



52C13NW0005 2,7912 FLEMING

010

AGASSIZ RESOURCES LTD.

OFF LAKE PROPERTY

FLEMING AND SENN TOWNSHIPS

KENORA MINING DIVISION, ONTARIO

REPORT ON

MAGNETIC AND VLF-EM SURVEYS

RECEIVED

MAR 22 1985

MINING LANDS SECTION

A. James Walker, P. Eng.

February 28, 1985

2nd
63 2234



52C13NW0005 2.7912 FLEMING

010C

- i

LIST OF CONTENTS

Introduction	Page 1
Summary	1
Property	2
Previous Work	2
General Geology	2
Survey Method	3
Survey Results	4
Conclusions	5
Survey Data	6

ENCLOSURES

Magnetometer Survey	-	Total Field Values
"	"	Total Field Contours
VLF-EM Survey	-	Annapolis - Values and profiles
		Annapolis - Filtered values and contours
		Seattle - Values and profiles
		Seattle - Filtered values and contours

INTRODUCTION

At the request of Agassiz Resources Ltd., Walker Exploration carried out magnetic and VLF-EM surveys over the Off Lake claim block of Agassiz Resources (35 claims). The claims are located in Senn and Fleming Townships, about 30 kilometers north of EMO Ontario.

Linecutting and chaining was carried out in December 1984, while the surveys were made in January 1985.

A Geonics EM16 VLF unit was used for the VLF-EM survey, reading Annapolis, Maryland, transmitter (21.4 kHz), along the EW cut lines. A second survey was also made using Seattle, Washington transmitter (24.8 kHz) looking for possible EW cross structures. The NS base line and tie lines were read, as well as NS lines on the lake portion of the grid.

The magnetic survey was carried out with an EDA PPM 300 total field proton magnetometer. An EDA PPM 400 base station magnetometer was used for diurnal control.

SUMMARY

The magnetic and VLF-EM surveys show a northeasterly trending pattern. Conductors are present over the previously drilled Noranda copper occurrence, as well as the gold occurrence located by Brian Christie of Agassiz Resources Ltd. Other conductors present likely require further exploration.

PROPERTY

The 35 claim property is located in the northwest part of Fleming Township and the southwest part of Senn Township (Claims 728022, 728023, 728025-728033 inclusive, 751001-751015 inclusive, 771991-772000 inclusive). The group is about 30 kilometers north of EMO, Ontario. Provincial road 615 leaves highway 71 about 23 kilometers from EMO and crosses the northwest part of the claim block. About half the grid is covered by Off Lake.

PREVIOUS WORK

In 1967, Noranda Exploration carried out magnetic, induced polarization and resistivity surveys over a copper prospect in Senn Township just north of the Fleming Township boundary, and just west of Off Lake. Some mapping and 3 holes were drilled in 1967, which located minor pyrite and chalcopyrite.

In 1971 both INCO and Phelps Dodge Corporation flew combined magnetic and electromagnetic surveys of the area.

Old trenches occur at the north end of Off Lake. In 1984, Agassiz carried out geological mapping.

GENERAL GEOLOGY - Map 2325 - Ontario

The property is located along a northeast trending belt of Precambrian volcanics, with granitic rocks to the northwest and southeast. A

stock of quartz monzonite (Burditt Lake stock) occurs to the northeast.

The claim group is mainly underlain with intermediate to felsic volcanics, with mafic volcanics along the east and north sections of the group.

Gold values were obtained in a northeast trending shear along the shore on the southeast part of Claim K728026, or about 2300 feet west on line 20 South. A gossan zone with fuchsite occurs along the roadside on the north end of Off Lake. The Noranda Copper showing is located in the northwest part of Claim K751001, or about line 32N, to the west of Highway 615.

SURVEY METHOD

The magnetic survey was performed with an EDA PPM 300 proton magnetometer, measuring total field to 0.1 Gammas. Diurnal control was made by using an EDA base station magnetometer (PPM 400), located on the southwest corner of the grid.

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. Corrected data was stored on cassette of an HP85 computer.

Observations were made at 50 foot intervals on lines 400 feet apart. As well, base lines and tie lines were read. Values are plotted on a plan at a scale of 1 inch equals 400 feet (1:4800). Contours of values are plotted on a separate sheet.

The VLF-EM survey was made on the same grid of lines, using a Geonics EM16 VLF unit. Stations were read at 50 foot intervals. The Annapolis, Maryland transmitter station was used (21.4 kHz). A second VLF survey was made by running north-south lines on the lake portion of the grid, as well as the north-south base line and tie line. The Seattle, Washington transmitter (24.8 kHz) was observed.

Dip angle and quadrature values are plotted on plans for each survey, with profiles of values on separate plans.

The dip angle values were filtered (FRASER) for both surveys. Filtered values and contours are plotted on separate plans for each transmitter.

SURVEY RESULTS

The magnetic survey shows a general north-south strike to the volcanic rocks. The higher magnetic values along the east section of the grid, as well as the west part, represent the intermediate to basic volcanics, while the central and south westerly area of low and flat magnetics likely represent the more felsic units, such as rhyolite.

Some faulting is also seen in the magnetic pattern of the contoured values.

The VLF-EM survey shows a conductive zone along the west boundary going from Off Lake to Spring Lake, on which the copper zone tested by drilling, by Noranda in 1967 occurs. Another long conductor is along the east shore of Off Lake, and has some magnetic coincidence. Other short zones are shown on the VLF plans.

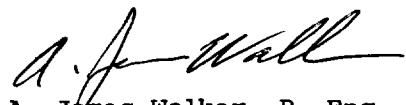
Both magnetic and electromagnetic surveys suffer from interference of the major power line crossing the grid, as well as the local power lines along Highway 615 and into the numerous cottages along the lakeshore.

CONCLUSIONS

The surveys have located conductors, which may represent sulphide mineralization or shearing and faulting in an environment favourable for gold and base metals. Some conductivity is present at the gold occurrence on line 20S, in a northeast trending shear.

Final interpretation of surveys is being carried out by Mr. J. B. Boniwell, Consulting Geophysicist.

Respectfully submitted,



A. James Walker, P. Eng.

AJW:sb

March 9, 1985.

