U. S. Department of Commerce
Environmental Science Services Administration
Rockville, Maryland

COAST & GEODETIC SURVEY

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U. S. DEPARTMENT OF COMMERCE
ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION
COAST AND GEODETIC SURVEY
ROCKVILLE, MARYLAND

MASTER

CGS-746-7

SEISMIC STATION DATA
HANDLEY EVENT

April 30, 1970

Special Projects Party
Las Vegas, Nevada

Kenneth W. King
Chief of Party

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(70) 1815 South 6th Street	162
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INTRODUCTION

On a continuing authority by the Atomic Energy Commission, the Special Projects
Party of the Coast and Geodetic Survey instrumented Event *Burst in Nevada* HANDLEY with 108

seismograph stations located in four states, Nevada, California, Utah, and

Arizona. The purpose of this report is three-fold: (1) to give preliminary scaled
peak-trace surface motions recorded at all sites, (2) to give the station operation
results, and (3) to give complete descriptions with maps and photographs of all
seismograph stations. *are described with maps and*

photographs

PEAK TRACE SURFACE MOTIONS

Table I gives a complete tabulation of all peak trace surface motions as recorded from Event HANDLEY. The stations are compiled according to ascending order of distance from ground zero. Also given on Table I are distances and personnel perception numbers. Results from all Coast and Geodetic Survey seismograph stations both magnetic tape and photographic records are included. Six (SNPO) L-7 records were not available for this report, but the data will be reported later. Generally, the frequency range of interest was found to be on the flat response portion of the instruments.

Maximum trace ground motions were plotted versus distance for displacement, velocity, and acceleration, but were not included in this report to avoid classification of report. With the exception of the ETS-1 anomaly, which was a factor of 2 to 5 greater in acceleration than normal (average NRDS response), generally all measured ground motions were as predicted or lower. The ETS-1 anomaly was predicted to be up to or as much as 15 times greater in acceleration by ERC. The characteristic wave form (large amplitude, pulse-like first arrival) of the anomaly was present on the ETS-1, ETS-2, and ETS-3 seismograms.

STATION OPERATION RESULTS

One hundred and eight (108) seismograph stations with a total of five hundred and ninety (590) data channels of information were installed for Event HANDLEY. Table II lists all stations with their operation results. The reasons for the losses are given on the last page of Table II. Figures 1, 2, and 3 are maps showing the general locations of the stations. Four stations (South Area 1-Test Structure, E-Mad, 606, and Chancellor Apartments) were lost, giving a station operation success rate of 96.3%. Two stations out of four stations lost had other seismographs at or near the same location. The lost stations with back-up were Area 1, which had the accelerographs on the north and south test structures and one on the ground, and E-Mad which had an instrument (L-7) operated by SNPO (Space Nuclear Propulsion Office) at the same site. Out of the 590 data channels, 26 channels were lost at ten stations for a data channel operation success rate of 95.6%. The losses were due to noise (spikes) on traces, no tone-starts, tape recorder failure, a trace drifting off a record, and seismometer or amplifier failure (3.8% loss).

TABLE I : MAXIMUM TRACE AMPLITUDES

ESSA/COAST AND GEODETIC SURVEY

Special Projects Party
Las Vegas, Nevada

EVENT: HANDLEYDATE: APRIL 7, 1970

STATION	Dist. (Km)	OBS. REPORT	LEVEL	GROUND MOTION (O-P)					REMARKS
				COMP	Te Sec	DISP. cm	VEL cm/sec	ACCEL g	
(1) 484	3.95		Gr.	Z	0.3			1.72	Strain Gauge
			"	T	0.2			1.02	
			"	R	0.25			1.22	
(2) 491	4.13		Gr.	Z	0.4			1.31	Strain Gauge
			"	T	0.3			0.50	
			"	R	0.6			0.877	
(3) 490	4.25		Gr.	Z	0.4			1.49	Strain Gauge
			"	T	0.2			0.648	
			"	R	---			---	
(4) 492	4.84		Gr.	Z	0.25			1.76	Strain Gauge
			"	T	0.4			0.351	
			"	R	0.2			0.444	
(5) Area 19-TS North Single	14.54		Gr.	Z	0.14			0.0999	Accel
			"	NS	0.17			0.127	
			"	EW	0.08/			0.234	
			"		0.3				
			"	Z	0.99	4.36			
			"	NS	2.23	6.97			
(6) 672	18.62		Gr.	Z	0.49		16.6		L-7
			"	T	0.4/		4.8 ?		
			"	R	2.2 1.0/ 2.6		11.2		
(7) 673	22.23		Gr.	Z	0.7		11.5		L-7
			"	T	1.5		9.29		
			"	R	0.6/ 1.5		9.62		

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ESSA/COAST AND GEODETIC SURVEY

Special Projects Party

Las Vegas, Nevada

EVENT: HANDLEYDATE: APRIL 7, 1970

STATION	Dist. (Km)	OBS. REPORT	LEVEL	GROUND MOTION (O-P)					REMARKS
				COMP	Te Sec	DISP. cm	VEL cm/sec	ACCEL g	
(8) 601	27.10		Gr.	Z	1.25		3.13		L-7
			"	T	1.25/ 0.65		3.15		
			"	R	2.55/ 2.3		4.48		
(9) DOE Station	28.23		Gr.	Z	0.09			0.0647	Accel
			"	T	0.11/ 0.72			0.0878	
			"	R	0.76			0.0588	Trace Drifted
			"	Z	1.12	1.86 ?			
			"	T	1.3/ 1.6	5.79			
			"	R	1.39	2.88			
(10) Fleur de Lis	28.31	V	Gr.	Z	1.8/ 2.7		5.12		L-7
			"	T	1.3		2.06 ?		
			"	R	1.3/ 3.6		4.89		
(11) CP-17	28.49		Gr.	Z	0.85/ 2.4		6.82		L-7
			"	T	0.9/ 1.2		6.09		
			"	R	1.6		8.23		
(12) 602	31.71		Gr.	Z	2.4/ 0.8		3.05		L-7
			"	T	1.35/ 0.35		3.23		
			"	R	2.4/ 0.3		4.72		
(13) 674	34.07		Gr.	Z	0.5		3.76		L-7
			"	T	1.2/ 0.2		4.45		
			"	R	2.0/ 0.2		3.85		

TABLE I : MAXIMUM TRACE AMPLITUDES
ESSA/COAST AND GEODETIC SURVEY
Special Projects Party
Las Vegas, Nevada

EVENT: HANDLEY

DATE: APRIL 7, 1970

STATION	Dist. (Km)	OBS. REPORT	LEVEL	GROUND MOTION (O-P)					REMARKS
				COMP	Te Sec	DISP. cm	VEL cm/sec	ACCEL g	
(14) Station 2	34.92		Gr.	Z	0.12			0.0241	Accel
			"	NS	0.18			0.0171	
			"	EW	0.20			0.0313	
			"	Z	0.30	0.0650			
			"	NS	2.96	1.02			
			"	EW	3.41	1.08			
(15) 603	36.30		Gr.	Z	1.18		3.52		L-7
			"	T	2.0		2.17		
			"	R	2.2		2.50		
(16) 675/443	41.07		Gr.	Z	0.17/ 0.55		2.80		L-7
			"	T	1.1		1.73		
			"	R	1.4		2.94		
(17) 413	41.27		Gr.	Z	1.2		3.93		L-7
			"	T	0.8		2.32		
			"	R	0.9/ 1.2		4.77		
(18) Knight Ranch	41.30		Gr.	Z	2.1		1.32		L-7
			"	T	1.39		1.19		
			"	R	2.05		2.28		
(19) Climax Mine	43.29		Gr.	Z	0.17			0.0183	Accel
			"	N50° E	0.16			0.00997	
			"	S40° E	0.14			0.00793	
			"	Z	1.32	0.601			
			"	N50° E	2.90	0.588			
			"	S40° E	2.52	0.645			

TABLE I : MAXIMUM TRACE AMPLITUDES

ESSA/COAST AND GEODETIC SURVEY

Special Projects Party

Las Vegas, Nevada

EVENT: HANDLEYDATE: APRIL 7, 1970

STATION	Dist. (Km)	OBS. REPORT	LEVEL	GROUND MOTION (O-P)					REMARKS
				COMP	Te Sec	DISP. cm	VEL cm/sec	ACCEL g	
(20) <u>BEATTY:</u>									
Beatty, HR (A)	48.2	V	Gr.	Z	2.3		3.73		L-7, HR
			"	T	2.3/ 0.1		1.12		
			"	R	2.6/ 0.15		3.18		
Beatty, AL (B)			"	Z	2.3/ 0.13		3.88		L-7, AL
			"	T	1.4/ 0.15		2.26		
			"	R	2.9/ 0.17		3.91		
(21) Beatty Exchange Club	48	V (Ground)	Roof	Z	0.12			0.0621	Accel
			"	Minor Axis	0.18/ 0.68			0.0645	
			"	Major Axis	0.24			0.0560?	
			"	Z	1.08	0.65			
			"	Minor Axis	0.6/ 2.28	1.30			
			"	Major Axis	2.38	0.54			
			"	Z	2.65		3.06		L-7
			"	Major Axis	0.65		3.77		
			"	Minor Axis	0.35		3.09		
(22) <u>BEATTY:</u> Beatty, BTY	49.5		Gr.	Z	0.8		1.20		NGC-21
(23) 677	49.23		Gr.	Z	1.29		2.42		L-7
			"	T	1.9		2.16		
			"	R	1.25/ 0.5		2.59		

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STATION	Dist. (Km)	OBS. REPORT	LEVEL	GROUND MOTION (O-P)					REMARKS
				COMP	Te Sec	DISP. cm	VEL cm/sec	ACCEL g	
(24) <u>AREA 1-TS:</u>									
North	49.81		Top	Z	0.068/			0.0247	Accel
			(5th)		0.47				
			"	NS	0.44			0.0647	
			"	EW	0.085/			0.0926	
			"		0.24				
			"	Z	1.32	0.932			
			"	NS	2.08	0.541			
(25) Center	49.83		"	EW	3.35	1.55			Accel
			Gr.	Z	0.11			0.0180	
			"	NS	0.10			0.0206	
			"	EW	0.12			0.0173	
			"	Z	0.28	0.0628 ?			
			"	NS	2.74	0.752			
			"	EW	3.07	1.43			
(26) South	49.85		Top	----	----	----		----	Accel
			(5th)	LOST					
(27) 604	49.96		Gr.	Z	3.0/		1.75		L-7
			"		0.15				
			"	T	1.5		0.589		
(28) 676	51.87		"	R	3.2		1.55		L-7
			Gr	Z	0.22		3.80		
			"	T	0.19		1.80		
			"	R	---		-----		
(29) 678	54.54								LOST 1 Channel
			Gr.	Z	0.21		3.40		
			"	T	1.6/		3.83		
			"		2.3				
			"	R	0.5/		2.92		L-7
					1.6				

TABLE I : MAXIMUM TRACE AMPLITUDES
ESSA/COAST AND GEODETIC SURVEY
Special Projects Party
Las Vegas, Nevada

EVENT: HANDLEY

DATE: APRIL 7, 1970

STATION	Dist. (Km)	OBS. REPORT	LEVEL	GROUND MOTION (O-P)					REMARKS
				COMP	Te Sec	DISP. cm	VEL cm/sec	ACCEL g	
(30) NRDS: ETS Tower	55.4		Top	Minor Axis	0.34		16.3		L-7
			"	Major Axis	0.41		31.4		
			38 ft. above Gr.	Z	0.30		6.38		
			"	Major Axis	0.47		9.15		
			Gr. Level	Minor Axis	0.30		4.90		
			"	Major Axis	0.26		4.42		
(31) ETS-1	55.6	V	Gr.	Z	0.23			0.162	Accel
			"	NS	0.22			0.104	
			"	EW	0.20			0.040	
			"	Z	1.2	1.58			
			"	NS	1.31	0.41			
(32) ETS-2	55.7		"	EW	1.56	0.59			Accel
			Gr	Z	0.24			0.130	
			"	NS	0.23			0.108	
			"	EW	0.27			0.0648	
			"	Z	1.19	0.620			
			"	NS	1.27	0.398			
(33) 679	55.71		"	EW	1.62	0.478			L-7
			Gr.	Z	1.1		3.52		
			"	T	1.0		3.19		
(34) ETS-3	55.8		"	R	1.3		3.77		Accel
			Gr.	Z	0.17			0.130	
			"	NS	0.23			0.0948	
			"	EW	0.19			0.0678	
			"	Z	1.25	1.51			
			"	NS	1.31	0.485			
			"	EW	1.44	0.432			

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ESSA/COAST AND GEODETIC SURVEY

