

Raider® Drills the Fastest to KOP in Viewfield, Saskatchewan

8-3/4" R516DUX, Saskatchewan, Canada

CHALLENGE: To improve ROP in the vertical section to KOP in Viewfield, Saskatchewan. Typically the formation changes from an extremely soft shale to a hard, heavy dolomite with sandstone intrusions near the end. Twenty offsets drilling the same section had an average ROP of 90.1 m/hr (295.6 ft/hr) with the fastest 117.7 m/hr (386.2 ft/hr).

SOLUTION: To maximize efficiency in this application, Varel designers, through the use of proprietary SPOT-DN™ software, refined the previous recommended design. The design changes included reducing bit imbalances, making the cutting structure more aggressive, utilizing upgraded cutters, and using tungsten carbide shock studs along the shoulder of the bit's cutting structure. Shock studs contact the formation to help maintain the bit's natural smooth cutting action thereby increasing cutter life and overall bit performance.

RESULTS: This 8-3/4" R516DUX bit drilled 1089 m (3572ft) to the KOP with an outstanding ROP of 129.6 m/hr (425.2 ft/hr). Not only is this a 44% improvement on average, but also a 10% improvement on the previous record holder. Pulled with an above average dull of 1-0-CT-N-X-0-NO-BHA, this Raider remains in re-runnable condition for its next Viewfield run!

