

Case Study – Mexico

TrackMaster Select™ System Saves 36 Hours of Rig Time in Challenging Mexico Application

Outstanding one-trip performance delivers a successful deep sidetrack in 9 7/8 in. high-strength casing

CHALLENGE

A customer required a deep sidetrack, in 9 7/8 in. 62.8 ppf TAC-140 casing with the presence of poor cement behind the casing. A rat hole in a high compressive strength (>20ksi) formation was also required. A one-trip solution was desired with the delivery of a full gauge window for the trouble-free re-entry of subsequent drilling assemblies.

SOLUTION

WIS recommended a Trackmaster Select whipstock system, configured with an integral construction tri-mill with a hybrid cutting structure to complete this challenging application.

RESULT

- Successfully completed a window in 9 7/8 in. 62.8 ppf TAC-140 casing in one trip
- 36 hours of rig time was saved.
- The integral tri-mill was within acceptable gauge diameter criteria after the run, assuring a high-quality window
- Subsequent directional drilling assemblies passed freely through window to continue drilling the 8 1/2 in. section to TD

An optimized TrackMaster Select™ system configuration, with an integral tri-mill, was prepared to successfully sidetrack from high strength casing and drill a rat hole in hard formation.

Wellbore Integrity Solutions (WIS) in Mexico responded to a customer's request to plan and execute a challenging onshore sidetrack. The specific criteria that made this application challenging included:

- Deep exit point at 6,700 m (approximately 22,000 ft) with 270° orientation
- High temperature conditions
- High-strength TAC-140 grade casing
- Poor cement quality behind the casing
- High compressive strength formation (>20,000 psi) comprising conglomerates, shale, sandstone, and traces of limestone

Historical records indicated that this type of sidetrack typically requires two trips. However, WIS recommended using the new integral design tri-mill with a hybrid cutting structure. This configuration delivered an outstanding one-trip sidetracking performance.

The casing was successfully milled, and the rathole drilled in a total of 20 hours. Upon inspection at the surface, the follow mill was measured within 1/32 in. of full gauge, and the dress mill was at full gauge—assuring a high-quality window. The subsequent directional drilling bottom hole assembly (BHA) passed freely through the window and continued drilling ahead as planned.

A significant time savings of 36 hours was recognized in this application.

