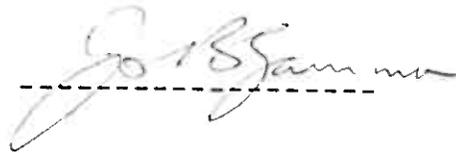


A/S SULFIDMALM  
INTER-OFFICE MEMORANDUM

Date: 5th 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:

Rept. No. 409/76/17. Suolojavrre Grid, Masi.

Please find attached our summary of work carried out on the Suolojavrre Grid during 1976. This area was selected on the basis of helicopter EM anomalies in an area with scattered geochemical anomalies. Overburden cover severely hampered mapping and prospecting but boulders containing up to 0.4% Cu and 3.9% Zn were discovered. Geophysical anomalies seem to be associated with the graphitic schist horizons of regional extent. Bedrock-till interface geochemistry would be interesting to try in this area should we decide to pursue the search further.

  
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FOR FALCONBRIDGE NIKKELVERK A/S  
A/S SULFIDMALM

Project 905-17

Ground surveys at Suolojavrre  
in 1976, Masi

By

E. Kreivi

K. Taipale

**ADDITIONAL ACTIVITY**

**OFFSHORE**  
The offshore area is defined as the area extending from the coastline to the edge of the continental shelf. It is divided into three zones: the inner zone, the middle zone, and the outer zone. The inner zone is the area closest to the coastline, the middle zone is the area between the inner and outer zones, and the outer zone is the area furthest from the coastline. The offshore area is a rich source of oil and gas reserves and is an important part of the national energy supply.

**ABORIGINAL RESERVES**  
The Aboriginal Reserves are areas of land set aside for the use of the Aboriginal people. They are located in various parts of the country and are an important part of the national heritage. The reserves are managed by the Aboriginal Land Council and are used for a variety of purposes, including housing, education, and health care.

**MARINE RESERVE**  
The Marine Reserve is an area of the sea set aside for the protection of marine life. It is located in the coastal waters of the country and is an important part of the national marine environment. The reserve is managed by the Marine Conservation Authority and is used for a variety of purposes, including research, education, and recreation.

**WATER RESOURCES**  
The water resources of the country are a vital part of the national infrastructure. They are used for a variety of purposes, including agriculture, industry, and domestic consumption. The water resources are managed by the Water Resources Commission and are an important part of the national economy.

**PERMACULTURE**  
Permaculture is a sustainable agricultural system that combines the best of traditional agriculture and modern science. It is based on the principles of ecology and is designed to be self-sufficient and resilient. Permaculture is an important part of the national food security strategy and is used for a variety of purposes, including food production, education, and recreation.

**JAYHUNTER BASIN**  
The Jay Hunter Basin is a large area of land in the north-eastern part of the country. It is an important part of the national energy supply and is used for a variety of purposes, including oil and gas production, agriculture, and recreation. The basin is managed by the Jay Hunter Basin Authority and is an important part of the national economy.

**WATER RESOURCES**  
The water resources of the country are a vital part of the national infrastructure. They are used for a variety of purposes, including agriculture, industry, and domestic consumption. The water resources are managed by the Water Resources Commission and are an important part of the national economy.

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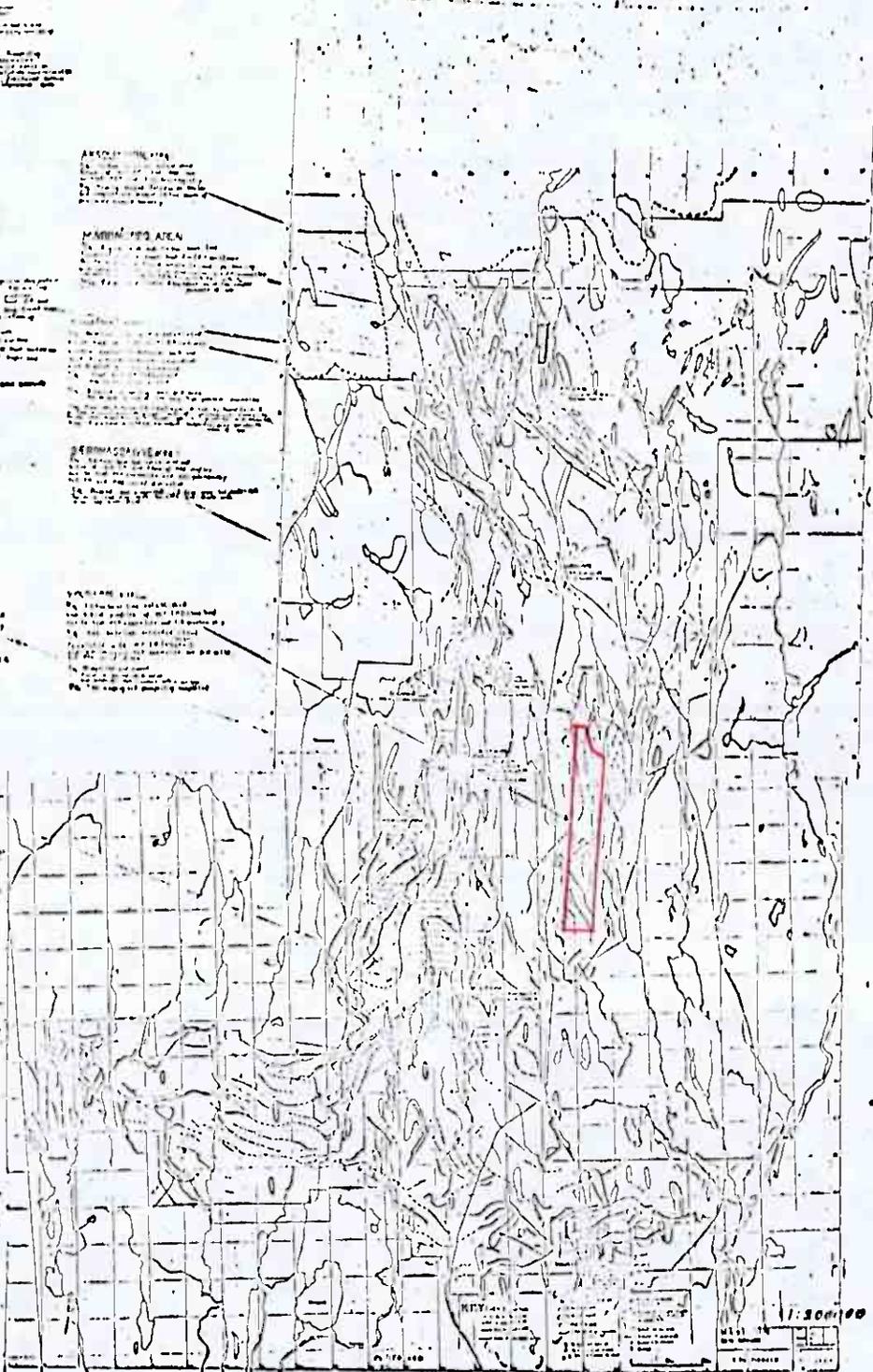


FIG. 1

## Introduction (Fig.1)

The Suolojavrrre-grid is situated on the western side of the lake called Stuora Suolojavrrre. The 5.6 kms long base-line starts from 700 ms north of Duolbajavrre, 10 kms south of Suolovuobme. The base-line was set out in the direction of magnetic north and 800 ms long profiles were set out east-wards from the base-line with 100 ms line-spacing. The grid was layed out to locate by VLF-EM- and Mag-survey and mapping the helicopter-anomalies within the geochemically anomalous areas, found by the reconnaissance till sampling of 1974. The area is quite covered by swamps and drift as usual in this district.

## Geology by Kalle Taipale (Fig.2)

### Petrography

The only rock type that has not been described in the connection of Havggajavrre, Unna Vuovdas and Javrehuosjokka is the skarn. It consists of tremolite and chlorite and possibly some plagioclase. See the sample 191C/KT. This rock type is exposed only in two places and its origin and stratigraphical setting is obscure. The southernmost occurrence of skarn rock (sample 278/KT) contained some pyrrhotite. The nickel anomaly near this place could be explained by this kind of sulphide bearing skarn.

Other rocks like greenstones, mica schist and quartz banded iron ores are similar to the rocks of other areas described before. The greenstone differs a little from the greenstones of Havggajavrre, Unna Vuovdas and Javrehuosjokka, however. It is more gabbroic, more coarse grained than the varieties in other areas. The weak nickel anomalies are probably caused by silicate nickel of these gabbroic greenstones.

