



EXPLORATION

NTS: 42-A-5

010

BRISTOL PROPERTY

1986 GEOPHYSICS ASSESSMENT REPORT ON CLAIMS

P948867, 948868, 938307, 946299, 848498, 949635-949638,
699056, 699057, 699059-699068, 848504-848506, 921756-921758.

SEPTEMBER 14, 1987

K.N. HENDRY

INTRODUCTION

This report describes the geophysical surveys executed during October 28 to December 12, 1986 by JVX Ltd. on the Bristol Property, Bristol Twp., southwest of Timmins, Ontario. The survey includes VLF-EM and Magnetic methods along lines 200 meters apart and tie lines 400 meters apart (mag only). The total amount of VLF and magnetic data applicable to the above claims is 19.75km and 44.71km respectively.

The purpose of the work was to acquire geological information from magnetic trends (mainly from the location of diabase dikes) and variations in bedrock conductivity.

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 PRESENTATIONS

The VLF-EM results, in profile form, are shown on Plates 24-29. Horizontal scale is 1:5,000 and vertical scales 1cm = 10% IP and OP. The correct crossover sense is negative to positive when moving south for NAA and NSS stations.

The magnetic results are shown on Plates 15-20 (posted values) and 21-23 (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 13 shows a general location and 14, a portion of the claim map.

DISCUSSION OF RESULTS

The VLF-EM data show a number of crossovers that line up over several lines in the main outcrop area between lines 10E to 14W. To the east and west it can be assumed that the overburden thickens and penetration was not achieved. Many two and three line conductors with indefinite crossover shape are indicated but most can probably be attributed to overburden response.

The geological mapping found a sequence of volcanics. The VLF conductors labelled "A" to "E" appear to mark the contacts between the sequence which consists of: intermediate volcanics, "A", chlorite schists, "B", intermediate volcanics, "C", felsic volcanics "D" felsic volcanics and tuffs. The mapping did not define a rock type change across "E".

The magnetic contour map shows the northerly trending diabase dikes and little else. The relatively non-magnetic volcanics cannot be distinguished with the high relief created by the dikes.

CONCLUSIONS AND RECOMMENDATIONS

The VLF-EM survey has mapped conductive zones at or near stratigraphic contacts within a zone of shallow overburden. The survey essentially has duplicated the mapping work.

The magnetic map outlines the diabase dikes also observed during the mapping program.

No recommendation can be made based on the geophysical results gathered to date.

Submitted by:

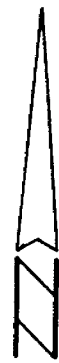
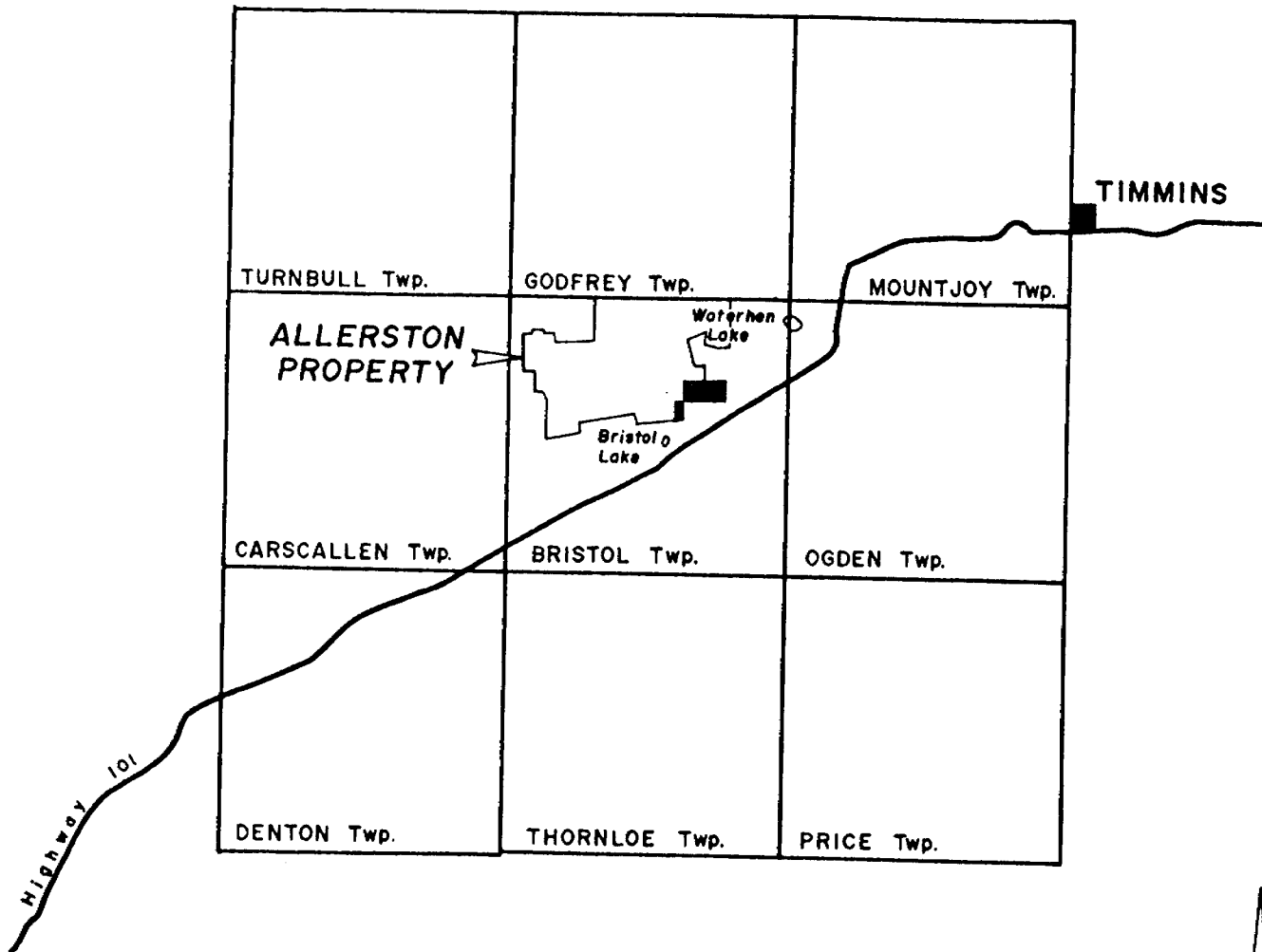
K.N. Hendry
K.N. Hendry
Sr. Geophysicist
Exploration, E.D.

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Distribution:

E.D. Files (1)
Geophy.- Vanc. . (1)

Qual.
63. 2734



ALLERSTON PROPERTY

BRISTOL TOWNSHIP,
NORTHEASTERN ONTARIO



GENERAL LOCATION MAP

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

Scale: 1: 250,000

Date: JANUARY 1987

Plate: # 3

CARSCALLEN Township

O G D E N Township

Waterhen Lake

McDonen Lake

Outline of ALLERSTON PROPERTY

CLAIMS OF INTEREST

Bristol Lake

POWER LINE
Highway 101

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: 14



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

#243/87



42A06NW8427 2.10453 BRISTOL

900

Mining

Type of Survey(s) VLF & MAG.		Township or Area BRISTOL	
Claim Holder(s) COMINCO LTD.		Prospector's Licence No. A.10043	
Address 2200-120 ADELAIDE STREET WEST, TORONTO, ONTARIO M5H 1T1			
Survey Company COMINCO LTD.	Date of Survey (from & to) 10 86 12 86 Day Mo. Yr. Day Mo. Yr.		Total Miles of line Cut 40.06
Name and Address of Author (of Geo-Technical report) K.N. HENDRY			

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	
	- Magnetometer	40
	- Radiometric	
	- Other VLF	20
For each additional survey: using the same grid: Enter 20 days (for each)	Geological	
	Geochemical	
	Geophysical	
	Geological	

Man Days	Geophysical	Days per Claim
Complete reverse side and enter total(s) here	- Electromagnetic	
	- Magnetometer	
	- Radiometric	
	- Other	
	Geological	
	Geochemical	

Airborne Credits	Days per Claim
Note: Special provisions credits do not apply to Airborne Surveys	
Electromagnetic	

Mining Claims Traversed (List in numerical sequence)

Prefix	Mining Claim Number	Expend. Days Cr.	Prefix	Mining Claim Number	Expend. Days Cr.
P	948867		P	848506	
	948868			921756	
	938307			921757	
	946299			921758	
	848498				
	949635				
	949636				
	949637				
	949638				
	699056				
	699057				
	699059				
	699060				
	699061				
	699062				
	699063				
	699064				
	699065				
	699066				
	699067				
	699068				
	848504				
	848505				

POHUPINE MINING DIVISION
RECEIVED
OCT 6 1987

RECORDED
OCT 06 1987

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.

Total number of mining claims covered by this report of work. **27**

For Office Use Only

Total Days Cr. Recorded	Date Recorded	Mining Recorder
11.20	OCT. 6/87	<i>Sony White</i>
	Date Approved as Recorded	Branch Director

Date: OCTOBER 5/87

Recorded Holder (Agent) (Signature): *R.C. Laroche*

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
R.C. LAROCHE, 860 SHERBROOKE STREET, PETERBOROUGH, ONTARIO K9J 2R4

Date Certified: OCTOBER 5, 1987

Certified by (Signature): *R.C. Laroche*



Recorded Holder
Cominco Ltd.

Township or Area
Bristol Township

Type of survey and number of Assessment days credit per claim	Mining Claims Assessed
Geophysical Electromagnetic _____ days Magnetometer <u>40</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 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.	P 699056 699057 699059 to 699068 inclusive 848498 848504 to 848506 inclusive 921756 to 921758 inclusive 938307 946299 948867 948868 949635 to 949638 inclusive

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

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) - 60.



Recorded Holder
Cominco Ltd.

Township or Area
Bristol Township

Type of survey and number of Assessment days credit per claim	Mining Claims Assessed
Geophysical Electromagnetic <u>VLF</u> <u>16</u> 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.	P 699056 699057 699059 to 699065 inclusive 848498 921756 to 921758 inclusive 938307 946299 948867 948868 949635 to 949638 inclusive

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

No credits have been allowed for the following mining claims

not sufficiently covered by the survey Insufficient technical data filed

P 699066 to 699068 inclusive
 848504 to 848506 inclusive

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.

