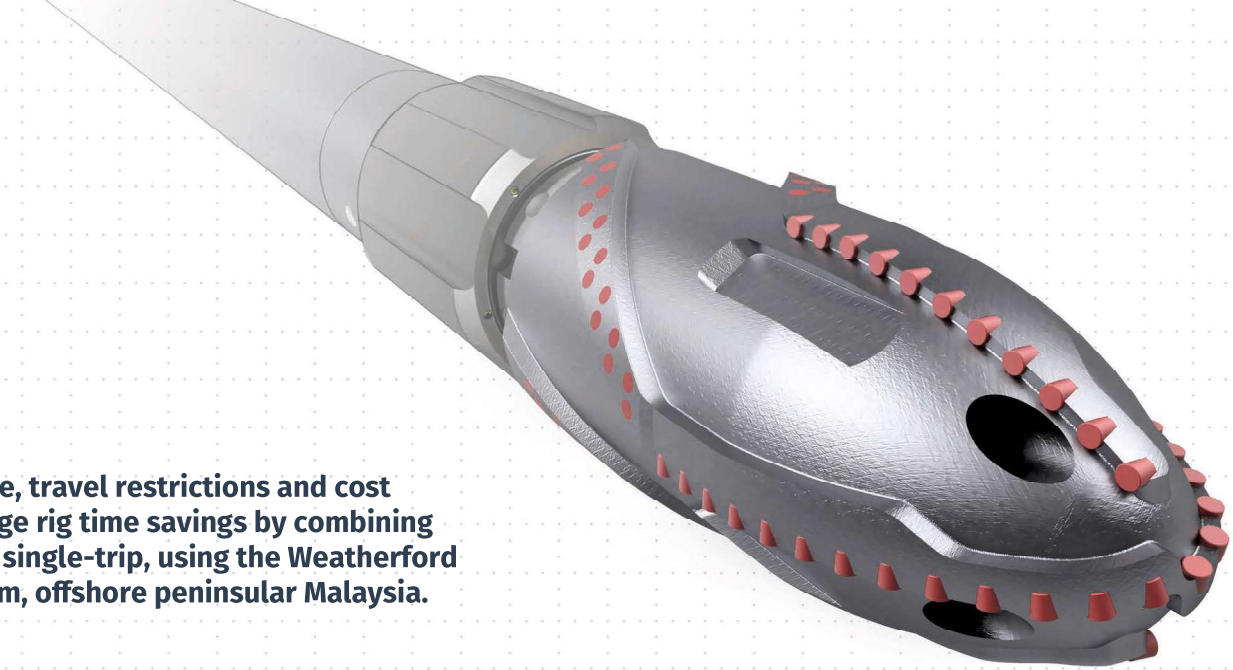


Weatherford TR1P, Malaysia

During a period of low crude oil price, travel restrictions and cost sensitivity, a client sought to leverage rig time savings by combining upper and lower completions into a single-trip, using the Weatherford TR1P™ single-trip completion system, offshore peninsular Malaysia.

THE CHALLENGE

To deploy 7" stand alone screens, with 4-1/2" inner string (using a 3-way sub) and 4-1/2" production tubing to surface into 8-1/2" open hole, totalling a depth of 4,769m, including 545m of open hole below a 9-5/8" casing shoe at 4,224m.

Completion to be undertaken in one single trip whilst overcoming the risk of hang up without rotating string at any point

THE SOLUTION

A TurboRunner™ turbine powered reamer shoe was selected to run on the end of the single-trip completion string to provide the ability to ream at high speed without rotation from surface whilst minimising vibration, reactive torque, and weight on reamer. This mitigated damage to the completions string and safe guarded against packer pre-set.

Having the ability to ream to target depth, has the potential to eliminate up to 5 days of rig time of having to POOH the completion, make a wiper trip and re-run the completion.

THE RESULT

The completion was run to depth, reaching target depth first time.

Tight spots from formation creep, cutting beds, ledges and other well bore irregularities were recorded at several intervals, but not enough to warrant activating the TurboRunner.

> *TurboRunner provided the insurance we needed to feel confident to take the controlled risk of combining upper and lower completions for deployment in a formation with a challenging history. We look forward to the further use of TurboRunner as we expand our program for deployment of single-trip completion systems.*

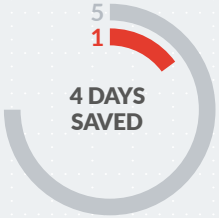
Senior Completion Engineer - Malaysia National Oil Company

DEEP CASING TOOLS

IN NUMBERS

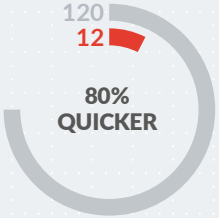
Conventional Technology

TurboRunner™



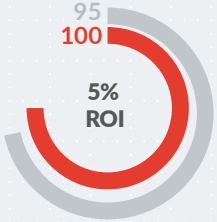
ACHIEVED TD FIRST TIME

Without need for further hole cleaning or wiper trips with conventional technology.



96 HOURS SAVED

on additional runs to achieve TD. Avoided extra costs in case of stuck completion leading to side-tracking, fishing or re-drilling.



ADDITIONAL PRODUCTION

An additional 5% ROI was achieved as the TurboRunner™ enabled the completion to reach TD.