Statoil Saves Substantial Rig Time Using Efficient Conveyance in Deep Water

HALLIBURTON EXTENDED-STROKE DPU® TOOL OFFERS DEPENDABILITY, POWER, AND SAVINGS

GULF OF MEXICO

OVERVIEW
A great amount of planning is required for subsea well interventions. After a rig or intervention vessel is mobilized to location to connect the floating rig to the subsea wellhead with a marine riser, the subsea crown plugs must be pulled out of the subsea wellhead. When conventional slickline tools are unsuccessful in pulling the subsea wellhead plug, other methods must be used. Halliburton offers an extended-stroke downhole power unit (DPU®) tool capable of pulling subsea crown plugs when conventional methods fail.

CHALLENGES
On a job in the Gulf of Mexico for Statoil, the upper and lower crown plugs needed to be removed just below 8,000 ft. The marine riser was filled with 10.6 lbm/gal fluid. In an attempt to pull the upper crown plug, the crew initially ran a conventional pulling tool. While latched into the plug and to assist in pulling, an integrated workover control system (IWOCS) pumped fluid in between the two plugs to decrease the differential across the plug. On two separate attempts, the crew was unable to pull the plug. There were indications that the IWOCS system had failed.

SOLUTION
Halliburton recommended that an extended-stroke DPU tool be used as a contingency plan because it has distinct advantages when used as a crown plug pulling tool. The device can provide anchored power to pull crown plugs in a single run and in reduced time. This setup also has the capability to pull subsea crown plugs that often require greater force than is possible with traditional conveyances without requiring time and resources to reduce hydrostatic pressure. In deepwater environments, reducing time can significantly impact costs because of the extra equipment and logistics necessary to properly operate in those conditions.

RESULTS
» The DPU tool was successfully deployed to retrieve all of the crown plugs
» Substantial rig time was saved avoiding multiple unsuccessful attempts

CASE STUDY
HAL39135

A typical DPU® tool configuration
RESULTS

The DPU® tool proved to be a viable and cost-effective option. The program’s contingency program included a 3.59-in. extended-stroke DPU tool with a crown plug pulling tool, which was deployed and successfully pulled the crown plug. A conventional pulling tool was used again to pull the lower crown plug without success. The DPU tool was then used to retrieve the lower crown plug, and the attempt was successful. This system saved substantial rig time by preventing multiple unsuccessful attempts and uses more efficient conveyance.