

Reprinted from Sibuet, J.-C., Ryan, W.B.F., et al., 1979.

*Initial Reports of the Deep Sea Drilling Project, Volume XLVII, Part 2, Washington (U.S. Government Printing Office)***31. GEOPHYSICAL DATA COLLECTED UNDERWAY ON *GLOMAR CHALLENGER*, LEG 47B¹**

Jean-Claude Sibuet, Centre Oceanologique de Bretagne, B.P. 337, 29273 Brest, France

William B.F. Ryan, Lamont-Doherty Geological Observatory, Palisades, New York
and

Ted B. Gustafson and S.M. Smith, Scripps Institution of Oceanography, La Jolla, California

— The scientific party aboard *Glomar Challenger* collected geophysical data during DSDP Leg 47B, which commenced from Vigo, Spain, and terminated at Brest, France (Figure 1). Site 398 (40°57.6'N, 10°43.1'W), located just south of Vigo Seamount and about 95 miles west of Porto, Portugal, was drilled from 13 April 1976 to 9 May 1976. Table 1 gives satellite positions, distance (in nautical miles along the track) and the speed and course between successive navigation points. The positioning error along the trackline is approximately 1 nautical mile. Distances are shown (Figure 1) along the trackline every 50 nautical miles and annotated every 100 nautical miles. Time is marked by crosses every 2 hours and annotated every 4 hours. —

Figure 2 shows the magnetic anomaly and bathymetric data plotted as functions of time, distance, latitude, and longitude (with distance plotted as a linear function). Dates and positions of major course changes (> 30 degrees) are annotated. Magnetic anomaly values have been computed using the 1965 IGRF regional field; depth is expressed in uncorrected meters assuming a sound velocity of 1500 m/s. The site location and significant bathymetric features also are annotated on the profile. Sections of track having sub-bottom profiler records are represented by a solid line along the bottom of the profile.

Figures 3 to 8 are the seismic reflection records shown as a linear function of time. Profiles are annotated every hour and at each change of course and speed. Depth is annotated on the sides of the profiles in seconds of two-way travel time. The sound source for these data was two bolt airguns with 10 and 40 in³ firing chambers. The data were recorded on dry-paper EDO recorders employing 10 and 5-s sweep rate after filtering frequencies outside the 40 to 320 Hz range.

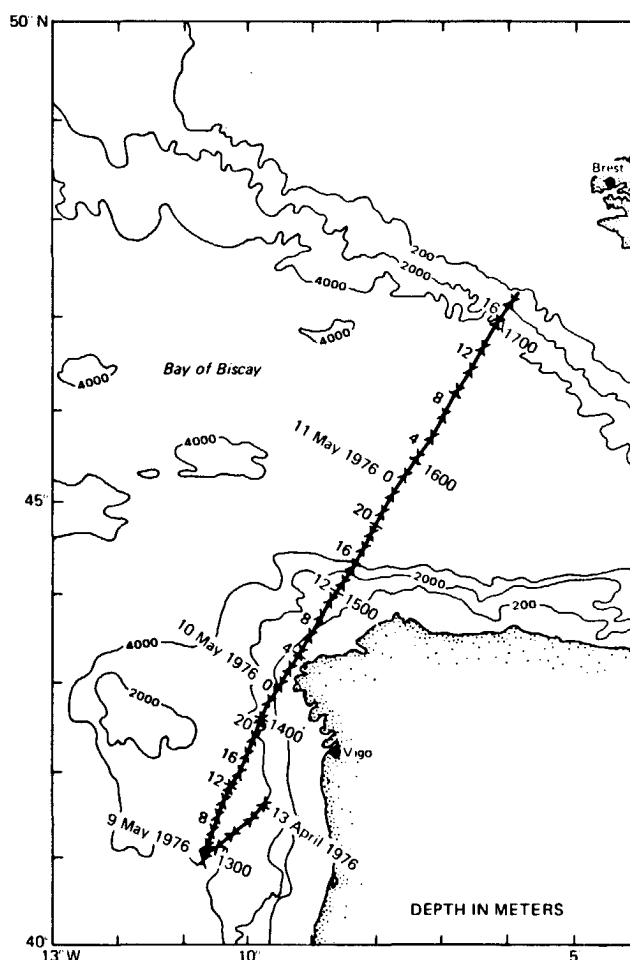


Figure 1. Leg 47B navigation, Mercator projection.

ACKNOWLEDGMENTS

We especially acknowledge the DSDP technical staff onboard *Glomar Challenger* during Leg 47B for their valuable assistance and competence during this cruise. The processed data have been prepared by the Underway Data Processing Group, SIO and the Geological Data Center of Scripps Institution of Oceanography.

¹ Contribution 583 of the Scientific Department of the Centre Oceanologique de Bretagne.

