

**UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY**

**SEISMIC REFRACTION DATA COLLECTED IN THE CHUGACH MOUNTAINS
AND ALONG THE GLENN HIGHWAY IN SOUTHERN ALASKA IN 1984**

by

**Margaret A. Daley, Elizabeth L. Ambos,
and Gary Fuis**



Open-File Report 85-531

**This report (map) is preliminary and has not been reviewed for conformity with
U.S. Geological Survey editorial standards (and stratigraphic nomenclature).
Any use of trade names is for descriptive purposes only and does not imply
endorsement by the U.S.G.S.**

*Menlo Park, California
1985*

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1 All at U.S.G.S., Menlo Park, CA

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TABLE OF CONTENTS

	Page
Introduction.....	1
Description of the Survey.....	1
Seismic Recorders and Shooting Systems.....	4
Data Reduction.....	4
Record Sections.....	7
Acknowledgments.....	10
References.....	11
Appendix A: Station and Shotpoint Locations.....	12
Appendix B: Recorder Data Sheets.....	16

FIGURES

1. Tectonostratigraphic Terrane Map of Study Area.....	2
2. Schematic Diagram of a Seismic Recorder.....	5
3. Displacement-Response Curve for a Recording System with a 2 Hz Seismometer.....	6

TABLES

1. Master Shot List.....	3
2. Shot Efficiency Factors.....	9

PLATES

1. Locations of shots and recorders	
2. Record section for Shot 9, Shot Point 17	
3. Record section for Shot 10, Shot Point 18	
4. Record section for Shot 11, Shot Point 19	
5. Record section for Shot 12, Shot Point 20	
6. Record section for Shot 13, Shot Point 21	
7. Alternative true amplitude record section for Shot 13 Shot Point 21	
8. Record section for Shot 25, Shot Point 14	
9. Record section for Shot 26, Shot Point 7	
8. Record section for Shot 27, Shot Point 16	
9. Record section for Shot 28, Shot Point 15	
10. Record section for Shot 29, Shot Point 13	

INTRODUCTION

In June and July of 1984, the U.S.G.S. conducted a seismic refraction experiment in south-central Alaska in order to develop velocity-depth models along transects (1) in the Chugach Mountains, (2) on the Glenn Highway west of Glenallen, and (3) along the Richardson Highway from Valdez to the Denali Fault. The experiment was part of ongoing investigations designed to characterize deep crustal structure along a transect extending from Valdez in the south to Prudhoe Bay in the north.

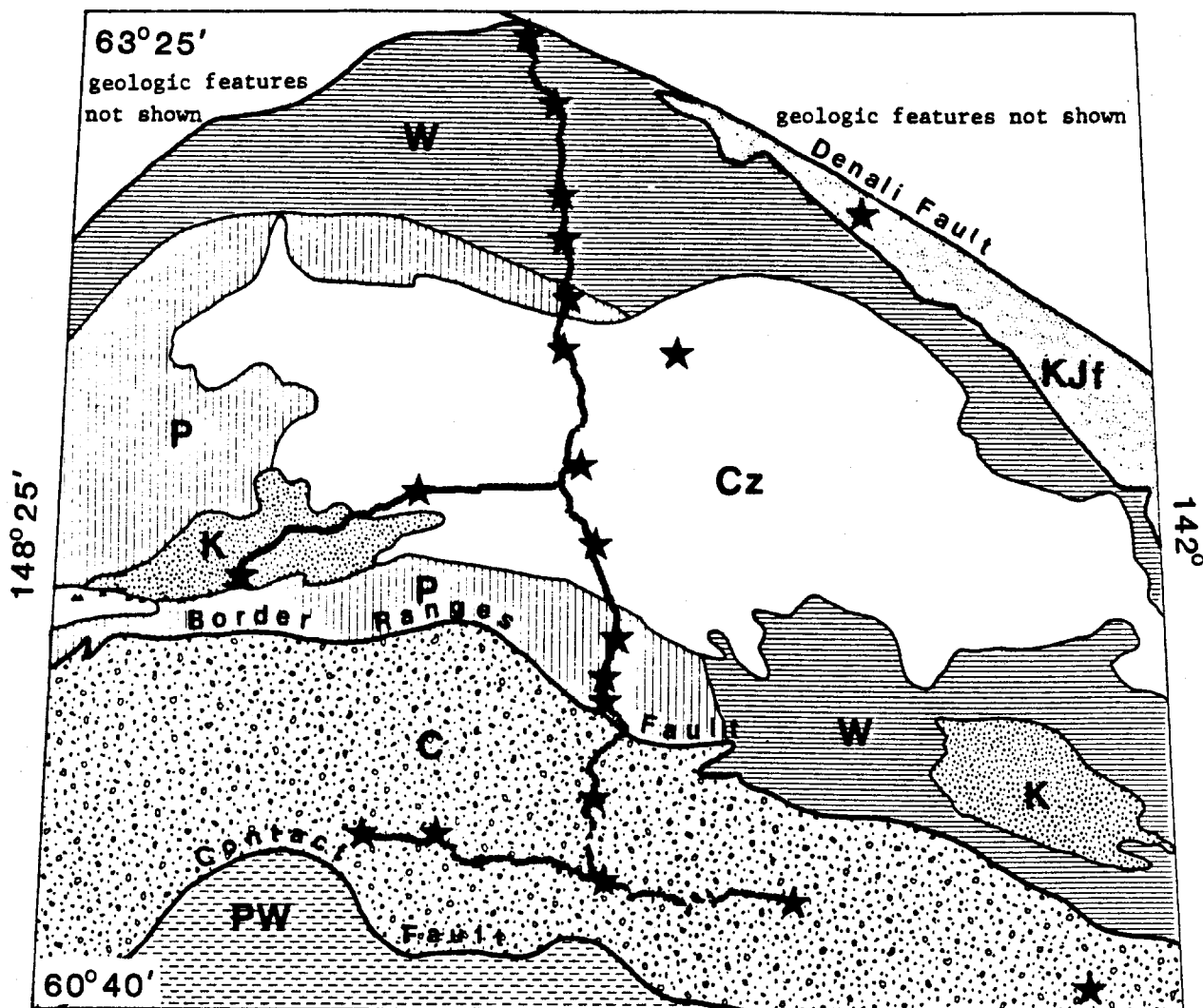
The 1984 experiment was broken into four deployments, or lines, each roughly 140 km long. The locations of the four lines with respect to regional geologic features are shown in Figure 1, annotated locations of shotpoints and receivers are displayed in Plate 1. The two east-west deployments run roughly parallel to the major geologic structures of south-central Alaska. The northernmost of these two profiles begins at Shot Point 7 (see Plate 1) just northeast of Glennallen and extends approximately 160 km to the west along the Glenn Highway. The southern east-west profile extends 136 km along the trend of the Chugach Mts. from a point 13 km west of Valdez to Lake Bremner in the east. The two north-south lines run end to end along the Richardson Highway from Valdez in the south to the Denali Fault in the north. Each of the two east-west lines is contained within one tectonostratigraphic terrane, (Jones and others, 1981), whereas the north-south lines cross terrane boundaries (Fig. 1). This report includes data from the two east-west deployments; data from the north-south deployments will be published in later Open-File reports.

DESCRIPTION OF THE SURVEY

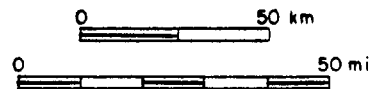
For each deployment, 120 portable seismic recorders were placed at pre-surveyed locations along the line. Recorder locations were plotted in the field on topographic maps, orthophotos, and/or color infrared photos, all at a scale of 1:63360. Locations were determined by topography, landforms, man-made features, and road mileage and are accurate to 25 meters. For convenience in the field, the 120 recorders were divided into 6 teams. Usually, one technician was responsible for the data collection and data processing for his/her team of 20 recorders. Station and shotpoint locations for the entire experiment are shown on Plate 1; shotpoints that were fired for the Chugach or West Glenn lines are represented by solid stars and are labeled with the deployment name.

All shots fired on the West Glenn line were drill-hole shots. Shot holes were drilled 9 in. (23 cm) in diameter and 160 ft. (50 m) deep and were loaded with 2000-3000 lbs. (900-1360 kg) of ammonium nitrate explosives. For offset shots requiring larger charges, two holes were drilled and the total poundage of explosives was split between the two holes. This was the case for shotpoint 16, the 4000 lb. (1815 kg) offset shot on the West Glenn line.

The five shots fired on the Chugach line were all lake shots. For each shot, the explosives were roped together in bundles of 600 lbs. (272 kg) and lowered to the bottom of the lake by helicopter. Each bundle of explosives included a booster and a primer cord. The primer cords were tied together and were ignited by an electric blasting cap at shot time. The land shots were detonated in a similar fashion with 4 boosters and 2 primer cords for each 2000 lb. (900 kg) hole. A complete list of shot times, locations and sizes is given in Table 1. The Chugach deployment includes shots numbered 9-13 and the West Glenn deployment includes shots 23-29.



(terrane divisions and descriptions taken from Jones and others, 1981)



EXPLANATION

Cz	Cenozoic sedimentary and volcanic rocks	K	Middle to Upper Cretaceous sedimentary rocks
PW	Cenozoic Prince William Terrane	KJf	Deformed Upper Mesozoic flysch
C	Cretaceous Chugach Terrane	★	Shotpoint location
P	Middle Paleozoic to Mesozoic Peninsular Terrane	—	Fault
W	Upper Paleozoic to Mesozoic Wrangellia Terrane	—	Terrane boundary/geologic contact
		•	Seismic recorder location

Figure 1. Map showing geologic features, shotpoint locations and seismic recorder locations for the 1984 U.S.G.S. seismic refraction experiment.

Table 1: Master Shot List

DKDAT MASTER SHOT LIST

ALASKA - SUMMER 1984

SHOT NUMBER	DATE	SHOT POINT	LATITUDE	LONGITUDE	SHOT TIME	SIZE (LBS)
1	JUN 24, 1984	8	61 56.3303	145 16.7487	176 10 0	0.011 2000
2	JUN 24, 1984	11	61 31.3367	145 13.6217	176 10 3	57.594 2000
3	JUN 24, 1984	1	63 20.8559	145 42.1500	176 10 6	0.012 6000
4	JUN 24, 1984	7	62 9.9422	145 24.9930	176 12 0	0.009 2000
5	JUN 24, 1984	9	61 41.9517	145 9.2683	176 12 2	0.010 2000
6	JUN 24, 1984	12	61 15.3000	145 17.1100	176 12 3	57.009 2000
7	JUN 24, 1984	19	61 1.8251	145 15.6821	176 12 6	0.008 2000
8	JUN 25, 1984	10	61 34.5950	145 13.5833	177 10 0	0.008 2000
9	JUL 2, 1984	17	61 9.2574	146 35.9967	184 10 0	0.012 3000
10	JUL 2, 1984	18	61 9.1038	146 10.2209	184 10 1	59.812 2000
11	JUL 2, 1984	19	61 1.8251	145 15.6821	184 10 4	0.011 2000
12	JUL 2, 1984	20	60 57.9442	144 10.2347	184 10 6	0.009 3000
13	JUL 2, 1984	21	60 43.5173	142 31.0501	184 10 8	0.008 6000
14	JUL 8, 1984	1	63 20.8559	145 42.1500	191 10 10	0.010 2000
15	JUL 8, 1984	3	62 54.6586	145 29.8132	191 10 12	0.009 2000
16	JUL 8, 1984	5	62 34.9283	145 27.4631	191 10 14	0.011 2000
17	JUL 8, 1984	7	62 9.9422	145 24.9930	191 10 15	59.810 2000
18	JUL 8, 1984	2	63 9.8936	145 32.1771	191 12 0	0.011 2000
19	JUL 8, 1984	4	62 47.4488	145 28.4207	191 12 2	0.010 2000
20	JUL 8, 1984	6	62 29.5123	145 28.0682	191 12 4	0.012 2000
21	JUL 8, 1984	19	61 1.8251	145 15.6821	191 12 6	0.008 7200
22	JUL 8, 1984	8	61 56.3303	145 16.7487	191 12 7	59.811 1100
23	JUL 12, 1984	13	61 52.2237	147 20.6873	195 9 0	0.006 3300
24	JUL 12, 1984	22	61 2.0400	147 6.4430	195 9 0	4.410 2000
25	JUL 12, 1984	14	62 5.3069	146 19.2361	195 9 2	0.011 2000
26	JUL 12, 1984	7	62 9.9422	145 24.9930	195 9 4	0.010 2500
27	JUL 12, 1984	16	62 51.1766	143 41.6363	195 9 6	0.009 4000
28	JUL 12, 1984	15	62 28.1754	144 50.2771	195 11 14	0.011 3000
29	JUL 14, 1984	13	61 52.2237	147 20.6873	196 11 10	0.010 2160

SHOUP BAY
VALDEZ
WOODMORTH
LAKE BREMNER
ROSS GREEN

WEAK
EQ COLUMBIA BAY MAG-D = 2.5

2 HOLES

Two shots were fired at Shotpoint 13 because the first shot, shot 23, did not detonate completely. By coincidence, a 2.5 M_D (duration magnitude) earthquake with an epicenter near Columbia Bay occurred at approximately the same time as shot 23. Our seismometers recorded the earthquake energy, as there was almost no detectable energy from our shot. The earthquake is listed as shot 24 on the shot list but seismic data from the earthquake source are not presented in this report. Shot 29, the shot refired at shotpoint 13, was also weak.

SEISMIC RECORDERS AND SHOOTING SYSTEMS

The seismic recorders used in the 1984 Alaska refraction experiment are described in a paper by Healy and others (1982). Each recorder consists of a 2 Hz vertical-component geophone, a set of three parallel amplifiers, a cassette recorder, and a clock with a memory board, all of which are shown schematically in Figure 2. Signals received by the geophone pass through a signal splitter and the amplifiers and are recorded as multiplexed FM signals on analog cassette tape along with an internally-generated time code, a radio-received time code and a fixed reference frequency. The recording system is designed for maximum displacement response in the frequency range of 4-40 Hz, with peak response at approximately 25 Hz. Figure 3 shows the displacement-response curve for a recording system with a 2 Hz seismometer.

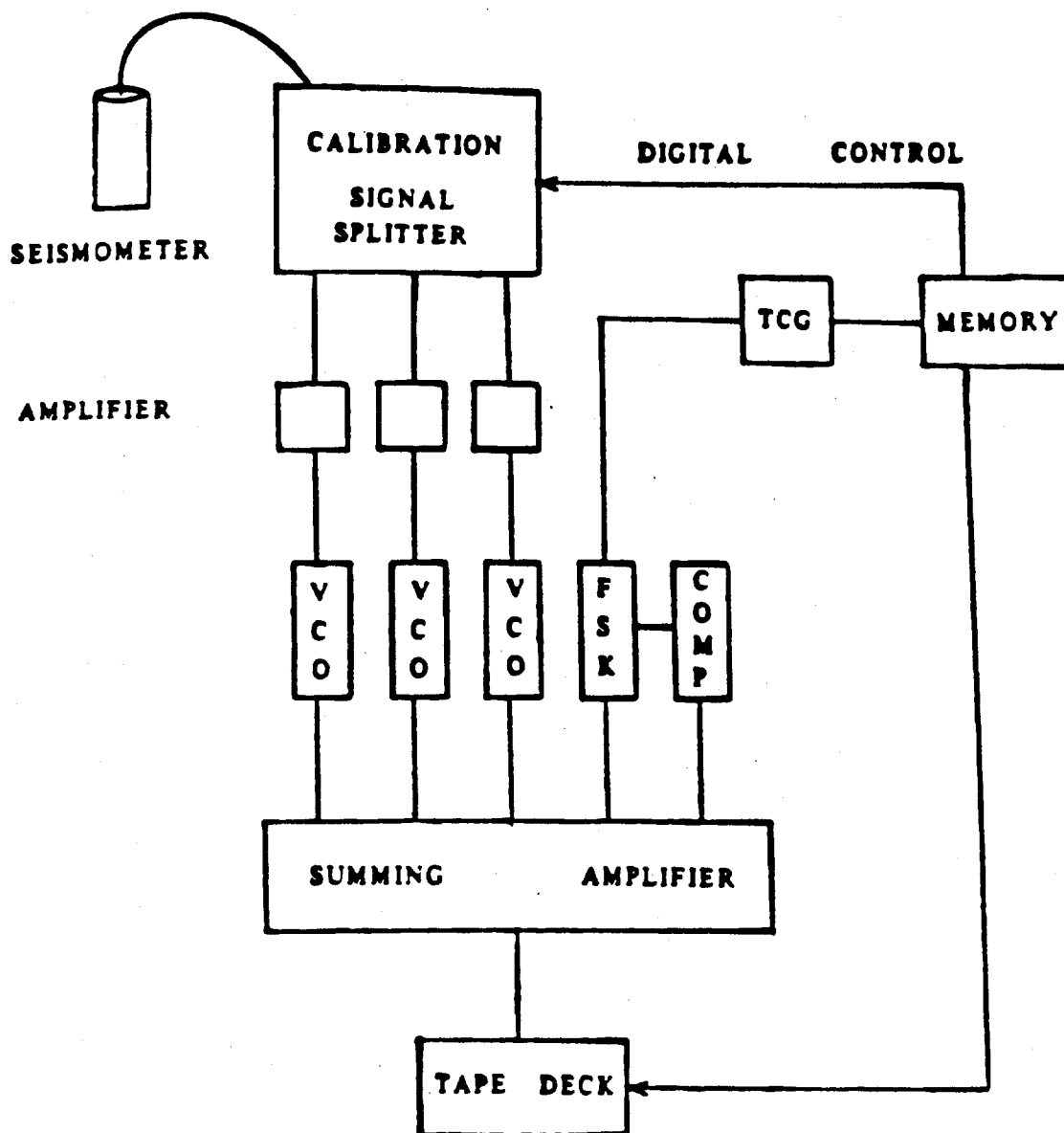
Prior to the time of the shots, field technicians enter up to 10 recording times into the clock memory and set the gain settings for the three amplifiers. The battery-operated recorders turn on automatically at the pre-set times. Before each deployment, the field technicians synchronize each recorder clock with a master reference clock. After the deployment, the recorder clock is compared with the master clock and the drift is recorded so that shot-time clock corrections may be interpolated. The master clock is synchronized with a Rubidium Standard reference clock at Western Regional Headquarters in Menlo Park, California which drifts approximately 1 millisecond per week.

Each shooting system consists of a master reference clock, a chart recorder, a blasting unit, and a WWVB receiver. Prior to each shot, the shooting system is wired to an electric blasting cap which is wired to the explosives. The clock automatically triggers detonation by sending an electrical impulse to the blasting cap at the pre-set shot time. The chart recorder is turned on manually at shot time. It records a WWVB signal, an internally generated time code, and the cap break. Shot times (Table 1) are determined from the paper copy of the time code, assuming that the electrical impulse to the cap is simultaneous with detonation.

DATA REDUCTION

During the experiment, field technicians record station locations and elevations, amplifier gain settings, clock drifts, and notes about instrument performance. These data are entered into a microcomputer and stored on floppy disks. Station and shotpoint locations are listed by location number in Appendix A. Data pertaining to the seismic recorders are listed by team and shot in Appendix B.

The analog seismic data are converted to digital data on a microcomputer system. Twenty seconds of seismic data are digitized per shot for each



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

Figure 2. Schematic diagram of a seismic recorder.

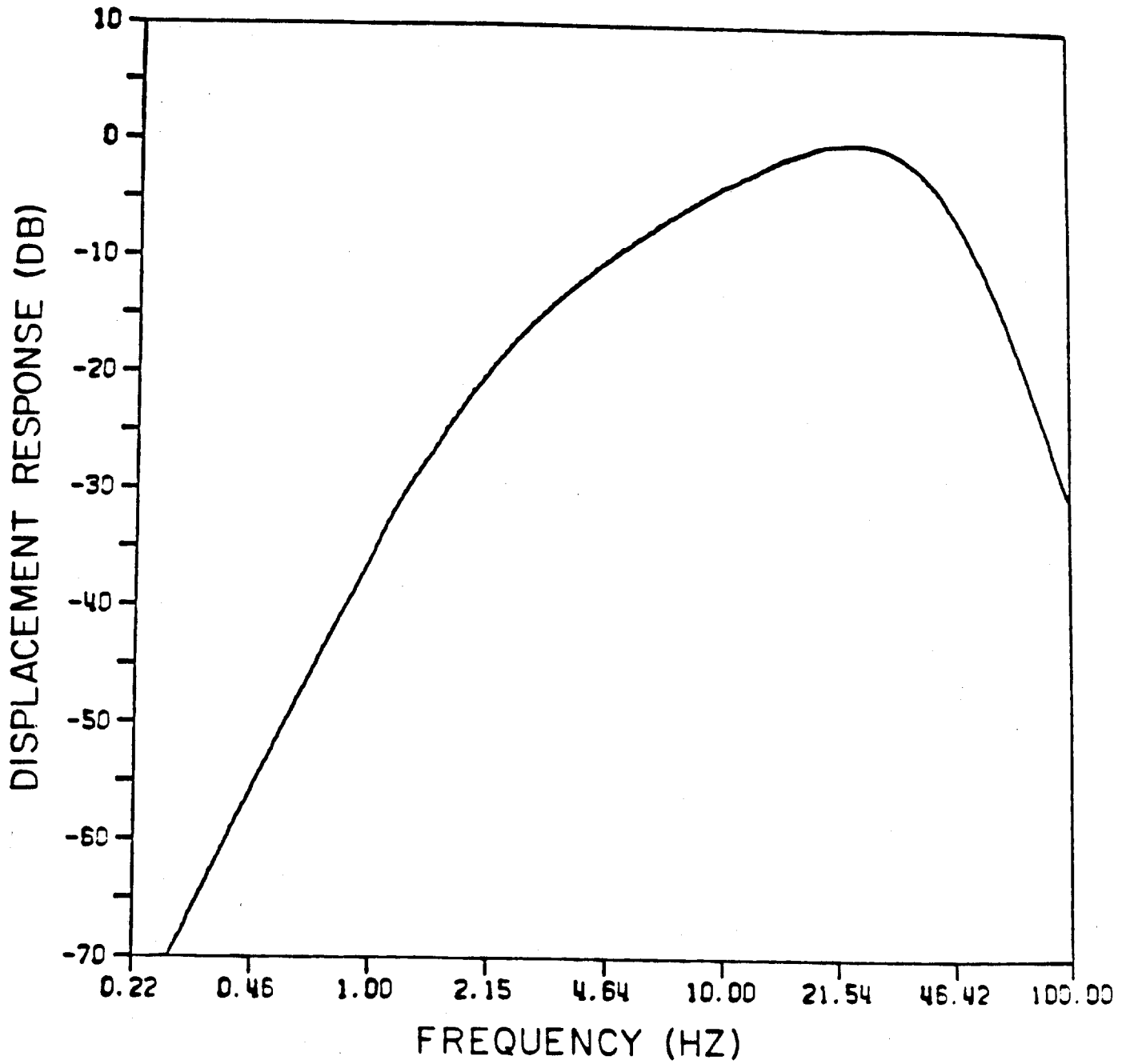


Figure 3. System response curve for cassette recording units with 2 Hz seismometers

recorder at a sampling rate of 200 points per second. Digitization begins at time, (t), equal to (d/6)-2, where d is the shot-to-recorder distance in km and "6" is the reducing velocity in km/s. An amplifier calibration test and a seismometer response test are recorded and digitized for each instrument turn-on time. The digitized seismic data are stored on floppy disks and checked for errors in timing, station location and signal amplification. A final copy of the corrected data is stored on 9-track digital tape.

