

42A105E0052 2.13955 STOCK

010

GEOPHYSICAL REPORT
FOR
NAHANNI MINES LIMITED
ON THE
NORTH PIPESTONE PROPERTY
STOCK TOWNSHIP
PORCUPINE MINING DIVISION
TIMMINS, ONTARIO

RECEIVED

FEB 25 1991

MINING LANDS SECTION

Prepared By:
J.C. Grant, CET, FGAC
Exsics Exploration Ltd.
February, 1991



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42A10SE0052 2.13955 STOCK

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INTRODUCTION

During December 1990 a total of 5.2 miles of grid was established on the 4 claims property. A total field magnetic and two VLF surveys were completed on the unpatented contiguous claim group known as the North Pipestone Property in Stock Township in the Porcupine Mining Division, Province of Ontario.

A total of 448 magnetic and 464 EM readings were recorded during the survey period from January 2, 1990 to January 3, 1991. The linecutting, magnetic survey and electromagnetic survey were completed by personnel of Exsics Exploration Limited. The interpretation and report were completed by the author from January 3, 1991 to January 29, 1991.

The project area is located in the northeast corner of Stock Township approximately 35 miles northeast of the City of Timmins.

The purpose of the survey was to identify the lithological units structural features and geophysical anomalies favourable for gold deposition.

PERSONNEL

The people directly involved with the field work and the collection of all data are as follows:

- Robin Mathieu.....Timmins, Ontario
- Paul Edwards.....Timmins, Ontario
- Ed Brunet.....Timmins, Ontario

The work was carried out under the supervision of J. C . Grant.

LOCATION AND ACCESS

The 4 contiguous unpatented mining claims are located in the northeast corner of Stock Township, Porcupine Mining Division, Province of Ontario as shown in Figure 1.

The project area is 3/4 of a mile southwest of the Montclerg Gold deposit and is approximately 5 miles due east of the Clavos Gold deposit.

Access to the property is via provincial Highway 101 East from Timmins, north on Highway 577 and then west along a concession road.

The property is covered by a thick, 100 to 150 foot sequence of glacial gravel, sand and clay.

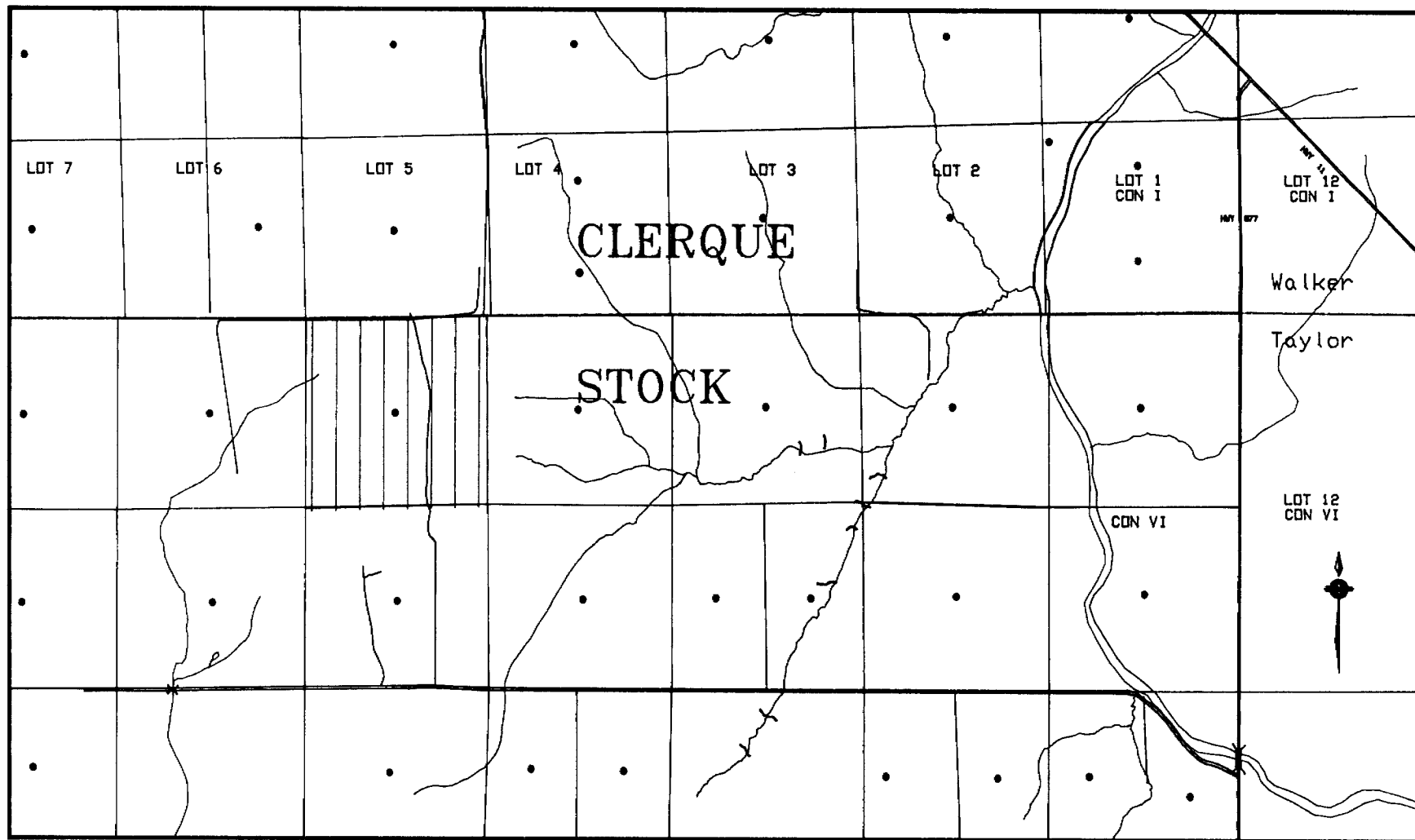
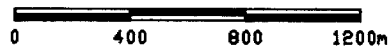


FIGURE 1: LOCATION MAP



CLAIM GROUP

The North Pipestone Property consists of 4 contiguous unpatented mining claims as shown in Figure 2 and includes the following claim numbers:

P-1129497, P-1129498, P-1129499, P-1129471

N1/2 Lot 5, Con VI Stock Township

The mineral rights are owned 100% by Nahanni Mines Limited, Toronto, Ontario. The surface rights are owned by Remi Desrochers, Lot 5, Con VI, Stock Township.

GENERAL GEOLOGY

The project area is located in the Precambrian Shield. The rocks are a sequence of meta-sedimentary units consisting of argillites and greywackes intruded by a series of felsic sills. These units lie south of a sequence of ultramafic flows. All units are in turn cross cut by a series of north-northwest trending diabase dikes. Structurally the property is situated on the major east trending Pipestone Fault which is host to several gold deposits in the area. The fault is located between the sediments and the volcanics.