### Structure

The structure of Suolojavrrre grid is obscure because of poor outcrop. Anyway there is probably a fold structure judging by the coupled occurrence of the sulphide bearing chert-graphite schist horizons. (see the map).

### Block searching

Some good boulders with Zn and Pb were found at the beach of lake Suolojavrrre (e.g. 31/MP-75). The occurrence of those elements is very random however. The till at Suolojavrrre grid is mostly very poor in boulders at the surface. So the boulders searching with Proxan apparatus or something like it could bring out "hidden" blocks.

### Geophysics (Fig.3)

South of the 600N-profile there seems to be a very weak relief on the VLF-curves. To the north of the profile at least four strong conductor zones are running in a south-north-direction. They seem to conform to the acidvolcanics-beds with some mineralized graphitic beds. The mag-relief is quite low, but there are some anomalies, which are parallel to EM-anomalies and seem to be on the quartz-banded magnetite-formations, found during the detailed mapping.

### Conclusions

The geochemical and geophysical anomalies seem to conform to the mineralized graphitic beds in acid volcanics as in the other areas Havggajavrre and Unna Vuovdas.

The mineralization is mainly pyrrhotite and some pyrite with traces of chalcopyrite, occasionally sphalerite (31/M-76).

The best analyses of hand specimens gave:

0.40% Cu in 233/KT/76

3.9% Zn in 31/MP/76

Maas: 1776

Date 23/8 1976

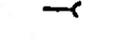
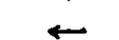
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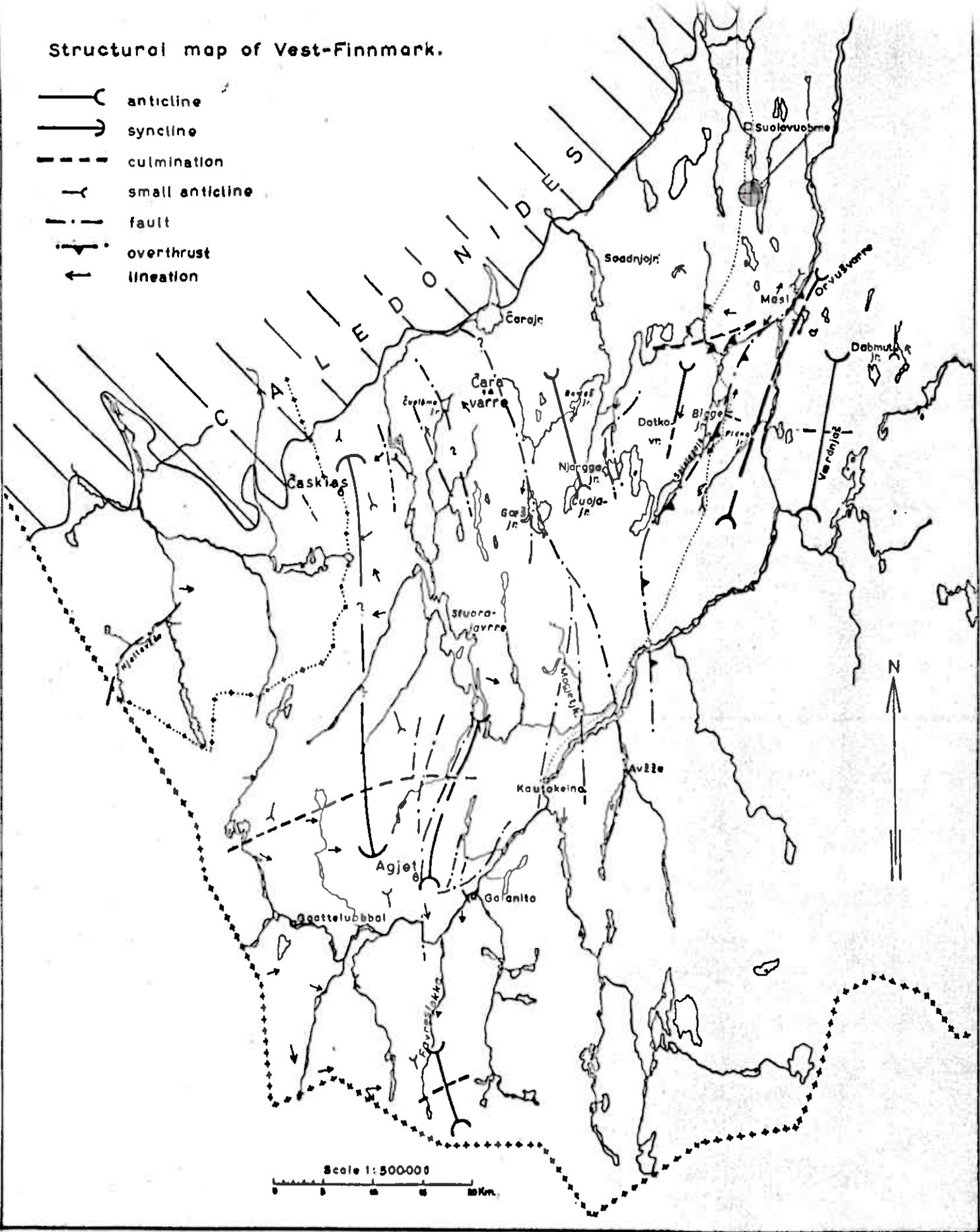
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					Cu	Zn	Pb	S	Ag	Au	
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79	253/KT	---	---		099	0.017	<0.02				
80	253/KT	---	---		019	<0.01	<0.02				
81	43/MP	Silesjavann	---		1.10	<0.01	<0.02				
82	50/MP	---	---		1.21	<0.01	<0.02				
83	37A/EK	Daimutjavann R. Sulojavann	---		0.06	5.2	0.83		52 ppm		$\Sigma Zn, Pb = 6.03$
84	37B/EK	---	---		0.07	3.6	0.78		51 ppm		$\Sigma Zn, Pb = 4.38$
85	37C/EK	---	---		0.07	2.7	1.05		"		$\Sigma Zn, Pb = 3.75$
86	42A/EK	Raipas	---		290		<0.02		90	20 ppm / 1 ppm	
87	42B/EK	---	---		048		<0.02		"	"	

Shipment No. 12/3



Structural map of Vest-Finnmark.

-  anticline
-  syncline
-  culmination
-  small anticline
-  fault
-  overthrust
-  lineation



