Voyager®

Voyager® Sets New ROP Record from Shoe-to-TD

8-1/2" V516PDG1, Cooper Basin, Australia

CHALLENGE: Improve the ROP and secure a Shoe-to-TD run, improving efficiencies and lowering overall drilling cost. The bit will be run on a motor in a vertical application drilling through the formations; Mackunda, Allaru, Toolebuc, Wallumbia, Cadna-Owie, Murta, McKinlay, Namur, Westbourne, Adori, Brikhead, Hutton, Poolowanna, Nappameri, Toolachee, Roseneath, Epsilon, Murteree, Pacthawarra, Tirrawara, and Merrimelia.

SOLUTION: Maximize drill bit efficiency in this mud motor driven vertical application. Varel designers using proprietary SPOT-DN™ software have included PowerCutters™ in the bit design to enhance the abrasion resistance of the cutting structure shoulder. This arrangement allows optimum ROP while transitioning formations and protection for primary cutters.

RESULTS: This Voyager bit drilled 1937 m (6354 ft) at a record ROP of 25.9 m/hr (85 ft/hr). The 8-1/2" V516PDG1 bit achieved a 51% ROP improvement compared to the Shoe-to-TD offsets average. The ROP record is 16.1% better than the next best Shoe-to-TD run. The bit TD'ed the section with an excellent dull grade of 1-1-WT-S-X-I-CT-TD and continued on to drill an entire second interval on an offset well without repairs. The design of this Voyager bit contributed to efficiency savings of one day of rig time and an ROP record for this field.