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STATION	Dist. (Km)	OBS. REPORT	LEVEL	GROUND MOTION (O-P)					REMARKS
				COMP	Te Sec	DISP. cm	VEL cm/sec	ACCEL g	
NRDS Continued: (35) Test Cell "C"	57.0		Gr.	Z	0.19			0.0552	Accel
			"	NS	0.16			0.0414	
			"	EW	0.19			0.0257	
			"	Z	1.38	0.550			
			"	NS	0.94	0.397			
			"	EW	1.38	0.411			
(36) E-MAD	58.6		Gr.	----	----			----	Accel LOST 6 Channels
(37) NRDS #1	58.79		Gr.	Z	0.21			0.0222	Accel
			"	NS	0.17			0.0249	
			"	EW	0.29			0.0162	
			"	Z	0.94	0.441			
			"	NS	1.0	0.248			
			"	EW	3.0	0.688			
(38) CP-1 (B)	59.0	IV (2nd Level)	Gr.	Z	1.0		0.565		NGC-21
			"	T	0.86		0.566		
			"	R	1.0		0.774		
(38) CP-1 (C)			Gr.	Z	0.20			0.00845	Accel
			"	NS	0.16			0.00677	
			"	EW	0.26			0.00923	
			"	Z	---	----			LOST 1 Channel
			"	NS	2.91	0.470			
			"	EW	2.58	0.626			
(39) 605	62.6		Gr.	Z	0.28		1.36		L-7
			"	T	1.15/ 0.3		0.89		
			"	R	3.6/ 0.45		1.22		

TABLE I : MAXIMUM TRACE AMPLITUDES

ESSA/COAST AND GEODETIC SURVEY

Special Projects Party

Las Vegas, Nevada

EVENT: HANDLEYDATE: APRIL 7, 1970

STATION	Dist. (Km)	OBS. REPORT	LEVEL	GROUND MOTION (O-P)					REMARKS
				COMP	Te Sec	DISP. cm	VEL cm/sec	ACCEL g	
(40) LSM	66.55	V	Gr.	Z	1.0		2.50		NGC-21
(41) 416	76.67		Gr.	Z	1.7		2.26		L-7
			"	T	1.5		2.18		
			"	R	2.2		3.46		
(42) <u>GOLDFIELD:</u> Goldfield HR (A)	77.04		Gr.	Z	1.4/ 0.3		1.53		L-7
			"	T	0.8/ 0.31		0.993		
			"	R	3.8/ 0.21		1.60		
Courthouse (B)		V	Roof	Z	0.13/ 0.19			0.0329	Accel
			"	NS	0.21			0.0133	
			"	EW	0.21			0.0170	
			"	Z	0.295	0.0320?			
			"	NS	2.04	0.277			
			"	EW	3.89	0.559			
Courthouse (C)			Base.	Z	0.2			0.0253	Accel
			"	NS	0.24			0.0121	
			"	EW	0.22			0.00760	
			"	Z	0.28	0.0220?			
			"	NS	4.18	0.690			
			"	EW	2.12	0.430			
(43) 606	78.8		Gr.	-----	-----		-----		L-7 LOST 3 Channels
(44) <u>MERCURY:</u> Q-25	85.99	V	Gr.	Z	0.32/ 0.13		0.355		NGC-21
			"	T	0.20		0.366		
			"	R	0.23		0.365		

TABLE I : MAXIMUM TRACE AMPLITUDES

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Special Projects Party

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STATION	Dist. (Km)	OBS. REPORT	LEVEL	GROUND MOTION (O-P)					
				COMP	Te Sec	DISP. cm	VEL cm/sec	ACCEL g	REMARKS
MERCURY CONT:									
(45) Q-24		V	Gr.	Z	0.14			0.00733	Accel
			"	NS	0.12			0.00847	
			"	EW	0.12			0.00947	
			"	Z	0.22	0.0750			
			"	NS	1.94	0.218			
			"	EW	2.15	0.627			
(46) MCV	88.8	V	Gr.	Z	0.2		1.10		NGC-21
(47) Twin Springs	104.9	V	Gr.	Z	0.37/		1.22		NGC-21
			"		0.08				
			"	T	0.20		0.901		
			"	R	0.28		0.838		
(48) TONOPAH: Church (A)	103.24		Gr.	Z	0.29/		0.566		NGC-21
			(HR)		0.12				
			"	S36°W	0.5/		0.336		
			"		0.31				
			"	S54° E	0.5/		0.293		
			"		0.10				
Motel (B)		III	Gr.	Z	0.17		0.485		NGC-21
		(ground)	(AL)						
		(2nd Level)	"	S36° W	0.16		0.467		
			"	S54° E	0.20		0.683		
(49) Mizpah Hotel	105.0	IV	5th	Z	0.95			0.0139	Accel
			Floor						
			"	N70° E	0.33			0.0198	
			"	S30° E	0.38			0.0158	
			"	Z	0.32	0.003207			
			"	N70° E	3.5	0.181			
			"	S30° E	0.47/	0.444			
					3.4				

TABLE I : MAXIMUM TRACE AMPLITUDES
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STATION	Dist. (Km)	OBS. REPORT	LEVEL	GROUND MOTION (O-P)					REMARKS
				COMP	Te Sec	DISP. cm	VEL cm/sec	ACCEL g	
(50) Belvada Hotel (A)	105.4		Roof	Z	0.085			0.0224	Accel
			"	N70°E	0.365			0.0164	
			"	S30°E	0.13/ 0.62			0.0113	
			"	Z	0.3	0.0193			
			"	N70°E	3.28	0.248			
			"	S30°E	3.26/ 0.44	0.483			
Belvada Hotel (B)	105.4		Base.	Z	0.29			0.00698	Accel
			"	N70°E	0.23			0.00518	
			"	S30°E	0.21			0.00592	
			"	Z	0.89	0.109			
			"	N70°E	3.72	0.195			
			"	S30°E	3.75	0.226			
(51) Foote Mineral Co. Well (Clayton Valley)	109.3		Gr.	Z	0.13/ 1.0		1.31		L-7
			"	T	2.0		2.81		
			"	R	2.6		3.03		
(52) SE-2 (Indian Springs)	114.05		Gr.	Z	0.5		0.571		L-7
			"	T	2.0/ 3.6		0.495		
			"	R	0.12/ 0.9		0.743		
(53) <u>ALAMO:</u> Alluvium (A)	121.5	IV	Gr.	Z	0.5/ 0.7		0.857		L-7
			"	T	0.55/ 1.3		1.42		
			"	R	0.6		1.14		
Hardrock (A)	121.5	IV	Gr	Z	0.9		1.05		L-7
			"	---	---		----		LOST 2 channel

TABLE I : MAXIMUM TRACE AMPLITUDES

ESSA/COAST AND GEODETIC SURVEY

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STATION	Dist. (Km)	OBS. REPORT	LEVEL	GROUND MOTION (O-P)					
				COMP	Te Sec	DISP. cm	VEL cm/sec	ACCEL g	REMARKS
(53) ALA (B)		IV	Gr.	Z	1.5		0.310		NGC-21
(54) Pahump	131.5	V	Gr.	Z	0.8/ 0.3		0.749		L-7
			"	T	2.85		0.848		
			"	R	0.90		1.46		
			"	Z	0.18			0.00808	Accel
			"	R	0.20			0.00683	
			"	T	0.16			0.00461	
(55) Manhattan Power Station	146.4		Gr.	Z	0.3/ 0.13		0.838		L-7
			"	T	1.6		0.232?		
			"	R	0.3/ 1.0		0.767		
(56) North Las Vegas			Gr.	Z	0.42/ 0.17			0.00546	Accel
			"	NS	1.18/ 0.19			0.00658	
			"	EW	0.64/ 0.14			0.00429	
			"	Z	0.86	0.202			
			"	NS	3.9	0.718			
			"	EW	2.72	0.386			
(57) Squire's Park			Gr.	Z	1.3		1.01		L-7
			"	S63°E	1.75		1.62		
			"	N27°E	1.70		1.62		
(58) Mint Hotel		V	Roof (28th)	Z	0.1/ 0.25			0.00866	Accel
			"	N27°E	----			-----	LOST 1 Channel
			"	S63°E	0.95			0.050	
			"	Z	0.3	0.0455			
			"	N27°E	1.3	1.78			
			"	S63°E	1.0	1.55			

TABLE I.: MAXIMUM TRACE AMPLITUDES
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Las Vegas, Nevada

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STATION	Dist. (Km)	OBS. REPORT	LEVEL	GROUND MOTION (O-P)					REMARKS
				COMP	Te Sec	DISP. cm	VEL cm/sec	ACCEL g	
(59) Mint Hotel			Base.	Z	0.25/ 0.63			0.00478	Accel
			"	N27°E	1.20			0.00425	
			"	S63°E	0.28/ 0.80			0.00561	
			"	Z	0.3	0.0487			
			"	N27°E	3.30	0.555			
			"	S63°E	2.4/ 4.5	0.547			
(60) Horseshoe Garage	176.45		Top (6th)	Z	.3/ .55			0.00490	Accel
			"	N27°E	0.22/ 0.45			0.00674	
			"	S63°E	0.30			0.0128	
			"	Z	0.52	0.116			
			"	N27°E	3.30	0.598			
			"	S63°E	3.0	0.380			
(61) Fremont	176.52	V	Roof (17th)	Z	0.16			0.00585	Accel
			"	N27°E	0.25/ 0.85			0.0239	Record stopped 20 sec
			"	S63°E	0.25/ 1.0			0.0259	after in- itial. May
			"	Z	0.57/ 1.3	0.106			not be maximums
			"	N27°E	0.9	0.568			
			"	S63°E	1.0	0.754			
(62) Four Queens (A)	176.54	V	Top (19th)	Z	0.16			0.00768	Accel
			"	N27°E	1.03			0.0337	
			"	S63°E	0.24/ 1.76			0.0268	
			"	Z	1.25	0.767			
			"	N27°E	1.14	1.64			
			"	S63°E	1.89	1.68			

TABLE I : MAXIMUM TRACE AMPLITUDES

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STATION	Dist. (Km)	OBS. REPORT	LEVEL	GROUND MOTION (O-P)					
				COMP	Te Sec	DISP. cm	VEL cm/sec	ACCEL g	REMARKS
Four Queens L-7 (B)			Roof (W)	Major Axis	1.9		5.07		L-7
			"	Minor Axis	1.1		7.36		
			15th (Center)	Major Axis	1.52		4.46		
			12th (center)	"	1.95		3.72		
			6th (center)	"	2.0		2.64		
			1st (center)	"	1.15		0.90		
			(63) Central Telephone Company	IV	Top (5th)	Z	0.86/ 0.11		
"	N27° E	1.2/ 0.36					0.00869		
"	S63° E	0.28					0.0136		
"	Z	0.74			0.262				
"	N27° E	1.86			0.391				
"	S63° E	2.9			0.775				
(64) Bank of Nevada	V	Roof (11th)			Z	0.23			0.0211
			N27° E	0.60			0.0260		
			S63° E	1.0			0.0165		
			Z	1.43	1.52				
			N27° E	1.10	0.654				
			S63° E	1.42	0.897				
			(65) Bank of Nevada	IV	1st Floor	Z	0.52/ 0.16		
N27° E	0.32						0.00448		
S63° E	0.56						0.0496		
Z	0.72	0.140							
N27° E	1.6	0.579							
S63° E	2.6	0.497							

TABLE I.: MAXIMUM TRACE AMPLITUDES
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STATION	Dist. (Km)	OBS. REPORT	LEVEL	GROUND MOTION (O-P)					REMARKS
				COMP	Te Sec	DISP. cm	VEL cm/sec	ACCEL g	
(66) Bank of Nevada		V	Roof (E)	Minor Axis	0.52		5.43		L-7
			Roof (W)	"	0.6		3.03		
			8th(E)	"	0.6		4.20		
			8th(W)	"	0.6		3.07		
			5th(E)	"	0.6		2.47		
			5th(W)	"	0.8		2.13		
			4th(E)	"	1.6		2.31		
			3rd(W)	"	1.5		1.95		
			2nd(E)	"	1.6		2.39		
			2nd(W)	"	1.6		1.68		
			Gr. (center)	"	1.6		2.02		
		IV	Gr. (center)	Major Axis	1.25		1.23		
		V	Roof (center)	Minor Axis	0.6		2.02		L-7
			"	Major Axis	1.3		3.92		
			8th "	"	1.65		2.98		
			5th "	"	2.4		1.51		
			4th "	"	2.6		1.44		
			Gr.	"	2.9		1.31		
(67) Executive Towers (Suites)		IV	Top (6th)	Z	0.24			0.0157	Accel
			"	N27° E	0.42			0.0162	
			"	S63° E	0.75			0.0207	
(68) Clark County Courthouse		IV-V	Roof (4th)	Z	0.28			0.00747	Accel
				N27° E	0.46			0.0209	
				S63° E	0.56			0.0168	
				Z	---	Negl.			
				N27° E	0.64/	0.448			
				S63° E	2.05/	0.502			
					1.85				