TABLE 1
Navigation, Leg 47B (1976)

Day	Month	Time Zone	Hour	Latitude (N)	Longitude (W)	Distance (n. mi.)	Speed (knots)	Course (°)	Nav. Points
13	4	0	956	41°39.4'	9°42.8'	1229.1	8.5	222	1
13	4	0	1032	41°35.6'	9°47.4'	1234.2	6.1	214	2
13	4	0	1045	41°34.5'	9°48.4'	1235.5	8.1	222	3
13	4	0	1050	41°34.0'	9°49.0'	1236.2	5.0	218	4
13	4	0	1128	41°31.5'	9°51.6'	1239.3	8.3	232	5
13	4	0	1312	41°22.5'	10°6.7'	1253.8	8.4	232	6
13	4	0	1502	41°12.9'	10°22.8'	1269.2	8.5	233	7
13	4	0	1620	41°6.3'	10°34.5'	1280.3	7.9	231	8
13	4	0	1645	41°4.2'	10°37.9'	1283.6	8.9	198	9
13	4	0	1650	41°3.5'	10°38.2'	1284.3	9.3	212	10
13	4	0	1729	40°58.4'	10°42.5'	1290.3	7.6	207	11
13	4	0	1737	40°57.5'	10°43.1'	1291.4	0.0	90	12
9	5	0	000	40°57.5'	10°43.1'	1291.4	0.3	63	13
9	5	0	324	40°58.0'	10°41.8'	1292.5	4.1	191	14
9	5	0	330	40°57.6'	10°41.9'	1292.9	4.5	37	15
9	5	0	335	40°57.9'	10°41.6'	1293.2	4.9	10	16
9	5	0	412	41°0.9'	10°40.9'	1296.3	5.0	6	17
9	5	0	430	41°2.4'	10°40.7'	1297.8	4.2	8	18
9	5	0	446	41°3.5'	10°40.5'	1298.9	5.6	24	19
9	5	0	500	41°4.7'	10°39.8'	1300.2	5.5	24	20
9	5	0	512	41°5.7'	10°39.2'	1301.3	5.8	18	21
9	5	0	600	41°10.1'	10°37.3'	1305.9	5.8	16	22
9	5	0	630	41°12.9'	10°36.2'	1308.9	5.4	21	23
9	5	0	915	41°26.8'	10°29.1'	1323.7	5.5	23	24
9	5	0	1222	41°42.5'	10°20.4'	1340.7	5.7	19	25
9	5	0	1300	41°45.9'	10°18.8'	1344.3	5.8	28	26
9	5	0	1334	41°48.8'	10°16.7'	1347.6	5.7	28	27
9	5	0	1434	41°53.8'	10°13.1'	1353.3	5.8	29	28
9	5	0	1520	41°57.7'	10°10.2'	1357.8	6.0	30	29
9	5	0	1714	42°7.6'	10°2.6'	1369.2	6.3	24	30
9	5	0	1735	42°9.6'	10°1.4'	1371.4	6.1	22	31
9	5	0	1930	42°20.5'	9°55.4'	1383.1	6.7	19	32
9	5	0	2030	42°26.8'	9°52.5'	1389.8	6.6	22	33
9	5	0	2320	42°44.3'	9°43.1'	1408.6	6.5	36	34
9	5	0	2328	42°45.0'	9°42.4'	1409.5	6.8	34	35
10	5	0	000	42°48.0'	9°39.6'	1413.1	6.8	34	36
10	5	0	100	42°53.6'	9°34.4'	1419.9	6.7	27	37
10	5	0	136	42°57.2'	9°31.9'	1423.9	6.8	28	38
10	5	0	215	43°1.1'	9°29.1'	1428.3	6.7	33	39
10	5	0	322	43°7.4'	9°23.6'	1435.8	6.3	37	40
10	5	0	422	43°12.4'	9°18.4'	1442.1	6.6	36	41
10	5	0	440	43°14.0'	9°16.8'	1444.0	7.0	39	42
10	5	0	450	43°14.9'	9°15.8'	1445.2	6.4	32	43
10	5	0	636	43°24.5'	9°7.7'	1456.5	6.7	30	44
10	5	0	702	43°27.0'	9°5.7'	1459.4	6.9	30	45
10	5	0	730	43°29.8'	9°3.5'	1462.6	7.0	27	46
10	5	0	800	43°32.9'	9°1.3'	1466.1	6.9	30	47
10	5	0	944	43°43.3'	8°53.0'	1478.1	7.1	32	48
10	5	0	1126	43°53.5'	8°44.2'	1490.1	6.8	28	49
10	5	0	1145	43°55.4'	8°42.8'	1492.2	6.6	29	50
10	5	0	1244	44°1.1'	8°38.5'	1498.7	6.4	29	51
10	5	0	1315	44°4.0'	8°36.3'	1502.0	6.1	34	52
10	5	0	1334	44°5.6'	8°34.8'	1504.0	6.7	34	53
10	5	0	1430	44°10.8'	8°29.9'	1510.2	6.7	34	54
10	5	0	1600	44°19.1'	8°22.1'	1520.2	6.3	35	55
10	5	0	1644	44°22.9'	8°18.4'	1524.9	6.0	31	56
10	5	0	1705	44°24.7'	8°16.9'	1527.0	6.1	27	57
10	5	0	1750	44°28.8'	8°14.0'	1531.6	6.4	27	58
10	5	0	1830	44°32.6'	8°11.3'	1535.8	6.5	29	59
10	5	0	1956	44°40.7'	8°4.9'	1545.1	6.9	28	60
10	5	0	2232	44°56.5'	7°53.3'	1562.9	6.9	24	61
10	5	0	2330	45°2.6'	7°49.4'	1569.6	6.9	29	62
11	5	0	000	45°5.6'	7°47.0'	1573.1	6.9	29	63
11	5	0	020	45°7.6'	7°45.4'	1575.4	7.4	29	64
11	5	0	100	45°11.9'	7°42.0'	1580.3	7.3	33	65
11	5	0	148	45°16.8'	7°37.4'	1586.2	7.3	35	66
11	5	0	234	45°21.4'	7°32.8'	1591.8	7.8	36	67
11	5	0	454	45°36.1'	7°17.7'	1609.9	8.0	39	68
11	5	0	520	45°38.8'	7°14.6'	1613.4	7.4	35	69
11	5	0	522	45°39.0'	7°14.4'	1613.6	8.0	31	70
11	5	0	642	45°48.1'	7°6.5'	1624.3	7.7	24	71
11	5	0	716	45°52.1'	7°4.0'	1628.6	8.3	28	72
11	5	0	1032	46°15.8'	6°45.5'	1655.6	8.8	35	73
11	5	0	1156	46°25.9'	6°35.3'	1667.9	8.8	32	74
11	5	0	1220	46°28.9'	6°32.6'	1671.4	8.6	28	75
11	5	0	1440	46°46.6'	6°18.7'	1691.5	8.6	29	76
11	5	0	1602	46°56.8'	6°10.3'	1703.2	8.3	33	77
11	5	0	1628	46°59.8'	6°7.4'	1706.8	8.0	32	78
11	5	0	1716	47°5.2'	6°2.4'	1713.2	7.5	33	79
11	5	0	1900	47°16.0'	5°51.9'	1726.1	7.5	33	80

