

Operator Improves ROP in High-Impact, Abrasive Interbedded Layers, Haynesville Basin

StrataBlade bit improves average pad ROP by 28% compared to the offset performance of conventional bit

An operator in the Haynesville Basin of East Texas used a 9 7/8-in StrataBlade* concave diamond element bit to improve shoe-to-shoe performance in an intermediate section.

Reduce bit runs through interbedded layers

The operator wanted to reduce bit runs while drilling an intermediate section through the interbedded and abrasive formations of the Travis Peak and Cotton Valley geological layers. Premature cutter wear and fatigue often result in two to three bit runs when using conventional PDC bits. Consequently, ROP is lower and the BHA must be pulled before reaching interval TD.

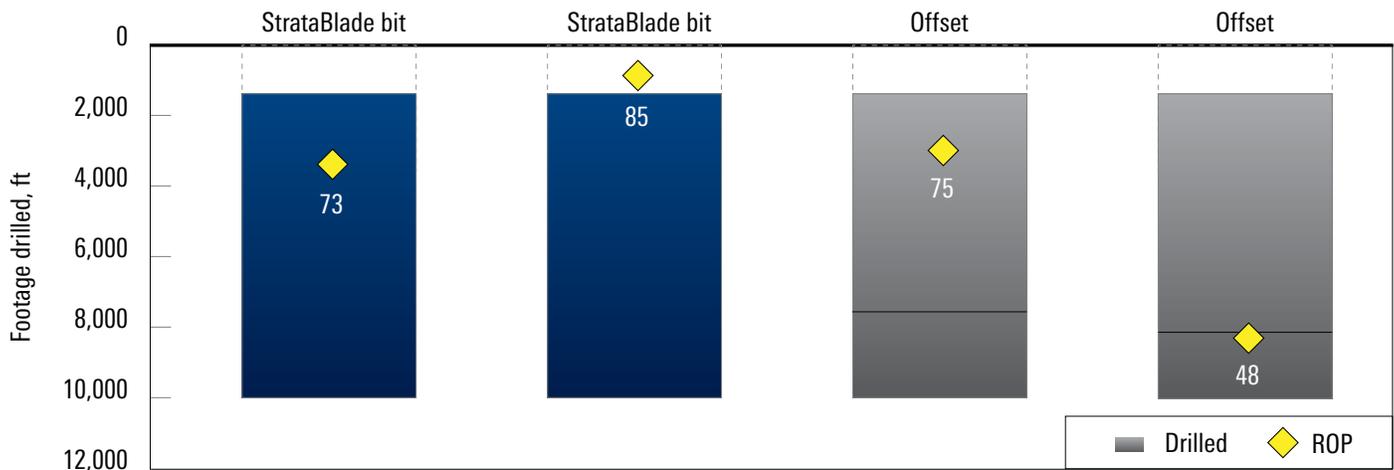
Endure abrasive and impact-prone layers

Schlumberger specifically developed the StrataBlade concave diamond element bit to withstand the abrasive and high-impact nature of interbedded layers. The signature geometry of Strata* concave diamond cutting elements is the concave feature with a pointed ridged tip that decreases the effective cutter back-rake angle, which cuts deeper into rock and increases point loading. This significantly improves cutting efficiency and sustains a higher instantaneous ROP with the same input energy.

Increased ROP through high unconfined compressive-strength formation

The StrataBlade bit endured the abrasive and high-impact layers while drilling the intermediate layer, enabling the operator to eliminate additional bit trips and improve ROP by an average of 28% compared with direct offsets.

Bit Performance



The StrataBlade bit achieved an average ROP increase of 28% compared with offset average performance.

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