IV. GEOPHYSICAL PROFILING, DSDP 42A

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INTRODUCTION

We obtained routine geophysical measurements during Leg 42A of the Deep Sea Drilling Project. Of the 841 nautical miles covered from Malaga, Spain, to Istanbul, Turkey, geophysical data were collected on all but the Bosphorus Straits, and a short distance approaching them. We were underway 35 per cent of the time during the 41 days spent at sea. Careful planning and excellent geophysical survey data aided us in locating the sites with a minimum expenditure of time. At a few sites strong winds and currents caused problems in positioning the ship over the site.

The onboard instrumentation included a precision echo sounder, magnetometer, seismic reflection profiler, and a satellite navigation system. They were maintained and operated by the Deep Sea Drilling Project's technical staff in cooperation with the scientific party and the officers and crew of Global Marine, Inc.

NAVIGATION

A Magnavox Model MX702A-3 Satellite Navigation Receiver with an H-P 2100A computer was the main source for navigation information. The unit was used to automatically obtain edited fixes during the cruise. Celestial fixes were also routinely taken by the ship's officers.

The preliminary ship's track was determined by the bridge officers from readings of the gyro-compass and speed estimate (dead reckoning techniques) between satellite fixes. This track was subsequently edited and smoothed. The smoothed track was digitized and speeds and courses-made-good calculated. This information is listed in Table 1.

The accuracy of the track is variable but is ± 40 meters in the area of a satellite fix. The accuracy is some-

what less in other areas depending upon the length of time between fixes, weather and currents, and the maneuvering of the ship.

Strong winds and currents in the vicinity of Site 372 caused some degeneration in the navigational control. The smooth track is shown in Figure 1.

Bathymetry

Bathymetric profiles were obtained with a 16-kHz echo sounder using an EDO recorder. The pulse width is 0.2 milliseconds and the sweep rate was one second. The topographic profile was drawn on the basis of depth readings, taken at 5-minute intervals. This profile is found at the bottom of Figure 2.

Magnetics

Total intensity measurements of the earth's magnetic field were obtained using a Geometrics magnetometer; the sensor was towed approximately 300 meters astern. In addition to an analog record, actual gamma counts were logged at 5-minute intervals. These digitized values were then used to calculate the residual anomalies. The magnetic profile is found at the top of Figure 2.

Seismic Reflecting Profile

The seismic reflection profiles were obtained utilizing two (10 cubic inches and 40 cubic inches) Bolt pneumatic airguns. The Teledyne hydrophone array was towed approximately 330 meters behind the vessel. The return signals were passed through two Bolt PA6 amplifiers and filter modules before being recorded on two EDO Western Model 550 Precision Bathymetric recorders. Our recorder was set on a 10-second sweep; the other on a 5-second sweep. The annotated 10-second sweep records are shown in Figure 3.

TABLE 1

Time	Latitude	Longitude	Distance (miles)	Speed (knots)	Course (degrees)
Depart Malaga (14 April 1975)					
1908	36° 39.20'N	-1° 51.50'W	0.0	6.6	86
1915	36° 39.30'N	-1° 50.50'W	0.8	9.5	85
2044	36° 40.40'N	-1° 33.10'W	14.8	9.6	83
2215	36° 42.30'N	-1° 15.00'W	29.4	9.6	79
2232	36° 42.80'N	-1° 11.70'W	32.1	9.3	82
(15 April 1975)					
000	36° 44.80'N	0° -54.80'W	45.8	9.3	82
0024	36° 45.30'N	0° -50.29'W	49.6	8.8	80
0250	36° 49.20'N	0° -23.99'W	71.0	8.9	83
0434	36° 51.00'N	0° -4.89'W	86.4	9.6	75
0706	36° 57.10'N	00° 24.50'W	110.6	10.6	81
0718	36° 57.40'N	0° 27.10'W	112.7	10.6	90
0730	36° 57.40'N	00° 29.80'W	114.8	10.6	81
0840	36° 59.30'N	0° 45.00'W	127.1	9.4	81
1030	37° 2.00'N	1° 6.30'W	144.3	9.5	81
1100	37° 2.80'N	1° 12.10'W	149.1	9.5	82
1218	37° 4.50'N	1° 27.40'W	161.4	9.4	80
1218	37° 4.50'N	1° 27.40'W	161.4	9.4	94
1230	37° 4.40'N	1° 29.70'W	163.2	9.4	80
1404	37° 7.00'N	1° 47.90'W	178.0	9.5	81
1550	37° 9.70'N	2° 08.70'W	194.8	9.2	76
1620	37° 10.80'N	2° 14.30'W	199.4	9.3	75
1622	37° 10.90'N	2° 14.70'W	199.7	10.4	78
1640	37° 11.60'N	2° 18.50'W	202.8	10.4	72
1740	37° 14.80'N	2° 31.00'W	213.3	9.9	77
2012	37° 20.50'N	3° 1.60'W	238.3	9.1	74
2138	37° 24.20'N	3° 17.40'W	251.4	9.3	74
2328	37° 28.80'N	3° 38.00'W	268.3	8.8	77
(16 April 1975)					
000	37° 29.90'N	3° 43.70'W	273.0	8.8	77
0116	37° 32.40'N	3° 57.40'W	284.1	8.7	71
0202	37° 34.60'N	4° 05.30'W	290.8	8.9	73
0350	37° 39.30'N	4° 24.70'W	306.9	8.5	72
0510	37° 42.90'N	4° 38.30'W	318.2	8.7	74
0540	37° 44.10'N	4° 43.60'W	322.6	9.3	71
0602	37° 45.20'N	4° 47.70'W	326.0	9.1	114
0618	37° 44.20'N	4° 50.50'W	328.4	8.8	118
0656	37° 41.60'N	4° 56.70'W	334.0	9.0	115
0720	37° 40.10'N	5° 00.80'W	337.6	9.0	104
0750	37° 39.00'N	5° 06.30'W	342.1	7.2	115
0752	37° 38.90'N	5° 06.60'W	342.3	7.5	117
0815	37° 37.60'N	5° 09.80'W	345.2	7.5	110
0854	37° 35.90'N	5° 15.60'W	350.0	7.8	108
0854	37° 35.90'N	5° 15.60'W	350.0	0.0	0
(18 April 1975)					
0645	37° 35.90'N	5° 15.60'W	350.0	1.4	166
0646	37° 35.90'N	5° 15.60'W	350.1	3.6	356
0700	37° 36.70'N	5° 15.50'W	350.9	8.0	354
0754	37° 43.90'N	5° 14.60'W	358.1	8.6	348
0934	37° 57.90'N	5° 10.80'W	372.4	9.5	353
1118	38° 14.30'N	5° 08.20'W	389.0	9.9	351
1310	38° 32.50'N	5° 04.70'W	407.4	10.5	355
1326	38° 35.30'N	5° 04.40'W	410.2	9.6	355
1400	38° 40.70'N	5° 03.70'W	415.6	9.6	355
1510	38° 51.80'N	5° 02.40'W	426.8	9.6	354
1512	38° 52.10'N	5° 02.40'W	427.1	9.7	10
1522	38° 53.70'N	5° 02.70'W	428.7	9.7	20
1530	38° 54.90'N	5° 03.30'W	430.0	9.7	10
1540	38° 56.50'N	5° 03.60'W	431.6	9.6	355
1615	39° 02.10'N	5° 03.10'W	437.2	9.6	351
1632	39° 04.80'N	5° 02.50'W	439.9	9.8	349

