

# Case Study

## New Fastest 9-1/4" Build Section in KUWAIT

### APPLICATION

Onshore – 9-1/4" build section.  
Interbedded, Limestone, Dolomite, and  
Shale formations  
Hybrid "Push and Point" RSS drive system

### TECHNOLOGY

EVOS™ 616  
STEEL BODY

### LOCATION

KUWAIT  
Onshore

### CUSTOMER CHALLENGE

The Customer focused on drilling the complete 9-1/4" build section one PDC bit in combination of a 'hybrid push and point' rotary steerable system (RSS). The objective is to achieve the best possible ROP and lowest cost per foot.

The previous wells in the same geology primarily utilized PDC bit designs achieving 16.4 ft/h ROP across the field average.

### VAREL SOLUTION

VAREL proposed a specific PDC design leveraging the EVOS™ bit technology, perfectly designed for 'build' drilling applications. EVOS™ bit series is a trouble-free design delivering smooth torque, advanced directional control, excellent wellbore quality and dynamic stability.

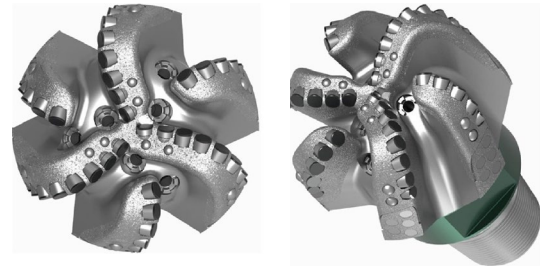
**Solution:** Steel body, 6-bladed, 16-mm cutting structure for optimal open face volume. Specific cutting structure and gage configuration to provide better torque management and greater stability for optimum toolface control.

### CUSTOMER VALUE

New consistent field record achieved and time saving on the planned objective.

- ROP Field record run with **19.9 ft/h**.
- Achieved **21.0%** increase in ROP as compared to Field Average performance.
- Achieved **highest ROP and lowest cost per foot in** 9-1/4" building section.

### EVOS™ Steel PDC Design



### Performance Comparisons

