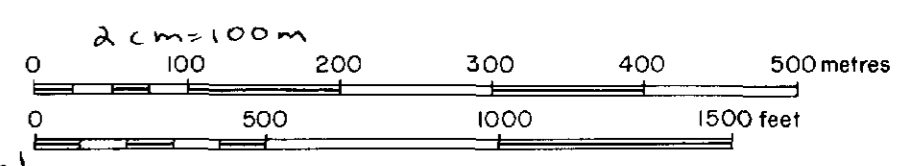
WALKER EXPLORATION LTD.  
Survey Contractor  
Mississauga, Ontario  
December 1984



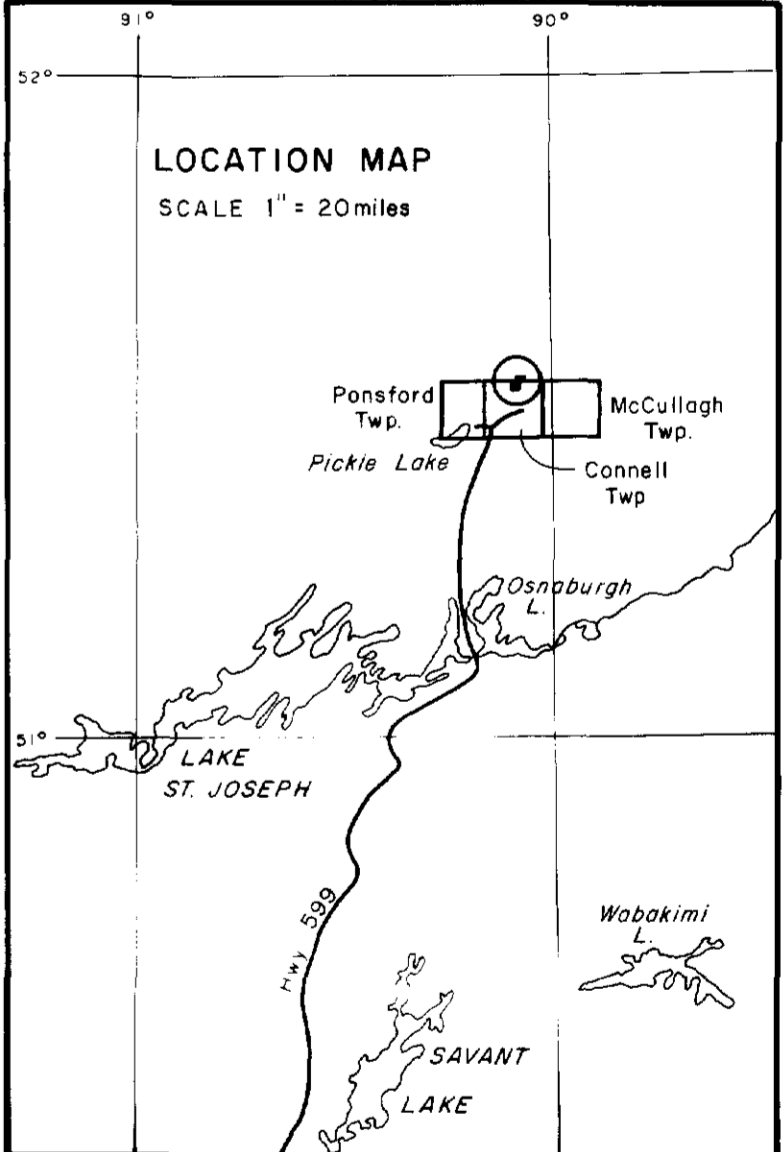
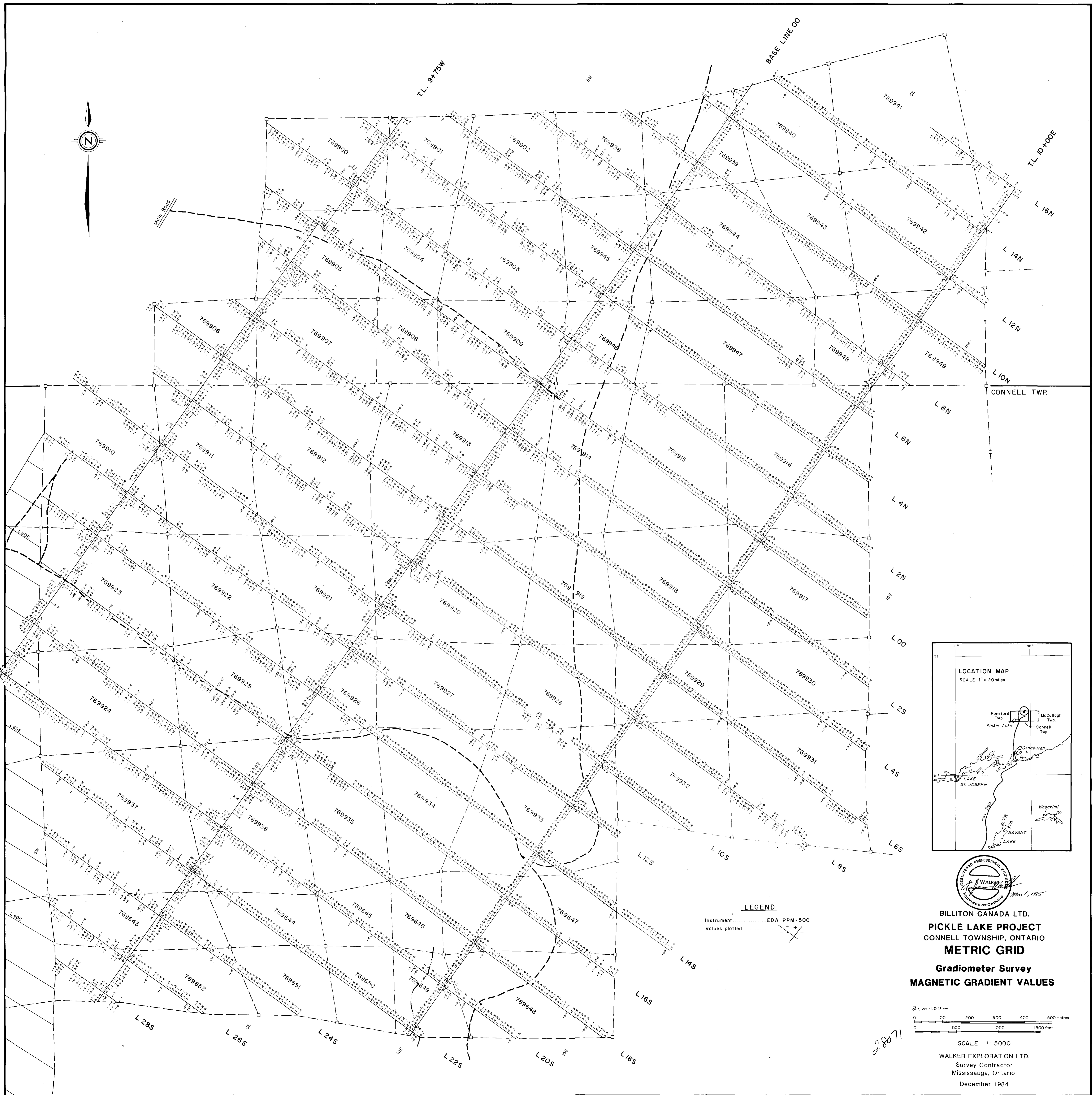
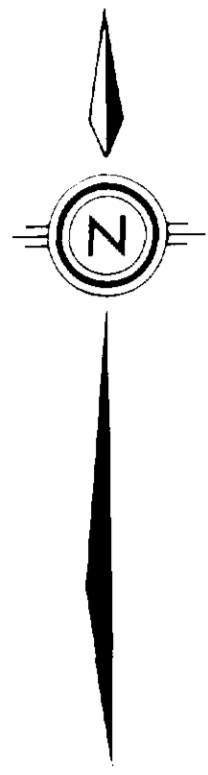


