Latin American Operator Protects Casing in Low-ROP Drilling

Low ROP Creates Casing Wear Concern

Operator concerned with high casing wear while drilling multiple hole sections across the surface casing with a ROP as low as 2ft/hr and 120-150 RPM using a RSS. Up to 3,800 lb/jt side forces were analyzed in the build section at 6,500ft MD. With the low ROP and higher RPM, several million drill pipe revolutions were expected within the 11 ¾" casing which can create casing integrity issues.

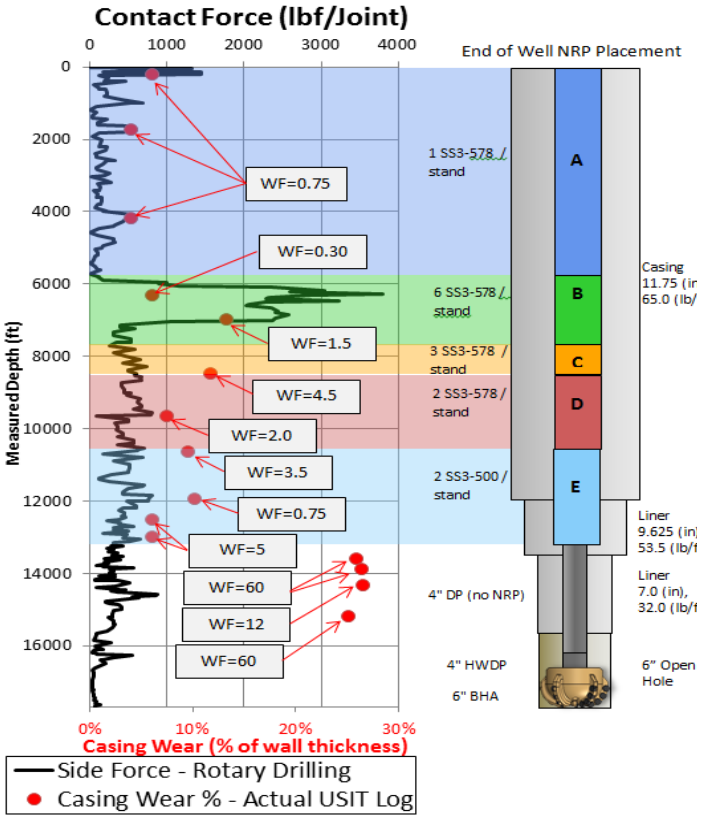
WWT NRPs Create Drill Pipe Stand Off

WWT's SS3-578 Non-Rotating Protectors (NRPs) were installed 5ft above the tool joint connection to create a stand-off between the drill pipe and casing. Due to the high chance for severe casing wear, NRPs were installed to protect the entire 11 ¾" casing.

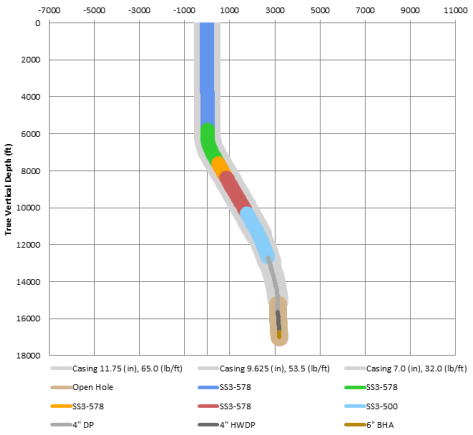
USIT Log Indicates Casing Protection

After drilling 3 hole sections, a maximum casing wear of only 13% was measured by a USIT log within the 11-3/4" casing where side forces were highest. The 7" liner, without protectors, experienced up to 26% wear while only drilling the 6" hole section. Backmodeled casing wear factors (WF) correspond to 0.75-4.5 in the areas with NRPs installed and 12-60 without NRPs. Applying the wear factors experienced in the 7" liner to the 11 ¾" casing would have resulted in severe casing wear. The results strongly indicate that NRPs are effective in minimizing casing wear.

Location: Latin America
Well Type: S-shaped
Objective: Casing Protection in Low ROP Drilling
Solution: WWT NRPs
Results: USIT Log Results Indicate Minimal Casing Wear at NRPs



NRP Placement at TD



WWT Non-Rotating Protectors
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