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October 11, 1991

Summary of CSMIP Strong-Motion Records for
the August 17, 1991 Earthquake near Petrolia, California

Report No. OSMS 91-09

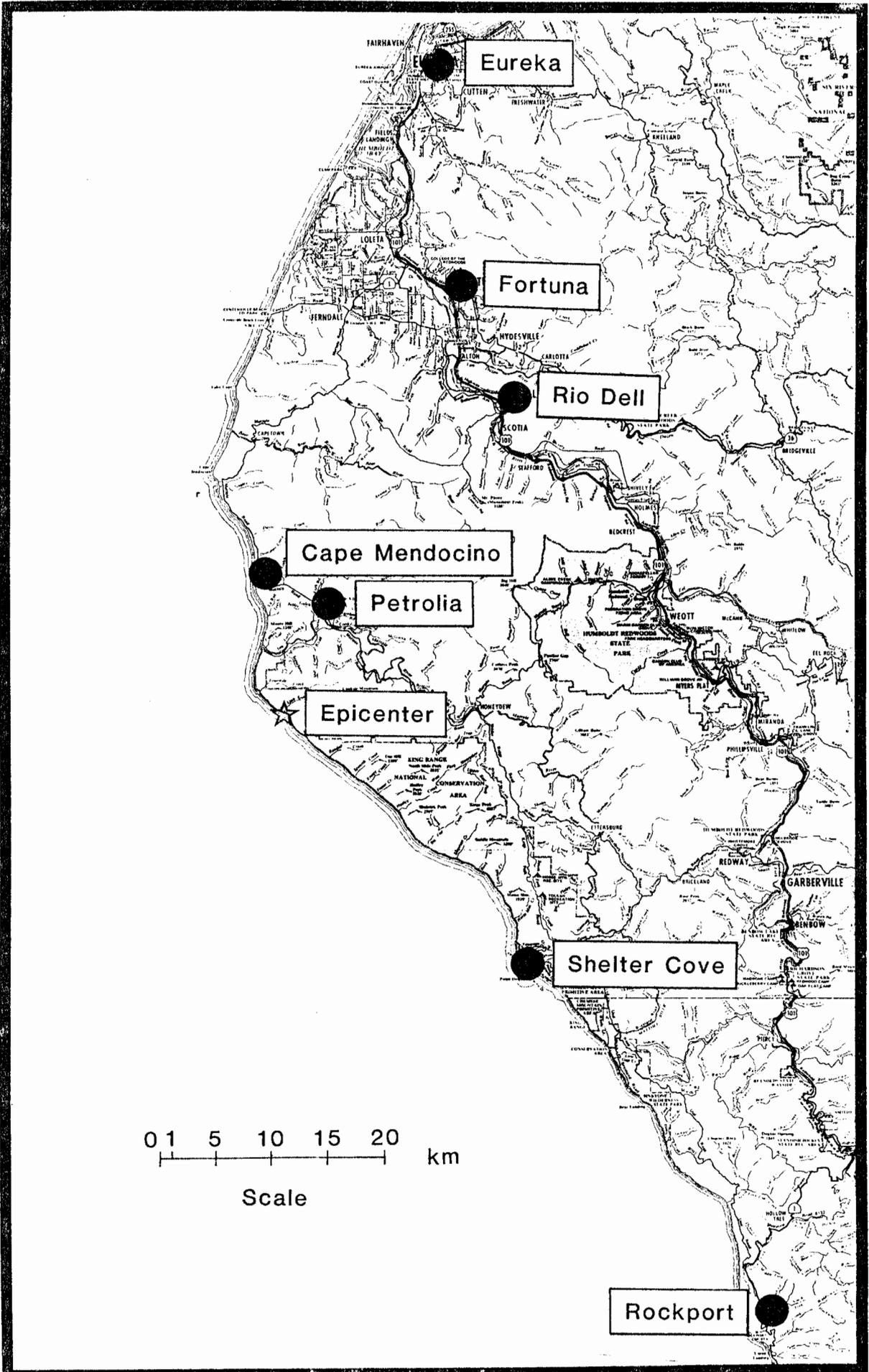
Prepared by CSMIP staff

Accelerograms of particular interest which were recorded at CSMIP stations during the earthquake near Petrolia of August 17 are attached. Eleven accelerograms were recovered at nine stations including two buildings, one bridge and six freefield stations. The stations are located 11 to 71 km from the preliminary epicenter of 40.235°N and 124.348°W (UCB). The preliminary magnitude estimate is 6.0 (ML, UCB).

