DRILLSCAN®
ENGINEERING SOFTWARE

OUR HIGHLY SOPHISTICATED DRILLING OPTIMIZATION SOFTWARE HELPS IMPROVE ACCURACY, QUALITY, AND EFFICIENCY

DrillScan® engineering software offers advanced engineering solutions to drilling engineers, at each step of the well construction process to reduce the time to target, enhance bottom hole assembly (BHA) integrity, and increase reservoir contact. Advanced modeling and simulations optimize drilling operations and increase well integrity by providing in-depth analysis for well planning, well integrity, BHA and bit selection, and drillstring modeling.

ADVANCED INTELLIGENCE MODULES

Each of DrillScan software's four primary modules use advanced algorithms and 3D visualization to provide optimal drilling designs and reduce NPT.

Well Planning

3D visualization provides a better understanding of wellbore positions and its ellipsoids of uncertainty along with its proximity to nearby wells. Combined with the Collision Avoidance module, the software provides anti-collision calculations to minimize risk while optimizing well trajectory design.

BHA & BIT Analysis

Provides quick and comprehensive 3D predictions of the directional behavior (build/drop rate, turn rate) of the BHA, allowing for optimal design and equipment selection to reduce failure rates. The Vibration Modal Analysis module provides drillers with critical rotation speeds and weight on bit (WOB) to avoid, increasing BHA integrity.

Well Integrity

The Casing Design module allows the user to optimize the well architecture, select casing sizes and grades, simulate loads, and calculate packer-tubing forces. The casing deformation and stand-off capability calculates casing standoff as well as the reconstruction of cased-hole trajectory, due to the deformed casing in the wellbore.

Drillstring Modeling

The Torque & Drag module is an advanced software solution based on stiff string calculations that increase the success of drilling, casing and completion operations through the anticipation of critical mechanical loads. The Drillstring Fatigue Analysis simulates fatigue and stresses based on the well trajectory profile, drillstring description and operational history.

OUTCOMES

- Reduce time to target and improve drilling performance using unique 3D Bit/BHA models for optimal bit and BHA selection
- Improve well integrity and enhance BHA integrity with advanced simulations and 3D modeling
- Prevent well collisions and increase production through advanced survey management
- Avoid expensive drillstring failures by proactively modeling drillstring behavior

PROOF POINTS

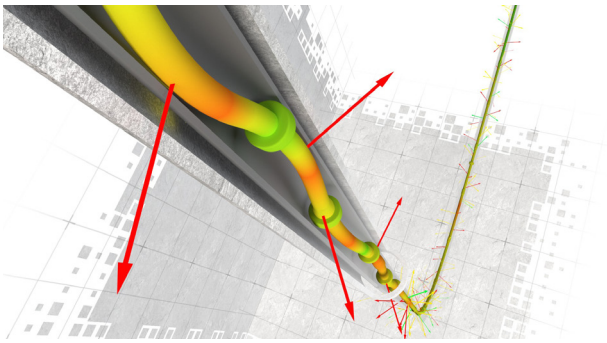

FIGURE 1: ADVANCED 3D VIEWER: HIGH LEVEL OF BUCKLING ALONG LANDING STRING WHILE RIH WITH LINER IN 3D DEEPWATER WELL

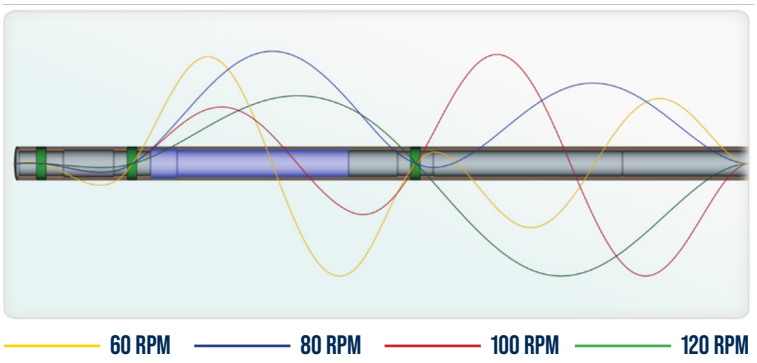

FIGURE 2: MIN/MAX DISPLACEMENT RELATIVE TO CRITICAL SPEED (AMPLITUDE OF VIBRATION)

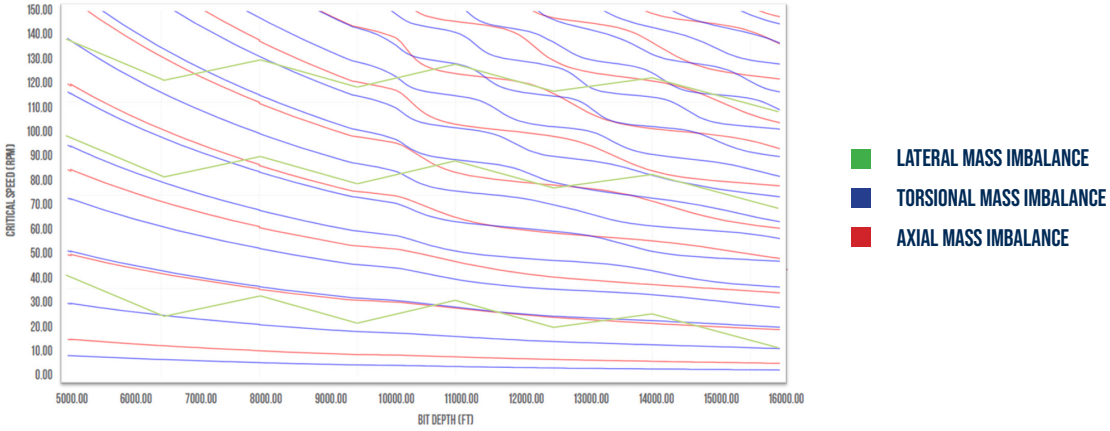

FIGURE 3: DRILLERS ROADMAP DISPLAYING CRITICAL RPM OVER DEPTH TO REDUCE DOWNHOLE TOOL FAILURES

CONTACT US

For more information on how our Drilling Engineering software can help you achieve better drilling outcomes, contact an H&P sales representative today or contact us through our website at **helmerichpayne.com/contact**.

It's time to follow through on your drilling performance potential.