TABLE 1 - Continued

Time	Latitude	Longitude	Distance (miles)	Speed (knots)	Course (degrees)
1700	39° 09.30'N	5° 01.40'W	444.5	9.5	352
1740	39° 15.60'N	5° 00.30'W	450.9	10.3	350
1816	39° 21.70'N	4° 58.90'W	457.1	8.9	347
1816	39° 21.70'N	4° 58.90'W	457.1	8.9	345
1926	39° 31.70'N	4° 55.40'W	467.4	9.7	345
2000	39° 37.00'N	4° 53.60'W	472.9	9.6	348
2044	39° 43.90'N	4° 51.70'W	480.0	9.2	351
2133	39° 51.30'N	4° 50.10'W	487.5	9.2	333
2228	39° 58.90'N	4° 45.20'W	496.0	10.5	332
2249	40° 02.10'N	4° 42.90'W	499.6	10.0	256
2255	40° 01.90'N	4° 41.70'W	500.6	10.5	332
2304	40° 03.30'N	4° 40.70'W	502.2	10.0	256
2317	40° 02.70'N	4° 38.00'W	504.3	8.4	164
2329	40° 01.10'N	4° 38.60'W	506.0	9.1	53
2335	40° 01.70'N	4° 39.50'W	506.9	7.3	52
(19 April 1975)					
0000	40° 03.60'N	4° 42.70'W	510.0	7.3	52
0002	40° 03.70'N	4° 42.90'W	510.2	6.0	50
0014	40° 04.50'N	4° 44.10'W	511.4	7.2	62
0035	40° 05.70'N	4° 47.00'W	514.0	7.1	240
0122	40° 02.90'N	4° 40.80'W	519.5	6.4	240
0126	40° 02.70'N	4° 40.30'W	519.9	8.2	254
0137	40° 02.30'N	4° 38.40'W	521.4	5.8	169
0158	40° 00.30'N	4° 38.90'W	523.5	4.6	171
0200	40° 00.10'N	4° 39.00'W	523.6	5.6	53
0310	40° 04.10'N	4° 45.70'W	530.1	4.8	57
0326	40° 04.80'N	4° 47.10'W	531.4	6.2	70
0326	40° 04.80'N	4° 47.10'W	531.4	0.0	0
0605	40° 04.80'N	4° 47.10'W	531.4	1.0	319
0605	40° 04.80'N	4° 47.10'W	531.4	4.0	153
0620	40° 03.90'N	4° 47.70'W	532.4	4.1	171
0648	40° 02.00'N	4° 48.10'W	534.3	5.0	165
0648	40° 02.00'N	4° 48.10'W	534.3	0.0	0
(25 April 1975)					
0230	40° 02.00'N	4° 48.10'W	534.3	1.6	313
0230	40° 02.00'N	4° 48.10'W	534.3	5.9	110
0300	40° 01.00'N	4° 51.70'W	537.3	8.0	111
0400	39° 58.10'N	5° 01.40'W	545.2	7.8	113
0524	39° 53.80'N	5° 14.40'W	556.1	8.5	120
0544	39° 52.40'N	5° 17.60'W	558.9	8.0	116
0550	39° 52.10'N	5° 18.50'W	559.7	8.0	120
0714	39° 46.40'N	5° 31.10'W	570.9	8.2	123
0730	39° 45.20'N	5° 33.50'W	573.1	8.2	120
0735	39° 44.90'N	5° 34.30'W	573.8	8.3	120
0752	39° 43.70'N	5° 36.90'W	576.1	8.8	117
0900	39° 39.10'N	5° 48.40'W	586.1	8.9	115
1014	39° 34.40'N	6° 01.20'W	597.0	9.5	119
1015	39° 34.30'N	6° 01.40'W	597.2	9.5	116
1204	39° 26.70'N	6° 21.40'W	614.4	9.4	117
1304	39° 22.50'N	6° 32.30'W	623.8	9.3	116
1400	39° 18.70'N	6° 42.40'W	632.5	9.3	114
1448	39° 15.70'N	6° 51.20'W	639.9	8.8	114
1540	39° 12.60'N	7° 00.20'W	647.6	8.8	112
1546	39° 12.30'N	7° 01.30'W	648.5	8.8	107
1634	39° 10.30'N	7° 10.00'W	655.5	9.2	108
1718	39° 08.20'N	7° 18.30'W	662.3	9.2	107
1738	39° 07.30'N	7° 22.10'W	665.4	9.2	108
1745	39° 07.00'N	7° 23.40'W	666.4	9.2	113
1904	39° 02.30'N	7° 37.80'W	678.5	8.8	119
1930	39° 00.40'N	7° 42.10'W	682.4	8.9	121
2122	38° 51.90'N	8° 00.30'W	698.9	9.3	117
2158	38° 49.40'N	8° 06.70'W	704.5	8.6	118
2200	38° 49.30'N	8° 07.00'W	704.8	8.6	116
2310	38° 44.90'N	8° 18.60'W	714.8	8.9	116
2332	38° 43.50'N	8° 22.40'W	718.1	8.9	90

