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Utah FORGE Drills First of Two Deep Wells

- A highly deviated well drilled in hard, hot crystalline granite - a geothermal first
- Total length of the well will be approximately 11,000 feet

SALT LAKE CITY, UT, 30 October, 2020 - The Utah Frontier Observatory for Research in Geothermal Energy (FORGE), funded by the U.S. Department of Energy, is excited to announce that the drilling of its first highly deviated deep well has commenced. Highly deviated wells are frequently drilled for oil and gas production, but not by the geothermal industry. The Utah FORGE team will be the first to tackle this challenge while drilling in hot, hard crystalline granite.

The upper part of the well will be drilled vertically through approximately 4,700 feet of sediments at which point it will penetrate into hard crystalline granite. At about 6,000 feet, the well will be gradually steered at a 5° angle for each 100 feet until it reaches an inclination of 65° from its vertical point. The total length of the well will be approximately 11,000 feet with the "toe" – or the end of the well – reaching a vertical depth of 8,500 feet. The temperature at this depth will be 440°F.

"This is an exciting phase in the Utah FORGE project and is key to proving Enhanced Geothermal Systems (EGS) technologies are commercially viable" said Joseph Moore, PhD, and Principal Investigator of Utah FORGE. The goal of our research is to test tools and technologies for the creation of a geothermal resource where none exists naturally. Developing cost effective EGS technologies is an important step in capturing the enormous energy potential beneath our feet and bringing low cost, environmentally green, and renewable energy across the United States.

Once the well is completed, a series of tests will be run to facilitate the development of the EGS resource. Some of the tests will include determining the stress conditions through short-term injection experiments, during which microseismicity will be carefully monitored. Other tests will allow for the interpretation of the orientation and distribution of the existing and induced fractures in the granite, which will form the pathways for water to circulate and heat up in the newly created EGS reservoir.

The results of these tests and R&D activities will be used to plan the second deviated well. Drilling of the second well is tentatively scheduled for early 2022.

About Utah FORGE: The Utah FORGE project is managed by the Energy & Geoscience Institute at the University of Utah. Funding for the project is provided by the U.S. Department of Energy. The FORGE site is located near the town of Milford in Beaver County, Utah, on the western flank of the Mineral Mountains. Near term goals are aimed at perfecting drilling, stimulation, injection-production, and subsurface imaging technologies required to establish and sustain continuous fluid flow and energy transfer from an EGS reservoir. For more information, please visit our website at https://utahforge.com.

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