

UNITED STATES DEPARTMENT OF THE INTERIOR

GEOLOGICAL SURVEY

Data Report for the August 1982 Seismic-refraction
Experiment in the Mono Craters-Long Valley Region, California

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Open-File Report 83-708

This report is preliminary and has not been reviewed
for conformity with U.S. Geological Survey editorial standards
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1983

¹USGS, Menlo Park, California

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INTRODUCTION

A seismic-refraction survey was conducted of the Mono Craters-Long Valley region of eastern California during the month of August, 1982, as part of a multi-disciplinary investigation of the Mono Craters area sponsored by the Office of Basic Energy Science under the Department of Energy. The overall objective of this investigation is to evaluate the Mono Craters structure as a possible site for deep scientific drilling and, in particular, to assess the possibility that a youthful magma chamber may reside in the upper crust beneath the Mono Craters structure.

The main objective of this seismic-refraction survey is to provide detailed resolution of the P-wave velocity structure of the upper 5 to 10 km of the crust within and adjacent to what has been tentatively identified as the Mono Craters ring fracture system (Bailey, et al., 1976). The experiment was designed to define subsurface offsets along faults (especially possible ring-fracture faults), to look for evidence of feeder dikes for the Mono Craters volcanos, and to delineate a magma chamber in the upper crust. Earlier refraction surveys provided information on P-wave velocity structure in the upper few km of the crust beneath Mono Lake to the north (Pakiser, 1976) and Long Valley to the south (Hill and McHugh, 1975, and Hill, 1976).

This report is a compilation of the data obtained from the August, 1982, seismic-refraction survey. An interpretation of these data will be published separately.

DESCRIPTION OF THE SURVEY

The survey consisted of two linear profiles with reversed and overlapping coverage that cross the postulated Mono Craters ring-fracture system in roughly north-south and east-west directions. In addition, sparsely sampled fan profiles were deployed in linear configurations oriented perpendicular to the north end of the north-south profile and the west end of the east-west profile, respectively. A total of ten shots were fired in 150 to 200-foot deep holes using 2,000 pounds of Hercules Fogel B-2 explosives for each shot. Locations of shotpoints and recording sites along these profiles are plotted on a map of the region in Figure 1 and listed in Tables 1 and 2.

The north-south profile extends for 50 km along Highway 395 from the southeast margin of the Long Valley caldera to the west shore of Mono Lake. Six shots along this profile were recorded by 92 stations, deployed typically every 0.5 km between shotpoints and every 1 to 2 km along unreversed extensions beyond the northernmost and southernmost shotpoints. Eight recording units were deployed at 1 to 2 km intervals along an east-northeast trending line just south of Mono Lake to form the fan profile for this series of shots.

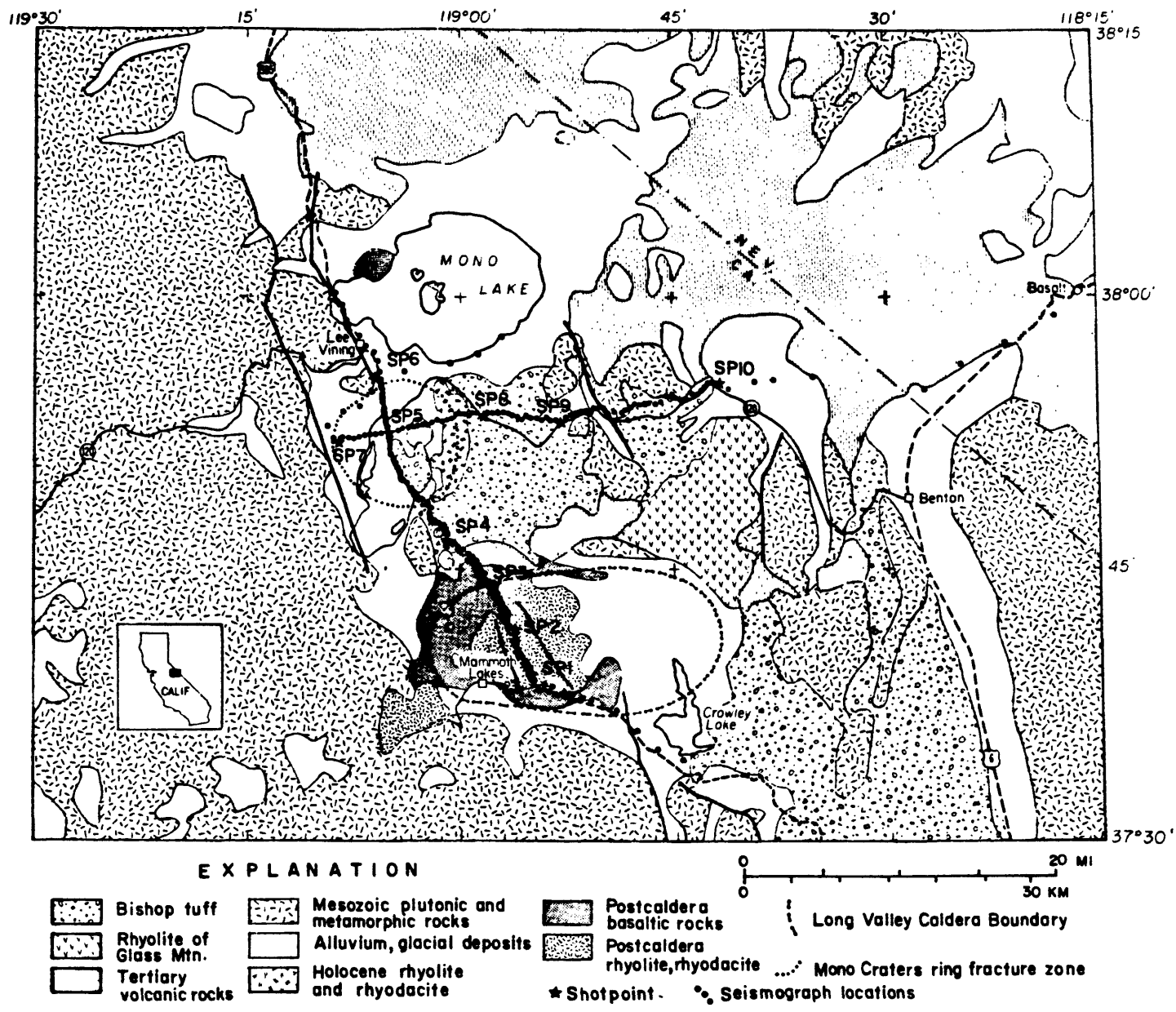


Figure 1. A geologic map of Mono Craters-Long Valley region with recorder and shot locations. Recorder locations are indicated by solid circles and shotpoints by stars.

The east-west profile extends from the west edge of the Mono Craters ring fracture system (at the base of the Sierra Nevada escarpment) for 80 km eastward to Basalt, Nevada. Five shots along this profile were recorded by 90 stations, typically deployed at 0.5 km intervals between shotpoints and at 4 km intervals along a 40 km, unreversed extension of the profile east of shotpoint 10. The fan profile for this series of shots is comprised of ten recording sites at 2 km intervals along Highway 395 spanning the Mono Craters ring-fracture system (the stations were relocated at selected sites used in the north-south profile). Shotpoint 5 in the center of the postulated ring-fracture system is common to both profiles.

INSTRUMENTATION AND DATA REDUCTION

Seismic Recorders

One hundred seismic recorders were deployed by five observers responsible for 20 instruments each. The seismic recorders are portable, weigh approximately 40 pounds, powered by two 6-volt rechargeable batteries, and contain 30-minute cassette tapes to record data. Contained within each seismic recorder is a single vertical-component 2 Hz geophone (which is removed and buried when the seismograph is deployed), chronometer, three amplifier with pre-set gain settings, calibrator, tape deck, tape-speed-compensation tone generator, and a back-up WWVB radio receiver (fig. 2). Ten minutes prior to the expected energy arrival time a pre-programmed microprocessor in the seismic recorder performs a geophone release, an amplification check, and a calibration sequence of 1, 10, 100, and 1000 mv, with a 10 Hz signal. The response curve for the system peaks at about 20 Hz (fig. 3).

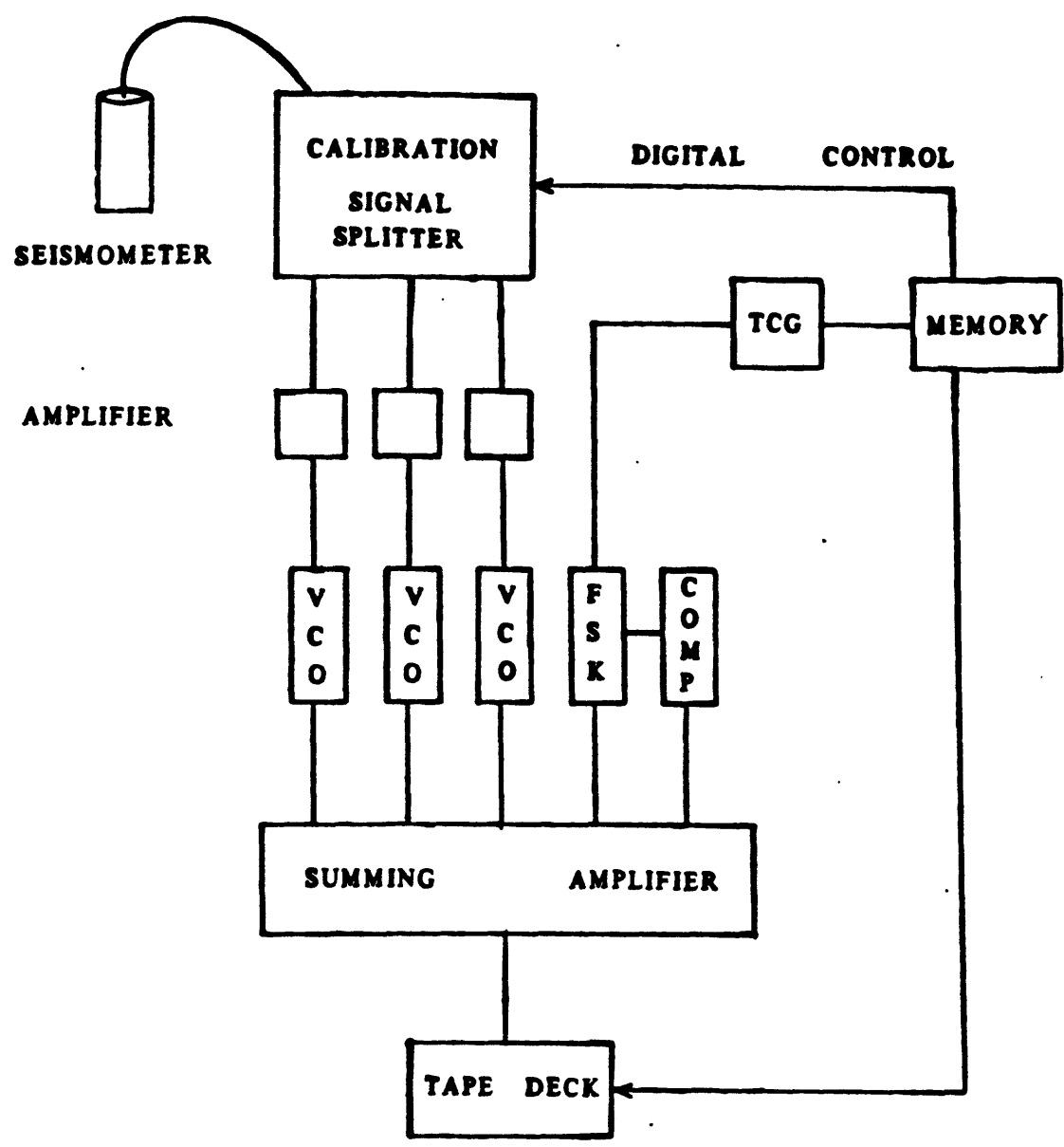
Observers are responsible for synchronizing the time in the seismic recorders with a Hand Held Tester (HHT; Healy and others, 1982), preprogramming the microprocessors with up to 10 distinct recording times on each side of a tape, and establishing accurate site locations, before shots are fired.

After shots have been fired observers retrieve the seismic recorders, record chronometer drifts, and remove the tapes.

Data Reduction

Shot times are picked from a paper record on which WWVB, the master clock time code, and the detonation pulse are recorded. Shot times are accurate to ± 2 milliseconds. Recorder locations and elevations were determined using 1:24000 orthophoto and 1:62500 topographic maps (Tables 1 and 2).

Information pertaining to operation of the seismic recorders was entered on the Team Data Sheets (Appendix A). After checking for errors in time and site locations the analog data from the cassette tapes are digitized for a total of 20 seconds beginning 2 seconds before the first arrival at a rate of 200 samples/sec.



COMP = COMPENSATION
FSK = FREQUENCY SHIFT KEYING
TCG = TIME CODE GENERATOR
VCO = VOLTAGE-CONTROLLED OSCILLATOR

Figure 2. Schematic diagram of seismic recorders

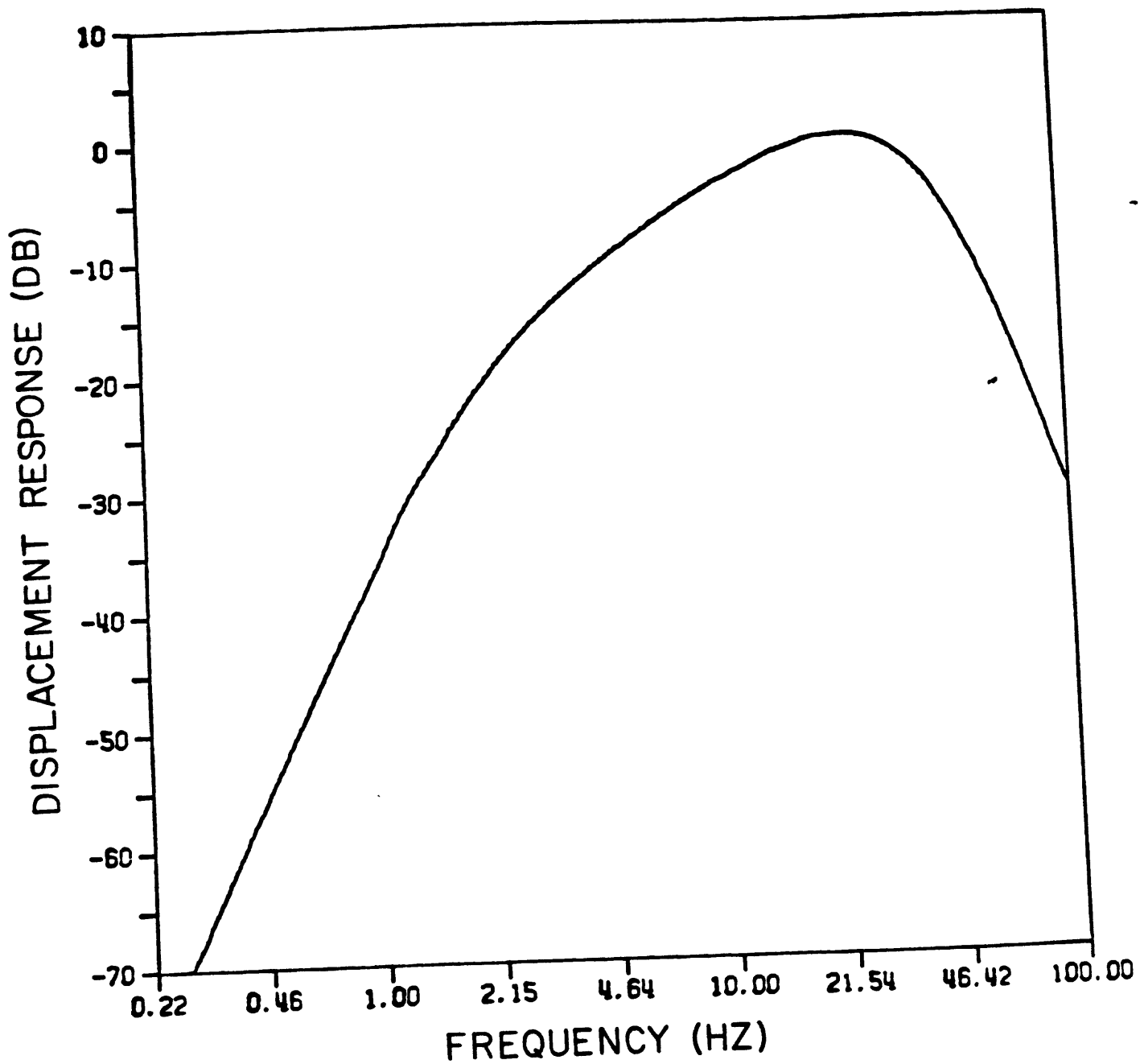


Figure 3. System response curve for cassette recording units with 2 Hz seismometers

Traces 121, 122, 123, overlap traces 197, 198, and 199 on the north-south profile. After checking these traces for each shot the overlapping trace with the best quality was used in the record sections.

Record sections are plotted with maximum trace amplitudes normalized to a common value. The horizontal axis represents distance in kilometers, and the vertical axis is traveltime, in seconds reduced by (distance/6.0 km/s), or $T = t - x/6.0$ where T = reduced time, t = total traveltime, and x = distance. Negative distances indicate positions south of shotpoints on the north-south profile and east of shotpoints on the east-west profile. The record sections for fan configurations are plotted in a similar manner but with the horizontal axis representing distance along the fan profile with zero distance assigned to the westernmost station for shots along the north-south profile and the southernmost station for shots along the east-west profile. For each shot there are three record sections: unfiltered profile, filtered profile (2 to 15 Hz bandpass), and unfiltered fan (Plates 2 - 12).

First-arrival times were picked using a display of the digitized traces on a computer graphics terminal with cross-hairs to pinpoint the arrival on each trace. For impulsive first-arrivals, times could be determined to within 10 to 100 milliseconds.

ACKNOWLEDGMENTS

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TABLES

Table 1. The "Master Shot List" contains the shot number, date, shot point number, latitude, longitude, shot time, and charge of each shot.

