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January 22, 1982

Roger E. Scholl
Technical Director
E.E.R.I.
2620 Telegraph Avenue
Berkeley, CA 94704

Dear Roger:

I wanted to pass on to you what has been done towards investigating the central New Brunswick earthquake of January 9 and the Gaza, N.H. earthquake of Jan. 18 in the New England area.

The seismologists at Weston Observatory worked on epicentral locations for the Maine earthquake and aftershocks during the 9th while reports on damage in Maine were monitored by Walter A. Anderson, the Maine State Geologist, through the State Highway Patrol and the Civil Preparedness Agency. A team of geologists consisting of myself and M.H. Pease, Jr., representing Weston Observatory, and Garrett Morrison, a consultant, left on the 9th and arrived on the 10th at Presque Isle, northern, Maine. There, Bill Forbes, a geologist with the University of Maine, Presque Isle had collected all the reports on effects along the northern Maine-New Brunswick border. We were joined by Walter Anderson the next morning. Earthquake effects west of the epicentral area were then investigated. Another team, from the Maine Geological Survey, investigated reports of damage in southeastern Maine. John Peterson of Weston Observatory, checked our permanent seismographs in eastern Maine and deployed 2 portable and a strong motion instrument. The Canadian Earth Physics Branch, the University of New Brunswick and M.T.I. deployed several portable seismographs in New Brunswick.

Little damage was found west of the epicenter and in southeastern Maine. In the region around Presque Isle and Caribou Maine and Perth-Andover, N.B., a few windows were broken, asphalt roads cracked, some hairline motar cracks formed in upper parts of cinder block buildings and numerous reports of cracks in old stone walled cellars - Intensity V. This area is 90 to 120 km from the epicenter. Similar features were reported from the southeastern edge of Maine and Bathurst, N.B. (about 90 km to the east of the epicenter.

Plaster Rock, N.B., 60 km west of the epicenter and the closest town on that side, seemed to have lesser effects; only a few cellar cracks were reported. The lumber mill there had tall undisturbed stacks of lumber.

Roger E. Scholl
Berkeley, CA

The epicentral region is in the middle of the largest wilderness area in the regions and has no towns, only scared moose. A new, mid 60's asphalt highway crosses the area, passing about 18 km south of the epicenter. Only minor cracking of the road bed at bridges was seen and minor cracks in ice and snow near the bridges. The lack of roads, deep snow, winds and invigorating -35° F temperatures tended to discourage expeditions to the epicenters at this time. Ten foot stacks of logs seen in the region were not toppled, but they may have been frozen solid. Sketches and photos, when cameras were not frozen, were made of the damage seen.

Intensity data in New England was collected by the Maine Geological Survey and the Lamont-Doherty Observatory.

Little damage has been reported so far from the epicentral area of the Gaza, N.H. earthquake. Part of a stone foundation of a 200 year old chimney fell in one house, right on the epicenter, causing extensive cracking of plaster in the house. A little south a new strongly built house had several 10"x10" wood beams shattered from differential movement between the parts of the foundation underlain by rock and compacted glacial till. Otherwise only minor cellar cracks have been reported and some people 30 km away did not feel it, although it was felt quite strongly west of Boston, 130 km to the south. The intensity seems to have ranged from III to V in the region around the epicenter.

Twelve portable seismographs were installed in the epicentral area, over a period 6 to 18 hours following the earthquake, by Weston Observatory, Weston Geophysical Engineering Corp., M.I.T. and Lamont-Doherty. Seven strong motion stations of the Army Corps of Engineers in N.H., VT and MA triggered.

Intensity data is being collected in Maine by the Maine Geological Survey, central New England by Weston Observatory and farther afield by Lamont-Doherty.

Both earthquakes occurred in regions recognized as active and where several small earthquakes have been recorded in the past 4 years.

Sincerely,

Patrick J. Barosh

Patrick J. Barosh, Director
New England Seismotectonic Study

P.S. 5 chickens were killed in N.H.