

Case Study

200% ROP enhancement in Sinian System/Formation – Onshore China

APPLICATION

Deep Vertical Well – 8,699m TVD
Sinian System/Formation, Tarim Field

TECHNOLOGY

6-5/8" VION™ 613
VENOM™ Cutter Technology

LOCATION

China
Onshore

CUSTOMER CHALLENGE

The Customer focuses on completing the complex vertical interval comprised of extremely hard and dense formation (Dolomite) in the Sinian System/formation of China. The Customer objective is to achieve the best possible ROP and lowest cost per meter.

VAREL SOLUTION

Utilizing Application Engineering and VAREL's proprietary design software, the VION™ PDC technology was chosen, a solution perfectly designed for "vertical" applications. The VION 613 design is a trouble-free solution delivering smooth torque, advanced directional control, excellent wellbore quality and dynamic stability.

Solution: 6-bladed, 13-mm cutting structure with partial double row. Specific cutting structure and gage configuration to provide better torque management and greater stability especially in drilling vertical section.

Purpose: Superior drilling efficiency with improved ROP and durability.

CUSTOMER VALUE

- **Fastest 6.625" drill bit as compared to competitive offsets** in the same well - drilling Sinian System/formation.
- **478.3 \$/ft of cost saving** compared to previous competitive offsets drilling Sinian System formation.
- **200% of ROP enhancement** with more footage drilled as compared to previous 613 competitive offsets.

6.625 VION 613 Design



Performance Comparisons