SHOT NUMBER	DATE	SHOT POINT	LATITUDE	LONGITUDE	SHOT TIME	SIZE (LBS)	WWVB TIME
1	AUG 5, 1982	1	37 39.1683	118 55.2347	217 6 30	2000	217 6 30 0.019
2	AUG 5, 1982	3	37 44.2827	118 58.4381	217 6 45	2000	217 6 45 59.610
3	AUG 5, 1982	5	37 52.4661	119 5.0583	217 7 0	2000	217 7 0 0.014
4	AUG 5, 1982	2	37 41.4958	118 56.3420	217 7 30	2000	217 7 30 0.015
5	AUG 5, 1982	4	37 46.3401	119 0.9096	217 7 45	2000	217 7 45 59.622
6	AUG 5, 1982	6	37 55.4347	119 6.0635	217 8 0	2000	217 8 0 0.020
7	AUG 10, 1982	7	37 52.0329	119 8.2191	222 7 45	2000	222 7 45 0.016
8	AUG 10, 1982	9	37 53.0319	118 53.0800	222 8 0	2000	222 8 0 0.015
9	AUG 10, 1982	10	37 55.1129	118 42.1083	222 8 15	2000	222 8 15 0.072
10	AUG 10, 1982	5	37 52.4661	119 5.0583	222 8 45	2000	222 8 45 0.016
11	AUG 10, 1982	8	37 53.4496	118 58.4088	222 9 0	2000	222 9 0 0.313

NORTH-SOUTH PROFILE

LOCATION NUMBER	LATITUDE (DEG,MIN,SEC)	LONGITUDE (DEG,MIN,SEC)	ELEV (FT)	LOCATION NUMBER	LATITUDE (DEG,MIN,SEC)	LONGITUDE (DEG,MIN,SEC)	ELEV (FT)
101	37 40 58.8	118 56 24.4	7500	151	37 43 41.0	118 57 48.4	7600
102	37 40 43.3	118 56 20.1	7500	152	37 43 56.0	118 57 59.0	7560
103	37 40 28.0	118 56 12.6	7500	153	37 44 8.7	118 58 8.8	7480
104	37 40 14.3	118 56 2.4	7500	154	37 44 15.9	118 58 33.3	7482
105	37 39 57.1	118 55 52.5	7500	155	37 44 38.4	118 58 31.8	7480
106	37 39 44.5	118 55 39.8	7500	156	37 44 49.7	118 58 43.5	7480
107	37 39 30.2	118 55 30.3	7500	157	37 45 1.8	118 58 54.8	7480
108	37 39 13.9	118 55 24.2	7500	158	37 45 17.3	118 59 1.4	7600
109	37 39 10.0	118 55 13.9	7300	159	37 45 30.6	118 59 15.4	7720
110	37 38 43.2	118 55 6.9	7290	160	37 45 42.6	118 59 33.3	7870
111	37 38 32.7	118 54 17.4	7290	161	37 45 53.1	118 59 55.3	7720
112	37 38 19.8	118 53 43.8	7190	162	37 46 8.7	119 0 13.2	8000
113	37 38 5.4	118 53 0.4	7190	163	37 46 20.7	119 0 32.1	8040
114	37 37 56.0	118 52 24.3	7120	164	37 46 19.8	119 0 53.4	8040
115	37 37 45.2	118 51 45.0	7120	165	37 46 40.7	119 1 2.7	8040
116	37 37 35.1	118 51 6.8	7120	166	37 46 56.5	119 1 11.7	7960
117	37 37 4.5	118 49 16.4	7038	167	37 47 13.5	119 1 22.8	7960
118	37 35 57.0	118 47 55.9	7038	168	37 47 23.4	119 1 41.2	7960
119	37 34 59.1	118 46 22.0	6920	169	37 47 31.3	119 1 57.9	7880
120	37 34 26.1	118 44 34.1	6920	170	37 47 41.2	119 2 14.0	7800
121	37 53 50.2	119 5 31.1	6840	171	37 47 54.9	119 2 21.6	7800
122	37 54 6.1	119 5 34.1	6840	172	37 48 12.9	119 2 15.6	7800
123	37 54 22.5	119 5 37.5	6800	173	37 48 29.3	119 2 40.7	7800
124	37 54 45.4	119 5 41.4	6820	175	37 48 39.0	119 2 58.6	7800
*125	37 55 0.2	119 5 43.9	6830	176	37 48 50.0	119 3 13.2	7684
126	37 55 15.2	119 5 47.3	6800	177	37 48 59.5	119 3 27.9	7640
127	37 55 47.5	119 5 53.2	6760	178	37 49 13.5	119 3 36.1	7640
128	37 56 18.6	119 5 59.6	6780	179	37 49 32.9	119 3 47.1	7600
129	37 56 47.0	119 6 14.8	6800	180	37 49 50.3	119 4 11.6	7500
130	37 57 40.9	119 7 17.2	6760	181	37 49 45.8	119 4 6.5	7500
131	37 58 26.8	119 7 56.6	6480	182	37 49 58.8	119 4 17.1	7440
132	37 59 24.0	119 8 25.6	6480	183	37 50 14.0	119 4 23.7	7360
*133	37 52 43.6	119 9 28.6	7935	184	37 50 29.5	119 4 33.4	7360
*134	37 53 31.5	119 8 27.2	7520	185	37 50 44.0	119 4 40.7	7300
*135	37 53 49.0	119 7 14.3	7160	186	37 50 59.5	119 4 48.5	7290
*136	37 54 37.6	119 6 16.3	6860	187	37 51 13.5	119 4 57.3	7280
*137	37 55 39.7	119 4 7.4	6540	188	37 51 30.1	119 5 3.4	7200
*138	37 56 19.4	119 0 43.3	6430	189	37 51 45.2	119 5 6.7	7100
*139	37 56 50.5	118 58 38.9	6430	190	37 52 0.8	119 5 9.4	7040
*140	37 57 37.8	118 57 4.4	6430	191	37 52 15.7	119 5 12.5	7000
141	37 41 7.1	118 56 27.3	7560	192	37 52 23.4	119 5 6.8	6930
142	37 41 30.3	118 56 23.4	7560	193	37 52 42.8	119 5 18.0	6920
143	37 41 43.7	118 56 44.4	7640	194	37 53 2.7	119 5 21.8	6900
144	37 41 58.7	118 56 52.3	7640	195	37 53 19.3	119 5 23.7	6880
145	37 42 13.9	118 56 58.6	7600	196	37 53 34.6	119 5 28.0	6840
146	37 42 30.2	118 57 3.3	7560	197	37 53 50.0	119 5 30.9	6840
147	37 42 45.0	118 57 7.7	7640	198	37 54 6.9	119 5 34.1	6840
148	37 42 60.0	118 57 16.0	7640	199	37 54 22.6	119 5 36.9	6800
149	37 43 13.2	118 57 28.0	7640	200	37 54 38.4	119 5 40.2	6800
150	37 43 27.0	118 57 38.1	7720				

* Indicates stations on fan profile

TABLE 20. THE WEATHER RELATIVE LOCATIONS GIVE LOCATION NUMBER (SEE TABLE 1),
 Latitude, longitude, and elevation of each station.

EAST-WEST PROFILE

LOCATION NUMBER	LATITUDE (DEG.,MIN.,SEC)	LONGITUDE (DEG.,MIN.,SEC)	ELEV (FT)	LOCATION NUMBER	LATITUDE (DEG.,MIN.,SEC)	LONGITUDE (DEG.,MIN.,SEC)	ELEV (FT)
201	37 52 1.0	119 8 13.3	7520	258	37 58 54.5	118 18 19.2	7360
202	37 52 5.1	119 7 52.9	7520	260	37 59 6.1	118 15 5.4	6520
203	37 52 4.4	119 8 57.0	7765	261	37 53 26.0	118 59 5.0	7240
204	37 52 6.5	119 7 35.9	7400	262	37 53 20.3	118 59 26.6	7320
205	37 52 11.1	119 7 6.0	7400	263	37 53 24.7	118 59 47.6	7400
206	37 52 13.7	119 6 46.2	7200	264	37 53 22.9	118 59 59.9	7480
207	37 52 15.4	119 6 25.9	7000	265	37 53 22.3	119 0 23.0	8080
208	37 52 17.3	119 6 6.5	7000	266	37 53 9.9	119 0 41.2	7960
209	37 52 20.9	119 5 43.7	7000	267	37 53 4.4	119 1 3.0	7480
212	37 57 5.3	119 6 56.6	6800	268	37 53 1.8	119 1 23.5	7320
213	37 58 34.5	119 8 2.0	6520	269	37 53 2.6	119 1 44.6	7240
214	37 59 55.9	119 8 43.7	6600	270	37 52 55.4	119 2 3.1	7080
*215	37 52 19.3	119 5 13.7	6987	271	37 52 51.6	119 2 23.6	7000
221	37 53 27.6	118 58 47.3	7200	272	37 52 49.8	119 2 42.2	7080
222	37 53 26.0	118 58 26.7	7200	273	37 52 44.2	119 3 3.6	7000
223	37 53 27.2	118 58 4.1	7260	275	37 52 40.4	119 3 23.1	7000
224	37 53 22.9	118 57 45.4	7280	276	37 52 38.4	119 3 43.2	6880
225	37 53 27.2	118 57 20.1	7360	277	37 52 34.4	119 4 2.8	6920
226	37 53 28.4	118 57 0.0	7360	278	37 52 30.2	119 4 27.1	6920
227	37 53 25.3	118 56 40.9	7380	279	37 52 28.1	119 4 43.8	6920
228	37 53 21.8	118 56 21.7	7440	280	37 52 28.1	119 5 3.5	6920
229	37 53 16.7	118 56 2.6	7520	281	37 53 24.5	118 51 58.1	7900
230	37 53 4.6	118 55 42.9	7600	282	37 53 32.3	118 51 38.4	7850
231	37 53 17.1	118 55 25.7	7600	283	37 53 35.8	118 51 20.3	7920
232	37 53 12.8	118 55 0.2	7680	284	37 53 35.8	118 50 59.6	7920
233	37 53 10.9	118 54 37.4	7820	285	37 53 43.2	118 50 38.5	8000
234	37 53 5.4	118 54 22.2	7840	286	37 53 47.8	118 50 15.9	7760
235	37 53 13.2	118 54 3.5	7940	287	37 53 38.1	118 49 57.6	7680
236	37 53 3.9	118 53 43.9	7920	288	37 53 29.9	118 49 36.4	7720
237	37 53 1.5	118 53 18.8	7858	289	37 53 32.3	118 49 13.8	7760
238	37 53 1.9	118 53 4.6	7858	290	37 53 25.3	118 48 47.3	7560
239	37 53 15.9	118 52 38.1	7950	291	37 53 37.3	118 48 28.2	7520
240	37 53 19.8	118 52 19.7	8030	292	37 53 46.8	118 48 12.8	7440
241	37 54 20.3	118 45 0.0	7240	293	37 53 56.4	118 47 54.8	7400
242	37 54 15.1	118 44 34.0	7160	294	37 53 54.8	118 47 33.6	7320
243	37 54 18.8	118 44 11.9	7080	295	37 53 59.1	118 47 14.8	7250
244	37 54 30.1	118 43 50.7	7000	296	37 54 0.7	118 46 54.6	7320
245	37 54 35.7	118 43 25.7	6920	297	37 53 57.2	118 46 20.7	7400
246	37 54 43.5	118 43 8.5	6880	298	37 54 6.5	118 46 1.1	7360
247	37 54 54.0	118 42 53.0	6840	299	37 54 22.6	118 45 37.5	7380
248	37 55 3.1	118 42 38.5	6800	300	37 54 27.1	118 45 15.9	7280
249	37 55 6.0	118 42 12.3	6600	*128	37 56 18.6	119 5 59.6	6780
250	37 54 48.2	118 41 14.3	6574	*162	37 46 8.7	119 0 13.2	8000
251	37 55 12.7	118 39 30.3	6520	*167	37 47 13.5	119 1 22.8	7960
252	37 55 18.9	118 38 8.9	6488	*172	37 48 12.9	119 2 15.6	7800
253	37 55 30.6	118 35 21.0	6480	*176	37 48 50.0	119 3 13.2	7684
254	37 52 9.0	118 31 56.1	5800	*185	37 50 44.0	119 4 40.7	7300
255	37 54 50.5	118 27 30.2	5800	*199	37 54 22.6	119 5 36.9	6800
256	37 56 15.5	118 24 50.4	6280				
257	37 57 26.7	118 21 46.7	6480				

EAST-WEST PROFILE

APPENDIX A

Team Data Sheets with Tape-Grade Scale

The "Team Data Sheets" contain all the information related to the seismic recorders. Each set of 20 recorders is given a designated team number under which data is stored and referenced. Each "Data for one Team" contains shot number, team number, shotpoint, and shot time given in Julian day, hour, minute, and second. Column headings for the table are explained below:

Loc	- location number from the seismic recorder location file
Dist (km)	- distance in kilometers from the shotpoint to the recorder location
Azim	- azimuth clockwise north from the shotpoint to the recorder location
Unit	- I.D. number of the recording unit
Chron	- chronometer correction for the recorder at shot time (calculated from the total clock drift)
Chan	- channel number (1, 2, or 3) which was selected to be digitized by the computer
C1, C2, C3	- amplifier gain setting (db) for each data-recording channel
Tape Grade	- value used to rate the performance quality of the seismic recorder (see Tape Grade Scale)

The "Tape Grade Scale" is a listing of all tape grade numbers used on the Team Data Sheets. Each number corresponds to a specific problem with the recording unit.

Tape Grade Scale

- 0 - Good
- 1 - Tape did not run
- 2 - Tape ran but no signal
- 3 - Skipped record time
- 6 - Weak signal; low record level
- 17 - Bad time Code
- 20 - In for repair; not deployed
- 30 - Digitized without calibrations

FIELD DATA TABLE

MAMMOTH LAKES, CALIFORNIA

SHOT NUMBER 1 TEAM 1

SHOT POINT 1

SHOT TIME: 217: 6:30: 0.426

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	101	3.767	332.8	1	8	3	30	12	62	0
2	102	3.296	330.6	2	-104	2	30	12	62	0
3	103	2.798	329.2	3	3	3	30	12	62	0
4	104	2.308	329.1	4	1	3	30	12	62	0
5	105	1.729	327.0	5	13	3	30	12	62	0
6	106	1.234	329.3	6	5	3	30	12	62	0
7	107	0.737	327.2	7	-3	3	30	12	62	0
8	108	0.274	295.5	8	39	3	30	12	62	0
9	109	0.005	114.2	9	61		30	12	62	1
10	110	0.849	168.0	10	9		30	12	62	2
11	111	1.804	129.7	11	35	3	30	12	62	0
12	112	2.701	125.0	12	3		30	12	62	2
13	113	3.837	121.3	13	5	3	30	12	62	0
14	114	4.748	118.8	14	21	3	30	12	62	0
15	115	5.756	117.1	15	2	3	30	12	62	0
16	116	6.732	115.8	16	13		30	12	62	17
17	117	9.585	113.8	17	25		30	12	62	1
18	118	12.283	119.0	18	-3		30	12	62	2
19	119	15.171	120.7	19	-20	3	30	12	62	0
20	120	17.973	119.1	20	4		30	12	62	2

FIELD DATA TABLE

MAMMOTH LAKES, CALIFORNIA

SHOT NUMBER 1 TEAM 2

SHOT POINT 1

SHOT TIME: 217: 6:30: 0.426

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	121	31.052	330.9	21	0	1	30	12	82	0
2	122	31.517	331.2	22	6	1	30	12	82	0
3	123	32.000	331.5	23	6	1	30	12	82	30
4	124	32.668	332.0	24	-3		30	12	82	1
5	125	33.099	332.3	25	-6	1	30	12	82	0
6	126	33.546	332.5	26	2		30	12	82	1
7	127	34.498	333.0	27	-9	1	30	12	82	0
8	128	35.425	333.5	28	8	1	30	12	82	0
9	129	36.374	333.6	29	5	1	30	12	82	0
10	130	38.546	332.7	30	2		30	12	62	1
11	131	40.245	332.4	31	4	1	30	12	62	0
12	132	42.136	332.7	32	1	1	30	12	62	0
13	133	32.657	320.2	33	-4	1	30	12	62	0
14	134	32.894	323.8	34	3	1	30	12	62	0
15	135	32.325	327.0	35	-16	1	30	12	62	0
16	136	32.869	330.5	36	0	1	30	12	62	0
17	137	33.184	336.8	37	0		30	12	62	2
18	138	32.740	345.8	38	2		30	12	62	17
19	139	33.075	351.3	39	1	1	30	12	62	0
20	140	34.258	355.5	40	2	1	30	12	62	0

FIELD DATA TABLE

MAMMOTH LAKES, CALIFORNIA
 SHOT NUMBER 1 TEAM 3
 SHOT POINT 1
 SHOT TIME: 217: 6:30: 0.426

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	141	4.030	333.6	41	0		30	12	82	6
2	142	4.644	338.6	42	1	3	30	12	82	0
3	143	5.228	334.9	43	-9		30	12	82	6
4	144	5.728	335.2	44	-5	3	30	12	82	6
5	145	6.219	335.7	45	0		30	12	82	6
6	146	6.726	336.6	46	-26	3	30	12	82	0
7	147	7.186	337.2	47	13	3	30	12	42	0
8	148	7.691	337.1	48	22		30	12	42	2
9	149	8.182	336.4	49	3	1	30	12	82	0
10	150	8.672	336.0	50	-3	2	30	12	82	0
11	151	9.169	335.6	51	11	3	30	12	82	0
12	152	9.696	335.4	52	5	1	30	12	82	0
13	153	10.151	335.1	53	2	1	30	12	82	0
14	154	10.615	332.6	54	-7	1	30	12	82	0
15	155	11.222	334.4	55	6		30	12	82	17
16	156	11.660	333.9	56	2	1	30	12	82	0
17	157	12.115	333.5	57	0	1	30	12	82	0
18	158	12.617	333.8	58	-2		30	12	42	17
19	159	13.135	333.3	59	0	3	30	12	42	0
20	160	13.666	332.3	60	-4		30	12	42	17

FIELD DATA TABLE

MAMMOTH LAKES, CALIFORNIA
 SHOT NUMBER 1 TEAM 4
 SHOT POINT 1
 SHOT TIME: 217: 6:30: 0.426

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	161	14.206	331.0	61	5	1	30	12	82	0
2	162	14.839	330.4	62	2	1	30	12	82	0
3	163	15.393	329.6	63	2	1	30	12	82	0
4	164	15.639	327.9	64	4	1	30	12	82	0
5	165	16.307	328.4	65	3	1	30	12	82	0
6	167	17.426	328.8	66	3		30	12	82	1
7	166	16.838	328.7	67	-5		30	12	82	1
8	168	17.922	328.1	68	1	1	30	12	82	0
9	169	18.347	327.4	69	3	3	30	12	62	0
10	170	18.816	326.9	70	5	3	30	12	62	0
11	171	19.273	327.1	71	1	3	30	12	62	0
12	172	19.661	328.3	72	5	3	30	12	62	0
13	173	20.417	327.6	73	0		30	12	62	1
14				74	--		30	12	62	20
15	175	20.905	327.0	75	6	1	30	12	62	0
16	177	21.827	326.4	76	-3	3	30	12	62	0
17	176	21.385	326.7	77	0	3	30	12	62	0
18	178	22.298	326.5	78	3	1	30	12	62	0
19	179	22.945	326.8	79	6	1	30	12	62	0
20	180	23.722	326.3	80	5		30	12	62	1

FIELD DATA TABLE

MAMMOTH LAKES, CALIFORNIA
 SHOT NUMBER 1 TEAM 5
 SHOT POINT 1
 SHOT TIME: 217: 6:30: 0.426

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	181	23.537	326.4	81	-10	1	30	12	62	0
2	182	13.592	320.8	82	-4		30	12	62	2
3	183	24.495	326.7	83	8	1	30	12	62	0
4	184	14.581	322.0	84	9		30	12	62	2
5	185	25.496	327.0	85	0	1	30	12	62	0
6	186	15.541	323.0	86	-4		30	12	62	17
7	187	26.483	327.4	87	6	1	30	12	62	0
8	188	26.992	327.7	88	10	1	30	12	82	0
9	189	27.430	328.1	89	3	1	30	12	82	0
10	190	27.874	328.5	90	11	1	30	12	82	30
11	191	28.307	328.8	91	2	3	30	12	82	6
12	192	28.436	329.3	92	9	1	30	12	82	0
13	193	29.092	329.5	93	11	1	30	12	82	0
14	194	29.668	329.9	94	6	1	30	12	82	0
15	195	30.135	330.3	95	8	1	30	12	82	0
16	196	30.596	330.6	96	-6		30	12	82	17
17	197	31.046	330.9	97	3	1	30	12	62	30
18	198	31.538	331.2	98	-2	1	30	12	62	0
19	199	31.995	331.6	99	3	1	30	12	62	0
20	200	32.463	331.8	100	3	1	30	12	62	0

