

## APPENDIX

Data for explosion seismic experiments carried out by JARE-20, -21 and -22 are summarized. The locations of profile lines and shot points are illustrated in the figures. Shot and observation points and travel-time data are given in the following tables. Distance from shot (Delta) is given in km and azimuth from shot to stations is taken clockwise from the north. Arrival time ( $T$ ) and travel time ( $T-O$ ) are given in seconds. Reduced travel time,  $T-O-D/6.0$  is also given in seconds, where  $O$  is shot time and  $D$ , distance from the shot point. Marks + and - attached to travel time indicate upward and downward ground motions of the phase, respectively. A, B, C and D attached to it indicate quality of the reading. For details of each shot, see text.

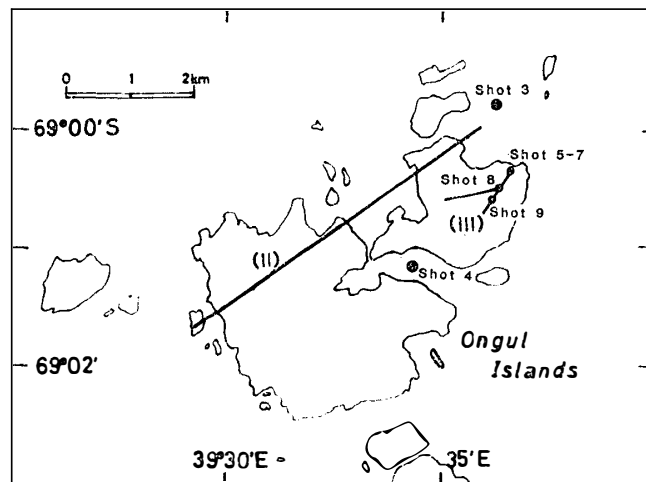


Fig. A-1. The locations of Shots 3-9 for the experiment -II and -III.

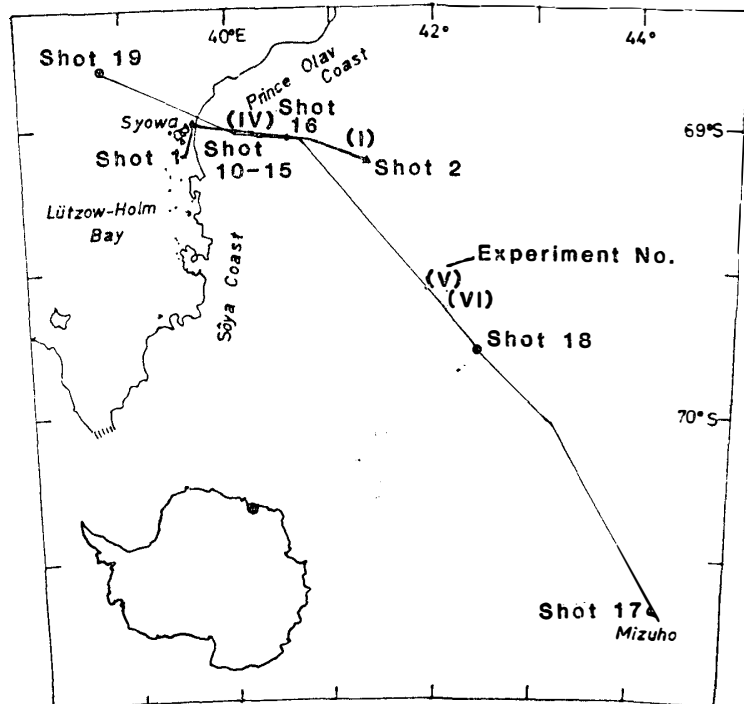


Fig. A-2. The locations of Shots 1-2 and 10-19 for the experiment -I, -IV, -V and -VI.

Table A-1. List of explosions. Latitude and longitude for Shots 5 to 9 are taken in km and positive towards north and east, respectively with the origin at the astronomical station in East Ongul Island (69°00'22"S, 39°35'24"E, 24 m).

