

A-Force® Builds & Holds 18° Tangent with 90% Slide in Underbalanced Application

12-1/4" AF45DJP, Monroe County, Ohio

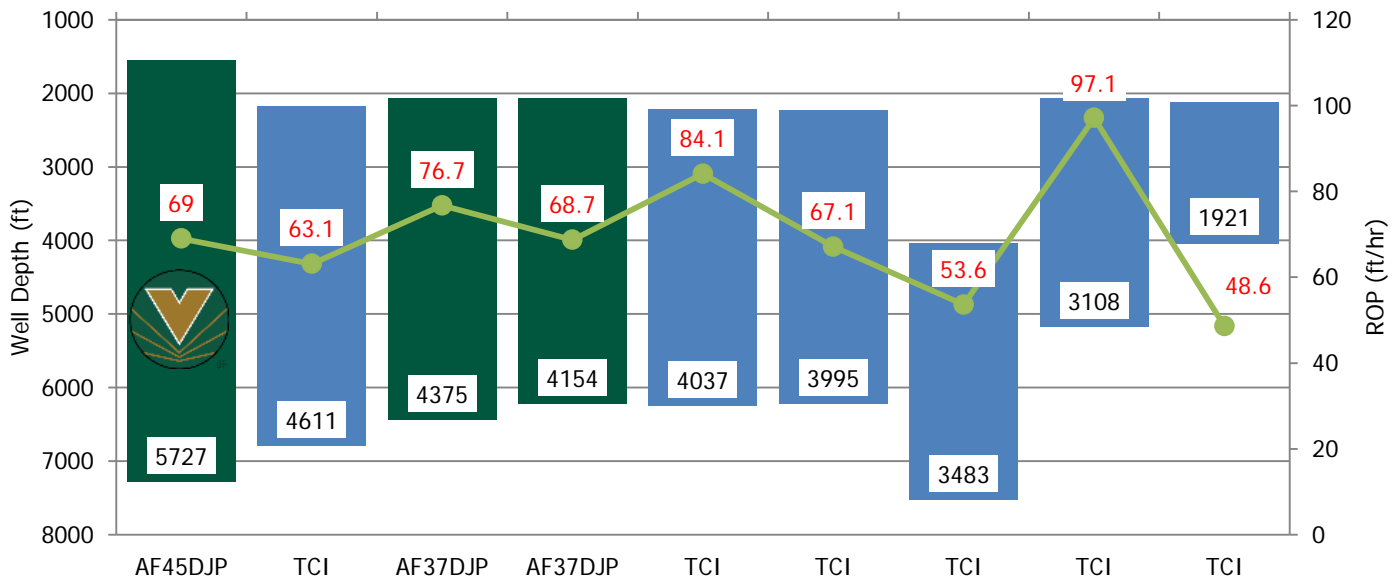
CHALLENGE: To improve footage in the vertical tangent section of Eastern Ohio while utilizing underbalanced drilling techniques. This application used air and light misting throughout the Packer Shale and Lockport Dolomite formations. Eight offset runs in similar underbalanced wells averaged 3,710 ft (1,130 m) with an ROP of 69.9 ft/hr (21.3 m/hr).

SOLUTION: Varel's A-Force bit series is the industry's only drill bit product line dedicated to underbalanced drilling. By utilizing a true rolling motion cutting structure, A-Force takes full advantage of the rock mechanics associated with underbalanced drilling. The bit's custom designed steel center jet and SideWinder™ milling design provide additional pathways to optimize cuttings evacuations. These and other features maximize the bit's downhole sliding and high degree tangent capabilities.

RESULTS: While build/holding an 18° tangent, this A-Force successfully drilled 5,727 ft (1,504 m), a 54% improvement. Even in an interval consisting of 90% sliding, the AF45DJP maintained a steady average ROP of 69 ft/hr (21 m/hr). With such outstanding footage and sliding capability, this newly engineered A-Force design has received positive feedback from the rig and is sure to be the favored choice in underbalanced drilling.



After 83 hours of drilling, 53% more than the average offset, the bit was POOH with a 1-1-WT-A-E-IN-WT-TQ dull grade.



For more information on this bit and proposed applications please speak to your local Varel representative.