Bedford Institute of Oceanography

Dartmouth, Nova Scotia

Canada

POTENTIAL FIELD MEASUREMENTS IN THE GULF OF MAINE

SACKVILLE 73-032 CRUISE

by

D.R. Parrott

Atlantic Geoscience Centre

Geological Survey of Canada

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Geological Survey of Canada Open File Report No. 238

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ABSTRACT

Magnetic and bathymetric profiles and bottom gravity measurements are presented as observed on Bedford Institute of Oceanography cruise SACKVILLE 73-032 in the Gulf of Maine.

1. INTRODUCTION

Between October 22 and November 2, 1973, the CNAV SACKVILLE carried out a geophysical survey of the Gulf of Maine during which continuous total field magnetic and bathymetry readings were taken (Fig. 1). Bottom gravity measurements were made at selected points in order to check data collected previously during cruise HUDSON 71-014 (GSC Open File 218, B.I. Report BI-D-74-2).

2. INSTRUMENTATION

The total magnetic field value was measured using a towed Barringer Proton Precession Magnetometer and recorded in analogue form on a Hewlett Packard analogue recorder.

Underwater gravity readings were taken using either of two LaCoste-Romberg underwater gravimeters (#H2G and #G25A) that were on loan from Earth Physics Branch, Ottawa. Two meters were taken on the survey in order to have a readily available spare if the need should arise.

Bathymetry was measured using a Kelvin Hughes MS26B transducer interfaced with an EPC 4100 graphic recorder.

The ship was positioned using a Decca navigation system, with supplementary Loran A readings taken when the Decca system were of poor quality. Fixes were taken every 15 minutes and also immediately before a major course change and then again 5 minutes after the ship was on the new course.

3. DATA PROCESSING AND REDUCTION

3.1 Navigation

The Decca chain for the area surveyed in the Gulf of Maine does not have the grid characteristics required to obtain accurate fixes. The probable error can exceed 1.5 km in one direction and .5 km in a perpendicular direction. However Loran A readings, accurate to within 250 meters were used to supplement the navigation in zones where the quality of the Decca fixes were poor. The positions should be accurate to within approximately 500 meters.

After preliminary work on the ship's track during the cruise, it was noticed that the results of the tabulated fixes gave very irregular courses and speeds while the ship was supposedly holding a steady course and speed. In order to obtain an approximately regular course from the data an averaging function was applied to the raw fixes, and to the times of these fixes. The averaging was carried out as follows:

1. Start of line and end of line - the data (fix and time) were assumed correct and left unchanged (values A and Z, Fig. 2).
2. The station adjacent to start of line or end of line (values B and Y) - 'corrected' fixes (B^1 and Y^1) calculated using the weighting function

$$B^1 = \frac{A + 2B + C}{4} \qquad Y^1 = \frac{X + 2Y + Z}{4}$$

3. All other positions on the line (values C to X) were calculated using the weighting function

$$C^1 = \frac{A + 2B + 4C + 2D + E}{10}$$

$$D^1 = \frac{B + 2C + 4D + 2E + F}{10} \quad \text{etc.}$$

Once a 'correct' value was calculated, the program was incremented to the next position and a weighted value calculated for that position. The process was repeated until position Y was reached where the value was calculated as described for B^1.

Since the time interval between fixes was occasionally irregular, the effective time for the corrected fix was calculated in a similar way, applying the same weights to the fix times.

Once all the times and fixes had been averaged the data were interpolated to give the ship's position at 1 minute intervals.

As a result of applying the averaging function, the ship's track gave a closer approximation to the apparently steady course which had been steered. The difference between original and filtered location was generally less than 1 kilometer.

3.2 Magnetics

The magnetic values were recorded on a strip chart recorder in analogue form. These strip records were then digitized at intervals of 5 minutes using the D-MAC digitizer of the Nova Scotia Research Foundation. Additional points were digitized in areas of high frequency activity. The result of digitizing the data was total field magnetic values interpolated to 1 minute intervals. The digitized data were compared with the analogue records to eliminate any digitizing errors.

Once the data were corrected to a suitable form each total field value was reduced to a magnetic anomaly by subtracting the International Geomagnetic Reference Field (IAGA Comm. 2, 1969) from the observed total field reading for that position. No correction was made for diurnal variation. The magnetic field was monitored at the Bedford Institute, Dartmouth, throughout the cruise. For days 295 to 301/1500 the magnetic field was quiet and

the maximum magnetic variation was approximately 20γ. For the remainder of the survey a magnetic storm was encountered and variations with amplitudes of 300γ and greater occurred.

3.3 Gravity

At each underwater gravity station the reading was recorded as a digital readout and slope from a graphic recorder. The digital readout was proportional to the spring tension acting on the beam, and the slope from the graph indicated the rate of displacement of the beam. This rate of displacement was proportional to the difference between the spring tension and the force of gravity acting on the beam. By taking 2 readings on each station a set of simultaneous equations was obtained that could be solved and converted to a gravity value.

The gravity values were referenced to a base station at Bedford Institute of Oceanography before the cruise, and upon return to B.I.O. The values quoted are on the Canadian Mapping Scale on which the value of g at B.I.O. pier (EPB Station 9861-62) is 980578.94 mgals.

Simple Bouguer anomalies were calculated assuming that the water layer of density 1.03 $g.cm^{-3}$ is replaced by material with an average crustal density of 2.67 $g.cm^{-3}$. The calculations are accurate to better than 1 mgal.

3.4 Bathymetry

The bathymetry readings were taken every five minutes from the records produced by the EPC graphic recorder. The depths were read to the nearest fathom (1.829 metres). The readings were punched onto computer cards, interpolated to one minute intervals and stored on magnetic tape. A velocity of 4800 ft/sec was assumed for the velocity of sound in sea-water. No corrections were made for variations in sound velocity.

3.5 Data Storage

The final stage in the data processing was the combination of the 1 minute fixes, magnetic total field, magnetic anomaly and bathymetry readings into a single record for each minute. The data are stored on magnetic tape in the standard B.I.O. results tape format.

The gravity data, however, are not stored in a computer based data file due to the small amount of data (24 stations). The values obtained for the gravity field are presented in Appendix D.

4. DATA PRESENTATION

The geophysical data are presented in four forms:

1. Line Check Data (Appendix A) are listed as the time and location of fix, speed, course and the Eotvos correction and distance travelled between successive 15 minute fixes. The values listed for speed, course and distance travelled were used to check for any obvious errors in navigation. The Eotvos correction is included in this appendix although it is not required for any of the data collected on the cruise. A number 1 in the first column (LC) represents the start of a line; a number 2 represents the end of a line, and number 0 represents intermediate points.

2. Data Printout (Appendix B) lists the location, magnetic total field and magnetic anomaly in nanoteslas (gammas), and the depth in metres, at 10 minute intervals.

3. Geophysical Profiles (Appendix C) are presented for all lines on which magnetic readings were taken. The ships track (filtered as described in section 3.1) and profiles of the magnetic anomaly and bathymetry are presented at a scale of 1:1,000,000.

NOTE: A scale bar is drawn on each diagram. This bar represents a distance of 50 kilometres. At a scale of 1:1,000,000, this bar measures 5 cm.

4. Bottom Gravity Data (Appendix D) are presented as a listing giving for each gravity station (at sea level), the location, total gravity, field reading, free air, and Bouguer anomalies, and water depth.

5. DISCUSSION OF MAGNETIC PROFILES

During the cruise two areas of particular interest were encountered. A brief discussion of these areas is presented to draw attention to zones where the data may show results not obvious from other data obtained in the area, and to show some of the limitations of the data.

The first area is west of Yarmouth where a 2000 γ magnetic anomaly was measured approximately 10 km from shore (time 301 2200 p.C-28). Three additional traverses were made of the area in an attempt to determine the extent and nature of the anomaly. The four traverses of the made it possible to estimate the strike of the anomaly to be roughly northeast. Previously published maps of airborne (GSC map 7033G) and shipborne (GSC Map 7291G) magnetic surveys of the area show a continuation offshore of the magnetic high associated with the outcrop of Halifax formation observed near Cape St. Mary, N.S. The anomaly measured on the four traverses correlates well with the anomaly pattern off Cape St. Mary and may indicate an extension of the rock formation offshore. The data presented here are quite different from the data presented on the shipborne magnetic survey (GSC Map 7291G) above latitude $43^{\circ}50'$N. The latter shows a series of very short wavelength anomalies that are discontinuous with surrounding data and the Cape St. Mary trend is not clear. The new data shows that in that interval the Cape St. Mary trend is continuous rather than distinct segments 10 kilometres apart.

Care must be taken in attempting to correlate other anomalies immediately south of the one near Yarmouth since the ships track is almost parallel to the trend of magnetic anomalies observed by Bower (1962) in a previous survey

of the area. What may seem to be correlation from one line to another may actually be caused by the narrow, linear trends characteristic of the area.

The other zone of interest was encountered near 43°N, 65°45'W at 302 1700 while surveying a zone of high magnetic readings observed during a previous survey of the region (Hudson 71-014). It was thought that the magnetic feature may reflect linear fault but the additional data obtained shows that the feature is not linear. Gravity measurements for the area from the previous cruise show a high gravity field associated with the high magnetic readings. This could indicate the presence of a mafic intrusion. quite near, the surface with an area of approximately 100 sq. km.

6. ACKNOWLEDGEMENTS

The assistance and co-operation of the Captain and crew of CNAV SACKVILLE and personnel of the Atlantic Geoscience Centre who aided with the collection and processing of the data is gratefully acknowledged.
A.K. Goodacre of Earth Physics Branch, Ottawa, motivated execution of the underwater gravity survey.

Special thanks are due the cruise Chief Scientist, Dr. R.T. Haworth, whose guidance and assistance was essential for the production of this report.

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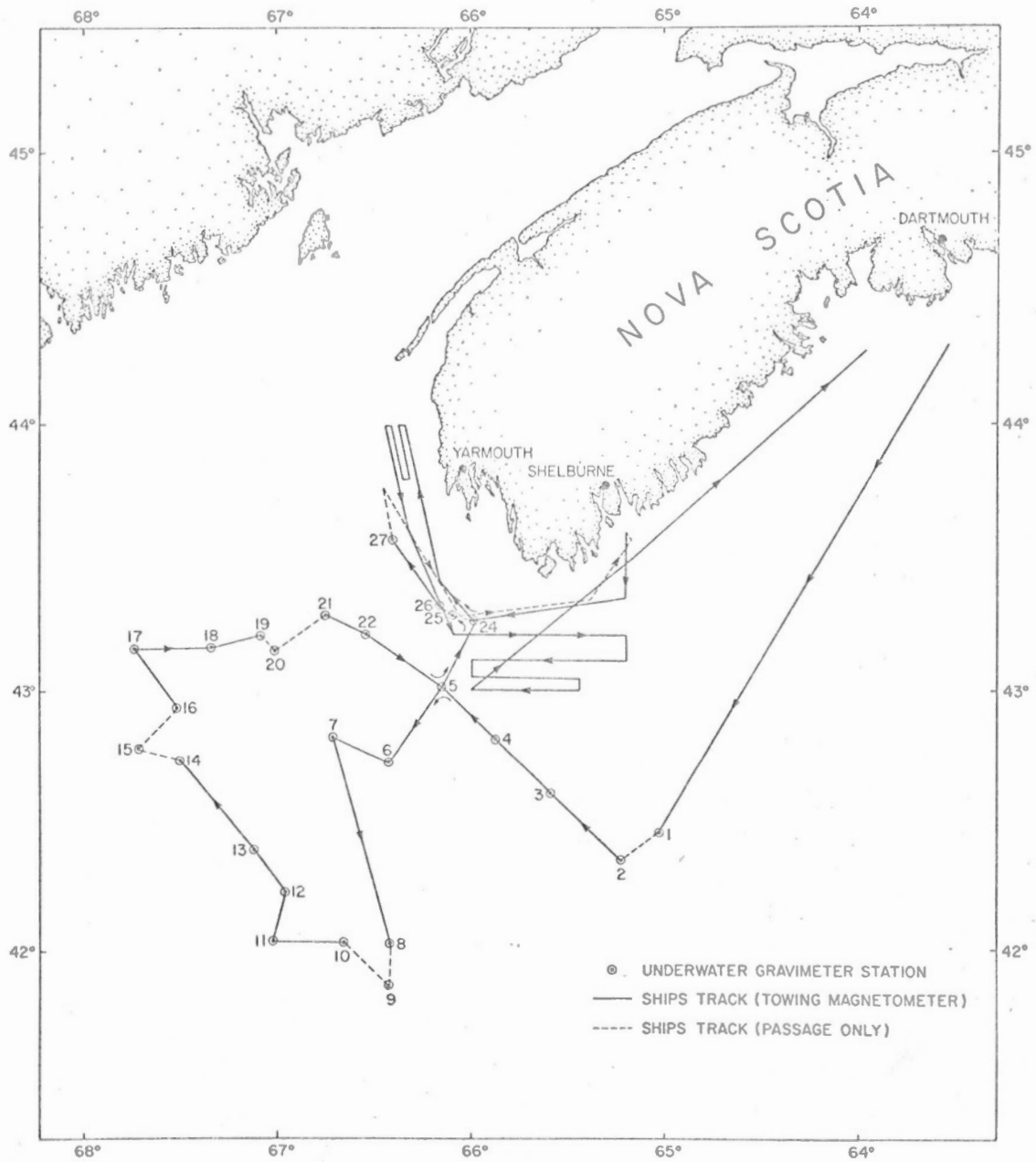
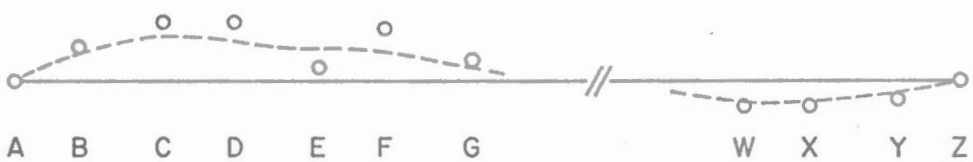


Figure 1: Cruise Sackville 73-032 showing approximate locations of ships tracks and gravity.



o = raw navigation fixes

—— = track as indicated by log and gyro

--- = filtered fix track

Figure 2: Effect of filtering on location.

Appendix A

Navigation Fix Data

NAVIGATION FIX SA[illegible]ILLE 73-032

LC	DAY	TIME	LATITUDE	LONGITUDE	NV	SPEED (KNOTS)	COURSE	EOTVOS	DISTAN (KM)
1	295	2000	44 18.2	-63 32.5	0				
0	295	2015	44 15.3	-63 35.0	0	13.6	211.7	-37.7	6.3
0	295	2015	44 15.3	-63 35.0	0				
0	295	2030	44 13.3	-63 36.0	0	8.5	199.7	-15.1	3.9
0	295	2030	44 13.3	-63 36.0	0				
0	295	2045	44 11.2	-63 38.2	0	10.5	216.9	-33.5	4.9
0	295	2045	44 11.2	-63 38.2	0				
0	295	2100	44 8.5	-63 40.4	0	12.5	210.3	-33.3	5.8
0	295	2100	44 8.5	-63 40.4	0				
2	295	2115	44 5.6	-63 42.2	0	12.7	204.0	-27.2	5.9
1	295	2215	44 3.0	-63 44.5	0				
0	295	2230	44 .5	-63 46.5	0	11.5	209.9	-30.5	5.3
0	295	2230	44 .5	-63 46.5	0				
0	295	2245	43 58.0	-63 48.8	0	12.0	213.5	-35.1	5.6
0	295	2245	43 58.0	-63 48.8	0				
0	295	2300	43 55.8	-63 51.0	0	10.8	215.8	-33.7	5.0
0	295	2300	43 55.8	-63 51.0	0				
0	295	2315	43 53.3	-63 52.8	0	11.3	207.4	-27.5	5.2
0	295	2315	43 53.3	-63 52.8	0				
0	295	2330	43 50.5	-63 55.0	0	12.9	209.5	-33.6	6.0
0	295	2330	43 50.5	-63 55.0	0				
0	295	2345	43 47.8	-63 57.3	0	12.7	211.6	-35.3	5.9
0	295	2345	43 47.8	-63 57.3	0				
2	295	2400	43 44.8	-64 0	0	14.3	213.0	-41.4	6.6
1	296	0	43 44.8	-64 0	0				
0	296	15	43 43.4	-64 1.7	0	7.5	221.3	-26.4	3.5
0	296	15	43 43.4	-64 1.7	0				
0	296	30	43 41.0	-64 4.0	0	11.7	214.7	-35.5	5.4
0	296	30	43 41.0	-64 4.0	0				
0	296	45	43 38.6	-64 5.6	0	10.7	205.7	-24.7	4.9

NAVIGATION FIX SACKVILLE 73-032

LC	DAY	TIME	LATITUDE	LONGITUDE	NV	SPEED (KNOTS)	COURSE	EOTVOS	DISTAN (KM)
0	296	45	43 38.6	-64 5.6	0				
0	296	100	43 36.2	-64 7.5	0	11.1	209.8	-29.4	5.1
0	296	100	43 36.2	-64 7.5	0				
0	296	130	43 31.5	-64 10.3	0	10.2	203.3	-21.6	9.5
0	296	130	43 31.5	-64 10.3	0				
0	296	145	43 29.5	-64 12.2	0	9.7	214.6	-29.6	4.5
0	296	145	43 29.5	-64 12.2	0				
0	296	200	43 26.6	-64 14.0	0	12.7	204.3	-27.8	5.9
0	296	200	43 26.6	-64 14.0	0				
0	296	215	43 24.4	-64 15.5	0	9.8	206.3	-23.4	4.5
0	296	215	43 24.4	-64 15.5	0				
0	296	230	43 22.0	-64 17.1	0	10.7	205.8	-24.9	4.9
0	296	230	43 22.0	-64 17.1	0				
0	296	245	43 19.2	-64 18.6	0	12.0	201.3	-23.2	5.6
0	296	245	43 19.2	-64 18.6	0				
0	296	300	43 17.2	-64 20.6	0	9.9	216.0	-31.4	4.6
0	296	300	43 17.2	-64 20.6	0				
0	296	315	43 15.0	-64 22.0	0	9.7	204.9	-21.9	4.5
0	296	315	43 15.0	-64 22.0	0				
0	296	330	43 13.5	-64 24.4	0	9.2	229.4	-37.9	4.3
0	296	330	43 13.5	-64 24.4	0				
0	296	345	43 11.0	-64 25.5	0	10.5	197.8	-17.1	4.9
0	296	345	43 11.0	-64 25.5	0				
0	296	400	43 8.9	-64 25.5	0	8.4	180.0	.3	3.9
0	296	400	43 8.9	-64 25.5	0				
0	296	415	43 6.3	-64 29.0	0	14.6	224.5	-55.1	6.8
0	296	415	43 6.3	-64 29.0	0				
0	296	430	43 4.3	-64 31.5	0	10.8	222.4	-39.5	5.0
0	296	430	43 4.3	-64 31.5	0				
0	296	445	43 3.0	-64 32.5	0	6.0	209.3	-15.9	2.8

NAVIGATION FIX SACKVILLE 73-032

LC	DAY	TIME	LATITUDE	LONGITUDE	NV	SPEED (KNOTS)	COURSE	EOTVOS	DISTAN (KM)
0	296	445	43 3.0	-64 32.5	0				
0	296	500	43 2.0	-64 32.6	0	4.0	184.2	-1.5	1.9
0	296	500	43 2.0	-64 32.6	0				
0	296	545	42 54.8	-64 37.8	0	10.9	207.9	-27.4	15.1
0	296	545	42 54.8	-64 37.8	0				
0	296	600	42 50.5	-64 36.0	0	18.0	162.9	30.4	8.3
0	296	600	42 50.5	-64 36.0	0				
0	296	615	42 47.5	-64 33.0	0	14.9	143.7	49.4	6.9
0	296	615	42 47.5	-64 33.0	0				
0	296	630	42 46.5	-64 32.5	0	4.3	159.8	8.2	2.0
0	296	630	42 46.5	-64 32.5	0				
0	296	645	42 43.0	-64 34.5	0	15.2	202.8	-31.4	7.0
0	296	645	42 43.0	-64 34.5	0				
0	296	700	42 40.5	-64 38.3	0	15.0	228.2	-60.7	6.9
0	296	700	42 40.5	-64 38.3	0				
0	296	730	42 37.5	-64 44.0	0	10.3	234.4	-45.8	9.6
0	296	730	42 37.5	-64 44.0	0				
0	296	745	42 36.0	-64 47.0	0	10.7	235.8	-48.3	4.9
0	296	745	42 36.0	-64 47.0	0				
0	296	800	42 34.1	-64 50.3	0	12.3	232.0	-53.1	5.7
0	296	800	42 34.1	-64 50.3	0				
0	296	815	42 33.0	-64 52.8	0	8.6	239.1	-40.4	4.0
0	296	815	42 33.0	-64 52.8	0				
0	296	830	42 31.0	-64 55.5	0	11.3	224.9	-43.5	5.2
0	296	830	42 31.0	-64 55.5	0				
2	296	845	42 29.5	-64 58.0	0	9.5	230.9	-40.4	4.4
1	296	1105	42 22.0	-65 14.0	0				
0	296	1115	42 23.2	-65 16.0	0	11.4	309.1	-48.6	3.5
0	296	1115	42 23.2	-65 16.0	0				
0	296	1130	42 25.0	-65 17.5	0	8.5	328.4	-24.3	3.9

NAVIGATION FIX SACKVILLE 73-032

LC	DAY	TIME	LATITUDE	LONGITUDE	NV	SPEED (KNOTS)	COURSE	EOTVOS	DISTAN (KM)
0	296	1130	42 25.0	-65 17.5	0				
0	296	1145	42 27.0	-65 19.0	0	9.1	331.0	-24.2	4.2
0	296	1145	42 27.0	-65 19.0	0				
0	296	1200	42 29.0	-65 22.0	0	11.9	312.1	-48.4	5.5
0	296	1200	42 29.0	-65 22.0	0				
0	296	1215	42 30.2	-65 25.0	0	10.1	298.5	-48.5	4.7
0	296	1215	42 30.2	-65 25.0	0				
0	296	1230	42 32.3	-65 28.0	0	12.2	313.5	-48.3	5.6
0	296	1230	42 32.3	-65 28.0	0				
0	296	1245	42 34.5	-65 30.7	0	11.9	317.9	-43.4	5.5
0	296	1245	42 34.5	-65 30.7	0				
0	296	1300	42 36.0	-65 33.5	0	10.2	306.0	-45.1	4.7
0	296	1300	42 36.0	-65 33.5	0				
2	296	1305	42 36.5	-65 34.4	0	10.0	307.0	-43.5	1.5
1	296	1338	42 37.3	-65 34.2	0				
0	296	1345	42 38.0	-65 35.5	0	10.2	306.2	-44.9	2.2
0	296	1345	42 38.0	-65 35.5	0				
0	296	1400	42 39.5	-65 38.1	0	9.7	308.1	-41.8	4.5
0	296	1400	42 39.5	-65 38.1	0				
0	296	1415	42 41.0	-65 40.9	0	10.2	306.1	-45.0	4.7
0	296	1415	42 41.0	-65 40.9	0				
0	296	1430	42 42.5	-65 43.6	0	10.0	307.1	-43.4	4.6
0	296	1430	42 42.5	-65 43.6	0				
0	296	1445	42 43.3	-65 46.5	0	9.1	290.6	-46.7	4.2
0	296	1445	42 43.3	-65 46.5	0				
0	296	1500	42 44.6	-65 49.0	0	9.0	305.3	-40.2	4.2
0	296	1500	42 44.6	-65 49.0	0				
0	296	1515	42 47.0	-65 51.0	0	11.3	328.5	-31.8	5.2
0	296	1515	42 47.0	-65 51.0	0				
2	296	1530	42 49.0	-65 52.5	0	9.1	331.2	-23.9	4.2

NAVIGATION FIX SACKVILLE 73-032

LC	DAY	TIME	LATITUDE	LONGITUDE	NV	SPEED (KNOTS)	COURSE	EOTVOS	DISTAN (KM)
1	296	1620	42 48.3	-65 53.5	0				
0	296	1630	42 49.5	-65 53.5	0	7.2	0	.2	2.2
0	296	1630	42 49.5	-65 53.5	0				
0	296	1645	42 50.9	-65 55.0	0	7.1	321.8	-24.0	3.3
0	296	1645	42 50.9	-65 55.0	0				
0	296	1700	42 52.0	-65 57.0	0	7.3	306.9	-32.0	3.4
0	296	1700	42 52.0	-65 57.0	0				
0	296	1715	42 54.0	-65 59.0	0	9.9	323.8	-31.8	4.6
0	296	1715	42 54.0	-65 59.0	0				
0	296	1730	42 55.5	-66 1.5	0	9.5	309.3	-39.9	4.4
0	296	1730	42 55.5	-66 1.5	0				
0	296	1745	42 57.3	-66 4.2	0	10.7	312.3	-43.0	5.0
0	296	1745	42 57.3	-66 4.2	0				
0	296	1800	42 58.0	-66 7.5	0	10.1	286.2	-52.6	4.7
0	296	1800	42 58.0	-66 7.5	0				
2	296	1810	42 59.5	-66 8.3	0	9.7	338.7	-18.9	3.0
1	296	1845	43 .5	-66 8.8	0				
0	296	1900	42 58.0	-66 11.0	0	11.9	212.8	-34.8	5.5
0	296	1900	42 58.0	-66 11.0	0				
0	296	1915	42 56.5	-66 12.8	0	8.0	221.3	-28.7	3.7
0	296	1915	42 56.5	-66 12.8	0				
0	296	1930	42 54.7	-66 14.5	0	8.8	214.7	-27.0	4.1
0	296	1930	42 54.7	-66 14.5	0				
0	296	1945	42 52.7	-66 17.0	0	10.9	222.5	-39.8	5.0
0	296	1945	42 52.7	-66 17.0	0				
0	296	2000	42 49.7	-66 19.1	0	13.5	207.2	-33.1	6.2
0	296	2000	42 49.7	-66 19.1	0				
0	296	2015	42 48.0	-66 20.8	0	8.4	216.3	-27.2	3.9
0	296	2015	42 48.0	-66 20.8	0				
0	296	2030	42 47.0	-66 19.0	0	6.6	127.1	29.3	3.1

NAVIGATION FIX SACKVILLE 73-032

LC	DAY	TIME	LATITUDE	LONGITUDE	NV	SPEED (KNOTS)	COURSE	EOTVOS	DISTAN (KM)
0	296	2030	42 47.0	-66 19.0	0				
0	296	2045	42 45.2	-66 23.5	0	15.1	241.4	-71.9	7.0
0	296	2045	42 45.2	-66 23.5	0				
2	296	2100	42 42.0	-66 25.5	0	14.1	204.7	-31.6	6.5
1	296	2130	42 43.3	-66 25.5	0				
0	296	2145	42 44.0	-66 28.6	0	9.5	287.1	-49.8	4.4
0	296	2145	42 44.0	-66 28.6	0				
0	296	2200	42 45.2	-66 32.5	0	12.4	292.7	-62.5	5.8
0	296	2200	42 45.2	-66 32.5	0				
0	296	2215	42 46.2	-66 35.5	0	9.7	294.4	-48.2	4.5
0	296	2215	42 46.2	-66 35.5	0				
0	296	2230	42 48.0	-66 39.0	0	12.6	305.0	-55.9	5.8
0	296	2230	42 48.0	-66 39.0	0				
2	296	2245	42 49.4	-66 42.3	0	11.2	300.0	-52.8	5.2
1	296	2310	42 49.8	-66 42.7	0				
0	296	2330	42 47.8	-66 40.1	0	8.3	136.4	31.8	5.1
0	296	2330	42 47.8	-66 40.1	0				
0	296	2345	42 45.0	-66 39.2	0	11.5	166.7	15.1	5.3
0	296	2345	42 45.0	-66 39.2	0				
2	296	2400	42 42.8	-66 38.8	0	8.9	172.4	6.8	4.1
1	297	0	42 42.8	-66 38.8	0				
0	297	15	42 40.6	-66 38.5	0	8.8	174.3	5.2	4.1
0	297	15	42 40.6	-66 38.5	0				
0	297	30	42 38.5	-66 38.0	0	8.5	170.1	8.4	3.9
0	297	30	42 38.5	-66 38.0	0				
0	297	45	42 36.5	-66 37.5	0	8.1	169.6	8.4	3.8
0	297	45	42 36.5	-66 37.5	0				
0	297	100	42 33.6	-66 36.5	0	12.0	165.8	16.9	5.5
0	297	100	42 33.6	-66 36.5	0				
0	297	115	42 31.5	-66 36.0	0	8.5	170.1	8.5	4.0

NAVIGATION FIX SACKVILLE 73-032

LC	DAY	TIME	LATITUDE	LONGITUDE	NV	SPEED (KNOTS)	COURSE	EOTVOS	DISTAN (KM)
0	297	115	42 31.5	-66 36.0	0				
0	297	130	42 28.5	-66 35.0	0	12.4	166.2	17.0	5.7
0	297	130	42 28.5	-66 35.0	0				
0	297	145	42 26.2	-66 34.5	0	9.3	170.9	8.5	4.3
0	297	145	42 26.2	-66 34.5	0				
0	297	200	42 23.1	-66 33.8	0	12.6	170.5	12.1	5.8
0	297	200	42 23.1	-66 33.8	0				
0	297	215	42 21.0	-66 32.7	0	9.0	158.8	18.4	4.2
0	297	215	42 21.0	-66 32.7	0				
0	297	230	42 18.2	-66 31.2	0	12.1	158.4	25.2	5.6
0	297	230	42 18.2	-66 31.2	0				
0	297	245	42 16.0	-66 30.8	0	8.9	172.3	6.9	4.1
0	297	245	42 16.0	-66 30.8	0				
0	297	300	42 13.5	-66 30.0	0	10.3	166.7	13.6	4.8
0	297	300	42 13.5	-66 30.0	0				
0	297	315	42 11.0	-66 28.5	0	10.9	156.0	25.2	5.1
0	297	315	42 11.0	-66 28.5	0				
0	297	330	42 8.0	-66 27.0	0	12.8	159.7	25.4	5.9
0	297	330	42 8.0	-66 27.0	0				
0	297	345	42 6.0	-66 26.5	0	8.1	169.5	8.5	3.8
0	297	345	42 6.0	-66 26.5	0				
2	297	400	42 4.9	-66 26.0	0	4.6	161.4	8.4	2.2
1	297	520	42 0	-66 17.0	0				
0	297	545	41 56.0	-66 18.5	0	10.0	195.6	-14.5	7.7
0	297	545	41 56.0	-66 18.5	0				
0	297	600	41 53.5	-66 22.0	0	14.4	226.2	-57.3	6.7
0	297	600	41 53.5	-66 22.0	0				
2	297	615	41 52.0	-66 24.0	0	8.5	224.8	-33.0	3.9
1	297	645	41 51.0	-66 25.5	0				
0	297	650	41 51.0	-66 25.5	0	0	0	0	0

NAVIGATION FIX SACKVILLE 73-032

LC	DAY	TIME	LATITUDE	LONGITUDE	NV	SPEED (KNOTS)	COURSE	EOTVOS	DISTAN (KM)
0	297	650	41 51.0	-66 25.5	0				
0	297	700	41 51.5	-66 27.0	0	7.3	294.1	-37.3	2.3
0	297	700	41 51.5	-66 27.0	0				
0	297	745	41 56.0	-66 33.0	0	8.5	315.2	-33.0	11.7
0	297	745	41 56.0	-66 33.0	0				
0	297	845	42 2.0	-66 39.0	0	7.5	323.4	-24.7	13.9
0	297	845	42 2.0	-66 39.0	0				
0	297	915	42 2.0	-66 41.5	0	3.7	270.0	-20.6	3.4
0	297	915	42 2.0	-66 41.5	0				
0	297	930	42 2.0	-66 46.0	0	13.4	270.0	-73.8	6.2
0	297	930	42 2.0	-66 46.0	0				
0	297	945	42 2.3	-66 49.0	0	9.0	277.7	-49.4	4.2
0	297	945	42 2.3	-66 49.0	0				
0	297	1000	42 2.2	-66 52.0	0	8.9	267.4	-49.4	4.1
0	297	1000	42 2.2	-66 52.0	0				
0	297	1015	42 2.0	-66 56.0	0	11.9	266.1	-65.7	5.5
0	297	1015	42 2.0	-66 56.0	0				
2	297	1025	42 2.0	-66 58.0	0	8.9	270.0	-49.4	2.8
1	297	1315	42 2.8	-67 .6	0				
0	297	1330	42 3.4	-67 .5	0	2.4	7.1	1.7	1.1
0	297	1330	42 3.4	-67 .5	0				
0	297	1345	42 5.8	-66 59.4	0	10.1	18.8	18.6	4.7
0	297	1345	42 5.8	-66 59.4	0				
0	297	1400	42 8.6	-66 57.6	0	12.4	25.5	30.4	5.7
0	297	1400	42 8.6	-66 57.6	0				
2	297	1415	42 11.6	-66 57.3	0	12.0	4.2	5.5	5.6
1	297	1450	42 13.4	-66 56.5	0				
0	297	1500	42 14.6	-66 58.0	0	9.8	317.2	-36.6	3.0
0	297	1500	42 14.6	-66 58.0	0				
0	297	1515	42 16.8	-67 1.0	0	12.5	314.7	-48.7	5.8

NAVIGATION FIX. SACKVILLE 73-032

LC	DAY	TIME	LATITUDE	LONGITUDE	NV	SPEED (KNOTS)	COURSE	EOTVOS	DISTAN (KM)
0	297	1515	42 16.8	-67 1.0	0				
0	297	1530	42 18.7	-67 3.5	0	10.6	315.8	-40.6	4.9
0	297	1530	42 18.7	-67 3.5	0				
2	297	1552	42 21.4	-67 6.5	0	9.5	320.6	-33.2	6.5
1	297	1635	42 23.9	-67 8.0	0				
0	297	1645	42 25.5	-67 10.0	0	13.1	317.3	-48.4	4.0
0	297	1645	42 25.5	-67 10.0	0				
0	297	1700	42 27.4	-67 12.0	0	9.6	322.2	-32.3	4.5
0	297	1700	42 27.4	-67 12.0	0				
0	297	1715	42 29.0	-67 14.0	0	8.7	317.3	-32.4	4.0
0	297	1715	42 29.0	-67 14.0	0				
0	297	1730	42 30.8	-67 16.5	0	10.3	314.3	-40.4	4.8
0	297	1730	42 30.8	-67 16.5	0				
0	297	1745	42 32.8	-67 18.4	0	9.8	325.0	-30.6	4.5
0	297	1745	42 32.8	-67 18.4	0				
0	297	1800	42 34.5	-67 20.0	0	8.3	325.3	-25.8	3.8
0	297	1800	42 34.5	-67 20.0	0				
0	297	1815	42 35.0	-67 21.9	0	5.9	289.7	-30.8	2.8
0	297	1815	42 35.0	-67 21.9	0				
0	297	1830	42 36.9	-67 23.5	0	8.9	328.2	-25.7	4.1
0	297	1830	42 36.9	-67 23.5	0				
0	297	1845	42 39.0	-67 24.8	0	9.2	335.5	-20.8	4.3
0	297	1845	42 39.0	-67 24.8	0				
0	297	1900	42 41.5	-67 26.5	0	11.2	333.4	-27.1	5.2
0	297	1900	42 41.5	-67 26.5	0				
2	297	1915	42 43.0	-67 29.0	0	9.5	309.2	-40.2	4.4
1	297	1945	42 44.0	-67 30.5	0				
0	297	2000	42 44.6	-67 33.3	0	8.6	286.3	-45.0	4.0
0	297	2000	42 44.6	-67 33.3	0				
0	297	2015	42 45.5	-67 37.5	0	12.9	286.3	-67.3	6.0

