



# Bergvesenet

Postboks 3021, 7002 Trondheim

## Rapportarkivet

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                     |                                    |                                      |                                         |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|------------------------------------|--------------------------------------|-----------------------------------------|
| Bergvesenet rapport nr<br><b>BV 508</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Intern Journal nr                   | Internt arkiv nr                   | Rapport lokalisering<br>Trondheim    | Gradering<br><b>Åpen</b>                |
| Kommer fra ..arkiv<br>Falconbridge                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Ekstern rapport nr<br>Sul 407-76-17 | Oversendt fra<br>Sulfidmalm A/S    | Fortrolig pga                        | Fortrolig fra dato:                     |
| Tittel<br><b>Ground surveys and prospect drilling on Unna Vuovdas 1976, Masi.</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                     |                                    |                                      |                                         |
| Forfatter<br><b>E Kreivi, K Taipale</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                     | Dato<br>1976                       | Bedrift<br>Sulfidmalm A/S            |                                         |
| Kommune<br><b>Kautokeino</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Fylke<br><b>Finnmark</b>            | Bergdistrikt<br><b>Finnmark</b>    | 1: 50 000 kartblad<br>18331<br>19334 | 1: 250 000 kartblad<br><b>Nordreisa</b> |
| Fagområde<br><b>Boring Geologi<br/>Geofysikk</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Dokument type<br><b>Rapport</b>     | Forekomster<br><b>Unna Vuovdas</b> |                                      |                                         |
| Råstofftype<br><b>Malm/metall</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Emneord<br><b>Cu Ni Co Zn Ag</b>    |                                    |                                      |                                         |
| Sammendrag<br>Geologisk kartlegging, shoot-back geofysikk, morenegeokjemi og bekkesedimentprøvetaking og 173m kjerneboringer fordelt på 4 hull ble utført.<br>Boringen ble utført på sulfidrike brekseaktige lag som opptrår i veksel med basiske vulkanitter. Jernsulfidlagene inneholder opptil 70% magnetkis med litt svovelkis og spor av kobberkis. Beste analyse av ga 0,21% Ni og 1,10% Cu i hvert sitt håndstykke, mens boringene ga 1m med 0,08% Ni og 0,46% Cu i hvert sitt hull.<br>Det ble ikke anbefalt å gå videre med undersøkelsene. |                                     |                                    |                                      |                                         |

FOR FALCONBRIDGE NIKKELVERK A/S  
A/S SULFIDMALM

Project 905-17

Ground surveys and prospect drilling  
on Unna Vuovdas in 1976, Masi.

By

E. Kreivi

K. Taipale

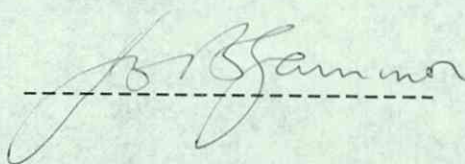
Report No. 407/76/17

A/S SULFIDMALM  
INTER-OFFICE MEMORANDUM

Date: 3rd May, 1977 ✓  
To: Falconbridge Nikkelverk A/S  
cc: W. D. Harrison, H. T. Berry, R. Jahnsen,  
R. B. Band, E. Kreivi, Bergmester Vasshaug  
From: J. B. Gammon  
Subject:

Report No. 407/76/17. Unna Vuovdas, Masi.

Please find attached a summary of work carried out on the Unna Vuovdas grid during 1976. This work was aimed at delineating more exactly indications discovered during prospecting in 1973. Boulders carrying up to 1.1% Cu were discovered but the work carried out suggests that these are not representative of the sulphide bearing graphite schist horizon from which they are derived. No further work is recommended.

  
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| ASS. DIR.   |  |            |     |
| ADM. SEC.   |  |            |     |
| SKIFF. DIR. |  |            |     |
| INNOV. AND  |  |            |     |
| REC. SEC.   |  |            |     |
| FIN. SEC.   |  |            |     |
| FOR. SEC.   |  |            |     |
|             |  |            |     |
| 3           |  |            |     |



ΠΡΟΣ ΕΞ' ΑΡΑΓΑΤΕΛ

[illegible]

AKSQUINITY 2749

The value is also estimated  
that of 100 MP but that has  
to be 100 MP and 100 MP only  
by using second order approximation  
and therefore, it is the same as  
previously named boundary

HAUTON: 152 AREA

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HERDMASOATIVE

1. The first two paragraphs of the letter are very good. The third paragraph is very good. The fourth paragraph is very good. The fifth paragraph is very good. The sixth paragraph is very good. The seventh paragraph is very good. The eighth paragraph is very good. The ninth paragraph is very good. The tenth paragraph is very good. The eleventh paragraph is very good. The twelfth paragraph is very good. The thirteenth paragraph is very good. The fourteenth paragraph is very good. The fifteenth paragraph is very good. The sixteenth paragraph is very good. The seventeenth paragraph is very good. The eighteenth paragraph is very good. The nineteenth paragraph is very good. The twentieth paragraph is very good. The twenty-first paragraph is very good. The twenty-second paragraph is very good. The twenty-third paragraph is very good. The twenty-fourth paragraph is very good. The twenty-fifth paragraph is very good. The twenty-sixth paragraph is very good. The twenty-seventh paragraph is very good. The twenty-eighth paragraph is very good. The twenty-ninth paragraph is very good. The thirtieth paragraph is very good. The thirty-first paragraph is very good. The thirty-second paragraph is very good. The thirty-third paragraph is very good. The thirty-fourth paragraph is very good. The thirty-fifth paragraph is very good. The thirty-sixth paragraph is very good. The thirty-seventh paragraph is very good. The thirty-eighth paragraph is very good. The thirty-ninth paragraph is very good. The fortieth paragraph is very good. The forty-first paragraph is very good. The forty-second paragraph is very good. The forty-third paragraph is very good. The forty-fourth paragraph is very good. The forty-fifth paragraph is very good. The forty-sixth paragraph is very good. The forty-seventh paragraph is very good. The forty-eighth paragraph is very good. The forty-ninth paragraph is very good. The fiftieth paragraph is very good. The fifty-first paragraph is very good. The fifty-second paragraph is very good. The fifty-third paragraph is very good. The fifty-fourth paragraph is very good. The fifty-fifth paragraph is very good. The fifty-sixth paragraph is very good. The fifty-seventh paragraph is very good. The fifty-eighth paragraph is very good. The fifty-ninth paragraph is very good. The sixtieth paragraph is very good. The sixty-first paragraph is very good. The sixty-second paragraph is very good. The sixty-third paragraph is very good. The sixty-fourth paragraph is very good. The sixty-fifth paragraph is very good. The sixty-sixth paragraph is very good. The sixty-seventh paragraph is very good. The sixty-eighth paragraph is very good. The sixty-ninth paragraph is very good. The seventieth paragraph is very good. The seventy-first paragraph is very good. The seventy-second paragraph is very good. The seventy-third paragraph is very good. The seventy-fourth paragraph is very good. The seventy-fifth paragraph is very good. The seventy-sixth paragraph is very good. The seventy-seventh paragraph is very good. The seventy-eighth paragraph is very good. The seventy-ninth paragraph is very good. The eightieth paragraph is very good. The eighty-first paragraph is very good. The eighty-second paragraph is very good. The eighty-third paragraph is very good. The eighty-fourth paragraph is very good. The eighty-fifth paragraph is very good. The eighty-sixth paragraph is very good. The eighty-seventh paragraph is very good. The eighty-eighth paragraph is very good. The eighty-ninth paragraph is very good. The ninetieth paragraph is very good. The ninety-first paragraph is very good. The ninety-second paragraph is very good. The ninety-third paragraph is very good. The ninety-fourth paragraph is very good. The ninety-fifth paragraph is very good. The ninety-sixth paragraph is very good. The ninety-seventh paragraph is very good. The ninety-eighth paragraph is very good. The ninety-ninth paragraph is very good. The hundredth paragraph is very good.

## JAYTIM VOSJOKKA, et al.

1. I have been in contact with  
and a list of people of whom I  
have been in contact with  
2. I have been in contact with  
and a list of people of whom I  
have been in contact with  
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and a list of people of whom I  
have been in contact with

5/25/2006 11:02 AM

1. The first line of the document is "The first line of the document is the first line of the document."

2. The second line of the document is "The second line of the document is the second line of the document."

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## LEPIA WU/DAS #198

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1. The house is situated on a hill  
 and the view is very good.  
 2. The house is very big and  
 has a large garden.  
 3. The house is very old and  
 has a lot of history.  
 4. The house is very new and  
 has a lot of modern facilities.  
 5. The house is very cheap and  
 has a lot of space.  
 6. The house is very expensive and  
 has a lot of luxury.  
 7. The house is very small and  
 has a lot of character.  
 8. The house is very big and  
 has a lot of space.  
 9. The house is very old and  
 has a lot of history.  
 10. The house is very new and  
 has a lot of modern facilities.

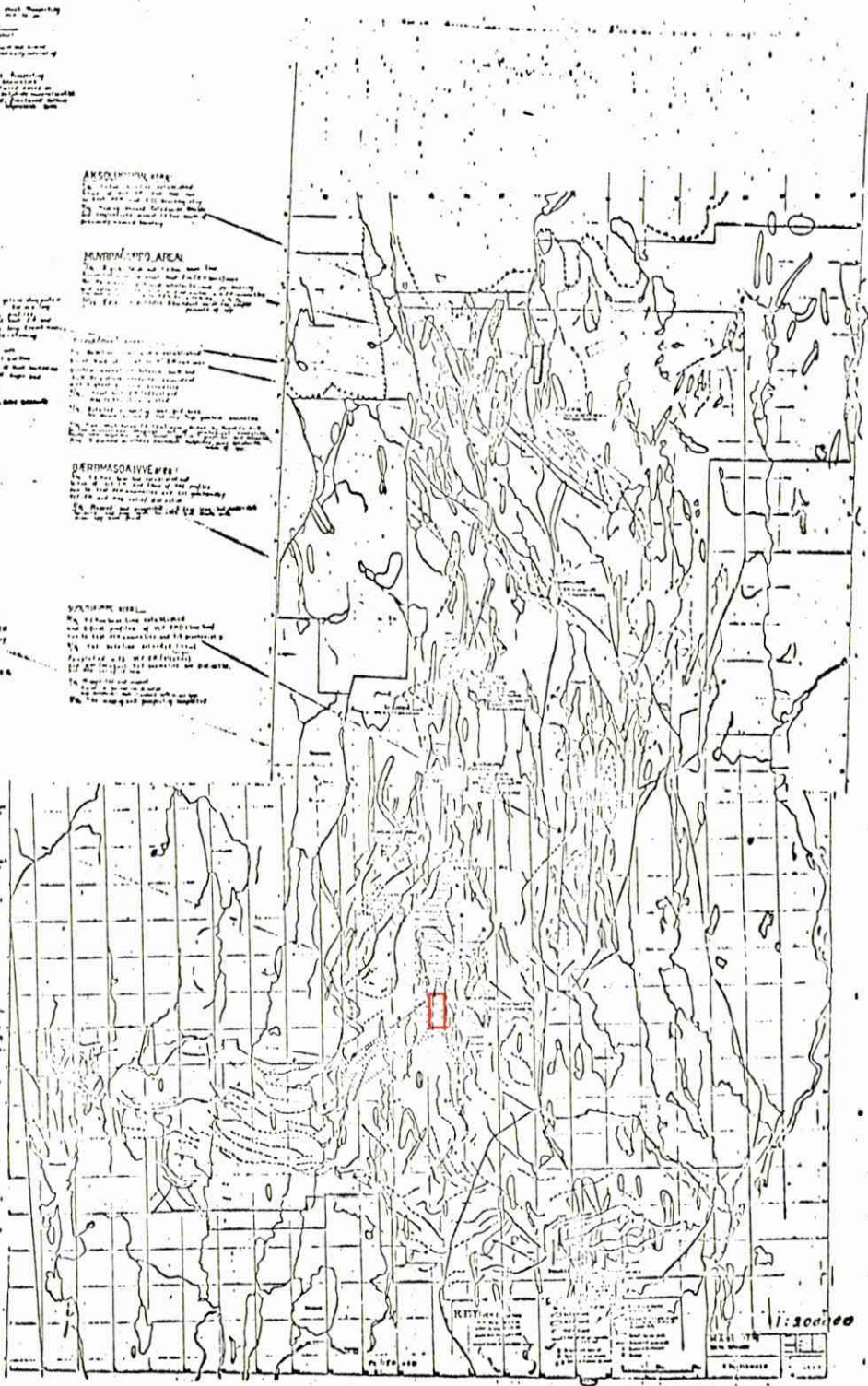


FIG. 1



## Introduction (Fig.1)

The Unna Vuovdas grid is a part of the main 12 kms long Salggan grid, laid out in 1973. It is situated 3.5 kms NW of the old crossroad of Alta-Kautokeino-Masi on mapsheet 1833I.

Its southern end coincides with the Havggajavrre grid's northern part. The 900 ms long base-line was laid out from the point 200S/0 northwards and 400-500 ms long profiles, line-spacing was 50 ms. The grid was laid out to locate, by detailed mapping, prospecting, till-sampling and Shoot-Back-survey the geochemical and the VLF-EM-anomalies and the chalcopyrite-bearing graphitic horizons found in 1973 by the reconnaissance surveys. The area forms part of a northwards, gently raising, hill slope, which could be of some significance in the sense of boulder tracing. 4 prospect drill-holes, totalling 173 ms, were drilled to find a source of the anomalies. 9 ms of trench was dug over a horizon of massive iron sulphides with traces of chalcopyrite.

## Geology by Kalle Taipale (Fig.2)

### Petrography

The Unna Vuovdas area consists of rocks of both sedimentary and volcanic origin. The sulphide bearing chert-graphite schist horizons are lying about at the contact zone of sedimentary and volcanic series. The change from sedimentary rocks to volcanic ones is gradual and the greywackes are a mixture of sedimentary and volcanic material.

1. Greywacke and mica schist

Greywacke consists of biotite, quartz, feldspar, calcite and some amphibole. In places it contains some idiomorphic, lath-shaped, light mineral, which could be some aluminium rich one, like andalusite.

Greywackes are always well foliated and quite coarse grained and intercalated with calcite or dolomite.

In places, where the amount of mica has increased and the grain size is smaller these rocks can be called mica schists. This kind of variety is rare.

2. Greenschist,-stone

The basic volcanic rocks of Unna Vuovdas area consist of different varieties of greenstones. In places this rock type is somewhat coarse grained and poorly foliated resembling gabbros. These kind of varieties could represent the slowly cooled inner parts of lava beds. In some places the rock is very foliated and chlorite rich. In cases like this the rock is also tightly minor folded due to weak competence.

3. Amphibolite

Amphibolite is mostly dark green in colour, mostly medium grained and rather foliated. It is also intercalated with carbonate or carbonate may occur also as thin veinlets and fissure fillings.

#### 4. Chert and graphite schist

As already said these rocks occur at the boundary between greywackes and greenstones.

The colour of chert varies from pure white to brownish with increasing ironstain caused by sulphides.

Chert is intercalated with graphite schist. When the graphite content is at its minimum or does not exist at all the chalcopyrite content seems to be at its maximum.

Graphite schist contains often pyrite whether as layers or as matrix in brecciated schist. This type of rock seldom contains considerable amounts of chalcopyrite, but only iron sulphides.