RECORD SECTIONS

Plates 2-12 are record sections of shots 9-13 (Chugach deployment) and shots 25-29 (West Glenn deployment). Each record section shows seismic data for one shot from all properly functioning seismometers on the line. Data traces are plotted as a function of distance (x-axis) and time (y-axis). The time plotted for each trace is reduced by a velocity of 6 km/s according to the formula

$$T_r = T_a - d/6$$

where T_r = Reduced time, T_a = actual time, and d = distance from shot to recorder. A negative distance indicates that a station is west of the shotpoint.

For each shot, a normalized and a true amplitude record section are presented. Traces on the normalized record section are scaled such that the maximum amplitude for each trace is 0.25 inch. Each trace amplitude on the true amplitude record sections is proportional to actual velocity of ground motion as detected by the seismometer.

Trace amplitudes, A(t), for the true amplitude plots are computed from observed amplitudes, $A_o(t)$, by the formula:

$$A(t) = A_o(t) f_a f_d f_s$$

where f_a , f_d , and f_s are multiplicative factors for instrument amplifier gain, distance from the shotpoint and shot efficiency, respectively. The distance and amplifier gain multiplicative factors are determined from seismic recorder data by the formulas

$$f_a = 10 (AS/20) \text{ and} \\ f_d = (\text{shot-recorder distance})^2.$$

Where "AS" is the attenuation setting in decibels (db). Both db settings and shot-recorder distances are listed in the team data tables, Appendix B.

The shot efficiency factor, f_s , is an arbitrary scalar multiplier chosen to display the data such that the seismic impulses are clearly visible with as few traces as possible overlapping one another. The shot efficiency factor is inversely proportional to the shot strength.

For the most useful comparison among true amplitude record sections of shots from the same deployment, we used the same base shot efficiency factor for all shots in the same deployment whenever possible. We compensated for differences in shot size using the following relationships, taken from O'Brien (1967):

shot strength = (size lbs.)^{2/3} and shot strength = (size lbs.)^{1/3}
for lake shots for land shots

Shot 29 was so weak that when true amplitude record sections were plotted with an adjusted shot efficiency factor as described above, there was no visible seismic energy. Therefore, we used a larger shot efficiency factor for shot 29, so that the seismic signals could be seen on the record section. In contrast, the energy from Shot 13 carried well, so that many data traces overlapped and interfered with neighboring traces on the true amplitude record section plotted with the adjusted base efficiency factor. For completeness, we have included two true amplitude record sections of shot 13, one plotted with the same base efficiency factor as for the other Chugach line shots, and a second plotted with a smaller shot efficiency factor so that individual data traces are easily discernable. Shot efficiency factors for all shots are listed in Table 2.

Before plotting the final record sections, each section was checked for problematical traces that either interfered with other data traces or were so noisy themselves that no seismic signals could be detected on them. In most cases, noisy traces were a result of site conditions (proximity to a noise source, such as the Alaska pipeline or a river) or due to poor geophone coupling or instrument malfunctioning. In some cases, filtering out high frequency noise with a bandpass filter improved the quality of such traces. Traces that were filtered are noted with asterisks on plates 2-12. Problematical traces that could not be improved were deleted. If a trace is missing on a record section, the reason is noted in the tape grade section of the team data tables (Appendix B).

TABLE 2: SHOT EFFICIENCY FACTORS

SHOT	SIZE (LBS)	EFFICIENCY FACTOR
Chugach Deployment		
9	3000	.0003048
10	2000	.0004
11	2000	.0004
12	3000	.0003048
13	6000	.00019228
		.00009614 *
West Glenn Deployment		
25	2000	.0004
26	2500	.0003713
27	4000	.0002
28	3000	.0003494
29	2160	.0024

* used for Plate 7

ACKNOWLEDGMENTS

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APPENDIX A

STATION AND SHOT POINT LOCATIONS

Appendix A is a computer printout of shot point and station locations listed by location number. Locations 1-21 are shot point locations. Locations 302-445 and 701-828 are station locations. Both shot point and station locations are shown on plate 1.

ALASKA/1984: SHOTPOINT LOCATIONS

LOCATION NUMBER	LATITUDE (DEG, MIN, SEC)	LONGITUDE (DEG, MIN, SEC)	ELEVATION (FEET)				
1	63 20 51.4	145 42 9.0	2800	62	6	26.6	145 45 14.7
2	63 9 53.6	145 32 10.6	3220	62	6	27.6	145 46 26.0
3	62 54 39.5	145 29 48.8	2600	62	6	28.0	145 47 31.4
4	62 47 26.9	145 28 25.2	2550	62	6	26.4	145 48 39.2
5	62 34 55.7	145 27 27.8	2200	62	6	26.6	145 49 60.0
6	62 29 30.7	145 28 4.1	1960	62	6	24.1	145 51 18.6
7	62 9 56.5	145 24 59.6	1350	62	6	25.3	145 52 28.0
8	61 56 19.8	145 16 44.9	1000	62	5	48.3	145 58 10.9
9	61 41 57.1	145 9 16.1	2000	62	5	54.6	146 0 54.1
10	61 34 35.7	145 13 35.0	1750	62	5	56.7	146 1 58.3
11	61 31 20.2	145 13 37.3	1830	62	6	2.6	146 3 21.7
12	61 15 18.0	145 17 6.6	1150	62	6	3.2	146 4 42.1
13	61 52 13.4	147 20 41.2	3200	62	6	0.6	146 5 48.9
14	62 5 19.4	146 19 10.7	2420	62	5	52.4	146 6 45.7
15	62 28 10.5	144 50 16.6	1750	62	5	54.6	146 8 13.0
16	62 51 10.6	143 41 53.2	2250	62	5	53.2	146 9 23.8
17	61 9 15.4	146 35 59.8	350	62	5	52.6	146 10 34.5
18	61 9 6.2	146 10 13.3	400	62	5	50.5	146 11 53.1
19	61 1 49.5	145 15 40.9	450	62	5	47.7	146 13 10.9
20	60 57 56.7	144 10 14.1	1143	62	5	44.4	146 15 26.2
21	60 43 31.0	142 31 3.0	2207	62	5	39.5	146 16 38.7
				62	5	31.3	146 17 40.7
				62	5	19.4	146 19 10.7
				62	5	18.6	146 20 1.0
				62	5	14.5	146 21 12.6
				62	5	7.4	146 22 18.1
				62	4	55.5	146 23 18.8
				62	4	32.8	146 24 17.7
				62	4	14.6	146 25 17.7
				62	4	1.5	146 26 16.2
				62	3	49.8	146 27 19.5
				62	3	30.6	146 28 14.9
				62	3	11.1	146 29 28.6
				62	2	56.2	146 30 28.8
				62	2	57.6	146 31 37.7
				62	2	58.3	146 32 54.0
				62	2	43.5	146 34 0.3
				62	2	19.0	146 34 54.3
				62	2	3.2	146 35 42.1
				62	1	46.2	146 36 53.1
				62	1	46.4	146 38 0.7
				62	1	53.2	146 39 23.0
				62	1	44.6	146 40 28.6
				62	1	37.8	146 41 49.2
				62	1	37.8	146 41 49.2

ALASKA/1984: STATION LOCATIONS - WEST GLENN DEPLOYMENT

302	62 9 45.9	145 25 30.0	1500
303	62 9 27.9	145 26 17.3	1570
304	62 9 16.2	145 27 57.1	1560
305	62 8 34.9	145 28 36.9	1550
306	62 7 30.0	145 28 30.4	1500
307	62 7 18.1	145 29 42.1	1500
308	62 6 53.6	145 31 12.8	1420
309	62 6 33.9	145 31 55.6	1390
310	62 6 36.2	145 33 14.7	1420
311	62 6 29.6	145 34 19.3	1470
312	62 6 28.0	145 35 33.5	1520
313	62 6 28.0	145 36 50.4	1550
314	62 6 27.0	145 37 55.1	1570
315	62 6 27.6	145 39 3.7	1600
316	62 6 25.3	145 40 16.5	1640
317	62 6 20.2	145 41 42.6	1670
318	62 6 25.3	145 42 58.1	1700
319	62 6 27.6	145 44 13.3	1740

ALASKA/1984: STATION LOCATIONS - CRUGACH DEPLOYMENT

387	62 1 19.6	146 42 41.5	2300	61 1 47.0	145 15 35.4	500
388	62 1 0.4	146 43 46.4	2450	61 1 59.5	145 16 54.8	500
389	62 0 28.4	146 44 18.6	2400	61 1 53.2	145 17 22.2	700
400	61 59 50.8	146 45 9.2	2400	61 1 47.3	145 18 18.7	2110
401	61 59 36.9	146 46 4.1	2400	61 1 57.7	145 19 29.2	2420
402	61 59 23.2	146 47 13.3	2410	61 1 50.5	145 20 30.4	2770
403	61 59 7.4	146 48 14.7	2420	61 2 16.9	145 21 10.8	1760
404	61 58 59.2	146 49 24.8	2410	61 2 52.5	145 21 50.1	2180
405	61 58 58.8	146 50 40.3	2460	61 3 3.0	145 23 17.0	2510
406	61 58 58.8	146 51 44.7	2500	61 3 3.6	145 24 45.7	3130
407	61 59 14.8	146 53 13.4	2540	61 3 47.8	145 25 55.0	2550
408	61 59 18.5	146 54 13.9	2500	61 3 46.4	145 27 3.0	3440
409	61 59 23.4	146 55 39.8	2520	61 4 1.1	145 28 12.7	3400
410	61 59 13.6	146 57 7.3	2500	61 4 11.8	145 29 8.5	3260
411	61 59 15.2	146 57 55.6	2560	61 4 25.9	145 30 7.6	3210
412	61 59 20.9	146 59 28.2	2780	61 4 53.5	145 31 28.7	2380
413	61 59 19.1	147 0 22.8	2690	61 4 56.8	145 32 35.0	2200
414	61 59 24.2	147 1 52.9	2780	61 4 47.6	145 34 5.1	2400
415	61 59 21.5	147 3 0.3	2900	61 4 60.8	145 35 33.8	3100
416	61 59 16.0	147 4 21.7	3130	61 4 58.8	145 36 43.5	2840
417	61 58 57.8	147 5 9.4	3210	61 4 56.6	145 37 53.2	2920
418	61 58 31.6	147 5 43.4	3230	61 4 38.2	145 39 14.4	3560
419	61 57 52.1	147 6 44.8	3250	61 4 27.3	145 40 7.7	3640
420	61 57 23.9	147 7 35.3	3300	61 4 22.0	145 41 27.1	3450
421	61 57 0.7	147 8 29.7	3310	61 4 26.3	145 42 35.1	3110
422	61 56 33.7	147 9 7.4	3310	61 4 29.6	145 44 3.0	2760
423	61 56 15.1	147 10 26.8	3290	61 5 4.9	145 45 13.0	2640
424	61 55 59.8	147 11 22.4	3140	61 5 22.9	145 45 55.2	2360
425	61 55 41.3	147 12 34.5	3080	61 5 3.7	145 47 46.4	1770
426	61 55 33.6	147 13 34.0	3080	61 5 0.7	145 49 5.1	2460
427	61 55 22.3	147 14 44.8	3120	61 4 59.9	145 50 21.1	1860
428	61 55 8.0	147 15 29.9	3100	61 4 59.0	145 52 29.2	1790
429	61 54 47.5	147 16 21.7	3000	61 4 42.0	145 53 18.6	1660
430	61 54 26.5	147 17 32.0	2960	61 4 26.1	145 54 46.9	2050
431	61 53 59.9	147 18 45.8	2970	61 5 7.0	145 54 33.4	2240
432	61 53 42.5	147 19 41.3	3000	61 4 2.6	145 55 43.6	1100
433	61 53 9.9	147 19 54.8	3020	61 4 52.7	145 56 7.6	3780
434	61 52 34.7	147 20 23.0	3080	61 3 58.3	145 57 4.7	950
435	61 52 11.2	147 20 41.2	3200	61 4 56.4	145 57 20.7	4220
436	61 50 9.0	147 24 41.0	3305	61 4 22.0	145 58 51.6	2290
437	61 48 33.1	147 30 51.3	2710	61 4 24.0	146 0 23.7	2090
438	61 47 57.0	147 36 14.3	2370	61 4 32.2	146 1 21.1	1790
439	61 47 29.6	147 40 25.5	2130	61 5 9.8	146 2 52.8	3100
440	61 47 52.3	147 46 7.3	1840	61 5 13.7	146 3 57.9	2200
441	61 47 36.0	147 54 0.4	1550	61 5 51.4	146 4 31.3	3200
442	61 47 56.6	147 58 40.5	1650	61 6 49.3	146 4 39.3	2430
443	61 48 40.0	148 7 59.8	2080			
444	61 47 50.5	148 15 44.0	1630			
445	61 47 50.9	148 17 30.3	1700			

748	146 5 50.4	3480	798	60 58 20.4	144 49 0.2	1975
749	146 6 47.5	2820	799	60 57 51.3	144 47 55.3	1730
750	146 8 16.4	1820	800	60 57 44.2	144 47 0.2	210
751	146 9 1.2	510	801	60 57 4.0	144 44 46.1	220
752	146 9 29.1	146 9 1.2	802	60 58 16.1	144 41 28.6	230
753	146 10 16.2	300	803	60 58 53.3	144 42 37.6	220
754	146 11 10.1	250	804	60 59 6.4	144 43 34.5	220
755	146 11 59.2	200	805	60 59 10.5	144 37 53.6	220
756	146 12 48.8	120	806	60 58 11.4	144 36 38.3	2320
757	146 14 5.0	70	807	60 58 19.8	144 35 18.7	2190
758	146 15 19.0	30	808	60 58 29.8	144 34 2.3	2520
759	146 16 35.5	30	809	60 59 6.6	144 32 36.7	2690
760	146 17 44.5	20	810	60 59 42.3	144 31 22.1	2280
761	146 18 39.9	5	811	60 59 37.4	144 30 12.1	2400
762	146 20 10.5	5	812	60 59 30.6	144 28 47.5	2520
763	146 21 14.8	100	813	60 59 43.3	144 27 13.1	2100
764	146 22 30.1	320	814	60 59 29.0	144 25 58.5	2240
765	146 23 26.9	100	815	60 59 24.7	144 24 22.9	2410
766	146 25 10.8	1600	816	60 59 16.1	144 23 10.9	2190
767	146 26 34.7	1800	817	60 59 8.1	144 21 25.5	2140
768	146 27 42.8	2000	818	60 59 4.2	144 20 16.0	2360
769	146 28 52.7	1500	819	60 59 5.6	144 18 55.9	1680
770	146 29 50.3	2850	820	60 58 58.3	144 17 33.4	1380
771	146 30 16.3	2000	821	60 58 50.9	144 16 24.7	1200
772	146 31 26.6	2770	822	60 58 45.8	144 15 12.7	1220
773	146 32 10.6	2150	823	60 58 47.2	144 13 52.2	620
774	146 33 29.3	1300	824	60 58 33.3	144 12 44.4	1520
775	146 34 31.2	1000	825	60 58 20.2	144 11 29.8	1600
776	146 35 46.7	100	826	60 58 19.0	144 10 56.6	1800
777	145 14 27.1	450	827	60 57 51.9	144 10 11.6	1160
778	145 13 33.9	460	828	60 43 24.9	142 30 52.2	2600
779	145 12 26.9	1105				
780	145 11 19.8	1375				
781	145 10 28.0	1425				
782	145 9 13.7	1720				
783	145 9 40.1	1775				
784	145 7 45.9	1700				
785	145 6 47.0	1700				
786	145 5 51.0	1180				
787	145 4 42.7	1390				
788	145 3 37.9	1550				
789	145 2 15.2	1480				
790	145 1 18.3	1360				
791	144 59 41.0	1780				
792	144 58 37.0	1950				
793	144 57 22.0	1780				
794	144 55 31.5	1800				
795	144 53 43.3	2325				
796	144 52 34.7	2870				
797	144 51 21.0	1550				
	144 50 1.8	1940				

APPENDIX B
TEAM DATA SHEETS

Appendix B is a printout of all data pertaining to the seismic recorders as stored on floppy disks. The data are organized by team and shot number and are listed in shot order. Because a team refers to a group of 20 instruments deployed by the same technician in the field, the location numbers are not necessarily in order. The abbreviations used in the column headings are explained below.

LOC	Location number, same as shown on Plate 1.
DIST(KM)	Distance in kilometers from the shot point to the recorder location.
AZIM	Azimuth from the shot point to the recorder location.
UNIT	Recorder I.D. number.
CHRON	Clock drift correction (in milliseconds) at shot time.
CHAN	Channel on which the data trace was digitized.
C1, C2, C3	Gain attenuation settings (in dB) for channel 1, channel 2, and channel 3.
TAPE GRADE	Coded notes about data quality and instrument performance. A full explanation of tape grades follows.

EXPLANATION OF TAPE GRADE CODES

- 0 Good tape: recorder functioning properly.
- 1 Tape recorder did not run.
- 2 Seismic data totally obscured by noise; trace deleted.
- 3 Skipped record time for one or more shots.
- 4 Tape wound to end; no seismic signal, no calibrations.
- 5 Unreadable time code.
- 6 Instrument noise on tape.
- 7 Site noise on tape.
- 8 Random noise on tape.
- 9 Periodic tick marks on record.
- 12 No seismic signal on tape; either continuous instrument noise or no deviation at all.
- 13 Recorder clock jumped or stopped. Timing error could not be corrected.
- 14 Instrument in for repair - not deployed.
- 15 No seismic signal / very low record level; geophone was disconnected or shorted or the recorder had a "hung jug", meaning that the seismometer mass could not move.
- 16 Bad geophone test.
- 17 Tape ran at the correct time but recorded a different day on the time code. Trace was recovered by changing the shot day on the data disk for the digitization of the trace.
- 18 Timing error; trace shifted to match the time on the time code records.
- 19 Segments of the trace were zeroed to remove high amplitude noise.
- 20 Trace was filtered using a 4-pole Butterworth filter. The filtered frequency ranges are noted on the record sections, plates 2-12.
- 21 Timing error light on during digitization.
- 22 Trace was deleted for true amplitude profiles because the signal was overamplified such that it interfered with neighboring traces.
- 23 Trace amplitude is anomalously high or low on true amplitude profiles, but standard checks of calibrations, trace amplitude multiplier, and jug test show no errors.

