
Texas Geothermal Project to Serve as Testing Ground for Smart Tracers

2022-06-17

A nanoparticle tracer used in oil and gas wells is set to be tested in a planned commercial-scale geothermal project in South Texas.

A Special Focus article published in [World Oil](#) discusses plans of using “smart” ultra-high resolution nanoparticle tracers to map inter-flow well communication in a geothermal well to be initiated later this year in Southern Texas. Criterion Geothermal Systems’ Water Oak 1 (WO-1) well will mark the beginning of the first commercial-scale geothermal development in Texas.

Earlier this year, Criterion Energy Partners was awarded a grant from the U.S. Department of Energy which the company planned to use for research and development of industrial decarbonization technology in partnership with the City of Baytown and business incubator Bay TechWerx.

Another interesting aspect of this project is that the smart tracer has already been used extensively for flow profiling of unconventional oil and gas wells, making it a milestone in the transfer of oil and gas technologies to the geothermal sector. The proprietary inert nanoparticles are formulated for sub-atomic detection accuracy, enabling a high level of precision in identify different production zones and mapping inter-well communications. This is augmented by the integration of big data analytics and advanced 3D reservoir flow visualization to provide accurate, calibrated, and cost-effective well diagnostics results.

Future plans for the project in South Texas include putting up a scalable 20-MW Organic Rankine Cycle (ORC) geothermal power plant. With a positive evaluation of the site’s potential, more than 75 additional wells can be drilled in the development area to set the stage for further development in Texas.

Further details on the project including the completion testing plans for well WO-1 and results of previous studies using the proprietary smart tracer can be found in the article linked below.

Read the [original article](#) on ThinkGeoEnergy.