TABLE 1 - Continued

Time	Latitude	Longitude	Distance (miles)	Speed (knots)	Course (degrees)
(26 April 1975)					
000	38° 43.50'N	8° 27.70'W	722.2	8.9	90
0054	38° 43.50'N	8° 37.90'W	730.2	7.9	90
0150	38° 43.60'N	8° 47.30'W	737.5	7.9	70
0240	38° 45.80'N	8° 55.30'W	744.1	8.9	70
0518	38° 53.70'N	9° 23.70'W	767.6	7.9	71
0610	38° 55.90'N	9° 32.10'W	774.5	7.4	71
0620	38° 56.30'N	9° 33.60'W	775.7	8.3	82
0650	38° 56.80'N	9° 38.90'W	779.9	8.3	85
0702	38° 57.00'N	9° 41.00'W	781.5	8.2	75
0725	38° 57.80'N	9° 44.90'W	784.7	5.8	75
0738	38° 58.10'N	9° 46.50'W	786.0	6.7	158
0745	38° 57.40'N	9° 46.90'W	786.7	8.2	75
0918	39° 00.70'N	10° 02.70'W	799.5	7.5	75
0930	39° 01.10'N	10° 04.60'W	801.0	7.8	75
0940	39° 01.40'N	10° 06.20'W	802.3	7.8	70
0956	39° 02.10'N	10° 08.70'W	804.3	7.8	70
1030	39° 03.60'N	10° 14.00'W	808.7	8.0	70
1100	39° 04.90'N	10° 18.80'W	812.7	7.0	68
1104	39° 05.10'N	10° 19.40'W	813.2	7.3	69
1216	39° 08.20'N	10° 30.00'W	822.0	7.3	70
1356	39° 12.40'N	10° 44.80'W	834.2	8.1	70
1358	39° 12.50'N	10° 45.10'W	834.4	7.7	67
1442	39° 14.70'N	10° 51.80'W	840.1	7.7	67
1546	39° 17.90'N	11° 01.60'W	848.3	8.0	70
1624	39° 19.60'N	11° 07.80'W	853.4	7.6	67
1640	39° 20.40'N	11° 10.20'W	855.4	7.8	67
1734	39° 23.10'N	11° 18.60'W	862.5	8.2	67
1810	39° 25.00'N	11° 24.50'W	867.4	8.1	66
1918	39° 28.70'N	11° 35.30'W	876.5	8.4	66
2004	39° 31.30'N	11° 42.90'W	882.9	8.3	68
2020	39° 32.10'N	11° 45.60'W	885.1	8.3	70
2028	39° 32.50'N	11° 46.90'W	886.2	8.8	68
2106	39° 34.60'N	11° 53.60'W	891.8	8.8	71
2214	39° 37.90'N	12° 05.80'W	901.8	7.9	71
(27 April 1975)					
000	39° 42.50'N	12° 22.90'W	915.7	7.9	71
0002	39° 42.60'N	12° 23.20'W	916.0	7.5	67
0020	39° 43.50'N	12° 25.90'W	918.2	7.7	71
0045	39° 44.50'N	12° 29.80'W	921.4	7.7	74
0200	39° 47.20'N	12° 41.80'W	931.0	7.7	67
0228	39° 48.60'N	12° 46.10'W	934.6	7.8	121
0242	39° 47.60'N	12° 48.10'W	936.4	7.7	118
0320	39° 45.40'N	12° 53.70'W	941.3	6.1	117
0345	39° 44.20'N	12° 56.70'W	943.8	6.0	110
0346	39° 44.20'N	12° 56.80'W	943.9	5.6	110
0348	39° 44.10'N	12° 57.00'W	944.1	5.5	102
0410	39° 43.70'N	12° 59.60'W	946.1	8.0	100
0410	39° 43.70'N	12° 59.60'W	946.1	0.0	0
(29 April 1975)					
0730	39° 43.70'N	12° 59.60'W	946.1	0.4	292
0730	39° 43.70'N	12° 59.60'W	946.1	4.9	126
0755	39° 42.50'N	13° 01.70'W	948.2	9.0	126
0845	39° 38.10'N	13° 09.60'W	955.7	9.0	120
0908	39° 36.40'N	13° 13.50'W	959.1	8.5	122
1006	39° 32.00'N	13° 22.50'W	967.3	8.5	120
1138	39° 25.40'N	13° 37.10'W	980.4	8.3	120
1158	39° 24.00'N	13° 40.20'W	983.1	8.2	121
1318	39° 18.40'N	13° 52.40'W	994.1	8.5	122
1410	39° 14.50'N	14° 00.50'W	1001.5	8.7	122
1450	39° 11.50'N	14° 06.90'W	1007.3	8.7	121
1540	39° 07.80'N	14° 14.90'W	1014.6	8.7	118
1550	39° 07.10'N	14° 16.60'W	1016.0	9.1	116
1634	39° 04.20'N	14° 24.30'W	1022.7	8.2	118

