Lake Mead
June-Dec. 1940

International
Seismological
Centre

LAKE MEAD SEISMOGRAPH STATIONS

Instrumental Report
June, 1940

During June, 1940 the seismograph at Boulder City was the only one of these stations in operation. 133 disturbances, numbered 2215 to 2347 inclusive, were recorded. These disturbances were divided into several groups as follows:

30 local shocks of unknown distance.
43 local shocks at 2 to 20 miles, nearly half at 8 to 11 mi.
19 near shocks of unknown distance.
31 near shocks at 85 to 215 mi., nearly half at 160 to 190 mi.
5 distant and teleseismic earthquakes.
6 disturbances of doubtful cause, either artifical or seismic.
1 disturbance of artifical origin.

Total 135

One of these shocks was double but not counted as such, while two additional disturbances were found and interpreted without changing the numbering.

The distances as given are not correct, but estimated. The near shocks at 160 to 190 miles could be Imperial Valley aftershocks, and if so should have distances approximating 220 miles.

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LAKE MEAD SEISMOLOGICAL STATIONS

Bureau of Reclamation, National Park Service
and Coast and Geodetic Survey

MONTH OF June 1940

Time used is ~~P.S.T.~~ or G.C.T. Strike out whichever does not apply.

No.	Date	BOULDER CITY Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z	OVERTON Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z	PIERCE FERRY Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z
#2215	1	e	18	44	16.1																				
		f	18	48						Very faint near shock.															
2216	1	iP	19	51	00.5																				
		iS	19	51	52.9																				
		i	19	52	03.3					Second quake on coda of 2216															
		iS	19	52	04.7																				
		F	19	52	52.3					S - P = 0.9 sec.				4.5 miles				Three slight shocks together.							
2217	1	iP	21	24	21.8					S - P = 1.0 sec.				4.8 miles				Very slight shock.							
		iS	21	24	22.8																				
		F	21	24	35.0																				
2218	1	e?	22	42	14.7					Very faint shock															
		eS?	22	42	48.	0.5, 1.0				160 mi.															
		F	22	44.0																					
2219	1	e	23	43	04.7?					Very faint near shock															
		F	23	46																					
2220	1	e?	23	55	16.					Very faint shock.															
		e	23	55	18.3					S - P? = 43 sec.															
		e	23	55	22.8					205 mi.															
		eS	23	55	58.7																				
		F	23	5	9.5																				
2221	2	eP	0	00	37.7					S - P = 33.5 sec.						162 miles									
		eP	0	00	39.3	0.5																			
		iS?	0	01	16.3					Distinct shock.															
		iS	0	01	17.9																				
		F	0	07																					
2222	2	e	2	39.8						Very faint near shock.															
		F	2	40.5																					

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LAKE MEAD SEISMOLOGICAL STATIONS

Bureau of Reclamation, National Park Service and Coast and Geodetic Survey

MONTH OF June 194[illegible]

Time used is P.S.T. or G.C.T. Strike out whichever does not apply.

No. / Date	Phase	Time h m s	Period T	Trace Amplitude E	N	Z
BOULDER CITY						
2223 2	eP	6 13 50.6				
	e	6 13 55.9				
	eS	6 14 24.0				
	iS	6 14 24.6				
	M	6 14 37	0.8			
	F	6 17.3				
2224 2	e	11 46 09.6				
	F	11 55	1.5			
2225 2	eP?	12 12 03.0				
	iS	12 12 05.2				
	C	12 12 09.6				
	F	12 12.7				
2226 2	e	14 13 51				
	iS	14 13 53				
	F	14 14.3				
2227 3	i	1 09 19.7				
	F	1 09 45				
2228 3	iS?	1 29 18.6				
	F	1 29 30				
2229 3	eP	5 43 56				
	i	5 44 01.2				
	iS?	5 44 41.5				
	F	5 47				
2230 3	i	6 27 54				
	F	6 28 05.0				

No. / Date	Phase	Time h m s	Period T	Trace Amplitude E	N	Z	
OVERTON							
2223 2	S - P = 35.6 sec.				172 miles		Distinct shock.
2224 2	Very faint distant shock.						
2225 2	S - P = 2.9 sec.				14 miles		Slight shock.
2226 2	Very slight local shock.				9.5 miles		
2227 3	No phases local shock.						
2228 3	Very slight local shock.						
2229 3	S - P = 44.1 sec.				211 miles		Very faint shock.
2230 3	Very slight local shock.						

No. / Date	Phase	Time h m s	Period T	Trace Amplitude E	N	Z	
PIERCE FERRY							
2223 2							Distinct shock.
2224 2							
2225 2							Slight shock.
2226 2							
2227 3							
2228 3							
2229 3							Very faint shock.
2230 3							

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LAKE MEAD SEISMOLOGICAL STATIONS

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MONTH OF June 1940

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No. Date		Phase	BOULDER CITY Time h m s	Period T	Trace Amplitude E	N	Z	Phase	OVERTON Time h m s	Period T	Trace Amplitude E	N	Z	Phase	PIERCE FERRY Time h m s	Period T	Trace Amplitude E	N	Z
2231	3	eP?	18 08 10.3	2					Distinct distant shock.										
Ir		eL?	18 11.0	20					1000 miles.										
		eL	18 11.2																
		eS?	18 11 53	10															
		F	Runs into 2232																
2232	3	e	18 29 14	1.5					Very faint near shock.										
		F	19 15																
2233	4	eP?	10 35 59.4						S - P = 38.1 & 41.3 sec.		180		to 190 miles.						
		iP	10 36 08.3																
		iP	10 36 09.3						Distinct shock.		Maximum amplitudes—7 m.m.								
		iS	10 36 46.4																
		iS	10 36 50.6	0.7															
		F	10 44																
2234	4	e	10 57 49						Very faint near shock.										
		F	10 59																
2235	4	e	11 57 56.?						Very faint near shock.										
		F	12 00																
2236	4	e	23 34 46						Very faint near shock.										
		F	23 37																
2237	5	e	0 04 48.						Very faint near shock.										
		F	0 07																
2238	5	e	2 12 05.						Very faint near shock.										
		F	2 14																
2239	5	e	8 28 55.						Very faint near shock.										
		F	8 30																

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LAKE MEAD SEISMOLOGICAL STATIONS

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MONTH OF June 1940

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No.	Date	Station	Phase	Time h	Time m	Time s	Period T	Trace Amplitude E	Trace Amplitude N	Trace Amplitude Z	Remarks
2240	5	BOULDER CITY	e	11	07	53					
			e	11	08	08					
			e	11	13	16.8?					
			e	11	18	18.8?					
			iS	11	19	06					
			F	12	45						
		OVERTON	Iu								S - P = 12m 13s 7,500 miles? Distinct shock.
2241	5	BOULDER CITY	eP?	17	53	26.3					
			iS	17	53	26.8					
			F	17	53	40					
		OVERTON									Very slight local shock. 12 miles.
2242	5	BOULDER CITY	eP?	21	13	30					
			eS	21	14	11					
			F	21	17						
		OVERTON									Very faint near shock. 197 miles.
2243	5	BOULDER CITY	eP?	22	54	46					
			iS?	22	54	19.3	0.6				
			S	22	55	28.0	1.2				
			F	23	03						
		OVERTON									S - P = 33 sec. 160 miles. Faint shock.
2244	6	BOULDER CITY	e	2	28	09					
			e	2	28	43					
			F	2	32						
		OVERTON									Very faint shock.
2245	6	BOULDER CITY	e	8	24	22.1					
			F	8	26						
		OVERTON									Very faint shock.
2246A	6	BOULDER CITY	e	8	52	44					
			i	8	53	25					
			F	8	55						
		OVERTON									Very faint shock. 200 miles.
2246B	6	BOULDER CITY	e	14	10	33					
		OVERTON									Very faint shock.
2247	6	BOULDER CITY	i	17	02	09.2					
			F	17	02.3						
		OVERTON									Very slight near shock.
2248	6	BOULDER CITY	i	21	49	39					
			F	21	49.8						
		OVERTON									Very slight local shock.

PIERCE FERRY

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MONTH OF June 1940

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No.	Date	Station	Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z	Remarks
2249	6	BOULDER CITY	e?	22	21	55.8					
			eP	22	21	56.2					
			iS	22	22	33.5	0.8				
			F	22	29						
		OVERTON									S - P = 36.6 sec. 177 miles. Faint shock.
		PIERCE FERRY									
2250	6	BOULDER CITY	eP?	23	22	02.2					
			e	23	22	02.8					
			iS?	23	22	40.6					
			iS	23	22	43.4					
			F	23	24.4						
		OVERTON									S - P = 38.4 or 41.6 sec. 185 miles. Faint shock.
		PIERCE FERRY									
2251	6	BOULDER CITY	e	23	29	34.5					
			i	23	30	19.5	0.7				
			F	23	31.5						
		OVERTON									Very faint shock. 215 miles.
		PIERCE FERRY									
2252	6	BOULDER CITY	e?	23	48	36.3					
			e	23	48	42.2					
			iS	23	49	06.7	0.6				
			F	23	52						
		OVERTON									Very faint shock. 145 miles.
		PIERCE FERRY									
2253	6	BOULDER CITY	e?	23	57	18.9					
			e	23	57	23.6					
			iS	23	57	53.7					
			iM	23	58	16	1.5				
			F	0	02.5						
		OVERTON									Faint near shock 165 miles.
		PIERCE FERRY									
2254	6	BOULDER CITY	i	23	57	44					
			F	23	57	50					
		OVERTON									Very slight local shock? Superposed on 2253
		PIERCE FERRY									
2255	7	BOULDER CITY	i	2	11	21.2					
			F	2	12.7						
		OVERTON									Very faint near shock.
		PIERCE FERRY									
2256	7	BOULDER CITY	i	2	25	26.3					
			F	2	26.3						
		OVERTON									Very faint near shock.
		PIERCE FERRY									

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MONTH OF June 1940

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No.	Date	Station	Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z	Remarks
2257	7	BOULDER CITY	i	5	13	19.1					Very faint near shock.
			F	5	14	6					
2258	7	BOULDER CITY	eP	5	15	02					Small near shock. 190 miles?
			i	5	15	07.5	0.6				
			iS	5	15	41.7	0.8				
			i	5	15	48					
			F	5	18	8					
2259	7	BOULDER CITY	eP?	10	26	00.3					S - P = 26^s Faint shock. 125 miles?
			iS	10	26	26.5					
			F	10	30						
2260	7	BOULDER CITY	e?	15	36	13.0					Very faint near shock. 165 miles?
			eP	15	36	17.6					
			iS	15	36	47					
			F	15	39						
2261	7	BOULDER CITY	eP?	21	47	01					Very faint near shock. 140 miles.
			eS	21	47	30					
			F	21	50						
2262	8	BOULDER CITY	e?	17	11	11.2					Faint near shock 173 miles.
			eP	17	11	12.0					
			iS	17	11	47.5					
			M	17	11	55	1.0	+1			
			F	17	14	2					
2263	8	BOULDER CITY	eP?	19	05	19.9					Very slight local shock. 4 miles?
			iS	19	05	20.7					
			F	19	05	25.0					
2264	8	BOULDER CITY	P	20	06	37.0					S - P = 1.3 sec. 6.3 miles Very slight shock.
			S	20	06	38.3					
			F	20	06	50					

OVERTON

PIERCE FERRY

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No. Date		BOULDER CITY Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z	OVERTON Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z	PIERCE FERRY Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z	
2265	9	eP?	2	36	17																					Very faint near shock.
		iS	2	36	50																					160 miles?
		F	2	38																						
2266	9	iP	2	41	28.2																					S - P = 2.8 sec.
		iS	2	41	31.0																					13.5 miles
		F	2	42.3																						Slight shock felt in Boulder City.
2267	9	eP?	2	54	30.3																					Very slight local shock.
		iS	2	54	31.1																					4 miles?
		F	2	54	40																					
2268	9	i	21	15	50.1																					Very slight local disturbance.
		F	21	15	55																					
2269	9	i	23	46	18.1																					Very slight local disturbance.
		F	23	46	25.0																					
2270	10	i	2	14	02.5																					Faint disturbance.
		F	2	17																						
2271	10	i	16	44	25.5																					Very slight local shock.
		F	16	44	35																					
2272	10	i	19	55	35.0																					Very slight local shock?
		F	19	55	37																					
2273	10	eP?	19	54	51.8																					Very slight local shock.
		iS	19	54	52.8																					5 miles?
		F	19	55.0																						
2274	11	e?	2	35	08.																					Very faint near shock.
		eS?	2	36	29.3																					102 miles.
		F	2	38																						
2275	11	iP	4	48	07.8																					S - P = 2.0 sec.
		iS	4	48	09.8																					9.6 miles.
		F	4	48.6																						Slight shock.

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LAKE MEAD SEISMOLOGICAL STATIONS

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MONTH OF June 19[illegible]

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No.	Date	BOULDER CITY Phase	Time h m s	Period T	Trace Amplitude E N Z	OVERTON Phase	Time h m s	Period T	Trace Amplitude E N Z	PIERCE FERRY Phase	Time h m s	Period T	Trace Amplitude E N Z	
2276	11	e	4 51 51				Very slight local shock.							
		F	4 52											
2277	11	eP	19 51 58.0				S - P = 35.3 sec.							
		i	19 52 03.1				170 miles.							
		iS	19 52 33.2				Distinct shock.							
		iS?	19 52 45.5											
		F	19 56.0											
2278	11	eP?	20 36 16				S - P = 30 sec.							
		eS?	20 36 46				145 miles?							
		F	20 40				Very faint near shock.							
2279	12	eP?	23 29 54.9				S - P = 3.4 sec.							
		iS	23 29 57.3				16 miles							
		F	23 29.2				Very slight							
2280	13	e	9 00 28				Very slight local shock.							
		i	9 01 30.2				10.5 miles							
		F	9 01 40											
2281	13	i	20 59 01.9				2 to 2½ sec. period waves							
		F	21 01											
2282	14	i	1 30 15.2				Very slight disturbance maybe local shock?							
		F	1 30 20											
2283	14	iP	6 19 26.2				S - P = 2.3 sec.							
		iS	6 19 28.5				11.2 miles							
		F	6 19.8				Very slight local shock.							
2284	14	eP?	13 58 23.6				S- P = 31s							
		eS	13 58 54.6				149 miles?							
		F	13 59.5				Very faint near shock.							

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LAKE MEAD SEISMOLOGICAL STATIONS

Bureau of Reclamation, National Park Service
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MONTH OF June 1940

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No. Date	Phase	BOULDER CITY Time h m s	Period T	Trace Amplitude E	N	Z	Phase	OVERTON Time h m s	Period T	Trace Amplitude E	N	Z	Phase	PIERCE FERRY Time h m s	Period T	Trace Amplitude E	N	Z
2285 14	iP	16 19 58.8	0.5					S - P = 1.9 sec.										
	is?	16 20 00.7?						9.2 miles										
	M	16 20 02	0.8	14				Strong shock felt in Boulder City and at Boulder Dam.										
	F	16 21.3																
2286 14	e	16 30 58.9						Very slight local shock.										
	F	16 31 10																
2287 14	iS	16 33 43.8						Very slight local shock.										
	F	16 33 50																
2288 14	eP?	16 45 36.8						Very slight local shock.										
	iS	16 45 38.4						7.5 miles.										
	F	16 45.8																
2289 14	e?	17 07 19.4						Very slight local shock.										
	F	17 07 25																
2290 14	e	17 21 19.2						Very slight local shock.										
	F	17 21 25																
2291 14	eP?	17 53 04.3						Very slight local shock.										
	iS	17 53 06.2						9.2 miles?										
	F	17 53 15																
2292 14	i	20 44 02.5						Very slight local shock.										
	F	20 44 10																
2293 14	eP	21 59 27.4						Very faint near shock.										
	e	21 59 32.5						170 miles.										
	iS	22 00 02.1	0.5															
	F	22 03																
2294 14	i	0 21 35.7						Very slight local shock.										
	F	0 21 40																

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LAKE MEAD SEISMOLOGICAL STATIONS

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BOULDER CITY

No.	Date	Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z
2295	15	eP?	5	29	07.1				
		iP	5	29	7.6				
		iS	5	29	09.6				
		F	5	29	30				
2296	15	i	6	40	23				
		F	6	40	30				
2297A	16	P	2	34	11.0				
		S	2	34	12.9				
		C	2	34	14.6				
		F	2	34	27				
2297B	17	iS?	7	58	06				
		F	7	58.2					
2298	17	eP	9	03	24.2				
		S	9	03	26.7				
		F	9	04.0					
2299	17	i	10	18	31.8				
		F	10	18	35				
2300	17	eP	10	34	10.8				
		eS?	10	40	08				
		eS	10	44	45				
		M	10	48.7		8.0			
		F	12	20					
2301	17	i	15	52	08				
2302	17	eP?	18	24	29.6				
		iS	18	24	31.6				
		F	18	24.7					

OVERTON

No.	Date	Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z
2295	15								
2296	15								
2297A	16								
2297B	17								
2298	17								
2299	17								
2300	17								
2301	17								
2302	17								

PIERCE FERRY

No.	Date	Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z
2295	15								
2296	15								
2297A	16								
2297B	17								
2298	17								
2299	17								
2300	17								
2301	17								
2302	17								

No.	Date	Remarks
2295	15	S - P = 2.5 sec. 12 miles Very slight shock.
2296	15	Very slight local shock.
2297A	16	S - P = 1.9 sec. 9.3 miles Very slight shock.
2297B	17	Slight local disturbance.
2298	17	S - P = 2.5 sec. 12.1 miles Very slight shock.
2299	17	Very slight local shock.
2300	17	S - P = 9m 57s to 10m 42s 2500 miles or more. Teleseism.
2301	17	Local disturbance
2302	17	Local shock S - P = 2 sec. 9.5 miles.

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M-107-4

LAKE MEAD SEISMOLOGICAL STATIONS

Bureau of Reclamation, National Park Service
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MONTH OF June 194[0]

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BOULDER CITY

No.	Date	Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z
2303	17	eP?	18	56	35.9				
		iS	18	56	37.9				
		F	18	56.8					
2304	17	eP?	19	05	16.0				
		iS	19	05	17.6				
		F	19	05.4					
2305	17	iP	20	25	10.0	0.2			
		iS	20	25	12.1	0.3	-2		
		fS	20	25	12.7				
		F	20	25.6					
2306	18	eP?	6	15	12.8				
		eP	6	15	21.6	0.4			
		iS	6	15	47.1	0.7	+1.3		
		i	6	15	54.3	0.7	-2		
		F	6	18.3					
2307	18	eP?	13	09	34.0				
		iS?	13	09	36.2				
		F	13	09.8					
2308	18	eP?	13	58	27.6				
		iS?	13	58	30.0				
		F	13	58.6					
2309	18	e?	14	14	34.9				
		iS?	14	14	35.9				
		F	14	14.7					
2310	18	eP?	15	19	56.6				
		iS	15	19	58.6				
		F	15	20.2					

OVERTON

Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z
	Local shock						
	S - P = 2 sec.						
	9.5 miles.						
	Local Shock						
	S - P = 1.6?						
	7.5 miles						
	Local shock						
	S - P = 2.1 sec.						
	10 miles						
	Near shock						
	S - P = 34.3 sec. or less						
	165 miles?						
	Local shock. S - P = 2.2						
	10 miles.						
	Local shock, faint						
	11.5 miles						
	Faint, local						
	4.8 miles						
	Faint local shock.						
	9.5 miles						

PIERCE FERRY

Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z

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M-10774

LAKE MEAD SEISMOLOGICAL STATIONS

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and Coast and Geodetic Survey

MONTH OF June 194

Time used is ~~P.S.T.~~ or G.C.T. Strike out whichever does not apply.

BOULDER CITY

OVERTON

PIERCE FERRY

No.	Date	Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z	Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z	Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z
2311	18	eP	15	28	58.4																				
		iS	15	29	00.2	0.4	-1.5																		
		F	15	29	.4																				
											Local shock. Felt at Boulder Dam as short sharp shock of 1 sec. 8.5 miles								duration accompanied by loud rumble.						
2312	18	e	18	48	10																				
		F	18	51	.5																				
											Faint near shock														
2313	19	e	0	35	35																				
		F	0	36	.5																				
											Faint waves may not be seismic.														
2314	19	eP?	12	49	28.8																				
		iS	12	49	31.0																				
		F	12	49	.8																				
											Small local shock. Felt at Boulder Dam as moderate shock of about 2 sec. duration accompanied by rumbling sound. Noticed in central part of power plant only. 10.5 miles.														
2315	19	eP?	15	41	03.3																				
		iS	15	41	05.4																				
		F	15	41	.4																				
											Small local shock. 10 miles.														
2316	19	eP?	16	04	18.0																				
		iS	16	04	20.1																				
		F	16	04	.6																				
											Local shock. Felt at Boulder Dam, in control room only, as light shock of 1 sec. duration. 9 miles.														
2317	19	eP	17	32	13.5																				
		iS	17	32	15.5																				
		F	17	32	.4																				
											Local shock. Felt at Boulder Dam as heavy shock of about 2 sec. duration. Loud rumbling sound seemed to come from Nevada canyon wall south of the plant. 9.5 miles.														
2318	19	e	17	47	33																				
		F	17	48	.0																				
											May not be seismic.														
2319	19	eP?	23	47	29.5																				
		iS	23	47	33.4																				
		F	23	47	.8																				
											Local shock. 19 miles.														
2320	20	eP?	0	49	26.2																				
		eS	0	49	30																				
		F	0	49	.7																				
											Small local 8.5 miles.														