NAVIGATION FIX SACKVILLE 73-032

LC	DAY	TIME	LATITUDE	LONGITUDE	NV	SPEED (KNOTS)	COURSE	EOTVOS	DISTAN (KM)
0	297	2015	42 45.5	-67 37.5	0				
2	297	2030	42 46.1	-67 41.5	0	12.0	281.5	-64.1	5.6
1	297	2115	42 49.5	-67 40.0	0				
0	297	2130	42 51.8	-67 37.0	0	12.7	43.7	49.1	5.9
0	297	2130	42 51.8	-67 37.0	0				
2	297	2145	42 53.7	-67 34.0	0	11.6	49.2	48.9	5.4
1	297	2230	42 57.2	-67 32.8	0				
0	297	2245	42 59.7	-67 34.8	0	11.6	329.7	-31.6	5.4
0	297	2245	42 59.7	-67 34.8	0				
0	297	2300	43 2.0	-67 37.5	0	12.1	319.4	-42.7	5.6
0	297	2300	43 2.0	-67 37.5	0				
0	297	2315	43 2.0	-67 44.0	0	19.0	270.0	-102.8	8.8
0	297	2315	43 2.0	-67 44.0	0				
0	297	2330	43 5.5	-67 43.3	0	14.2	8.3	12.0	6.6
0	297	2330	43 5.5	-67 43.3	0				
0	297	2345	43 7.7	-67 44.5	0	9.5	338.3	-18.8	4.4
0	297	2345	43 7.7	-67 44.5	0				
2	297	2359	43 10.3	-67 44.0	0	11.3	8.0	9.1	4.9
1	298	0	43 10.5	-67 44.0	0				
0	298	20	43 10.2	-67 45.8	0	4.0	257.1	-21.5	2.5
0	298	20	43 10.2	-67 45.8	0				
0	298	25	43 10.6	-67 44.7	0	10.8	63.5	53.2	1.7
0	298	25	43 10.6	-67 44.7	0				
0	298	45	43 9.6	-67 42.0	0	6.6	116.9	32.5	4.1
0	298	45	43 9.6	-67 42.0	0				
0	298	100	43 10.5	-67 36.3	0	17.0	77.8	92.2	7.9
0	298	100	43 10.5	-67 36.3	0				
0	298	115	43 11.0	-67 32.1	0	12.4	80.7	67.7	5.7
0	298	115	43 11.0	-67 32.1	0				
0	298	130	43 10.5	-67 28.5	0	10.7	100.8	57.9	5.0

NAVIGATION FIX SACKVILLE 73-032

LC	DAY	TIME	LATITUDE	LONGITUDE	NV	SPEED (KNOTS)	COURSE	FOTVOS	DISTAN (KM)
0	298	130	43 10.5	-67 28.5	0				
2	298	145	43 9.8	-67 25.0	0	10.6	105.3	56.4	4.9
1	298	225	43 9.5	-67 21.1	0				
0	298	245	43 10.5	-67 16.6	0	10.3	73.1	54.3	6.4
0	298	245	43 10.5	-67 16.6	0				
0	298	300	43 11.0	-67 13.8	0	8.4	76.2	45.0	3.9
0	298	300	43 11.0	-67 13.8	0				
0	298	315	43 11.5	-67 10.5	0	9.8	78.3	53.1	4.6
0	298	315	43 11.5	-67 10.5	0				
2	298	333	43 12.5	-67 5.0	0	13.8	76.0	73.9	7.7
1	298	410	43 13.0	-67 5.0	0				
2	298	420	43 10.5	-67 4.3	0	15.3	168.5	17.7	4.7
1	298	500	43 9.5	-67 2.0	0				
0	298	505	43 9.8	-67 0	0	17.9	78.4	97.2	2.8
0	298	505	43 9.8	-67 0	0				
0	298	520	43 11.5	-66 57.5	0	10.0	47.0	40.3	4.6
0	298	520	43 11.5	-66 57.5	0				
0	298	535	43 13.5	-66 54.5	0	11.9	47.6	48.4	5.5
0	298	535	43 13.5	-66 54.5	0				
0	298	550	43 14.8	-66 51.5	0	10.2	59.3	48.2	4.7
0	298	550	43 14.8	-66 51.5	0				
2	298	605	43 16.5	-66 49.0	0	10.0	47.0	40.2	4.6
1	298	640	43 17.4	-66 47.0	0				
0	298	645	43 17.2	-66 45.0	0	17.6	97.8	96.8	2.7
0	298	645	43 17.2	-66 45.0	0				
0	298	700	43 16.8	-66 43.0	0	6.0	105.4	32.0	2.8
0	298	700	43 16.8	-66 43.0	0				
0	298	715	43 15.5	-66 38.8	0	13.3	113.0	67.6	6.2
0	298	715	43 15.5	-66 38.8	0				
2	298	730	43 14.0	-66 35.5	0	11.3	122.0	53.1	5.2

NAVIGATION FIX SACKVILLE 73-032

LC	DAY	TIME	LATITUDE	LONGITUDE	NV	SPEED (KNOTS)	COURSE	EOTVOS	DISTAN (KM)
1	298	802	43 13.0	-66 32.2	0				
0	298	815	43 12.0	-66 30.2	0	8.2	124.4	37.1	3.3
0	298	815	43 12.0	-66 30.2	0				
0	298	830	43 10.5	-66 27.0	0	11.1	122.7	51.6	5.1
0	298	830	43 10.5	-66 27.0	0				
0	298	845	43 8.5	-66 24.2	0	11.4	134.4	45.3	5.3
0	298	845	43 8.5	-66 24.2	0				
0	298	900	43 7.0	-66 21.5	0	9.9	127.3	43.6	4.6
0	298	900	43 7.0	-66 21.5	0				
0	298	915	43 5.5	-66 18.8	0	9.9	127.3	43.6	4.6
0	298	915	43 5.5	-66 18.8	0				
0	298	930	43 4.3	-66 15.7	0	10.3	117.9	50.1	4.7
0	298	930	43 4.3	-66 15.7	0				
0	298	945	43 3.0	-66 13.0	0	9.5	123.4	43.6	4.4
0	298	945	43 3.0	-66 13.0	0				
2	298	1000	43 2.0	-66 11.0	0	7.1	124.4	32.3	3.3
1	298	1325	43 2.2	-66 10.0	0				
0	298	1330	43 3.0	-66 9.2	0	11.9	36.2	39.1	1.8
0	298	1330	43 3.0	-66 9.2	0				
0	298	1345	43 4.7	-66 7.9	0	7.8	29.2	21.1	3.6
0	298	1345	43 4.7	-66 7.9	0				
0	298	1400	43 6.3	-66 5.5	0	9.5	47.6	38.8	4.4
0	298	1400	43 6.3	-66 5.5	0				
0	298	1415	43 8.5	-66 3.0	0	11.4	39.7	40.5	5.3
0	298	1415	43 8.5	-66 3.0	0				
0	298	1430	43 10.7	-66 3.0	0	8.8	0	.3	4.1
0	298	1430	43 10.7	-66 3.0	0				
0	298	1445	43 12.2	-66 1.0	0	8.4	44.2	32.2	3.9
0	298	1445	43 12.2	-66 1.0	0				
0	298	1500	43 14.2	-65 59.5	0	9.1	28.7	24.3	4.2

NAVIGATION FIX SACKVILLE 73-032

LC	DAY	TIME	LATITUDE	LONGITUDE	NV	SPEED (KNOTS)	COURSE	EOTVOS	DISTAN (KM)
0	298	1500	43 14.2	-65 59.5	0				
2	298	1510	43 15.0	-65 58.8	0	5.7	32.5	16.9	1.8
1	298	1530	43 15.5	-65 58.5	0				
0	298	1550	43 16.8	-66 3.5	0	11.6	289.7	-59.1	7.2
0	298	1550	43 16.8	-66 3.5	0				
2	298	1610	43 17.5	-66 6.5	0	6.9	287.8	-35.6	4.2
1	298	1630	43 16.3	-66 6.0	0				
2	298	1635	43 17.0	-66 8.3	0	21.8	292.7	-107.8	3.4
1	298	1715	43 20.5	-66 11.0	0				
0	298	1730	43 21.5	-66 12.5	0	5.9	312.5	-23.7	2.7
0	298	1730	43 21.5	-66 12.5	0				
0	298	1745	43 23.8	-66 14.5	0	10.9	327.7	-31.2	5.0
0	298	1745	43 23.8	-66 14.5	0				
0	298	1800	43 25.4	-66 15.6	0	7.2	333.5	-17.2	3.3
0	298	1800	43 25.4	-66 15.6	0				
0	298	1815	43 27.0	-66 17.8	0	9.0	315.0	-34.5	4.2
0	298	1815	43 27.0	-66 17.8	0				
0	298	1830	43 29.5	-66 19.0	0	10.6	340.8	-18.5	4.9
0	298	1830	43 29.5	-66 19.0	0				
0	298	1845	43 31.5	-66 20.5	0	9.1	331.5	-23.3	4.2
0	298	1845	43 31.5	-66 20.5	0				
2	298	1900	43 33.8	-66 23.5	0	12.7	316.6	-46.7	5.9
1	301	1315	43 33.8	-65 12.2	0				
0	301	1330	43 31.6	-65 12.2	0	8.8	180.0	.3	4.1
0	301	1330	43 31.6	-65 12.2	0				
0	301	1345	43 28.5	-65 12.5	0	12.4	184.0	-4.1	5.8
0	301	1345	43 28.5	-65 12.5	0				
0	301	1400	43 26.7	-65 11.8	0	7.5	164.2	11.3	3.5
0	301	1400	43 26.7	-65 11.8	0				
0	301	1425	43 21.5	-65 12.4	0	12.5	184.8	-5.1	9.7

NAVIGATION FIX SACKVILLE 73-032

LC	DAY	TIME	LATITUDE	LONGITUDE	NV	SPEED (KNOTS)	COURSE	EOTVOS	DISTAN (KM)
0	301	1425	43 21.5	-65 12.4	0				
0	301	1427	43 21.3	-65 12.8	0	10.6	235.5	-47.3	.7
0	301	1427	43 21.3	-65 12.8	0				
0	301	1430	43 21.0	-65 13.4	0	10.6	235.5	-47.2	1.0
0	301	1430	43 21.0	-65 13.4	0				
0	301	1445	43 20.5	-65 18.2	0	14.1	261.8	-75.4	6.5
0	301	1445	43 20.5	-65 18.2	0				
0	301	1500	43 19.8	-65 22.2	0	12.0	256.5	-62.9	5.5
0	301	1500	43 19.8	-65 22.2	0				
0	301	1515	43 20.0	-65 26.4	0	12.3	273.7	-66.1	5.7
0	301	1515	43 20.0	-65 26.4	0				
0	301	1530	43 19.7	-65 31.2	0	14.0	265.1	-75.4	6.5
0	301	1530	43 19.7	-65 31.2	0				
0	301	1545	43 19.5	-65 35.7	0	13.1	266.5	-70.8	6.1
0	301	1545	43 19.5	-65 35.7	0				
0	301	1600	43 19.0	-65 38.5	0	8.4	256.2	-44.2	3.9
0	301	1600	43 19.0	-65 38.5	0				
0	301	1615	43 18.5	-65 41.8	0	9.8	258.2	-52.1	4.5
0	301	1615	43 18.5	-65 41.8	0				
0	301	1630	43 18.5	-65 45.8	0	11.6	270.0	-63.0	5.4
0	301	1630	43 18.5	-65 45.8	0				
0	301	1645	43 17.5	-65 49.0	0	10.1	246.8	-50.5	4.7
0	301	1645	43 17.5	-65 49.0	0				
0	301	1700	43 17.0	-65 53.5	0	13.3	261.3	-70.9	6.1
0	301	1700	43 17.0	-65 53.5	0				
0	301	1715	43 16.5	-65 57.5	0	11.8	260.3	-63.1	5.5
0	301	1715	43 16.5	-65 57.5	0				
0	301	1725	43 16.0	-66 0	0	11.3	254.6	-59.2	3.5
0	301	1725	43 16.0	-66 0	0				
0	301	1727	43 16.2	-66 .2	0	7.5	323.9	-23.8	.5

NAVIGATION FIX SACKVILLE 73-032

LC	DAY	TIME	LATITUDE	LONGITUDE	NV	SPEED (KNOTS)	COURSE	EOTVOS	DISTAN (KM)
0	301	1727	43 16.2	-66 .2	0				
0	301	1735	43 17.2	-66 1.0	0	8.7	329.8	-23.6	2.1
0	301	1735	43 17.2	-66 1.0	0				
0	301	1745	43 18.0	-66 1.8	0	5.9	324.0	-18.9	1.8
0	301	1745	43 18.0	-66 1.8	0				
0	301	1800	43 19.5	-66 4.0	0	8.8	313.1	-34.6	4.1
0	301	1800	43 19.5	-66 4.0	0				
0	301	1815	43 21.0	-66 5.0	0	6.7	334.1	-15.7	3.1
0	301	1815	43 21.0	-66 5.0	0				
0	301	1830	43 22.8	-66 9.0	0	13.7	301.8	-62.7	6.3
0	301	1830	43 22.8	-66 9.0	0				
0	301	1845	43 25.0	-66 9.8	0	9.1	345.2	-12.3	4.2
0	301	1845	43 25.0	-66 9.8	0				
0	301	1847	43 25.2	-66 10.3	0	12.5	298.8	-58.9	.8
0	301	1847	43 25.2	-66 10.3	0				
0	301	1850	43 25.5	-66 11.0	0	11.8	300.5	-54.9	1.1
0	301	1850	43 25.5	-66 11.0	0				
0	301	1905	43 28.0	-66 11.0	0	10.0	0	.4	4.6
0	301	1905	43 28.0	-66 11.0	0				
0	301	1920	43 30.5	-66 12.0	0	10.4	343.8	-15.4	4.8
0	301	1920	43 30.5	-66 12.0	0				
0	301	1935	43 33.0	-66 12.5	0	10.1	351.7	-7.5	4.7
0	301	1935	43 33.0	-66 12.5	0				
0	301	1950	43 35.0	-66 13.5	0	8.5	340.1	-15.5	3.9
0	301	1950	43 35.0	-66 13.5	0				
0	301	2000	43 37.0	-66 14.5	0	12.8	340.1	-22.9	3.9
0	301	2000	43 37.0	-66 14.5	0				
0	301	2015	43 39.5	-66 16.0	0	10.9	336.5	-23.1	5.0
0	301	2015	43 39.5	-66 16.0	0				
0	301	2030	43 42.5	-66 17.0	0	12.3	346.4	-15.1	5.7

NAVIGATION FIX SACKVILLE 73-032

LC	DAY	TIME	LATITUDE	LONGITUDE	NV	SPEED (KNOTS)	COURSE	EOTVOS	DISTAN (KM)
0	301	2030	43 42.5	-66 17.0	0				
0	301	2045	43 44.6	-66 17.6	0	8.6	348.3	-9.1	4.0
0	301	2045	43 44.6	-66 17.6	0				
0	301	2100	43 47.2	-66 18.5	0	10.7	346.0	-13.6	5.0
0	301	2100	43 47.2	-66 18.5	0				
0	301	2115	43 49.8	-66 19.1	0	10.5	350.5	-8.9	4.9
0	301	2115	43 49.8	-66 19.1	0				
0	301	2130	43 52.0	-66 19.0	0	8.8	1.9	1.9	4.1
0	301	2130	43 52.0	-66 19.0	0				
0	301	2145	43 54.5	-66 19.5	0	10.1	351.8	-7.4	4.7
0	301	2145	43 54.5	-66 19.5	0				
0	301	2200	43 57.2	-66 20.7	0	11.3	342.3	-18.2	5.3
0	301	2200	43 57.2	-66 20.7	0				
0	301	2217	44 0	-66 21.2	0	10.0	352.7	-6.4	5.2
0	301	2217	44 0	-66 21.2	0				
0	301	2219	44 0	-66 21.7	0	10.8	270.0	-57.9	.7
0	301	2219	44 0	-66 21.7	0				
0	301	2223	44 0	-66 22.8	0	11.9	270.0	-63.5	1.5
0	301	2223	44 0	-66 22.8	0				
0	301	2225	43 59.6	-66 22.7	0	12.2	169.8	12.3	.8
0	301	2225	43 59.6	-66 22.7	0				
0	301	2230	43 58.5	-66 22.5	0	13.3	172.5	10.1	2.1
0	301	2230	43 58.5	-66 22.5	0				
0	301	2245	43 55.7	-66 21.2	0	11.8	161.5	20.8	5.5
0	301	2245	43 55.7	-66 21.2	0				
0	301	2300	43 52.7	-66 20.5	0	12.2	170.5	11.5	5.6
0	301	2300	43 52.7	-66 20.5	0				
0	301	2315	43 49.7	-66 19.5	0	12.3	166.5	16.2	5.7
0	301	2315	43 49.7	-66 19.5	0				
0	301	2330	43 47.5	-66 18.5	0	9.3	161.8	16.0	4.3

NAVIGATION FIX SACKVILLE 73-032

LC	DAY	TIME	LATITUDE	LONGITUDE	NV	SPEED (KNOTS)	COURSE	EOTVOS	DISTAN (KM)
0	301	2330	43 47.5	-66 18.5	0				
0	301	2332	43 47.5	-66 18.8	0	6.7	270.0	-35.9	.4
0	301	2332	43 47.5	-66 18.8	0				
0	301	2340	43 47.5	-66 20.2	0	7.6	270.0	-40.9	1.9
0	301	2340	43 47.5	-66 20.2	0				
0	301	2342	43 47.7	-66 20.5	0	8.9	312.7	-35.1	.5
0	301	2342	43 47.7	-66 20.5	0				
0	301	2345	43 48.0	-66 20.8	0	7.4	324.2	-23.3	.7
0	301	2345	43 48.0	-66 20.8	0				
2	301	2359	43 50.8	-66 22.0	0	12.6	342.8	-19.4	5.4
1	302	0	43 51.0	-66 22.0	0				
0	302	15	43 53.6	-66 23.0	0	10.8	344.5	-15.1	5.0
0	302	15	43 53.6	-66 23.0	0				
0	302	30	43 57.1	-66 23.6	0	14.1	353.0	-8.5	6.5
0	302	30	43 57.1	-66 23.6	0				
0	302	47	44 0	-66 24.5	0	10.5	347.4	-11.9	5.5
0	302	47	44 0	-66 24.5	0				
0	302	49	44 .1	-66 25.5	0	21.8	277.9	-114.6	1.3
0	302	49	44 .1	-66 25.5	0				
0	302	52	44 .2	-66 26.1	0	8.9	283.0	-46.4	.8
0	302	52	44 .2	-66 26.1	0				
0	302	55	44 .5	-66 26.7	0	10.5	304.8	-46.2	1.0
0	302	55	44 .5	-66 26.7	0				
0	302	57	44 .2	-66 26.7	0	9.1	180.0	.3	.6
0	302	57	44 .2	-66 26.7	0				
0	302	100	43 59.8	-66 26.8	0	8.2	190.2	-7.5	.8
0	302	100	43 59.8	-66 26.8	0				
0	302	115	43 57.5	-66 26.0	0	9.5	165.9	12.8	4.4
0	302	115	43 57.5	-66 26.0	0				
0	302	130	43 55.0	-66 25.3	0	10.2	168.6	11.3	4.7

NAVIGATION FIX SACKVILLE 73-032

LC	DAY	TIME	LATITUDE	LONGITUDE	NV	SPEED (KNOTS)	COURSE	EOTVOS	DISTAN (KM)
0	302	130	43 55.0	-66 25.3	0				
0	302	145	43 52.8	-66 24.2	0	9.4	160.2	17.5	4.3
0	302	145	43 52.8	-66 24.2	0				
0	302	200	43 50.0	-66 23.8	0	11.3	174.1	6.8	5.2
0	302	200	43 50.0	-66 23.8	0				
0	302	215	43 47.4	-66 23.5	0	10.4	175.2	5.1	4.8
0	302	215	43 47.4	-66 23.5	0				
0	302	230	43 45.4	-66 22.4	0	8.6	158.3	17.5	4.0
0	302	230	43 45.4	-66 22.4	0				
0	302	245	43 42.5	-66 22.0	0	11.7	174.3	6.8	5.4
0	302	245	43 42.5	-66 22.0	0				
0	302	300	43 40.5	-66 21.4	0	8.2	167.8	9.7	3.8
0	302	300	43 40.5	-66 21.4	0				
0	302	315	43 39.0	-66 21.5	0	6.0	182.8	-1.4	2.8
0	302	315	43 39.0	-66 21.5	0				
0	302	331	43 36.2	-66 20.0	0	11.3	158.8	22.6	5.6
0	302	331	43 36.2	-66 20.0	0				
0	302	345	43 34.0	-66 18.8	0	10.1	158.4	20.7	4.4
0	302	345	43 34.0	-66 18.8	0				
0	302	400	43 32.0	-66 18.1	0	8.3	165.8	11.3	3.8
0	302	400	43 32.0	-66 18.1	0				
0	302	402	43 31.8	-66 17.8	0	8.9	132.6	36.1	.6
0	302	402	43 31.8	-66 17.8	0				
0	302	415	43 30.8	-66 16.5	0	6.3	136.7	23.8	2.5
0	302	415	43 30.8	-66 16.5	0				
0	302	430	43 27.7	-66 15.0	0	13.1	160.7	24.4	6.1
0	302	430	43 27.7	-66 15.0	0				
0	302	445	43 25.5	-66 12.6	0	11.2	141.6	38.5	5.2
0	302	445	43 25.5	-66 12.6	0				
0	302	500	43 22.9	-66 12.0	0	10.5	170.5	10.0	4.9

NAVIGATION FIX SACKVILLE 73-032

LC	DAY	TIME	LATITUDE	LONGITUDE	NV	SPEED (KNOTS)	COURSE	EOTVOS	DISTAN (KM)
0	302	500	43 22.9	-66 12.0	0				
0	302	515	43 21.0	-66 10.0	0	9.6	142.6	32.1	4.4
0	302	515	43 21.0	-66 10.0	0				
0	302	530	43 18.8	-66 9.0	0	9.3	161.7	16.2	4.3
0	302	530	43 18.8	-66 9.0	0				
0	302	545	43 15.5	-66 7.5	0	13.9	161.7	24.7	6.4
0	302	545	43 15.5	-66 7.5	0				
0	302	600	43 13.0	-66 6.5	0	10.4	163.8	16.4	4.8
0	302	600	43 13.0	-66 6.5	0				
0	302	602	43 12.6	-66 5.7	0	21.2	124.5	97.7	1.3
0	302	602	43 12.6	-66 5.7	0				
0	302	605	43 12.0	-66 4.5	0	21.2	124.4	97.6	2.0
0	302	605	43 12.0	-66 4.5	0				
0	302	615	43 12.8	-66 2.5	0	10.0	61.2	48.3	3.1
0	302	615	43 12.8	-66 2.5	0				
0	302	630	43 13.0	-65 57.5	0	14.6	86.9	80.6	6.8
0	302	630	43 13.0	-65 57.5	0				
0	302	645	43 12.2	-65 54.0	0	10.7	107.4	56.3	5.0
0	302	645	43 12.2	-65 54.0	0				
0	302	700	43 13.0	-65 50.0	0	12.1	74.7	64.4	5.6
0	302	700	43 13.0	-65 50.0	0				
0	302	715	43 12.8	-65 45.8	0	12.3	93.7	67.6	5.7
0	302	715	43 12.8	-65 45.8	0				
0	302	730	43 12.2	-65 42.0	0	11.3	102.2	61.1	5.3
0	302	730	43 12.2	-65 42.0	0				
0	302	745	43 12.8	-65 37.5	0	13.3	79.6	72.5	6.2
0	302	745	43 12.8	-65 37.5	0				
0	302	800	43 12.5	-65 34.0	0	10.3	96.7	56.3	4.8
0	302	800	43 12.5	-65 34.0	0				
0	302	815	43 12.5	-65 30.0	0	11.7	90.0	64.4	5.4

NAVIGATION FIX SACKVILLE 73-032

LC	DAY	TIME	LATITUDE	LONGITUDE	NV	SPEED (KNOTS)	COURSE	EOTVOS	DISTAN (KM)
0	302	815	43 12.5	-65 30.0	0				
0	302	830	43 12.7	-65 25.5	0	13.1	86.5	72.5	6.1
0	302	830	43 12.7	-65 25.5	0				
0	302	845	43 12.8	-65 22.4	0	9.0	87.5	49.8	4.2
0	302	845	43 12.8	-65 22.4	0				
0	302	900	43 12.9	-65 19.0	0	9.9	87.7	54.6	4.6
0	302	900	43 12.9	-65 19.0	0				
0	302	915	43 13.0	-65 16.0	0	8.8	87.4	48.2	4.1
0	302	915	43 13.0	-65 16.0	0				
0	302	930	43 13.0	-65 12.0	0	11.7	90.0	64.3	5.4
0	302	930	43 13.0	-65 12.0	0				
0	302	932	43 12.8	-65 12.0	0	6.1	180.0	.2	.4
0	302	932	43 12.8	-65 12.0	0				
0	302	945	43 10.8	-65 11.6	0	9.3	171.7	7.7	3.7
0	302	945	43 10.8	-65 11.6	0				
0	302	1000	43 9.4	-65 11.8	0	5.6	185.9	-3.1	2.6
0	302	1000	43 9.4	-65 11.8	0				
0	302	1005	43 7.3	-65 12.0	0	25.3	184.0	-6.9	3.9
0	302	1005	43 7.3	-65 12.0	0				
0	302	1007	43 7.3	-65 12.1	0	2.4	270.0	-13.3	.1
0	302	1007	43 7.3	-65 12.1	0				
0	302	1015	43 7.2	-65 14.5	0	13.2	266.7	-71.3	3.3
0	302	1015	43 7.2	-65 14.5	0				
0	302	1030	43 7.0	-65 18.2	0	10.8	265.8	-58.7	5.0
0	302	1030	43 7.0	-65 18.2	0				
0	302	1045	43 7.2	-65 23.2	0	14.6	273.1	-79.1	6.8
0	302	1045	43 7.2	-65 23.2	0				
0	302	1100	43 7.3	-65 27.5	0	12.6	271.8	-68.1	5.8
0	302	1100	43 7.3	-65 27.5	0				
0	302	1115	43 7.0	-65 31.6	0	12.0	264.3	-65.0	5.6

NAVIGATION FIX SACKVILLE 73-032

LC	DAY	TIME	LATITUDE	LONGITUDE	NV	SPEED (KNOTS)	COURSE	EOTVOS	DISTAN (KM)
0	302	1115	43 7.0	-65 31.6	0				
0	302	1130	43 6.8	-65 36.0	0	12.9	266.4	-69.7	6.0
0	302	1130	43 6.8	-65 36.0	0				
0	302	1145	43 6.8	-65 40.3	0	12.6	270.0	-68.1	5.8
0	302	1145	43 6.8	-65 40.3	0				
0	302	1200	43 6.7	-65 46.0	0	16.7	268.6	-90.0	7.7
0	302	1200	43 6.7	-65 46.0	0				
0	302	1215	43 6.0	-65 50.3	0	12.9	257.4	-68.1	6.0
0	302	1215	43 6.0	-65 50.3	0				
0	302	1230	43 6.5	-65 56.2	0	17.4	276.6	-93.2	8.0
0	302	1230	43 6.5	-65 56.2	0				
0	302	1240	43 6.2	-66 0	0	16.7	263.8	-90.1	5.2
0	302	1240	43 6.2	-66 0	0				
0	302	1242	43 5.9	-66 .2	0	10.1	206.0	-23.7	.6
0	302	1242	43 5.9	-66 .2	0				
0	302	1245	43 5.5	-66 .5	0	9.1	208.7	-23.7	.8
0	302	1245	43 5.5	-66 .5	0				
0	302	1252	43 3.0	-66 1.0	0	21.7	188.3	-15.2	4.7
0	302	1252	43 3.0	-66 1.0	0				
0	302	1254	43 3.1	-66 .8	0	5.4	55.6	24.7	.3
0	302	1254	43 3.1	-66 .8	0				
0	302	1302	43 3.2	-65 59.8	0	5.5	82.2	30.2	1.4
0	302	1302	43 3.2	-65 59.8	0				
0	302	1315	43 3.4	-65 57.2	0	8.8	84.0	48.4	3.5
0	302	1315	43 3.4	-65 57.2	0				
0	302	1330	43 3.5	-65 54.0	0	9.4	87.6	51.7	4.3
0	302	1330	43 3.5	-65 54.0	0				
0	302	1345	43 3.1	-65 51.2	0	8.3	101.1	45.2	3.9
0	302	1345	43 3.1	-65 51.2	0				
0	302	1400	43 3.3	-65 48.0	0	9.4	85.1	51.7	4.3

NAVIGATION FIX SACKVILLE 73-032

LC	DAY	TIME	LATITUDE	LONGITUDE	NV	SPEED (KNOTS)	COURSE	EOTVOS	DISTAN (KM)
0	302	1400	43 3.3	-65 48.0	0				
0	302	1415	43 2.6	-65 45.5	0	7.8	111.0	40.3	3.6
0	302	1415	43 2.6	-65 45.5	0				
0	302	1430	43 2.9	-65 42.0	0	10.3	83.3	56.6	4.8
0	302	1430	43 2.9	-65 42.0	0				
0	302	1445	43 3.0	-65 38.5	0	10.2	87.8	56.6	4.7
0	302	1445	43 3.0	-65 38.5	0				
0	302	1500	43 3.0	-65 35.1	0	9.9	90.0	54.9	4.6
0	302	1500	43 3.0	-65 35.1	0				
0	302	1515	43 3.0	-65 31.7	0	9.9	90.0	54.9	4.6
0	302	1515	43 3.0	-65 31.7	0				
0	302	1530	43 2.8	-65 28.7	0	8.8	95.2	48.4	4.1
0	302	1530	43 2.8	-65 28.7	0				
0	302	1544	43 2.5	-65 26.0	0	8.6	98.6	46.7	3.7
0	302	1544	43 2.5	-65 26.0	0				
0	302	1546	43 2.0	-65 26.0	0	15.0	180.0	.9	.9
0	302	1546	43 2.0	-65 26.0	0				
0	302	1550	43 1.0	-65 26.0	0	15.0	180.0	.9	1.9
0	302	1550	43 1.0	-65 26.0	0				
0	302	1555	43 0	-65 26.0	0	12.0	180.0	.6	1.9
0	302	1555	43 0	-65 26.0	0				
0	302	1557	42 59.9	-65 26.4	0	9.3	251.1	-48.0	.6
0	302	1557	42 59.9	-65 26.4	0				
0	302	1600	42 59.8	-65 27.0	0	9.0	257.2	-48.0	.8
0	302	1600	42 59.8	-65 27.0	0				
0	302	1615	43 0	-65 31.5	0	13.2	273.5	-71.5	6.1
0	302	1615	43 0	-65 31.5	0				
0	302	1630	43 0	-65 35.5	0	11.7	270.0	-63.7	5.4
0	302	1630	43 0	-65 35.5	0				
0	302	1645	42 59.9	-65 40.0	0	13.2	268.3	-71.5	6.1

NAVIGATION FIX SACKVILLE 73-032

LC	DAY	TIME	LATITUDE	LONGITUDE	NV	SPEED (KNOTS)	COURSE	EOTVOS	DISTAN (KM)
0	302	1645	42 59.9	-65 40.0	0				
0	302	1700	42 59.5	-65 44.5	0	13.3	263.1	-71.5	6.1
0	302	1700	42 59.5	-65 44.5	0				
0	302	1715	42 59.5	-65 49.0	0	13.2	270.0	-71.6	6.1
0	302	1715	42 59.5	-65 49.0	0				
0	302	1730	43 0	-65 53.0	0	11.9	279.7	-63.7	5.5
0	302	1730	43 0	-65 53.0	0				
0	302	1745	43 0	-65 57.5	0	13.2	270.0	-71.5	6.1
0	302	1745	43 0	-65 57.5	0				
0	302	1755	43 0	-66 0	0	11.0	270.0	-59.7	3.4
0	302	1755	43 0	-66 0	0				
0	302	1757	43 .4	-65 59.8	0	12.8	20.1	24.8	.8
0	302	1757	43 .4	-65 59.8	0				
0	302	1800	43 1.0	-65 59.5	0	12.8	20.1	24.8	1.2
0	302	1800	43 1.0	-65 59.5	0				
0	302	1815	43 3.0	-65 56.0	0	13.0	52.0	56.8	6.0
0	302	1815	43 3.0	-65 56.0	0				
0	302	1830	43 5.0	-65 52.8	0	12.3	49.5	51.9	5.7
0	302	1830	43 5.0	-65 52.8	0				
0	302	1845	43 6.0	-65 50.2	0	8.6	62.2	41.9	4.0
0	302	1845	43 6.0	-65 50.2	0				
0	302	1900	43 8.2	-65 46.5	0	13.9	50.8	60.0	6.5
0	302	1900	43 8.2	-65 46.5	0				
0	302	1915	43 9.7	-65 43.5	0	10.6	55.6	48.4	4.9
0	302	1915	43 9.7	-65 43.5	0				
0	302	1930	43 11.5	-65 40.0	0	12.5	54.8	56.5	5.8
0	302	1930	43 11.5	-65 40.0	0				
0	302	1945	43 13.8	-65 36.5	0	13.7	48.0	56.6	6.4
0	302	1945	43 13.8	-65 36.5	0				
0	302	2000	43 16.0	-65 32.9	0	13.7	50.0	58.1	6.3

NAVIGATION FIX SACKVILLE 73-032

LC	DAY	TIME	LATITUDE	LONGITUDE	NV	SPEED (KNOTS)	COURSE	EOTVOS	DISTAN (KM)
0	302	2000	43 16.0	-65 32.9	0				
0	302	2015	43 18.3	-65 29.5	0	13.5	47.1	54.8	6.3
0	302	2015	43 18.3	-65 29.5	0				
0	302	2030	43 20.2	-65 26.0	0	12.7	53.3	56.3	5.9
0	302	2030	43 20.2	-65 26.0	0				
0	302	2045	43 22.5	-65 22.6	0	13.5	47.1	54.7	6.3
0	302	2045	43 22.5	-65 22.6	0				
0	302	2100	43 24.2	-65 20.2	0	9.7	45.7	38.4	4.5
0	302	2100	43 24.2	-65 20.2	0				
0	302	2115	43 26.5	-65 18.0	0	11.2	34.8	35.4	5.2
0	302	2115	43 26.5	-65 18.0	0				
0	302	2130	43 27.7	-65 14.5	0	11.2	64.7	55.9	5.2
0	302	2130	43 27.7	-65 14.5	0				
0	302	2145	43 30.0	-65 10.5	0	14.8	51.6	64.1	6.9
0	302	2145	43 30.0	-65 10.5	0				
0	302	2200	43 31.8	-65 8.0	0	10.2	45.2	39.9	4.7
0	302	2200	43 31.8	-65 8.0	0				
0	302	2215	43 33.6	-65 4.5	0	12.4	54.6	55.8	5.8
0	302	2215	43 33.6	-65 4.5	0				
0	302	2230	43 35.5	-65 1.4	0	11.8	49.8	49.4	5.4
0	302	2230	43 35.5	-65 1.4	0				
0	302	2245	43 37.2	-64 58.5	0	10.8	51.0	46.1	5.0
0	302	2245	43 37.2	-64 58.5	0				
0	302	2300	43 39.0	-64 55.2	0	12.0	53.0	52.5	5.5
0	302	2300	43 39.0	-64 55.2	0				
0	302	2315	43 40.8	-64 52.6	0	10.4	46.3	41.3	4.8
0	302	2315	43 40.8	-64 52.6	0				
0	302	2330	43 42.6	-64 50.0	0	10.4	46.2	41.3	4.8
0	302	2330	43 42.6	-64 50.0	0				
0	302	2345	43 44.8	-64 46.8	0	12.8	46.4	50.8	5.9