FIELD DATA TABLE

MAMMOTH LAKES, CALIFORNIA
 SHOT NUMBER 2 TEAM 1
 SHOT POINT 3
 SHOT TIME: 217: 6:45: 0.017

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	101	6.801	154.0	1	8	3	30	12	62	0
2	102	7.277	154.9	2	-106	2	30	12	62	2
3	103	7.780	155.1	3	3	3	30	12	62	0
4	104	8.269	154.8	4	1	1	30	12	62	0
5	105	8.852	154.8	5	13	1	30	12	62	0
6	106	9.337	154.1	6	5	1	30	12	62	0
7	107	9.836	154.0	7	-3	1	30	12	62	0
8	108	10.354	154.5	8	40	1	30	12	62	0
9	109	10.572	153.5	9	62	0	30	12	62	1
10	110	11.392	154.6	10	9	0	30	12	62	2
11	111	12.239	150.1	11	36	1	30	12	62	0
12	112	13.005	147.8	12	3	0	30	12	62	2
13	113	13.963	145.1	13	5	1	30	12	62	0
14	114	14.718	142.9	14	21	1	30	12	62	0
15	115	15.575	140.9	15	2	1	30	12	62	6
16	116	16.414	139.0	16	13	3	30	12	62	0
17	117	18.954	134.7	17	25	0	30	12	62	1
18	118	21.823	134.9	18	-3	3	30	12	62	6
19	119	24.718	134.1	19	-20	2	30	12	62	0
20	120	27.348	131.8	20	4	0	30	12	62	2

FIELD DATA TABLE

MAMMOTH LAKES, CALIFORNIA

SHOT NUMBER 2 TEAM 2

SHOT POINT 3

SHOT TIME: 217: 6:45: 0.017

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	121	20.501	329.5	21	0	1	30	12	82	0
2	122	20.962	330.1	22	6	1	30	12	82	0
3	123	21.441	330.5	23	6	1	30	12	82	0
4	124	22.106	331.2	24	-3		30	12	82	1
5	125	22.535	331.6	25	-6	1	30	12	82	0
6	126	22.981	332.0	26	2		30	12	82	1
7	127	23.930	332.8	27	-9	1	30	12	82	0
8	128	24.857	333.5	28	8	1	30	12	82	0
9	129	25.807	333.6	29	5	1	30	12	82	0
10	130	27.980	332.4	30	2		30	12	62	1
11	131	29.680	332.0	31	4	1	30	12	62	0
12	132	31.570	332.4	32	1	1	30	12	62	6
13	133	22.505	314.0	33	-4	1	30	12	62	0
14	134	22.545	319.3	34	3	2	30	12	62	0
15	135	21.859	323.8	35	-16	1	30	12	62	0
16	136	22.323	329.0	36	0	1	30	12	62	0
17	137	22.642	338.4	37	0	1	30	12	62	0
18	138	22.524	351.4	38	2	1	30	12	62	0
19	139	23.235	359.2	39	1	1	30	12	62	0
20	140	24.772	4.6	40	2	1	30	12	62	0

FIELD DATA TABLE

MAMMOTH LAKES, CALIFORNIA

SHOT NUMBER 2 TEAM 3

SHOT POINT 3

SHOT TIME: 217: 6:45: 0.017

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	141	6.538	153.5	41	0		30	12	82	6
2	142	5.955	149.6	42	2	1	30	12	82	0
3	143	5.343	152.2	43	-9		30	12	82	6
4	144	4.844	151.6	44	-5	1	30	12	82	0
5	145	4.359	150.5	45	0		30	12	82	6
6	146	3.867	148.3	46	-26	1	30	12	82	0
7	147	3.427	145.8	47	13	1	30	12	42	0
8	148	2.931	144.1	48	22		30	12	42	2
9	149	2.429	144.0	49	3	1	30	12	82	0
10	150	1.939	142.6	50	-3	1	30	12	82	0
11	151	1.444	140.1	51	11	3	30	12	82	0
12	152	0.930	134.0	52	6	3	30	12	82	0
13	153	0.499	120.8	53	2	3	30	12	82	0
14	154	0.174	258.9	54	-7	3	30	12	82	0
15	155	0.676	348.5	55	6	3	30	12	82	0
16	156	1.095	337.3	56	2	3	30	12	82	0
17	157	1.547	333.2	57	0	3	30	12	82	0
18	158	2.050	335.2	58	-2	3	30	12	42	0
19	159	2.568	332.1	59	0	3	30	12	42	0
20	160	3.100	330.0	60	1	3	30	12	42	0

FIELD DATA TABLE

MAMMOTH LAKES, CALIFORNIA
 SHOT NUMBER 2 TEAM 4
 SHOT POINT 3
 SHOT TIME: 217: 6:45: 0.017

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	161	3.679	323.7	61	5	1	30	12	82	0
2	162	4.325	322.8	62	2	1	30	12	82	0
3	163	4.904	321.1	63	2	1	30	12	82	0
4	164	5.226	316.4	64	4	1	30	12	82	0
5	165	5.857	319.2	65	3	1	30	12	82	0
6	167	6.949	321.6	66	4		30	12	82	1
7	166	6.372	320.5	67	-5		30	12	82	1
8	168	7.470	320.3	68	1	1	30	12	82	0
9	169	7.921	319.2	69	3	3	30	12	62	6
10	170	8.409	318.5	70	5	1	30	12	62	0
11	171	8.851	319.4	71	1	1	30	12	62	0
12	172	9.187	322.4	72	5	1	30	12	62	0
13	173	9.965	321.3	73	0		30	12	62	1
14				74	--		30	12	62	20
15	175	10.473	320.5	75	6	1	30	12	62	0
16	177	11.417	319.7	76	-3	1	30	12	62	0
17	176	10.963	320.2	77	0	1	30	12	62	0
18	178	11.878	320.3	78	3	1	30	12	62	0
19	179	12.510	321.1	79	6	1	30	12	62	0
20	180	13.304	320.6	80	5		30	12	62	1

FIELD DATA TABLE

MAMMOTH LAKES, CALIFORNIA
 SHOT NUMBER 2 TEAM 5
 SHOT POINT 3
 SHOT TIME: 217: 6:45: 0.017

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	181	13.118	320.6	81	-10	1	30	12	62	0
2	182	13.592	320.8	82	-4	1	30	12	62	6
3	183	14.059	321.5	83	9	1	30	12	62	0
4	184	14.581	322.0	84	9		30	12	62	2
5	185	15.042	322.5	85	0	1	30	12	62	0
6	186	15.541	323.0	86	-4		30	12	62	17
7	187	16.016	323.3	87	6	1	30	12	62	0
8	188	16.513	324.0	88	10	1	30	12	82	0
9	189	16.939	324.7	89	3	1	30	12	82	6
10	190	17.371	325.4	90	12	1	30	12	82	6
11	191	17.795	326.0	91	2	1	30	12	82	0
12	192	17.913	326.8	92	9	1	30	12	82	0
13	193	18.566	327.1	93	11	1	30	12	82	0
14	194	19.132	327.9	94	6	2	30	12	82	0
15	195	19.592	328.6	95	8	1	30	12	82	0
16	196	20.049	329.0	96	-7	1	30	12	82	6
17	197	20.495	329.5	97	3	2	30	12	62	0
18	198	20.983	330.1	98	-2	2	30	12	62	0
19	199	21.437	330.6	99	3	1	30	12	62	0
20	200	21.902	331.0	100	3	1	30	12	82	6

FIELD DATA TABLE

MAMMOTH LAKES, CALIFORNIA

SHOT NUMBER 3 TEAM 1

SHOT POINT 5

SHOT TIME: 217: 7: 0: 0.421

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	101	24.756	149.1	1	8	1	30	12	62	0
2	102	25.221	149.5	2	-108	2	30	12	62	2
3	103	25.719	149.7	3	3	3	30	12	62	0
4	104	26.210	149.7	4	2	3	30	12	62	0
5	105	26.790	149.8	5	14	1	30	12	62	0
6	106	27.283	149.6	6	5	1	30	12	62	0
7	107	27.781	149.7	7	-3	1	30	12	62	0
8	108	28.291	149.9	8	40	1	30	12	62	0
9	109	28.521	149.6	9	63	0	30	12	62	1
10	110	29.324	150.1	10	9	0	30	12	62	2
11	111	30.219	148.4	11	37	1	30	12	62	0
12	112	30.993	147.5	12	4	0	30	12	62	2
13	113	31.946	146.3	13	5	1	30	12	62	0
14	114	32.682	145.3	14	21	1	30	12	62	0
15	115	33.509	144.3	15	2	2	30	12	62	0
16	116	34.311	143.3	16	13	2	30	12	62	0
17	117	36.716	140.8	17	26	0	30	12	62	1
18	118	39.579	140.5	18	-3	2	30	12	62	6
19	119	42.426	139.7	19	-21	3	30	12	62	0
20	120	44.932	137.9	20	4	0	30	12	62	2

FIELD DATA TABLE

MAMMOTH LAKES, CALIFORNIA

SHOT NUMBER 3 TEAM 2

SHOT POINT 5

SHOT TIME: 217: 7: 0: 0.421

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	121	2.623	345.1	21	0	3	30	12	82	0
2	122	3.117	346.1	22	6	1	30	12	82	0
3	123	3.627	346.8	23	6		30	12	82	2
4	124	4.338	347.7	24	-3		30	12	82	1
5	125	4.797	348.1	25	-6	1	30	12	82	0
6	126	5.265	348.3	26	2		30	12	82	1
7	127	6.270	348.8	27	-9	1	30	12	82	0
8	128	7.242	349.1	28	8	1	30	12	82	0
9	129	8.175	347.7	29	5	1	30	12	82	0
10	130	10.186	341.3	30	2		30	12	62	1
11	131	11.844	339.1	31	4	1	30	12	62	0
12	132	13.744	339.0	32	1	1	30	12	62	0
13	133	6.496	274.3	33	-4	3	30	12	62	0
14	134	5.348	291.5	34	3	3	30	12	62	0
15	135	4.057	308.0	35	-16	3	30	12	62	0
16	136	4.376	336.0	36	0	3	30	12	62	0
17	137	6.068	13.0	37	0	1	30	12	62	0
18	138	9.555	41.7	38	2	1	30	12	62	0
19	139	12.401	49.3	39	1	1	30	12	62	0
20	140	15.10	50.8		2	1	30	12	62	0

FIELD DATA TABLE

MAMMOTH LAKES, CALIFORNIA
 SHOT NUMBER 3 TEAM 3
 SHOT POINT 5
 SHOT TIME: 217: 7: 0: 0.421

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	141	24.498	149.0	41	0		30	12	82	2
2	142	23.940	147.9	42	2	1	30	12	82	0
3	143	23.316	148.4	43	-9		30	12	82	6
4	144	22.822	148.2	44	-5	1	30	12	82	0
5	145	22.342	147.9	45	0		30	12	82	6
6	146	21.855	147.5	46	-27	1	30	12	82	0
7	147	21.414	147.1	47	14	1	30	12	42	0
8	148	20.916	146.9	48	23		30	12	42	2
9	149	20.413	146.9	49	4	1	30	12	82	0
10	150	19.921	146.8	50	-3	1	30	12	82	0
11	151	19.422	146.8	51	11	1	30	12	82	0
12	152	18.894	146.7	52	6	1	30	12	82	0
13	153	18.436	146.6	53	2	1	30	12	82	0
14	154	17.925	147.8	54	-7	1	30	12	82	0
15	155	17.360	146.5	55	6	1	30	12	82	0
16	156	16.911	146.7	56	2	1	30	12	82	0
17	157	16.450	146.8	57	0	1	30	12	82	0
18	158	15.960	146.3	58	-2	1	30	12	42	0
19	159	15.431	146.5	59	0	3	30	12	42	6
20	160	14.880	147.1	60	-4	3	30	12	42	6

FIELD DATA TABLE

MAMMOTH LAKES, CALIFORNIA
 SHOT NUMBER 3 TEAM 4
 SHOT POINT 5
 SHOT TIME: 217: 7: 0: 0.421

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	161	14.319	148.2	61	5	1	30	12	82	0
2	162	13.681	148.7	62	2	1	30	12	82	0
3	163	13.124	149.6	63	2	1	30	12	82	0
4	164	12.894	151.7	64	4	1	30	12	82	0
5	165	12.219	151.2	65	3	1	30	12	82	0
6	167	11.096	150.9	66	4		30	12	82	1
7	166	11.685	151.0	67	-5		30	12	82	1
8	168	10.613	152.2	68	1	1	30	12	82	0
9	169	10.210	153.6	69	3	3	30	12	62	0
10	170	9.764	154.9	70	6	3	30	12	62	0
11	171	9.302	154.8	71	1	3	30	12	62	0
12	172	8.872	152.4	72	6	1	30	12	62	0
13	173	8.144	154.6	73	0		30	12	62	1
14				74	--		30	12	62	20
15	175	7.692	156.6	75	6	3	30	12	62	0
16	177	6.839	160.0	76	-3	3	30	12	62	0
17	176	7.240	158.1	77	0	3	30	12	62	0
18	178	6.364	160.4	78	3	3	30	12	62	0
19	179	5.711	160.9	79	6	3	30	12	62	0
20	180	5.025	165.4	80	5	2	30	12	62	6

FIELD DATA TABLE

MAMMOTH LAKES, CALIFORNIA

SHOT NUMBER 3 TEAM 5

SHOT POINT 5

SHOT TIME: 217: 7: 0: 0.421

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	181	5.191	164.4	81	-10	3	30	12	62	0
2	182	4.738	166.2	82	-4	3	30	12	62	0
3	183	4.243	166.7	83	9	3	30	12	62	0
4	184	3.726	168.6	84	9		30	12	62	2
5	185	3.255	170.1	85	0	3	30	12	62	0
6	186	2.751	172.4	86	-4		30	12	62	17
7	187	2.299	176.2	87	6	3	30	12	62	0
8	188	1.785	179.9	88	10	3	30	12	82	0
9	189	1.320	183.4	89	4		30	12	82	2
10	190	0.850	189.8	90	12	3	30	12	82	0
11	191	0.437	210.4	91	2	3	30	12	82	0
12	192	0.163	209.8	92	9	3	30	12	82	0
13	193	0.580	322.3	93	12	3	30	12	82	0
14	194	1.161	337.3	94	6	3	30	12	82	0
15	195	1.659	342.7	95	8	3	30	12	82	0
16	196	2.140	343.8	96	-7	3	30	12	82	0
17	197	2.617	345.2	97	3	3	30	12	62	0
18	198	3.141	346.2	98	-2	3	30	12	62	0
19	199	3.626	347.0	99	4	3	30	12	62	0
20	200	4.121	347.4	100	3	1	30	12	82	0

FIELD DATA TABLE

MAMMOTH LAKES, CALIFORNIA

SHOT NUMBER 4 TEAM 1

SHOT POINT 2

SHOT TIME: 217: 7:30: 0.422

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	101	0.960	185.6	1	9	3	30	12	62	0
2	102	1.433	179.5	2	-111	2	30	12	62	6
3	103	1.913	174.2	3	3	3	30	12	62	0
4	104	2.367	169.2	4	2	3	30	12	62	0
5	105	2.937	166.5	5	14	3	30	12	62	0
6	106	3.394	162.9	6	5	3	30	12	62	0
7	107	3.886	161.6	7	-3	3	30	12	62	0
8	108	4.410	161.7	8	42	3	30	12	62	0
9	109	4.607	159.2	9	65	0	30	12	62	1
10	110	5.444	160.6	10	10	0	30	12	62	2
11	111	6.235	151.1	11	38	1	30	12	62	0
12	112	7.002	146.7	12	4	0	30	12	62	2
13	113	7.984	142.1	13	5	0	30	12	62	2
14	114	8.772	138.7	14	22	1	30	12	62	0
15	115	9.672	135.7	15	2	1	30	12	62	0
16	116	10.557	133.2	16	14	3	30	12	62	0
17	117	13.225	128.2	17	27	0	30	12	62	1
18	118	16.071	129.7	18	-3	3	30	12	62	6
19	119	18.984	129.4	19	-21	1	30	12	62	0
20	120	21.693	127.0	20	5	0	30	12	62	2

FIELD DATA TABLE

MAMMOTH LAKES, CALIFORNIA
 SHOT NUMBER 4 TEAM 2
 SHOT POINT 2
 SHOT TIME: 217: 7:30: 0.422

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	121	26.506	329.5	21	0	1	30	12	82	0
2	122	26.967	329.9	22	6	1	30	12	82	0
3	123	27.445	330.2	23	6	1	30	12	82	0
4	124	28.108	330.8	24	-3		30	12	82	1
5	125	28.536	331.1	25	-6	1	30	12	82	0
6	126	28.980	331.4	26	2		30	12	82	1
7	127	29.926	332.1	27	-9	1	30	12	82	0
8	128	30.848	332.7	28	8	1	30	12	82	0
9	129	31.797	332.8	29	5	1	30	12	82	0
10	130	33.977	331.8	30	2		30	12	62	1
11	131	35.679	331.5	31	4	1	30	12	62	0
12	132	37.567	331.8	32	1	1	30	12	62	6
13	133	28.346	317.1	33	-4	1	30	12	62	0
14	134	28.482	321.4	34	3	2	30	12	62	0
15	135	27.844	324.9	35	-16	1	30	12	62	0
16	136	28.329	329.0	36	0	1	30	12	62	0
17	137	28.586	336.4	37	0	1	30	12	62	0
18	138	28.171	346.8	38	2	1	30	12	62	0
19	139	28.589	353.2	39	1	1	30	12	62	0
20	140	29.865	357.9	40	2	1	30	12	62	0

FIELD DATA TABLE

MAMMOTH LAKES, CALIFORNIA
 SHOT NUMBER 4 TEAM 3
 SHOT POINT 2
 SHOT TIME: 217: 7:30: 0.422

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	141	0.716	193.4	41	0		30	12	82	2
2	142	0.072	283.6	42	2	3	30	12	82	0
3	143	0.727	306.4	43	-9		30	12	82	2
4	144	1.184	318.9	44	-5	3	30	12	82	0
5	145	1.650	325.5	45	0	3	30	12	82	0
6	146	2.139	330.7	46	-27	3	30	12	82	0
7	147	2.591	333.5	47	14	3	30	12	42	0
8	148	3.096	333.9	48	24		30	12	42	2
9	149	3.593	332.6	49	4	1	30	12	82	0
10	150	4.085	332.3	50	-3	1	30	12	82	0
11	151	4.585	332.0	51	12	1	30	12	82	0
12	152	5.114	331.9	52	6	3	30	12	82	6
13	153	5.571	331.6	53	2	3	30	12	82	6
14	154	6.066	327.6	54	-7	3	30	12	82	6
15	155	6.646	331.1	55	6	1	30	12	82	0
16	156	7.091	330.4	56	3	1	30	12	82	0
17	157	7.550	330.0	57	0	1	30	12	82	0
18	158	8.047	330.7	58	-2	1	30	12	42	0
19	159	8.571	330.0	59	0	3	30	12	42	6

FIELD DATA TABLE

MAMMOTH LAKES, CALIFORNIA

SHOT NUMBER 4 TEAM 4

SHOT POINT 2

SHOT TIME: 217: 7:30: 0.422

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	161	9.674	327.1	61	5	1	30	12	82	2
2	162	10.315	326.5	62	2	1	30	12	82	0
3	163	10.882	325.5	63	2	1	30	12	82	0
4	164	11.163	323.2	64	5	1	30	12	82	0
5	165	11.818	324.2	65	3	1	30	12	82	0
6	167	12.927	325.1	66	4		30	12	82	1
7	166	12.342	324.7	67	-5		30	12	82	1
8	168	13.436	324.2	68	2	1	30	12	82	0
9	169	13.874	323.5	69	3	1	30	12	62	0
10	170	14.355	322.9	70	6	1	30	12	62	0
11	171	14.805	323.3	71	1	3	30	12	62	0
12	172	15.167	325.0	72	6	1	30	12	62	0
13	173	15.936	324.3	73	0		30	12	62	1
14				74	--		30	12	62	20
15	175	16.435	323.6	75	6	1	30	12	62	0
16	177	17.370	323.0	76	-4	1	30	12	62	0
17	176	16.921	323.3	77	0	1	30	12	62	0
18	178	17.836	323.3	78	3	1	30	12	62	0
19	179	18.477	323.7	79	6	1	30	12	62	0
20	180	19.264	323.2	80	5		30	12	62	1

