

MORVEN DISTRICT - AE18

Technical Report for Period 1st January - 31st December 1973

During the period two geochemical surveys were conducted in this district as part of a wider regional assessment programme throughout the western half of E.V.L.

1 Geochemistry

1.1 Multi-element Analyses (Figs. 1-3) (Fig. 17 Ruthven)

Samples of stream sediment were selected on the basis of approximately one per square kilometre. Samples were sieved to -80 mesh and analyse spectrographically for fifteen elements: Bi, Co, Cu, Cr, Pb, Mo, Ni, Ag, Zn, W, Mn, Zn & Zr. In addition, each sample was analysed for arsenic by atomic absorbtion methods after hot acid extraction. This work formed part of a regional investigation throughout much of western E.V.L. It was aimed at checking for concentrations of unusual element or to establish the presence of possibly significant pathfinder elements. None of obvious economic importance were revealed in this district, although the survey did show the Culblean granite to be slightly anomalous in Sn. The raw data sheets and sample location plan for this district are included with the submission for Ruthven.

1.2 Metal: Sulphur Ratios (Fig. 1, West Insch)

A number of float and outcrop samples of basic and ultrabasic rock were collected and analysed for total Cu, Ni, & S. This work constituted a part of a regional survey of copper:sulphur and nickel:sulphur ratios throughout the Aberdeenshire/Baffshire basic complexes. The results gave little encouragement for further work in the Morven District. The values obtained are included as part of the submission for West Insch (Fig. 1)

2 Soils Research Project

Statistical studies were carried out on material previously collected, data collated and results then written up. These results can be found in the final report submitted in October 1973, which applies to most E.V.L. areas and time periods, including Morven 1973.

3 Enclosures

Fig. 1 Stream Sediment Values for Cu, Ni, Co & Cr

Fig. 2 Stream Sediment Values for Pb, Zn, Ag & Mn

Fig. 3 Stream Sediment Values for Sn, W, Mo & As

(Figs. 17 Ruthven & Fig. 1 West Insch also refer.)

MORVEN DISTRICT - AEL8

Geological Report - 1 January to 31 December 1972

During the period further geochemical, geophysical and geological work was carried out as part of a continuing programme, the bulk of the activity being involved in the ground follow-up of an airborne electromagnetic survey flown prior to 1972.

1. GEOCHEMISTRY.

As proposed in the programme submitted with the Supplementary Application, stream sediment sampling was completed over a small area immediately to the east of Strathdon. The samples were analysed for Cu Ni Pb and Zn, the results being shown on Figs. 1 and 2.

2. GROUND FOLLOW-UP OF RECONNAISSANCE ANOMALIES.

The ground follow-up of the previous HEM survey initially entailed an office study of all the data, in conjunction with the examination of the aerial photographic cover. This enabled the early elimination of many anomalies probably attributable to man-made features. The remaining 29 apparently natural conductors were then followed-up on the ground, using a combination of electromagnetic, magnetic and soil geochemical techniques, together with geological examination.

The equipment used for this geophysical work were an ABEM EM Gun, and a Sharpe fluxgate magnetometer. The geochemical soil samples were taken with hand augers from the 'B' soil horizon and analysed for Cu Ni Pb and Zn by A.A.S., after hot extraction.

A summary of the follow-up work is given on Fig. 3, and the locations of the anomalies, together with an outline of the regional geology, are shown on Fig. 4. The detailed results are shown plotted in 'profile' form, on copies of the 75 field working sheets, together comprising Fig. 5.

It had originally been intended to undertake induced polarization traverses (as forecast in the programme outlined in the Supplementary Application) but a decision whether such work was still justified, on the results obtained during the year, was postponed into 1973.

3. SOIL RESEARCH PROJECT.

The data were analysed prior to the write up of the project. (The results may be found in the final report submitted in October 1973, which applies to most EVL areas and time periods, including Morven in 1972, even though this item has not been specifically referred to in the programme submitted).

/Cont....

MURVEN

Institute of Geological Sciences

2000-01-02

2. S. P. 1935-6-17-Subs 8711

4. ENCLOSURES.

- H.R.
D.M.K.
Geophysics

Enveloped

 - { 1. Stream sediment geochemical analyses for Cu and Ni in ppm. (part of 1" O.S. Sheet 39 Strathdon).
 - 2. Stream sediment geochemical analyses for Pb and Zn in ppm. (part of 1" O.S. Sheet 39 Strathdon).
 - 3. List summarising the ground follow-up of HEM anomalies.
 - 4. Map showing positions of the 29 anomalies investigated, together with an outline of the regional geology. (Sheet 39).
 - 5. Detailed 'profile' results for EM, magnetic and geochemical work.

W.A.B.

K.C.B.
6.11.73

RESULTS OF GROUND FOLLOW-UP ON
H.E.M. ANOMALIES - MORVEN AREA.

Anomaly No.	Ground Follow-up Traverses				REMARKS
	Geol.	E.M.	Mag.	Geochem.	
431A	✓	3	3	2	In middle of cleared forest. G.E.M. anomaly broad and flat topped. Nothing artificial in vicinity.
431B	✓	3	3	2	On hillside on edge of clump of trees. Grouse feeding pen nearby, but probably not sole cause if any.
432A	✓	2	-	-	Power line noise rendered E.M. of little use. No well define anomaly emmerged.
433A	✓	4	3	1	Open moorland. Possibly related to graphitic zones in Corvie Burn shear.
433B	✓	3	3	3	Near serpentinite body and wire fence. Considered too broad to be artificial.
433C	✓	3	-	-	little I.P. and no O.P. response.
433D	✓	3	-	-	Slight I.P. response on fence 100ft. from peg,no.O.P.
433E	✓	3	2	2	Open moorland. 400ft. of fence. Terrain not considered cause. On blackschist belt.
434B	✓	2	2	1	Some ground E.M. response. Mag. correlation makes it worth further investigation.
434C	✓	2	-	-	Little response. Fence nearby.
434B	✓	3	1	1	On severe terrain. No artificial feature. Could be instrumental judder. 1 line mag. to find correlation.
434C	✓	1	-	-	P.L. interference ruled out E.M. response.
438A	✓	-	-	-	Power line considered as cause of the anomaly.
438B	✓	-	-	-	Forestry fence considered as likely cause.
440A	✓	1	-	-	Much interference from G.P.O. cable. Prob. cause.
440B	✓	3	-	-	Coincident with strand wire fence. F.L. sub parallel graphitic breccia float near.

RESULTS OF GROUND FOLLOW-UP ON

H.E.M. ANOMALIES - MORVEN AREA

Anomaly No.	Ground Follow-up Traverses				REMARKS
	Geol.	E.M.	Mag.	Geochem.	
441A	✓	2	-	-	Quartz vein material and ura gabbro.
441B	✓	3	3	1	Fence, but broad G.E.M. anom. [?]; coincides also with marked fence feature associated with siliceous rocks.
443A	✓	1	-	-	Fence.
444A	✓	1	-	-	Steep scree slope.
444B	✓	-	-	-	Coincident with major Power line fence.
451A	✓	3	-	-	Fence.
451B	✓	3	2	2	Boggy ground in valley. 300ft. NE of wire fence. No other artificial feature. ural gabbro.
453A	✓	3	-	-	Coincident with track along ridge.
453B	✓	3	-	-	200ft. south of fence and track. Open hillside.
453C	✓	1	-	-	Fence.
454A	✓	3	-	-	Alongside track. Quartz vein material.
454B	✓	1	-	-	Granitic area. No ground features.
460	✓	1	1	1	Broad G. Mag. Anomaly flanks this.
465B	✓	-	-	-	Grounded wire mesh fence.
465C	✓	8	6	6	Good ground mag. 3-4% pyrrhotite.
466A	✓	-	-	-	On top of granite ridge. Terrain effect.
466B	✓	3	1	1	Broad vague I.P. anomaly in granitic zone.
466A	✓	3	1	1	Granite outcrops. Nature of local mag. should be found. No artificial feature.
465A	-	-	-	-	Not investigated.
466B	✓	-	-	-	Anomaly falls in centre of Loch Duivan.
466C	-	-	-	-	Not investigated.
467A	✓	-	-	-	Direct correlation between anomaly & R/A tracchere elsewhere along road.

RESULTS OF GROUND FOLLOW-UP ON
H.E.M. ANOMALIES - MORVEN AREA

Anomaly No.	Ground Follow-up Traverses				REMARKS
	Geol.	E.M.	Mag.	Geochem.	
67B467C.	-	-	-	-	Not investigated
75B467L.	-	-	-	-	Not investigated
77B477T.	✓	-	-	-	Road.

G.P.R. May 1973

FINANCIAL ASSISTANCE FOR MINERAL EXPLORATION (M.E.I.G.A.)

COMPANY: EXPLORTION VENTURES LTD

REF: AE 18

MRD 84/5/13

PROJECT: MORVEN

MRD 144/5/13

The following Open File material is held by B.G.S. in London, Keyworth and Edinburgh. Available for public inspection from 16.10.80.

- Extracts from application 6.8.71 "Outline of proposed project geological considerations work programme" with accompanying plan 1": 4 miles. OS sheet 5
- Geological report 9.8.71 to 31.12.71 with the following enclosures:
 1. Geology, Culblean Hill area. 6": 1 mile, August 1971.
OS map no. part of Aberdeenshire LXXI
 2. Stream sediment follow up sampling Cu, Ni, Mo, 1": 1 mile.
OS map no. 39. 1971
- Geological report 1.1.72 to 31.12.72 with the following enclosures:
 1. Stream sediment geochemical analyses for Cu and Ni part of 1" OS sheet 39
 2. Stream sediment geochemical analyses for Pb and Zn, part of 1" OS sheet 39
 3. List summarising the ground follow up of HEM anomalies (431A - 477B)
 4. Map showing positions of the 29 anomalies investigated together with an outline of the regional geology sheet 39
 5. Detailed 'profile' results for EM, magnetic and geochemical work
- Technical report 1st January to 31st December 1973 with the following enclosures
All are 1": 1 mile scale, 1973, OS map nos. 38, 39, 40, 41, 42 and 43

Fig 1 stream sediment values for Cu, Ni, Co and Cr

Fig 2 " " " " Pb, Zn, Ag and Mn

Fig 3 " " " " Sn, W, Mo and As

*Not at Keyworth

MINERAL EXPLORATION INCENTIVE SCHEME

APPLICATION
for assistance

AC 18

1. Applicant Exploration Ventures Limited
Address 49 Moorgate, London EC2R 6BQ
Telephone No. 01-606-1020
Contact Mr. R.B. Riley or Mr. M.J. Lynch

2. Project title Morven

3. Applicants' organisation & financial structure

Please see this Company's letter dated 6th August, 1971.

4. Outline of proposed project, including geological considerations (see plan attached)

This area includes that part of the Morven Younger Basic Mass which lies south of the River Don and north of the River Dee. It is mainly unlitised gabbros with little quartz; ferrogabbros are characteristic. In the eastern part of this area there are also high aeromagnetic anomalies unexplained by surface geology, which may represent further areas of basic rocks. Cu and Ni are the metals sought.

This area also includes a region of granitic activity which has molybdenum potential.

5. Work programme and costs of project

Preliminary geological and stream sediment reconnaissance is already underway and future work will involve further stream sediment geochemistry with soil sampling as a probable follow up. A detailed soil survey will be undertaken to relate soil values to bedrock.

Ground magnetics will be used over aeromagnetic high areas and geological examination will help to analyse their cause.

Application for contributions under the Mineral
Exploration and Investment Grants Act 1972

Geological Report : Morven EA18

During the period 9th August to 31st December, 1971, a limited amount of geological and geochemical work was carried out in this area. Reconnaissance mapping of outcrop and float occurrences was undertaken in the Culblean Hill area, in conjunction with a small programme of stream sediment sampling for molybdenum. Aerial photographs were studied as an aid to geological interpretation and for classifying electromagnetic anomalies arising out of a previous heliborne survey.

Enclosures

- ✓ 1. Geology - Culblean Hill area (Aberdeenshire LXXII)
- ✓ 2. Geochemical stream sediment values for Cu, Ni, Mo (p.p.m.)
Culblean (Sheet 39)

2.

4. ENCLOSURES.

1. Stream sediment geochemical analyses for Cu and Ni in ppm. (part of 1" O.S. Sheet 39 Strathdon).
2. Stream sediment geochemical analyses for Pb and Zn in ppm. (part of 1" O.S. Sheet 39 Strathdon).
3. List summarising the ground follow-up of HEM anomalies.
4. Map showing positions of the 29 anomalies investigated, together with an outline of the regional geology. (Sheet 39).
5. Detailed 'profile' results for EM, magnetic and geochemical work.

K.B

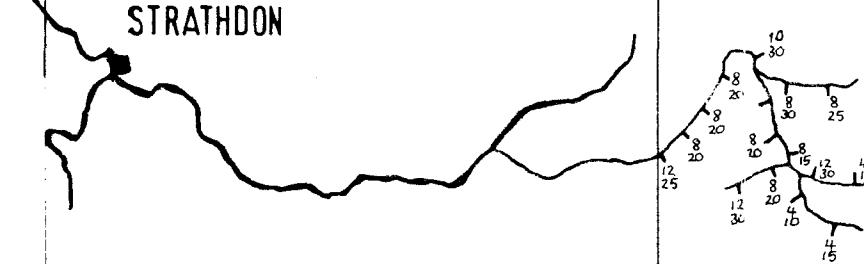
K.C.B.
6.11.73

Enclo i - 5 enclosed

For Geochim Division

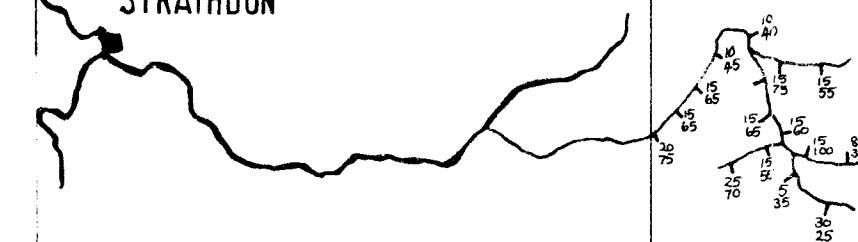
431 A (3); 431 B (3) 433 A (4); 433 B (3); 434 B (3); 434 C (2);
 436 B (3); 440 B (3); 451 B (3); 454 C (1); 455 C (8); 456 B (3)
 464 A (3)

STRATHDON



EXPLORATION VENTURES LIMITED		1
Area	MORVEN	Drg No
Title : STREAM SEDIMENT GEOREMISTRY		
COPPER VALUES ppm		
NICKEL		
S.S. Map No	39	
Scale	1:53,360	Date MARCH 1977
Prepared by	S.M.	Drawn by S.M.

STRATHDON



EXPLORATION VENTURES LIMITED		2	
Area	MARYAN	Org No	
Title	STREAM SEGMENT GEOCHEMISTRY		
	COPPER VALUES PPM		
	NICKEL		
O.S. Map No	35		
Scale	1:63,500	Date	14 AUGUST 1977
Prepared by	S.M.	Drawn by	S.M.

RESULTS OF GROUND FOLLOW-UP ON
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Anomaly No.	Ground Follow-up Traverses				REMARKS
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431B ,	✓	3	3	2	On hillside on edge of clump of trees. Grouse feeding pen nearby, but probably not sole cause if any.
432A	✓	2	-	-	Power line noise rendered E.M. of little use. No well defined anomaly emerged.
433A ✗	✓	4	3	1	Open moorland. Possibly related to graphitic zones in t. corvie Burn shear.
433B	✓	3	3	3	Near serpentinite body and wire fence. Considered too broad to be artificial.
433C	✓	3	-	-	little I.P. and no O.P. response.
434A	✓	3	-	-	Slight I.P. response on fence 100ft. from peg, no O.P.
434B. ✓	✓	3	2	2	Open moorland. 400ft. of fence. Terrain not considered cause. On blackschist belt.
434C ✗	✓	2	2	1 *	Some ground E.M. response. Mag. correlation makes it worth further investigation.
436A	✓	2	-	-	Little response. Fence nearby.
436B ✗	✓	3	1	1	On severe terrain. No artificial feature. Could be instrumental judder. 1 line mag. to find correlation.
436C	✓	1	-	-	P.L. interference ruled out E.M. response.
438A	✓	-	-	-	Power line considered as cause of the anomaly.
438B	✓	-	-	-	Forestry fence considered as likely cause.
440A	✓	1	-	-	Much interference from G.P.O. cable. Prob. cause.
440B	✓	3	-	-	Coincident with strand wire fence. F.b. sub parallel graphitic breccia float nearby.

RESULTS OF GROUND FOLLOW-UP ON

H.E.M. ANOMALIES IN MORVEN AREA

Anomaly No.	Ground Follow-up Traverses				REMARKS
	Geol.	E.M.	Mag.	Geochem.	
441A	✓	2	-	-	Quartz vein material and ural gabbro.
441B ✓	✓	3	3	1	Fence, but broad G.E.M. anomaly coincides also with marked topo. feature associated with siliceous rocks.
443A	✓	1	-	-	Fence.
444A	✓	1	-	-	Steep scree slope.
444B	✓	1	-	-	Coincident with major Power line
451A	✓	3	-	-	Fence.
451B ✓	✓	3	2	2	Boggy ground in valley. 300ft. NE of wire fence. No other artificial feature. ural gabbro.
453A	✓	3	-	-	Coincident with track along ridge.
453B	✓	3	-	-	200ft. south of fence and track. Open hillside.
453C	✓	1	-	-	Fence.
454A	✓	3	-	-	Alongside track. Quartz vein material.
454B ✗	✓	1	-	-	Granitic area. No ground features.
454C ✓	✓	1	1	1	Broad G. Mag. Anomaly flanks this.
455B	✓	-	-	-	Grounded wire mesh fence.
455C ✓	✓	8	6	6 *	Good ground mag. 3-4% pyrrhotite.
456A	✓	-	-	-	On top of granite ridge. Terrain effect.
456B ✓	✓	3	1	1	Broad vague I.P. anomaly in granitic zone.
464A ✓	✓	3	1	1	Granite outcrops. Nature of local mag. should be found. No artificial feature.
465A	-	-	-	-	Not investigated.
466B ? ✓	-	-	-	-	Anomaly falls in centre of Loch Dovan.
466C	-	-	-	-	Not investigated.
467A	✓	-	-	--	Direct correlation between anomaly & R/A trace here & elsewhere along road.

RESULTS OF GROUND FOLLOW-UP ON
H.E.M. ANOMALIES - MORVEN AREA

Anomaly No.	Ground Follow-up Traverses				REMARKS
	Geol.	E.M.	Mag.	Geochem.	
467C	-	-	-	-	Not investigated
475B	-	-	-	-	Not investigated
477B	✓	-	-	-	Road.

AUCHINMURRAN
Woods

Cairne

Midmuir

Alluvial
Wood

Fluvio-Glacial
Sands and Gravels

St. Blairs Stone

Gravel Pit

Rathie Fluvio Glacial sands
and gravels

Current Bedding
apparent.

Gravel Pit

Logie Colliery

Burns

Glen davian Wood

Supposed Site of the Battle of Callanish
A.D. 1602

Moorfoot

Lockhead

LOCH DAVAN

GNEISS

Old Minard

* Canals
* Circular Foundations

When granite is
exposed in this section it
is of the coarse-grained,
grey-brown bearing variety
The fine
biotite granite

Coarse & fresh
biotite granite

flat lying joints

Bronze Jar found
A.D. 1932

Circle

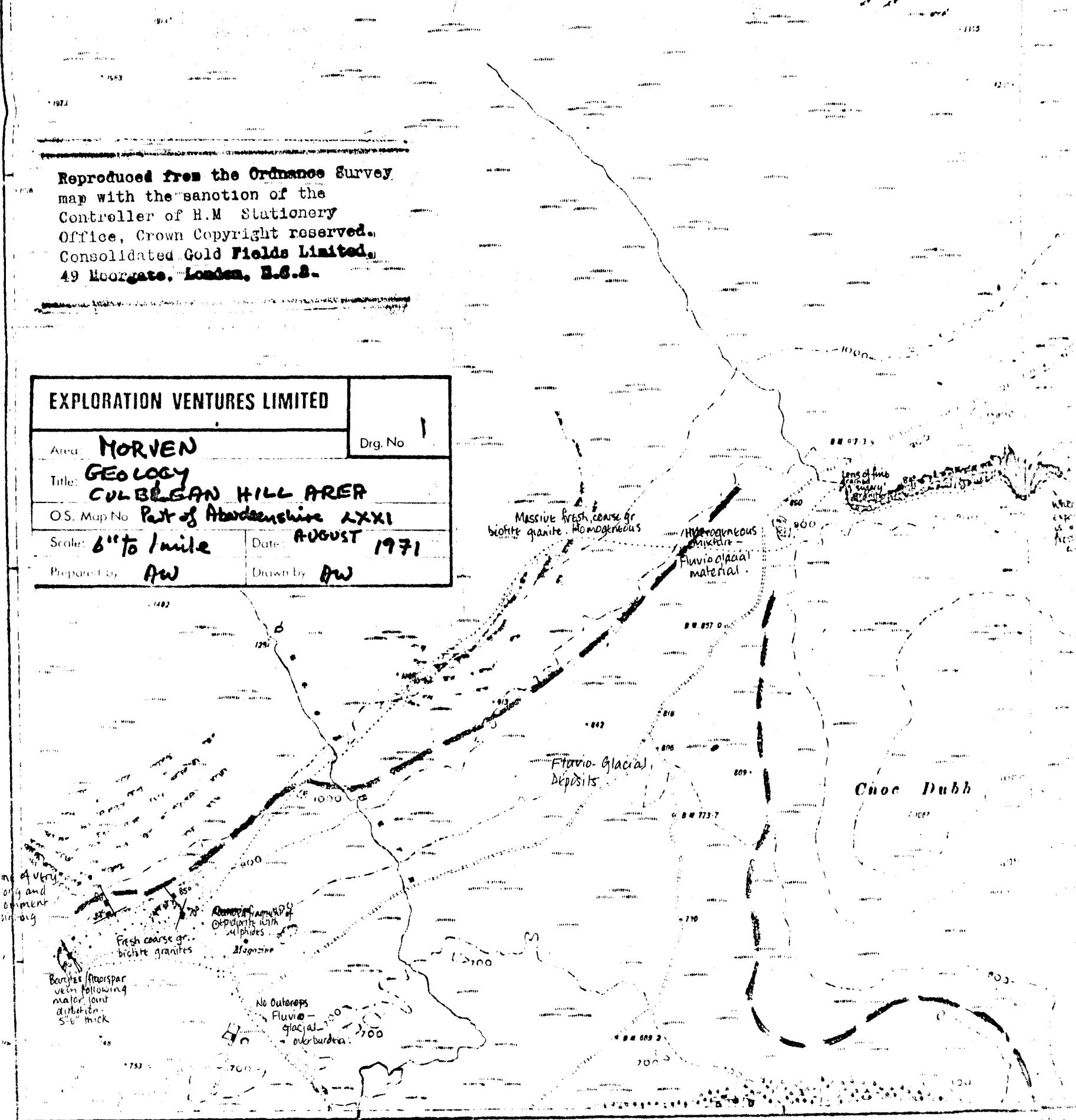
schists. Few gabbro blocks

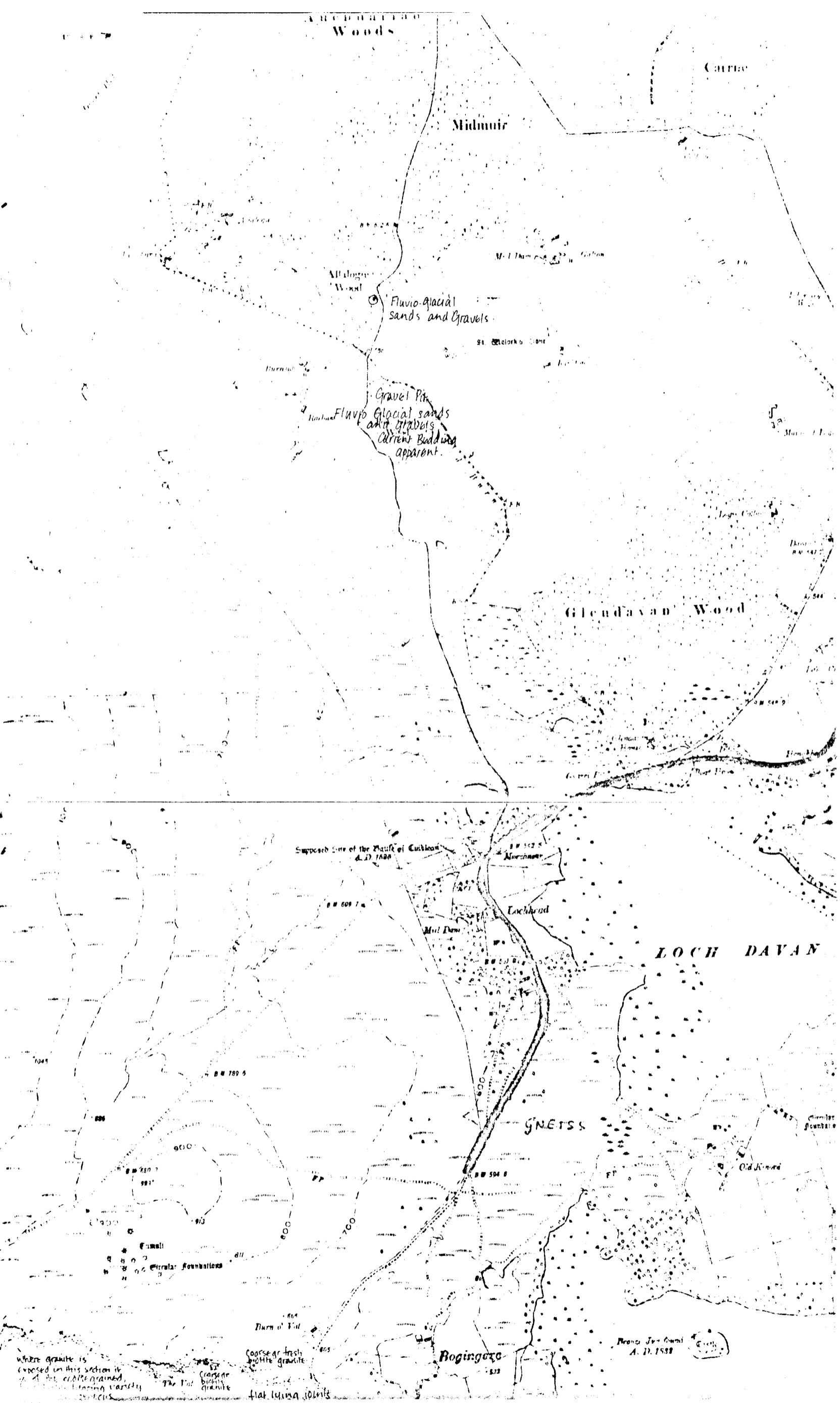
C u l b l e a n

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EXPLORATION VENTURES LIMITED

EXPLORATION VENTURES LIMITED		
Area:	MORVEN	Drg. No.
Title:	GEOLOGY CULBEGAN HILL AREA	
O.S. Map No	Part of Aberdeenshire LXXI	
Scale:	6" to 1 mile	Date: AUGUST 1971
Prepared by	Drawn by AW	



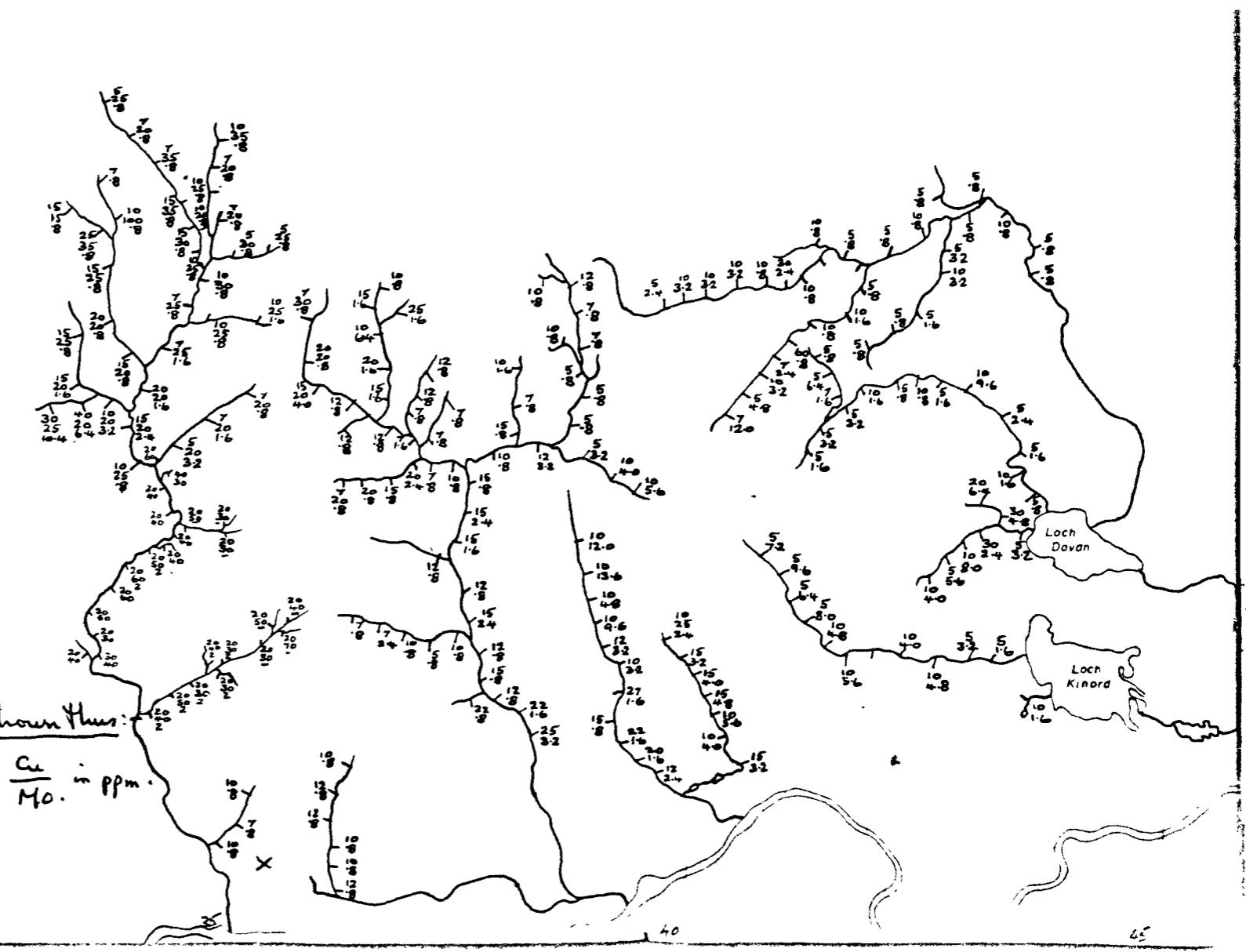


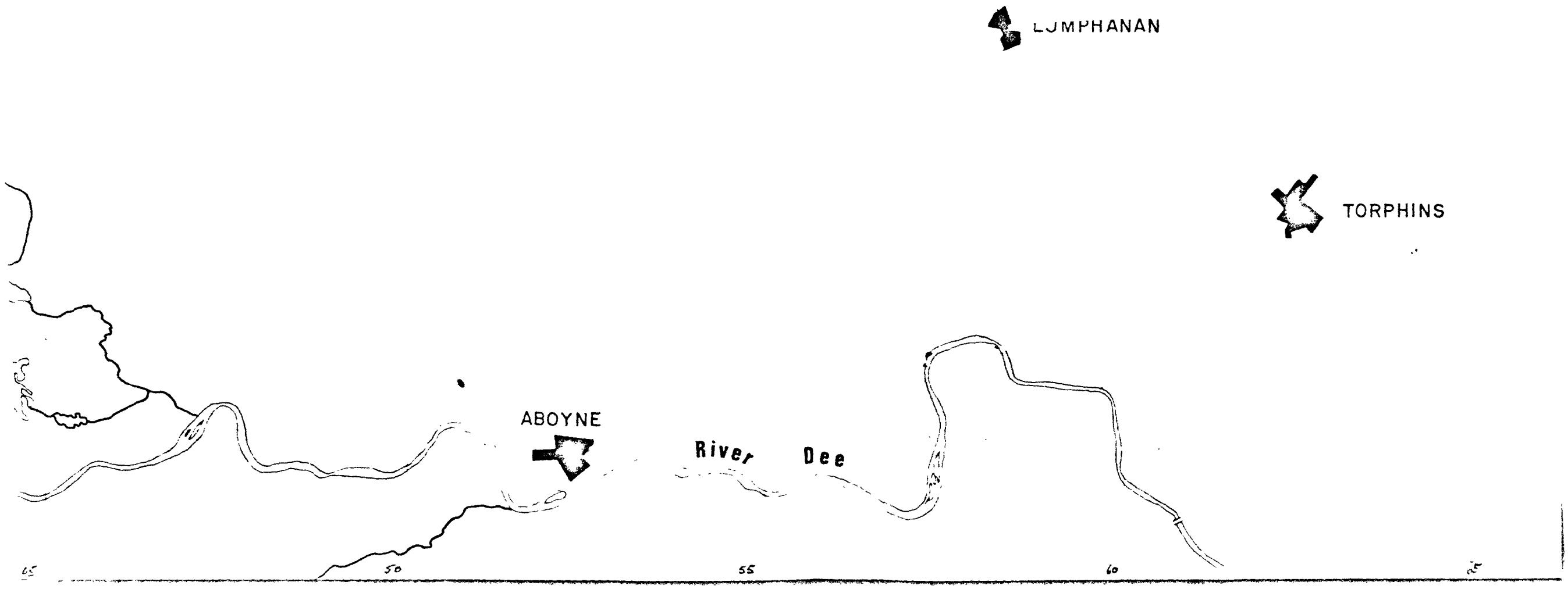
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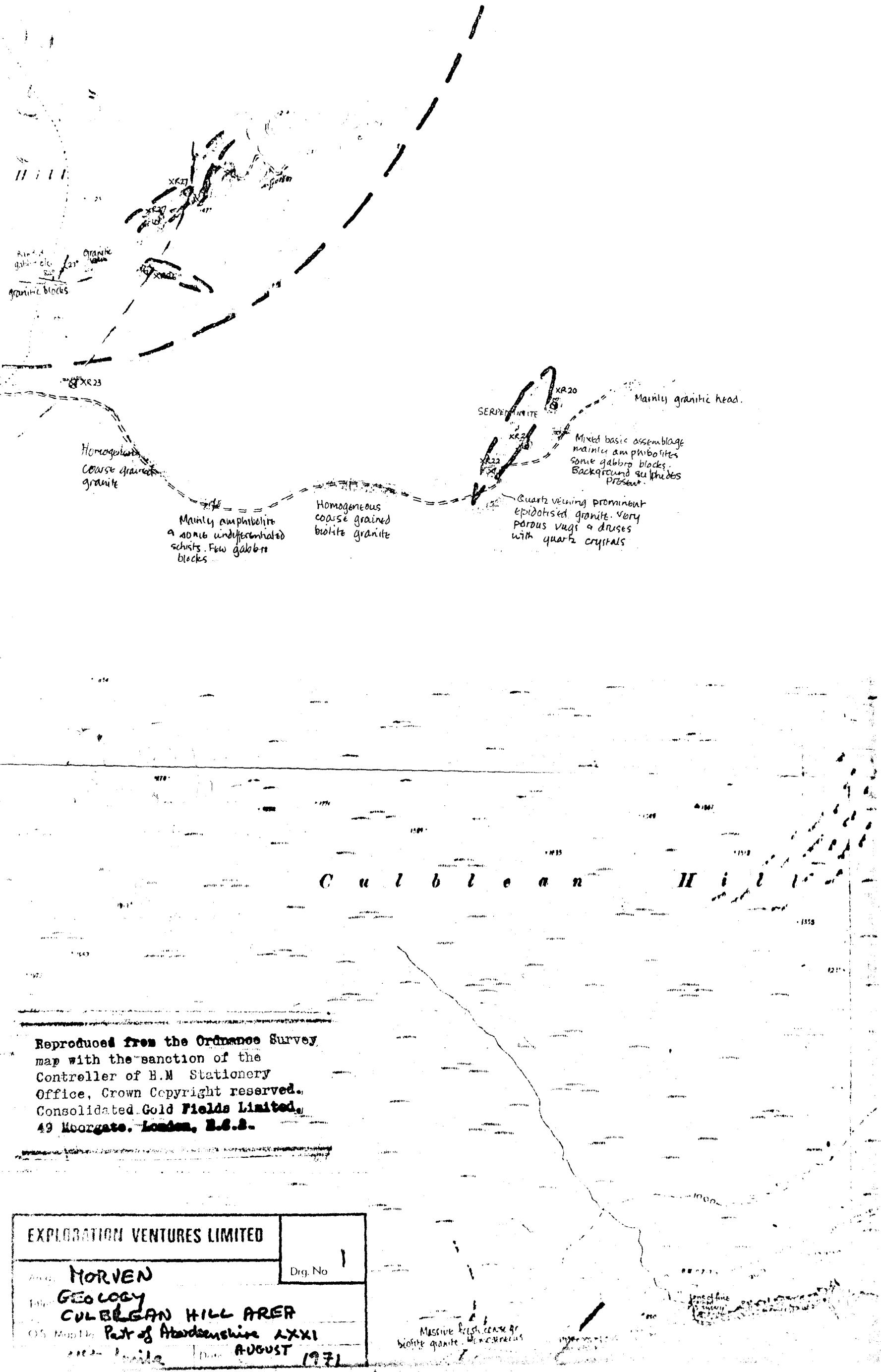
EXPLORATION VENTURES LIMITED		2.
Area:	MORVEN	Drg. No
Title:	Stream sediment F.V. sampling	
Cu Ni Mo at Galloway Hill		
OS Map No	39	
Scale:	1 mile to 1 mile	Date 7. 1971
Prepared by:	GPR	Drawn by: A.W.

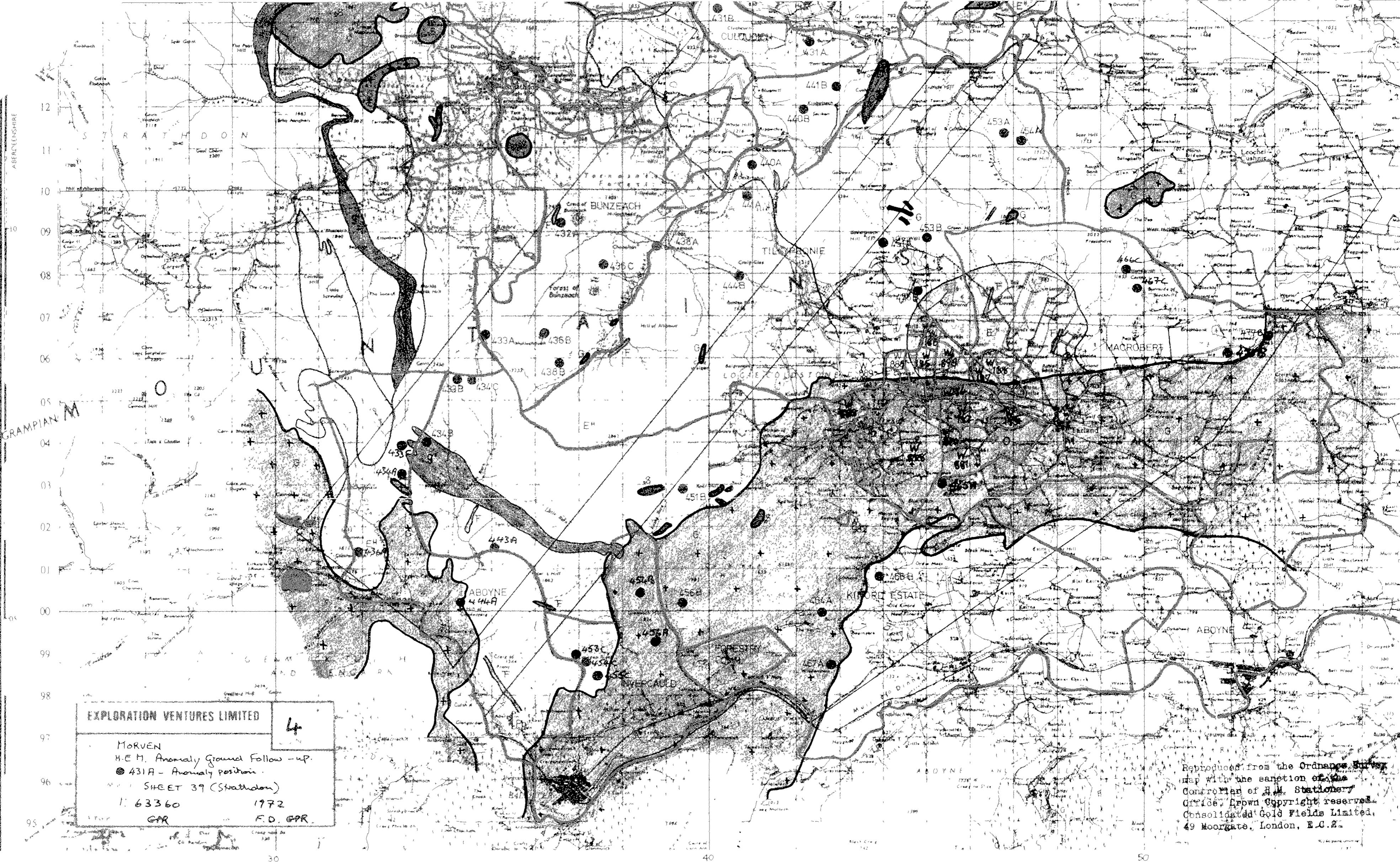
Values shown thus:

$\frac{Cu}{Ni}$ or $\frac{Cu}{Mo}$ in ppm.