No.	Date	Time (L.T.)	Charge size (kg)	Shot depth (m)	Latitude	Longitude	Height (m)	Table No.	Experiment No.	Remarks
1	Jan. 14, 1979	13 00 00	1000	124 (Sea)	69°00' 27.9" S	39°37' 51.4" E	-124	A-2a	I	Sôya Coast (JARE-20)
2	Jan. 23, 1979	17 50 00	560	63 (Snow)	69 08 54.5	41 17 45.5	1220	A-2c		
3	May 19, 1980	11 59 59.96	100	50 (Sea)	68 59 43.58	39 35 55.23	-50	A-3a	II	East and West Ongul Islands (JARE-21)
4	May 20, 1980	13 00 00.28	80	50 ( " )	69 01 06.98	39 34 12.02	-50	A-3c		
5	June 5, 1980	13 30 00.572	0.7	0 (Rock)	(-0.099)	(0.688)	15	A-4a A-4f	III	East Ongul Island (JARE-21)
6		13 38 00.703	0.1	0 ( " )	(-0.111)	(0.651)	15			
7		13 43 00.582	0.1	0 ( " )	(-0.120)	(0.651)	15			
8		13 53 00.400	0.2	0 ( " )	(-0.326)	(0.466)	19			
9	June 6, 1980	11 44 59.730	0.6	0 ( " )	(-0.190)	(0.569)	17			
10	July 22, 1980	13 27 10	15	25 (Snow)	69 01 35.1	40 18 46.2	777	A-5a A-5c	IV	Sôya Coast S-Route (JARE-21)
11		14 18 02	10	10 ( " )						
12		15 14 52.06	100	30 ( " )						
13		11 10 01	20	10 ( " )						
14	July 27, 1980	11 50 02	20	5 ( " )	69 02 33.1	40 34 31.6	951			
15		12 40 02	45	10 ( " )						
16		14 10 02.49	100	30 ( " )						
17	Nov. 12, 1980	18 00 00.63	1400	140 (Snow)	70 41 16.8	44 15 34.6	2246	A-6a A-6d	V	Mizuho Plateau (JARE-21)
18	Nov. 15, 1980	16 00 00.30	1000	100 ( " )	69 46 24.5	42 26 27.4	1692			
19	Jan. 12, 1981	17 59 59.96	3000	160 (Sea)	68 48 41.9	38 53 26.0	-160		VI	Mizuho Plateau (JARE-21, -22)

*Table A-2a. Shot and observation points for Shots 1 and 2 in the Sôya Coast.*

	Station	Latitude	Longitude	Height
1	Shot 1 Ongul Straight	69°00' 27.9" S	39°37' 51.4" E	—124 m
2	Shot 2 Boring site	69 08 54.5	41 17 45.9	1220
3	1 S16-1	69 01 46.7	40 03 18.0	540
4	2	69 02 16.5	40 08 40.2	610
5	3	69 02 40.8	40 13 01.5	660
6	4	69 03 27.2	40 21 17.9	780
7	5	69 04 14.9	40 29 43.0	900
8	6	69 05 01.1	40 37 50.7	980
9	7	69 05 50.3	40 46 24.6	1040
10	8	69 06 37.7	40 54 32.3	1080
11	9	69 07 25.2	41 02 40.0	1140
12	10	69 08 08.8	41 10 04.2	1180

*Table A-2b. Travel-time data for Shot 1.*

Station	Delta	Azimuth	<i>T</i>	<i>T-O</i>	<i>T-O-D/6</i>
1	17.13	098	3.51+	3.15	0.30
2	20.80	099	3.99+	3.63	0.17
3	23.78	100	4.73+	4.37	0.41
4	29.45	101	5.45+	5.09	0.18
6	40.81	102	7.43+	7.07	0.27
7	46.69	102	8.03+	7.67	—0.11
8	52.27	103	8.88+	8.52	—0.19
9	57.85	103	10.47+	10.11	0.47
10	62.93	103	11.81+	11.45	0.96

*Table A-2c. Travel-time data for Shot 2.*

Station	Delta	Azimuth	<i>T</i>	<i>T-O*</i>	<i>T-O-D/6</i>
1	51.20	285	10.79+	10.79	2.26
2	47.51	285	10.17+	10.17	2.25
4	38.83	285	8.71+	8.71	2.24
6	27.45	285	6.86+	6.86	2.29
7	21.56	285	5.95+	5.95	2.36
8	15.97	285	5.07+	5.07	2.41
9	10.38	286	4.70+	4.70	2.97
10	5.29	286	4.25+	4.25	3.37

\* Indicates that the shot time is indeterminable.

Table A-3a. Shot and observation points for Shots 3 and 4 in the vicinity of East and West Ongul Islands.