#### Structure

The structure of Unna Vuovdas area looks very interesting. According to both shoot-back data and geological field observations there seems to be a shallow syncline with eastern limb dipping about  $20-30^{\circ}$  W and western limb little steeper with dips of  $30-50^{\circ}$  E. The axis of syncline plunges about  $20^{\circ}$  to south. Quite opposite minor fold axis directions occur on the western limb of the syncline, but the graphite rich rock there is very intensely folded and almost any kind of plunge can be observed.

#### Block searching and till geochemistry

Block searching at Unna Vuovdas area was quite successfull.



Tens of py-, po-, and cp-bearing boulders were found with best assays of copper being about 1% Zinc and lead were not analyzed. Reasons for abundant occurrence of ore boulders are many: First the synclinal structure causes double occurrence of ore bearing horizons and so the ore block producing area will be doubled. Furthermore the flat dips of the strata make the ore bearing horizons broad at the ground section. •

Second the overburden is rather thin and this makes many boulders occur at or near the surface.

Third reason is topography of the area. The whole area consists of gently northwards raising hill slope. This slope has weakened the capacity of ice for carrying blocks and thus the slope has become an enrichment area of the boulders.

Detailed geochemistry correlates very well with the geology and geophysical anomalies. The best Cu-anomalies are situated approximately upon the same ore bearing horizon, above which the best boulders were found.

#### Geophysics (Fig.3)

Only a Shoot-Back-EM-survey was done on the detailed grid with 50 ms coil-separation. A group of very strong conductors were found in 250 ms wide zone going through the whole grid from south to north. They seem to conform very closely to the cherty-graphite units.

# Geochemistry (Fig.4)

Till-samplers were collected mostly from the C-layer 50-60 cms deep by a hand auger with 25 ms sample interval. Also stream sediment-samples were collected. The samples were assayed in Atom Energy Laboratory for Ni, Cu, Co, Zn and Ag. The plotted assays on a map show two distinctive anomalous zones going through the grid from south to north. The zone in the middle of the grid has got mainly anomalous Cu, Co and Ni and the zone on the eastern side of the grid has got mainly anomalous Zn and Co. The Co-values are significantly higher than anywhere else in Masi-area.

The highest values were:

|    |          |    |           |               |
|----|----------|----|-----------|---------------|
| Ni | 340 ppm  | at | 300N/0    |               |
| Cu | 1150 ppm | at | 200S/150W | at lake shore |
|    | 1070 ppm | at | 0/250W    | in till       |
| Co | 1440 ppm | at | 200S/100E |               |
| Zn | 1450 ppm | at | 500N/0    |               |

# Drilling (Fig.5)

Four diamond-drill-holes totalling 173 ms were drilled by a contractor, called Terranor A/S, to find a source of the Shoot-Back-EM- and geochemical anomalies. The drill-holes are collared:

|                    |           |    |           |
|--------------------|-----------|----|-----------|
| 1-U/1776           | 60°W/50 m | at | 300N/125W |
| 2-U/1776           | 60°W/60 m | at | 0/177W    |
| 3-U/1776           | 45°W/29 m | at | 250S/167W |
| 4-U/1776           | 60°W/34 m | at | 50N/350W  |
| <u>Total 173 m</u> |           |    |           |

In the core we found basic volcanics-beds repeating with chert-beds with graphite-rich parts brecciated by iron sulphides, often more than 70% po with some py and traces of cp. Assays were very low compared to the relatively high till-anomalies. The highest metal-values were:

Ni 0.08% in 1-U/1776 at 17-18 m  
Cu 0.46% in 1-U/1776 at 43-44 m

Zn-values were less than 0.01% and Pb-values were less than 0.03%.

### Conclusions

The drilling-results were very disappointing, but even then I assume that we hit the right horizons, which give the strong EM- and geochemical anomalies. The mineralizations in these horizons were very strong, more than 70% of sulphides. Dips were flat, partly horizontal and in some parts of the grid well mineralized zones are on the surface of the bedrock under the till over large areas.

The best analyzes in the hand specimens gave:

0.20% Ni in 31/KT/76  
1.10% Cu in 26 and 162/KT/76

Project no. *Masi 17/76*

Date *5/7 1976*

Inspector: *E. Kiviv.*

| No. | Probe-<br>No. | Lokaliset           | Provetype    | Beskr. | N.   | Cu   |  |  |  |  |  |  | Bemerk: |
|-----|---------------|---------------------|--------------|--------|------|------|--|--|--|--|--|--|---------|
| 0   | 26/KT         | <i>Uana Vuoda</i>   | <i>g-r-b</i> |        | 0,18 | 1,10 |  |  |  |  |  |  |         |
| 1   | 33/KT         | ---                 | ---          |        | 0,02 | 0,58 |  |  |  |  |  |  |         |
| 2   | 31/KT         | ---                 | ---          |        | 0,20 | 0,14 |  |  |  |  |  |  |         |
| 3   | 45/KT         | ---                 | ---          |        | 0,04 | 0,76 |  |  |  |  |  |  |         |
| 4   | 47/KT         | ---                 | ---          |        | 0,14 | 0,82 |  |  |  |  |  |  |         |
| 5   | 59a/KT        | ---                 | ---          |        | 0,01 | 0,88 |  |  |  |  |  |  |         |
| 6   | 145/KT        | ---                 | ---          |        | 0,08 | 0,38 |  |  |  |  |  |  |         |
| 7   | 150c/KT       | ---                 | ---          |        | 0,09 | 1,00 |  |  |  |  |  |  |         |
| 8   | 151c/KT       | ---                 | ---          |        | 0,12 | 0,24 |  |  |  |  |  |  |         |
| 9   | 161/KT        | ---                 | ---          |        | 0,12 | 0,40 |  |  |  |  |  |  |         |
| 10  | 162/KT        | ---                 | ---          |        | 0,02 | 1,10 |  |  |  |  |  |  |         |
| 11  | 137/KT        | ---                 | ---          |        | 0,04 | 0,50 |  |  |  |  |  |  |         |
| 2   | 151a/KT       | ---                 | ---          |        | 0,01 | 0,60 |  |  |  |  |  |  |         |
| 3   | 128/KT        | <i>Juvonhuopila</i> | ---          |        | 0,03 | 0,65 |  |  |  |  |  |  |         |

Peräkirje:

Shipment No. *17/1*

Port no. *Masi 1776*

 Dato *9/11 1976*

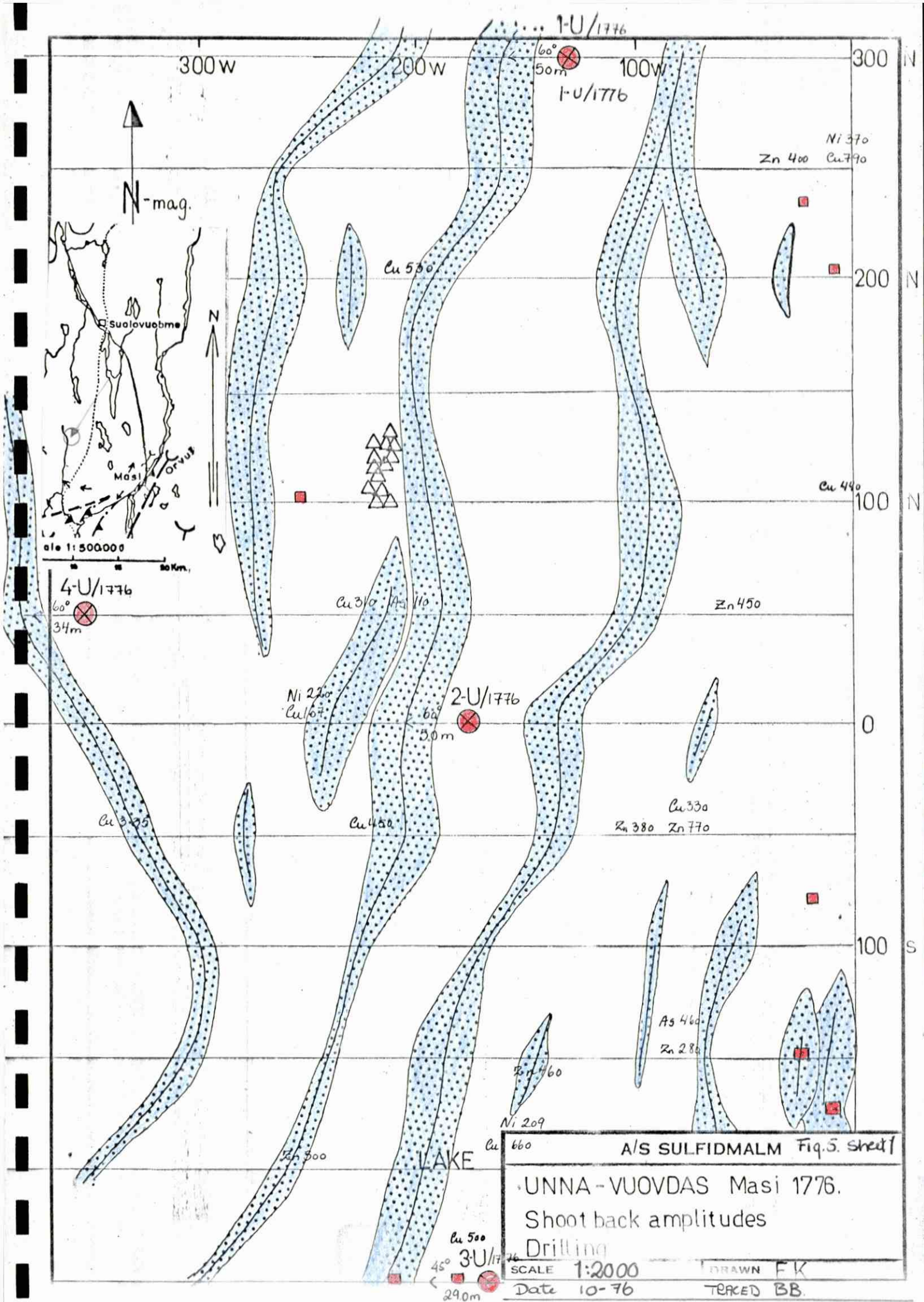
 Innsendt av: *E. Kili*

| Prov -     | Localitet | Provetyp            | Beskr | Ni  | Cu  | Zn    | Pb    | Bemerk: |
|------------|-----------|---------------------|-------|-----|-----|-------|-------|---------|
| 9 1-V      | 15-2      | Uarna Vuorokas core |       | 007 | 014 | <0.01 | <0.02 |         |
| 0 5.5-6    | ---       | ---                 |       | 002 | 009 | <0.01 | <0.02 |         |
| 31 17-18   | ---       | ---                 |       | 008 | 002 | <0.01 | 0.03  |         |
| 32 21-22   | ---       | ---                 |       | 004 | 014 | <0.01 | <0.02 |         |
| 33 42-43   | ---       | ---                 |       | 008 | 016 | <0.01 | <0.02 |         |
| 4 43-44    | ---       | ---                 |       | 004 | 046 | <0.01 | <0.02 |         |
| 5 2-V      | 8-9       | ---                 |       | 007 | 013 | <0.01 | <0.01 |         |
| 6 28-29    | ---       | ---                 |       | 003 | 009 | <0.01 | <0.02 |         |
| 7 52-53    | ---       | ---                 |       | 006 | 003 | <0.01 | <0.01 |         |
| 8 3-V      | 2-3       | ---                 |       | 005 | 005 | <0.01 | <0.02 |         |
| 39 19.5-20 | ---       | ---                 |       | 007 | 003 | 001   | <0.02 |         |
| 10 4-V     | 15-16     | ---                 |       | 003 | 008 | <0.01 | <0.02 |         |
| 1 19-20    | ---       | ---                 |       | 005 | 007 | <0.01 | <0.02 |         |
| 42 20-21   | ---       | ---                 |       | 002 | 006 | <0.01 | <0.02 |         |
| 13 21-22   | ---       | ---                 |       | 005 | 005 | <0.01 | <0.02 |         |

Tekniskert:

 Shipment No. *17/10*





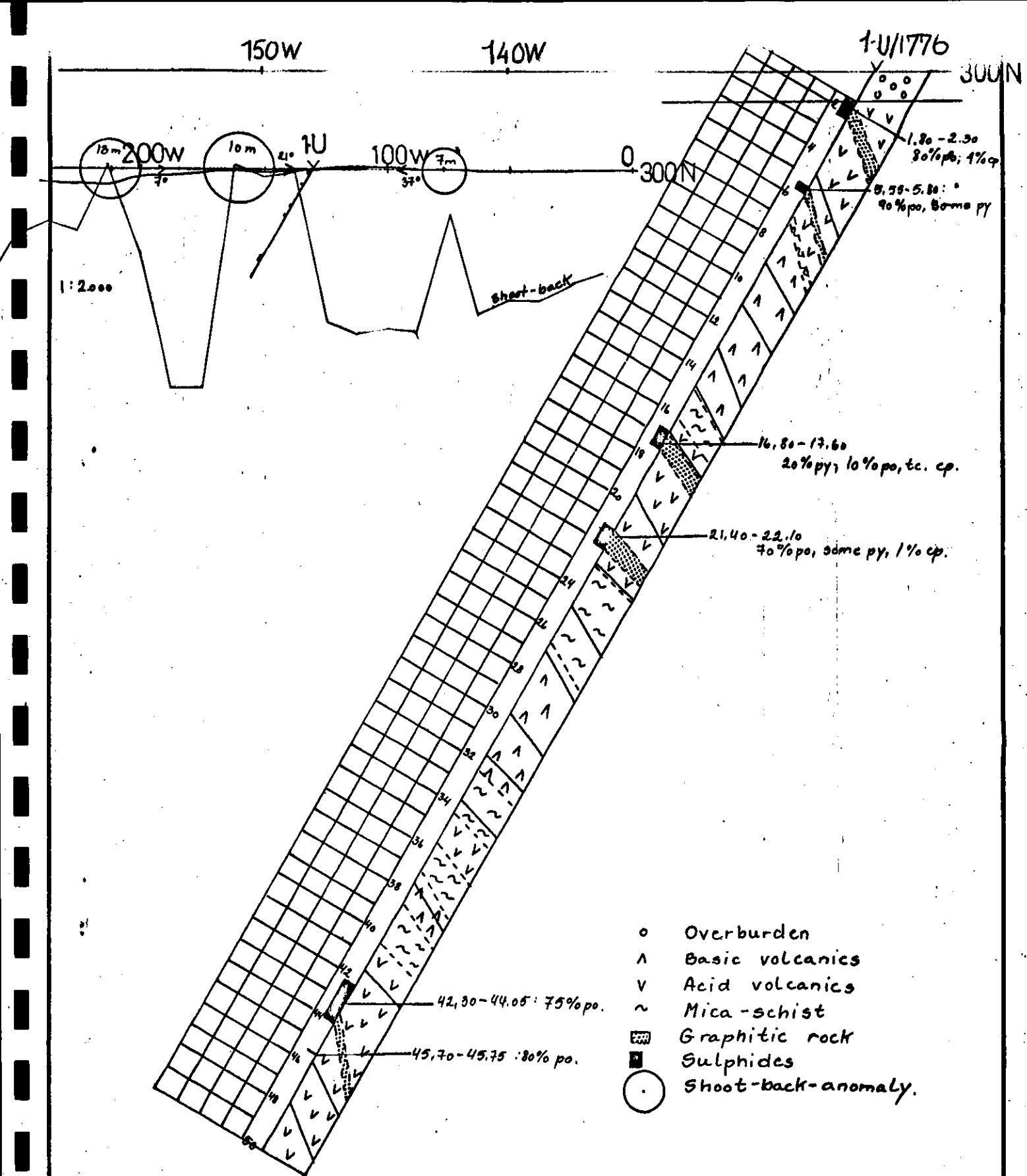


FIG 5 Sheet 2.

