

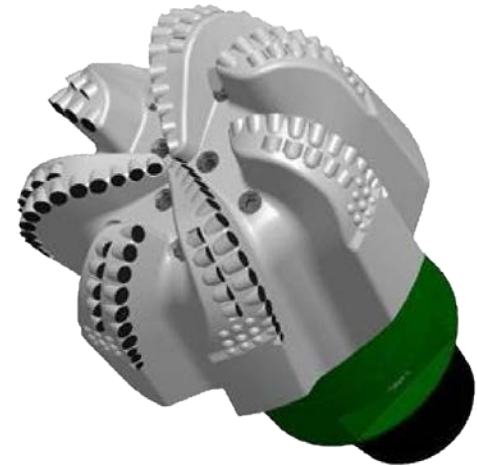
Raider® Sets New ROP Benchmark in Arabian Gulf

16" R719PDGX, Arabian Gulf, Saudi Arabia

CHALLENGE: Improve ROP in the vertical section of Saudi Arabia's Offshore North East quadrant. While drilling through the Rus, Umm Er Radhuma, and Aruma formations, bits run an average of 2,645 ft (806 m) at 80.94 ft/hr (24.67 m/hr).

SOLUTION: To maximize downhole efficiency in this offshore application, Varel designers, through the use of proprietary SPOT-DN™ software, have included tungsten carbide shock studs to limit bit vibration, a premium TSP gauge for maximum protection, and an extra row of PowerCutters™ on all blades to increase cutter exposure on the critical shoulder area. Together, these features provide the perfect combination of protection and power for offshore drilling where daily drilling costs are highest.

RESULTS: This Raider drilled 2,538 ft (773 m) at a record ROP of 88.28 ft/hr (26.9 m/hr). With a CPF of \$134.99 USD, Varel saved the customer over \$30,000 USD while maintaining the highest ROP of all offsets in this section. This bit was POOH due to TD'ing the interval with an outstanding 0-0-NO-A-X-NO-TD dull grade. The cutting structure durability of the Raider bit helped avoid a costly trip and contributed to the overall savings on this well.



Varel's high density PowerCutter™ arrangement gives enhanced bit life through a variety of rock types without sacrificing ROP. The cutting structure provides extra exposure and cutter density on the critical shoulder area of the bit.

