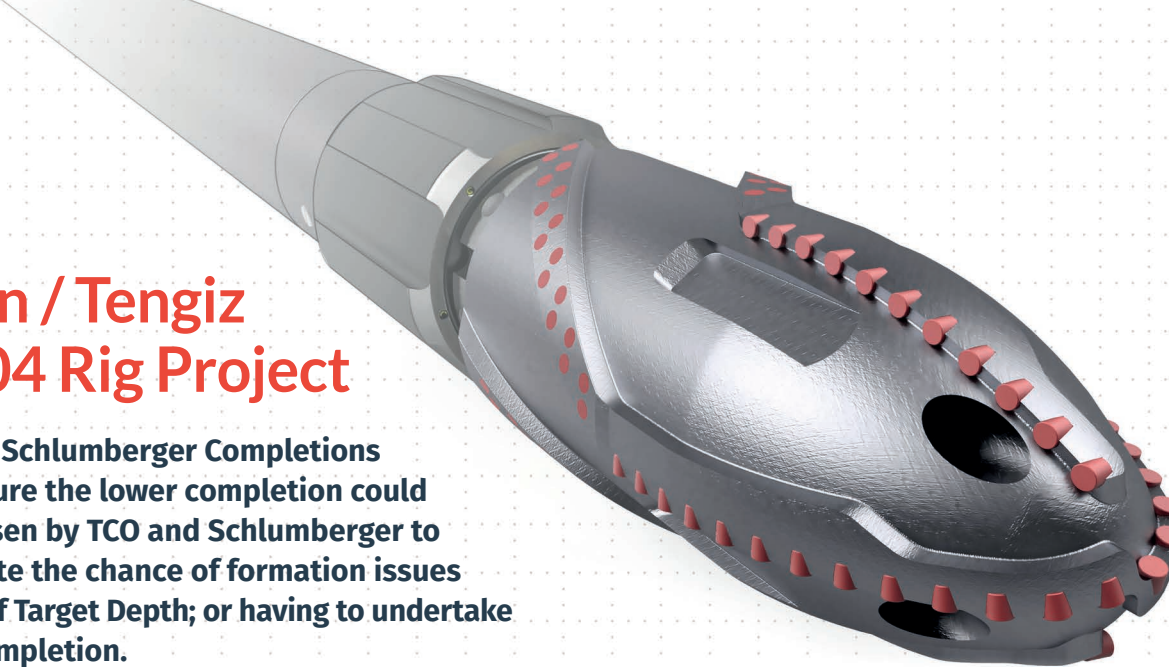


Onshore Kazakhstan / Tengiz Provence Nabors 104 Rig Project

On a Tengiz Chevron Oil (TCO) project, Schlumberger Completions required a de-risked approach to ensure the lower completion could reach Target Depth (TD). DCT was chosen by TCO and Schlumberger to provide reaming tools to help eliminate the chance of formation issues leading to a completion deployment off Target Depth; or having to undertake remedial work then a re-run of the completion.



THE CHALLENGE

Wells within the Tengiz Provence often pose challenges when deploying lower completions due to challenging geology and high-pressure levels below the salt layer.

A potential problematic open hole 6 1/2" section was identified in well T7254. In order to reach TD, a reaming trip was needed to work through several tight spots that were identified.

THE SOLUTION

Schlumberger and TCO realised that conventional technology would not have been able to reach TD and tackle this complex well.

DCT's TurboRunner™ was chosen to help address the tight spot issues, work through obstructions, successfully reach a TD of over 5190m and ultimately de-risk deployment.

The TurboRunner™ is a high-speed reaming system that enables drilling teams to land completions and liners at TD without the need for surface rotation. Its pioneering design protects the completion from vibration, reactive torque and pressure spikes.

By using low circulating pressures, the TurboRunner™ ensures completion teams access all planned reserves and the risk of potential damage to equipment is minimised, even in complex wells.

The TurboRunner™ can ream through obstructions that conventional technology cannot, resulting in fewer wiper trips.

THE RESULT

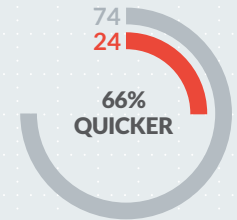
Because the TurboRunner™ allows formation issues to be reamed and passed without the need to rotate the string it allowed critical zonal isolation equipment to be landed on depth.

Early attempts to deploy the completion saw numerous challenges. The decision was made to utilise TurboRunner™ systems to help alleviate deployment challenges, which led to a much higher success rate of landing the completion to depth. The tool was utilised on 11 runs in total.



IN NUMBERS

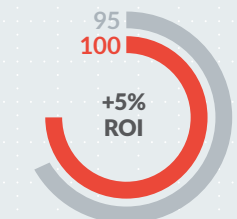
Conventional Technology
TurboRunner™



48 HOURS SAVED
24 hours rather than 74 hours to deploy the completion whilst avoiding additional wiper trips and completion re-runs.



66% TIME SAVED
TurboRunner™ reamed through multiple tight spots in the well to reach TD in one day rather than three.



100% ROI versus 95% ROI
Reaming was used for over 40m to achieve casing deployment to 100% of TD, ensuring maximum ROI over the production interval.