APPENDIX I. BATHYMETRIC, MAGNETIC AND SEISMIC REFLECTION DATA, DEEP SEA DRILLING PROJECT, LEG 25

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The *Glomar Challenger*, DSDP Leg 25, started from Port Louis (Mauritius) on 28 June 1972 and ended in Durban (South Africa) on 22 August 1972 after having occupied 11 sites and steamed 5408 nautical miles in the western Indian Ocean. The underway data (bathymetry, magnetics, and seismic reflection profiles) collected during the cruise are presented as two separate sets of profiles. The location of these profiles is given on the track chart of Figure 1, which has been derived from all available navigational data given in Tables 1 to 16.

The first set of profiles is a computer plot of depth and total intensity magnetic anomalies presented as a function of distance, location, and time. The same distance and time scale is used for both the bathymetry and the magnetics in order to allow easy comparisons and possible correlations (Figure 2). The data are presented in several sections, which take into account either major course changes or drill site locations. Each section is identified by a code number: GC25-1 corresponds to the first section, from Mauritius to Site 239, and GC25-2 to the second section, from Site 239 to position 16°55.1′S and 54°21.4′E where the ship's track is altered from a north northeast course to north, northwest course, etc. These code numbers appear on each section at the bottom left corner of the figure and also along the corresponding track in Figure 1. The data collected in the vicinity of a drill site, which belong more appropriately to the site survey, are not given in this chapter. The bottom profiles indicate the depth in meters, assuming a sound velocity for seawater of 1500 m/sec; the scale is mentioned at the start of each section. The vertical exaggeration of the depth profile is 37:1. The top profiles represent the total intensity magnetic anomaly in gammas with the scale also given at the beginning of each section. The regional magnetic field has been computed and removed using the Cain et al. (1964) POGO 10/68 coefficients. All fixes and "pit log" positions that were used (see Tables 1 to 16) are marked on each section by a vertical line of dots; selected positions, depending on space possibilities as allotted by the computer printout, are given in full on the diagram, and the dots are aligned with the lower part of those numbers which correspond to that position. The vertical spacing of these dots corresponds, for the depth profiles, to a 1000-meter interval and, for the magnetics, to a 200-gamma anomaly amplitude. The crosses on these vertical lines indicate sea level for the depth profile and the zero level for the magnetic anomaly profile. GMT time in hours is marked and labelled every 6 hours at the top of each figure. The dates (day and month) also are shown at the same level of the diagram directly after 0000 GMT of each day. A distance scale, annotated every 100 nautical miles, is given at the bottom of each figure; all the sections start at zero mile and the last figure along this scale corresponds to the section's total length in nautical miles. The courses (true course) and large course changes, if allowed by space requirements, are given just above the distance scale at the 6000-meter depth line.

The second set of data are photographic reductions of the original 10-sec-sweep seismic reflection profiles and, consequently, are displayed as a function of time only (Figure 3). The section code numbers (GC25-1, GC25-2, etc.), used for the bathymetric and magnetic profiles, also appear on the photographs. GMT time in hours is marked and labeled every 4 hours at the bottom of each photograph. The mean course for each section is given in brackets after each section code number; speed information is shown at the beginning of each photograph just above the hour scale and whenever large changes (about 1 kn or more) occur for at least one hour of time. Significant recording interruptions are indicated by two hash marks. Vertical scales are in seconds of acoustic two-way travel time (DT). The vertical exaggeration varies, according to the speed, and is between 15:1 and 30:1. Site approaches and site surveys usually are done at 5 or 7 knots, while underway data, collected between sites, usually are obtained at 8 to 11 knots. For the convenience of those who will use this information, the seismic reflection profiles have been reversed and can be read from left to right on each sheet. Comparison with the first set of data (bathymetry and magnetics) is thus much easier. The site survey data are not presented in this chapter; they appear in the site reports (Chapters 2-10, this volume).

The navigational data for *Glomar Challenger* DSDP Leg 25, are summarized in Tables 1 to 16, where all fixes and all "pit log" positions are listed. Each table corresponds to one section. The first "distance" column (DIST) gives the distance in nautical miles between two successive positions; the corresponding true course and effective speed are given in the two next columns (CSE, SPEED). The last column on the right (DISTT) indicates the total distance from the start of each section to the position which is considered; the last figure at the bottom of that column represents the total length of the corresponding section. The site survey navigation data are not presented in these tables. The different sections which have been distinguished are indicated on the track chart of Figure 1. Along this track, GMT hour marks have been drawn every 3 hours and labeled every 12 hours. The site survey tracks are hardly distinguishable on this chart; they are given with more details in the respective site reports (see Chapters 2-10, this volume).

The bathymetric data were obtained with a Gifft precision depth recorder using a 12-kHz transducer-receiver system. The magnetic data were collected with a Varian proton-precession magnetometer with the sensor towed 300

meters behind the ship. The readings on the recorder were made every 5 minutes. The seismic reflection profiler consisted of two Bolt PAR 600 A airguns, a towed hydrophone array assembled by DSDP, a Bolt amplifier and bandpass filter, and an EDO Western Model PDR 333 recorder. Navigation was performed using an ITT Model satellite receiver and a PDP 8 computer system. Smooth navigation plots, bathymetric and magnetic plots were made using Institut National d'Astronomie et de Géophysique de Paris, IBM 360-65 computer.

Glomar Challenger left Port Louis (Mauritius) in a westerly direction and reached Site 239 after 1.5 days of steaming across the northern part of the Madagascar Basin and the southern part of the Mascarene Basin. Reunion Island was passed to the north; somewhat later, on 29 June 1972 at about 1700 GMT, an important fracture zone, unofficially named Mahanoro Ridge (*Conrad* 14 cruise) and running in a north northeast-south southwest (~35°) direction to the southern tip of Madagascar, was crossed. The basement reflector appeared clearly on the airgun record after having crossed this structure, and the selection of Site 239 was thus very easy.

Site 239 was left in a north northeast direction. The purpose of this slight deviation from the direct track to Site 240 was to attempt the recognition of possible sea floor spreading magnetic anomalies in the Mascarene Basin since no account of magnetic identification was available for this area. Some lineations (sections GC25-1 and GC25-2) were indeed observed, but the profiles were too short to be able to propose any identification. On 4 July 1972, at about 17°40′S (between 1500 and 2000 GMT), the ship's track crossed another important fracture zone which, according to the general bathymetric trend in this area, seems to run parallel to the so-called Mahanoro Ridge. At position 16°55′S and 54°21′E, the course was changed to a north northwest direction. *Glomar Challenger* passed west of Tromelin Island, then along the Amirante Trench through the Farquhar group. Extremely rough basement topography, associated with large magnetic anomalies ranging between 200 and 800 gammas, was observed all along this track (section GC25-3). Entering in the southwestern Somali Basin, basement reflections could no longer be resolved. However, it was known from previous work (Bunce et al., 1967; Schlich et al., 1972) that the sediment cover was relatively thin, 1.0 seconds to 0.5 seconds DT (double way time) and even less over small topographic highs. Near site 240, the airgun records showed a thin transparent sediment layer overlying a stratified sequence of poorly defined thickness, which prevented any precise basement depth computation.

From Site 240, *Glomar Challenger* proceeded west to Site 241, which is located on the lower East African continental rise. At about 1100 GMT on 12 July 1972, the ship's track (section GC25-4) crossed a very distinct topographic high associated with a 300-gamma magnetic anomaly. This feature may be interpreted as the southern continuation of Chain Ridge. Farther to the west, the sediment thickness increases very rapidly, and it has been shown (Schlich et al., 1972) that basement is at least as deep as 4000 meters below the sea floor at Site 241.

On leaving Site 241, *Glomar Challenger* had to change course twice for technical reasons (sections GC25-5 and GC25-6) and then proceeded south towards Site 242 (section GC25-7). The sea floor rises gently from 4000 meters to about 2500 meters and is cut by several submarine canyons, which are clearly shown on the airgun records. The sediments remain very thick and basement reflections cannot be seen. At latitude 15°55.7′S, about 20 miles due west of the proposed Site 242, *Glomar Challenger* changed course to about 090° and crossed the so-called Davie Ridge at a right angle. No significant magnetic anomaly was recorded across the ridge (less than 50 gammas). Acoustic basement appears clearly on the airgun record but does not correspond to real basement (as proven later by *Marion Dufresne*, Cruise 2, 1973).

Proceeding from this point south towards Sites 243 and 244, only small magnetic anomalies were recorded; they are associated with topographic highs along the north-south trending Davie Ridge and appear as short wavelength anomalies, probably related to the presence of volcanic material (section GC25-8). Before reaching Sites 243/244, the Zambesi Canyon was crossed several times, but the acoustic basement traced into and across the area with a flexotir device (*Gallieni*, Cruise 6, 1972) could not be seen on the *Glomar Challenger* airgun record (Chapter 6, this volume).

The *Glomar Challenger* left Site 244 on 29 July 1972, passed the Zambesi Canyon again, and steamed across the Madagascar Ridge in a southeast direction towards Site 245. Very large magnetic anomalies associated with rugged topography were recorded along this track (section GC25-9). South of Cap Ste. Marie, Madagascar, these anomalies exceed 1000 gammas in amplitude. In the Madagascar Basin, basement is clearly observed on the airgun record and can be traced into, and across, the area of Site 245. Magnetic anomalies of 400 gammas amplitude were recorded. This is somewhat surprising considering the parallelism of *Glomar Challenger* track with the anticipated magnetic lineation trends in this region (Schlich, Patriat, and Segoufin, 1972). These anomalies are without doubt related to the successive basement highs which can be seen on the airgun records.

In order to drill an intermediate site, which was located in the extreme southern part of the Madagascar Basin, Site 245 was left in a southwesterly direction (section GC25-10). In fact, north of Site 245, basement topography becomes rapidly very rough; this may be explained by the proximity of the Southwest Indian Ridge. Moreover, although it has been established (Schlich, this volume) that Site 245 is located on anomaly 29 of the Heirtzler et al. (1968) time scale, older anomalies, such as anomaly 30, could not be identified from the magnetic data recorded along this track. Because of these two facts, plus unfavorable weather conditions, this proposed intermediate site was abandoned and *Glomar Challenger* steamed west towards Sites 246 and 247, located on the Madagascar Ridge (sections GC25-11 and GC25-12). A series of well-stratified layers, following more or less the gentle upward slope of the east flank of the Madagascar Ridge, can be traced on the *Glomar Challenger* airgun record; but the

acoustic basement, which corresponds to a high velocity layer (5 km/sec) according to *Gallieni* Cruise 4 (1971), appears only faintly on these records. Magnetic anomalies of relatively long wavelengths (~80 km) are observed in the lower part of the eastern flank of the ridge, and short wavelength anomalies of low amplitude on the ridge crest itself may indicate minor volcanic intrusives.

By contrast, the western flank of the Madagascar Ridge is very steep and suggestive of large-scale vertical faulting. A magnetic anomaly of more than 1000 gammas amplitude corresponds to this abrupt boundary (section GC25-13). In the Mozambique Basin, the basement was not recorded continuously, but its presence can be inferred at some locations. Patches of very transparent sediments overlie a sequence of well-stratified layers which thin towards the Mozambique Ridge (section GC25-14).

Before reaching Site 248, at about 0400 GMT on 13 August 1972, a clear intrusive structure that is associated with a large amplitude magnetic anomaly was observed on the records (section GC25-13). At Site 248, the basement reflector is distinct and the selection of the drill site was very easy.

The very steep eastern flank of the Mozambique Ridge was crossed enroute to Site 249. The airgun record (section GC25-15) shows a very rough basement topography overlain by sediment accumulations of variable thickness (0 to 1 second DT). The magnetic anomalies over the ridge have relatively long wavelengths (~50 km) and have an amplitude range of about 400 gammas. Site 249 was left on 20 August 1972, and *Glomar Challenger* steamed westward over the western flank of the Mozambique Ridge, which gradually descends into the Natal Valley, and finally called at Durban on 22 August 1972 (section GC25-16).

ACKNOWLEDGMENTS

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I wish also to thank the Global Marine shipboard staff, in particular, Captain J. Clarke and Operations Manager J. Shore.

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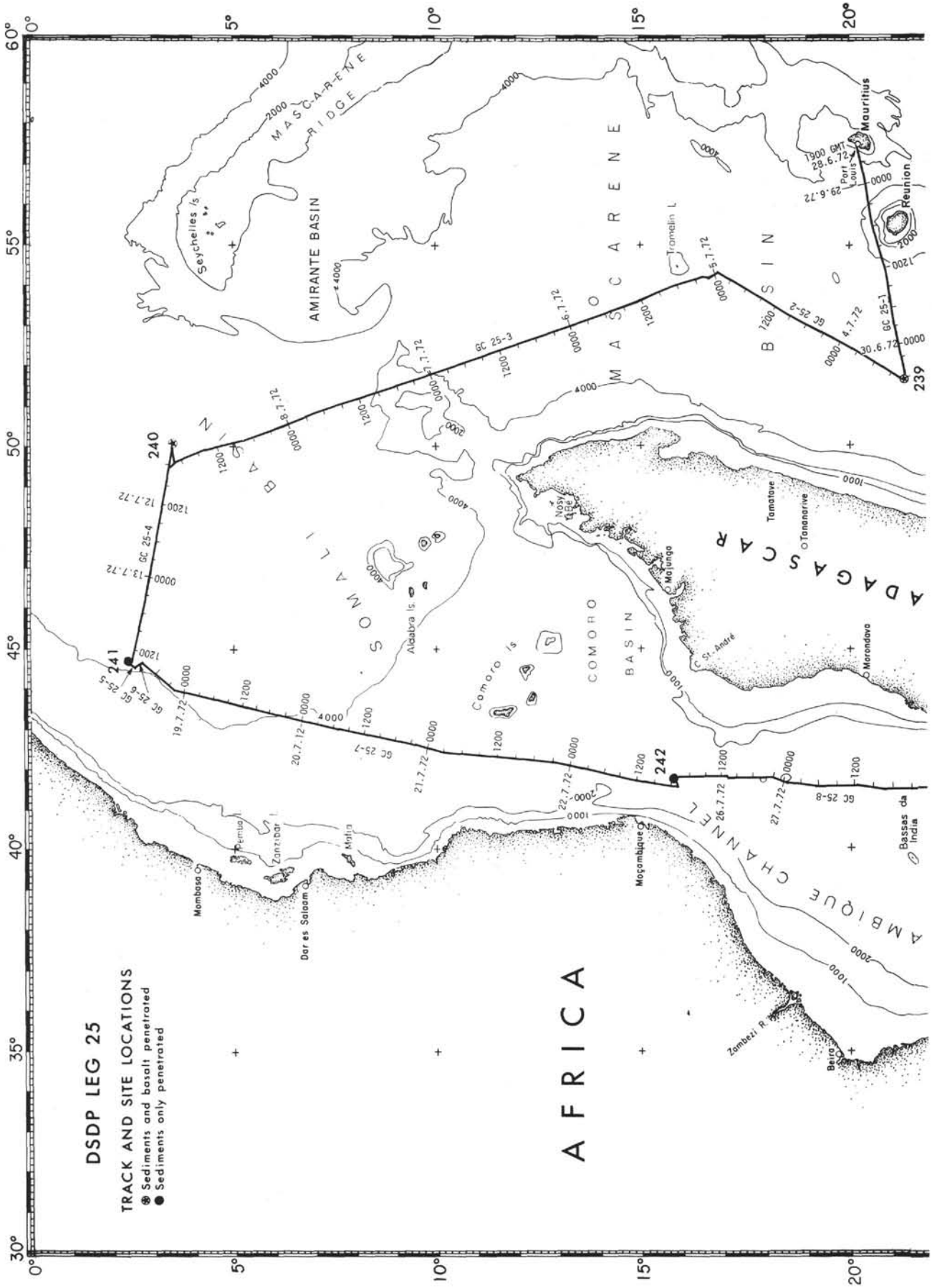
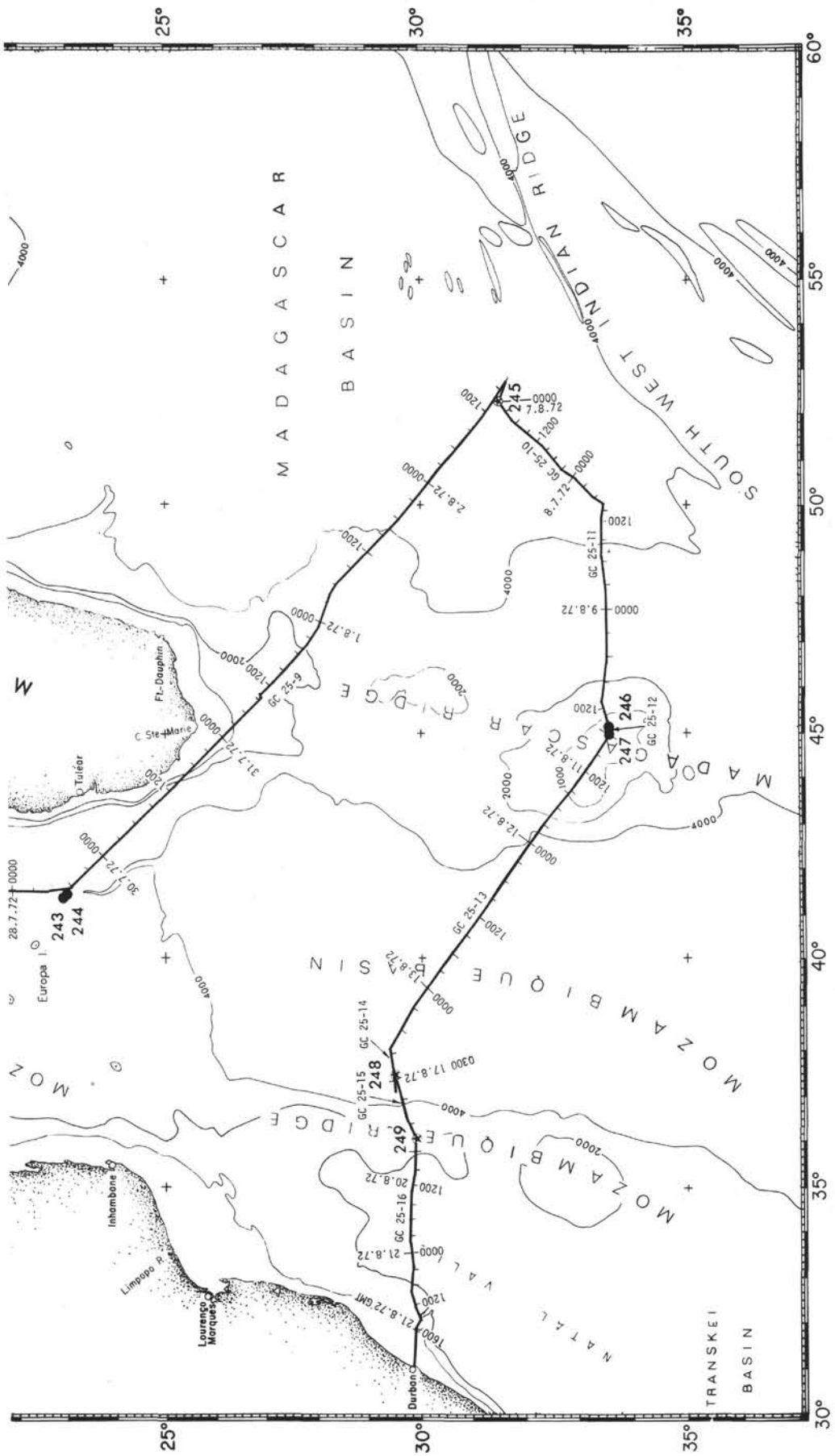


Figure 1. Glomar Challenger, *DSDP Leg 25, Track Chart from Mauritius to Durban.*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MOZAMBIQUE BASIN
NATAL VALLEY
TRANSKEI BASIN
MADAGASCAR RIDGE
Europa I.
Ft. Dauphin
C. Ste Marie
Tuléar
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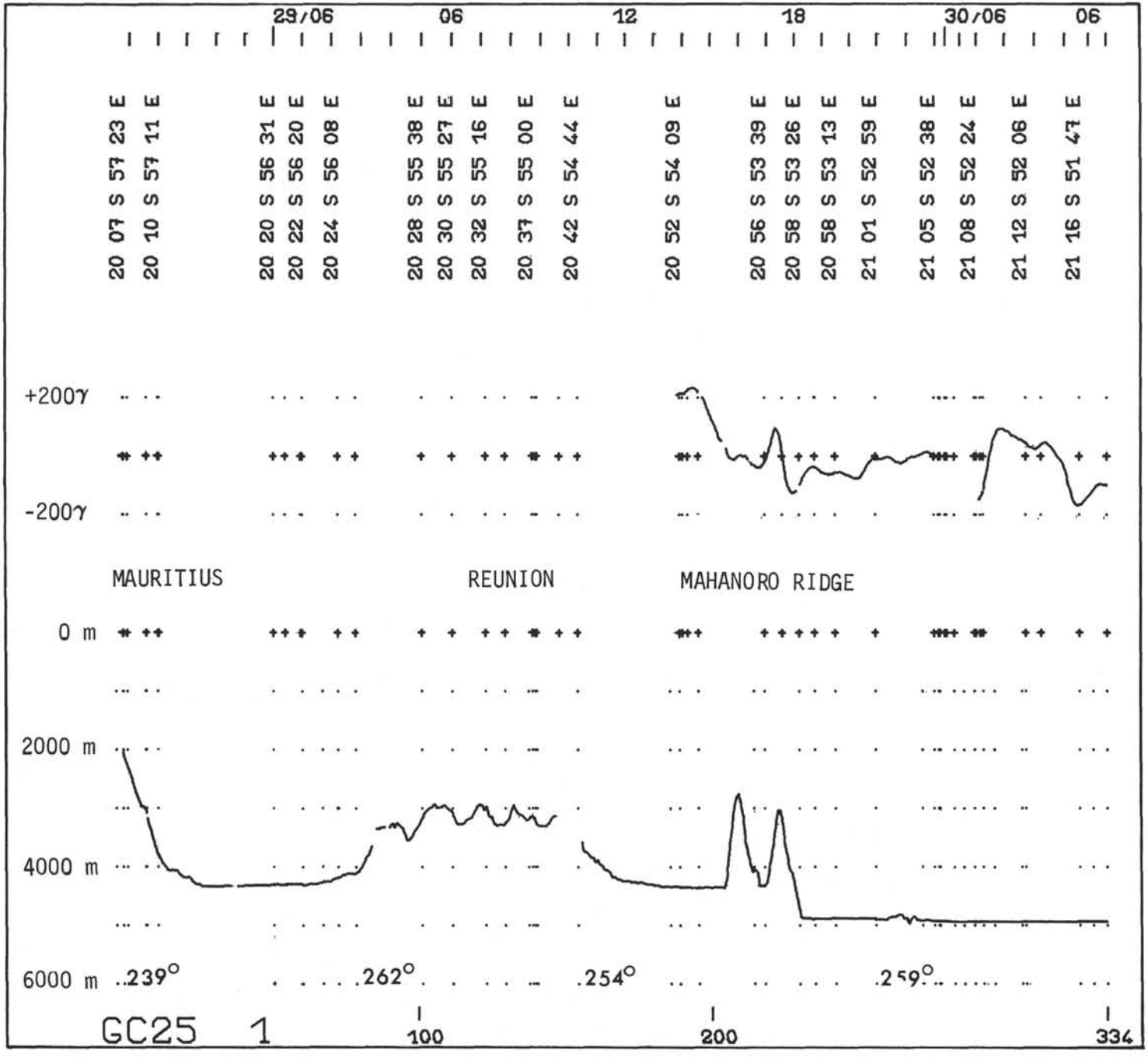
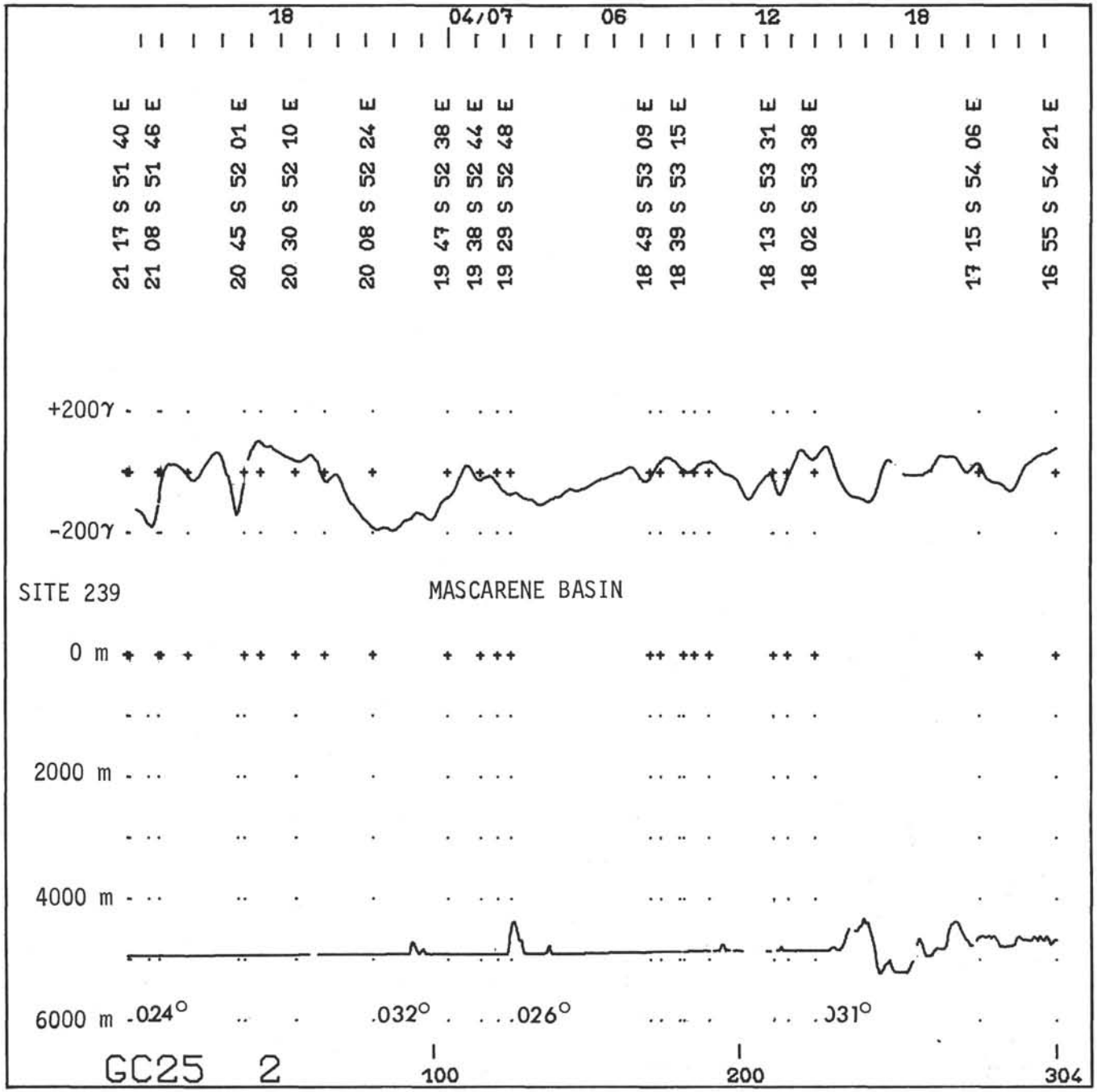


Figure 2. Glomar Challenger, *DSDP Leg 25, depth and total intensity magnetic anomaly profiles displayed as a function of time, location, and distance.*



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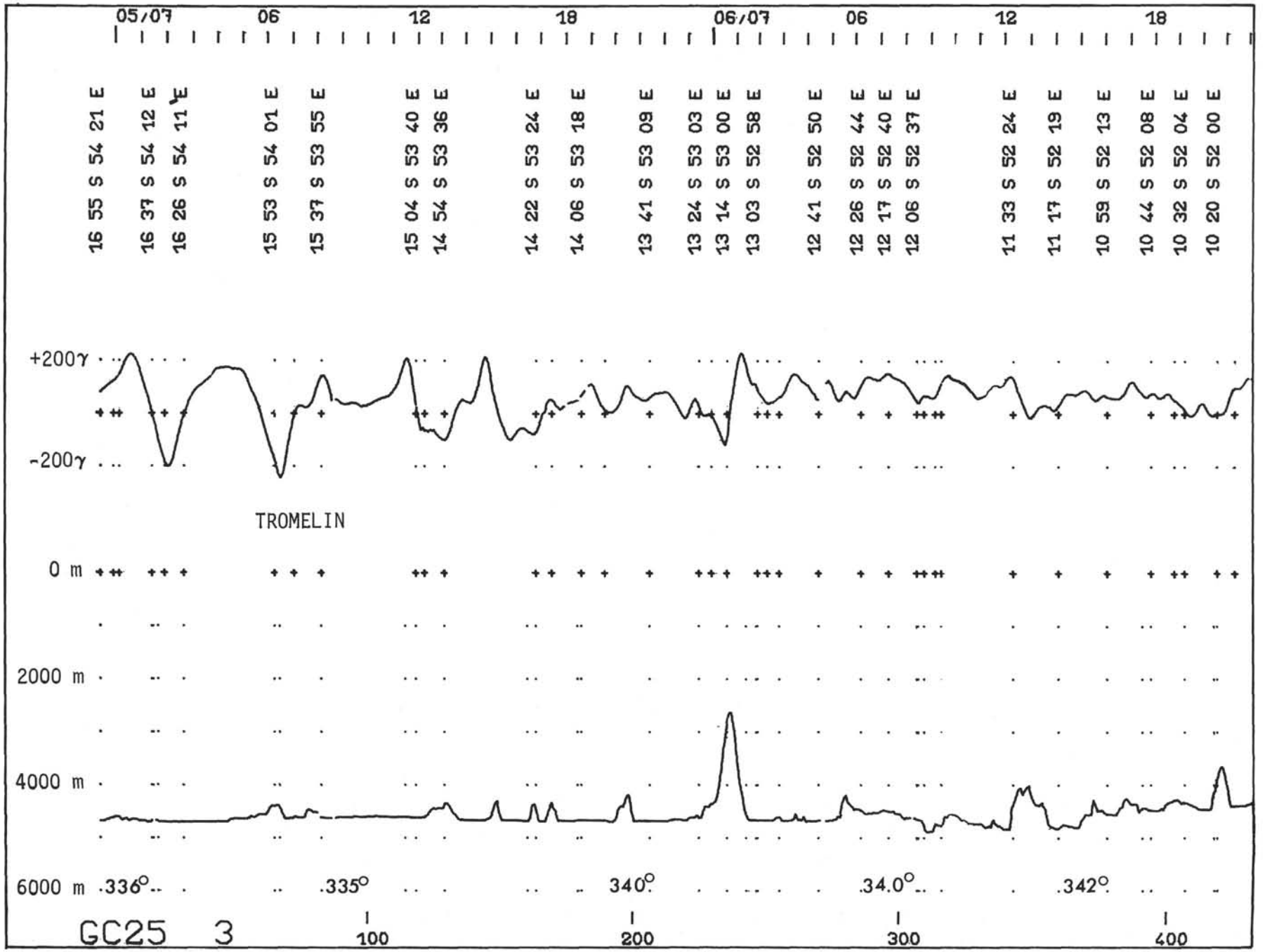

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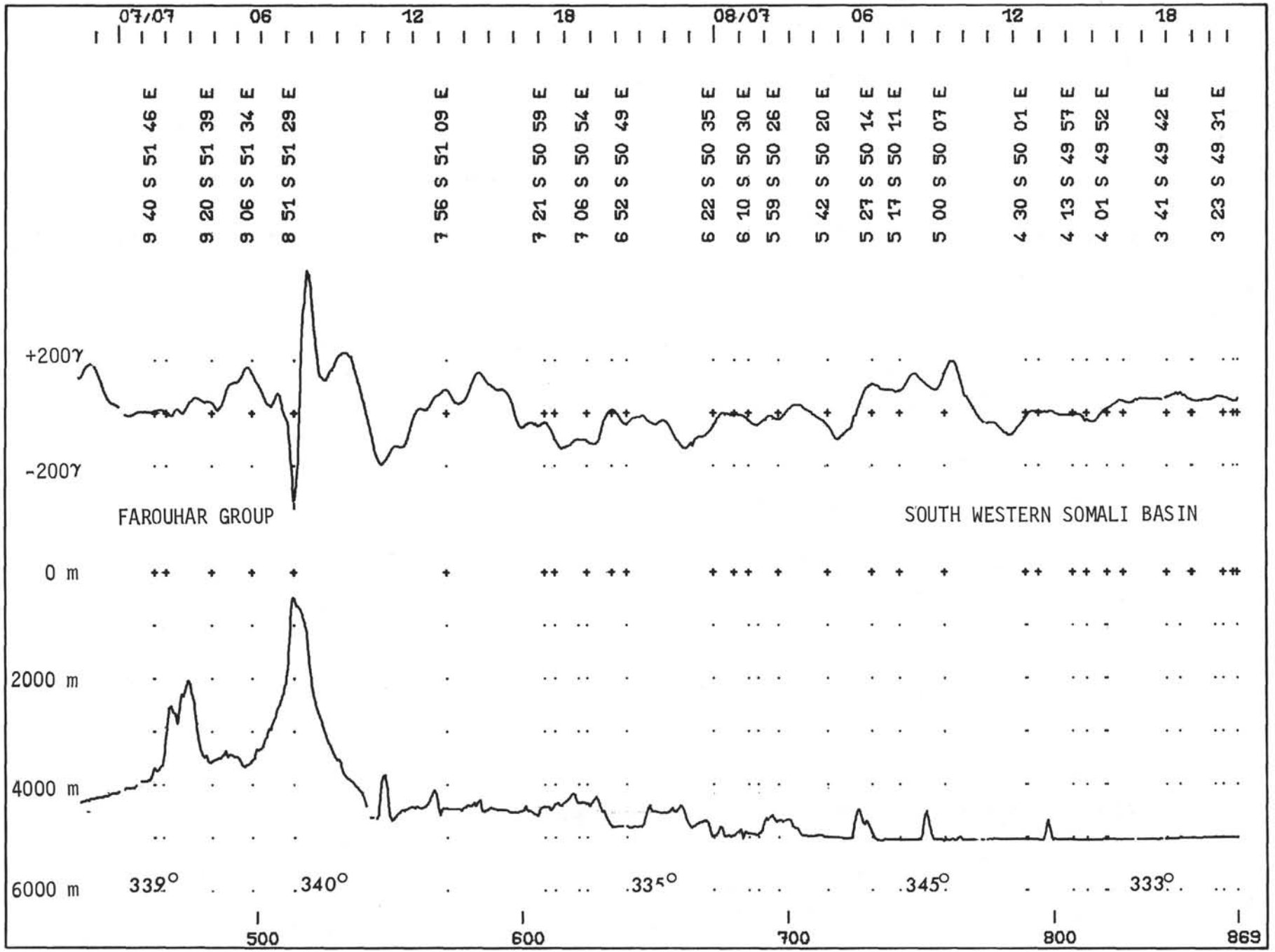

