

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

DATA REPORT FOR 1980-1981 SEISMIC-REFRACTION
PROFILES IN THE WESTERN MOJAVE DESERT, CALIFORNIA

By

R. N. Harris, A. W. Walter and G. S. Fuis¹

GEOLOGICAL SURVEY OPEN-FILE REPORT 88-580

¹ U.S. Geological Survey, Menlo Park, CA

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This report 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. Geological Survey.

Menlo Park, California
1988

¹ U.S. Geological Survey, Menlo Park, CA

CONTENTS

	Page
Introduction	1
Instrumentation	2
Data Processing and Editing	2
Acknowledgments	3
References	3a

TABLES

	Page
TABLE 1. List of shots for western Mojave Desert, 1980-1981	4
2. Seismic recorder locations, western Mojave Desert, 1980-1981	5
3. Explanation of columns in seismic recorder data table	14
4. Description of tape grade codes	14
5. Seismic recorder data	15

ILLUSTRATIONS

	Page
FIGURE 1. Index map of study area	28
2. Deployment 1, shot numbers 1-5	29
3. Deployment 2, shot numbers 6-8	30
4. Deployment 3, shot number 9	31
5. Deployment 4, shot numbers 10-12	32
6. Deployment 5, shotpoint 13	33
7. Record section for shot number 1, shotpoint 4, north of shotpoint 4	34
8. Record section for shot number 1, shotpoint 4, south of shotpoint 4	35
9. Record section for shot number 1, shotpoint 4, east-west recording array	36
10. Record section for shot number 2, shotpoint 2, north of shotpoint 2	37
11. Record section for shot number 2, shotpoint 2, south of shotpoint 2	38
12. Record section for shot number 2, shotpoint 2, east-west recording array	39
13. Record section for shot number 3, shotpoint 3, north-south recording array	40
14. Record section for shot number 3, shotpoint 3, west of shotpoint 3	41
15. Record section for shot number 3, shotpoint 3, east of shotpoint 3	42
16. Record section for shot number 4, shotpoint 1, north of shotpoint 2	43
17. Record section for shot number 4, shotpoint 1, south of shotpoint 2	44
18. Record section for shot number 4, shotpoint 1, west-east recording array	45
19. Record section for shot number 5, shotpoint 5, north-south recording array	46
20. Record section for shot number 5, shotpoint 5, west of shotpoint 2	47
21. Record section for shot number 5, shotpoint 5, east of shotpoint 2	48

22. Record section for shot number 6, shotpoint 2, south of shotpoint 2	49
23. Record section for shot number 6, shotpoint 2, north of shotpoint 7	50
24. Record section for shot number 7, shotpoint 7, north of shotpoint 7	51
25. Record section for shot number 7, shotpoint 7, north-south recording array	52
26. Record section for shot number 8, shotpoint 6, north of shotpoint 6	53
27. Record section for shot number 8, shotpoint 6, south of shotpoint 6	54
28. Record section for shot number 9, shotpoint 2, north of San Andreas Fault	55
29. Record section for shot number 9, shotpoint 2, western north-south recording array	56
30. Record section for shot number 9, shotpoint 2, south of San Andreas Fault	57
31. Record section for shot number 9, shotpoint 2, east of shotpoint 7	58
32. Record section for shot number 10, shotpoint 10, north of shotpoint 10	59
33. Record section for shot number 10, shotpoint 10, south of shotpoint 10	60
34. Record section for shot number 11, shotpoint 11, north of shotpoint 11	61
35. Record section for shot number 11, shotpoint 11, south of shotpoint 11	62
36. Record section for shot number 12, shotpoint 12, northern half	63
37. Record section for shot number 12, shotpoint 12, southern half	64
38. Record section for shot number 13, shotpoint 13	65

INTRODUCTION

During 1980 and 1981, the U.S. Geological Survey collected seismic refraction data in the western Mojave Desert (fig. 1). The seismic refraction data extends from north of the Garlock Fault, south through the Mojave Desert, and across the San Andreas Fault into the San Gabriel Mountains. This report describes and documents the recorded data, which was collected over three field sessions. In total thirteen shots were fired at 11 different shotpoints (Table 1). The experiment consisted of five deployments of a set of 100 portable seismic recorders, during which seismic energy from one or more shots was recorded. The data set was acquired with five deployments of a set of 100 portable seismic recorders.

The first phase (deployments 1 - 3; figs. 2 - 4), in June 1980, was designed to investigate P-wave anisotropic-velocity using a south trending profile with two cross-arrays. Station spacing for these deployments was about 0.5 km. The U.S. Geological Survey loaded and detonated all shots in the first phase.

The second phase of the experiment (deployments 4 and 5; figs. 5 and 6), in April and November 1981, recorded two quarry blasts (shots 10 and 11) and a missile detonation (shot 12) so that the profile from phase one could be extended to the north and south. Station spacing for these deployments was about 1.5 km. During this phase of the experiment some of the original recording sites were reoccupied. Given and Koesterer (1983) describe shot number 13, which was detonated on Santa Catalina island.

Shot times and shotpoint locations are presented in table 1. Geographic locations for each recording site are in table 2. The location of each recording site relative to the shot point and information about each data recording for that site is provided in table 3. Seismic record sections are plotted in figures 7 - 38. The data is stored on magnetic tape in SEG-Y format, described by Barry and others (1975), and may be obtained by writing the National Geophysical Data Center, National Oceanic and Atmospheric Administration, 325 Broadway, Boulder CO, 80303.

On the basis of this data and in-situ stress measurements Kohler and Healy (1981) suggest that P-wave anisotropic velocity arises from the action of tectonic stress on high-angle macro-factures. Fuis and others (1986) modeled the crust along the north - south profile between shotpoint 12 and the San Gabriel Mountains. Other work in the area includes six deep seismic reflection profiles collected by the Consortium for Continental Reflection Profiling in 1982 (Cheadle and others, 1986).

INSTRUMENTATION

Each seismic refraction recorder consists of a 2-Hz vertical component seismometer coupled to an analog tape cassette recording system (Healy and others, 1982) The electronics, including signal response, calibration and diagnostic tests is described by Murphy (1988).

DATA PROCESSING AND EDITING

For each shot, 20 seconds of seismic signal from playback of cassette data tapes were digitized at 200 samples/sec. The digitizing start time (T) is calculated from:

$$T = S - 2sec + X/R + C$$

where

S = shot time (Table 1),

X = shot to recorder distance in km (Table 2),

R = reduction velocity in km/sec,

C = recorder clock drift in seconds.

Recorder and shotpoint locations were determined from USGS 7.5' and 15' topographic maps and are estimated to be accurate to 10 meters. Shotpoint to recorder distances are calculated

with the algorithm of Sodano and Robinson (1963). The reduction velocity for all shots except shotpoint 13 is 6.0 km/sec; a reduction velocity of 8.0 km/sec was used for shotpoint 13. The clock drift of each recorder was checked before and after each deployment and was assumed to be linear. Estimated drifts at shot time were usually less than 50 milliseconds.

Record sections, shown in figures 7-38, are plotted with the maximum amplitude for each trace normalized to a common value. Distances are relative to the shotpoint, except as noted, and distances to the west and north of the shotpoint are given negative values.

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TABLE 1.—*List of Shots for western Mojave Desert, 1980-1981*

Deployment Number	Shot Number	Shot Point	Date	Shot Time (Day, Hour, Min, Sec)	Latitude (deg, min)	Longitude (deg, min)	Elevation (meters)	Size (kg)
1	1	4	JUN 15, 1980	167:06:00:00.010	34 50.0285	117 39.3073	908	470
1	2	2	JUN 15, 1980	167:06:29:80.003	34 48.0542	117 46.7844	780	358
1	3	3	JUN 15, 1980	167:07:00:00.008	34 57.0705	117 45.8702	713	381
1	4	1	JUN 15, 1980	167:07:29:59.989	34 47.5793	117 52.9454	704	289
1	5	5	JUN 15, 1980	167:08:30:00.010	34 42.9739	117 46.7313	915	358
2	6	2	JUN 25, 1980	177:06:00:00.012	34 48.0542	117 46.7844	780	381
2	7	7	JUN 25, 1980	177:07:00:00.012	34 27.8142	117 51.6504	1073	381
2	8	6	JUN 25, 1980	177:08:00:00.016	34 32.6843	117 51.2842	882	142
3	9	2	JUN 28, 1980	180:08:00:00.016	34 48.0542	117 46.7844	780	970
4	10	10	APR 24, 1981	114:20:01:13.785	35 2.6402	117 40.6659	770	13,896
4	11	11	APR 24, 1981	114:20:02:23.085	35 2.7052	117 40.8376	771	3,255
4	12	12	APR 25, 1981	115:21:00:58.487	35 42.5200	117 31.8600	753	37,324
5	13	13	NOV 8, 1981	312:20:00:00.190	33 19.0307	118 18.3825	55	67,183

TABLE 2.—*Seismic Recorder Locations, western Mojave Desert, 1980-1981*

Station number	Latitude deg min	Longitude deg min	Elevation meters
101	34 57.04	117 45.84	713
102	34 56.48	117 46.09	733
103	34 56.11	117 45.74	777
104	34 55.73	117 45.50	755
105	34 55.27	117 45.56	719
106	34 54.74	117 45.39	724
107	34 54.45	117 45.41	727
108	34 54.24	117 45.41	728
109	34 54.04	117 45.77	721
110	34 53.90	117 46.02	715
111	34 53.73	117 46.34	711
112	34 53.42	117 46.32	715
113	34 53.14	117 46.34	718
114	34 52.76	117 46.34	722
115	34 52.56	117 46.36	725
116	34 52.28	117 46.35	728
117	34 52.03	117 46.36	735
118	34 51.73	117 46.36	739
119	34 51.46	117 46.35	738
121	34 50.04	117 39.30	908
122	34 49.84	117 37.78	957
123	34 49.88	117 38.05	954
124	34 49.92	117 38.40	939
125	34 49.97	117 38.75	927
126	34 50.07	117 39.43	902
127	34 50.12	117 39.77	890
128	34 50.17	117 40.13	887
129	34 50.22	117 40.47	881
130	34 50.29	117 40.80	875
131	34 50.25	117 41.15	860
132	34 50.33	117 41.48	860
133	34 50.41	117 41.84	847
134	34 50.47	117 42.17	841
135	34 50.55	117 42.48	829
136	34 50.50	117 42.81	820
137	34 50.44	117 43.16	811
138	34 50.39	117 43.49	792
139	34 50.32	117 43.87	792
141	34 42.99	117 46.73	915

TABLE 2.—*Seismic Recorder Locations, western Mojave Desert, 1980-1981—Continued*

Station number	Latitude deg min	Longitude deg min	Elevation meters
142	34 43.20	117 46.41	913
143	34 43.51	117 46.41	919
144	34 43.80	117 46.40	925
145	34 44.09	117 46.41	928
146	34 44.40	117 46.41	933
147	34 44.68	117 46.40	936
148	34 44.98	117 46.40	927
149	34 45.28	117 46.41	933
150	34 45.57	117 46.41	939
151	34 45.86	117 46.41	942
152	34 46.16	117 46.41	951
153	34 46.45	117 46.41	954
154	34 46.75	117 46.42	933
155	34 47.03	117 46.42	902
156	34 47.32	117 46.42	872
157	34 47.61	117 46.42	847
158	34 47.92	117 46.42	826
159	34 48.21	117 46.42	811
160	34 48.50	117 46.42	796
161	34 47.56	117 52.94	704
162	34 48.47	117 53.86	704
163	34 48.47	117 53.50	703
164	34 48.47	117 53.14	703
165	34 48.47	117 52.80	702
166	34 48.47	117 52.44	701
167	34 48.47	117 52.08	701
168	34 48.48	117 51.74	700
169	34 48.48	117 51.37	700
170	34 48.48	117 51.03	701
171	34 48.49	117 50.64	700
172	34 48.49	117 50.29	704
173	34 48.49	117 49.96	709
174	34 48.48	117 49.59	719
175	34 48.49	117 49.27	725
176	34 48.49	117 48.90	735
177	34 48.49	117 48.54	716
178	34 48.49	117 48.18	725
179	34 48.49	117 47.84	765
180	34 48.50	117 47.46	774
181	34 48.04	117 46.78	780

TABLE 2.—*Seismic Recorder Locations, western Mojave Desert, 1980-1981—Continued*

Station number	Latitude deg min	Longitude deg min	Elevation meters
182	34 48.81	117 46.41	780
183	34 49.09	117 46.41	777
184	34 49.38	117 46.41	774
185	34 48.50	117 46.75	789
186	34 48.50	117 47.10	780
187	34 50.27	117 44.17	792
188	34 50.19	117 44.51	786
189	34 50.14	117 44.85	783
190	34 50.07	117 45.19	780
191	34 50.01	117 45.53	777
192	34 49.96	117 45.87	774
193	34 49.90	117 46.22	768
194	34 49.87	117 46.40	762
195	34 49.58	117 46.40	771
196	34 50.16	117 46.42	756
197	34 50.28	117 46.42	753
198	34 50.57	117 46.42	750
199	34 50.85	117 46.42	747
200	34 51.16	117 46.43	741
201	34 39.66	117 47.08	846
202	34 39.65	117 47.44	850
203	34 39.36	117 47.45	828
204	34 39.07	117 47.45	812
205	34 38.79	117 47.44	808
206	34 38.76	117 47.78	803
207	34 38.76	117 48.13	799
208	34 38.75	117 48.49	794
209	34 38.47	117 48.50	796
210	34 38.18	117 48.50	799
211	34 37.86	117 48.51	802
212	34 37.58	117 48.51	805
213	34 37.31	117 48.50	808
214	34 36.97	117 48.49	813
215	34 36.67	117 48.49	817
216	34 36.40	117 48.49	820
217	34 36.13	117 48.49	823
218	34 35.83	117 48.50	828
219	34 35.58	117 48.49	832
220	34 35.27	117 48.49	837
221	34 34.93	117 48.48	843

TABLE 2.—*Seismic Recorder Locations, western Mojave Desert, 1980-1981—Continued*

Station number	Latitude deg min	Longitude deg min	Elevation meters
222	34 34.67	117 48.48	847
223	34 34.37	117 48.48	853
224	34 34.05	117 48.49	860
225	34 33.80	117 48.47	866
226	34 33.52	117 48.47	872
227	34 33.21	117 48.52	878
228	34 32.91	117 48.49	884
229	34 32.53	117 48.50	893
230	34 32.25	117 48.50	902
231	34 31.96	117 48.51	911
232	34 31.69	117 48.50	922
233	34 32.53	117 48.68	893
234	34 32.53	117 49.04	892
235	34 32.53	117 49.39	890
236	34 32.54	117 49.72	890
237	34 32.55	117 49.94	890
238	34 32.54	117 50.44	890
239	34 32.55	117 50.93	887
240	34 32.70	117 51.29	882
248	34 42.90	117 46.41	908
249	34 42.61	117 46.41	908
250	34 42.30	117 46.41	908
251	34 42.01	117 46.39	899
252	34 41.72	117 46.39	898
253	34 41.45	117 46.40	891
254	34 41.13	117 46.40	881
255	34 40.86	117 46.39	914
256	34 40.56	117 46.43	881
257	34 40.28	117 46.39	864
258	34 40.02	117 46.40	852
259	34 39.67	117 46.39	837
260	34 39.66	117 46.74	838
261	34 31.31	117 48.49	939
262	34 31.25	117 48.53	945
263	34 31.08	117 48.54	956
264	34 30.80	117 48.52	963
265	34 30.57	117 48.51	969
266	34 30.36	117 48.82	975
267	34 30.06	117 49.03	991
268	34 29.82	117 49.02	1006

TABLE 2.—*Seismic Recorder Locations, western Mojave Desert, 1980-1981-Continued*

Station number	Latitude deg min	Longitude deg min	Elevation meters
269	34 29.46	117 49.02	1018
270	34 29.17	117 49.03	1036
271	34 29.16	117 49.36	1036
272	34 29.16	117 49.73	1036
273	34 29.16	117 49.99	1030
274	34 28.86	117 50.06	1055
275	34 28.56	117 50.06	1073
276	34 27.92	117 50.06	1140
277	34 27.61	117 50.06	1201
278	34 27.22	117 49.88	1302
279	34 28.40	117 50.34	1073
280	34 27.81	117 51.65	1073
281	34 27.93	117 51.52	1073
282	34 28.05	117 51.29	1073
283	34 28.12	117 51.19	1073
284	34 28.09	117 50.85	1109
285	34 28.20	117 50.55	1097
286	34 26.89	117 49.98	1158
287	34 26.62	117 50.06	1158
288	34 26.51	117 50.07	1170
289	34 26.17	117 50.10	1186
290	34 25.86	117 50.06	1207
291	34 25.61	117 50.20	1219
292	34 25.35	117 50.27	1231
293	34 25.02	117 50.19	1256
294	34 24.92	117 49.86	1280
295	34 24.82	117 49.54	1292
296	34 24.65	117 49.30	1317
297	34 24.35	117 49.33	1341
298	34 24.10	117 49.37	1353
300	34 23.63	117 49.21	1402
301	34 30.27	117 53.75	933
302	34 29.60	117 53.74	984
303	34 29.27	117 53.75	1012
304	34 28.64	117 53.98	1058
305	34 28.15	117 53.92	1097
306	34 27.50	117 53.97	1170
307	34 26.91	117 53.97	1183
308	34 26.43	117 53.74	1218

TABLE 2.—*Seismic Recorder Locations, western Mojave Desert, 1980-1981-Continued*

Station number	Latitude deg min	Longitude deg min	Elevation meters
309	34 25.89	117 53.82	1292
310	34 25.32	117 53.92	1378
311	34 24.91	117 53.90	1451
312	34 27.45	117 53.40	1161
313	34 27.38	117 52.60	1195
314	34 27.39	117 51.70	1091
315	34 26.80	117 51.11	1127
316	34 26.43	117 50.62	1161
317	34 25.88	117 49.53	1231
318	34 25.68	117 49.04	1298
319	34 25.76	117 48.52	1396
320	34 25.38	117 48.08	1451
321	34 14.29	117 51.74	475
322	34 14.47	117 51.88	482
323	34 14.94	117 51.80	543
324	34 15.13	117 51.55	570
325	34 15.36	117 51.46	561
326	34 15.60	117 51.21	628
327	34 15.80	117 50.61	695
328	34 16.29	117 50.78	756
329	34 16.68	117 50.68	817
330	34 16.81	117 50.31	902
331	34 16.97	117 50.55	939
332	34 17.24	117 50.48	1006
333	34 17.58	117 49.96	1097
334	34 17.98	117 50.04	1158
335	34 18.21	117 50.70	1390
336	34 18.54	117 50.41	1463
337	34 18.82	117 49.99	1530
338	34 19.12	117 50.37	1695
339	34 19.78	117 50.22	1890
340	34 19.96	117 50.26	1932
341	34 29.90	117 45.85	1042
342	34 29.31	117 45.85	1082
343	34 28.72	117 45.85	1131
344	34 28.19	117 45.85	1180
345	34 27.66	117 45.85	1231
346	34 27.06	117 45.84	1286
347	34 26.49	117 45.86	1341
348	34 26.01	117 46.06	1402

TABLE 2.—*Seismic Recorder Locations, western Mojave Desert, 1980-1981-Continued*

Station number	Latitude deg min	Longitude deg min	Elevation meters
349	34 25.33	117 46.02	1469
350	34 24.74	117 46.12	1567
351	34 24.45	117 45.83	1628
352	34 24.88	117 46.58	1585
353	34 25.08	117 47.38	1534
355	34 24.08	117 48.85	1378
356	34 23.90	117 48.57	1414
357	34 23.73	117 47.95	1487
358	34 23.65	117 47.58	1530
359	34 23.53	117 47.09	1585
360	34 23.50	117 46.64	1634
361	34 23.35	117 46.52	1646
362	34 23.17	117 46.35	1689
363	34 22.94	117 46.19	1743
364	34 22.85	117 45.93	1792
365	34 22.70	117 45.70	1859
366	34 22.52	117 45.21	1975
367	34 22.42	117 45.07	2010
368	34 22.45	117 45.71	2060
369	34 22.55	117 46.19	2109
370	34 22.63	117 46.71	2170
371	34 22.25	117 46.83	2219
372	34 22.10	117 47.18	2256
373	34 21.66	117 47.38	2310
374	34 21.59	117 47.85	2353
375	34 22.03	117 47.96	2402
376	34 21.73	117 48.50	2377
377	34 21.35	117 48.49	2329
378	34 20.90	117 48.63	2286
379	34 20.89	117 49.13	2231
380	34 20.74	117 49.57	2213
381	34 9.75	117 53.76	250
382	34 9.80	117 53.19	280
383	34 10.22	117 53.23	329
384	34 10.86	117 52.82	390
385	34 11.10	117 52.26	396
386	34 11.31	117 52.07	387
387	34 11.59	117 51.86	364
388	34 11.82	117 51.71	384
389	34 12.03	117 51.46	427

TABLE 2.—*Seismic Recorder Locations, western Mojave Desert, 1980-1981—Continued*

Station number	Latitude deg min	Longitude deg min	Elevation meters
390	34 12.23	117 51.87	463
391	34 12.40	117 51.89	488
392	34 12.63	117 51.84	502
393	34 12.86	117 51.70	506
394	34 13.01	117 51.29	506
395	34 13.37	117 51.03	469
396	34 13.60	117 50.82	469
397	34 13.76	117 50.69	469
398	34 13.95	117 50.71	469
399	34 14.10	117 50.82	469
400	34 14.26	117 51.03	457
401	34 44.30	117 46.35	933
441	35 42.40	117 31.88	750
442	35 41.26	117 31.93	660
443	35 40.66	117 31.92	622
444	35 40.08	117 31.93	600
445	35 38.52	117 31.53	634
446	35 37.66	117 31.21	683
447	35 36.63	117 31.46	759
448	35 35.91	117 31.97	863
449	35 35.17	117 32.48	957
450	35 34.36	117 33.14	1000
451	35 33.91	117 33.69	986
452	35 32.92	117 34.59	981
453	35 32.05	117 34.87	896
454	35 31.27	117 34.97	861
455	35 30.62	117 35.08	863
456	35 30.02	117 35.18	884
457	35 29.25	117 35.29	945
458	35 28.74	117 35.37	1003
459	35 28.21	117 35.41	1033
460	35 41.78	117 31.89	683
461	34 55.29	117 45.58	719
462	34 55.75	117 44.69	732
463	34 56.38	117 44.26	723
464	34 57.22	117 43.97	713
465	34 58.36	117 44.03	707
466	34 58.92	117 43.00	724
467	34 59.29	117 42.26	732
468	35 0.05	117 41.07	739

TABLE 2.—*Seismic Recorder Locations, western Mojave Desert, 1980-1981—Continued*

Station number	Latitude deg min	Longitude deg min	Elevation meters
469	35 0.99	117 40.56	742
470	35 1.25	117 40.55	753
471	35 1.70	117 40.55	744
472	35 1.98	117 40.82	750
473	35 2.64	117 40.67	770
474	35 3.09	117 40.30	771
475	35 4.01	117 40.89	770
476	35 4.82	117 40.93	780
477	35 5.84	117 41.05	796
478	35 7.07	117 40.82	811
479	35 8.08	117 40.11	832
480	35 8.74	117 39.81	814
481	35 27.74	117 35.27	1049
482	35 27.20	117 35.08	1049
483	35 26.65	117 35.37	1009
484	35 26.01	117 35.43	991
485	35 25.21	117 35.51	963
486	35 24.06	117 35.75	960
487	35 23.11	117 35.99	1012
488	35 22.29	117 36.40	1085
489	35 21.84	117 38.06	1158
490	35 20.67	117 37.82	1116
491	35 19.59	117 37.83	1074
492	35 18.62	117 38.29	1026
493	35 17.62	117 38.76	988
494	35 16.42	117 39.47	957
495	35 15.52	117 39.48	927
496	35 14.30	117 39.46	899
497	35 13.35	117 39.45	871
498	35 11.96	117 39.95	846
499	35 10.69	117 39.98	832
500	35 9.83	117 39.52	823
510	34 35.95	117 48.51	826
577	35 6.44	117 40.86	798
578	35 7.44	117 40.65	819
580	35 8.53	117 40.00	812
583	35 26.79	117 35.26	1018

TABLE 3.—*Explanation of Columns Seismic Recorder Data Table*

Column	Description
Loc	Location number of seismic recorder.
Dist	Distance from shotpoint to recorder.
Azini	Azimuth from shotpoint to recorder, in degrees, clockwise from north.
Db	Amplifier attenuation setting (db) of the digitized channel. The gain is determined by subtracting the given attenuation from a total gain of 96 db.

