



Completion Solutions

Swellpacker® system is used as an anchor to provide torque for liner hanger running tool

Location: Norwegian Continental Shelf

Overview

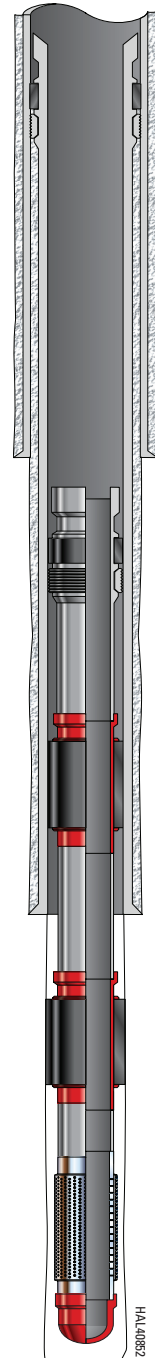
A major customer operating in the Norwegian Continental Shelf planned to utilize a traditional completion method on their well. The method required 4 ½-in. tubing hanging inside the 7-in. parent liner with a screen section in the 6-in. hole. They used Swellpacker® systems to isolate against the unstable formation in the overburden and an additional Swellpacker system was installed inside the liner as a contingency to perforate and bypass the glass plug; just in case there was a failure in trying to remove the plug.

The completion was run to total depth (TD) at 5,028 meters without any issues. The dart used to set the liner hanger was dropped and circulated in to place. Unfortunately, the dart did not seal and no pressure could be applied to set the conventional liner hanger. After several attempts, the liner hanger slips where finally set, but they were still unable to release the running tool and set the packer.

Solution

The decision was made to release the running tool from the liner hanger by rotating the tool counterclockwise. However, due to incomplete activation of the liner hanger and packer there was nothing to support the torque below the running tool; meaning that while attempting to rotate and release, the rotation was transferred through the running tool and the complete string was rotated.

The next plan of action was to wait for the Swellpacker system in the tail pipe below the liner hanger to swell and seal. The Swellpacker system would then act as an anchoring point, supporting the required torque to release the running tool.



CHALLENGE	SOLUTION	RESULT
Could not release liner hanger running tool	Swellpacker® system to support for counterclockwise torque	Successfully released running tool, saving time and money

Results

The local Halliburton Swell Technology engineer utilized the Halliburton SwellSim® simulation software results to determine at what time the Swellpacker system would be ready to support the required torque, in order to release the running tool. Critical swell times for the Swellpacker Oil Swelling (OS) 4.5-in. x 5.55-in. x 6 meter system were discussed on site with customer representative in order to finalize the next course of action. Findings showed that first seal would occur in three days and time to fully set would occur in seven days. After five days, an attempt to release was performed.

The running tool was rotated six and a half turns counterclockwise with a maximum torque of 5.6 kft-lbf. The running tool was successfully released and the contingency operation could now be carried out.

Thanks to the local and global technical support and experience, Halliburton was able to repurpose our zonal isolation Swellpacker systems to perform an emergency release of the liner running tool, saving the customer significant time and money.



↑ SYSTEM
DOUBLE
THE USE