| A/S SULFIDMALM           |       |           |    |
|--------------------------|-------|-----------|----|
| UNNA VUOVDAS, Masi 1776. |       |           |    |
| 1-U/1776                 |       | 300N/125W |    |
| Terranor a.s.            |       | 60W/50m   |    |
| SCALE                    | 1:200 | DRAWN     | EK |
| DATE                     | 10-76 | TRACED    | BB |

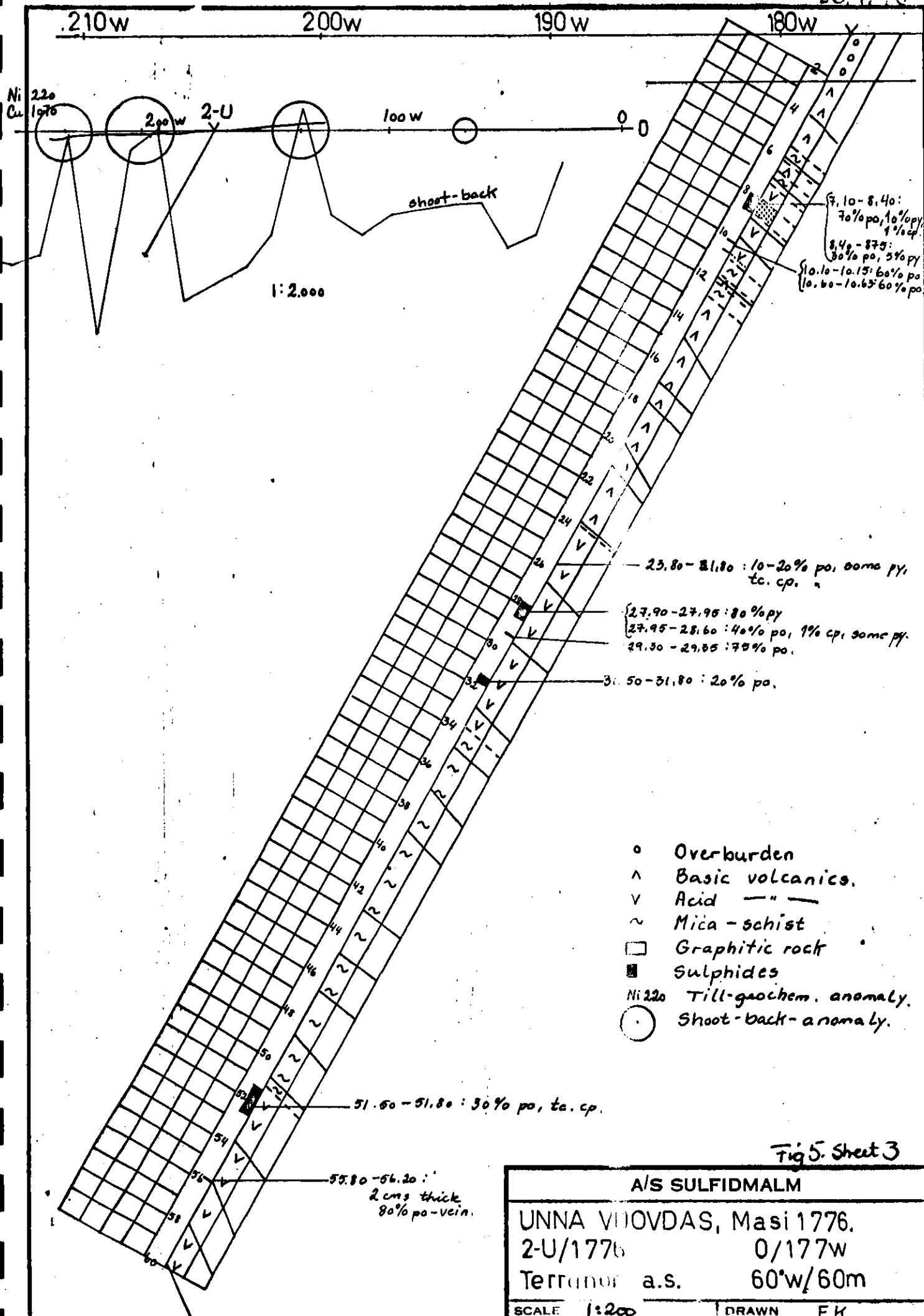


Fig 5. Sheet 3

## A/S SULFIDMALM

UNNA VHOVDAS, Masi 1776.

2-U/1776

0/177w

Terranor a.s.

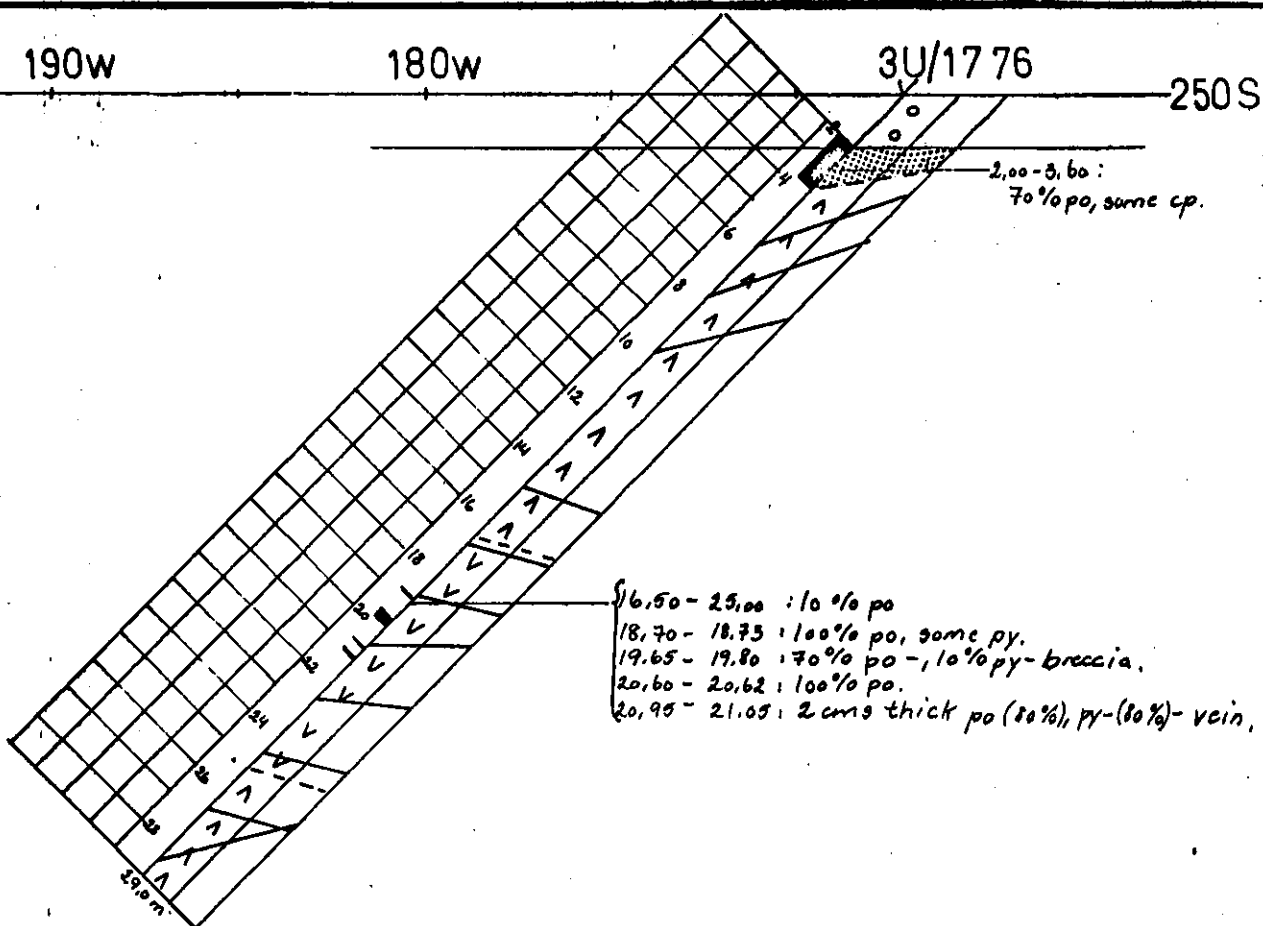
60'w/60m

SCALE 1:200

DRAWN EK

Date 10-76

Traced BB



# KEY:

- Overburden
- △ Basic volcanics
- ▽ Acid — " —
- ▨ Graphitic rock
- Sulphides
- Sulphides in outcrop.
- Cu 500 Till-geochem. anomaly
- 6m 41° Shoot-back-anomaly.

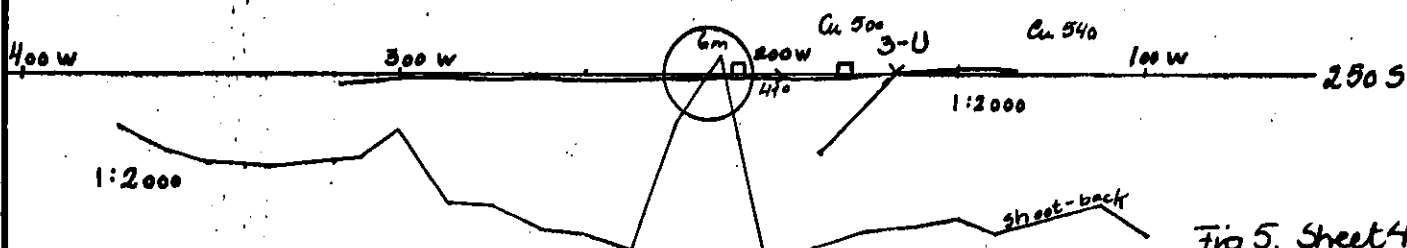


Fig 5. Sheet 4.

A/S SULFIDMALM

UNNA VUOVDAS, Masi 1776.

3U/1776

250S/167W

Terranor a.s.

45°W/29m

SCALE 1:200

DRAWN FK

Date 10-76

Traced BB.

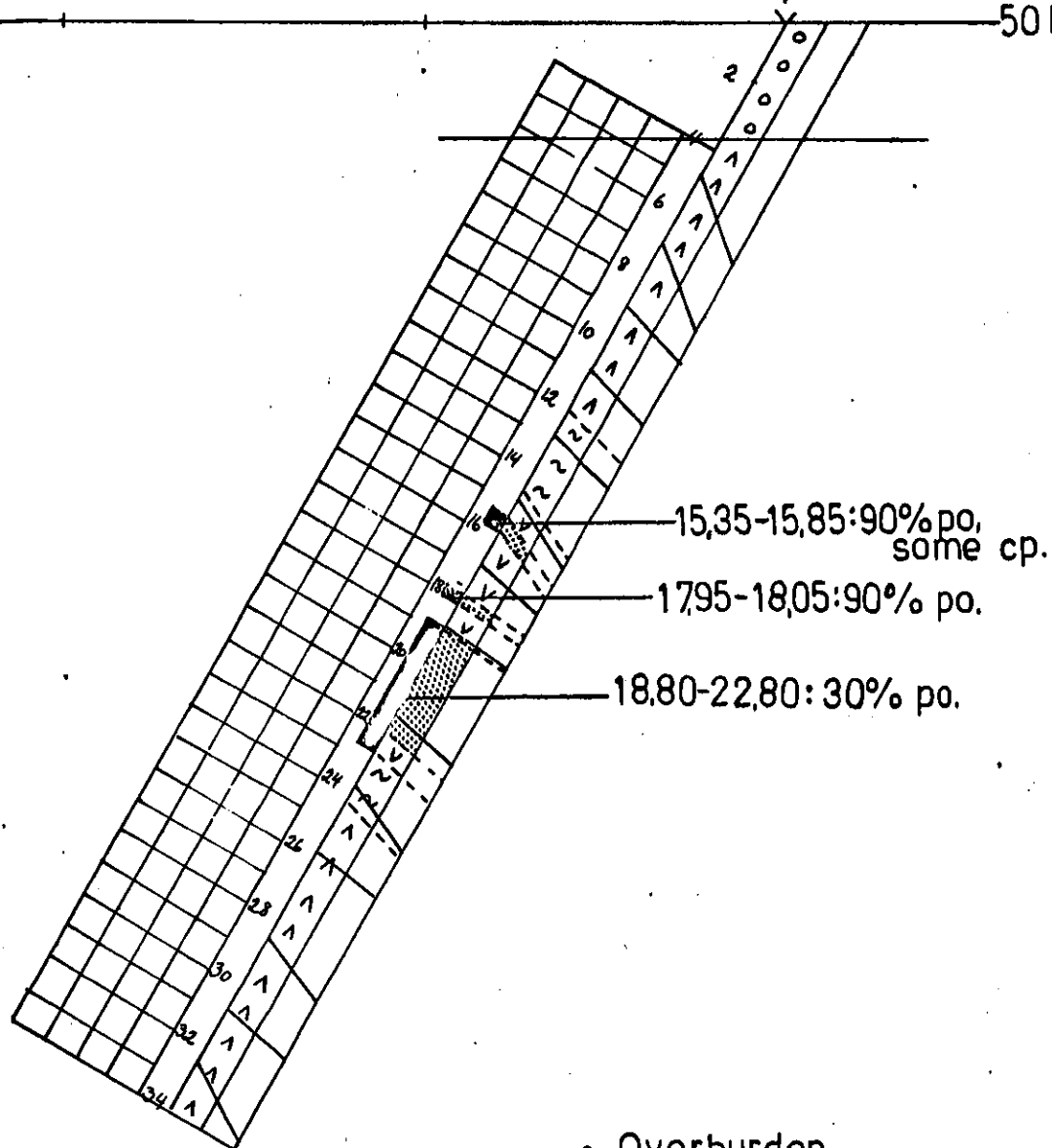
380W

370W

360W

4U/1776

50N



- Overburden
- ^ Basic volcanics
- v Acid — " —
- ▨ Graphitic rock
- Sulphides
- ~ Mica schist
- Sulphides in outcrop
- Ni 25% Cu 5% Stream geochem. anomaly
- Shoot-back anomaly.

Stream

400W

6m

Ni 25% Cu 5%

24°

4-U

300W

58°

200W

50N

1:2000

Sheet-back

Fig 5. Sheet 5.

A/S SULFIDMALM

UNNA VUOVDAS, Masi 1776.

4-U/1776

50N/350W

Territorium a.s.

60°W/34m

SCALE 1:200

Date 10-76

DRAWN EK

Traced B.B.

