



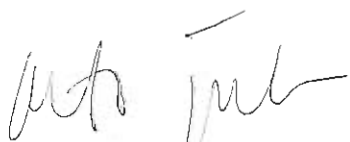
# Bergvesenet

Postboks 3021, N-7441 Trondheim

## Rapportarkivet

|                                                                                                                       |                         |                                    |                                                                                                         |                              |
|-----------------------------------------------------------------------------------------------------------------------|-------------------------|------------------------------------|---------------------------------------------------------------------------------------------------------|------------------------------|
| Bergvesenet rapport nr<br><b>4788</b>                                                                                 | Intern Journal nr       | Internt arkiv nr                   | Rapport lokalisering                                                                                    | Gradering<br><b>Apen</b>     |
| Kommer fra ..arkiv<br>Grong Gruber AS                                                                                 | Ekstern rapport nr      | Oversendt fra<br>Grong Gruber a.s. | Fortrolig pga                                                                                           | Fortrolig fra dato:          |
| Tittel<br>Geophysical measurement carried out in the surroundings of Grong, Norway during april 1992.<br>( Godejord). |                         |                                    |                                                                                                         |                              |
| Forfatter<br>Julkunen, Arto                                                                                           |                         | Dato    År<br>25.05 1992           | Bedrift (Oppdragsgiver og/eller oppdragstaker)<br>Grong Gruber AS<br>Soumen Malmi OY<br>Finnexploration |                              |
| Kommune<br>Grong                                                                                                      | Fylke<br>Nord-Trøndelag | Bergdistrikt                       | 1: 50 000 kartblad<br>18234                                                                             | 1: 250 000 kartblad<br>Grong |
| Fagområde<br>Geofysikk                                                                                                | Dokument type           |                                    | Forekomster (forekomst, gruvefelt, undersøkelsesfelt)<br>Godejord                                       |                              |
| Råstoffgruppe<br>Malm/metall                                                                                          | Råstofftype<br>Cu Zn    |                                    |                                                                                                         |                              |
| Sammendrag, innholdsfortegnelse eller innholdsbeskrivelse                                                             |                         |                                    |                                                                                                         |                              |

*GEOPHYSICAL MEASUREMENTS CARRIED OUT  
IN THE SURROUNDING OF GRONG, NORWAY  
DURING APRILL 1992*

  
*Arto Julkunen, M.Sc (Eng.)*

*Espoo 26.5.1992*

**SUOMEN MALMI OY**

FINNEXPLORATION



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## 1. INTRODUCTION

According to the quotation 221/92 002 to Norsulfid A/S Suomen Malmi Oy (SMOY) carried out geophysical measurements in Grong, Norway, in the Godejord area. The measurements took place during the period 22.4.1992-27.4.1992. The work was done under leadership of Mr. Aimo Hattula, Outokumpu Finnmines Oy Exploration. The field crew consisted of a foreman and observer. The duration of the whole work (including map drawing) was 128 man hours.

The instrument used in Mise-a-la-masse ('MAM' or 'charged potential') was Gefinex 100.

Locating of the survey lines was based on the existing boreholes and grids made by the Client.

## 2. MISE-A-LA-MASSE MEASUREMENTS

The measurements were made with a Gefinex 100 system which is made by the Outokumpu Oy.

The locations of the remote groundings are shown in Appendix 1. The locations of the boreholes (where active groundings were located) are shown in Appendix 2.

Surface measurements were made using a station separation of 10 m. Line separation was either 25 or 50 m. Equipotential maps and section maps are shown in Appendices 3-6. All the results are presented as normalized unit, mV/A.

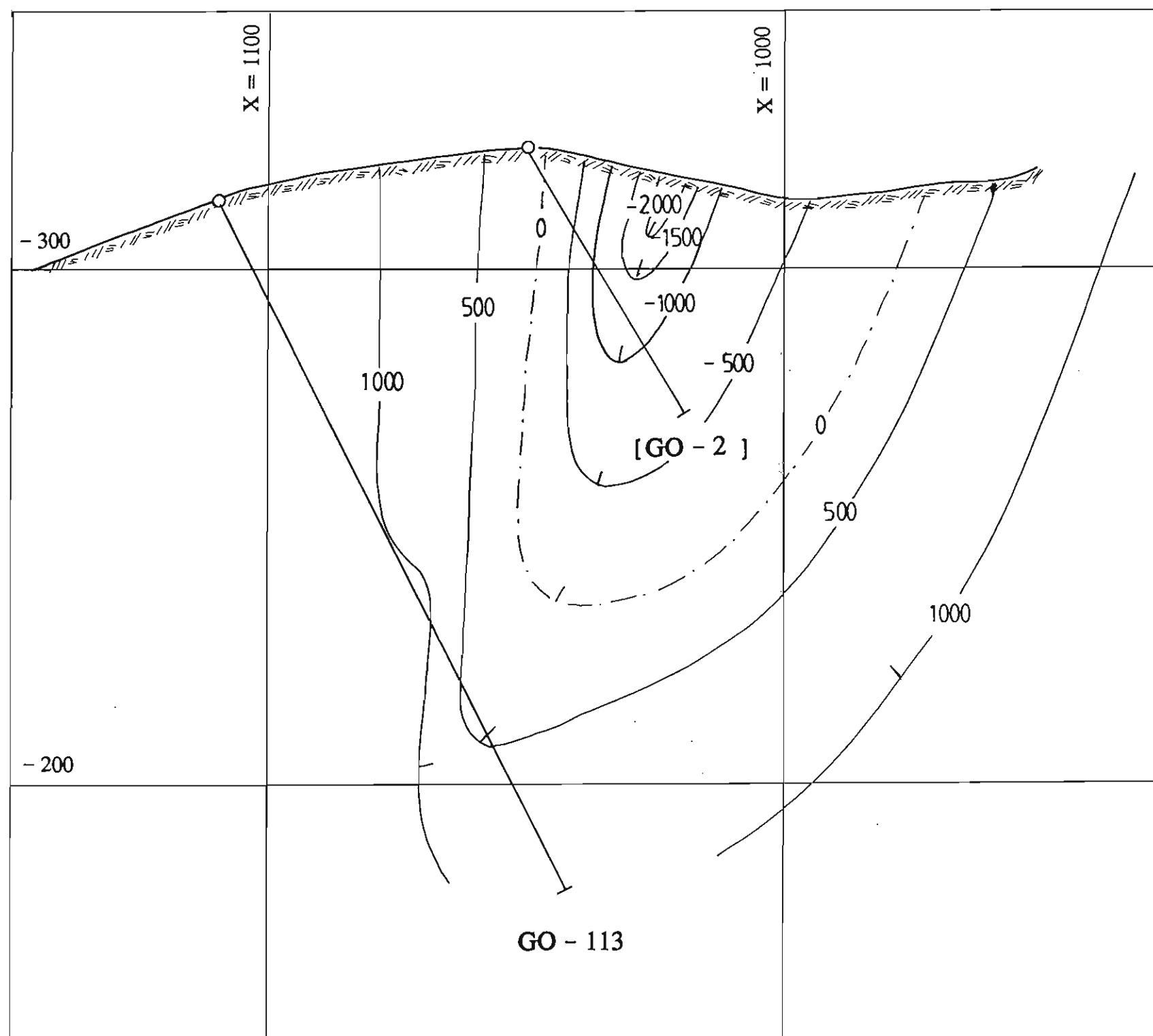
There are five previously measured profiles, which are included in this report in order to cover whole survey area. These profiles are y= 5350, y= 5375, y= 4990 and y= 5125.

The work succeeded well in accordance with the plans.



CORE HOLE: GO - 113, 2

Active grounding GO - 104 / 56 m



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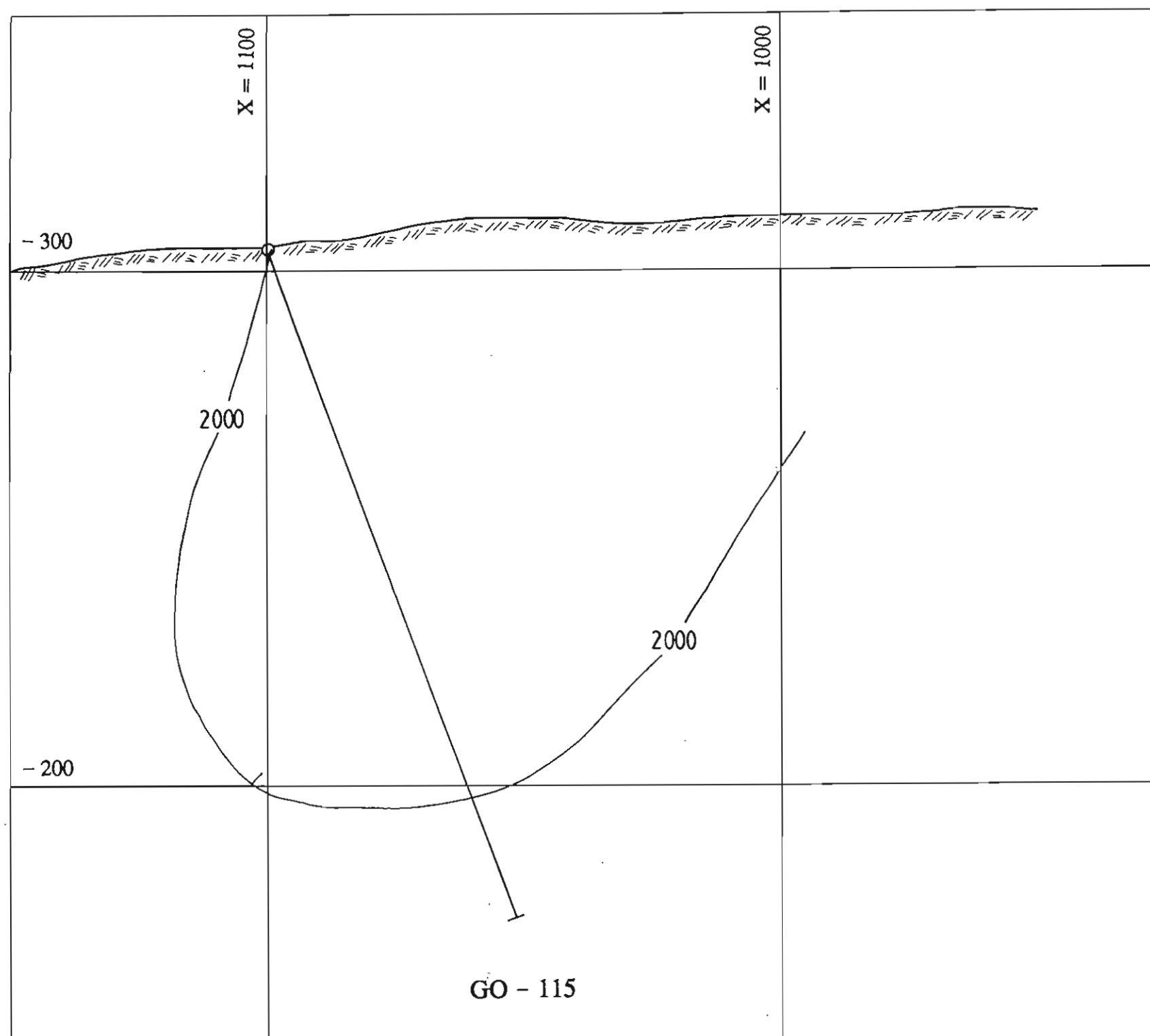
**GODEJORD**  
 GRONG, N O R W A Y  
 Y = (5300) 5292  
 1 : 1000  
 CHARGED POTENTIAL SECTION