The location of CSMIP stations and the earthquake epicenter are shown on the attached map. Peak accelerations for all records recovered, the station coordinates and distance from the epicenter are listed in Table 1.

Accelerograms of particular interest included here are:

- Petrolia. Closest station at 11 km, 53% g peak acceleration.
- Cape Mendocino. This station is 2 km more distant from the epicenter but the peak acceleration of 26% g is about one-half the value at Petrolia.
- Shelter Cove. Peak acceleration of 24% g at 33 km.



Eureka

Fortuna

Rio Dell

Cape Mendocino

Petrolia

Epicenter

Shelter Cove

Rockport

0 1 5 10 15 20 km

Scale

Table 1

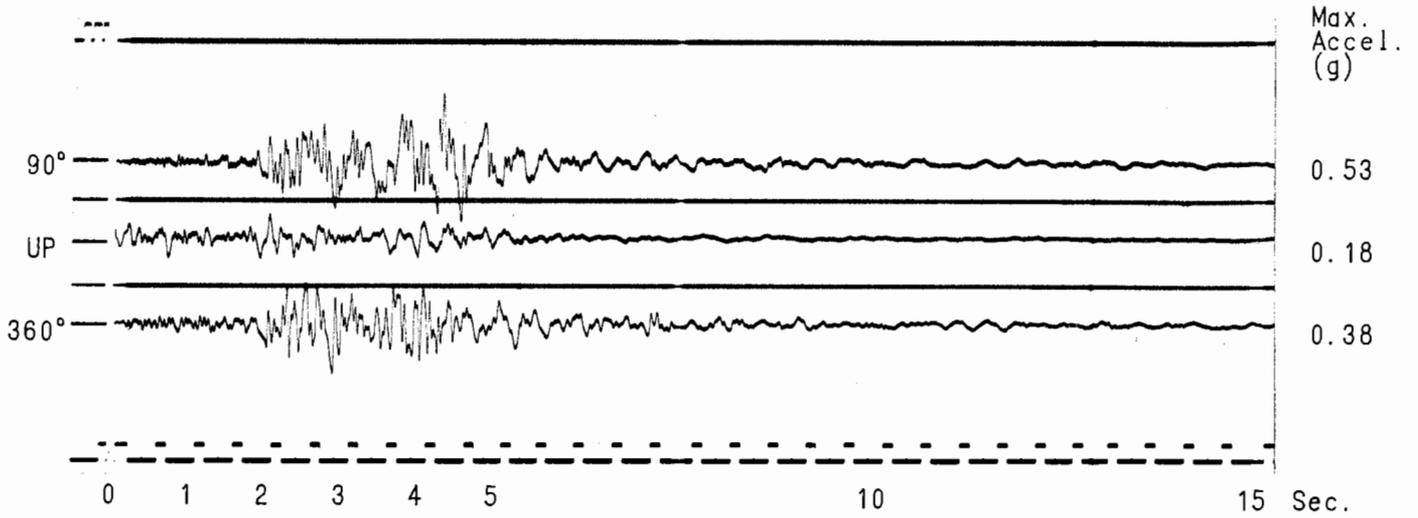
Data recovered at CSMIP stations from the August 17 Earthquake near Petrolia