TABLE 4.—*Description of Tape Grade Codes*

Code	Description	Code	Description
0	Good playback	14	Tape Speed off
1	Tape did not run	15	Bad Calibration
2	No signal	16	Recorder stopped during play
3	Skipped record time	17	Bad time code
6	Weak multiplexed signal; cannot read time code; low record level	18	Tape speed off, belt slipped
7	Continuous calibration	20	Recorder unit not deployed
8	Noise, sinusoidal	25	Bad geophone test
9	Noise, spike	28	Unit damaged
10	Noise, WWVB cross feed	29	Tape damaged
12	Noise, random	30	Digitized without calibraton
		31	Amplifier out of balance

TABLE 5.—*Seismic Recorder Data*
Shot Number 1 Shot Point 4
Shot Time (Julian day, hr, min, sec): 167:06:00:00.010

Loc	Dist (km)	Azim (deg)	Db	Tape Grade	Loc	Dist (km)	Azim (deg)	Db	Tape Grade	Loc	Dist (km)	Azim (deg)	Db	Tape Grade
101	16.34	322.5	26	0	135	4.93	281.3	44	15	169	18.61	261.2	44	0
102	15.78	319.1	26	0	136	5.42	279.3	44	0	170	18.10	261.0	44	0
103	14.93	319.0		6/17	137	5.93	277.5	44	15	171	17.52	260.7		0/6
104	14.14	318.2	26	0	138	6.41	276.0	44	0	172	16.98	260.4	44	0
105	13.60	315.5	44	0	139	6.98	274.4	44	13	173	16.49	260.1		6/17
106	12.72	313.2		2	141	17.24	221.1	26	0	174	15.93	259.7	44	0
107	12.38	311.4	44	0	142	16.83	220.7	26	0	175	15.45	259.4	44	0
108	12.12	309.9	44	0	143	16.20	222.0	44	0	176	14.90	259.0	44	0
109	12.33	307.0	44	0	144	15.81	223.3	44	0	177	14.36	258.6	44	0
110	12.49	305.0	44	0	145	15.43	224.6	44	15	178	13.82	258.2	44	0
111	12.72	302.6		2	146	15.02	226.2	44	0	179	13.31	257.7	44	0
112	12.40	300.5	44	0	147	14.66	227.6	44	0	180	12.74	257.2	44	0
113	12.16	298.3		25	148	14.29	229.3	44	0	181	11.98	252.2	44	0
114	11.85	295.2	44	15	149	13.94	231.0	44	0	182	11.07	258.3	44	0
115	11.72	293.6	44	0	150	13.61	232.7	44	0	183	10.97	261.0	44	0
116	11.51	291.2	44	0/6/30	151	13.29	234.6	44	0	184	10.90	263.8	44	0
117	11.36	289.0	44	0	152	12.98	236.6	44	0	185	11.70	256.1		1
118	11.19	286.3	44	0	153	12.70	238.6	26	0	186	12.21	256.7	44	15
119	11.05	283.9	26	0	154	12.42	240.8	26	25	187	7.42	273.4	44	0
121	0.02	29.9	62	0	155	12.18	242.9	44	0	188	7.94	272.2	44	0
122	2.36	98.7	62	0	156	11.94	245.2	44	0	189	8.46	271.4		3
123	1.93	98.4	62	0	157	11.73	247.7	44	15	190	8.97	270.6	44	0
124	1.39	98.0	62	0	158	11.52	250.3		1	191	9.49	269.8	44	0
125	0.86	96.7	62	0	159	11.35	252.8	44	0	192	10.01	269.3	44	0
126	0.21	292.4	62	0	160	11.21	255.4	44	0	193	10.54	268.8	44	0
127	0.73	283.9	62	0	161	21.29	257.7	44	0	194	10.82	268.5		1
128	1.28	282.1	62	0	162	22.37	262.7	44	0	195	10.84	265.7	44	0
129	1.81	281.3	62	0	163	21.83	262.5	44	0	196	10.84	271.3		1
130	2.32	281.8	62	0	164	21.29	262.3	26	0	197	10.85	272.5	44	0
131	2.84	278.5	62	0	165	20.78	262.1	26	0	198	10.88	275.3	44	0
132	3.36	279.5	62	0	166	20.23	261.9	26	0	199	10.95	278.0		1
133	3.92	280.4	62	0	167	19.69	261.7	26	0	200	11.05	280.9		1
134	4.45	280.5		3	168	19.18	261.5	44	0					

TABLE 5.—Seismic Recorder Data—Continued
Shot Number 2 Shot Point 2
Shot Time (Julian day, hr, min, sec): 167:06:29:60.003

Loc	Dist (km)	Azim (deg)	Db	Tape Grade	Loc	Dist (km)	Azim (deg)	Db	Tape Grade	Loc	Dist (km)	Azim (deg)	Db	Tape Grade
101	16.67	5.0	26	0	135	8.02	54.8	26	15	169	7.04	276.5	44	0
102	15.61	3.9	26	15	136	7.56	53.2	26	0	170	6.53	277.0	44	0
103	14.99	6.1		6/17	137	7.07	51.3	44	15	171	5.94	277.8		17
104	14.32	7.9	26	0	138	6.62	49.3	44	0	172	5.40	278.7	44	0
105	13.48	7.9	26	0	139	6.10	46.7	44	0	173	4.91	279.6	44	0/30
106	12.54	9.7	26	0	141	9.36	179.5	44	0	174	4.34	280.5	44	0
107	12.02	10.1	26	0	142	8.99	176.3	44	0	175	3.87	281.9	44	0
108	11.62	10.4	26	0	143	8.42	176.1	44	0	176	3.32	283.9		2
109	11.17	7.9	26	0	144	7.89	175.8	44	0	177	2.79	286.8	62	0
110	10.88	6.1	26	0	145	7.36	175.5	44	15	178	2.27	290.7	62	0
111	10.51	3.7		2	146	6.79	175.1	44	0	179	1.80	296.9	62	0
112	9.95	4.1	26	0	147	6.26	174.7	44	0	180	1.31	308.7	62	0
113	9.43	4.1		7	148	5.71	174.1	44	0	181	0.02	180.0	62	0
114	8.73	4.4	26	15	149	5.16	173.6	44	0	182	1.50	22.0	62	0
115	8.35	4.5	26	0	150	4.64	172.9	62	0	183	2.01	16.4	62	0
116	7.84	4.9	44	15	151	4.09	171.9	62	0	184	2.52	13.0	62	0
117	7.38	5.1	44	0	152	3.55	170.7	44	0	185	0.83	3.3		1
118	6.83	5.5	44	0	153	3.03	169.2	44	0	186	0.95	330.1	62	0
119	6.34	6.1	44	0	154	2.48	166.9		25	187	5.71	44.3	44	0
121	11.99	72.1	26	0	155	1.98	163.5	62	0	188	5.25	41.3	44	0
122	14.12	76.5	26	0	156	1.47	157.5	62	0	189	4.85	37.4		2
123	13.73	75.8	26	0	157	0.98	145.7	62	0	190	4.46	33.1	44	0
124	13.24	74.8	26	0	158	0.61	113.5		1	191	4.09	27.9	44	0
125	12.76	73.8	26	0	159	0.63	62.2	62	0	192	3.79	21.5	44	0
126	11.81	71.6	26	0	160	0.99	34.0	62	0	193	3.52	14.1	62	0
127	11.35	70.3	26	0	161	9.44	264.5	44	0	194	3.41	9.9		1
128	10.88	68.9	26	0	162	10.81	274.1	44	0	195	2.89	11.7	62	0
129	10.42	67.4	44	0	163	10.27	274.3	44	0	196	3.93	8.2		1
130	10.02	65.6	26	0	164	9.73	274.6	44	0/30	197	4.16	7.7	62	0
131	9.51	64.6	44	0	165	9.21	274.8	44	0	198	4.68	6.9	44	0
132	9.11	62.5	44	0	166	8.66	275.1	44	0	199	5.21	6.1		1
133	8.72	60.0	26	0	167	8.12	275.5	44	0	200	5.76	5.5		1
134	8.33	57.6		3	168	7.61	275.9		7					

TABLE 5.-Seismic Recorder Data-Continued
Shot Number 3 Shot Point 3
Shot Time (Julian day, hr, min, sec): 167:07:00:00.008

Loc	Dist (km)	Azim (deg)	Db	Tape Grade	Loc	Dist (km)	Azim (deg)	Db	Tape Grade	Loc	Dist (km)	Azim (deg)	Db	Tape Grade
101	0.08	138.8	62	0	135	13.11	156.8	26	0	169	17.96	207.8	26	0
102	1.14	197.2	62	0	136	13.01	159.0	26	0	170	17.72	206.4	26	0
103	1.78	173.8		6/17	137	12.93	161.4	26	0	171	17.46	204.7		6/17
104	2.55	167.1	44	0	138	12.88	163.6	44	0	172	17.23	203.0	26	0
105	3.35	172.0	44	0	139	12.86	166.3	26	0	173	17.04	201.5	26	0
106	4.38	170.5	44	0	141	28.06	182.9	26	0	174	16.86	199.6	26	0
107	4.89	171.7	44	0	142	25.66	181.8		25	175	16.70	198.1	26	0
108	5.29	172.4	44	0	143	25.08	181.9	26	0	176	16.53	196.2		6/17
109	5.61	178.5	44	0	144	24.55	181.9	26	0	177	16.38	194.4	26	0
110	5.86	182.2	44	0	145	24.02	182.0	26	0/15	178	16.25	192.5	26	25
111	6.22	186.7		17	146	23.45	182.0	26	0	179	16.14	190.7	26	0
112	6.78	185.8	44	0	147	22.92	182.0	26	0	180	16.03	188.7	26	0
113	7.30	185.6		25	148	22.37	182.1	26	0	181	16.75	184.8	26	0
114	8.00	185.2	44	0	149	21.82	182.2	26	0	182	15.30	183.1	26	0
115	8.38	185.1	44	0	150	21.29	182.2	26	0	183	14.77	183.2	26	0
116	8.89	184.7	26	0	151	20.74	182.3	26	0	184	14.24	183.3		25
117	9.35	184.5	26	0	152	20.19	182.3	26	0	185	15.90	184.9		1
118	9.90	184.3	26	0	153	19.66	182.4	26	0	186	15.96	186.7	26	0
119	10.40	184.0	26	0	154	19.11	182.5		25	187	12.85	168.3		3
121	16.41	142.4	26	0	155	18.59	182.6	26	0	188	12.89	170.8	26	0
122	18.19	137.3	26	0	156	18.05	182.6	26	0	189	12.92	173.1		3
123	17.85	138.1	26	0	157	17.50	182.8	26	0	190	12.98	175.4	26	0
124	17.44	139.2	26	0	158	16.93	182.8		1	191	13.07	177.7	26	0
125	17.03	140.4	26	0	159	16.40	182.9	26	0	192	13.14	180.0	26	0
126	16.24	142.8	26	0	160	15.87	183.0	26	0	193	13.26	182.3	26	0
127	15.85	144.1	26	0	161	20.62	211.5	26	0	194	13.34	183.5		1
128	15.47	145.5	26	0	162	20.02	217.5	26	0	195	13.87	183.3	26	0
129	15.10	147.0	26	0	163	19.70	216.2	26	0	196	12.81	183.7		1
130	14.73	148.4	26	0	164	19.38	214.9	26	0	197	12.58	183.8	26	0
131	14.51	150.3	26	0	165	19.09	213.6	26	0	198	12.05	184.0	26	0
132	14.15	151.8	26	0	166	18.79	212.2	26	13	199	11.53	184.2		1
133	13.76	153.5	26	0	167	18.51	210.8	26	0	200	10.97	184.4		1
134	13.44	155.2		3	168	18.24	209.4	26	0					

TABLE 5.—*Seismic Recorder Data—Continued*
Shot Number 4 Shot Point 1
Shot Time (Julian day, hr, min, sec): 167:07:29:59.989

Loc	Dist (km)	Azim (deg)	Db	Tape Grade	Loc	Dist (km)	Azim (deg)	Db	Tape Grade	Loc	Dist (km)	Azim (deg)	Db	Tape Grade
101	20.57	31.7		2	135	16.88	70.9	26	0	169	2.92	55.2	62	0
102	19.49	32.4	26	0	136	16.37	70.7	26	0	170	3.36	60.2	62	0
103	19.22	34.8		6/17	137	15.83	70.4	26	0	171	3.89	64.4	62	0
104	18.86	37.0	26	0	138	15.32	70.1	26	0	172	4.39	67.4	62	0
105	18.14	38.3	26	0	139	14.73	69.9	26	0	173	4.86	69.6	44	0
106	17.54	41.0	26	0/30	141	12.72	131.8	26	0	174	5.39	72.0	44	0
107	17.14	42.1	26	0	142	12.85	129.0	26	0	175	5.86	73.4	44	0
108	16.83	43.0	26	0	143	12.49	127.0	26	0	176	6.39	74.8	44	0
109	16.19	42.4	26	0	144	12.19	125.0	26	0	177	6.93	75.9	44	0
110	15.75	42.0	26	0	145	11.88	122.9	26	0	178	7.46	77.0	44	0
111	15.18	41.5		2	146	11.58	120.5	26	0	179	7.97	77.7	44	0
112	14.79	43.0	26	0/30	147	11.32	118.2	26	0	180	8.54	78.5	44	0
113	14.39	44.4		25	148	11.08	115.7	44	0	181	9.44	84.8	44	0
114	13.89	46.4	26	0	149	10.84	113.1	44	0	182	10.22	77.1	26	0
115	13.62	47.5	26	0	150	10.65	110.4	44	0	183	10.35	74.3	44	0
116	13.29	49.2	26	0	151	10.47	107.6		3	184	10.51	71.4		25
117	12.99	50.6	44	0	152	10.31	104.7	26	0	185	9.60	79.7		1
118	12.64	52.6	44	0	153	10.18	101.8	26	0	186	9.08	79.2	44	0
119	12.36	54.5	26	0	154	10.08	98.7	26	25	187	14.28	69.6	44	0
121	21.30	77.6	26	0	155	10.01	95.8	26	0	188	13.74	69.4	44	0
122	23.50	79.7	26	0	156	9.97	92.7	44	0	189	13.22	69.0		3
123	23.10	79.3	26	0	157	9.95	89.6	44	0	190	12.69	68.7	26	0
124	22.60	78.9	26	0	158	9.97	86.3		1	191	12.17	68.3	26	0
125	22.10	78.4	26	0	159	10.03	83.2	44	0	192	11.65	67.8	26	0
126	21.11	77.3	26	0	160	10.10	80.3	44	0	193	11.12	67.2	26	0
127	20.63	76.8	26	0	161	0.03	173.6	62	0	194	10.84	67.0		1
128	20.13	76.2	26	0	162	2.16	319.9	62	0	195	10.65	69.6	26	0
129	19.64	75.5	26	0	163	1.85	332.9	62	0	196	11.04	64.4		1
130	19.19	74.8	26	0	164	1.68	349.6	62	0	197	11.14	63.3	44	0
131	18.66	74.6	26	0	165	1.66	7.6	62	0	198	11.39	60.9	26	0
132	18.21	73.7	26	0	166	1.82	25.1	62	8	199	11.65	58.6		1
133	17.73	72.8	26	0	167	2.11	38.6	62	0	200	11.94	56.3		1
134	17.27	71.9	26	0/30	168	2.47	47.8	62	0					

TABLE 5.—*Seismic Recorder Data—Continued*
Shot Number 5 Shot Point 5
Shot Time (Julian day, hr, min, sec): 167:08:30:00.010

Loc	Dist (km)	Azim (deg)	Db	Tape Grade	Loc	Dist (km)	Azim (deg)	Db	Tape Grade	Loc	Dist (km)	Azim (deg)	Db	Tape Grade
101	26.04	3.0	26	0	135	15.44	24.8	26	15	169	12.40	325.2	44	0
102	24.99	2.2	26	0	136	15.14	23.2	26	0	170	12.12	327.2	44	0
103	24.34	3.5		17	137	14.84	21.5	26	0	171	11.82	329.7	44	0
104	23.65	4.6	26	0	138	14.57	19.8	26	0	172	11.56	332.0	44	0
105	22.81	4.5	26	0	139	14.26	17.8	26	0	173	11.33	334.3		3
106	21.84	5.3	26	0	141	0.04	3.8	82	0	174	11.07	336.9	44	0
107	21.32	5.4	26	0	142	0.65	49.7	62	0	175	10.90	339.2	44	0
108	20.92	5.5	26	0	143	1.11	26.4	62	0	176	10.71	342.0	44	0
109	20.51	4.1	26	0	144	1.60	18.1	62	0	177	10.56	344.9	44	0
110	20.24	3.1	26	0	145	2.12	13.5	62	0	178	10.43	347.8	44	0
111	19.89	1.7		2	146	2.68	10.6	62	0	179	10.35	350.6	44	0
112	19.33	1.9	26	0	147	3.20	9.0	62	0	180	10.27	353.8	44	0
113	18.81	1.8		25	148	3.74	7.8	44	0	181	9.37	359.5	44	0
114	18.10	1.9	26	0	149	4.29	6.6	44	0	182	10.80	2.6		3
115	17.73	1.8		25	150	4.82	5.9	44	0	183	11.33	2.5	44	0
116	17.21	2.0	26	0	151	5.36	5.3		3	184	11.86	2.3		25
117	16.75	2.0	26	0	152	5.92	4.8	44	0	185	10.23	359.8		1
118	16.20	2.0	26	0	153	6.44	4.3	44	0	186	10.23	356.9	44	0
119	15.70	2.1	26	0	154	6.99	3.9		25	187	14.04	16.2	26	0
121	17.30	40.9	26	0	155	7.51	3.7	44	0	188	13.76	14.2	26	0
122	18.64	47.1	26	0	156	8.05	3.4	44	0	189	13.55	12.2		3
123	18.39	46.0	26	0	157	8.59	3.2	44	0	190	13.34	10.1	26	0
124	18.07	44.6	26	0	158	9.16	3.0		1	191	13.14	8.0	26	0
125	17.78	43.2	26	0	159	9.70	2.8	44	0	192	12.98	5.8	26	0
126	17.21	40.3	26	0	160	10.23	2.7	44	0	193	12.83	3.5	26	0
127	16.95	38.7	26	0	161	12.72	311.8	44	0	194	12.76	2.3		1
128	16.70	37.1	44	0	162	14.88	313.1	26	0	195	12.23	2.4	44	0
129	16.45	35.4	44	0	163	14.49	314.6	26	0	196	13.29	2.1		1
130	16.27	33.8	26	0	164	14.11	316.1	44	0	197	13.52	2.0	26	0
131	15.93	32.3	26	0	165	13.75	317.7	44	0	198	14.05	2.0	26	0
132	15.78	30.5	44	0	166	13.38	319.4	26	0	199	14.58	1.9		1
133	15.65	28.5	26	0	167	13.04	321.2	44	0	200	15.14	1.8		1
134	15.50	26.6	26	0	168	12.73	323.1	44	0					

TABLE 5.—Seismic Recorder Data—Continued
Shot Number 6 Shot Point 2
Shot Time (Julian day, hr, min, sec): 177:06:00.00.012

Loc	Dist (km)	Azim (deg)	Db	Tape Grade	Loc	Dist (km)	Azim (deg)	Db	Tape Grade	Loc	Dist (km)	Azim (deg)	Db	Tape Grade
142	8.99	176.3	42	0	228	28.13	185.3	24	0	269	34.54	185.7		3
145	7.36	175.5	42	0	229	28.82	185.2	24	0	270	35.07	185.6	24	0
148	5.71	174.1	42	0	230	29.35	185.1	24	0	271	35.15	186.5	24	0
151	4.09	171.9	62	0	231	29.87	185.1	24	0	272	35.22	187.3		17
154	2.48	166.9	62	0	232	30.38	185.0	24	0	273	35.27	188.0	24	0
157	0.98	145.7	62	0	233	28.84	185.8	24	0	274	35.84	188.0	24	0
181	0.02	0.0	62	0	234	28.91	186.8	24	15	275	36.40	187.9	24	0
201	15.53	181.7	42	0	235	28.97	187.9	24	0	276	37.66	187.7	24	0
202	15.56	183.7		3	236	29.03	188.9	24	0	277	38.13	187.6	24	0
203	16.11	183.6	42	15	237	29.07	189.6	24	0	278	38.80	187.0	24	0
204	16.64	183.5	42	0	238	29.22	191.0	24	15	279	36.74	188.5	24	0
205	17.17	183.4	42	0	239	29.36	192.5	24	0	280	38.16	191.3	24	0
206	17.25	185.1	42	15	240	29.21	193.6	42	15	281	37.91	191.0		1
207	17.31	186.8	42	0	248	9.54	176.5	42	0	282	37.62	190.6	24	0
208	17.39	188.6	42	0	249	10.08	176.7	42	0	283	37.47	190.4		25
209	17.92	188.4	42	0	250	10.65	177.0	42	0	284	37.43	189.6	24	0
210	18.44	188.2	24	0	251	11.20	176.9	42	0	285	37.15	188.9	24	15
211	19.03	188.0	24	0	252	11.72	177.1		17	286	39.44	187.1	24	15
212	19.54	187.7	42	15	253	12.23	177.2	42	0	287	39.94	187.2	24	0
213	20.03	187.5	42	0/30	254	12.82	177.4	24	0	288	40.16	187.2	24	0
214	20.65	187.3	42	0	255	13.31	177.4	42	0	289	40.79	187.2	24	0
215	21.20	187.1	42	0/30	256	13.86	177.8	42	0	290	41.34	187.0	24	0
216	21.70	186.9	24	0	257	14.39	177.6	42	0	291	41.82	187.2	24	0
217	22.20	186.7	42	15/30	258	14.87	177.7	42	0	292	42.32	187.3	6	25
218	22.75	186.6	24	0/30	259	15.52	177.8	42	0	293	42.91	187.0	24	15
219	23.22	186.4	24	0	260	15.52	179.7		25	294	43.03	186.3	24	0
220	23.79	186.3		3	261	31.07	184.8	42	0	295	43.16	185.6	24	0
221	24.39	186.1		1	262	31.18	184.9		1	296	43.44	185.1	24	0
222	24.89	186.0	24	0	263	31.49	184.9	24	0	297	44.01	185.1	6	25
223	25.43	185.9	24	0	264	32.01	184.7	24	0	298	44.47	185.1		1
224	26.01	185.8	24	0	265	32.43	184.7	24	0	299	44.88	184.8	24	0
225	26.49	185.6		1	266	32.85	185.4	24	0	300	45.31	184.7	24	0/30
226	27.00	185.5	24	0	267	33.44	185.9	24	0					
227	27.57	185.5	24	0	268	33.89	185.8	24	0					

TABLE 5.—Seismic Recorder Data—Continued
 Shot Number 7 Shot Point 7
 Shot Time (Julian day, hr, min, sec): 177:07:00:00.012

Loc	Dist (km)	Azim (deg)	Db	Tape Grade	Loc	Dist (km)	Azim (deg)	Db	Tape Grade	Loc	Dist (km)	Azim (deg)	Db	Tape Grade
142	29.66	15.7	24	0	228	10.58	27.2	42	0	269	5.05	52.9	42	0
145	31.13	14.9	42	0	229	9.97	28.9	42	0	270	4.74	58.0	42	0
148	32.74	14.2	42	0	230	9.50	30.4	42	0	271	4.29	54.5	42	0
151	34.32	13.5	44	0	231	9.05	32.1	42	0	272	3.86	49.8		17
154	35.91	12.9	44	0	232	8.63	33.9	42	0	273	3.56	45.5	62	0
157	37.47	12.3	44	0	233	9.84	27.5	42	0	274	3.10	51.6	62	0
181	38.13	11.2	26	0	234	9.60	24.6	42	0	275	2.79	60.6	62	0
201	22.98	17.7	42	0	235	9.38	21.6	42	0	276	2.44	85.3	62	0
202	22.82	16.4		3	236	9.22	18.7	42	0	277	2.47	98.8	62	0
203	22.29	16.7	42	0	237	9.14	18.6	42	0	278	2.92	112.0	62	0
204	21.78	17.1	42	0	238	8.93	12.0	42	0	279	2.27	61.5	62	0
205	21.28	17.6	42	0	239	8.82	7.2	42	0	280	0.01	123.2	62	0
206	21.09	16.3	42	0	240	9.04	3.5	42	0	281	0.29	42.0		1
207	20.94	14.9	42	0	248	29.03	16.0	42	0	282	0.70	52.1	62	0
208	20.80	13.4	42	0	249	28.51	16.3	42	0	283	0.90	51.6	24	0
209	20.28	13.7	42	0	250	27.96	16.6	42	0	284	1.33	67.3	62	0
210	19.76	14.1	42	0	251	27.45	17.0	42	0	285	1.83	66.7	62	0
211	19.19	14.5	42	0	252	26.94	17.3	42	0	286	3.08	123.8	62	0
212	18.69	14.9	42	0	253	26.45	17.7	42	0	287	3.28	132.2	62	0
213	18.21	15.4	42	0	254	25.89	18.0		17	288	3.43	134.9	62	0
214	17.61	15.9	42	0	255	25.43	18.4	42	0	289	3.86	142.1	62	0
215	17.08	16.4	42	0	256	24.89	18.7	42	0	290	4.36	146.0	42	0
216	16.60	16.9	42	0	257	24.41	19.2	42	0	291	4.64	151.4	42	0
217	16.12	17.4	42	0	258	23.95	19.6	24	0	292	5.02	155.2	42	0
218	15.58	18.0	42	0	259	23.35	20.1	24	0	293	5.63	156.6	42	0
219	15.14	18.6	42	0	260	23.16	18.9		25	294	6.01	152.9	42	0
220	14.60	19.3	42	0	261	8.07	36.8	42	0	295	6.40	149.6	42	0
221	14.03	20.2		1	262	7.95	36.9		1	296	6.87	148.4	42	0
222	13.56	20.9	42	0	263	7.70	38.2	24	0	297	7.33	151.0	42	0
223	13.05	21.8	42	0	264	7.31	41.0	42	0	298	7.71	153.1		1
224	12.51	22.7	42	0	265	7.02	43.3	42	0	299	8.17	153.3	42	0
225	12.08	23.7		1	266	6.41	42.6	42	0	300	8.59	154.2	42	0
226	11.62	24.7	42	0	267	5.78	43.9	42	0					
227	11.07	25.6	42	0	268	5.48	47.4	42	0					

TABLE 5.—Seismic Recorder Data—Continued
 Shot Number 8 Shot Point 6
 Shot Time (Julian day, hr, min, sec): 177:08:00:00.016

