

DESERT QUEEN: GEOTHERMAL EARLY STAGE ASSET

- ✔ **4,672 hectares NW Nevada**
- ✔ **6 km from 12.5 MW Desert Peak plant**
- ✔ **extensive geothermal exploration 70's to 80's including 13 holes**
- ✔ **36 MW Estimated Resource**
- ✔ **Temperature Gradient program started March 2010**

The Desert Queen Property is located adjacent to the Hot Springs Mountains, Nevada. The site is approximately 38 km north of the town of Fallon and is near to the Desert Peak and Brady-Hazen Hot Springs geothermal facilities and our Soda Lake Operation, three of the nine producing geothermal fields in the state of Nevada.

The property is 8 km from the two major 345 kilovolt ("kV") lines, located on the northwest side of Interstate 80, that originate at the Valmy power plant. The substation at the Desert Peak geothermal facility (9.5 km to the SW of Desert Queen) connects to a 115 kV line that parallels Interstate 80 into the Reno area.

Geothermal exploration in the area was conducted by the U.S. Geological Survey, the U.S. Bureau of Reclamation, and a number of private entities over a period of more than 20 years mainly because it was the site of the hottest surface temperature gauged in the state of Nevada. In 1973, Phillips Petroleum conducted a three-year exploration program that focused primarily on the Desert Peak area, but extended into the Desert Queen site. Of the 53 temperature gradient holes that Phillips drilled, 12 were in the Desert Queen area. These holes were drilled to an average depth of 91 m. In addition, they drilled 8 stratigraphic holes, one of which, was in the Desert Queen area. It was drilled to a total depth of 425 m where a temperature of 101°C was gauged.

In 2007, the Great Basin Center on Geothermal Energy at the University of Nevada, Reno conducted a shallow temperature probe survey over the area of the Desert Queen Property. Results of that survey defined a NNE trending shallow temperature anomaly approximately 6 km long and 2 km in width, defined by the 25°C isotherm. The maximum temperature reached 43°C against a background temperature of 23°C.

Alterra Power is evaluating all data and available databases located at the University of Nevada, Reno and the Nevada Division of Minerals. In early 2010 Magma Energy drilled 5 small diameter temperature-gradient holes to depths between 147 m and 300 m on private lands. One of these holes had a temperature of 140°C at a depth of 122 m. A water sample recovered from this hole has a sodium chloride composition that has a Na/K/Ca predicted temperature of 211°C. This water chemistry is similar to that from the nearby operating Desert Peak and Soda Lake geothermal fields. Additional temperature-gradient holes are planned but will need to follow completion of an Environmental Assessment as the holes and access roads will be on BLM managed lands.

