

Borehole	12¼ in
Drilling interval	3,498- to 3,944-m [11,476- to 12,938-ft] MD, 3,457- to 3,780-m [11,342- to 12,402-ft] TVD
Zone of exclusion (ZOE) alert zone	678–3,919 m [12,067–12,854 ft]
ZOE fail zone	3,711.83–3,874.68 m [12,178–12,713 ft]

Background

CNOOC China Ltd. needed to drill a 12¼-in section to reach TD. However, the optimal trajectory required an azimuth of 0.09°—forcing the well design to plot through the ZOE and presenting additional accuracy challenges. Avoiding the ZOE meant that well tortuosity would increase tremendously. It would also force a much longer well path, increasing other drilling costs. It was determined that the PowerDrive Xcel® rotary steerable system in gyro mode was the best solution.

Technology

PowerDrive Xcel RSS

CNOOC Drills Through ZOE with Near-Pinpoint Trajectory Control in East China Sea

PowerDrive Xcel RSS successfully reaches TD while sustaining trajectory within 2.14 m of plan through ZOE region

CNOOC successfully reached the TD with a center-to-center distance between planned and actual trajectory of 2.14 m [7 ft].