Loc	Dist (km)	Azim (deg)	Db	Tape Grade	Loc	Dist (km)	Azim (deg)	Db	Tape Grade	Loc	Dist (km)	Azim (deg)	Db	Tape Grade
142	20.82	20.9	24	0	228	4.29	84.5	42	0	269	6.89	149.8	42	0
145	22.36	19.4	6	0	229	4.26	93.7	42	0	270	7.35	152.0	42	0
148	23.93	18.1	6	0	230	4.33	100.8	42	0	271	7.15	155.7	42	0
151	25.48	17.0	26	0	231	4.46	107.4	42	0	272	6.94	159.9	42	0
154	27.04	15.9	26	0	232	4.64	113.5	42	0	273	6.81	163.1	24	0
157	28.59	15.0	26	0	233	4.00	94.0	42	0	274	7.32	165.2	24	0
181	29.21	13.6	26	0	234	3.45	94.7	42	0	275	7.86	166.2	24	0
201	14.40	26.5	24	0	235	2.91	95.6	42	0	276	9.00	168.0	24	0
202	14.17	24.5	3	0	236	2.41	96.4	42	0	277	9.57	168.7	24	0
203	13.67	25.4	24	0	237	2.07	96.9	42	0	278	10.32	168.0	24	0
204	13.18	26.4	24	0	238	1.32	101.7	42	0	279	8.05	169.7	24	0
205	12.71	27.5	24	0	239	0.61	115.2	42	0	280	9.03	183.5	24	0
206	12.44	25.5	24	0	240	0.02	348.1	42	0	281	8.80	182.4		1
207	12.22	23.2	24	0	248	20.31	21.5	24	0	282	8.57	180.0	24	0
208	12.01	20.8	24	0	249	19.81	22.1	24	0	283	8.45	179.0	6	0
209	11.81	21.7	24	0	250	19.28	22.7	24	0	284	8.52	175.5	24	0
210	11.01	22.7	24	0	251	18.79	23.4	24	0	285	8.36	172.3	24	0
211	10.47	23.9	24	0	252	18.30	24.1	6	0	286	10.90	169.4	24	0
212	10.00	25.1	42	0	253	17.84	24.7	24	0	287	11.37	170.5	24	0
213	9.56	26.5	42	0	254	17.31	25.5		17	288	11.57	170.7	24	0
214	9.01	28.3	42	0	255	16.87	26.3	24	0	289	12.19	171.4	24	0
215	8.52	30.0	42	0	256	16.35	27.0	24	0	290	12.76	171.5	24	0
216	8.09	31.8	24	0	257	15.91	28.0	24	0	291	13.18	172.8	24	0
217	7.67	33.8	24	0	258	15.48	28.8	24	0	292	13.65	173.5	6	0
218	7.21	36.2	24	0	259	14.92	30.1	24	0	293	14.27	173.3	6	0
219	6.85	38.6	24	0	260	14.66	28.3		25	294	14.52	171.4	6	0
220	6.40	41.8		3	261	4.97	120.7	42	0	295	14.78	169.6	24	0
221	5.97	45.8		1	262	4.98	122.1		1	296	15.16	168.5	24	0
222	5.64	49.5	42	0	263	5.14	125.1	42	0	297	15.70	169.0	6	25
223	5.30	53.9	42	0	264	5.49	129.4	42	0	298	16.14	169.5		1
224	4.97	59.3	42	0	265	5.77	132.5	42	0	299	16.60	169.2	6	0
225	4.77	64.4		1	266	5.71	138.7	42	0	300	17.04	169.3	6	0
226	4.57	70.2	42	0	267	5.94	144.6	42	0					
227	4.34	77.0	42	0	268	6.34	146.8	42	0					

TABLE 5.—Seismic Recorder Data—Continued
Shot Number 9 Shot Point 2
Shot Time (Julian day, hr, min, sec): 180:08:00:00.016

Loc	Dist (km)	Azim (deg)	Db	Tape Grade	Loc	Dist (km)	Azim (deg)	Db	Tape Grade	Loc	Dist (km)	Azim (deg)	Db	Tape Grade
297	44.01	185.1	6	0	334	55.82	185.1	6	0	369	47.16	178.9	6	0
301	34.57	198.0	24	15	335	55.50	186.2	6	0	370	47.01	179.9		1
302	35.73	197.3	6	0	336	54.85	185.8	6	15	371	47.71	180.1	6	0
303	36.32	197.1		1	337	54.27	185.2	6	0	372	47.99	180.7	6	0
304	37.53	197.1	6	0	338	53.77	185.9	6	15	373	48.82	181.1	6	0
305	38.38	196.5	24	0/30	339	52.54	185.7	6	0	374	48.95	181.9		6/17
306	39.56	196.2		3	340	52.21	185.9	6	0	375	48.14	182.1	24	0
307	40.61	195.7	6	0	341	33.60	177.6	6	0	376	48.73	183.1		6/18
308	41.36	194.9	6	0	342	34.69	177.6	6	0	377	49.44	183.0	6	0/31
309	42.37	194.7	6	15	343	35.78	177.7	6	0	378	50.29	183.2	6	0
310	43.42	194.6	24	0	344	36.75	177.8	6	0	379	50.35	184.1	6	0
311	44.14	194.3	6	0	345	37.74	177.8	6	0	380	50.67	184.8		12
312	39.42	194.9	42	15	346	38.85	177.9	6	0	381	71.62	188.6	6	0
313	39.24	193.1	42	0/17	347	39.90	178.0	6	0	382	71.40	187.9	6	0
314	38.94	191.1	24	0	348	40.77	178.4	6	0	383	70.65	188.1	6	0
315	39.86	189.6	6	0	349	42.03	178.4	6	0	384	69.39	187.7	6	0
316	40.40	188.4	6	0	350	43.12	178.6	6	15	385	68.63	187.0		15
317	41.20	185.9	6	0	351	43.66	178.1	6	0	386	68.42	186.8	36	12
318	41.51	184.8	42	15	352	42.84	179.6	6	0	387	67.87	186.6	6	0
319	41.30	183.7	6	0	353	42.49	181.2	6	0	388	67.42	186.4	6	0
320	41.97	182.7	6	0	355	44.43	184.1		15	389	66.99	186.2	24	0
321	62.89	187.0		17	356	44.74	183.5	6	15	390	66.69	186.7	6	0
322	62.58	187.2	6	0	357	45.00	182.3		17	391	66.38	186.8		3
323	61.70	187.2	24	12	358	45.13	181.5	6	0	392	65.94	186.8	24	12
324	61.31	186.8	24	12	359	45.35	180.6	6	0	393	65.50	186.6	24	12
325	60.87	186.8	6	0	360	45.39	179.7	6	0	394	65.16	186.1	6	0
326	60.38	186.5	6	0	361	45.68	179.5	6	0	395	64.45	185.8	24	12
327	59.91	185.6	6	0	362	46.02	179.2	6	25	396	64.01	185.6	6	0
328	59.05	186.0	6	0	363	46.44	178.9	6	0	397	63.68	185.4	6	0
329	58.31	185.9	6	0	364	46.62	178.4	6	0	398	63.35	185.5	24	12
330	58.02	185.4	24	12	365	46.90	178.0	6	0	399	63.08	185.6	24	12
331	57.75	185.7	24	15	366	47.27	177.1	6	0	400	62.81	186.0	6	0
332	57.25	185.7	6	0	367	47.46	176.8	6	0					
333	56.55	184.9	6	0	368	47.36	178.0	6	0					

TABLE 5.—Seismic Recorder Data—Continued
Shot Number 10 Shot Point 10
Shot Time (Julian day, hr, min, sec): 114:20:01:19.785

Loc	Dist (km)	Azim (deg)	Db	Tape Grade	Loc	Dist (km)	Azim (deg)	Db	Tape Grade	Loc	Dist (km)	Azim (deg)	Db	Tape Grade
107	16.77	205.5	42	0/30	286	67.61	192.2		1	468	4.83	187.3	82	0
110	18.09	206.8	42	0	289	68.96	192.1	42	0	469	3.05	177.0	82	0/15/30
113	19.57	206.2	42	0	291	69.99	192.0		15	470	2.57	176.2	62	0
116	21.02	204.3	42	0	293	71.06	191.8	24	0	471	1.75	174.3		1
119	22.40	202.7	42	0	296	71.47	190.7	24	0/17	472	1.25	190.5	82	0
147	34.33	194.8	24	0	299	72.88	190.4	24	0	473	0.00	238.7	94	0
150	32.76	195.5		25	401	35.00	194.3		15	474	1.00	33.8	62	13
153	31.19	196.3		17	441	74.72	10.2	24	0	475	2.55	352.3	62	0
156	29.65	197.2	24	15	442	72.63	10.5	42	0	476	4.06	354.3		28
159	28.08	198.2	42	15	443	71.53	10.6		9	477	5.94	354.3		28
183	26.53	199.3		3	444	70.48	10.8	42	0	478	8.19	358.4	42	0
194	25.17	200.3		6	445	67.77	11.7		1	479	10.09	4.8	42	0
198	23.98	201.4		1	446	66.33	12.4	24	15	480	11.35	6.6		25
203	44.27	193.5	42	15	447	64.39	12.5	24	0	481	47.13	10.0	42	0
210	46.78	194.8	42	0	448	62.91	12.0	42	0	482	46.20	10.6	24	0
213	48.33	194.3	42	15	449	61.43	11.6		1	483	45.12	10.3	42	0
216	49.96	193.9	42	0	450	59.76	11.0	24	0	484	43.93	10.4	42	0
219	51.44	193.4		17	451	58.77	10.3		1	485	42.46	10.6	42	0
222	53.08	193.0		1	452	56.74	9.3	24	0	486	40.30	10.7	42	0
225	54.64	192.6	42	0	453	55.09	9.1	24	15	487	38.50	10.6	42	0
228	56.25	192.3		3	454	53.65	9.2	24	0	488	36.90	10.1	24	0
231	57.97	191.9		3	455	52.43	9.3	24	0	489	35.73	6.4	42	0
248	37.53	193.5	24	0	456	51.31	9.3		17	490	33.62	7.4	42	0
251	39.13	192.9	24	0	457	49.88	9.4		28	491	31.64	7.8	42	0
254	40.72	192.4	42	0	458	48.92	9.4	24	0	492	29.77	7.0	42	0
257	42.26	192.0	42	0	459	47.95	9.5	24	0	493	27.85	6.0		1
260	43.48	192.3	42	0	461	15.51	208.8	42	0	494	25.54	4.1	42	0
262	59.26	191.7	42	0	462	14.14	205.7	42	0	495	23.89	4.3	42	0
265	60.48	191.4	42	0	463	12.80	205.3	42	0	496	21.63	4.8	42	15
268	62.01	191.9	42	0	464	11.21	206.7	42	0	497	19.90	5.3	42	0
273	63.51	193.0	42	0	465	9.46	213.1	42	0	498	17.27	3.6	42	9
277	66.33	192.5	24	0	466	7.74	207.4	42	0/30	499	14.93	4.0		1
279	65.01	193.2	42	0	467	6.65	201.3	42	0	500	13.41	7.4		3

TABLE 5.—Seismic Recorder Data—Continued
Shot Number 11 Shot Point 11
Shot Time (Julian day, hr, min, sec): 114:20:02:23.085

Loc	Dist (km)	Azim (deg)	Db	Tape Grade	Loc	Dist (km)	Azim (deg)	Db	Tape Grade	Loc	Dist (km)	Azim (deg)	Db	Tape Grade
107	16.77	204.5	42	0	286	67.68	191.9		1	468	4.93	184.1	42	0
110	18.08	205.9	42	0	289	69.02	191.9	24	0	469	3.19	172.4	62	0
113	19.57	205.4	42	0	291	70.05	191.8		12	470	2.72	170.8	62	0
116	21.03	203.5	42	0	293	71.13	191.6	24	0	471	1.91	168.8		1
119	22.42	202.0	24	0	296	71.54	190.4		12	472	1.35	178.6	82	0
147	34.38	194.3	24	0	299	72.95	190.2	24	0	473	0.29	114.8	94	0
150	32.81	195.0		25	401	35.06	193.9		25	474	1.09	49.0	62	0
153	31.24	195.8		17	441	74.65	10.4	6	25	475	2.41	358.1	62	0
156	29.69	196.7	24	0	442	72.56	10.7	24	0	476	3.92	358.0		28
159	28.11	197.6	24	0	443	71.46	10.9		9	477	5.80	356.7		28
183	26.56	198.7		3	444	70.41	11.0	24	0	478	8.07	0.2	42	0
194	25.20	199.7		6	445	67.71	12.0		1	479	10.00	6.4	42	0
198	23.99	200.8		1	446	66.27	12.7	24	25	480	11.27	8.0		25
203	44.32	193.2	24	0	447	64.33	12.7	24	0	481	47.06	10.3	24	0
210	46.83	194.5	24	0	448	62.85	12.3	24	0	482	46.13	10.9	24	0
213	48.38	194.0	24	0	449	61.36	11.9		1	483	45.05	10.6	42	0
216	50.01	193.5	24	0	450	59.69	11.2	24	16	484	43.86	10.7	42	0
219	51.50	193.1		14/17	451	58.70	10.6		1	485	42.39	11.0	24	0
222	53.14	192.7		1	452	56.66	9.6	24	0	486	40.23	11.0	42	0
225	54.70	192.3	24	0	453	55.01	9.4	24	0	487	38.44	11.0	24	0
228	56.32	192.0		3	454	53.57	9.5	24	0	488	36.82	10.5	24	0
231	58.03	191.7		3	455	52.35	9.6	24	0	489	35.64	6.8	24	0
248	37.59	193.1	24	0	456	51.23	9.6		17	490	33.54	7.8	24	0
251	39.19	192.5	24	0	457	49.81	9.7		28	491	31.56	8.3	24	0
254	40.78	192.0	24	0	458	48.85	9.8	24	0	492	29.68	7.5	24	0
257	42.32	191.6	24	0	459	47.87	9.9	24	0	493	27.75	6.5		1
260	43.54	191.9		3	461	15.50	207.8	42	0	494	25.44	4.7	42	0
262	59.33	191.4	42	0	462	14.14	204.6	42	0	495	23.79	4.9	42	0
265	60.55	191.2	24	0	463	12.80	204.0	42	0	496	21.54	5.6	42	0
268	62.07	191.6		9/17	464	11.21	205.2	42	0	497	19.80	6.1		12
273	63.57	192.7	24	0/15	465	9.38	211.2	42	0	498	17.17	4.5		29
277	66.39	192.3	24	0	466	7.73	205.2	42	0	499	14.83	5.1		1
279	65.06	192.9	24	0	467	6.68	198.9	42	0	500	13.33	8.6		3

TABLE 5.—*Seismic Recorder Data-Continued*
Shot Number 12 Shot Point 12
Shot Time (Julian day, hr, min, sec): 115:21:00:58.487

Loc	Dist (km)	Azim (deg)	Db	Tape Grade	Loc	Dist (km)	Azim (deg)	Db	Tape Grade	Loc	Dist (km)	Azim (deg)	Db	Tape Grade
107	91.22	193.1	24	0	286	142.53	191.2	24	15	468	79.77	190.1		3
110	92.42	193.5		1	289	143.88	191.2	24	0	469	77.91	189.8		3
113	93.81	193.6	24	0	291	144.91	191.2		12	470	77.44	189.8		3
116	95.47	193.4		1	293	145.99	191.1	6	0	471	76.62	189.9		3
119	96.93	193.2	24	0	296	146.41	190.5		12	472	76.19	190.3		3
147	109.19	191.7	24	0	299	147.82	190.4	6	0	473	74.94	190.3		3
150	107.60	191.9		25	401	109.88	191.6		25	474	74.02	190.0		3
153	108.01	192.1	6	0	441	0.22	188.8	94	0	475	72.52	190.9		3
156	104.43	192.3	24	15	442	2.33	182.4	94	0	476	71.05	191.2		28
159	102.82	192.5	24	0	443	3.45	181.5		9	477	69.24	191.6		28
183	101.22	192.7		17	444	4.52	181.4	42	0	478	66.94	191.7		3
194	99.82	192.8	6	6	445	7.41	176.1	42	0	479	64.90	191.1		3
198	98.57	193.0		1	446	9.03	173.8		1	480	63.61	190.9		3
203	119.16	191.5	24	15	447	10.90	176.8	42	0	481	27.81	190.7	42	0
210	121.62	192.1	24	0	448	12.23	180.8	42	0	482	28.75	189.8	24	0
213	123.19	191.9	24	15	449	13.62	183.9	42	0	483	29.81	190.3	24	0
216	124.84	191.8	24	0	450	15.21	187.3	42	0	484	31.01	190.0	42	0
219	126.33	191.6	24	0	451	16.17	189.8	42	0	485	32.48	189.8	24	0
222	127.98	191.5		1	452	18.23	193.1	42	0	486	34.64	189.8	24	0
225	129.55	191.3	24	0	453	19.88	193.2	42	0	487	36.44	189.9	24	0
228	131.17	191.2		3	454	21.32	192.7	42	0	488	38.04	190.4	24	0
231	132.89	191.0		3	456	23.65	192.2	42	0	489	39.36	193.8	24	0
248	112.43	191.4	24	0	457	25.07	191.9		28	490	41.39	192.6		1
251	114.05	191.2	24	0	458	26.03	191.8	24	0	491	43.34	192.0	24	0
254	115.64	191.1	24	0	459	27.00	191.5	42	0	492	45.25	192.4	24	0
257	117.18	190.9	24	0	460	1.38	181.7	82	0	493	47.21	192.8		1
260	118.40	191.1	24	0	461	89.78	193.5		3	494	49.62	193.4	24	0
262	134.19	191.0	24	0	462	88.64	192.7		3	495	51.24	193.0	24	0
265	135.41	190.8	24	0	463	87.36	192.5		3	496	53.44	192.5	24	0
268	136.93	191.1	24	0	464	85.75	192.4		3	497	55.14	192.1	24	0
273	138.41	191.6		15	465	83.71	192.8		3	498	57.82	192.3		29
277	141.24	191.4	6	0	466	82.37	191.9		3	499	60.12	191.8		1
279	139.90	191.7	24	0	467	81.48	191.2		3	500	61.55	190.9	24	0

TABLE 5.—*Seismic Recorder Data—Continued*
Shot Number 19 Shot Point 19
Shot Time (Julian day, hr, min, sec): 912:20:00:00.190

Loc	Dist (km)	Azim (deg)	Db	Tape Grade	Loc	Dist (km)	Azim (deg)	Db	Tape Grade	Loc	Dist (km)	Azim (deg)	Db	Tape Grade
106	184.95	15.7	24	0	452	256.46	15.0	6	0	479	210.00	16.1		3
147	165.82	17.1	24	0	455	252.17	15.1		1	480	211.30	16.1	6	0
153	168.93	16.8	24	0	456	251.06	15.1	24	0	481	246.96	15.3	24	0
159	172.05	16.5	24	0	457	249.65	15.1	24	0	482	246.08	15.4		2
206	154.75	17.6	24	0	458	248.70	15.2		10	484	243.81	15.5	42	0
213	151.87	17.5	24	0	459	247.74	15.2	24	0	485	242.36	15.5	42	0
225	145.70	18.3	42	0	462	186.16	16.0	24	0	486	240.22	15.6	24	0
231	142.47	18.7	42	0	463	187.47	16.1	24	0	496	221.32	15.5	24	0
248	162.68	17.5	24	0	464	189.08	16.1		25	497	219.64	15.6		3
254	159.56	17.8	24	0	465	191.08	15.9		3	498	216.96	15.6	24	0
258	157.62	18.1	24	0	466	192.51	16.2	24	0	499	214.69	15.8	24	0
260	156.83	18.0	24	0	467	193.49	16.5		18	500	213.36	16.1	24	0
265	140.05	19.1	42	0	468	195.36	16.9	24	0	510	149.46	17.8	42	0
268	138.47	18.9	42	0	469	197.26	17.0	24	0	577	206.77	16.0	24	0
279	135.33	18.5	42	0	472	198.88	16.7	24	0	578	208.62	15.9	24	0
286	132.87	19.1	24	0	474	201.08	16.7		6	580	210.84	16.1		20
289	131.55	19.2	6	0	475	202.44	16.4	24	0	583	245.28	15.4	24	0
293	129.50	19.5	6	0	476	203.87	16.2	24	0					
299	128.00	20.4	6	0	477	205.62	16.0	24	0					

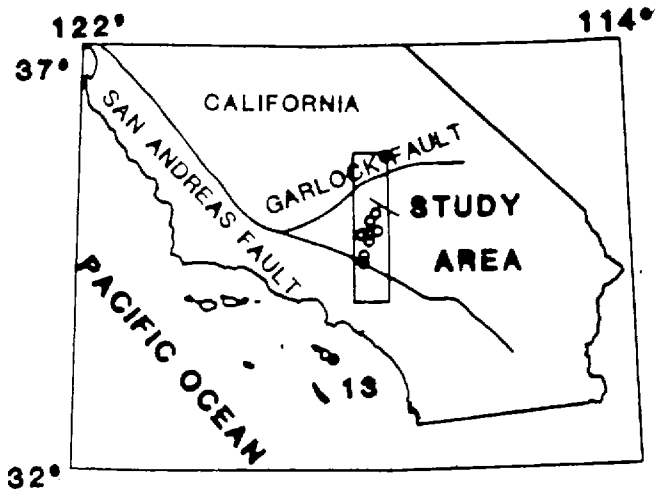
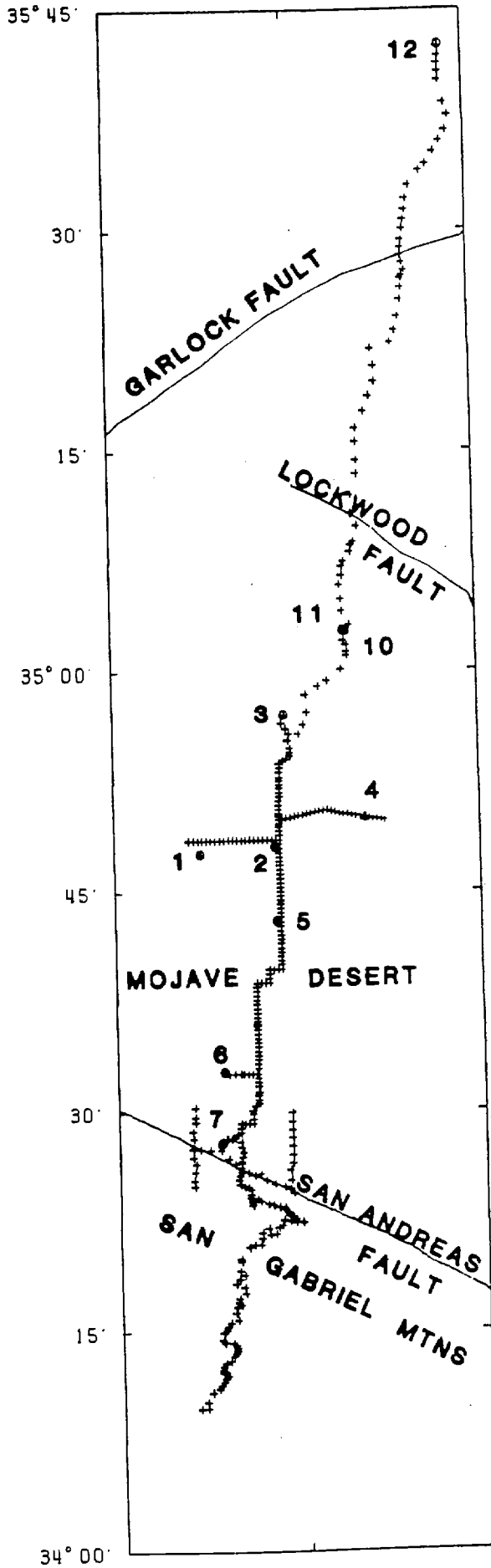


FIGURE 1 -Index map of study area showing shotpoints (O), and recorder sites (+) All locations are listed in table 1

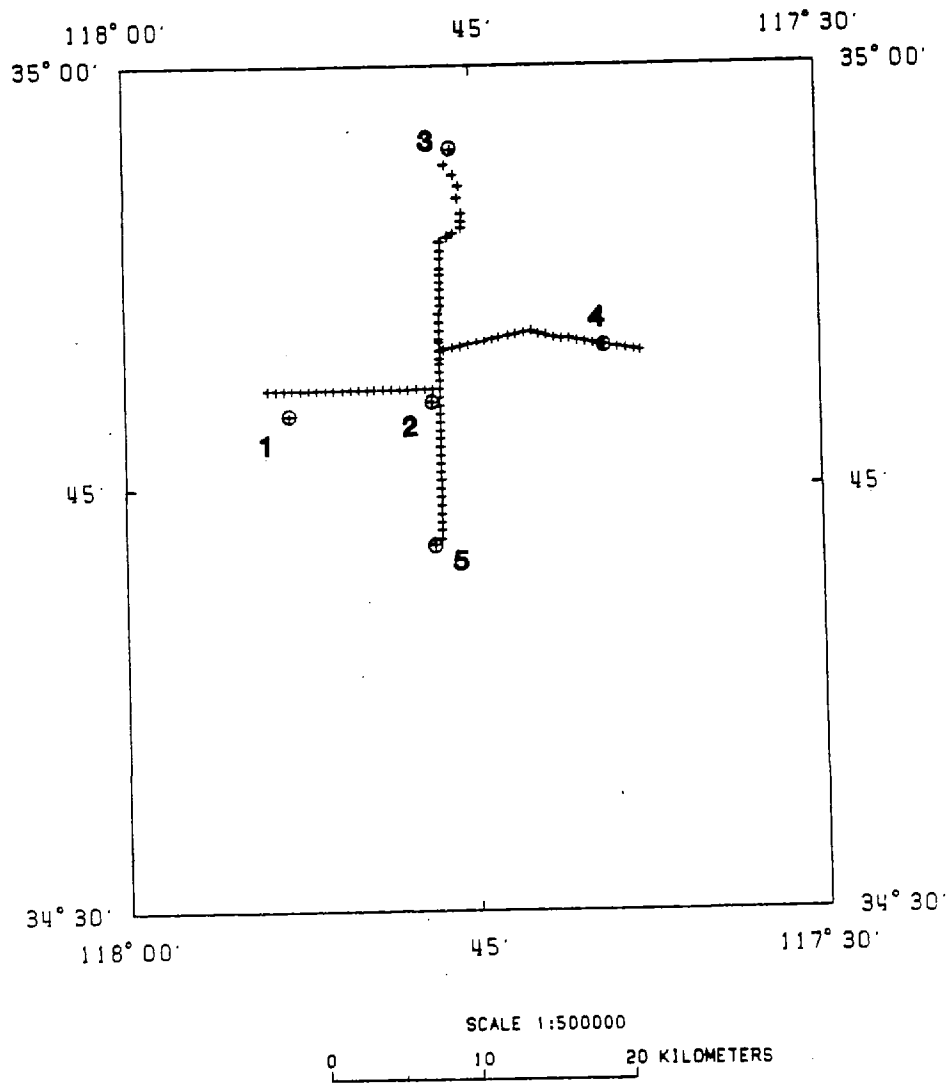


FIGURE 2.-Location of recorder sites (+) and shotpoints (o) for deployment 1, shot numbers 1-5 (stations 101 - 200).

