



42A06NW8423 2.9741 BRISTOL

010

COMINCO LTD.

EXPLORATION

GEOPHYSICS

NTS: 42/A-5

BRISTOL PROPERTY

1986 GEOPHYSICS ASSESSMENT REPORT

ON CLAIMS

P835909-835916,  
P871660 and P871661

**RECEIVED**  
FEB -4 1987  
**MINING LANDS SECTION**

JANUARY, 1987

J. KLEIN

*Qual 63.2411*



42A06NW8423 2.9741 BRISTOL

010C

TABLE OF CONTENTS

	<u>Page</u>
INTRODUCTION	1
INSTRUMENTATION AND PROCEDURES	1
DATA PRESENTATION	1
DISCUSSION OF THE DATA	2
CONCLUSION AND RECOMMENDATIONS	2

APPENDIX I            Statement of Qualifications

PLATES 314-86-10	VLF-EM Results
314-86-11	Magnetic Results (Posted Values)
314-86-12	Magnetic Results (Contours)
314-86-13	General Location Map, (Scale 1:250,000)
314-86-14	Claim Map (Portion Only), (Scale 1:48,000)

COMINCO LTD.

EXPLORATION

GEOPHYSICS

NTS: 42/A-5

BRISTOL PROPERTY

1986 GEOPHYSICS ASSESSMENT REPORT  
ON CLAIMS  
P835909-835916, P871660 and P871661

INTRODUCTION

This report describes the geophysical survey executed and results collected over parts of the Bristol property, Bristol Twp.

The survey comprised magnetic (11.4 km) and VLF-EM (10.6 km) techniques along lines some 200 m apart.

The property is accessible by gravel road off Highway 101, some 15 km SW of Timmins, Ont. (see Plate 13 and 14).

The survey was executed as part of a larger project during the period October 28th to December 12th, 1986. The field work was executed by JVX Ltd. of Thornhill, Ont.

The purpose of the survey was to acquire geological information from magnetic trends (mainly the location of diabase dykes) and variations in bedrock conductivity, if present.

INSTRUMENTATION AND PROCEDURES

A Scintrex IGS-2 with VLF-EM-4 and MP-4 sensors were used for the very low frequency electromagnetic and magnetic survey respectively. The VLF-EM data was collected using three transmitter stations. This was forced on by the very intermittent transmitting behaviour of these stations.

The data was collected employing stations: NSS (21.4 kHz at Annapolis, Md.), NAA (24.0 kHz Cutler, Mn.) and NLK (24.8 kHz, Seattle, Wa.). The readings were taken facing towards the transmitter station; line station interval was 25 metre.

The magnetic data was collected along lines at 200 metre and tie lines at 400 metre intervals. A compatible base station: Scintrex MP-3 was employed, sampling at 10 sec. intervals. Magnetic drift was generally in the 2-3 nT/ sample range.

The data was automatically stored in the IGS-2. The magnetic data was corrected for diurnal variations each night using the input from the base station magnetometer.

The VLF-EM and magnetic results were computer plotted.

The survey lines were oriented N35°W.

DATA PRESENTATION

The VLF-EM results, in profile form, are shown on Plate 314-86-10. Horizontal scale is 1:5,000 and vertical scales 1 cm = 10% IP and OP. Note the difference in IP crossovers for the three stations employed: from negative to positive when moving south for NAA and NSS and the reverse for NLK.

The magnetic results are shown on Plates 314-86-11 (posted values) and 314-86-12 (contours) also on a scale of 1:5,000. The contours are given for 59,000 to 59,300 nT in 100 nT intervals only. Both data sets were used for this contouring.

Plate 314-86-13 shows a general location and 314-86-14, a portion of the claim map.

### DISCUSSION OF THE DATA

The VLF-EM results show a few, somewhat ill-defined crossovers (labelled G). These do not line up too well. They show on two frequencies where dual data sets are available, e.g., Line 2000E-1825S and Line 2400E-1275/1300S. No significance can be attributed to these features.

Several narrow, long magnetic highs cut across the grid in a N10°W direction. These features, no doubt, reflect steeply dipping diabase dykes. The magnetic relief between these magnetic highs is low (less than 100 nT). No differentiation in rock types can be made.

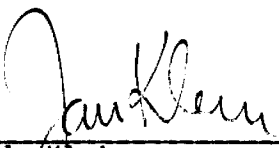
### CONCLUSION AND RECOMMENDATIONS

The VLF-EM survey resulted in the detection of a few, somewhat ill-defined crossovers, without clear line to line continuity. These crossovers appear without significance.

The magnetic results show several long, linear highs interpreted to be caused by steeply dipping, N10°W trending, narrow diabase dykes. The remainder of the magnetic results are without relief.

No recommendations can be made based on these geophysical results, obtained over an area void of outcrop.

Submitted by:

  
 \_\_\_\_\_  
 J. Klein  
 Chief Geophysicist

### Distribution:

Mining Recorder	(2)
E.D. Exploration	(1)
Administration	(1)
Geoph. - Toronto	(1)
Geoph. - Vancouver	(1)


APPENDIX I

CERTIFICATION

I, JAN KLEIN, of 4371 Coventry Drive, in the Corporation of Richmond, in the Province of British Columbia, do hereby certify:-

- 1) THAT I graduated from the Technological University of Delft Netherlands in 1965 with a M.Sc. in Geophysics;
- 2) THAT I am a member of the Association of Professional Engineers of the Province of British Columbia, the Society of Exploration Geophysicists of America, and the British Columbia Geophysical Society;
- 3) THAT I have been practising my profession for the past twenty-one years.