	Station	Latitude	Longitude	Height
1	Shot 3 Kita-no-ura Cove	68°59' 43.58" S	39°35' 55.23" E	−50.0 m
2	Shot 4 Kai-no-hama Beach	69 01 06.98	39 34 12.02	−50.0
3	0A1 E. Ongul Is.	69 00 18.95	39 35 40.69	3.0
4	0A2 "	69 00 18.95	39 35 40.69	3.0
5	0A3 "	69 00 18.95	39 35 40.69	3.0
6	0B1 "	69 00 19.79	39 35 39.52	7.5
7	0B2 "	69 00 19.79	39 35 39.52	7.5
8	0B3 "	69 00 19.79	39 35 39.52	7.5
9	1 "	69 00 06.56	39 35 28.42	10.5
10	2 "	69 00 16.36	39 35 01.63	13.5
11	3 "	69 00 28.77	39 34 35.26	9.0
12	4 "	69 00 46.03	39 33 57.56	4.0
13	5 W. Ongul Is.	69 01 00.43	39 33 15.54	7.5
14	6 "	69 00 58.38	39 32 18.92	17.5
15	7 "	69 01 04.36	39 31 41.50	11.0
16	8 "	69 01 09.50	39 30 58.17	17.5
17	9 "	69 01 18.88	39 30 10.97	16.0
18	10 "	69 01 29.13	39 29 53.51	10.0
19	SYO Syowa Station	69 00 31.70	39 35 31.60	20.0

Table A-3b. Travel-time data for Shot 3.

Station	Delta	Azimuth	<i>T</i>	<i>T-O</i>	<i>T-O-D/6</i>	<i>T</i>	<i>T-O</i>	<i>T-O-D/6</i>	<i>T</i>	<i>T-O</i>	<i>T-O-D/6</i>
0A1	1.109	188	0.22+	0.26	0.08						
1	0.773	203	0.07+	0.11	−0.02	0.18+	0.22	0.09	0.20−	0.24	0.11
3	1.659	212	0.16+	0.20	−0.08	0.48−	0.52	0.24			
4	2.337	214	0.34+	0.38	−0.01	0.80−	0.84	0.45			
5	2.970	217	0.36+	0.40	−0.09	0.89−	0.93	0.44			
6	3.340	226	0.46+	0.50	−0.06	1.03−	1.07	0.51			
7	3.770	228	0.61+	0.65	0.02	1.25−	1.29	0.66			
8	4.241	231	0.64+	0.68	−0.03	1.55−	1.59	0.88			
9	4.832	232	0.73+	0.77	−0.04	1.71−	1.75	0.94			
10	5.182	231	0.79+	0.83	−0.03	1.76−	1.81	0.94			

Table A-3c. Travel-time data for Shot 4.

Station	Delta	Azimuth	<i>T</i>	<i>T-O</i>	<i>T-O-D/6</i>	<i>T</i>	<i>T-O</i>	<i>T-O-D/6</i>
0A1	1.784	034	0.66+	0.38	0.08			
0A2	1.784	034	0.66+	0.38	0.08			
0A3	1.784	034	0.66+	0.38	0.08			
1	2.055	024	0.64+	0.36	0.02	0.98—	0.70	0.36
3	1.211	012	0.50+	0.22	0.02	0.75—	0.47	0.27
4	0.668	346	0.41+	0.13	0.02	0.49—	0.21	0.10
5	0.660	288	0.41+	0.13	0.02	0.50—	0.22	0.11
6	1.284	282	0.50+	0.22	0.01	0.71—	0.43	0.22
7	1.674	273	0.61+	0.33	0.05	0.90—	0.62	0.34
8	2.154	268	0.68+	0.40	0.04	1.07—	0.79	0.43
9	2.702	262	0.77+	0.49	0.04	1.23—	0.95	0.50
10	2.952	257	0.82+	0.54	0.05	1.32—	1.04	0.55

Table A-4a. Shot and observation points for Shots 5 to 9 in East Ongul Island. Latitude and longitude are taken positive towards north and east in km, respectively.