TABLE 1 - Continued

Time	Latitude	Longitude	Distance (miles)	Speed (knots)	Course (degrees)
1654	39° 02.90'N	14° 27.40'W	1025.4	9.0	116
1736	39° 00.10'N	14° 34.70'W	1031.7	9.0	117
1800	38° 58.50'N	14° 38.80'W	1035.3	9.0	120
1822	38° 56.80'N	14° 42.50'W	1038.6	8.5	119
1924	38° 52.50'N	14° 52.30'W	1047.4	8.9	122
2018	38° 48.30'N	15° 01.10'W	1055.4	9.1	119
2044	38° 46.40'N	15° 05.50'W	1059.4	9.1	134
2114	38° 43.20'N	15° 09.70'W	1063.9	9.2	135
2241	38° 33.80'N	15° 21.90'W	1077.3	9.2	141
2302	38° 31.30'N	15° 24.50'W	2080.5	9.6	141
2305	38° 30.90'N	15° 24.90'W	1081.0	9.5	130
2320	38° 29.40'N	15° 27.20'W	1083.4	4.9	131
2340	38° 28.30'N	15° 28.80'W	1085.0	4.6	167
2345	38° 27.90'N	15° 28.90'W	1085.4	4.6	167
(30 April 1975)					
0715	37° 54.00'N	15° 38.70'W	1120.2	6.3	162
0722	37° 53.30'N	15° 39.00'W	1120.9	6.4	129
0745	37° 51.80'N	15° 41.40'W	1123.4	8.8	131
0800	37° 50.30'N	15° 43.50'W	1125.6	9.3	131
0814	37° 48.90'N	15° 45.60'W	1127.8	8.4	136
0910	37° 43.30'N	15° 52.50'W	1135.6	8.9	134
1030	37° 35.10'N	16° 03.30'W	1147.4	8.9	136
1232	37° 22.10'N	16° 19.10'W	1165.5	8.9	137
1348	37° 13.90'N	16° 28.80'W	1176.7	8.7	138
1416	37° 10.90'N	16° 32.20'W	1180.8	9.0	137
1526	37° 03.20'N	16° 41.20'W	1191.3	9.1	137
1604	36° 59.00'N	16° 46.10'W	1197.1	9.1	137
1648	36° 54.10'N	16° 51.80'W	1203.7	9.3	137
1700	36° 52.80'N	16° 53.40'W	1205.6	9.3	132
1712	36° 51.50'N	16° 55.10'W	1207.4	9.3	136
1740	36° 48.40'N	16° 58.90'W	1211.8	9.2	135
1834	36° 42.60'N	17° 06.20'W	1220.0	9.2	134
1926	36° 37.10'N	17° 13.40'W	1228.0	9.4	131
2022	36° 31.30'N	17° 21.60'W	1236.8	9.3	132
2206	36° 20.60'N	17° 36.50'W	1252.8	9.3	134
(1 May 1975)					
000	36° 08.40'N	17° 52.20'W	1270.5	9.3	134
0100	36° 02.00'N	18° 00.50'W	1279.7	9.3	124
0136	35° 58.90'N	18° 06.20'W	1285.3	9.4	157
0145	35° 57.60'N	18° 06.90'W	1286.7	9.3	156
0205	35° 54.80'N	18° 08.50'W	1289.8	6.3	147
0216	35° 53.80'N	18° 09.30'W	1291.0	7.9	146
0240	35° 51.20'N	18° 11.50'W	1294.1	7.9	141
0244	35° 50.80'N	18° 11.90'W	1294.6	6.6	140
0244	35° 50.80'N	18° 11.90'W	1294.6	0.0	0
(4 May 1975)					
0700	35° 50.80'N	18° 11.90'W	1294.6	0.3	91
0700	35° 50.80'N	18° 11.90'W	1294.6	7.0	99
0755	35° 49.80'N	18° 19.70'W	1301.0	10.0	99
0824	35° 49.10'N	18° 25.60'W	1305.9	9.9	101
0902	35° 47.90'N	18° 33.20'W	1312.1	9.1	102
1050	35° 44.60'N	18° 53.00'W	1328.5	9.5	103
1110	35° 43.90'N	18° 56.80'W	1331.7	9.4	100
1145	35° 43.00'N	19° 03.50'W	1337.2	9.4	98
1432	35° 39.50'N	19° 35.40'W	1363.4	9.2	98
1520	35° 38.50'N	19° 44.40'W	1370.8	9.2	98
1614	35° 37.40'N	19° 54.50'W	1379.0	9.0	99
1706	35° 36.20'N	20° 04.00'W	1386.9	9.6	99
1746	35° 35.20'N	20° 11.80'W	1393.3	9.3	99
1854	35° 33.50'N	20° 24.60'W	1403.8	8.9	98
1934	35° 32.70'N	20° 31.80'W	1409.7	9.2	95
2005	35° 32.30'N	20° 37.60'W	1414.5	9.1	119
2014	35° 31.60'N	20° 39.10'W	1415.9	8.9	122

