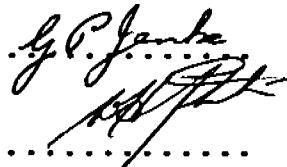


CRA EXPLORATION PTY LTD

# OPEN FILE

ANNUAL REPORT  
ROGERS KNOLL EL 2334  
FOR THE YEAR ENDING 24.1.82

submitted by: G.P. JENKE



accepted by: W.H. Johnston



copy to : Dept of Mines & Energy N.T.

date: January 1982

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1. SUMMARY

Following the delineation of a discrete magnetic response by aeromagnetic surveys, ground magnetic and gravity surveys have been carried out over the source.

2. CONCLUSIONS

From an interpretation of the magnetic data, the source of the response comprises two bodies. The southern one is at a depth of 200 m at its south end and deepens towards the north. Dips remain steep towards the east along its length.

There has yet been no interpretation for the northern source.

3. INTRODUCTION

The magnetic response of interest within the EL was first noted (as an isolated feature on the northern edge of the Daly River Basin) during a detailed low level airborne magnetic and radiometric survey (Jenke, 1981). In the

surrounding areas the magnetic field is uniform or shows only gentle gradients from deep sources, whereas the above response is indicative of relatively shallow magnetic material.

The published geological maps show the immediate area covered by Quaternary alluvium with nearby outcrops of the Middle Cambrian Tindall Limestone and the Lower Cretaceous Mullaman Beds (sandstones, siltstones, grits and conglomerate), which are flat lying or dip very gently to the south. Antrim Plateau Volcanics may underlie the Tindall Limestone.

The regional BMR aeromagnetic contour map shows the response in a quiet area (Figure 1). Larger amplitude features occur to the NW along the edge of the basin and it is possible that all these sources are related. However, no outcrop likely to represent the sources has been mapped.

The exploration programme on the EL was designed to determine the physical parameters of the source with a view towards investigation by drilling.

#### 5. TITLE

An application for an exploration licence over the area was lodged on 26.10.79. This was amended to an area of 30.89 square miles (80.00 km<sup>2</sup>) in August 1980 and subsequently granted on 24.1.81 (Plan No.NTd 1491).

#### 6. ABORIGINAL SACRED SITES

The Aboriginal Sacred Sites Protection Authority advised on 4.2.81 that there were no recorded sacred sites within the EL area.

### 7. AEROMAGNETIC SURVEY

The response was covered by an airborne magnetic and radiometric survey with a flight line spacing of 300 m and a mean terrain clearance of 80 m. The stacked magnetic profiles and flight path plot for the area are shown as Plan Nos. NTd 1305 and NTd 1276.

To define the response in more detail, a small contour map was compiled by hand (Appendix 1) to show a N-S striking feature about 2 km long separated from an equidimensional one to the north. Only one traverse, tie line 15E, crossed the response perpendicular to its strike. The response has been modelled by a two dimensional dyke to produce a depth of 250 m below the aircraft (170 m below ground level) and, assuming induced magnetization only, a dip steep to the east (Appendix 1). However, these results are approximate at best as the two dimensional model is a poor approximation to the source in this case.

### 8. GRIDDING

A point nominated as 5000 mE 5000 mN was chosen in the vicinity of the response defined by the airborne survey, identified on the flight path recovery photographs, and by reference to the flight path plans, was found to have an approximate AMG position of 246 760 mE 8 381 700 mN. From here, baselines were laid out as follows:-

5000 mN	4700 mE - 5000 mE
4700 mE	5000 mN - 6800 mN
5000 mE	2400 mN - 5000 mN

The initial bearings of these segments were established by

compass and then maintained by backsighting. Distances were chained, and flagged, permatagged wooden pegs positioned every 50 m.

Traverse lines were established with a topofil distance measuring device and compass. Stations were flagged at 50 m intervals and permatagged wooden pegs positioned 200 and 400 m either side of the 4700 mE and 5000 mE baselines.

#### 9. GROUND MAGNETOMETER SURVEY

A digital base station magnetometer was positioned near 5000 mE 5000 mN and run throughout the survey with a reading interval of 30 s. This station was assigned a value of 47 700 nT, and the deviation from this was subtracted from the traverse line readings taken at the same time to remove the effect of diurnal changes.

Readings were taken at intervals of 5 m along traverse lines using Scintrex MP-2 magnetometers with a sensor elevation of 3 m. Profiles of the data (Appendix 2) show large erratic variations caused by shallow highly magnetic material, presumably laterite, such that only by manual smoothing of these profiles was it possible to define the response of the deeper source and compile a contour map (Plan No.NTd 1714).

#### 10. GROUND MAGNETOMETER SURVEY INTERPRETATION

For the interpretation of the ground magnetic data, a two dimensional dyke model was used. As can be seen from the contour map (Plan No.NTd 1714) the strike extent of the

source is limited, so that this model can only roughly approximate it. All of the following work has assumed that remanent magnetization is not present.

On 3200 mN the best trial and error fit was for a 200 m wide dyke at a depth of 200 m and dipping 85°E. For the same dip, both the depth and width were varied but in each case, the fit was not as good. These and model results for other lines are included in Appendix 3.

In general, the steep easterly dip is maintained along the strike of the southern source and its depth increases northwards from about 200 m on 3000 mN to 350 m on 4 400 mN. At these depths it is not possible to accurately resolve the source thickness.

No interpretation has yet been carried out on the northern source.

#### 11. GRAVITY SURVEY

The first phase of the gravity survey covered lines 2600 mN to 4000 mN using Lacoste and Romberg Meter (S/N G-544) in June 1981. Levels with distributed misclosures were established with respect to a datum at 5000 mE 3000 mN, and meter drifts were corrected by repeat measurements every 100 minutes or less. Four ties were made to the BMR station 9793.9318 at the old Katherine airport, but here only extrapolated drift rates were used for corrections. A meter constant of 1.01957 which was supplied with the instrument was used to convert the dial readings to milligals, and although this was later

measured as 1.02176 on the Adelaide calibration range, the difference was so small (0.2%) that the data was not recalculated except for the tie to the BMR station.

All levels were tied to a Department of Transport and Works benchmark (BM00:195.82 m) immediately south of the intersection of the Stuart Highway and the new Mainora Road by a traverse of about 3.35 km from 5000 mE 3000 mN. Level misclosures within the grid area did not exceed 0.07 m, and were not distributed.

From the BMR gravity station 6793.9318, a value of 978 326.71 mgals was established at 5000 mN 3000 mE, and in the tabulation of observed gravity values (Appendix 5) a value of 26.71 mgals has been adopted for that station. Profiles of the corrected gravity data are shown in Appendix 4. A Bouguer density of  $2.2 \text{ t m}^{-3}$  was used in the data reduction.

No contour map has yet been compiled, nor has any interpretation been carried out.



G.P. JENKE

12. LIST OF PLANS

<u>Plan No.</u>	<u>Title</u>	<u>Scale</u>
NTd 1491	Partial Relinquishment ELA 2334 Rogers Knoll N.T.	1:250 000
NTd 1305	Florina Project Residual Magnetic Intensity Sheet 5468/4	1: 40 000
NTd 1276	Florina Project Recoveried Flight Paths Sheet 5468/4	1: 40 000
NTd 1714	Contours of Total Magnetic Intensity Rogers Knoll EL 2334	1: 10 000

13. REFERENCES

Jenke, G.P. 1981 Final Report King River  
EL 2332, Wye Hill EL 2333,  
Stott Hill EL 2335 and  
Elsey 2337.  
Unpublished CRAE Report 10946

14. LOCALITY

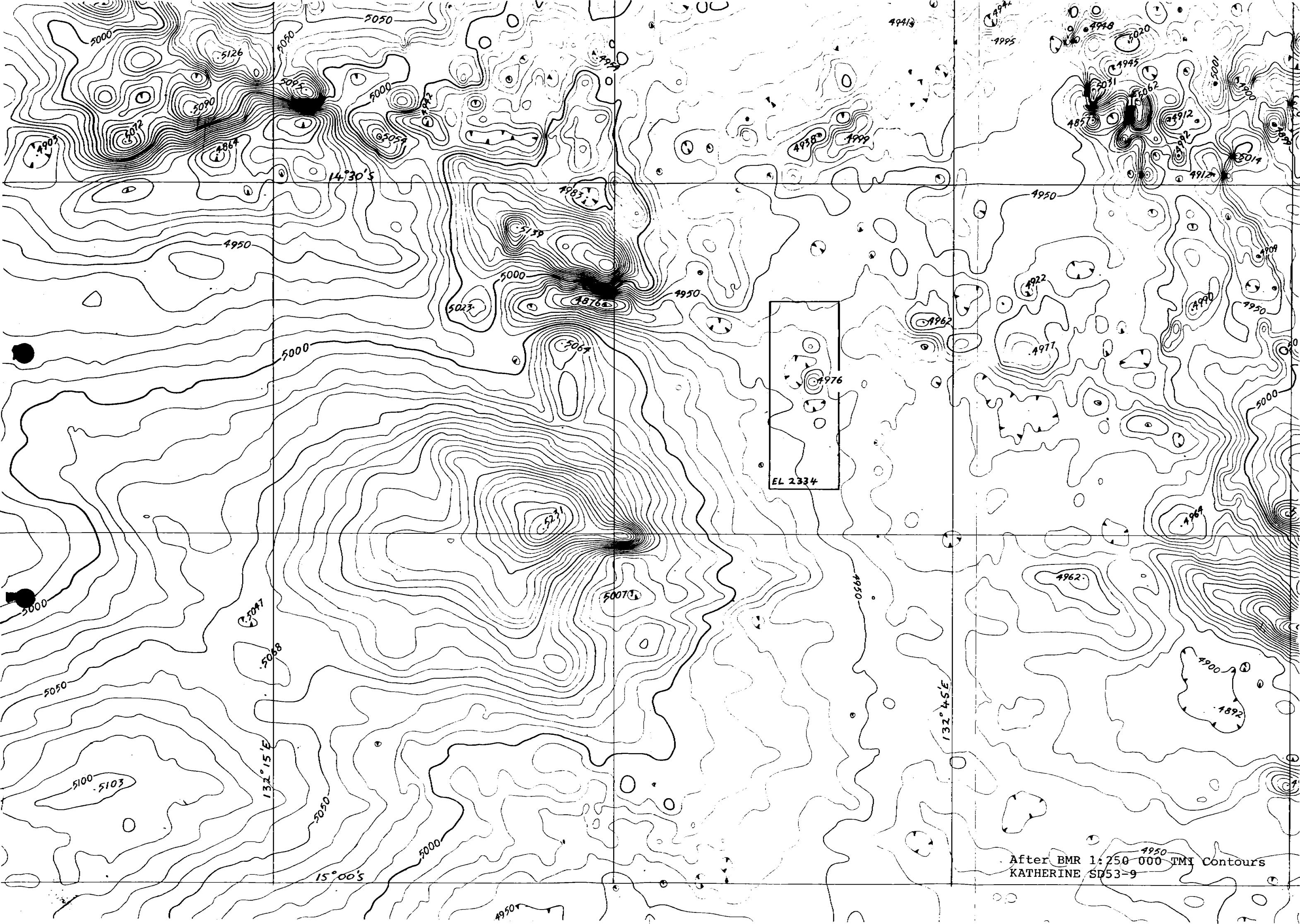
Katherine SD53-9

15. KEYWORDS

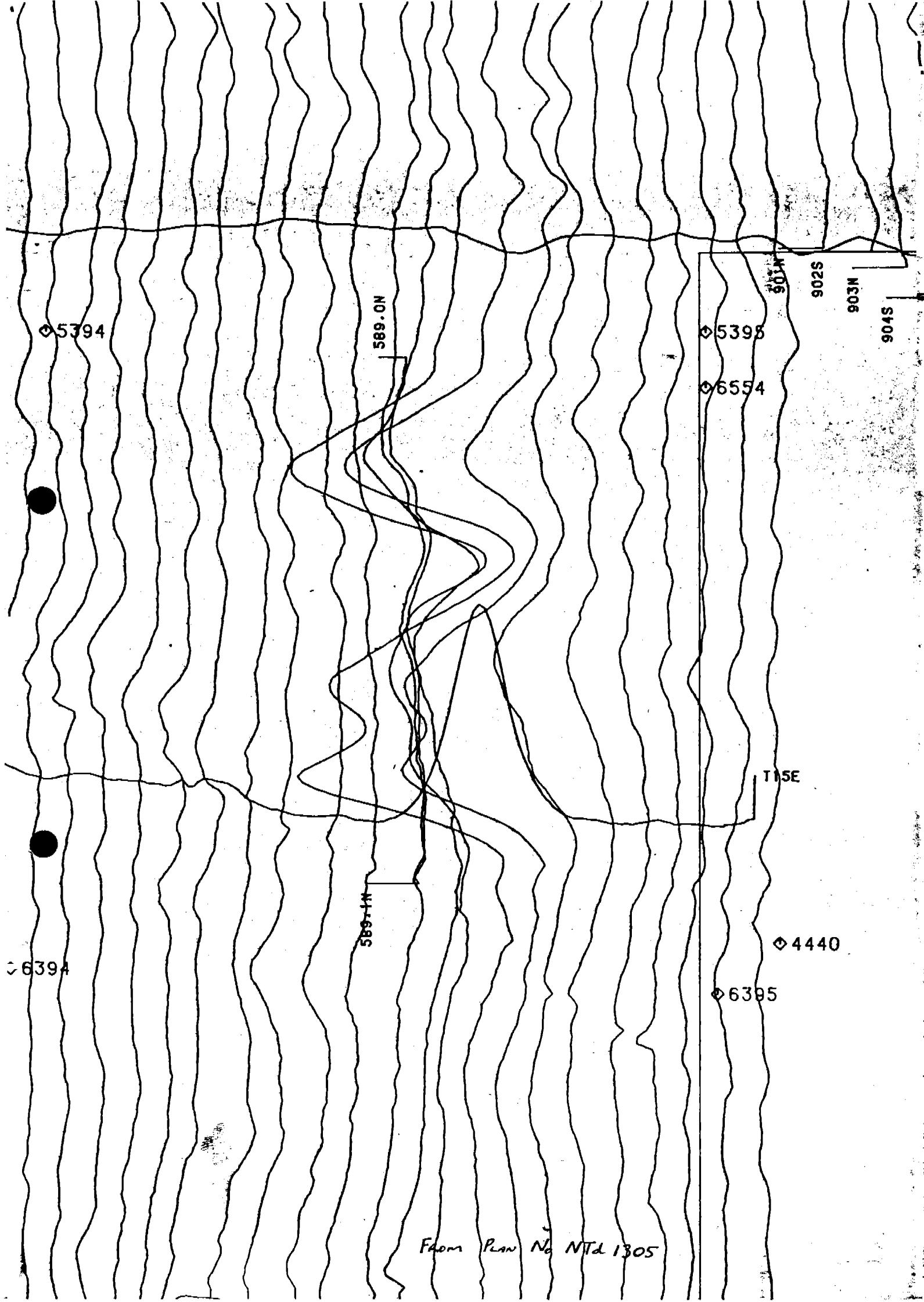
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geophysics-interpret.theory, instrument-surve.

