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Tittel
Magnetic and VLF-measurement in the Klinkenberg area, Røros Norway

Forfatter Dalsegg, Einar	Dato År 19.11 1999	Bedrift (Oppdragsgiver og/eller oppdragstaker) Crew Development Corporation Mindex ASA
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Kommune Røros	Fylke Sør-Trøndelag	Bergdistrikt	1: 50 000 kartblad 17203	1: 250 000 kartblad Røros
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Fagområde Geofysikk	Dokument type	Forekomster (forekomst, gruvefelt, undersøkelsesfelt) Klinkenberg
Råstoffgruppe Malm/metall	Råstofftype Cu Zn	

Sammendrag, innholdsfortegnelse eller innholdsbeskrivelse
VLF and Magnetic survey over Klinkenberg old Cu-Zn mine.
The purpose of the survey was to follow up the helicopter EM survey done over the same area earlier this year.

BILAG TIL JNR. 2137/00

BV 4643

NGU Report 99.109

Magnetic and VLF measurements in the
Klinkenberg area, Røros, Norway ,1999

Report no.: 99.109		ISSN 0800-3416	Grading: Confidential until 19.10.2006	
Title: Magnetic and VLF measurements in Klinkenberg area, Røros, Norway ,1999				
Authors: Einar Dalsegg		Client: Mindex ASA		
County: Sør-Trøndelag		Commune: Røros		
Map-sheet name (M=1:250.000) Røros		Map-sheet no. and -name (M=1:50.000) Røros 1720 III		
Deposit name and grid-reference: Klinkenberg 32V 63580 695870		Number of pages: 28		Price (NOK):
		Map enclosures: 3		
Fieldwork carried out: 25.10 - 28.10 1999	Date of report: 19.11 1999	Project no. 2850.00	Person responsible: <i>Jon S. Lønning</i>	
Summary:				
On behalf of Mindex ASA the Geological Survey of Norway have executed VLF and Magnetic survey over Klinkenberg old Cu-Zn mine. Klinkenberg are located at Røros in Sør- Trøndelag county. The purpose of the survey was to follow up the Helicopter EM survey done over the same area earlier this year.				
Keywords: Geofysikk	Elektromagnetisk måling		Magnetometri	
Sulfid				
			Fagrapport	

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1. INTRODUCTION

On behalf of Mindex ASA, the Geological Survey of Norway have executed VLF and Magnetic survey over Klinkenberg old Cu-Zn mine. Klinkenberg are located at Røros in Sør-Trøndelag county. The location of the area are shown in the map 99-109-01.

The purpose of the survey was to follow up the Helicopter EM survey done over the same area earlier this year.

The survey was executed from 25.10 - 28.10 1999. According to the agreements, no interpretation should be done within the project.

2. MEASUREMENTS

The VLF-measurements was carried out using NGUs own instrument. The best of the two operating transmitters was JXZ (Norway) with the frequency 16.4 kHz. The direction of the magnetic field from the transmitter was 5°.

The magnetic survey was carried out using the Scintrex MP3 magnetometer (accuracy 1nT). No base station magnetometer in the area was available, but the measurements was checked against diurnal variations at a controlpoint. There was only small diurnals during the survey and the data quality was good.

3. RESULTS

The results of the VLF measurements are presented as curves in figures 1 – 16. The magnetic measurements (total field) are presented as curves in figures 17 – 24, and as contoured color-shaded map in scale 1: 5000 in map 99.109-02.

Map -03 shows the magnetic total field as contoured color-shaded map in scale 1 : 2000.

Color maps are produced using Geosoft Montaj software version 4.1. Grid cell size was 10 meter.

KLINKENBERG
Magnetic total field
Profile 650 N

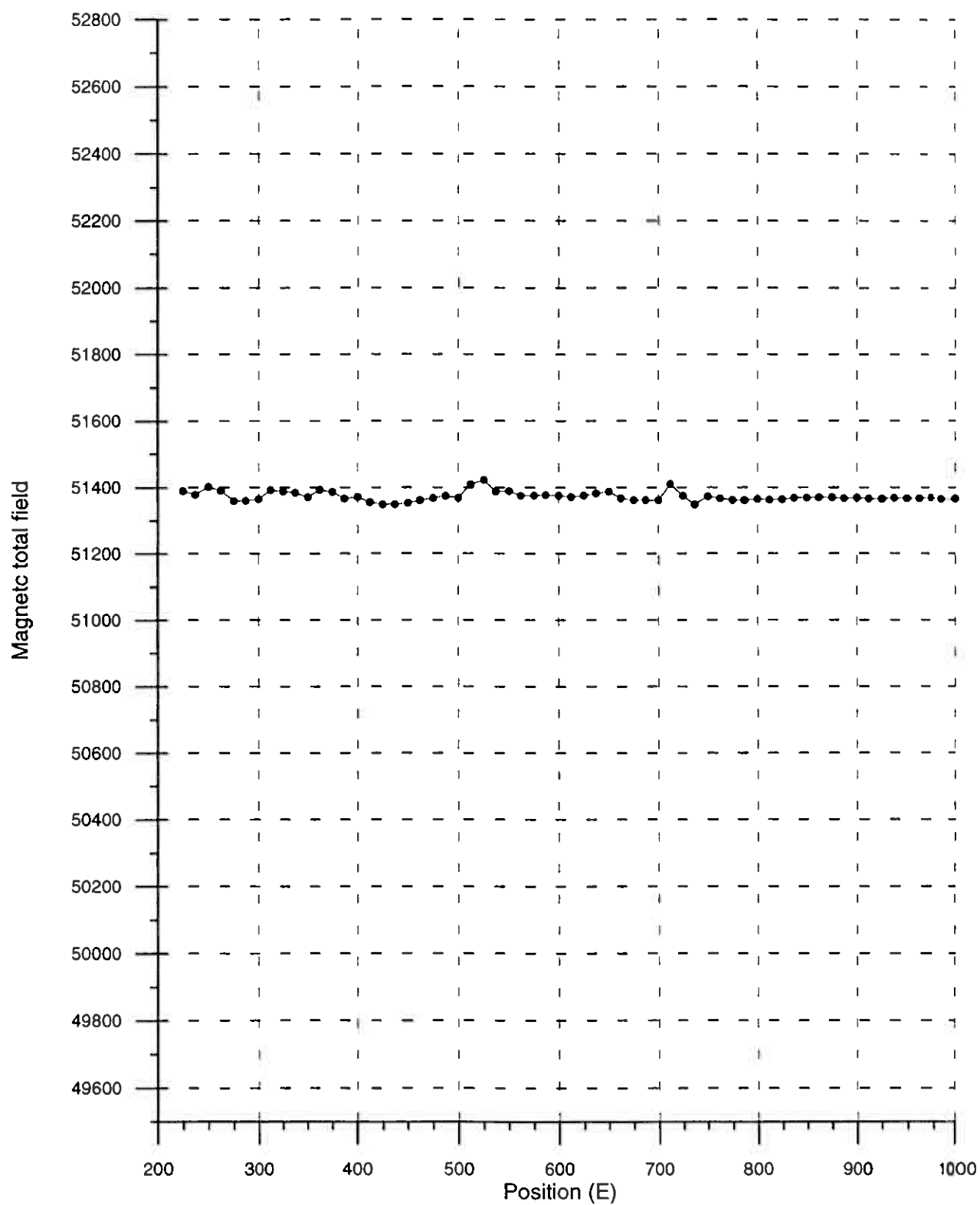


Figure 1. Magnetic total field profile 650 N.

KLINKENBERG
Magnetic total field
Profile 750 N

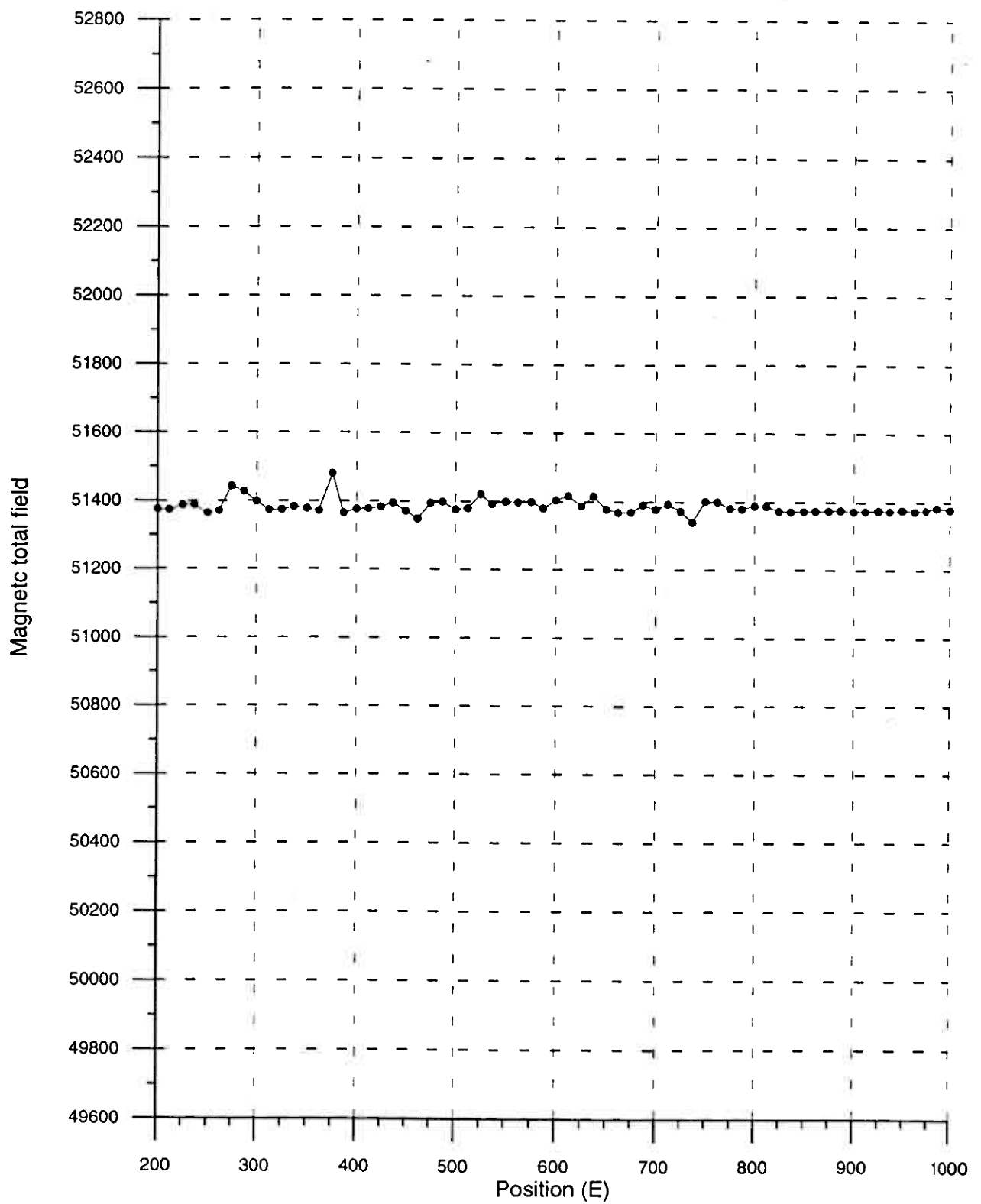


Figure 2. Magnetic total field profile 750 N.

KLINKENBERG
Magnetic total field
Profile 800 N

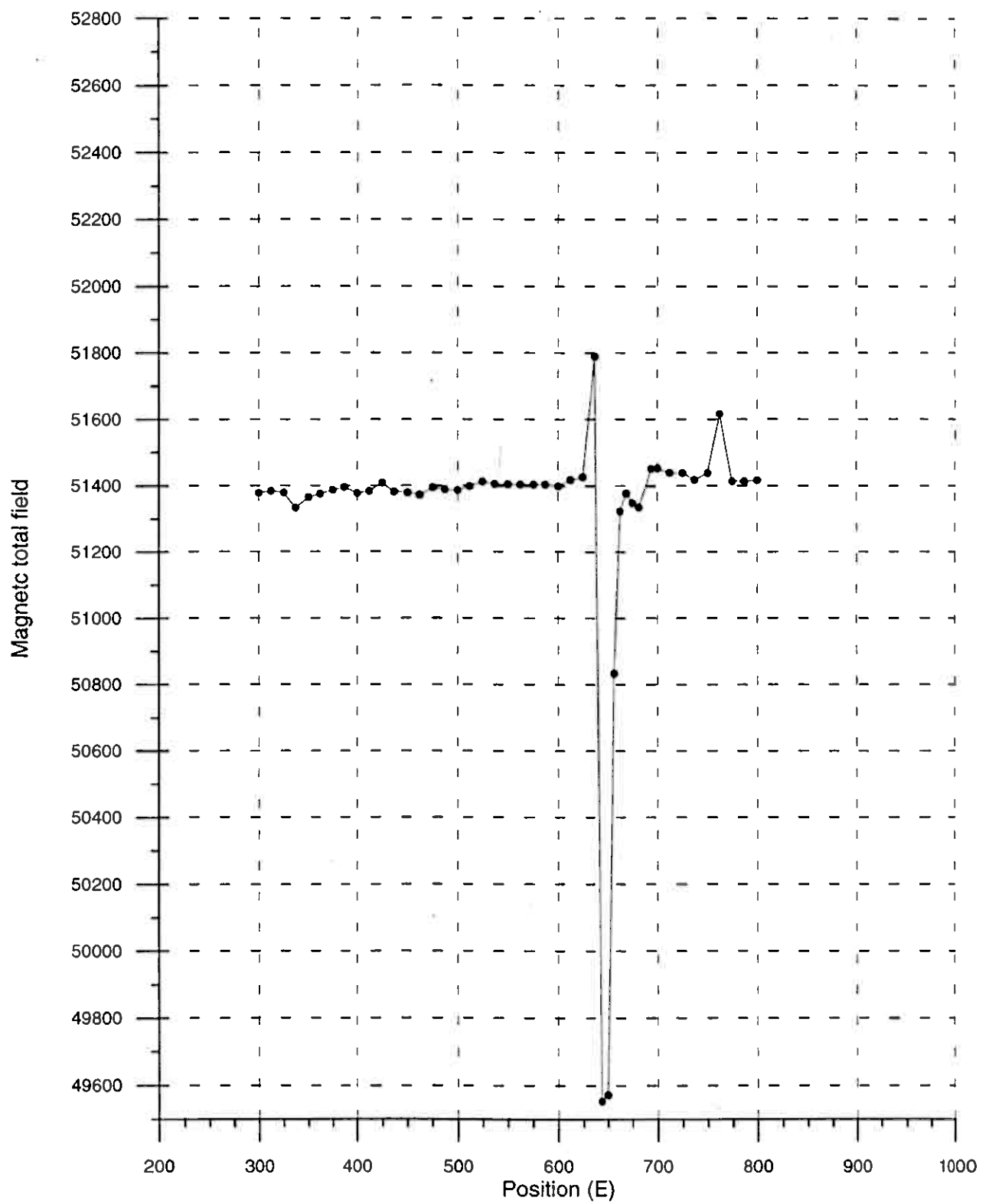


Figure 3. Magnetic total field profile 800 N.

