



## Special Considerations for Deviated Wells

When running the Slimline® TAC or Slimline® Quick-Set™ TAC in an extremely deviated and/or horizontal well, special attention should be paid to a few important factors. In addition to closely following the directions outlined in TechTAC's Setting and Releasing Instructions, operators and rig crews should also consider the following:

### **Confirm the TAC placement relative to wellbore deviations**

Because the Slimline QuickSet TAC can be fully set in 1–3 turns, it has proven to be an ideal solution for wells with deviations or corkscrews in the vertical section of the wellbore.

The optimal alignment for most TACs is as deep as possible while still remaining in the vertical section. For horizontal wells, that typically means just above the kickoff point. This placement anchors the maximum length of the tubing string while maintaining proper alignment, helping to avoid introducing bending moments or undue stress on the tool.

Although Slimline QuickSet TACs can—and have—been successfully deployed below the kickoff point, doing so may expose the tool to increased side loading and stress. Engineers should carefully evaluate well geometry, deviation severity, and overall completion design before choosing to set the TAC below the kickoff point.

In all cases, confirm TAC placement relative to the pump, wellbore deviations, and any other downhole equipment prior to running the anchor.

### **Ensure that enough upward tension is pulled on the TAC before landing the tubing**

Before landing the tubing, it's vital to pull the proper tension on the tubing anchor. Without the proper

tension, the cyclic loading inherent during sucker rod pumping can exceed the tension placed on the TAC. This means that instead of remaining under constant tension as designed, the TAC alternates between tension and compression with every pump stroke. This cycle places undue wear and tear on the TAC and, over time, can lead to tool failure—either through premature shearing, or worse, causing the top sub to break off.

However, it is essential that this tension is measured in inches of stretch and NOT pounds of pull. Particularly in a well with high dog-leg severity or cork-screwed geometry, all of the bends the tubing must navigate can make the surface measurement of pounds of pull highly inaccurate when compared to the tension at the tool. Instead, a calculation like this one (taken from the Setting and Releasing Instructions) should be used:

*(Example) 20,000 lbs. of pull on 8,000 ft. of 2.375" OD, 4.7#, 1.995" ID tubing*

*20 x 8 x 0.30675 (stretch constant for 4.7# 2.375 tubing) = 49.08 inches of stretch*

### **Do not over-torque the tool**

Most tubing anchor mandrels (bodies) are connected to the subs with NU 10-round threads, whereas most tubing connections are EUE 8-round threads which can handle higher amounts of torque. This knowledge is particularly important when attaching tubing to the anchor.

It's recommended to put a backup on the TAC subs, while independently connecting the tubing to both the top and bottom TAC connections. Doing so will help prevent over tightening and possible galling the 10-round inner threads on the TAC.