DKDAT FIELD DATA TABLE

ALASKA - SUMMER 1984
 SHOT NUMBER 9 SHOT POINT 17 TEAM 3
 SHOT TIME: 184:10: 0: 0.012

LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE	GRADE
1	709	65.061	100.2	41	-16	2	30	12	48	12
2	708	66.372	100.0	42	17	1	30	12	48	0
3	707	67.714	100.1	43	-22	1	30	12	48	0
4	706	68.503	100.9	44	96	1	30	12	48	0
5	705	69.264	101.5	45	2	2	30	12	48	0
6	704	70.118	101.1	46	32	2	30	12	68	0
7	703	71.219	101.2	47	41	1	30	12	68	0
8	701	72.379	100.7	48	38	2	30	12	88	0
9	267	73.623	100.9	49	27	1	30	12	88	0
10	777	74.658	100.8	50	-17	1	30	12	88	0
11	778	75.474	100.8	51	41	1	30	12	68	0
12	779	76.599	101.2	52	49	1	30	12	68	0
13	780	77.671	101.4	53	7	2	30	12	48	0
14	781	78.436	101.3	54	-20	2	30	12	48	0
15	782	79.661	101.6	55	34	2	30	12	48	0
16	783	80.669	101.4	56	29	3	30	12	48	1
17	784	81.586	101.5	57	37	2	30	12	48	0
18	785	82.505	101.7	58	24	2	30	12	48	0
19	786	84.131	103.4	59	505	2	30	12	48	0
20	787	84.985	103.0	60	-15	2	30	12	48	4

DKDAT FIELD DATA TABLE

ALASKA - SUMMER 1984
 SHOT NUMBER 9 SHOT POINT 17 TEAM 1
 SHOT TIME: 184:10: 0: 0.012

LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE	GRADE
1	776	0.336	144.2	1	38	3	30	12	88	0
2	775	1.388	107.3	2	76	3	30	12	88	0
3	774	2.273	98.0	3	22	3	30	12	68	0
4	773	3.461	97.8	4	-150	3	30	12	68	0
5	772	4.267	106.7	5	28	3	30	12	48	0
6	770	5.642	101.5	6	11	3	30	12	48	0
7	769	6.580	103.8	7	6	3	30	12	48	0
8	768	7.606	102.2	8	37	3	30	12	48	1
9	767	8.606	100.7	9	139	3	30	12	48	0
10	766	9.786	97.2	10	16	3	30	12	48	0
11	765	11.358	97.4	11	-41	3	30	12	48	0
12	764	12.171	95.6	12	22	3	30	12	48	0
13	763	13.351	97.4	13	5	3	30	12	48	0
14	762	14.338	97.8	14	58	3	30	12	48	0/23
15	760	16.549	98.0	15	53	3	30	12	48	0
16	759	17.622	98.7	16	-16	3	30	12	48	0
17	758	18.805	99.1	17	27	3	30	12	48	0
18	757	19.832	97.2	18	-29	3	30	12	68	0
19	756	20.923	95.9	19	-31	3	30	12	68	0
20	755	21.610	94.2	20	25	3	30	12	68	0

DKDAT FIELD DATA TABLE

ALASKA - SUMMER 1984
 SHOT NUMBER 9 SHOT POINT 17 TEAM 4
 SHOT TIME: 184:10: 0: 0.012

LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE	GRADE
1	788	86.124	102.6	61	16	1	30	12	48	1
2	789	86.891	102.3	62	1	1	30	12	48	0/7
3	790	88.283	102.0	63	8	2	30	12	48	0
4	791	89.229	101.9	64	20	2	30	12	48	0
5	792	90.265	101.6	65	-12	2	30	12	48	0
6	793	91.870	101.4	66	-5	2	30	12	48	0
7	794	93.517	101.4	67	9	2	30	12	48	0
8	795	94.763	101.9	68	-5	2	30	12	48	0
9	796	95.803	101.7	69	4	2	30	12	48	0
10	797	96.984	101.6	70	51	2	30	12	48	0
11	798	98.042	101.9	71	30	2	30	12	48	0/12
12	799	99.189	102.3	72	24	1	30	12	48	0/8
13	800	100.045	102.3	73	-26	2	30	12	48	0/8
14	803	103.434	100.7	74	-4	2	30	12	48	0
15	802	104.682	101.2	75	17	2	30	12	48	0
16	805	107.504	100.0	76	3	2	30	12	48	0/7
17	804	102.519	100.6	77	10	2	30	12	48	0/7
18	806	108.969	100.8	78	-7	2	30	12	48	0
19	807	110.085	100.6	79	30	2	30	12	48	0
20	808	111.147	100.3	80	15	2	30	12	48	0

DKDAT FIELD DATA TABLE

ALASKA - SUMMER 1984
 SHOT NUMBER 9 SHOT POINT 17 TEAM 2
 SHOT TIME: 184:10: 0: 0.012

LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE	GRADE
1	754	22.303	92.2	21	-25	1	30	12	88	0
2	753	23.093	91.0	22	19	1	30	12	88	0
3	752	23.831	93.1	23	15	1	30	12	88	0
4	751	24.327	95.4	24	-7	1	30	12	68	0
5	750	25.093	97.3	25	52	1	30	12	68	0
6	749	26.435	97.3	26	-6	3	30	12	48	0
7	748	27.361	98.2	27	16	3	30	12	48	0
8	747	28.507	99.1	28	-55	3	30	12	48	0
9	746	28.970	102.6	29	24	3	30	12	48	0
10	745	29.735	104.6	30	10	3	30	12	48	0
11	744	30.709	104.3	31	8	3	30	12	48	0
12	743	32.341	105.7	32	49	3	30	12	48	0/17/22
13	742	33.239	105.7	33	84	3	30	12	48	0
14	741	34.586	105.2	34	21	3	30	12	48	0
15	740	35.641	103.0	35	-49	3	30	12	48	0
16	738	36.735	102.8	36	13	1	30	12	48	0
17	736	38.018	101.7	37	16	1	30	12	48	0
18	732	39.890	101.5	38	1	30	12	48	6	0
19	731	40.723	101.2	39	-8	1	30	12	48	0
20	730	41.762	100.9	40	12	1	30	12	48	0

DKDAT FIELD DATA TABLE

ALASKA - SUMMER 1984
SHOT NUMBER 11 SHOT POINT 19 TEAM 3
SHOT TIME: 184:10: 4: 0.011

Table with columns: LOC, DIST(KM), AZIM, UNIT, CHRON, CHAN, C1, C2, C3, TAPE, GRADE. Rows 1-20.

DKDAT FIELD DATA TABLE

ALASKA - SUMMER 1984
SHOT NUMBER 11 SHOT POINT 19 TEAM 4
SHOT TIME: 184:10: 4: 0.011

Table with columns: LOC, DIST(KM), AZIM, UNIT, CHRON, CHAN, C1, C2, C3, TAPE, GRADE. Rows 1-20.

DKDAT FIELD DATA TABLE

ALASKA - SUMMER 1984
SHOT NUMBER 11 SHOT POINT 19 TEAM 1
SHOT TIME: 184:10: 4: 0.011

Table with columns: LOC, DIST(KM), AZIM, UNIT, CHRON, CHAN, C1, C2, C3, TAPE, GRADE. Rows 1-20.

DKDAT FIELD DATA TABLE

ALASKA - SUMMER 1984
SHOT NUMBER 11 SHOT POINT 19 TEAM 2
SHOT TIME: 184:10: 4: 0.011

Table with columns: LOC, DIST(KM), AZIM, UNIT, CHRON, CHAN, C1, C2, C3, TAPE, GRADE. Rows 1-20.

DKDAT FIELD DATA TABLE

ALASKA - SUMMER 1984
 SHOT NUMBER 11 SHOT POINT 19 TEAM 5
 SHOT TIME: 184:10: 4: 0.011

LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAFE	GRADE
1	809	39.158	37.4	81	-11	1	30	12 48	0	
2	810	40.142	95.6	82	-2		30	12 48	1	
3	811	41.203	95.7	83	84	1	30	12 48	0	
4	812	42.491	95.8	84	27	1	30	12 48	0	
5	813	43.862	95.1	85	13	1	30	12 48	0	
6	814	45.022	95.5	86	-7		30	12 48	1	
7	815	46.465	95.5	87	-227	1	30	12 48	0	
8	816	47.571	95.7	88	23	1	30	12 48	0	
9	817	49.173	95.8	89	7	1	30	12 48	0	
10	818	50.224	95.8	90	25		30	12 48	5	
11	819	51.417	95.7	91	5	1	30	12 48	0	
12	820	52.676	95.8	92	6	2	30	12 48	0/6/8	
13	821	53.727	95.9	93	29	1	30	12 48	0/23	
14	822	54.821	96.0	94	26	1	30	12 48	0	
15	823	56.020	95.8	95	26	2	30	12 48	12	
16	824	57.082	96.1	96	8	2	30	12 68	0	
17	825	58.243	96.4	97	4	1	30	12 68	0	
18	826	58.744	96.4	98	2	1	30	12 88	0	
19	827	59.520	97.1	99	20	1	30	12 88	0	
20	828	152.499	102.9	100	14	2	30	12 88	0	

DKDAT FIELD DATA TABLE

ALASKA - SUMMER 1984
 SHOT NUMBER 12 SHOT POINT 20 TEAM 1
 SHOT TIME: 184:10: 6: 0.009

LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAFE	GRADE
1	776	132.141	279.0	1	39	2	30	12 88	0	
2	775	131.008	279.0	2	76	2	30	12 88	0	
3	774	130.108	279.1	3	22	2	30	12 68	0	
4	773	128.925	279.1	4	-150	2	30	12 68	0	
5	772	128.171	278.8	5	28	2	30	12 48	0	
6	770	126.762	279.0	6	11	2	30	12 48	0/12	
7	769	125.851	278.9	7	6	2	30	12 48	0	
8	768	124.815	278.9	8	37	2	30	12 48	1	
9	767	123.809	279.0	9	139	2	30	12 48	0	
10	766	122.625	279.3	10	16	2	30	12 48	0	
11	765	121.058	279.3	11	-41	2	30	12 48	0	
12	764	120.261	279.5	12	22	2	30	12 48	0	
13	763	119.073	279.3	13	5	2	30	12 48	0	
14	762	118.089	279.2	14	58	2	30	12 48	0/6/20	
15	760	115.886	279.3	15	54	2	30	12 48	0	
16	759	114.817	279.2	16	-16	2	30	12 48	0	
17	758	113.640	279.1	17	28	2	30	12 48	0	
18	757	112.619	279.4	18	-29	2	30	12 68	0	
19	756	111.549	279.7	19	-31	1	30	12 68	0	
20	755	110.908	280.1	20	25	2	30	12 68	0	

DKDAT FIELD DATA TABLE

ALASKA - SUMMER 1984
 SHOT NUMBER 11 SHOT POINT 19 TEAM 6
 SHOT TIME: 184:10: 4: 0.011

LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAFE	GRADE
1	729	30.600	280.7	101	27	1	30	12 48	0	
2	728	29.508	281.8	102	16	1	30	12 48	0	
3	727	28.008	283.6	103	3	1	30	12 48	0	
4	726	27.267	282.8	104	2	1	30	12 48	0	
5	725	26.016	281.0	105	45	3	30	12 48	0	
6	724	24.703	281.3	106	-3	3	30	12 48	0	
7	723	23.677	281.5	107	74	3	30	12 48	0	
8	722	22.545	282.5	108	7	3	30	12 48	0	
9	721	21.842	283.8	109	9	3	30	12 48	0	
10	720	20.812	286.2	110	30	3	30	12 48	0	
11	719	19.829	287.2	111	54	3	30	12 48	0	
12	718	18.668	286.5	112	31	3	30	12 48	1	
13	717	17.460	288.4	113	-13	3	30	12 48	0	
14	716	16.282	290.9	114	10	3	30	12 48	0	
15	715	15.318	291.8	115	10	3	30	12 48	0	
16	714	13.877	290.4	116	38	3	30	12 48	0	
17	713	12.894	290.0	117	66	3	30	12 48	0	
18	712	11.995	289.9	118	35	3	30	12 48	0	
19	711	10.857	289.5	119	7	3	30	12 48	0	
20	710	9.917	291.7	120	6		30	12 48	1	

DKDAT FIELD DATA TABLE

ALASKA - SUMMER 1984
 SHOT NUMBER 12 SHOT POINT 20 TEAM 2
 SHOT TIME: 184:10: 6: 0.009

LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAFE	GRADE
1	754	110.299	280.5	21	-25	1	30	12 88	0	
2	753	109.589	280.8	22	19	1	30	12 88	0	
3	752	108.749	280.4	23	15	1	30	12 88	0	
4	751	108.172	279.9	24	-7	1	30	12 68	0	
5	750	107.378	279.5	25	52	2	30	12 68	0	
6	749	106.041	279.6	26	-6	2	30	12 48	0	
7	748	105.114	279.3	27	16	2	30	12 48	0	
8	747	103.976	279.1	28	-55	2	30	12 48	0	
9	746	103.615	278.1	29	24	2	30	12 48	0	
10	745	102.978	277.5	30	10	2	30	12 48	0	
11	744	101.999	277.5	31	8	2	30	12 48	0	
12	743	100.509	277.0	32	49	2	30	12 48	0/17/23	
13	742	99.628	276.9	33	84	2	30	12 48	0	
14	741	98.253	276.9	34	21	2	30	12 48	0	
15	740	97.025	277.7	35	-50	1	30	12 48	0/20	
16	738	95.928	277.7	36	13	2	30	12 48	0	
17	736	94.566	278.1	37	16	2	30	12 48	0	
18	732	92.715	278.1	38	1	2	30	12 48	0	
19	731	91.873	278.2	39	-8	2	30	12 48	0	
20	730	90.825	278.3	40	12	2	30	12 48	0	

DKDAT FIELD DATA TABLE

ALASKA - SUMMER 1984
SHOT NUMBER 12 SHOT POINT 20 TEAM 5
SHOT TIME: 184:10: 6: 0.009

LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE	GRADE
1	809	20.312	276.1	81	-11	3	30	12	48	0
2	810	19.348	279.7	82	-2		30	12	48	1
3	811	18.286	279.6	83	84	3	30	12	48	0
4	812	16.997	279.9	84	27	3	30	12	48	0
5	813	15.677	282.2	85	13	3	30	12	48	0
6	814	14.489	281.4	86	-7		30	12	48	1
7	815	13.055	282.0	87	-227	3	30	12	48	0
8	816	11.940	281.9	88	23	3	30	12	48	0
9	817	10.339	282.3	89	7	3	30	12	48	0
10	818	9.293	283.0	90	25	3	30	12	48	5
11	819	8.135	285.2	91	5	3	30	12	48	0
12	820	6.878	286.1	92	6	2	30	12	48	0/21
13	821	5.823	286.8	93	29	3	30	12	48	0/23
14	822	4.742	288.7	94	26	3	30	12	48	0
15	823	3.635	295.5	95	26	2	30	12	48	0
16	824	2.530	296.6	96	8	3	30	12	68	0
17	825	1.353	302.6	97	4	3	30	12	68	0
18	826	0.941	317.2	98	2	3	30	12	88	0
19	827	0.150	165.7	99	20	3	30	12	88	0
20	828	93.660	106.7	100	14	2	30	12	88	0

DKDAT FIELD DATA TABLE

ALASKA - SUMMER 1984
SHOT NUMBER 12 SHOT POINT 20 TEAM 3
SHOT TIME: 184:10: 6: 0.009

LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE	GRADE
1	709	67.861	278.0	41	-16	2	30	12	48	12
2	708	66.540	278.2	42	17	2	30	12	48	0
3	707	65.203	278.1	43	-22	2	30	12	48	0/20
4	706	64.483	277.2	44	96	1	30	12	48	0
5	705	63.789	276.5	45	2	1	30	12	48	0
6	704	62.898	276.8	46	32	1	30	12	68	0/ 8
7	703	61.812	276.6	47	41	1	30	12	68	0
8	701	60.601	277.1	48	38	1	30	12	88	0
9	267	59.374	276.9	49	27	1	30	12	88	0
10	777	58.338	276.9	50	-17	1	30	12	88	0
11	778	57.525	276.8	51	41	1	30	12	68	0
12	779	56.451	276.2	52	50	1	30	12	68	0
13	780	55.408	275.9	53	7	1	30	12	48	0
14	781	54.631	276.0	54	-20	1	30	12	48	0
15	782	53.461	275.4	55	34	1	30	12	48	0
16	783	52.139	275.5	56	29		30	12	48	1
17	784	51.234	275.3	57	37	2	30	12	48	0
18	785	50.357	274.8	58	24	1	30	12	48	0
19	786	49.194	271.7	59	635	1	30	12	48	0/18
20	787	48.229	272.2	60	-15		30	12	48	12

DKDAT FIELD DATA TABLE

ALASKA - SUMMER 1984
SHOT NUMBER 12 SHOT POINT 20 TEAM 6
SHOT TIME: 184:10: 6: 0.009

LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE	GRADE
1	729	89.667	278.2	101	27	2	30	12	48	0
2	728	88.549	278.6	102	16	2	30	12	48	0
3	727	86.989	279.1	103	3	2	30	12	48	0
4	726	86.285	278.8	104	2	2	30	12	48	0
5	725	85.100	278.2	105	45	1	30	12	48	0
6	724	83.785	278.2	106	-3	2	30	12	48	0
7	723	82.761	278.3	107	74	2	30	12	48	0
8	722	81.607	278.5	108	7	2	30	12	48	0
9	721	80.865	278.8	109	9	2	30	12	48	0
10	720	79.750	279.3	110	30	1	30	12	48	0/23
11	719	79.027	279.5	111	54	1	30	12	48	0/23
12	718	77.910	279.2	112	31		30	12	48	1
13	717	76.627	279.6	113	-13	2	30	12	48	0
14	716	75.339	279.9	114	10	2	30	12	48	0
15	715	74.341	280.0	115	10	2	30	12	48	0
16	714	73.005	279.5	116	38	2	30	12	48	0
17	713	72.062	279.3	117	66	2	30	12	48	0
18	712	71.186	279.1	118	35	2	30	12	48	0
19	711	70.084	278.9	119	7	2	30	12	48	0
20	710	69.082	279.1	120	6		30	12	48	1

DKDAT FIELD DATA TABLE

ALASKA - SUMMER 1984
SHOT NUMBER 12 SHOT POINT 20 TEAM 4
SHOT TIME: 184:10: 6: 0.009

LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE	GRADE
1	788	46.997	272.6	61	16		30	12	48	1
2	789	46.155	273.0	62	1	1	30	12	48	0
3	790	44.698	273.2	63	8	1	30	12	48	0
4	791	43.734	273.2	64	20	1	30	12	48	0
5	792	42.623	273.7	65	-12	1	30	12	48	0
6	793	40.969	273.9	66	-5	1	30	12	48	0
7	794	39.327	273.7	67	9	1	30	12	48	0
8	795	38.245	272.1	68	-5	1	30	12	48	0
9	796	37.143	272.4	69	4	1	30	12	48	0
10	797	35.949	272.3	70	52	1	30	12	48	0
11	798	35.004	271.2	71	30	2	30	12	48	12
12	799	34.026	269.7	72	24	1	30	12	48	0
13	800	33.199	269.3	73	-27	1	30	12	48	0
14	803	29.289	273.4	74	-4	3	30	12	48	0
15	802	28.209	271.2	75	17	1	30	12	48	0
16	805	25.067	275.2	76	3	3	30	12	48	0
17	804	30.167	274.1	77	10	1	30	12	48	0
18	806	23.840	271.1	78	-7	1	30	12	48	0
19	807	22.649	271.8	79	30	3	30	12	48	0
20	808	21.511	272.7	80	15	1	30	12	48	0

DKDAT FIELD DATA TABLE

ALASKA - SUMMER 1984
SHOT NUMBER 13 SHOT POINT 21 TEAM 3
SHOT TIME: 184:10: 8: 0.008

LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE	GRADE
1	709	160.735	283.0	41	-16	2	30	12 48	12	
2	708	159.434	283.1	42	17	1	30	12 48	0	
3	707	158.096	283.1	43	-22	2	30	12 48	0	9/20
4	706	157.298	282.8	44	96	1	30	12 48	0	
5	705	156.544	282.5	45	2	1	30	12 48	0	
6	704	155.689	282.7	46	32	2	30	12 68	0	
7	703	154.593	282.6	47	41	1	30	12 68	0	
8	701	153.438	282.9	48	38	2	30	12 88	0	
9	267	152.198	282.8	49	27	1	30	12 88	0	
10	777	151.167	282.9	50	-17	2	30	12 88	0	
11	778	150.354	282.9	51	41	1	30	12 68	0	
12	779	149.233	282.7	52	50	1	30	12 68	0	
13	780	148.166	282.6	53	7	2	30	12 48	0	
14	781	147.403	282.7	54	-20	2	30	12 48	0	
15	782	146.187	282.5	55	34	1	30	12 48	0	
16	783	144.880	282.6	56	29	2	30	12 48	1	
17	784	143.964	282.6	57	37	2	30	12 48	0	
18	785	143.049	282.5	58	24	2	30	12 48	0	
19	786	141.525	281.5	59	635	1	30	12 48	0	18
20	787	140.637	281.7	60	-15		30	12 48	12	

DKDAT FIELD DATA TABLE

ALASKA - SUMMER 1984
SHOT NUMBER 13 SHOT POINT 21 TEAM 1
SHOT TIME: 184:10: 8: 0.008

LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE	GRADE
1	776	225.304	282.1	1	39	2	30	12 88	0	
2	775	224.173	282.2	2	77	2	30	12 88	0	
3	774	223.284	282.2	3	22	2	30	12 68	0	
4	773	222.102	282.3	4	-150	2	30	12 68	0	
5	772	221.320	282.1	5	28	2	30	12 48	0	
6	770	219.926	282.2	6	11	2	30	12 48	0	
7	769	219.002	282.1	7	6	2	30	12 48	0	
8	768	217.972	282.2	8	37	2	30	12 48	1	
9	767	216.972	282.2	9	139	2	30	12 48	0	
10	766	215.813	282.4	10	16	2	30	12 48	0	
11	765	214.248	282.4	11	-41	2	30	12 48	0	
12	764	213.468	282.6	12	22	2	30	12 48	0	
13	763	212.266	282.5	13	5	1	30	12 48	0	9/20
14	762	211.278	282.5	14	58	1	30	12 48	0	9/20
15	760	209.077	282.5	15	54		30	12 48	5	
16	759	208.000	282.5	16	-16	1	30	12 48	0	
17	758	206.817	282.5	17	28	1	30	12 48	0	
18	757	205.825	282.7	18	-29	1	30	12 68	0	
19	756	204.779	282.8	19	-31	1	30	12 68	0	
20	755	204.167	283.0	20	25	1	30	12 68	0	

DKDAT FIELD DATA TABLE

ALASKA - SUMMER 1984
SHOT NUMBER 13 SHOT POINT 21 TEAM 4
SHOT TIME: 184:10: 8: 0.008

LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE	GRADE
1	788	139.472	281.9	61	16		30	12 48	1	
2	789	136.697	282.1	62	1	1	30	12 48	0	
3	790	137.283	282.3	63	8	2	30	12 48	0	
4	791	136.333	282.3	64	20	1	30	12 48	0	
5	792	135.286	282.6	65	-12	1	30	12 48	0	
6	793	133.678	282.7	66	-5	1	30	12 48	0	
7	794	132.030	282.8	67	9	1	30	12 48	0	
8	795	130.797	282.4	68	-5	1	30	12 48	0	
9	796	129.750	282.6	69	4	1	30	12 48	0	
10	797	129.566	282.6	70	52	1	30	12 48	0	
11	798	127.517	282.4	71	30		30	12 48	12	
12	799	126.389	282.1	72	24	1	30	12 48	0	9/20
13	800	125.535	282.1	73	-27	1	30	12 48	0	
14	803	122.121	283.5	74	-4	1	30	12 48	0	
15	802	120.864	283.1	75	17	1	30	12 48	0	
16	805	118.092	284.2	76	3	1	30	12 48	0	
17	804	123.040	283.6	77	10	1	30	12 48	0	
18	806	116.583	283.5	78	-7	2	30	12 48	0	
19	807	115.477	283.7	79	30	1	30	12 48	0	
20	808	114.430	284.0	80	15	1	30	12 48	0	

DKDAT FIELD DATA TABLE

ALASKA - SUMMER 1984
SHOT NUMBER 13 SHOT POINT 21 TEAM 2
SHOT TIME: 184:10: 8: 0.008

LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE	GRADE
1	754	203.588	283.3	21	-25	1	30	12 88	0	
2	753	202.900	283.5	22	19	1	30	12 88	0	
3	752	202.034	283.3	23	15	1	30	12 88	0	
4	751	201.421	283.0	24	-7	1	30	12 68	0/22	
5	750	200.555	282.8	25	52	1	30	12 68	0	
6	749	199.261	282.8	26	-6	1	30	12 48	0	
7	748	198.315	282.7	27	16	1	30	12 48	0	
8	747	197.156	282.6	28	-55	2	30	12 48	0	
9	746	196.702	282.1	29	24	2	30	12 48	0	
10	745	196.001	281.8	30	10	1	30	12 48	0	
11	744	195.023	281.8	31	8	1	30	12 48	0/17/22	
12	743	193.471	281.6	32	49	2	30	12 48	0	
13	742	192.581	281.6	33	85	2	30	12 48	0	
14	741	191.215	281.6	34	21	2	30	12 48	0/8/20	
15	740	190.071	282.0	35	-50	1	30	12 48	0	
16	738	188.976	282.1	36	13	2	30	12 48	0	
17	736	187.676	282.3	37	16	2	30	12 48	0	
18	732	185.808	282.3	38	1	2	30	12 48	0	
19	731	184.976	282.4	39	-8	2	30	12 48	0	
20	730	183.340	282.5	40	12	2	30	12 48	0	

