ScanWell

Case Study

Well Integrity

Validating Sealant Repair Using Direct Leak Metering

CHALLENGE

After re-completion and perforation of a well, the client observed pressure build-up in A-annulus. Diagnostics showed that the reservoir had direct communication with A-annulus estimated to be 86 scf/min. Subsequently, both Tubing to A- annulus and A-B annulus communication as identified. The client decided to repair the well using a sealant and contacted ScanWell to measure and document the efficiency of the sealant.

SOLUTION

ScanWell mobilized portable leak investigation equipment including pressure sensors, flowmeters and acoustic. After initial sealant was injected, ScanWell performed an initial direct leak metering followed by 72 hours of pressure monitoring. A second sealant injection was performed using wireline, and ScanWell subsequently performed a final direct leak metering to document leak rates in A and B annuli.

RESULTS

Leak rate measurements after initial sealant injection showed 0.36 scf/min and 0.09 scf/min in A and B Annuli respectively. A Annuli had pressure build-up from 332,69 psi to 337,9 psi and. B annuli 292,76 to 326,54psi over 72 hours. Leak rate after final sealant injection was measured to 0,09 scf/min for both annuli - well within the 15scf/min API criteria.

CLIENT VALUE

ScanWell was able to verify and document the successfully repair allowing the client to restart production.

QUICK FACTS

Where
Caribbean

When
2019

What
Direct Leak Metering

Duration
1 Week

Crew
1 engineer

Equipment
7 pelicases

EX Classification
Atex Zone 2

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