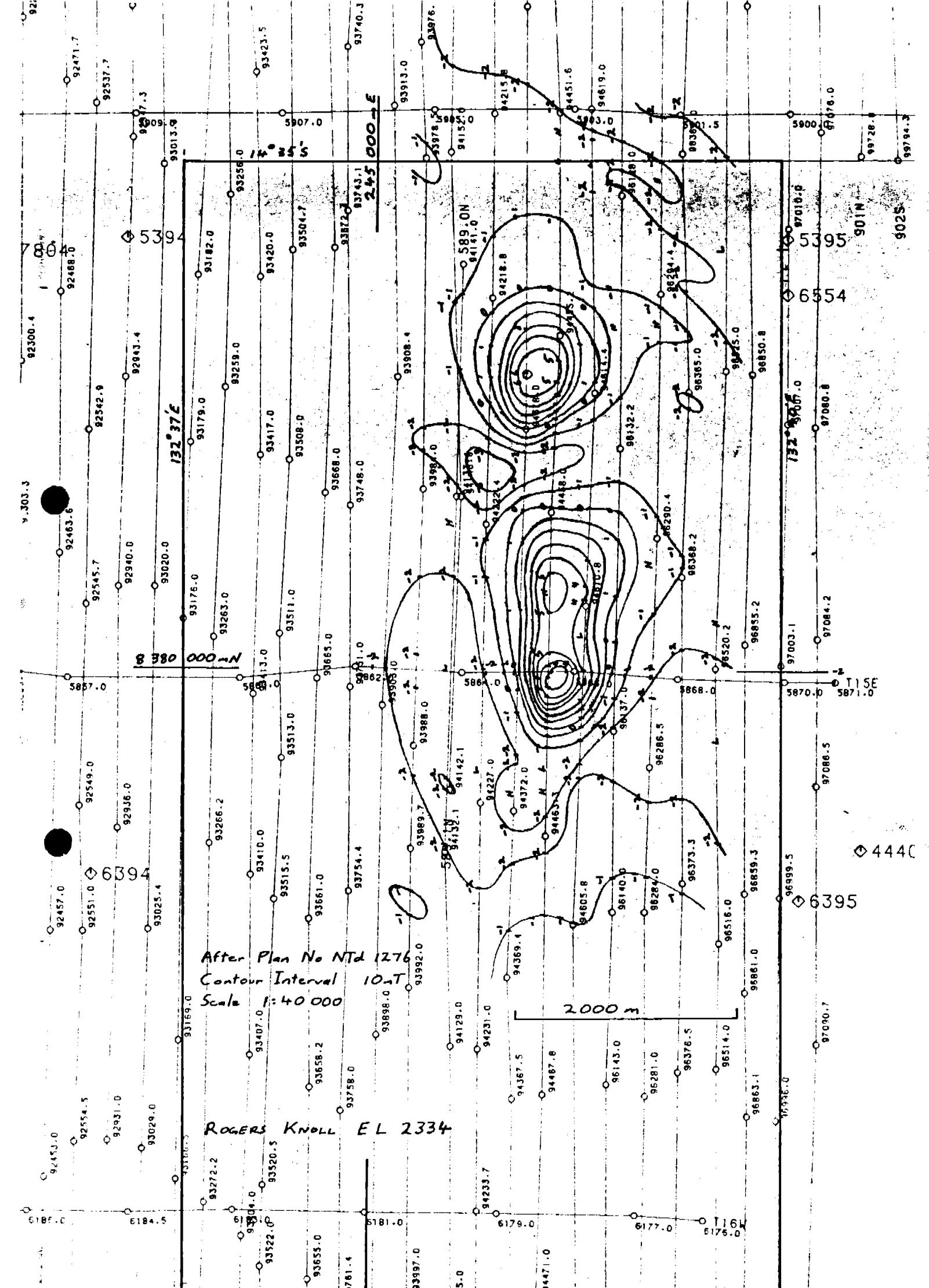
**APPENDIX I**

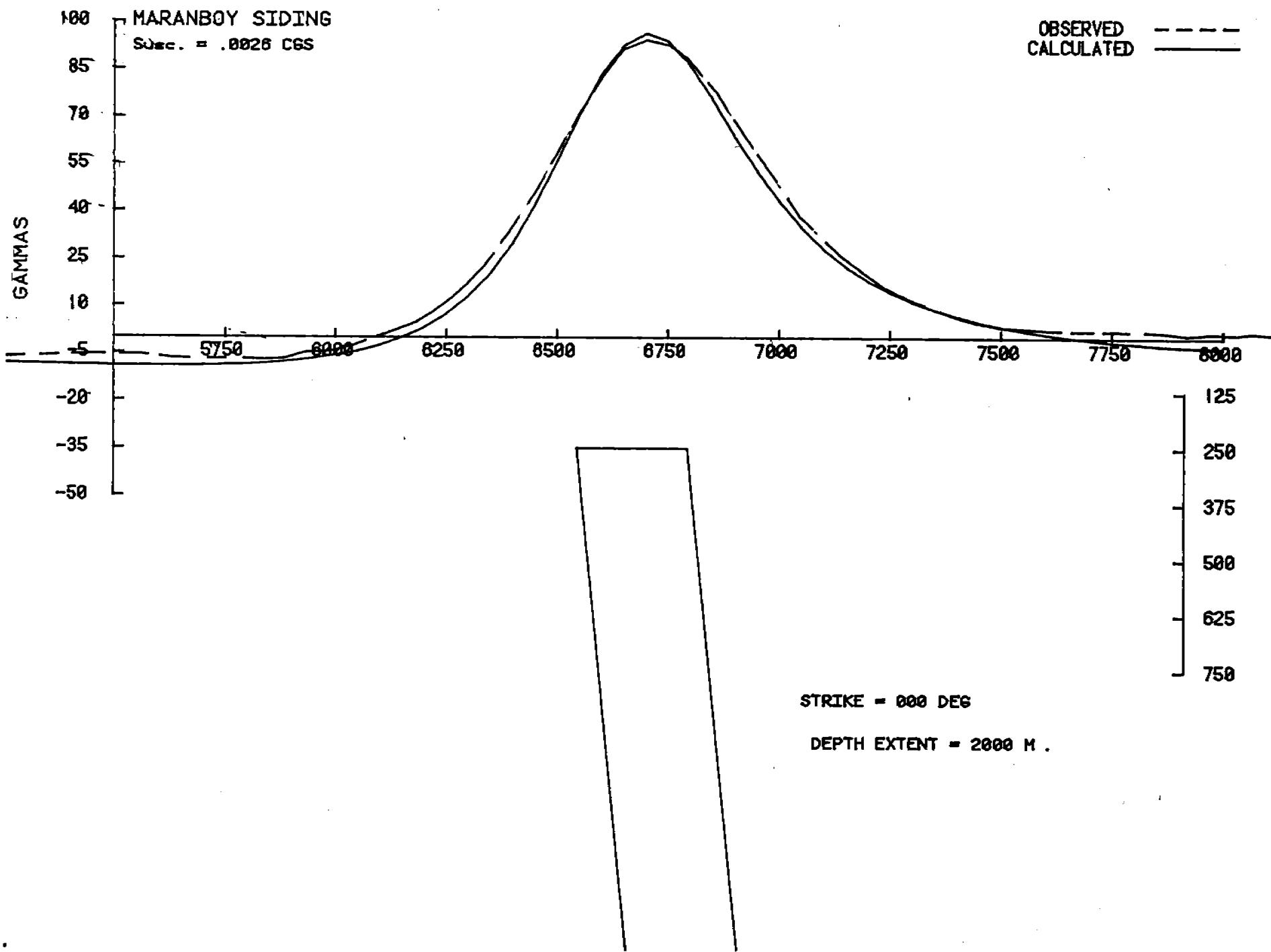
**INTERPRETATION OF AEROMAGNETIC DATA**



~~After BMR 1:250 000 TMI~~ <sup>4950</sup> Contours  
KATHERINE SD53-9

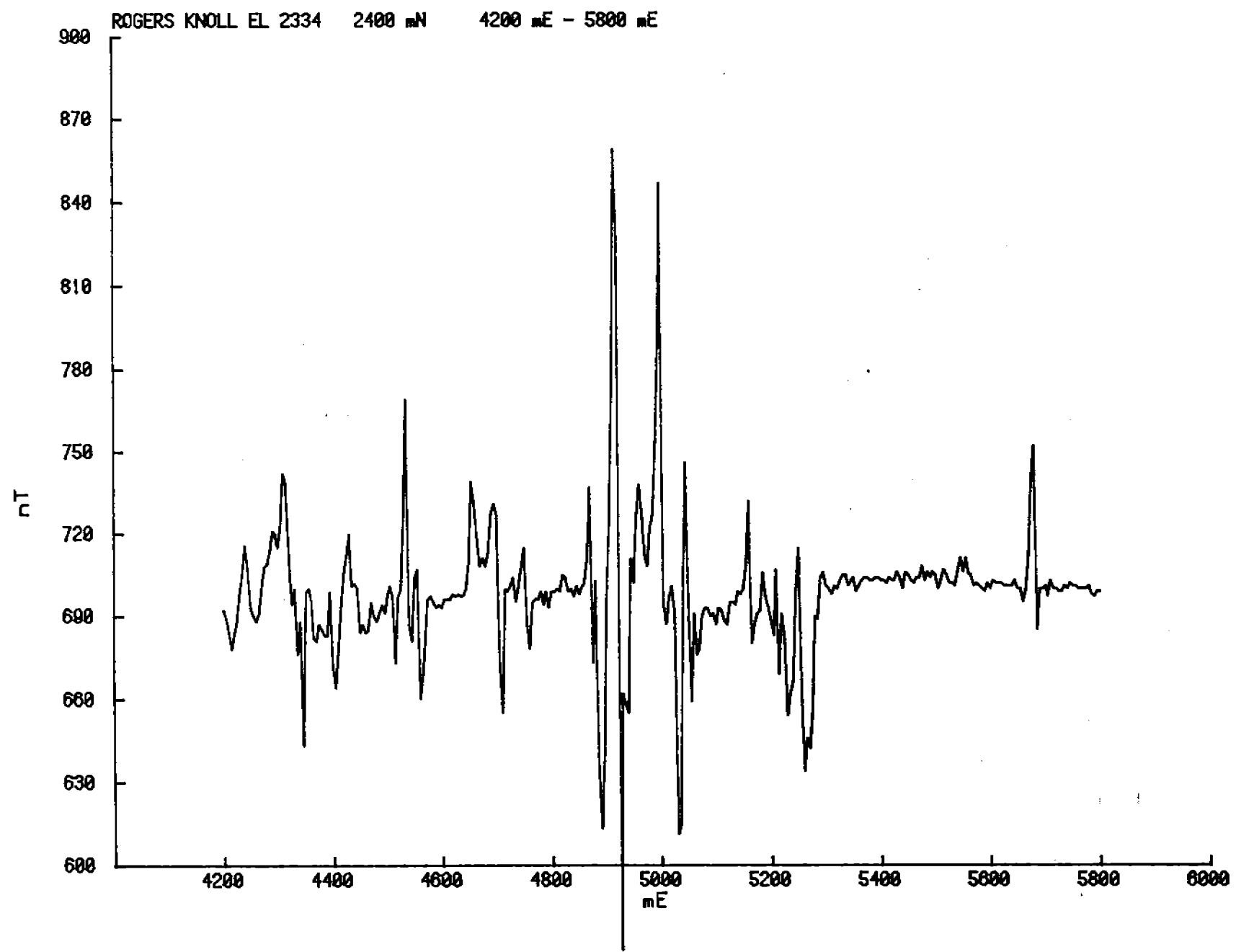


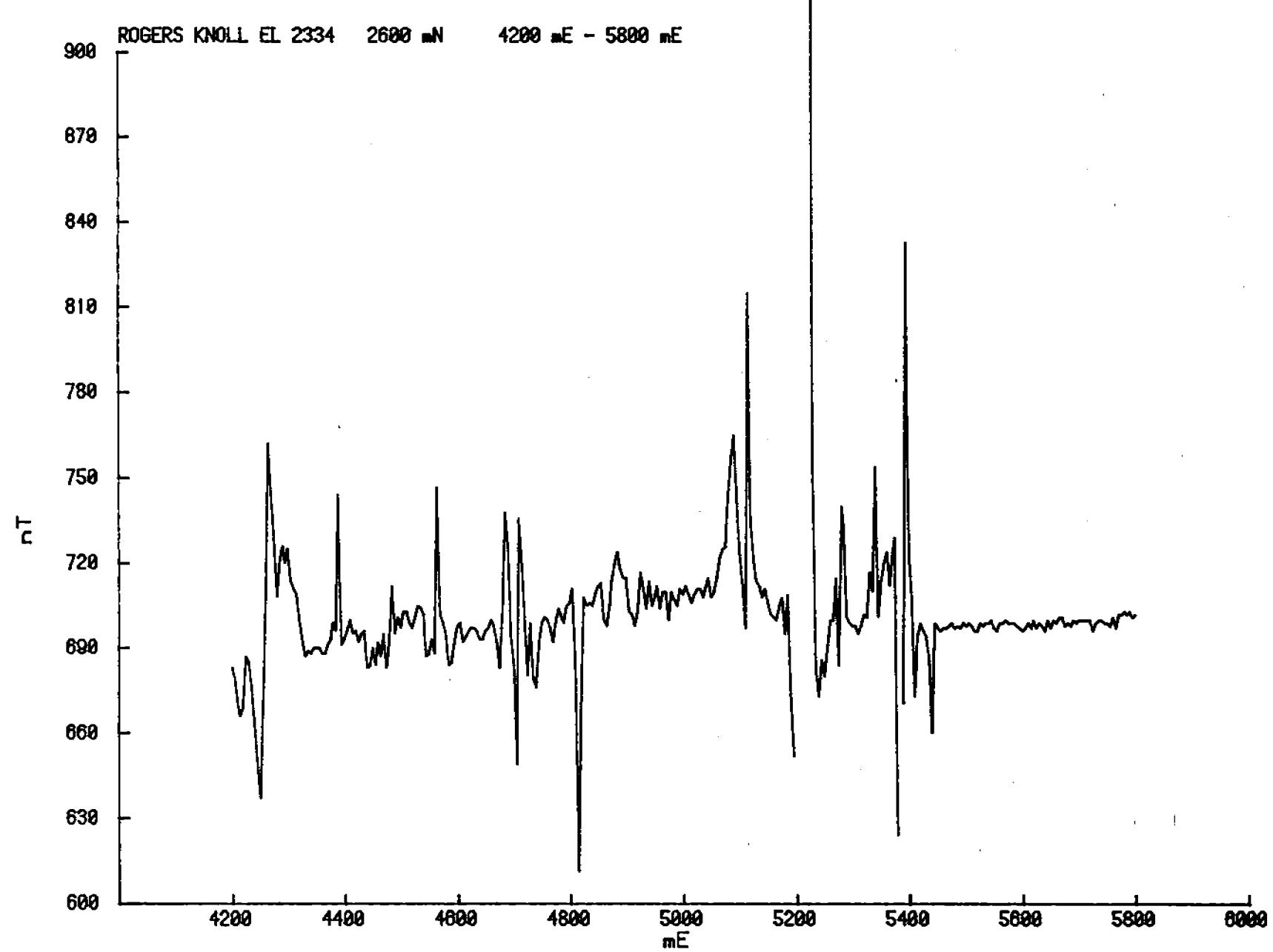


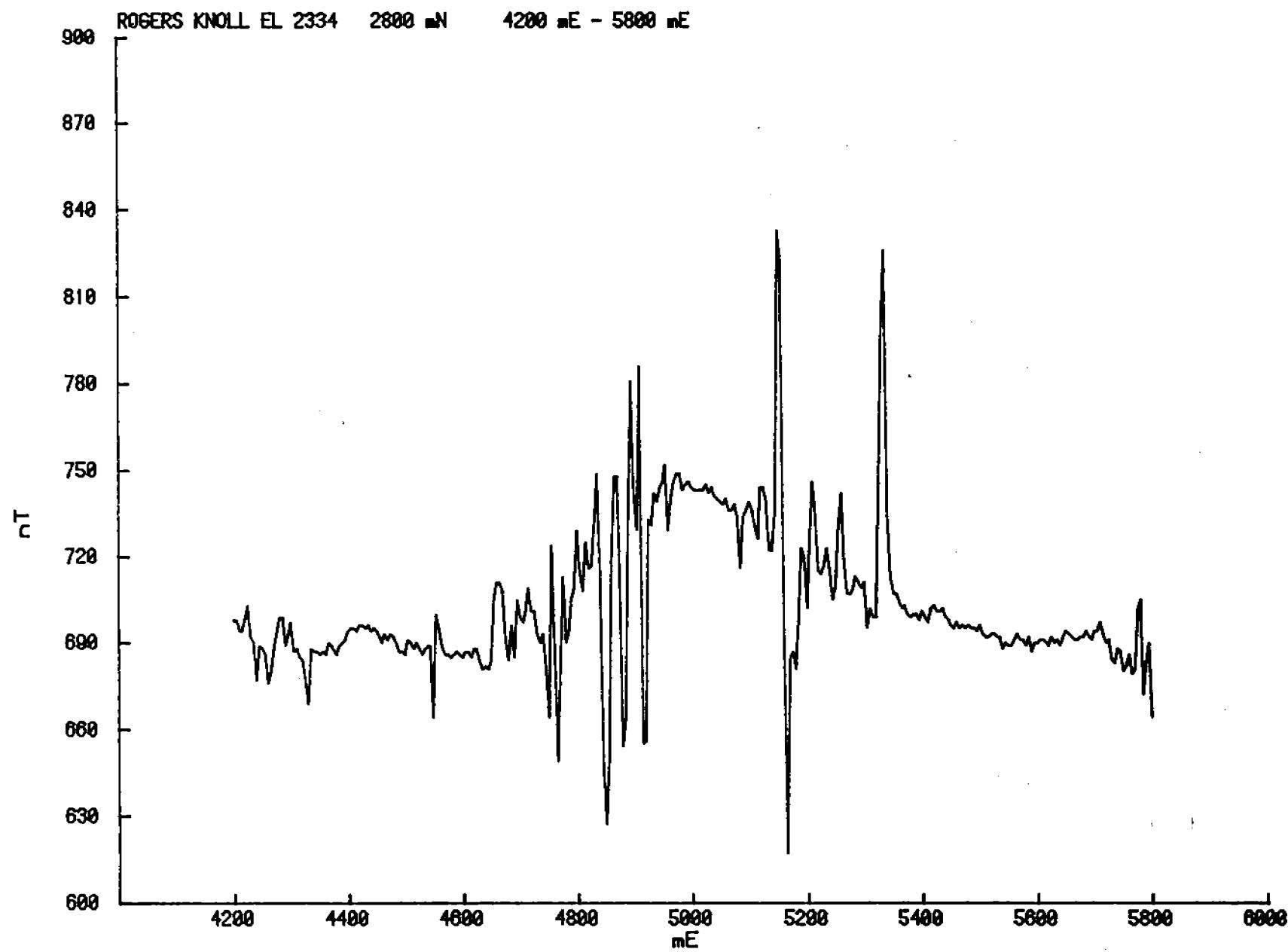


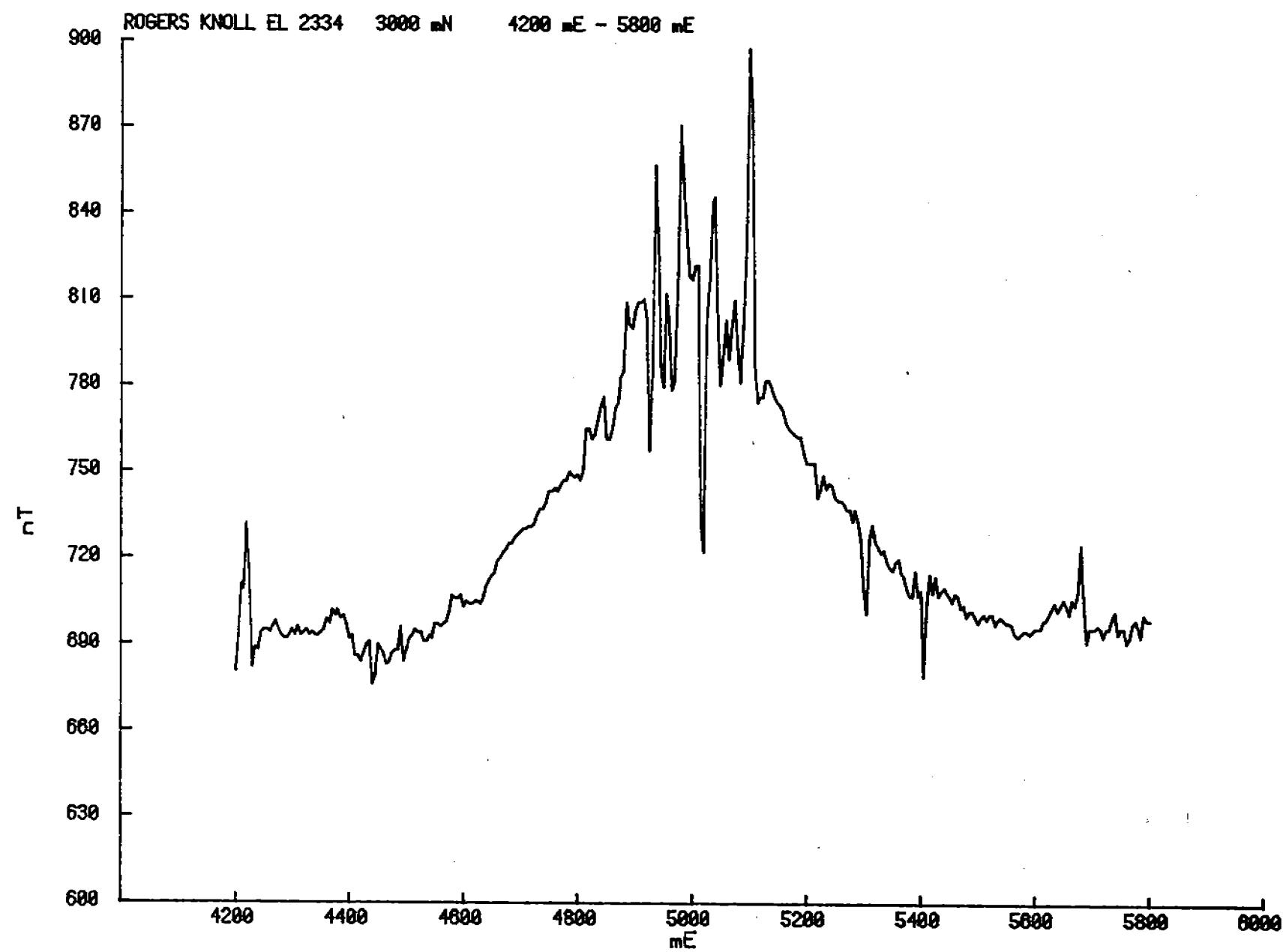
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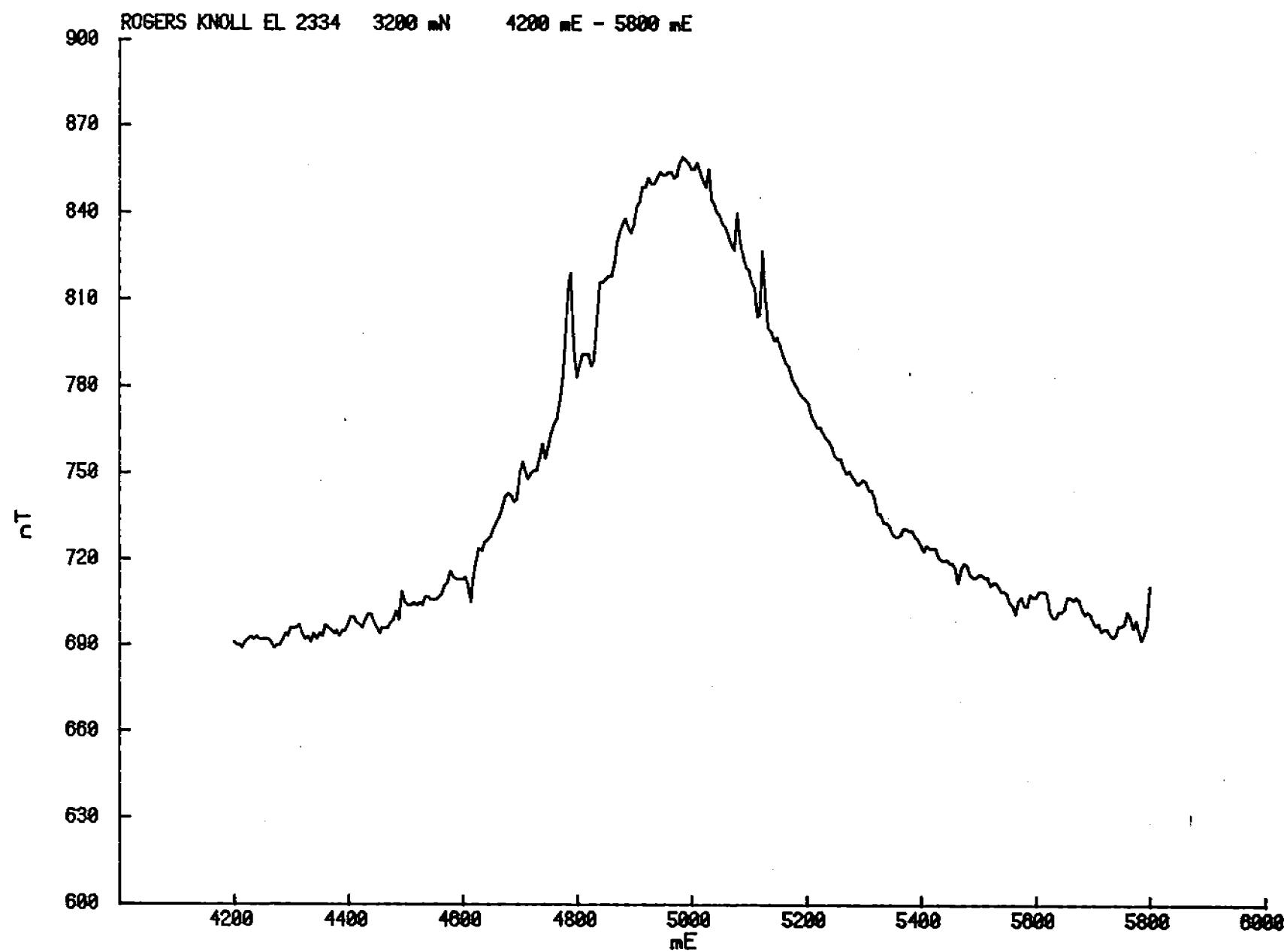
**GROUND MAGNETOMETER PROFILES**