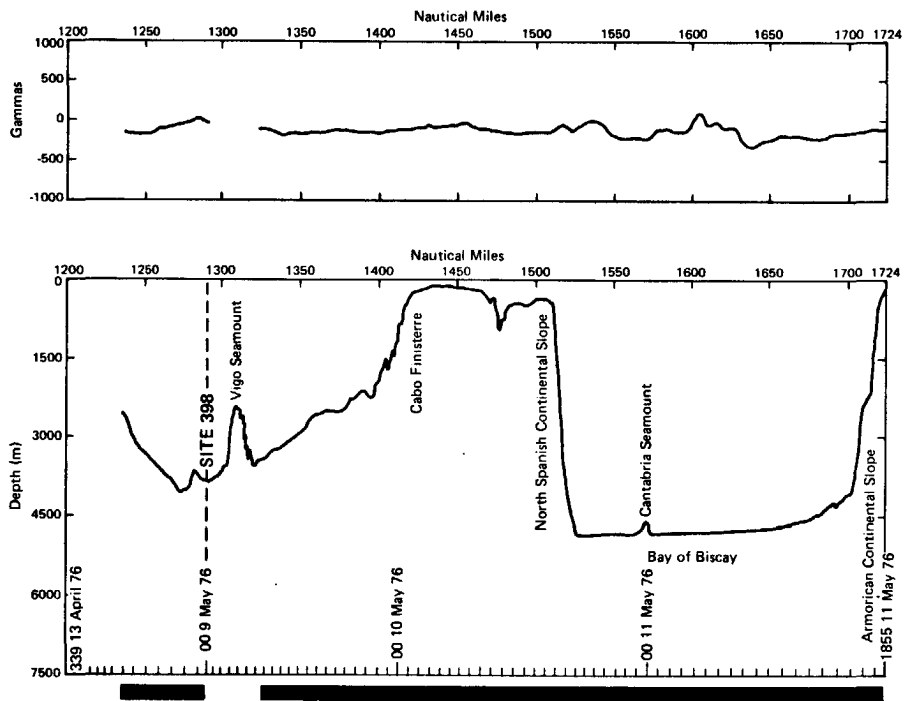


Figure 2. Magnetic and bathymetric profiles, Leg 47B.

