CASE STUDY

HALLIBURTON

Permian Basin, U.S.A.

# Slugger™ increased production 73% on extreme gas slugging Permian Basin well

Novel technology allows operators to increase production when compared to gas lift

## CHALLENGE

Wells that experience extreme gas slugging are difficult to produce with ESPs because there is minimal liquid for the pump to handle during a gas slug.

## SOLUTION

Installed in tandem with a Hydro-Helical® gas separator, the Slugger gas separator features include:

- Expanded internal liquid reservoirs deliver a continuous stream of liquid to the pump
- Extended length and downstream-directed gas exit ports reduce gas recirculation
- Stationary helix inducer, which creates two-phase vortex separation

## RESULT

- Increased production to 52 BOPD from an average of 30 BOPD with gas lift
- Well stabilized with pump intake pressure (PIP) at desired level
- Extended run life

## Overview

Unconventional Permian Basin wells face several production challenges, including extreme gas slugging. Under these conditions, traditional mechanical gas separators struggle to process and deliver liquid to electric submersible pumps (ESP), leaving some operators to choose gas lift as the initial form of production, delaying higher production rates and payback times.

## Challenge

One operator in the Permian switched from gas lift to ESP and saw a dramatic increase in production. However, prolonged low-flow or no-flow conditions due to gas slugging shortened the system's run life.

## Solution

Summit ESP® – A Halliburton Service has developed innovative technology to address significant gas slugging. The Slugger incorporates internal reservoirs to ensure a steady liquid supply during gas slug events, maintaining optimal processing conditions.

For this particular well, a dedicated team of customer and Summit ESP personnel from all functional areas—technical/engineering, quality, reliability, monitoring, design, and field service—collaborated closely on the project. In addition to overcoming gas slug production challenges, the team addressed multiple surface constraints at the well site.

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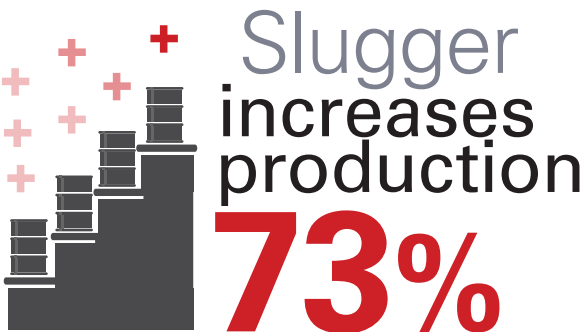
## Result

After over 90 days of operation, production with the Slugger™ showed excellent health checks. With the Intelevate™ software platform for remote monitoring and control, surface pressure issues that required constant adjustments to find the optimal production balance were resolved.

Performance was exceptional, and production improved by 73%. The customer is pleased with the results and is considering the Slugger to eliminate initial gas lift production, reduce payback times, and increase profitability.

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