CASE STUDY

Damaged Casing Repair at Shallow Depth Tag Oil, New Zealand

www.saltel-industries.com

CONTEXT

Damaged Casing repair
in a 5-1/2in, 17#, Vertical well

82ft / 26m
Intervention zone – Depth

2in / 50mm
Interval Length

68°F / 20°C
Downhole Temperature

SOLUTION

5-1/2in Reinforced
Steel thickness= 0.157in/4mm
Sealing thickness= 0.059in/1.5mm

2,041psi / 141 bar
External service pressure

2.875in 6.4# Tubing
Conveyance

19.7ft / 6.0m
Patch length before expansion

19.0ft / 5.8m
Patch length after expansion

OPERATIONAL CHARACTERISTICS

7,308 psi / 504 bar
Max. Expansion Pressure

4.47in / 113.5mm
Patch Nominal ID

4.338in / 110.2m
Patch Drift ID

4.331in / 110.0mm
Setting controller/Gauge Ring

CONTEXT

In a 9 year-old well, a communication between the $5^{1/2}$in production casing and the $9^{5/8}$in annulus had to be located then shut off.

The objective was to cover and seal off the hole using a Saltel Expandable Casing Patch, allowing the completion to be run through the patch.

SOLUTION

The depth of the leak was not known before the job; a 5.5in Reinforced SES Patch was selected in case the damaged zone had been located deep in the well, which would have require a high collapse pressure.

A multi finger caliper log allowed to locate the hole in the production casing 25.7m below the Tubing Hanger.

The patch and setting BHA were conveyed with $2^{7/8}$in tubing on a service rig and positioned by tubing tally.

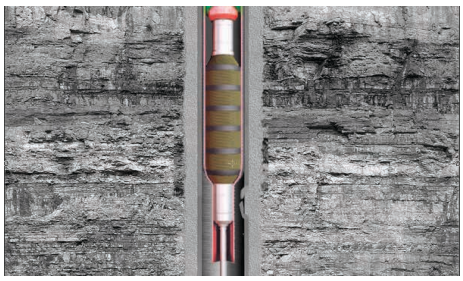
Log

RESULTS

The patch was rigged up, positioned, installed in 12 expansions, and drifted at 4.331in without issue in less than 3 hours.

It was then pressure tested solid at 1,550psi for 10min.

Finally the completion was set back into the well.



"Well done on the excellent job! I am very impressed with Saltel's technology, great service quality and professionalism."

Jaimie Lovell,
D&C Engineer

"Very professional job done to the high standard."

Company Man