Case Study Fishing

Retrieval of Subsurface Safety Valve with Damaged Fish Neck

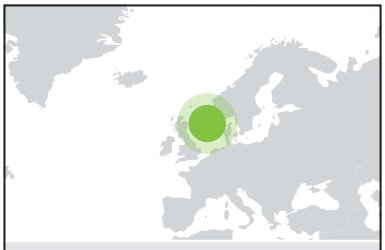
The Challenge

A subsurface safety valve (SSSV) was changed out in 2007 and 2010 – taking three attempts to set on each occasion due to scale. In 2014, the well was shut-in due to a failed SSSV test arising after an unsuccessful attempt to pull the SSSV to surface with the standard GS Pulling Tool. Damage to the fish neck was suspected to be the cause.

Considerations

The following key requirements and concerns were identified:

- Inability to retrieve and set new SSSV resulted in reduced production - a timely and effective solution was critical
- The standard GS Pulling Tool would latch and shear down but failed to make full contact with the fish neck
- The fish neck was suspected to be damaged
- Training in the operation of Peak's tools was required to ensure the full potential of the tools was realized



Location: North Sea
Customer: UK-based Operator
Well Type: Oil Producer (max. 35 degree deviation)

Products/Services:
7-in IN FRC Heavy-Duty Pulling Tool and 5 ½-in Heavy-Duty Releasable Spear

Well open and shows increase in production

Excellent working relationship established

30%

Peak's 7-in IN FRC Heavy-Duty Pulling Tool allows 30% more contact with the fish neck than a standard GS Pulling Tool

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Peak's Solution

Peak's 7-in IN FRC Heavy-Duty Pulling Tool has full radial contact, allowing 30% more contact with the fish neck than a standard GS Pulling Tool. Fitted with Serrated Dogs for additional internal grip, it was able to latch, but pulled free from the fish neck on every attempt - this confirmed that damage to the fish neck was extensive.

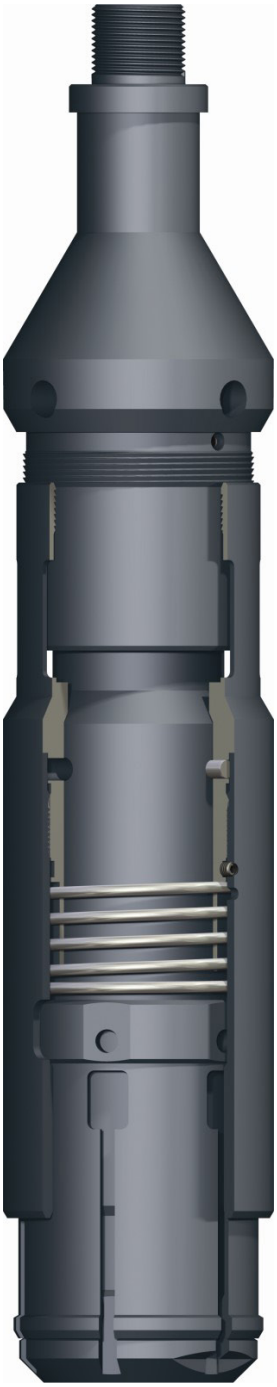
It was therefore decided with the customer to use Peak's 5 ½-in Heavy-Duty Releasable Spear fitted with the Long Adjustment Sleeve to ensure shear off capabilities, should this be required. The viability of this option was proven following trials on a similar lock onshore to ensure latching was the best fit possible.

After a few attempts to latch, it was found to be free to take a large over-pull. With this confirming that the fish neck of the SSSV had successfully been latched, jarring commenced - the SSSV was successfully pulled to surface where severe damage to the fish neck was observed by the operators.

Value to Customer

All operations were carried out safely and efficiently:

- Failed SSSV now out of the well
- Integrity issues now closed out
- Well is open and shows an increase in production
- Peak Well Systems are now the primary fishing tool provider for the oil producer
- The wireline crew have a better understanding of Peak fishing tools following training
- Post-sale support coupled with proven operational reliability has created an excellent working relationship



▲ IN FRC Pulling Tool

Product Code(s): Internal Neck Full Radial Contact Pulling Tool – 210

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