



LIVE WELL CONNECTOR

Underbalanced Deployment of Screens

Do Not Kill Your Well

BACKGROUND

Four existing multi-lateral horizontal gas wells located in the Southern North Sea were initially completed barefoot but production eventually ceased due to blockage of the production conduit by reservoir solids (sand and rocks). To mitigate this problem, 2-7/8" pre-drilled liner pipe made up in lengths of up to 200m was to be deployed on wireline and coiled tubing into the live wells. Killing the wells had in the past caused significant reservoir damage and production loss and had to be avoided.

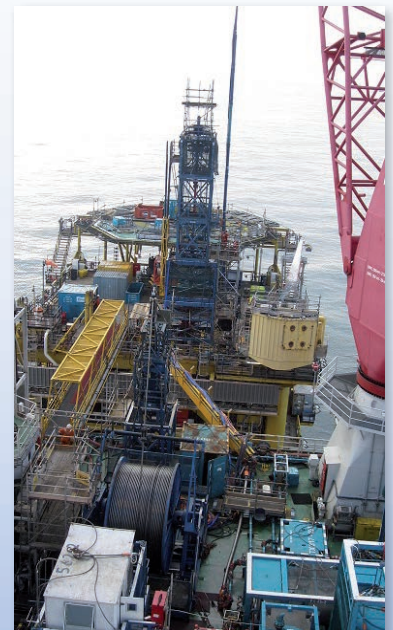
OBJECTIVE

The objective was to install 2-7/8" pre-drilled liner pipe with lengths of up to 200m on wireline and coiled tubing into the four live wells.

EXECUTION

- The Live Well Connector™ was specially designed to make up joints inside a pressurized BOP stack.
- Wireline Lubricator was used to deploy each pipe separate, step by step.
- Pipes were connected to each other inside the pressurized BOP stack.
- Special BOP inserts were made and used to tag, centralize and hold the connectors inside the BOP stack.
- Operations were run from a lift-boat.

- After the liner assembly was made up inside the BOP stack, the assembly was run into the well using coiled tubing and was suspended on a hydraulically set packer inside the bottom of the 4,5" production tubing.



RESULTS

- All four wells were successfully completed underbalanced with pre-drilled liners using Live Well Connectors.
- On average, deployment took three days. This is exclusive Rig-up and Rig down.
- Operations were sensitive to weather because of the high BOP/Lubricator stack-up.
- Operations were run without any incidents or accidents.
- The Live Well Connector performed well and the customer was very satisfied with the performance.