CASE STUDY

HALLIBURTON

North Sea, UK Sector

eMotion®-LV barrier valve saves 29 hours rig time

Interventions eliminated during packer-setting operations – saving time and removing risk

CHALLENGE

An operator wanted to set a production packer without intervention or control lines to surface to:

- Prevent reservoir damage when opening the barrier valve
- Increase efficiency of the operation and reduce HSE challenges

SOLUTION

The eMotion-LV remotely operated barrier valve allows the completion to be run to depth with the ball open.

- Once installed, can be commanded to close and open on demand
- Delayed open feature allows for preprogramming of the ball opening to help avoid pressure surges

RESULT

- Use of interventionless technique saved 29 hours rig time
- Mitigated HSE risks while increasing efficiency of the operation

Overview

A global operator in the UK North Sea had a well with completion design limitations and desired to set a production packer hydraulically, without the need for intervention.

Halliburton proposed running the eMotion®-LV remotely operated barrier valve, which can be repeatedly opened or closed by computer-controlled remote command, to set theproduction packer. Use of the eMotion-LV barrier valve to set the packer saved 29 hours rig time over conventional techniques, increasing the efficiency of the operation and helping reduce the associated risks.

HAL117583

Challenge

An operator in the UK North Sea wanted to hydraulically set a production packer without intervention. The well conditions and completion design had a few limitations which created some challenges.

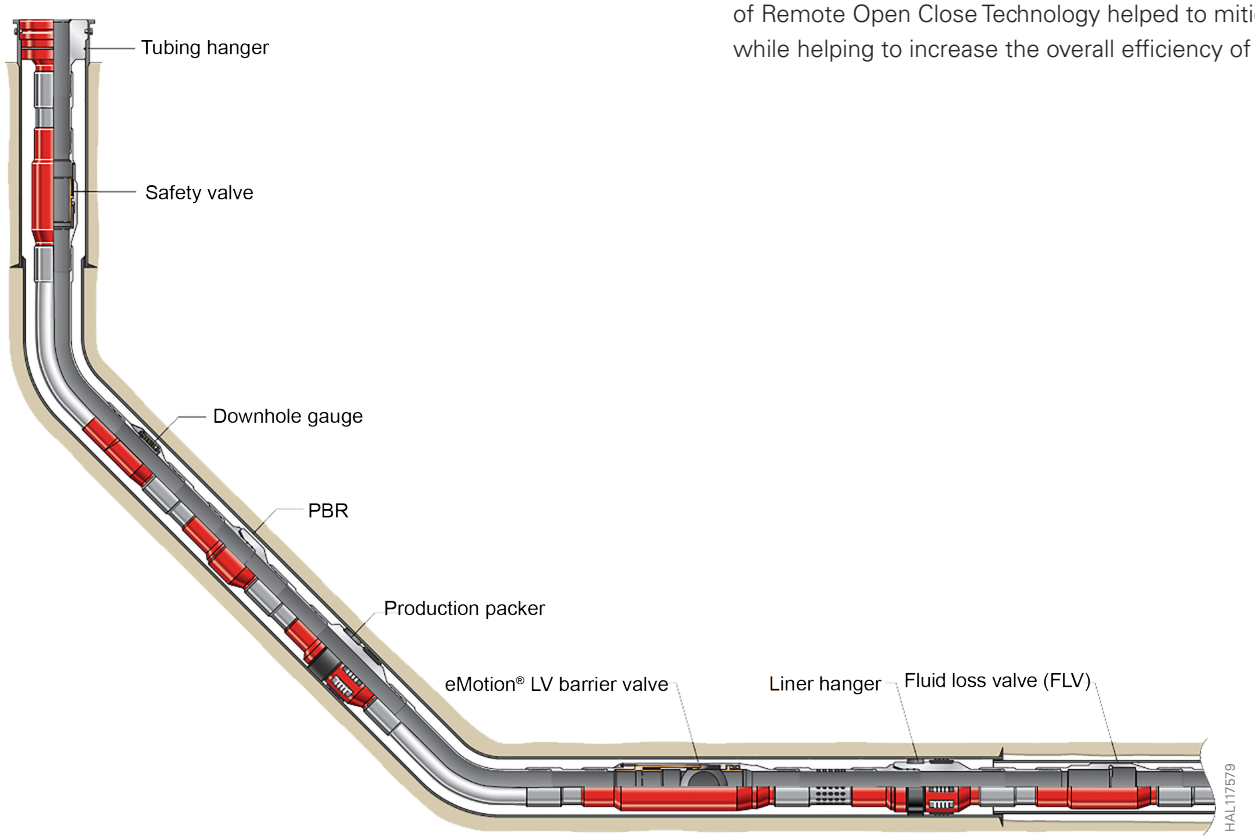
Solution

Halliburton recommended using the eMotion-LV remotely operated barrier valve to set the production packer. The eMotion-LV valve is a computer-controlled, isolation barrier valve that can be repeatedly opened or closed by remote command. It is permanently deployed as part of the tubing where it is used as a full-bore, testable barrier during completion deployment operations.

The eMotion-LV isolation barrier valve was deployed below the production packer as part of the upper completion. It was run-in-hole in the open position (allowing the tubing to self fill) to a depth of16,000 ft at a 90° deviation. Once at depth, the eMotion-LV valve was commanded to close by applying 750 psi for 15 minutes against the Fluid Loss Valve (FLV). The eMotion-LV valve was then used as a barrier to pressure up against for setting the production packer.

With the production packer successfully set and the tubing tested, the eMotion®-LV valve was commanded to re-open by applying 2,250 psi for 15 minutes. This time, a short delay was pre-programmed into the valve, allowing the operator to bleed down the command

pressure before it opened. This prevented a pressure surge that could potentially damage the reservoir and other completion equipment. The open eMotion-LV valve now provided full-bore access through the completion allowing the FLV to be sheared-out before handing the well over to production.



Result

Conventional intervention methods would have required the use of electric line runs consisting of tractors and strokers due to the horizontal architecture. Using the eMotion-LV valve in this application proved to save 29 hours rig time over the conventional techniques and prevented a pressure surge to the FLV in the lower completion, which had a limited pressure rating.

The use of intervention can add additional challenges regarding safety due to the additional personnel that are involved in the rig-up and testing of pressure-control equipment. The introduction of Remote Open Close Technology helped to mitigate these risks while helping to increase the overall efficiency of the operation.

For more information, contact your local Halliburton representative or visit us on the web at www.halliburton.com

halliburton.com

HALLIBURTON