Bulletin News

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Introduction

In the Oil & Gas industry, the maiden utilization of any new technology, regardless how appealing or useful it may seem, is always an arduous endeavor. When presenting **NeoTork** to many players over the past months we have systematically been asked the same question: "Have you run it yet?" Followed by the usual comment: "Come back to see us when you have run data..."

Today, we are very excited to tell you that **"yes"** we have now run **NeoTork** on a **North Sea job** with more details provided here below.

In this bulletin you will also learn about two new features that have now been incorporated in **NeoTork** to improve its efficiency and resilience.

Beginning a new bulletin is always a commitment to continue feeding readers with new information. This is certainly our intention and we plan to circulate regularly some updates on **NeoTork** progresses.

"4 RUNS – 167 HOURS OF HARSH CONDITIONS USAGE"

First Job

Intervention was required on a well for a major North Sea Operator because screen damage was suspected in the lower completion. It was decided to install smaller OD sand screens inside the existing screens to enable returning the well to production. Previous e-Line operations had identified an obstacle at 16,720ft presumed to be either the location of a valve that had not cycled properly or alternatively, a Barium Sulfate scale deposit causing the restriction.

It was decided to run Coil Tubing to first investigate the cause of the hold up and then mill through it, regardless of its nature.

NeoTork tool was included in the BHA as severe conditions were expected in this deep and horizontal well. In order to safeguard the coil and the well integrity, coil tubing was run in hole pumping only ½ the nominal flow. Every time an obstacle was identified, the coiled tubing was picked up and flow was increased to normal parameters (2 Brl/min) until the obstruction was cleared.

This process, intended to protect the coil and the well had the disadvantage to cause multiple stalls that, for the majority, occurred when low flow was pumped. With such low flow, the motor was not able to produce the required torque and stalls were unavoidable. A total of 4 runs were performed, using a 3.9" OD mill in a cumulated 167 hrs. of downhole operations.

The coil intervention was interrupted when the non-rotating stabilizer located in the assembly below **NeoTork** snapped leaving part of the stabilizer, PDM and mill down the hole. **NeoTork** also suffered during this incident and the steel cables were severed as a result of the severe back spin experienced at the moment of the twist-off. During post run inspection, we identified that it was likely that additional back-spins had already been experienced by **NeoTork**, those presumably occurred during each stall thus weakening the cables.

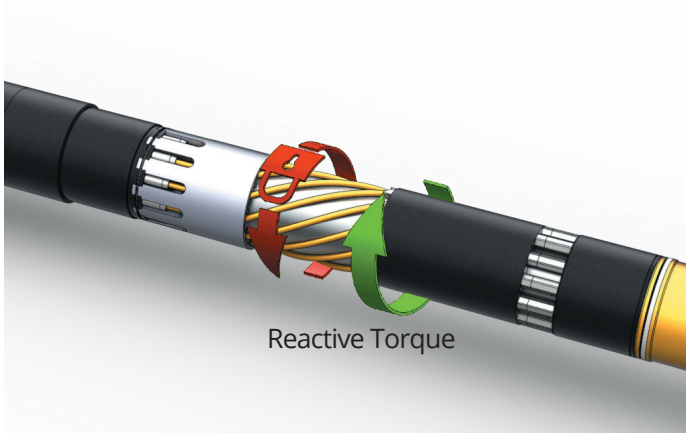
Based on this experience and in accordance with our culture of continuous improvement, we have conceived a new feature that will suppress all risk for cable to suffer back spins related damage. This upgrade is presented in the back page of this bulletin.

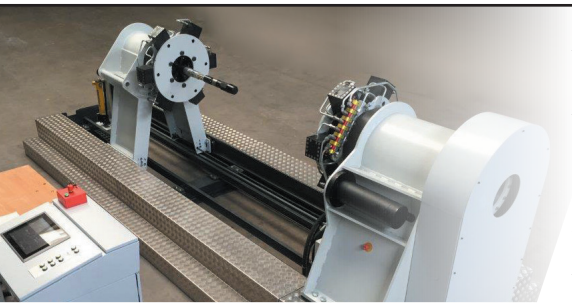
Although the conclusion of this operation has been a bit unfortunate for unrelated circumstances, **NeoTork** had the opportunity to demonstrate its value and strength in these very challenging conditions. The effectiveness of our tool has been difficult to fully assess as still some stalls were experienced but most of those occurred when low flow was pumped. The general feeling from the user though is that without **NeoTork** more stalls would have been experienced and the whole operation, until the time of failure, would have taken more time.

New NeoTork Upgrades

The recent test in the North Sea has illustrated that **NeoTork** can be, in some cases, exposed to below BHA backspin, forcing the cables to work in an inappropriate manner. The Neo-Oiltools engineering team has been swift to react to the challenge and has already designed a new assembly, that will be incorporated to **NeoTork**, in all its sizes, to block anti-clock wise rotation beyond the set limit.

This new component, connected onto the hexagonal section located at the top of the main shaft, will have two keys that will allow clock wise rotation but that will butt on a shoulder should any anti-clock motion from the bottom BHA be generated beyond the natural limit allowing the tool to return to its full length.





ACT Unit

As any downhole tools, **NeoTork** requires a breakout unit to be assembled. At Neo Oiltools, we decided to go one step further and have therefore designed a machine to allow, not only the assembly, but also the calibration and testing of NeoTork. We have named it the ACT. This specifically designed unit was assembled in our Troisvierges facility.

It has been operating since September 2015 and has been already utilized to prepare the 4 ¾ and 6 ¾ tools that are currently on their way for field applications.

Upcoming Catoosa Test

An important test will be conducted mid-December in the USA on the Catoosa test site. During this operation we will drill an entire 8 ½ section, alternating runs with and without **NeoTork** to collect comparative information.

The test will be monitored both on surface as well as downhole where two instrumented subs will be located below and above **NeoTork**. These subs will remain in the BHA while drilling without **NeoTork** thus delivering truly comparative data in sections of same strength and nature.

It is important to mention that this test is receiving the support from both an international major oil company, as well as from an important service provider. Both these companies will assist with the test engineering and supervision but will also qualify the data that will be published as a result of this test.

The plan is to produce a joined final publication reporting the tests' findings in terms of **NeoTork** proven effectiveness to mitigate both down-hole vibrations and slip-stick.

Pressure Warning System

During our numerous **NeoTork** presentations we have often been asked the question of what would happen if the cables break?

We remind that in such unlikely occurence **NeoTork** is conceived to retain its pulling capacity and thus will not cause a lost in hole event.

While a cable breakdown should be generally relatively easy to detect from surface, there might be circumstances in which the signs of failure will not be that evident to interpret and this could result in some lost time.

To address this issue, we have now incorporated a new simple feature to **NeoTork** that will create a pressure indication clearly visible from surface should this scenario take place, indicating the need to pull out of the hole.

From now on, all **NeoTork** tools, regardless of the application, will be supplied with this device and all existing inventory will be upgraded.