SURVEY DATA

Off Lake Property - Agassiz Resources Ltd.
Senn and Fleming Townships, Kenora Mining Division

Geophysical Contractor	-	Walker Exploration Ltd.
Covering Dates	-	Linecutting - December 8-27, 1984
		Magnetic Survey - January 18-25, 1985
		VLF-EM Survey - January 18-26, 1985
		Remove Lake Pickets - January 26-27, 1985
		Data Preparation - February 2-4, 1985
		Drafting - February 11-20, 1985
		Report - February 25-28, 1985
Line Coverage	-	Linecutting - 34.0 miles
		Magnetic Survey - 34.0 miles
		3623 Readings
		VLF-EW Lines - 29.8 miles
		3175 Readings
		VLF-NS Lines - 15.8 miles
		1688 Readings

Crew

Magnetic Survey	David Miles, Proton Station, Ontario
VLF Survey	James Tough, Bracebridge, Ontario
Drafting	R. T. Marcroft, Mississauga, Ontario
Report & Data	A. J. Walker, Oakville, Ontario
Geophysical Consultant	J. B. Boniwell, Mississauga, Ontario

Instruments

Magnetic Survey

EDA, PPM 300, Proton

Total Field

Reading to 0.1 Gammas

Solid State Memory

Readings at 50 foot intervals

VLF-EM Survey

Geonics EM-16

Reading Dip angle and quadrature in per cent

Transmitters Used:

Annapolis, Maryland 21.4 kHz

Seattle, Washington 24.8 kHz

Readings at 50 foot intervals

Observations made facing:

Annapolis - N. Easterly

Seattle - Southerly



Ministry of
Natural
Resources

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

FWM *25



S2C13NW0005 2.7912 FLEMING

900

W8501-25

Mining Act

= Do not use shaded areas below.

Type of Survey(s)

Electromagnetic (VLF) and Magnetic

Claim Holder(s)

AGASSIZ RESOURCES LTD.

Address

Suite 1904 - 372 Bay St., TORONTO, Ontario

Survey Company

Walker Exploration Ltd.

Name and Address of Author (of Geo-Technical report)

A. James Walker, 10 Hurontario St., MISSISSAUGA, Ontario L5G 3G7

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

RECEIVED
FEB 25 1985

MINING LANDS SECTION

Expenditures (excludes power stripping)

Type of Work Performed

Performed on Claim(s)

Calculation of Expenditure Days Credits

Total Expenditures	Total Days Credits
\$ []	÷ 15 = []

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.

Date

4/02/85

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

A. James Walker, 10 Hurontario St.,

MISSISSAUGA, Ontario L5G 3G7

Township or Area

Senn & Fleming Beadle Lake

Prospector's Licence No. M2068

T1421

Mining Claims Traversed (List in numerical sequence)

Mining Claim Number	Expend. Days Cr.	Mining Claim Prefix	Expend. Days Cr.
K 728022		751014	
728023		751015	
728025		771991	
728026		771992	
728027		771993	
728029		771994	
728030		771995	
728031		771996	
728032		771997	
728033		771998	
751001		771999	
751002		772000	
751003			
751004			
751005			
751006			
751007			
751008			
751009			
751010			
751011			
751012			
751013			

RECEIVED
FEB 11 1985
AM 7:30 10/11/21/23/4/85

35

For Office Use Only	
Total Days Cr Recorded	Date Recorded
2100	Feb 11 1985
Mining Recorder	
A. James Walker	

Date Certified
Feb. 4, 1985

Certified by (Signature)

GEOPHYSICAL TECHNICAL DATA

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

Number of Stations _____ Magnetic 3623
 Number of Readings _____ VLF 4863
 Station interval 100 Feet (Readings 50') Line spacing 400 Feet
 Profile scale VLF 1" = 40%
 Contour interval Magnetic 10 Gammas

MAGNETIC

Instrument EDA PPM 350 Total Field Proton
 Accuracy – Scale constant 0.1 Gammas
 Diurnal correction method Base Station Control
 Base Station check-in interval (hours) 30 Seconds
 Base Station location and value Southwest corner of Grid 59,988

ELECTROMAGNETIC

Instrument Geonics EM16
 Coil configuration _____
 Coil separation _____
 Accuracy \pm 1%
 Method: Fixed transmitter Shoot back In line Parallel line
 Frequency Annapolis, Maryland 21.4 kHz and Seattle, Washington 24.8 kHz
(specify V.L.F. station)
 Parameters measured In-Phase dip angle and quadrature in per cent

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 _____

Mining Lands Section

File No 2.7912

Control Sheet

TYPE OF SURVEY

GEOPHYSICAL

GEOLOGICAL

GEOCHEMICAL

EXPENDITURE

MINING LANDS COMMENTS:

