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Rapportarkivet

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Tittel Geophysical survey at South Pasvik in oct 1993 - jan 1994				
Forfatter Soumen Malmi SMOY		Dato 24.01 1994	Bedrift Sulfidmalm Falconbridge	
Kommune Sør-Varanger	Fylke Finnmark	Bergdistrikt Troms og Finnmark	1: 50 000 kartblad 23332	1: 250 000 kartblad Kirkenes
Fagområde Geofysikk	Dokument type Prospekteringsfondet		Forekomster Rømlingsås Blankvann	
Råstofftype Malm/metall	Emneord Ni Cu			
Sammendrag This report describes the geophysical survey carried out on behalf of A/S Sulfidmalm (the Client) by Soumen Malmi Oy (SMOY) at South Pasvik. The work consisted of IP-measurements and was carried out according to the agreement dated Desember 2, 1993. The survey plan was made by the client. The field crew consisted of one foreman and three observers. The duration of the field work was 1472 man-hours. All data is delivered to the Client as various maps and on diskettes in Geosoft format.				

A/S SULFIDMALM

GEOPHYSICAL SURVEY AT SOUTH PASVIK NORWAY
IN OCTOBER 1993 – JANUARY 1994

SUOMEN MALMI OY

GEOPHYSICAL SURVEY AT SOUTH PASVIK NORWAY IN OCTOBER 1993 - JANUARY 1994

1. INTRODUCTION

This report describes the geophysical survey carried out on behalf of A/S Sulfidmalm (the Client) by Suomen Malmi Oy (Smoy) at South Pasvik.

The work consisted of IP- measurements and was carried out according to the agreement dated December 2, 1993. The survey plan was made by the Client. The field crew consisted of one foreman and three observers. The duration of the field work was 1472 man-hours. All the data is delivered to the Client as various maps and on diskettes in Geosoft format.

2. SURVEY AREA

The survey area is located in South Pasvik, Finmark Fylke, Sør-Varanger Kommun approx. 90 km South - West from the Town of Kirkenes. The survey was made in two grid areas which were named as grid D and grid E. Totally 11,65 km line kilometers of base lines and 5,8 km of rapid base lines were measured to locate survey grids on the survey area. The quantity of IP-survey was 69,84 line-kilometers.

3. EQUIPMENT AND FIELD PROCEDURE

Surveying and staking of the base lines were carried out using a theodolite. Survey lines were 100 m apart. The station spacing was 10 m. The survey direction was E - W.

The equipment in the IP survey consisted of a Scintrex IPR-12 receiver and a IPC-9 transmitter. The IPR-12 accepts signals from up to eight potential dipoles simultaneously which are then recorded in solid-state memory along with automatically calculated parameters.

The measurements were carried out using the dipole-dipole configuration with a-value equal to 40 meters and n-values equal to 1, 2, 3 and 4.

Due to the winter circumstances in December 1993 - January 1994 the high electrode resistances resulted noisy data at some stations. In area D noise caused by power lines disturbed the measurements somewhat.

4. DATA PRESENTATION AND PROCESSING

The results are presented as apparent resistivity- and chargeability color maps for values $n = 1$ and $n = 4$ and as pseudosections of four different profiles at area E.

The noisy positive peaks were cleaned by lowering them to 100 mV/V and the negative peaks by lowering them to -40 mV/V. A recursive lowpass filter was applied to the data. The passband was 40% of the full frequency band. The effect of such a filter is roughly in between a 2- and 3-point moving average operator.