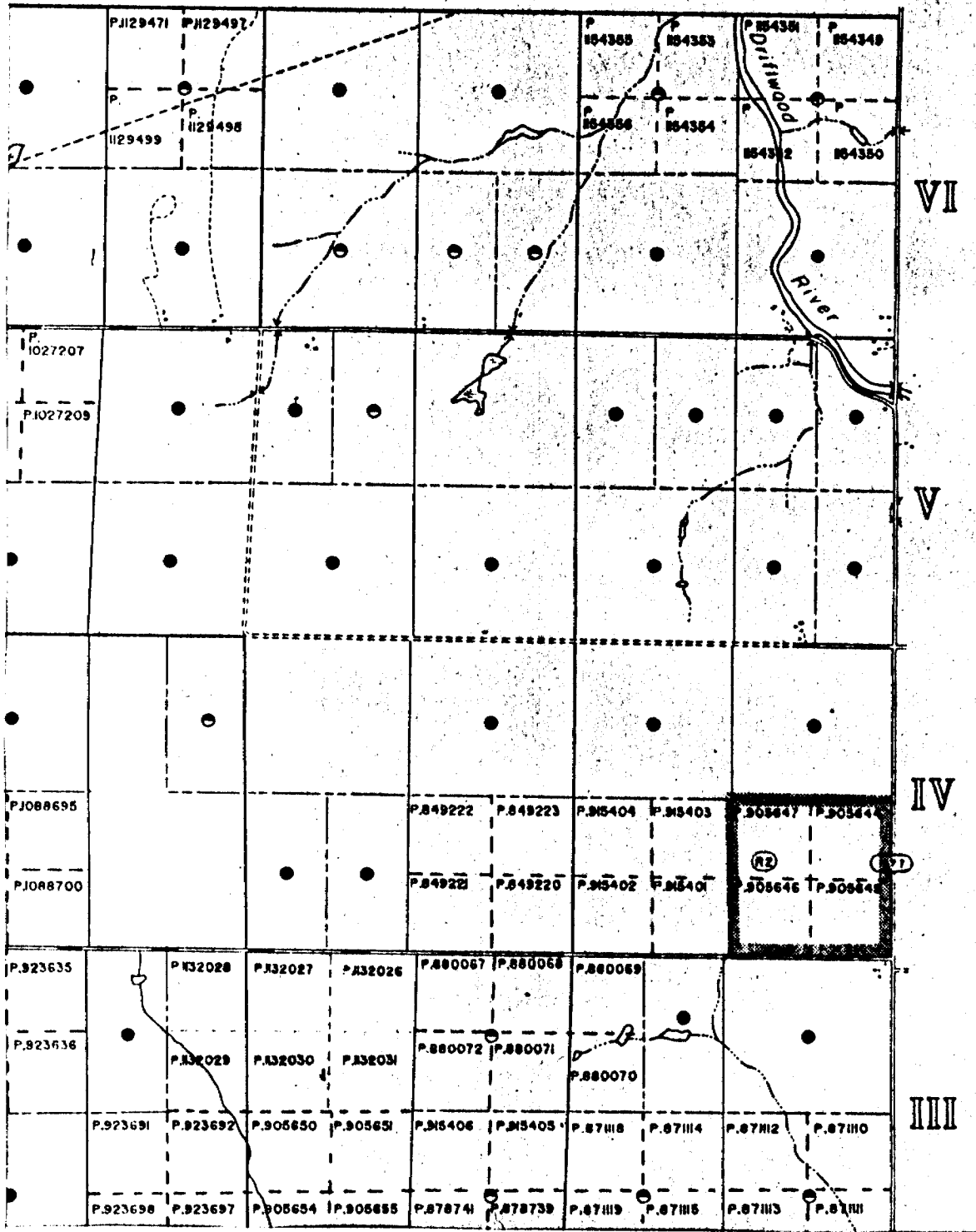


FIGURE 2: CLAIM MAP

PREVIOUS EXPLORATION ACTIVITIES

Research has revealed that the property has been subject of limited exploration efforts in the past. This activity consisted of numerous magnetic and electromagnetic surveys which were completed for assessment requirements.

GEOPHYSICAL PROGRAM

During the period from December 17th to December 19th, 1990, a total of 5.2 miles of grid were established. A total field magnetic and gradient survey and two VLF-EM surveys were performed.

The baseline and tie-line were established with an east-west strike and the grid lines with a spacing of 125 meters were established at right angles. All lines were picketed at a 25 meter interval. Station 0+00 on the baseline is located at the northeast corner of claim P=1129497 on the Stock-Clergue Township line.

A total of 448 magnetic readings and 464 VLF-EM readings were recorded during the survey period from January 2, 1991 to January 3, 1991.

Magnetic and Gradient Survey:

The magnetic gradient survey was completed using the EDA Omni IV system with readings taken at 12.5m intervals. Specifications for this unit can be found as Appendix A of this report.

SURVEY RESULTS

Generally the surveys were successful in returning several areas of interest on the grid.

Certainly the major feature noted by the magnetic survey is the massive ultramafic intrusive over the northern portion of the grid. This intrusive appears to have been crosscut by a fault or dike like structure striking north-northwest across lines 100MW to 200MW from 230MS to BL respectfully. There also appears to be a second cross structure coming into the intrusive in the area between lines 500 and 600MW, north end.

The magnetics also show the existence of a diabase dike in the area of line 600MW from 800MS to 500MS, with the possibility of a second dike like structure in the area of 200MW, south end.

One target area for future follow-up may be on line 100MW at 225MS represented by a mag low.

The major VLF-EM feature on the grid represents the pipeline striking northeast to southwest across the entire grid from L0/300MS to L700MW/600MS.

Two further areas of interest would be the weak VLF-EM zones represented by deflections. These two zones parallel each other with the northern zone striking roughly east-west across lines 0+00 to 200MW at 450 to 475MS and the southern zone striking at about 250 degrees across lines 100MW to 300MW.

Both of these features have subtle magnetic association represented by bulging in the magnetic contours.

CONCLUSIONS AND RECOMMENDATIONS

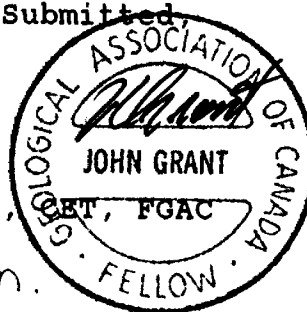
The surveys did prove the existence of some minor cross structure which may be fault controlled diabase dikes.

The weak EM responses on the southeast section of the grid may relate to weak sulphide horizons which could be masked by conductive overburden, or they may relate to clay ridges or troughs within the overburden.

Should drilling be planned, two areas worthy of testing may be the weak magnetic low on L100MW at 2+12.5MS and the EM target on L100MW at 500MS.

However, caution would be advisable in the area of the EM response until further geophysical follow-up, ie, IP or Deep EM, has been done to prove the existence of sulphides and not overburden noise as the source of the zones.

Respectfully Submitted,



John C. Grant,

Qualification.
2.5347

CERTIFICATE OF QUALIFICATIONS

I, John Charles Grant do hereby certify:

1. that I am a geophysicist and reside at Lot 2 Martineau Avenue, Kamiskotia Lake, Timmins, Ontario.
2. that I am a Fellow of the Geological Association of Canada.
3. that I am a member of the Certified Engineering Technologist Association.
4. that I graduated from Cambrian College of Applied Arts and Technology, Sudbury Campus in 1975 with an Honour's diploma in Geology Technology.
5. that I have practised my profession continuously for 13 years.
6. that my report on the NORTH PIPESTONE PROPERTY, for NAHANNI MINES LIMITED, is based on work carried out under my supervision.
4. I hold no specific or special interest in the described property. I have been retained as a Consulting Geophysicist for "the property".

Dated this 20th day of February, 1991 at Timmins, Ontario

John C. Grant, C.E.T., F.G.A.C.





Mining Act

Report of Work
(Geophysical, Geological and Geochemical)

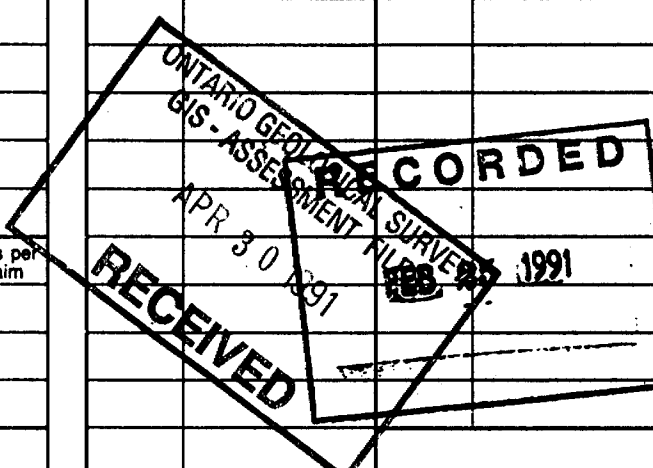
Type of Survey(s) <i>MAGNETIC & TWO DIRECTIONAL VLF-EM</i>	Mining Division <i>Porcupine</i>	Township or Area <i>Stock</i>
Recorded Holder(s) <i>Nahanni Mines Ltd</i>	Prospector's Licence No. <i>2.13955</i>	<i>T951</i>
Address <i>2220 - 7 King St E Toronto ON M5C1A2</i>		Telephone No. <i>868-0000</i>
Survey Company <i>ESSIS EXPLORATION LTD.</i>		
Name and Address of Author (of Geo-Technical Report) <i>J.C. GRANT Box 1800, Timmins, Ont. P4N-7X1</i>		Date of Survey (from & to) Day <i>01</i> Mo <i>01</i> Yr <i>91</i>

Credits Requested per Each Claim in Columns at right

Mining Claims Traversed (List in numerical sequence)

Special Provisions	Geophysical	Days per Claim	Mining Claim		Mining Claim		Mining Claim	
			Prefix	Number	Prefix	Number	Prefix	Number
For first survey: Enter 40 days. (This includes line cutting)	- Electromagnetic	40	P.	112947				
	- Magnetometer	40		112948				
	- Other			112948				
For each additional survey: using the same grid: Enter 20 days (for each)	Geological			112949				
	Geochemical							
Man Days Complete reverse side and enter total(s) here	Geophysical	Days per Claim						
	- Electromagnetic							
	- Magnetometer							
	- Other							
	Geological							
	Geochemical							
Airborne Credits Note: Special provisions credits do not apply to Airborne Surveys.	Electromagnetic	Days per Claim						
	Magnetometer							
	Other							