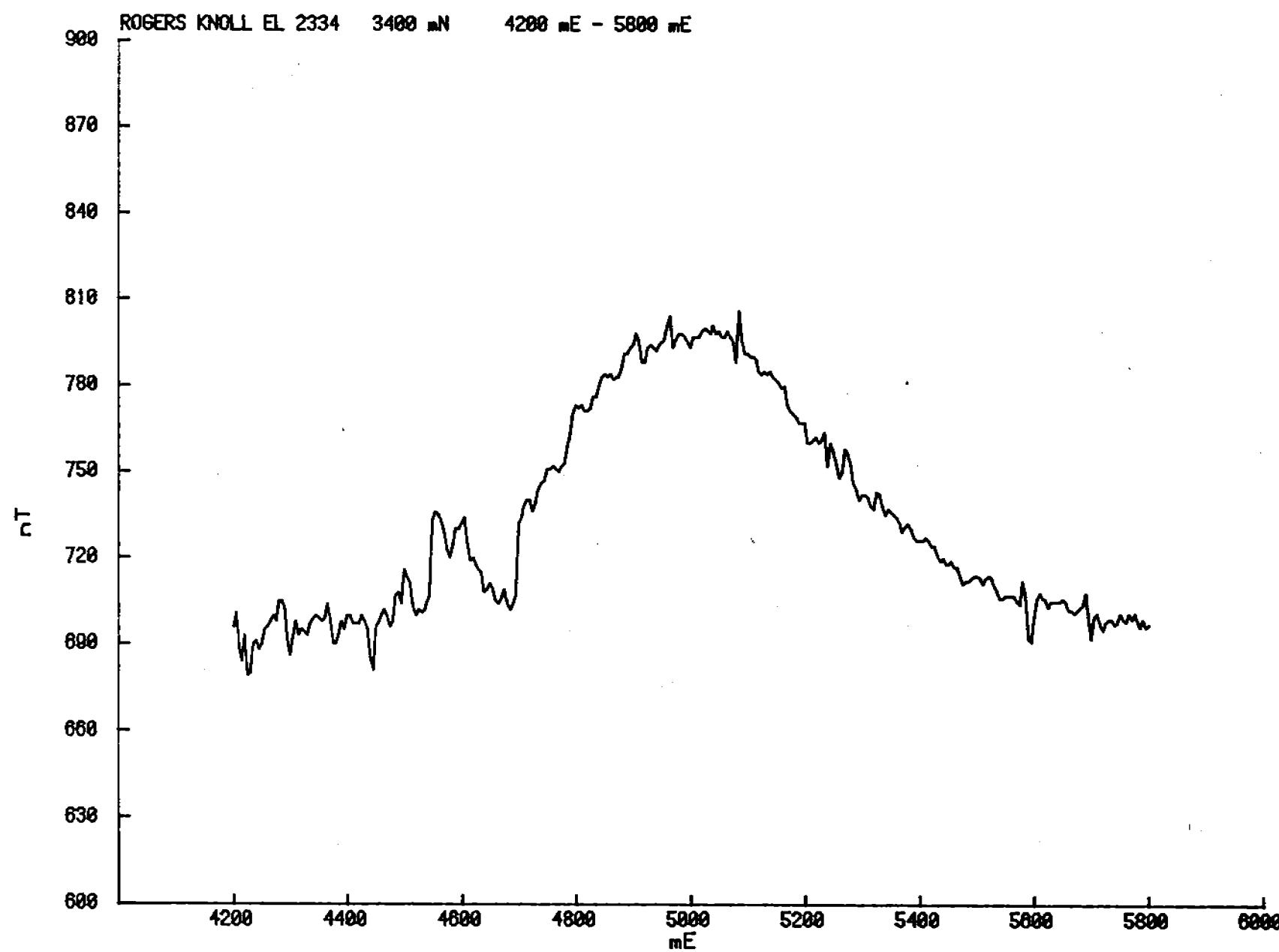


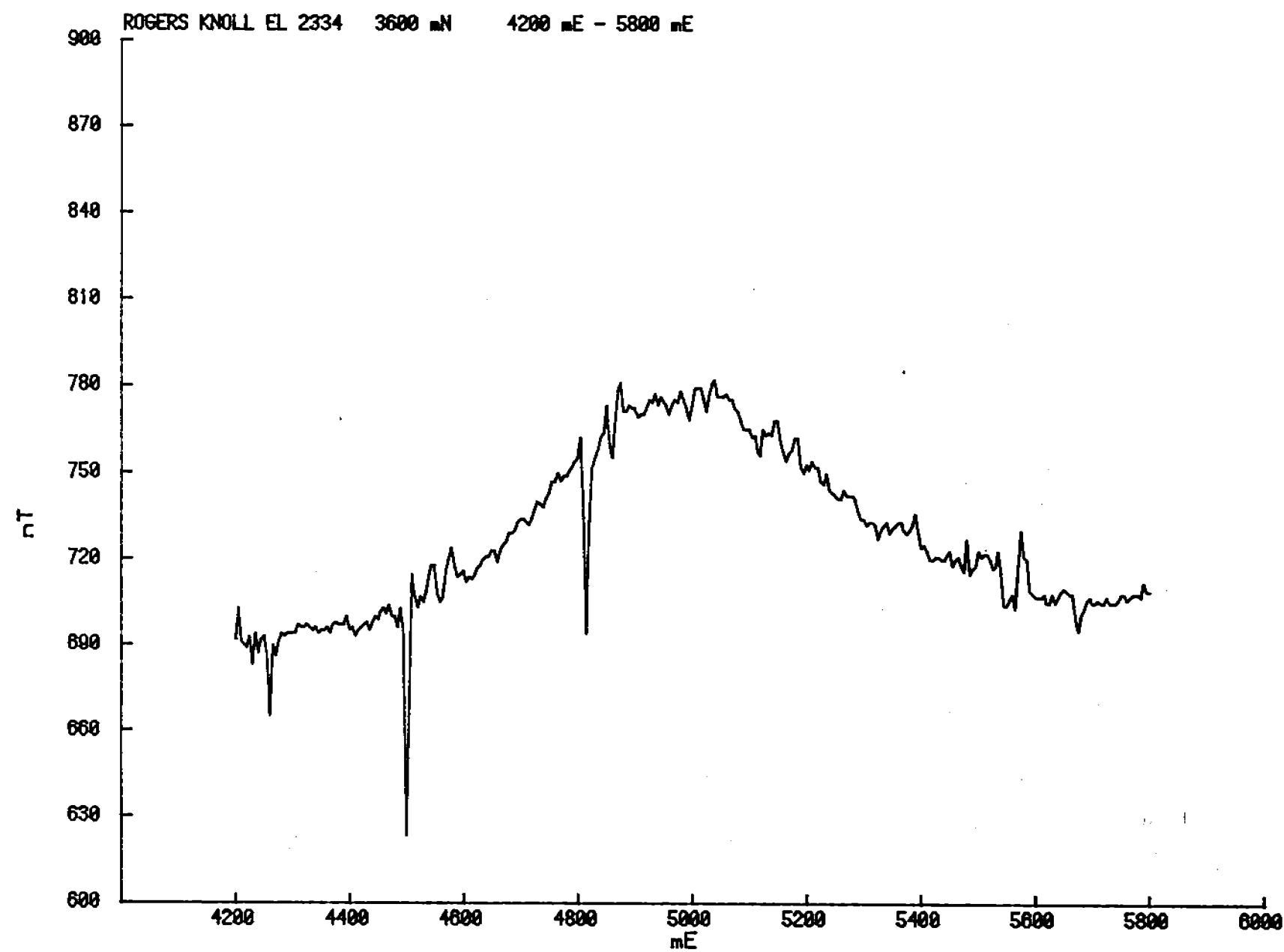


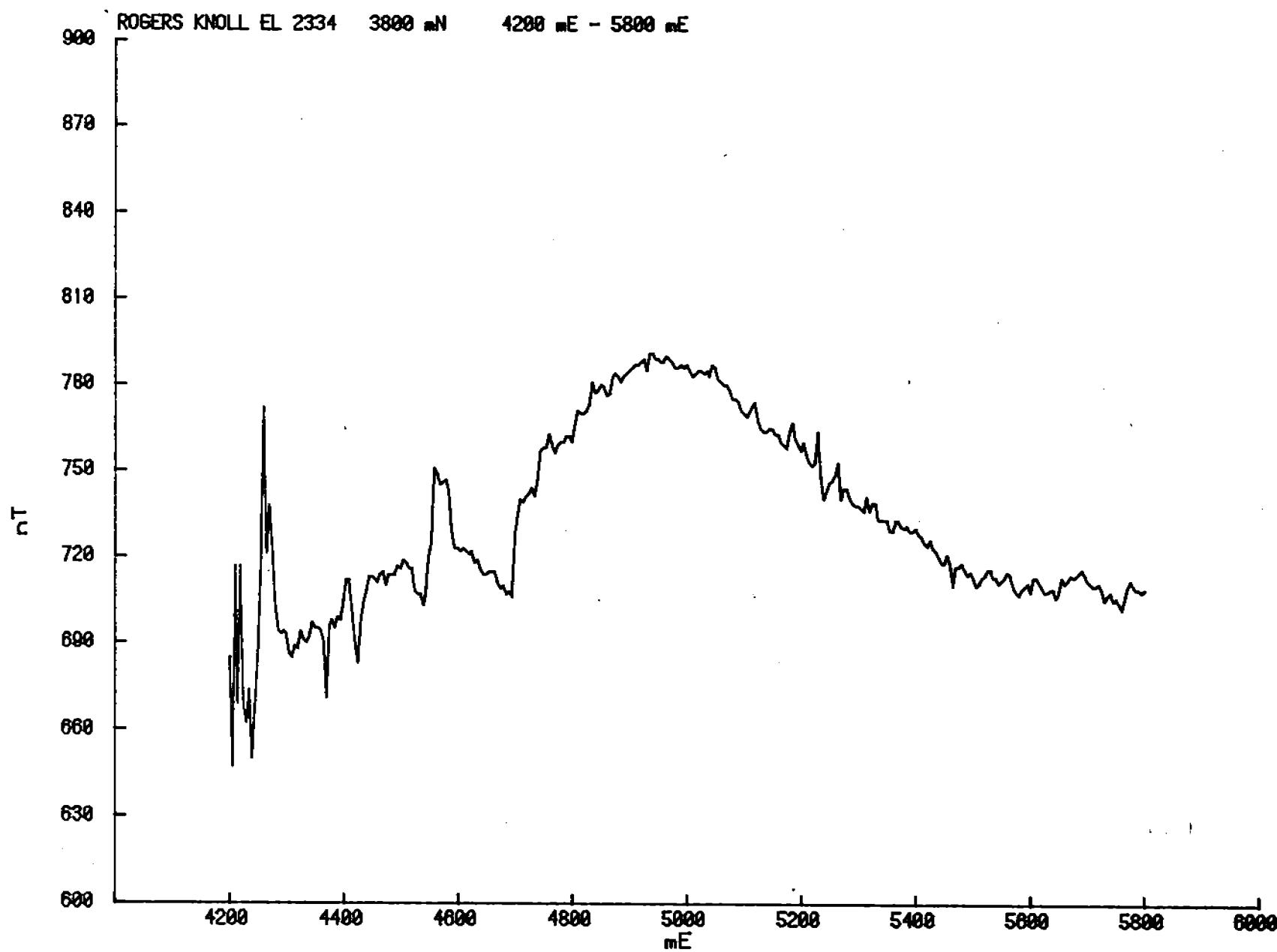


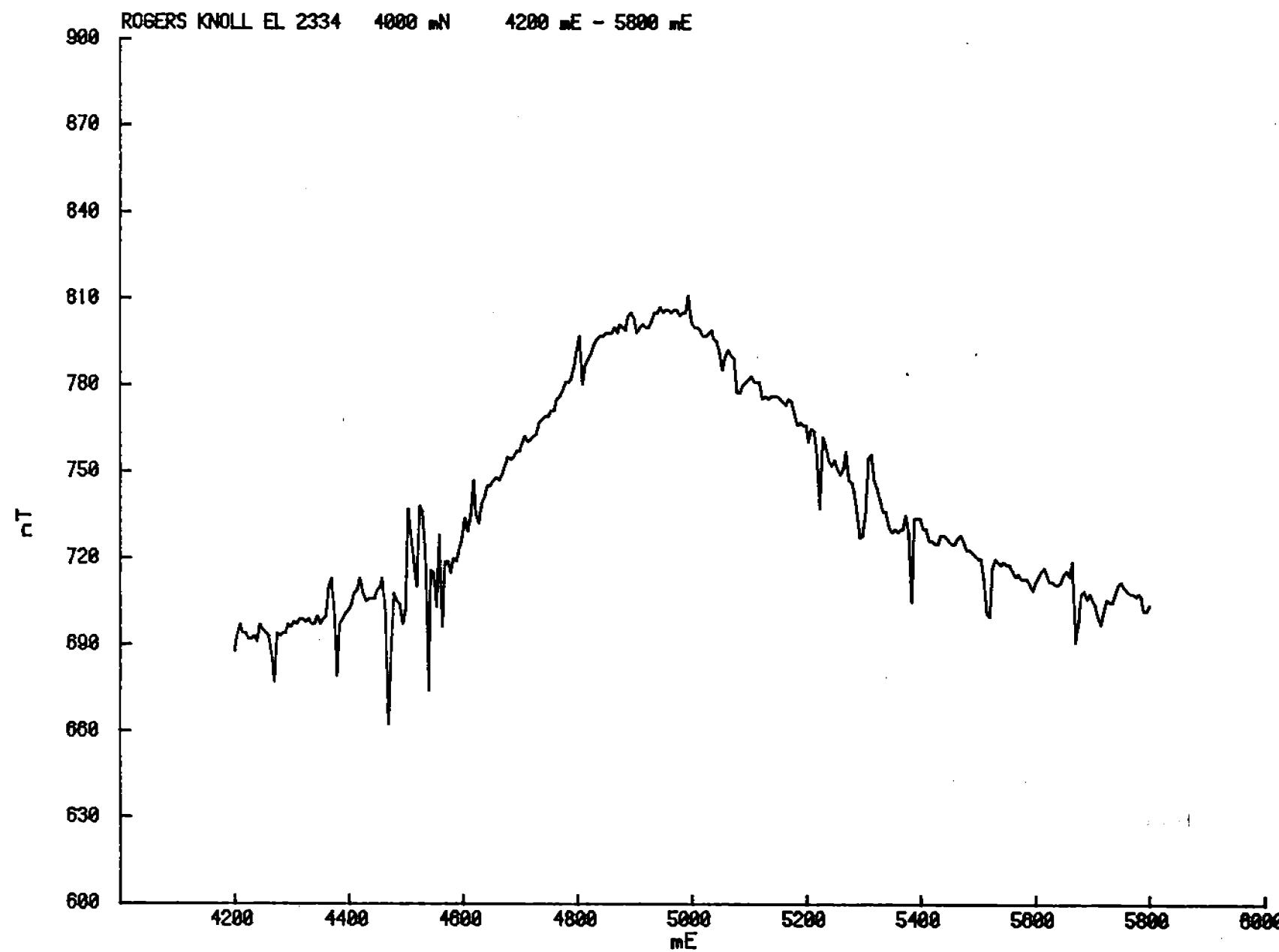


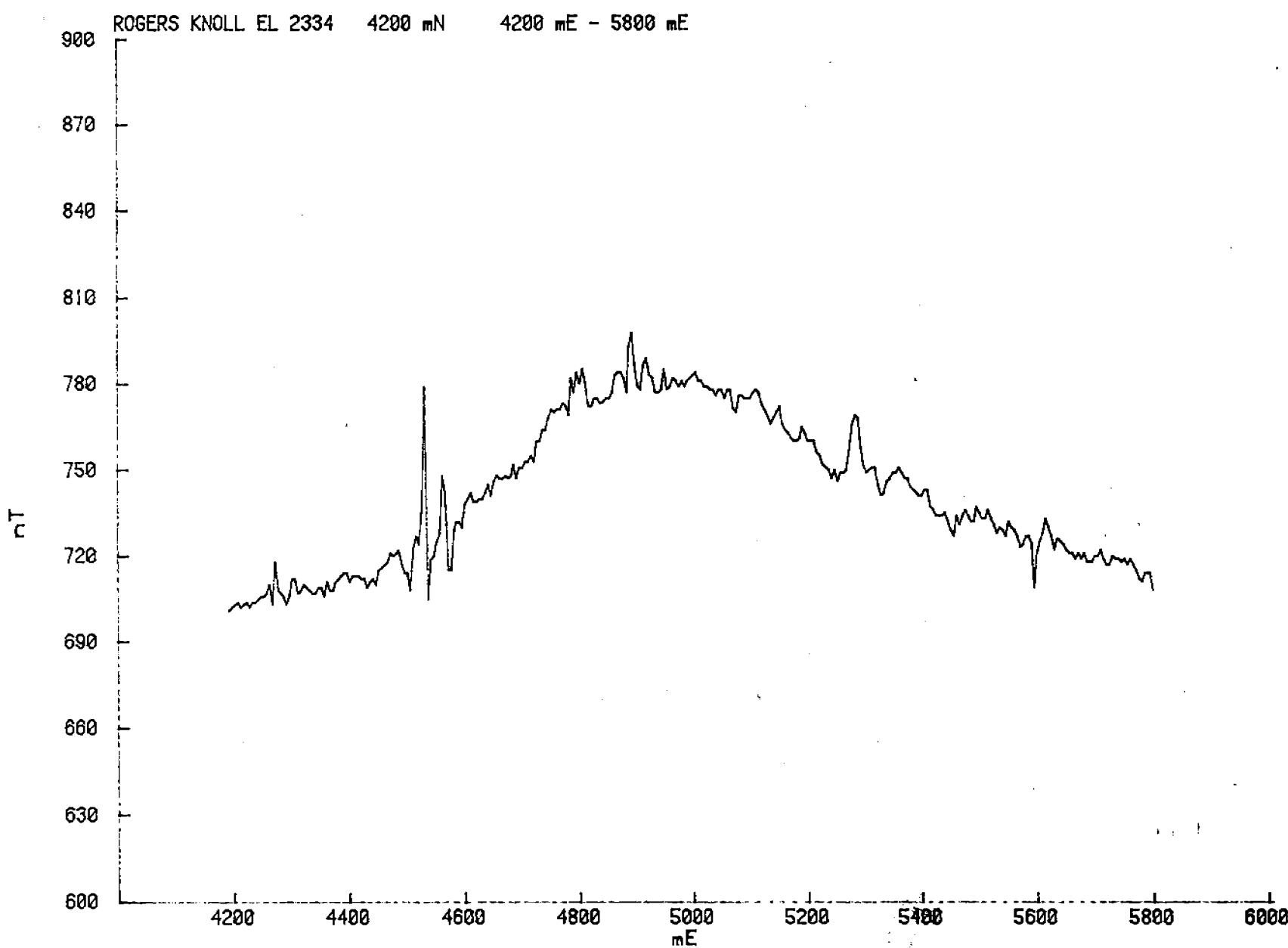


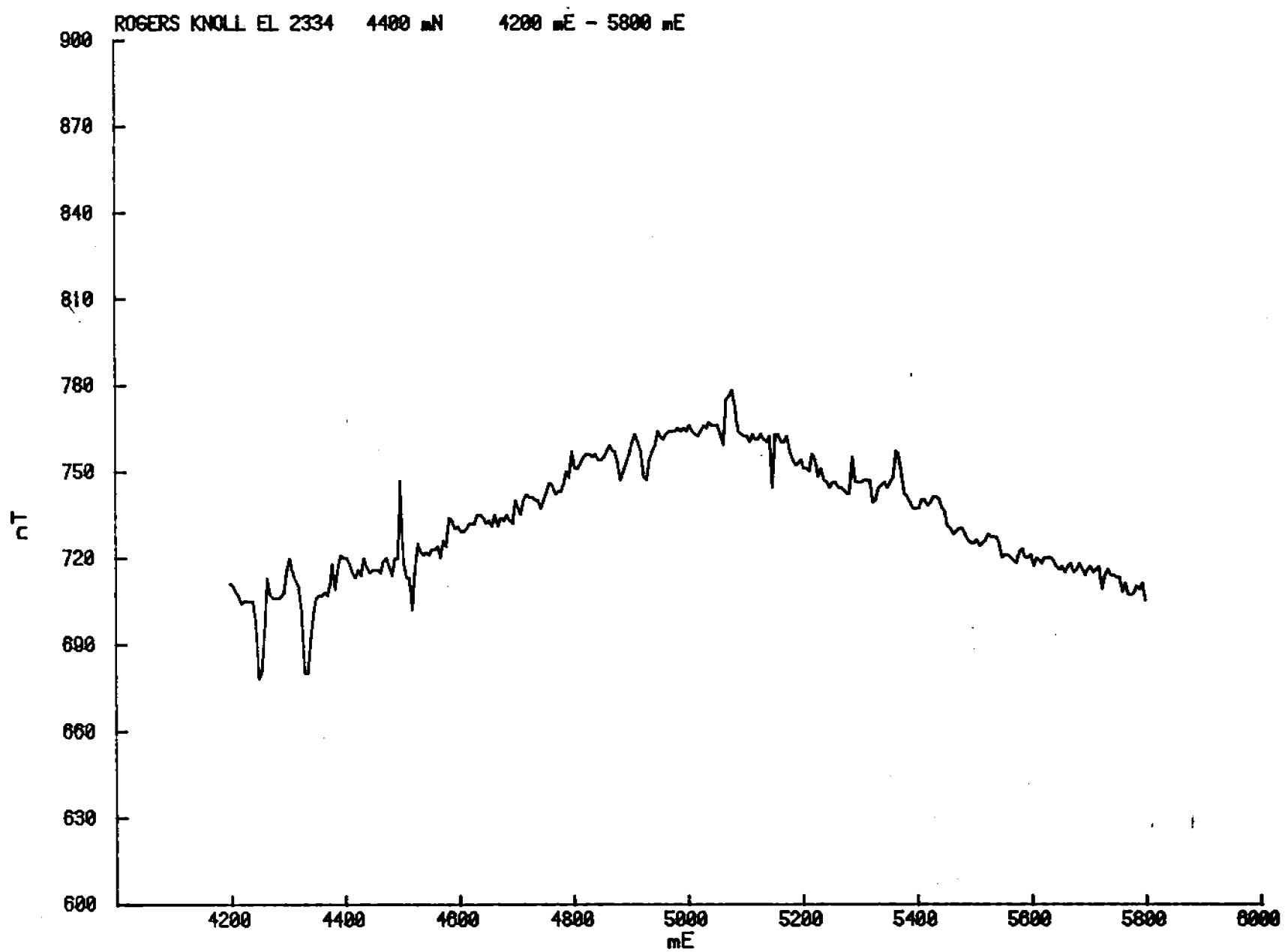


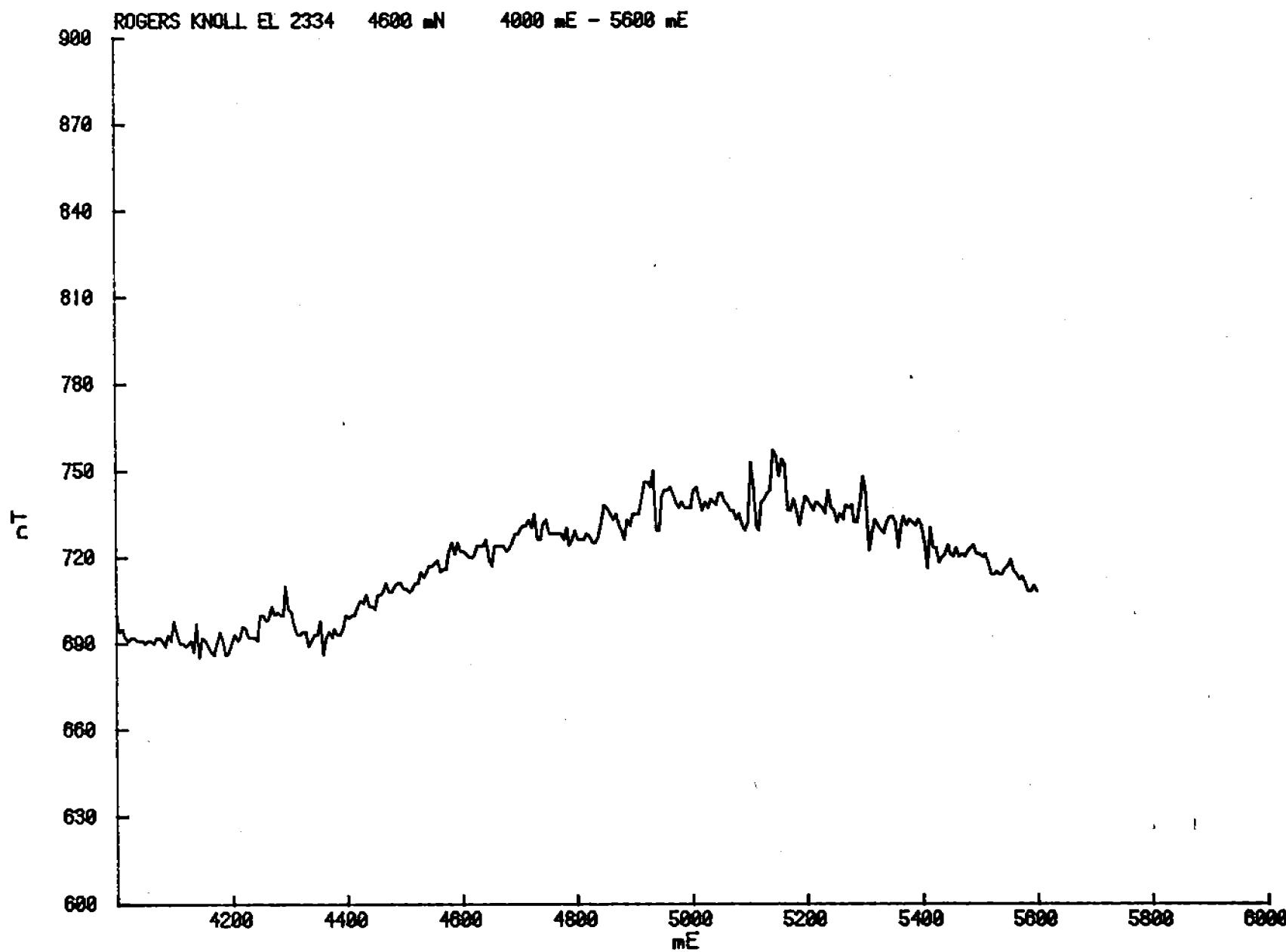


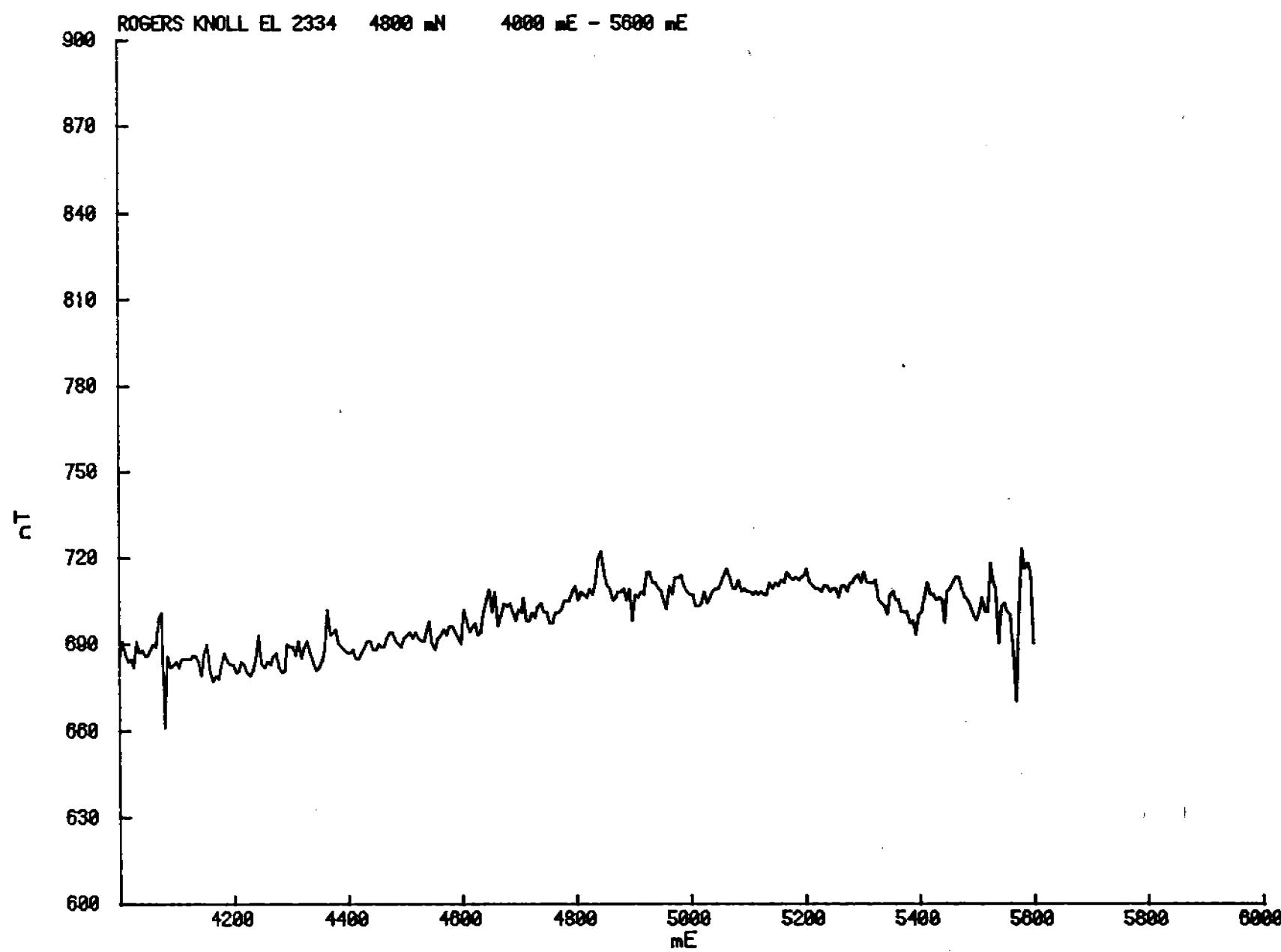


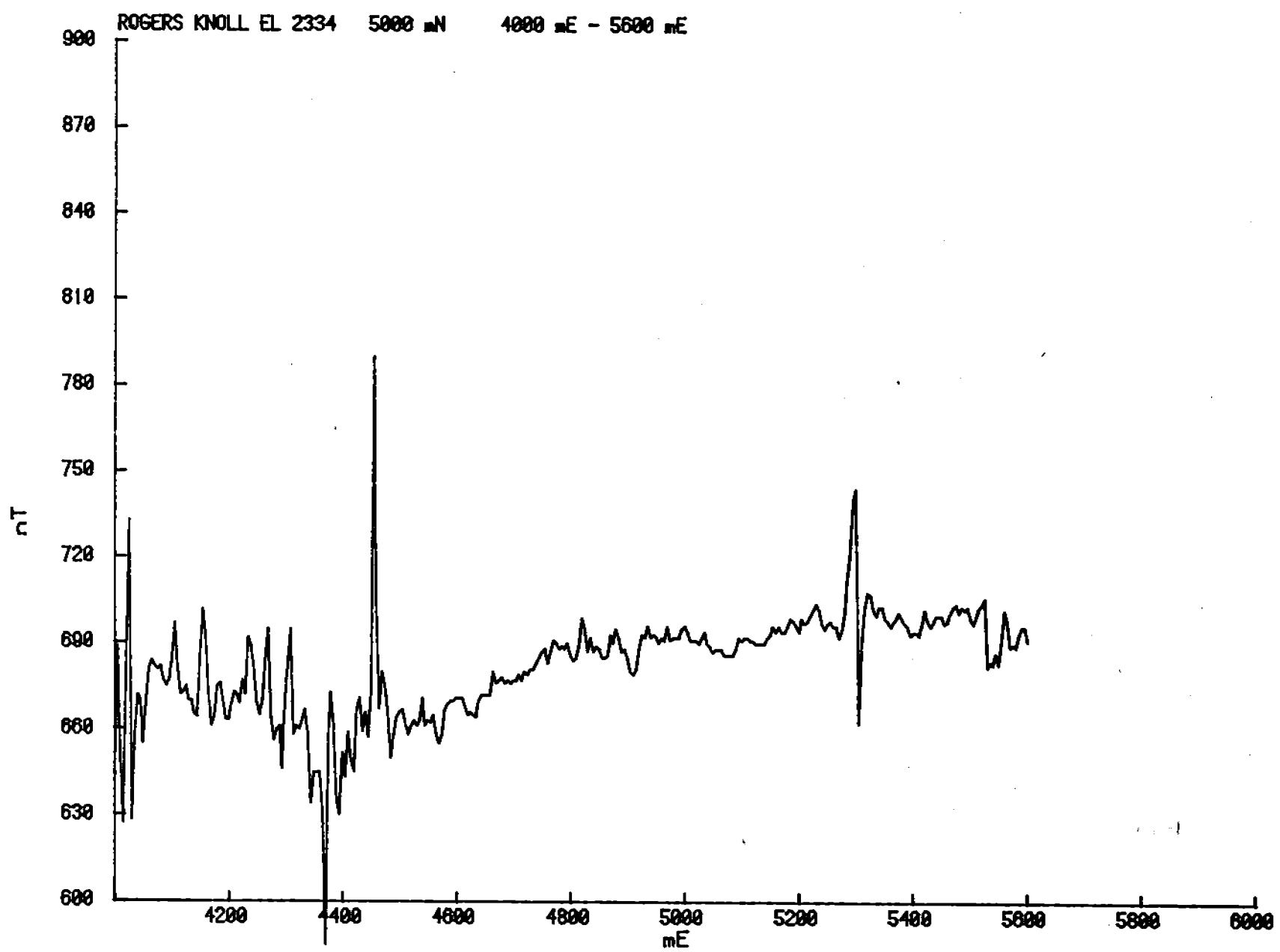


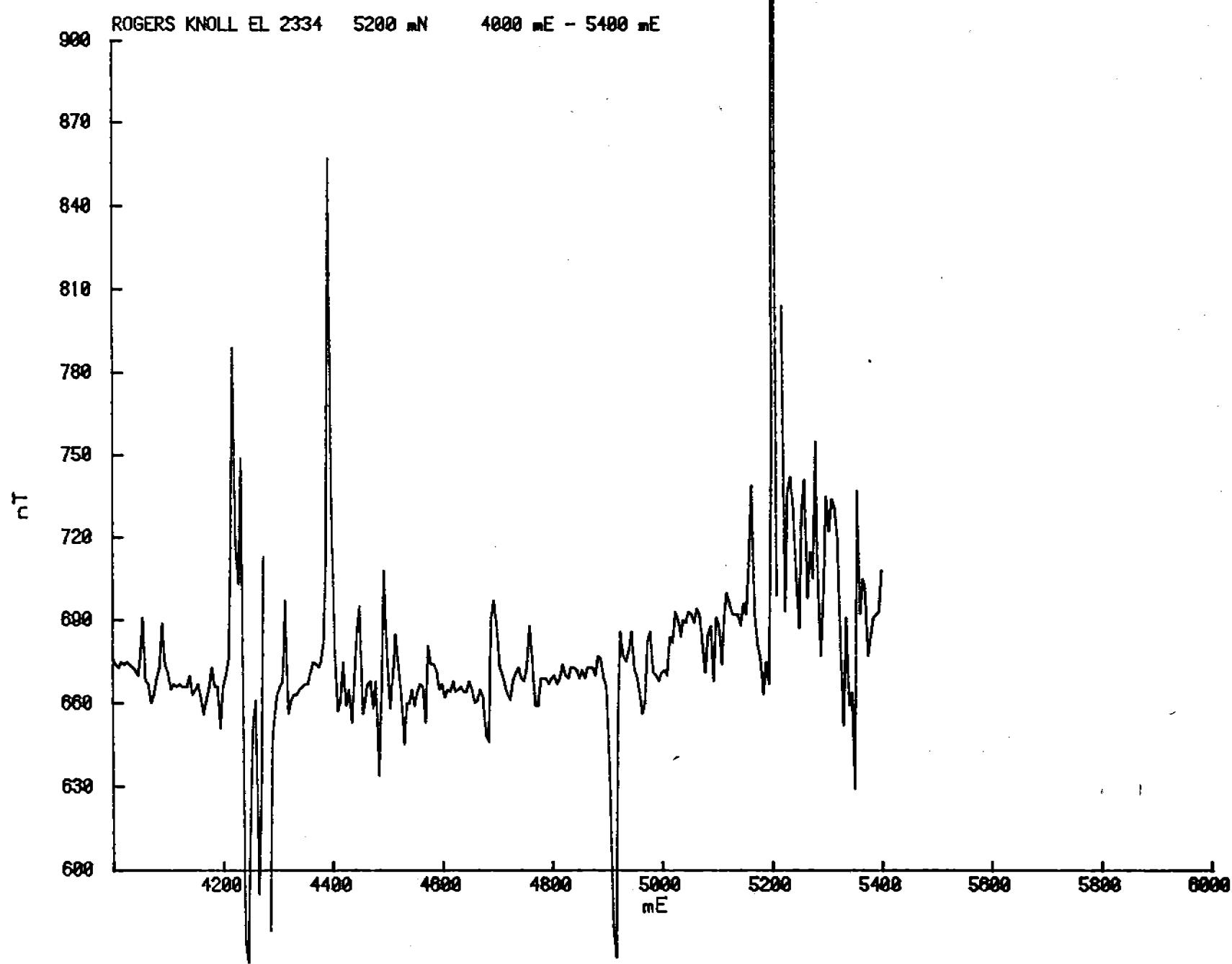


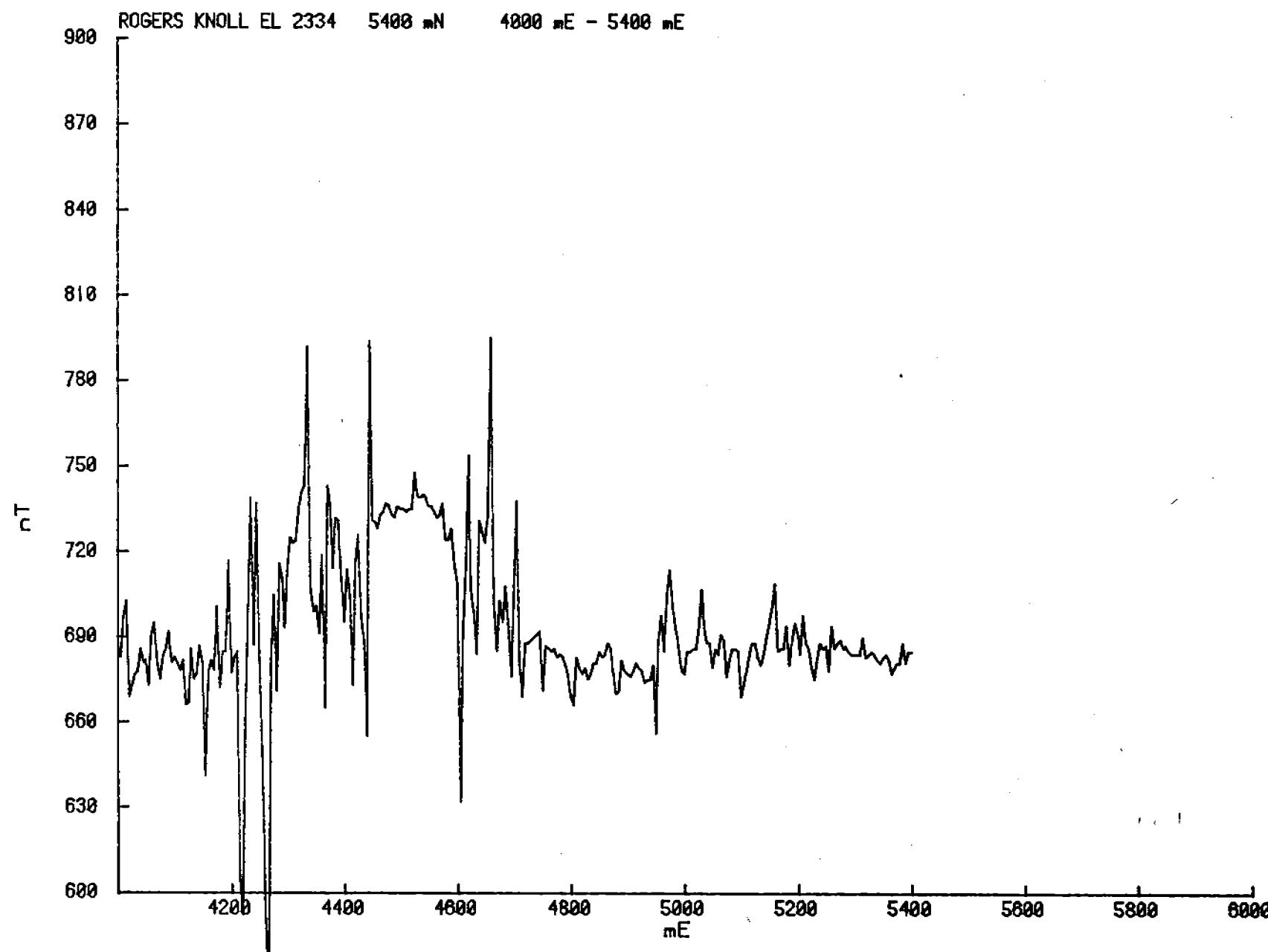


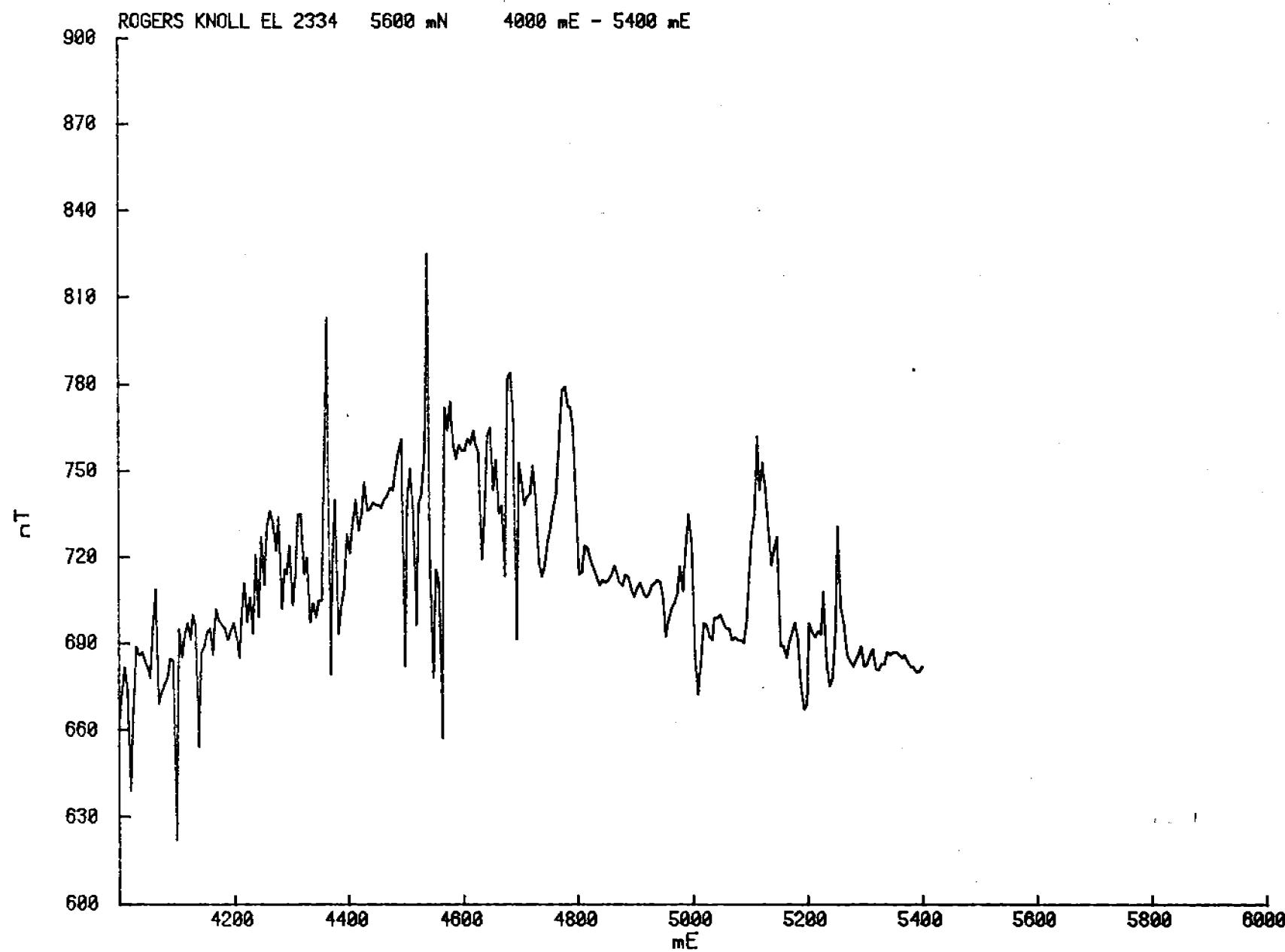


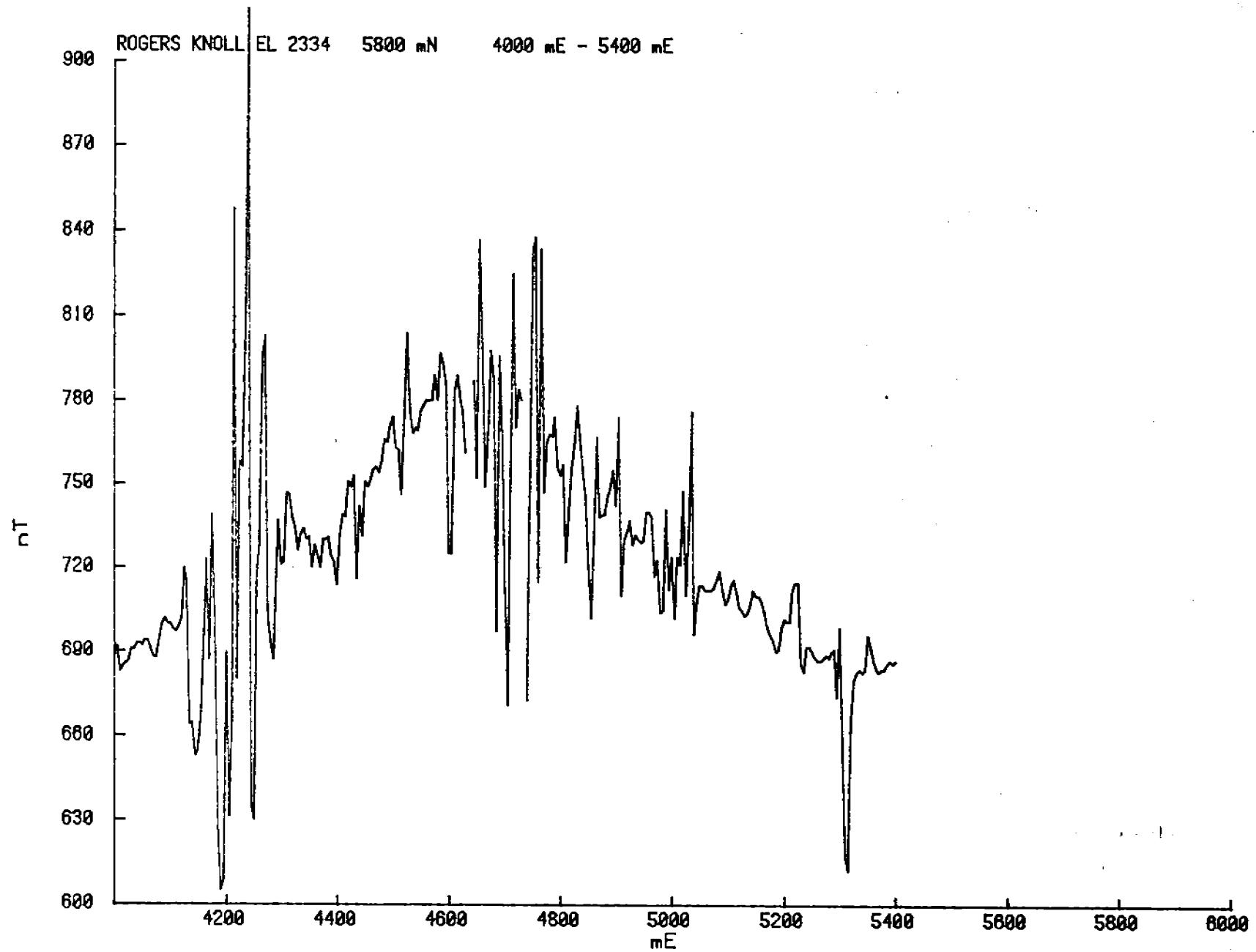


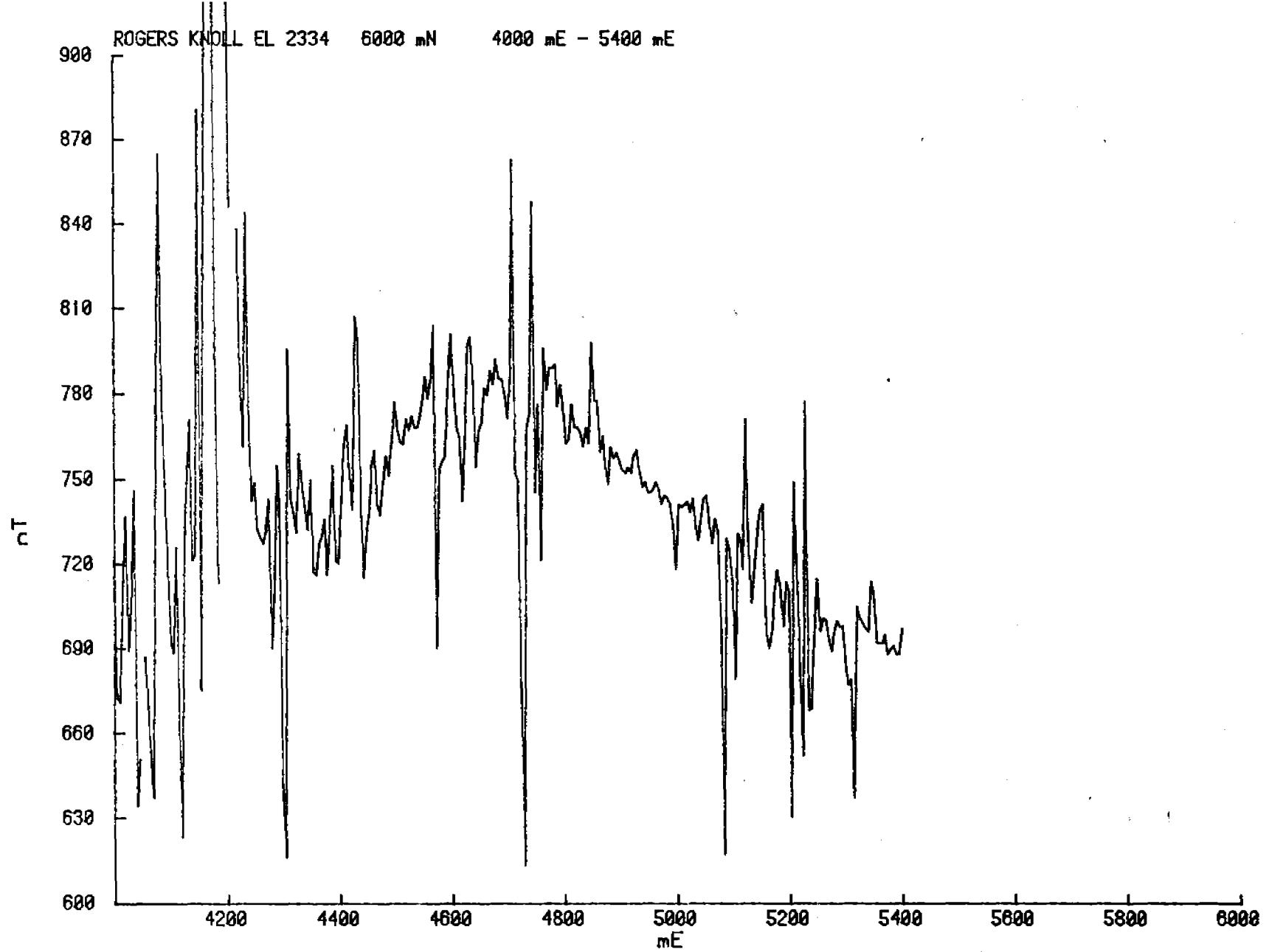


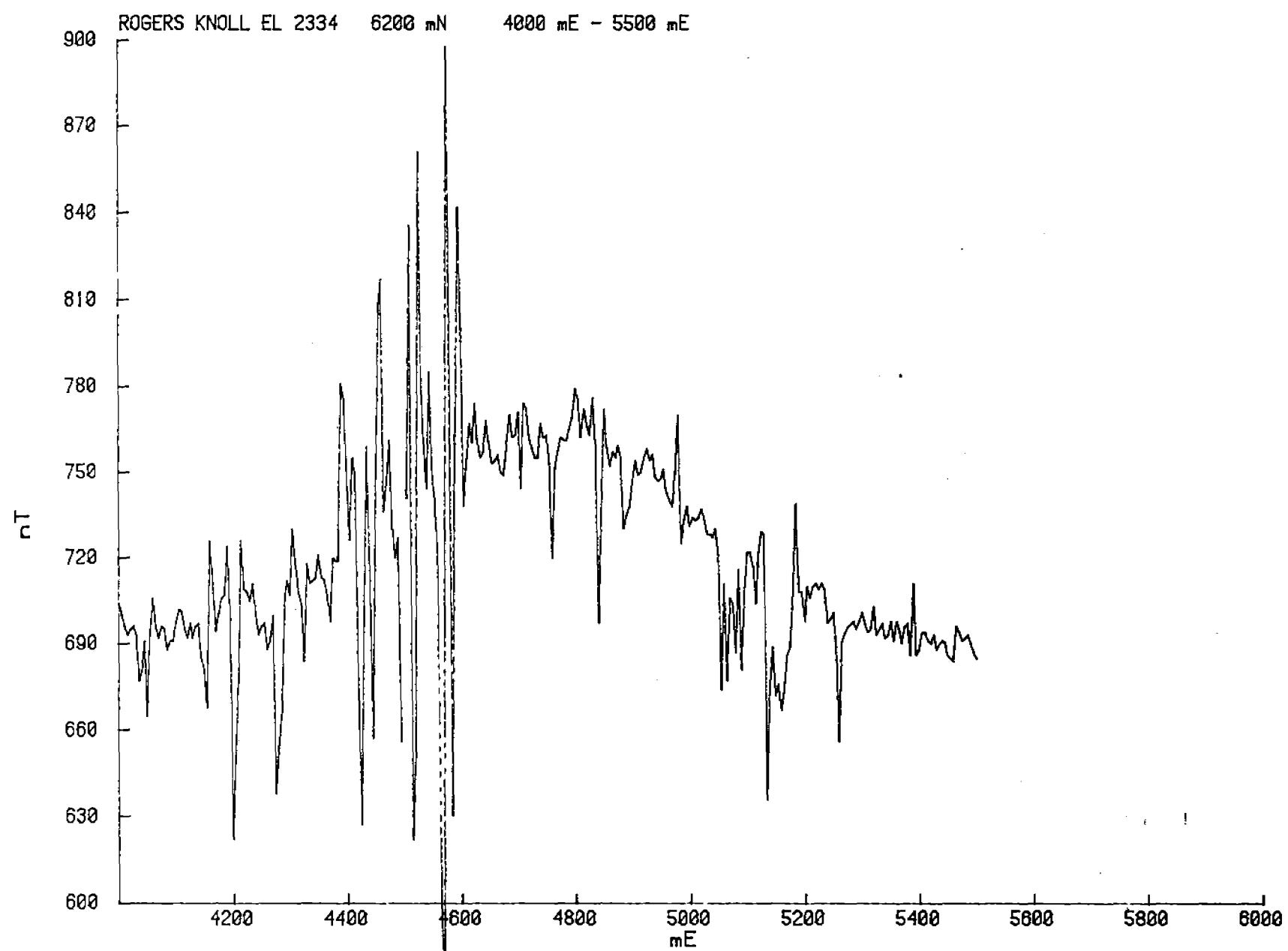


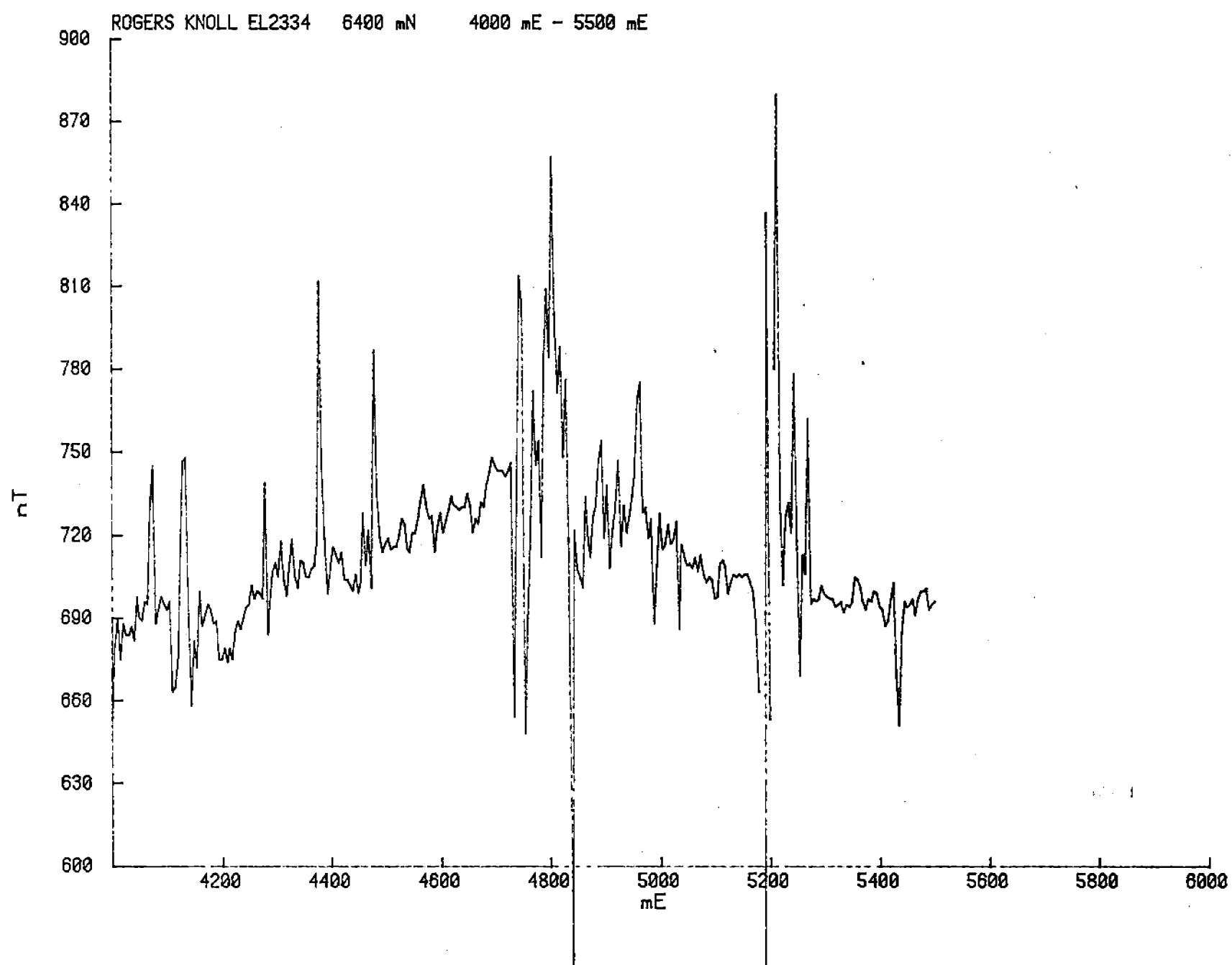


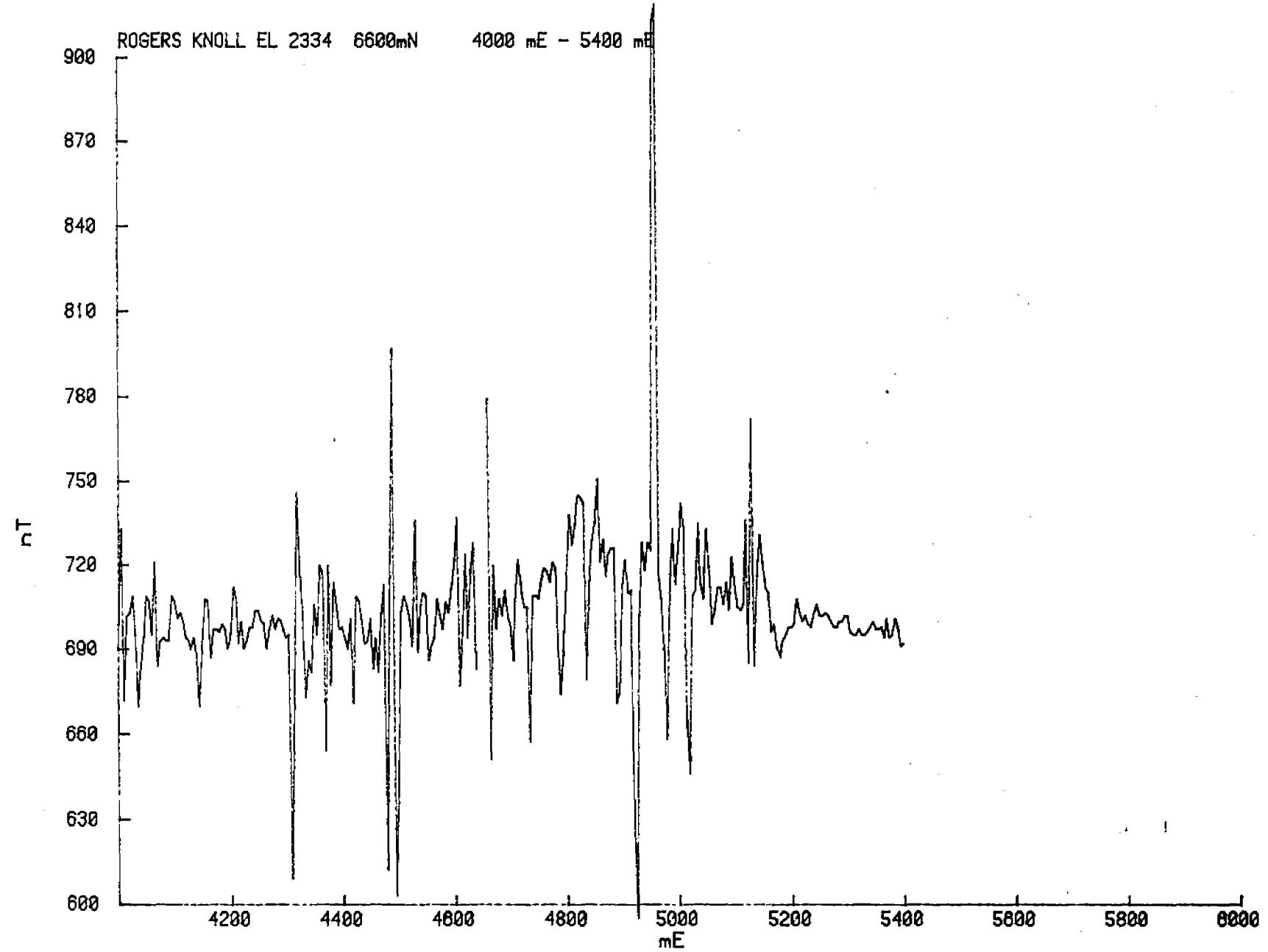


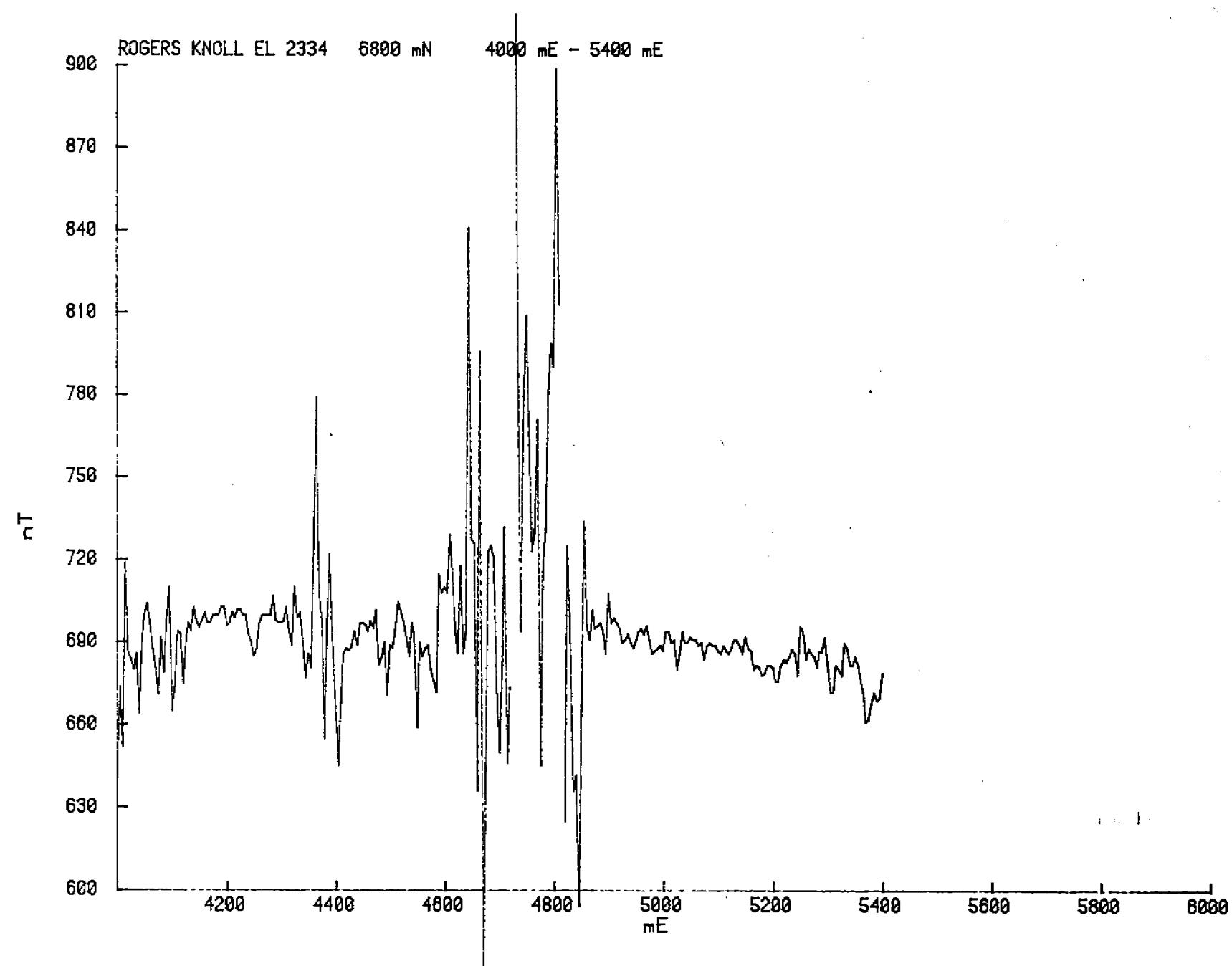






