BaraG-Force™ VacVCD System Reduces ROC Levels and Decreases Final Disposal Costs on Nine-Well Drilling Program

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**BAROID SOLUTION DECREASES ROC BY MORE THAN 60 PERCENT**

U.S. ROCKY MOUNTAINS

**INEFFICIENT CUTTINGS DRYING PROCESS CAUSES STORAGE AND FLUID REUSE ISSUES**

An operator in the Rocky Mountains wanted to minimize the volume of retained water on cuttings (ROC), along with the total volume of treated cuttings requiring storage on location prior to disposal. Treated cuttings also had to pass visual inspection criteria established by the U.S. Bureau of Land Management (BLM).

The cuttings grinding process initially used by the operator resulted in several unacceptable outcomes: excessive use of the drying agent, a higher overall waste volume, and an increased concentration of low gravity solids (LGS) in recovered drilling fluid. Further, the cuttings had to be transported to and from the treatment area via augers and/or front-end loaders, increasing safety risks and the potential for spills.

**INNOVATIVE VERTICAL CUTTINGS DRYER SYSTEM REDUCES WASTE VOLUME**

The Baroid team recommended installing the BaraG-Force™ VacVCD (vertical cuttings dryer) system to help minimize ROC levels and waste volumes, and to decrease final disposal costs. The BaraG-Force VacVCD system would also help minimize the LGS concentration in recovered drilling fluid, making it more suitable for reuse in the active system and lowering overall fluid maintenance costs.

**CHALLENGES**

Minimize ROC levels and waste volumes, and decrease final disposal costs for a nine-well drilling program

**SOLUTION**

Integrated BaraG-Force™ VacVCD system to provide multiple efficiency improvements, such as:

- Pneumatic cuttings delivery system for continuous feed and drying process
- A consistent feed stream to improve retention and maximize operational efficiency
- Dedicated catch tank for recovered fluid
- Small footprint for flexible placement at rigsite

**RESULTS**

- Decreased average ROC by more than 60 percent for nine-well drilling program
- Lowered LGS concentrations in recovered fluids
- Eliminated necessity for augers and manual loaders for moving wet cuttings to the treatment area

A reduction in ROC was achieved with the BaraG-Force™ VacVCD cuttings treatment process during a nine-well drilling program.
The integrated, fully enclosed system combines a proven pneumatic transfer system and an efficient VCD design in a single modular package, and its small footprint allows for flexible placement at the rigsite. The system relies on vacuum feed so that the delivery of cuttings from the shaker remains continuous rather than intermittent. This consistent feed stream helps improve retention and maximize operational efficiency. By comparison, an intermittent feed stream delivered by manual loading can cause a dry buildup that leads to packoffs below the hopper.

With this new process in place, only dry cuttings produced by the BaraG-Force VacVCD unit required transport to a storage area. The treated cuttings exhibited a significantly lower ROC value, complied with BLM specifications, and helped the operator maintain a much cleaner location. Whole mud recovered by the BaraG-Force VacVCD system was returned to the active system without the need for excessive dilution and chemical treatment.

**NEW DRYING SYSTEM LOWERS ROC STRAIGHT FROM SHAKERS BY 60 PERCENT**

The BaraG-Force VacVCD drying process reduced the average ROC by weight from 28.6 percent on primary shakers to 11.1 percent, without the use of augers or loaders to transport wet cuttings. The results are shown in the graph comparing outcomes on nine similar wells drilled with this rig.