

Expro Excellence

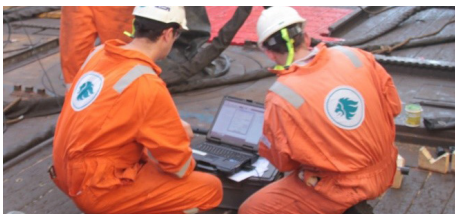
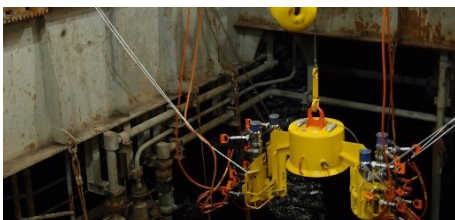
Maximizing value of an appraisal DST using CaTS™ wireless gauges

Wireless Well Solutions



Objectives and background

- Our customer planned an appraisal well to improve the estimated ultimate recovery (EUR) of their reservoir
- Reservoir connectivity is a key uncertainty that impacts field development decisions. Our customer wanted additional insight and data beyond a conventional DST, with minimal incremental cost
- An objective for the test was to flow the wells at conditions analogous to a producing well, but standard test durations are insufficient to investigate the volumes that would be accessed under production conditions
- Recoverable resources were dependant of demonstrating significant reservoir connectivity, however this was complicated by the geology



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- Expro installed 2 x CaTS™ gauges clamped onto the lower completion below a permanent packer
- Another 2 CaTS™ gauges were installed inside the tailpipe on a plug below the packer
- Four repeaters were installed below a bridge plug
- Four ASMs were installed on a modified debris cap at the sea floor
- Four discrete systems were run giving, four independent gauge measurements and multiple redundancy

Value to the client

- Use of wireless gauges allowed the pressure build-up duration to be extended from 3 days to 428 days
- The higher-cost rig time was used for producing a larger pressure disturbance
- The gauges allowed the resolution of the third and fourth reservoir boundaries (with outermost boundaries 15km from the well)
- This well test strategy was able to investigate a similar reservoir volume to the planned development wells
- The use of multiple gauges contributed to narrowing the range of uncertainty by allowing a tighter drift range in modelling
- The results showed that the gas volume in the model was a significant overestimate of the actual gas volume

Insight



24/7 monitoring



Cost effective



Contact

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