November 25, 1987

Your File: 243/87
Our File: 2.10453

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

Dear Sir:

RE: Notice of Intent dated November 10, 1987
Geophysical (Magnetometer, Electromagnetic and VLF)
Survey on Mining Claims P 699056 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,

W.R. Cowan, Manager
Mining Lands Section
Mines and Minerals Division

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

Telephone: (416) 965-4888

JS:p1
Enclosure: Technical Assessment Work Credits

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

Resident Geologist
Timmins, Ontario

Cominco Ltd.
Suite 2200
120 Adelaide Street West
Toronto, Ontario
M5H 1T1

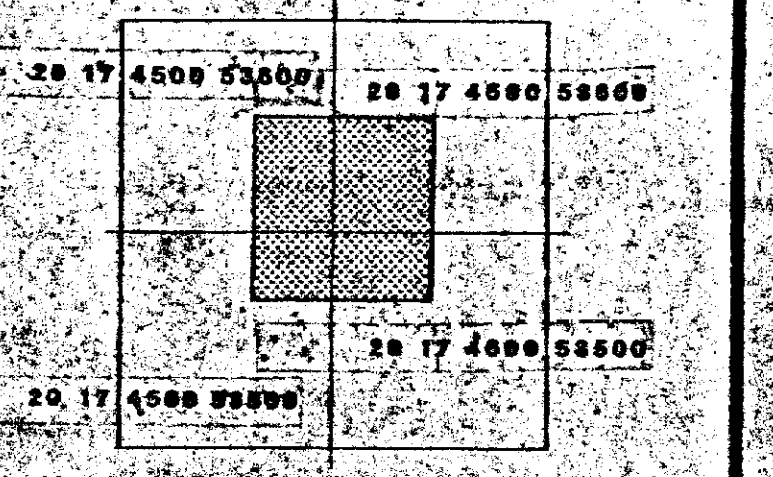
MAP SYMBOLOLOGY

Aerial Cableway	Pipeline (above ground)
Boundary	Railroad
International	Single Track
Interprovincial	Double Track
District, Township	Abandoned
Indian Reserve	Terrace
Appraisal	Road
Lot, Concession	Highway, County
Appraisal	Township
Peak Boundary	Access Road at strategic intersection or significant driveway
Bridge	Trail, Back Road (various types)
Road, Railroad	Double line road with multiple lanes
Building	Reservoir
Chimney	River, Stream, Canal
Cliff, Pit, Pile	Appraisal
Contours	Appraisal
Intermittent	Appraisal
Appraisal	Appraisal
Appraisal	Appraisal
Control Points	Appraisal
Horizontal	Appraisal
Vertical	Appraisal
Culvert	Appraisal
Falls	Appraisal
Double line road	Appraisal
Fence, Hedge, Wall	Appraisal
Feature Outline (topographic features, etc.)	Appraisal
Flooded Land	Appraisal
Lock	Appraisal
Marsh or Swamp	Appraisal
Moat	Appraisal
Mine Head Frame	Appraisal
Outcrop	Appraisal

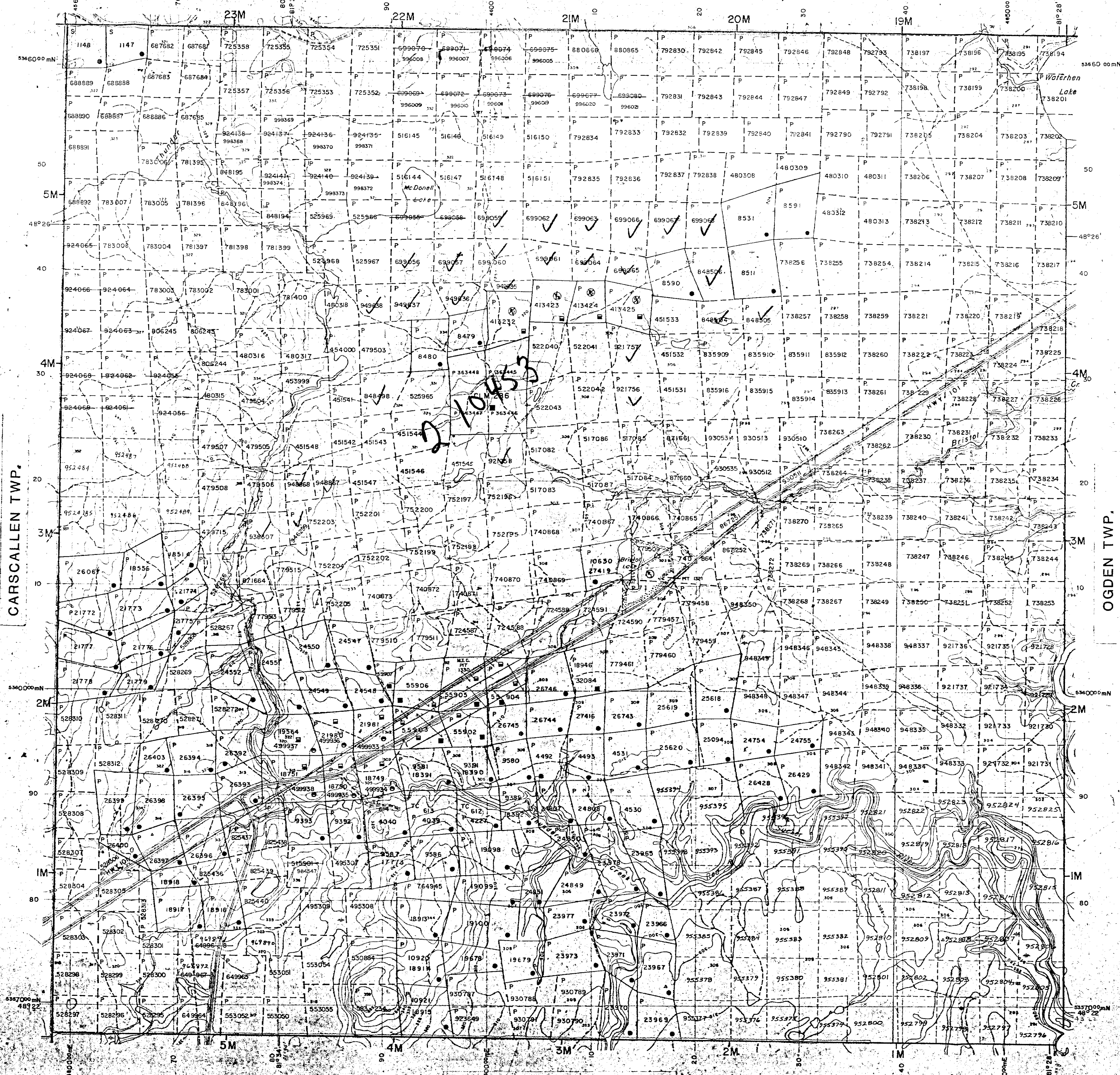
AREAS WITHDRAWN FROM DISPOSITION

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
Referenced by Order No. 24/17	
Feb. 1917	

KEY PLAN For O.B.M. Map



GODFREY TWP.



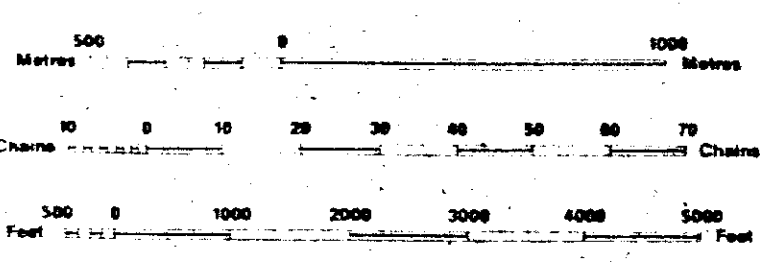
LEGEND

HIGHWAY AND ROUTE No.	
OTHER ROADS	
TRAILS	
SURVEYED LINES	
TOWNSHIPS, BASE LINES, ETC.	
LOTS, MINING CLAIMS, REGISTRY	
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	

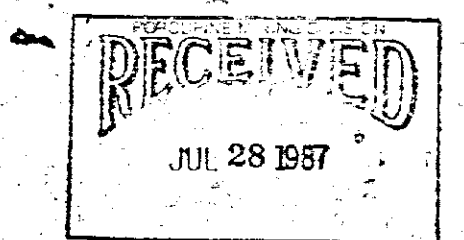
DISPOSITION OF CROWN LANDS

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	◘

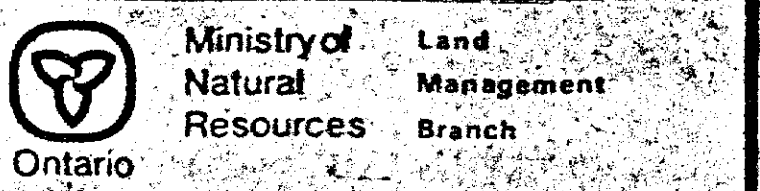
NOTE: MINING RIGHTS IN PARCELS PATENTED PRIOR TO MAY 6, 1913, VESTED IN ORIGINAL PATENTEE BY THE PUBLIC LANDS ACT, R.S.O. 1910, CHAP. 300, SEC. 63, SUBSEC. 1.



SCALE 1:20 000
ZONE 17



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



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

THORNELOE TWP.



210

LEGEND

INSTRUMENT SINTREX IQS-2/HP-4

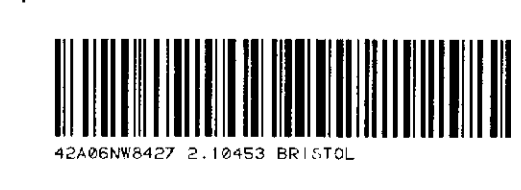
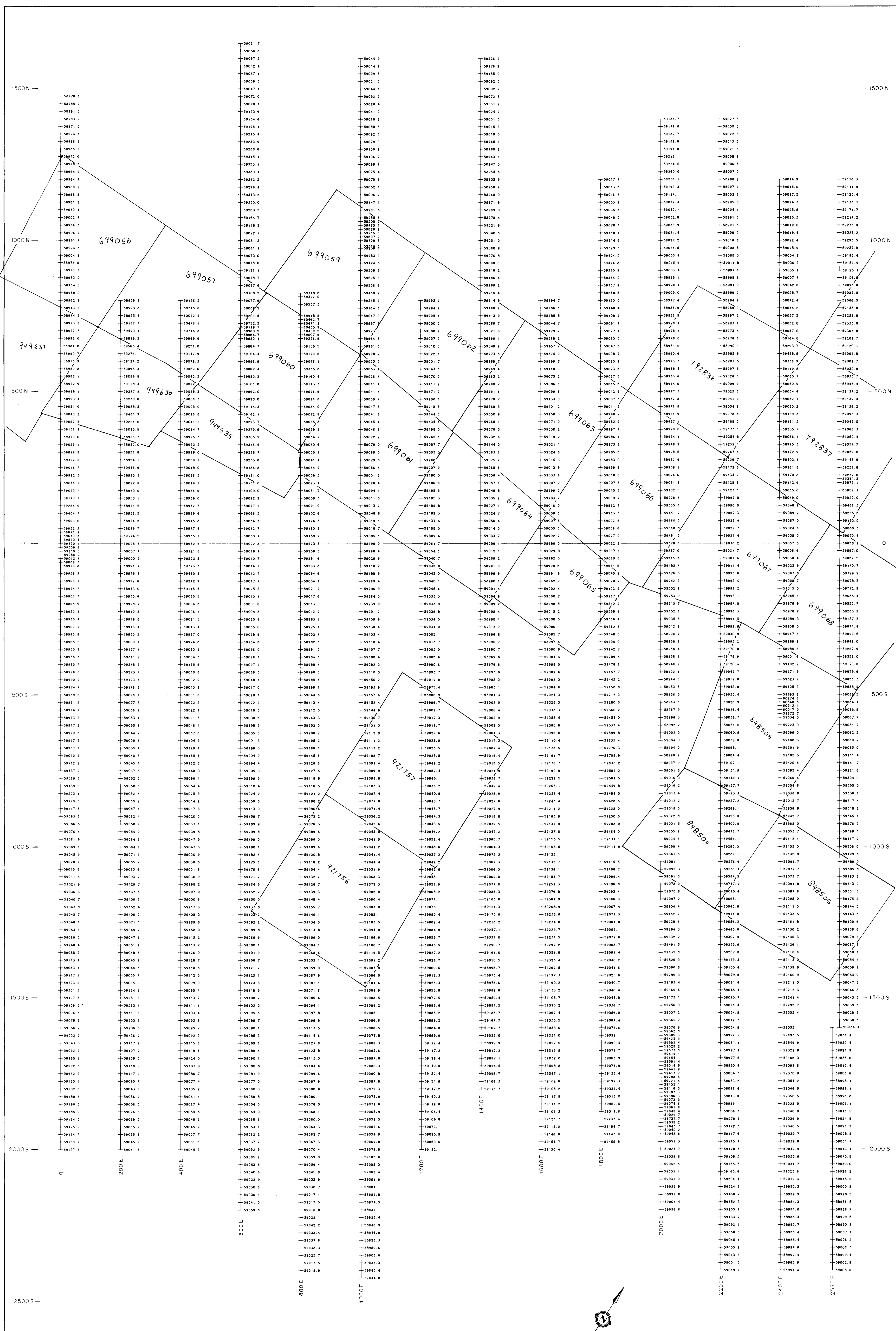
(values in nTeela)



