WESTERMAN

Solving for Sand in the Permian

WESTERMAN'S SEPARATION TECHNOLOGY:

INCLUDES sand management technology standard

MAXIMIZES uptime by cleaning out sand without shutting down*

REDUCES maintenance costs across the life of the well

IMPROVES the total cost of separator ownership

SIMPLIFIES everyday equipment upkeep

*When following OEM recommended cleanout guidelines

UNLIKE STANDARD SEPARATOR PACKAGES, EVERY WESTERMAN HORIZONTAL SEPARATOR COMES STANDARD WITH A HIGH-PERFORMANCE SAND MANAGEMENT SYSTEM WHICH LETS YOU REMOVE SAND FROM THE PRODUCTION STREAM WITHOUT TAKING THE WELL OFFLINE.

Managing high sand volumes is a critical aspect of operation in areas such as the Permian Basin, where sandy production can slow throughput and create potentially burdensome surface maintenance practices and downtime. Excess sand in separation equipment changes the available retention time and space within the unit, resulting in suboptimal separation conditions. That's why Westerman designs advanced sand-separation capabilities into every horizontal separation unit.

CHALLENGE

The Permian accounts for almost 40 percent of all U.S. proppant demand. Its wells consume 68,500 tons of sand daily, a number forecasted to reach 119 billion pounds as proppant intensity continues to increase. This means that sand production rates during flowback and early production can reach up to 1,600 pounds—taking a significant toll on surface processing and equipment.

When a standard separator runs within a sandy production stream, sand can occupy up to 25 percent of its available retention space—capping throughput and delaying time-to-market. This condition also limits retention time, resulting in inferior product purity, a condition that not only impacts quality but also transportation safety.

SOLUTION

Westerman's sand management model offers a proprietary inverted V-Trough design with openings on each side—sized and spaced to allow equal flow through each port. When the sand drain is opened, their even flow creates a sweeping motion along the vessel walls. These dynamics draw the sand to the drain for discharge and disposal without adversely affecting overall separation efficiency.

BETTER SEPARATION ECONOMICS

- Maximizes uptime by keeping the well online during cleanout
- Reduces separation unit maintenance costs overall
- Lowers total cost of ownership via better utilization/ throughput

ADVANCED DESIGN

- Makes the most of available separation volume
- Maximizes sand management capacity
- Prevents erosion, plugging and other problems

SIMPLE OPERATION

- Both collects and drains sand
- Easy to access and discharge
- No special tools required

COMES STANDARD

- No added cost for sand management capability
- No installation or third-party consultation required
- Brings strong sand management to horizontal designs

PROVEN IN THE PERMIAN

- Performs well on multi-well pads
- Facilitates volumes associated with long laterals
- Built with demanding Worthington QA/QC