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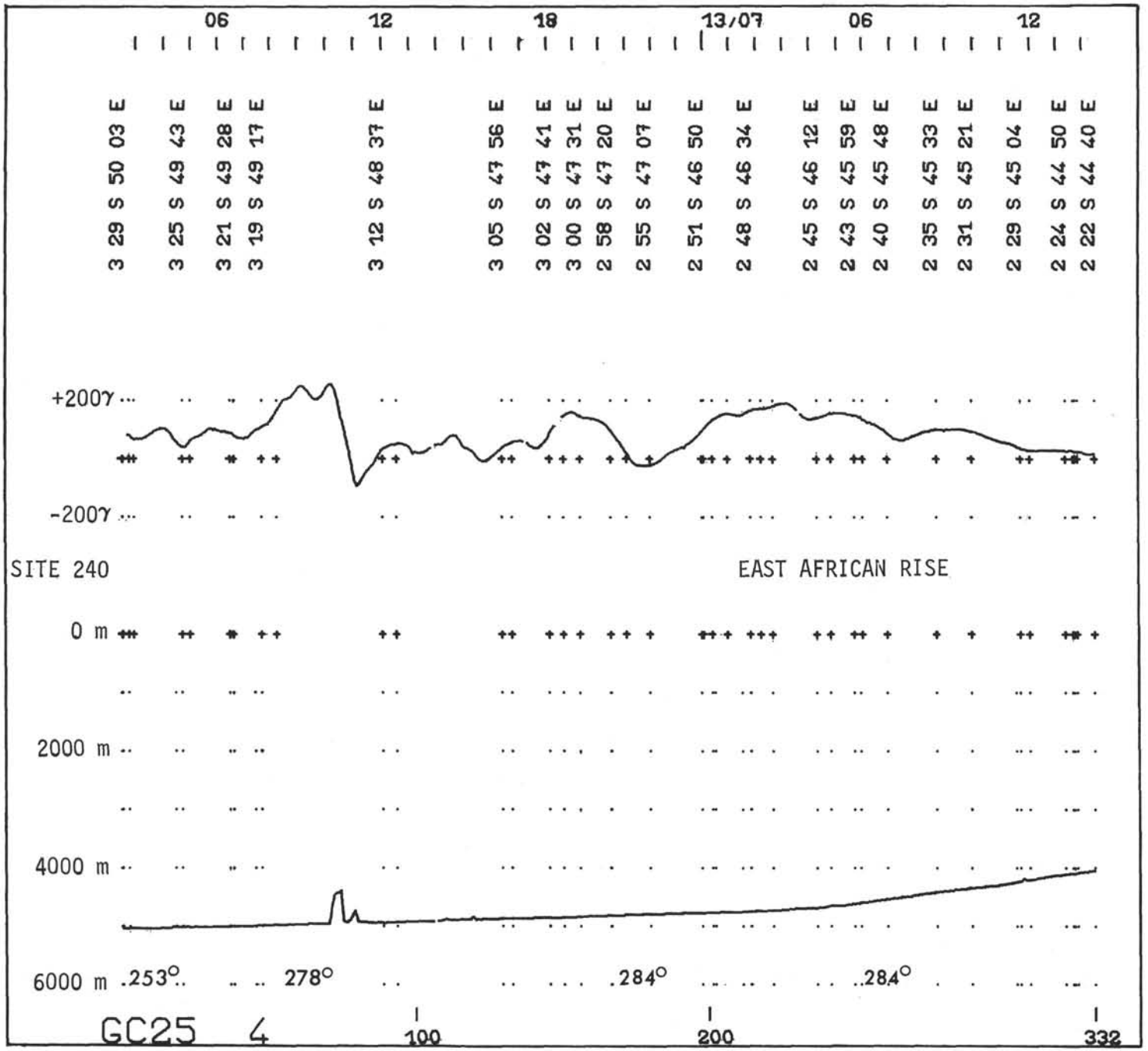

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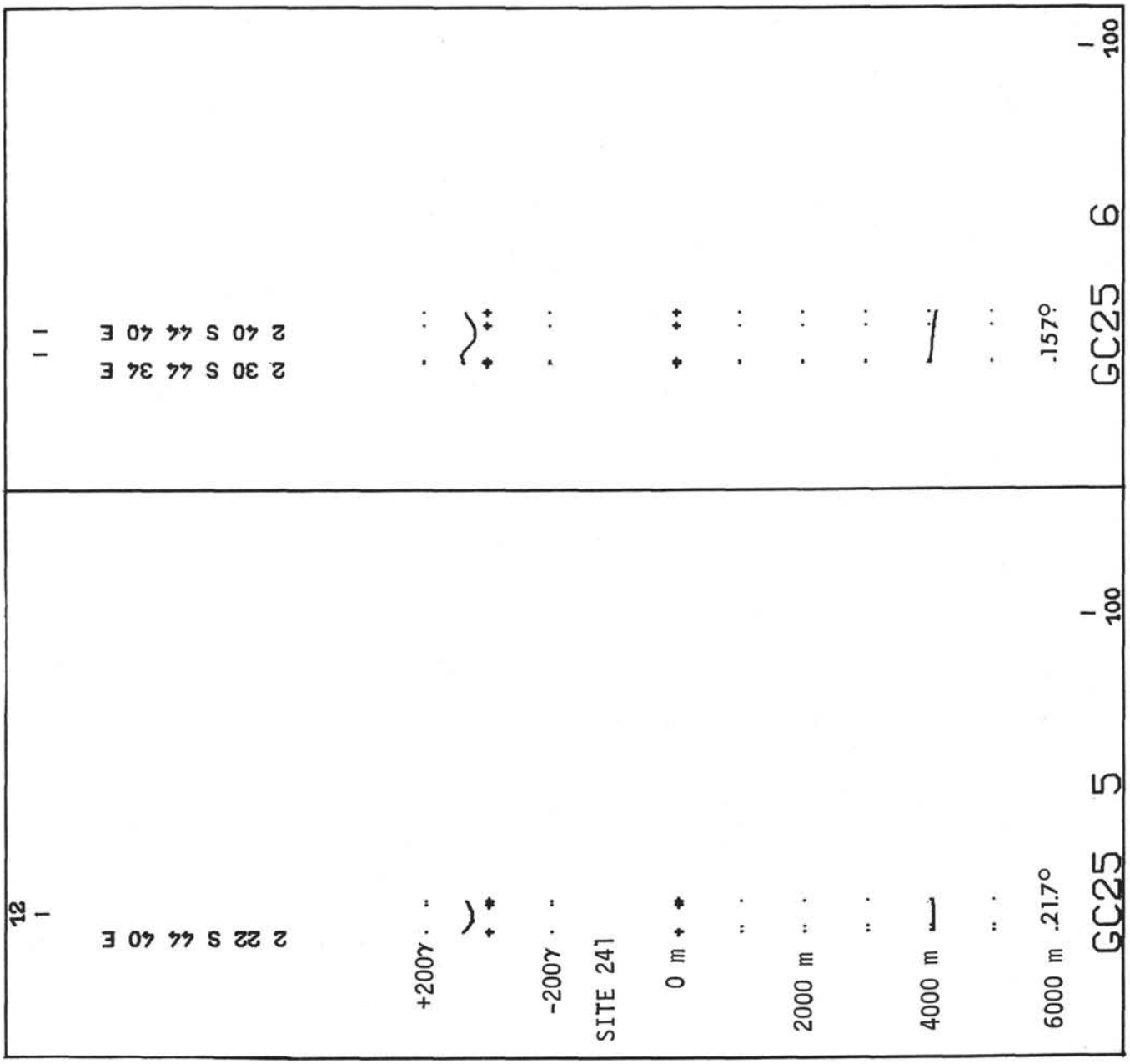

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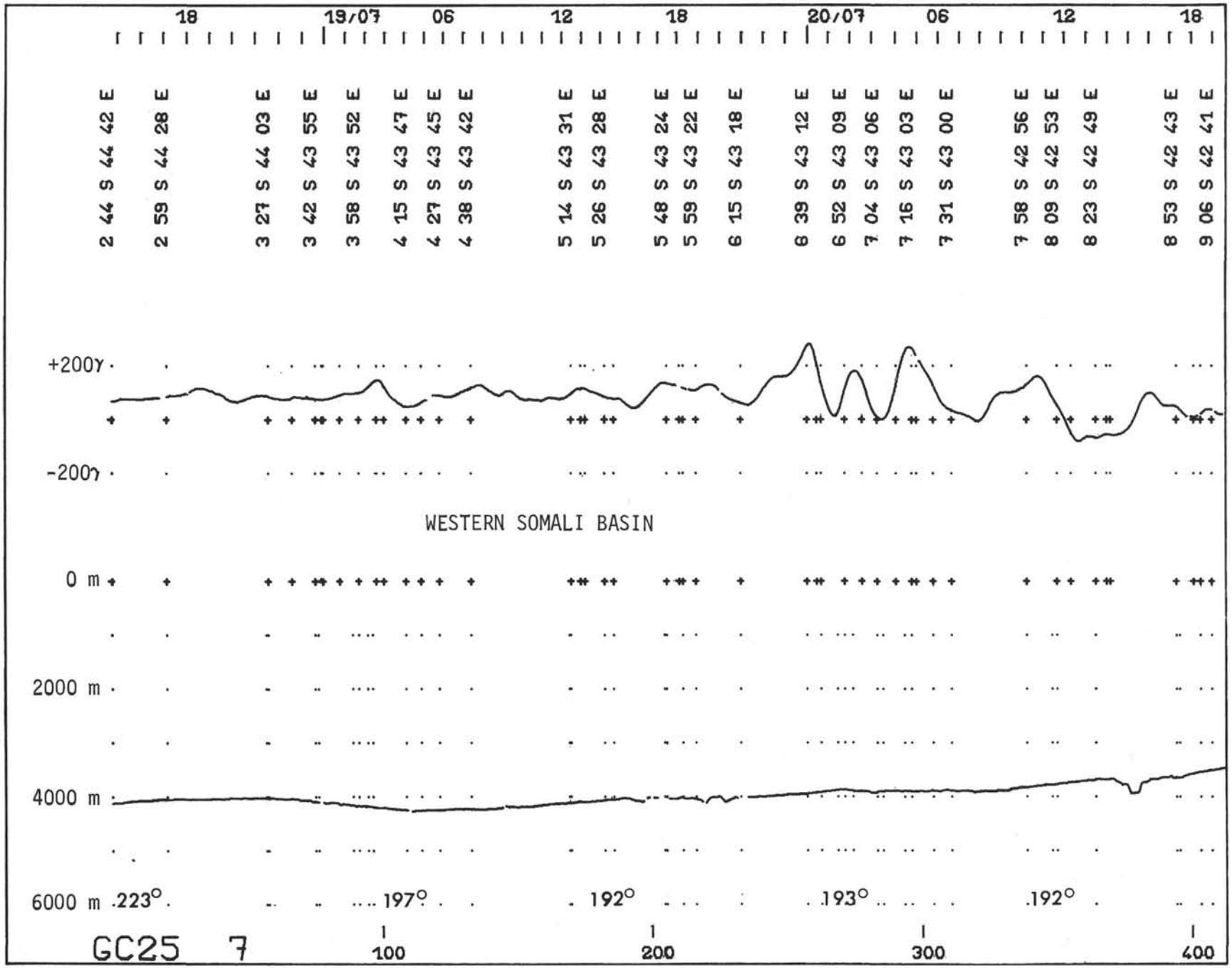

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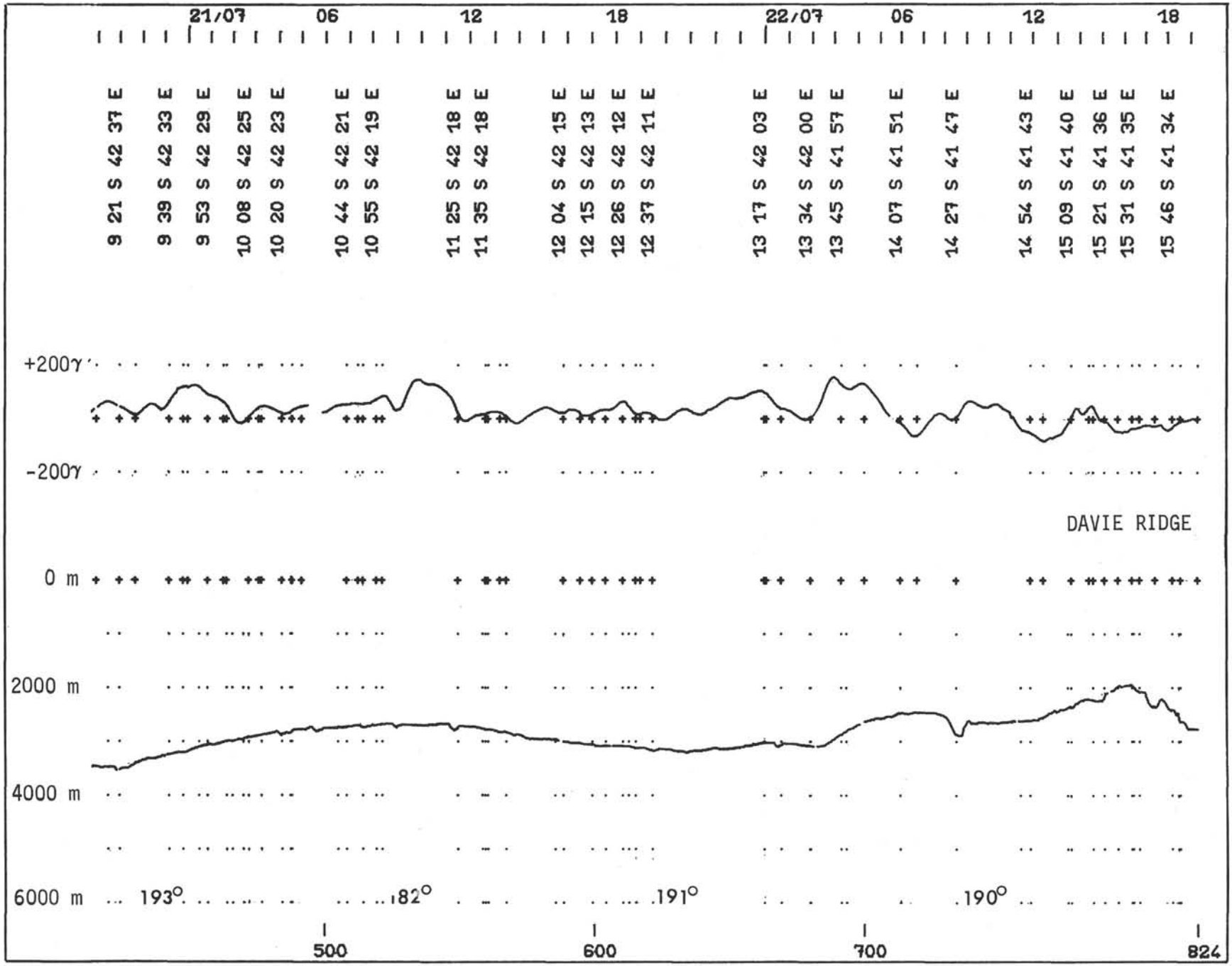

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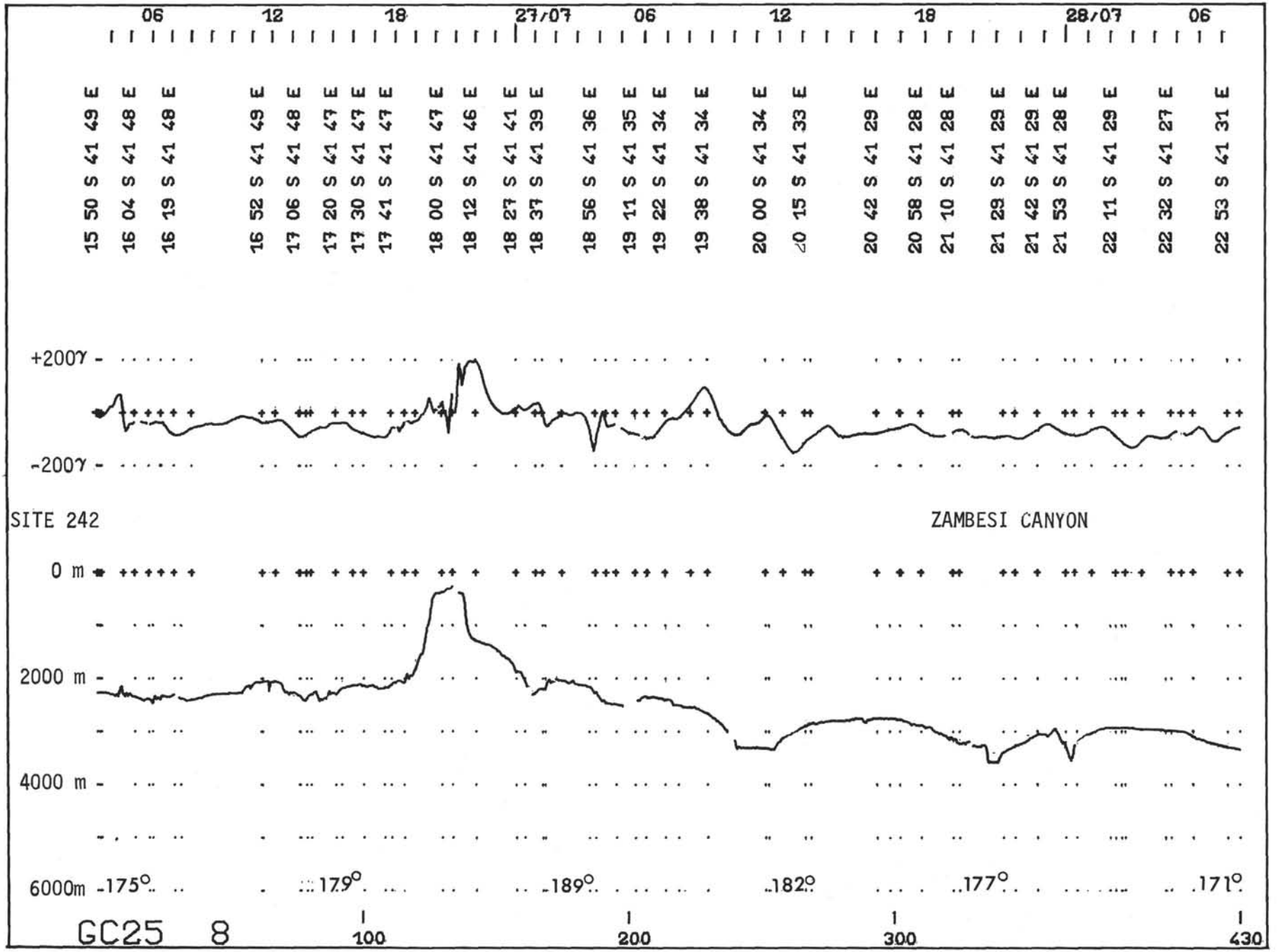

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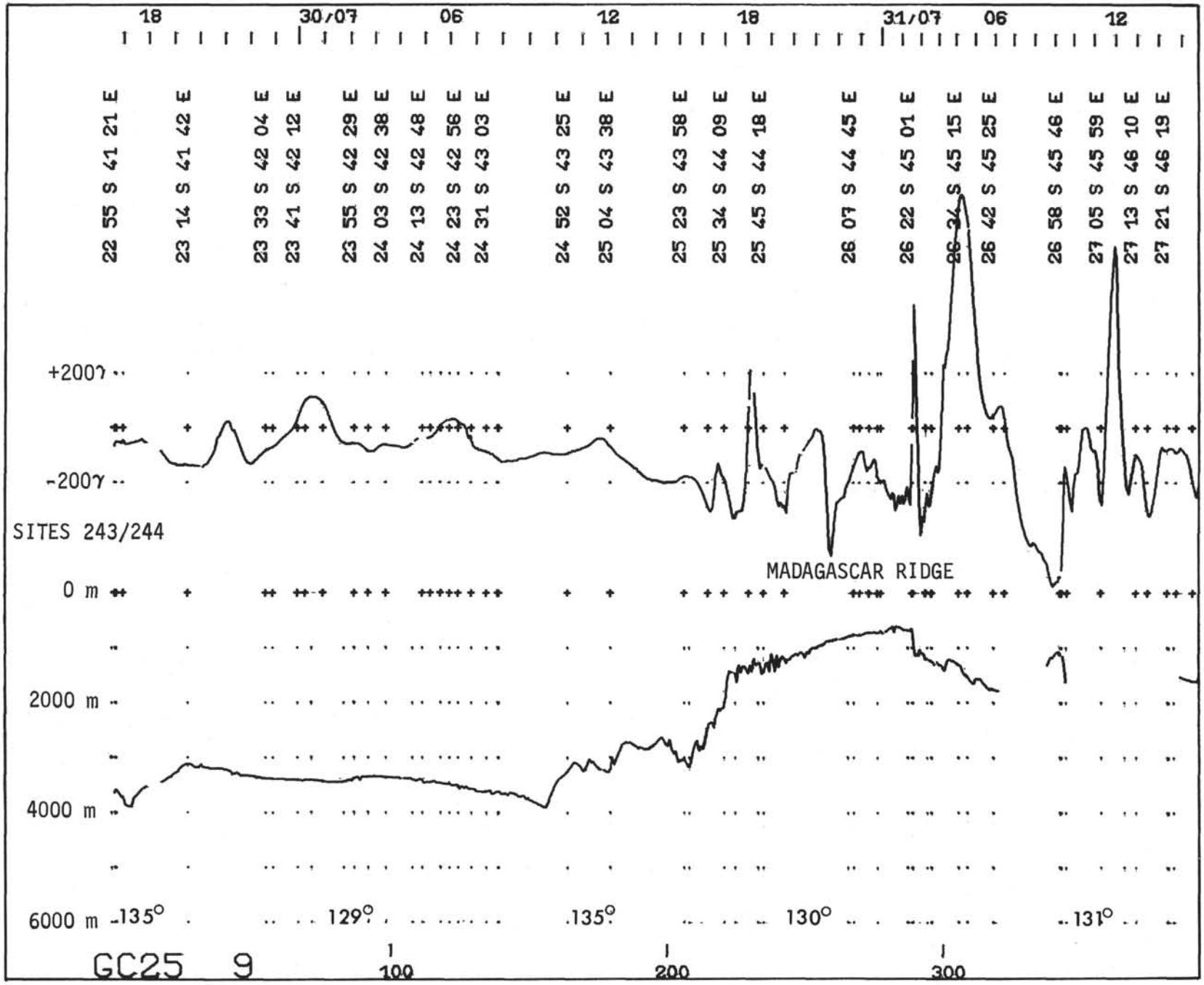

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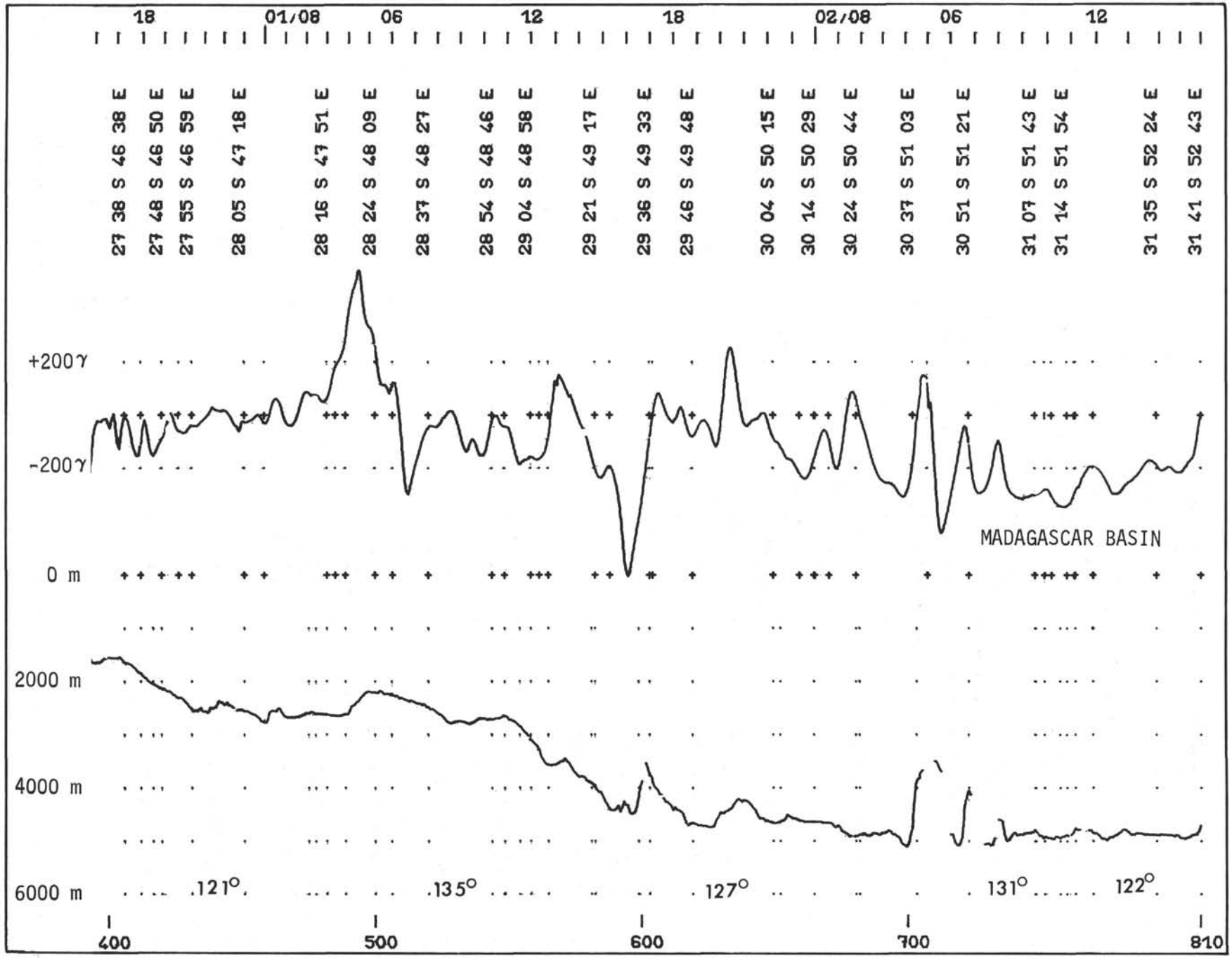

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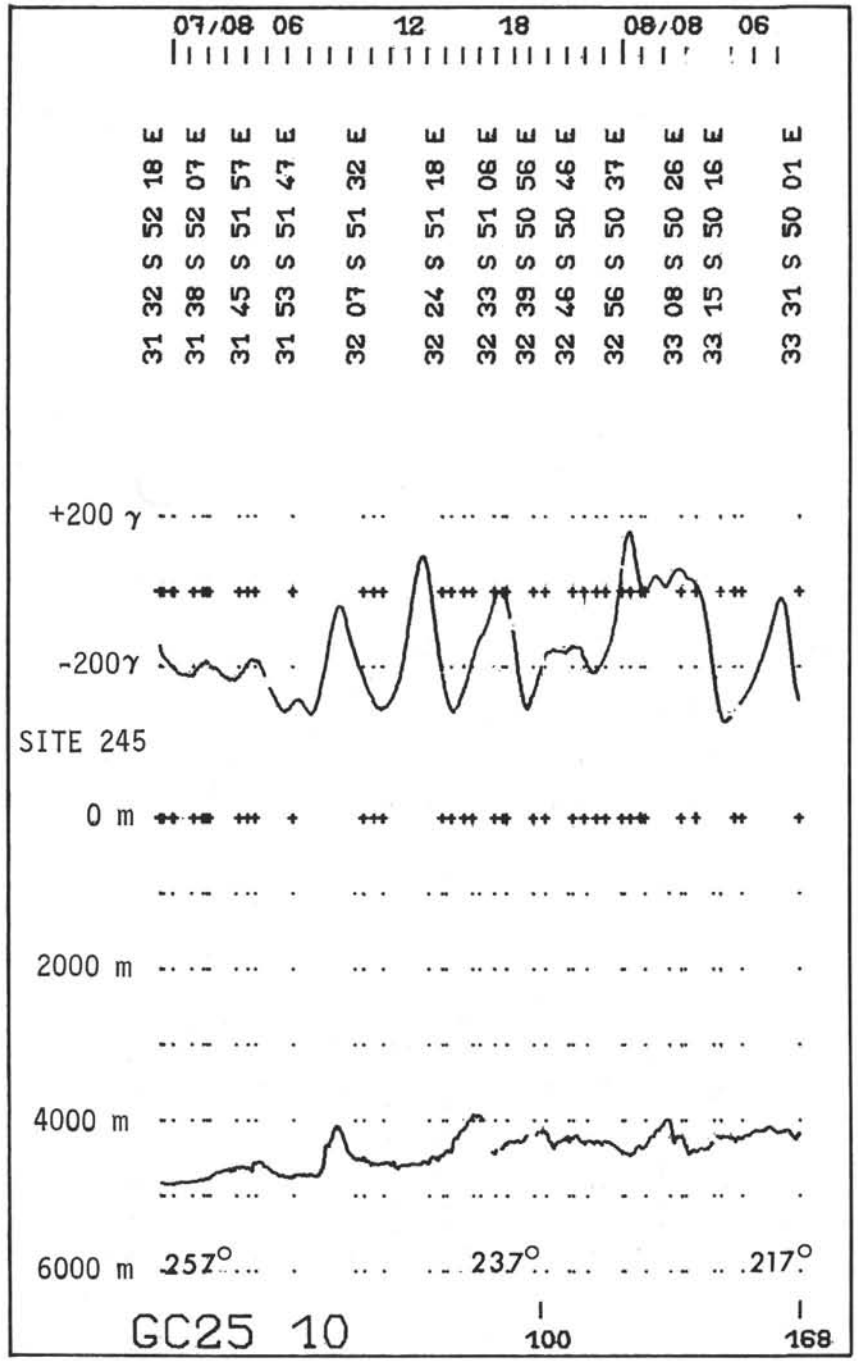

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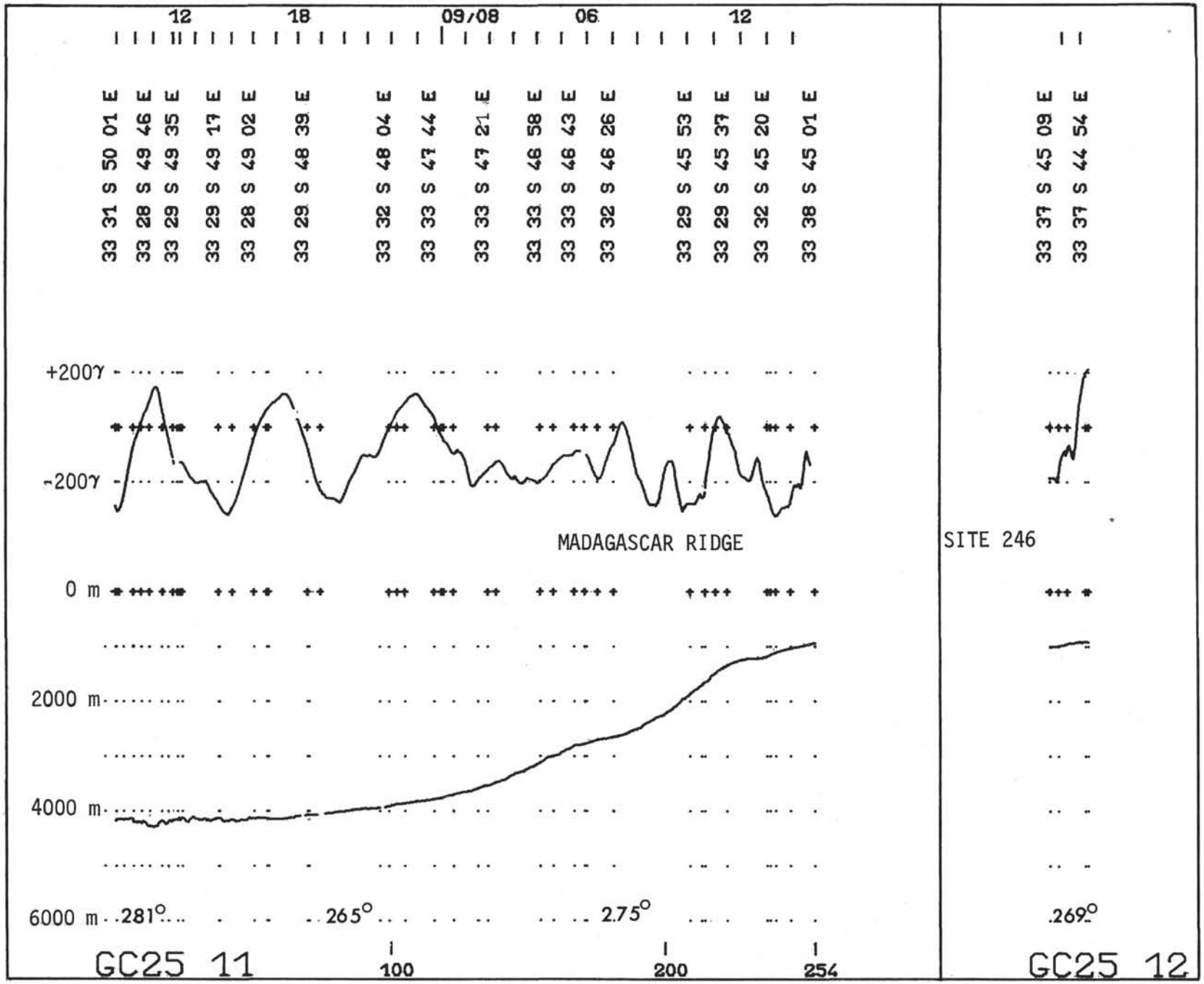