International Seismological Centre

LAKE MEAD SEISMOLOGICAL STATIONS

Bureau of Reclamation, National Park Service
and Coast and Geodetic Survey

MONTH OF June 194

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	BOULDER CITY							OVERTON							PIERCE FERRY						
No. / Date	Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z	Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z	Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z
2321 20	e	1	37	16					Faint seismic disturbance.															
	F	1	37.4																					
2322 20	i	3	01	15					Origin?															
	F	3	01.3																					
2323 20	iP	4	16	21.5	0.4	-2			Local shock. 8.2 miles.															
	is	4	16	23.2	0.7	-7																		
	F	4	17.5																					
2324 20	e	5	48	41					Faint local shock.															
	F	5	48.9																					
2325 20	e	8	51	35					Faint local shock.															
	F	8	51.8																					
2326 21	e	6	31	39					Faint local shock.															
	F	6	31.8																					
2327 22	is	13	00.3						Faint local shock. Poor time marks.															
2328 22	is	14	29.5						Faint local shock, no time marks here.															
	F	14	29.6																					
2329 22	eP	16	49	46.8?					Local shock. 14.5 miles.															
	is	16	49	49.8	0.5?	1.2																		
	F	16	50.3																					
2330 22	eP	19	05	01.3?					Local shock. 18 miles.															
	is	19	05	05.0	0.5?	-1.2																		
	F	19	05.5																					
2331 22	is	21	15	24					Faint local shock.															
	F	21	15.7																					
2332 23	e?	7	07	48					Faint near shock.															
	is	7	08	23					S - P = 35 sec.?															
	F	7	09.8																					

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LAKE MEAD SEISMOLOGICAL STATIONS

Bureau of Reclamation, National Park Service
and Coast and Geodetic Survey

MONTH OF June 194 0

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BOULDER CITY

No. Date	Phase	Time h m s	Period T	Trace Amplitude E	N	Z
2333 23	eP	19 01 28.2?				
	iS	19 01 30.9	0.5?	-1		
	F	19 01.8				
2334 23	eP	21 29 18.0?				
	iS	21 29 20.5				
	F	21 29.7				
2335 23	eP	21 44 05?	2			
	G	21 47 17	15			
	eS?	21 48 55	6?			
	e	21 49 09	6			
	F	22 01				
2336 24	e	5 58 46				
	F	5 59.0				
2337 24	e	16 40 15.9?				
	e	16 40 20.4				
	i	16 40 51	0.5			
	F	16 43.8				
2338 24	eP?	21 16 20.6?				
	iS?	21 16 21.3		1.5		
	iS	21 16 23.3		2.0		
	F	21 16.7				
2339 25	eP	20 15 24.6?				
	iS	20 15 26.4				
	F	20 15.6				
2340 26	e	4 55 48?				
	iS?	4 56 28.5				
	F	4 58.2				

OVERTON

Phase	Time h m s	Period T	Trace Amplitude E	N	Z
	Faint beginning, local shocks. 13? miles.				
	Faint local shock. 7? miles.				
	Small distant quake. 2000 miles?				
	Small local disturbance.				
	Waves of near shock. S - P = 35 sec.? 168 miles?				
	Local shock. 3 miles?				
	Local Shock. 8.5 miles.				
	Near shock. S - P = 40.5 sec. 195? miles.				

PIERCE FERRY

Phase	Time h m s	Period T	Trace Amplitude E	N	Z

International Seismological Centre

LAKE MEAD SEISMOLOGICAL STATIONS

Bureau of Reclamation, National Park Service
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MONTH OF June 194

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BOULDER CITY

OVERTON

PIERCE FERRY

No.	Date	Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z	Remarks
2341	27	e	17	54	38					Faint local shock.
		F	17	54	8					
2342	27	eP	17	56	06.1					Local shock.
		iS	17	56	07.9	0.4	1.6			8.5 miles.
		F	17	56	3					
2343	28	e	20	53	10?					Near shock, faint.
		eS	20	53	48					S - P = 38 sec.?
		F	20	55	1					180? miles.
2344	29	e	7	11	15					Faint, near shock.
		F	7	12	0					
2345	29	iS	8	10	37					Faint, local shock.
		F	8	10	7					
2346	29	iS	12	30	13					Faint, local shock.
		F	12	30	3					
2347	29	e	16	27	59					Faint, near shock.
		eS	16	28	17					S - P = 18 sec.
		F	16	29	3					150 miles?

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LAKE MEAD SEISMOLOGICAL STATIONS

Notation used in instrumental reports, 1940

1. Wave groups or phases:

P First preliminary tremors; longitudinal waves. Used when no differention is made as below.

Pg Longitudinal waves. The path is entirely in the upper layer.

P* Upper first preliminary tremor whose path lies along the top on the intermediate layer except for short distances in the surface layer.

P_n Normal longitudinal waves that have passed below the continental layer.

PP Normal longitudinal waves reflected once at the earth's surface.

PPP Normal longitudinal waves reflected twice at the earth's surface.

S Second preliminary tremors; transverse waves. Used when no differentiation is made, as below.

Sg Transverse waves. The path is entirely in the upper layer.

S* Upper second preliminary tremor whose path lies along the top of the intermediate layer except for short distances in the surface layer.

S_n Normal transverse waves that have passed below the continental layer.

SS Normal transverse waves reflected once at the earth's surface.

SSS Normal transverse waves reflected twice at the earth's surface.

Q Surface shear waves in which the earth particles oscillate in the horizontal plane normal to the direction of propagation.

L Long waves, unidentified, at the beginning of the surface phase or "main phase."

M Waves of maximum amplitude in the main phase, generally referred to surface waves.

m Waves having maximum trace amplitudes, generally referred to local or near shocks.

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2. Nature of motion:

i Impulsive and sharply defined beginning of a phase.

e Poorly defined emergence of a phase.

T Period of wave.

In the Lake Mead reports, trace amplitudes; ie, movement of trace on record from rest position, will be measured in millimeters.

3. Deduced Data:

Epicentral distances or distances to origin of disturbance.

Local- - - - - -from 0 to 70 miles.

Near- - - - - - - from 70 to 700 miles.

Distant - - - - from 700 to 3500 miles.

Teleseismic - - greater than 3500 miles.

Until the Pierce Ferry station is in operation, distances from each station will be estimated by the S - P method, and the location of the epicenter, by direction of first impulse.

Until further notice, distances of local shocks will be based on 4.8 miles per 1 second S - P interval. Distances of near shocks will be based on Gutenberg's 1931 travel time curves for Southern California.

4. CONSTANTS OF SEISMOGRAPH:

T_o Free or undamped period of the seismograph pendulum.

V Static magnification.

$\frac{1}{}$ Ratio of successive damped amplitudes.

M Weight of seismograph inertia mass measured in grams.

International Seismological Centre

Lake Mead Seismological Stations

INSTRUMENTAL CONSTANTS - 1940

BOULDER CITY, Nevada, Bureau of Reclamation, Administration Building. Tom C. Mead in charge.

Position: Lat. 38° 58' 51" N., Long. 114° 50' 02" W., elevation 776 m. Underlying ground; fractured Monzonite.

Instruments:

WOOD-ANDERSON torsion seismometer; E - W component. M = 1.19 g; T_o = 0.95 sec., ↼ = 9:1, V = 2220. Photographic recording, 60 mm per minute. Time corrections obtained daily by radio. Impulse upward corresponds to eastward ground movement. Use beginning of time breaks.

SURVEY VIBRATION METERS: E - W and N - S components; T_o = 1.5 sec.; ↼ = ca 6:1; V = ca 1000. Photographic recording: 15 mm per minute, both components on same drum. Impulse upward corresponds to southward and eastward ground movement. This seismograph was installed for trial use June 29, 1940 and was discontinued July 17, 1940.

OVERTON, Nevada, D. S. Carder in charge; Perry Convis, observer.

Position: Lat. 36° 31' 52" N., Long. 114° 26' 33" W., elevation 395 m. Underlying ground; terrace gravel overlying fine playa silt with gypsum cement.

Instruments:

NEUMANN-LABARRE vibration meters; E - W and N - S components; T_o = 0.65 sec.; ↼ = ca 6:1; V = ca 8000. Photographic recording; 15 mm. per minute, both components on same drum. Impulse upward corresponds to ground movements westward and southward. Time corrections obtained daily by radio and impressed upon the record, exact hour at beginning of break. Automatic impression of correct time on record several times daily began September 24, 1940. Serviceable recordings at this station began about August 1, 1940. Seismograph is disturbed twice daily by passing train at a distance of about 800 feet.

International Seismological Centre

Errata and additions to the June, 1940 report.

Earthquake No.		
2216	Correct iP to read	iP 19:51:52.0
2231	Insert after eP? Change eS? to M	eS 18:10:35
2240	Delete S	
2243	Delete ? after S and change to read	iS 22:55:19.3
2271	Change i to read	i 16:44:26.5
2273	Change to read	eP? 19:55:51.8 iS 19:55:52.8 F 19:56.0
2275	Change the minute reading from 48 to 49	
2280	Change e to read	e 9:01:28
2288	Change the minute reading from 45 to 46	
2289	Change to read	e 17:07:29.4 F 17:07:35
2302	Change the minute reading from 24 to 25	
2327	Change to read	eP 13:00:19.6 iS 13:00:21.0 F 13:00.5
2335	Substitute e for G and delete S?	

International Seismological Centre

LAKE MEAD SEISMOLOGICAL STATIONS

Instrumental Report - July, 1940

During July, 1940, the seismograph at Boulder City recorded 64 seismic and one artificial disturbances.

The local disturbances were divided as follows:

20	local shocks some of which were probably artificial, in the probable range up to 6 miles.
6	local shocks in the range 6 to 12 miles.
7	at unknown distance but probably less than 20 miles.
Total 33	

The earthquakes of the near group ranged from 100 to 320 miles. The distance of 6 ranged from 140 to 175 miles. The distances of nine more could not be estimated. Three distant shocks and one questionable, 2,000 to 3,200 miles. Four teleseisms, 3,500 to 5,200 miles, were recorded.

International Seismological Centre

LAKE MEAD SEISMOLOGICAL STATIONS

Bureau of Reclamation, National Park Service
and Coast and Geodetic Survey

MONTH OF July 194 0

Time used is ~~P.S.T. or~~ G.C.T. Strike out whichever does not apply.

		BOULDER CITY							OVERTON							PIERCE FERRY						
No.	Date	Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z	Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z	Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z
2348	2	?eP	17	21	31.6						Local														
		iS	17	21	34.2		+1																		
		F	17	21.7																					
2349	2	?e	19	20.7		4					Near														
		F	19	22																					
2350A	3	e	18	32	37						Local														
		eS	18	32	39	0.8																			
2350B	4	e	3	47	40						Near shock?														
		e	3	47	54	½																			
2351	4	?e	19	20	49.2						Local														
		e			50.0																				
		i			51.8	0.3	1.8																		
		F	19	21																					
2352	5	?e	11	25	01.7						Local														
		i			3.5		0.8																		
		i			4.1																				
		F	11	25.1																					
2353	5	?e	11	25	16.7						Local														
		i			17.5		0.9																		
		i			18.2																				
		F	11	25.4																					
2354	5	?e	22	13	36.1						Local														
		i	22	13	37.6		0.8																		
		F	22	13.7																					
2355	6	eP	3	49	21.0	1.2	Teleseism. USCGS Reasonably good record on Survey meters.																		
		e	3	49	59.5		(11°N,61°W, 3:40:00)																		
		eS	3	56	39	4	3520 mi.																		
		F	4	03.9																					

International Seismological Centre

M-1073

LAKE MEAD SEISMOLOGICAL STATIONS

Bureau of Reclamation, National Park Service
and Coast and Geodetic Survey

MONTH OF July 194 0

Time used is P.S.T. or M.S.T. or C.T. Strike out whichever does not apply.

BOULDER CITY

No.	Date	Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z
2356	6	?eP	21	58	03.8				
		iS			06.0	0.2?	1.5		
		F	21	58.2					
2357	7	?e	1	51	36				
		?e	1	51	50				
		iS	1	52	21				
		F	1	53.4					
2358	7	eP	5	14	05.2				
		iS	5	14	06.9				
		M	5	14	07	0.2	2.5		
		F	5	14.5					
2359	7	?eP	18	44	18				
		eP			31				
		eS	18	45	32.6				
		F	18	48.6					
2360	8	?eP	10	05	49.4				
		iP			52.0				
		iS	10	06	35.5				
		F	10	09.5					
2361	8	?eP	10	58	40.5				
		iP	10	58	43.1				
		eS		59	29	0.7			
		iS			34	1.0			
		F	11	02.8					
2362	9	eP	6	21	27.5				
		iS			28.5		2		
		F	6	21.7					

OVERTON

Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z

PIERCE FERRY

Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z

Local
10 miles.

Near
200 miles.

Local
7 miles.

Near
320 miles

Near
200 miles.

Near
210 miles

Local—poorly developed record paper.
4 miles.

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LAKE MEAD SEISMOLOGICAL STATIONS

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and Coast and Geodetic Survey

MONTH OF July 1940

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BOULDER CITY

No.	Date	Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z
2363	9	iP	14	57	19.0	0.3	1.5		
		iS			20.0	0.4	-15		
		F	14	57.8			7		
2364A	10	eP	6	01	12.6				
		iP		01	22.0				
		i		01	30	1.0	-1.5		
		eS		10	34	5			
		F	6	22					
2364B	10	e	23	33	02.7		0.5		
		e	23	33	04.0				
		F	23	33					
2365	12	?eP	14	33	23.8				
		iS	14	33	24.9		1.0		
		F	14	33.5					
2366	12	eP?	19	07	46	2?			
		F	19	12					
2367	13	?eP	14	02	47.1				
		iS	14	02	48.1		0.6		
2368	13	eP	16	40	22.4				
		iS	16	40	58.5				
		i	16	41	02.9	1			
		F	16	43.4					
2369	13	eP	16	55	12.1				
		eS	17	01	30				
		F	17	27					

OVERTON

No.	Date	Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z
2363	9								
2364A	10								
2364B	10								
2365	12								
2366	12								
2367	13								
2368	13								
2369	13								

PIERCE FERRY

No.	Date	Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z
2363	9								
2364A	10								
2364B	10								
2365	12								
2366	12								
2367	13								
2368	13								
2369	13								

No.	Remarks
2363	Local 4 miles.
2364A	Teleseism. USCGS. (45° N, 128° E, 05:50.5) 4970 miles.
2364B	Faint local.
2365	Local 4 miles.
2366	Faint distant shock.
2367	Local 4 miles.
2368	Near 175 miles.
2369	Distant. USCGS. (7° N, 83° W, 16;47:30) 2830 miles.

International Seismological Centre

LAKE MEAD SEISMOLOGICAL STATIONS

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MONTH OF July 1940

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No. Date		Phase	BOULDER CITY Time h m s	Period T	Trace Amplitude E	N	Z	Phase	OVERTON Time h m s	Period T	Trace Amplitude E	N	Z	Phase	PIERCE FERRY Time h m s	Period T	Trace Amplitude E	N	Z
2370A	13	?eP	18 46 15																
		eP	25.2						Near.										
		iS	44.0						140 miles.										
		i	49.4	0.8															
		F	48.5																
2370B	13	eP	18 57 42.6																
		iS	44.1	0.3	1.0				Local										
		F	18 57.8						6 miles.										
2371	13	eP?	22 51 54																
		eS	22 52 29						Near. P may come in earlier.										
		F	53.7						150 miles.										
2372	13	eS	23 22 17																
		F	23 22.6						Near?										
2373	14	eP	0 02 47																
		eS	0 03 19						May come in here.										
		i	0 03 23.2						Near. 150 miles.										
		F	0 05.0																
2374	14	eP	5 47 30.0																
		iS	30.6	0.5	5				Local. 2 miles.										
		F	47.8																
2375	14	eP	6 01 39.6	2.5	+1.5	-0.7			Teleseism. USCGS										
		e	6 01 47						(52° N, 178° E, 5:52:48)										
		eS	6 08 37	5					3240 miles.										
		i	6 08 58																
		eL	6 14.5																
		F	8 50																

International Seismological Centre
M-1073

LAKE MEAD SEISMOLOGICAL STATIONS

Bureau of Reclamation, National Park Service and Coast and Geodetic Survey

MONTH OF July 194 0

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No. Date		BOULDER CITY Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z	OVERTON Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z	PIERCE FERRY Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z	
2376	14	eP	14	56	40.9																					Local. 2 miles.
		iS			41.5	0.2	1.0																			
		F		56	8																					
2377	15	eP	2	33	46.0																					Near. 180 miles.
		iS		34	28.0																					
		F		36	8																					
2378	16	eS	0	04	55																					Faint near shock.
		F	0	07	2																					
2379	16	e	3	25	13																					Faint trace of distant earthquake.
		e	3	35	30																					
		F	3	48																						
2380	19	e	4	56	53	1.0																				Faint trace of near earthquake.
		F	4	58																						
2381	20	e	2	05	42	2.0																				Faint trace.
		F	2	08																						
2382	21	eP	8	37	01.7																					Near. 150 miles.
		eP	8	37	02.9																					
		iS	8	37	38.9																					
		iS	8	37	42.7	0.8																				
		F	8	40	5																					
2383A	22	eP?	23	01	38.4																					Near. 170 miles.
		eP		01	40.5																					
		iS		02	27.9	0.6	0.7																			
		iS		02	30.9	2.2	0.8																			
		F	23	06	3																					
2383B	24	?eP	14	03	56.8																					Local. ½ miles.
		iS			57.5	0.37	1.5																			
		F	14	04	0																					

3

International Seismological Centre
M-1073

LAKE MEAD SEISMOLOGICAL STATIONS

Bureau of Reclamation, National Park Service
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MONTH OF July 1940

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BOULDER CITY

No.	Date	Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z
2384	25	e	14	03	42	0.5			
		F	14	03.8					
		Faint trace of near shock.							
2385	25	eP	20	02	41.3				
		iS			42.4	0.3	2.0		
		F		03.0					
		Local. ~~4~~ 5 miles.							
2386	25	i	20	27	34		0.7		
		F		27.6					
		Local.							
2387	25	eP	22	57	40.9				
		iS			41.5	0.3?	1.2		
		F		57.8					
		Local. 2 miles.							
2388	26	e	6	47	12	0.5?			
		F		47.8					
		Faint trace of near shock.							
2389	26	i	7	18	47		0.8		
		F		18.9					
		Faint local shock.							
2390	26	eP	11	27	47.9				
		iS	11	27	48.5	0.3	1.0		
		F	11	27.9					
		Local. ~~2~~ 3 miles.							

OVERTON

Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z

PIERCE FERRY

Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z

International Seismological Centre

M-1074-4

LAKE MEAD SEISMOLOGICAL STATIONS

Bureau of Reclamation, National Park Service
and Coast and Geodetic Survey

MONTH OF July 1940

Time used is P.S.T. or G.C.T. Strike out whichever does not apply.

No.	Date	BOULDER CITY Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z	OVERTON Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z	PIERCE FERRY Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z
2391	26	?eP	11	57	55.0																				
		eP			55.5																				
		iS			56.0	0.3	1.8																		
		i			56.7																				
		F	11	58.0																					
		Local. 4 miles.																							
2392	26	iS	17	29	40.5		0.6																		
		F	17	29.7																					
		Faint local disturbance.																							
2393	26	?eP	21	25	12.5																				
		eP			13.5																				
		iS			14.4	0.3	1.7																		
		i			15.6																				
		F	21	25.8																					
		Local. 8 miles.																							
2394	26	e	23	03	11																				
		e	23	03	36	0.8																			
		F	23	04.4																					
		Faint trace of near shock.																							
2395	27	eP	2	51	12																				
		iS	2	51	47.4																				
		i			54.0	0.6	0.7																		
		F		53.3																					
		Near shock. 150 miles.																							
2396	27	eP	13	38	38																				
		iP			43																				
		e	13	39	00																				
		eS	13	43	37	3.																			
		eL	13	49.3		6																			
		F	14	03																					
		Distant. 2000 miles.																							

International Seismological Centre
M-10-3-4

LAKE MEAD SEISMOLOGICAL STATIONS

Bureau of Reclamation, National Park Service
and Coast and Geodetic Survey

MONTH OF July 194 0

Time used is P. ~~S.T.~~ G.C.T. Strike out whichever does not apply.