KLINKENBERG
Magnetic total field
Profile 850 N

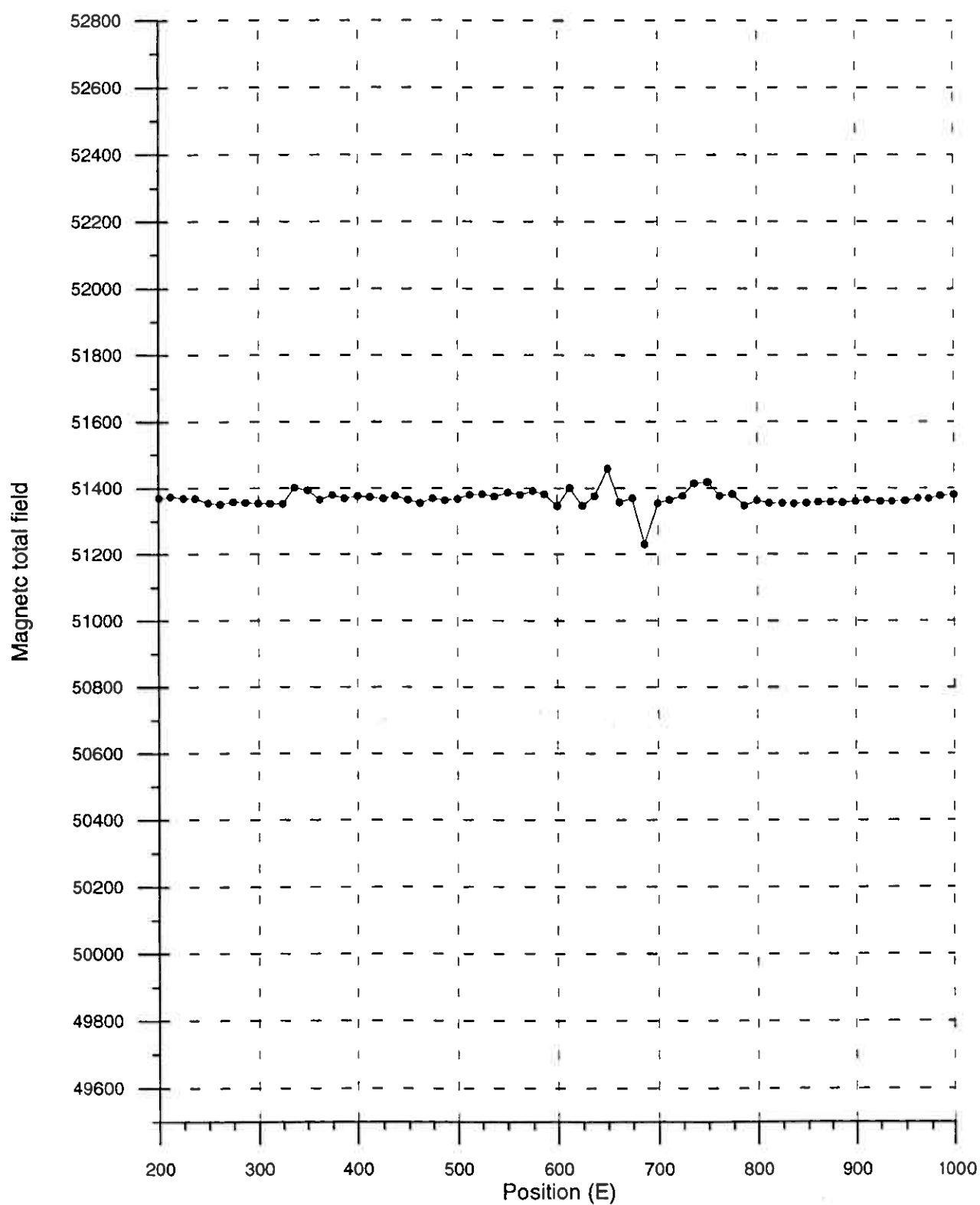


Figure 4. Magnetic total field profile 850 N.

KLINKENBERG
Magnetic total field
Profile 900 N

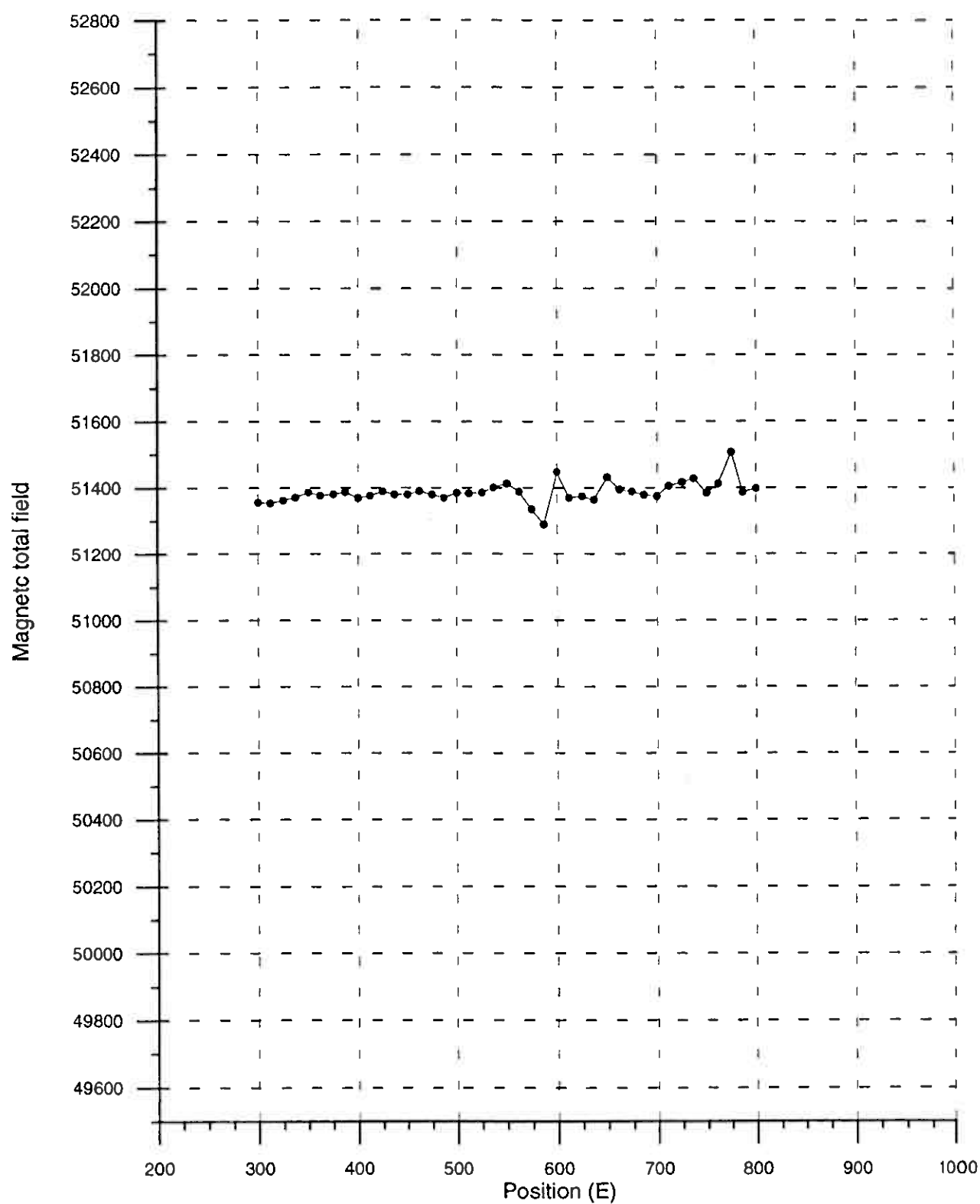


Figure 5. Magnetic total field profile 900 N.

KLINKENBERG
Magnetic total field
Profile 950 N

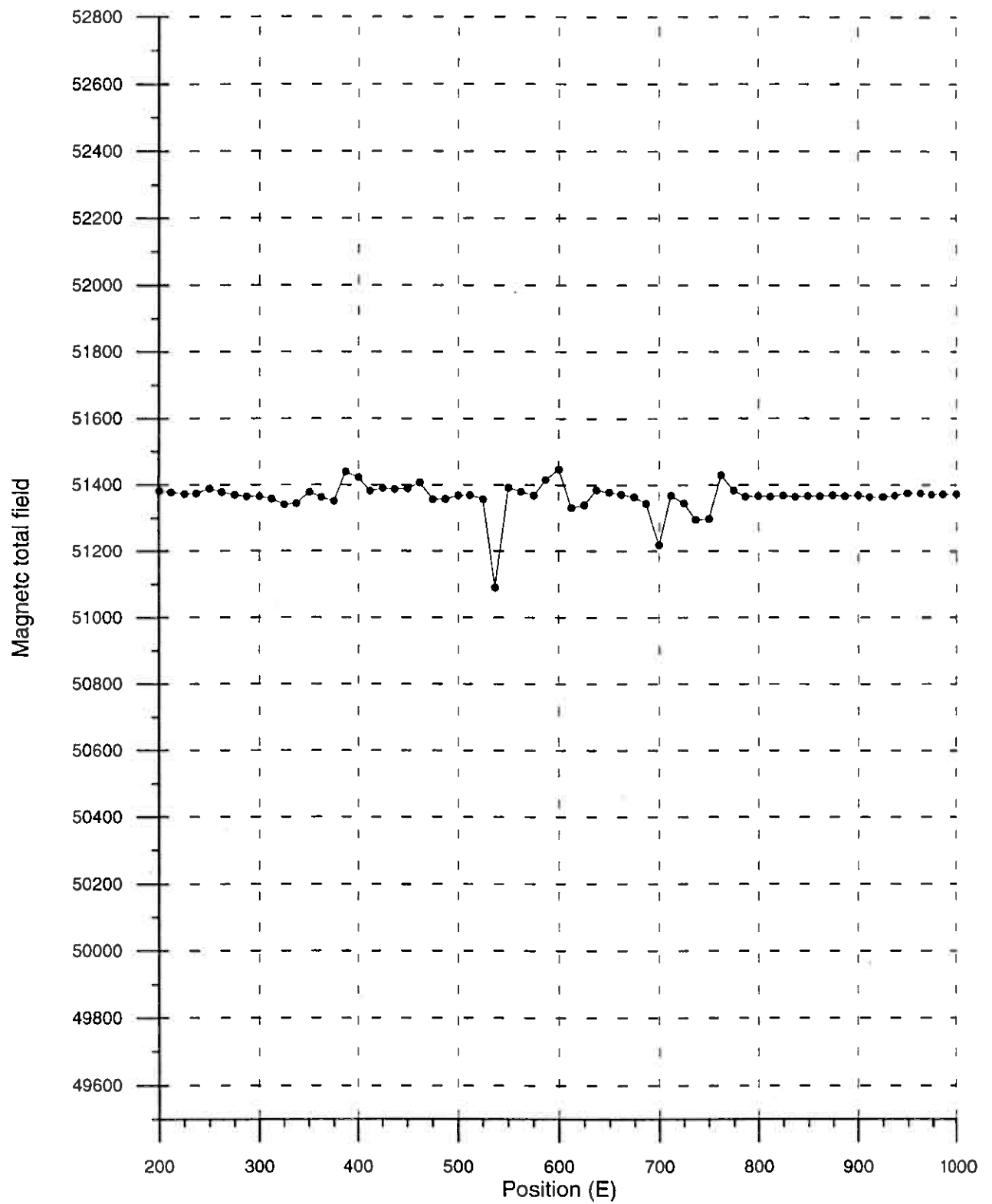


Figure 6. Magnetic total field profile 950 N.

KLINKENBERG
Magnetic total field
Profile 1000 N

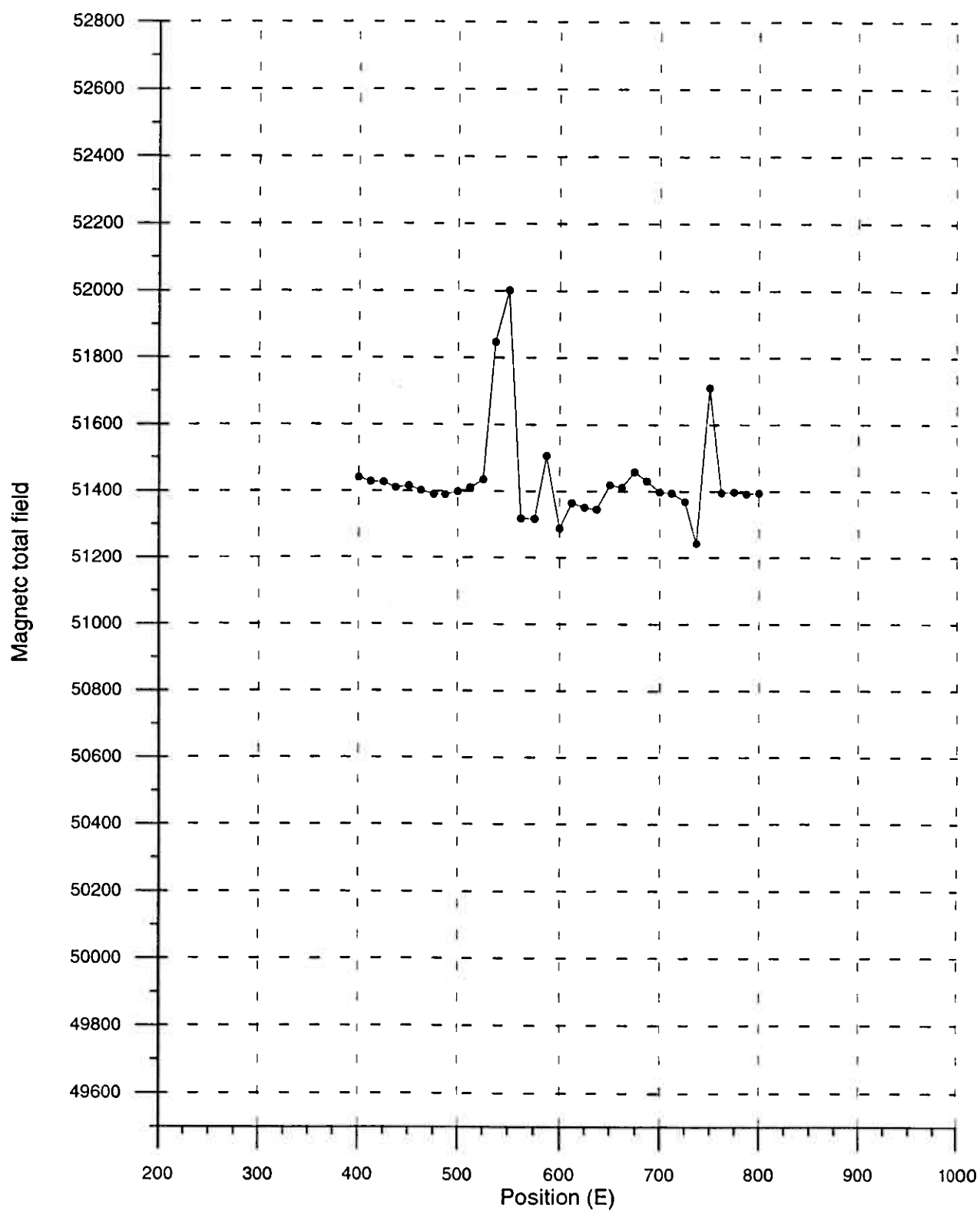


Figure 7. Magnetic total field profile 1000 N.

KLINKENBERG
Magnetic total field
Profile 1050 N

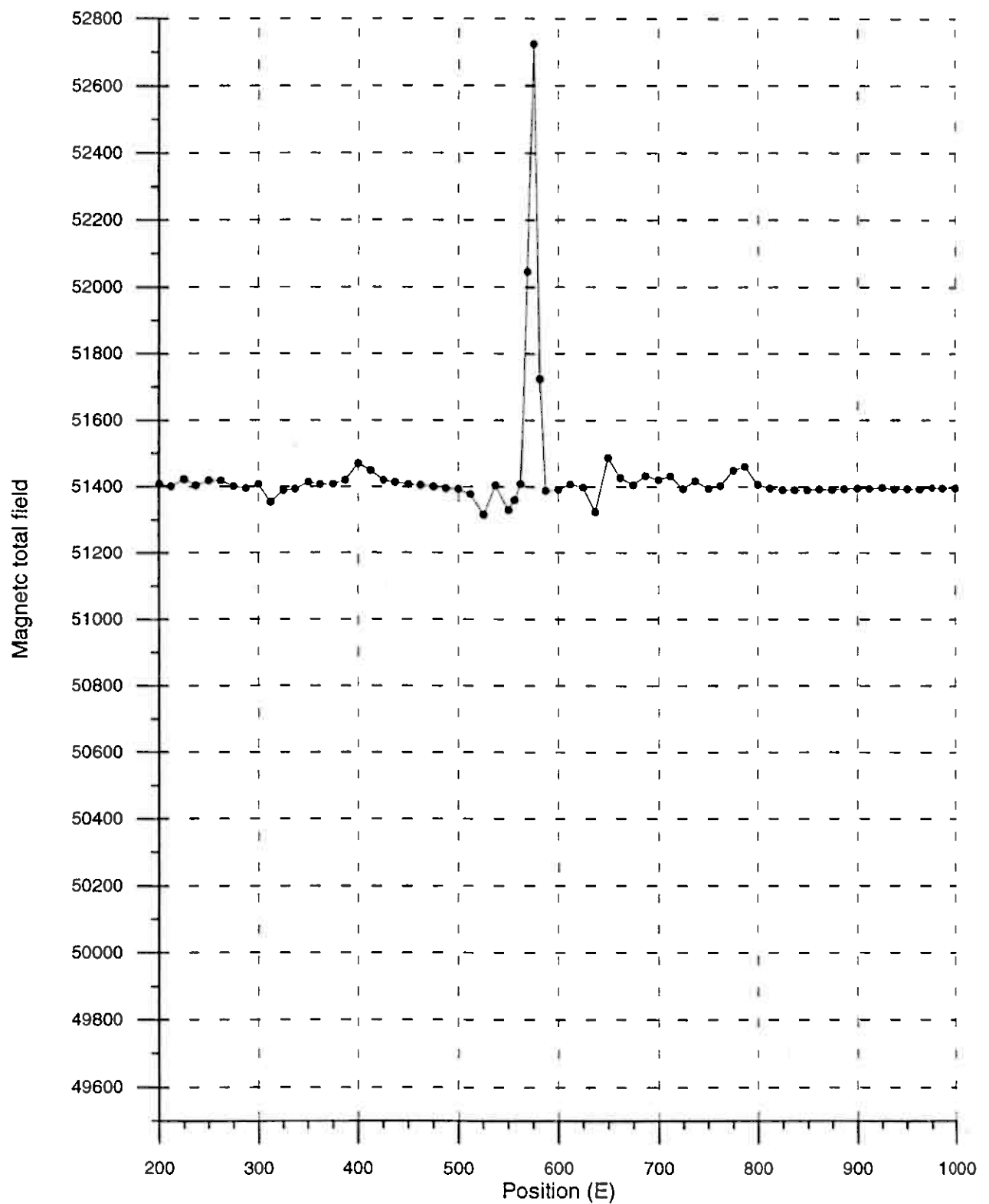


Figure 8. Magnetic total field profile 1050 N.