300

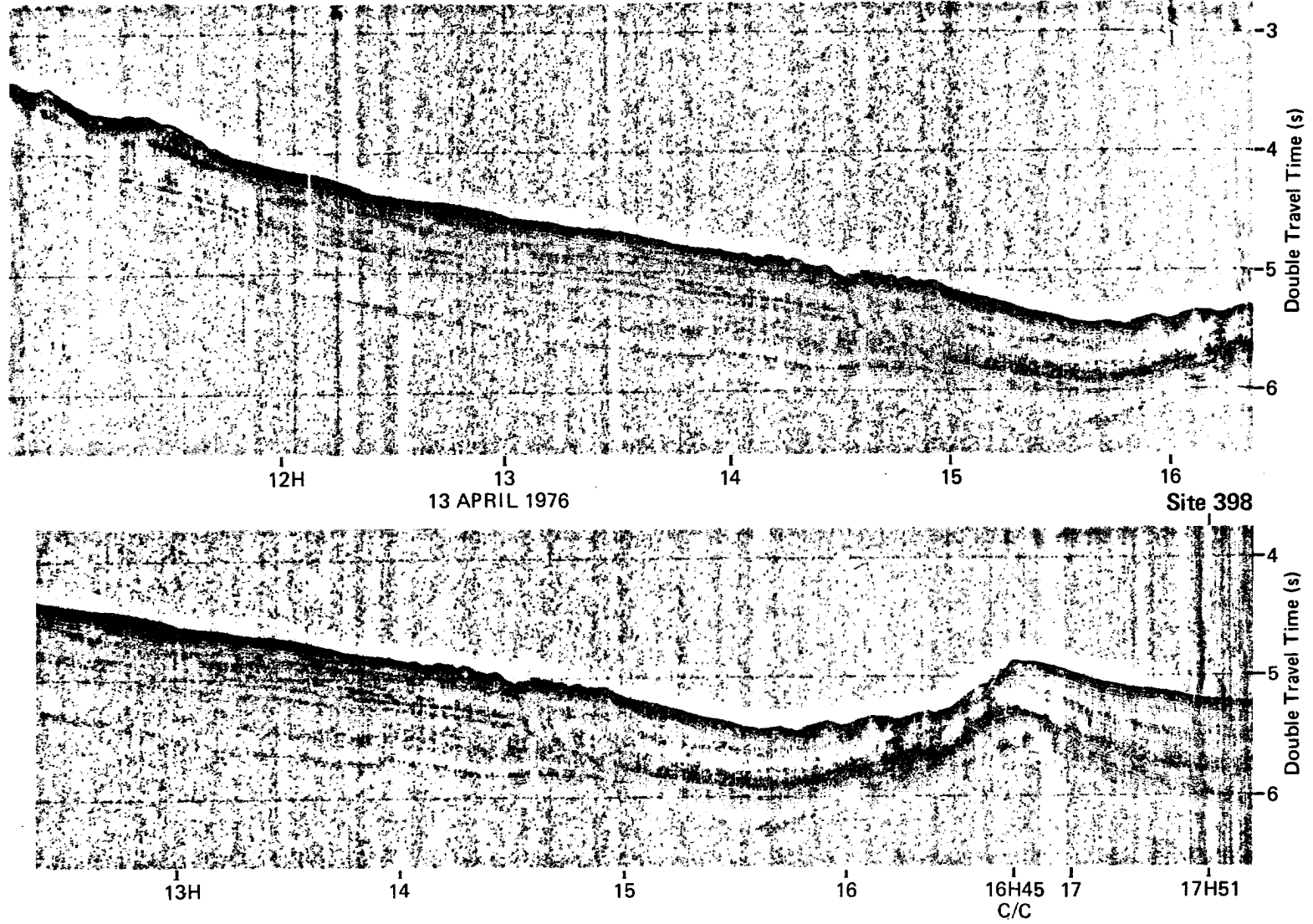


Figure 3. Seismic reflection profiles, Leg 47B.