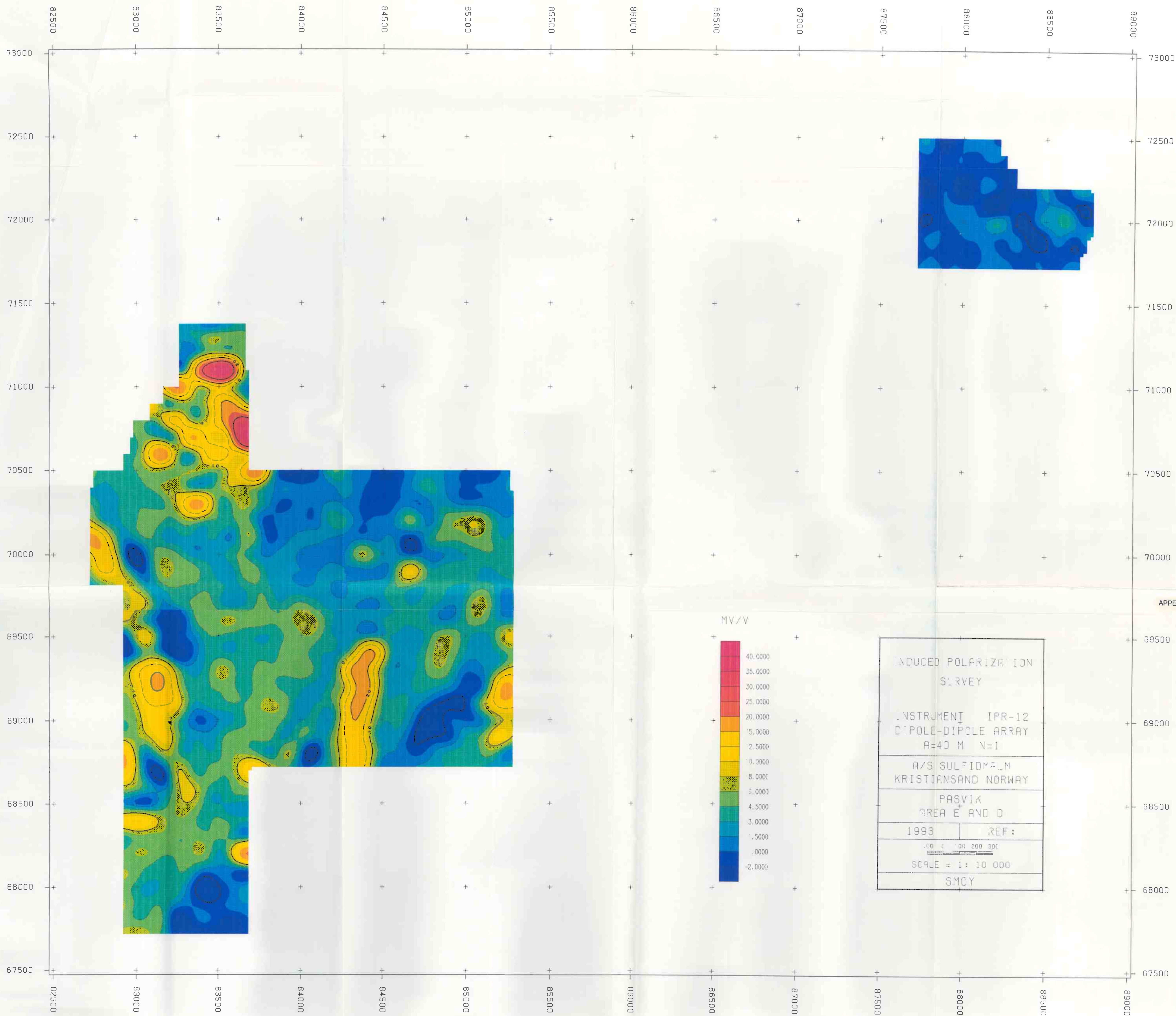
Apparent resistivity data was processed with the same filter. In case of very sharp drops in resistivity values the overshooting of the filter may result in negative resistivity values. These negative values are very small, only some Ohmmeters and they have been replaced by a value of 1 Ohmm in order to make possible the logarithm presentation of the results.

The map grid was further processed using a Hanning filter with a lowpass band of 30 % ($r_1 = 0.12$, $r_2 = 0.15$ $r_{max} = 0.5$) of the full frequency band.

