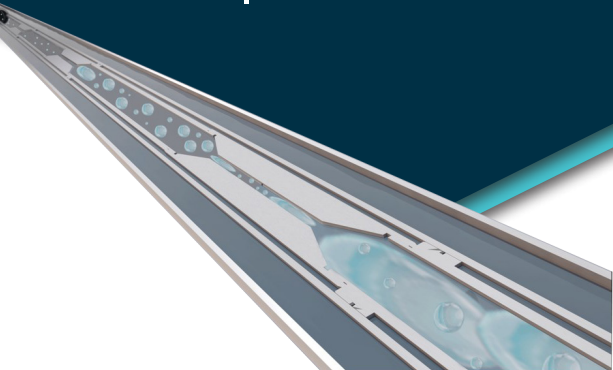


CASE STUDY

Eliminating Gas Locking in the Delaware Basin



GasGuard™

▶ BACKGROUND

Gas interference and gas-locking conditions are among the **largest challenges facing the ESP industry** today. Although technology has advanced to address gas management through separation and handling, **limitations arise when gas slugging occurs**, and **GVF approaches 70% or higher**.

High GLR applications are extremely costly. Gas interference leads to **production loss, reduced ESP efficiency, and failure of electrical components** due to continuous cycling or inadequate liquid flow past the motor, resulting in overheating and increased system stress.

▶ PROBLEM

A major operator in the Delaware Basin of West Texas was experiencing difficulties with an unconventional well, where ESP efficiency and operations were **compromised by gas locking**.

▶ SOLUTION

FET Multilift Solutions partnered with one of the largest Permian producers to introduce the **GasGuard fluid conditioning tool**. This solution mitigates gas interference by **lowering the GVF of the production stream to levels an ESP can manage without interruptions, downtime, or failures**.

Initial results were apparent immediately upon ESP restart. After installation, **oil production increased 28%** over six months, while **shutdowns were reduced 89%** vs. the previous three months.

▶ RESULTS

In addition to the successful initial results, **motor amperage variations were significantly reduced**, and **motor temperature spikes were drastically reduced**, allowing the ESP to **operate more efficiently with no gas-related interruptions**.

Since the installation of GasGuard, shutdowns due to gas lock or interference have been a fraction of those during the previous ESP run. Lowering GVF before the fluid/gas mixture reaches the intake allows the ESP to remain active during slugging events — confirmed by a tighter amp signature.

Motor temperature fluctuations were significantly reduced, demonstrating that GasGuard effectively mitigates gas slugging and enables proper motor cooling through a more consolidated fluid stream.

Reduced amperage fluctuations indicate a **more consistent fluid mixture**, contributing to **increased ESP efficiency, greater drawdown potential**, and a **significant decrease in both mechanical and electrical failures**.

WELL STATISTICS

Location	Delaware Basin, West TX
Casing	5.5" 20-lb. Casing
Well Type	Horizontal
Peak GLR	Up to 2,900 SCF/STB
Oil Cut	Up to 30%

KEY IMPROVEMENTS

89% Reduction	in shutdown frequency
28% Average	increased oil production
Significant Improvement	in amp signature
Cooler, More Stability	in motor operation

89%

REDUCTION IN SHUTDOWNS

28%

INCREASE IN OIL PRODUCTION

2,900

SCF/STB PEAK GLR

6_{mo}

SUSTAINED PERFORMANCE DATA

PERFORMANCE COMPARISON

METRIC	PREVIOUS 3 MONTHS	W/GASGUARD (After Drawdown)	VARIANCE
Oil bbl/day	128.2	163.4	+27.5%
Monthly Shutdowns	10.7	1.2	-88.5%
Gas Production (mcf)	422	485	+14.9%
30-Day Revenue Increase (@ \$25 oil/bbl)	\$96,150	\$122,550	\$26,400
200-Day Revenue Increase (@ \$25 oil/bbl)	\$641,000	\$817,000	\$176,000