FIELD DATA TABLE

MAMMOTH LAKES, CALIFORNIA

SHOT NUMBER 4 TEAM 5

SHOT POINT 2

SHOT TIME: 217: 7:30: 0.422

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	181	19.078	323.3	81	-10	1	30	12	62	0
2	182	19.554	323.4	82	-4	1	30	12	62	0
3	183	20.028	323.8	83	9	1	30	12	62	0
4	184	20.554	324.1	84	9		30	12	62	2
5	185	21.019	324.4	85	0	1	30	12	62	0
6	186	21.522	324.7	86	-4		30	12	62	17
7	187	21.999	324.9	87	6	1	30	12	62	0
8	188	22.501	325.3	88	10	1	30	12	82	0
9	189	22.931	325.8	89	4	1	30	12	82	0
10	190	23.367	326.4	90	12	1	30	12	82	0
11	191	23.794	326.8	91	3	1	30	12	82	0
12	192	23.915	327.4	92	9	1	30	12	82	0
13	193	24.568	327.6	93	12	1	30	12	82	0
14	194	25.137	328.2	94	6	1	30	12	82	0
15	195	25.597	328.7	95	8	1	30	12	82	0
16	196	26.055	329.1	96	-7	1	30	12	82	0
17	197	26.500	329.5	97	3	1	30	12	62	0
18	198	26.988	329.9	98	-2	1	30	12	62	0
19	199	27.440	330.3	99	4		30	12	62	17
20	200	27.905	330.6	100	3	1	30	12	82	0

FIELD DATA TABLE

MAMMOTH LAKES, CALIFORNIA
 SHOT NUMBER 5 TEAM 1
 SHOT POINT 4
 SHOT TIME: 217: 7:45: 0.029

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	101	11.921	146.3	1	9	1	30	12	62	0
2	102	12.378	147.1	2	-113	2	30	12	62	6
3	103	12.873	147.6	3	3	1	30	12	62	0
4	104	13.363	147.6	4	2	1	30	12	62	0
5	105	13.941	148.0	5	14	1	30	12	62	0
6	106	14.436	147.7	6	5	1	30	12	62	0
7	107	14.934	147.9	7	-3	1	30	12	62	6
8	108	15.440	148.4	8	42	1	30	12	62	0
9	109	15.674	147.8	9	66	0	30	12	62	1
10	110	16.470	148.9	10	10	0	30	12	62	2
11	111	17.393	146.0	11	38	1	30	12	62	0
12	112	18.189	144.5	12	4	0	30	12	62	2
13	113	19.179	142.7	13	5	2	30	12	62	0
14	114	19.952	141.2	14	22	2	30	12	62	0
15	115	20.823	139.7	15	2	2	30	12	62	0
16	116	21.670	138.4	16	14	2	30	12	62	0
17	117	24.212	135.1	17	27	0	30	12	62	1
18	118	27.081	135.2	18	-3	2	30	12	62	6
19	119	29.974	134.5	19	-22	2	30	12	62	0
20	120	32.593	132.5	20	5	0	30	12	62	2

FIELD DATA TABLE

MAMMOTH LAKES, CALIFORNIA
 SHOT NUMBER 5 TEAM 2
 SHOT POINT 4
 SHOT TIME: 217: 7:45: 0.029

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	121	15.428	334.0	21	0	1	30	12	82	0
2	122	15.902	334.5	22	6	1	30	12	82	0
3	123	16.394	335.0	23	6	1	30	12	82	0
4	124	17.077	335.8	24	-3		30	12	82	1
5	125	17.518	336.2	25	-6	1	30	12	82	30
6	126	17.974	336.5	26	2		30	12	82	1
7	127	18.946	337.3	27	-9	1	30	12	82	0
8	128	19.894	338.0	28	8	1	30	12	82	0
9	129	20.845	337.9	29	5	1	30	12	82	6
10	130	22.971	336.0	30	2		30	12	62	1
11	131	24.657	335.3	31	4	1	30	12	62	0
12	132	26.555	335.5	32	1	1	30	12	62	0
13	133	17.251	313.2	33	-4	1	30	12	62	0
14	134	17.295	320.2	34	3	1	30	12	62	0
15	135	16.658	326.1	35	-16	1	30	12	62	0
16	136	17.231	332.8	36	0	1	30	12	62	0
17	137	17.877	344.7	37	0	1	30	12	62	0
18	138	18.469	0.9	38	2	1	30	12	62	0
19	139	19.708	9.7	39	1	1	30	12	62	0
20	140	21.788	284.2	40	2	2	30	12	62	0

FIELD DATA TABLE

MAMMOTH LAKES, CALIFORNIA
 SHOT NUMBER 5 TEAM 3
 SHOT POINT 4
 SHOT TIME: 217: 7:45: 0.029

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	141	11.667	145.9	41	0		30	12	82	2
2	142	11.140	143.4	42	2	1	30	12	82	0
3	143	10.502	144.3	43	-9		30	12	82	2
4	144	10.015	143.7	44	-5	1	30	12	82	0
5	145	9.546	142.8	45	0	1	30	12	82	0
6	146	9.079	141.4	46	-28	1	30	12	82	0
7	147	8.658	140.1	47	14	1	30	12	42	0
8	148	8.174	139.1	48	24		30	12	42	2
9	149	7.673	138.8	49	4	1	30	12	82	0
10	150	7.190	138.0	50	-4	3	30	12	82	6
11	151	6.701	137.2	51	12	1	30	12	82	0
12	152	6.189	136.0	52	6	1	30	12	82	0
13	153	5.742	135.0	53	2	1	30	12	82	0
14	154	5.168	138.0	54	-7	1	30	12	82	0
15	155	4.701	132.0	55	6	1	30	12	82	0
16	156	4.255	131.1	56	3	1	30	12	82	0
17	157	3.805	129.6	57	0	1	30	12	82	0
18	158	3.384	125.1	58	-2	3	30	12	42	0
19	159	2.873	122.3	59	0	3	30	12	42	0
20	160	2.306	120.4	60	-4	3	30	12	42	0

FIELD DATA TABLE

MAMMOTH LAKES, CALIFORNIA
 SHOT NUMBER 5 TEAM 4
 SHOT POINT 4
 SHOT TIME: 217: 7:45: 0.029

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	161	1.677	120.1	61	5	1	30	12	82	0
2	162	1.076	109.7	62	2	3	30	12	82	0
3	163	0.550	89.0	63	2	3	30	12	82	0
4	164	0.035	123.4	64	5	3	30	12	82	0
5	165	0.657	342.4	65	3	3	30	12	82	0
6	167	1.777	337.1	66	4		30	12	82	1
7	166	1.190	339.4	67	-5		30	12	82	1
8	168	2.253	329.5	68	2	1	30	12	82	0
9	169	2.680	324.7	69	3	3	30	12	62	0
10	170	3.160	322.0	70	6	3	30	12	62	0
11	171	3.610	323.8	71	1	3	30	12	62	0
12	172	3.994	330.3	72	6	3	30	12	62	0
13	173	4.747	326.8	73	0		30	12	62	1
14				74	--		30	12	62	20
15	175	5.241	324.6	75	6	3	30	12	62	0
16	177	6.175	322.6	76	-4	3	30	12	62	0
17	176	5.726	323.7	77	0	3	30	12	62	0
18	178	6.641	323.5	78	3	1	30	12	62	0
19	179	7.283	324.6	79	6	1	30	12	62	0
20	180	8.069	323.3	80	5		30	12	62	1

FIELD DATA TABLE

MAMMOTH LAKES, CALIFORNIA
 SHOT NUMBER 5 TEAM 5
 SHOT POINT 4
 SHOT TIME: 217: 7:45: 0.029

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	181	7.883	323.4	81	-11	1	30	12	62	0
2	182	8.359	323.6	82	-4	1	30	12	62	0
3	183	8.834	324.6	83	9	1	30	12	62	0
4	184	9.361	325.1	84	10		30	12	62	1
5	185	9.829	325.8	85	0		30	12	62	17
6	186	10.335	326.4	86	-4		30	12	62	17
7	187	10.814	326.7	87	6	1	30	12	62	0
8	188	11.322	327.5	88	10	1	30	12	82	0
9	189	11.760	328.4	89	4	1	30	12	82	0
10	190	12.206	329.3	90	13	1	30	12	82	0
11	191	12.642	330.1	91	3	1	30	12	82	6
12	192	12.778	331.1	92	10	1	30	12	82	0
13	193	13.436	331.3	93	12	1	30	12	82	0
14	194	14.020	332.2	94	6	1	30	12	82	0
15	195	14.496	333.0	95	8	1	30	12	82	0
16	196	14.963	333.5	96	-7	1	30	12	82	0
17	197	15.421	334.0	97	3	1	30	12	62	0
18	198	15.924	334.6	98	-2	1	30	12	62	0
19	199	16.390	335.1	99	4	1	30	12	62	0
20	200	16.868	335.5	100	3	1	30	12	82	0

FIELD DATA TABLE

MAMMOTH LAKES, CALIFORNIA
 SHOT NUMBER 6 TEAM 1
 SHOT POINT 6
 SHOT TIME: 217: 8: 0: 0.427

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	101	30.265	152.1	1	9	1	30	12	62	
2	102	30.737	152.3	2	-115	2	30	12	62	6
3	103	31.238	152.4	3	3	1	30	12	62	0
4	104	31.728	152.4	4	2	2	30	12	62	0
5	105	32.310	152.4	5	14	2	30	12	62	0
6	106	32.799	152.3	6	5	2	30	12	62	0
7	107	33.298	152.3	7	-3	1	30	12	62	6
8	108	33.813	152.4	8	43	1	30	12	62	6
9	109	34.036	152.1	9	67	0	30	12	62	1
10	110	34.849	152.5	10	10	0	30	12	62	2
11	111	35.705	151.0	11	39	2	30	12	62	2
12	112	36.455	150.2	12	4	0	30	12	62	2
13	113	37.376	149.1	13	5	2	30	12	62	0
14	114	38.083	148.2	14	23	2	30	12	62	6
15	115	38.879	147.3	15	2	1	30	12	62	6
16	116	39.649	146.4	16	14	2	30	12	62	6
17	117	41.966	144.0	17	28	0	30	12	62	1
18	118	44.813	143.5	18	-3	2	30	12	62	6
19	119	47.623	142.6	19	-22	2	30	12	62	0
20	120	50.058	140.9	20	5	0	30	12	62	2

FIELD DATA TABLE

MAMMOTH LAKES, CALIFORNIA

SHOT NUMBER 6 TEAM 2

SHOT POINT 6

SHOT TIME: 217: 8: 0: 0.427

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	121	3.063	164.9	21	0	1	30	12	82	0
2	122	2.570	163.6	22	6	1	30	12	82	0
3	123	2.064	161.9	23	6	3	30	12	82	6
4	124	1.367	156.4	24	-3		30	12	82	1
5	125	0.934	148.6	25	-6		30	12	82	17
6	126	0.525	129.8	26	2		30	12	82	1
7	127	0.709	21.4	27	-9	3	30	12	82	0
8	128	1.623	3.6	28	8	1	30	12	82	0
9	129	2.510	353.9	29	5	1	30	12	82	0
10	130	4.527	336.7	30	2		30	12	62	1
11	131	6.216	333.7	31	4	3	30	12	62	0
12	132	8.112	334.7	32	1	3	30	12	62	6
13	133	7.079	225.0	33	-4	3	30	12	62	0
14	134	4.974	224.7	34	3	3	30	12	62	0
15	135	3.453	209.9	35	-16	3	30	12	62	0
16	136	1.524	191.6	36	0	3	30	12	62	0
17	137	2.873	81.6	37	0	1	30	12	62	0
18	138	7.997	78.1	38	2	3	30	12	62	0
19	139	11.172	76.5	39	1	3	30	12	62	0
20	140	13.784	72.9	40	2	1	30	12	62	0

FIELD DATA TABLE

MAMMOTH LAKES, CALIFORNIA

SHOT NUMBER 6 TEAM 3

SHOT POINT 6

SHOT TIME: 217: 8: 0: 0.427

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	141	30.003	152.0	41	0		30	12	82	6
2	142	29.421	151.1	42	2	1	30	12	82	0
3	143	28.811	151.6	43	-10		30	12	82	6
4	144	28.313	151.5	44	-6	1	30	12	82	0
5	145	27.827	151.4	45	0	1	30	12	82	0
6	146	27.330	151.1	46	-28	1	30	12	82	0
7	147	26.880	150.8	47	15	2	30	12	42	0
8	148	26.377	150.7	48	24		30	12	42	6
9	149	25.878	150.8	49	4	2	30	12	82	0
10	150	25.385	150.8	50	-4	2	30	12	82	0
11	151	24.885	150.9	51	12	2	30	12	82	0
12	152	24.356	150.9	52	6	2	30	12	82	0
13	153	23.899	150.9	53	2	1	30	12	82	0
14	154	23.417	151.9	54	-8	1	30	12	82	0
15	155	22.823	151.0	55	7	1	30	12	82	0
16	156	22.379	151.2	56	3	1	30	12	82	0
17	157	21.921	151.4	57	0	1	30	12	82	0
18	158	21.423	151.2	58	-2	1	30	12	42	0
19	159	20.901	151.5	59	0	1	30	12	42	0
20	160	20.366	152.0	60	-4	1	30	12	42	6

FIELD DATA TABLE

MAMMOTH LAKES, CALIFORNIA
 SHOT NUMBER 6 TEAM 4
 SHOT POINT 6
 SHOT TIME: 217: 8: 0: 0.427

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	161	19.831	153.0	61	5	1	30	12	82	0
2	162	19.205	153.5	62	2	1	30	12	82	0
3	163	18.667	154.3	63	2	1	30	12	82	0
4	164	18.474	155.7	64	5	1	30	12	82	0
5	165	17.792	155.6	65	3	1	30	12	82	0
6	167	16.668	155.7	66	4		30	12	82	1
7	166	17.257	155.6	67	-5		30	12	82	1
8	168	16.207	156.7	68	2	1	30	12	82	0
9	169	15.823	157.7	69	3	1	30	12	62	0
10	170	15.394	158.6	70	6	1	30	12	62	0
11	171	14.932	158.7	71	1	1	30	12	62	0
12	172	14.474	157.3	72	6	1	30	12	62	6
13	173	13.775	158.9	73	0		30	12	62	1
14				74	--		30	12	62	20
15	175	13.343	160.2	75	7	1	30	12	62	0
16	177	12.513	162.3	76	-4	1	30	12	62	0
17	176	12.903	161.1	77	0	1	30	12	62	0
18	178	12.040	162.6	78	3	1	30	12	62	0
19	179	11.390	162.9	79	6	1	30	12	62	0
20	180	10.710	165.2	80	5		30	12	62	1

FIELD DATA TABLE

MAMMOTH LAKES, CALIFORNIA
 SHOT NUMBER 6 TEAM 5
 SHOT POINT 6
 SHOT TIME: 217: 8: 0: 0.427

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	181	10.877	164.7	81	-11	1	30	12	62	0
2	182	10.423	165.5	82	-4	1	30	12	62	0
3	183	9.928	165.7	83	9	1	30	12	62	0
4	184	9.407	166.4	84	10		30	12	62	6
5	185	8.932	166.9	85	0	1	30	12	62	0
6	186	8.421	167.4	86	-4		30	12	62	6
7	187	7.953	168.2	87	6	1	30	12	62	6
8	188	7.425	168.5	88	11	1	30	12	82	0
9	189	6.951	168.4	89	4	1	30	12	82	0
10	190	6.467	168.1	90	13	1	30	12	82	0
11	191	6.001	167.9	91	3	1	30	12	82	0
12	192	5.803	166.1	92	10	1	30	12	82	0
13	193	5.156	167.5	93	12	1	30	12	82	0
14	194	4.538	166.9	94	6	1	30	12	82	0
15	195	4.029	165.9	95	9	1	30	12	82	0
16	196	3.547	165.7	96	-7	1	30	12	82	0
17	197	3.069	164.8	97	3	3	30	12	62	0
18	198	2.547	163.4	98	-2	3	30	12	62	0
19	199	2.066	161.5	99	4	3	30	12	62	0
20	200	1.570	159.5	100	7	1	30	12	82	0

FIELD DATA TABLE

MAMMOTH LAKES, CALIFORNIA
 SHOT NUMBER 7 TEAM 1
 SHOT POINT 7
 SHOT TIME: 222: 7:45: 0.016

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	201	0.006	207.9	1	19	3	30	12	94	0
2	202	0.503	79.0	2	13	0	30	12	88	17
3	203	1.073	274.0	3	9	3	30	12	88	0
4	204	0.920	81.3	4	-14	3	30	12	48	0
5	205	1.664	80.3	5	35	0	30	12	48	2
6	206	2.156	80.3	6	0	3	30	12	48	0
7	207	2.655	81.0	7	-3	3	30	12	48	0
8	208	3.131	81.3	8	96	3	30	12	48	0
9	209	3.700	80.9	9	163	3	30	12	48	0
10	199	5.776	41.4	10	14	3	30	12	48	0
11	128	8.559	22.4	11	70	3	30	12	48	0
12	212	9.538	11.3	12	6	3	30	12	48	0
13	213	12.106	1.3	13	2	3	30	12	48	0
14	214	14.632	357.1	14	57	1	30	12	48	0
15	215	4.418	83.0	15	5	3	30	12	48	0
16	185	5.724	114.8	16	32	3	30	12	48	0
17	176	9.423	128.9	17	62	0	30	12	48	1
18	172	11.240	128.9	18	-3	3	30	12	48	0
19	167	13.409	131.5	19	-56	0	30	12	48	2
20	162	16.015	132.9	20	36	1	30	12	48	0

FIELD DATA TABLE

MAMMOTH LAKES, CALIFORNIA
 SHOT NUMBER 7 TEAM 2
 SHOT POINT 7
 SHOT TIME: 222: 7:45: 0.016

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	221	14.078	79.2	21	-4	1	30	12	88	0
2	222	14.565	79.7	22	15	1	30	12	88	0
3	223	15.115	80.0	23	19	1	30	12	88	0
4	224	15.542	80.8	24	-11	1	30	12	88	0
5	225	16.173	80.6	25	-14		30	12	48	17
6	226	16.665	80.8	26	--		30	12	48	1
7	227	17.112	81.4	27	-32	1	30	12	48	0
8	228	17.559	81.9	28	19	3	30	12	48	0
9	229	18.003	82.6	29	14	1	30	12	48	0
10	230	18.437	84.0	30	6	1	30	12	48	0
11	231	18.898	83.0	31	13		30	12	48	2
12	232	19.501	83.6	32	14		30	12	48	1
13	233	20.049	83.9	33	--		30	12	48	1
14	234	20.403	84.5	34	14		30	12	48	17
15	235	20.880	84.0	35	-38	1	30	12	48	0
16	236	21.330	84.9	36	0	1	30	12	88	0
17	237	21.934	85.2	37	50	2	30	12	88	0
18	238	22.282	85.2	38	6	1	30	12	88	2
19	239	22.966	84.3	39	3	1	30	12	88	0
20	240	23.425	84.1	40	7	1	30	12	48	0

