

Case Study

Exceptional Achievement, the Fastest and Longest 8.5" Section drilled in Egypt

APPLICATION

Onshore – 8.5" Build Section
Trajectory: Building from Vertical to 28.12deg.
Medium Hard to very Hard Sandstone, Silt & Shale with some Dolomite and Limestone Formation.

CUSTOMER CHALLENGE

The Customer focused on drilling the 8.5" section with the objective of maximizing operational efficiency by achieving maximum ROP while minimizing tripping time and NPT, driven by a bit with optimum durability to maximize footage drilled per run.

VAREL SOLUTION

VAREL proposed a specific PDC design leveraging the VION™ bit technology, designed for drilling applications where durability and control is essential. The proposed solution capitalizes on unique VAREL Venom™ shaped cutters technology, the COBRA & FANG cutters for this application.

Solution: 7 bladed, 13mm cutting structure cutting structure with COBRA and FANG-Venom™ Shaped cutters. **COBRA** and **FANG cutters** are used to enhance point loading, increased cutting efficiency and ROP performance. Lower energy is required for a given output compared to equivalent round cutters.

CUSTOMER VALUE

The 8.5" VION-713 delivered the run objectives and set a new field record for the fastest and longest interval drilled, achieving the lowest cost per foot.

- Achieved the longest interval drilled of interval of [3350ft](#) with new record ROP of [49.5ft/h](#).
- Achieved [3.7%](#) improvement in interval drilled as compared to Previous best run in the field.
- Achieved [42.2%](#) improvement in the ROP as compared to Previous best run in the field.

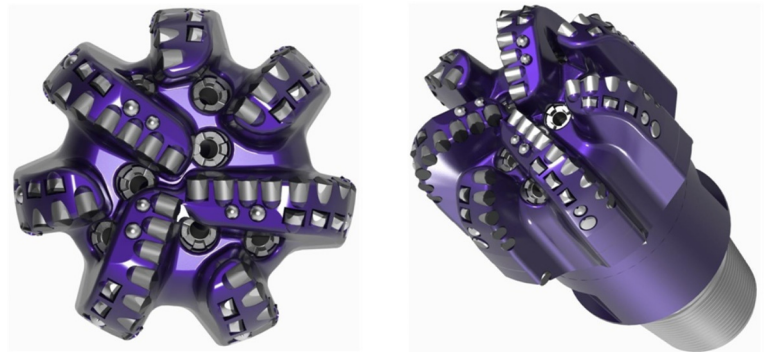
TECHNOLOGY

VION™ 713
Rotary Steerable BHA
(Halliburton iCruise®)

LOCATION

Egypt
Onshore

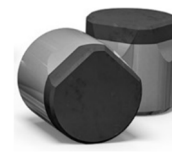
Matrix Body PDC design



Cobra Venom™ Shaped Cutters



Fang Venom™ Shaped Cutters



Performance Comparisons

