

Integrated Drilling System Saves Equinor USD 4.9 Million Per Well

Suite of Schlumberger technologies increases meters drilled per day by 29%, saving 6.7 drilling days per well

Implementing a “one team” approach led to a 29% increase in average meters drilled per day, a savings of USD 4.9 million and 6.7 days per well, and a drastic reduction in the number of trips.

Equinor’s concerns

Hard and abrasive stingers at the base of the 12¼-in section caused high levels of shock and vibration damage to drilling tools. This damage—combined with severe friction, high dogleg requirements, twist offs, and fluctuating torque values when drilling through interbedded chalk and limestone—caused multiple trips to replace equipment.

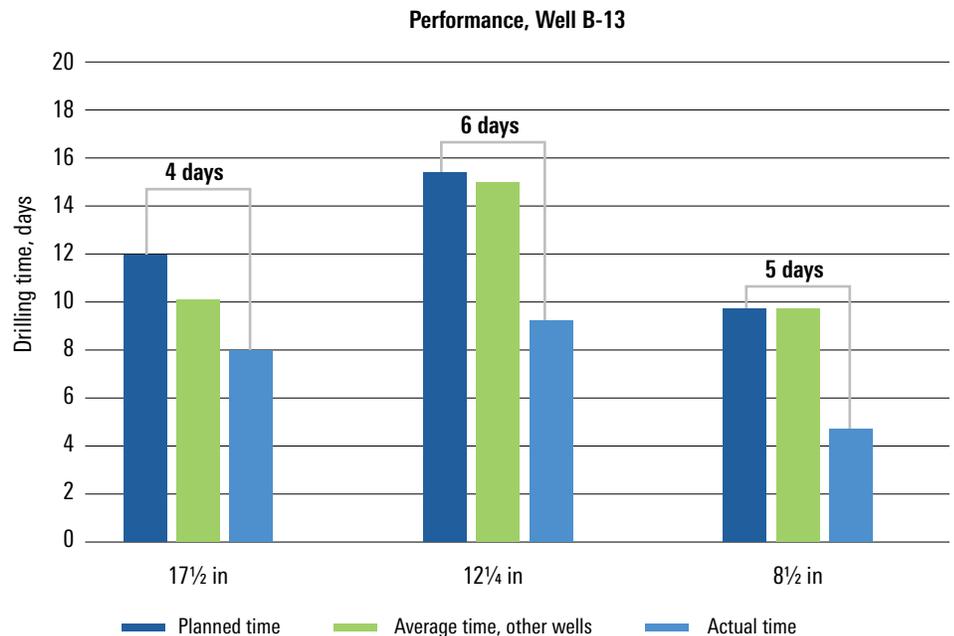
What Equinor tried first

To mitigate tool damage, Equinor used an active vibration dampener on conventional tools to improve performance, but it was insufficient.

What Schlumberger recommended

In 2018, Schlumberger implemented a “one team” approach, leveraging a combination of technologies to maximize drilling efficiency in four wells. The operation included the PowerDrive Xceed* ruggedized RSS and PowerDrive Orbit* RSS powered by PowerDrive vorteX* powered RSS, the GeoSphere* reservoir mapping-while-drilling service, an AxeBlade* ridged diamond element bit, the OptiDrill* real-time drilling intelligence service, and VERSACLEAN* mineral oil-based drilling fluid system.

Additionally, other rig factors were changed: The crew was assigned a steady rotation to increase employee ownership in the project; they implemented a continuous lessons-learned follow up that focused on time consumption after each section was drilled; and they optimized logistics and personnel planning to ensure the right equipment and personnel were always available.



In Well B-13, Schlumberger saved ~15 rig days ahead of the planned budget time.

What Equinor achieved

Upon implementing integrated technologies in four wells, the average meters drilled per day increased by 29% as compared with similar wells, reducing operations cost by USD 4.9 million per well and saving an average of 6.7 days per well. In contrast to the four to nine runs required to drill the two previous 12¼-in sections with similar inclination, the sections using Schlumberger technologies were completed in a single run. By using these technologies, Equinor achieved 99% efficiency for the entire scope of the section—not just drilling performance.