DKDAT FIELD DATA TABLE

ALASKA - SUMMER 1984
 SHOT NUMBER 13 SHOT POINT 21 TEAM 5
 SHOT TIME: 184:10: 8: 0.008

LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE	GRADE
1	809	113.449	284.7	81	-11	1	30	12 48	0	0
2	810	112.636	285.4	82	-2	1	30	12 48	1	0
3	811	111.584	285.5	83	84	1	30	12 48	0	0
4	812	110.305	285.6	84	27	1	30	12 48	0	0
5	813	109.040	286.0	85	13	1	30	12 48	0	0
6	814	107.846	285.9	86	-7	1	30	12 48	1	0
7	815	106.429	286.0	87	-227	1	30	12 48	0	0
8	816	105.318	286.1	88	23	1	30	12 48	0	0
9	817	103.731	286.2	89	7	1	30	12 48	0	0
10	818	102.695	286.3	90	25	1	30	12 48	12/13	0
11	819	101.552	286.5	91	5	1	30	12 48	0	0
12	820	100.300	286.6	92	6	2	30	12 48	0/20/22	0
13	821	99.248	286.6	93	29	3	30	12 48	0/22	0
14	822	98.167	286.7	94	26	1	30	12 48	0	0
15	823	97.020	286.9	95	26	2	30	12 48	2	0
16	824	95.924	286.9	96	8	1	30	12 68	0	0
17	825	94.739	286.8	97	4	1	30	12 68	0	0
18	826	94.250	286.9	98	2	1	30	12 88	0	0
19	827	93.372	286.5	99	20	1	30	12 88	0	0
20	828	0.251	139.2	100	14	3	30	12 88	0	0

DKDAT FIELD DATA TABLE

ALASKA - SUMMER 1984
 SHOT NUMBER 13 SHOT POINT 21 TEAM 6
 SHOT TIME: 184:10: 8: 0.008

LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE	GRADE
1	729	182.778	282.5	101	27	2	30	12 48	0	0
2	728	181.692	282.7	102	16	2	30	12 48	0	0
3	727	180.181	283.0	103	3	2	30	12 48	0	0
4	726	179.453	282.8	104	2	2	30	12 48	0	0
5	725	178.213	282.6	105	45	2	30	12 48	0	0
6	724	176.905	282.6	106	-3	2	30	12 48	0	0
7	723	175.883	282.7	107	74	2	30	12 48	0	0
8	722	174.752	282.8	108	7	2	30	12 48	0	0
9	721	174.039	283.0	109	9	2	30	12 48	0	0
10	720	172.969	283.2	110	30	1	30	12 48	0	0
11	719	171.964	283.4	111	54	1	30	12 48	0	0
12	718	170.831	283.2	112	31	1	30	12 48	1	0
13	717	169.577	283.4	113	-13	2	30	12 48	0	0
14	716	168.323	283.6	114	10	2	30	12 48	0	0
15	715	167.334	283.7	115	10	2	30	12 48	0	0
16	714	165.969	283.5	116	38	2	30	12 48	0	0
17	713	165.014	283.4	117	67	2	30	12 48	0	0
18	712	164.130	283.4	118	35	1	30	12 48	0	0
19	711	163.016	283.3	119	7	1	30	12 48	0	0
20	710	162.032	283.4	120	6	1	30	12 48	0	1

DKDAT FIELD DATA TABLE

ALASKA - SUMMER 1984
 SHOT NUMBER 25 SHOT POINT 14 TEAM 1
 SHOT TIME: 195: 9: 2: 0.011

LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE	GRADE
1	16	159.267	57.8	1	18	1	30	12 88	0	0
2	481	87.647	61.0	2	20	2	30	12 88	0	0
3	101	47.797	79.8	3	11	1	30	12 88	0	0
4	302	47.409	80.0	4	-100	2	30	12 88	0/16	3
5	303	46.643	80.5	5	-8	1	30	12 68	0	0
6	304	45.160	80.7	6	6	1	30	12 68	0	0
7	305	44.406	82.2	7	0	1	30	12 48	0	0
8	306	44.283	84.8	8	-10	1	30	12 48	3	0
9	307	43.218	85.1	9	58	1	30	12 68	0	0
10	308	41.852	86.0	10	-36	1	30	12 48	0	0
11	309	41.197	86.8	11	-40	1	30	12 48	0	0
12	310	40.056	86.6	12	12	1	30	12 48	0	0
13	311	39.109	86.8	13	4	1	30	12 48	0	0
14	312	38.031	86.8	14	29	1	30	12 48	0	0
15	313	36.917	86.7	15	--	1	30	12 48	14	0
16	314	35.979	86.7	16	-8	1	30	12 48	0	0
17	315	34.987	86.5	17	14	1	30	12 48	0/19	0
18	316	33.928	86.6	18	-14	2	30	12 48	0	0
19	317	32.673	86.7	19	19	1	30	12 48	1	0
20	318	31.588	86.3	20	4	1	30	12 48	0	0

DKDAT FIELD DATA TABLE

ALASKA - SUMMER 1984
 SHOT NUMBER 25 SHOT POINT 14 TEAM 2
 SHOT TIME: 195: 9: 2: 0.011

LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE	GRADE
1	319	30.505	86.0	21	-9	1	30	12 48	0	0
2	320	29.613	86.0	22	12	1	30	12 48	0/18	0
3	321	28.584	85.8	23	-44	1	30	12 48	0	0
4	322	27.638	85.6	24	-4	1	30	12 48	0	0
5	323	26.654	85.5	25	-9	1	30	12 48	0	0
6	324	25.486	85.3	26	2	1	30	12 48	1	0
7	325	24.343	85.3	27	9	1	30	12 48	0/18	0
8	326	23.343	85.0	28	-56	1	30	12 48	0	0
9	327	22.280	84.8	29	12	1	30	12 48	0	0
10	328	21.287	84.7	30	7	1	30	12 48	0	0
11	329	19.911	84.0	31	7	3	30	12 48	0	0
12	330	18.735	84.7	32	19	3	30	12 48	3	0
13	331	18.304	87.2	33	36	3	30	12 48	0	0
14	332	17.180	86.9	34	12	3	30	12 48	0	0
15	350	15.950	86.1	35	-32	3	30	12 48	0	0
16	351	15.025	85.6	36	1	3	30	12 48	0	0
17	352	10.859	84.6	37	7	3	30	12 48	0	0
18	353	13.835	84.5	38	2	3	30	12 48	0	0
19	353	12.677	83.9	39	1	3	30	12 48	0	0
20	354	11.704	83.7	40	7	1	30	12 48	0	4

DKDAT FIELD DATA TABLE

ALASKA - SUMMER 1984
 SHOT NUMBER 25 SHOT POINT 14 TEAM 3
 SHOT TIME: 195: 9: 2: 0.011

LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE	GRADE
1	356	9.659	83.3	41	0	3	30	12 48	0	
2	357	8.635	82.8	42	10	3	30	12 48	0	
3	358	7.615	82.0	43	-12	3	30	12 48	0	
4	359	6.484	80.8	44	47	3	30	12 48	0	
5	360	5.365	79.3	45	3	3	30	12 48	0	
6	372	7.561	248.7	46	7	3	30	12 48	0	
7	362	3.405	76.3	47	16	3	30	12 48	0	
8	363	2.348	73.9	48	12	3	30	12 68	12/15/16	
9	364	1.414	73.6	49	12	3	30	12 68	0	
10	365	0.060	58.0	50	-13	3	30	12 88	0	
11	366	0.679	270.5	51	17	3	30	12 88	0	
12	367	1.723	266.0	52	21	3	30	12 68	0	
13	368	2.691	262.7	53	7	3	30	12 68	0	
14	369	3.621	258.7	54	-13	3	30	12 48	0	
15	370	4.626	252.2	55	4	3	30	12 48	0	
16	371	5.636	249.5	56	14	3	30	12 48	0	
17	372	6.574	248.8	57	14	3	30	12 48	0	
18	361	4.336	77.9	58	16	3	30	12 48	0	
19	374	8.532	247.0	59	-2	3	30	12 48	0	
20	375	9.754	246.2	60	-7	3	30	12 48	0	

DKDAT FIELD DATA TABLE

ALASKA - SUMMER 1984
 SHOT NUMBER 25 SHOT POINT 14 TEAM 5
 SHOT TIME: 195: 9: 2: 0.011

LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE	GRADE
1	406	30.754	247.5	81	-14	3	30	12 48	0	
2	407	31.768	249.2	82	-6	3	30	12 48	0	
3	408	32.552	249.9	83	22	3	30	12 48	0	
4	409	33.677	250.9	84	17	3	30	12 48	0	
5	410	34.980	251.1	85	3	1	30	12 48	0	
6	411	35.629	251.6	86	0	1	30	12 48	0	
7	412	36.854	252.5	87	143	1	30	12 48	0	
8	413	37.629	252.8	88	20	2	30	12 48	0/16	
9	414	38.835	253.6	89	8	1	30	12 48	5	
10	415	39.800	253.8	90	20	1	30	12 48	0	
11	416	40.985	254.1	91	5	1	30	12 48	0	
12	417	41.811	253.6	92	7	1	30	12 48	0	
13	418	42.524	252.7	93	24	1	30	12 48	0	
14	419	43.756	251.6	94	20	1	30	12 48	0	
15	420	44.738	250.8	95	19	1	30	12 48	0	
16	421	45.727	250.3	96	0	1	30	12 48	0	
17	422	46.535	249.5	97	5	1	30	12 48	0	
18	423	47.822	249.4	98	-4	1	30	12 48	0	
19	424	48.750	249.2	99	16	1	30	12 48	0	
20	425	49.938	249.0	100	12	1	30	12 48	1	

DKDAT FIELD DATA TABLE

ALASKA - SUMMER 1984
 SHOT NUMBER 25 SHOT POINT 14 TEAM 4
 SHOT TIME: 195: 9: 2: 0.011

LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE	GRADE
1	376	10.799	245.8	61	13	3	30	12 48	0	
2	377	11.702	248.0	62	4	3	30	12 48	0	
3	378	12.729	249.9	63	9	3	30	12 48	0	
4	379	13.792	249.5	64	18	3	30	12 48	0	
5	380	14.801	247.8	65	-14	3	30	12 48	0	
6	381	15.629	247.1	66	-4	3	30	12 48	0	
7	382	16.786	246.8	67	-25	3	30	12 48	0	
8	383	17.690	248.1	68	-8	3	30	12 48	0	
9	384	18.732	250.1	69	6	1	30	48 12	0/6	
10	385	19.720	250.3	70	37	3	30	12 48	0	
11	386	20.894	250.8	71	7	3	30	12 48	4	
12	387	21.800	250.1	72	18	3	30	12 48	0	
13	388	22.893	249.5	73	-14	3	30	12 48	0	
14	389	23.693	247.7	74	0	3	30	12 48	0	
15	400	24.832	245.8	75	16	3	30	12 48	0	
16	401	25.738	245.7	76	2	3	30	12 48	0/22	
17	402	26.831	245.7	77	8	3	30	12 48	3	
18	403	27.846	245.6	78	-4	3	30	12 48	0	
19	404	28.880	246.0	79	10	3	30	12 48	0	
20	405	29.892	246.8	80	22	3	30	12 48	1	

DKDAT FIELD DATA TABLE

ALASKA - SUMMER 1984
 SHOT NUMBER 25 SHOT POINT 14 TEAM 6
 SHOT TIME: 195: 9: 2: 0.011

LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE	GRADE
1	426	50.834	249.1	101	21	1	30	12 48	0	
2	427	51.922	249.1	102	16	1	30	12 48	0	
3	428	52.697	248.9	103	1	1	30	12 48	0	
4	429	53.633	248.6	104	0	1	30	12 48	0	
5	430	54.829	248.4	105	30	1	30	12 48	0	
6	431	56.138	248.0	106	-5	1	30	12 48	0/12	
7	432	57.093	247.8	107	38	1	30	12 68	0	
8	433	57.669	246.9	108	3	1	30	12 68	0	
9	434	58.488	246.1	109	4	1	30	12 88	0	
10	435	59.034	245.6	110	23	1	30	12 88	0	
11	446	61.089	244.6	111	48	1	30	12 68	1	
12	436	63.837	243.8	112	-14	1	30	12 48	4	
13	437	70.015	243.6	113	-12	1	30	12 48	0	
14	438	74.747	244.4	114	3	1	30	12 48	0	
15	439	78.430	245.0	115	8	1	30	12 48	0	
16	440	82.393	246.9	116	24	1	30	12 48	5	
17	441	88.944	248.4	117	8	1	30	12 48	0	
18	442	92.494	249.7	118	10	1	30	12 48	0	
19	443	99.721	252.0	119	4	1	30	12 48	0	
20	445	108.098	252.6	120	4	1	30	12 48	0	

DKDAT FIELD DATA TABLE

ALASKA - SUMMER 1984
SHOT NUMBER 26 SHOT POINT 7 TEAM 3
SHOT TIME: 195: 9: 4: 0.010

LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	GRADE	TAPE
1	356	38.324	258.7	41	0	1	30	12	48	0
2	357	39.339	259.0	42	10	1	30	12	48	0
3	358	40.350	259.2	43	-12	1	30	12	48	0
4	359	41.473	259.5	44	47	1	30	12	48	0
5	360	42.589	259.7	45	3	1	30	12	48	0
6	373	55.408	258.2	46	7	1	30	12	48	0
7	362	44.555	259.9	47	16	1	30	12	48	0
8	363	45.617	260.0	48	12	1	30	12	68	12
9	364	46.548	259.8	49	12	1	30	12	68	0
10	365	47.899	259.7	50	-13	1	30	12	88	0
11	366	48.621	259.8	51	17	1	30	12	88	0
12	367	49.666	259.9	52	21	1	30	12	68	0
13	368	50.641	259.8	53	7	1	30	12	68	0
14	369	51.575	259.6	54	-13	1	30	12	48	0
15	370	52.550	259.0	55	4	3	30	12	48	0/19
16	371	53.518	258.6	56	14	1	30	12	48	0
17	372	54.433	258.4	57	14	1	30	12	48	0
18	361	43.620	259.8	58	16	1	30	12	48	0/7
19	374	56.323	257.8	59	-2	2	30	12	48	0
20	375	57.500	257.4	60	-7	1	30	12	48	0

DKDAT FIELD DATA TABLE

ALASKA - SUMMER 1984
SHOT NUMBER 26 SHOT POINT 7 TEAM 4
SHOT TIME: 195: 9: 4: 0.010

LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	GRADE	TAPE
1	376	58.458	257.1	61	13	1	30	12	48	0
2	377	59.422	257.4	62	4	2	30	12	48	0
3	378	60.498	257.6	63	9	1	30	12	48	0
4	379	61.540	257.4	64	18	1	30	12	48	0
5	380	62.480	256.9	65	-14	2	30	12	48	0
6	381	63.270	256.6	66	-4	1	30	12	48	0
7	382	64.400	256.4	67	-25	2	30	12	48	0
8	383	65.351	256.6	68	-8	2	30	12	48	0
9	384	66.464	257.0	69	6	1	30	48	12	0
10	385	67.454	257.0	70	37	2	30	12	48	0
11	386	68.642	257.0	71	7	7	30	12	48	4
12	387	69.515	256.7	72	18	1	30	12	48	0
13	388	70.576	256.4	73	-14	1	30	12	48	0
14	389	71.278	255.7	74	16	1	30	12	48	0
15	400	72.295	255.0	75	16	1	30	12	48	0
16	401	73.180	254.8	76	2	1	30	12	48	0
17	402	74.266	254.7	77	8	8	30	12	48	3
18	403	75.259	254.5	78	-4	1	30	12	48	0
19	404	76.310	254.5	79	10	1	30	12	48	0
20	405	77.371	254.7	80	23	1	30	12	48	1

DKDAT FIELD DATA TABLE

ALASKA - SUMMER 1984
SHOT NUMBER 26 SHOT POINT 7 TEAM 1
SHOT TIME: 195: 9: 4: 0.010

LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	GRADE	TAPE
1	16	116.691	49.1	1	18	1	30	12	88	0
2	481	45.388	41.4	2	20	1	30	12	88	0
3	101	0.137	218.3	3	11	3	30	12	88	0
4	302	0.550	233.2	4	-100	3	30	12	88	0
5	303	1.433	231.8	5	-8	1	30	12	68	12
6	304	2.857	244.1	6	6	3	30	12	68	0
7	305	4.037	231.2	7	0	3	30	12	48	0
8	306	5.469	214.0	8	-10	3	30	12	48	3
9	307	6.987	219.8	9	58	3	30	12	68	0
10	308	7.831	223.7	10	-36	3	30	12	48	0
11	309	8.700	223.9	11	-40	3	30	12	48	0
12	310	9.483	229.2	12	12	3	30	12	48	0
13	311	10.335	231.7	13	4	3	30	12	48	0
14	312	11.228	234.9	14	29	3	30	12	48	0
15	313	12.157	237.9	15	--	3	30	12	48	14
16	314	12.976	240.0	16	-8	3	30	12	48	0
17	315	13.836	242.1	17	14	3	30	12	48	7
18	316	14.808	243.8	18	-14	1	30	12	48	0
19	317	16.003	245.3	19	18	1	30	12	48	1
20	318	16.941	247.3	20	4	3	30	12	48	0

DKDAT FIELD DATA TABLE

ALASKA - SUMMER 1984
SHOT NUMBER 26 SHOT POINT 7 TEAM 2
SHOT TIME: 195: 9: 4: 0.010

LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	GRADE	TAPE
1	319	17.925	248.8	21	-9	3	30	12	48	0
2	320	18.769	249.7	22	12	3	30	12	48	0
3	321	19.731	250.9	23	-44	3	30	12	48	8
4	322	20.625	251.8	24	-4	3	30	12	48	0
5	323	21.575	252.4	25	-9	3	30	12	48	0
6	324	22.692	253.4	26	2	2	30	12	48	1
7	325	23.807	254.0	27	9	3	30	12	48	0
8	326	24.766	254.7	28	-56	3	30	12	48	0
9	327	25.798	255.3	29	12	3	30	12	48	0
10	328	26.769	255.7	30	7	3	30	12	48	9
11	329	28.094	256.6	31	7	3	30	12	48	0
12	330	29.292	256.5	32	19	3	30	12	48	3
13	331	29.865	255.1	33	36	1	30	12	48	0
14	332	30.946	255.7	34	12	3	30	12	48	0
15	350	32.110	256.5	35	-32	3	30	12	48	0
16	351	33.001	257.0	36	1	3	30	12	48	0
17	355	37.099	258.2	37	7	3	30	12	48	0
18	352	34.139	257.8	38	2	1	30	12	48	0
19	353	35.275	258.2	39	1	1	30	12	48	0
20	354	36.240	258.4	40	7	1	30	12	48	4

DKDAT FIELD DATA TABLE

ALASKA - SUMMER 1984
 SHOT NUMBER 27 SHOT POINT 16 TEAM 1
 SHOT TIME: 195; 9: 6: 0.009

LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE	GRADE
1	16	0.000	180.0	1	18	3	30	12	88	0
2	481	72.271	233.9	2	20	1	30	12	88	0
3	101	116.826	229.1	3	11	1	30	12	88	0
4	302	117.238	229.2	4	-100	2	30	12	88	0
5	303	118.117	229.2	5	-8	3	30	12	68	12
6	304	119.434	229.5	6	6	1	30	12	68	0
7	305	120.710	229.2	7	0	1	30	12	48	0
8	306	121.981	228.5	8	-10	1	30	12	48	3
9	307	122.994	228.7	9	58	1	30	12	68	0
10	308	124.474	228.8	10	-36	1	30	12	48	0
11	309	125.340	228.8	11	-40	2	30	12	48	0
12	310	126.144	229.1	12	12	2	30	12	48	0
13	311	126.976	229.3	13	4	2	30	12	48	0
14	312	127.814	229.6	14	29	1	30	12	48	0/7
15	313	128.652	230.0	15	--	--	30	12	48	0/8
16	314	129.380	230.2	16	-8	2	30	12	48	14
17	315	130.120	230.5	17	14	1	30	12	48	0/7
18	316	130.968	230.8	18	-14	2	30	12	48	0
19	317	132.022	231.0	19	18	2	30	12	48	1
20	318	132.760	231.4	20	4	2	30	12	48	0

DKDAT FIELD DATA TABLE

ALASKA - SUMMER 1984
 SHOT NUMBER 26 SHOT POINT 7 TEAM 5
 SHOT TIME: 195; 9: 4: 0.010

LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE	GRADE
1	406	78.274	254.9	81	-14	1	30	12	48	0
2	407	79.388	255.5	82	-6	1	30	12	48	0
3	408	79.908	255.7	83	22	1	30	12	48	0
4	409	81.074	256.1	84	17	1	30	12	48	0
5	410	82.379	256.1	85	3	1	30	12	48	0
6	411	83.044	256.2	86	0	2	30	12	48	0
7	412	84.303	256.6	87	143	2	30	12	48	0
8	413	85.084	256.6	88	20	2	30	12	48	0/19
9	414	86.314	256.9	89	8	2	30	12	48	5
10	415	87.284	257.0	90	20	2	30	12	48	12
11	416	88.471	257.1	91	5	2	30	12	48	0
12	417	89.278	256.8	92	7	1	30	12	48	0
13	418	89.954	256.4	93	24	2	30	12	48	0
14	419	91.124	255.8	94	20	2	30	12	48	0
15	420	92.060	255.4	95	19	1	30	12	48	0
16	421	93.012	255.1	96	0	2	30	12	48	0
17	422	93.768	254.7	97	5	1	30	12	48	0
18	423	95.035	254.5	98	-4	1	30	12	48	0
19	424	95.944	254.4	99	16	2	30	12	48	0
20	425	97.111	254.2	100	12	2	30	12	48	1

