

MAMMOTH LAKES EARTHQUAKES - STRONG MOTION RECORDS

City of Los Angeles Department of Water and Power

Location: Control Gorge Hydro Plant, 37.44°N, 118.55°W

Instruments: Kinemetrics SMA

Date	Time	Mag	Duration, Sec	Acceleration, g			Record No.
				L	V	T	
5-25-80	0933	6.0	13	0.052	0.049	0.070	063
	0949	5.8	--	Less than 0.029			064
	1245	6.0	10	0.073	0.049	0.064	065
	1336	5.5	3	Less than 0.025			066
	1338	--	1	Less than 0.025			067
	1359	5.0	2	Less than 0.01			068
5-26-80	0320	--	1	Less than 0.01			069
	0525	4.9	2	Less than 0.02			070
	1158	5.5	3	Less than 0.025			074
5-27-80	0751	6.0	15	0.114	0.082	0.102	---

For additional information or copies of the records, contact Luis E. Escalante (EERI 1977), PD&C Division, Department of Water and Power, City of Los Angeles, Box 111, Los Angeles, California, 90051. File copies have been forwarded to USGS and CDMG.

California Department of Water Resources, operator of about 75 strong motion instruments along the California Aqueduct Water Project, reports no significant records. This means nothing 0.05g or larger.

Pacific Gas & Electric has submitted a record made at their Diablo Canyon Power Plant (near San Luis Obispo) Sunday, May 25. "It was recorded by the Terra Technology DCS-302 digital-analog recording system. Because the DCS-302 is intended to capture data for scientific and engineering - rather than operation - use, it has a gain ranging capability which causes the recorder to switch to lower sensitivity if the incoming seismic waves are driving the record off-scale. This feature made it possible to have the system set at high enough sensitivity to record the weak but distinctive ground motions arriving from the Mammoth Lakes area." [R.V. Bettinger, EERI 1975] Maximum amplitudes on the record, taken at Esta #25, near the warehouse, are 0.0022 on the north-south component and 0.0012 on the east-west component. Vertical is somewhat less. Predominant period is about 1.5 seconds. Bracketed duration above 0.001g is at least 20 seconds. Copies should be available from Mr. Bettinger, PG&E, 77 Beale Street, San Francisco, California 94106.

Southern California Edison, US Geological Survey, and California Division of Mines and Geology summaries (see page 110 of July NEWSLETTER) still stand, as they have not been updated. No response to inquiries has been received from the University of Nevada or University of Southern California.

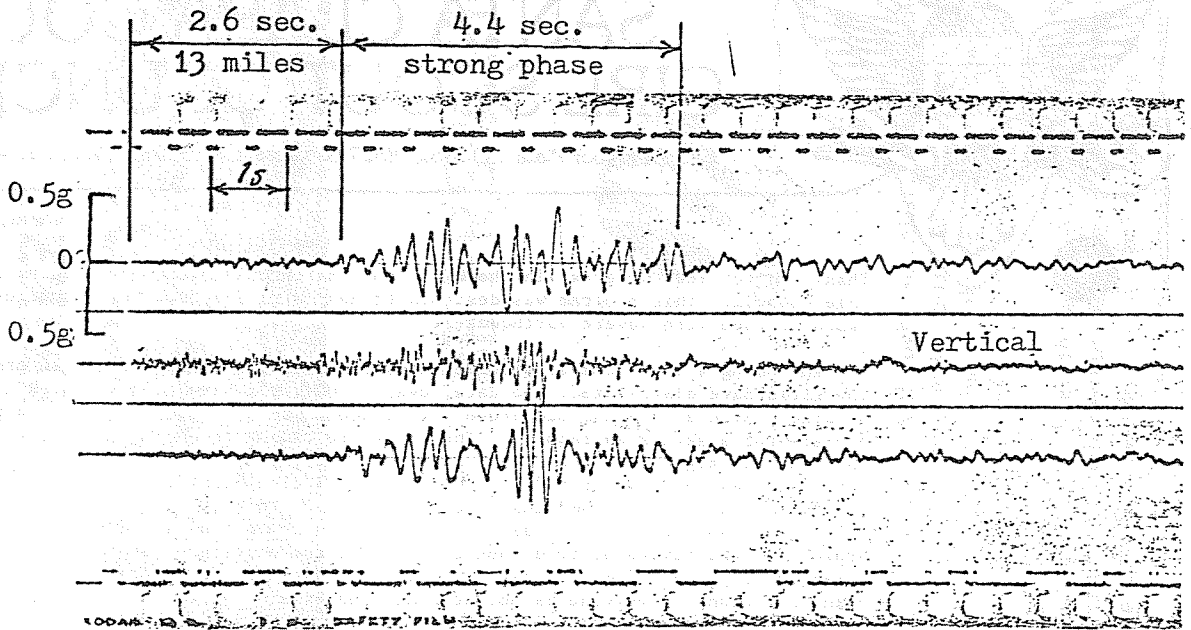
## ACCELEROGRAMS FROM MAMMOTH LAKES EARTHQUAKES

Earthquake Engineering Research Laboratory  
California Institute of Technology

CIT recorded 48 events at McGee Creek Inn, 23 events at Mammoth Elementary School and 8 events at Long Valley Fire Station, between 5-25-80 and 6-16-80. The maximum peak acceleration was 0.42g (horiz) at McGee Creek Inn, with 0.40g (horiz) at Mammoth Elementary School (see figure). The instruments were installed after the second of the three major earthquakes and the records consist of accelerograms of the third, May 27th shock, which produced the peak ground acceleration given above, and numerous aftershocks.

Station	Instrument	Recording Interval	No. of Events	Maximum Acceleration
McGee Creek Inn	SMA-T	5-25/5-27	18	L 0.29g T 0.32g V —
McGee Creek Inn		5-27/5-30	8	L 0.29g T 0.13g V —
McGee Creek Inn		5-30/6-16	22	L 0.42g T 0.17g V 0.17g
Mammoth Elementary School	SMA-T	5-26/5-27	5	L 0.40g T 0.31g V 0.20g
Mammoth Elementary School		5-27/5-30	7	< 0.08g
Mammoth Elementary School		5-30/6-16	11	< 0.10g
Long Valley Fire Station	SMA-T	5-26/5-30	4	L 0.14g T 0.12g V 0.10g
Long Valley Fire Station	SMA-T	5-30/6-16	4	all < 0.05g

EARTHQUAKE ENGINEERING RESEARCH LABORATORY  
 CALIFORNIA INSTITUTE OF TECHNOLOGY



Magnitude 6.1 earthquake recorded at Mammoth Mountain School, 7:50 am, 27 May 1980, by instrument installed after the second of the 3 larger shocks.

PEAK ACCELERATION

0.40g horizontal  
 0.31g horizontal  
 0.20g vertical

"AVERAGE PEAK" = 0.33g

DEPARTMENT OF WATER & POWER  
 CITY OF LOS ANGELES

Control Gorge P.P. Richter Magnitude: 6.1  
 5-27-80 0751

Longitudinal 1.93 cm/g N38W

.124g

Vertical 1.83 cm/g

.082g

Transverse 1.68 cm/g N52E

Location: 37° 28.5' N  
 118° 48.7' W

Depth: 13 km

.108g

→ | ← 1 sec.