Casing exits required for sidetracking through tubing
An operator required a window milled through 5.5-in, 17-lbm/ft, L80 liner in each of two deviated wells in the North Sea for sidetracking through tubing. The dogleg severity (DLS) across the window had to be kept low enough so that the fatigue life of the 2\(\frac{7}{8}\)-in tubing workstring was not compromised and each window was to be completed in one trip.

TrackMaster TT whipstock system deployed with FasTrack mill
TrackMaster TT thru-tubing whipstock system is designed to pass through the tubing ID; once below the tubing string, it can be hydraulically anchored inside the liner to enable window milling operations. A 5.5-in whipstock and a FasTrack one-trip mill were used to create the extended-gauge window and drill the rathole.

Each exit created in single trip with subsequent trouble-free sidetracking
- A 9.6-ft window was milled at 10,519 ft in 1.5 h and a 24-ft rathole was drilled and reamed in 3 h on the first well, which had a 22° inclination. The window orientation was 48.5° to the left of the high side.
- On the second well, with a 52.5° inclination, a 9.6-ft window was milled at 11,729 ft in 2.5 h and a 16-ft rathole was drilled and reamed in 3.5 h. The window orientation was 47° to the left of the high side.
- The first two successful thru-tubing casing exits in the North Sea were accomplished in a single trip each.
- The workstring performance was not compromised. Subsequent directional and completion assemblies passed through the window without difficulty.