DKDAT FIELD DATA TABLE

ALASKA - SUMMER 1984
 SHOT NUMBER 27 SHOT POINT 16 TEAM 2
 SHOT TIME: 195; 9: 6: 0.009

LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE	GRADE
1	319	133.555	231.7	21	-9	1	30	12	48	0
2	320	134.264	231.9	22	12	1	30	12	48	0
3	321	135.045	232.2	23	-44	3	30	12	48	0
4	322	135.776	232.4	24	-4	1	30	12	48	0
5	323	136.574	232.7	25	-9	1	30	12	48	0
6	324	137.488	233.0	26	2	2	30	12	48	1
7	325	138.431	233.2	27	9	1	30	12	48	0
8	326	139.203	233.5	28	-56	1	30	12	48	0
9	327	140.056	233.7	29	12	1	30	12	48	0
10	328	140.868	233.9	30	7	2	30	12	48	0
11	329	141.914	234.3	31	7	3	30	12	48	2/7
12	330	143.041	234.5	32	19	3	30	12	48	3
13	331	143.842	234.3	33	36	2	30	12	48	0
14	332	144.721	234.5	34	12	2	30	12	48	0
15	350	145.623	234.9	35	-32	1	30	12	48	0
16	351	146.336	235.1	36	1	1	30	12	48	2/6/12
17	355	149.793	236.0	37	7	2	30	12	48	0
18	352	147.206	235.4	38	2	2	30	12	48	0
19	353	148.140	235.7	39	1	2	30	12	48	0
20	354	148.976	235.9	40	7	2	30	12	48	4

DKDAT FIELD DATA TABLE

ALASKA - SUMMER 1984
 SHOT NUMBER 26 SHOT POINT 7 TEAM 6
 SHOT TIME: 195; 9: 4: 0.010

LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE	GRADE
1	426	98.008	254.2	101	21	1	30	12	48	0
2	427	99.093	254.2	102	16	1	30	12	48	0
3	428	99.849	254.1	103	1	1	30	12	48	0
4	429	100.753	253.8	104	0	1	30	12	48	0
5	430	101.921	253.7	105	30	2	30	12	48	0
6	431	103.190	253.4	106	-5	2	30	12	48	0/8/20
7	432	104.123	253.2	107	38	2	30	12	68	0
8	433	104.618	252.7	108	3	1	30	12	68	0
9	434	105.351	252.2	109	4	2	30	12	88	0
10	435	105.836	251.9	110	23	2	30	12	88	0
11	446	107.761	251.2	111	48	30	12	68	1	4
12	436	110.394	250.6	112	-14	1	30	12	48	0
13	437	116.491	250.1	113	-12	3	30	12	48	0
14	438	121.294	250.4	114	3	2	30	12	48	0
15	439	125.025	250.6	115	8	2	30	12	48	0
16	440	129.478	251.6	116	24	30	12	48	5	0
17	441	136.167	252.3	117	8	2	30	12	48	0
18	442	139.832	253.1	118	10	1	30	12	48	0
19	443	147.232	254.5	119	4	1	30	12	48	0/8/20
20	445	155.645	254.8	120	4	2	30	12	48	0

DKDAT FIELD DATA TABLE

ALASKA - SUMMER 1984
 SHOT NUMBER 27 SHOT POINT 16 TEAM 5
 SHOT TIME: 195: 9: 6: 0.009

LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE	GRADE
1	406	189.430	239.3	81	-14	2	30	12 48	0	
2	407	190.262	239.7	82	-6	1	30	12 48	0	
3	408	190.948	239.8	83	22	2	30	12 48	0	
4	409	191.931	240.0	84	17	2	30	12 48	0	
5	410	193.173	240.1	85	3	2	30	12 48	0	
6	411	193.745	240.3	86	0	2	30	12 48	0	
7	412	194.805	240.5	87	143	2	30	12 48	0	
8	413	195.513	240.6	88	20	3	30	12 48	0/22	
9	414	196.554	240.8	89	8	3	30	12 48	5	
10	415	197.438	240.9	90	20	2	30	12 48	0	
11	416	198.542	241.1	91	5	2	30	12 48	0	
12	417	199.424	241.0	92	7	2	30	12 48	0	
13	418	200.260	240.9	93	24	2	30	12 48	0	
14	419	201.649	240.7	94	20	2	30	12 48	0	
15	420	202.726	240.6	95	19	2	30	12 48	0	
16	421	203.771	240.5	96	0	2	30	12 48	0	
17	422	204.672	240.4	97	5	2	30	12 48	0/ 8/20	
18	423	205.956	240.4	98	-4	2	30	12 48	0	
19	424	206.893	240.4	99	16	2	30	12 48	0/ 8/20	
20	425	208.084	240.4	100	12	2	30	12 48	1	

DKDAT FIELD DATA TABLE

ALASKA - SUMMER 1984
 SHOT NUMBER 27 SHOT POINT 16 TEAM 6
 SHOT TIME: 195: 9: 6: 0.009

LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE	GRADE
1	426	208.948	240.5	101	21	2	30	12 48	0	
2	427	210.009	240.5	102	16	2	30	12 48	0	
3	428	210.799	240.5	103	1	2	30	12 48	0	
4	429	211.770	240.5	104	0	2	30	12 48	0	
5	430	212.982	240.5	105	30	2	30	12 48	0	
6	431	214.325	240.4	106	-5	2	30	12 48	0/ 8/20	
7	432	215.295	240.4	107	38	2	30	12 68	0	
8	433	215.985	240.2	108	3	2	30	12 88	0	
9	434	216.904	240.0	109	4	2	30	12 88	0	
10	435	217.512	239.9	110	23	2	30	12 88	0	
11	446	219.668	239.6	111	48	1	30	12 68	1	
12	436	222.473	239.5	112	-14	2	30	12 48	4	
13	437	228.622	239.5	113	-12	2	30	12 48	0	
14	438	233.209	239.9	114	3	2	30	12 48	0/ 8/20	
15	439	236.772	240.1	115	8	2	30	12 48	0/ 8/20	
16	440	240.673	240.9	116	24	2	30	12 48	5	
17	441	246.871	241.5	117	8	2	30	12 48	0	
18	442	250.077	242.1	118	10	2	30	12 48	0/ 8/20	
19	443	256.551	243.2	119	4	2	30	12 48	2	
20	445	264.589	243.7	120	4	2	30	12 48	0/ 8/20	

DKDAT FIELD DATA TABLE

ALASKA - SUMMER 1984
 SHOT NUMBER 27 SHOT POINT 16 TEAM 3
 SHOT TIME: 195: 9: 6: 0.009

LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE	GRADE
1	356	150.786	236.2	41	0	1	30	12 48	0/19/20	
2	357	151.651	236.4	42	10	2	30	12 48	0	
3	358	152.504	236.6	43	-12	2	30	12 48	0/19	
4	359	153.452	236.9	44	47	2	30	12 48	0	
5	360	154.406	237.1	45	3	2	30	12 48	0	
6	373	166.698	238.3	46	7	1	30	12 48	0	
7	362	156.136	237.4	47	16	2	30	12 48	0	
8	363	157.092	237.6	48	12	2	30	12 68	12	
9	364	157.979	237.7	49	12	2	30	12 68	0	
10	365	159.265	237.8	50	-13	2	30	12 88	0	
11	366	159.887	237.9	51	17	2	30	12 88	0	
12	367	160.823	238.1	52	21	2	30	12 68	0	
13	368	161.737	238.2	53	7	2	30	12 68	0/ 7	
14	369	162.672	238.2	54	-13	2	30	12 48	0	
15	370	163.769	238.2	55	4	2	30	12 48	0	
16	371	164.804	238.2	56	14	2	30	12 48	0	
17	372	165.734	238.2	57	14	2	30	12 48	0	
18	361	155.308	237.3	58	16	2	30	12 48	0	
19	374	167.694	238.3	59	-2	2	30	12 48	0	
20	375	168.915	238.3	60	-7	2	30	12 48	0	

DKDAT FIELD DATA TABLE

ALASKA - SUMMER 1984
 SHOT NUMBER 27 SHOT POINT 16 TEAM 4
 SHOT TIME: 195: 9: 6: 0.009

LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE	GRADE
1	376	169.898	238.3	61	13	2	30	12 48	0	
2	377	170.711	238.5	62	4	2	30	12 48	0	
3	378	171.630	238.7	63	9	2	30	12 48	0	
4	379	172.684	238.7	64	18	2	30	12 48	0	
5	380	173.752	238.6	65	-14	2	30	12 48	0	
6	381	174.597	238.6	66	-4	2	30	12 48	0	
7	382	175.746	238.6	67	-25	2	30	12 48	0	
8	383	176.567	238.8	68	-8	2	30	12 48	0	
9	384	177.462	239.1	69	6	2	30	12 48	0/19	
10	385	178.408	239.1	70	37	2	30	12 48	0/ 8	
11	386	179.507	239.3	71	7	2	30	12 48	4	
12	387	180.448	239.2	72	18	2	30	12 48	0	
13	388	181.561	239.2	73	-14	2	30	12 48	0	
14	389	182.482	239.1	74	0	2	30	12 48	0/ 8	
15	400	183.724	238.9	75	16	2	30	12 48	0/ 8	
16	401	184.626	238.9	76	2	2	30	12 48	0	
17	402	185.701	238.9	77	8	2	30	12 48	3	
18	403	186.713	238.9	78	-4	2	30	12 48	0	
19	404	187.707	239.0	79	10	2	30	12 48	0	
20	405	188.640	239.2	80	23	2	30	12 48	1	

DKDAT FIELD DATA TABLE

ALASKA - SUMMER 1984
 SHOT NUMBER 28 SHOT POINT 15 TEAM 1
 SHOT TIME: 195:11:14; 0.011

LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE	GRADE
1	16	72.386	53.8	1	19	1	30	12 88	0	
2	481	0.184	2.0	2	22	3	30	12 88	0	
3	101	45.384	221.5	3	12	1	30	12 88	0	
4	302	45.785	221.7	4	-107	2	30	12 88	0	
5	303	46.656	221.8	5	-7	1	30	12 88	3	
6	304	47.893	222.8	6	7	1	30	12 68	0	
7	305	49.228	222.3	7	0	0	30	12 48	3	
8	306	50.676	220.7	8	-9	9	30	12 48	3	
9	307	51.633	221.3	9	62	1	30	12 68	0	
10	308	53.072	221.8	10	-39	1	30	12 48	0	
11	309	53.939	221.9	11	-42	1	30	12 48	0	
12	310	54.655	222.8	12	13	1	30	12 48	0	
13	311	55.441	223.4	13	4	1	30	12 48	0/19	
14	312	56.219	224.2	14	31	1	30	12 48	0	
15	313	56.997	225.0	15	--	1	30	12 48	14	
16	314	57.682	225.6	16	-8	1	30	12 48	0	
17	315	58.379	226.3	17	15	1	30	12 48	0/ 9/20	
18	316	59.190	226.9	18	-15	2	30	12 48	0	
19	317	60.210	227.6	19	16	1	30	12 48	1	
20	318	60.914	228.4	20	4	1	30	12 48	0	

DKDAT FIELD DATA TABLE

ALASKA - SUMMER 1984
 SHOT NUMBER 28 SHOT POINT 15 TEAM 3
 SHOT TIME: 195:11:14; 0.011

LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE	GRADE
1	356	79.106	238.5	41	0	2	30	12 48	0	
2	357	79.724	238.8	42	10	2	30	12 48	0	
3	358	80.604	239.2	43	-13	2	30	12 48	0	
4	359	81.586	239.6	44	50	2	30	12 48	0	
5	360	82.573	240.0	45	3	2	30	12 48	0	
6	373	95.074	241.7	46	7	1	30	12 48	0	
7	362	84.356	240.5	47	17	2	30	12 48	0	
8	363	85.339	240.8	48	13	2	30	12 68	12	
9	364	86.243	240.9	49	12	2	30	12 68	0	
10	365	87.554	241.1	50	-14	2	30	12 88	0	
11	366	88.199	241.3	51	18	2	30	12 88	0	
12	367	89.165	241.6	52	23	2	30	12 68	0	
13	368	90.100	241.7	53	8	2	30	12 68	0	
14	369	91.045	241.8	54	-13	2	30	12 48	0	
15	370	92.130	241.7	55	5	2	30	12 48	0	
16	371	93.163	241.6	56	15	2	30	12 48	0	
17	372	94.099	241.6	57	15	2	30	12 48	0	
18	361	83.503	240.3	58	17	2	30	12 48	0	
19	374	96.064	241.6	59	-2	2	30	12 48	0	
20	375	97.287	241.6	60	-8	2	30	12 48	21	

DKDAT FIELD DATA TABLE

ALASKA - SUMMER 1984
 SHOT NUMBER 28 SHOT POINT 15 TEAM 2
 SHOT TIME: 195:11:14; 0.011

LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE	GRADE
1	319	61.683	229.2	21	-10	1	30	12 48	0	
2	320	62.376	229.7	22	12	1	30	12 48	0	
3	321	63.143	230.3	23	-47	1	30	12 48	0	
4	322	63.864	230.8	24	-5	1	30	12 48	0	
5	323	64.656	231.4	25	-9	1	30	12 48	0	
6	324	65.566	232.0	26	2	1	30	12 48	1	
7	325	66.509	232.5	27	10	1	30	12 48	0	
8	326	67.284	233.1	28	-60	1	30	12 48	3	
9	327	68.144	233.6	29	13	1	30	12 48	0	
10	328	68.965	234.1	30	8	1	30	12 48	0	
11	329	70.028	234.8	31	7	1	30	12 48	0	
12	330	71.167	235.1	32	20	1	30	12 48	0	
13	331	71.962	234.7	33	38	2	30	12 48	0	
14	332	72.858	235.3	34	13	2	30	12 48	0	
15	350	73.785	235.9	35	-35	1	30	12 48	0	
16	351	74.518	236.3	36	1	1	30	12 48	0	
17	355	78.073	238.0	37	8	1	30	12 48	0	
18	352	75.420	237.0	38	2	1	30	12 48	0	
19	353	76.384	237.5	39	1	1	30	12 48	0/20	
20	354	77.243	237.8	40	8	1	30	12 48	4	

DKDAT FIELD DATA TABLE

ALASKA - SUMMER 1984
 SHOT NUMBER 28 SHOT POINT 15 TEAM 4
 SHOT TIME: 195:11:14; 0.011

LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE	GRADE
1	376	98.273	241.6	61	13	2	30	12 48	0	
2	377	99.124	241.9	62	4	2	30	12 48	0	
3	378	100.084	242.2	63	10	2	30	12 48	0	
4	379	101.144	242.2	64	19	2	30	12 48	0	
5	380	102.195	242.1	65	-15	2	30	12 48	0	
6	381	103.035	242.0	66	-4	2	30	12 48	0	
7	382	104.189	242.0	67	-27	2	30	12 48	0	
8	383	105.045	242.3	68	-8	2	30	12 48	0	
9	384	105.996	242.7	69	6	1	30	48 12	0/ 9/19	
10	385	106.959	242.8	70	40	2	30	12 48	0	
11	386	108.088	243.0	71	7	2	30	12 48	4	
12	387	109.020	242.9	72	19	2	30	12 48	0	
13	388	110.130	242.8	73	-15	2	30	12 48	0	
14	389	111.008	242.5	74	0	2	30	12 48	0	
15	400	112.208	242.1	75	17	2	30	12 48	0	
16	401	113.112	242.1	76	2	1	30	12 48	0	
17	402	114.196	242.2	77	8	2	30	12 48	3	
18	403	115.211	242.2	78	-4	2	30	12 48	0	
19	404	116.224	242.3	79	11	3	30	12 48	2	
20	405	117.193	242.5	80	24	2	30	12 48	1	

DKDAT FIELD DATA TABLE

ALASKA - SUMMER 1984
 SHOT NUMBER 29 SHOT POINT 13 TEAM 1
 SHOT TIME: 196:11:10; 0.010

LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE	GRADE
1	16	217.475	59.9	1	34	2	30	12 88	0/ 8	
2	481	146.264	62.9	2	38	2	30	12 88	0/ 8	
3	101	105.701	72.0	3	22	3	30	12 88	0/ 8	
4	302	105.298	72.0	4	-183	2	30	12 88	0/ 8	
5	303	104.482	72.2	5	6	2	30	12 68	0/ 8	
6	304	103.001	72.2	6	12	2	30	12 68	0/ 8	
7	305	102.083	72.8	7	0	2	30	12 48	0/ 8	
8	306	101.624	73.8	8	7	2	30	12 48	0/ 8	
9	307	100.529	73.9	9	108	2	30	12 68	0/ 8	
10	308	99.065	74.1	10	-66	2	30	12 48	0/ 8	
11	309	98.310	74.3	11	-72	2	30	12 48	0/ 8	
12	310	97.225	74.1	12	24	2	30	12 48	0/ 8	
13	311	96.271	74.1	13	8	2	30	12 48	0/ 8	
14	312	95.223	73.9	14	55	2	30	12 48	0/ 8	
15	313	94.152	73.7	15	--	--	30	12 48	14	
16	314	93.243	73.6	16	-14	2	30	12 48	0	
17	315	92.295	73.4	17	27	2	30	12 48	0/ 8	
18	316	91.264	73.3	18	-25	2	30	12 48	5	
19	317	90.025	73.1	19	-12	2	30	12 48	1	
20	318	89.022	72.8	20	8	2	30	12 48	0/ 8	

DKDAT FIELD DATA TABLE

ALASKA - SUMMER 1984
 SHOT NUMBER 28 SHOT POINT 15 TEAM 5
 SHOT TIME: 195:11:14; 0.011

LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE	GRADE
1	406	118.016	242.8	81	-15	2	30	12 48	0	
2	407	118.922	243.2	82	-7	2	30	12 48	0	
3	408	119.647	243.5	83	24	1	30	12 48	12	
4	409	120.685	243.8	84	19	2	30	12 48	0	
5	410	121.953	243.9	85	3	2	30	12 48	0	
6	411	122.554	244.1	86	-2	2	30	12 48	0	
7	412	123.676	244.4	87	156	2	30	12 48	13	
8	413	124.409	244.6	88	22	2	30	12 48	0/19	
9	414	125.511	244.9	89	8	2	30	12 48	5	
10	415	126.427	245.0	90	22	2	30	12 48	0/20	
11	416	127.563	245.2	91	6	2	30	12 48	0/20	
12	417	128.431	245.1	92	7	2	30	12 48	0	
13	418	129.230	244.9	93	26	2	30	12 48	0	
14	419	130.569	244.6	94	22	2	30	12 48	0	
15	420	131.615	244.4	95	21	2	30	12 48	0	
16	421	132.641	244.2	96	0	2	30	12 48	0	
17	422	133.509	244.0	97	5	2	30	12 48	0	
18	423	134.797	244.0	98	-5	2	30	12 48	0	
19	424	135.732	244.0	99	17	1	30	12 48	2	
20	425	136.925	244.0	100	13	2	30	12 48	1	

DKDAT FIELD DATA TABLE

ALASKA - SUMMER 1984
 SHOT NUMBER 29 SHOT POINT 13 TEAM 2
 SHOT TIME: 196:11:10; 0.010

LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE	GRADE
1	319	88.002	72.6	21	-17	3	30	12 48	2/ 7	
2	320	87.142	72.4	22	22	2	30	12 48	0/ 8	
3	321	86.167	72.2	23	-83	2	30	12 48	0	
4	322	85.267	72.0	24	-8	2	30	12 48	0	
5	323	84.318	71.8	25	-16	2	30	12 48	0/ 8	
6	324	83.208	71.6	26	4	4	30	12 48	1	
7	325	82.104	71.4	27	17	2	30	12 48	0	
8	326	81.162	71.1	28	-104	2	30	12 48	2/ 8	
9	327	80.150	70.9	29	23	2	30	12 48	0	
10	328	79.491	70.7	30	13	2	30	12 48	0/ 8	
11	329	78.208	70.3	31	13	2	30	12 48	0/20	
12	330	77.009	70.2	32	36	2	30	12 48	0	
13	331	76.381	70.7	33	67	2	30	12 48	12	
14	332	75.326	70.4	34	23	2	30	12 48	0/ 8	
15	350	74.206	70.0	35	-60	2	30	12 48	0/ 8	
16	351	73.350	69.7	36	2	2	30	12 48	0	
17	355	69.393	68.6	37	14	2	30	12 48	0	
18	352	72.275	69.2	38	4	2	30	12 48	12	
19	353	71.189	68.8	39	1	2	30	12 48	0	
20	354	70.253	68.6	40	14	2	30	12 48	4	

DKDAT FIELD DATA TABLE

ALASKA - SUMMER 1984
 SHOT NUMBER 28 SHOT POINT 15 TEAM 6
 SHOT TIME: 195:11:14; 0.011

LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE	GRADE
1	426	137.804	244.0	101	22	2	30	12 48	0	
2	427	138.878	244.1	102	17	2	30	12 48	0	
3	428	139.664	244.0	103	1	30	12 48	3		
4	429	140.621	243.9	104	0	2	30	12 48	0/20	
5	430	141.829	243.9	105	32	1	30	12 48	0/20	
6	431	143.159	243.8	106	-5	1	30	12 48	0	
7	432	144.124	243.7	107	41	2	30	12 68	0	
8	433	144.762	243.4	108	3	2	30	12 68	0	
9	434	145.634	243.1	109	4	2	30	12 88	0/20	
10	435	146.211	242.9	110	25	2	30	12 88	0/20	
11	446	148.313	242.5	111	51	30	12 68	1		
12	436	151.083	242.2	112	-13	2	30	12 48	1	
13	437	157.244	242.2	113	-13	2	30	12 48	0	
14	438	161.911	242.6	114	3	1	30	12 48	0/20	
15	439	165.537	242.9	115	9	2	30	12 48	0/20	
16	440	169.621	243.9	116	26	30	12 48	4		
17	441	176.002	244.7	117	9	2	30	12 48	0	
18	442	179.373	245.5	118	10	1	30	12 48	0/ 8	
19	443	186.194	246.9	119	5	2	30	12 48	0/20	
20	445	194.405	247.4	120	4	2	30	12 48	0	

