



ENVIROMUL™ Oil-Based Fluid

Well Drilled in 29 Days with ENVIROMUL™ Oil-Based Fluid, 31% Faster than Previous Record Well in Field

Location: Caspian Area, Azerbaijan

Operator's Challenge

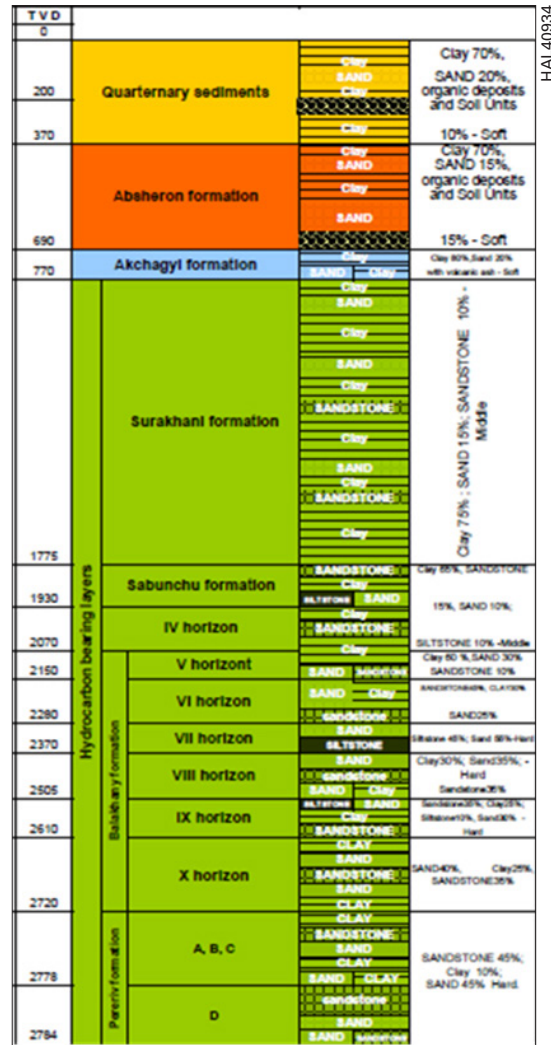
SOCAR-AQS has drilled challenging wells in the Caspian Sea for several years. Some of the challenges include lost circulation, wellbore instability, tight hole and logistics constraints. Baroid has provided the drilling fluids for eight wells, beginning in 2011. The lithology encountered in the Caspian is complex, and it includes highly reactive clays through the Absheron, Surakhany, and Balakhany formations, as well as the production horizons on Fasila and deeper.

The wells also exhibit a narrow drilling window between pore pressure and fracture gradient, so the operator wanted a drilling fluid that would help with equivalent circulating density (ECD) management.

Halliburton's Solution

The first six wells were drilled with water-based fluid systems. The Baroid team recommended implementing the ENVIROMUL™ oil-based fluid system. This inhibitive and lubricious fluid would significantly improve wellbore stability, reduce the risk of stuck pipe, and help improve tripping efficiency. Further, it would eliminate bit balling that could impair penetration rates.

After applying the Baroid Technical Process, which included lab testing, risk assessments, and a technical presentation of the results, SOCAR-AQS approved the use of the ENVIROMUL system.



Typical well lithology

Economic Value Created

The program started with a successfully drilled horizontal well, which was followed by a second horizontal well that was drilled in a record time of 29 days. Before using the new fluid system, the fastest well drilled in the area was 42 days.

CHALLENGE	SOLUTION	RESULT
Reactive clays, tight spots, and complex lithology was slowing drilling in Caspian Sea	Replace water-based fluid with flat-rheology ENVIROMUL oil-based system	Customer drilled record-setting well with no wellbore stability issues