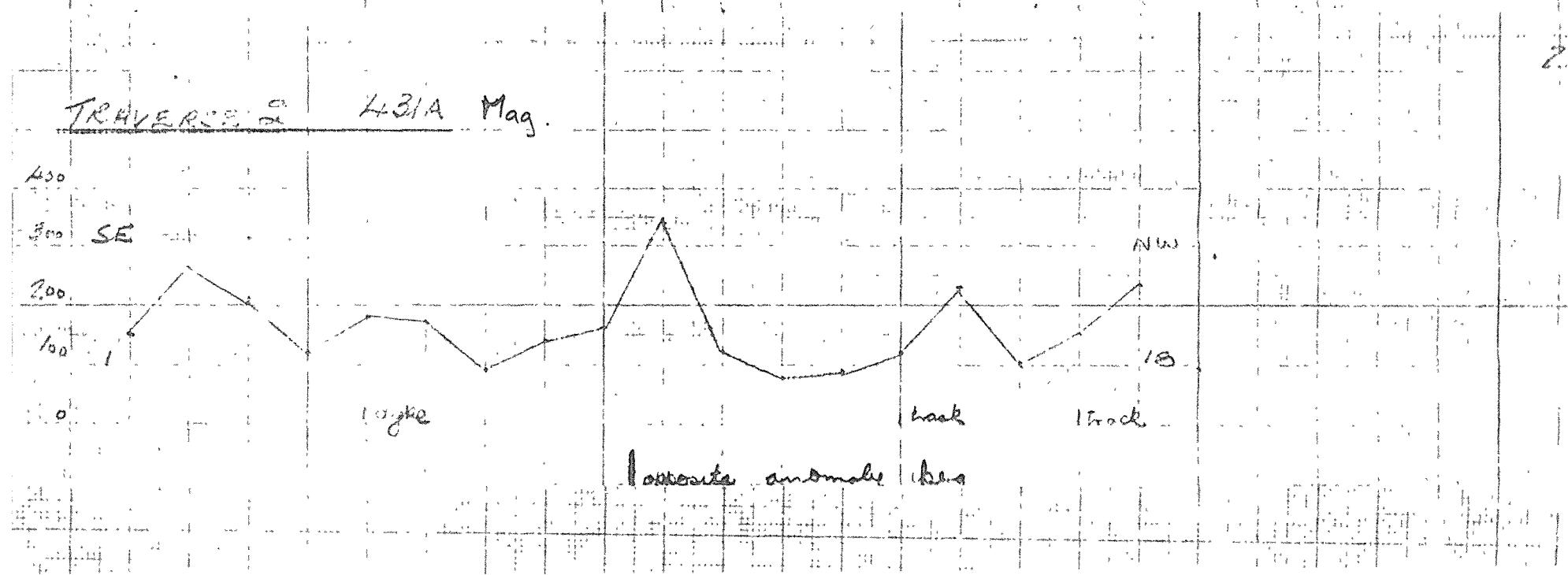
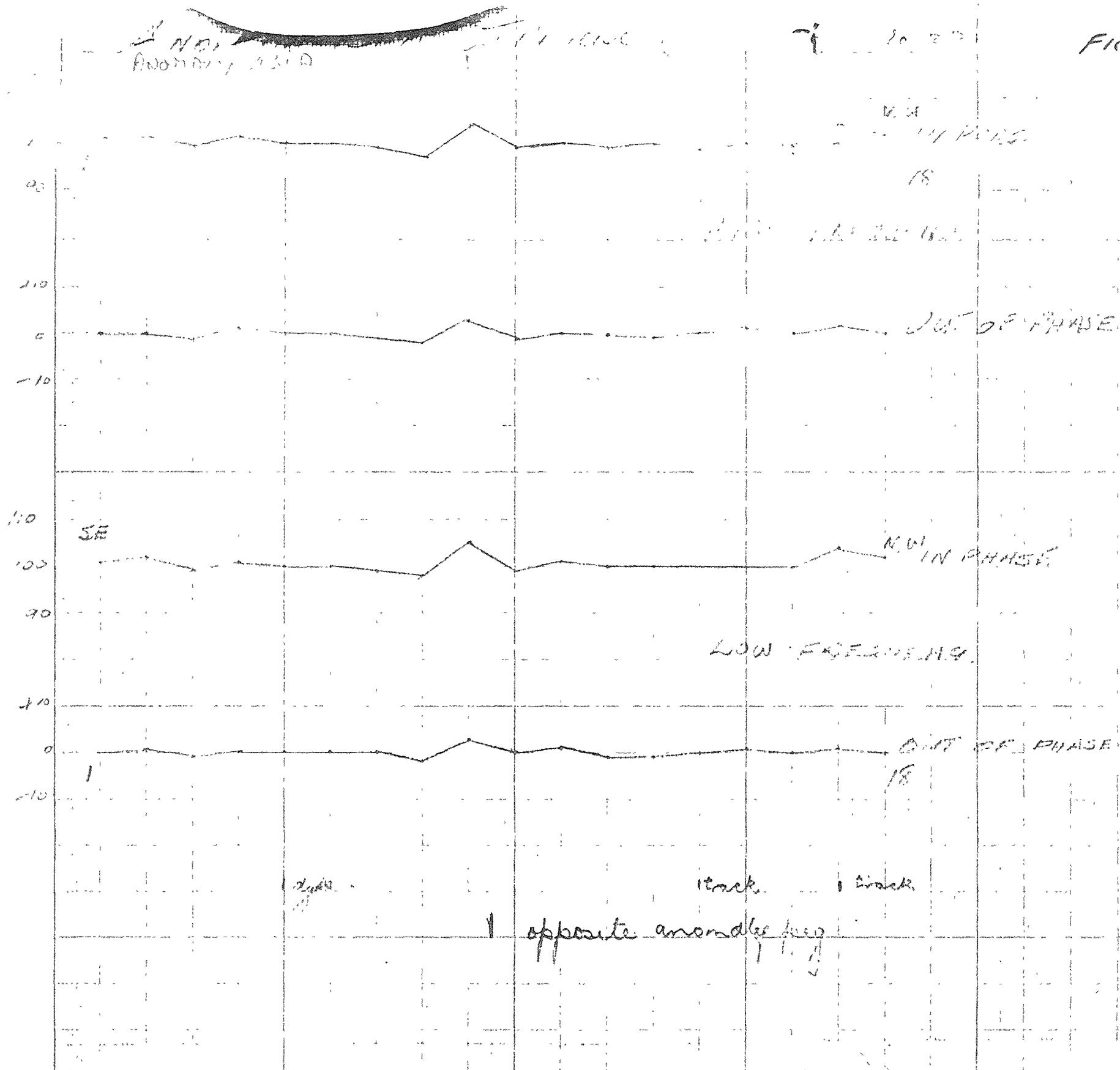
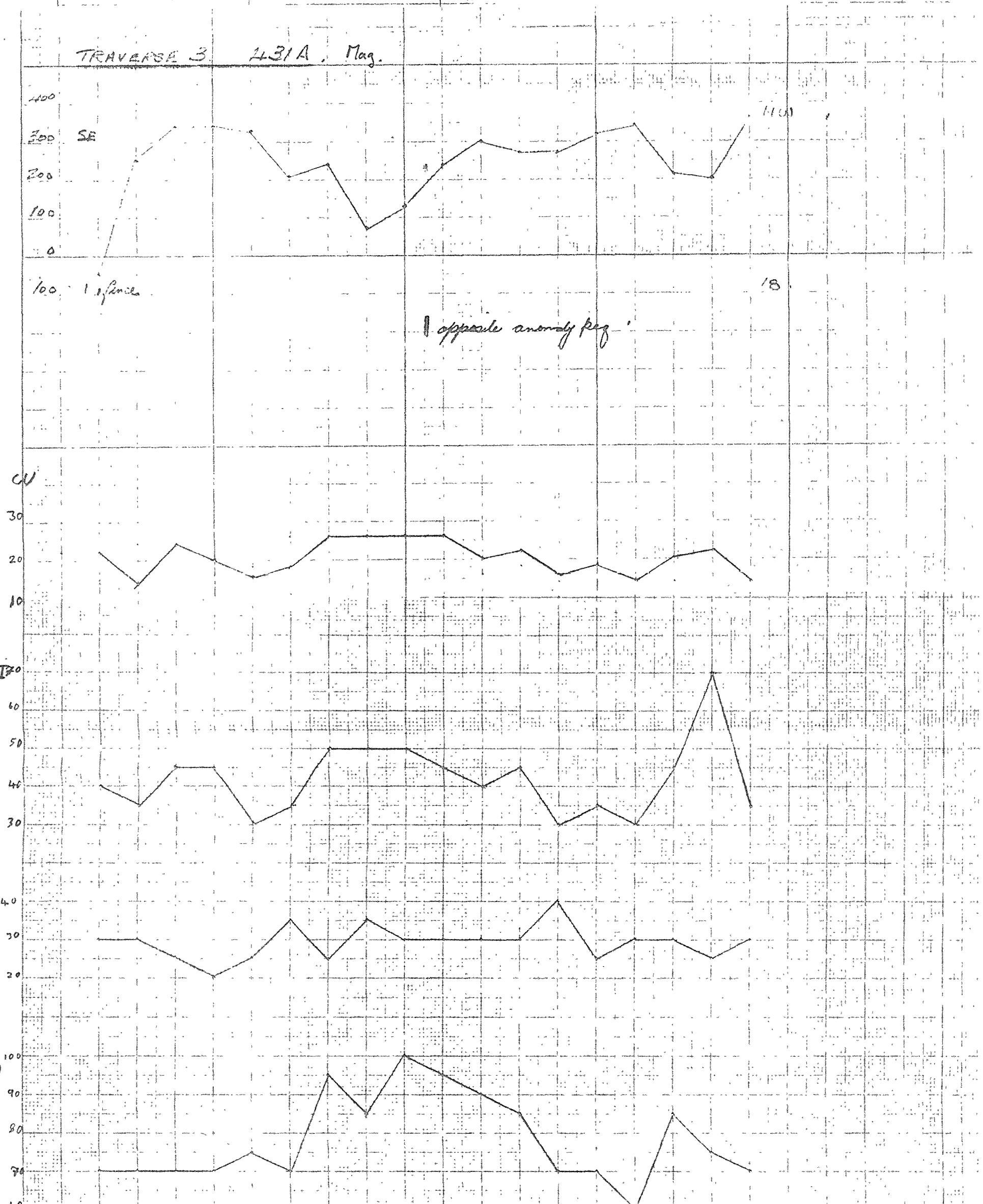
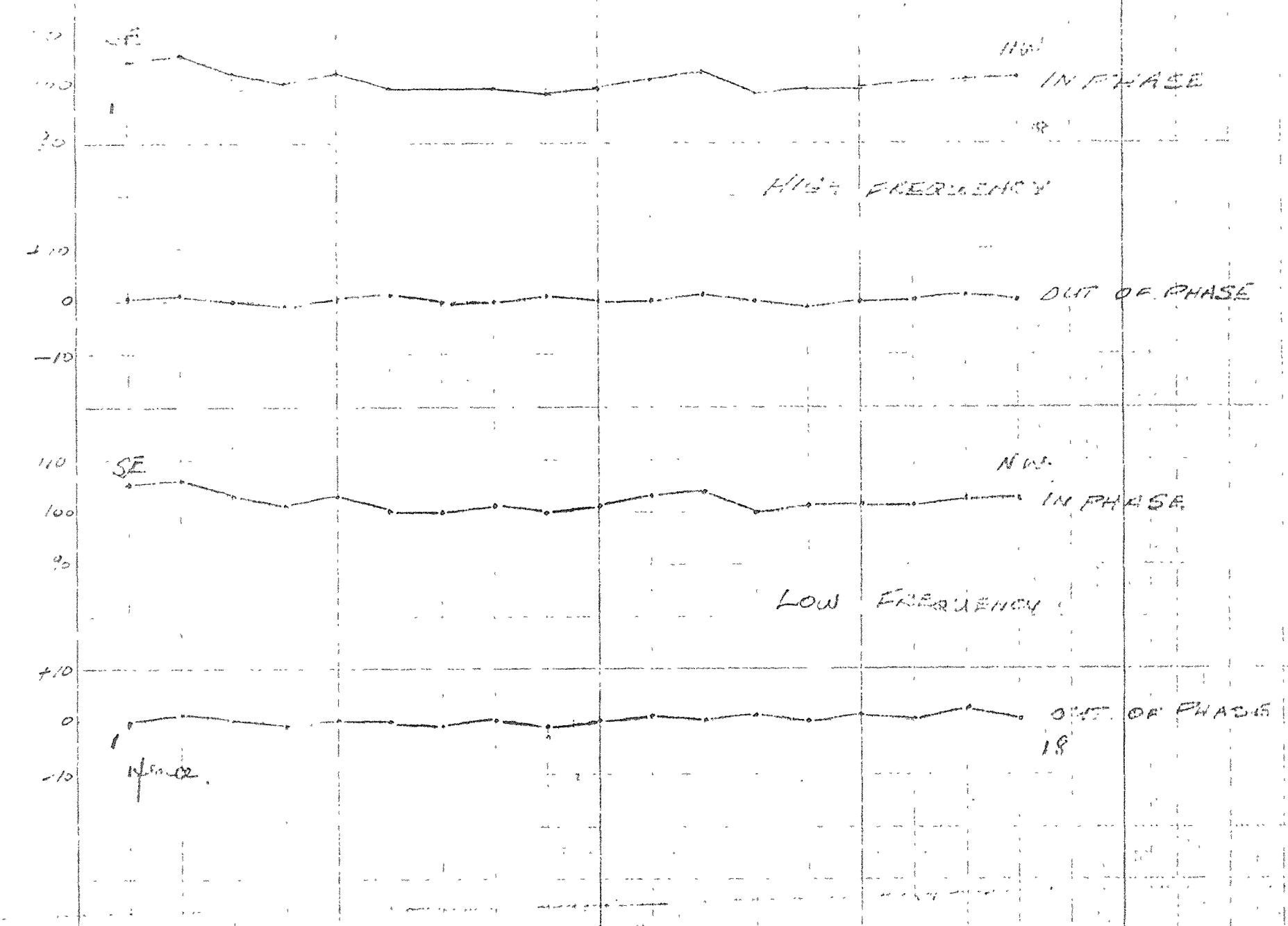


FIG 5

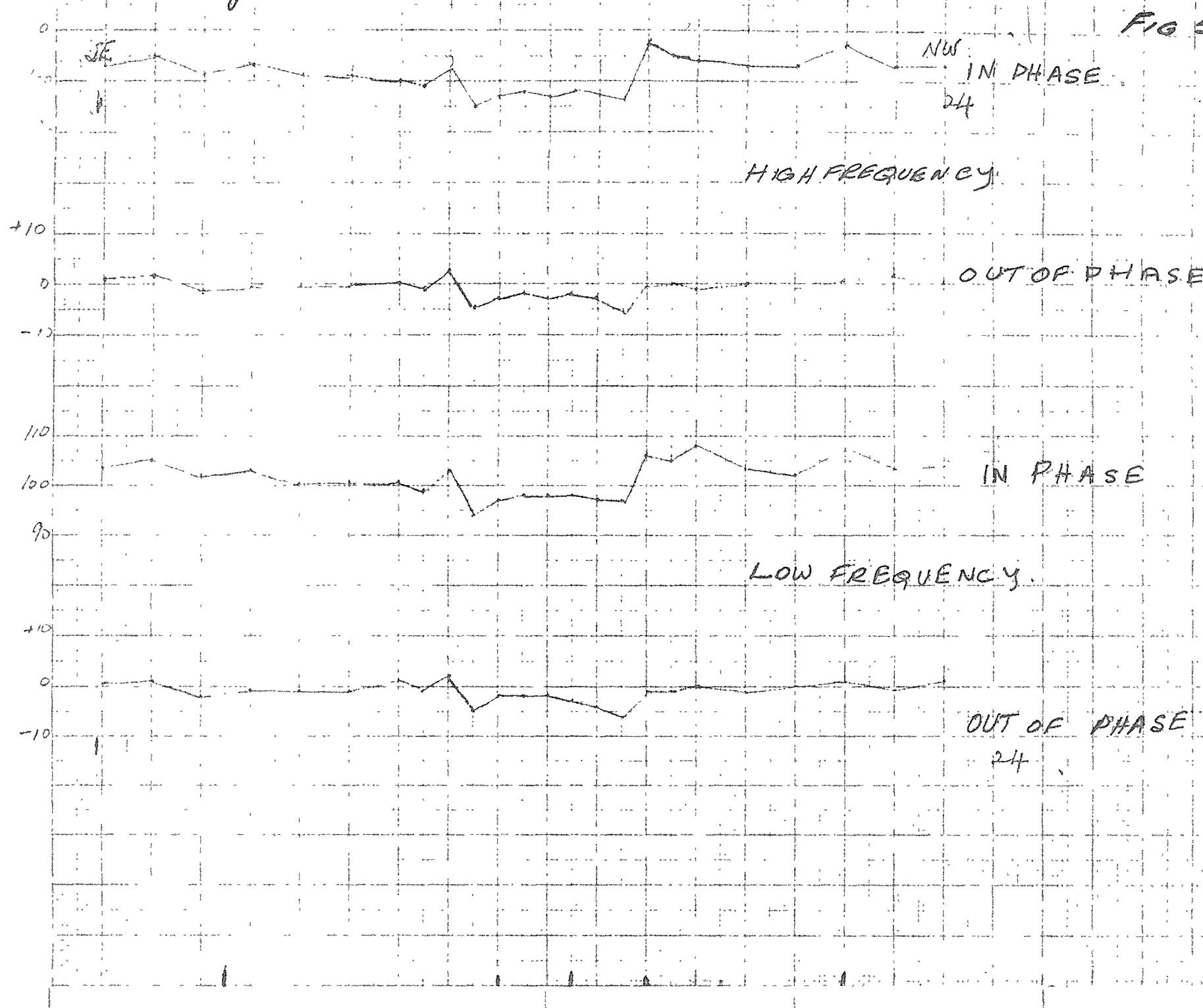
TRAVERSE 3 ANOMALY 431A.



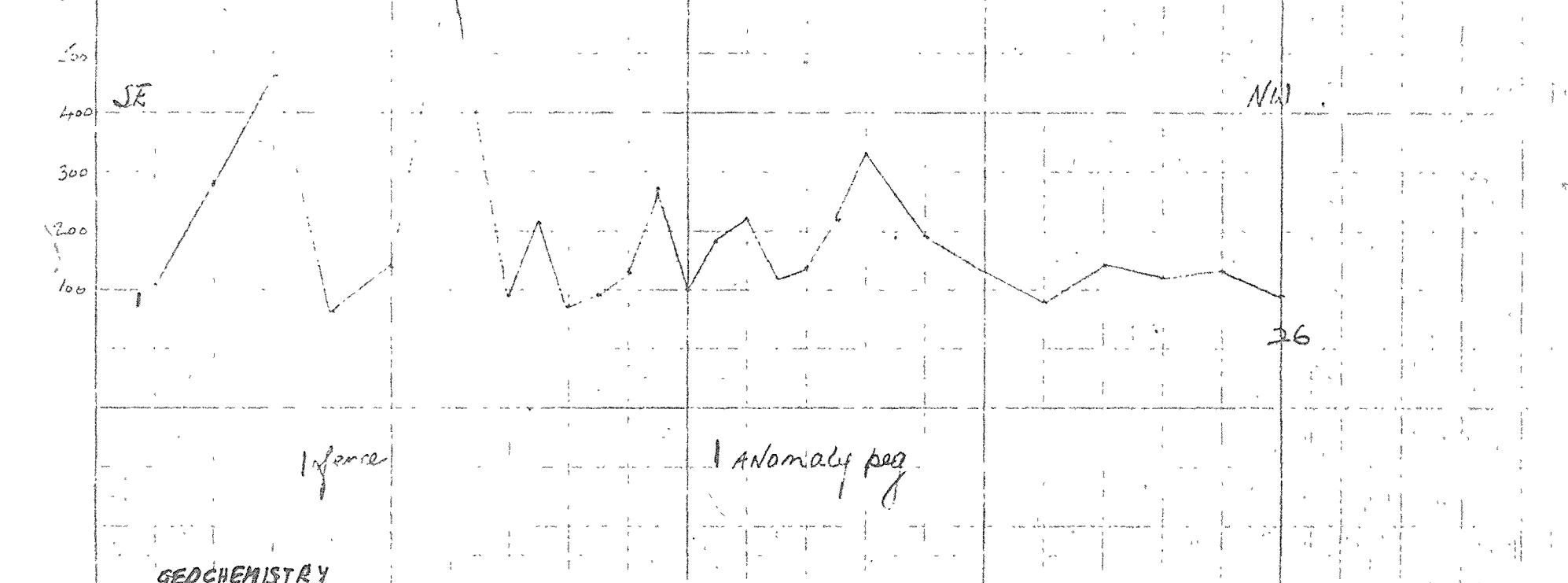
Anomaly A31A E.M. Gun for cable

03/62

FIG 5



MAGNETOMETER

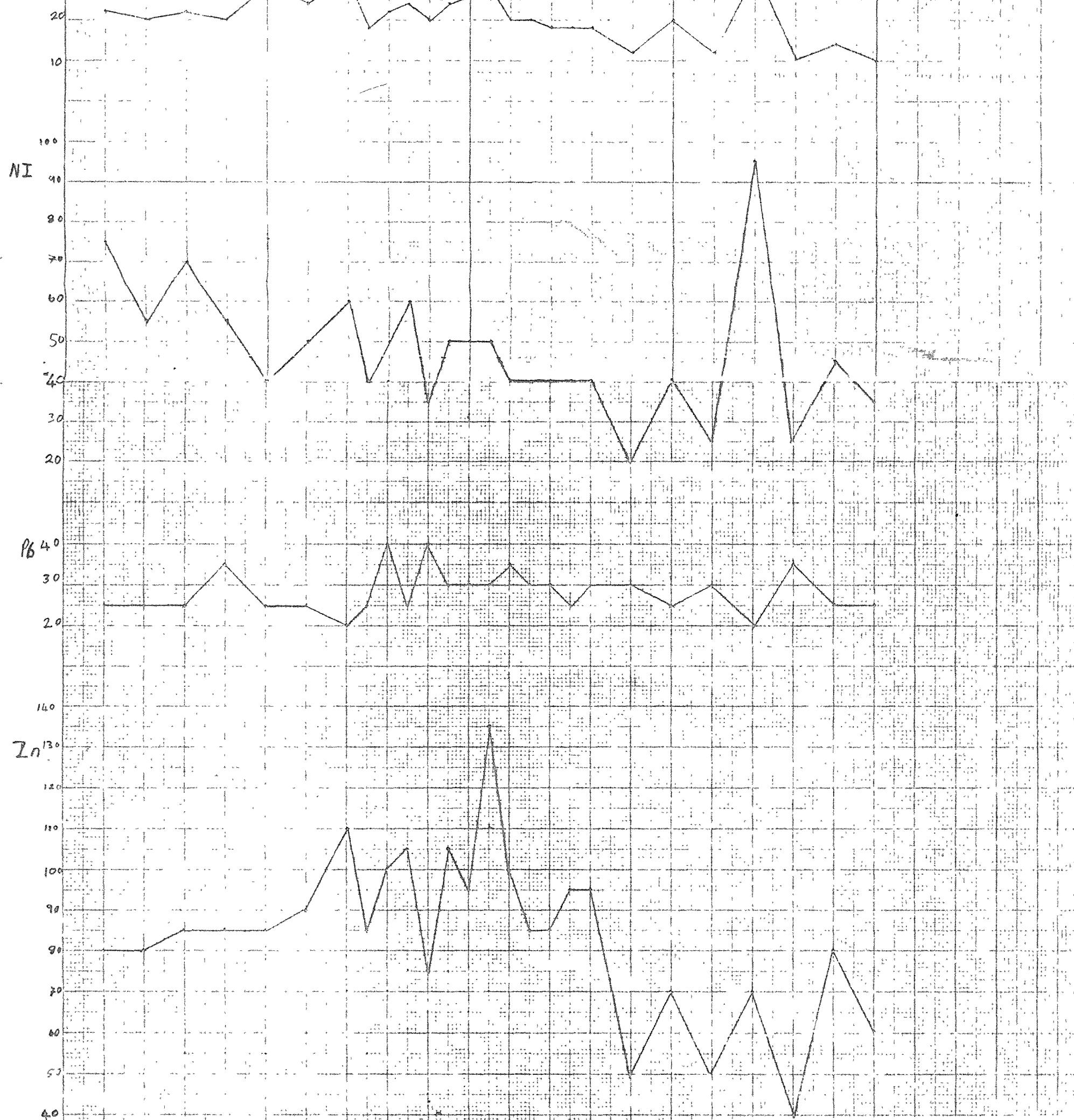


1st fence

Anomaly peak

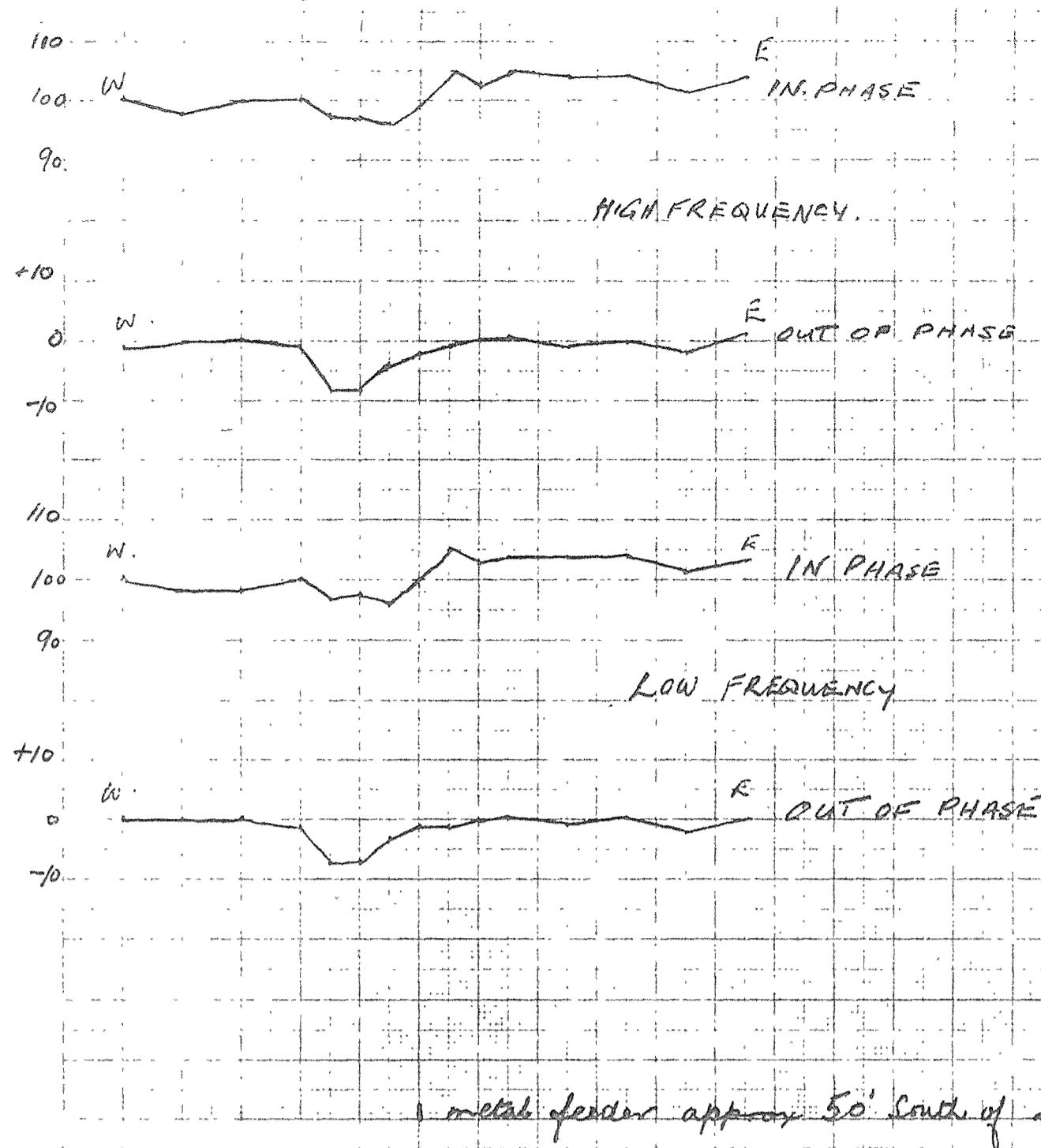
26

GEOCHEMISTRY



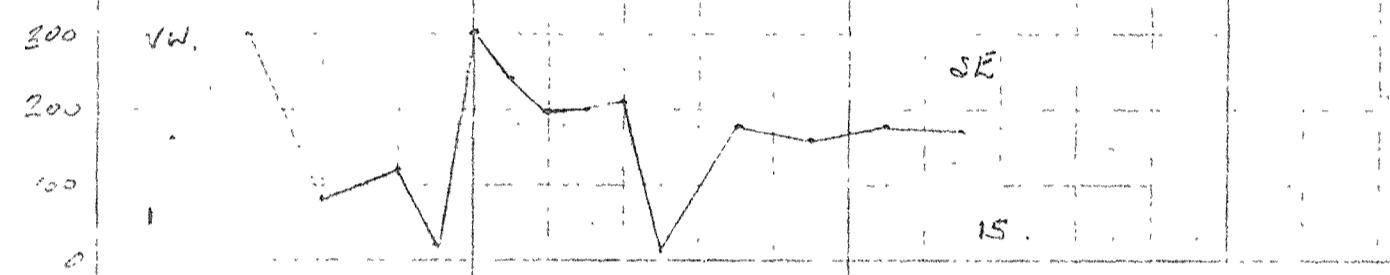
Anomaly 431B EN Gun 200ft cable

FIG. 5

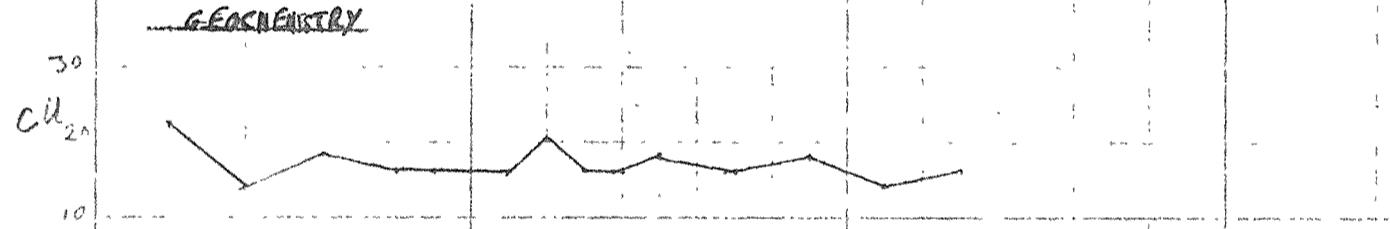


metal feeder approx 50' south of anomaly peg

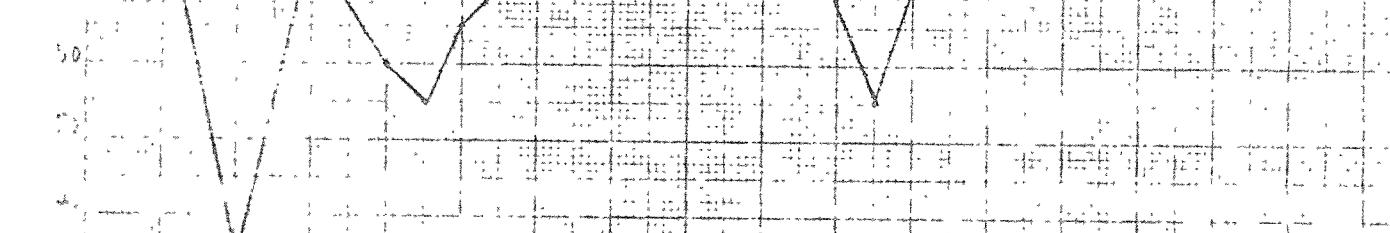
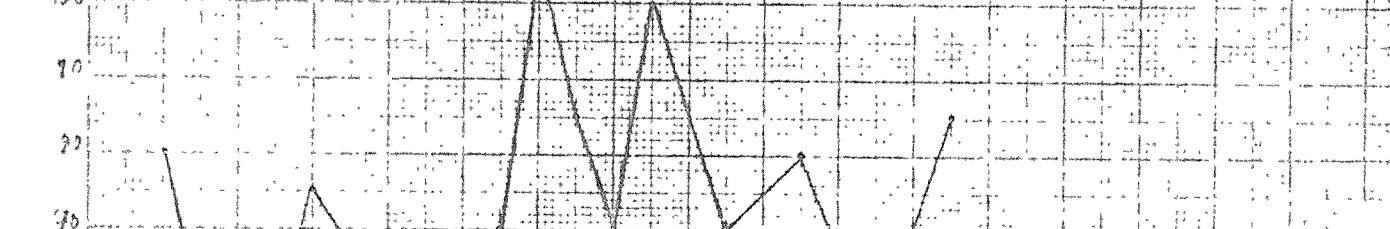
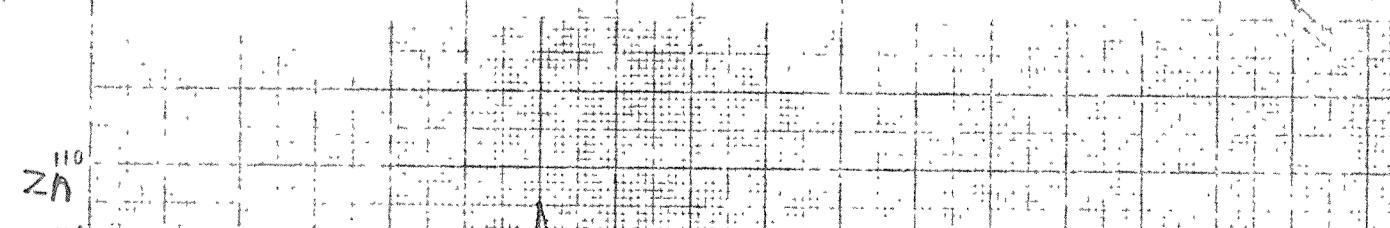
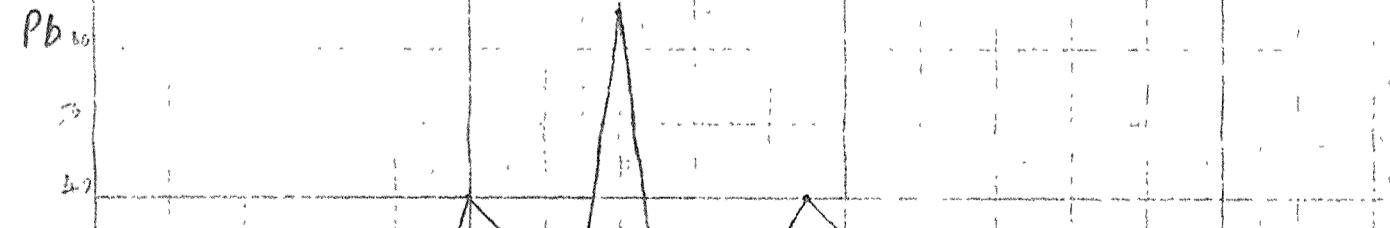
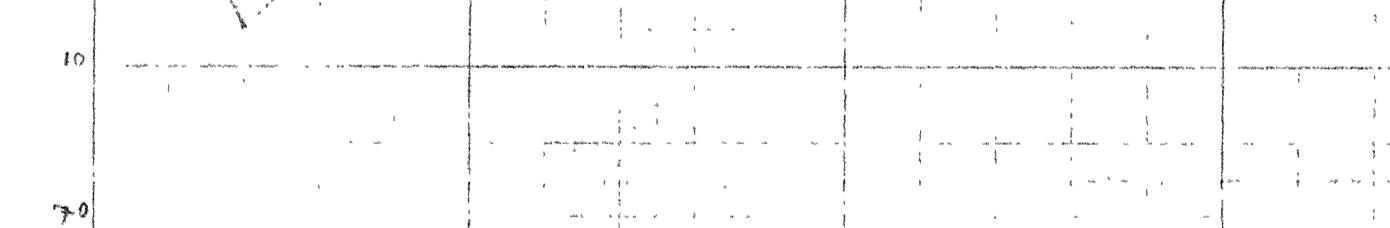
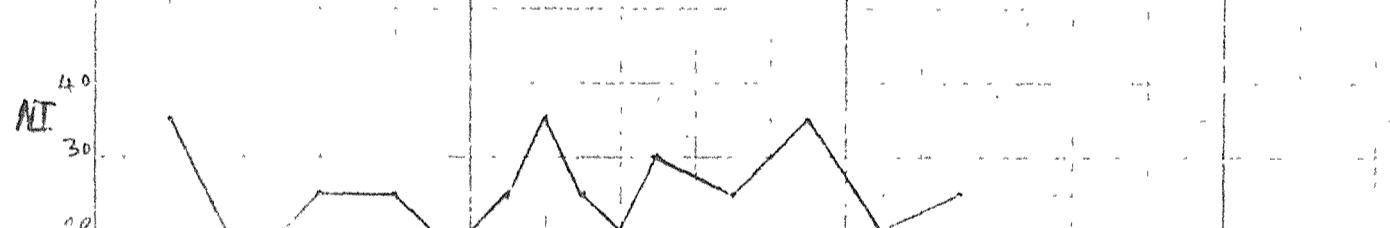
MAGNETOMETER



ANOMALY PEG.

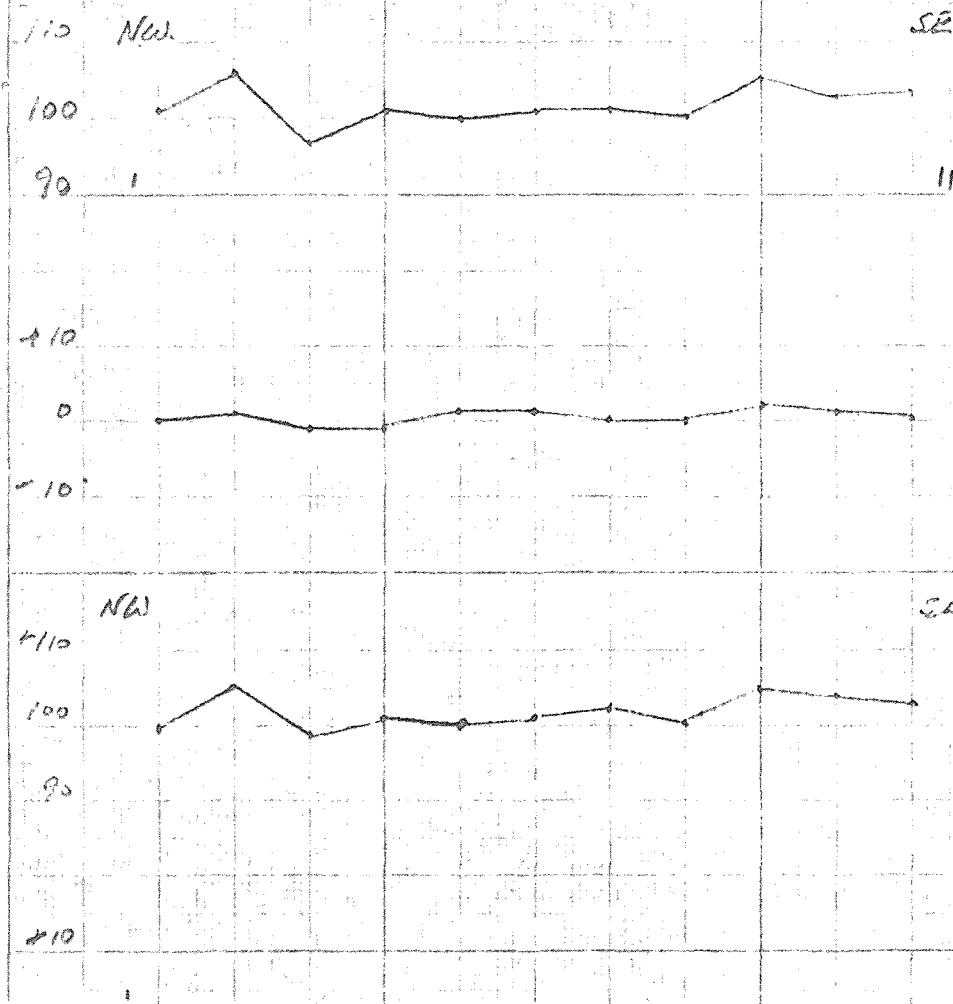


GEOCHEMISTRY

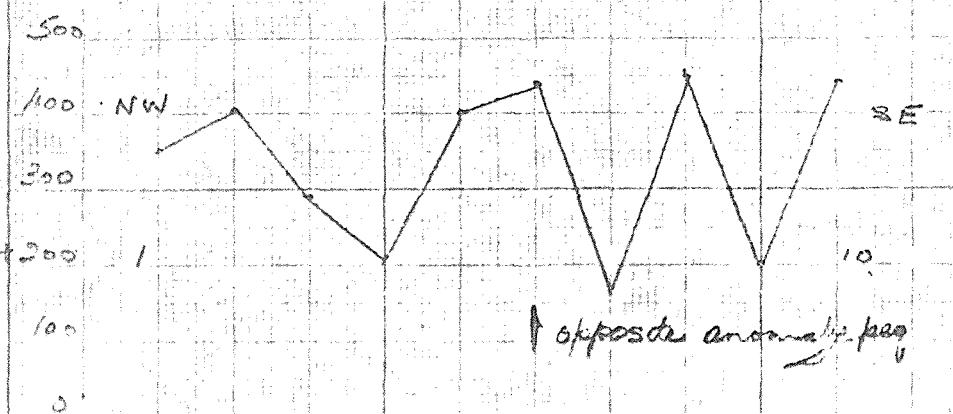


Anomaly 431B TRAVERSE 2.