NAVIGATION FIX SACKVILLE 73-032

LC	DAY	TIME	LATITUDE	LONGITUDE	NV	SPEED (KNOTS)	COURSE	EOTVOS	DISTAN (KM)
0	302	2345	43 44.8	-64 46.8	0				
2	302	2400	43 46.8	-64 44.0	0	11.4	45.3	44.4	5.3
1	303	0	43 46.8	-64 44.0	0				
0	303	15	43 49.8	-64 41.0	0	14.8	35.8	47.8	6.9
0	303	15	43 49.8	-64 41.0	0				
0	303	30	43 51.0	-64 38.0	0	9.9	61.0	47.3	4.6
0	303	30	43 51.0	-64 38.0	0				
0	303	45	43 53.0	-64 35.0	0	11.8	47.2	47.4	5.5
0	303	45	43 53.0	-64 35.0	0				
0	303	100	43 54.8	-64 32.0	0	11.3	50.2	47.3	5.2
0	303	100	43 54.8	-64 32.0	0				
0	303	115	43 57.2	-64 29.0	0	12.9	42.0	47.4	6.0
0	303	115	43 57.2	-64 29.0	0				
0	303	130	43 58.8	-64 25.5	0	11.9	57.6	55.0	5.5
0	303	130	43 58.8	-64 25.5	0				
0	303	145	44 .8	-64 22.0	0	12.9	51.5	55.1	6.0
0	303	145	44 .8	-64 22.0	0				
0	303	200	44 2.5	-64 18.8	0	11.4	53.5	50.2	5.3
0	303	200	44 2.5	-64 18.8	0				
0	303	215	44 4.2	-64 16.5	0	9.5	44.2	36.0	4.4
0	303	215	44 4.2	-64 16.5	0				
0	303	230	44 5.4	-64 14.5	0	7.5	50.1	31.2	3.5
0	303	230	44 5.4	-64 14.5	0				
0	303	245	44 5.2	-64 13.0	0	4.4	100.5	23.3	2.0
0	303	245	44 5.2	-64 13.0	0				
0	303	300	44 6.5	-64 11.2	0	7.3	44.8	28.1	3.4
0	303	300	44 6.5	-64 11.2	0				
0	303	315	44 8.8	-64 9.5	0	10.4	27.9	26.7	4.8
0	303	315	44 8.8	-64 9.5	0				
0	303	330	44 9.6	-64 8.0	0	5.4	53.4	23.3	2.5

NAVIGATION FIX SACKVILLE 73-032

LC	DAY	TIME	LATITUDE	LONGITUDE	NV	SPEED (KNOTS)	COURSE	EOTVOS	DISTAN (KM)
0	303	330	44 9.6	-64 8.0	0				
0	303	345	44 11.0	-64 6.2	0	7.6	42.7	28.0	3.5
0	303	345	44 11.0	-64 6.2	0				
0	303	400	44 12.0	-64 5.0	0	5.3	40.7	18.6	2.4
0	303	400	44 12.0	-64 5.0	0				
0	303	415	44 13.0	-64 3.5	0	5.9	47.1	23.3	2.7
0	303	415	44 13.0	-64 3.5	0				
0	303	430	44 14.2	-64 1.0	0	8.6	56.2	38.8	4.0
0	303	430	44 14.2	-64 1.0	0				
0	303	445	44 15.5	-63 59.2	0	7.3	44.8	28.0	3.4
0	303	445	44 15.5	-63 59.2	0				
2	303	500	44 16.0	-63 57.0	0	6.6	72.4	34.1	3.1

TOTAL TRACK DISTANCE = 1729 KM

Appendix B

73-032

10 minute Data

SACKVILLE 73-032 DAY 295 1973

TIME	LATITUDE	LONGITUDE	BATHY	T.F.	M.A.
2240	43 58.9	63 48.0	179	55491	-142
2250	43 57.3	63 49.5	177	55450	-180
2300	43 55.7	63 50.9	177	55404	-223
2310	43 54.0	63 52.2	184	55391	-233
2320	43 52.3	63 53.7	192	55400	-221
2330	43 50.5	63 55.1	195	55358	-259
2340	43 48.7	63 56.6	203	55340	-274
2350	43 47.0	63 58.1	219	55348	-263

SACKVILLE 73-032 DAY 296 1973

TIME	LATITUDE	LONGITUDE	BATHY	T.F.	M.A.
0000	43 45.3	63 59.7	226	55365	-243
0010	43 43.9	64 1.1	225	55370	-236
0020	43 42.4	64 2.4	217	55419	-185
0030	43 40.9	64 3.8	208	55494	-107
0040	43 39.4	64 5.0	210	55540	-58
0050	43 37.8	64 6.1	199	55489	-105
0100	43 36.3	64 7.3	197	55401	-189
0110	43 34.7	64 8.4	193	55250	-336
0120	43 33.1	64 9.4	192	55227	-355
0130	43 31.6	64 10.5	190	55237	-341
0140	43 30.0	64 11.6	186	55251	-323
0150	43 28.4	64 12.8	173	55249	-321
0200	43 26.8	64 13.9	172	55262	-303
0210	43 25.2	64 15.0	172	55297	-264
0220	43 23.5	64 16.0	186	55259	-298
0230	43 21.9	64 17.1	177	55242	-310
0240	43 20.3	64 18.2	166	55243	-304
0250	43 18.7	64 19.3	159	55245	-298
0300	43 17.3	64 20.5	153	55246	-294
0310	43 15.9	64 21.6	137	55249	-288
0320	43 14.5	64 22.8	137	55265	-269
0330	43 13.2	64 23.9	137	55272	-259
0340	43 11.7	64 24.8	139	55262	-265
0350	43 10.3	64 25.7	135	55271	-252
0400	43 8.8	64 26.7	135	55284	-234
0410	43 7.3	64 28.1	133	55278	-238
0420	43 5.9	64 29.4	120	55285	-228
0430	43 4.7	64 30.7	113	55285	-226
0440	43 3.5	64 31.7	104	55276	-233
0450	43 2.3	64 32.6	96	55271	-235
0500	43 1.0	64 33.3	91	55276	-225
0510	42 59.7	64 33.9	89	55268	-228
0520	42 58.1	64 34.5	87	55267	-223
0530	42 56.4	64 35.0	89	55259	-224
0540	42 54.7	64 35.3	95	55255	-219
0550	42 52.8	64 35.2	98	55250	-213
0600	42 51.0	64 34.9	100	55239	-212
0610	42 49.1	64 34.4	104	55223	-215
0620	42 47.4	64 34.1	109	55216	-211
0630	42 45.8	64 33.9	115	55210	-208
0640	42 44.2	64 35.0	120	55215	-197
0650	42 42.6	64 36.3	120	55230	-179
0700	42 41.2	64 38.1	120	55254	-154
0710	42 39.9	64 40.1	115	55272	-136
0720	42 38.7	64 42.0	115	55285	-125
0730	42 37.5	64 44.0	115	55326	-85
0740	42 36.4	64 46.1	115	55354	-59
0750	42 35.4	64 48.1	115	55358	-57
0800	42 34.3	64 50.0	115	55358	-59
0810	42 33.3	64 51.9	115	55356	-62

SACKVILLE 73-032 DAY 296 1973

TIME	LATITUDE	LONGITUDE	BATHY	T.F.	M.A.
0820	42 32.2	64 53.7	115	55342	-77
0830	42 31.1	64 55.4	115	55322	-98
0840	42 30.0	64 57.1	115	55309	-112
1110	42 22.6	65 14.8	115	55357	-91
1120	42 23.8	65 16.3	109	55376	-85
1130	42 25.1	65 17.5	109	55398	-76
1140	42 26.3	65 18.9	106	55425	-61
1150	42 27.5	65 20.4	100	55456	-44
1200	42 28.8	65 22.1	100	55502	-11
1210	42 29.9	65 24.0	96	55530	1
1220	42 31.1	65 25.9	95	55547	4
1230	42 32.4	65 27.9	93	55513	-44
1240	42 33.6	65 29.8	91	55491	-81
1250	42 34.8	65 31.6	89	55501	-85
1300	42 36.0	65 33.5	89	55519	-81
1410	42 40.5	65 40.0	87	55573	-79
1420	42 41.4	65 41.8	87	55625	-39
1430	42 42.3	65 43.6	87	55647	-30
1440	42 43.1	65 45.4	89	55755	66
1450	42 44.0	65 47.1	91	55810	109
1500	42 45.0	65 48.7	91	55717	4
1510	42 46.3	65 50.1	89	55712	-13
1630	42 49.4	65 53.8	82	55794	36
1640	42 50.4	65 54.8	82	55855	87
1650	42 51.3	65 55.9	104	55914	137
1700	42 52.3	65 57.1	107	55810	23
1710	42 53.4	65 58.5	151	55915	116
1720	42 54.4	66 .0	131	55754	-56
1730	42 55.5	66 1.7	128	55739	-83
1740	42 56.5	66 3.4	128	55716	-119
1750	42 57.4	66 5.2	128	55712	-135
1800	42 58.3	66 7.0	87	55806	-54
1810	42 59.5	66 8.3	104	55834	-37
1850	42 59.7	66 9.5	106	55842	-35
1900	42 58.2	66 10.9	118	55788	-86
1910	42 57.1	66 12.2	87	55776	-96
1920	42 55.8	66 13.5	117	56032	161
1930	42 54.5	66 14.8	148	55885	16
1940	42 53.1	66 16.2	131	55912	46
1950	42 51.7	66 17.4	128	55854	-8
2000	42 50.2	66 18.6	155	55651	-207
2010	42 48.9	66 19.5	91	55651	-204
2020	42 47.7	66 20.3	47	55726	-125
2030	42 46.6	66 20.9	65	55594	-253
2040	42 45.4	66 22.2	86	55628	-217
2050	42 43.9	66 23.7	95	55711	-132
2100	42 42.0	66 25.5	98	55735	-103
2140	42 43.8	66 27.7	113	55545	-313
2210	42 46.1	66 34.5	104	55651	-245
2230	42 47.9	66 39.0	168	55739	-185

SACKVILLE 73-032 DAY 296 1973

TIME	LATITUDE	LONGITUDE	BATHY	T.F.	M.A.
2240	42 48.9	66 41.2	177	55749	-189
2320	42 48.6	66 41.5	175	55793	-145
2330	42 47.4	66 40.4	129	55733	-194
2340	42 45.9	66 39.8	157	55696	-220
2350	42 44.3	66 39.3	150	55684	-221

SACKVILLE 73-032 DAY 297 1973

TIME	LATITUDE	LONGITUDE	BATHY	T.F.	M.A.
0000	42 42.9	66 38.9	153	55624	-271
0010	42 41.4	66 38.6	162	55607	-278
0020	42 39.9	66 38.3	164	55597	-279
0030	42 38.4	66 37.9	161	55546	-320
0040	42 37.0	66 37.5	166	55627	-229
0050	42 35.4	66 37.1	183	55618	-227
0100	42 33.7	66 36.6	193	55578	-256
0110	42 32.1	66 36.1	245	55575	-248
0120	42 30.4	66 35.6	270	55561	-250
0130	42 28.6	66 35.1	272	55484	-314
0140	42 26.9	66 34.7	283	55415	-372
0150	42 25.2	66 34.1	300	55615	-160
0200	42 23.4	66 33.6	301	55442	-320
0210	42 21.7	66 32.9	298	55330	-420
0220	42 20.0	66 32.3	283	55828	90
0230	42 18.3	66 31.6	265	55556	-169
0240	42 16.7	66 31.0	252	55535	-178
0250	42 15.1	66 30.3	239	55555	-146
0300	42 13.4	66 29.7	228	55585	-104
0310	42 11.7	66 28.9	203	55600	-76
0320	42 10.1	66 28.1	183	55647	-16
0330	42 8.4	66 27.4	104	55669	18
0340	42 7.0	66 26.8	87	55645	5
0350	42 5.8	66 26.3	80	55643	12
0400	42 4.9	66 26.0	80	55620	-4
0920	42 2.0	66 42.9	78	55651	-21
0930	42 2.1	66 45.6	64	55641	-42
0940	42 2.1	66 47.8	60	55624	-67
0950	42 2.2	66 50.1	60	55605	-95
1000	42 2.1	66 52.3	58	55599	-110
1340	42 5.4	66 59.5	58	55528	-227
1350	42 7.0	66 58.8	58	55510	-252
1400	42 8.7	66 58.0	64	55511	-258
1410	42 10.6	66 57.5	150	55580	-199
1450	42 13.4	66 56.5	219	55437	-354
1500	42 14.7	66 58.2	228	55460	-345
1510	42 16.0	66 59.9	261	55512	-308
1520	42 17.4	67 1.6	281	55529	-305
1530	42 18.7	67 3.3	287	55535	-313
1540	42 19.9	67 4.8	305	55555	-306
1550	42 21.1	67 6.2	320	55582	-292
1640	42 24.6	67 8.9	355	55604	-300
1650	42 26.0	67 10.5	347	55689	-229
1700	42 27.3	67 12.0	345	55646	-285
1710	42 28.5	67 13.4	333	55671	-272
1720	42 29.7	67 14.8	325	55687	-269
1730	42 30.9	67 16.3	318	55681	-287
1740	42 32.0	67 17.6	303	55684	-296
1750	42 33.1	67 18.8	285	55734	-257
1800	42 34.1	67 20.1	276	55786	-215

SA[illegible]LE 73-032 DAY 297 1973

TIME	LATITUDE	LONGITUDE	BATHY	T.F.	M.A.
1810	42 35.[illegible]	67 21.2	265	55829	-182
1820	42 36.[illegible]	67 22.3	256	55856	-165
1830	42 37.2	67 23.4	237	55691	-340
1840	42 38.4	67 24.5	204	55780	-263
1850	42 39.8	67 25.6	204	55799	-255
1900	42 41.3	67 26.7	226	55790	-277
1910	42 42.4	67 28.2	215	55804	-275
2230	42 57.2	67 32.8	225	55889	-291
2240	42 58.8	67 34.2	210	55975	-220
2250	43 .2	67 36.1	186	56059	-151
2300	43 1.4	67 38.4	183	56125	-100
2310	43 2.5	67 40.6	175	56315	75
2320	43 3.8	67 42.4	157	56154	-99
2330	43 5.2	67 43.8	186	56325	58
2340	43 6.9	67 44.3	179	55991	-286

SACKVILLE 73-032 DAY 298 1973

TIME	LATITUDE	LONGITUDE	BATHY	T.F.	M.A.
0030	43 10.5	67 43.8	195	56106	-189
0040	43 10.2	67 41.9	197	56082	-205
0050	43 10.2	67 39.4	193	56121	-156
0100	43 10.4	67 36.5	193	56266	-2
0110	43 10.5	67 33.8	201	56470	211
0120	43 10.5	67 31.2	190	56424	175
0130	43 10.4	67 28.5	179	56247	8
0140	43 10.0	67 26.2	183	56231	3
0650	43 17.0	66 44.5	124	55796	-312
0700	43 16.4	66 42.4	109	55659	-438
0710	43 15.8	66 40.2	102	56328	242
0720	43 15.0	66 37.8	111	55953	-118
0730	43 14.0	66 35.5	93	55995	-62
1330	43 2.9	66 9.4	109	55827	-67
1340	43 4.1	66 8.1	104	55886	-10
1350	43 5.3	66 6.9	102	56013	114
1400	43 6.5	66 5.6	109	56024	123
1410	43 7.8	66 4.4	93	55986	83
1420	43 9.1	66 3.4	76	55740	-166
1430	43 10.5	66 2.5	73	55993	82
1440	43 11.7	66 1.5	60	55733	-179
1450	43 12.9	66 .5	54	55774	-141
1500	43 14.0	65 59.6	49	55761	-157
1720	43 20.9	66 11.5	67	55870	-133
1730	43 21.8	66 12.6	54	55875	-137
1740	43 23.0	66 13.7	76	55913	-110
1750	43 24.2	66 14.8	78	55834	-199
1800	43 25.4	66 15.9	87	55886	-158
1830	43 29.4	66 19.2	56	55881	-197
1840	43 30.9	66 20.3	54	55869	-222
1850	43 32.3	66 21.7	58	55941	-163

SACKVILLE 73-032 DAY 301 1973

TIME	LATITUDE	LONGITUDE	BATHY	T.F.	M.A.
1320	43 33.0	65 12.2	47	55615	-220
1330	43 31.4	65 12.3	64	55557	-269
1340	43 29.6	65 12.3	71	55597	-220
1350	43 27.9	65 12.2	73	55617	-190
1400	43 26.3	65 12.1	65	55607	-191
1410	43 24.4	65 12.2	106	55612	-176
1420	43 22.5	65 12.3	115	55620	-158
1430	43 21.1	65 13.6	128	55591	-185
1440	43 20.7	65 16.5	102	55634	-151
1450	43 20.4	65 19.4	86	55558	-237
1500	43 20.1	65 22.2	78	55606	-198
1510	43 20.0	65 25.2	64	55475	-340
1520	43 19.8	65 28.1	54	55432	-394
1530	43 19.7	65 31.0	40	55478	-358
1540	43 19.5	65 33.7	36	55498	-348
1550	43 19.3	65 36.2	36	55774	-81
1600	43 19.0	65 38.6	38	55553	-310
1610	43 18.7	65 40.9	42	55578	-293
1620	43 18.5	65 43.3	42	55594	-284
1630	43 18.2	65 45.7	23	55672	-214
1640	43 17.8	65 48.1	32	55665	-229
1650	43 17.4	65 50.7	21	55889	-13
1700	43 17.0	65 53.4	23	55749	-161
1710	43 16.6	65 56.1	32	55885	-34
1720	43 16.2	65 58.7	42	55849	-78
1730	43 16.5	66 .5	42	55918	-17
1740	43 17.6	66 1.5	36	55994	48
1750	43 18.5	66 2.6	38	55996	40
1800	43 19.5	66 3.9	43	56137	171
1810	43 20.6	66 5.1	54	55900	-76
1820	43 21.7	66 6.6	51	56006	17
1830	43 22.9	66 8.2	49	55840	-160
1840	43 24.3	66 9.3	53	56132	119
1850	43 25.6	66 10.6	60	55826	-198
1900	43 27.2	66 11.1	56	55735	-300
1910	43 28.8	66 11.5	40	55982	-63
1920	43 30.4	66 11.9	36	56101	44
1930	43 32.1	66 12.4	47	55628	-439
1940	43 33.7	66 13.0	53	55666	-412
1950	43 35.2	66 13.7	45	55711	-378
2000	43 37.0	66 14.5	58	55705	-396
2010	43 38.7	66 15.3	54	55754	-360
2020	43 40.5	66 16.1	49	55762	-364
2030	43 42.2	66 16.8	56	55994	-144
2040	43 43.9	66 17.4	58	55903	-246
2050	43 45.5	66 17.9	54	55878	-282
2100	43 47.2	66 18.3	49	55818	-353
2110	43 48.9	66 18.7	45	55986	-195
2120	43 50.5	66 19.0	45	55990	-201
2130	43 52.1	66 19.2	47	56007	-193

SACKVILLE 73-032 DAY 301 1973

TIME	LATITUDE	LONGITUDE	BATHY	T.F.	M.A.
2140	43 53.8	66 19.6	51	56325	114
2150	43 55.4	66 20.0	43	56611	389
2200	43 57.1	66 20.5	42	58002	1769
2210	43 58.8	66 20.9	49	56191	-51
2220	44 0	66 22.0	51	56474	221
2230	43 58.6	66 22.4	56	56091	-155
2240	43 56.6	66 21.7	49	56415	180
2250	43 54.7	66 21.0	47	56273	51
2300	43 52.8	66 20.4	51	56126	-82
2310	43 50.9	66 19.8	47	56036	-160
2320	43 49.1	66 19.2	45	56009	-175
2330	43 47.5	66 18.5	43	56001	-172
2340	43 47.5	66 20.2	45	55970	-210
2350	43 49.0	66 21.2	64	56046	-146

SACKVILLE 73-032 DAY 302 1973

TIME	LATITUDE	LONGITUDE	BATHY	T.F.	M.A.
0000	43 51.0	66 21.9	58	56029	-176
0010	43 52.9	66 22.6	54	56157	-60
0020	43 54.8	66 23.1	54	56230	0
0030	43 56.8	66 23.6	54	56014	-228
0040	43 58.7	66 24.1	60	56109	-145
0050	44 .1	66 25.7	71	56162	-105
0100	43 59.8	66 26.6	82	56090	-179
0110	43 58.2	66 26.2	71	56045	-214
0120	43 56.6	66 25.7	65	56068	-181
0130	43 55.0	66 25.2	54	56019	-220
0140	43 53.4	66 24.7	58	56090	-138
0150	43 51.8	66 24.2	54	56013	-205
0200	43 50.1	66 23.8	56	55929	-278
0210	43 48.4	66 23.4	60	55938	-259
0220	43 46.8	66 23.0	67	56253	65
0230	43 45.2	66 22.6	58	56261	84
0240	43 43.6	66 22.2	64	55931	-236
0250	43 42.1	66 21.9	62	55867	-290
0300	43 40.7	66 21.5	69	55768	-380
0310	43 39.3	66 21.1	69	55774	-365
0320	43 37.9	66 20.7	67	56073	-57
0330	43 36.4	66 20.0	65	55977	-142
0340	43 34.8	66 19.3	73	55810	-298
0350	43 33.4	66 18.7	64	55970	-128
0400	43 32.0	66 18.1	67	55919	-169
0410	43 30.9	66 17.0	73	55932	-146
0420	43 29.5	66 15.9	82	55678	-388
0430	43 27.8	66 14.8	62	56054	0
0440	43 26.3	66 13.7	58	55723	-317
0450	43 24.7	66 12.6	73	55799	-228
0500	43 23.1	66 11.7	56	55756	-259
0510	43 21.6	66 10.7	51	56162	158
0520	43 20.0	66 9.8	54	55871	-120
0530	43 18.4	66 8.9	54	55968	-11
0540	43 16.6	66 8.1	54	55877	-88
0550	43 14.8	66 7.2	71	55937	-15
0600	43 13.0	66 6.5	65	56096	156
0610	43 12.4	66 3.4	67	55865	-59
0620	43 12.6	66 .7	64	55791	-124
0630	43 12.7	65 57.9	49	55743	-161
0640	43 12.7	65 55.2	45	55900	6
0650	43 12.7	65 52.6	47	55789	-94
0700	43 12.7	65 49.9	40	55781	-92
0710	43 12.7	65 47.2	45	55802	-60
0720	43 12.6	65 44.5	40	55722	-129
0730	43 12.6	65 41.8	49	55715	-125
0740	43 12.6	65 39.1	51	55722	-108
0750	43 12.6	65 36.5	54	55707	-112
0810	43 12.6	65 31.2	67	55652	-146
0820	43 12.6	65 28.6	76	55715	-73

SACKVILLE 73-032 DAY 302 1973

TIME	LATITUDE	LONGITUDE	BATHY	T.F.	M.A.
0830	43 12.7	65 26.0	82	55754	-24
0840	43 12.8	65 23.6	73	55680	-89
0850	43 12.8	65 21.3	98	55704	-56
0900	43 12.9	65 19.0	111	55638	-114
0910	43 12.9	65 16.8	128	55549	-194
0920	43 13.0	65 14.5	146	55547	-187
0930	43 13.0	65 12.0	151	55522	-202
0940	43 11.7	65 11.8	148	55538	-178
0950	43 10.3	65 11.8	144	55564	-144
1000	43 8.6	65 11.9	146	55469	-230
1010	43 7.3	65 12.9	122	55465	-231
1020	43 7.2	65 15.7	109	55576	-131
1030	43 7.1	65 18.6	98	55663	-55
1040	43 7.1	65 21.5	100	55637	-93
1050	43 7.2	65 24.5	93	55733	-8
1100	43 7.1	65 27.4	107	55696	-57
1130	43 6.9	65 36.1	80	55734	-52
1140	43 6.8	65 39.2	73	55883	84
1150	43 6.7	65 42.4	82	55706	-104
1200	43 6.6	65 45.7	84	55721	-101
1210	43 6.4	65 49.1	84	55712	-122
1220	43 6.3	65 52.6	87	55740	-108
1230	43 6.3	65 56.1	78	55783	-78
1240	43 6.2	65 60.0	75	55827	-49
1250	43 3.7	66 .8	73	56010	144
1300	43 3.2	65 59.9	75	55807	-52
1310	43 3.3	65 58.1	82	55768	-84
1320	43 3.3	65 56.1	78	55713	-132
1330	43 3.3	65 54.1	91	55726	-111
1340	43 3.2	65 52.1	95	55641	-188
1350	43 3.2	65 50.1	96	55637	-184
1400	43 3.1	65 48.1	96	55560	-252
1410	43 3.0	65 46.2	100	55568	-236
1420	43 2.9	65 44.1	82	55641	-154
1430	43 2.9	65 41.9	95	55682	-105
1440	43 2.9	65 39.7	84	55729	-49
1450	43 2.9	65 37.4	131	55721	-48
1500	43 3.0	65 35.1	124	55769	8
1510	43 2.9	65 33.0	128	55793	41
1520	43 2.9	65 30.8	128	55801	57
1530	43 2.8	65 28.7	113	55778	43
1540	43 2.6	65 26.8	118	55753	27
1550	43 1.1	65 26.0	115	55794	80
1600	42 59.9	65 27.2	111	55837	125
1610	42 59.9	65 30.0	120	55863	139
1620	42 59.9	65 32.8	120	55967	232
1630	42 59.9	65 35.6	133	55690	-55
1640	42 59.8	65 38.6	133	55630	-126
1650	42 59.8	65 41.5	148	55685	-82
1700	42 59.7	65 44.4	129	56686	907

SACKVILLE 73-032 DAY 302 1973

TIME	LATITUDE	LONGITUDE	BATHY	T.F.	M.A.
1710	42 59.7	65 47.4	118	56456	665
1720	42 59.7	65 50.3	137	55500	-302
1730	42 59.9	65 53.1	128	55631	-182
1740	42 60.0	65 55.9	95	55694	-131
1750	43 0	65 58.7	96	55690	-146
1800	43 .9	65 59.2	98	55733	-110
1810	43 2.2	65 57.2	91	55698	-145
1820	43 3.5	65 55.1	82	55782	-60
1830	43 4.7	65 53.0	80	55765	-75
1840	43 5.8	65 50.9	84	55816	-22
1850	43 6.9	65 48.8	73	55802	-34
1900	43 8.1	65 46.6	67	56045	210
1910	43 9.2	65 44.5	56	55838	5
1920	43 10.4	65 42.2	53	55868	37
1930	43 11.7	65 39.9	43	55768	-60
1940	43 13.1	65 37.6	51	55664	-163
1950	43 14.5	65 35.3	38	55631	-194
2000	43 16.0	65 33.0	36	55752	-72
2010	43 17.5	65 30.6	47	55673	-150
2020	43 18.9	65 28.4	51	55692	-130
2030	43 20.3	65 26.1	54	55564	-257
2040	43 21.7	65 24.1	54	55618	-202
2050	43 23.0	65 22.1	54	55728	-92
2100	43 24.3	65 20.3	51	55750	-69
2110	43 25.6	65 18.4	60	55589	-230
2120	43 26.8	65 16.4	69	55608	-210
2130	43 28.0	65 14.3	65	55621	-195
2230	43 35.4	65 1.5	47	55624	-181
2240	43 36.6	64 59.4	45	55729	-75
2250	43 37.8	64 57.4	64	55478	-324
2300	43 39.0	64 55.4	54	55595	-205
2310	43 40.2	64 53.6	58	55571	-228
2320	43 41.5	64 51.7	54	55581	-218
2330	43 42.7	64 49.8	54	55560	-238
2340	43 44.2	64 47.8	67	55539	-259
2350	43 45.6	64 45.9	56	55600	-197

SACKVILLE 73-032 DAY 303 1973

TIME	LATITUDE	LONGITUDE	BATHY	T.F.	M.A.
0000	43 47.0	64 43.9	56	55620	-177
0010	43 48.5	64 42.0	58	55578	-219
0020	43 49.9	64 40.0	51	55596	-201
0030	43 51.1	64 38.0	54	55585	-210
0040	43 52.4	64 36.0	75	55502	-292
0050	43 53.7	64 34.0	82	55457	-336
0100	43 54.9	64 31.9	84	55455	-336
0110	43 56.3	64 29.8	69	55457	-333
0120	43 57.6	64 27.7	73	55463	-325
0130	43 58.8	64 25.5	64	55439	-347
0140	44 .1	64 23.3	65	55506	-277
0150	44 1.3	64 21.2	76	55439	-342
0200	44 2.4	64 19.2	76	55455	-324
0210	44 3.4	64 17.6	76	55486	-291
0220	44 4.2	64 16.1	58	55601	-175
0230	44 4.9	64 14.7	73	55567	-207
0240	44 5.5	64 13.5	76	55617	-155
0250	44 6.1	64 12.4	69	55679	-92
0300	44 6.9	64 11.2	78	55619	-151
0310	44 7.9	64 10.1	67	55574	-197
0320	44 8.8	64 9.0	98	55545	-226
0330	44 9.6	64 8.0	78	55549	-222
0340	44 10.5	64 6.9	78	55574	-197
0350	44 11.3	64 5.9	95	55574	-197
0400	44 12.0	64 4.8	73	55697	-73
0410	44 12.7	64 3.7	67	55626	-144
0420	44 13.4	64 2.5	65	55597	-171
0430	44 14.2	64 1.1	64	55464	-303
0440	44 14.9	63 59.8	65	55252	-513
0450	44 15.5	63 58.4	73	55548	-215
0500	44 16.0	63 57.0	73	55537	-222