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STATION	Dist. (Km)	OBS. REPORT	LEVEL	GROUND MOTION (O-P)					
				COMP	Te Sec	DISP. cm	VEL cm/sec	ACCEL g	REMARKS
(69) 1st Nat. Bank		V-VI	Top (11th)	Z	0.13			0.00683	Accel
				N27°E	0.40/ 1.05			0.0231	
				S63°E	0.3/ 1.2			0.0304	
				Z	1.10	1.33?			
				N27°E	0.85/ 2.00	0.662			
				S63°E	1.15	1.34			
(70) 1815 S. 6th Residence		V	Gr. " "	Z	1.15		1.22 ?	L-7	
				S63°E	0.9/ 2.45		1.73		
				N27°E	1.8/ 2.25		1.67		
(71) Chancellor Apts		III	Top (5th)	----	----		-----	Accel LOST 3 Channels	
(72) Sahara 400	177.94	V-VI	Roof (24th)	Z	0.18			0.00518	Accel
			"	NS	1.24			0.0329	
			"	EW	1.20			0.0274	
			"	Z	1.23	1.49			
			"	NS	1.28	1.54			
			"	EW	1.35	1.30			
(73) Sahara 400	177.94		Roof	EW	1.19		8.62	L-7	
			"	NS	1.20		10.04		
			15th	NS	1.25		6.09		
			5th	NS	1.45		2.53		
			3rd	NS	1.58		2.22		
			1st	NS	2.2		1.78		

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STATION	Dist. (Km)	OBS. REPORT	LEVEL	GROUND MOTION (O-P)					REMARKS
				COMP	Te Sec	DISP. cm	VEL cm/sec	ACCEL g	
(74) Sahara 200		V	Roof (12th)	Z	0.86			0.00650	Accel
			"	NS	0.26/ 0.8			0.0232	
			"	EW	0.82			0.0290	
			"	Z	0.71	0.0820			
			"	NS	1.08	0.586			
			"	EW	0.84/ 1.03	0.962			
(75) Stardust		III, V	Roof (10th)	Z	0.44			0.00405	Accel
			"	N27° E	0.40			0.0200	
			"	S63° E	0.65			0.0191	
			"	Z	0.6	0.0481			
			"	N27° E	0.45/ 1.44	0.358			
			"	S63° E	0.6/ 1.7	0.483			
(76) Riviera		V	Roof (10th)	Z	0.33/ 0.16			0.00651	Accel
			"	NS	0.64			0.0241	
			"	EW	0.64			0.0179	
			"	Z	0.63	0.171			
			"	NS	0.85/ 3.65	0.432			
			"	EW	1.14	0.576			
(77) Desert Inn	178.50	V	Roof (9th)	Z	0.56			0.00564	Accel
			"	N27° E	0.76			0.0171	
			"	S63° E	0.51			0.0274	
			"	Z	0.88	0.142			
			"	N27° E	2.60	0.217			
			"	S63° E	2.84	0.286			

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STATION	Dist. (Km)	OBS. REPORT	LEVEL	GROUND MOTION (O-P)					
				COMP	Te Sec	DISP. cm	VEL cm/sec	ACCEL g	REMARKS
(78) Royal Inn		V	Top (13th)	Z	0.12/ 0.18			0.00333	Accel
			"	NS	0.56		0.0244		
			"	EW	0.66		0.0238		
			"	Z	0.25	0.0213			
			"	NS	0.6	0.218			
			"	EW	1.02	0.451			
(79) Landmark Tower	178.86	VI	29th	Z	0.4/ 1.75			0.00606	Accel
			"	NS	1.8		0.0220		
			"	EW	0.4/ 1.77		0.0279		
			"	Z	1.55	3.977			
			"	NS	1.85	1.40			
			"	EW	0.35/ 1.85	2.00			
(80) International Hotel	178.76	V-VI	Roof (center	Z	0.25			0.010	Accel
			"	NS	0.88		0.0299		
			"	EW	0.93		0.0197		
			"	Z	1.18	1.00			
			"	NS	2.97	1.23			
			"	EW	2.7	1.74			
(81) Internat- ional Hotel	178.76		Main Roof	Minor Axis	3.1		9.01		L-7 (N. Wing)
			21st	"	3.0		7.30		
			13th	"	3.05		4.41		
			4th	"	3.1		3.90		
			3rd	"	2.8		1.85		
			1st	"	2.8		1.39		

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STATION	Dist. (Km)	OBS. REPORT	LEVEL	GROUND MOTION (O-P)					REMARKS
				COMP	Te Sec	DISP. cm	VEL cm/sec	ACCEL g	
(82) Sands		V	Roof (18th)	Z	1.35			0.00841	Accel
			"	NS	1.16			0.0273	
			"	EW	1.16/ 0.23			0.0199	
			"	Z	1.15	0.122			
			"	NS	1.24	1.25			
			"	EW	1.33	1.20			
(83) Sands			Mech Rm.	EW	1.25		6.87		L-7
			"	NS	1.29		5.20		
			14th	EW	1.23		4.68		
			"	NS	1.3		3.73		
			8th	EW	1.4		2.54		
			"	NS	1.3		2.18		
			3rd	EW	1.4		1.20		
			3rd	NS	1.6		1.08		
			2nd	EW	1.1		0.98		
			2nd	NS	1.7		1.07		
			1st	EW	1.3		1.22		
			1st	NS	1.45		0.98		
(84) Caesar's Palace		IV-VI (14, & 15th)	Roof (16th)	Z	0.85/ 0.25			0.00685	Accel
			"	NS	0.97			0.0169	
			"	EW	0.98			0.0158	
			"	Z	0.36	0.00897			
			"	NS	1.16	0.674			
			"	EW	1.09	0.614			

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				COMP	Te Sec	DISP. cm	VEL cm/sec	ACCEL g	
(85) Dunes Hotel		V-VI	Roof (23rd)	Z	0.2			0.00422	Accel
			"	NS	0.6/ 2.1			0.0199	
			"	EW	0.3/ 1.9			0.0247	
			"	Z	0.55	0.0909			
			"	NS	2.1	1.55			
			"	EW	1.8	1.69			
			Base.	Z	0.42			0.00296	Accel
			"	NS	0.28/ 1.16			0.00460	
			"	EW	0.95			0.00456	
			"	Z	1.4/ 0.18	0.303			
			"	NS	1.77	0.290			
			"	EW	1.90	0.282			
(86) Dunes Hotel		V	Roof (23rd)	NS	1.8		6.78		L-7 (Helicdr.)
			Roof	NS	1.92		5.17		L-7
			15th	NS	2.0		5.22		
			5th	NS	1.9		2.10		
			3rd	NS	1.25		1.44		
			2nd	NS	1.85		1.06		
			Base.	NS	1.3		0.89		
(87) Holiday Inn			Roof (7th)	Z	0.29/ 0.10			0.00341	Accel
			"	NS	0.46			0.0133	
			"	EW	0.53			0.0112	
			"	Z	1.13	0.0756			
			"	NS	0.31/ 1.4	0.278			
			"	EW	0.4/ 1.85	0.344			

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STATION	Dist. (Km)	OBS. REPORT	LEVEL	GROUND MOTION (O-P)					REMARKS
				COMP	Te Sec	DISP. cm	VEL cm/sec	ACCEL g	
(88) Sunrise Hospital		V	Top (5th)	Z	0.12			0.00374	Accel
			"	NS	0.47			0.0298	
			"	EW	0.425			0.0194	
			"	Z	0.45	0.0976			
			"	NS	0.61/ 1.98	0.430			
			"	EW	0.43/ 1.68	0.246			
(89) SE-6 LVN	181.65	IV (Trailer on wheels)	Gr.	NS	1.07	0.285			BVR
			"	NS	0.93	0.238			BVR
			"	Z	1.35/ 0.30		0.605		L-7
			"	EW	1.8		1.05		
			"	NS	2.0/ 1.9		1.59		
			Gr.	Z	1.0/ 0.3		0.547		NGC-21
			"	EW	0.9		0.513		
			"	NS	1.08/ 0.35		0.602		
			Gr.	Z	0.22			0.00548	Accel
			"	NS	0.34			0.00623	
			"	EW	0.52/ 0.96			0.00543	
			"	Z	0.3	0.0203 ?			
			"	NS	3.23	0.535			
			"	EW	1.8	0.213?			Trace drifted 52 sec. after initial motion, probably not max.

TABLE I: MAXIMUM TRACE AMPLITUDES

ESSA/COAST AND GEODETIC SURVEY

Special Projects Party

Las Vegas, Nevada

EVENT: HANDLEYDATE: APRIL 7, 1970

STATION	Dist. (Km)	OBS. REPORT	LEVEL	GROUND MOTION (O-P)					REMARKS
				COMP	Te Sec	DISP. cm	VEL cm/sec	ACCEL g	
(90) UNLV Campus Dormitory		IV	Top (6th)	Z	0.15			0.00762	Accel
			"	NS	0.36			0.0118	
			"	EW	0.32			0.0104	
(91) 462	184.47		Gr.	Z	1.01		0.294		L-7
			"	T	3.15		0.275		
			"	R	1.6/ 4.0		0.405		
(92) Pioche	197.48		Gr.	Z	0.42		0.489		L-7
			"	T	1.05		0.288		
			"	R	----		----		LOST 1 Channel
(93) <u>HOOVER</u> <u>DAM:</u> Oil House	210		Gr.	Z	0.9			0.000518	Accel
			"	N45°W	0.5			0.000503?	
			"	N45°W	0.25			0.000495?	
			"	N45°W	1.7	0.07			
			"	S45°W	3.3	0.12			
(94) 1215 Gallery	210		Dam	Z	0.31			0.00152	Accel
			"	S45°E	0.29			0.000515	(Near
			"	S45°W	0.3			0.00337	Top)
			"	S45°E	2.4	0.05			
			"	N45°E	3.6	0.06			
(95) Intake Tower	210		Dam	Z	0.3			0.00131	Accel
			"	N45°W	1.0/ 0.4			0.00938	(Near Top)
			"	N45°E	0.9			0.00502	
			"	N45°W	0.95	0.168			
			"	S45°W	1.0	0.110			

TABLE I : MAXIMUM TRACE AMPLITUDES
ESSA/COAST AND GEODETIC SURVEY
Special Projects Party
Las Vegas, Nevada

EVENT: HANDLEY

DATE: APRIL 7, 1970

STATION	Dist. (Km)	OBS. REPORT	LEVEL	GROUND MOTION (O-P)					REMARKS
				COMP	Te Sec	DISP. cm	VEL cm/sec	ACCEL g	
(96) Ruth, Nevada	255.5		Gr.	Z	1.4/ 0.6		0.164		L-7
			"	T	1.4/ 0.5		0.204		
			"	R	1.35/ 0.35		0.249		
(97) Ely, Nevada	262.26	IV	Gr.	Z	1.1/ 1.6		0.142		L-7
			"	T	0.4/ 1.4		0.188		
			"	R	1.1		0.269		
(98) Bakers- field, Cal	313.1		Gr.	Z	2.9		0.223		L-7
			"	T	2.55		0.166		
			"	R	3.55/ 1.0		0.271		
(99) Kingman, Arizona	343.3		Gr.	---	----		----		L-7, LOST, 2 Channels
			"	R	0.8/ 1.6		0.137		
(100) Reno, Nevada: 1st. Nat. Bank	375.64	II	Roof	Z	1.2		1.13		L-7
			"	Minor Axis	2.3		0.773		
			"	Major Axis	2.2		0.720		
			Base.	Z	1.2		0.297		
			"	Minor Axis	1.7		0.167		
			"	Major Axis	1.3		0.248		

TABLE I: MAXIMUM TRACE AMPLITUDES

ESSA/COAST AND GEODETIC SURVEY

Special Projects Party

Las Vegas, Nevada

EVENT: HANDLEYDATE: APRIL 7, 1970

STATION	Dist. (Km)	OBS. REPORT	LEVEL	GROUND MOTION (O-P)					REMARKS
				COMP	Te Sec	DISP. cm	VEL cm/sec	ACCEL g	
(101) Los Angeles, Calif.	392.12	II	Base. " "	Z Minor Major Axis	1.2 2.7 3.4		0.171 0.202 0.183		L-7
(102) Sacramento Calif. Water Resources Building	456.6		Base. " "	Z Major Axis Major Axis	3.95 2.8 2.2/ 5.85		0.135 0.149 0.248		L-7
(103) Salt Lake City, Utah Liberty Park	556.3	I	Gr. " "	Z T R	2.5 2.3 1.8		0.122 0.230 0.242		L-7
ASD Amchitka	---	I	Gr.	Z	1.25		0.0074		NGC-21