GEOLOGY

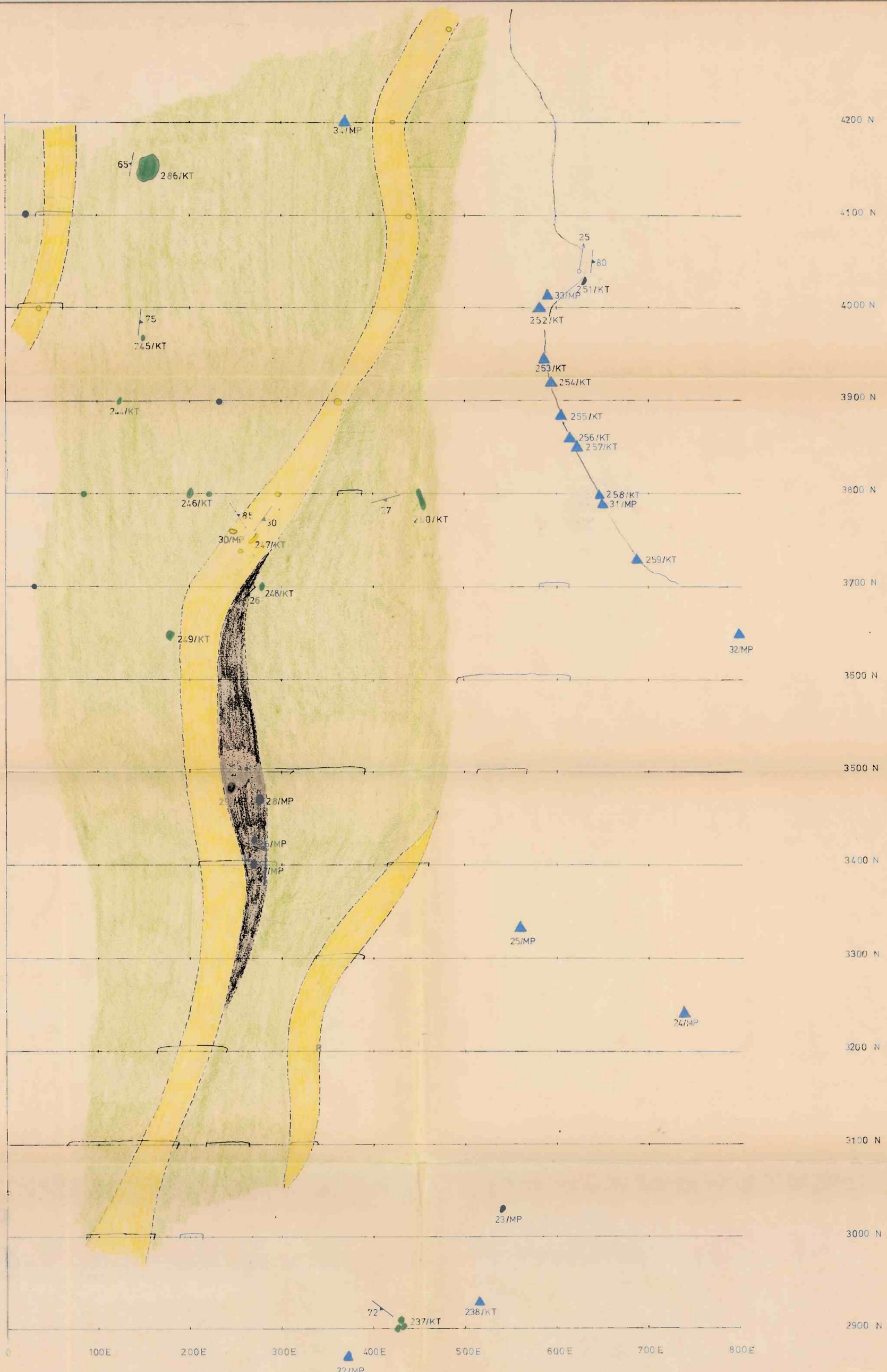


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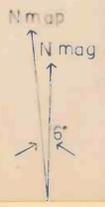
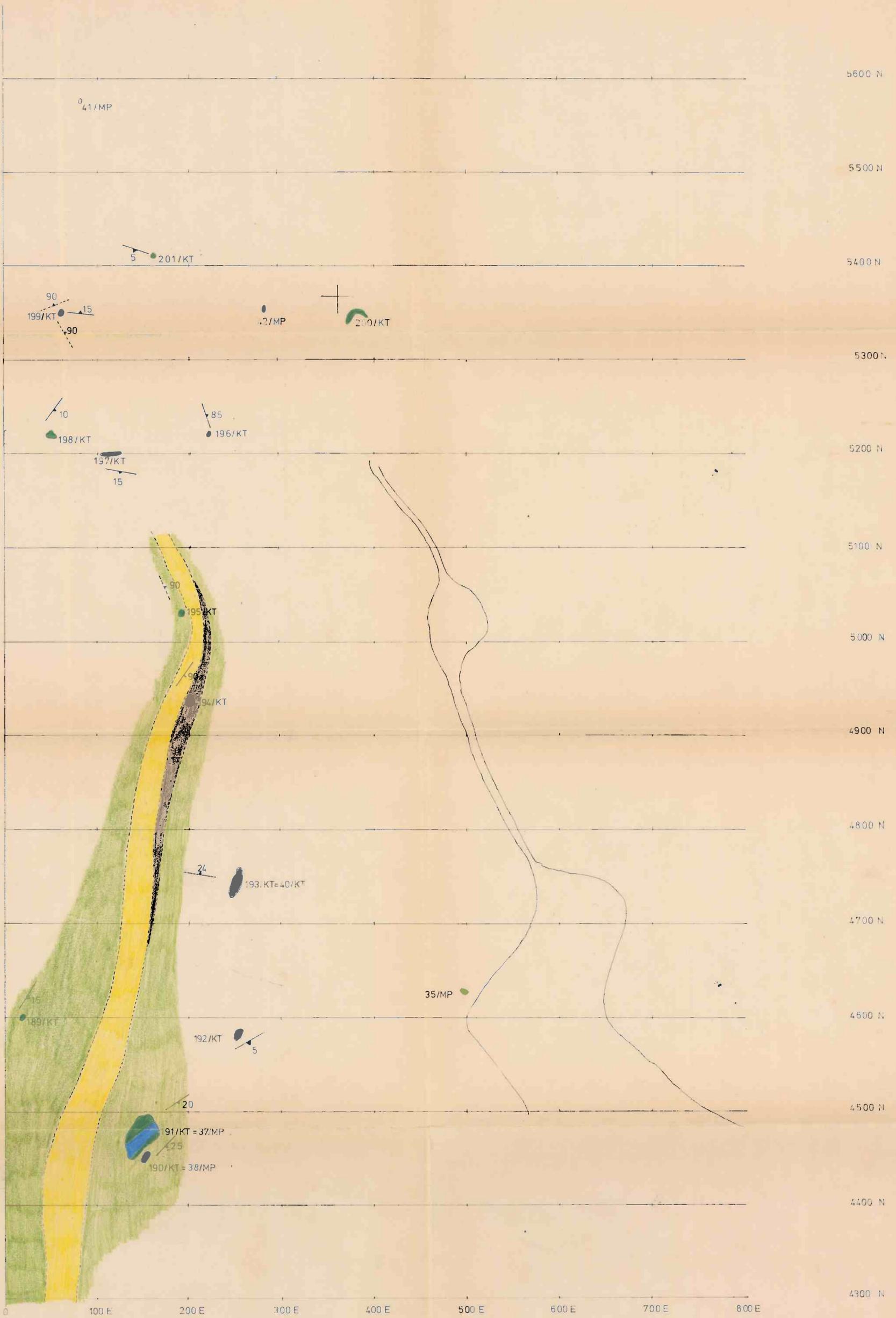


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		MAP SHEET		

SUOLOJAVRE MASI 1776 GEOLOGY



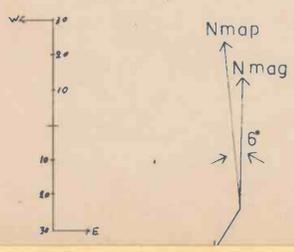
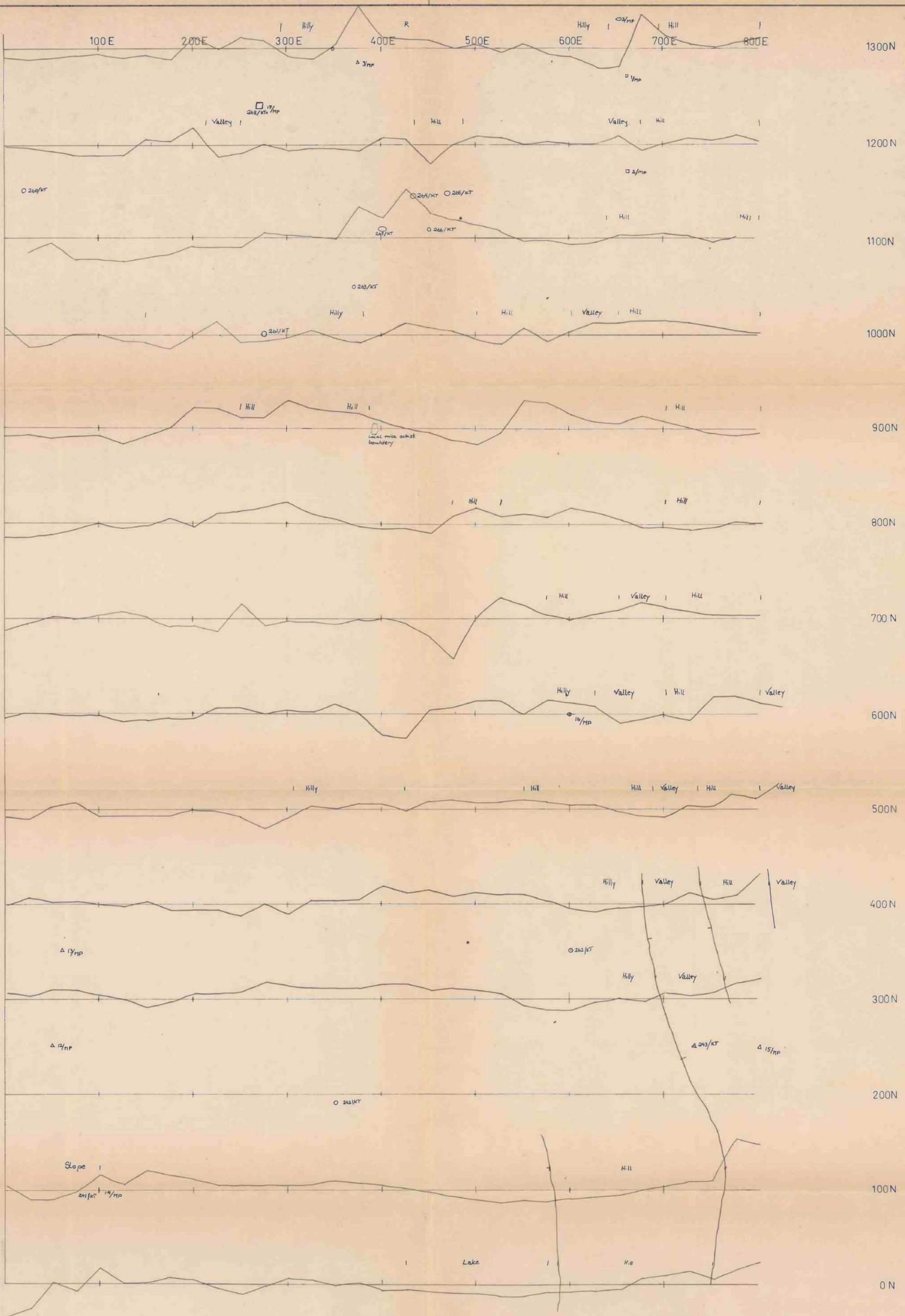
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	MAP NO.	409/76/17	
MAP SHEET			