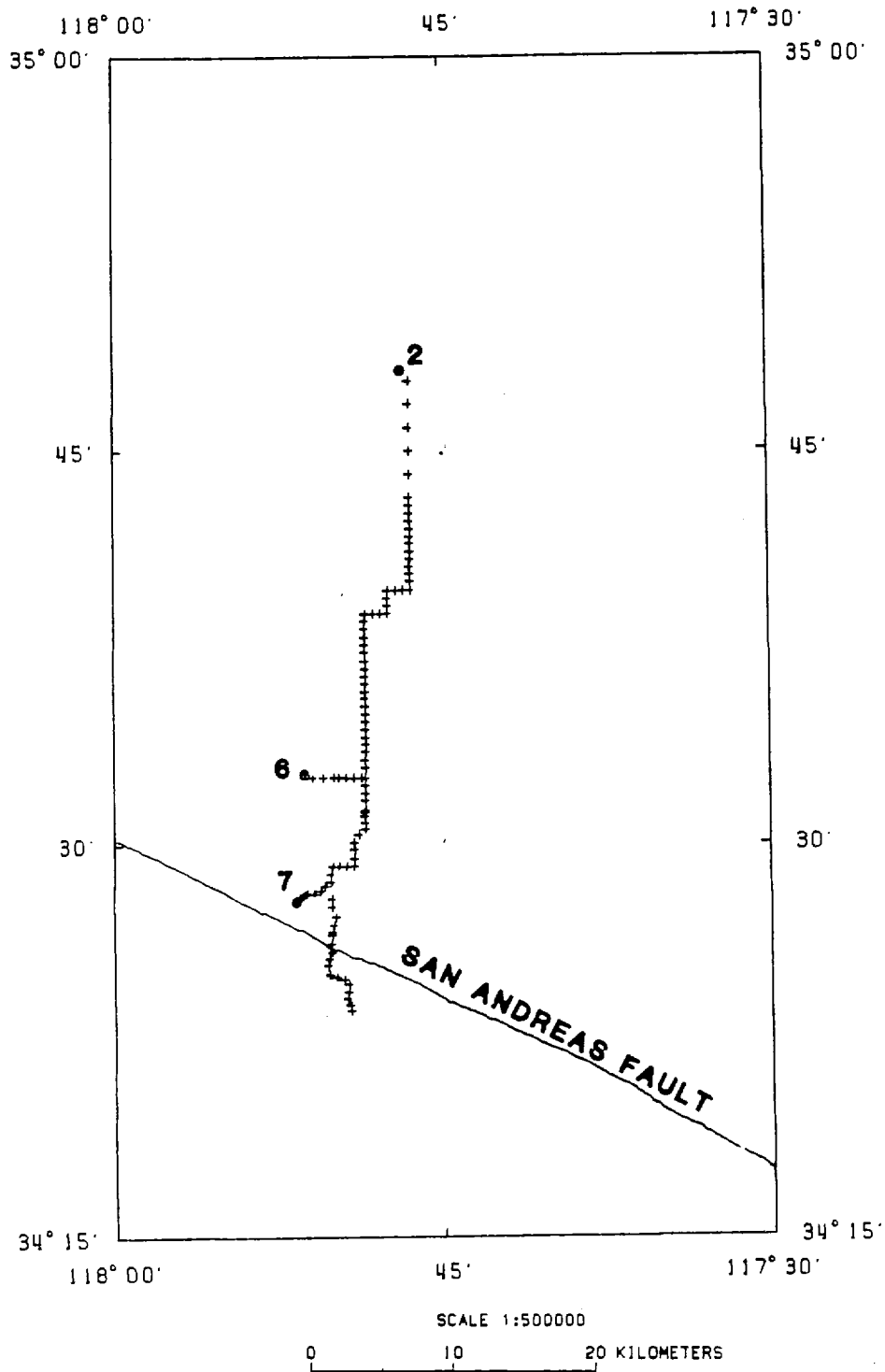


FIGURE 3.-Location of recorder sites (+) and shotpoints (o) for deployment 2, shot numbers 6-8 (stations 142 - 300).

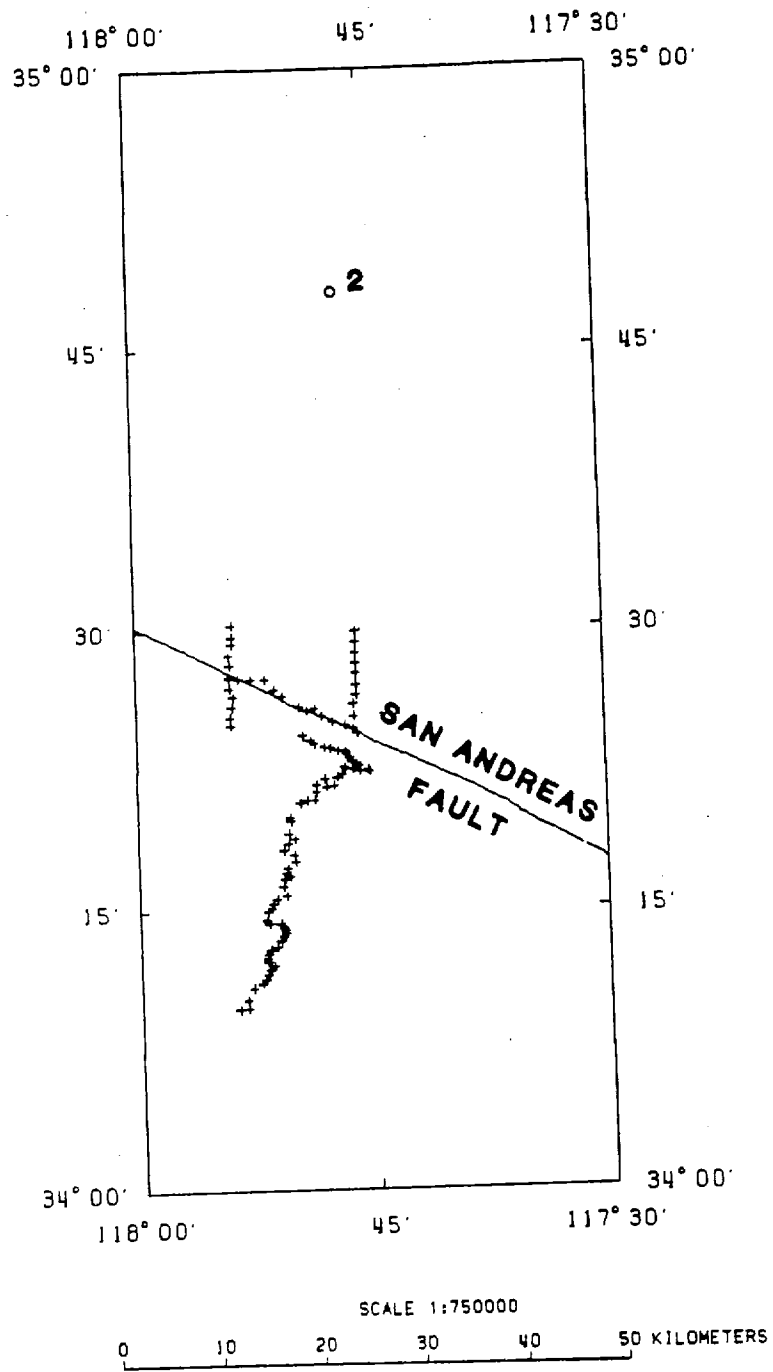


FIGURE 4.-Location of recorder sites (+) and shotpoint (o) for deployment 3, shot number 9 (stations 297 - 400).

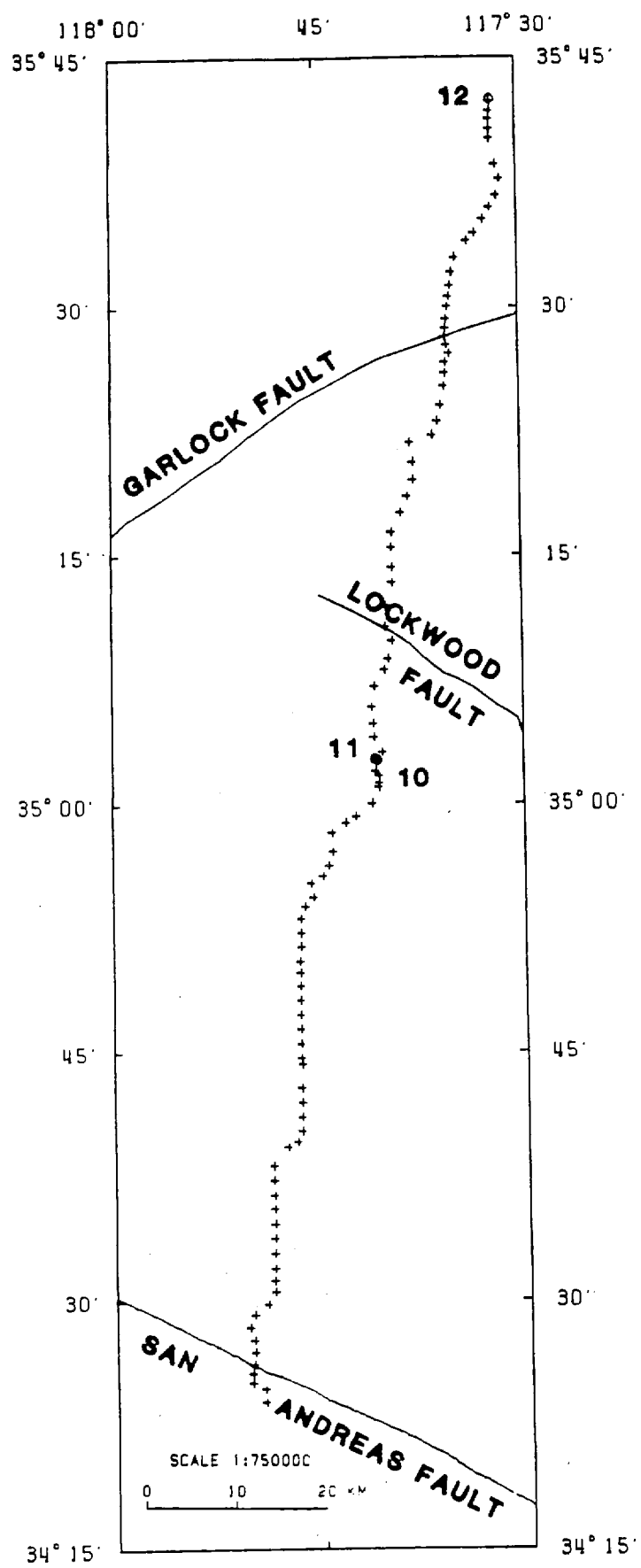


FIGURE. 5.-Location of recorder sites (+) and shotpoint (o) for deployment 4, shot numbers 10-12 (stations 107 - 500).

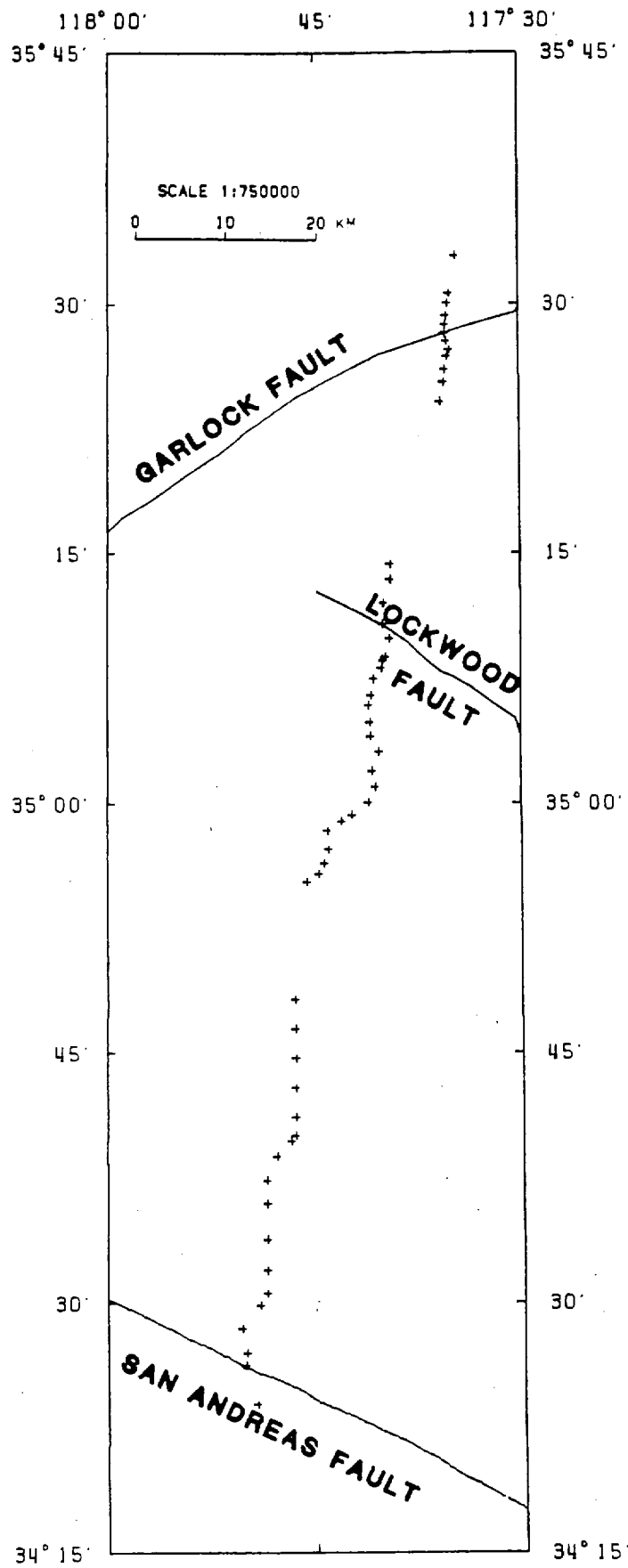


FIGURE 6.—Location of recorder sites (+) for deployment 5, shotnumber 13 (stations 105 - 583). The shotpoint was located on Catalina Island, not shown.

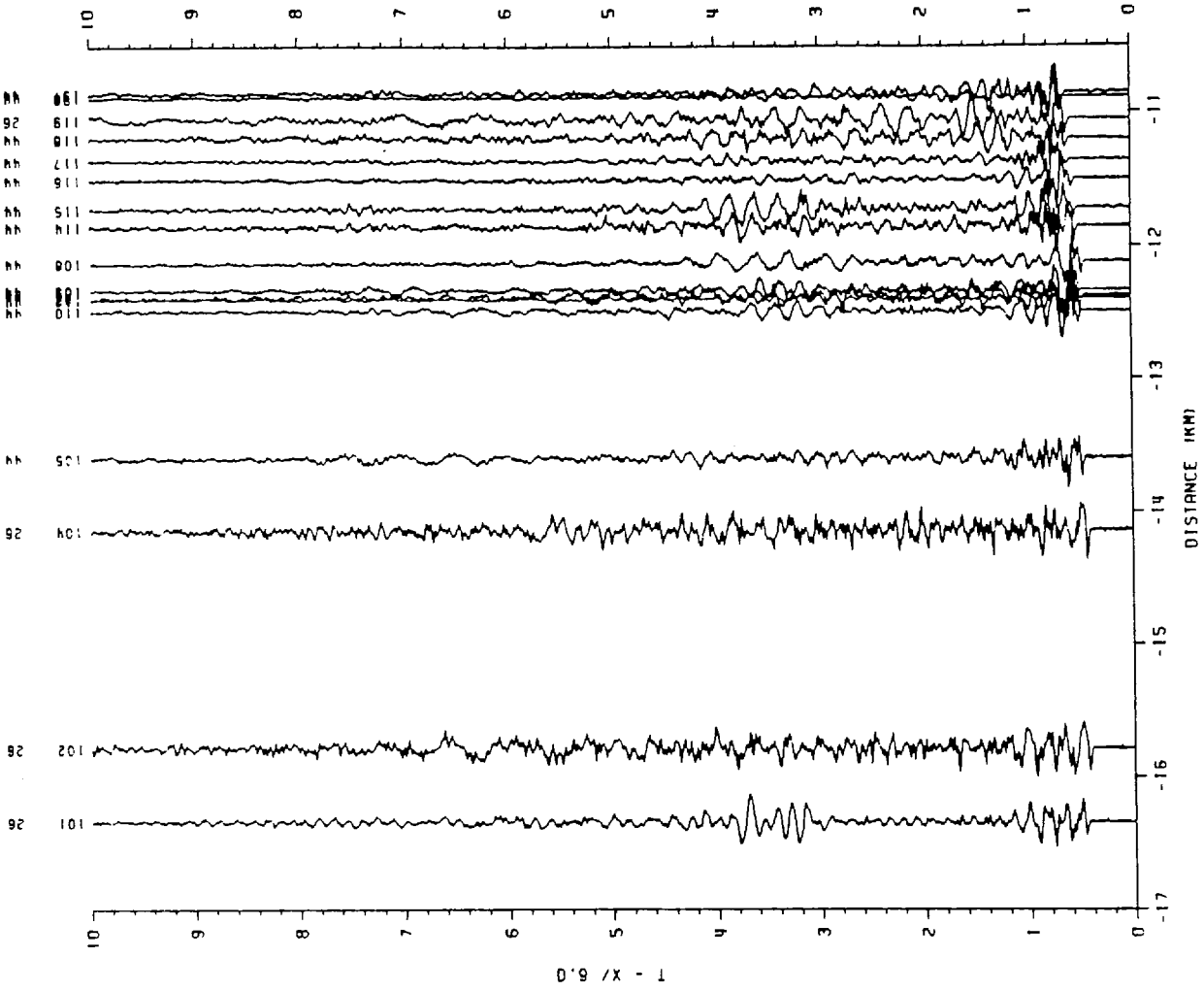


FIGURE 7 - Record section for shot number 1, shotpoint 4. South - north recording array, north of shotpoint 4 (see fig. 2). The station location and the amplifier attenuation setting is listed at the top of each trace.

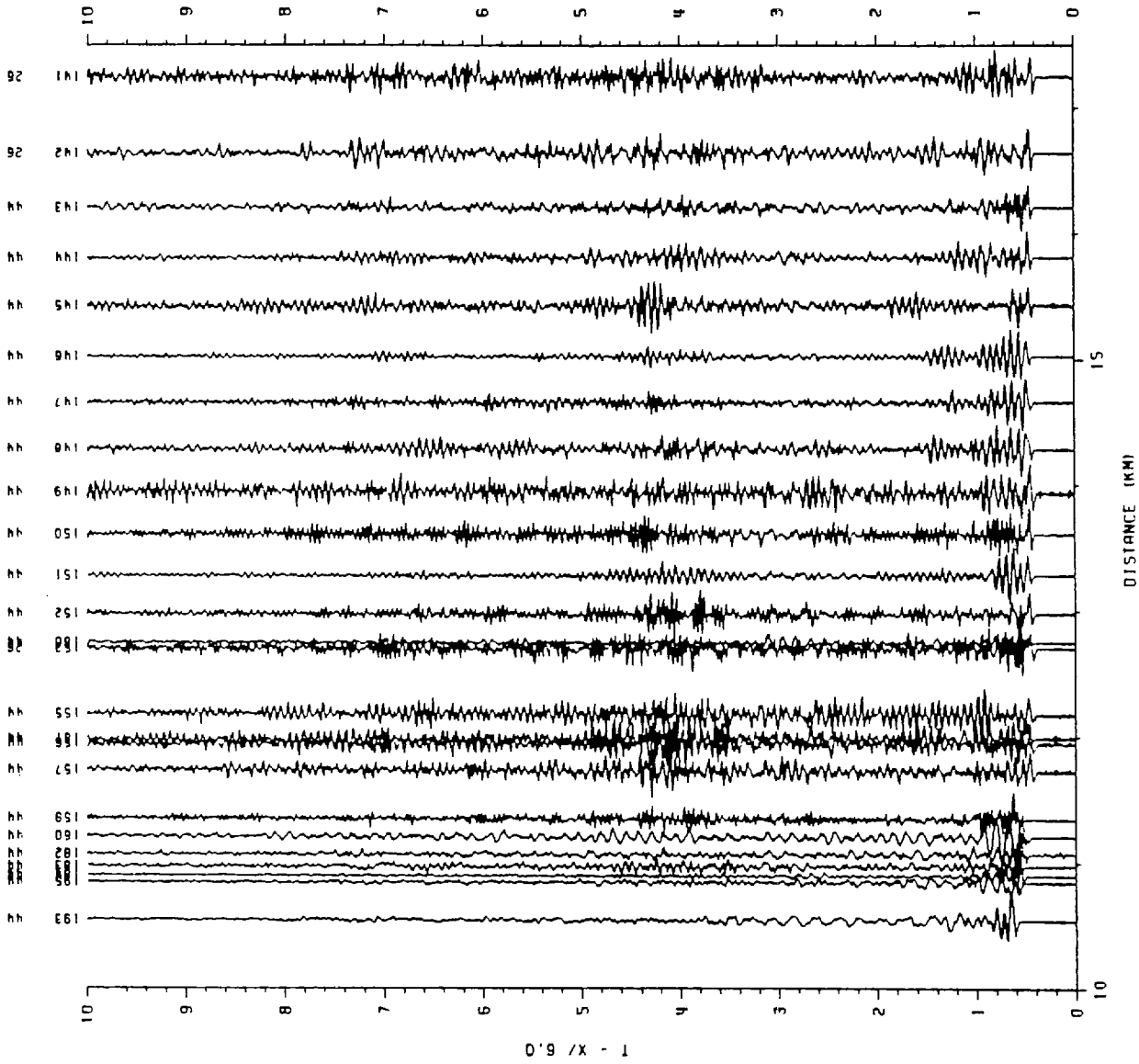


FIGURE 3-Record section for shot number 1, shotpoint 4. North - south recording array, south of shotpoint 4 (see fig. 2). The station location and the amplifier attenuation setting is listed at the top of each trace.

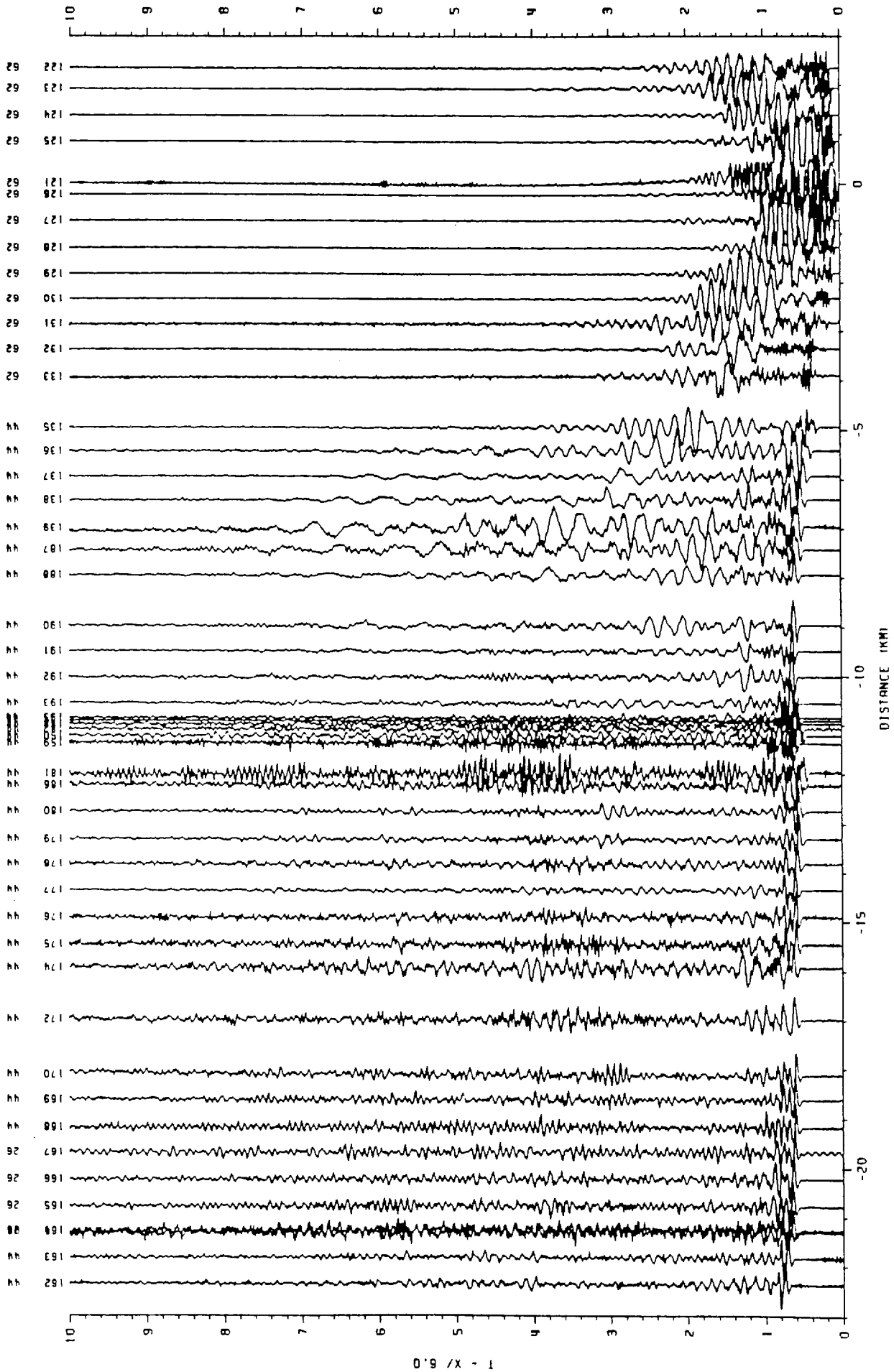


FIGURE 9—Record section for shot number 1, shotpoint 4. East-west recording array (see fig. 2). The station location and the amplifier attenuation setting is listed at the top of each trace.

