**CASE STUDY**

**Neyrfor Turbodrill Delivers an ROP 55% Greater Than That of a Conventional High Speed Downhole Motor**

Neyrfor turbodrill 4¾-in T1XL MK1 proves to be the conventional directional drive system of choice.

**CHALLENGE**
To compare the performance of a Neyrfor* turbodrill against a conventional high speed downhole motor.

**SOLUTION**
Use a Neyrfor turbodrill 4¾-in T1XL MK1 in a West Oklahoma Operator’s Colony Wash horizontal well in Washita Co., Oklahoma.

**RESULTS**
The turbodrill demonstrated a 55% improvement in ROP despite drilling the more challenging section, and is the preferred drive system.

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**Neyrfor 4¾-in T1XL MK1 vs. conventional high speed PDM**

In a West Oklahoma Operator’s Colony Wash horizontal well in Washita Co., Oklahoma, a Neyrfor turbodrill 4¾-in T1XL MK1 was tested against a conventional high performance downhole motor. Both were fitted with 6¼-in Kinetic* diamond impregnated bits which are extremely effective with turbodrills, as well as high speed PDMs. The turbodrill had the more difficult challenge of drilling off the openhole whipstock and building the majority of the 14°/100-ft curve. It had a maximum bit RPM of 1,674, while that of the PDM was 1,244.

**Neyrfor turbodrill remains the drive system of choice**
The turbodrill outperformed the high speed PDM by 55%, with an ROP of 10.02 ft/h vs. 6.46 ft/h. In 64.5 h the Neyrfor turbodrill footage was 646 ft, compared to 420 ft achieved by the PDM in 65 h.

With over 60 directional runs in the area for a West Oklahoma Operator, Neyrfor remains the preferred drive system, drilling the curve three to four days faster and extending the lateral 2.66 times further per run than conventional assemblies.