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SUOLOJAVRE MASI 1776 GEOLOGY

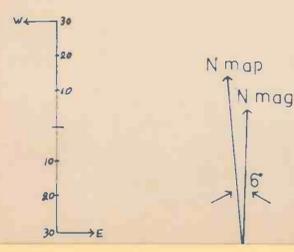
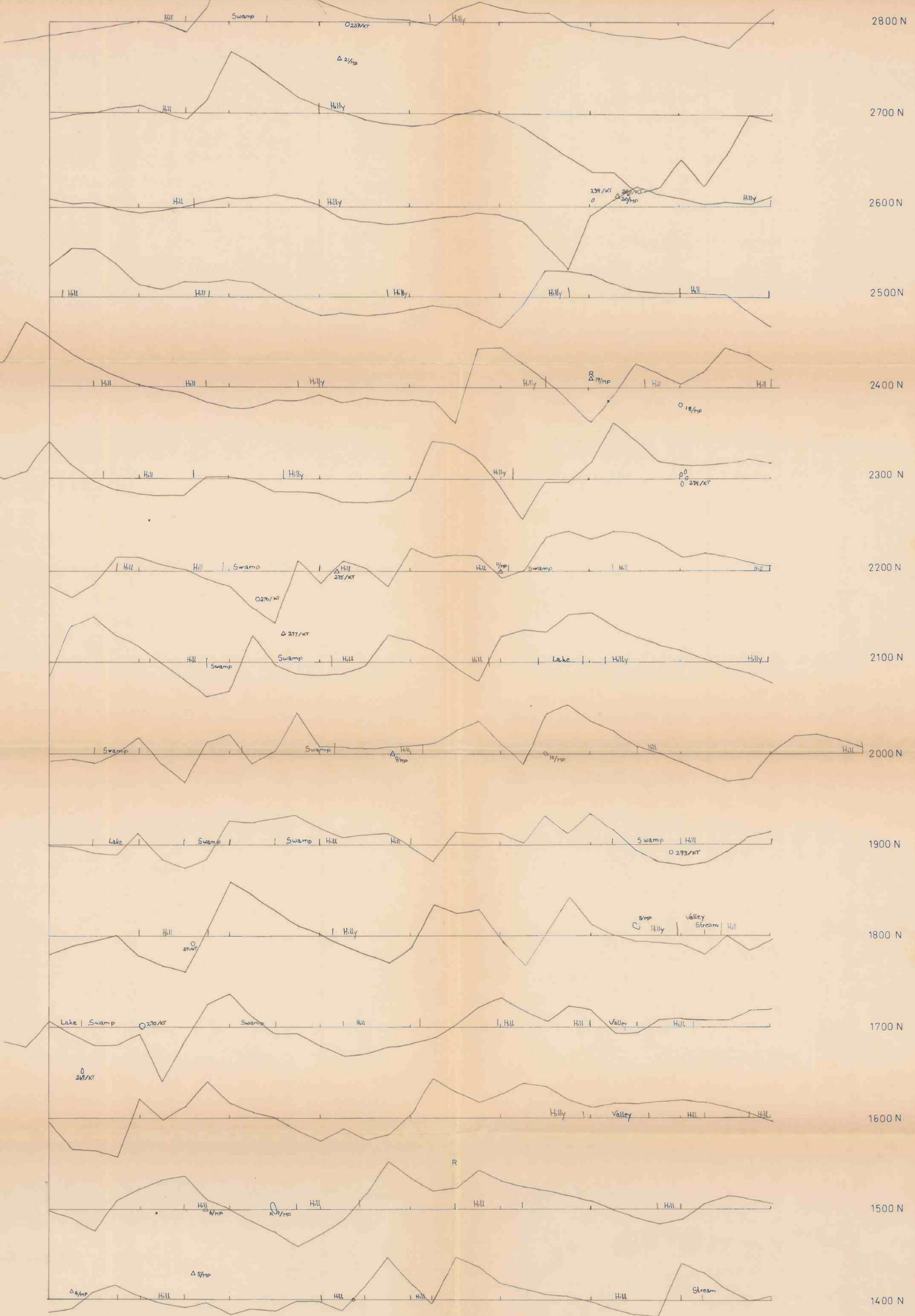
GEOPHYSICS



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% SULFIDMALM	MAP NO.	409/76/17	

SUOLOJAVRRE MASI 1776. Detailed VLF, data Crone Radem FIG.3 sheet 1

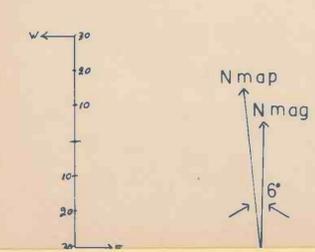
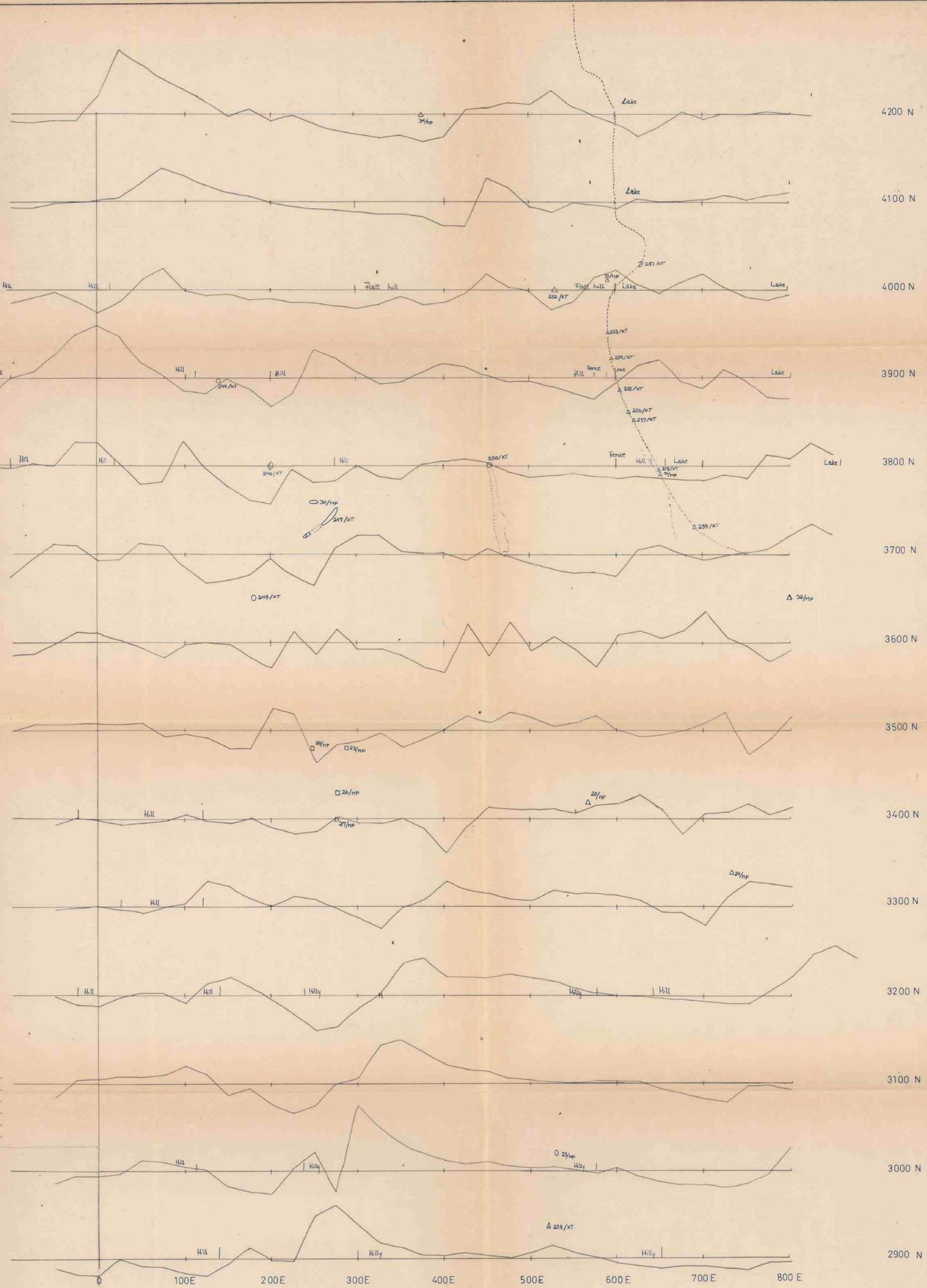
As Transfer, 200, A 1 1/2" x 10", Swamp Grid



