

Case study: Malaysia

AutoTrak G3 delivered superior performance and improved ROP 20%

A major operator in Malaysia awarded Baker Hughes the second batch of a high profile, deepwater drilling campaign. Our competitor was responsible for completing the first batch of drilling. For the subsequent second batch, Baker Hughes was required to take on a much more challenging and complex extended reach drilling (ERD) well. These challenges also included narrow effective circulating density (ECD) margins, increasing the risk for potential wellbore stability issues.

The field, which consist of very soft unconsolidated sand formations, posed serious challenges for our competitor's rotary steerable system (RSS) to not only steer, but also to maintain the tangent section. Geological targets were enlarged to accommodate the related steering issues, resulting in sub-optimal well placement in the reservoir section.

A narrow usable flow rate range due to pressure drop requirement from

the competitor's RSS also hampered the operator chances for rate of penetration (ROP) improvement.

Baker Hughes employed its full suite of LWD services, which included **SeismicTrak™ seismic service** and **VisiTrak™ geospatial navigation and analysis service**.

The deployment of **AutoTrak™ G3 RSS** in this challenging field proved to be very successful. The superior directional control of AutoTrak G3 resulted in drilling the well very close to plan, allowed for optimum well placement in the reservoir and mitigated potential risk resulting from accidentally drilling into unwanted formation zone. Improvements in drilling ROP were also achieved, by optimizing the flowrate for hole cleaning and ECD management.

The excellent performance of AutoTrak G3 in this challenging field gained recognition from our customer as being the best RSS in the market.

Challenges

- Poor directional control was experienced by competitor RSS especially in very soft unconsolidated sand layers
- Wellbore stability and risk of loss
- Limitation on drilling ROP due to low flow rate used to manage ECD

Results

- Excellent directional control in very soft unconsolidated sand
- Improvement in drilling ROP of 20%
- Improved hole cleaning due to higher flow rate used