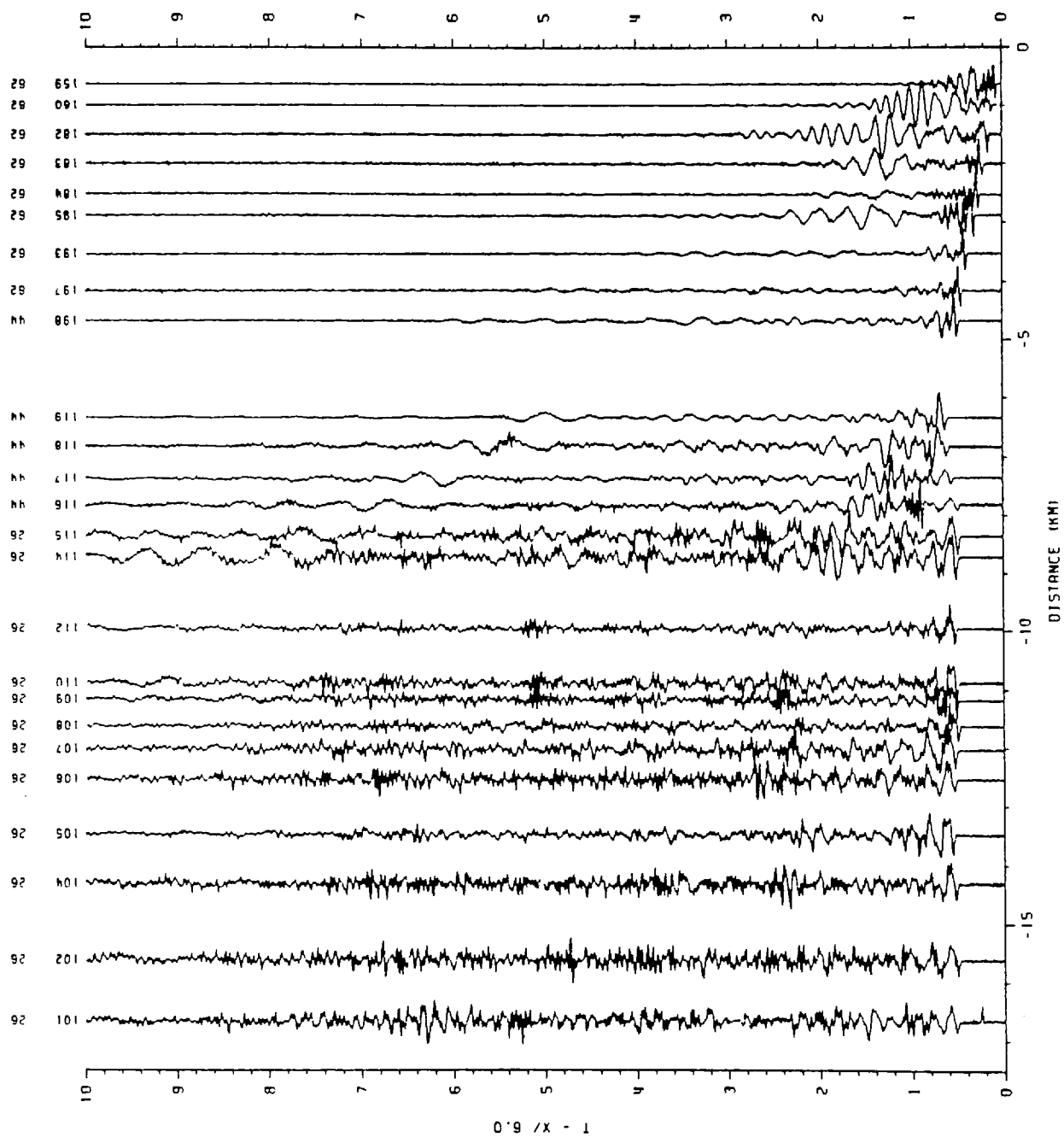


FIGURE 10-Record section for shot number 2, shotpoint 2. North-south recording array, north of shotpoint 2 (see fig. 2). The station location and the amplifier attenuation setting is listed at the top of each trace.

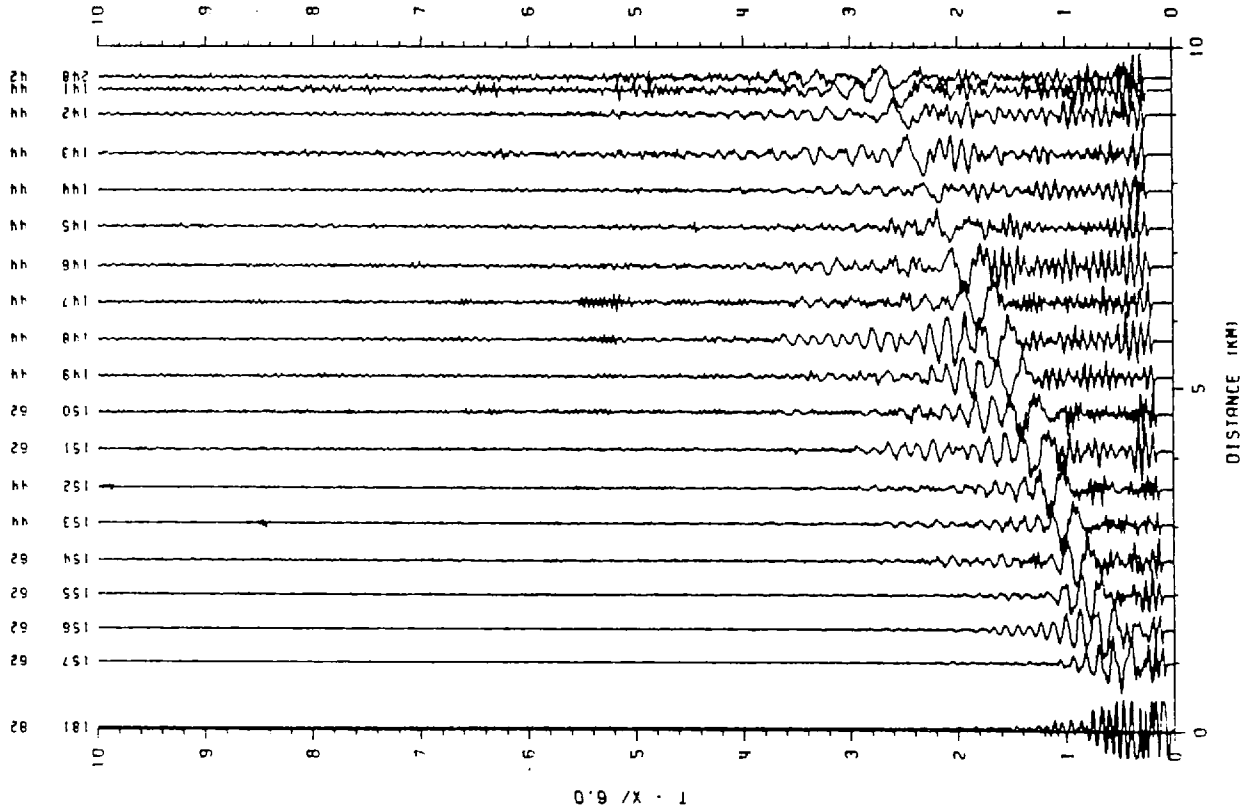


FIGURE 11 - Record section for shot number 2, shotpoint 2. North-south recording array, south of shotpoint 2 (see fig. 2). The station location and the amplifier attenuation setting is listed at the top of each trace.

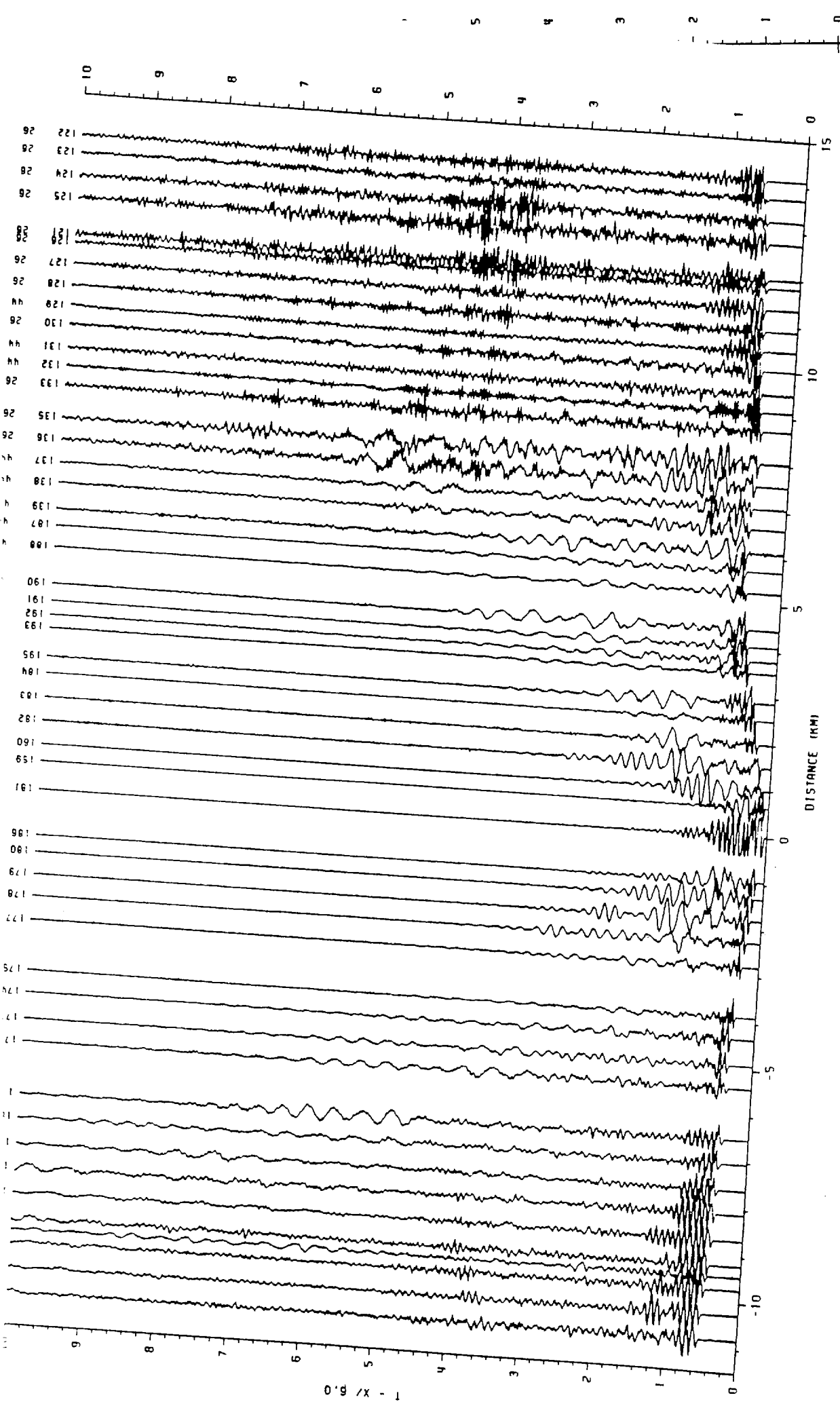


FIGURE 12-Record section for shot number 2, shotpoint 2. East-west recording array (see fig. 2). The station location and the amplifier attenuation setting is listed at the top of each trace.

FIGURE 13-Record section for shot number 2, shotpoint 2. East-west recording array (see fig. 2). The station location and the amplifier attenuation setting is listed at the top of each trace.

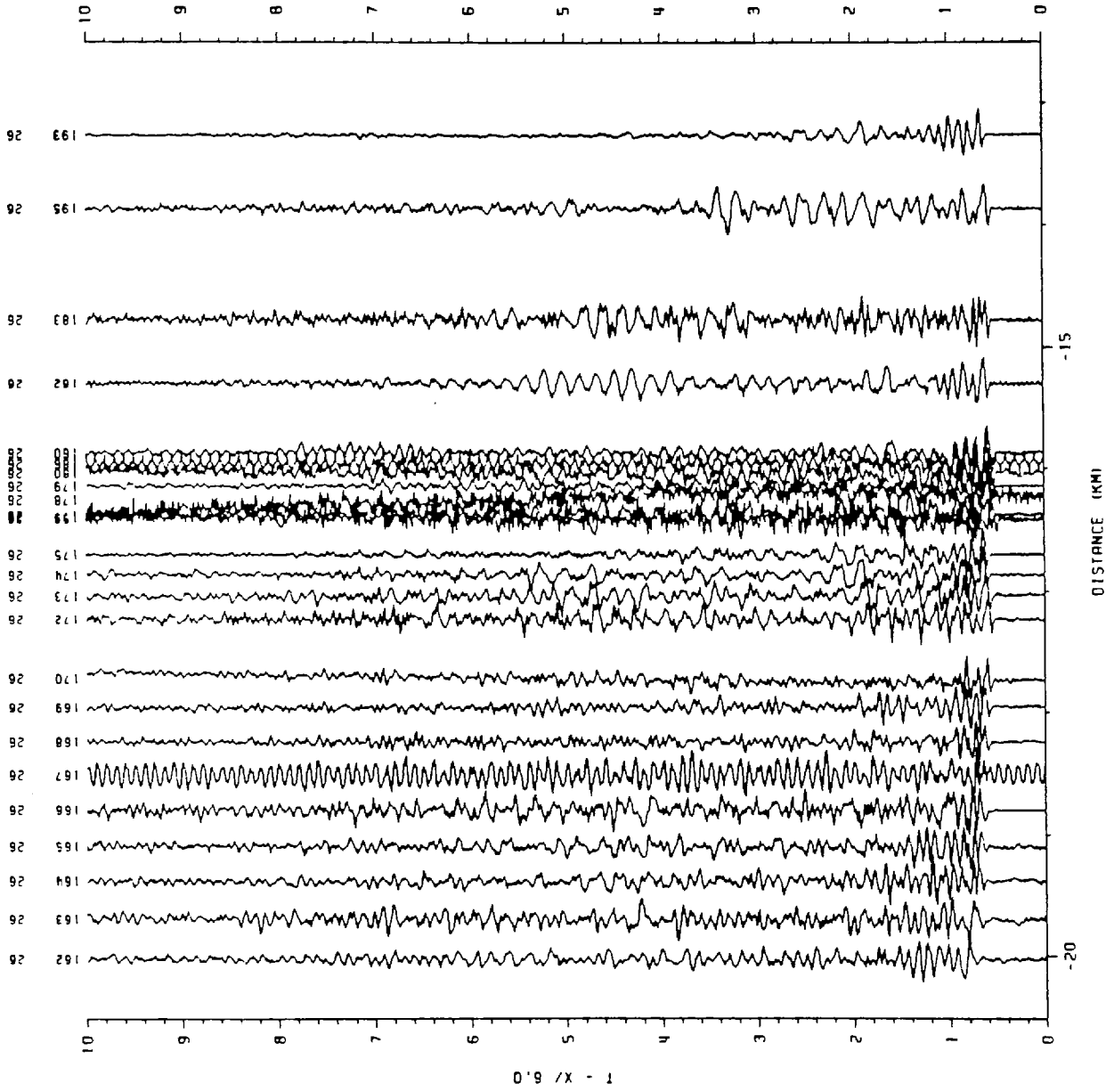


FIGURE 14-Record section for shot number 3, shotpoint 3. East - west recording array, west of shotpoint 3 (see fig. 2). The station location and the amplifier attenuation setting is listed at the top of each trace.

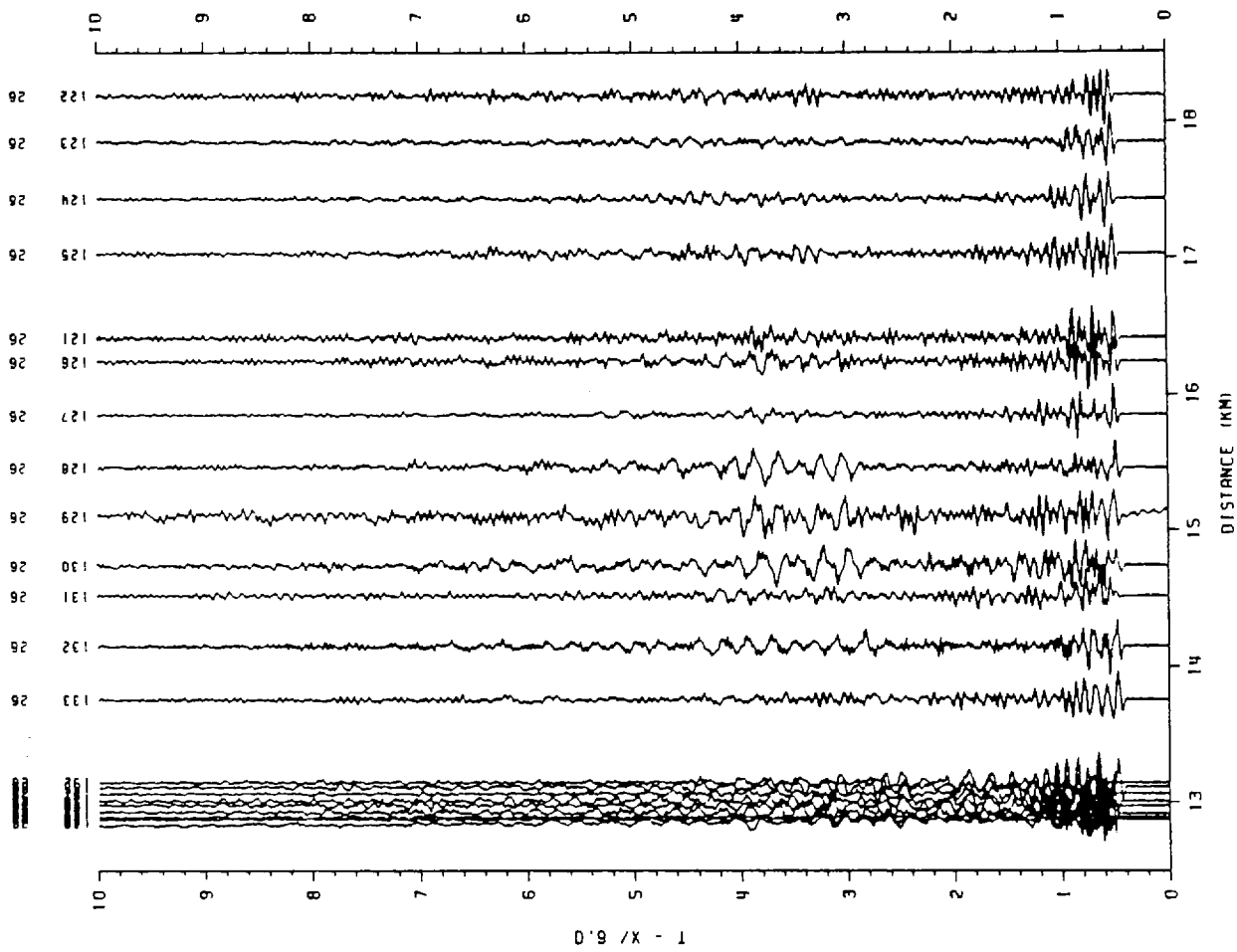


FIGURE 15--Record section for shot number 3, shotpoint 3. West - east recording array, east of shotpoint 3 (see fig. 2). The station location and the amplifier attenuation setting is listed at the top of each trace.

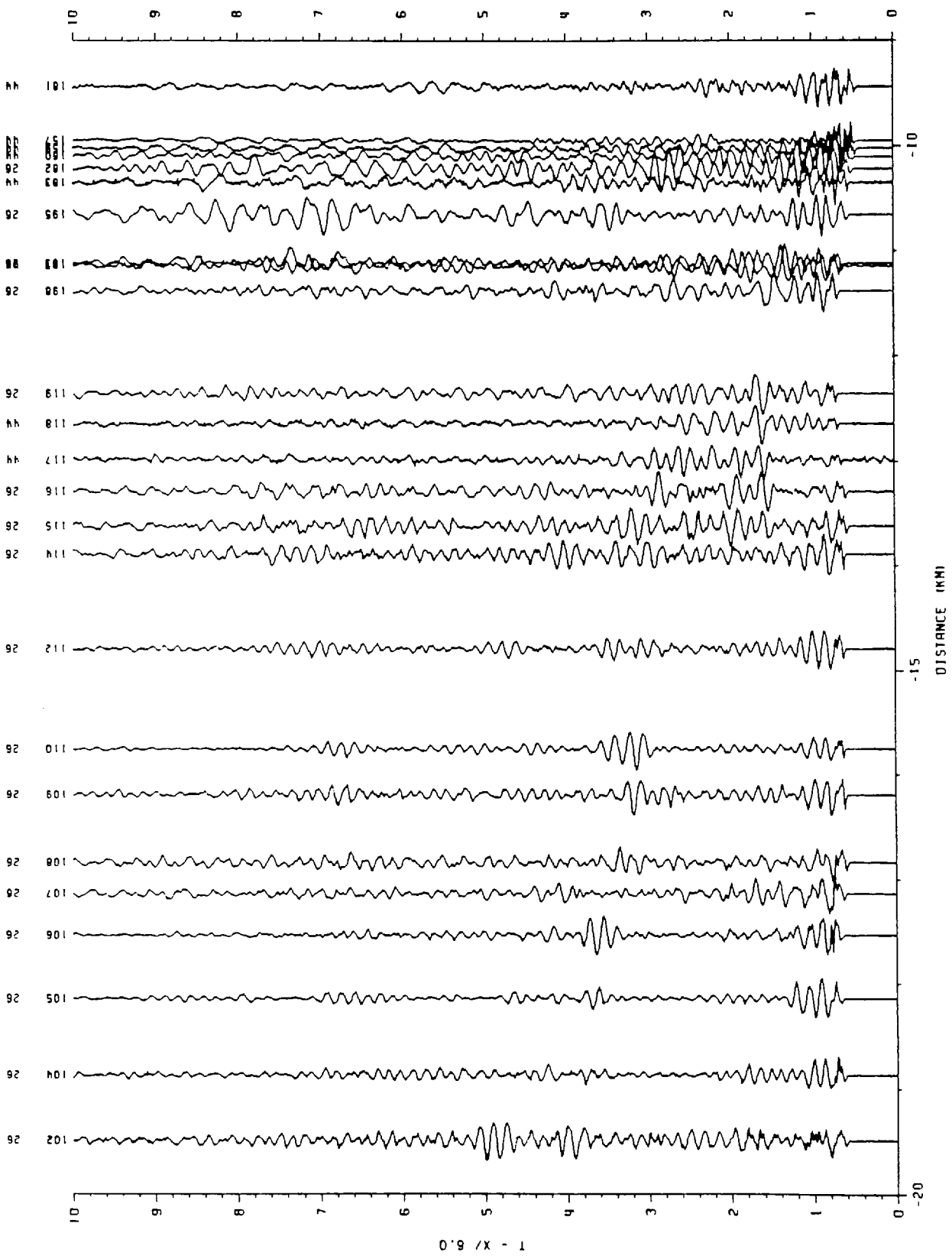


FIGURE 16-Record section for shot number 4, shotpoint 1. South - north recording array (see fig. 2). The station location and the amplifier attenuation setting is listed at the top of each trace.

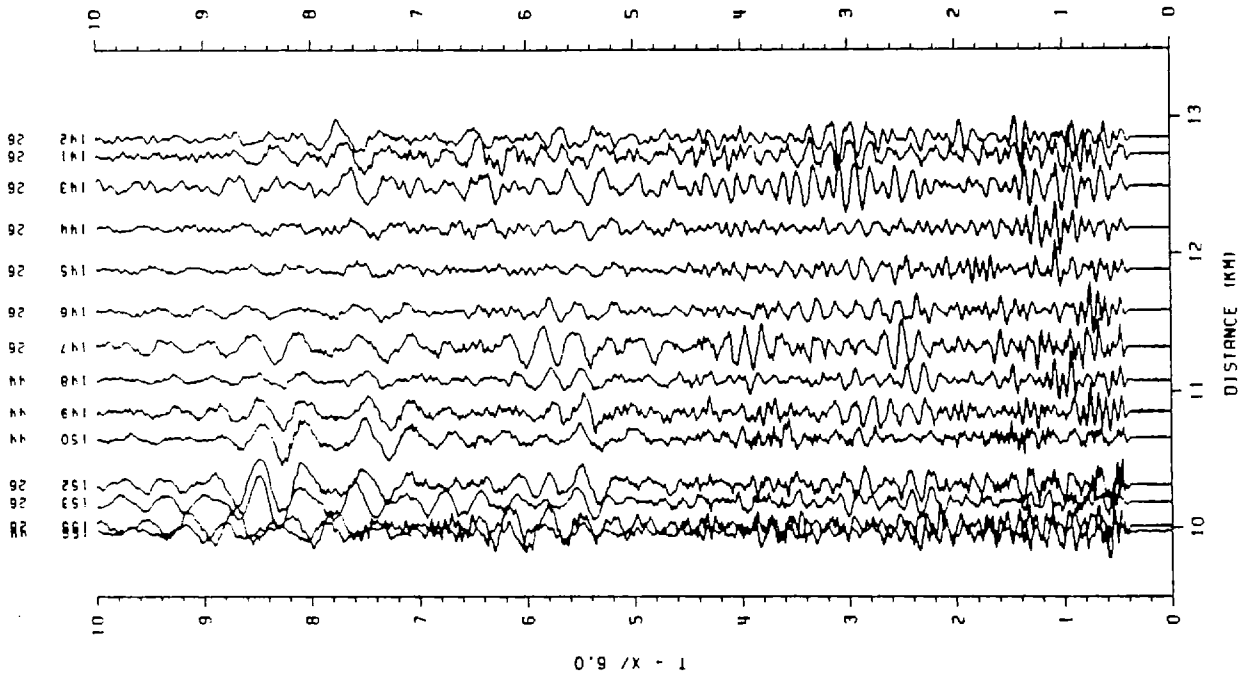


FIGURE 17--Record section for shot number 4, shotpoint 1. North - south recording array (see fig. 2). The station location and the amplifier attenuation setting is listed at the top of each trace.

