Dynamic Kill Analysis

Introduction
Relief well planning is an industry-wide necessity to help mitigate risks associated with drilling operations in high-pressure/high-temperature environments. Using reservoir information, fluid and gas properties and state-of-the-art multiphase flow simulation software, Boots & Coots can advise on how to successfully implement well killing operations.

Simulation results are interpreted by highly skilled Boots & Coots engineers who, with the benefit of on-site experience, have delivered dozens of relief well contingency plans worldwide. Having this information in hand is critical for correct pre-planning for emergency resources and logistics.

Boots & Coots uses the commercially available Drillbench® Blowout Control, which is powered by the OLGA® multiphase flow simulator, to perform dynamic kill analysis for a variety of scenarios. In addition, Boots & Coots has exclusive access to our innovative kill analysis solutions software, a hydraulic, reservoir and fluid model program that calculates both steady state and dynamic kill analysis.

Features and Benefits
• A variety of well control scenarios examined
• Live graphics display visualization over the period of the dynamic kill operation
• Engineering support for multiple kill scenario evaluation and modeling
• Industry subject matter experts
• Independent analysis for dynamic kill modeling using Drillbench® Blowout Control and our exclusive kill analysis solutions software programs

Analyzing Results
The dynamic kill process involves pumping fluids at high rates to build pressure against the formation to arrest the influx. Dynamic kill simulations include hydraulic analysis, temperature profile, fluid PVT, reservoir performance and flowpath amongst additional inputs necessary for accurate modeling.

The main outputs of the Dynamic Kill Analysis are:
• Kill fluid density
• Minimum kill fluid volume
• Dynamic kill pump rate
• Dynamic kill pump pressure
• Dynamic kill hydraulic horsepower

From this information the minimum pumping capability and equipment logistics for successful well kill operations, can be determined.

For more information, contact your Boots & Coots representative or email us at boots-coots@halliburton.com.

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