FIELD DATA TABLE

MAMMOTH LAKES, CALIFORNIA

SHOT NUMBER 7 TEAM 3

SHOT POINT 7

SHOT TIME: 222: 7:45: 0.016

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	241	34.309	82.9	41	5	1	30	12	48	0
2	242	34.922	83.3	42	2	1	30	12	48	0
3	243	35.471	83.2	43	-17	1	30	12	48	0
4	244	36.026	82.7	44	-8	1	30	12	48	0
5	245	36.655	82.6	45	0	1	30	12	48	0
6	246	37.102	82.3	46	-10	1	30	12	88	0
7	247	37.521	81.9	47	41	1	30	12	88	0
8	248	37.912	81.5	48	-17	1	30	12	48	0
9	249	38.558	81.5	49	4	1	30	12	48	0
10	250	39.886	82.6	50	-2	1	30	12	48	0
11	251	42.505	82.0	51	18	1	30	12	48	0
12	252	44.499	82.2	52	5	1	30	12	48	0
13	253	48.612	82.4	53	3	1	30	12	48	0
14	254	53.212	89.8	54	-13	2	30	12	48	0
15	255	59.919	85.0	55	5	2	30	12	48	0
16	256	64.066	83.0	56	0	2	30	12	48	0
17	257	68.798	81.6	57	-11	2	30	12	48	0
18	258	74.220	80.1	58	-3	2	30	12	48	0
19	259			59	0		30	12	42	1
20	260	78.945	80.5	60	-8	2	30	12	48	0

FIELD DATA TABLE

MAMMOTH LAKES, CALIFORNIA

SHOT NUMBER 7 TEAM 4

SHOT POINT 7

SHOT TIME: 222: 7:45: 0.016

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	261	13.630	78.9	61	12	1	30	12	88	0
2	262	13.093	79.4	62	8	1	30	12	88	0
3	263	12.615	78.3	63	7	3	30	12	48	0
4	264	12.310	78.3	64	10	3	30	12	48	0
5	265	11.754	77.8	65	4	3	30	12	48	0
6	266	11.243	79.3	66	19	3	30	12	48	0
7	267	10.688	79.6	67	-17	3	30	12	48	0
8	268	10.180	79.6	68	5	3	30	12	48	0
9	269	9.678	78.9	69	8	3	30	12	48	0
10	270	9.194	79.7	70	17	3	30	12	48	0
11	271	8.679	79.8	71	1	3	30	12	48	0
12	272	8.221	79.7	72	13	3	30	12	48	0
13	273	7.676	80.2	73	-4	3	30	12	48	0
14				74	--		30	12	48	1
15	275	7.188	80.5	75	16	3	30	12	48	0
16	279	5.180	81.0	76	-9	1	30	12	88	0
17	276	6.692	80.3	77	-2	1	30	12	88	0
18	278	5.593	81.0	78	6	1	30	12	88	0
19	277	6.200	80.7	79	5	1	30	12	88	0
20	280	4.705	80.1	80	14		30	12	88	2

FIELD DATA TABLE

MAMMOTH LAKES, CALIFORNIA
 SHOT NUMBER 7 TEAM 5
 SHOT POINT 7
 SHOT TIME: 222: 7:45: 0.016

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	281	23.965	83.9	81	44	1	30	12	48	0
2	282	24.468	83.5	82	9	1	30	12	48	0
3	283	24.921	83.3	83	-74		30	12	48	2
4	284	25.422	83.5	84	-77		30	12	48	17
5	285	25.961	83.1	85	-13		30	12	48	17
6	286	26.527	82.9	86	-11	1	30	12	48	0
7	287	26.938	83.7	87	-54	1	30	12	48	0
8	288	27.425	84.3	88	-79	1	30	12	48	0
9	289	27.982	84.3	89	-40	1	30	12	48	0
10	290	28.606	84.8	90	-96	1	30	12	48	0
11	291	29.108	84.2	91	-33	1	30	12	48	0
12	292	29.512	83.7	92	-73	2	30	12	48	0
13	293	29.982	83.2	93	-74	1	30	12	48	0
14	294	30.489	83.4	94	-54	1	30	12	48	0
15	295	30.962	83.3	95	-74	1	30	12	48	0
16	296	31.457	83.3	96	4	1	30	12	48	0
17	297	32.267	83.7	97	-37	1	30	12	48	0
18	298	32.777	83.3	98	-10	1	30	12	48	0
19	299	33.410	82.5	99	-50	1	30	12	48	0
20	300	33.951	82.4	100	-35	1	30	12	48	0

FIELD DATA TABLE

MAMMOTH LAKES, CALIFORNIA
 SHOT NUMBER 8 TEAM 1
 SHOT POINT 9
 SHOT TIME: 222: 8: 0: 0.015

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	201	22.280	265.2	1	19	1	30	12	94	0
2	202	21.776	265.4	2	13	0	30	12	88	6
3	203	23.338	265.6	3	9	0	30	12	88	17
4	204	21.359	265.4	4	-14	2	30	12	48	0
5	205	20.619	265.6	5	35	0	30	12	48	6
6	206	20.129	265.8	6	0	2	30	12	48	0
7	207	19.630	265.8	7	-3	1	30	12	48	2
8	208	19.154	265.9	8	96	1	30	12	48	0
9	209	18.589	266.1	9	164	1	30	12	48	0
10	199	18.544	277.7	10	14	0	30	12	48	17
11	128	19.874	287.8	11	70	1	30	12	48	0
12	212	21.658	290.3	12	6	1	30	12	48	0
13	213	24.192	295.1	13	2	1	30	12	48	0
14	214	26.241	299.1	14	57	1	30	12	48	0
15	215	17.862	265.8	15	6	1	30	12	48	0
16	185	17.533	256.0	16	33	0	30	12	48	2
17	176	16.781	242.4	17	63	0	30	12	48	1
18	172	16.148	236.5	18	-3	0	30	12	48	17
19	167	16.238	228.6	19	-56	0	30	12	48	6
20	162	16.495	219.4	20	36	1	30	12	48	0

FIELD DATA TABLE

MAMMOTH LAKES, CALIFORNIA
 SHOT NUMBER 8 TEAM 2
 SHOT POINT 9
 SHOT TIME: 222: 8: 0: 0.015

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	221	8.407	275.4	21	-4	1	30	12	88	0
2	222	7.901	275.4	22	15	1	30	12	88	0
3	223	7.355	276.1	23	19	1	30	12	88	0
4	224	6.888	275.4	24	-11	1	30	12	88	0
5	225	6.288	277.1	25	-14	3	30	12	48	0
6	226	5.805	278.1	26	--		30	12	48	1
7	227	5.329	277.8	27	-32	3	30	12	48	0
8	228	4.851	277.2	28	19	3	30	12	48	0
9	229	4.368	276.0	29	15	3	30	12	48	0
10	230	3.865	271.2	30	6	3	30	12	48	0
11	231	3.475	277.7	31	13	3	30	12	48	0
12	232	2.840	276.8	32	14		30	12	48	1
13	233	2.280	277.0	33	--		30	12	48	1
14	234	1.894	273.3	34	14	3	30	12	48	0
15	235	1.477	283.6	35	-46	3	30	12	48	0
16	236	0.957	273.6	36	0	3	30	12	88	0
17	237	0.343	268.0	37	50	3	30	12	88	0
18	238	0.005	90.0	38	6	3	30	12	88	17
19	239	0.783	56.5	39	3	3	30	12	88	0
20	240	1.232	63.4	40	7	3	30	12	48	0

FIELD DATA TABLE

MAMMOTH LAKES, CALIFORNIA
 SHOT NUMBER 8 TEAM 3
 SHOT POINT 9
 SHOT TIME: 222: 8: 0: 0.015

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	241	12.089	78.5	41	5	3	30	12	48	0
2	242	12.684	79.8	42	2	3	30	12	48	0
3	243	13.236	79.7	43	-17	3	30	12	48	0
4	244	13.808	78.6	44	-8	1	30	12	48	0
5	245	14.442	78.4	45	0		30	12	48	17
6	246	14.902	77.9	46	-10	1	30	12	88	0
7	247	15.342	77.0	47	42	1	30	12	88	0
8	248	15.751	76.3	48	-17	1	30	12	48	0
9	249	16.394	76.5	49	4	1	30	12	48	0
10	250	17.664	79.3	50	-2	1	30	12	48	0
11	251	20.304	78.5	51	18	1	30	12	48	0
12	252	22.290	79.1	52	5	1	30	12	48	0
13	253	26.389	80.0	53	3	1	30	12	48	0
14	254	31.049	93.0	54	-13	1	30	12	48	0
15	255	37.643	84.9	55	5	2	30	12	48	0
16	256	41.819	81.8	56	0	2	30	12	48	0
17	257	46.592	79.9	57	-11	2	30	12	48	0
18	258	52.079	78.0	58	-3	2	30	12	48	0
19	259			59	0		30	12	42	1
20	260	56.785	78.6	60	-8	2	30	12	48	30

FIELD DATA TABLE

MAMMOTH LAKES, CALIFORNIA
 SHOT NUMBER 8 TEAM 4
 SHOT POINT 9
 SHOT TIME: 222: 8: 0: 0.015

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	261	8.854	275.0	61	12	1	30	12	88	0
2	262	9.347	273.5	62	8	2	30	12	88	6
3	263	9.868	274.1	63	7	3	30	12	48	0
4	264	10.165	273.7	64	10	3	30	12	48	0
5	265	10.726	273.4	65	4	3	30	12	48	0
6	266	11.155	271.3	66	19	3	30	12	48	0
7	267	11.685	270.4	67	-17	3	30	12	48	0
8	268	12.187	270.0	68	5	1	30	12	48	0
9	269	12.703	270.1	69	8	1	30	12	48	0
10	270	13.155	269.1	70	17	1	30	12	48	0
11	271	13.660	268.7	71	1	1	30	12	48	0
12	272	14.116	268.5	72	13	1	30	12	48	0
13	273	14.644	267.9	73	-4	1	30	12	48	0
14				74	--		30	12	48	1
15	275	15.124	267.5	75	16	1	30	12	48	0
16	279	17.114	266.5	76	-9	1	30	12	88	0
17	276	15.618	267.3	77	-2	1	30	12	88	0
18	278	16.703	266.6	78	6	1	30	12	88	0
19	277	16.102	267.0	79	5	1	30	12	88	0
20	280	17.595	266.6	80	15		30	12	88	2

FIELD DATA TABLE

MAMMOTH LAKES, CALIFORNIA
 SHOT NUMBER 8 TEAM 5
 SHOT POINT 9
 SHOT TIME: 222: 8: 0: 0.015

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	281	1.773	66.9	81	43	3	30	12	48	0
2	282	2.309	66.1	82	9	3	30	12	48	0
3	283	2.759	67.8	83	-72		30	12	48	2
4	284	3.232	71.2	84	-75		30	12	48	17
5	285	3.794	70.4	85	-13		30	12	48	17
6	286	4.363	71.1	86	-11	3	30	12	48	0
7	287	4.709	76.3	87	-52	3	30	12	48	0
8	288	5.164	80.4	88	-77	3	30	12	48	0
9	289	5.721	80.6	89	-39	3	30	12	48	0
10	290	6.332	83.5	90	-94	3	30	12	48	0
11	291	6.847	80.8	91	-32	3	30	12	48	0
12	292	7.269	79.0	92	-71	2	30	12	48	0
13	293	7.759	77.5	93	-73	3	30	12	48	0
14	294	8.255	78.6	94	-53	3	30	12	48	0
15	295	8.733	78.3	95	-72	3	30	12	48	0
16	296	9.225	78.7	96	4	3	30	12	48	0
17	297	10.019	80.2	97	-36		30	12	48	17
18	298	10.543	79.1	98	-10	1	30	12	48	0
19	299	11.209	77.2	99	-49		30	12	48	17
20	300	11.755	77.1	100	-34	1	30	12	48	0

FIELD DATA TABLE

MAMMOTH LAKES, CALIFORNIA
 SHOT NUMBER 9 TEAM 1
 SHOT POINT 10
 SHOT TIME: 222: 8:15: 0.072

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	201	38.705	261.5	1	20	1	30	12	94	0
2	202	38.198	261.6	2	13	2	30	12	88	6
3	203	39.750	261.9	3	9	0	30	12	88	17
4	204	37.781	261.5	4	-14	0	30	12	48	0
5	205	37.038	261.6	5	35	2	30	12	48	6
6	206	36.546	261.6	6	0	1	30	12	48	0
7	207	36.047	261.6	7	-3	1	30	12	48	0
8	208	35.571	261.6	8	97	1	30	12	48	0
9	209	35.001	261.6	9	165	1	30	12	48	0
10	199	34.480	267.7	10	14	1	30	12	48	0
11	128	35.069	273.6	11	71	1	30	12	48	0
12	212	36.571	275.7	12	6	0	30	12	48	17
13	213	38.515	279.6	13	2	1	30	12	48	0
14	214	39.999	282.9	14	57	1	30	12	48	0
15	215	34.285	261.3	15	6	1	30	12	48	0
16	185	34.070	256.2	16	33	1	30	12	48	0
17	176	33.070	249.4	17	63	0	30	12	48	1
18	172	32.192	246.6	18	-3	1	30	12	48	0
19	167	31.812	242.7	19	-57	0	30	12	48	6
20	162	31.324	238.0	20	36	1	30	12	48	0

FIELD DATA TABLE

MAMMOTH LAKES, CALIFORNIA
 SHOT NUMBER 9 TEAM 2
 SHOT POINT 10
 SHOT TIME: 222: 8:15: 0.072

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	221	24.641	262.9	21	-4	1	30	12	88	0
2	222	24.147	262.6	22	15	1	30	12	88	0
3	223	23.595	262.5	23	19	1	30	12	88	0
4	224	23.161	262.1	24	-11	1	30	12	88	0
5	225	22.531	262.2	25	-14		30	12	48	17
6	226	22.038	262.1	26	--		30	12	48	1
7	227	21.589	261.7	27	-33	3	30	12	48	0
8	228	21.143	261.2	28	19	3	30	12	48	0
9	229	20.705	260.6	29	15	3	30	12	48	0
10	230	20.298	259.3	30	6	3	30	12	48	0
11	231	19.816	260.2	31	13	3	30	12	48	0
12	232	19.226	259.5	32	14		30	12	48	1
13	233	18.690	259.0	33	--		30	12	48	1
14	234	18.359	258.2	34	15	3	30	12	48	0
15	235	17.864	258.7	35	-46	3	30	12	48	0
16	236	17.454	257.5	36	0	1	30	12	88	0
17	237	16.874	256.8	37	51	1	30	12	88	0
18	238	16.532	256.5	38	6	1	30	12	88	0
19	239	15.804	257.5	39	3	1	30	12	88	0
20	240	15.339	257.6	40	7	3	30	12	48	0

FIELD DATA TABLE

MAMMOTH LAKES, CALIFORNIA
 SHOT NUMBER 9 TEAM 3
 SHOT POINT 10
 SHOT TIME: 222: 8:15: 0.072

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	241	4.474	251.3	41	5		30	12	48	17
2	242	3.939	246.1	42	2	3	30	12	48	0
3	243	3.401	244.2	43	-17	3	30	12	48	0
4	244	2.786	246.0	44	-8	3	30	12	48	0
5	245	2.158	243.7	45	0	3	30	12	48	0
6	246	1.676	244.6	46	-10	3	30	12	88	0
7	247	1.202	250.9	47	42	3	30	12	88	0
8	248	0.790	261.8	48	-17	3	30	12	48	0
9	249	0.143	260.8	49	4	3	30	12	48	0
10	250	1.397	114.2	50	-2	3	30	12	48	0
11	251	3.820	87.3	51	18	1	30	12	48	0
12	252	5.814	86.3	52	5	1	30	12	48	0
13	253	9.931	85.8	53	3	1	30	12	48	0
14	254	15.889	110.2	54	-13	1	30	12	48	0
15	255	21.411	91.3	55	5	1	30	12	48	0
16	256	25.392	85.2	56	0	1	30	12	48	0
17	257	30.096	81.8	57	-11	1	30	12	48	0
18	258	35.547	78.6	58	-3	1	30	12	48	0
19	259			59	0		30	12	42	1
20	260	40.260	79.4	60	-8	1	30	12	48	0

FIELD DATA TABLE

MAMMOTH LAKES, CALIFORNIA
 SHOT NUMBER 9 TEAM 4
 SHOT POINT 10
 SHOT TIME: 222: 8:15: 0.072

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	261	25.091	262.9	61	12	1	30	12	88	0
2	262	25.621	262.6	62	8	1	30	12	88	6
3	263	26.113	263.1	63	7	3	30	12	48	0
4	264	26.419	263.0	64	10	3	30	12	48	0
5	265	26.981	263.1	65	4	3	30	12	48	0
6	266	27.470	262.5	66	19	3	30	12	48	0
7	267	28.021	262.3	67	-17	3	30	12	48	0
8	268	28.528	262.2	68	5	3	30	12	48	0
9	269	29.036	262.4	69	8	3	30	12	48	0
10	270	29.513	262.1	70	17		30	12	48	17
11	271	30.027	262.0	71	1	3	30	12	48	0
12	272	30.485	262.0	72	13	1	30	12	48	0
13	273	31.027	261.9	73	-4	1	30	12	48	0
14				74	--		30	12	48	1
15	275	31.515	261.8	75	16	1	30	12	48	0
16	279	33.522	261.6	76	-9	1	30	12	88	0
17	276	32.010	261.8	77	-2	1	30	12	88	0
18	278	33.108	261.6	78	6	1	30	12	88	0
19	277	32.501	261.7	79	5	1	30	12	88	0
20	28	99	261.7	80	15	2	30	12	88	6

FIELD DATA TABLE

MAMMOTH LAKES, CALIFORNIA
 SHOT NUMBER 9 TEAM 5
 SHOT POINT 10
 SHOT TIME: 222: 8:15: 0.072

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	281	14.793	257.7	81	41	3	30	12	48	0
2	282	14.273	258.2	82	9	3	30	12	48	0
3	283	13.816	258.3	83	-70		30	12	48	2
4	284	13.323	257.8	84	-73		30	12	48	17
5	285	12.771	258.4	85	-13		30	12	48	17
6	286	12.201	258.5	86	-11	3	30	12	48	0
7	287	11.828	256.6	87	-51	3	30	12	48	0
8	288	11.390	254.8	88	-75	3	30	12	48	0
9	289	10.839	254.4	89	-38	3	30	12	48	0
10	290	10.280	252.3	90	-91	3	30	12	48	0
11	291	9.723	253.5	91	-32	3	30	12	48	0
12	292	9.281	254.6	92	-70	1	30	12	48	0
13	293	8.780	255.7	93	-71	3	30	12	48	0
14	294	8.294	254.5	94	-52	3	30	12	48	0
15	295	7.814	254.5	95	-71	3	30	12	48	0
16	296	7.327	253.9	96	3	3	30	12	48	0
17	297	6.571	250.9	97	-36	3	30	12	48	0
18	298	6.024	252.0	98	-10	3	30	12	48	0
19	299	5.331	255.2	99	-48	3	30	12	48	0
20	300	4.785	255.2	100	-33	3	30	12	48	0