**BILLITON CANADA LTD.**  
**PICKLE LAKE PROJECT**  
**CONNELL TOWNSHIP, ONTARIO**  
**METRIC GRID**  
**Magnetometer Survey**  
**TOTAL FIELD CONTOURS**

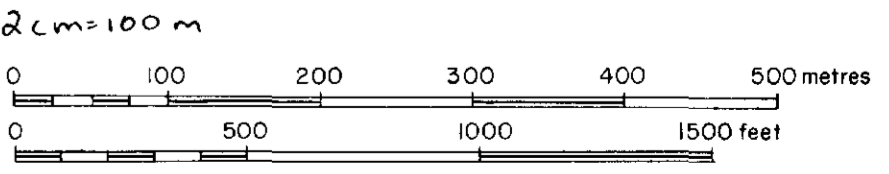
**LEGEND**  
 Instrument ..... EDA PPM-500  
 Base station ..... EDA PPM-400  
 Values plotted above 60,000 gammas  
 Contour interval ..... 25 gammas  
 25 gamma contour .....  
 125 gamma contour .....  
 500 gamma contour .....  
 Depression .....



SCALE 1 : 5000  
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 Survey Contractor  
 Mississauga, Ontario  
 December 1984



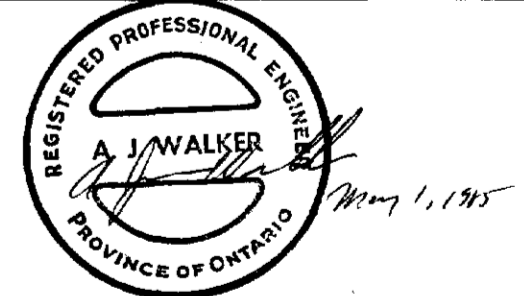
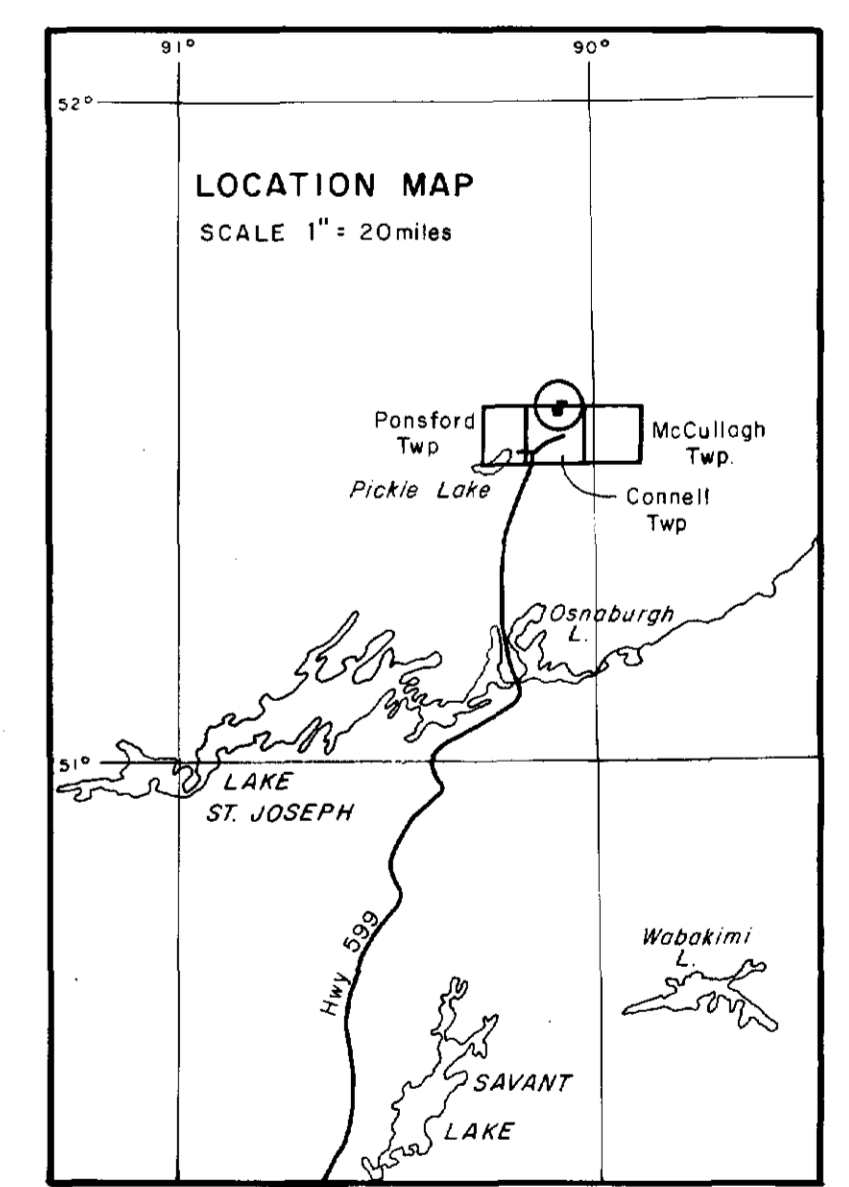
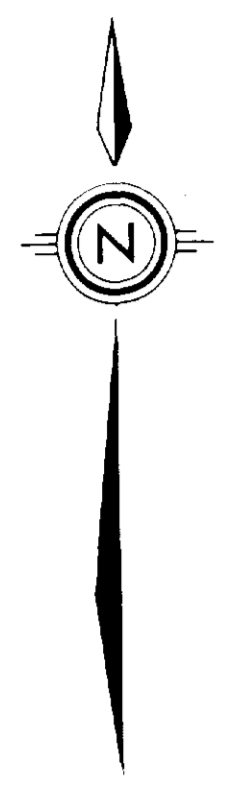
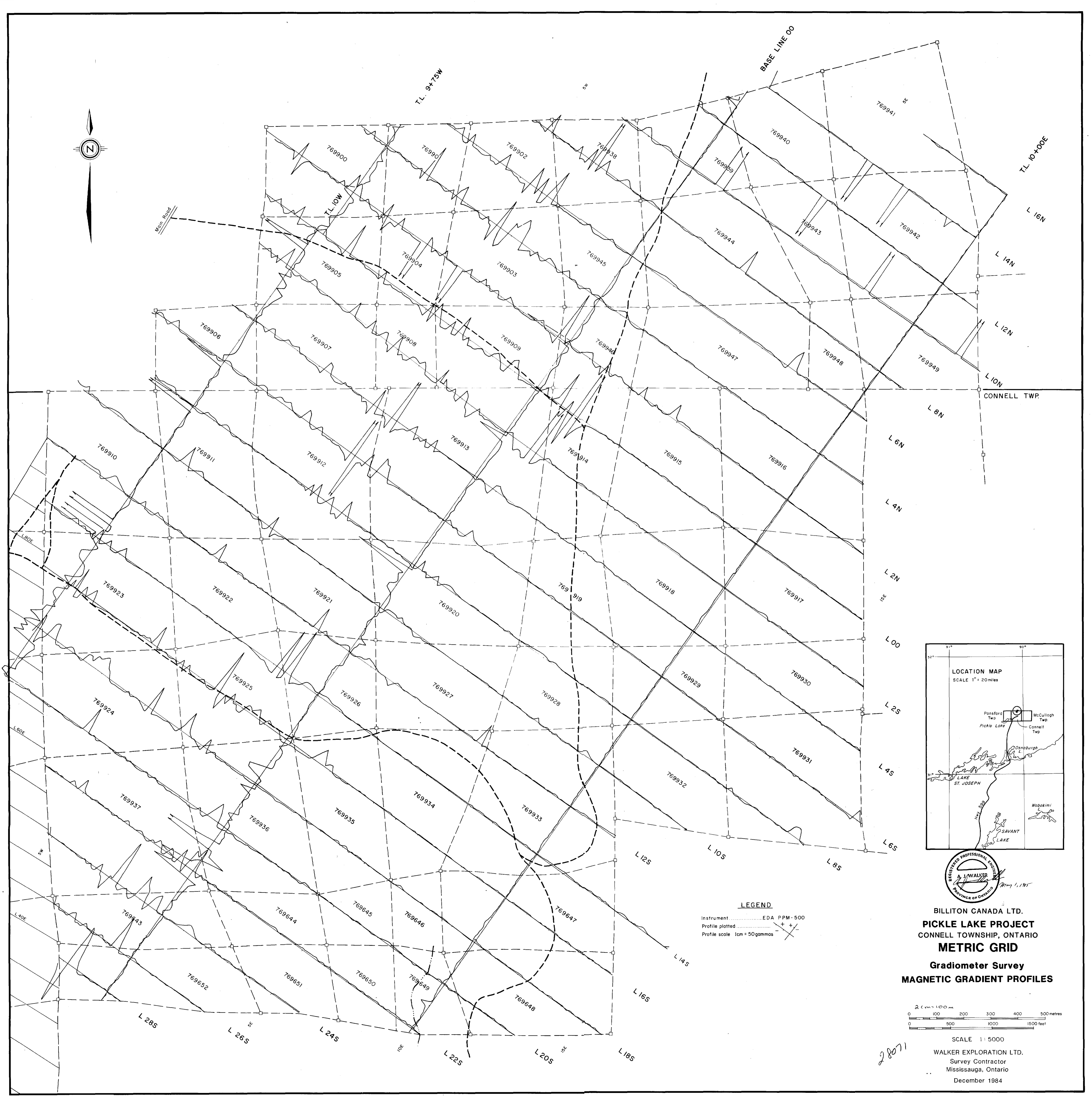
**BILLITON CANADA LTD.**  
**PICKLE LAKE PROJECT**  
**CONNELL TOWNSHIP, ONTARIO**  
**METRIC GRID**  
**Gradiometer Survey**  
**MAGNETIC GRADIENT VALUES**