Signed:

  
\_\_\_\_\_  
J. Klein, P.Eng.  
Chief Geophysicist

January 1987

G O D F R E Y Township

Waterhen Lake

McDonen Lake

Outline of ALLERSTON PROPERTY

Claims of Interest



Bristol Lake

POWER LINE  
Highway 101

CARSCALLEN Township

OGDEN Township

T H O R N L O E Township



ALLERSTON PROPERTY

BRISTOL TOWNSHIP,  
NORTHEASTERN ONTARIO



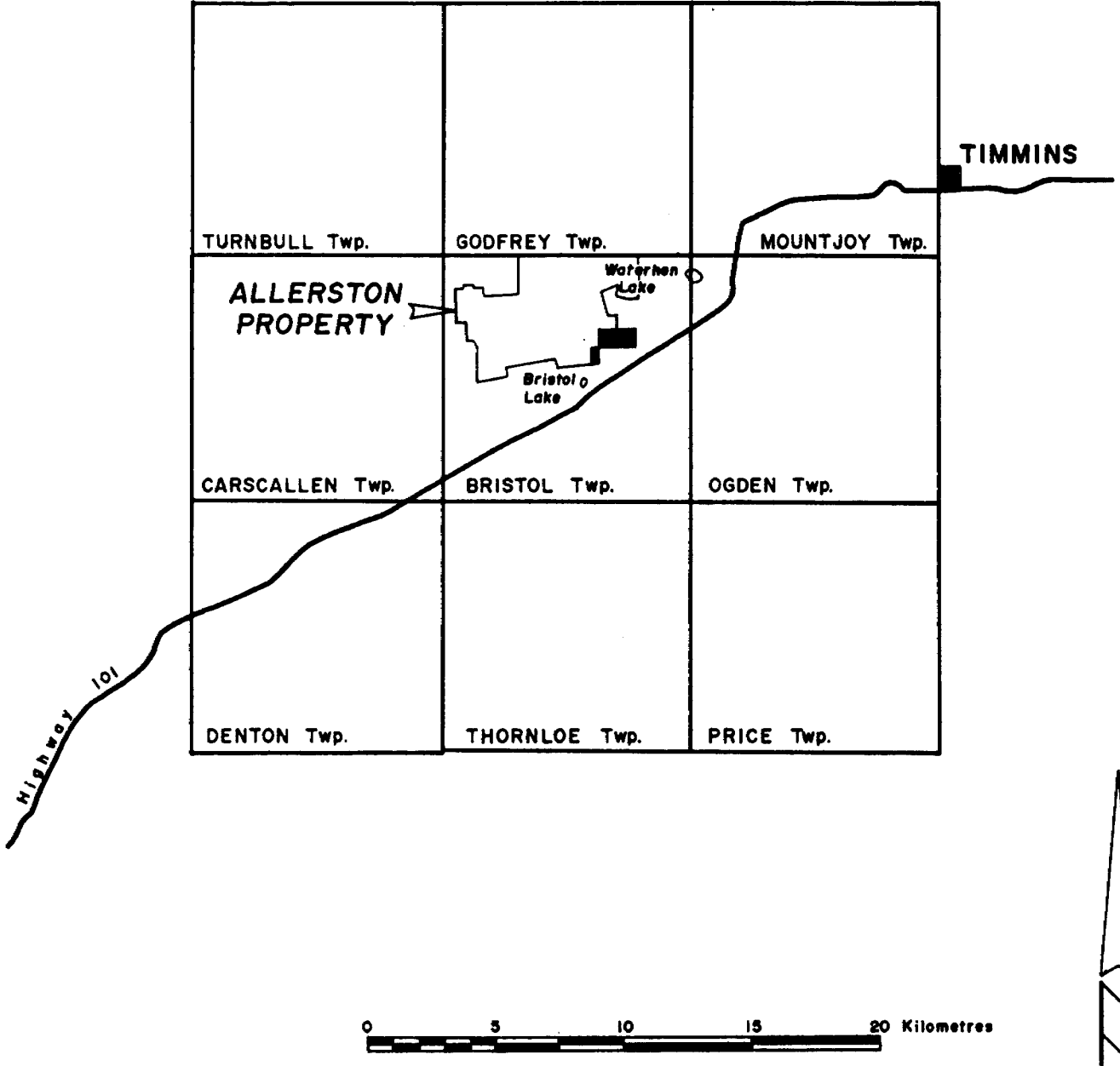
Drawn by:		Traced by:	
Revised by	Date	Revised by	Date