Prefix	Number	Prefix	Number	Prefix	Number
P.	112947				
	112948				
	112948				
	112949				



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FEB 28 1991

MINING LANDS SECTION

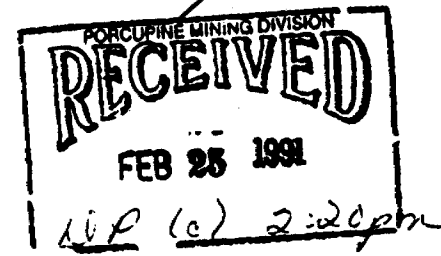
Total miles flown over claim(s)	Date <i>Feb. 20/91</i>	Recorded Holder or Agent (Signature) <i>J.C. Grant</i>	Total number of mining claims covered by this report of work. <i>4</i>
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Certification Verifying Report of Work
I hereby certify that I have 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 <i>J.C. Grant, Box 1800, Timmins, Ont.</i>	Telephone No. <i>P4N-7X1 705-267-4151</i>	Date <i>Feb 20/91</i>	Certified By (Signature) <i>J.C. Grant</i>
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For Office Use Only

Total Days Cr. Recorded <i>320</i>	Date Recorded <i>FEB 25 1991</i>	Mining Recorder <i>Robert Bunting</i>
	Date Approved as Recorded <i>April 24, 1991</i>	Provincial Manager, Mining Lands <i>Ray C. G... ..</i>



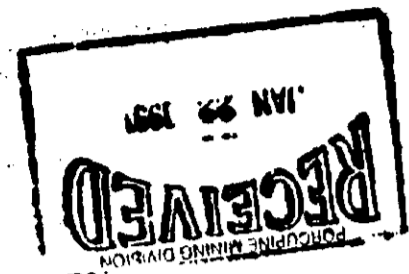
REFERENCES

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

- (R1) Reserve for recreational purposes S.R.O. 188543 under Sec 3 P.L.A.
- (R2) Application pending under P.L.A. for surface rights

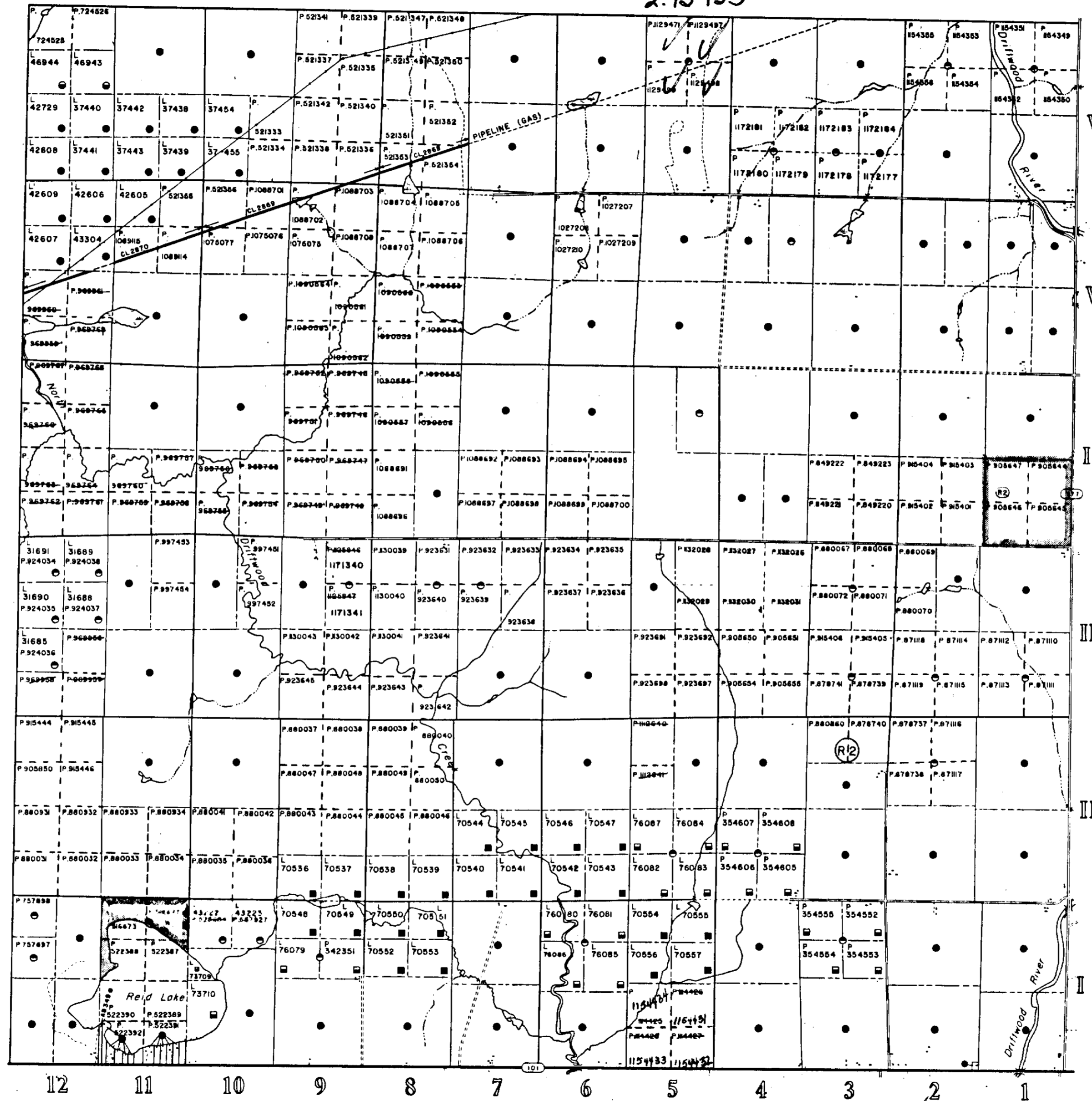


CLERGUE TWP.

2.13955

GERMAN TWP.

TAYLOR TWP.



THE INFORMATION THAT APPEARS ON THIS MAP HAS BEEN COMPILED FROM VARIOUS SOURCES, AND ACCURACY IS NOT GUARANTEED. THOSE WISHING TO STAKE MINING CLAIMS SHOULD CON-



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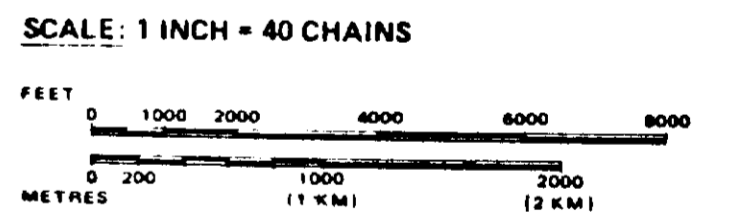
LEGEND

- HIGHWAY AND ROUTE No.
- OTHER ROADS
- TRAILS
- SURVEYED LINES:
 - TOWNSHIPS, BASE LINES, ETC.
 - LOTS, MINING CLAIMS, PARCELS, ETC.
- UNSURVEYED LINES:
 - LOT LINES
 - PARCEL BOUNDARY
 - MINING CLAIMS ETC.
- RAILWAY AND RIGHT OF WAY
- UTILITY LINES
- NON-PERENNIAL STREAM
- FLOODING OR FLOODING RIGHTS RESERVATIONS
- SUBDIVISION OR COMPOSITE PLAN
- ORIGINAL SHORELINE
- MARSH OR MUSKEG
- MINES
- TRAVERSE MONUMENT

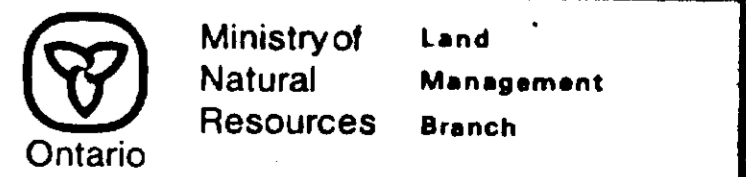
DISPOSITION OF CROWN LANDS

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	▼
ORDER-IN-COUNCIL	OC
RESERVATION	⊙
CANCELLED	⊘
SAND & GRAVEL	⊚

NOTE: MINING RIGHTS IN PARCELS PATENTED PRIOR TO MAY 6, 1913, VESTED IN ORIGINAL PATENTEE BY THE PUBLIC LANDS ACT, R.S.O. 1970, CHAP. 380, SEC. 63, SUBSEC 1.