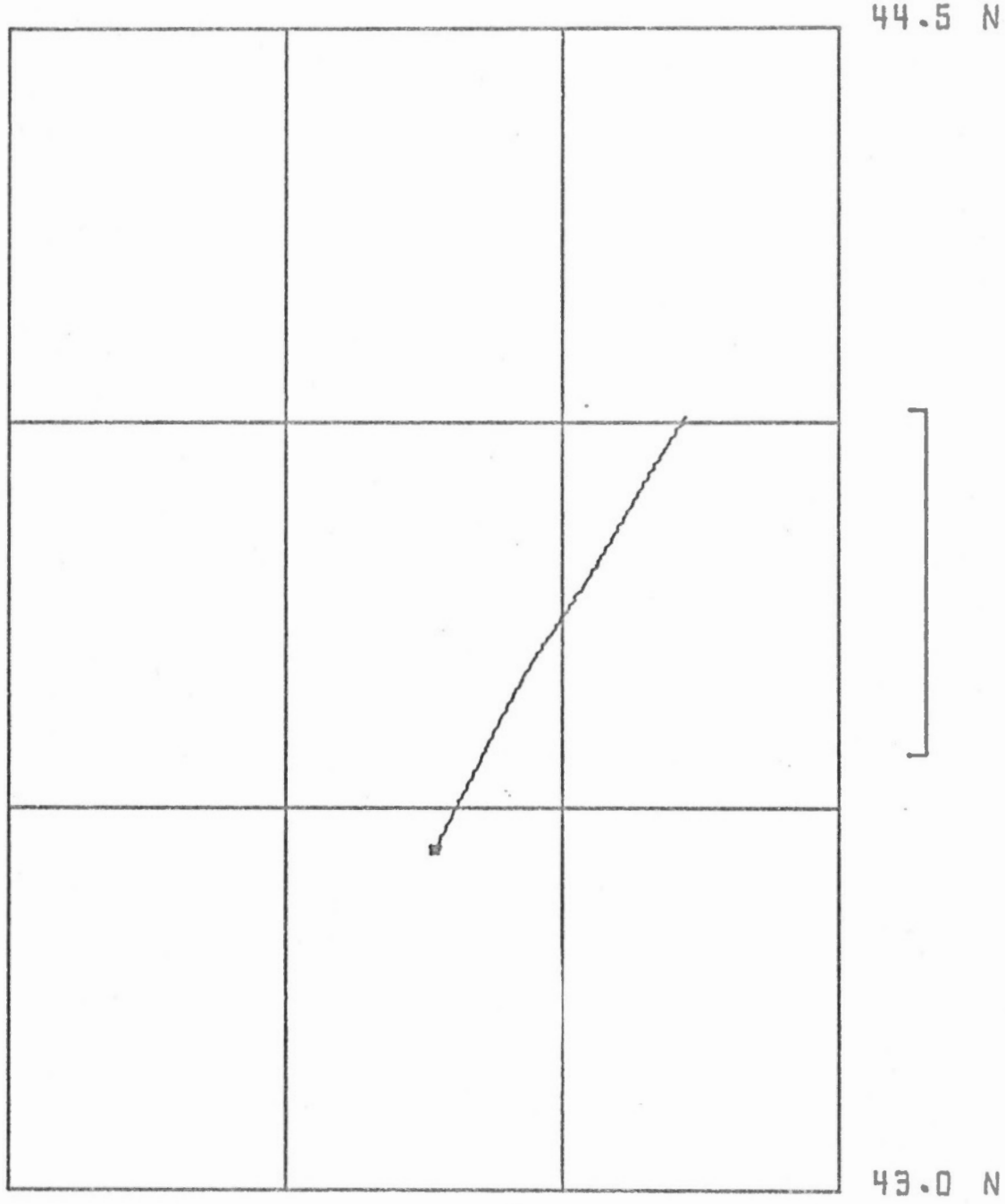
Appendix C

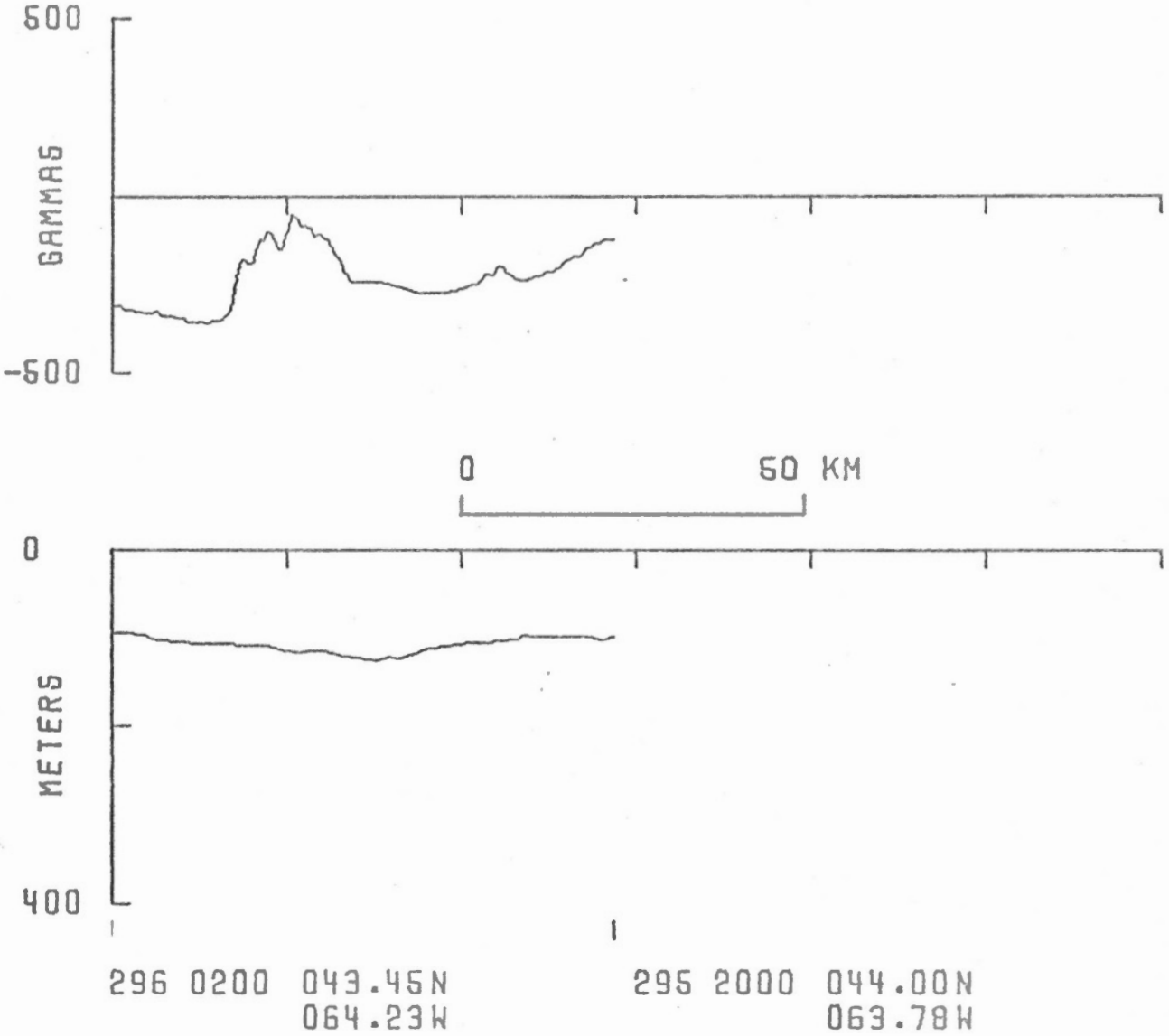
Sackville

73-032

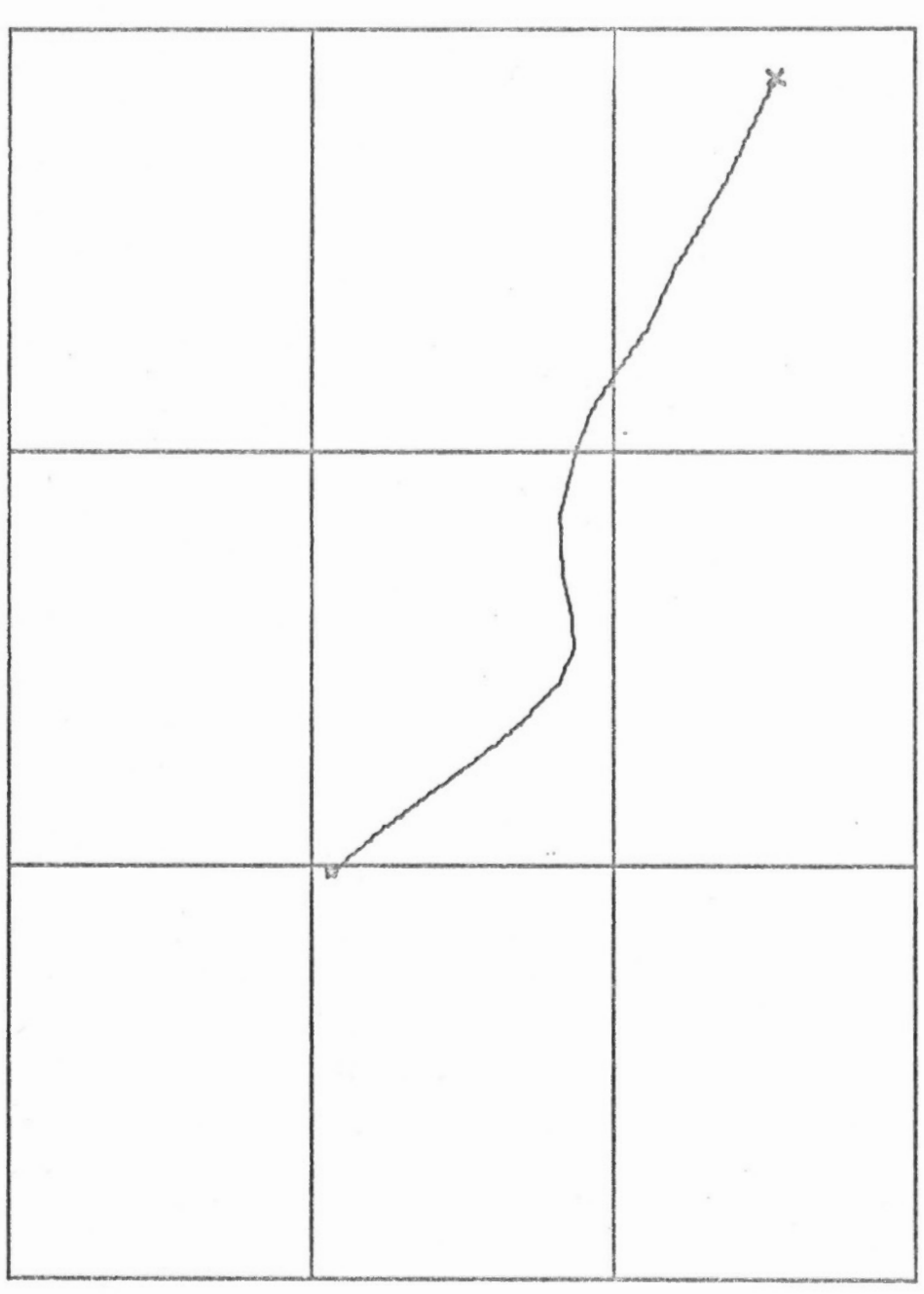
Profile Mag + Ships track

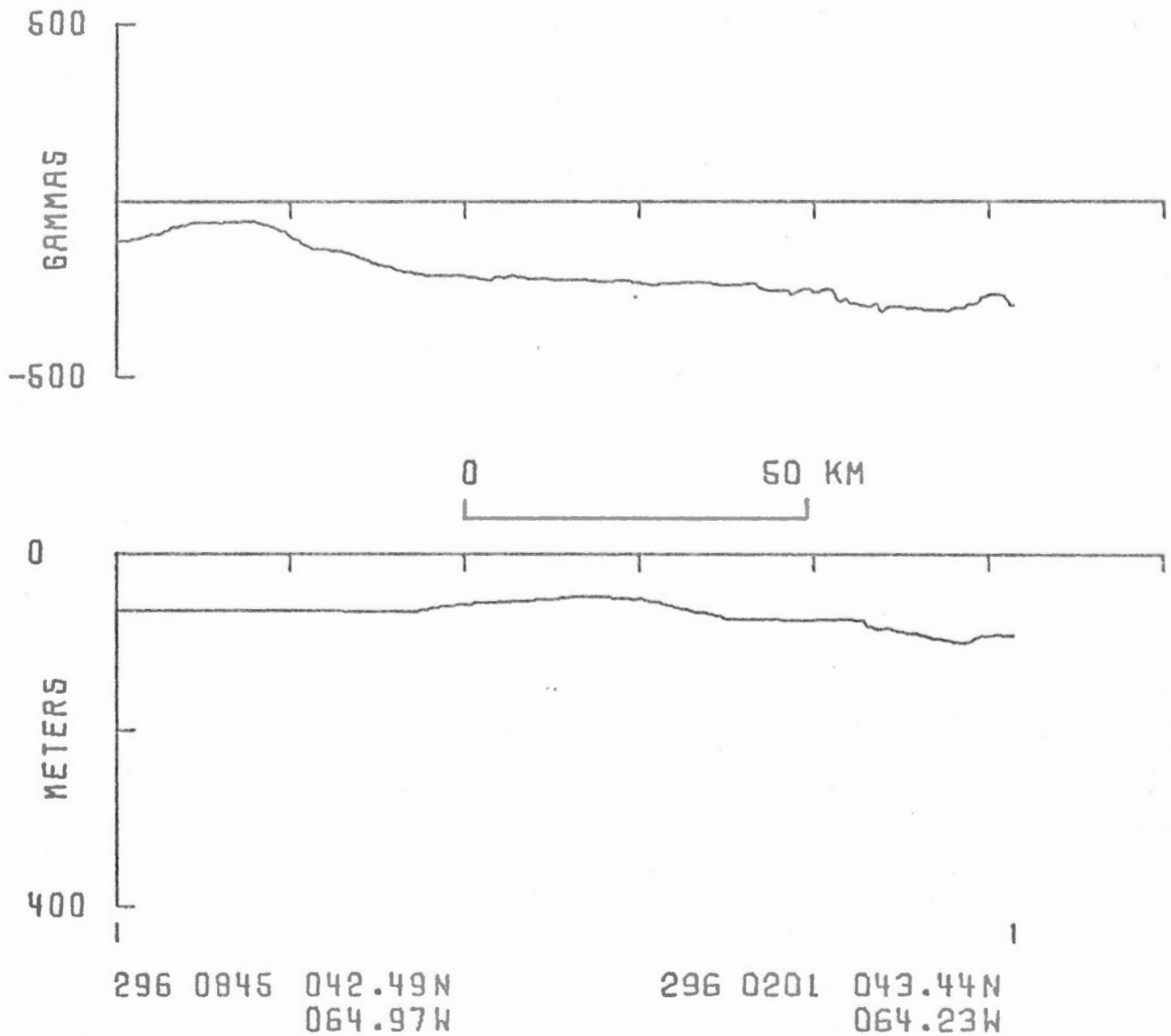
1/1000000 AT 43N



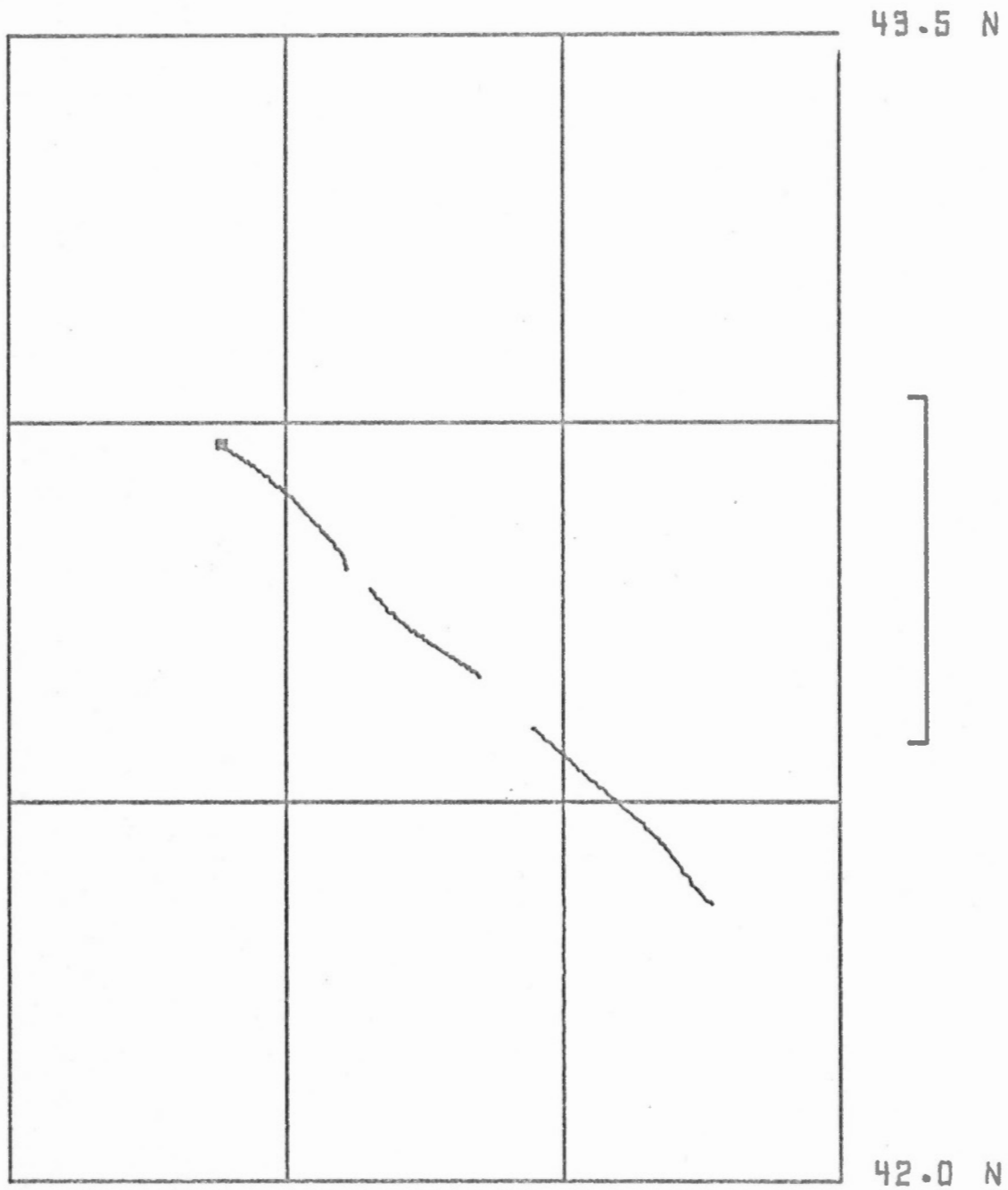

500
GAMMAS
-500
0
50 KM
0
METERS
400
296 0200 043.45N
064.23W
295 2000 044.00N
063.78W

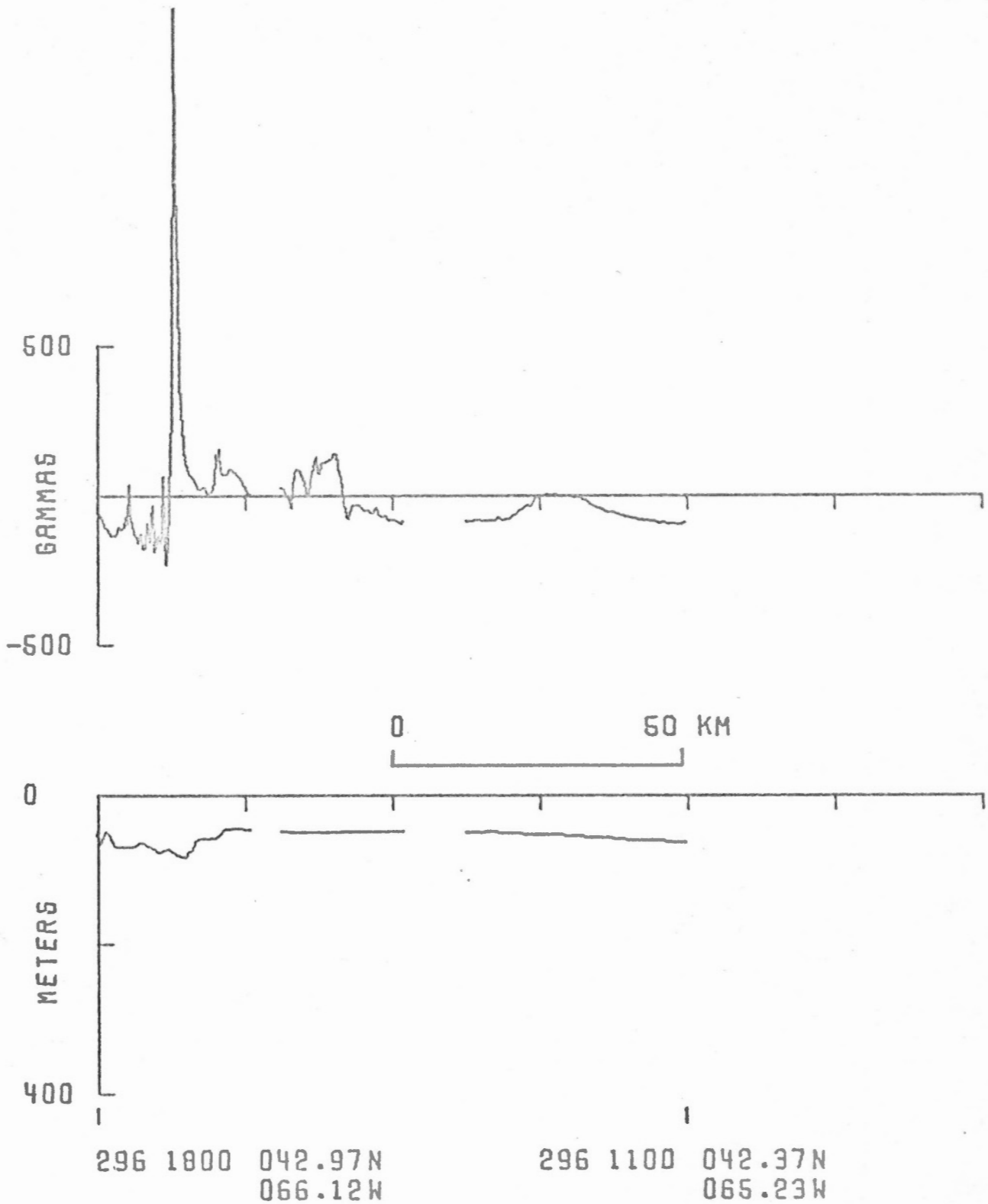
1/1000000 AT 43N



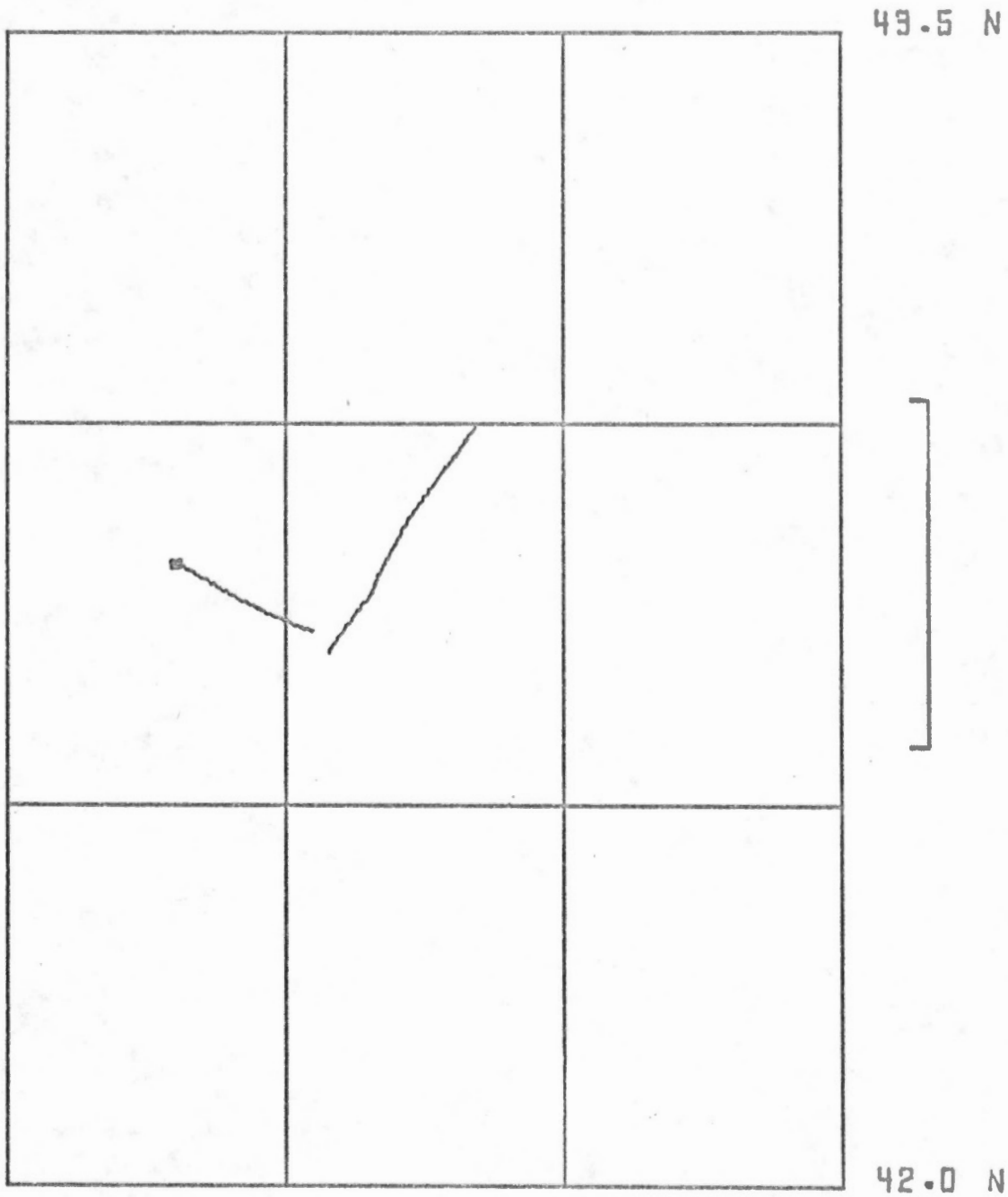

500
GAMMAS
-500
0
50 KM
0
METERS
400
296 0845 042.49N
064.97W
296 0201 043.44N
064.23W

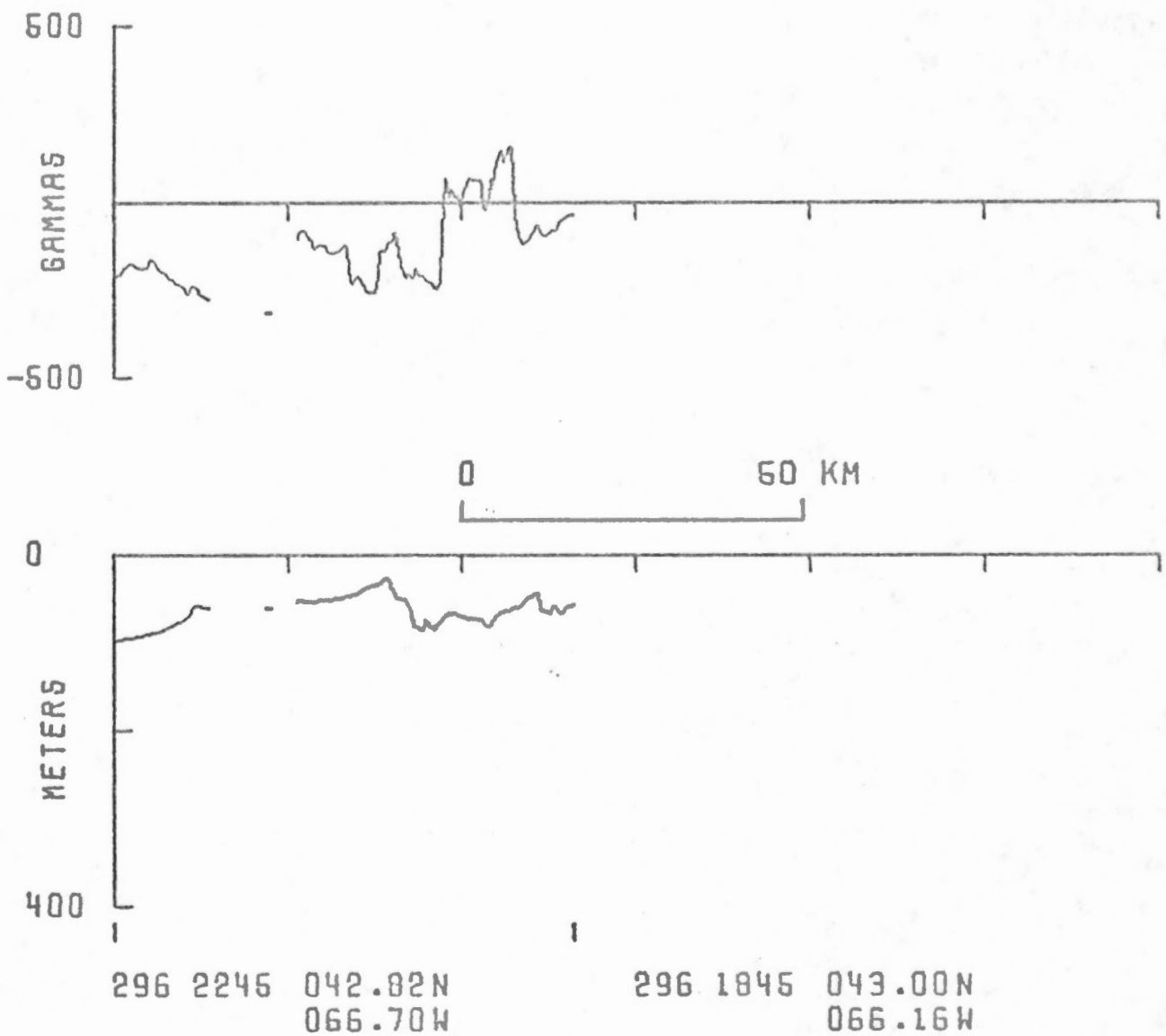
1/1000000 AT 43N



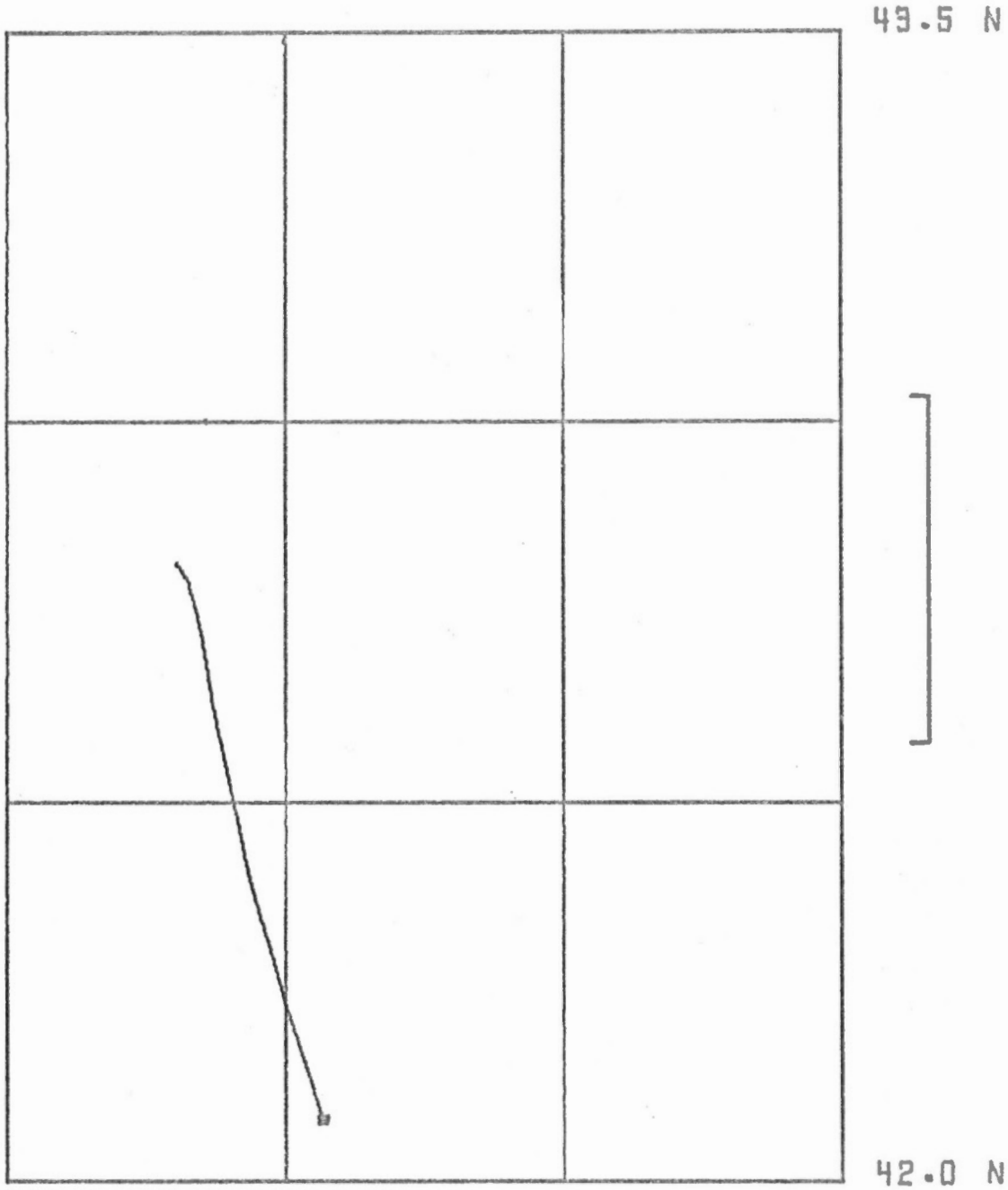

500
GAMMAS
-500
0
50 KM
0
METERS
400
296 1800 042.97N
066.12W
296 1100 042.37N
065.23W

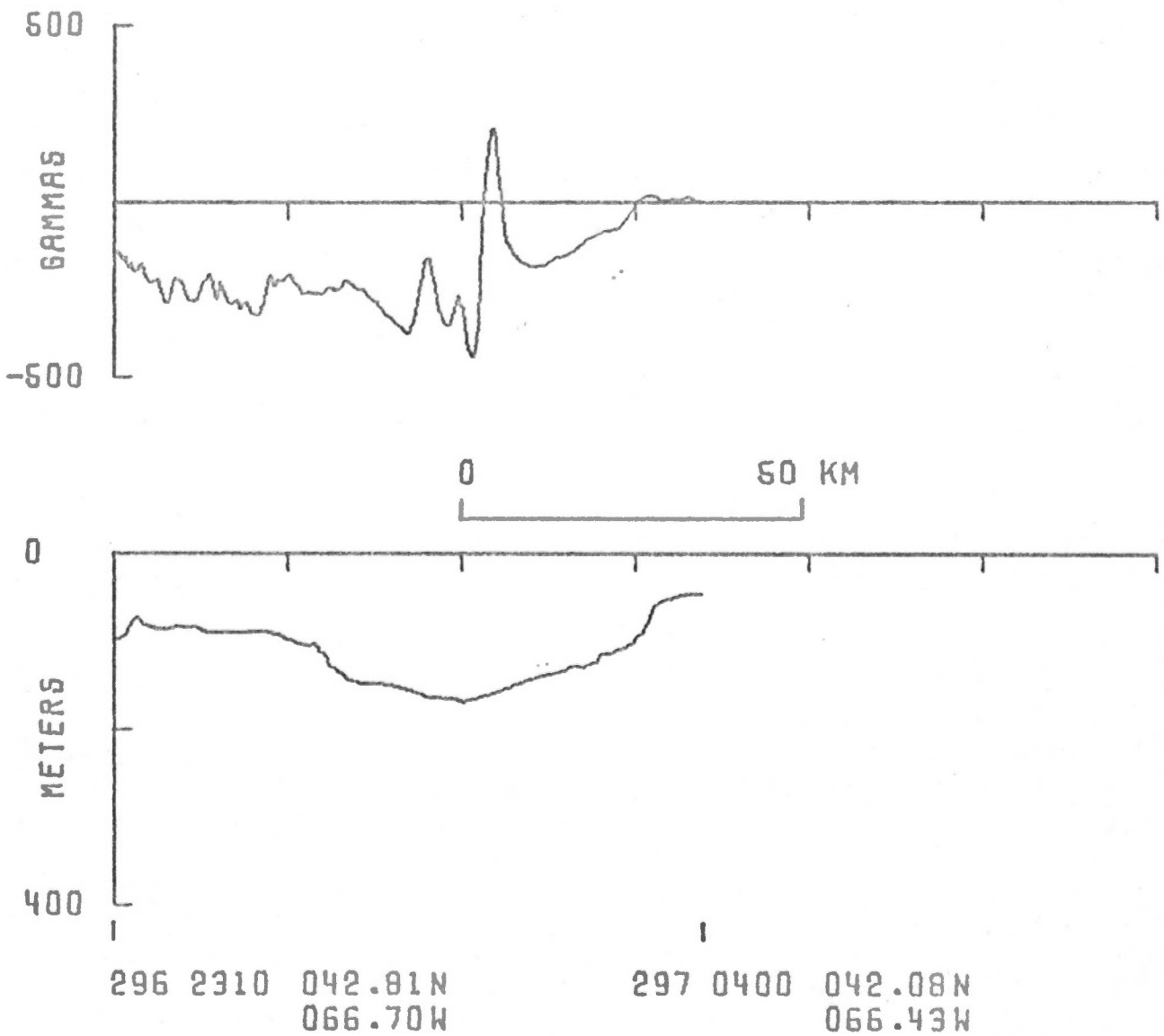
1/1000000 AT 43N



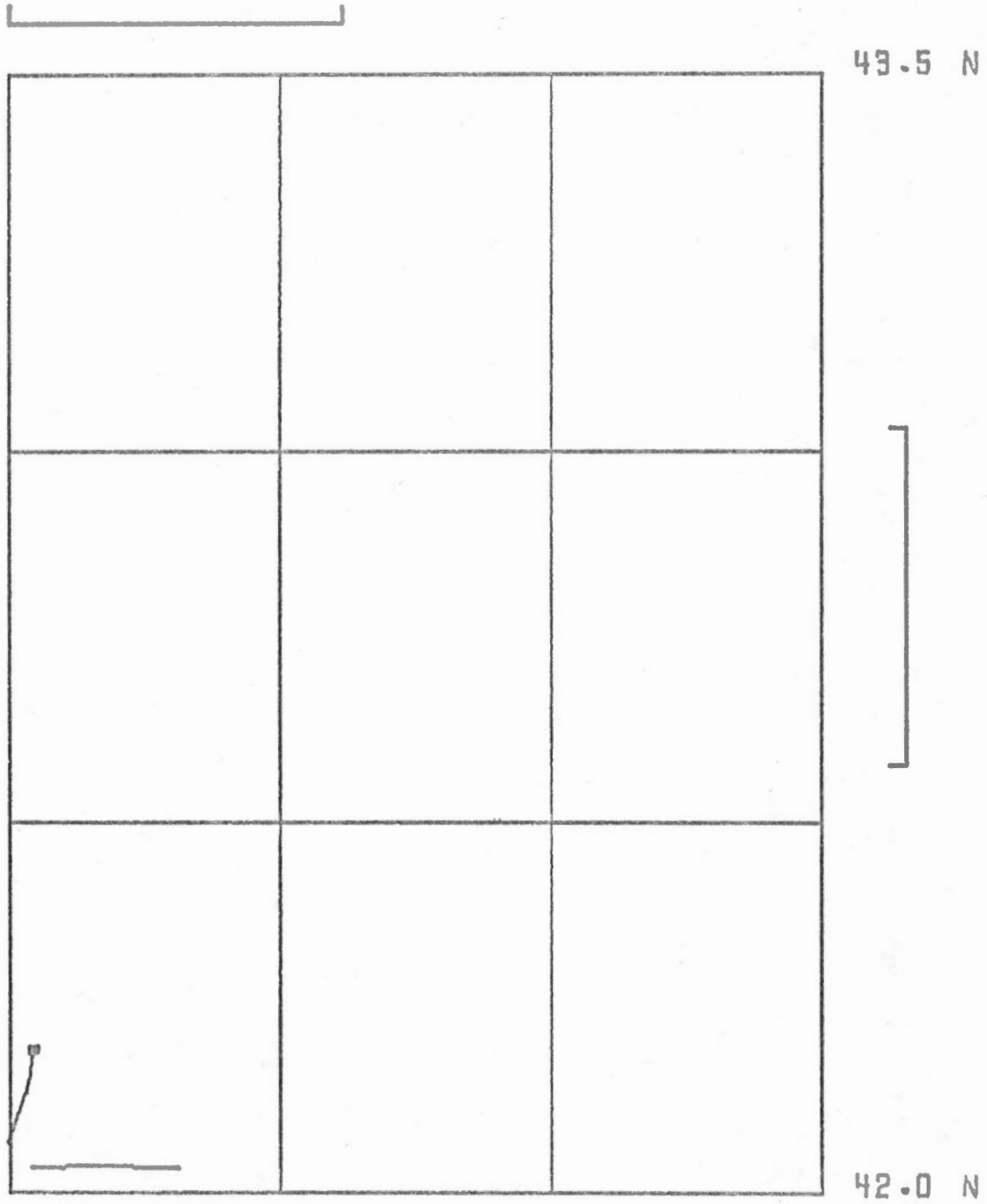

500
GAMMAS
-500
0
50 KM
0
METERS
400
296 2246 042.82N
066.70W
296 1845 043.00N
066.16W

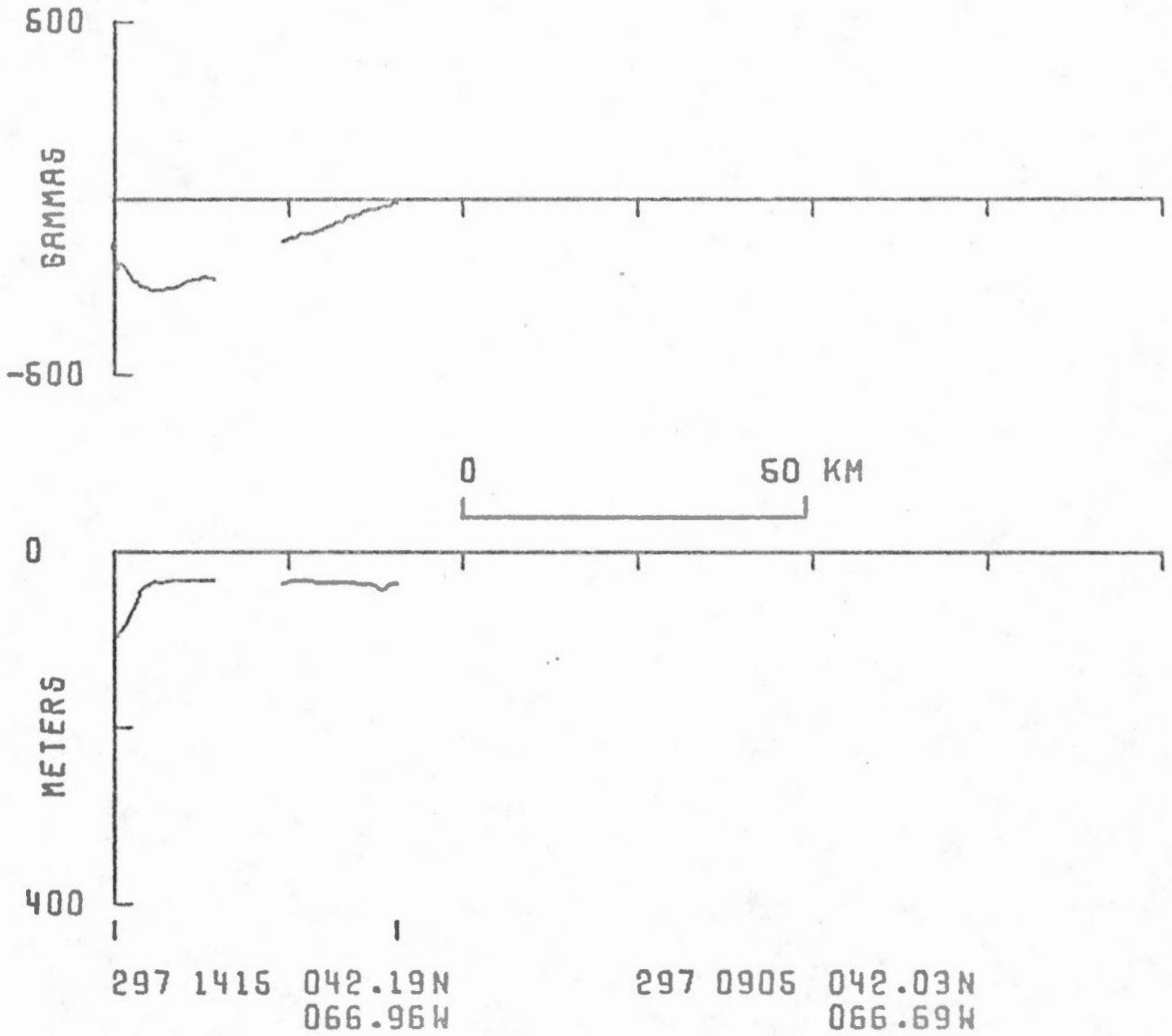