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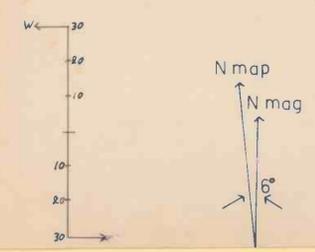
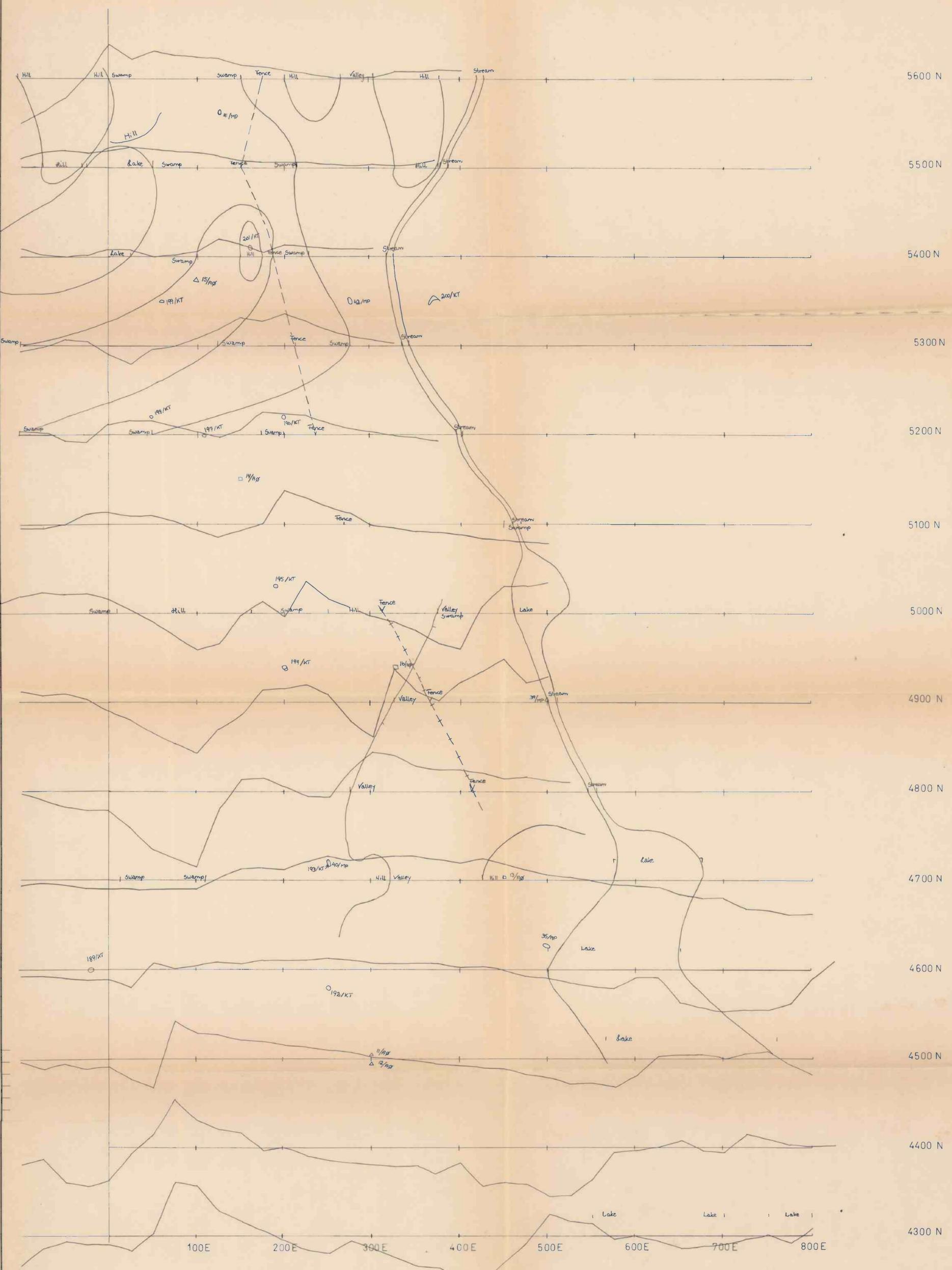
SUOLOJAVRRE MASI 1776, Detailed VLF, data Crone Radem FIG. 3 Sheet 2

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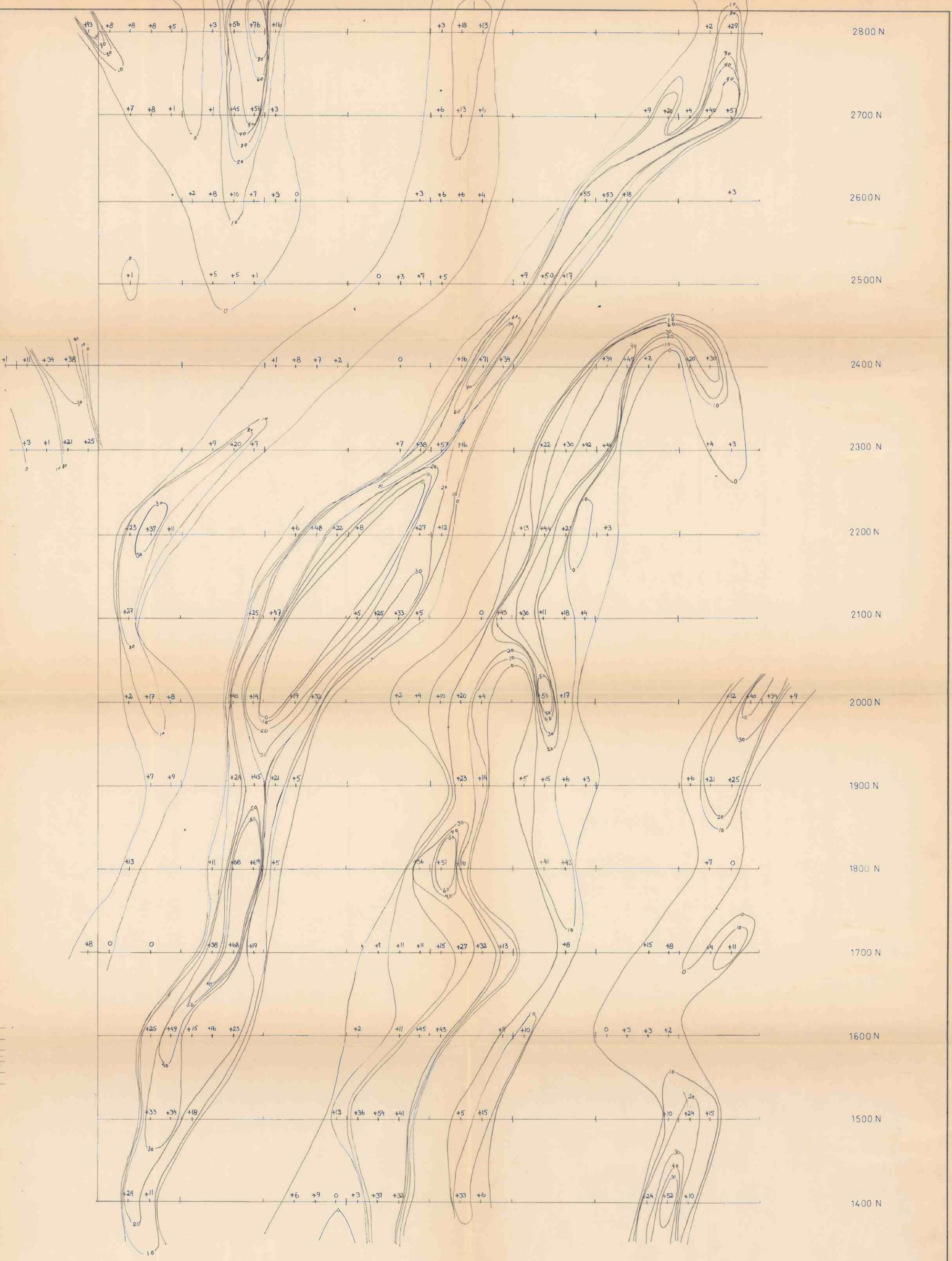


