



Weatherford®

REAL RESULTS

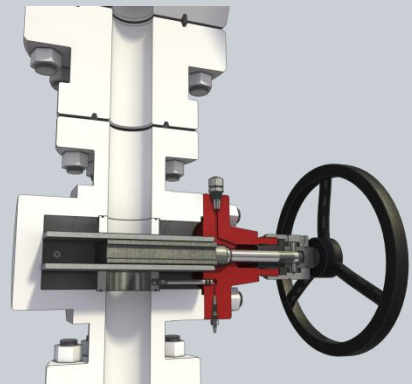
Renaissance™ WDCLP System Enables Shell UK to Avoid Costly Workover on North Sea Well for Savings of £5 Million

Objectives

- Restore the full functionality of a tubing-retrievable surface-controlled subsurface safety valve (SCSSV) in an offshore well where the safety-valve control line had become blocked, rendering the safety valve inoperable. The tubing-retrievable safety valve had severely damaged sealbores, making it impossible to set and seal a wireline-retrievable SCSSV.
- Avoid a major rig workover and the need for a hydraulic workover rig to pull 5 1/2-in. production tubing.
- Create a new wellhead penetration without changing the geometry and configuration of the Christmas tree. The flow lines could not be altered or raised.
- Introduce and install the technology quickly and efficiently.

Results

- Working closely with Shell UK and Cameron, Weatherford designed a Ren Gate™ conversion to the wellhead, providing a new wellhead penetration without altering the flowlines or raising the wellhead.
- Weatherford installed a 5 1/2-in. damaged control line packoff (WDCLP) system consisting of the following tools:
 - Retrievable sealbore production packer with type QN safety-valve landing nipple in the upper bore.
 - 3.81-in (96.8-mm) Renaissance WDCL safety valve.
 - Control-line stinger to transport the new control line to surface and a Ren Gate control-line hanger sealed in the wellhead penetration.
 - A 3.81-in. (96.8 mm) Renaissance WDCL damaged control-line replacement system consisting of a WDCL safety valve, control-line stinger to transport the new control line to the surface, and a Ren Gate control line hanger sealed in the Ren Gate wellhead penetration.



The Ren Gate conversion to the wellhead provided a new wellhead penetration without altering the flowlines or raising the wellhead.

Location

North Sea, UK sector

Rig

Gannet Platform

Well Name

GA-03

Products/Services

- Renaissance WDCLP system
- Ren Gate wellhead
- BlackCat™ retrievable sealbore production packer
- QN safety-valve landing nipple
- WDCL safety valve

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Results (continued)

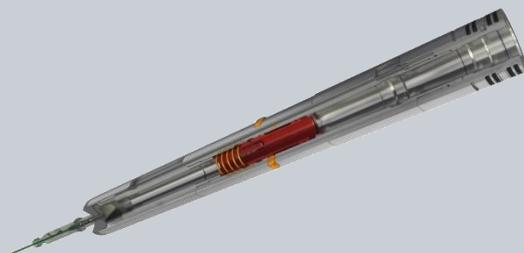
- The WDCL safety valve was set deep set at 1,740 ft (530 m).
- The job was performed on slickline and capillary string without pulling the tubing string.

Value to Client

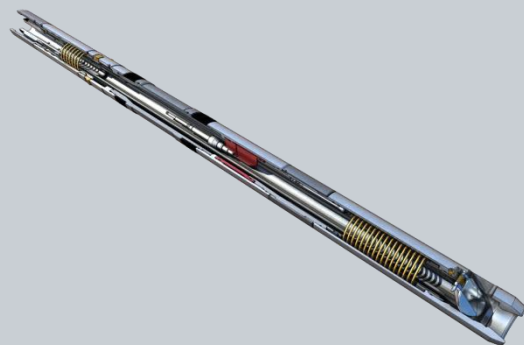
- The installation of the Renaissance™ WDCL system enabled Shell UK to regain full surface control of the new WDCL subsurface safety valve and eliminate the requirement for a storm choke.
- Installing the WDCL system eliminated the need for a major rig workover with a hydraulic workover rig, saving Shell UK over £5 million (US\$7.8 million).

"From our first contact and concept with Weatherford in late July, endorsement in August, and successful installation in December enabled us to meet our nearly impossible deadline and end our original plan to use a hydraulic workover unit in September. This was a tremendous accomplishment worth noting."

—Brian Goldsworthy
Completion and Well Intervention Engineer, Shell UK



Ren Gate™ control-line hanger.



3.81-in (96.8 mm) Renaissance WDCL valve.

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