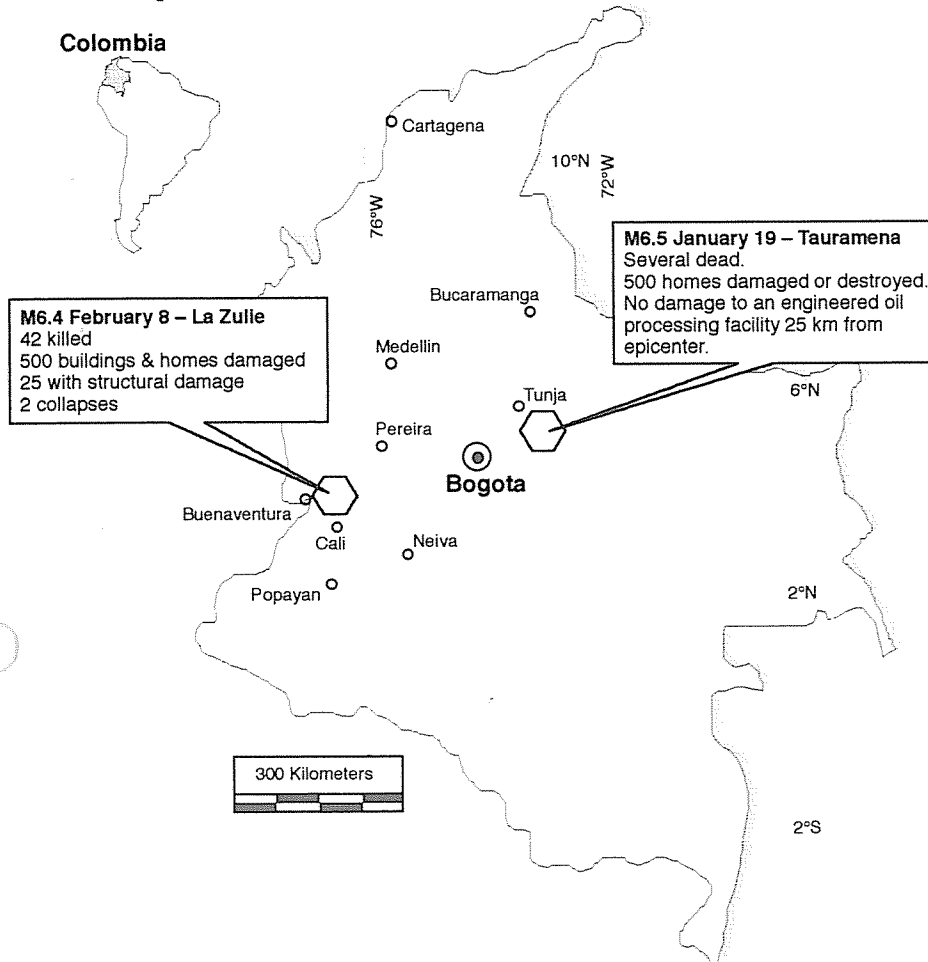


## Learning from Earthquakes

## Columbia Experiences Two Major Earthquakes in Three Weeks



Two major earthquakes occurred in Columbia within a period of three weeks, each resulting in death and serious damage. On January 19, a magnitude 6.5 ( $M_s$ ,  $M_w$ ) earthquake occurred northeast of Bogota. The earthquake caused several fatalities. The USGS reports that more than 500 houses were damaged or destroyed in Boyaca and Casanare Departments. Many large landslides occurred in the mountainous epicentral area.

On February 8, 1995 a magnitude 6.4 earthquake occurred near the town of La Zulla in the Department of Valle del Cauca. The epicenter was located at latitude  $4.12^\circ$  N,

longitude  $76.67^\circ$  W, and at a depth of 90 km. There were 42 reported deaths and several hundred injuries. The earthquake caused extensive damage in the rural regions of three departments close to the epicenter (Valle del Cauca, Choco, and Risaralda), and in the cities of Pereira (pop. 450,000) and Cali (pop. 1.2 million). In Pereira, approximately 500 buildings were affected by the earthquake; of these, 25 are reported to have structural damage. Two "pre-code" buildings collapsed and another 10 may be demolished.

*Contributed by EERI members William Graf and Luis Garcia.*

## The February 6, 1995 Earthquake off East Cape, New Zealand

An earthquake measuring 7.0 on the Richter scale occurred at 11:51 am local time, on February 6, 1995, off the east coast of the North Island of New Zealand. The New Zealand Seismological Observatory placed the epicenter at  $36.9^\circ$  south,  $179.1^\circ$  east, and at a depth of 33 km. The epicenter was located approximately 140 km east of East Cape. The earthquake was felt in Auckland and as far south as Christchurch.

The New Zealand Ministry of Civil Defense reported no deaths or injuries related to the earthquake. There was no significant damage reported. Fortunately, the epicenter was located off the coast of one of the more isolated regions of the country (presumably associated with the subduction zone that runs parallel to the coast). The nearest town with tall buildings, i.e., anything taller than two-story wood frame houses, is Gisborne, located approximately 180 km from the epicenter. The next closest major town is Whakatane, located approximately 200 km from the epicenter. A second explanation for the low damage reported is that the rupture was rather weak in short-period radiation. There were no reports of tsunami.

*This report was contributed by John Berrill, University of Canterbury, Christchurch, New Zealand.*

The publication and distribution of this report was funded by National Science Foundation Grant #BCS-9215158, EERI's Learning From Earthquakes Project.