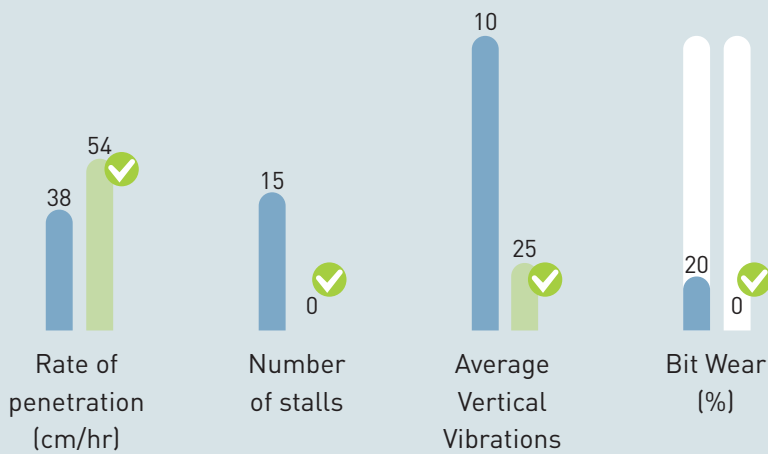


NEO-tork Torque Management, Optimized Performance

Milling made easy!

BRIDGE PLUG MILLING COMPARATIVE TESTING

- Without NEO-tork
- With NEO-tork



Surface Test - Bridge Plug Milling

The comparative drilling test was done on an actual bridge plug set inside a casing. Our aim was to reproduce the milling of pressure plugs in a horizontal application as used in a shale development. As well as performance we also wanted to assess ROP and bit wear. Both drilling systems (identical except for NeoTork) were pushed to their limit to achieve maximum ROP.

The table below is explicit, however the difference in ROP doesn't take into account what would occur in a normal field application. On the test bench, stalls are immediately detected and remedied within a few seconds, while in a field it could take up to an hour before drilling can resume.

NeoTork delivered a much smoother run with no stalling. The difference in the level of vibrations, noise, bit wear and cutting size was impressive. The assembly with NeoTork drilled effortlessly, whereas the system without NeoTork experienced continual hammering.



Mill pictures after the test



Without NEO-tork

With NEO-tork



Without NEO-tork

With NEO-tork

TEST RESULTS

	Without	With
Rate of penetration (cm/hr)	35	54
Number of stalls	15	0
Average vertical vibrations	95	25
Bit Weat (%)	20	0

USING NEOTORK IN MILLING OPERATIONS MEANS:

- Faster milling time
- Reduced mill failure
- Lower operating costs
- Reduced number of stalls
- Less coil and downhole equipment damage