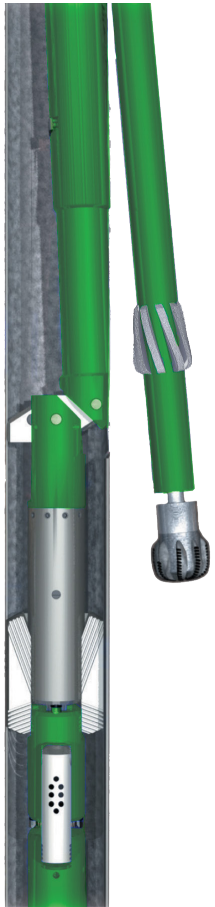


First North Sea One-Trip, Dual-String Exit for Thru-Tubing Sidetrack

Full-gauge, window and 9.5 ft rathole completed in 8 hours.



TrackMaster TT Thru-Tubing whipstock system completed the North Sea's first one-trip, dual-string exit through production casing in a single trip.*

Sidetrack planned through production tubing and liner.

An operator decided to sidetrack a mature well in the North Sea to access additional reserves. Thru-Tubing Rotary Drilling (TTRD) technology was selected as a cost-effective alternative to pulling the completion tubing. A Thru-Tubing whipstock system was required to create the exit through 4½ inch, 12.6-lbm/ft tubing cemented inside 7 inch, 29 lbm/ft liner. The window had to enable a 3.7 inch × 4.125 inch bicenter bit to be run on a 3⅝ inch OD directional assembly with a Positive Displacement Motor (PDM) set at 1.8° bend angle.

TrackMaster™ TT whipstock system and bi-mill used to create exit.

4½ inch TrackMaster TT thru-tubing whipstock system, with an OD of 3.62 inch, is designed to pass through the tubing ID. Running in with the whipstock, orienting and setting it, shearing the milling assembly from the whipstock, milling the window, and drilling the rathole can all be accomplished in a single trip. 3.8 inch OD bi-mill was used to create the window. The TrackMaster TT whipstock system enables a longer casing window to facilitate subsequent entry of drilling assemblies.

First North Sea dual-string exit accomplished in single trip.

After milling a full-gauge in 1.5 hr, a 9.5 ft rathole was drilled in 6.5 hr. This enabled the sidetracking BHA to enter the rathole and drill a 9,200 ft sidetrack with an inclination of 20.67°. This operation marked the North Sea's first successful one-trip, dual-string exit through production tubing.

CHALLENGE

Mill a full-gauge window through 4½ inch tubing and 7 inch liner, and drill a rathole to allow entry of a directional sidetracking assembly.

SOLUTION

Run a 4½ inch TrackMaster* TT thru-tubing whipstock system and 3.8 inch OD bi-mill.

RESULT

Completing the window and 9.5 ft rathole in 8 hr marked, the North Sea's first successful one-trip dual-string exit through production tubing.



**TrackMaster
Select™**

- A HISTORY OF INNOVATION
- UNRIVALED EXPERIENCE
- GLOBAL PRESENCE