1/1000000 AT 43N



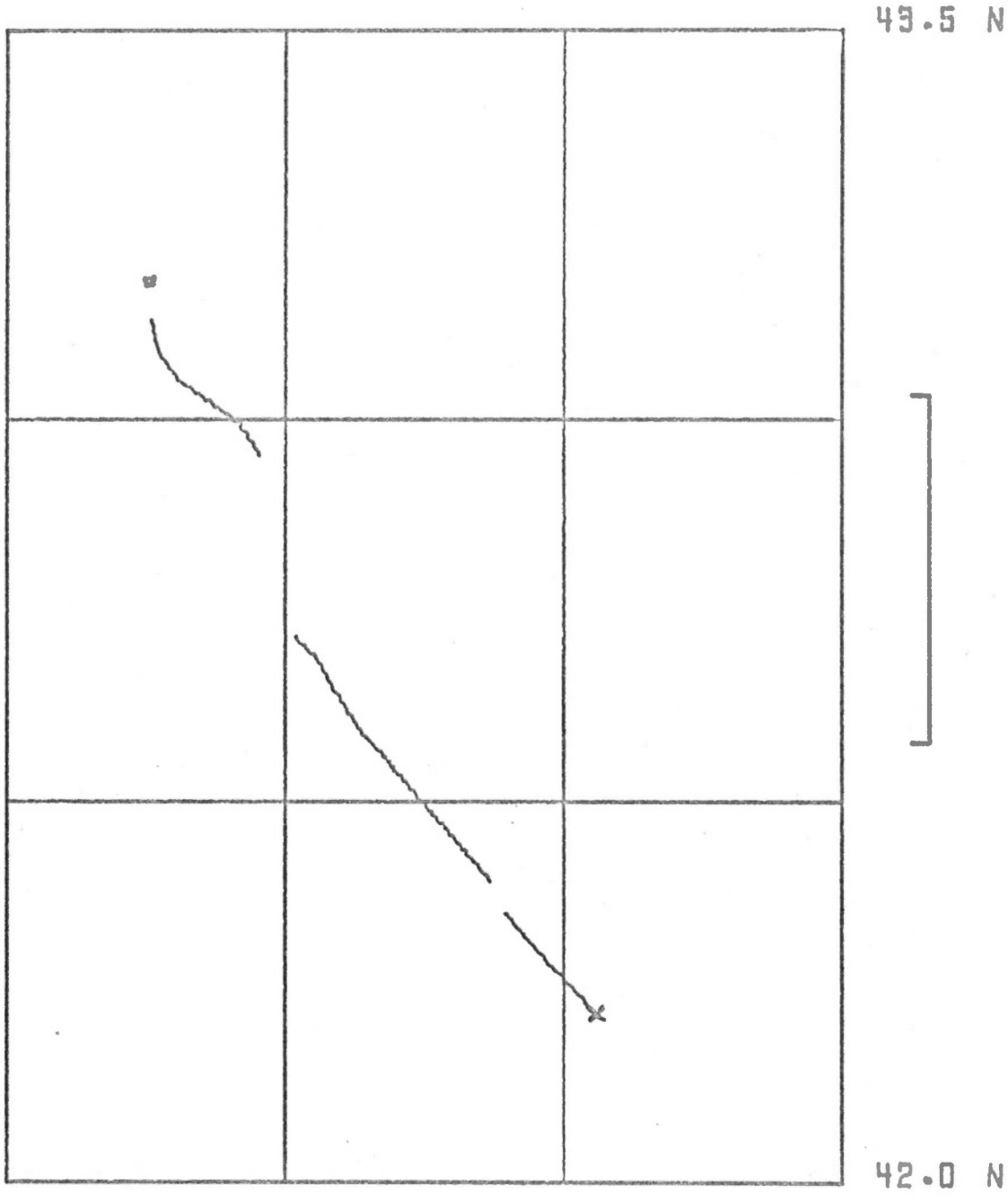

500
GAMMAS
-500
0
50 KM
0
METERS
400
296 2310 042.81N
066.70W
297 0400 042.08N
066.43W

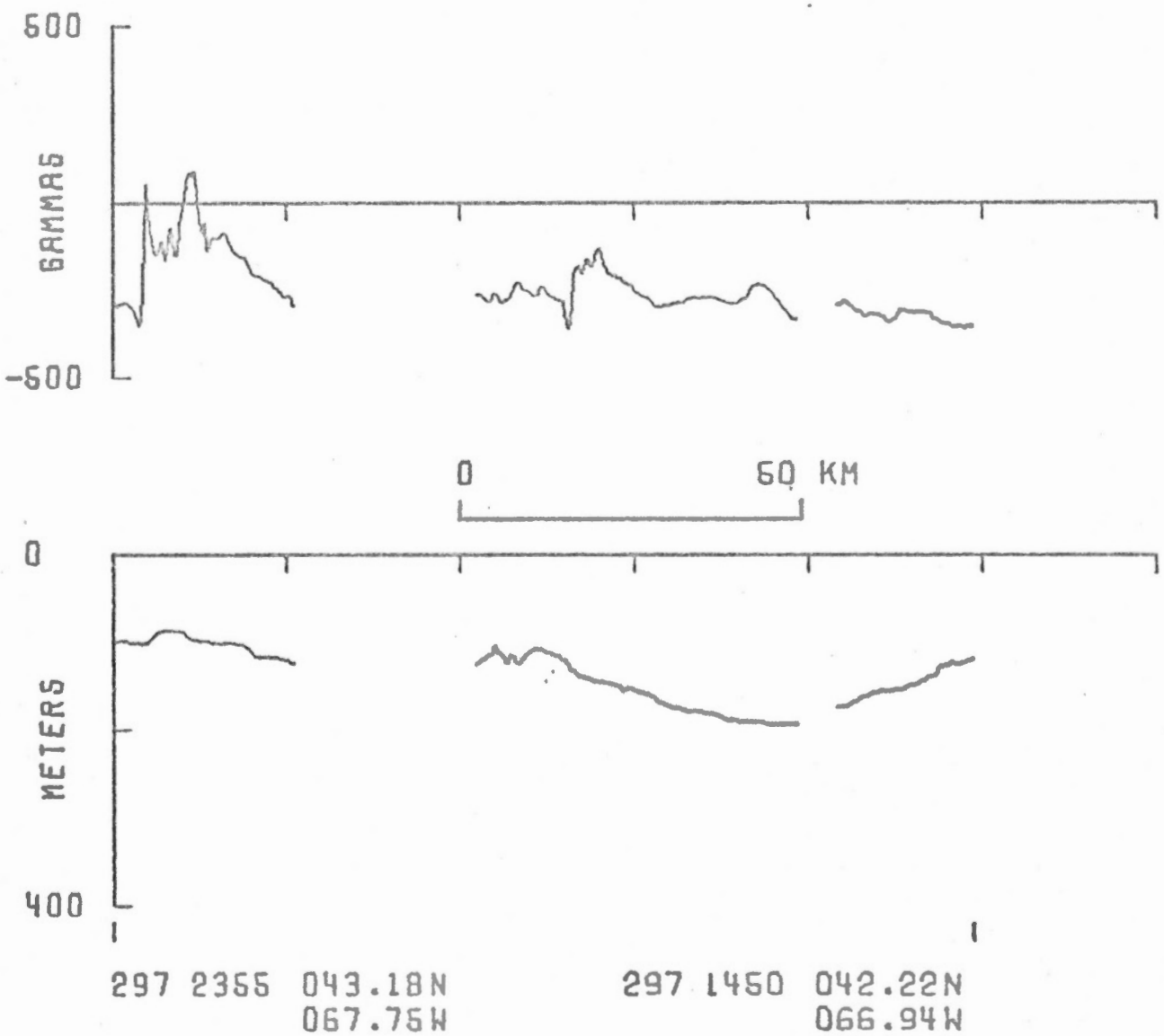
1/1000000 AT 43N



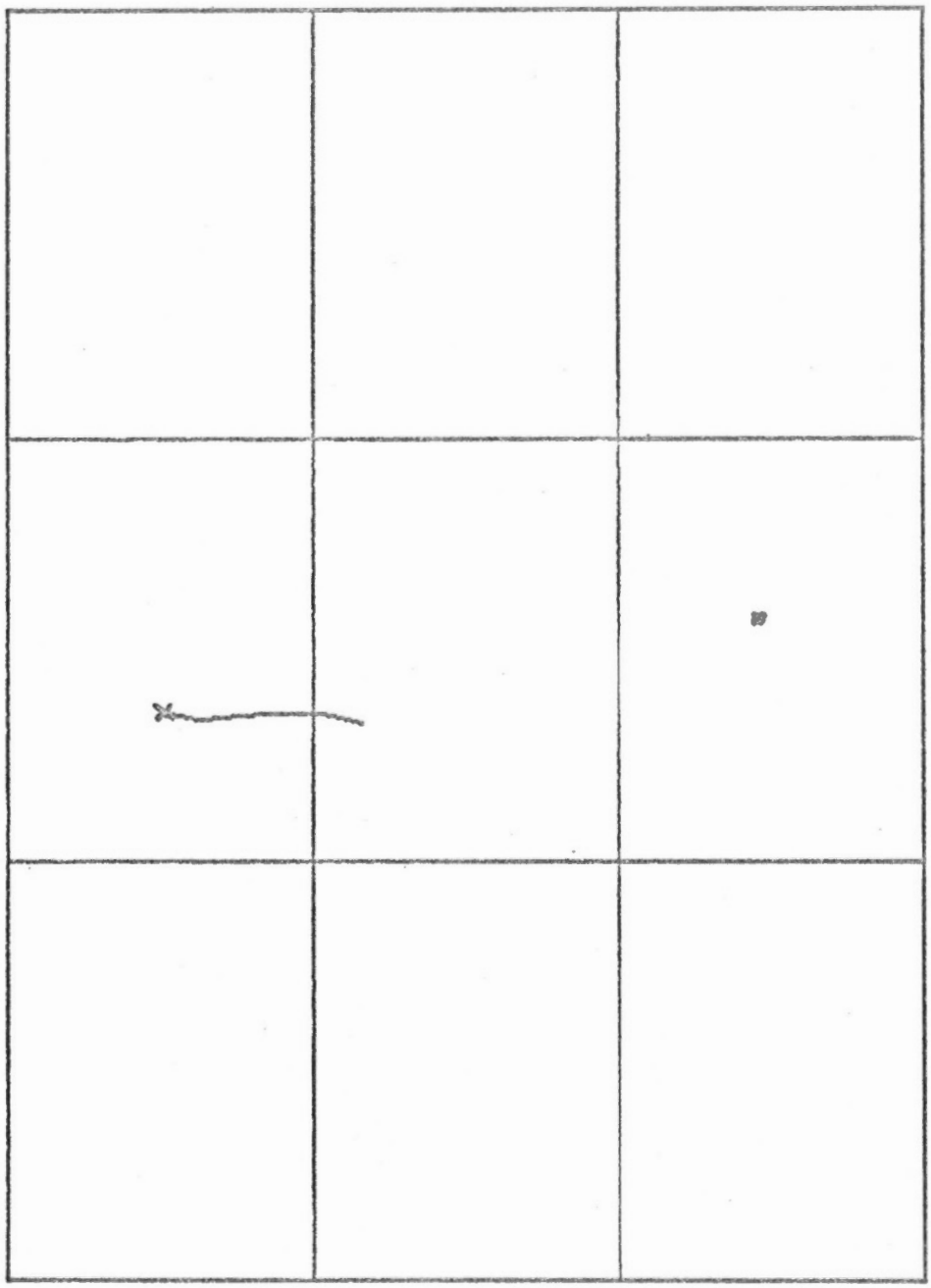

600
GAMMAS
-600
0
50 KM
0
METERS
400
297 1415 042.19N
066.96W
297 0905 042.03N
066.69W

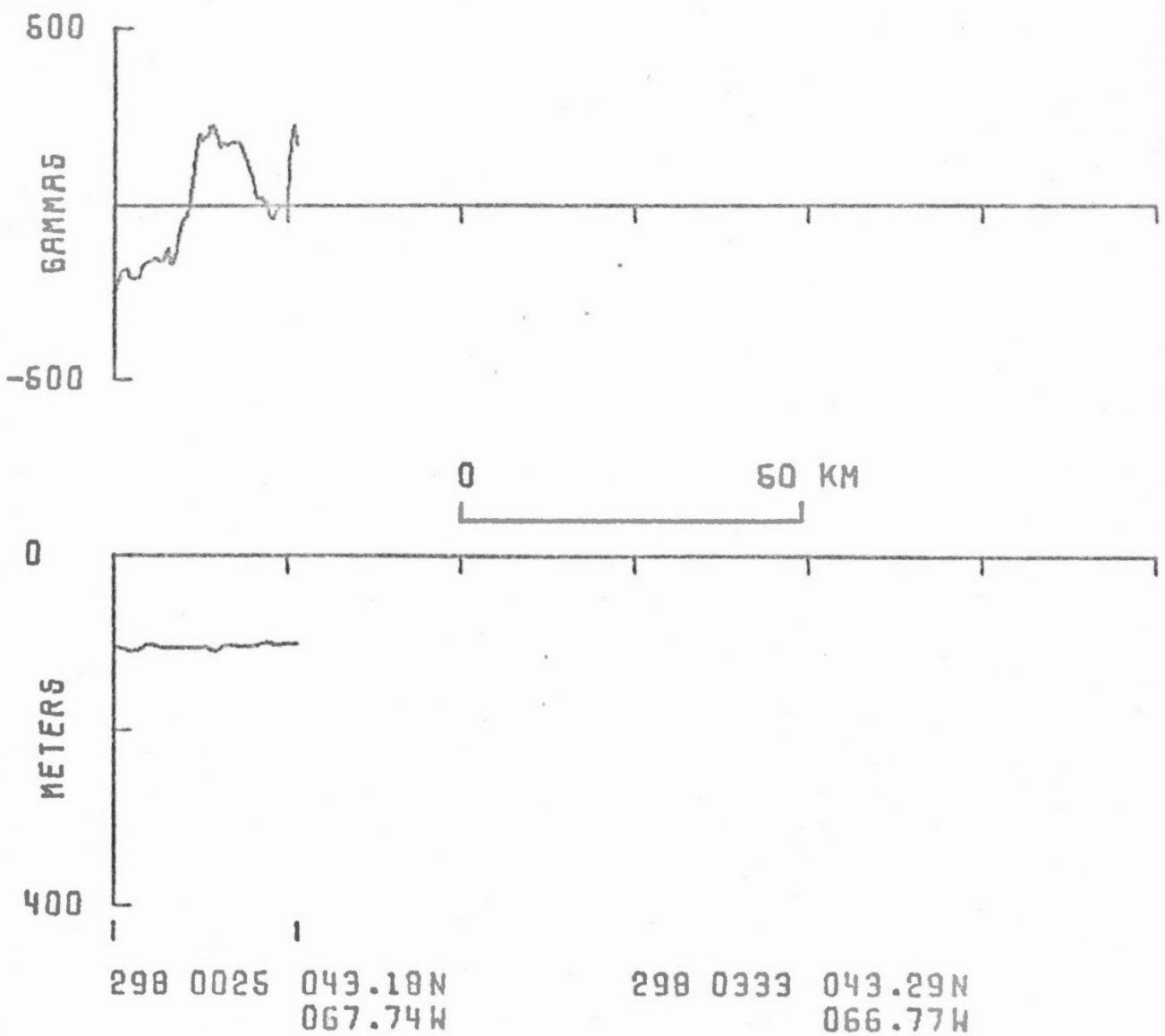
1/1000000 AT 43N




600
GAMMAS
-600
0
60 KM
0
METERS
400
297 2355 043.18N
067.75W
297 1450 042.22N
066.94W

1/1000000 AT 43N




600
GAMMAS
-600
0
60 KM
0
METERS
400
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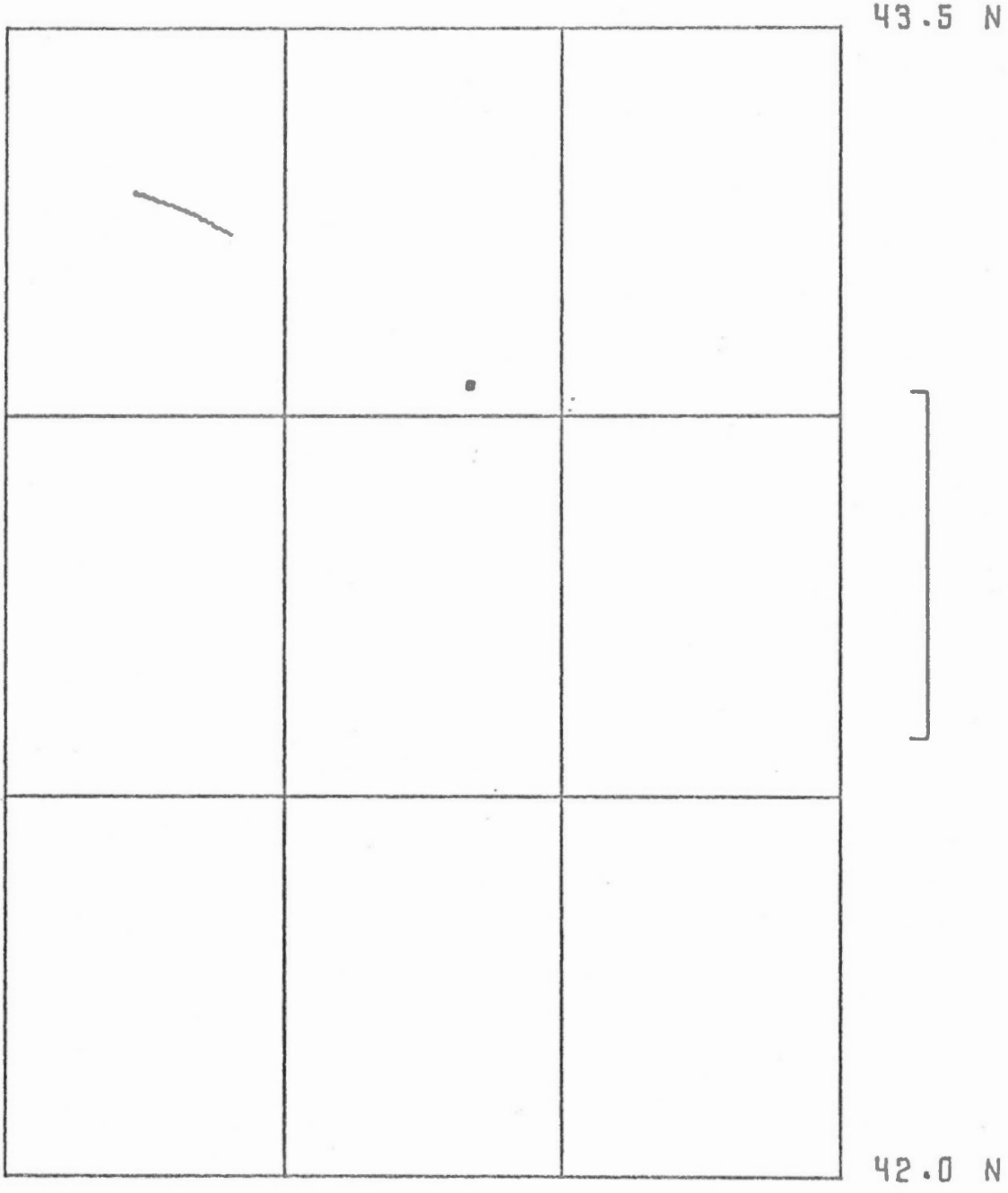
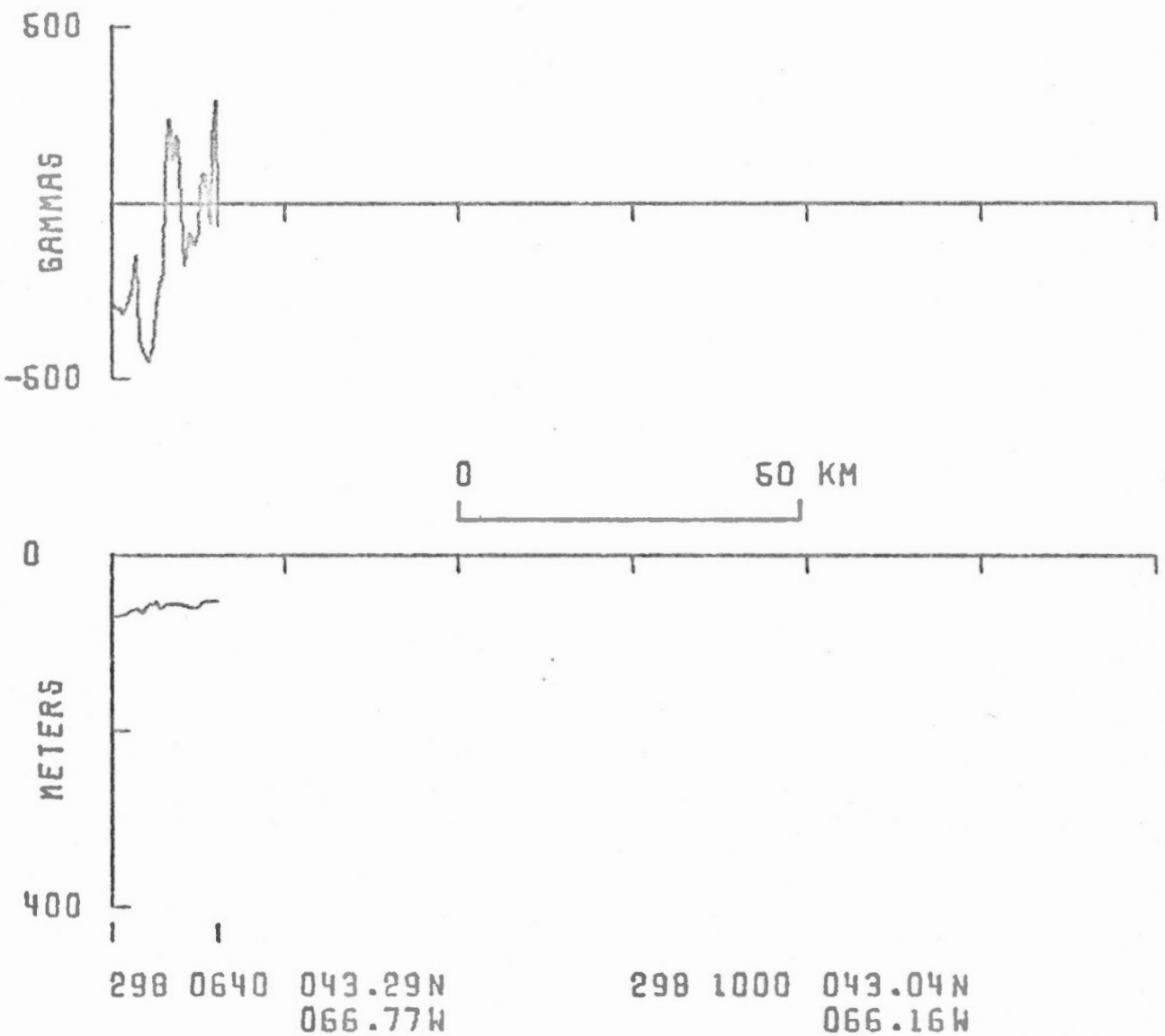
067.74W
298 0333 043.29N
066.77W

1/1000000 AT 43N




500
GAMMAS
-500
0
50 KM
0
METERS
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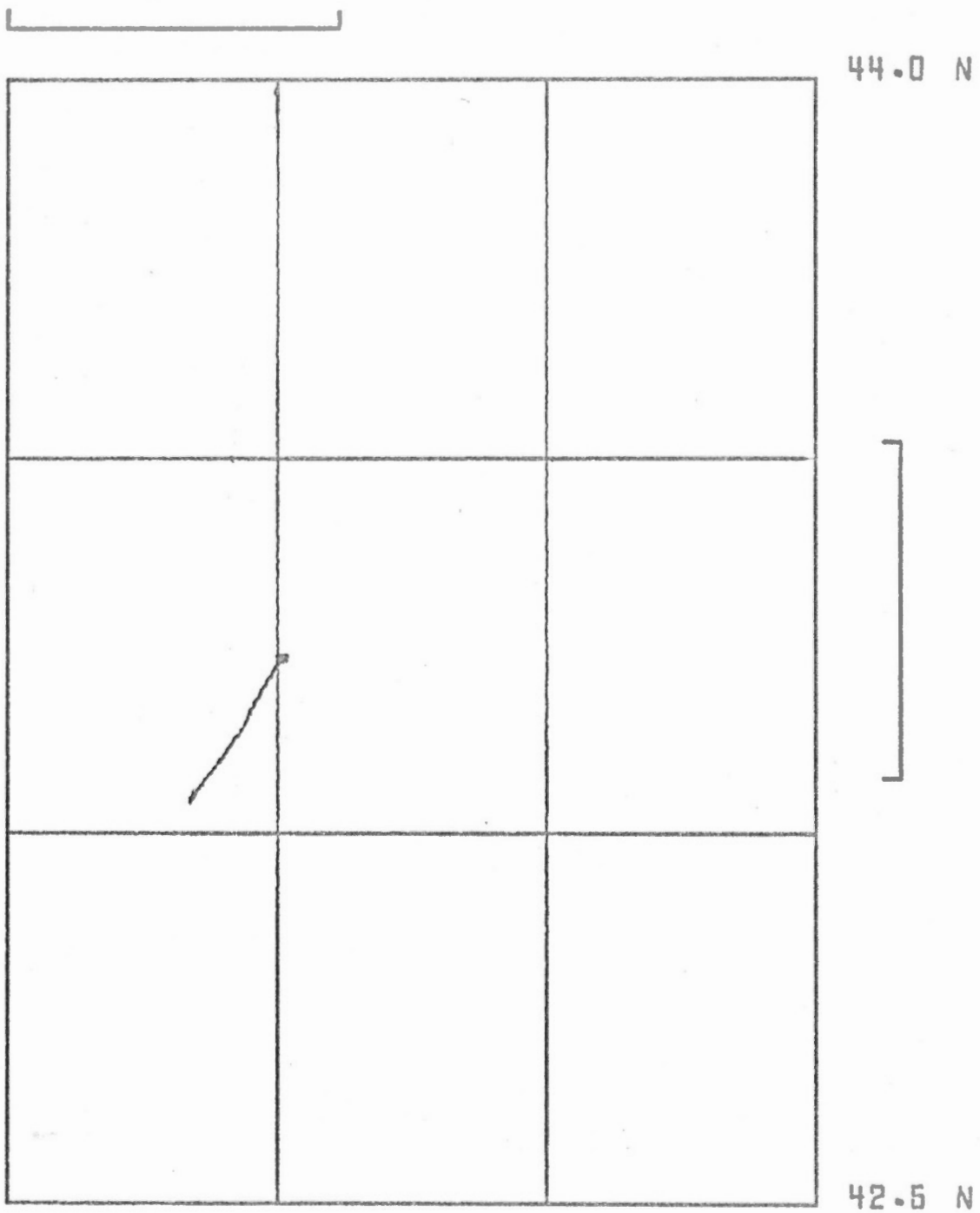
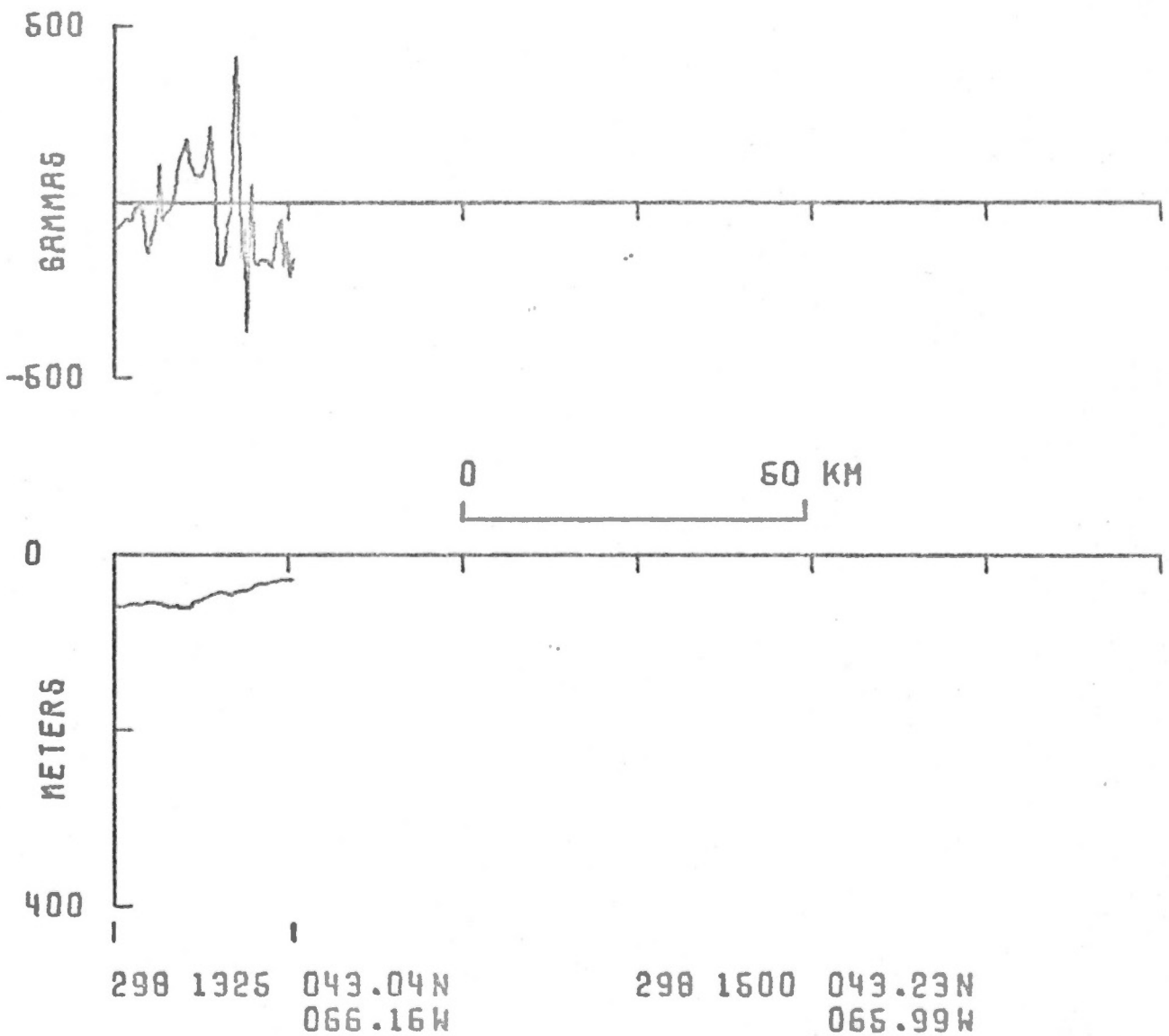
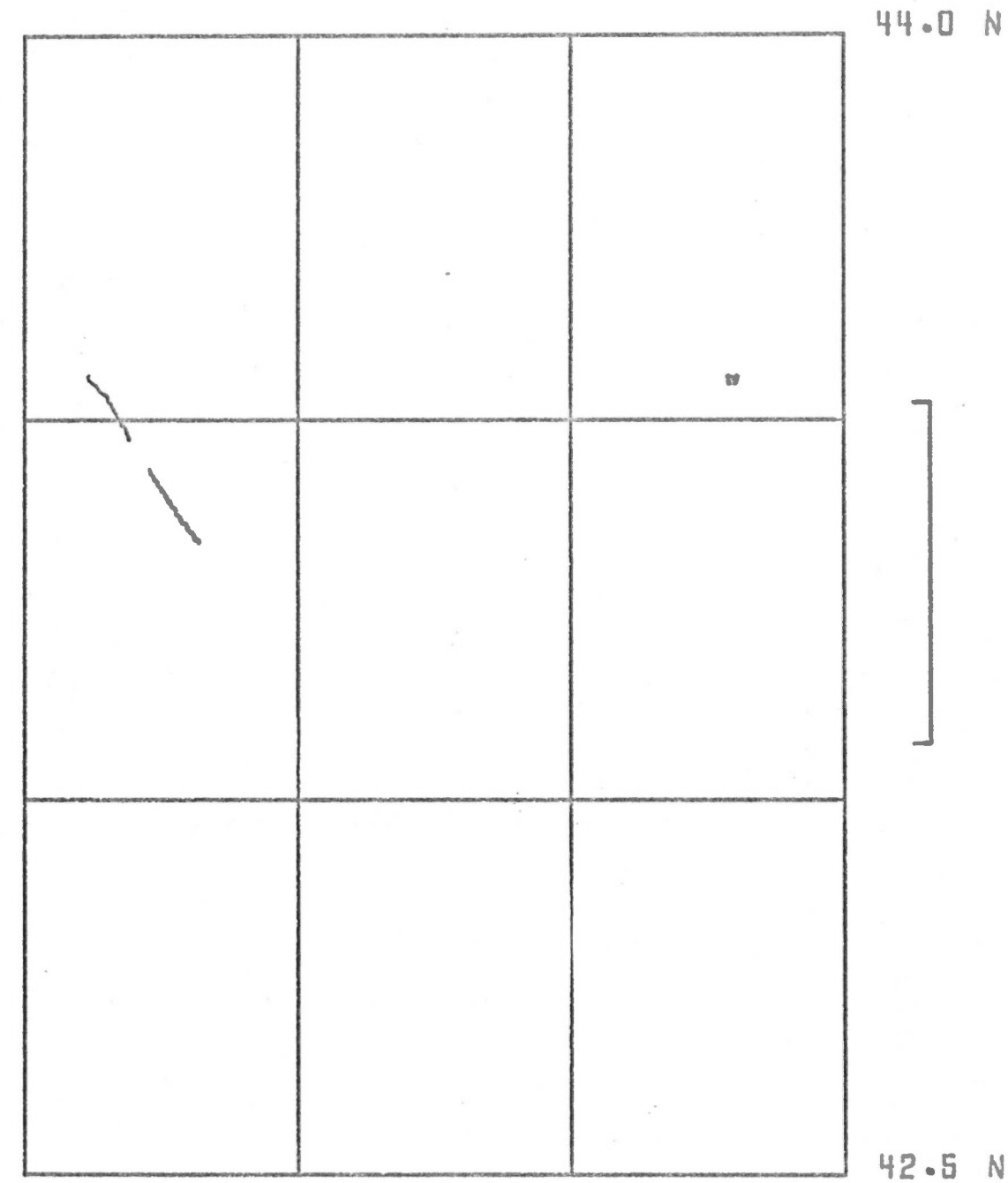
298 0640 043.29N
066.77W
298 1000 043.04N
066.16W