NORSULFID A / S  
 14.05.1992 / aml



CORE HOLE: GO - 115

Active grounding GO - 104 / 56 m

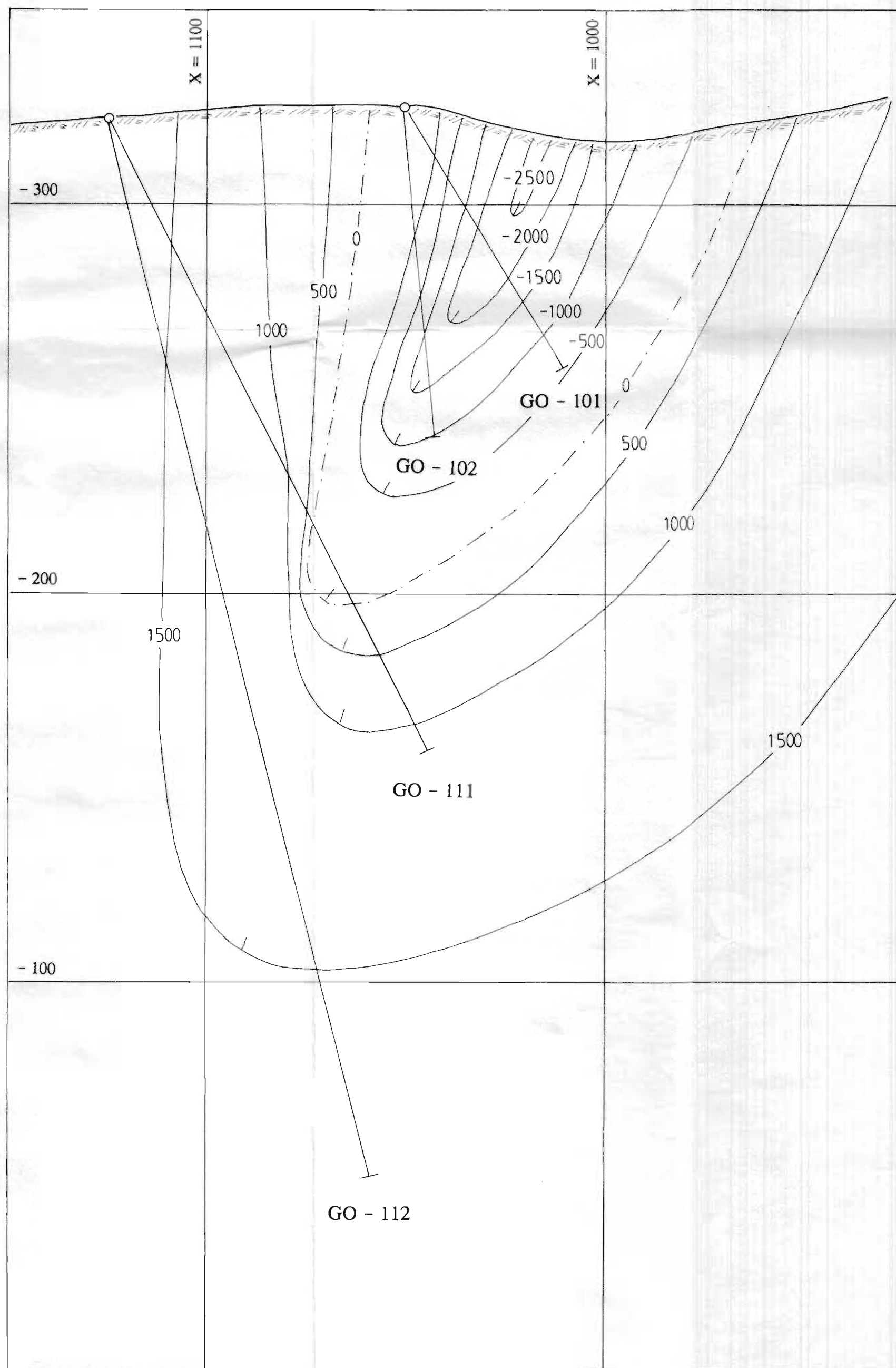


SUOMEN MALMI OY  
FINNEXPLORATION

GODEJORD  
GRONG, N O R W A Y  
Y = (5050) 5038  
1 : 1000  
CHARGED POTENTIAL SECTION

NORSULFID A / S  
14.05.1992 / aml





# APPENDIX 3.4

CORE HOLES: GO - 101, 102, 111, 112

Active grounding GO - 104 / 56 m

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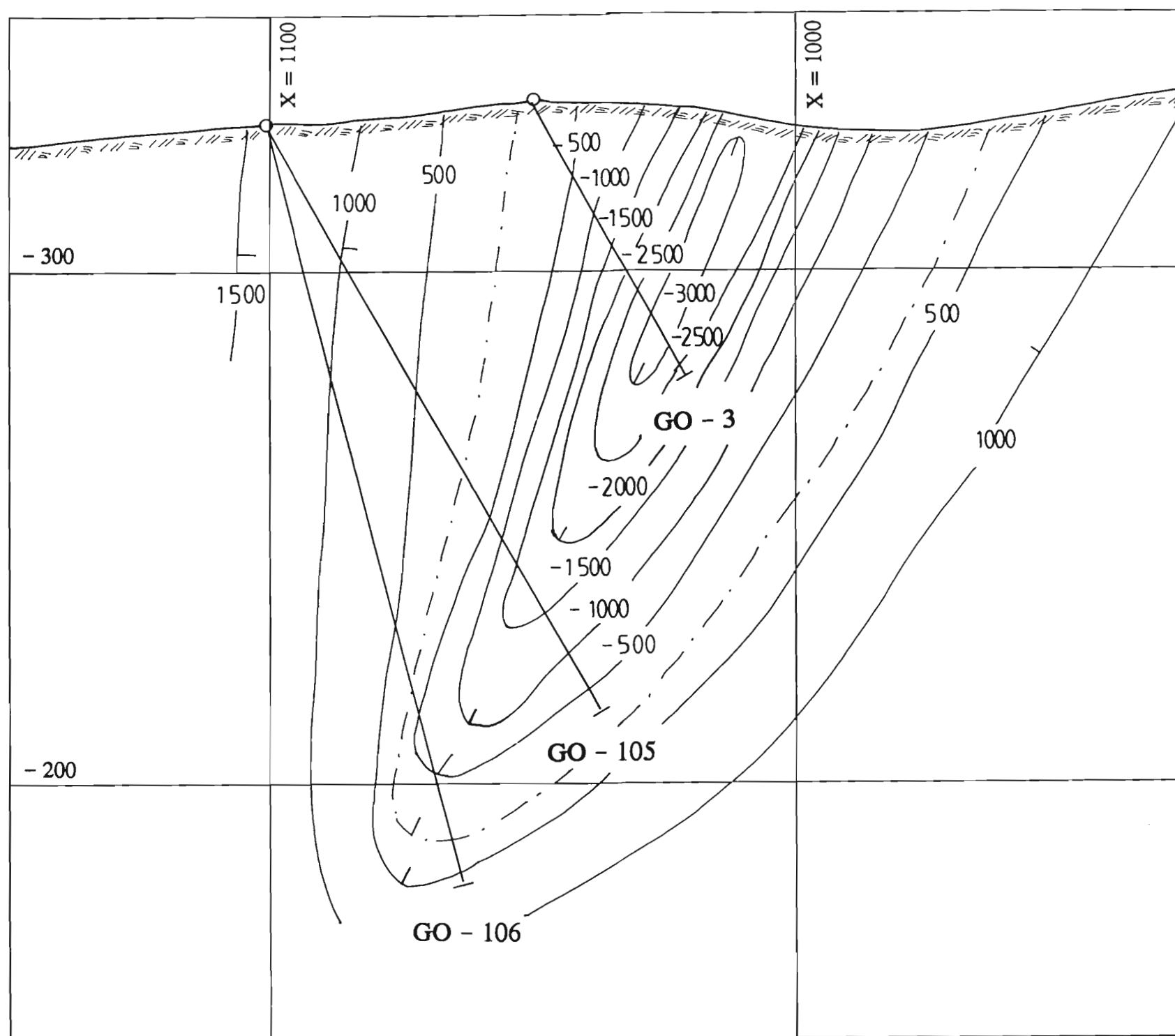
GODEJORD  
GRONG, N O R W A Y  
Y = 5325  
1 : 1000  
CHARGED POTENTIAL SECTION

NORSULFID A / S  
14.05.1992 / aml



CORE HOLES: GO - 3, 105, 106

Active grounding GO - 104 / 56 m



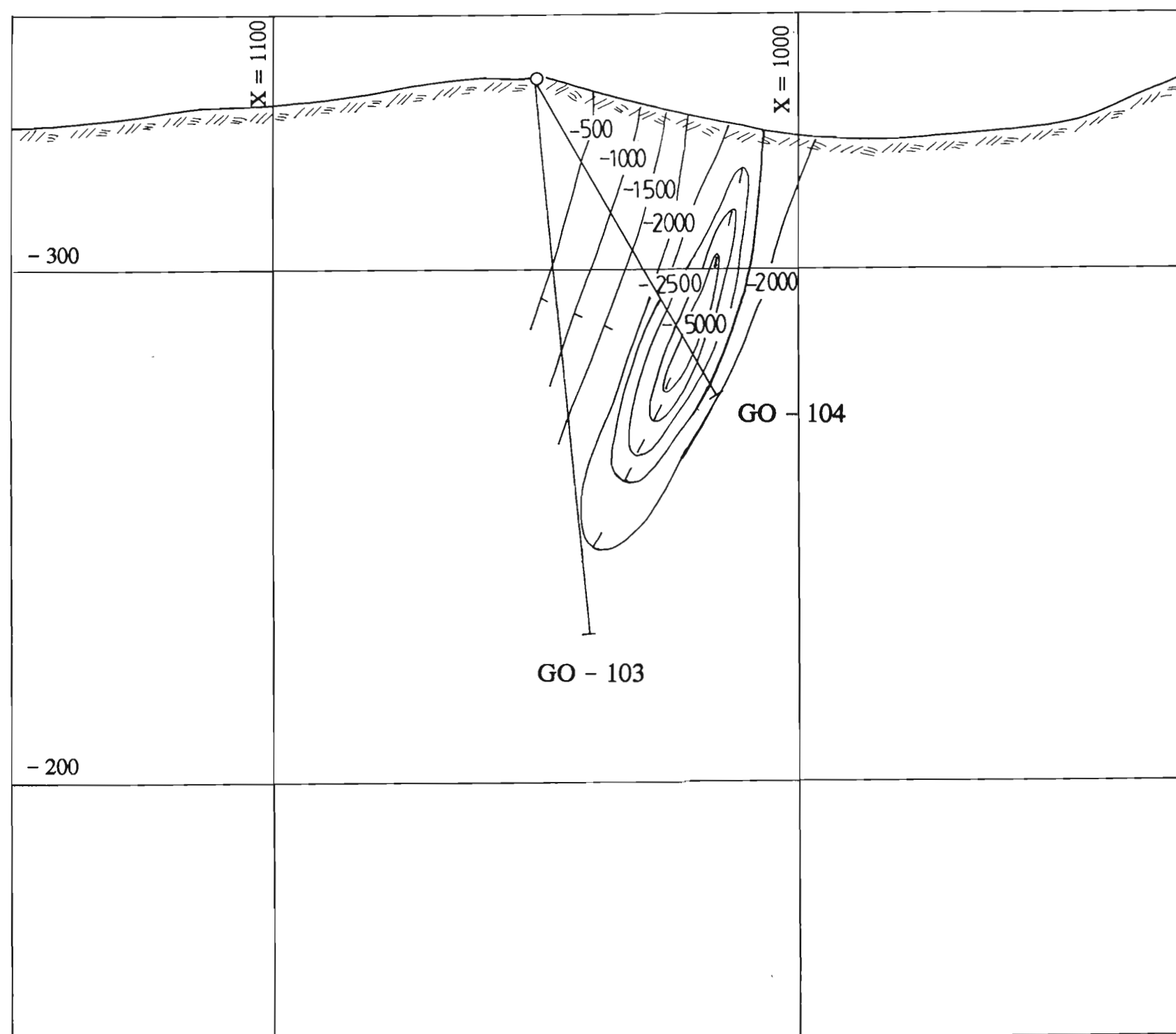
SUOMEN MALMI OY  
FINNEXPLORATION

GODEJORD  
GRONG, NORWAY  
Y = 5350  
1 : 1000  
CHARGED POTENTIAL SECTION

NORSULFID A / S  
14.05.1992 / aml

CORE HOLES: GO - 103, 104

Active grounding GO - 104 / 56 m



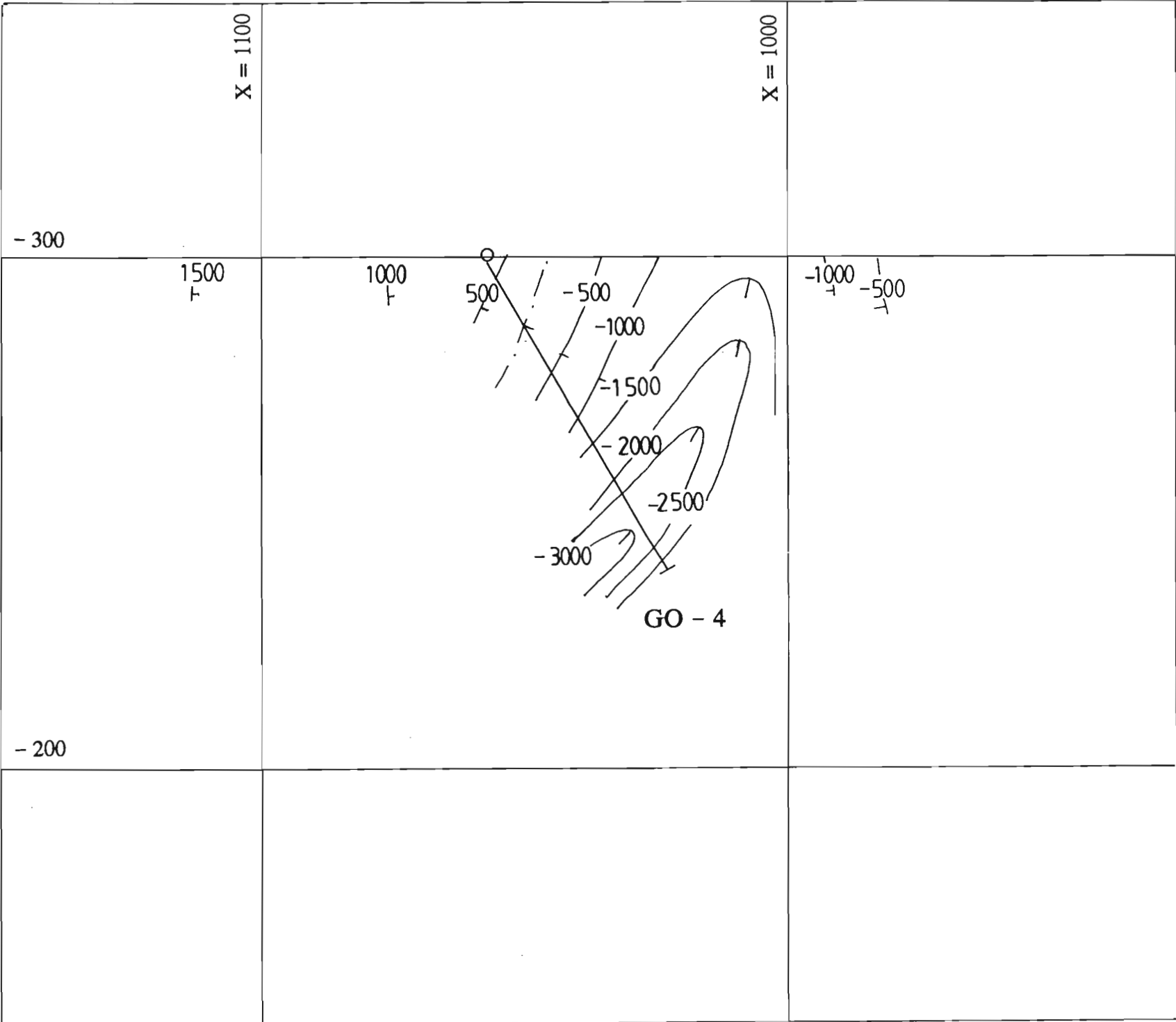
**SUOMEN MALMI OY**  
**FINNEXPLORATION**