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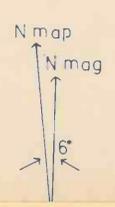
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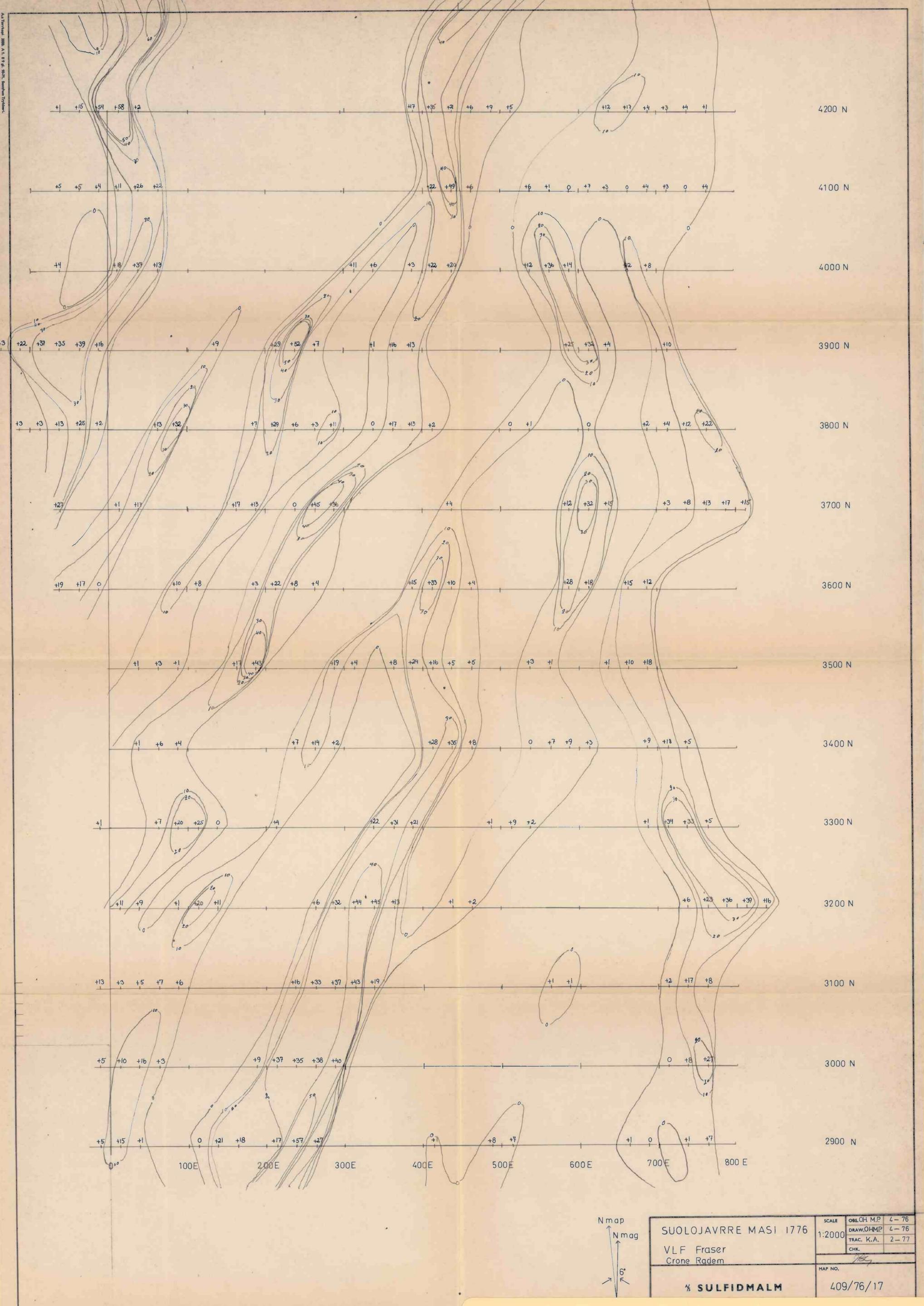
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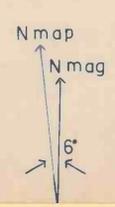


