

DUKHAN FIELD

STATE OF QATAR

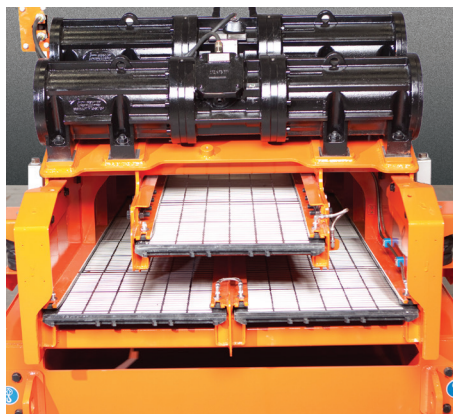
Average ROP	55 ft/h [16.8 m/h]
Average pump rate	500 galUS/min [1,893 L/min]
Average mud content by weight	17.95%
Average mud content by volume	42%
Total discard rate	
Tophole section	38.88 lbm/min [17.6 kg/min]
8½-in section	9.66 lbm/min [4.38 kg/min]
6⅝-in section	4.68 lbm/min [2.12 kg/min]
Screen replacement required	No

Technology

MD-2* dual-deck shale shaker

Compact MD-2 Shaker Configuration Outperforms Traditional Shaker Setup in Dukhan Field, Qatar

In same environment, dual-deck shale shakers handle same flow rate while producing drier cuttings



The MD-2 shale shaker can be switched on the fly between balanced elliptical and progressive elliptical motions as drilling conditions change.

Challenge

During drilling operations in the Dukhan field, Qatar Petroleum sought to increase solids control efficiency, retain base fluid, save tank cleaning time, and reduce the fluid system footprint on its rigs.

Solution

Two MD-2 shakers were installed on a rig, replacing a setup of three conventional shakers (a configuration retained on another rig for comparison). The objective of the comparison was to evaluate the efficiency of the MD-2 shakers by monitoring mud content of cuttings and testing flow rate and solids-handling capacity.

Results

The MD-2 shakers produced drier cuttings with significantly less mud on cuttings; the cuttings passed a paint filter test for free liquids without requiring a drying shaker for transportation to disposal sites. The two-shaker setup handled the same flow rate as the previous setup of three shakers without experiencing overspill.