**GODEJORD**  
 GRONG, N O R W A Y  
 Y = 5375  
 1 : 1000  
 CHARGED POTENTIAL SECTION

NORSULFID A / S  
 14.05.1992 / aml

CORE HOLE: GO - 4

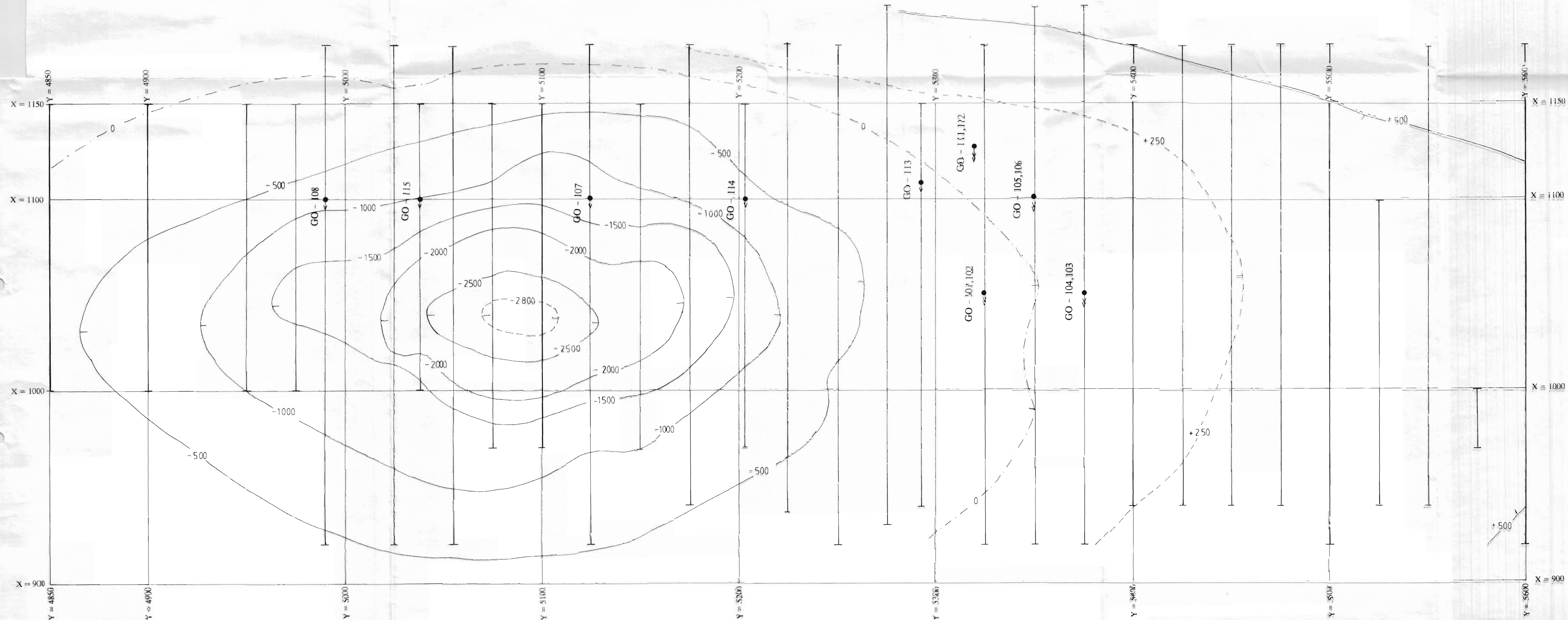
Active grounding GO - 104 / 56 m



SUOMEN MALMI OY  
FINNEXPLORATION

GODEJORD  
GRONG, N O R W A Y  
Y = 5400  
1 : 1000  
CHARGED POTENTIAL SECTION

NORSULFID A / S  
14.05.1992 / aml



SUOMEN MALMI OY  
FINNEXPLORATION

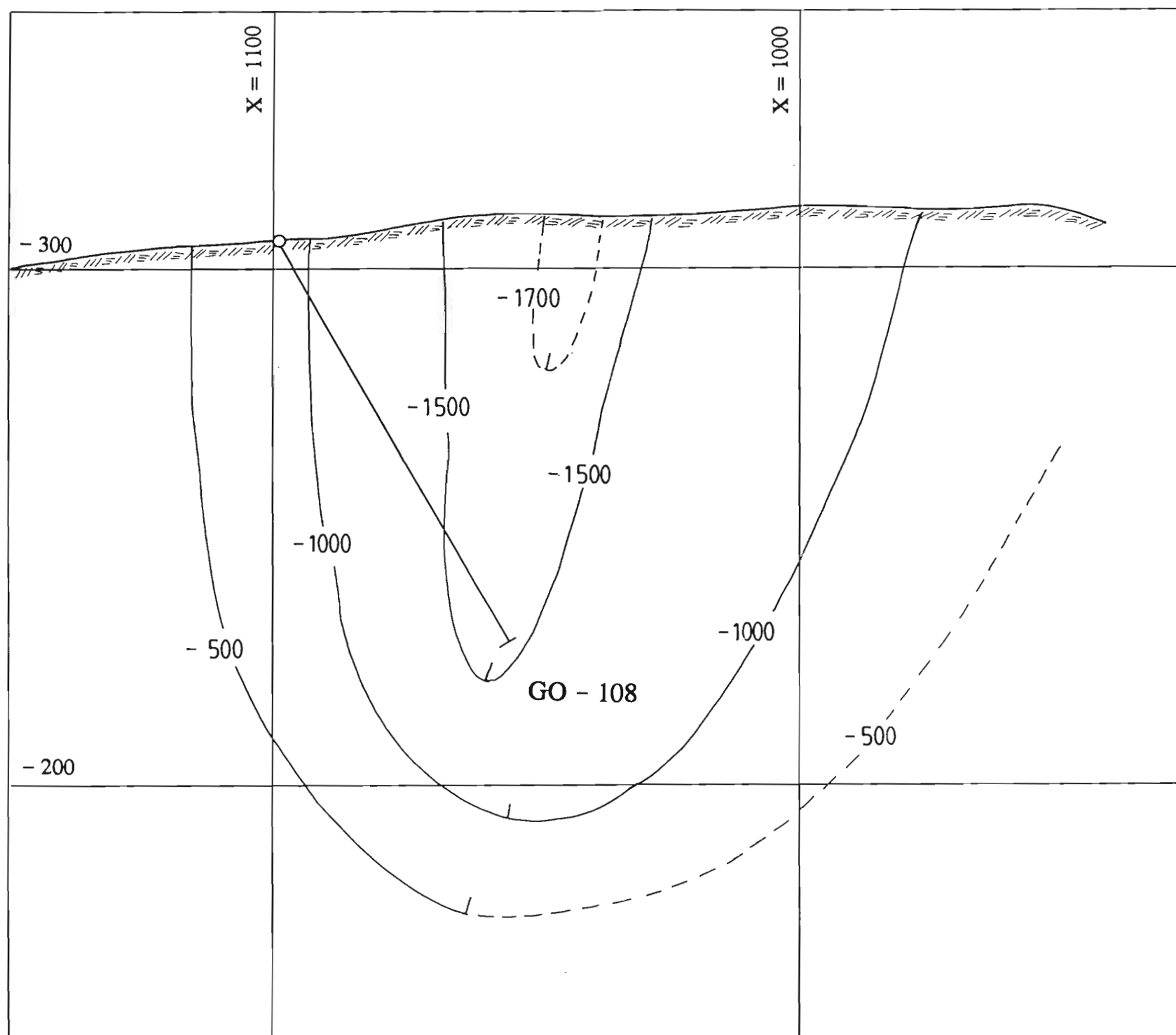
GODEJORD  
GRONG, NORWAY  
1 : 1000  
CHARGED POTENTIAL MAP  
Active grounding GO - 107 / 81 m

NORSULFID A / S  
14.05.1992 / aml



CORE HOLE: GO - 108

Active grounding GO - 107 / 81 m



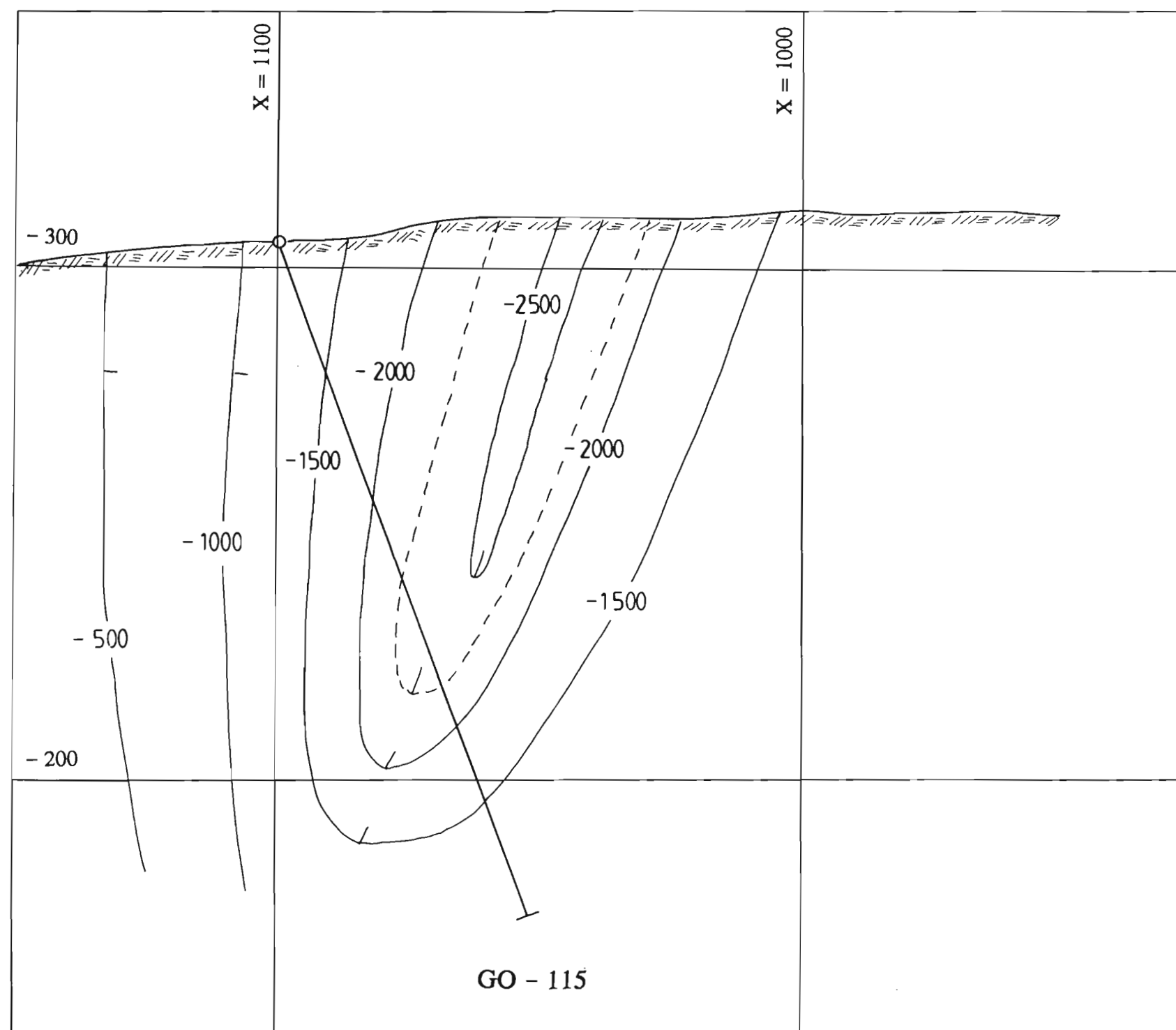
SUOMEN MALMI OY  
FINNEXPLORATION

GODEJORD  
GRONG, NORWAY  
Y = 4990  
1 : 1000  
CHARGED POTENTIAL SECTION

NORSULFID A/S  
14.05.1992 / aml

CORE HOLE: GO - 115

Active grounding GO - 107 / 81 m



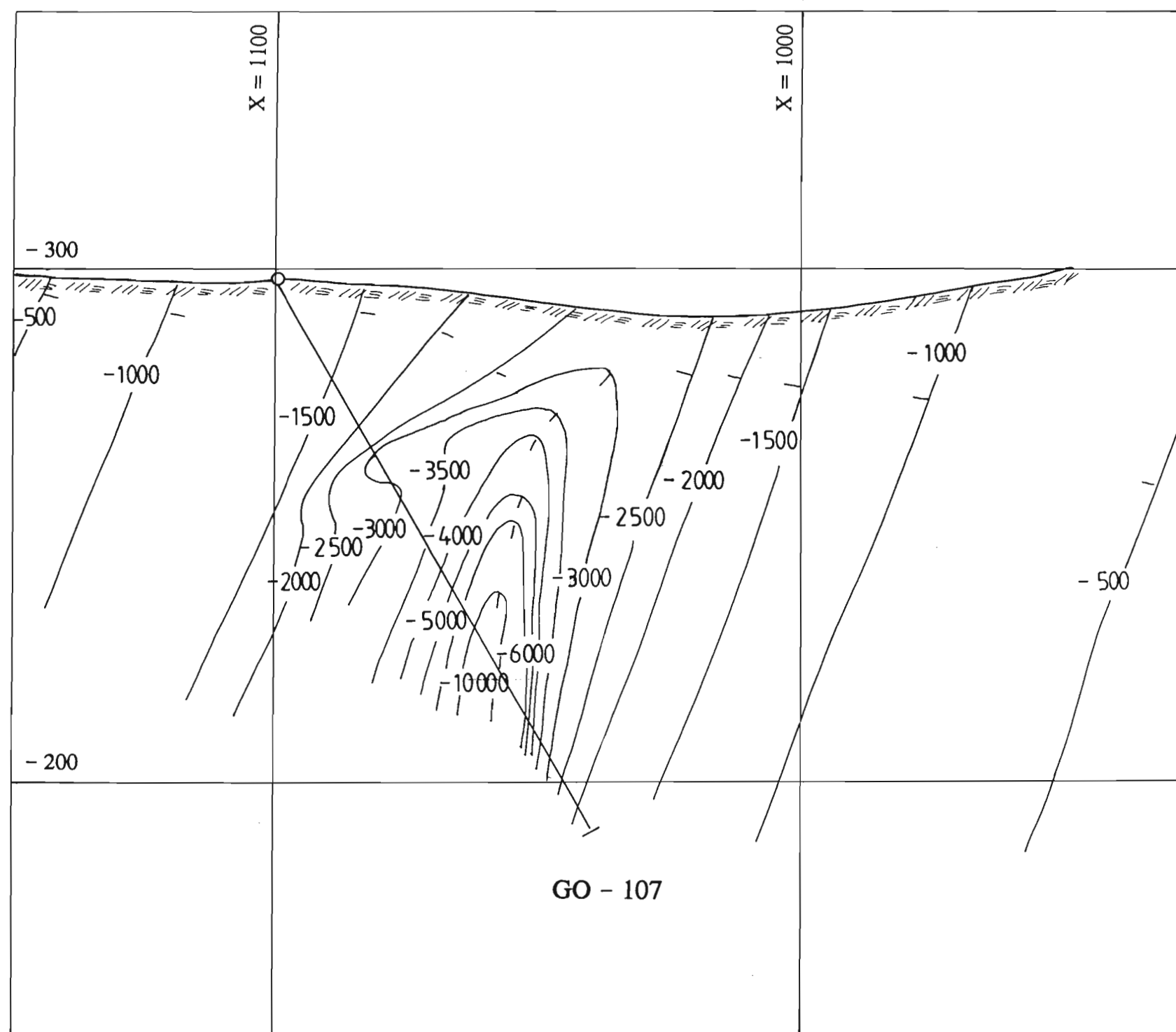
SUOMEN MALMI OY  
FINNEXPLORATION

GODEJORD  
GRONG, NORWAY  
Y = (5050) 5038  
1 : 1000  
CHARGED POTENTIAL SECTION

NORSULFID A / S  
14.05.1992 / aml

CORE HOLE: GO - 107

Active grounding GO - 107 / 81 m



SUOMEN MALMI OY  
FINNEXPLORATION

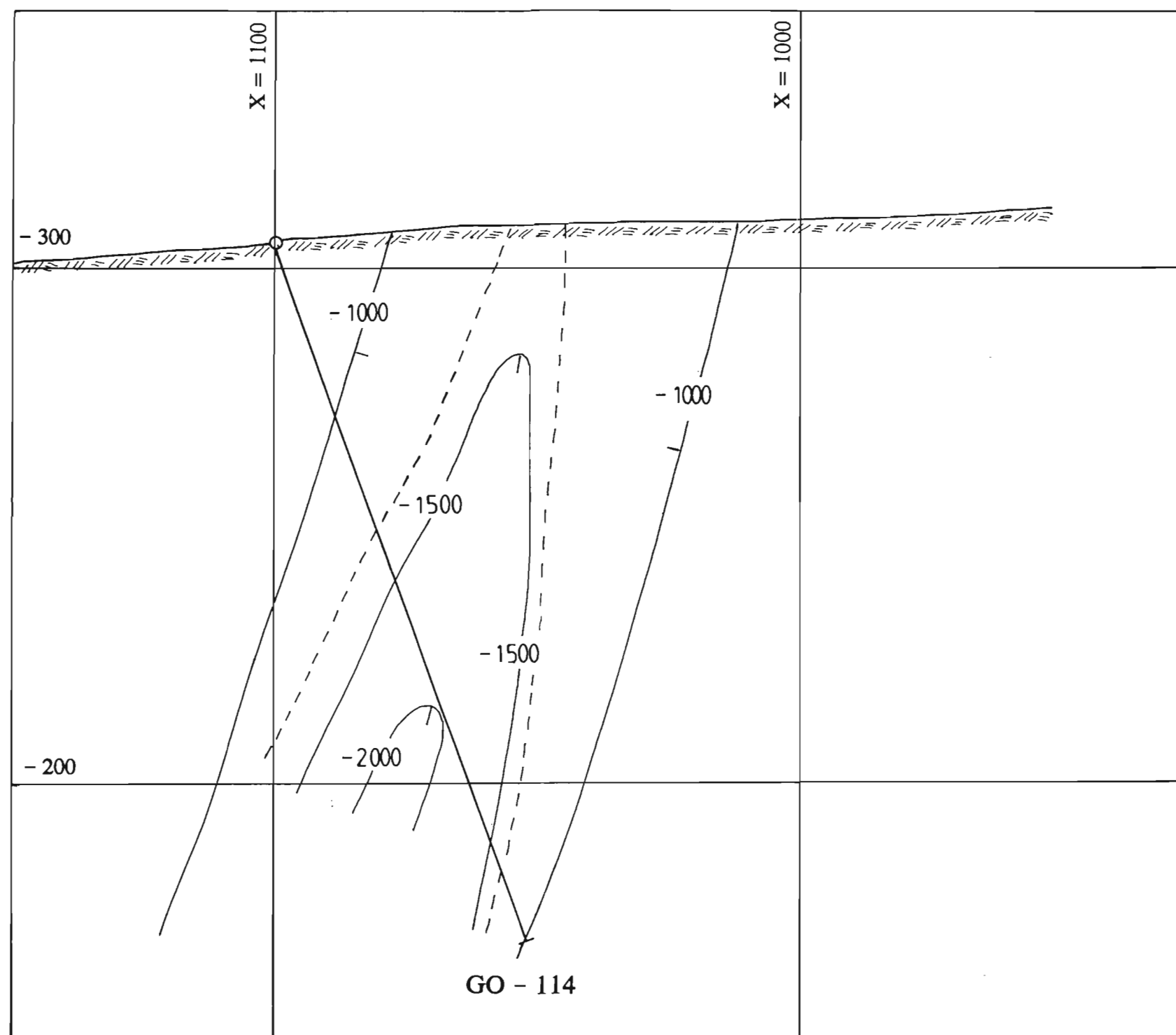
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GRONG, N O R W A Y  
Y = 5125  
1 : 1000  
CHARGED POTENTIAL SECTION

