



Faltering Production Restored in the Sprayberry with Valiant's Advanced VSD Programming

CHALLENGE

- › Frequent alarms and daily shut downs causing deferred production

SOLUTION

- › Valiant proprietary VSD software combined with field technicians' graybeard experience

PRODUCTION DATA

Avg Depth:	8,100 ft
Oil:	250 bbl/d
Water:	400 bbl/d
Gas:	800 mscf/d
Gas to Oil Ratio:	3,200 scf/bbl

If your production is suffering due to challenging downhole conditions, please contact us at www.valiant-als.com/contact.

An operator was experiencing multiple alarms and daily shutdowns across 10 wells in the Lower Sprayberry formation of the Permian Basin. Transient gas production in these wells was causing elevated motor temperatures and undercurrent, triggering multiple alarms on a daily basis and resulting in repetitive shutdowns and restarts of the electric submersible pump (ESP) system installed.

The previous artificial lift provider's variable speed drives (VSDs) were not programmed to recognize or adapt to gas-locking conditions, resulting in mechanically stressful equipment cycling, frequent interruptions and lost production during periods where the system was turned off.

Over time, frequent starts and stops will deteriorate the insulation on an ESP's power cable and motor winding, cause excessive wear on internal components, and diminish ESP system run time. Therefore, the operator's frequent shut downs were not only causing production setbacks, but also would have contributed to failures, further

jeopardizing the profitability of the wells.

To increase uptime and mitigate the operator's losses, Valiant installed ESP systems designed with 400 series pumps and vortex gas separators above a 456 series motor controlled by Valiant's Pulse™ Variable Speed Drive.

Every Pulse™ VSD is programmed with proprietary gas-lock mitigation software, which reduces motor speed to allow gas slugs to work through the pump without shutting down for improved ESP run time and performance.

Valiant's VSD technicians diagnosed the cause of the operator's ongoing problem and provided a solution: Pulse™ drives for all 10 wells, programmed to ride out the transient conditions and ensure uninterrupted operation.

After resolving the issue, the operator was able to maintain asset profitability and Valiant was awarded ten new wells in the Permian.