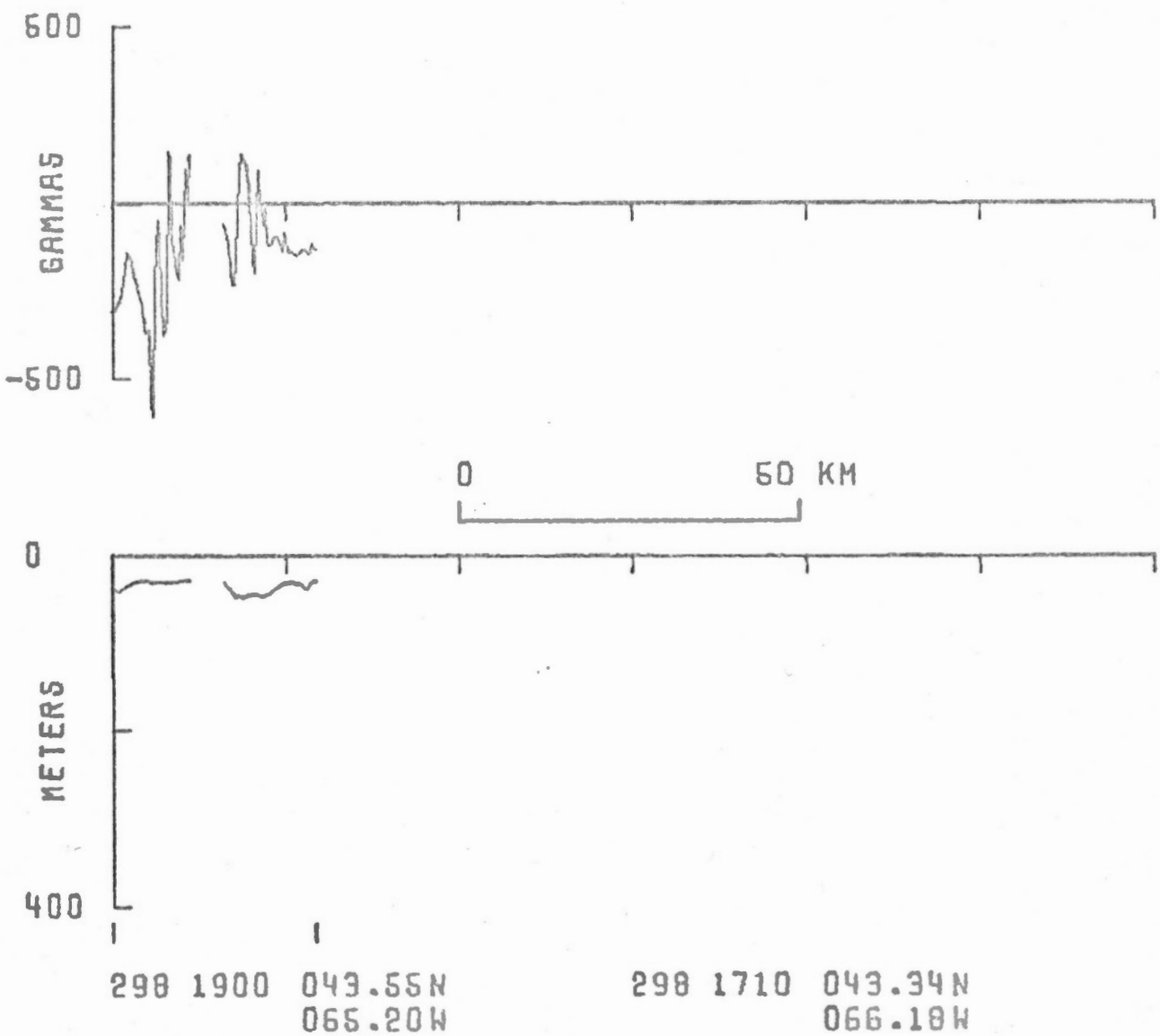
1/1000000 AT 43N




600
GAMMAS
-600
0
60 KM
0
METERS
400
298 1325 043.04N
066.16W
298 1500 043.23N
065.99W

1/1000000 AT 43N

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GAMMAS
-600
0
50 KM
0
METERS
400
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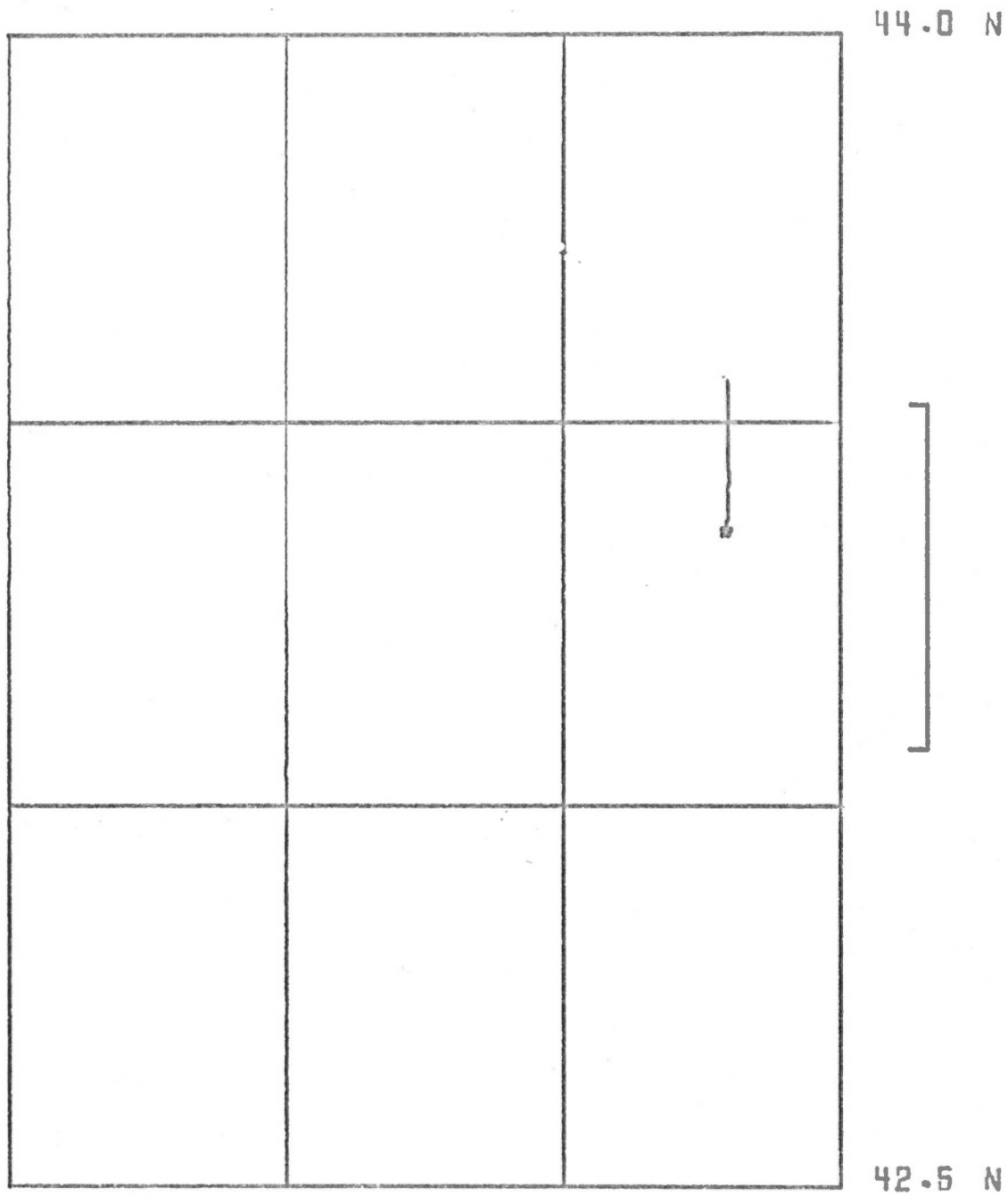
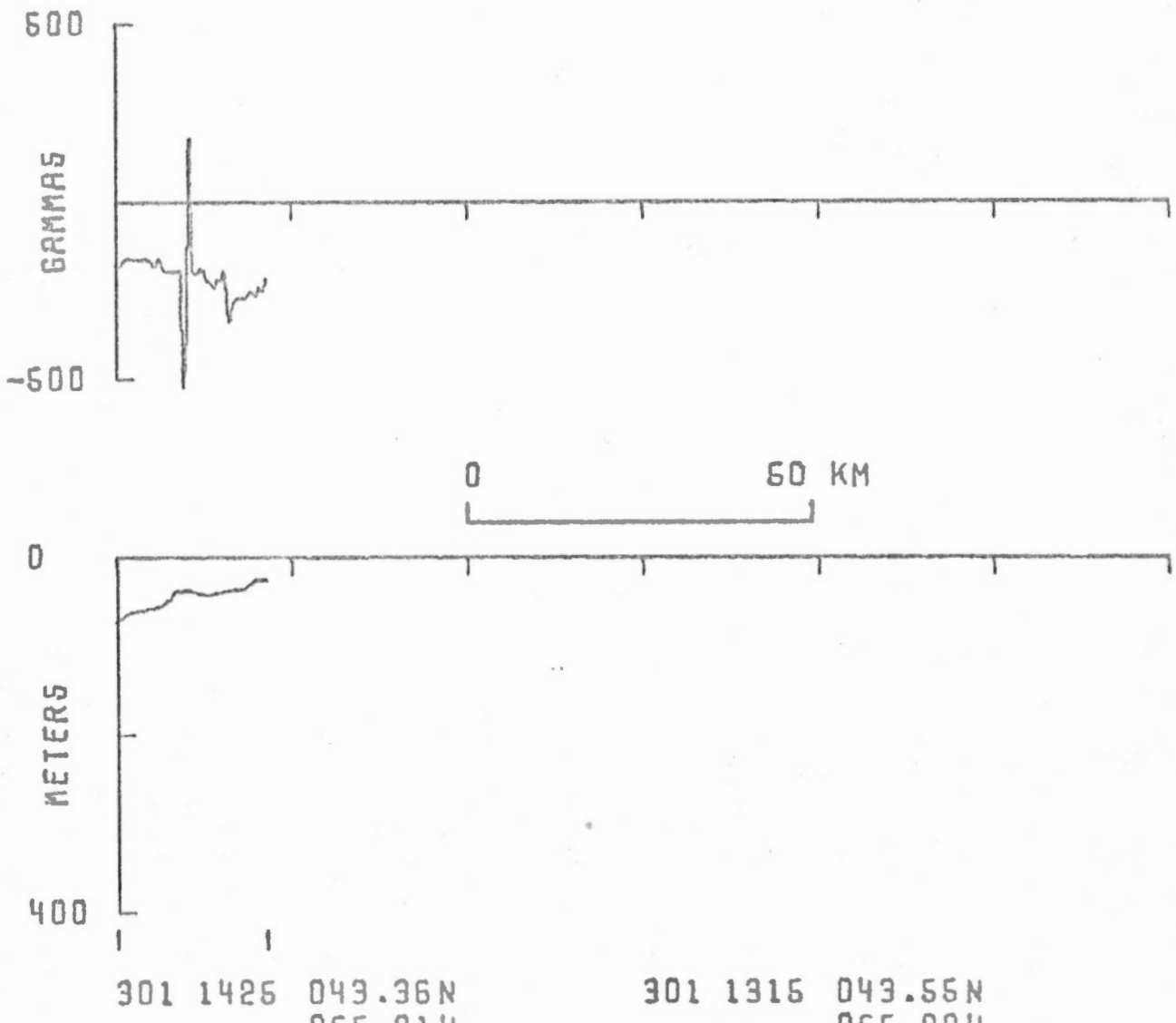
065.20W
298 1710 043.34N
066.18W

1/1000000 AT 43N




600
GAMMAS
-600
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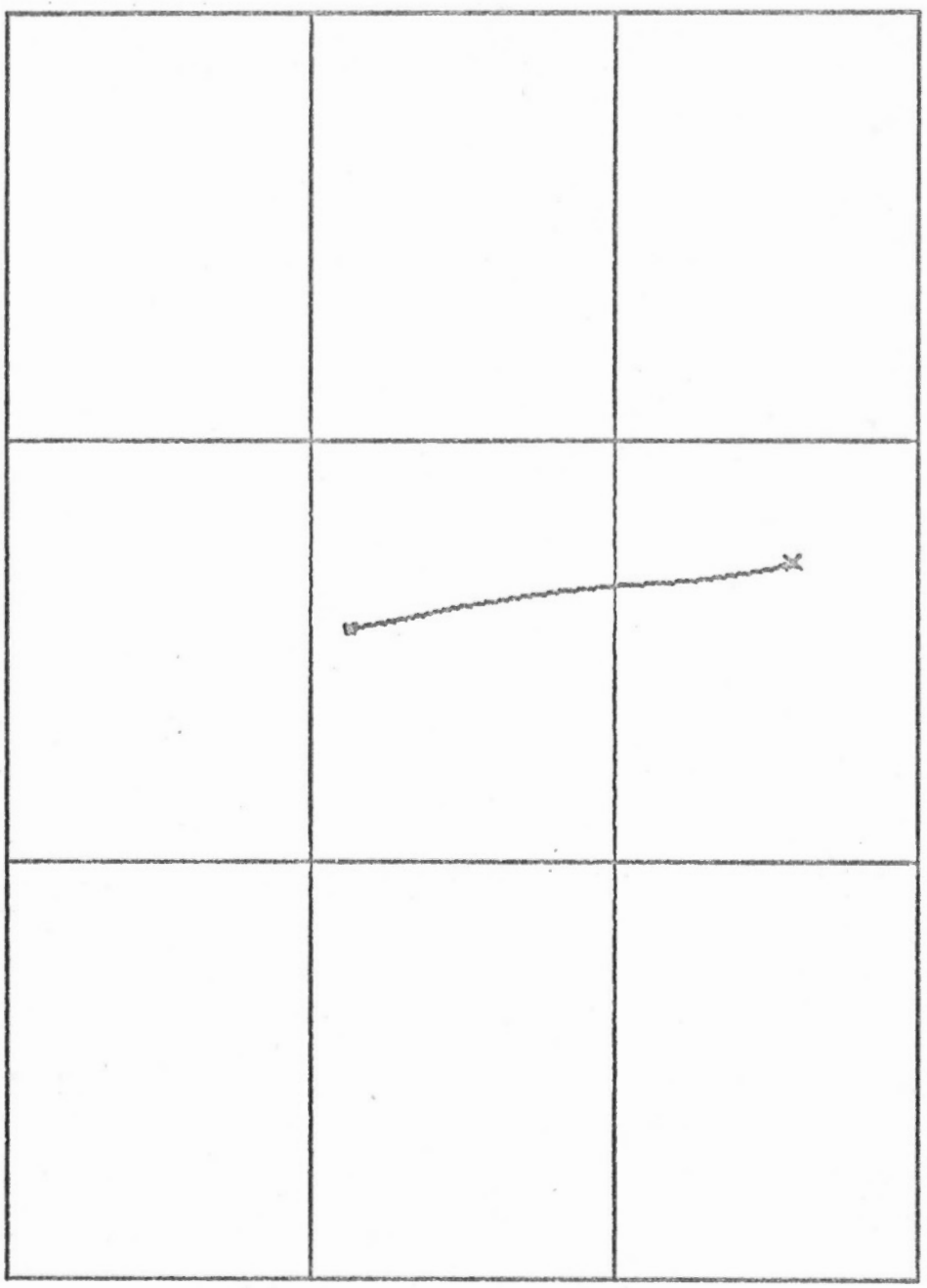
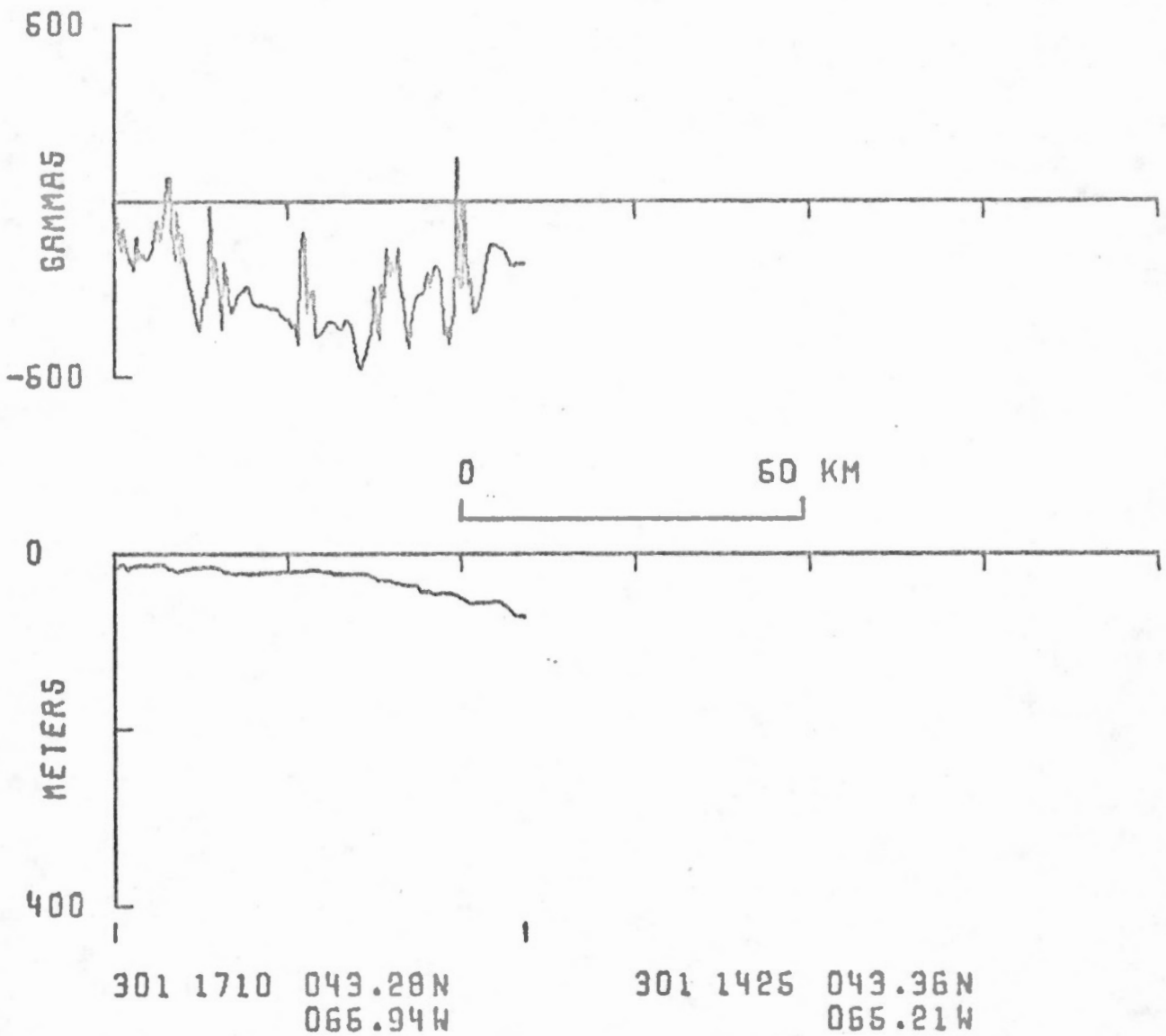
60 KM
0
METERS
400
301 1425 043.36N
065.21W
301 1315 043.55N
065.20W

1/1000000 AT 43N

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METERS
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301 1425 043.36N
065.21W

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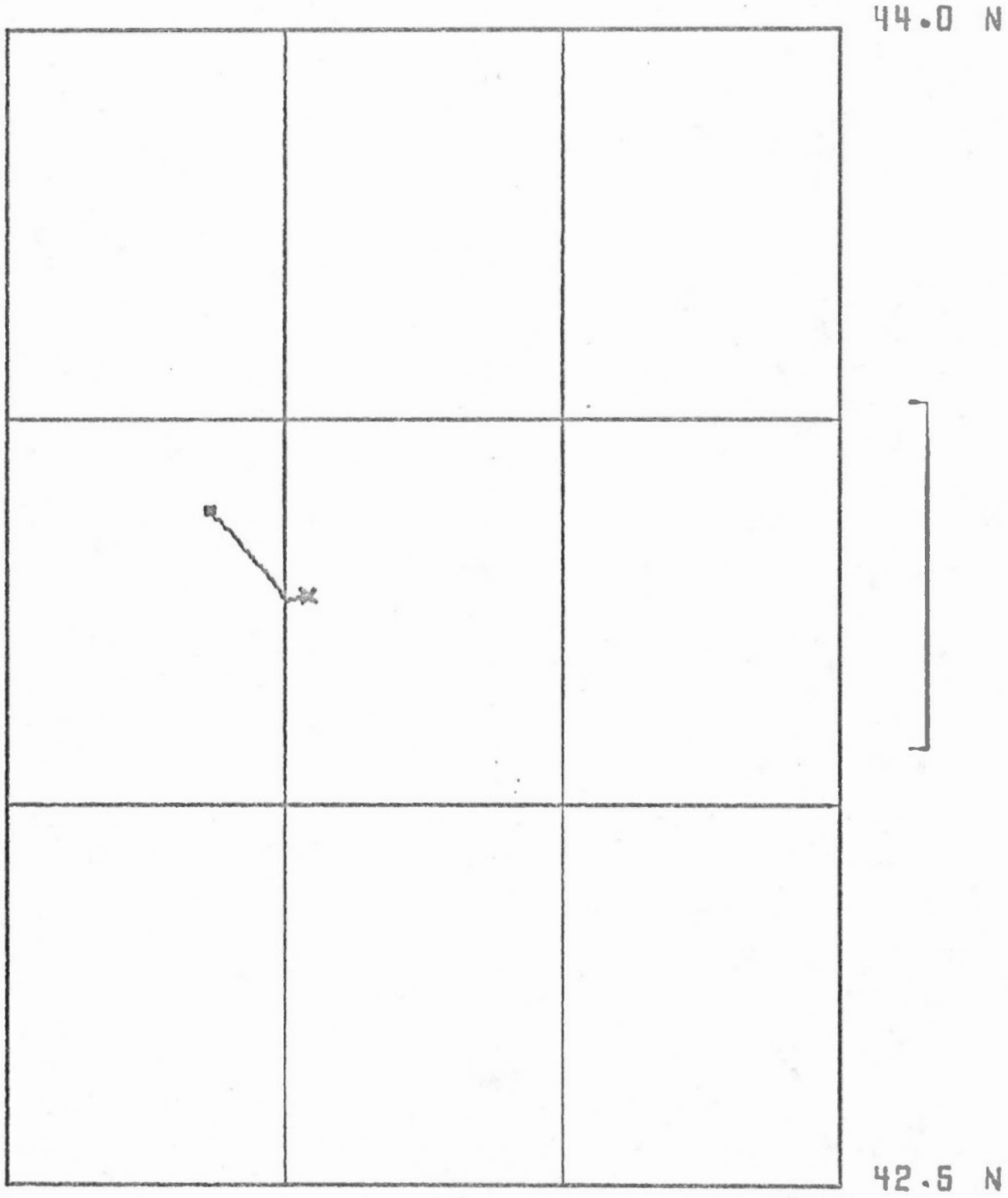

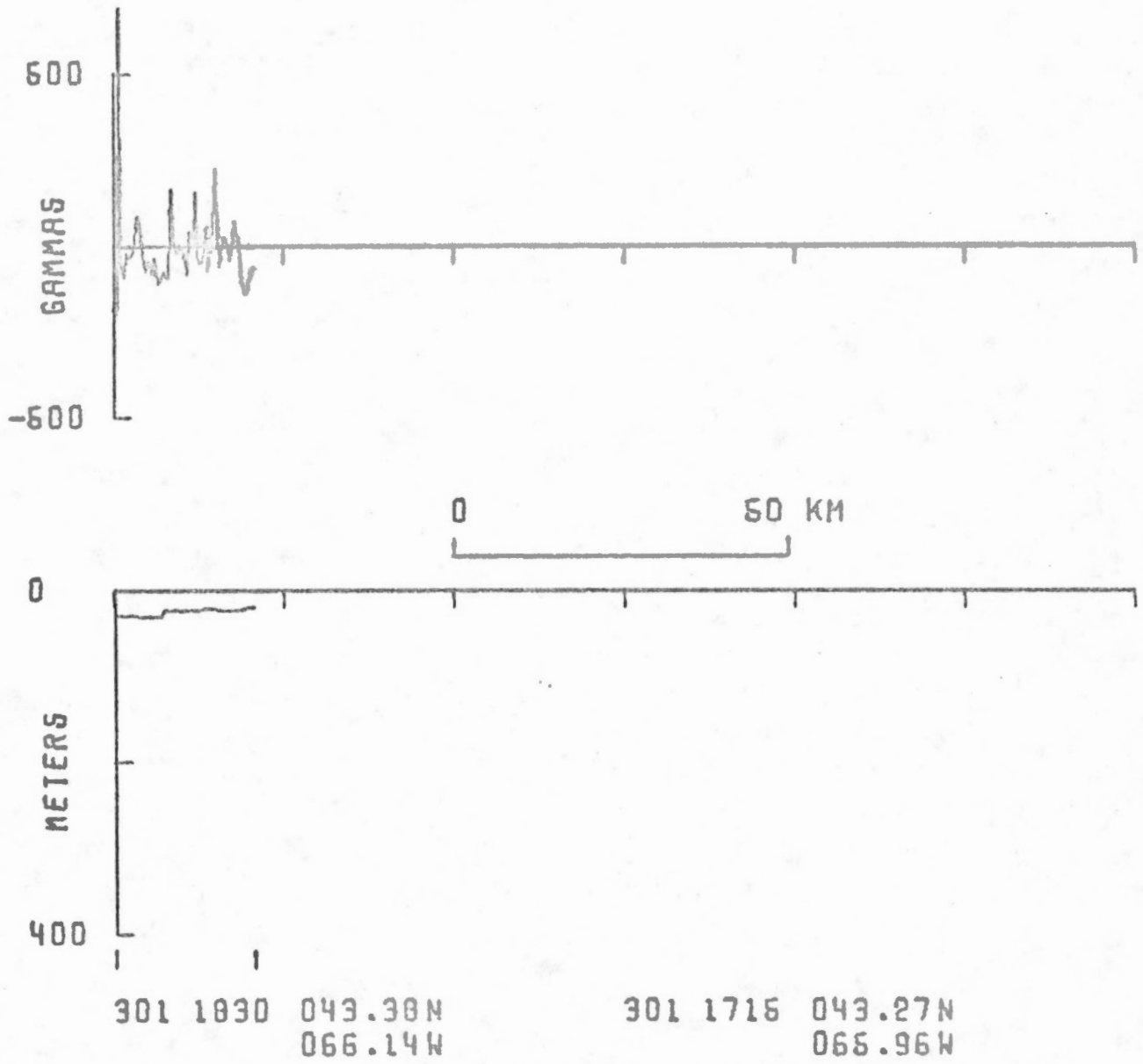
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GAMMAS
-600
0
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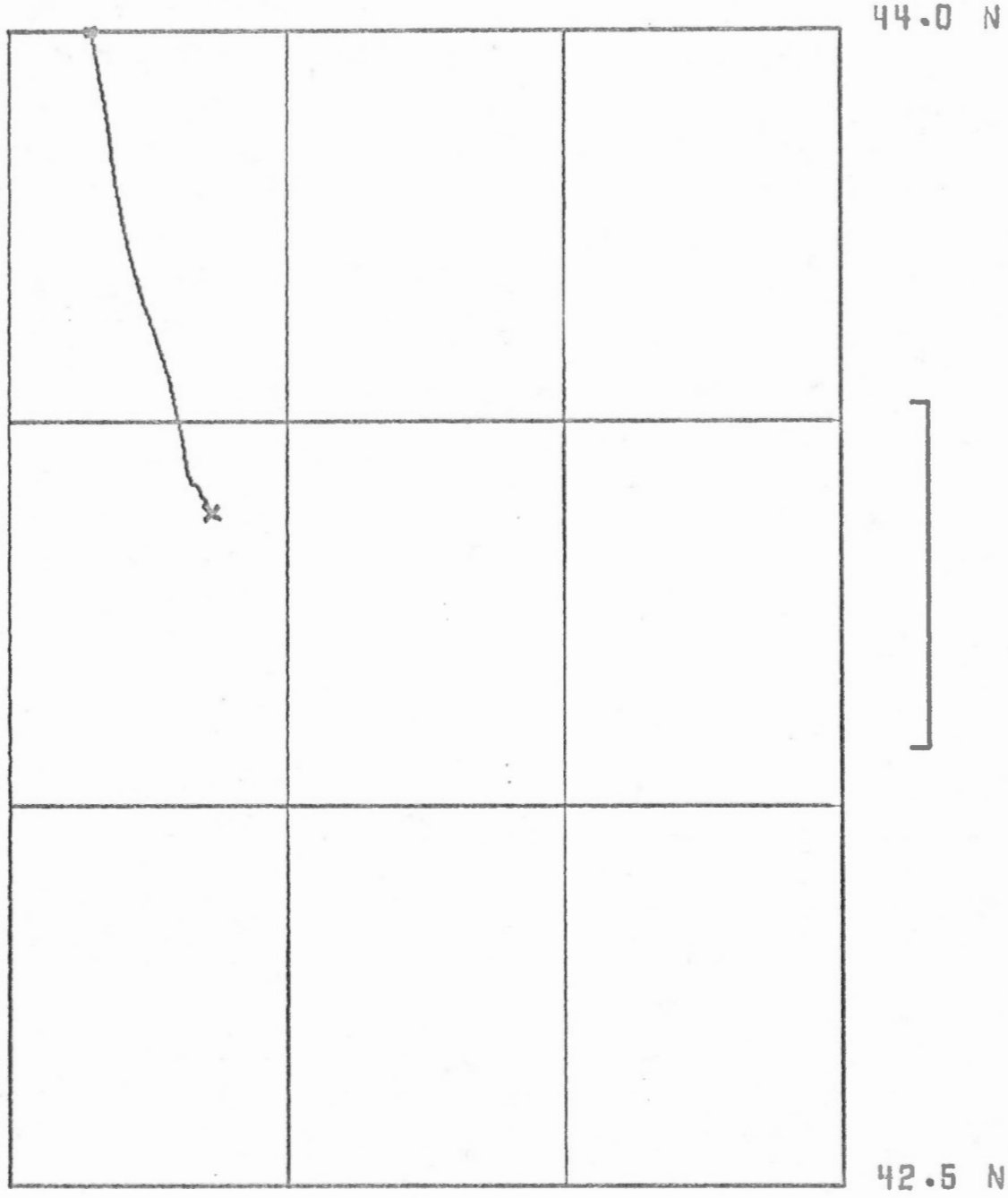
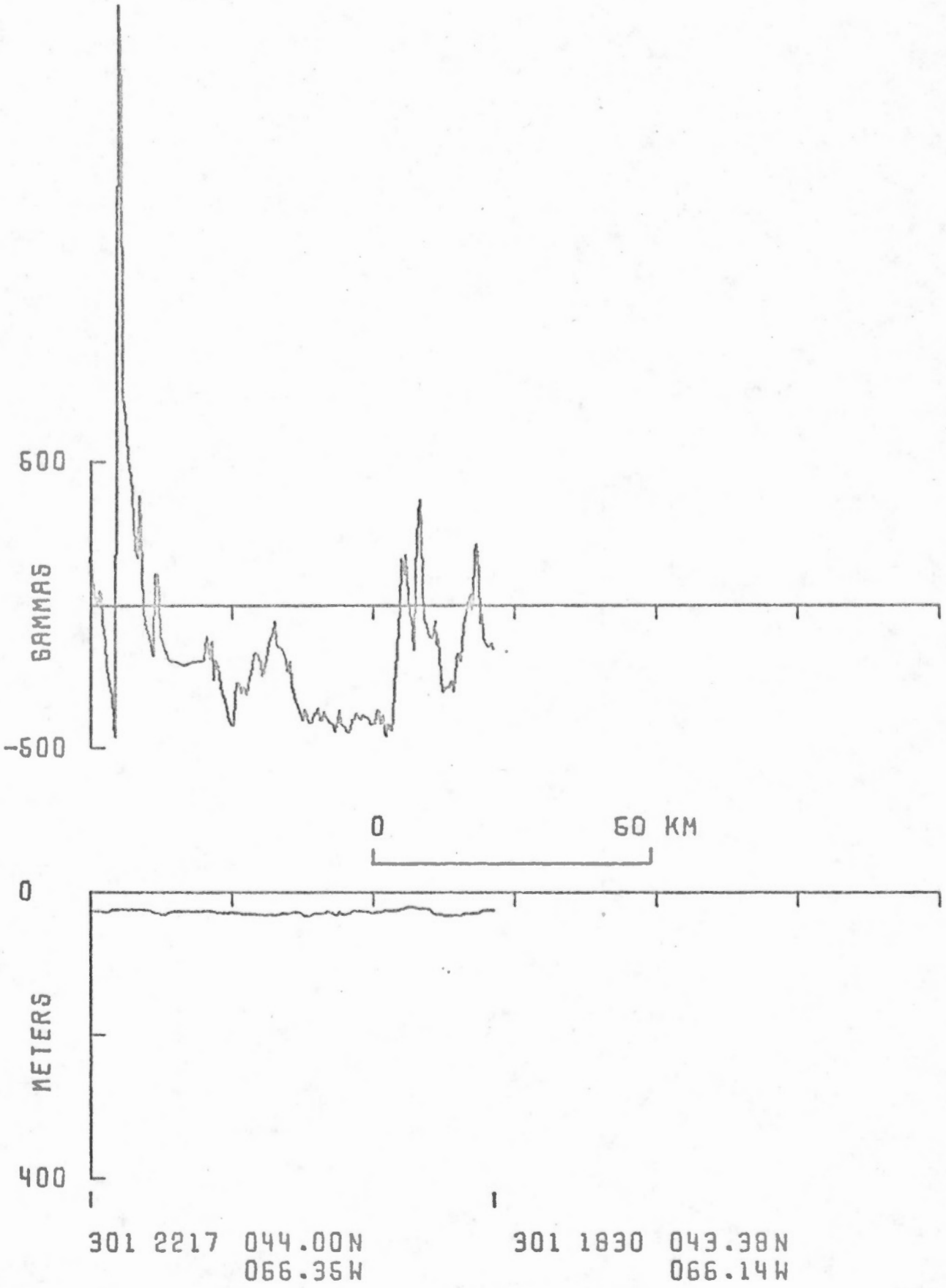
0
METERS
400
301 1830 043.38N
066.14W
301 1715 043.27N
065.96W