NORSULFID A / S  
14.05.1992 / aml



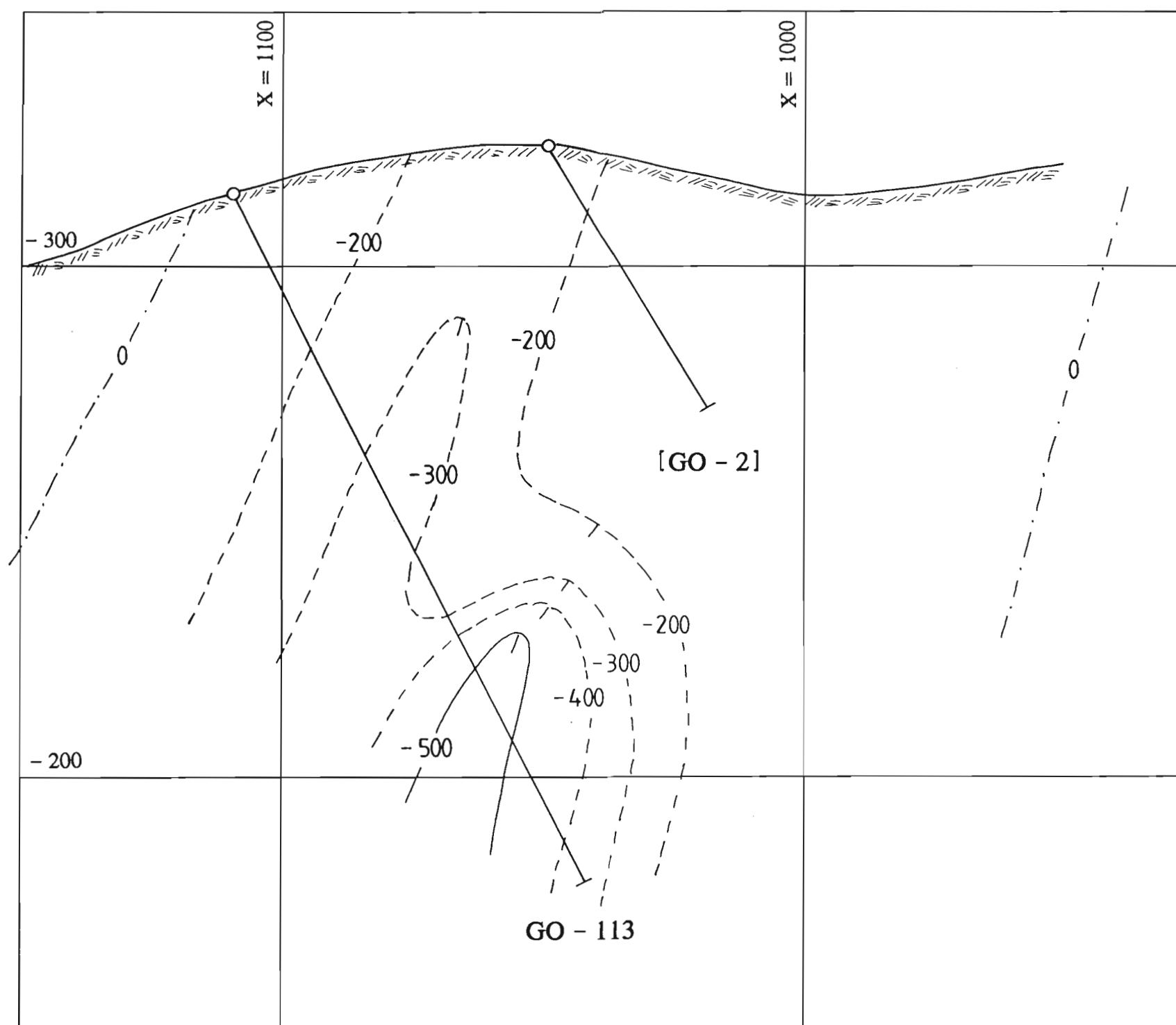
CORE HOLE: GO - 114

Active grounding GO - 107 / 81 m

**SUOMEN MALMI OY  
FINNEXPLORATION****GODEJORD**  
GRONG, N O R W A Y  
Y = 5200  
1 : 1000  
CHARGED POTENTIAL SECTIONNORSULFID A / S  
14.05.1992 / aml