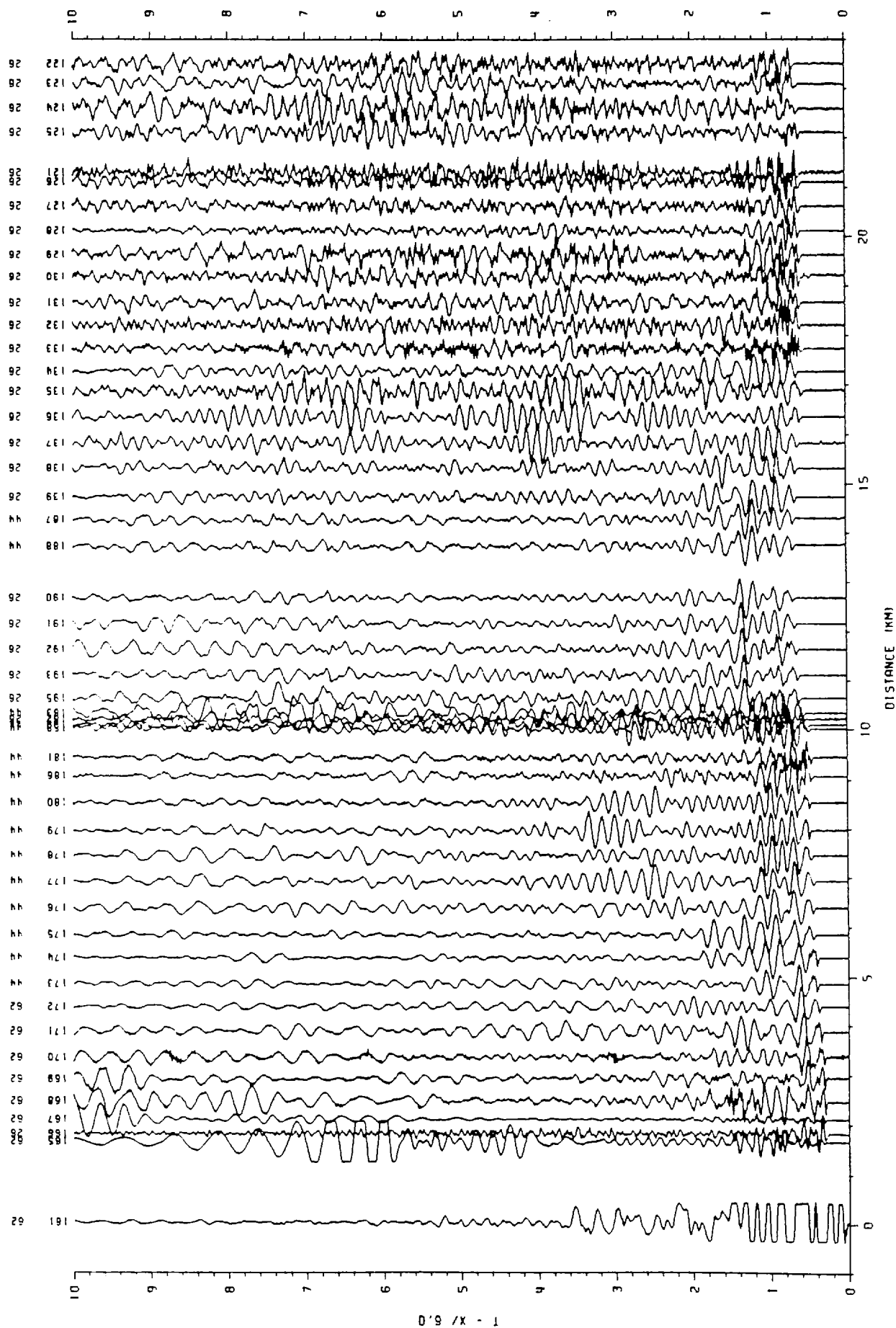


FIGURE 18-Record section for shot number 4, shotpoint 1. West - east recording array (see fig. 2). The station location and the amplifier attenuation setting is listed at the top of each trace.

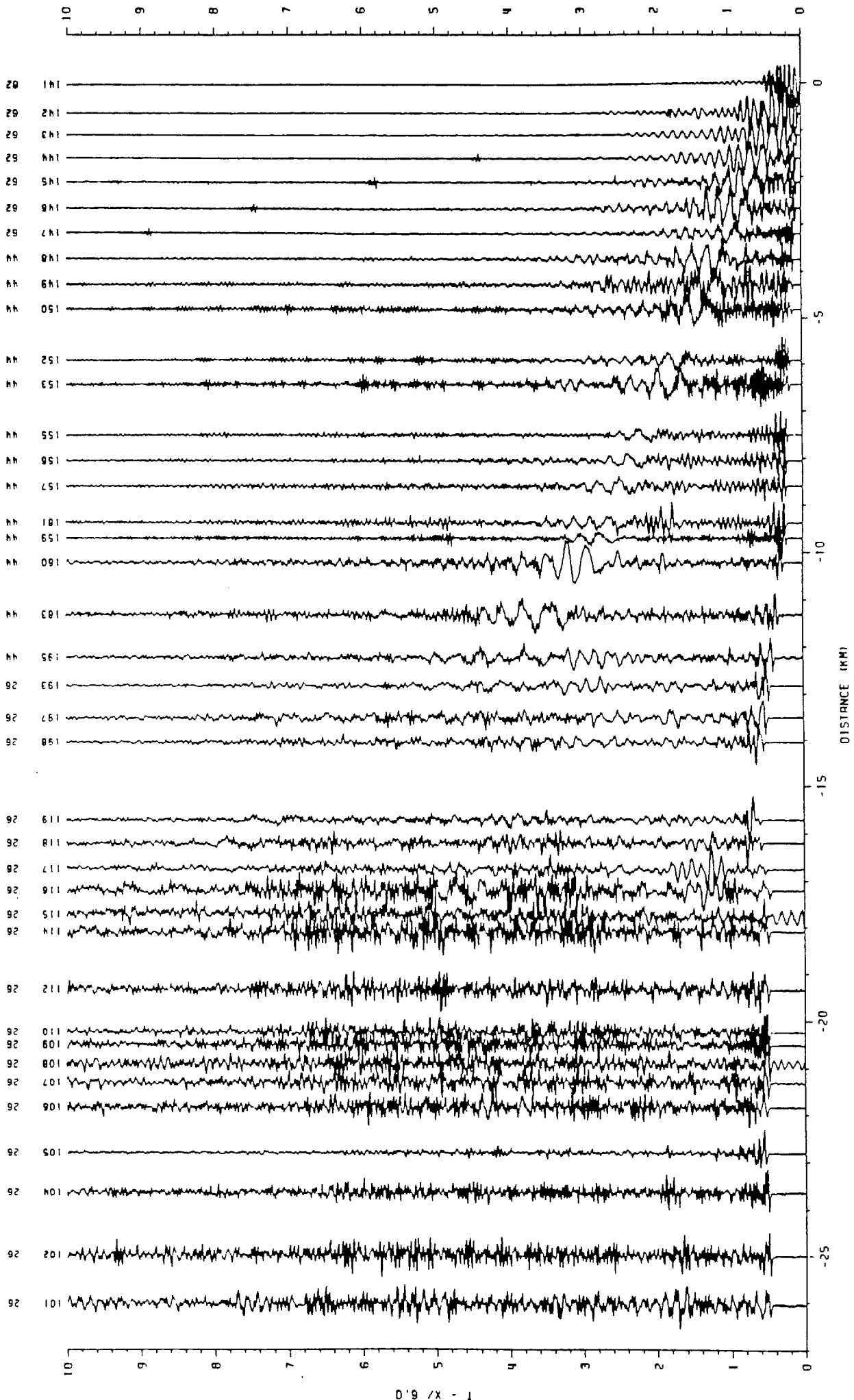


FIGURE 19—Record section for shot number 5, shotpoint 5. North-south recording array (see fig. 2). The station location and the amplifier attenuation setting is listed at the top of each trace.

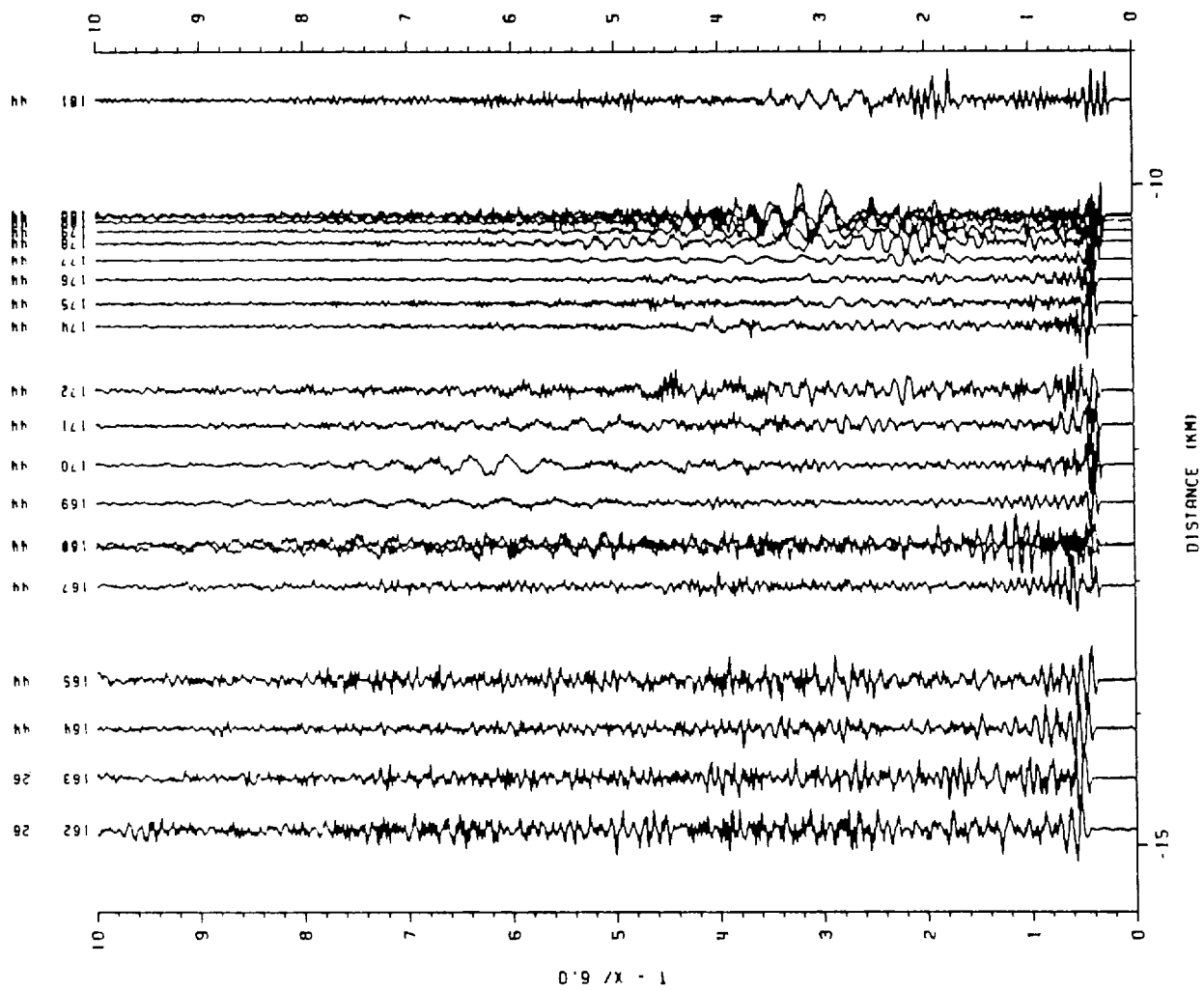


FIGURE 20--Record section for shot number 5, shotpoint 5. East - west recording array (see fig. 2). The station location and the amplifier attenuation setting is listed at the top of each trace.

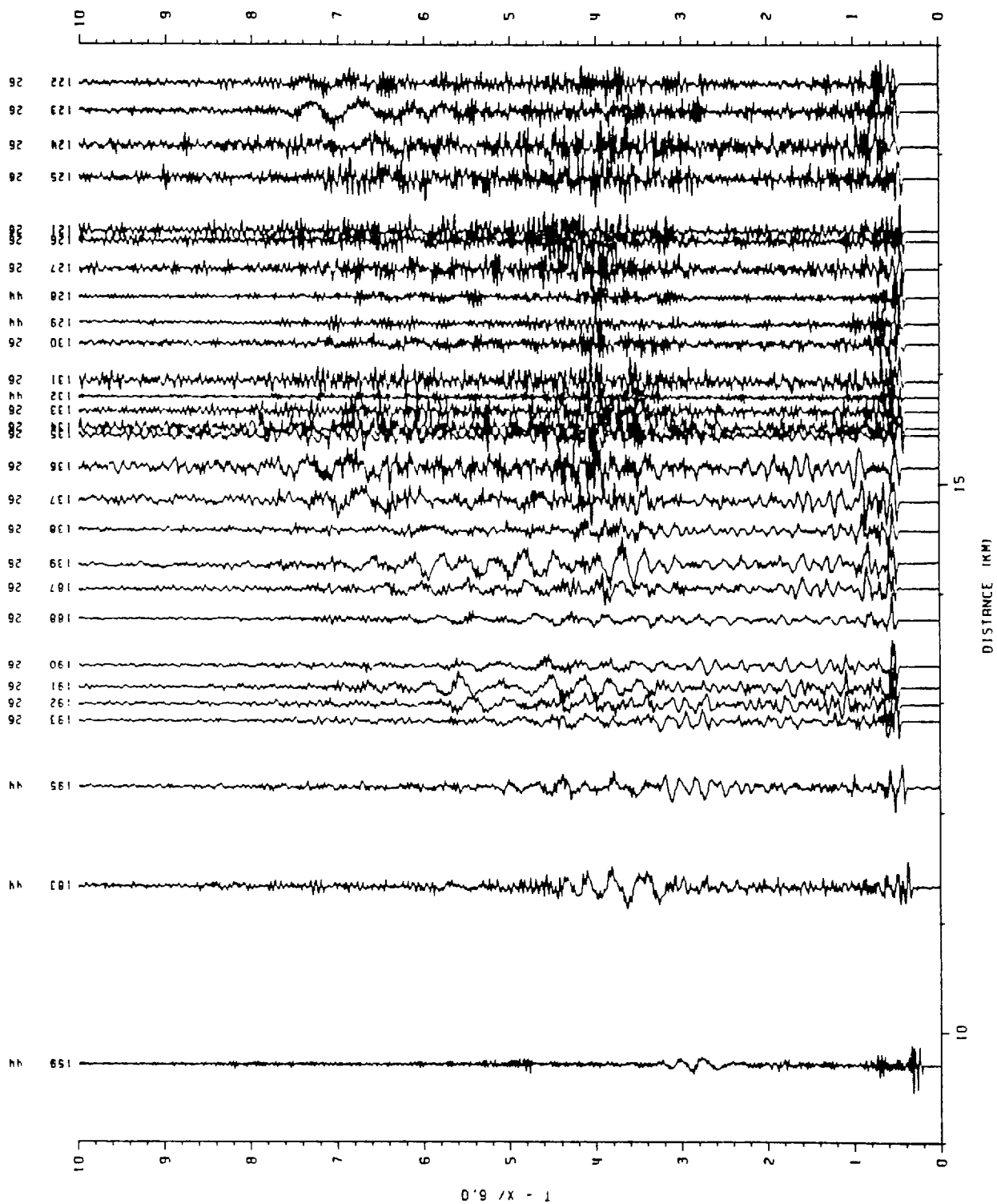


FIGURE 21 - Record section for shot number 5, shotpoint 5. West - east recording array, east of shotpoint 5 (see fig. 2). The station location and the amplifier attenuation setting is listed at the top of each trace.

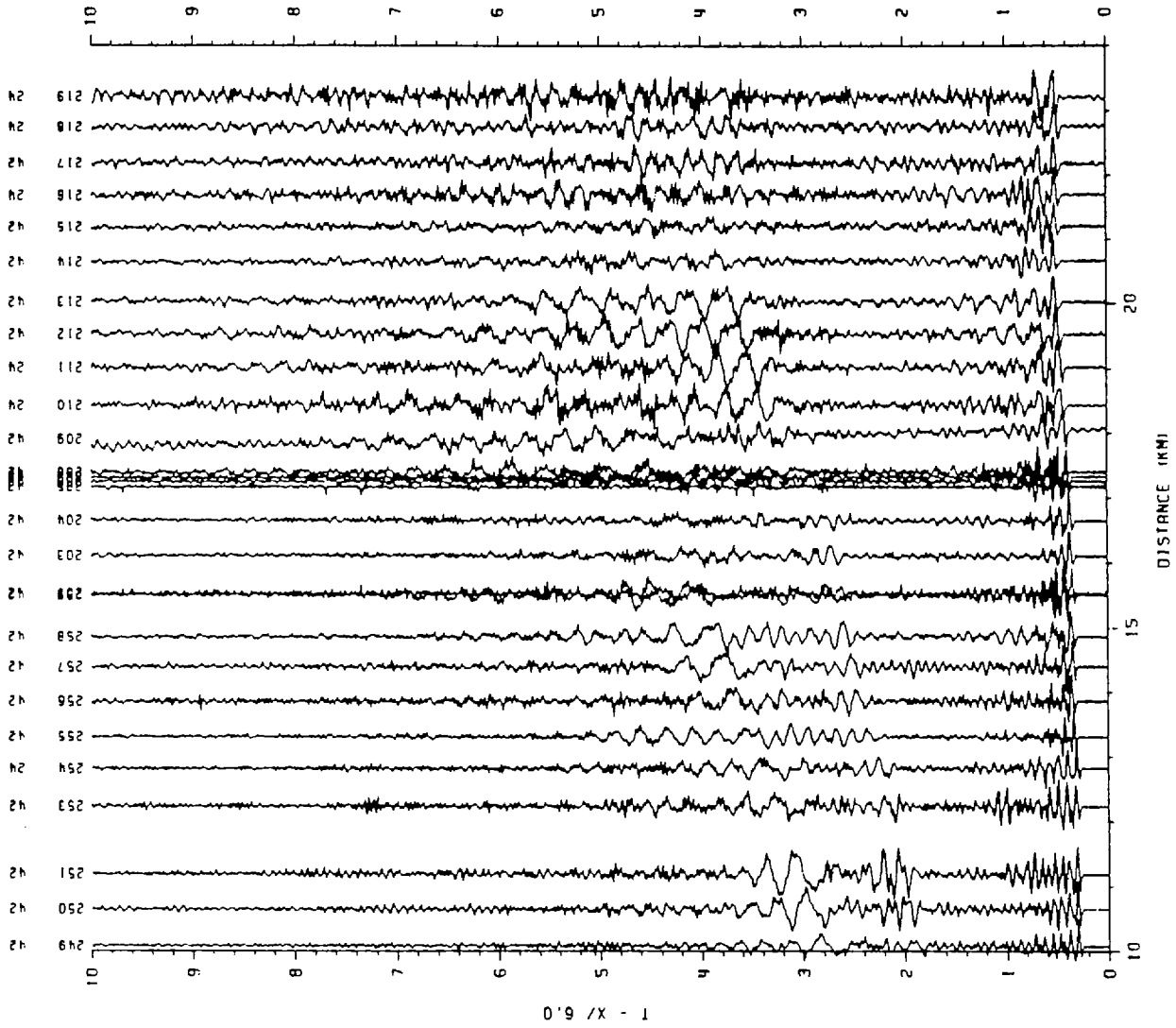


FIGURE 22--Record section for shot number 6, shotpoint 2. North-south recording array, south of shotpoint 2 (see fig. 3). The station location and the amplifier attenuation setting is listed at the top of each trace.

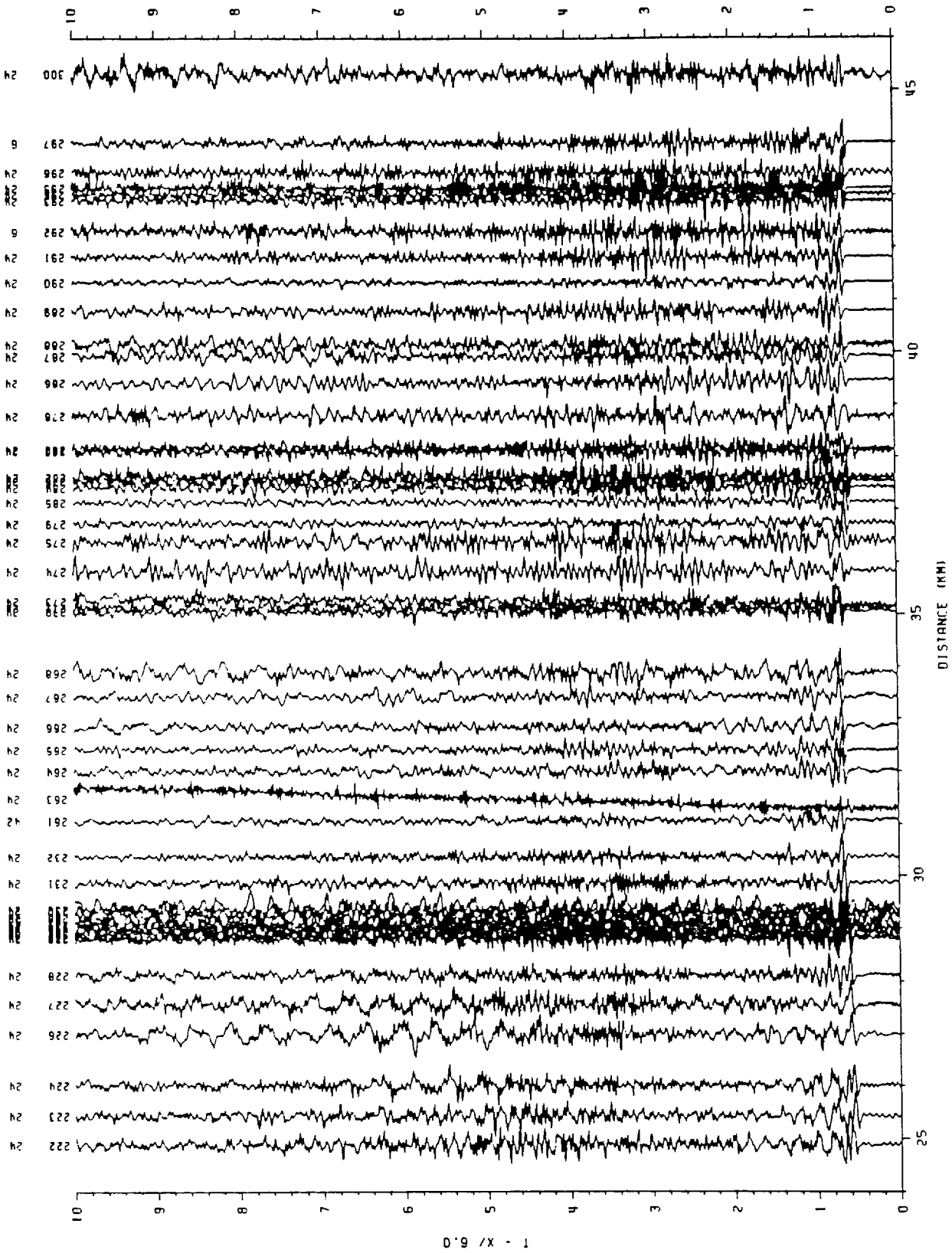


FIGURE 23—Record section for shot number 2, shotpoint 2. North-south recording array, north of shotpoint 7 (see fig. 3). The station location and the amplifier attenuation setting is listed at the top of each trace.

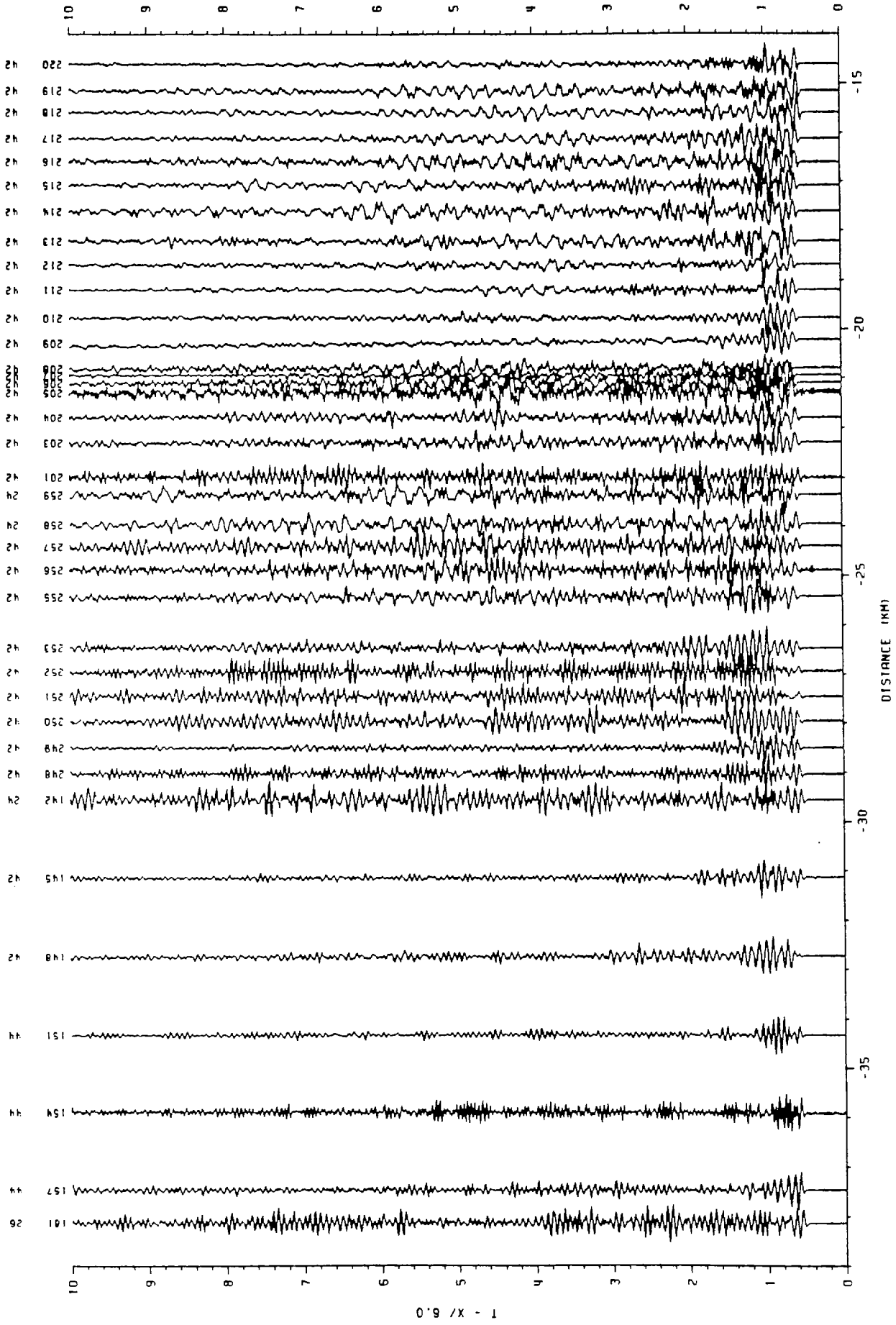


FIGURE 21-Record section for shot number 7, shotpoint 7. Recording array north of shotpoint 7 (see fig. 3). The station location and the amplifier attenuation setting is listed at the top of each trace.

