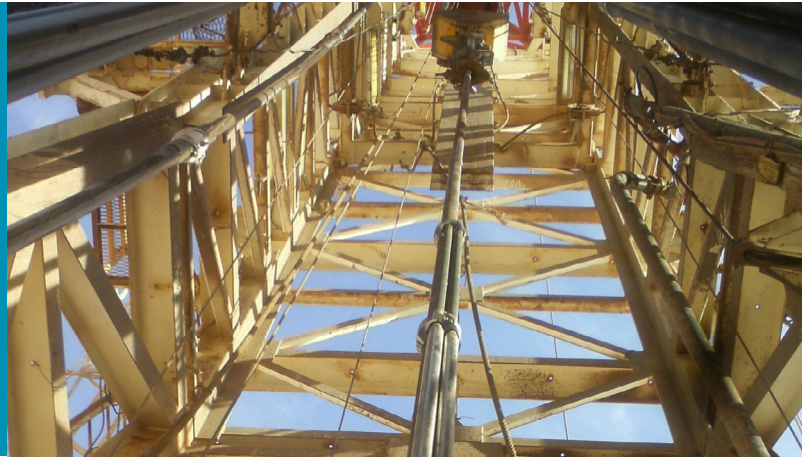


Expro Excellence Real-time wireless PCP monitoring

Wireless Well Solutions



Objectives and background

- An operator onshore in East Africa required real-time pressure and temperature measurements while drill stem testing (DST) multiple zones to evaluate the reservoir and define the ongoing development plan for the field
- The reservoir contained heavy oils and a progressive cavity pump (PCP) was run in each test for artificial lift
- Wireless real-time surface read out (SRO) data from the test intervals was needed to optimize operations, however this has historically not been possible due to the PCP noise and downhole equipment

Expro Excellence

- An opportunity was identified to instrument the well with CaTS EM gauges during the test, thus enabling SRO data to be captured throughout the testing operation, and subsequent monitoring and optimization of the PCP unit
- 5 DST runs with PCP were performed on the well using below tester valve and below packer gauge stations
- A CaTS gauge carrier was used below the tester valve (the primary station), whilst gauges were also externally clamped onto the tailpipe below the packer (the secondary station)
- Wireless SRO data was received at surface throughout the operation of the PCP, despite the noise, proving the concept of using CaTS gauges in artificial lift operations

Value to the client

- A wireless SRO data point was received at surface every 90 seconds from the primary gauge station, whilst a data point was received every 30 minutes from the secondary tailpipe station
- The SRO data was used as the primary means to monitor the pump intake pressure and the resultant drawdown on the sand face
- Provided a means to ascertain the proper function of the downhole TCP guns and the operation of the pressure operated tester valve (POTV)
- The SRO function allowed the client to terminate the test early due to real-time monitoring and analysis of the reservoir data and pressure transient during the build-ups

Insight



World's first



Contact

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