

West Texas Operator Experiences Numerous NRP Benefits

Unexpected dog-leg creates challenges while drilling horizontal well

Operator was drilling a 20,000+ ft horizontal well with a 7,000 ft step-out, using 4" drillpipe and 29 lb/ft 7" casing set at the base of the curve. When starting the lateral with a rotary steerable system, they experienced higher than normal torque (over 17,000 ft-lbs), pick-up weight, and levels of metal recovered at the ditch magnet (4 lbs. /day).

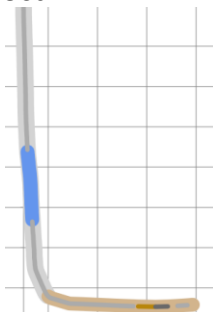
WWT Contact Force Modeling

WWT immediately ran torque and drag modeling that identified contact forces in the vertical section of the well where a window was cut in the 9-5/8" casing at approximately 7,300ft MD. Even though contact forces were below 2,000 lbs/jt it was decided this is most likely the area that created the casing wear as typically seen with high kick offs created by whipstocks. 4" SS3 protectors were shipped to location and installed on 114 joints to prevent tool joint contact.

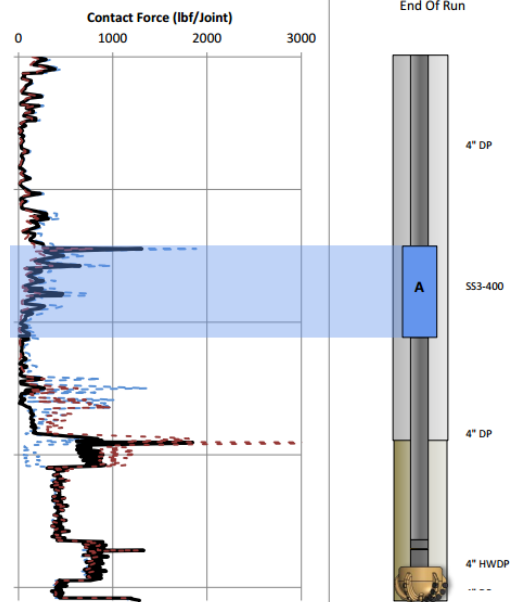
Additional Benefits Received

After installing WWT Non-Rotating Protectors (NRPs), the metal recovery at the magnet immediately reduced from 4 lbs to 0.6 lbs. Surface torque also reduced from 17,500 ft-lbs down to 8,500 ft-lbs (48%) and drag was significantly reduced (18%). Operator was able to complete well within torque limit and without failed casing. Both company man and directional driller were pleased with results.

“WWT provided great service and support during this project”



Location: West Texas
Well Type: Horizontal
Objective: Reduced torque and casing wear
Solution: WWT SS3 installed across contact-force spike
Results: Significant immediate reduction in metal recovery, torque, and drag



WWT Non-Rotating Protectors
www.wwtinternational.com