Fluid and Cuttings Separator Reduces Mud Retention on Cuttings 32%, Saving USD 1,497 per Day

SCREEN PULSE separator recovers more than 33,500 lbm of oil-base drilling fluid for Pinedale operator

The operator deployed the SCREEN PULSE separator for Derrick FLC 500 Series shakers onto a Derrick FLC 504 shaker that used high-capacity composite shaker screens. Using pulsating suction technology instead of friction, the SCREEN PULSE separator reduced whole mud retention on cuttings (ROC) by an average of 32% and oil on cuttings (OOC) by an average of 18%. This saved the operator approximately 5,609-lbm drilling fluid and USD 1,497 in fluid costs and disposal fees per day.

Background
An operator in the Pinedale Anticline was drilling with an oil-base fluid to combat clay swelling and improve drilling time. To minimize the waste, costs, and HSE risk associated with oil-base fluid, the operator wanted to reduce the volume of fluids being lost to the drilled solids. M-I SWACO recommended the SCREEN PULSE* fluid and cuttings separator, which strips cuttings of free drilling fluid to meet or exceed the US Environmental Protection Agency (EPA) paint filter liquids test requirements for screening waste.

Technologies
SCREEN PULSE fluid and cuttings separator

<table>
<thead>
<tr>
<th>Well type</th>
<th>Tight gas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drilling fluid</td>
<td>Oil-base mud</td>
</tr>
</tbody>
</table>

**ROC Pulse Off versus On**

![Retention on cuttings, bbl/bbl](chart.png)

- ROC (whole mud bbl/bbl) pulse off
- ROC (whole mud bbl/bbl) pulse on