

GUJARAT-SAURASHTRA BASIN

OFFSHORE INDIA

Block	Kutch Saurashtra
Field	Mumbai High
Formation	Volcanic dike

Background

Oil and Natural Gas Corporation Limited (ONGC) in India needed to drill a minimum of 300 m [980 ft] through a volcanic dike formation. In an offset well, the operator encountered high variation in unconfined compressive strength (UCS) throughout the section—in some places as high as 33,000 psi [228 MPa].

While drilling the offset well, nine bits were used to penetrate through 550 m [1,804 ft] of Mesozoic formation with an average ROP of 0.5 m/h [1.6 ft/h]. This resulted in high drilling costs. Moving forward, ONGC needed to cut costs in order to drill the deepest offshore HT well in the India and Bangladesh region.

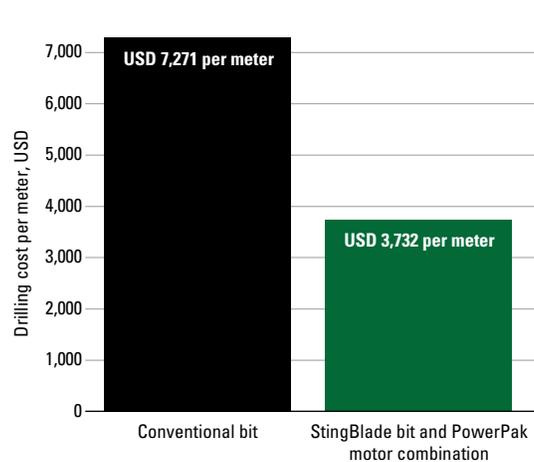
Technology

- IDEAS* integrated dynamic design and analysis platform
- StingBlade* conical diamond element bit
- PowerPak* steerable motor

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ONGC Increases ROP by 40% to Save 15.7 Rig Days Using StingBlade Bit

StingBlade bit with PowerPak motor drills 8 times deeper than conventional roller cone bit and lowers cost per meter by more than 50%, offshore India



The StingBlade bit drilled a cumulative 819 m [2,687 ft] with an average ROP of 2.3 m/h [8 ft/h] in the first run and 1.6 m/h [5.2 ft/h] in the second run. This was a 40% increase in average ROP. The bit increased the average length drilled per bit by 8 times, which resulted in a savings of 15.7 rig days and a more than 50% reduction in cost per meter as compared with drilling the offset well.