L.D. bq

L.D. leg

J. Herst

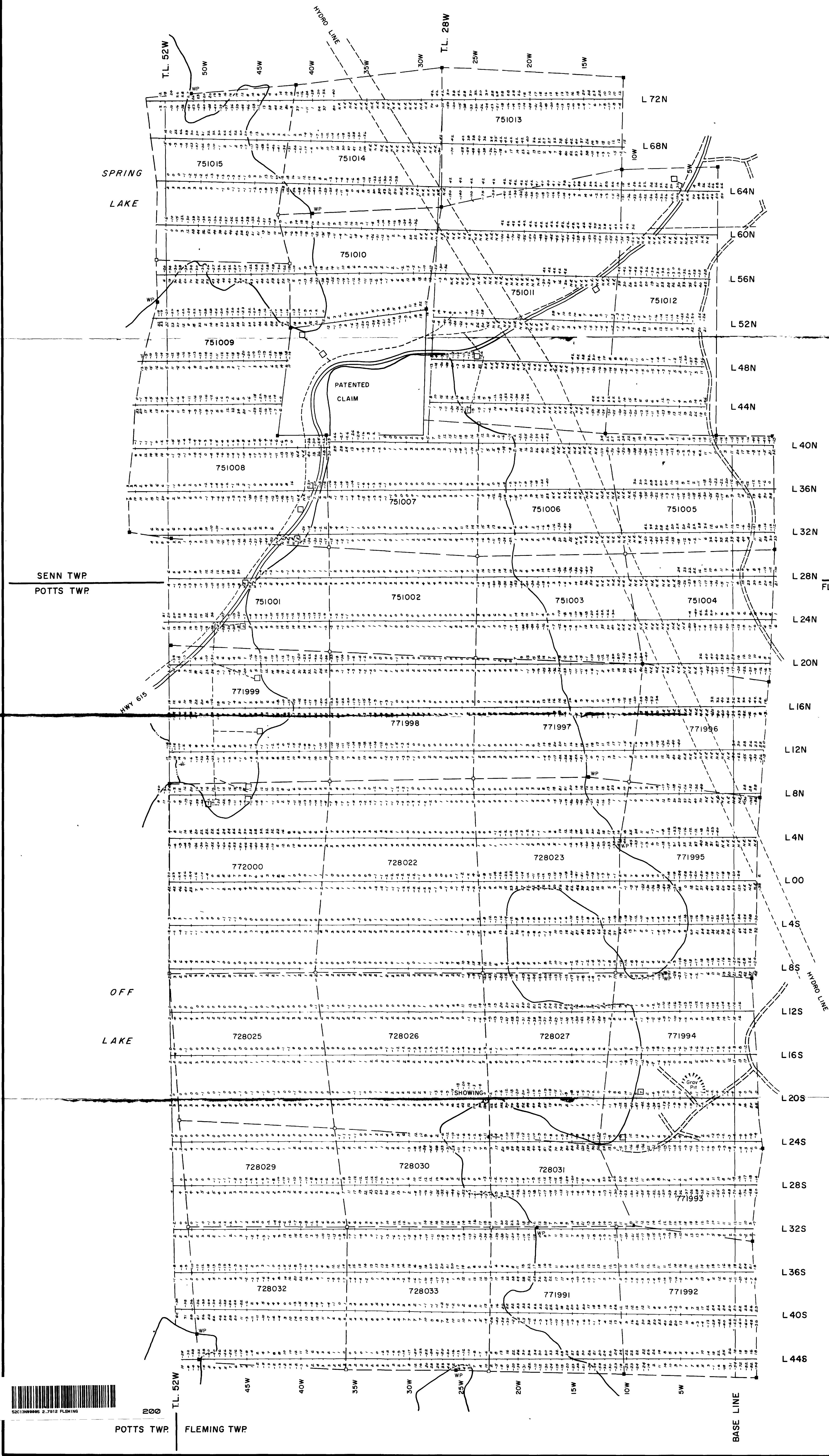
Signature of Assessor

85

m

3.1912

1	8032	✓	✓	75-1011	✓	-	
23		✓	✓	12	✓	-	
25		✓	✓	13	✓	✓	
26		✓	✓	14	✓	✓	
27		✓	✓	15	✓	✓	
29		✓	✓	771991	✓	-	
30		✓	✓	92	✓	-	
31		✓	✓	93	✓	-	
32		✓	✓	94	✓	✓	
33		✓	-	95	✓	✓	5.
75-1001		✓	✓	96	✓	-	2.
2		✓	✓	97	✓	✓	
3		✓	-	98	✓	✓	
4		✓	-	99	✓	✓	
5		✓	-	772000	✓	✓	
6		✓	✓				
7		✓	✓				
8		✓	✓				
9		✓	✓				
10		✓	✓				



LEGEND	
Claim post; located, assumed, witness	■□■ WP
Claim line	—
Cottages	□ □
Power Line	- - - -
Roads; main, bush	
Lakeshore, Creek, Swamp	
Grid line with 100' stations	
SURVEY DATA	
Instrument	Geonics EM-16
Transmitter	... NSS, Annapolis, M.D., 21.4 kHz
Stations read facing	Northeast
Readings plotted	QP

AGASSIZ RESOURCES LTD.

OFF LAKE GRID

enn and Fleming Township

KENORA M.D. ONTARIO

VLF EM SURVEY

Inphase and Quadrature Readings

Inphase and Quadrature Readings (Tx NSS)

500' 1000' 1500'

SCALE 1" = 400 feet

Survey Contractor

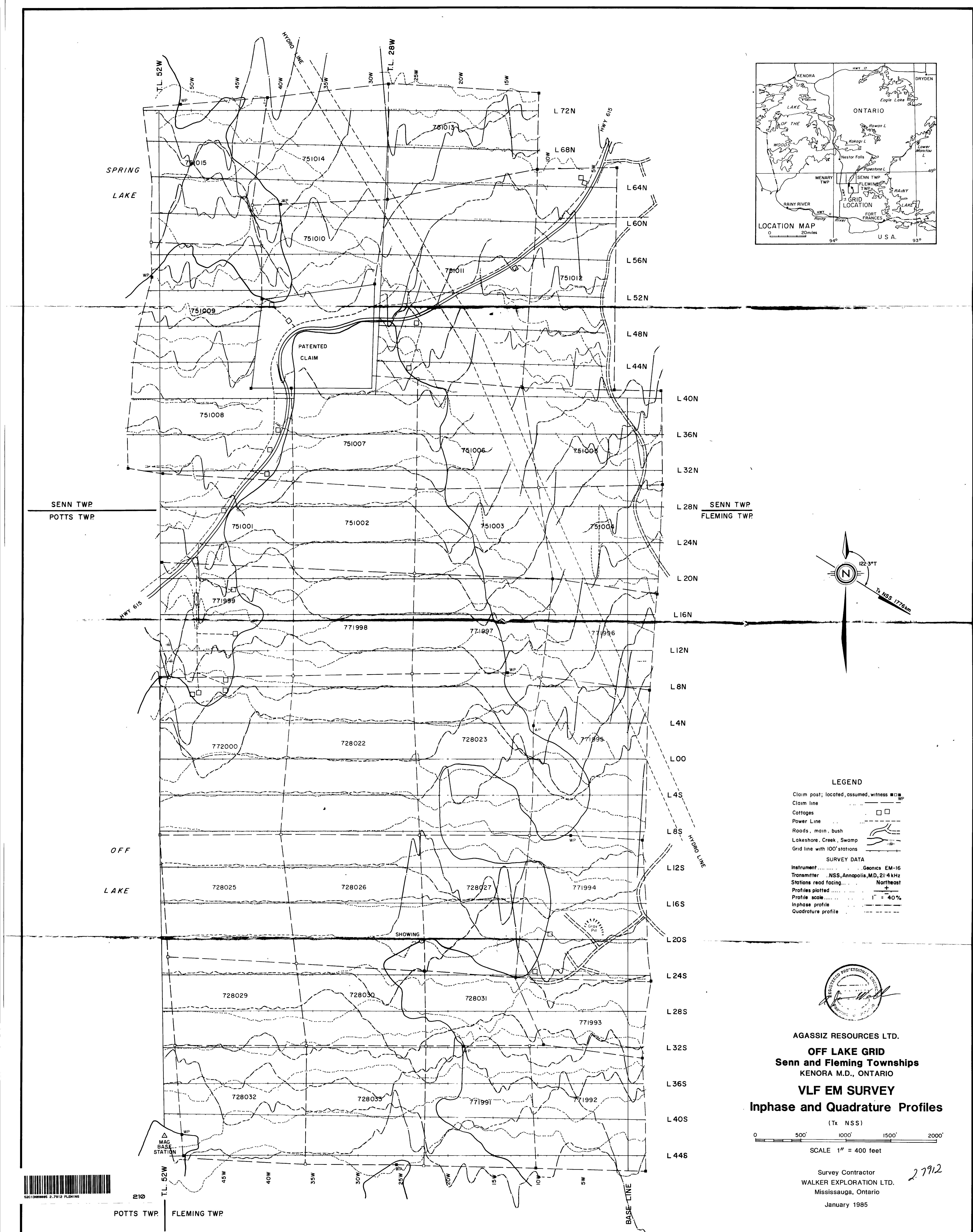
WALKER EXPLORATION LTD.

