

Neyrfor Turbodrill and Smith Bits Kinetic Bit Save Over USD 1 Million on Horizontal Interval

Drilled 506 m, the longest single run through the Nikanassin formation

CHALLENGE

Reduce the number of days, runs, and bits required to drill a 1000 m horizontal interval through the abrasive Nikanassin formation.

SOLUTION

Use a 4 3/4-in Neyrfor T1XL directional turbodrill with a Smith Bits Kinetic* K505 diamond-impregnated bit.

RESULTS

Saved 21 days and over USD 1 million by drilling the interval with just two bits and trips.



Horizontal interval in hard formation required multiple runs and bits

An operator required 1000 m horizontal intervals drilled in the Nikanassin formation of Western Canada. Because of the abrasive nature of the conglomerate formation, comprised of hard sandstone, chert, and shale, an average of 13 roller cone bits were being used per well; this equated to about 77 m drilled per bit.

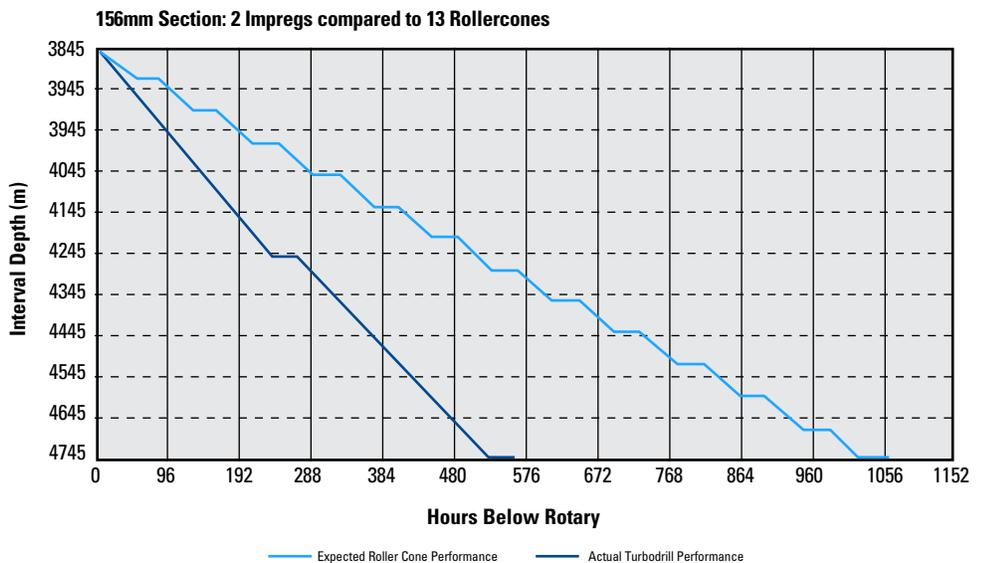
Neyrfor turbodrill and Smith Bits Kinetic bits offered durability

A 4 3/4-in Neyrfor T1XL directional turbodrill and a 156 mm Smith Bits Kinetic K505 diamond-impregnated bit were selected to drill the lateral section. The turbodrill has an established record of superior durability, power output, and energy efficiency while remaining on bottom for extended periods of time. It also offers exceptional toolface control. Kinetic drill bits are designed for hard, abrasive formations. With PDC cutters, diamond-impregnated matrix materials, and grit hot pressured inserts, the bits deliver optimal durability and ROP.

Drilling the entire interval in two runs saved over USD 1,000,000

506 m were drilled in the first run at an average ROP of 2.1 m/h. This set a new record for the longest single run through the Nikanassin. The roller cone bit run immediately before had delivered only 60 m at 1.3 m/h.

A Kinetic K505 bit was used for the next run as well, to confirm its ability to resist wear even under extreme conditions while maintaining an acceptable ROP. 491 m were drilled at a slightly slower rate of 1.9 m/h, but still better than most roller cone bit runs. The client saved 21 days of rig time and over USD 1 million.