TABLE I : MAXIMUM TRACE AMPLITUDES

ESSA/COAST AND GEODETIC SURVEY

Special Projects Party
Las Vegas, Nevada

EVENT: HANDLEYDATE: APRIL 7, 1970

STATION	Dist. (Km)	OBS. REPORT	LEVEL	GROUND MOTION (O-P)					REMARKS
				COMP	Te Sec	DISP. cm	VEL cm/sec	ACCEL g	
NOTE: NUMBERS IN PARENTHESIS REFER TO STATION NUMBERS ON MAPS.									
<u>ABBREVIATIONS:</u>									
Accel = Particle acceleration in ground-motion column; accelerograph in remarks column.									
AL = Alluvium									
Cm = Centimeters									
Cm/sec = Centimeters/second									
Comp = Component									
Disp. = Particle Displacement									
Dist. = Distance									
EW = east-west									
Gr. = Ground									
HR = Hardrock									
Km = Kilometers									
L-7 = Velocity System									
NS = north-south									
OBS = Observer									
O-P = Zero to Peak									
R = Radial to Ground Zero									
Sec = Second									
T = Transverse to Ground Zero									
Te = Period of Maximum Phase Measured									
Vel = Particle Velocity									
Z = Vertical									
Base. = Basement									

ESSA-COAST & GEODETIC SURVEY
Special Projects Party

FINAL
TABLE II EVENT INSTRUMENTATION OPERATION
RESULTS

EVENT: HANDLEY

DATE: April 6, 1970

STATION	DIST (km) & BEARING	LOCATION	SEIS	RECORD	PARA	REMARKS
	To G.Z.					
484	3.95	Pahute Mesa	Strain Gauge	Mag. Tape	A-3	Bearing same as Jorum, OK
491	4.13	Pahute Mesa	Strain Gauge	Mag. Tape	A-3	Bearing same as Jorum, OK
490	4.25	Pahute Mesa	Strain Gauge	Mag. Tape	A-3	Bearing same as Jorum, Lost 1 channel (1)
492	4.84	Pahute Mesa	Strain Gauge	Mag. Tape	A-3	Bearing same as Jorum, OK
Thirsty Canyon Area 19-TS	12	A. F. Bombing Range	Qtz. Rod	6" Paper	S-4	OK
North Single	14.54	Ground	Accel	12" Photo	A-3 D-3	OK
672	18.62 330° 19'	Area 18	L-7	Mag. Tape	V-3	OK
673	22.23 323° 27'	Area 18	L-7	Mag. Tape	V-3	OK
601	27.10 234° 32'	BPF Line	L-7	Mag. Tape	V-3	OK
Sleeping Mtn. DOE Station	28 28.23 290° 32'	North of Beatty Pahute Mesa	Qtz. Rod Accel	6" Paper 12" Paper	S-3 A-3 D-3	OK OK
Fleur de Lis	28.31 28° 06'	Near Beatty	L-7	Mag. Tape	V-3	OK
CP-17	28.49 302° 45'	Area 18	L-7	Mag. Tape	V-3	OK
602	31.71 226° 02'	BPF Line	L-7	Mag. Tape	V-3	OK

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ESSA-COAST & GEODETIC SURVEY
Special Projects Party

TABLE II: FINAL EVENT INSTRUMENTATION OPERATION
RESULTS

EVENT: HANDLEY

DATE: April 6, 1970

STATION	DIST (km) & BEARING TO G.Z.	LOCATION	SEIS	RECORD	PARA	REMARKS
674	34.07 337° 41'	Area 30	L-7	Mag. Tape	V-3	OK
Station 2	34.92 289° 34'	Area 12	Accel	12" Photo	A-3 D-3	OK
603	36.30 213° 50'	BPF Line	L-7	Mag. Tape	V-3	OK
675/443	41.07 340° 55'	Area 29	L-7	Mag. Tape	V-3	OK
413	41.27 312° 03'	Area 16	L-7	Mag. Tape	V-3	OK
Knight Ranch	41.30 23° 09'	Near Beatty	L-7	Mag. Tape	V-3	OK
Climax Mine	43.29	Test Site	Accel	12" Photo	A-3 D-3	OK
Beatty	48.2 24° 13'	Hardrock/Alluv.	L-7	Mag. Tape	V-6	OK
Exchange Club		Roof	Accel	12" Photo	A-3 D-3	OK
BTY	49.5	Roof South of Beatty	L-7 NGC-21 Helicdr	Mag. Tape 12" Paper	V-3 V-1	OK OK
677	49.23 331° 54'	Area 29	L-7	Mag. Tape	V-3	OK
Area 1-TS North	49.81	Roof	Accel	12" Photo	A-3 D-3	OK

ESSA-COAST & GEODETIC SURVEY
Special Projects Party

TABLE II: FINAL EVENT INSTRUMENTATION OPERATION
RESULTS

EVENT: HANDLEY

DATE: April 6, 1970

STATION	DIST (km) & BEARING TO GZ	LOCATION	SEIS	RECORD	PARA	REMARKS
Area 1-TS South	49.85	Roof	Accel	12" Photo	A-3 D-3	LOST (2)
Center		Ground	Accel	12" Photo	A-3 D-3	OK
604	49.96 204° 23'	BPF Line	L-7	Mag. Tape	V-3	OK
676	51.87 337° 54'	Area 29	L-7	Mag. Tape	V-3	LOST, R-Comp. (3)
678	54.54 346° 33'	Area 25	L-7	Mag. Tape	V-3	OK
ETS Tower	55.4	On Tower	L-7	Mag. Tape	V-6	OK
ETS #1	55.6	NRDS	Accel	12" Photo	A-3 D-3	OK
ETS #2	55.7 338° 51'	NRDS	L-7 Accel	Mag. Tape 12" Photo	V-3 A-3 D-3	SNPO L-7, OK OK
679	55.71 329° 21'	Area 25	L-7	Mag. Tape	V-3	OK
ETS #3	55.8	NRDS	Accel	12" Photo	A-3 D-3	OK
Test Cell "C"	57.0 336° 15'	NRDS	L-7 Accel	Mag. Tape 12" Photo	V-3 A-3 D-3	SNPO L-7, OK OK
Test Cell "A"	57.9 334° 30'	NRDS	L-7	Mag. Tape	V-3	SNPO L-7, OK
E-MAD	58.6 339° 26'	NRDS	Accel L-7	12" Photo Mag. Tape	A-3 D-3 V-3	LOST (4) SNPO L-7, OK

ESSA-COAST & GEODETIC SURVEY
Special Projects Party

TABLE II: FINAL EVENT INSTRUMENTATION OPERATION RESULTS

EVENT: HANDLEY

DATE: April 6, 1970

STATION	DIST (km) & BEARING TO G.Z.	LOCATION	SEIS	RECORD	PARA	REMARKS
NRDS #1	58.79	Ground	Accel	12" Photo	A-3 D-3	OK
CP-1 (CPX)	59.0 313° 39'	Test Site	BVR NGC-21 Accel	12" Paper 12" Paper Mag. Tape 12" Photo	D-1 V-1 V-3 A-3 D-3	OK OK OK LOST 1 Channel (5)
494	59.14 338° 55'	NRDS	L-7	Mag. Tape	V-3	SNPO L-7, OK
Well J-11	61.33 338°	NRDS	L-7	Mag. Tape	V-3	SNPO L-7, OK
605	62.6 197° 15'	BPF Line	L-7	Mag. Tape	V-3	OK
LSM	66.55	NRDS	Helicdr. Z-21	12" Paper	V-1	OK
Grapevine Canyon 416	72 76.67 350.38	6 miles NE of Scottys Junction Lathrop Wells	Qtz. Rod L-7	6" Paper Mag. Tape	S-5 V-3	OK OK
Goldfield	77.04 126° 32'	Hardrock	L-7	Mag. Tape	V-3	OK
Goldfield Courthouse		Roof	Accel	12" Photo	A-3 D-3	OK
		Basement	Accel	12" Photo	A-3 D-3	OK
606	78.8 189° 46'	BPF Line	L-7	Mag. Tape	V-3	LOST(6)
Q-25	85.99 325° 29'	Mercury	NGC-21	Mag. Tape	V-3	OK
Q-24		Mercury	Accel	12" Photo	A-3 D-3	OK

ESSA-COAST & GEODETIC SURVEY
Special Projects Party

TABLE II: FINAL EVENT INSTRUMENTATION OPERATION
RESULTS

EVENT: HANDLEY

DATE: April 6, 1970

STATION	DIST (km) & BEARING	LOCATION	SEIS	RECORD	PARA	REMARKS
MCV	TO GZ 88.8	Mercury	NGC-21 Helicdr	12" Paper	V-1	OK
Tonopah: Church/Motel	103.24 143° 31'	Hardrock/Alluv.	NGC-21	Mag. Tape & 10" Photo	V-6	OK
Mizpah Hotel	105.0	Floor	Accel	12" Photo	A-3 D-3	OK
Belvada Hotel	105.4 144° 20'	Ground	Accel	12" Photo	A-3 D-3	OK
		Roof	Accel	12" Photo	A-3 D-3	OK
Twin Springs	104.9 197° 31'	Fallini Ranch	NGC-21 Qtz Rod	Mag. Tape 6" Paper	V-3 S-3	OK
Foot Mineral Company Well	109.3 117° 11'	Clayton Valley Silver Peak	L-7	Mag. Tape	V-3	OK
SE-2	114.05 314° 30'	Indian Springs	L-7	Mag. Tape	V-3	OK
Alamo	121.5 266° 36'	Grade School	L-7	Mag. Tape	V-6	LOST 2 Channels (7)
ALA			NGC-21 Helicdr.	12" Paper	V-1	OK
Pahrump	131.5 338° 12'	Farmers Coop.	L-7	Mag. Tape	V-3	OK
			Accel	12" Photo	A-3	OK
Manhattan Power Station	146.4 160° 05'	Manhattan, Nev.	L-7	Mag. Tape	V-3	OK

ESSA-COAST & GEODETIC SURVEY
Special Projects Party

TABLE II: FINAL EVENT INSTRUMENTATION OPERATION

RESULTS

EVENT: HANDLEY

DATE: April 6, 1970

STATION	DIST (km) & BEARING TO G.Z.	LOCATION	SEIS	RECORD	PARA	REMARKS
LAS VEGAS:						
Bank of Nev	174.98	Roof	Accel	12" Photo	A-3 D-3	OK
		Floor - West	Accel	12" Photo	A-3 D-3	OK
		(JAB)	L-7 Strain Gauges	Mag. Tape 3 Mag. Tape	V-18 A-36	OK OK
1st. Nat. Bank		Roof	Accel	12" Photo	A-3 D-3	OK
Four Queens	176.54	Top Level of Structure	Accel	12" Photo	A-3 D-3	OK
		Top To Bottom of Structure	Vel. L-7	Mag. Tape	V-6	OK
Fremont	176.52	Roof	Accel	12" Photo	A-3 D-3	OK
Holiday Inn		Roof	Accel	12" Photo	A-3 D-3	OK
Horseshoe Garage	176.45	Roof	Accel	12" Photo	A-3 D-3	OK
Mint Hotel		Roof	Accel	12" Photo	A-3 D-3	OK
		Pool Deck Level	Accel	12" Photo	A-3 D-3	Not Installed
		Basement	Accel	12" Photo	A-3 D-3	OK
Squire's Park		Ground	L-7	Mag. Tape	V-3	OK
C.C.Courthouse		Roof	Accel	12" Photo	A-3 D-3	OK

ESSA-COAST & GEODETIC SURVEY
Special Projects Party

TABLE II: FINAL EVENT INSTRUMENTATION OPERATION
RESULTS

EVENT: HANDLEY

DATE: April 6, 1970

STATION	DIST (km) & BEARING TO G.Z.	LOCATION	SEIS	RECORD	PARA	REMARKS
LAS VEGAS:						
North Las Vegas		Statz Street	Accel	12" Photo	A-3 D-3	OK
Riviera		Roof	Accel	12" Photo	A-3 D-3	OK
Sahara 200	177.94	Roof	Accel	12" Photo	A-3 D-3	OK
Sahara 400		Roof	Accel	12" Photo	A-3 D-3	OK
		Roof To First Level	L-7	Mag. Tape	V-6	OK
Sands Hotel		Roof	Accel	12" Photo	A-3 D-3	OK
		Top To Bottom	L-7	Mag. Tape	V-12	OK
Stardust Hotel		Roof	Accel	12" Photo	A-3 D-3	OK
Desert Inn		Roof	Accel	12" Photo	A-3 D-3	OK
Dunes Hotel		Roof	Accel	12" Photo	A-3 D-3	OK
		Basement	Accel	12" Photo	A-3 D-3	OK
		Top To Bottom of Structure	L-7	Mag. Tape	V-6	OK
Landmark Tower	178.86	Roof	L-7	12" Paper Helicdr.	V-1	OK
		29th Level	Accel	12" Photo	A-3 D-3	OK
International Hotel	178.76	Roof	Accel	12" Photo	A-3 D-3	OK
		Top To Bottom of Structure	L-7	Mag. Tape	V-6	OK

