BaraG-Force[™] VacVCD System Significantly Reduces ROC Levels, Saving Costs on 16-Well Program

BAROID SOLUTION REDUCES ROC TO 4 PERCENT, SAVING USD 18,350 PER WELL

DENVER-JULESBURG BASIN, U.S. ROCKIES

OPERATOR SEEKS SOLUTION FOR HIGH ROC AND HIGH DIESEL USE WITH DRYING SHAKERS

An operator in the Denver-Julesburg Basin wanted to minimize the volume of retained oil on cuttings (ROC) in oil-based mud (OBM), along with the total volume of treated cuttings requiring disposal. Inefficient drying caused excessive diesel consumption and higher costs



for transporting the treated cuttings from location to the disposal site.

The cuttings hopper was loaded manually via augers, slowing the process and increasing safety risks and the potential for spills.

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, which would then help decrease final disposal costs.

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.



A reduction in ROC was achieved with the BaraG-Force[™] VacVCD cuttings treatment process during a 16-well drilling program.

CHALLENGES

Minimize ROC levels and waste volumes, and decrease final disposal costs for a 16-well drilling program

SOLUTION

Integrated BaraG-Force™ VacVCD system, which provides:

- 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

- » Achieved an ROC of 4 percent by weight
- » Reduced diesel consumption by 110 bbl per well
- » Saved approximately USD 18,350 per well

The dry cuttings produced by the BaraG-Force[™] VacVCD unit exhibited a significantly lower ROC value and helped the operator maintain a much cleaner location. The system relies on vacuum feed instead of augers, so the delivery of cuttings from the shaker remains continuous. This consistent feed stream helps improve retention and maximize operational efficiency. By comparison, manual loading can cause a dry buildup that leads to packoffs below the hopper.

BAROID SOLUTION ENABLES ROC TO DROP TO 4 PERCENT BY WEIGHT

The dry cuttings produced by the BaraG-Force VacVCD unit exhibited a significantly lower ROC value and helped the operator maintain a much cleaner location.

Comparing two rigs drilling identical wells, the rig using drying shakers achieved an ROC of 17.4 percent by weight. The rig equipped with the BaraG-Force VacVCD system achieved an ROC of 4 percent by weight.

This significant decrease in ROC helped the operator save an estimated USD 18,350 per well, based on a lower overall waste volume for disposal and the following efficiencies:

	Savings, USD
110-bbl reduction in diesel consumption	9,350
11 truckloads eliminated due to reduced waste stream	6,600
2 truckloads eliminated due to less drying agent required	2,400
Total	18,350



The BaraG-Force[™] VacVCD configuration features a small footprint. Wet cuttings are delivered from the shakers to the hopper via the pneumatic vacuum line. A rotary feed valve below the hopper minimizes buildup, and recovered drilling fluid is pumped to an integrated catch tank. Dried cuttings are ejected below the dryer for easy removal. An auxiliary site response pod to assist with spills and cleanups is connected at the right of the hopper.

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