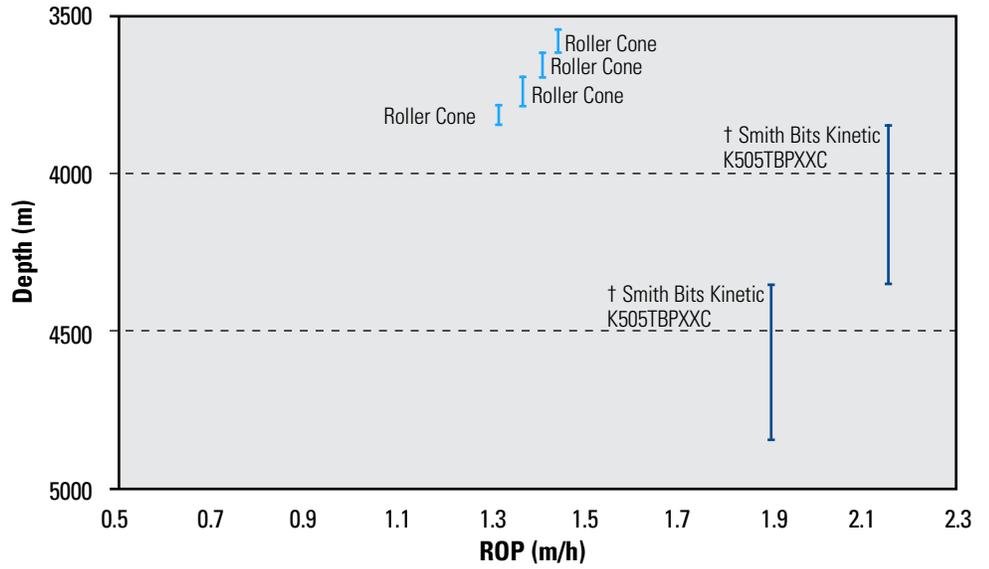


CASE STUDY: 21 days of rig time saved on horizontal interval, Western Canada

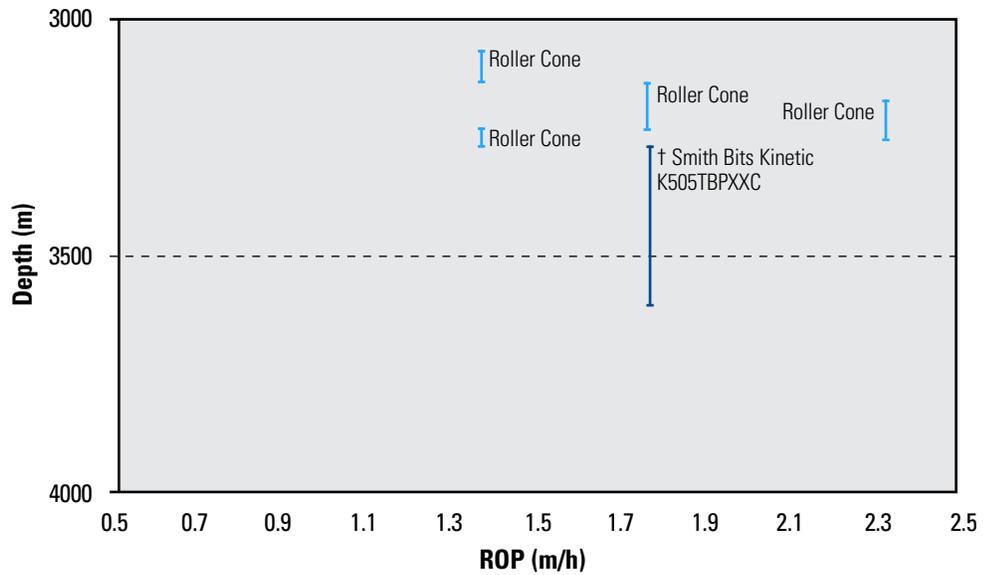


The Smith Bits Kinetic impreg bit set a new record with the longest single run through the Nikanassin. The next run utilized the same bit model to confirm the bits resistance to extreme wear while maintaining an acceptable ROP. †

Depth vs ROP
Well #1 / 156mm Section



Depth vs ROP
Well #2 / 156mm Section



Neyfor 6 1/2-in TSXL turbodrill and 156 mm K503 Kinetic diamond-impregnated drill bit as a drilling system are engineered for hard and abrasive formations.

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