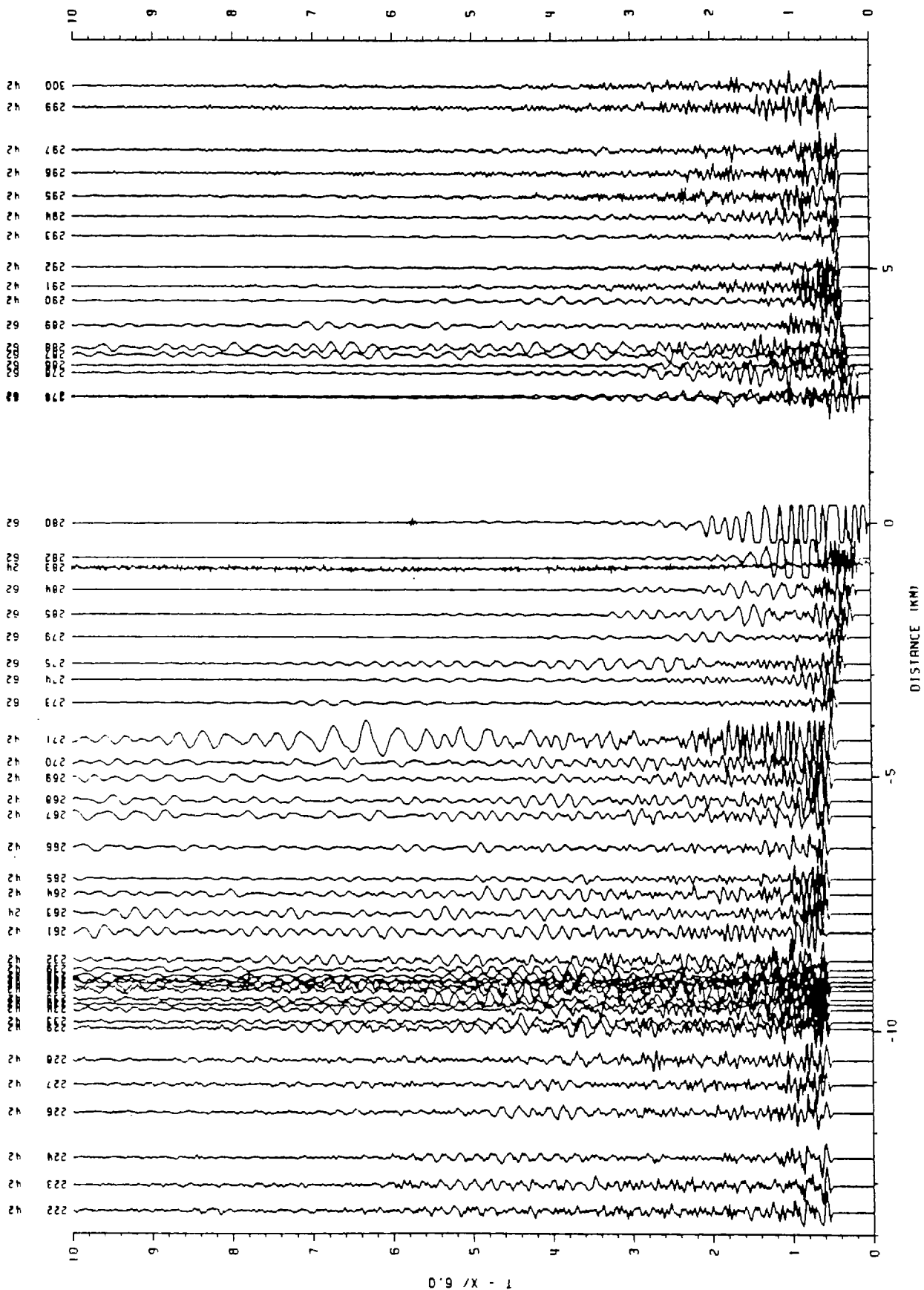


FIGURE 25—Record section for shot number 7, shotpoint 7. North-south recording array (see fig. 3). The station location and the amplifier attenuation setting is listed at the top of each trace.

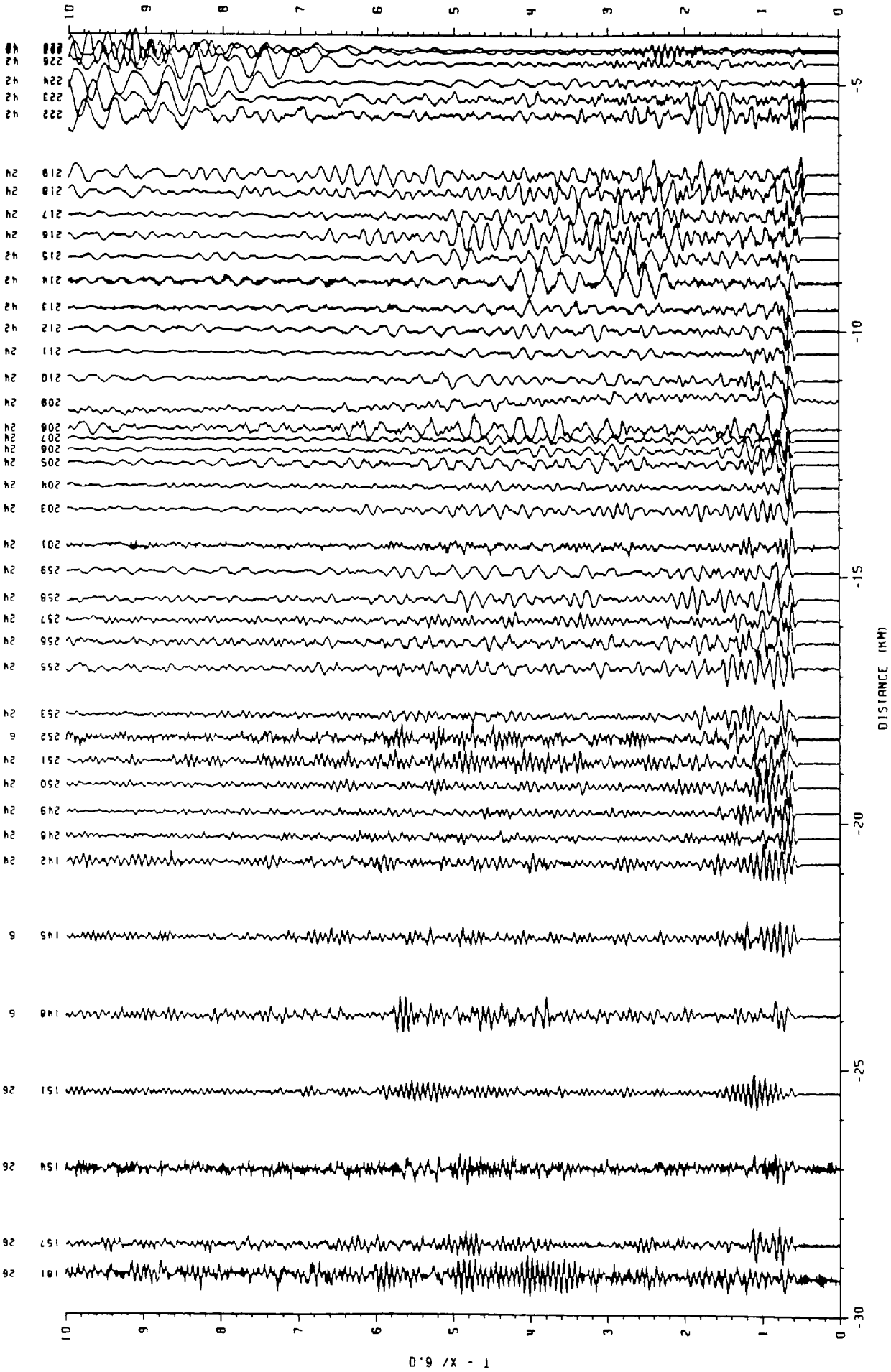


FIGURE 26-Record section for shot number 8, shotpoint 6. Recording array north of shotpoint 6 (see fig. 3). The station location and the amplifier attenuation setting is listed at the top of each trace.

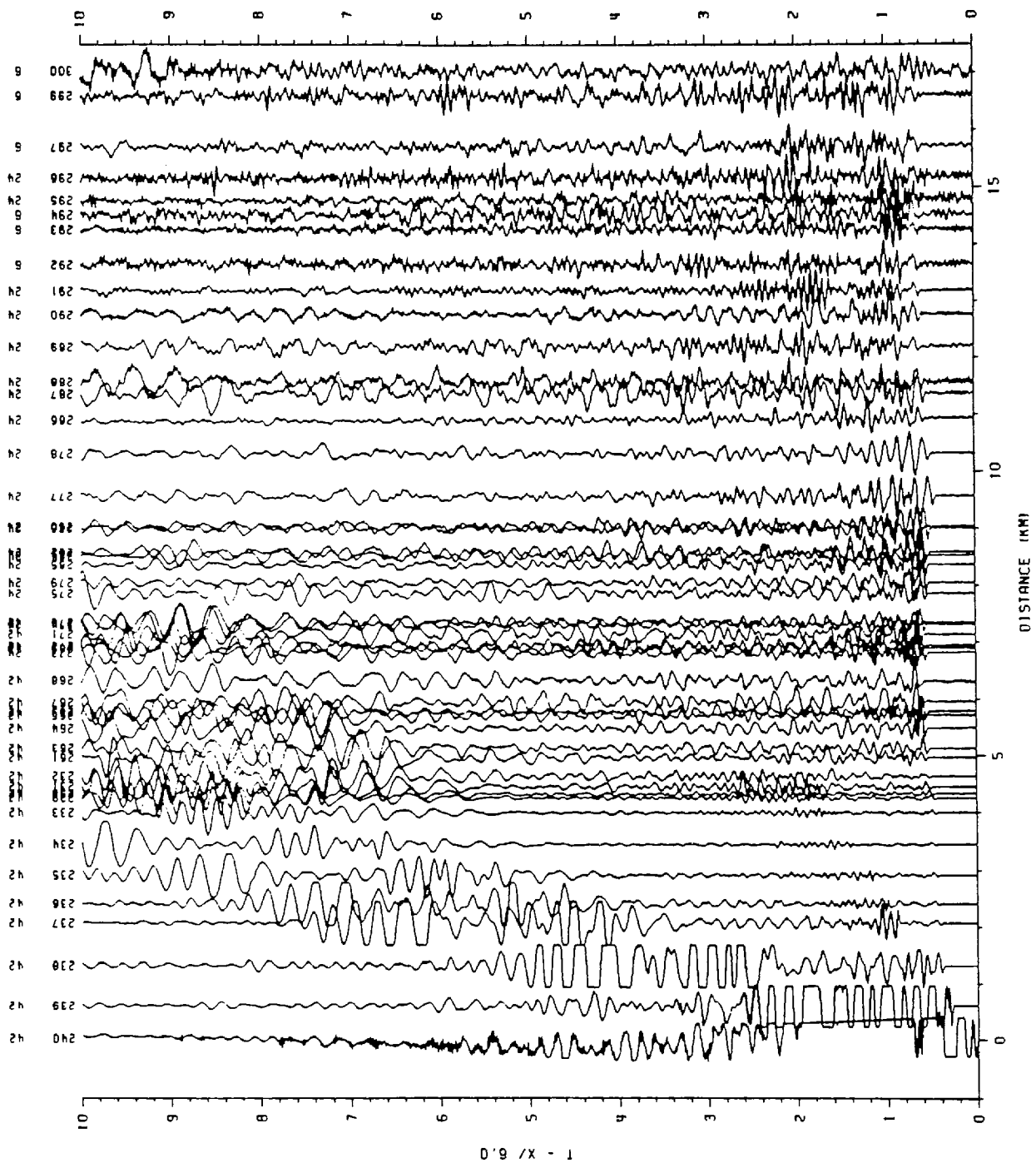


FIGURE 27-Record section for shot number 8, shotpoint 6. Recording array south of shotpoint 6 (see fig. 3). The station location and the amplifier attenuation setting is listed at the top of each trace.

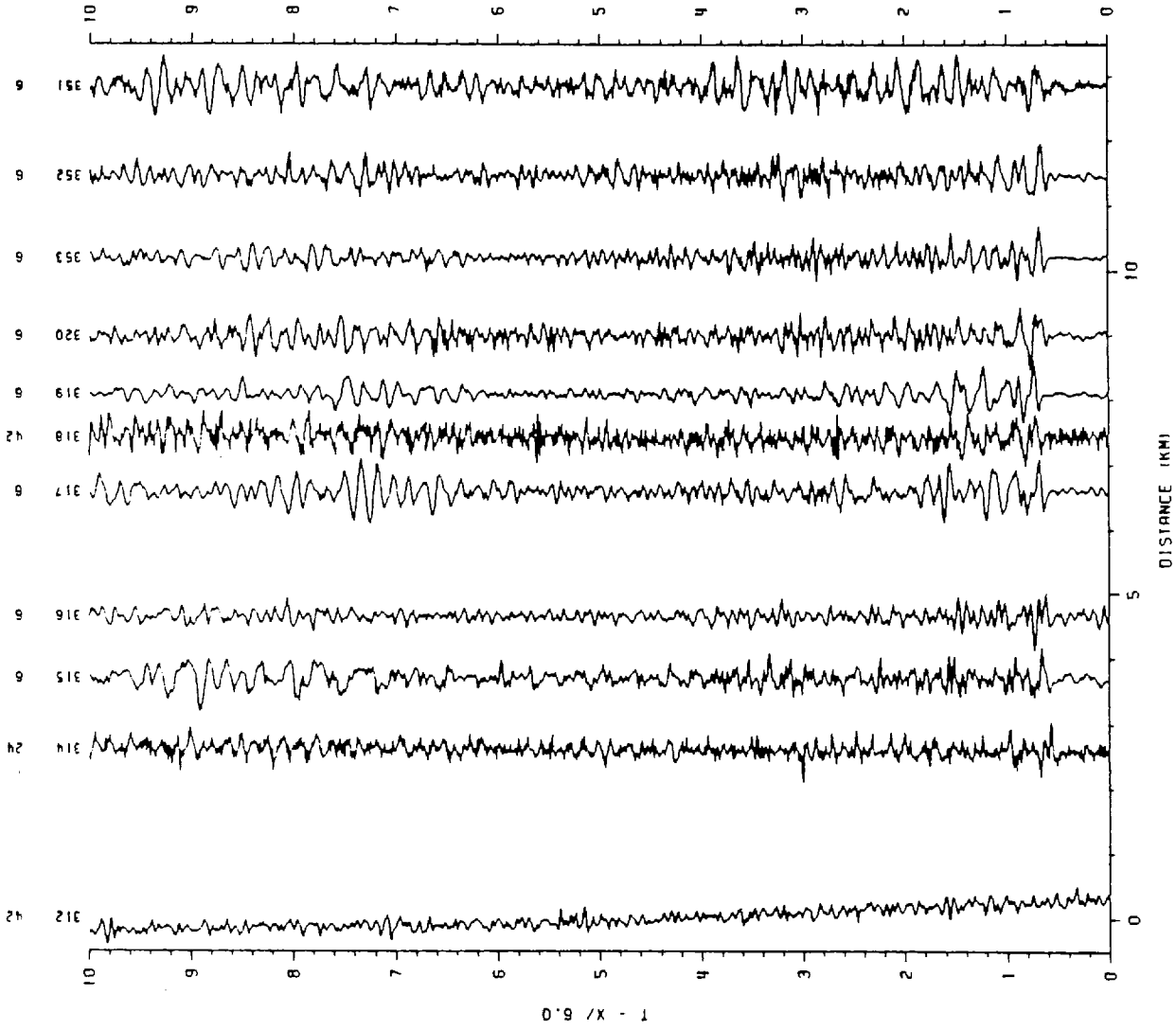


FIGURE 28-Record section for shot number 9, shotpoint 2. Recording array north of San Andreas Fault (see fig. 4). Distances are relative to station 312. The station location and the amplifier attenuation setting is listed at the top of each trace.

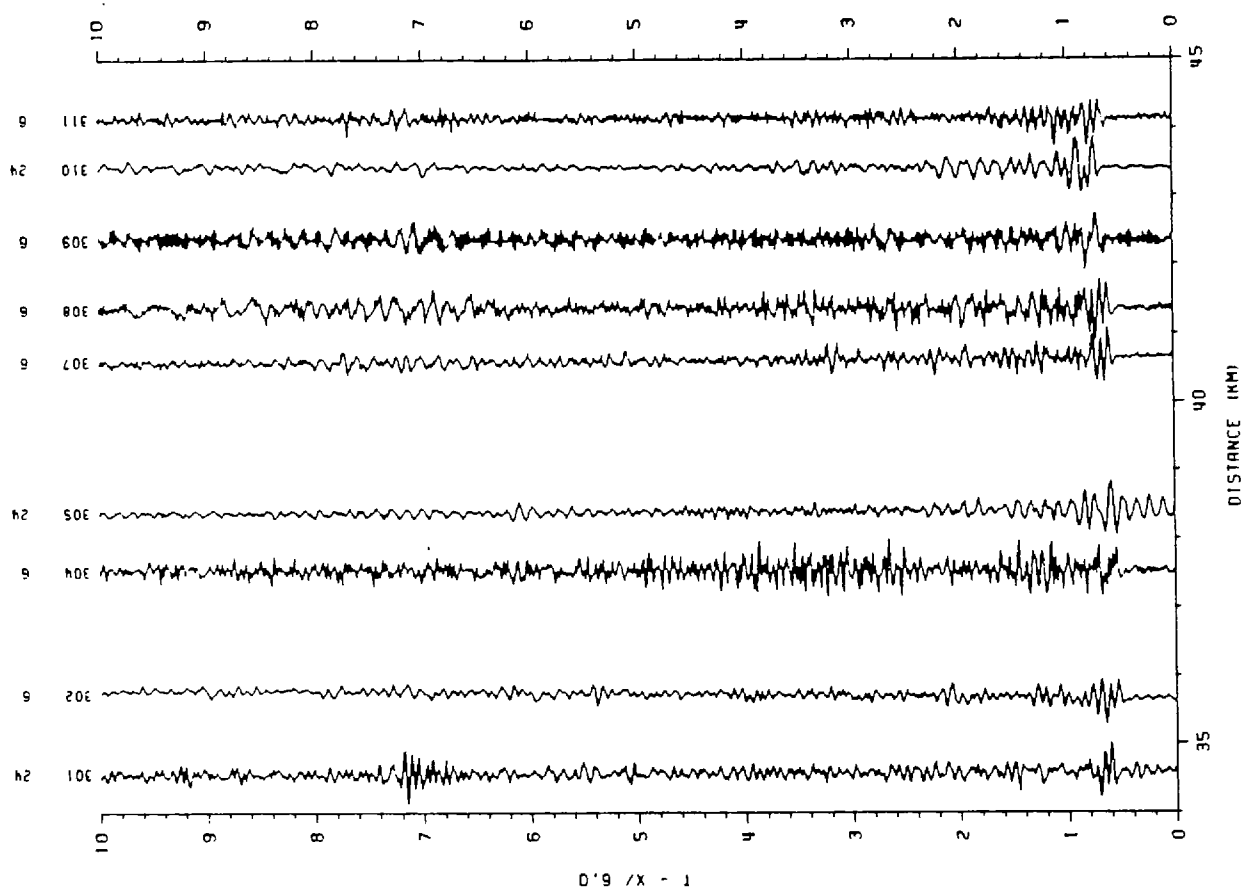


FIGURE 29—Record section for shot number 9, shotpoint 2, Western north - south recording array (see fig. 4). The station location and the amplifier attenuation setting is listed at the top of each trace.

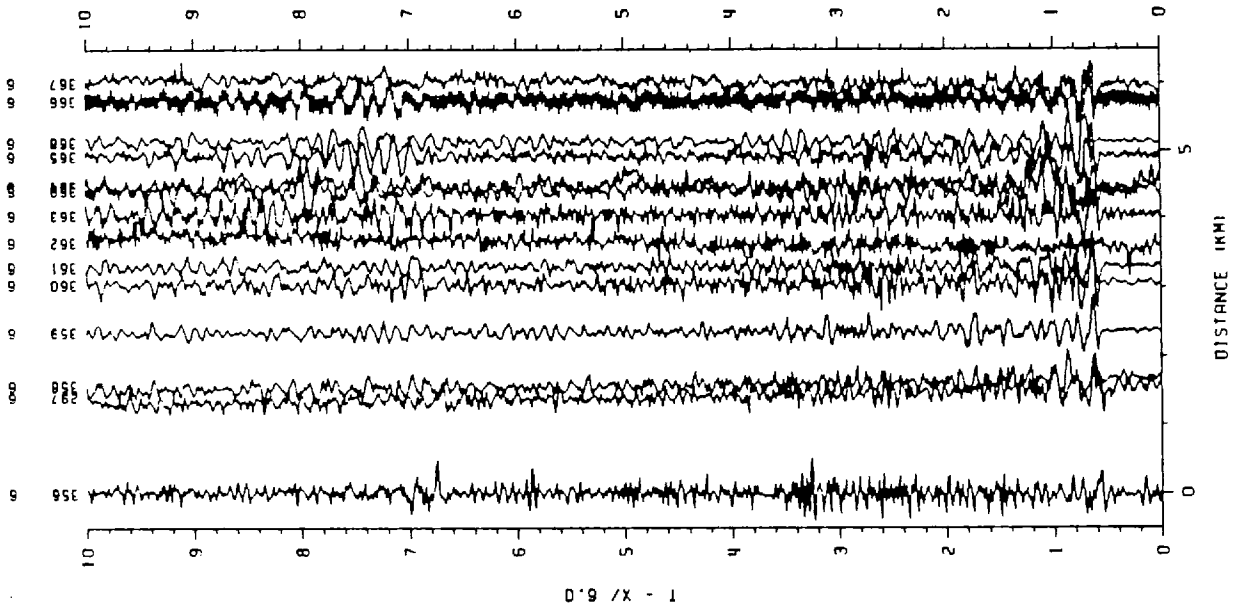


FIGURE 30--Record section for shot number 9, shotpoint 2. North-south recording array, south of San Andreas Fault (see fig. 4). The station location and the amplifier attenuation setting is listed at the top of each trace.

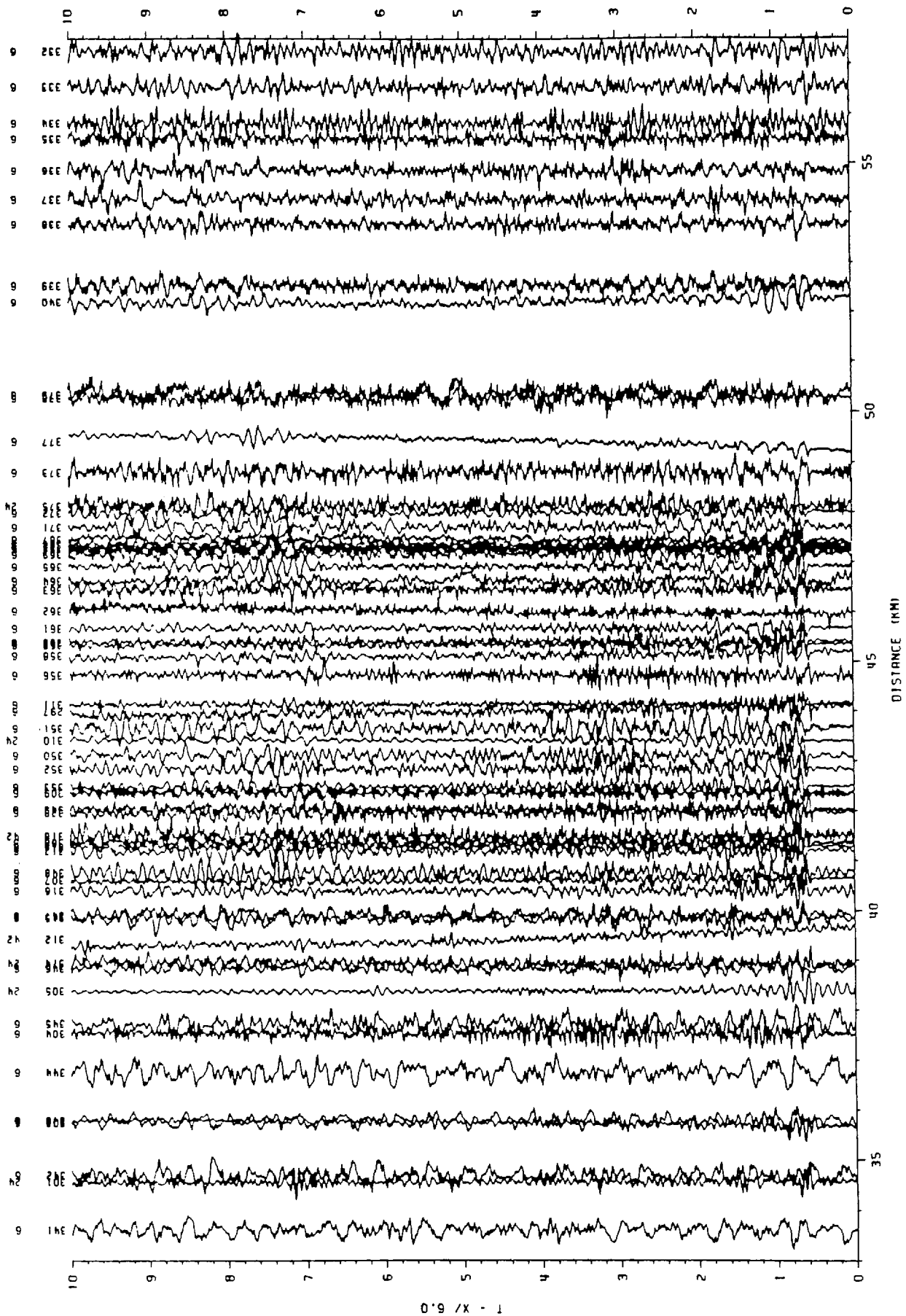


FIGURE 31—Record section for shot number 9, shotpoint 2. North-south recording array, east of shotpoint 7 (see fig. 4). The station location and the amplifier attenuation setting is listed at the top of each trace.