# 1/5 SULFIDMALM

## DIAMOND DRILL RECORD

LOCATION: Masi 1776 BEARING: W DIP: 60° HOLE NO: 1-U SHEET NO: 1  
 LOGGED BY: E. Kreivi STARTED: 30/9 1976 PROPERTY: Unna Vuovdas  
 CASING: 3.00 m FINISHED: 1/10 1976 300N/125W  
 CORE SIZE: TT 46 TESTS (CORRECTED):

| From  | To    | Description                                                                                                                                                                                                                                                                          |
|-------|-------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 0     | 1.50  | Overburden                                                                                                                                                                                                                                                                           |
| 1.50  | 1.80  | Acid volcanics                                                                                                                                                                                                                                                                       |
| 1.80  | 2.30  | Graphitic rock<br>- brecciated by 80% po and qtz, 1% cp,<br>cp in cracks, fine grained                                                                                                                                                                                               |
| 2.30  | 6.80  | Acid volcanics<br>- some thin mica-rich beds<br>- some narrow carbonate-veins<br>4.05- 4.50 Thin graphitic layers, folded<br>5.55- 5.80 Graphitic rock, bracciated by<br>90% po, some py                                                                                             |
| 6.80  | 7.10  | Mica-schist, some carbonate                                                                                                                                                                                                                                                          |
| 7.10  | 14.85 | Greenschist<br>7.10- 7.80 Mica- and carbonate-rich<br>- some narrow carb-veins                                                                                                                                                                                                       |
| 14.85 | 16.05 | Mica-schist<br>- carbonate-rich                                                                                                                                                                                                                                                      |
| 16.05 | 22.90 | Acid volcanics<br>- 10% py-, po-breccia<br>16.80-17.60 Graphitic bed<br>- 20% py, 10% po, traces of cp<br>17.60-21.40 Amphibole-bearing<br>- carb-breccia<br>21.40-22.10 Graphitic rock<br>- 70% po-breccia, some py, 1% cp<br>in cracks<br>21.95-22.10 90% po<br>22.50-22.80 Folded |
| 22.90 | 26.60 | Mica-schist<br>- some chlorite- and carb-breccia<br>26.35-26.40 Graphite-bed                                                                                                                                                                                                         |
| 26.60 | 32.30 | Greenschist<br>28.00-28.10 Qtz-vein<br>28.60-28.90 Mica-rich<br>29.60-29.70 Qtz-vein<br>31.05-31.50 Qtz-vein                                                                                                                                                                         |



# A/s SULFIDMALM

## DIAMOND DRILL RECORD

LOCATION: Masi 1776 BEARING: W DIP: 60° HOLE NO: 1-U SHEET NO: 1A  
 LOGGED BY: E. Kreivi STARTED: 30/9-76 PROPERTY: Unna Vuovdas  
 CASING: 3.00 FINISHED: 1/10-76 300N/125W  
 CORE SIZE: TT 46 TESTS (CORRECTED):

| From  | To    | Description                                                                                                                                             |
|-------|-------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| 0     | 1.50  | Overburden                                                                                                                                              |
| 1.50  | 1.80  | Acid volcanics                                                                                                                                          |
| 1.80  | 2.30  | 0.50m Graphitic rock                                                                                                                                    |
|       |       | -80% po, 1% cp                                                                                                                                          |
| 2.30  | 6.80  | Acid volcanics                                                                                                                                          |
|       | 0.45m | 4.05-4.50 Thin graphitic layers                                                                                                                         |
|       | 0.25m | 5.55-5.80 Graphitic rock, 90% po, some py                                                                                                               |
| 6.80  | 7.10  | Mica-schist                                                                                                                                             |
| 7.10  | 14.85 | Greenschist                                                                                                                                             |
| 4.85  | 16.05 | Mica-schist                                                                                                                                             |
| 16.05 | 22.90 | Acid volcanics                                                                                                                                          |
|       |       | -10% py, po-breccia                                                                                                                                     |
|       | 0.80m | 16.80-17.60 Graphitic rock, 20% py, 10% po, to cp                                                                                                       |
|       | 0.70m | 21.40-22.10 " " 70% po, some py, 1% cp                                                                                                                  |
|       | 0.15m | 21.95-22.10 90% po                                                                                                                                      |
| 22.90 | 26.60 | Mica-schist                                                                                                                                             |
|       |       | 26.35-26.40 Graphitic rock                                                                                                                              |
| 26.60 | 32.30 | Greenschist                                                                                                                                             |
| 32.30 | 34.30 | Mica-schist                                                                                                                                             |
| 34.30 | 35.80 | Acid volcanics (chert)                                                                                                                                  |
|       |       | -10% po                                                                                                                                                 |
| 35.80 | 37.00 | Mica-schist                                                                                                                                             |
| 37.00 | 38.50 | Greenschist                                                                                                                                             |
| 38.50 | 40.30 | Mica-schist                                                                                                                                             |
| 40.30 | 50.00 | Acid volcanics (chert)                                                                                                                                  |
|       | 1.75m | 42.30-44.05 70% po                                                                                                                                      |
|       |       | 43.80-44.00 Graphitic rock                                                                                                                              |
|       |       | 44.05-50.00 5% po                                                                                                                                       |
|       | 0.05m | 45.70-45.75 80% po                                                                                                                                      |
| 50.00 |       | End of hole                                                                                                                                             |
|       |       | The hole was drilled to test geochemical and geophysical anomalies. The anomalies are probably caused by the sulphide-rich graphitic layers as follows: |
|       | 4.65m | 60-70% po, some py and traces of cp                                                                                                                     |



# A/s SULFIDMALM

## DIAMOND DRILL RECORD

LOCATION: Masi 1776 BEARING: W DIP: 60° HOLE NO: 1-U SHEET NO: 2  
 LOGGED BY: E. Kreivi STARTED: 30/9 1976 PROPERTY: Unna Vuovdas  
 CASING: 3.00 m FINISHED: 1/10 1976 300N/125W  
 CORE SIZE: TT 46 TESTS (CORRECTED):

| From  | To    | Description                                                                                                                                                              |
|-------|-------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 32.30 | 34.30 | Mica-schist<br>- carbonate-veins                                                                                                                                         |
| 34.30 | 35.80 | Acid volcanics (chert)<br>- 10% po-breccia, carb-breccia<br>34.50-34.55 Amphibole-rich                                                                                   |
| 35.80 | 37.00 | Mica-schist<br>35.80-36.00 Folded                                                                                                                                        |
| 37.00 | 38.50 | Greenschist                                                                                                                                                              |
| 38.50 | 40.30 | Mica-schist<br>38.50-40.00 Very folded<br>38.90-39.40 Scapolite-rich                                                                                                     |
| 40.30 | 50.00 | Acid volcanics (chert)<br>- some carb-veins<br>42.30-44.05 70% po-breccia<br>43.80-44.00 Graphitic rock<br>44.60-44.00 Folded<br>44.05-50.00 5% po<br>45.70-45.75 80% po |
| 50.00 |       | End of hole                                                                                                                                                              |
|       |       | Core-angles                                                                                                                                                              |
|       |       | 41°/ 4.90 50°/ 6.90 31°/ 8.90 30°/10.90 40°/12.80                                                                                                                        |
|       |       | 33°/14.70 26°/16.80 42°/19.60 14°/22.80 30°/24.80                                                                                                                        |
|       |       | 31°/26.80 24°/29.80 17°/31.70 18°/33.80 30°/37.50                                                                                                                        |
|       |       | 17°/41.60 53°/43.70 35°/45.90 38°/47.80                                                                                                                                  |

# A/s SULFIDMALM

## DIAMOND DRILL RECORD

LOCATION: Masi 1776      BEARING: W      DIP: 60°      HOLE NO: 2-U      SHEET NO: 1  
 LOGGED BY: E. Kreivi      STARTED: 28/9-76      PROPERTY: Unna Vuovdas  
 CASING: 3.50      FINISHED: 28/9-76      0/177W  
 CORE SIZE: TT 46      TESTS (CORRECTED):

| From  | To    | Description                                                                                                                           |
|-------|-------|---------------------------------------------------------------------------------------------------------------------------------------|
| 0     | 2.00  | Overburden                                                                                                                            |
| 2.00  | 5.30  | Greenschist<br>- Fel-banded, some carb in veins<br>2.00-3.50 Broken rock                                                              |
| 5.30  | 6.00  | Mica-schist<br>- some chlorite and carb                                                                                               |
| 6.00  | 6.50  | Greenschist<br>- more Fel and carb than before                                                                                        |
| 6.50  | 7.05  | Mica-schist<br>- more Fel, less mica than before                                                                                      |
| 7.05  | 7.90  | Acid volcanics<br>- thin beds of graphite<br>- some carb<br>- -5% po-breccia, some py<br>7.50-7.90 chert                              |
| 7.90  | 8.75  | Graphite-schist<br>- brecciated by po<br>7.90-8.40 70% po, 10% py, 1% cp<br>8.40-8.75 30% po, 5% py                                   |
| 8.75  | 10.80 | Acid volcanics<br>- some carb-breccia, some chlorite, some mica and po<br>10.10-10.15 Graphitic rock, 60% po<br>10.60-10.63 " " "     |
| 10.80 | 12.75 | Mica-schist<br>- 50% mica, 50% Fel+ carb<br>- 2% po<br>11.60-11.90 Greenschist, some carb-breccia                                     |
| 12.75 | 23.80 | Greenschist<br>- Fel-banded<br>- some carb-breccia, some mica<br>18.70-18.80 Chert, mica rich rock on both sides<br>19.05-19.30 Chert |
| 23.80 | 33.80 | Acid volcanics<br>23.80-24.60 Chlorite-bearing carbonate-breccia,<br>30% mica                                                         |

# <sup>A</sup>/<sub>s</sub> SULFIDMALM

## DIAMOND DRILL RECORD

LOCATION: Masi 1776 BEARING: W DIP: 60° HOLE NO: 2-U SHEET NO: 1a  
 LOGGED BY: E. Kreivi STARTED: 28/9-76 PROPERTY: Unna Vuovdas  
 CASING: 3.50 FINISHED: 29/9-76 0/177W  
 CORE SIZE: TT 46 TESTS (CORRECTED):

| From  | To    | Description                                                                                                                                                                                                                                                     |
|-------|-------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 0     | 2.00  | Overburden                                                                                                                                                                                                                                                      |
| 2.00  | 5.30  | Greenschist                                                                                                                                                                                                                                                     |
| 5.30  | 6.00  | Mica-schist                                                                                                                                                                                                                                                     |
| 6.00  | 6.50  | Greenschist                                                                                                                                                                                                                                                     |
| 6.50  | 7.05  | Mica-schist                                                                                                                                                                                                                                                     |
| 7.05  | 7.90  | Acid volcanics                                                                                                                                                                                                                                                  |
|       |       | -5% po-breccia, some py                                                                                                                                                                                                                                         |
| 7.90  | 8.75  | 0.85m Graphite-schist                                                                                                                                                                                                                                           |
|       |       | -brecciated by po                                                                                                                                                                                                                                               |
|       |       | 7.90-8.40 70% po, 10% py, 1% cp                                                                                                                                                                                                                                 |
|       |       | 8.40-8.75 30% po, 5% py                                                                                                                                                                                                                                         |
| 8.75  | 10.80 | Acid volcanics                                                                                                                                                                                                                                                  |
|       | 0.05m | 10.10-10.15 Graphitic rock 60% po                                                                                                                                                                                                                               |
|       | 0.03m | 10.60-10.63 " " "                                                                                                                                                                                                                                               |
| 10.80 | 12.75 | Mica-schist                                                                                                                                                                                                                                                     |
|       |       | 11.60-11.90 Greenschist                                                                                                                                                                                                                                         |
| 12.75 | 23.80 | Greenschist                                                                                                                                                                                                                                                     |
| 23.80 | 33.80 | Acid volcanics                                                                                                                                                                                                                                                  |
|       | 8.00m | 23.80-31.80 10-20% po-breccia, some py, to cp                                                                                                                                                                                                                   |
|       |       | 27.90-27.95 80% py                                                                                                                                                                                                                                              |
|       |       | 27.95-28.60 40% po, 1% cp, some py                                                                                                                                                                                                                              |
|       |       | 29.30-29.35 95% po                                                                                                                                                                                                                                              |
|       |       | 31.50-31.80 20% po                                                                                                                                                                                                                                              |
| 33.80 | 51.10 | Mica-schist                                                                                                                                                                                                                                                     |
| 51.10 | 60.00 | Acid volcanics                                                                                                                                                                                                                                                  |
|       |       | 51.50-52.80 30% po, traces of cp                                                                                                                                                                                                                                |
|       |       | 55.80-56.20 2 cm thick 80% po-vein                                                                                                                                                                                                                              |
|       | 60.00 | End of hole                                                                                                                                                                                                                                                     |
|       |       | The hole was drilled to test geochemical and geophysical anomalies. In the hole there were acid volcanics with graphitic beds under basic volcanics. The acid volcanics and graphitic beds got some po and py and traces of cp: 30-40% po, 5% py, traces of cp. |
|       | 8.93m |                                                                                                                                                                                                                                                                 |

## A/s SULFIDMALM

## DIAMOND DRILL RECORD

LOCATION: Masi 1776 BEARING: W DIP: 60° HOLE NO: 2-U SHEET NO: 2  
 LOGGED BY: E. Kreivi STARTED: 28/9-76 PROPERTY: Unna Vuovdas  
 CASING: 3.50 FINISHED: 29/9-76 0/177W  
 CORE SIZE: TT 46 TESTS (CORRECTED):

| From  | To    | Description                                                                            |
|-------|-------|----------------------------------------------------------------------------------------|
|       |       | 23.80-31.80 10-20% po-breccia, some py<br>traces of cp                                 |
|       |       | 27.90-27.95 80% py                                                                     |
|       |       | 27.95-28.60 40% po, 1% cp, some py                                                     |
|       |       | 29.30-29.35 95% po                                                                     |
|       |       | 31.50-31.80 Carb-vein, 20% po                                                          |
| 33.80 | 51.10 | Mica-schist<br>-50% mica and chlorite                                                  |
|       |       | 34.50-34.55 Mica-rich Fel-vein                                                         |
| 51.10 | 60.00 | Acid volcanics<br>-mica and chlorite-bearing                                           |
|       |       | 51.50-52.80 White feldspar, brecciated by 30% po,<br>traces of cp, a little of fucsite |
|       |       | 58.30-58.45 Qtz-vein                                                                   |
|       |       | 55.80-56.20 2 cm thick carb- and po-vein, 80% po                                       |
| 60.00 |       | End of hole                                                                            |
|       |       | Core-angles                                                                            |
|       |       | B: 13°/ 3.90 10°/ 5.95 15°/ 6.90 10°/ 8.90                                             |
|       |       | 15°/ 9.80 10°/11.70 28°/14.60 15°/16.80                                                |
|       |       | 15°/17.80 33°/19.70 23°/20.90 10°/23.70                                                |
|       |       | 17°/26.60 11°/29.60 18°/32.80 10°/34.80                                                |
|       |       | 20°/36.80 17°/38.80 7°/42.70 5°/44.90                                                  |
|       |       | 7°/46.50 20°/48.70 15°/50.80 23°/53.80                                                 |
|       |       | 38°/55.80 38°/57.80 37°/59.90                                                          |