CORE HOLE: GO - 113, 2

Active grounding GO - 107 / 81 m



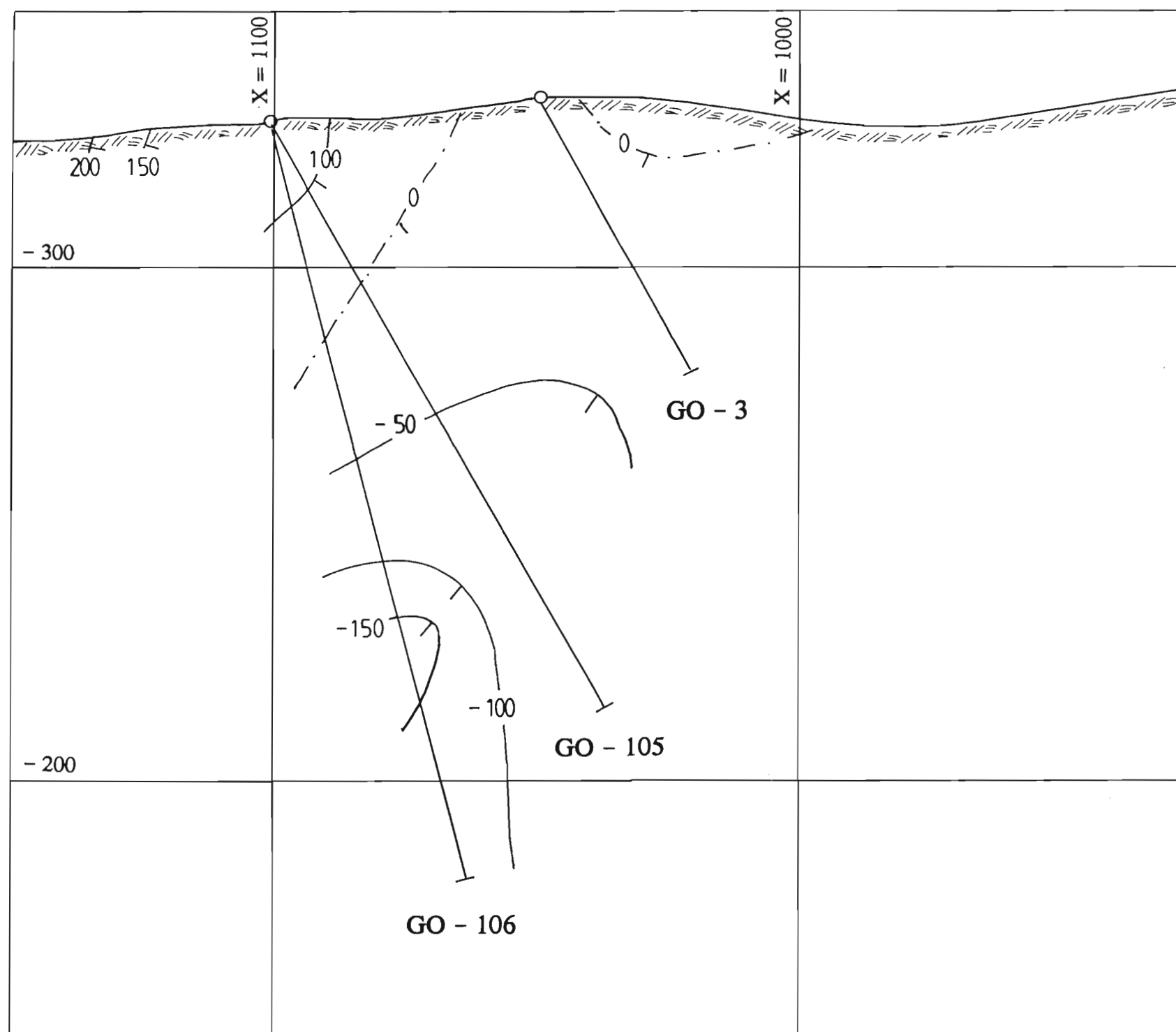
SUOMEN MALMI OY  
FINNEXPLORATION

GODEJORD  
GRONG, NORWAY  
Y = (5300) 5292  
1 : 1000  
CHARGED POTENTIAL SECTION

NORSULFID A / S  
14.05.1992 / aml

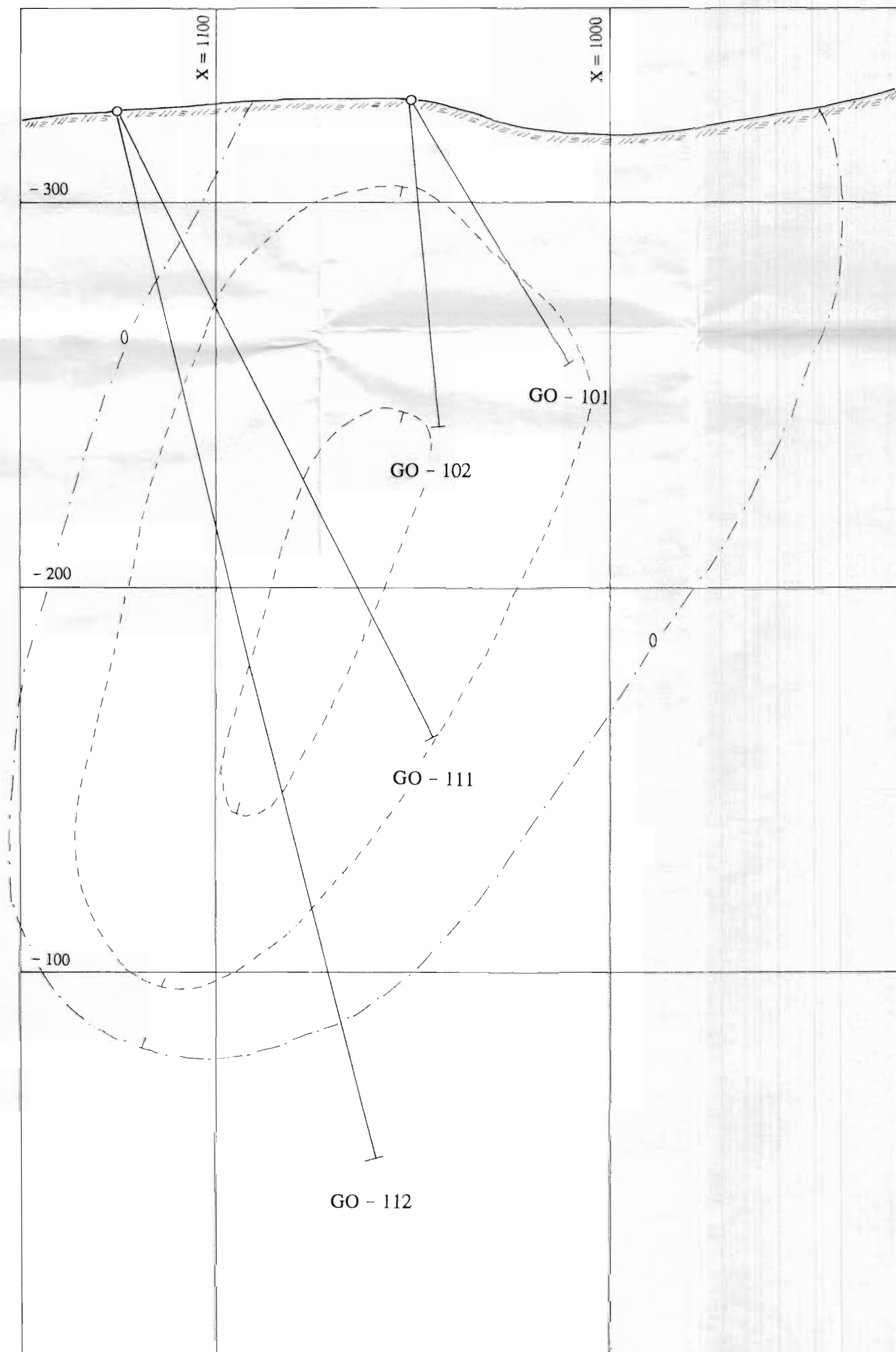
CORE HOLES: GO - 3, 105, 106

Active grounding GO – 107 / 81 m

SUOMEN MALMI OY  
FINNEXPLORATION

GODEJORD  
GRONG, N O R W A Y  
Y = (5300) 5350  
1 : 1000  
CHARGED POTENTIAL SECTION

NORSULFID A / S  
14.05.1992 / aml



#### APPENDIX 4.8

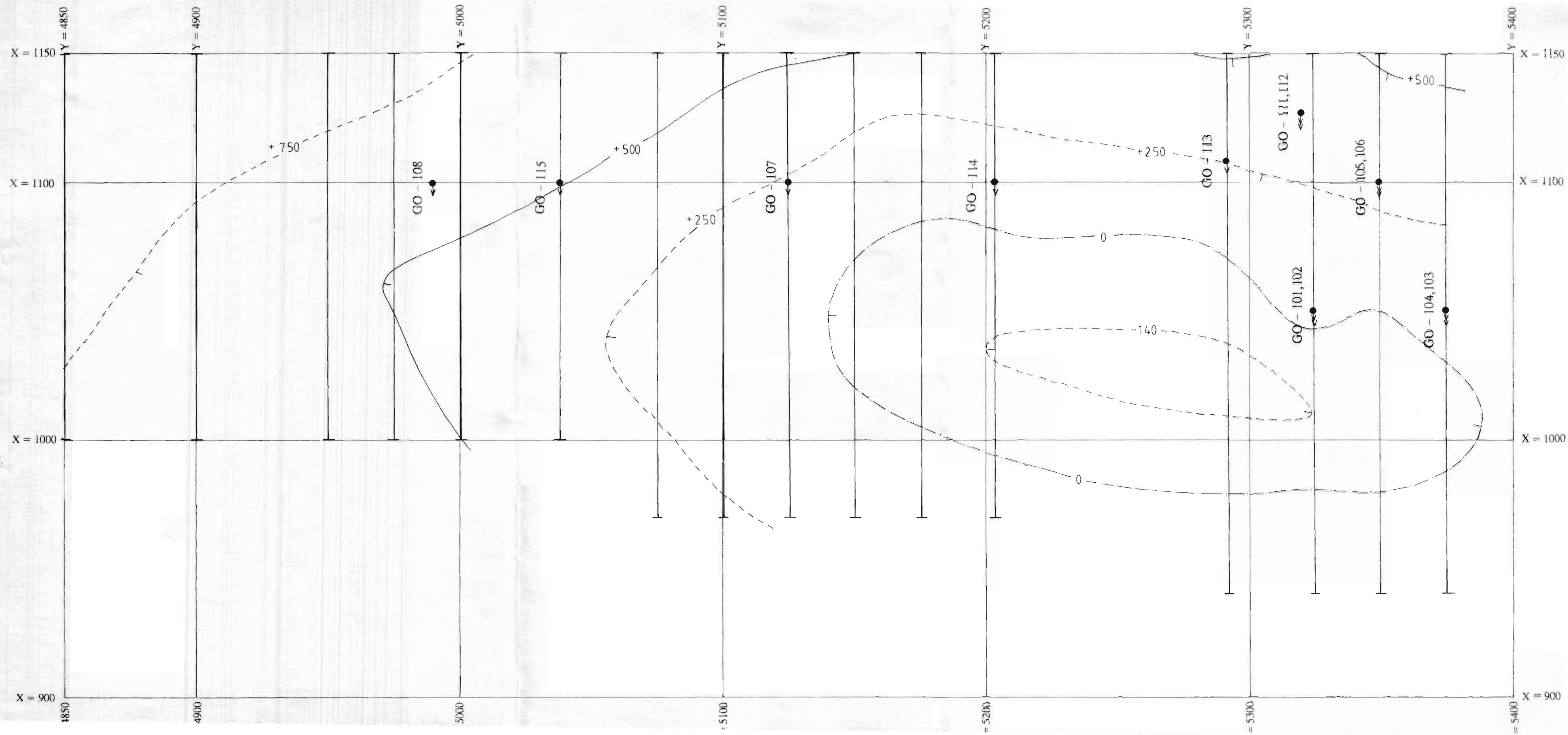
CORE HOLES: GO - 101, 102, 111, 112

Active grounding GO - 107 / 81 m

SUOMEN MALMI OY  
FINNEXPLORATION

GODEJORD  
GRONG, N O R W A Y  
Y = 5325  
1 : 1000  
CHARGED POTENTIAL SECTION

NORSULFID A / S  
14.05.1992 / aml



SUOMEN MALMI OY  
FINNEXPLORATION

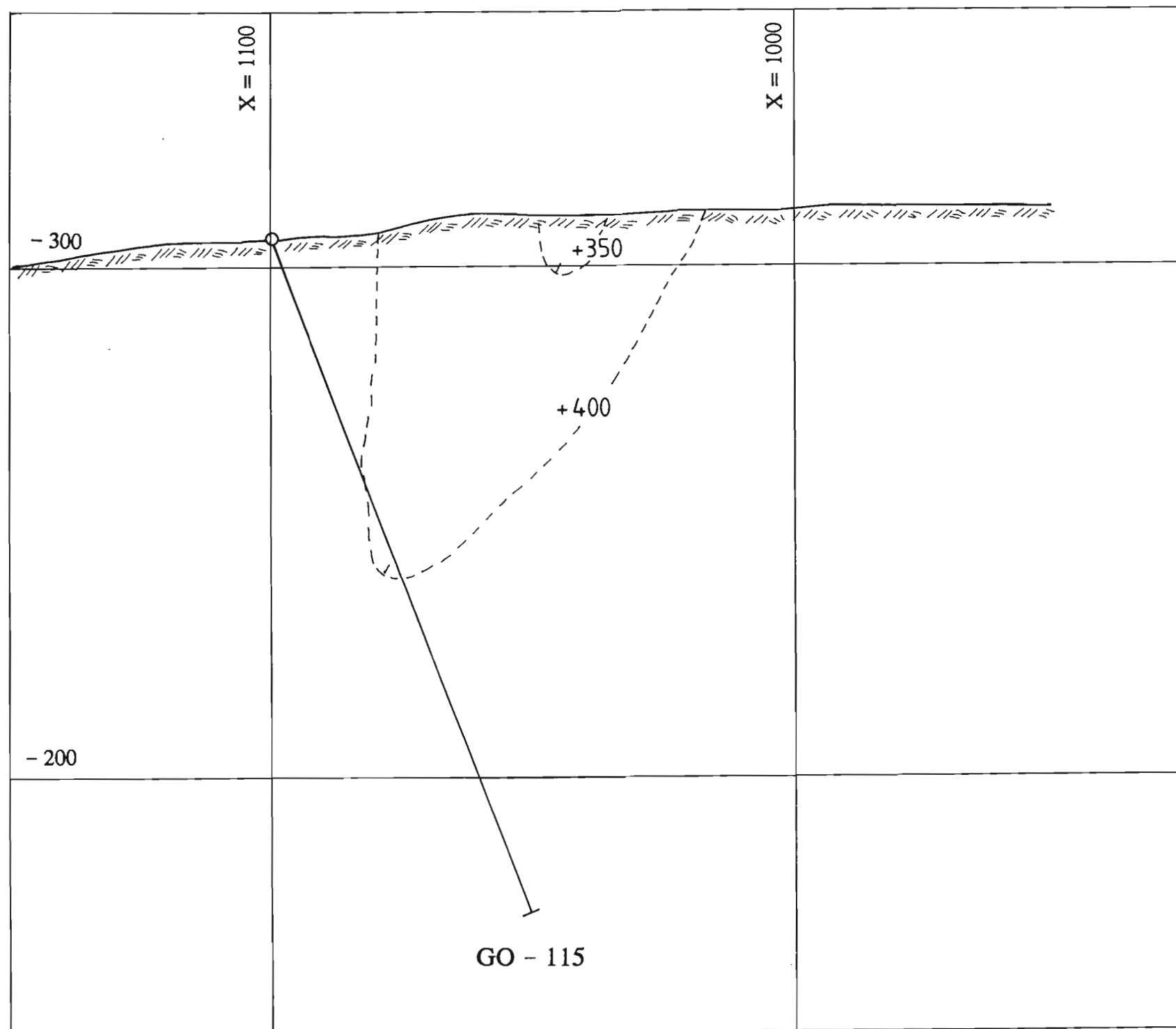
