

SCREEN PULSE Separator Reduces Water Content in Cuttings and Drilling Waste, Saves USD 13,500 per Well

Conсорcio Shushufindi improves water-based mud recovery and decreases waste volume, onshore Ecuador

CHALLENGE

- Reduce the mud on cuttings to improve mud recovery and reduce the final disposal waste volume.

SOLUTION

- Use the SCREEN PULSE* fluid and cuttings separator to reduce the mud on cuttings and enhance fluid recovery.

RESULTS

- Reduced the water content in the cuttings by 14%–25%.
- Condensed drilling waste volume by 15%–29%.
- Decreased the total waste handling costs by 12%–26%.
- Saved USD 13,500 per well.



Decrease fluid on drill cuttings and improve fluid recovery

While drilling onshore in the Shushufindi field, Conсорcio Shushufindi discovered that the typical amount of fluid contained within drill cuttings was very high, occasionally reaching 80% water content by weight. This high water content caused the volume of mud lost in the shakers to exceed 75 bbl/d [12 m³/d], resulting in an increased number of trips to transport the drill cuttings for final disposal. In addition, high volumes of diluted mud and mud from dewatering operations increased the total amount of waste generated by the wells.

Install the SCREEN PULSE separator to improve cuttings quality and enhance drilling fluid recovery

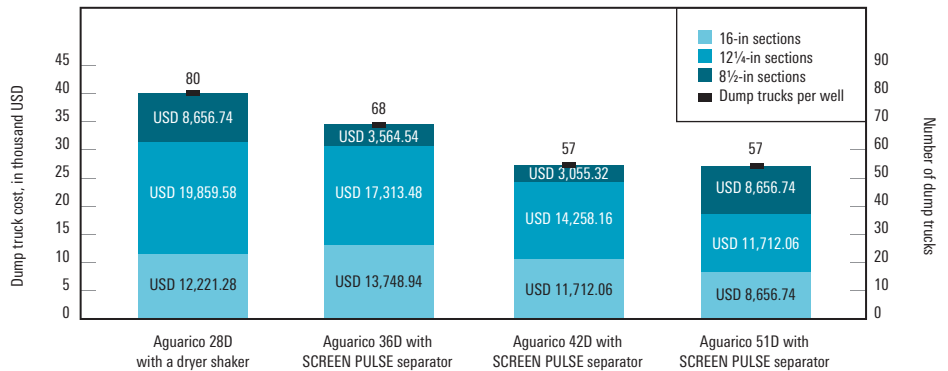
Due to the high costs and risks involved with cuttings handling, treatment, and disposal practices in the Shushufindi field, M-I SWACO, a Schlumberger company, recommended installing the SCREEN PULSE separator on the Aguarico 36D, Aguarico 42D, and Aguarico 51D wells.

The SCREEN PULSE separator decreases the need for costly waste-treatment chemicals previously required for the fluid volume lost to cuttings, and dilution rates are reduced. At the same time, expensive base fluid that once would be discarded can be now recovered, which clears the way for reuse in the active mud systems.

Reduced fluid loss, improved drill cuttings dryness, and decreased waste handling costs

Comparing Well Aguarico 28D, which used only a dryer shaker, with those wells using the SCREEN PULSE separator, the water content in cuttings decreased by 10% in the upper and intermediate sections and 14% in the final section. In addition, the drilling waste volume from the three wells with the SCREEN PULSE separator decreased by an average 19.3%, resulting in a reduction in waste removal costs and 58 fewer required waste disposal trips. In total, the SCREEN PULSE separator saved Conсорcio Shushufindi USD 13,500 per well, including USD 9,000 in transportation costs and USD 3,000 in drill cuttings drying operations.

These results and benefits exceeded Conсорcio Shushufindi’s economic and environmental expectations. In addition, Conсорcio Shushufindi can expect an increase in well life and a higher injection volume capacity.



Deploying the SCREEN PULSE separator helped Conсорcio Shushufindi reduce the total mud on cuttings and cut down on the costs associated with waste disposal.

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