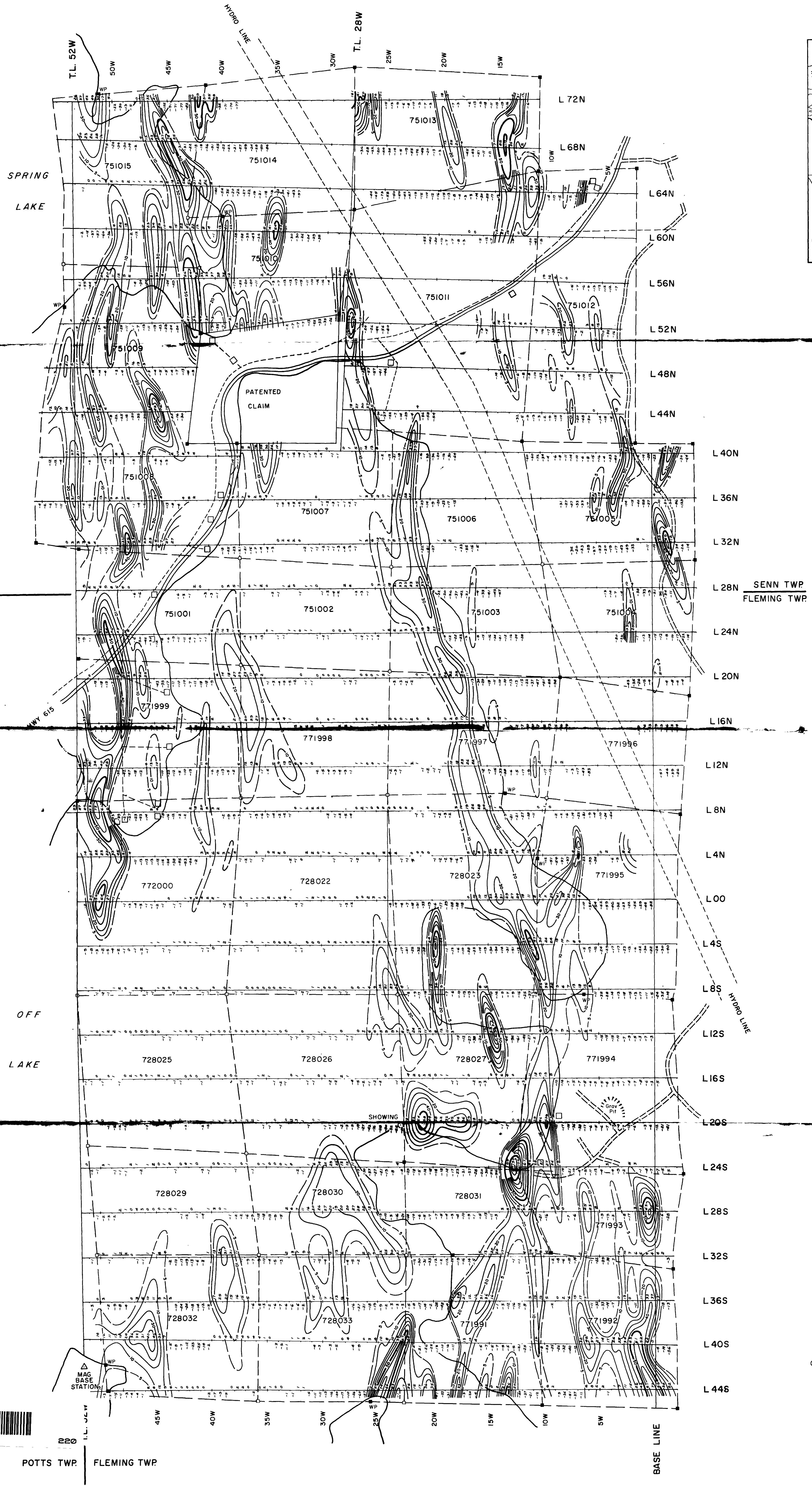
Mississauga, Ontario

Survey Contractor
WALKER EXPLORATION LTD.
Mississauga, Ontario

January 1985

10. The following table summarizes the results of the study.





LEGEND

- Claim post, located, assumed, witness ■ WP
- Claim line
- Cottages
- Power Line
- Roads, main, bush
- Lakeshore, Creek, Swamp
- Grid line with 100' stations

SURVEY DATA

- Instrument Geonics EM-16
- Transmitter NSS, Annapolis, M.D., 21.4 kHz
- Contours of Fraser filtered inphase VLF-EM data
- Contour interval +10%
- +5% contour
- +10% contour
- +50% contour



AGASSIZ RESOURCES LTD.

