



Location: North Sea
Customer: UK-based Operator
Well Type: Water Injector
(max 40 degrees deviation)

Products/Services:
4 ½-in OD Heavy-Duty
Releasable Spear

Case Study Fishing

Retrieval of Injection Valve Backed off From 7-in Retrievable Bridge Plug

The Challenge

In March 2015, wireline was deployed to pull a 7-in retrievable bridge plug, complete with injection valve to surface. Once pulled to surface it was noticed that the injection valve with crossover had backed off downhole.

The injection valve and crossover were located at 9,901 ft, between the 7-in to 5 ½-in completion crossover. A method to fish the injection valve and crossover to allow a new injection valve to be installed was required

Considerations

The following key requirements and concerns were identified:

- A timely and effective intervention was critical to allow the new injection valve to be installed to minimize impact on linked production wells
- Onshore trial to determine how the injection valve and crossover could be fished was to be conducted within hours of the issue arising

8hours

Mobilized to offshore platform within eight hours

6hours

Crossover and injection valve retrieved within six hours

Peak's Solution

During the onshore trial it was established that the crossover could only be located at the smaller ID where it would make contact with the poppet of the injection valve. The injection valve required 125 lbs minimum force to compress the poppet and the full travel to open the injection valve was 5.52 in. With the poppet fully compressed this would allow the Peak Releasable Spear to locate the inner ID on the crossover.

Following rapid mobilization of Peak's 4 1/2-in OD Heavy-Duty Releasable Spear to the offshore platform, it was successfully run in hole to the location of the crossover at 9,901 ft. After the latching process, the pick-up weight increased 100 lbs, confirming the 4 1/2-in OD Heavy-Duty Releasable Spear had a grip of the injection valve.

Upon returning to surface it was noted by the operator that the injection valve was externally damaged and there was clear evidence of debris which was brought back to surface.

Value to Customer

All operations were carried out safely and efficiently, minimizing the period of reduced production from linked production wells.

- Onshore trials were carried out immediately to confirm forward plan
- Mobilized to offshore platform within eight hours
- Upon arriving at the platform the tools were run in-hole without issue and successfully fished the crossover, complete with injection valve within six hours
- New retrievable bridge plug and injection valve now set and full injection available
- Operational support ensured that the customer received the best possible support



▲ Releasable Spear

Product Code(s): Releaseable Spear – 204

info@peakwellsystems.com

© 2019 Peak Well Systems Pty Ltd. All rights reserved. This material and everything contained herein is the property of Peak Well Systems Pty Ltd and is prepared for information purposes only. Nothing contained within these materials shall be treated as a representation to be relied on by any person or an offer for sale or contract of any kind whatsoever. Any reproduction or distribution without the express written consent of Peak Well Systems Pty Ltd is strictly prohibited.

September 2019 | CS-10