SCALE 1:5000  
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 December 1984

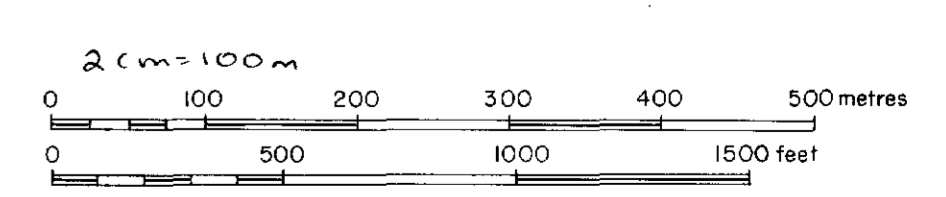
**LEGEND**  
 Instrument ..... EDA PPM-500  
 Values plotted ..... + + +





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**PICKLE LAKE PROJECT**  
**CONNELL TOWNSHIP, ONTARIO**  
**METRIC GRID**  
**Gradiometer Survey**  
**MAGNETIC GRADIENT PROFILES**

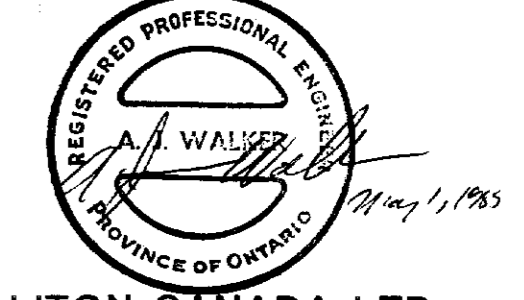
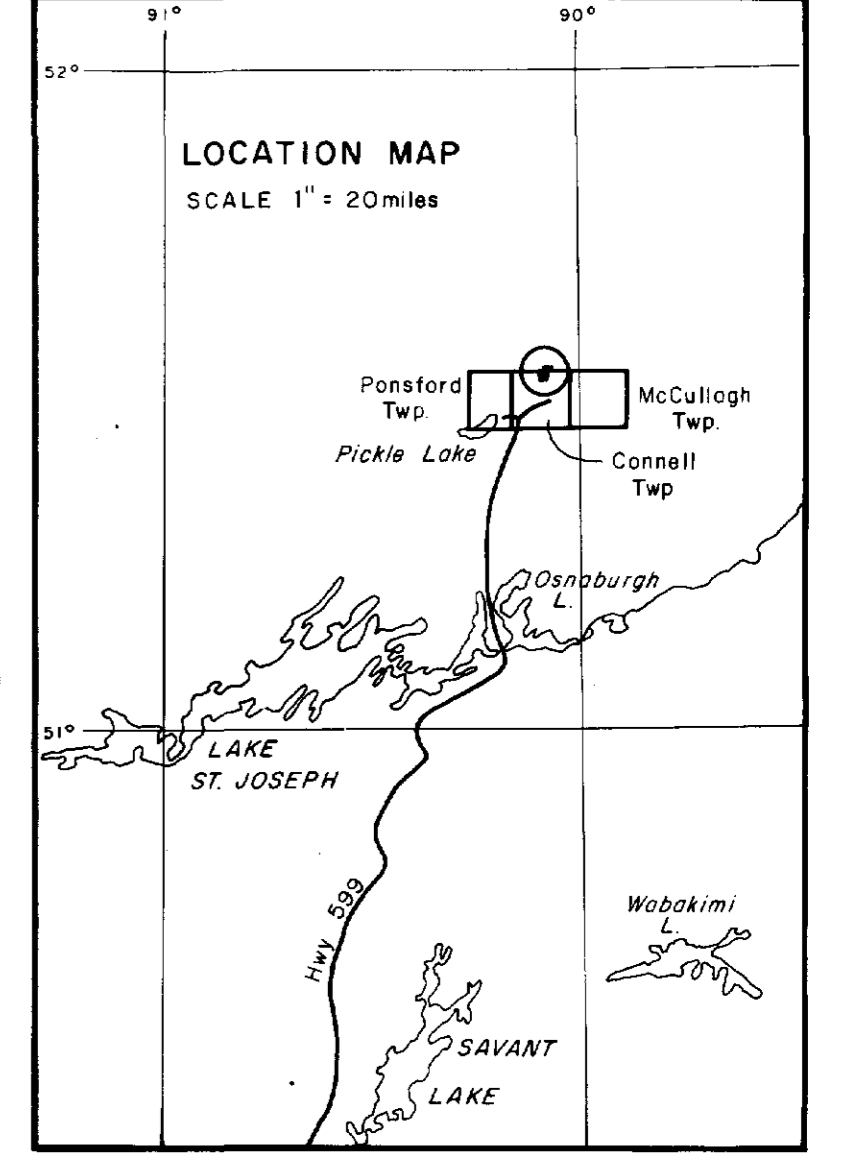
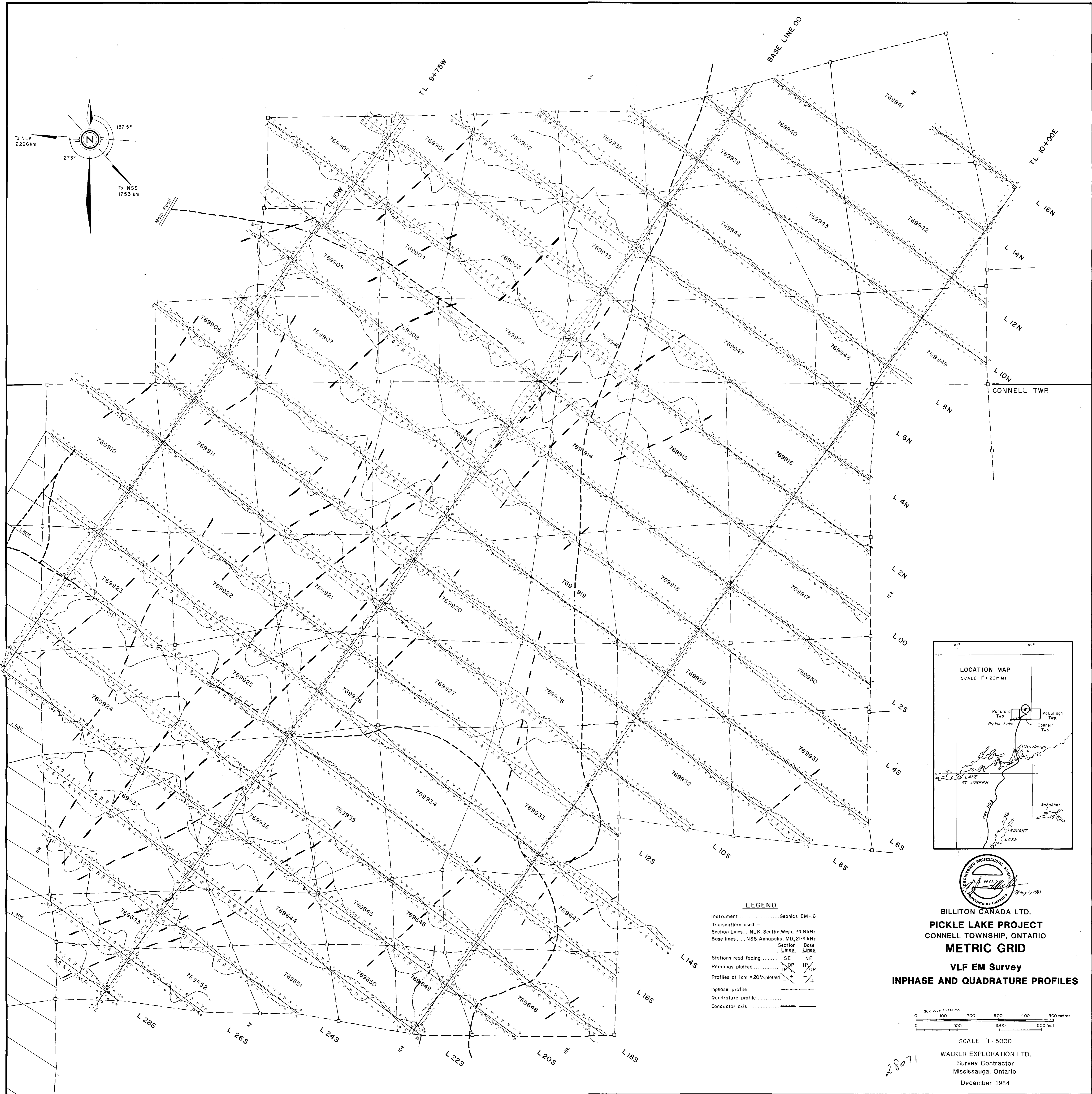
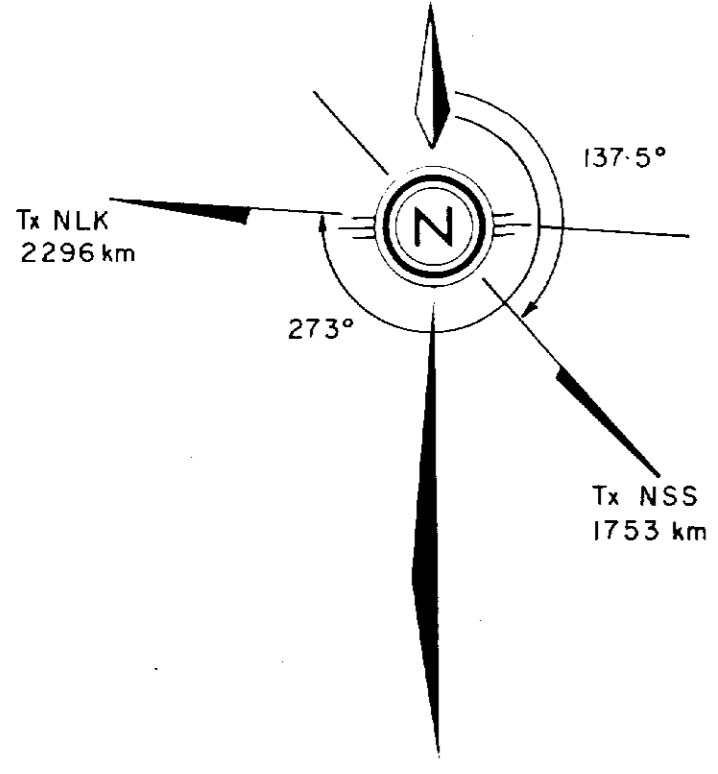
**LEGEND**  
 Instrument ..... EDA PPM-500  
 Profile plotted ..... + + +  
 Profile scale 1cm = 50gammas