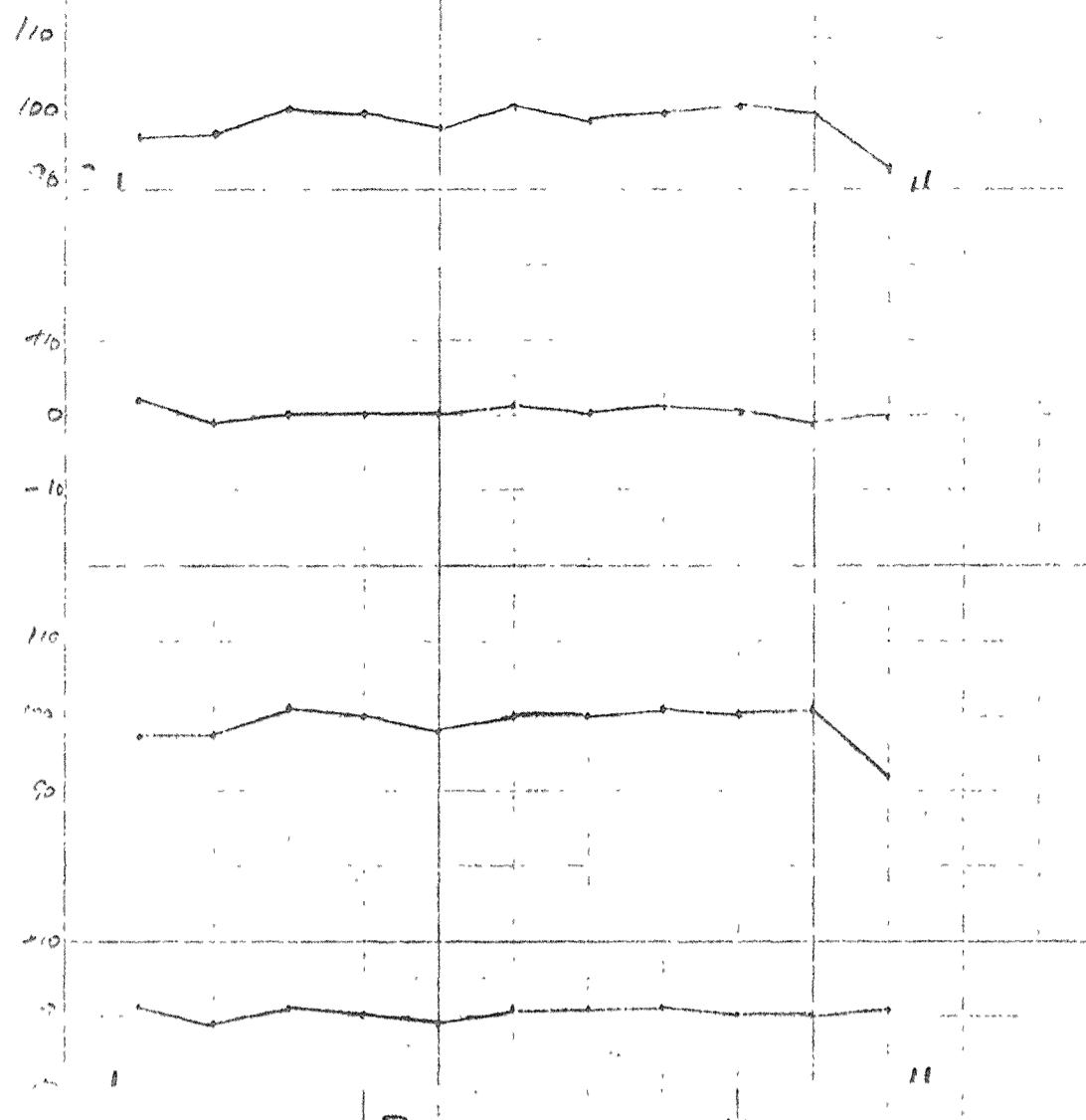
FIG. 5



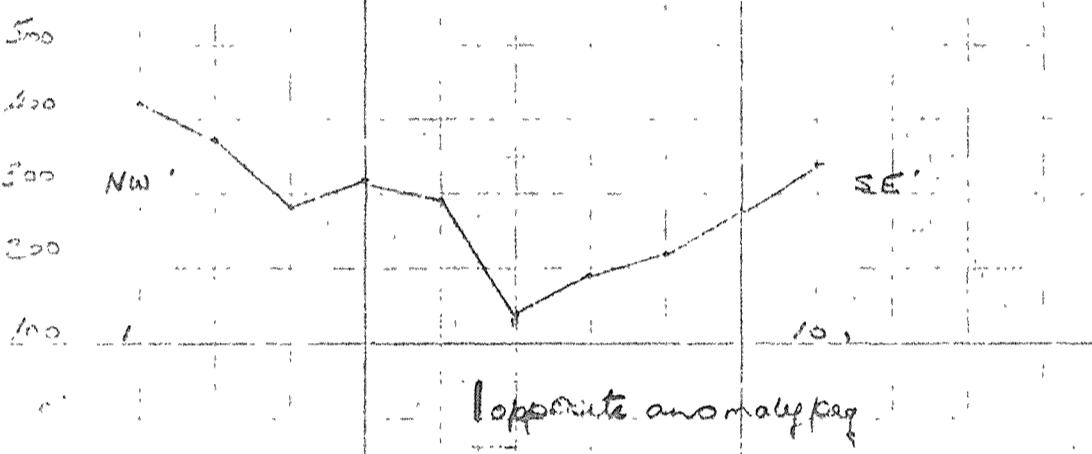
TRAVERSE 2 431B. Mag.



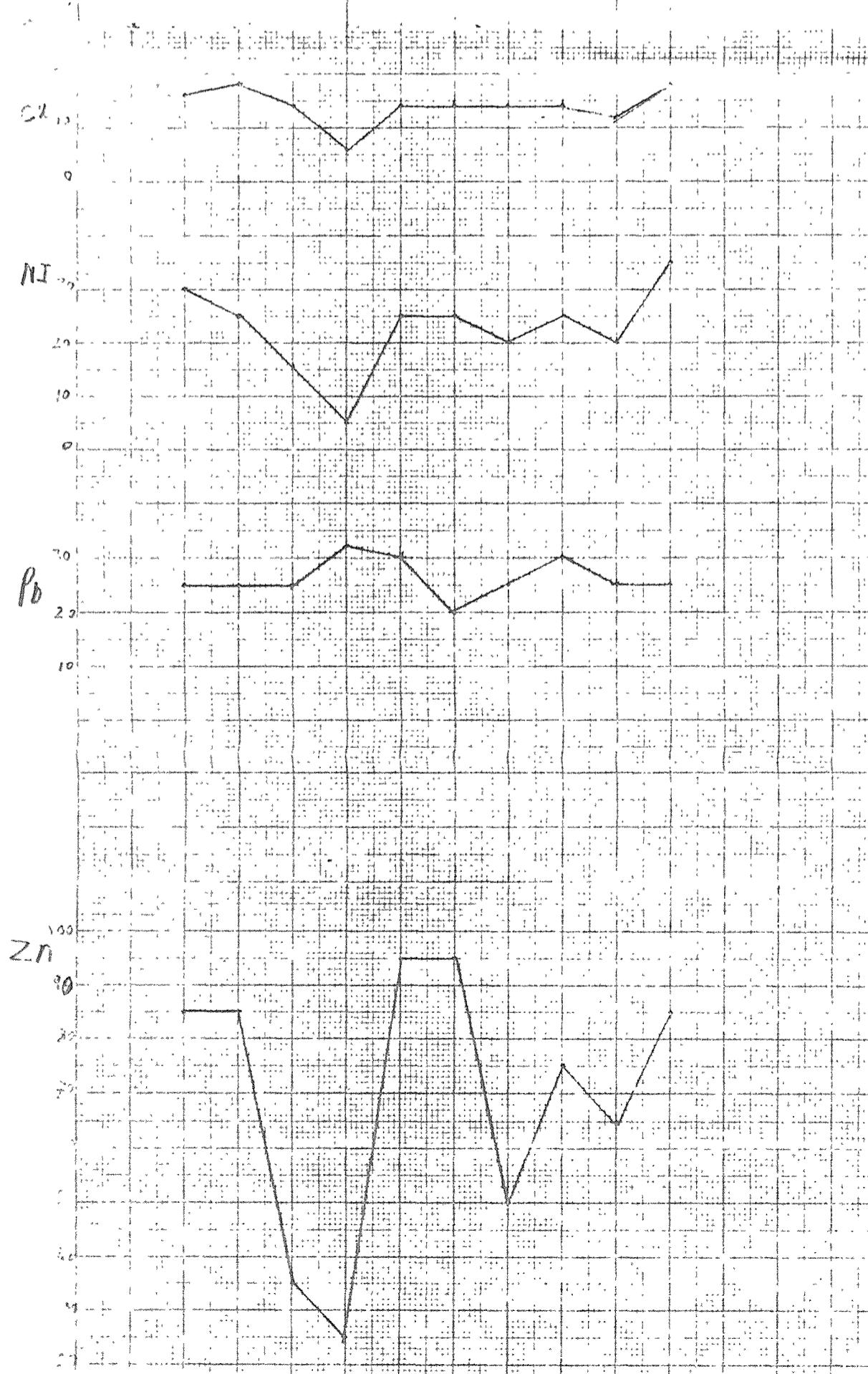
Anomaly 431B TRAVERSE 3.



TRAVERSE 3. 431B Mag



Opposite anomaly peaks

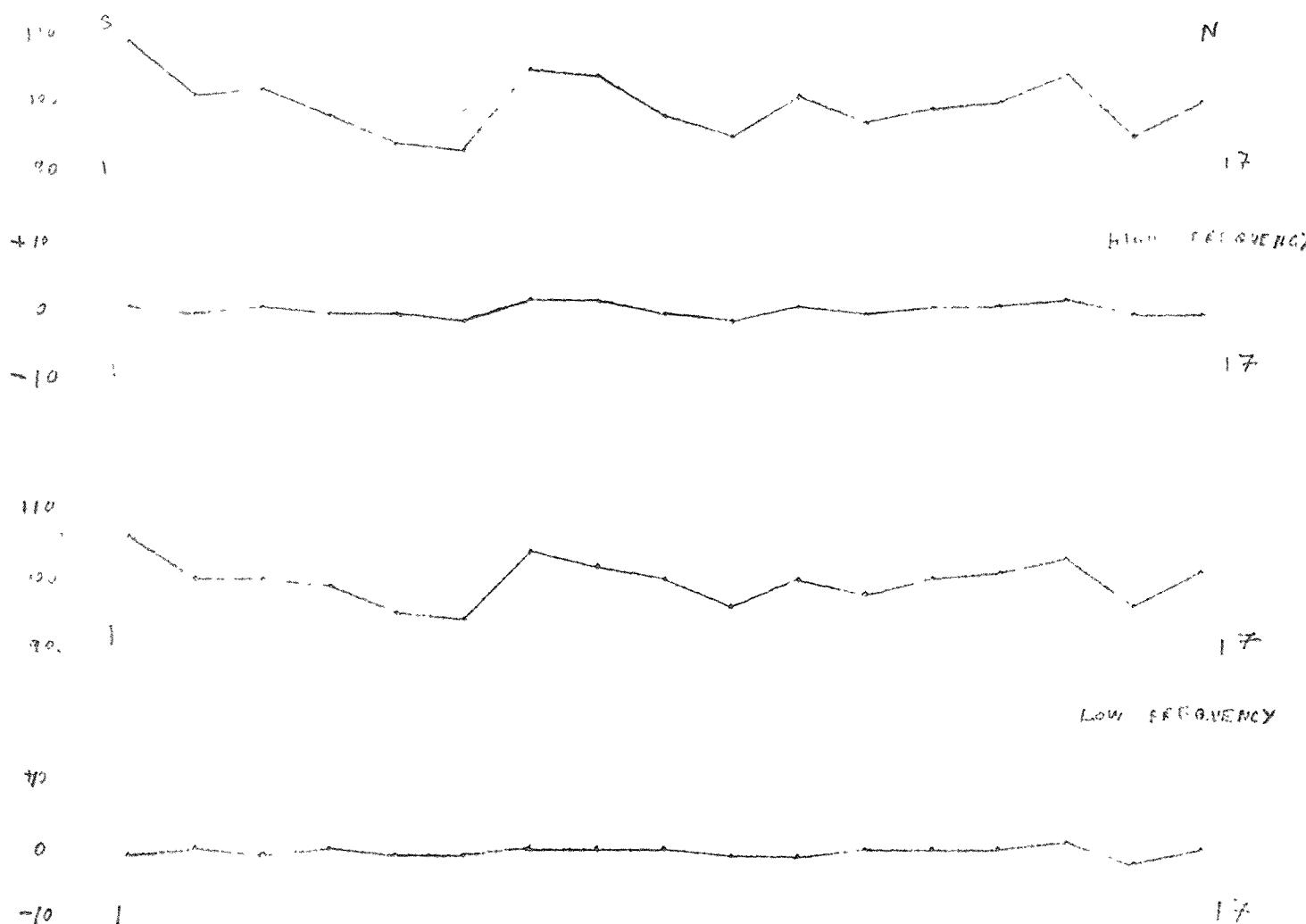


ANOMALY 433A TRAVERSE 3.

EM. GUN 200 ft cable

11/5/72

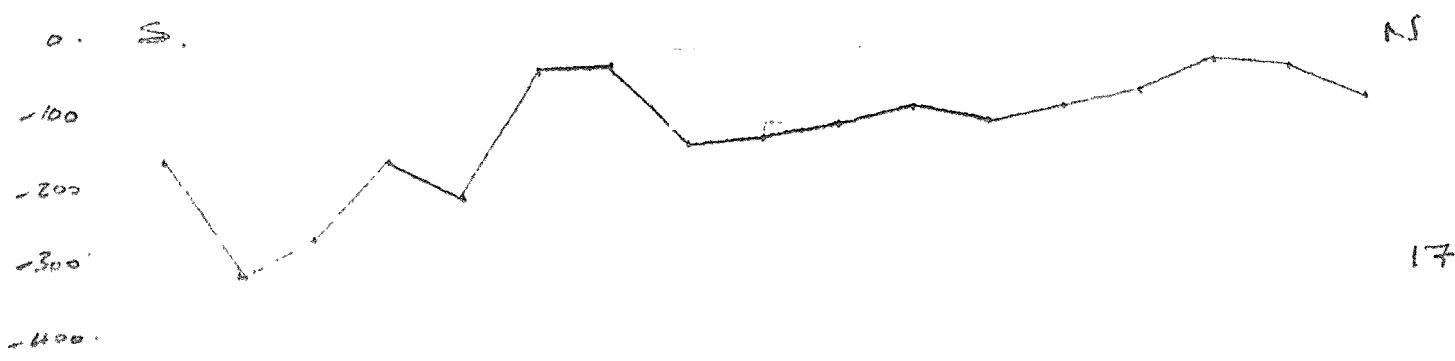
Fig. 5.



433A TRAVERSE 3.

MAG.

19-5-72



ANOMALY 433A Primary TRAVERSE to M Gun Zeeft cable FIG. 5

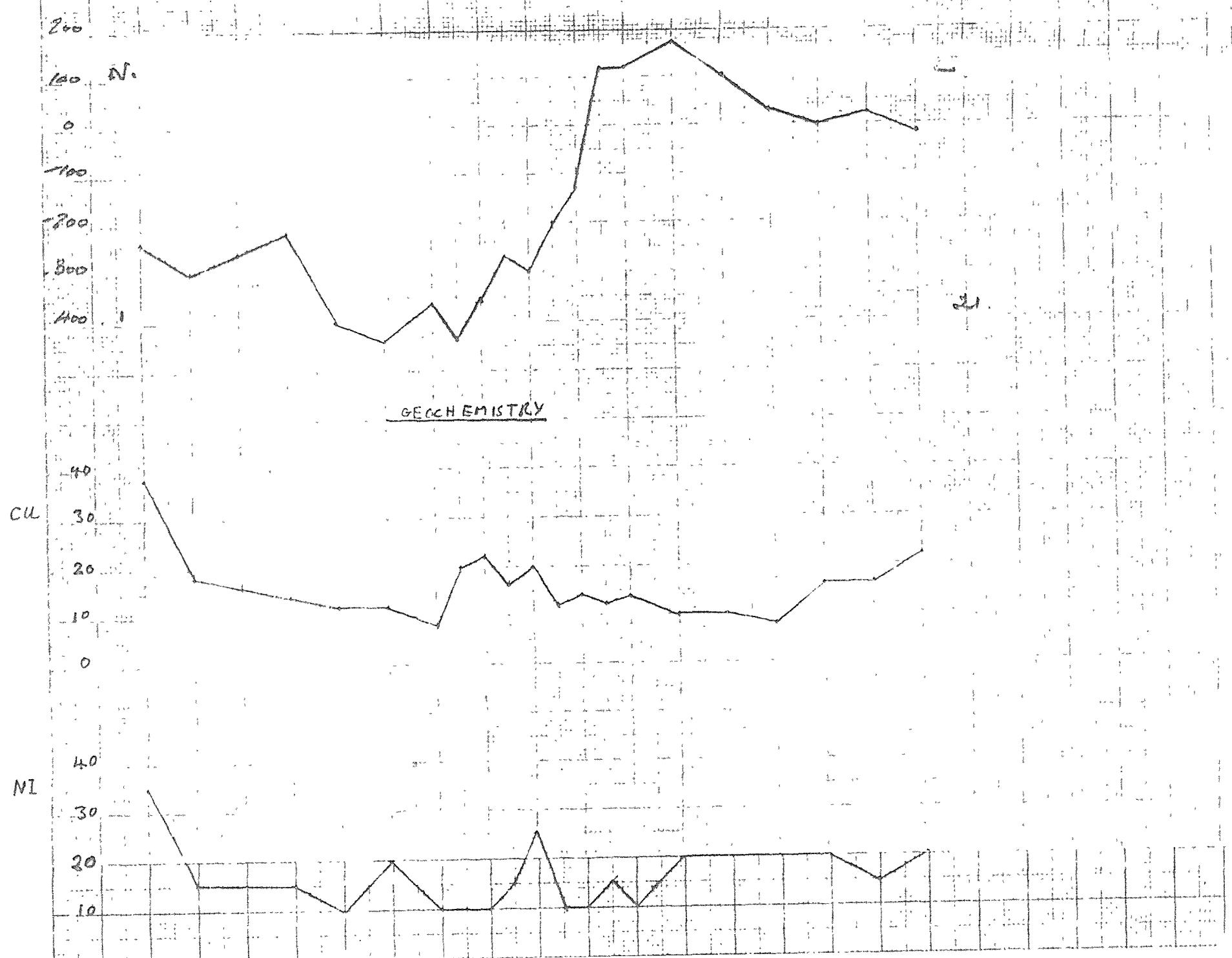
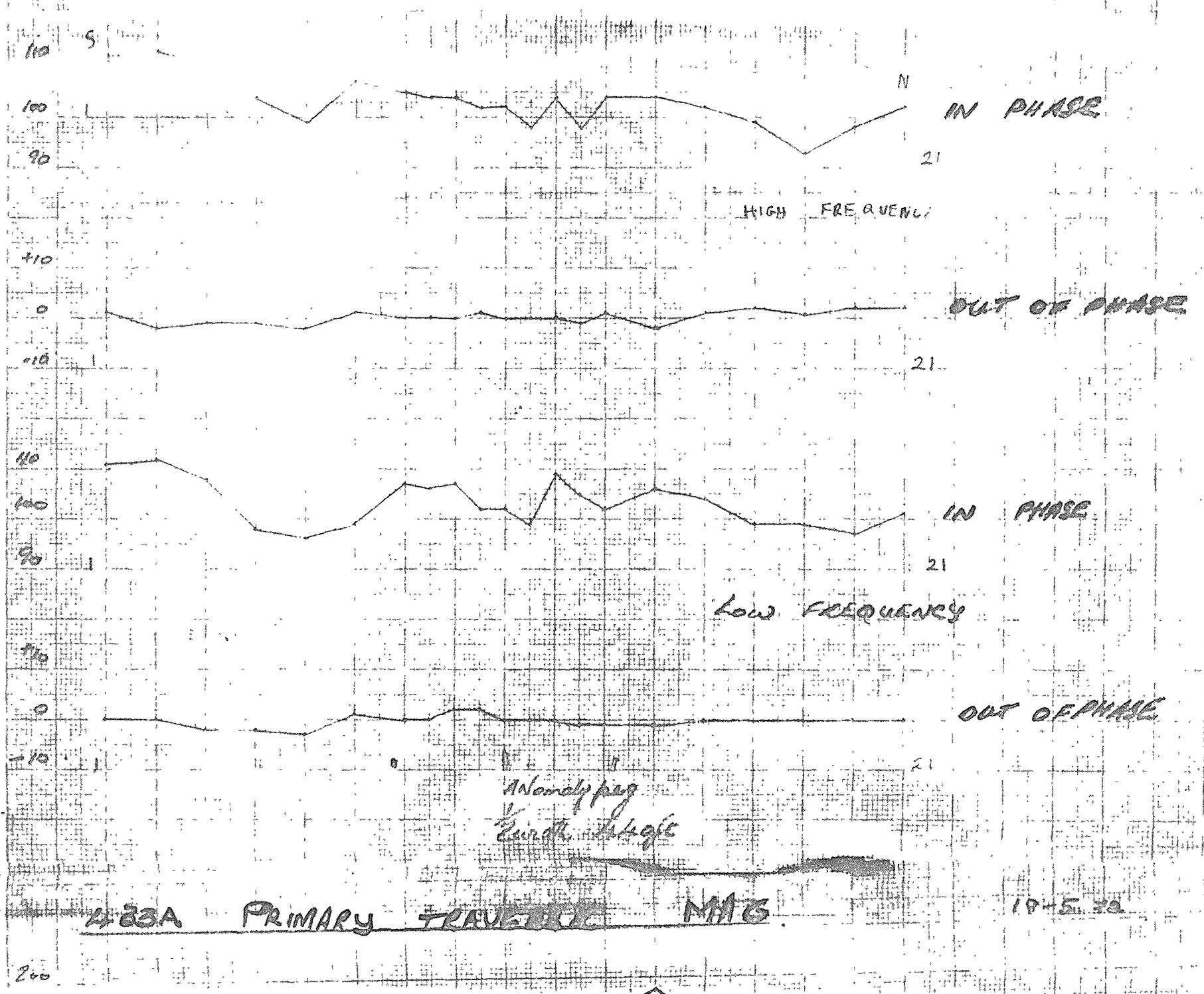
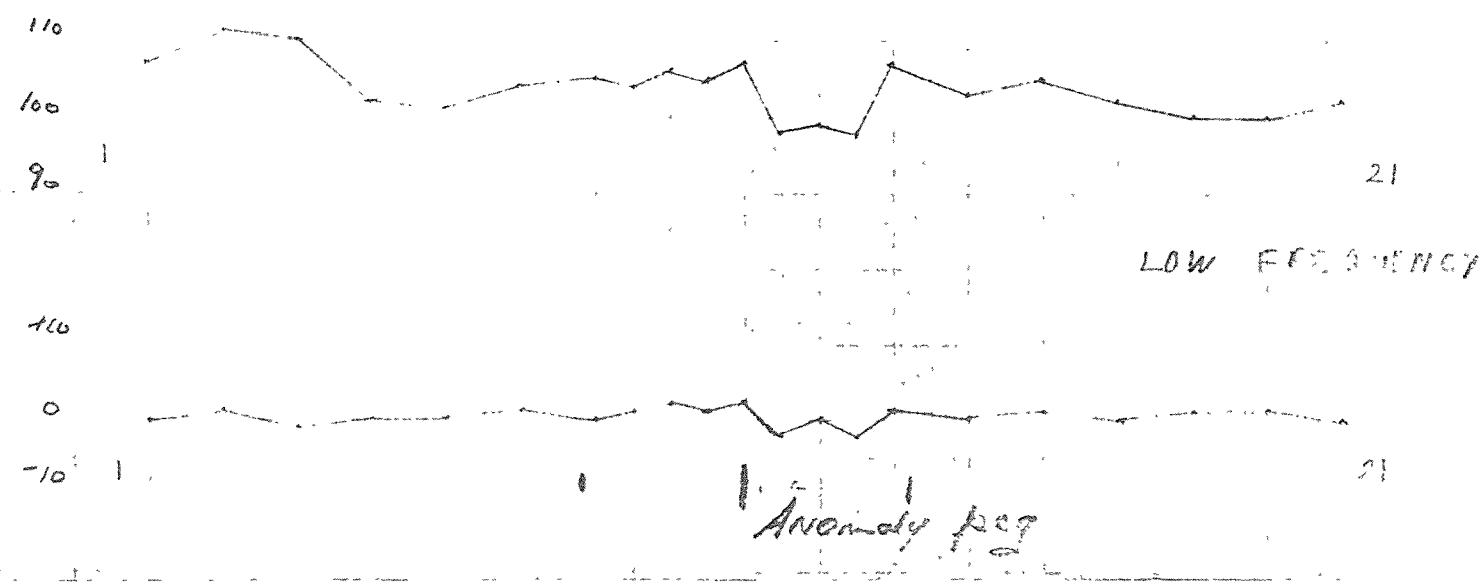
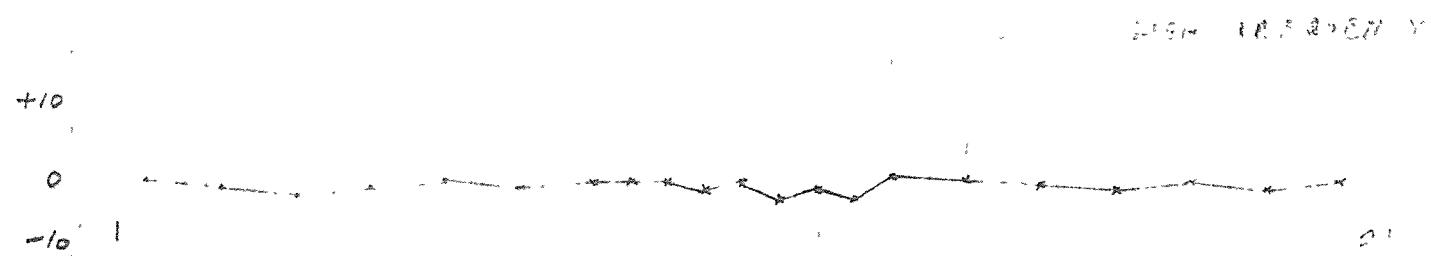
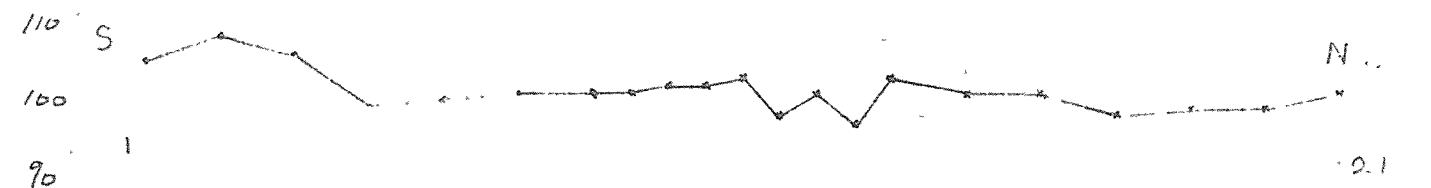


Fig. 5.

ANOMALY 4433A PRIMARY TRAVERSE (REPEAT) E.M. GNS. 200ft cable

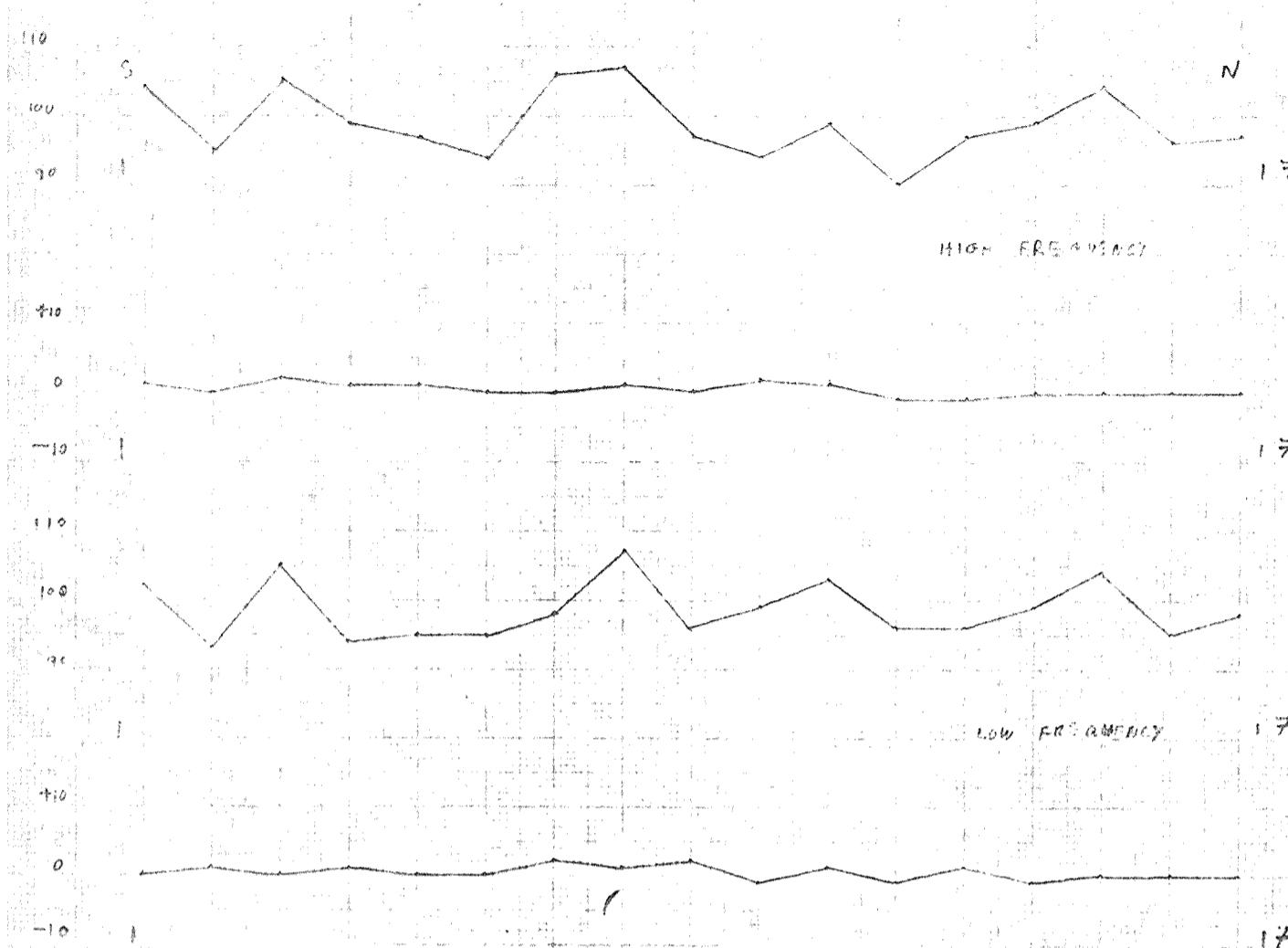


ANOMALY 433 A. TRAVERSE 2.

EM. GUN. 200 ft. cable.

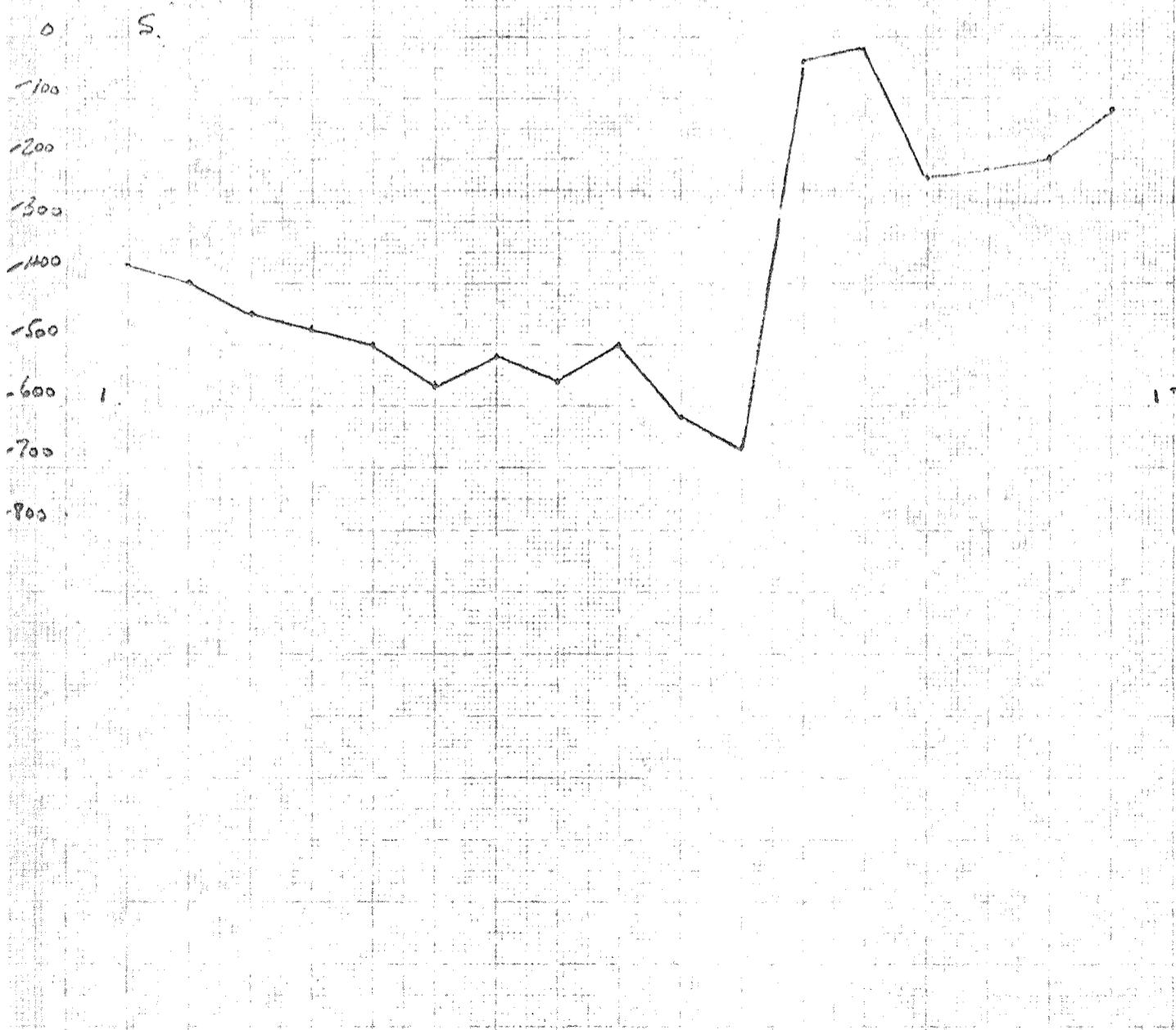
11/5/72

Fig. 5.



433 A. TRAVERSE 2. MAG.

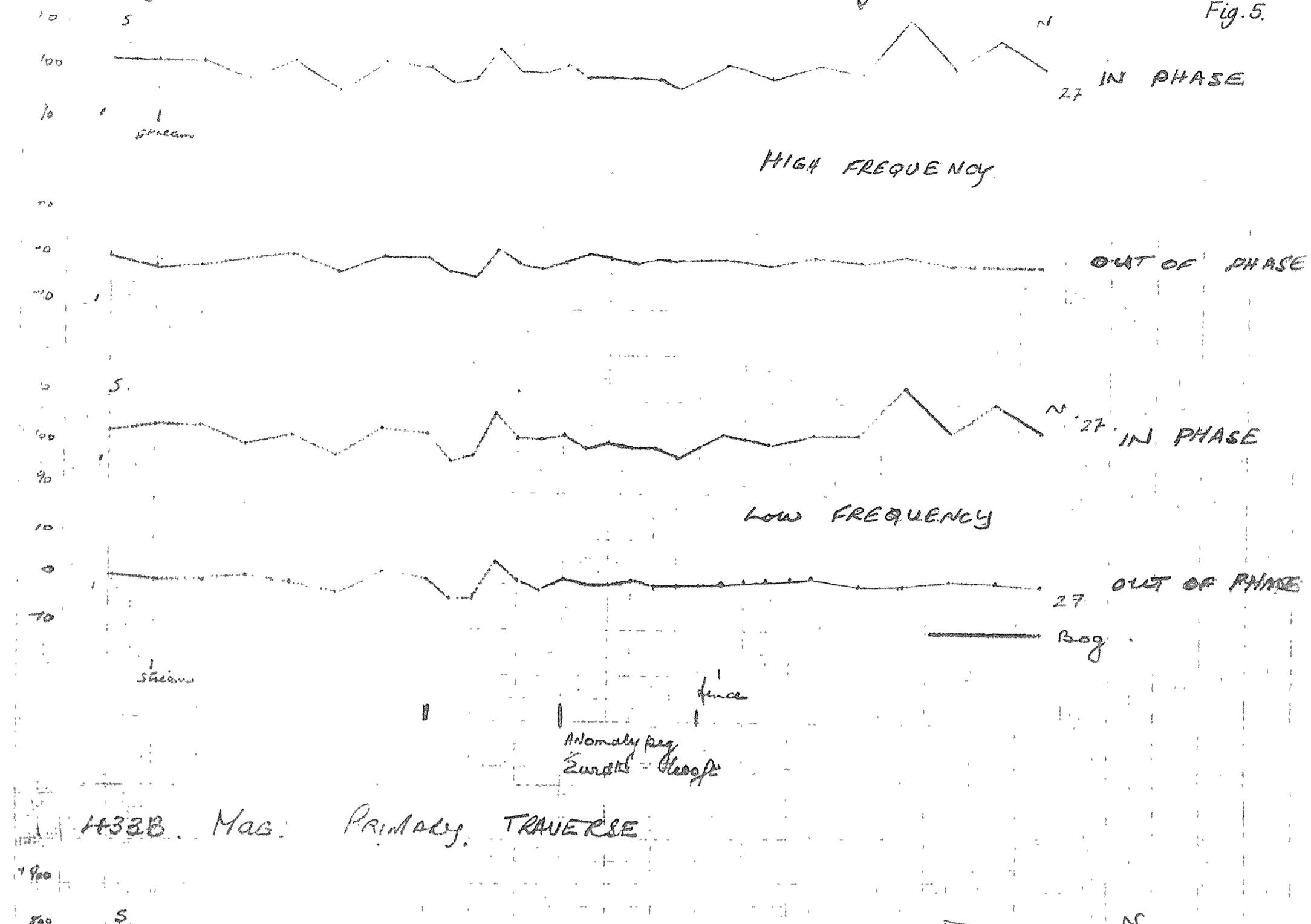
19-5-72.



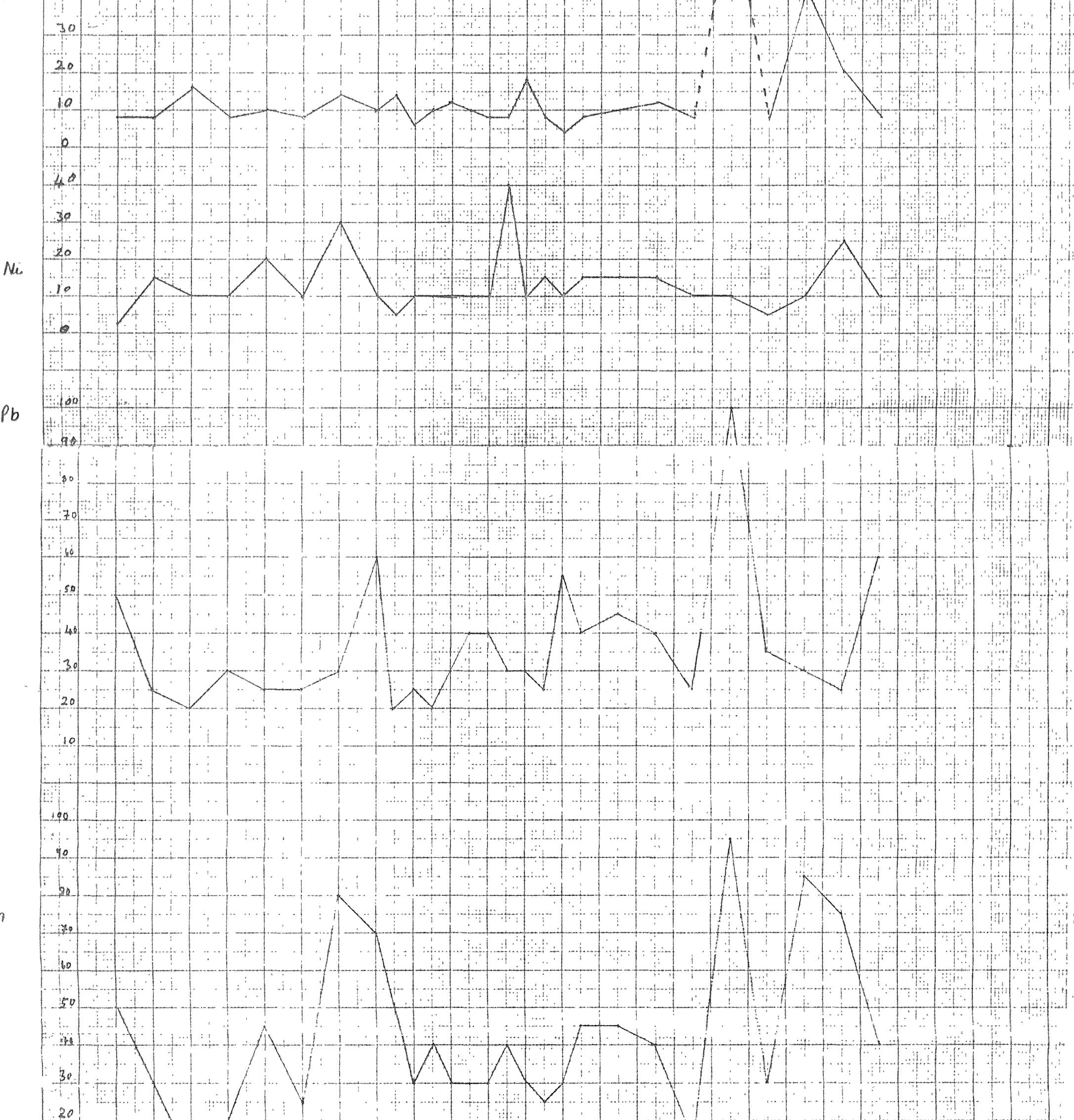
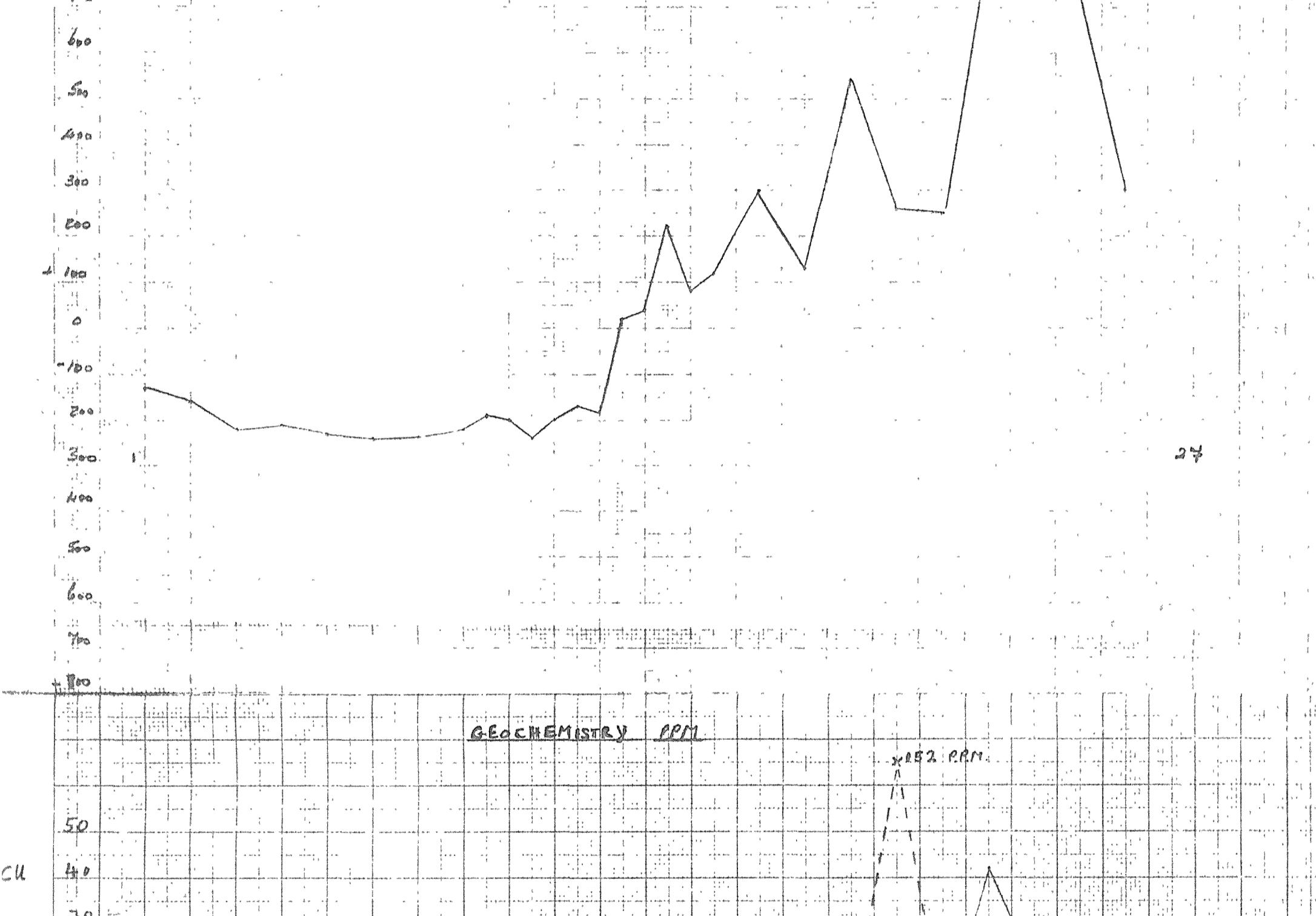
Anomaly 433B PRIMARY TRAVERSE E 19 Gem. 200 ft cable

11-5-72

Fig. 5.