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Checked by:	Reviewed by:
Date:	Date:

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TOTAL FIELD MAGNETIC SURVEY
WEST SHEET

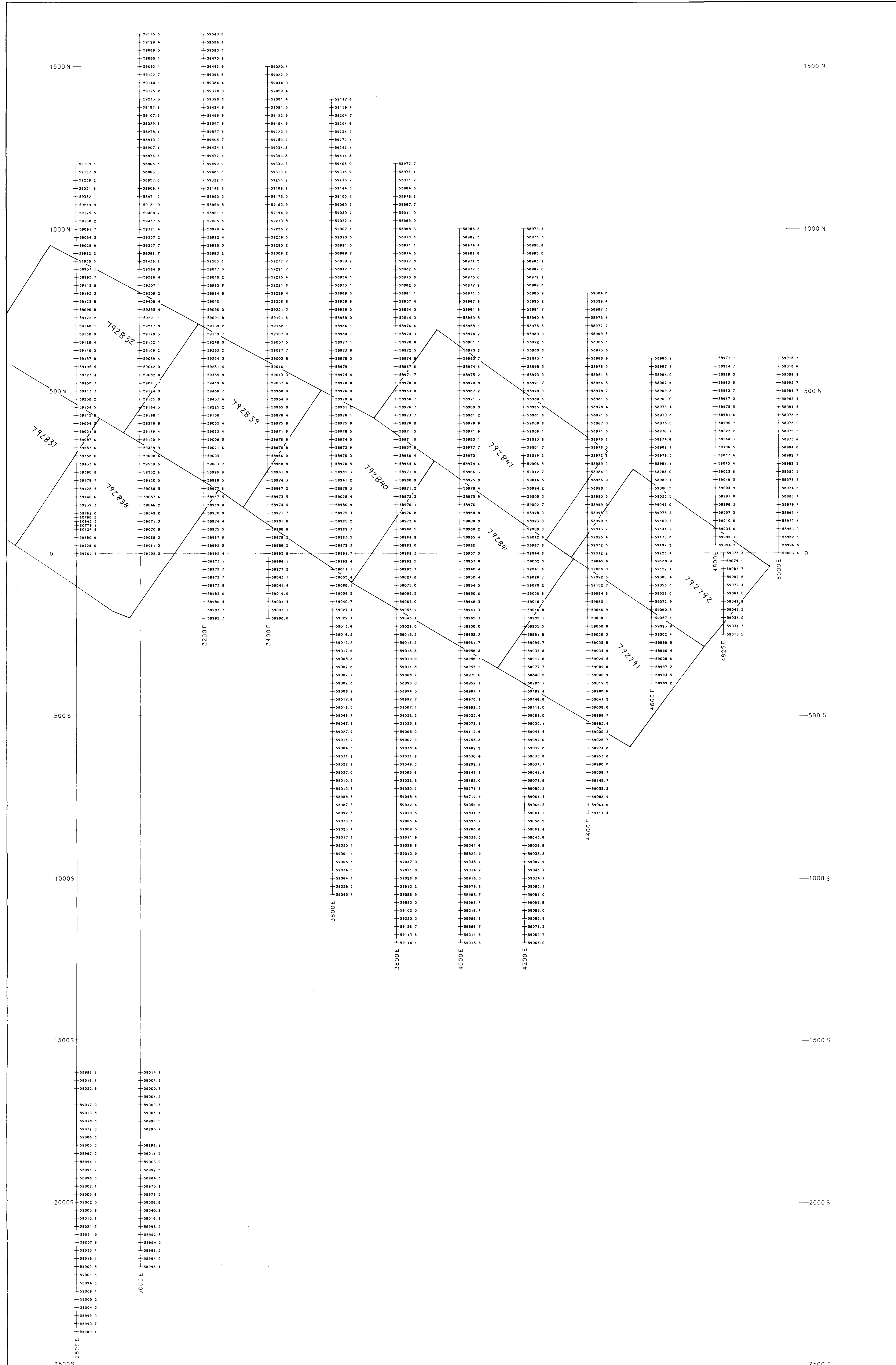
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LEGEND

INSTRUMENT GINTREX IGC-2/MP-4
(values in nTesla)

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Sheet: 16		



230

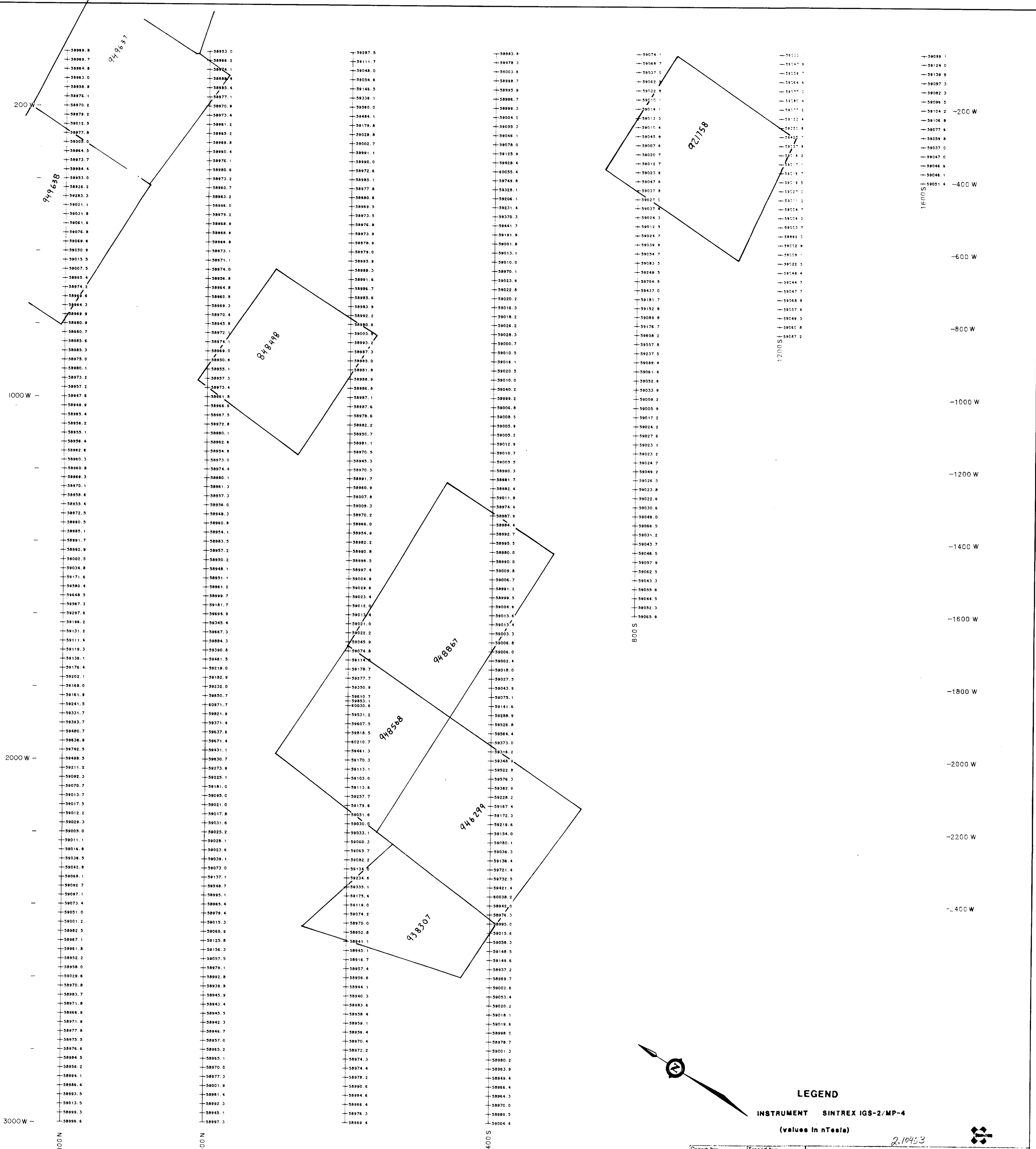
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(value in nTees)

BRISTOL PROPERTY
TOTAL FIELD MAGNETIC SURVEY
EAST SHEET

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 (values in nTesla)