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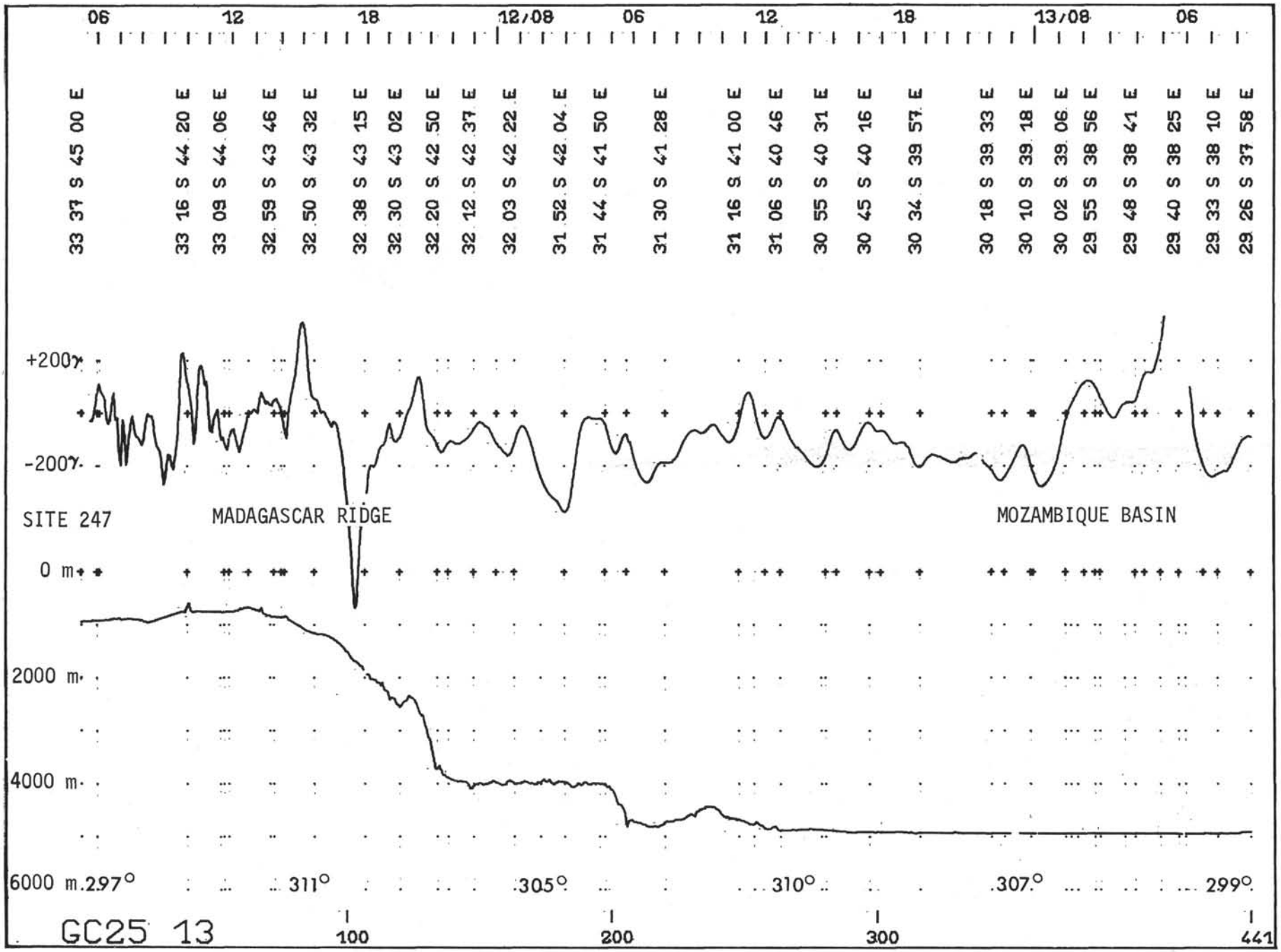

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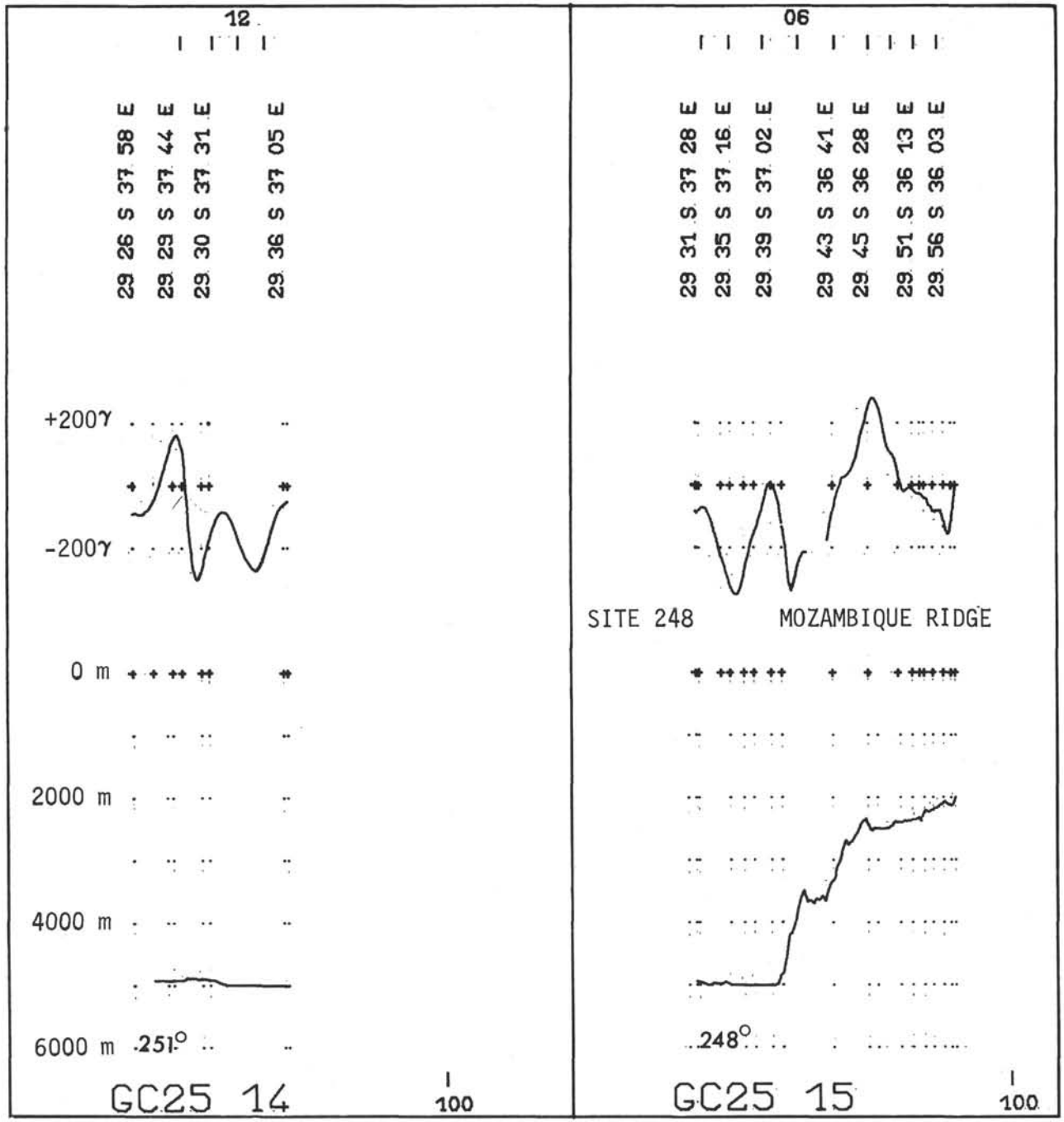

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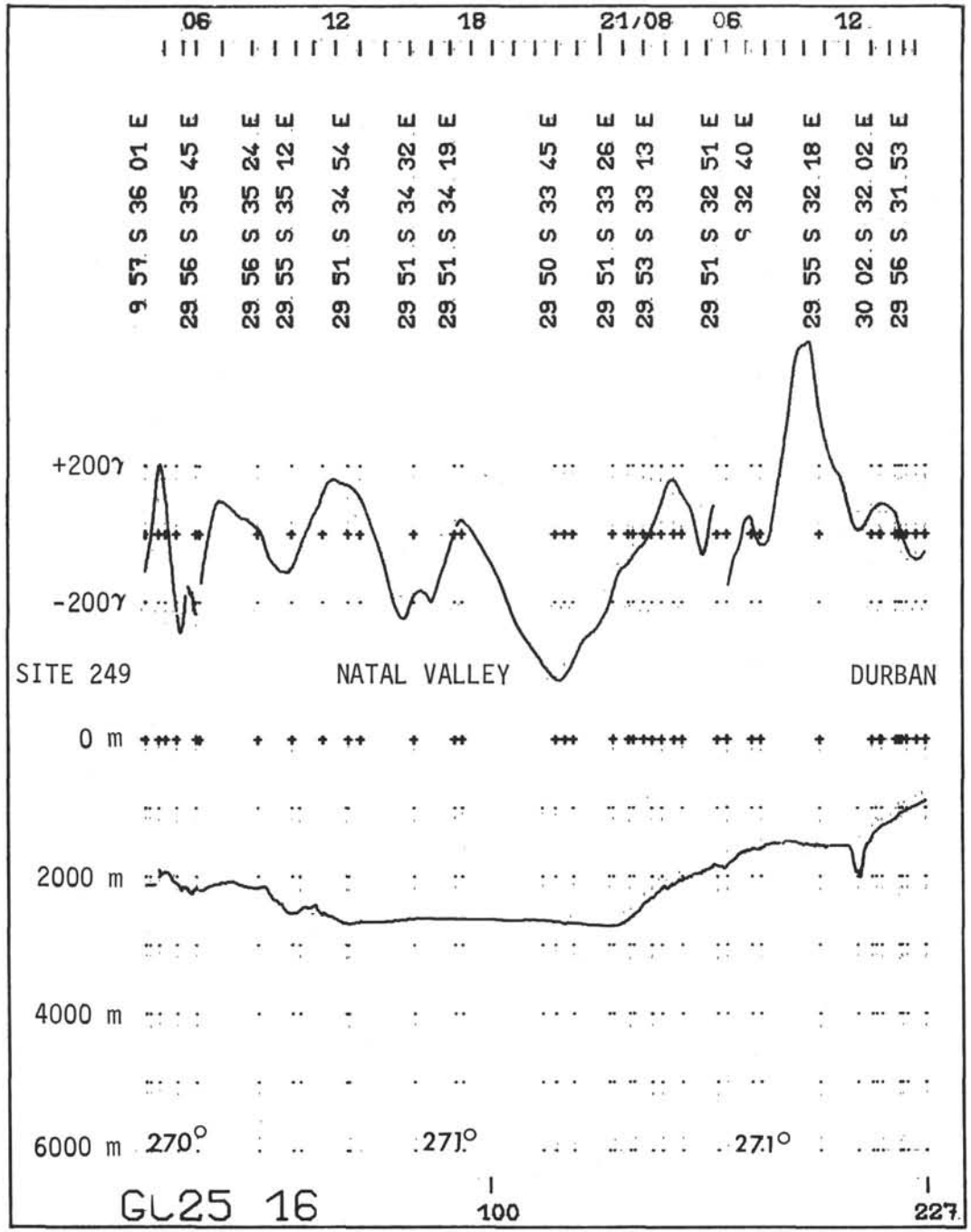

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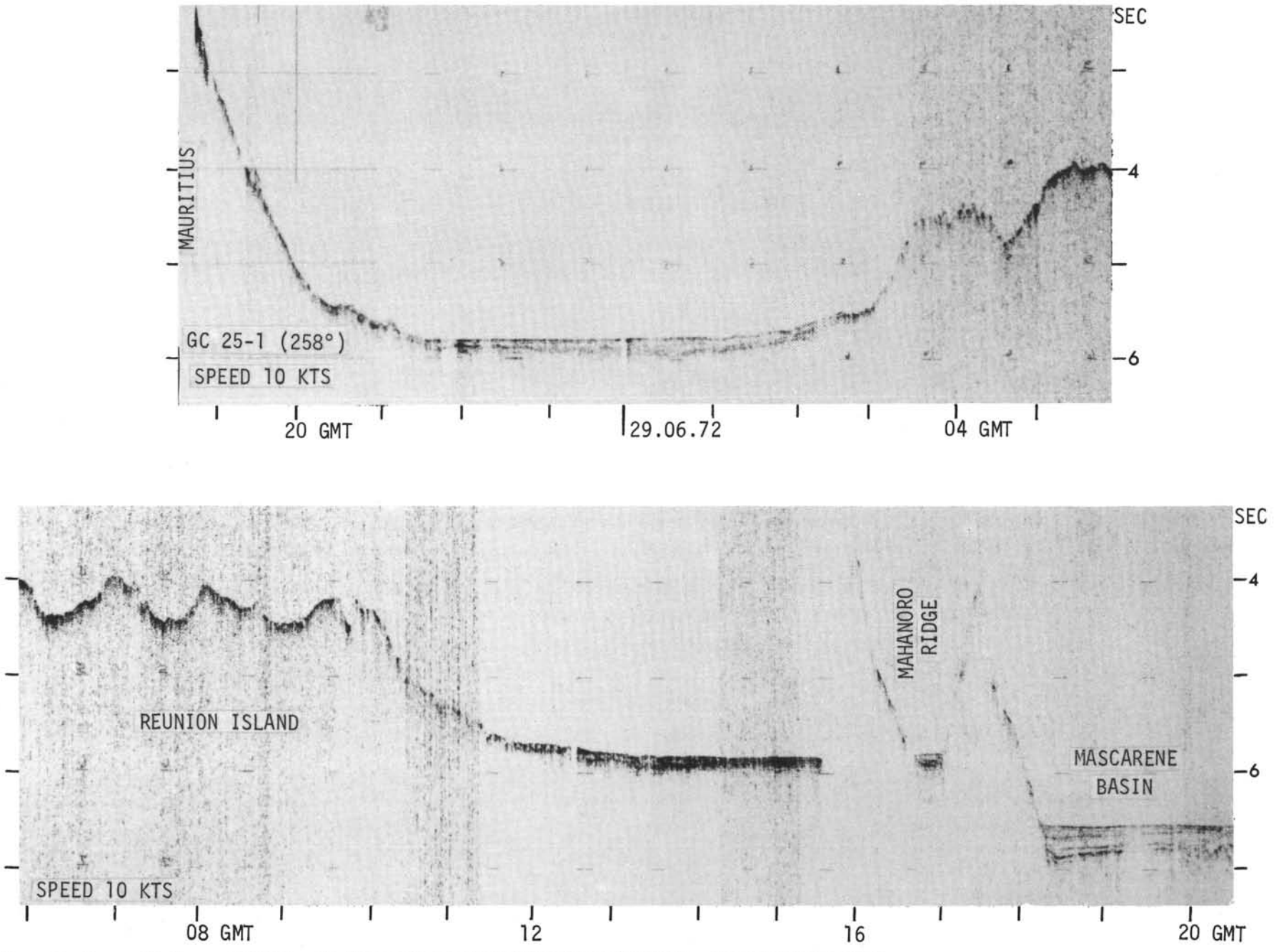
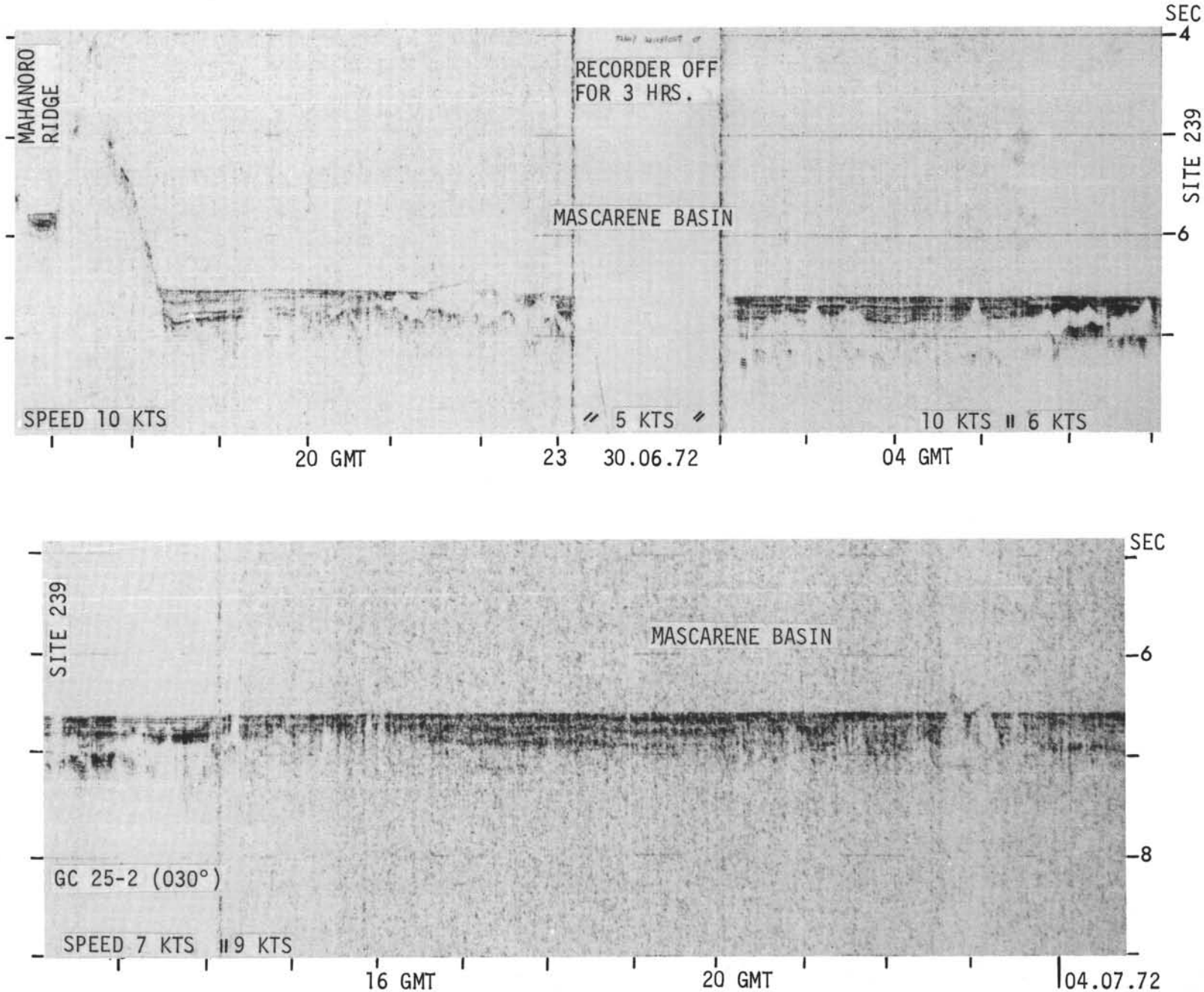


Figure 3. Glomar Challenger, *DSDP Leg 25, 10-sec-sweep seismic reflection profiles displayed as a function of time.*



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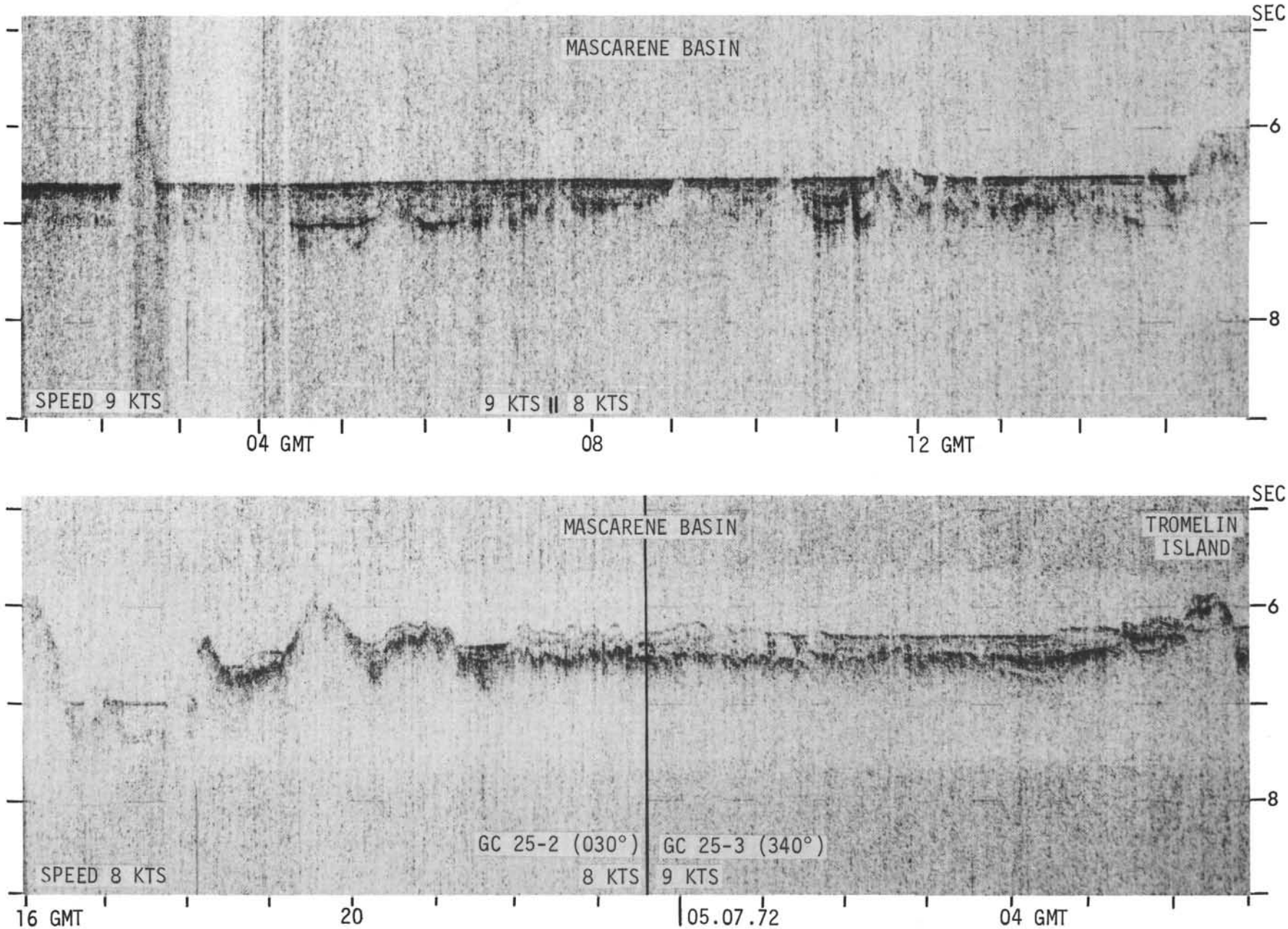

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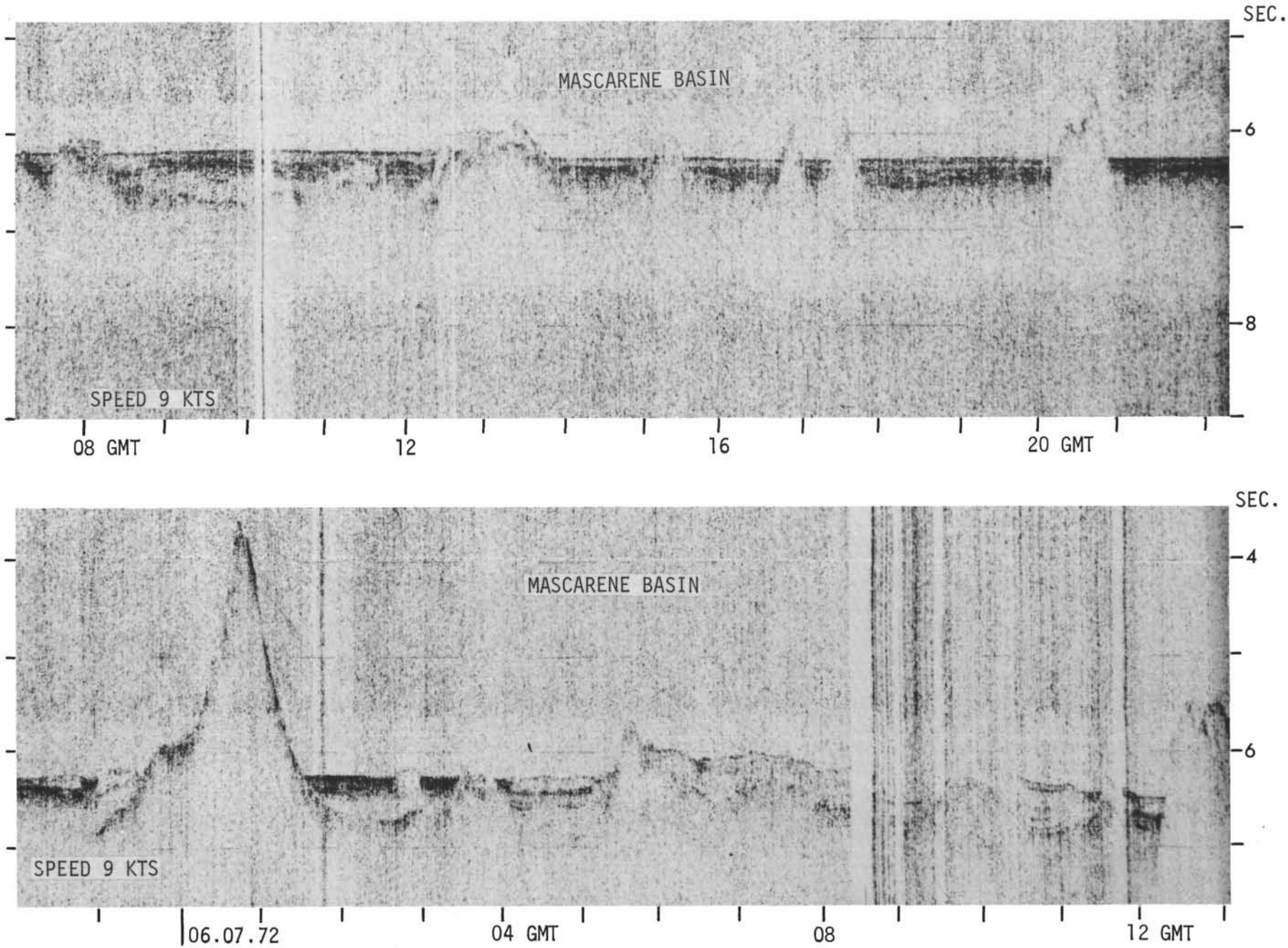

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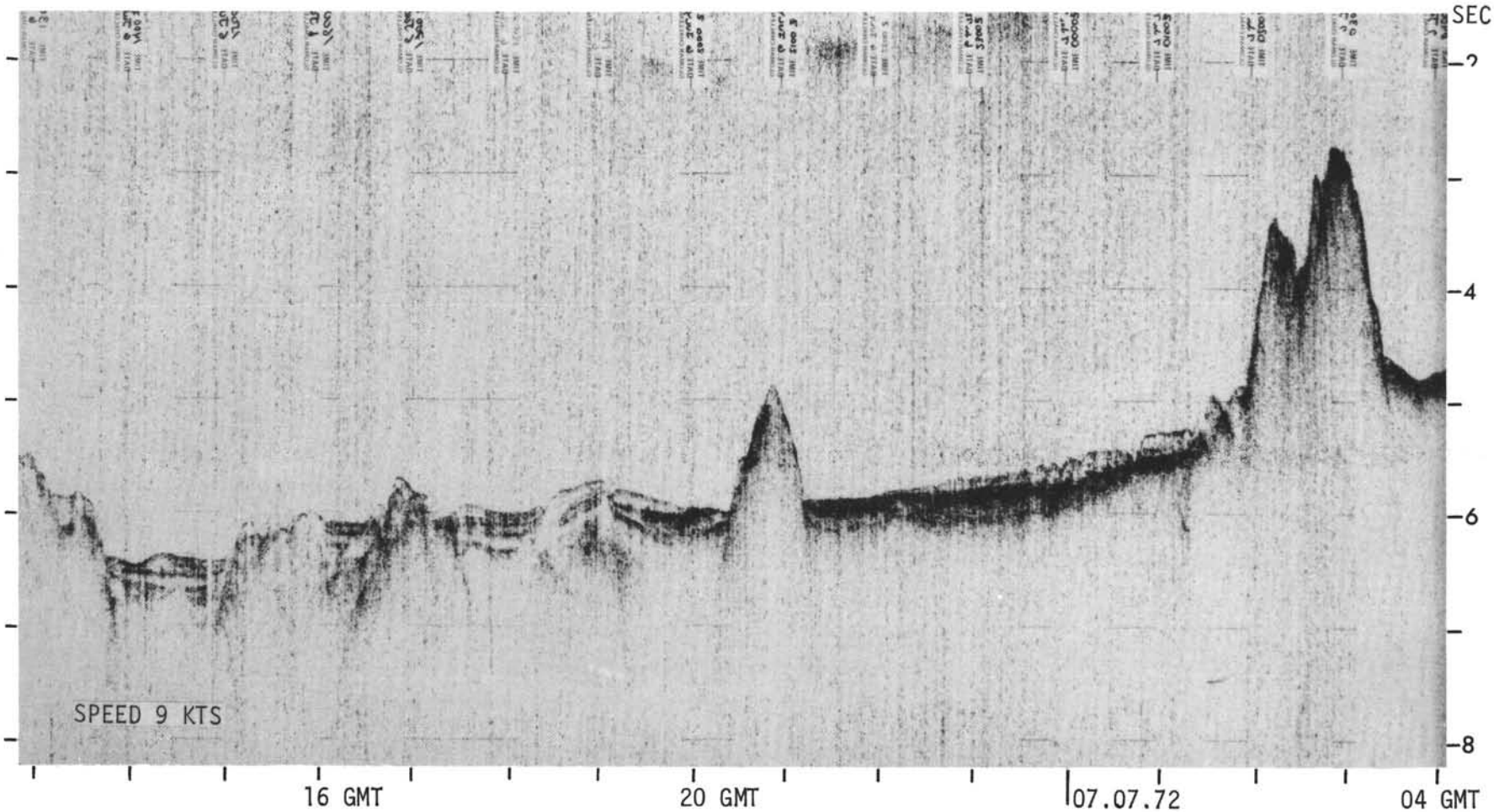

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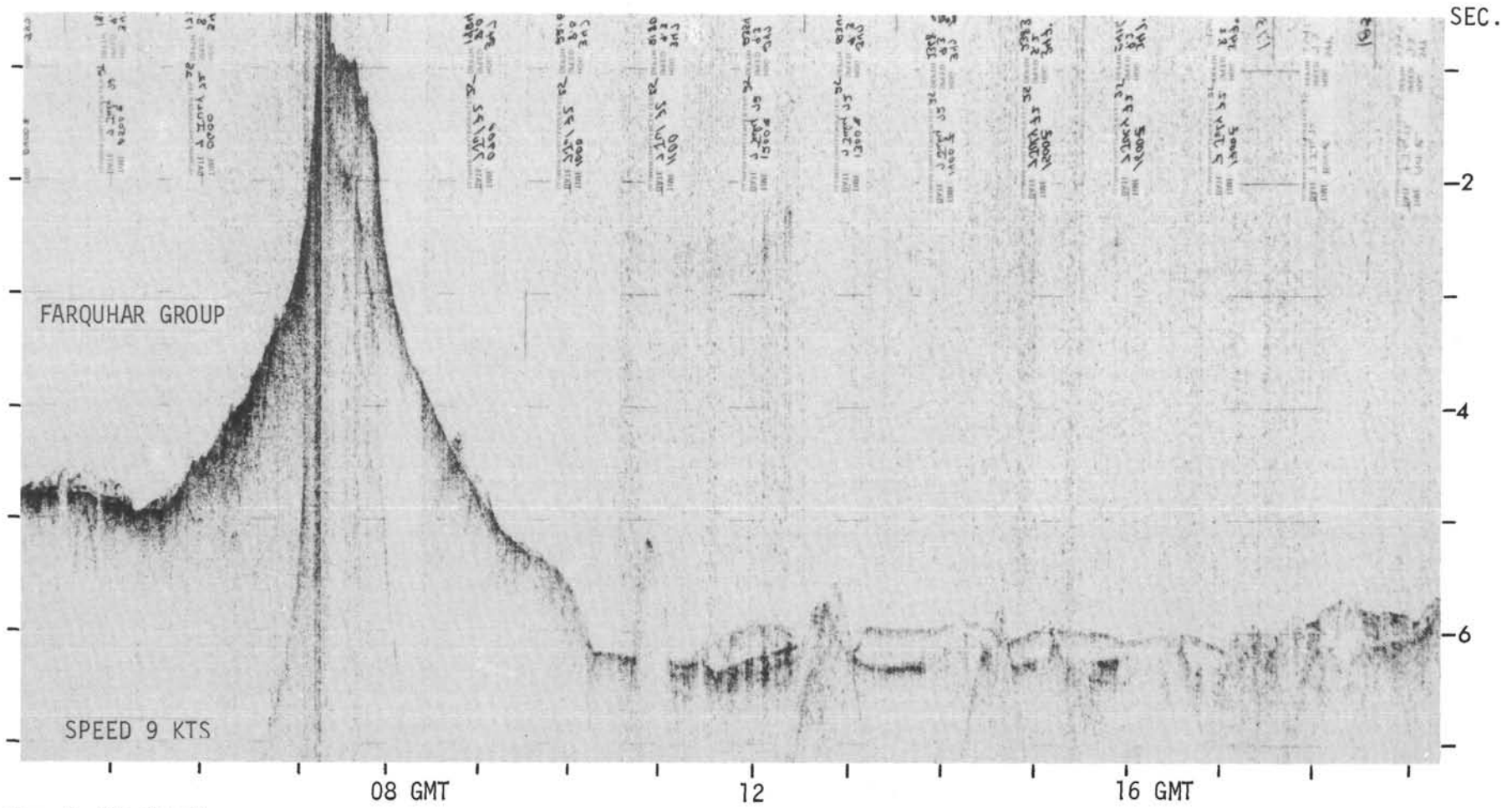

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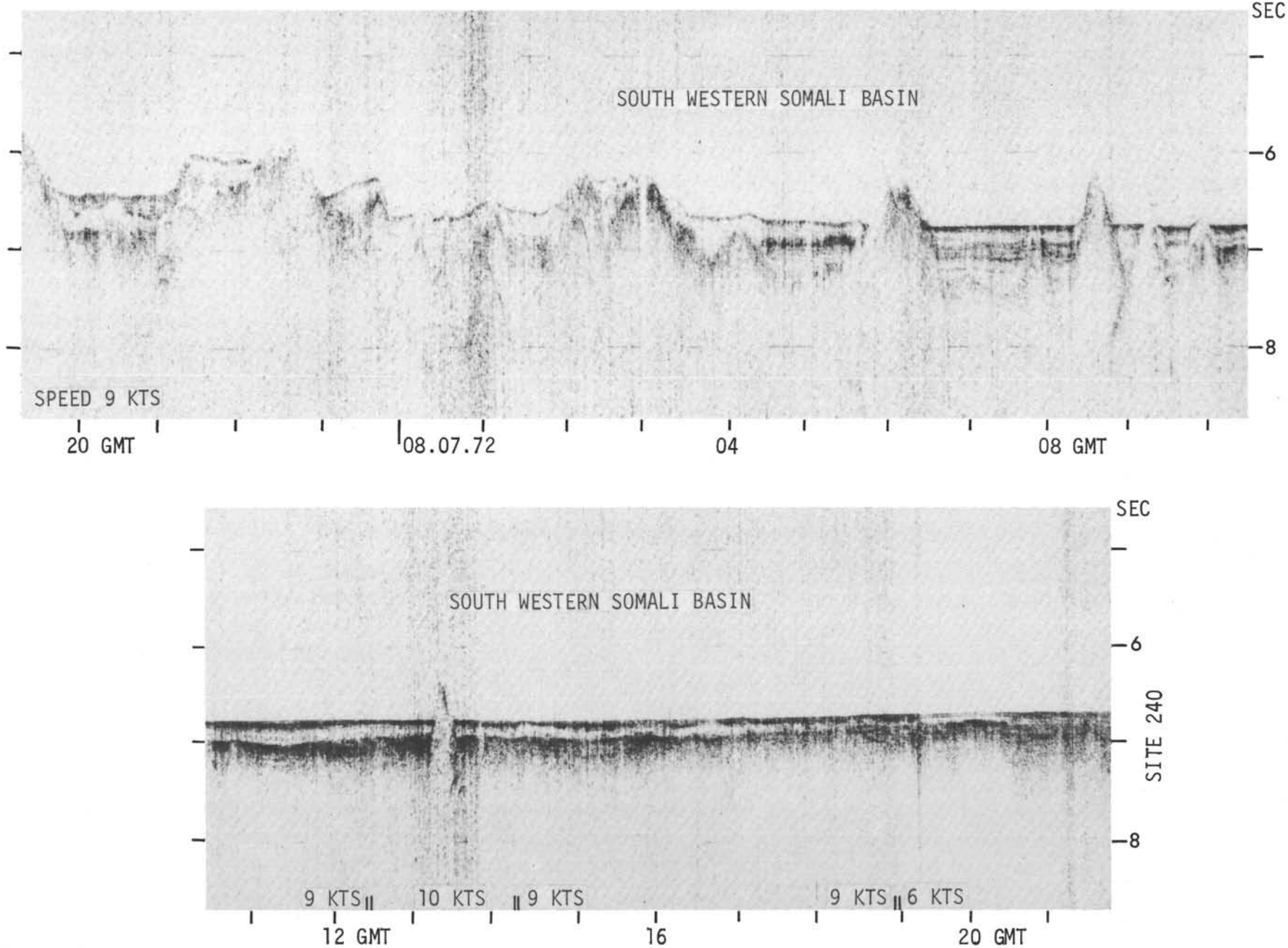