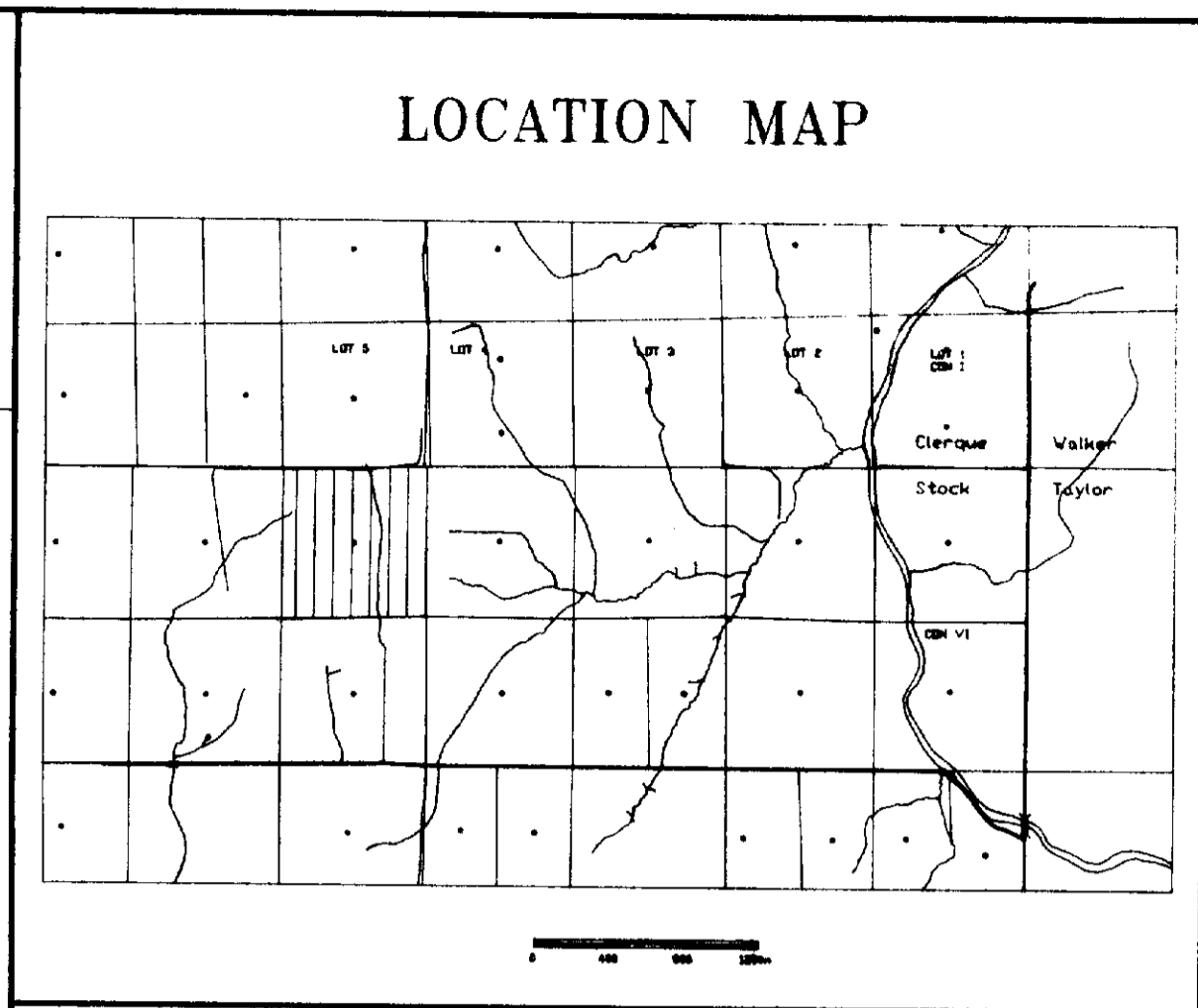
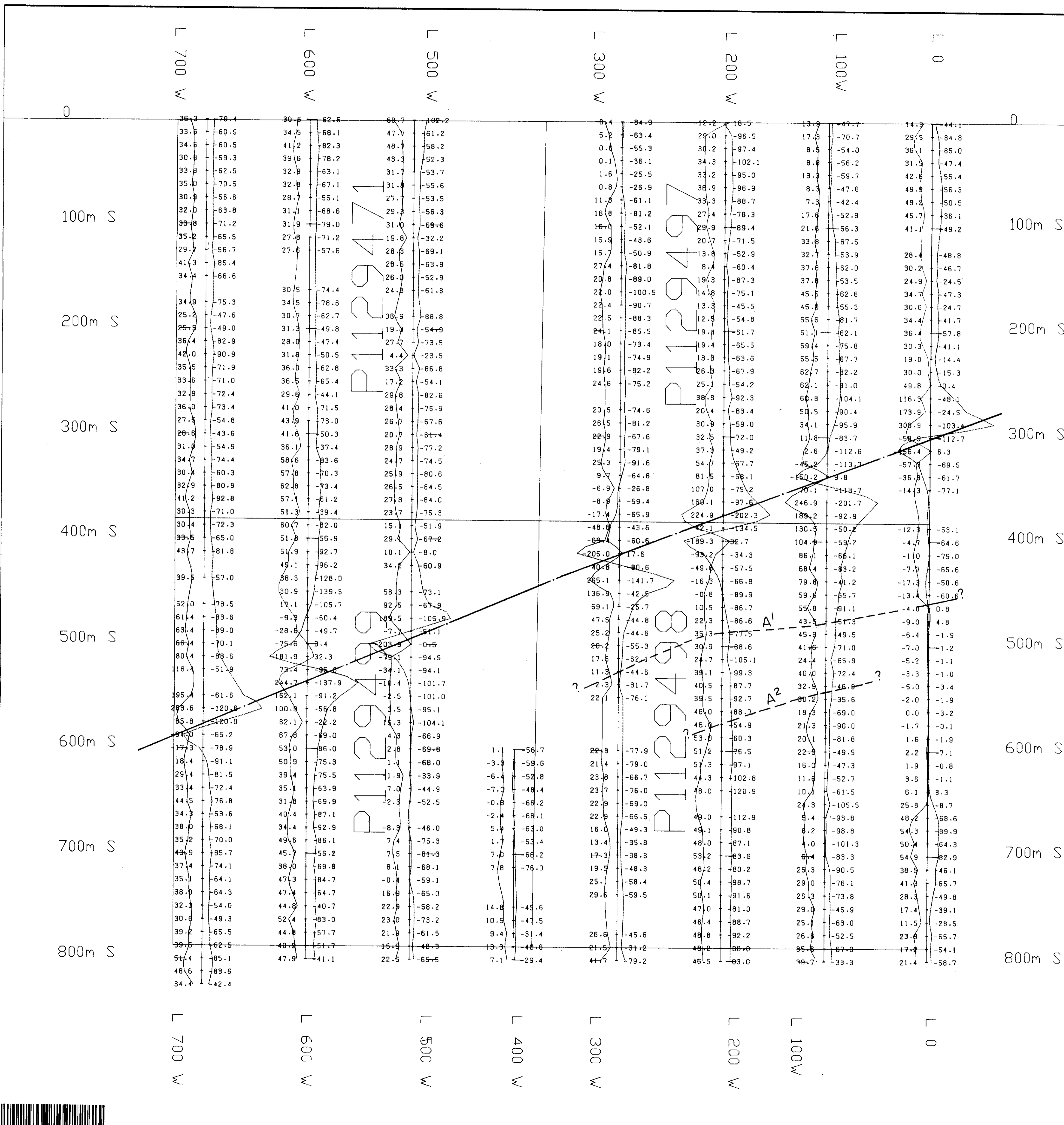


TOWNSHIP
STOCK
 M.N.R. ADMINISTRATIVE DISTRICT
TIMMINS
 MINING DIVISION
PORCUPINE
 LAND TITLES / REGISTRY DIVISION
COCHRANE



Date MARCH, 1985 Number
 ACTIVATED APR 25/90 D.C. **G-3248**

BOND TWP.



