

Innovative MVCD Technology Improves Cuttings Treatment and Waste Management in Five-Well Trial

MOBILE VERTICAL CUTTINGS DRYER SYSTEM HELPS OPERATOR SAVE ~USD 373,000 BY RECOVERING 2,242 BBL OF DRILLING FLUID AND REDUCES COST FOR WET CUTTINGS HAUL-OFF AND FINAL TREATMENT

OMAN, MIDDLE EAST

CHALLENGE

- » Costly synthetic-based mud (SBM) is lost with cuttings when untreated
- » Logistics and disposal of SBM cuttings from remote sites increase operational costs
- » Wet cuttings transport poses HSE risk through potential spills

SOLUTION

- » Use the Mobile Vertical Cuttings Dryer (MVCD) system to recover SBM cuttings onsite

RESULTS

- » Recovered and reused 2,242 BBL of SBM from cuttings
- » Reduced haul-off volume by 40% due to reduced number of loads needing to be transported offsite (leading to less emissions)
- » Minimized final SBM cuttings treatment cost by reducing oil on cuttings by 40%

OVERVIEW

An operator drilling multiple wells in Oman required a more robust cuttings treatment and waste management solution for their ongoing development campaign, in which they were experiencing economic and environmental issues with regard to synthetic-based mud (SBM) recovery and haul-off.



Mobile Vertical Cuttings Dryer system arriving at the rig site in Oman.

CHALLENGE

The operator wanted to minimize the handling and logistics of drilled waste, specifically focused on reducing final SBM treatment costs and HSE exposure. The challenge was to identify a cost-effective, onsite method to recover the synthetic fluid from cuttings while drilling, which would decrease the amount of waste volumes having to be shipped from the rig sites to waste treatment facilities; thus, minimizing HSE risk due to potential spills during hauling operations.

SOLUTION

Halliburton Baroid Separation Solutions (BSS) proposed the innovative Mobile Vertical Cuttings Dryer (MVCD) system to address the operator's concerns. The unique MVCD technology is capable of reducing retention on cuttings to below 6% via recovery of SBM from the drilled cuttings. This mobile unit can be easily set up at the rig site with limited rig up and rig down times and without any lifting requirements, reducing HSE risk. The integrated setup includes a dryer for the cuttings treatment process and a centrifuge to condition the recovered mud for re-use.

The MVCD system was deployed in a five-well trial involving three rigs operating in the same field. A total of five sections were drilled with SBM: a 16-in. section, two 12¼-in. sections, a 9½-in. section, and an 8¾-in. section.

RESULTS

The MVCD system demonstrated its value by successfully recovering USD 373,615.00 worth of SBM over the course of five wells in this trial. The reduced cuttings haul-off volume further reduced the spend on transportation to the waste treatment site and minimized transportation emissions with less HSE exposure during road transport. Both the economic and environmental goals of the customer were met by this solution.

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