# CLAIM LOCATION MAP

Scale: 1: 48,000

Date: JANUARY 1987

Plate: 314-86-14



**ALLERSTON PROPERTY**

BRISTOL TOWNSHIP,  
NORTHEASTERN ONTARIO



Drawn by:		Traced by:	
Revised by	Date	Revised by	Date

**GENERAL LOCATION MAP**



Recorded Holder  
**COMINCO LTD**

Township or Area  
**BRISTOL TOWNSHIP**



42A06NW8423 2.9741 BRISTOL

900

Type of survey and number of Assessment days credit per claim	Mining Claims Assessed
<p><b>Geophysical</b></p> <p>Electromagnetic _____ <u>13</u> days</p> <p>Magnetometer _____ <u>33</u> days</p> <p>Radiometric _____ days</p> <p>Induced polarization _____ days</p> <p>Other _____ days</p>	<p>P 835909 to 16 inclusive 871660-61</p>
<p>Section 77 (19) See "Mining Claims Assessed" column</p>	
<p>Geological _____ days</p>	
<p>Geochemical _____ days</p>	
<p>Man days <input type="checkbox"/> Airborne <input type="checkbox"/></p> <p>Special provision <input checked="" type="checkbox"/> Ground <input type="checkbox"/></p> <p><input type="checkbox"/> Credits have been reduced because of partial coverage of claims.</p> <p><input type="checkbox"/> Credits have been reduced because of corrections to work dates and figures of applicant.</p>	

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

[Empty box for special credits]

**No credits have been allowed for the following mining claims**

not sufficiently covered by the survey       insufficient technical data filed

[Empty box for no credits]

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.



# 377/86  
Mining Act 29741

Instructions: - Please type or print.  
- If number of mining claims traversed exceeds space on this form, attach a list.  
Note: - Only days credits calculated in the "Expenditures" section may be entered in the "Expend. Days Cr." columns.  
- Do not use shaded areas below.

Type of Survey: **Mag and VLF** Township or Area: **Bristol**  
 Claim Holder(s): **Cominco Ltd.** Prospector's Licence No.: **A10043**  
 Address: **2200-120 Adelaide Street West, Toronto, Ontario M5H 1T1**  
 Survey Company: **J.V.X. Limited** Date of Survey (from & to): **28 10 86** to **09 12 86** Total Miles of line Cut: **7.3**  
 Name and Address of Author (of Geo-Technical report): **B. Lum, c/o Cominco Ltd. 2200-120 Adelaide St.W., Toronto, Ontario**

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

Mining Claims Traversed (List in numerical sequence)

Mining Claim		Expend. Days Cr.	Mining Claim		Expend. Days Cr.
Prefix	Number		Prefix	Number	
P	835909				
	835910				
	835911				
	835912				
	835913				
	835914				
	835915				
	835916				
	871660				
	871661				

Expenditures (includes power stripping)

Type of Work Performed: **None**  
 Performed in Claim(s): **None**

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.

Date: **Dec. 9/86** Recorded Holder or Agent (Signature): *[Signature]*

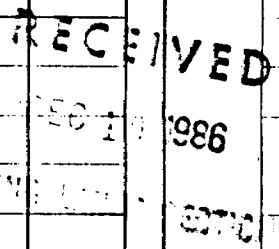
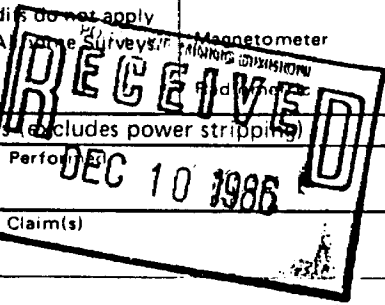
For Office Use Only

Total Days Cr. Recorded: **600** Date Recorded: **Dec. 10/86** Mining Registrar (Signature): *[Signature]*  
 Date Approved as Recorded: **DEC. 10 1986** Branch Director (Signature): *[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: **D.W. Moore c/o Cominco Ltd. 2200-120 Adelaide Street West, Toronto, Ontario M5H 1T1**  
 Date Certified: **DEC. 9/86** Certified by (Signature): *[Signature]*



March 20, 1987

Your File: 377/86  
Our File: 2.9741

Mining Recorder  
Ministry of Northern Development and Mines  
60 Wilson Avenue  
Timmins, Ontario  
P4N 2S7

Dear Sir:

RE: Notice of Intent dated February 12, 1987  
Geophysical (Electromagnetic & Magnetometer)  
Surveys on Mining Claims P 835909, et al,  
in Bristol Township

---

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,

J.C. Smith, A/Manager  
Mining Lands Section  
Mineral Development and Lands Branch  
Mines and Minerals Division

Whitney Block, Room 6610  
Queen's Park  
Toronto, Ontario  
M7A 1W3

Telephone: (416) 965-4888

DK/mc

cc: Cominco Ltd  
Suite 2200  
120 Adelaide Street West  
Toronto, Ontario  
M5H 1T1  
Attention: D.W. Moore

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

Resident Geologist  
Timmins, Ontario

Encl.



