Expro Excellence

Expro performs first extended well testing using the storage tank in the hull of a drillship

Well Flow Management | Well Testing

Objectives and background

- In order to evaluate productivity and characteristics of the reservoir, the client required an uninterrupted Extended Well Test (EWT) using a 15k well test package with an additional fluid storage
- Well test flow back to process and transfer fluids to storage tanks in the hull of drillship with an 80,000 bbl capacity

Expro Excellence

- Expro performed the first extended well testing using the storage tank in the hull of a drillship
- Expro's engineering design team worked to select equipment which met the expected flowing parameters
- Expro's engineering design team performed the design process overview including the rig visit, well test design report (WTDR), gas dispersion, sea fastening and rig cooling studies to meet specific Certifying Authority requirements
- A three stage separation process was performed using 800bbl of tank capacity achieving the retention time required to meet the True Vapour Pressure (TVP) requirement of the drillship storage tanks
- Using Expro's Data to Desk (D2D) enabled the client to have a data solution allowing data to be logged and transmitted real-time from the surface facility to shore, allowing fast decision making
- The early approach and increased levels of communication with the Certifying Authority proved invaluable in meeting the 45 day project plan schedule
- Following two DST operations, a total of approximately 24,500bbls (calculated rig volumes) was processed
- To enhance subsurface data gathering during the EWT and optimise the wider reservoir appraisal campaign, CaTS permanent downhole wireless gauges were installed as part of the abandonment operations post DST

Value to the client

- This enabled the customer to obtain the well test data on a fast-track basis continuously without interruption
- The project timeline allowed for the rig up of well test equipment at the port. 95% of the rig up was completed before the rig sailed
- The Expro real-time logging and processing allowed for the monitoring of well test data during the testing period
- The CaTS gauge data provided valuable pressure build-up data beyond the immediate DSTs. The downhole wireless gauges captured long term dynamic reservoir pressure interferences from remote appraisal activities. This data was used to determine reservoir connectivity and reduce uncertainties associated with the reservoir models

> **The testing spread set-up with the flexibility of on-board crude storage provides a new benchmark in testing for the industry, which simply wasn't possible in the past.**

World first