1/1000000 AT 43N

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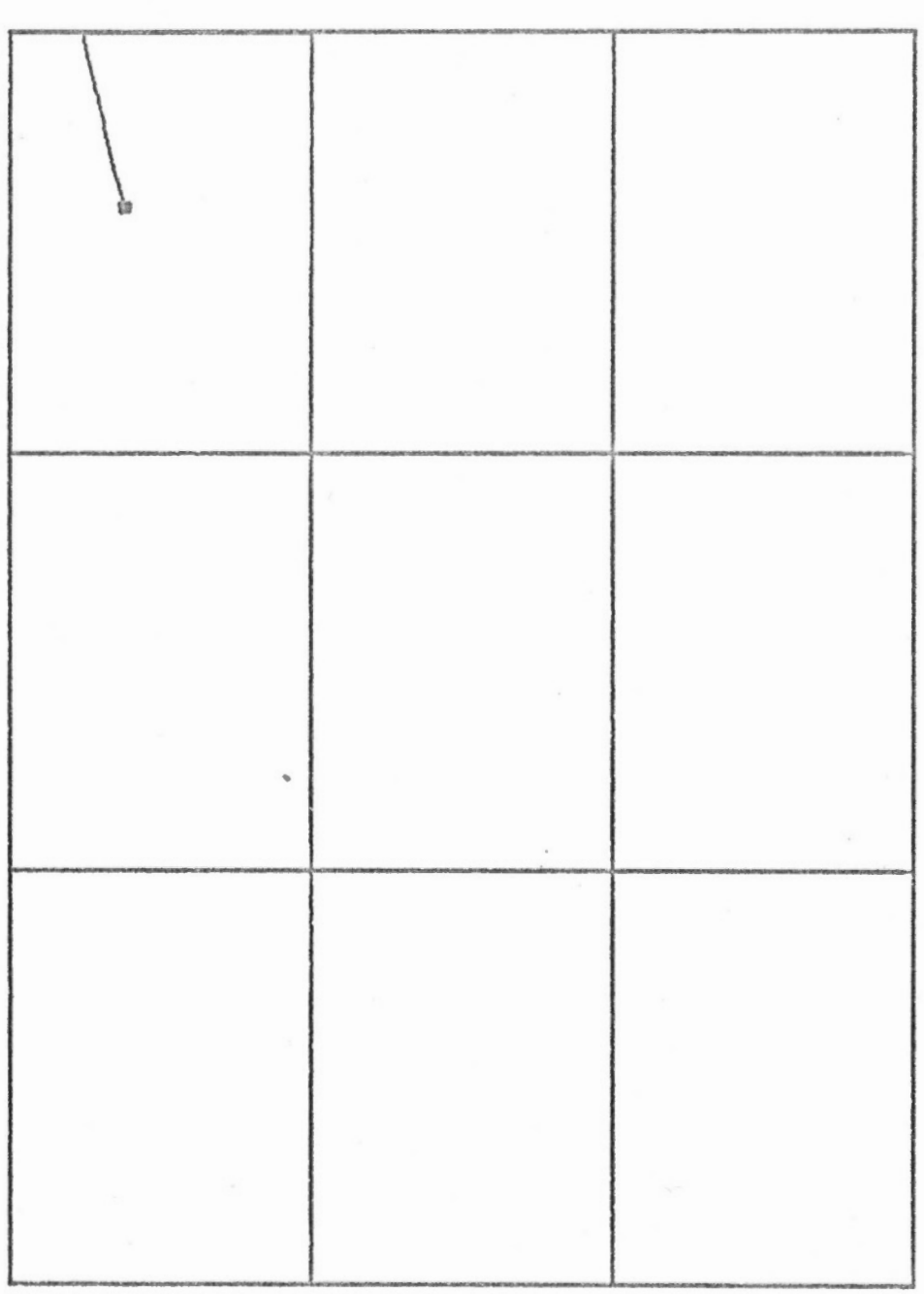
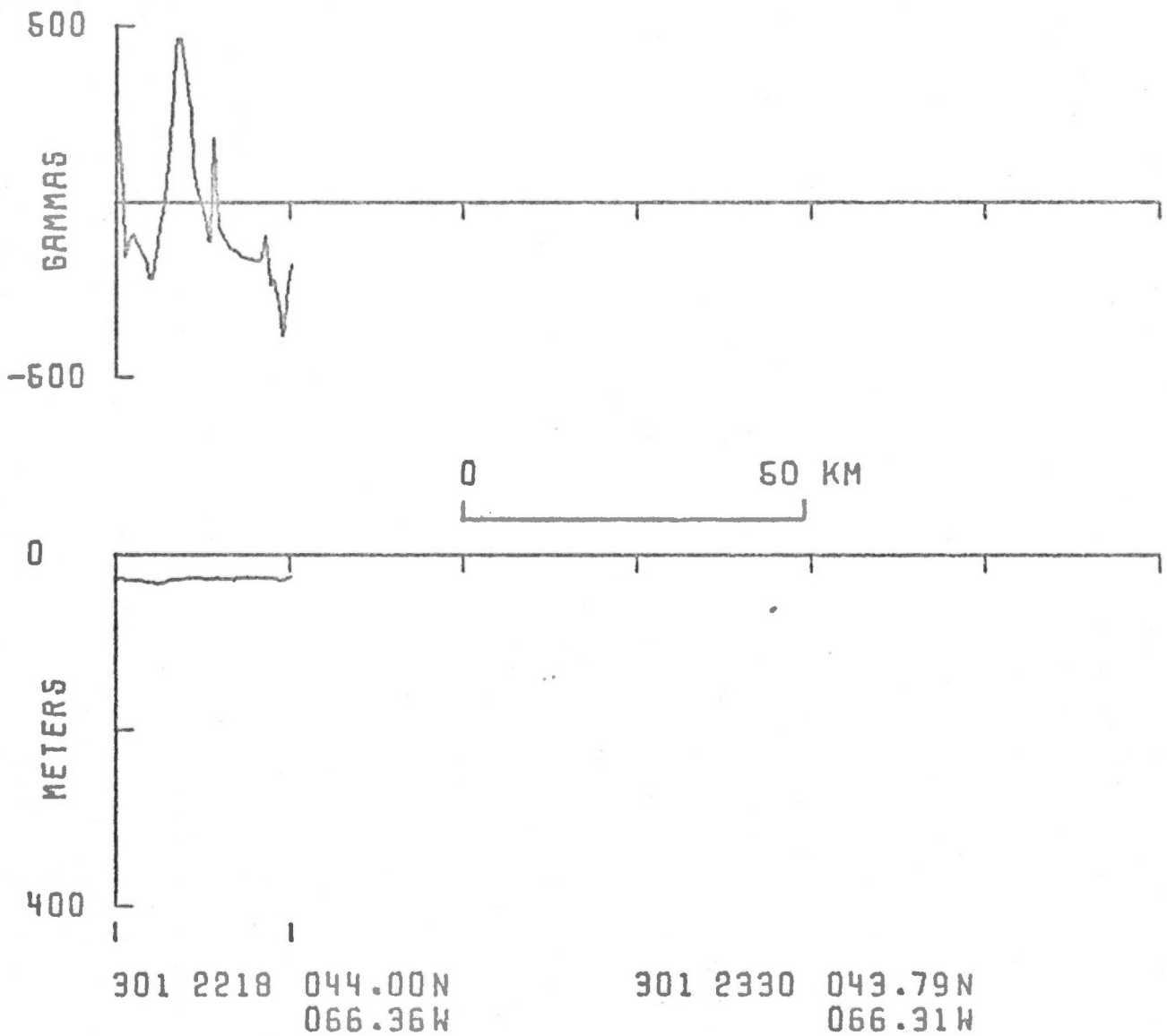
0
60 KM
0
METERS
400
301 2217 044.00N
066.35W
301 1830 043.38N
066.14W

1/1000000 AT 43N

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METERS
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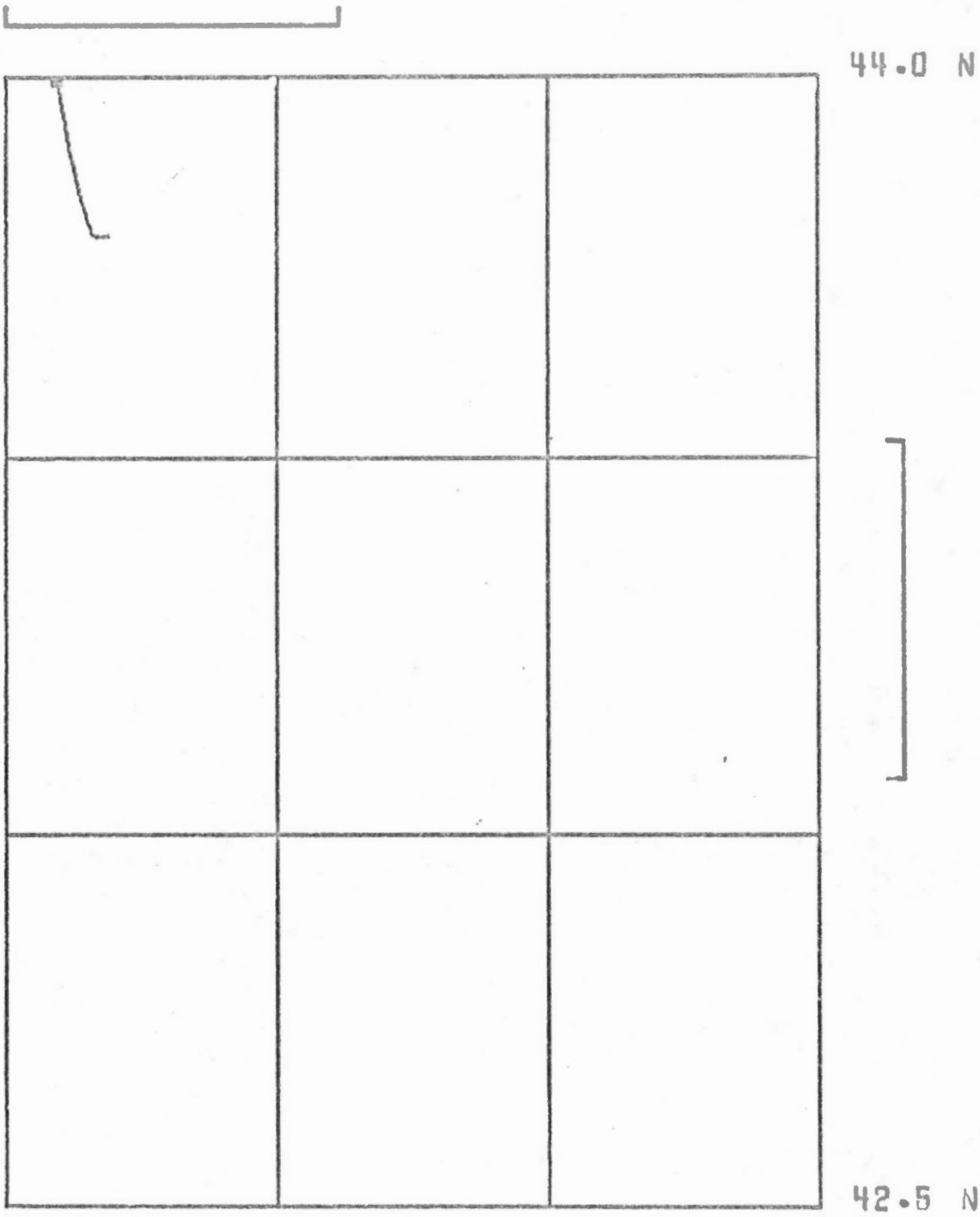
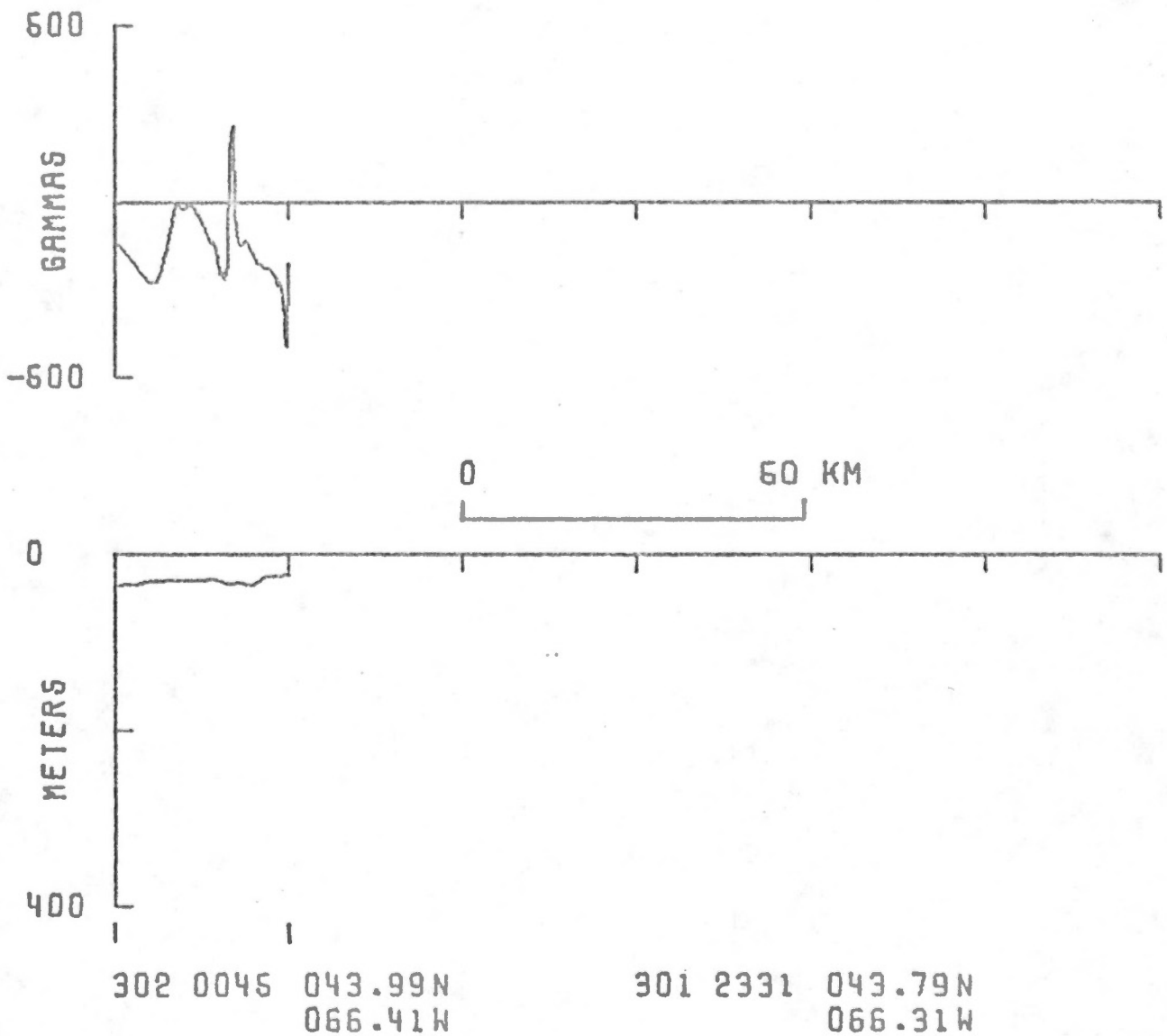
301 2330 043.79N
066.31W

1/1000000 AT 43N

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METERS
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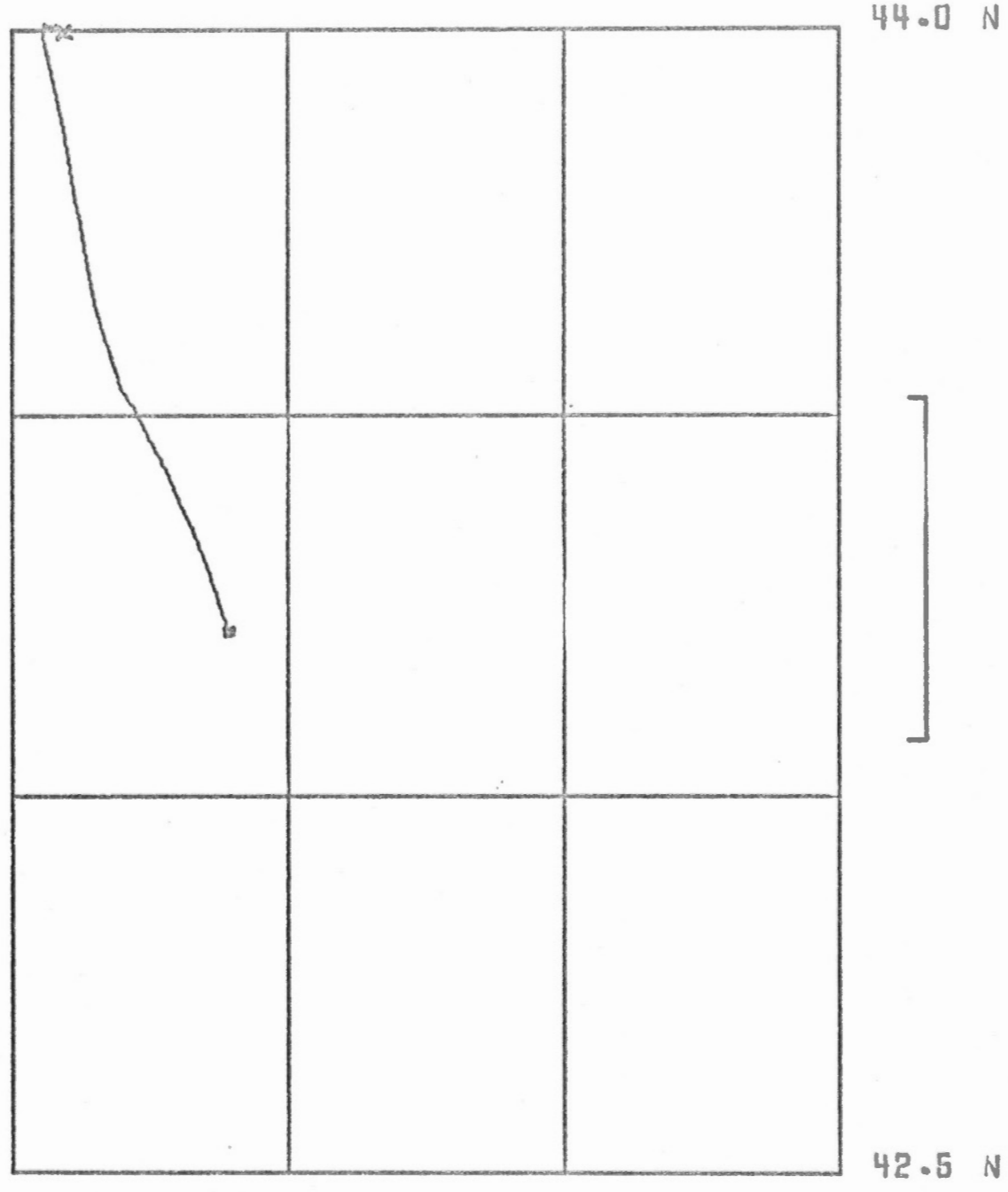
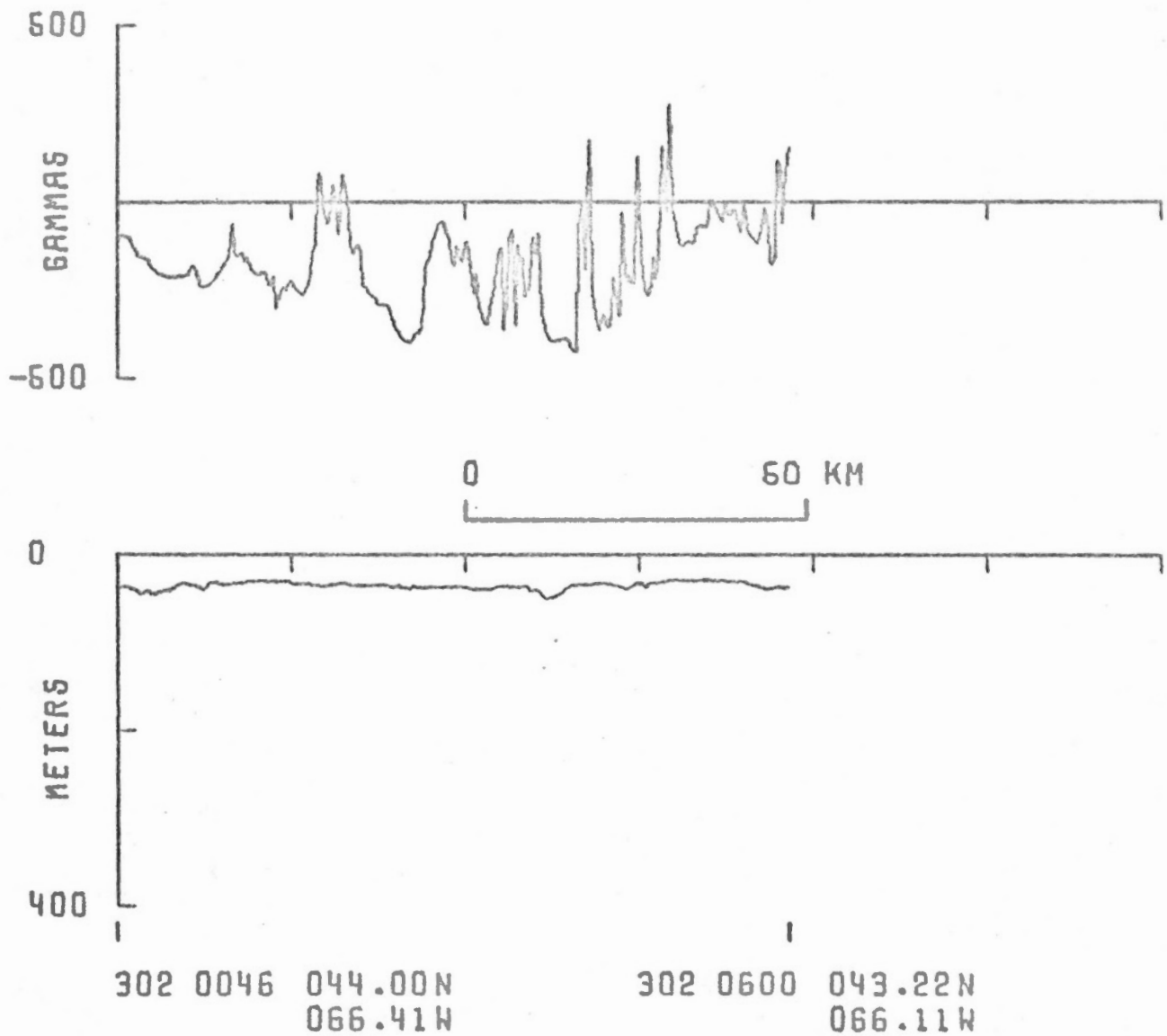
066.41W
301 2331 043.79N
066.31W

1/1000000 AT 43N

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60 KM
0
METERS
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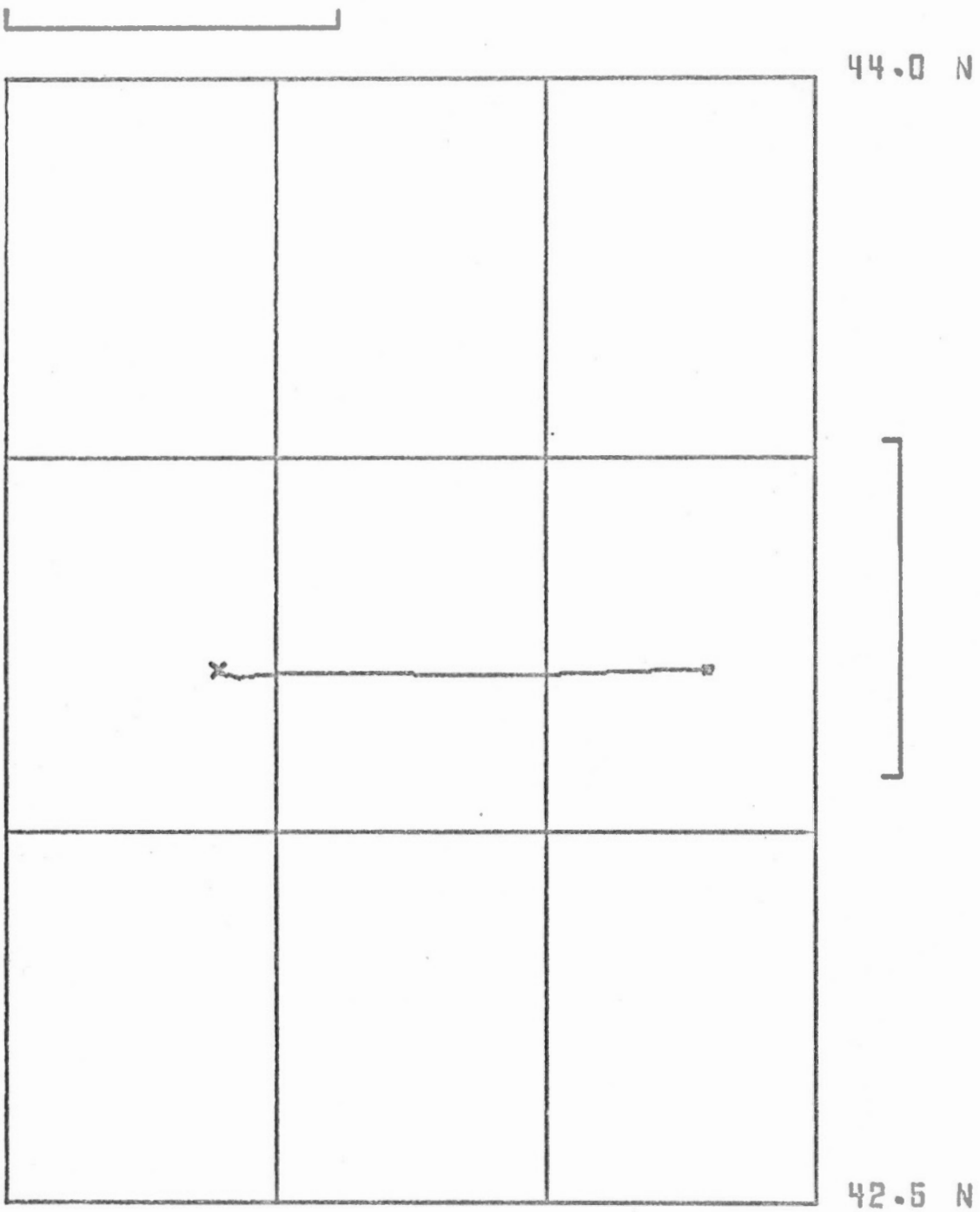
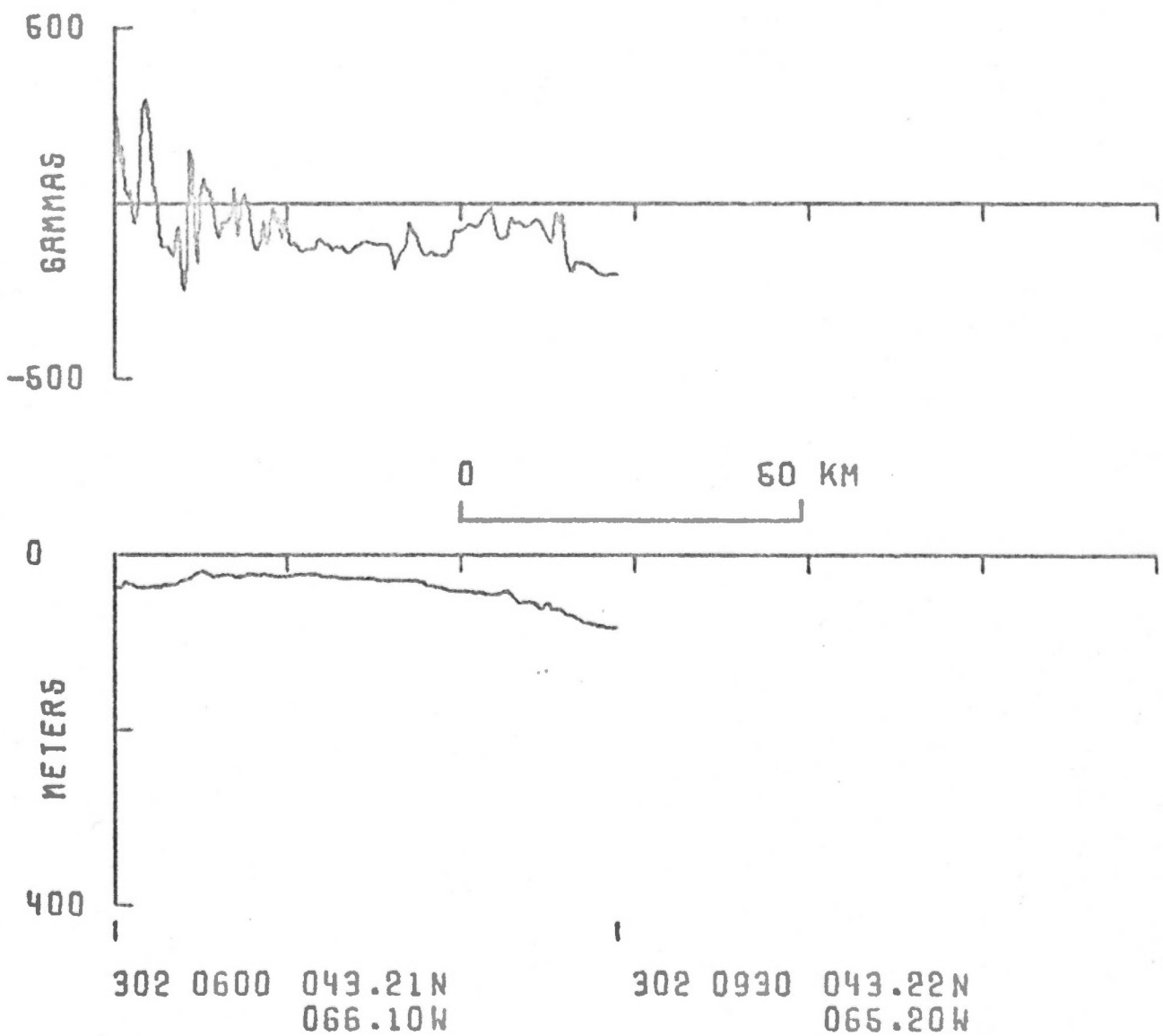
066.41W
302 0600 043.22N
066.11W

1/1000000 AT 43N

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60 KM
0
METERS
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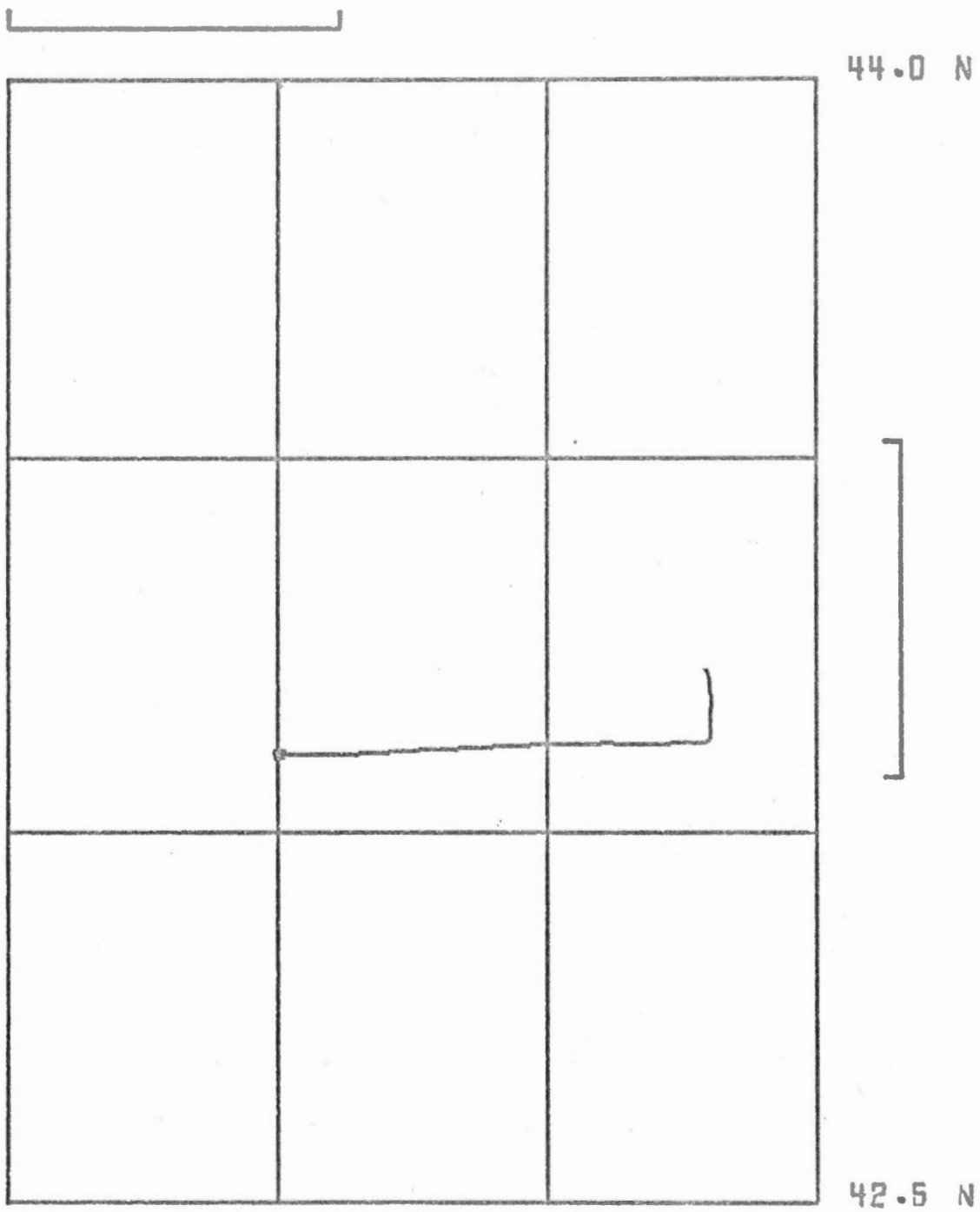
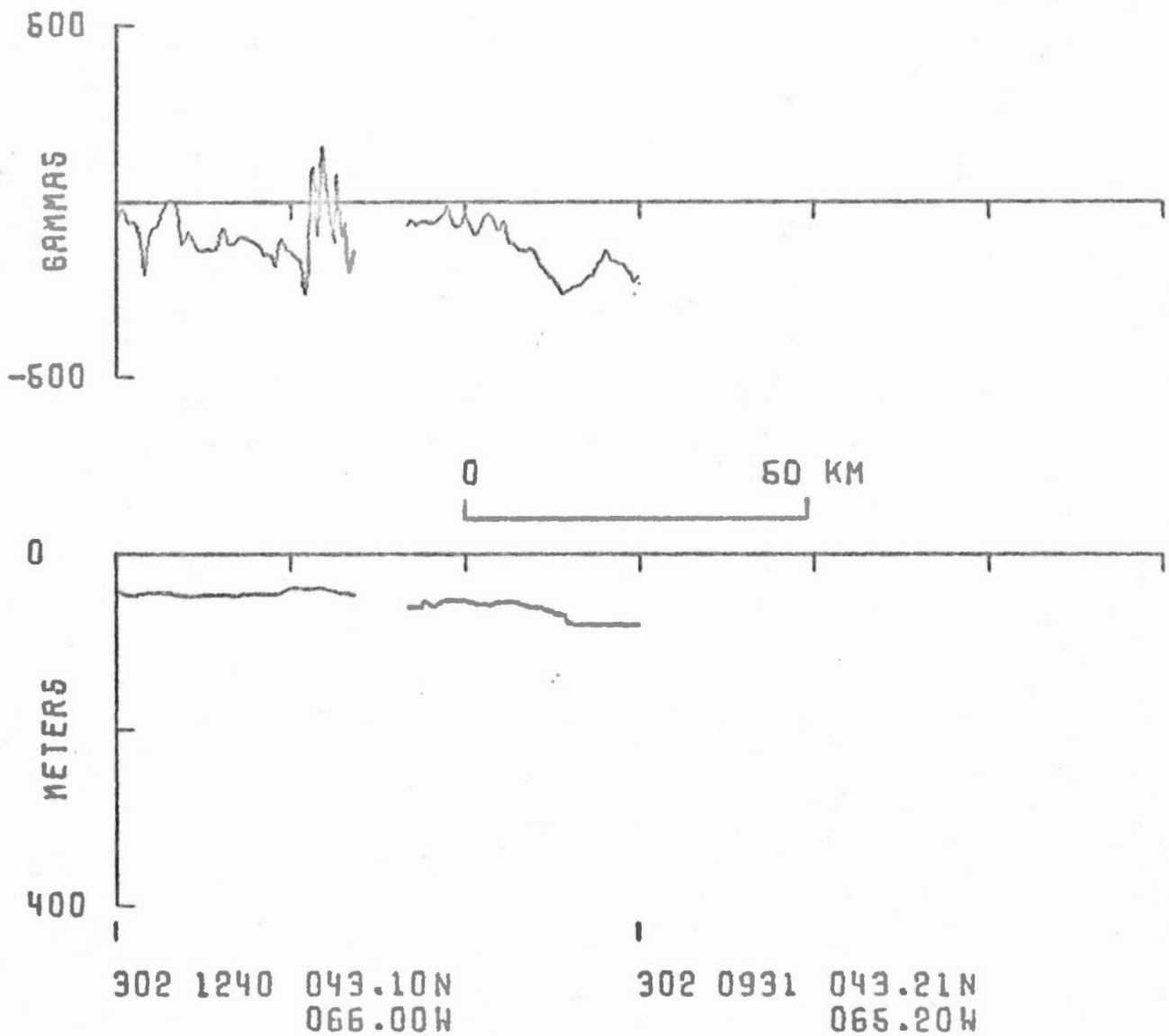
302 0600 043.21N
066.10W
302 0930 043.22N
065.20W