Espoo, January 24, 1994

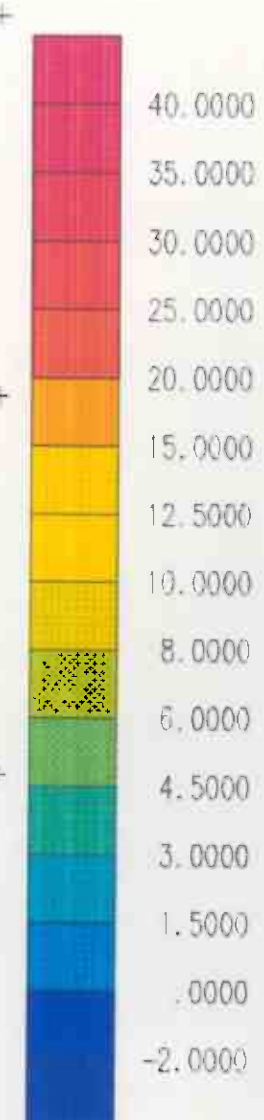
SUOMEN MALMI OY


Pekka Mikkola



APPENDIX 1.1

MV/V



INDUCED POLARIZATION
SURVEY

INSTRUMENT IPR-12
DIPOLE-DIPOLE ARRAY
A=40 M N=1

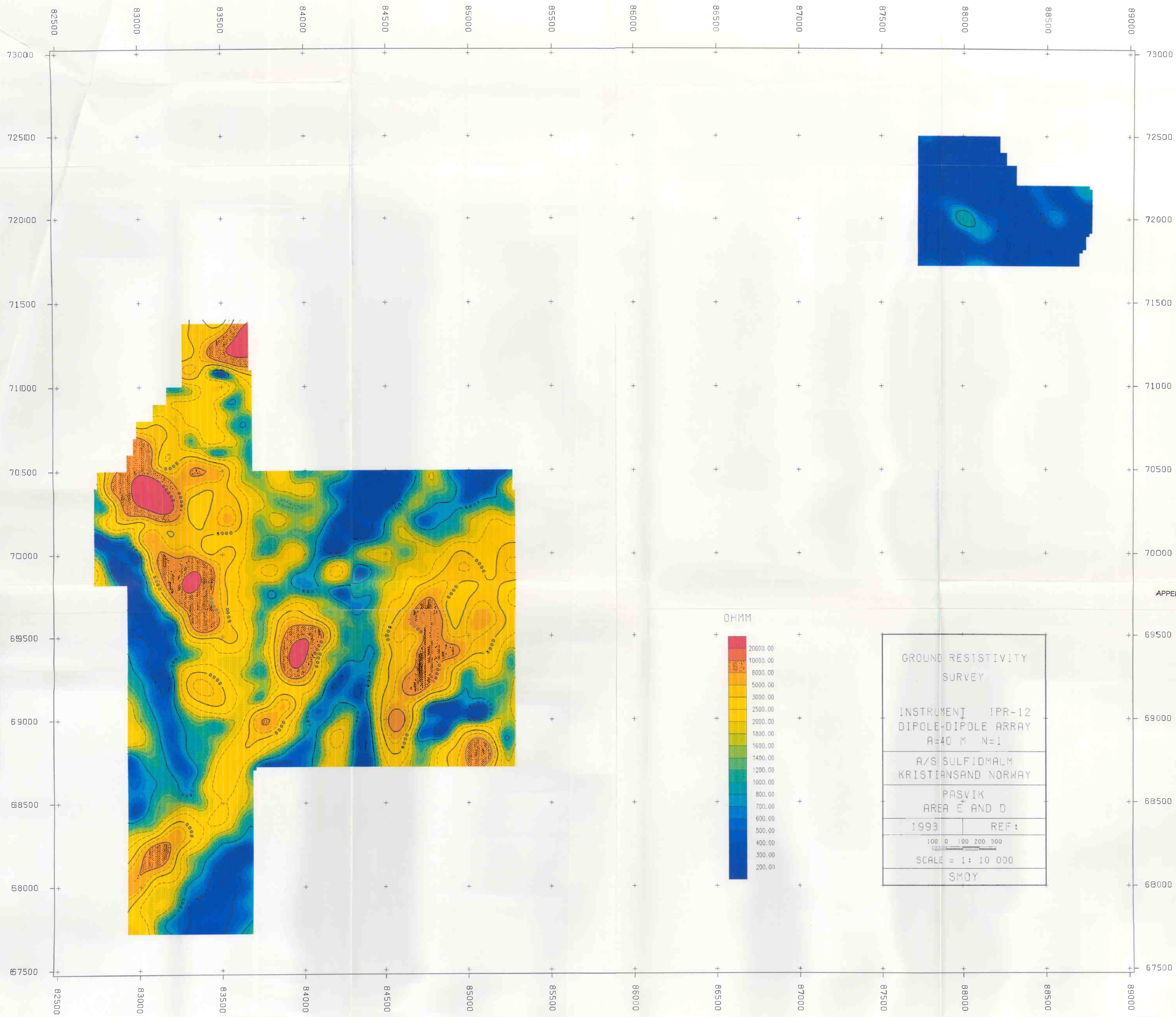
A/S SULFIDMÅLM
KRISTIANSAND NORWAY

PASVIK
AREA E AND D

1993 REF:

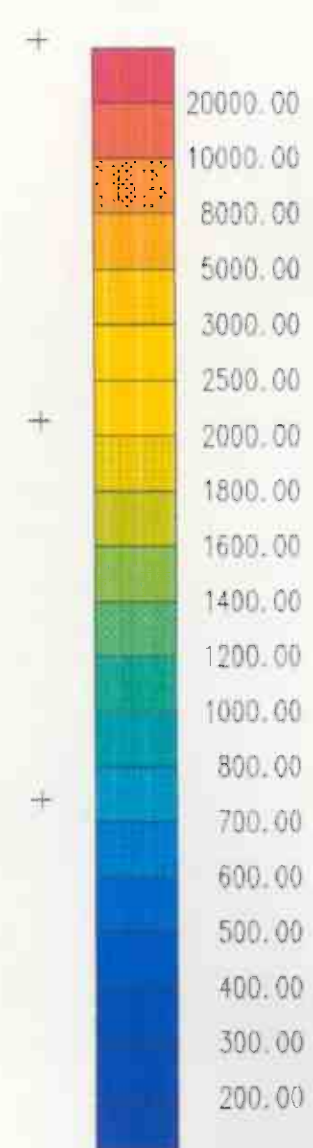
