

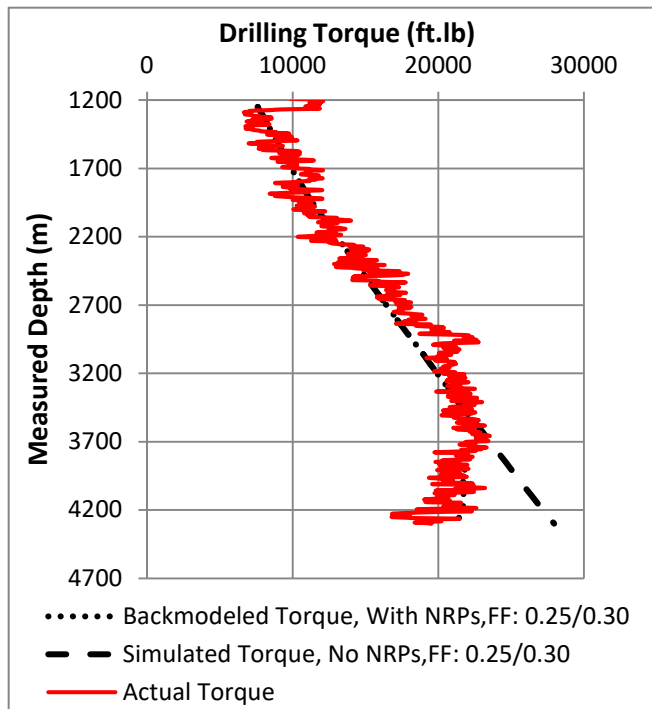
WWT NRPs Provide Superior Benefit in Offset Well Comparison

Offset Wells Drilled with Different NRPs

A comparison was made of two similar directional wells in South East Asia drilled using WWT Non-Rotating Protectors and a different nrp for torque reduction and casing protection. WWT's NRPs provided lower torque, lower surface mechanical specific energy (MSE) and lower metal debris collected compared to the different nrp.

33% Torque Reduction with WWT NRPs

NRPs were installed to cover this high side-force area. Torque was reduced by 33% from simulated results at TD.

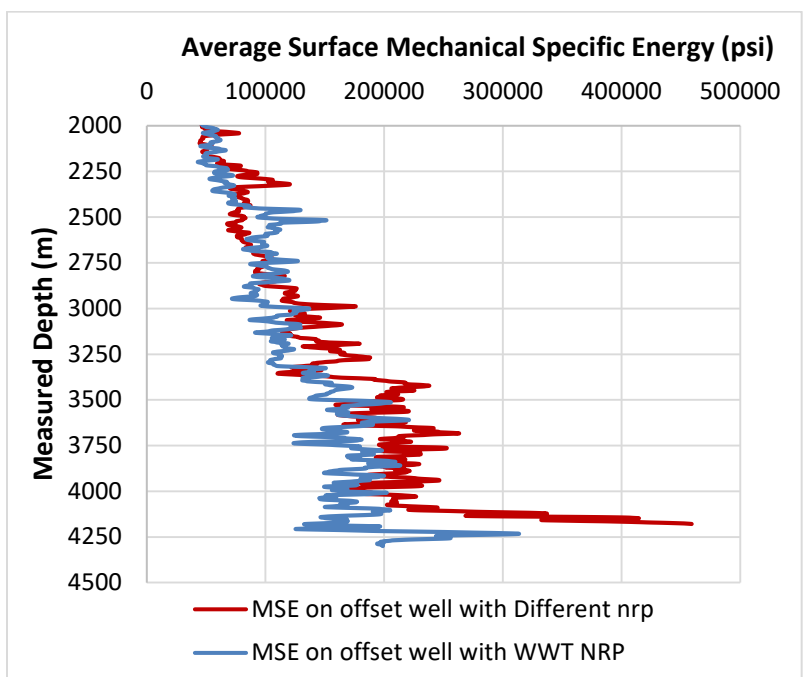
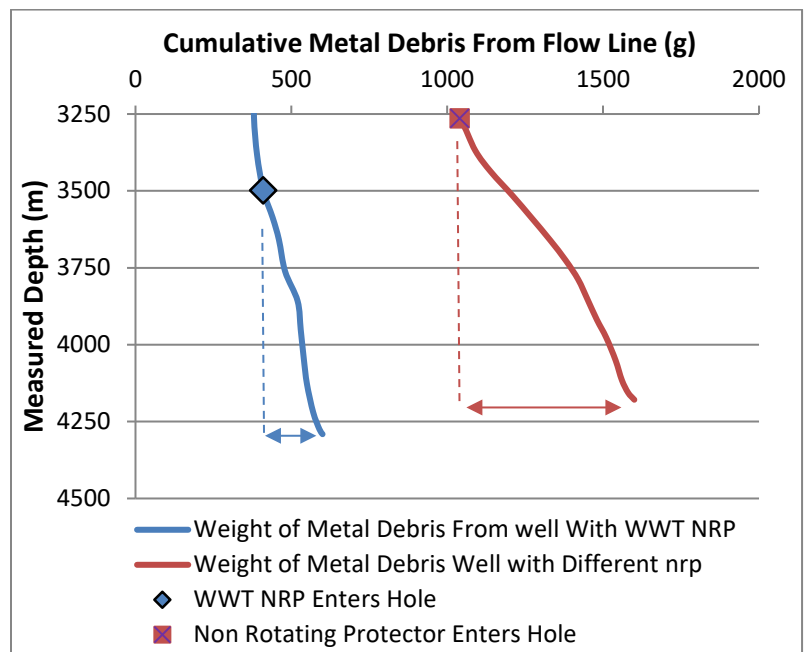


Less Metal Debris Returns and Mechanical Specific Energy on the Well Using WWT NRPs

The well using WWT NRPs showed less cumulative metal debris than the well using the alternative nrp. Also, Lower surface MSE was observed, indicating more efficient drilling.



Location: Asia
Well Type: Directional
Objective: Torque Reduction and Casing Protection
Solution: WWT NRPs
Results: Lower Torque, MSE and Metal Debris with **WWT NRP**



WWT Non-Rotating Protectors
www.wwtinternational.com