OFF LAKE GRID
Senn and Fleming Townships
KENORA M.D., ONTARIO

VLF EM SURVEY
Filtered Inphase Contours

(Tx NSS)

0 500' 1000' 1500' 2000'

SCALE 1" = 400 feet

Survey Contractor
WALKER EXPLORATION LTD.
Mississauga, Ontario
January 1985

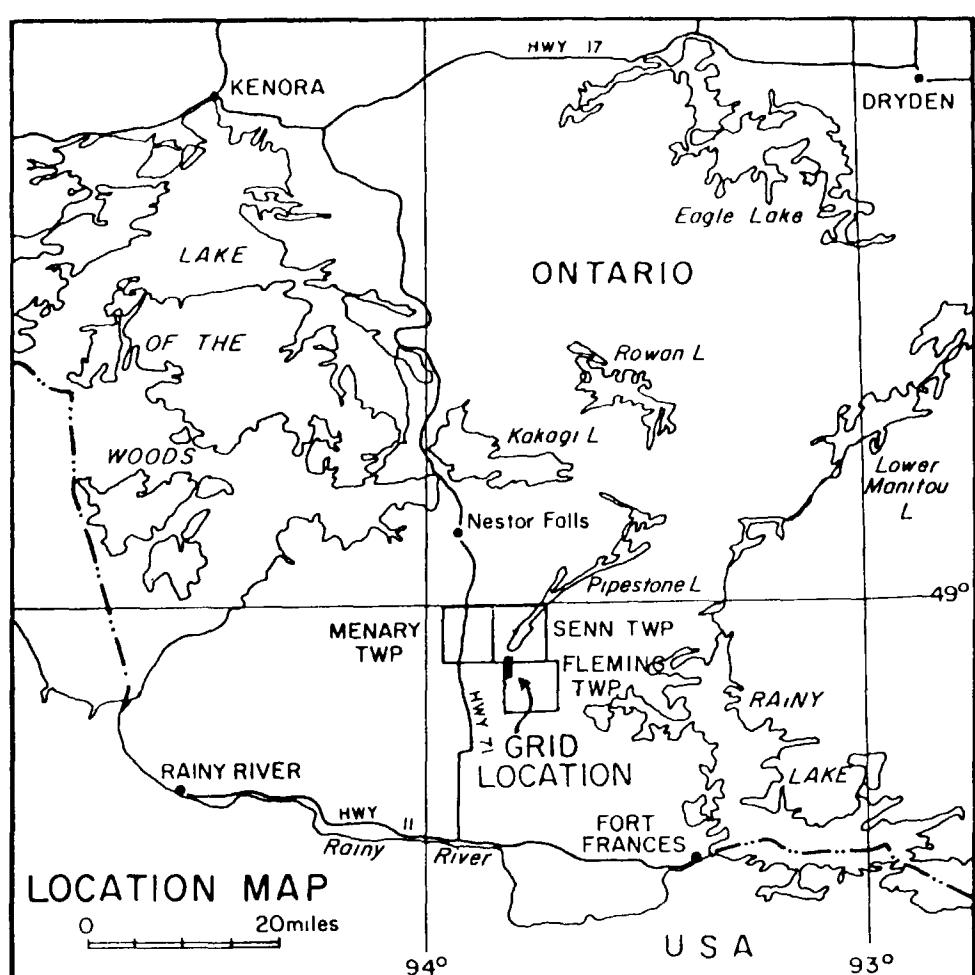
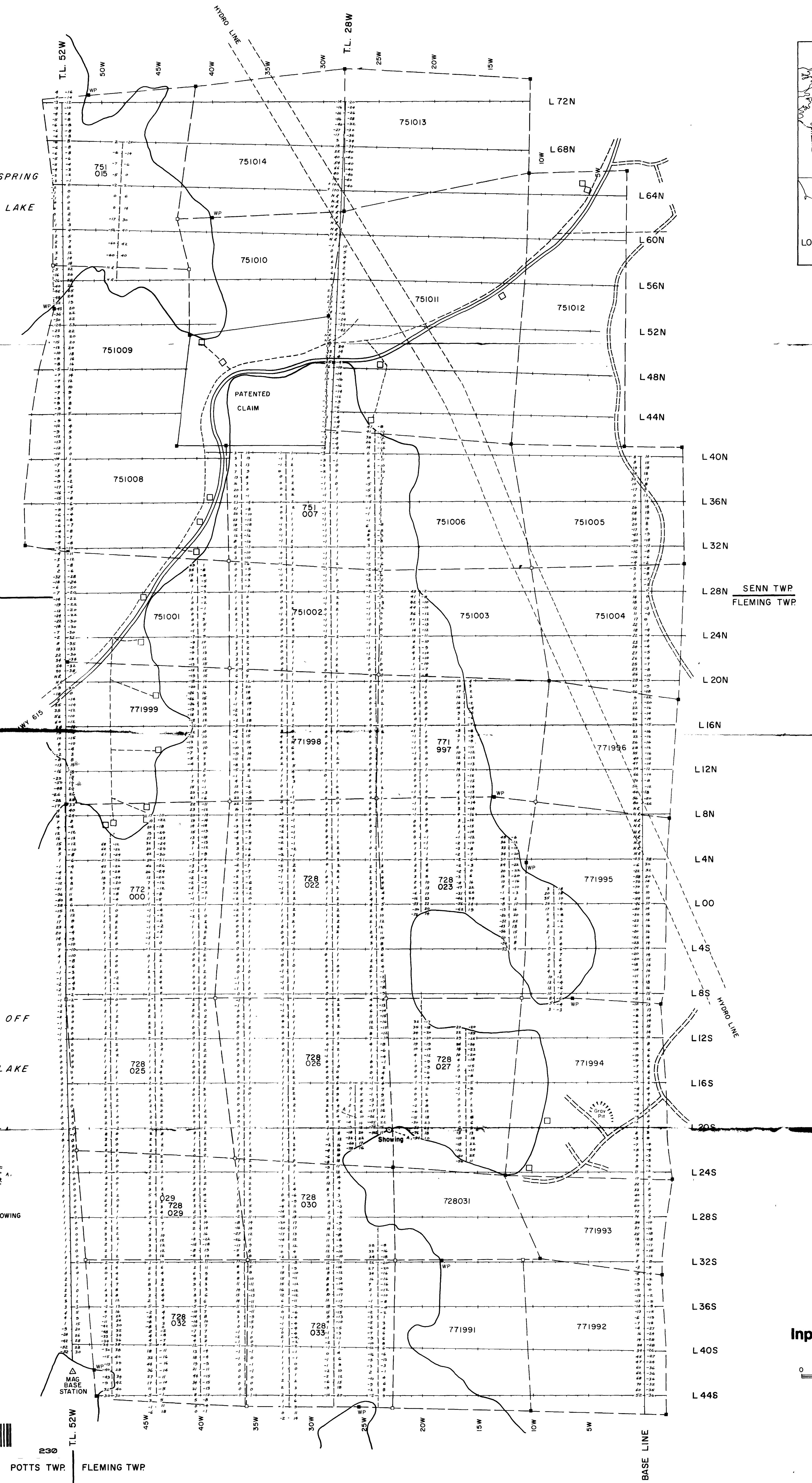


POTTS TWP. FLEMING TWP.