MAP SYMBOLOLOGY

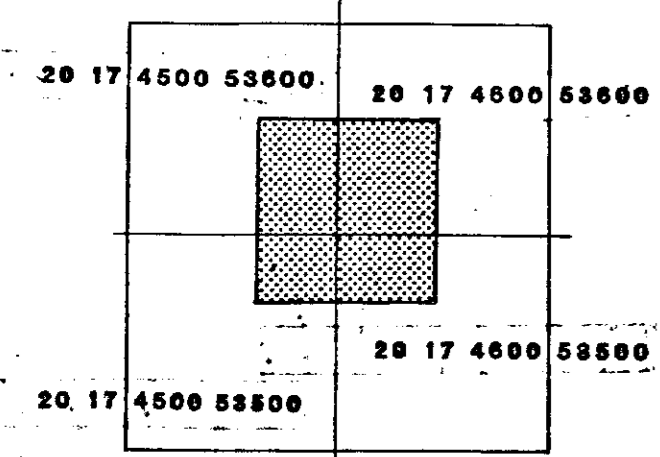
Aerial Cableway	Pipeline (above ground)
Boundary	Railroad
International	Single Track
Interprovincial	Double Track
District, Township, Indian Reserve	Abandoned
Appurtenance	Variable
Lot, Concession	Road
Appurtenance	Highway, County Township
Park Boundary	Access (road of doubtful importance)
Bridge	Trail, Back Road (single entry)
Road, Railroad	Rapids
Building	Double line river with multiple rapids
Chimney	Double line river with multiple rapids
Cliff, Pit, Pile	Reservoir
Contours	River, Stream, Canal
Intersected	Approximate direction of flow
Approximate	Lock
Depression	Spot Elevation (base elevation) 300.0
Control Points	Tower
Horizontal	Transmission Line
Vertical	Prism
Culvert	Palisade
Falls	Tunnel
Double line river	Utility Poles
Fence, Hedge, Wall	Wharf, Dock, Pier
Feature Outline (Construction features, etc.)	Wooded Area
Flooded Land	
Lock	
Morsh or Swamp	
Mast	
Mine Head Frame	
Outcrop	

AREAS WITHDRAWN FROM DISPOSITION

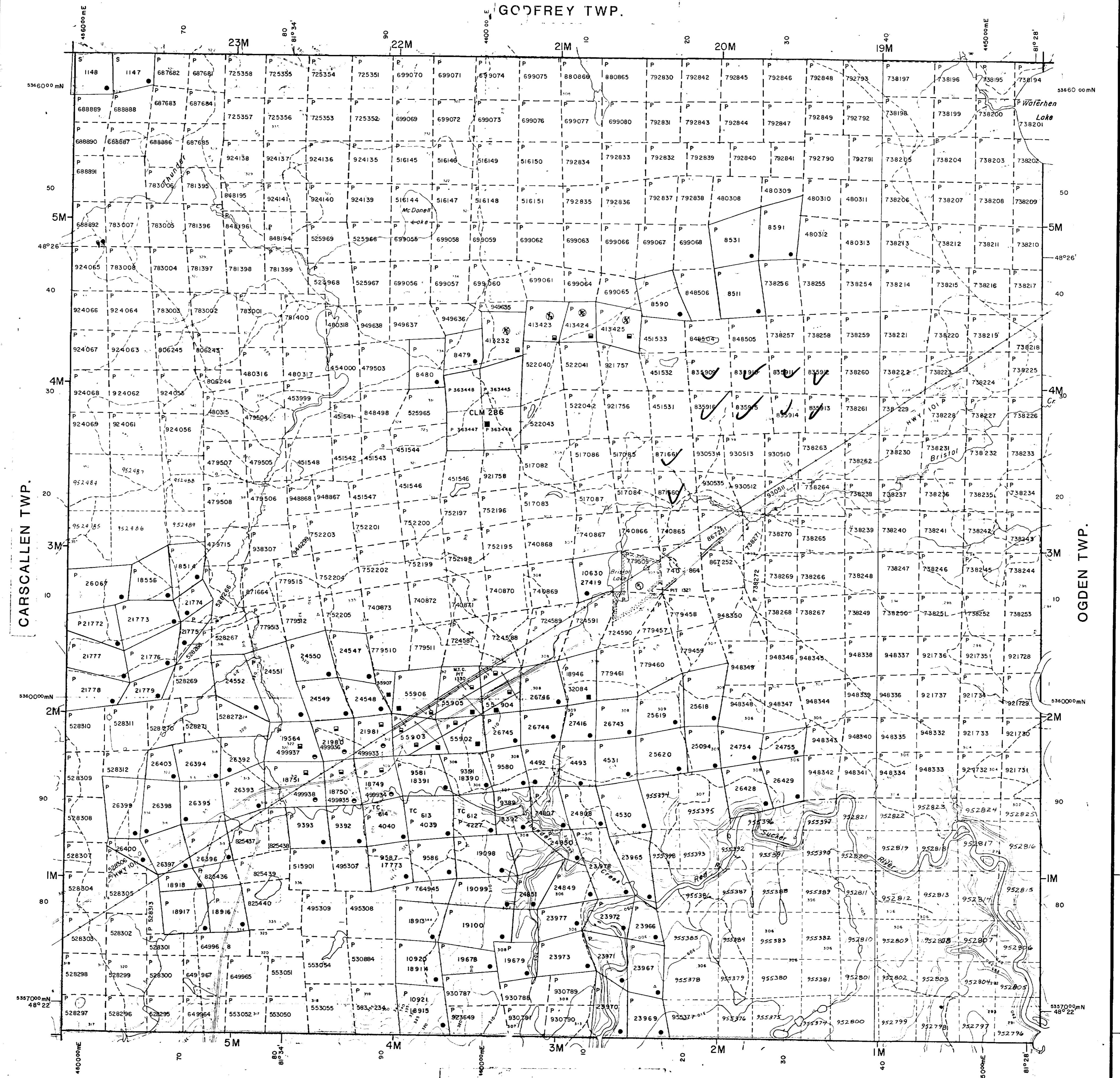
- M.R.O. - MINING RIGHTS ONLY
- S.R.O. - SURFACE RIGHTS ONLY
- M.+S. - MINING AND SURFACE RIGHTS

Description	Order No.	Date	Disposition	File
			S.R.O.	164584
sec. 36/700 16/11/83 16/11/83 16/11/83 16/11/83 REOPENED BY ORDER NRO 24/87 FEB. 1987				

KEY PLAN For O.B.M. Map



GODFREY TWP.