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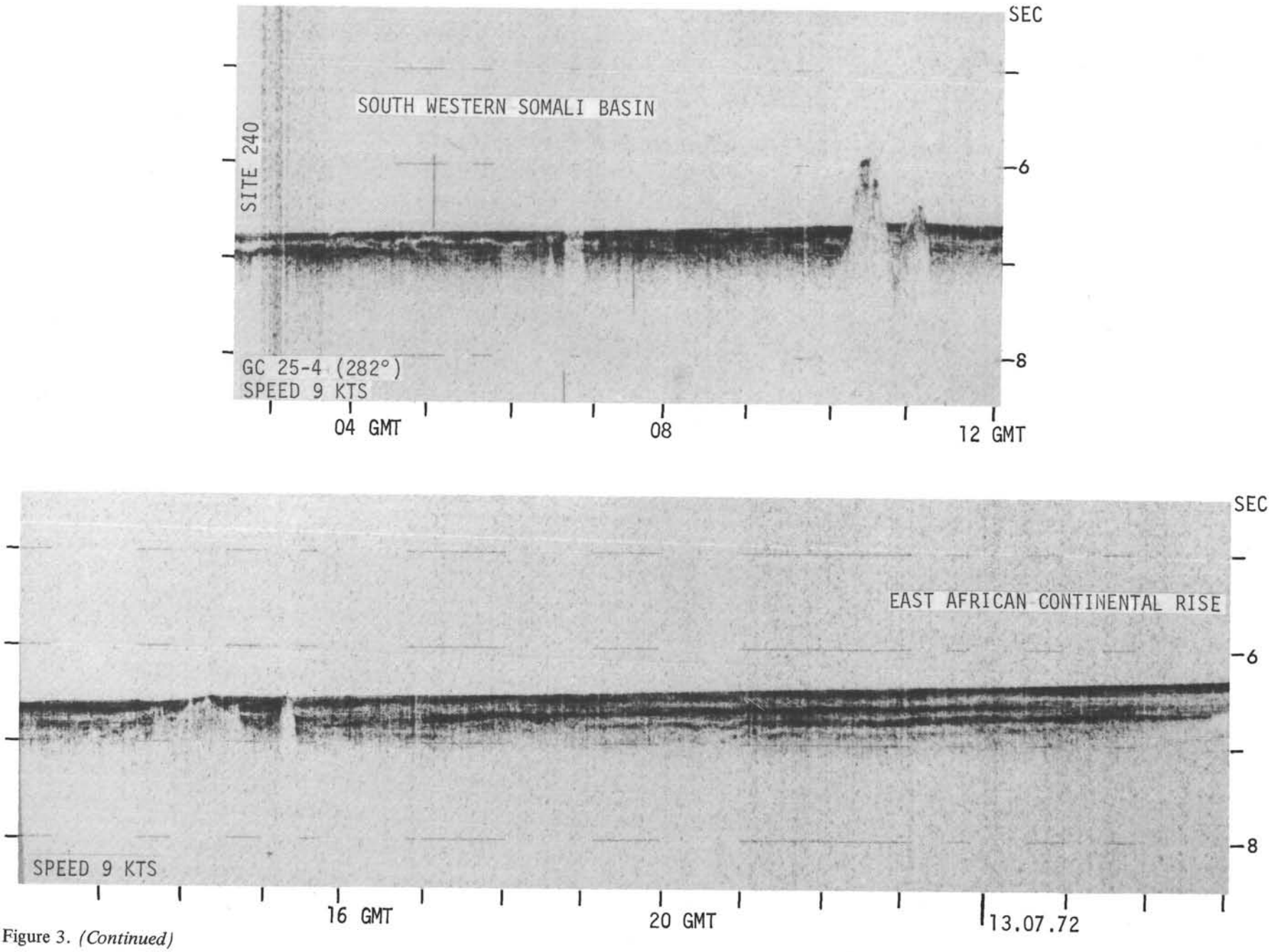

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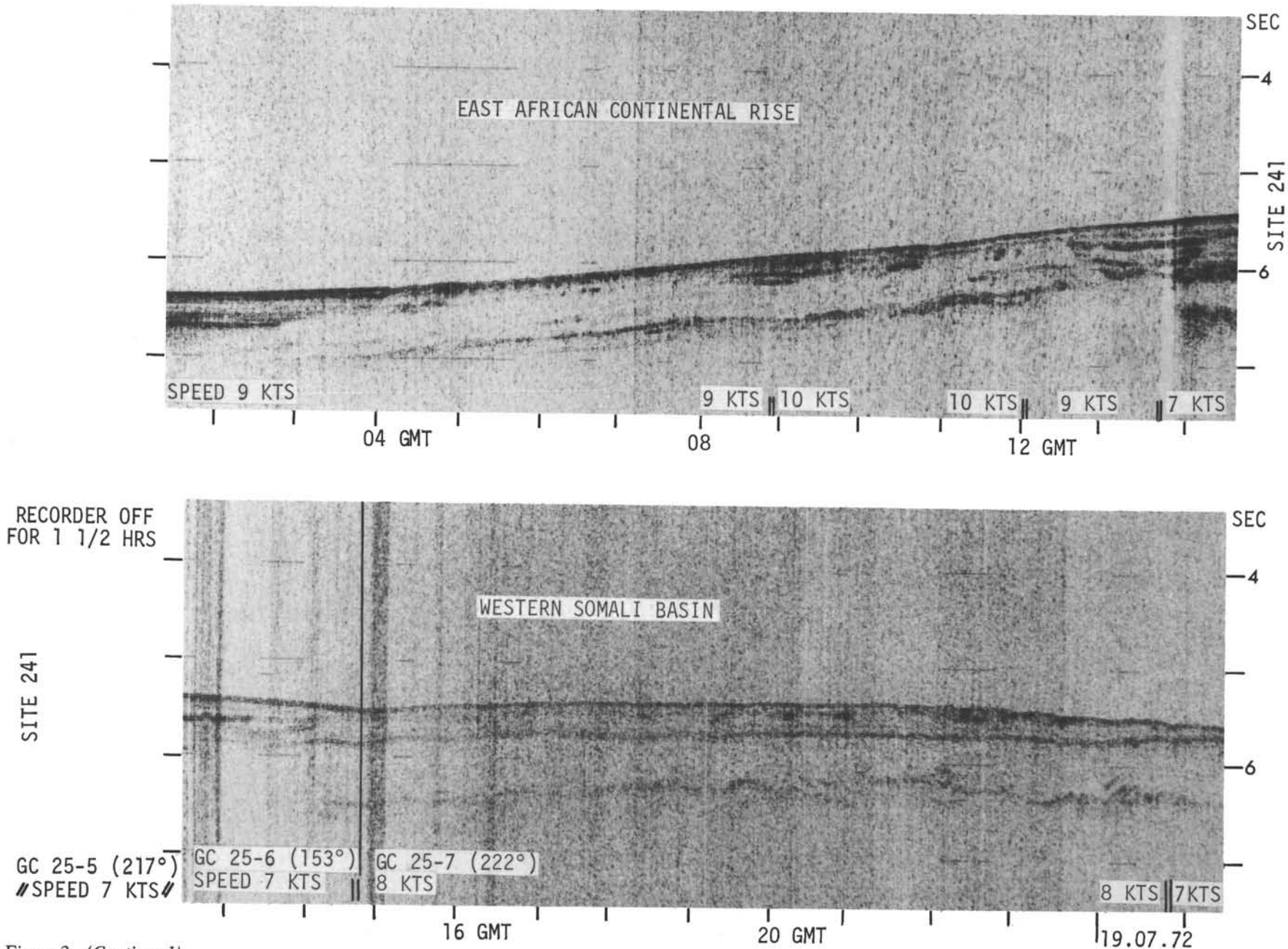

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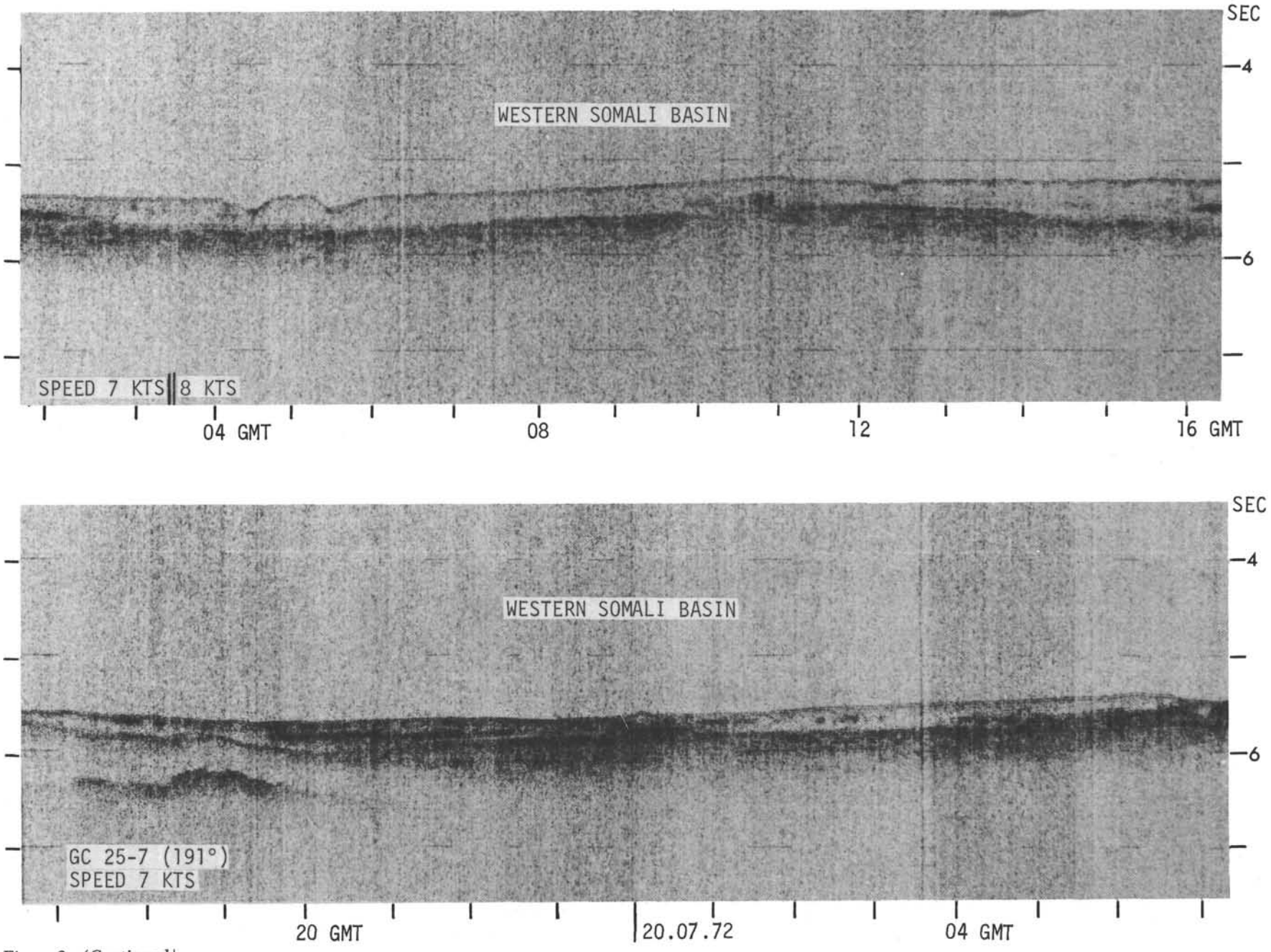

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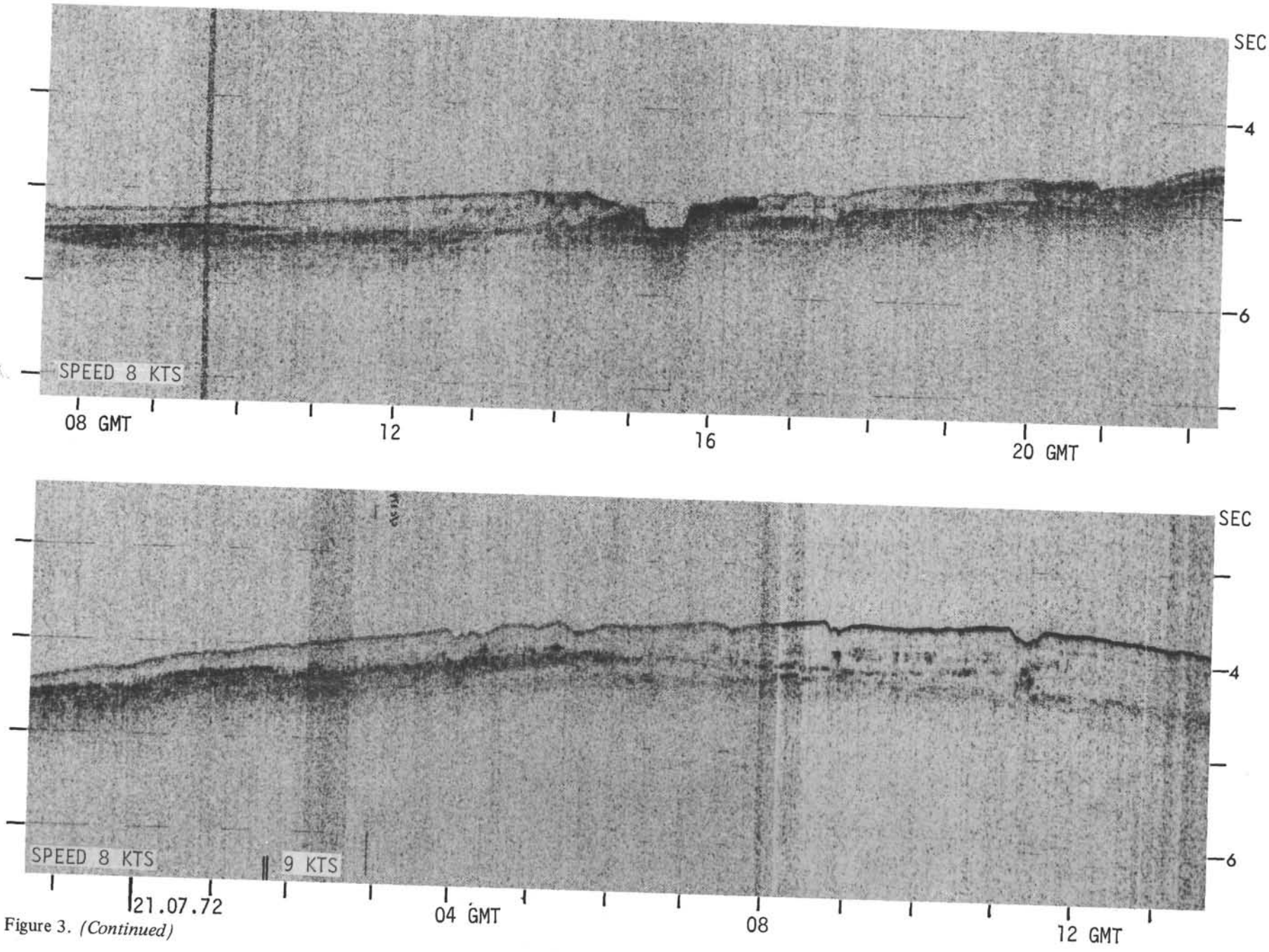


