

Kymera XTreme hybrid drill bit improved ROP 138%, saved 2.3 days

A major operator working in the Middle East was experiencing well loss challenges when drilling through a difficult interbedded section. The 16-in. section, which comprised limestone, sandstone, and shale formations, was extremely hard and abrasive. To minimize the risk of losses, high-weight mud was used, but this significantly reduced ROP and the operator needed to use two tungsten carbide insert (TCI) roller cone bits to complete the section. The operator had then tried to improve ROP through the section by using PDC bits, but without success. Concerned about this drilling cost and, believing it was possible to drill the entire 2,721 ft (829 m) section, shoe-to-shoe, in one run, the operator asked Baker Hughes, a GE company (BHGE), for a solution.

BHGE recommended the **Kymera™ XTreme (XT) hybrid drill bit** for the application. Building upon the success of prior hybrid technology, the Kymera XT bit can be customized for each scenario

and delivers smooth, reliable, faster, and more durable drilling performance in both vertical and curve applications. It also delivers superior tool-face control in difficult drilling environments including challenging carbonates and interbedded formations where drilling speed and durability are often pushed to their limits.

After BHGE collaborated with the operator and designed a customized Kymera XT bit for the challenging section, the bit was deployed in the well. The Kymera XT bit drilled the entire section in a single run, eliminating the cost of a bit trip and a second bit that the operator had incurred on previous wells. Drilling through the 16-in. section proceeded with 138% higher average ROP than the field average, and 50% lower costs per foot than the roller cone bits had delivered in offset wells. As a result, the operator finished the section 2.3 days ahead of time and saved nearly \$100,000 USD.

Challenges

- Increase ROP despite high weight mud
- Drill 16-in. vertical section in one run through hard, abrasive formations
- Reduce costs-per-foot through 2,721 ft (829 m) section

Results

- Saved 2.3 days
- Increased average ROP 138%
- Reduced cost-per-foot 50%
- Drilled 16-in. vertical section in one run

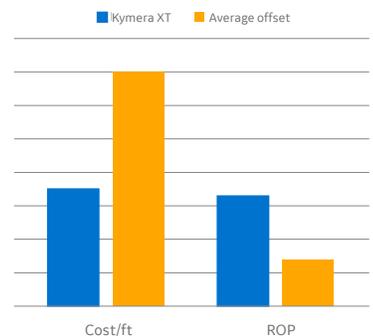
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Performance and cost comparison



The Kymera XT hybrid bit more than doubled ROP while cutting the operator's cost-per-foot in half