# A/s SULFIDMÄLM

## DIAMOND DRILL RECORD

LOCATION: Masi 1776 BEARING: W DIP: 45° HOLE NO: 3-U SHEET NO: 1  
 LOGGED BY: E. Kreivi STARTED: 20/9-76 PROPERTY: Unna Vuovdas  
 CASING: 3.60 FINISHED: 27/9-76 250S/167W  
 CORE SIZE: TT 46 TESTS (CORRECTED):

| From  | To    | Description                                                                                                                                                                                                                                                                                                                                                                 |
|-------|-------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 0     | 2.00  | Overburden                                                                                                                                                                                                                                                                                                                                                                  |
| 2.00  | 3.60  | Graphitic rock<br>-70% po, a little of cp<br>- lost core about 1 m                                                                                                                                                                                                                                                                                                          |
| 3.60  | 16.50 | Greenschist<br>-thin white Fel-beds and veins<br>-thin carb-veins<br>3.60- 5.50 Lost core about 1 m<br>7.00-14.40 Folded<br>15.10-15.20 Carb-vein surrounded by mica<br>15.20-16.50 Mica-rich layers                                                                                                                                                                        |
| 16.50 | 25.00 | Acid volcanics<br>- mainly Fel, a little Qtz and carb<br>- 10% po-breccia with carbonate<br>16.50-18.00 Mica-, carb-rich<br>18.70-18.73 Massive po, some py<br>19.65-19.80 70% po-, 10% py-, carb-, qtz-breccia<br>20.60-20.62 Po-vein (100% po)<br>20.95-21.05 2 cms thick po- (80%), py-(20%) vein<br>23.40-23.95 Carb-rich (50% carb)<br>23.95-25.00 Mica- and carb-rich |
| 25.00 | 29.00 | Greenschist<br>-Fel- and carb-rich layers<br>25.80-27.50 Scapolite-, mica- and carb-rich<br>28.80-29.00 Mica- and carb-rich                                                                                                                                                                                                                                                 |
| 29.00 |       | End of hole. Had to stop because of caving. Planned 40 ms deep.                                                                                                                                                                                                                                                                                                             |
|       |       | Core-angles:                                                                                                                                                                                                                                                                                                                                                                |
|       |       | B: 54°/ 3.70 63°/ 5.70 63°/ 7.70 57°/ 9.70<br>24°/14.50 30°/16.70 32°/18.60 44°/20.50<br>38°/22.40 30°/24.40 30°/26.60 58°/28.60                                                                                                                                                                                                                                            |

# %s SOLFIDMALM

## DIAMOND DRILL RECORD

LOCATION: Masi 1776 BEARING: W DIP: 45° HOLE NO: 3-U SHEET NO: 1a  
 LOGGED BY: E. Kreivi STARTED: 20/9-76 PROPERTY: Unna Vuovdas  
 CASING: 3.60 FINISHED: 27/9-76 250S/167W  
 CORE SIZE: TT 46 TESTS (CORRECTED):

| From                                                                                                                                                                                                                                                                                                                                                              | To    | Description                                      |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|--------------------------------------------------|
| 0                                                                                                                                                                                                                                                                                                                                                                 | 2.00  | Overburden                                       |
| 2.00                                                                                                                                                                                                                                                                                                                                                              | 3.60  | 1.60m Graphitic rock                             |
|                                                                                                                                                                                                                                                                                                                                                                   |       | -70% po, a little of cp, lost core about 1 m     |
| 3.60                                                                                                                                                                                                                                                                                                                                                              | 16.50 | Greenschist                                      |
| 16.50                                                                                                                                                                                                                                                                                                                                                             | 25.00 | 8.50m Acid volcanics                             |
|                                                                                                                                                                                                                                                                                                                                                                   |       | -10% po-breccia                                  |
|                                                                                                                                                                                                                                                                                                                                                                   | 0.03m | 18.70-18.73 100% po, some py                     |
|                                                                                                                                                                                                                                                                                                                                                                   | 0.15m | 19.65-19.80 70% po-, 10% py-breccia              |
|                                                                                                                                                                                                                                                                                                                                                                   | 0.02m | 20.60-20.62 100% po                              |
|                                                                                                                                                                                                                                                                                                                                                                   | 0.02m | 20.95-21.05 2 cms thick po- (80%), py (20%) vein |
| 25.00                                                                                                                                                                                                                                                                                                                                                             | 29.00 | Greenschist                                      |
| 29.00                                                                                                                                                                                                                                                                                                                                                             |       | End of hole                                      |
| <p>The hole was planned to test geophysical and geochemical anomalies and to be drilled down to 40 ms, but because of caving the hole had to be stopped at 29.00. One graphitic bed, less than 1.60 ms thick, was intersected. It got 70% po and a little of cp. 8.50 ms of acid volcanics with 10% po-breccia and some thin massive po-veins was penetrated.</p> |       |                                                  |
|                                                                                                                                                                                                                                                                                                                                                                   | 1.82m | 70% po, some py, rare cp.                        |

# 1/2 Sulfidmalm

## Diamond Drill Record

LOCATION: Masi 1776 BEARING: W DIP: 60° HOLE NO: 4-U SHEET NO: 1  
 LOGGED BY: E. Kreivi STARTED: 2/10-76 PROPERTY: Unna Vuoydas  
 CASING: 3.50 FINISHED: 3/10-76 50N/350W  
 CORE SIZE: TT 46 TESTS (CORRECTED):

| From  | To    | Description                                                                                                                                                                                                                                                                                                                                                                                                                       |
|-------|-------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 0     | 3.50  | Overburden                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 3.50  | 12.00 | Greenschist<br>- some carb-breccia and Qtz-veins<br>6.60-6.70 Fractured<br>7.00-8.05 Carb-breccia                                                                                                                                                                                                                                                                                                                                 |
| 12.00 | 14.50 | Mica-schist<br>-40% mica, 60% Fel and carb, some amphibole                                                                                                                                                                                                                                                                                                                                                                        |
| 14.50 | 22.80 | Acid volcanics<br>-thin graphite-bearing beds and carb-veins<br>15.35-15.85 Graphitic rock, brecciated by<br>90% po, some cp<br>15.85-16.20 60% carb<br>17.95-18.05 90% po in graphitic rock<br>18.05-18.80 Carb-vein with some po-breccia<br>18.80-22.00 30% graphite, brecciated by 30% po and<br>carbonate and some py<br>17.30-17.55 Folded<br>20.50-20.60 Fractured<br>22.00-22.80 30% po + carb-breccia, mica-rich, some py |
| 22.80 | 24.20 | Mica-schist<br>-carb-rich<br>23.80-24.20 Chlorite-rich                                                                                                                                                                                                                                                                                                                                                                            |
| 24.20 | 34.00 | Greenschist<br>-thin carb-veins<br>26.45-26.50 Graphite<br>27.00-27.20 Qtz-vein<br>28.50-29.00 Folded                                                                                                                                                                                                                                                                                                                             |
| 34.00 |       | End of hole. Had to stop because of caving. Planned<br>40 ms deep.                                                                                                                                                                                                                                                                                                                                                                |



# A/s SULFIDMALM

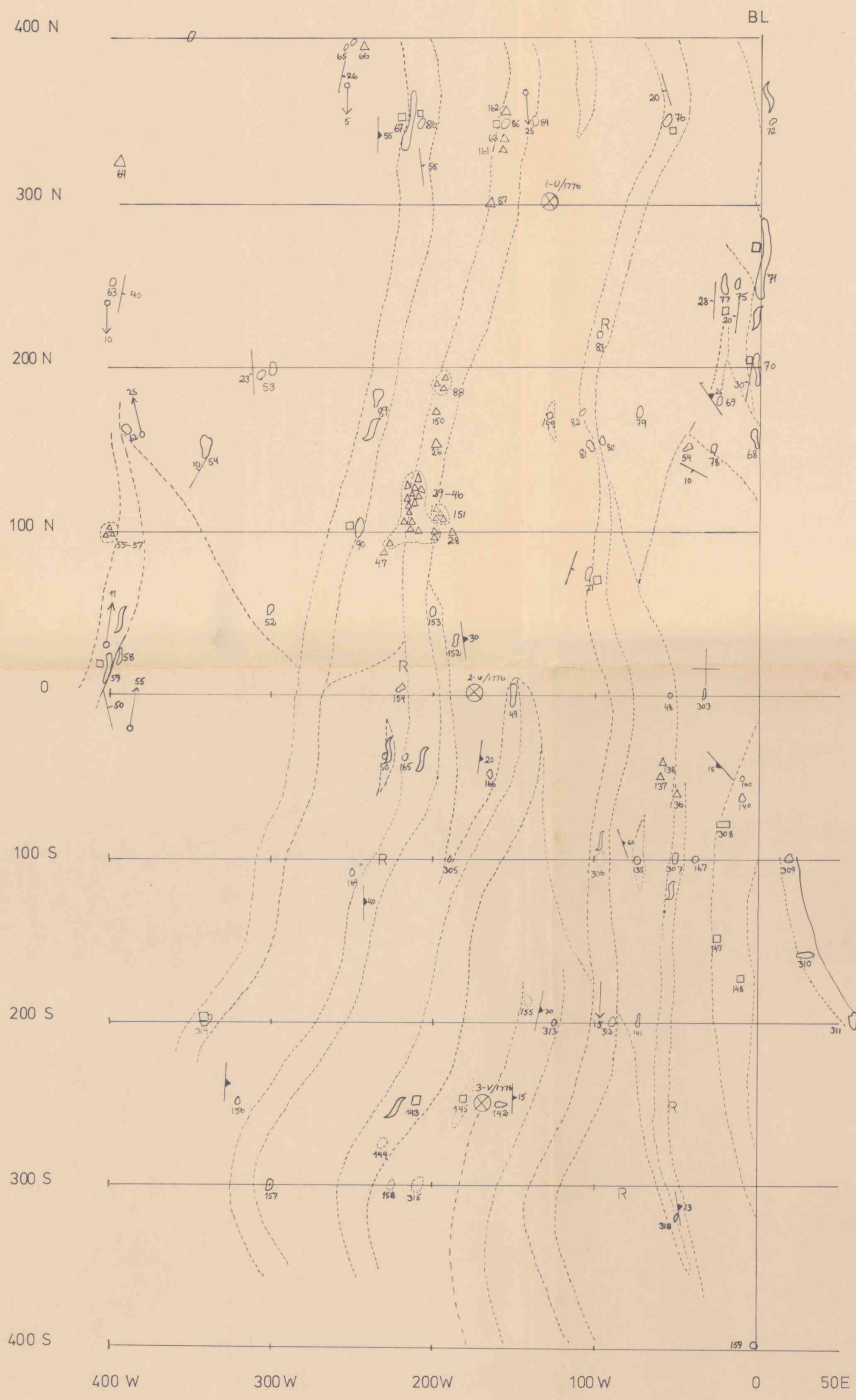
## DIAMOND DRILL RECORD

LOCATION: Masi 1776 BEARING: W DIP: 60° HOLE NO: 4-U SHEET NO: 1a  
 LOGGED BY: E. Kreivi STARTED: 2/10-76 PROPERTY: Unna Vuovdas  
 CASING: 3.50 FINISHED: 3/10-76 50N0350W  
 CORE SIZE: TT 46 TESTS (CORRECTED):

| From  | To    | Description                                                                                                                                                                                                      |
|-------|-------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 0     | 3.50  | Overburden                                                                                                                                                                                                       |
| 3.50  | 12.00 | Greenschist                                                                                                                                                                                                      |
| 12.00 | 14.50 | Mica-schist                                                                                                                                                                                                      |
| 14.50 | 22.80 | Acid volcanics                                                                                                                                                                                                   |
|       | 0.50m | 15.35-15.85 Graphitic rock, brecciated by<br>90% po, some cp                                                                                                                                                     |
|       | 0.10m | 17.95-18.05 90% po in graphitic rock                                                                                                                                                                             |
|       |       | 18.05-18.80 Carb vein with some po-breccia (<5%)                                                                                                                                                                 |
|       | 3.20m | 18.80-22.00 30% po in graphitic rock                                                                                                                                                                             |
|       | 0.80m | 22.00-22.80 30% po                                                                                                                                                                                               |
| 22.80 | 24.20 | Mica-schist                                                                                                                                                                                                      |
| 24.20 | 34.00 | Greenschist                                                                                                                                                                                                      |
|       |       | 26.45-26.50 Graphite                                                                                                                                                                                             |
| 34.00 |       | End of hole                                                                                                                                                                                                      |
|       |       | The hole was drilled to test geochemical and<br>geophysical anomalies, and planned to drill<br>down to 40 ms, but because of caving we had<br>to stop at 34.00. The hole got mineralized<br>graphitic beds with: |
|       | 4.60m | 30-40% po, traces of cp                                                                                                                                                                                          |
|       |       | Core-angles                                                                                                                                                                                                      |
|       |       | B: 40°/ 4.80 38°/ 6.90 15°/ 8.90 15°/10.90                                                                                                                                                                       |
|       |       | 14°/12.90 28°/14.80 11°/16.90 4°/18.90                                                                                                                                                                           |
|       |       | 12°/21.65 24°/23.80 8°/25.90 22°/28.60                                                                                                                                                                           |
|       |       | 12°/30.95 32°/32.40 70°/33.50                                                                                                                                                                                    |



As Tarkopi 2000 A 2 E 8 10 21 Saurum Trakkeri



**KEY:**

- ⊗ DDH
- 3 ACID VOLCANICS
- GRF-SCHIST INTERCALATIONS
- 5 QUARTZ VEIN
- 14 GREENSCHIST-STONE
- 15 GREYWACKE, MICASCHIST
- 17 AMPHIBOLITE
- 5 SULPHIDES IN BEDROCK
- ▲ SULPHIDES IN BLOCK
- R GOSSAN
- 20 BEDDING
- 20 SCHISTOSITY
- 20 MINOR FOLD AXIS
- CONTACT INFERRED
- CONTACT OBSERVED

|                                   |           |          |           |
|-----------------------------------|-----------|----------|-----------|
| UNNA VUOVDAS MASI 1776<br>GEOLOGY | SCALE     | OBS. KT  | JULY-76   |
|                                   | 1: 2000   | DRAW. KT | AUG-76    |
| SULFIDMALM                        | TRAC.     | CHK.     |           |
|                                   | MAP NO.   |          |           |
|                                   |           |          | 407/76/17 |
|                                   | MAP SHEET |          |           |

Fig 2 Sheet 1. GEOLOGY UNNA VUOVDAS MASI 1776





As Teräspöytä, 2000 A2 E 9 p. 1071, Sannun-Työkalu.

