Instant 30% Torque Reduction in S-Shaped Well

Unexpected High Torque

While drilling the 5-7/8" section in an S-shaped well, the operator encountered unexpected high torque.

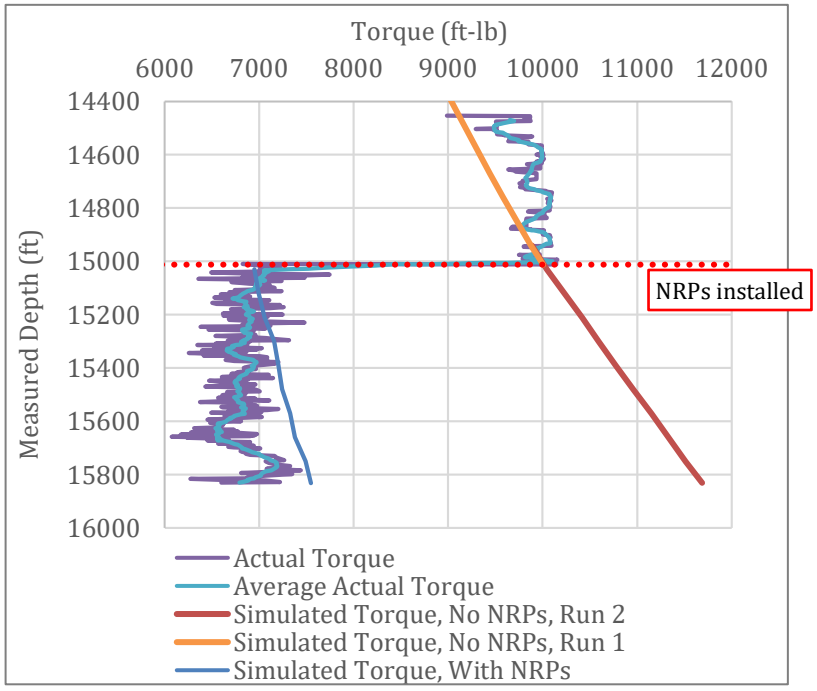
Recommendation & Results

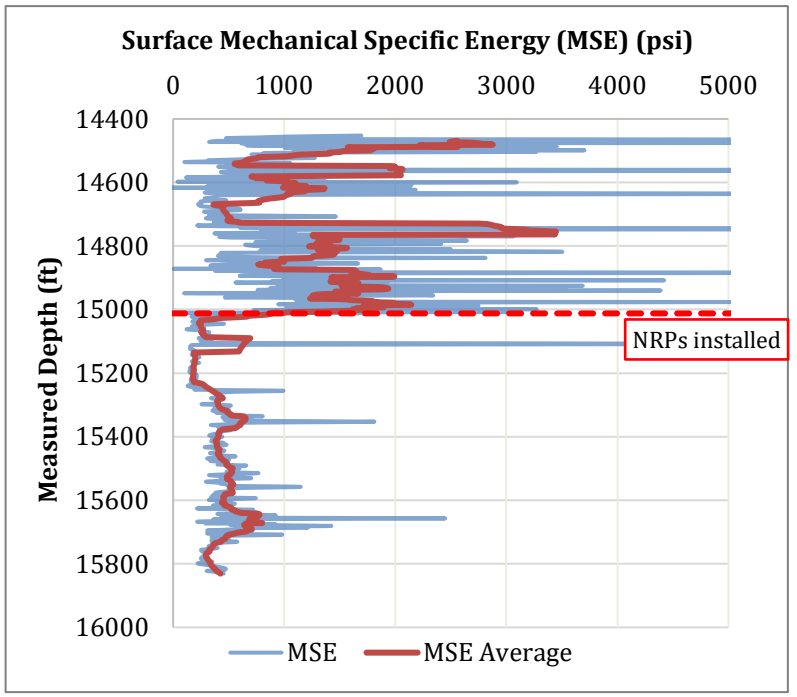
By performing torque and drag analysis, WWT identified the high side force area and recommended covering the build and drop sections to provide optimum torque reduction. 129 NRPs HT model were recommended across this area. NRPs were installed after the wiper trip at 15,012ft. The operator drilled the first run of the 5-7/8" section without using NRPs. The torque averaged around 10kft-lb. After installing the NRPs, the torque immediately decreased to 7kft-lb. The torque continued to average around the same value until the TD at 15,800ft MD.

Improved Drilling Efficiency

Surface Mechanical Specific Energy (MSE) is one of the methods used to measure the efficiency of the drilling. MSE measures the energy required to drill a specific volume of rock by incorporating the drilling parameters. The surface MSE before running NRPs was 1500psi. After NRPs were installed, the surface MSE decreased to 500psi indicating higher drilling efficiency. The operator was pleased with the results and considered using NRPs in the upcoming well.

Location: Middle East
Well Type: S-Shaped
Objective: Torque Reduction
Solution: HT-550
Benefit Seen: 30% Torque Reduction





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