SCALE 1: 5000  
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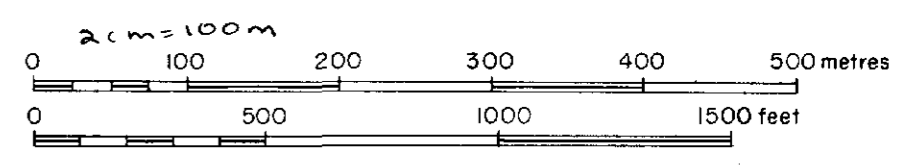
28071





**BILLITON CANADA LTD.**  
**PICKLE LAKE PROJECT**  
**CONNELL TOWNSHIP, ONTARIO**  
**METRIC GRID**  
**VLF EM Survey**  
**INPHASE AND QUADRATURE PROFILES**

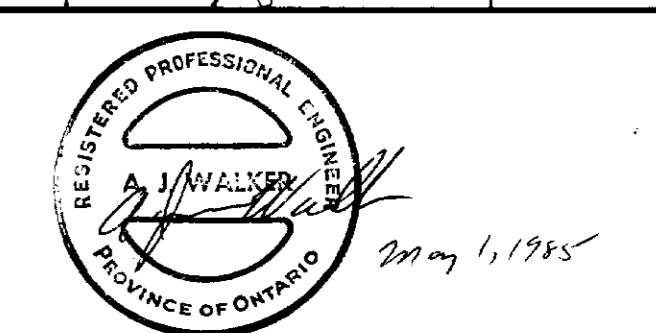
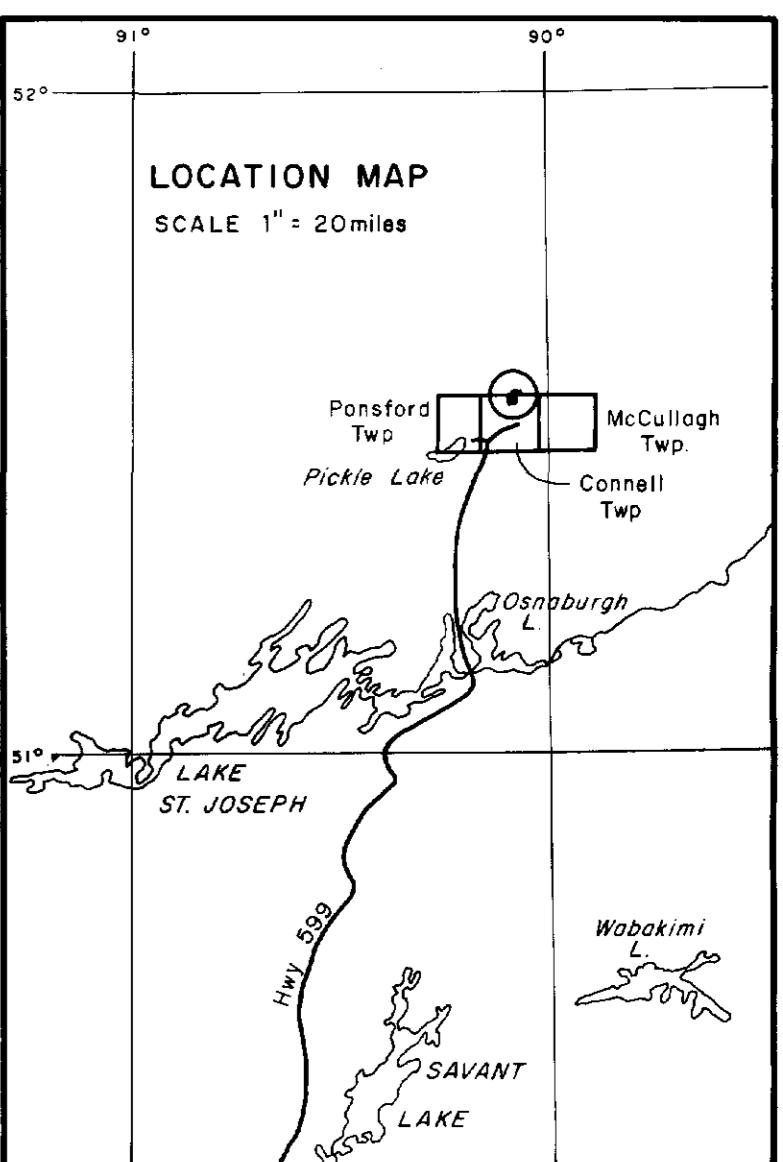
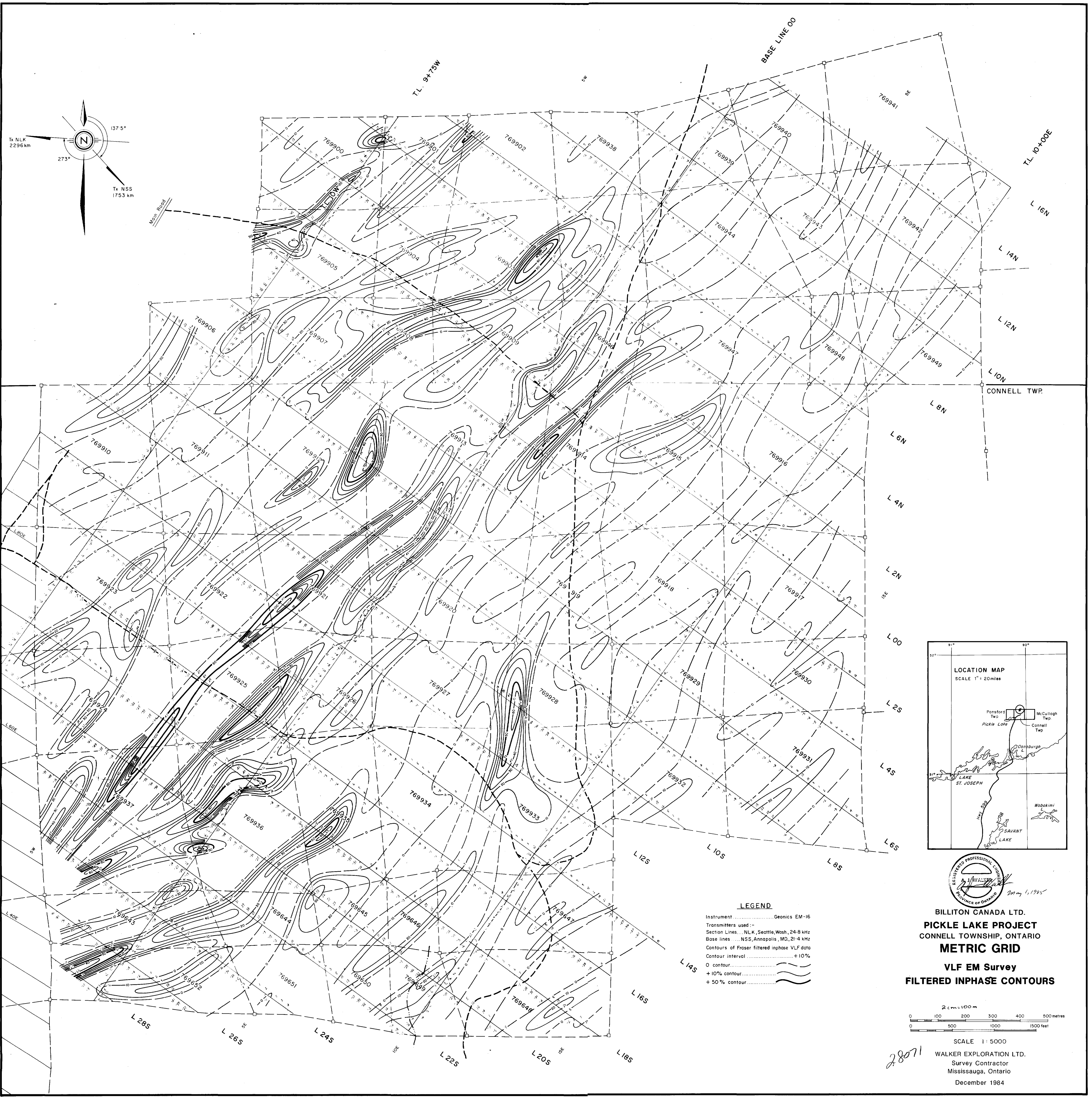
**LEGEND**  
 Instrument ..... Geonics EM-16  
 Transmitters used: - NLK, Seattle, Wash, 24.8 kHz  
 Section Lines ..... NSS, Annapolis, MD, 21.4 kHz  
 Base lines ..... NSS, Annapolis, MD, 21.4 kHz  
 Stations read facing ..... SE NE  
 Readings plotted ..... OP IP / OP  
 Profiles at 1cm = 20% plotted ..... + / -  
 Inphase profile .....  
 Quadrature profile .....  
 Conductor axis ..... - - - - -