LEGEND

- VLF-EM ANOMALY AXIS, CUTLER, MAINE
- CLAIM LINES
- TOWNSHIP BOUNDARIES
- NORTH ZONE
- SOUTH ZONE
- PIPE LINE

Quadrature In-phase

2.13955

CUTLER, MAINE (24.0KHz)

NAHANNI MINES LIMITED

NORTH PIPESTONE
VLF-EM SURVEY
CUTLER, MAINE

STOCK TOWNSHIP
PORCUPINE MINING DIVISION, ONTARIO

SCALE IN METERS

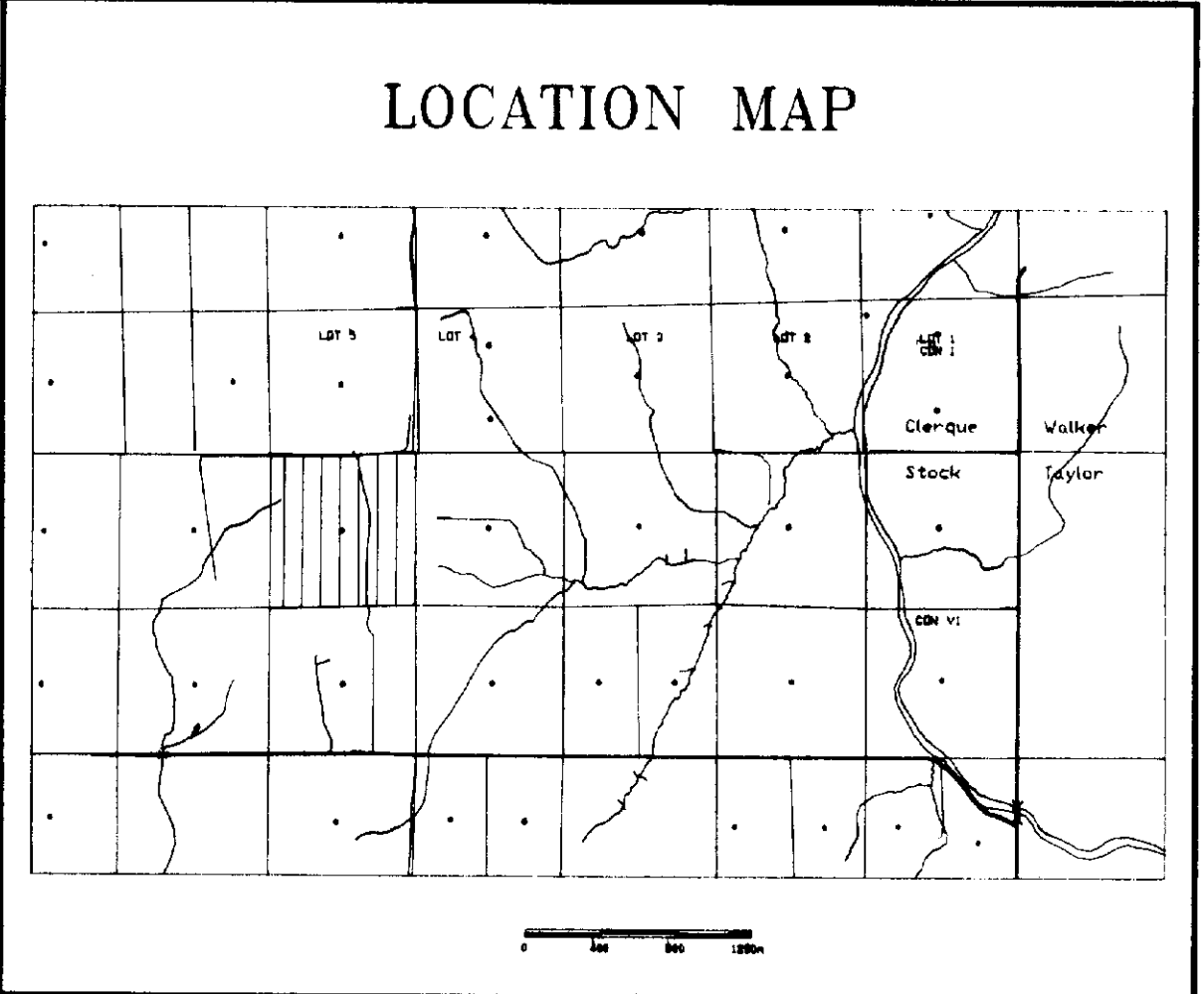
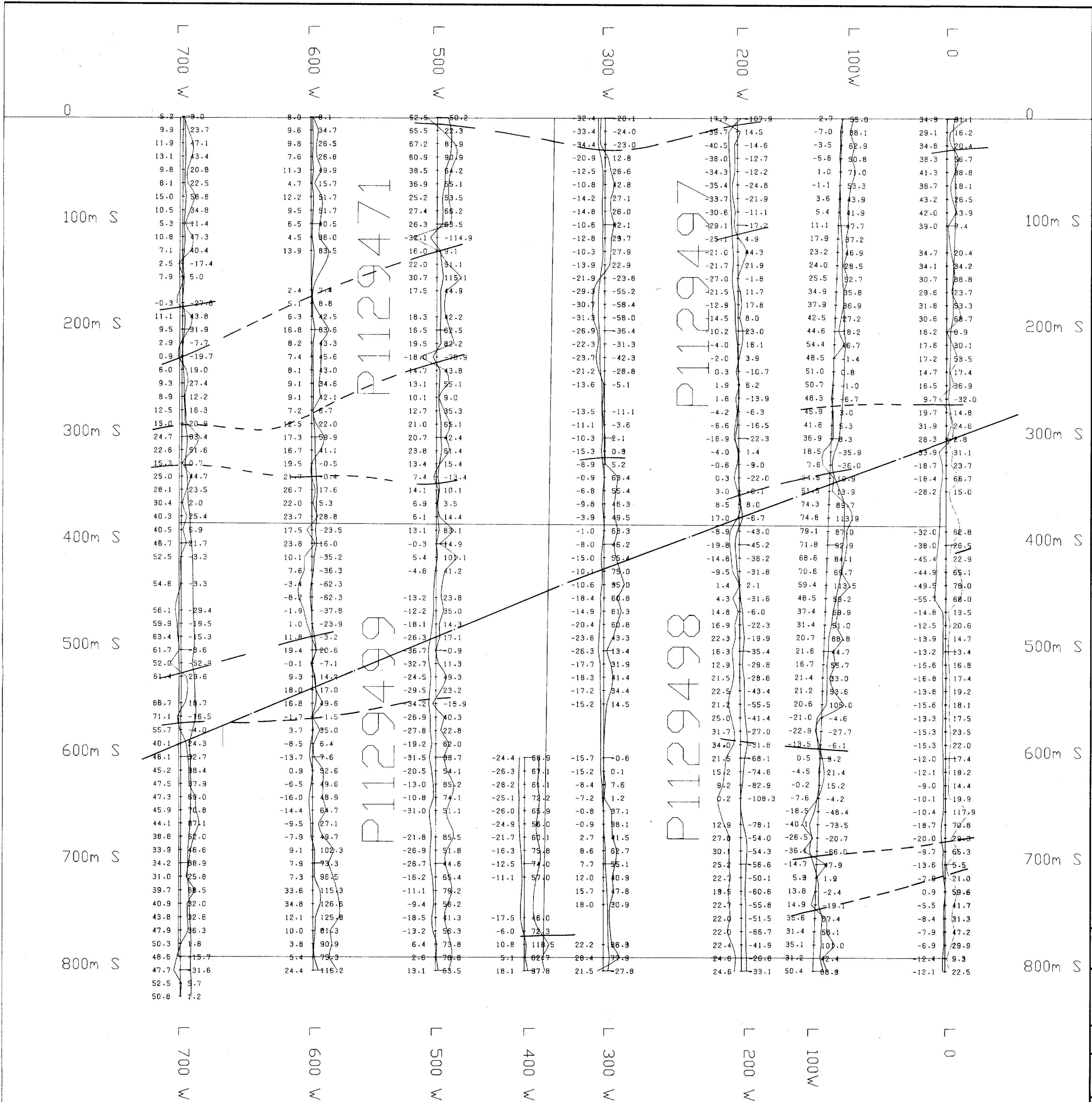
1 : 2000 (1cm = 20meters)

SURVEY BY: Exsics Exploration Ltd. DATE: Dec. 1990
REVISION BY: DATE:

PROJECT NO.:
FILE NO.:

JOHN GRANT
Geological Consultant





LEGEND

- VLF-EM ANOMALY AXIS, ANNAPOLIS, MARYLAND
- CLAIM LINES
- TOWNSHIP BOUNDARIES
- PIPE LINE

Quadrature In-phase

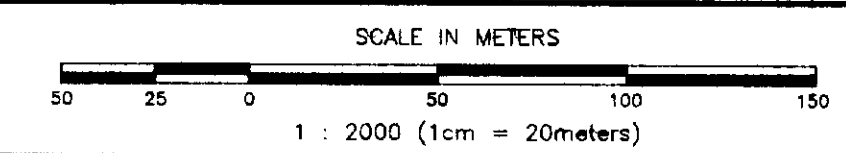
ANNAPOLIS, MARYLAND (21.4KHZ)

