



Solids Control and Waste Management

BaraMesh™ Shaker Screens Help Major Operator Reduce Disposal Volume and Recover Invert Emulsion Fluid for Reuse

Location: Southern Region, US

Challenge

To lower disposal costs, the operator wanted to reduce the overall waste stream volume generated at the rigsite while recovering as much reusable drilling fluid as possible.

Halliburton's Solution

Based on the results of a series of field comparisons throughout the region, the Baroid team recommended that the rig shakers be equipped with high-performance BaraMesh™ shaker screens.

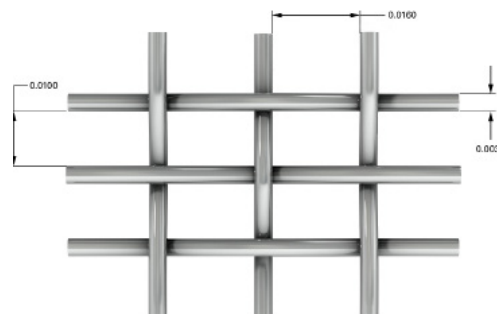
The BaraMesh screen incorporates a strong three-layer design with larger wire diameter than conventional equivalent screens. The rectangular aspect ratio of approximately 1.6:1 provides increased fluid conductivity and screen life, while maximizing low gravity solids separation and removal.

The BaraMesh screens reduced the mud retained on cuttings (ROC) by 0.67%, helping to lower the total waste volume and recover whole drilling fluid for reuse. As an additional benefit, the BaraMesh screens lasted 27% longer than comparable competitor screens.

Economic Value Created

The 0.67% ROC reduction achieved with the BaraMesh screens allowed the operator to recover 11.3 bbl of reusable invert emulsion fluid (IEF), valued at \$1,460. Over the 16-day duration of the well, shakers equipped with competitor screens required three additional screen replacements compared to the shaker equipped with BaraMesh screens. This lowered solids control costs from \$0.76/bbl for the competitor screen to \$0.55/bbl for the BaraMesh screens.

Based on these savings, the operator can expect to reduce solids control and waste treatment costs by up to \$5,400 per well in this area.



BaraMesh with an approximate 1.6:1 aspect ratio and 0.0034" wire diameter

The unique rectangular BaraMesh™ screen design offers 1.6:1 wire aspect ratio to improve conductivity in comparison to traditional 1:1 mesh openings.

BaraMesh™ Screen Cloth Designations			
API	D100 Separation (microns)	Conductance (Kd/mm)	API D100 Cut Point (microns)
45	327.5 to 390	5.66	380
50	275 to 327.5	4.45	326
60	231 to 275	3.34	252
70	196 to 231	3.03	215
80	165 to 196	2.5	170
100	137.5 to 165	2.26	163
120	116.5 to 137.5	1.59	130
140	98 to 116.5	1.35	103
170	82.5 to 98	1.27	85
200	69 to 82.5	0.84	73
230	58 to 69	0.74	67
270	49 to 58	0.67	55
325	41.5 to 49	0.5	45

CHALLENGE	SOLUTION	RESULT
Lower total waste volume and recover drilling fluid for reuse	BaraMesh shaker screens provided by Baroid	Mud retained on cuttings decreased by 0.67%, with 11+ bbl of IEF recovered and less total waste volume for disposal