



Advancing safe, affordable geothermal energy

Next-generation geothermal resources have the potential to increase geothermal power generation in the United States by twenty-fold by 2050. Next-gen geothermal uses technologies developed by the oil and gas industry to engineer reservoirs for geothermal energy generation, vastly expanding the available resource base.

Each project and client has unique requirements—we customize our solutions to meet your specific objectives. With a commitment to safety, efficiency and innovation, we support clients in unlocking geothermal resources to provide reliable and renewable energy solutions.



Case Studies

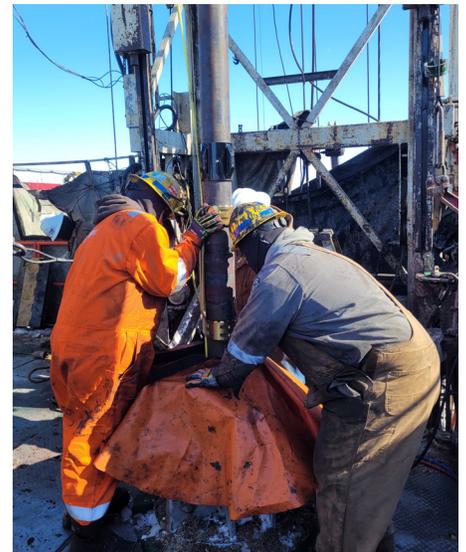
Assessing feasibility of subsurface heat storage in abandoned oil and gas wells to generate flexible electricity

A project on geothermal energy furthered the understanding of the feasibility of utilizing abandoned oil and gas wells as geothermal heat storage wells. This DOE-funded project addressed the challenges of energy supply intermittency by storing energy from renewable resources in the subsurface to harvest it at a later time during at-peak energy demand, enhancing grid resilience and reliability. Members of the Projeo team worked through a prestigious Small Business Technology Transfer (STTR) grant and participated in the Energy I-Corps training program to work towards the advancement and commercialization of this novel approach.

In this project, Projeo and its research partners assessed the heat storage and hydrogeological characteristics of subsurface reservoirs to determine the temperature profile and used the baseline data for modeling and simulation to determine other well locations.

Our expertise spans both conventional and next-gen geothermal applications, such as:

- Enhanced Geothermal Systems (EGS)
- Sedimentary geothermal, including geopressed systems
- Subsurface thermal energy storage

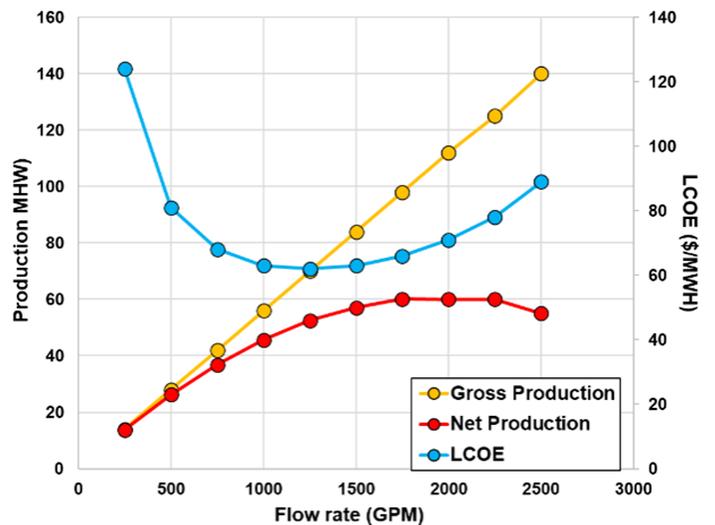
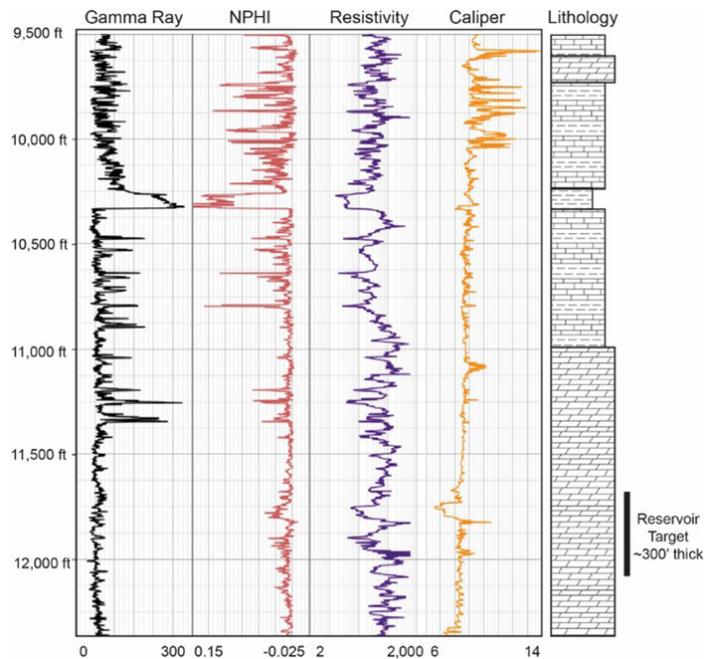


Geothermal reservoir characterization and techno-economic analysis

Projeo, in partnership with the Utah Geological Survey, conducted a geothermal reservoir characterization and techno-economic analysis of sedimentary geothermal reservoirs in the Great Salt Lake Basin, Utah. This project developed actionable insight that can be used to make geothermal exploration decisions such as leasing or exploration well targeting.

Reservoir characterization consisted of compiling, processing, and interpreting public legacy well, seismic, and heat flow data and supplementing it with a field reservoir characterization of target reservoirs to generate a geologic model for potential geothermal resources in the area. We detailed reservoirs that had not previously been identified and demonstrated the technical feasibility of developing these reservoirs.

We supplemented reservoir characterization with economic models that calculated the range of levelized cost of electricity (LCOE) and capital needs to develop the characterized reservoirs.



Geothermal development well prognosis

Projeo was tasked by a geothermal operator to update the conceptual model for their producing geothermal field and provide a prognosis and recommendation for three development well options at the field. The project resulted in predictions of reservoir temperature and flow rates for each of the three wells and an analysis of the effects of the wells on the field's overall injection strategy.

As part of this analysis, Projeo noted major significant uncertainties in the field's conceptual geologic model and how those uncertainties affected the selected well locations. To reduce this uncertainty, Projeo conducted a structural analysis and fault block restoration. This resulted in a recommendation for a new development well trajectory that is predicted to increase field productivity.