**CHALLENGE**

Petronas’ first fast-track deepwater well faced a complex, overpressurized environment with shallow hazards and channels. Two prior drilling efforts by another operator failed to reach the geological target.

**SOLUTION**

Halliburton Landmark implemented collaborative well planning and real-time monitoring using DecisionSpace® Well Planning technology. The software integrated multiple vendors in subsurface and drilling operations within a single subsurface platform and automation process.

**RESULT**

The well was drilled successfully without operational problems, faster than anticipated and under budget. Planning for the primary well location and six geological sidetrack scenarios was accomplished in a single day.

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**Collaborative Well Planning Saves Operator Months of Planning for Complex Well Geology**

**INTEGRATED TECHNOLOGY ENABLES PETRONAS TO SUCCESSFULLY FAST-TRACK DRILLING OF DEEPWATER WELL OFFSHORE MALAYSIA**

**CHALLENGE**

With two failed efforts by another operator to reach the target, it was imperative that a complex geological environment offshore Malaysia be successfully drilled without further delay. Doing so meant Petronas had to compress the 12 to 18 months typically required for planning a deepwater well to less than two months.

Efficiently addressing the complex drilling and geological challenges depended on integration of a multi-vendor team. Interdisciplinary communication meant resolving geoscience’s focus on geological features and the drilling department’s emphasis on the well path and hitting the target.

**SOLUTION**

The collaborative well planning (CWP) was achieved with DecisionSpace® Well Planning technology. The third-generation well planning software integrated geoscience, interpretation, and trajectory planning in real time. Process automation enabled well trajectories to be planned automatically based on assigned geological targets, platforms, and key drilling parameters. The fast, accurate planning successfully managed the risk, inherent uncertainty, and project cost challenges in the complex geological environment.

**RESULT**

The well was drilled successfully without operational problems, faster than anticipated and under budget. Planning for the primary well location and six geological sidetrack scenarios was accomplished in a single day.

DecisionSpace® Well Planning software provided a common platform for integrating subsurface data and 3D trajectory planning.
Collaborative well planning was fundamental to demystifying a complex planning process. Used for real-time monitoring, it allowed the well to be drilled to total depth, faster than anticipated and under budget.

RESULT

By using a common software platform for both subsurface data and 3D trajectory planning in the operator’s real-time visualization center, it took the team just one day to design the primary well location and complete six geological sidetrack scenarios.

During drilling, the CWP process provided real-time monitoring guided by an easy-to-use, holistic well plan that demystified the complex design. As a result, the well was drilled successfully for the first time. Total depth was reached with no significant problems, faster than expected and under budget.

Using the CWP process, the well was drilled successfully on the operator’s first attempt, faster than anticipated and under budget.

12 to 18 Months
Typical planning time for a deepwater well

or

< 2 Months
Planning time for Well B-3 ST1 (> 1,000 meters)