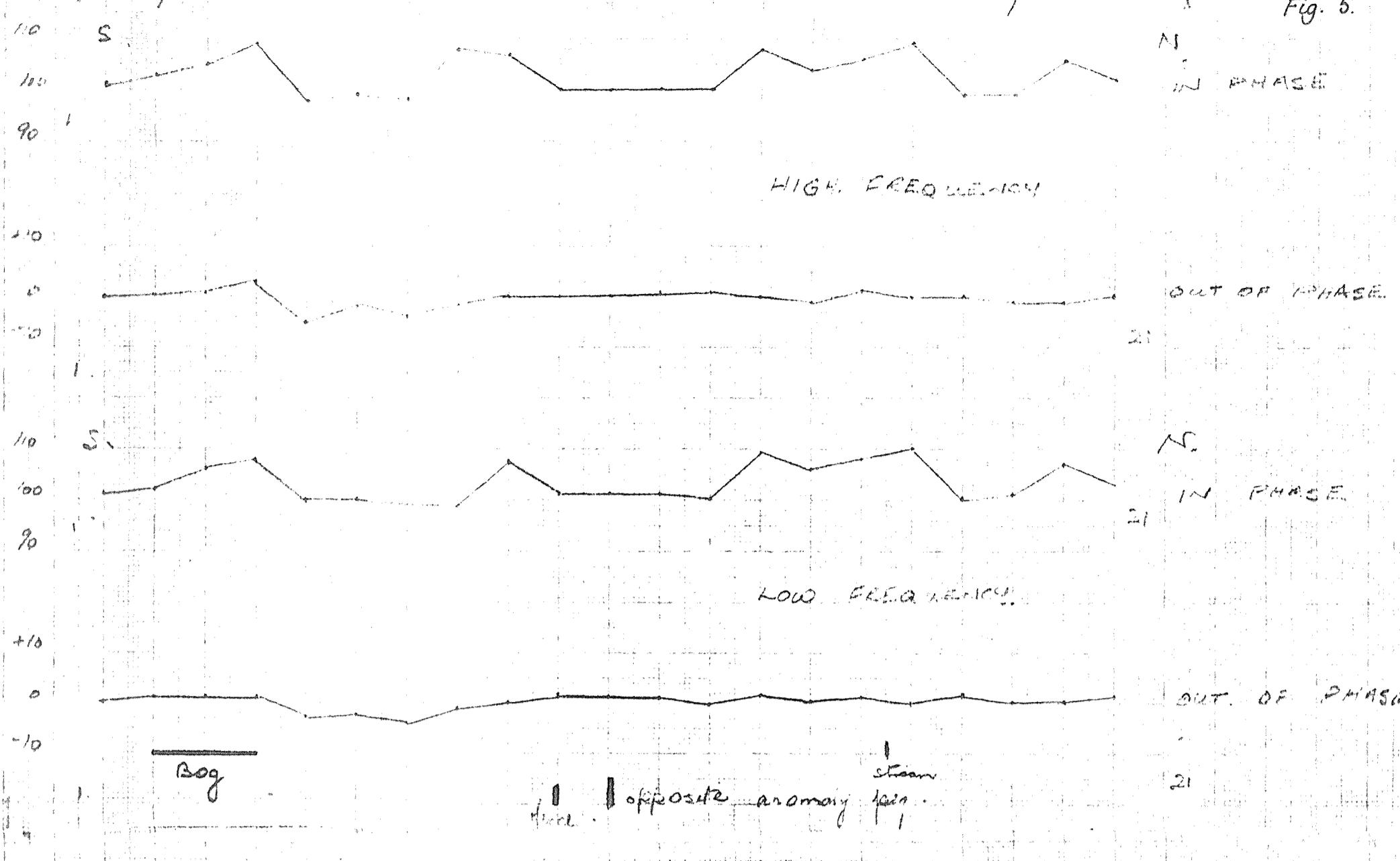
433B. Mag. Primary. TRAVERSE



Anomaly 433B Transverse 2 EM Scan, 200 ft cable

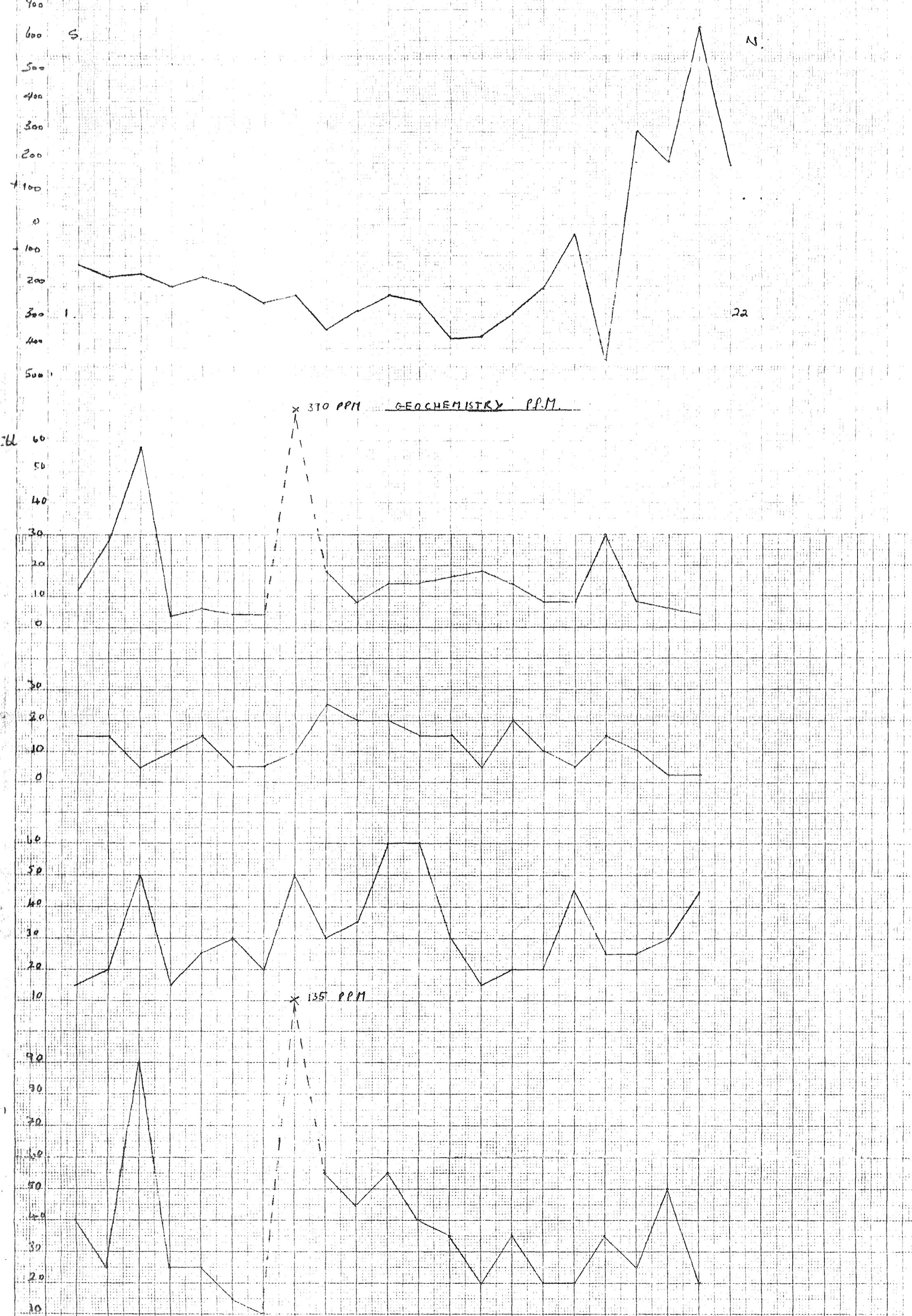
10-5-72

Fig. 5.

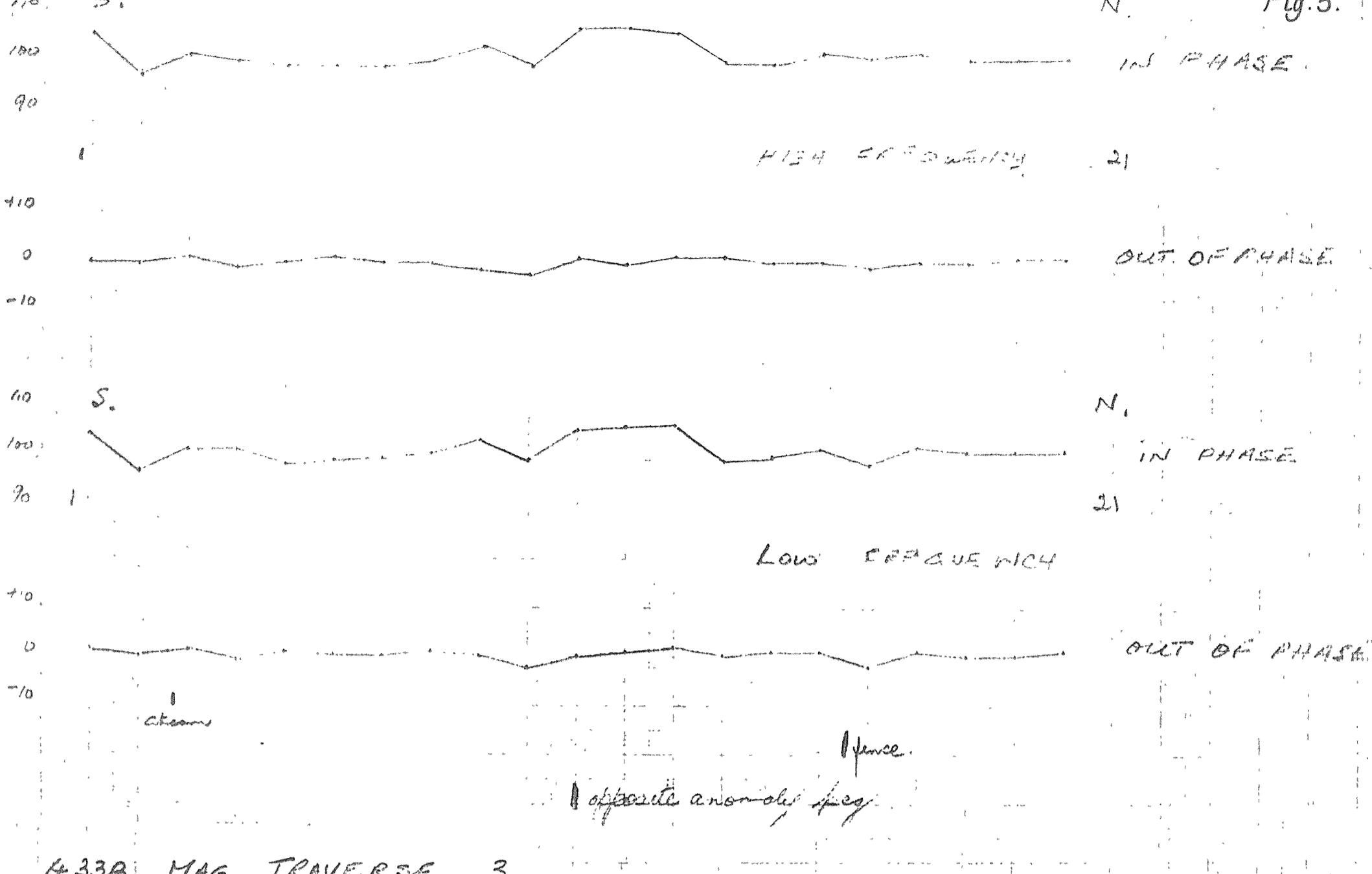


433B MAG. TRAVERSE 2

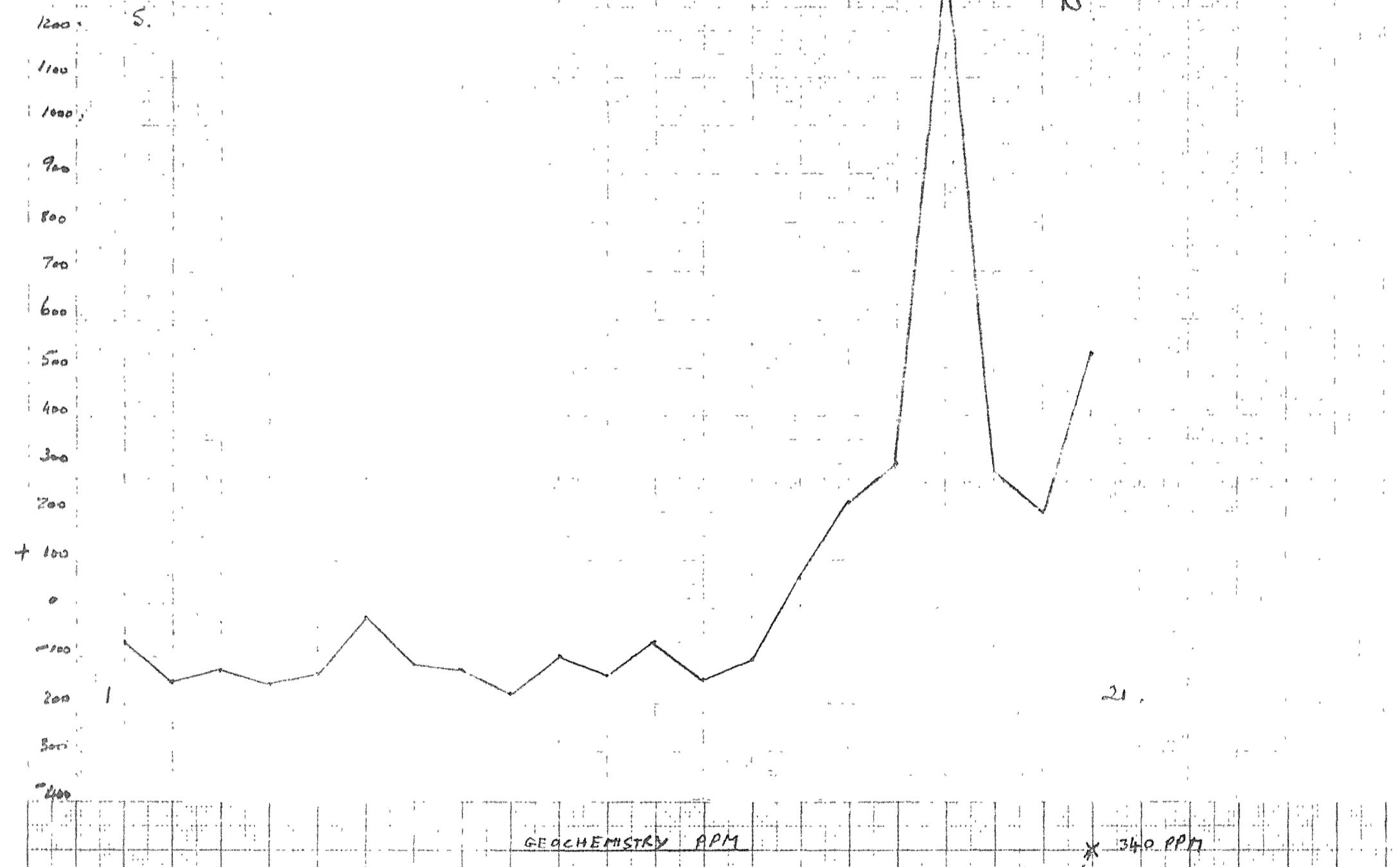
19-5-72



Abnormality depth: TRAVERSE 3 E 17 Sun Purple Coalbed, 10-25-46 N. Fig. 5.

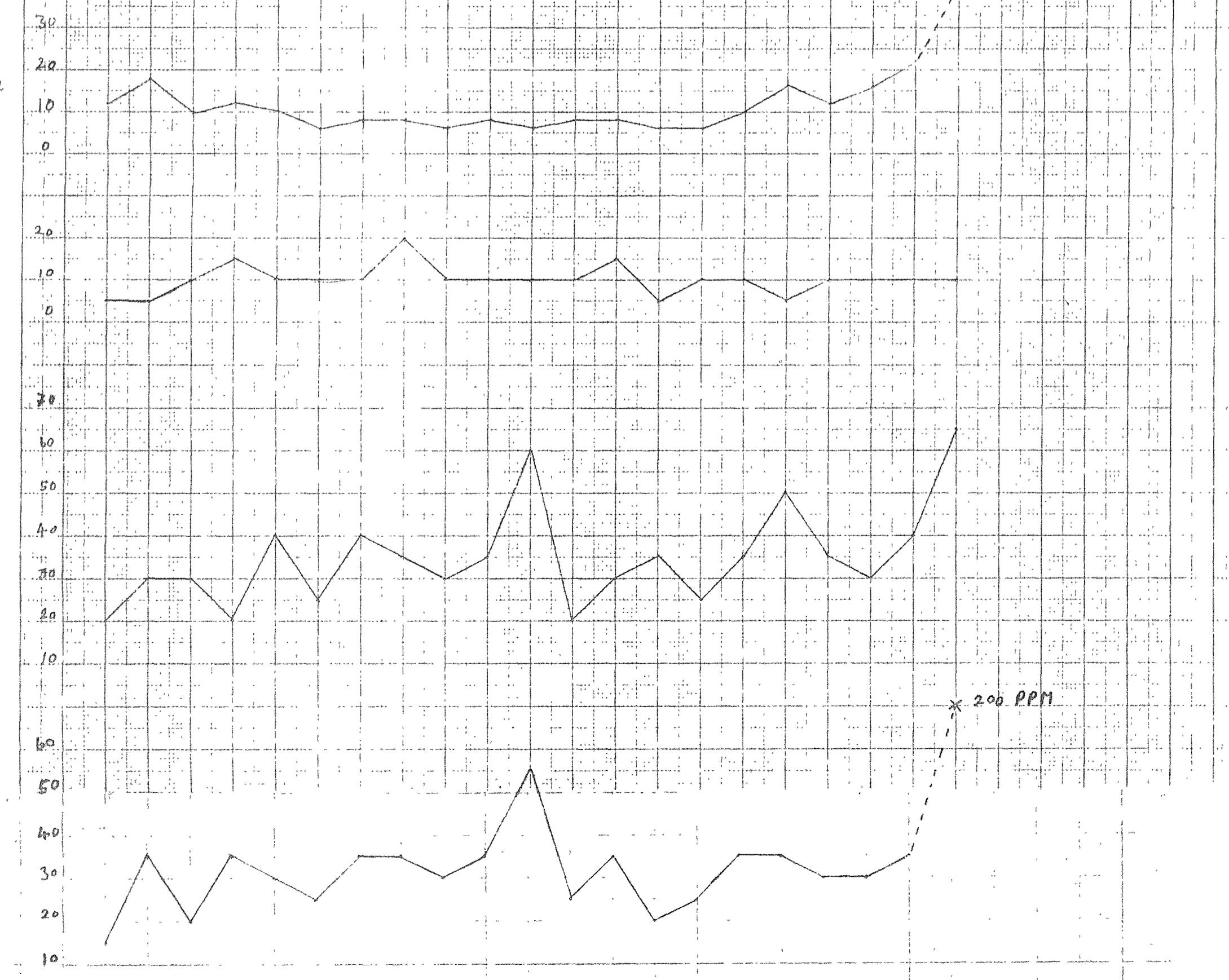


433B MAG. TRAVERSE 3

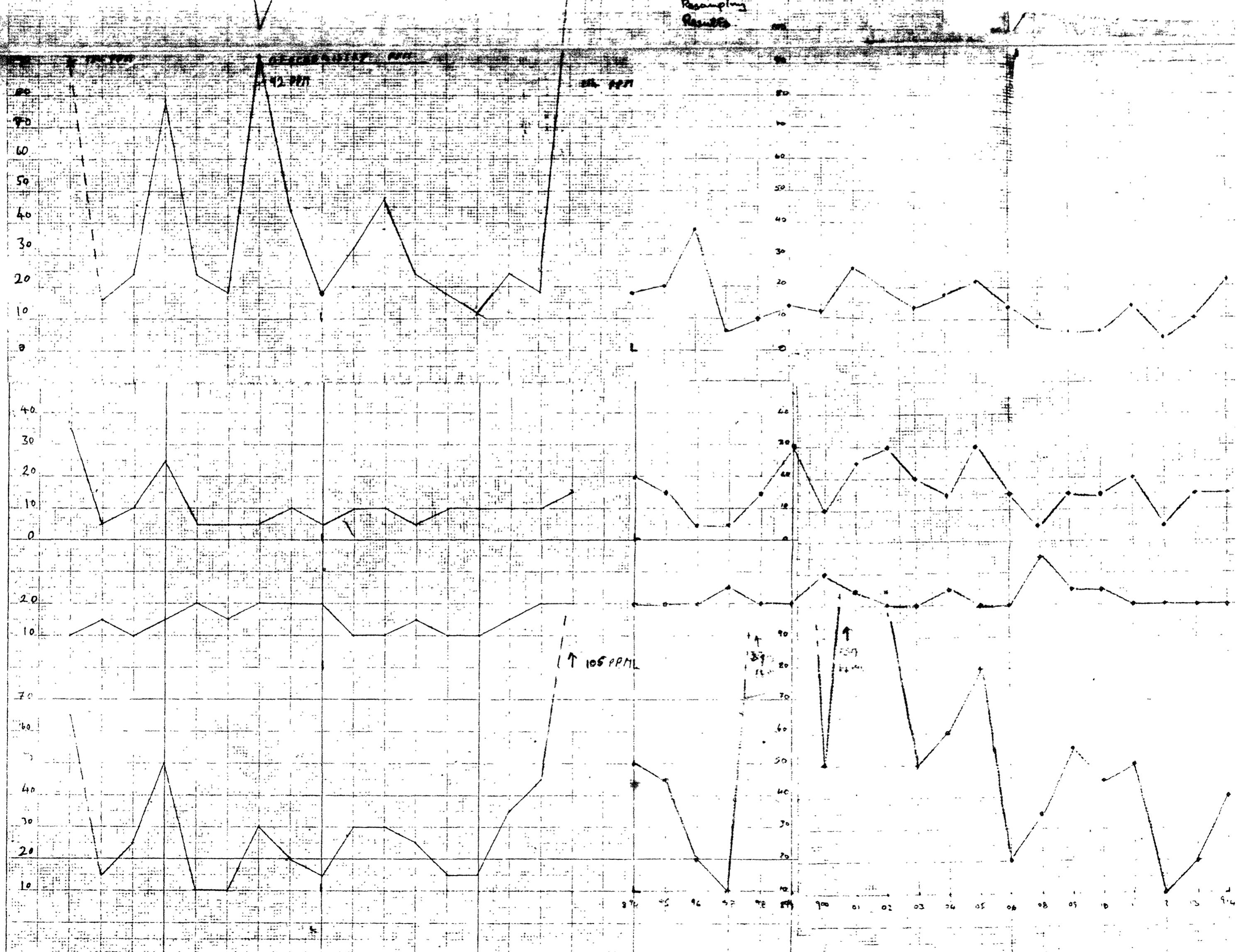
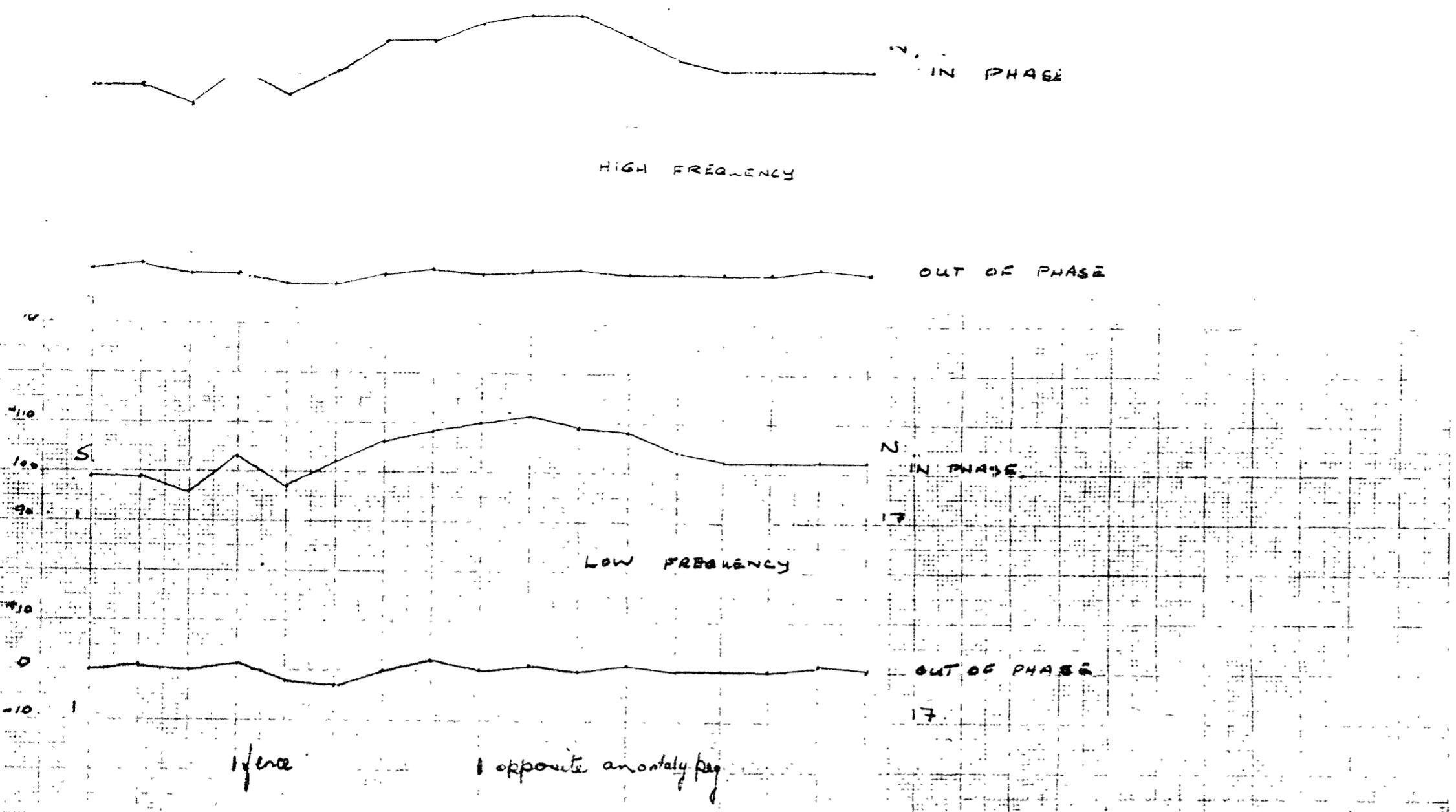


GEOCHEMISTRY APM

* 340 PPM



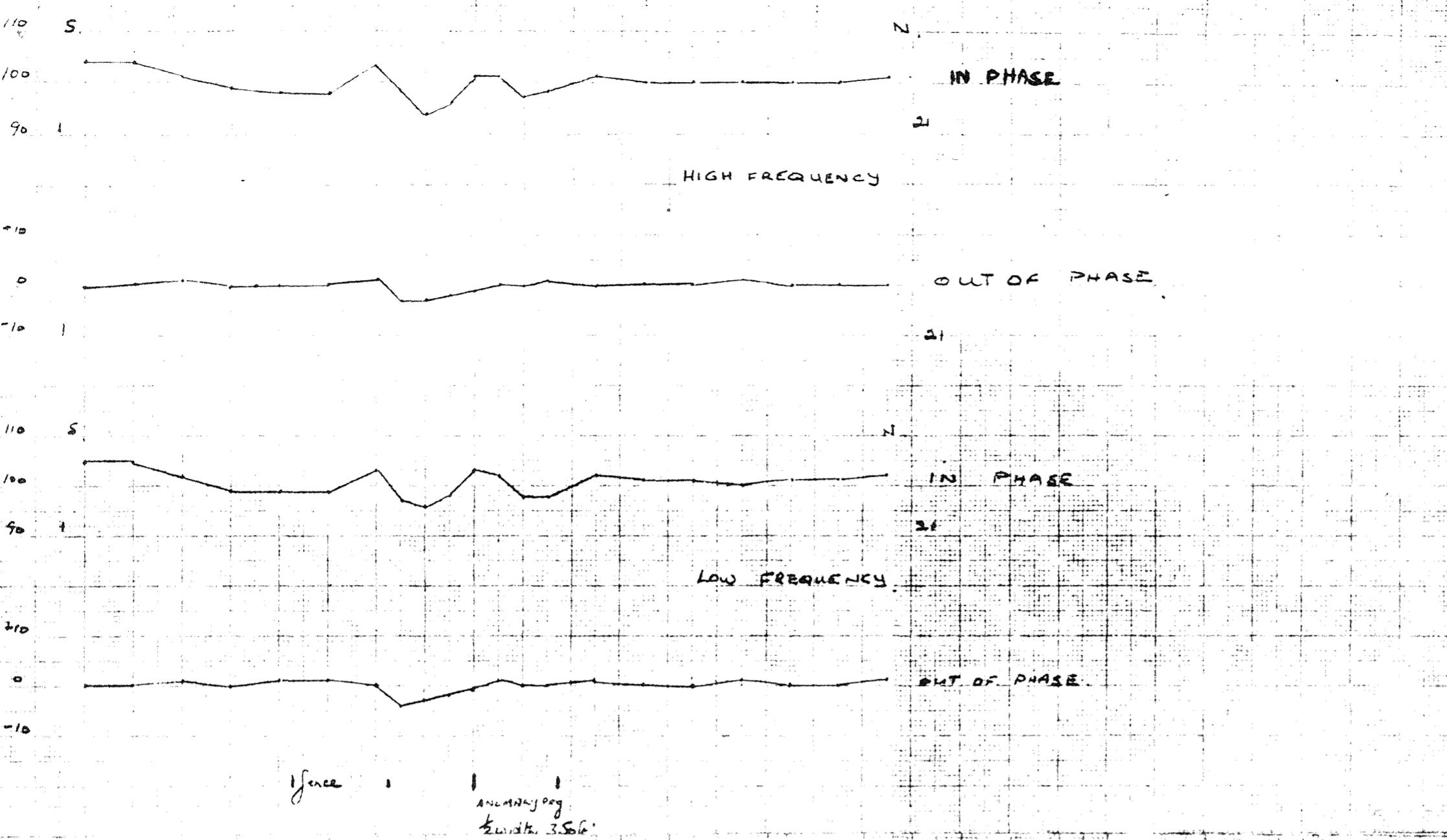
ANOMALY 434 B. TRAVERSE 2 E.M. GUN 200/6 cable 55-72 Fig. 5.



ANOMALY 434B PRIMARY TRAVERSE

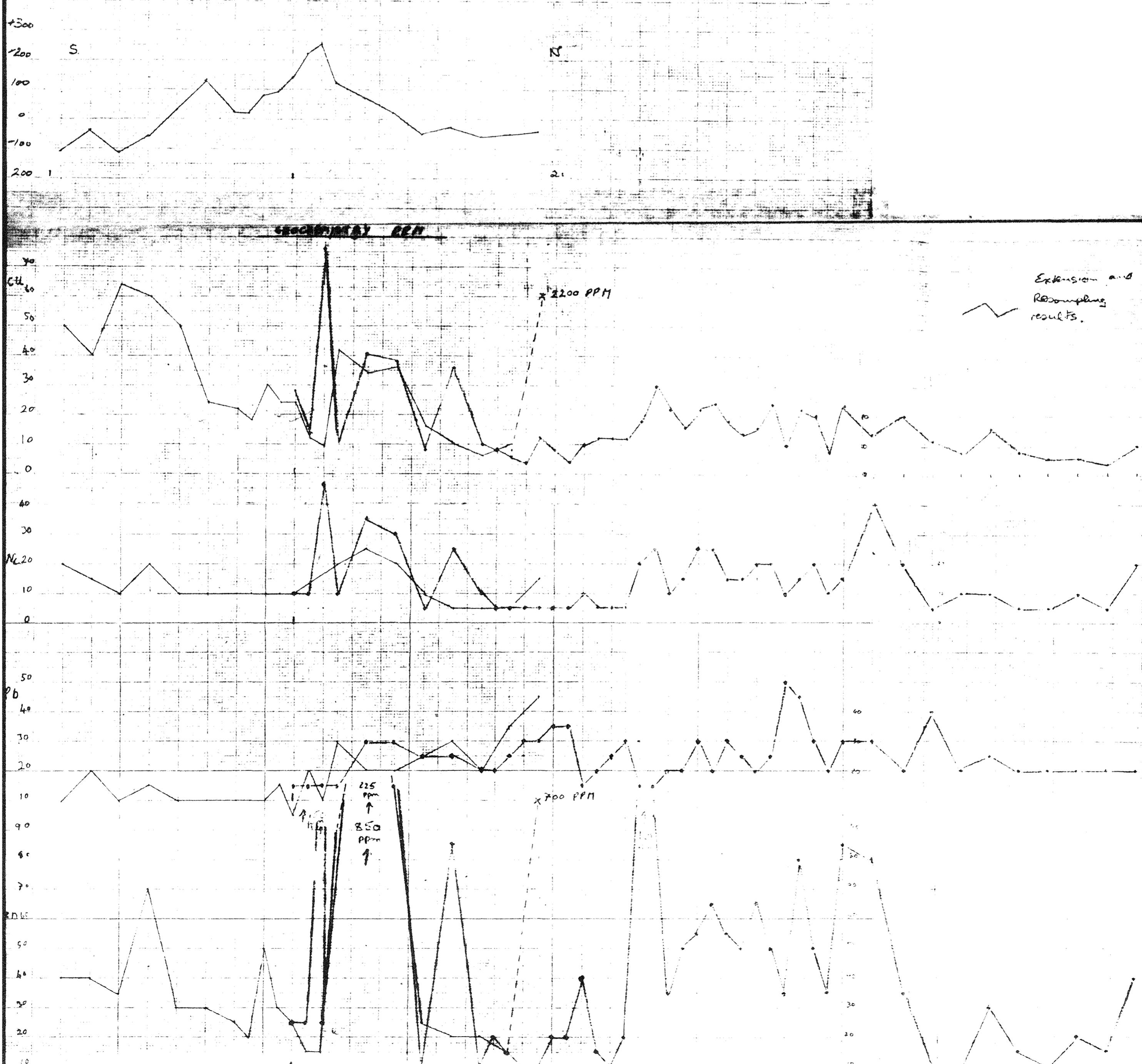
EM GUN 200 ft cable

5-5-72 Fig. 5



434B MAG. PRIMARY TRAVERSE

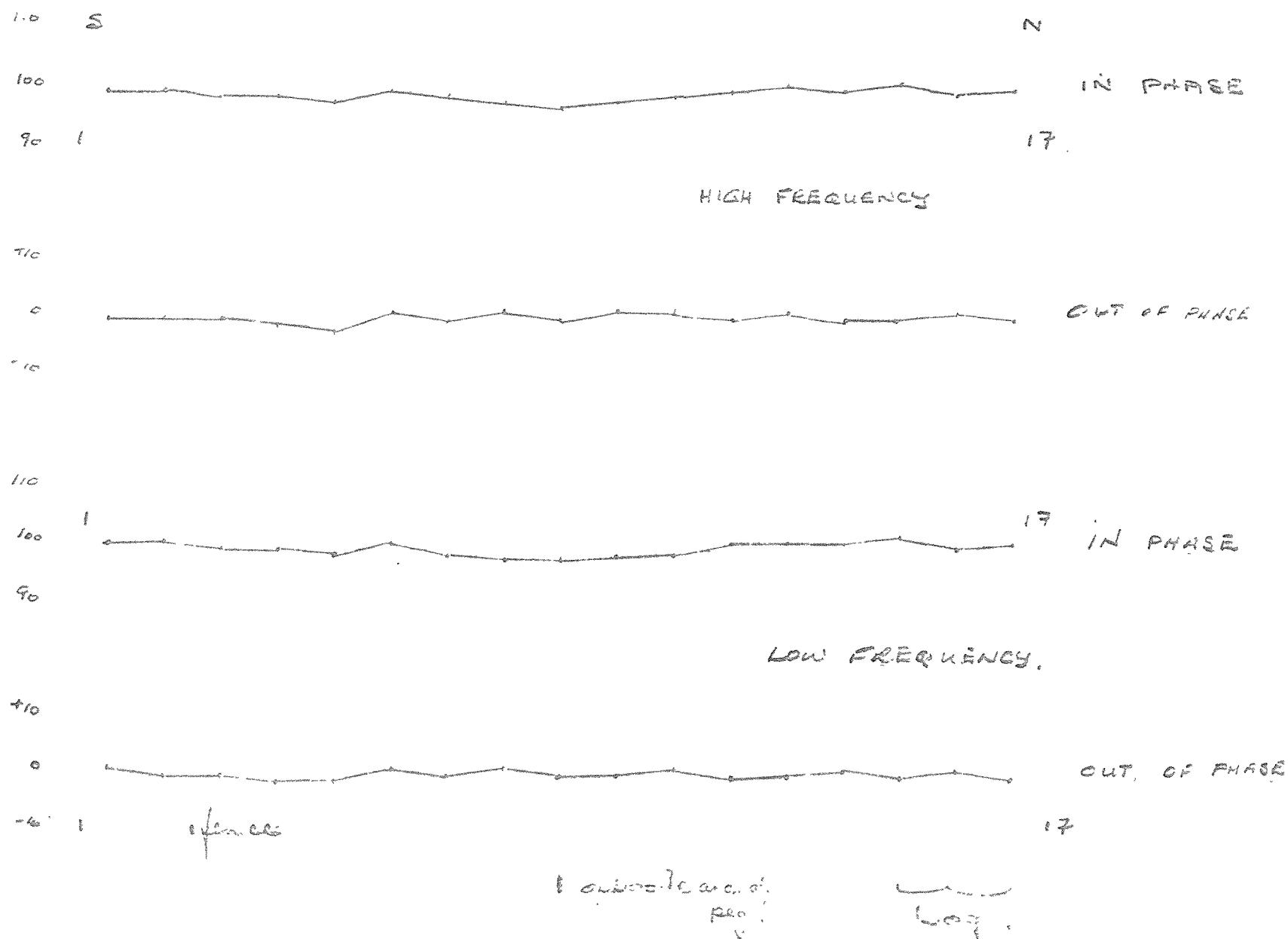
19-5-72



Interrogator 224 E TRAVERSE 3 E.M Gun Zoo/6 cable

5.5.72

Fig. 5.



Anomaly 434c. PRIMARY TRAVERSE R.M. San 200ft cable. S. Wm.

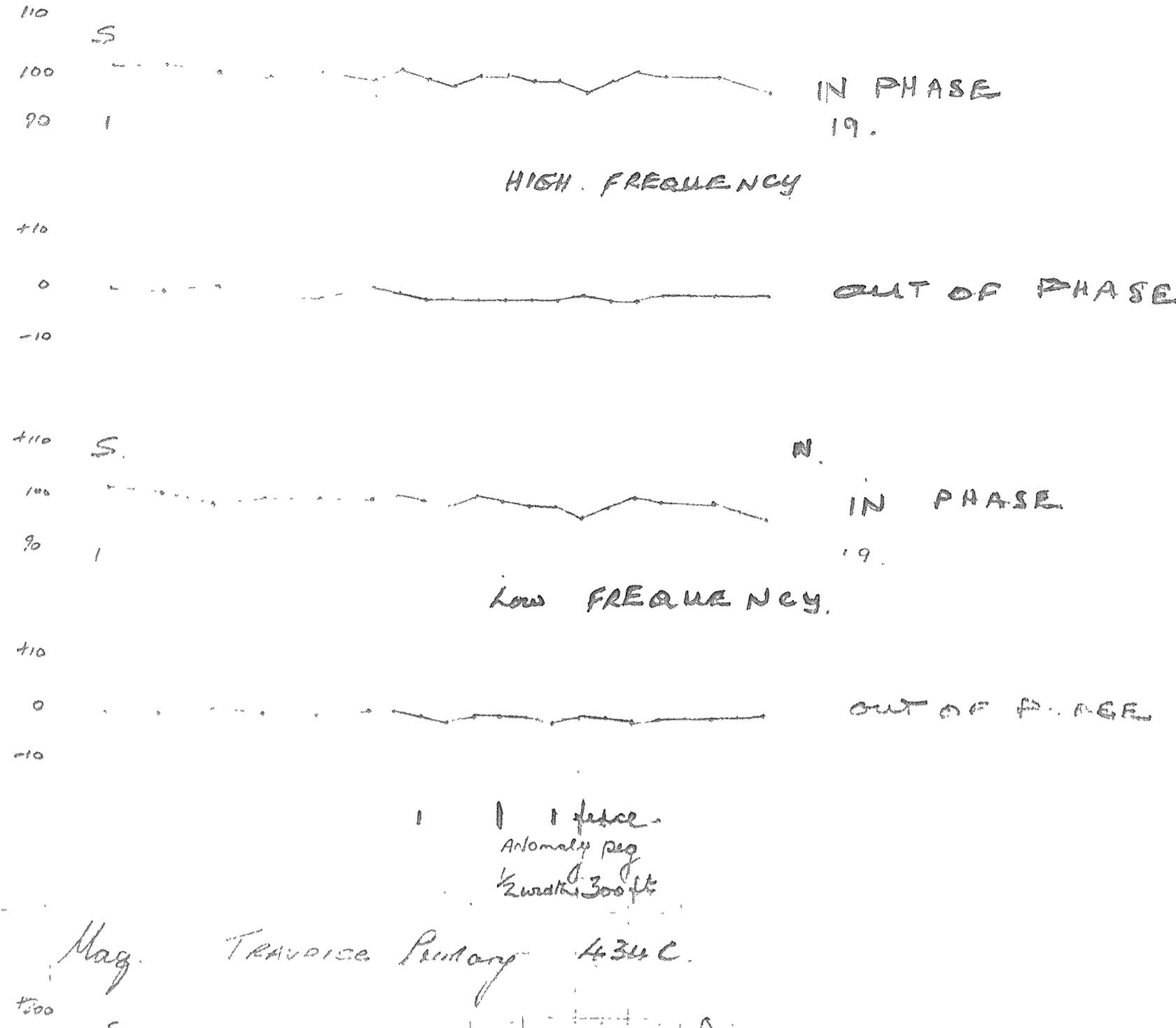
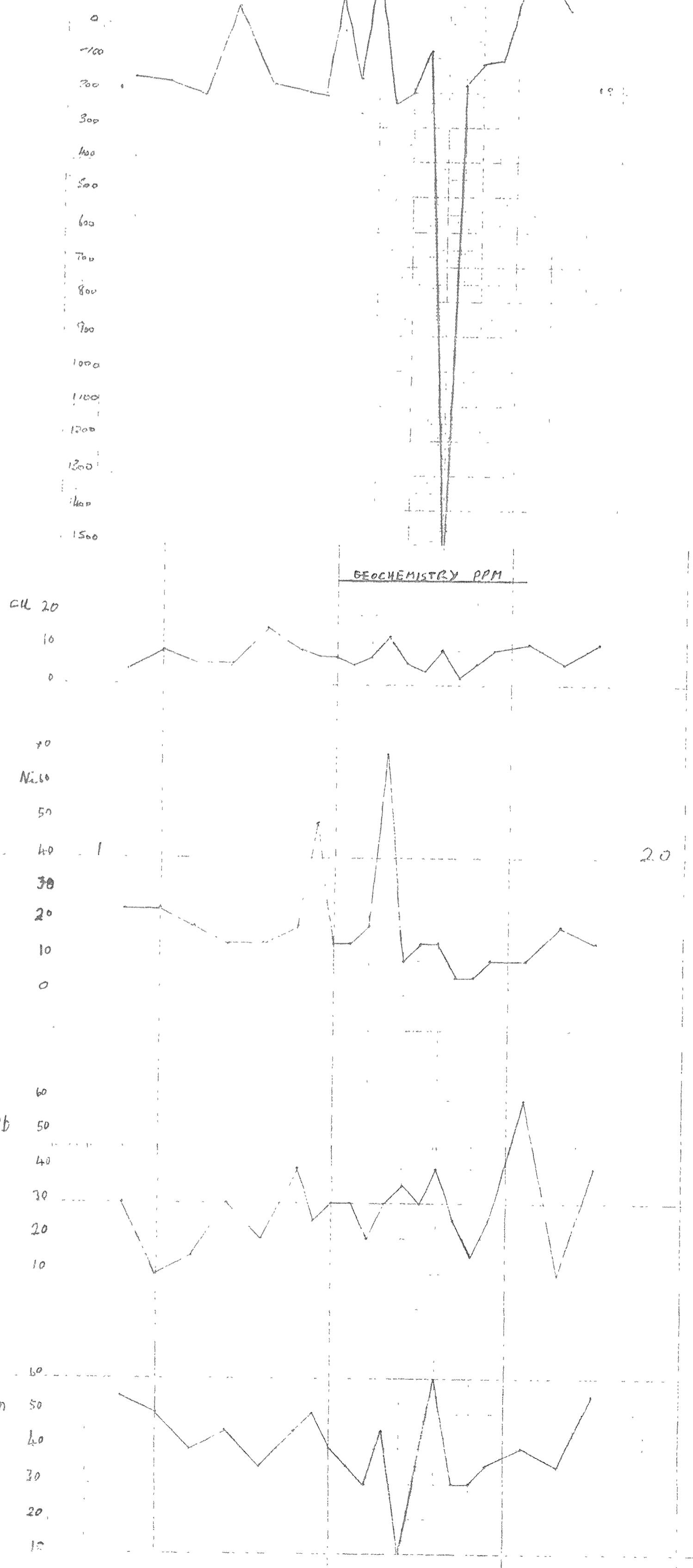


Fig. 5.