KLINKENBERG
Magnetic total field
Profile 1100 N

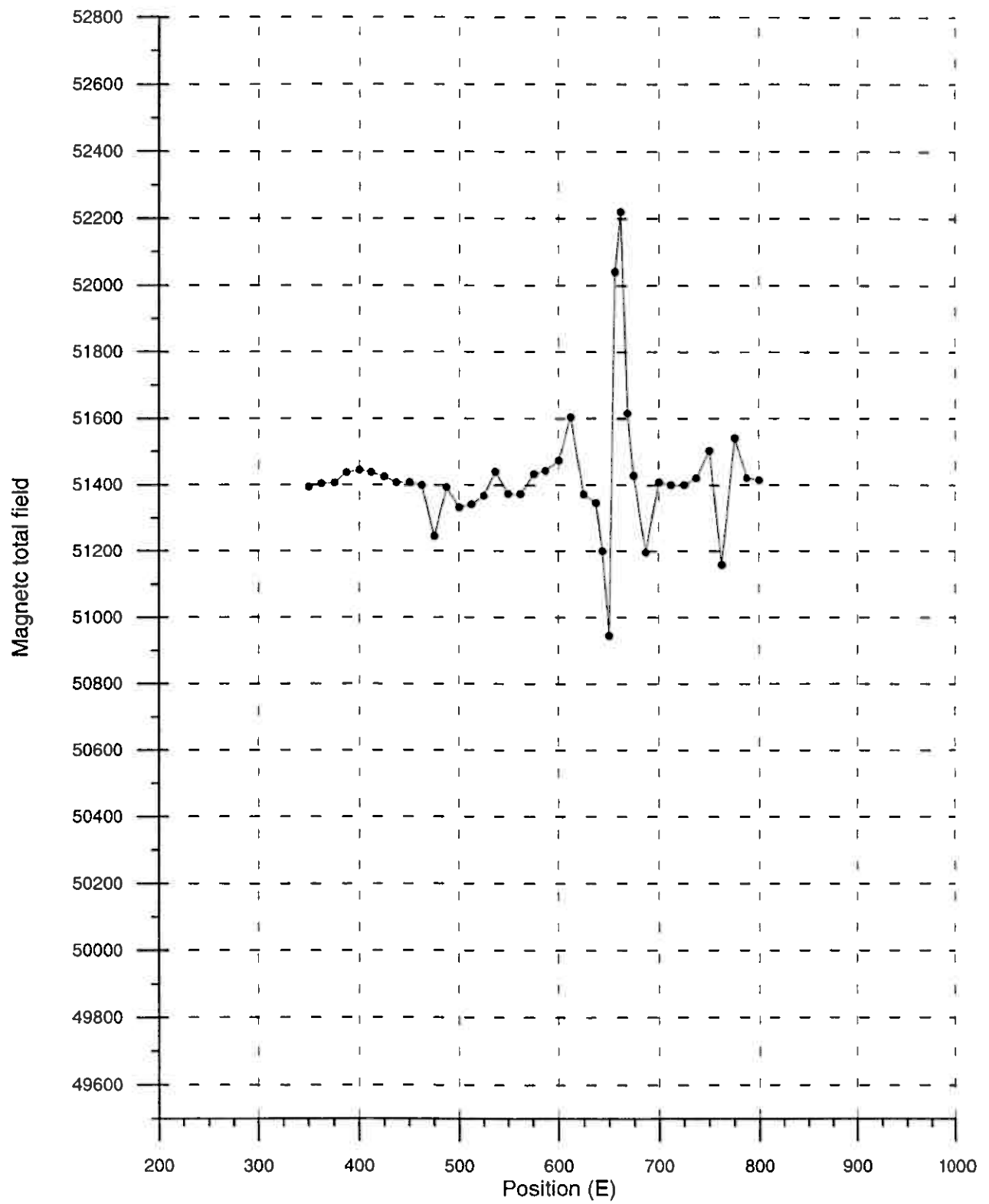


Figure 9. Magnetic total field profile 1100 N.

KLINKENBERG
Magnetic total field
Profile 1150 N

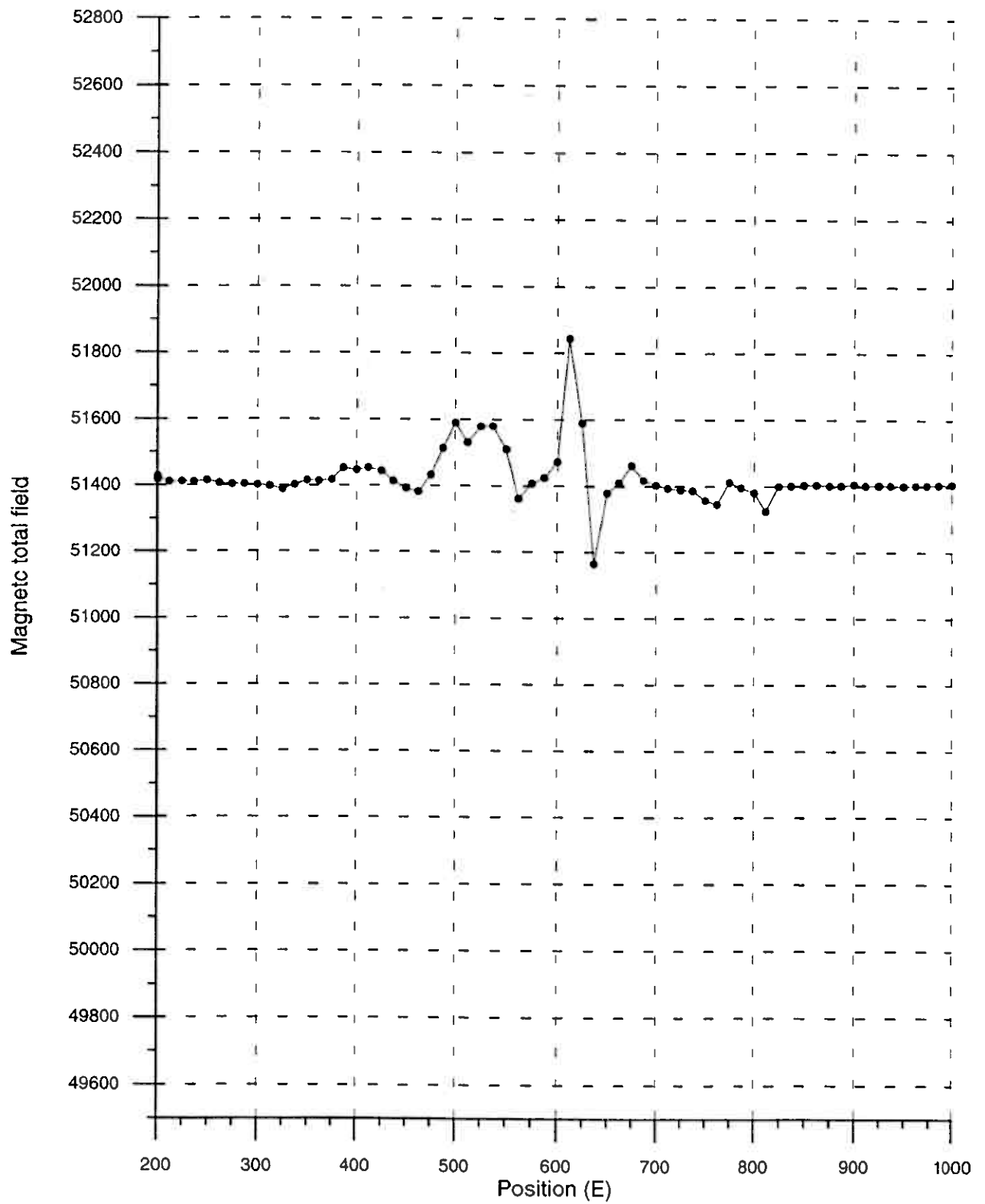


Figure 10. Magnetic total field profile 1150 N.

KLINKENBERG
Magnetic total field
Profile 1200 N

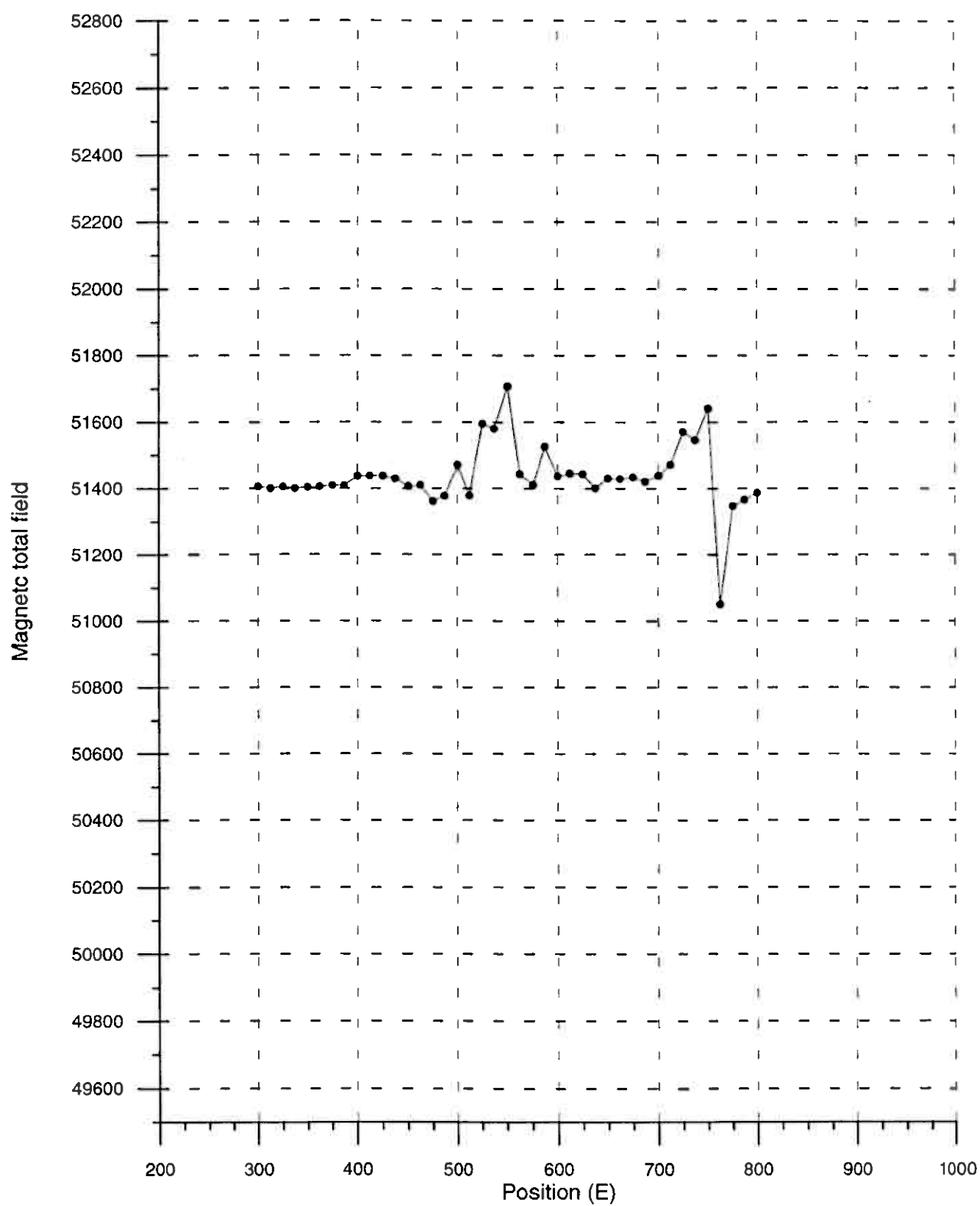


Figure 11. Magnetic total field profile 1200 N.

KLINKENBERG
Magnetic total field
Profile 1250 N

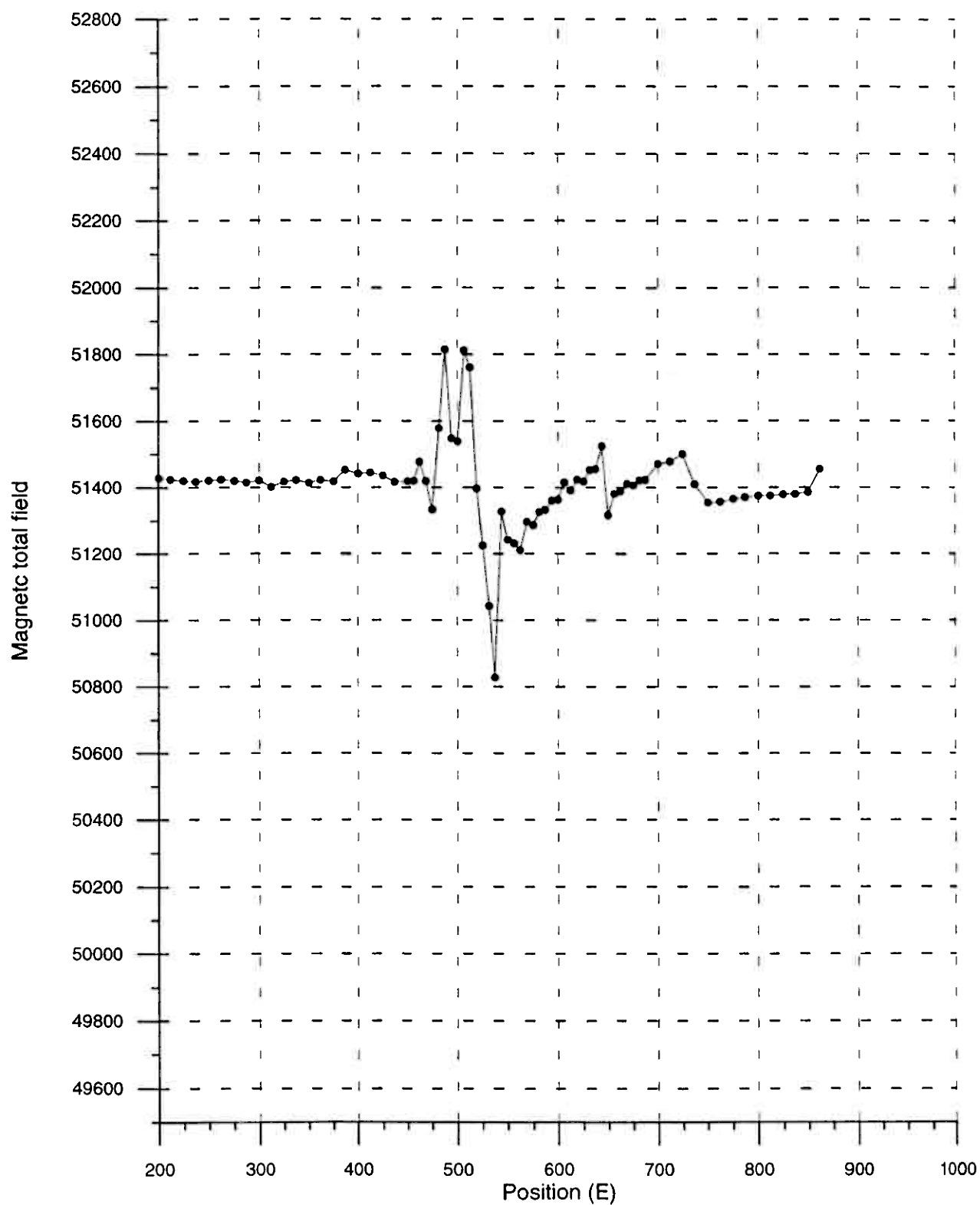


Figure 12. Magnetic total field profile 1250 N.

