

UNR profs at center of geothermal study



Jim Faulds, director of the Nevada Bureau of Nevada Mines and Geology, talks about mapping geothermal resources with students. Photo/UNR

Two researchers from the UNR are poised to play a key role in a project that has the potential to unlock massive resources of power generated from geothermal sources.

Professors Jim Faulds and Wendy Calvin, among the world's leaders in the understanding of geothermal systems, are providing their expertise to the project funded by the U.S. Department of Energy.

The project dubbed FORGE – short for Frontier Observatory for Research in Geothermal Energy – seeks to dramatically widen the number of potential locations where power could be produced from geothermal resources.

The UNR researchers will provide geologic modeling of two potential FORGE sites – one near Fallon and a second near Coso in California. The establishment of FORGE at these two sites will provide the geothermal community a field laboratory where the science and engineering needed for widespread commercialization of enhanced geothermal systems can be developed and refined.

The FORGE project seeks to develop enhanced geothermal technology for use at locations where heat is available but water doesn't naturally flow through the underground rock. Those locations are widespread through the Great Basin.

But the geological challenges are difficult, he said, because researchers need to find ways to open formations sufficiently so that water can move through the heated rock and become steam to drive generating units.

"We know that there are huge resources in the subsurface," the geologist said. "Finding that fluid flow is the trickiest part."

The researchers based in the University's College of Science bring valuable experience to the FORGE team: experience that will make that job easier.

"We have a long history of working with the geothermal systems in the region and understanding the geologic setting of those systems," Faulds said.

Participation in the FORGE project provides an opportunity for University researchers to widen their knowledge of geothermal operations and maintain the state's position on the cutting edge of development of the geothermal industry.