220

BASE LINE

27912



LEGEND

located, assumed, witness ■□■
WP

n, bush
Creek, Swamp
in 100' stations

SURVEY DATA

..... Geonics EM-16
..... NLK, Seattle, Wash., 24.8 kHz
d facing South
otted IP 1 QP

A circular registration stamp for a professional engineer. The outer ring contains the text "REGISTERED PROFESSIONAL ENGINEER" at the top and "PROVINCE OF ONTARIO" at the bottom. Inside the circle, there is a large, stylized signature of "J. WALTER". Above the signature, the name "J. WALTER" is printed in capital letters.

AGASSIZ RESOURCES LTD.

OFF LAKE GRID

Senn and Fleming Townships

KENORA M.B., ONTARIO

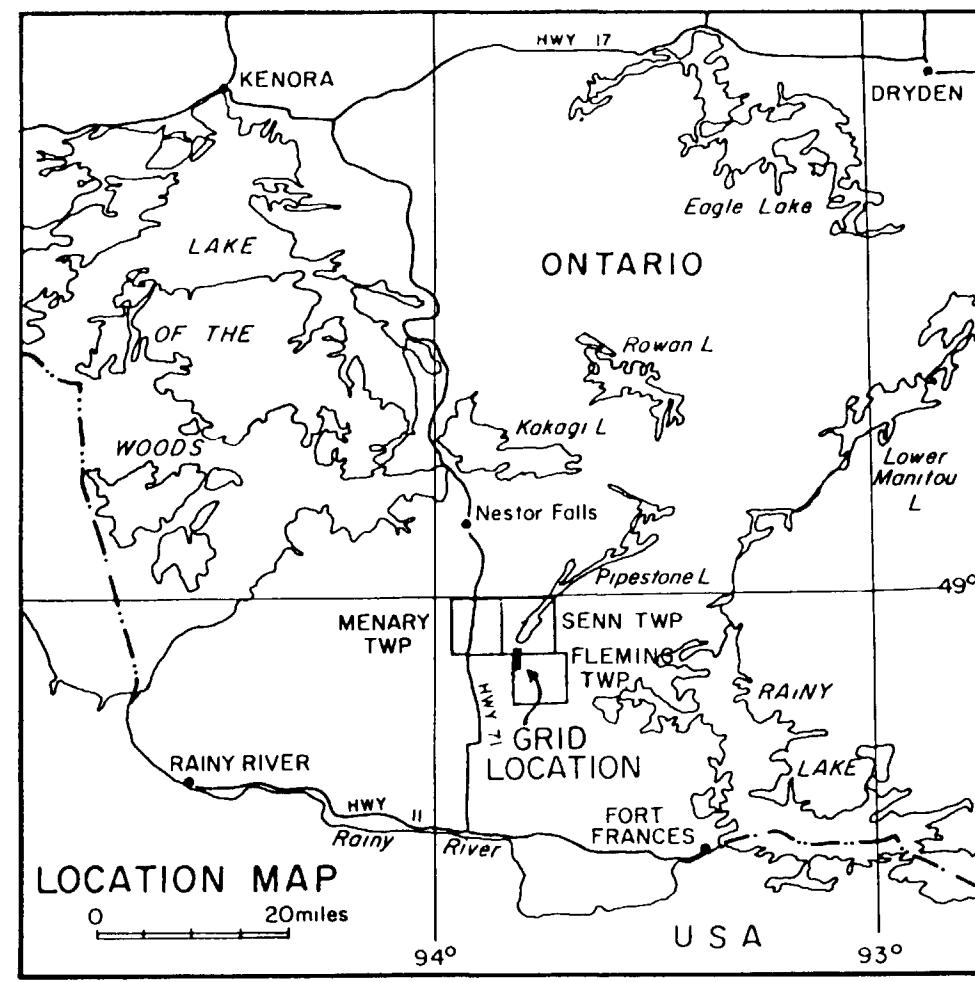
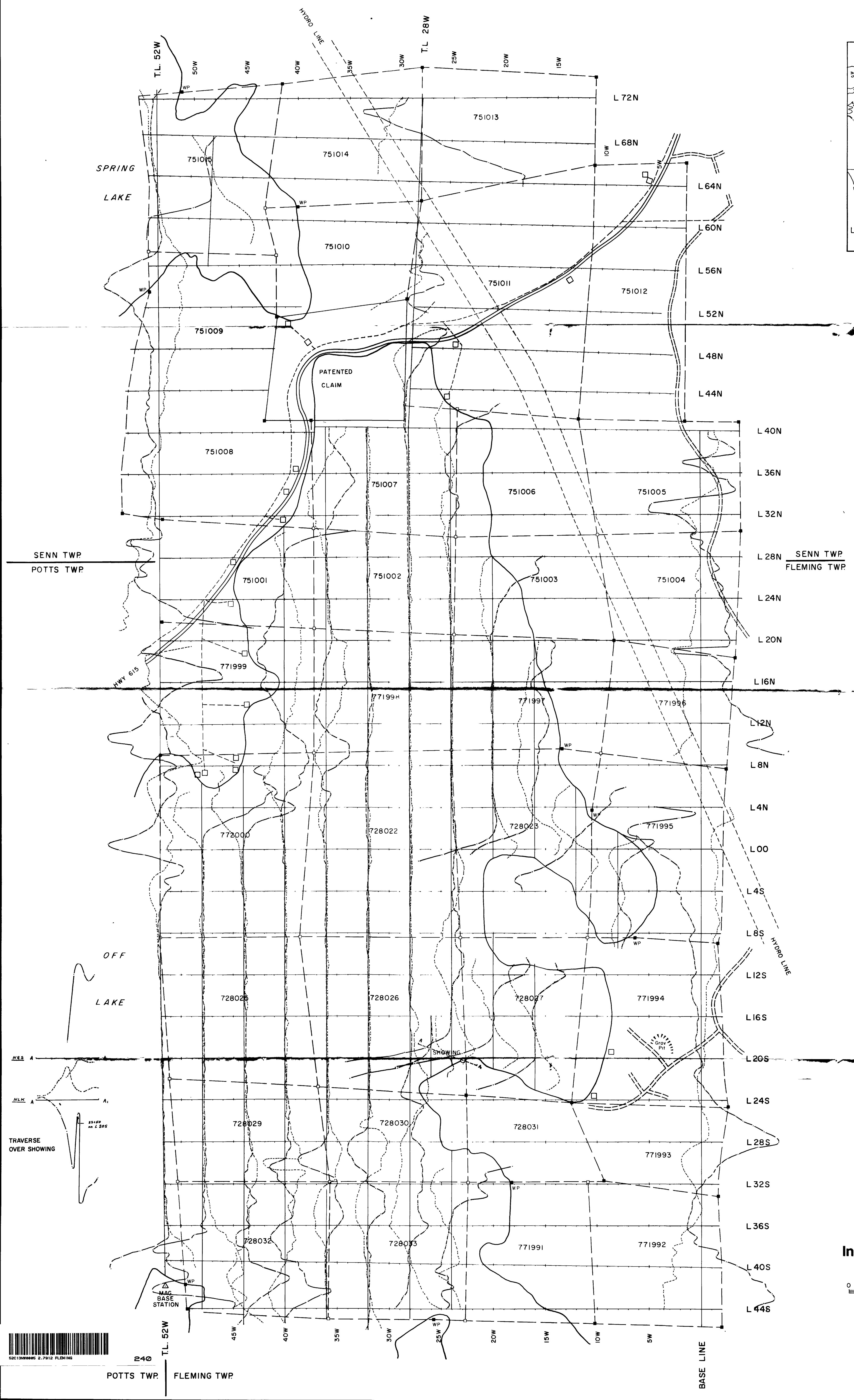
VLF EM SURVEY