FIELD DATA TABLE

MAMMOTH LAKES, CALIFORNIA
 SHOT NUMBER 10 TEAM 1
 SHOT POINT 5
 SHOT TIME: 222: 8:45: 0.016

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	201	4.708	260.1	1	20	1	30	12	94	0
2	202	4.201	260.3	2	13	2	30	12	88	6
3	203	5.752	262.7	3	9	3	30	12	88	0
4	204	3.784	259.9	4	-14	0	30	12	48	2
5	205	3.040	260.1	5	36	2	30	12	48	6
6	206	2.548	260.1	6	0	3	30	12	48	0
7	207	2.050	259.1	7	-3	3	30	12	48	0
8	208	1.575	257.9	8	98	3	30	12	48	0
9	209	1.005	257.4	9	167	0	30	12	48	2
10	199	3.626	347.0	10	14	3	30	12	48	0
11	128	7.242	349.1	11	72	3	30	12	48	0
12	212	8.986	342.1	12	7	0	30	12	48	2
13	213	12.114	338.9	13	2	1	30	12	48	0
14	214	14.822	338.7	14	58	1	30	12	48	0
15	215	0.365	223.2	15	6	3	30	12	48	0
16	185	3.255	170.1	16	33	3	30	12	48	0
17	176	7.240	158.1	17	64	0	30	12	48	1
18	172	8.872	152.4	18	-3	3	30	12	48	0
19	167	11.096	150.9	19	-57	2	30	12	48	6
20	162	13.681	148.7	20	36	1	30	12	48	0

FIELD DATA TABLE

MAMMOTH LAKES, CALIFORNIA
 SHOT NUMBER 10 TEAM 2
 SHOT POINT 5
 SHOT TIME: 222: 8:45: 0.016

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	221	9.375	78.7	21	-4	1	30	12	88	0
2	222	9.861	79.5	22	15	1	30	12	88	0
3	223	10.411	79.9	23	19	1	30	12	88	0
4	224	10.838	81.0	24	-11	1	30	12	88	0
5	225	11.469	80.8	25	-14		30	12	48	17
6	226	11.961	81.0	26	--		30	12	48	1
7	227	12.409	81.8	27	-33	1	30	12	48	0
8	228	12.858	82.6	28	19	1	30	12	48	0
9	229	13.305	83.5	29	15	1	30	12	48	0
10	230	13.746	85.3	30	6	1	30	12	48	0
11	231	14.200	83.9	31	13	1	30	12	48	0
12	232	14.808	84.6	32	14		30	12	48	1
13	233	15.357	85.1	33	--		30	12	48	1
14	234	15.715	85.8	34	15	1	30	12	48	0
15	235	16.189	85.1	35	-46	1	30	12	48	0
16	236	16.646	86.2	36	0	1	30	12	88	0
17	237	17.252	86.6	37	51	1	30	12	88	0
18	238	17.600	86.6	38	6	1	30	12	88	0
19	239	18.276	85.4	39	4	1	30	12	88	0
20	240	18.734	85.1	40	7	1	30	12	48	0

FIELD DATA TABLE

MAMMOTH LAKES, CALIFORNIA
 SHOT NUMBER 10 TEAM 3
 SHOT POINT 5
 SHOT TIME: 222: 8:45: 0.016

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	241	29.611	83.3	41	5	1	30	12	48	0
2	242	30.225	83.7	42	2	1	30	12	48	0
3	243	30.774	83.6	43	-17	1	30	12	48	0
4	244	31.326	83.1	44	-8	1	30	12	48	0
5	245	31.955	82.9	45	0		30	12	48	17
6	246	32.401	82.6	46	-10	1	30	12	88	0
7	247	32.819	82.1	47	43	2	30	12	88	0
8	248	33.209	81.7	48	-17	2	30	12	48	0
9	249	33.855	81.7	49	4	1	30	12	48	0
10	250	35.186	82.9	50	-2	1	30	12	48	0
11	251	37.803	82.3	51	18	1	30	12	48	0
12	252	39.797	82.4	52	5	2	30	12	48	0
13	253	43.911	82.6	53	3	2	30	12	48	0
14	254	48.577	90.7	54	-13	2	30	12	48	0
15	255	55.232	85.4	55	5	2	30	12	48	0
16	256	59.367	83.2	56	0	2	30	12	48	0
17	257	64.095	81.7	57	-11	2	30	12	48	0
18	258	69.516	80.1	58	-3	2	30	12	48	0
19	259			59	0		30	12	42	1
20	260	74.241	80.5	60	-8	2	30	12	48	0

FIELD DATA TABLE

MAMMOTH LAKES, CALIFORNIA
 SHOT NUMBER 10 TEAM 4
 SHOT POINT 5
 SHOT TIME: 222: 8:45: 0.016

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	261	8.928	78.3	61	13	1	30	12	88	0
2	262	8.389	78.9	62	8	1	30	12	88	0
3	263	7.915	77.2	63	7	3	30	12	48	0
4	264	7.610	77.1	64	10	3	30	12	48	0
5	265	7.057	76.3	65	4	3	30	12	48	0
6	266	6.540	78.6	66	19	3	30	12	48	0
7	267	5.984	79.2	67	-18	3	30	12	48	0
8	268	5.477	79.0	68	5	3	30	12	48	0
9	269	4.976	77.6	69	8	3	30	12	48	17
10	270	4.490	79.1	70	17		30	12	48	0
11	271	3.975	79.4	71	1	3	30	12	48	0
12	272	3.518	79.0	72	13	3	30	12	48	0
13	273	2.972	80.3	73	-4	3	30	12	48	0
14				74	--		30	12	48	1
15	275	2.484	81.2	75	16	3	30	12	48	0
16	279	0.481	89.4	76	-9	3	30	12	88	0
17	276	1.988	80.7	77	-2	3	30	12	88	0
18	278	0.892	85.5	78	6	3	30	12	88	0
19	277	1.497	82.4	79	5	3	30	12	88	0
20	280	0.005	360.0	80	15	3	30	12	88	0

FIELD DATA TABLE

MAMMOTH LAKES, CALIFORNIA
 SHOT NUMBER 10 TEAM 5
 SHOT POINT 5
 SHOT TIME: 222: 8:45: 0.016

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	281	19.272	84.8	81	39	1	30	12	48	0
2	282	19.773	84.2	82	8	1	30	12	48	0
3	283	20.226	84.1	83	-67		30	12	48	2
4	284	20.727	84.2	84	-70	1	30	12	48	0
5	285	21.264	83.7	85	-13		30	12	48	17
6	286	21.829	83.5	86	-11	1	30	12	48	0
7	287	22.244	84.4	87	-49	1	30	12	48	0
8	288	22.735	85.2	88	-72	1	30	12	48	0
9	289	23.291	85.1	89	-36	1	30	12	48	0
10	290	23.920	85.8	90	-87	1	30	12	48	0
11	291	24.417	85.0	91	-30	1	30	12	48	0
12	292	24.818	84.4	92	-66	2	30	12	48	0
13	293	25.286	83.8	93	-67	1	30	12	48	0
14	294	25.794	84.0	94	-49	1	30	12	48	0
15	295	26.266	83.9	95	-67	1	30	12	48	0
16	296	26.761	83.9	96	3	1	30	12	48	0
17	297	27.573	84.3	97	-34	1	30	12	48	0
18	298	28.080	83.8	98	-10	1	30	12	48	0
19	299	28.710	82.9	99	-45		30	12	48	17
20	300	29.251	82.8	100	-32	1	30	12	48	0

FIELD DATA TABLE

MAMMOTH LAKES, CALIFORNIA
 SHOT NUMBER 11 TEAM 1
 SHOT POINT 8
 SHOT TIME: 222: 9: 0: 0.313

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	201	14.625	259.7	1	20	1	30	12	94	0
2	202	14.119	259.7	2	13	0	30	12	88	6
3	203	15.664	260.6	3	9	2	30	12	88	0
4	204	13.702	259.6	4	-14	2	30	12	48	0
5	205	12.958	259.6	5	36	2	30	12	48	6
6	206	12.466	259.6	6	0	1	30	12	48	0
7	207	11.968	259.4	7	-3	1	30	12	48	0
8	208	11.493	259.2	8	99	1	30	12	48	0
9	209	10.923	259.2	9	168	0	30	12	48	2
10	199	10.702	279.2	10	14	1	30	12	48	30
11	128	12.311	295.5	11	72	1	30	12	48	0
12	212	14.203	298.3	12	7	0	30	12	48	2
13	213	16.994	303.9	13	2	1	30	12	48	0
14	214	19.298	308.4	14	58	1	30	12	48	0
15	215	10.215	258.2	15	6	1	30	12	48	0
16	185	10.478	241.3	16	33	1	30	12	48	0
17	176	11.078	219.6	17	64	0	30	12	48	1
18	172	11.211	210.3	18	-3	1	30	12	48	0
19	167	12.312	200.7	19	-58	2	30	12	48	6
20	162	13.773	191.1	20	37	3	30	12	48	0

FIELD DATA TABLE

MAMMOTH LAKES, CALIFORNIA
 SHOT NUMBER 11 TEAM 2
 SHOT POINT 8
 SHOT TIME: 222: 9: 0: 0.313

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	221	0.557	272.0	21	-4	3	30	12	88	30
2	222	0.060	241.5	22	15	3	30	12	88	0
3	223	0.499	89.2	23	19	3	30	12	88	0
4	224	0.963	97.5	24	-11	3	30	12	88	0
5	225	1.573	89.7	25	-14	3	30	12	48	0
6	226	2.065	88.8	26	--		30	12	48	1
7	227	2.533	91.2	27	-33	3	30	12	48	0
8	228	3.005	93.1	28	19	3	30	12	48	0
9	229	3.484	95.2	29	15	3	30	12	48	0
10	230	4.009	99.9	30	6	3	30	12	48	0
11	231	4.380	94.0	31	13	3	30	12	48	0
12	232	5.012	95.0	32	14		30	12	48	1
13	233	5.572	95.1	33	--		30	12	48	1
14	234	5.959	96.4	34	15	3	30	12	48	0
15	235	6.392	93.8	35	-47	3	30	12	48	0
16	236	6.895	95.9	36	0	1	30	12	88	0
17	237	7.511	96.0	37	52	1	30	12	88	0
18	238	7.856	95.6	38	6	1	30	12	88	0
19	239	8.473	92.3	39	4	1	30	12	88	0
20	240	8.917	91.4	40	7	1	30	12	48	0

FIELD DATA TABLE

MAMMOTH LAKES, CALIFORNIA
 SHOT NUMBER 11 TEAM 3
 SHOT POINT 8
 SHOT TIME: 222: 9: 0: 0.313

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	241	19.725	85.2	41	5	1	30	12	48	0
2	242	20.347	85.8	42	2	1	30	12	48	0
3	243	20.894	85.6	43	-17	1	30	12	48	0
4	244	21.437	84.8	44	-8	1	30	12	48	0
5	245	22.062	84.5	45	0		30	12	48	17
6	246	22.504	84.0	46	-10	1	30	12	88	0
7	247	22.916	83.3	47	43	1	30	12	88	0
8	248	23.301	82.7	48	-18	1	30	12	48	0
9	249	23.947	82.7	49	4	1	30	12	48	0
10	250	25.293	84.3	50	-2	1	30	12	48	0
11	251	27.901	83.3	51	19	1	30	12	48	0
12	252	29.896	83.4	52	5	1	30	12	48	0
13	253	34.012	83.6	53	4	1	30	12	48	0
14	254	38.892	93.5	54	-13	2	30	12	48	0
15	255	45.377	86.7	55	5	2	30	12	48	0
16	256	49.473	84.0	56	0	2	30	12	48	0
17	257	54.185	82.2	57	-12	2	30	12	48	0
18	258	59.599	80.2	58	-3	2	30	12	48	0
19	259			59	0		30	12	42	1
20	260	64.324	80.6	60	-8	2	30	12	48	0

FIELD DATA TABLE

MAMMOTH LAKES, CALIFORNIA
 SHOT NUMBER 11 TEAM 4
 SHOT POINT 8
 SHOT TIME: 222: 9: 0: 0.313

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	261	1.008	269.7	61	13	1	30	12	88	0
2	262	1.531	262.2	62	9	1	30	12	88	0
3	263	2.031	268.0	63	7	3	30	12	48	0
4	264	2.334	266.9	64	10	3	30	12	48	0
5	265	2.898	267.2	65	4	3	30	12	48	0
6	266	3.380	261.0	66	19	3	30	12	48	0
7	267	3.934	259.8	67	-18	3	30	12	48	0
8	268	4.442	259.9	68	5	3	30	12	48	0
9	269	4.947	261.3	69	8	3	30	12	48	0
10	270	5.428	259.7	70	17	1	30	12	48	0
11	271	5.943	259.4	71	1	3	30	12	48	0
12	272	6.400	259.7	72	13	3	30	12	48	0
13	273	6.947	259.1	73	-4	3	30	12	48	0
14				74	--		30	12	48	1
15	275	7.436	258.9	75	16	1	30	12	48	0
16	279	9.444	258.9	76	-9	1	30	12	88	0
17	276	7.930	259.1	77	-2	1	30	12	88	0
18	278	9.032	258.8	78	6	1	30	12	88	0
19	277	8.423	258.9	79	5	1	30	12	88	0
20	280	9.917	259.5	80	15	1	30	12	88	0

FIELD DATA TABLE

MAMMOTH LAKES, CALIFORNIA
 SHOT NUMBER 11 TEAM 5
 SHOT POINT 8
 SHOT TIME: 222: 9: 0: 0.313

	LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE GRADE
1	281	9.443	90.5	81	38	1	30	12	48	0
2	282	9.924	89.1	82	7	1	30	12	48	0
3	283	10.370	88.5	83	-65		30	12	48	2
4	284	10.874	88.6	84	-68		30	12	48	17
5	285	11.397	87.5	85	-13	1	30	12	48	30
6	286	11.956	86.9	86	-11	1	30	12	48	0
7	287	12.392	88.4	87	-48	1	30	12	48	0
8	288	12.904	89.6	88	-70	1	30	12	48	0
9	289	13.457	89.3	89	-36	1	30	12	48	0
10	290	14.104	90.2	90	-84	1	30	12	48	0
11	291	14.575	88.7	91	-30	1	30	12	48	0
12	292	14.960	87.7	92	-65	2	30	12	48	0
13	293	15.414	86.6	93	-66	1	30	12	48	0
14	294	15.927	86.9	94	-48	1	30	12	48	0
15	295	16.394	86.5	95	-65	1	30	12	48	0
16	296	16.889	86.5	96	2	1	30	12	48	0
17	297	17.709	87.0	97	-33	1	30	12	48	0
18	298	18.205	86.2	98	-10	1	30	12	48	0
19	299	18.819	84.8	99	-44	1	30	12	48	30
20	300	19.357	84.5	100	-31	1	30	12	48	0

APPENDIX B**First Arrival Times**

Appendix B is a listing of the first arrival times picked from the record sections. Included are: shotpoint number, recorder site location, travel-time picks in both real and reduced (T-X/6) times, and distance (km) and azimuth of the recorder from the shotpoint.

FIRST ARRIVAL TIMES - SHOT 1

SHOT POINT	LOC	REAL TIME	REDUCED TIME	DIST	AZIM	SHOT POINT	LOC	REAL TIME	REDUCED TIME	DIST	AZIM
1	101	1.196	0.568	3.767	332.789	1	168	3.710	0.723	17.922	328.058
1	102	1.121	0.571	3.296	330.626	1	169	3.766	0.709	18.347	327.380
1	103	0.923	0.456	2.798	329.160	1	172	4.157	0.880	19.661	328.334
1	104	0.695	0.311	2.308	329.106	1	170	3.941	0.805	18.816	326.870
1	105	0.566	0.278	1.729	326.970	1	171	4.050	0.837	19.273	327.092
1	106	0.393	0.187	1.234	329.266	1	175	4.266	0.782	20.905	327.032
1	107	0.260	0.138	0.737	327.240	1	176	4.359	0.795	21.385	326.725
1	108	0.128	0.083	0.274	295.470	1	177	4.411	0.773	21.827	326.562
1	111	0.528	0.227	-1.804	129.660	1	178	4.479	0.762	22.298	326.545
1	113	1.217	0.577	-3.837	121.314	1	179	4.587	0.762	22.945	326.609
1	114	1.364	0.572	-4.748	118.762	1	181	4.693	0.770	23.537	326.367
1	115	1.677	0.717	5.756	117.054	1	183	4.859	0.777	24.495	326.678
1	119	3.504	0.975	-15.171	120.671	1	185	5.055	0.805	25.496	327.040
1	121	5.991	0.816	31.052	330.902	1	187	5.198	0.784	26.483	327.374
1	123	6.197	0.864	32.000	331.526	1	188	5.275	0.777	26.992	327.691
1	122	6.091	0.838	31.517	331.223	1	189	5.345	0.773	27.430	328.074
1	125	6.359	0.842	33.099	332.251	1	192	5.538	0.798	28.436	329.322
1	127	6.553	0.804	34.498	333.044	1	193	5.654	0.805	29.092	329.463
1	128	6.785	0.881	35.425	333.525	1	194	5.732	0.787	29.668	329.908
1	129	6.952	0.889	36.374	333.616	1	195	5.835	0.812	30.135	330.324
1	131	7.571	0.864	40.245	332.391	1	200	6.252	0.841	32.463	331.840
1	132	7.899	0.876	42.136	332.651	1					
1	133	6.187	0.745	32.657	320.176	1					
1	134	6.290	0.808	32.894	323.838	1					
1	135	6.186	0.798	32.325	326.957	1					
1	136	6.286	0.808	32.869	330.460	1					
1	139	6.556	1.044	33.075	351.286	1					
1	140	6.797	1.088	34.258	355.482	1					
1	142	1.470	0.696	4.644	338.350	1					
1	146	1.959	0.838	6.726	336.555	1					
1	147	2.070	0.872	7.186	337.210	1					
1	149	2.311	0.948	8.182	336.352	1					
1	150	2.458	1.013	8.672	335.982	1					
1	151	2.561	1.033	9.169	335.641	1					
1	152	2.559	0.943	9.696	335.380	1					
1	153	2.574	0.883	10.151	335.064	1					
1	154	2.567	0.797	10.615	332.632	1					
1	156	2.651	0.707	11.660	333.893	1					
1	157	2.715	0.696	12.115	333.494	1					
1	159	2.916	0.727	13.135	333.254	1					
1	161	3.089	0.721	14.206	330.994	1					
1	163	3.230	0.664	15.393	329.598	1					
1	164	3.288	0.681	15.639	327.897	1					
1	162	3.189	0.716	14.839	330.414	1					
1	165	3.377	0.659	16.307	328.424	1					

