

Gulf of America

Proven Single-Trip 14" Heavy-Wall Q-125 Casing Exit Using the TrackMaster™ Whipstock System

Advance TrackMaster Cutter Technology Improves Milling Efficiency and Window Quality in Deepwater Gulf of America

Combining Technologies to Optimize Sidetrack Operations

During a Deepwater Gulf of America (GoA) campaign, Wellbore Integrity Solutions (WIS) successfully milled a single-trip window in uncemented 14-in., 115-ppf Q-125 heavy-wall casing (0.82-in. wall thickness). The operation enabled smooth directional BHA pass-through and uninterrupted continuation of drilling operations. This application required precise window placement and consistent milling performance in heavy-wall casing.

To eliminate a dedicated CIBP run, real-time collar logging was performed during the cleanout run, with collar depth re-verified on the whipstock run prior to hydraulic anchor activation. Using the WIS TrackMaster™ hydraulic whipstock system equipped with newly developed premium cylindrical TCI cutter technology, a 26-ft window and 35-ft rathole were milled in a single trip while maintaining controlled milling rates of approximately 2.5 ft/hr. Despite the challenges of milling uncemented casing, the window was delivered in one run with mill dull grades within WIS acceptable criteria.

To further enhance efficiency, the BHA was optimized with ten WIS string magnets to manage swarf, collecting a total of 3,142 lb of metal during the sidetrack operation. These string magnets were critical in preventing adverse conditions in the wellbore, drilling fluid system, and subsea BOP stack.

As a result of the integrated application of WIS technologies, the sidetrack operation was successfully executed in a demanding exit through 14-in., 115-ppf Q-125 heavy-wall casing.



WELL INFORMATION

Casing: 14" 115 ppf Q125 Heavy Wall
Setting Depth: 8,300 ft MD
Inclination: 46°

CHALLENGE

- Required precise window placement and reliable milling performance in 14", 115-ppf Q-125 heavy-wall, uncemented casing
- Needed to ensure smooth directional BHA pass-through for continued drilling
- Sought to avoid a dedicated CIBP run and minimize operational time and risk
- Necessitated effective swarf management to protect the wellbore, drilling fluids, and subsea BOP stack

SOLUTION

- Deployed the TrackMaster hydraulic whipstock system with newly developed premium cylindrical TCI cutter technology
- Performed real-time collar logging during cleanout and re-verified depth on the whipstock run to ensure accurate window placement
- Milled a 26-ft window and 35-ft rathole in a single trip at controlled rates (~2.5 ft/hr)
- Optimized the BHA with ten WIS string magnets, enabling efficient swarf recovery

RESULT

- Achieved a successful single-trip casing exit through heavy-wall Q125 casing
- Enabled uninterrupted drilling operations with clean BHA pass-through
- Retrieved 3,142 lb of metal swarf, preventing potential wellbore and equipment issues
- Delivered a high-quality window with mill dull grades within WIS acceptable criteria
- Completed the sidetrack efficiently and safely, despite challenging uncemented casing conditions