Baker Hughes

Cut the costs of failed tubing retrievable safety valves (TRSV) and get your wells back online safer and sooner

REACH wireline-retrievable safety valve (WRSV)

The REACH™ wireline-retrievable safety valve provides the industry's first and only solution to bring ultra-deepwater wells with failed tubing-retrievable safety valves back online faster, safer, and more economically than a deepwater workover.

FASTER

Deepwater workovers can cost as much as $60M to recomplete the well and may take a year or more to begin depending on rig availability. The REACH WRSV only requires a light well intervention (LWI) vessel to perform the job at approximately one-quarter the cost of a workover. This not only avoids the high CAPEX of a major rig workover but can also expedite plans as LWI can typically be deployed in about half the time, bringing the well back on sooner and recovering additional production quicker

Because the REACH WRSV only requires a LWI vessel instead of a workover rig to perform the job, you can:

- Schedule an intervention vessel in a matter of months, reducing deferred production
- Perform the job with only one piece of equipment (wireline valve) versus the cost of replacing the entire upper completion and crew associated with the recompletion
- Get a turn-key solution – Baker Hughes can provide the valve, the wireline services, and the intervention vessel, saving time and simplifying operations
- Order the wireline valve in advance and have it ready to go when you need it

SAFER

With traditional workovers, pulling the completion string requires considerable operations and logistics, as well as increased exposure to HSE risks. Utilizing a REACH WRSV eliminates problems that may arise with pulling and recompleting wells. In addition, the REACH WRSV reduces the number of personnel required on location, thus eliminating potential exposure to HSE risks. The REACH WRSV utilizes an atmospheric chamber to operate and does not require nitrogen. A proprietary control system design also ensures fail-safe closure in the event of a seal leak. The REACH WRSV is the only fully fail-safe option available on the market today. The REACH WRSV:

- Reduces manipulation of equipment downhole, and the risk associated with installing a new completion

APPLICATIONS

- Deepwater wells
- Intervention for failed TRSV

BENEFITS

- Eliminates the need for a workover rig to perform intervention for substantial savings
- Ensures fail-safe closure in the event of a seal leak
- Removes the large carbon footprint of a workover and recompletion
- Operates on the same hydraulic control system already in place
- Eliminates the need to pull and replace the entire upper completion to be able to get the well back online
- Capable of being adapted for use in any manufacturer's failed TRSV

- Significantly reduces the potential for unforeseen operational issues by eliminating the need to replace all of the equipment in the well
- Eliminates the requirement to swap fluids to kill the well for a recompletion since it can be installed in the well in its current condition

Installing a REACH WRSV is also less carbon intensive as it removes the carbon footprint of the facilities, equipment, and personnel associated with a major rig-based work over.

MORE ECONOMICAL

The REACH WRSV is tubing pressure insensitive, allowing it to be operated by the same hydraulic control system that was originally used to operate the failed TRSV. This allows you to:

- Remove the need to modify or change subsea equipment, eliminating further CAPEX
- Eliminate the need to pull the entire upper completion to perform the operation, so the original completion is still intact and operable after the intervention work is complete
- Avoid high CAPEX for equipment for a full recomplete and operating costs of a workover vessel
- Have valve inventory on hand, ready to go at a moment's notice so that the well can be brought back online faster than a complete workover
- Take advantage of doing other LWI work at lower cost while the valve is deployed (i.e. chemical treatments) since the LWI vessel is already on location

HOW IT WORKS

The REACH WRSV is hydraulically controlled from the surface through the original control line that connects the inoperable TRSV to the surface emergency shutdown system. It is a normally closed valve, so that when the applied control chamber pressure is removed, the valve automatically returns to the closed position. Rather than utilizing a nitrogen charge, the Reach WRSV utilizes an atmospheric chamber, further enhancing reliability.

Building on the same robust design principals as the existing REACH TRSV, the REACH WRSV is rated to 12,500 psi (861.8 bar) at 300°F (148.9°C) to ensure reliable performance in harsh, deepwater environments and it significantly exceeds API 14A Annex B V3 and V2 flow testing.

REACH™

Wireline-retrievable safety valve

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