2.13955

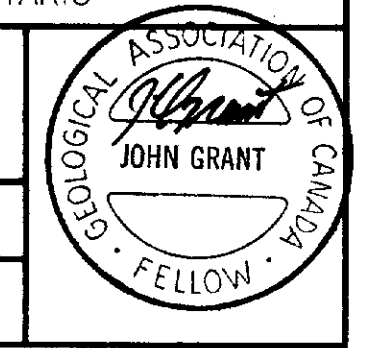
NAHANNI MINES LIMITED

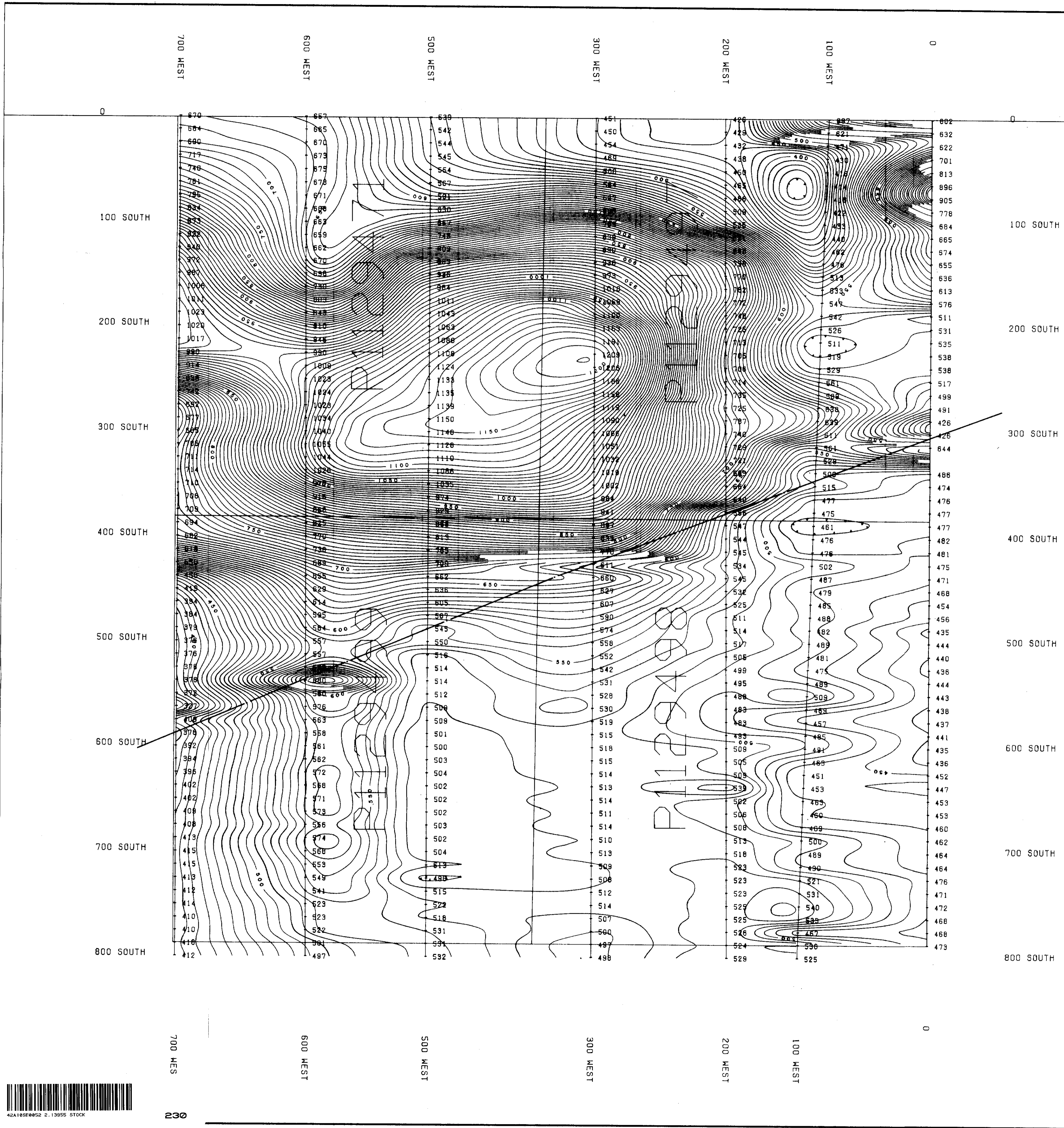
**NORTH PIPESTONE
VLF-EM SURVEY
ANNAPOLIS, MARYLAND**

STOCK TOWNSHIP
PORCUPINE MINING DIVISION, ONTARIO

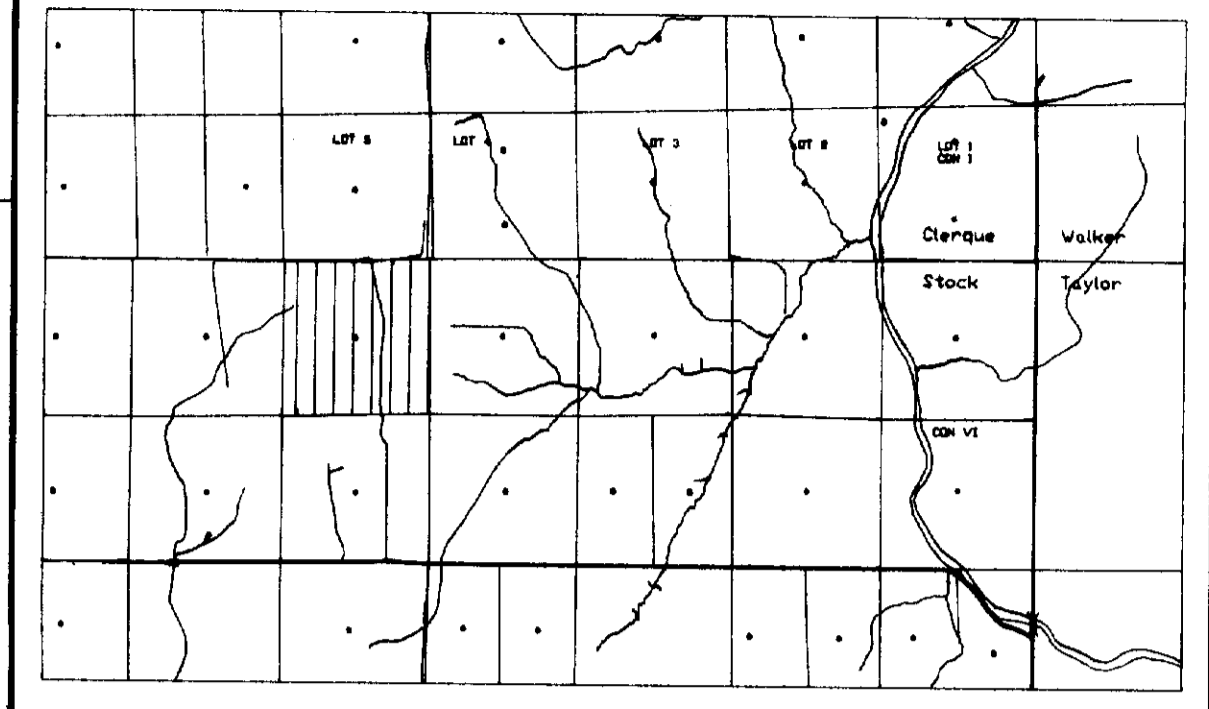


SURVEY BY: Exsics Exploration Ltd. DATE: Dec. 1990
 REVISION BY: DATE:
 PROJECT NO.:
 FILE NO.: **B.J. McKay**
 Geological Consultant



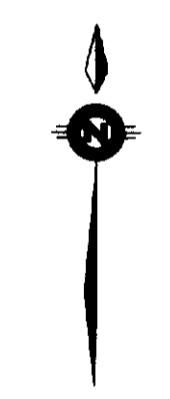


LOCATION MAP



LEGEND

- CLAIM LINES
 - TOWNSHIP BOUNDARIES
 - - - PIPE LINE
- MAGNETIC CONTOUR INTERVAL - 10 GAMMAS

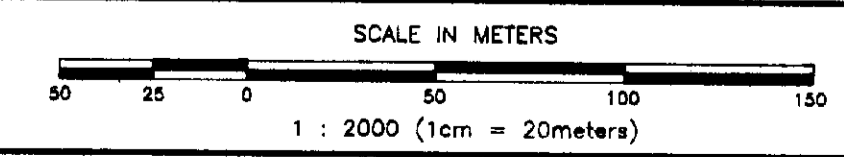


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NAHANNI MINES LIMITED

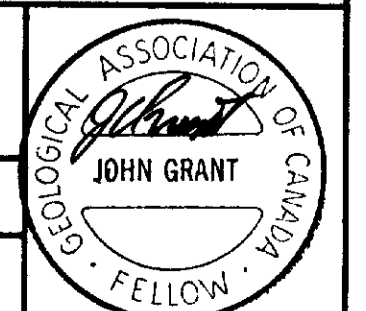
**NORTH PIPESTONE
TOTAL FIELD
MAGNETIC SURVEY**

