

Expro Excellence

Expro DFOS Intervention provides insight to enable our customer to triple production from a well on gas lift

Well Intervention and Integrity



Objectives and background

- A Customer had a selection of under-performing wells on gas lift that were impacting overall field production
- One well was not only under-performing but was also experiencing Tubing to A-Annulus communication issues. The wells design featured eight Side Pocket Mandrels (SPM's)
- The Customer selected Expro's Distributed Fiber Optic Sensing (DFOS) Intervention solution over competing methodologies such as Spectral Noise and Production Logging to gain an operationally efficient and comprehensive view of the integrity and performance of the well

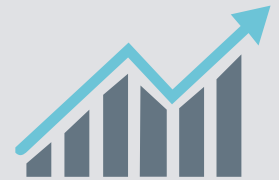
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- Expro worked with the Customers incumbent Slickline provider to convert one of their Slickline units into a DFOS Intervention unit
- The surveillance program featured baseline, annulus bleed and well flow periods
- Expro's eXtract data processing software was utilized to process and transmit the DFOS data to an analyst off-site for fast-track data interpretation
- Expro's QikView software was used for data integration and visualization
- SPM3 was clearly identified as the source of the tubing to annulus communication. With lift gas entering via SPM3 (and not through the deeper orifice valve) this resulted in a loss of drawdown and therefore loss of production

Value to the client

- The insight gained from the DFOS Intervention enabled the Customer to remediate the well with a high degree of confidence
- The Customer was able to remediate the well by performing a through-tubing intervention
- Post remediation, the following well performance aspects were observed:
 - A three-fold improvement in oil production (from 112 bbls/d to 370 bbls/d)
 - Water cut dropped by 6% (from 89% to 83%)
 - Lift gas requirements for the well remained unchanged at 1.6 MMscf/d

Enhanced production



Well integrity