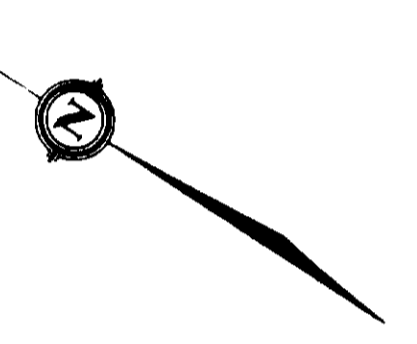
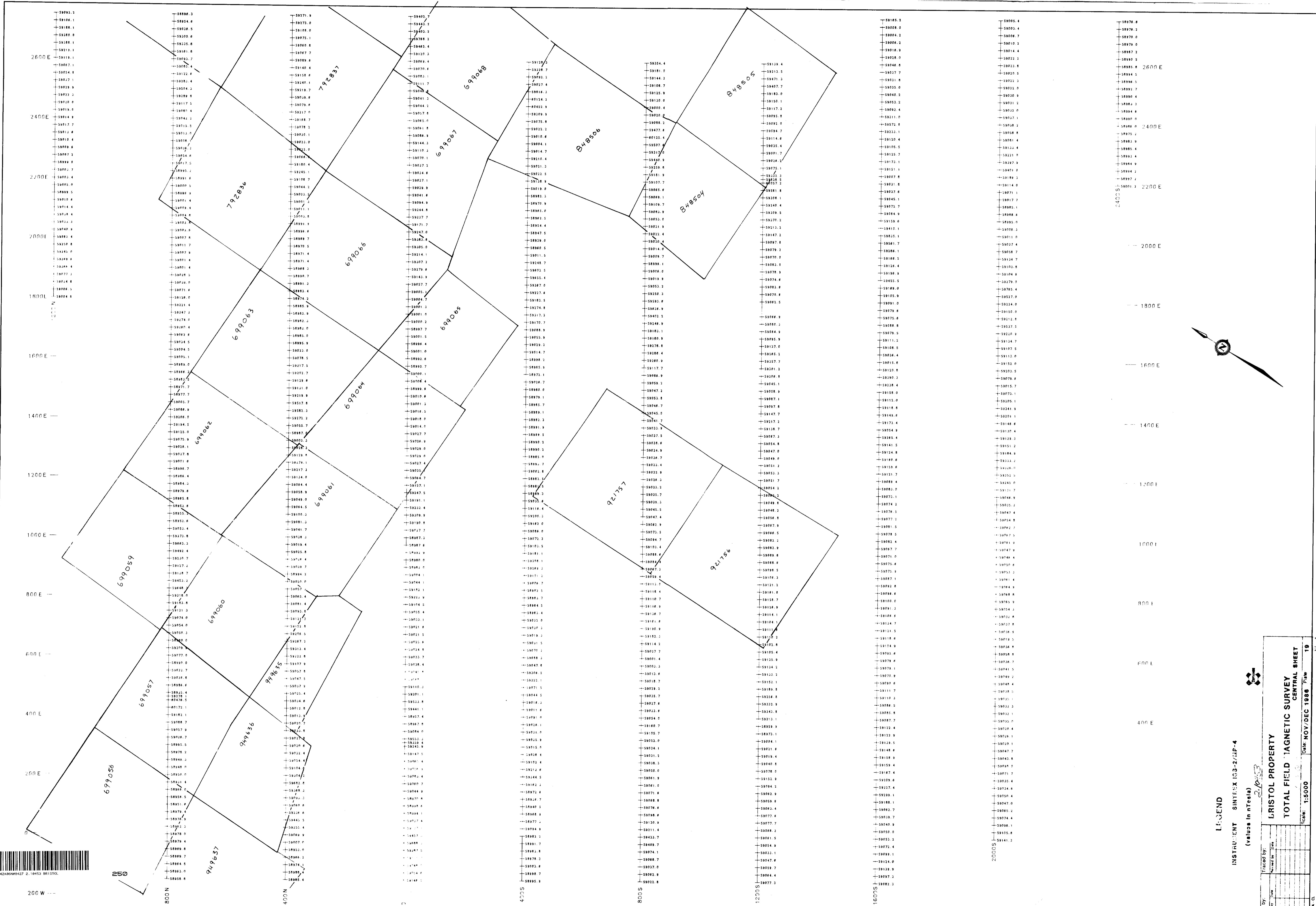
2,10453

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42A66N8427 2:10453 BR1810L

240



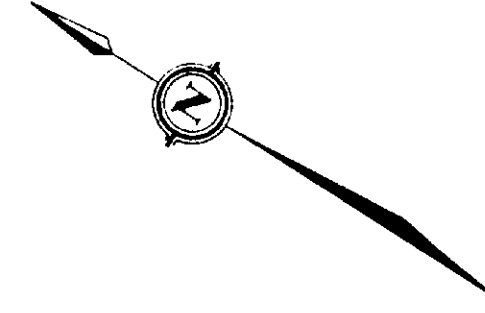
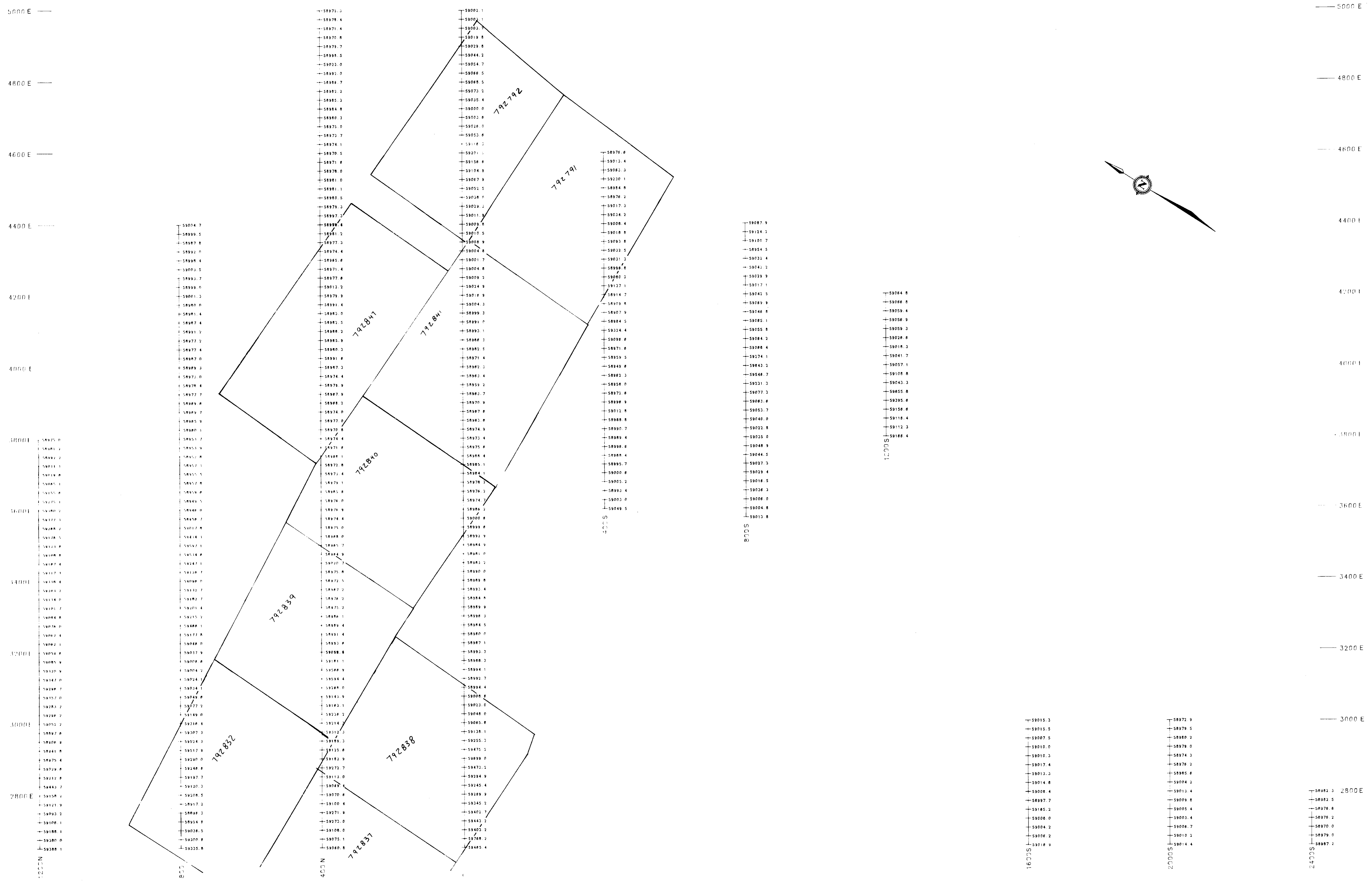
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INSTRUMENT SINTREX IS3-2/1P-4
(value in nT/m)

BRISTOL PROPERTY
TOTAL FIELD MAGNETIC SURVEY
CENTRAL SHEET
Scale: 1:5000
Date: NOV/DEC 1986
19



4242000427 2-10453 BR1510L



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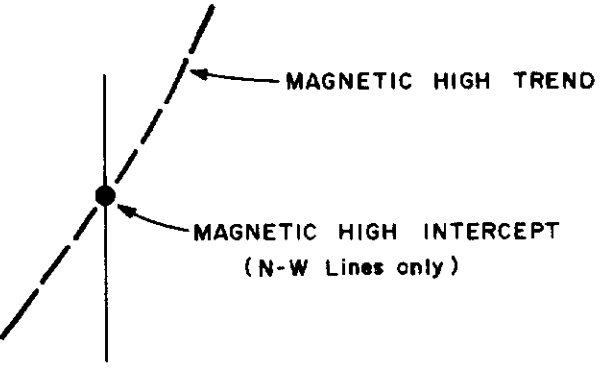
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INSTRUMENT CHILREX IGS-2/MP-4

(values in nTesi)

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Field by:	Reviewed by:
Date:	Date:
Scale:	Scale:
BRISTOL PROPERTY TOTAL FIELD MAGNETIC SURVEY EAST SHEET	
Date: NOV/DEC 1986 Page: 20	

MAGNETIC DECLINATION



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

0 50 100 200 300 400 500 Metres

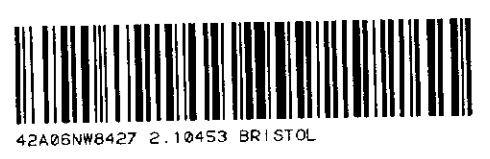
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ALLERSTON PROPERTY Bristol Township, N.E. Ontario