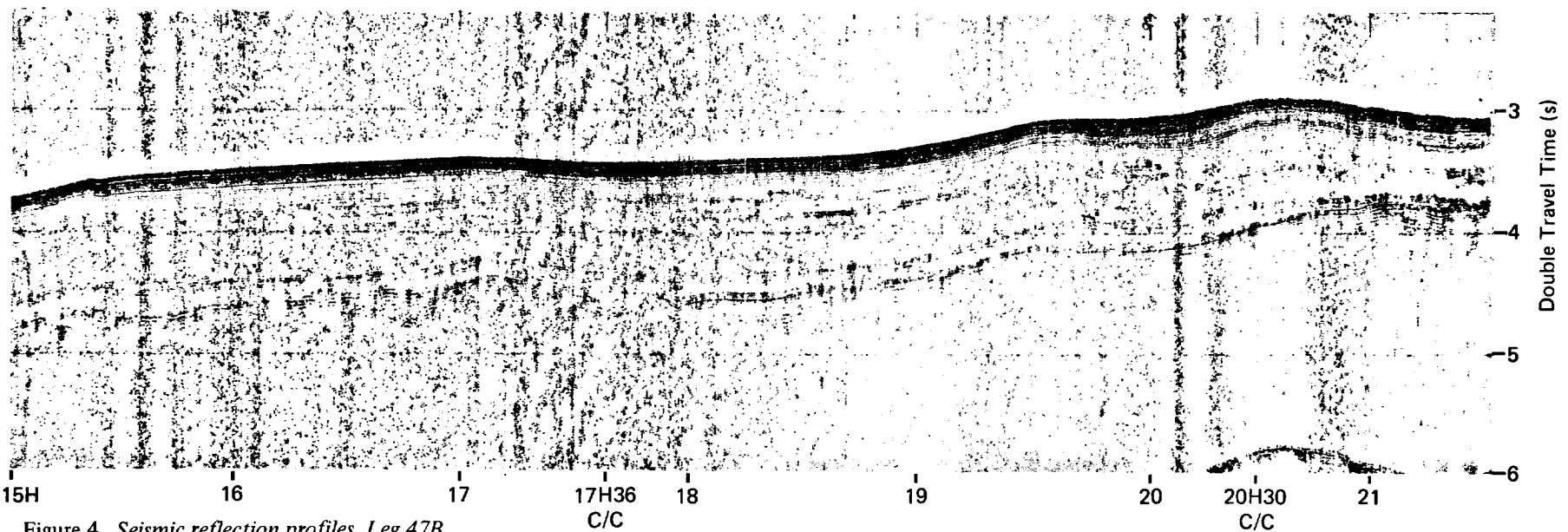
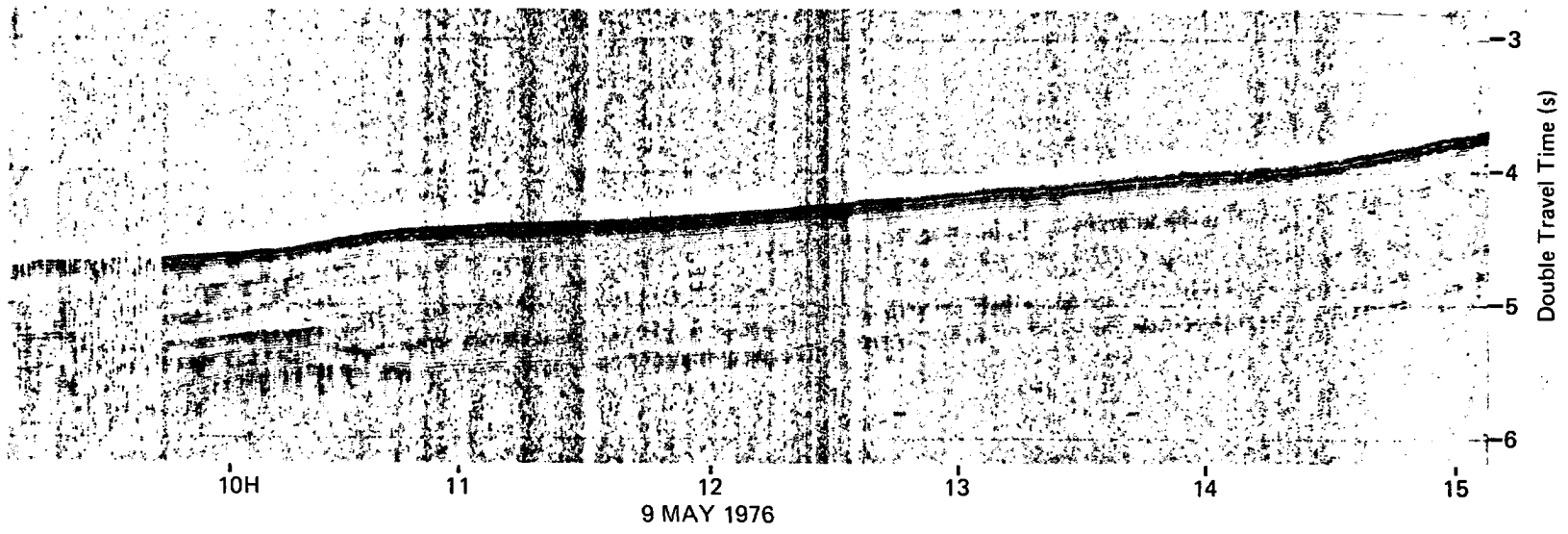


Figure 4. Seismic reflection profiles, Leg 47B.

