

Colorado Operator Raises Niobrara Production with Cementing

Wells cemented using Fulcrum technology outperform nearby wells cemented conventionally by as much as 32.8%

Nine Niobrara Formation wells cemented using Fulcrum* cement-conveyed frac performance technology delivered higher mean initial production as compared with nearby conventionally cemented wells targeting the same formation.

The operator's concerns

An independent operator wanted to maximize hydraulic fracturing efficiency in plug and perf wells targeting the tight oil Niobrara Formation. In particular, engineers wanted to maximize zonal isolation to minimize stage-to-stage fracturing fluid communication and nonuniform fractures.

What was tried first

Despite using industry best practices for centralization and spacers, the engineering team was concerned that channels of nonaqueous drilling fluid (NAF) might enable fracturing fluid to migrate between perforation clusters behind the casing.

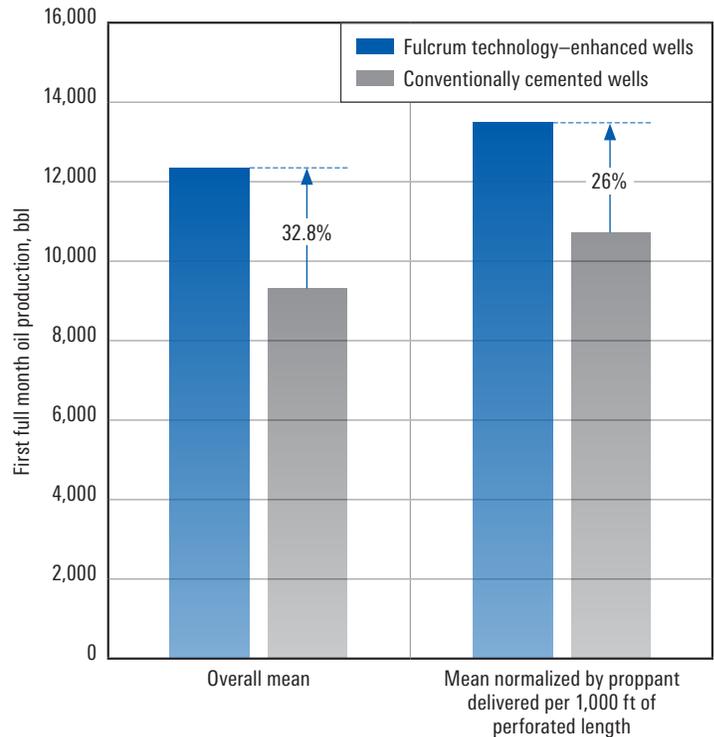
What Schlumberger recommended

Fulcrum technology improves fracturing performance by modifying the rheology of NAF left in channels behind the casing, limiting fluid mobility and interstage communication.

What happened

Using public data sources, mean early oil production was compared for nine wells cemented using Fulcrum technology and 344 wells drilled and stimulated within the last 2 years and within a 10-mile radius.

For the Fulcrum technology-enhanced wells, the mean production in the first full month was 32.8% higher than the mean of the conventionally cemented wells. Normalized by concentration of proppant placed per 1,000 ft of perforated length, mean oil production in the first full month was 26% higher in the Fulcrum technology-enhanced wells.



Nine Niobrara Formation wells cemented using Fulcrum technology produced more first-month oil as compared with 344 nearby offsets that were cemented conventionally. Source: Public production data via IHS.