1/1000000 AT 43N

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METERS
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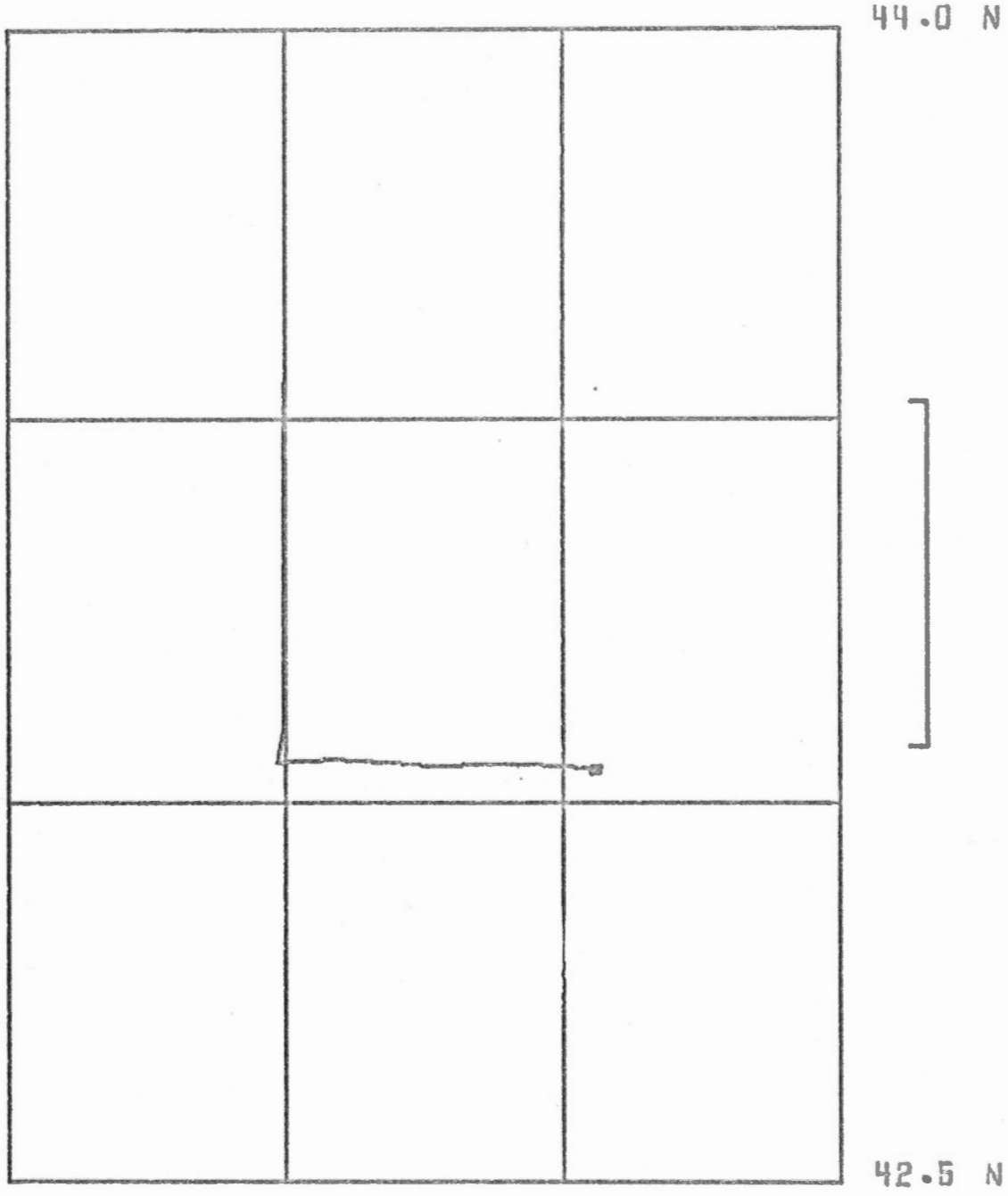
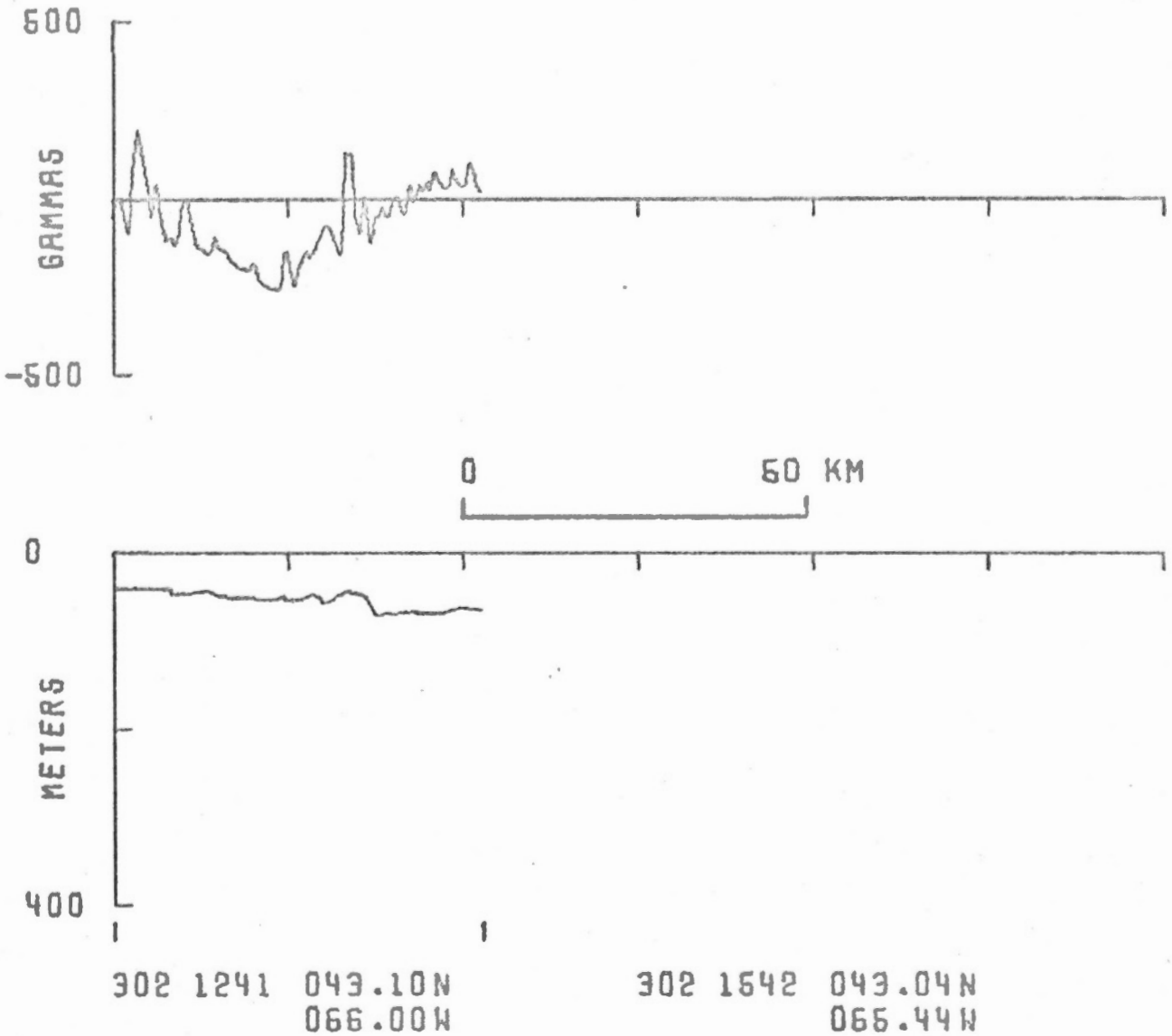
066.00W
302 0931 043.21N
065.20W

1/1000000 AT 43N

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METERS
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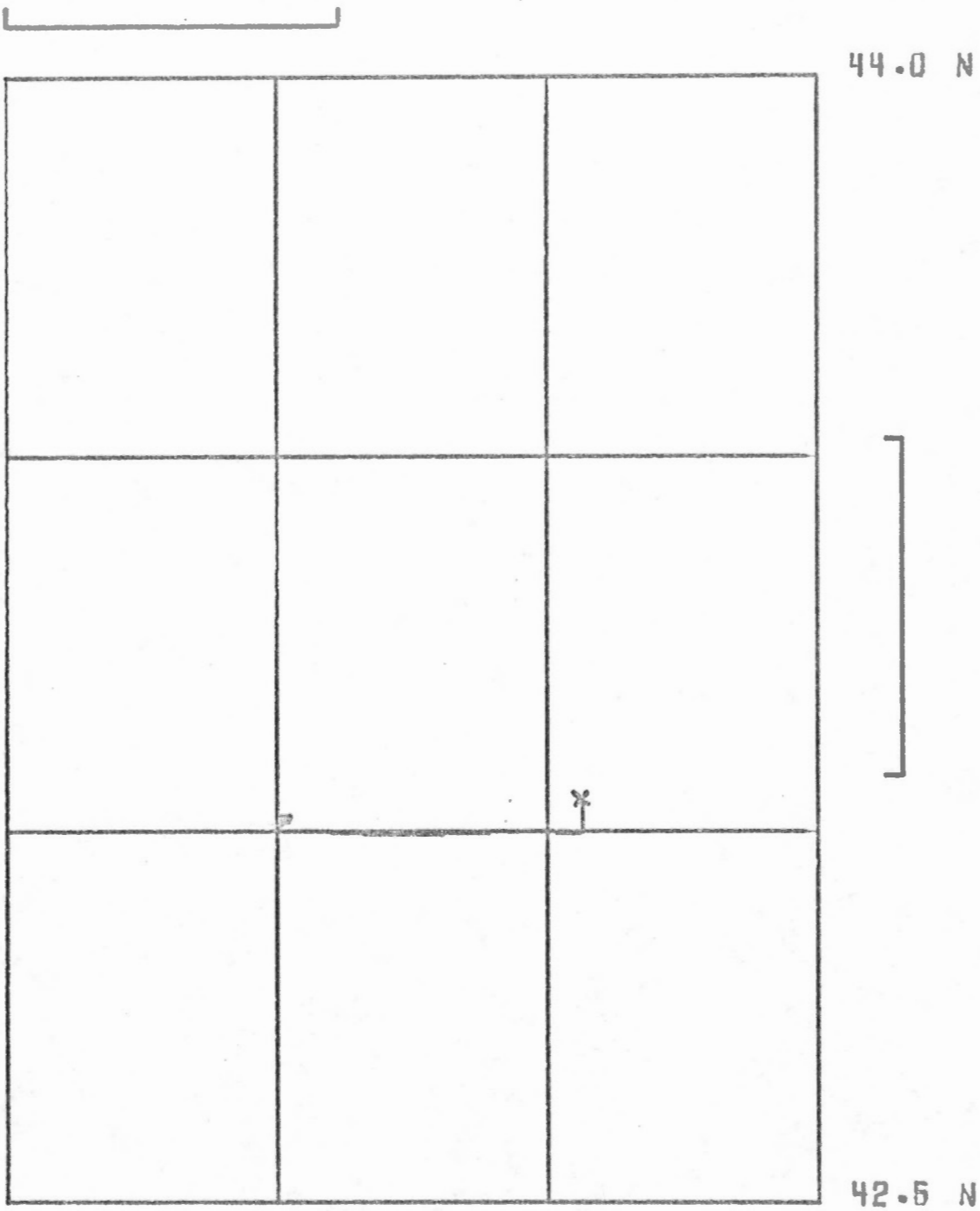
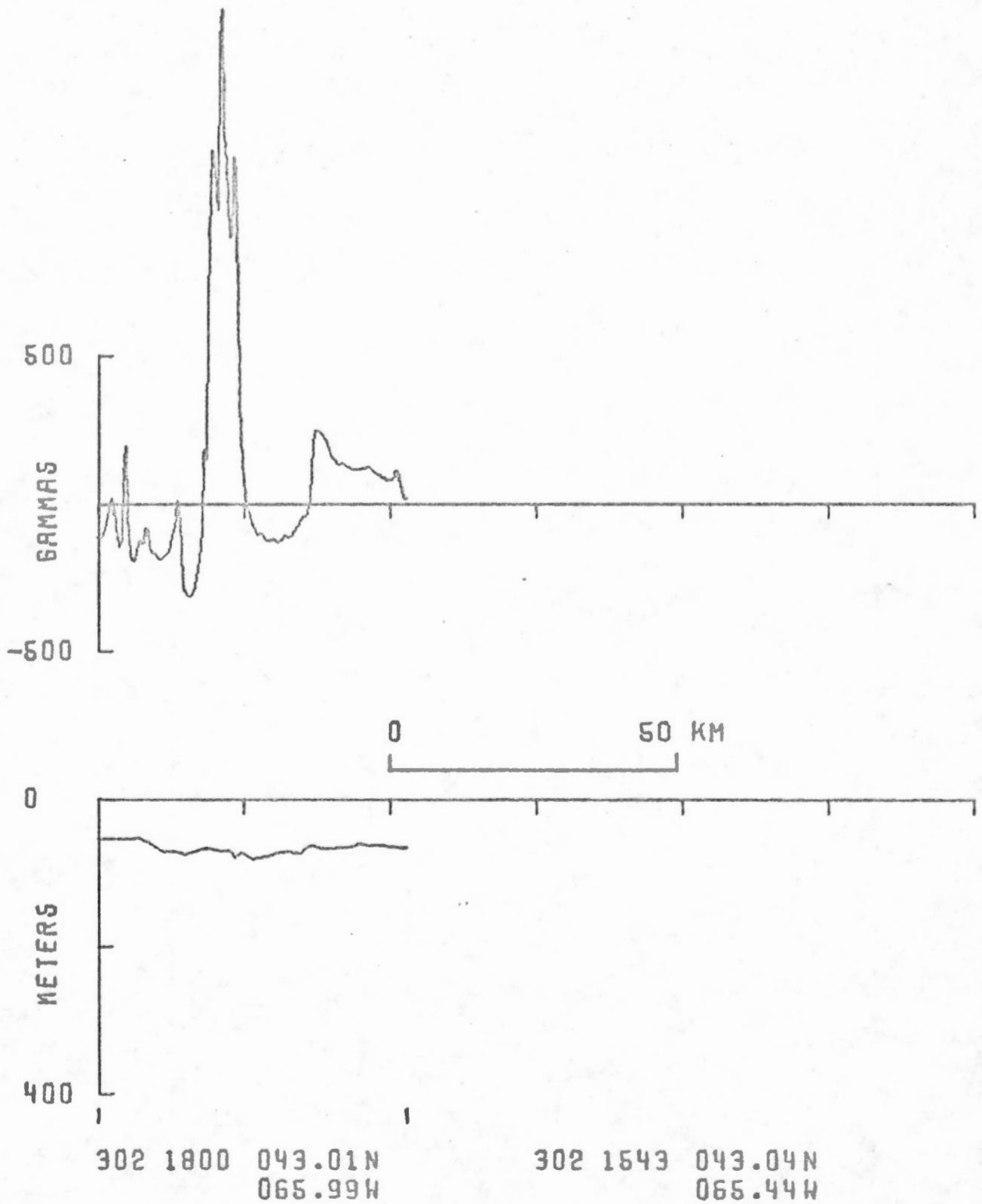
066.00W
302 1542 043.04N
065.44W

1/1000000 AT 43N

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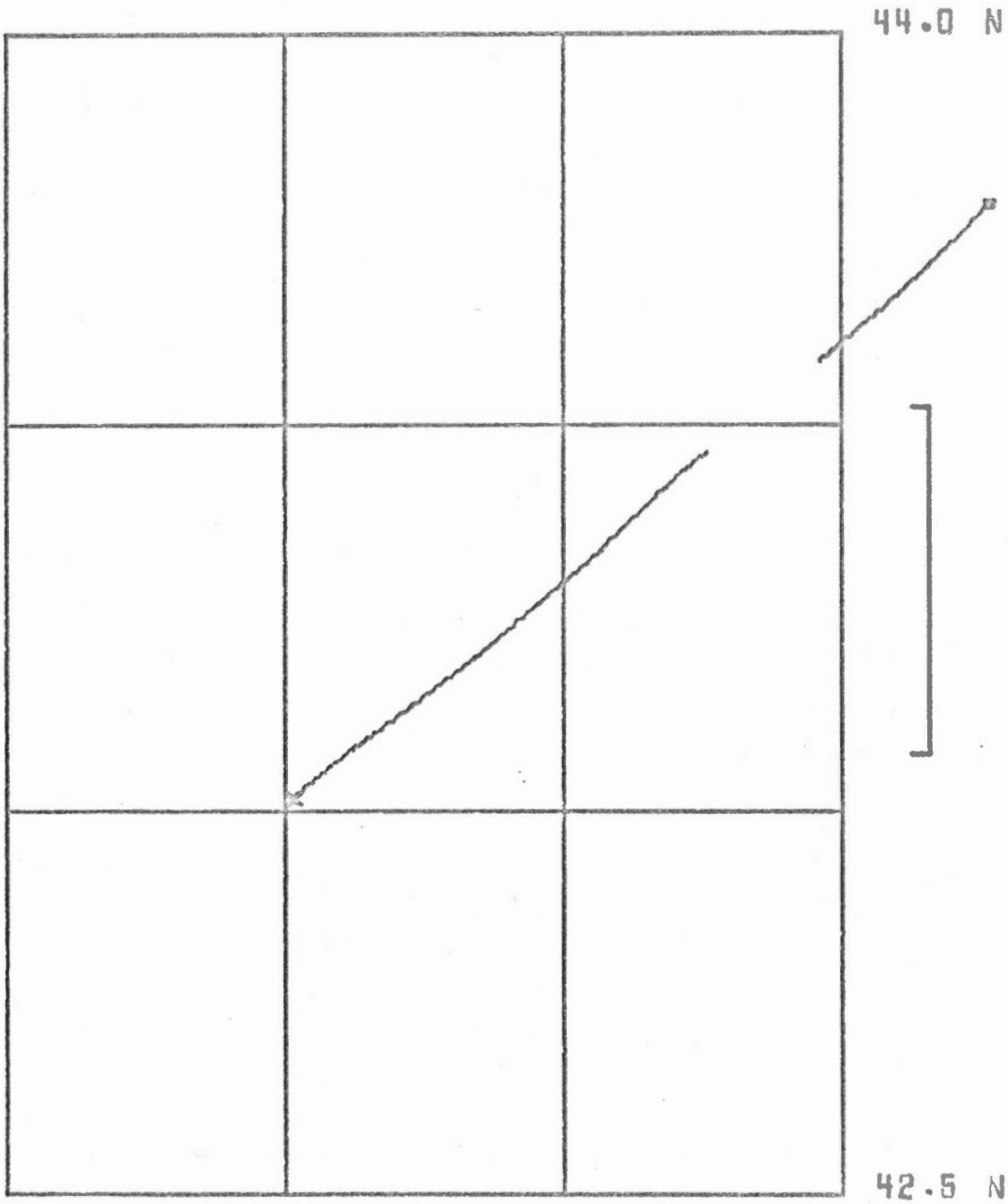
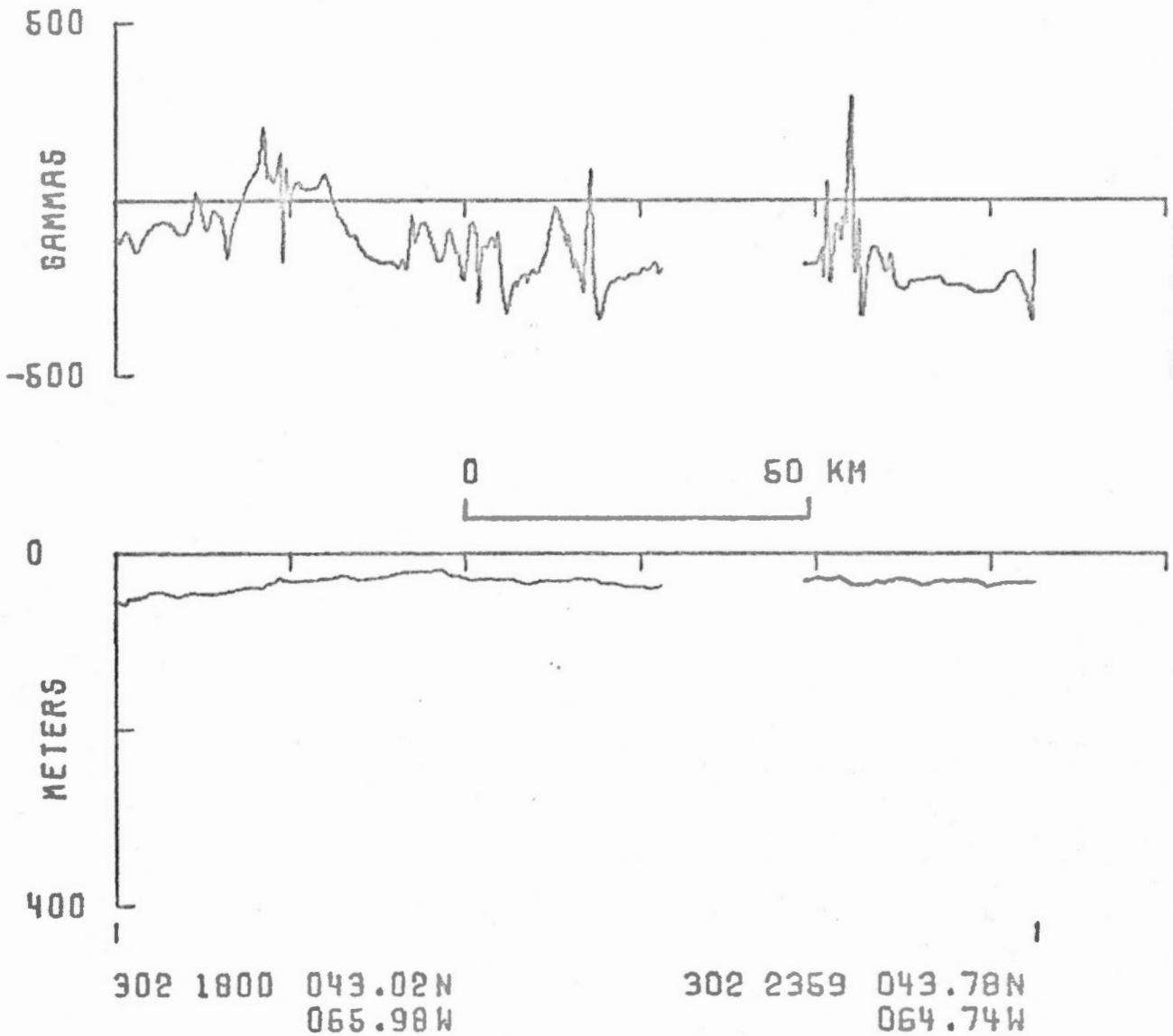
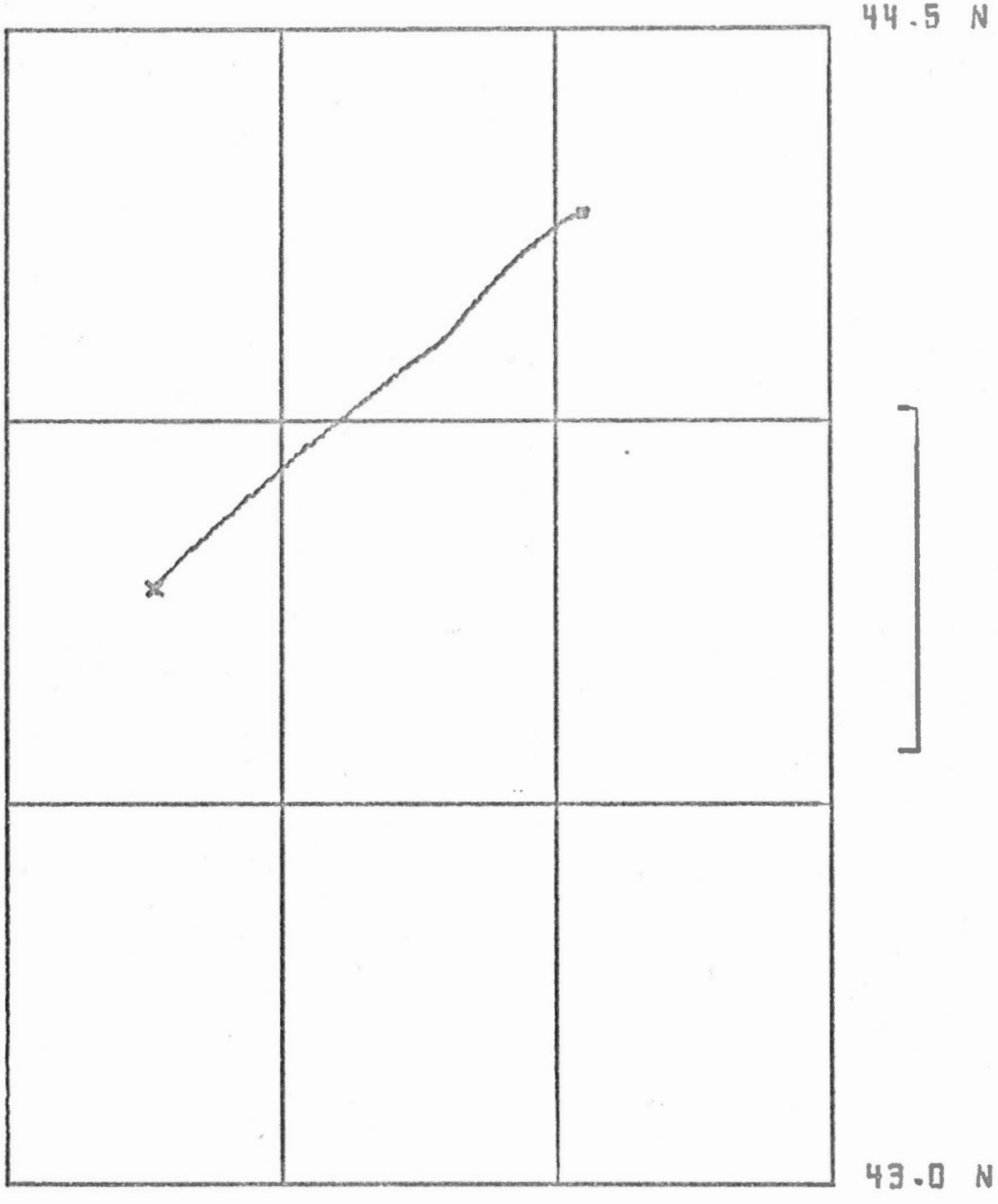
GAMMAS
-500
0
50 KM
0
METERS
400
302 1800 043.01N
065.99W
302 1543 043.04N
065.44W

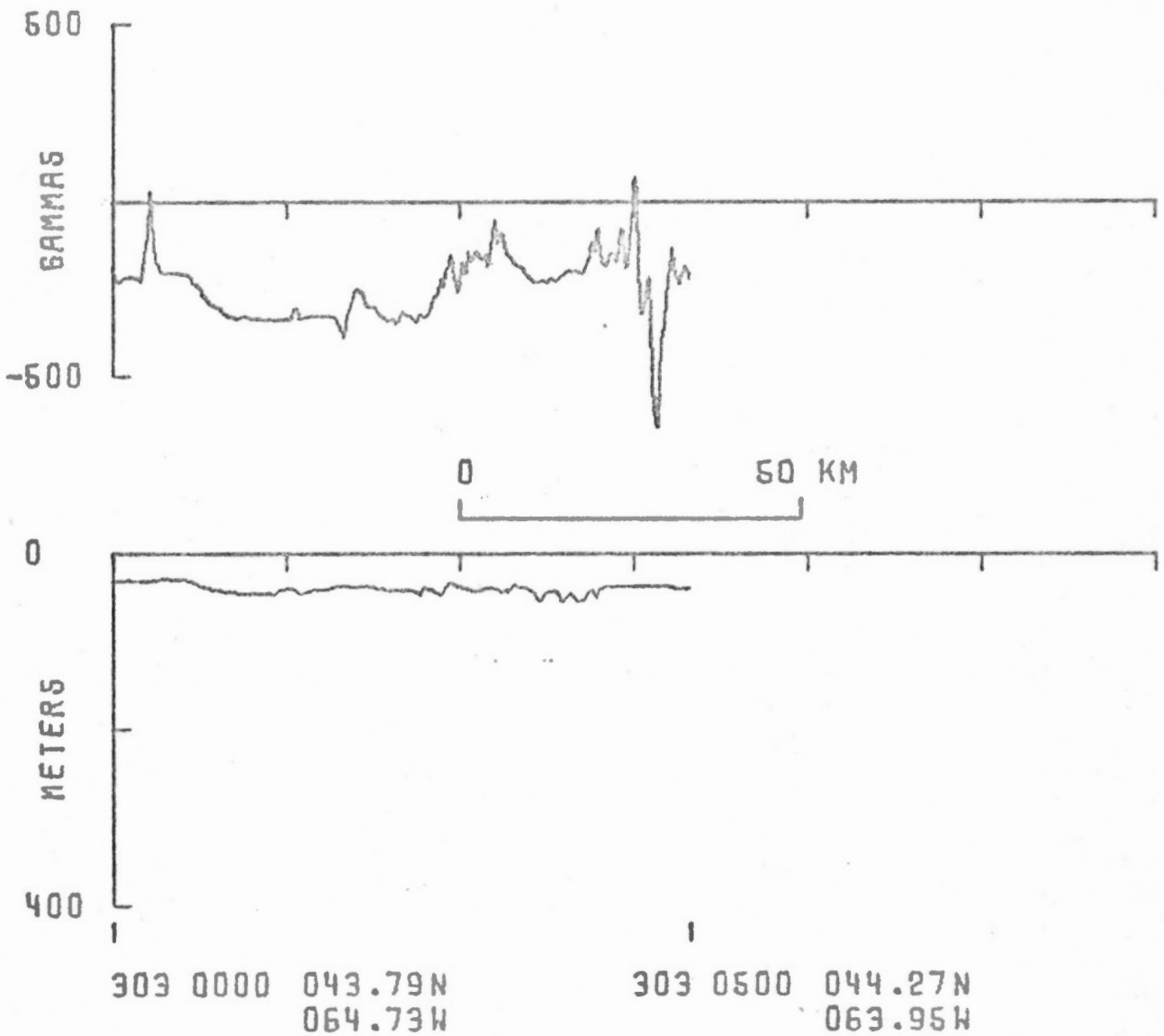
1/1000000 AT 43N




600
GAMMAS
-600
0
50 KM
0
METERS
400
302 1800 043.02N
065.98W
302 2359 043.78N
064.74W

1/1000000 AT 43N




600
GAMMAS
-600
0
50 KM
0
METERS
400
303 0000 043.79N
064.73W
303 0500 044.27N
063.95W

APPENDIX 'D'

BOTTOM GRAVITY STATIONS

STN.	LATITUDE	LONGITUDE	GRAVITY TOTAL FIELD	FREE AIR ANOMALY	BOUGUER ANOMALY	DEPTH (FEET)
01	42°27.5'	65°01.2'	980471.9	44.4	52.8	402
02	42°21.0'	65°13.4'	980475.6	57.4	66.0	408
03	42°36.5'	65°34.5'	980461.3	27.6	33.7	294
04	42°48.5'	65°52.0'	980457.5	7.0	12.8	276
05	43°00.7'	66°08.5'	980470.3	- 2.5	4.5	336
06	42°43.3'	66°25.5'	980461.4	13.1	20.6	360
07	42°50.0'	66°42.7'	980505.7	27.8	41.4	648
08	42°00.0'	66°17.0'	980405.1	29.7	34.7	241
09	41°51.0'	66°25.5'	980377.9	15.0	20.4	255
10	42°02.0'	66°39.0'	980390.7	13.9	18.4	216
11	42°02.8'	67°00.6'	980390.2	14.3	18.2	186
12	42°13.0'	66°57.0'	980450.2	24.1	38.8	702
13	42°23.0'	67°07.0'	980487.1	20.4	43.0	1080
14	42°44.0'	67°30.5'	980493.5	14.9	31.5	792
15	42°46.5'	67°43.5	980491.5	15.2	29.9	702
16	42°55.7'	67°31.5'	980493.6	1.5	16.8	732
17	43°10.5'	67°44.0'	980520.8	13.4	26.6	630
18	43°09.5'	67°21.0'	980519.2	18.1	29.8	558
19	43°12.5'	67°05.0'	980533.9	23.5	36.7	630
20	43°09.0'	67°01.0'	980521.9	20.4	32.4	576
21	43°17.5'	66°47.0'	980541.6	35.9	45.3	450
24	43°15.5'	65°58.5'	980456.3	-25.3	-22.4	138
25	43°17.5'	66°06.5'	980474.0	-13.1	- 9.5	174
26	43°19.5'	66°10.0'	980485.8	- 3.0	.2	156