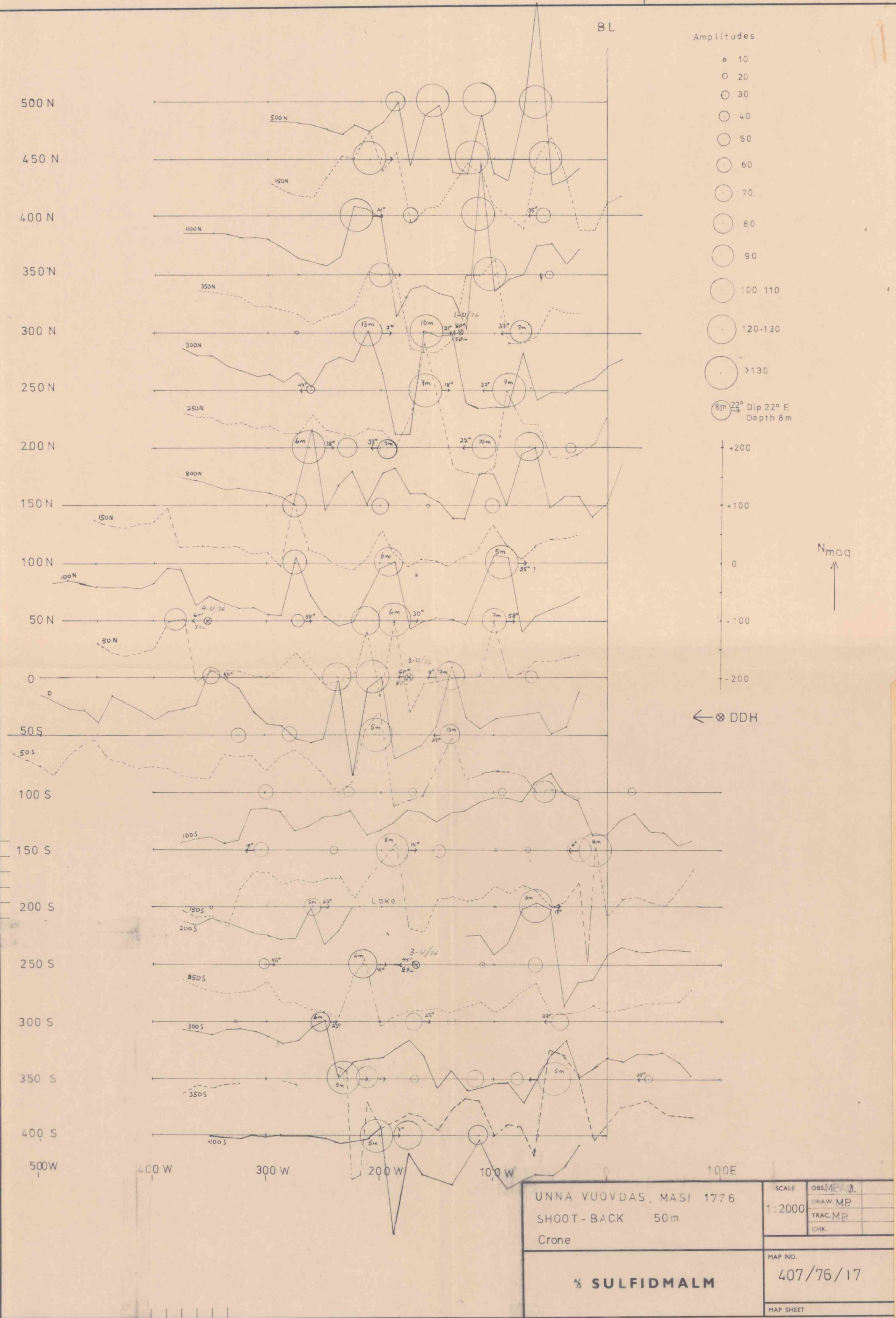


Fig 3 sheet 1.

UNNA VUOVDAS, Masi 1776 shoot-back 50 m. Crone



Top 204W 175W 113W  
 Dip 2° E  
 Depth 5m  
 Amplitude 180 130 70

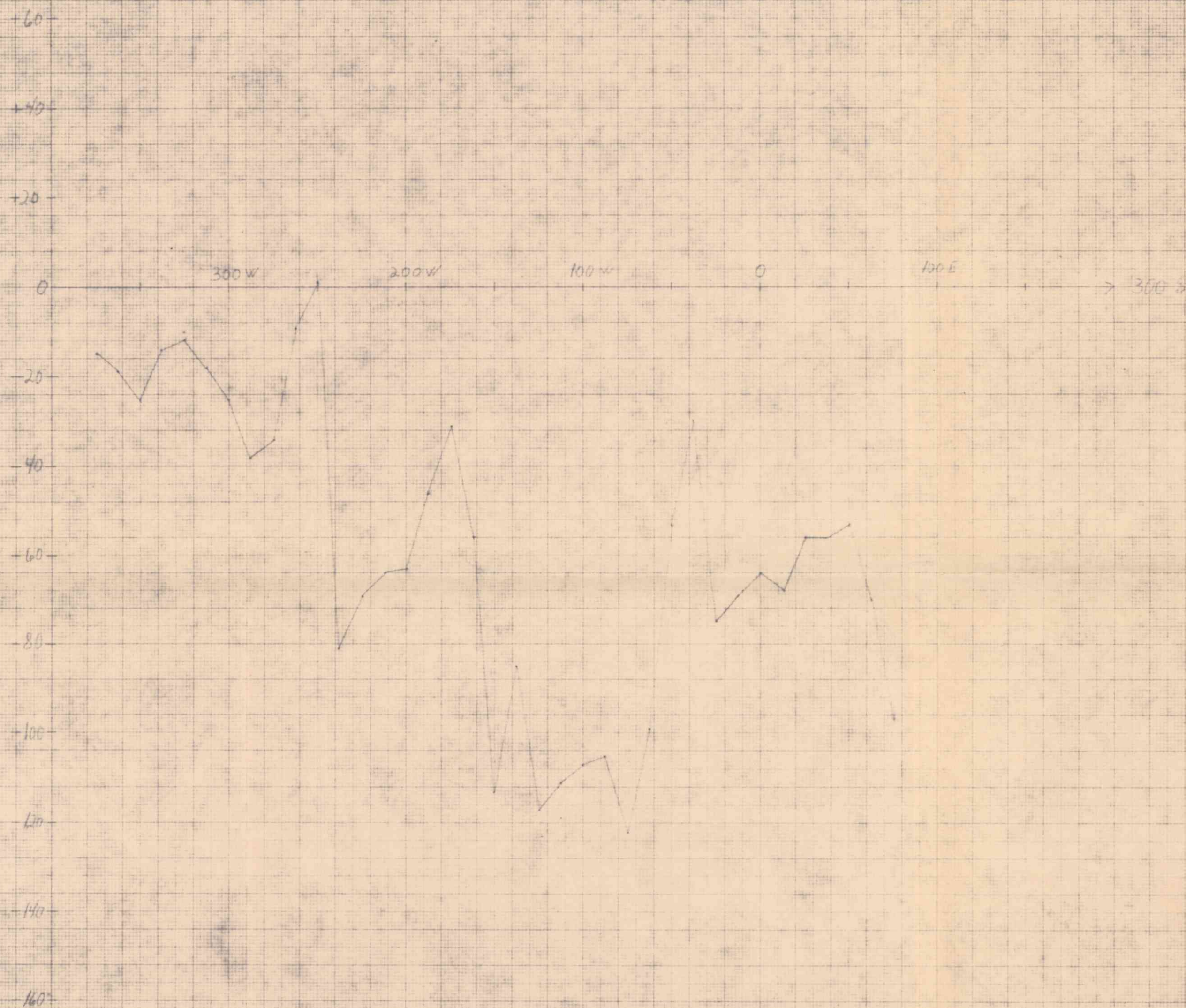
Top 213W 212W 190W 117W 11W 47W 222W  
 Dip E W 25° W  
 Depth 5m 5m 5m 5m 5m 5m 5m  
 Amplitude 100 100 30 20 50 190 30



UNNA VUOVDS, Masi 1776  
 Shoot - Back 50m  
 Profiles 400S, 350S  
 Scale 1:2000  
 Obs. 1776  
 Drawn 1776



|           |       |       |       |       |       |
|-----------|-------|-------|-------|-------|-------|
| Top       | 332 W | 352 W | 170 W | 182 W | 42 W  |
| By        | 75° E | 82° E |       |       | 28° W |
| Depth     | 6 m   |       |       |       |       |
| Amplitude | 20    | 20    | 30    | 20    |       |

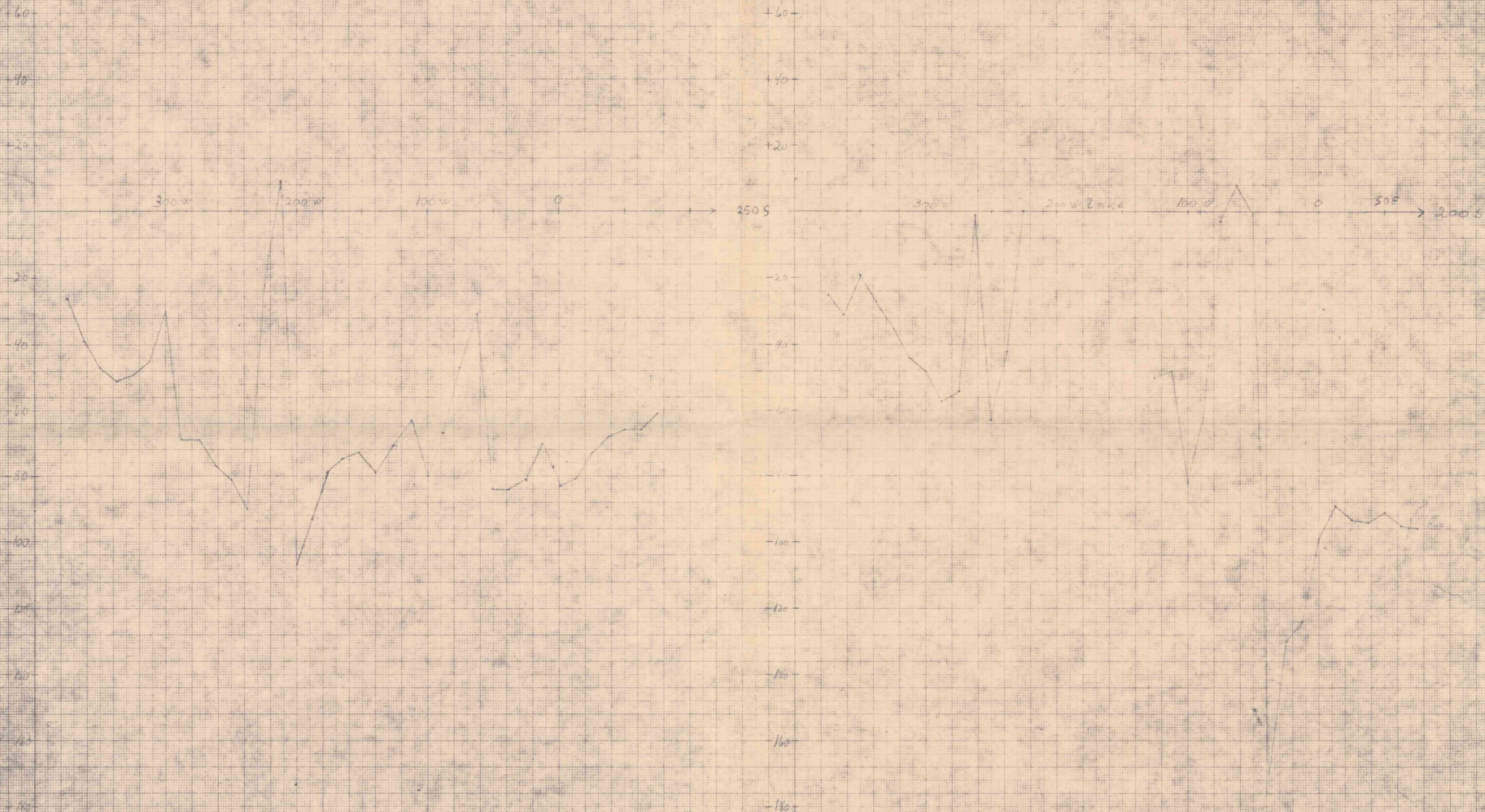


UNNA VUOVDAS, Maxi 1776  
 Shoot-back 50m  
 Profiles 300 S  
 Scale 1:2000



Top 328W 215W 110W 64W 14W  
 Dip 48°E 41°E  
 Depth 40 170 30 60 10  
 Amplitude 40 170 30 60 10

Top 262W 63W  
 Dip 63°E 15°E  
 Depth 5 6m  
 Amplitude 70 140

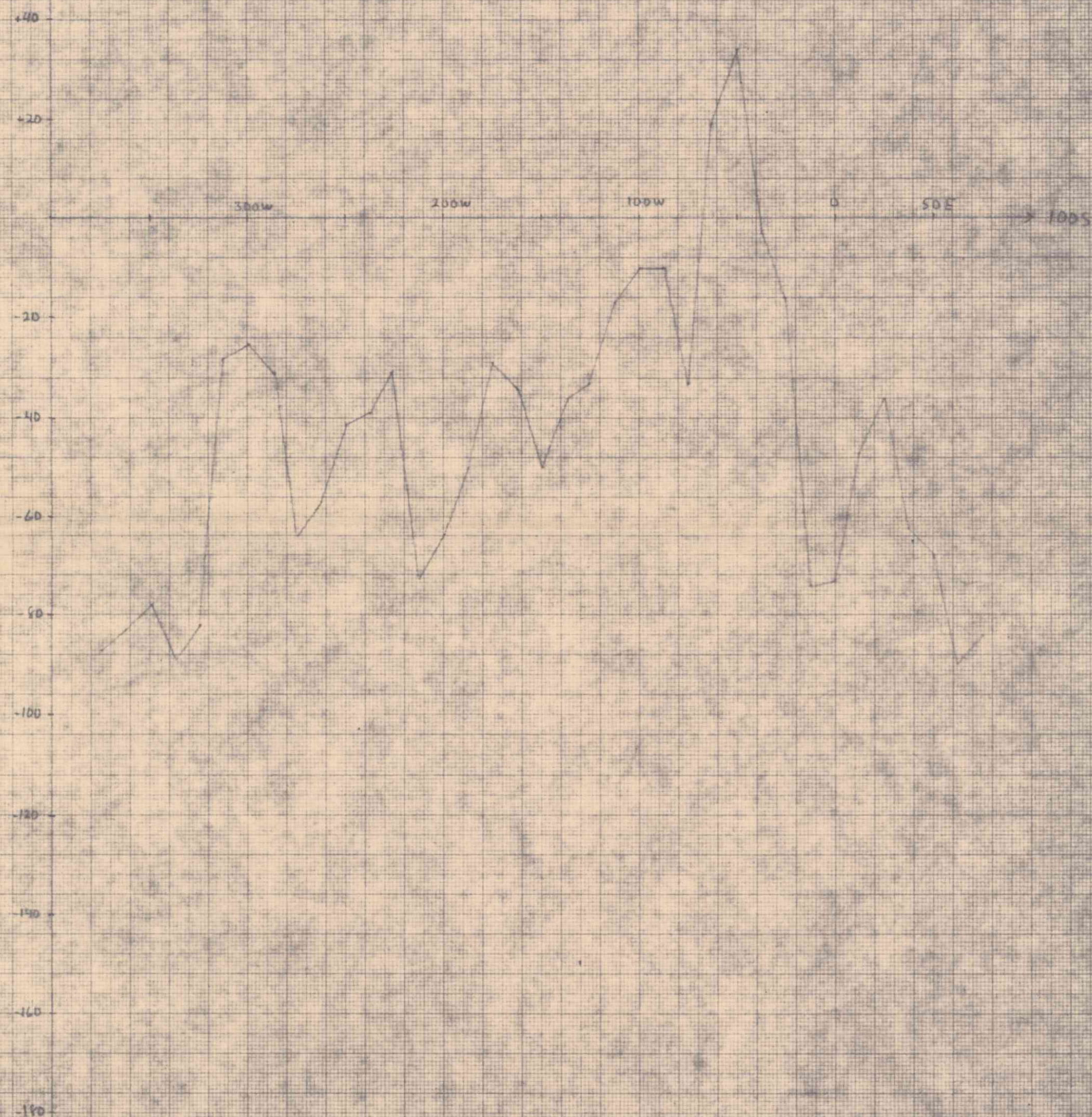
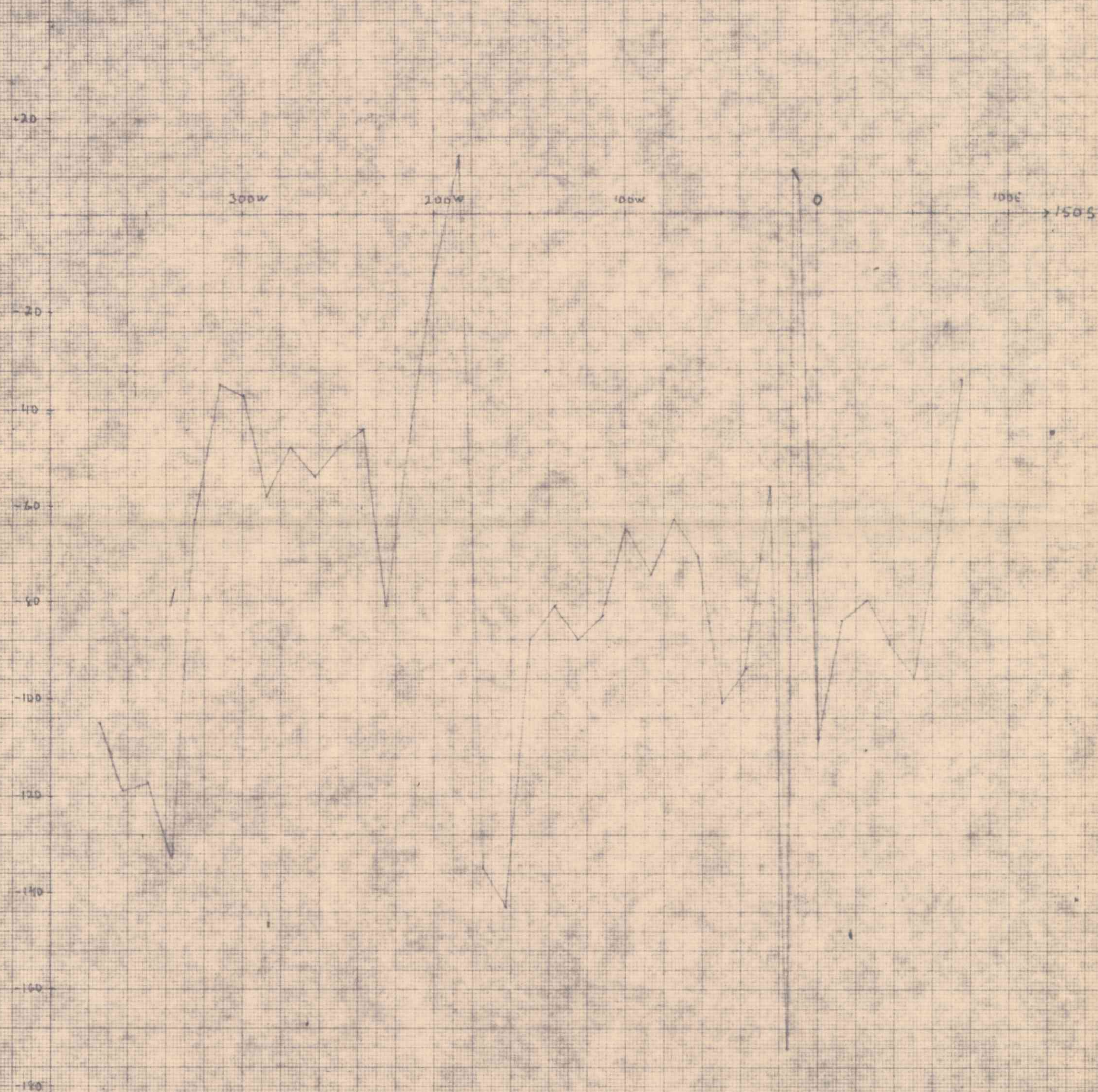