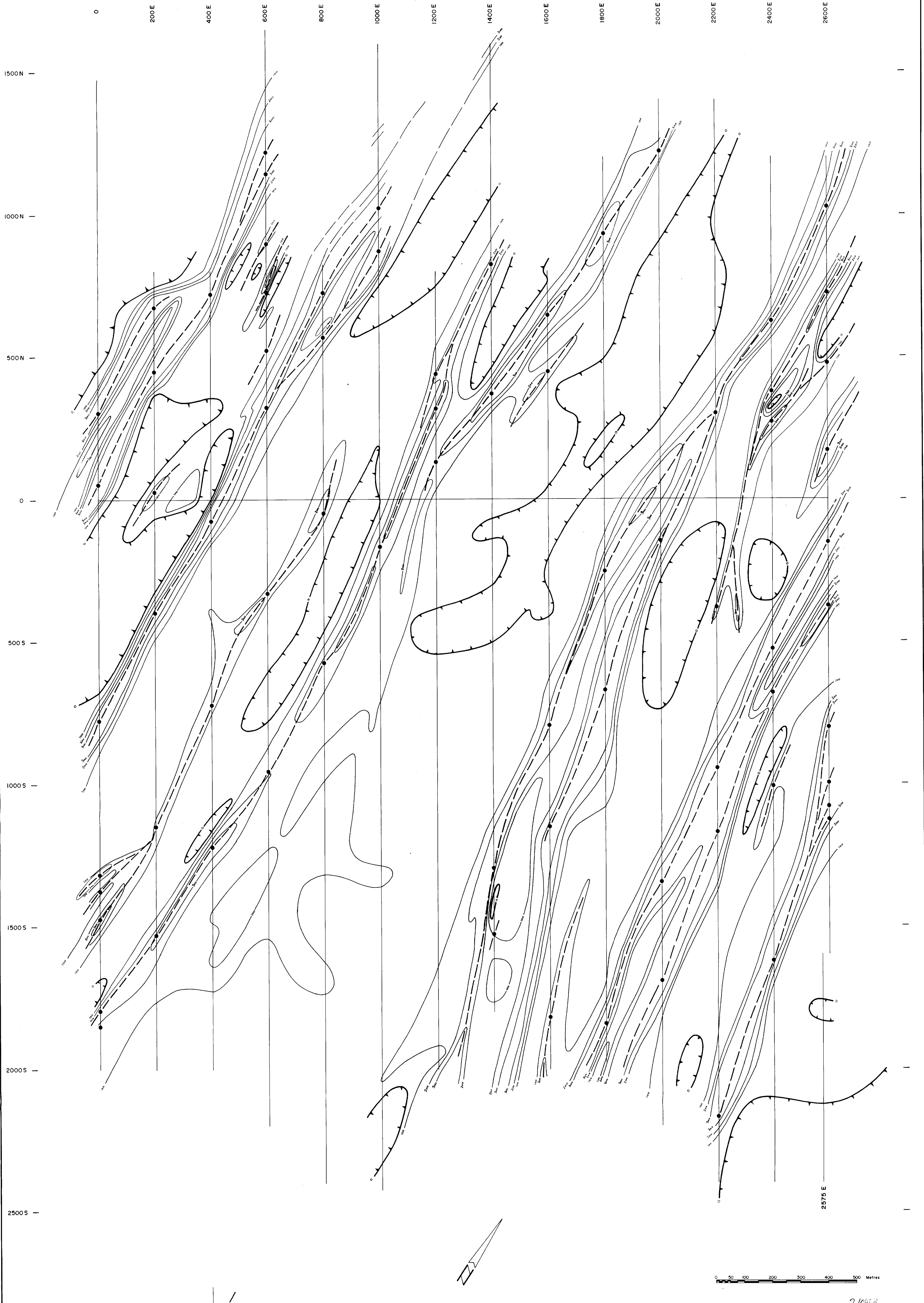
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Revised by (Date)	Revised by (Date)

**TOTAL FIELD MAGNETIC SURVEY
 - CONTOUR PLAN -
 West Sheet**

Scale: 1 : 5000 Date: JANUARY 1987 Plate: 21



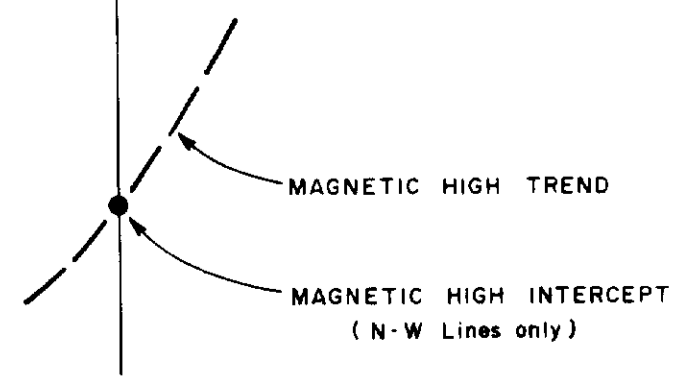
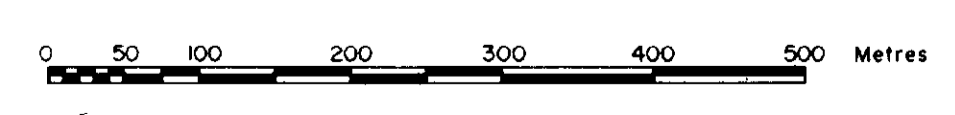
1081-108



1500 N —
1000 N —
500 N —
0 —
500 S —
1000 S —
1500 S —
2000 S —
2500 S —

0 200E 400E 600E 800E 1000E 1200E 1400E 1600E 1800E 2000E 2200E 2400E 2600E

2575 E



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

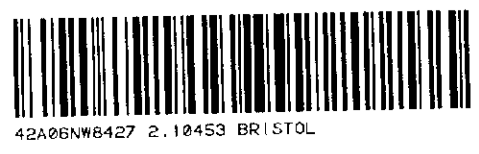
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ALLERSTON PROPERTY Bristol Township, N.E. Ontario

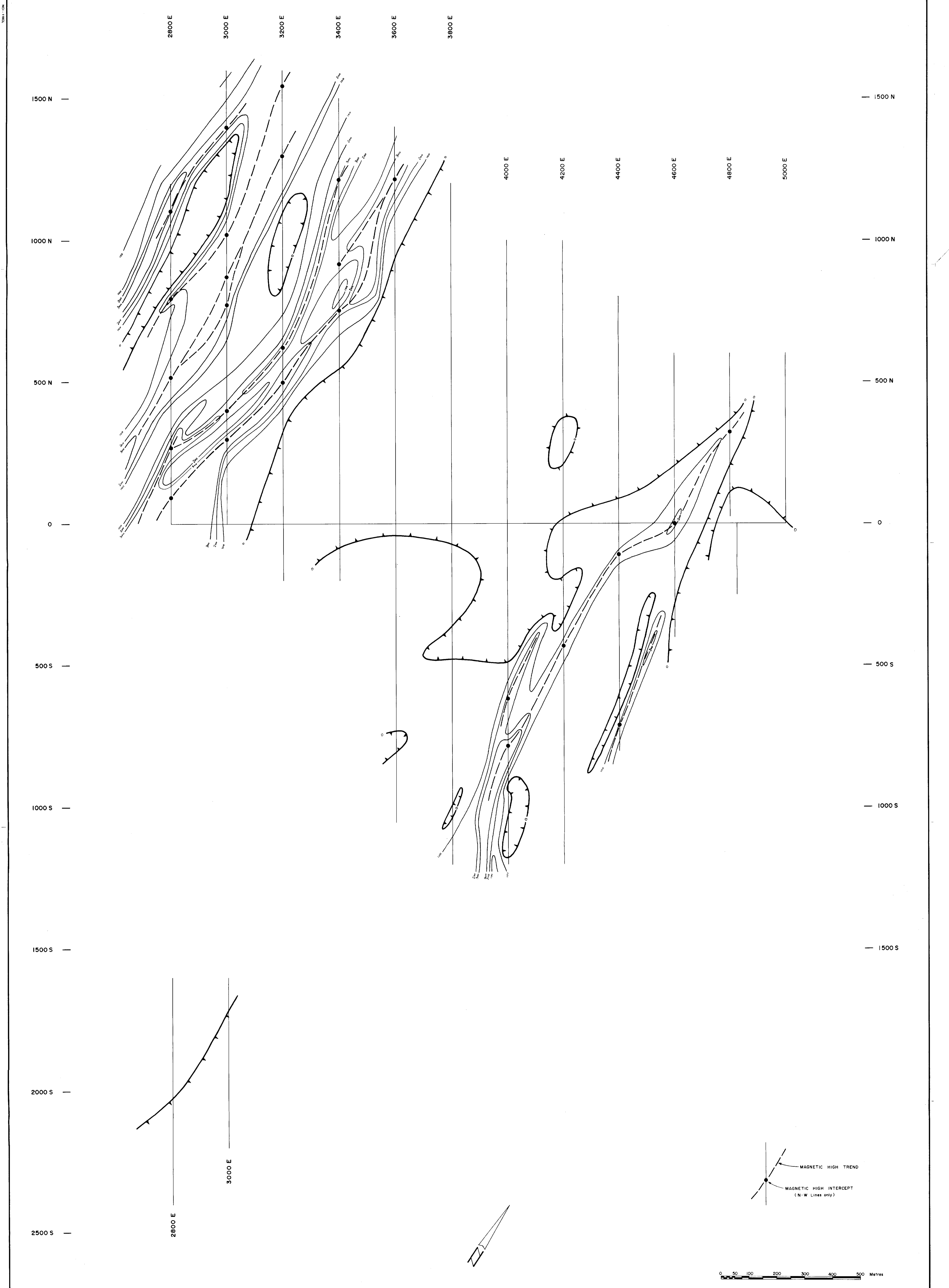
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TOTAL FIELD MAGNETIC SURVEY
- CONTOUR PLAN -
Centre Sheet

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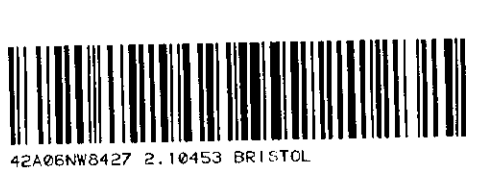
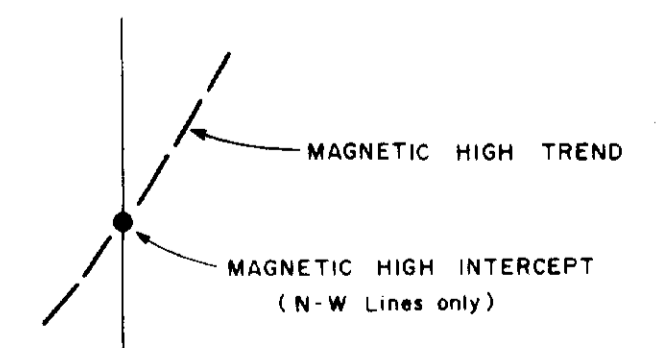


