

Halliburton PinPoint Injection (PPI) Packer Isolates Multiple Zones in a Single Trip

RECORD TREATMENT LENGTH REDUCES OPERATING COST

GULF OF MEXICO

CHALLENGE

- » Provide effective treatment options for an operator in the Gulf of Mexico
- » Isolate multiple, lengthy intervals in a single run

SOLUTION

PinPoint Injection (PPI) packer, in order to:

- » Reduce trips in hole
- » Isolate and perform step rate tests in just one trip per each zone

RESULTS

- » Reduced trips in the hole from four or five to just one trip
- » Achieved successful installation and retrieval
- » Saved time and costs, while also avoiding NPT

OVERVIEW

An operator working offshore in the Gulf of Mexico wanted to evaluate the condition of three zones that had been previously perforated in 2015. Understanding whether or not the perforations were plugged off was a critical piece of information that was needed prior to running the completion.

Halliburton Completion Tools suggested using its PinPoint Injection (PPI) packer in order to isolate and perform step rate tests across each of the zones individually in just one trip. This recommendation from Halliburton considerably reduced the number of runs required, saving operational time and well cost.

CHALLENGE

This Gulf of Mexico operator needed to further improve its operational efficiencies. They asked Halliburton to perform three step rate tests on the same run in-hole to evaluate the condition of perforations that were shot three years previously.

Traditionally, the approach taken would be to run retrievable bridge plugs to isolate each zone independently and perform injection tests between the packer and bridge plugs – thus requiring three runs. Adding to this challenge was the fact that the distance between the two packer elements was 268 feet (82 meters).



SOLUTION

Halliburton recommended its PPI packer – a retrievable, treating, straddle packer that features a space-out between packer elements. This space-out helps to ensure that the maximum number of perforations within a long producing interval can be broken down to accept stimulation fluids uniformly. Once the entire zone has been broken down individually, a large-scale treatment can be performed more effectively. Adding extensions between elements of the PPI packer allowed for lengthy intervals to be injected in a single run. This operation required the space-out to be 268 feet (82 meters), which was a record length for the Halliburton PPI packer.

CASE STUDY

RESULT

Once the packer was run to depth in the first perforation zone, the operational sequence was to set the packer, perform step rate tests, unset the packer, and pull up to the next test depth. Again, the same sequence of operations was completed and then repeated until the third and final zone. All three zones were successfully tested to determine the condition of the perforations from 2015 – a key objective from the customer who wanted to understand the well conditions across each perforation zone prior to running the completion. This successful operation also highlighted the fact that record space-outs between elements would not have a negative effect on the performance of the Halliburton PPI packer, and also demonstrated its versatility. Using the PPI packer also enabled the operator to avoid non-productive time (NPT) and save considerable time and money.

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