

DE-7200™ VFD™ Centrifuge achieves exceptional solids removal with a single pass in mud reconditioning application

• 84.4% solids removal and 5.1 PPG density reduction on 13.4 PPG oil-based mud

Objective

Recondition a typical Eagle Ford oil-based, invert emulsion drilling fluid at a liquid mud plant. Primary goal of reconditioning was to reduce LGS to 6-8% by volume. Evaluation of performance included:

- Density reduction
- LGS content in effluent
- Solids removal efficiency

Testing Conditions

Drilling fluid properties

13.4 PPG OBM with 10.4% LGS by volume

Centrifuge Parameters

- Bowl speed: 3000 RPM
- Conveyor differential: 24 RPM
- Pond depth: deepest possible
- Feed rate: 40 GPM

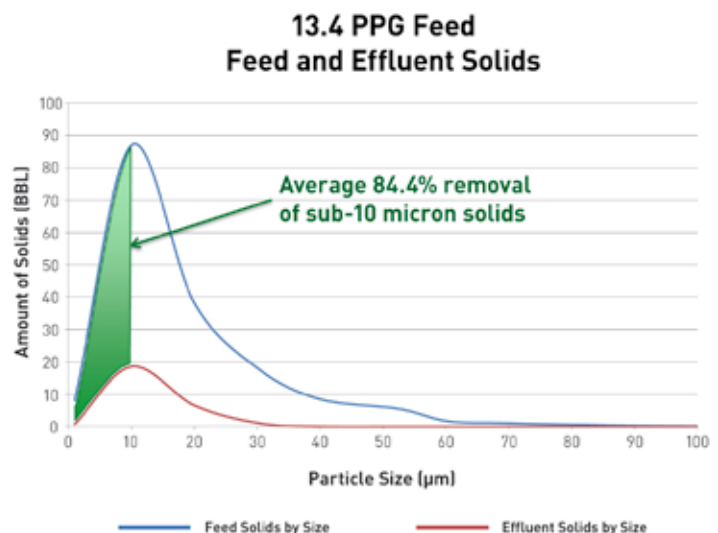
Results

- 5.1 PPG density reduction
- Reduced LGS from 10.4% to 5.5%
- 84.4% total solids removal

Conclusion

The DE-7200™ VFD™ Centrifuge removed over 84% of the total solids effectively, reducing mud weight and LGS content. This enabled the mud plant to meet their reconditioning goal in a single pass through the centrifuge.

	Feed	Effluent
Density	13.4 PPG	8.3 PPG
Total solids % by volume	26.7%	6.4%
LGS % by volume	10.4%	5.5%
Plastic viscosity	37 cP	9 cP
Fluid volume	634 bbl	412 bbl
Solids amount	169 bbl	26 bbl



The above graph depicts the amount of solids in the feed and effluent in each size range. The area between the curves shows the amount of solids removed by the centrifuge. Note the high concentration of solids in the feed in the sub-10 micron size range. In a single pass, the DE-7200 removed over 84% of these viscosity-building fine solids.

For more information, please contact your local Derrick sales representative.

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