

MIDDLE EAST

ONSHORE

Lithology	Soft limestone and shale
Well type	Horizontal
Section length	Multiple sections from 450 to 1,200 m [1,476 to 3,937 ft]
Unconfined compressive strength (UCS)	27.6 to 55.1 MPa [4,000 to 8,000 psi]

Background

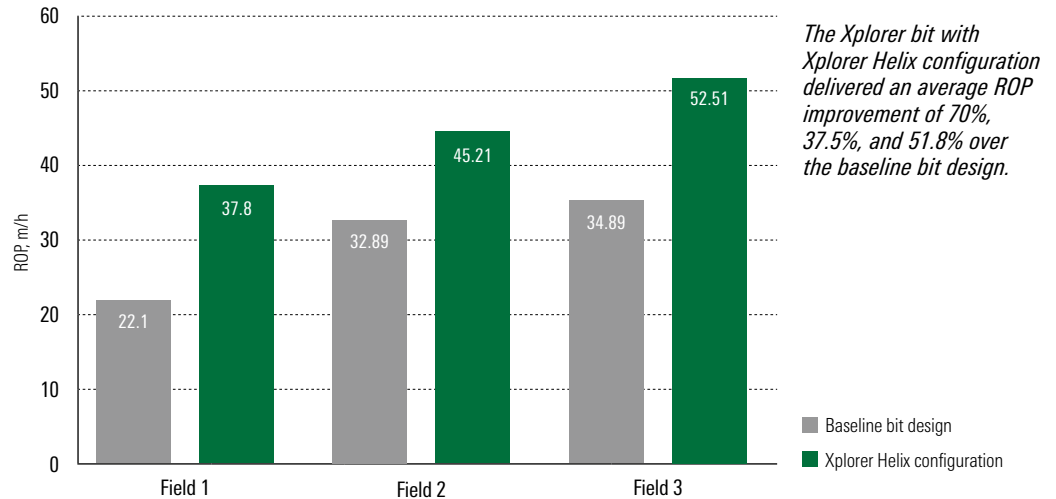
An operator wanted to increase the average field ROP across multiple lateral wells in the Middle East. The sections ranged from 450 to 1,200 m [1,476 to 3,937 ft] in length and consisted of soft limestone—and the occasional shale string—with UCS ranging from 27.6 to 55.1 MPa [4,000 to 8,000 psi]. To facilitate this, the operator and Smith Bits decided to use a 6½-in Xplorer premium roller cone drill bit with the Xplorer Helix* spiral TCI configuration to achieve a continuous improvement in on-bottom ROP over the benchmark design.

Technology

- Xplorer Helix spiral TCI configuration
- Xplorer premium roller cone drill bit

Xplorer Helix Configuration Increases ROP by 70%, 37.5%, and 51.8% in Three Fields, Middle East

Operator improves ROP while drilling laterals in soft limestone using premium roller cone drill bit with spiral TCI configuration



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