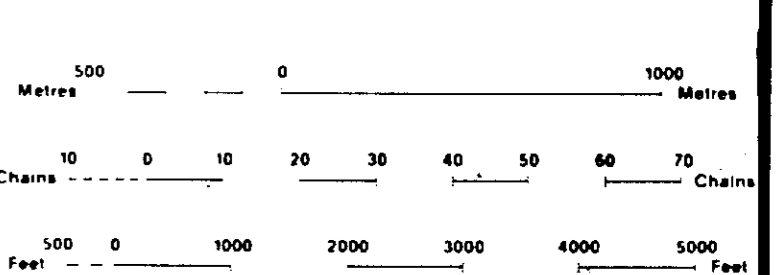
LEGEND

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	
SUBDIVISION OR COMPOSITE PLAN	
RESERVATIONS	
ORIGINAL SHORELINE	
MARSH OR MUSKEG	
MINES	
TRAVERSE MONUMENT	

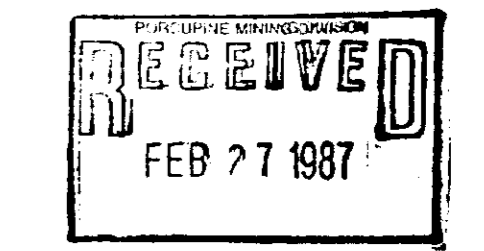
DISPOSITION OF CROWN LANDS

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	
RESERVATION	
CANCELLED	
SAND & GRAVEL	

NOTE: MINING RIGHTS IN PARCELS PATENTED PRIOR TO MAY 6, 1913 VESTED IN ORIGINAL PATENTEES BY THE PUBLIC LANDS ACT, R.S.O. 1970, CHAP. 380, SEC. 53, SUBSEC. 1.



SCALE 1:20 000  
ZONE 17



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

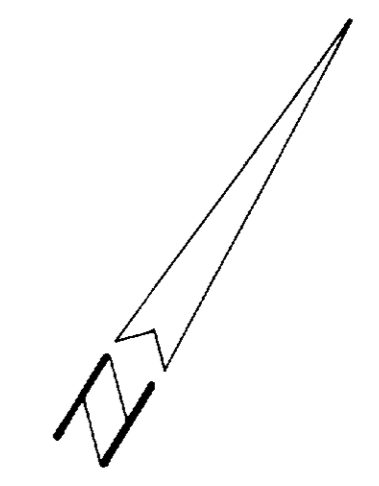
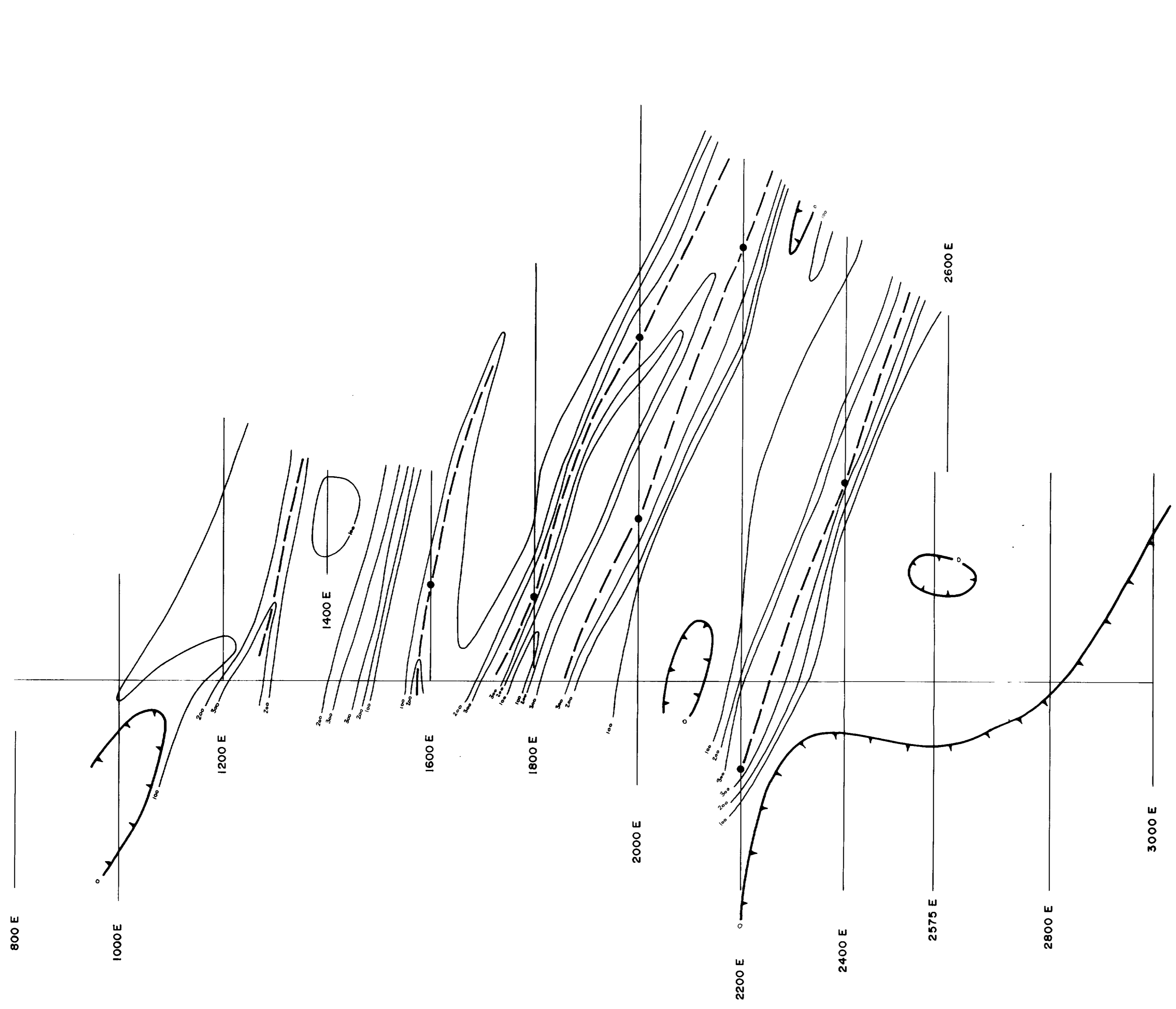
Ministry of Land Management  
Natural Resources Branch  
Ontario