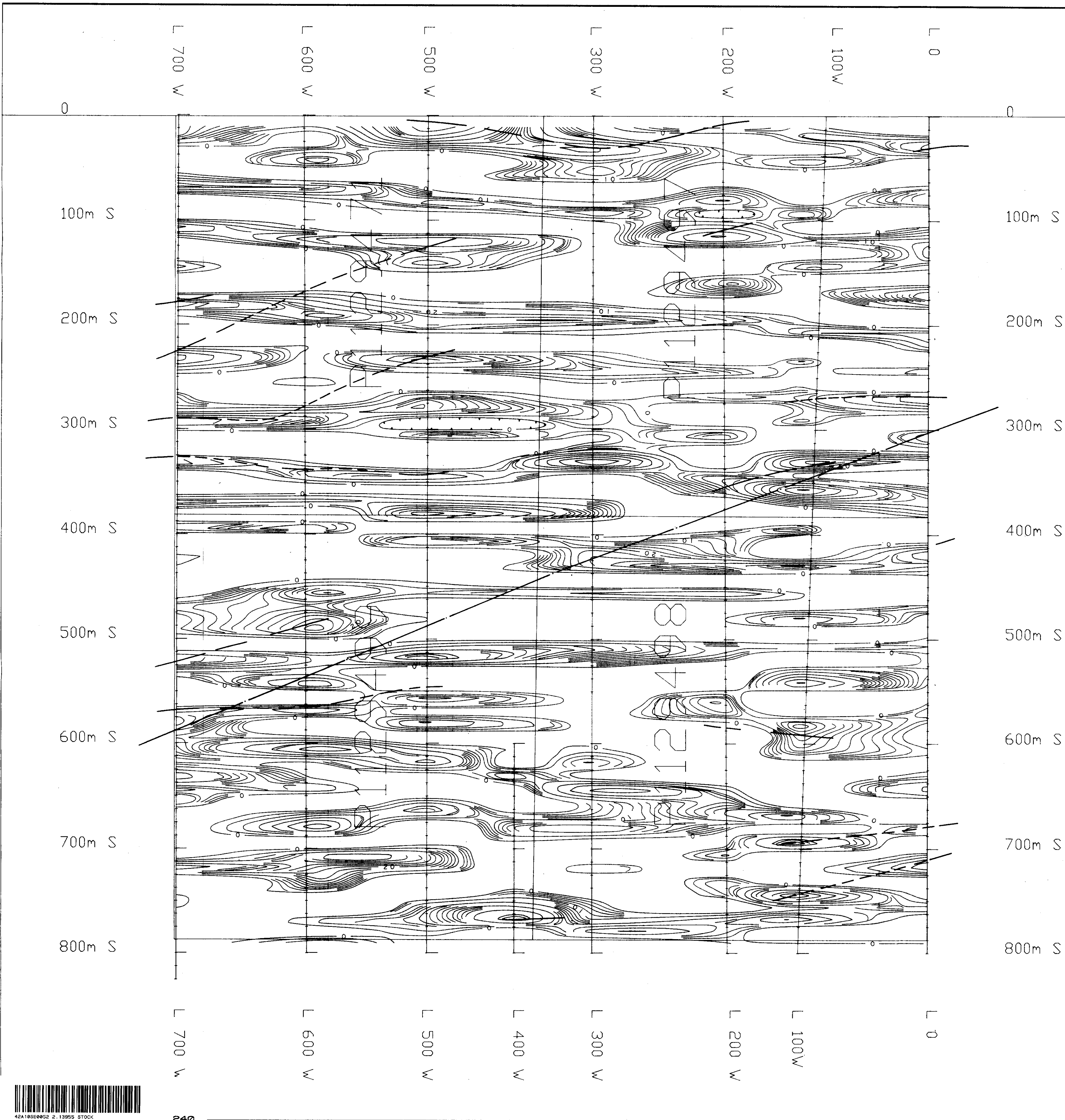
STOCK TOWNSHIP
PORCUPINE MINING DIVISION, ONTARIO



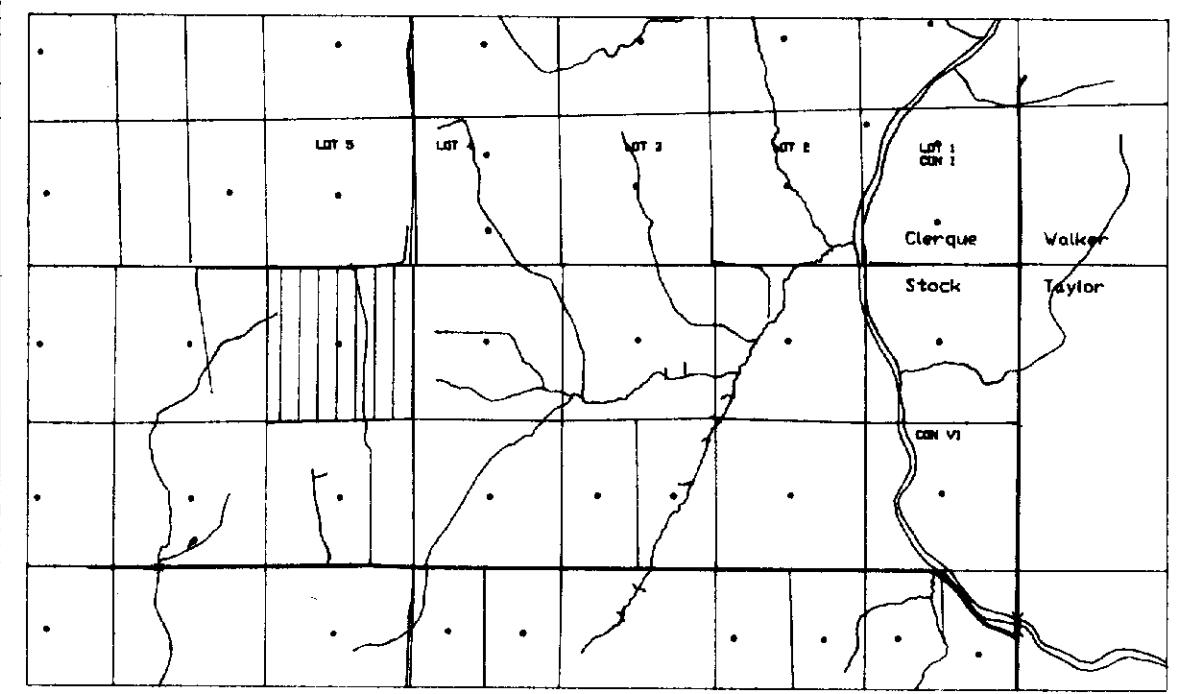
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PROJECT NO.:
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Geological Consultant


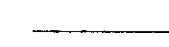
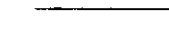
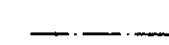




LOCATION MAP



LEGEND

-  VLF-EM ANOMALY AXIS, ANNAPOLIS, MARYLAND
-  CLAIM LINES
-  TOWNSHIP BOUNDARIES
-  PIPE LINE

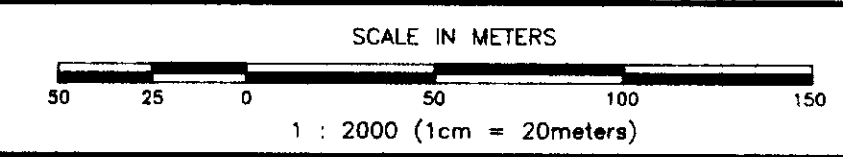


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NAHANNI MINES LIMITED

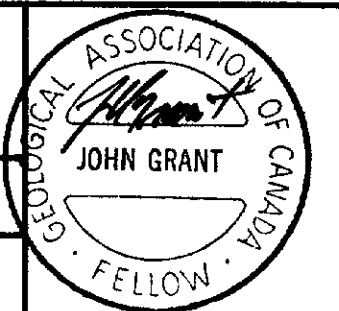
NORTH PIPESTONE
FRASER FILTER
ANNAPOLIS, MARYLAND

