

Case History

Complex Well Drilling / Drilling Fluids

Middle East Operator Realizes Over 300% Increase in Sliding ROP with the Use of DFL-A™

Location: Persian Gulf, Offshore Dubai, UAE

OPERATOR'S CHALLENGE – A

Major Operator in Middle East, drilling in the Persian Gulf was having a very difficult time with pipe hang up and sliding the drill string while cutting windows and slide drilling to for side-track wells. Because of the sensitive formations they were drilling, they were looking for a friction reducing additive that would reduce the coefficient of friction and allow them to efficiently drill these wells, that would not alter their drilling fluid properties in their specialty muds.

EGS's SOLUTION – EGS's

seasoned engineering team worked hand-in-hand with the operator to determine the best fluid's solution to help them mitigate their friction as well as enhance their drilling performance.



As a solution, the teams decided on implementing EGS's DFL-A because of its superior lubricity, its non-damaging properties and its environmental compatibility.

Unlike other standard friction reducing products on the market, DFL-A does not change drilling fluid properties as it is a "bonding lubricant" and not a flowing lubricant. DFL is engineered to reduce contact friction, to reduce the heat produced by friction, to reduce flowing fluid pressures (ECDs and SPPs) and to reduce wear on casing, drill pipe, equipment and drilling bits, as well as improve ROPs.

Added Value – After milling the window in the casing for their sidetrack, the operator attempted to initially drill the sidetrack without the addition of the DFL-A. With weight stacking, and stick-slip dominating the operation, and the slide-drilling ROP hovering less than 15 fph, the operator added DFL-A at a concentration of 1% to the mud system. Immediately after the DFL-A turned the corner on the bit, the sliding ROP increased from 15 fph to over 55 fph for an increase of over 333% while the rotating ROP increased from 60 fph to over 130 fph for an increase of over 110%. The operator finished drilling the section and successfully completed the well with no further problems.