ORIGINAL COMPLETION JULY 1984  
REVISED: Feb. 9/87 JB  
Number: **G-3998**

T. NELOE TWP.



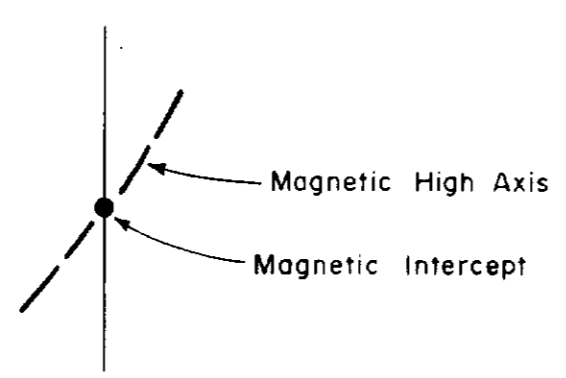
800 S —  
 1000 S —  
 1200 S —  
 1400 S —  
 1600 S —  
 1800 S —  
 2000 S —  
 2200 S —  
 2400 S —  
 2600 S —



29741



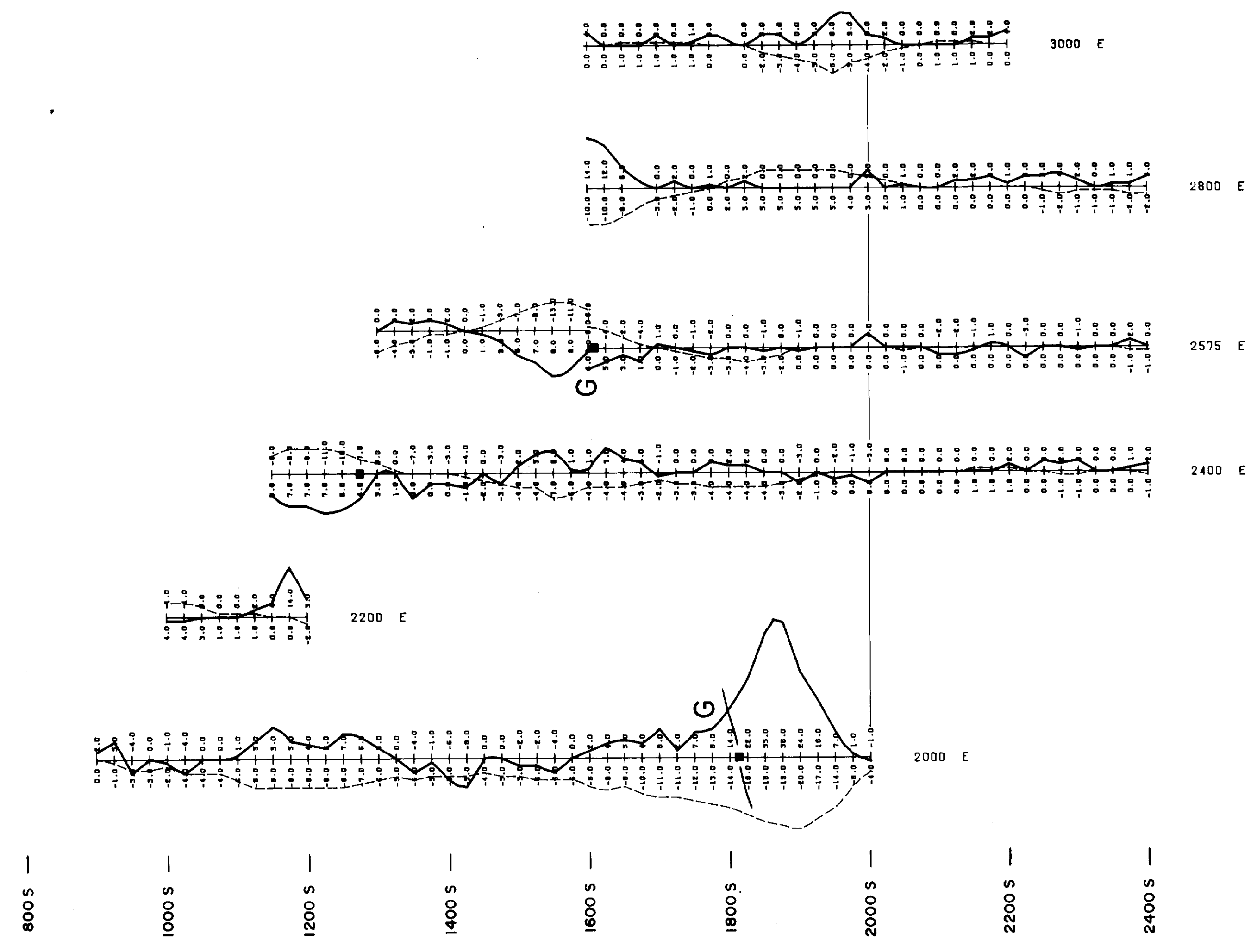
Contour Base Level : 59,000 nTesla  
 Instrument : SCINTREX IGS-2/MP-4