GODEJORD  
GRONG, N O R W A Y  
1 : 1000  
CHARGED POTENTIAL MAP  
Active grounding GO - 112 / 178.3 m

NORSULFID A / S  
14.05.1992 / aml



CORE HOLE: GO - 115

Active grounding GO - 112 / 178.3 m



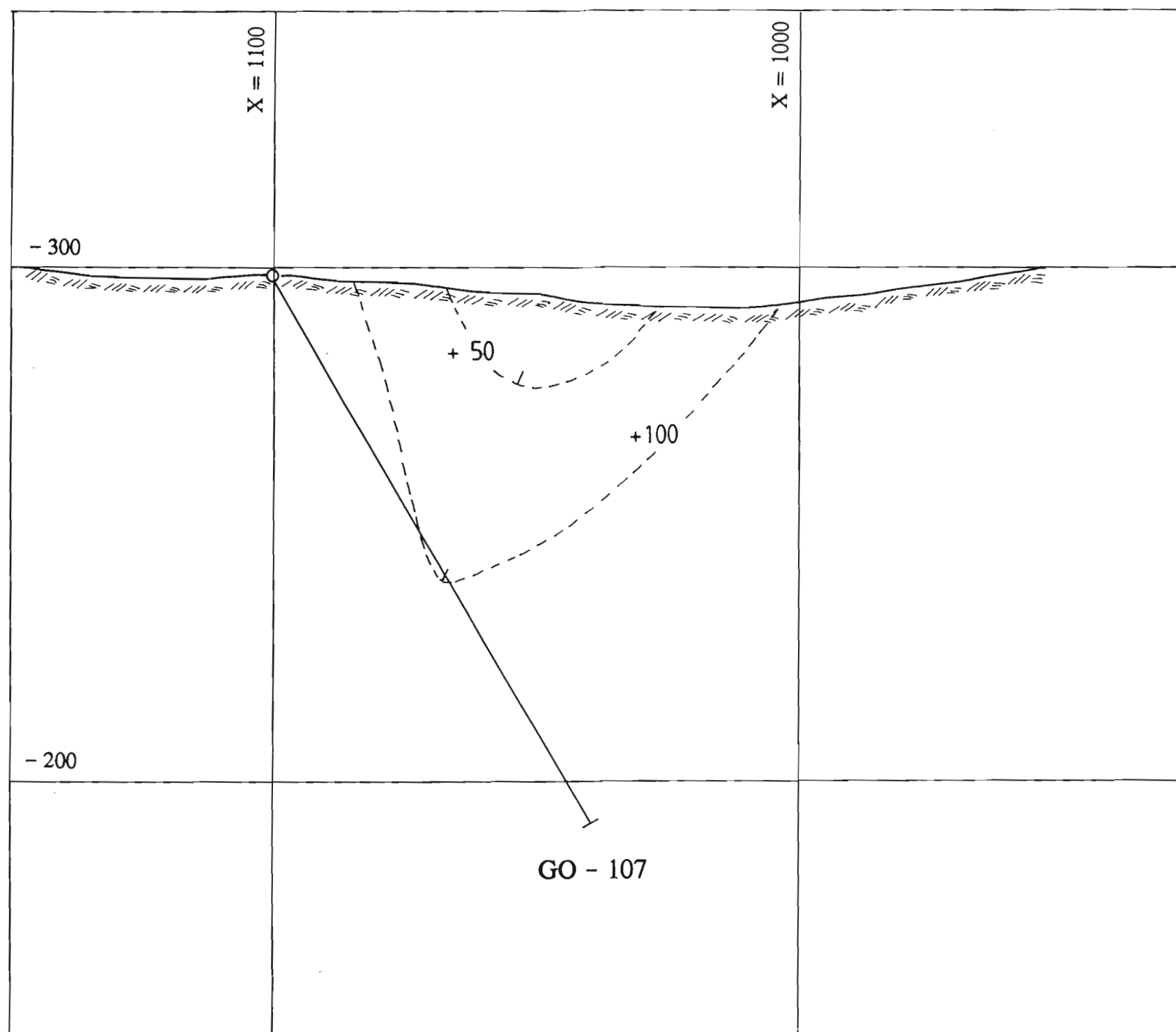
SUOMEN MALMI OY  
FINNEXPLORATION

GODEJORD  
GRONG, N O R W A Y  
Y = (5050) 5038  
1 : 1000  
CHARGED POTENTIAL SECTION

NORSULFID A / S  
14.05.1992 / aml

CORE HOLE: GO - 107

Active grounding GO - 112 / 178.3 m



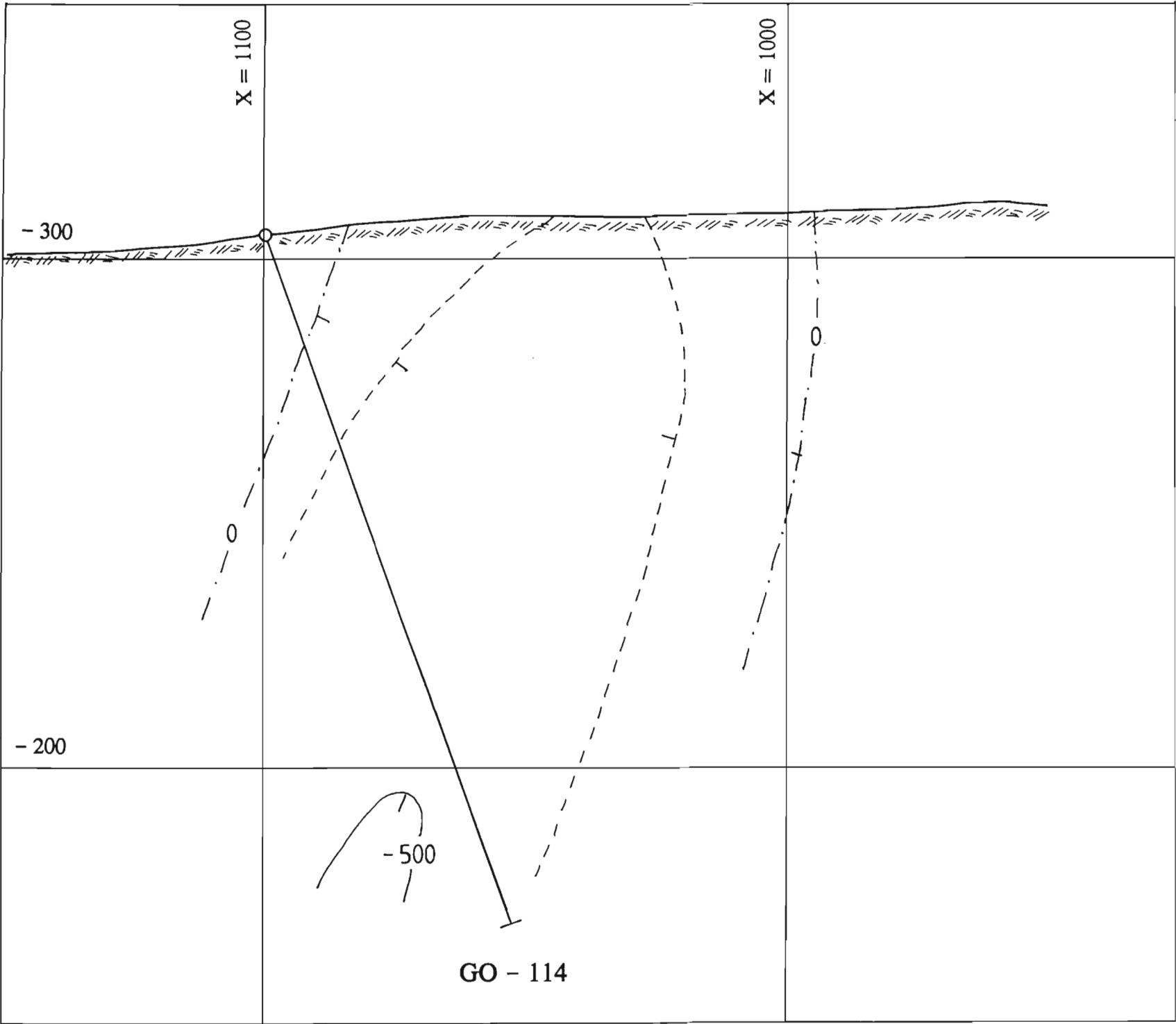
SUOMEN MALMI OY  
FINNEXPLORATION

GODEJORD  
GRONG, NORWAY  
Y = 5125  
1 : 1000  
CHARGED POTENTIAL SECTION

NORSULFID A / S  
14.05.1992 / aml

CORE HOLE: GO - 114

Active grounding GO - 112 / 178.3 m



SUOMEN MALMI OY  
FINNEXPLORATION

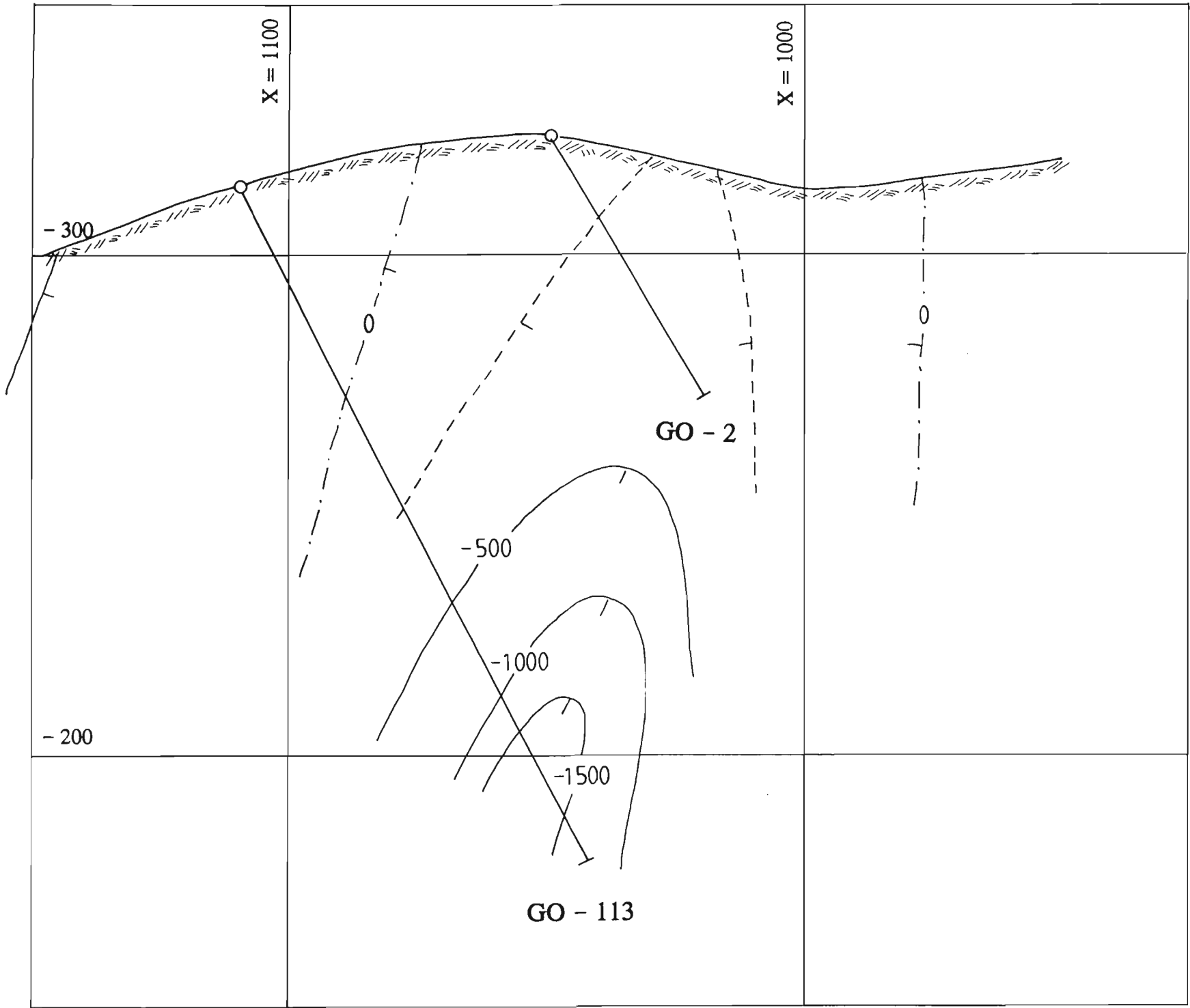
GODEJORD  
GRONG, N O R W A Y  
Y = 5200  
1 : 1000  
CHARGED POTENTIAL SECTION