KLINKENBERG
Magnetic total field
Profile 1300 N

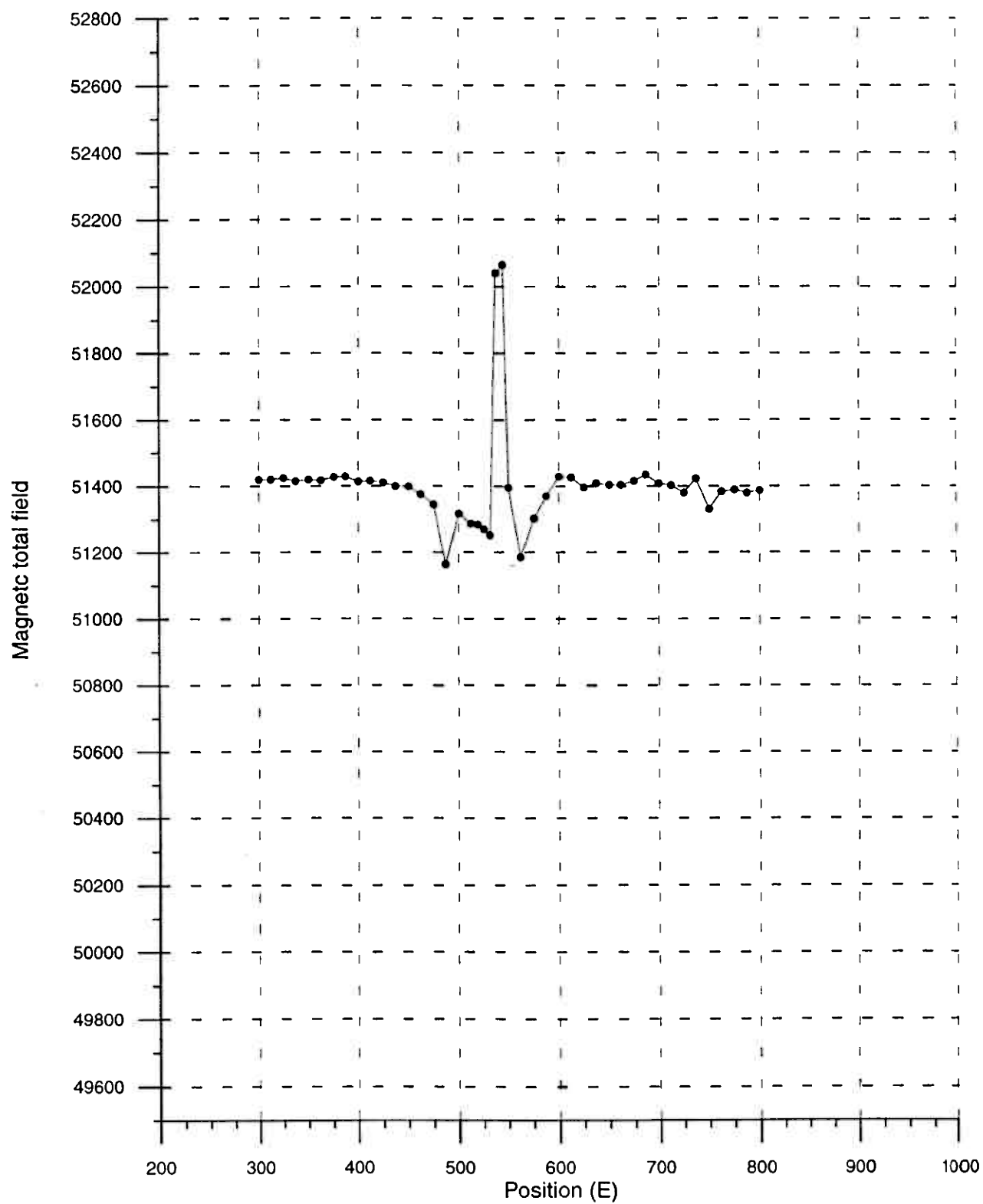


Figure 13. Magnetic total field profile 1300 N.

KLINKENBERG
Magnetic total field
Profile 1350 N

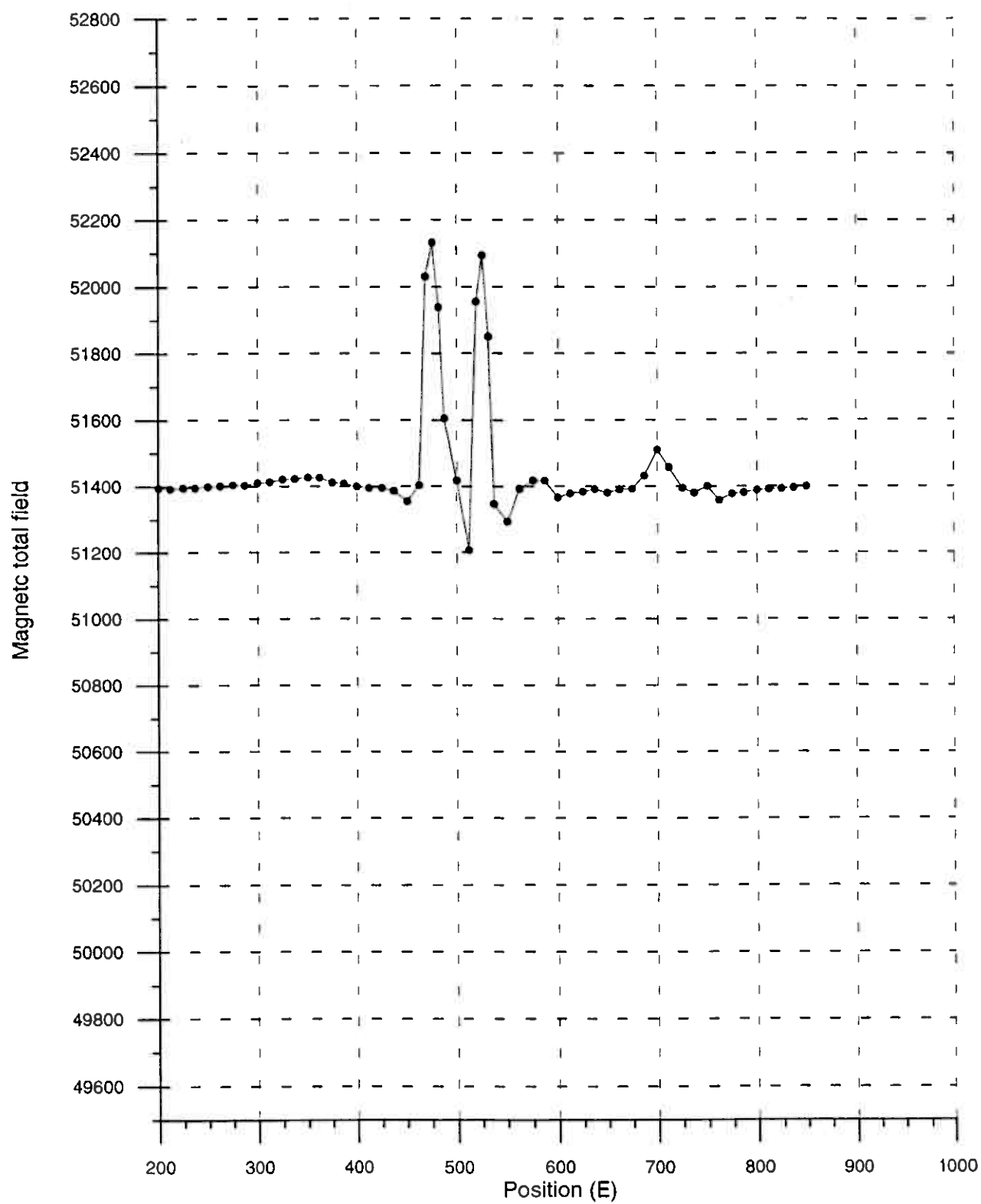


Figure 14. Magnetic total field profile 1350 N.

KLINKENBERG
Magnetic total field
Profile 1400 N

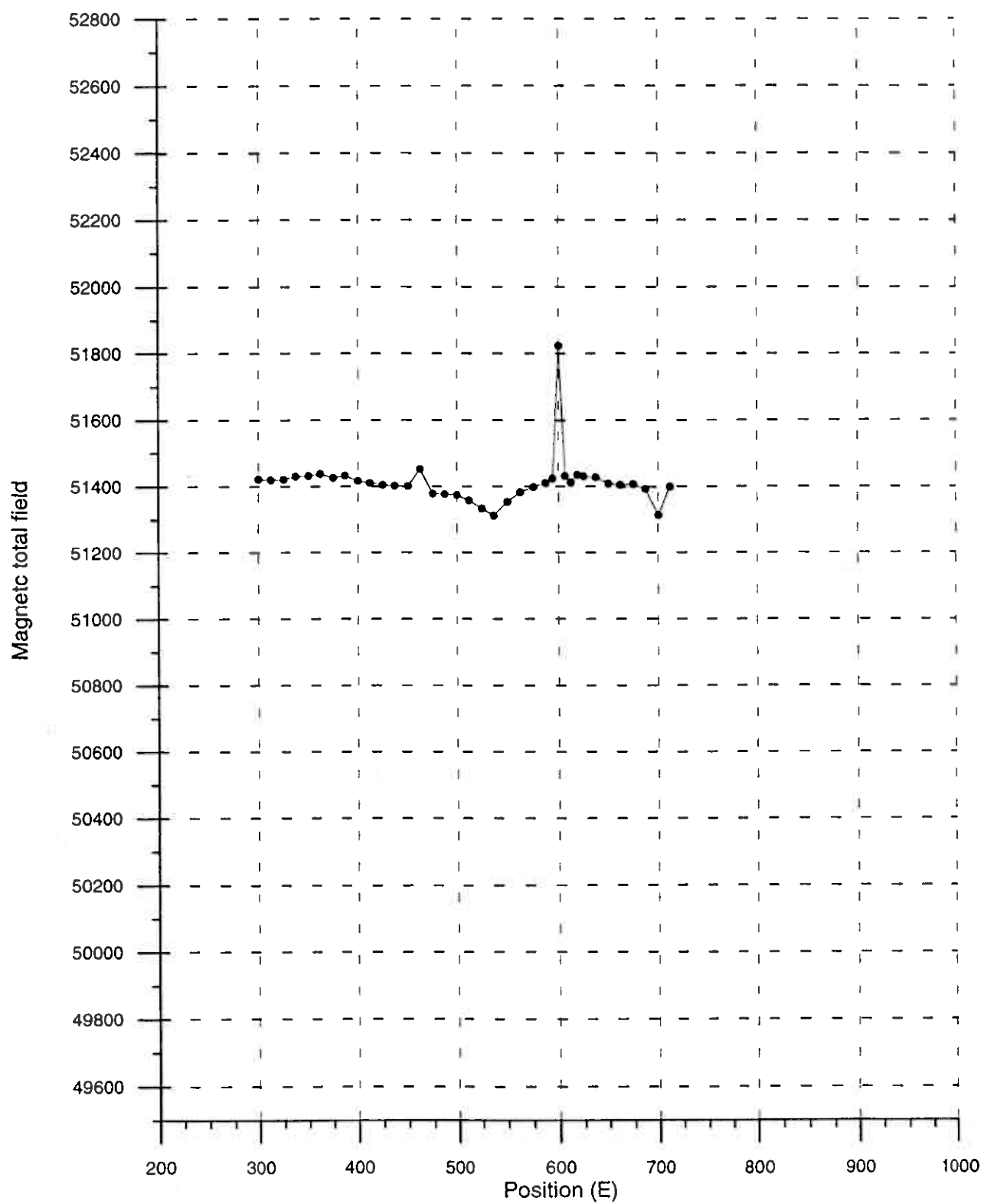


Figure 15. Magnetic total field profile 1350 N.

KLINKENBERG
Magnetic total field
Profile 1450 N

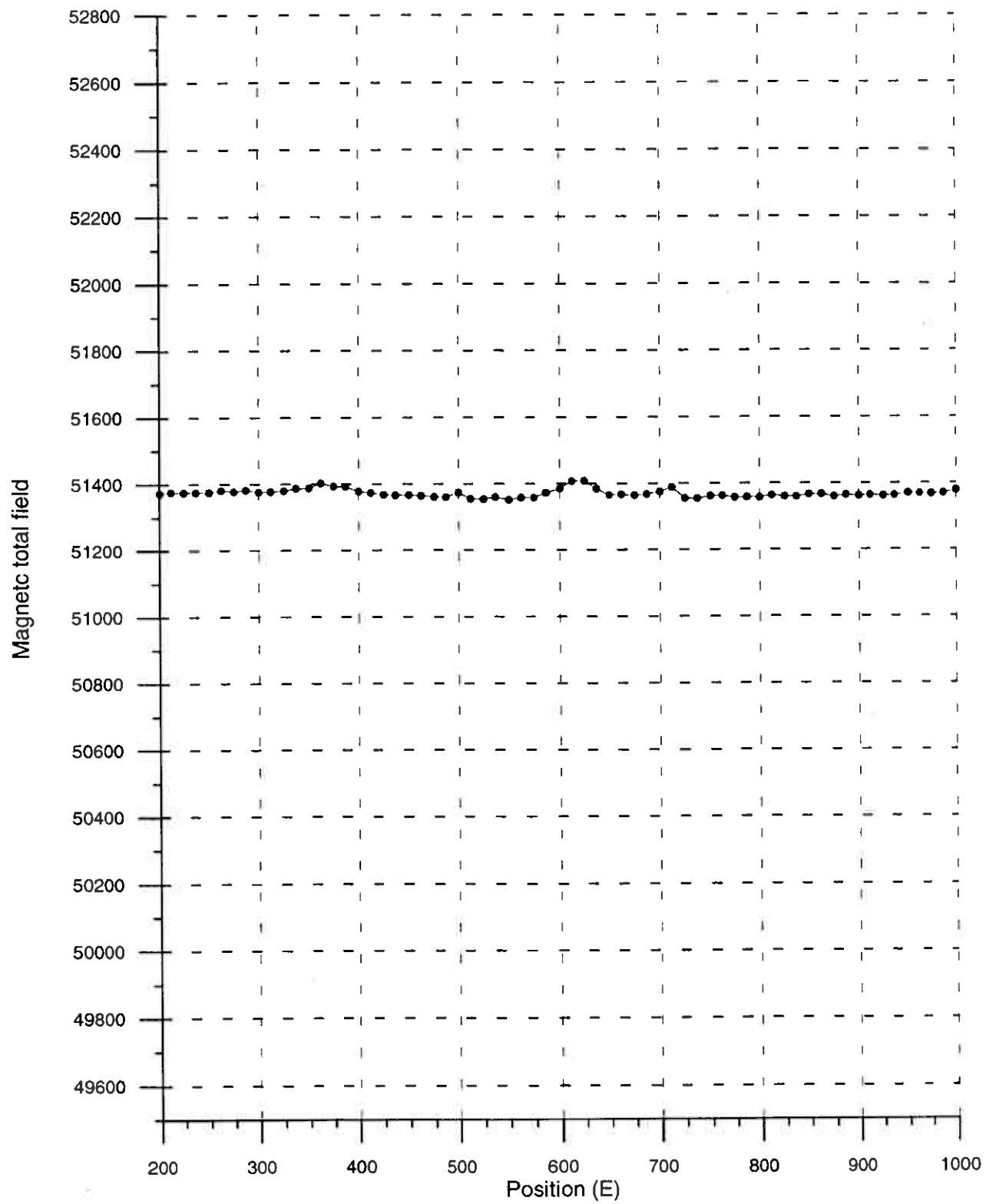
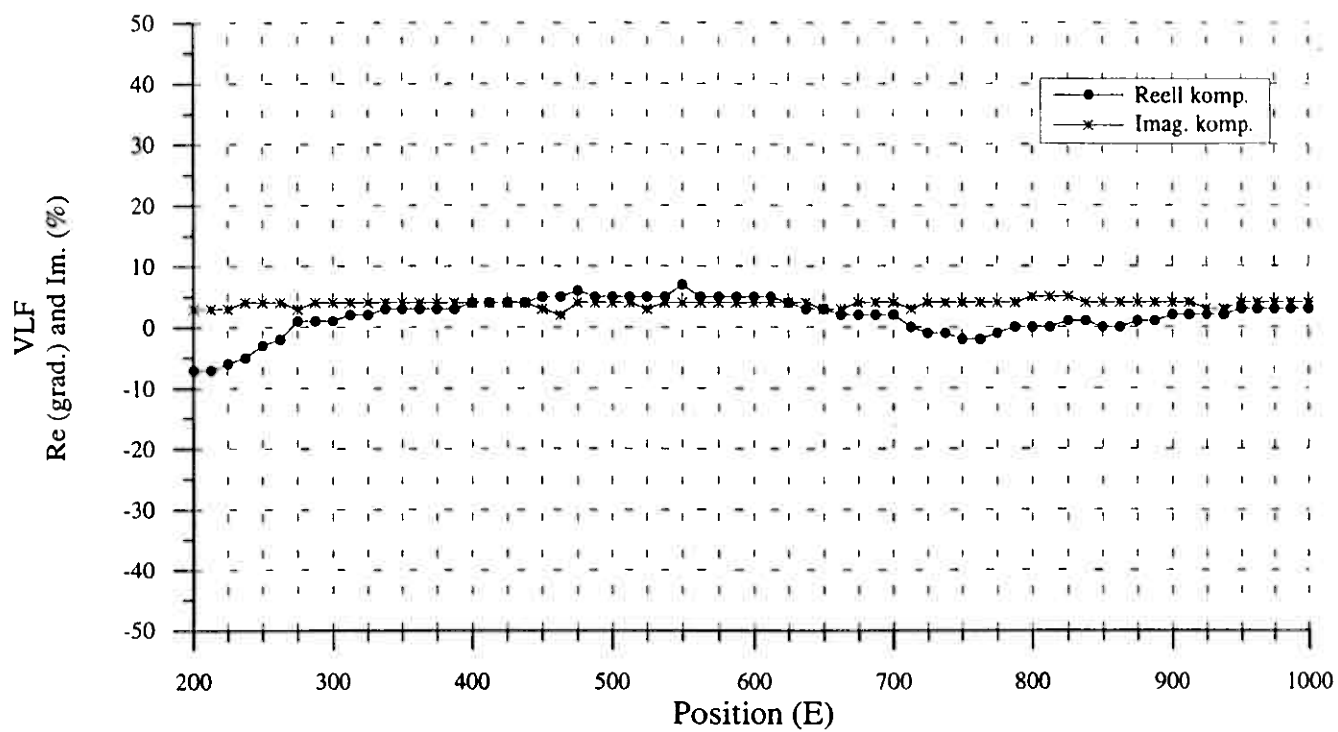