Station No.	Name	Distance Coords.	Epicentral Acceleration (km)	Maximum	
				Ground	Structure
89156	Petrolia	40.325 N 124.287 W	11	0.53g H 0.18g V	
89005	Cape Mendocino - T-hut	40.348 N 124.352 W	13	0.26g H 0.05g V	
89530	Shelter Cove - Airport	40.026 N 124.069 W	33	0.24g H 0.05g V	
89324	Rio Dell - Hwy 101/Painter St Overpass	40.503 N 124.100 W	37	0.08g H 0.03g V	0.10g H 0.20g V
89486	Fortuna - 1-story Commercial Bldg. FF	40.584 N 124.145 W	42	0.04g H 0.01g V	
89473	Fortuna - 1-story Commercial Bldg.	40.584 N 124.144 W	42	0.04g H 0.01g V	0.18g H
89509	Eureka - 5-story Residential Bldg. FF	40.801 N 124.148 W	65	0.03g H 0.01g V	
89494	Eureka - 5-story Residential Bldg.	40.802 N 124.146 W	65	0.03g H 0.01g V	0.08g H
89327	Eureka	40.802 N 124.163 W	65	Not triggered	
79042	Rockport	39.740 N 123.815 W	71	0.08g H 0.02g V	

Petrolia

(CSMIP Station 89156)

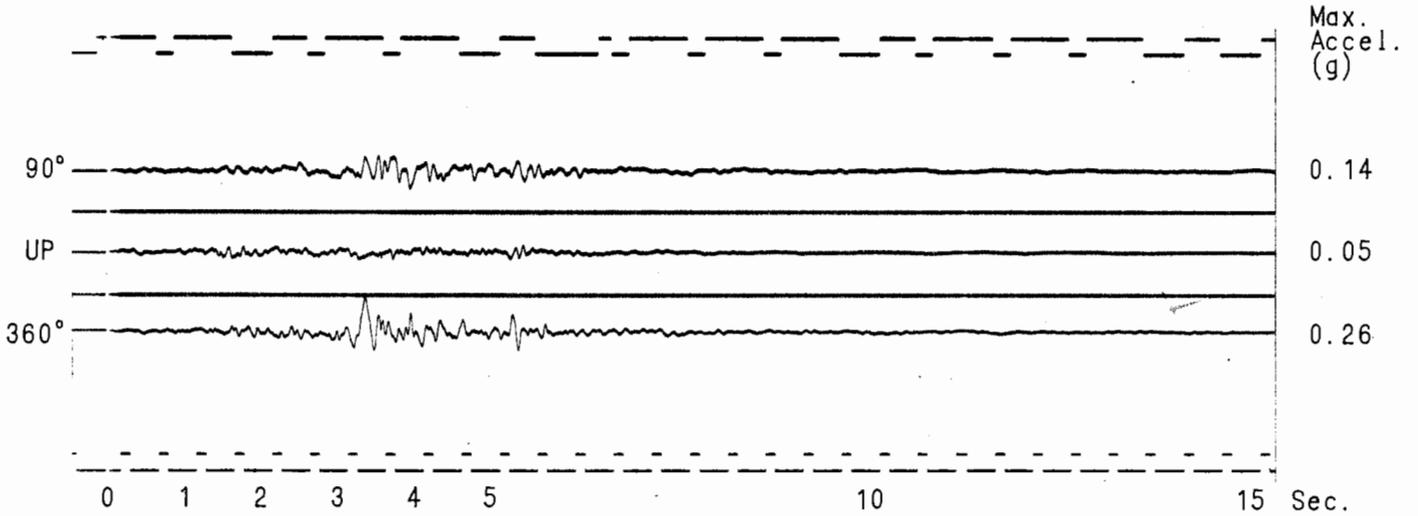
Record 89156-S2597-91232.01



Cape Mendocino - T Hut

(CSMIP Station 89005)

Record 89005-S2596-91232.01



Shelter Cove - Airport

(CSMIP Station 89530)

Record 89530-S1848-91231.01