	Station	Latitude	Longitude	Height
1	Shot 5 Maigo Stream	−0.099 N	0.688 E	15.0 m
2	Shot 6 "	−0.111	0.651	15.0
3	Shot 7 "	−0.120	0.651	15.0
4	Shot 8 "	−0.326	0.466	19.0
5	Shot 9 "	−0.190	0.569	16.5
6	A1 E. Ongul Is.	−0.116	0.669	15.0
7	A2 "	−0.150	0.607	15.0
8	A3 "	−0.176	0.585	16.0
9	A4 "	−0.233	0.534	17.0
10	A5 "	−0.294	0.487	18.0
11	A6 "	−0.371	0.398	22.5
12	A7 "	−0.440	0.312	28.0
13	A8 "	−0.531	0.242	33.0
14	B1 "	−0.224	0.483	18.5
15	B2 "	−0.222	0.452	18.5
16	B3 "	−0.324	0.162	22.5
17	B4 "	−0.339	0.078	24.0
18	B5 "	−0.352	0.008	22.5
19	B6 "	−0.359	−0.101	27.0
20	B7 "	−0.393	−0.188	34.0
21	B8 "	−0.440	−0.260	27.5

Table A-4b. Travel-time data for Shot 5.

Station	Delta	Azimuth	<i>T</i>	<i>T-O</i>	<i>T-O-D/6</i>	<i>T</i>	<i>T-O</i>	<i>T-O-D/6</i>
A1	0.025	228	0.578+A	0.006	0.002			
A2	0.096	238	0.588+A	0.016	0.000			
A3	0.129	233	0.594+A	0.022	0.001			
A4	0.204	229	0.610-B	0.038	0.004			
A5	0.280	226	0.618+A	0.046	-0.001	0.665 S	0.093	0.046
A6	0.398	227	0.641-B	0.069	0.003	0.701 S	0.129	0.063
A7	0.508	228	0.660+A	0.088	0.003	0.739 S	0.167	0.082
A8	0.621	226	0.680+A	0.108	0.005	0.781 S	0.209	0.106

Table A-4c. Travel-time data for Shot 6.

Station	Delta	Azimuth	<i>T</i>	<i>T-O</i>	<i>T-O-D/6</i>	<i>T</i>	<i>T-O</i>	<i>T-O-D/6</i>
A1	0.019	106	0.707-B	0.004	0.001			
A2	0.059	228	0.712+A	0.009	-0.001			
A3	0.093	225	0.718+A	0.015	0.000	0.735 S	0.032	0.017
A5	0.246	222	0.742+A	0.039	-0.002	0.782 S	0.079	0.038
A6	0.363	224	0.765+A	0.062	0.002	0.823 S	0.120	0.060
A7	0.472	226	0.783+A	0.080	0.001	0.860 S	0.157	0.078
A8	0.586	224	0.803+A	0.100	0.002	0.897 S	0.194	0.096

Table A-4d. Travel-time data for Shot 7.

Station	Delta	Azimuth	<i>T</i>	<i>T-O</i>	<i>T-O-D/6</i>	<i>T</i>	<i>T-O</i>	<i>T-O-D/6</i>
A1	0.018	078	0.586-B	0.004	0.001			
A2	0.053	236	0.590+A	0.008	-0.001	0.601 S	0.019	0.010
A3	0.087	230	0.596+A	0.014	0.000	0.612 S	0.030	0.016
A5	0.239	223	0.620+A	0.038	-0.002	0.652 S	0.070	0.030
A6	0.356	225	0.643+A	0.061	0.002	0.692 S	0.110	0.051
A7	0.466	227	0.661+A	0.079	0.001	0.741 S	0.159	0.081
A8	0.580	225	0.681+A	0.099	0.002	0.777 S	0.195	0.098

Table A-4e. Travel-time data for Shot 8.

Station	Delta	Azimuth	<i>T</i>	<i>T-O</i>	<i>T-O-D/6</i>	<i>T</i>	<i>T-O</i>	<i>T-O-D/6</i>
A2	0.226	039	0.434+A	0.034	-0.004	0.460 S	0.060	0.022
A3	0.191	038	0.427+A	0.027	-0.005	0.448 S	0.048	0.016
A4	0.115	036	0.417-B	0.017	-0.002			
A5	0.038	033	0.407+A	0.007	0.001			
A6	0.082	237	0.429+A	0.029	0.015	0.454 S	0.054	0.040
A7	0.192	234	0.448+A	0.048	0.016	0.491 S	0.091	0.059
A8	0.304	228	0.467+A	0.067	0.016	0.526 S	0.126	0.075

Table A-4f. Travel-time data for Shot 9.