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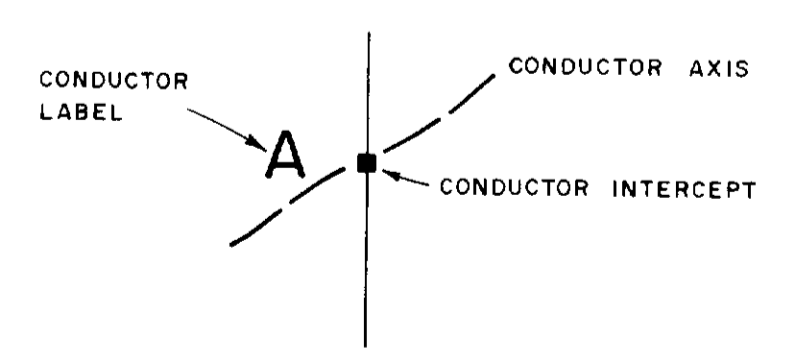
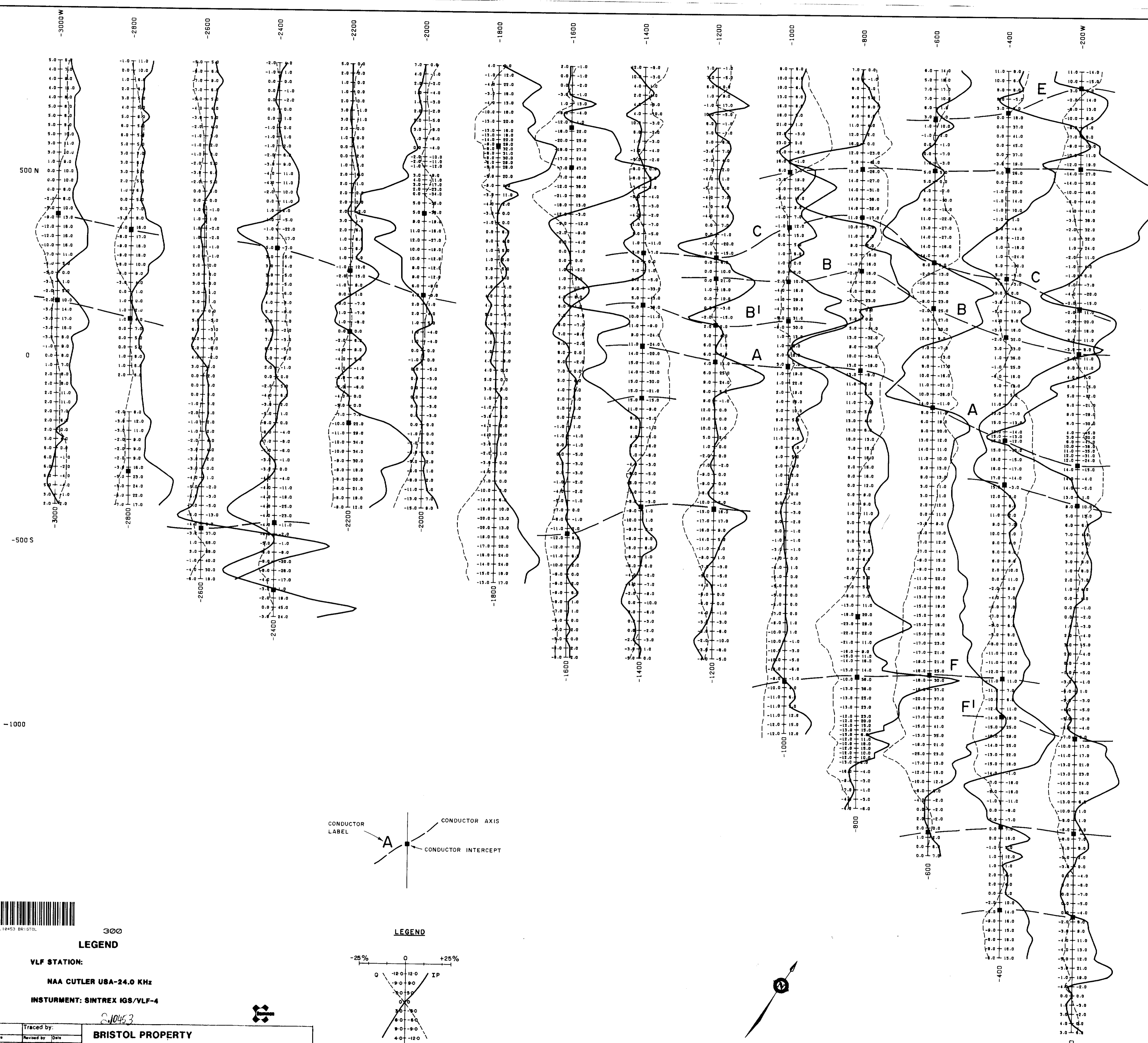
Contour Base Level - 59,000 nTesla

Instrument: SCINTREX IGS-2 / MP-4

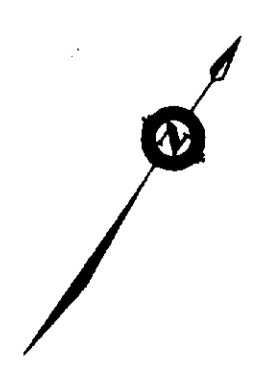
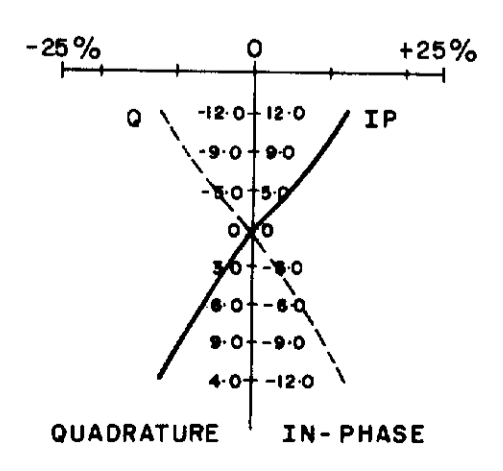


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				- CONTOUR PLAN -	
				East Sheet	
Scale: 1 : 5000		Date: JANUARY 1987		Plate: 23	



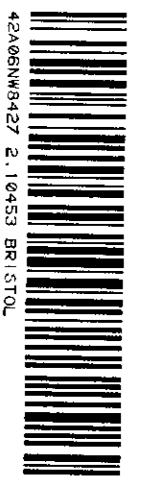
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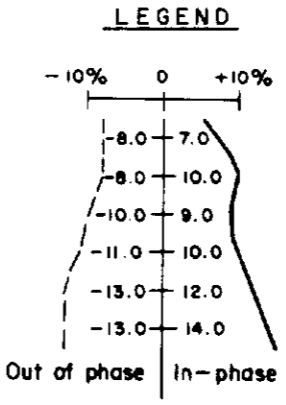
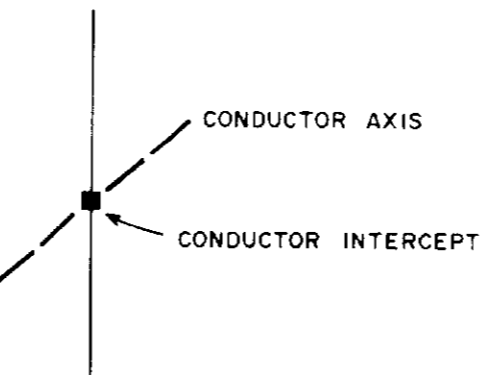
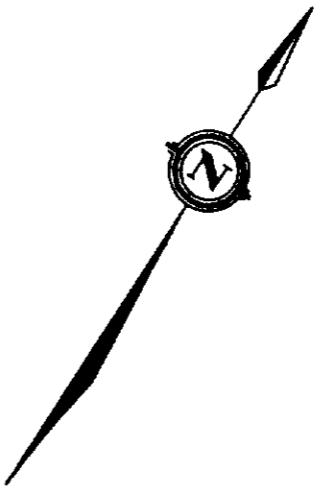
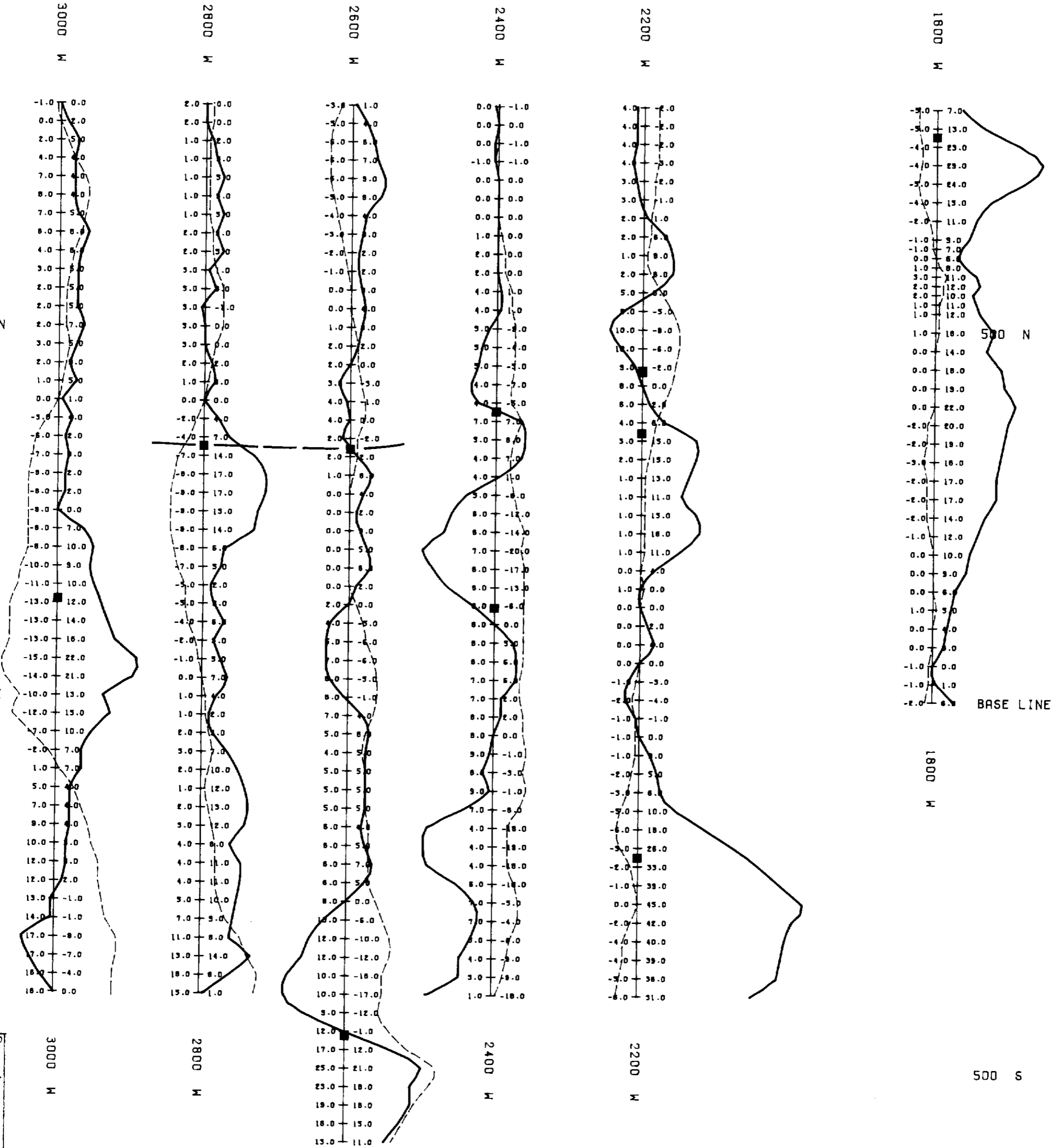
LEGEND
VLF STATION:
 NAA CUTLER USA-24.0 KHz
 INSTRUMENT: SINTREX IGS/VLF-4