A graph showing two peaks. The first peak is small and located at approximately $x=1$. The second, much larger peak is centered at approximately $x=3.5$.



Altar Valley 434C TRAVERSE 2 Eng S. Zoot-cable

19-

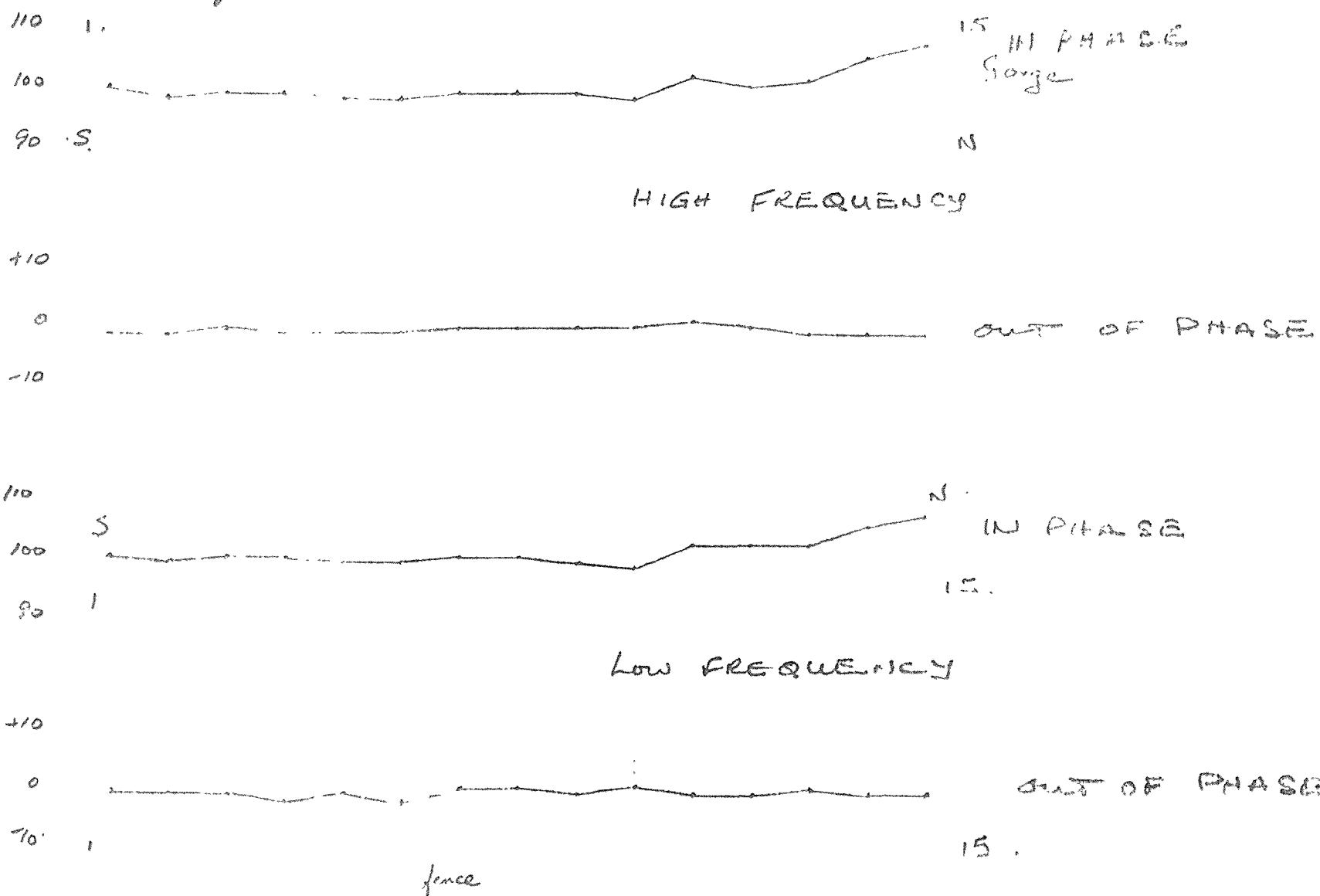


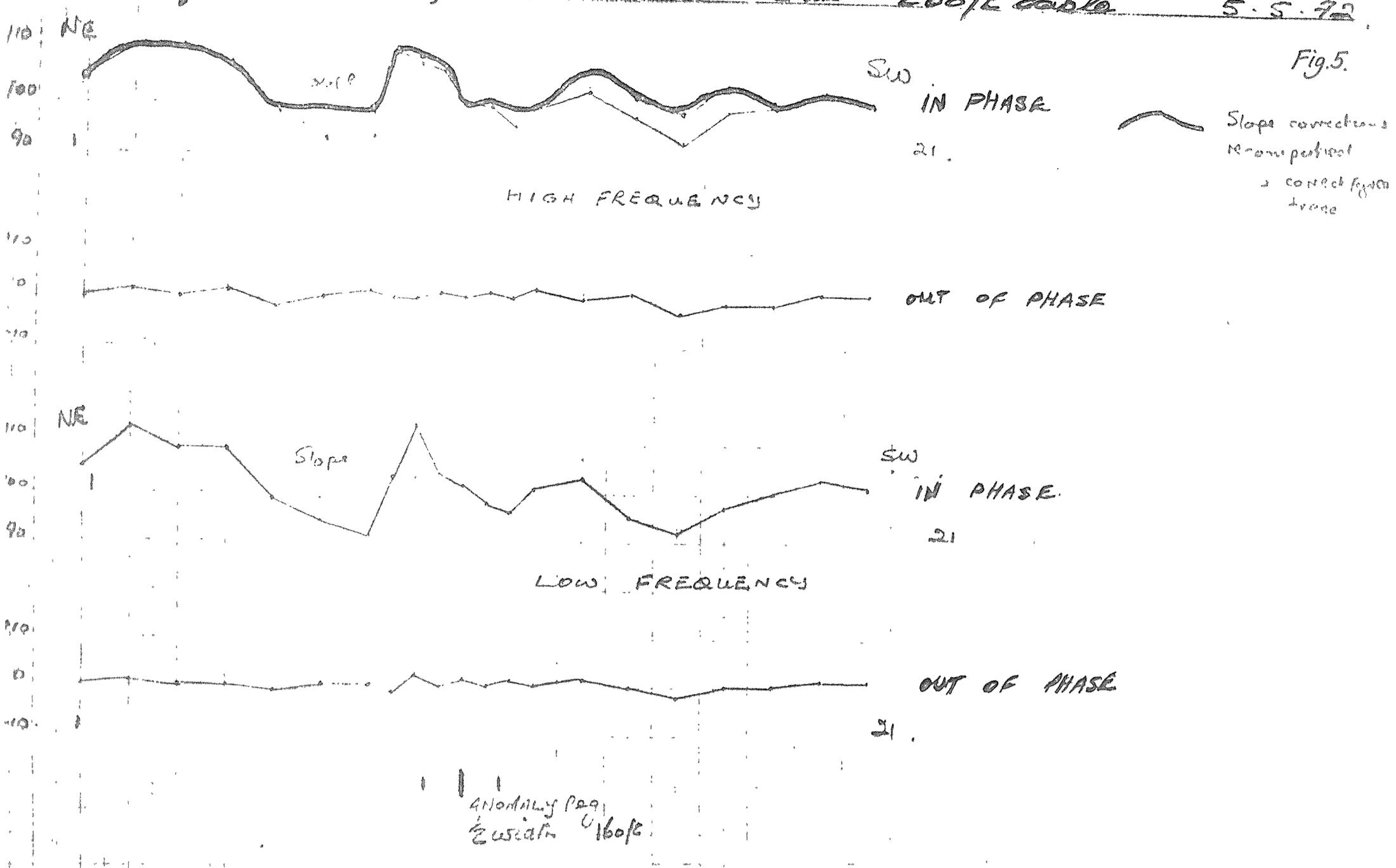
Fig. 5.

MAG. TRAVERSE 2. 434C

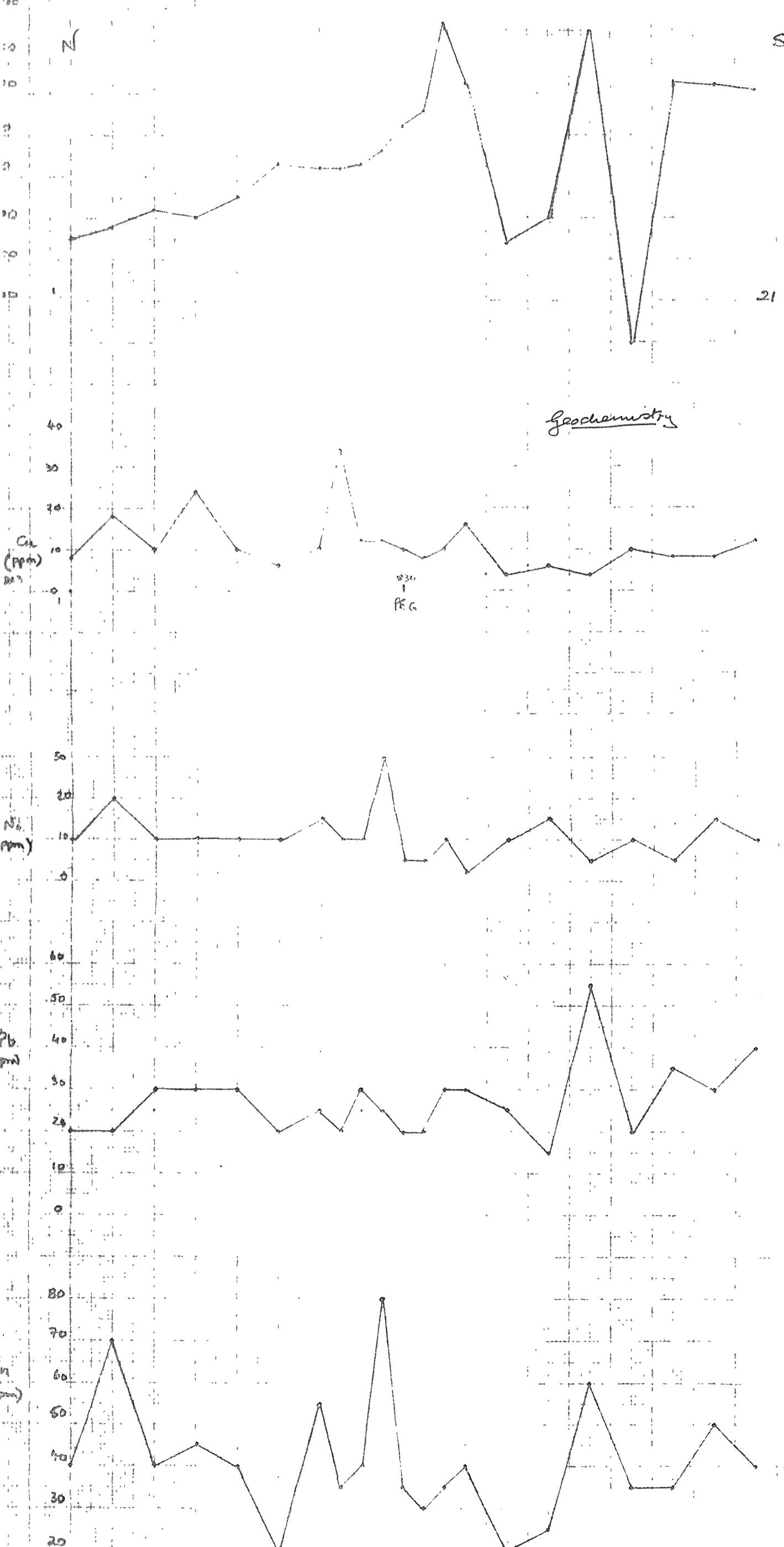
19.5 Y.



Anomaly 436B PRIMARY TRAVERSE E.M Gun 200ft cable 5.5.72.



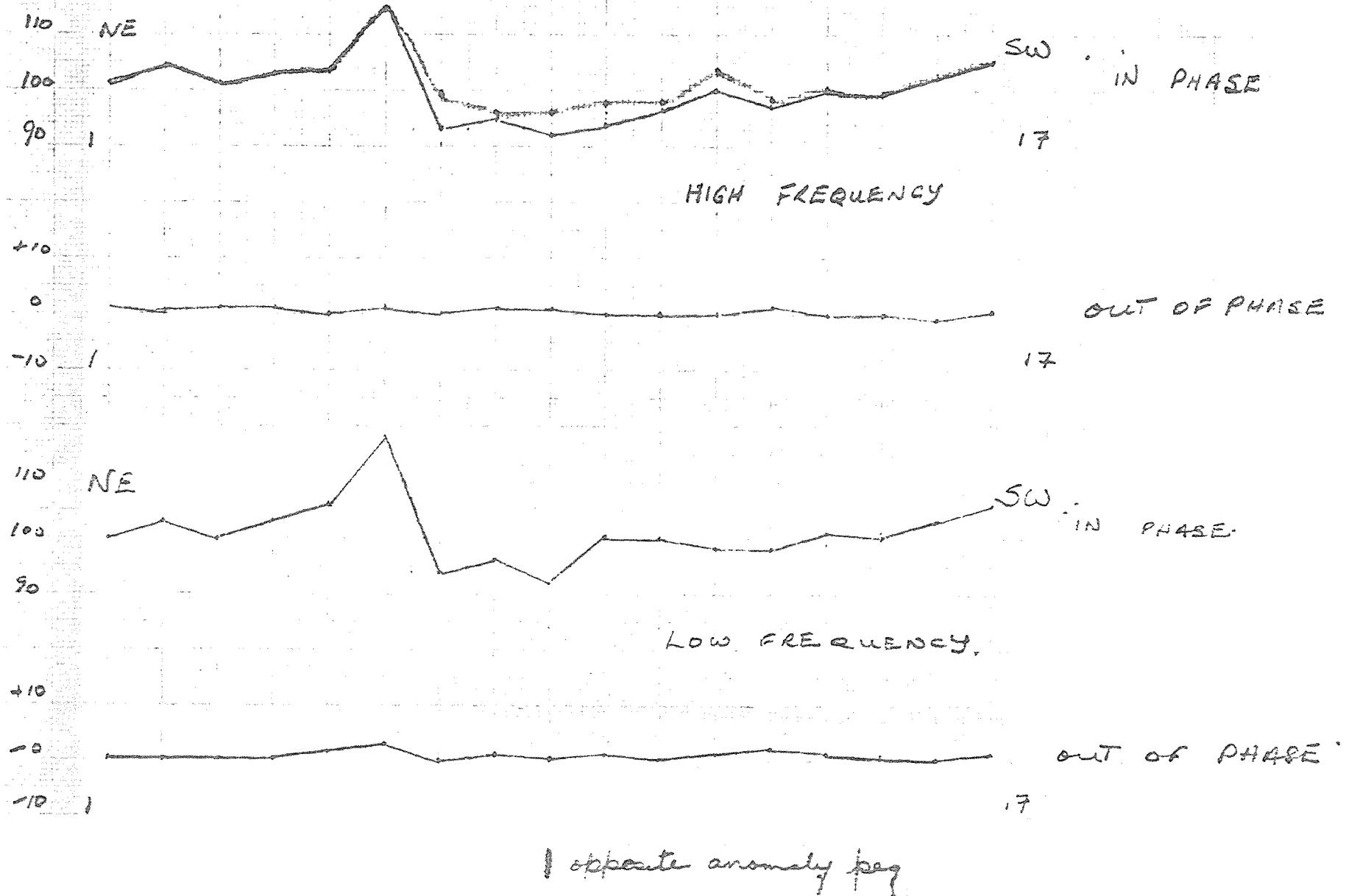
436B PRIMARY TRAVERSE MAG 19-5-72



ANOMALY 436B TRAVERSE 2 E N Gage Zonof Cable.

5.5.72.

Fig. 5.



ANOMALY 436B TRAVERSE 3 EM. SENS 200 ft cable 100 spacing 11-5-72

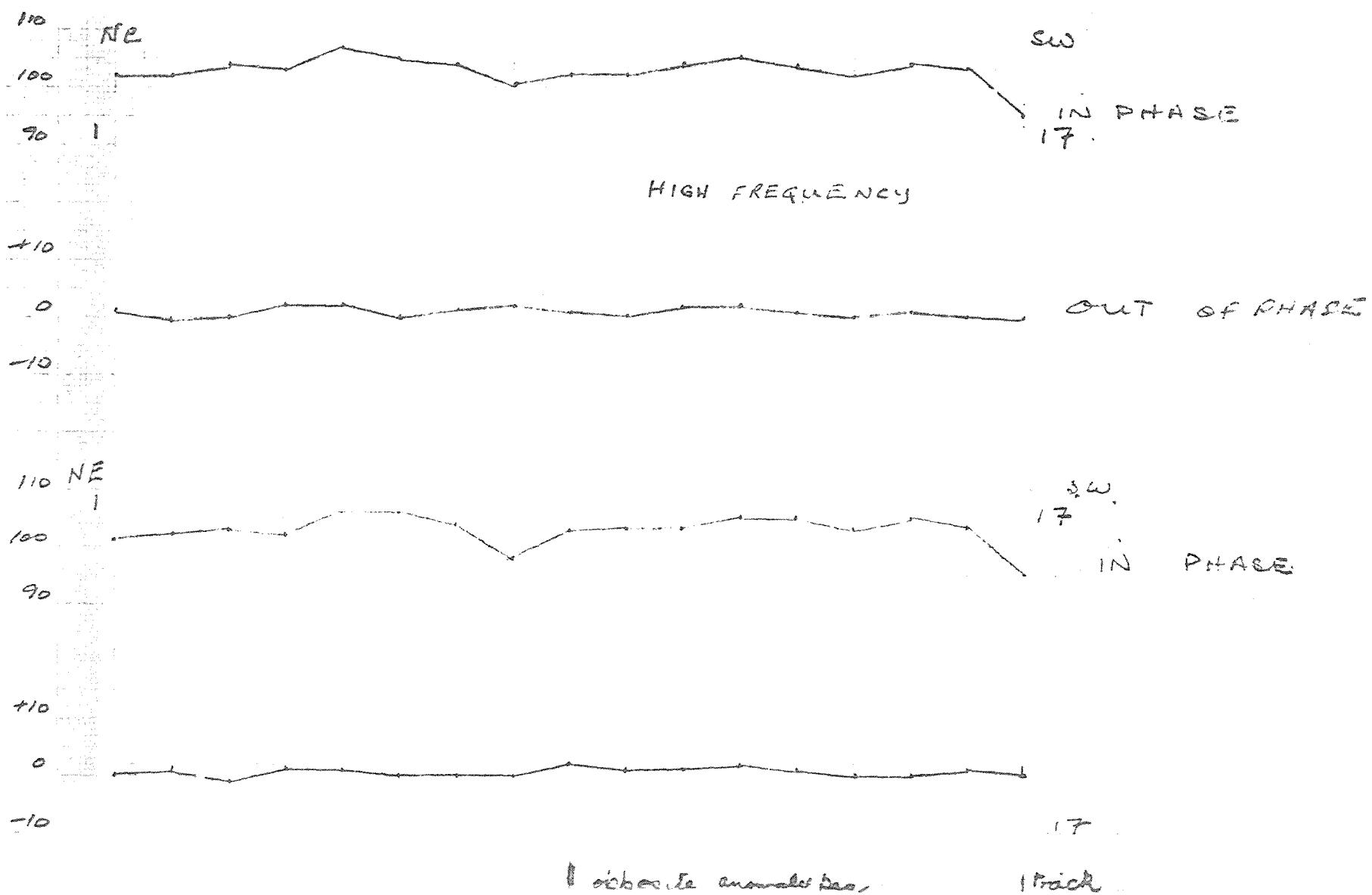
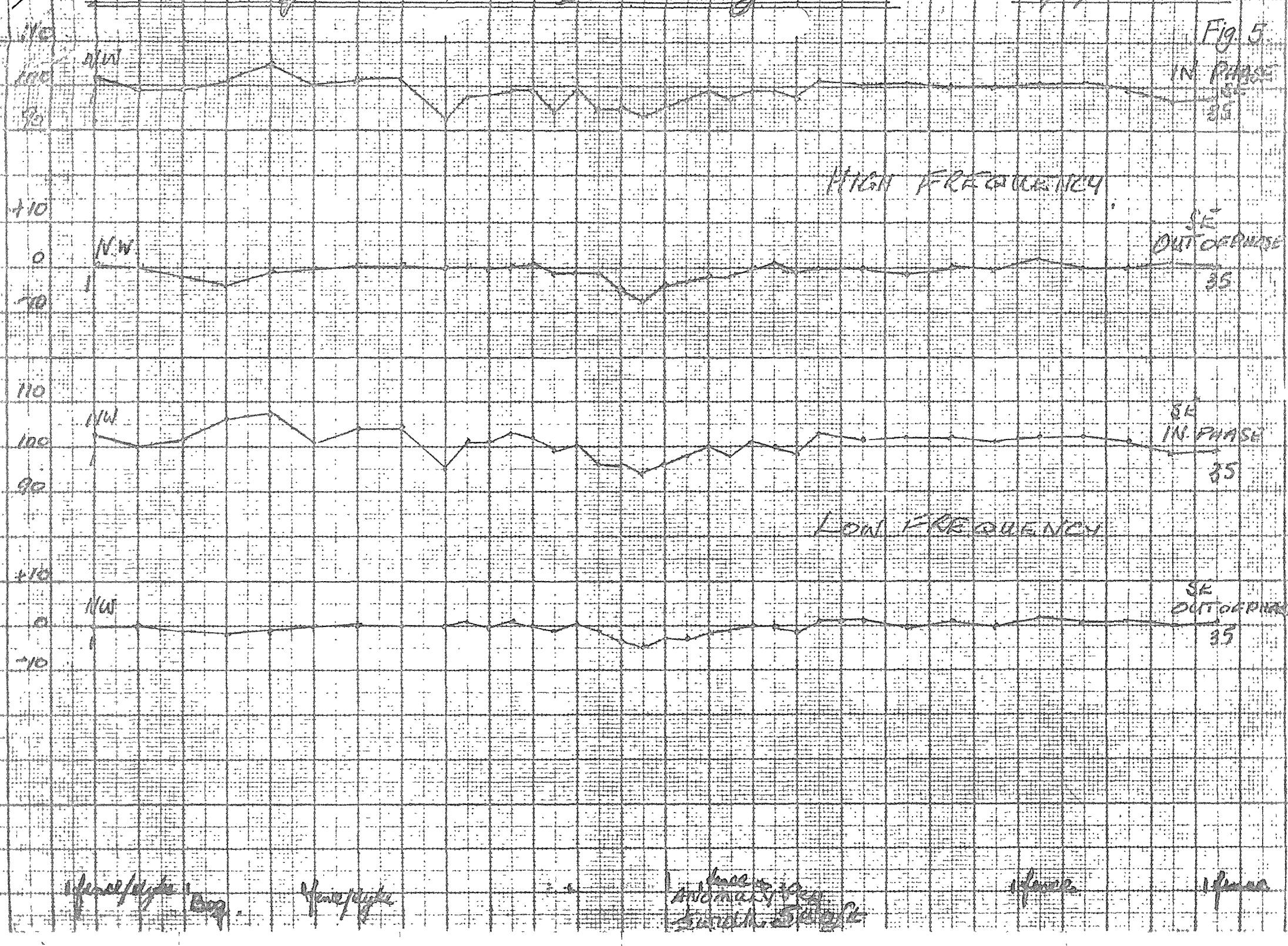


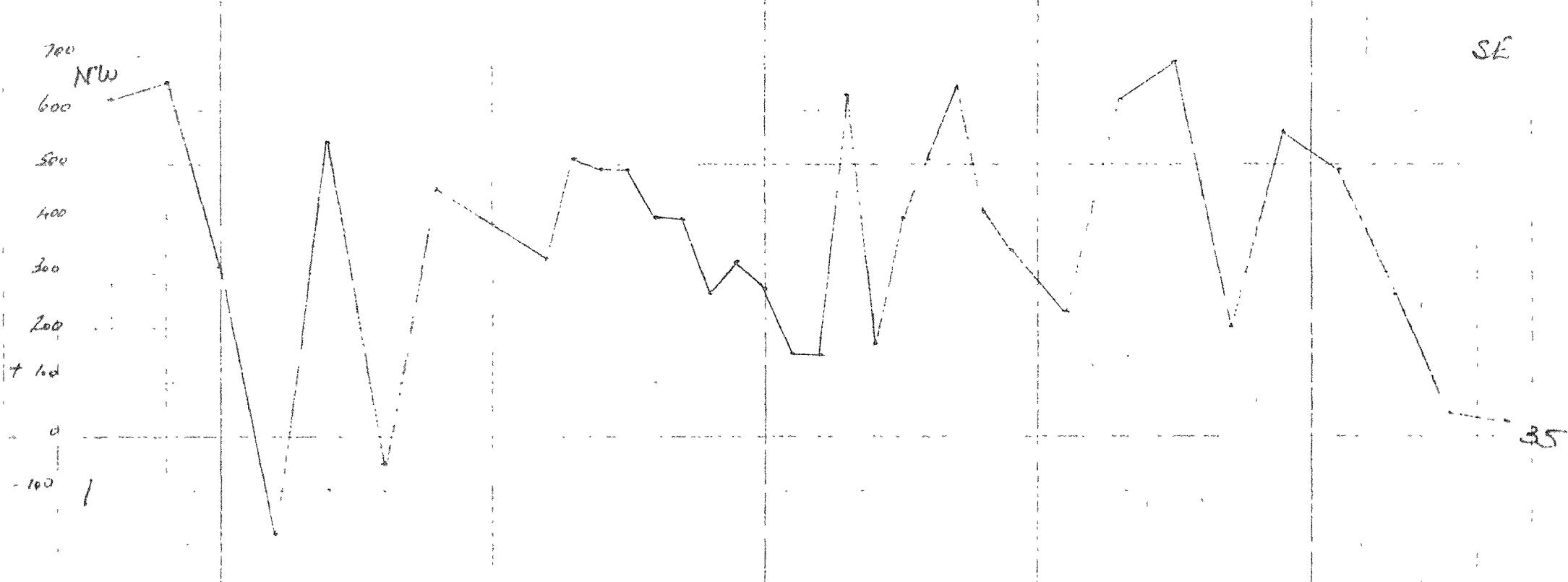
Fig. 5.

SE 11 anomaly 4448 E. N. Gun Znaff Cables 14/3/82 Gill

Fig 5



MAGNETOMETER



GYROMETRY

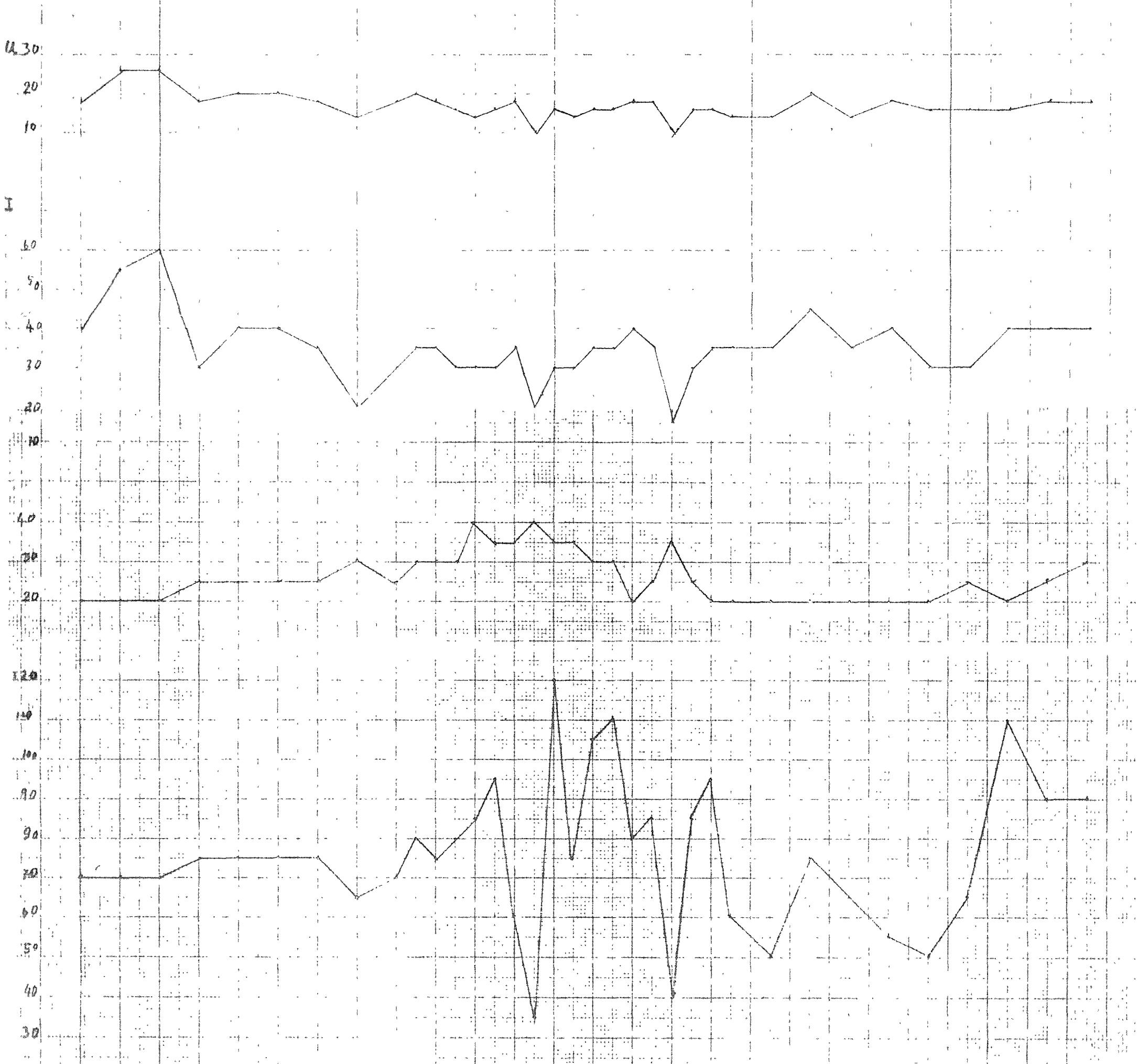
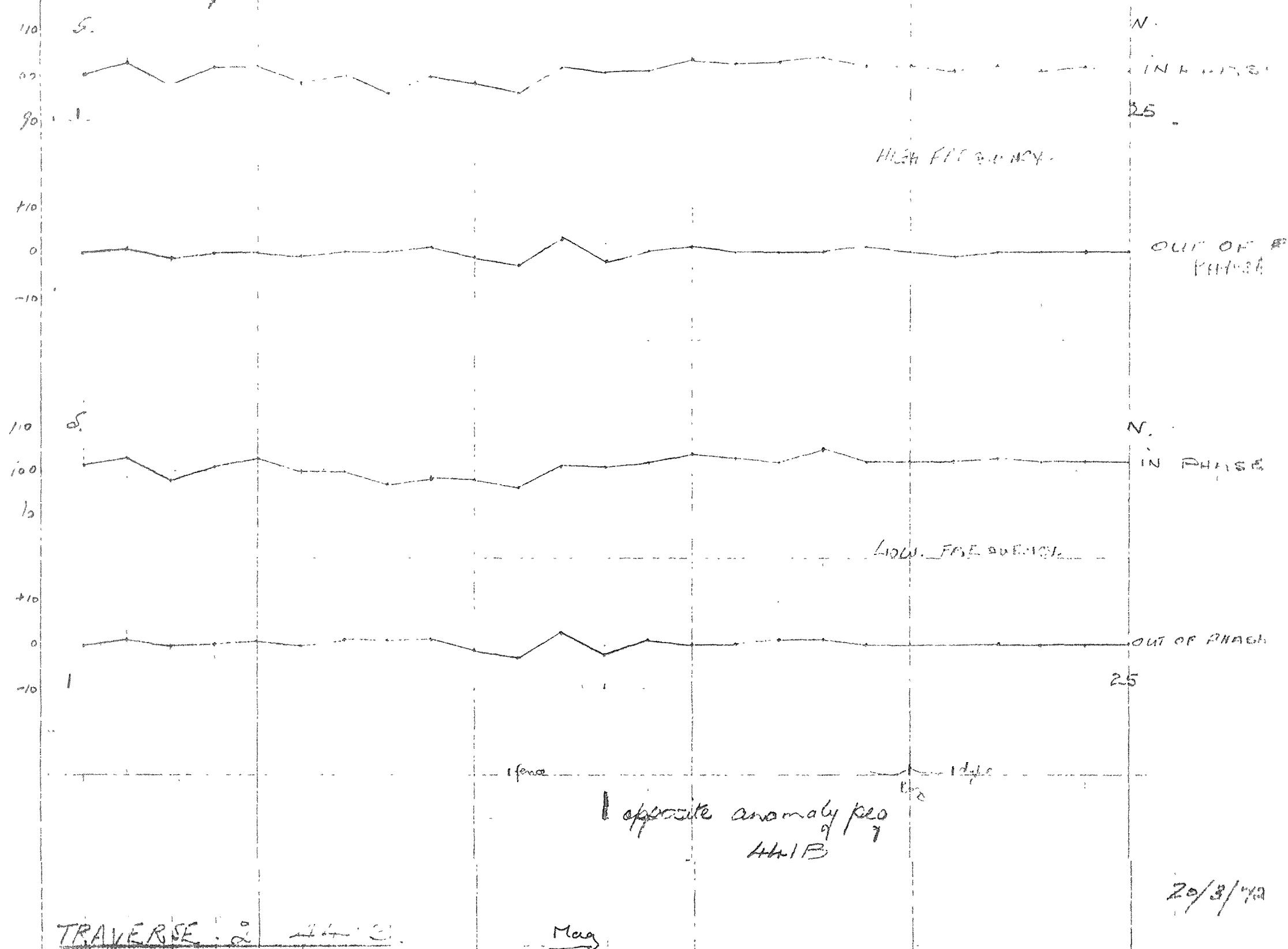


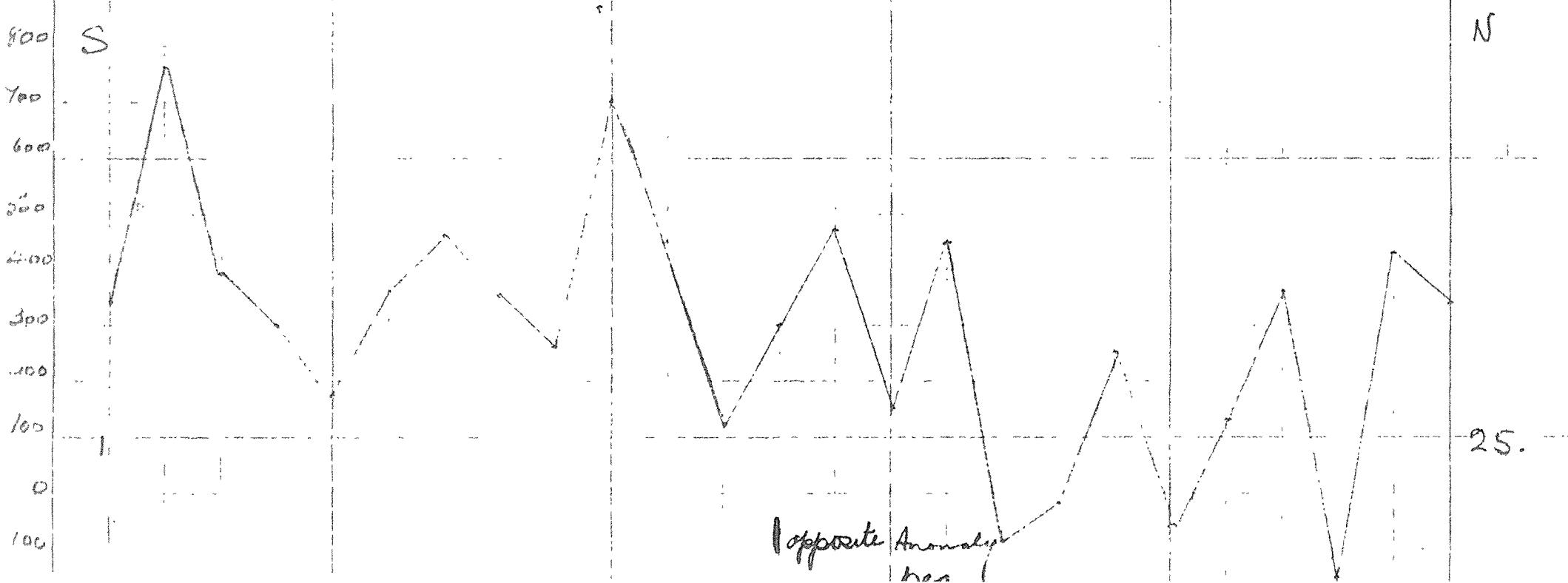
Fig. 5.

Anomaly 4641B TRAVERSE 2.



TRAVERSE 2 4641B.

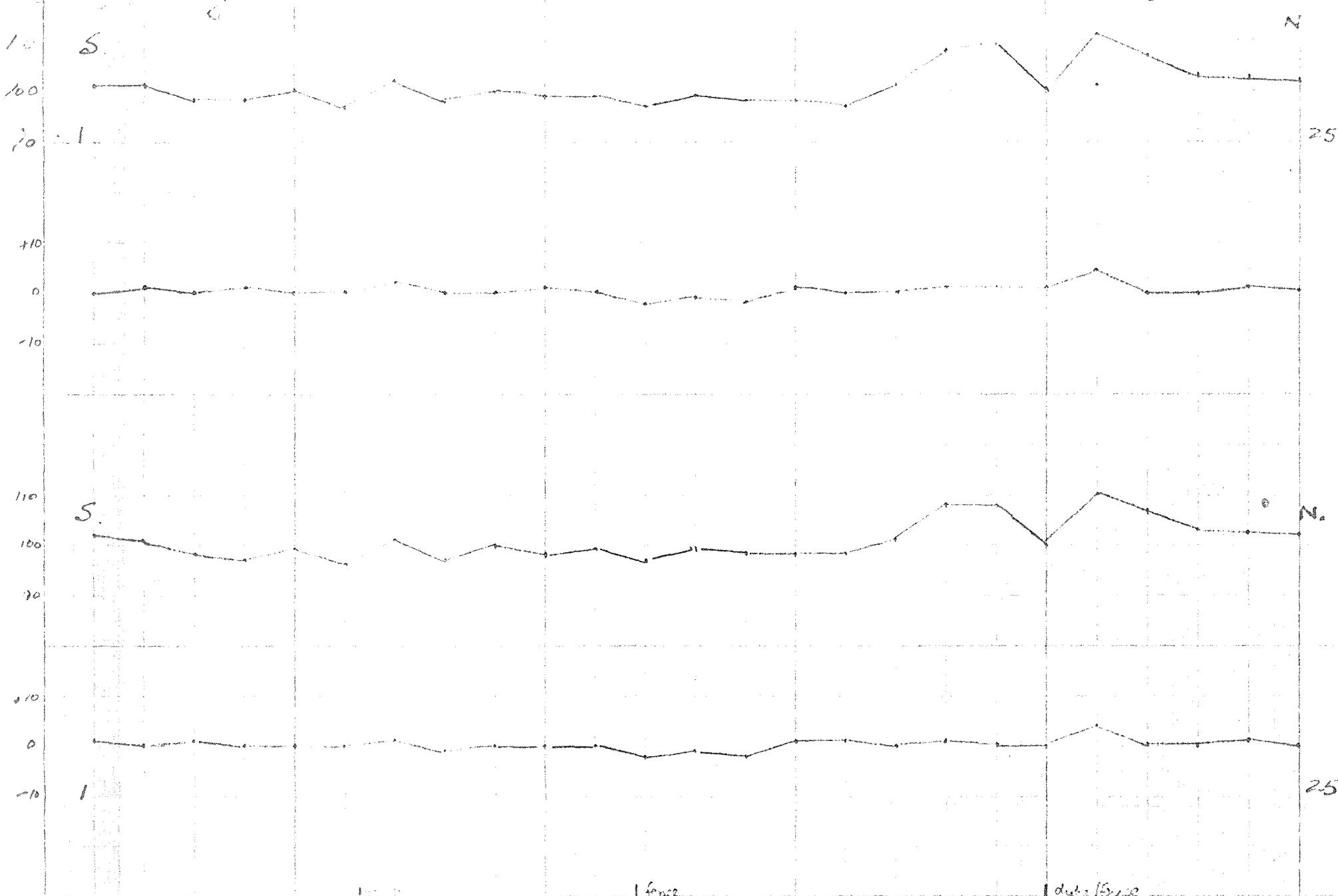
Mag.