TABLE 1 – Continued

Time	Latitude	Longitude	Distance (miles)	Speed (knots)	Course (degrees)
2017	35° 31.40'N	20° 39.60'W	1416.3	8.8	97
2200	35° 29.50'N	20° 58.00'W	1431.4	8.7	96
2308	35° 28.40'N	21° 10.10'W	1441.4	8.4	97
(5 May 1975)					
0 0	35° 27.50'N	21° 18.90'W	1448.6	8.4	99
0138	35° 25.30'N	21° 35.50'W	1462.3	8.4	102
0250	35° 23.20'N	21° 47.60'W	1472.4	8.1	102
0320	35° 22.40'N	21° 52.50'W	1476.4	8.3	100
0400	35° 21.40'N	21° 59.20'W	1482.0	8.6	100
0535	35° 19.10'N	22° 15.70'W	1495.6	8.3	100
0544	35° 18.90'N	22° 17.20'W	1496.9	8.3	96
0652	35° 17.90'N	22° 28.60'W	1506.2	8.1	104
0730	35° 16.70'N	22° 34.70'W	1511.4	8.7	101
0808	35° 15.70'N	22° 41.30'W	1516.8	8.4	98
0928	35° 14.10'N	22° 54.90'W	1528.1	8.7	98
0954	35° 13.60'N	22° 59.50'W	1531.9	9.4	99
1022	35° 12.90'N	23° 04.80'W	1536.2	9.0	98
1235	35° 10.20'N	23° 28.90'W	1556.1	8.9	110
1326	35° 07.70'N	23° 37.70'W	1563.7	8.9	111
1508	35° 02.30'N	23° 54.90'W	1578.8	9.2	110
1543	35° 00.50'N	24° 01.00'W	1584.2	9.2	106
1618	34° 59.00'N	24° 07.30'W	1589.5	9.1	107
1656	34° 57.30'N	24° 14.00'W	1595.3	9.1	106
1804	34° 54.50'N	24° 26.10'W	1605.6	9.2	107
1842	34° 52.80'N	24° 32.90'W	1611.4	8.8	110
1920	34° 50.90'N	24° 39.30'W	1617.0	9.4	107
1945	34° 49.70'N	24° 43.90'W	1620.9	9.4	94
2106	34° 49.90'N	24° 59.20'W	1633.5	9.3	94
2220	34° 48.10'N	25° 13.10'W	1645.0	8.8	93
(6 May 1975)					
000	34° 47.30'N	25° 30.90'W	1659.6	8.8	93
0216	34° 46.30'N	25° 55.20'W	1679.6	8.6	95
0330	34° 45.40'N	26° 08.10'W	1690.2	9.1	96
0400	34° 44.90'N	26° 13.60'W	1694.8	8.4	94
0420	34° 44.70'N	26° 17.00'W	1697.6	8.8	95
0452	34° 44.30'N	26° 22.70'W	1702.3	8.7	93
0602	34° 43.70'N	26° 35.10'W	1712.5	9.1	93
0623	34° 43.50'N	26° 39.00'W	1715.7	4.4	94
0630	34° 43.50'N	26° 39.60'W	1716.2	9.1	93
0638	34° 43.40'N	26° 41.10'W	1717.4	8.5	95
0858	34° 41.80'N	27° 05.10'W	1737.2	9.1	94
1050	34° 40.60'N	27° 25.80'W	1754.3	9.0	90
1124	34° 40.60'N	27° 32.00'W	1759.4	9.8	93
1256	34° 39.90'N	27° 50.20'W	1774.4	9.0	90
1442	34° 39.80'N	28° 09.60'W	1790.3	8.9	94
1528	34° 39.30'N	28° 17.90'W	1797.2	9.2	96
1548	34° 39.00'N	28° 21.60'W	1800.2	8.9	96
1608	34° 38.70'N	28° 25.20'W	1803.2	8.6	97
1750	34° 37.00'N	28° 42.80'W	1817.8	9.4	94
1940	34° 35.90'N	29° 03.80'W	1835.1	8.7	91
2010	34° 35.80'N	29° 09.10'W	1839.5	9.1	91
2030	34° 35.70'N	29° 12.80'W	1842.5	9.0	99
2040	34° 35.50'N	29° 14.60'W	1844.0	9.0	126
2055	34° 34.20'N	29° 16.80'W	1846.2	9.1	89
2156	34° 34.30'N	29° 28.00'W	1855.5	9.0	91
2245	34° 34.10'N	29° 37.00'W	1862.8	9.0	89
2318	34° 34.20'N	29° 43.00'W	1867.8	9.4	90
(7 May 1975)					
000	34° 34.20'N	29° 51.00'W	1874.4	9.4	90
0052	34° 34.30'N	30° 00.80'W	1882.5	9.4	92
0112	34° 34.20'N	30° 04.60'W	1885.6	8.8	90
0326	34° 34.10'N	30° 28.50'W	1905.3	8.8	90
0353	34° 34.10'N	30° 33.00'W	1909.3	8.9	102