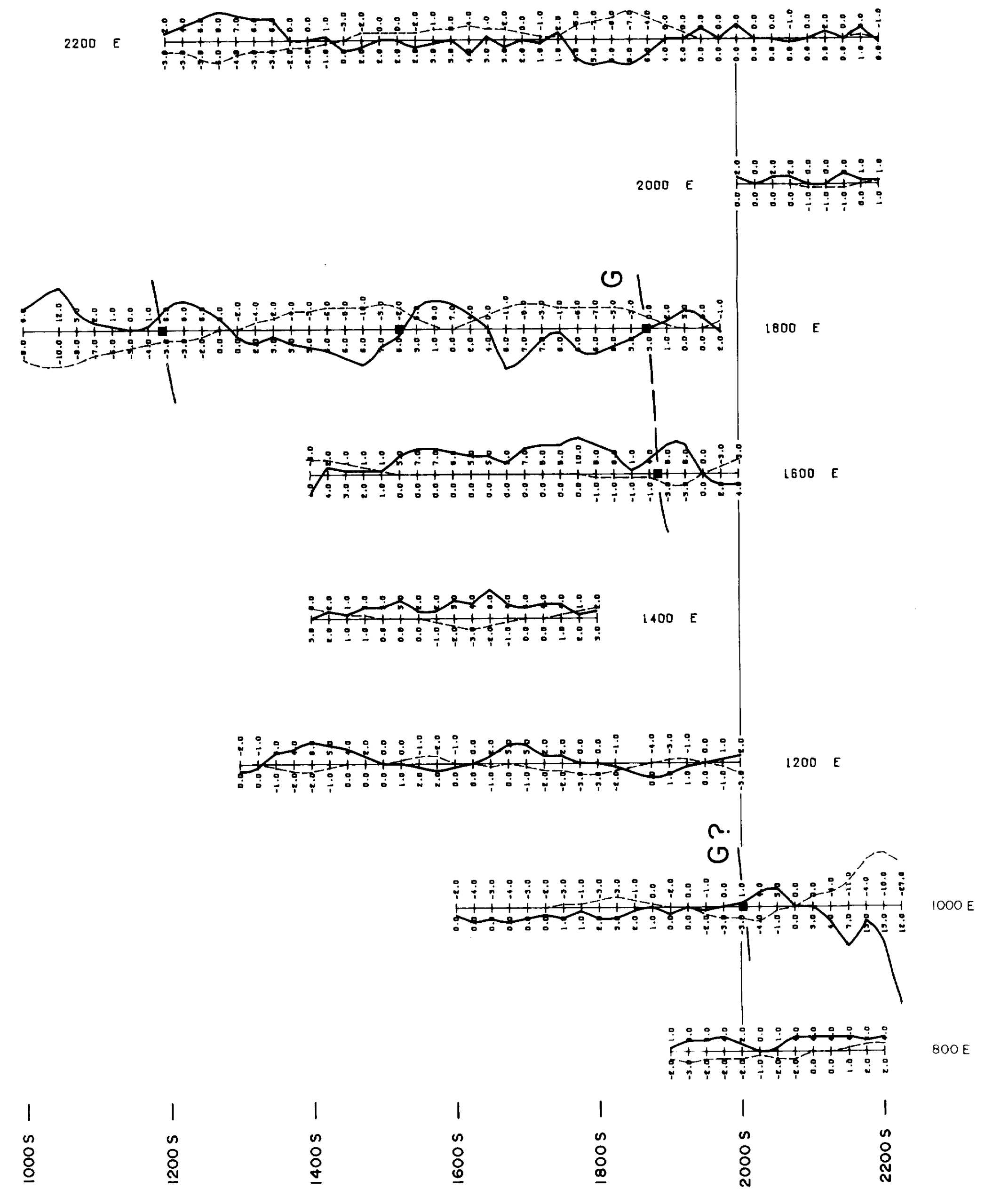
<b>ALLERSTON PROPERTY</b> BRISTOL TOWNSHIP, NORTEASTERN ONTARIO	
Drawn by: _____ Revised by: _____	Traced by: _____ Revised by: _____
<b>MAGNETIC RESULTS          (Contours)</b>	
Scale: 1 : 5000	Date: JANUARY 1987
Plate: 314-86-12	