DKDAT FIELD DATA TABLE

ALASKA - SUMMER 1984
 SHOT NUMBER 29 SHOT POINT 13 TEAM 3
 SHOT TIME: 196:11:10: 0.010

LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE	GRADE
1	356	68.236	41	-4	2	30	12	48	0/ 8	0
2	357	67.265	42	18	2	30	12	48	0/ 8	0
3	358	66.305	43	-23	2	30	12	48	0/ 8	2
4	359	65.241	44	87	2	30	12	48	0/ 8	0
5	360	64.182	45	5	2	30	12	48	0	0
6	373	51.394	46	12	2	30	12	48	12	0
7	362	62.300	47	29	2	30	12	48	0	0
8	363	61.274	48	22	2	30	12	68	12	0
9	364	60.348	49	22	2	30	12	68	0	0
10	365	59.006	50	-25	2	30	12	88	0/ 8	0
11	366	58.329	51	31	2	30	12	88	0	0
12	367	57.329	52	39	2	30	12	68	0/ 8	0
13	368	56.373	53	13	2	30	12	68	0/ 8	0
14	369	55.419	54	-23	2	30	12	48	0/ 8	0
15	370	54.349	55	8	2	30	12	48	0	0
16	371	53.322	56	26	2	30	12	48	0	0
17	372	52.380	57	26	1	30	12	48	12	0
18	361	63.197	58	30	2	30	12	48	0/ 8	0
19	374	50.415	59	-3	2	30	12	48	0/ 8	0
20	375	49.192	60	-14	2	30	12	48	0/ 9	0

DKDAT FIELD DATA TABLE

ALASKA - SUMMER 1984
 SHOT NUMBER 29 SHOT POINT 13 TEAM 5
 SHOT TIME: 196:11:10: 0.010

LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE	GRADE
1	406	28.275	81	-28	2	30	12	48	0	0
2	407	27.352	82	-12	2	30	12	48	0	0
3	408	26.636	83	45	2	30	12	48	0	0
4	409	25.632	84	35	2	30	12	48	0	0
5	410	24.387	85	6	2	30	12	48	2/ 7	0
6	411	23.822	86	-3	2	30	12	48	0	0
7	412	22.805	87	294	2	30	12	48	13	0
8	413	22.128	88	41	2	30	12	48	0/19	0
9	414	21.186	89	16	2	30	12	48	5	0
10	415	20.377	90	42	2	30	12	48	0	0
11	416	19.375	91	11	1	30	12	48	0	0
12	417	18.482	92	14	2	30	12	48	0	0
13	418	17.570	93	49	2	30	12	48	0	0
14	419	16.093	94	41	1	30	12	48	0	0
15	420	14.966	95	39	1	30	12	48	0	0
16	421	13.899	96	0	1	30	12	48	0	0
17	422	12.944	97	10	1	30	12	48	0	0
18	423	11.682	98	-8	3	30	12	48	0	0
19	424	10.756	99	32	3	30	12	48	0	0
20	425	9.589	100	25	2	30	12	48	1	0

DKDAT FIELD DATA TABLE

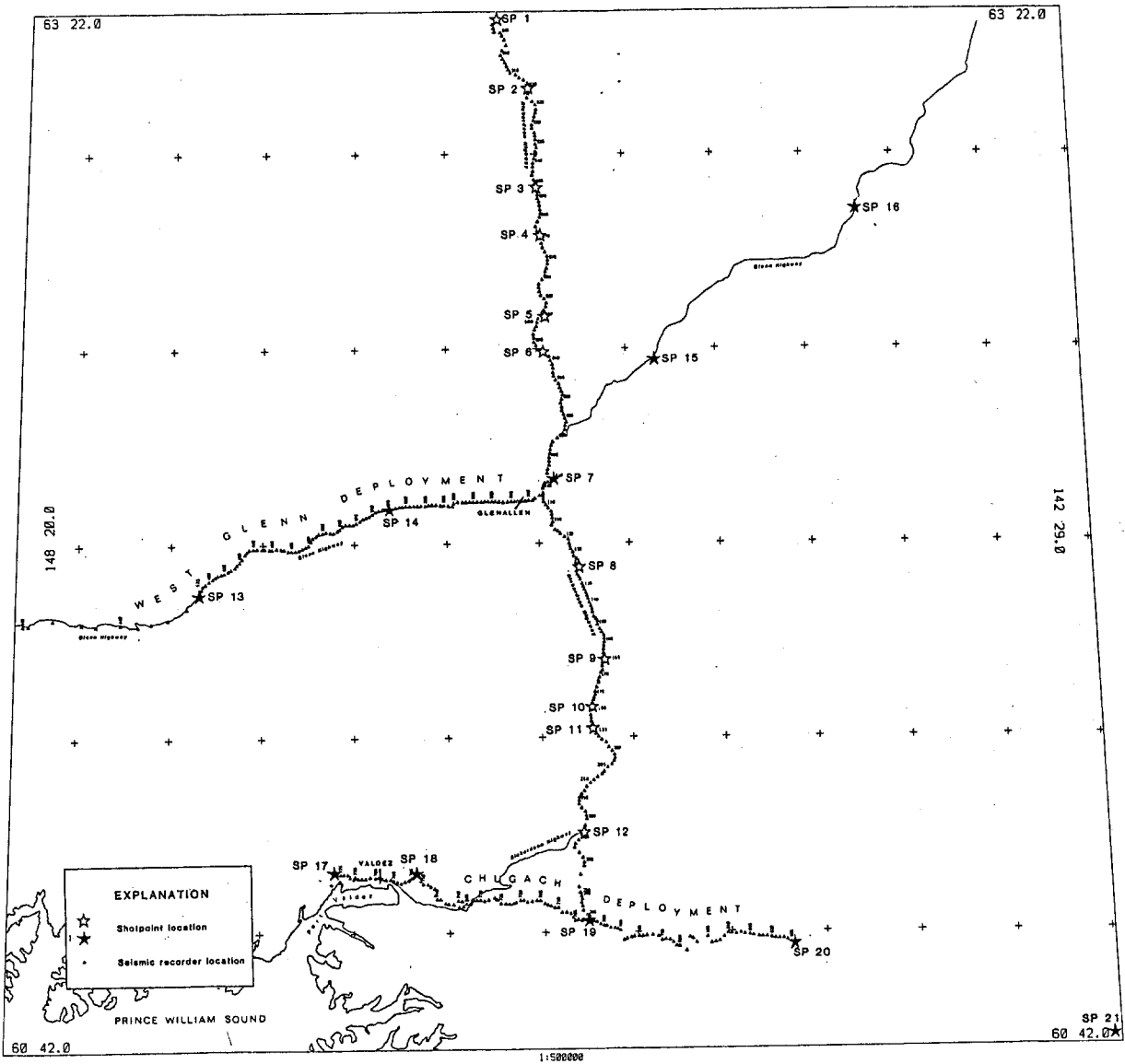
ALASKA - SUMMER 1984
 SHOT NUMBER 29 SHOT POINT 13 TEAM 4
 SHOT TIME: 196:11:10: 0.010

LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE	GRADE
1	376	48.205	61	23	2	30	12	48	0	0
2	377	47.311	62	7	2	30	12	48	0	0
3	378	46.313	63	17	2	30	12	48	0	0
4	379	45.247	64	33	2	30	12	48	0	0
5	380	44.214	65	-25	2	30	12	48	0/ 8	0
6	381	43.379	66	-7	2	30	12	48	0	0
7	382	42.221	67	-46	2	30	12	48	12	0
8	383	41.332	68	-14	2	30	12	48	12	0
9	384	40.343	69	11	1	30	48	12	12	0
10	385	39.369	70	68	2	30	12	48	0	0
11	386	38.228	71	12	2	30	12	48	4	0
12	387	37.295	72	32	2	30	12	48	0	0
13	388	36.184	73	-25	2	30	12	48	0	0
14	389	35.329	74	-2	2	30	12	48	0	0
15	400	34.172	75	29	2	30	12	48	0	0
16	401	33.266	76	4	2	30	12	48	0/ 8	0
17	402	32.173	77	14	2	30	12	48	1	0
18	403	31.158	78	-6	2	30	12	48	0	0
19	404	30.124	79	19	2	30	12	48	0	0
20	405	29.120	80	41	2	30	12	48	1	0

DKDAT FIELD DATA TABLE

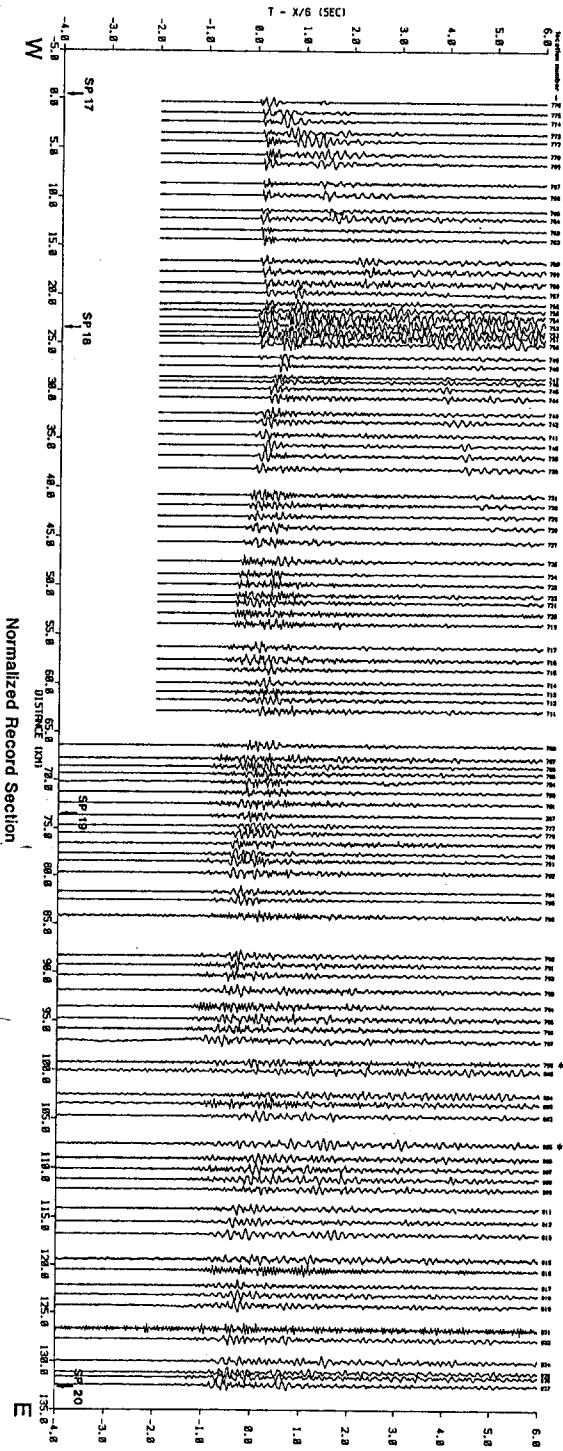
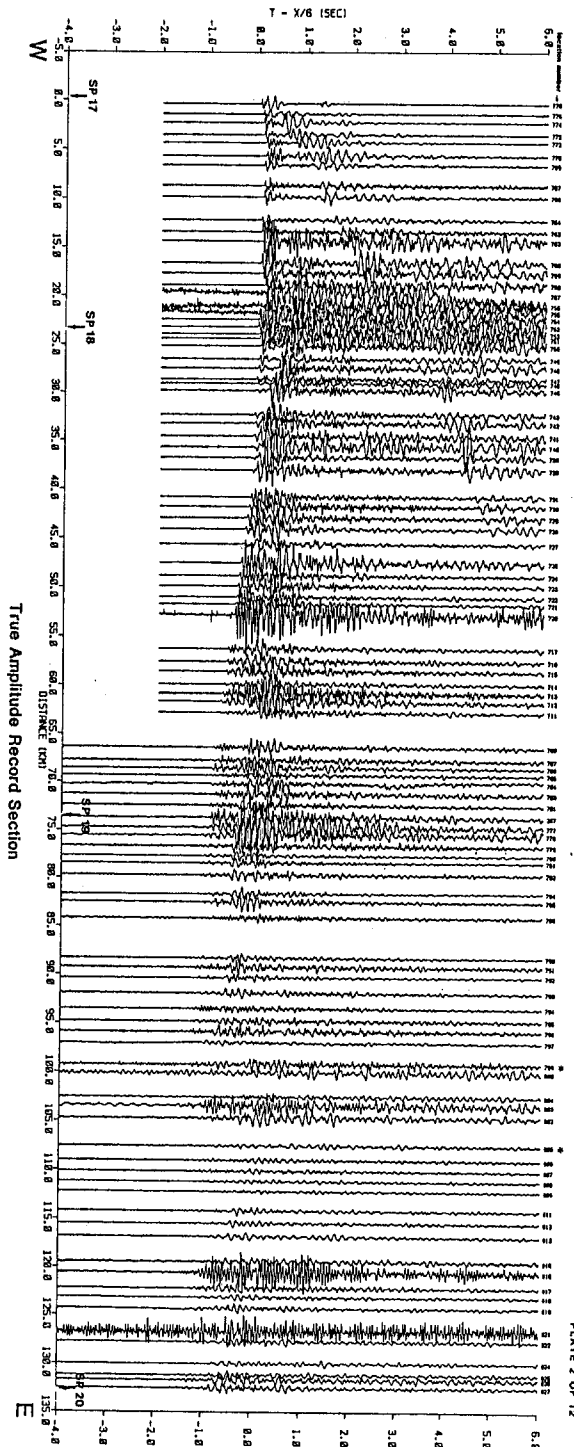
ALASKA - SUMMER 1984
 SHOT NUMBER 29 SHOT POINT 13 TEAM 6
 SHOT TIME: 196:11:10: 0.010

LOC	DIST(KM)	AZIM	UNIT	CHRON	CHAN	C1	C2	C3	TAPE	GRADE
1	426	8.793	101	39	3	30	12	48	0	0
2	427	7.829	102	30	3	30	12	48	0/ 8	0
3	428	7.062	103	1	3	30	12	48	3	0
4	429	6.094	104	0	0	30	12	48	5	0
5	430	4.960	105	56	3	30	12	48	0	0
6	431	3.702	106	-9	3	30	12	48	0	0
7	432	2.892	107	71	3	30	12	68	0	0
8	433	1.876	108	6	3	30	12	68	0	0
9	434	0.711	109	8	3	30	12	88	0	0
10	435	0.069	110	44	3	30	12	88	0	0
11	446	2.371	111	89	3	30	12	68	0	0
12	436	5.208	112	-27	3	30	12	48	4	0
13	437	11.234	113	-22	1	30	12	48	0	0
14	438	15.794	114	5	2	30	12	48	0	0
15	439	19.432	115	15	2	30	12	48	0	0
16	440	23.752	116	44	2	30	12	48	5	0
17	441	30.494	117	15	2	30	12	48	0	0
18	442	34.277	118	18	1	30	12	48	0	0
19	443	42.055	119	8	2	30	12	48	0/ 8/20	0
20	445	50.549	120	8	2	30	12	48	0	0



ALASKA / T.A.C.T., 1984: RECORDER AND SHOTPOINT LOCATION MAP

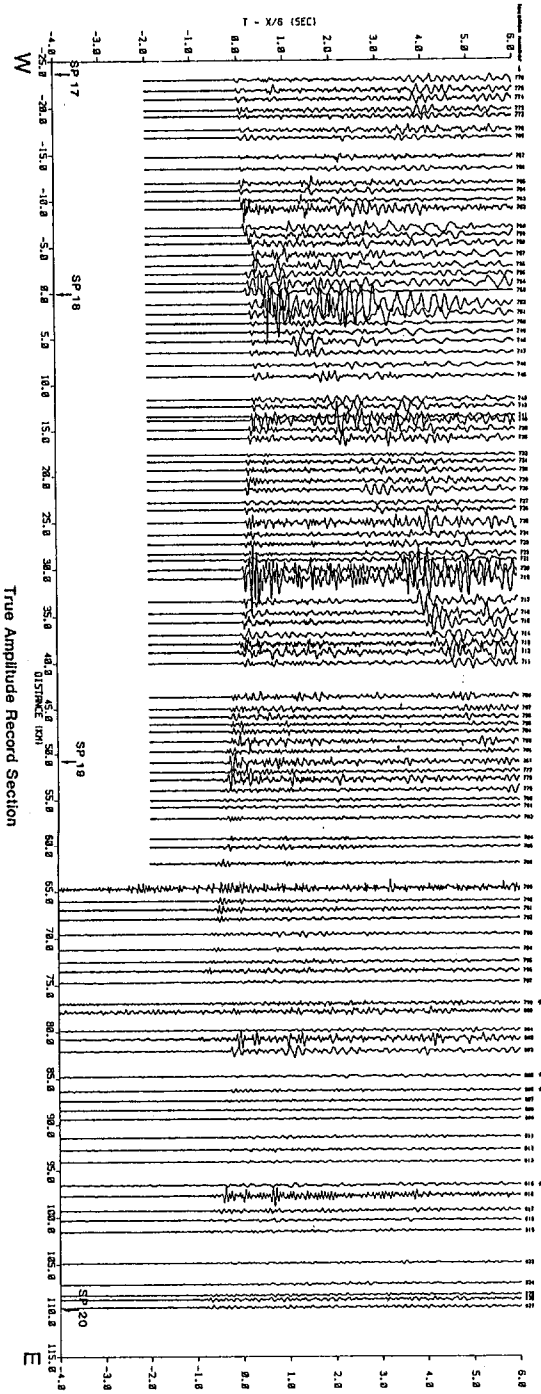
by Margaret A. Daley, Elizabeth L. Amos and Gary Fuls



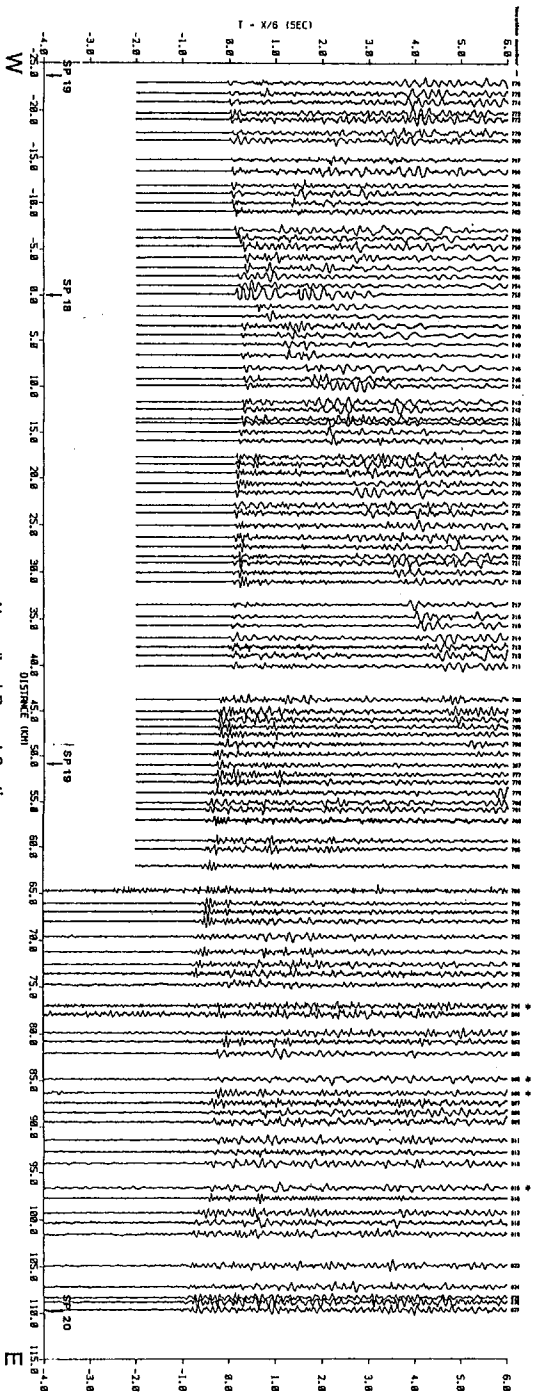
ALASKA/ CHUGACH MTS. PROFILE: SHOT 9, SHOTPOINT 17

by Margaret A. Daley, Elizabeth L. Amos and Gary Fuis

1985



True Amplitude Record Section



Normalized Record Section

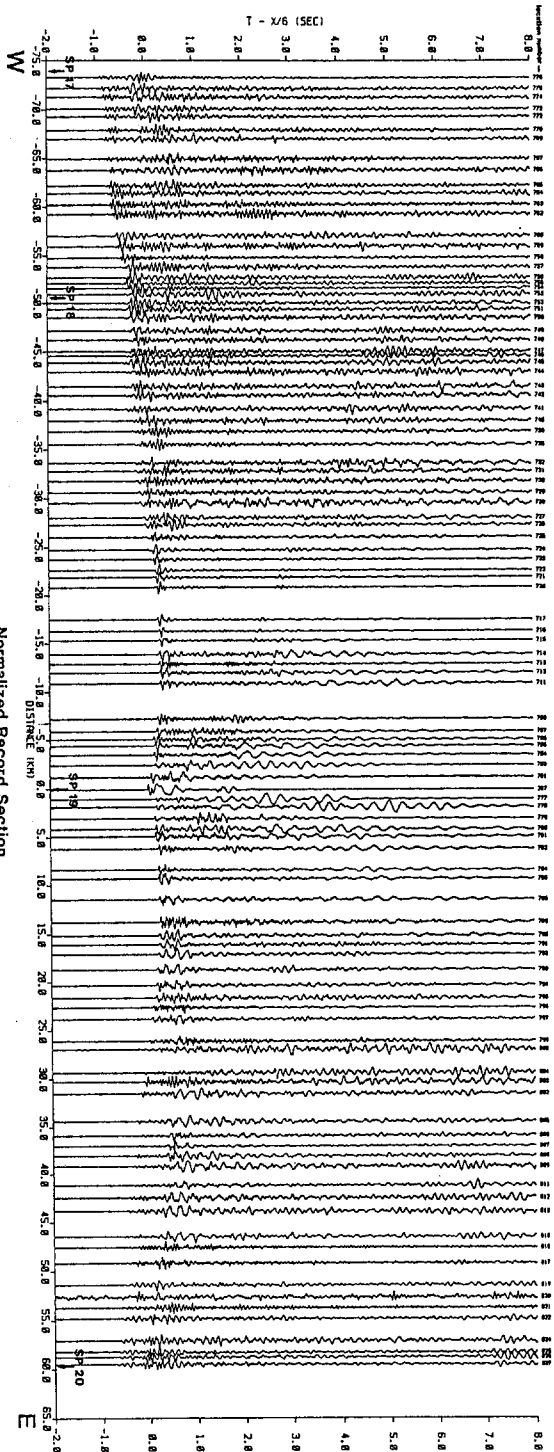
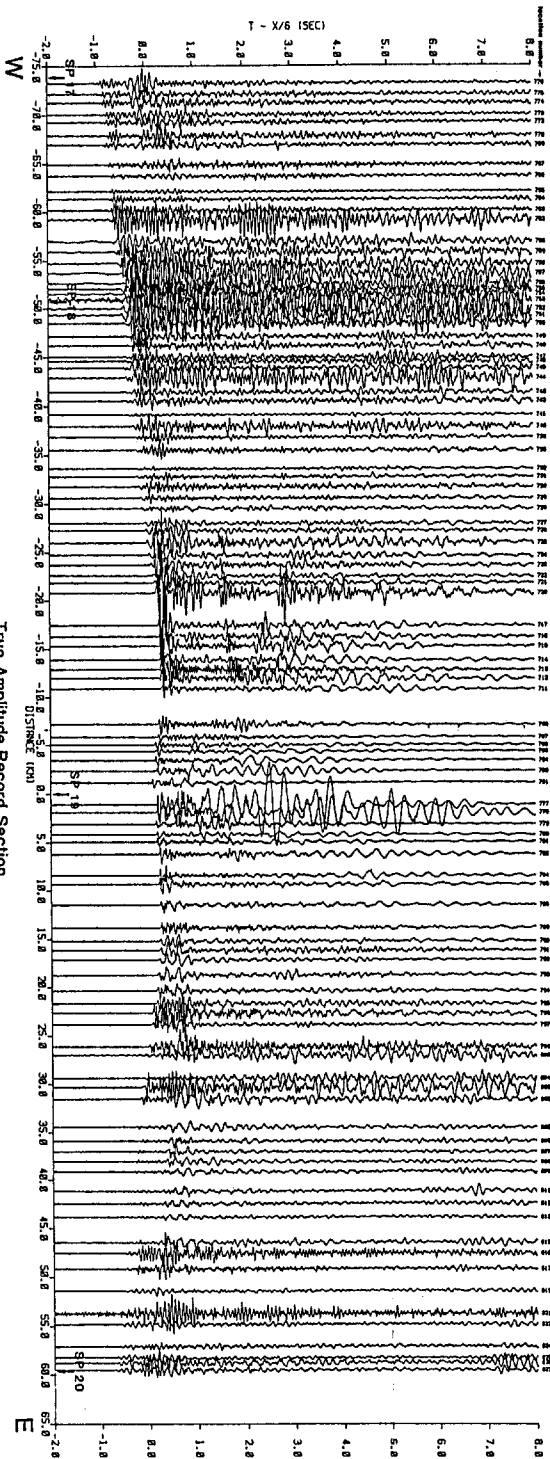
ALASKA / CHUGACH MTS. PROFILE: SHOT 10, SHOTPOINT 18