TABLE 1 – Continued

Time	Latitude	Longitude	Distance (miles)	Speed (knots)	Course (degrees)
0402	34° 33.80'N	30° 34.90'W	1910.6	9.0	100
0405	34° 33.70'N	30° 35.40'W	1911.0	9.0	88
0512	34° 34.10'N	30° 47.60'W	1921.1	9.0	88
0530	34° 34.20'N	30° 50.90'W	1923.8	9.0	90
0652	34° 34.10'N	31° 05.80'W	1936.1	9.0	100
0655	34° 34.10'N	31° 06.40'W	1936.5	9.2	143
0707	34° 32.60'N	31° 07.70'W	1938.3	9.0	90
1736	34° 32.60'N	31° 13.00'W	1942.7	8.9	93
0836	34° 32.10'N	31° 23.80'W	1951.6	9.4	145
0846	34° 30.90'N	31° 24.90'W	1953.2	8.9	93
0859	34° 30.80'N	31° 27.20'W	1955.1	8.9	59
0952	34° 34.80'N	31° 35.40'W	1963.0	9.6	63
1000	34° 35.40'N	31° 36.80'W	1964.2	7.1	65
1030	34° 36.90'N	31° 40.70'W	1967.8	6.7	61
1046	34° 37.80'N	31° 42.60'W	1969.6	6.7	25
1132	34° 42.40'N	31° 45.30'W	1974.7	6.8	15
1200	34° 45.50'N	31° 46.30'W	1977.9	6.8	2
1208	34° 46.40'N	31° 46.30'W	1978.8	8.7	10
1223	34° 48.50'N	31° 46.80'W	1981.0	5.6	198
1232	34° 47.70'N	31° 46.40'W	1981.8	5.6	199
1255	34° 45.70'N	31° 45.60'W	1984.0	7.2	202
1255	34° 45.70'N	31° 45.60'W	1984.0	0.0	0
(10 May 1975)					
1444	34° 45.70'N	31° 45.60'W	1984.0	0.7	219
1444	34° 45.70'N	31° 45.60'W	1984.0	6.8	22
1507	34° 48.10'N	31° 47.80'W	1986.6	6.8	20
1546	34° 52.30'N	31° 48.70'W	1991.0	9.0	28
1559	34° 54.00'N	31° 49.80'W	1993.0	5.8	219
1610	34° 53.20'N	31° 49.00'W	1994.1	5.9	204
1620	34° 52.30'N	31° 48.50'W	1995.1	7.5	210
1620	34° 52.30'N	31° 48.50'W	1995.1	0.0	0
(12 May 1975)					
1830	34° 52.30'N	31° 48.50'W	1995.1	0.8	95
1830	34° 52.30'N	31° 48.50'W	1995.1	6.7	269
1855	34° 52.30'N	31° 45.10'W	1997.8	8.6	270
1953	34° 52.20'N	31° 35.00'W	2006.1	8.3	268
2010	34° 52.10'N	31° 32.10'W	2008.5	8.5	268
2230	34° 51.60'N	31° 08.00'W	2028.3	8.5	270
2332	34° 51.50'N	30° 57.30'W	2037.1	8.8	272
(13 May 1975)					
000	34° 51.70'N	30° 52.30'W	2041.2	8.8	272
0030	34° 51.90'N	30° 46.90'W	2045.6	8.8	270
0116	34° 51.90'N	30° 38.70'W	2052.3	9.1	271
0210	34° 52.00'N	30° 28.70'W	2060.5	8.7	270
0354	34° 51.90'N	30° 10.40'W	2075.6	8.4	270
0414	34° 51.90'N	30° 07.00'W	2078.4	8.8	269
0542	34° 51.60'N	29° 51.20'W	2091.3	8.9	270
0602	34° 51.60'N	29° 47.60'W	2094.3	8.5	270
0940	34° 51.60'N	29° 09.90'W	2125.2	8.5	269
1000	34° 51.50'N	29° 06.40'W	2128.1	8.5	266
1058	34° 50.90'N	28° 56.40'W	2136.3	8.3	266
1232	34° 50.10'N	28° 40.60'W	2149.3	7.9	266
1252	34° 49.90'N	28° 37.40'W	2151.9	8.5	267
1318	34° 49.70'N	28° 32.90'W	2155.6	8.1	268
1418	34° 49.40'N	28° 23.00'W	2163.8	8.4	268
1500	34° 49.20'N	28° 15.80'W	2169.7	8.8	270
1650	34° 49.20'N	27° 56.20'W	2185.8	8.9	270
1710	34° 49.20'N	27° 52.60'W	2188.7	8.8	269
1858	34° 48.90'N	27° 33.30'W	2204.6	8.7	268
2050	34° 48.40'N	27° 13.50'W	2220.8	8.7	267
2256	34° 47.40'N	26° 51.30'W	2239.1	9.1	260
2315	34° 46.90'N	26° 47.80'W	2242.0	8.7	342
2328	34° 48.70'N	26° 47.10'W	2243.9	9.1	260