Figure 16. Magnetic total field profile 1450 N.

KLINKENBERG
VLF
Profile 650 N



KLINKENBERG
VLF
Profile 750 N

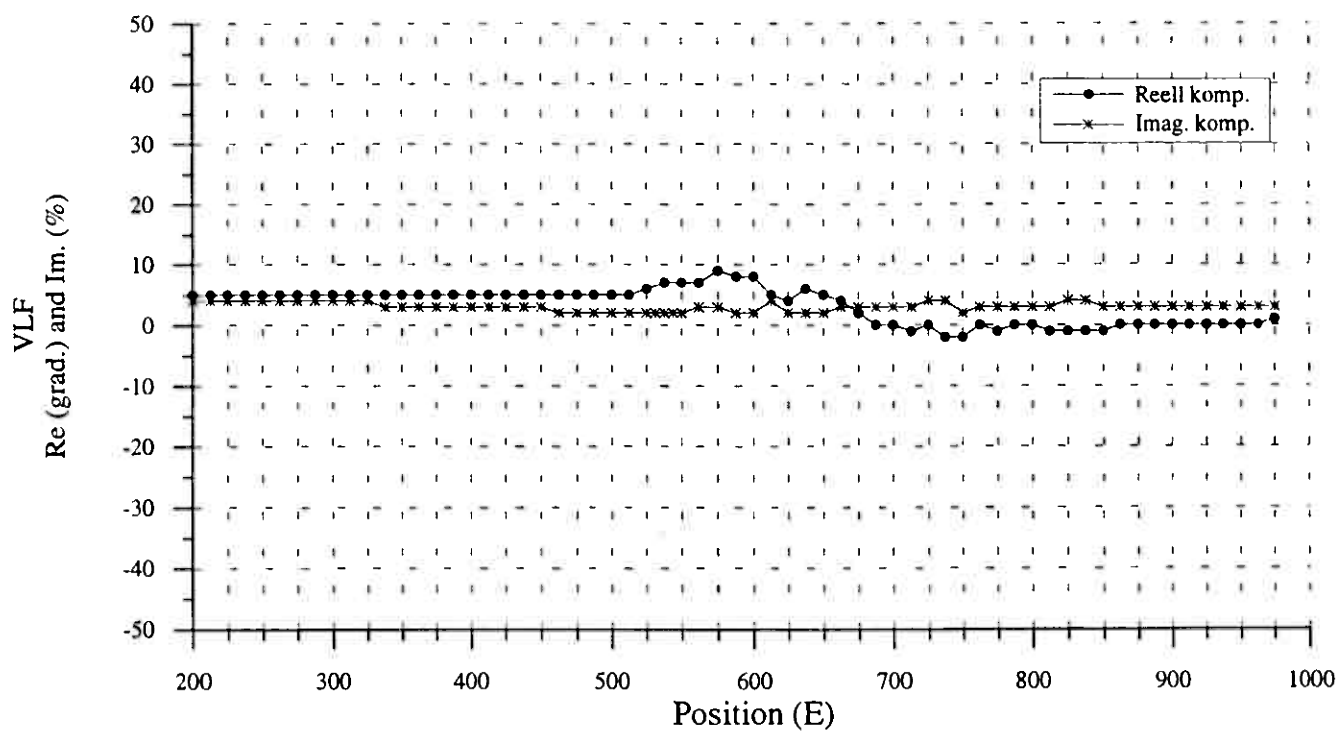
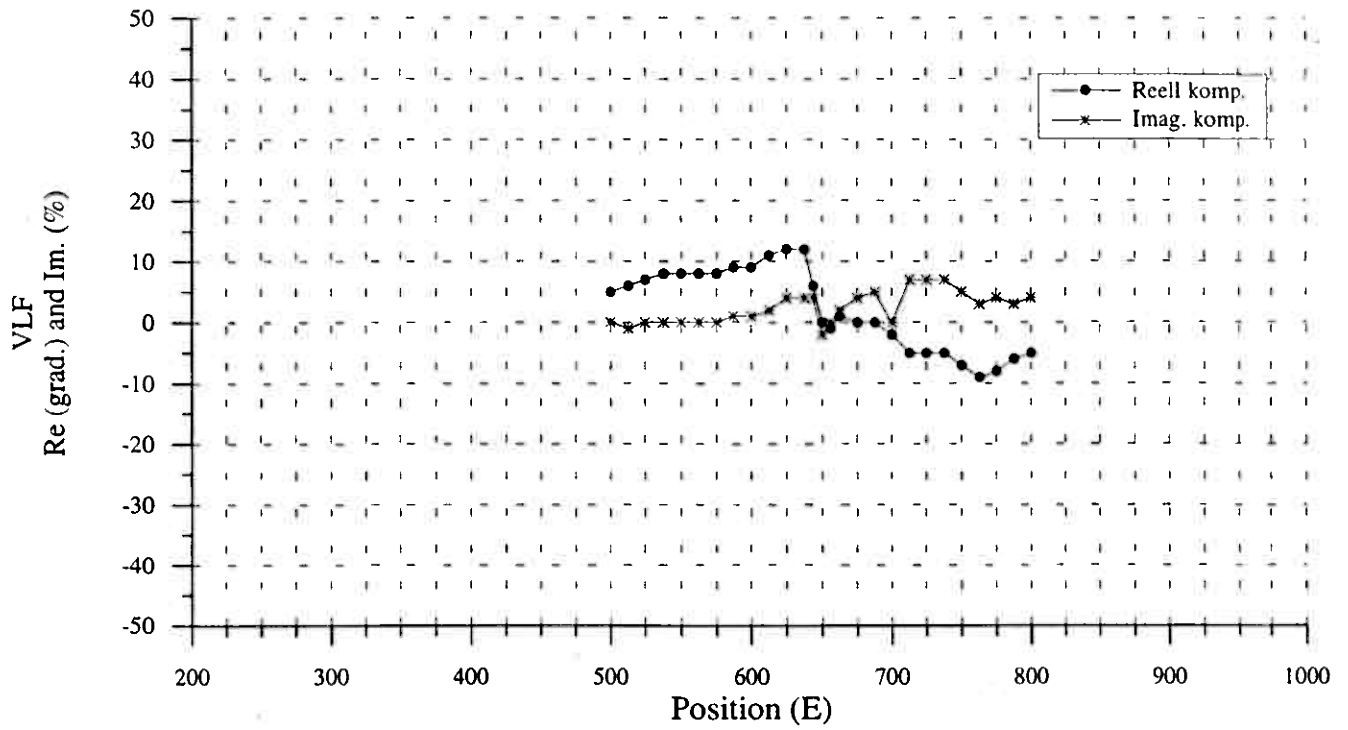


Figure 17. VLF profile 650 N and 750 N.

KLINKENBERG
VLF
Profile 800 N



KLINKENBERG
VLF
Profile 850 N

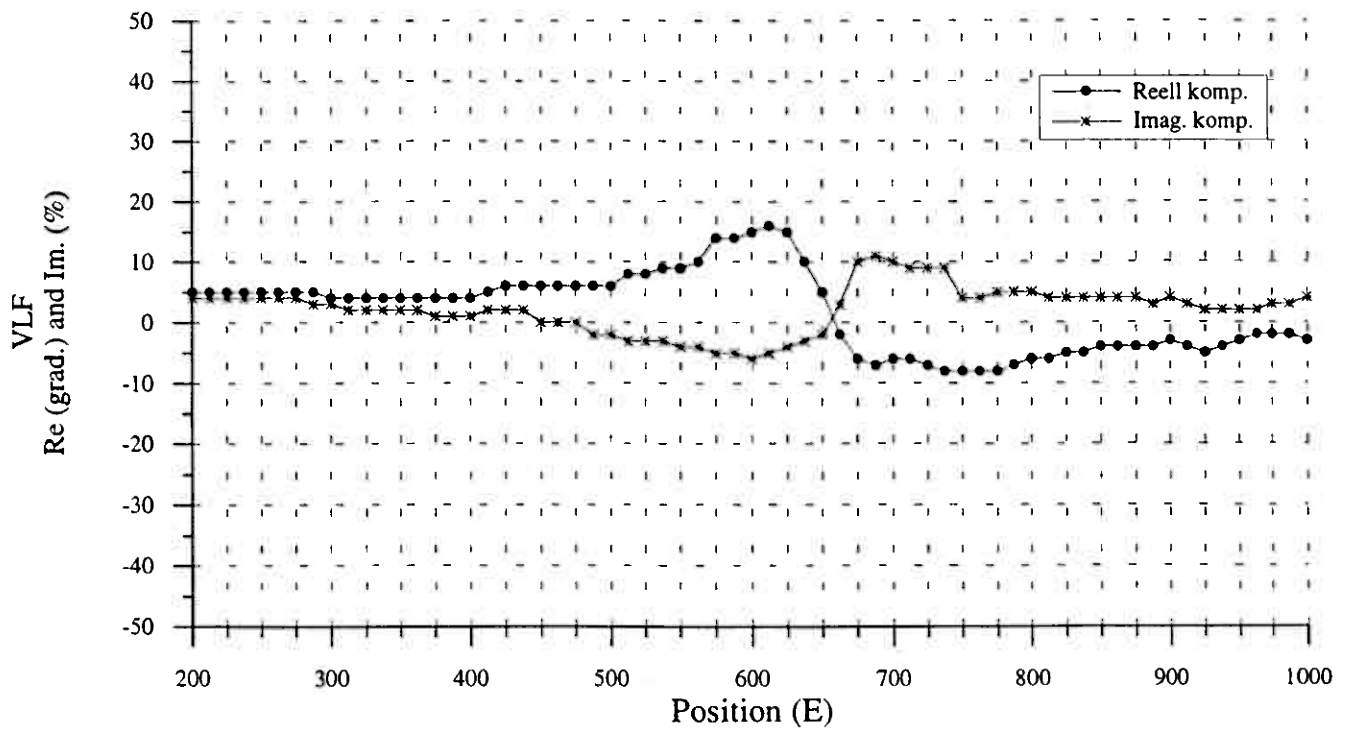
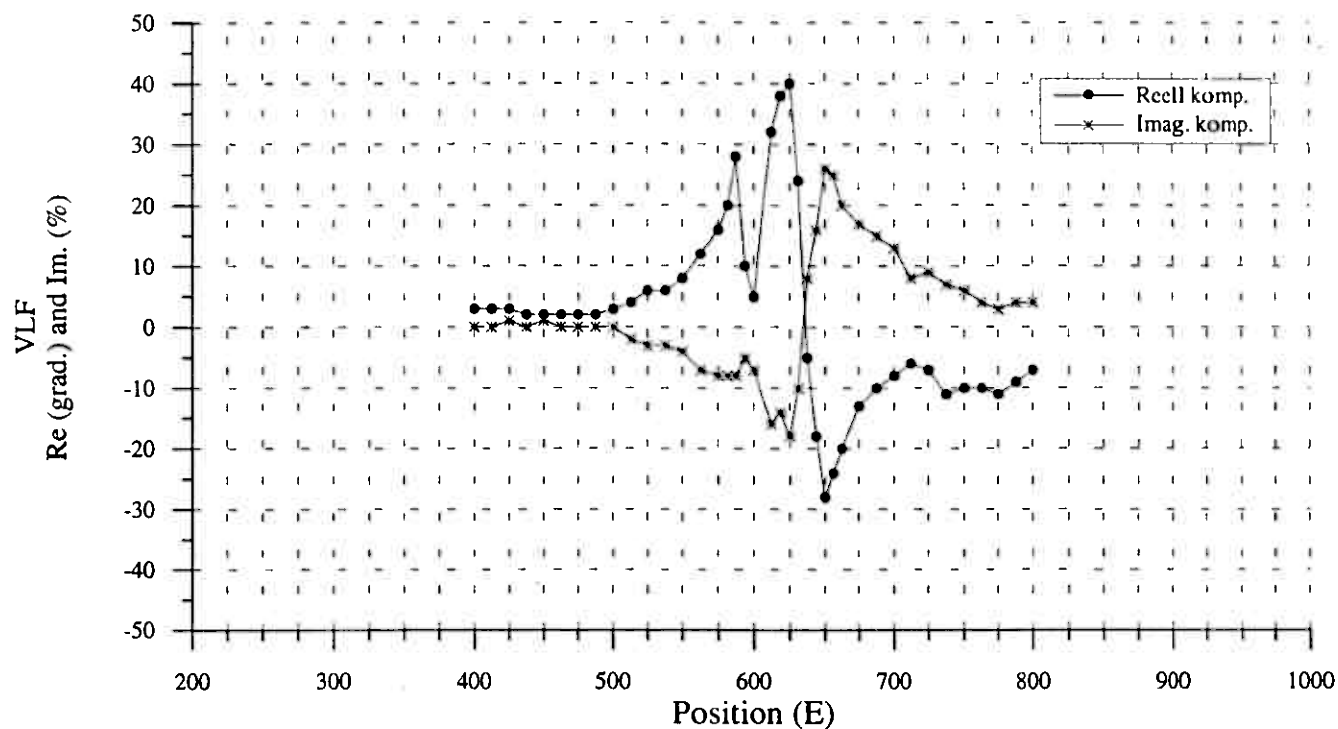


Figure 18. VLF profile 800 N and 850 N.

