Anadarko-Woodford Basin Rig Operator

FIELD REPORT 177

Oklahoma Operator Cuts Costs by $27,000 per Well Using Derrick Hyperpool Shakers Over Competitor's Latest Technology

- 33.9% reduction in discard ratio.
- 29.2% dilution reduction = $15,570 diesel savings per well.
- 11.9% reduction in haul-off barrels.

Overview

After a failed trial run of a competitor's shakers in January 2024, an operator in Canadian County, Oklahoma, experienced immediate cost savings when switching back to Derrick's Hyperpool shale shakers at their site in the Anadarko-Woodford Basin in June of 2024.

Enticed by a free trial of the competitor's latest technology, the operator was ultimately left dissatisfied after the new shakers failed to meet baseline standards in several key performance indicators (KPIs) after drilling several wells. Among other failings, the operator encountered issues with wetter cuttings, increased fluids-related costs, and greater non-productive time (NPT) than when operating with Derrick's Hyperpool.

Circumstances

The operator was able to measure project success by comparing data at a single pad across four wells within the Anadarko-Woodford Basin production area – two pads equipped with the competitor's shakers and two pads equipped with Hyperpool.

Drilling Conditions:

- ROP: 175 ft/hr
- Circulating Rate: 400 GPM
- Mud Weight: 11.0-12.0 PPG
- Mud Type: OBM

A thorough analysis of various drilling parameters encompassed solids removed, haul-off, base fluid dilution, rig site testimony, NPT, and discard ratio. Shortly after the installation of the competitor shakers, the first issues began to occur. The discard ratio, measuring fluid loss per barrel of drilled solids, was of particular significance. The evaluation also factored in time lost due to reduced ease of use for rig personnel (i.e. lengthy screen panel changes) and equipment failures associated with the competitor's equipment.

Solution

After a brief trial with a competitor's equipment, Derrick's technicians stepped in to remove the failed shakers and reinstall the original Hyperpool models. They utilized K-Series conversion kits to streamline the process and help operators avoid significant reinstallation costs. The Hyperpool shakers provide increased capacity, and the conversion kits allow straightforward installation on existing equipment skids. The Hyperpool screen compression system simplifies screen changes, offering a more reliable and faster solution than the competitor's air bladder system.

Results

The Derrick Hyperpool removed more fluid from the cuttings, losing less fluid for every barrel of solids disposed. To the operator's benefit, the discard ratio of the discarded solids from Hyperpool was reduced by 33.9%, leading to more fluid being saved and reused over the life of the project.

The resulting 29.2% reduction in dilution translated into an additional $15,570 in savings on base fluid cost per well alone.

With less fluid being removed, there was an 11.9% reduction in barrels hauled off, contributing to operational savings and a greener footprint at the Anadarko-Woodford Basin site. With an average cost savings of $27,000 per well, Derrick's Hyperpool came out on top when put side-by-side with the competitor's latest shaker.

KEY METRICS