Case study: Well Construction

Location: Permian Basin

Year-Round Holistic Well Planning Solution Improves Process and Data Exchange Across Domains at IRM

IRM used an unparalleled well construction planning solution to reduce well planning times and improve well construction.

Throughout 2019, Independence Resources Management (IRM) used the DrillPlan® coherent well construction planning solution to seamlessly integrate subsurface and drilling data. This enabled IRM to complete well planning and replanning and generate enhanced drilling programs in a fraction of the time spent before.

IRM’s goal
IRM needed to increase team productivity by improving communication channels while optimizing trajectory design within geological safety factors and constraints defined by its well construction standards.

What IRM tried first
Previously, IRM was using multiple data formats and linear workflows in separate drilling programs for well construction projects. This lack of integration and communication created barriers throughout the different domains, which in turn slowed down well planning efforts and prevented well planners and geologists from making timely decisions.

What Schlumberger recommended
Schlumberger recommended using the DrillPlan solution to integrate all well engineering aspects in a single system. This integration facilitates cross-domain collaboration—which enables well planners to run automated engineering analysis and validation to increase planning efficiency so they can focus on the areas that need their attention most.

Having seamless well planning, risk management, and workflow integration—including those workflows created by third parties—all in a single solution would provide IRM the tools needed to highlight potential issues and evaluate possible design options.

What was achieved
The DrillPlan solution enabled communication and data sharing across the well construction team. It seamlessly integrated up-to-date Petrel® E&P software platform models with optimized trajectories that were designed within the safety parameters defined by IRM. The DrillPlan solution seamlessly integrated subsurface and drilling data, drastically improving the quality of the well construction design and enhancing collaboration through IRM teams.

Map of the Midland Basin in West Texas, USA.

Casing load design and automated validation workflow.

Automated trajectory design workflow with shared geological details.