Modified Swellpacker® Isolation System Helps Operator Simplify Workover Operations

HALLIBURTON HELPS OPERATOR RE-COMPLETE WELL WHILE SAVING TIME AND MONEY

MALAYSIA

OVERVIEW

Faced with a damaged tubing-retrievable safety valve in a dual well, one operator in Malaysia came to Halliburton looking for a solution to re-complete their wells without wasting an excessive amount of time and money. Halliburton Swellpacker® systems were able to do just that. They sealed the well and helped the operator avoid having to pull and replace the existing completion.

CHALLENGES

A major operator in Malaysia wanted to work over and re-complete the long string from a dual completion in order to replace a damaged tubing-retrievable safety valve. One of the 3 1/2-in. completion tubing strings was reconnected to surface to allow for production through the long string. This operation would help eliminate the need for a complete workover, and the dual RDH completion packer could remain in place, resulting in time and cost savings for the overall operation. The anticipated differential pressure across the tool was expected to be 2,200 psi.

SOLUTION

Halliburton proposed the use of a redesigned Swellpacker® isolation system to allow for greater inward swelling and less swelling outward. The inward swelling element would create a seal on the production tubing, and the outward swelling rubber would create a seal on the body of the overshot tool. The scoop of the overshot tool was designed to facilitate swallowing the stump to help eliminate the need for rotation or reciprocation going over the stump.

RESULTS

The modified Swellpacker systems allowed the operator to reliably re-complete the wells without the need to pull and replace the existing completion, therefore saving a significant amount of time and cost.

Since this was the first application of a Swellpacker system where most of the swelling and differential pressure requirements were focused on the inward swelling of the element, a full scale test with the actual tool was conducted to help ensure the required pressure rating was achieved. The pressure test indicated the tool was capable of holding >3,000 psi, well over the required 2,200 psi pressure rating.

The two systems were installed successfully, and as such, this solution has been used for additional wells with similar issues.