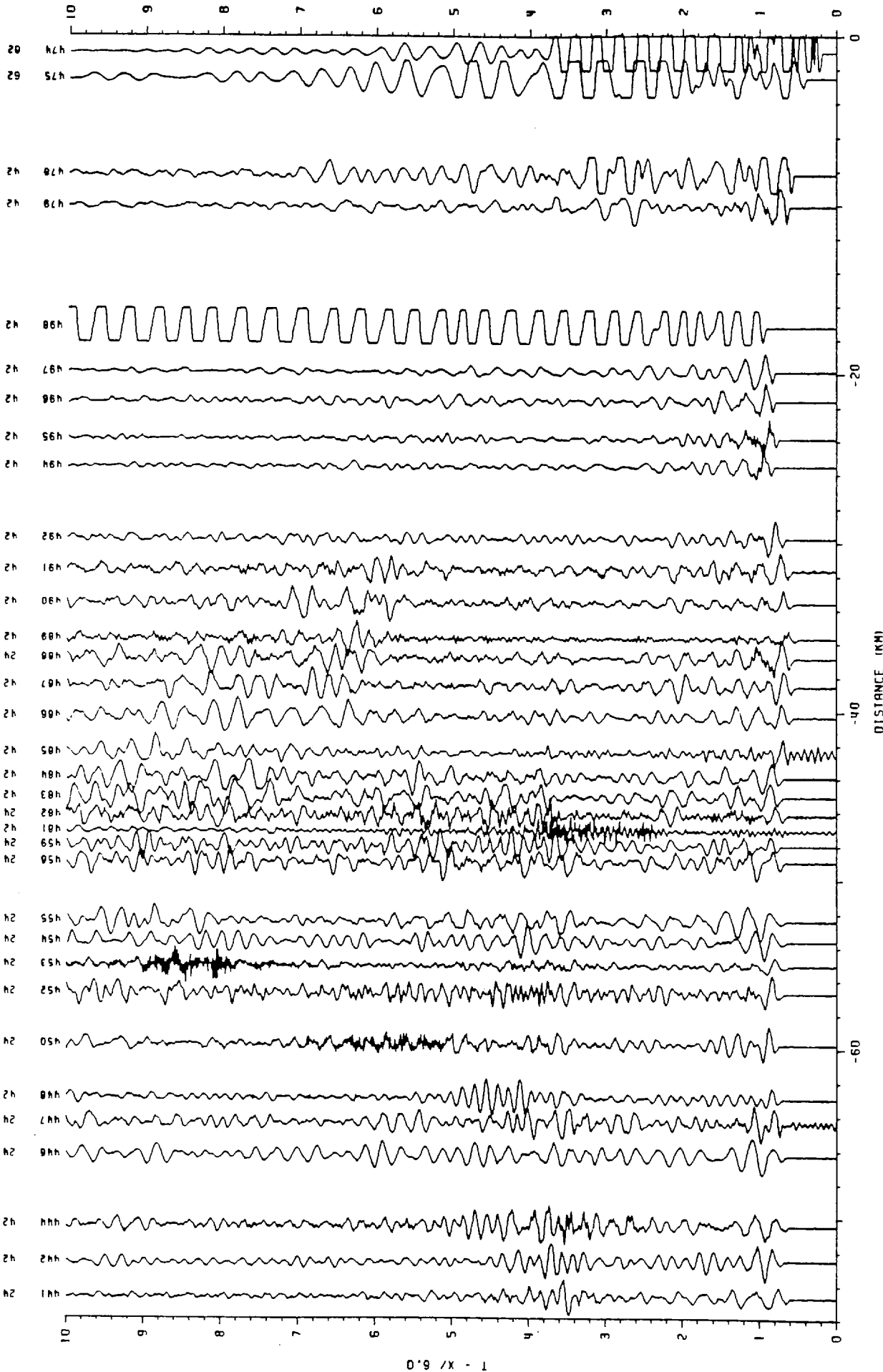


FIGURE 32-Record section for shot number 10, shotpoint 10. Recording array north of shotpoint 10 (see fig. 5). The station location and the amplifier attenuation setting is listed at the top of each trace.

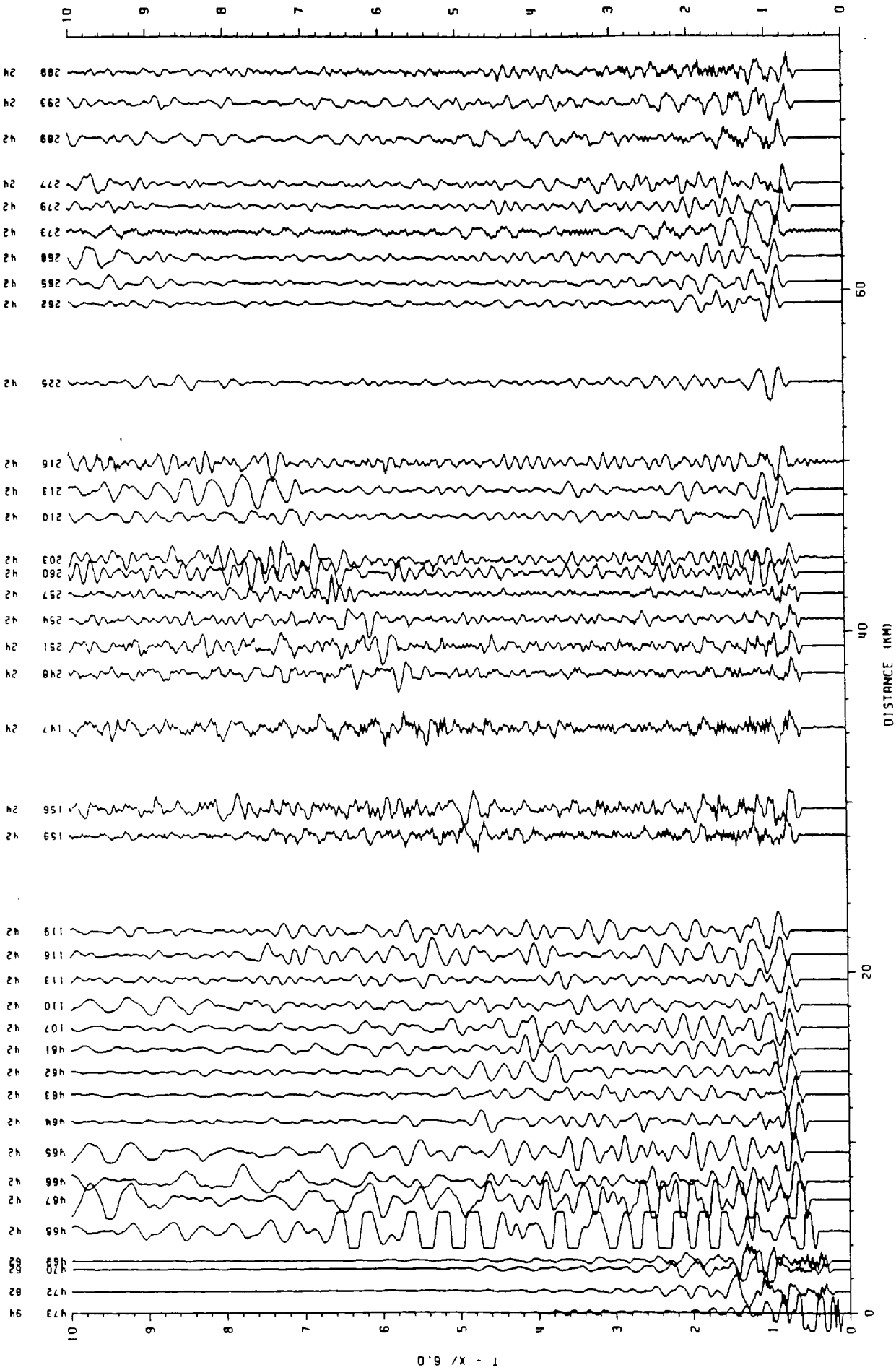


FIGURE 33-Record section for shot number 10, shotpoint 10. Recording array south of shotpoint 10 (see fig. 5). The station location and the amplifier attenuation setting is listed at the top of each trace.

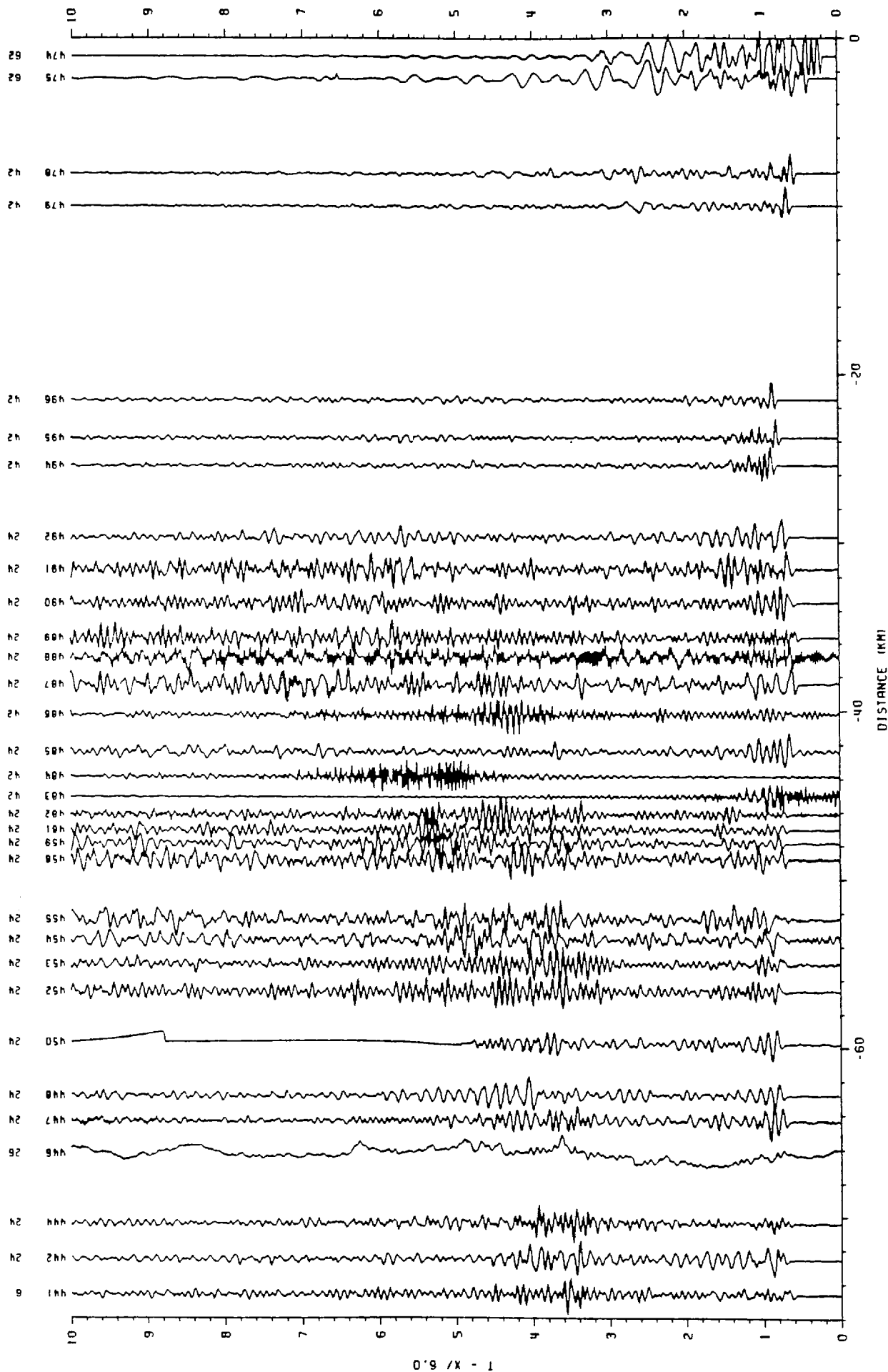


FIGURE 3-4—Record section for shot number 11, shotpoint 11. Recording array north of shotpoint 11 (see fig. 5). The station location and the amplifier attenuation setting is listed at the top of each trace.

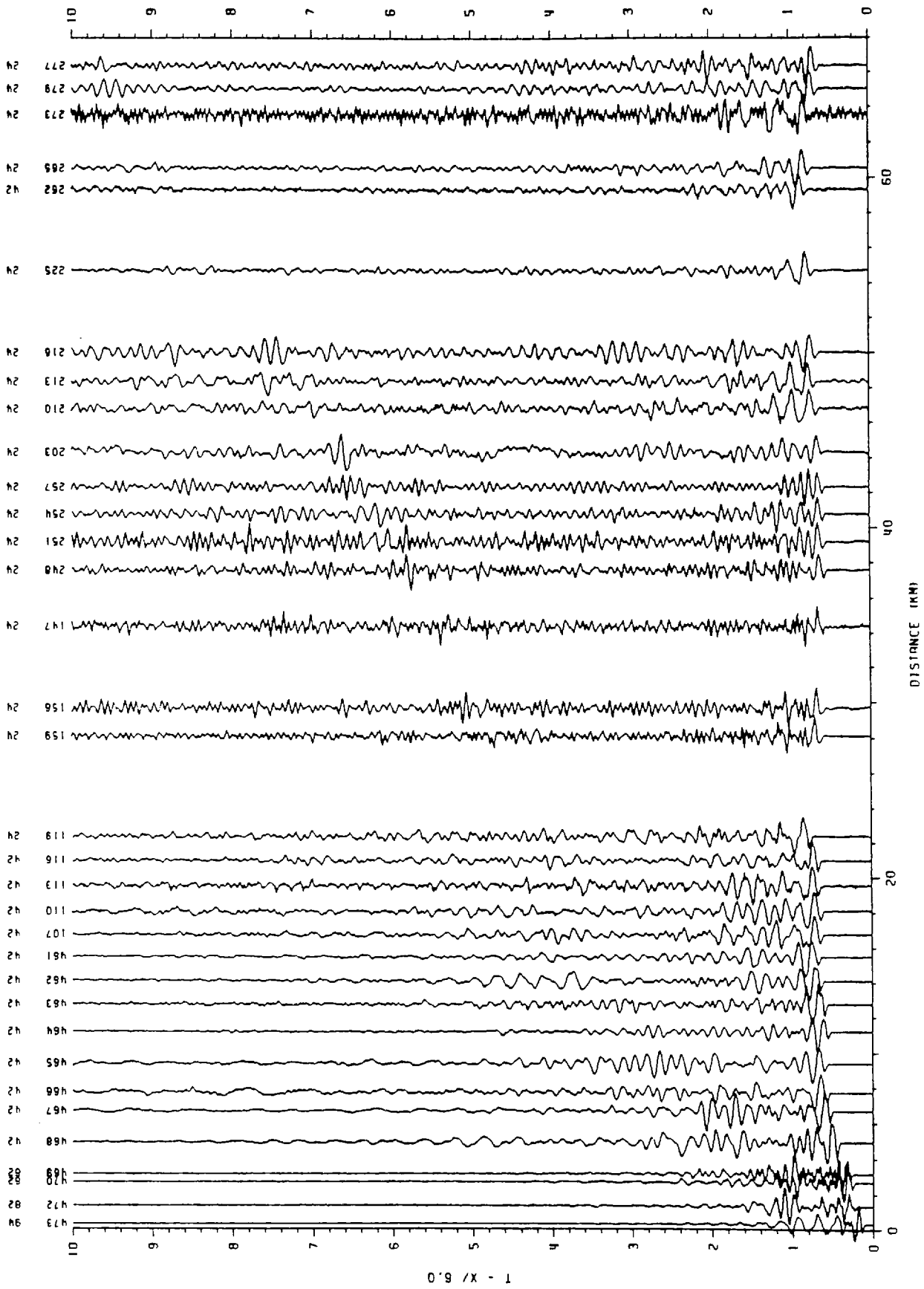


FIGURE 35 - Record section for shot number 11, shotpoint 11. Recording array south of shotpoint 11 (see fig. 5). The station location and the amplifier attenuation setting is listed at the top of each trace.

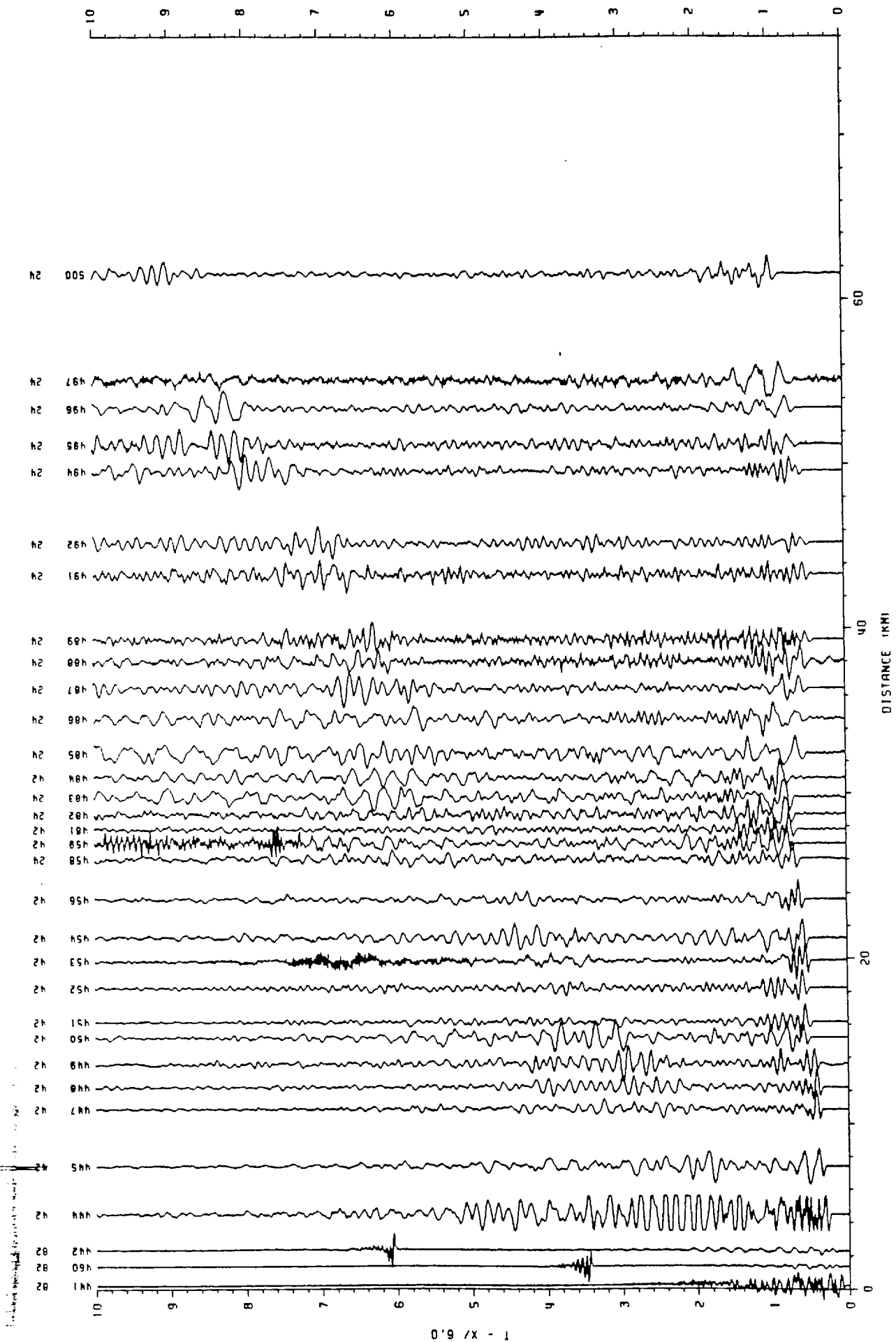


FIGURE 36-Record section for shot number 12, shotpoint 12. North - south recording array (see fig. 5). The station location and the amplifier attenuation setting is listed at the top of each trace.

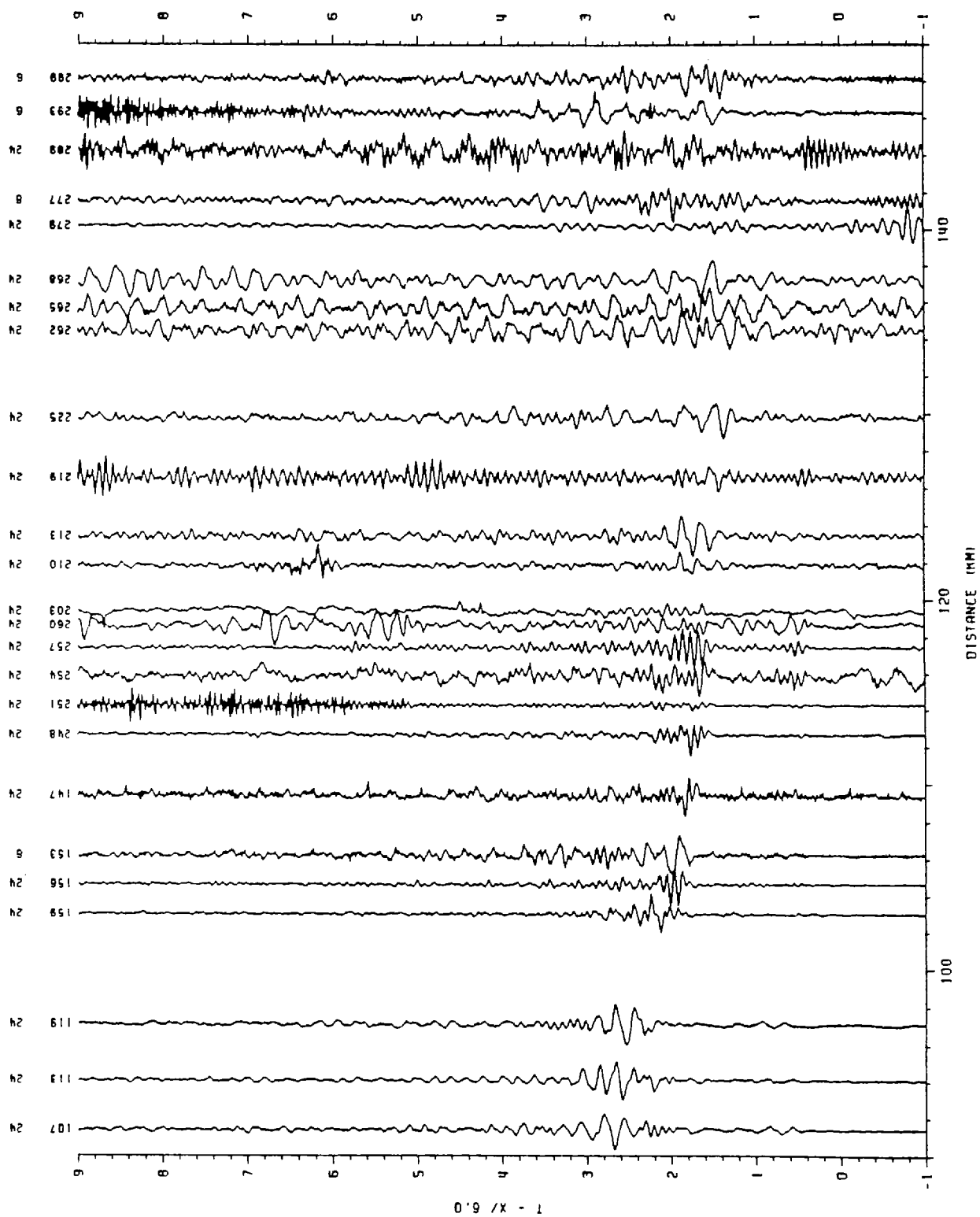


FIGURE 37—Record section for shot number 12, shotpoint 12 (see fig. 5). The station location and the amplifier attenuation setting is listed at the top of each trace.

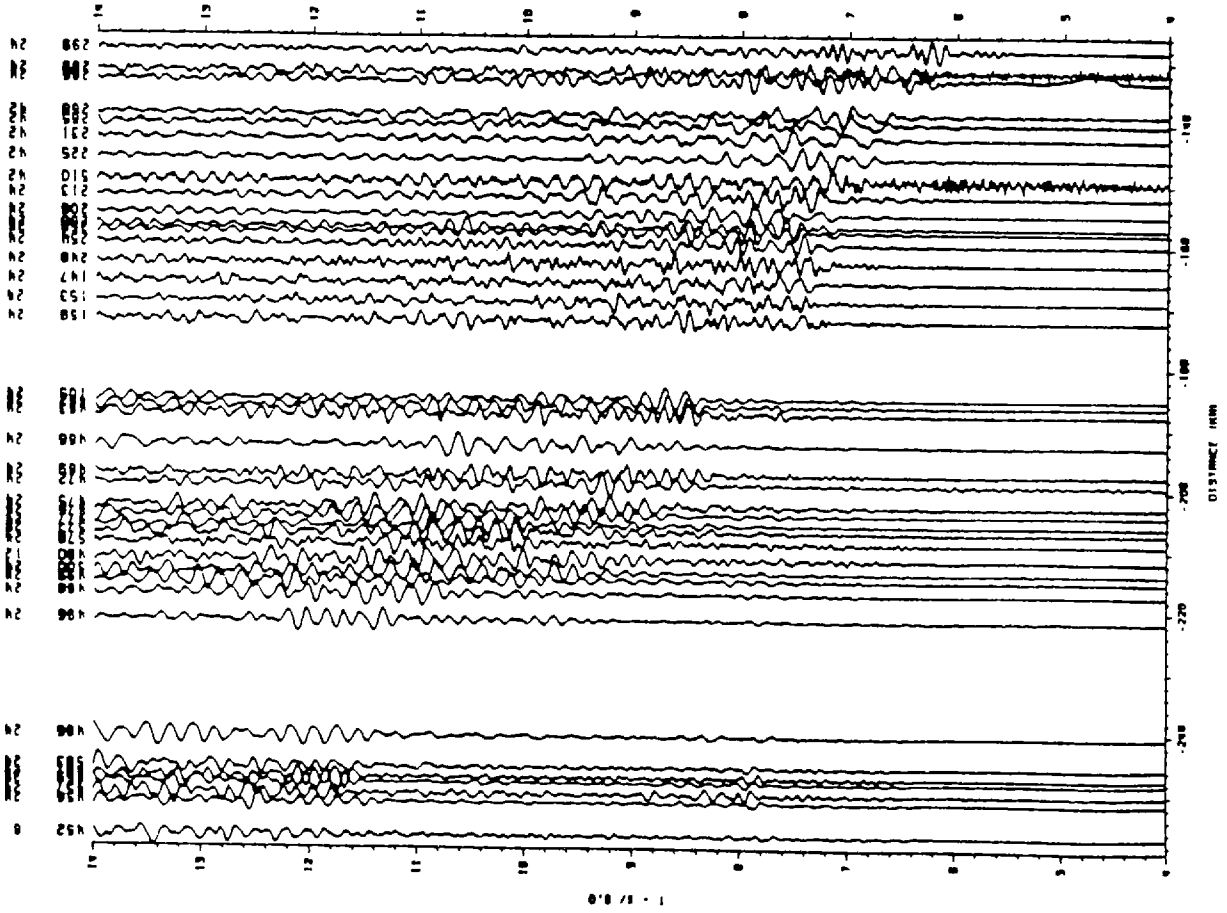


FIGURE 38—Record section for shot number 13, shotpoint 13 (see fig. 6). The station location and the amplifier attenuation setting is listed at the top of each trace.