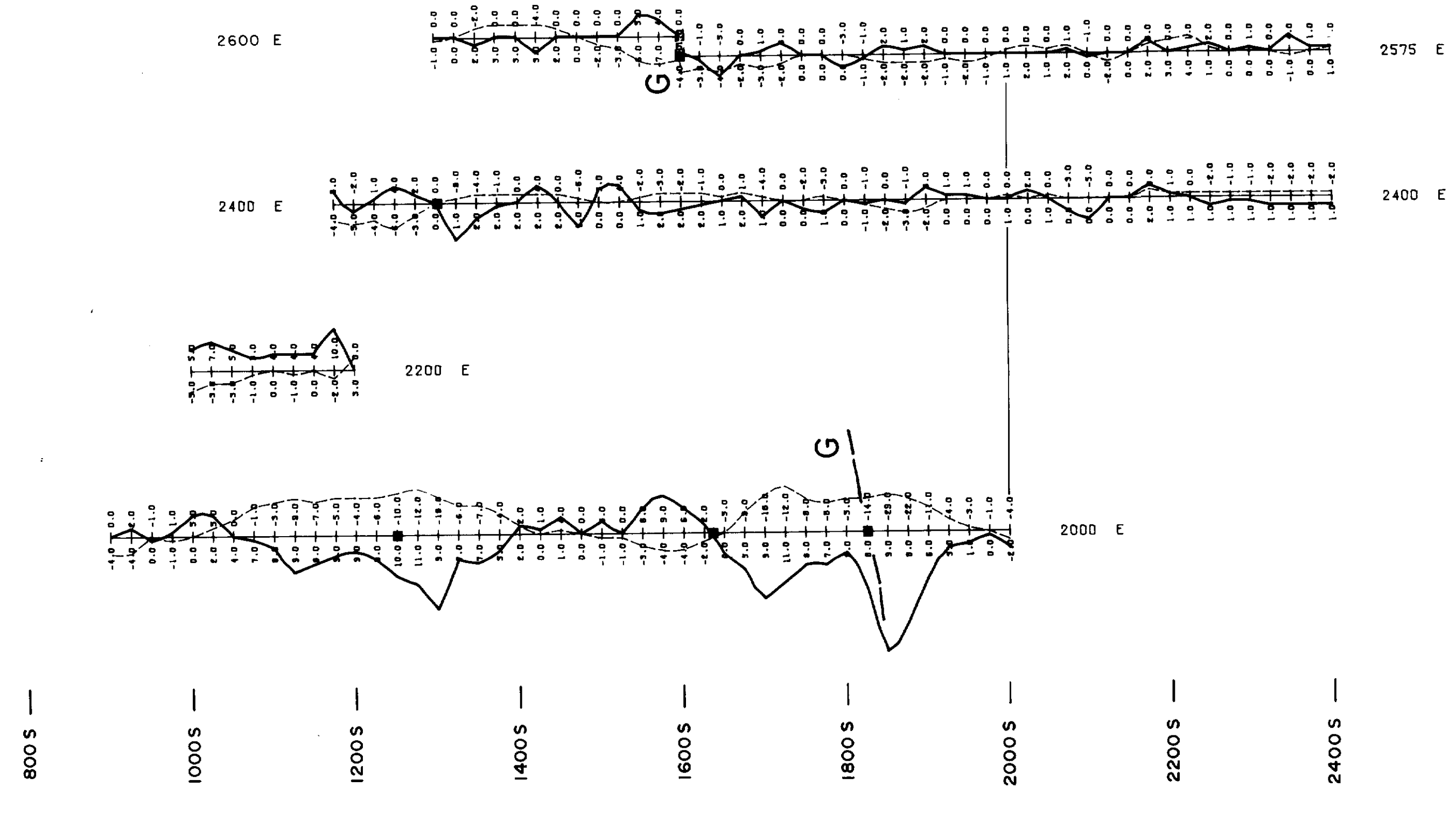
VLF Station: ANNAPOLIS, MARYLAND  
Frequency: 21.4 kHz



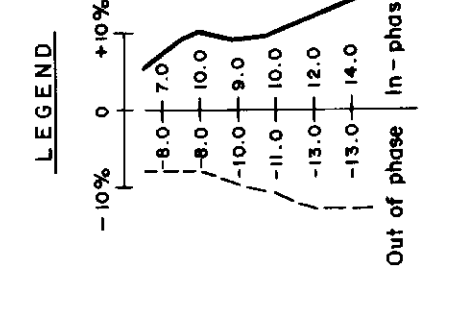
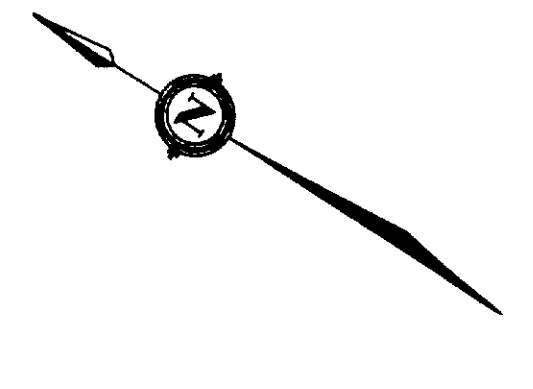
VLF Station: CUTLER, MAINE  
Frequency: 24.0 kHz



VLF Station: SEATTLE, WASHINGTON  
Frequency: 24.8 kHz



29741



ALLERSTON PROPERTY  
BRISTOL TOWNSHIP,  
NORTHEASTERN ONTARIO

VLF-EM RESULTS

Drawn by: \_\_\_\_\_  
Checked by: \_\_\_\_\_  
Approved by: \_\_\_\_\_  
Date: \_\_\_\_\_

Scale: 1 : 5000  
Date: JANUARY 1987  
Pub: 314-86-10  
FORM 270 (7/78)

