Expro Excellence

Expro delivers non-intrusive solution for ESP optimisation

Acumen

Objectives and background

- An operator with a large number of producing black oil wells had downhole Electrical Submersible Pump (ESP) systems with gas separation systems installed to augment production
- The ESP systems were subjected to higher gas rates and varying pressures from the initial design specification
- The customer did not have individual well monitoring in place and therefore had no visibility on well inflow performance and on the efficiency of the downhole separator
- The customer was facing shutting down the ESP systems to reduce the production rate to avert catastrophically damaging the ESP and avoiding costly work over
- The customer approached Expro for an non-intrusive solution

Expro Excellence

- Expro proposed utilising a non-intrusive methodology to monitor and provide reliable measurements
- These measurements were taken at the wellhead without the need to modify the well configuration
- Expro were able to measure intake pressure, Producing Bottomhole Pressure (PBHP) and Annular Gas Flow measurements directly at the surface wellhead in real time

Value to the client

- The customer received reliable measurements, which gave them insight into the pump and well inflow performance, giving the customer an understanding of how their well was performing.
- The annulus gas rate provided by Expro gave the customer an indication of the downhole separator efficiency
- The customer was now able to access ESP and well performance monitoring, results were input to reservoir models and nodal analysis.
- The customer used this insight to increase pump and separator performance and maximise production from the well
- Expro provided the customer with a non-intrusive solution from the surface. There was no requirement to break pressure containment and surveillance was performed within one working day

Insight

Contact

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