Case study: Elastomers
Location: North Dakota

Extreme-Power Elastomer Helps Discovery Downhole Services Maintain ROP While Drilling Long Sections

Run with DynaPower XP elastomer in 300-degF section up to 40% faster than offset, North Dakota

Runs were up to 40% and 30% faster than the offset runs drilled using conventional elastomers.

Discovery Downhole Services’ concerns
Discovery Downhole Services needed to expedite drilling the 5-in section of a North Dakota well.

What Schlumberger recommended
Schlumberger recommended using the DynaPower XP* extreme-power motor elastomer. In challenging drilling environments, this new elastomer provides increased power output relative to conventional elastomers. It also provides 30% improvement in abrasion resistance, enabling Discovery Downhole Services to maintain ROP while drilling longer sections. The elastomer is formulated to survive large operating temperature gradients while drilling shoe to shoe in oil-based muds and water-based muds.

Record-setting runs
During consecutive runs, DynaPower XP elastomer maintained its effectiveness in bottomhole temperatures of nearly 300 degF while drilling faster than runs with conventional elastomers. The first run drilled 9,906 ft [3,019 m] with an ROP of 248 ft/h [76 m/h]. This run was 40% faster than the most recent offsets in the state. The second run drilled 9,739 ft [2,968 m] with an ROP of 232 ft/h [71 m/h], which was 30% faster than the same offset runs.

The DynaPower XP elastomer provided increased power output relative to conventional elastomers.