

Realization of a test well for research on GEothermal and thermal storage through innovative drilling

Publieke samenvatting / Public summary

Aanleiding

Huisman Geo has developed a new set of tools that need to be tested under field conditions before they can be rolled out for full field scale applications. Initial testing has been performed in Czech Republic but testing under Dutch conditions is preferred before market introduction. Meanwhile, the Rijswijk Centre for Geo-energy which is in operation since 2019 is planning to extend its testing facilities with additional research infrastructure. Both goals can be united in this project, where a new research well for the RCSG is drilled using the new innovative ECI-RSS technology from Huisman. The research well will be completed with an innovative combination of composite/steel casing types and casing-formation bonding, resulting in a unique well where various tools can be tested for various completion designs.

Doelstelling

The goals of the proposed project are to: a) Investigate and demonstrate the feasibility of Lateral Well Constructions with Enhanced Steerable Casing Drilling, thereby derisking its use for upcoming projects; b) Examine placement and performance of permanent downhole monitoring tools; c) Realize a test well that can be used for small-scale test of thermal storage and for calibration and verification of logging tools over new suits of (steel/composite) casing and casing-formation bonding.

Projectinformatie / Project information

Projectnummer / Project number
TKITOETKI2020-02-GE

Subsidiebedrag / Grant amount
€ 350.000,00

Algemene informatie / General information

Penvoerder / Secretariat
TNO

Publicaties en materialen / Publications and attachments

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Eindrapport Genovative
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Korte omschrijving

The goal of the project is to drill a research well at the Rijswijk Centre for Geo-energy (RCSG) with innovative drilling techniques that are developed by Huisman Geo. Within this project the application of several innovations are tested under field conditions, such as the drilling tools and techniques, the new types of casings, the installation and application of optical cables for monitoring. The research well is adding a valuable asset to the RCSG which will be ready to be used for testing. WP1 is assuring licenses and permits. In WP2 the detailed drilling plan and design of the well is completed. The third WP is dedicated to the preparations for the drilling, scheduled for Q1 2021. The operational activities of WP4 involve the drilling and completions of the study well (WP 4). WP5 will evaluate the results of the study and potential impact that the drilling concept can have on the performance of geothermal projects. Work package 6 comprises the overall reporting of the project.

Resultaat

The project will deliver proof-of-concept of a new multilateral drilling technology that can be subsequently applied in actual geothermal operation. The activities here described are related to tool development and testing, but they assist in getting the performance of the new tools well understood in advance of demonstrating them on future drilling projects. The project will deliver a research borehole at the Rijswijk facility that is ready to be used for various experiments related to well technology: either calibration of logging tools, reservoir related tests (e.g. related to high temperature storage) or (baseline) monitoring for future downhole experiments or geothermal production.

De data in deze applicatie is afkomstig van de Rijksdienst voor Ondernemend Nederland (RVO) en wordt in samenwerking met de Topsector Energie ontsloten.

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