KLINKENBERG
VLF
Profile 900 N



KLINKENBERG
VLF
Profile 950 N

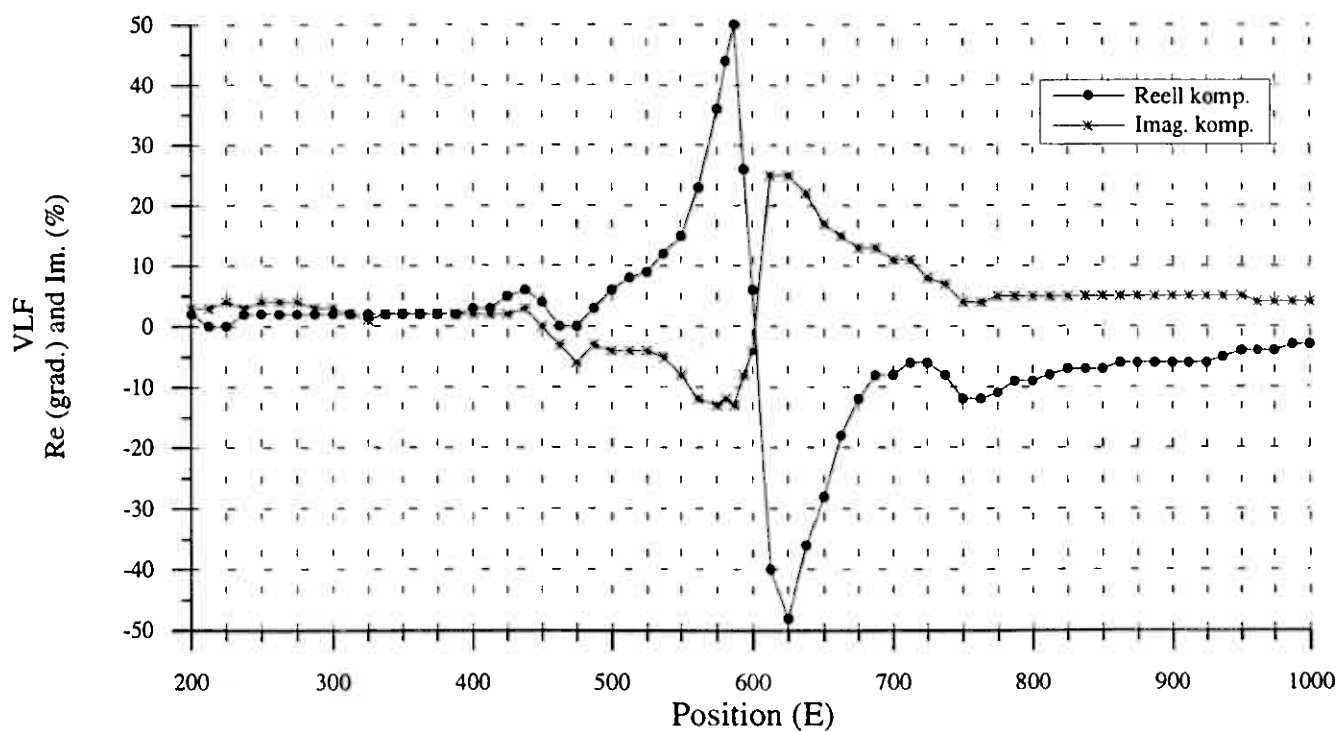


Figure 19. VLF profile 900 N and 950 N.

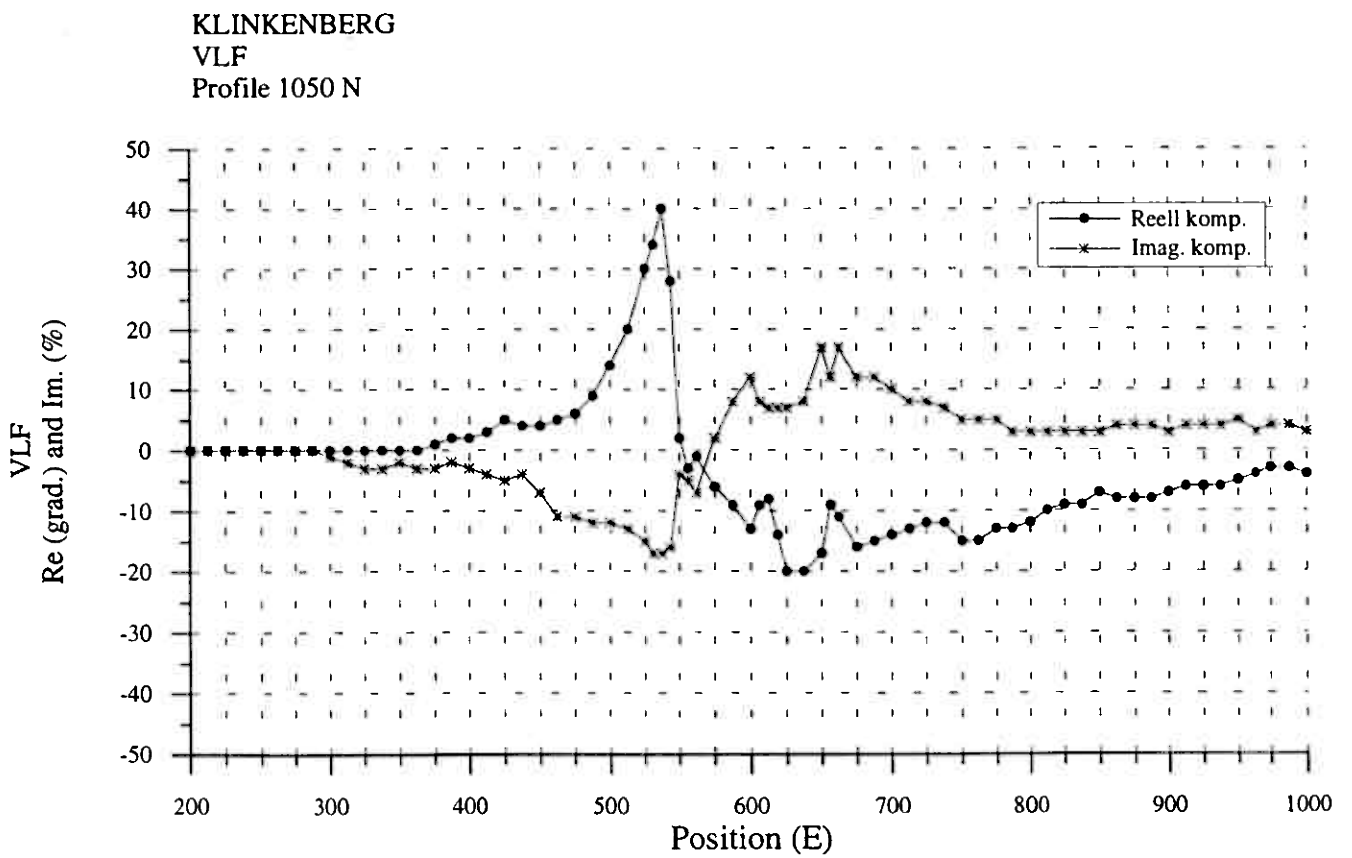
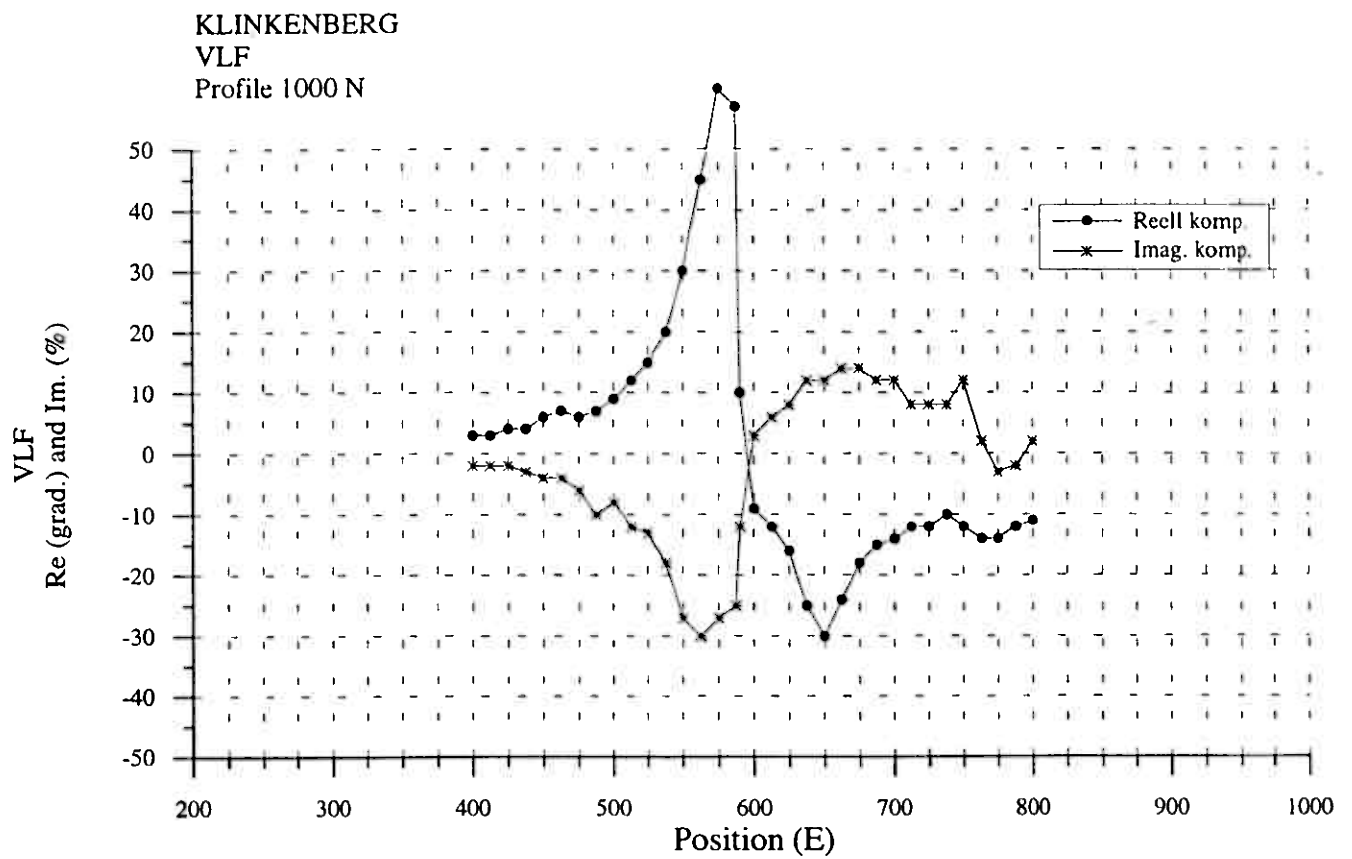
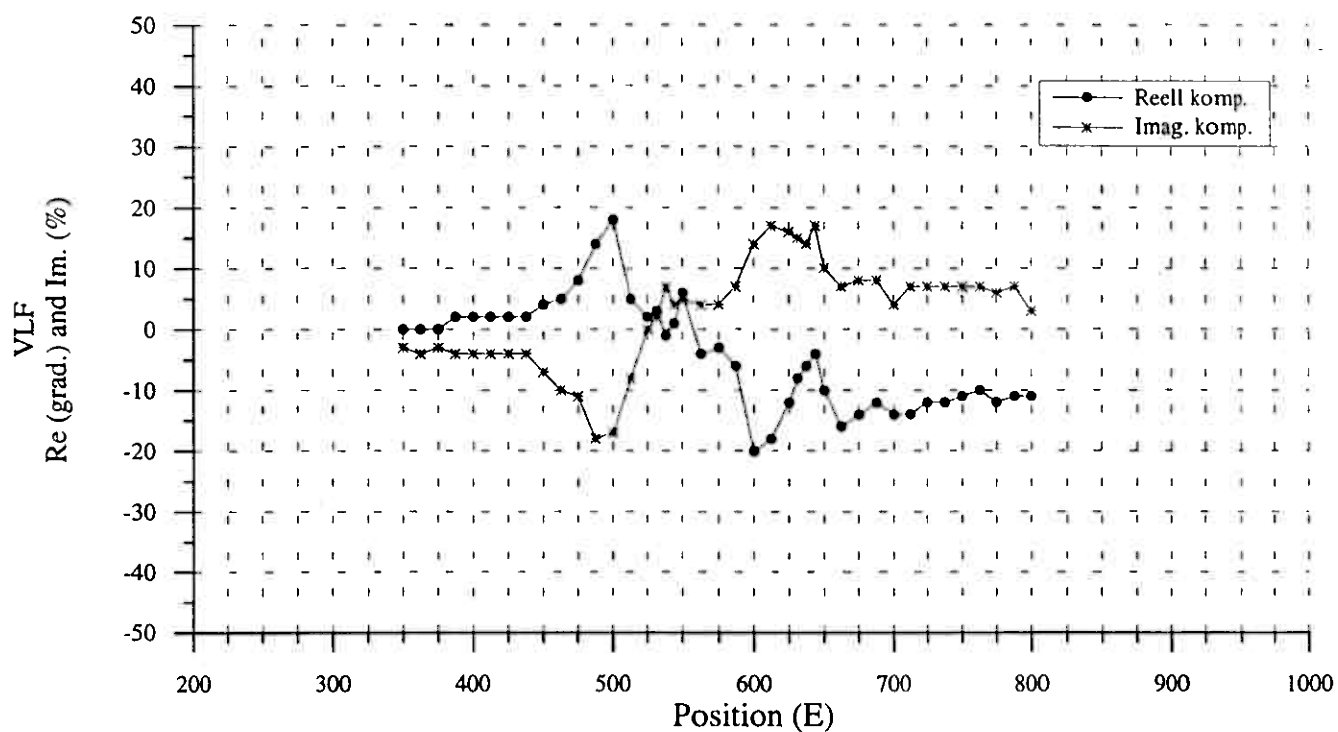


Figure 20. VLF profile 1000 N and 1050 N.