No.	Date	BOULDER CITY Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z	OVERTON Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z	PIERCE FERRY Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z
2397	28	eP?	1	38	08						Faint shock. 230 miles.														
		eS		39	03																				
		F		40.3																					
2398	29	eP	7	46	09.6						Local. 12 miles.														
		iS			12.4	0.3	1.1																		
		F		46.3																					
2399	29	iP	20	18	04.4						Local. 6 miles.														
		iS			05.9	0.4	4.																		
		F		18.4																					
2400	29	?eP	20	54	24						Near. 150 miles.														
		eS		55	01																				
		F		56.3																					
2401	30	i	1	05	27		0.7				Faint disturbance.														
		F	1	05.5																					
2402	30	eP	13	45	32.8						4 miles.														
		iS			33.7	0.3?	1.6																		
		F		45.7																					
2403	30	e?	19	30	56						Doubtful.														
2404	31	eP	1	41	34.4	0.4	3				Local. 8 miles.														
		iS			34.5																				
		F		41.7																					
2405	31	eP	13	49	11.3						Faint local shock. 17 miles.														
		eS			13	0.1–0.5	0.5																		
		F	13	49.4																					
2406A	31	?eP	18	13	49						Local. 10 miles.														
		iS			51.2																				
		M			52	0.4	1.3																		
		F		14.1																					

International Seismological Centre

LAKE MEAD SEISMOLOGICAL STATIONS

Instrumental Report - August, 1940

During August, 1940, the Boulder City Seismograph recorded 67 shocks as follows:

22	local shocks of distances from 3 to 33 miles.
13	local disturbances, several probably artificial, unknown distance.
10	near shocks 70 to 300 miles.
4	near shocks at unknown distance.
3	well recorded distant and teleseismic shocks.
15	recorded traces of probable seismic waves from shocks at unknown distances.
67	Total.

Numbers 2435 and 2436 in this report undoubtedly should be combined in a single shock, which has the appearance of being from a blast, distance about 20 miles. Numbers 2474 and 2475 should likewise be combined.

The Overton station recorded several near and 1 distant shock. The Overton record is disturbed for about 20 minutes at each passing of a train which makes one round trip daily. The track passes at a distance of about 800 feet and the speed of the train is 10 to 12 miles per hour. Local shocks near Boulder City were not recorded at Overton or were masked by the train disturbance.

International Seismological Centre

M-1073-4

LAKE MEAD SEISMOLOGICAL STATIONS

Bureau of Reclamation, National Park Service
and Coast and Geodetic Survey

MONTH OF August 1940

Time used is ~~P.S.T. or~~ G.C.T. Strike out whichever does not apply.

No.	Date		Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z	Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z	Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z
				BOULDER CITY								**OVERTON**								**PIERCE FERRY**						
2406B		1	e	7	42	48	0.5	0.5																		
			P	7	42.9																					
			Faint trace of local shock.																							
2407		1	eP	12	51	33	2																			
			eS	13	01	15	8																			
			F	13	06		Teleseism. 5,175 miles.																			
2408		1	e	15	20	07	May be P.																			
			eP			09																				
			iP			15																				
			i			22																				
			i			26																				
			eS	15	29	48	8																			
			~~Surface~~	Teleseism. 5,180 miles.																						
			e	15	34	00	35												eS?	15	30	40				
			F	16	50														F	16	12		Faint waves.			
2409		1	e	19	32	19																				
			eP			21																				
			iS1			55.6																				
			iS2		33	02.7	0.8	-0.9																		
			F		35.1																					
			~~Maybe due earlier.~~ Near shock.																							
							200 miles.																			
2410		2	e	3	38	13	0.3	0.8																		
			F	3	38.3		Local shock.																			
2411		2	e	15	22	00																				
			S			13	0.8	0.7																		
			F		22.7		Defective end of record.																			
							Local to near shock.																			
2412		2	e	20	25	03																				
			S			07	0.3	0.8																		
			F		25.3		Local.																			

International Seismological Centre
M-1073

LAKE MEAD SEISMOLOGICAL STATIONS

Bureau of Reclamation, National Park Service and Coast and Geodetic Survey

MONTH OF August 1940

Time used is [redacted] G.C.T. Strike out whichever does not apply.

BOULDER CITY

No.	Date	Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z
2413	3	eP	9	29	26.1				
		iS			28.1				
		m			28.3	0.3	1.4		
		F		29.7					
		Local. 9 miles.							
2414	3	e	12	32	47.0				
		i			52				
		i			54				
		m			56	0.4	1.2		
		e			58	1.0	1.3		
		F		33.6					
		[redacted]. doubtful distance.							
		23 to 33 miles.							
2415	4	iS	13	19	43	0.3	0.7		
		F		19.8		Local. No P.			
2416	4	e	13	24	34	0.4			
		F	13	40.3		Maybe seismic waves.			
2417	4	e	13	25	12				
		F		25.4		Maybe seismic waves			
		and some train as 2416.							
2418	4	e	13	26	09	0.3			
		F		26.3		Maybe local or			
		some train as 2416.							
2419	4	e	13	37	38				
		iS			40.5	0.5	0.8		
		F	13	38.0					
		Local. 7 miles or more.							
2420	4	iS	13	39	36	0.4			
		F		39.8		Maybe local.			

OVERTON

Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z

PIERCE FERRY

Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z

International Seismological Centre

LAKE MEAD SEISMOLOGICAL STATIONS

Bureau of Reclamation, National Park Service and Coast and Geodetic Survey

MONTH OF August 19[illegible]

Time used is [illegible] or G.C.T. Strike out whichever does not apply.

No.	Date	Phase	BOULDER CITY Time h	m	s	Period T	Trace Amplitude E	N	Z	OVERTON Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z	PIERCE FERRY Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z
2421	4	eP	16	01	32																				
		iS			34	0.4	0.6																		
		F		01.7																					
		Local shock. 5 to 10 miles.																							
2422	4	e	18	16	12																				
		e			14																				
		eS			36	1.0	0.9																		
		F		18.2																					
		Near shock. 110 to 130 miles.																							
2423	5	e	8	28	14	1.5																			
		F		31.5																					
		Waves of near or distant shock.																							
2424	5	iS	16	28	35	0.2	0.9							In train disturbance?											
		F		28.7																					
		Small local shock. No P.																							
2425	6	eP	11	31	11.5																				
		iS			12	0.2	1.2																		
		F		31.4																					
		Small local shock. 2 to 3 miles.																							
2426	7	e	2	39	15.5	P?																			
		iS?			16.5																				
		iS			16.8	0.2	0.9																		
		Local shock. 4 to 5 miles.																							
2427	7	e	3	07	21	1																			
		F	3	11.0		Seismic wave?																			
		Near or distant shock.																							
2428	7	eP	4	31	05.3																				
		iS			06.4	0.3	2.0																		
		m			07	0.3	3.5																		
		F		3.6		Moderate local shock.																			
		Miles. Felt at Boulder Dam Power House.																							
		Slight shock. Up and down motion.																							

International Seismological Centre

LAKE MEAD SEISMOLOGICAL STATIONS

Bureau of Reclamation, National Park Service
and Coast and Geodetic Survey

MONTH OF August 1940

Time used is ~~P.S.T.~~ or G.C.T. Strike out whichever does not apply.

No. Date		Phase	BOULDER CITY Time h	m	s	Period T	Trace Amplitude E	N	Z	Phase	OVERTON Time h	m	s	Period T	Trace Amplitude E	N	Z	Phase	PIERCE FERRY Time h	m	s	Period T	Trace Amplitude E	N	Z
2429	8	eP	1	30	20.5																				
		iS			21.8																				
		m			22	0.3	0.7																		
		F		30.5																					
		Faint local shock. 6 miles.																							
2430	8	e	13	15	04	1-3																			
		F	13	21		Seismic? waves.																			
2431	9	e	2	52	04																				
		eP			05.8																				
		iS			06.8	0.2	1.7																		
		F		52.5		Local shock.																			
		10 to 14 mi. Felt at Boulder Dam Power House. Short sharp shock. 2 second duration.																							
2432	9	iSm	12	40	30	0.37	1.2												Record spoiled.						
		F	12	40.6		Local. No F.																			
2433	10	eP	7	55	27.0														Record spoiled.						
		iS			28.9																				
		m			29	0.2	1.1																		
		F		55.7		Local shock. 9 mi.																			
2434	11	e	16	58	30	1.5																			
		F	17	02.0																					
		~~Impulse of tremor.~~																							
2435	11	e	18	58	28.8																				
		iS			29.9	0.3	1.5																		
		m			30.5	0.3	2.2																		
		~~Impulse seen in there~~. Local shock. Not noticed on Overton, would indicate that it might be very local to Boulder. But Overton not good.																							

International Seismological Centre

M-1074-4

LAKE MEAD SEISMOLOGICAL STATIONS

Bureau of Reclamation, National Park Service
and Coast and Geodetic Survey

MONTH OF August 194[illegible]

Time used is P.S.T. or G.C.T. Strike out whichever does not apply.

BOULDER CITY

No. Date		Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z
2436	11	i			32.4				
		im			33.2	0.3	2.2		
		P			59.8				
		[illegible]							
2437	12	e	17	11	42				
		is			44.5	0.47	1.0		
		P	17	12	0.0				
		Local shock. 14+ miles.							
2438	12	e	23	00	03.5				
		e		00	39.5				
		es		00	41.5	0.8	0.5		
		P		01	8				
		Near shock. 100 miles.							
2439	13	e	0	45	57.4				
		ism			58.7	0.37	1.7		
		P		46	1	Local shock. 6 mi.			
2440	13	e	15	49	19				
		e	15	49	26	1.5			
		e	15	59	54	6+			
		P	16	02		Telesism or distant shock. Faint.			
2441	13	e	22	08	52				
		es?	22	09	50				
		P		12	7	Near shock. 300 miles.			
2442	14	eP	7	18	26.7				
		is			27.2	0.2	2.0		
		P		18	7	Local shock. 2 to 3 miles.			

OVERTON

Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z

PIERCE FERRY

Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z

International Seismological Centre

LAKE MEAD SEISMOLOGICAL STATIONS

Bureau of Reclamation, National Park Service and Coast and Geodetic Survey

MONTH OF August 1940

Time used is P.S.T. or ~~G.C.T.~~ Strike out whichever does not apply.

BOULDER CITY

No.	Date	Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z
2443	15	e	4	40	24				
		e		43	23				
		F		48		Faint seismic? waves.			
2444	15	e	4	57	40				
		e	5	00	38				
		F	5	06		Faint seismic? waves.			
2445	15	e	21	35	58				
		es		36	39	Near shock.			
		F		38.4		220 miles or more.			
2446	16	e	1	35	32				
		es			46.5				
		m			48	0.4	1.0		
		F		36.5		Near shock. 70 mi.			
2447	16	e	2	33	43	1.5			
		F	2	35.4		Faint seismic waves.			
2448	19	e	0	01	32	0.8			
		F		02.3					
		Faint seismic waves(near ?)							
2449	19	e	18	26	15	0.8			
		F		27.0					
		Faint seismic waves(near?)							
2450	21	e	6	57	24	1.0			
		F		57.8					
		Faint seismic waves(near?)							
2451	21	e	18	28	30				
		F		28.8		Faint seismic waves.			

OVERTON

Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z
iP	1	35	26				
is		35	37	?	4.0		
F		36.2					

PIERCE FERRY

Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z
				?	Lines fuzzy and rough, doubtful if on Overton		
					Slight shock, [illegible].		
					de[illegible]re. Location, 20 mi. N. of Sheep		
					Mountain or E. of L. Granite Gorge.		
					53 mi. ca.		

International Seismological Centre

LAKE MEAD SEISMOLOGICAL STATIONS

Bureau of Reclamation, National Park Service
and Coast and Geodetic Survey

MONTH OF August 194 0

Time used is P.S.T. or G.C.T. Strike out whichever does not apply.

No.	Date	Station	Phase	h	m	s	Period T	Trace Amplitude E	N	Z
2452	22	BOULDER CITY	eP	3	34	46	1.5			
			e			52	4	-1		
			eS		40	30	15	-1		
			e		43	43	20	-1		
			e		46	15	10	1.5		
			E		47	55	10	2		
			F	5	49					
			Distant earthquake. 2660 miles.							
2453	23		eP	10	21	33.0				
			i			33.9				
			e			34.	0.3	1.0		
			F		21.7		Local shock. 4 mi.			
2454	23		e	21	30	47	0.4			
			eS		31	02				
			F		31.7					
			Near shock? 75 or more miles ~~distant~~.							
2455	24		e	5	45	11.7				
			i			12.7				
			e			14	0.3	2.3		
			F		45.4		Local shock. 5 mi. or more.			
2456	24		i	10	02	32.5	0.3	0.7		
			F		02.6		Faint local shock.			
2457	24		e	13	07	15				
			i			17.5		0.6		
			F		07.4					
			Faint local shock. ca. 14 miles.							
2458	24		e	13	42	50	Probably not seismic.			
2459	24		e	14	12	49				
			i			50.2				
			e			51	0.3	1.1		
			F		12.9		Local shock. 6 miles or more.			

No.	Date	Station	Phase	h	m	s	Period T	Trace Amplitude E	N	Z
2452	22	OVERTON	eP	3	34	49				
			eS	3	40	46				
			E	3	47		10			
			F	4	26					
2453	23									
2454	23									
2455	24									
2456	24									
2457	24									
2458	24									
2459	24									

No.	Date	Station	Phase	h	m	s	Period T	Trace Amplitude E	N	Z
2452	22	PIERCE FERRY								
2453	23									
2454	23									
2455	24									
2456	24									
2457	24									
2458	24									
2459	24									

International Seismological Centre

LAKE MEAD SEISMOLOGICAL STATIONS

Bureau of Reclamation, National Park Service
and Coast and Geodetic Survey

MONTH OF August 194[illegible]

Time used is [illegible] or G.C.T. Strike out whichever does not apply.

BOULDER CITY

No.	Date	Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z
2460	25	eP	17	13	57.8				
		iS			59.2				
		mS			59.5	0.3	4.0		
		F		14.2					
		[illegible] local shock. 7 mi.							
2461	25	eP	22	29	46.1				
		iS			47.2				
		mS			48	0.5	2.0		
		F		29.9		Local shock. 5 mi.			
2462	26	e	2	12	42	0.3			
		eS			59	0.6	1.0		
		F		13.6		Near shock. 80 miles or more.			
2463	26	e	2	38					
		Faint disturbance may not be seismic.							
2464	26	e	4	34	48				
		eS		35	05.6	0.5	0.8		
		F		35.5		Near shock. 80 mi.			
2465	26	eP	5	08	35				
		eS?	5	21	30	8			
		F	5	29		Teleseism. 8,000 mi.			
2466	26	e	17	16	24				
		F		18.0					
		Faint waves of near shock.							
2467	26	eP	22	49	54.1				
		iP			54.8				
		i			55.7				
		iS		50	15.0				
		mS			15.6	0.2	2.5		
		i			17.5				
		F		51.9					
		Near shock. 100 miles.							

OVERTON

Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z
[illegible]	4	34	37				
iSE			47	?	2.0		
F		35.7					
[illegible]	22	49	58				
iSe		50	22		2.0		
F		51.2					

PIERCE FERRY

Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z

International Seismological Centre

LAKE MEAD SEISMOLOGICAL STATIONS

Bureau of Reclamation, National Park Service
and Coast and Geodetic Survey

MONTH OF August 1940

Time used is ~~P.S.T.~~ or G.C.T. Strike out whichever does not apply.

No.	Date	BOULDER CITY Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z	OVERTON Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z	PIERCE FERRY Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z
2468	28	e?	0	20	25.5																				
		is			26.5	0.2	3.0																		
		F		20.5		Local shock. 5 mi.																			
2469	28	e	4	54	36					e	4	13.8		Artificial disturbance?											
		F	4	55.9		Faint seismic waves				F	4	14.7													
2470	28	e	11	03	43																				
		F	11	05.0		Faint seismic waves																			
2471	28	e	15	56	01.7																				
		is			02.7	0.2	2.0																		
		i			03.7																				
		F		56.2		Local shock. 5 mi.																			
2472	28	e	16	22	30	1.5				e	16	04		Local disturbance due to passing train.											
		F		24.2		Faint seismic waves				F	16	27													
2473	28	eF?	21	02	58					e	21	02.2													
		i			00.7					F	21	04.0		Record masked by train disturbance.											
		is			01.2	0.2	1.3																		
		F		02.2		Local shock. 6 mi.																			
2474	29	e?	3	31	53.9																				
		is			54.8	0.2?	1.4	Local shock. 5 mi.																	
2475	29	i			55.7																				
		F		32.1		Probably belongs to 2474.																			
2476	30	e	14	45	42.5																				
		is			44.0																				
		m			44.5	0.2	1.0																		
		F		46.0		Local shock. 7 mi.																			
2477	30	e	16	35	52	Near shock.												Marked by train disturbance.							
		F		36.7																					
2478	31	is	17	01	42	0.2	1.7																		
		F		02.0		Local shock.																			

International Seismological Centre

LAKE MEAD SEISMOLOGICAL STATIONS

Instrumental Report - September, 1940

A swarm consisting of 50 local earthquakes was recorded on the Boulder City seismograph on September 25, September 26, and September 27. The larger of these were recorded at Overton. With the check at Overton several of these earthquakes probably originated from beneath the lake basin east or northeast of Boulder City, or in the land areas near Las Vegas Wash or Fortification Hill. A more definite location is impossible without the check of Pierce Ferry or some other third station. Recorded shocks were distributed as follows:

34	shocks were from 5 to 33 miles from Boulder City with a concentration at 12 to 13 miles.
52	local shocks or disturbances were recorded at Boulder City only.
10	local shocks were recorded at Overton only.
13	shocks in the distance range 78 to 450 miles.
3	shocks from 1500 to 6000 miles.
8	shocks at an indeterminate distance.
120	Total.

Correction to Instrumental Constants accompanying July and August, 1940, reports: At Overton, automatic recording of time signals began October 15, 1940 instead of September 24,1940.

International Seismological Centre

LAKE MEAD SEISMOLOGICAL STATIONS

Bureau of Reclamation, National Park Service
and Coast and Geodetic Survey

MONTH OF **September** 1940

Time used is ~~E.S.T. or~~ G.C.T. Strike out whichever does not apply.

BOULDER CITY

No.	Date	Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z
2479	2	iP	9	51	34.1	0.2	+0.5		
		i			34.2	0.2	1.5		
2480		iS			35.1	0.2	-4.3		
		i			36.1		1.4		
		i			38.5				
		F		51.8					
		Local shock, 5 mi.							
		2479 & 2480 undoubtedly one shock.							
2481	3	eP	9	11	26.7		0.6		
		iS			27.7				
		F		11.6					
		Faint local disturbance. 5 mi.							
2482	4	eP	11	04	11.1		0.2		
		iS			12.4	0.2	0.4		
		Faint local disturbance. 7 mi.							
2483	5	e	3	56	01		0.7		
		F		56.1					
		Faint local disturbance.							
2484	5	e	9	33	54	0.3	0.1		
		e		34	25	0.5	0.2		
		F		36.0					
		Faint near shock, maybe 150 miles.							
2485	5	e	19	46	16.0				
		iS			17.3		2.2		
		F		46.4					
		Faint local disturbance. 7 mi.							
2486	5	e	21	34	04				
		F		34.1					
		Very faint local disturbance.							

OVERTON

No.	Date	Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z
2479	2								
2480		- - -							
2481	3	- - -							
2482	4	- - -							
2483	5	- - -							
2484	5	- - -							
2485	5								
2486	5	- - -							

PIERCE FERRY

No.	Date	Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z
2479	2								
2480									
2481	3								
2482	4								
2483	5								
2484	5								
2485	5	Artificial disturbance from trains.							
2486	5								

International Seismological Centre
M-1073

LAKE MEAD SEISMOLOGICAL STATIONS

Bureau of Reclamation, National Park Service
and Coast and Geodetic Survey

MONTH OF September 194 0

Time used is ~~P.S.T. or~~ G.C.T. Strike out whichever does not apply.

No.	Date		BOULDER CITY Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z	OVERTON Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z	PIERCE FERRY Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z
2487	6		e	3	01	16					---															
			F		02.9																					
			Faint, near earthquake.																							
2488	6		e	17	06	15					1	17	06	00					Approximate time. No time marks.							
			e			45					1S		06	26												
			F		08.4						F		07.0													
			Faint near shock, (160 miles? ca. more.)								Ca. 120 miles.															
2489	7		e?	10	38	41	May come in here				---															
			e		39	33	1																			
			e		41	34																				
			F		43.6																					
			Faint near or distant shock.																							
2490	7		e	13	03	48					---															
			e		05	08	1.2																			
			F		08																					
			Faint near or distant shock.																							
			---								i	21	13	44	0.7											
											F		14.0													
											Faint local disturbance.															
2491	7		e	21	20	45					---															
			F		21.3																					
			Faint disturbance.																							
2492	8		e	6	19	54					---															
			e	6	21	23	.2	0.3																		
			F	6	25																					
			Faint near or distant disturbance.																							
2493	8		e	8	02	43		0.6																		
			F		02.8																					
			Faint local disturbance.																							

International Seismological Centre

LAKE MEAD SEISMOLOGICAL STATIONS

Bureau of Reclamation, National Park Service
and Coast and Geodetic Survey

MONTH OF September 1940

Time used is [redacted] G.C.T. Strike out whichever does not apply.

No.	Date	BOULDER CITY Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z	OVERTON Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z	PIERCE FERRY Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z
2493	8	- - -								e	9	30	58	blurr											
										i	9	31	06	"	1.3										
										F		31	32												
										Local disturbance.															
2494	8	is	15	13	25		0.7			- - -															
		F		13.6																					
		Small local disturbance.																							
2495	8	e	19	11	18					- - -															
		F	19	11.5																					
		Very faint local disturbance.																							
2496	8	e	19	23	52					- - -															
		F		24.1																					
		Very faint local disturbance.																							
2497	8	e	19	25	25		?			- - -															
		eS	19	25	26.5																				
		M		25	31		0.3	0.9																	
		F		25.8																					
		Small local to near shock.																							
2498	8	eP	19	26	19.3					- - -															
		iS			22.2		0.3	1.2																	
		F		26.9																					
		Small local shock. 14 miles.																							
	9	- - -								e	6	41	25		0.5										
										F		41.7													
										Faint local disturbance.															
	9	- - -								e	6	43	17		0.5										
										F		43.4													
										Faint local disturbance.															
	9	- - -								e	7	40	46		0.5										
										F		40.9													
										Faint local disturbance.															