Anomaly 441 B

Total Epoch 3.

Fig. 5.

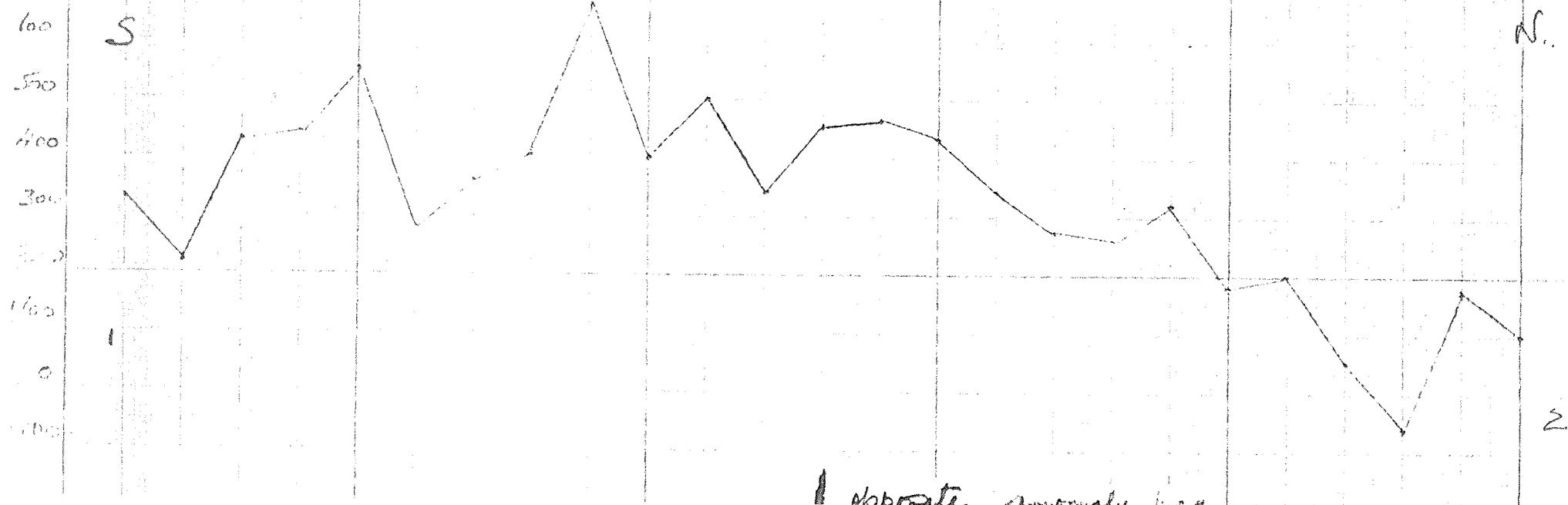


I opposite anomaly key

TRAILER

Mag

N.



ANOMALY 454C PRIMARY TRAVERSE E.M. GUR 200/6 cable

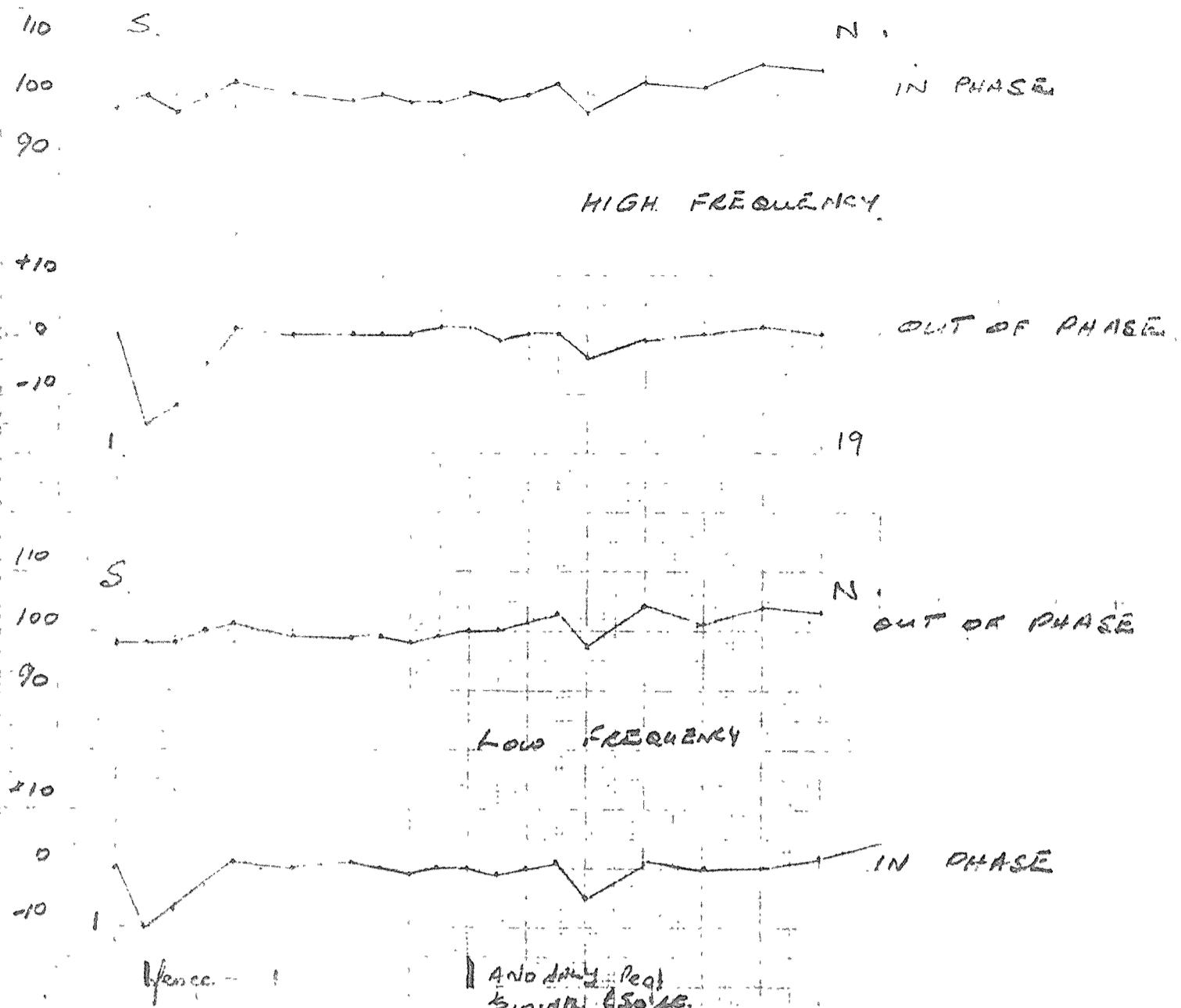
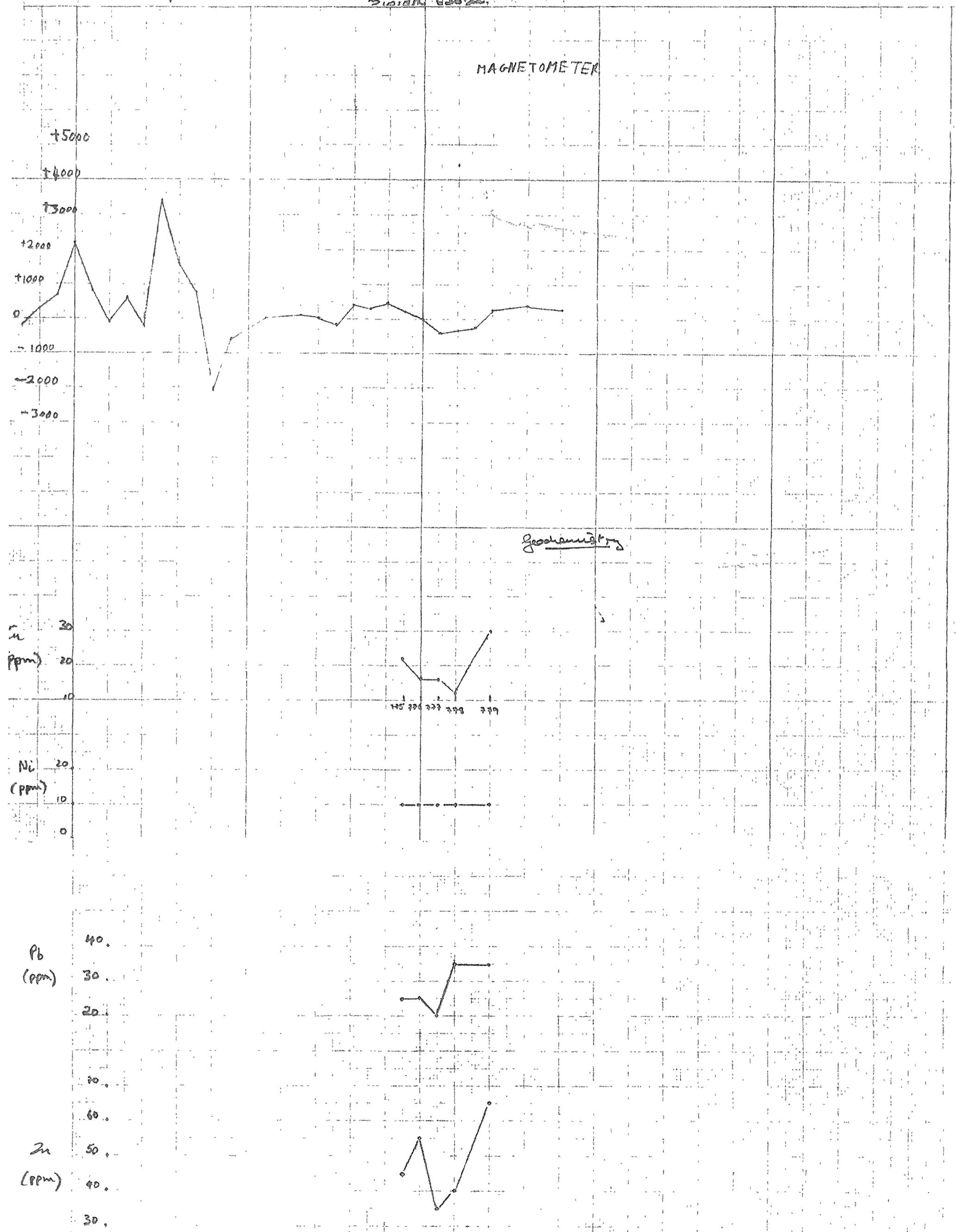
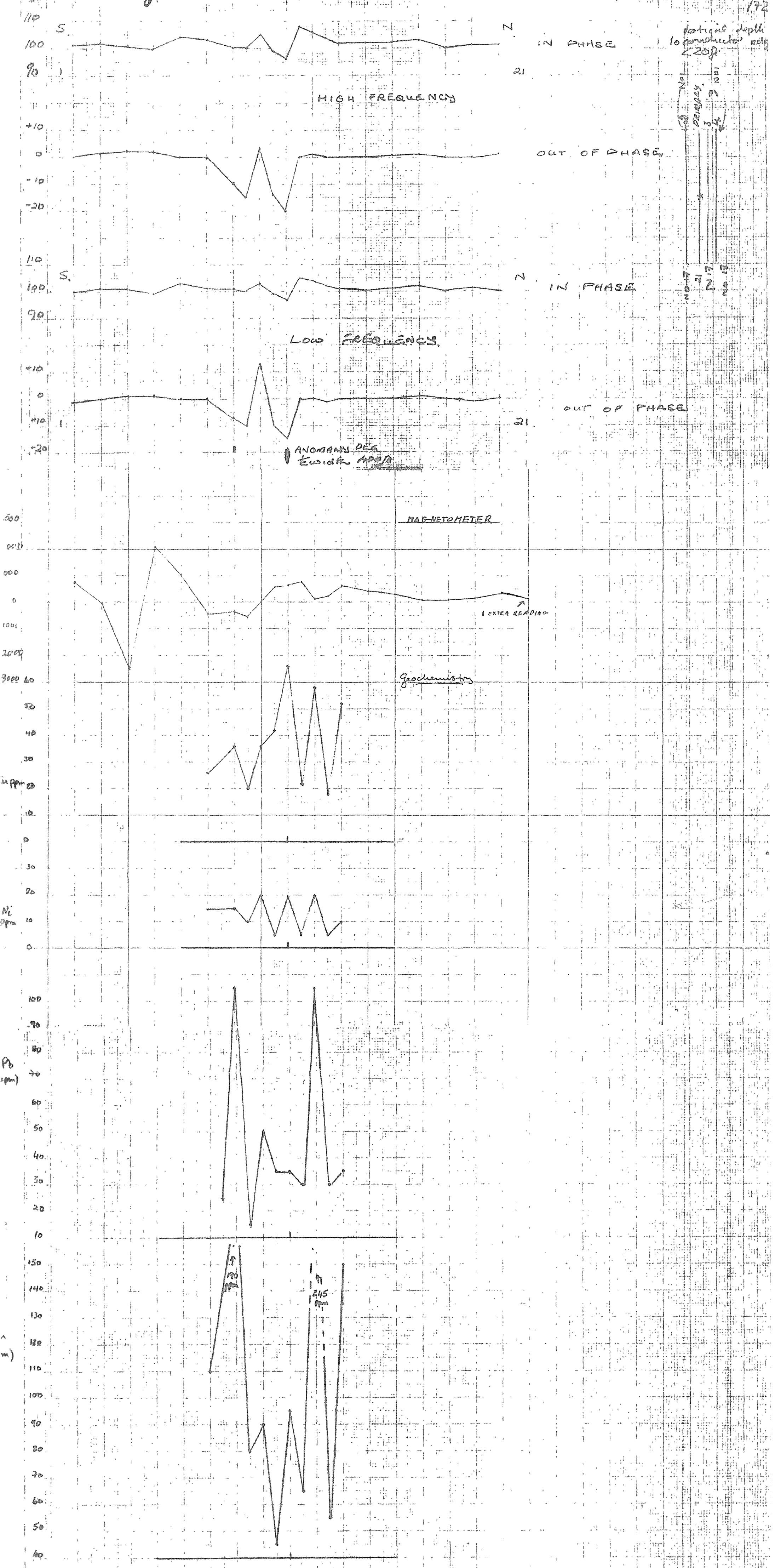


Fig. 5.

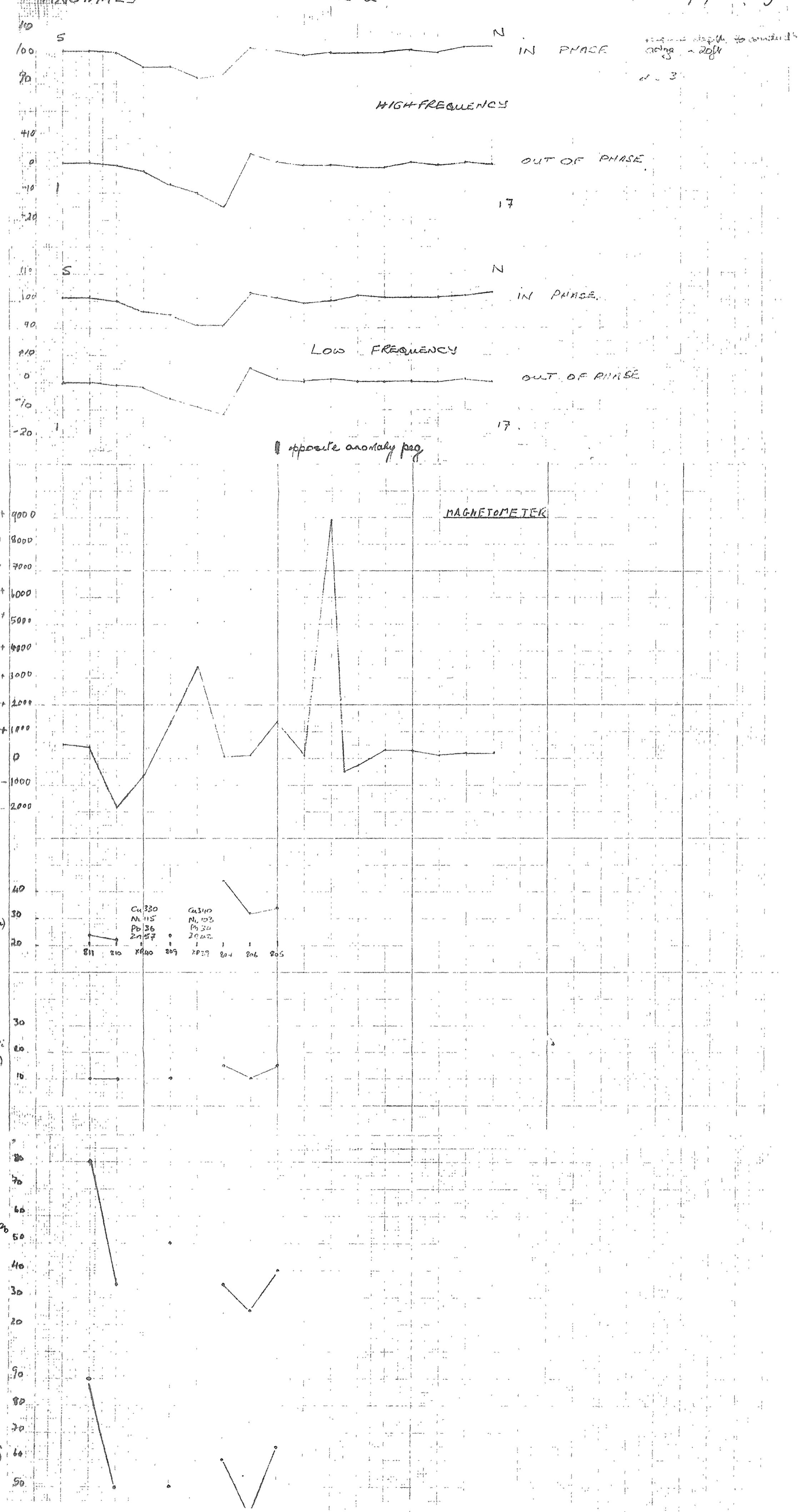


Anomaly 4556 Primary Traverse EM Gun Zoon cable pigs 107
172



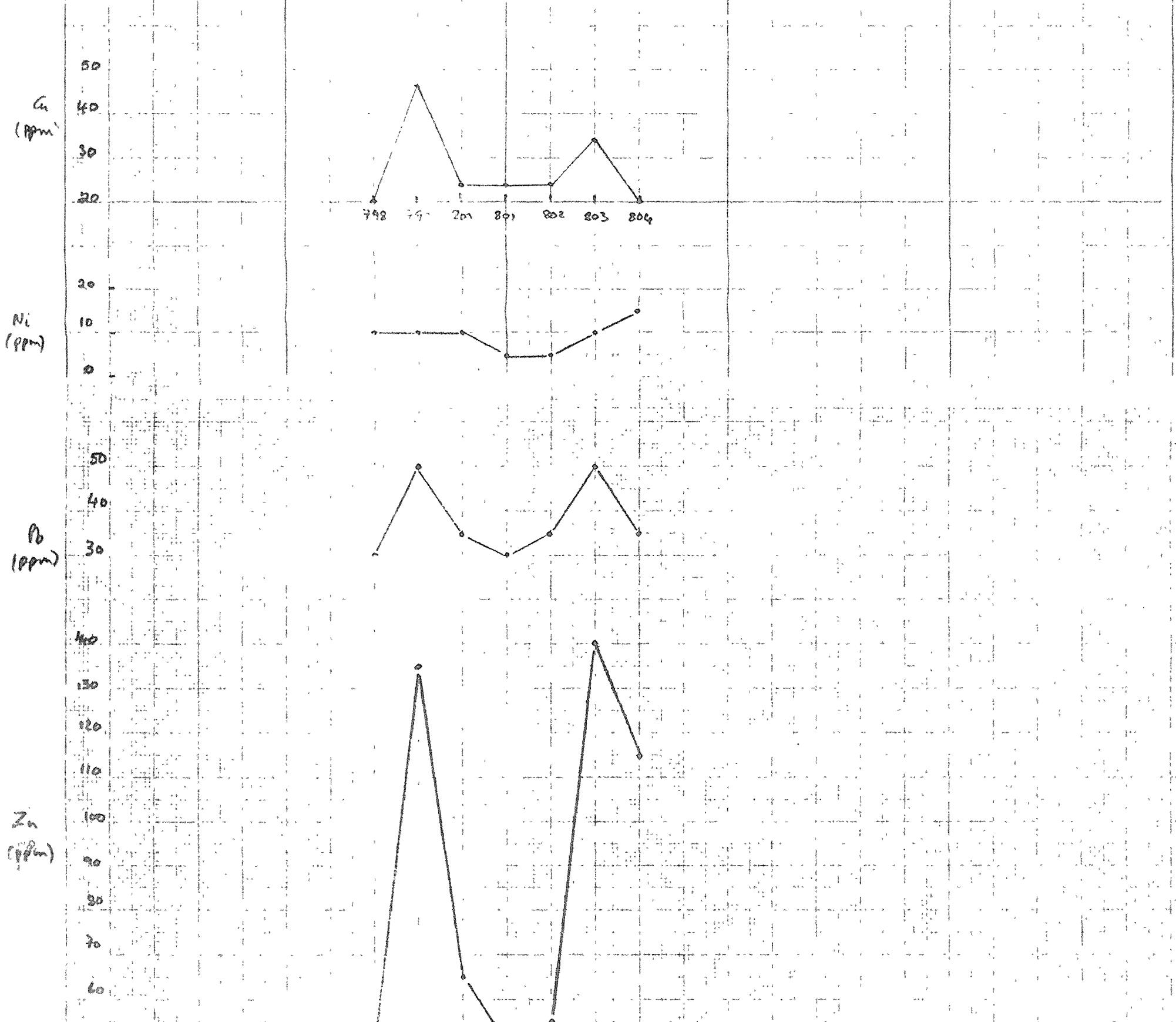
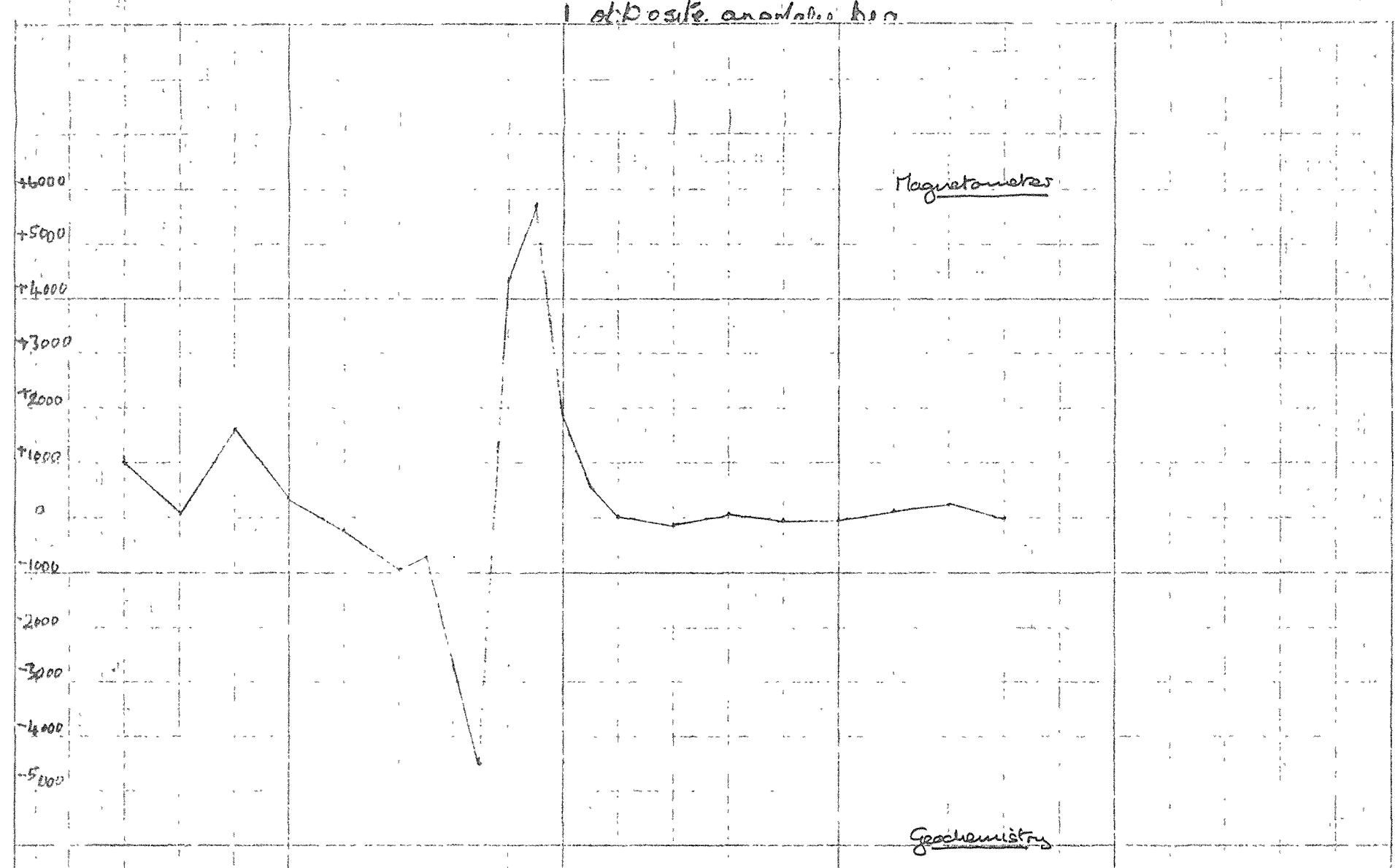
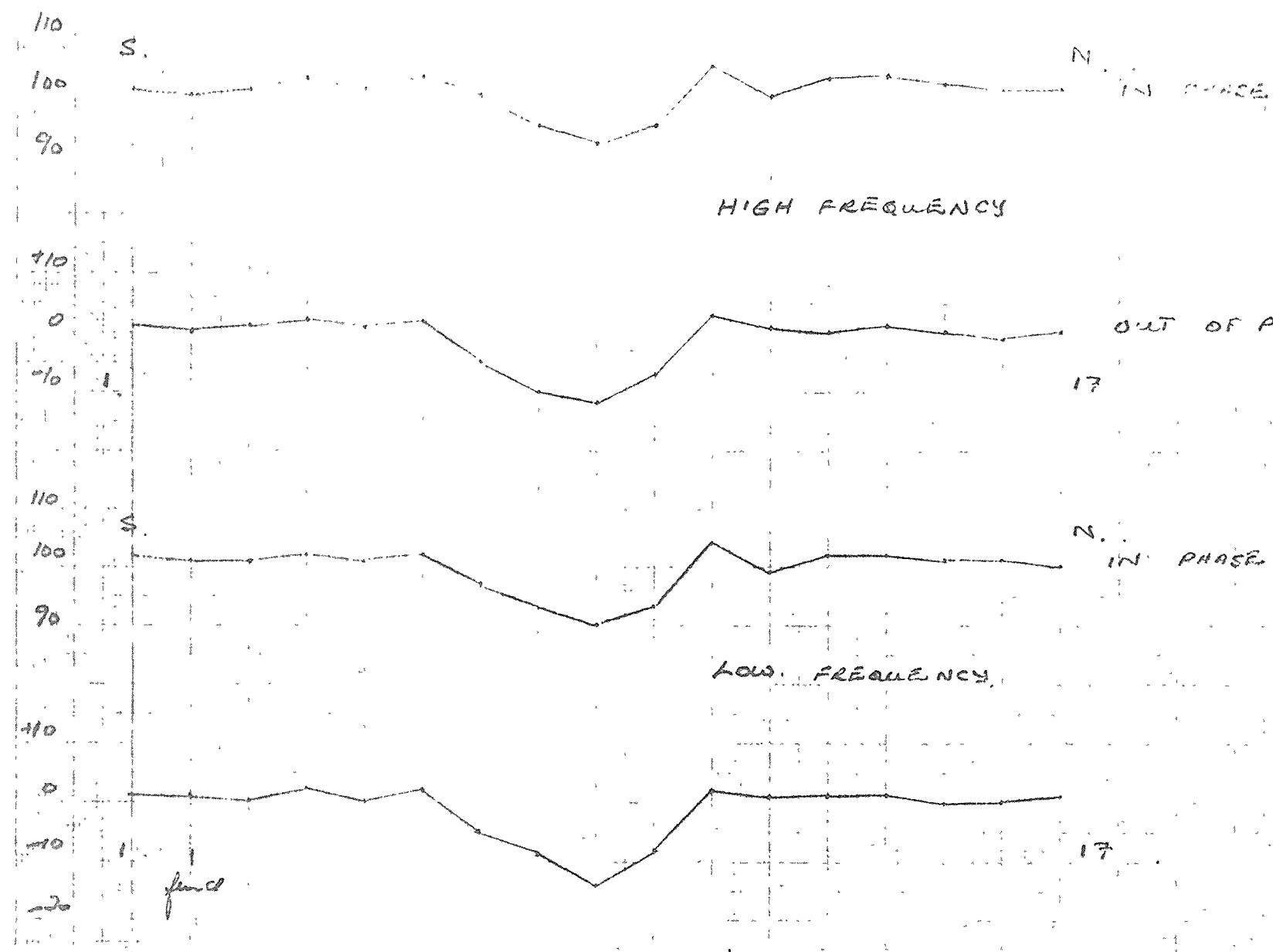
ANOMALY 2056 TRAVERSE 2

20/6/72 Fig. 5



Anorthite 455C TRAVERSE 3

20/6/72 Fig.5.



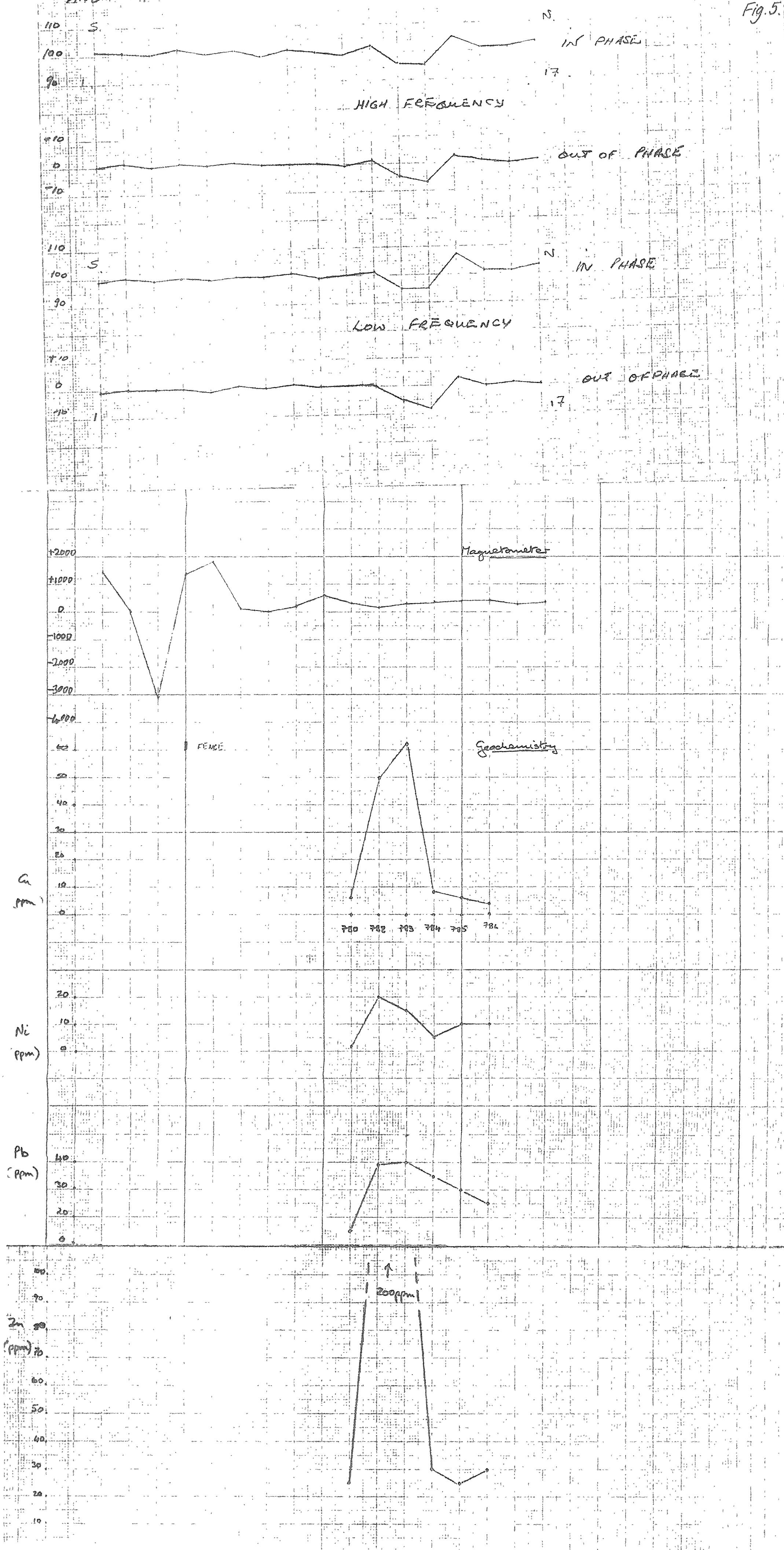
Vertical depth to
conductor edge ~60 feet.

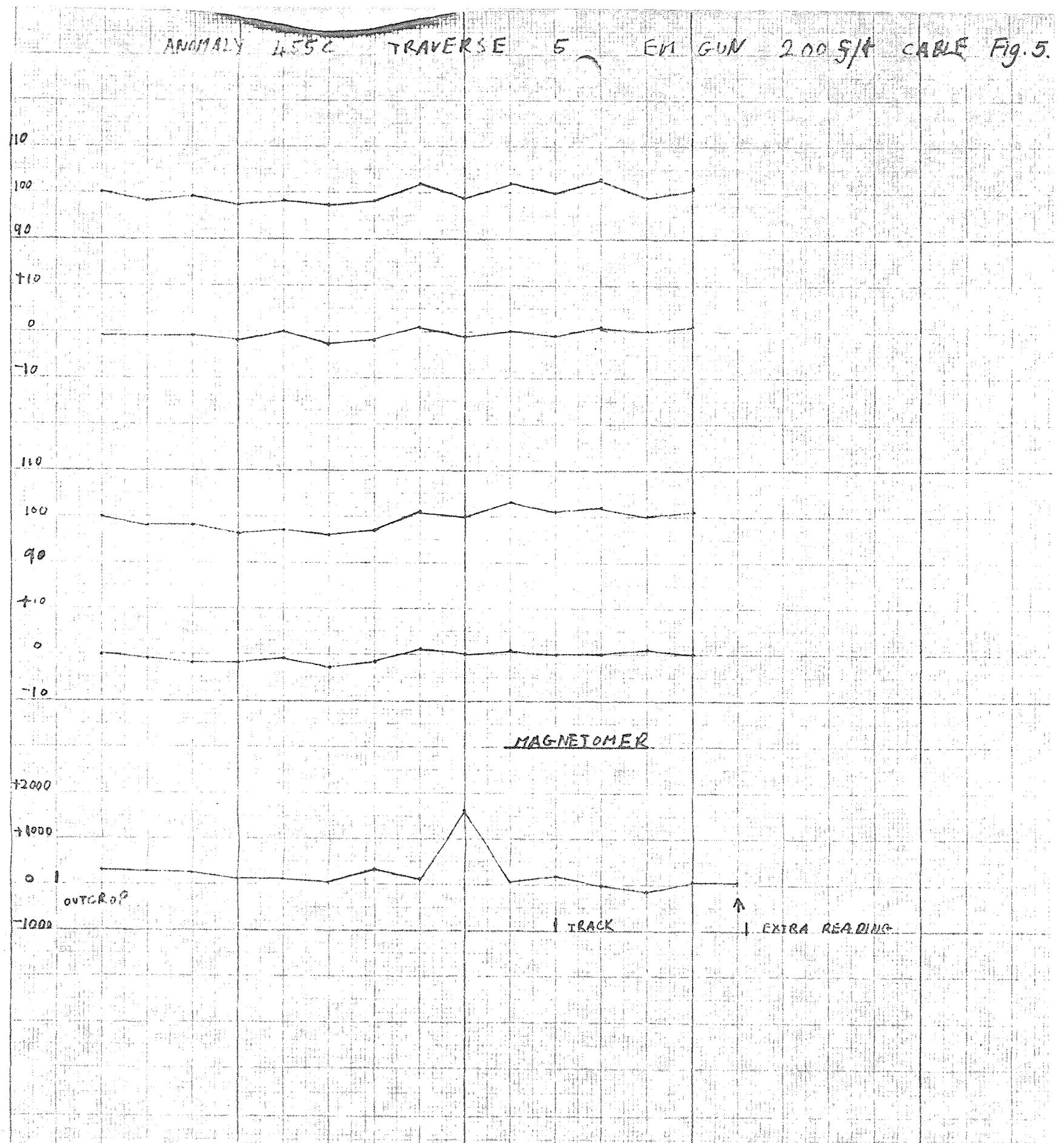
X = 7.

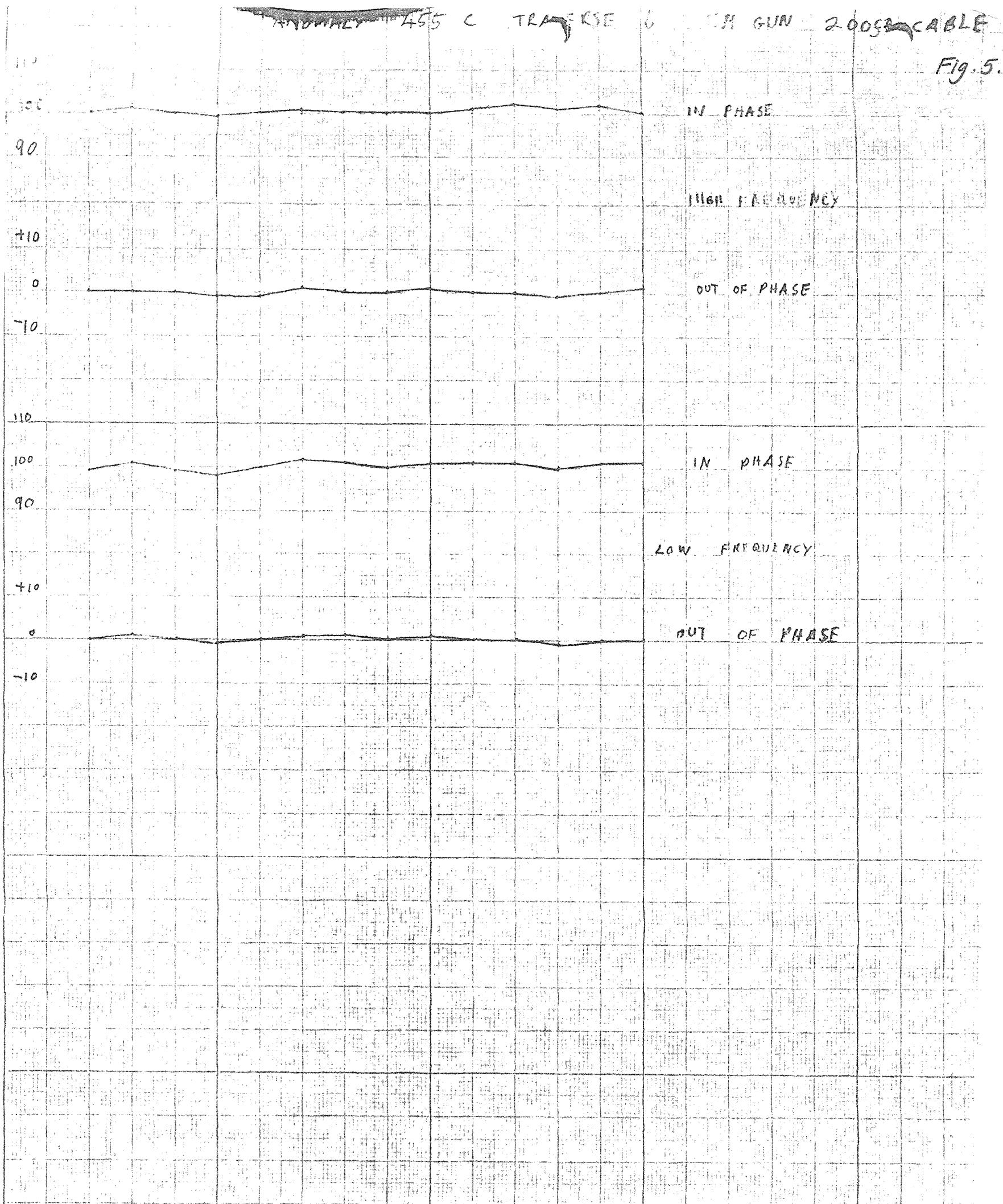
ANOMALY 455C TRAVERSE 4.

20/6/72

Fig. 5.

