

Directional Performance Enhancement

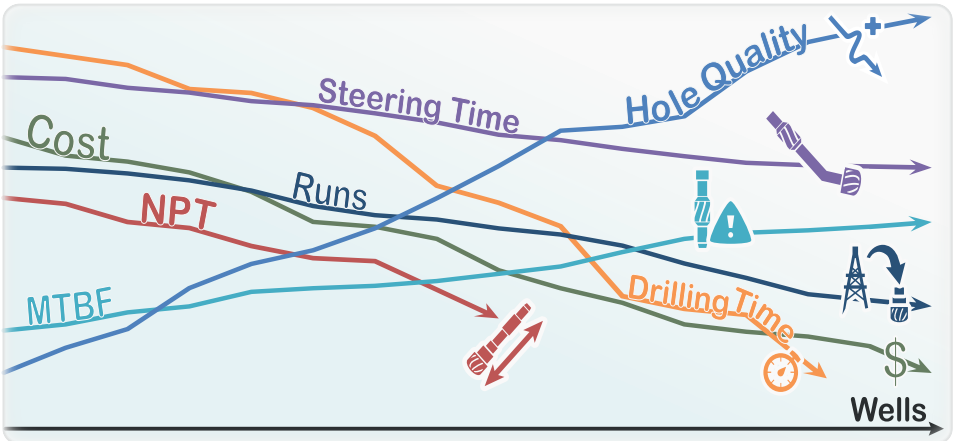
Ref: DD03

Objectives

- BHA & Bit Directional Pre-Analysis [DD01] with a Bit Run Directional Post-Analysis [DD02] validated model
- Challenge service companies bit-BHA proposal to improve directional performance
- Anticipate the coupled bit-BHA directional performance against rock strength
- Define fitting parameters of previously run BHAs
- Explain unexpected directional counter-performance observed during the run

Benefits / Pre-Well Real Time Post-Well

- Independent benchmarking of directional drilling solutions
- Accurately model all BHAs and reduce the number of days required to drill a well
- Achieve shoe-to-shoe drilling with a single BHA
- Enhance the learning curve by modelling existing data, capitalising on results for the next well
- Increase drilling process efficiency by reducing intrusive over-steering



Performance improvement over a drilling campaign

Includes

- Bit-Rock interaction model, steerability assessment, accounting for formation UCS
- Modelling of all types of RSS, steerable motors, URWD and VGS systems
- Sensitivity analysis on multiple parameters (hole overgauge, inclination, WOB, TFO, Stabiliser gauges and positions ect...)
- Optimisation of sliding/rotating or activation pattern

Deliverables and Timing

- Earliest result delivery within 12 days after reception of full and usable set of data
- Delivery of final PowerPoint® or written report within 4 weeks, intermediate reports on demand
- Result support from our most experienced Drilling Champions, upon request
- Result presentation in client's office (optional)
- Real-time support available onsite or remotely (optional)