International Seismological Centre
M-1073

LAKE MEAD SEISMOLOGICAL STATIONS

Bureau of Reclamation, National Park Service
and Coast and Geodetic Survey

MONTH OF September 194 0

Time used is P.S.T. or G.C.T. Strike out whichever does not apply.

No.	Date	Station	Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z	Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z	Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z
2499	9	BOULDER CITY	e	9	24	23					- - -															
			F	9	24	.9																				
			Very small local disturbance.																							
	9		e	17	58	41		0.6			- - -															
			F			58.7																				
			Very faint local disturbance.																							
2500	9		eP	19	45	42.6					- - -															
			iS			44.8	0.3	1.0																		
			F			46.4																				
			Small local shock. 11 miles.																							
2501	10		e	4	42	48		0.5			- - -															
			F			42.9																				
			Very faint local disturbance.																							
2502	10		im	21	08	42	0.4	0.8				Many small artificial disturbances.														
			F			08.9																				
			Small local shock.																							
2503	11		eP	0	52	03.7					e	0	51?	53					blurr,(time check poor)							
			iP			05.0	0.3	-0.4			i		52?	02					lost.							
			iS			18.6	0.3	-0.7			F			53.1												
			iS			20.3	0.3	-2.0																		
			i			26.3	0.6	0.7																		
			F	0	53.7																					
			Small near shock, 71 to 78 mi.																							
2504	11		e	4	33	38					- - -															
			F			33.7																				
	11		e	4	35	35					i	4	34	55												
			F			35.9					F			35.0												
			Waves of doubtful origin.									Maybe artificial.														

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M-1073-4

LAKE MEAD SEISMOLOGICAL STATIONS

Bureau of Reclamation, National Park Service
and Coast and Geodetic Survey

MONTH OF **September** 19**0**

Time used is ~~P.S.T.~~ or G.C.T. Strike out whichever does not apply.

No.	Date		Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z
BOULDER CITY										
2505		11	e	14	08	54.8				
			iP			55.5				
			i			56.5	0.3			
			iS		09	01.6	0.4	1.5		
			im		09	3.0	0.6	2.0		
			Small local shock. 33 miles.							
			Probable location between north end of Muddy Mountains and Calico Salt mine.							
2506		12	e	o	17	19				
			e			57				
			m		18	02	1	0.4		
			F		19.9					
			Near shock, 230 miles.							
2507		12	e	13	30	34				
			eP			54	1.5			
			eSKS		41	04	7			
			e	14	02	20	23			
			e	14	11	42	16			
			F	14	46					
			Small teleseism.							
2508		13	e	11	51	04				
			e			06				
			e			09.5	0.8	0.4		
			i			35				
			i		52					
			iS			20	1.2	2.0		
			i			27.5	1.2	2.5		
			i			35				
			im			39	1.0	4.3		
			F	12	01.4					
			Near earthquake, 345 miles.							

No.	Date		Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z
OVERTON										
2505		11	iP	14	08	51	blurr	2.0	1.5	
			iS			54	"	6.0	3.5	
			F			09.7				
			14 miles.							
			Probable location between north end of Muddy Mountains and Calico Salt mine.							
2506		12	- - -							
2507		12	- - -							
2508		13	eP	11	51	22?	blurr			
			eS			52	49?			
			F	11	59					
			Time not certain.							

No.	Date		Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z
PIERCE FERRY										

International Seismological Centre
M-1073-4

LAKE MEAD SEISMOLOGICAL STATIONS

Bureau of Reclamation, National Park Service
and Coast and Geodetic Survey

MONTH OF September 1940

Time used is [redacted] G.C.T. Strike out whichever does not apply.

No.	Date	Phase	BOULDER CITY Time h	m	s	Period T	Trace Amplitude E	N	Z	OVERTON Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z	PIERCE FERRY Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z
2509	13	e	14	47	06																				
		e			15																				
		e			31																				
		eS		48	25					e	14	49.0			blurr, small amplitude.									
		m		48	42	1	0.6			F		51.													
		F		51.9																					
		Near earthquake, 350 miles.																							
2510	13	e	22	56	56	faint.				- - -	Artificial disturbances.														
		e		57	01																				
		e			44	0.8	0.1																		
		F		59.9																					
		Near shock, 230 to 270 miles?																							
2511	14	e	23	20	43	faint.				- - -	Artificial disturbances.														
		e		21	07	2.5	0.1																		
		F		28.9																					
		Seismic waves, origin unknown.																							
2512	16	eP	2	29	54																				
		iS			55	0.1	1.5																		
		F	2	30.1																					
		Small local disturbance. 5 mi.																							
2513	17	i	9	32	16		0.3																		
		F		32.3																					
		Faint local disturbance.																							
2514	17	e	23	41	51	0.6	0.2																		
		Faint local disturbance.																							
2515	18	e	15	20	30																				
		e		21	17	1	0.3																		
		F		23.5																					
		Faint near shock. 270 miles?																							

International Seismological Centre

LAKE MEAD SEISMOLOGICAL STATIONS

Bureau of Reclamation, National Park Service
and Coast and Geodetic Survey

MONTH OF September 194 0

Time used is ~~P.S.T. or~~ G.C.T. Strike out whichever does not apply.

No.	Date		BOULDER CITY Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z	OVERTON Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z	PIERCE FERRY Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z
2516	19		e?	1	33	47																				
			e		34	27																				
			e		34	31	0.8	0.3																		
			Faint near shock. 260? mi.																							
			F		36.4																					
2517	19		e?	8	22	36																				
			e		23	49																				
			e			52	1	0.4																		
			F		25.9																					
			Faint seismic waves, may be near shock. 450? miles.																							
2518	19		e	18	32	51					eP	18	32	48	faint waves											
			e	18	43	27	6	0.5			eS		43	27												
			e	19	10.7		16				e		44	03												
			F	19	32						e	19	10.3		16											
											e	19	43.6		6											
			Teleseism, ca 6,000 miles.								F	19	48													
			Epicenter 23 S Lat. 171 E. Long. According to U.S. C. & G. S. time at origin 18 h., 19,8 m.																							
2519	20		e	9	48	41.4					- - -															
			iS			42.0	0.2	1.7																		
			F		49.0																					
			Local disturbance, 3 miles.																							
2520	20		e?	12	21	50																				
			eP		22	05.0		+0.1			e	12	21	39												
			iP			06.3		+0.4			iP		21	51												
			iS			28.0					iS		22	03												
			im			31.8	0.7	5.5			m		22.3			0	15?									
			fs			33.0					F		24.2													
			F		25.5																					
			The main shock was preceded by a smaller disturbance on the Overton record. Appearance of the earlier disturbance on the Boulder City record is doubtful. Tentative epicenter in the general region south east to south west of Caliente, Nevada. This may be the shock reported felt at Alamo on an indefinite date about September 25.																							

International Seismological Centre

LAKE MEAD SEISMOLOGICAL STATIONS

Bureau of Reclamation, National Park Service
and Coast and Geodetic Survey

MONTH OF September 194 0

Time used is P.S.T. or G.C.T. Strike out whichever does not apply.

No.	Date	BOULDER CITY Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z	OVERTON Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z	PIERCE FERRY Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z
2521	20	e?	12	29	18					- - -															
		is			19.5																				
		F			29.4																				
		Faint local disturbance. 7 mi.																							
2522	20	e	12	31	58.2					- - -															
		is			59.6	0.3	1.1																		
		F			32.2																				
		Faint local disturbance. 7 mi.																							
2523	20	e	19	01	42					- - -															
		e		02	21																				
		F		04.4																					
		Faint seismic waves of near shock.																							
2524	21	e	0	11	06					e	0	11.5						Blurred disturbance on N-S only.							
		e			49					F	0	13													
		F	0	13.4																					
		Faint near shock.																							
2525	22	e	3	59	17					- - -															
		F			59.8																				
		Faint waves, near shock.																							
2526	22	eP	23	12	09																				
		eS	23	16	05																				
		F	23	37																					
		Faint trace of distant earthquake.																							
2527	23	e	7	26	07	1				- - -															
		e		35	09	3																			
		F	7	54																					
		Maybe seismic, other waves during the day.																							
	24	- - -								1P	5	54	56	?	0.4	± 0.3?		Fuzzy on N-S.							
										1S		55	00	?	1.8	1.6									
										F		55.6													
										Local to Overton. 19 miles.															

International Seismological Centre

LAKE MEAD SEISMOLOGICAL STATIONS

Bureau of Reclamation, National Park Service
and Coast and Geodetic Survey

MONTH OF September 1940

Time used is [redacted] G.C.T. Strike out whichever does not apply.

No. Date	Phase	Time h m s	Period T	Trace Amplitude E	N	Z
BOULDER CITY						
2528A 24	e?	6 19 04				
	e	09.5	0.4			
	i	10.5	0.7	0.8		
	F	6 19.6				
		Near earthquake?				
2528B 25	e	10 46 31	0.3	0.1		
	F	46.7				
		Short period seismic waves, near or local.				
2529 25	i	10 56 02	0.3	0.2		
	F	10 56.3				
		Seismic waves, near or local.				
2530 25	e	15 15 29.5				
		Maybe separate disturbance or may be near shock.				
	e	37.7				
	i	40	0.4	0.7		
	F	In next shock.				
2531 25	eP	15 15 51.7				
	iS	53.8	0.5	1.5		
	F	15 15.3				
		Local shock. 10 miles.				
2532A 25	eP	15 16 19.5				
	iS	22.5	0.4	1.5		
	F	In next shock.				
		Local shock. 14 miles.				
2532B 25	P	Obscured.				
	iS	15 16 26.4	0.4	2.0		
	F	15 17.1				
		Local shock.				

Phase	Time h m s	Period T	Trace Amplitude E	N	Z
OVERTON					
- - -					
- - -					
- - -					
- - -					

Phase	Time h m s	Period T	Trace Amplitude E	N	Z
PIERCE FERRY					

Disturbances on record during this swarm apparently artificial.

International Seismological Centre

LAKE MEAD SEISMOLOGICAL STATIONS

Bureau of Reclamation, National Park Service
and Coast and Geodetic Survey

MONTH OF September 194

Time used is P.S.T. or G.C.T. Strike out whichever does not apply.

No. Date	Phase	BOULDER CITY Time h m s	Period T	Trace Amplitude E	N	Z	Phase	OVERTON Time h m s	Period T	Trace Amplitude E	N	Z	Phase	PIERCE FERRY Time h m s	Period T	Trace Amplitude E	N	Z
								Disturbances on record during this swarm apparently artificial.										
2533 25	eP	15 17 05.6	0.4	0.1														
	iS	07.5	0.5	2.0														
	m	08	0.5	2.5														
	F	In next																
		Local shock. 9 miles.																
2534 25	iS	15 17 29.8	0.4	1.7														
	P	Obscured																
	F	18.0																
		Local shock.																
2535 25	iS	15 18 04.2	0.4	0.9														
	F	18.4																
		Local shock.																
2536 25	eP	15 18 33.3	0.4	0.2														
	iS	36.0	0.4	2.9														
	F	19.5																
		Local shock. 13 miles.																
2537 25	eP	15 21 9	0.4	0.1														
	iS	11.5	0.4	1.0														
	F	21.5																
		12 miles.																
2538 25	eP	15 24. 02.6	0.5	0.1														
	iS	05.0	0.5	1.5														
	F	24.8																
		Local shock, 12 miles.																
2539 25	eP	15 27 12.5	0.5	0.1														
	iS	15.2	0.5	2.5														
	F	27.9																
		Local shock, 13 miles.																
2540 25	i	15 28 15	0.4	0.2														
	F	28.5																
		Faint local shock.																

International Seismological Centre

LAKE MEAD SEISMOLOGICAL STATIONS

Bureau of Reclamation, National Park Service and Coast and Geodetic Survey

MONTH OF September 1940

Time used is ~~POSITIVE~~ G.C.T. Strike out whichever does not apply.

No. Date		Phase	BOULDER CITY Time h m s	Period T	Trace Amplitude E	N	Z	Phase	OVERTON Time h m s	Period T	Trace Amplitude E	N	Z	Phase	PIERCE FERRY Time h m s	Period T	Trace Amplitude E	N	Z
2541	25	e	15 37 52						Disturbances on record during this swarm apparently artificial.										
		is	37 54.3	0.4	1.1														
		F	38.3																
			Local shock. 11 miles.																
2542	25	e	15 40 28	faint.															
		F	40.6																
			Faint local? shock.																
2543	25	is	16 46 34		0.2														
		F	46.7																
			Faint local disturbance.																
2544	25	e	17 00 27.8																
		is	29.8	0.4	0.8														
		F	00.8																
			Local shock, 10 miles.																
2545	25	iP	17 10 52.3	0.5	0.3			iPN	17 10 59	Blurred									
		is	10 54.8	0.5	5.5			iPE	11 00	At minute mark.									
		F	In next shock					is	11 07		3	4							
			Local shock. 12 miles.					i	09										
								F	In next shock										
									Local. 36 miles.										
			Felt at Los Angeles Bureau of Power & Light Power House at Boulder Dam as abrupt and rapid. Duration 10 - 15 seconds. Tentative epicenter near Las Vegas Wash or Fortification Hill or in between, depending on depth of focus.																
2546	25	P	Obscured					P	Obscured										
		is	17 11 21.8	0.5	2.5			is	17 11 32										
		F	12.3					is	35										
			Local shock.					F	12.5										
2547	25	e	17 13 25																
		F	13.6																
			Very faint, may be seismic.																

International Seismological Centre
M-1073-4

LAKE MEAD SEISMOLOGICAL STATIONS

Bureau of Reclamation, National Park Service and Coast and Geodetic Survey

MONTH OF September 194[illegible]

Time used is P.S.T. or G.C.T. Strike out whichever does not apply.

BOULDER CITY

No.	Date	Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z
2548	25	eP	17	14	58.8	0.5	-0.2		
		iS		15	01.3	0.4	-2.7		
		F			16.0				
		Local shock. 12 miles. Felt at Power House, Boulder Dam.							
2549	25	e	17	16	32.6				
		i		16	38.2	0.5	0.3		
		F			16.9				
		Local shock, 27 miles.							
2550 A	25	i	17	17	33	0.5	0.3		
		F			17.8				
		Small local shock.							
2550 B	25	e	17	19	04	0.5	0.1		
		F			19.3				
		Faint local shock.							
2551	25	eP	17	19	23.8	0.5	0.2		
		iS			26.4	0.5	-3.5		
		F	17	20.3					
		Local shock, 13 miles. Felt at Power House, Boulder Dam.							
2552	25	e	17	20	33				
		F	17	20.7					
		Very faint local shock.							
2553	25	e	17	24	00				
		e			02.6		0.4		
		F			24.2				
		Very faint local shock.							
2554	25	e	17	26	39.5				
		iS			41.0	0.5	0.4		
		F			27.0				
		Very faint local shock, 6 miles?							

OVERTON

No.	Date	Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z
2548	25	eP?	17	15	03	Beginning blurred			
		iS		15	10				
		F			16				
		34 miles? Duration, 2 ½ seconds. Epicenter probably same as 2545.							
2549	25	- - -							
2550 A	25	- - -							
2550 B	25	- - -							
2551	25	eP	17	19	30				
		iS			38				
		F			19.8				
		Duration, 2 seconds. Epicenter probably same as 2545.							
2552	25	- - -							
2553	25	- - -							
2554	25	Artificial disturbance?							

PIERCE FERRY

No.	Date	Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z
2545	25								

International Seismological Centre
M-1073-4

LAKE MEAD SEISMOLOGICAL STATIONS

Bureau of Reclamation, National Park Service and Coast and Geodetic Survey

MONTH OF September 1940

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No.	Date	Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z
BOULDER CITY									
2555	25	e	17	28	56				
		iS			57.6	0.5	0.3		
		F			29.1				
		Very faint local shock, may be 6 miles.							
2556	25	e	17	31	41				
		F			31.9				
		Very faint local shock.							
2557	25	eP	17	46	12.2	0.5	-0.1		
		i			12.5	0.5	-0.2		
		i			15.3		-0.3		
		iS			17.1	0.7	1.2		
		iS			17.3	0.7	-3.0		
		m			20	0.7	-3.5		
		24 miles. Felt at Power House, Boulder Dam as abrupt and rapid shock. Appeared to be hardest of the swarm. Duration 10 seconds. A second shock appears to be superposed in P - phase of Boulder City record. If so, epicenter closer to Boulder Dam, probably same as 2545. Tentative epicenter east of Boulder Dam in Detrital Wash.							
2558	25	iS	17	47	07	0.5	0.3		
		F			47.3				
		Very faint local shock.							
2559	25	e	17	57	45	0.4	0.2		
		F			57.9				
		Very faint local shock.							
2560	25	eP	18	49	36.6	0.5	-0.1		
		iS			38.7	0.6	1.0		
		m			40	0.5	1.3		
		F			50.2				
		Small local shock. 10 miles.							

No.	Date	Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z
OVERTON									
- - -									
- - -		Artificial disturbance.							
		iP	17	46	22	blurr			
		iS		46	30	"		3.0	
		iS		46	31	"	1.8		
		F			47.4				
		38 miles.							
- - -									
- - -									
		e	18	49	45	Disturbance, blurr.			
		F			50				

No.	Date	Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z
PIERCE FERRY									

International Seismological Centre
M-1073

LAKE MEAD SEISMOLOGICAL STATIONS

Bureau of Reclamation, National Park Service
and Coast and Geodetic Survey

MONTH OF September 1940

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No.	Date	Station	Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z
2561	25	BOULDER CITY	eP	18	54	10.9	0.4	-0.1		
			iS			13.5	0.6	-2.0		
			m			15	0.6	2.2		
			F			55.1				
			Local shock, 12 miles.							
		OVERTON	e	18	54	21				
			is	18	54	27	blurr	0.6	1.5	
			is			28				
			F			55.0				
			ca. 39 miles. Epicenter probably same as 2545.							
		PIERCE FERRY								
2562	25	BOULDER CITY	e	19	06	32.0				
			e	19	06	32.5				
			iS			34.2				
			m			35	0.5	-2		
			F			06.9				
			Small local shock, 8 - 11 mi.							
		OVERTON	i	19	06	41	blurr		0.7	
			i			06	43	"	0.5	
			F			07				
			ca. 39 miles.							
		PIERCE FERRY								
2563	25	BOULDER CITY	eP	19	13	39.6				
			iS			41.9	0.3	09		
			F			14.0				
			Very small local shock, 7 mi.							
		OVERTON	e	19	13	51				
			F			14.0				
		PIERCE FERRY								
2564	25	BOULDER CITY	eS	19	14	05	0.4	0.2		
			F			14.2				
			Very faint local shock.							
		OVERTON	- - -							
		PIERCE FERRY								
2565	25	BOULDER CITY	e	19	17	05?		0.1		
			F			17.2				
			Very faint local disturbance, probably close to Overton.							
		OVERTON	e	19	17	01	blurr			
			F			17.3				
		PIERCE FERRY								
2566	25	BOULDER CITY	e	22	31	57		0.3		
			F			32.1				
			Very faint local disturbance.							
		OVERTON	- - -							
		PIERCE FERRY								
2567	26	BOULDER CITY	iP	1	33	50.5	0.3	-1.0		
			iS			51.5	blurr	5.5		
			F			34.3				
			Local shock, 5 miles.							
		OVERTON	iS	1	34	07	blurr	0.8	0.5	
			F			34.3				
		PIERCE FERRY								
2568	26	BOULDER CITY	i	1	43	14	blurr	2.2		
			F	1	43.4					
			Local disturbance, probably not seismic.							
		OVERTON	- - -							
		PIERCE FERRY								

International Seismological Centre
M-073-4

LAKE MEAD SEISMOLOGICAL STATIONS

Bureau of Reclamation, National Park Service
and Coast and Geodetic Survey

MONTH OF September 194[0]

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No. Date		Phase	Time h m s	Period T	Trace Amplitude E	N	Z
BOULDER CITY							
2569	26	e	4 09 10	0.6			
		e	47	1.5	0.2		
		F	4 12				
			Faint near? shock.				
2570	26	sP	5 00 12.6	0.5	0.1		
		iS	00 15.3	0.5	2.5		
		F	01.1				
			Local shock. 13 miles.				
2571	26	i	14 24 37	0.3	0.3		
		F	24.7				
			Small local disturbance.				
2572	27	i	0 13 12		0.3		
		F	13.3				
			Faint local disturbance.				
	27	- - -					
2573	27	e	17 05 56	1?			
		e	17 08 33	3			
		F	17 12				
			Very faint seismic waves.				
2574	27	is	20 35 37	0.3	1.0		
		F	35.7				
			Small local disturbance.				
		- - -					
		- - -					
		- - -					

Phase	Time h m s	Period T	Trace Amplitude E	N	Z
OVERTON					
e	4 09 52				
F	4 12?				
iSN	5 00 27	blurr		1.0	
iSE	28	"	0.5		
F	00.8				
	Epicenter probably nearly same as 2545.				
- - -					
- - -					
e	1 34 12				
F	1 34.6				
	Local disturbance.				
e	17 08 0	faint			
F	14				
	Probably local disturbance.				
- - -					
i	21 15 22	blurr			
F	16.0				
	Local disturbance.				
i	22 03 26	blurr			
F	03.8				
	Local disturbance.				
e	22 36 18	blurr			
is	36 21	"	1.0	0.8	

Phase	Time h m s	Period T	Trace Amplitude E	N	Z
PIERCE FERRY					

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LAKE MEAD SEISMOLOGICAL STATIONS

Bureau of Reclamation, National Park Service
and Coast and Geodetic Survey

MONTH OF September 1940

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No. Date		BOULDER CITY Phase	Time h m s	Period T	Trace Amplitude E	N	Z	OVERTON Phase	Time h m s	Period T	Trace Amplitude E	N	Z	PIERCE FERRY Phase	Time h m s	Period T	Trace Amplitude E	N	Z
2575	27	e	22 45 43	0.3	0.3			- - -											
		F	45.9																
		Local disturbance.																	
2576	27	eP	22 47 14.9	0.3	0.1														
		iS	17.5	0.5	1.5			iS	22 47 28	blurr	0.6	0.8							
		F	48.1					F	47.8										
		Local shock, 13 miles.						ca. 35 miles.											
		Epicenter may be same as 2545.																	
2577	27	eP	22 52 42.1	0.5	+0.1			ePe	22 52 49		+0.1								
		iS	44.2	0.6	1+			iSen	56		0.8	1.5							
		m	52 46	0.5	3.5			F	53.3										
		F	54.2																
		Local shock, 10 miles.						36 miles.											
		Tentative epicenter in lake basin southwest of Calville Wash.																	
2578	27	e	22 54 38					- - -											
		F	54.7																
		Faint local disturbance.																	
2579	27	eP	23 20 16.4					- - -											
		iS	17.2		1.7														
		F	20.4																
		Local disturbance.																	
	27	- - -						e	23 34 18										
								F	34.4										
								Faint local disturbance.											
2580	28	e	4 47 47					- - -											
		1	47.4		0.8														
		F	47.9																
		Faint local disturbance.																	
2581	28	e	17 56 40					- - -											
		F	56.7																
		Faint local disturbance.																	

