

Lithology	Soft-to-medium shale and sandstone
Section	26 in
High-risk interval	0 to 755 ft [0 to 230 m]
Drilling type	Extended reach

Background

An operator needed to drill one remaining extended-reach well on a 32-well pad. However, drilling would pose a high risk of collision with the other wells because of its location at the center of the deck. The previously drilled wells were also in production under high-pressure conditions, so a collision could result in a serious HSE concern. To optimize drilling in the high-risk interval of the remaining well, Schlumberger designed a custom BHA.

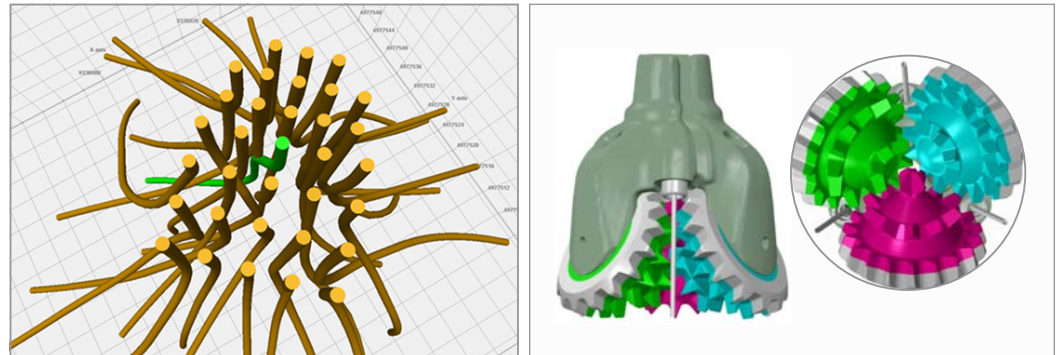
Technologies

- PowerPak* steerable motors
- Smith Bits Xtra* standard roller cone drill bit
- GyroSphere* MEMS gyro-while-drilling service

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Soft-Gauge Bit and MEMS Gyro-While-Drilling Service Optimize Drilling, Offshore Russia

Xtra bit and GyroSphere service reduce high risk of collision and casing damage of infill well on a 32-well pad, Caspian Sea



While drilling with PowerPak steerable motors, the operator used the GyroSphere MEMS gyro-while-drilling service which enabled taking surveys to proactively steer the high-risk interval—0 to 755 ft [0 to 230 m]—of one remaining infill well (left) on a 32-well pad away from nearby producing wells. To further reduce drilling risks, the aggressive bit teeth, teeth standoff, and sharp edges were reduced on the Xtra standard roller cone drill bit (right). The outer material was made of soft bronze alloy for added assurance against damaging the steel casing in case of contact. The high-risk interval was successfully drilled and created a basis for further infill well development.