* Indicates stations on fan profile

FIRST ARRIVAL TIMES - SHOT 2

SHOT POINT	LOC	REAL TIME	REDUCED TIME	DIST	AZIM	SHOT POINT	LOC	REAL TIME	REDUCED TIME	DIST	AZIM
3	101	2.032	0.899	-6.801	153.953	3	171	2.099	0.624	8.851	319.395
3	103	2.062	0.765	-7.780	155.111	3	172	2.198	0.667	9.187	322.351
3	104	2.208	0.830	-8.269	154.773	3	175	2.387	0.641	10.473	320.473
3	105	2.280	0.804	-8.852	154.818	3	176	2.460	0.633	10.963	320.166
3	106	2.352	0.796	-9.337	154.102	3	177	2.536	0.633	11.417	319.729
3	107	2.409	0.770	-9.836	154.009	3	178	2.612	0.633	11.878	320.334
3	108	2.487	0.761	-10.354	154.472	3	179	2.701	0.616	12.510	321.135
3	111	2.887	0.847	-12.239	150.119	3	181	2.811	0.624	13.118	320.602
3	113	3.166	0.839	-13.963	145.118	3	183	3.019	0.676	14.059	321.533
3	114	3.334	0.881	-14.718	142.942	3	185	3.191	0.684	15.042	322.485
3	115	3.496	0.9000	-15.575	140.8511	3	187	3.345	0.676	16.016	323.316
3	119	4.685	0.565	-24.718	134.093	3	188	3.445	0.693	16.513	323.959
3	121	4.110	0.693	20.501	329.545	3	190	3.580	0.685	17.371	325.4093
3	122	4.212	0.719	20.962	330.058	3	191	3.667	0.701	17.795	326.049
3	125	4.440	0.684	22.535	331.649	3	192	3.636	0.650	17.913	326.840
3	127	4.846	0.858	23.930	332.826	3	193	3.779	0.684	18.566	327.148
3	133	4.418	0.667	22.505	313.956	3	194	3.856	0.667	19.132	327.907
3	134	4.510	0.753	22.545	319.316	3	195	3.950	0.684	19.592	328.593
3	135	4.370	0.727	21.859	323.786	3	200	4.369	0.719	21.902	331.022
3	136	4.405	0.684	22.323	329.006						
3	138	4.715	0.961	22.524	351.443						
3	139	4.831	0.959	23.235	359.240						
3	140	5.070	0.941	24.772	4.636						
3	142	1.925	0.933	-5.955	149.634						
3	144	1.655	0.847	-4.844	151.621						
3	146	1.440	0.796	-3.867	148.291						
3	147	1.358	0.787	-3.427	145.826						
3	149	1.080	0.676	-2.429	144.026						
3	150	0.759	0.436	-1.939	142.552						
3	151	0.616	0.376	-1.444	140.079						
3	152	0.428	0.273	-0.930	133.976						
3	153	0.236	0.153	-0.499	120.795						
3	154	0.053	0.024	-0.174	258.921						
3	155	0.343	0.230	0.676	348.519						
3	156	0.490	0.307	1.095	337.313						
3	157	0.548	0.290	1.547	333.188						
3	158	0.632	0.290	2.050	335.194						
3	159	0.752	0.324	2.568	332.081						
3	160	0.845	0.3359	3.1085	328.157						
3	161	0.990	0.377	3.679	323.673						
3	162	1.157	0.436	4.325	322.767						
3	163	1.219	0.401	4.904	321.089						
3	164	1.298	0.427	5.226	316.440						
3	165	1.386	0.410	5.837	319.176						
3	168	1.679	0.434	7.470	320.299						
3	169	1.777	0.457	7.921	319.159						
3	170	1.983	0.581	8.409	318.488						

* Indicates stations on fan profile

FIRST ARRIVAL TIMES - SHOT 3

SHOT POINT	LOC	REAL TIME	REDUCED TIME	DIST	AZIM	SHOT POINT	LOC	REAL TIME	REDUCED TIME	DIST	AZIM
5	101	4.932	0.806	-24.756	149.125	5	170	2.288	0.661	-9.764	154.882
5	104	5.200	0.832	-26.210	149.652	5	171	2.161	0.611	-9.302	154.820
5	105	5.283	0.818	-26.790	149.778	5	172	2.061	0.582	-8.872	152.429
5	106	5.366	0.819	-27.283	149.624	5	175	1.828	0.546	-7.692	156.615
5	107	5.385	0.755	-27.781	149.671	5	176	1.717	0.511	-7.240	158.141
5	108	5.496	0.781	-28.291	149.919	5	177	1.593	0.454	-6.839	160.007
5	111	5.830	0.794	-30.219	148.443	5	178	1.550	0.489	-6.364	160.382
5	113	6.169	0.845	-31.946	146.349	5	179	1.370	0.418	-5.711	160.907
5	114	6.266	0.819	-32.682	145.343	5	181	1.262	0.396	-5.191	164.439
5	115	6.558	0.974	-33.509	144.312	5	182	1.191	0.402	-4.738	166.151
5	116	6.808	1.089	-34.311	143.346	5	183	1.083	0.376	-4.243	166.745
5	119	8.224	1.154	-42.426	139.660	5	185	0.901	0.359	-3.255	170.129
5	122	0.850	0.330	3.117	346.135	5	187	0.648	0.264	-2.299	176.250
*5	125	1.175	0.376	4.797	348.132	5	188	0.570	0.273	-1.785	179.935
5	127	1.506	0.461	6.270	348.831	5	190	0.346	0.204	-0.850	189.778
5	128	1.737	0.530	7.242	349.094	5	191	0.269	0.196	-0.437	210.374
5	129	1.892	0.530	8.175	347.698	5	192	0.094	0.067	-0.163	209.798
5	131	2.478	0.504	11.844	339.089	5	193	0.275	0.179	0.580	322.298
5	132	2.881	0.590	13.744	338.959	5	194	0.423	0.230	1.161	337.279
*5	133	1.621	0.539	6.496	274.261	5	195	0.525	0.248	1.659	342.700
*5	134	1.379	0.487	5.348	291.482	5	197	0.742	0.305	2.617	345.156
*5	135	1.131	0.455	4.057	308.016	5	196	0.655	0.298	2.140	343.752
*5	136	1.088	0.359	4.376	336.012	5	199	0.989	0.384	3.626	346.982
*5	137	1.610	0.599	6.068	13.044	5	200	1.076	0.389	4.121	347.443
*5	138	2.671	1.079	9.555	41.692						
*5	139	3.017	0.950	12.401	49.251						
*5	140	3.528	1.010	15.107	50.776						
5	142	4.964	0.974	-23.940	147.883						
5	144	4.803	0.999	-22.822	148.219						
5	146	4.590	0.948	-21.855	147.478						
5	147	4.517	0.948	-21.414	147.068						
5	149	4.350	0.948	-20.413	146.915						
5	150	4.181	0.861	-19.921	146.842						
5	152	3.910	0.761	-18.894	146.654						
5	153	3.789	0.716	-18.436	146.612						
5	154	3.691	0.704	-17.925	147.821						
5	155	3.547	0.654	-17.360	146.498						
5	156	3.451	0.632	-16.911	146.660						
5	157	3.359	0.618	-16.450	146.752						
5	158	3.285	0.625	-15.960	146.295						
5	161	3.069	0.682	-14.319	148.235						
5	162	2.934	0.654	-13.681	148.736						
5	163	2.870	0.682	-13.124	149.620						
5	164	2.831	0.682	-12.894	151.681						
5	165	2.704	0.668	-12.219	151.187						
5	168	2.394	0.625	-10.613	152.224						
5	169	2.319	0.618	-10.210	153.608						

* Indicates stations on fan profile

FIRST ARRIVAL TIMES - SHOT 4

SHOT POINT	LOC	REAL TIME	REDUCED TIME	DIST	AZIM	SHOT POINT	LOC	REAL TIME	REDUCED TIME	DIST	AZIM
2	101	0.674	0.514	-0.960	185.633	2	169	3.204	0.891	13.874	323.460
2	102	0.752	0.513	-1.433	179.542	2	170	3.330	0.937	14.355	322.921
2	103	0.867	0.549	-1.913	174.183	2	171	3.439	0.971	14.805	323.331
2	104	0.977	0.583	-2.367	169.201	2	172	3.545	1.017	15.167	325.032
2	105	1.084	0.594	-2.937	166.495	2	175	3.676	0.937	16.435	323.628
2	106	1.160	0.594	-3.394	162.910	2	176	3.780	0.960	16.921	323.338
2	107	1.266	0.6231	-3.857	161.550	2	177	3.832	0.937	17.370	322.968
2	108	1.375	0.640	-4.410	161.746	2	178	3.876	0.903	17.836	323.287
2	111	1.828	0.789	-6.235	151.062	2	179	4.028	0.949	18.477	323.728
2	114	2.411	0.949	-8.772	138.699	2	181	4.128	0.949	19.078	323.279
2	115	2.766	1.134	-9.672	135.712	2	182	4.333	1.074	19.554	323.374
2	116	2.916	1.156	-10.557	133.248	2	183	4.309	0.971	20.028	323.807
2	119	4.284	1.120	-18.984	129.378	2	185	4.511	1.008	21.019	324.381
2	121	5.430	1.012	26.506	329.453	2	187	4.627	0.961	21.999	324.902
2	122	5.524	1.029	26.967	329.854	2	188	4.724	0.974	22.501	325.339
2	123	5.599	1.025	27.445	330.231	2	189	4.791	0.969	22.931	325.841
*2	125	5.731	0.975	28.536	331.121	2	190	4.868	0.974	23.367	326.367
2	127	5.993	1.005	29.926	332.088	2	191	4.969	1.004	23.794	326.828
2	128	6.186	1.045	30.848	332.668	2	192	4.981	0.995	23.915	327.417
2	129	6.344	1.045	31.797	332.798	2	193	5.085	0.991	24.568	327.634
2	131	6.962	1.015	35.679	331.506	2	194	5.193	1.004	25.137	328.201
*2	133	5.819	1.095	28.346	317.134	2	195	5.261	0.995	25.597	328.722
*2	134	5.752	1.005	28.482	321.375	2	196	5.355	1.012	26.055	329.061
*2	135	5.606	0.965	27.844	324.938	2	200	5.636	1.005	27.905	330.617
*2	136	5.806	1.085	28.329	329.035						
*2	137	5.979	1.215	28.586	336.449						
*2	138	6.120	1.425	28.171	346.809						
*2	139	5.990	1.225	28.589	353.201						
*2	140	6.263	1.285	29.865	357.941						
2	142	0.092	0.080	0.072	283.603						
2	144	0.746	0.549	1.184	318.939						
2	146	1.042	0.686	2.139	330.676						
2	145	0.869	0.594	1.650	325.537						
2	147	1.220	0.789	2.591	333.526						
2	149	1.467	0.869	3.593	332.596						
2	150	1.629	0.949	4.085	332.263						
2	151	1.724	0.960	4.585	331.985						
2	155	1.965	0.857	6.646	331.074						
2	156	2.005	0.823	7.091	330.398						
2	157	2.093	0.834	7.550	329.969						
2	158	2.153	0.811	8.047	330.680						
2	160	2.365	0.846	9.114	328.805						
2	162	2.531	0.811	10.315	326.472						
2	163	2.614	0.800	10.882	325.521						
2	164	2.649	0.789	11.163	323.231						
2	165	2.792	0.823	11.818	324.219						
2	168	3.139	0.900	13.436	324.237						

* Indicates stations on fan profile

FIRST ARRIVAL TIMES - SHOT 5

SHOT POINT	LOC	REAL TIME	REDUCED TIME	DIST	AZIM	SHOT POINT	LOC	REAL TIME	REDUCED TIME	DIST	AZIM
4	101	2.741	0.754	-11.921	146.285	4	163	0.275	0.183	-0.550	88.985
4	103	2.865	0.720	-12.873	147.558	4	164	0.006	0.000	0.035	123.391
4	104	2.913	0.686	-13.363	147.627	4	165	0.282	0.1728	0.6570	342.373
4	105	2.986	0.663	-13.941	147.953	4	168	0.673	0.297	2.253	329.539
4	106	3.059	0.663	-14.436	147.723	4	169	0.806	0.3595	2.680	324.668
4	107	3.153	0.6641	-14.9335	147.874	4	170	0.938	0.411	3.160	322.038
4	108	3.236	0.663	-15.440	148.388	4	171	1.047	0.446	3.610	323.827
4	111	3.596	0.697	-17.393	145.990	4	172	1.226	0.560	3.994	330.253
4	113	3.905	0.709	-19.179	142.722	4	175	1.433	0.560	5.241	324.604
4	114	4.045	0.720	-19.952	141.207	4	176	1.492	0.537	5.726	323.664
4	115	4.305	0.834	-20.823	139.716	4	177	1.566	0.537	6.175	322.600
4	116	4.549	0.937	-21.670	138.358	4	178	1.655	0.549	6.641	323.482
4	119	5.516	0.521	-29.974	134.490	4	179	1.774	0.560	7.283	324.583
4	121	3.280	0.709	15.428	334.002	4	181	1.874	0.560	7.883	323.433
4	123	3.475	0.743	16.394	335.039	4	182	1.987	0.594	8.359	323.647
4	125	3.628	0.709	17.518	336.185	4	183	2.078	0.606	8.834	324.612
4	127	3.889	0.731	18.946	337.334	4	187	2.431	0.629	10.814	326.693
4	128	4.093	0.777	19.894	337.987	4	188	2.527	0.640	11.322	327.480
4	131	4.841	0.731	24.657	335.272	4	189	2.589	0.629	11.760	328.380
4	132	5.431	1.0056	26.550	335.479	4	190	2.697	0.663	12.206	329.294
4	133	3.561	0.686	17.251	313.225	4	192	2.793	0.663	12.778	331.132
4	134	3.671	0.789	17.295	320.215	4	193	2.914	0.674	13.436	331.348
4	135	3.474	0.697	16.658	326.124	4	194	3.022	0.686	14.020	332.211
4	136	3.592	0.720	17.231	332.835	4	195	3.113	0.697	14.496	333.000
4	137	3.699	0.720	17.877	344.706	4	196	3.214	0.720	14.963	333.459
4	138	3.890	0.811	18.469	0.852	4	198	3.465	0.811	15.924	334.584
4	139	4.142	0.857	19.708	9.688	4	200	3.531	0.811	16.868	335.545
4	140	4.485	0.880	21.629	15.078						
4	142	2.691	0.834	-11.140	143.406						
4	144	2.435	0.766	-10.015	143.670						
4	145	2.380	0.789	-9.546	142.762						
4	146	2.267	0.754	-9.079	141.408						
4	147	2.197	0.754	-8.658	140.088						
4	149	1.805	0.526	-7.673	138.775						
4	150	1.668	0.469	-7.1902	138.022						
4	151	1.505	0.389	-6.701	137.156						
4	152	1.569	0.537	-6.189	135.997						
4	153	1.426	0.469	-5.742	135.018						
4	154	1.318	0.457	-5.168	137.980						
4	155	1.184	0.400	-4.701	131.967						
4	156	1.052	0.343	-4.255	131.074						
4	157	0.977	0.343	-3.805	129.592						
4	158	0.884	0.320	-3.384	125.078						
4	159	0.799	0.320	-2.873	122.338						
4	160	0.693	0.309	-2.306	120.351						
4	161	0.520	0.240	-1.677	120.135						
4	162	0.408	0.229	-1.076	109.685						

* Indicates stations on fan profile

FIRST ARRIVAL TIMES - SHOT 6

SHOT POINT	LOC	REAL TIME	REDUCED TIME	DIST	AZIM	SHOT POINT	LOC	REAL TIME	REDUCED TIME	DIST	AZIM
6	101	5.963	0.919	-30.264	152.070	6	177	2.634	0.549	-12.513	162.264
6	103	6.086	0.880	-31.238	152.417	6	178	2.567	0.560	-12.040	162.552
6	104	6.088	0.800	-31.728	152.371	6	179	2.458	0.560	-11.390	162.939
6	105	6.174	0.789	-32.310	152.426	6	181	2.350	0.537	-10.877	164.721
6	106	6.278	0.811	-32.799	152.258	6	182	2.274	0.537	-10.423	165.511
6	113	7.054	0.825	-37.375	149.139	6	183	2.158	0.503	-9.928	165.733
6	119	8.783	0.846	-47.623	142.592	6	185	2.003	0.514	-8.932	166.852
6	121	0.808	0.297	-3.063	164.890	6	188	1.718	0.480	-7.425	168.535
6	122	0.714	0.286	-2.570	163.576	6	189	1.604	0.446	-6.951	168.409
6	127	0.267	0.149	0.709	21.431	6	190	1.501	0.423	-6.467	168.137
6	128	0.499	0.229	1.623	3.648	6	191	1.469	0.469	-6.001	167.948
6	129	0.658	0.240	2.510	333.864	6	192	1.379	0.411	-5.803	166.116
6	131	1.310	0.274	6.216	333.707	6	193	1.259	0.400	-5.156	167.462
*6	133	1.614	0.434	-7.079	224.964	6	194	1.111	0.354	-4.538	166.942
*6	134	1.218	0.389	-4.974	224.747	6	195	1.003	0.331	-4.029	165.916
*6	135	0.850	0.274	-3.453	209.908	6	196	0.911	0.320	-3.547	165.718
*6	136	0.403	0.149	-1.524	191.553	6	199	0.573	0.229	-2.066	161.461
*6	137	0.902	0.423	2.873	81.594	6	200	0.423	0.160	-1.579	158.537
*6	138	2.121	0.789	7.997	78.139						
*6	139	2.742	0.880	11.172	76.524						
*6	140	3.269	0.971	13.784	72.863						
6	142	5.863	0.960	-29.421	151.144						
6	144	5.690	0.971	-28.313	151.542						
6	145	5.632	0.994	-27.827	151.366						
6	146	5.492	0.937	-27.330	151.069						
6	147	5.463	0.983	-26.880	150.802						
6	149	5.262	0.949	-25.878	150.825						
6	150	4.962	0.731	-25.385	150.844						
6	151	4.913	0.766	-24.885	150.867						
6	152	4.814	0.754	-24.356	150.867						
6	153	4.749	0.76	-23.899	150.915						
6	154	4.600	0.697	-23.417	151.932						
6	155	4.467	0.663	-22.823	151.031						
6	156	4.347	0.617	-22.379	151.244						
6	157	4.294	0.640	-21.921	151.409						
6	158	4.165	0.594	-21.423	151.176						
6	159	4.135	0.651	-20.901	151.458						
6	161	3.945	0.640	-19.831	152.977						
6	163	3.808	0.697	-18.667	154.250						
6	164	3.799	0.720	-18.474	155.743						
6	165	3.662	0.697	-17.792	155.559						
6	168	3.387	0.686	-16.207	156.668						
6	169	3.277	0.640	-15.823	157.673						
6	170	3.229	0.663	-15.394	158.597						
6	171	3.140	0.651	-14.932	158.672						
6	175	2.852	0.629	-13.343	160.170						
6	176	2.756	0.606	-12.903	161.149						

* Indicates stations on fan profile

FIRST, ARRIVAL, TIMES - SHOT 7

SHOT POINT	LOC	REAL TIME	REDUCED TIME	DIST	AZIM	SHOT POINT	LOC	REAL TIME	REDUCED TIME	DIST	AZIM
7	201	0.001	0.000	0.006	207.858	7	265	2.930	0.971	11.754	77.835
7	202	0.358	0.274	0.503	79.040	7	266	2.754	0.880	11.243	79.271
7	203	0.327	0.149	-1.073	273.958	7	267	2.661	0.880	10.688	79.625
7	204	0.313	0.160	0.920	81.320	7	268	2.577	0.880	10.180	79.567
7	206	0.691	0.331	2.156	80.323	7	269	2.447	0.834	9.678	78.861
7	207	0.831	0.389	2.655	81.008	7	270	2.321	0.789	9.194	79.669
7	208	0.910	0.389	3.131	81.319	7	271	2.166	0.720	8.679	79.836
7	209	1.028	0.411	3.700	80.934	7	272	2.056	0.686	8.221	79.673
*7	212	2.207	0.617	9.538	11.310	7	273	2.068	0.789	7.676	80.225
*7	213	2.498	0.480	12.106	1.289	7	275	1.861	0.663	7.188	80.523
*7	214	2.999	0.560	14.632	357.073	7	276	1.801	0.686	6.692	80.337
*7	215	1.251	0.514	4.418	83.043	7	277	1.651	0.617	6.200	80.734
7	221	3.215	0.869	14.078	79.192	7	278	1.492	0.560	5.593	81.041
7	222	3.285	0.857	14.565	79.748	7	279	1.423	0.560	5.180	81.046
7	223	3.262	0.743	15.115	79.987	7	281	4.703	0.709	23.965	83.906
7	224	3.447	0.857	15.542	80.759	7	282	4.844	0.766	24.468	83.467
7	227	3.721	0.869	17.112	81.369	7	286	5.278	0.857	26.527	82.932
7	228	3.807	0.880	17.559	81.947	7	287	5.404	0.914	26.938	83.683
7	229	3.846	0.846	18.003	82.647	7	288	5.508	0.937	27.425	84.325
7	230	3.896	0.823	18.437	83.985	7	289	5.532	0.869	27.982	84.290
7	235	4.280	0.800	20.880	83.962	7	290	5.716	0.949	28.606	84.850
7	236	4.332	0.777	21.330	84.867	7	291	5.788	0.937	29.108	84.203
7	237	4.444	0.789	21.934	85.198	7	292	5.890	0.971	29.512	83.711
7	239	4.605	0.777	22.966	84.302	7	293	5.980	0.983	29.982	83.243
7	240	4.693	0.789	23.425	84.120	7	294	6.087	1.006	30.489	83.446
7	241	6.747	1.029	34.309	82.858	7	295	6.212	1.051	30.962	83.301
7	242	6.860	1.040	34.922	83.251	7	296	6.203	0.960	31.457	83.319
7	243	7.020	1.109	35.471	83.171	7	297	6.429	1.051	32.267	83.680
7	244	7.079	1.074	36.026	82.719	7	298	6.480	1.017	32.777	83.272
7	245	7.183	1.074	36.655	82.570	7	299	6.608	1.040	33.410	82.341
7	246	7.269	1.086	37.102	82.286	7	300	6.767	1.109	33.951	82.425
7	247	7.282	1.029	37.521	81.873	*7	128	1.929	0.503	8.559	22.410
7	248	7.347	1.029	37.912	81.528	*7	162	3.469	0.800	16.015	132.858
7	249	7.489	1.063	38.558	81.537	*7	172	2.616	0.743	11.240	128.928
7	250	7.676	1.029	39.886	82.619	*7	185	1.514	0.560	5.724	114.844
7	251	8.158	1.074	42.505	82.050	*7	199	1.454	0.491	5.776	41.372
7	252	8.525	1.109	44.499	82.159						
7	253	9.119	1.017	48.612	82.398						
7	254	9.771	0.903	53.212	89.766						
7	255	10.958	0.971	59.919	85.025						
7	256	11.786	1.109	64.066	82.992						
7	257	12.552	1.086	68.798	81.632						
7	258	13.353	0.983	74.220	80.134						
7	260	14.220	1.063	78.945	80.465						
7	262	3.131	0.949	13.093	79.374						
7	263	3.074	0.971	12.615	78.332						
7	264	3.012	0.960	12.310	78.301						

