

MICROSEISMIC MONITORING OF JACKSON HOLE, WYOMING
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As part of the Safety of Dams Program for Jackson Lake Dam, the Service operated an array of five seismograph stations in the vicinity of Jackson Lake Dam for a period of 87 days. Approximately 110 microearthquakes were recorded in the Jackson Hole area and epicenters were determined using HYPO 71 (Lee and Lahr, 1975). Data from stations DCI and TMI are being incorporated into the Service's data set to provide better location accuracy for events west and south of the network; events in the Teton Range and southern Jackson Hole, respectively. The majority of the epicenters are 5-25 miles east of the Teton Range front in the Mt. Leidy Highlands. The spatial distribution of epicenters in this area is apparently random. However, this area is outside the limits of the seismograph array and the apparent randomness may be a result of poor location accuracy. However, similar monitoring carried out previously by the University of Utah, yielded comparable results. Only eight epicenters fall within 1 mile of the surface trace of the Teton fault, a relatively low number of events for such a major youthful structure. Six epicenters were located near the mouth of Arizona Creek where Behrendt and others (1968) have postulated a north-northwest trending branch of the Teton fault from gravity and seismic refraction data. From this study alone no coherent pattern of seismicity can be determined for Jackson Hole.