Wellbore Integrity SOLUTIONS

Continued Sidetracking Success in Geothermal Operations Using the TrackMaster Select System

The TrackMaster Select*, configured for Geothermal Operations, successfully completed a 13 ⅜ casing exit in a single trip. After the conclusion of drilling operations, the system was retrieved to enable multilateral production.

A system ideally suited to Geothermal Operations.

A customer in the Philippines required a cased hole sidetrack from 13⅜ casing as part of a multilateral project The known challenges included a high compressive strength rock at the exit point, in addition to, significant expected fluid losses. As part of the planning process, Wellbore Integrity Solutions (WIS) worked closely with the customer to select the best system configuration and operational procedures for this application.

Previous experience had shown that the chosen TrackMaster Select configuration could perform well in such conditions.

- Exit Point in 13⅜ inch casing, 68ppf, at 3820 ft with a DLS of >3deg/100ft.
- Hydraulic set system, including expandable anchor and hybrid tri-mill suitable for high compressive strength formation, >27 ksi.
- Gyro orientation method.
- Rathole length of 21 ft, full gauge diameter.
- System subsequently recovered with TrackMaster hook to re-establish wellbore access.

CHALLENGE

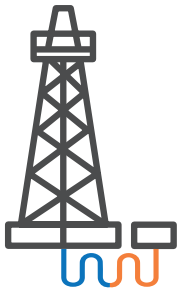
- To construct a multilateral geothermal well, a sidetrack from 13⅜ inch casing was required in a high compressive strength formation (>27ksi).
- Fluid losses were also an additional concern during the sidetracking operation.
- The system also had to be fully retrievable to provide the required multilateral architecture.

SOLUTION

A 13⅜ inch TrackMaster Select System with a hydraulic set expandable anchor and tri-mill assembly was chosen for this Geothermal application. The system selection was both suitable for use in a fluid loss environment and capable of drilling an extended rathole in the high compressive strength formation. A gyro was utilized to orient the system.

RESULTS

- Successful 1-trip sidetrack.
- System operation not impacted by fluid loss environment
- A 21 foot rathole was drilled in a high UCS formation.
- The tri-mill had acceptable wear, confirming a full gauge casing exit.
- The subsequent 12¼ inch drilling BHA passed freely through the window.
- System successfully retrieved with standard retrieval hook.



TrackMaster Select™

- A HISTORY OF INNOVATION
- UNRIVALED EXPERIENCE
- GLOBAL PRESENCE