

Significant Torque Reduction Achieved by S4 NRPs

Challenging S-Shaped Well

While planning for an S-Shaped well in gas field, an operator expected high torque. WWT Non-Rotating Protectors (NRPs) were chosen based on satisfactory previous experience in similar well design.

Engineering Study

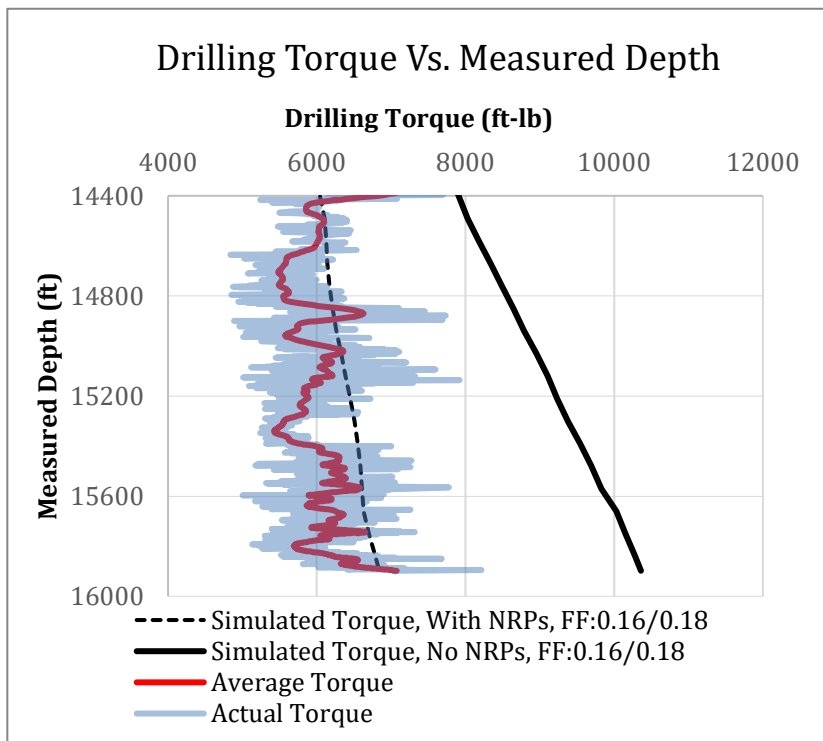
WWT Engineering performed torque and drag analysis to evaluate the side forces in the well and identify the areas where high torque is generated. Optimum placement was recommended using 120 NRPs S4 model to cover the high side force zone and provide the required torque reduction and casing protection. NRPs were used to drill the cement and the 5-7/8" section.

32% Torque Reduction

The 5-7/8" section was drilled from 14,387 ft to 15,898 ft MD with NRPs covering 3,774 ft of DP. The torque was expected to reach 10,400 ft-lb at TD without NRPs whereas actual torque averaged around 7,000 ft-lb with NRPs, achieving 32% torque reduction.



Location: Middle East
Well Type: S-Shaped
Objective: Torque Reduction
Solution: S4-550
Benefit Seen: 32% Torque Reduction



WWT Non-Rotating Protectors
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