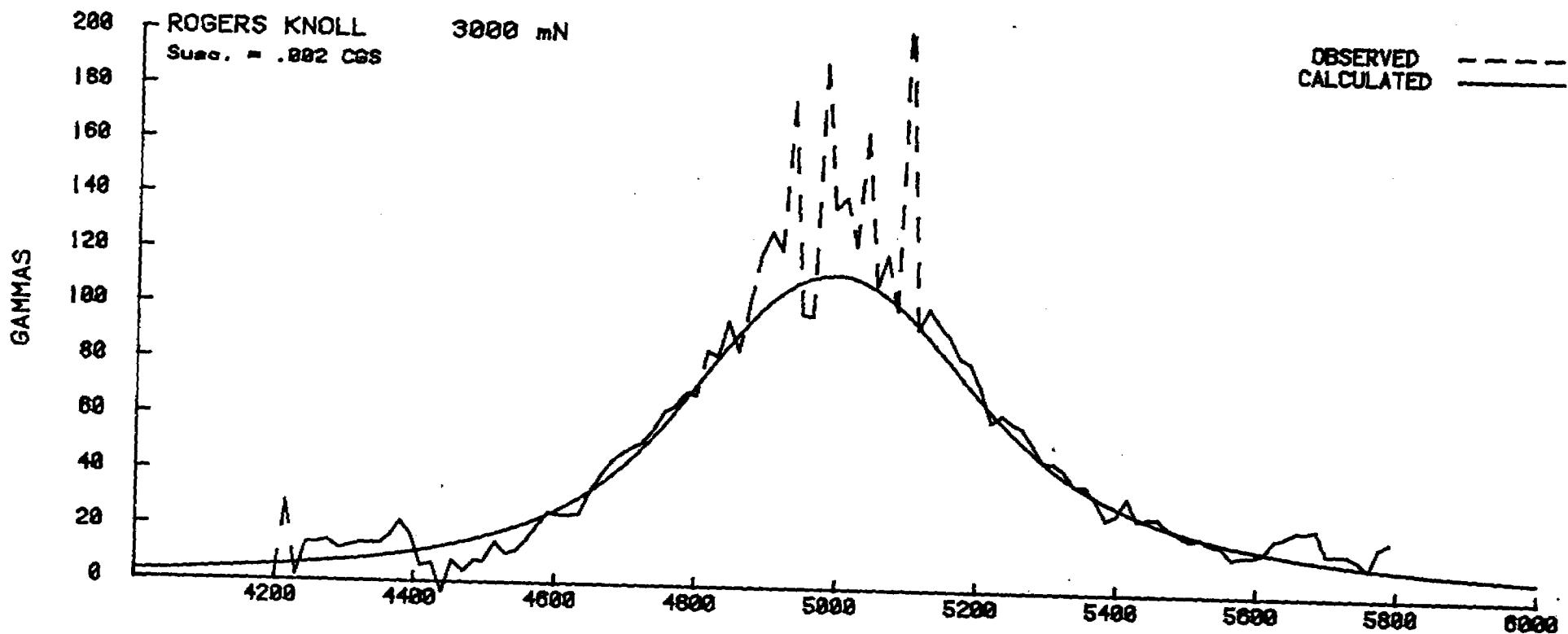






**APPENDIX III**

**GROUND MAGNETIC DATA INTERPRETATION**



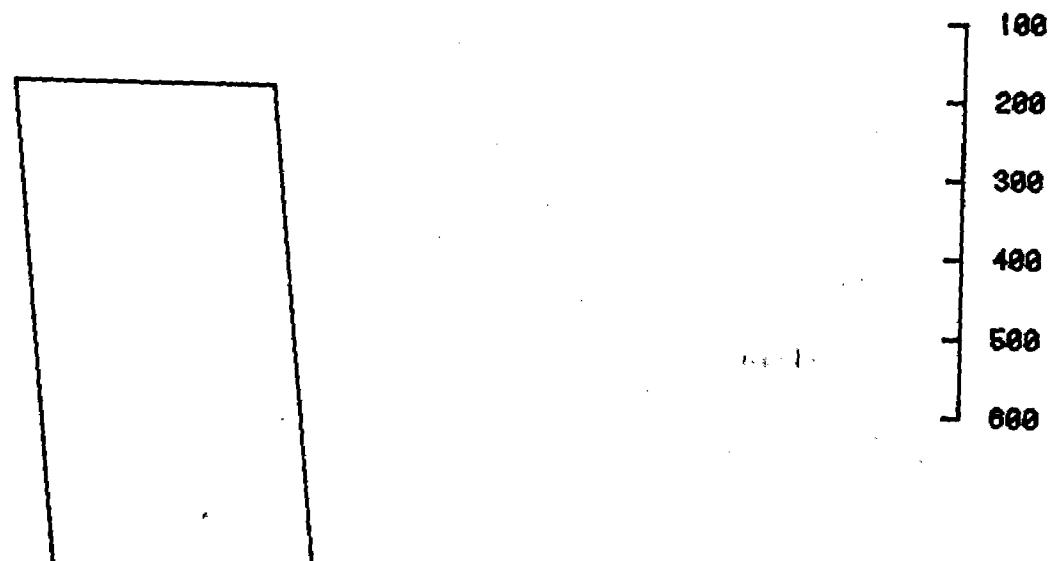
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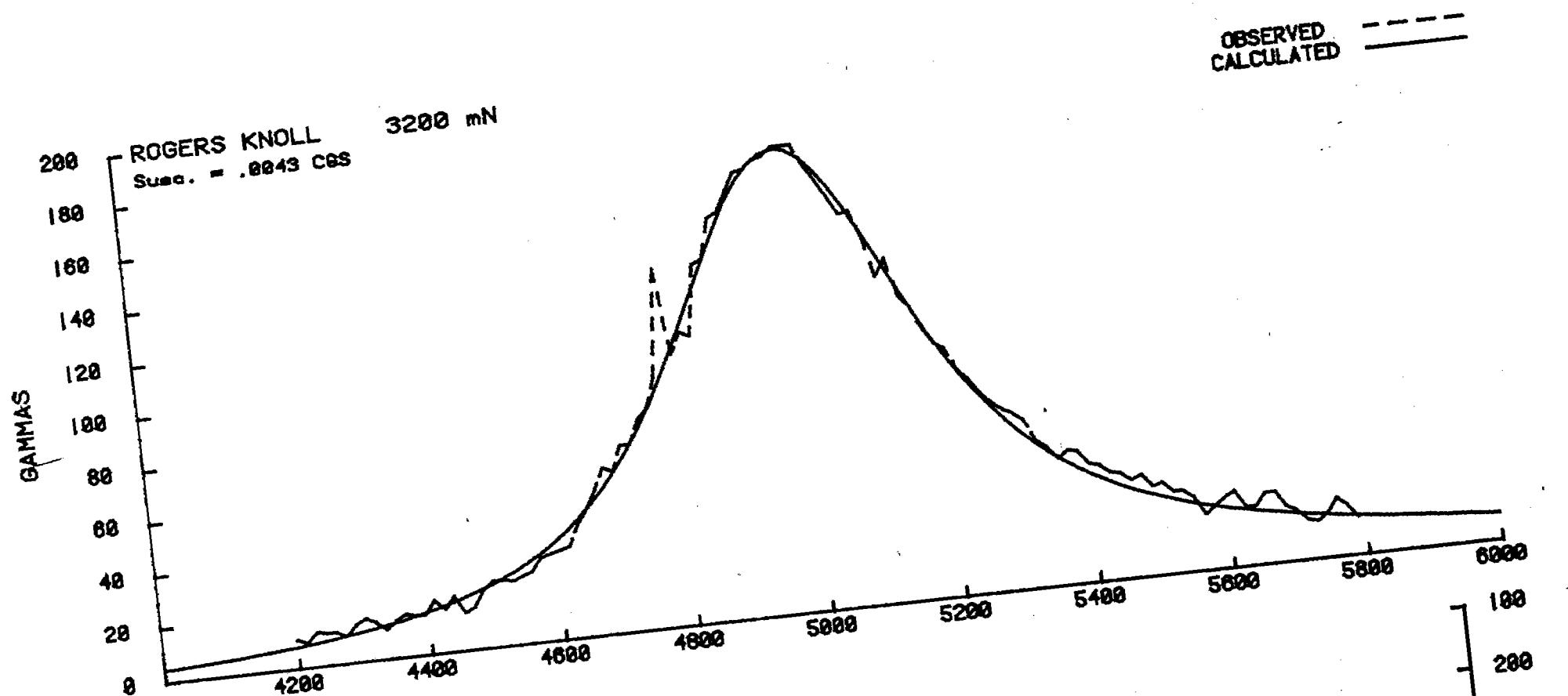
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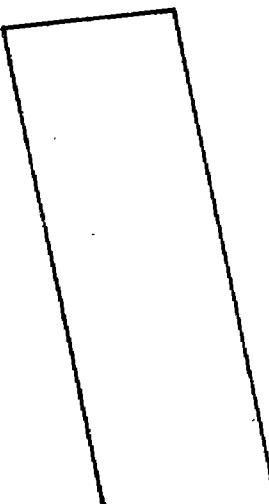
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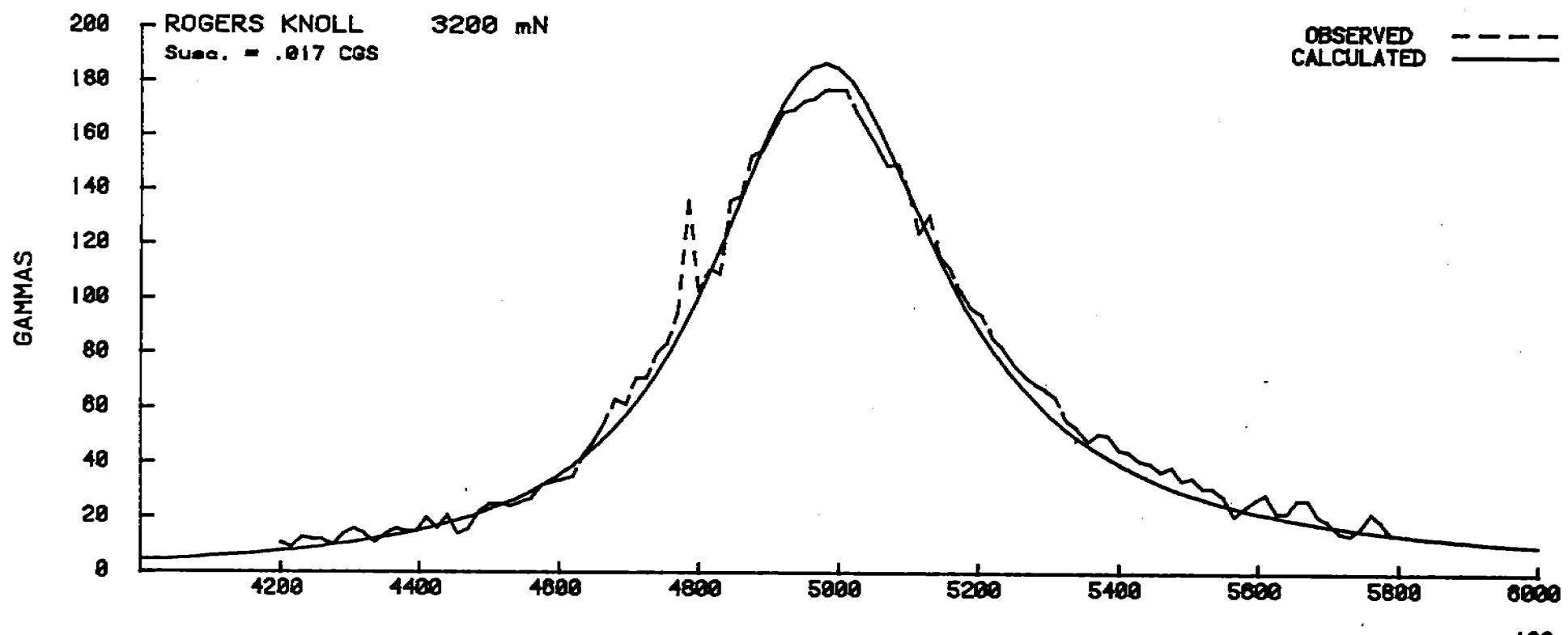




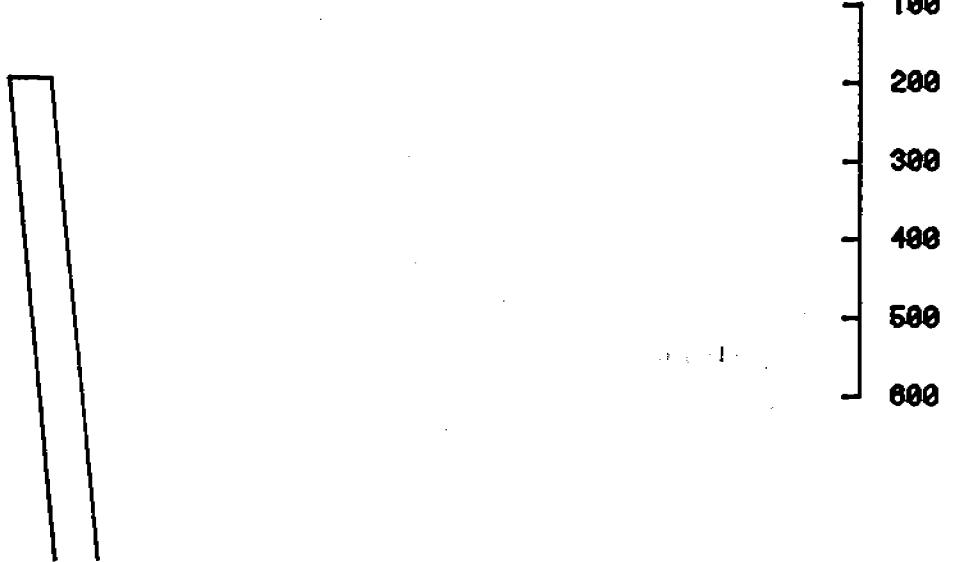
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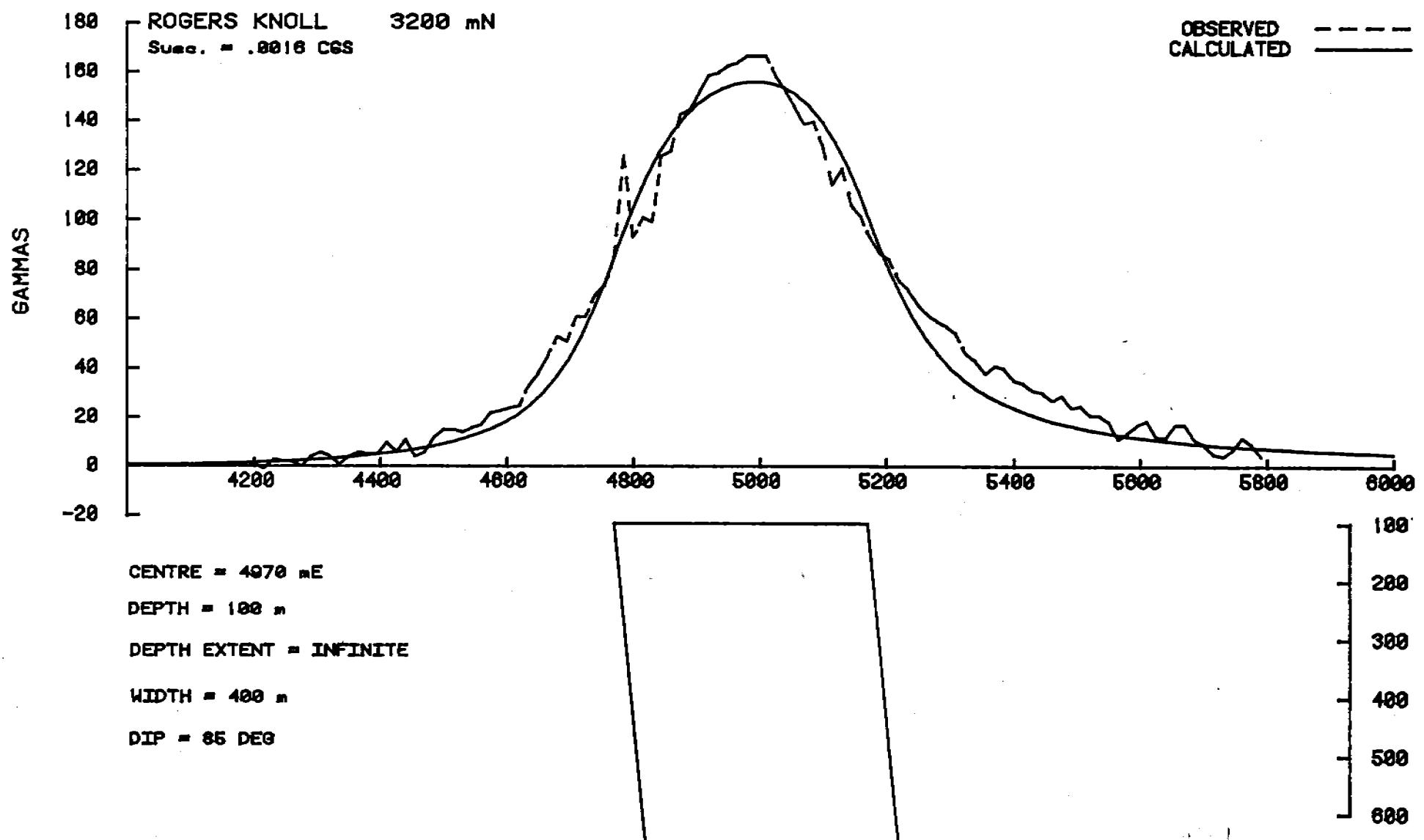


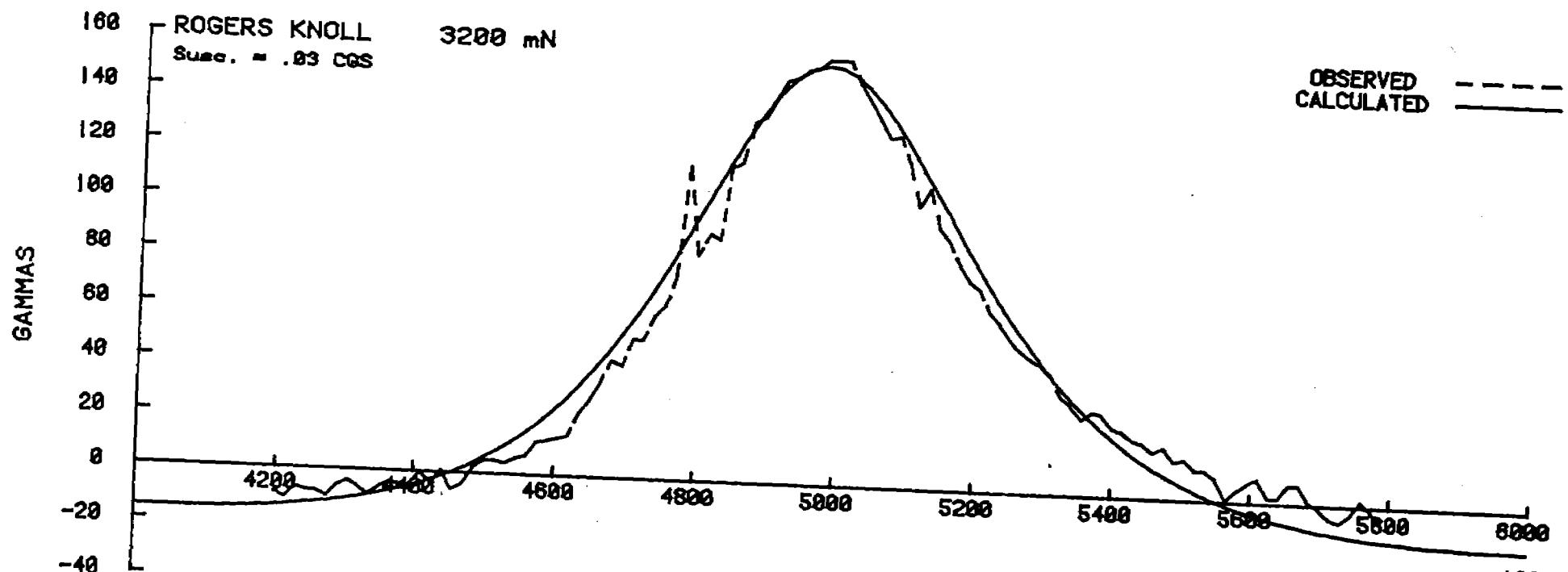
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 200  
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 400  
 500  
 600