TABLE 1 - Continued

Time	Latitude	Longitude	Distance (miles)	Speed (knots)	Course (degrees)
(14 May 1975)					
000	34° 47.90'N	26° 41.30'W	2248.7	9.1	263
0028	34° 47.40'N	26° 36.20'W	2252.9	8.9	264
0048	34° 47.10'N	26° 32.60'W	2255.9	9.2	266
0208	34° 46.30'N	26° 17.70'W	2268.2	9.4	268
0248	34° 46.00'N	26° 10.10'W	2274.5	9.4	272
0304	34° 46.10'N	26° 07.00'W	2277.0	9.3	272
0320	34° 46.20'N	26° 04.00'W	2279.5	9.3	276
0354	34° 46.70'N	25° 57.60'W	2284.7	8.5	278
0440	34° 47.60'N	25° 49.70'W	2291.3	8.5	275
0450	34° 47.70'N	25° 48.00'W	2292.7	9.6	274
0510	34° 47.90'N	25° 44.10'W	2295.9	9.2	277
0652	34° 49.70'N	25° 25.10'W	2311.6	9.3	277
0710	34° 50.00'N	25° 21.70'W	2314.4	9.3	275
0745	34° 50.40'N	25° 15.10'W	2319.8	9.3	271
0835	34° 50.60'N	25° 05.70'W	2327.5	9.3	268
0842	34° 50.60'N	25° 04.40'W	2328.6	8.4	269
1012	34° 50.30'N	24° 49.10'W	2341.2	7.4	266
1043	34° 50.00'N	24° 44.50'W	2345.0	7.5	292
1142	34° 52.70'N	24° 36.20'W	2352.3	7.4	288
1144	34° 52.80'N	24° 35.90'W	2352.5	7.4	288
1330	34° 56.80'N	24° 20.70'W	2365.6	8.1	287
1336	34° 57.00'N	24° 19.80'W	2366.4	8.1	279
1355	34° 57.40'N	24° 16.70'W	2369.0	5.1	280
1417	34° 57.80'N	24° 14.40'W	2370.9	8.1	279
1540	34° 59.60'N	24° 01.00'W	2382.0	7.8	278
1710	35° 01.20'N	23° 46.80'W	2393.8	7.8	273
1752	35° 01.50'N	23° 40.10'W	2399.3	7.5	271
2146	35° 02.20'N	23° 04.60'W	2428.3	7.8	276
2210	35° 02.50'N	23° 00.80'W	2431.5	7.7	272
2230	35° 02.60'N	22° 57.70'W	2434.0	7.7	277
2342	35° 03.80'N	22° 46.50'W	2443.2	7.2	281
(15 May 1975)					
000	35° 04.20'N	22° 43.90'W	2445.4	7.7	281
000	35° 04.20'N	22° 43.90'W	2445.4	7.7	281
0102	35° 05.70'N	22° 34.30'W	2453.4	7.2	279
0242	35° 07.60'N	22° 19.80'W	2465.4	7.2	275
0246	35° 07.60'N	22° 19.20'W	2465.9	7.8	274
0315	35° 07.90'N	22° 14.60'W	2469.7	7.8	272
0320	35° 07.90'N	22° 13.80'W	2470.3	7.8	276
0402	35° 08.50'N	22° 07.20'W	2475.8	7.5	275
0432	35° 08.80'N	22° 02.60'W	2479.5	7.7	276
0550	35° 09.90'N	21° 50.50'W	2489.5	7.6	274
0711	35° 10.70'N	21° 38.10'W	2499.7	7.5	265
0736	35° 10.40'N	21° 34.20'W	2502.8	5.8	265
0748	35° 10.30'N	21° 32.80'W	2504.0	6.6	269
0808	35° 10.30'N	21° 30.10'W	2506.2	6.5	261
0835	35° 09.80'N	21° 26.60'W	2509.1	5.3	262
0844	35° 09.70'N	21° 25.60'W	2509.9	6.7	260
0844	35° 09.70'N	21° 25.60'W	2509.0	0.0	0
(16 May 1975)					
1736	35° 09.70'N	21° 25.60'W	2509.9	1.0	221
1736	35° 09.70'N	21° 25.60'W	2509.9	5.8	78
1749	35° 10.00'N	21° 27.10'W	2511.2	8.8	77
1802	35° 10.40'N	21° 29.40'W	2513.1	8.6	73
1950	35° 14.90'N	21° 46.50'W	2528.6	8.7	74
2138	35° 19.10'N	22° 05.90'W	2544.2	8.6	74
2230	35° 20.80'N	22° 13.00'W	2550.2	8.8	76
2300	35° 22.30'N	22° 20.00'W	2556.1	8.8	73
2348	35° 24.30'N	22° 28.30'W	2563.2	9.2	73
(17 May 1975)					
000	35° 24.80'N	22° 30.50'W	2565.0	9.2	73
0008	35° 25.20'N	22° 31.90'W	2566.2	8.7	72
0030	35° 26.20'N	22° 35.60'W	2569.4	8.7	69
0134	35° 29.50'N	22° 46.30'W	2578.7	8.4	68
0218	35° 31.80'N	22° 53.30'W	2584.9	8.7	67