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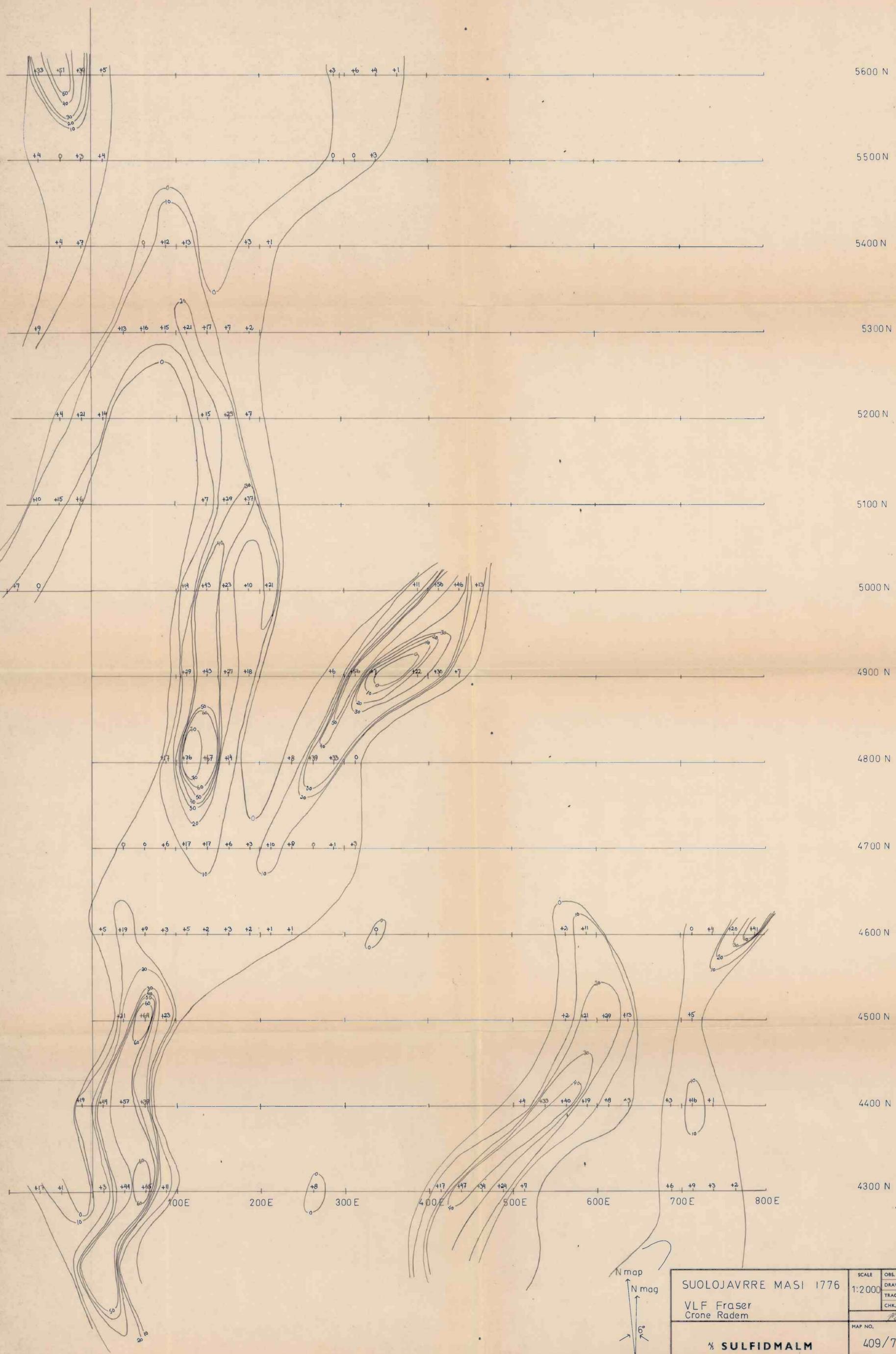
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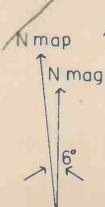
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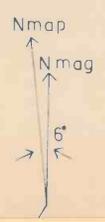
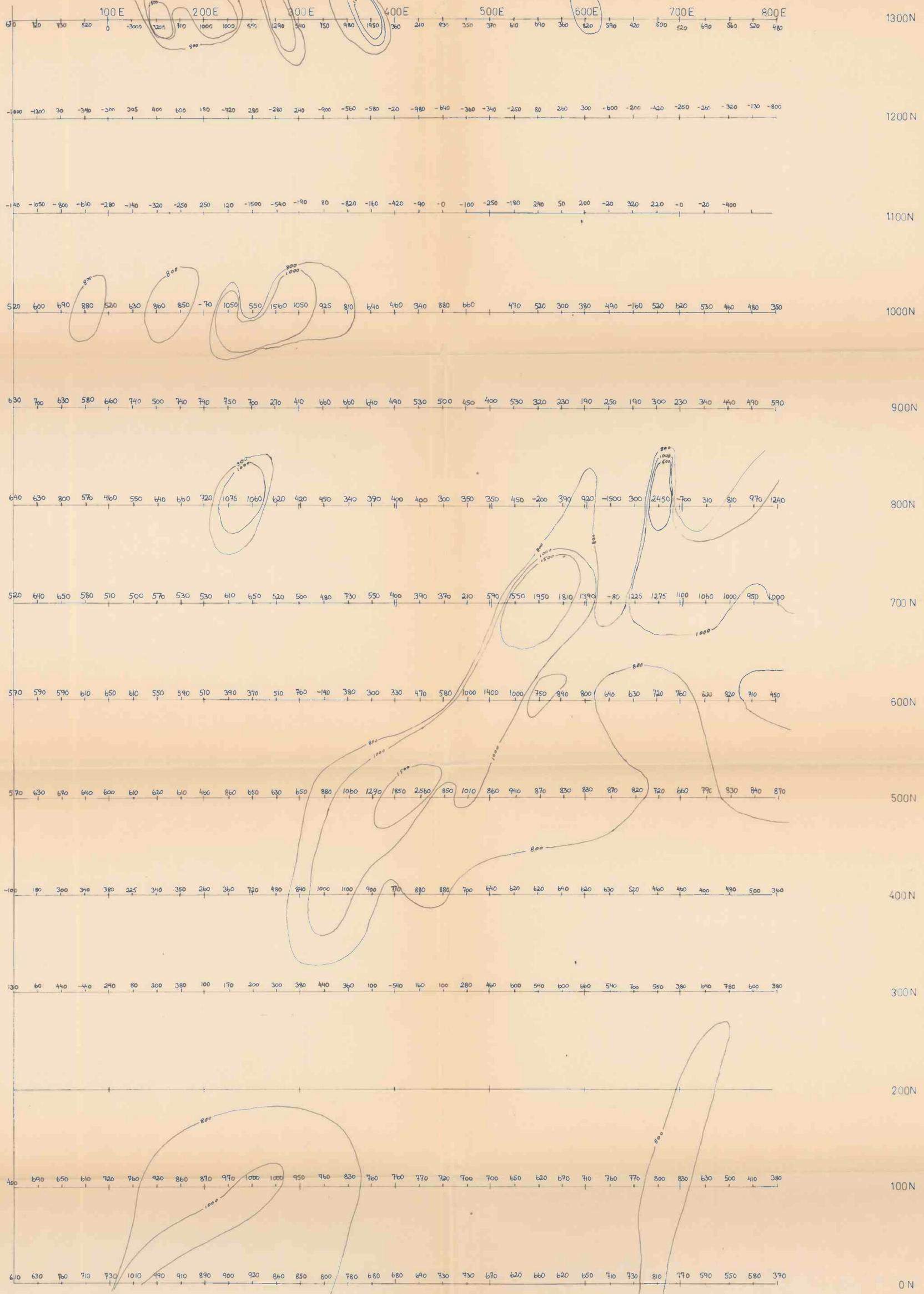
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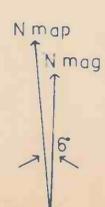
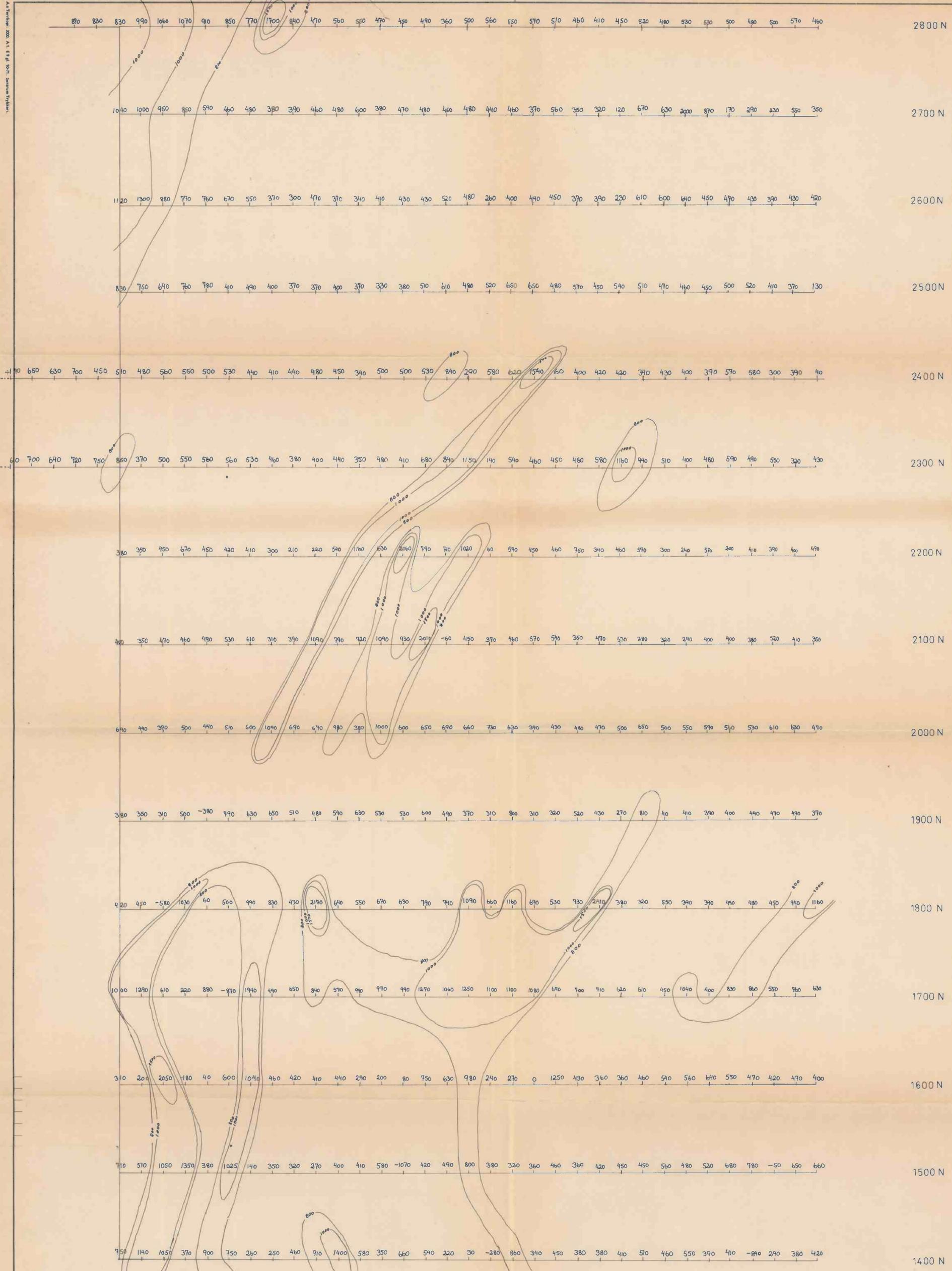