UNDERWAY GEOPHYSICAL DATA

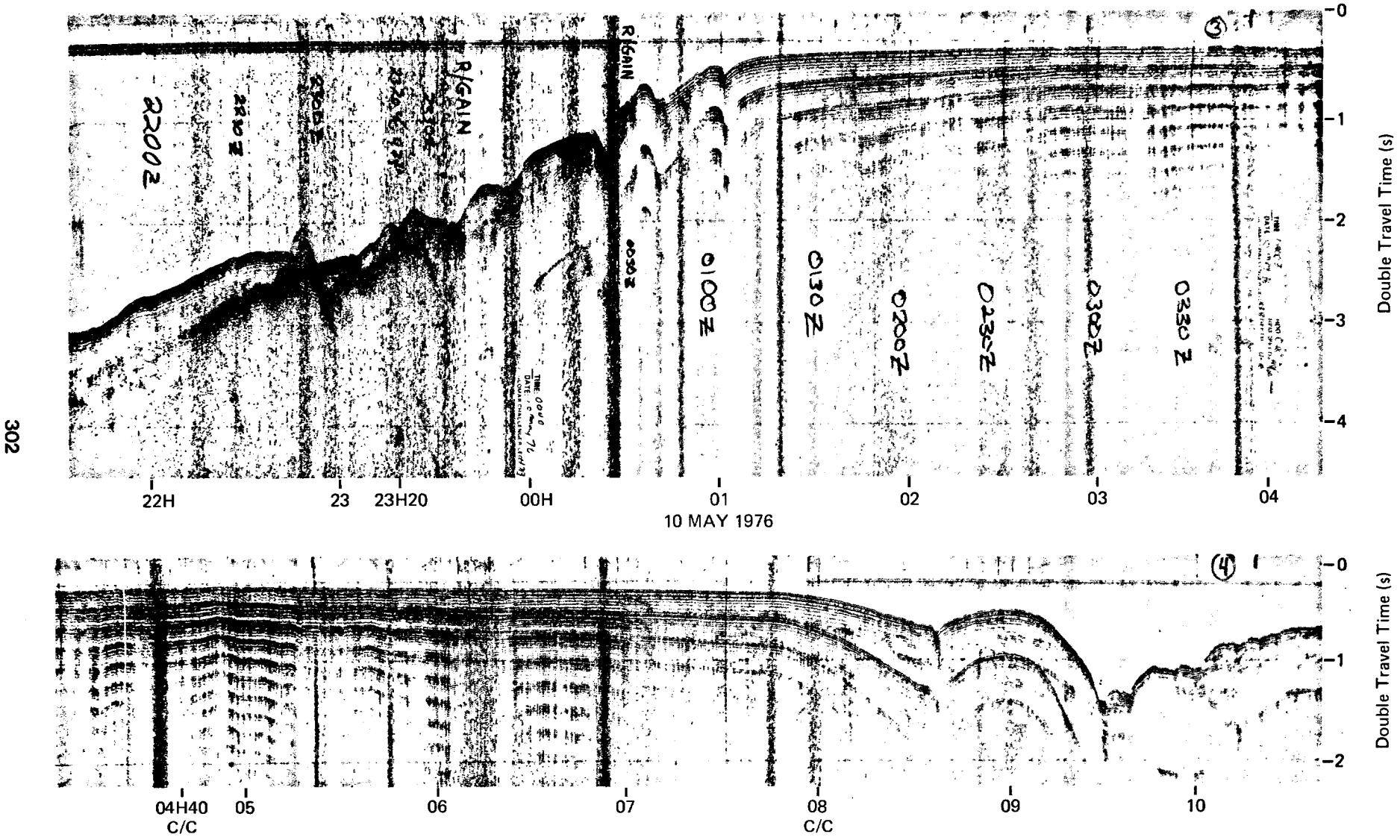


Figure 5. Seismic reflection profiles, Leg 47B.

