

Voyager® Oval Cutters Drill 70% Faster

12-1/4" V519OP2DGHX, Litchendjili Field, Offshore Congo

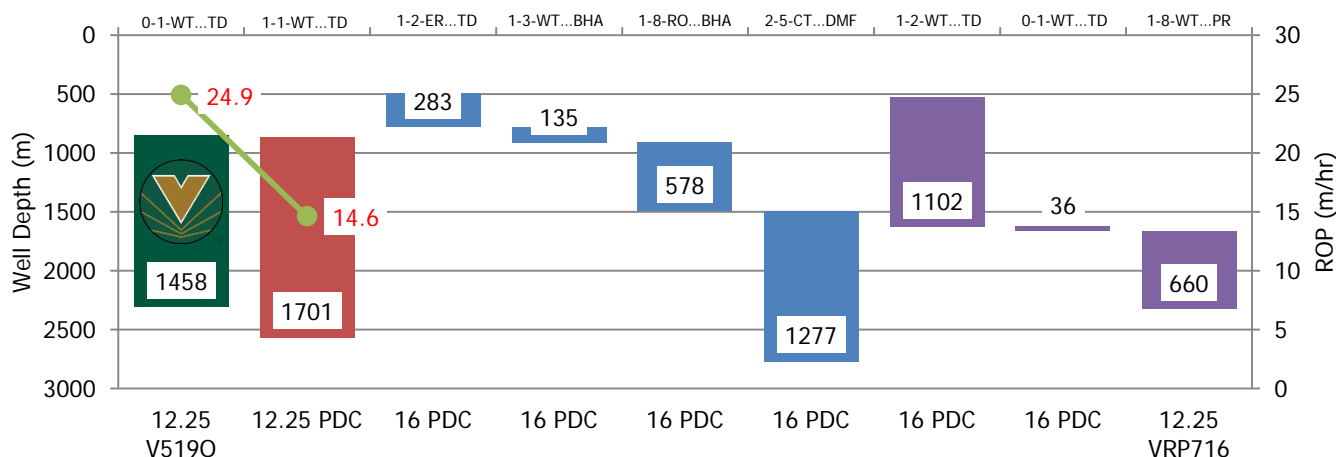
CHALLENGE: To successfully achieve the directional objective with optimum ROP and minimal vibrations into the Loeme Salt, Pointe-Indienne, and Pointe-Noire formations. The operator has recently changed the field's well plan from 16" to 12-1/4" hole size for this interval, greatly reducing the number of bits required for this section. The 12-1/4" direct offset drilled 1,701 m (5,580 ft) at 14.6 m/hr (47.9 ft/hr)



SOLUTION: In this challenging application of interbedded formations, the Varel team recommended the 12-1/4" V519OP2DGHX. Varel's unique Oval Cutter technology utilized on this bit provides a distinct directional advantage. Its narrower face improves drilling efficiency, even as it wears, resulting in less WOB required to engage the formation. Because of this, oval cutters produce less reactive torque resulting in a more constant torque profile, which improves directional control. The tungsten carbide matrix shock studs in the center and behind the gauge cutters make contact with the formation to minimize vibrations and aid in maintaining the bit's normal smooth cutting action thereby increasing cutter life and overall bit performance.

As seen in the chart below, Varel's 12-1/4" V519O bit had the best dull grade of all offsets despite drilling the second longest run being POOH at 0-1-WT-G-X-I-NO-TD.

RESULTS: This Voyager, run on an RSS push-the-bit assembly, successfully drilled its planned 29° tangent followed by a 16° drop. It drilled 1,458 m (4,783 ft) to TD of the interbedded shale/sand/silt sequence at an average of 24.9 m/hr (81.7 ft/hr). This represents a 71% ROP increase compared to the 12-1/4" offset.



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