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

BRISTOL PROPERTY
VLF PROFILES
WEST SHEET
 Scale: 1:5000 Date: NOV/DEC 1986 Plate: 24



310



LEGEND

VLF STATION:
 NSS ANNOPLIS USA-21.4 KHZ
 INSTRUMENT: SINTREX IGS/VLF-4

Drawn by:

Traced by:

Reviewed by:

Date

Date

Date

Date

Date

Date

Date

Date

310453



BRISTOL PROPERTY
VLF PROFILES

WEST SHEET

Scale: 1:5000

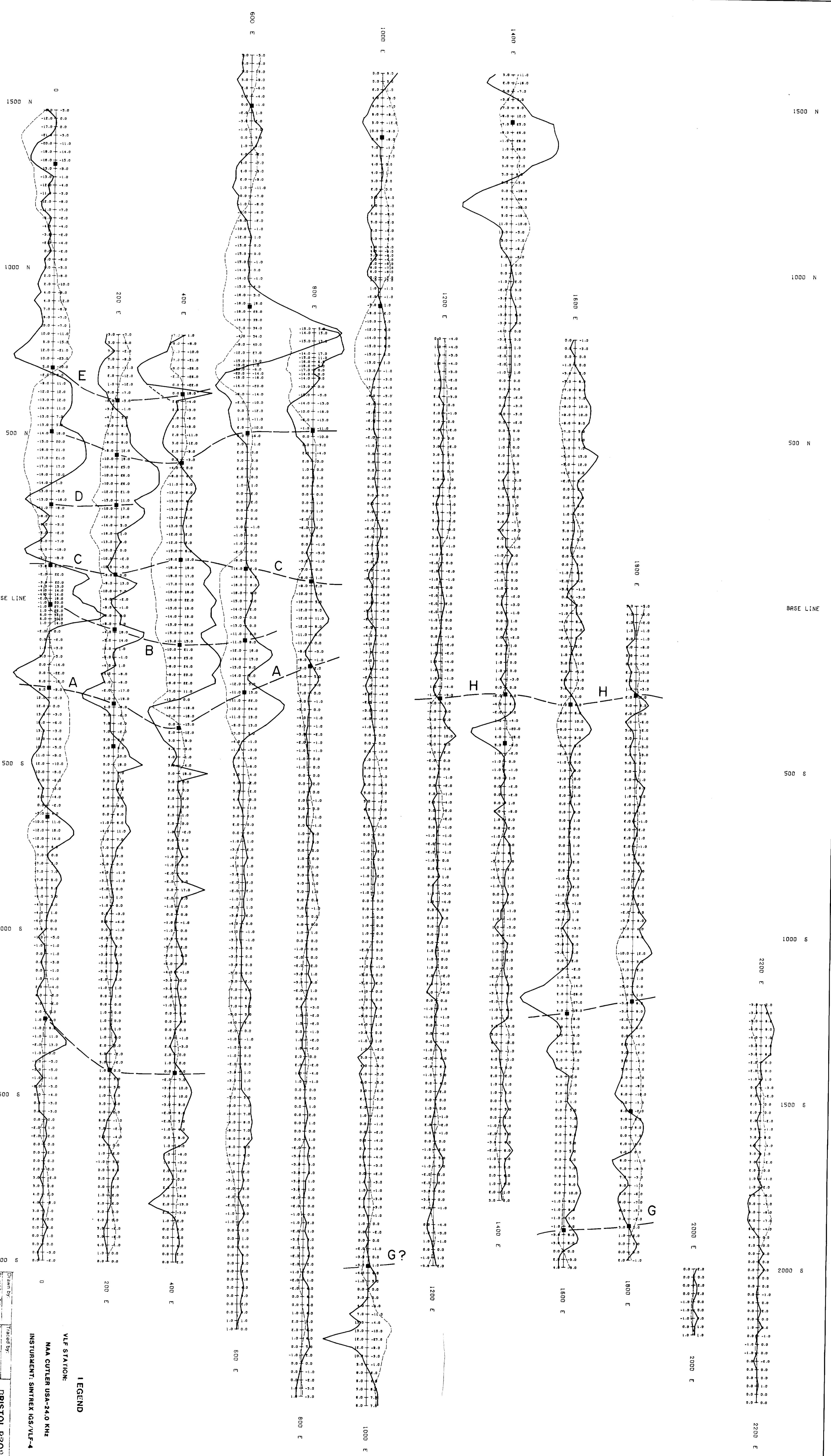
Date NOV/DEC 1986

Plate 25

NCI 112A CI

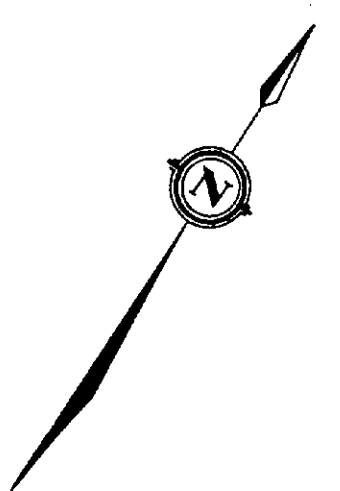
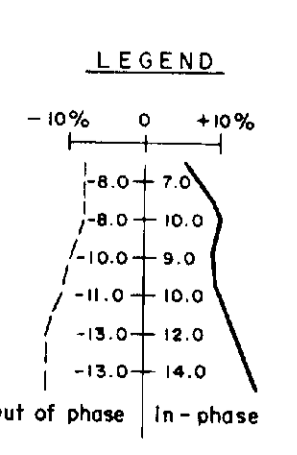
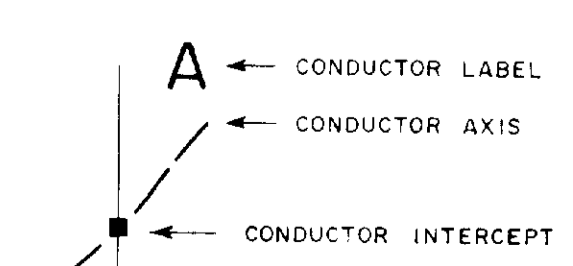


320

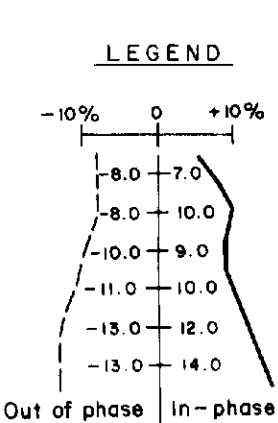
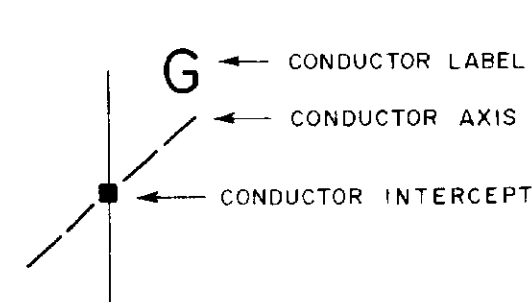
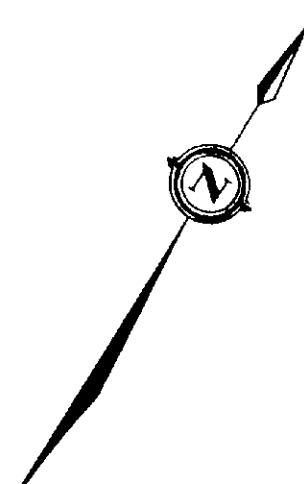
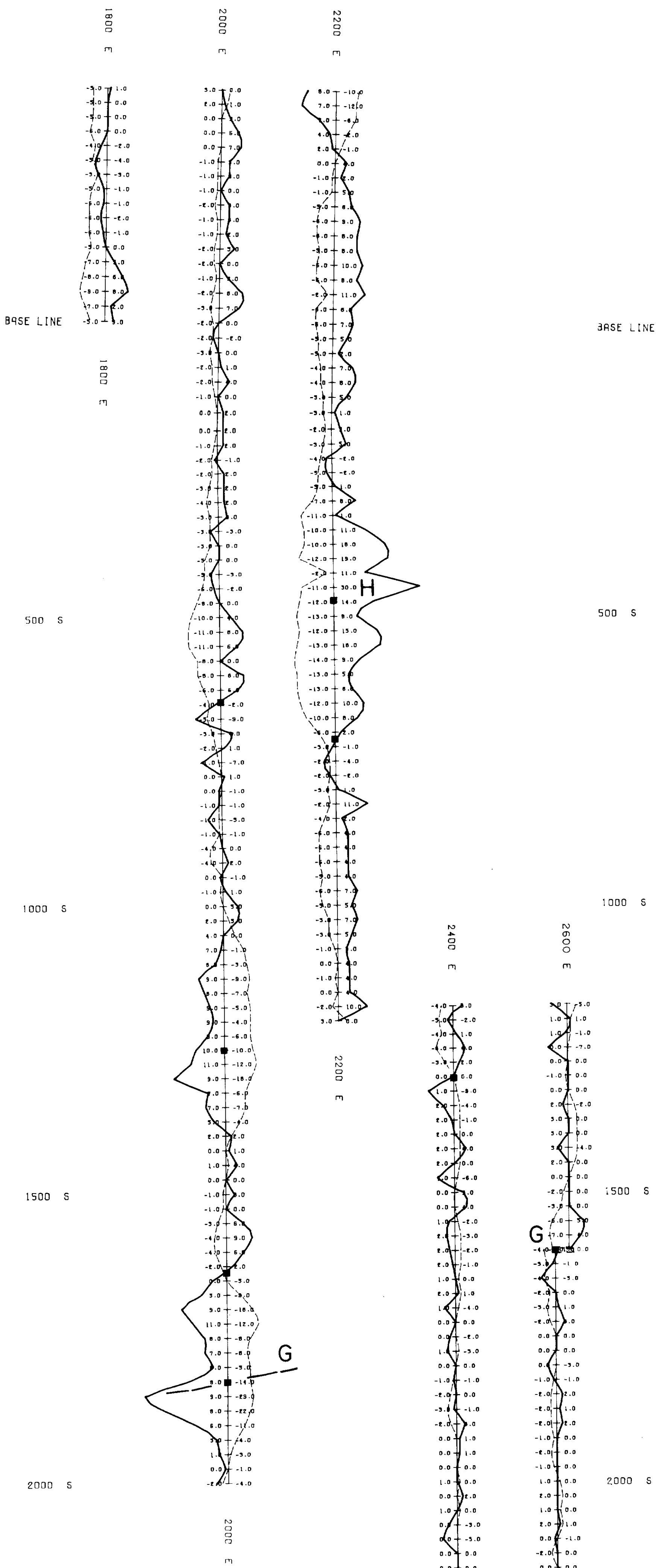


