

## Latin American Operator Protects Casing in Re-Entry Wells

### Casing Wear in Re-entry Wells

An operator drilling re-entry wells had a concern of casing wear due to corrosion and also additional drill pipe revolutions while sidetracking. Milling the cased-hole window using a whipstock required approximately 80 hours of rotation on the existing casing and 550 kg (1,210 lb) of metal swarf was recovered at the surface. Once a liner was run through the sidetrack point, the abrupt deviation created high contact forces thus creating concern for casing wear.

### WWT NRPs Create Tool Joint Stand Off

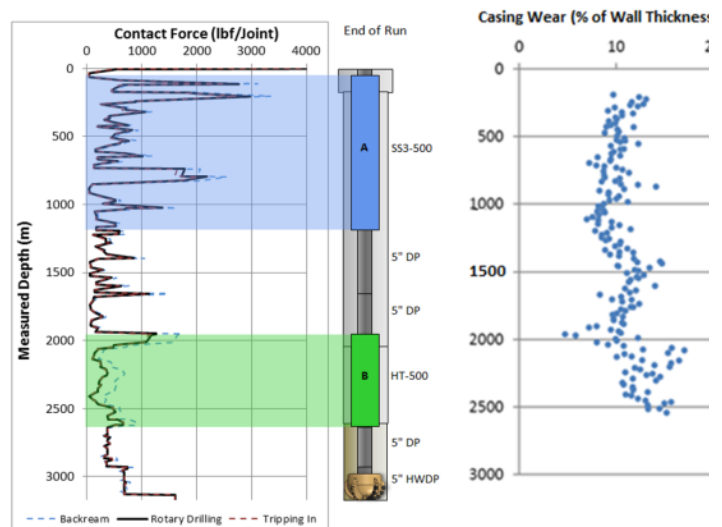
WWT Non-Rotating Protectors (NRPs) installed 1.4m (4.6ft) above the tool joint connection created stand-off between the drill pipe and casing. NRPs were installed 1/stand where side forces exceeded 2,500 lbs/jt in the vertical section of the wellbore. Tool joints adjacent to the installed NRPs remained unpolished, indicating successful tool joint standoff.

### USIT Log Indicates Casing Protection

A USIT log indicated only 5-10% wear was measured at the side track point, which protectors covered the entire run. Even with partial coverage, the maximum wear experienced in the 9 7/8" liner was below 14%, well below operator's requirements.



**Location:** Latin America  
**Well Type:** Build-and-Hold Re-Entry Sidetrack  
**Objective:** Casing Protection  
**Solution:** WWT NRPs  
**Results:** Minimal Casing Wear at Sidetrack Point



Polishing of tool joints indicates casing protection using NRPs:

With NRPs

No NRPs



WWT Non-Rotating Protectors  
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