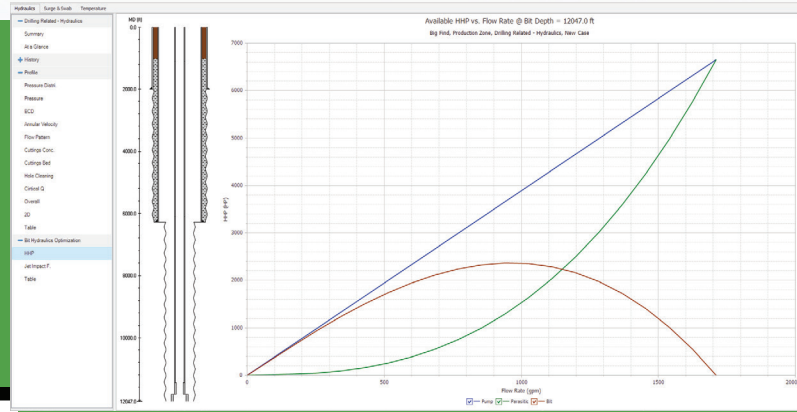


HYDPRO Drilling Hydraulics Model

Prevent circulation losses and optimize drilling fluid performance



Bit Hydraulics Optimization

OVERVIEW

Whether you are drilling a vertical or extended-reach well, a too high or too low equivalent circulating density (ECD) can cause serious drilling problems or even compromise your project's budget. A successful drilling operation relies heavily on achieving an optimal ECD. Accurate modeling and optimized drilling hydraulics are crucial. It allows engineers to plan ahead, improving drilling efficiency, reducing risk, and decreasing non-productive time (NPT).

Originally developed by Pegasus Vertex and incorporated into the LINQX portfolio in 2024, **HYDPRO** has evolved into a comprehensive drilling-hydraulics modeling solution. HYDPRO addresses all critical aspects of drilling hydraulics, including downhole circulating temperature, pressure- and temperature-dependent fluid density and rheology, surge and swab effects, equivalent circulating density (ECD), bit-hydraulics optimization, hole cleaning, and volumetric displacements. By enabling a complete examination of downhole hydraulic conditions, HYDPRO helps operators identify potential issues and optimize drilling performance before the job begins.

KEY BENEFITS

Improved Drilling Efficiency

- Selecting the right bit for specific drilling conditions improves drilling performance and extends bit life.
- Optimizing drilling parameters for effective hole cleaning prevents complications like stuck pipe and wellbore instability.

Cost-Effectiveness

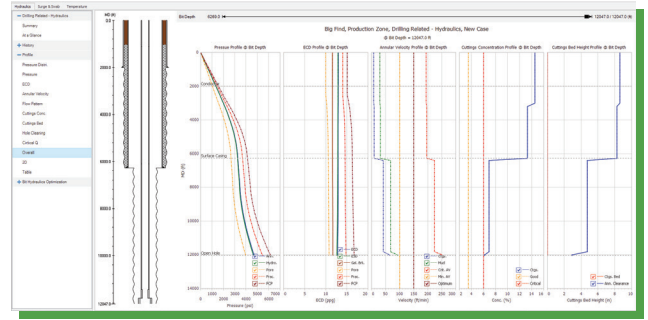
- By identifying potential issues beforehand, HYDPRO helps minimize on-site problems, leading to less downtime and cost savings.
- Enables the optimization of drilling parameters, such as ECD and bit selection, which can lead to faster drilling rates and reduced wear on equipment, lowering overall operational costs.

Risk Mitigation

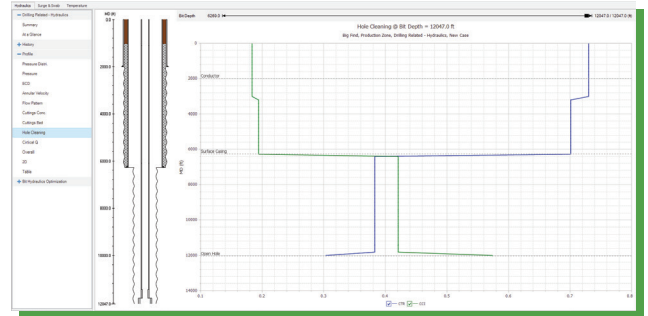
- Accurate modeling helps prevent incidents like stuck pipe, differential sticking, and wellbore instability, safeguarding personnel and equipment.
- Prevents downhole problems like formation fluid kick-in and loss circulation fluid.

KEY FEATURES

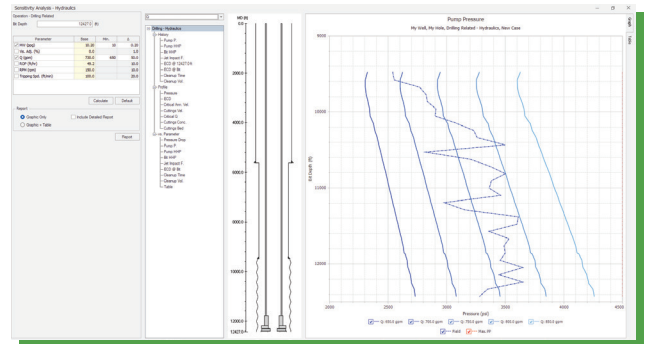
- Organizes case files into a structured four-level tree
- Fixed flow rate analysis: pressure, ECD, hole cleaning
- Bit hydraulics optimization
- Surge and swab
- Field data comparison on ECD and SPP
- Temperature prediction
- PT dependent fluid density and rheology
- Bingham Plastic, Power Law, and Herschel-Buckley rheology models
- Land and offshore wells
- Hydraulics sensitivity analysis
- Hydraulics optimization
- 2D animation
- 3D well path visualization
- Graph customization
- Microsoft Word® report
- Survey import from Excel®, text or PDF® files
- US oil field, SI, and customized units
- Multi-language: English, Spanish, Chinese



Pressure Profile



Hole Cleaning



Hydraulics Sensitivity

TAKE YOUR WELL PLANNING TO THE NEXT LEVEL

See HYDPRO in Action—Schedule Your Demo Today

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