UNDERWAY GEOPHYSICAL DATA

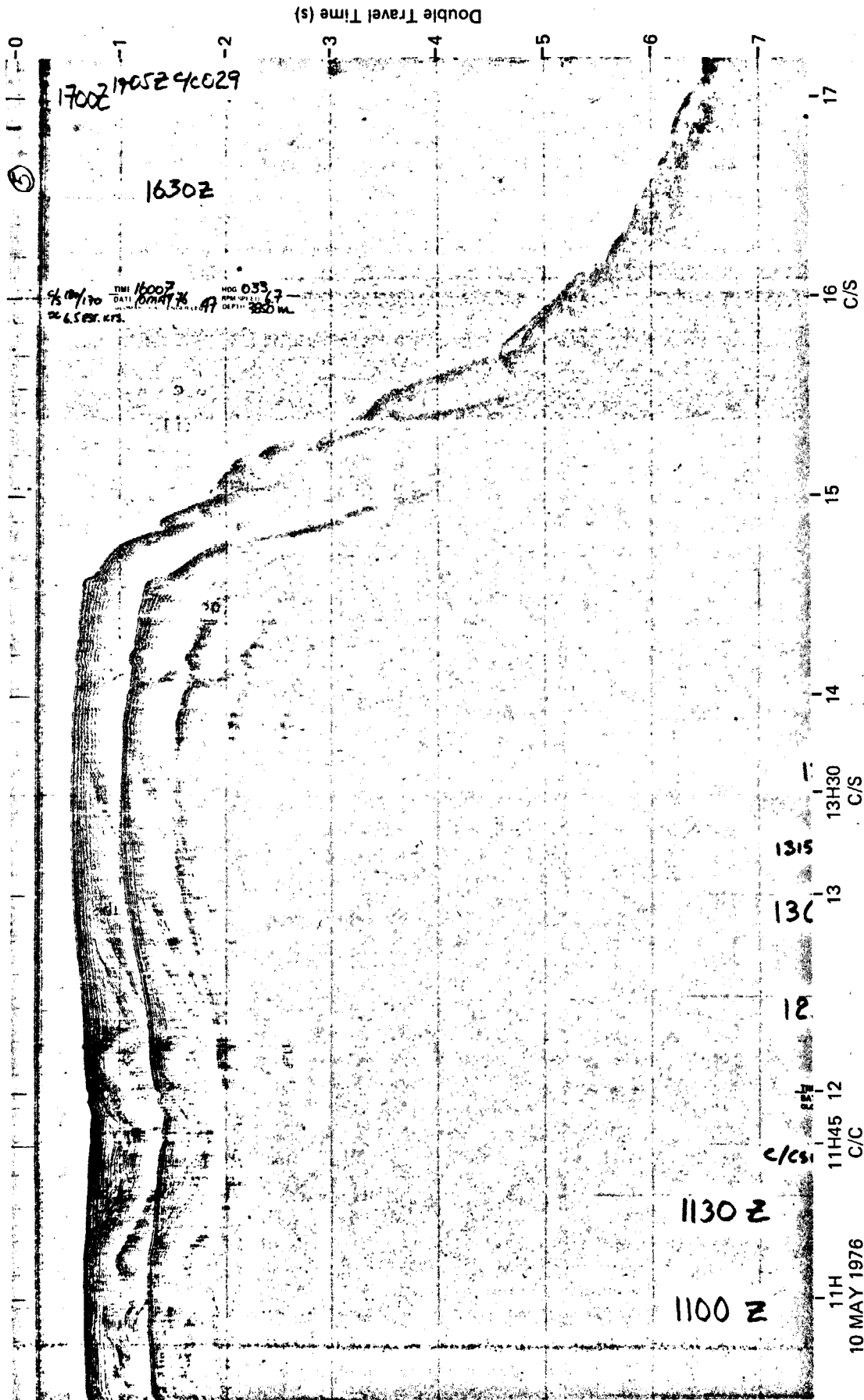


Figure 6. Seismic reflection profiles, Leg 47B.

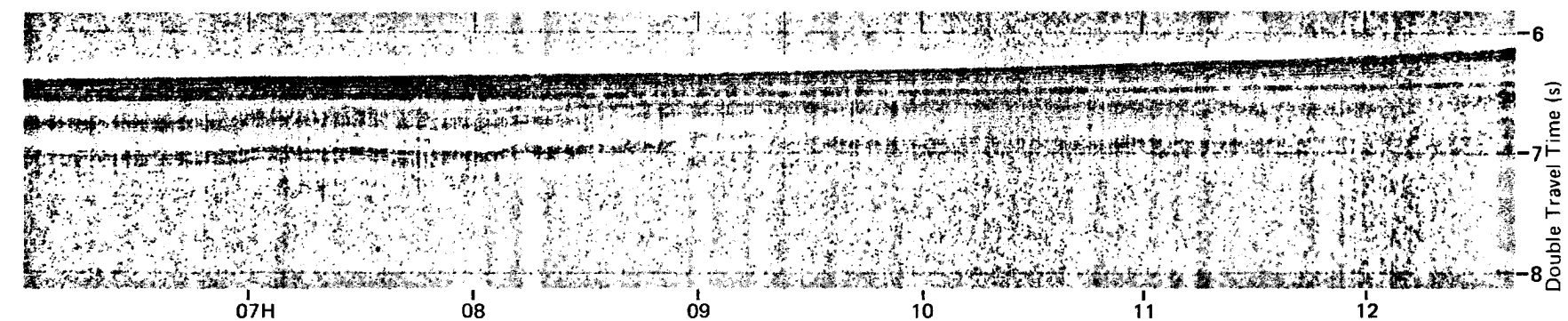
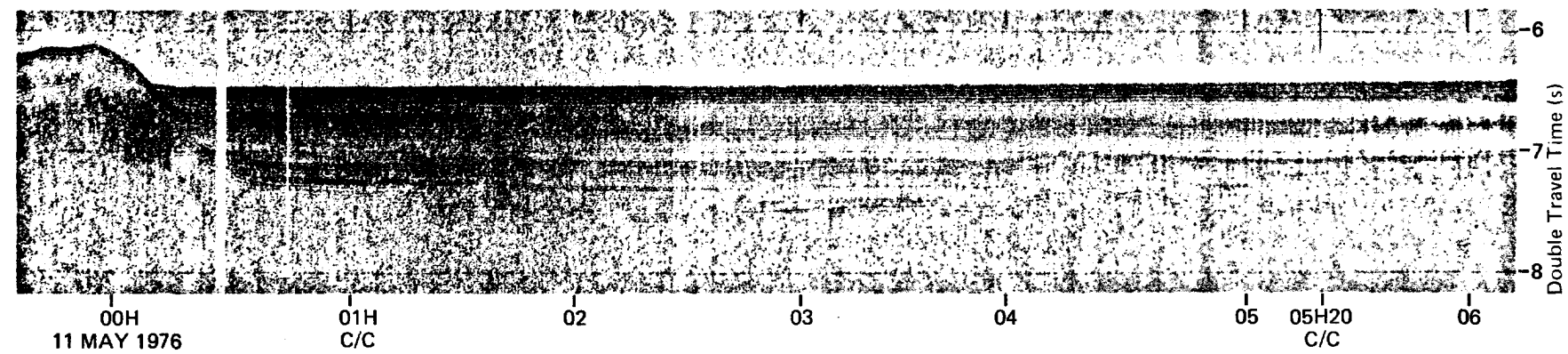
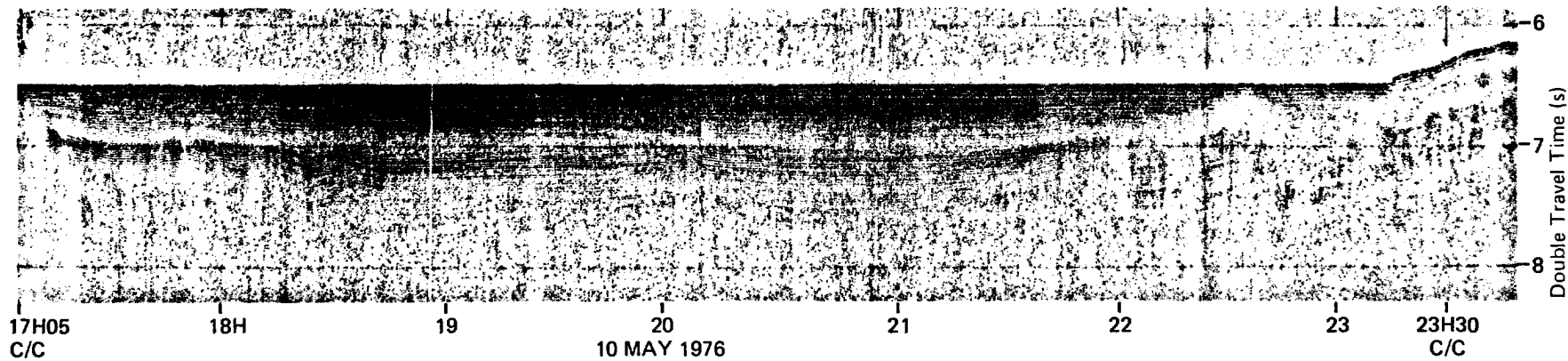


