Case Study

12 ¼" EVOS-616 with ARTIMIS™ cutters exceeds all competition in Dutch sector - Cretaceous to Triassic Application

APPLICATION

The 12 ¼" section commenced in the Chalk (containing Chert), through Jurassic, Triassic and into Permian Zechstein. Run on **PowerDrive® RSS**.

TECHNOLOGY

EVOS-616 ('Sandwich design')

VENOM ARTIMIS™ Cutters

LOCATION

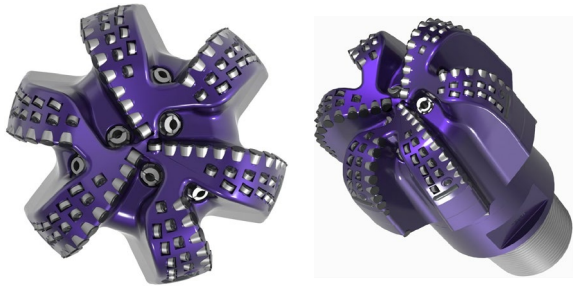
Dutch Sector Offshore

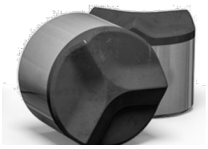
CUSTOMER CHALLENGE

Competitor's bit was pulled in the Ommelanden Chalk for low ROP after drilling approximately 390m, final 35m averaged 5.35m/hr. The bit was rig graded **1-1-WT-A-X-IN-NO-PR**.

The challenge was to have a bit in hole that will improve ROP performance as well as deliver the directional objective hence the **EVOS-616** bit with ARTIMIS cutters.

12 ¼" EVOS-616
(FY616PPDG1XU-T)





ARTIMIS™ Shaped Cutter

VAREL SOLUTION

VES proposed the EVOS-616 bit which has a unique and engineered cutting structure designed for optimum performance in challenging applications. The EVOS bit series has been developed specifically for directional applications where responsiveness and consistency are essential.

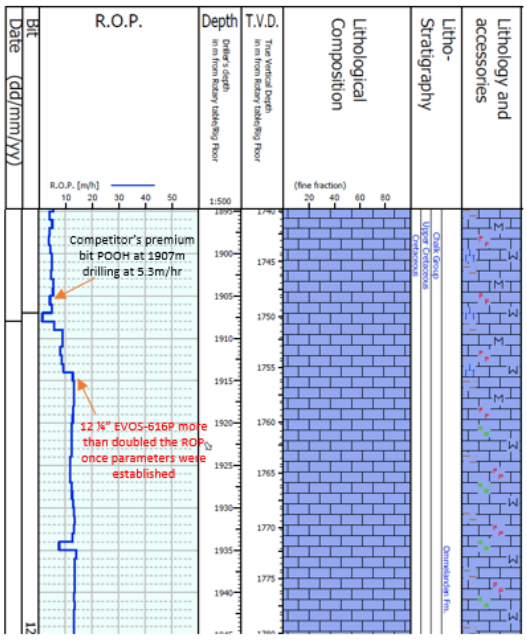
CUSTOMER VALUE

The 12 ¼" EVOS-616, in hole and parameters fully established, more than doubled ROP to **12.5m/hr** in the Ommelanden Formation running same BHA. The improvement in ROP was remarkable and the bit performed well throughout the run.

The bit drilled a total length of **2,118m** to section TD at 4025m MD at an average ROP of **16.91m/hr.** It responded well to the PowerDrive RSS maintaining tangent and dropping inclination from 36° to 20° as per directional plan. Max DLS – **2.5° /30m**. Bit grade: 1-3-BT-S-X-IN-CT-TD.

Customer's comment: "*Fantastic run - good performance / will run the Sandwich as standard for upcoming wells".*

DD's comment: "Smooth drilling, Shocks / Vibration and stick/slip minimal, good directional control, tangent and drop, enough capacity left for the power drive".



Formations drilled with the EVOS-616 bit: Ommelanden, Texel, Holland, Vlieland, Altena, Muschelkalk, Rot Claystone, Rot Salt, Zechstein and Basal Zechstein.

VAREL ENERGY SOLUTIONS

June 2021