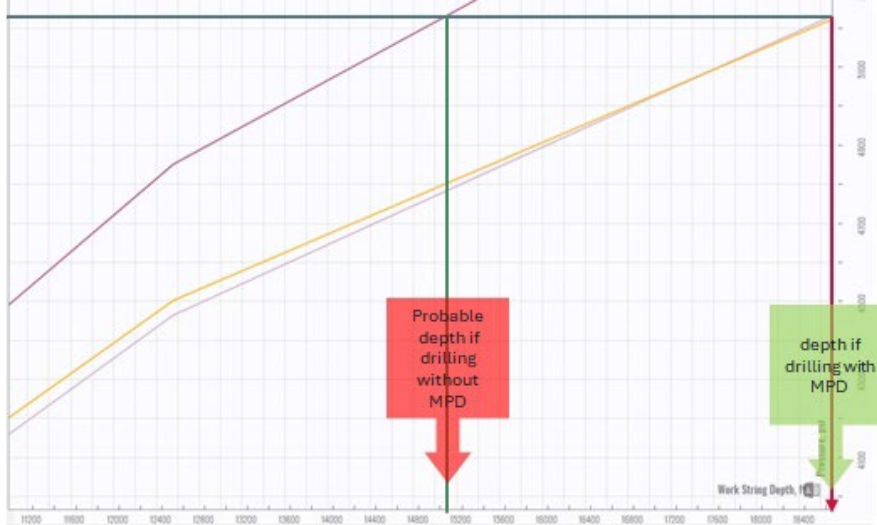


Victus™ Intelligent MPD System Lowers Mud Weight Requirement, Achieves Planned Target Depth, Enables Lateral Extensions



The picture shows a simulation of the SPP pressure vs the depth for the different mud weight (MW). The MW using MPD shows the possibility to drill deeper while the conventional MW would result in reaching equipment limitation earlier, resulting in calling early TD because of exceeding pump pressure.

Objectives

- Overcome high pumping pressure in the event that higher mud weight was used.
- Reach total depth despite equivalent circulating density (ECD) limitations.
- Ensure surface equipment can withstand excessive pressures.
- Optimize drilling parameters via precise planning.

Our Approach

- Weatherford experts evaluated the operator's challenges and recommended a managed pressure drilling (MPD) solution anchored by the Victus intelligent MPD system.
- The Victus MPD system precisely maintains bottomhole pressure by integrating rig equipment for machine-to-machine communication, real-time analysis of downhole conditions, and rapid automated responses from a central location.
- In close collaboration with the operator, Weatherford engineers conducted comprehensive simulations to evaluate pressure scenarios, including the impact of mud weight on ECD. The team also considered the surface equipment limitations in the design phase.
- The Victus MPD system draws on advanced hydraulics modelling to precisely determine real-time bottomhole pressure by taking into account the effects of fluid and formation temperature, fluid compressibility, and wellbore cuttings.

LOCATION
Middle East

WELL TYPE
Development

FORMATION
Unconventional reservoir

HOLE ANGLE
Horizontal

CASING SIZE
5-7/8 in.

MEASURED DEPTH
10,883 to 18,727 ft (3,317 to 5,707 m)

TOTAL VERTICAL DEPTH
10,883 to 10,566 ft (3,317 to 3,220 m)

PRODUCTS/SERVICES

- Managed pressure drilling
- Victus Intelligent MPD system



Victus™ Intelligent MPD System Lowers Mud Weight Requirement, Achieves Planned Target Depth Enables Lateral Extensions

Our Approach (continued)

- This feature enabled field personnel to use mud with a lighter mud weight (9 pcf) than conventional operations while still maintaining the target ECD at the anchor point across the entire operation.
- The on-site team successfully performed a pore pressure test and avoided all ballooning.

Value to Customer

- By using the Victus intelligent MPD system, the operator reached the planned target depth. If conventional technology was the only option, the operator would have had to stop drilling 4,000 ft (1,219 m) earlier due to the surface equipment/pump pressure limitations.
- The MPD solution lowered the mud weight requirement and reduced ECD and pumping pressure. In addition, the system enabled field personnel to continuously monitor the operations and make real-time adjustments.
- The operator was able to optimize pressure control and ensure wellbore stability.