TABLE 1 - Continued

Time	Latitude	Longitude	Distance (miles)	Speed (knots)	Course (degrees)
(18 May 1975)					
0324	35° 35.60'N	23° 04.10'W	2594.4	8.8	68
0354	35° 37.20'N	23° 09.10'W	2598.8	8.8	71
0404	35° 37.70'N	23° 10.80'W	2600.3	8.8	70
0424	35° 38.70'N	23° 14.20'W	2603.2	9.4	71
0520	35° 41.60'N	23° 24.40'W	2612.0	9.4	76
0600	35° 43.10'N	23° 31.90'W	2618.3	9.5	75
0640	35° 44.70'N	23° 39.40'W	2624.6	9.5	85
0810	35° 46.00'N	23° 57.00'W	2638.9	9.5	81
1102	35° 50.20'N	24° 30.20'W	2666.2	9.3	82
1120	35° 50.60'N	24° 33.60'W	2668.9	9.3	84
1140	35° 50.90'N	24° 37.40'W	2672.0	9.3	86
1248	35° 51.70'N	24° 50.30'W	2682.5	9.7	86
1308	35° 51.90'N	24° 54.30'W	2685.8	8.7	85
1318	35° 52.00'N	24° 56.10'W	2687.2	8.7	90
1336	35° 52.00'N	24° 59.30'W	2689.9	8.7	86
1406	35° 52.30'N	25° 04.70'W	2694.2	10.6	91
1414	35° 52.30'N	25° 06.40'W	2695.6	8.9	1
1429	35° 54.50'N	25° 06.50'W	2697.8	8.9	6
1430	35° 54.60'N	25° 06.50'W	2698.0	6.1	20
1441	35° 55.70'N	25° 07.00'W	2699.1	6.7	10
1441	35° 55.70'N	25° 07.00'W	2699.1	0.0	0
(19 May 1975)					
0455	35° 55.70'N	25° 07.00'W	2699.1	1.3	211
0455	35° 55.70'N	25° 07.00'W	2699.1	6.3	48
0509	35° 56.70'N	25° 08.30'W	2700.6	8.5	47
0558	36° 01.40'N	25° 14.60'W	2707.5	8.3	47
0730	36° 10.20'N	25° 26.10'W	2720.3	8.3	28
0852	36° 20.20'N	25° 32.60'W	2731.6	8.4	13
1005	36° 30.10'N	25° 35.40'W	2741.8	8.4	10
1110	36° 39.10'N	25° 37.50'W	2750.9	8.1	16
1117	36° 40.00'N	25° 37.80'W	2751.9	8.1	18
1205	36° 46.10'N	25° 40.30'W	2758.3	8.1	16
1210	36° 46.80'N	25° 40.60'W	2759.0	8.2	29
1219	36° 47.90'N	25° 41.30'W	2760.2	8.2	35
1257	36° 52.10'N	25° 45.10'W	2765.4	8.0	7
1324	36° 55.70'N	25° 45.60'W	2769.1	8.1	352
1338	36° 57.60'N	25° 45.30'W	2770.9	7.9	352
1422	37° 03.30'N	25° 44.30'W	2776.7	7.9	359
1454	37° 07.50'N	25° 44.20'W	2780.9	7.9	3
1526	37° 11.70'N	25° 44.50'W	2785.1	8.1	3
1608	37° 17.30'N	25° 44.90'W	2790.8	8.1	7
1730	37° 28.30'N	25° 46.50'W	2801.8	8.1	3
1806	37° 33.10'N	25° 46.90'W	2806.6	8.1	360
2038	37° 53.60'N	25° 46.70'W	2827.1	7.8	358
2130	38° 00.30'N	25° 46.40'W	2833.8	7.8	356
2142	38° 01.90'N	25° 46.30'W	2835.4	8.1	356
2218	38° 06.80'N	25° 45.80'W	2840.3	8.1	10
2241	38° 09.80'N	25° 46.50'W	2843.4	8.1	353
2310	38° 13.70'N	25° 45.90'W	2847.3	7.9	353
2330	38° 16.30'N	25° 45.50'W	2849.9	8.4	355
(20 May 1975)					
000	38° 20.50'N	25° 45.00'W	2854.1	8.4	355
0030	38° 24.60'N	25° 44.50'W	2858.3	8.4	359
0042	38° 26.30'N	25° 44.50'W	2859.9	8.7	358
0100	38° 28.90'N	25° 44.40'W	2862.5	8.5	0
0246	38° 44.00'N	25° 44.50'W	2877.6	8.7	359
0250	38° 44.60'N	25° 44.50'W	2878.2	8.7	1
0332	38° 50.70'N	25° 44.60'W	2884.3	12.5	359
0750	39° 44.60'N	25° 43.80'W	2938.2	12.4	7
0834	39° 53.60'N	25° 45.30'W	2947.3	9.7	32
(21 May 1975)					
0857	39° 56.80'N	25° 47.80'W	2951.0	10.1	39
0918	39° 59.50'N	25° 50.70'W	2954.6	5.9	54
(22 May 1975)					
1250	41° 34.00'N	28° 45.80'W	3117.4	3.3	113

Figure 1.

Figure 2.

Figure 2. - Continued

Figure 2 - Continued

Figure 2 - Continued

Figure 2 - Continued

Figure 2 - Continued

Figure 2 — *Continued*

DEPART MALAGA, SPAIN
14 APRIL 1975

GEOPHYSICAL PROFILING

Figure 3

Figure 3 — Continued

Figure 3 – Continued

Figure 3 — Continued

SITE 373

Figure 3 — Continued

Figure 3 — Continued

Figure 3 — Continued

Figure 3 – Continued

SITE 376 12 km NE
OF SITE 375

Figure 3 — Continued

Figure 3 — *Continued*

Figure 3 — *Continued*

Figure 3 – Continued

Figure 3 — Continued