Unavvadas, Masu 1776  
 Shoot - Back 50m  
 Profiles: 250S, 200S  
 Scale: 1:2000  
 Date: May 1776



| Top       | 705 W | 190 W | 25 W | 10 W |
|-----------|-------|-------|------|------|
| Ref       | 15 W  | 14 W  |      | 6 W  |
| Ref       |       | 8 W   |      | 2 W  |
| Amplitude | 60    | 100   | 100  | 160  |

| Top       | 700 W | 230 W | 120 W | 92 W | 55 W | 22 W |
|-----------|-------|-------|-------|------|------|------|
| Amplitude | 60    | 40    | 30    | 30   | 100  | 40   |

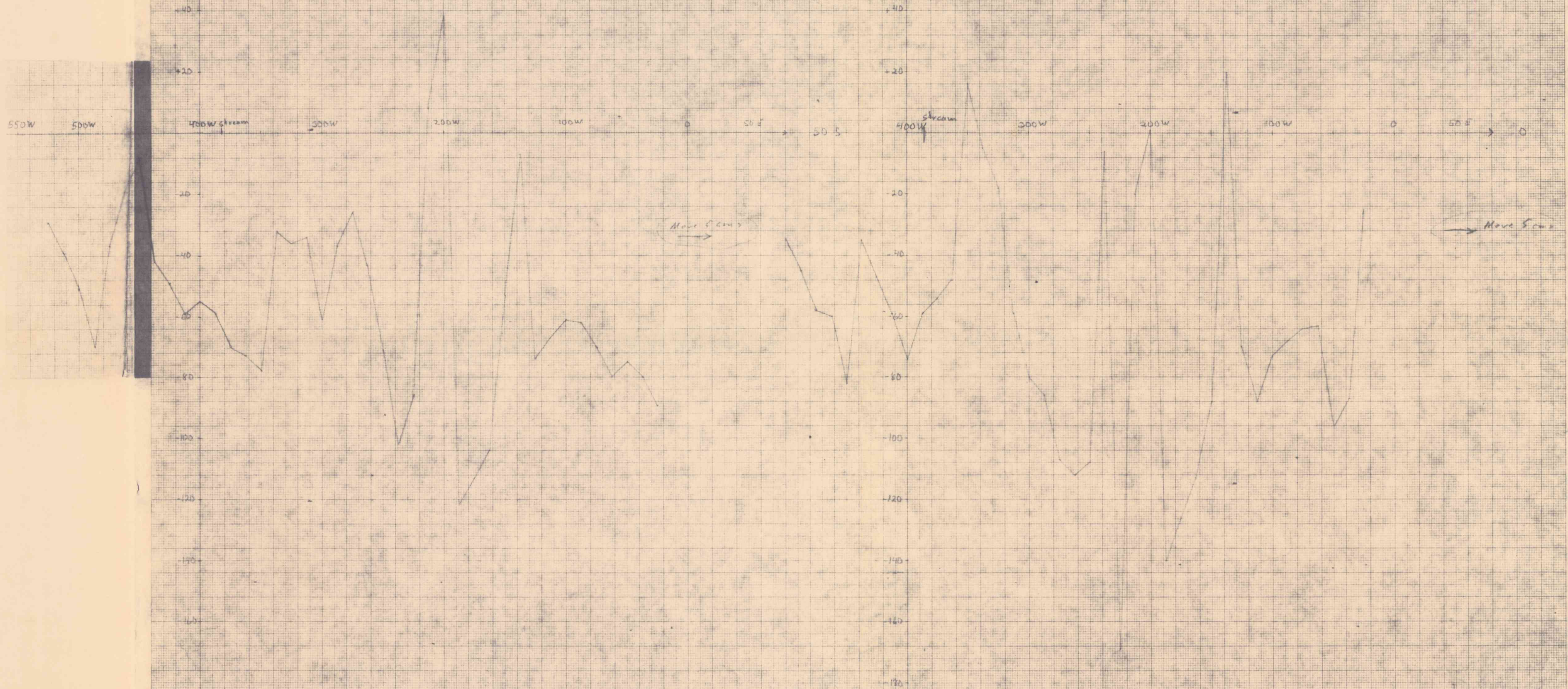


UnnaVuovdas, Masi 1776  
 Shoot-Back 50m  
 Profiles 150 S, 100 S  
 Scale 1:2000



|           |      |      |      |      |
|-----------|------|------|------|------|
| Top       | 325W | 280W | 204W | 132W |
| Dir       |      |      |      | 220W |
| Depth     |      |      | 5m   | 12m  |
| Amplitude | 60   | 60   | 190  | 80   |

|           |      |      |     |      |      |
|-----------|------|------|-----|------|------|
| Top       | 250W | 290W | 336 | 120W | 162W |
| Dir       | 400W |      |     | 24W  |      |
| Depth     | 10m  |      |     | 2    |      |
| Amplitude | 70   | 130  | 200 | 120  | 80   |



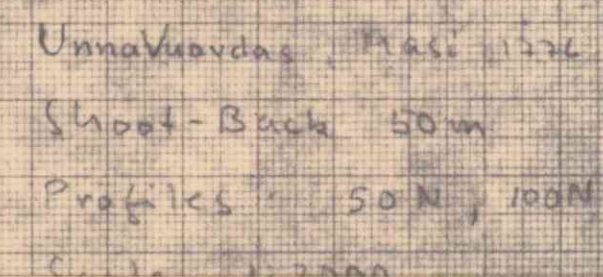
Unna Vuovdas, Masi 1776  
 Shoot-back 50m  
 Profiles 50S, 0  
 Scale 1:1000

UNNA VUOVĐAS, Masi 1776 shoot-back 50m Profiles 50S, 0

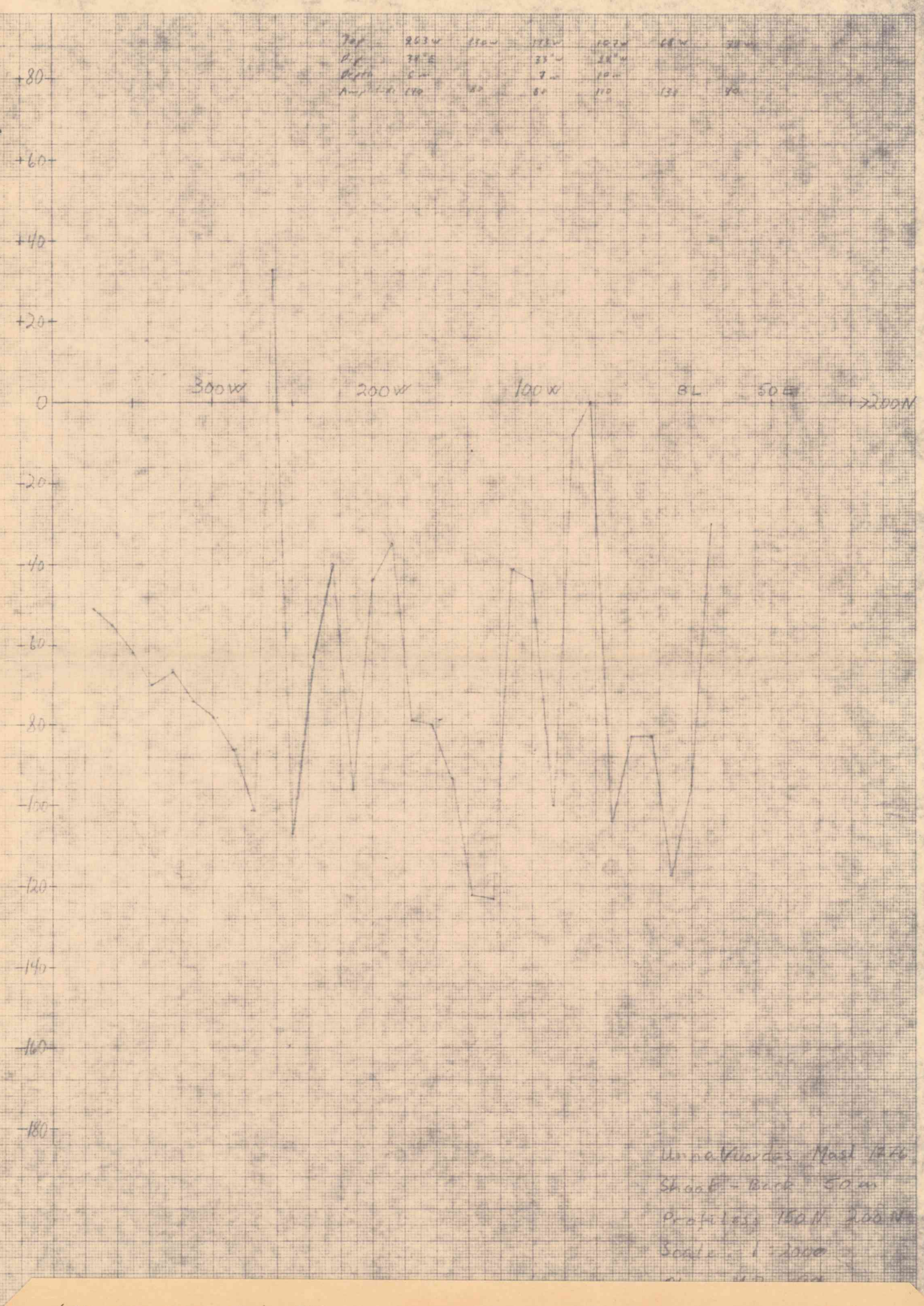
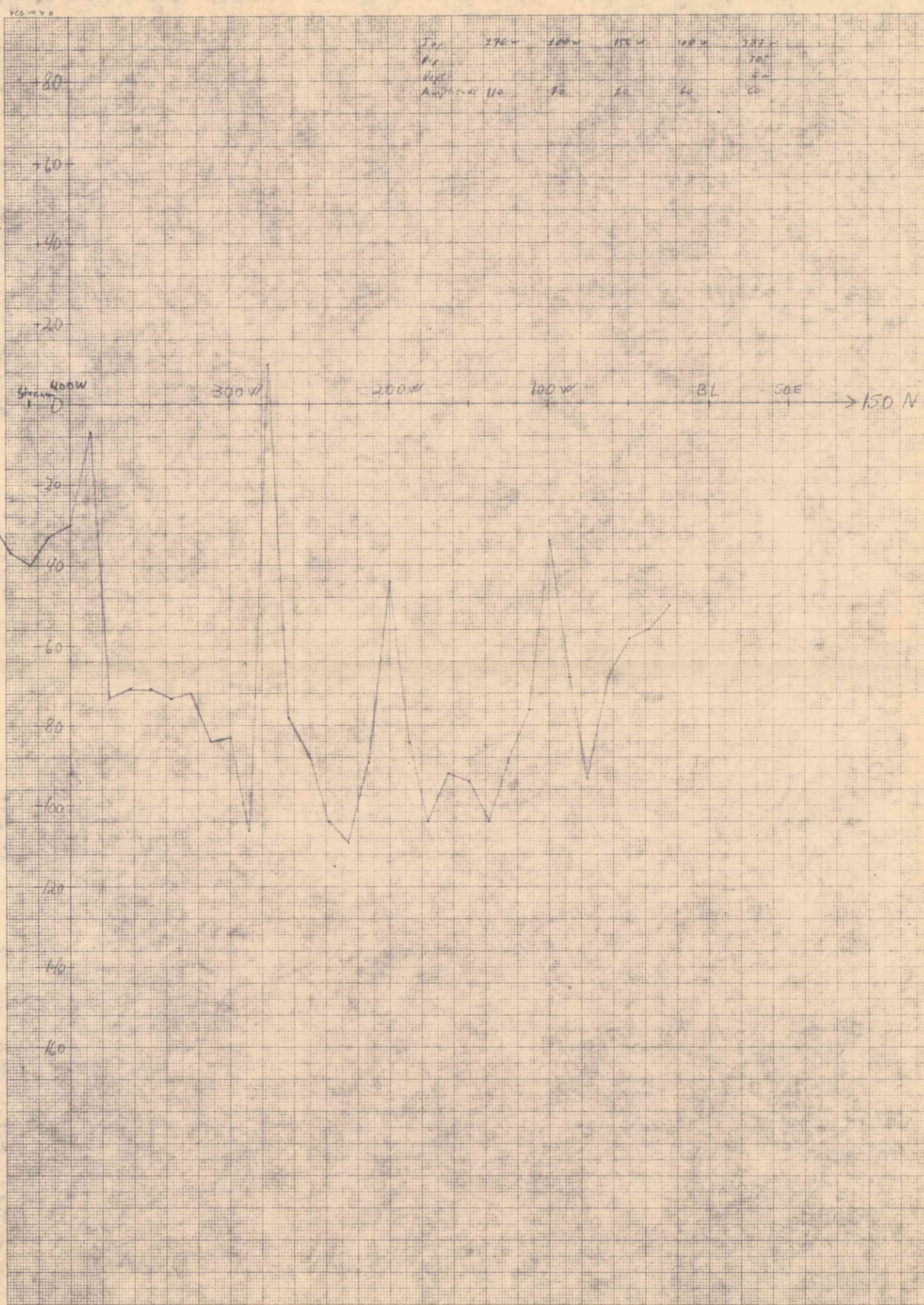
Fig 3. Sheet 6



| Top   | Sample code | W. p    | Slip p |
|-------|-------------|---------|--------|
| 380 W | 70          | 30° E   | 75 m   |
| 374 W | 110         |         |        |
| 188 W | 130         | 80° E ? | 6 m    |
| 28 W  | 140         | 55° E   | 5 m    |