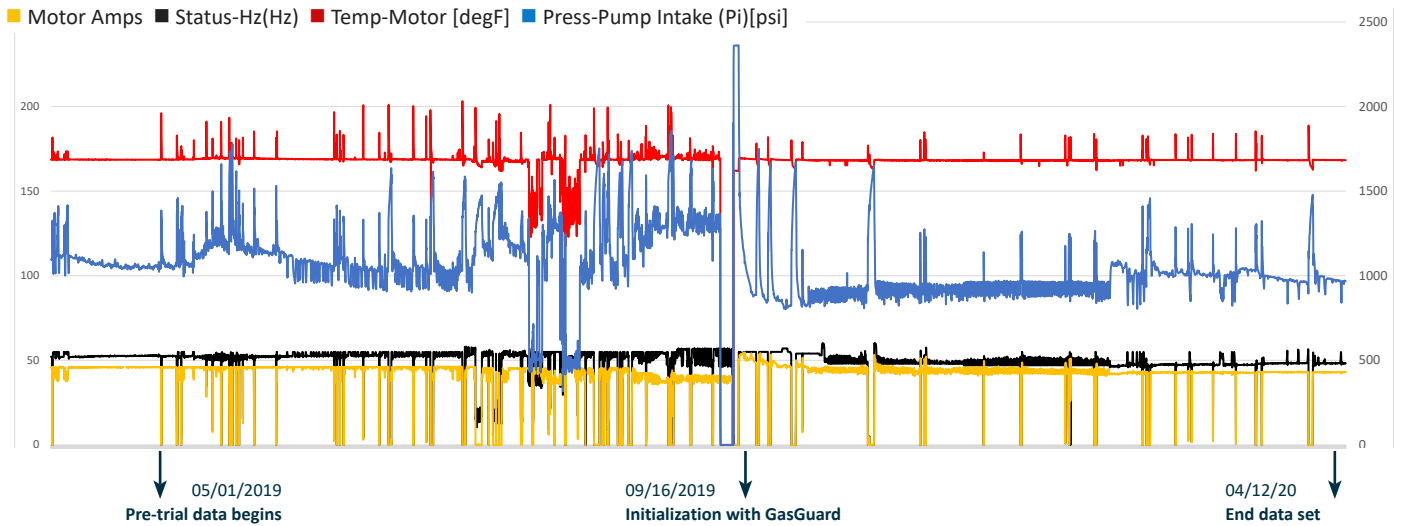
30-DAY REVENUE UPLIFT
@ \$25 / bbl oil price

+\$26,400

200-DAY REVENUE UPLIFT
@ \$25 / bbl oil price

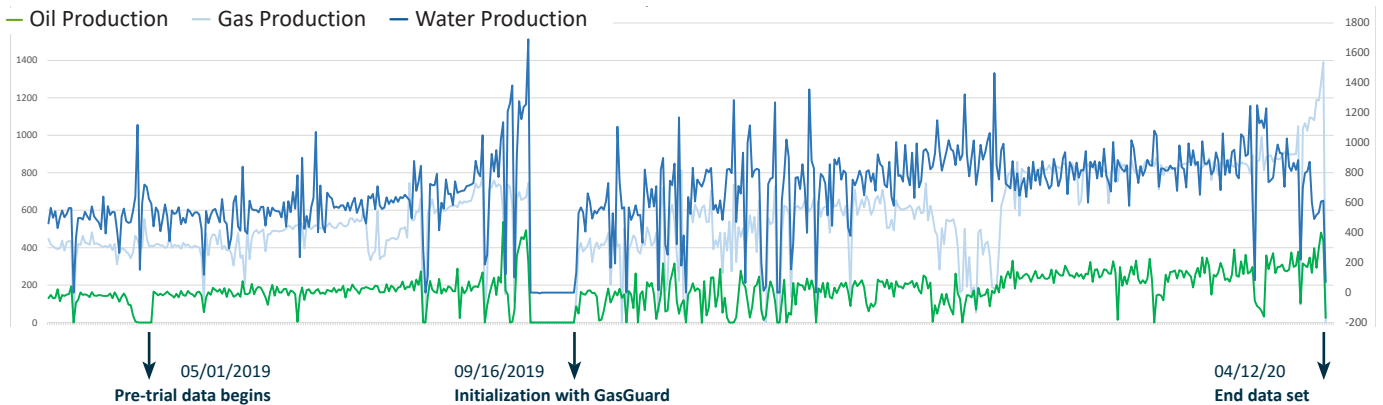
+\$176,000

OPERATING DATA — Motor Amps, Frequency, Temperature, and Intake Pressure



Measurable reduction in motor amp volatility and temperature spikes following GasGuard initialization. Tighter amp signature post-installation confirms a more stable fluid mixture reaching the ESP intake.

OPERATING DATA — Oil, Water, and Gas Production



Oil production demonstrates sustained uplift following GasGuard installation. Average oil production increased 28% (128.2 → 163.4 bb./day) over the 6-month post-installation period.

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