Alpha shakers save operator nearly $45,000 in the Midland Basin

High-capacity shakers reduce dilution and screen costs

Background

While drilling the Wolfcamp A/D and Sprayberry wells in the Midland Basin, an independent drilling company replaced two Brandt™ King Cobra shakers with two new Alpha™ shakers. During the trial, the high-capacity Alpha shakers handled all the flow—900 gal/min—with various mud types without issue.

Solution

The operator drilled the Sprayberry and Wolfcamp A wells open loop with water-based mud (WBM). Since the single-deck Alpha shakers were efficient at keeping solids out of the system, we reduced the number of times the operator had to dump and dilute, as well as the volume of lube needed. In fact, there was an average of 37% less volume dumped per well. After each well, the rig pits had less solids buildup, which reduced cleaning time.

For the Wolfcamp D well drilled with oil-based mud (OBM), the operator was able to screen finer, switching from API 170 to API 230 screens. Screening finer resulted in cleaner mud and less diesel dilution. The operator was also able to displace to OBM without having to stop and circulate, saving 6 hours of downtime which equals $13,750 in savings per well.

Results

The use of the two high-performance Alpha shakers saved the operator $44,850. By delivering drier cuttings, the Alpha shakers enabled the operator to retain more drilling fluids and reduce dilution costs. A 7% decrease in the volume of lube used saved the operator $14,685 per well, while a 27% reduction in diesel saved $11,715 per well. Additionally, less downtime equaled $13,750 in savings per well, while the use of fewer screens saved $4,700 per well. Following the successful trial, the operator purchased the Alpha shakers.

Case study facts

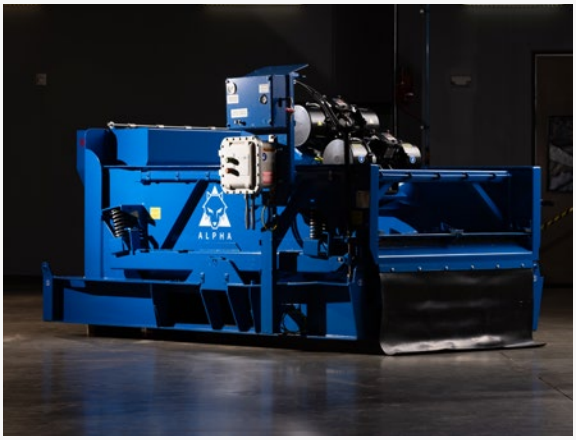
Location: Midland Basin, Texas

Customer: Independent drilling company

Time frame: August 2023

Results

- Cost savings of $44,850 after four wells
- Drier cuttings: 10% average retention on cuttings
- Purchased the shakers



Alpha shakers save operator $78,000 in Colorado

Lower waste volumes and fewer haul-off trips reduce carbon emissions

Background

A drilling company in the Piceance Basin deployed Brandt™ Alpha™ shakers as flowline and drying shakers—a first for these shakers. The company also ran a competitor shaker on an adjacent rig.

Solution

The high-capacity Alpha shakers deliver drier cuttings, which results in lower waste volumes and the mix-off material needed to dry disposal loads to meet environmental requirements.

Results

By reducing the amount of waste and mix-off material at the wellsite, the Alpha shakers saved the operator $78,000 on disposal costs after six wells. Reduced waste also means fewer haul-off trips and trucks on the road, which lowers the carbon footprint of the drilling operation. Additionally, the Alpha shakers yielded 80% less waste than the competitor shaker.

Case study facts

Location: Piceance Basin, Colorado

Time frame: October 2023

Results

- Cost savings of $78,000 after six wells
- Reduced waste translates to fewer disposal trucks on the road and a lower carbon footprint
- Yielded 80% less waste than the competitor shaker

Alpha shakers save operator more than $108,000 in the Utica Basin

Drier cuttings and cleaner mud reduce disposal costs

Background

An independent drilling company in the Utica Basin replaced three competitor shakers with three Brandt™ Alpha™ shakers. While the previous shakers were only able to handle flow with API 170 screens, the high-capacity Alpha shakers easily and efficiently handled the flow rate, and the operator was able to screen finer to API 200 for the first time.

Solution

The Alpha shakers and Premium X-tended Life (PXL) screens produce drier cuttings and cleaner mud, which reduce disposal costs. The finer API screen improved solids removal efficiency and reduced dilution. Drier cuttings lower not only waste volumes but also the amount of mix-off material needed to dry disposal loads to meet environmental requirements. As a result, the operator needed fewer haul-off trips from the wellsite, which reduced the drilling operation's carbon footprint.

Results

By upgrading to the Alpha shakers and finer PXL API 200 mesh screens, the operator saved $108,649 and improved drilling efficiency. The finer screens led to a 61.4% improvement in cost per foot.

Case study facts

Location: Northeast US Appalachia

Time frame: December 2023

Results

- Cost savings of $108,649 after three wells
- Drier cuttings drastically reduced disposal costs
- Screening finer means cleaner mud and less dilution