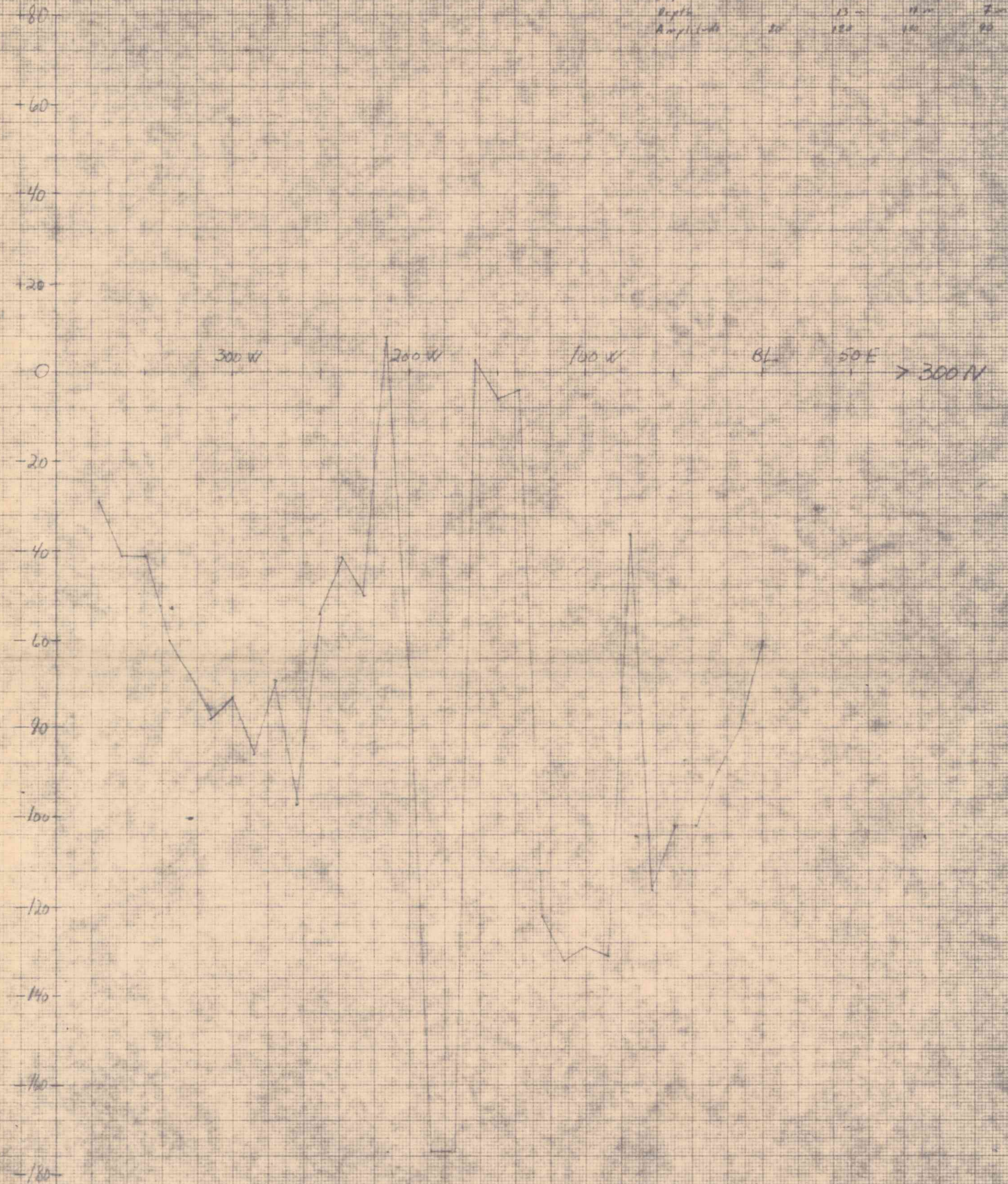
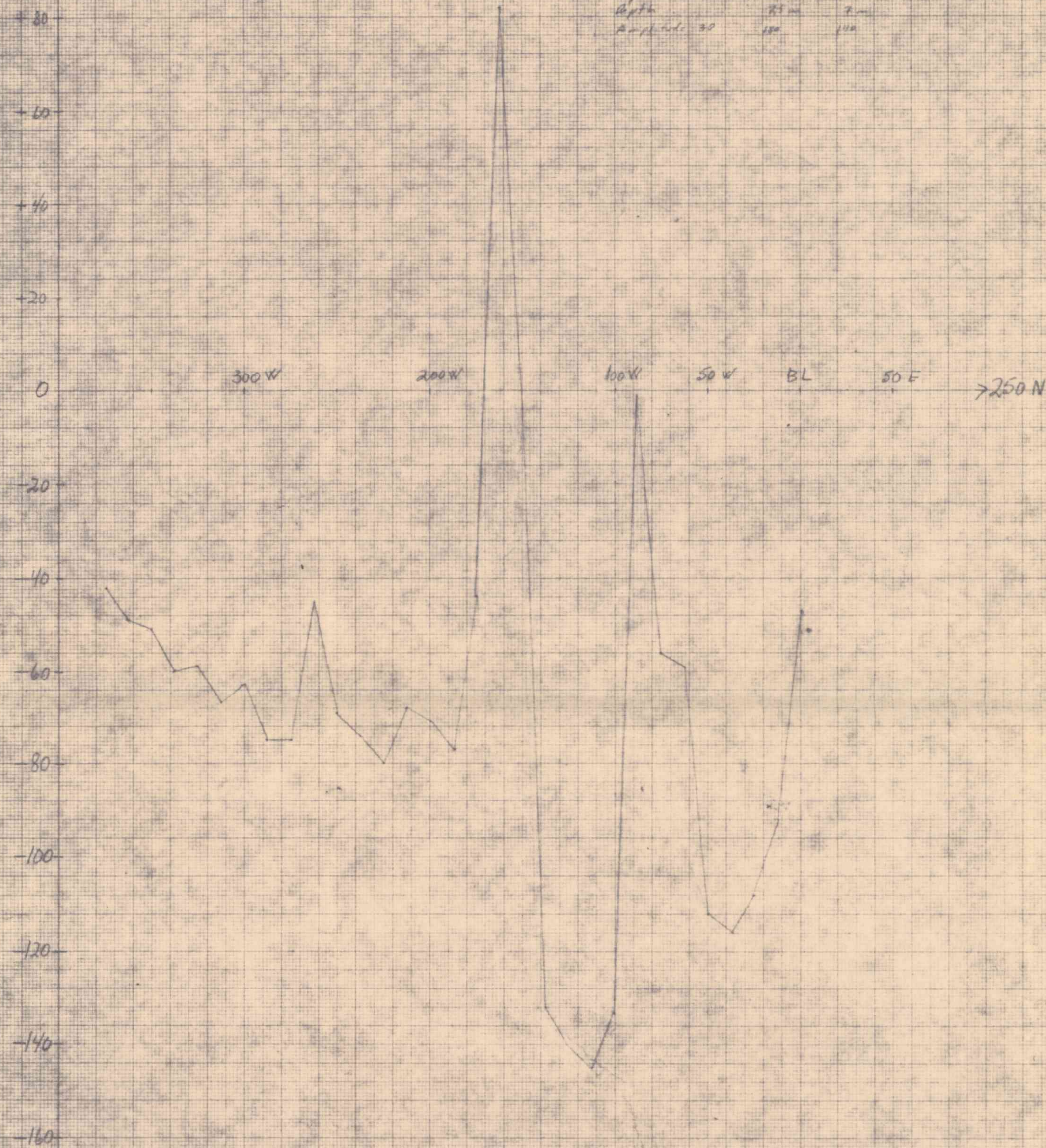


Unna Vuovdas, May 1976  
 Shoot-back 50m  
 Profiles 150N, 200N  
 Scale 1:2000



|           |        |        |       |
|-----------|--------|--------|-------|
| Top       | 26.2 W | 16.0 W | 26 W  |
| Dip       | 77° W  | 18° E  | 77° W |
| Depth     | 75 m   | 7 m    | 7 m   |
| Amplitude | 30     | 150    | 100   |

|           |        |        |        |       |
|-----------|--------|--------|--------|-------|
| Top       | 27.4 W | 21.0 W | 16.0 W | 26 W  |
| Dip       | 77° W  | 18° E  | 17° W  | 77° W |
| Depth     | 75 m   | 15 m   | 11 m   | 7 m   |
| Amplitude | 30     | 120    | 100    | 90    |



Unna Vuordas, Maxi 1776  
 Shoot - Back 50m  
 Profiles 250 N, 300 N  
 Scale 1:2000

UNNA VUORDAS, Maxi 1776 shoot-back 50m Profiles 250 N, 300 N

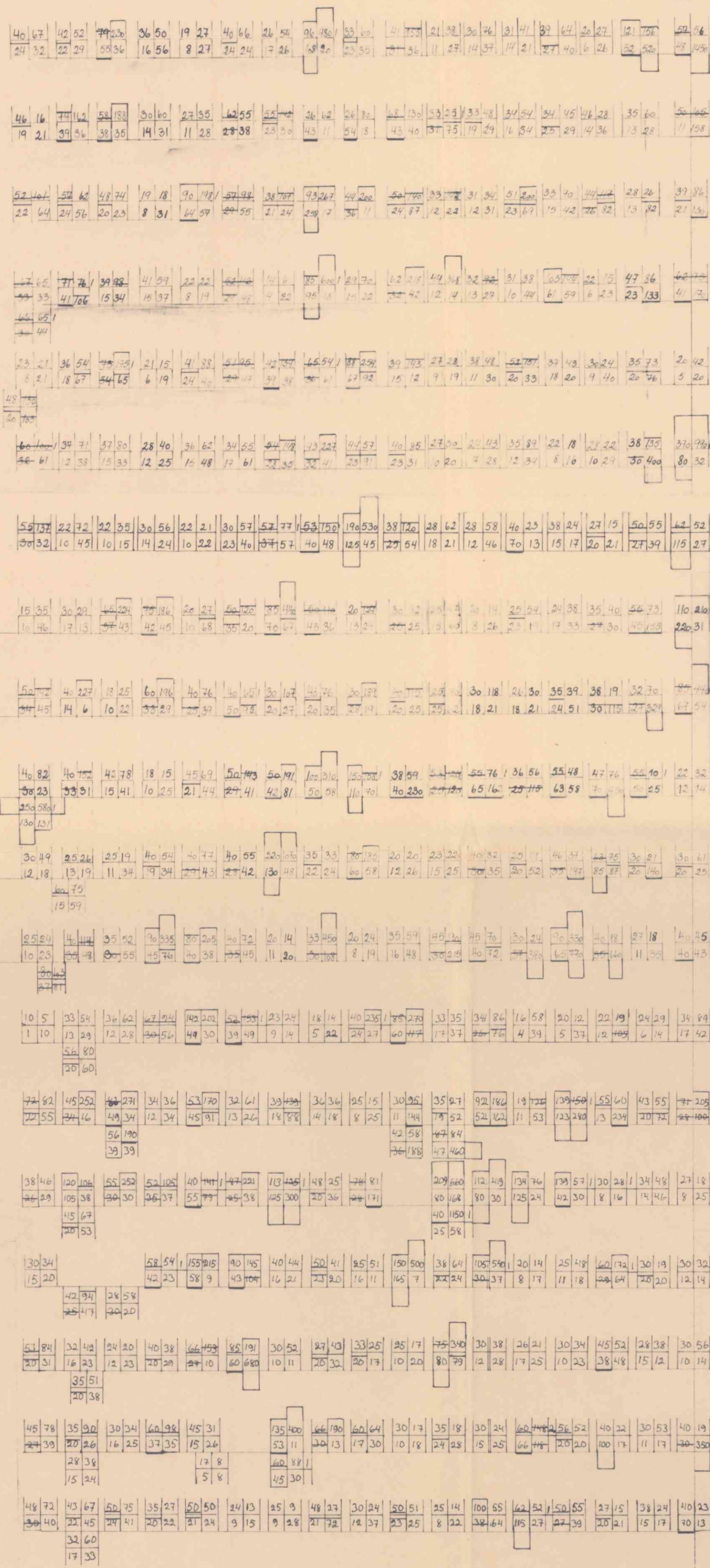






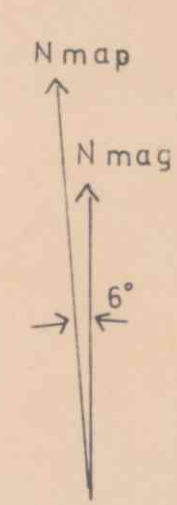
As: Teräspiä, 2000, A.2, E.9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000.

500 N  
400 N  
300 N  
200 N  
100 N  
0  
100 S  
200 S  
300 S  
400 S



|                      | Ni<br>ppm<br>50 - 70     | Cu<br>ppm<br>90-120      | Co<br>ppm<br>19-25       |
|----------------------|--------------------------|--------------------------|--------------------------|
| Possible<br>90-95%   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Probable<br>95-98%   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Anomalous<br>98-100% | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|                      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

| Zn<br>ppm<br>65-95       | Pb<br>ppm<br>37-41       | Ag<br>ppm x 10 <sup>-1</sup><br>2 |
|--------------------------|--------------------------|-----------------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>          |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>          |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>          |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>          |



|                                                  |                 |                                                                 |
|--------------------------------------------------|-----------------|-----------------------------------------------------------------|
| UNNA VUOVDAS MASI 1776<br>TILLSAMPLING<br>Assays | SCALE<br>1:2000 | OBS. MPAO. 6-7<br>DRAW. MP 6-7<br>TRAC EKBB 7-7<br>CHK. EK. 1-7 |
| MAP NO.<br>407/76/17                             |                 | 989                                                             |
| % SULFIDMALM                                     |                 | MAP SHEET                                                       |

FIG. 4 Sheet 1  
Assays  
TILLSAMPLING  
UNNA VUOVDAS MASI 1776



