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*Passive and Active Seismic Studies and the Geologic
Structure of the Boise Front, Idaho*

JAMES K. APPLGATE AND PAUL R. DONALDSON

Microseismic and seismic refraction studies were undertaken in the Boise area to define the geologic structure in order to better evaluate the geothermal potential of the area.

The Boise area is located at the northeast margin of the western portion of the Snake River Plain. The plain is bounded on the northeast and southwest by normal faults. The northeastern fault is locally referred to as the Boise Front fault. There appears to be a fault roughly parallel to the Boise Front fault which is down on the northeast side, thus creating a graben in the Boise area. Airphoto linear studies and gravity and magnetic studies were used to attempt to delineate these features. The northwest-southeast trending structures appear to be older and not active in approximately the last 500,000 years. Intersecting these trends are northeast-southwest and north-south trending fracture systems that are seismically active in the area north of Boise. Seismic refraction and other studies indicate that these zones, while they may not have large displacements, are probably hydrologically important. Consequently, zones of intersection of the trends may be important in the evaluation of the geothermal potential of the area.

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