

GEOHERMAL RESOURCES AND UTILIZATION IN UTAH



This issue of the *Geo-Heat Center Quarterly Bulletin*, is the third in our series of state summaries of their geothermal resources and utilization. Previous reports covered: South Dakota (Vol. 18, No. 4 - December 1997); and New Mexico (Vol. 23, No. 4 - December 2002). We also covered, in very general terms, direct-uses in California in Vol. 24, No. 1 (March 2003). This report on Utah, covers both electric power generation and direct-use - one of the four states that is presently producing power from geothermal resources. As can be seen from the cover map and the map in the following article, most of the geothermal resources in the state are located just to the west of the Wasatch Range, in an arc down through the middle of the state. This is the start of the Basin and Range physiographic province that extends all the way to southern Oregon and Klamath Falls.

Utah has one of the largest geothermally-heated greenhouses at Milgro near Newcastle, covering over 24 acres, growing chrysanthemums, poinsettia, callilysis and tulips. The state also has a unique use, that of SCUBA dive pools, at three locations. These pools, two over 60 feet (18 m) deep, are used to certify divers, as there are no deep lakes or oceans that can be conveniently used. One of these pools, Bonneville Sea Base, also has 100 different types of fish, including sharks, to view while swimming. Another dive pool, The Crater at Homestead Resort near Midway, is inside a 55 foot high by 400 feet in diameter (17 m by 122 m) tufa (travertine) dome, with a 110-foot (33.5-m) tunnel cut in the side for access. It was originally called Schneitter's Hot Pot when used in the 1860s. The third dive pool is in the very northern edge of the state north of Garland and Tremonton, formerly Belmont or Udy Hot Springs, is now run by Camperworld. The outdoor pond, only 30 feet (9 m) deep, is adjacent to areas where lobsters and crayfish were originally raised commercially in the geothermal water for the local market.

The three main sources of geothermal resource information and research are from the Utah Geological Survey (<http://geology.utah.gov>), the Utah Energy Office (www.energy.utah.gov), or the Energy and Geoscience Institute (formally Earth Sciences and Research Institute) at the University of Utah (www.egi.utah.edu), all in Salt Lake City. A new state geothermal map (reproduced on the cover of this issue) was recently published by the Idaho National Engineering and Environmental Laboratory (INEEL) for the USDOE. This 21- by 24-in. map, shows not only the various geothermal uses in the state, but also public land ownership, and areas that have a potential for geothermal electric generation and direct-use applications. Copies can be obtained at INEEL from Patrick Laney (email: ptl@ineel.gov; phone: 208-526-7468) or online at: geothermal.id.doe.gov/maps/ut.jpg.

I was fortunate to have the expert assistance of Bob Blackett of the Utah Geological Survey, during a week-long tour of the Utah geothermal use sites last summer. Much of the information and photographs in this issue are from that visit. Most of the geological descriptions of the various resources are based on compilations by Bob Blackett. Bob is also the contact person for the recently formed Utah Geothermal State Working Group established under the USDOE *GeoPowering the West* initiative. He provides frequent updates on geothermal activities in the state, and can be contacted at: Blackett@suu.edu.

Finally, the most elementary use of geothermal energy that I saw on my trip, was a transient sitting on a rock in a geothermal stream in sight of the State Capitol Building at Wasatch Warm Springs (on the northern edge of Salt Lake City), shaving. The hot water was free.

-- The Editor