100 0 100 200 300
SCALE = 1: 10 000

SMOY

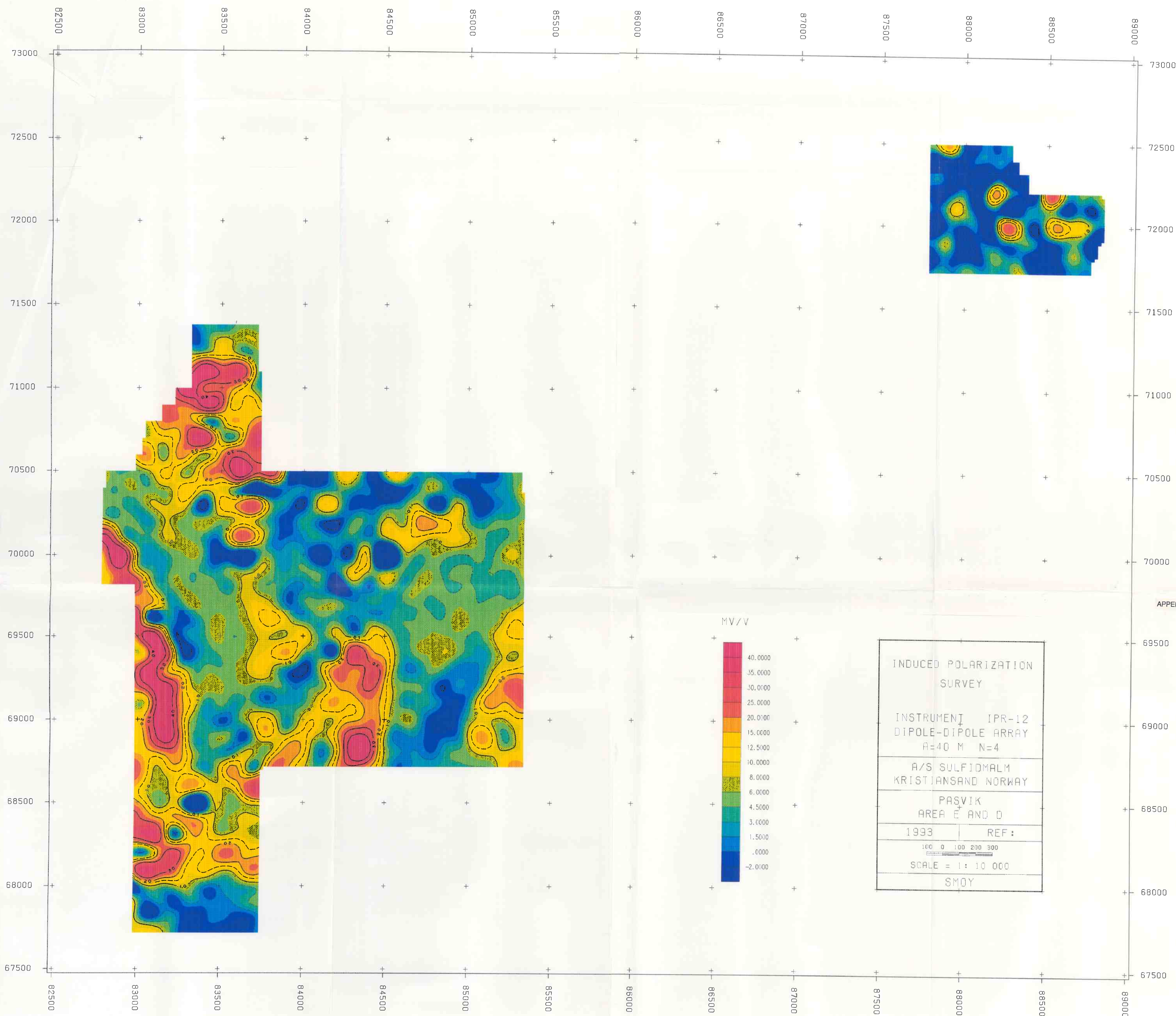


APPENDIX 1.2

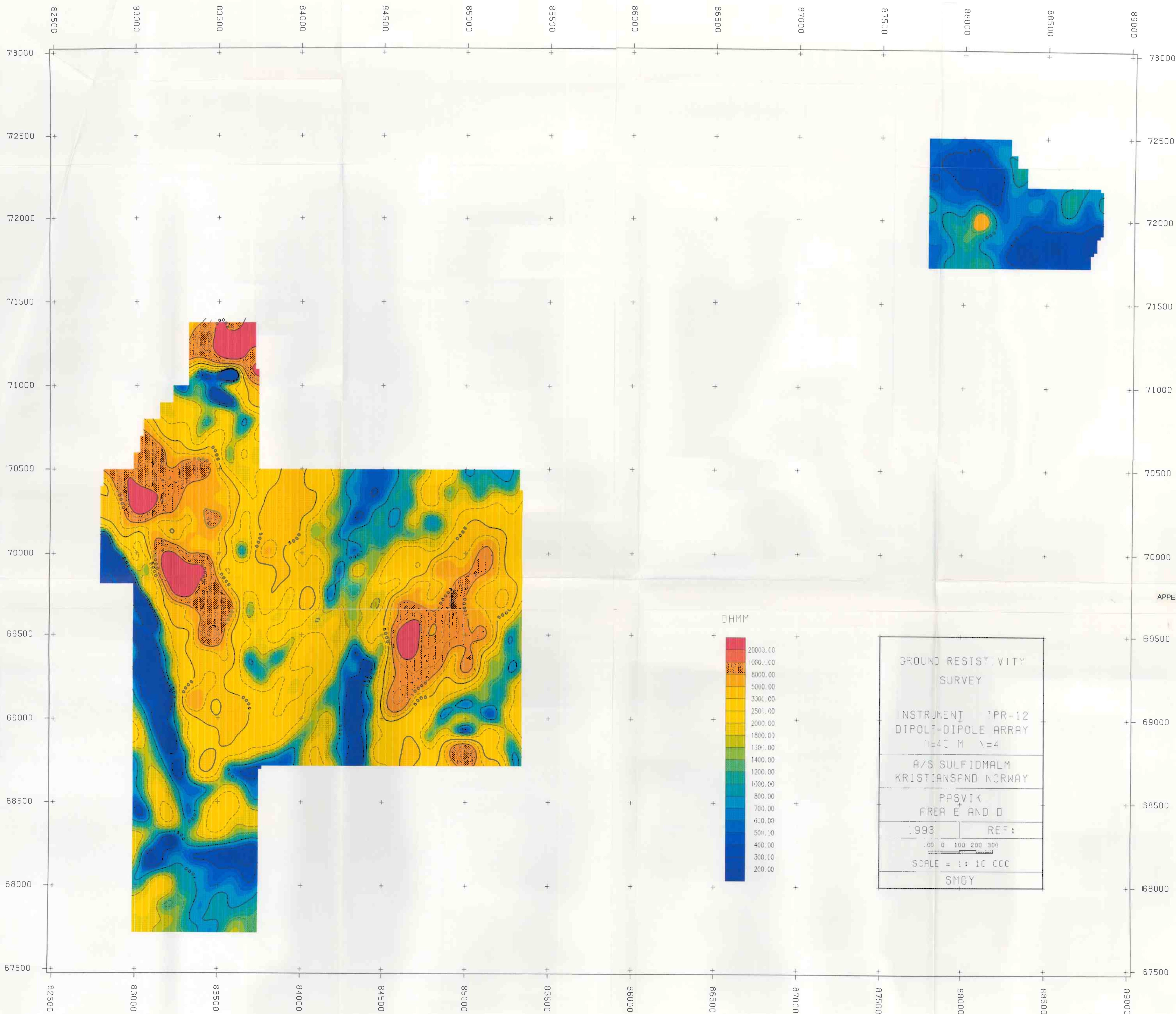
OHMM



GROUND RESISTIVITY SURVEY	
INSTRUMENT IPR-12 DIPOLE-DIPOLE ARRAY A=40 M N=1	
A/S SULFIDMALM KRISTIANSAND NORWAY	
PASVIK AREA E AND D	
1993	REF:
100 0 100 200 300	
SCALE = 1: 10 000	
SMØY	