Inphase and Quadrature Readings

Impress and Quadrature Readings (Tx NLK)

A horizontal scale bar diagram. It features three vertical tick marks labeled "500'", "1000'", and "1500'" from left to right. The distance between the first and second tick marks is explicitly labeled "SCALE 1" = 400 feet".

Survey Contractor
WALKER EXPLORATION LTD.
Mississauga, Ontario



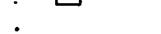
LEGEND

- Claim post, located, assumed, witness WP

Claim line _____

Cottages .

Power Line - - - - -

Roads, main, bush 

Lakeshore, Creek, Swamp 

Grid line with 100' stations 

SURVEY DATA

Instrument	Geonics EM-16
Transmitter ...	NLK, Seattle, Wash., 24.8 kHz
Stations read facing	South
Profiles plotted	- +
Profile scale	1" = 40%
Inphase profile	-----
Quadrature profile	---- - - - -



AGASSIZ RESOURCES LTD.

OFF LAKE GRID

Senn and Fleming Townships

KENORA M.D. ONTARIO

VLF EM SURVEY

Inphase and Quadrature Profiles

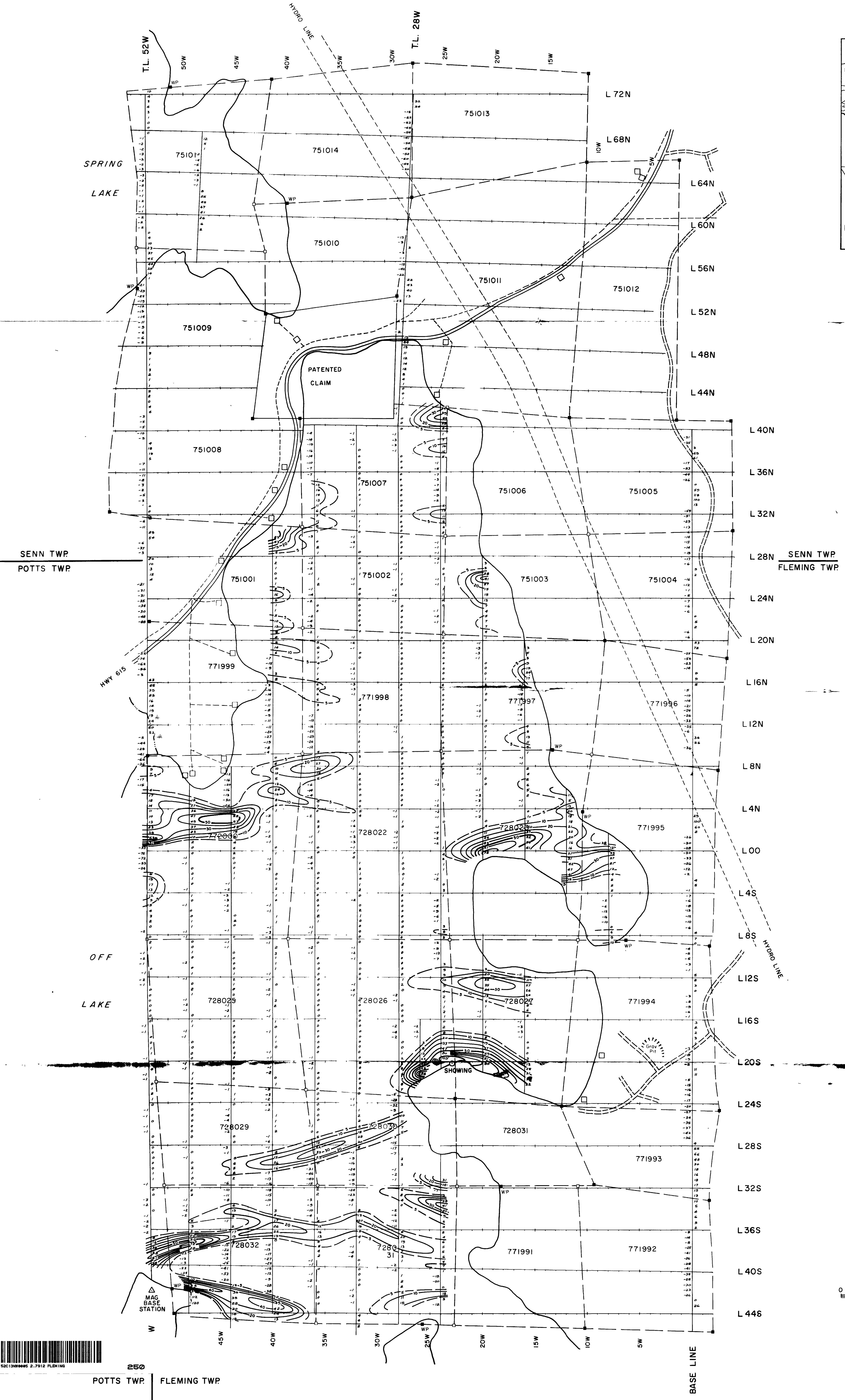
(Tx NLK)

SCALE 1" = 400 feet

January 1985

Journal of Health Politics, Policy and Law, Vol. 28, No. 4, December 2003
DOI 10.1215/03616878-28-4 © 2003 by The University of Chicago

27912



LEGEND

Claim post; located, assumed, witness ■□■ WP

Claim line _____

Cottages . □ □

Power Line -----

Roads, main, bush

Lakeshore, Creek, Swamp

Grid line with 100' stations

SURVEY DATA

Instrument	Geonics EM-16
Transmitter .. .	NLK, Seattle, Wash., 24.8 kHz
Contours of Fraser filtered inphase VLF-EM data	
Contour interval	+10 %
+5 contour	
+10 % contour	
+ 50 % contour	

— 1 —

—
—

RED PROFESSIONAL EDITION

REGISTERED
WALKER

Digitized by srujanika@gmail.com

PROVINCE OF ONTARIO

ACASIZ RESOURCES LTD.

