



Bumpass Hell

View looking east-southeast from trail at the west end of Bumpass Hell (Lassen Peak quadrangle). Bumpass Hell is the surface expression of the major upflow from the vapor-dominated reservoir of the Lassen hydrothermal system (Muffler and others, 1982; Ingebritsen and Sorey, 1985). Bumpass Hell contains many fumaroles, mud pots, and acid hot springs (Muffler and others, 1983). Big Boiler is a superheated fumarole (temperatures up to 161°C; Clynne and others, 2003). Bumpass Hell lies along the contact between the dacite of Bumpass Mountain (unit db, 232±8 ka; part of the Bumpass sequence of the Lassen domefield) and the andesite of Mount Diller (unit amd, 387±10 ka; part of the Diller sequence of Brokeoff Volcano). At lower right is the explosion breccia at the vent for the dacite of Bumpass Mountain. Mount Harkness (unit amh, 188±32 ka) is a small calc-alkaline basalt and andesite volcano that marks the southern limit of active volcanism in the Cascades. Kelly Mountain (unit ad2) is part of the Dittmar Volcanic Center (2,300–1,300 ka). Dyer Mountain is composed of Paleozoic metasedimentary rocks and is part of the northern Sierra Nevada.

Photograph by Patrick Muffler.