Figure 3. *(Continued)*

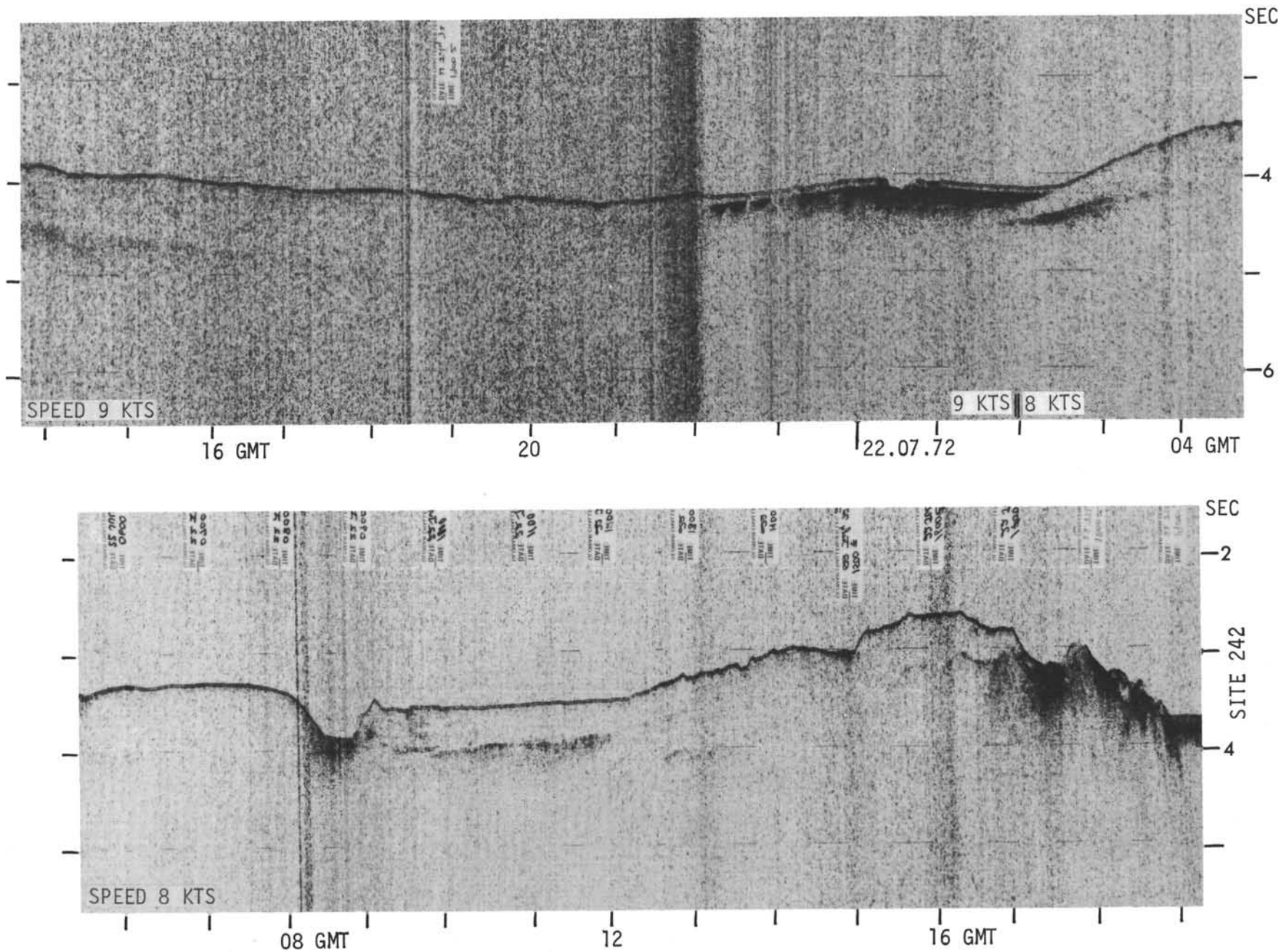


Figure 3. *(Continued)*

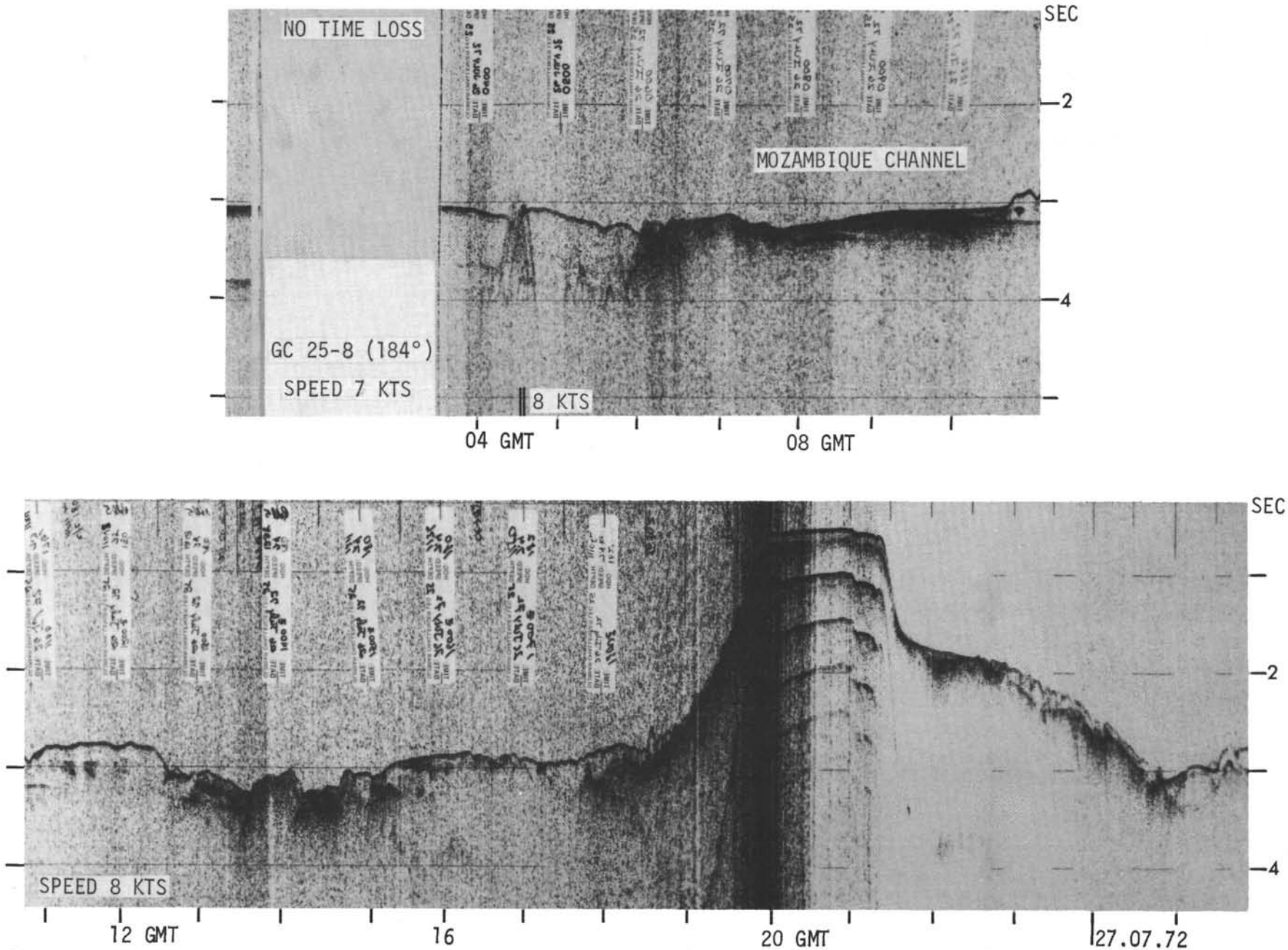


Figure 3. *(Continued)*

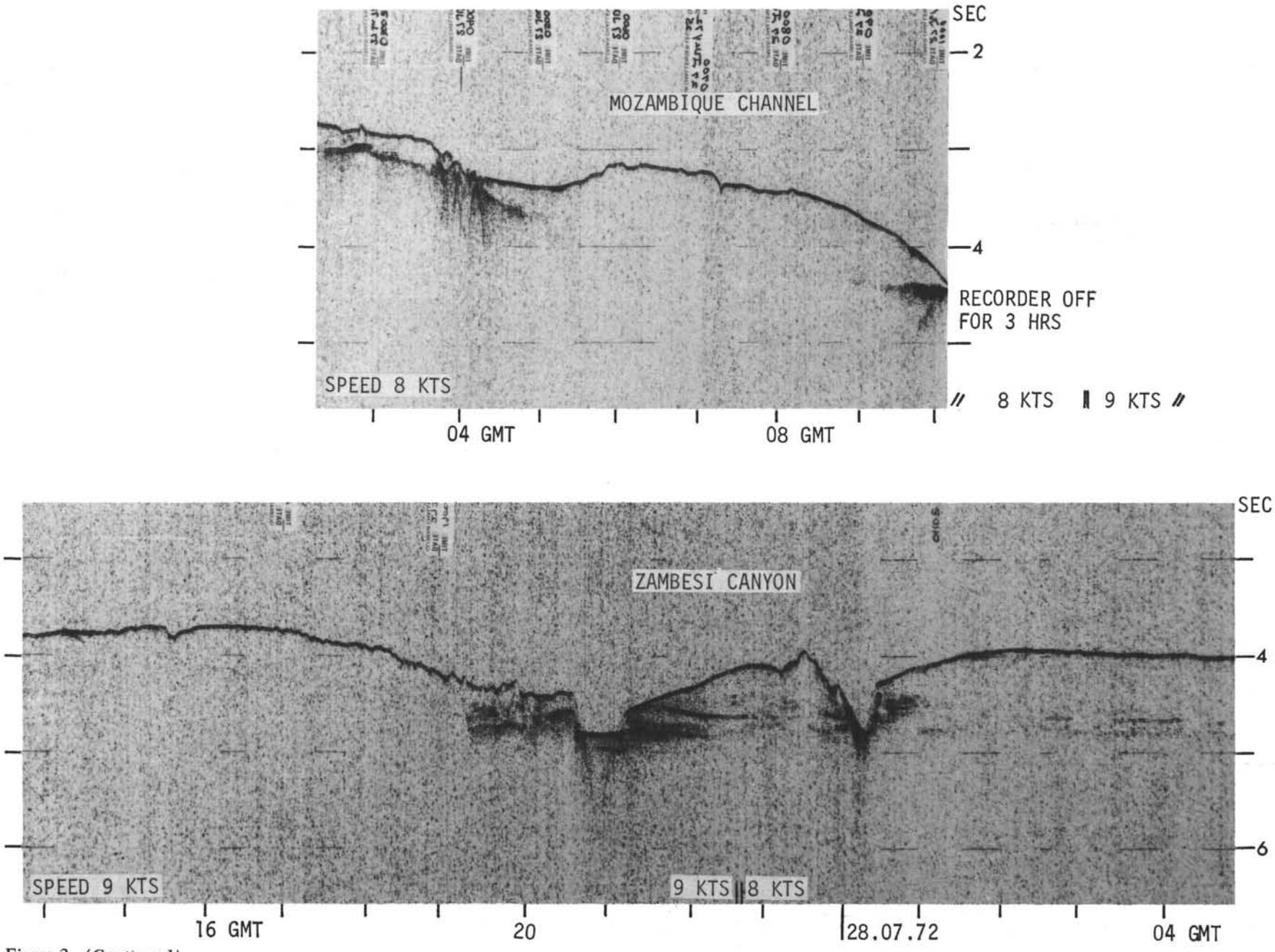


Figure 3. *(Continued)*

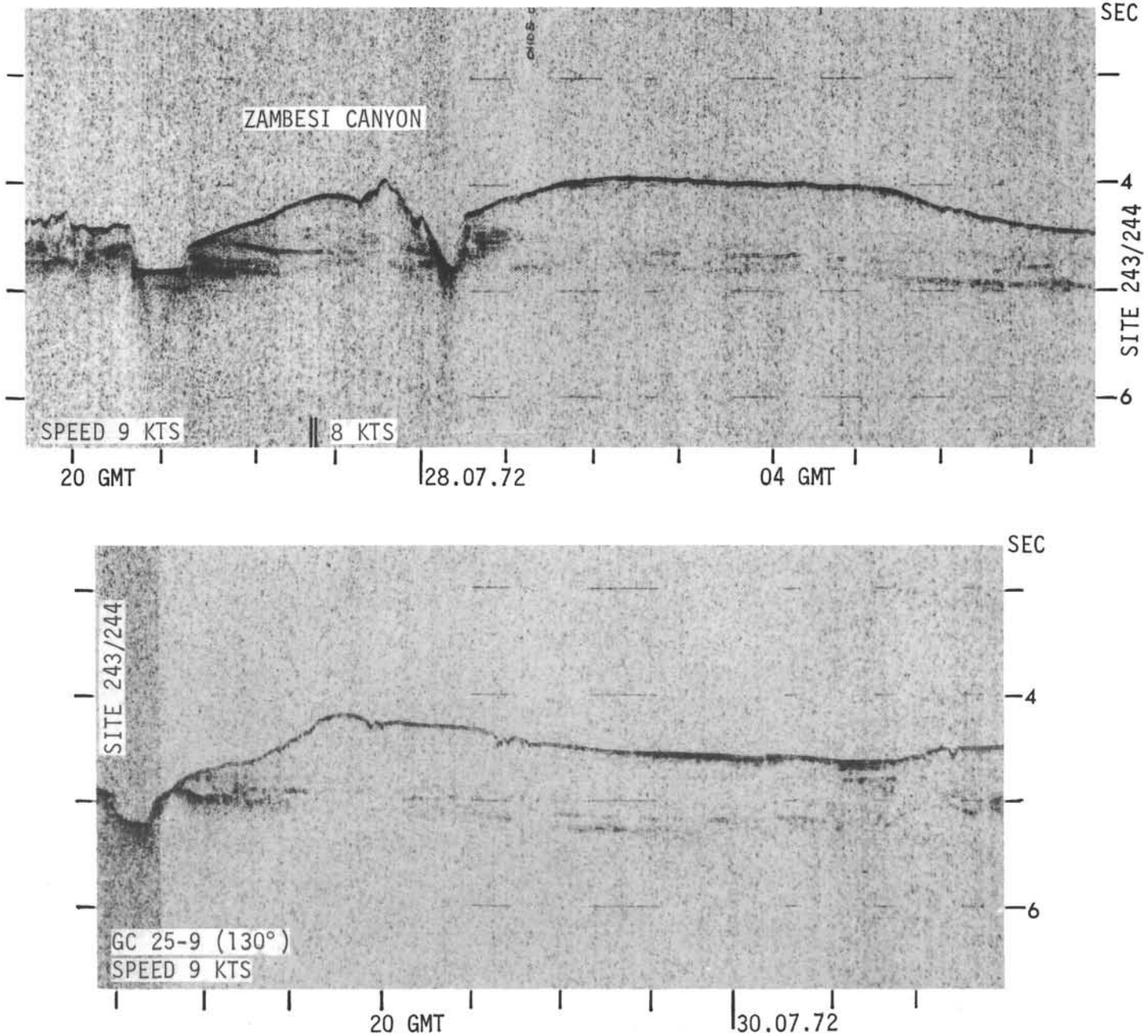


Figure 3. *(Continued)*

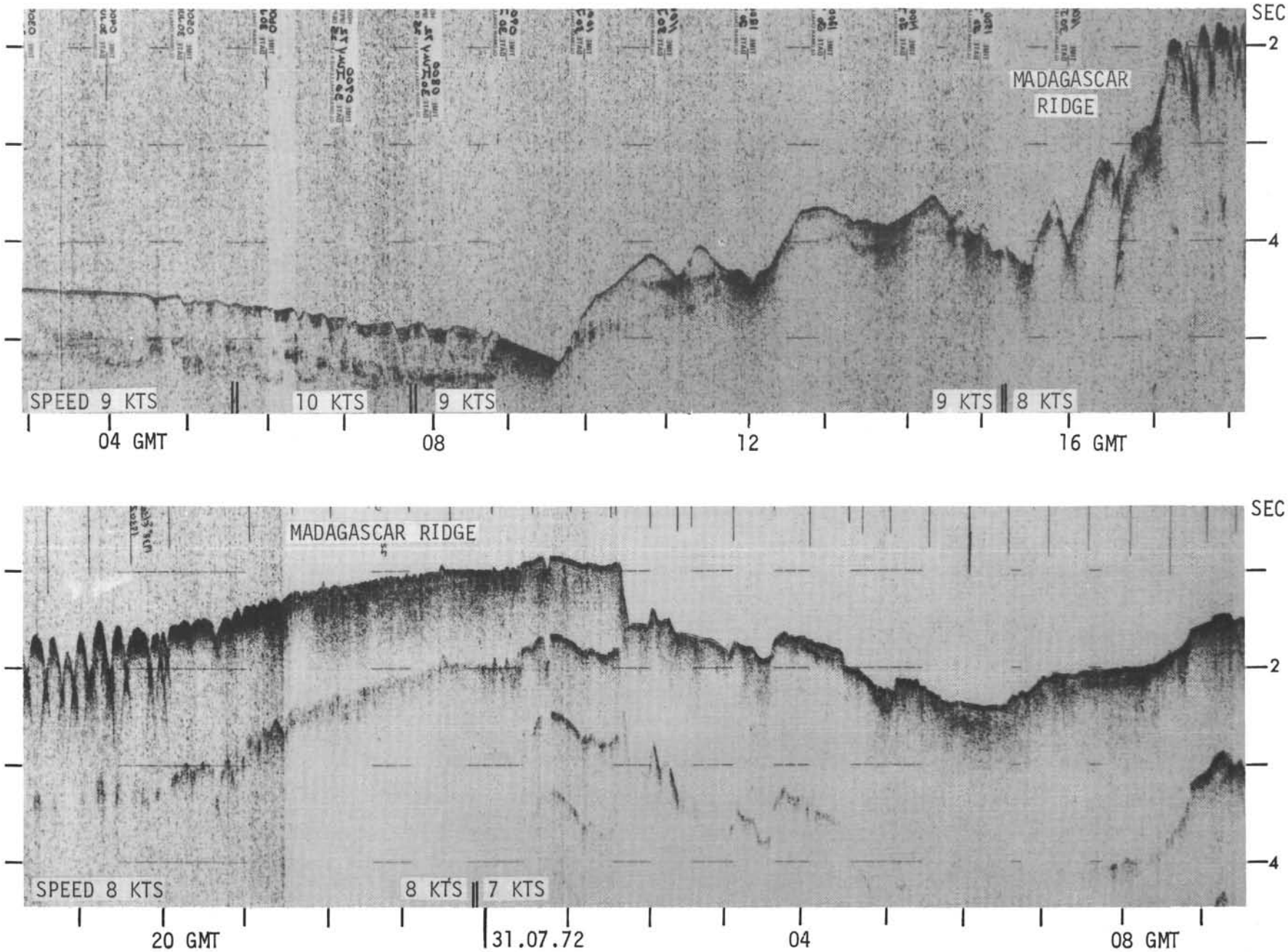


Figure 3. *(Continued)*

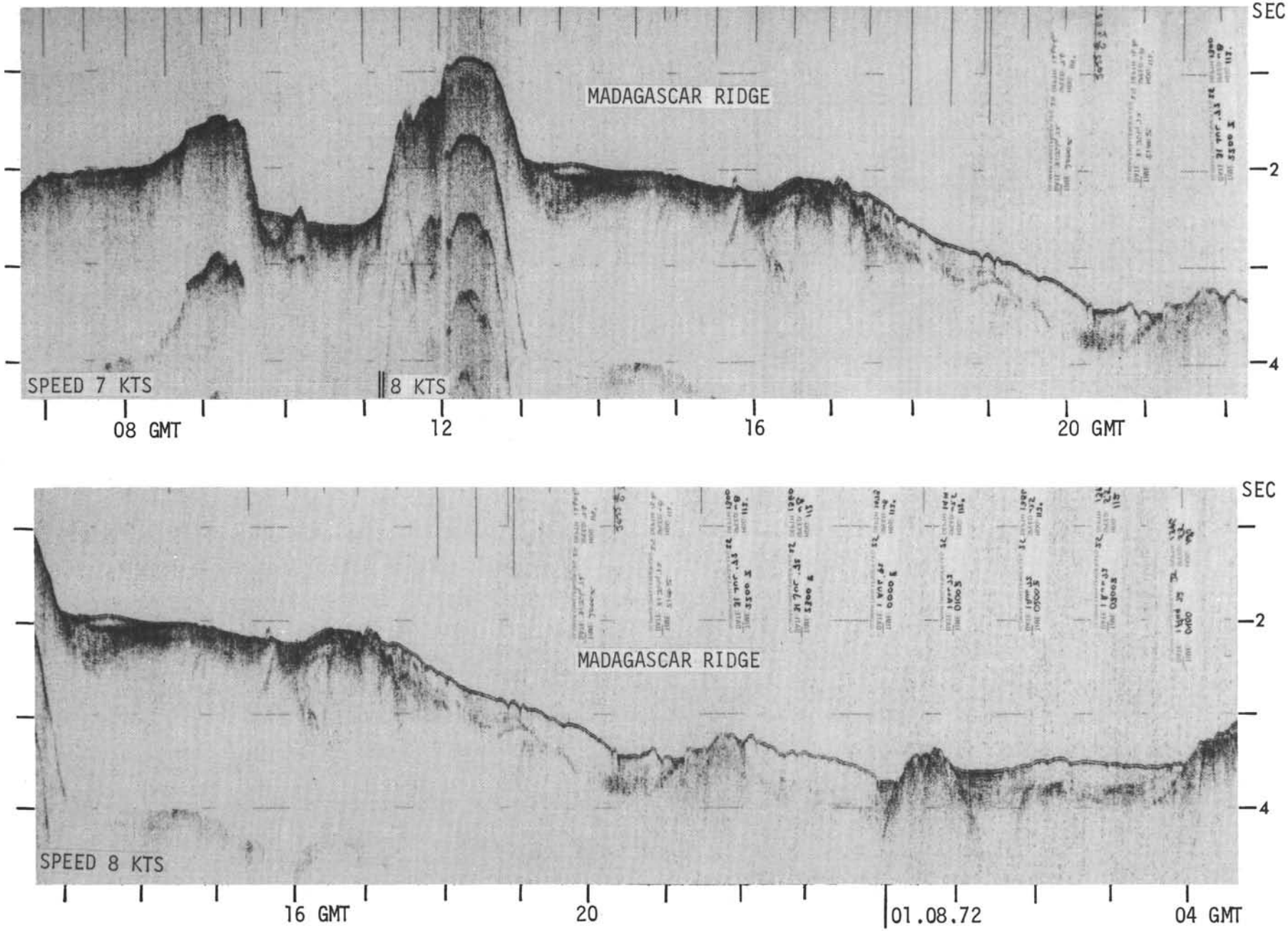


Figure 3. *(Continued)*

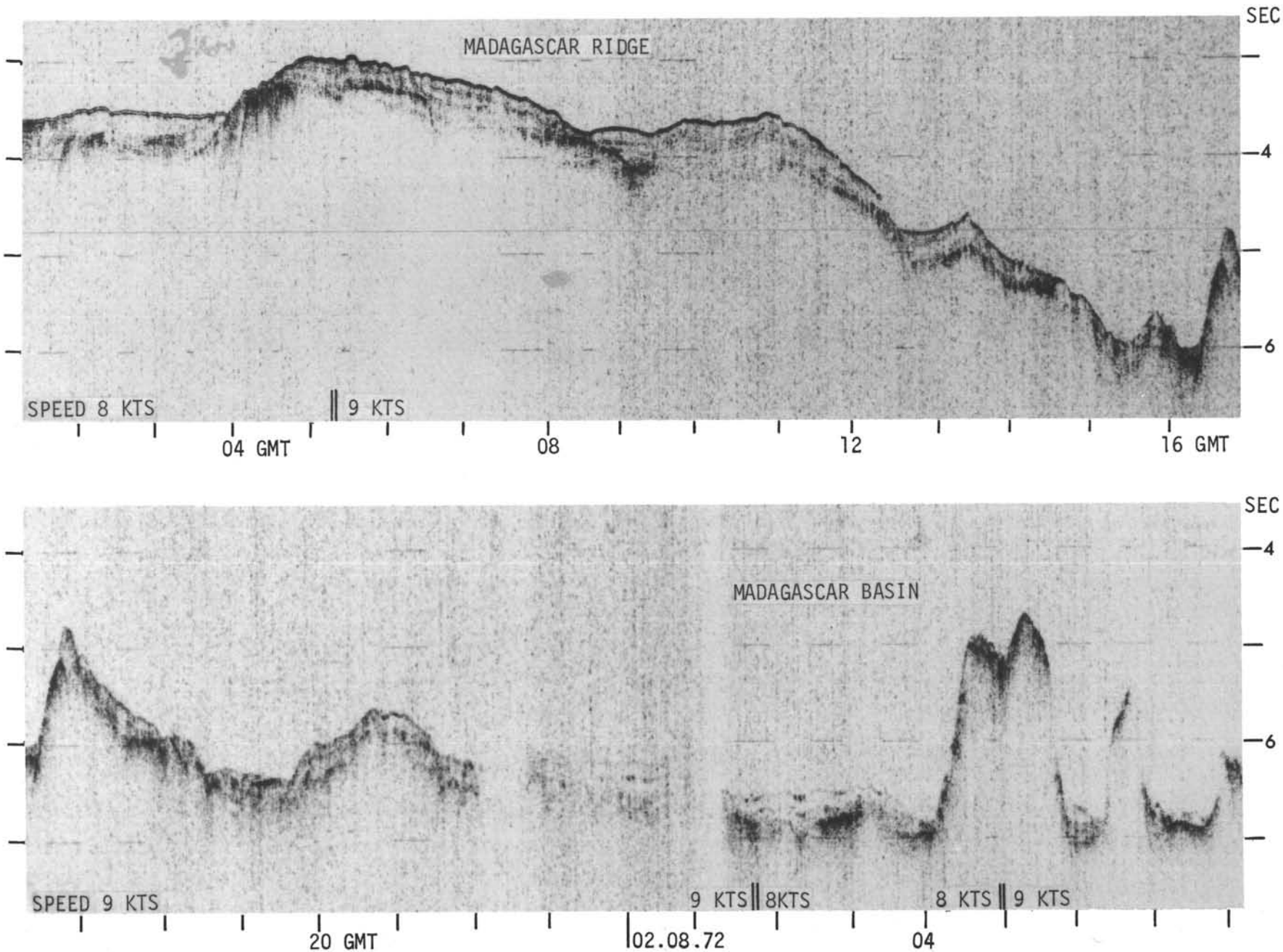


Figure 3. *(Continued)*

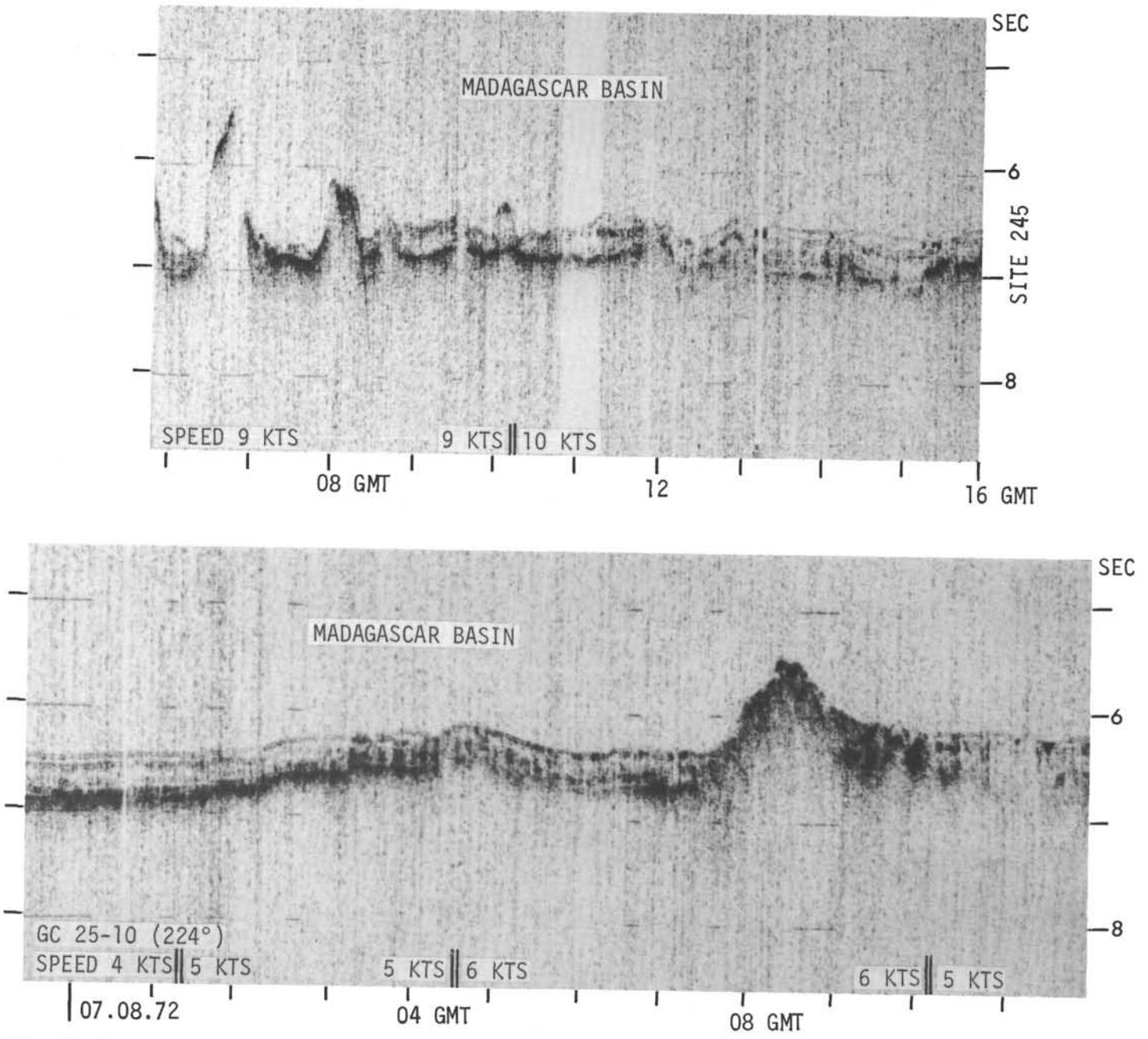


Figure 3. *(Continued)*

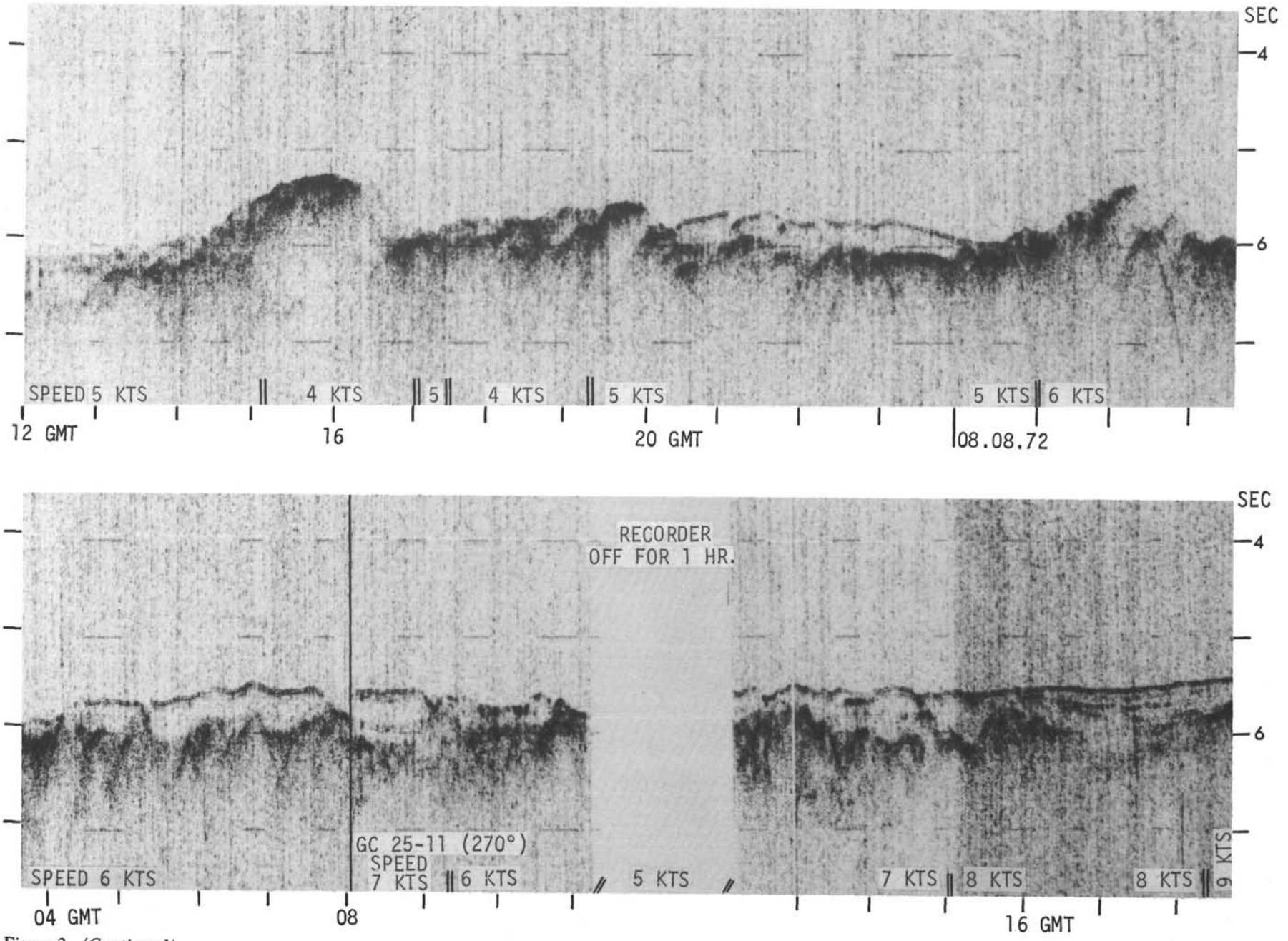
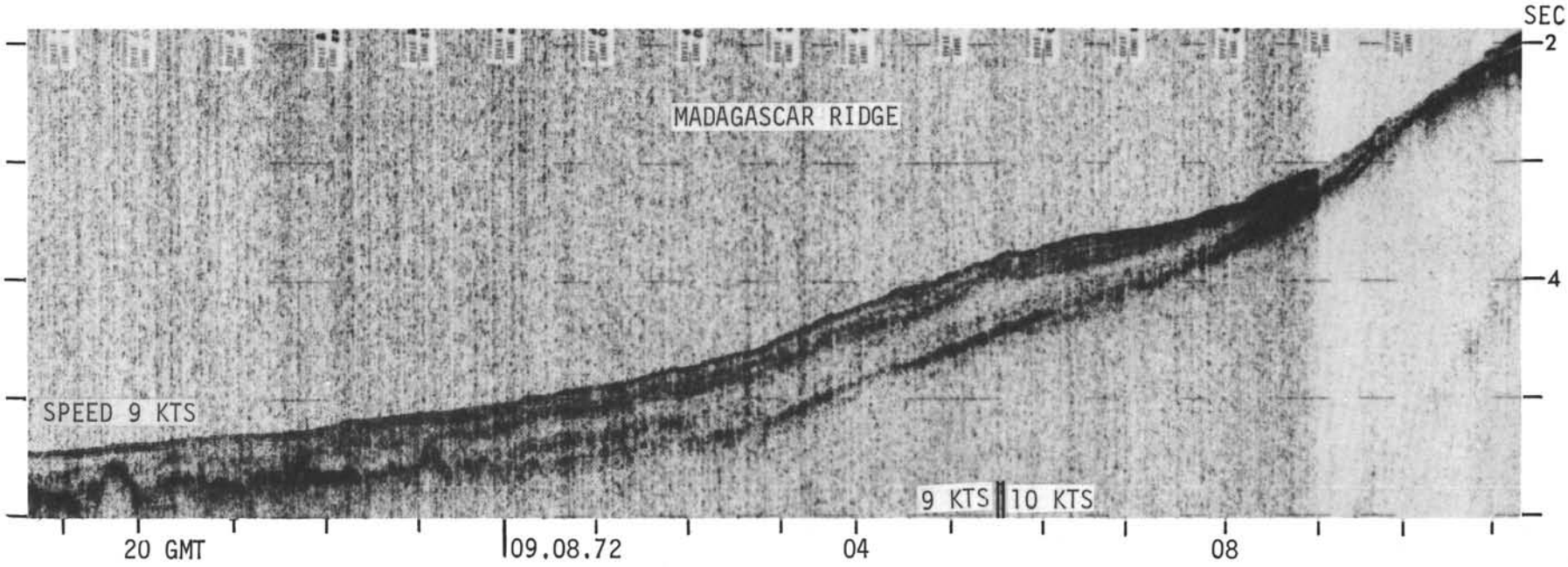