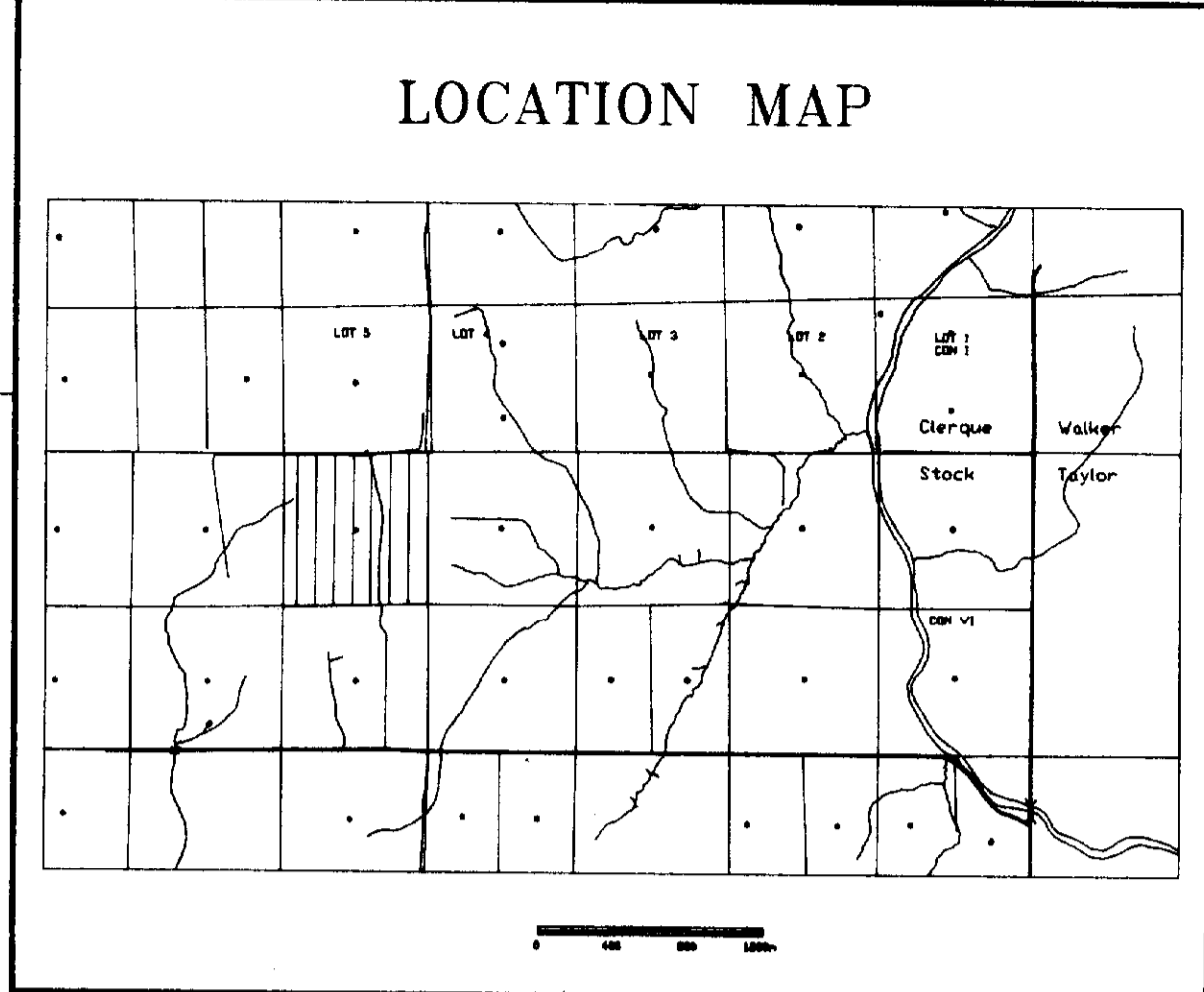
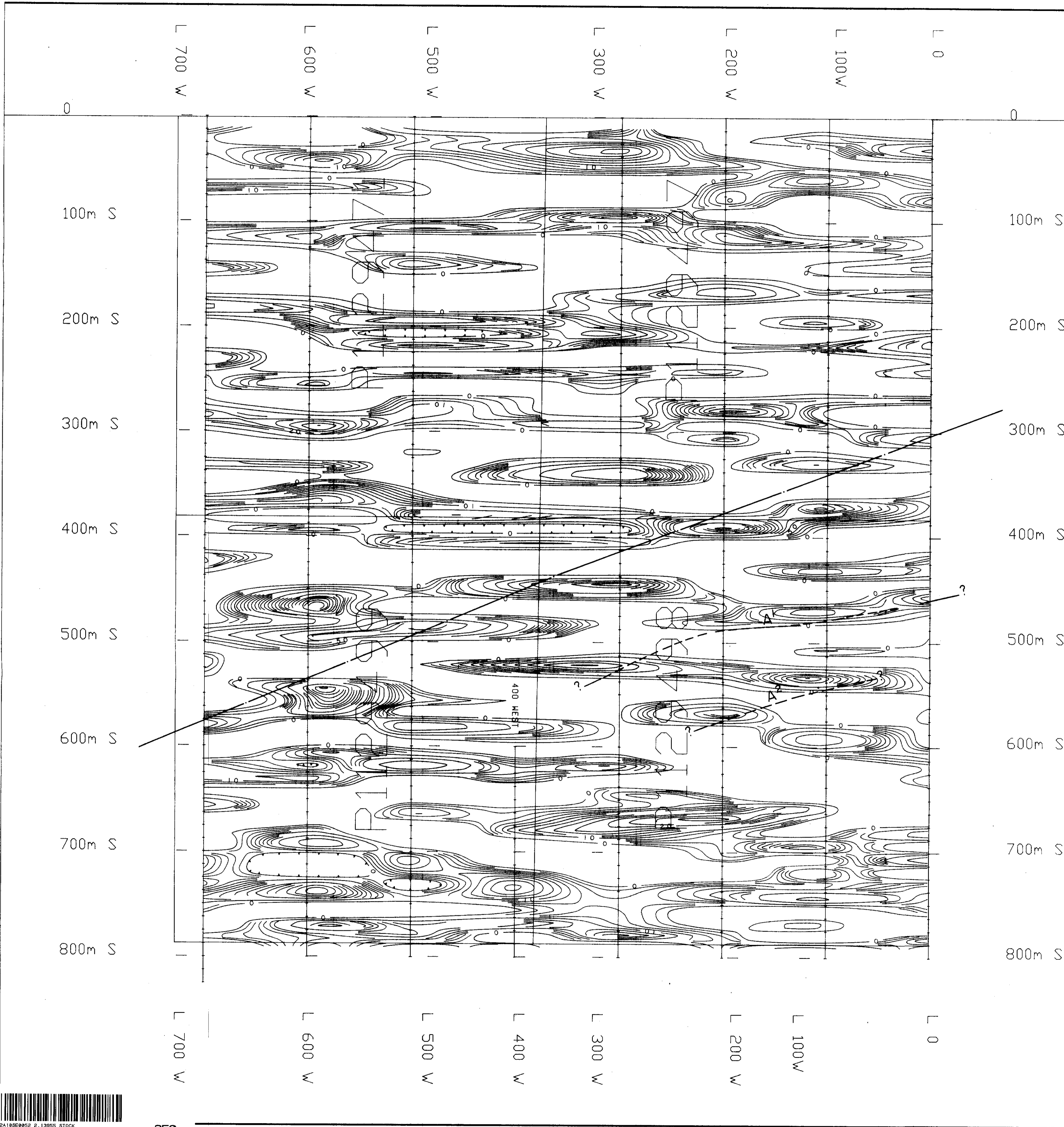
STOCK TOWNSHIP
PORCUPINE MINING DIVISION, ONTARIO



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REVISION BY: DATE:

PROJECT NO.:
FILE NO.: **B.J. McKay**
Geological Consultant





LEGEND

- VLF-EM ANOMALY AXIS, CUTLER, MAINE
- CLAIM LINES
- TOWNSHIP BOUNDARIES
- A¹ NORTH ZONE
- A² SOUTH ZONE
- PIPE LINE

2.13955

NAHANNI MINES LIMITED

NORTH PIPESTONE
FRASER FILTER
CUTLER, MAINE

STOCK TOWNSHIP
PORCUPINE MINING DIVISION, ONTARIO

SCALE IN METERS

1 : 2000 (1cm = 20meters)

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