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LAKE MEAD SEISMOLOGICAL STATIONS

Bureau of Reclamation, National Park Service
and Coast and Geodetic Survey

MONTH OF September 1940

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No.	Date	BOULDER CITY Phase	h	m	s	Period T	Trace Amplitude E	N	Z	OVERTON Phase	h	m	s	Period T	Trace Amplitude E	N	Z	PIERCE FERRY Phase	h	m	s	Period T	Trace Amplitude E	N	Z
2582	29	e	1	33	32	1.5				- - -															
		F			36.2																				
		Faint waves of near or distant shock.																							
2583	29	e	19	30	07.3					- - -															
		iS			08.6	0.4	2.2																		
		F			30.3																				
		Local disturbance. 6 miles.																							
2584	30	e	0	31	53	0.3	0.1			e	0	32	06		0.3										
		e		32	00	0.6	0.3			F		32.2													
		F		32.3						Faint local disturbance.															
		Faint waves of near or local disturbance.																							
		- - -								e	0	32	44												
										F		32.8			Faint local disturbance.										
2585	30	e	6	02	17	0.2	1.0			- - -															
		F		02.4																					
		Faint local disturbance.																							
2586	30	e	9	48	52	1	0.1			- - -															
		F		49.4																					
		e	9	56	10	4																			
		F	10	02																					
		Probably seismic?																							
	30	- - -								e	17	08													
										F	18	30			Artificial disturbance.										
	30	- - -								i	19	20	22		blurr										
										F	19	20.8			May be seismic.										
	30	- - -								e	19	28	53		blurr										
										i			55												
										F		29.2			May be seismic, Could be 10 miles.										
2587	30	i	20	39	21	0.3	1			- - -															
		F		39.4																					
		local disturbance.																							

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LAKE MEAD SEISMOLOGICAL STATIONS

Instrumental Report - October, 1940

The Boulder City and Overton Stations were in operation during October, 1940. Recorded shocks were distributed as follows:

26 disturbances, some probably not seismic, local to Boulder City.

9 disturbances, some probably not seismic, local to Overton.

15 small shocks at unknown distance from Boulder City.

10 small shocks near Overton.

44 local shocks of known approximate distance from Boulder City, 29 of which in range from 3 to 8 miles. Some of these barely recorded at Overton, giving approximate location under or near Lake Mead a few miles north and north east of Boulder City. Six of these shocks felt at Boulder City, one of which also felt at Boulder Dam. The latter shock was roughly located near the entrance to Black Canyon a mile or two above Boulder Dam.

8 shocks apparantly located a few miles south of Alamo, several of which reported felt at Alamo.

13 shocks at distances 200 - 300 miles from Boulder City correlated with Pasadena.

14 probably distant shocks recorded at Boulder City or Overton.

3 teleseism shocks recorded at Boulder City and Overton.

142 Total

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M-1073-4

LAKE MEAD SEISMOLOGICAL STATIONS

Bureau of Reclamation, National Park Service
and Coast and Geodetic Survey

MONTH OF October 1940

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BOULDER CITY

No. Date	Phase	Time h m s	Period T	Trace Amplitude E	N	Z
1	i	2 13 21	0.4	1.3		
	F	13.4				
		Small local disturbance.				
1	i	2 14 16		0.7		
	F	14.3				
		Faint local disturbance.				
1	e	10 54 31				
	e	54 36	1.2	-0.3		
	e	11 10.0 doubtful long waves?				
	F	11 12				
		Near or distant earthquake.				
2	i	3 15 04.8		0.7		
	F	15.1				
		Faint local disturbance.				
2	e	3 23 09	4			
	F	26.5				
		Faint waves.				
2	e?	11 35 55.2				
	is	35 55.7	0.2	2		
	F	36.1				
		Small local, no definite P; ½ mi.				
3	eP	1 35 32.3	0.5?	1.5		
	is	33.1		7		
	m	33.5	0.3?	5		
	F	35.8				
		Local, not felt. 4 miles.				
3	---					

OVERTON

Phase	Time h m s	Period T	Trace Amplitude E	N	Z

---					
e	10 54 42				
e	11 04.6	?			
F	11 05				

---					
e	1 35 33	blurr, may not be seismic.			
F	35.6				
e	1 35 50	blurr, may not be seismic.			
F	35.9				
e	5 05 58	blurr.			
F	06.2				
	May not be seismic.				

PIERCE FERRY

Phase	Time h m s	Period T	Trace Amplitude E	N	Z

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LAKE MEAD SEISMOLOGICAL STATIONS

Bureau of Reclamation, National Park Service
and Coast and Geodetic Survey

MONTH OF October 1940 2

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No. Date	BOULDER CITY Phase	Time h m s	Period T	Trace Amplitude E	N	Z	OVERTON Phase	Time h m s	Period T	Trace Amplitude E	N	Z	PIERCE FERRY Phase	Time h m s	Period T	Trace Amplitude E	N	Z
3	e	5 41 16					- - -											
	e	42 01	1	0.2														
	F	43.1																
	Near shock, 250 miles.																	
3	- - -						e	20 12 58	blurr	1								
							F	13.4										
							May not be seismic.											
3	- - -						eP	22 53 56										
							iS	54 00		1								
							F	54.2										
							Local, maybe 29 miles.											
4	e	2 39 24.6					- - -											
	iS	39 25.8		0.7														
	F	39.5																
	Faint local, maybe 6 miles.																	
4	eP	4 16 14					iP	4 16 06										
	eS	31					iS	17										
	eS	16 32					iS	18										
	m	16 35	0.8	0.7			m	21		4	6							
	F	17.4					F	17.1										
	Near, 85 miles.						54 miles.											
	Epicenter in lower end of Fahrenagat Valley, 10 - 15 miles S.E. of Alamo.																	
	Shock reported felt at Alamo about this time.																	
4	eP	8 06 02					eP	8 06 08										
	eP	19	1.8				e	06 28										
	e	23	1.8	0.5			eS	15 29										
	eS	15 18	4				F	24										
	F	9 04																
	Telseism. 4800 miles. Strong at Iquiique, Chile. Provisional epicenter according to U.S. Coast & Geodetic Survey, 19°S. Lat., 64° W. Long. Time at origin 7 h., 54 m., 35 sec.																	

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LAKE MEAD SEISMOLOGICAL STATIONS

Bureau of Reclamation, National Park Service and Coast and Geodetic Survey

MONTH OF October 1940 3

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No. Date	Station	Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z	Remarks
4	BOULDER CITY	e	11	44	24					
		m		44	29	0.8	0.3			
		F		44.7						
	OVERTON	eP	11	43	59					
		iS		44	13		1.5	1.5		
		F		44.7						65 mi. Probably Pahranagat Valley.
	PIERCE FERRY									
4	BOULDER CITY	eP	18	52	28.7					
		iS		52	29.5		3?			
		F		52.7						Local, 4 miles.
	OVERTON	---								
	PIERCE FERRY									
4	BOULDER CITY	iP	19	27	38.1	0.3	1			
		iS			39.0	0.3?	7?			
		F		28.1						Local, 4½ mi. Felt in Boulder City as a thud. Motion rapid.
	OVERTON	---								
	PIERCE FERRY									
4	BOULDER CITY	iP	20	24	51.1	0.4	0.8			
		iS		24	52.2	0.5	2.5			
		F		25.2						Local, 5½ miles. Felt in Boulder City. Motion rapid.
	OVERTON	---								
	PIERCE FERRY									
5	BOULDER CITY	e	14	46	09	1				
		e		56	20	5				
		F	15	16						Distant shock.
	OVERTON	---								Too small to record.
	PIERCE FERRY									
6	BOULDER CITY	e	15	49	30					faint.
		e	15	54.5						S may come in here.
		F	16	30						Faint distant earthquake. Epicenter according to U.S. Coast & Geodetic Survey, 9° N. Lat., 84° W. Long. Time at origin 15 h., 38 m., 43 sec.
	OVERTON	---								
	PIERCE FERRY	iP?	15	49	35					Pasadena
		iS?		58	50					

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LAKE MEAD SEISMOLOGICAL STATIONS

Bureau of Reclamation, National Park Service
and Coast and Geodetic Survey

MONTH OF October 1940 4

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No. Date	BOULDER CITY Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z	OVERTON Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z	PIERCE FERRY Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z
6	e?	18	20	49.0					e?	18	21	02	blurred and faint.											
	eP			49.7					i		21	45												
	iP			54.4					m		21	50		1.5										
	e		21	26.5	1.2				F			22.8												
	iS			29.3	0.7																			
	i			40.8																				
	m			43	0.7	1.6																		
	F		24.8																					
	Near shock, 220 miles. San Jacinto shock, 33° 08' N Lat., 116° 05' W Long. Time at origin, 18 h., 19 m., 53 sec., according to Pasadena.																							
6	- - -								e	23	22	27												
									iS			40												
									m			43		1.2	0.9									
									F		23.2													
									Small, may be 65 or more miles from Overton.															
7	- - -								iS	1	21	20		0.9	0.8									
									F			21.7												
									Small local, disturbance.															
8	e	16	27	58	phases doubtful.				- - - Lost in train disturbance.															
	e		28	04																				
	e		31	04																				
	F		34																					
	Faint distant earthquake.																							
10	- - -								e	1	34	09												
									eS		34	22		0.5										
									F		35													
									May be 65 miles.															
11	e	2	15	38					i	2	15	18	blurr											
	F		15.8						i		15	24		2	1									
	Very faint disturbance.								F		15.9													
									Local, distance doubtful.															

International Seismological Centre
M-1073-4

LAKE MEAD SEISMOLOGICAL STATIONS

Bureau of Reclamation, National Park Service
and Coast and Geodetic Survey

MONTH OF October 1940

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No. Date	Station	Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z
11	BOULDER CITY	eS	5	50	25				
		m			27	blurred	0.7		
		F		51.1					
		Local?							
11		e?	5	58	10.5				
		eP			12.0	½	0.1		
		iP_1			26.3	0.8			
		i			46.8	0.8			
		iS			54.2				
		iS		59	05.2		0.9		
		i			12.7	1.0	0.7		
		iS_1			15.7	1.3	1.4		
		m			18				
		F	6	04.4					
		Felt in Los Angeles. Intensity V to VI. Epicenter 33° 47' N. Lat.; 118° 35' W. Long.; Time at origin, 05 h., 57m., 13 s., according to Pasadena.							
11		e	6	02	21		0.3		
		F		02.6					
		Checks with Overton, no phases.							
11		e	7	51.7					
		Doubtful.							
11		e	7	59	51	1	small		
		e?	8	03	16	4	amplitudes.		
		e		27	54	7			
		F		34					

No. Date	Station	Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z
	OVERTON	i	5	50	17	blurr	0.5	0.7	
		i			23				
		m			32		1.8	2.5	
		F		51.2					
		Local, distance undecipherable.							
		iP	5	58	21	blurr	0.5	0.7	
		iS		59	29.5	blurr	2.3	3.0	
		F	6	03					
		e	6	02	11	blurr	1.2	1.0	
		F		03.8					
		Local, in coda of above record.							
		iP	7	51	04	blurr	1	0.5	
		i			10		2.2	1.5	
		F		52					
		Local, distance 30? mi., dimly recorded.							
		e?	7	59	51	Very small.			
		F	8	01					
		Probably distant earthquake.							

No. Date	Station	Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z
	PIERCE FERRY								

International Seismological Centre

LAKE MEAD SEISMOLOGICAL STATIONS

Bureau of Reclamation, National Park Service
and Coast and Geodetic Survey

MONTH OF October 1940 6

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BOULDER CITY

No. Date	Phase	Time h m s	Period T	Trace Amplitude E	N	Z
11	eP	18 54 01	small			
	eS	19 04 32	8	0.2		
	F	19 56				
	Teleseism. 5900 miles.					
	Epicenter 45° S. Lat.; 73° W. Long.; Time at origin, 18 h., 41.0 m.					
	according to U.S. C. & G. S.					
12	eP	0 25 12				
	eS	26 05	0.8	0.2		
	F	27.9				
	Small near shock, 300 miles.					
	Epicenter, Santa Monica Bay, 33° 47' N. Lat.; 118° 35' W. Long.;					
	Time at origin, 0 h., 24 m., 00 s., according to Pasadena.					
12	eP	3 47 06.2				
	ei	47 30				
	eS	48 22.7				
	m	30	0.9	0.4		
	F	50.6				
	Small near shock, 444 miles.					
	Epicenter, off coast of lower California, 31.7° N. Lat.; 116.5° W. Long.;					
	Time at origin, 3 h., 45.7 s., according to Pasadena.					
12	e	15 09 46.8				
	eS	10 04.8	0.6	0.3		
	F	10.8				
	Probably local to Overton.					
	90 mi.					
12	e	15 18 07				
	eS	25	0.6	0.2		
	F	19.3				
	Very small near shock, 90 mi.?					

OVERTON

Phase	Time h m s	Period T	Trace Amplitude E	N	Z
- - -					
- - -					
- - -					
	Off Record.				
i	15 09 37	Disturbance covered by train disturbance on next hour line.			
F	10.7 blurr.				
eP	15 18 04 blurr				
iS?	18 14	2?			
F	19.1				
Small shock, 48 mi.? Local. Felt at Alamo.					

PIERCE FERRY

Phase	Time h m s	Period T	Trace Amplitude E	N	Z

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LAKE MEAD SEISMOLOGICAL STATIONS

Bureau of Reclamation, National Park Service
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MONTH OF October 1940 7

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No. Date	BOULDER CITY Phase	Time h m s	Period T	Trace Amplitude E	N	Z	OVERTON Phase	Time h m s	Period T	Trace Amplitude E	N	Z	PIERCE FERRY Phase	Time h m s	Period T	Trace Amplitude E	N	Z
12	e	17 11 07					iP	17 10 43	blurr	0.5	0.5							
	eS	11 12					iS	57		1.6	1.0							
	F	11.4						Small, 67 miles.										
		Very small.						Felt at Alamo.										
12	iS	18 08 35		0.6			- - -											
	F	08.6																
		Very small local disturbance.																
12	- - -						i	23 03 46	blurr	0.6								
							F	04.0										
								Small local disturbance.										
12	- - -						iP	23 13 46	blurr									
							iS	48		0.9	0.8							
							F	14.3										
								Small local disturbance, maybe 10 miles.										
13	e	6 26 36.3					iP	6 26 29.5	blurr									
	eP	38.8					iS	41.5										
	eS	54.0					iS	43										
	e	57.3					m	46.0		2.7	2							
	m	59		0.5	0.3													
	F	27.8						Small local, 58 miles.										
		Very small near shock. 85 mi.						Felt at Alamo.										
		Epicenter, Pahranagat Valley, a few miles south of Alamo.																
13	e	11 59 23.5					- - -											
	eS	59 27.8		0.5	0.5													
	F	59.8																
		Very small local, 20 or more mi.																
14	e	6 31 20?					iP	6 31 10.5	blurr	0.6	0.7							
	eS	35.1					iS	24.5	blurr	3	2							
	m	40		0.7	0.4		F	32.1										
	F	32.2						Small near shock, 67 miles.										
		Very small near shock.						Felt at Alamo.										

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LAKE MEAD SEISMOLOGICAL STATIONS

Bureau of Reclamation, National Park Service
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MONTH OF October 1940 8

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No. Date	Phase	BOULDER CITY Time h m s	Period T	Trace Amplitude E	N	Z	Phase	OVERTON Time h m s	Period T	Trace Amplitude E	N	Z	Phase	PIERCE FERRY Time h m s	Period T	Trace Amplitude E	N	Z
14	is	7 08 05		0.6			- - -											
	F	08.1																
		Very small local disturbance, unknown distance.																
14	e	12 56 55.3					eP	12 56 45	blurr									
	eS	57 13.8					is	58.5		1	1							
	m	16	0.7	0.3			F	57.5										
		Very small near shock. 90+ mi. Epicenter probably near Alamo.						Small local shock, 68 miles.										
15	- - -						i	0 27 10.5		1	0.8							
								Small local disturbance.										
15	e	6 45 18	1				- - -											
	e	25	1.8															
	e	28																
	F	48.0																
		Very small seismic waves, noted at Pasadena as i = 06:45:14 and i = 06:45:23 Maybe near shock. (Boulder City = 150 miles?, Pasadena = 140 miles)																
15	- - -						e	18 21 47	blurr									
							is	52.5				28 mi.						
							m	54.5		1.6	1.3							
								Small local shock.										
15	- - -						is	22 03 33	blurr	0.8	0.7							
							F	03.7										
								Small local disturbance.										
15	e	22 23 58.1					- - -											
	is	58.8	0.2	0.9														
	F	24.1																
		Very small local disturbance, maybe 3.5 mi.																
16	is	9 51 57	0.2	1.0			- - -											
	F	52.0																
		Very small local disturbance																

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No. Date	BOULDER CITY Phase	Time h m s	Period T	Trace Amplitude E	N	Z	OVERTON Phase	Time h m s	Period T	Trace Amplitude E	N	Z	PIERCE FERRY Phase	Time h m s	Period T	Trace Amplitude E	N	Z
16	e	17 53 09.2					e	17 53 04?	slight thickening of N-S line.									
	e	13.5					eS	53 56	blurr									
	eS	50.5	0.7	0.3			em	54 07		0.3	0.8							
	e	54.4					Blurred line distance very doubtful,											
	e	59.7					but a near shock.											
	F	17 55.5																
	Very small near shock, ca 225 mi. Epicenter, San Jacinto fault W. of Salton Sea, 33° 08′ N. Lat., 116° 05′ W. Long.; time at origin, 17 h., 52 m., 13 s.; according to Pasadena.																	
16	is	22 02 53		1.0			- - -											
	F	03.0																
	Very small local shock. 8 mi.?																	
16	e	22 32 11.8					- - -											
	is	12.7	0.2	0.9														
	F	32.4																
	Very small local shock, 5 mi.?																	
16	e	22 37 21.4					- - -											
	is	21.9		1.5														
	F	37.4																
	Very small local disturbance, 2.5 miles or more.																	
16	e	23 14 56	1.5	0.2			- - -											
	F	16.1																
	Very small seismic waves, of distant earthquake.																	
17	e	0 34 34.4	?				- - -											
	is	34.9		1.5														
	F	34.6																
	Very small local disturbance. 2 to 3 miles.																	

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LAKE MEAD SEISMOLOGICAL STATIONS

Bureau of Reclamation, National Park Service
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MONTH OF October 1940

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BOULDER CITY

OVERTON

PIERCE FERRY

No. Date	Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z	Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z	Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z
17	e	0	51	23.6					- - -															
	is			24.4	0.3	2.3																		
	F			51.5																				
	Small local shock or disturbance, 4 miles.																							
17	is	2	17	40		0.8			- - -															
	F			17.7	in beginning of next.																			
17	is			43		1.0			- - -															
	F			17.8																				
	Two very small local disturbances.																							
17	e	2	41	02					- - -															
	F			41.6																				
	Very small waves not part of following shock.																							
17	e	2	41	23.1	or 1 sec. earlier.				e	2	41	38	blurr on lines.											
	is			24.3					F		41.8													
	m			25	0.3	1.5																		
	F			41.7																				
	Small local shock, 4 or 9 mi., or more.																							
17	e	2	44	15		0.4			- - -															
	F			44.4																				
	Very small seismic waves.																							
17	e	2	45	25					- - -															
	m			27	0.3	0.7																		
	F			45.6																				
	Very small local?																							