NORSULFID A / S  
14.05.1992 / aml



CORE HOLE: GO - 113, 2

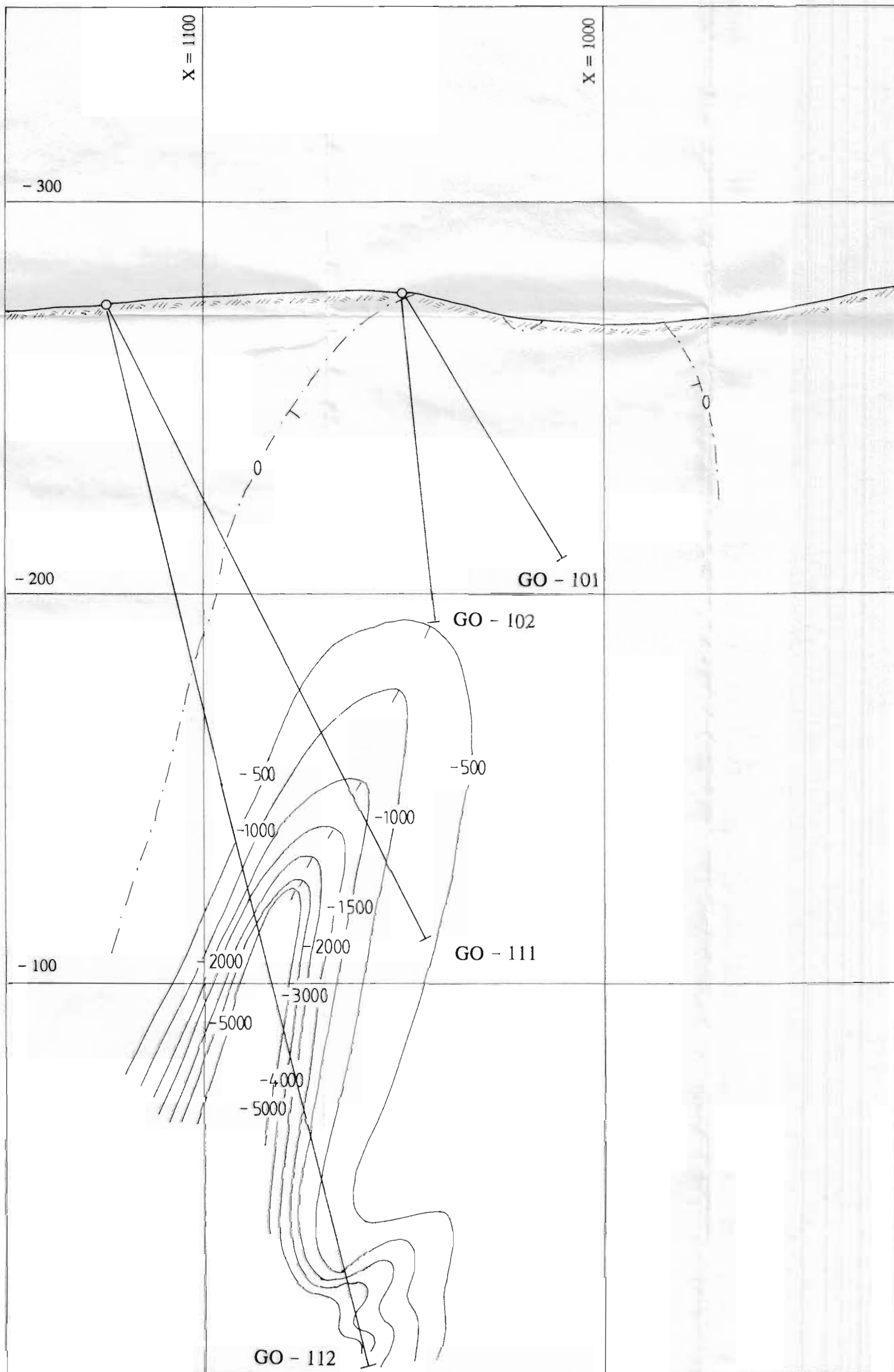
Active grounding GO - 112 / 178.3 m



SUOMEN MALMI OY  
FINNEXPLORATION

GODEJORD  
GRONG, N O R W A Y  
Y = (5300) 5292  
1 : 1000  
CHARGED POTENTIAL SECTION

NORSULFID A / S  
14.05.1992 / aml



# APPENDIX 5.6

CORE HOLES: GO - 101, 102, 111, 112

Active grounding GO - 112 / 178.3 m

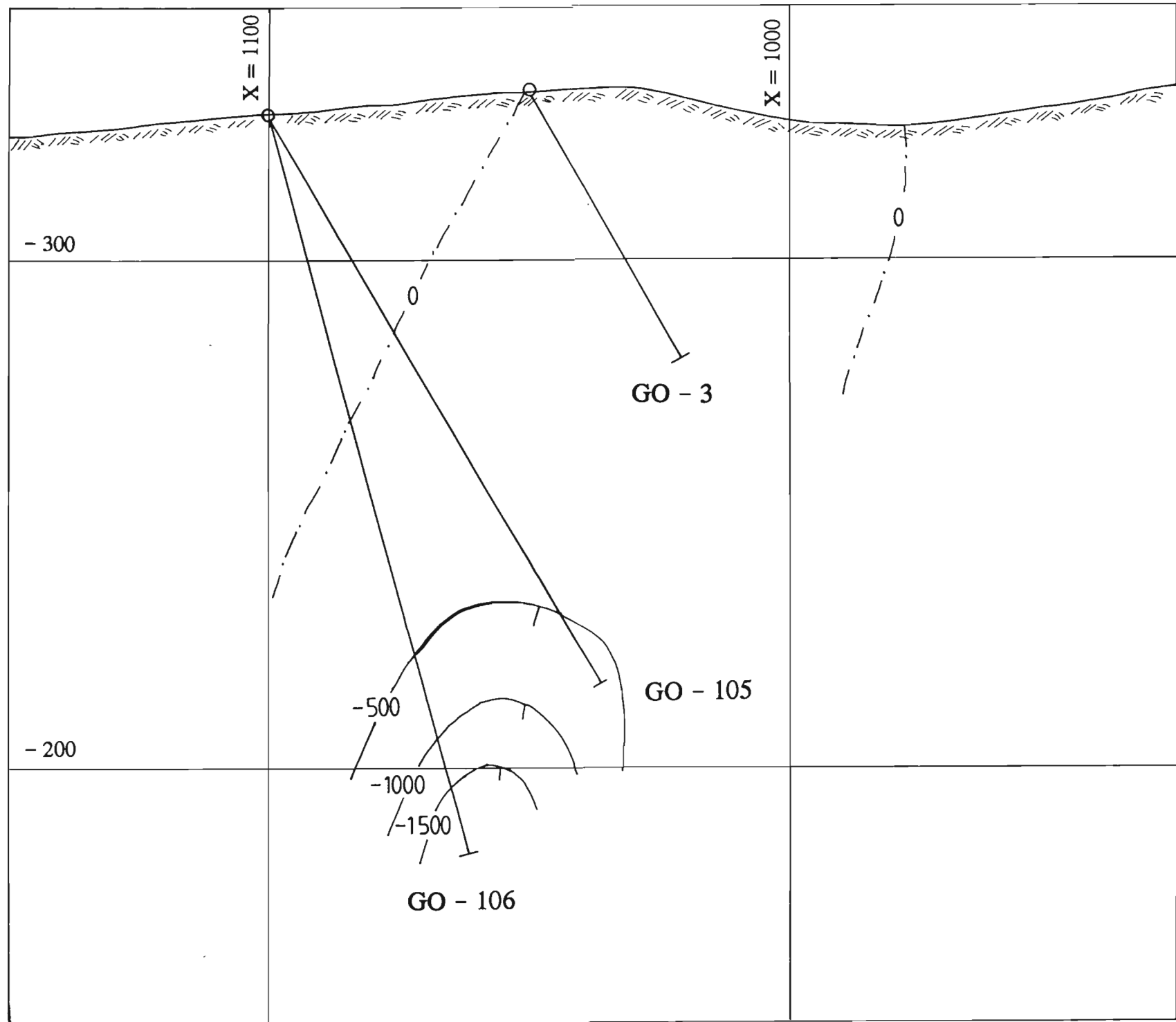
SUOMEN MALMI OY  
FINNEXPLORATION

GODEJORD  
GRONG, N O R W A Y  
Y = 5325  
1 : 1000  
CHARGED POTENTIAL SECTION

NORSULFID A / S  
14.05.1992 / aml

CORE HOLES: GO - 3, 105, 106

Active grounding GO - 112 / 178.3 m



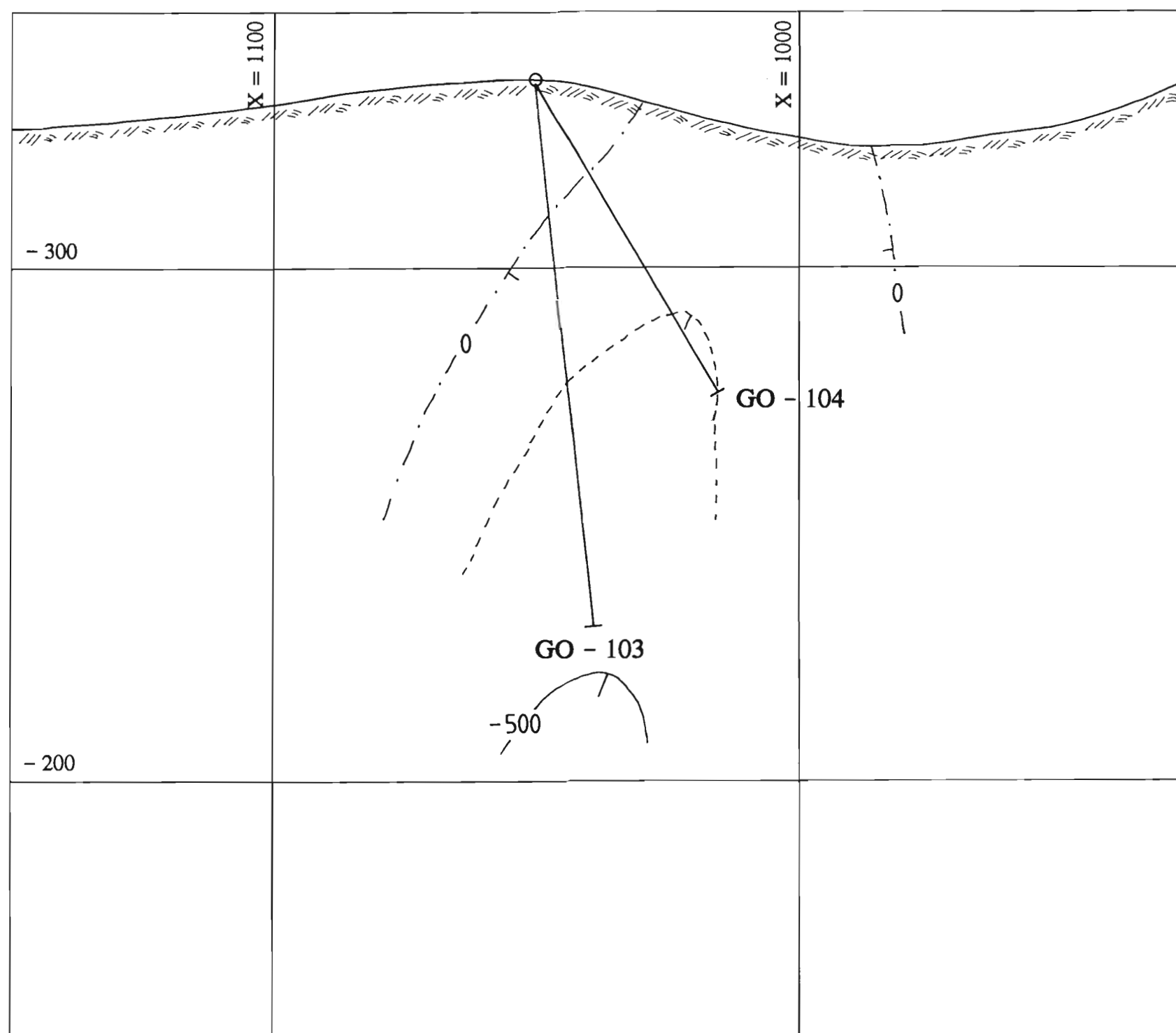
SUOMEN MALMI OY  
FINNEXPLORATION

GODEJORD  
GRONG, NORWAY  
Y = 5350  
1 : 1000  
CHARGED POTENTIAL SECTION

NORSULFID A / S  
14.05.1992 / aml

CORE HOLES: GO - 103, 104

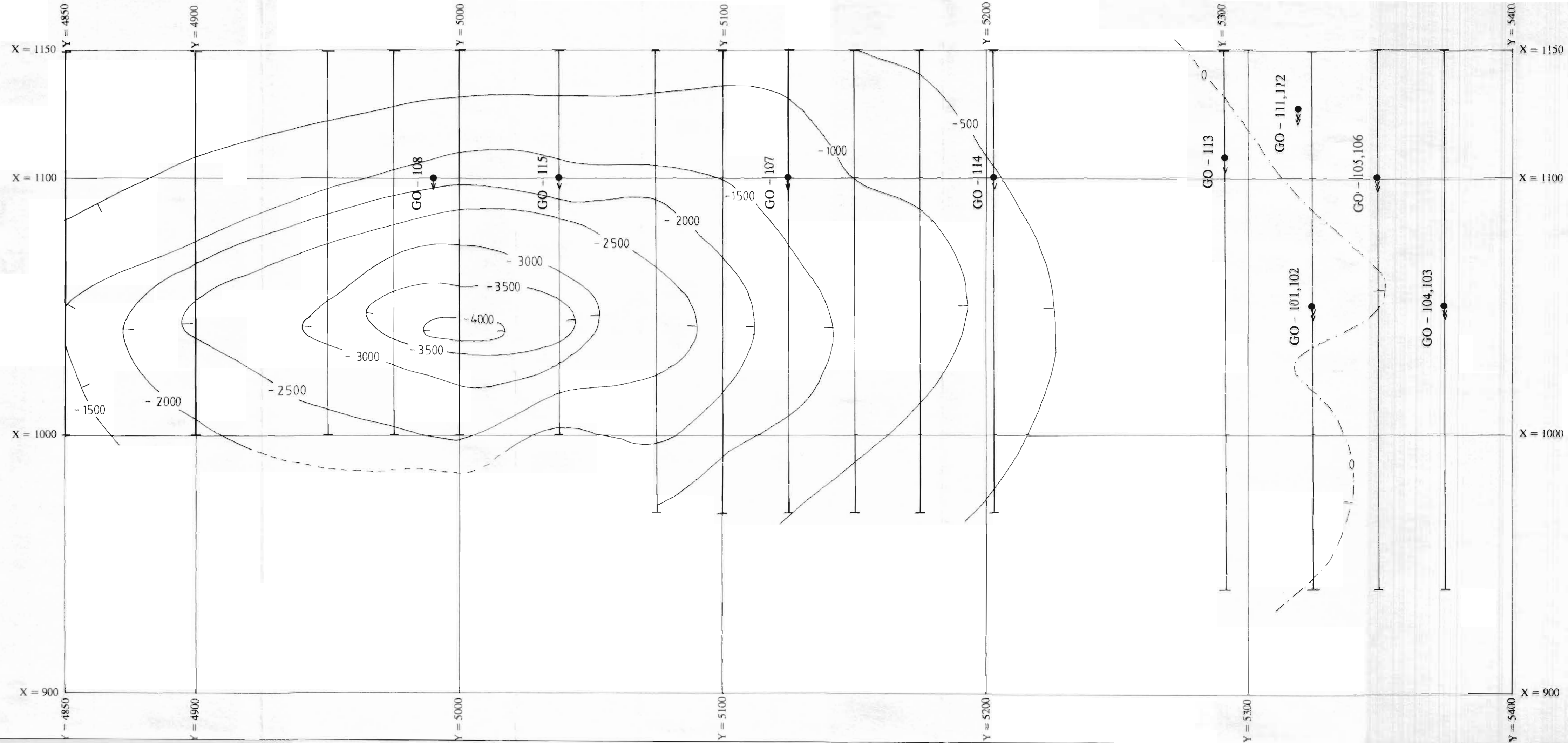
Active grounding GO - 112 / 178.3 m



SUOMEN MALMI OY  
FINNEXPLORATION

GODEJORD  
GRONG, NORWAY  
Y = 5375  
1 : 1000  
CHARGED POTENTIAL SECTION

NORSULFID A / S  
14.05.1992 / aml



SUOMEN MALMI OY  
FINNEXPLORATION

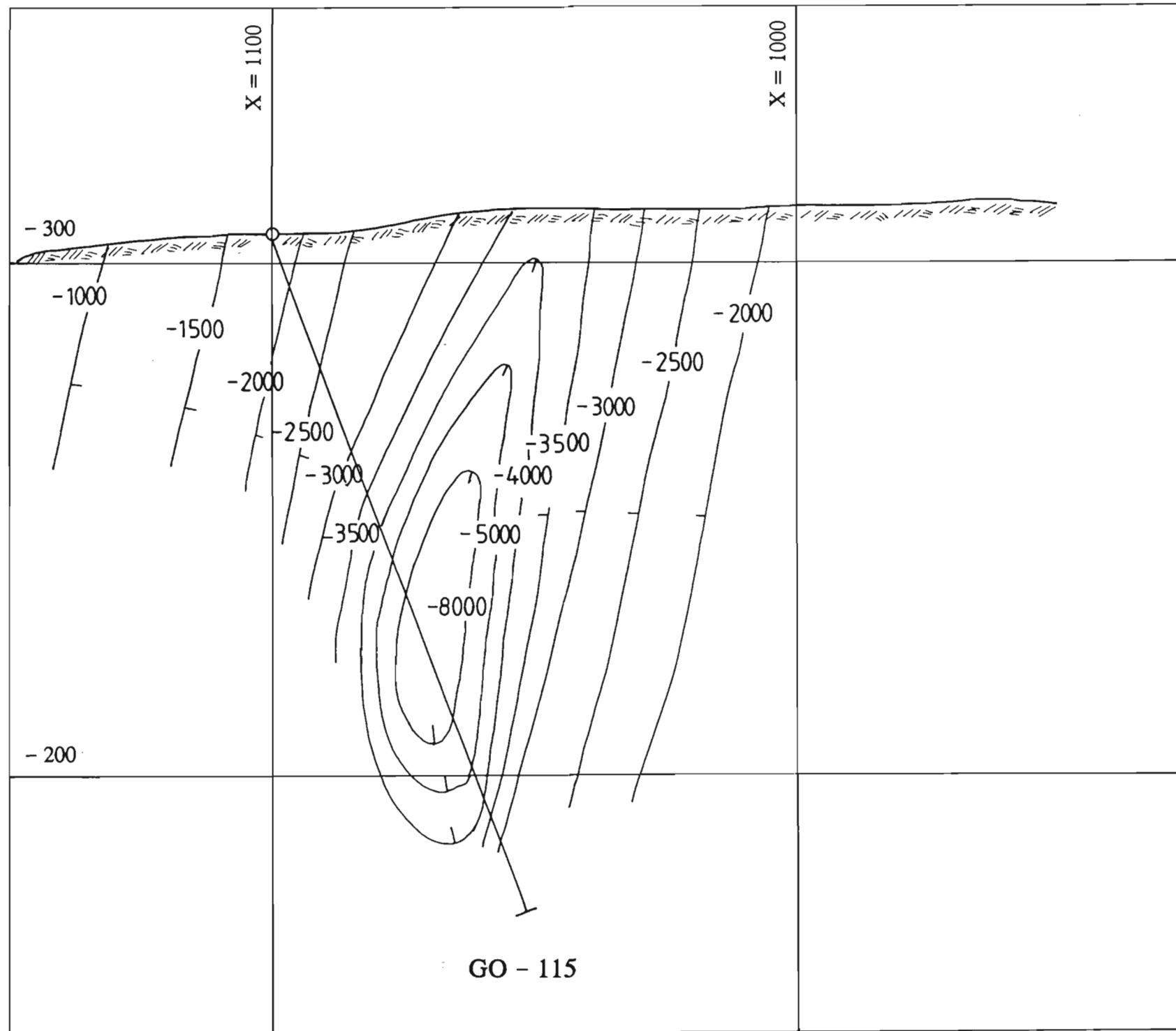
GODEJORD  
GRONG, N O R W A Y  
1 : 1000  
CHARGED POTENTIAL MAP  
Active grounding GO = 115 / 84,5 m