SCALE 1:5000  
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 Mississauga, Ontario  
 December 1984

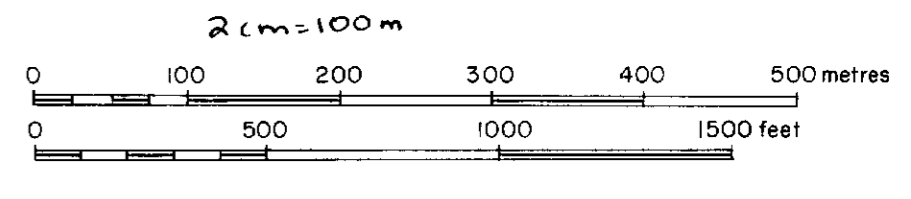
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**BILLITON CANADA LTD.**  
**PICKLE LAKE PROJECT**  
**CONNELL TOWNSHIP, ONTARIO**  
**METRIC GRID**  
**VLF EM Survey**  
**FILTERED INPHASE CONTOURS**

**LEGEND**  
Instrument ..... Geonics EM-16  
Transmitters used :-  
Section Lines ..... NLK, Seattle, Wash., 24.8 kHz  
Base lines ..... NSS, Annapolis, MD, 21.4 kHz  
Contours of Fraser filtered inphase VLF data  
Contour interval ..... + 10%  
0 contour .....  
+ 10% contour .....  
+ 50% contour .....



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