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LAKE MEAD SEISMOLOGICAL STATIONS

Bureau of Reclamation, National Park Service and Coast and Geodetic Survey

MONTH OF) October 1940 11

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No. Date	Station	Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z
17	BOULDER CITY	e	3	00	03				
		eS		00	09				
		em			14	0.3	0.7		
		em			30	0.4	0.8		
		F		00.7					
		Two very small shocks, local?							
17	BOULDER CITY	e	3	55	10.5				
		iS			12.1				
		m			13	0.2	1.6		
		F		55.7					
		Small local, probably between Boulder City and Overton.							
17	BOULDER CITY	eP	3	56	35.0				
		e			37.8				
		iS			39.5				
		m			40	0.2	1.7		
		e			53	ca.			
		F		57.1					
		Small local, ca. 22 mi. appears similar to many others before 3 hrs. as above on 16 Oct. Others ca. 20 mi.							
17	BOULDER CITY	e	3	59	56.5				
		iS	4	00	01.3	0.3	0.9		
		F		00.2					
		Very small local, 24 mi. or more.							
17	BOULDER CITY	i	4	13	39.1				
		m			42	0.4	0.9		
		F		13.9					
		Very small local, no distance.							
17	BOULDER CITY	e?	4	30	08.6				
		i			09.2				
		iS			10.0				
		m			11	0.4	2.2		
		F		30.9					
		Small local, distance 4 mi. or more may be about 20 mi. as at 3:56 above. Epicenter between Boulder City and Overton.							

No. Date	Station	Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z
17	OVERTON	---							
17	OVERTON	eS	3	55	27				
		F		55.8					
		blurr on line							
17	OVERTON	---							
		e	3	56	46				
		F		56.1					
		blurr on line.							
17	OVERTON	---							
17	OVERTON	---							
17	OVERTON	e	4	30	20				
		eS			26				
		F		30.8					
		blurr 0.4 Distance 30 miles.							

No. Date	Station	Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z
	PIERCE FERRY								

International Seismological Centre

LAKE MEAD SEISMOLOGICAL STATIONS

Bureau of Reclamation, National Park Service
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MONTH OF October 1940 12

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No. Date	Phase	Time h m s	Period T	Trace Amplitude E	N	Z
BOULDER CITY						
17	e?	4 31 19.2	blurr			
	e	21				
	iS	23.3				
	m	25	0.4	1.6		
	F	32.1				
	Small local, 20 mi.(as 3:56)					
17	e	5 09 10	0.6	0.2		
	F	09.3				
	Very small seismic disturbance, local?					
17	e	5 12 21.5	may come here?			
	e	25.4				
	iS	27.3				
	m	29	0.4	2.3		
	F	13.2				
	Small local 10 mi. or more.					
17	- - -					
17	e	5 23 38	blurr	0.5		
	F	23.7				
	Very small local disturbance.					
17	e	5 42 06	blurr	0.8		
	F	42.1				
	Very small local disturbance.					
17	e	7 24 43	0.4	0.4		
	F	25.1				
	Very small local or near shock.					
OVERTON						
	e	4 31 38	blurr			
	F	31.9				
	- - -					
	e	5 12 32	blurr			
	eS	41		0.5		
	F	13.1				
	e	5 17 32	blurr			
	eS	42	blurr	0.3		
	F	18.1				
	Very small local shock, 40 mi.					
	- - -					
	- - -					
	- - -					
PIERCE FERRY						

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M-1073

LAKE MEAD SEISMOLOGICAL STATIONS

Bureau of Reclamation, National Park Service
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MONTH OF October 1940 13

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No. Date	BOULDER CITY Phase	Time h m s	Period T	Trace Amplitude E	N	Z	OVERTON Phase	Time h m s	Period T	Trace Amplitude E	N	Z	PIERCE FERRY Phase	Time h m s	Period T	Trace Amplitude E	N	Z
17	e	8 50 00					- - -											
	iS	00.9	0.3	0.2														
	F	50.2																
	Small local disturbance, 4 miles.																	
17	e	8 55 02.2					- - -											
	i	04.8	0.2															
	iS	05	0.5	1.5														
	F	Lost in following shock.																
	Small local shock, 14 mi. or more.																	
17	iS	8 55 29	0.5	0.9			- - -											
	F	55.7																
	Very small local shock, no distance.																	
17	e	10 18 06		0.5			- - -											
	F	18.1																
	Very small local disturbance.																	
17	e	10 19 09					- - -											
	e	19																
	eS	54.5																
	eS	57	1.2	0.3														
	F	20.3																
	Very small near shock, 250 mi. Felt at El Centro.																	
17	e	13 42 49					- - -											
	iS	52																
	m	53	0.2	1.6														
	F	43.2																
	Small local shock, 15 miles.																	
18	e	2 13 53					e	2 14 02										
	iS	55.1					iS	10										
	m	56	0.3	2.5				38 miles.										
	F	14.8																
	Small local shock, 10 miles. Epicenter probably in or near lake basin NE of Boulder City.																	

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LAKE MEAD SEISMOLOGICAL STATIONS

Bureau of Reclamation, National Park Service
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MONTH OF October 194

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No. Date	Phase	BOULDER CITY Time h m s	Period T	Trace Amplitude E	N	Z	Phase	OVERTON Time h m s	Period T	Trace Amplitude E	N	Z	Phase	PIERCE FERRY Time h m s	Period T	Trace Amplitude E	N	Z
18	e	2 15 52.8					- - -											
	is	54.0	0.3	1.0														
	F	16.2																
		Very small local shock, 6 mi. or more.																
18	e	6 18 07					- - -											
	is	08.3		3.0														
	F	18.3																
		Small local shock, 6 miles.																
18	e	14 32 26	0.3	0.7			- - -											
	F	32.5																
		Very small local disturbance.																
18	e	14 33 25		0.6			- - -											
	F	33.5																
		Very small local disturbance.																
18	e	18 56 46.5	May come in here.				- - -											
	e	48.5																
	is	49.3																
	m	51	0.4	1.0														
	F	57.2																
		Very small local shock, 6 to 14 mi.																
18	e	21 11 29	May come in here.															
	m	35	0.5	0.3			i	21 11 38.0		1.0	0.8							
	F	11.7					F	12.0										
		Very small, would not be recognized except for Overton.						Very small local shock, 47 mi. ca.										
19	e	11 15 09.4	?				- - -											
	e	10.3																
	is	11.6																
	m	12																
	F	15.4																
		Small local shock, 6 to 11 mi.																

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M-1873-4

LAKE MEAD SEISMOLOGICAL STATIONS

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MONTH OF October 1940

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No. Date	Phase	BOULDER CITY Time h	m	s	Period T	Trace Amplitude E	N	Z	Phase	OVERTON Time h	m	s	Period T	Trace Amplitude E	N	Z	Phase	PIERCE FERRY Time h	m	s	Period T	Trace Amplitude E	N	Z
19	e	16	20	18.1						Lost in train disturbance.														
	i			18.7																				
	is			18.9		4.5																		
	F		20.5																					
		Small local shock.																						
19	- - -								e	21	53	30	blurr	+										
									i			32			+	P?								
									i			39		+										
									is			40		2.0	2.5									
									F		54.3													
										Small local shock, 40 mi.														
20	e	0	16	45.7					- - -															
	is			46.7																				
	m			47	0.3	1.5																		
	F		17.0																					
		Small local shock, 5 mi.																						
20	e	17	24	29.7					- - -															
	is			32.2	0.4	0.9																		
	F		24.7																					
		Very small local shock, 12 mi.																						
20	- - -								e	21	09	21	blurr											
									is			25	blurr	0.7	0.7									
									F	21	09.7													
										Very small local shock, 20 mi.														
20	e	21	27	43	?				e	21	27	29	blurr	?										
	e			50	?				e			35	blurr											
	eS			58.2	0.6	0.1			is			42	blurr	0.9	0.6									
		Very small.								Small local shock, 35 to 65 mi.														
21	e	0	08	39.2					- - -															
	is			40.3	0.4	1.0																		
		Very small local shock, 5 mi. or more.																						

International Seismological Centre
M-10 3-4

LAKE MEAD SEISMOLOGICAL STATIONS

Bureau of Reclamation, National Park Service
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MONTH OF October 1940 16

Time used is ~~P.S.T. or~~ G.C.T. Strike out whichever does not apply.

No. Date	BOULDER CITY Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z	OVERTON Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z	PIERCE FERRY Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z
21	e	4	05	25.5					- - -															
	iS			27.0	0.3	1.8																		
	F		05.5																					
	Very local shock, 8 miles.																							
21	e	6	50	30.1					eP	6	50	38	blurr											
	e			33.1					eS		51	24	blurr	1		1								
	eS		51	08.5					F			52.0												
	m			14	0.4	1.1			Very small near shock.															
	F		53.3																					
	Small near shock. Epicenter on Agua Caliente fault near Aguanga, 33° 07' N Lat., 116° 25' W Long.; time at origin 6h 49m 33s, according to Pasadena.																							
21	e	7	30	26.6	?				- - -															
	iS			27.3	0.5	2.5																		
	F		30.6																					
	Small local shock, 3 mi. Felt in Boulder City as light momentary shock.																							
21	e	21	07	46.5					- - -															
	S			47.5	½	0.8																		
	F		07.9																					
	Very small local shock, 5 mi.																							
21	iP	21	08	12.0	0.3	1.0			e	21	08	19.5	blurr											
	iS			13.6	0.7	5.0			iS			27.5	blurr	0.5		0.6								
	m			14	0.5	8.+			F		08.7													
	F		08.8						Very small local shock, ca. 30 mi.															
	Local shock, 8 miles. Tentative epicenter in lake basin near entrance to Black Canyon. Felt in Boulder City as light momentary shock. Felt also at Boulder Dam in Arizona valve house.																							
22	e	1	40	41					- - -															
	eS			42.6	½	0.7																		
	F		40.8																					
	Very small local shock, 8 miles.																							

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LAKE MEAD SEISMOLOGICAL STATIONS

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MONTH OF October 1940

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No. Date	Phase	Time h m s	Period T	Trace Amplitude E	N	Z	Phase	Time h m s	Period T	Trace Amplitude E	N	Z	Phase	Time h m s	Period T	Trace Amplitude E	N	Z
		BOULDER CITY						**OVERTON**						**PIERCE FERRY**				
22	e	2 14 39		0.6	blurr		- - -											
	F	14.7																
		Very small local disturbance.																
22	iS	3 46 13	½	1.0			- - -											
	F	46.5																
		Very small local shock.																
22	e	6 49 54	0.8				- - -											
	F	51.3																
		Very small waves of near or distant shock.																
22	iS	7 49 55	½	1.0			- - -											
	F	50.0																
		Very small local shock.																
22	iS	10 15 06	½	1.0			- - -											
	F	15.2																
		Very small local shock.																
22	e	11 05 10					- - -											
	e	11 05 46																
	F	08.5																
		Very faint seismic waves.																
22	iS	14 48 09.5		1.1			- - -											
	F	48.2																
		Very small local disturbance.																
22	iS	15 15 12.5		0.9			- - -											
	F	15.3																
		Very small local disturbance.																
22	iS	21 38 48	½	0.6			- - -											
	F	38.9																
		Very small local disturbance.																
23	eP	0 41 27.9		0.2			- - -											
	iP	28.3		0.8														
	iS	28.7	0.3	4.0														

International Seismological Centre

LAKE MEAD SEISMOLOGICAL STATIONS

Bureau of Reclamation, National Park Service
and Coast and Geodetic Survey

MONTH OF October 194 0 18

Time used is P~~S.T. or~~ G.C.T. Strike out whichever does not apply.

BOULDER CITY | OVERTON | PIERCE FERRY

No. Date	Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z	Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z	Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z
23	e	2	32	28	?	No phases			- - -															
	F		34.0																					
	Faint seismic waves, Epicenter in vicinity of Stauffer, 34° 49' N Lat, 119°W Long; time at origin 02h 31m 31s, according to Pasadena.																							
23	e	4	46	58.7					- - -															
	iS			59.3		1.0																		
	F		47.1																					
	Very small local disturbance, 3 mi.																							
23	iS	8	10	06		0.9			- - -															
	F		10.2																					
	Very small local disturbance.																							
23	e	8	26	11.4					- - -															
	iS			11.8		0.2	1.0																	
	F		26.3																					
	Very small local shock, 7 mi.																							
23	eP	8	39	23.3	½	0.3			- - -															
	iS			25.1	0.2	1.5																		
	m			26	0.2	2.5																		
	F		39.7																					
	Small local shock, 9 mi.																							
23	iS	9	49	38		0.2	1.2		- - -															
	F		49.8																					
	Very small local shock,																							
23	e	10	00	18.7	?				- - -															
	iS			19.2		1.5																		
	F		00.4																					
	Very small local distrubance, 3 mi.																							
23	e	10	17	15	?				- - -															
	eS			16.2		0.3																		
	F		17.4																					
	Very small local disturbance, 6 mi. or more.																							

International Seismological Centre

LAKE MEAD SEISMOLOGICAL STATIONS

Bureau of Reclamation, National Park Service and Coast and Geodetic Survey

MONTH OF October 1940 19

Time used is [redacted] G.C.T. Strike out whichever does not apply.

No. Date	Phase	BOULDER CITY Time h	m	s	Period T	Trace Amplitude E	N	Z	Phase	OVERTON Time h	m	s	Period T	Trace Amplitude E	N	Z	Phase	PIERCE FERRY Time h	m	s	Period T	Trace Amplitude E	N	Z
24	e	10	11	29.6					- - -															
	iS			31.2	0.3	0.7																		
	F		11.7																					
	Very small local shock, 8 mi. or more.																							
24	e	20	18	54	1.2				- - -															
	F		23																					
	Small seismic waves.																							
24	iS	20	24	10	0.3	0.7			- - -															
	F		24.2																					
	Very small local disturbance.																							
26	eP	1	24	57.7					e	1	24	48												
	iP			58.3	0.3	0.4			iP			49		-0.5	-1.0	?	blurred.							
	eS		25	31.2	0.7	0.8			iS		25	14.5		+2.0	+1.5									
	iS			31.9	0.4	1.0			F		26.8			14.5	-17.5		blurred.							
	m			33	0.8	2.4					Medium shock, 123 mi.													
	F		28.5																					
	Small near shock, 160 mi.																							
26	e	11	22	55.5					- - -															
	e		23	07	0.7	0.3																		
	F		23.9																					
	Very small near shock. Epicenter, Vallecito Mts., 33° 00' N Lat, 116° 15' W Long; time at origin 11h 21m 23s, according to Pasadena.																							
26	e	17	58	18	1.2				- - -															
	eS	18	06	02	3.5																			
	e	18	08	15	6.																			
	F	18	15.0																					
	Faint trace of telesism.																							
26	iS	22	09	38					- - -															
	F		09.7																					
	Very small local disturbance.																							

International Seismological Centre
M-1073-4

LAKE MEAD SEISMOLOGICAL STATIONS

Bureau of Reclamation, National Park Service
and Coast and Geodetic Survey

MONTH OF October 1940

Time used is ~~P.S.T. or~~ G.C.T. Strike out whichever does not apply.

No. Date	Phase	BOULDER CITY Time h m s	Period T	Trace Amplitude E	N	Z	Phase	OVERTON Time h m s	Period T	Trace Amplitude E	N	Z	Phase	PIERCE FERRY Time h m s	Period T	Trace Amplitude E	N	Z
27	eP	5 42 56	3				eP	5 42 57	4									
	e	51 07	5				e	53 06										
	e	53 08	5				e	55.2										
	e	57.0	12				e	58.2	13									
	e	58.2	13				F	6 24										
	F	6 45																
		Teleseism, 4200 miles. Epicenter 9.9° N Lat, 84.4° W Long; time at origin 5h 35m 36s, according to U.S. C.& G.S.																
27	e	7 09 47.4						---										
	eS	49.5		0.2														
	F	09.9																
		Very small local shock, 11 mi. or more.																
27	e	9 50 55.0	0.2					---										
	iS	56.7	0.5	0.9														
	F	50.2																
		Very small local shock, 8 mi. or more.																
27	e	12 33 36.2					eS	12 33 52	blurr	0.3	0.3							
	iS	37.3	0.2	1.0			F	34.0										
	m	38	0.4	1.7														
	F	34.0																
		Small local shock, 5 mi. N.E. of Boulder City.																
27	eP	16 11 03					iP	16 11 03										
	i	06					iS	13		2.5								
	i	09					iS	14			3							
	eS	13.0					F	12.3										
	iS	14.5	0.2	0.7														
	F	12.4																
		Small local, ca. 50 miles.						Small local shock, ca. 50 mi.										
27	e	19 55 56						---										
	eS	56 28	1.5	0.3														
	F	20 00.6																
		Small near shock. Epicenter, Gulf of California, 30° N Lat, 114° W Long; time at origin 11h 54m, according to Pasadena.																

International Seismological Centre

LAKE MEAD SEISMOLOGICAL STATIONS

Bureau of Reclamation, National Park Service
and Coast and Geodetic Survey

MONTH OF **October** 194**0** **21**

Time used is ~~P.S.T. or~~ G.C.T. Strike out whichever does not apply.

BOULDER CITY

No. Date	Phase	Time h m s	Period T	Trace Amplitude E	N	Z
27	e	20 29 05				
	F	31.5				
	Very small near shock, same as above epicenter, 30° N Lat, 114° W Long; time at origin 12h 26m, according to Pasadena.					
28		21 22 +	nothing.			
28	- - -					
29	is	0 18 21	0.2	0.7		
	F	18.4				
	Very small local shock.					
30		12 00.1				
	Doubtful, very faint seismic waves.					
30	e	23 10 38	1.0			
	F	11.3				
	Faint seismic waves.					
31	e	9 34 41	0.4	0.3		
	F	34.8				
	Very faint waves of near or local shock.					

OVERTON

Phase	Time h m s	Period T	Trace Amplitude E	N	Z
- - -					
- - -					
i	22 51 56	?	1.4	0.6	
F	52.3				
Local disturbance.					
- - -					
- - -					
- - -					
- - -					

PIERCE FERRY

Phase	Time h m s	Period T	Trace Amplitude E	N	Z

International Seismological Centre

LAKE MEAD SEISMOLOGICAL STATIONS

Instrumental Report - November, 1940

INSTRUMENTAL CONSTANTS - 1940

PIERCE FERRY, Arizona

Position: Lat. 36° 07' 15" N., Long. 114° 00' 17" W., elevation 417 m. Underlying ground; terrace gravel overlying fine playa silt with gypsum cement.

Instruments:

SURVEY VIBRATION METERS: E-W and N-S components; T_o = 1.5 sec.; ϵ = ca 6:1; V = ca 1000. Photographic recording; 30 mm per minute, both components on same drum. Impulse upward corresponds to northward and westward ground movement. This seismograph was installed November 21, 1940.

International Seismological Centre

LAKE MEAD SEISMOLOGICAL STATIONS

Bureau of Reclamation, National Park Service and Coast and Geodetic Survey

MONTH OF November 1940

Time used is ~~P.S.T.~~ or G.C.T. Strike out whichever does not apply.

No. Date	Phase	BOULDER CITY Time h m s	Period T	Trace Amplitude E	N	Z	Phase	OVERTON Time h m s	Period T	Trace Amplitude E	N	Z	Phase	PIERCE FERRY Time h m s	Period T	Trace Amplitude E	N	Z
1	iP	3 09 03.4	?	0.3			- - -											
	iS	03.8	0.2	2.0														
	F	09.1																
		Small local disturbance, 2 mi.																
1	e	7 26 00.6	?				- - -											
	eP	01.9																
	i	56.5																
	eS	58.2																
	iS	27 04.1																
	m	30	1.2	1.0														
	F	30.6																
		Small near shock, 330 miles. Epicenter 33° 47' N Lat, 118° 35' W Long; time at origin 07h 25m 03s, according to Pasadena. Felt in Los Angeles.																
1	e	15 56 58	2?				- - -											
	e	16 01 07		?														
	F	16 19																
		Very small record of seismic waves.																
1	e	20 01 41					- - -											
	eS	02 42	0.7	0.2														
	F	03.9																
		Very small near shock.																
2	e	2 59 29.2					- - -											
	eS	3 00 28.4	0.7	0.2														
	F	01.8																
		Very small near shock.																
2	iS	15 38 46	0.3	0.6			- - -											
	F	38.9																
		Very small local disturbance.																
2	e	17 76 48					- - -											
	F	78.5																
		Very faint seismic? waves.																

International Seismological Centre

LAKE MEAD SEISMOLOGICAL STATIONS

Bureau of Reclamation, National Park Service
and Coast and Geodetic Survey

MONTH OF November 1940 — 2

Time used is P.S.T. or G.C.T. Strike out whichever does not apply.

