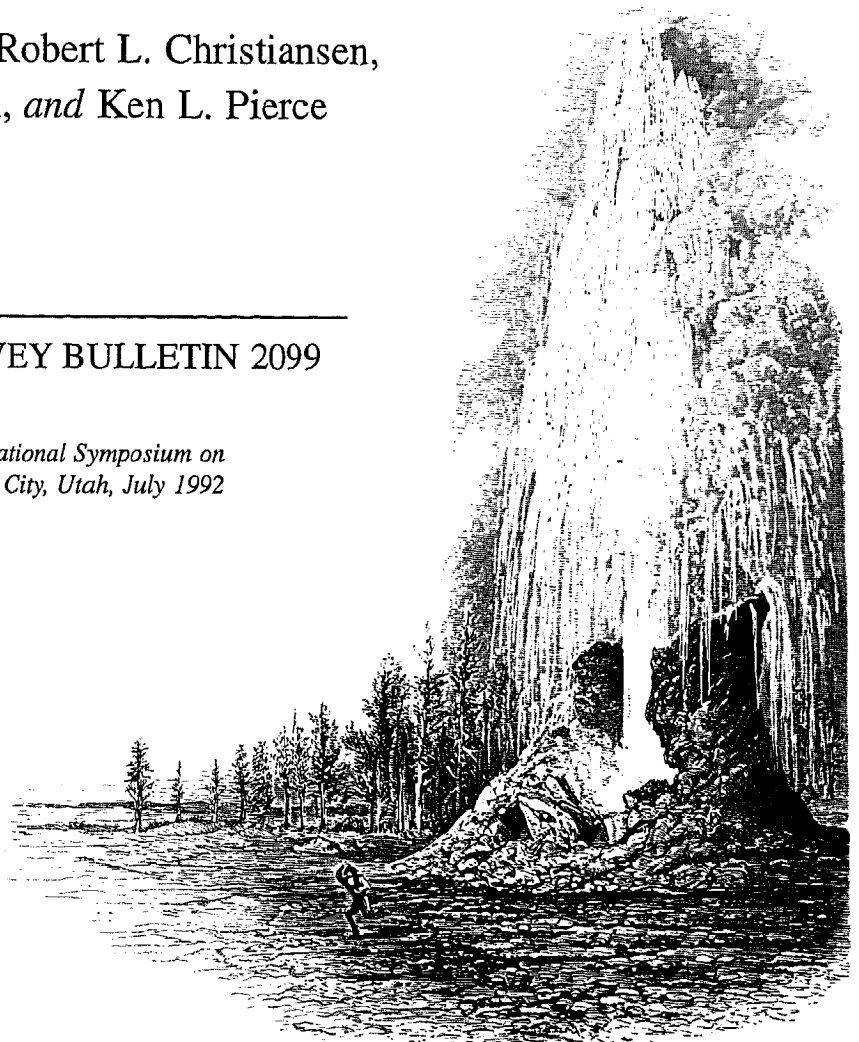


A Field-Trip Guide to Yellowstone National Park, Wyoming, Montana, and Idaho— Volcanic, Hydrothermal, and Glacial Activity in the Region

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U.S. GEOLOGICAL SURVEY BULLETIN 2099

*Originally Prepared for the 7th International Symposium on
Water-Rock Interaction (WRI-7), Park City, Utah, July 1992*



UNITED STATES GOVERNMENT PRINTING OFFICE, WASHINGTON : 1994



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GLOSSARY

Adiabatic. In thermodynamics, pertaining to the relationship of pressure and volume when a gas or fluid is compressed or expanded without either giving or receiving heat. Compression may result in gas condensing to liquid, and expansion may result in liquid evaporation (or boiling) to gas. Although there is no change in the heat content of the system, there is a change in temperature.

Adiabatic expansion. An increase in volume with no change in heat content of the system but with a decrease in temperature. For example, water at high temperature (>100°C) and high pressure (>1 atmosphere) that flows upward toward the Earth's surface experiences a decrease in pressure that eventually results in boiling (evaporation) and a decrease in temperature of the system. However, the total heat content, distributed between the remaining liquid water and new-formed steam remains constant.

Andesite volcanism. Volcanic activity characterized by eruption or extrusion of lava intermediate in composition

between rhyolite (relatively rich in silica, sodium, and potassium) and basalt (relatively rich in calcium and magnesium). Many of the high volcanoes in the Cascade Range of Washington and Oregon and in the Andes Range of South America are composed mostly of andesitic lavas.

Clinoptilolite. A zeolite mineral that is relatively rich in potassium.

Curie-point isotherm. The temperature above which minerals in a rock lose their magnetic properties.

Dacite. A fine-grained igneous rock that is similar in composition to andesite but containing less calcium and more silica.

End moraine. A mound of unsorted and unstratified rock deposited at the lower end or front of a glacier where the advancing ice sheet melts.

Fluidal layers. As applied to a flowing lava, layers of liquid magma with relatively low viscosity within solid and (or) relatively viscous material composed of crystals and glass.