Figure 3. *(Continued)*



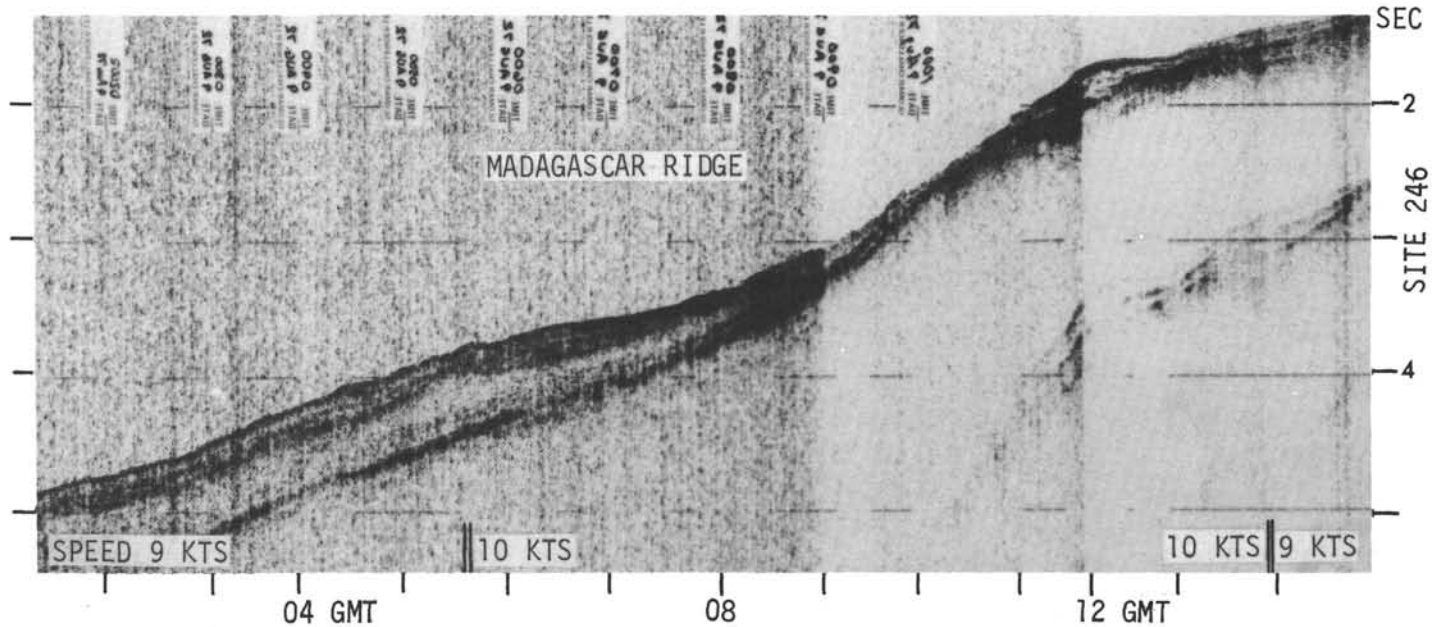


Figure 3. *(Continued)*

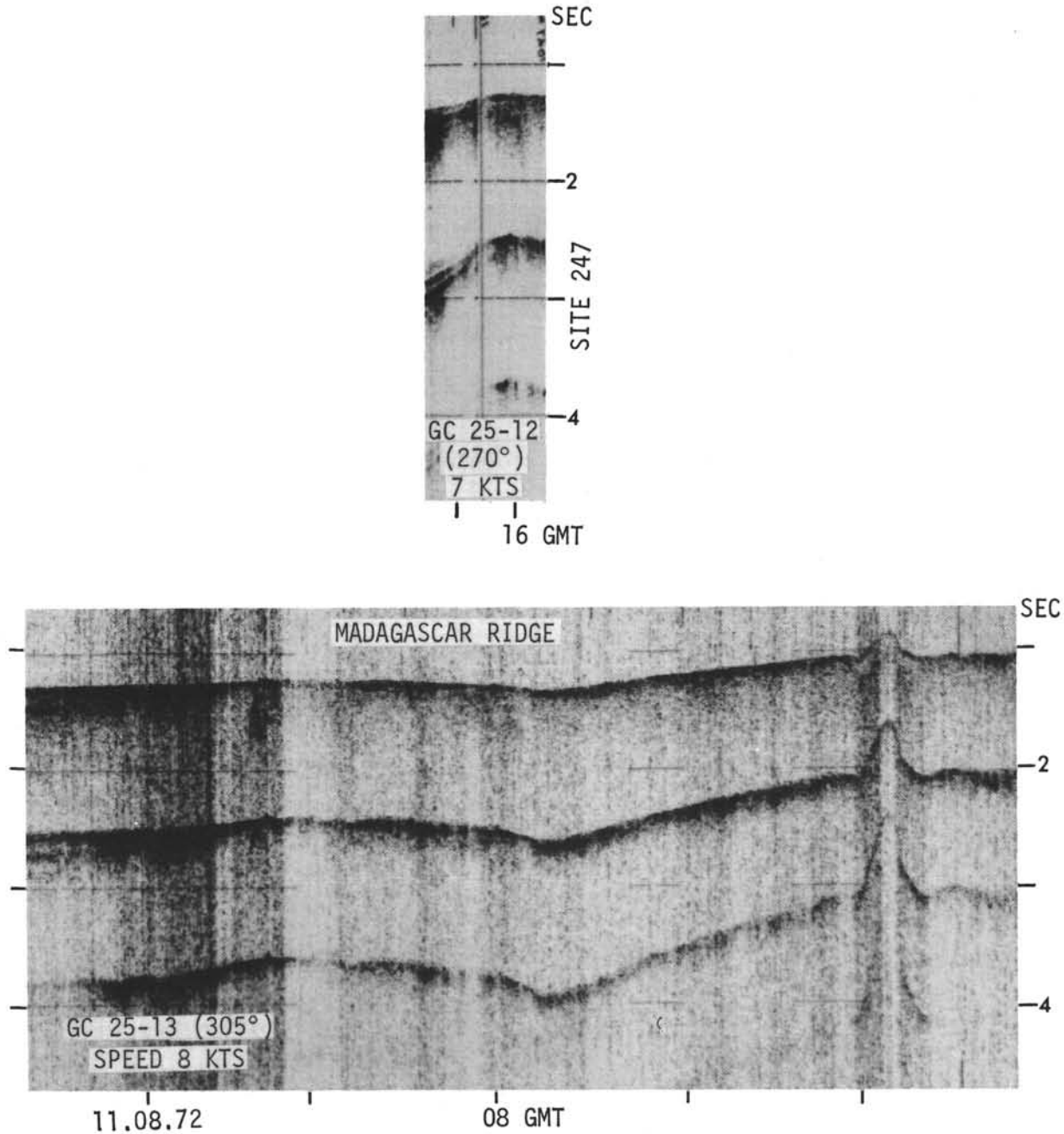


Figure 3. *(Continued)*

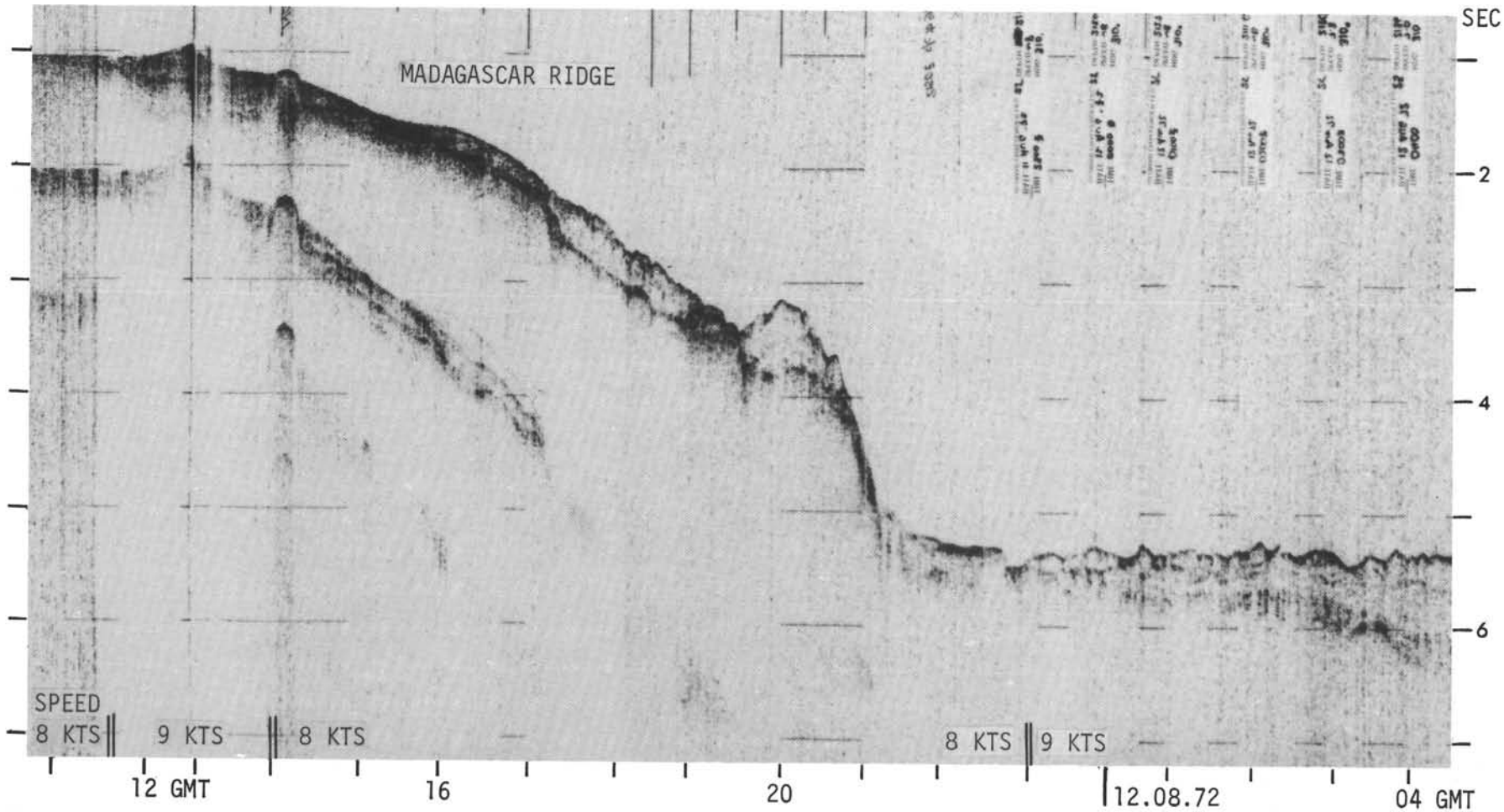


Figure 3. *(Continued)*

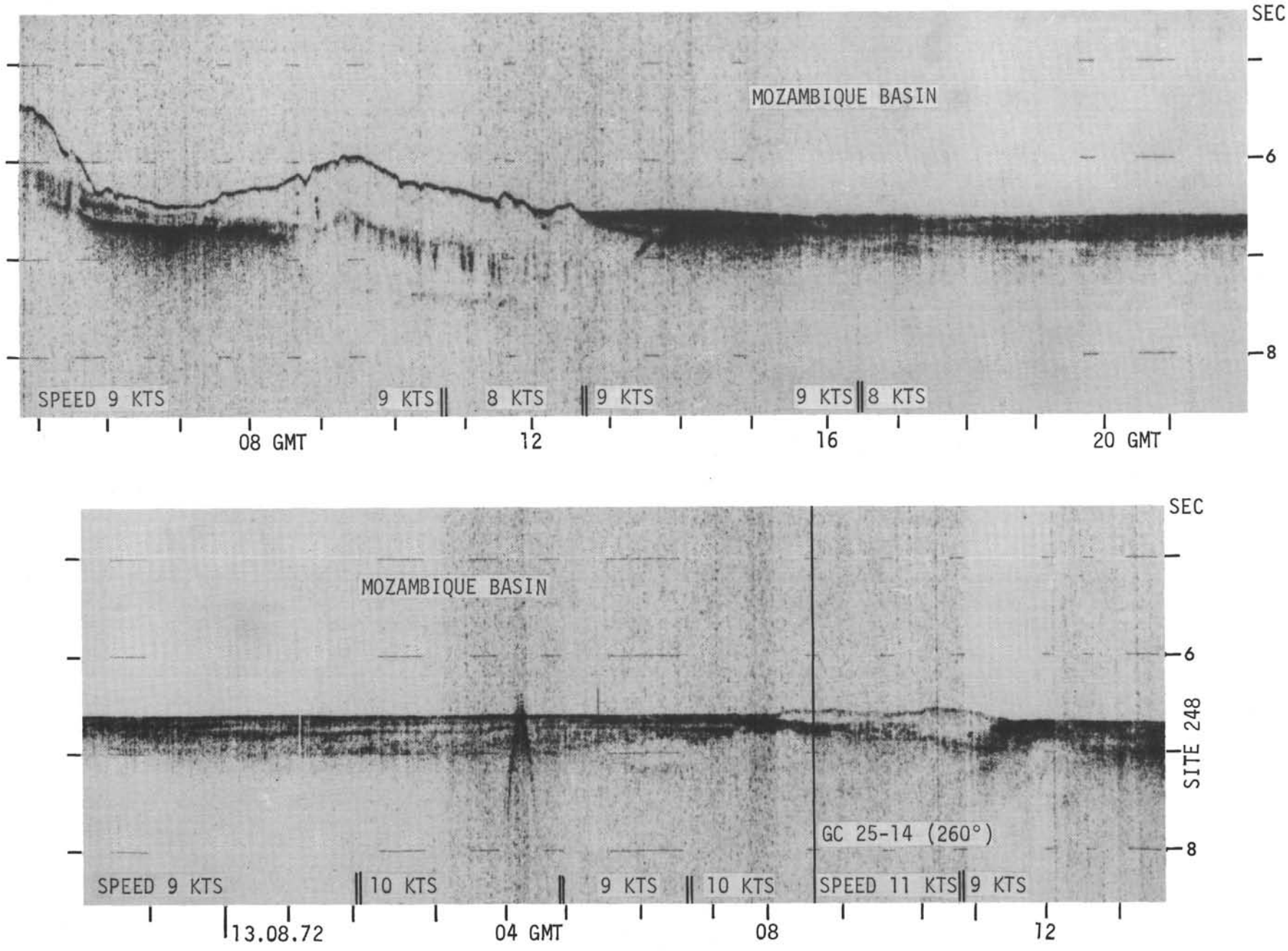


Figure 3. *(Continued)*

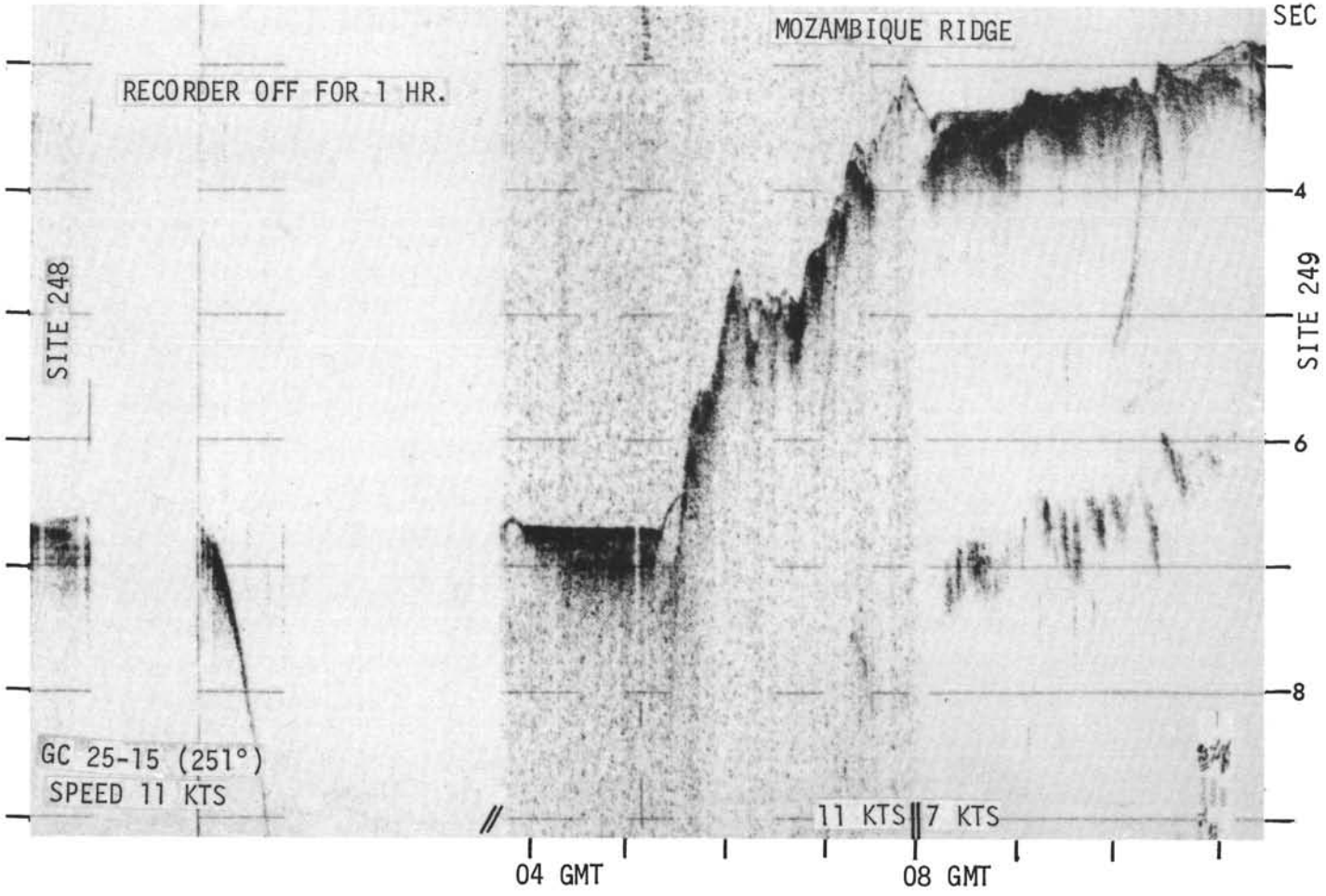


Figure 3. *(Continued)*

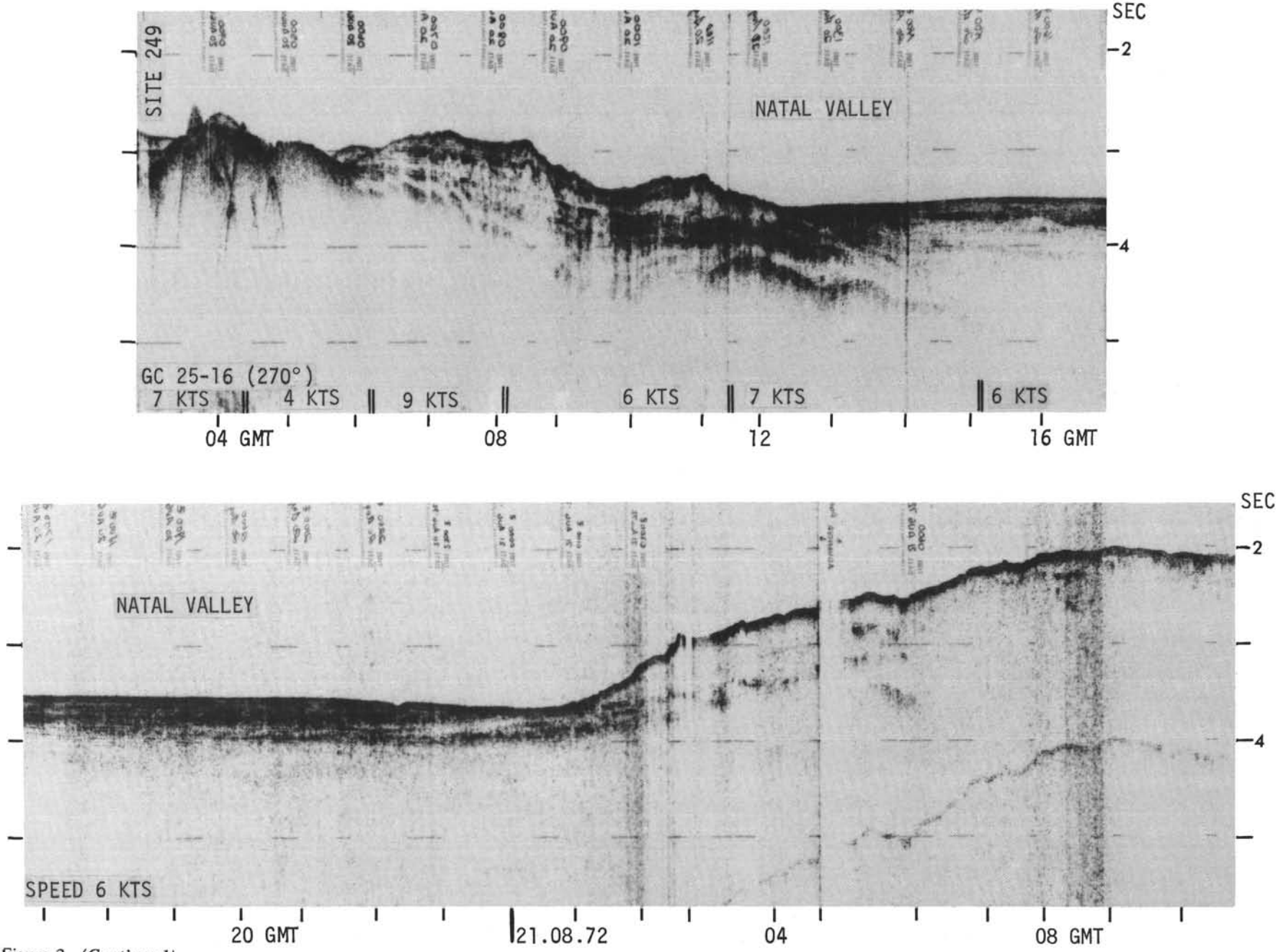


Figure 3. *(Continued)*

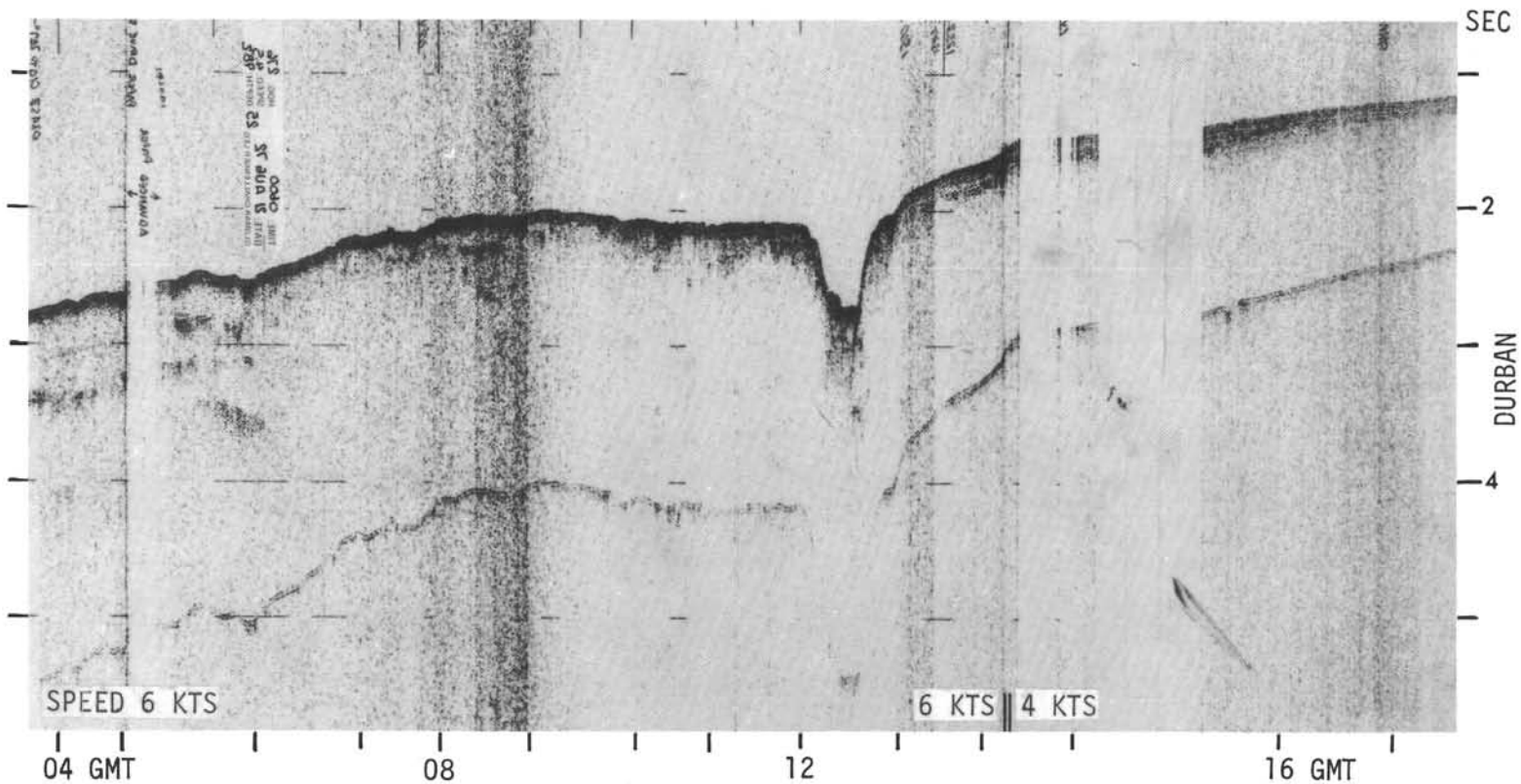


Figure 3. *(Continued)*

TABLE 1
Glomar Challenger, DSDP Leg 25, Navigation Data

DATE (day/mo)	GMT (hr/min)	LONGITUDE (deg/min)	LATITUDE (deg/min)	DATE (day/mo)	GMT (hr/min)	LONGITUDE (deg/min)	LATITUDE (deg/min)	DIST (nmi)	CSE (°)	SPEED (kt)	DISTT (nmi)
28. 6	18H50	57D23.4	20D 7.0	28. 6	18H58	57D22.0	20D 7.8	1.54	239.	11.591	1.54
28. 6	18H58	57D22.0	20D 7.8	28. 6	19H36	57D15.7	20D 9.8	6.27	251.	9.910	7.82
28. 6	19H36	57D15.7	20D 9.8	28. 6	19H37	57D15.5	20D 9.8	0.16	255.	9.751	7.98
28. 6	19H37	57D15.5	20D 9.8	28. 6	20H 0	57D11.6	20D10.5	3.74	259.	9.768	11.72
28. 6	20H 0	57D11.6	20D10.5	28. 6	20H 2	57D11.3	20D10.6	0.32	257.	9.738	12.05
28. 6	20H 2	57D11.3	20D10.6	29. 6	0H 0	56D31.2	20D20.5	39.07	255.	9.851	51.13
29. 6	0H 0	56D31.2	20D20.5	29. 6	0H24	56D27.2	20D21.5	3.94	255.	9.853	55.07
29. 6	0H24	56D27.2	20D21.5	29. 6	0H56	56D21.5	20D22.5	5.46	259.	10.251	60.54
29. 6	0H56	56D21.5	20D22.5	29. 6	1H 0	56D20.8	20D22.6	0.66	259.	9.932	61.20
29. 6	1H 0	56D20.8	20D22.6	29. 6	2H12	56D 8.3	20D24.5	11.94	261.	9.953	73.14
29. 6	2H12	56D 8.3	20D24.5	29. 6	2H48	56D 2.1	20D25.5	5.93	260.	9.883	79.07
29. 6	2H48	56D 2.1	20D25.5	29. 6	5H 0	55D38.5	20D28.5	22.44	262.	10.202	101.52
29. 6	5H 0	55D38.5	20D28.5	29. 6	6H 0	55D27.8	20D30.0	10.14	261.	10.149	111.67
29. 6	6H 0	55D27.8	20D30.0	29. 6	7H 8	55D16.0	20D32.7	11.44	256.	10.099	123.11
29. 6	7H 8	55D16.0	20D32.7	29. 6	7H48	55D 9.3	20D34.9	6.71	251.	10.065	129.82
29. 6	7H48	55D 9.3	20D34.9	29. 6	8H42	55D 0.2	20D37.9	9.05	250.	10.056	138.87
29. 6	8H42	55D 0.2	20D37.9	29. 6	8H48	54D59.1	20D37.7	1.02	282.	10.256	139.90
29. 6	8H48	54D59.1	20D37.7	29. 6	8H52	54D58.5	20D37.4	0.68	291.	10.305	140.59
29. 6	8H52	54D58.5	20D37.4	29. 6	9H38	54D50.8	20D40.1	7.70	250.	10.052	148.29
29. 6	9H38	54D50.8	20D40.1	29. 6	10H18	54D44.4	20D42.3	6.38	250.	9.570	154.67
29. 6	10H18	54D44.4	20D42.3	29. 6	13H54	54D 9.2	20D52.0	34.52	254.	9.591	189.20
29. 6	13H54	54D 9.2	20D52.0	29. 6	14H 0	54D 8.2	20D52.3	0.95	251.	9.517	190.16
29. 6	14H 0	54D 8.2	20D52.3	29. 6	14H12	54D 6.2	20D52.2	1.89	272.	9.477	192.05
29. 6	14H12	54D 6.2	20D52.2	29. 6	14H35	54D 2.5	20D53.4	3.64	251.	9.517	195.70
29. 6	14H35	54D 2.5	20D53.4	29. 6	16H56	53D39.1	20D56.8	22.29	261.	9.488	218.00
29. 6	16H56	53D39.1	20D56.8	29. 6	17H35	53D32.7	20D57.6	6.06	262.	9.329	224.06
29. 6	17H35	53D32.7	20D57.6	29. 6	18H12	53D26.6	20D58.1	5.75	265.	9.330	229.82
29. 6	18H12	53D26.6	20D58.1	29. 6	18H44	53D21.1	20D58.5	5.18	266.	9.715	235.00
29. 6	18H44	53D21.1	20D58.5	29. 6	19H30	53D13.5	20D58.8	7.12	267.	9.295	242.12
29. 6	19H30	53D13.5	20D58.8	29. 6	20H58	52D59.3	21D 1.3	13.57	260.	9.257	255.70
29. 6	20H58	52D59.3	21D 1.3	29. 6	22H56	52D38.4	21D 5.1	19.95	259.	10.144	275.65
29. 6	22H56	52D38.4	21D 5.1	29. 6	23H20	52D36.6	21D 5.3	1.65	260.	4.146	277.31
29. 6	23H20	52D36.6	21D 5.3	29. 6	23H30	52D36.6	21D 5.3	0.03	308.	0.222	277.35
29. 6	23H30	52D36.6	21D 5.3	29. 6	23H35	52D36.3	21D 5.4	0.34	260.	4.146	277.69
29. 6	23H35	52D36.3	21D 5.4	30. 6	0H 0	52D34.5	21D 5.8	1.72	256.	4.135	279.42
30. 6	0H 0	52D34.5	21D 5.8	30. 6	0H10	52D33.8	21D 6.0	0.69	256.	4.163	280.11
30. 6	0H10	52D33.8	21D 6.0	30. 6	0H41	52D31.1	21D 6.7	2.58	254.	5.010	282.70
30. 6	0H41	52D31.1	21D 6.7	30. 6	1H55	52D24.1	21D 8.5	6.79	254.	5.510	289.50
30. 6	1H55	52D24.1	21D 8.5	30. 6	2H 0	52D23.5	21D 8.7	0.58	254.	7.010	290.08
30. 6	2H 0	52D23.5	21D 8.7	30. 6	2H15	52D22.0	21D 9.1	1.50	254.	6.010	291.58
30. 6	2H15	52D22.0	21D 9.1	30. 6	2H20	52D21.1	21D 9.4	0.87	254.	10.510	292.46
30. 6	2H20	52D21.1	21D 9.4	30. 6	3H42	52D 6.2	21D12.5	14.35	258.	10.507	306.82
30. 6	3H42	52D 6.2	21D12.5	30. 6	4H16	52D 0.6	21D13.6	5.36	258.	9.467	312.18
30. 6	4H16	52D 0.6	21D13.6	30. 6	5H30	51D47.1	21D16.2	12.85	258.	10.423	325.04
30. 6	5H30	51D47.1	21D16.2	30. 6	7H 4	51D37.5	21D18.2	9.28	258.	5.923	334.32
30. 6	7H 4	51D37.5	21D18.2	30. 6	7H 5	51D37.4	21D18.2	0.08	263.	4.939	334.40

TABLE 2
Glomar Challenger, DSDP Leg 25, Navigation Data

DATE (day/mo)	GMT (hr/min)	LONGITUDE (deg/min)	LATITUDE (deg/min)	DATE (day/mo)	GMT (hr/min)	LONGITUDE (deg/min)	LATITUDE (deg/min)	DIST (nmi)	CSE (°)	SPEED (kt)	DISTT (nmi)
3. 7	12H23	51D40.7	21D17.7	3. 7	12H30	51D41.0	21D16.9	0.83	24.	7.170	0.83
3. 7	12H30	51D41.0	21D16.9	3. 7	13H50	51D46.3	21D 8.9	9.41	31.	7.062	10.25
3. 7	13H50	51D46.3	21D 8.9	3. 7	14H 0	51D46.8	21D 8.1	0.93	33.	5.608	11.18
3. 7	14H 0	51D46.8	21D 8.1	3. 7	14H52	51D52.0	21D 0.8	8.77	33.	10.122	19.96
3. 7	14H52	51D52.0	21D 0.8	3. 7	16H46	52D 1.9	20D45.1	18.24	31.	9.605	38.21
3. 7	16H46	52D 1.9	20D45.1	3. 7	17H20	52D 4.7	20D40.4	5.35	30.	9.449	43.56
3. 7	17H20	52D 4.7	20D40.4	3. 7	18H32	52D10.4	20D30.4	11.38	28.	9.486	54.94
3. 7	18H32	52D10.4	20D30.4	3. 7	19H34	52D15.4	20D22.0	9.63	29.	9.321	64.58
3. 7	19H34	52D15.4	20D22.0	3. 7	21H16	52D24.2	20D 8.7	15.67	32.	9.223	80.26
3. 7	21H16	52D24.2	20D 8.7	4. 7	0H 0	52D38.1	19D47.7	24.71	32.	9.042	104.97
4. 7	0H 0	52D38.1	19D47.7	4. 7	1H12	52D44.2	19D38.6	10.83	32.	9.030	115.81
4. 7	1H12	52D44.2	19D38.6	4. 7	1H49	52D46.8	19D33.5	5.61	26.	9.109	121.43
4. 7	1H49	52D46.8	19D33.5	4. 7	2H18	52D48.7	19D29.5	4.43	23.	9.178	125.86
4. 7	2H18	52D48.7	19D29.5	4. 7	7H20	53D 9.9	18D49.0	45.23	26.	8.986	171.10
4. 7	7H20	53D 9.9	18D49.0	4. 7	7H45	53D11.4	18D45.8	3.47	25.	8.334	174.57
4. 7	7H45	53D11.4	18D45.8	4. 7	8H40	53D15.1	18D39.1	7.58	28.	8.272	182.15
4. 7	8H40	53D15.1	18D39.1	4. 7	9H 6	53D17.1	18D36.1	3.56	31.	8.231	185.72
4. 7	9H 6	53D17.1	18D36.1	4. 7	9H42	53D19.5	18D31.7	4.90	28.	8.175	190.63
4. 7	9H42	53D19.5	18D31.7	4. 7	12H18	53D31.1	18D13.9	21.01	32.	8.082	211.64
4. 7	12H18	53D31.1	18D13.9	4. 7	12H52	53D33.7	18D10.1	4.54	33.	8.012	216.18
4. 7	12H52	53D33.7	18D10.1	4. 7	14H 2	53D38.1	18D 2.0	9.12	27.	7.823	225.31
4. 7	14H 2	53D38.1	18D 2.0	4. 7	20H28	54D 6.6	17D15.9	53.58	31.	8.330	278.90
4. 7	20H28	54D 6.6	17D15.9	4. 7	23H30	54D21.4	16D55.1	25.18	34.	8.302	304.08

TABLE 3
Glomar Challenger, DSDP Leg 25, Navigation Data

DATE (day/mo)	GMT (hr/min)	LONGITUDE (deg/min)	LATITUDE (deg/min)	DATE (day/mo)	GMT (hr/min)	LONGITUDE (deg/min)	LATITUDE (deg/min)	DIST (nmi)	CSE (°)	SPEED (kt)	DISTT (nmi)
4. 7	23H30	54D21.4	16D55.1	5. 7	0H 0	54D19.3	16D50.7	4.85	336.	9.707	4.85
5. 7	0H 0	54D19.3	16D50.7	5. 7	0H14	54D18.4	16D48.7	2.21	335.	9.492	7.06
5. 7	0H14	54D18.4	16D48.7	5. 7	1H30	54D12.4	16D37.9	12.25	332.	9.671	19.31
5. 7	1H30	54D12.4	16D37.9	5. 7	2H 0	54D13.8	16D33.2	4.89	16.	9.780	24.20
5. 7	2H 0	54D13.8	16D33.2	5. 7	2H44	54D11.4	16D26.5	6.98	341.	9.518	31.18
5. 7	2H44	54D11.4	16D26.5	5. 7	6H21	54D 1.9	15D53.5	34.31	344.	9.487	65.50
5. 7	6H21	54D 1.9	15D53.5	5. 7	7H 8	53D59.0	15D46.6	7.50	337.	9.577	73.00
5. 7	7H 8	53D59.0	15D46.6	5. 7	8H16	53D55.6	15D37.0	10.14	341.	8.955	83.15
5. 7	8H16	53D55.6	15D37.0	5. 7	11H58	53D40.3	15D 4.9	35.36	335.	9.558	118.51
5. 7	11H58	53D40.3	15D 4.9	5. 7	12H22	53D38.7	15D 1.7	3.46	334.	8.674	121.98
5. 7	12H22	53D38.7	15D 1.7	5. 7	13H14	53D36.1	14D54.8	7.43	340.	8.578	129.42
5. 7	13H14	53D36.1	14D54.8	5. 7	16H54	53D24.0	14D22.5	34.38	340.	9.376	163.80
5. 7	16H54	53D24.0	14D22.5	5. 7	17H31	53D21.8	14D16.9	5.89	339.	9.562	169.70
5. 7	17H31	53D21.8	14D16.9	5. 7	18H42	53D18.2	14D 6.3	11.26	341.	9.519	180.96
5. 7	18H42	53D18.2	14D 6.3	5. 7	19H40	53D15.4	13D58.0	8.73	342.	9.039	189.70
5. 7	19H40	53D15.4	13D58.0	5. 7	21H30	53D 9.3	13D41.9	17.16	340.	9.364	206.87
5. 7	21H30	53D 9.3	13D41.9	5. 7	23H30	53D 3.5	13D24.4	18.30	342.	9.153	225.18
5. 7	23H30	53D 3.5	13D24.4	6. 7	0H 0	53D 2.3	13D20.0	4.55	344.	9.119	229.74
6. 7	0H 0	53D 2.3	13D20.0	6. 7	0H38	53D 0.7	13D14.5	5.80	344.	9.159	235.54
6. 7	0H38	53D 0.7	13D14.5	6. 7	2H 0	52D58.3	13D 3.2	11.51	348.	8.425	247.05
6. 7	2H 0	52D58.3	13D 3.2	6. 7	2H26	52D57.3	12D59.7	3.66	344.	8.456	250.72
6. 7	2H26	52D57.3	12D59.7	6. 7	2H54	52D55.6	12D55.6	4.42	338.	9.484	255.14
6. 7	2H54	52D55.6	12D55.6	6. 7	4H32	52D50.2	12D41.6	14.96	339.	9.164	270.11
6. 7	4H32	52D50.2	12D41.6	6. 7	6H16	52D44.5	12D26.8	15.82	339.	9.129	285.94
6. 7	6H16	52D44.5	12D26.8	6. 7	7H22	52D40.9	12D17.0	10.41	340.	9.472	296.36
6. 7	7H22	52D40.9	12D17.0	6. 7	8H30	52D37.4	12D 6.8	10.65	342.	9.401	307.01
6. 7	8H30	52D37.4	12D 6.8	6. 7	8H47	52D35.5	12D 4.9	2.75	316.	9.722	309.77
6. 7	8H47	52D35.5	12D 4.9	6. 7	9H14	52D34.2	12D 0.9	4.21	342.	9.377	313.99
6. 7	9H14	52D34.2	12D 0.9	6. 7	9H28	52D33.4	11D58.8	2.20	341.	9.449	316.19
6. 7	9H28	52D33.4	11D58.8	6. 7	9H36	52D33.1	11D58.2	0.66	336.	4.983	316.85
6. 7	9H36	52D33.1	11D58.2	6. 7	12H22	52D24.5	11D33.5	26.15	341.	9.452	343.01
6. 7	12H22	52D24.5	11D33.5	6. 7	14H10	52D19.4	11D17.1	17.15	343.	9.530	360.16
6. 7	14H10	52D19.4	11D17.1	6. 7	16H 8	52D13.7	10D59.6	18.38	342.	9.347	378.54
6. 7	16H 8	52D13.7	10D59.6	6. 7	17H54	52D 8.6	10D44.0	16.39	342.	9.279	394.94
6. 7	17H54	52D 8.6	10D44.0	6. 7	18H52	52D 6.0	10D35.7	8.68	343.	8.988	403.63
6. 7	18H52	52D 6.0	10D35.7	6. 7	19H18	52D 4.7	10D32.0	3.88	341.	8.956	407.51
6. 7	19H18	52D 4.7	10D32.0	6. 7	20H40	52D 0.5	10D20.5	12.26	340.	8.974	419.77
6. 7	20H40	52D 0.5	10D20.5	6. 7	21H25	51D58.2	10D14.4	6.47	340.	8.638	426.25
6. 7	21H25	51D58.2	10D14.4	7. 7	0H 0	51D51.2	9D53.3	22.23	342.	8.607	448.49
7. 7	0H 0	51D51.2	9D53.3	7. 7	0H14	51D50.6	9D51.4	1.99	342.	8.567	450.49
7. 7	0H14	51D50.6	9D51.4	7. 7	1H36	51D46.5	9D40.6	11.54	339.	8.444	462.03
7. 7	1H36	51D46.5	9D40.6	7. 7	2H 4	51D45.0	9D36.4	4.45	340.	9.548	466.48
7. 7	2H 4	51D45.0	9D36.4	7. 7	3H54	51D39.1	9D20.4	17.03	340.	9.293	483.52
7. 7	3H54	51D39.1	9D20.4	7. 7	5H40	51D34.7	9D 6.1	14.95	343.	8.464	498.48
7. 7	5H40	51D34.7	9D 6.1	7. 7	7H19	51D29.2	8D51.1	15.85	340.	9.611	514.33
7. 7	7H19	51D29.2	8D51.1	7. 7	7H21	51D29.2	8D50.8	0.30	3.	9.147	514.64
7. 7	7H21	51D29.2	8D50.8	7. 7	13H20	51D 9.6	7D56.9	57.43	340.	9.599	572.07

TABLE 3 – *Continued*

DATE (day/mo)	GMT (hr/min)	LONGITUDE (deg/min)	LATITUDE (deg/min)	DATE (day/mo)	GMT (hr/min)	LONGITUDE (deg/min)	LATITUDE (deg/min)	DIST (nmi)	CSE (°)	SPEED (kt)	DISTT (nmi)
7. 7	13H20	51D 9.6	7D56.9	7. 7	17H16	50D59.1	7D21.6	36.82	343.	9.361	608.89
7. 7	17H16	50D59.1	7D21.6	7. 7	17H40	50D58.1	7D17.8	3.89	346.	9.742	612.79
7. 7	17H40	50D58.1	7D17.8	7. 7	18H54	50D54.7	7D 6.3	12.02	343.	9.750	624.82
7. 7	18H54	50D54.7	7D 6.3	7. 7	19H54	50D51.8	6D57.4	9.35	342.	9.359	634.18
7. 7	19H54	50D51.8	6D57.4	7. 7	20H30	50D49.7	6D52.2	5.58	338.	9.306	639.76
7. 7	20H30	50D49.7	6D52.2	8. 7	0H 0	50D35.8	6D22.5	32.75	335.	9.359	672.52
8. 7	0H 0	50D35.8	6D22.5	8. 7	0H50	50D32.5	6D15.5	7.79	335.	9.355	680.31
8. 7	0H50	50D32.5	6D15.5	8. 7	1H25	50D30.2	6D10.4	5.54	336.	9.504	685.86
8. 7	1H25	50D30.2	6D10.4	8. 7	2H36	50D26.5	5D59.9	11.18	340.	9.448	697.04
8. 7	2H36	50D26.5	5D59.9	8. 7	4H36	50D20.3	5D42.5	18.47	340.	9.237	715.51
8. 7	4H36	50D20.3	5D42.5	8. 7	6H24	50D14.8	5D27.0	16.45	340.	9.139	731.96
8. 7	6H24	50D14.8	5D27.0	8. 7	7H32	50D11.6	5D17.0	10.50	342.	9.266	742.47
8. 7	7H32	50D11.6	5D17.0	8. 7	9H18	50D 7.1	5D 0.7	16.91	345.	9.573	759.38
8. 7	9H18	50D 7.1	5D 0.7	8. 7	12H32	50D 1.3	4D30.6	30.65	349.	9.481	790.04
8. 7	12H32	50D 1.3	4D30.6	8. 7	13H 0	50D 0.5	4D25.8	4.76	351.	10.202	794.80
8. 7	13H 0	50D 0.5	4D25.8	8. 7	14H16	49D57.1	4D13.6	12.77	344.	10.086	807.57
8. 7	14H16	49D57.1	4D13.6	8. 7	14H49	49D55.8	4D 8.5	5.25	346.	9.563	812.83
8. 7	14H49	49D55.8	4D 8.5	8. 7	15H37	49D52.9	4D 1.5	7.50	338.	9.385	820.34
8. 7	15H37	49D52.9	4D 1.5	8. 7	16H16	49D50.4	3D56.1	6.03	335.	9.284	826.38
8. 7	16H16	49D50.4	3D56.1	8. 7	18H 4	49D42.9	3D41.4	16.51	333.	9.176	842.90
8. 7	18H 4	49D42.9	3D41.4	8. 7	19H 0	49D39.1	3D33.1	9.11	336.	9.761	852.01
8. 7	19H 0	49D39.1	3D33.1	8. 7	19H 4	49D39.0	3D32.7	0.43	340.	6.480	852.44
8. 7	19H 4	49D39.0	3D32.7	8. 7	20H48	49D31.8	3D23.6	11.62	322.	6.707	864.06
8. 7	20H48	49D31.8	3D23.6	8. 7	21H27	49D28.9	3D21.2	3.72	309.	5.738	867.79
8. 7	21H27	49D28.9	3D21.2	8. 7	21H48	49D27.5	3D20.2	1.67	305.	4.796	869.47

TABLE 4
Glomar Challenger, DSDP Leg 25, Navigation Data

DATE (day/mo)	GMT (hr/min)	LONGITUDE (deg/min)	LATITUDE (deg/min)	DATE (day/mo)	GMT (hr/min)	LONGITUDE (deg/min)	LATITUDE (deg/min)	DIST (nmi)	CSE (°)	SPEED (kt)	DISTT (nmi)
12. 7	2H22	50D 3.4	3D29.3	12. 7	2H49	50D 1.2	3D29.9	2.26	253.	5.037	2.26
12. 7	2H49	50D 1.2	3D29.9	12. 7	3H 0	49D59.6	3D29.5	1.64	284.	8.996	3.91
12. 7	3H 0	49D59.6	3D29.5	12. 7	4H44	49D43.7	3D25.8	16.46	283.	9.498	20.37
12. 7	4H44	49D43.7	3D25.8	12. 7	5H 6	49D41.2	3D25.0	2.63	288.	7.190	23.01
12. 7	5H 6	49D41.2	3D25.0	12. 7	6H32	49D28.1	3D21.7	13.57	284.	9.469	36.58
12. 7	6H32	49D28.1	3D21.7	12. 7	6H40	49D26.9	3D21.4	1.17	284.	8.840	37.76
12. 7	6H40	49D26.9	3D21.4	12. 7	6H43	49D26.7	3D21.3	0.21	289.	4.384	37.98
12. 7	6H43	49D26.7	3D21.3	12. 7	7H48	49D17.5	3D19.1	9.56	284.	8.833	47.55
12. 7	7H48	49D17.5	3D19.1	12. 7	8H20	49D12.4	3D17.8	5.19	284.	9.739	52.75
12. 7	8H20	49D12.4	3D17.8	12. 7	12H 4	48D37.0	3D12.9	35.98	278.	9.638	88.73
12. 7	12H 4	48D37.0	3D12.9	12. 7	12H34	48D32.3	3D12.0	4.83	281.	9.663	93.56
12. 7	12H34	48D32.3	3D12.0	12. 7	16H26	47D56.8	3D 5.6	36.25	280.	9.376	129.82
12. 7	16H26	47D56.8	3D 5.6	12. 7	16H46	47D53.5	3D 4.8	3.41	284.	10.237	133.23
12. 7	16H46	47D53.5	3D 4.8	12. 7	18H10	47D41.0	3D 2.5	12.77	280.	9.125	146.00
12. 7	18H10	47D41.0	3D 2.5	12. 7	18H43	47D36.2	3D 1.6	4.83	281.	8.793	150.84
12. 7	18H43	47D36.2	3D 1.6	12. 7	19H20	47D31.0	3D 0.3	5.45	284.	8.852	156.30
12. 7	19H20	47D31.0	3D 0.3	12. 7	20H30	47D20.8	2D58.1	10.47	282.	8.976	166.77
12. 7	20H30	47D20.8	2D58.1	12. 7	21H 6	47D15.6	2D56.8	5.40	284.	9.006	172.18
12. 7	21H 6	47D15.6	2D56.8	12. 7	22H 0	47D 7.7	2D55.2	7.99	281.	8.883	180.17
12. 7	22H 0	47D 7.7	2D55.2	13. 7	0H 0	46D50.5	2D51.2	17.77	283.	8.889	197.95
13. 7	0H 0	46D50.5	2D51.2	13. 7	0H 4	46D50.0	2D51.1	0.59	283.	8.898	198.54
13. 7	0H 4	46D50.0	2D51.1	13. 7	0H25	46D47.1	2D50.3	3.02	285.	8.639	201.57
13. 7	0H25	46D47.1	2D50.3	13. 7	1H 0	46D41.8	2D49.4	5.35	280.	9.176	206.92
13. 7	1H 0	46D41.8	2D49.4	13. 7	1H50	46D34.3	2D48.4	7.65	278.	9.191	214.58
13. 7	1H50	46D34.3	2D48.4	13. 7	2H14	46D30.8	2D47.8	3.57	280.	8.925	218.15
13. 7	2H14	46D30.8	2D47.8	13. 7	2H41	46D26.7	2D47.3	4.09	276.	9.110	222.25
13. 7	2H41	46D26.7	2D47.3	13. 7	4H20	46D12.0	2D45.2	14.98	278.	9.081	237.23
13. 7	4H20	46D12.0	2D45.2	13. 7	4H50	46D 7.4	2D44.5	4.60	278.	9.217	241.84
13. 7	4H50	46D 7.4	2D44.5	13. 7	5H42	45D59.7	2D43.0	7.95	281.	9.183	249.80
13. 7	5H42	45D59.7	2D43.0	13. 7	6H 4	45D57.0	2D42.3	2.80	284.	7.647	252.60
13. 7	6H 4	45D57.0	2D42.3	13. 7	6H58	45D48.7	2D40.4	8.45	282.	9.397	261.06
13. 7	6H58	45D48.7	2D40.4	13. 7	8H44	45D33.1	2D35.5	16.54	288.	9.364	277.61
13. 7	8H44	45D33.1	2D35.5	13. 7	10H 0	45D21.4	2D31.9	12.21	287.	9.645	289.82
13. 7	10H 0	45D21.4	2D31.9	13. 7	11H44	45D 4.9	2D29.4	16.85	279.	9.726	306.68
13. 7	11H44	45D 4.9	2D29.4	13. 7	12H 2	45D 1.8	2D28.8	3.17	281.	10.584	309.86
13. 7	12H 2	45D 1.8	2D28.8	13. 7	12H 3	45D 1.6	2D28.7	0.14	280.	8.684	310.00
13. 7	12H 3	45D 1.6	2D28.7	13. 7	13H26	44D50.4	2D24.9	11.96	289.	8.651	321.97
13. 7	13H26	44D50.4	2D24.9	13. 7	13H40	44D47.8	2D24.2	2.60	285.	11.174	324.58
13. 7	13H40	44D47.8	2D24.2	13. 7	13H45	44D47.2	2D24.0	0.64	283.	7.692	325.22
13. 7	13H45	44D47.2	2D24.0	13. 7	13H52	44D46.4	2D23.9	0.89	281.	7.707	326.12
13. 7	13H52	44D46.4	2D23.9	13. 7	14H40	44D40.8	2D22.2	5.88	287.	7.354	332.00

