

## Case Study

# Custom Built ESeal™ Patch Restores Well Integrity

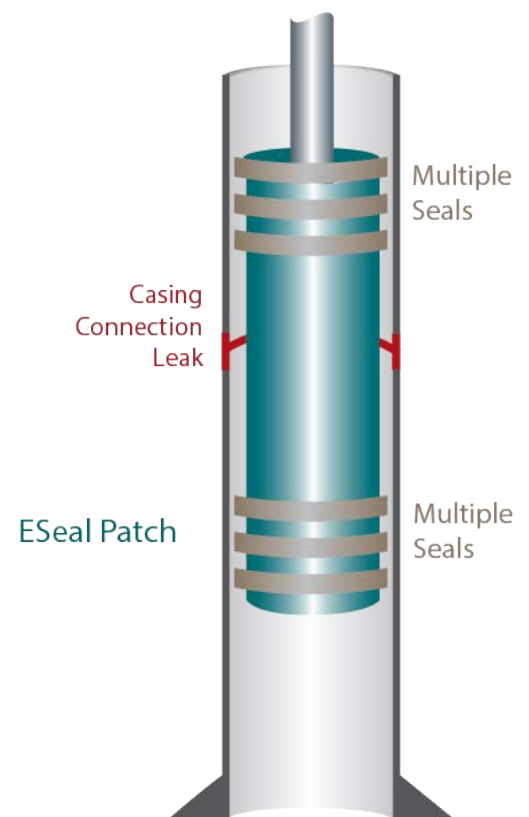
## Challenge

CNR International U.K Ltd. required a system to restore well integrity on a well in their Tiffany Field. A suspected non gas tight connection around 600ft MD within the 10-<sup>3</sup>/<sub>4</sub>" production casing required to be repaired. Future plans for the well include drilling a sidetrack from the 7" casing and running a gas lifted completion thus, repairing the leak and maintaining sufficient ID for these future operations was imperative.

## Solution

A bespoke 8-5/8" single joint ESeal Patch system was proposed. The patch has three elastomers top and bottom designed to seal within both 60.7 and 55.7 lb/ft 10-<sup>3</sup>/<sub>4</sub>" base casing – this was done to give as wide a sealing range as possible to account for known corrosion in the base casing across the interval in question. The patch itself was 30ft in length and gave an effective sealing interval of 16.5 feet between the innermost elastomers. An ultra-low debris shoe was specifically made for the system to minimize drill-out debris – after installation this 6000 psi rated shoe was not immediately drilled out but used as a barrier in the well whilst it was suspended prior to future operations. The patch and inner running string came to the rig pre-made in a 40ft basket. This was done for ease of handling and also so that no specific additional equipment was required on board to install the expandable. The patch was picked up and RIH to depth where it was successfully expanded, isolating the leak between the elastomeric sealing elements which were set as part of the expansion process.

The well was then pressure tested up to the required 2,500 psi before being suspended prior to future operations.



- ▶ Completion Date: January 2018
- ▶ Location: Tiffany Field UKNS
- ▶ Base Casing: 10-<sup>3</sup>/<sub>4</sub>" (55.5 lb/ft)
- ▶ Issue: Well Integrity – connection leak
- ▶ Solution: 8-5/8" ESeal Patch
- ▶ Depth: 586 – 616ft (30 ft ESeal Patch)

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