Station	Delta	Azimuth	$T$	$T-O$	$T-O-D/6$	$T$	$T-O$	$T-O-D/6$
B1	0.092	248	59.749+A	0.019	0.004	59.766 S	0.036	0.021
B2	0.121	255	59.755+A	0.025	0.005	59.774 S	0.044	0.024
B3	0.428	252	59.807+A	0.077	0.006	59.876 S	0.146	0.075
B4	0.513	253	59.820+A	0.090	0.004	59.904 S	0.174	0.088
B5	0.584	254	59.830+A	0.100	0.003	59.925 S	0.195	0.098
B6	0.691	256	59.848+A	0.118	0.003	59.957 S	0.227	0.112
B7	0.784	255	59.863+A	0.133	0.002	59.977 S	0.247	0.116
B8	0.866	253	59.877+A	0.147	0.003	59.999 S	0.269	0.125

Table A-5a. Shot and observation points for Shots 10 to 16 in the Sôya Coast.

	Station	Latitude	Longitude	Height
1	Shot 10 S22	69°01' 35.1" S	40°18' 46.2" E	777 m
2	Shot 11 S22	69 01 35.1	40 18 46.2	777
3	Shot 12 S22	69 01 35.1	40 18 46.2	777
4	Shot 13 S22	69 01 35.1	40 18 46.2	777
5	Shot 14 S22	69 01 35.1	40 18 46.2	777
6	Shot 15 S22	69 01 35.1	40 18 46.2	777
7	Shot 16 S27-3	69 02 33.1	40 34 31.6	951
8	1 S22-3	69 01 34.3	40 19 42.2	
9	2 S23	69 01 41.1	40 21 51.9	
10	3 S23-3	69 01 46.2	40 23 15.0	
11	4 S24	69 01 50.6	40 24 48.2	
12	5 S24-3	69 01 57.5	40 26 09.4	
13	6 S25	69 02 04.8	40 27 39.9	
14	7 S25-3	69 02 10.4	40 29 02.5	
15	8 S26	69 02 18.3	40 30 37.3	
16	9 S26-3	69 02 22.4	40 31 51.2	
17	10 S27	69 02 29.1	40 33 21.5	

Table A-5b. Travel-time data for Shot 10.

Stn.	Delta	Azimuth	<i>T</i>	<i>T-O</i>	<i>T-O-D/6</i>	<i>T</i>	<i>T-O</i>	<i>T-O-D/6</i>	<i>T</i>	<i>T-O</i>	<i>T-O-D/6</i>
1	0.62	088	52.25+A	0.19	0.09						
2	2.07	095	52.58+A	0.52	0.18						
3	3.00	097	52.78+A	0.72	0.22				53.09+	1.03	0.53
4	4.05	097	52.92+A	0.86	0.19	53.04—	0.98	0.31	53.33—	1.27	0.60
5	4.97	098	53.10+A	1.04	0.21	53.30—	1.24	0.41	53.62—	1.56	0.73
6	5.99	099	53.31+A	1.25	0.25	53.56+	1.50	0.50			
7	6.93	099	53.51+A	1.45	0.30	53.86—	1.80	0.65			
8	8.00	100	53.80+B	1.74	0.41	54.28—	2.22	0.89			
9	8.83	100	53.70+B	1.64	0.17	54.26+	2.20	0.73			
10	9.86	100	53.91—B	1.85	0.21	54.19+	2.13	0.49	54.59+	2.53	0.89
2	2.07	095	53.00—	0.94	0.60	53.18—S	1.12	0.78			
3	3.00	097				53.70—S	1.64	1.14			
4	4.05	097	53.86—	1.80	1.13	54.27—S	2.21	1.54			
5	4.97	098	54.17—	2.11	1.28	54.80—S	2.74	1.91			
6	5.99	099	54.56—	2.50	1.50	55.41—S	3.35	2.35			
7	6.93	099	54.97—	2.91	1.76	56.11—S	4.05	2.90			
8	8.00	100	55.44—	3.38	2.05	56.73—S	4.67	3.34			
9	8.83	100				56.91—S	4.85	3.38			
10	9.86	100				57.64—S	5.58	3.94			

Table A-5c. Travel-time data for Shot 16.