ESSA-COAST & GEODETIC SURVEY
Special Projects Party

TABLE II: FINAL EVENT INSTRUMENTATION OPERATION RESULTS

EVENT: HANDLEY

DATE: April 6, 1970

STATION	DIST (km) & BEARING	LOCATION	SEIS	RECORD	PARA	REMARKS
	TO G.Z.					
LAS VEGAS: Caesar's Palace		Roof	Accel	12" Photo	A-3 D-3	OK
Royal Inn		Roof (Center)	Accel	12" Photo	A-3 D-3	OK
SE-6	181.65	University of Nevada at Las Vegas	BVR L-7 NGC-21 Accel	12" Paper Mag. Tape 10" Paper 12" Photo	D-1 V-3 V-3 A-3 D-3	OK OK OK OK
462	184.47 312° 02'	Frenchman Mtn.	L-7	Mag. Tape	V-3	OK
Pioche	197.48 249° 02'	Hardrock	L-7	Mag. Tape	V-3	LOST 1 Channel (8)
Hoover Dam	210	1215 Gallery, Intake Tower and Oil House	Accel	12" Photo	A-9 D-6	OK
Ruth	255.5 211° 45'	1000' SE of Fault- less Station	L-7	Mag. Tape	V-3	OK
Ely	262.26 213° 50'	Park	L-7 Qtz. Rod	Mag. Tape 6" Paper	V-3 S-1	OK
Bakersfield	313.1 46° 25'	Alluvium	L-7	Mag. Tape	V-3	OK
Kingman, Ariz.	343.3 315° 20'	Hualapai Park	L-7	Mag. Tape	V-3	LOST 2 Channels (9)
Reno: 1st Nat. Bank	375.64	Roof and First	L-7	Mag. Tape	V-6	OK
Los Angeles	392.12 24° 43'	Downtown Union Bank Bldg.	L-7	Mag. Tape	V-3	OK

ESSA-COAST & GEODETIC SURVEY
Special Projects Party

TABLE II: FINAL EVENT INSTRUMENTATION OPERATION
RESULTS

EVENT: HANDLEY

DATE: April 6, 1970

STATION	DIST (km) & BEARING TO G.Z.	LOCATION	SEIS	RECORD	PARA	REMARKS
Sacramento	456.6 107° 16'	Water Resources Building	L-7	Mag. Tape	V-3	OK
Salt Lake City, Utah	556.3 226° 32'	Liberty Park	L-7	Mag. Tape	V-3	OK
Central Telephone		Roof	Accel	12" Photo	A-3 D-3	OK
Chancellor Apts.		Roof	Accel	12" Photo	A-3	LOST (10)
Sunrise Hospital		Roof	Accel	12" Photo	A-3 D-3	OK
UNLV -Dorm		Roof	Accel	12" Photo	A-3	OK
Executive Tower (Suites)		Roof	Accel	12" Photo	A-3	OK
1815 S. 6th Street Residence		Las Vegas	L-7	Mag. Tape	V-3	OK

LEGEND:

OK = Station ran, good record
1 = Noisy, spikes on channel
2 & 4 = No tone starts
5 = Vertical (Carder Displacement Meter) drifted off record.
6 = Tape recorder stopped prior to event.
3, 7, 8 and 9 = Amplifier/seismometer failures (3.8%)
10 = Light source failure.

The seismometers of the stations with no bearings given on Table were oriented with the axes of the structures instrumented or oriented in a north-south direction for the radial component.

ESSA/COAST AND GEODETIC SURVEY

Special Projects Party

Las Vegas, Nevada

TABLE III : SEISMIC STATION DATA

EVENT: HANDLEY				
STATION		GEODETIC OR NEVADA		MEDIUM
STATION NUMBER		COORDINATES		
1	484	N917, 901.67	E546, 168.87	Hardrock
2	491	N916, 360.29	E544, 852.96	Hardrock
3	490	N924, 476.27	E551, 921.13	Hardrock
4	492	N912, 860.81	E541, 877.94	Hardrock
5	Area 19 - TS North Single	N949, 636.30	E585, 707.37	Hardrock
6	672	N875, 299.24	E568, 802.86	Hardrock
7	673	N869, 790.12	E581, 968.87	Hardrock
8	601	N37° 27.3'	W116° 15.8'	Hardrock
9	DOE	N895, 900	E625, 300	Hardrock
10	Fleur de Lis Ranch	N37° 02.3'	W116° 42.95'	Hardrock
11	CP-17	N37° 08.63'	W116° 16.28'	Hardrock
12	602	N37° 29.25'	W116° 16.75'	Hardrock
13	674	N825, 950	E580, 180	Hardrock
14	Station 2	N890, 007	E646, 497	Hardrock
15	603	N37° 34.8'	W116° 18.7'	Hardrock
16	675/443	N801, 045.00	E582, 600.97	Hardrock
17	413	N837, 137.31	E638, 607.34	Hardrock
18	Knight Ranch	N36° 56.55'	W116° 43.65'	Alluvium

Event: HANDLEY

STATION		GEODETIC OR NEVADA		MEDIUM
STATION NUMBER		COORDINATES		
19	Climax Mine	N905,360	E678,790	Hardrock
20A	Beatty	N36° 53.57'	W116° 45.15'	Hardrock
20B	Beatty	N36° 54.32'	W116° 45.43'	Alluvium
21	Exchange Club	N36° 54.52'	W116° 45.47'	Alluvium
22	Beatty (BTY)	N780,400	E471,350	Hardrock
23	677	N785,930.35	E614,635.65	Hardrock
24	Area 1-TS - North	N835,902.14	E673,275.44	Alluvium
25	Area 1-TS- Center	N835,620	E673,250	Alluvium
26	Area 1-TS- South	N835,432.36	E673,104.62	Alluvium
27	604	N37° 42.6'	W116° 18.0'	Hardrock
28	676	N770,721.90	E602,556.76	Hardrock
29	678	N749,308.32	E579,994.54	Alluvium
30	ETS Tower	N36° 50'05"	W116° 18'38.5"	Alluvium
31	ETS-1	N758,284.2	E604,778.8	Alluvium
32	ETS-2	N758,072.9	E604,466.6	Alluvium
33	679	N771,142.58	E631,704.61	Alluvium
34	ETS-3	N757,725.2	E604,760.0	Alluvium
35	Test Cell "C"	N757,283	E613,820	Alluvium
36	E-MAD	N748,425.3	E606,063.0	Alluvium
37	NRDS-1	N749,768.94	E611,362.39	Alluvium
38A	CP-1A	N794,195	E678,750	Alluvium
38B	CP-1B	N793,930	E677,780	Alluvium
38C	CP-1C	N794,720	E678,550	Alluvium

Event: HANDLEY

STATION		GEODETIC OR NEVADA		MEDIUM
STATION NUMBER		COORDINATES		
39	605	N37 ⁰ 50.9'	W116 ⁰ 19.4'	Hardrock
40	LSM	N724,145.34	E615,773.78	Hardrock
41	416	N36 ⁰ 38.6'	W116 ⁰ 23.8'	Alluvium
42A	Goldfield A	N37 ⁰ 42.48'	W117 ⁰ 14.00'	Hardrock
42B	Goldfield B	N37 ⁰ 42.48'	W117 ⁰ 14.00'	Hardrock
43	606	N37 ⁰ 59.85'	W116 ⁰ 23.4'	Hardrock
44	Q-25	N695,942.18	E698,436.86	Alluvium
45	Q-24	N695,940	E698,400	Alluvium
46	MCV	N36 ⁰ 38'00.714"	W115 ⁰ 59'59.245"	Hardrock
47	Twin Springs	N38 ⁰ 12.5'	W116 ⁰ 09.2'	Alluvium
48A	Tonopah St. Marks Church	N38 ⁰ 03.93'	W117 ⁰ 13.8'	Hardrock
48B	Tonopah, Silver Queen Motel	N38 ⁰ 04.00'	W117 ⁰ 13.8'	Alluvium
49	Mizpah Hotel	N38 ⁰ 04'06"	W117 ⁰ 13'47"	Hardrock
50	Belvada Hotel	N38 ⁰ 04.08'	W117 ⁰ 13.8'	Hardrock
51	Foote Mineral Co.	N37 ⁰ 47.85'	W117 ⁰ 35.2'	Hardrock
52	SE-2	N36 ⁰ 34.7'	W115 ⁰ 37.25'	Hardrock
53A	Alamo	N37 ⁰ 21'51"	W115 ⁰ 09'42"	Hardrock/ Alluvium
53B	ALA	N37 ⁰ 16'09"	W115 ⁰ 08'06"	Hardrock
54	Pahrump	N36 ⁰ 12'54"	W115 ⁰ 59'00"	Alluvium
55	Manhattan	N38 ⁰ 32.42'	W117 ⁰ 05.08'	Alluvium
56	North Las Vegas	N36 ⁰ 11.89'	W115 ⁰ 06.45'	Alluvium
57	Squire's Park	N36 ⁰ 10.52'	W115 ⁰ 08.37'	Alluvium

Event: HANDLEY

STATION		GEODETIC OR NEVADA		
STATION NUMBER		COORDINATES		MEDIUM
58	Mint Roof	N36° 10.28'	W115° 08.63'	Alluvium
59	Mint Basement	N36° 10.28'	W115° 08.63'	Alluvium
60	Horseshoe Garage	N36° 10.28'	W115° 08.60'	Alluvium
61	Fremont	N36° 10.25'	W115° 08.57'	Alluvium
62A	Four Queens	N36° 10.22'	W115° 08.60'	Alluvium
62B	Four Queens	N36° 10.22'	W115° 08.60'	Alluvium
63	Central Telephone Co.	N36° 10.09'	W115° 08.41'	Alluvium
64	Bank of Nevada - Roof	N36° 10.07'	W115° 08.65'	Alluvium
65	Bank of Nevada -1st Floor	N36° 10.07'	W115° 08.65'	Alluvium
66A	Bank of Nevada	N36° 10.07'	W115° 08.65'	Alluvium
66B	Bank of Nevada	N36° 10.07'	W115° 08.65'	Alluvium
67	Executive Towers	N36° 09.98'	W115° 08.65'	Alluvium
68	Clark County Court-house	N36° 10.14'	W115° 08.62'	Alluvium
69	First National Bank	N36° 10.11'	W115° 08.53'	Alluvium
70	1815 South 6th Street Residence	N36° 08.92'	W115° 08.72'	Alluvium
71	Chancellor Apartments	N36° 08.88'	W115° 09.07'	Alluvium
72	Sahara 400 - Roof	N36° 08.58'	W115° 09.35'	Alluvium
73	Sahara 400	N36° 08.58'	W115° 09.35'	Alluvium
74	Sahara 200 - Roof	N36° 08.58'	W115° 09.35'	Alluvium
75	Stardust Hotel	N36° 07.98'	W115° 09.89'	Alluvium
76	Riviera	N36° 08.14'	W115° 09.66'	Alluvium
77	Desert Inn	N36° 07.73'	W115° 09.92'	Alluvium
78	Royal Inn	N36° 07.9'	W115° 09.0'	Alluvium