No. Date	Phase	BOULDER CITY Time h m s	Period T	Trace Amplitude E	N	Z	OVERTON Phase	Time h m s	Period T	Trace Amplitude E	N	Z	PIERCE FERRY Phase	Time h m s	Period T	Trace Amplitude E	N	Z
3	iS	1 38 25	0.4	0.1			- - -											
	F	38.5																
		Very small local disturbance.																
4	e	1 43 25	0.3	0.1			- - -											
		Very small local disturbance.																
5	e	16 05 51	1 begins ca. here				- - -											
	e	07 52																
	F	09.7																
		Very small seismic waves.																
5	e	18 49 27.1					- - -											
	iS	27.7		1.2														
	F	49.5																
		Very small local disturbance, ca. 3 mi.																
6	e	14 36 03.0					- - -											
	iS	04.8		2														
	F	36.2																
		Small local, 9 miles.																
7	e	14 09 43		?			- - -											
	e	46	2															
	e	18 08	7															
	e	19 30	2.5															
	F	23																
		Very faint distant shock.																
7	e	16 03 47.3		?			- - -											
	iS	49.5	0.3	0.7														
	F	04.0																
		Very small local shock, 11 mi?																
7	eP	16 04 56.6	0.2				- - -											
	iS	59.0	0.2	1.5														
	F	05.3																
		Small local shock, 12 miles.																

International Seismological Centre
M-107 4

LAKE MEAD SEISMOLOGICAL STATIONS

Bureau of Reclamation, National Park Service and Coast and Geodetic Survey

MONTH OF November 1940 3

Time used is ~~E.S.T. or~~ G.C.T. Strike out whichever does not apply.

No. Date	BOULDER CITY Phase	Time h m s	Period T	Trace Amplitude E	N	Z	OVERTON Phase	Time h m s	Period T	Trace Amplitude E	N	Z	PIERCE FERRY Phase	Time h m s	Period T	Trace Amplitude E	N	Z
7	iS	19 43 43		0.3	?		- - -											
	F	43.8																
	Very small local disturbance.																	
8	e	0 25 08	½	0.1			- - -											
	F	25.5																
	Very small near shock.																	
8	e	1 52 58	0.7	0.2			- - -											
	F	53.4																
	Very small near shock, or local.																	
9	eP	1 53 07.2	0.3	-0.2			eP?	1 53 12										
	iS	10.3	0.3	✱3.3			e	1 15										
	F	in next shock.					iS	19		1.5								
	Small local shock, 15 miles.						F	in next shock.										
								Very doubtful, thickening of the line. N-S light had burned out.										
	Tentative epicenter in lake basin between Calville Wash and north slope of Fortification Hill. 33 mi?																	
9	eP	1 53 21.4	0.3	-0.3			e	1 53 27										
	iS	24.5	0.3	+2.0			iS	34	0.5	4.5								
	m	25	0.3	3.0			F	54.2										
	F	53.9					Small local shock, 33 miles.											
	Small local shock, 15 miles.																	
	Epicenter same as preceding shock. Maybe located on fault 1 to 4 mi. NE of Old Calville below Boulder Canyon. The latter of these two shocks is the larger. On the Overton record, the two shocks have the appearance of one, with S of the former and later having semblances of P and S respectively.																	
9	e	6 57 38	0.7				e	6 57 52	thickening of line?									
	F	59.0					F	58.2										
	Very small near shock.																	
9	e	21 31 17.8					- - -											
	iS	19.8	0.2	0.8														
	F	31.5																
	Very small local shock, 10 mi.																	

International Seismological Centre
M-1073-4

LAKE MEAD SEISMOLOGICAL STATIONS

Bureau of Reclamation, National Park Service
and Coast and Geodetic Survey

MONTH OF November 1940

Time used is ~~P.S.T.~~ or G.C.T. Strike out whichever does not apply.

No. Date	Phase	BOULDER CITY Time h m s	Period T	Trace Amplitude E	N	Z	Phase	OVERTON Time h m s	Period T	Trace Amplitude E	N	Z	Phase	PIERCE FERRY Time h m s	Period T	Trace Amplitude E	N	Z
9	eS	23 15 55.1	0.6	0.1			eP	23 15 30		? thick line.								
	F	16.4					e	34										
		80 miles.					iS	41										
							m	56		2.2								
							F	16.4										
								Small local shock, 53 miles.										
		Tentative epicenter about 15 miles south of Alamo.																
10	e	1 52 03.5	?	?			e	1 50 37										
	e	07					e	1 52 13		?								
	eS?	2 02 21	8 +	0.7			e	41										
	e	21 45	28 to				eS?	2 02 01										
	F	55	16				eS	25	6									
		Teleseism, 6400 miles.					F	45										
		Epicenter 45.0° N Lat, 26.2° E Long; time at origin 1h 39.0m, according to U.S. C. & G.S.																
10	e	10 26 32.8					---											
	eS	27 32.0		?														
	eS	27 36.7	0.7	0.1														
	F	27.9																
		Very small near shock.																
10	e	20 47 15	1.2				---											
	F	49.6																
		Probably a distant earthquake.																
11	---						e	0 43 50		ca. here								
							iS	53		1.9	1.0							
							F	44.5										
								Small local shock, 15 mi. or less.										

International Seismological Centre
M-1073

LAKE MEAD SEISMOLOGICAL STATIONS

Bureau of Reclamation, National Park Service
and Coast and Geodetic Survey

MONTH OF November 1940 5

Time used is ~~P.S.T. or~~ G.C.T. Strike out whichever does not apply.

No. Date	Phase	Time h m s	Period T	Trace Amplitude E	N	Z
BOULDER CITY						
11	eP	9 14 05.0				
	eS	12.8				
	m	15	0.3	1.2		
	m	20	0.3	1.3		
	F	14.7				
		Very small local, 37 miles.				
		Tentative epicenter about 5 miles north of Bonelli Peak or about 5 miles north of Dry Lake Post Office.				
11	iS	11 49 13.5	0.3	0.9		
	F	49.3				
		Very small local disturbance.				
11	eP	14 40 28.2				
	iS	29.2	0.2	2.2		
	F	40.6				
		Small local shock, 5 miles.				
11	e	15 34 59.4		?		
	iS	35 02.5	½	1		
	F	35.1				
		Very small local disturbance, 15 mi?				
12	iS	16 10 08	½	0.9		
	F	10.2				
		Very small local disturbance.				
12	---					

No. Date	Phase	Time h m s	Period T	Trace Amplitude E	N	Z
OVERTON						
11	iP	9 14 00.5		0.5	0.3	
	iS	05.5		1.1	0.8	
	m	24		1.8	1.1	
		24 miles.				
11	---					
11	---					
11	---					
12	---					
12	e	23 20 19.0				
	iS	21.5		1.7	1.7	
	F	20.6		Small local shock, 12.5 mi., followed by two artificial disturbances.		
	e	23 32				
	e	23 34				

No. Date	Phase	Time h m s	Period T	Trace Amplitude E	N	Z
PIERCE FERRY						

International Seismological Centre
M-1073

LAKE MEAD SEISMOLOGICAL STATIONS

Bureau of Reclamation, National Park Service and Coast and Geodetic Survey

Time used is ~~E.S.T. or~~ G.C.T. Strike out whichever does not apply.

No. Date	Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z
BOULDER CITY								
13	e	3	57	8.4				
	eP			9.2	0.3	0.2		
	iS			10.6	0.3	1.0		
	m			12	0.3	3.0		
	F		57.6					
	Small local shock, 10 miles.							
15	- - -							
16	e	2	36	09				
	F		36.9					
	Faint seismic waves, doubtful origin.							
17	e	3	59	55	2			
	e	4	03	42	8			
	e		05	48	8			
	F		19.5					
	Very small distant earthquake,							
18	e	2	40	55	0.6	0.1		
	F		41.0					
	Very small local shock.							
18	e	18	41	51.7				
	e		42	07.6				
	m			09	0.6	0.2		
	F		42.6					
	Very small near shock, 78? mi.							

No. Date	Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z
OVERTON								
13	eP	3	57	16.5				
	eS			23.5		0.3	0.3	
	F		57.7					
	Very small shock, 35 mi. Under Lake Mead, near Hesses.							
15	e	15	14	30				
	iS			31		1.0		
	F		14.8					
	Very small local disturbance, 5 mi?							
16	- - -							
17	e	3	59	53	3			
	e			58	3.0			
	e	4	02	43				
	e		03	45	8			
	F	4	21.0					
	Very small distant earthquake, 1400 miles, other phases make interpretation doubtful.							
18	- - -							
18	e	18	41	15				
	e			16.5	may not be seismic.			
	iP			46		0.4		
	iS			52.5			?	
	iS			53		0.7		
	F		42.2					
	Small local shock, 34 miles.							

No. Date	Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z
PIERCE FERRY								

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LAKE MEAD SEISMOLOGICAL STATIONS

Bureau of Reclamation, National Park Service
and Coast and Geodetic Survey

MONTH OF November 1940

Time used is ~~E.S.T. or C.S.T.~~ G.C.T. Strike out whichever does not apply.

No. Date	Phase	BOULDER CITY Time h m s	Period T	Trace Amplitude E	N	Z	Phase	OVERTON Time h m s	Period T	Trace Amplitude E	N	Z	Phase	PIERCE FERRY Time h m s	Period T	Trace Amplitude E	N	Z
19	- - -						eP	1 11 50										
							i	52.5		0.5								
							i	54		0.8								
							F	12.2										
								Very small local.										
19	eP	10 53 33.7	½	0.2			- - -											
	iS	34.7	½	1.0														
	m	35	½	1.5														
	F	53.7																
		Very small local disturbance, 5 mi.																
19	eP	13 12 55.7	0.3	0.1			- - -											
	iS	56.8	½	2.5														
	F	13.1																
		Small local shock, 5 mi. Felt at Boulder City as a typical light local shock.																
19	- - -						e	13 42 45		0.4								
							iS	47		1.0								
							F	43.1										
								Very small local shock, 10 mi.										
19	e	15 13 37.6					e	15 13 43										
	e	50.6	2				e	47										
	eS	23 08	7	? may be			e	52		1.5	0.1							
	F	28.6		seismic.			eS	23 19		6								
							F	31.4										
		Very small, probably distant earthquake.																
19	eP	18 37 29					e	18 39 14										
	eP	46					e	39										
	eS	39 38	?				F	43.0										
	F	42.3																
		Very small near or distant earthquake. May be 725 miles.																

International Seismological Centre

LAKE MEAD SEISMOLOGICAL STATIONS

Bureau of Reclamation, National Park Service
and Coast and Geodetic Survey

MONTH OF **November** 1940 — 8

Time used is ~~P.S.T. or~~ G.C.T. Strike out whichever does not apply.

	BOULDER CITY								OVERTON								PIERCE FERRY							
No. Date	Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z	Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z	Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z
19	e	20	47	06	blurr				- - -								- - -							
	F		47.3																					
	e	22	13	49	lasting 7 sec.																			
	e		16	36	"	7	"																	
	e		17	53	"	4	"																	
	e		33	35	"	5	"																	
	e		37	52	"	5	"																	
	e		40	03	"	6	"																	
	These do not have a seismic appearance, probably local disturbances.																							
20	- - -								e	13	43	28					- - -							
									is			29.5		1.+										
									F		43.9													
									Very small local shock. 7 mi.															
21	e	17	56	00.6					- - -															
	eS			02.7	0.2	0.6																		
	F		56.2																					
	Very small local shock, 10 mi.																							
21	- - -								eP	23	10	42					- - -							
									iS			45		1.5	1.+									
									F		11.5													
									Small local shock, 15 miles.															
22	e	9	59	48.4					- - -								- - -							
	eS			50.2	½	0.2																		
	F	10	00.0																					
	Very small local shock, 9 mi.																							
22	eP	12	37	50.5	0.5				eP	12	38	04	blurr				e	12	37	53				
	e			54.3	0.7	0.5			eS		38	47	blurr				e		38	07				
	eS		38	26.0	0.8	0.4			F		39.7						eS			32				
	e			35.3	0.5	0.8			Very small near shock, 240 mi.								e			39	1.3	0.3		
	F		41.3														e			41	1.3			0.4
	Small near shock, 200 miles.																F		41.7		215 miles.			

International Seismological Centre

LAKE MEAD SEISMOLOGICAL STATIONS

Bureau of Reclamation, National Park Service and Coast and Geodetic Survey

MONTH OF November 1940

Time used is ~~P.S.T.~~ G.C.T. Strike out whichever does not apply.

No. Date	Phase	BOULDER CITY Time h m s	Period T	Trace Amplitude E	N	Z	Phase	OVERTON Time h m s	Period T	Trace Amplitude E	N	Z	Phase	PIERCE FERRY Time h m s	Period T	Trace Amplitude E	N	Z
23	eP	3 56 19	2				e	3 56 21					eP	3 56 17	2.5			
	eS	4 02 23	8				eS	4 02 26					eS	4 02 18	10			
	e	10	12				F	4 05					F	4 42				
	F	20.0						Very small, 2690 miles.						2650 miles.				
		Faint trace of distant shock, ca. 2670 miles. Epicenter 9° N Lat, 84° W Long; time at origin 3h 48m 52s, according to U.S. C & G S.																
23	e	5 54 25					eS	5 54 52	blurr				e	5 54 28				
	e	36	0.7	0.1			F	55.1					e	44				
	F	56.7											F	56.5				
		Very small near shock.																
24	e	13 05 51					e	13 06.5		?	?		e	13 06 00?		?		
	eS	06 31	0.6	0.1			F	07.0					e	05 40				
	F	08.1						Very faint waves of N.S.					eS	49	1.2	0.3	0.3	
		Very small near shock, 220 mi.											F	06.2	255 miles.			
26	e	16 59 40.8					- - -						- - -					
	iS	41.3	0.3	0.8														
	F	59.8																
		Very small local shock, 3 mi. or more, too small to record at Overton and Pierce Ferry.																
26	eS	21 52 31		0.1			e	21 51 15					- - -					
	F	52.6					iS	18										
		Very small disturbance.					F	51.6										
								Very small local disturbance (more than a minute ahead of Boulder City)?										
27	e	19 46 28.0	May be P.				- - -						- - -					
	iS	29.4		1.0														
	F	46.5																
		Very small local disturbance, 7 mi? or less.																
27	e	23 17 46.6					- - -						- - -					
	iS	47.1	0.3	2.2														
	F	17.9																
		Small local disturbance, 2 mi.																
28	e	00 01 13.7	0.1	May be P			- - -						- - -					
	e	14.4	0.1															
	iS	15.0	0.2	4.0														
	f	16.3	(break)															
	F	01.4	Small local shock, 6 miles.															
		Felt at Boulder City. Was mistaken for an artifical disturbance.																

International Seismological Centre
M-1073

LAKE MEAD SEISMOLOGICAL STATIONS

Bureau of Reclamation, National Park Service
and Coast and Geodetic Survey

MONTH OF November 1940 10

Time used is ~~P.S.T. or~~ G.C.T. Strike out whichever does not apply.

BOULDER CITY

No. Date	Phase	Time h m s	Period T	Trace Amplitude E	N	Z
28	e	2 34 33		0.1		
	F	34.6				
	Very small local disturbance.					
28	e	8 11 49.0				
	iS	49.5	0.2	1.0		
	F	11.9				
	Very small local disturbance.					
28	e	11 26 33.4				
	iS	33.9	0.3	1.0		
	F	26.6				
	Very small local disturbance.					
28	e	18 04 06		0.1		
	F	04.2				
	Very small, probably artifical.					
28	- - -					
28	eP	21 46 08.8				
	iS	09.2	0.2	3.3		
	F	46.2				
	Small local disturbance, 2 mi.					
28	e	23 56 09	½	0.1		
	F	56.2				
	Very small probably artifical.					
29	e	6 44 17		0.2		
	F	44.3				
	Very small local disturbance.					
29	e	8 21 04				
	e	09				
	eS	32.5	0.3	0.2		
	F	22.9				
	Very small near shock, 140 mi.					
30	e	17 38 43				
	F	38.8				
	Very small disturbance.					
30	- - -					

OVERTON

Phase	Time h m s	Period T	Trace Amplitude E	N	Z
- - -					
- - -					
- - -					
- - -					
eP	19 46 16.0			blur	
iS	19.0		1.0	"	
F	46.7	Follows train disturbance by 13 min.			
Very small disturbance, 15 mi.					
- - -					
- - -					
- - -					
eS	8 21 52	? blurr			
F	22.3				
- - -					
e	23 04 25	blurr			
iS	27	"	0.8	1.0	
F	04.9				
Very small local shock, 10 mi.					

PIERCE FERRY

Phase	Time h m s	Period T	Trace Amplitude E	N	Z
- - -					
- - -					
- - -					
- - -					
- - -					
- - -					
- - -					
eS	8 21 52				
F	23.7				
- - -					
- - -					

International Seismological Centre

LAKE MEAD SEISMOLOGICAL STATIONS

Instrumental Report - - - December, 1940.

The instrumental record at Overton is incomplete because a supply of undeveloped records was sent to wrong addressee and opened by mistake. However several epicenters were located as follows:

Tentative epicenters in the Lake Mead Region of December, 1940 shocks:

Dec. 1, 20h 53m G.C.T.	Las Vegas Wash or 2 mi. E. Boulder Dam or in between, depending on depth of focus. Very tentative.
Dec. 3, 13h 38m	Las Vegas Wash or 2 mi. E. Boulder Dam or in between, depending on depth of focus. Very tentative.
Dec. 6, 16h 37m	Between Calville Wash and Fortification Hill. Very tentative.
Dec. 19, 12h 34m	Epicenter near base of Fortification Hill, 11 or 12 mi. NE Boulder City. Fairly well located.

The recorded shock of Dec. 19, at 12h 34m G.C.T. is of particular interest because it is the first that was recorded at the three Lake Mead stations. The epicenter of this shock is located at the base of Fortification Hill opposite Callville Wash, on or near a NE-SW fault. Maps showing tentative locations of this and other shocks is under preparation. Shocks which were felt at Boulder City are listed and described as follows:

Felt earthquakes in December, 1940:

Dec. 2, 18:53:39 G.C.T.	Noise reported at Boulder City.
Dec. 3, 17:59:5	Lightly felt at Boulder City.
Dec. 4, 5:59:20	" " " " "
15:27:06	" " " " "
Dec.17, 11:16:33	" " " " "
Dec.27, 3:29:12	Felt as a "sharp blow at Boulder City.

International Seismological Centre
M-1073-4

LAKE MEAD SEISMOLOGICAL STATIONS

Bureau of Reclamation, National Park Service
and Coast and Geodetic Survey

MONTH OF December 1940

Time used is G.C.T.

BOULDER CITY

No. Date	Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z
1	e	11	56	56.9	May be P.			
	F		56	1				
	e		57	12.1				
	i			12.7				
	iS			14.7	½	1.3		
	F		57	.7				
	Very small shock, 14 to 88 mi. doubtful if one or two shocks.							
1	e	13	07	12.7				
	eS			35.5				
	iS			37.5	4.0	0.2		
	F		08	.5				
	Very small near shock, 113 mi.							
1	eP	20	53	21.5	0.3			
	iP			22.4				
	iS			23.4	0.5	1.0		
	fS			24.2				
	m			24.5	0.5	1.6		
	F		53	.8				
	Very small local shock, 9-11 mi.							
1	e	21	18	16	1.5	0.1		
	F		21	.5				
	Very small seismic waves.							
1	e	22	19	32	0.7	0.1		
	F		20	.0				
	Very small seismic waves, near?							
2	eP	5	22	57.9	0.3	0.05		
	iP			59.1	0.2	0.15		
	iS		23	00.0	0.4	1.4		
	m			00.5	0.3	2.0		
	F		23	.5				
	Small local shock, 10-11 miles.							

OVERTON

Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z
---							
e	12	07	03	blurr			
iS			25	blurr	0.8	0.8	?
F		08	.0				
108 miles.							
e	20	53	30	blurr	x		
eS		53	38	"	x		
F		54	.0				
Very faint may be 40 miles.							
e	21	18	24		?		
eS		19	22				
F		20					
Faint, 330 miles.							
---							
e	5	22	14	blurr			
F		22	.5				

PIERCE FERRY

Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z
---							
e	13	07	04.5	blurr		?	
eS		07	20.0	"	0.5	0.5	
F		08	.0 Poor time correction.				
76 miles.							
---							
e?	21	18	21				
e		18	50.3				
eS		19	17.6	1.3			
m		19	36	1.3	0.25	0.15	
F		23	.5				
Very small near shock. 320 mi.							
eS	22	19	34				
F		19	.9				
Very small near shock.							

International Seismological Centre

LAKE MEAD SEISMOLOGICAL STATIONS

Bureau of Reclamation, National Park Service and Coast and Geodetic Survey

MONTH OF December 1940 —

Time used is G.C.T.