* Indicates stations on fan profile

FIRST ARRIVAL TIMES - SHOT 8

SHOT POINT	LOC	REAL TIME	REDUCED TIME	DIST	AZIM	SHOT POINT	LOC	REAL TIME	REDUCED TIME	DIST	AZIM
9	201	4.479	0.766	-22.280	265.229	9	266	2.625	0.766	-11.155	271.257
9	204	4.245	0.686	-21.359	265.410	9	267	2.668	0.720	-11.685	270.376
9	206	4.098	0.743	-20.129	265.767	9	268	2.774	0.743	-12.187	269.978
9	208	3.798	0.606	-19.154	265.882	9	269	2.860	0.743	-12.703	270.097
9	209	3.795	0.697	-18.589	266.098	9	270	2.958	0.766	-13.155	269.131
*9	212	4.547	0.937	-21.658	290.272	9	271	2.974	0.697	-13.660	268.672
*9	213	5.072	1.040	-24.192	295.081	9	272	3.038	0.686	-14.116	268.481
*9	214	5.299	0.926	-26.241	299.108	9	273	3.081	0.640	-14.644	267.868
*9	215	3.686	0.709	-17.862	265.785	9	275	3.172	0.651	-15.124	267.481
9	221	1.938	0.537	-8.407	275.404	9	276	3.312	0.709	-15.618	267.340
9	222	1.808	0.491	-7.901	275.402	9	277	3.404	0.720	-16.102	266.975
9	223	1.729	0.503	-7.355	276.087	9	278	3.458	0.674	-16.703	266.646
9	224	1.628	0.480	-6.888	275.396	9	279	3.538	0.686	-17.114	266.509
9	225	1.482	0.434	-6.288	277.124	9	281	0.387	0.091	1.773	66.879
9	227	1.357	0.469	-5.329	277.763	9	282	0.545	0.160	2.309	66.092
9	228	1.277	0.469	-4.851	277.245	9	282	1.059	0.331	4.363	71.063
9	229	1.128	0.400	-4.368	275.993	9	286	1.185	0.400	4.709	76.296
9	230	1.010	0.366	-3.865	271.243	9	288	1.261	0.400	5.164	80.371
9	231	0.934	0.354	-3.475	277.737	9	289	1.273	0.320	5.721	80.586
9	234	0.624	0.309	-1.894	273.268	9	290	1.513	0.457	6.332	83.473
9	235	0.520	0.274	-1.477	283.633	9	291	1.644	0.503	6.847	80.824
9	237	0.242	0.183	-0.343	268.020	9	292	1.680	0.469	7.269	79.020
9	236	0.422	0.263	-0.957	273.602	9	293	1.808	0.514	7.759	77.499
9	239	0.290	0.160	0.783	56.523	9	294	1.879	0.503	8.255	78.598
9	240	0.377	0.171	1.232	63.407	9	296	2.052	0.514	9.225	78.674
9	241	2.701	0.686	12.089	78.464	9	295	2.027	0.571	8.733	78.347
9	242	2.823	0.709	12.684	79.755	9	295	2.363	0.606	10.543	79.111
9	243	2.983	0.777	13.236	79.686	9	298	2.713	0.754	11.755	77.083
9	244	3.067	0.766	13.808	78.648	9	300	2.713	0.754	11.755	77.083
9	246	3.249	0.766	14.902	77.868	*9	128	4.181	0.869	-19.674	287.767
9	247	3.288	0.731	15.342	76.982	*9	162	3.549	0.800	-16.495	219.429
9	248	3.357	0.731	15.751	76.276	*9	172	3.434	0.743	-16.148	236.507
9	249	3.521	0.789	16.394	76.502						
9	250	3.698	0.754	17.664	79.313						
9	251	4.207	0.823	20.304	78.549						
9	252	4.584	0.869	22.290	79.080						
9	253	5.198	0.800	26.389	79.999						
9	254	5.883	0.709	31.049	93.011						
9	255	7.062	0.789	37.643	84.897						
9	257	8.668	0.903	46.592	79.908						
9	256	7.827	0.857	41.819	81.794						
9	258	9.880	1.200	52.079	77.953						
9	260	10.470	1.006	56.785	78.594						
9	261	2.047	0.571	-8.854	274.976						
9	263	2.296	0.651	-9.868	274.087						
9	264	2.437	0.743	-10.165	273.654						
9	265	2.531	0.743	-10.726	273.360						

* Indicates stations on fan profile

FIRST ARRIVAL TIMES -- SHOT 9

SHOT POINT	LOC	REAL TIME	REDUCED TIME	DIST	AZIM	SHOT POINT	LOC	REAL TIME	REDUCED TIME	DIST	AZIM
10	201	7.516	1.065	-38.705	261.527	10	266	5.683	1.105	-27.470	262.459
10	204	7.302	1.005	-37.781	261.539	10	267	5.745	1.075	-28.021	262.262
10	206	7.016	0.925	-36.546	261.605	10	268	5.840	1.085	-28.528	262.236
10	207	7.003	0.995	-36.047	261.573	10	269	5.944	1.105	-29.036	262.424
10	208	6.893	0.965	-35.571	261.553	10	271	6.029	1.025	-30.027	262.024
10	209	6.809	0.975	-35.001	261.597	10	272	6.106	1.025	-30.485	262.036
*10	213	7.474	1.055	38.515	279.573	10	273	6.146	0.975	-31.027	261.858
*10	214	7.911	1.245	39.999	282.879	10	275	6.227	0.975	-31.515	261.764
*10	215	6.719	1.005	-34.285	261.340	10	276	6.380	1.045	-32.010	261.784
10	221	5.032	0.925	-24.641	262.872	10	277	6.472	1.055	-32.501	261.687
10	222	4.929	0.905	-24.147	262.611	10	278	6.503	0.985	-33.108	261.617
10	223	4.857	0.925	-23.595	262.525	10	279	6.572	0.985	-33.522	261.609
10	224	4.795	0.935	-23.161	262.054	10	281	3.170	0.705	-14.793	257.691
10	227	4.533	0.935	-21.589	261.665	10	282	3.144	0.765	-14.273	258.220
10	228	4.489	0.965	-21.143	261.191	10	286	2.869	0.835	-12.201	258.494
10	229	4.356	0.905	-20.705	260.567	10	287	2.836	0.865	-11.828	256.636
10	230	4.228	0.845	-20.298	259.309	10	288	2.773	0.875	-11.390	254.803
10	231	4.178	0.875	-19.816	260.174	10	289	2.601	0.795	-10.839	254.405
10	234	3.875	0.815	-18.359	258.240	10	290	2.628	0.915	-10.280	252.276
10	235	3.812	0.835	-17.864	258.696	10	291	2.456	0.835	-9.723	253.524
10	236	3.744	0.835	-17.454	257.461	10	292	2.432	0.885	-9.281	254.597
10	237	3.617	0.805	-16.874	256.771	10	293	2.338	0.875	-8.780	255.692
10	238	3.530	0.775	-16.532	256.535	10	294	2.257	0.875	-8.294	254.490
10	239	3.409	0.775	-15.804	257.511	10	295	2.177	0.875	-7.814	254.520
10	240	3.332	0.775	-15.339	257.585	10	296	1.996	0.775	-7.327	253.852
10	242	1.202	0.545	-3.939	246.135	10	297	2.010	0.915	-6.571	250.941
10	243	1.072	0.505	-3.401	244.208	10	298	1.739	0.735	-6.024	252.037
10	244	0.979	0.515	-2.786	246.035	10	299	1.633	0.745	-5.331	255.210
10	245	0.765	0.405	-2.158	243.658	10	300	1.542	0.745	-4.785	255.204
10	246	0.664	0.385	-1.676	244.641	*10	128	6.960	1.115	35.069	273.621
10	247	0.525	0.325	-1.202	250.880	*10	162	6.126	0.905	-31.324	238.018
10	248	0.417	0.285	-0.790	261.800	*10	172	6.500	1.135	-32.192	246.648
10	249	0.089	0.065	-0.143	260.825	*10	185	6.673	0.995	-34.070	256.242
10	250	0.508	0.275	1.397	114.242	*10	199	6.752	1.005	-34.480	267.734
10	251	1.172	0.535	3.820	87.281						
10	252	1.654	0.685	5.814	86.321						
10	253	2.470	0.815	9.931	85.765						
10	254	3.533	0.885	15.889	110.177						
10	255	4.594	1.025	21.411	91.342						
10	256	5.347	1.115	25.392	85.213						
10	257	6.161	1.145	30.096	81.757						
10	258	7.190	1.265	35.547	78.610						
10	260	7.965	1.255	40.260	79.438						
10	261	5.147	0.965	-25.091	262.946						
10	263	5.367	1.015	-26.113	263.080						
10	264	5.448	1.045	-26.419	263.039						
10	265	5.602	1.105	-26.981	263.144						

* Indicates stations on fan profile

FIRST ARRIVAL TIMES - SHOT 10

SHOT POINT	LOC	REAL TIME	REDUCED TIME	DIST	AZIM	SHOT POINT	LOC	REAL TIME	REDUCED TIME	DIST	AZIM
5	201	1.276	0.491	-4.708	260.135	5	266	1.810	0.720	6.540	78.611
5	203	1.462	0.503	-5.752	262.735	5	267	1.672	0.674	5.984	79.181
5	206	0.768	0.343	-2.548	260.078	5	268	1.587	0.674	5.477	79.032
5	207	0.605	0.263	-2.050	259.131	5	269	1.474	0.645	4.976	77.604
5	208	0.525	0.263	-1.575	257.946	5	271	1.188	0.526	3.975	79.418
* 5	213	2.407	0.389	12.114	338.906	5	272	1.066	0.480	3.518	78.981
* 5	214	3.133	0.663	14.822	338.724	5	273	0.964	0.469	2.972	80.281
* 5	215	0.209	0.149	-0.365	223.157	5	275	0.860	0.446	2.484	81.155
5	221	2.305	0.743	9.375	78.691	5	276	0.766	0.434	1.988	80.686
5	222	2.375	0.731	9.861	79.538	5	277	0.570	0.320	1.497	82.443
5	223	2.467	0.731	10.411	79.895	5	278	0.400	0.251	0.892	85.536
5	224	2.526	0.720	10.838	81.005	5	279	0.263	0.183	0.481	89.445
5	227	2.800	0.731	12.409	81.816	5	280	0.058	0.057	0.005	360.000
5	228	2.909	0.766	12.858	82.589	5	281	3.806	0.594	19.272	84.812
5	229	2.937	0.720	13.305	83.515	5	282	3.936	0.640	19.773	84.246
5	230	3.000	0.709	13.746	85.283	5	284	4.255	0.800	20.727	84.212
5	231	3.075	0.709	14.200	83.878	5	286	4.370	0.731	21.829	83.523
5	234	3.316	0.697	15.715	85.787	5	287	4.507	0.800	22.244	84.421
5	235	3.395	0.697	16.189	85.058	5	288	4.601	0.811	22.735	85.180
5	236	3.437	0.663	16.646	86.187	5	289	4.602	0.720	23.291	85.117
5	237	3.584	0.709	17.252	86.561	5	290	4.855	0.869	23.920	85.765
5	238	3.619	0.686	17.600	86.591	5	291	4.904	0.834	24.417	84.975
5	239	3.675	0.629	18.276	85.360	5	292	4.994	0.857	24.818	84.378
5	240	3.785	0.663	18.734	85.106	5	293	5.106	0.891	25.286	83.810
5	241	5.895	0.960	29.611	83.281	5	294	5.190	0.891	25.794	84.040
5	242	5.997	0.960	30.225	83.727	5	295	5.326	0.949	26.266	83.857
5	243	6.135	1.006	30.774	83.626	5	296	5.340	0.880	26.761	83.868
5	244	6.204	0.983	31.326	83.098	5	297	5.555	0.960	27.573	84.275
5	246	6.383	0.983	32.401	82.590	5	298	5.640	0.960	28.080	83.788
5	247	6.418	0.949	32.819	82.115	5	300	5.892	1.017	29.251	82.784
5	248	6.518	0.983	33.209	81.718	* 5	128	1.756	0.549	7.242	349.094
5	249	6.660	1.017	33.855	81.724	* 5	162	3.023	0.743	-13.681	148.736
5	250	6.824	0.960	35.186	82.943	* 5	172	2.164	0.686	-8.872	152.429
5	252	7.661	1.029	39.797	82.392	* 5	185	0.908	0.366	-3.255	170.129
5	251	7.238	0.937	37.803	82.281	* 5	199	1.096	0.491	3.626	346.982
5	253	8.244	0.926	43.911	82.634						
5	254	8.942	0.846	48.577	90.689						
5	255	10.120	0.914	55.232	85.436						
5	256	10.934	1.040	59.367	83.213						
5	257	11.654	0.971	64.095	81.737						
5	258	12.660	1.074	69.516	80.130						
5	260	13.402	1.029	74.241	80.482						
5	261	2.242	0.754	8.928	78.272						
5	262	2.118	0.720	8.389	78.917						
5	263	2.085	0.766	7.915	77.227						
5	264	2.023	0.754	7.610	77.134						
5	265	1.965	0.789	7.057	76.266						

* Indicates stations on fan profile

FIRST ARRIVAL TIMES - SHOT 11

SHOT POINT	LOC	REAL TIME	REDUCED TIME	DIST	AZIM	SHOT POINT	LOC	REAL TIME	REDUCED TIME	DIST	AZIM
8	201	3.268	0.830	-14.625	259.657	8	264	0.983	0.594	-2.334	266.933
8	203	3.398	0.787	-15.664	260.643	8	265	1.089	0.606	-2.898	267.153
8	204	3.038	0.754	-13.702	259.564	8	266	1.192	0.629	-3.380	261.014
8	206	2.843	0.766	-12.466	259.562	8	267	1.261	0.606	-3.934	259.808
8	207	2.783	0.789	-11.968	259.379	8	268	1.380	0.640	-4.442	259.921
8	208	2.647	0.731	-11.493	259.227	8	269	1.464	0.640	-4.947	261.266
*8	213	3.547	0.715	-16.994	303.917	8	270	1.556	0.651	-5.428	259.683
*8	214	4.151	0.935	-19.298	308.421	8	271	1.608	0.617	-5.943	259.438
*8	215	2.411	0.709	-10.215	258.219	8	272	1.684	0.617	-6.400	259.677
8	221	0.401	0.309	-0.557	271.959	8	273	1.752	0.594	-6.947	259.066
8	222	0.044	0.034	-0.060	241.496	8	275	1.856	0.617	-7.436	258.854
8	223	0.358	0.274	0.499	89.174	8	276	1.996	0.674	-7.930	259.115
8	224	0.458	0.297	0.963	97.451	8	277	2.158	0.754	-8.423	258.895
8	225	0.582	0.320	1.573	89.738	8	278	2.202	0.697	-9.032	258.828
8	227	0.845	0.423	2.533	91.197	8	279	2.283	0.709	-9.444	258.922
8	228	0.947	0.446	3.005	93.069	8	280	2.361	0.709	-9.917	259.456
8	229	1.015	0.434	3.484	95.216	8	281	1.997	0.423	9.443	90.465
8	230	1.194	0.526	4.009	99.895	8	282	2.088	0.434	9.924	89.059
8	231	1.153	0.423	4.380	93.991	8	285	2.460	0.560	11.397	87.490
8	234	1.439	0.446	5.959	96.404	8	286	2.541	0.549	11.956	86.916
8	235	1.534	0.469	6.392	93.809	8	287	2.648	0.583	12.392	88.414
8	236	1.583	0.434	6.895	95.932	8	288	2.791	0.640	12.904	89.596
8	237	1.755	0.503	7.511	95.995	8	289	2.803	0.560	13.457	89.306
8	238	1.789	0.480	7.856	95.644	8	290	3.013	0.663	14.104	90.215
8	239	1.892	0.480	8.473	92.305	8	291	3.058	0.629	14.575	88.745
8	240	1.955	0.469	8.917	91.420	8	292	3.202	0.709	14.960	87.656
8	241	4.145	0.857	19.725	85.216	8	293	3.266	0.697	15.414	86.627
8	242	4.237	0.846	20.347	85.820	8	294	3.397	0.743	15.927	86.908
8	243	4.408	0.926	20.894	85.616	8	295	3.567	0.834	16.394	86.534
8	244	4.453	0.880	21.437	84.794	8	296	3.535	0.720	16.889	86.473
8	246	4.665	0.914	22.504	83.982	8	297	3.763	0.811	17.709	86.986
8	247	4.779	0.960	22.916	83.276	8	298	3.846	0.811	18.205	86.161
8	248	4.764	0.880	23.301	82.691	8	299	3.994	0.857	18.819	84.768
8	249	4.883	0.891	23.947	82.673	8	300	4.106	0.880	19.357	84.501
8	250	5.095	0.880	25.293	84.320	*8	128	2.840	0.789	-12.311	295.459
8	251	5.553	0.903	27.901	83.294	*8	162	3.038	0.743	-13.773	191.124
8	252	5.965	0.983	29.896	83.373	*8	172	2.668	0.800	-11.211	210.257
8	253	6.457	0.789	34.012	83.568	*8	185	2.443	0.697	-10.478	241.337
8	254	7.293	0.811	38.892	93.543	*8	199	2.744	0.960	-10.702	279.213
8	255	8.431	0.869	45.377	86.747						
8	256	9.205	0.960	49.473	83.971						
8	257	10.048	1.017	54.185	82.159						
8	258	11.122	1.189	59.599	80.246						
8	260	11.898	1.177	64.324	80.644						
8	261	0.499	0.331	-1.008	269.735						
8	262	0.655	0.400	-1.531	262.243						
8	263	0.819	0.480	-2.031	268.041						

* Indicates stations on fan profile