

Case Study

New Cutter Technology Delivers Record Performance

Operator Record – Fastest 2-mile First Bench Three Forks Lateral

APPLICATION

1st Bench Three Forks Lateral
Shale/Limestone/Dolomite
Moderate UCS/Abrasion/Thermal
Moderate/Low Impact

TECHNOLOGY

VENOM Cutter Technology
COBRA Shaped Cutters

LOCATION

Dunn County, North Dakota

CUSTOMER CHALLENGE

Complete entire 2-mile lateral interval in one-bit run but with enhanced cutting efficiency with added durability to improve Rate of Penetration and reduce the overall time in the hole.

VAREL SOLUTION

Backed by the methodology of VES's VENOM Cutter Technology, Applications Engineers strategically placed COBRA shaped cutters into the previously successful baseline F613P2-F bit design. The baseline bit utilized planar cutters in the primary row and was run with success within proximity to this location.

Utilizing in-house proprietary software and analyzing previous dull conditions VES determined the optimal locations to place the cutters for enhanced cutting efficiency.

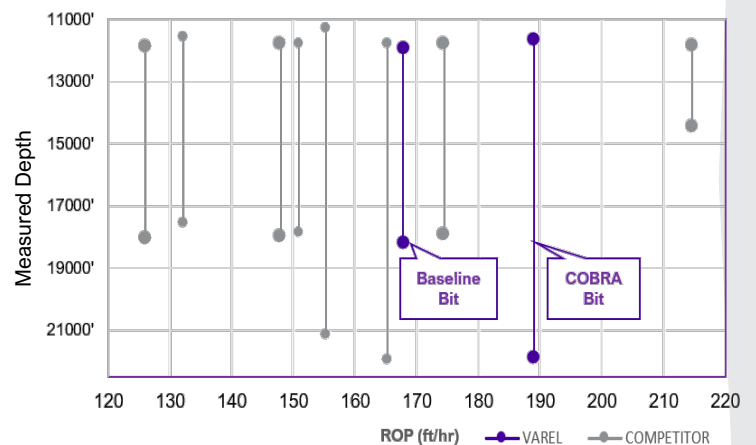
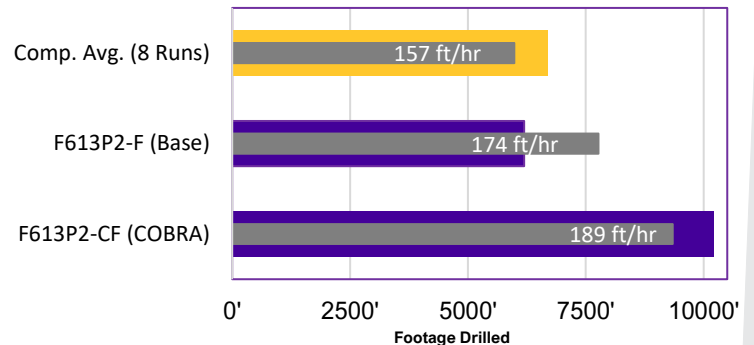
COBRA PERFORMANCE

- The baseline bit with planar cutters (tripped for DTF) was outperformed by the COBRA cutter version by 4,014' and 15 ft/hr.
- Of the 10 drill-out runs in the area, the VES F613P2-F and F613P2-CF bit runs outperformed the competition. The COBRA bit run outperformed the offset run average by 53% for Footage Drilled and 17% for Rate of Penetration.

CUSTOMER VALUE

The bit completed the 2-mile lateral interval in an **Operator Record** for this formation at **54 total hours. That equates to 7.5 hours or 13% faster than the previous record.** This operator has drilled over 900 wells targeting this formation in this basin.

Comparative Performance



COBRA Shaped Cutter Technology