Figure 7. Seismic reflection profiles, Leg 47B.

304

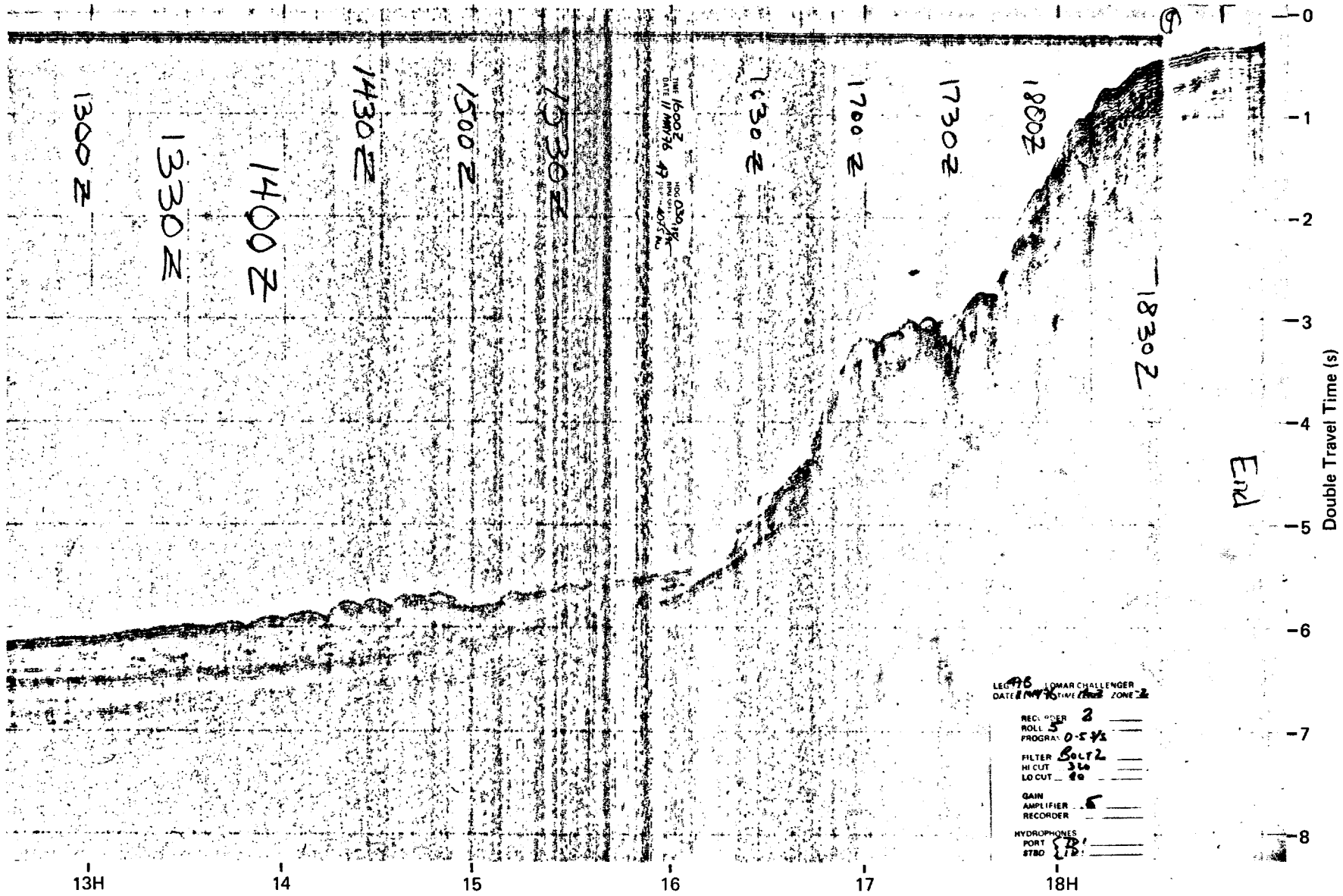


Figure 8. Seismic reflection profiles, Leg 47B.