

Lithology	Oolite
TD	2,554 m [8,379 ft]
TVD	1,974 m [6,476 ft]
Interval drilled	Horizontal sidetrack
Maximum density	10 lbm/galUS

Background

Water cut as high as 76% was restricting oil production in a vertical well in the South Fuwaris field. To optimize recovery and reduce water cut, the operator decided to sidetrack the well above the oil/water contact (OWC) into the upper Ratawi oolite, which had previously been considered too tight to produce. As the first attempt at horizontal production in the field, the success of this sidetrack determined the direction of future drilling campaigns throughout South Fuwaris field.

Technology

FLOPRO NT* water-base reservoir drill-in fluid

First Application of FLOPRO NT Fluid in South Fuwaris Field Triples Flow Rate

High-performance drill-in fluid delivers critical sidetrack well, reducing water cut and increasing oil production by 552 bbl/d [87.8 m³/d]



M-I SWACO recommended FLOPRO NT fluid for its rheology, hole cleaning ability, and lubricity. The fluid was displaced into the hole as the angle was built—for a near-horizontal, soft landing into the proposed production zone. With drilling rates in excess of 100 ft/h [30.5 m/h], the fluid eliminated the need for expensive lubricity pills typically used for extended horizontal sections. After acid stimulation and completion, the well flowed at 888 bbl/d [141.2 m³/d]—nearly three times the rate of the previous vertical production rate—with a water cut of just 3.3%.