Event: HANDLEY

STATION		GEODETIC OR NEVADA		MEDIUM
STATION NUMBER		COORDINATES		
79	Landmark Tower	N36 ⁰ 07.96'	W115 ⁰ 09.27'	Alluvium
80	International Hotel	N36 ⁰ 08.18'	W115 ⁰ 09.08'	Alluvium
81	International Hotel - L-7	N36 ⁰ 08.18'	W115 ⁰ 09.08'	Alluvium
82	Sands Hotel	N36 ⁰ 07.3'	W115 ⁰ 10.20'	Alluvium
83	Sands Hotel - L-7	N36 ⁰ 07.3'	W115 ⁰ 10.20'	Alluvium
84	Caesar's Palace	N36 ⁰ 06.95'	W115 ⁰ 10.52'	Alluvium
85	Dunes Hotel	N36 ⁰ 06.77'	W115 ⁰ 10.40'	Alluvium
86	Dunes Hotel	N36 ⁰ 06.77'	W115 ⁰ 10.40'	Alluvium
87	Holiday Inn	N36 ⁰ 06.40'	W115 ⁰ 10.39'	Alluvium
88	Sunrise Hospital	N36 ⁰ 07.98'	W115 ⁰ 08.13'	Alluvium
89	SE-6	N36 ⁰ 06.55'	W115 ⁰ 08.40'	Alluvium
90	UNLV Dormitory	N36 ⁰ 06.32'	W115 ⁰ 08.27'	Alluvium
91	462	N36 ⁰ 10.5'	W115 ⁰ 00.9'	Hardrock
92	Pioche	N37 ⁰ 56.22'	W114 ⁰ 27.01'	Hardrock
93	Hoover Dam - Oil House	N36 ⁰ 01'07"	W114 ⁰ 44'30"	Hardrock
94	Hoover Dam- Gallery	N36 ⁰ 00'57"	W114 ⁰ 44'14"	Hardrock
95	Hoover Dam- Intake	N36 ⁰ 00'59"	W114 ⁰ 44'15"	Hardrock
96	Ruth, Nevada	N39 ⁰ 15'28.5"	W114 ⁰ 59'52.0"	Hardrock
97	Ely, Nevada	N39 ⁰ 14.88'	W114 ⁰ 53.31'	Alluvium
98	Bakersfield, Calif.	N35 ⁰ 21.34'	W119 ⁰ 03.60'	Alluvium
99	Kingman, Arizona Hualapai Park	N35 ⁰ 06'	W113 ⁰ 53'	Hardrock
100	Reno, Nevada	N39 ⁰ 31.58'	W119 ⁰ 48.71'	Alluvium
101	Los Angeles, Calif.	N34 ⁰ 03.20'	W118 ⁰ 15.39'	Alluvium

Event: HANDLEY

STATION	GEODETIC OR NEVADA	
STATION NUMBER	COORDINATES	MEDIUM

102	Sacramento, California	N38° 34.54' W121° 29.80'	Alluvium
103	Salt Lake City, Utah	N40° 44' 51" W111° 52' 19"	Alluvium

FIGURE 1
-43-

FIGURE 2

FIGURE 3

SEISMOGRAPH STATION DESCRIPTIONS

The following are descriptions, photographs, and map locations of seismograph stations installed by the Special Projects Party of the Coast and Geodetic Survey. Station coordinates and surface media are tabulated on Table III. The large numbers on the maps correspond to station numbers listed in Tables I and III. The maps are direct copies made from portions of U. S. Geological Survey Topographic Quads with scales of: 1: 24, 000, 1: 62, 500, and 1: 250, 000. The geographic coordinates are marked on the right and top edge and Central Nevada Grid coordinates are shown on the left and bottom edges. All geographic coordinates are west longitude and north latitude. The Nevada coordinates are north and east.

STATION: 484
Instrument: Strain Gauge

Station 1
Map on page 50

This station is located on Pahute Mesa, Nevada Test Site, approximately northeast of Thirsty Canyon and approximately three-fourths mile from the Nevada Test Site boundary.

Mounted strain gauges on pad.

STATION: 491
Instrument: Strain Gauge

Station 2
Map on page 50

This station is located on Pahute Mesa, Nevada Test Site, approximately at the upper end of Thirsty Canyon, approximately one-half mile east of the Nevada Test Site boundary.

Strain gauge mounted on pad

STATION: 490
Instrument: Strain Gauge

Station 3
Map on page 52

This station is located on Pahute Mesa, Nevada Test Site, approximately one-quarter mile south of road 20-01 and approximately three-quarter mile east of the intersection of roads 20-01 and 20-02.

Strain gauge mounted on pad

116° 35'

ERYRANG E

37° 20'

920,000

1 5 0 1 2 3 4 5 KILOMETERS

CONTOUR INTERVAL 40 FEET
DASHED LINES REPRESENT 20-FOOT CONTOURS
DATUM IS MEAN SEA LEVEL

520,000

540,000

484, 491, and 492 Stations

STATION: 492
Instrument: Strain Gauge

Station 4
Map on page 50

This station is located on Pahute Mesa, Nevada Test Site, approximately three-fourths mile north of road 20-02 and one-half mile west of the Nevada Test Site boundary.

Strain gauge mounted on pad

STATION: Area 19-TS North Single
Instrument: Accelerograph

Station 5
Map on page 54

This station is located at the Area 19 Test Structure in Area 19, at the Nevada Test Site.

Instrument housing in foreground.
Test Structure in the background.

116° 20'

Area 19 -TS North Single

STATION: 672
Instrument: L-7

Station 6
Map on page 56

This station is located in Area 18 of the Nevada Test Site.

Instrument location area. View
looking west.

Seismometer location.

Station 672

STATION: 673
Instrument: L-7

Station 7
Map on page 58

This station is located in Area 18 of the Nevada Test Site.

Instrument location area. View
looking south.

Seismometer location.

673 Station

STATION: BPF 601
Instrument: L-7

Station 8
Map on page 60

This station is located on the east slope of the Kawich Mountain range, approximately five miles north of the north boundary of the Nevada Test Site.

Aerial view of station
looking northeast.

Aerial view of station
looking west.

Seismometer location.

STATION: DOE
Instrument: Accelerograph

Station 9
Map on page 62

This station is located on top of Rainier Mesa in Area 12 of the Nevada Test Site. Accelerograph pad is set on hardrock.

Station equipment building
View looking north .

Arrow indicates accelerograph
which is oriented 290° .

116° 12' 30"

DOE Station

STATION: Fleur de Lis Ranch
Instrument: L-7

Station 10
Map on page 64

This station is located approximately 75 feet behind the main Fleur de Lis Ranch house north of Beatty, Nevada.

Instrument housing area. View looking north.

Seismometer plant location.

STATION: CP-17
Instrument: L-7

Station 11
Map on page 66

This station is located in Area 18 of the Nevada Test Site, approximately one and one-half mile west of the CP-17 compound.

NO PICTURE AVAILABLE

CP-17 Station

STATION: BPF 602
Instrument: L-7

Station 12
Map on page 68

This station is located on the east side of the Kawich Mountain Range south of Quartzite Mountain and west of Antelope Dry Lake.

View looking east. Arrow is pointing to seismometer plant.

Aerial view of station.

Seismometer plant,

STATION: 674
Instrument: L-7

Station 13
Map on page 70

This station is located in Area 30, Nevada Test Site, approximately one and one-half mile north-west of "Buggy" hole.

Aerial view of station.

Seismometer location.

STATION: Station 2
Instrument: Accelerograph

Station 14
Map on page 72

This station is located west of Area 12 Camp, west of the fire house on hardrock, at the Nevada Test Site.

Instrument building. View
looking southwest.

Accelerograph location.
Instrument oriented north.

STATION: BPF 603
Instrument: L-7

Station 15
Map on page 68

Station BPF 603 is located on the west slope of Kawich Valley just north of the Nevada Test Site on the Nellis Bombing and Gunnery Range. Seismometers are located on hardrock outcropping.

Aerial view looking south to station location.

Northern Kawich Valley in background beyond seismometers.

Seismometer plant on hard-rock outcropping.

STATION: 675/443
Instrument: L-7

Station 16
Map on page 75

This station is located in Area 29 of the Nevada Test Site, on the west slope inside Forty Mile Canyon, approximately three miles south of the "Buggy" hole.

Aerial view of Forty
Mile Canyon.

Aerial view of Forty
Mile Canyon.

Seismometer location.

116° 20'

675/443 Station

STATION: 413
Instrument: L-7

Station 17
Map on page 77

This station is located northwest of Tippipah Spring directly across the road from the old Area 16 compound at the Nevada Test Site. Seismometers are in alluvium.

Equipment location. Seis-
mometer plant location.
Arrow points to radial seis-
mometer.

116° 10'

37° 5'

640,000
413 Station

STATION: Knight Ranch
Instrument: L-7

Station 18
Map on page 79

This station is located approximately one-half mile west of U. S. Highway 95, approximately one-quarter mile west of the main ranch house at Knight Ranch.

Seismometer location.

STATION: 677
Instrument: L-7

Station 23
Map on page 88

This station is located in Area 25 of the Nevada Test Site.

Instrument housing area.
View looking north

Seismometer location.

Knight Ranch Station

STATION: Climax Mine
Instrument: Accelerograph

Station 19
Map on page 81

Climax Mine is located in Area 15 of the Nevada Test Site, north of the U.S. Public Health Service complex.

Climax Mine area. View
looking east.

19

Entrance of Climax Mine
shaft leading to accelero-
graph.

Accelerograph oriented 50°.

116° 2' 30"

37° 12' 30"

1 KILOMETER

680,000

Climax Mine Station

STATION: Beatty Hardrock
Instrument: L-7

Station 20A
Map on page 86

This station is located west of highway 95, approximately 1500 feet south of the U. S. Coast and Geodetic Survey instrument van in south Beatty, Nevada.

Seismometer plant area.

Seismometer location.

STATION: Beatty Ball Park
Alluvium
Instrument: L-7

Station 20B
Map on page 86

This station is located on the southeast side of the Beatty Ball Park, Beatty, Nevada.

Instrument placement area.
View looking north, north-
east.

Seismometer location.

STATION: Beatty Exchange Club
Instrument: Accelerograph

Station 21
Map on page 86

Instrument located on top of the Exchange Club, Beatty, Nevada.

Instrument housing on roof.
View looking northwest.

Instrument location.

STATION: Beatty (BTY)
Instrument: NGC-21

Station 22
Map on page 86

This station is located west of Beatty in an abandoned mine, approximately one mile west of the Coast Survey instrument trailer in Beatty, Nevada. This station is a 24-hour recording station.

NO PICTURE AVAILABLE

Beatty Stations

STATION: Area 1 - Test Structure North
Instrument: Accelerograph

Station 24
Map on page 92

This station is located on the top level of the Area 1 Test Structure North which lies north of CP-1 and west of the Mercury Highway in Area 1, Nevada Test Site.

Area 1 Test Structure North.
View facing north. Arrow
points to level where the
accelerograph is situated.

STATION: Area 1 Test Structure Ground Center
Instrument: Accelerograph

Station 25
Map on page 92

The Area 1 Test Structure Ground accelerograph is located on the ground on a cement pad, which is on alluvium. This pad is halfway between the Area 1 Test Structures North and South, which lie north of CP-1 and west of the Mercury Highway in Area 1, Nevada Test Site.

Instrument pad and accelerograph on the Area 1 Test Structure Ground. Instrument oriented 360°

STATION: Area 1 Test Structure South
Instrument: Accelerograph

Station 26
Map on page 92

This accelerograph is located on the top level of the Area 1 Test Structure South, which lies north of CP-1 and west of the Mercury Highway in Area 1, Nevada Test Site.

Area 1 Test Structure South.
View facing north. Accelerograph is situated on top level.

Area 1 Test Structures Stations

STATION: 604
Instrument: L-7

Station 27
Map on page 94

This station is located on the west side of the Kawich Valley on the foot of the Kawich Mountain Range, eleven miles west, southwest of the Cedar Pipeline Ranch in Central Nevada.

Seismometer site.

Seismometer plant at
arrow.

Seismometer location and
equipment box.

Seismometer plant.

116° 20'

STATION: 676
Instrument: L-7

Station 28
Map on page 96

This station is located in Area 29, Nevada Test Site.

Instrument housing area.

Seismometer location.

STATION: 678
Instrument: L-7

Station 29
Map on page 98

This station is located at Well J-13 at NRDS on the Nevada Test Site.

Amplifier housing. View
looking west.

Seismometer location.

STATION: ETS Tower
Instrument: Accelerograph

Station 30
Map on page 96

This station is located on the Engine Test Stand Tower at NRDS at the Nevada Test Site.

ETS Tower arrows show points of seismometer installation.

Seismometer location top of tower.

Seismometer location on wall level. Arrows indicate seismometers.

Seismometer location ground level.

STATION: ETS-1
Instrument: Accelerograph

Station 31
Map on page 96

ETS-1 is located at NRDS, Nevada Test Site, approximately 250 yards east northeast of the Engine Test Stand.

Engine Test Stand and instrument housing. View looking southwest.

Accelerograph and pad on alluvium.
Instrument oriented north.

STATION: ETS-2
Instrument: Accelerograph

Station 32
Map on page 96

This station is located approximately 150 yards east of the Engine Test Stand at NRDS, Nevada Test Site.

Instrument housing with Engine Test Stand in background. View looking west.

Accelerograph and pad on alluvium. Instrument oriented north.

STATION: 679
Instrument: L-7

Station 33
Map on page 103

This station is located in Area 25 of the Nevada Test Site.

Instrument station.

Seismometer location.

STATION: ETS-3
Instrument: Accelerograph

Station 34
Map on page 96

This accelerograph is located approximately 300 yards east southeast of the Engine Test Stand at NRDS, at the Nevada Test Site.

Instrument housing area.
View looking southwest.

Accelerograph and pad on
alluvium. Instrument
oriented north.