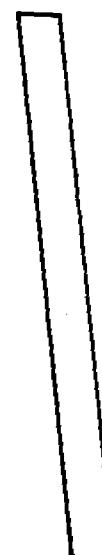
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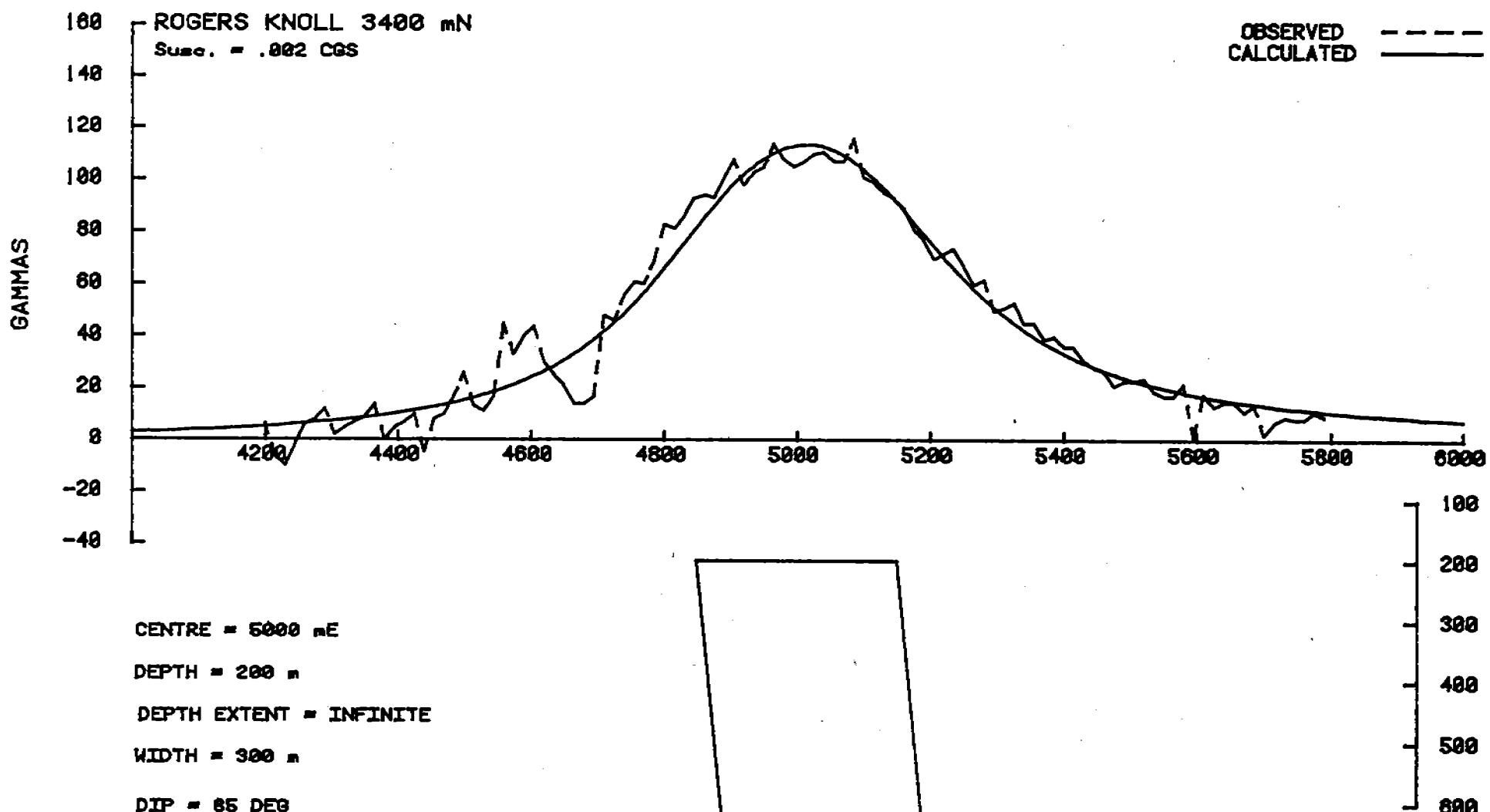


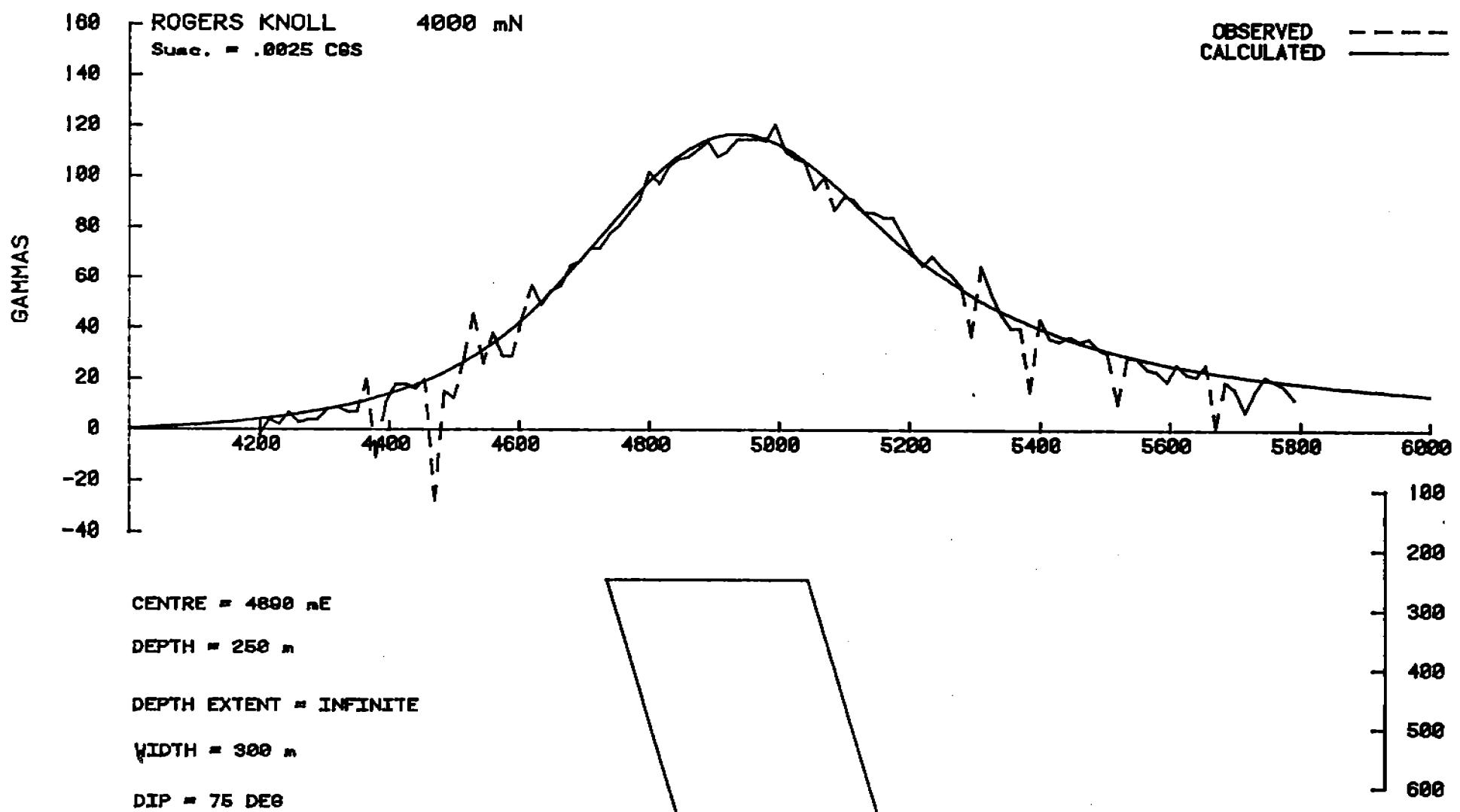


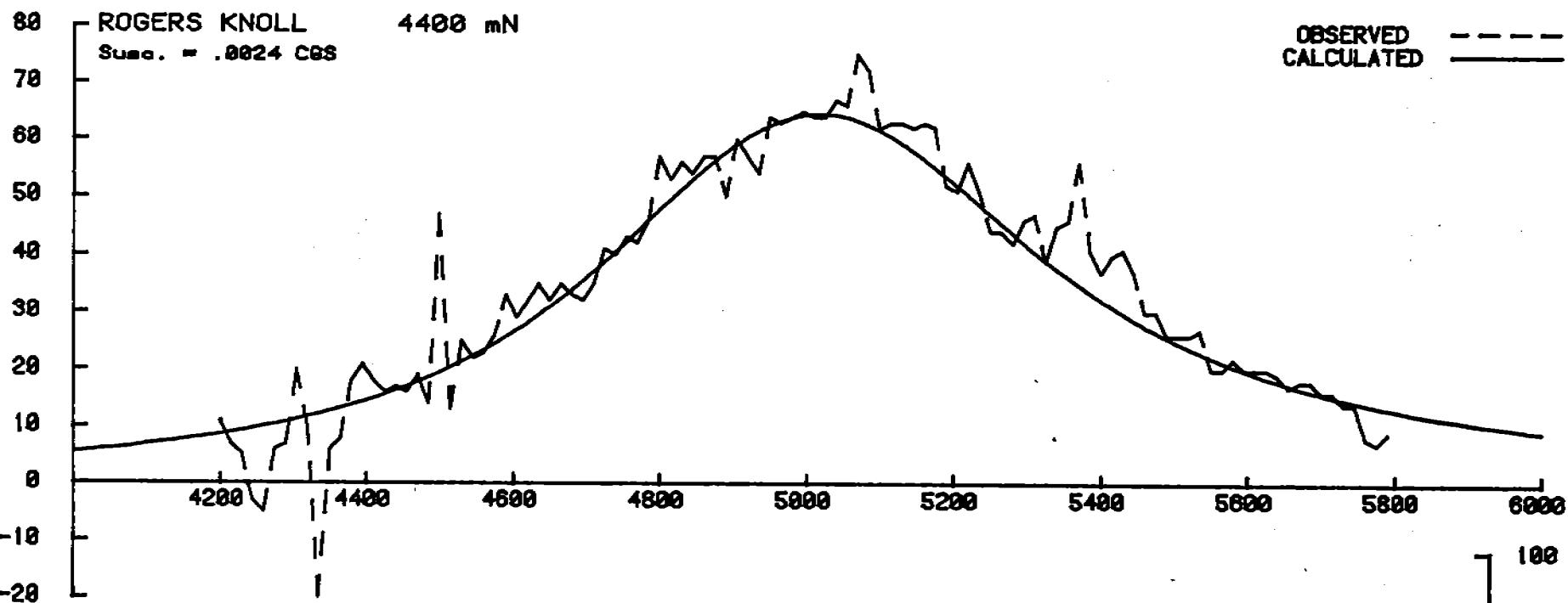


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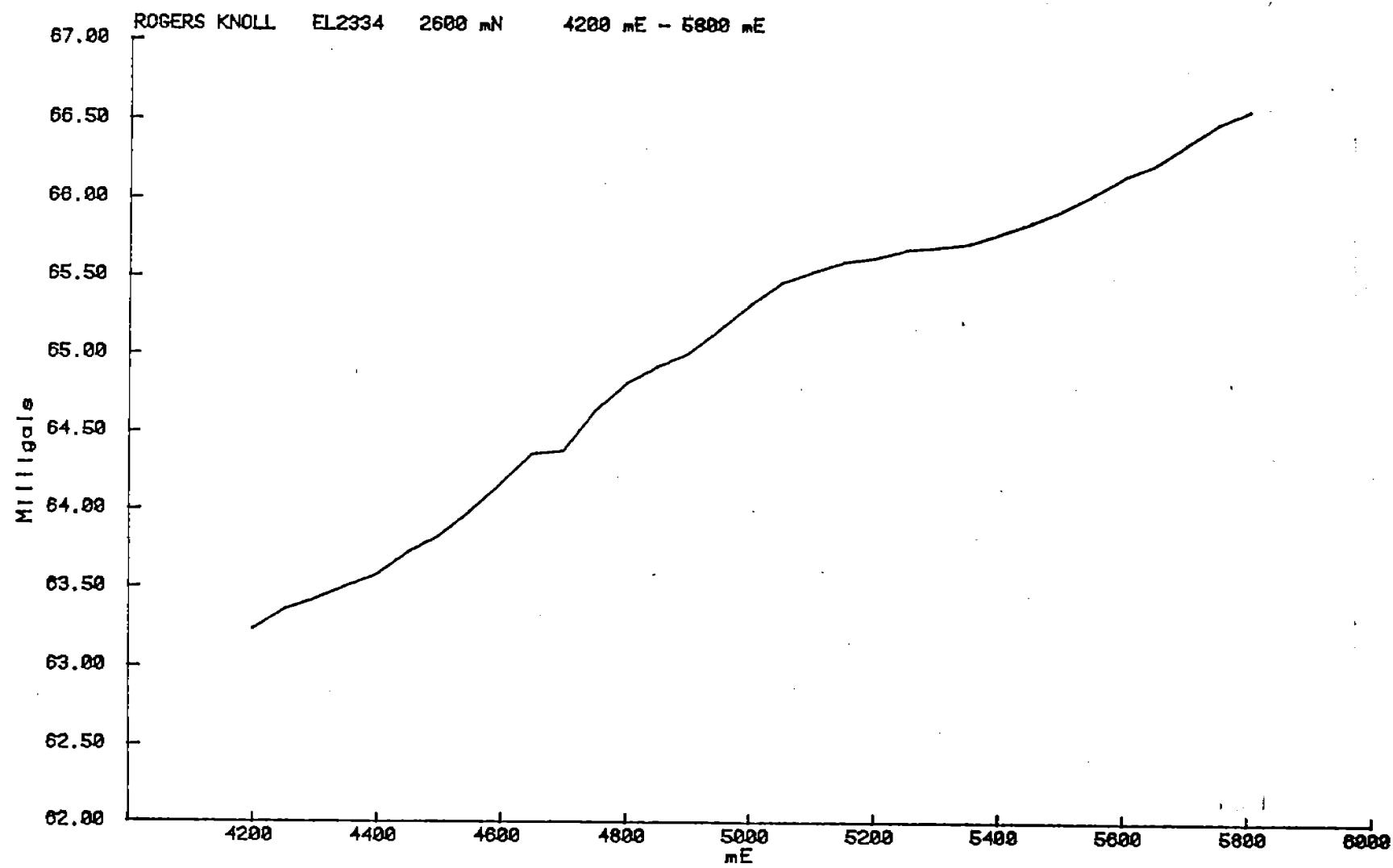
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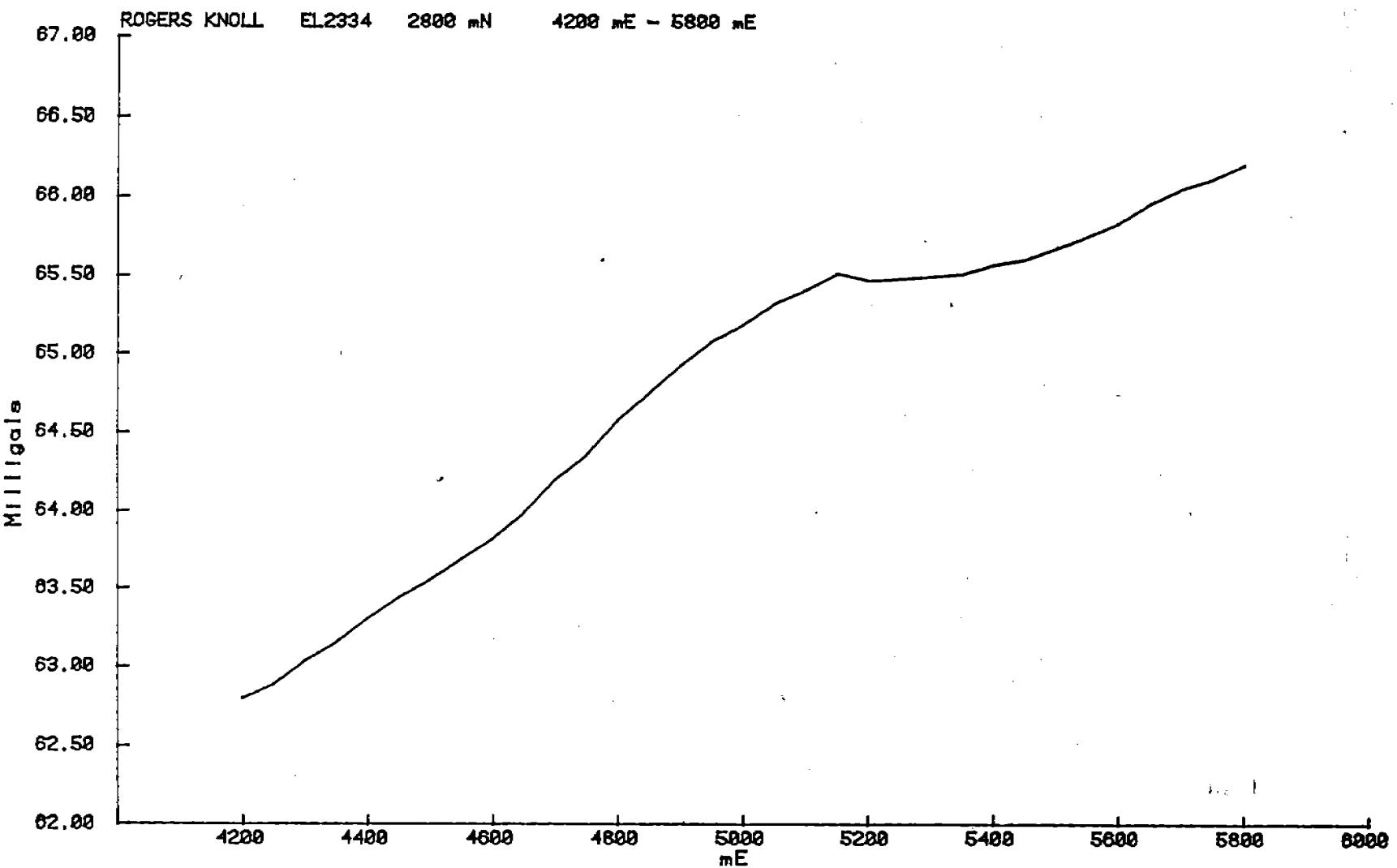
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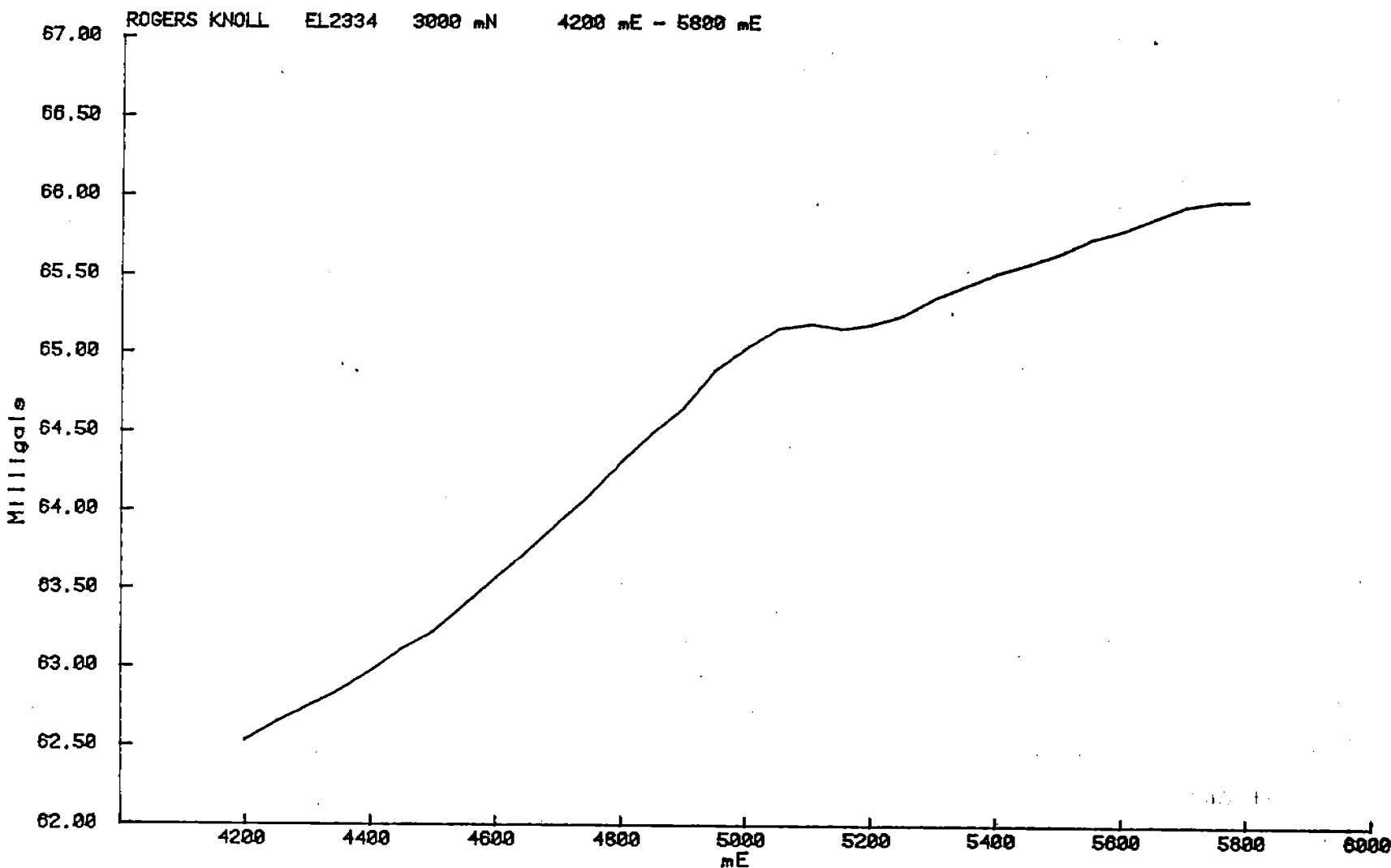
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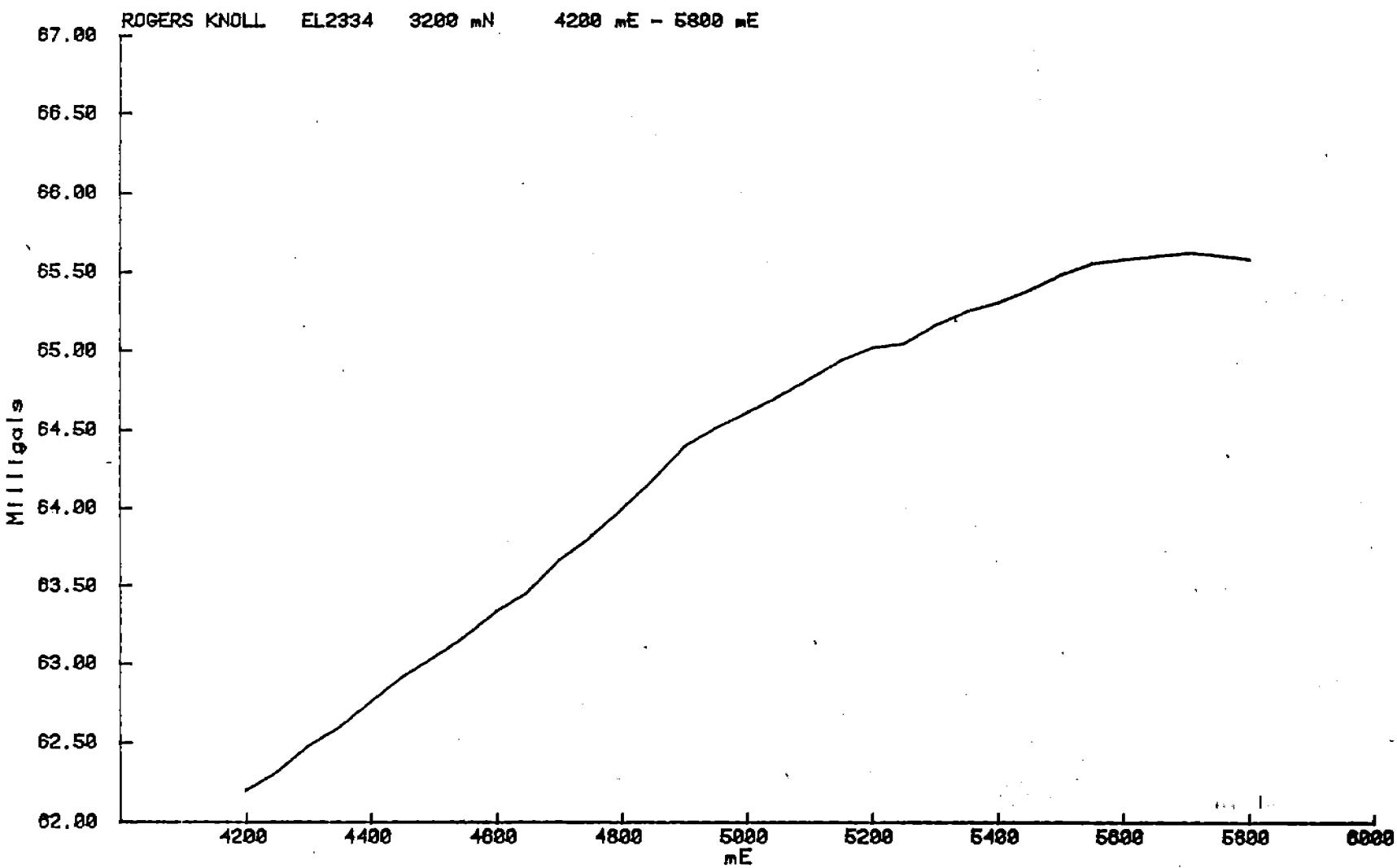
**APPENDIX IV**