Stn.	Delta	Azimuth	<i>T</i>	<i>T-O</i>	<i>T-O-D/6</i>	<i>T</i>	<i>T-O</i>	<i>T-O-D/6</i>	<i>T</i>	<i>T-O</i>	<i>T-O-D/6</i>
2	8.58	281	4.20+A	1.71	0.28	4.76+	2.27	0.84			
4	6.61	282	3.88+B	1.39	0.29	4.19—	1.70	0.60	4.58+	2.09	0.99
5	5.68	281	3.72+A	1.23	0.28	4.02+	1.53	0.58	4.42—	1.93	0.98
6	4.65	281	3.58+A	1.09	0.31	3.77+	1.28	0.50	4.11+	1.62	0.84
7	3.72	281	3.41+A	0.92	0.30	3.59—	1.10	0.48	3.76—	1.27	0.65
8	2.64	280	3.25+A	0.76	0.32				3.60+	1.11	0.67
10	0.79	279	2.72+A	0.23	0.10	2.98—	0.49	0.36			
4	6.61	282	4.78—	2.29	1.19	6.29—S	3.80	2.70			
5	5.68	281				5.87—S	3.38	2.43			
6	4.65	281	4.55+	2.06	1.28	5.31—S	2.82	2.04			
7	3.72	281	4.30+	1.81	1.19	4.64—S	2.15	1.53			
8	2.64	280				4.14—S	1.65	1.21			



*Table A-6a. Shot and observation points for Shots 17 to 19 in the Mizuho Plateau.*

	Station	Latitude	Longitude	Height
1	Shot 17 Z102-1	70°41' 16.8" S	44°15' 34.6" E	2246 m
2	Shot 18 H231	69 46 24.5	42 26 27.4	1692
3	Shot 19 Lützow-Holm Bay	68 48 41.9	38 53 26.0	−160
4	SYO Syowa Station	69 00 30.2	39 35 00.3	51
5	1 S16-1	69 01 48.0	40 03 15.5	594
6	2 S22	69 01 35.1	40 18 46.2	777
7	3 S27-3	69 02 33.1	40 34 31.6	951
8	4 H17	69 05 06.9	40 47 17.3	1063
9	5 H48-1	69 08 40.8	40 56 33.2	
10	6 H74-1	69 12 43.3	41 06 53.0	1385
11	7 H93	69 16 13.1	41 16 04.5	1307
12	8 H113-1	69 20 27.9	41 26 55.2	1394
13	9 H139	69 25 49.9	41 38 05.6	1422
14	10 H155	69 29 56.1	41 46 31.9	1499
15	11 H174	69 34 04.9	41 56 34.7	1492
16	12 H194	69 38 17.5	42 07 10.1	1559
17	13 H213	69 42 30.5	42 17 04.5	1658
18	14 H231	69 46 22.8	42 26 29.7	1692
19	15 H253	69 51 14.6	42 37 37.5	1773
20	16 H272	69 55 07.5	42 48 29.8	1831
21	17 H295	69 59 59.0	43 00 34.4	1905
22	18 Z2	70 02 13.1	43 09 38.5	1956
23	19 Z11-1	70 06 16.6	43 17 47.9	1960
24	20 Z22-1	70 11 23.3	43 26 25.6	2043
25	21 Z33	70 16 06.8	43 34 19.6	2099
26	22 Z42-1	70 20 23.2	43 41 38.1	2142
27	23 Z60-1	70 24 29.5	43 48 40.9	2138
28	24 Z75	70 28 49.0	43 56 38.0	2189
29	25 Z85	70 33 11.8	44 04 57.9	2198
30	26 Z94	70 37 25.0	44 10 37.4	2227
31	27 Mizuho Station	70 42 06.2	44 17 31.3	2258

*Table A-6b. Travel-time data for Shot 17.*

Station	Delta	Azimuth	<i>T</i>	<i>T-O</i>	<i>T-O-D/6</i>
SYO	259.60	316	42.56—D	41.93	—1.34
7	195.13	324	32.72+A	32.09	—0.43
9	172.22	325	29.46 D	28.83	0.13
11	152.76	325	26.26+B	25.63	0.17
13	132.36	326	23.40—D	22.77	0.71
14	123.01	326	21.95 D	21.32	0.82
16	101.72	328	17.58—C	16.95	0.00
17	90.00	329	16.00—C	15.37	0.37
18	83.52	330	14.82+A	14.19	0.27
19	74.41	331	13.23+A	12.60	0.20
20	63.46	331	11.49+A	10.86	0.28
21	53.36	331	9.79—B	9.16	0.27
22	44.19	332	8.68—B	8.05	0.68
23	35.39	332	7.11+A	6.48	0.58
24	25.97	333	5.57+A	4.94	0.61
25	16.40	336	5.14+A	4.51	1.78
26	7.81	337	2.62+B	1.99	0.69
27	1.94	142	1.03—B	0.40	0.08