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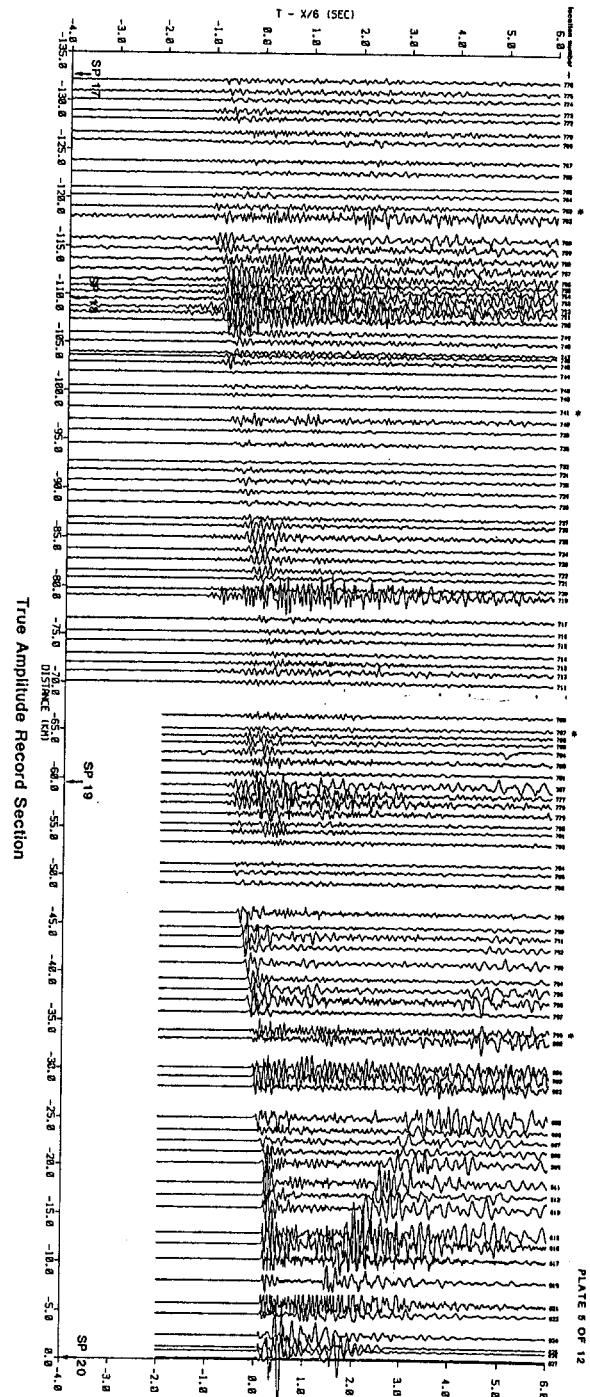
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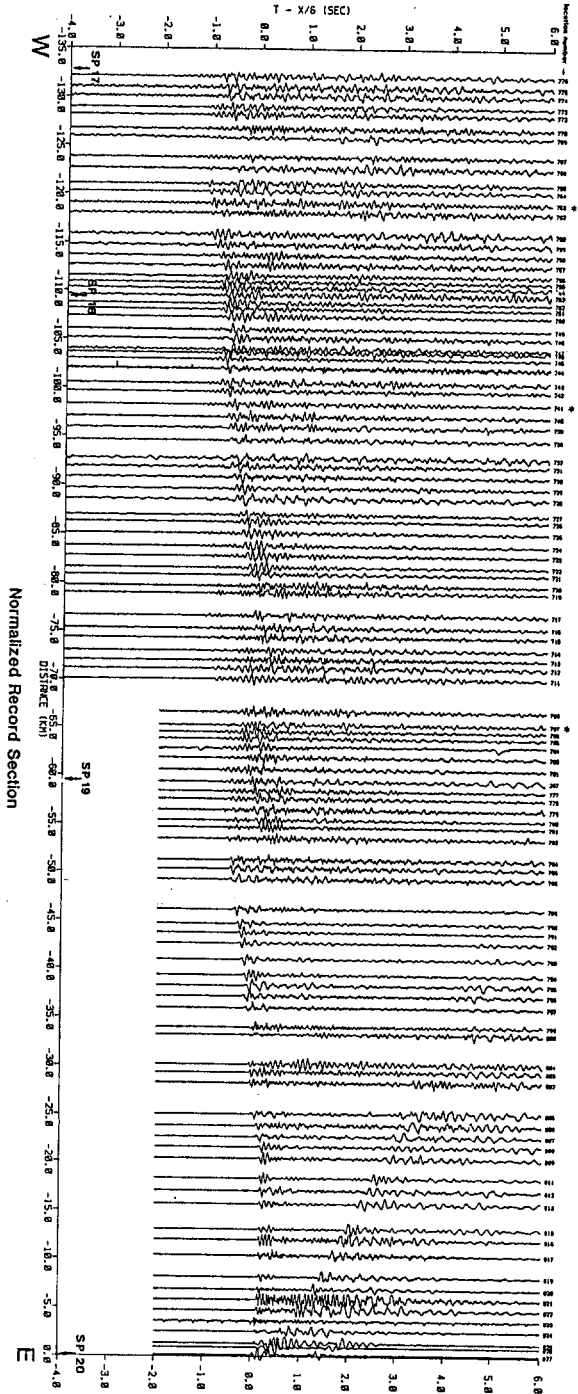
ALASKA / CHUGACH MTS. PROFILE: SHOT 11, SHOTPOINT 19

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True Amplitude Record Section



Normalized Record Section

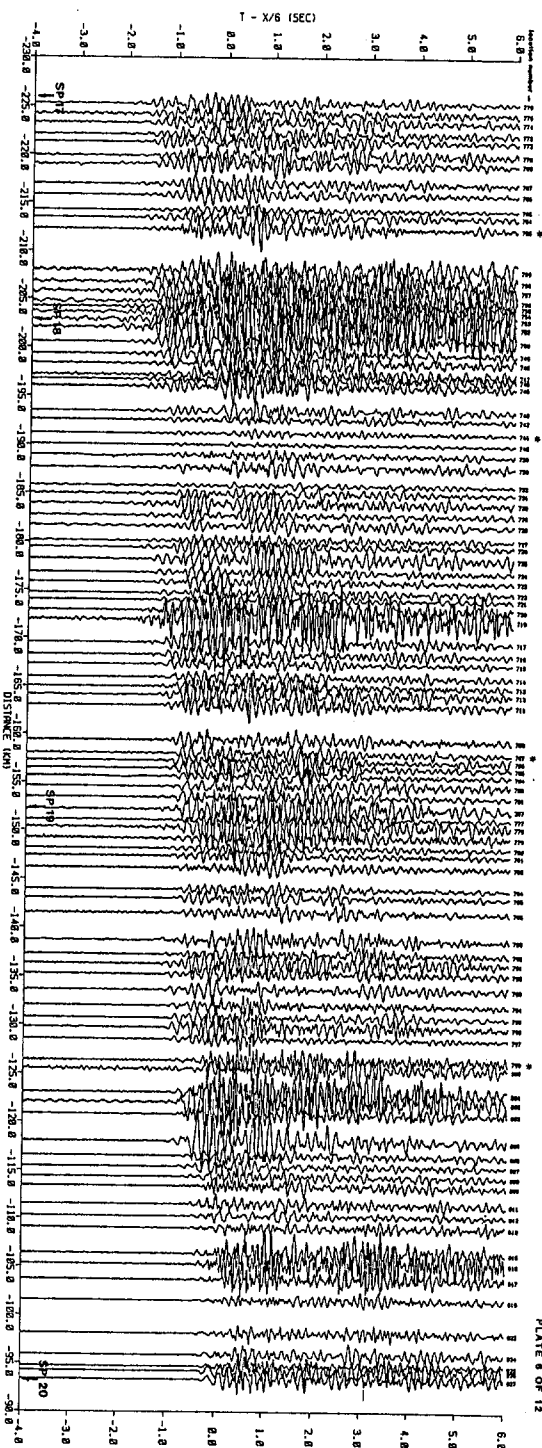
ALASKA / CHUGACH MTS. PROFILE: SHOT 12, SHOTPOINT 20

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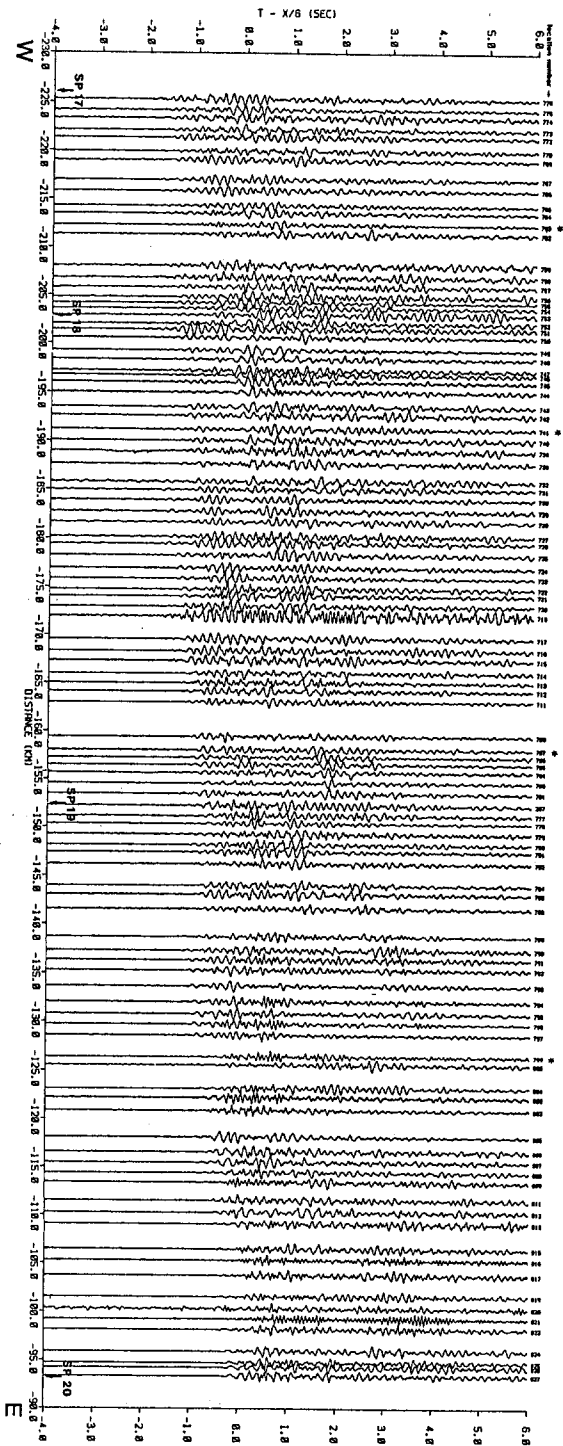
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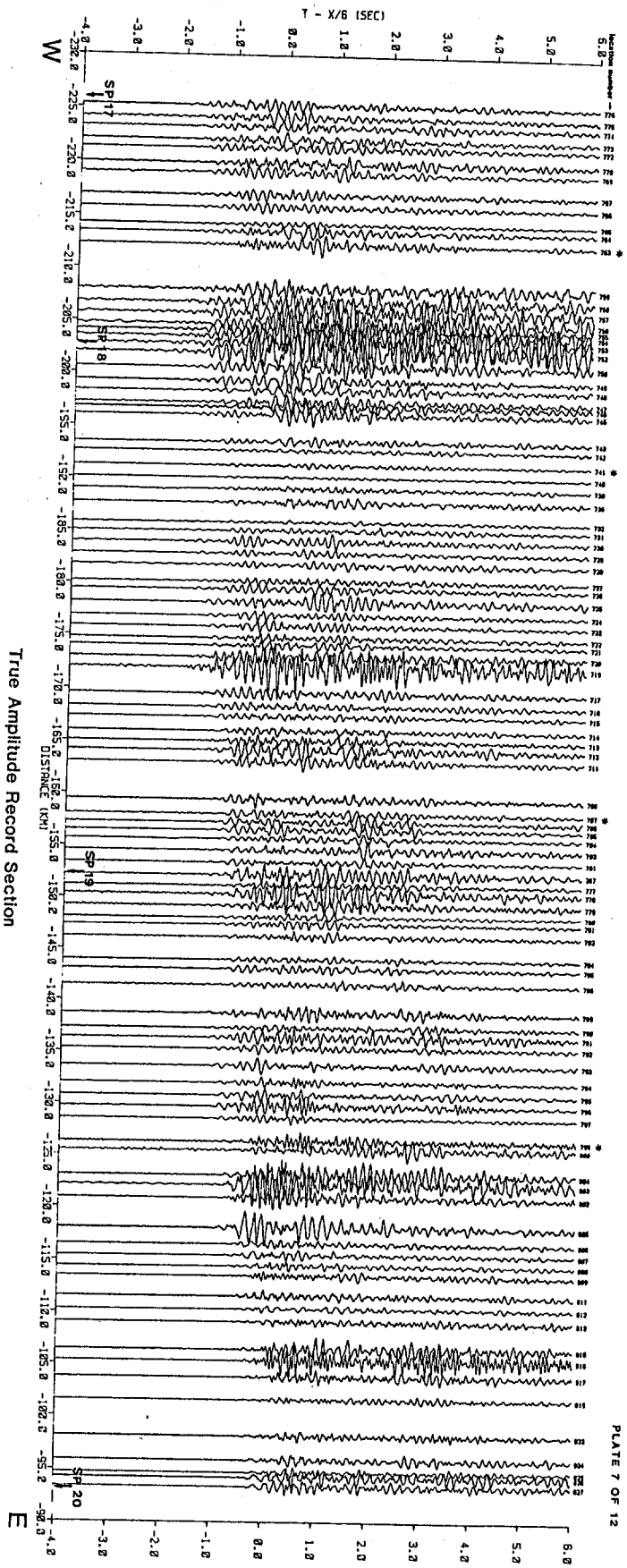
True Amplitude Record Section



Normalized Record Section

ALASKA / CHUGACH MTS. PROFILE: SHOT 13, SHOTPOINT 21

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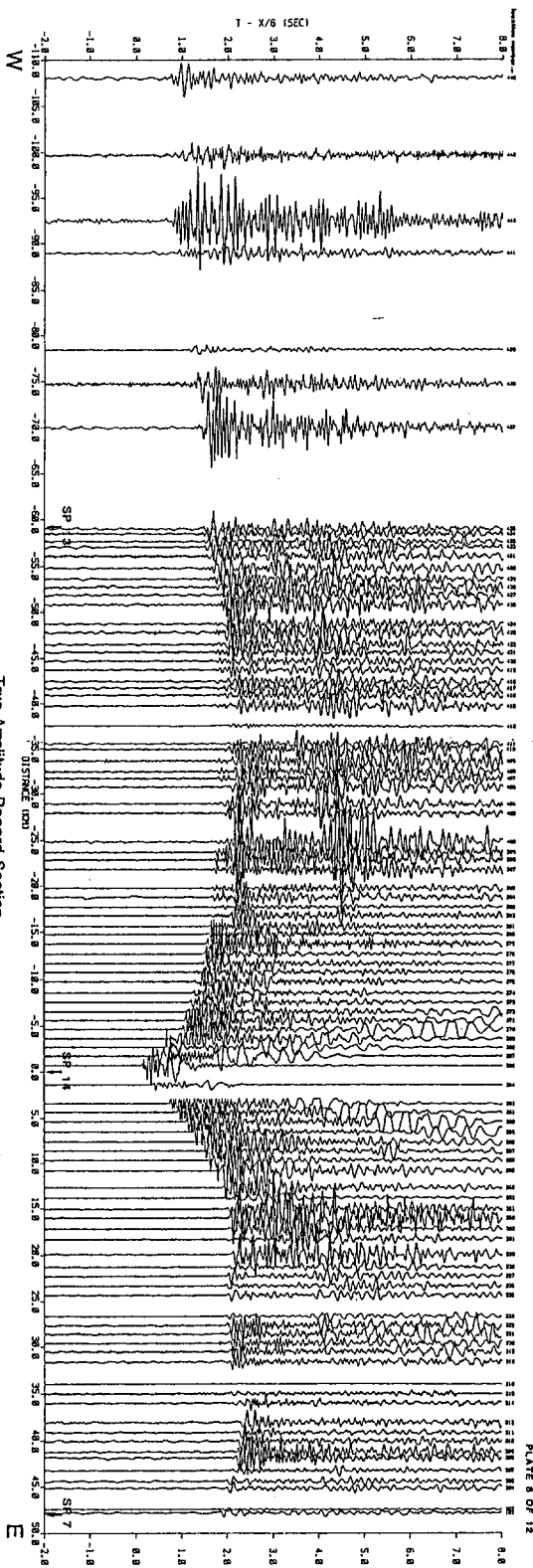
ALASKA / CHUGACH MTS. PROFILE: SHOT 13, SHOTPOINT 21

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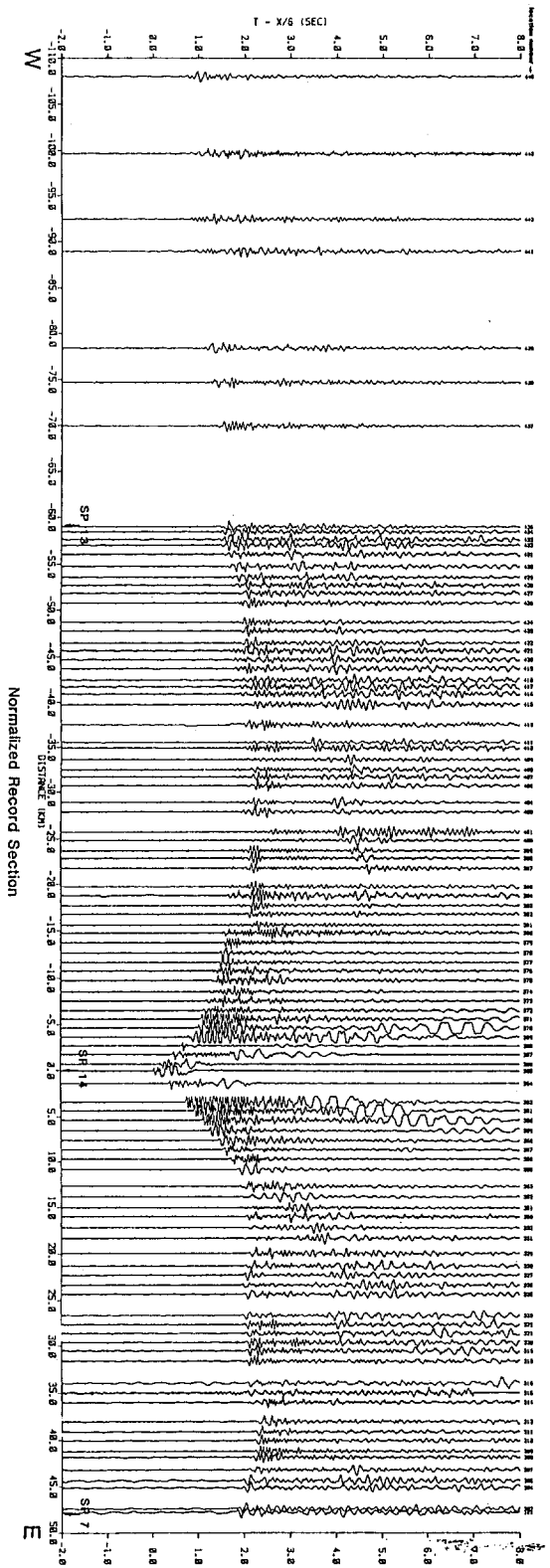
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* From data tape - filtered from 1-18 Hz



