

Well type	Horizontal
Maximum circulating temperature	283 degF [139 degC]
Mud type	Oil-based mud
Hole size	8% in
Circulating hours	186 h
Section length	4,220 ft [1,286 m]
TD	14,450 ft [4,404 m]

Background

In a well where temperatures commonly exceeded 280 degF [138 degC], an operator in the Middle East needed to drill a section shoe-to-shoe in a single run while using an aggressive oil-based mud. In previous runs, motor failures due to the elastomer were common, causing multiple trips and excessive NPT. Dyna-Drill, a Schlumberger company, suggested using the DynaPower XR* extreme-wear-resistant motor elastomer to prevent elastomer failure in this application.

Technology

- DynaPower XR extreme-wear-resistant motor elastomer
- PowerDrive vorteX* powered rotary steerable system

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Motor with DynaPower XR Elastomer Drills 186 h to TD in a Single Trip with Zero Damage, Middle East

Power section with extreme-wear-resistant elastomer increased ROP 20% while drilling in temperatures over 280 degF with aggressive oil-based mud



The DynaPower XR elastomer enabled the motor to sustain ROP and perform for 186 circulating hours at over 280 degF [138 degC], successfully drilling to TD in a single trip. During drilling, the ROP averaged 26.7 ft/h [8.1 m/h], which is a 20% improvement as compared with offset wells. The PowerDrive vorteX RSS with the DynaPower XR elastomer showed zero damage during the postrun check.