NORSULFID A / S  
14.05.1992 / aml



CORE HOLE: GO - 115

Active grounding GO - 115 / 84.5 m



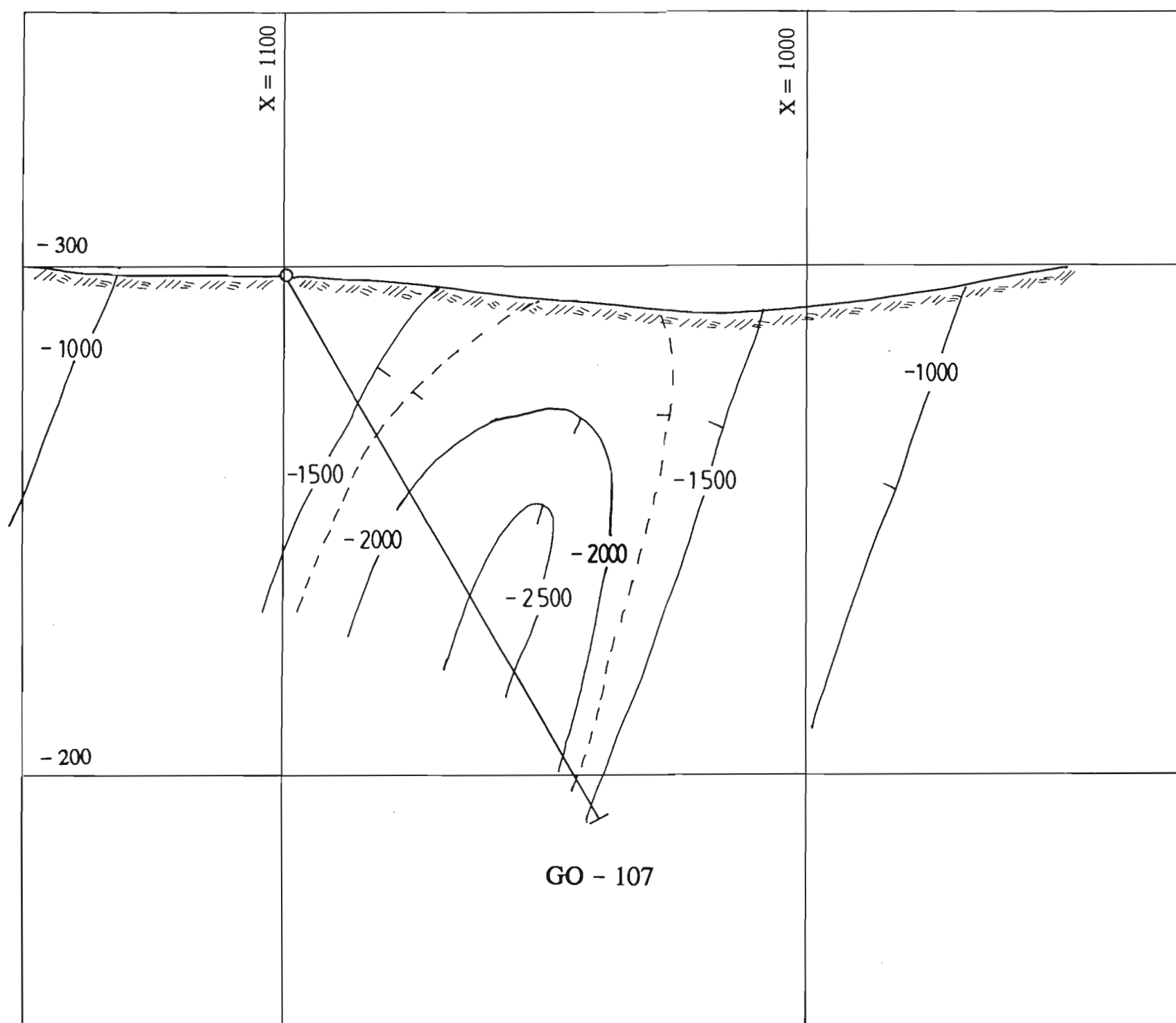
SUOMEN MALMI OY  
FINNEXPLORATION

GODEJORD  
GRONG, N O R W A Y  
Y = (5050) 5038  
1 : 1000  
CHARGED POTENTIAL SECTION

NORSULFID A / S  
14.05.1992 / aml

CORE HOLE: GO - 107

Active grounding GO - 115 / 84.5 m



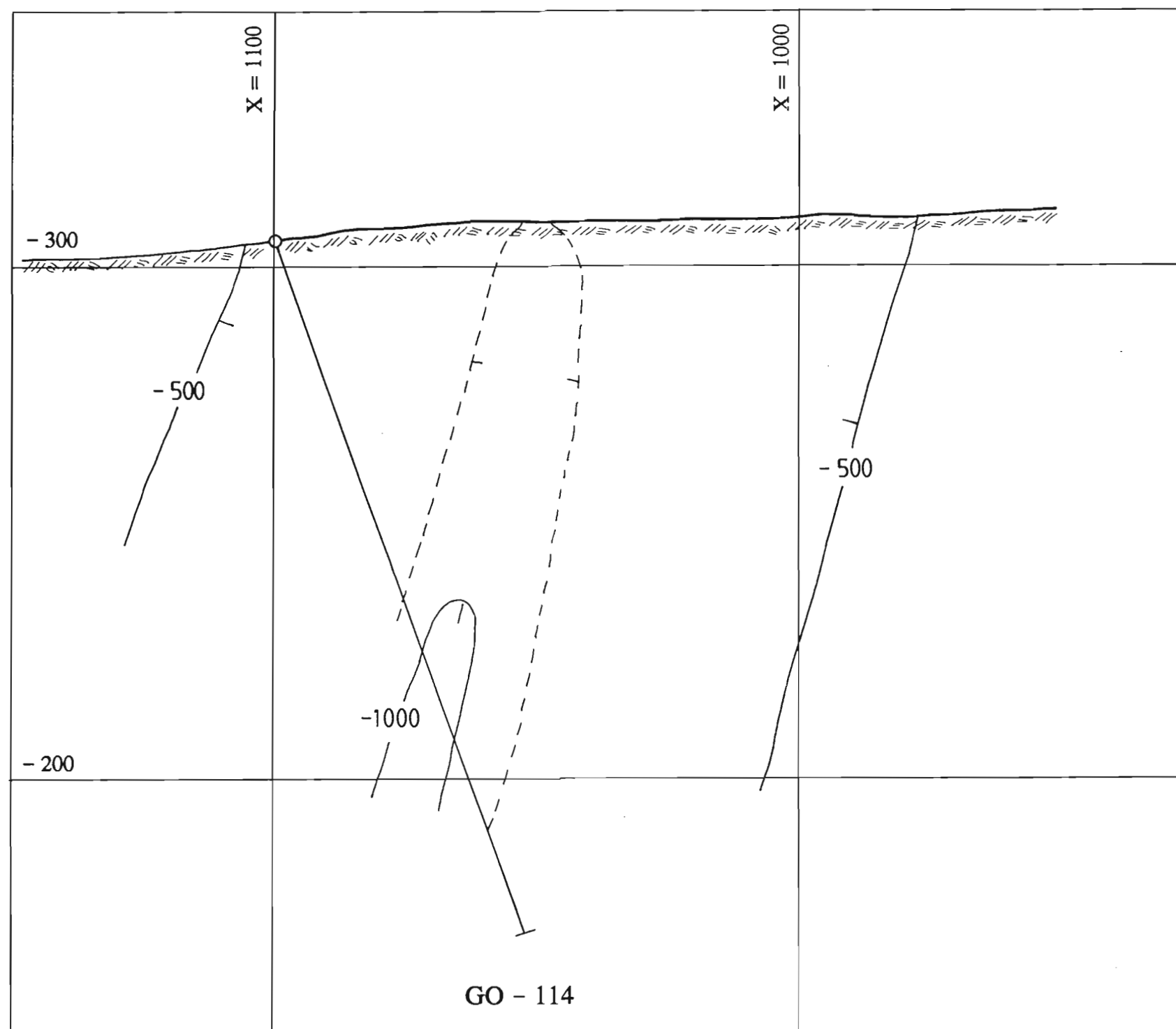
SUOMEN MALMI OY  
FINNEXPLORATION

GODEJORD  
GRONG, N O R W A Y  
Y = 5125  
1 : 1000  
CHARGED POTENTIAL SECTION

NORSULFID A / S  
14.05.1992 / aml

CORE HOLE: GO - 114

Active grounding GO - 115 / 84.5 m



SUOMEN MALMI OY  
FINNEXPLORATION

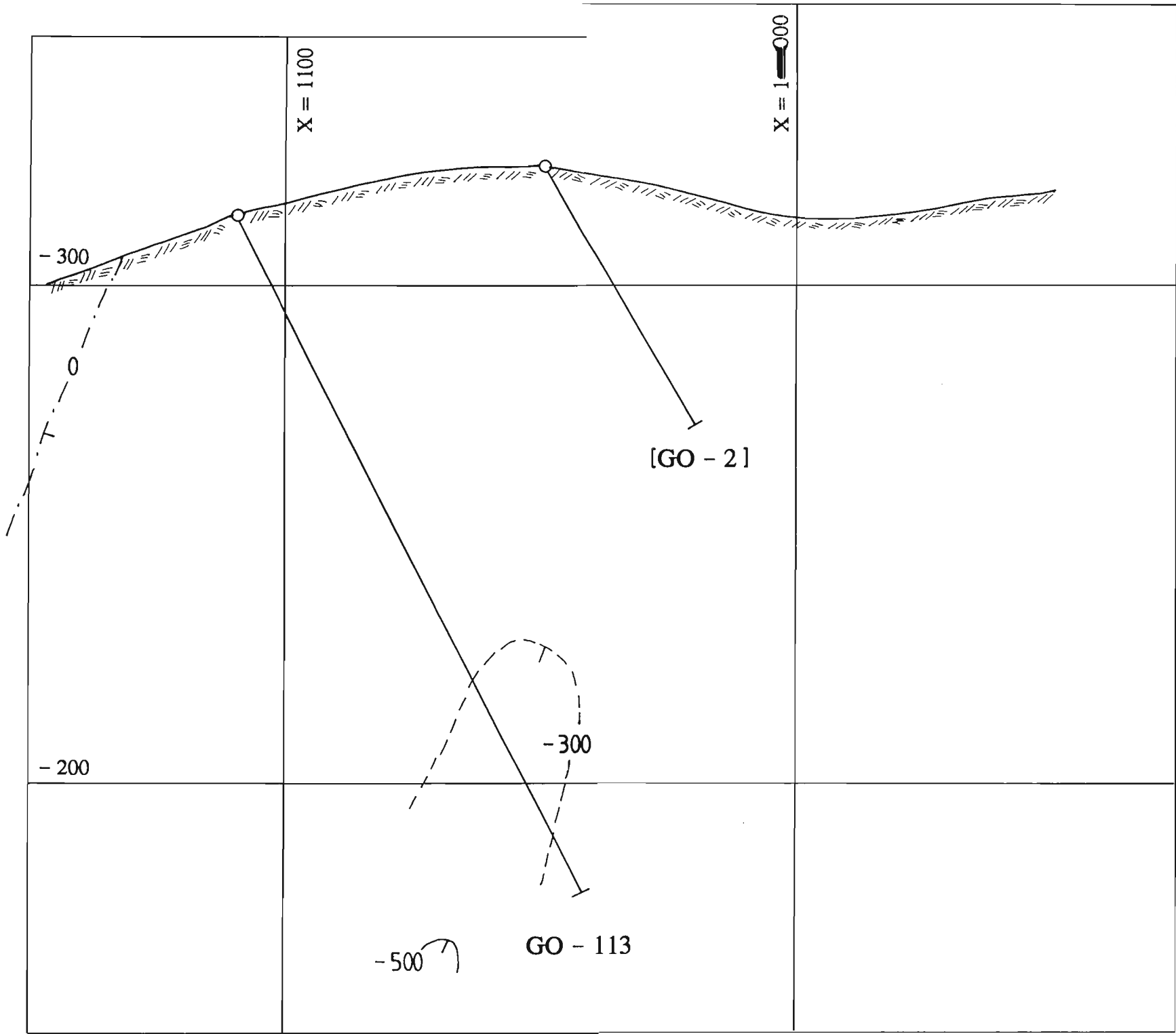
GODEJORD  
GRONG, NORWAY  
Y = 5200  
1 : 1000  
CHARGED POTENTIAL SECTION

NORSULFID A / S  
14.05.1992 / aml



CORE HOLE: GO - 113, 2

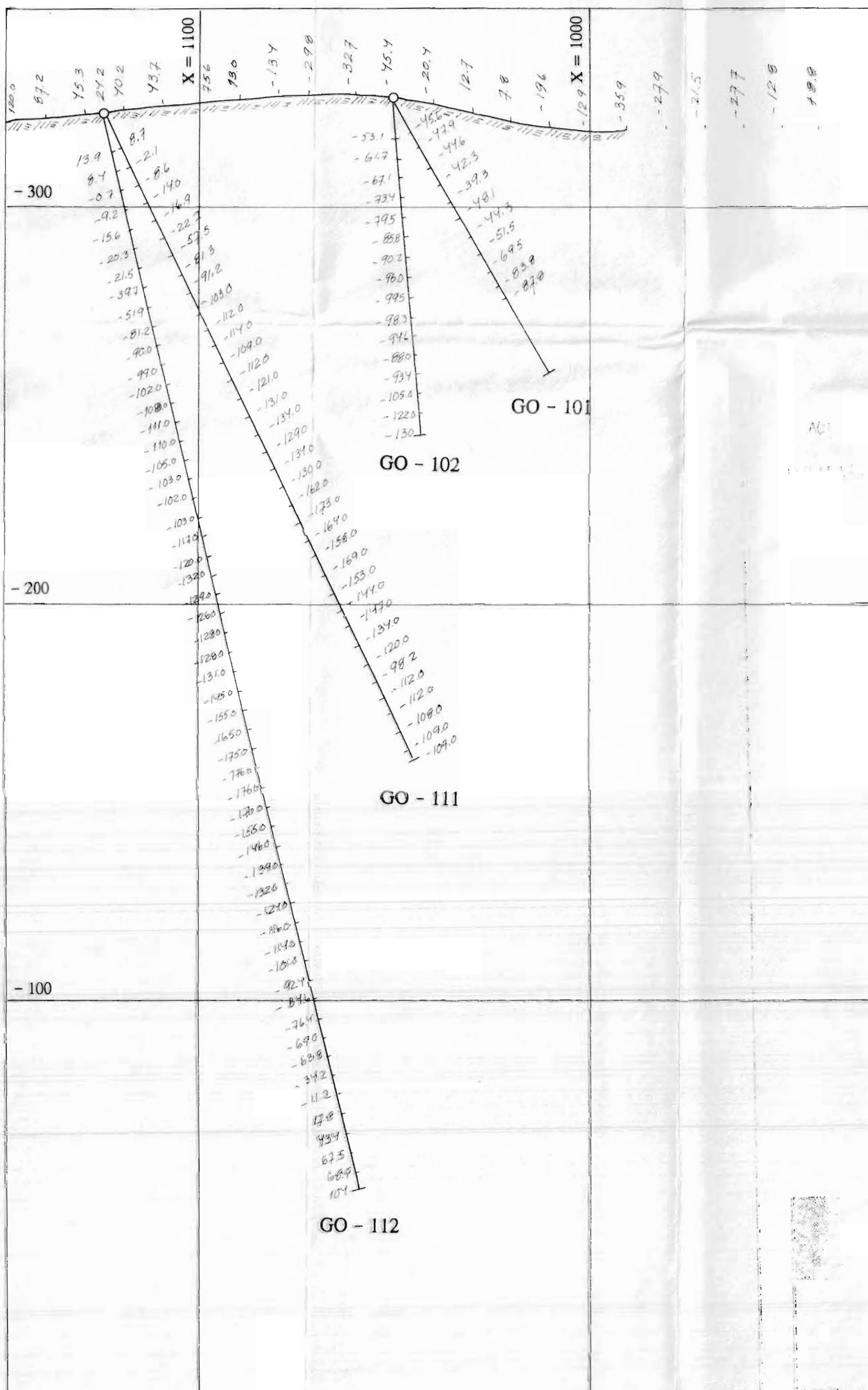
Active grounding GO - 115 / 84.5 m



SUOMEN MALMI OY  
FINNEXPLORATION

GODEJORD  
GRONG, N O R W A Y  
Y = (5300) 5292  
1 : 1000  
CHARGED POTENTIAL SECTION

NORSULFID A / S  
14.05.1992 / aml



# APPENDIX 6.1

CORE HOLES: GO - 101, 102, 111, 112

Active grounding GO - 115 / 84.5 m

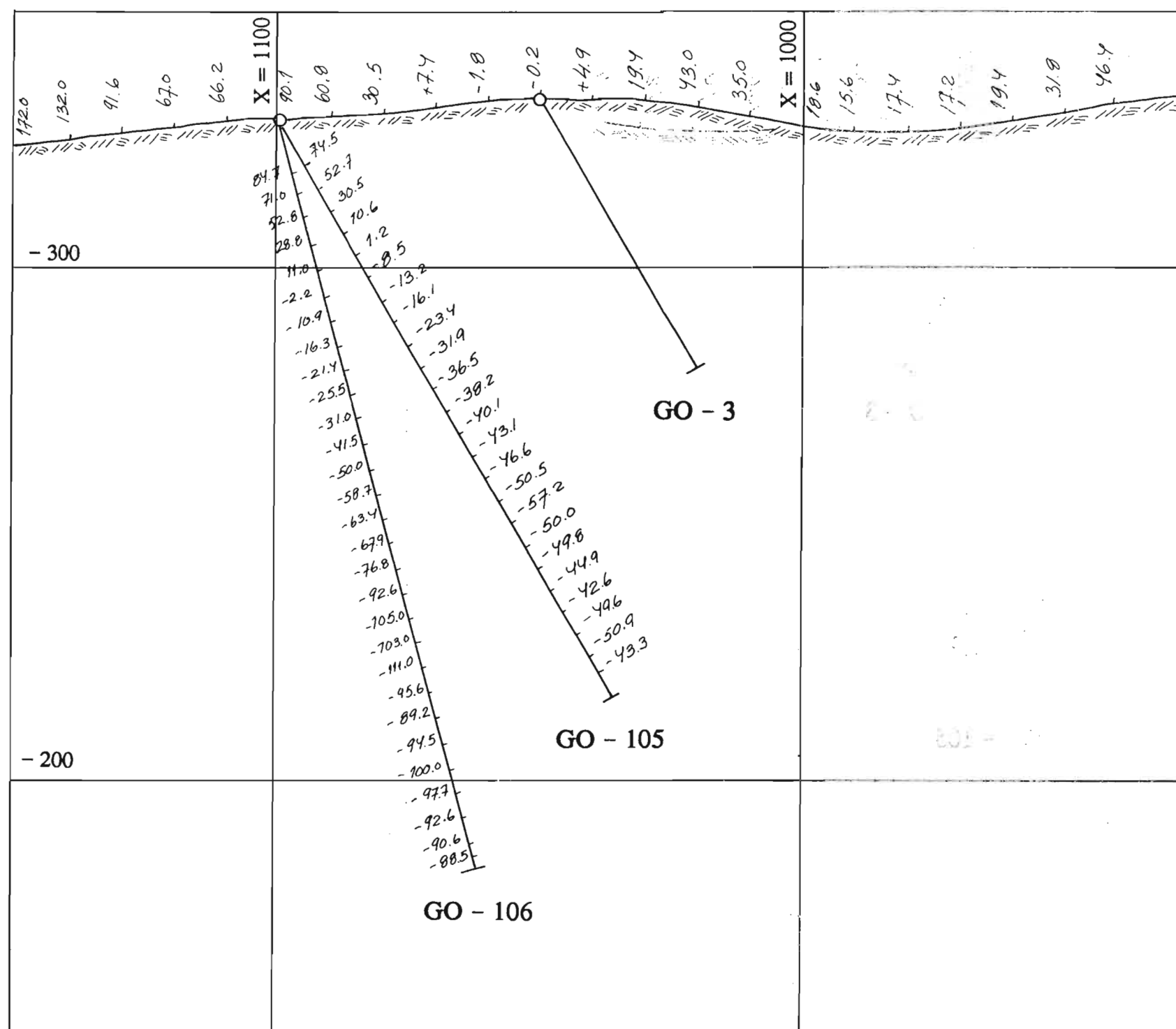
SUOMEN MAALMI OY  
FINNEXPLORATION

GODEJORD  
GRONG, NORWAY  
Y = 5325  
1 : 1000  
CHARGED POTENTIAL SECTION

NORSULFID A / S  
14.05.1992 / aml

CORE HOLES: GO - 3, 105, 106

Active grounding GO - 115 / 84.5 m



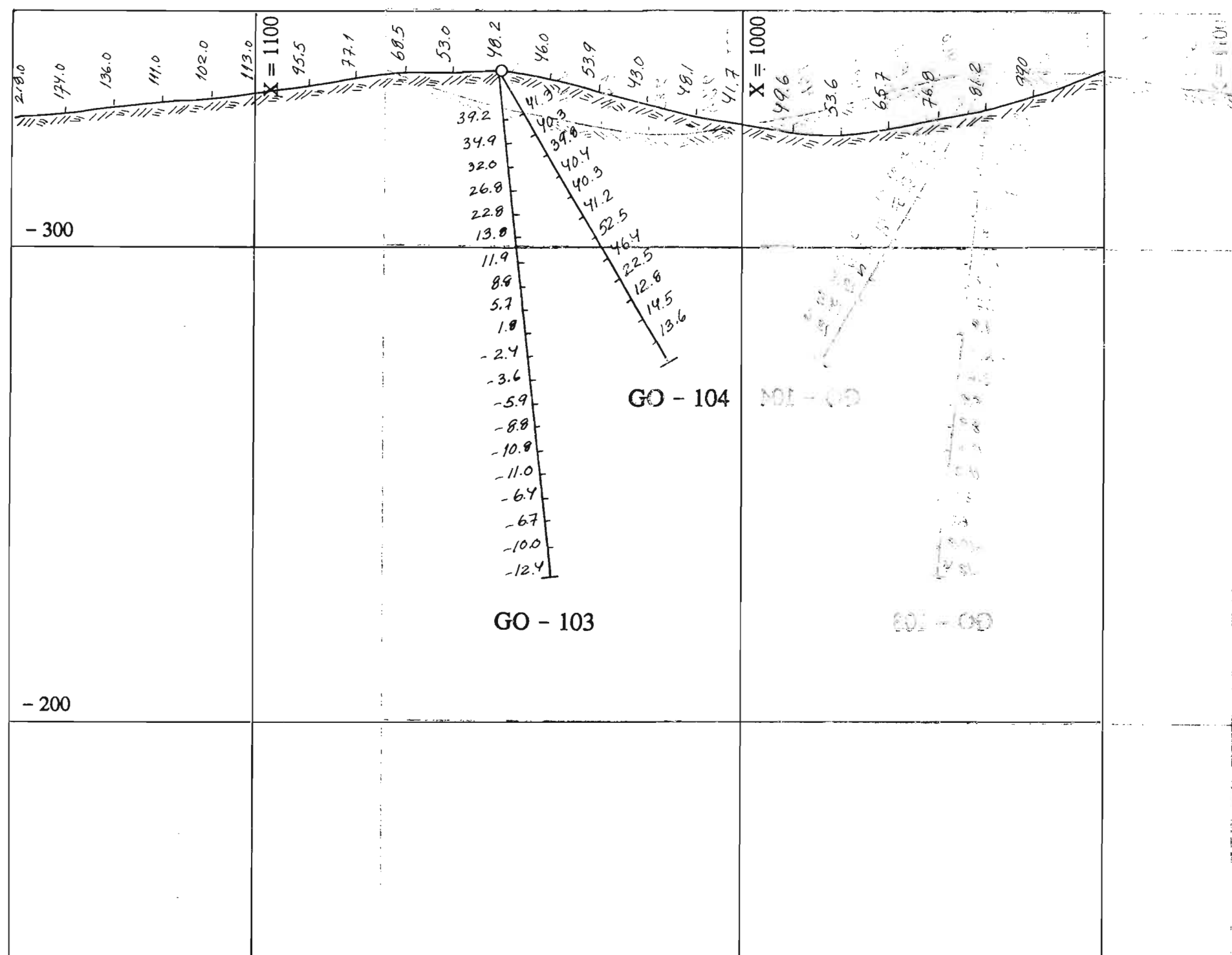
SUOMEN MALMI OY  
FINNEXPLORATION

GODEJORD  
GRONG, N O R W A Y  
Y = 5350  
1 : 1000  
CHARGED POTENTIAL SECTION

NORSULFID A / S  
14.05.1992 / aml

CORE HOLES: GO - 103, 104

Active grounding GO - 115 / 84.5 m

SUOMEN MALMI OY  
FINNEXPLORATIONGODEJORD  
GRONG, NORWAY  
Y = 5375  
1 : 1000  
CHARGED POTENTIAL SECTIONNORSULFID A / S  
14.05.1992 / aml