True Amplitude Record Section

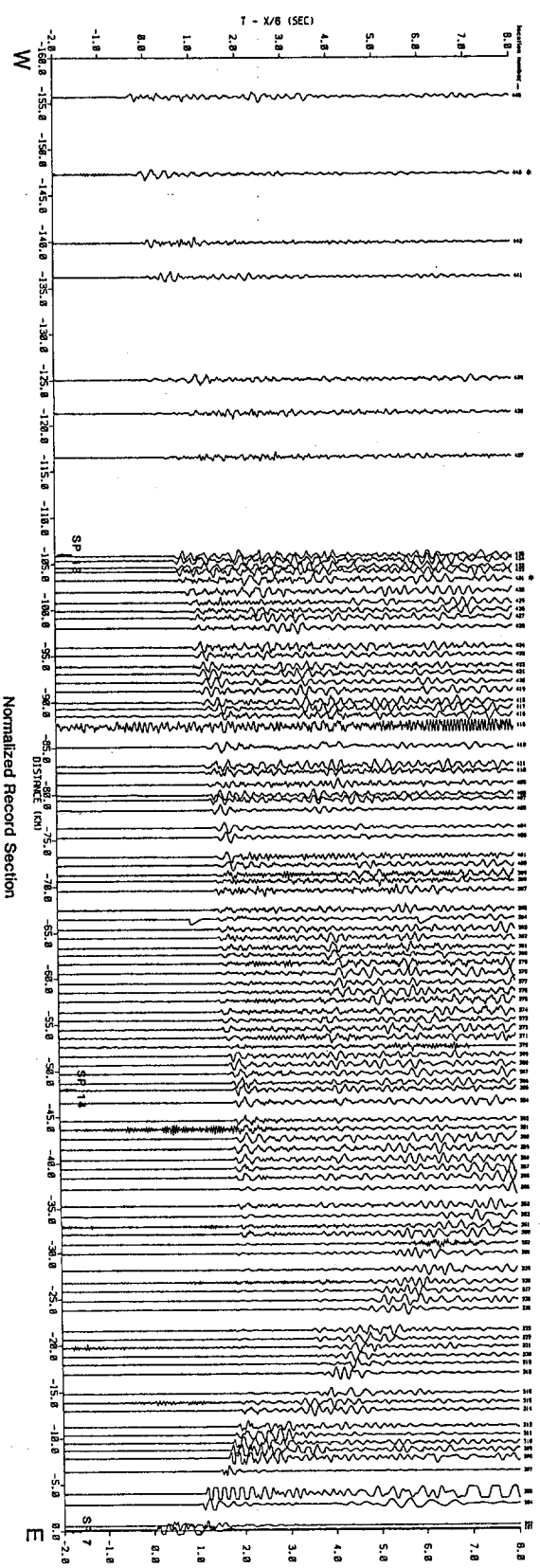
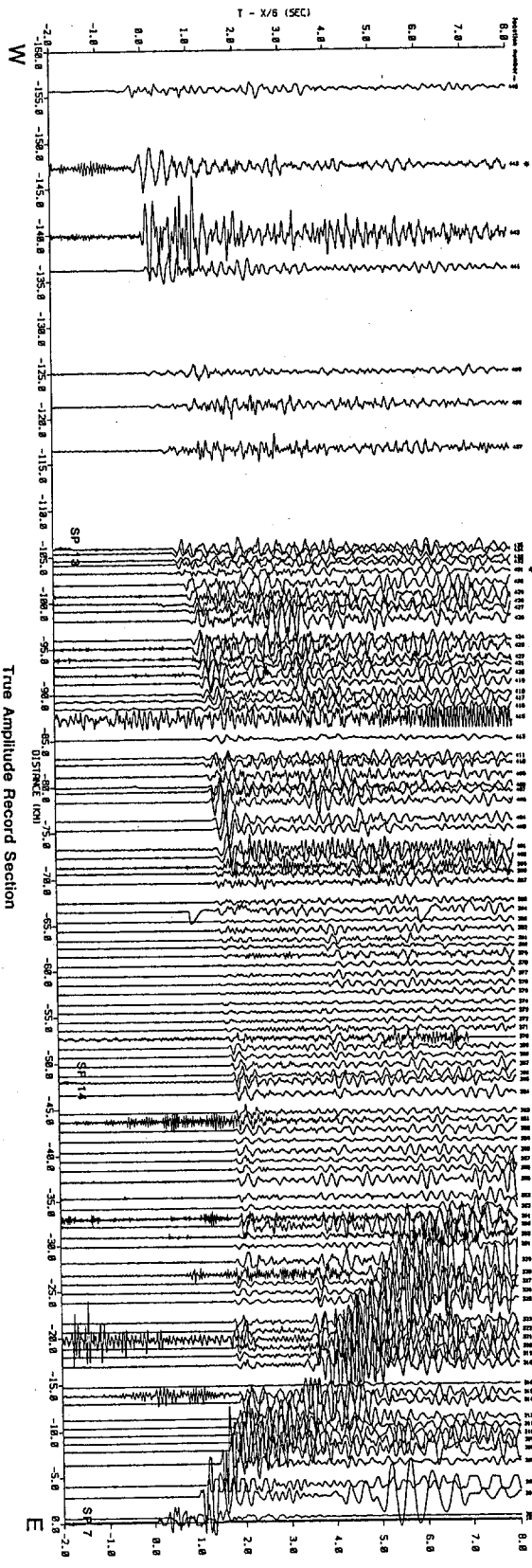


ALASKA / WEST GLENN HIGHWAY PROFILE: SHOT 25, SHOTPOINT 14

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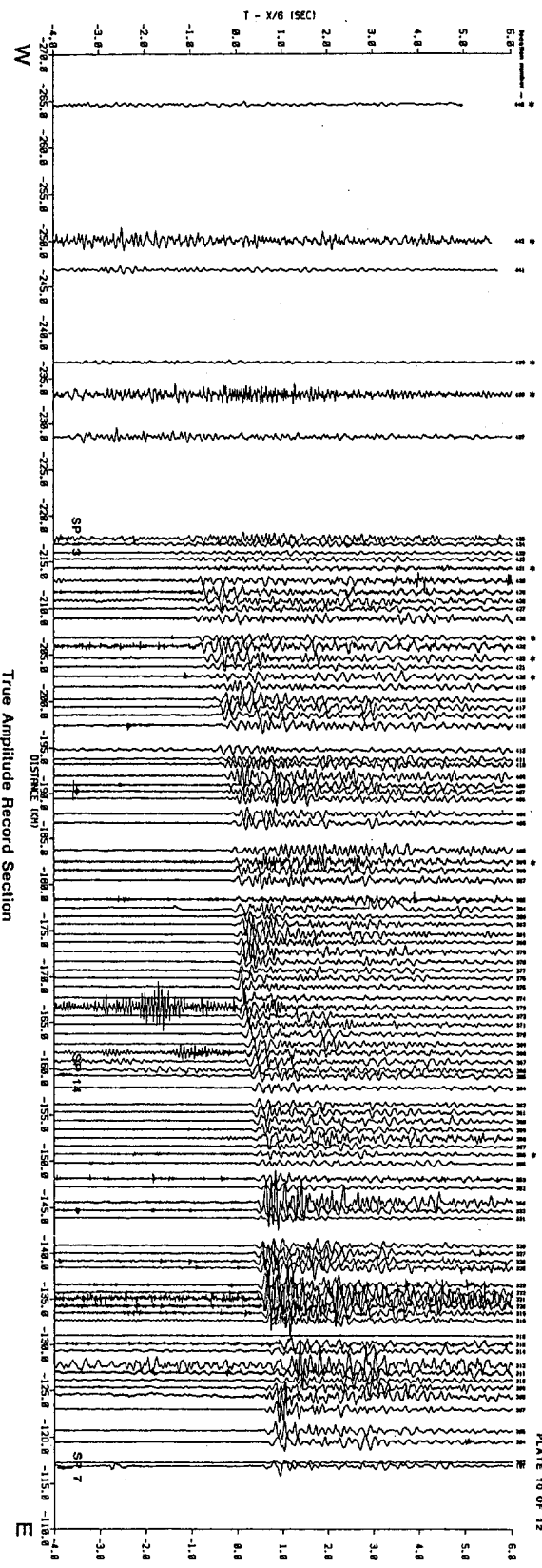


ALASKA / WEST GLENN HIGHWAY PROFILE: SHOT 26, SHOTPOINT 7

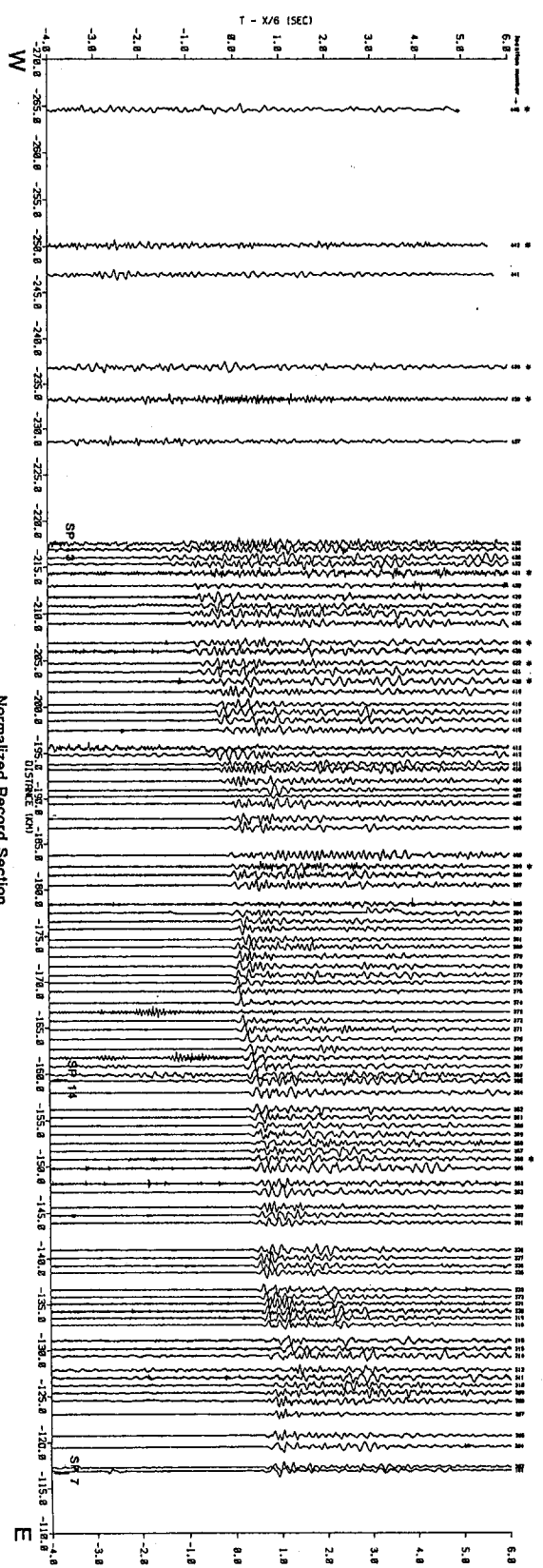
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True Amplitude Record Section



Normalized Record Section

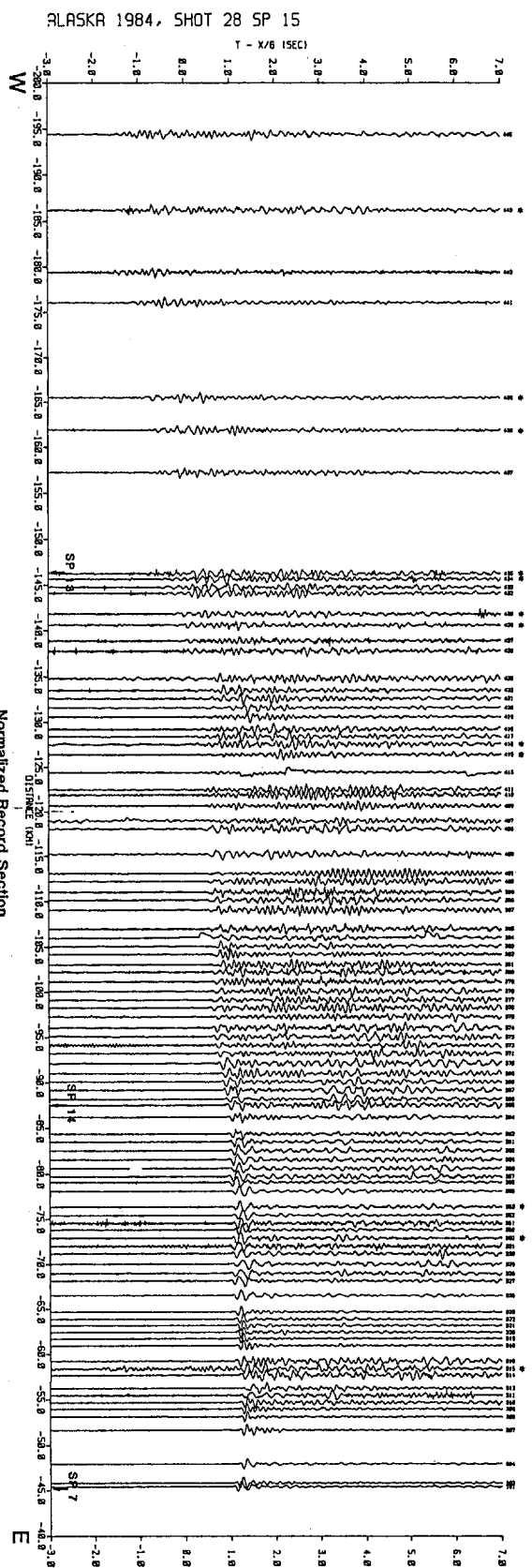
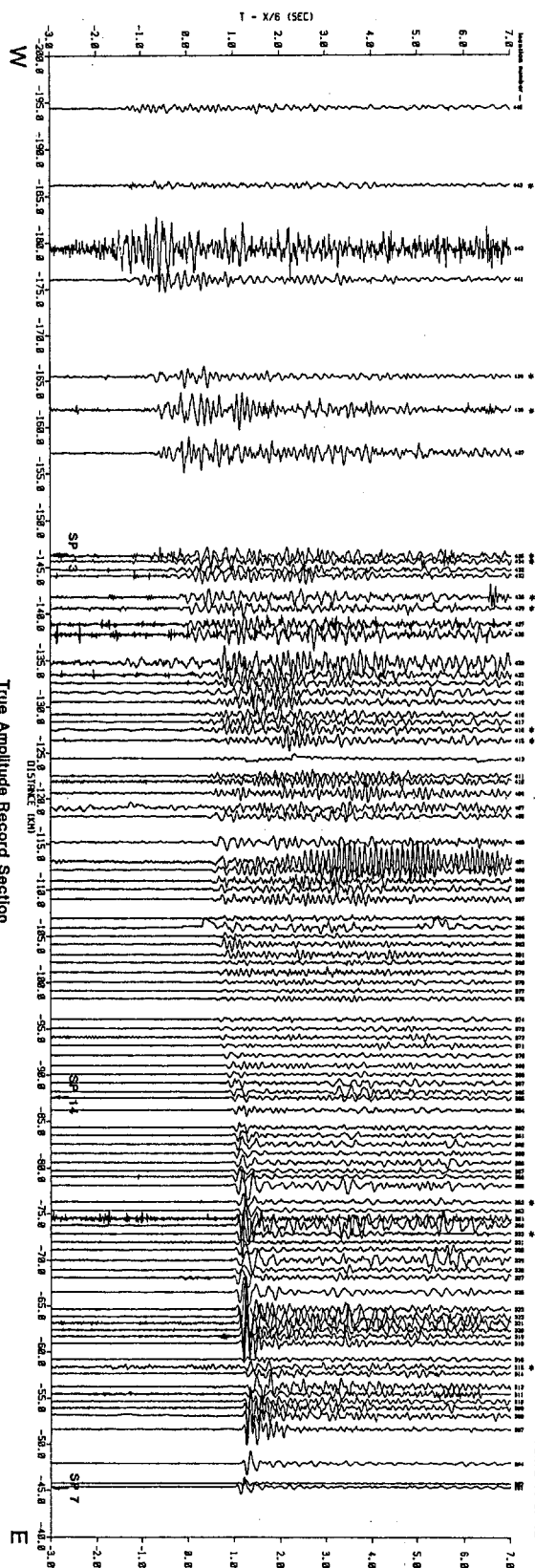
ALASKA / WEST GLENN HIGHWAY PROFILE: SHOT 27, SHOTPOINT 16

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8. View the Handbook/Manual from 2-18 8a

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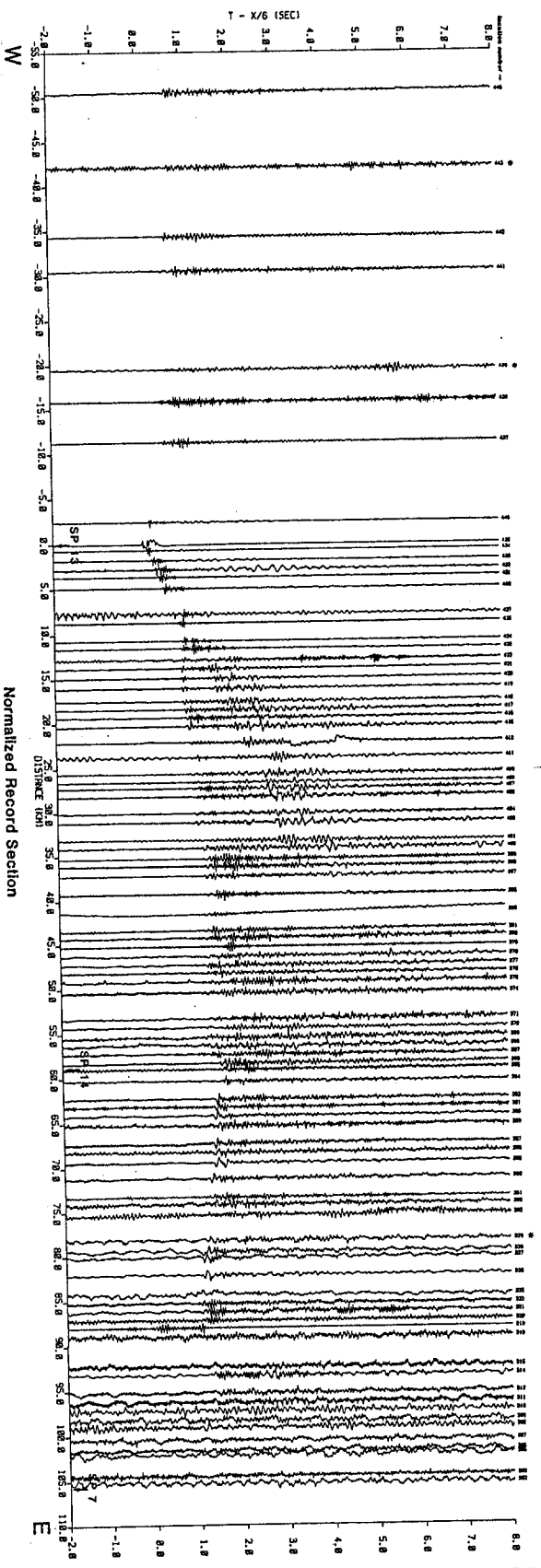
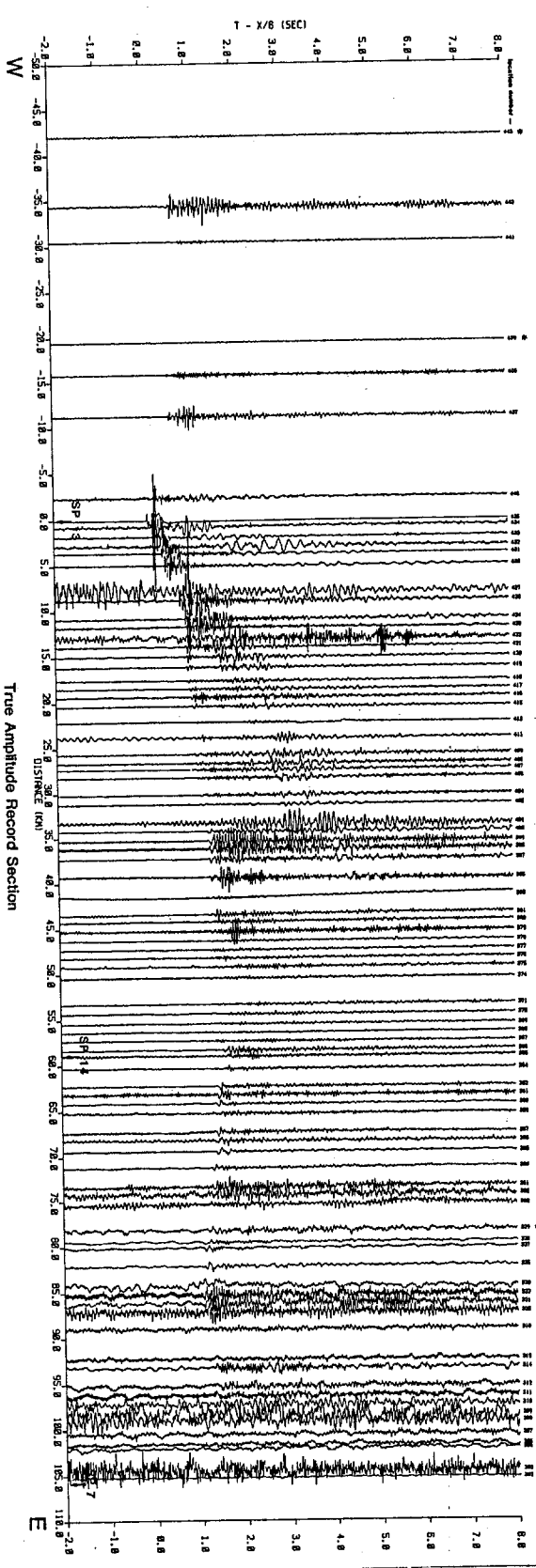
ALASKA / WEST GLENN HIGHWAY PROFILE: SHOT 28, SHOTPOINT 15

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ALASKA / WEST GLENN HIGHWAY PROFILE: SHOT 29, SHOTPOINT 13

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