No. Date	Phase	BOULDER CITY Time h m s	Period T	Trace Amplitude E	N	Z	Phase	OVERTON Time h m s	Period T	Trace Amplitude E	N	Z	Phase	PIERCE FERRY Time h m s	Period T	Trace Amplitude E	N	Z
1	e	11 56 56.9	May be P.				---						---					
	P	56.1																
	e	57 12.1																
	i	12.7																
	is	14.7	½	1.3														
	P	57.7																
		Very small shock, 14 to 88 mi. doubtful if one or two shocks.																
1	e	13 07 12.7					e	12 07 03	blurr				e	13 07 04.5	blurr		?	
	es	35.5					is	25	blurr	0.8	0.8	?	es	07 20.0	=	0.5	0.5	
	is	37.5	4.0	0.2			P	08.0					P	08.0	Poor time correction.			
	P	08.5																
		Very small near shock, 113 mi.						108 miles.						76 miles.				
1	eP	20 53 21.5	0.3				e	20 53 30	blurr	x			---					
	LP	22.4					es	53 38	"	x								
	is	23.4	0.5	1.0			P	54.0										
	fs	24.2																
	s	24.5	0.5	1.6														
	P	53.8																
		Very small local shock, 9-11 mi.						Very faint may be 40 miles.										
1	e	21 18 16	1.5	0.1			e	21 18 24		?			e?	21 18 21				
	P	21.5					es	19 22					e	18 50.3				
		Very small seismic waves.					P	20					es	19 17.6	1.3			
								Faint, 330 miles.					s	19 36	1.3	0.25	0.15	
													P	23.5				
														Very small near shock. 320 mi.				
1	e	22 19 32	0.7	0.1			---						es	22 19 34				
	P	20.0											P	19.9				
		Very small seismic waves, near?												Very small near shock.				
2	eP	5 22 57.9	0.3	0.05			e	5 22 14	blurr				---					
	LP	59.1	0.2	0.15			P	22.5										
	is	23 00.0	0.4	1.4														
	s	00.5	0.3	2.0														
	P	23.5																
		Small local shock, 10-11 miles.																

International Seismological Centre

LAKE MEAD SEISMOLOGICAL STATIONS

Bureau of Reclamation, National Park Service
and Coast and Geodetic Survey

MONTH OF December 1940 2

Time used is G.C.T.

	BOULDER CITY								OVERTON								PIERCE FERRY							
No. Date	Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z	Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z	Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z
2	e	18	24	53					--- Some artificial disturbance.								---							
	e		25	27	1																			
	F	18	55.3																					
	Very small recurrent waves, probably of seismic origin.																							
2	eP	18	53	39.4					---								---							
	iS			40.0		2.5																		
	F		53.9																					
	Small local shock, 3 mi. Noise reported at Boulder City.																							
3	e	13	38	36.4					e	13	38	46	blurr				---							
	eP			38.9					eS			54		0.1										
	iS			40.5	0.3	1.3			m			58												
	m			41.5	0.4	1.7			F		37.2													
	F		39.3							Very faint, could be 30-37 mi.														
	Small local shock. 10.5 miles.																							
3		17	59.5						---								---							
	light, local-type shock, felt in Boulder City.																							
4	e	5	59	19.5					---								---							
	eP			20.0																				
	iS			20.8	0.3	3.2																		
	F		39.6																					
	Small local shock, 4 mi. Lightly felt at Boulder City.																							
4	iP	15	27	06.1	0.3	0.5			---								---							
	iS			07.0	blur	6.0																		
	m			08	0.3	9.0																		
	F		27.6																					
	Local shock, 4.5 mi. Lightly felt at Boulder City.																							
4	iS	22	40	24	0.2	1.2			---								---							
	F		40.5						Artificial disturbances during this hour.															
	Very small local shock, no distance.																							
4	iS	22	40	55	0.2	0.8			---								---							
	F		41.0						Some artificial disturbances.															
	Very small local shock, no distance, too small to record elsewhere.																							

International Seismological Centre

LAKE MEAD SEISMOLOGICAL STATIONS

Bureau of Reclamation, National Park Service
and Coast and Geodetic Survey

MONTH OF December 1940

Time used is G.C.T.

BOULDER CITY							OVERTON							PIERCE FERRY						
No. Date	Phase	Time h m s	Period T	Trace Amplitude E	N	Z	Phase	Time h m s	Period T	Trace Amplitude E	N	Z	Phase	Time h m s	Period T	Trace Amplitude E	N	Z
4	is	23 29 27		0.7			---						---					
	F	29.5																
	Very small local disturbance, no distance.																	
5	e	5 08.5		0.3			---						---					
	Very small disturbance.																	
5	e	11 50.8		0.3			---						---					
	Very small local disturbance.																	
5	e	17 45 51		0.2			---						---					
	Very small local disturbance.																	
5	e	23 13 56		0.3			---						---					
	Very small local disturbance.																	
5	is	23 49 50	0.2	1.0			---						---					
	F	49.9																
	Very small local disturbance.																	
6	e	0 03 03		0.1			---						---					
	Very small local disturbance.																	
6	e	0 17 51.4					---						---					
	is	52.0	0.2	1.5														
	F	18.1																
	Very small local shock, 3 mi.																	
6	e	0 26 09	0.3	0.2			---						---					
	Very small local disturbance.																	
6	e	1 18 43	0.4	0.5			---						---					
	F	18.8																
	Very small local disturbance.																	
6	is	5 20 23		1.0			---						---					
	Very small local disturbance.																	

International Seismological Centre

LAKE MEAD SEISMOLOGICAL STATIONS

Bureau of Reclamation, National Park Service
and Coast and Geodetic Survey

MONTH OF December 1940

Time used is G.C.T.

No. Date	Phase	BOULDER CITY Time h m s	Period T	Trace Amplitude E	N	Z	Phase	OVERTON Time h m s	Period T	Trace Amplitude E	N	Z	Phase	PIERCE FERRY Time h m s	Period T	Trace Amplitude E	N	Z
6	e	9 59 23.8					- - -						- - -					
	is	24.8	0.2	0.8														
	F	59.5																
	Very small local shock, 5 mi.																	
6	eP	16 37 24.8					es	16 37 38	blurr	0.1			- - -					
	es	27.5	0.2	0.5				Very faint blurr.										
	m	28	0.3	1.3														
	F	37.8																
	Very small local shock, 13 mi.																	
6	- - -						es	21 36 45		0.3			- - -					
								Very faint.										
7	is	2 27 20		1.0			- - -						- - -					
	Very small local disturbance.																	
7	- - -						e	11 41 38		0.2			- - -					
								Very small local disturbance.										
7	is	17 06 12	0.2	0.3			- - -						- - -					
	Very small local disturbance.																	
7	iP	22 17 37.0	0.5	-0.4			iP	22 17 44.5		-0.4	-0.3 ?		iP	22 17 40.7	1	-0.3	-0.5	
	i	30.7	0.6				i	49					i	18 49				
	i	41.4					i	18 59					i	19 00				
	i	18 05.6	0.8	+2			is	19 17					m	19.5		-	18	12
	i	50.3	1.0	+2			m	50	3	-16			F	35				
	is	19 03.5	1.0	-4			F	35?										
	m	07	2.0	10.5														
	fs	09.5																
	F	35.0																
	Moderate near earthquake, 510 mi. Gulf of California. Generally south of this group of stations.																	
8	e	17 14 23					- - -						- - -					
	m	25	0.4	0.5														
	F	14.5																
	Very small local shock.																	

International Seismological Centre

LAKE MEAD SEISMOLOGICAL STATIONS

Bureau of Reclamation, National Park Service and Coast and Geodetic Survey

MONTH OF December 1940

Time used is G.C.T.

	BOULDER CITY							OVERTON							PIERCE FERRY						
No. Date	Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z	Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z	Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z
8	---								IS	20	55	58		1.0	0.7		---							
									F		56.2		Small	local.										
9	e	0	36	58					e	0	37	48					e	0	37	48				
	eS		37	30.7					F		38.2						F	0	40.0					
	m			35	1	0.3					Very faint.													
	F		39.3																					
	Very small near shock, 175 mi.																							
9	e	8	21	21.5					e	8	21	28					e	8	22	08				
	eS			50.3	0.8	0.2			e		22	09		0.1	0.3		F		22.7					
	F		22.5						F		22.5													
	Very small near shock, 150 mi.																							
9	e	10	21	04					---								e	10	21	44				
	eS		22	11	1.0	0.2											eS		21	55				
	F		23.2														F		23.6					
	Very small near shock, 375 mi.																							
9	i	17	38	38		0.4			---								---							
	F		38.7																					
	Very small local disturbance.																							
9	i	21	16	51		0.3			---								---							
	F		16.9																					
	Very small local disturbance.																							
9	i	6	41	47		0.5			---								---							
	F		41.8																					
	Very small local disturbance.																							
10	e	17	45	37	0.3	0.2			---								---							
	F		45.7																					
	Very small local disturbance.																							
10	is	17	51	56	0.5				---								---							
	F		52.0																					
	Very small local disturbance.																							

Artificial disturbance.

International Seismological Centre

LAKE MEAD SEISMOLOGICAL STATIONS

Bureau of Reclamation, National Park Service
and Coast and Geodetic Survey

MONTH OF December 1940

Time used is G.C.T.

No. Date	Phase	BOULDER CITY Time h m s	Period T	Trace Amplitude E	N	Z	Phase	OVERTON Time h m s	Period T	Trace Amplitude E	N	Z	Phase	PIERCE FERRY Time h m s	Period T	Trace Amplitude E	N	Z
10	e	18 34 33		0.1?			---						---					
		Very faint disturbance.																
10	e	19 04 43		0.1			---						---					
		Very small local disturbance.																
11	is	5 55 55	0.5	0.5			---						---					
	F	56.0																
		Very small local disturbance.																
11	is	5 58 23		0.3			---						---					
		Very small local disturbance.																
11	e	22 28 23		0.2			---	Much artificial disturbance for two hours.					---					
		Very small local disturbance.																
12	e	1 51 55	0.2	0.4			---						---					
		Very small local disturbance.																
13	e	8 04 35					---						e	8 05 20	1			
	e	8 05 07	1	0.2										Poor time correction.				
	F	06.4																
		Very small near earthquake. 170 mi.																
14	e	8 37 03.5	1.7	0.2				No Record					e	8 37 08	1.5			
	e	46 27	2.5	0.2									m	12	1.5	0.2		0.5
	F	47											F	38.5				
		Very small seismic waves.						"										
15	e	23 20 25	0.3	0.3									e	23 20 26	1.5			
	F	20.7											F	20.7				
		Very small local disturbance.						"										
16	e	2 44 14.5											---					
	is	16.3	0.2	1.0														
	F	44.3																
		Very small local disturbance, 9 mi.						"										

International Seismological Centre

LAKE MEAD SEISMOLOGICAL STATIONS

Bureau of Reclamation, National Park Service
and Coast and Geodetic Survey

MONTH OF December 1940 7

Time used is G.C.T.

No. Date	Phase	BOULDER CITY Time h m s	Period T	Trace Amplitude E	N	Z	Phase	OVERTON Time h m s	Period T	Trace Amplitude E	N	Z	Phase	PIERCE FERRY Time h m s	Period T	Trace Amplitude E	N	Z
16	e	6 10 27.8						No Record					--					
	is	28.7	0.3	2.0														
	F	10.6																
		Small local disturbance, 4½ mi.																
16	e	9 04 28						"					e	9 04 20?		-		
	is	39.8											es	33				
	m	40	0.2	1.2									m	40	1	0.4	0.4	
	F	05.7											F	04.9				
		Very small local to near shock, 987 mi.																
16	e	20 17 40	-	0.2				"					--					
		Very small disturbance, may not be seismic.																
17	is	3 19 19	0.2	0.2				"					--					
	F	19.4																
		Very small local disturbance.																
17	eP	11 16 32.7	0.2	0.2				"					--					
	is	33.5	0.2	2.0														
	F	16.7																
		Small local shock, 4 mi. Lightly felt at Boulder City.																
18	eP	6 10 46.8	0.3	0.1				"					--					
	is	49.9	0.3	0.6														
	m	50	0.2	1.5														
	F	11.2																
		Ver; small local shock, 15 mi.																
18	e	13 30 49.9						"					--					
	is	53.3	0.2	0.5														
	F	31.2																
		Very small local shock, 17 mi.																
18	e	14 21 35.7						"					--					
	is	37.7	0.3	1.5														
	F	21.7																
		Very small local shock, 15 mi.																

International Seismological Centre

LAKE MEAD SEISMOLOGICAL STATIONS

Bureau of Reclamation, National Park Service
and Coast and Geodetic Survey

MONTH OF December 194 0 8

Time used is G.C.T.

No. Date	BOULDER CITY Phase	Time h m s	Period T	Trace Amplitude E	N	Z	OVERTON Phase	Time h m s	Period T	Trace Amplitude E	N	Z	PIERCE FERRY Phase	Time h m s	Period T	Trace Amplitude E	N	Z
18	e	16 20 07.8	P may arrive here					No Record					--					
	iS	08.9	0.2	1.8														
	F	20.3																
	Very small local disturbance, 57 mi.																	
19	iP	12 33 35.6	0.3	-3.0			iP	12 33 42	Blur				--					
	iS	37.8	0.4	6.5			iS	12 33 49					ePe	12 33 43				
	m	39	0.4	12			F	12 34.7					ePn	44				
	F	35.0						Local - 34 mi.					iSen	33 51				
	Medium local shock, 11 mi.												F	34.7				
19	iP	14 55 23.0	0.3	-1.0				"					--					
	iS	25.2	0.3	1.7														
	m	25.5	0.3	-4.0														
	Small local shock, 12 mi.																	
19	iS	22 40 28	0.2	0.3			--						--					
	F	40.5																
	Very small local disturbance.																	
19	eP	22 59 31.2					--						--					
	iS	32.3	0.2	2.0														
	m	32.5	0.2	5.0														
	F	59.7																
	Small local shock, 5½ mi.																	
19	e	23 02 11.3					--						--					
	iS	12.0	-	0.7														
	F	02.3																
	Very small local disturbance, 4½ mi.																	
19	e	23 02 46.7					--						--					
	iS	47.7	-	0.4														
	F	02.9																
	Very small local disturbance, 5 mi.																	

International Seismological Centre
M-1073-4

LAKE MEAD SEISMOLOGICAL STATIONS

Bureau of Reclamation, National Park Service
and Coast and Geodetic Survey

MONTH OF December 1940

Time used is G.C.T.

No. Date	Station	Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z
20	BOULDER CITY	e	0	06	13				
		es		07	02				
		F		08.4					
		Very small near ? shock, 275 mi. or more.							
20		e	0	20	21.2				
		is			22.7	0.1	0.5		
		F		20.4					
		Very small local disturbance, 8½ mi.							
20		e	1	05	50	1.7			
		e		12	20	5	faint		
		F		19					
		May be part of distant earthquake.							
20		e	7	44	09				
		e		45	15	1.7			
		es		47	59	7			
		F		54.0					
		Very small distant record of an earthquake, Felt in New England States							
20		e	12	22	41	0.4	0.1		
		F		23.3					
		Very small local or near shock.							
20		e	20	48	39.5				
		is			40.6	0.2	2.0		
		F		48.8					
		Small local disturbance, 5½ mi.							
20		e	23	42	59	1.5			
		i		45	10	5			
		i			22	-			
		is			26	7			
		m		46	05	4	2.0		
(21)		F	0	04.0					
		Small distant earthquake, 850 mi.							
		Felt at Eureka, Calif. Epicenter 40° N Lat. 124° W Long; time at origin 15h 40.7m according to							

No. Date	Station	Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z
20	OVERTON	- -							
20		- -							
20		- -							
20		- -							
20		- -							
20		e	23	43	40				
		es		45	27				
		i		46	28	7	06		
		F		55					

No. Date	Station	Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z
20	PIERCE FERRY	e	0	06	52				
		e		07	08	1			
		F		09.1					
		- -							
		e?	1	05	31	?			
		e			44	1.5			
		F		08.5					
		e?	7	41	33				x
		e		44	18			x	
		e		44	43	2.5		x	
		es		47	32	8			
		F		55					
		e	12	22	43				
		F		23.1					
		- -							
		e	23	43	07				x
		e			14			x	
		i		43	45				x
		i		45	34				
		is			43				
		F	0	07					

International Seismological Centre
M-1073-4

LAKE MEAD SEISMOLOGICAL STATIONS

Bureau of Reclamation, National Park Service
and Coast and Geodetic Survey

MONTH OF December 1940 10

Time used is G.C.T.

	BOULDER CITY							OVERTON							PIERCE FERRY						
No. Date	Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z	Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z	Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z
21	e	7	45	53.4					--								--							
	iS			54.6	0.3	2.0																		
	F			46.1																				
	Small local shock, 6 mi.																							
21	e	8	50	51.2					e?	8	50	47	blur				--							
	eS		51	02.1	0.7	0.3			e			52	"											
	F		51	51.7					iS			55	"											
	Very small local to near shock, 537 mi.								m		51	00	-	1.3										
									F		54	4												
21	e	11	36	46.3					--								--							
	iS			48.5	0.2	0.7																		
	F			37.2																				
	Very small local shock, 11 mi.																							
									iP	14	16	19					--							
21	-?								iS		16	20	-	2.0										
									F		16	8												
									Small local shock, 15 mi.															
									--								e?	12	43	03				
22	e	12	43	49													e		43	07	1.5			
	e		53	48	7												e		52	55	6			
	e	13	11	50	9												e	13	06	4	12			
	e		12	40	20												e		12	8	20			
	F		47	0													F		25					
	Small distant earthquake, or teleseism.																							
									--								eP	19	10	21	2	+0.1	-0.2	
22	eP	19	10	21.6													e		18	56	3			
	iP			29.5													e		19	34	3			
	iS		20	01.5	3.5	0.3											F		33	1				
	F		32																					
	Small teloseism, ca 5,150 mi.																							
23	e	8	55	05	0.2	0.2			--								--							
	F		55	2																				
	Very small local disturbance.																							

International Seismological Centre

LAKE MEAD SEISMOLOGICAL STATIONS

Bureau of Reclamation, National Park Service
and Coast and Geodetic Survey

MONTH OF December 1940 11

Time used is G.C.T.

No. Date	BOULDER CITY Phase	Time h m s	Period T	Trace Amplitude E	N	Z	OVERTON Phase	Time h m s	Period T	Trace Amplitude E	N	Z	PIERCE FERRY Phase	Time h m s	Period T	Trace Amplitude E	N	Z
23	e	21 56 08					- -						e?	21 56 05				
	?	22 01.4											e	13				
		Small seismic waves.											?	22 00.6				
23	e	23 26 10.3					- -						- -					
	is	12.0	0.3	0.6														
	?	26.4																
		Very small local disturbance, 3 mi.																
23	e	23 43 29	0.3	0.3			- -						- -					
	?	43.5																
		Very small local disturbance.																
24	e	14 00 43	1.5					No Record					e	13 54 28				
	es	05 13	5	0.2									es	14 01 09	2.5	-0.6	-0.2	
	?	15.0											?	11				
		Small distant shock																
25	e	14 04 20						"					- -					
	es	23	0.3	0.4														
	?	04.5																
		Very small local shock, 15 mi.																
25	e	16 00 12.1						"					- -					
	is	13.0	0.2															
	m	16	0.2	1.0														
	?	00.7																
		Very small local shock, 14 mi.																
25	e	18 37 45.9						"					- -					
	is	48.7																
	m	49	0.2	1.0														
	?	38.1																
		Very small local shock, 13 mi.																
25	e	18 39 39.1						"					- -					
	is	41.1																
	m	42	0.4	1.1														
	?	40.1																

International Seismological Centre

LAKE MEAD SEISMOLOGICAL STATIONS

Bureau of Reclamation, National Park Service
and Coast and Geodetic Survey

MONTH OF December 1940 — 12

Time used is G.C.T.

No. Date	Phase	BOULDER CITY Time h m s	Period T	Trace Amplitude E	N	Z	Phase	OVERTON Time h m s	Period T	Trace Amplitude E	N	Z	Phase	PIERCE FERRY Time h m s	Period T	Trace Amplitude E	N	Z
25	e	18 56 40.6						No Record					--					
	iS	41.6	0.2	0.7														
	F	56.8																
	Very small local disturbance, 5 mi.																	
26	e	22 03 08.1						"					--					
	iS	08.7																
	m	9	02	0.9														
	F	03.5																
	Very small local disturbance, 3 mi.																	
27	iS	0 38 31	-	0.9				"					--					
	F	38.6																
	Very small local disturbance,																	
27	iS	2 02 54	0.3	1.8				"					--					
	F	03.0																
	Very small local disturbance.																	
27	iP	3 29 12.3						"					--					
	iS	13.2	-	5+	(maybe (15													
	Medium local shock, 4½ mi? Felt as a sharp blow at Boulder City.																	
27	e	11 01 17.8						"					--					
	iS	19.9																
	m	21	0.2	2.0														
	Very small local shock, 10½ mi.																	
27	iS	11 01 35	0.2	0.8				"					--					
	F	01.9																
	Very small local in coda of above.																	
27	iS	13 48 35	0.2	0.9				"					--					
	F	48.7																
	Very small local disturbance.																	

International Seismological Centre
M-1073-4

LAKE MEAD SEISMOLOGICAL STATIONS

Bureau of Reclamation, National Park Service
and Coast and Geodetic Survey

MONTH OF December 1940 13

Time used is G.C.T.

BOULDER CITY

No. Date	Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z
28	eP	16	50	21.2	3	0.2		
	eS	17	00	55	8			
	e		23	40	18			
	F	18	10					
	Small record of a teleseism, 5,900 mi.							
	Provisional Epicenter 18½° N Lat, 147 E Long; time at origin 16h 37.8m according to U.S.C. & G.S.							
29	e	16	45	47	2.0			
	F		46.8					
	Faint seismic waves							
30	is	10	37	26	0.2	0.5		
	F		37.5					
	Very small local disturbance.							
31	e	20	27	40.7				
	is			41.2	0.3	2.5		
	F		27.8					
	Small local disturbance, 2½ mi.							

OVERTON

Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z
	No Record						
	No Record						
	"						

PIERCE FERRY

Phase	Time h	m	s	Period T	Trace Amplitude E	N	Z
eP	No time marks.						
F	18	03.0					
--							
--							