TABLE 5
Glomar Challenger, DSDP Leg 25, Navigation Data

DATE (day/mo)	GMT (hr/min)	LONGITUDE (deg/min)	LATITUDE (deg/min)	DATE (day/mo)	GMT (hr/min)	LONGITUDE (deg/min)	LATITUDE (deg/min)	DIST (nmi)	CSE (°)	SPEED (kt)	DISTT (nmi)
18. 7	11H 8	44D40.8	2D22.2	18. 7	12H24	44D35.6	2D29.1	8.65	217.	6.835	8.65
18. 7	12H24	44D35.6	2D29.1	18. 7	12H36	44D34.8	2D30.1	1.27	218.	6.370	9.93

TABLE 6
Glomar Challenger, DSDP Leg 25, Navigation Data

DATE (day/mo)	GMT (hr/min)	LONGITUDE (deg/min)	LATITUDE (deg/min)	DATE (day/mo)	GMT (hr/min)	LONGITUDE (deg/min)	LATITUDE (deg/min)	DIST (nmi)	CSE (°)	SPEED (kt)	DISTT (nmi)
18. 7	12H36	44D34.8	2D30.1	18. 7	12H42	44D35.1	2D30.7	0.73	157.	7.376	0.73
18. 7	12H42	44D35.1	2D30.7	18. 7	14H12	44D40.3	2D40.6	11.11	152.	7.412	11.85
18. 7	14H12	44D40.3	2D40.6	18. 7	14H47	44D42.2	2D44.4	4.29	153.	7.369	16.15

TABLE 7
Glomar Challenger, DSDP Leg 25, Navigation Data

DATE (day/mo)	GMT (hr/min)	LONGITUDE (deg/min)	LATITUDE (deg/min)	DATE (day/mo)	GMT (hr/min)	LONGITUDE (deg/min)	LATITUDE (deg/min)	DIST (nmi)	CSE (°)	SPEED (kt)	DISTT (nmi)
18. 7	14H47	44D42.2	2D44.4	18. 7	17H10	44D28.3	2D59.3	20.40	223.	8.562	20.40
18. 7	17H10	44D28.3	2D59.3	18. 7	21H36	44D 3.8	3D27.6	37.51	221.	8.461	57.92
18. 7	21H36	44D 3.8	3D27.6	18. 7	22H36	43D57.9	3D33.9	8.65	223.	8.651	66.57
18. 7	22H36	43D57.9	3D33.9	18. 7	23H36	43D55.9	3D42.1	8.47	194.	8.476	75.04
18. 7	23H36	43D55.9	3D42.1	18. 7	23H54	43D55.4	3D44.5	2.39	194.	7.979	77.44
18. 7	23H54	43D55.4	3D44.5	19. 7	0H 0	43D55.1	3D45.2	0.77	195.	7.714	78.21
19. 7	0H 0	43D55.1	3D45.2	19. 7	0H48	43D53.6	3D51.2	6.16	195.	7.710	84.38
19. 7	0H48	43D53.6	3D51.2	19. 7	1H44	43D52.3	3D58.0	6.92	191.	7.418	91.30
19. 7	1H44	43D52.3	3D58.0	19. 7	2H38	43D50.8	4D 4.5	6.67	193.	7.413	97.97
19. 7	2H38	43D50.8	4D 4.5	19. 7	3H 0	43D50.0	4D 7.0	2.70	197.	7.372	100.68
19. 7	3H 0	43D50.0	4D 7.0	19. 7	4H 8	43D47.7	4D15.1	8.34	196.	7.362	109.02
19. 7	4H 8	43D47.7	4D15.1	19. 7	4H54	43D46.6	4D20.6	5.60	191.	7.317	114.63
19. 7	4H54	43D46.6	4D20.6	19. 7	5H50	43D45.1	4D27.2	6.76	193.	7.253	121.40
19. 7	5H50	43D45.1	4D27.2	19. 7	7H26	43D42.2	4D38.7	11.86	194.	7.414	133.26
19. 7	7H26	43D42.2	4D38.7	19. 7	12H30	43D31.8	5D14.2	37.00	196.	7.302	170.26
19. 7	12H30	43D31.8	5D14.2	19. 7	13H 0	43D30.6	5D17.5	3.50	199.	7.018	173.77
19. 7	13H 0	43D30.6	5D17.5	19. 7	13H14	43D30.3	5D19.1	1.62	194.	6.943	175.39
19. 7	13H14	43D30.3	5D19.1	19. 7	14H16	43D28.8	5D26.2	7.25	192.	7.023	182.65
19. 7	14H16	43D28.8	5D26.2	19. 7	14H45	43D28.0	5D29.5	3.43	193.	7.100	186.08
19. 7	14H45	43D28.0	5D29.5	19. 7	17H30	43D24.3	5D48.6	19.41	191.	7.061	205.50
19. 7	17H30	43D24.3	5D48.6	19. 7	18H10	43D23.5	5D53.2	4.66	190.	7.003	210.17
19. 7	18H10	43D23.5	5D53.2	19. 7	18H22	43D23.2	5D54.6	1.49	190.	7.498	211.67
19. 7	18H22	43D23.2	5D54.6	19. 7	18H58	43D22.4	5D59.4	4.79	190.	7.995	216.47
19. 7	18H58	43D22.4	5D59.4	19. 7	21H 0	43D18.9	6D15.6	16.59	192.	8.160	233.06
19. 7	21H 0	43D18.9	6D15.6	20. 7	0H 0	43D12.0	6D39.3	24.66	196.	8.223	257.73
20. 7	0H 0	43D12.0	6D39.3	20. 7	0H30	43D10.9	6D42.6	3.48	197.	6.973	261.22
20. 7	0H30	43D10.9	6D42.6	20. 7	0H44	43D10.6	6D44.2	1.61	193.	6.912	262.83
20. 7	0H44	43D10.6	6D44.2	20. 7	1H48	43D 9.0	6D52.7	8.64	191.	8.108	271.48
20. 7	1H48	43D 9.0	6D52.7	20. 7	2H34	43D 7.4	6D58.8	6.30	195.	8.225	277.79
20. 7	2H34	43D 7.4	6D58.8	20. 7	3H18	43D 6.4	7D 4.3	5.59	190.	7.622	283.38
20. 7	3H18	43D 6.4	7D 4.3	20. 7	4H 4	43D 5.0	7D11.2	7.04	191.	9.182	290.42
20. 7	4H 4	43D 5.0	7D11.2	20. 7	4H48	43D 3.7	7D16.8	5.78	192.	7.893	296.21
20. 7	4H48	43D 3.7	7D16.8	20. 7	5H 2	43D 3.4	7D18.7	1.87	192.	8.055	298.09
20. 7	5H 2	43D 3.4	7D18.7	20. 7	5H50	43D 2.3	7D24.9	6.29	190.	7.870	304.38
20. 7	5H50	43D 2.3	7D24.9	20. 7	6H40	43D 0.9	7D31.4	6.64	192.	7.978	311.03
20. 7	6H40	43D 0.9	7D31.4	20. 7	10H15	42D56.2	7D58.8	27.82	190.	7.766	338.86
20. 7	10H15	42D56.2	7D58.8	20. 7	11H42	42D53.9	8D 9.9	11.30	192.	7.797	350.17
20. 7	11H42	42D53.9	8D 9.9	20. 7	12H22	42D52.3	8D14.9	5.24	198.	7.871	355.41
20. 7	12H22	42D52.3	8D14.9	20. 7	13H30	42D49.9	8D23.7	9.11	195.	8.046	364.53
20. 7	13H30	42D49.9	8D23.7	20. 7	14H 0	42D49.1	8D27.5	3.92	191.	7.847	368.46
20. 7	14H 0	42D49.1	8D27.5	20. 7	14H12	42D48.9	8D29.1	1.56	189.	7.839	370.02
20. 7	14H12	42D48.9	8D29.1	20. 7	17H20	42D43.5	8D53.0	24.49	193.	7.818	394.52
20. 7	17H20	42D43.5	8D53.0	20. 7	18H 8	42D42.6	8D59.4	6.46	188.	8.077	400.98
20. 7	18H 8	42D42.6	8D59.4	20. 7	18H28	42D42.0	9D 1.9	2.57	193.	7.710	403.55
20. 7	18H28	42D42.0	9D 1.9	20. 7	19H 0	42D41.3	9D 6.0	4.20	189.	7.889	407.76
20. 7	19H 0	42D41.3	9D 6.0	20. 7	19H56	42D39.9	9D13.3	7.38	191.	7.911	415.14
20. 7	19H56	42D39.9	9D13.3	20. 7	21H 0	42D37.9	9D21.7	8.71	193.	8.167	423.86

TABLE 7 – *Continued*

DATE (day/mo)	GMT (hr/min)	LONGITUDE (deg/min)	LATITUDE (deg/min)	DATE (day/mo)	GMT (hr/min)	LONGITUDE (deg/min)	LATITUDE (deg/min)	DIST (nmi)	CSE (°)	SPEED (kt)	DISTT (nmi)
				*							
20. 7	21H 0	42D37.9	9D21.7	20. 7 *	21H42	42D36.2	9D27.3	5.77	197.	8.246	429.63
20. 7	21H42	42D36.2	9D27.3	20. 7 *	23H14	42D33.4	9D39.6	12.61	193.	8.223	442.24
20. 7	23H14	42D33.4	9D39.6	20. 7 *	23H48	42D31.9	9D44.6	5.21	197.	9.206	447.46
20. 7	23H48	42D31.9	9D44.6	21. 7 *	0H 0	42D31.4	9D46.1	1.67	197.	8.356	449.13
21. 7	0H 0	42D31.4	9D46.1	21. 7 *	0H54	42D29.2	9D53.4	7.52	197.	8.363	456.66
21. 7	0H54	42D29.2	9D53.4	21. 7 *	1H36	42D27.2	9D59.0	5.94	199.	8.486	462.60
21. 7	1H36	42D27.2	9D59.0	21. 7 *	1H45	42D26.7	10D 0.1	1.27	202.	8.518	463.87
21. 7	1H45	42D26.7	10D 0.1	21. 7 *	2H44	42D25.1	10D 8.1	8.07	191.	8.213	471.95
21. 7	2H44	42D25.1	10D 8.1	21. 7 *	3H10	42D24.6	10D11.8	3.76	186.	8.698	475.72
21. 7	3H10	42D24.6	10D11.8	21. 7 *	3H18	42D24.6	10D13.0	1.15	184.	8.672	476.88
21. 7	3H18	42D24.6	10D13.0	21. 7 *	4H 8	42D23.8	10D20.5	7.54	186.	9.050	484.42
21. 7	4H 8	42D23.8	10D20.5	21. 7 *	4H35	42D23.1	10D24.2	3.84	189.	8.540	488.26
21. 7	4H35	42D23.1	10D24.2	21. 7 *	5H 0	42D22.7	10D27.8	3.53	188.	8.491	491.80
21. 7	5H 0	42D22.7	10D27.8	21. 7 *	6H52	42D21.5	10D44.3	16.54	184.	8.862	508.34
21. 7	6H52	42D21.5	10D44.3	21. 7 *	7H23	42D20.3	10D48.4	4.30	195.	8.330	512.65
21. 7	7H23	42D20.3	10D48.4	21. 7 *	7H36	42D20.0	10D50.2	1.78	193.	8.216	514.43
21. 7	7H36	42D20.0	10D50.2	21. 7 *	8H10	42D19.5	10D55.1	4.96	185.	8.754	519.39
21. 7	8H10	42D19.5	10D55.1	21. 7 *	8H25	42D19.4	10D57.3	2.16	182.	8.679	521.56
21. 7	8H25	42D19.4	10D57.3	21. 7 *	11H32	42D18.7	11D25.3	28.00	182.	8.983	549.56
21. 7	11H32	42D18.7	11D25.3	21. 7 *	12H40	42D18.1	11D35.7	10.47	183.	9.239	560.03
21. 7	12H40	42D18.1	11D35.7	21. 7 *	12H46	42D18.0	11D36.7	0.95	188.	9.523	560.98
21. 7	12H46	42D18.0	11D36.7	21. 7 *	13H14	42D18.4	11D41.2	4.51	175.	9.679	565.50
21. 7	13H14	42D18.4	11D41.2	21. 7 *	13H30	42D18.2	11D43.5	2.36	183.	8.869	567.86
21. 7	13H30	42D18.2	11D43.5	21. 7 *	15H52	42D15.2	12D 4.5	21.15	188.	8.939	589.02
21. 7	15H52	42D15.2	12D 4.5	21. 7 *	16H32	42D14.4	12D10.6	6.15	187.	9.225	595.17
21. 7	16H32	42D14.4	12D10.6	21. 7 *	17H 3	42D13.9	12D15.1	4.58	185.	8.877	599.76
21. 7	17H 3	42D13.9	12D15.1	21. 7 *	17H36	42D13.2	12D20.0	4.89	189.	8.897	604.65
21. 7	17H36	42D13.2	12D20.0	21. 7 *	18H18	42D12.8	12D26.4	6.41	184.	9.160	611.06
21. 7	18H18	42D12.8	12D26.4	21. 7 *	18H50	42D12.5	12D31.2	4.89	183.	9.168	615.95
21. 7	18H50	42D12.5	12D31.2	21. 7 *	19H 2	42D12.3	12D33.1	1.82	186.	9.149	617.78
21. 7	19H 2	42D12.3	12D33.1	21. 7 *	19H30	42D11.8	12D37.3	4.31	186.	9.249	622.10
21. 7	19H30	42D11.8	12D37.3	22. 7 *	0H 0	42D 3.6	13D17.9	41.36	191.	9.193	663.47
22. 7	0H 0	42D 3.6	13D17.9	22. 7 *	0H 6	42D 3.5	13D18.9	0.93	191.	9.354	664.40
22. 7	0H 6	42D 3.5	13D18.9	22. 7 *	0H42	42D 2.3	13D24.1	5.33	193.	8.885	669.74
22. 7	0H42	42D 2.3	13D24.1	22. 7 *	1H56	42D 0.3	13D34.6	10.68	191.	8.660	680.42
22. 7	1H56	42D 0.3	13D34.6	22. 7 *	3H18	41D57.3	13D45.7	11.48	195.	8.400	691.90
22. 7	3H18	41D57.3	13D45.7	22. 7 *	4H18	41D55.4	13D54.1	8.60	192.	8.602	700.50
22. 7	4H18	41D55.4	13D54.1	22. 7 *	6H 0	41D51.9	14D 7.1	13.44	195.	7.906	713.94
22. 7	6H 0	41D51.9	14D 7.1	22. 7 *	6H45	41D50.1	14D12.9	6.08	196.	8.109	720.02
22. 7	6H45	41D50.1	14D12.9	22. 7 *	8H34	41D47.9	14D27.5	14.72	189.	8.103	734.74
22. 7	8H34	41D47.9	14D27.5	22. 7 *	11H56	41D43.2	14D54.5	27.38	190.	8.134	762.13
22. 7	11H56	41D43.2	14D54.5	22. 7 *	12H26	41D42.2	14D59.3	4.89	191.	9.794	767.03
22. 7	12H26	41D42.2	14D59.3	22. 7 *	13H38	41D40.1	15D 9.4	10.30	191.	8.586	777.33
22. 7	13H38	41D40.1	15D 9.4	22. 7 *	14H26	41D38.6	15D15.9	6.70	192.	8.387	784.04
22. 7	14H26	41D38.6	15D15.9	22. 7 *	14H37	41D38.3	15D17.4	1.53	191.	8.379	785.58
22. 7	14H37	41D38.3	15D17.4	22. 7 *	15H 7	41D36.7	15D21.4	4.23	202.	8.479	789.82
22. 7	15H 7	41D36.7	15D21.4	22. 7 *	15H42	41D35.8	15D26.2	4.88	191.	8.369	794.70
				*							

TABLE 7 – *Continued*

DATE (day/mo)	GMT (hr/min)	LONGITUDE (deg/min)	LATITUDE (deg/min)	DATE (day/mo)	GMT (hr/min)	LONGITUDE (deg/min)	LATITUDE (deg/min)	DIST (nmi)	CSE (°)	SPEED (kt)	DISTT (nmi)
22. 7	15H42	41D35.8	15D26.2	22. 7	16H23	41D35.9	15D31.4	5.27	178.	7.722	799.98
22. 7	16H23	41D35.9	15D31.4	22. 7	16H44	41D36.2	15D34.2	2.73	175.	7.811	802.71
22. 7	16H44	41D36.2	15D34.2	22. 7	17H28	41D35.5	15D40.0	5.83	187.	7.963	808.55
22. 7	17H28	41D35.5	15D40.0	22. 7	18H14	41D34.6	15D46.3	6.36	188.	8.295	814.91
22. 7	18H14	41D34.6	15D46.3	22. 7	18H36	41D34.2	15D49.3	3.02	187.	8.249	817.93
22. 7	18H36	41D34.2	15D49.3	22. 7	19H20	41D32.9	15D55.7	6.55	191.	8.931	824.48

TABLE 8
Glomar Challenger, DSDP Leg 25, Navigation Data

DATE (day/mo)	GMT (hr/min)	LONGITUDE (deg/min)	LATITUDE (deg/min)	DATE (day/mo)	GMT (hr/min)	LONGITUDE (deg/min)	LATITUDE (deg/min)	DIST (nmi)	CSE (°)	SPEED (kt)	DISTT (nmi)
26. 7	3H10	41D49.2	15D50.7	26. 7	3H22	41D49.3	15D51.9	1.20	175.	6.019	1.20
26. 7	3H22	41D49.3	15D51.9	26. 7	3H30	41D49.4	15D52.3	0.49	165.	3.679	1.69
26. 7	3H30	41D49.4	15D52.3	26. 7	4H36	41D49.1	16D 0.5	8.13	182.	7.392	9.82
26. 7	4H36	41D49.1	16D 0.5	26. 7	5H10	41D48.3	16D 4.7	4.27	190.	7.536	14.09
26. 7	5H10	41D48.3	16D 4.7	26. 7	5H50	41D47.9	16D10.1	5.44	184.	8.170	19.54
26. 7	5H50	41D47.9	16D10.1	26. 7	6H24	41D48.1	16D14.7	4.56	178.	8.060	24.11
26. 7	6H24	41D48.1	16D14.7	26. 7	7H 6	41D48.8	16D19.6	4.94	172.	7.066	29.05
26. 7	7H 6	41D48.8	16D19.6	26. 7	8H 0	41D49.6	16D26.3	6.76	173.	7.512	35.81
26. 7	8H 0	41D49.6	16D26.3	26. 7	11H30	41D49.5	16D52.8	26.50	180.	7.572	62.32
26. 7	11H30	41D49.5	16D52.8	26. 7	12H12	41D49.0	16D57.8	5.02	186.	7.174	67.34
26. 7	12H12	41D49.0	16D57.8	26. 7	13H21	41D48.3	17D 6.5	8.76	184.	7.618	76.10
26. 7	13H21	41D48.3	17D 6.5	26. 7	13H25	41D48.1	17D 7.0	0.51	196.	7.758	76.62
26. 7	13H25	41D48.1	17D 7.0	26. 7	13H43	41D47.0	17D 9.1	2.38	207.	7.940	79.00
26. 7	13H43	41D47.0	17D 9.1	26. 7	13H56	41D46.9	17D10.8	1.65	185.	7.637	80.65
26. 7	13H56	41D46.9	17D10.8	26. 7	15H10	41D47.0	17D20.3	9.50	179.	7.703	90.15
26. 7	15H10	41D47.0	17D20.3	26. 7	16H 0	41D47.0	17D26.7	6.40	180.	7.680	96.55
26. 7	16H 0	41D47.0	17D26.7	26. 7	16H30	41D47.1	17D30.7	4.00	178.	8.009	100.56
26. 7	16H30	41D47.1	17D30.7	26. 7	17H48	41D47.1	17D41.1	10.39	180.	7.998	110.96
26. 7	17H48	41D47.1	17D41.1	26. 7	18H30	41D47.3	17D46.4	5.30	178.	7.576	116.26
26. 7	18H30	41D47.3	17D46.4	26. 7	19H 0	41D47.4	17D50.2	3.84	178.	7.689	120.11
26. 7	19H 0	41D47.4	17D50.2	26. 7	20H18	41D47.2	18D 0.2	9.96	181.	7.662	130.07
26. 7	20H18	41D47.2	18D 0.2	26. 7	20H50	41D47.0	18D 4.2	4.00	181.	7.512	134.07
26. 7	20H50	41D47.0	18D 4.2	26. 7	22H 0	41D46.0	18D12.8	8.72	187.	7.477	142.80
26. 7	22H 0	41D46.0	18D12.8	27. 7	0H 0	41D41.5	18D27.1	14.89	197.	7.445	157.69
27. 7	0H 0	41D41.5	18D27.1	27. 7	1H 0	41D39.3	18D34.2	7.44	197.	7.445	165.13
27. 7	1H 0	41D39.3	18D34.2	27. 7	1H22	41D39.0	18D37.0	2.75	186.	7.506	167.89
27. 7	1H22	41D39.0	18D37.0	27. 7	2H15	41D37.8	18D44.1	7.24	189.	8.202	175.13
27. 7	2H15	41D37.8	18D44.1	27. 7	3H48	41D36.3	18D56.8	12.72	187.	8.209	187.86
27. 7	3H48	41D36.3	18D56.8	27. 7	4H16	41D36.2	19D 0.7	3.90	181.	8.359	191.76
27. 7	4H16	41D36.2	19D 0.7	27. 7	4H43	41D35.6	19D 4.4	3.82	187.	8.489	195.58
27. 7	4H43	41D35.6	19D 4.4	27. 7	5H34	41D35.2	19D11.7	7.22	184.	8.499	202.80
27. 7	5H34	41D35.2	19D11.7	27. 7	6H 4	41D34.5	19D16.0	4.35	189.	8.702	207.15
27. 7	6H 4	41D34.5	19D16.0	27. 7	6H54	41D34.2	19D22.9	6.93	182.	8.323	214.09
27. 7	6H54	41D34.2	19D22.9	27. 7	8H 2	41D34.6	19D32.4	9.47	178.	8.362	223.57
27. 7	8H 2	41D34.6	19D32.4	27. 7	8H47	41D34.8	19D38.7	6.31	178.	8.416	229.88
27. 7	8H47	41D34.8	19D38.7	27. 7	11H22	41D34.9	20D 0.4	21.69	180.	8.397	251.57
27. 7	11H22	41D34.9	20D 0.4	27. 7	12H 8	41D34.6	20D 7.0	6.62	182.	8.642	258.20
27. 7	12H 8	41D34.6	20D 7.0	27. 7	13H 6	41D33.6	20D15.3	8.34	187.	8.628	266.54
27. 7	13H 6	41D33.6	20D15.3	27. 7	13H21	41D33.1	20D17.5	2.32	192.	9.307	268.87
27. 7	13H21	41D33.1	20D17.5	27. 7	16H 2	41D29.2	20D42.2	24.89	189.	9.277	293.76
27. 7	16H 2	41D29.2	20D42.2	27. 7	16H58	41D27.9	20D50.8	8.68	188.	9.306	302.45
27. 7	16H58	41D27.9	20D50.8	27. 7	17H 0	41D27.8	20D51.1	0.31	186.	9.360	302.76
27. 7	17H 0	41D27.8	20D51.1	27. 7	17H50	41D28.1	20D58.9	7.79	178.	9.350	310.55
27. 7	17H50	41D28.1	20D58.9	27. 7	19H10	41D28.5	21D10.9	12.00	178.	9.007	322.56
27. 7	19H10	41D28.5	21D10.9	27. 7	19H26	41D28.7	21D13.3	2.40	177.	9.007	324.96
27. 7	19H26	41D28.7	21D13.3	27. 7	21H18	41D29.7	21D29.5	16.22	177.	8.693	341.19
27. 7	21H18	41D29.7	21D29.5	27. 7	21H48	41D29.7	21D34.0	4.56	179.	9.135	345.76

TABLE 8 – *Continued*

DATE (day/mo)	GMT (hr/min)	LONGITUDE (deg/min)	LATITUDE (deg/min)	DATE (day/mo)	GMT (hr/min)	LONGITUDE (deg/min)	LATITUDE (deg/min)	DIST (nmi)	CSE (°)	SPEED (kt)	DISTT (nmi)
27. 7	21H48	41D29.7	21D34.0	27. 7	22H42	41D29.4	21D42.3	8.23	182.	9.155	354.00
27. 7	22H42	41D29.4	21D42.3	28. 7	0H 0	41D28.2	21D53.0	10.75	186.	8.275	364.76
28. 7	0H 0	41D28.2	21D53.0	28. 7	0H24	41D27.9	21D56.3	3.31	186.	8.279	368.07
28. 7	0H24	41D27.9	21D56.3	28. 7	1H10	41D27.8	22D 2.7	6.42	180.	8.375	374.49
28. 7	1H10	41D27.8	22D 2.7	28. 7	2H14	41D29.0	22D11.6	8.93	173.	8.380	383.43
28. 7	2H14	41D29.0	22D11.6	28. 7	2H41	41D29.3	22D15.3	3.78	175.	8.405	387.21
28. 7	2H41	41D29.3	22D15.3	28. 7	3H24	41D29.5	22D21.4	6.03	179.	8.417	393.24
28. 7	3H24	41D29.5	22D21.4	28. 7	4H46	41D27.6	22D32.5	11.23	189.	8.224	404.48
28. 7	4H46	41D27.6	22D32.5	28. 7	5H12	41D29.0	22D36.2	3.92	161.	9.050	408.40
28. 7	5H12	41D29.0	22D36.2	28. 7	5H43	41D29.0	22D40.5	4.35	179.	8.419	412.76
28. 7	5H43	41D29.0	22D40.5	28. 7	7H16	41D31.2	22D53.4	13.00	171.	8.387	425.76
28. 7	7H16	41D31.2	22D53.4	28. 7	7H48	41D31.7	22D57.9	4.57	173.	8.570	430.33

TABLE 9
Glomar Challenger, DSDP Leg 25, Navigation Data

DATE (day/mo)	GMT (hr/min)	LONGITUDE (deg/min)	LATITUDE (deg/min)	DATE (day/mo)	GMT (hr/min)	LONGITUDE (deg/min)	LATITUDE (deg/min)	DIST (nmi)	CSE (°)	SPEED (kt)	DISTT (nmi)
29. 7	16H35	41D21.6	22D55.6	29. 7	16H43	41D22.1	22D56.1	0.70	135.	5.313	0.70
29. 7	16H43	41D22.1	22D56.1	29. 7	17H 0	41D24.0	22D57.8	2.49	135.	8.812	3.20
29. 7	17H 0	41D24.0	22D57.8	29. 7	19H34	41D42.1	23D14.3	23.39	135.	9.112	26.59
29. 7	19H34	41D42.1	23D14.3	29. 7	22H38	42D 4.3	23D33.2	27.87	133.	9.090	54.47
29. 7	22H38	42D 4.3	23D33.2	29. 7	22H56	42D 6.4	23D34.9	2.57	131.	8.587	57.04
29. 7	22H56	42D 6.4	23D34.9	30. 7	0H 0	42D12.9	23D41.7	9.08	138.	8.520	66.13
30. 7	0H 0	42D12.9	23D41.7	30. 7	0H20	42D14.9	23D43.9	2.84	141.	8.527	68.97
30. 7	0H20	42D14.9	23D43.9	30. 7	1H 0	42D20.3	23D48.0	6.46	130.	9.690	75.43
30. 7	1H 0	42D20.3	23D48.0	30. 7	2H10	42D29.9	23D55.1	11.31	129.	9.696	86.75
30. 7	2H10	42D29.9	23D55.1	30. 7	2H45	42D33.9	23D58.4	5.01	133.	8.591	91.76
30. 7	2H45	42D33.9	23D58.4	30. 7	3H30	42D38.8	24D 3.1	6.43	136.	8.577	98.19
30. 7	3H30	42D38.8	24D 3.1	30. 7	4H56	42D48.0	24D13.1	13.08	140.	9.130	111.28
30. 7	4H56	42D48.0	24D13.1	30. 7	5H16	42D50.0	24D15.6	3.10	144.	9.301	114.38
30. 7	5H16	42D50.0	24D15.6	30. 7	5H40	42D52.2	24D18.5	3.53	145.	8.830	117.91
30. 7	5H40	42D52.2	24D18.5	30. 7	6H 0	42D54.4	24D21.1	3.32	142.	9.967	121.23
30. 7	6H 0	42D54.4	24D21.1	30. 7	6H22	42D56.5	24D23.6	3.17	142.	8.670	124.41
30. 7	6H22	42D56.5	24D23.6	30. 7	6H52	42D59.8	24D27.4	4.83	142.	9.668	129.25
30. 7	6H52	42D59.8	24D27.4	30. 7	7H26	43D 3.7	24D31.6	5.47	140.	9.659	134.72
30. 7	7H26	43D 3.7	24D31.6	30. 7	7H52	43D 6.8	24D34.6	4.20	136.	9.703	138.93
30. 7	7H52	43D 6.8	24D34.6	30. 7	7H55	43D 7.2	24D34.9	0.46	136.	9.203	139.39
30. 7	7H55	43D 7.2	24D34.9	30. 7	10H28	43D25.9	24D52.9	24.74	136.	9.704	164.13
30. 7	10H28	43D25.9	24D52.9	30. 7	12H10	43D38.0	25D 4.0	15.64	135.	9.204	179.78
30. 7	12H10	43D38.0	25D 4.0	30. 7	15H16	43D58.4	25D23.1	26.63	136.	8.590	206.41
30. 7	15H16	43D58.4	25D23.1	30. 7	16H18	44D 4.4	25D29.7	8.55	140.	8.282	214.97
30. 7	16H18	44D 4.4	25D29.7	30. 7	17H 2	44D 9.1	25D34.1	6.12	136.	8.355	221.10
30. 7	17H 2	44D 9.1	25D34.1	30. 7	18H 6	44D15.0	25D41.2	8.88	143.	8.333	229.99
30. 7	18H 6	44D15.0	25D41.2	30. 7	18H44	44D18.9	25D45.4	5.48	140.	8.665	235.47
30. 7	18H44	44D18.9	25D45.4	30. 7	19H40	44D24.5	25D50.9	7.59	137.	8.142	243.07
30. 7	19H40	44D24.5	25D50.9	30. 7	22H45	44D45.7	26D 7.1	25.06	130.	8.129	268.14
30. 7	22H45	44D45.7	26D 7.1	30. 7	23H 0	44D47.1	26D 8.8	2.03	142.	8.159	270.18
30. 7	23H 0	44D47.1	26D 8.8	30. 7	23H26	44D50.1	26D11.1	3.52	131.	8.131	273.70
30. 7	23H26	44D50.1	26D11.1	30. 7	23H50	44D52.4	26D13.3	3.02	137.	7.560	276.73
30. 7	23H50	44D52.4	26D13.3	31. 7	0H 0	44D53.2	26D14.1	1.18	137.	7.111	277.91
31. 7	0H 0	44D53.2	26D14.1	31. 7	1H35	45D 1.8	26D22.3	11.25	137.	7.110	289.17
31. 7	1H35	45D 1.8	26D22.3	31. 7	1H38	45D 2.1	26D22.6	0.32	132.	6.446	289.49
31. 7	1H38	45D 2.1	26D22.6	31. 7	2H20	45D 5.2	26D26.3	4.67	142.	6.683	294.17
31. 7	2H20	45D 5.2	26D26.3	31. 7	2H40	45D 7.0	26D27.8	2.15	134.	6.471	296.33
31. 7	2H40	45D 7.0	26D27.8	31. 7	4H14	45D15.2	26D34.3	9.83	131.	6.275	306.16
31. 7	4H14	45D15.2	26D34.3	31. 7	4H40	45D17.7	26D36.4	3.16	134.	7.299	309.32
31. 7	4H40	45D17.7	26D36.4	31. 7	5H58	45D25.9	26D42.3	9.35	128.	7.196	318.68
31. 7	5H58	45D25.9	26D42.3	31. 7	6H36	45D29.4	26D44.8	4.01	128.	6.341	322.69
31. 7	6H36	45D29.4	26D44.8	31. 7	9H18	45D46.4	26D58.1	20.28	131.	7.513	342.98
31. 7	9H18	45D46.4	26D58.1	31. 7	9H21	45D46.7	26D58.1	0.29	81.	5.809	343.27
31. 7	9H21	45D46.7	26D58.1	31. 7	9H23	45D46.9	26D58.0	0.19	74.	5.812	343.46
31. 7	9H23	45D46.9	26D58.0	31. 7	9H45	45D49.1	26D57.2	2.14	67.	5.838	345.61
31. 7	9H45	45D49.1	26D57.2	31. 7	11H22	45D59.3	27D 5.2	12.09	131.	7.481	357.70
31. 7	11H22	45D59.3	27D 5.2	31. 7	13H 0	46D10.5	27D13.3	12.91	129.	7.908	370.62