*Table A-6c. Travel-time data for Shot 18.*

Station	Delta	Azimuth	<i>T</i>	<i>T-O</i>	<i>T-O-D/6</i>
SYO	141.03	307	23.88+C	23.58	0.08
7	72.45	321	12.70+A	12.40	0.32
10	40.08	320	7.34+A	7.04	0.36
11	29.97	320	5.75—B	5.45	0.45
12	19.56	321	4.33+B	4.03	0.77
13	9.44	320	2.59—B	2.29	0.72
16	21.50	139	4.51+A	4.21	0.63
17	33.37	139	6.47+A	6.17	0.61
19	49.38	138	8.79+A	8.49	0.26
20	60.14	141	10.63+A	10.33	0.31
21	70.09	142	12.01—B	11.71	0.03
22	79.17	143	13.44—B	13.14	—0.06
23	87.91	144	14.92—B	14.62	—0.03
24	97.32	144	16.74+B	16.44	0.22
25	106.94	144	17.87 D	17.57	—0.25

Table A-6d. Travel-time data for Shot 19.

Station	Delta	Azimuth	<i>T</i>	<i>T-O</i>	<i>T-O-D/6</i>	<i>T</i>	<i>T-O</i>	<i>T-O-D/6</i>	<i>T</i>	<i>T-O</i>	<i>T-O-D/6</i>
SYO	35.45	128	5.81+B	6.18	0.27						
1	52.70	118	8.28+A	8.65	−0.14				15.74 S	16.11	7.32
2	61.93	113	9.87+A	10.24	−0.09				18.38 S	18.75	8.42
3	72.37	111	11.57+A	11.94	−0.12				21.15 S	21.52	9.46
4	81.99	112	13.05+A	13.42	−0.25						
5	90.18	114	14.39+A	14.76	−0.27				24.72 S	25.09	10.06
6	99.52	117	15.88+A	16.25	−0.34						
7	107.84	118	17.25+A	17.62	−0.36	20.89 C	21.26	3.28			
8	117.85	120	18.79+A	19.16	−0.48	21.99 C	22.36	2.72	33.37 S	33.74	14.10
9	129.17	122	20.54+A	20.91	−0.62	23.20 C	23.57	2.04	34.54 S	34.91	13.38
10	137.87	124	22.02+A	22.39	−0.59	23.47 C	23.84	0.86	38.98 S	39.35	16.37
11	147.55	125	23.47+A	23.84	−0.75	25.91 C	26.28	1.69	41.35 S	41.72	17.13
12	157.61	126	25.29+A	25.66	−0.61	27.31 C	27.68	1.41	44.73 S	45.10	18.83
13	167.34	127	26.75+A	27.12	−0.77	28.55 C	28.92	1.03	47.14 S	47.51	19.62
14	176.46	127	28.25+A	28.62	−0.79				49.35 S	49.72	20.31
15	187.57	128	29.89+A	30.26	−1.00				52.64 S	53.01	21.75
16	197.46	129	31.40+A	31.77	−1.14				53.94 S	54.31	21.40
17	209.05	129	33.29+A	33.66	−1.18				58.51 S	58.88	24.04
18	216.15	129	34.40+A	34.77	−1.26				58.71 S	59.08	23.05
19	224.85	130	35.62+A	35.99	−1.49				62.24 S	62.61	25.13
20	235.02	131	36.56+A	36.93	−2.24	37.36 C	37.73	−1.44	64.92 S	65.29	26.12
21	244.42	132	37.72−B	38.09	−2.65	38.74 C	39.11	−1.63	66.33 S	66.70	25.96
22	253.02	132	38.81−B	39.18	−2.99	40.15 C	40.52	−1.65	67.81 S	68.18	26.01
23	261.32	133	39.89−C	40.26	−3.30	41.47 C	41.84	−1.72			
24	270.33	134	41.17+B	41.54	−3.52	42.77 C	43.14	−1.92			
25	279.59	134	42.98+C	43.35	−3.25	44.17 C	44.54	−2.06			
26	287.43	135	43.53+C	43.90	−4.01	45.31 C	45.68	−2.23			
27	296.45	135	44.69+C	45.06	−4.35	46.49 C	46.86	−2.55	79.67 S	80.04	30.63