EXPRO

WELL FLOW MANAGEMENT™

/ Expro Excellence Well Intervention

Expro provide innovative well intervention services to evaluate completions performance during experimental well operation, adding value to future well operations

Objectives/background

- In order to optimise asset development, the client partnered with Expro to undertake a research and development project with the toe and heel sections of a well completed differently to compare completion efficiency and production, in turn adding value to their decision making on future wells
- In order to optimise the research and development opportunity, the team maximised the opportunity by simulating various scenarios in the wells
- With a plug and perforation system was in place in the upper portion; and a sliding sleeve system in the lower section of the well – the objective to establish which was more efficient
- Expro were tasked with finding an effective solution to compare the two profiles – previously undertaken on two separate wells, but never in one well

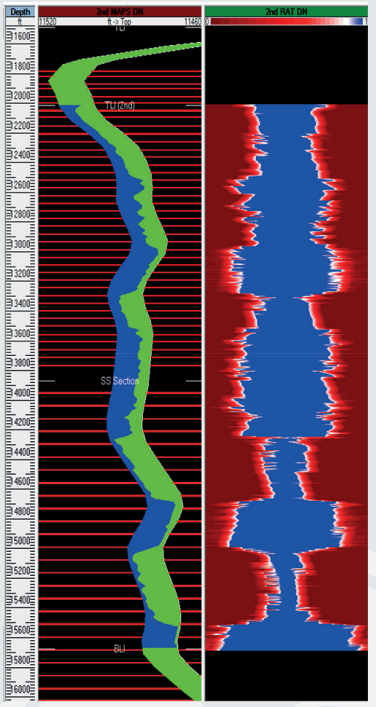
Expro Excellence

- Initial PLT run was contaminated by unexpected cementation slurry encountered in the well bore from a mortar fracture, which coated the logging tools (an experimental mortar type, not previously used) – Expro recommended a jetted nozzle, with a junk basket, for clean out followed by flowing the well for 24 hours to obtain optimal data results
- Expro ran a 24-finger caliper in addition to a multiple array production suite (MAPS) string –saving the client 10 hours
- The invasive clean out allowed a second run of a production logging tool (PLT), multi-finger imaging tool (MIT) and radial bond tool (RBT) simultaneously to 16,000 ft on coiled tubing saving the client 18 hours, whilst collating essential data
- The RBT identified the experimental mortar provided zonal isolation behind the casing
- E-coil was then prepared for the MAPS string, running in full 4.5" casing from surface, which confirmed inconsistent flow in the well – working with the client, the team advised opening the well from a 12 choke (through 16 and 20) up to 24 choke over the course of 16 hours, allowing logging operations to be optimised

Value to client

- The Expro team's expertise was fundamental to the success of the PLT – "the project had numerous changes through the planning phase... the team were extremely knowledgeable and responsive to requests, sharing their thoughts and insights when we were unsure"
- The solutions provided enabled consistent flow on the well and complete the research, with more than a day of rig time saved
- Successful evaluation of plug and perforation versus sliding sleeve completion methods
- Established additional clean-up techniques required when using the experimental mortar
- Identified higher water cut content than anticipated during production logging operations

> This is the best data we have seen from a horizontal production log, we plan to use this data as a training set for our international teams.



Contact

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