Non-Rotating Protectors Provide 37% Torque Reduction in an ERD Well and Outperform Lubricants in Offset Well Comparison

ERD Project

Operator was planning several ERD wells and decided to compare alternative solutions for torque reduction and casing protection. After trying beads and lubricants, the operator wanted to evaluate WWT Non-Rotating Protectors' (NRPs) performance and compare to the other solutions.

NRP Recommendation

NRPs were used to drill the 8-1/2" section. WWT engineering decided to install 171 SS-500 NRPs to achieve optimum casing protection and torque reduction by covering the high side force area. The blue shaded zone in the side force diagram represents the NRP coverage at the end of section.

Location: Middle East
Well Type: Horizontal ERD
Objective: Torque Reduction
Solution: WWT SS-500 NRPs
Benefit: 37% Torque Reduction and Casing Protection

37% Torque Reduction Benefit

The 8-1/2" section was drilled to 23,500ft with NRPs. The high side force area was covered throughout the section, achieving 15-37% torque reduction and maximum casing protection. The operator was very satisfied with the results as the NRPs had a 22% better torque reduction compared to the offset wells where lubricants and beads were used. Based on these results, the operator decided to use NRPs instead of the alternate solutions for the next wells.