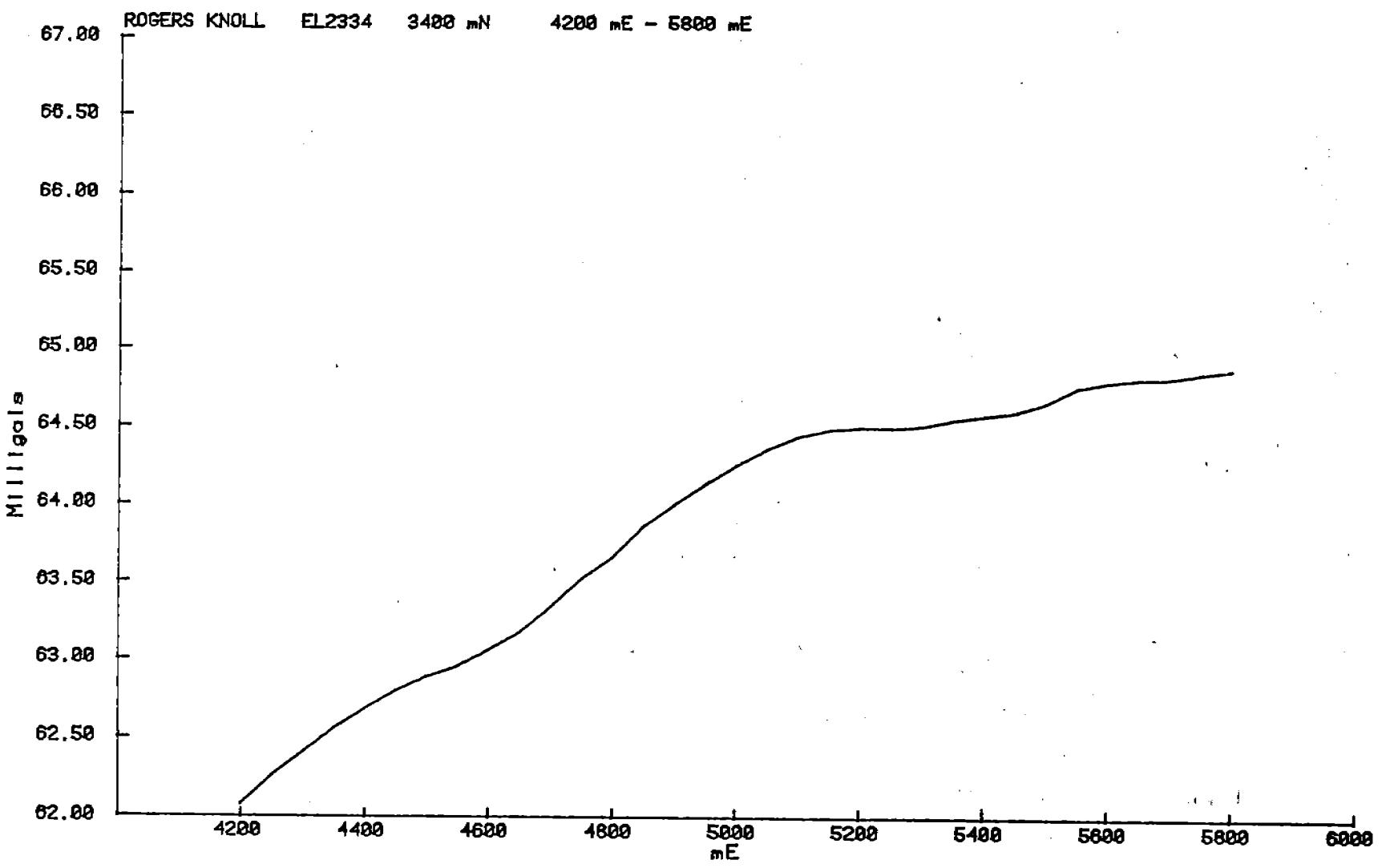
**GRAVITY PROFILES**

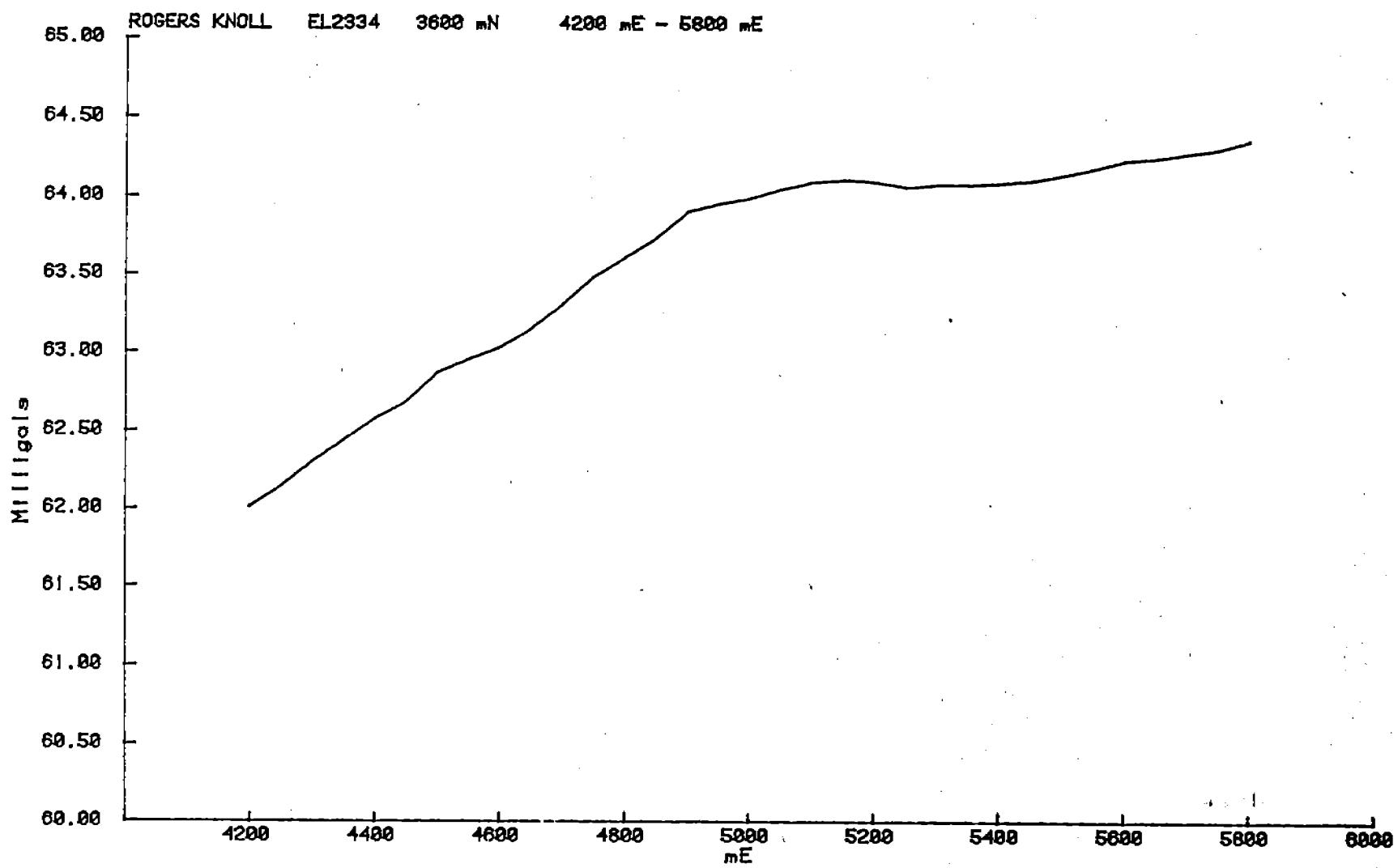


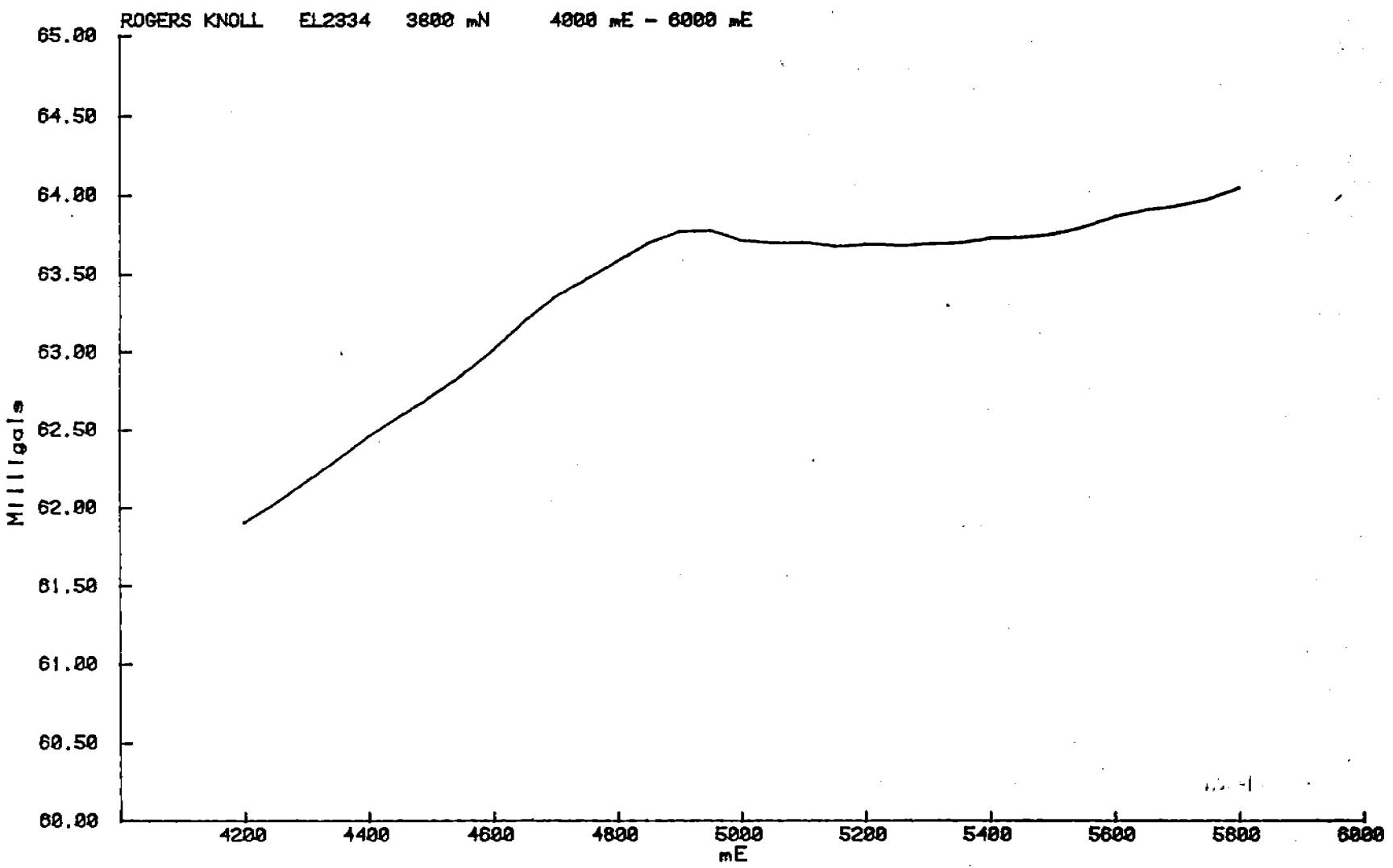


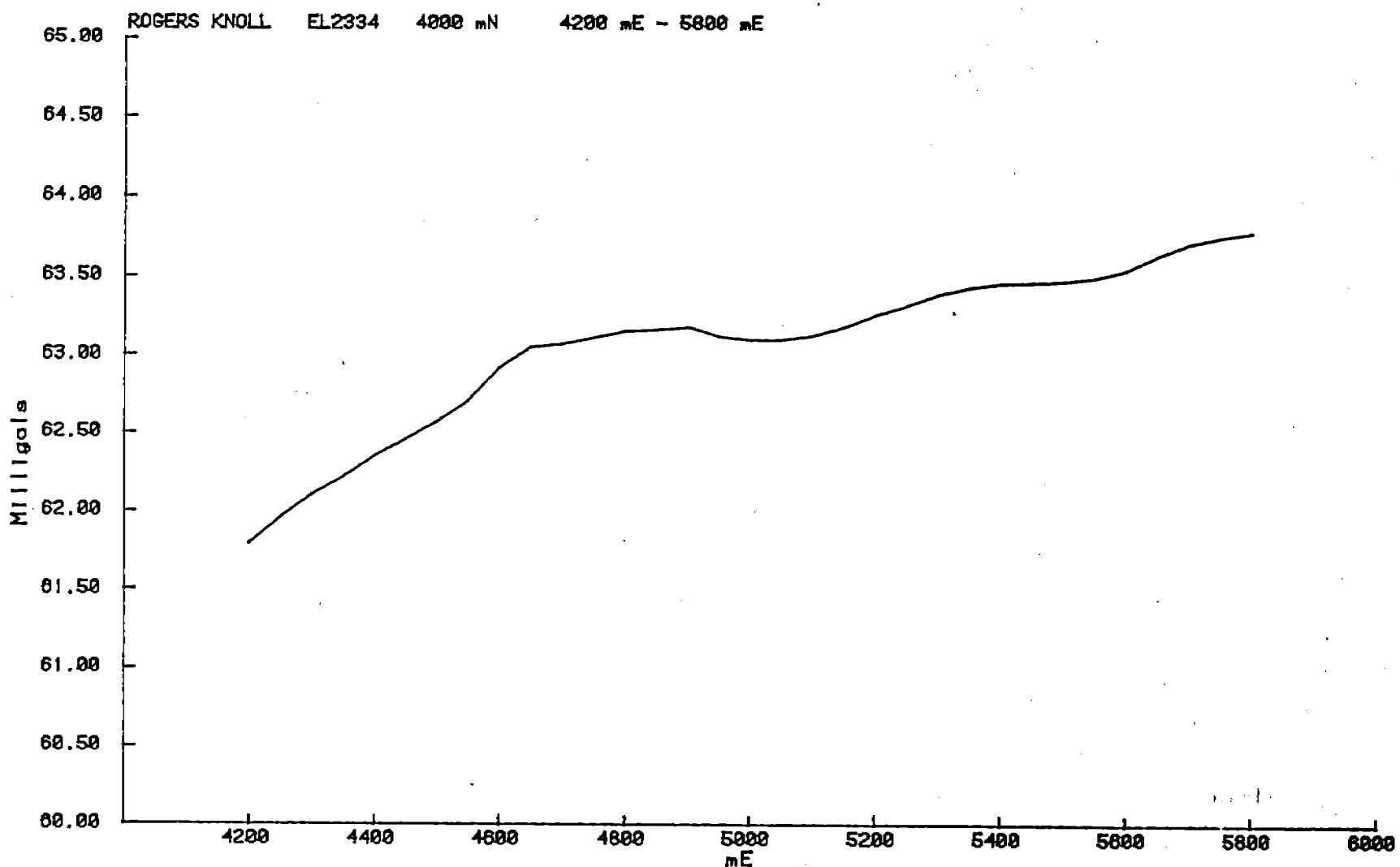


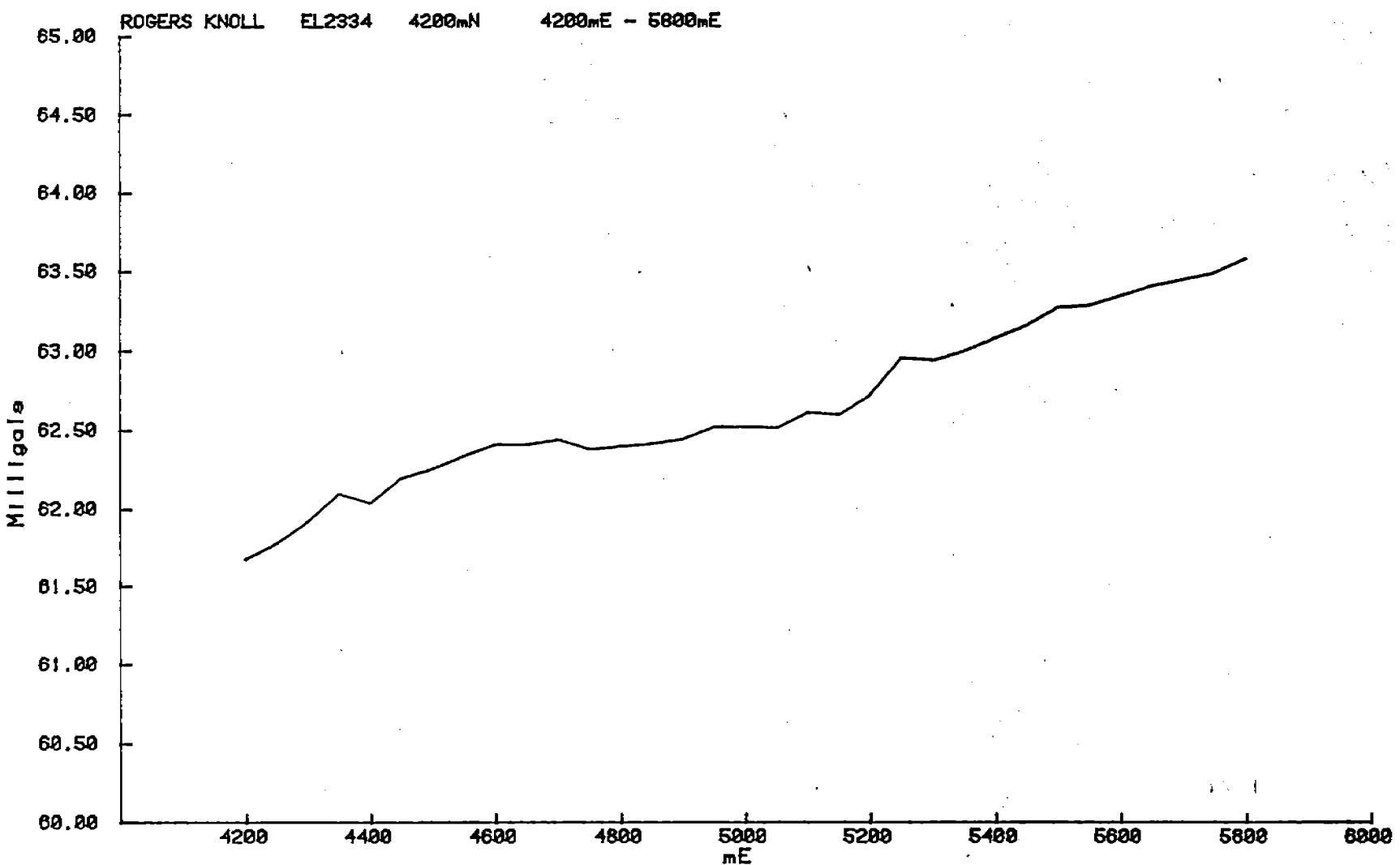


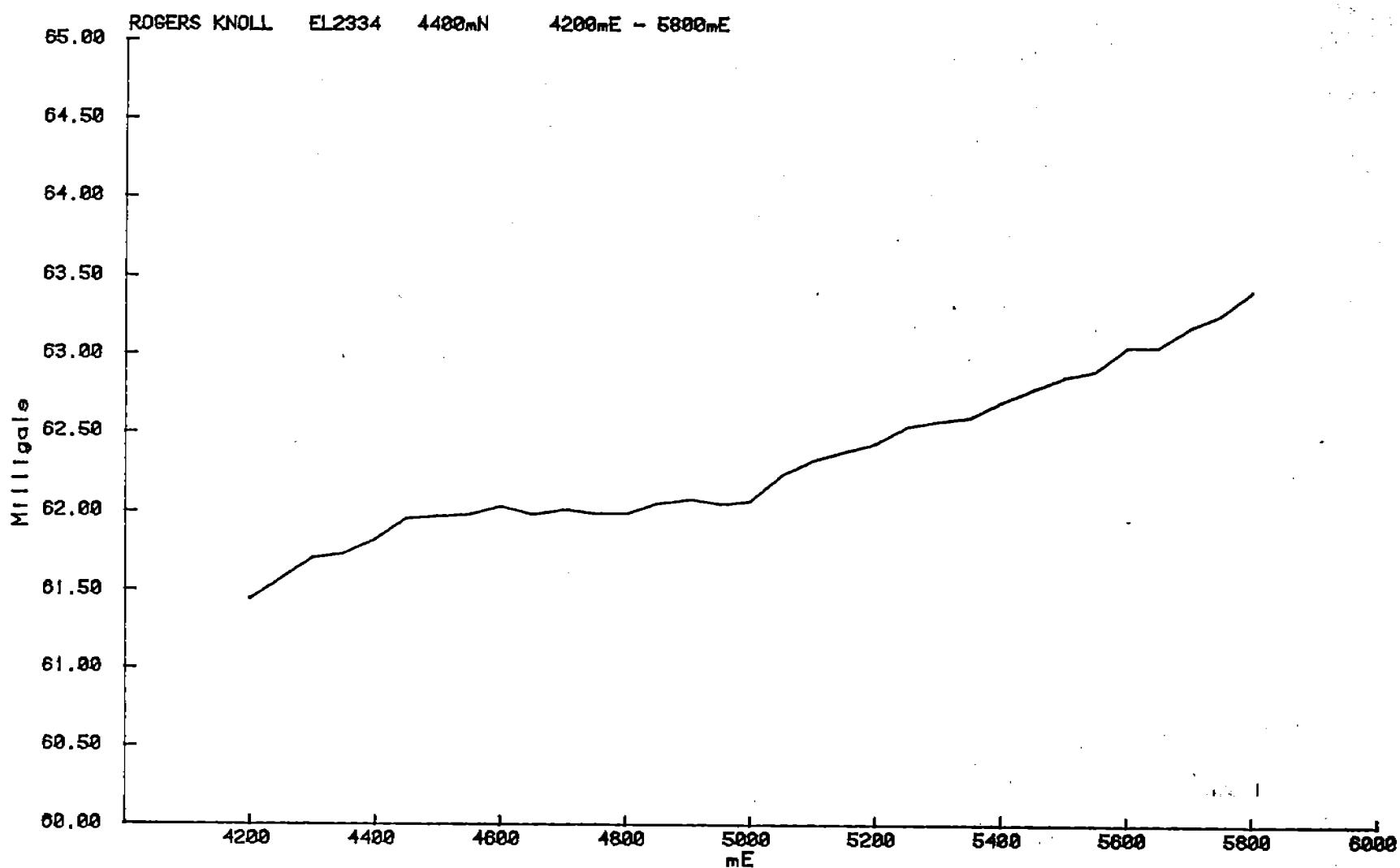


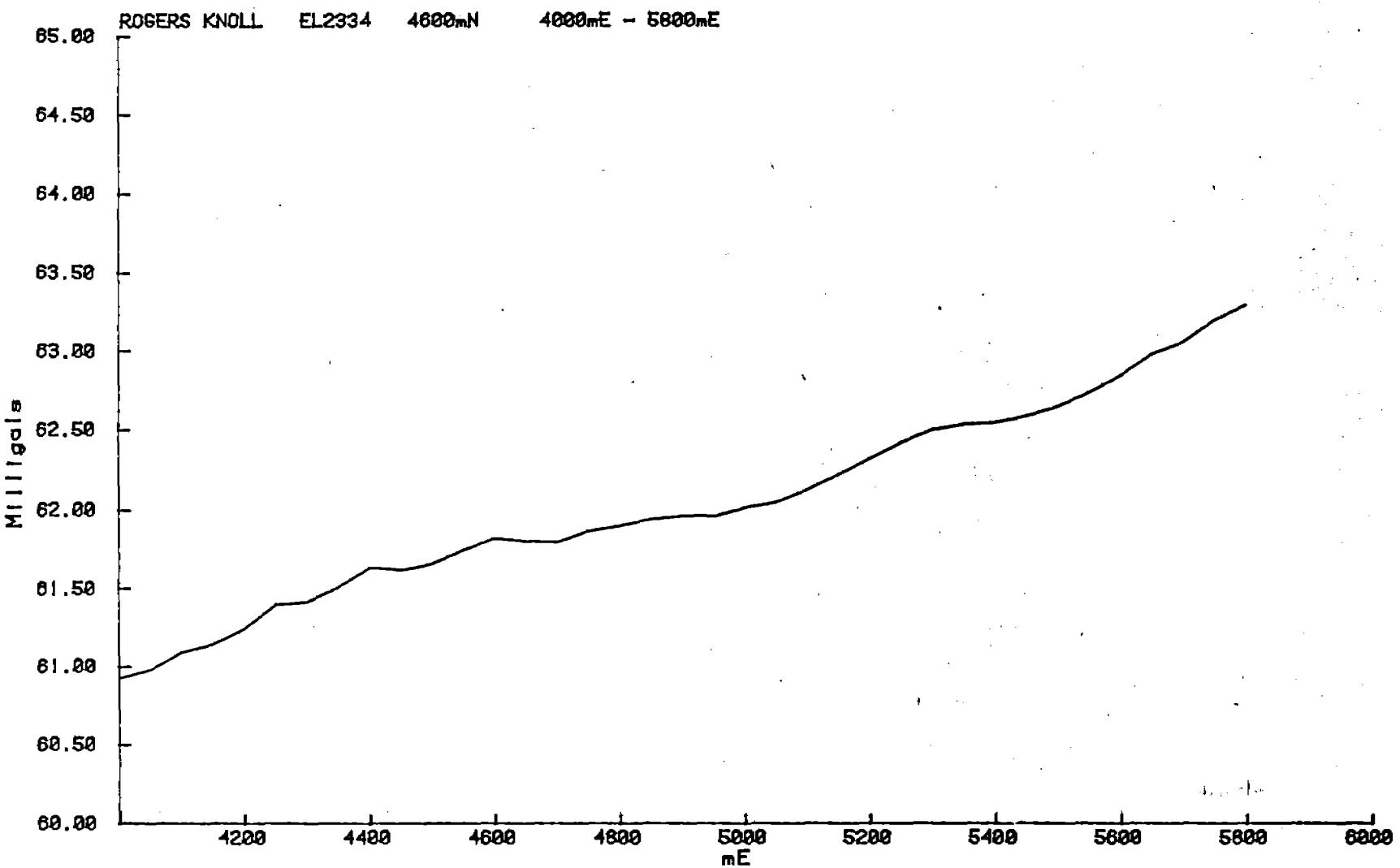


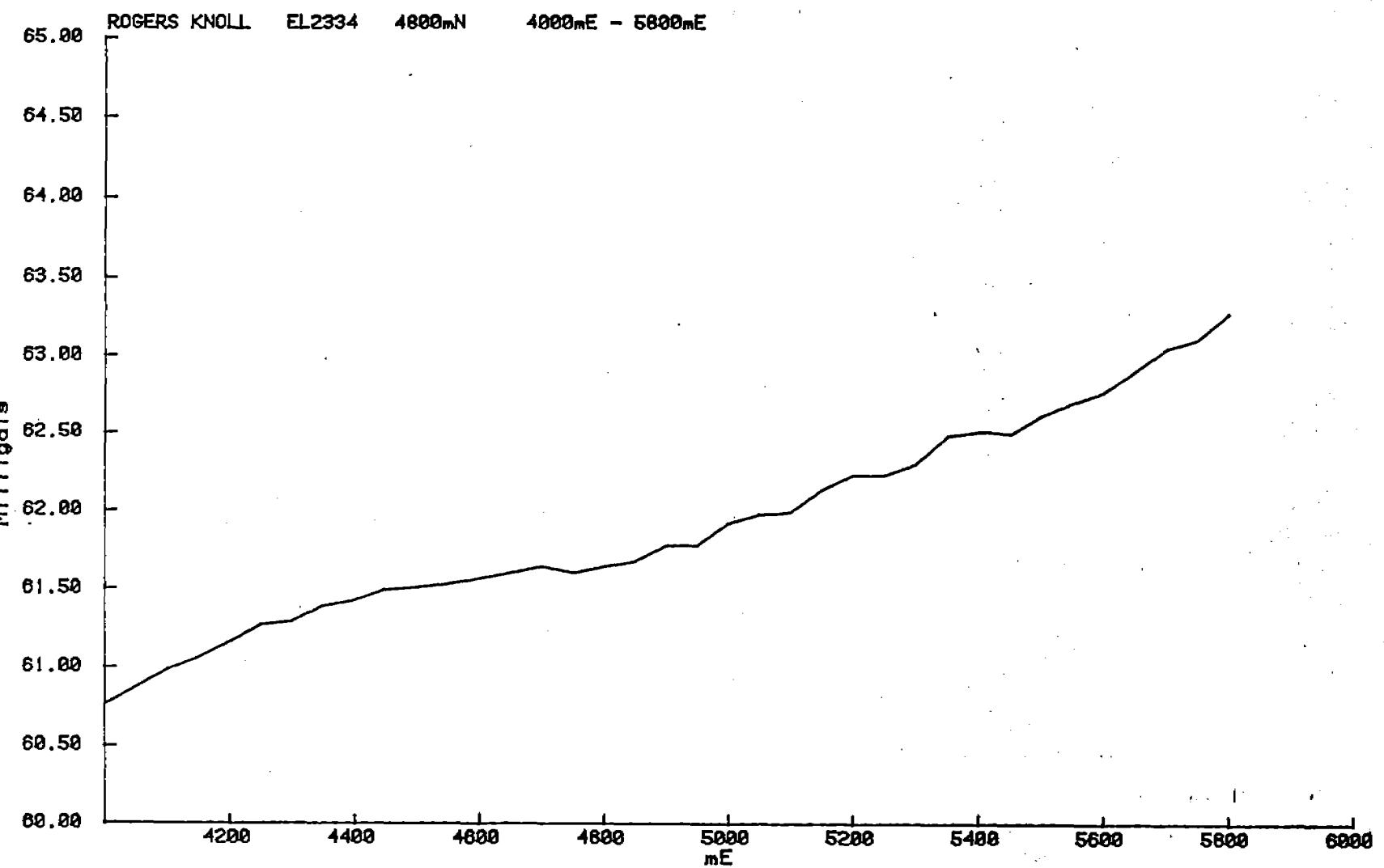


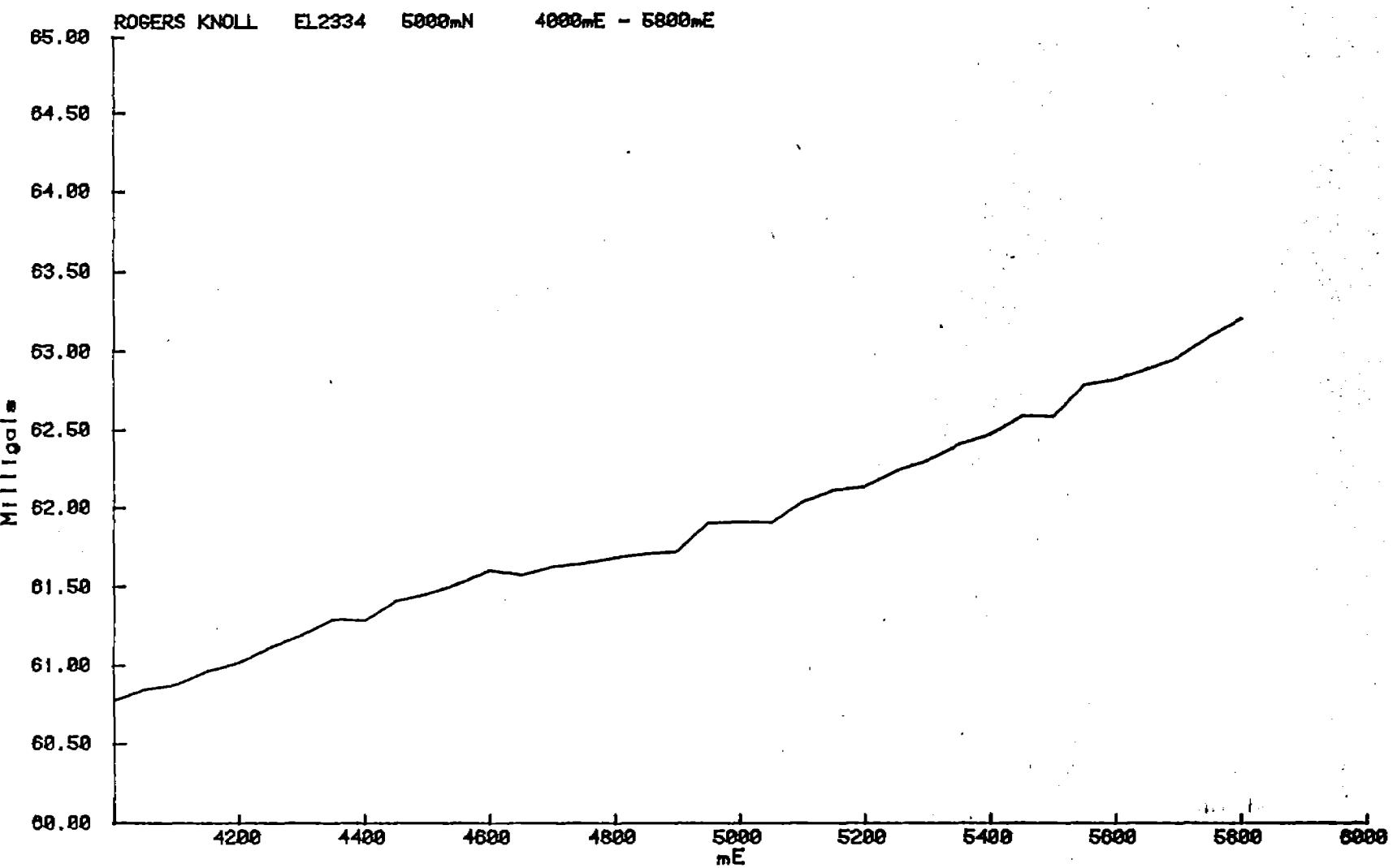


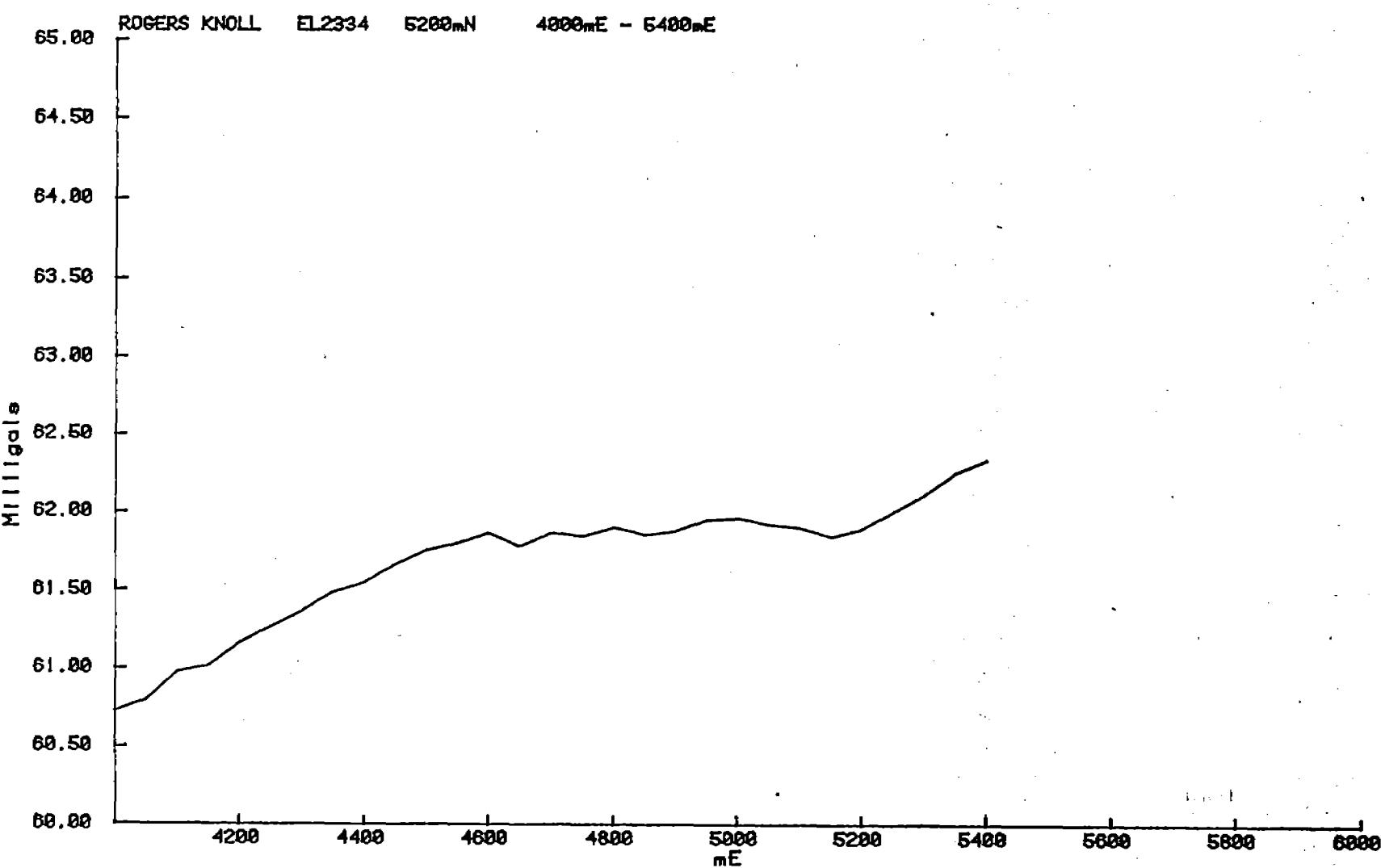


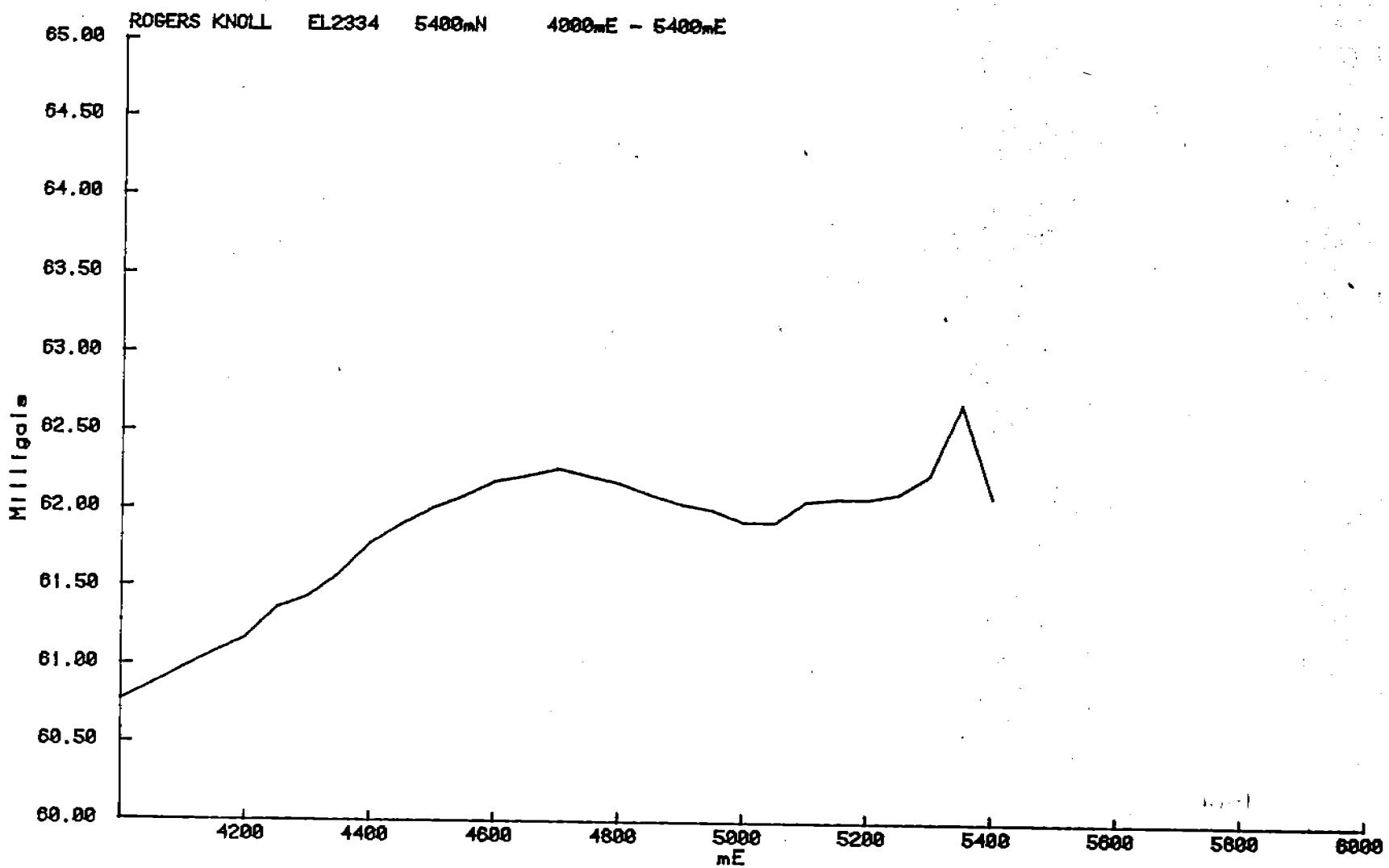


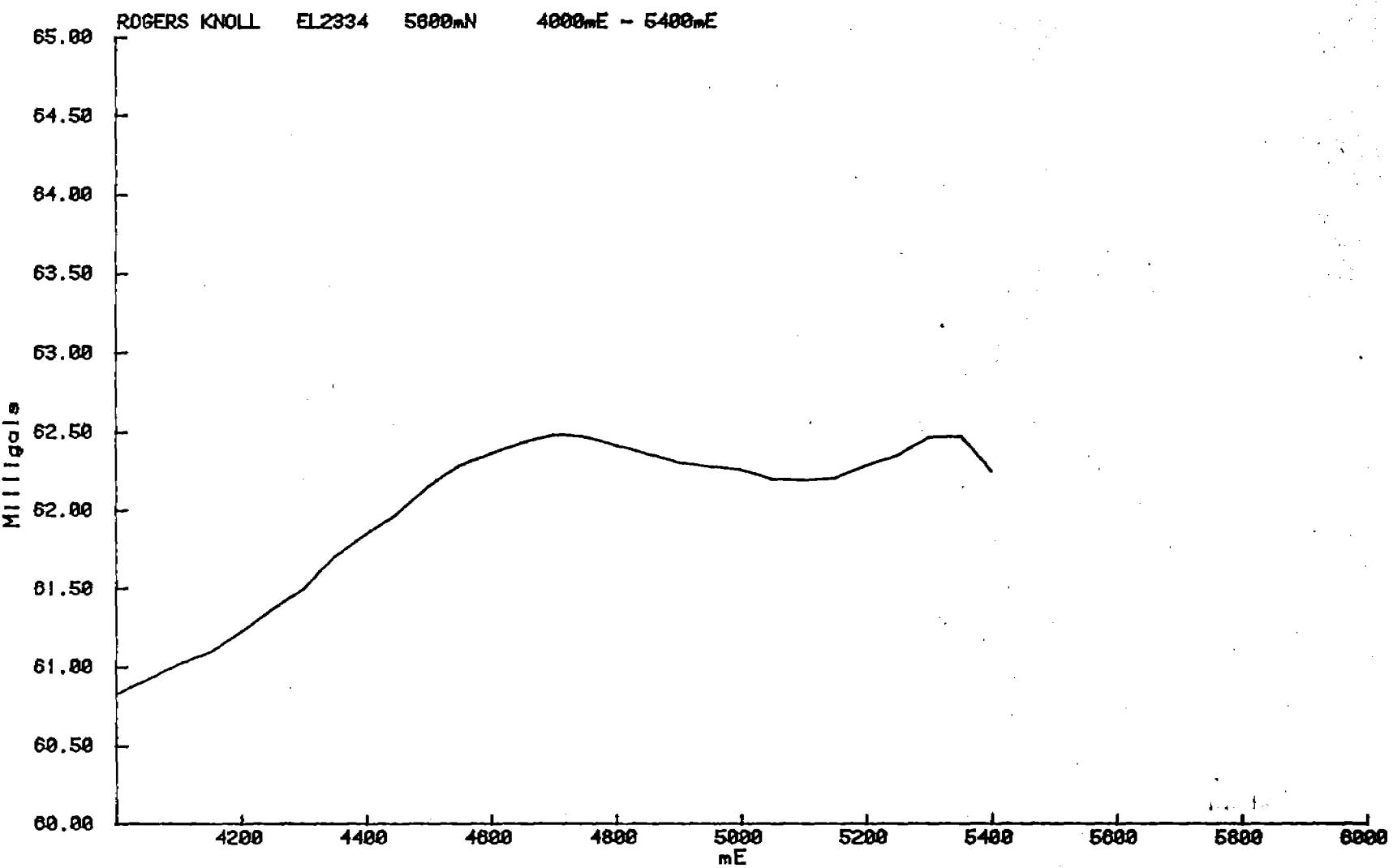


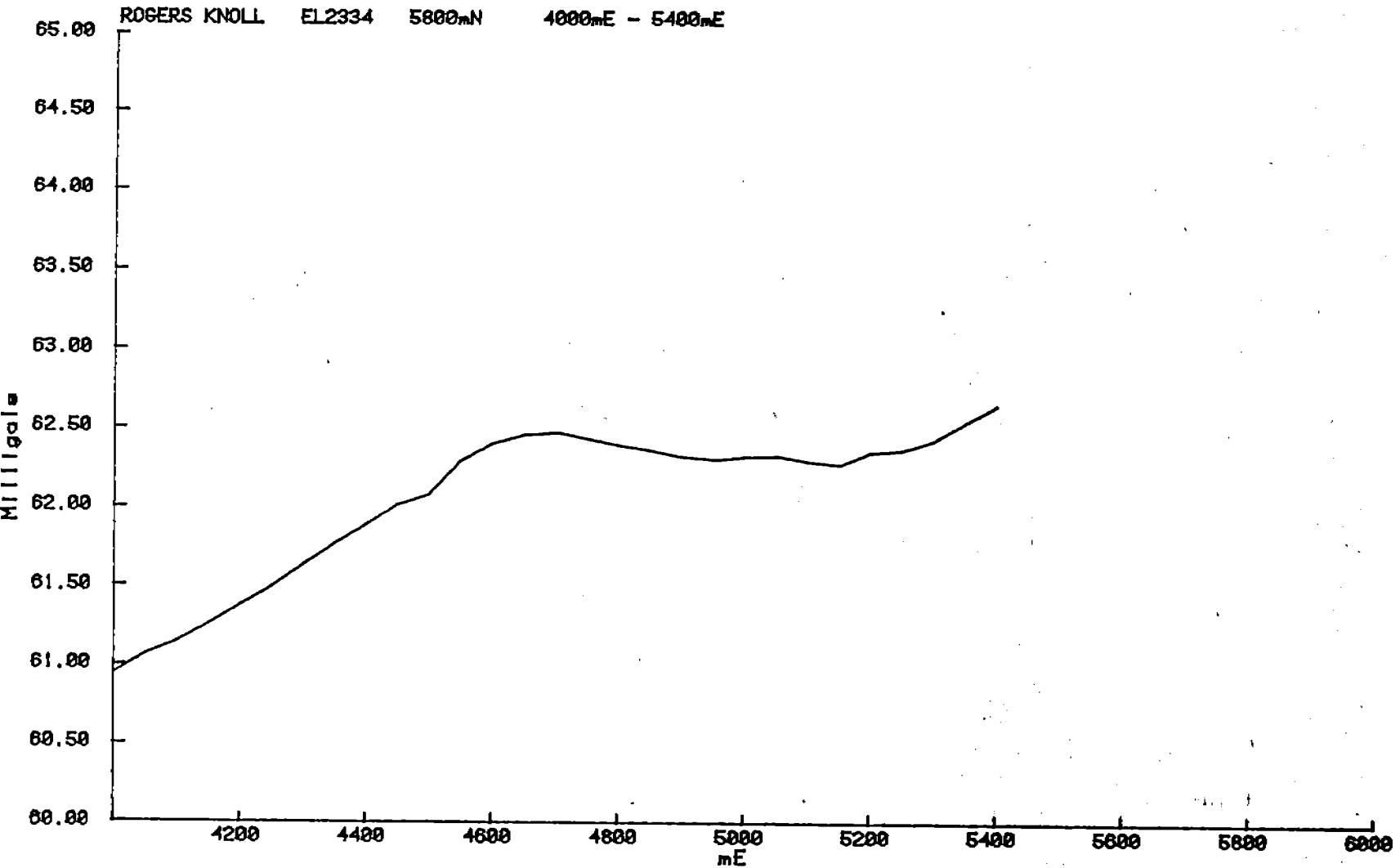


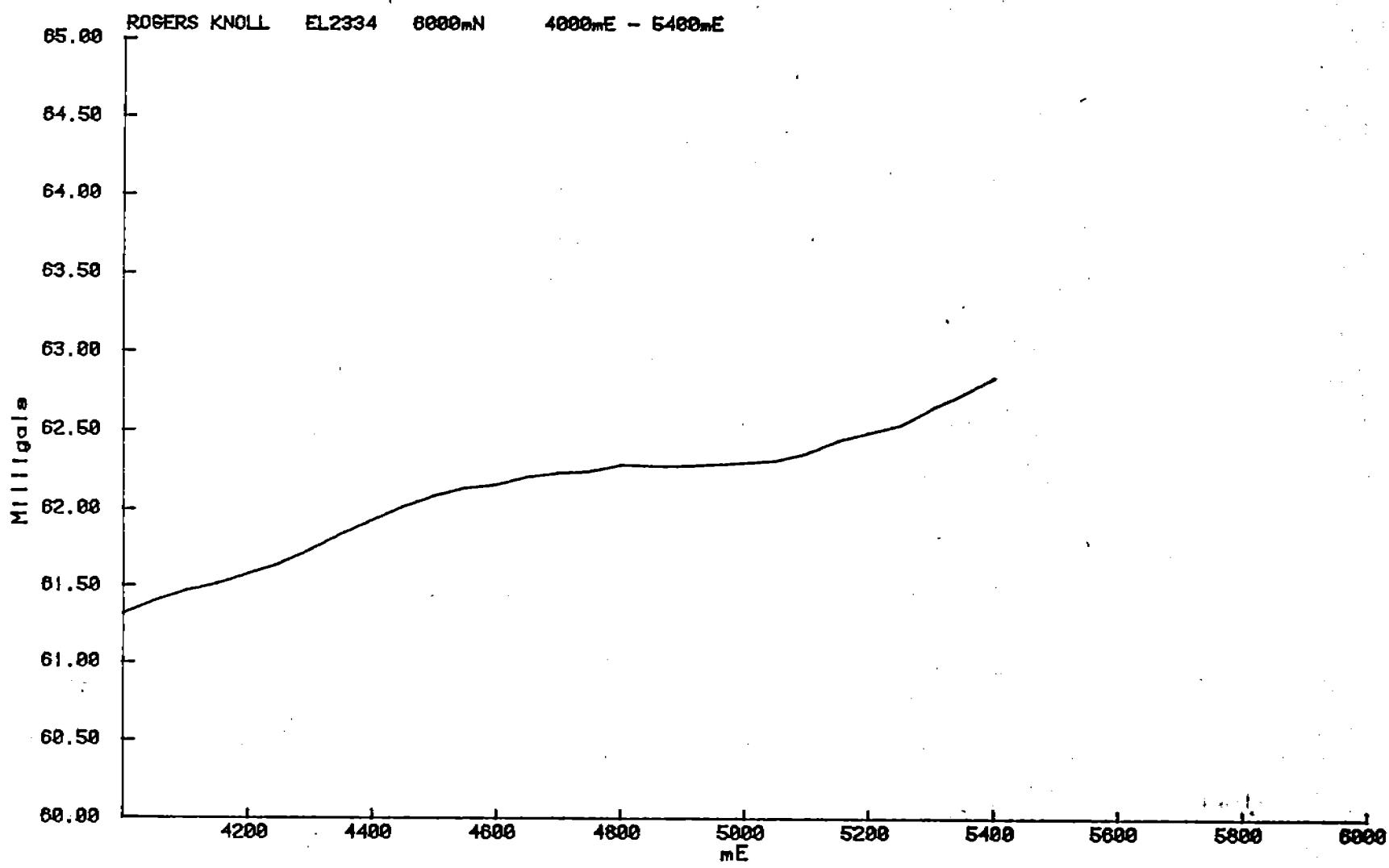


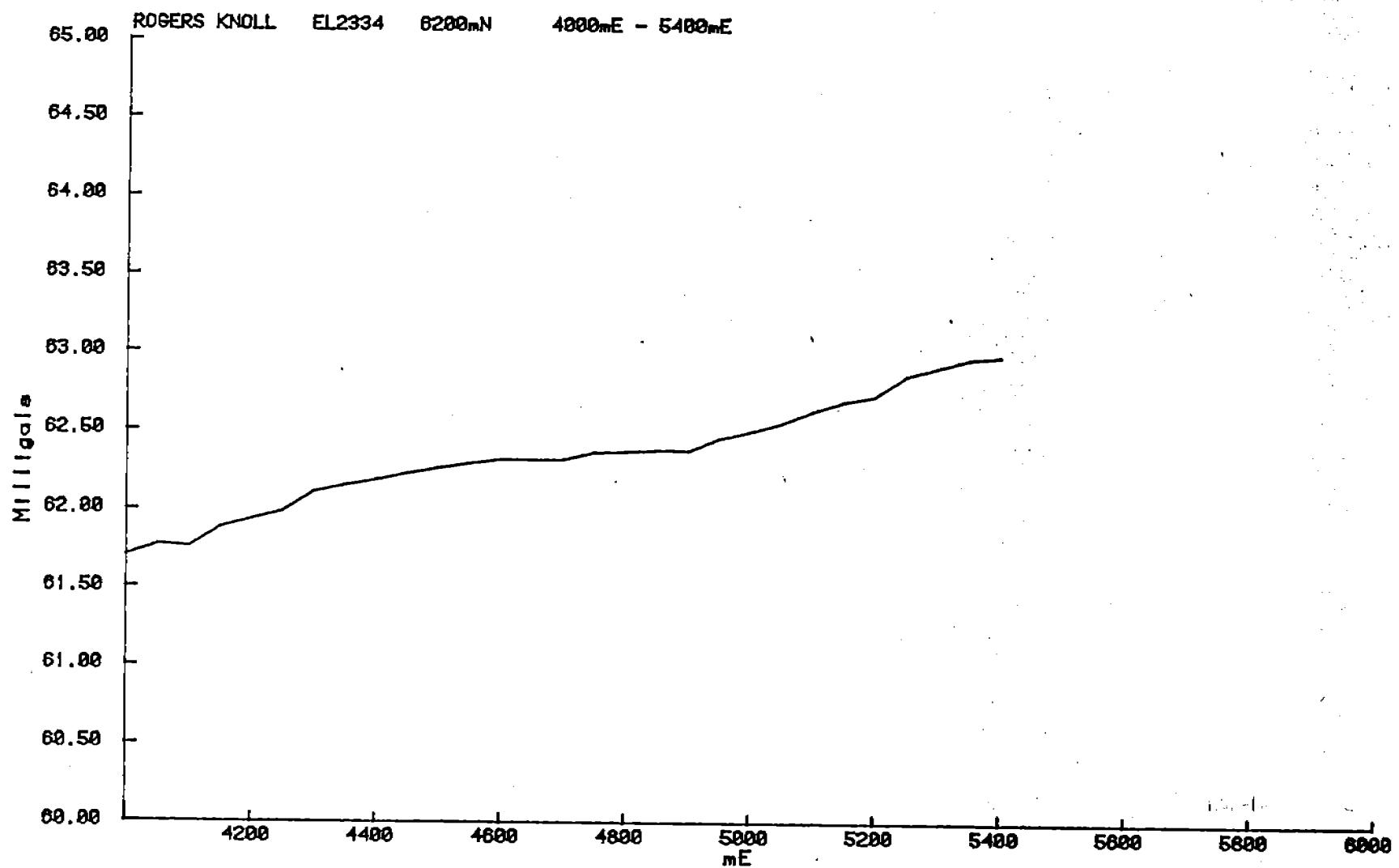


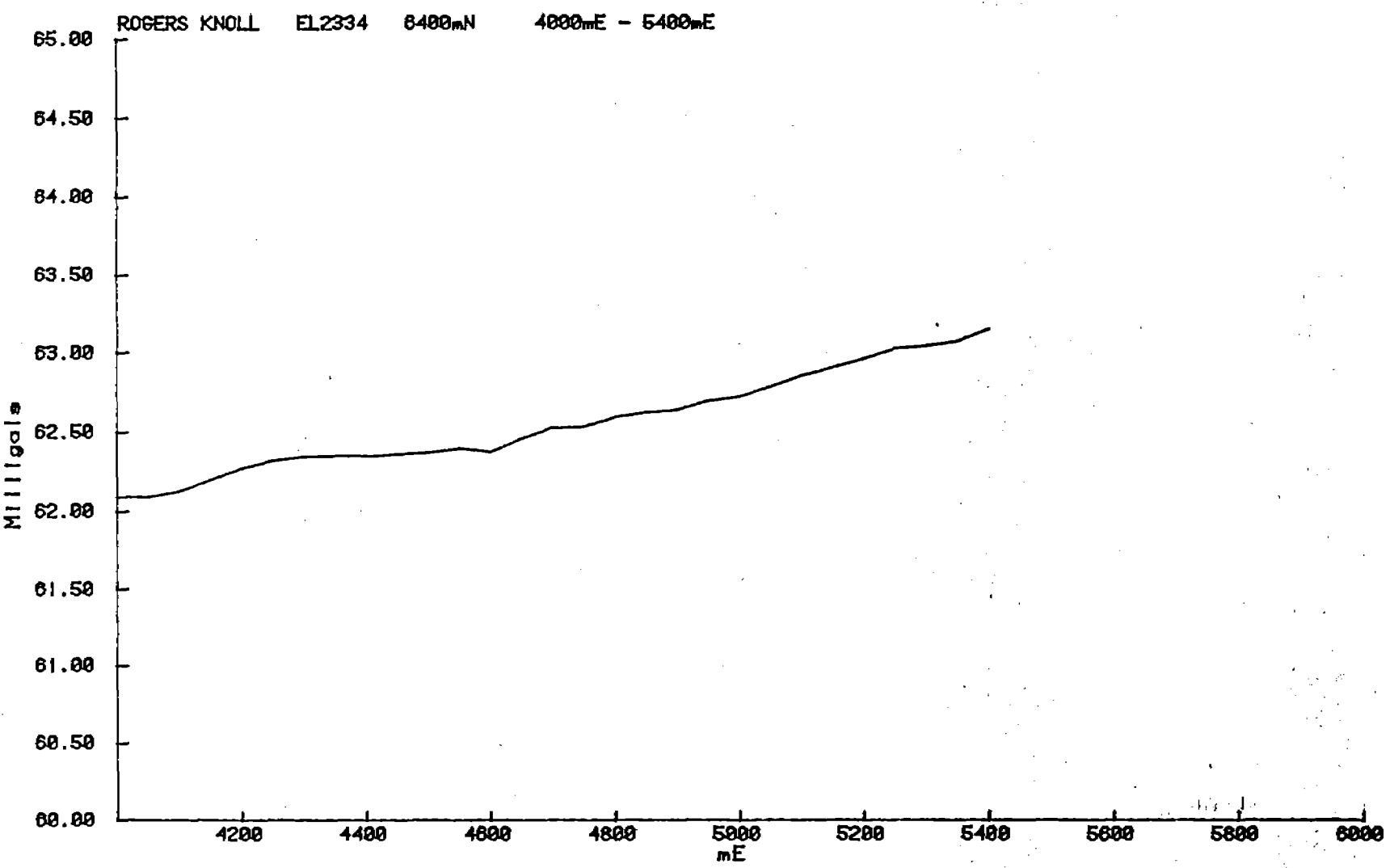












**APPENDIX V**

**TABULATION OF GRAVITY MEASUREMENTS**

METER S/N G-544

Lines 2600 mN - 4000 mN

Meter constant 1.01957

METER S/N G-326

Lines 4200 mN - 6400 mN

Meter constant 1.05848

Bouguer Density  $2.2 \text{ tm}^{-3}$

Elevation Correction  $0.2165 \text{ mgals m}^{-1}$

Latitude Correction  $3.96074 \times 10^{-4} \text{ mgals m}^{-1}$  N-S

Latitude Correction Reference 5000 mE 5000 mN

Grid North is Magnetic North ( $4^\circ$  east of True North)

From BMR station 6793.9318, the value of the observed gravity  
at 5000 mE 3000 mN has been established as 978 326.71 mgals.

ROGERS KNOLL EL2334 2600 mN 4200 mE - 5800 mE

I	mE	mN	Elevation (metres)	Observed gravity (mGal)	Bouguer gravity (mGal)
1	4200	2600	180.638	25.10	63.24
2	4250	2600	180.412	25.27	63.36
3	4300	2600	180.113	25.40	63.43
4	4350	2600	180.480	25.40	63.51
5	4400	2600	180.781	25.41	63.58
6	4450	2600	180.923	25.52	63.73
7	4500	2600	180.895	25.63	63.83
8	4550	2600	180.931	25.78	63.99
9	4600	2600	180.887	25.97	64.17
10	4650	2600	180.936	26.15	64.36
11	4700	2600	180.964	26.16	64.38
12	4750	2600	181.016	26.41	64.64
13	4800	2600	181.124	26.56	64.82
14	4850	2600	181.199	26.65	64.93
15	4900	2600	181.265	26.72	65.01
16	4950	2600	181.407	26.84	65.16
17	5000	2600	181.550	26.97	65.33
18	5050	2600	181.543	27.11	65.47
19	5100	2600	181.603	27.17	65.54
20	5150	2600	181.883	27.17	65.60
21	5200	2600	181.962	27.18	65.63
22	5250	2600	182.152	27.19	65.68
23	5300	2600	182.507	27.13	65.70
24	5350	2600	183.156	27.01	65.72
25	5400	2600	183.827	26.93	65.79
26	5450	2600	184.343	26.89	65.86
27	5500	2600	184.572	26.92	65.95
28	5550	2600	184.696	26.99	66.04
29	5600	2600	184.833	27.08	66.16
30	5650	2600	184.931	27.13	66.24
31	5700	2600	185.030	27.24	66.37
32	5750	2600	184.965	27.38	66.50
33	5800	2600	184.553	27.55	66.58

## ROGERS KNOLL EL2334 2800 mN 4200 mE - 5800 mE

I	mE	mN	Elevation (metres)	Observed gravity (mgsals)	Bouguer gravity (mgsals)
1	4200	2800	179.748	24.78	62.80
2	4250	2800	179.641	24.89	62.89
3	4300	2800	179.770	25.01	63.04
4	4350	2800	180.076	25.06	63.16
5	4400	2800	180.261	25.17	63.31
6	4450	2800	180.303	25.29	63.44
7	4500	2800	180.282	25.41	63.56
8	4550	2800	179.999	25.60	63.69
9	4600	2800	179.785	25.78	63.82
10	4650	2800	179.846	25.93	63.99
11	4700	2800	180.265	26.05	64.20
12	4750	2800	180.606	26.13	64.35
13	4800	2800	180.764	26.32	64.58
14	4850	2800	180.857	26.47	64.75
15	4900	2800	180.896	26.64	64.93
16	4950	2800	180.933	26.78	65.08
17	5000	2800	180.918	26.89	65.19
18	5050	2800	180.888	27.03	65.32
19	5100	2800	180.829	27.13	65.41
20	5150	2800	180.519	27.30	65.52
21	5200	2800	180.229	27.32	65.48
22	5250	2800	180.092	27.36	65.49
23	5300	2800	180.403	27.31	65.51
24	5350	2800	180.783	27.24	65.52
25	5400	2800	181.197	27.21	65.58
26	5450	2800	181.448	27.19	65.62
27	5500	2800	181.570	27.23	65.68
28	5550	2800	181.642	27.29	65.76
29	5600	2800	181.810	27.34	65.85
30	5650	2800	181.818	27.46	65.97
31	5700	2800	181.654	27.59	66.07
32	5750	2800	181.183	27.75	66.13
33	5800	2800	180.580	27.97	66.22

## ROGERS KNOLL EL2334 3000 mN 4200 mE - 5800 mE

I	mE	mN	Elevation (metres)	Observed gravity (mGal)	Bouguer gravity (mGal)
1	4200	3000	179.624	24.46	62.54
2	4250	3000	179.597	24.58	62.65
3	4300	3000	179.574	24.68	62.75
4	4350	3000	179.519	24.79	62.85
5	4400	3000	179.635	24.89	62.97
6	4450	3000	179.918	24.97	63.12
7	4500	3000	180.052	25.05	63.23
8	4550	3000	180.034	25.22	63.39
9	4600	3000	179.970	25.41	63.57
10	4650	3000	179.857	25.60	63.74
11	4700	3000	179.843	25.79	63.93
12	4750	3000	179.825	25.97	64.10
13	4800	3000	180.166	26.11	64.32
