



Technology in Action

SIM Plug set and retrieved in horizontal wells using tractor and stoker



SIM Retrievable Bridge Plug

Testing facility, Onshore Malaysia

Technical Challenge:

To evaluate an e-line deployed well tractor, well stoker, and slickline configuration toolstring for mechanical well interventions in highly deviated or horizontal wells.

Well Type:

Test well - 3-1/2" and 2-7/8" horizontal completion tubing.

Peak Solution:

SIM Retrievable Bridge Plug and SIM Running Tool.

The Challenge:

In high deviation wells, mechanical well intervention by slickline is often challenging. A Surface Integration Test was conducted to determine the feasibility of mechanical intervention work in 2-7/8" and 3-1/2" tubing using a well tractor and stoker run on e-line.

A SIM Retrievable Bridge Plug (SIM Plug) using a third-party tractor and stoker tool was run through a horizontal completion that included a Gas Lift Mandrel, Sliding Sleeve and X Nipple. The objective of the test was to simulate downhole horizontal conditions and to confirm the Plugs could be successfully run, set and retrieved on e-line using the tractor and stoker.

Considerations:

The following key requirements and concerns were highlighted:

- Plug must provide reliable and permanent isolation of the required zone
- Solution to be reliably set and retrieved
- Solution must be quick and easy to deploy on e-line

For more information please contact: info@peakwellsystems.com

Summary:

The 3-1/2" SIM Plug was successfully run horizontally through the Gas Lift Mandrel, Sliding Sleeve and X Nipple to the correct setting depth using the tractor.

The stoker tool was activated upwards then downwards to activate the J slot mechanism on the SIM Running Tool. This enabled the slips to engage within the 3-1/2" tubing. Downwards force was then applied by the stoker to successfully set the SIM Plug.

The stoker was used to take a check pull to confirm the SIM Plug was correctly set, and then applied enough force to release the SIM Running Tool allowing successful retrieval to surface.

To retrieve the SIM Plug, a MAT sub, GS Pulling Tool and pulling probe were run in hole on the tractor and stoker until the GS located the top of the SIM Plug.

The stoker was activated to unset the SIM Plug; the tractor then pulled the SIM Plug out of the completion through the Gas Lift Mandrel, Sliding Sleeve and X Nipple successfully to surface.

The test was repeated with a 2-7/8" SIM Plug in a 2-7/8" horizontal completion with success.

Value to Customer:

The test proves that Peak's SIM Plug's can be run on e-line and mechanically set in horizontal completions using a third-party tractor and stoker to provide the mechanical force required to set the SIM Plug in the tubing.

The test also confirmed that the third-party tractor and stoker could provide the required mechanical force to unset and retrieve the SIM Plug.