STATION: Test Cell "C"
Instrument: Accelerograph

Station 35
Map on page 96

Test Cell "C" accelerograph is located approximately thirty-five feet southwest of Test Cell "C" compound at NRDS, on the Nevada Test Site.

Instrument housing area.
View looking north.

Accelerograph and pad on alluvium.
Instrument oriented north.

STATION: E-MAD
Instrument: Accelerograph

Station 36
Map on page 108

This station is located approximately 150 feet south of the E-MAD Building by the compound fence. The E-MAD Building is located at NRDS, on the Nevada Test Site.

NO PICTURE AVAILABLE

STATION: NRDS #1
Instrument: Accelerograph

Station 37
Map on page 108

Station NRDS #1 is located just south of road "H", halfway between the E-MAD Building and the Control Point Area at NRDS, on the Nevada Test Site.

Instrument housing area.
View looking northwest.

Accelerograph and pad on alluvium.
Instrument oriented north.

E-MAD and NRDS #1 Stations

STATION: CP-1A (CPX)
Instrumentation: Benioff and Accelerograph

Station 38A and C
Map on page III

This station is located in building CP-55 on the hillside, southwest of the CP-1 complex at the Nevada Test Site.

Instrument housing accelerograph
and photo tube amplifier.

Accelerograph location.

No photograph available of Benioff
instrument location.

STATION: CP-1 (CPX)
Instrument: NGC-21 Helicorder

Station 38B
Map on page III

This station is located at the hill behind CP-1, on the Nevada Test Site.

CP-1 seismic plant. View
looking north, northeast.

CP-1 seismic plant. View
looking northeast. Arrow
indicates seismometer site.

Seismic plant. View
looking west, southwest.
Arrow indicates seismo-
meters.

Seismic plant. View looking
south, southwest. Arrow in-
dicates seismometers.

STATION: 605
Instrument: L-7

Station 39
Map on page 113

This station is located in the Kawich Mountain Range in Central Nevada. It is 13 miles north, 3.6 miles west and 1.7 miles southwest of the Cedar Pipeline Ranch.

Station location site with equipment

Seismometer location.

STATION: LSM
Instrument: NGC-21 Helicorder

Station 40
Map on page 115

This station is located on Little Skull Mountain, approximately 2.5 miles from main guard gate at NRDS, on the Nevada Test Site. Amplifier housing is in the U.S. Coast and Geodetic Survey seismic van next to the telephone relay building, which is 2.25 miles south of NRDS main guard gate.

Instrument housing. View
looking north.

NGC-21 seismometer plant.

STATION: 416
Instrument: L-7

Station 41
Map on page 117

This station is located behind the bar-restaurant on the south side of Highway 95 in Lathrop Wells, Nevada.

Lathrop Wells. View
looking west.

Lathrop Wells. View
looking north.

Seismometer location.

STATION: Goldfield, Nevada
Instrument: L-7

Station 42A
Map on page 120

This station is located approximately fifty yards behind Esmeralda County Courthouse in Goldfield, Nevada.

Goldfield Courthouse. View looking south.

Arrow indicates seismometer plant.

Seismometer Plant.

Arrow indicates radial seismometer.

STATION: Goldfield Courthouse
second floor and basement
Instrument: Accelerograph

Station 42B and C
Map on page 120

This station is located on the second floor and in the basement of the Esmeralda County Courthouse in Goldfield, Nevada.

Jury room second floor
Goldfield Courthouse.

Accelerograph location in
jury room.

Basement of Goldfield
Courthouse.

Accelerograph location.

117° 10'

Goldfield Stations

STATION: 606
Instrument: L-7

Station 43
Map on page 122

This station is in the Kawich Mountain Range in Central Nevada. It is 21 miles north of the Cedar Pipeline Ranch on Reveille Mill Road and 2 miles west.

Seismometer location. View looking south.

Seismometer locations. Arrows indicate seismometers.

STATION: Q-25
Instrument: NGC-21

Station 44
Map on page 126

This station is located approximately 50 yards east of Quonset 25 at Mercury, Nevada.

Q-25. View looking west.

Arrow indicates 3 component
seismometer plant. View
looking east.

STATION: Q-24
Instrument: Accelerograph

Station 45
Map on page 126

This station is located in the darkroom of Quonset number twenty-four in Mercury, Nevada, at the Nevada Test Site.

Accelerograph location.

STATION: MCV
Instrument: NGC-21 Helicorder

Station 46
Map on page 126

This station is located approximately 2 miles behind Q-24 at Mercury, Nevada, on the Nevada Test Site. The seismometer is located at the base of the micro relay tower.

MCV instrument housing. View looking west, southwest.

MCV NGC-21 seismometer.

STATION: Twin Springs
Instrumentation: NGC-21, Telemetry Link

Station 47
Map on page 128

This station is located approximately one mile north of Nevada State Highway 25 and one-half mile east, northeast of the Fallini Ranch, 12 miles east of Warm Springs, Nevada on State Highway 25.

NO PICTURE AVAILABLE

Twin Springs Station

STATION: Tonopah: Church/Motel
Instrument: NGC-21

Station 48A and B
Map on page 133

These stations are located in Tonopah, Nevada directly behind the St. Mark Episcopal Church and the Silver Queen Motel, respectively.

St. Marks Church. Arrow indicates seismometer site. View looking northwest.

Seismometer location.

Seismometer location behind Silver Queen Motel. View looking west.

Seismometer location. Arrows indicate seismometers.

STATION: Mizpah Hotel
Instrument: Accelerograph

Station 49
Map on page 133

This station is located in room 503 of the Mizpah Hotel, Tonopah, Nevada.
The instrument is oriented with the major axis of the building.

Accelerograph location.

Accelerograph location.

STATION: Belvada Hotel - Top
Instrument: Accelerograph

Station 50A
Map on page 133

This station is located in the fifth floor bathroom of the Belvada Hotel, Tonopah, Nevada. The accelerograph oriented with major axis of the building.

View of hall leading to
bathroom.

View of accelerograph in bathroom.

Accelerograph location.

STATION: Belvada Hotel - Basement
Instrument: Accelerograph

Station 50B
Map on page 133

This station is located in the basement of the Belvada Hotel in Tonopah, Nevada.
The instrument oriented with the major axis of the building.

Belvada Hotel. View
looking west.

Belvada Hotel basement.

Accelerograph against
concrete wall.

Accelerograph location.

117° 12' 30"

38° 5'

Tonopah Stations

STATION: Foote Mineral Company Well
Instrument: L-7

Station 51
Map on page 135

This station is located 3.9 miles northeast of Silver Peak, Nevada. This is well number FX11.

Seismometer location site.
View looking southeast.

Arrows point to locations
of seismometers. Radial
seismometer oriented 117° .

— 37° 50'

-135-

STATION: Alamo
Instrument: L-7

Station 53A
Map on page 140

This station's alluvium components are located approximately 500 feet directly behind the Alamo Grade School. The hardrock station is approximately 1700 feet east of the amplifier housing station on the first hill south of Alamo, Nevada.

Instrument amplifier housing.

View looking northwest from
hardrock location.

Hardrock location. Arrows indicate
seismometers.

Alluvium location. Arrows indicate
seismometers.

STATION: ALA
Instrument: NGC-21 Helicorder

Station 53B
Map on page 140

This station is located at the Pahrnagat Valley Game Preserve, 9 miles south of Alamo, Nevada. The recording housing is located at the preserve living quarters compound. The NGC-21 seismometer is located approximately 1500 feet northwest of the recording housing on the side of the drywash on Bureau of Land Management land.

Amplifier housing and recording
rack.

Alamo Stations

STATION: Pahrump
Instrument: L-7

Station 54
Map on page 142

This station is located in the front of the Farmer's Co-op storage building in Pahrump, Nevada.

Pahrump Farmer's Co-op building. Arrow indicates where station on ground is situated.

STATION: Manhattan Power Station
Instrument: L-7

Station 55
Map on page 144

This station is located approximately 15 feet east of the southeast corner of the Manhattan Power Station building, Manhattan, Nevada.

Manhattan Power Station.
View looking southwest.

Seismometer locations.
Arrows point to seismometers.

117° 5'

Manhattan Power Station

STATION: North Las Vegas
Instrument: Accelerograph

Station 56
Map on page 146

This station is located in an accelerograph housing building in the backyard of the residence at 2143 Statz Street, North Las Vegas, Nevada.

Instrument housing in backyard
of residence.

Accelerograph location.
Instrument oriented north.

North Las Vegas Station

STATION: Squire's Park
Instrument: L-7

Station 57
Map on page 174

This station is approximately 500 feet south of the Nevada Highway Patrol building located 2 blocks east of the intersection of Bonanza Road and Main Street on Bonanza Road, Las Vegas, Nevada.

Looking north to Highway Patrol building from seismometer plant.

Seismometer plant radial oriented north 27° east.

STATION: Mint Hotel Roof - Basement Level
Instrument: Accelerograph

Stations 58 and 59
Map on page 174

These stations are located in the basement and roof level of the Mint Hotel, located on Fremont Street in downtown Las Vegas, Nevada.

Mint Hotel view looking
south.

Accelerograph roof level. Instrument
oriented north 27° east.

Accelerograph in basement
Instrument oriented north
 27° east.

STATION: Horseshoe Casino Garage Parking
Lot
Instrument: Accelerograph

Station 60
Map on page 174

This station is located on the roof level of the Horseshoe Casino Garage Parking Lot, situated on the northwest corner of the intersection of Casino Center Drive and Fremont Street in Las Vegas, Nevada.

Horseshoe Casino Garage
View looking south.

Instrument housing on top
level of garage parking lot.

Accelerograph inside housing
instrument oriented north 27° east.

STATION: Fremont Hotel
Instrument: Accelerograph

Station 61
Map on page 174

This station is located in the Fremont Hotel on the northeast corner of the intersection of Casino Center Drive and Fremont Street in downtown Las Vegas, Nevada.

Fremont Hotel. View
looking south, southeast.

Accelerograph on roof
level on concrete floor.

STATION: Four Queens Hotel
Instrument: L-7 - 6 Channel

Station 62
Map on page 174

This station is in the Four Queens Hotel located on the southeast corner of the intersection of Fremont Street and Casino Center Boulevard in Las Vegas, Nevada.

Minor axis - roof level •

Major axis - roof level.

Typical seismometer plant
in west stairwell.

STATION: Central Telephone Company
Instrument: Accelerograph

Station 63
Map on page 174

This station is located on the roof of the Central Telephone Building at 125 Las Vegas Boulevard South in downtown Las Vegas, Nevada.

Central Telephone Company.
View looking southeast.

Accelerograph housing on
roof level.

STATION: Bank of Nevada - Roof and 1st Floor
Instrument: Accelerographs

Stations 64 and 65
Map on page 174

These stations are located in the Bank of Nevada building at the intersection of Third and Bridger Streets in Las Vegas, Nevada.

Bank of Nevada. View
looking east.

Instrument location on roof level.
Instrument oriented north 27° east.

Instrument 1st floor location.
Instrument oriented north 27° east.

STATION: Bank of Nevada
Instrument: L-7, 12 Channel

Station 66
Map on page 174

This station is located in the Bank of Nevada building at the intersection of Third and Bridger Streets in Las Vegas, Nevada.

Vehicle housing amplifiers
on 3rd level.

Roof level seismometer, east
end of building.

Roof level seismometer
west end of building.

STATION: Bank of Nevada
Instrument: L-7, 12 Channel

Station 66
Map on page 174

8th level seismometer in stair-
well at east end of building.

8th level seismometers in stair-
well at west end of building.

5th level seismometer in stair-
well at east end of building.

5th level seismometer at west end
of building.

STATION: Bank of Nevada
Instrument: L-7, 12 Channel

Station 66
Map on page 174

4th level seismometer in stair-
well at east end of building.

3rd level seismometer in parking
area at west end of building.

2nd level seismometer in stair-
well at east end of building.

2nd level seismometer in parking
ramp at west end of building.

STATION: Bank of Nevada
Instrument: L-7, 12 Channel

Station 66
Map on page 174

Stairwell to ground level
near west end of building.

Seismometers at bottom of
stairwell on ground level.
(Arrow indicates radial seis-
mometer on 6-Channel amplifier),

STATION: Bank of Nevada
Instrument: L-7, 6 Channel

Station 66
Map on page 174

Seismometers near center of roof
Arrow indicates transverse seismometer.

Seismometers on 8th level. Arrow points to seismometer bearing 117° .

Seismometers on 5th level. Arrow points to seismometer bearing 117° .

Seismometer on 4th level.

NOTE: Ground-level seismometer shown on page 157.

STATION: Executive Towers
Instrument: Accelerograph

Station 67
Map on page 174

This station is located on the roof level center in a small building.

NO PICTURE AVAILABLE

STATION: Clark County Courthouse
Instrument: Accelerograph

Station 68
Map on page 174

This station is located in the Clark County Courthouse on the corner of Third and Carson Streets in downtown Las Vegas, Nevada.

