

Q-Seal Wellhead – Multiple Seal Repair Case History

Client

Major Operator

Location

North Sea

Hanger Seal Type

13-3/8" Pack-Off Seal, 7" Tubing Hanger BT seal, Upper Hydraulic Packing/ Lower Moulded O-Ring

Multiple Seal Repairs in Only 5 hours.

The Challenge

A production well had been shut-in ahead of a water shut-off workover and annular communication had been identified due to multiple wellhead seal failures. Testing operations confirmed that the 13-3/8" Pack-Off Seal was passing, with the result that the C annulus was charging up the 13-3/8" Void. Test analysis also identified that the Tubing Hanger BT seal and the Upper Hydraulic Packing (a metal to metal seal) and the Lower Moulded O-Ring were all passing. Both the Hanger Void and the Tubing were charging from the A Annulus.

The Solution

Q-seal was injected to each of the 13-3/8" Pack-off, Tubing Hanger BT seal and Upper Hydraulic Packing/Lower Moulded O-ring to recover full barrier isolation. With double barriers in place the well can be brought back online as soon as water shut off operations are complete.

The Outcome

The 13-3/8" Pack-Off Seal, Tubing Hanger BT seal, and Upper Hydraulic Packing/Lower Moulded O-ring were all successfully repaired. After the injection of Q-seal into each seal, a successful pressure test at 1,000psi for 15 minutes was performed. 30-minute pressure build-up tests were then successfully completed on each seal, confirming successful reinstatement of the 13-3/8" Pack- Off Seal, Tubing Hanger BT seal and Upper Hydraulic Packing/Lower Moulded O-ring. Q-Seal restored the integrity of every passing seal in the wellhead, providing full barrier isolation. The entire operation took just 5 hours.

The Impact

- Wellhead integrity restored in just 5 hours.
- Multiple seals reinstated without well intervention – requirement for costly workover eliminated.
- No risk to operation of well – Q-Seal does not affect future wellhead operations.

