

1974

Geological Society of America, Abstracts and Programs, v. 6, no. 3, p. 421.

THE CASCADE AREA: A GEOTHERMAL PROSPECT IN  
THE IDAHO BATHOLITH

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Field and laboratory investigations show the existence of a geothermal resource in the Cascade area of west-central Idaho which may have development potential for non-electrical uses. Numerous high angle faults cut the Idaho Batholith in this area; displacements on some of these faults are as great as 10,000 feet and many of them have associated alteration zones. X-ray analyses of samples collected from these zones indicate substantial hydrothermal alteration. Fault controlled hot springs have temperatures at the surface of up to 71° C and temperatures at depth, based on the silica geothermometer, of up to 175° C.

Microseismic monitoring in the area suggests that east-west trending faults are active, supporting the plausibility of an accessible geothermal resource.

The domestic ground water supply for most of the area is from very shallow wells, most of which are developed in the upper 200 feet of the valley fill sediments. The few wells drilled in bedrock adjacent to the valley floor derive their water from joints rather than from fault systems. Preliminary data indicate no connection between the thermal systems and the water supply for the area.