APPENDIX 1.3

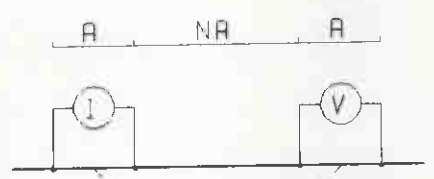


APPENDIX 1.4

LINE : 68100 N

INDUCED POLARIZATION SURVEY

DIPOLE-DIPOLE ARRAY



DEPTH POINT
N = 1, 2, 3, 4, ...
"A" SPACING = 40.0 METRES

A/S SULFIDMALM
PASVIK AREA E
NORWAY

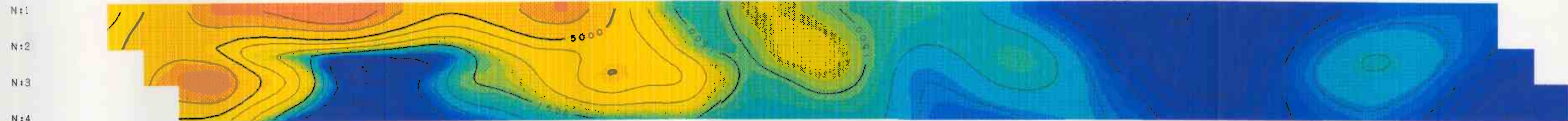
DATE : NOV 1993 REF : TL

SCALE = 1 : 2000
SMOY

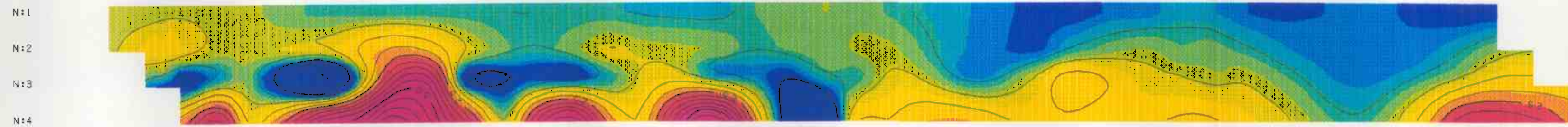


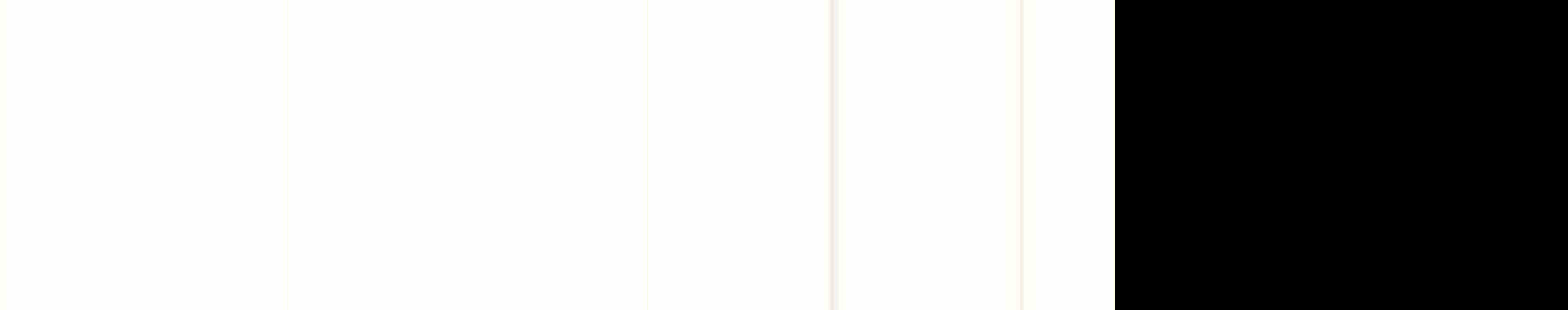
2900E 2920E 2940E 2960E 2980E 3000E 3020E 3040E 3060E 3080E 3100E 3120E 3140E 3160E 3180E 3200E 3220E 3240E 3260E 3280E 3300E 3320E 3340E 3360E 3380E 3400E 3420E 3440E 3460E 3480E 3500E 3520E 3540E 3560E 3580E 3600E 3620E 3640E 3660E 3680E 3700E

RZ3



MX

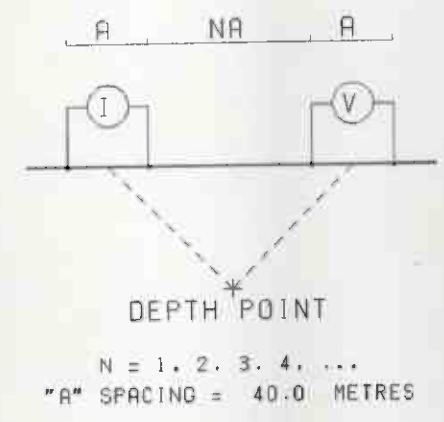




LINE : 70700 N

INDUCED POLARIZATION SURVEY

DIPOLE-DIPOLE ARRAY



A/S SULFIDMALM
PASVIK AREA E
NORWAY

DATE : NOV 1993 REF : TL

SCALE = 1 : 2000

SMØY