Clark County Courthouse.
View looking southeast..

Accelerograph at roof level
in the radio room.

STATION: First National Bank
Instrument: Accelerograph

Station 69
Map on page 174

This station is located in the First National Bank building in downtown Las Vegas, Nevada.

First National Bank. View
looking northeast.

Accelerograph in equipment
room at roof level.

STATION: 1815 South 6th Street
Instrument: L-7

Station 70
Map on page 174

This station is located at 1815 South 6th Street in Las Vegas, Nevada. Seismic plant is five feet north of the north wall of the building.

1815 South 6th Street. View
looking northeast.

Instrument location indicated
by arrow.

STATION: Chancellor Apartments
Instrument: Accelerograph

Station 71
Map on page 174

This station is located on the roof of the Chancellor Apartments on the northeast corner of the intersection of St. Louis Avenue and Paradise Road in Las Vegas, Nevada.

Chancellor Apartments. View
looking northeast.

Instrument housing on roof.
View looking north.

Inside of housing shown
above.

STATION: Sahara 400
Instrument: Accelerograph

Station 72
Map on page 174

This station is located on the roof level east side of the highrise, approximately 15 feet east of the service elevators.

NO PICTURE AVAILABLE

STATION: Sahara 400
Instrument: L-7, 6 Channel

Station 73
Map on page 174

This station is in the Sahara Hotel located on the southeast corner of the intersection of Sahara Avenue and Las Vegas Boulevard South.

Major and minor axis seismometers
on roof level on east side of Executive
offices.

Typical minor axis seismometer
plant in south stairwell.

Minor axis seismometer on
first level under south stair-
well.

STATION: Sahara 200
Instrument: Accelerograph

Station 74
Map on page 174

This station is located on the southeast corner of the intersection of Sahara Avenue and Las Vegas Boulevard South.

View of Sahara Hotels
looking west. Arrow
points to the Sahara 200.

Accelerograph on roof
level, oriented north.

STATION: Stardust Hotel
Instrument: Accelerograph

Station 75
Map on page 174

This station is located in the Stardust Hotel roof level, located at the intersection of Las Vegas Boulevard South and Convention Center Drive.

View of Stardust Hotel
looking west.

Accelerograph on concrete
floor roof level. Instrument
oriented north 27° east.

STATION: Riviera Hotel
Instrument: Accelerograph

Station 76
Map on page 174

This station is located in the penthouse area of the Riviera Hotel on Las Vegas Boulevard South, near Keno Lane.

Riviera Hotel, view looking
east, northeast.

Accelerograph on roof level.
Instrument oriented north.

STATION: Desert Inn Hotel
Instrument: Accelerograph

Station 77
Map on page 174

This station is located in the Desert Inn Hotel located on the southeast corner of the intersection of Desert Inn Road and Las Vegas Boulevard South in Las Vegas, Nevada.

Desert Inn. View looking
north.

Accelerograph located
on roof level inside
utility room.

STATION: Royal Inn
Instrument: Accelerograph

Station 78
Map on page 174

This station is located on the roof level center of the Royal Inn, in a small plywood building.

NO PICTURE AVAILABLE

STATION: Landmark Tower
Instrument: Accelerograph

Station 79
Map on page 174

This station is located in the Landmark Tower Hotel on the northwest corner of the intersection of Convention Center Drive and Paradise Road in Las Vegas, Nevada.

Landmark Tower .

Instrument on half level
between casino and skybar,
26th level.

STATION: International Hotel
Instrument: Accelerograph

Station 80
Map on page 174

This station is located on the 30th level center of the International Hotel on Paradise Road South in Las Vegas, Nevada.

Stairwell in which instrument
is situated. Arrow points to
accelerograph.

Instrument location.

STATION: International Hotel
Instrument: L-7, 6 Channel

Station 81
Map on page 174

The station is located in the northwest wing stairwell, top to bottom of the International Hotel on Paradise Road South in Las Vegas, Nevada.

All seismometers used at the International Hotel were oriented with the minor axis of the northwest wing. The roof level seismometer was placed in the stairwell at roof level. The seismometer placed on the twenty-first level was located on the twenty-first floor, thirteenth level was the thirteenth floor, the fourth level was the fourth floor, the third level was the third floor and the first level was the ground level.

NO PICTURE AVAILABLE

Las Vegas Stations (See Location Table)

STATION: Sands Hotel
Instrument: Accelerograph

Station 82
Map on page 186

This station is located in the penthouse of the Sands Hotel on Las Vegas Boulevard South, approximately three blocks south of Spring Mountain Road in Las Vegas, Nevada

Sands Hotel. View looking
north.

Accelerograph location on
concrete floor in penthouse.

STATION: Sands Hotel
Instrument: L-7, 12 Channel

Station 83
Map on page 186

This station is in the Sands Hotel, located on Las Vegas Boulevard South, approximately six blocks north of Dunes - Flamingo Roads in Las Vegas, Nevada.

Minor and major axis seismometers in penthouse roof level

Minor and major axis seismometers on fourteenth level

Minor and major axis seismometers on eighth level.

STATION: Sands Hotel
Instrument: L-7, 12 Channel

Station 83
Map on page 186

Minor and Major axis seismometers on third level.

Minor and Major axis seismometers on second level.

Minor and Major axis seismometers on first level.

STATION: Caesar's Palace Hotel
Instrument: Accelerograph

Station 84
Map on page 186

This station is located in Caesar's Palace Hotel, which is situated on Las Vegas Boulevard South, approximately one block north of Dunes - Flamingo Roads in Las Vegas, Nevada.

Caesar's Palace. View
looking west.

Accelerograph on cement floor
inside elevator housing. Instrument
oriented north.

STATION: Dunes Hotel
Instrument: Accelerograph

Station 85
Map on page 186

This station is located in the Dunes Hotel on the southwest corner of Las Vegas Boulevard South and the Dunes - Flamingo Roads in Las Vegas, Nevada.

Dunes Hotel. View
looking northwest.

Accelerograph on cement
floor in elevator room.
Instrument oriented north.

STATION: Dunes Hotel
Instrument: L-7, 6 Channel

Station 86
Map on page 186

This station is in the Dunes Hotel on the southwest corner of the intersection of Dunes - Flamingo Road and Las Vegas Boulevard South in Las Vegas, Nevada.

Major axis seismometer on roof level in penthouse elevator control area.

Typical seismometer plant next to airshaft in stairwell.

Major axis seismometer in north stairwell on second level.

Major axis seismometer under north stairwell.

STATION: Holiday Inn
Instrument: Accelerograph

Station 87
Map on page 186

This instrument is in the Holiday Inn Hotel on Las Vegas Boulevard South in Las Vegas, Nevada.

Holiday Inn. Arrow shows
approximate location of
accelerograph inside building
in stairwell.

STATION: Sunrise Hospital
Instrument: Accelerograph

Station 88
Map on page 174

This station is located in the equipment penthouse of the Sunrise Hospital, which is two blocks north of the intersection of Desert Inn Road and Maryland Parkway Drive in Las Vegas, Nevada.

Sunrise Hospital. View
looking northeast.

Penthouse housing accelerograph

Instrument in penthouse
oriented with the minor
axis of the building.

STATION: SE-6
Instrumentation: BVR, L-7, NGC-21 and
Accelerograph

Station 89
Map on page 186

This station is located on the north side of the University of Nevada campus in Las Vegas, Nevada.

Instrument housing. View
looking north.

View of instrument housing
looking south.

Accelerograph location.

STATION: SE-6
Instrumentation: BVR, L-7, NGC-21
Accelerograph

Station 89
Map on page 186

Arrows point where L-7
seismometers are located.

Arrows point to Benioff
seismometer locations.

STATION: UNLV Dormitory
Instrument: Accelerograph

Station 90
Map on page 186

This station is located in the 5th floor laundry room of the dormitory at the University of Nevada at Las Vegas, Nevada.

UNLV Dormitory. View
looking northwest.

Laundry room location.

Accelerograph in laundry room
oriented north.

Las Vegas Stations (See Location Table)

STATION: 462
Instrument: L-7

Station 91
Map on page 188

Station 462 is at the end of East Bonanza Road below Frenchman Mountain.

Equipment at Station 462.

Seismometers located on
hardrock, radial seis-
mometer oriented 312°

462 Station (Frenchman Mountain)

STATION: 462
Instrument: L-7

Station 91
Map on page 188

Station 462 is at the end of East Bonanza Road below Frenchman Mountain.

Equipment at Station 462.

Seismometers located on
hardrock, radial seis-
mometer oriented 312^o

462 Station (Frenchman Mountain)

STATION: Pioche, Nevada
Instrument: L-7

Station 92
Map on page 190

This station is located approximately 35 yards west of where Highland Street deadends at Mills Street in Pioche, Nevada.

Pioche, Nevada. View looking north east from equipment stand.

View looking east from seismometer plant.

Seismometer plant on hardrock.
Radial seismometer oriented 249°
Arrow points out vertical seismometer.

114° 27'30"

Pioche, Nevada

STATION: Hoover Dam Oil House
Instrument: Accelerograph

Station 93
Map on page 194

This station is located in the Oil House basement near the Hoover Dam.

Hoover Dam Oil House.

Instrument location.

STATION: Hoover Dam, 1215 Gallery
Instrument: Accelerograph

Station 94
Map on page 194

This station is located in Gallery 1215 of the Hoover Dam.

Hoover Dam

Accelerograph located
on Gallery.

STATION: Hoover Dam Intake Tower
Instrument: Accelerograph

Station 95
Map on page 194

This station is located near the top of the Hoover Dam Intake Tower.

Hoover Dam Intake Towers
on Nevada side of dam. The
accelerograph is in tower
at left.

Accelerograph location.

Hoover Dam Stations: Oil House, 1215 Gallery
and Intake Tower

STATION: Ruth, Nevada
Instrument: L-7

Station 96
Map on page 196

This station is located north of Rib Hill, approximately 300 feet from the south lip of Liberty Pit at Ruth, Nevada.

Seismometers buried in hardrock.
Radial seismometer (in foreground)
oriented 212°

Ruth Station

STATION: Ely, Nevada
Instrument: L-7

Station 97
Map on page 198

This station is on the Ely City Park, located south of the White Pine County High School, directly across Aultman Street from the High School, ten feet south of the Gazebo. Seismometers located in alluvium.

Arrows point to seismometers
by Gazebo. Radial seismometer
oriented 212°

Ely Station

STATION: Bakersfield, California
Instrument: L-7

Station 98
Map on page 200

This station is located west of the Occidental Petroleum Company building, on the building grounds in Bakersfield, California.

Occidental Petroleum. View
looking northwest.

Location of seismometers.
View looking east.

Amplifier location.

Arrows point to seismometers.

119° 2'30"

Bakersfield Station

STATION: Kingman, Arizona
Instrument: L-7

Station 99
Map on page 202

This station is located at Cabin Number 15, at the Hualapai Park, outside of Kingman, Arizona.

Cabin Number 15, Hualapai Park, Arizona. View looking southwest.

Amplifier housing.

Arrows point to seismometers outside Cabin Number 15.

113° 45'

35° 15'

Kingman Station

STATION: First National Bank, Reno, Nevada
Instrument: L-7

Station 100
Map on page 204

Amplifier housing in safe deposit lobby. Arrow points to amplifier.

Roof level seismometer plant.

Basement level seismometer plant.

119° 50'

39° 35'

Reno Station

STATION: Los Angeles, California
Instrument: L-7

Station 101
Map on page 206

This station is located in the basement of the Union Bank Building in downtown Los Angeles, California.

Amplifier with seismometer
plant.

This is a detailed black and white map of Los Angeles, California. The map shows the city's layout, including major roads, highways, and landmarks. The city name "LOS ANGELES" is prominently displayed in the center. The zip code "90010" is visible in the top right corner. Major roads such as the 101 Freeway, 10 Freeway, and 5 Freeway are clearly marked. Landmarks like the Los Angeles Convention Center, the Los Angeles Memorial Coliseum, and the Los Angeles Music Center are also shown. The map is oriented with North at the top.

-34° 2' 30"

-206-

STATION: Sacramento, California
Instrument: L-7

Station 102
Map on page 208

This station is located in the telephone switching room, room number 127, in the Water Resources Building in Sacramento, California.

View of hall directly in front
of room 127

Seismometer plant in telephone
room

Sacramento Station

STATION: Salt Lake City, Utah (Liberty Park)
Instrument: L-7

Station 103
Map on page 210

Aerial view of Liberty Park.
Arrow shows seismometer
location.

Aerial view. Arrow shows
building seismometers.

Arrow shows restroom
near seismometer plant.

111° 30'

40° 45'

Salt Lake City Station

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