TABLE 9 – *Continued*

DATE (day/mo)	GMT (hr/min)	LONGITUDE (deg/min)	LATITUDE (deg/min)	DATE (day/mo)	GMT (hr/min)	LONGITUDE (deg/min)	LATITUDE (deg/min)	DIST (nmi)	CSE (°)	SPEED (kt)	DISTT (nmi)
31. 7	13H 0	46D10.5	27D13.3	31. 7	13H32	46D14.1	27D16.1	4.23	131.	7.934	374.85
31. 7	13H32	46D14.1	27D16.1	31. 7	14H30	46D19.5	27D21.4	7.16	138.	7.413	382.02
31. 7	14H30	46D19.5	27D21.4	31. 7	14H51	46D22.2	27D23.5	3.30	132.	9.436	385.32
31. 7	14H51	46D22.2	27D23.5	31. 7	15H28	46D27.3	27D27.2	5.76	129.	9.341	391.08
31. 7	15H28	46D27.3	27D27.2	31. 7	17H18	46D38.7	27D38.5	15.19	138.	8.289	406.28
31. 7	17H18	46D38.7	27D38.5	31. 7	17H54	46D44.1	27D42.6	6.31	130.	10.530	412.60
31. 7	17H54	46D44.1	27D42.6	31. 7	18H53	46D50.0	27D48.3	7.82	137.	7.958	420.42
31. 7	18H53	46D50.0	27D48.3	31. 7	19H42	46D55.3	27D52.7	6.36	133.	7.798	426.79
31. 7	19H42	46D55.3	27D52.7	31. 7	20H22	46D59.8	27D55.5	4.91	125.	7.376	431.71
31. 7	20H22	46D59.8	27D55.5	31. 7	23H 2	47D18.6	28D 5.6	19.46	121.	7.299	451.17
31. 7	23H 2	47D18.6	28D 5.6	1. 8	0H 0	47D26.6	28D 8.2	7.60	110.	7.865	458.78
1. 8	0H 0	47D26.6	28D 8.2	1. 8	3H 0	47D51.6	28D16.3	23.59	110.	7.866	482.38
1. 8	3H 0	47D51.6	28D16.3	1. 8	3H24	47D54.9	28D17.6	3.13	114.	7.833	485.51
1. 8	3H24	47D54.9	28D17.6	1. 8	3H52	47D59.0	28D18.5	3.81	104.	8.176	489.33
1. 8	3H52	47D59.0	28D18.5	1. 8	5H18	48D 9.9	28D24.2	11.12	121.	7.762	500.45
1. 8	5H18	48D 9.9	28D24.2	1. 8	6H 4	48D15.7	28D28.4	6.66	130.	8.696	507.12
1. 8	6H 4	48D15.7	28D28.4	1. 8	7H36	48D27.0	28D37.3	13.32	132.	8.693	520.45
1. 8	7H36	48D27.0	28D37.3	1. 8	10H22	48D46.1	28D54.2	23.85	135.	8.620	544.30
1. 8	10H22	48D46.1	28D54.2	1. 8	10H54	48D49.9	28D57.5	4.69	135.	8.807	549.00
1. 8	10H54	48D49.9	28D57.5	1. 8	12H 0	48D58.0	29D 4.2	9.88	133.	8.983	558.88
1. 8	12H 0	48D58.0	29D 4.2	1. 8	12H20	49D 0.6	29D 6.4	3.16	133.	9.482	562.04
1. 8	12H20	49D 0.6	29D 6.4	1. 8	12H42	49D 3.5	29D 8.8	3.40	133.	9.284	565.44
1. 8	12H42	49D 3.5	29D 8.8	1. 8	14H42	49D17.5	29D21.5	17.66	136.	8.832	583.11
1. 8	14H42	49D17.5	29D21.5	1. 8	15H20	49D21.9	29D25.6	5.62	137.	8.884	588.73
1. 8	15H20	49D21.9	29D25.6	1. 8	17H 0	49D33.7	29D36.1	14.80	136.	8.882	603.54
1. 8	17H 0	49D33.7	29D36.1	1. 8	17H 8	49D34.8	29D36.9	1.17	128.	8.796	604.71
1. 8	17H 8	49D34.8	29D36.9	1. 8	18H50	49D48.0	29D46.5	14.99	130.	8.823	619.71
1. 8	18H50	49D48.0	29D46.5	1. 8	22H14	50D15.7	30D 4.8	30.28	127.	8.906	649.99
1. 8	22H14	50D15.7	30D 4.8	1. 8	23H20	50D24.6	30D10.9	9.85	128.	8.956	659.85
1. 8	23H20	50D24.6	30D10.9	1. 8	23H58	50D29.7	30D14.2	5.52	127.	8.721	665.37
1. 8	23H58	50D29.7	30D14.2	2. 8	0H 0	50D29.9	30D14.3	0.28	127.	8.620	665.66
2. 8	0H 0	50D29.9	30D14.3	2. 8	0H36	50D34.7	30D17.4	5.17	127.	8.620	670.83
2. 8	0H36	50D34.7	30D17.4	2. 8	1H48	50D44.0	30D24.0	10.35	129.	8.627	681.18
2. 8	1H48	50D44.0	30D24.0	2. 8	4H20	51D 3.0	30D37.3	21.15	129.	8.350	702.34
2. 8	4H20	51D 3.0	30D37.3	2. 8	5H 0	51D 7.8	30D40.9	5.49	131.	8.240	707.83
2. 8	5H 0	51D 7.8	30D40.9	2. 8	6H46	51D21.8	30D51.0	15.75	130.	8.917	723.59
2. 8	6H46	51D21.8	30D51.0	2. 8	9H30	51D43.6	31D 7.1	24.73	131.	9.050	748.32
2. 8	9H30	51D43.6	31D 7.1	2. 8	9H53	51D46.5	31D 9.5	3.53	133.	9.213	751.86
2. 8	9H53	51D46.5	31D 9.5	2. 8	10H10	51D48.9	31D11.2	2.60	130.	9.179	754.46
2. 8	10H10	51D48.9	31D11.2	2. 8	10H45	51D54.2	31D14.7	5.86	128.	10.048	760.32
2. 8	10H45	51D54.2	31D14.7	2. 8	11H12	51D56.8	31D16.6	2.81	130.	6.254	763.13
2. 8	11H12	51D56.8	31D16.6	2. 8	11H15	51D57.0	31D16.7	0.30	124.	6.037	763.43
2. 8	11H15	51D57.0	31D16.7	2. 8	11H54	52D 3.6	31D20.5	6.71	124.	10.337	770.15
2. 8	11H54	52D 3.6	31D20.5	2. 8	16H 0	52D44.7	31D42.5	41.56	122.	10.138	811.72

TABLE 10
Glomar Challenger, DSDP Leg 25, Navigation Data

DATE (day/mo)	GMT (hr/min)	LONGITUDE (deg/min)	LATITUDE (deg/min)	DATE (day/mo)	GMT (hr/min)	LONGITUDE (deg/min)	LATITUDE (deg/min)	DIST (nmi)	CSE (°)	SPEED (kt)	DISTT (nmi)
6. 8	23H14	52D18.1	31D32.0	6. 8	23H28	52D17.1	31D32.2	0.87	257.	3.769	0.87
6. 8	23H28	52D17.1	31D32.2	7. 8	0H 0	52D14.9	31D33.7	2.35	230.	4.416	3.23
7. 8	0H 0	52D14.9	31D33.7	7. 8	0H 6	52D14.6	31D34.0	0.44	230.	4.416	3.67
7. 8	0H 6	52D14.6	31D34.0	7. 8	1H18	52D 9.9	31D37.3	5.20	231.	4.336	8.87
7. 8	1H18	52D 9.9	31D37.3	7. 8	1H45	52D 7.4	31D38.5	2.42	238.	5.396	11.30
7. 8	1H45	52D 7.4	31D38.5	7. 8	1H56	52D 6.6	31D39.2	0.97	232.	5.337	12.28
7. 8	1H56	52D 6.6	31D39.2	7. 8	2H12	52D 7.0	31D39.9	0.77	154.	2.921	13.06
7. 8	2H12	52D 7.0	31D39.9	7. 8	3H42	51D59.2	31D44.0	7.82	238.	5.218	20.89
7. 8	3H42	51D59.2	31D44.0	7. 8	4H 8	51D57.1	31D45.3	2.21	231.	5.116	23.11
7. 8	4H 8	51D57.1	31D45.3	7. 8	4H32	51D55.6	31D46.9	2.02	222.	5.064	25.13
7. 8	4H32	51D55.6	31D46.9	7. 8	6H16	51D47.5	31D53.8	9.76	225.	5.635	34.90
7. 8	6H16	51D47.5	31D53.8	7. 8	9H40	51D32.5	32D 7.6	18.80	223.	5.532	53.71
7. 8	9H40	51D32.5	32D 7.6	7. 8	10H10	51D30.5	32D 9.8	2.78	218.	5.562	56.49
7. 8	10H10	51D30.5	32D 9.8	7. 8	10H40	51D28.7	32D11.7	2.45	217.	4.900	58.94
7. 8	10H40	51D28.7	32D11.7	7. 8	13H50	51D18.7	32D24.8	15.59	213.	4.924	74.54
7. 8	13H50	51D18.7	32D24.8	7. 8	14H22	51D16.9	32D26.6	2.40	219.	4.508	76.94
7. 8	14H22	51D16.9	32D26.6	7. 8	15H 8	51D13.4	32D28.6	3.55	237.	4.634	80.50
7. 8	15H 8	51D13.4	32D28.6	7. 8	15H38	51D11.2	32D29.8	2.19	237.	4.395	82.69
7. 8	15H38	51D11.2	32D29.8	7. 8	16H58	51D 6.1	32D33.6	5.76	229.	4.327	88.46
7. 8	16H58	51D 6.1	32D33.6	7. 8	17H23	51D 3.7	32D34.7	2.25	240.	5.416	90.72
7. 8	17H23	51D 3.7	32D34.7	7. 8	17H30	51D 3.2	32D35.1	0.62	235.	5.336	91.34
7. 8	17H30	51D 3.2	32D35.1	7. 8	17H35	51D 2.8	32D35.3	0.36	232.	4.379	91.71
7. 8	17H35	51D 2.8	32D35.3	7. 8	19H16	50D56.4	32D39.5	6.87	233.	4.086	98.59
7. 8	19H16	50D56.4	32D39.5	7. 8	19H55	50D53.2	32D41.4	3.25	234.	5.015	101.85
7. 8	19H55	50D53.2	32D41.4	7. 8	21H24	50D46.8	32D46.2	7.27	229.	4.903	109.12
7. 8	21H24	50D46.8	32D46.2	7. 8	22H 0	50D43.9	32D48.0	3.02	233.	5.035	112.14
7. 8	22H 0	50D43.9	32D48.0	7. 8	22H40	50D41.6	32D50.5	3.16	219.	4.752	115.31
7. 8	22H40	50D41.6	32D50.5	7. 8	23H10	50D40.0	32D52.5	2.41	214.	4.826	117.72
7. 8	23H10	50D40.0	32D52.5	8. 8	0H 0	50D37.3	32D56.0	4.19	212.	5.028	121.91
8. 8	0H 0	50D37.3	32D56.0	8. 8	0H26	50D36.0	32D57.9	2.17	212.	5.022	124.09
8. 8	0H26	50D36.0	32D57.9	8. 8	1H 2	50D34.3	33D 0.3	2.79	211.	4.658	126.89
8. 8	1H 2	50D34.3	33D 0.3	8. 8	1H12	50D33.7	33D 1.1	0.97	207.	5.864	127.86
8. 8	1H12	50D33.7	33D 1.1	8. 8	2H50	50D26.2	33D 8.3	9.56	222.	5.856	137.43
8. 8	2H50	50D26.2	33D 8.3	8. 8	3H32	50D22.6	33D11.0	4.07	227.	5.815	141.50
8. 8	3H32	50D22.6	33D11.0	8. 8	4H38	50D16.8	33D15.2	6.42	230.	5.839	147.92
8. 8	4H38	50D16.8	33D15.2	8. 8	5H15	50D13.4	33D17.8	3.85	227.	6.244	151.77
8. 8	5H15	50D13.4	33D17.8	8. 8	5H32	50D12.0	33D19.1	1.75	224.	6.211	153.53
8. 8	5H32	50D12.0	33D19.1	8. 8	7H58	50D 1.2	33D31.1	15.09	217.	6.202	168.63

TABLE 11
Glomar Challenger, DSDP Leg 25, Navigation Data

DATE (day/mo)	GMT (hr/min)	LONGITUDE (deg/min)	LATITUDE (deg/min)	DATE (day/mo)	GMT (hr/min)	LONGITUDE (deg/min)	LATITUDE (deg/min)	DIST (nmi)	CSE (°)	SPEED (kt)	DISTT (nmi)
8. 8	7H58	50D 1.2	33D31.1	8. 8	8H 9	49D59.7	33D30.9	1.24	281.	6.809	1.24
8. 8	8H 9	49D59.7	33D30.9	8. 8	8H55	49D53.7	33D29.6	5.25	285.	6.858	6.50
8. 8	8H55	49D53.7	33D29.6	8. 8	9H20	49D50.4	33D29.1	2.81	281.	6.760	9.32
8. 8	9H20	49D50.4	33D29.1	8. 8	9H48	49D46.8	33D28.7	2.98	276.	6.391	12.30
8. 8	9H48	49D46.8	33D28.7	8. 8	10H34	49D41.1	33D28.6	4.83	272.	6.301	17.13
8. 8	10H34	49D41.1	33D28.6	8. 8	11H 0	49D36.5	33D28.4	3.78	272.	8.745	20.92
8. 8	11H 0	49D36.5	33D28.4	8. 8	11H18	49D35.3	33D29.8	1.71	219.	5.705	22.63
8. 8	11H18	49D35.3	33D29.8	8. 8	12H16	49D34.6	33D29.1	0.88	323.	0.915	23.52
8. 8	12H16	49D34.6	33D29.1	8. 8	12H22	49D33.6	33D29.1	0.89	270.	8.992	24.42
8. 8	12H22	49D33.6	33D29.1	8. 8	14H20	49D17.9	33D29.0	13.15	270.	6.689	37.57
8. 8	14H20	49D17.9	33D29.0	8. 8	15H 4	49D11.7	33D28.8	5.13	272.	7.000	42.71
8. 8	15H 4	49D11.7	33D28.8	8. 8	16H 6	49D 2.3	33D28.7	7.94	271.	7.686	50.65
8. 8	16H 6	49D 2.3	33D28.7	8. 8	16H38	48D56.9	33D28.6	4.47	270.	8.383	55.12
8. 8	16H38	48D56.9	33D28.6	8. 8	16H42	48D56.3	33D28.7	0.55	268.	8.351	55.68
8. 8	16H42	48D56.3	33D28.7	8. 8	18H26	48D39.5	33D29.9	14.12	265.	8.150	69.81
8. 8	18H26	48D39.5	33D29.9	8. 8	19H 0	48D33.7	33D30.5	4.86	262.	8.579	74.67
8. 8	19H 0	48D33.7	33D30.5	8. 8	21H54	48D 4.2	33D32.8	24.85	265.	8.569	99.52
8. 8	21H54	48D 4.2	33D32.8	8. 8	22H14	48D 0.5	33D33.1	3.11	264.	9.337	102.63
8. 8	22H14	48D 0.5	33D33.1	8. 8	22H32	47D57.1	33D33.3	2.79	265.	9.302	105.43
8. 8	22H32	47D57.1	33D33.3	8. 8	23H40	47D44.6	33D33.3	10.53	270.	9.293	115.96
8. 8	23H40	47D44.6	33D33.3	9. 8	0H 0	47D41.2	33D33.2	2.83	272.	8.504	118.79
9. 8	0H 0	47D41.2	33D33.2	9. 8	0H 6	47D40.2	33D33.2	0.85	271.	8.505	119.64
9. 8	0H 6	47D40.2	33D33.2	9. 8	0H30	47D36.0	33D33.1	3.47	271.	8.677	123.12
9. 8	0H30	47D36.0	33D33.1	9. 8	1H56	47D21.2	33D33.5	12.44	268.	8.680	135.56
9. 8	1H56	47D21.2	33D33.5	9. 8	2H18	47D17.5	33D33.7	3.10	266.	8.465	138.66
9. 8	2H18	47D17.5	33D33.7	9. 8	4H 8	46D58.4	33D33.5	15.99	271.	8.722	154.65
9. 8	4H 8	46D58.4	33D33.5	9. 8	4H40	46D52.8	33D33.5	4.66	270.	8.749	159.32
9. 8	4H40	46D52.8	33D33.5	9. 8	5H32	46D43.6	33D33.3	7.70	271.	8.890	167.03
9. 8	5H32	46D43.6	33D33.3	9. 8	5H56	46D39.0	33D33.6	3.86	266.	9.657	170.89
9. 8	5H56	46D39.0	33D33.6	9. 8	6H24	46D33.5	33D33.0	4.64	277.	9.951	175.53
9. 8	6H24	46D33.5	33D33.0	9. 8	7H 3	46D26.4	33D32.5	5.88	275.	9.052	181.42
9. 8	7H 3	46D26.4	33D32.5	9. 8	10H 8	45D53.3	33D29.2	28.00	277.	9.082	209.42
9. 8	10H 8	45D53.3	33D29.2	9. 8	10H41	45D46.9	33D28.6	5.35	276.	9.735	214.78
9. 8	10H41	45D46.9	33D28.6	9. 8	11H 5	45D42.3	33D28.6	3.86	270.	9.651	218.64
9. 8	11H 5	45D42.3	33D28.6	9. 8	11H32	45D37.3	33D29.4	4.27	260.	9.501	222.91
9. 8	11H32	45D37.3	33D29.4	9. 8	13H 2	45D20.5	33D32.4	14.38	258.	9.591	237.30
9. 8	13H 2	45D20.5	33D32.4	9. 8	13H 9	45D19.1	33D32.4	1.12	267.	9.664	238.43
9. 8	13H 9	45D19.1	33D32.4	9. 8	13H22	45D16.8	33D33.1	2.07	253.	9.566	240.50
9. 8	13H22	45D16.8	33D33.1	9. 8	13H56	45D10.7	33D35.0	5.44	250.	9.615	245.95
9. 8	13H56	45D10.7	33D35.0	9. 8	14H55	45D 1.5	33D38.9	8.63	243.	8.778	254.58

TABLE 12
Glomar Challenger, DSDP Leg 25, Navigation Data

DATE (day/mo)	GMT (hr/min)	LONGITUDE (deg/min)	LATITUDE (deg/min)	DATE (day/mo)	GMT (hr/min)	LONGITUDE (deg/min)	LATITUDE (deg/min)	DIST (nmi)	CSE (°)	SPEED (kt)	DISTT (nmi)
10. 8	14H20	45D 9.6	33D37.2	10. 8	14H38	45D 7.5	33D37.2	1.70	269.	5.692	1.70
10. 8	14H38	45D 7.5	33D37.2	10. 8	14H52	45D 5.7	33D37.2	1.55	271.	6.661	3.26
10. 8	14H52	45D 5.7	33D37.2	10. 8	15H18	45D 1.8	33D37.3	3.19	268.	7.384	6.46
10. 8	15H18	45D 1.8	33D37.3	10. 8	16H20	44D54.0	33D37.6	6.59	268.	6.383	13.05
10. 8	16H20	44D54.0	33D37.6	10. 8	16H29	44D52.6	33D37.7	1.17	264.	7.847	14.23

TABLE 13
Glomar Challenger, DSDP Leg 25, Navigation Data

DATE (day/mo)	GMT (hr/min)	LONGITUDE (deg/min)	LATITUDE (deg/min)	DATE (day/mo)	GMT (hr/min)	LONGITUDE (deg/min)	LATITUDE (deg/min)	DIST (nmi)	CSE (°)	SPEED (kt)	DISTT. (nmi)
11. 8	5H10	45D 0.7	33D37.5	11. 8	6H 0	44D54.1	33D34.7	6.11	297.	7.341	6.11
11. 8	6H 0	44D54.1	33D34.7	11. 8	6H 6	44D53.4	33D34.2	0.83	308.	8.384	6.95
11. 8	6H 6	44D53.4	33D34.2	11. 8	10H 0	44D20.5	33D16.3	32.88	303.	8.432	39.84
11. 8	10H 0	44D20.5	33D16.3	11. 8	11H42	44D 6.3	33D 9.0	13.99	301.	8.230	53.83
11. 8	11H42	44D 6.3	33D 9.0	11. 8	11H54	44D 4.2	33D 8.1	1.98	297.	9.913	55.81
11. 8	11H54	44D 4.2	33D 8.1	11. 8	12H42	43D56.5	33D 4.7	7.25	297.	9.066	63.07
11. 8	12H42	43D56.5	33D 4.7	11. 8	13H46	43D46.7	32D59.9	9.61	300.	9.014	72.68
11. 8	13H46	43D46.7	32D59.9	11. 8	14H 0	43D43.7	32D58.7	2.79	295.	11.994	75.48
11. 8	14H 0	43D43.7	32D58.7	11. 8	14H 9	43D42.4	32D58.0	1.23	303.	8.200	76.71
11. 8	14H 9	43D42.4	32D58.0	11. 8	15H32	43D32.5	32D50.6	11.22	311.	8.114	87.94
11. 8	15H32	43D32.5	32D50.6	11. 8	17H54	43D15.3	32D38.2	19.10	310.	8.073	107.04
11. 8	17H54	43D15.3	32D38.2	11. 8	19H34	43D 2.9	32D30.4	13.08	307.	7.848	120.12
11. 8	19H34	43D 2.9	32D30.4	11. 8	21H20	42D50.5	32D20.7	14.30	313.	8.098	134.43
11. 8	21H20	42D50.5	32D20.7	11. 8	21H50	42D46.7	32D18.1	4.10	309.	8.216	138.54
11. 8	21H50	42D46.7	32D18.1	11. 8	23H 0	42D37.2	32D12.8	9.69	303.	8.308	148.23
11. 8	23H 0	42D37.2	32D12.8	12. 8	0H 0	42D29.0	32D 7.8	8.56	306.	8.567	156.80
12. 8	0H 0	42D29.0	32D 7.8	12. 8	0H48	42D22.5	32D 3.8	6.84	306.	8.552	163.64
12. 8	0H48	42D22.5	32D 3.8	12. 8	2H58	42D 4.7	31D52.8	18.74	306.	8.649	182.38
12. 8	2H58	42D 4.7	31D52.8	12. 8	4H44	41D50.1	31D44.1	15.20	305.	8.605	197.59
12. 8	4H44	41D50.1	31D44.1	12. 8	5H44	41D42.3	31D39.2	8.27	306.	8.275	205.86
12. 8	5H44	41D42.3	31D39.2	12. 8	7H32	41D28.4	31D30.9	14.50	305.	8.059	220.37
12. 8	7H32	41D28.4	31D30.9	12. 8	10H46	41D 0.7	31D16.0	28.04	302.	8.674	248.42
12. 8	10H46	41D 0.7	31D16.0	12. 8	12H 0	40D51.4	31D10.2	9.80	306.	7.952	258.23
12. 8	12H 0	40D51.4	31D10.2	12. 8	12H44	40D46.3	31D 6.5	5.80	310.	7.914	264.03
12. 8	12H44	40D46.3	31D 6.5	12. 8	14H42	40D31.1	30D55.8	16.90	309.	8.597	280.94
12. 8	14H42	40D31.1	30D55.8	12. 8	15H10	40D27.2	30D53.0	4.32	309.	9.275	285.27
12. 8	15H10	40D27.2	30D53.0	12. 8	16H28	40D16.1	30D45.7	12.09	307.	9.300	297.36
12. 8	16H28	40D16.1	30D45.7	12. 8	17H 0	40D12.1	30D42.9	4.44	309.	8.338	301.80
12. 8	17H 0	40D12.1	30D42.9	12. 8	18H46	39D57.9	30D34.5	14.87	304.	8.420	316.68
12. 8	18H46	39D57.9	30D34.5	12. 8	22H10	39D33.0	30D18.6	26.80	306.	7.882	343.48
12. 8	22H10	39D33.0	30D18.6	12. 8	22H45	39D28.4	30D15.5	4.99	307.	8.556	348.47
12. 8	22H45	39D28.4	30D15.5	12. 8	23H54	39D18.9	30D10.2	9.86	303.	8.579	358.34
12. 8	23H54	39D18.9	30D10.2	13. 8	0H 0	39D18.0	30D 9.6	0.91	306.	9.177	359.26
13. 8	0H 0	39D18.0	30D 9.6	13. 8	1H20	39D 6.6	30D 2.4	12.23	306.	9.177	371.49
13. 8	1H20	39D 6.6	30D 2.4	13. 8	2H 6	39D 0.4	29D58.0	7.04	309.	9.190	378.54
13. 8	2H 6	39D 0.4	29D58.0	13. 8	2H30	38D56.9	29D55.4	3.99	310.	9.975	382.53
13. 8	2H30	38D56.9	29D55.4	13. 8	2H42	38D55.1	29D54.2	1.99	308.	9.953	384.52
13. 8	2H42	38D55.1	29D54.2	13. 8	3H56	38D41.8	29D48.5	12.91	296.	10.474	397.44
13. 8	3H56	38D41.8	29D48.5	13. 8	4H22	38D38.3	29D46.6	3.59	302.	8.298	401.03
13. 8	4H22	38D38.3	29D46.6	13. 8	4H56	38D32.1	29D43.7	6.13	298.	10.832	407.17
13. 8	4H56	38D32.1	29D43.7	13. 8	5H41	38D25.3	29D40.6	6.64	297.	8.856	413.82
13. 8	5H41	38D25.3	29D40.6	13. 8	6H44	38D16.2	29D36.0	9.24	300.	8.801	423.06
13. 8	6H44	38D16.2	29D36.0	13. 8	7H18	38D10.6	29D33.3	5.53	299.	9.773	428.60
13. 8	7H18	38D10.6	29D33.3	13. 8	8H35	37D58.9	29D26.3	12.37	304.	9.643	440.97

TABLE 14
Glomar Challenger, DSDP Leg 25, Navigation Data

DATE (day/mo)	GMT (hr/min)	LONGITUDE (deg/min)	LATITUDE (deg/min)	DATE (day/mo)	GMT (hr/min)	LONGITUDE (deg/min)	LATITUDE (deg/min)	DIST (nmi)	CSE (°)	SPEED (kt)	DISTT (nmi)
13. 8	8H35	37D58.9	29D26.3	13. 8	9H12	37D51.7	29D28.5	6.67	251.	10.821	6.67
13. 8	9H12	37D51.7	29D28.5	13. 8	9H47	37D44.7	29D29.6	6.23	260.	10.683	12.90
13. 8	9H47	37D44.7	29D29.6	13. 8	10H 4	37D41.3	29D30.0	3.01	264.	10.637	15.91
13. 8	10H 4	37D41.3	29D30.0	13. 8	10H40	37D33.8	29D29.9	6.49	271.	10.829	22.41
13. 8	10H40	37D33.8	29D29.9	13. 8	10H54	37D31.0	29D30.4	2.50	257.	10.717	24.91
13. 8	10H54	37D31.0	29D30.4	13. 8	13H50	37D 2.4	29D35.8	25.57	258.	8.719	50.49

TABLE 15
Glomar Challenger, DSDP Leg 25, Navigation Data

DATE (day/mo)	GMT (hr/min)	LONGITUDE (deg/min)	LATITUDE (deg/min)	DATE (day/mo)	GMT (hr/min)	LONGITUDE (deg/min)	LATITUDE (deg/min)	DIST (nmi)	CSE (°)	SPEED (kt)	DISTT (nmi)
17. 8	2H57	37D28.5	29D31.8	17. 8	3H45	37D20.3	29D34.6	7.63	248.	9.546	7.63
17. 8	3H45	37D20.3	29D34.6	17. 8	4H 2	37D16.9	29D35.9	3.30	247.	11.652	10.93
17. 8	4H 2	37D16.9	29D35.9	17. 8	4H26	37D12.3	29D37.5	4.29	247.	10.740	15.23
17. 8	4H26	37D12.3	29D37.5	17. 8	4H44	37D 8.8	29D38.4	3.23	255.	10.769	18.46
17. 8	4H44	37D 8.8	29D38.4	17. 8	5H16	37D 2.6	29D39.3	5.49	261.	10.294	23.95
17. 8	5H16	37D 2.6	29D39.3	17. 8	5H34	36D58.8	29D40.1	3.41	256.	11.376	27.36
17. 8	5H34	36D58.8	29D40.1	17. 8	6H58	36D41.0	29D43.6	15.93	257.	11.379	43.30
17. 8	6H58	36D41.0	29D43.6	17. 8	8H 0	36D28.3	29D45.8	11.26	258.	10.905	54.56
17. 8	8H 0	36D28.3	29D45.8	17. 8	9H20	36D18.2	29D49.6	9.60	247.	7.201	64.17
17. 8	9H20	36D18.2	29D49.6	17. 8	9H56	36D13.8	29D51.5	4.28	244.	7.136	68.45
17. 8	9H56	36D13.8	29D51.5	17. 8	10H16	36D11.3	29D52.6	2.39	242.	7.179	70.84
17. 8	10H16	36D11.3	29D52.6	17. 8	10H28	36D10.0	29D53.4	1.42	238.	7.133	72.27
17. 8	10H28	36D10.0	29D53.4	17. 8	10H50	36D 7.1	29D54.7	2.81	240.	7.668	75.08
17. 8	10H50	36D 7.1	29D54.7	17. 8	11H18	36D 3.7	29D56.7	3.55	237.	7.609	78.63
17. 8	11H18	36D 3.7	29D56.7	17. 8	11H38	36D 1.5	29D57.9	2.30	239.	6.910	80.94
17. 8	11H38	36D 1.5	29D57.9	17. 8	11H52	36D 0.5	29D59.1	1.46	213.	6.265	82.40

TABLE 16
Glomar Challenger, DSDP Leg 25, Navigation Data

DATE (day/mo)	GMT (hr/min)	LONGITUDE (deg/min)	LATITUDE (deg/min)	DATE (day/mo)	GMT (hr/min)	LONGITUDE (deg/min)	LATITUDE (deg/min)	DIST (nmi)	CSE (°)	SPEED (kt)	DISTT (nmi)
20. 8	2H51	36D 4.6	29D57.0	20. 8	3H 2	36D 3.0	29D56.9	1.36	270.	7.434	1.36
20. 8	3H 2	36D 3.0	29D56.9	20. 8	3H12	36D 1.9	29D57.0	0.98	270.	5.935	2.35
20. 8	3H12	36D 1.9	29D57.0	20. 8	3H45	35D57.5	29D57.2	3.82	267.	6.957	6.17
20. 8	3H45	35D57.5	29D57.2	20. 8	4H 4	35D55.0	29D57.2	2.18	270.	6.907	8.36
20. 8	4H 4	35D55.0	29D57.2	20. 8	4H32	35D51.4	29D56.7	3.17	279.	6.803	11.54
20. 8	4H32	35D51.4	29D56.7	20. 8	6H 0	35D45.1	29D56.4	5.46	273.	3.722	17.00
20. 8	6H 0	35D45.1	29D56.4	20. 8	6H16	35D44.0	29D56.4	0.99	272.	3.718	17.99
20. 8	6H16	35D44.0	29D56.4	20. 8	8H10	35D24.4	29D56.1	17.07	271.	8.986	35.06
20. 8	8H10	35D24.4	29D56.1	20. 8	9H48	35D12.8	29D55.6	10.11	273.	6.193	45.18
20. 8	9H48	35D12.8	29D55.6	20. 8	11H30	35D 3.0	29D53.0	8.92	287.	5.250	54.10
20. 8	11H30	35D 3.0	29D53.0	20. 8	12H30	34D54.6	29D51.9	7.40	279.	7.403	61.51
20. 8	12H30	34D54.6	29D51.9	20. 8	13H 0	34D50.4	29D51.6	3.64	274.	7.293	65.15
20. 8	13H 0	34D50.4	29D51.6	20. 8	15H 8	34D32.6	29D51.3	15.54	271.	7.285	80.70
20. 8	15H 8	34D32.6	29D51.3	20. 8	17H12	34D19.1	29D51.1	11.77	271.	5.695	92.47
20. 8	17H12	34D19.1	29D51.1	20. 8	17H34	34D16.6	29D50.9	2.18	275.	5.968	94.66
20. 8	17H34	34D16.6	29D50.9	20. 8	21H56	33D45.5	29D50.0	27.12	272.	6.212	121.78
20. 8	21H56	33D45.5	29D50.0	20. 8	22H24	33D42.3	29D50.2	2.72	265.	5.844	124.51
20. 8	22H24	33D42.3	29D50.2	20. 8	22H48	33D39.7	29D50.5	2.35	263.	5.886	126.87
20. 8	22H48	33D39.7	29D50.5	21. 8	0H34	33D26.3	29D51.9	11.76	263.	6.659	138.63
21. 8	0H34	33D26.3	29D51.9	21. 8	1H15	33D21.2	29D52.1	4.44	267.	6.503	143.07
21. 8	1H15	33D21.2	29D52.1	21. 8	1H28	33D19.6	29D52.1	1.40	271.	6.466	144.48
21. 8	1H28	33D19.6	29D52.1	21. 8	2H 0	33D16.1	29D52.8	3.13	256.	5.886	147.62
21. 8	2H 0	33D16.1	29D52.8	21. 8	2H24	33D13.5	29D53.3	2.31	259.	5.781	149.93
21. 8	2H24	33D13.5	29D53.3	21. 8	2H48	33D10.3	29D53.2	2.73	271.	6.848	152.67
21. 8	2H48	33D10.3	29D53.2	21. 8	3H20	33D 6.2	29D53.0	3.63	274.	6.808	156.30
21. 8	3H20	33D 6.2	29D53.0	21. 8	3H45	33D 3.3	29D52.8	2.45	273.	5.890	158.75
21. 8	3H45	33D 3.3	29D52.8	21. 8	5H30	32D51.8	29D51.7	10.16	277.	5.810	168.92
21. 8	5H30	32D51.8	29D51.7	21. 8	6H 0	32D48.6	29D51.2	2.78	280.	5.568	171.71
21. 8	6H 0	32D48.6	29D51.2	21. 8	7H18	32D40.2	29D51.1	7.36	271.	5.668	179.07
21. 8	7H18	32D40.2	29D51.1	21. 8	7H45	32D37.3	29D51.2	2.48	267.	5.518	181.56
21. 8	7H45	32D37.3	29D51.2	21. 8	10H46	32D18.2	29D55.4	17.20	256.	5.702	198.76
21. 8	10H46	32D18.2	29D55.4	21. 8	13H 0	32D 2.7	30D 2.6	15.27	241.	6.837	214.03
21. 8	13H 0	32D 2.7	30D 2.6	21. 8	13H27	32D 0.5	30D 1.4	2.29	303.	5.109	216.33
21. 8	13H27	32D 0.5	30D 1.4	21. 8	13H33	32D 0.1	30D 1.0	0.53	311.	5.310	216.86
21. 8	13H33	32D 0.1	30D 1.0	21. 8	14H16	31D56.7	29D58.3	4.07	313.	5.682	220.93
21. 8	14H16	31D56.7	29D58.3	21. 8	14H40	31D56.0	29D57.4	1.08	326.	2.717	222.02
21. 8	14H40	31D56.0	29D57.4	21. 8	14H52	31D55.0	29D57.1	0.87	285.	4.358	222.89
21. 8	14H52	31D55.0	29D57.1	21. 8	15H14	31D53.7	29D56.6	1.23	297.	3.379	224.13
21. 8	15H14	31D53.7	29D56.6	21. 8	16H 2	31D50.9	29D55.2	2.86	299.	3.584	227.00
21. 8	16H 2	31D50.9	29D55.2	21. 8	16H40	31D47.9	29D54.3	2.69	289.	4.248	229.69
21. 8	16H40	31D47.9	29D54.3	21. 8	16H44	31D47.8	29D54.2	0.19	307.	2.965	229.89