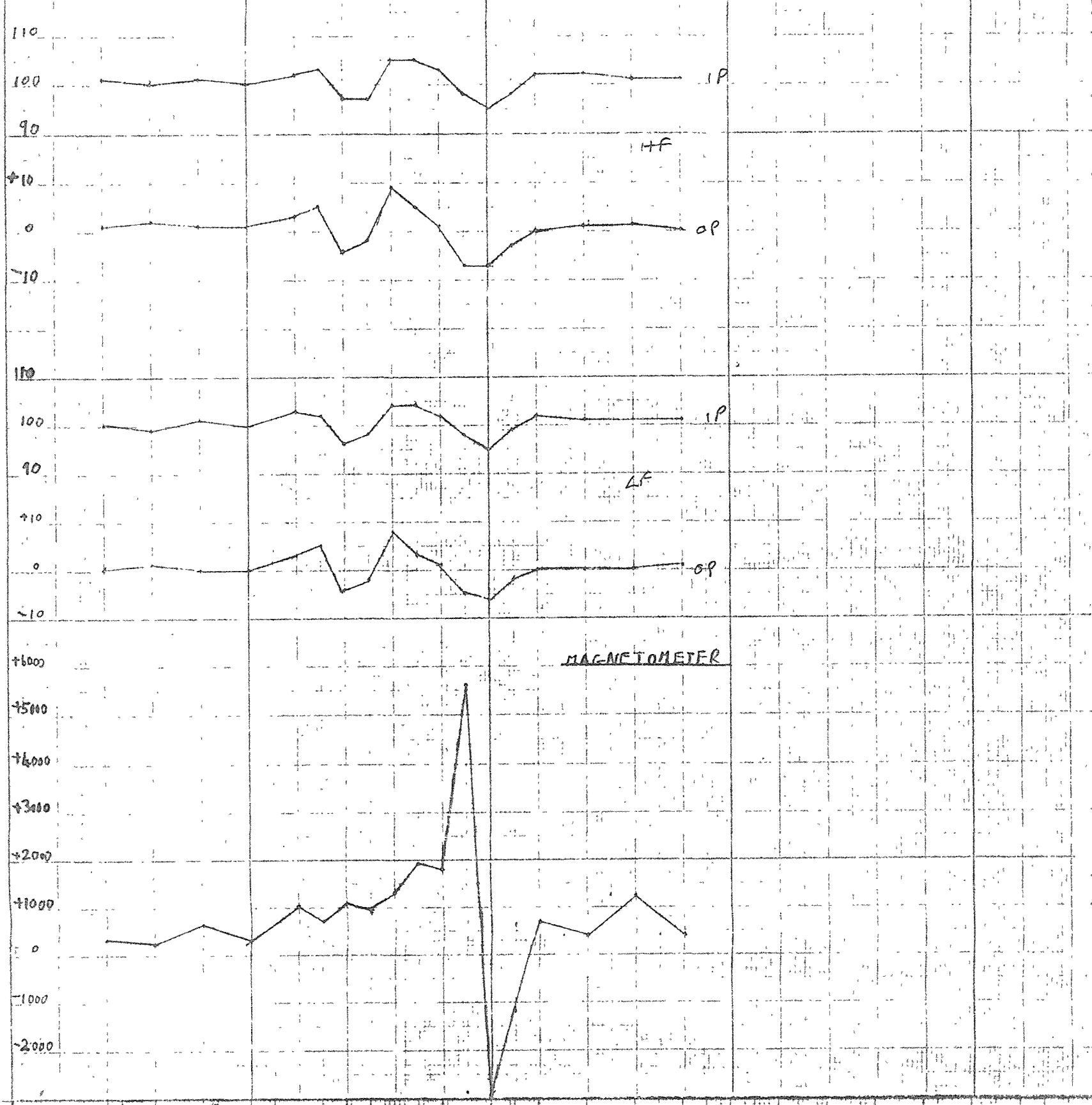






ANOMALY 455C TRAVEL 7 EM GUN 200 GS TABLE

Fig. 5.



Geochimistry

Au
(ppm)

Cu	11	130	71	183
Ni	63	152	37	62
Pb	29	26	26	32
Σ	73	116	68	68
	133	230	122	122

Gd 20 Cu 142

Ni 69

Pb 26

Zn 45

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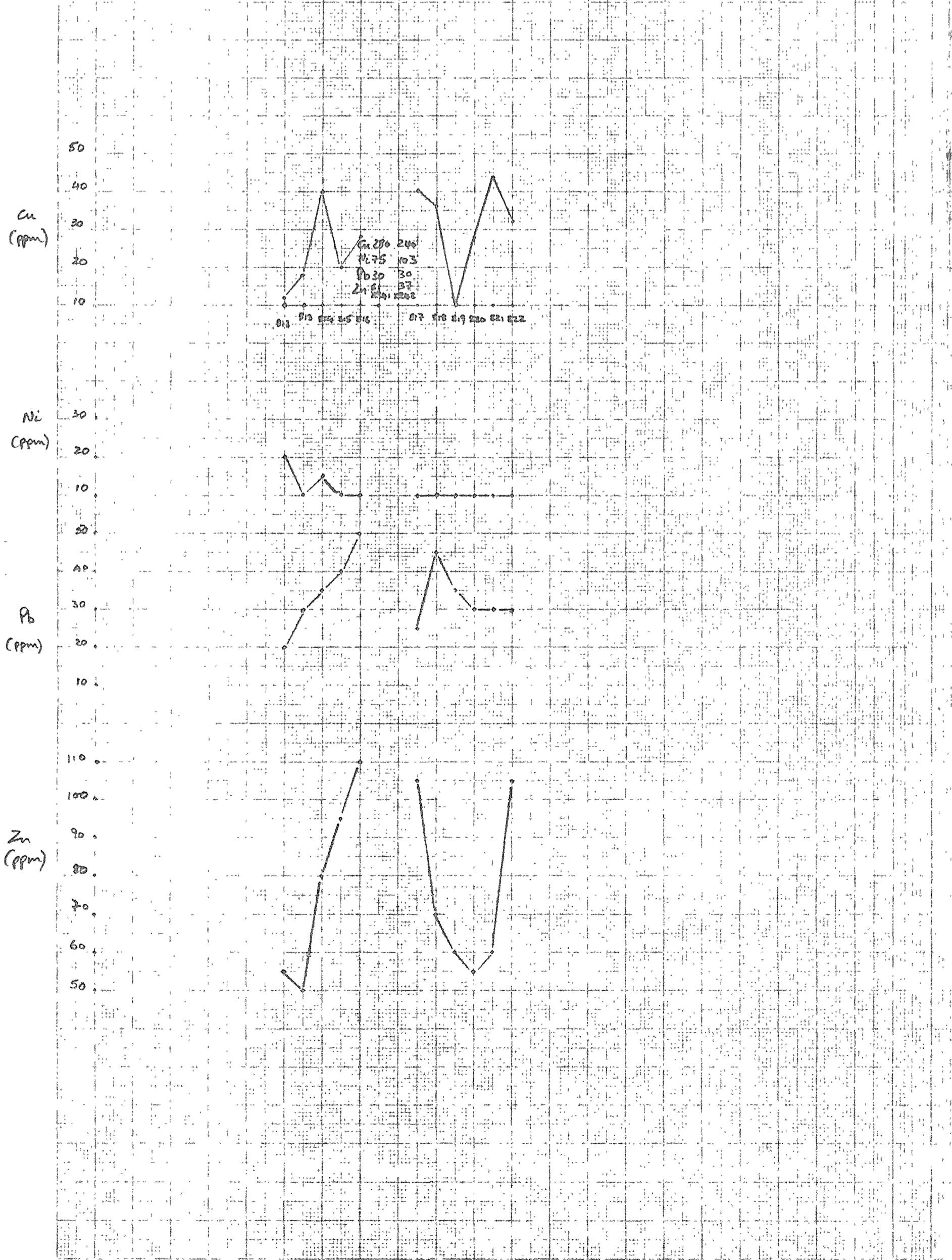
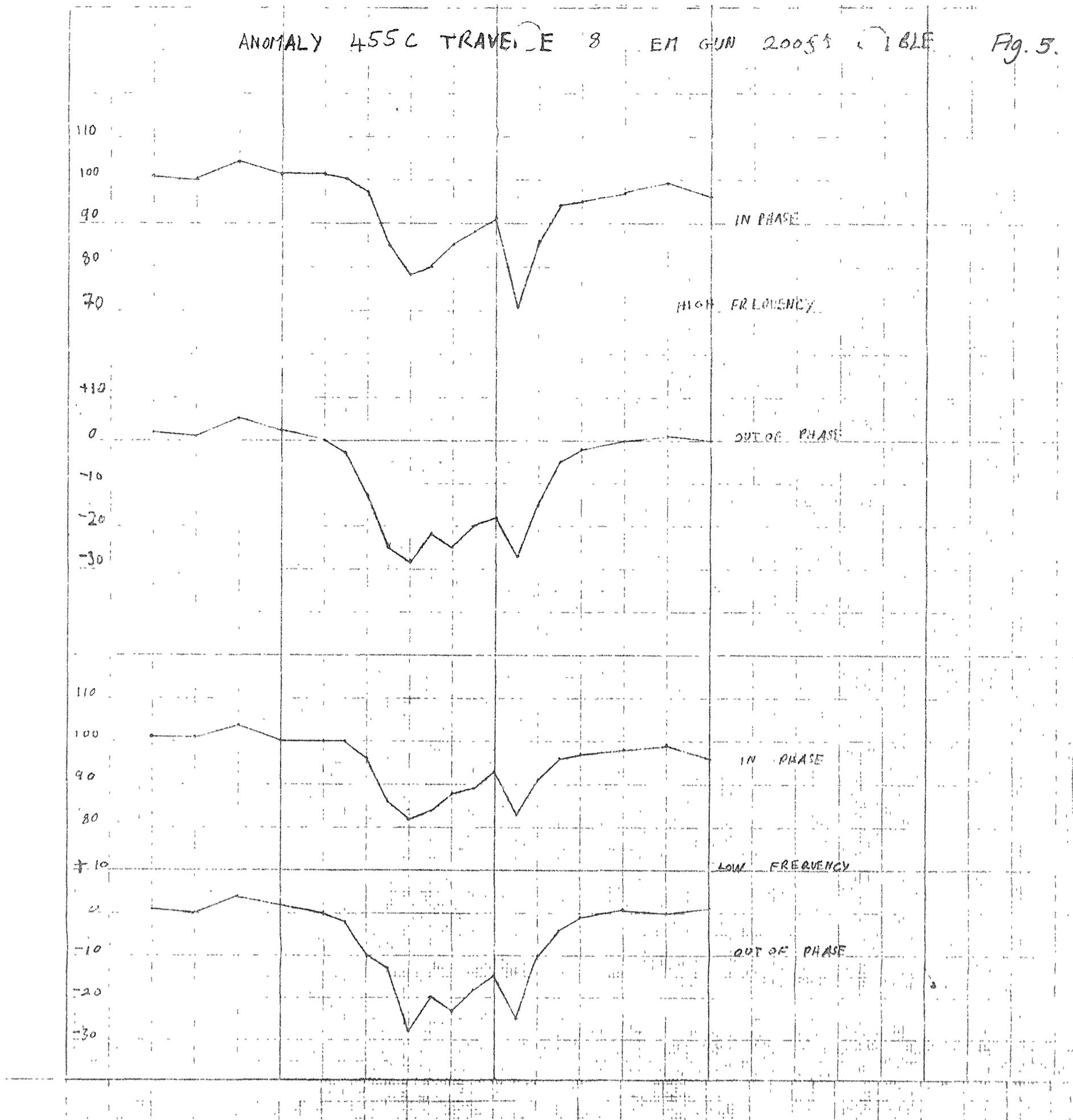
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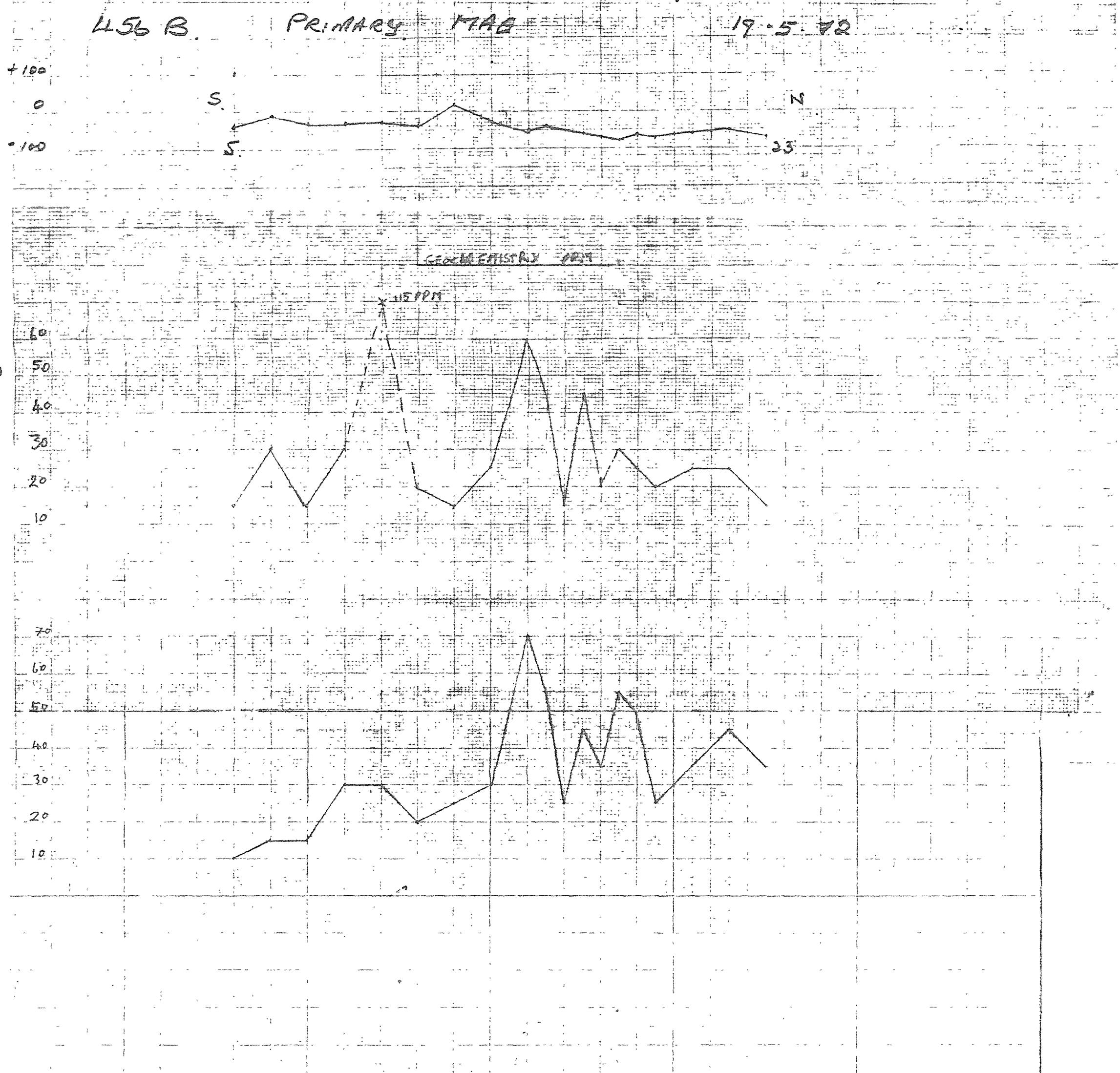
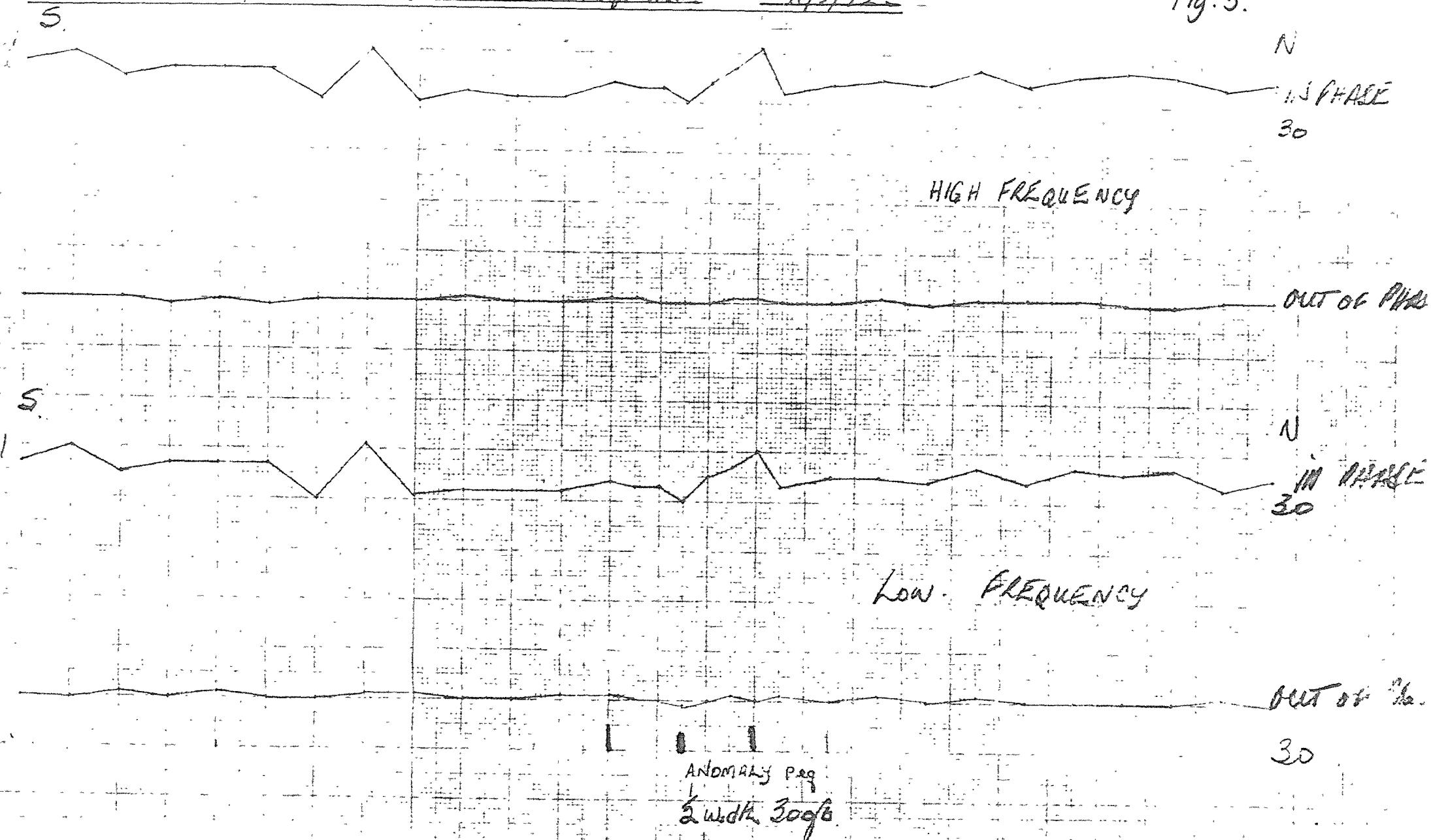
ANOMALY 455C TRAVERSE 8 EM GUN 20051 7815

Fig. 5.

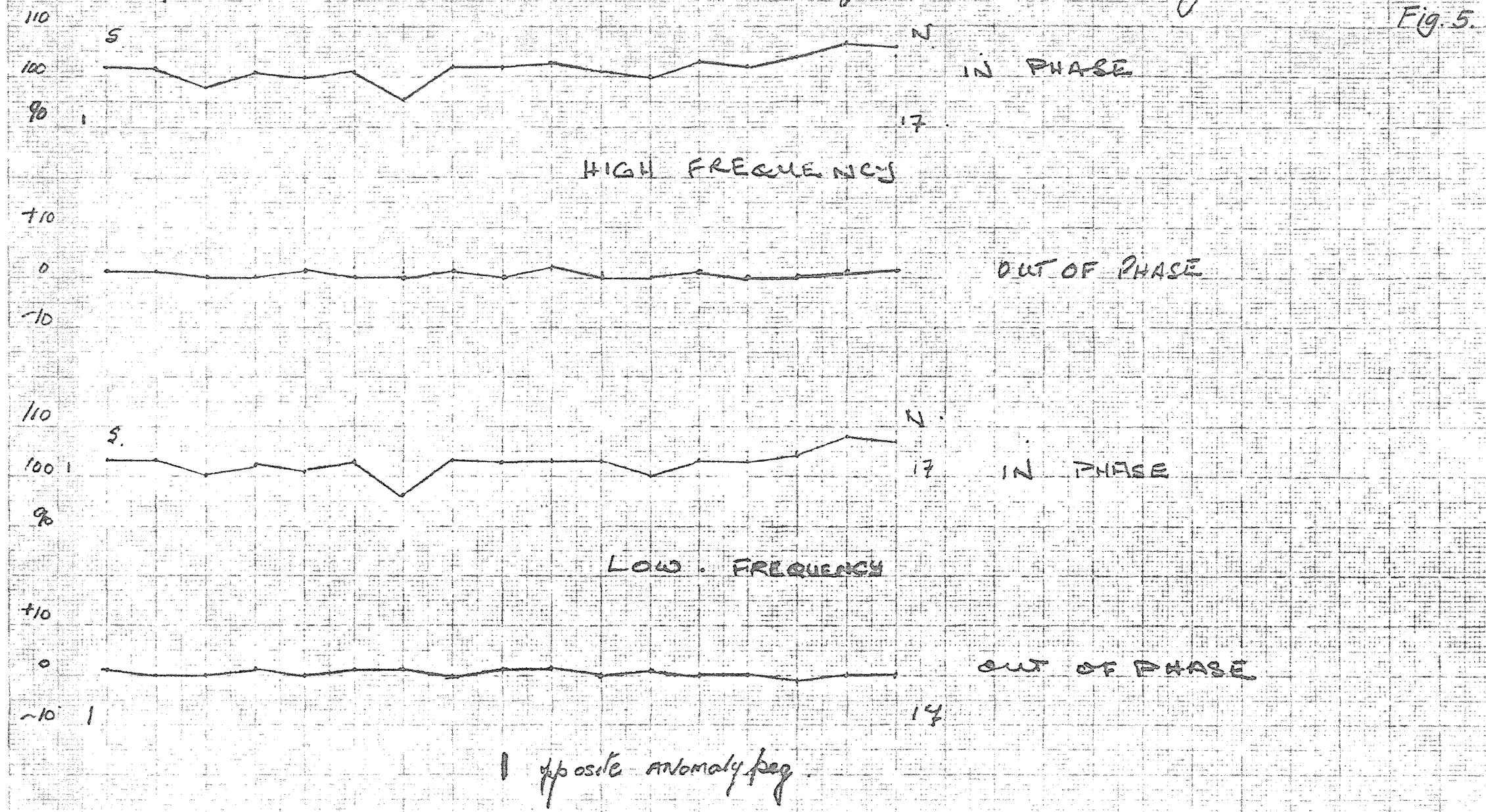


456.B PRIMARY TRAVERSE EM GUN 200ft table 11/5/72

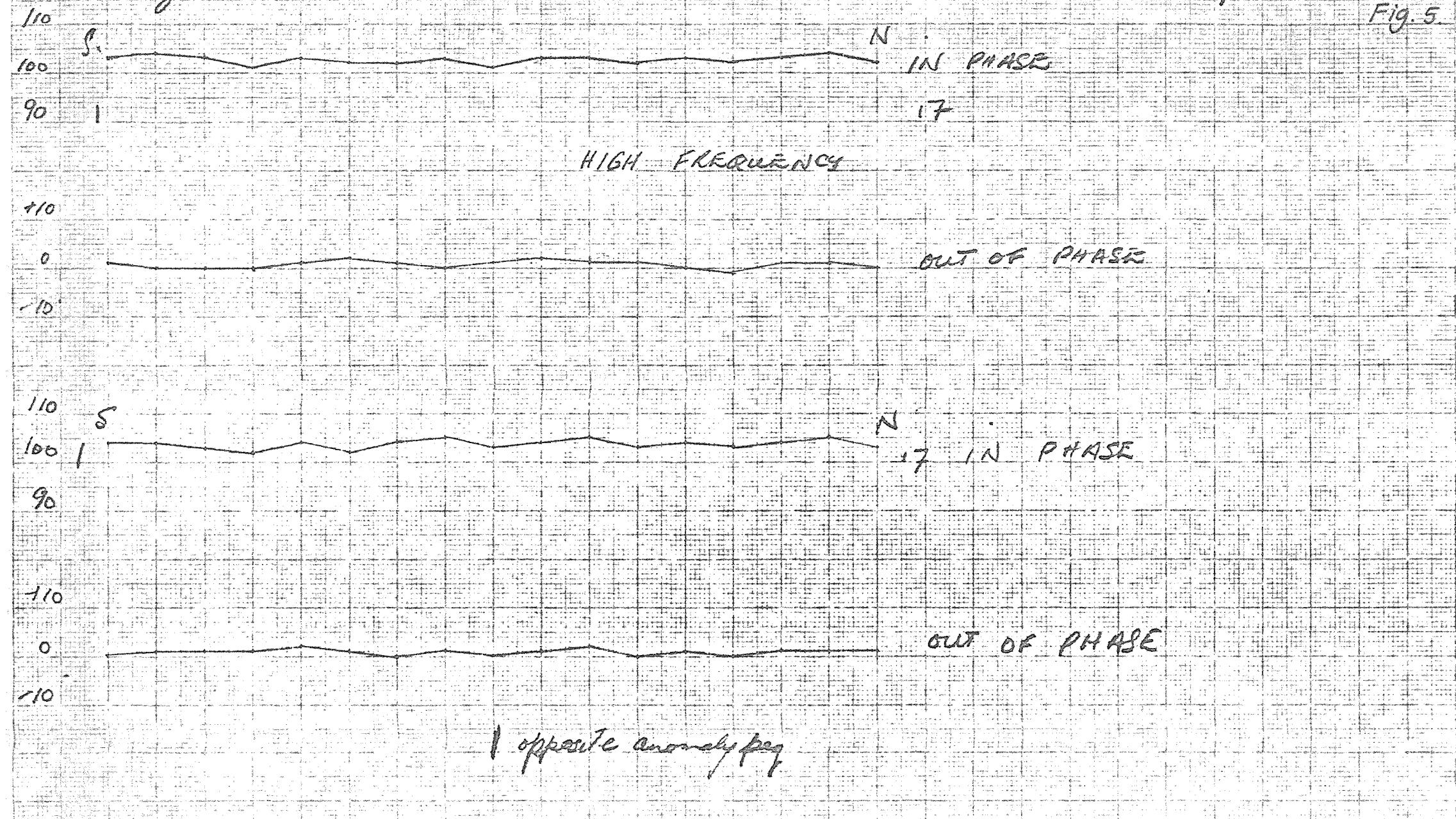
Fig. 5.



Anomaly 456B TRAVERSE 2 E. M. Gau 200 ft. cab. half spacing 11-5-72

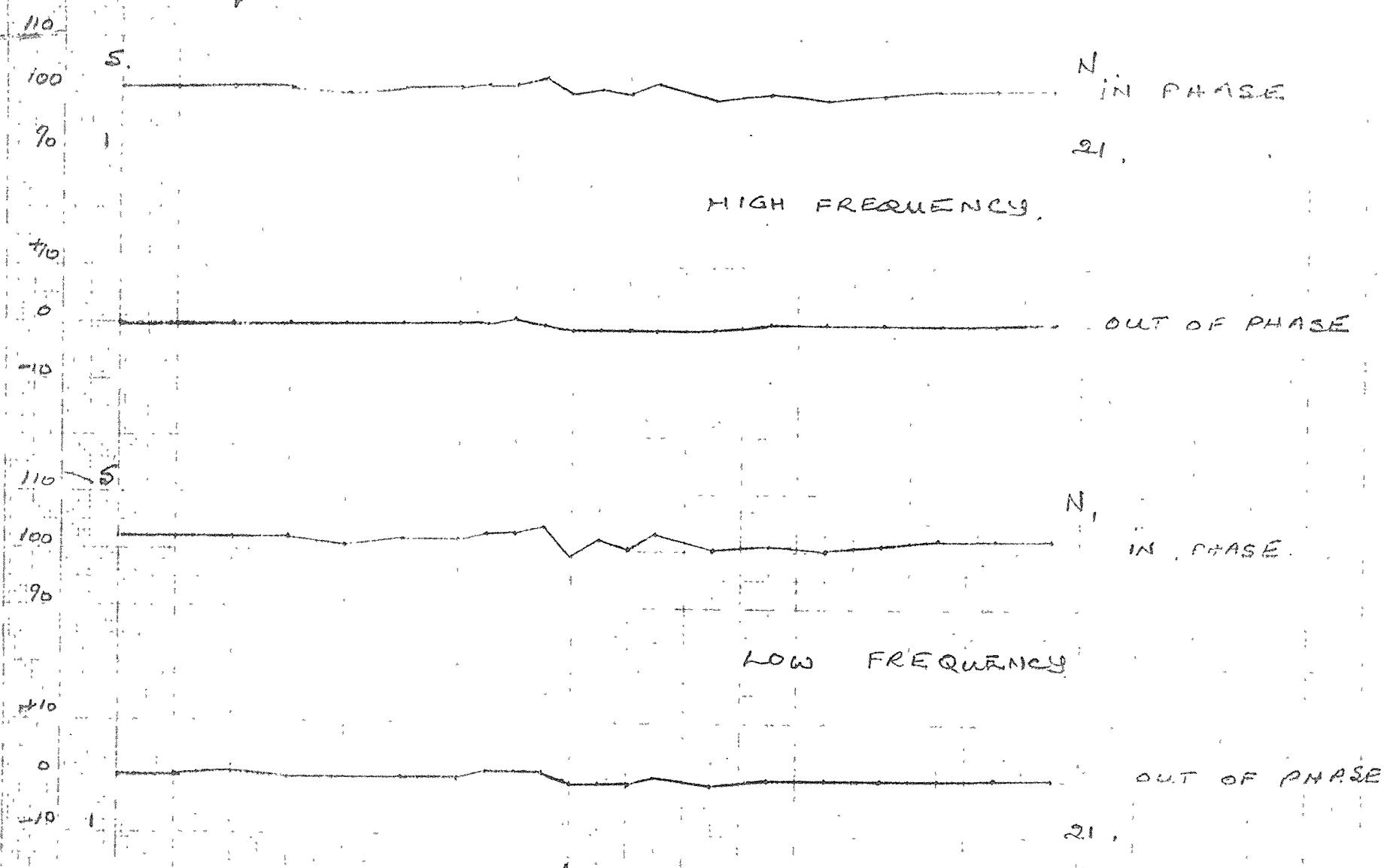


Anomaly 486 B TRAVERSE 3 E.M. Gun. Loop cable 100 ft. spacing 11-5-72.



Anomaly 451B PRIMARY TRAVERSE E.M. Survey 200ft cable.

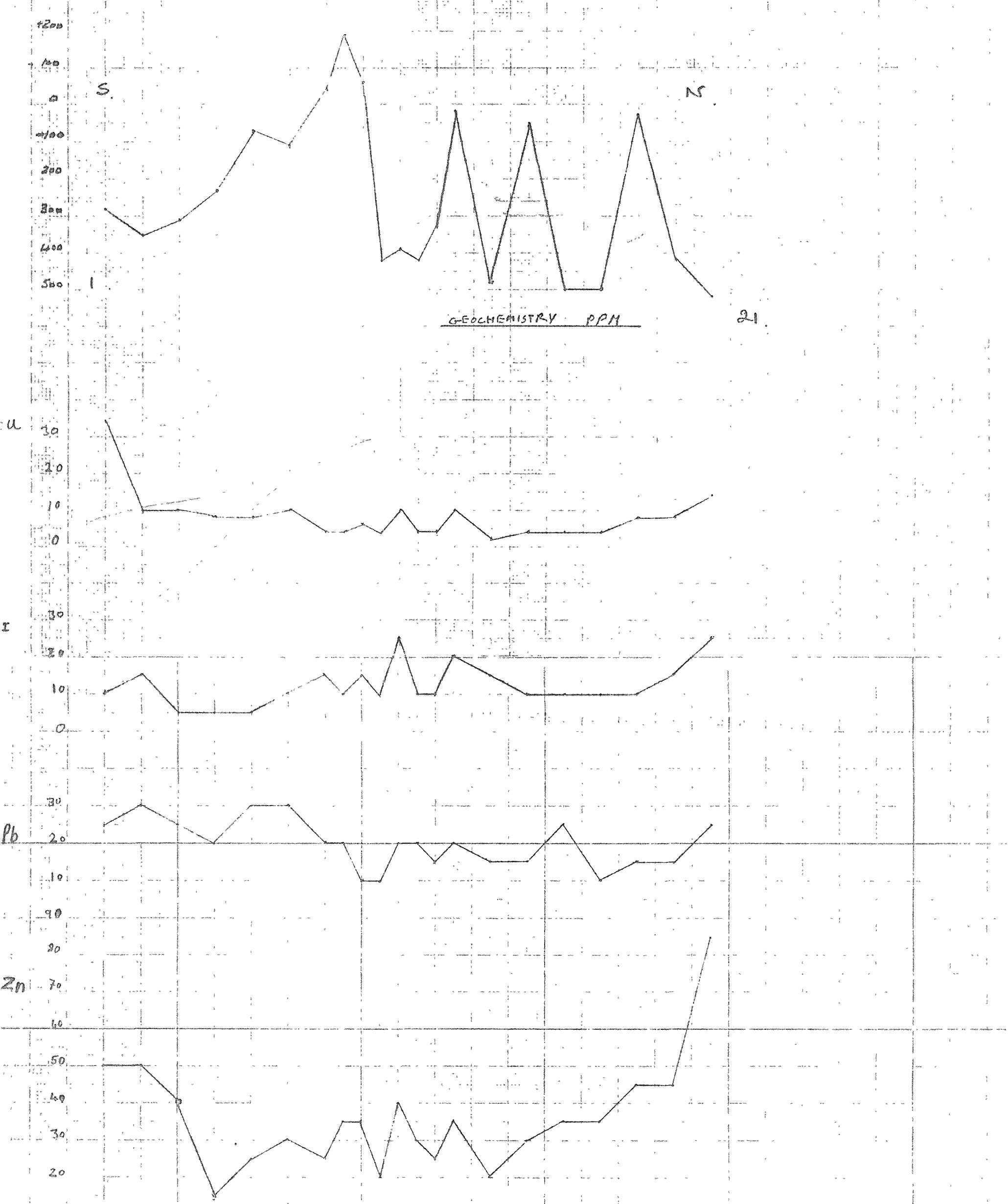
Fig. 5.



ANOMALY REG.
S.W.D.L. 400ft

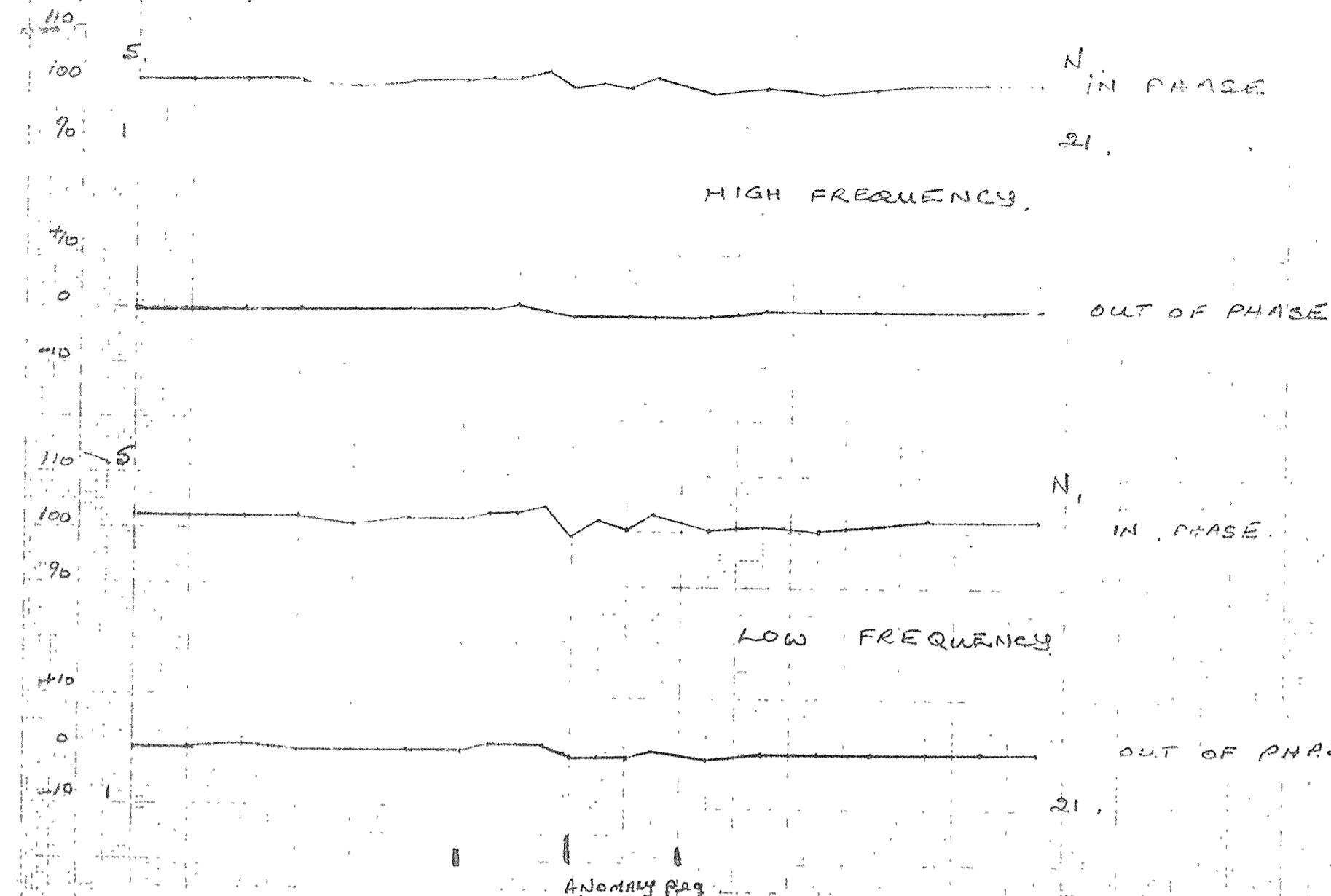
451-B PRIMARY TRAVERSE MAG.

19-5-72

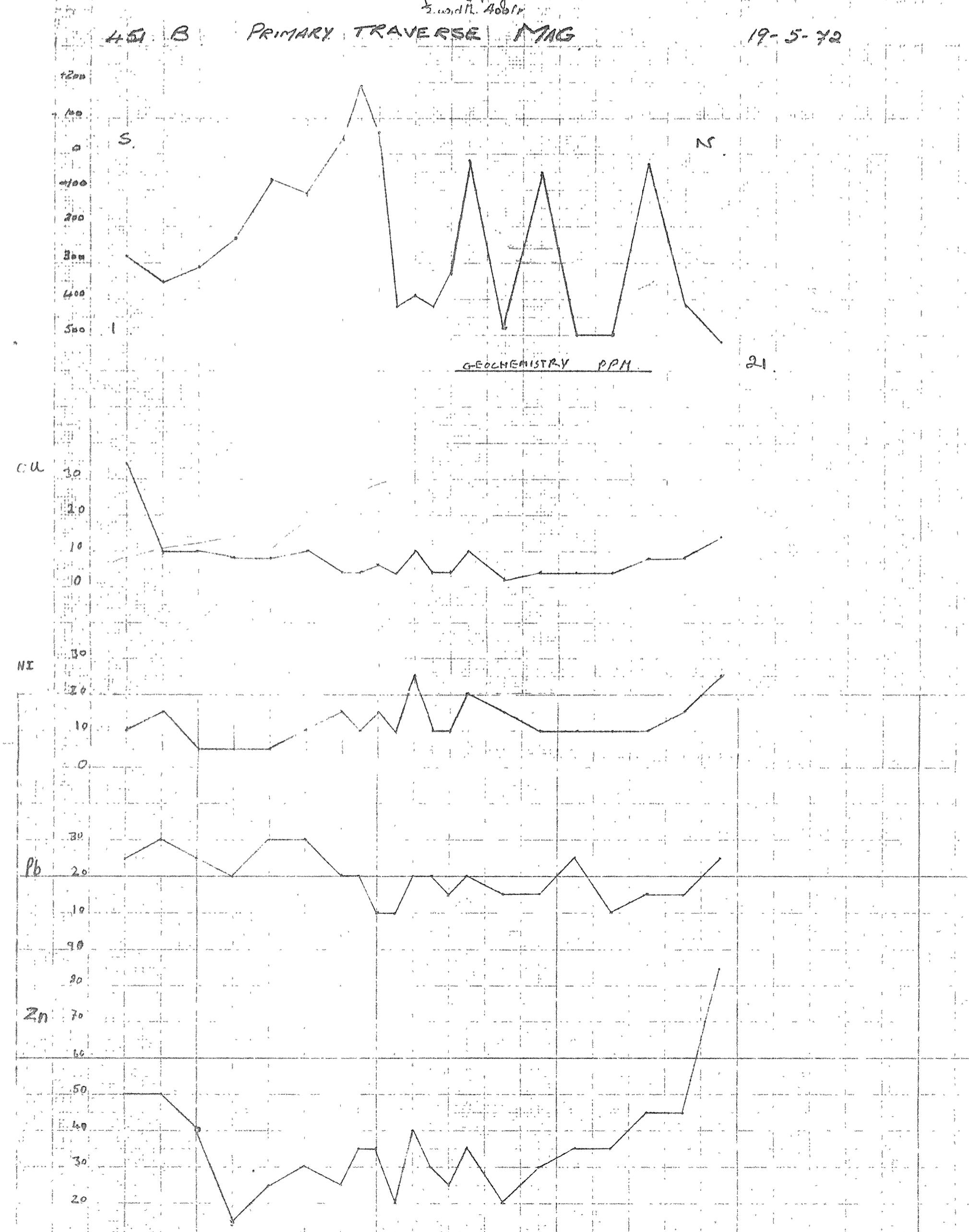


Anomaly 451B PRIMARY TRAVERSE E.M. GUNS 200ft cable.

Fig. 5.