14	4850	3000	180.519	26.21	64.50
15	4900	3000	180.755	26.32	64.66
16	4950	3000	180.923	26.52	64.90
17	5000	3000	180.691	26.71	65.04
18	5050	3000	180.296	26.92	65.16
19	5100	3000	180.111	26.99	65.20
20	5150	3000	180.009	26.98	65.17
21	5200	3000	180.042	27.00	65.19
22	5250	3000	180.129	27.04	65.25
23	5300	3000	180.358	27.10	65.37
24	5350	3000	180.675	27.11	65.45
25	5400	3000	181.062	27.11	65.53
26	5450	3000	181.334	27.11	65.59
27	5500	3000	181.401	27.16	65.66
28	5550	3000	181.491	27.23	65.75
29	5600	3000	181.508	27.28	65.80
30	5650	3000	181.435	27.37	65.88
31	5700	3000	181.234	27.49	65.96
32	5750	3000	181.134	27.54	65.99
33	5800	3000	180.859	27.60	65.99

## ROGERS KNOLL EL2334 3200 mN 4200 mE - 5800 mE

I	mE	mN	Elevation (metres)	Observed gravity (mgals)	Bouguer gravity (mgals)
1	4200	3200	179.337	24.11	62.20
2	4250	3200	179.365	24.22	62.32
3	4300	3200	179.474	24.36	62.49
4	4350	3200	179.711	24.42	62.60
5	4400	3200	179.897	24.54	62.76
6	4450	3200	179.933	24.69	62.92
7	4500	3200	179.954	24.81	63.04
8	4550	3200	179.910	24.95	63.18
9	4600	3200	180.022	25.09	63.34
10	4650	3200	180.238	25.16	63.46
11	4700	3200	180.556	25.30	63.67
12	4750	3200	180.723	25.41	63.82
13	4800	3200	180.860	25.56	64.00
14	4850	3200	180.928	25.73	64.19
15	4900	3200	180.824	25.97	64.40
16	4950	3200	180.616	26.13	64.52
17	5000	3200	180.304	26.29	64.61
18	5050	3200	180.081	26.44	64.72
19	5100	3200	180.094	26.55	64.83
20	5150	3200	179.698	26.75	64.95
21	5200	3200	179.654	26.84	65.03
22	5250	3200	180.221	26.74	65.05
23	5300	3200	180.520	26.79	65.17
24	5350	3200	180.790	26.82	65.26
25	5400	3200	180.915	26.85	65.32
26	5450	3200	181.287	26.85	65.40
27	5500	3200	181.566	26.88	65.49
28	5550	3200	181.667	26.93	65.56
29	5600	3200	181.547	26.98	65.59
30	5650	3200	181.492	27.01	65.61
31	5700	3200	181.527	27.02	65.63
32	5750	3200	181.436	27.02	65.61
33	5800	3200	180.305	27.24	65.59

## ROGERS KNOB EL2334 3400 mN 4200 mE - 5800 mE

I	mE	mN	Elevation (metres)	Observed gravity (m/sals)	Bouguer gravity (m/sals)
1	4200	3400	179.934	23.78	62.08
2	4250	3400	180.097	23.93	62.27
3	4300	3400	180.335	24.02	62.41
4	4350	3400	180.610	24.11	62.56
5	4400	3400	180.801	24.19	62.68
6	4450	3400	180.613	24.34	62.79
7	4500	3400	180.488	24.46	62.89
8	4550	3400	180.501	24.52	62.95
9	4600	3400	180.660	24.59	63.06
10	4650	3400	180.756	24.68	63.17
11	4700	3400	180.782	24.84	63.34
12	4750	3400	180.788	25.02	63.52
13	4800	3400	180.796	25.16	63.66
14	4850	3400	180.826	25.35	63.86
15	4900	3400	180.960	25.46	64.00
16	4950	3400	181.149	25.55	64.13
17	5000	3400	181.340	25.63	64.26
18	5050	3400	181.353	25.73	64.36
19	5100	3400	181.231	25.84	64.45
20	5150	3400	181.197	25.89	64.49
21	5200	3400	181.259	25.89	64.51
22	5250	3400	181.230	25.89	64.50
23	5300	3400	181.106	25.93	64.52
24	5350	3400	180.861	26.02	64.55
25	5400	3400	180.845	26.05	64.58
26	5450	3400	180.902	26.06	64.61
27	5500	3400	181.271	26.04	64.67
28	5550	3400	181.385	26.11	64.76
29	5600	3400	181.368	26.15	64.80
30	5650	3400	181.545	26.13	64.82
31	5700	3400	181.798	26.08	64.83
32	5750	3400	181.657	26.14	64.86
33	5800	3400	181.116	26.28	64.88

## ROGERS KNOLL EL2334 3600 mN 4200 mE - 5800 mE

I	mE	mN	Elevation (metres)	Observed gravity (m/sals)	Bouguer gravity (m/sals)
1	4200	3600	180.818	23.44	62.01
2	4250	3600	180.932	23.55	62.15
3	4300	3600	181.142	23.66	62.30
4	4350	3600	181.151	23.79	62.44
5	4400	3600	181.112	23.94	62.58
6	4450	3600	181.004	24.07	62.69
7	4500	3600	180.839	24.29	62.87
8	4550	3600	180.840	24.37	62.96
9	4600	3600	181.102	24.39	63.03
10	4650	3600	181.341	24.45	63.15
11	4700	3600	181.320	24.61	63.30
12	4750	3600	181.269	24.80	63.48
13	4800	3600	181.426	24.89	63.61
14	4850	3600	181.540	24.99	63.74
15	4900	3600	181.695	25.13	63.91
16	4950	3600	181.691	25.18	63.96
17	5000	3600	181.526	25.25	64.00
18	5050	3600	181.291	25.36	64.06
19	5100	3600	181.218	25.42	64.10
20	5150	3600	181.268	25.42	64.12
21	5200	3600	181.435	25.37	64.10
22	5250	3600	181.568	25.31	64.07
23	5300	3600	181.699	25.30	64.09
24	5350	3600	182.059	25.22	64.09
25	5400	3600	181.952	25.25	64.10
26	5450	3600	181.838	25.29	64.12
27	5500	3600	181.891	25.31	64.15
28	5550	3600	181.848	25.36	64.19
29	5600	3600	181.721	25.44	64.25
30	5650	3600	181.738	25.45	64.26
31	5700	3600	181.773	25.47	64.29
32	5750	3600	181.781	25.49	64.31
33	5800	3600	181.756	25.55	64.37