AGASSIZ RESOURCES LTD.

OFF LAKE GRID

KENORA M.D. ONTARIO

RENORA M.D., ONTARIO

VLF EM SURVEY

erred Inphase Contou

(Tx NLK)

500' 1000' 1500'

SCALE 1" = 400 feet

SCARLETT - 400 feet

Survey Contractor

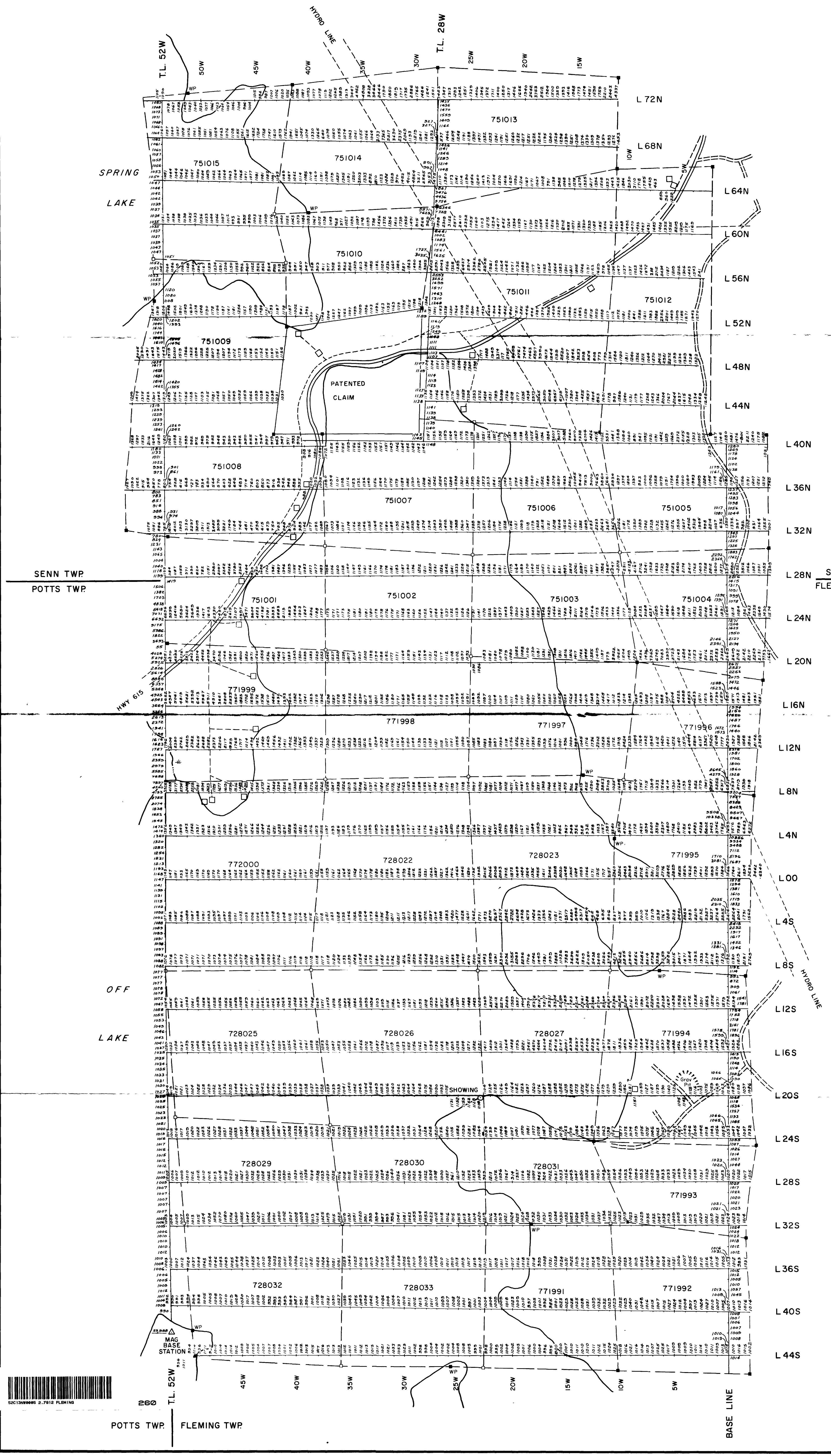
WALKER EXPLORATION LTD.

MISSISSAUGA, ONTARIO

January 1985

ANSWER The answer is 1000.

—
—
—

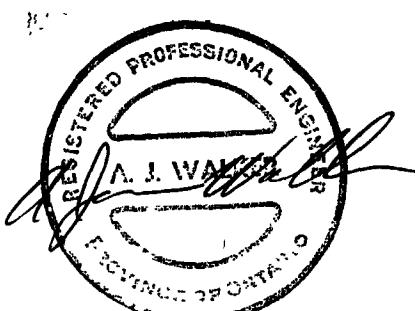


LEGEND

Claim post, located, assumed, witness ■ WP
 Claim line
 Cottages
 Power Line
 Roads, main, bush
 Lakeshore, Creek, Swamp
 Grid line with 100' stations

SURVEY DATA

Instrument: EDA PPM-300
 Base station: EDA PPM-400
 Readings + or - base level of 59,000 gammas



AGASSIZ RESOURCES LTD.

OFF LAKE GRID
Senn and Fleming Townships
KENORA M.D., ONTARIO

Magnetometer Survey
TOTAL INTENSITY READINGS

0 500' 1000' 1500' 2000'
 SCALE 1" = 400 feet

Survey Contractor
 WALKER EXPLORATION LTD.
 Mississauga, Ontario
 January 1985

27912