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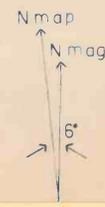
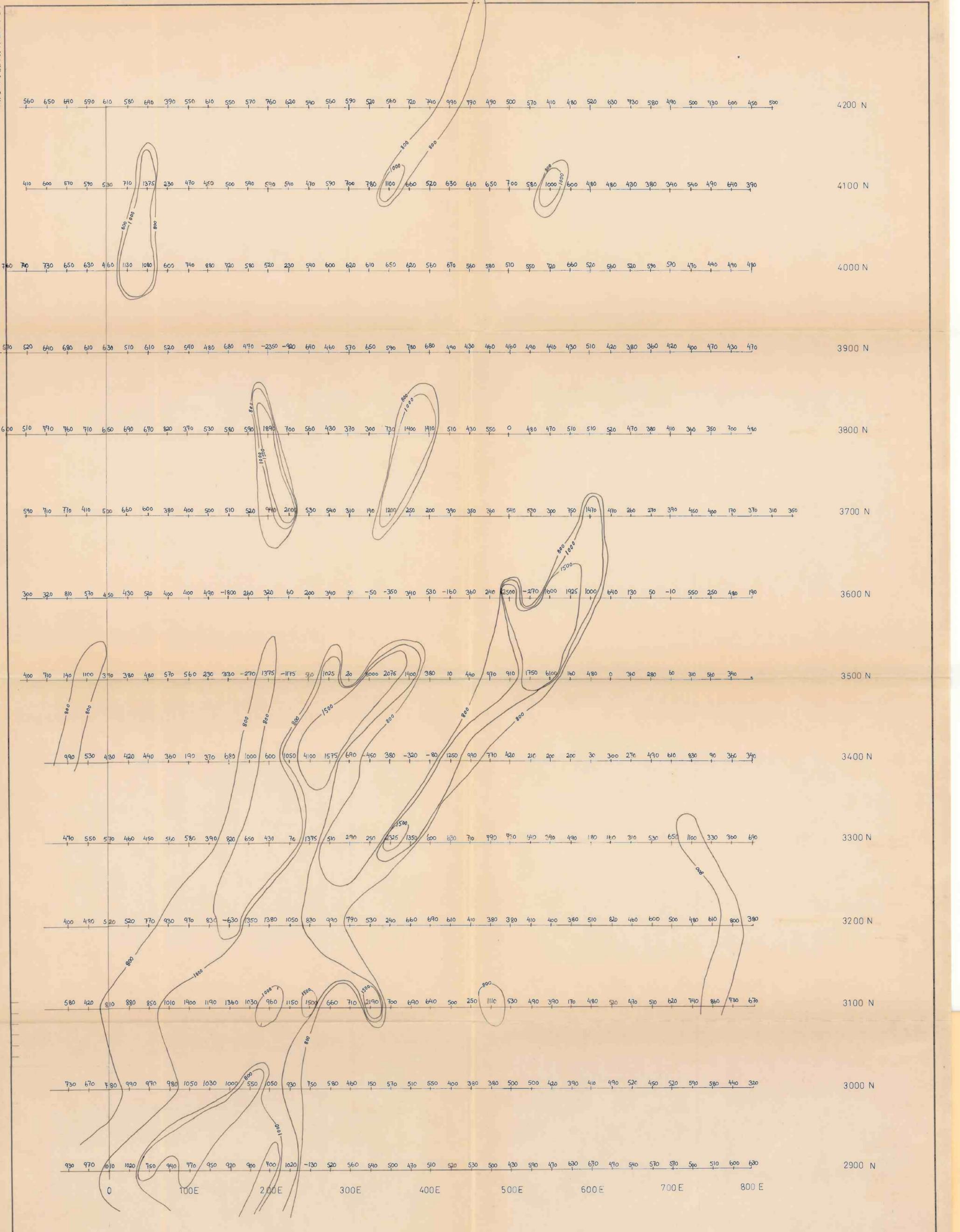
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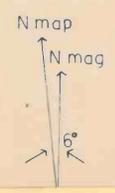
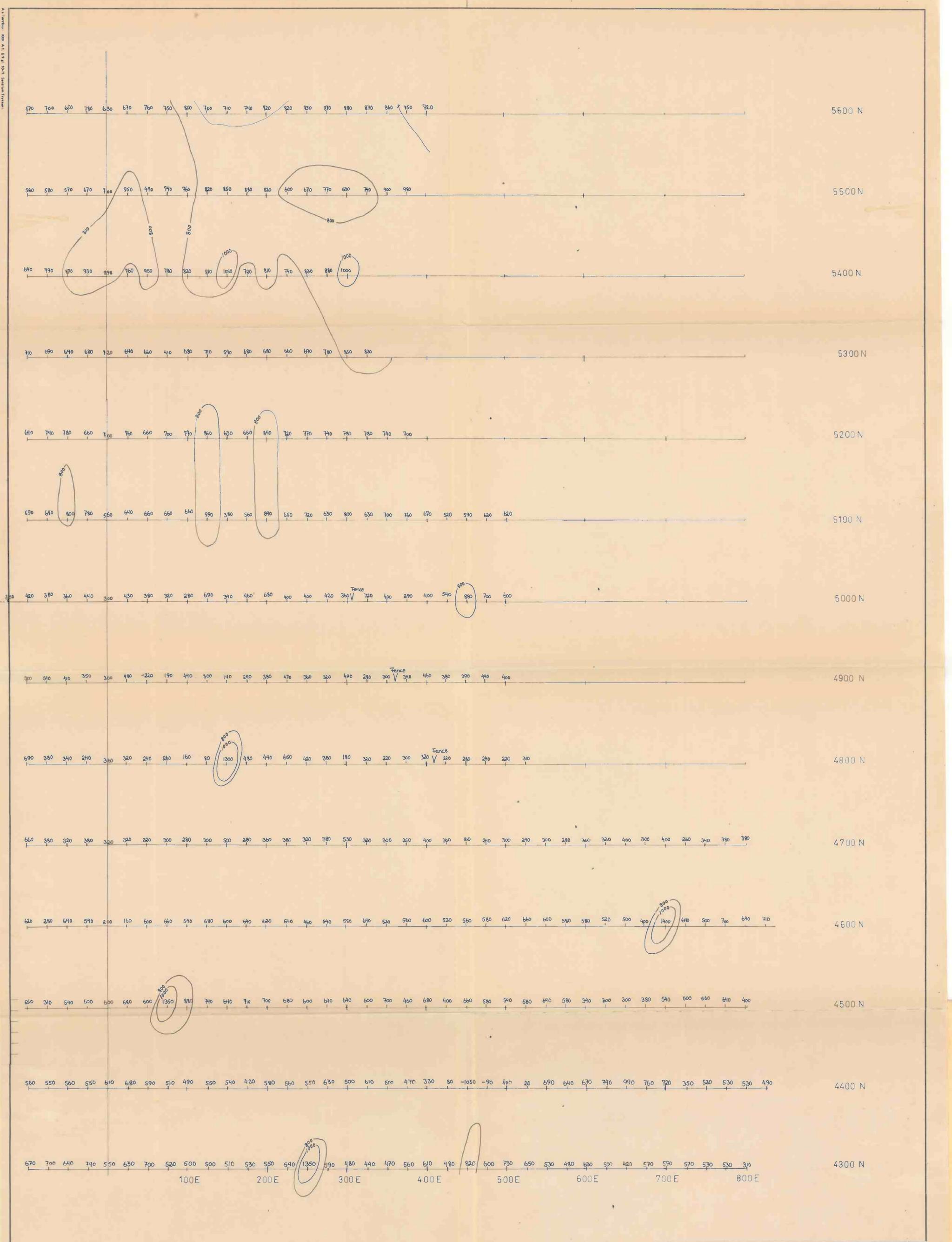


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SUOLOJAVRRE MASI 1776 Magnetic survey McPhar 700 Fig. 3 sheet 10



SUOLOJAVRRE MASI 1776		
Magnetic survey		
McPhar 700		
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