

Case study: Norway

Innovative e-line solution provides time, risk and cost savings

When preparing a multi scope coiled tubing intervention campaign which included straddle packer deployment, the client challenged the service suppliers to develop a solution that would deliver efficiencies to the overall operation. As it stood, the conventional coiled tubing straddle deployment approach would need 9 runs to install the required 100m straddle assembly. This was determined by the rig up height availability associated with the coiled tubing rig up.

Solution

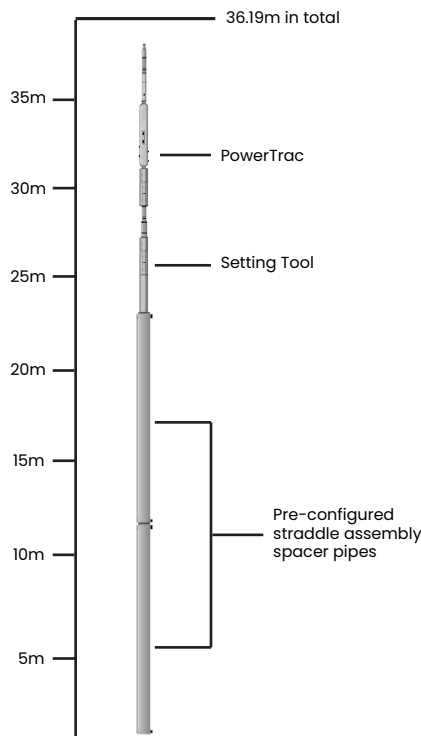
In collaboration with the straddle packer supplier, the possibility of running and installing the straddle assembly via an electric line deployed option was evaluated. In conclusion, our team proposed an innovative e-line deployed solution utilizing 7/16-in. cable and a PowerTrac 318 tractor to provide the required force to sting in the various straddle components and spacer pipes at the target well depth. Furthermore, the tractor's real-time tension/compression readings would be used to ensure precise and controlled in-well assembly of the straddle packer elements and spacer pipes as well as to provide a precise measurement of the 1,000 lbs over-pull applied at working depth to verify the secure latch of these components.

Deploying on e-line also provided more rig up height which enabled some surface assembly of spacer pipe sections, which would lead to fewer runs in hole to complete the full straddle deployment when compared to coiled tubing. As this was the first time such a technique was to be used, thorough pre job tests and simulations were carried out to optimize the deployment tool string design and to verify that a 36 meter tool string assembly could traverse the well trajectory.

Results

The wireline pressure control equipment was rigged up above the coiled tubing quick latch on the rig floor, minimizing the change-over to e-line for the straddle deployment phase of the intervention campaign. The e-line deployment of the 100 m straddle assembly components was completed in only six runs compared to the 9 runs required by coiled tubing, resulting in a time savings of almost two days. In addition, during the e-line deployment of the straddle packer assembly the coiled tubing crew were working in parallel preparing the subsequent coiled tubing job, hence providing further cost savings and efficiency gains for the client.

E-line tool string configuration for straddle assembly deployment



Challenges

- Deliver an e-line deployed solution for a multi-scope intervention which included a straddle packer deployment
- Conventional coiled tubing straddle deployment approach would need nine runs to install straddle

Results

- Wireline pressure control equipment was rigged up above the coiled tubing quick latch, minimizing time to change to e-line
- E-line deployment of 100m straddle assembly components completed in six runs, compared to nine by coiled tubing
- Time saving of almost two days
- During e-line deployment, crew were working parallel preparing subsequent coiled tubing