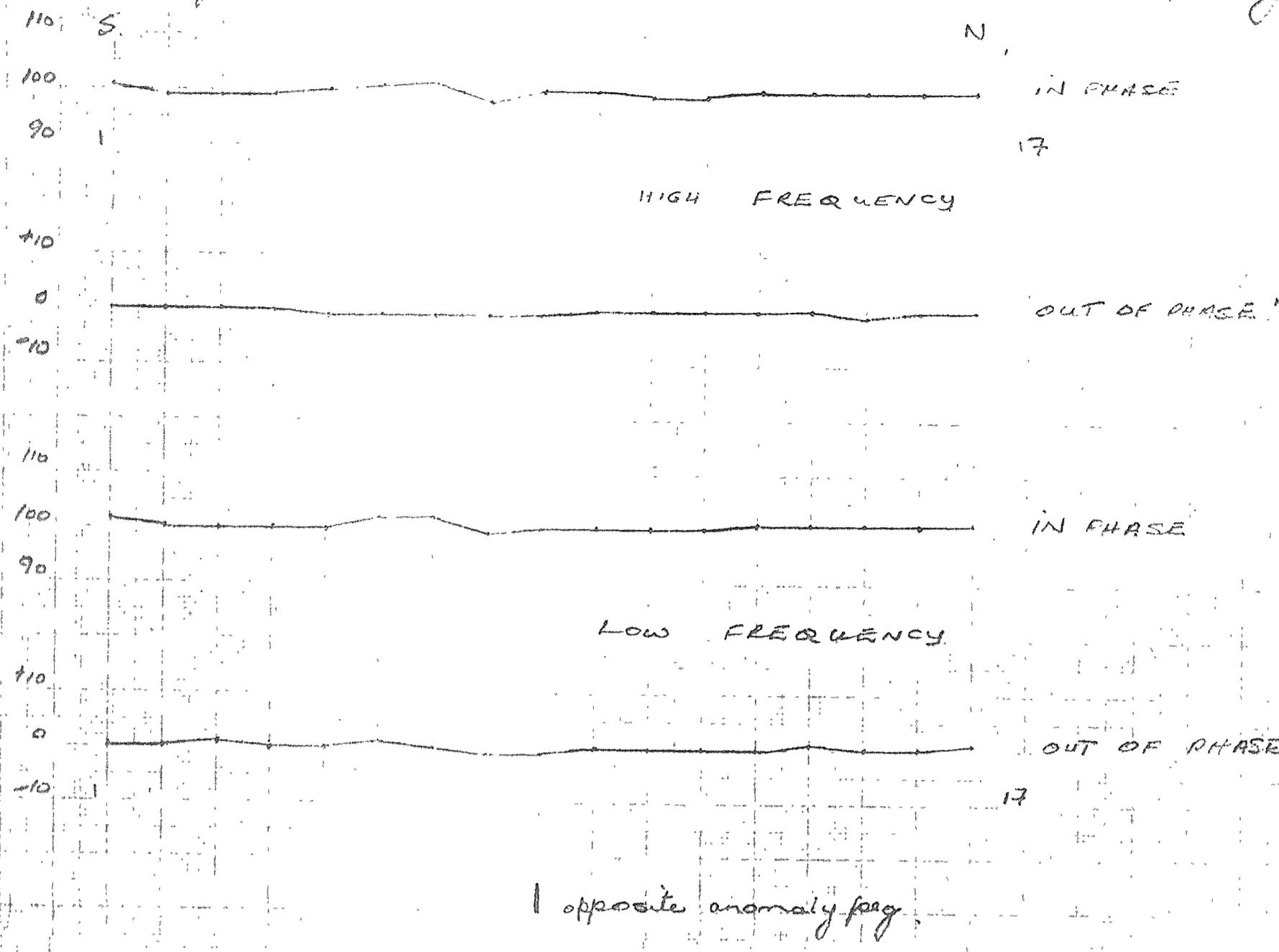
19-5-72



Anomaly. 451 B. TRAVERSE 2. EM Gun. 100' spacing

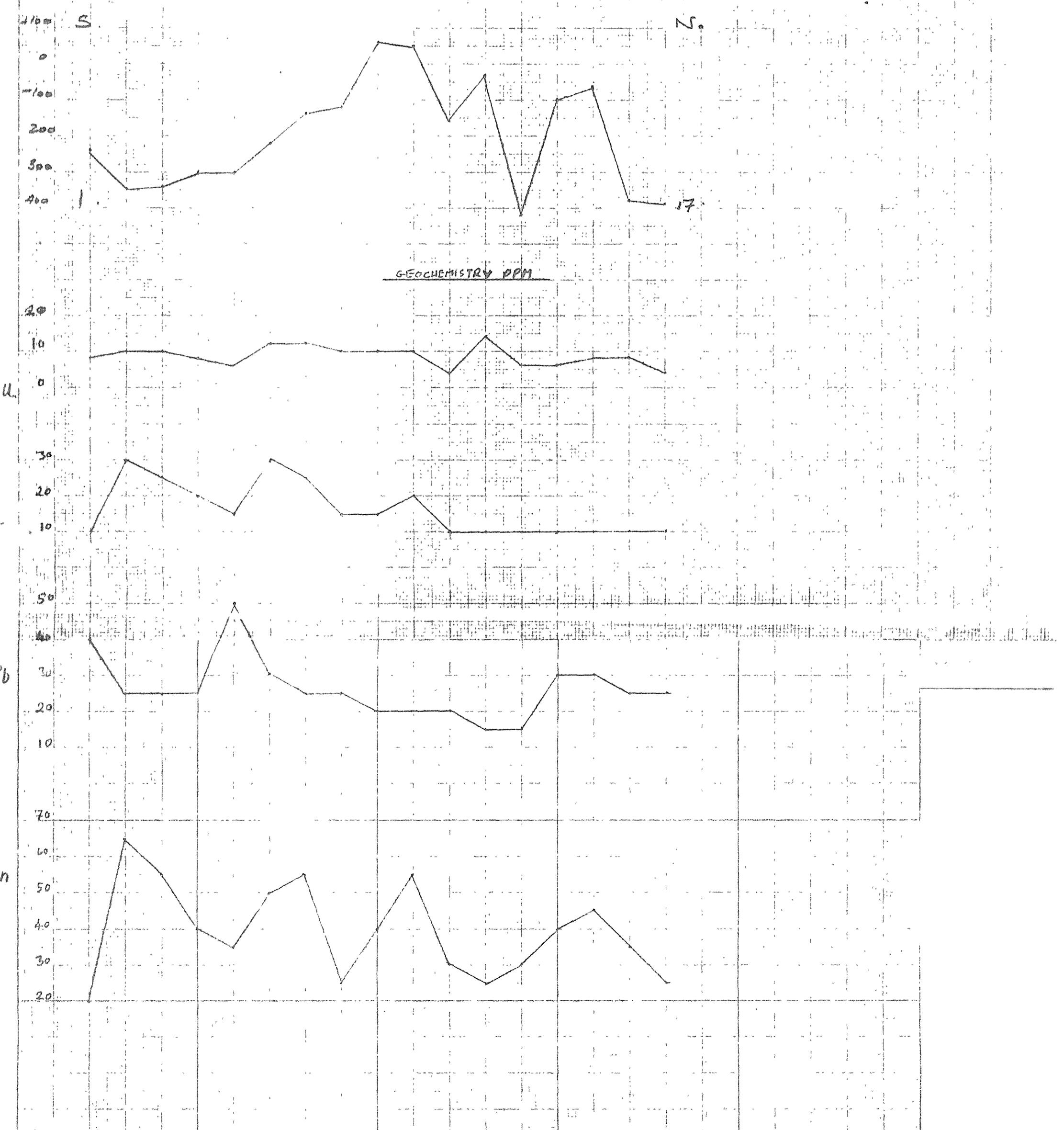
11-5-72

Fig. 5



451 B TRAVERSE 2. MAG

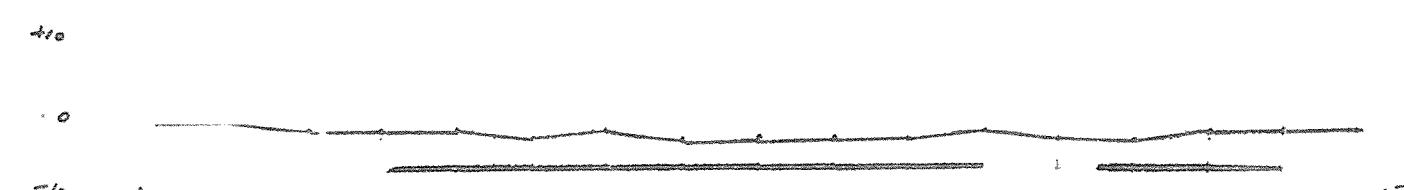
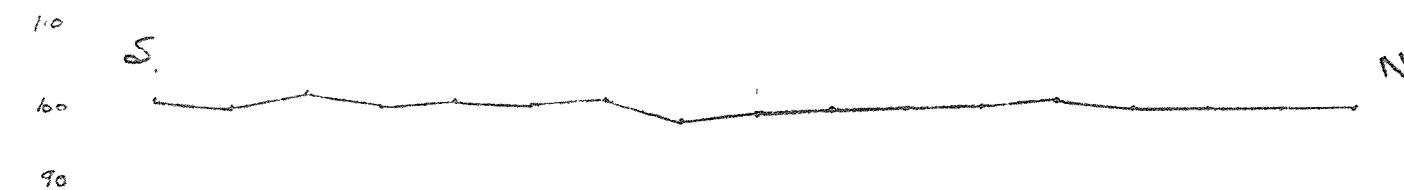
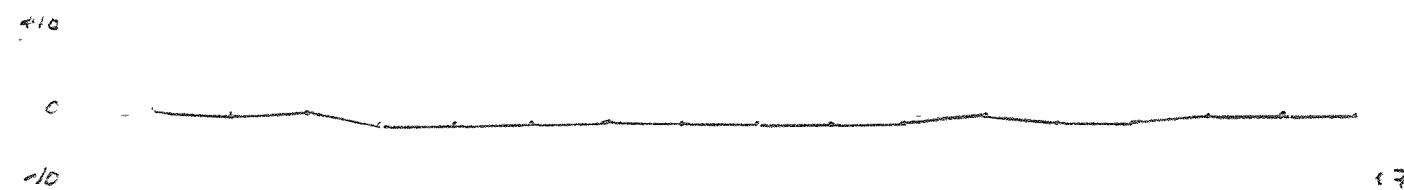
19-5-72



Anomaly 451B. TRAVERSE 3

E N Gun. 200ft. cable. 100' spacing

11-5-72



Boggy ground

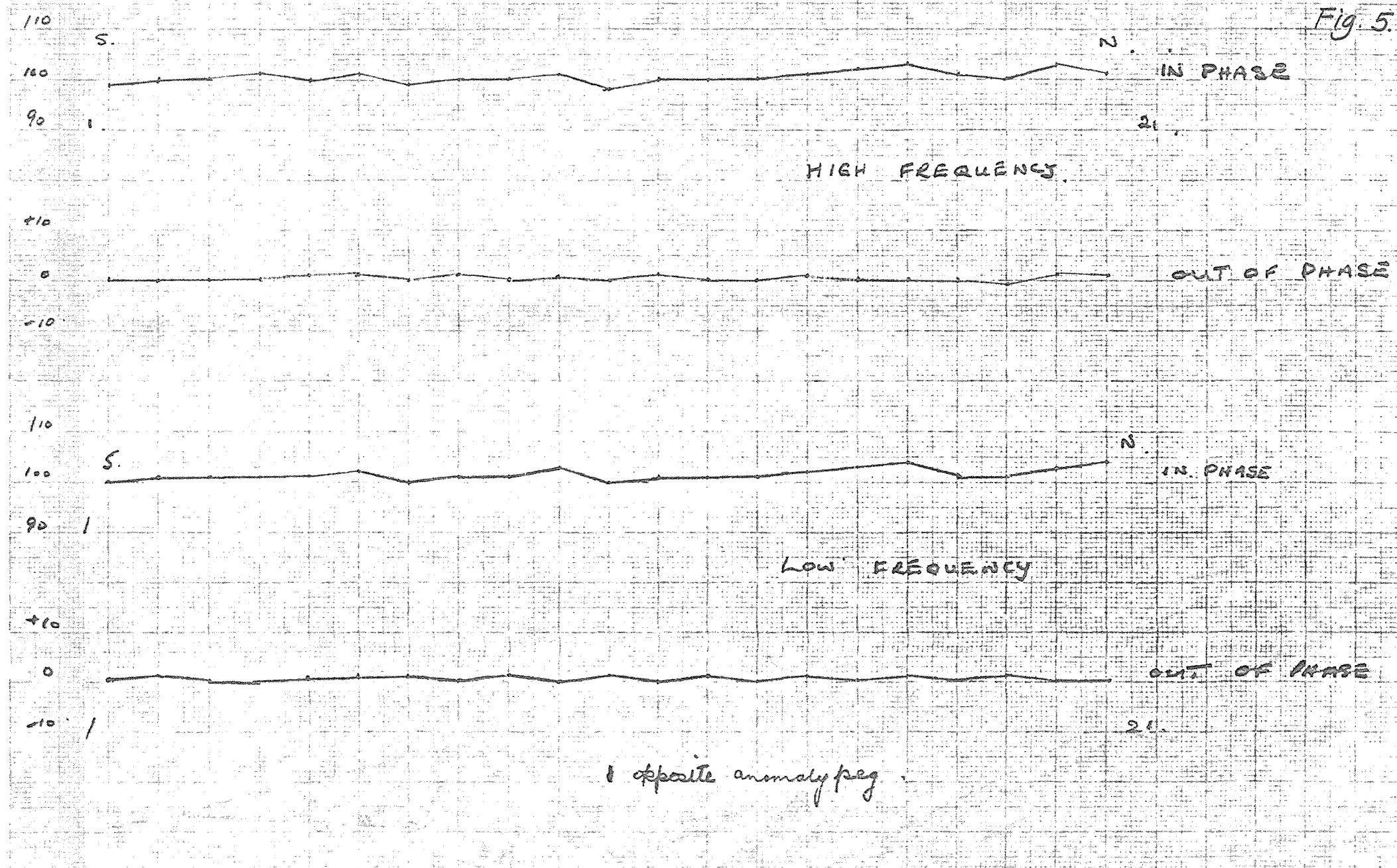
Stream

stream

opposite anomaly peg -

Fig. 5.

Anomaly 4644 TRAVERSE 2. EM Sums 200 ft cable 5-5-72.

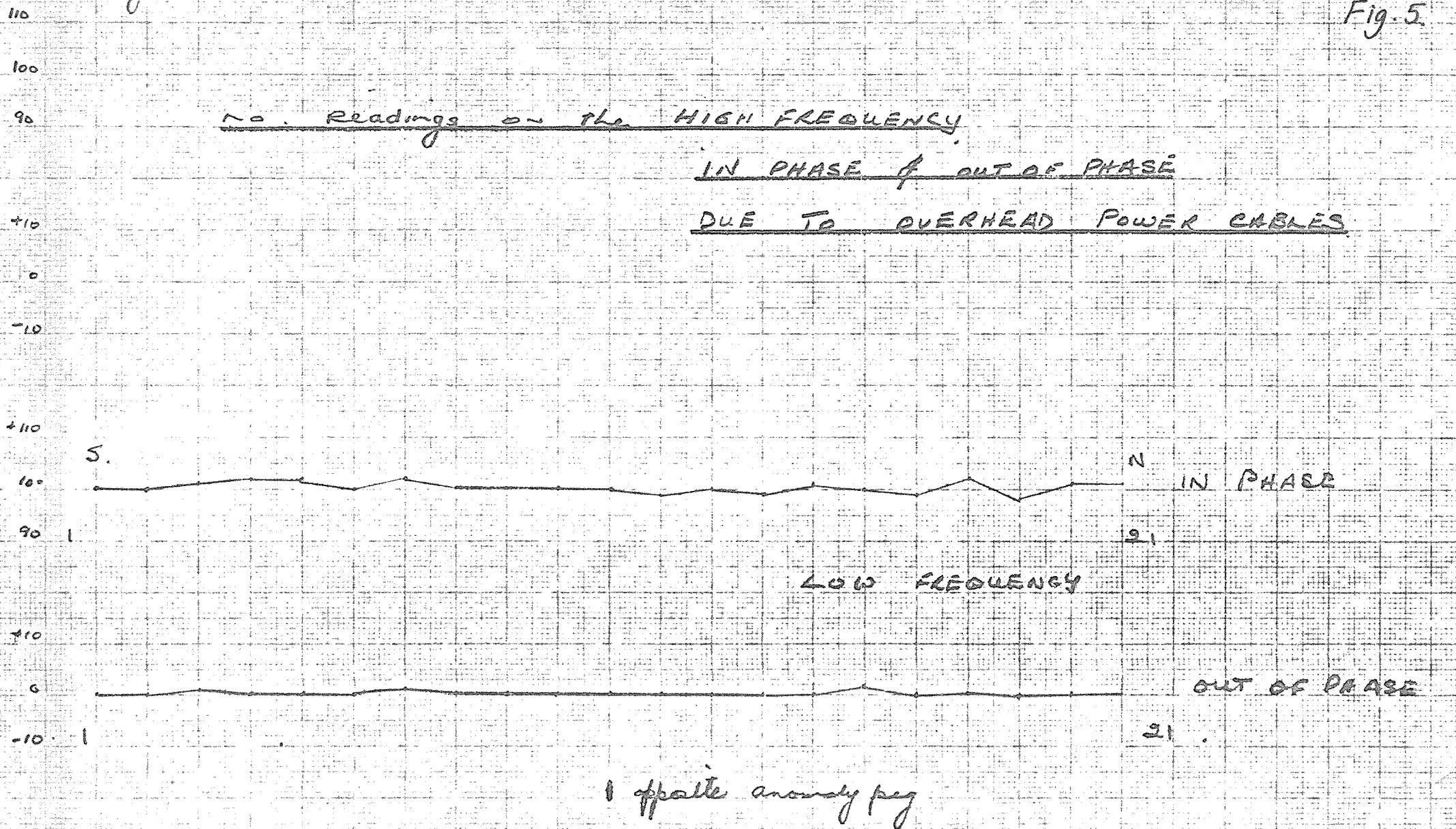


Anomaly 464A TRAVERSE 3

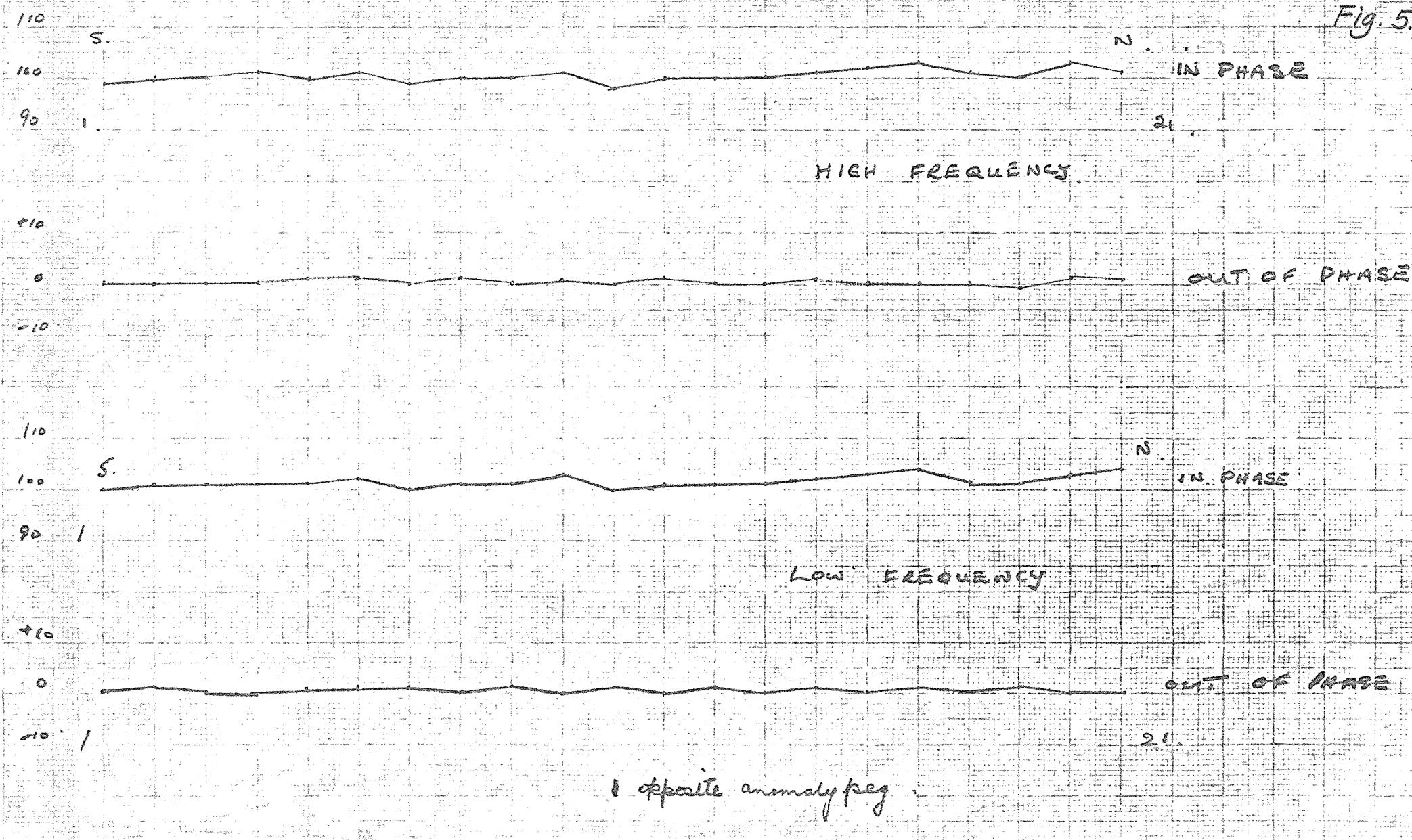
E.M. Gnd. Znfo. cable

5.5.72

Fig. 5.



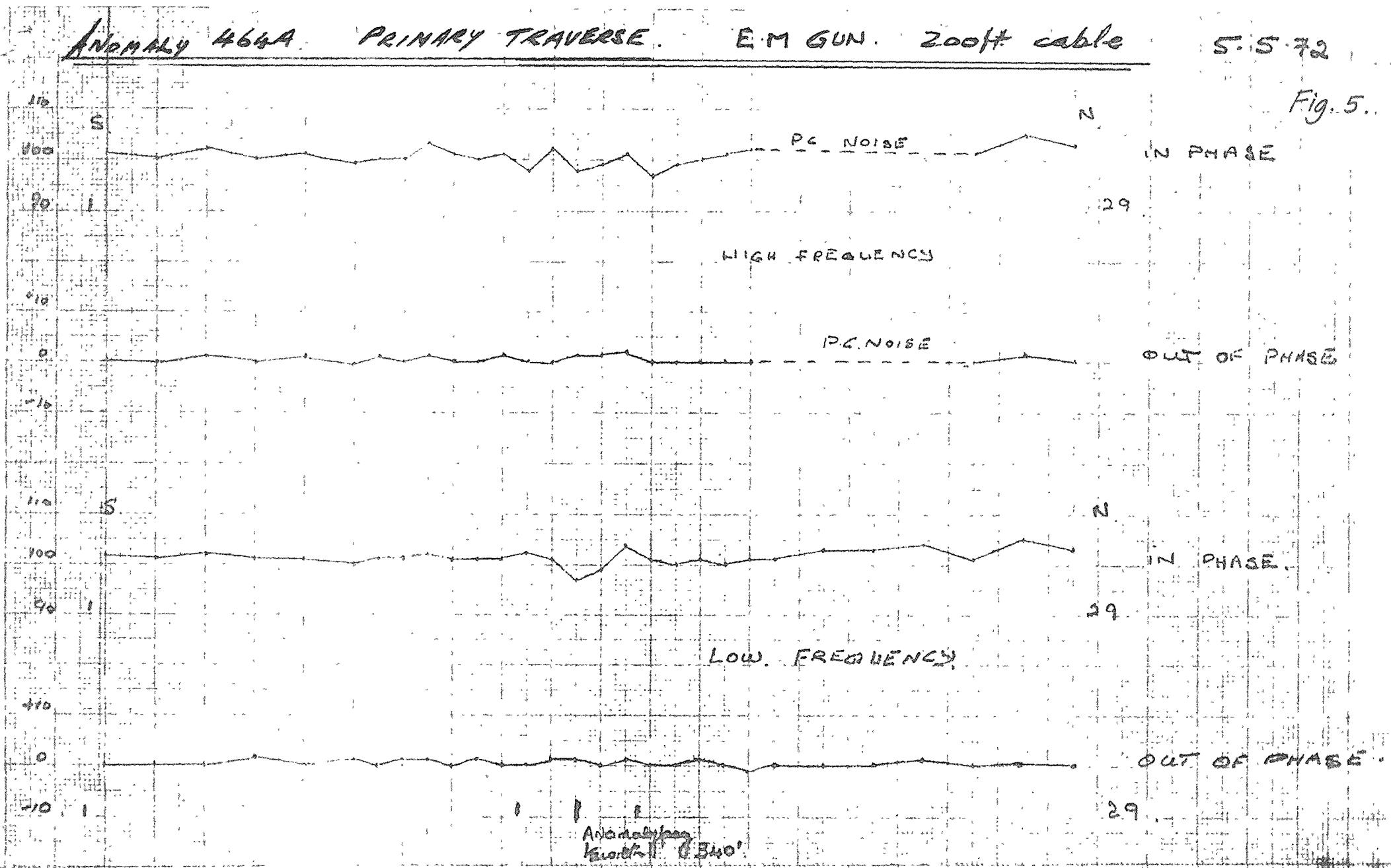
Anomaly 4644 TRAVERSE 2. EM Sums 200 ft cable 5-5-72.



Anomaly 464A PRIMARY TRAVERSE E.M GUN. 200ft cable

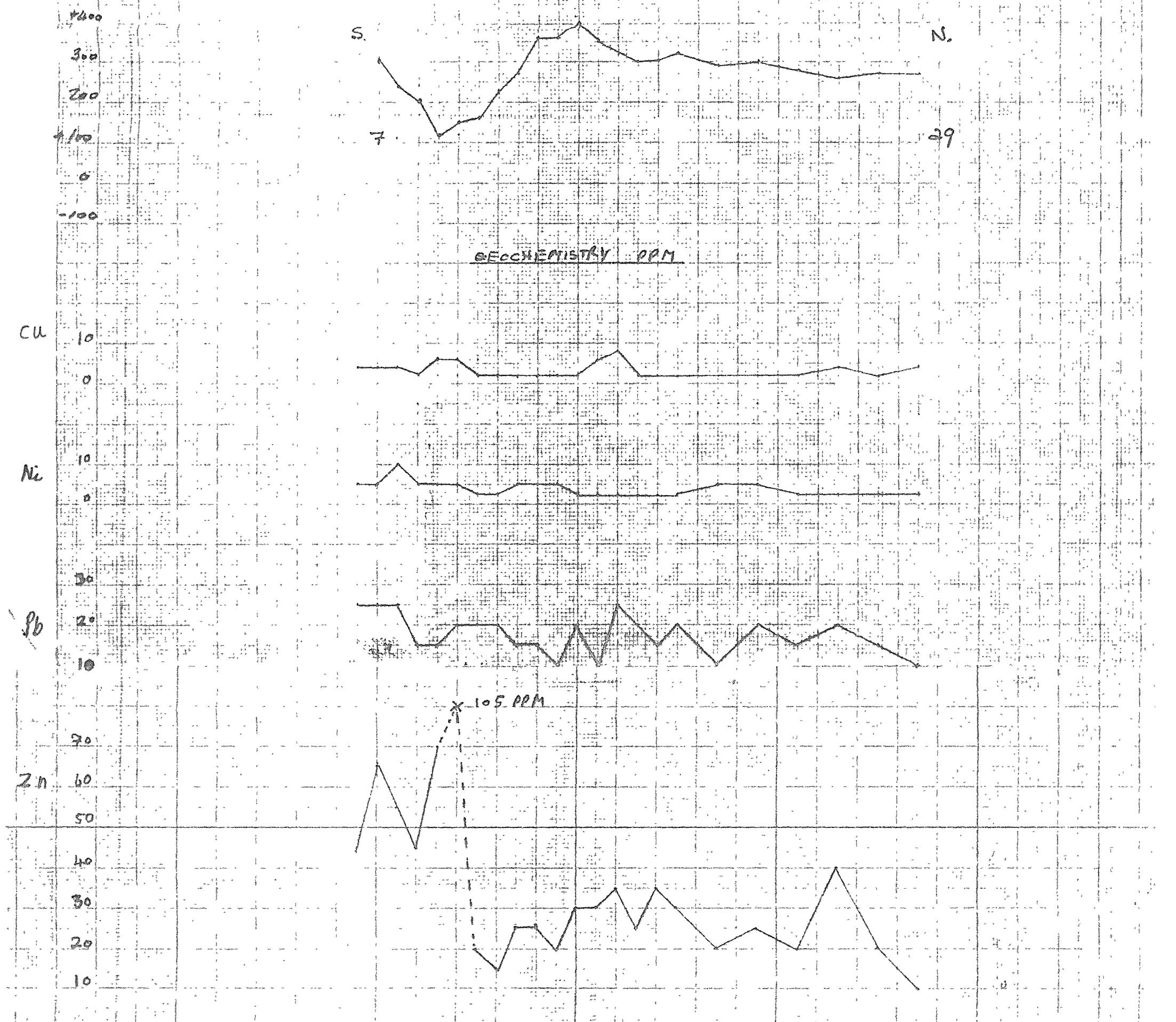
5.5.72

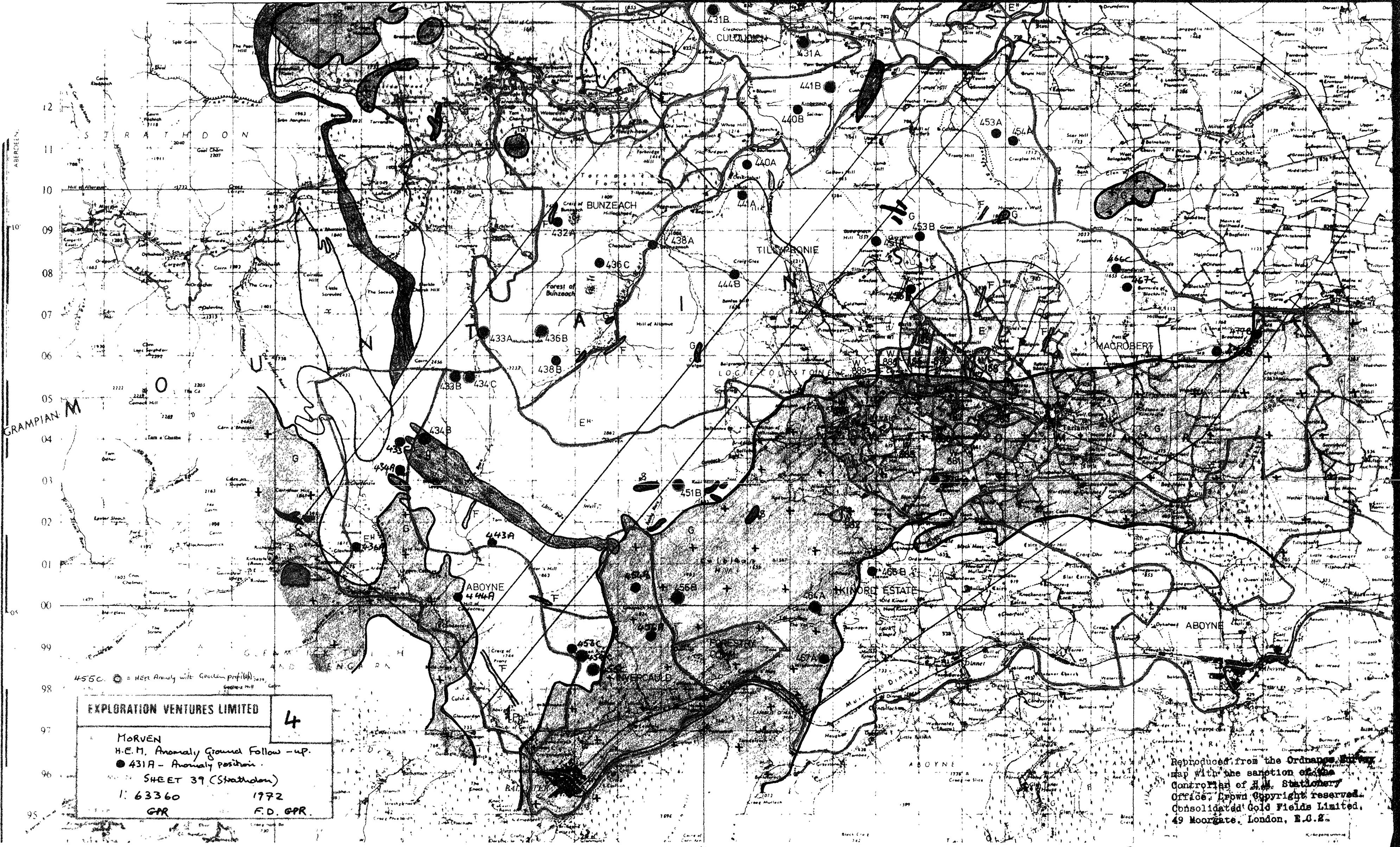
Fig. 5.



464A MAG PRIMARY TRAVERSE

19-5-72





EXPLORATION VENTURES LIMITED

1

MORVEN
H.E.M. Anomaly Ground Follow-up.
● 431A - Anomaly Position:

431A - Anomaly Position :
N 20° 54' E 107° 22' EGL NAD 83

SHEET 39 (Strathdon)

1: 63360 1972
GPR F.D. GPR.

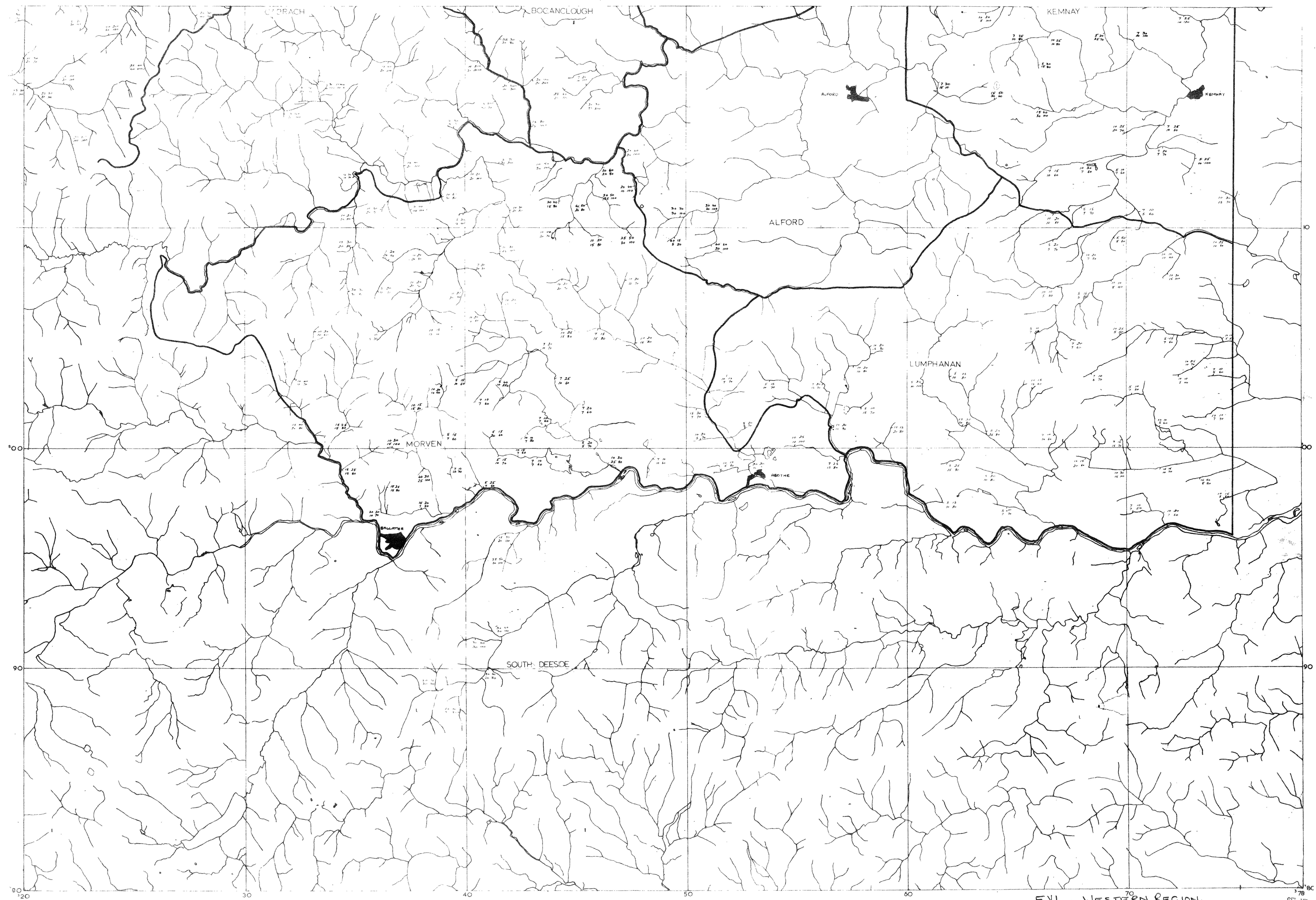
GAR F.D. GPR.

Black *Red* *Blue*

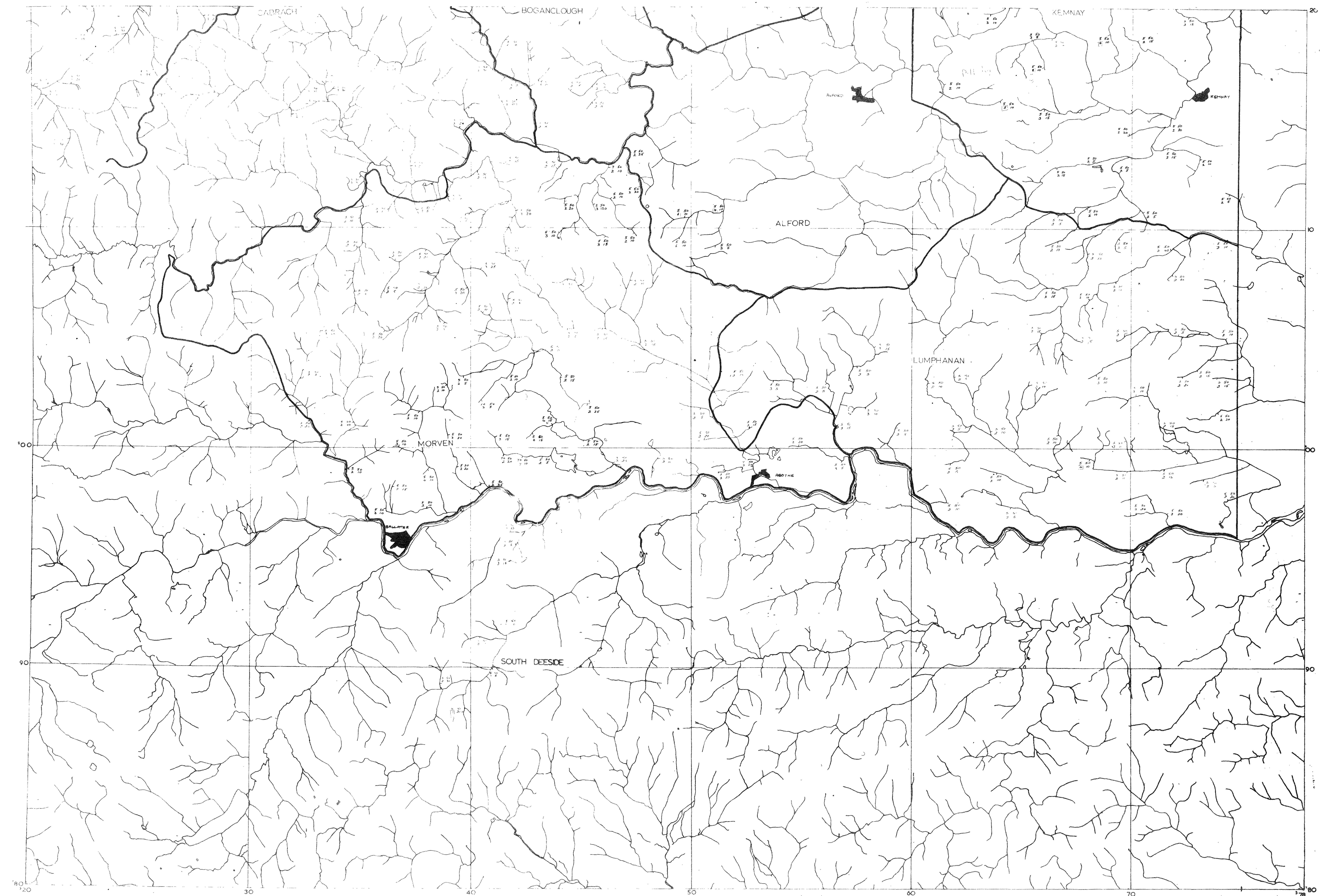
1000 m.s.n.m. 1000 m.s.n.m.

130

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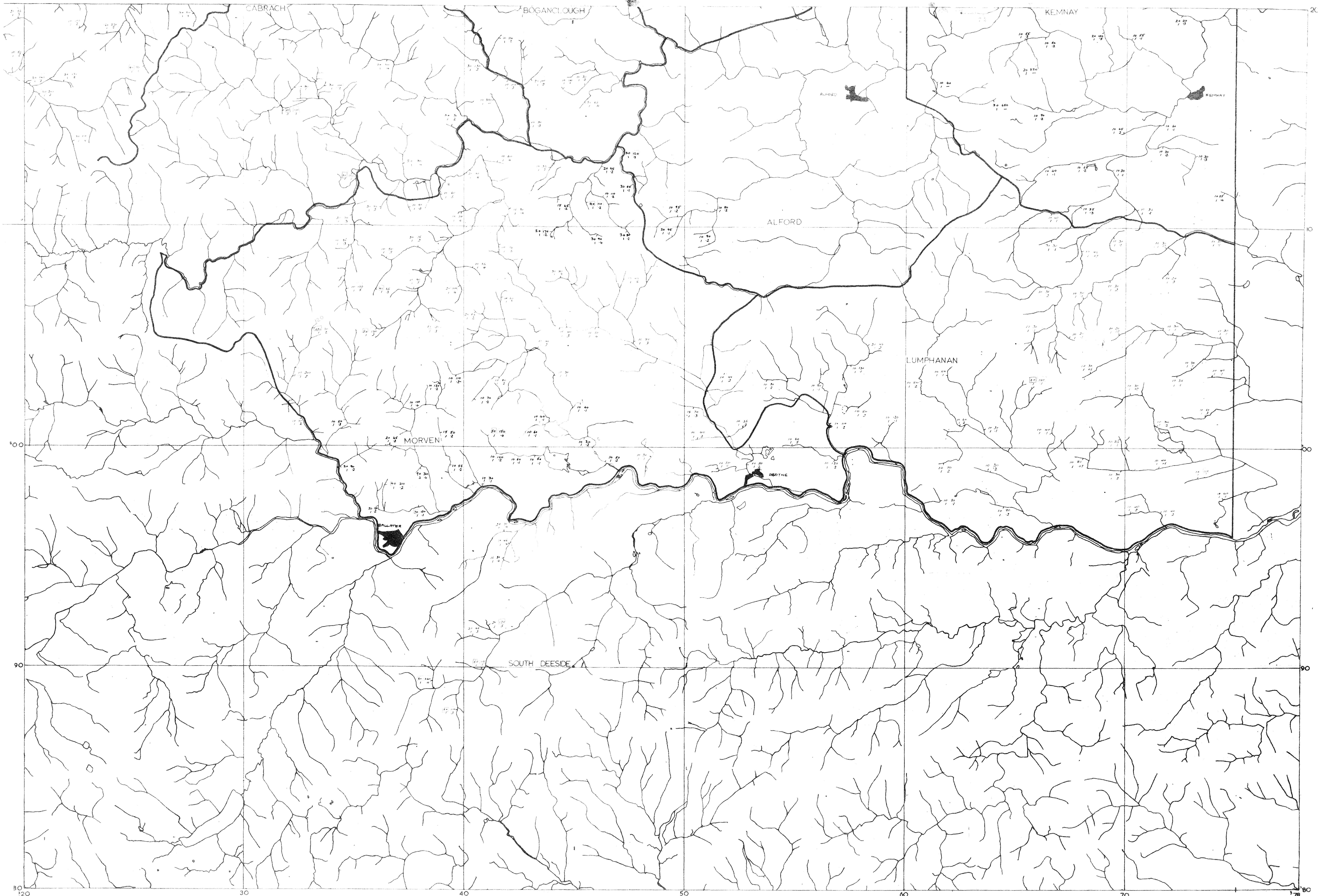


EVL - WESTERN REGION.
Stream Sediment Values for Co, Ni, Cu, Cr.
(Multi-element spectrographic scans). 1973



EVL - WESTERN REGION - MORVEN.

Stream Sediment Values for Sn, W, Mo, As
(Multi-element spectrographic scans). - 1973



EVL - WESTERN REGION - MORVEN
Stream Sediment Values for Pb, Zn, Ag, Mn.
(Multi-element spectrographic scans) - 1973