KLINKENBERG
VLF
Profile 1100 N



KLINKENBERG
VLF
Profile 1150 N

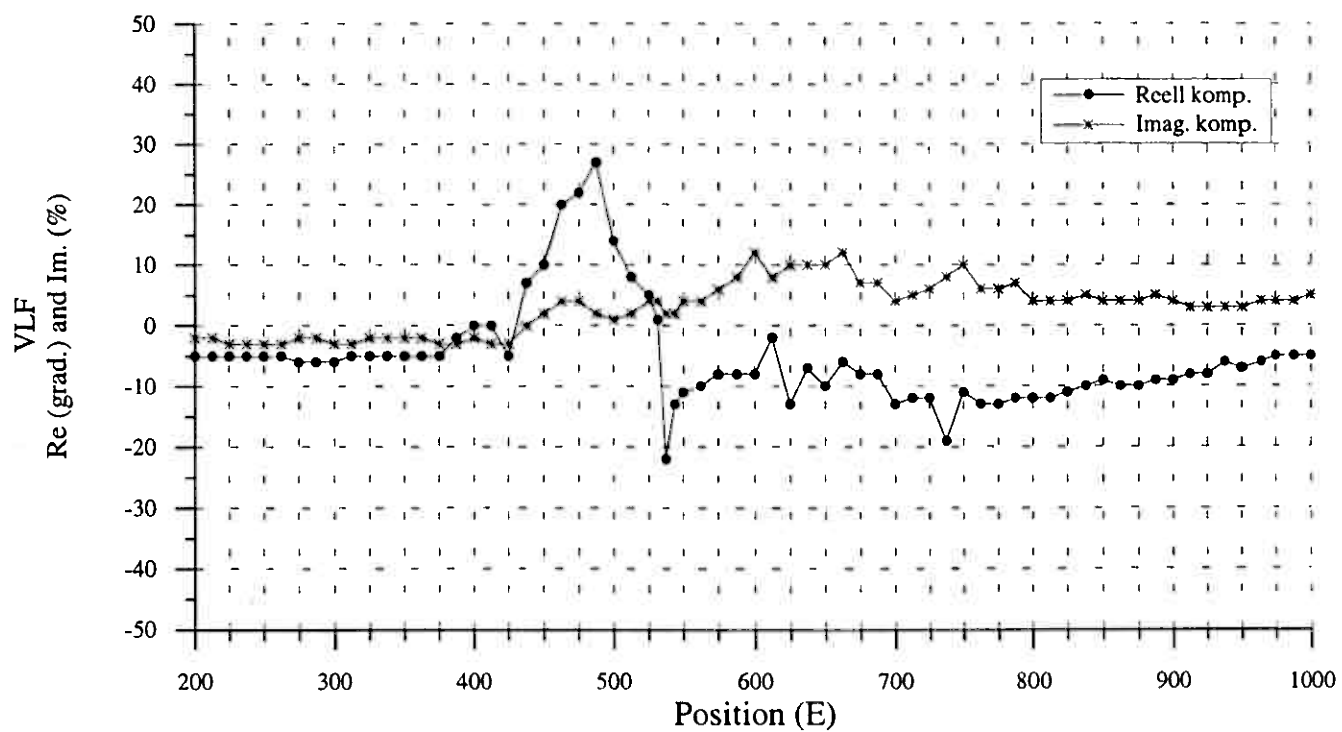
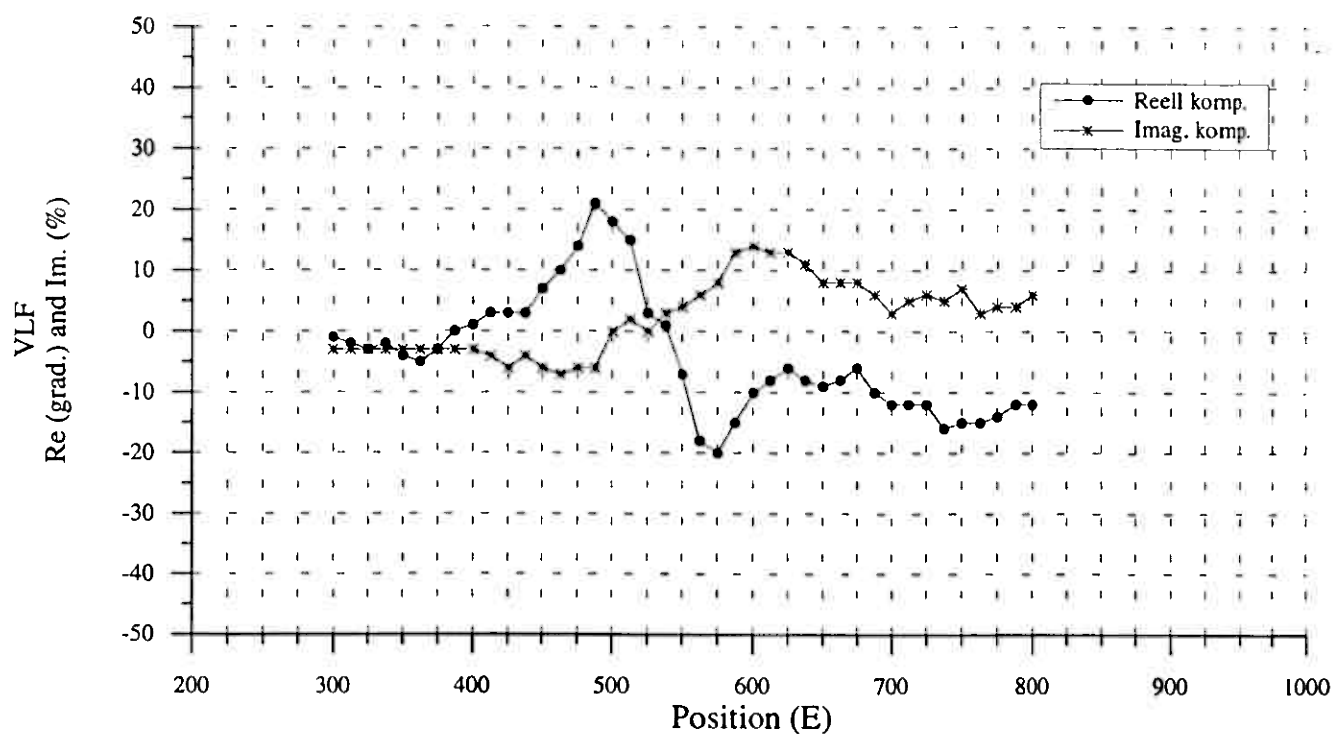


Figure 21. VLF profile 1100 N and 1150 N.

KLINKENBERG
VLF
Profile 1200 N



KLINKENBERG
VLF
Profile 1250 N

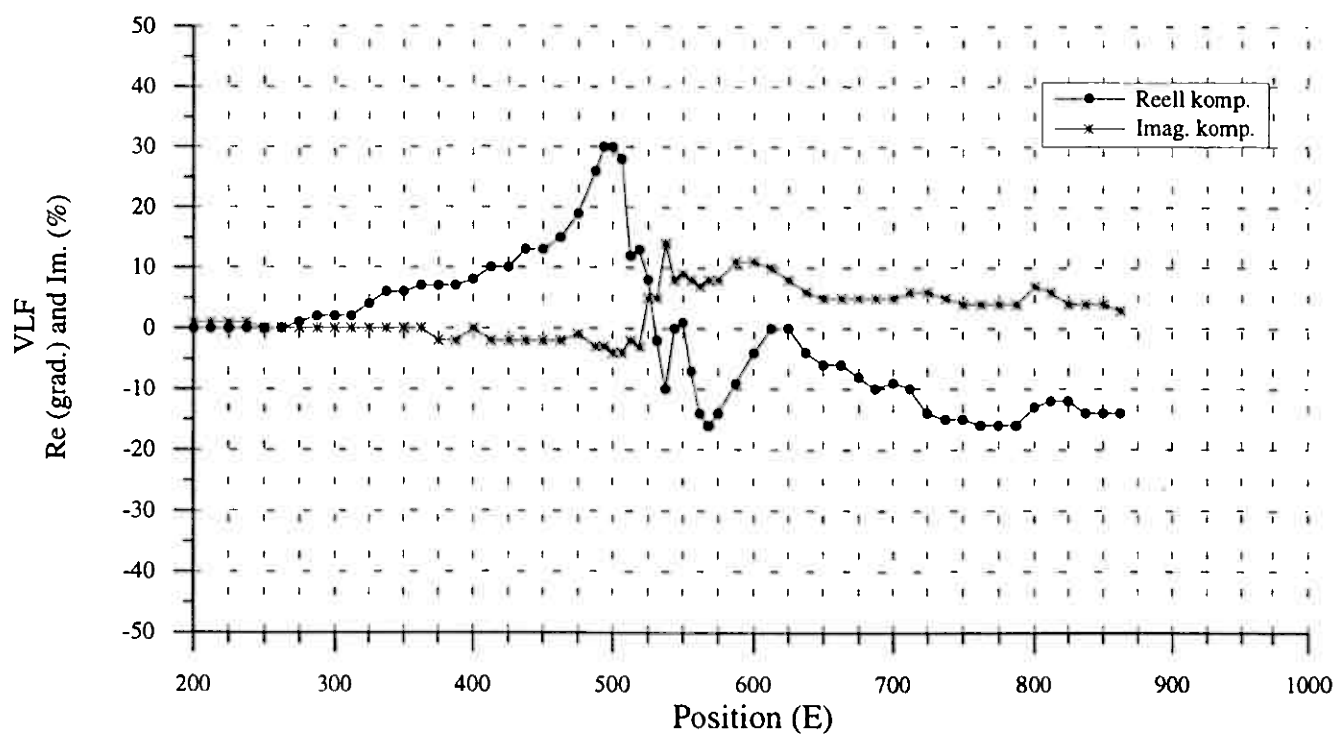
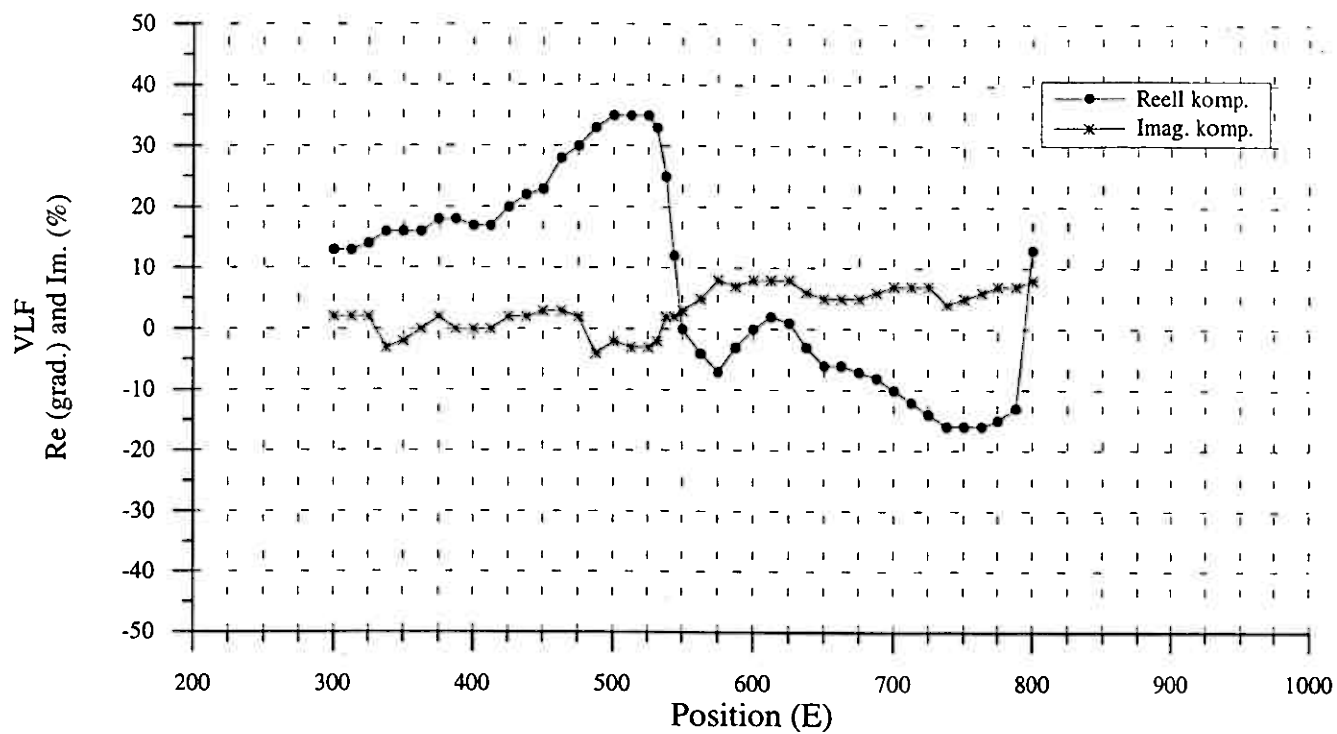


Figure 22. VLF profile 1200 N and 1250 N.

KLINKENBERG
VLF
Profile 1300 N



KLINKENBERG
VLF
Profile 1350 N

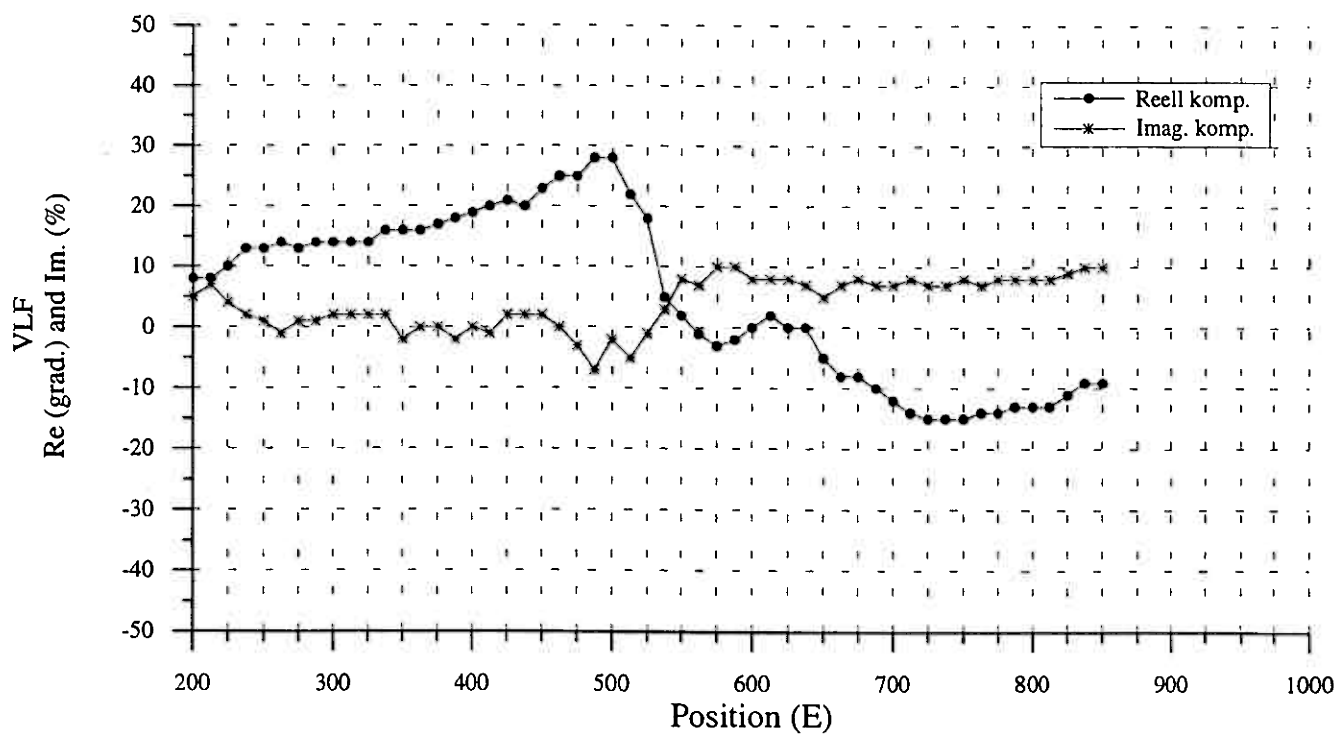
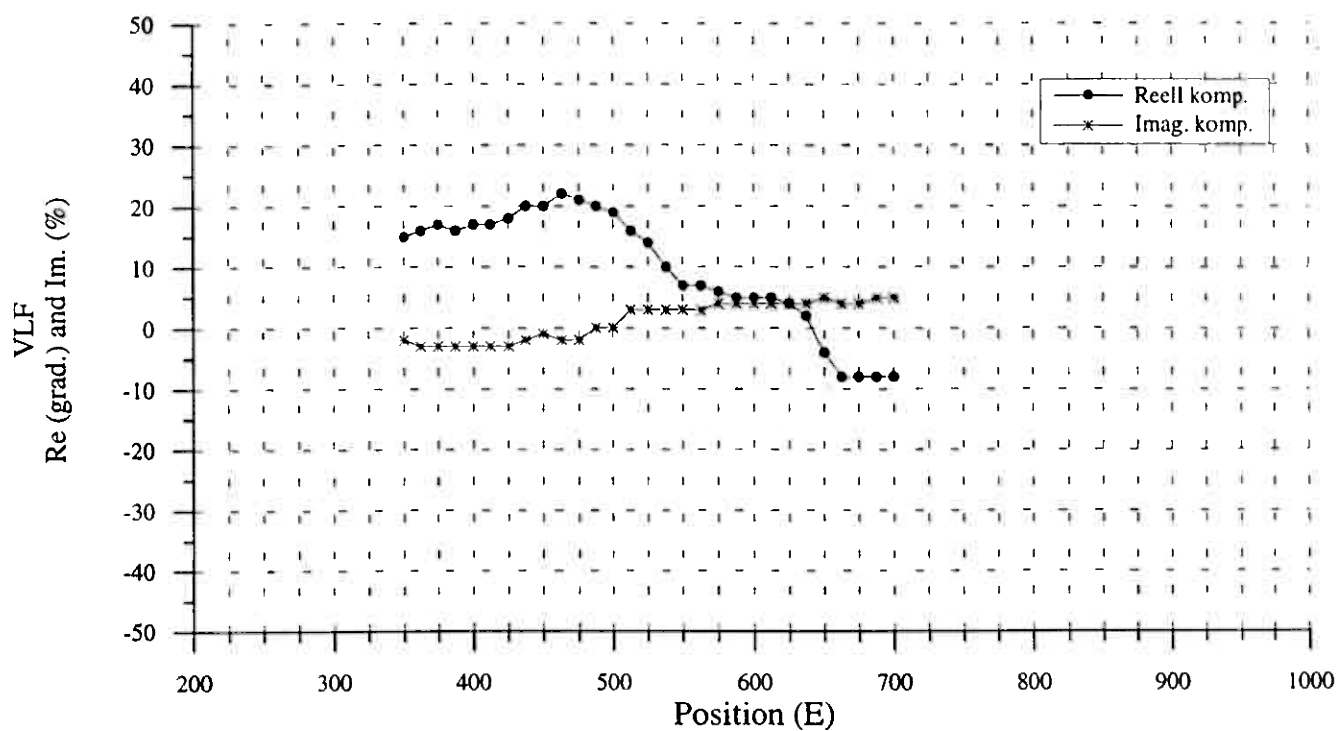


Figure 23. VLF profile 1300 N and 1350 N.