LEGEND

VLF STATION:
 NAA CUTLER USA-24.0 KHZ
 INSTRUMENT: SINTREX IGS/VLF-4



Drawn by: *[Signature]*
 Traced by: *[Signature]*
BRISTOL PROPERTY
VLF PROFILES
 Scale: 1:6000
 Date NOV/DEC 1986
 Plate: 26
 CENTRE SHEET



LEGEND

VLF STATION:

NLK SEATTLE USA-24.8 KHZ

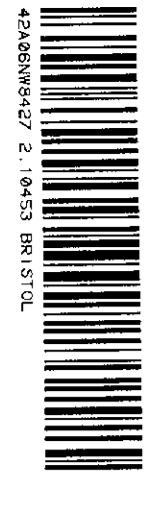
INSTRUMENT: SINTREX ICS/VLF-4

**BRISTOL PROPERTY
VLF PROFILES**

Traced by:	
Checked by:	
Date:	

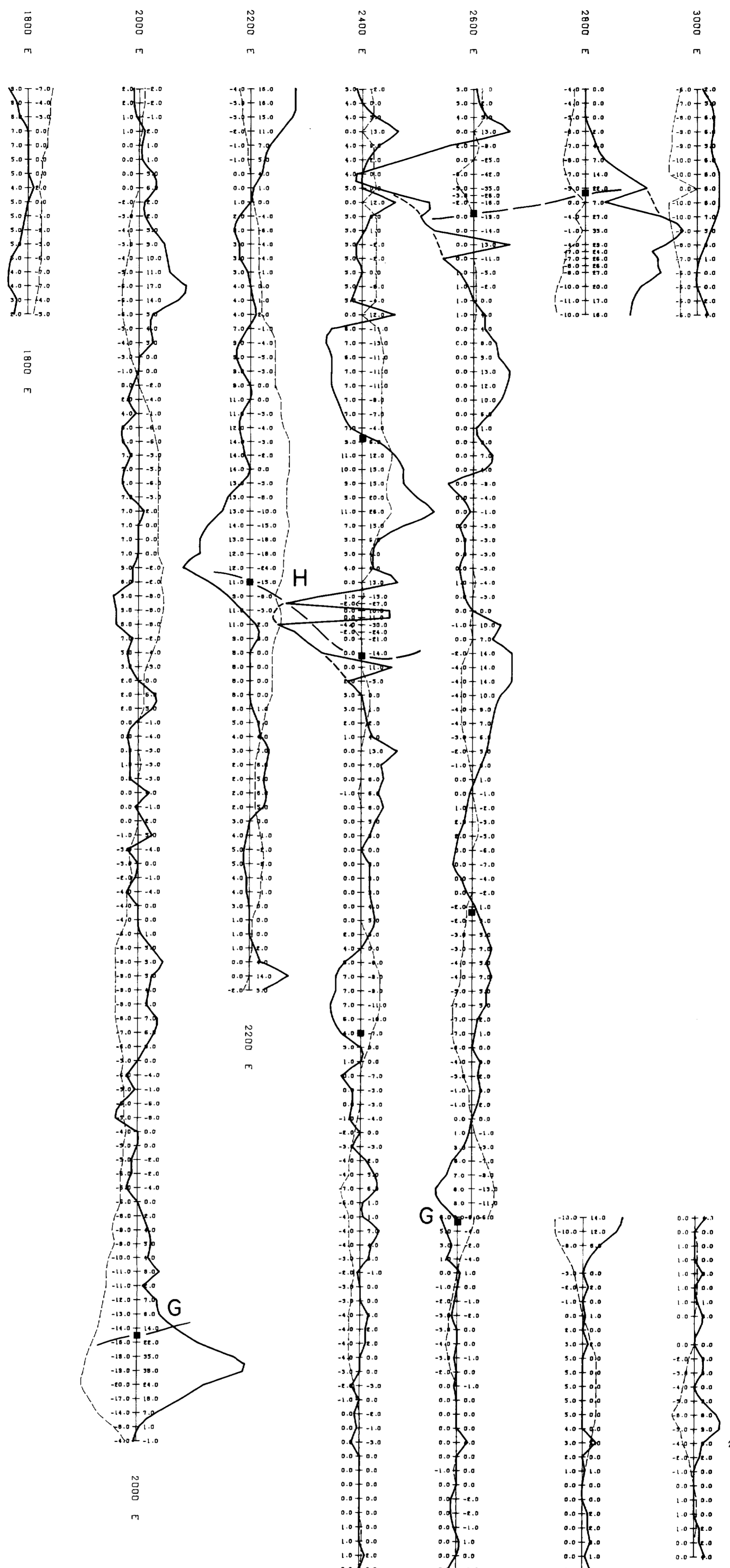
EAST SHEET
Plate: 27
Date: NOV/DEC 1986
Scale: 1:5000



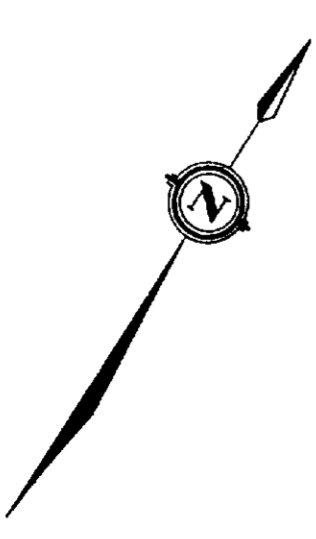


340

BASE LINE

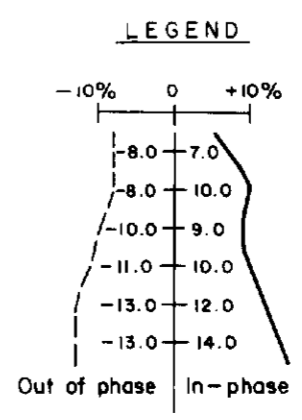
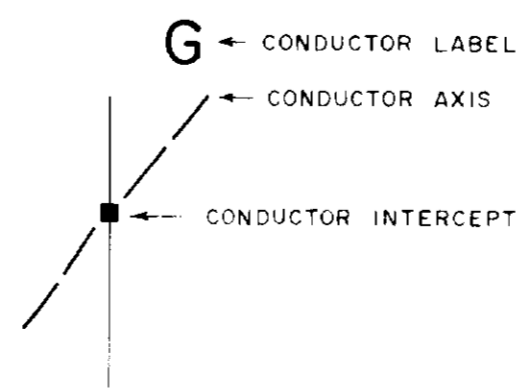


BASE LINE



LEGEND

VLF STATION:
NSS ANNAPOLIS USA-21.4 KHz
INSTURMENT: SINTREX IGS/VLF 4



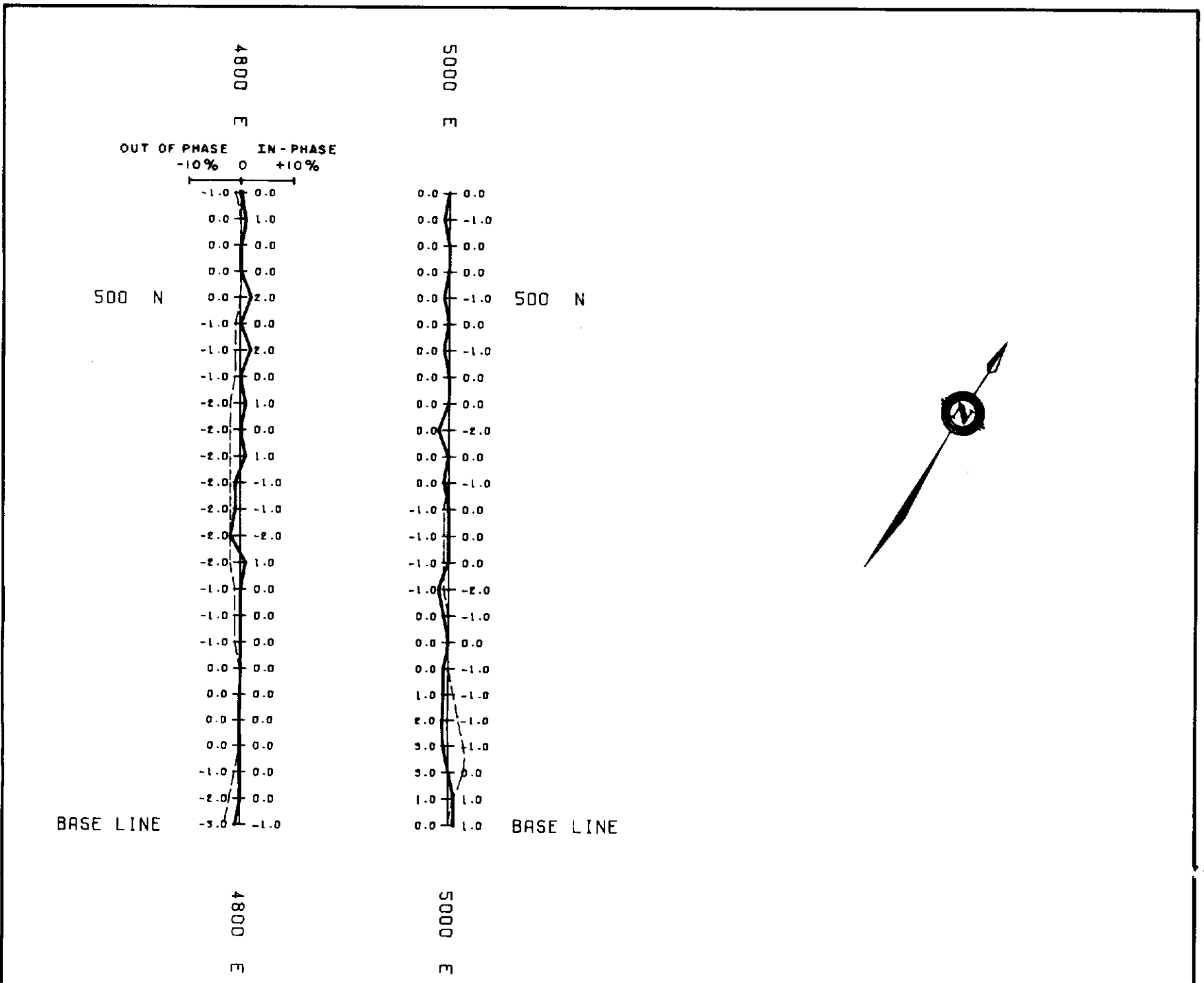
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Traced by: [blank]
Checked by: [blank]
Scale: 1:50000
Date: NOV/DEC 1986
Plate: 28

BRISTOL PROPERTY
VLF PROFILES

216473



EAST SHEET



42A06NW8427 2.10453 BRISTOL

350

VLF STATION:

NAA CUTLER USA-24.0 KHz

INSTURMENT: SINTREX IGS/VLF-4

2.10453



Drawn by:		Traced by:		BRISTOL PROPERTY VLF PROFILES EAST SHEET
Revised by	Date	Revised by	Date	
Scale: 1:5000		Date: NOV/DEC 1986		Plate: 29