

TrackMaster Select™ System Enables Single-Trip Dual-Casing Sidetrack and Saves Two Days of Rig Time

Engineered whipstock placement, WhipSim™ modeling, and an integral Tri-Mill system enabled a single-trip dual-casing window and ensured flawless BHA passage

TrackMaster Select™ cased-hole whipstock system enabled a precisely placed dual-casing window to support efficient sidetrack execution.

On a complex 3D offshore well, the operator required a sidetrack at 3,545 ft through 9-5/8" 47-ppf L-80 and 13-3/8" 68-ppf K-55 casing. Achieving a full-gauge window was essential to ensure unobstructed passage of the motor and rotary steerable assemblies and to enable successful drilling of the sidetrack leg in alignment with the well's intricate design strategy.

To support efficient window milling, the dual-casing sidetrack window and the precise positioning of the 9-5/8" TrackMaster Select cased-hole whipstock were engineered to mitigate the risk of intersecting casing collars in both casing strings. Proprietary WhipSim™ modeling software was used to analyze the well geometry, casing design, and required full-gauge window length across the two casings, ensuring accurate tool placement and optimal milling performance.

The 9-5/8" TrackMaster Select™ cased-hole whipstock system was deployed with an 8-1/2" integral Tri-Mill, which milled a 19-ft dual-casing window in seven hours and drilled an additional 11-ft rat hole in one more hour. Post-milling inspection confirmed that the Tri-Mill remained within acceptable gauge-loss limits: the lead and follow mills measured 1/4" under gauge, while the dress mill remained in gauge.

Following milling operations, the packed motor assembly and subsequent rotary steerable bottomhole assemblies passed cleanly through the milled window and drilled the sidetrack as planned. The streamlined execution of the dual-casing sidetrack saved the operator approximately two days of offshore rig time.

CHALLENGE

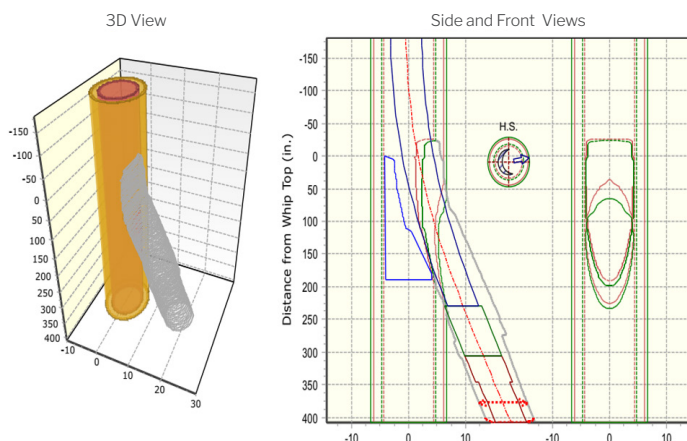
- Execute a sidetrack at 3,545 ft through 9-5/8" and 13-3/8" casing in a complex 3D offshore well
- Deliver a full-gauge dual-casing window to ensure unobstructed passage of motor and RSS BHAs
- Avoid intersecting casing collars while positioning the whipstock within tight tolerances.

SOLUTION

- Deployed the 9-5/8" TrackMaster Select cased-hole whipstock with precise placement guided by WhipSim modeling
- Engineered window length and orientation to safely clear both casing strings
- Utilized an 8-1/2" integral Tri-Mill to mill a 19-ft dual-casing window in a single trip

RESULT

- Full-gauge window achieved with minimal mill wear and verified clean BHA passage
- Sidetrack leg drilled successfully with packed motor and rotary steerable assemblies
- Approximately two days of offshore rig time saved through efficient single-trip execution



WhipSim™ analysis for dual casing sidetrack operations

- All dimensions are in inches
- Red, green, and gray curves represent inner and outer casing well and rat hole respectively