KLINKENBERG
VLF
Profile 1400 N



KLINKENBERG
VLF
Profile 1450 N

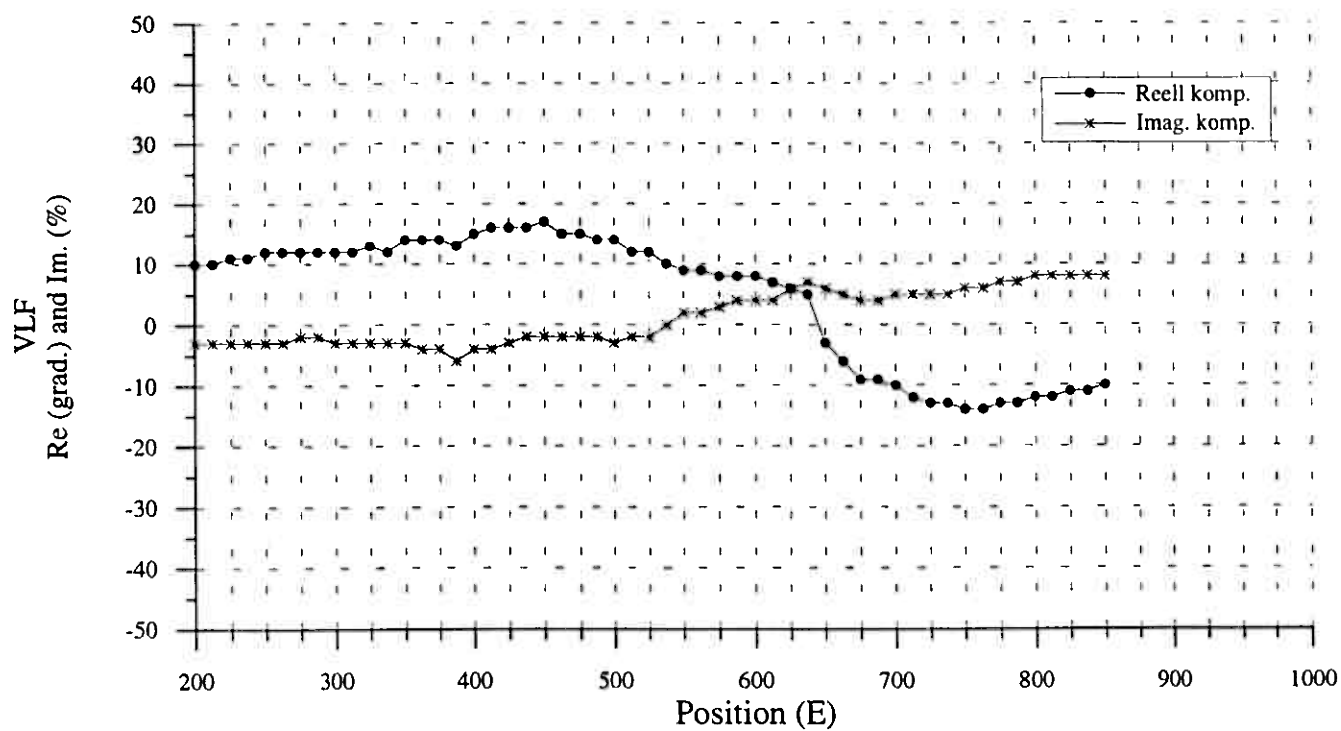
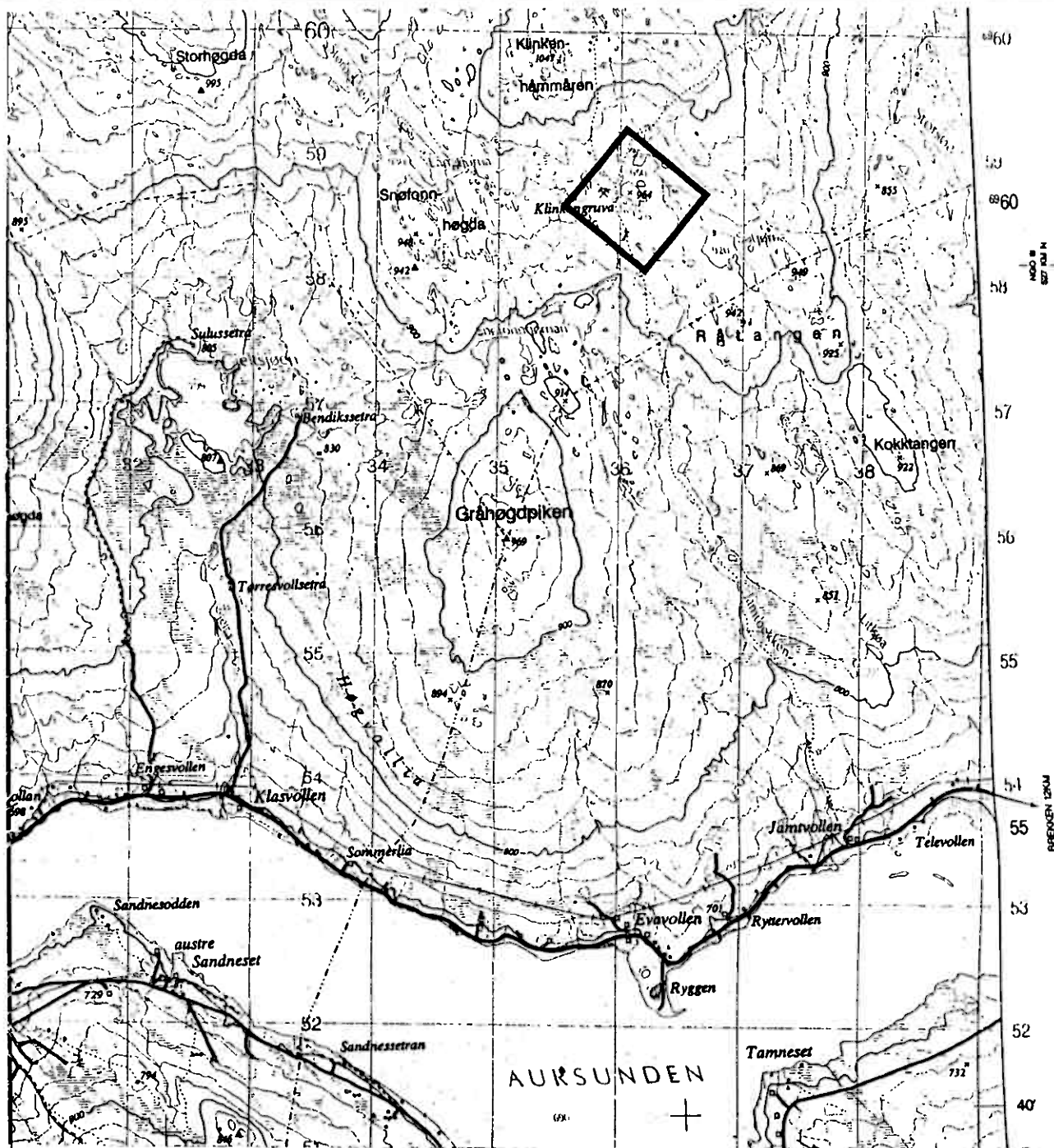


Figure 24. VLF profile 1400 N and 1450 N.



INVESTIGATED AREAS

MINDEX ASA
INVESTIGATED AREA
KLINKENBERG
RØROS, SØR-TRØNDELAG

SCALE

1:50 000

OPER. E.D. OCT. -99

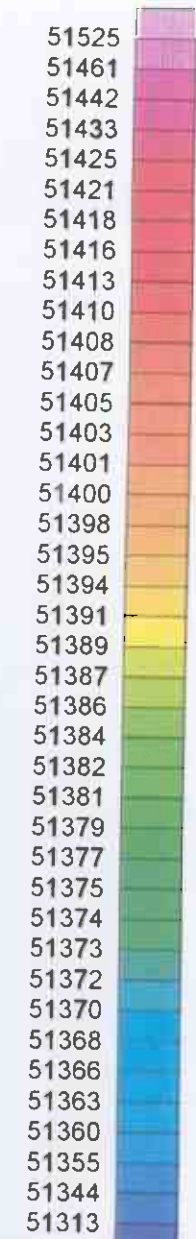
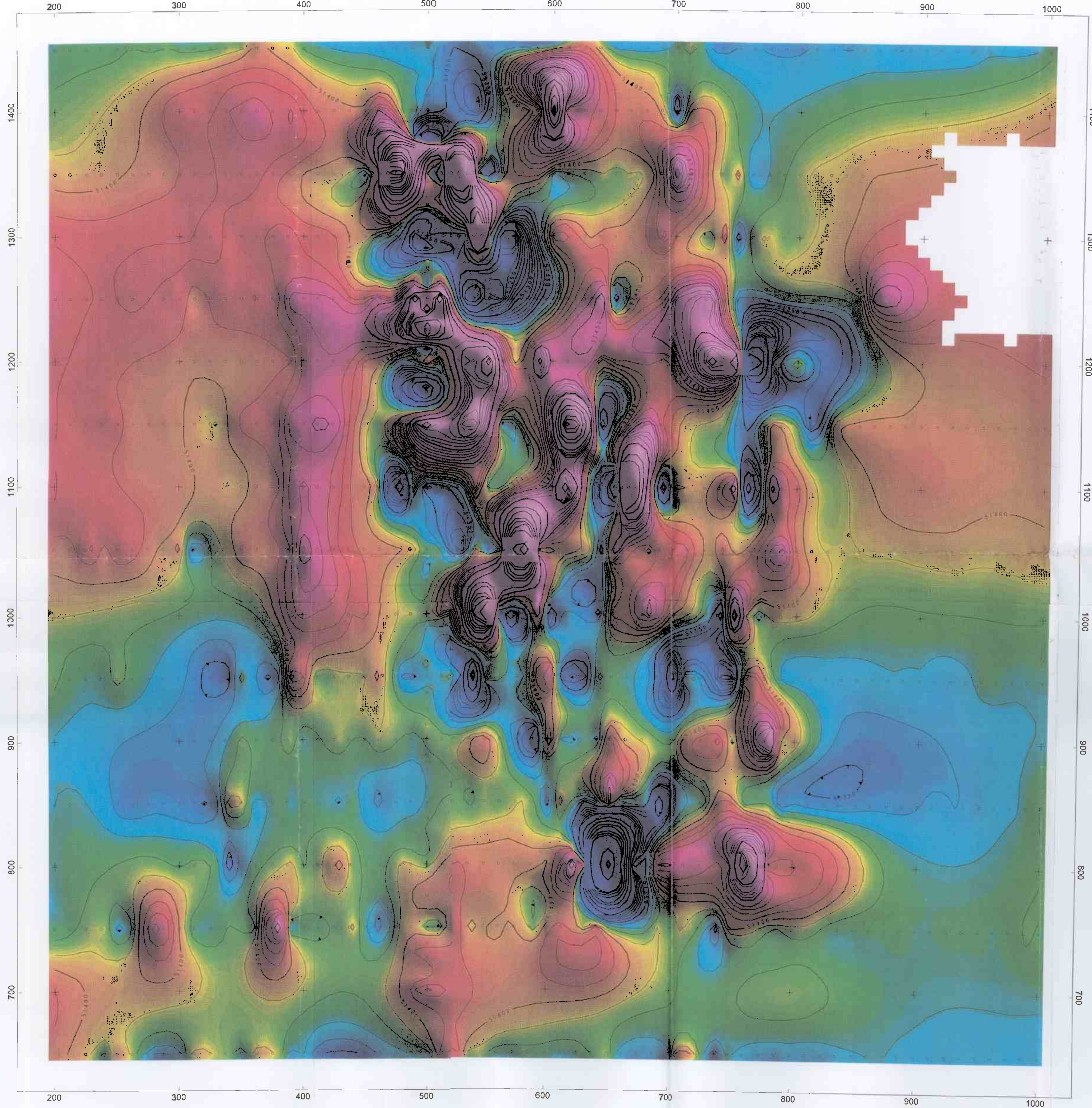
DRAW E.D. NOV. -99

TRAC

GEOLOGICAL SURVEY OF NORWAY
TRONDHEIM

MAP NO.
99.109-01

MAP 1:50 000
1720 III

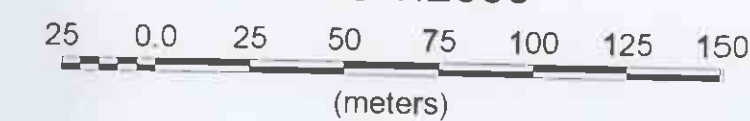


Mag.tot.

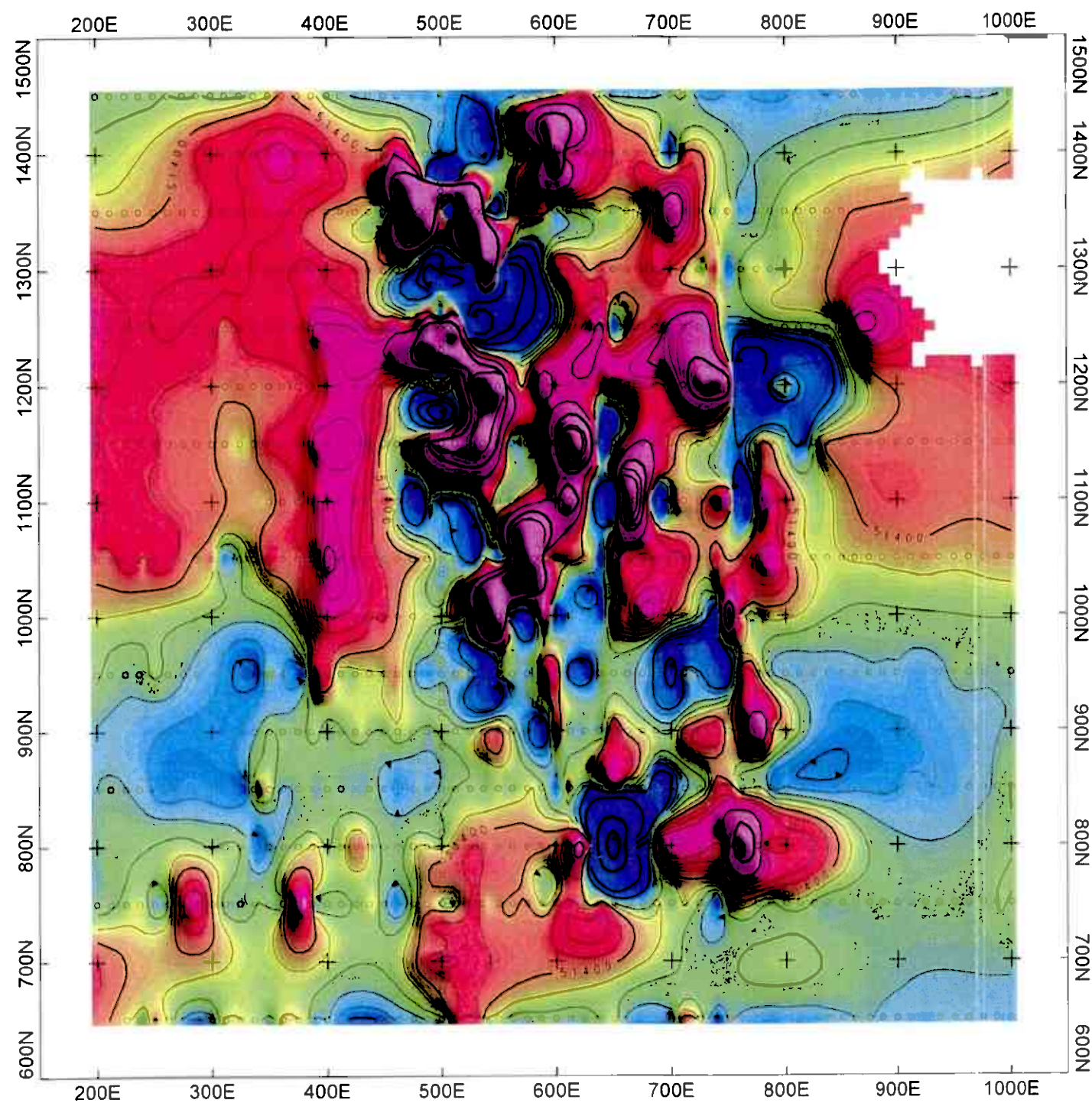
MINDEX ASA
Magnetic total field
KLINKENBERG
99.109-03



Scale 1:2000



NGU
Norges geologiske undersøkelse
Geological Survey of Norway



51525
51461
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51355
51344
51313

Mag.tot.
n.T.

MINDEX ASA

Magnetic total field

KLINKENBERG

99.109-02

NGU
Norges geologiske undersøkelse
Geological Survey of Norway