## ROGERS KNOLL EL2334 3800 mN 4000 mE - 6000 mE

I	mE	mN	Elevation (metres)	Observed gravity (m/sals)	Bouguer gravity (m/sals)
1	4200	3800	180.953	23.23	61.91
2	4250	3800	181.098	23.32	62.03
3	4300	3800	181.364	23.40	62.17
4	4350	3800	181.253	23.56	62.31
5	4400	3800	181.076	23.75	62.46
6	4450	3800	181.047	23.88	62.59
7	4500	3800	181.020	24.01	62.71
8	4550	3800	181.057	24.14	62.85
9	4600	3800	181.092	24.29	63.01
10	4650	3800	181.338	24.42	63.20
11	4700	3800	181.624	24.52	63.36
12	4750	3800	181.928	24.56	63.47
13	4800	3800	182.092	24.64	63.58
14	4850	3800	182.085	24.76	63.70
15	4900	3800	182.190	24.81	63.78
16	4950	3800	182.306	24.79	63.78
17	5000	3800	182.256	24.73	63.71
18	5050	3800	182.152	24.74	63.70
19	5100	3800	182.161	24.74	63.71
20	5150	3800	182.180	24.71	63.68
21	5200	3800	182.370	24.68	63.69
22	5250	3800	182.425	24.66	63.69
23	5300	3800	182.385	24.68	63.70
24	5350	3800	181.942	24.78	63.71
25	5400	3800	181.626	24.88	63.74
26	5450	3800	181.414	24.93	63.74
27	5500	3800	181.264	24.98	63.76
28	5550	3800	181.008	25.08	63.81
29	5600	3800	181.893	24.95	63.87
30	5650	3800	181.943	24.98	63.91
31	5700	3800	181.686	25.06	63.94
32	5750	3800	181.761	25.08	63.98
33	5800	3800	181.897	25.12	64.05

## ROGERS KNOLL EL2334 4000 mN 4200 mE - 5800 mE

I	mE	mN	Elevation (metres)	Observed gravity (mgsals)	Bouguer gravity (mgsals)
1	4200	4000	181.256	22.97	61.79
2	4250	4000	181.707	23.04	61.96
3	4300	4000	181.896	23.14	62.11
4	4350	4000	181.836	23.26	62.21
5	4400	4000	181.464	23.48	62.35
6	4450	4000	181.202	23.64	62.46
7	4500	4000	181.227	23.75	62.58
8	4550	4000	181.270	23.87	62.71
9	4600	4000	181.316	24.07	62.92
10	4650	4000	181.466	24.17	63.05
11	4700	4000	181.564	24.17	63.07
12	4750	4000	181.689	24.18	63.11
13	4800	4000	181.879	24.18	63.16
14	4850	4000	182.139	24.13	63.16
15	4900	4000	182.300	24.11	63.18
16	4950	4000	182.523	24.00	63.12
17	5000	4000	182.640	23.95	63.10
18	5050	4000	182.378	24.01	63.10
19	5100	4000	182.119	24.09	63.13
20	5150	4000	182.287	24.11	63.18
21	5200	4000	182.532	24.13	63.26
22	5250	4000	182.594	24.18	63.32
23	5300	4000	182.666	24.23	63.39
24	5350	4000	182.787	24.25	63.44
25	5400	4000	182.581	24.32	63.46
26	5450	4000	182.412	24.36	63.47
27	5500	4000	182.457	24.36	63.48
28	5550	4000	182.304	24.41	63.50
29	5600	4000	182.169	24.49	63.55
30	5650	4000	182.156	24.58	63.64
31	5700	4000	182.177	24.65	63.72
32	5750	4000	182.281	24.67	63.76
33	5800	4000	182.229	24.71	63.79

## ROGERS KNOLL EL2334 4200mN 4200mE ~ 5800mE

I	mE	mN	Elevation (metres)	Observed gravity (mgals)	Bouguer gravity (mgals)
1	4200	4200	181.840	22.65	61.68
2	4250	4200	181.570	22.81	61.79
3	4300	4200	181.290	23.01	61.92
4	4350	4200	181.130	23.22	62.10
5	4400	4200	181.100	23.16	62.04
6	4450	4200	181.170	23.31	62.20
7	4500	4200	181.220	23.36	62.26
8	4550	4200	181.210	23.44	62.34
9	4600	4200	181.150	23.52	62.41
10	4650	4200	180.970	23.56	62.42
11	4700	4200	180.820	23.62	62.45
12	4750	4200	181.210	23.47	62.38
13	4800	4200	181.520	23.43	62.40
14	4850	4200	181.750	23.39	62.42
15	4900	4200	181.790	23.41	62.45
16	4950	4200	181.800	23.48	62.52
17	5000	4200	182.050	23.43	62.52
18	5050	4200	182.480	23.32	62.52
19	5100	4200	182.840	23.35	62.62
20	5150	4200	183.030	23.29	62.60
21	5200	4200	182.940	23.43	62.72
22	5250	4200	182.740	23.70	62.96
23	5300	4200	182.560	23.73	62.94
24	5350	4200	182.040	23.90	63.00
25	5400	4200	182.200	23.94	63.08
26	5450	4200	182.660	23.92	63.16
27	5500	4200	182.500	24.07	63.28
28	5550	4200	182.430	24.09	63.28
29	5600	4200	182.510	24.13	63.35
30	5650	4200	182.560	24.18	63.41
31	5700	4200	182.480	24.24	63.45
32	5750	4200	182.430	24.29	63.49
33	5800	4200	182.400	24.38	63.58

## ROGERS KNOLL EL2334 4400mN 4200mE - 5800mE

I	mE	mN	Elevation (metres)	Observed gravity (mgsals)	Bouguer gravity (mgsals)
1	4200	4400	181.530	22.40	61.45
2	4250	4400	181.380	22.57	61.58
3	4300	4400	181.380	22.70	61.71
4	4350	4400	181.460	22.70	61.73
5	4400	4400	181.620	22.76	61.82
6	4450	4400	181.330	22.95	61.96
7	4500	4400	181.140	23.01	61.97
8	4550	4400	181.110	23.02	61.98
9	4600	4400	181.190	23.06	62.03
10	4650	4400	181.370	22.96	61.98
11	4700	4400	181.860	22.89	62.01
12	4750	4400	182.060	22.82	61.99
13	4800	4400	182.290	22.76	61.99
14	4850	4400	182.490	22.79	62.06
15	4900	4400	182.720	22.76	62.08
16	4950	4400	182.910	22.69	62.05
17	5000	4400	182.920	22.70	62.07
18	5050	4400	183.010	22.85	62.23
19	5100	4400	183.070	22.93	62.33
20	5150	4400	182.530	23.10	62.38
21	5200	4400	182.570	23.14	62.44
22	5250	4400	182.980	23.15	62.54
23	5300	4400	183.370	23.10	62.57
24	5350	4400	183.430	23.12	62.60
25	5400	4400	183.320	23.24	62.70
26	5450	4400	182.890	23.41	62.78
27	5500	4400	182.790	23.50	62.86
28	5550	4400	182.710	23.56	62.89
29	5600	4400	182.820	23.69	63.05
30	5650	4400	183.050	23.64	63.05
31	5700	4400	183.320	23.70	63.17
32	5750	4400	183.340	23.78	63.25
33	5800	4400	183.260	23.95	63.41

## ROGERS KNOLL EL2334 4600mN 4000mE - 5800mE

I	mE	mN	Elevation (metres)	Observed gravity (mgals)	Bouguer gravity (mgals)
1	4000	4600	182.290	21.65	60.93
2	4050	4600	182.220	21.72	60.99
3	4100	4600	182.060	21.87	61.10
4	4150	4600	181.810	21.97	61.15
5	4200	4600	181.620	22.10	61.24
6	4250	4600	181.460	22.29	61.40
7	4300	4600	181.450	22.31	61.42
8	4350	4600	181.480	22.39	61.51
9	4400	4600	181.490	22.52	61.63
10	4450	4600	181.520	22.49	61.62
11	4500	4600	181.760	22.48	61.66
12	4550	4600	181.860	22.54	61.74
13	4600	4600	182.010	22.58	61.82
14	4650	4600	182.130	22.54	61.80
15	4700	4600	182.340	22.48	61.79
16	4750	4600	182.580	22.50	61.87
17	4800	4600	182.700	22.51	61.90
18	4850	4600	182.700	22.55	61.94
19	4900	4600	182.700	22.57	61.96
20	4950	4600	182.710	22.56	61.96
21	5000	4600	182.750	22.61	62.02
22	5050	4600	182.820	22.63	62.05
23	5100	4600	182.910	22.68	62.12
24	5150	4600	182.970	22.76	62.22
25	5200	4600	183.020	22.85	62.32
26	5250	4600	183.190	22.91	62.42
27	5300	4600	183.570	22.91	62.50
28	5350	4600	184.040	22.84	62.54
29	5400	4600	184.130	22.83	62.55
30	5450	4600	184.120	22.87	62.59
31	5500	4600	184.230	22.90	62.64
32	5550	4600	184.490	22.93	62.73
33	5600	4600	184.490	23.04	62.84
34	5650	4600	182.090	23.69	62.97
35	5700	4600	183.770	23.40	63.05
36	5750	4600	184.070	23.48	63.19
37	5800	4600	183.980	23.59	63.29

## ROGERS KNOTT EL2334 4800mN 4000mE ~ 5800mE

I	mE	mN	Elevation (metres)	Observed gravity (mgsals)	Bouguer gravity (mgsals)
1	4000	4800	181.500	21.58	60.76
2	4050	4800	181.940	21.59	60.88
3	4100	4800	182.110	21.67	60.99
4	4150	4800	182.150	21.73	61.07
5	4200	4800	182.130	21.83	61.16
6	4250	4800	182.080	21.95	61.27
7	4300	4800	182.010	21.99	61.29
8	4350	4800	181.950	22.10	61.39
9	4400	4800	182.080	22.10	61.43
10	4450	4800	182.140	22.16	61.49
11	4500	4800	182.240	22.15	61.51
12	4550	4800	182.380	22.14	61.53
13	4600	4800	182.610	22.12	61.57
14	4650	4800	182.810	22.11	61.60
15	4700	4800	182.970	22.12	61.65
16	4750	4800	183.010	22.07	61.61
17	4800	4800	182.970	22.12	61.64
18	4850	4800	182.990	22.14	61.68
19	4900	4800	182.960	22.25	61.78
20	4950	4800	182.940	22.25	61.78
21	5000	4800	183.040	22.37	61.92
22	5050	4800	183.040	22.43	61.98
23	5100	4800	183.060	22.44	62.00
24	5150	4800	183.110	22.57	62.14
25	5200	4800	183.140	22.66	62.23
26	5250	4800	183.320	22.62	62.23
27	5300	4800	183.660	22.61	62.30
28	5350	4800	183.950	22.73	62.48
29	5400	4800	184.060	22.73	62.51
30	5450	4800	184.560	22.61	62.50
31	5500	4800	184.860	22.66	62.62
32	5550	4800	182.220	23.31	62.70
33	5600	4800	184.760	22.83	62.77
34	5650	4800	184.210	23.09	62.91
35	5700	4800	183.830	23.31	63.05
36	5750	4800	183.590	23.42	63.11
37	5800	4800	183.380	23.63	63.28

## ROGERS KNOLL EL2334 5000mN 4000mE - 5800mE

I	mE	mN	Elevation (metres)	Observed gravity (mgsals)	Bouguer gravity (mgsals)
1	4000	5000	183.100	21.17	60.78
2	4050	5000	183.270	21.20	60.85
3	4100	5000	183.160	21.26	60.89
4	4150	5000	183.130	21.35	60.97
5	4200	5000	183.100	21.40	61.02
6	4250	5000	183.240	21.47	61.12
7	4300	5000	183.370	21.52	61.20
8	4350	5000	183.410	21.60	61.29
9	4400	5000	183.440	21.58	61.28
10	4450	5000	183.530	21.69	61.41
11	4500	5000	183.580	21.73	61.46
12	4550	5000	183.560	21.79	61.52
13	4600	5000	183.590	21.87	61.60
14	4650	5000	183.640	21.83	61.57
15	4700	5000	183.670	21.87	61.63
16	4750	5000	183.660	21.89	61.65
17	4800	5000	183.700	21.92	61.68
18	4850	5000	183.690	21.95	61.71
19	4900	5000	183.680	21.96	61.72
20	4950	5000	183.780	22.12	61.91
21	5000	5000	183.950	22.09	61.91
22	5050	5000	183.910	22.09	61.91
23	5100	5000	184.020	22.20	62.04
24	5150	5000	184.150	22.24	62.12
25	5200	5000	184.330	22.22	62.14
26	5250	5000	184.680	22.25	62.24
27	5300	5000	184.770	22.29	62.30
28	5350	5000	184.460	22.46	62.41
29	5400	5000	184.160	22.59	62.48
30	5450	5000	184.590	22.62	62.59
31	5500	5000	185.030	22.51	62.59
32	5550	5000	181.500	23.48	62.79
33	5600	5000	185.050	22.74	62.82
34	5650	5000	184.490	22.93	62.89
35	5700	5000	184.090	23.09	62.96
36	5750	5000	183.950	23.25	63.09
37	5800	5000	183.950	23.36	63.20

ROGERS KNOLL EL2334 5200mN 4000mE - 5400mE

I	mE	mN	Elevation (metres)	Observed gravity (mgsals)	Bouguer gravity (mgsals)
1	4000	5200	183.820	20.88	60.73
2	4050	5200	183.860	20.95	60.80
3	4100	5200	183.940	21.10	60.98
4	4150	5200	184.040	21.12	61.02
5	4200	5200	184.170	21.23	61.16
6	4250	5200	184.290	21.31	61.27
7	4300	5200	184.210	21.43	61.37
8	4350	5200	184.190	21.55	61.49
9	4400	5200	184.240	21.60	61.55
10	4450	5200	184.290	21.70	61.66
11	4500	5200	184.330	21.78	61.76
12	4550	5200	184.350	21.82	61.80
13	4600	5200	184.360	21.88	61.86
14	4650	5200	184.370	21.80	61.78
15	4700	5200	184.420	21.87	61.86
16	4750	5200	184.380	21.85	61.84
17	4800	5200	184.450	21.89	61.90
18	4850	5200	184.550	21.83	61.86
19	4900	5200	184.770	21.80	61.88
20	4950	5200	185.070	21.81	61.96
21	5000	5200	185.250	21.78	61.96
22	5050	5200	185.180	21.75	61.92
23	5100	5200	185.200	21.73	61.90
24	5150	5200	185.140	21.68	61.85
25	5200	5200	185.060	21.75	61.90
26	5250	5200	185.040	21.86	62.01
27	5300	5200	185.020	21.97	62.11
28	5350	5200	185.140	22.09	62.26
29	5400	5200	185.470	22.10	62.34

ROGERS KNOLL EL2334 5400mN 4000mE - 5400mE

I	mE	mN	Elevation (metres)	Observed gravity (m/sals)	Bouguer gravity (m/sals)
1	4000	5400	184.580	20.68	60.77
2	4050	5400	184.750	20.74	60.87
3	4100	5400	185.010	20.79	60.98
4	4150	5400	185.240	20.84	61.08
5	4200	5400	185.310	20.92	61.17
6	4250	5400	185.350	21.10	61.37
7	4300	5400	185.310	21.18	61.44
8	4350	5400	185.340	21.31	61.58
9	4400	5400	185.300	21.52	61.78
10	4450	5400	184.920	21.72	61.90
11	4500	5400	184.720	21.87	62.01
12	4550	5400	184.690	21.95	62.08
13	4600	5400	184.740	22.04	62.18
14	4650	5400	184.730	22.08	62.22
15	4700	5400	184.940	22.07	62.26
16	4750	5400	185.040	22.01	62.22
17	4800	5400	185.170	21.93	62.17
18	4850	5400	185.400	21.81	62.10
19	4900	5400	185.750	21.67	62.04
20	4950	5400	185.730	21.63	62.00
21	5000	5400	185.490	21.61	61.93
22	5050	5400	185.390	21.63	61.93
23	5100	5400	185.350	21.78	62.06
24	5150	5400	185.340	21.79	62.08
25	5200	5400	185.340	21.80	62.08
26	5250	5400	185.390	21.82	62.12
27	5300	5400	185.770	21.86	62.24
28	5350	5400	185.010	22.47	62.69
29	5400	5400	184.770	21.92	62.09

ROGERS KNOLL EL2334 5600mN 4000mE - 5400mE

I	mE	mN	Elevation (metres)	Observed gravity (mgsals)	Bouguer gravity (mgsals)
1	4000	5600	186.250	20.30	60.83
2	4050	5600	186.320	20.38	60.93
3	4100	5600	186.410	20.45	61.02
4	4150	5600	186.460	20.52	61.10
5	4200	5600	186.460	20.65	61.23
6	4250	5600	186.670	20.74	61.37
7	4300	5600	186.810	20.84	61.50
8	4350	5600	186.880	21.03	61.71
9	4400	5600	186.930	21.16	61.85
10	4450	5600	186.930	21.29	61.98
11	4500	5600	186.980	21.46	62.16
12	4550	5600	186.800	21.63	62.29
13	4600	5600	186.310	21.81	62.37
14	4650	5600	185.740	22.00	62.44
15	4700	5600	185.450	22.11	62.49
16	4750	5600	185.520	22.08	62.48
17	4800	5600	185.580	22.01	62.42
18	4850	5600	185.770	21.91	62.37
19	4900	5600	186.030	21.80	62.31
20	4950	5600	186.150	21.74	62.28
21	5000	5600	186.050	21.75	62.26
22	5050	5600	185.820	21.74	62.20
23	5100	5600	185.770	21.74	62.19
24	5150	5600	185.940	21.72	62.21
25	5200	5600	186.250	21.73	62.29
26	5250	5600	185.380	21.98	62.36
27	5300	5600	182.840	22.65	62.48
28	5350	5600	186.190	21.92	62.48
29	5400	5600	186.020	21.73	62.25

## ROGERS KNOLL EL2334 5800mN 4000mE - 5400mE

I	mE	mN	Elevation (metres)	Observed gravity (mgsals)	Bouguer gravity (mgsals)
1	4000	5800	186.860	20.21	60.95
2	4050	5800	186.880	20.32	61.07
3	4100	5800	186.880	20.40	61.15
4	4150	5800	186.990	20.49	61.26
5	4200	5800	187.130	20.57	61.38
6	4250	5800	187.540	20.60	61.49
7	4300	5800	188.030	20.63	61.64
8	4350	5800	188.420	20.68	61.77
9	4400	5800	188.660	20.74	61.89
10	4450	5800	188.650	20.87	62.02
11	4500	5800	188.490	20.97	62.08
12	4550	5800	188.290	21.22	62.29
13	4600	5800	188.010	21.40	62.40
14	4650	5800	187.570	21.55	62.46
15	4700	5800	187.130	21.65	62.47
16	4750	5800	186.780	21.69	62.44
17	4800	5800	186.520	21.70	62.39
18	4850	5800	186.460	21.68	62.36
19	4900	5800	186.320	21.67	62.32
20	4950	5800	186.330	21.65	62.31
21	5000	5800	186.490	21.64	62.33
22	5050	5800	186.700	21.60	62.33
23	5100	5800	186.870	21.52	62.30
24	5150	5800	186.800	21.51	62.28
25	5200	5800	185.550	21.86	62.36
26	5250	5800	185.560	21.88	62.38
27	5300	5800	185.580	21.93	62.44
28	5350	5800	184.070	22.37	62.55
29	5400	5800	186.010	22.06	62.66

ROGERS KNOLL EL2334 6000mN 4000mE - 5400mE

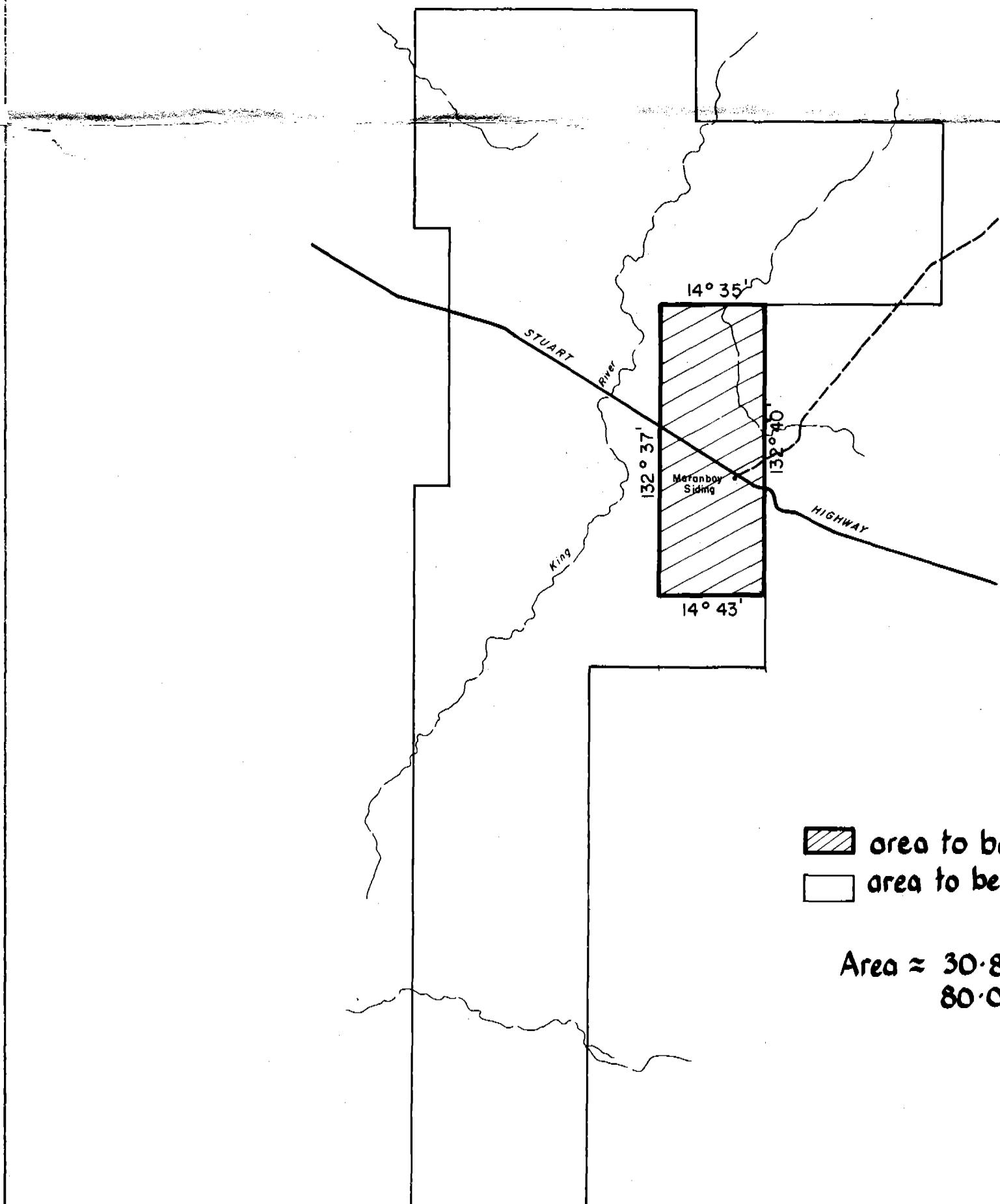
I	mE	mN	Elevation (metres)	Observed gravity (mgsals)	Bouguer gravity (mgsals)
1	4000	6000	189.580	19.91	61.32
2	4050	6000	189.520	20.00	61.40
3	4100	6000	189.290	20.12	61.47
4	4150	6000	188.860	20.26	61.52
5	4200	6000	188.880	20.32	61.58
6	4250	6000	189.380	20.27	61.65
7	4300	6000	189.800	20.27	61.74
8	4350	6000	190.120	20.30	61.84
9	4400	6000	190.270	20.36	61.93
10	4450	6000	190.370	20.42	62.02
11	4500	6000	190.450	20.47	62.09
12	4550	6000	190.290	20.56	62.14
13	4600	6000	189.970	20.65	62.16
14	4650	6000	189.760	20.74	62.21
15	4700	6000	189.380	20.85	62.24
16	4750	6000	189.100	20.92	62.25
17	4800	6000	188.940	20.99	62.29
18	4850	6000	189.140	20.94	62.28
19	4900	6000	189.300	20.90	62.28
20	4950	6000	189.400	20.89	62.29
21	5000	6000	189.450	20.89	62.30
22	5050	6000	189.520	20.89	62.32
23	5100	6000	189.400	20.96	62.36
24	5150	6000	189.250	21.07	62.45
25	5200	6000	189.480	21.07	62.49
26	5250	6000	188.850	21.26	62.55
27	5300	6000	188.040	21.54	62.65
28	5350	6000	187.190	21.81	62.74
29	5400	6000	183.460	22.72	62.84

## ROGERS KNOLL EL2334 6200mN 4000mE - 5400mE

I	mE	mN	Elevation (metres)	Observed gravity (mGal)	Bouguer gravity (mGal)
1	4000	6200	192.320	19.63	61.71
2	4050	6200	192.400	19.67	61.77
3	4100	6200	192.520	19.63	61.76
4	4150	6200	192.510	19.76	61.89
5	4200	6200	192.490	19.81	61.94
6	4250	6200	192.270	19.91	61.99
7	4300	6200	192.090	20.07	62.11
8	4350	6200	191.740	20.19	62.15
9	4400	6200	191.590	20.25	62.19
10	4450	6200	191.570	20.29	62.23
11	4500	6200	191.640	20.31	62.26
12	4550	6200	191.670	20.34	62.29
13	4600	6200	191.610	20.37	62.32
14	4650	6200	191.540	20.38	62.31
15	4700	6200	191.450	20.40	62.32
16	4750	6200	191.330	20.48	62.36
17	4800	6200	191.330	20.48	62.37
18	4850	6200	191.290	20.50	62.38
19	4900	6200	191.250	20.50	62.37
20	4950	6200	191.090	20.61	62.46
21	5000	6200	190.810	20.71	62.50
22	5050	6200	190.440	20.85	62.56
23	5100	6200	190.010	21.02	62.63
24	5150	6200	189.440	21.20	62.69
25	5200	6200	188.780	21.38	62.73
26	5250	6200	188.150	21.64	62.86
27	5300	6200	187.660	21.80	62.91
28	5350	6200	187.080	21.98	62.97
29	5400	6200	185.290	22.38	62.98


## ROGERS KNOLL EL2334 6400mN 4000mE - 5400mE

I	mE	mN	Elevation (metres)	Observed gravity (mGal)	Bouguer gravity (mGal)
1	4000	6400	195.110	19.33	62.10
2	4050	6400	195.440	19.26	62.10
3	4100	6400	195.590	19.26	62.13
4	4150	6400	195.600	19.32	62.20
5	4200	6400	195.460	19.42	62.27
6	4250	6400	195.160	19.54	62.32
7	4300	6400	194.650	19.67	62.35
8	4350	6400	194.350	19.74	62.35
9	4400	6400	193.820	19.85	62.35
10	4450	6400	193.530	19.93	62.36
11	4500	6400	193.250	19.99	62.37
12	4550	6400	192.820	20.11	62.40
13	4600	6400	191.870	20.29	62.38
14	4650	6400	191.850	20.38	62.46
15	4700	6400	191.430	20.54	62.53
16	4750	6400	191.270	20.58	62.53
17	4800	6400	191.250	20.64	62.60
18	4850	6400	191.270	20.67	62.63
19	4900	6400	191.260	20.69	62.64
20	4950	6400	191.160	20.76	62.70
21	5000	6400	190.870	20.85	62.72
22	5050	6400	190.440	21.00	62.78
23	5100	6400	189.930	21.18	62.85
24	5150	6400	189.410	21.34	62.90
25	5200	6400	188.840	21.52	62.96
26	5250	6400	187.850	21.80	63.03
27	5300	6400	187.370	21.92	63.04
28	5350	6400	186.510	22.13	63.07
29	5400	6400	185.540	22.42	63.15

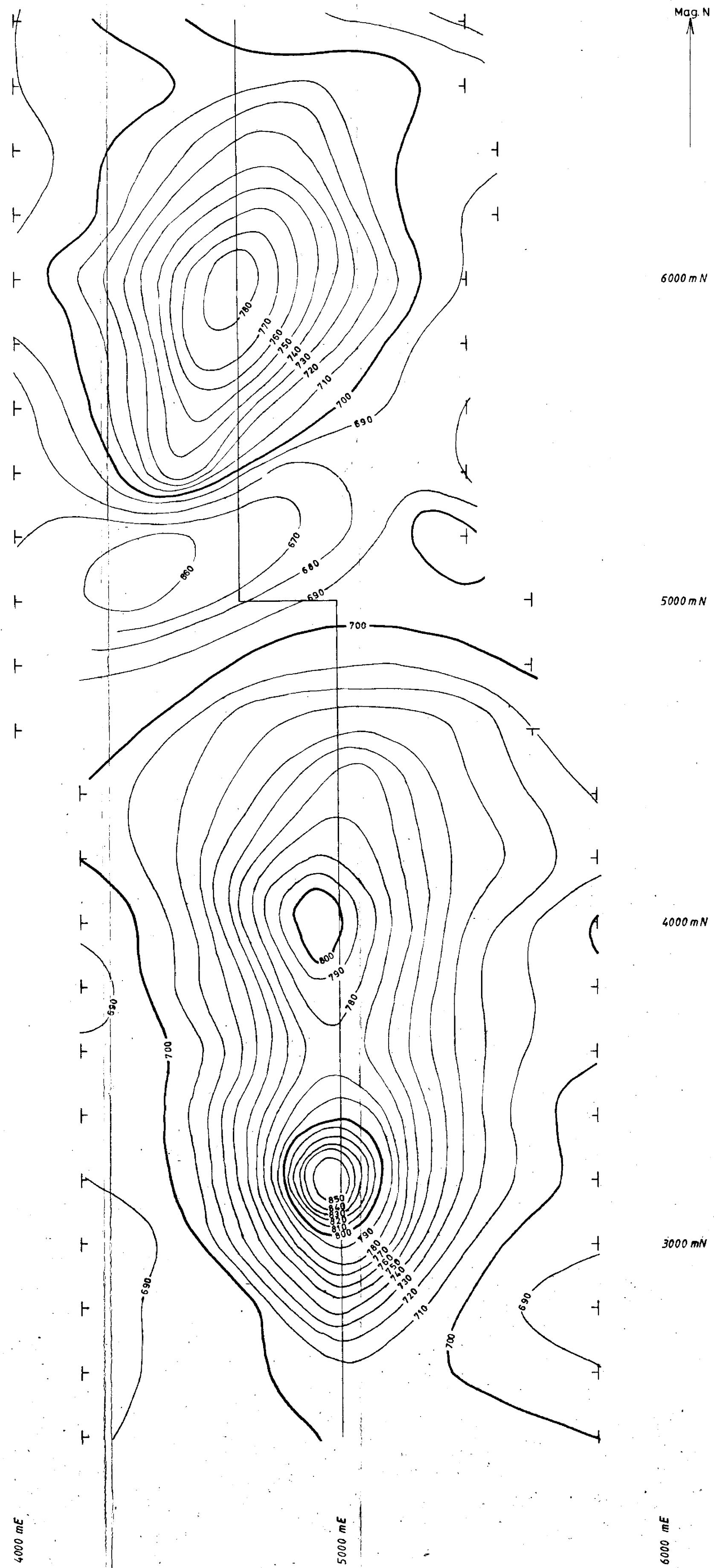


CROWN LAND ALLOCATION PLAN MAP		
PARTIAL RELINQUISHMENT		
ELA 2334		
ROGERS KNOOL		
NORTHERN TERRITORY		
Ref. No.	SD 53-9	
Date	W.H.J.	1:250,000
Surveyor	S.P.S.	JULY 1980
		NTd 1491

CR 82/108







## NOTES

5000 mE is approx AMG 246 760 mE  
5000 mN 8381 700 mN  
A base station adjacent to 5000 mE 5000 mN  
was assigned a value of 47700 nT  
A constant of 47000 has been removed  
from the contour values shown  
The contours were drawn from  
hand-smoothed profiles  
The magnetometer sensor height was 3m and  
the station spacing was 5m

5000 ♂♂

6000 ♂

metres

CONTOUR INTERVAL = 10 FT.

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R.A. EXPLORATION PTY LTD

#### **CONTOURS DE**

## CONTOURS OF EARTH'S MAGNETIC INTEN-

THE IRONETTE INVESTIGATOR

ROGERS KNOB E&L 2334

ce KATHERINE SD 53-9

Scale 1:10,000 Report

B.K.B Date JUNE 1981 Plan N

CR880