

# GEO-HEAT CENTER QUARTERLY BULLETIN

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A Quarterly Progress and Development Report  
on the Direct Utilization of Geothermal Resources

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Cover: **Beppu Jigokus**. Jigokus or "Hells" are famous hot springs in Beppu, Japan, that are popular tourist attractions. In the upper left is **Umi Jigoku (Sea Hell)** so called because this jigoku looks like the sea, which emerged after an explosion of a volcano 1,200 years ago and because the color of the boiling water of the pond is cobalt-blue. **Chinoike Jigoku (Blood Pond Hell)** is the oldest natural jigoku in Japan, and the pond is blood-red in color. In the lower left is **Bozu Jigoku (Bonze Hell)** which was formed about 470 years ago when a severe earthquake occurred resulting in an eruption under a temple. **Hotta** is a well site (left on the lake) for the district heating system. The wells require daily reaming to remove scale build up.

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