

Norway: PARATHERM with ECOTROL HT come through in challenging HTHP well

“The PARATHERM* HTHP system in tandem with ECOTROL* HT demonstrated its technical benefits by helping to achieve good drilling performance, including superior fluid loss control and hole stability”

Gunvald Nesheim, M-I SWACO Fluids Coordinator

Well Information

Location	North Sea Norwegian Sector
Depth	5,738 m(18,825 ft) MD
Section	8 ½ in. reservoir
Bottomhole temperature	162°C (324°)

The Situation

The operator requested a fluid system capable of delivering maximum performance for its HTHP well. To ensure accurate XPT pressure points, the operator put special focus on filter cake thickness and quality. Also, it was imperative that the system deliver minimal formation damage. Hence, a formation- specific bridging package would have to be included in the final drilling fluid formulation for the 8 ½ in. reservoir section. The section also was expected to have potential risk for gas influx, narrow operational window, drilling fluid losses, and hole stability issues.

The Solution

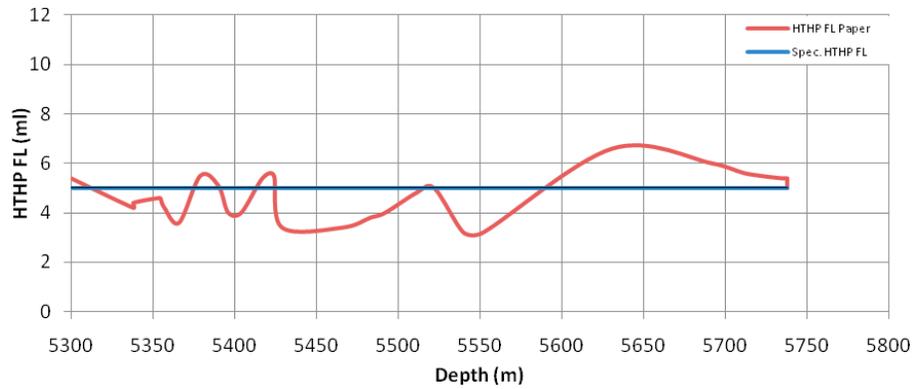
Based on previous M-I SWACO experience in the North-Sea, a paraffin-based PARATHERM HTHP low viscosity system was selected to drill the well. It was decided that the characteristics of the PARATHERM system, including the low viscosity profile, excellent hole cleaning capability to achieve optimum equivalent circulating density (ECD), and high resistance to contaminants would contribute to the success of this challenging HTHP well. ECOTROL HT replaced VERSATROL* HT on the basis of its capacity to achieve superior HTHP filtration control and a thin, slick filter cake.

The Results

- The well was drilled successfully and all XPT pressure points were achieved, thus meeting the operator’s objectives.
- The ECOTROL HT fluid loss additive proved to be a successful solution for all the drilling condition encountered. With the additives, HTHP fluid loss control was controlled easily as per the client’s specifications and delivered thin filter cakes.

Details

During the drilling operations, typical concentrations of EcOTROL HT ranged from 10– 20 kg/m³ (7-13 lb/ft) with occasional daily additions in the range from 1.0 – 2.0 kg/m (0.6-1.2 lb/ft).



Questions

We'll be glad to answer them. If you'd like to know more about the EcOTROL HT product and how it's performing for our other customers, please call the M-I SWACO office nearest you.



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