

## MARLIM SUL FIELD

OFFSHORE BRAZIL

Application	Openhole sidetrack
Environment	Deep water
Hole size	8½ in
Formation	Unconsolidated sandstone
Planned dogleg severity	3½°/30 m [3½°/100 ft]
Actual dogleg severity	5½°/30 m [5½°/100 ft]

## Background

The usual strategy adopted by Petrobras in the complex turbidite reservoir in the Marlim Sul field is to drill a pilot well to investigate the base and top of the reservoir followed by a sidetrack to gyrosteer inside the sandstone bodies. Because of the magnetic interference generated by the 9%-in casing, a regular magnetometer-based RSS required spacing of approximately 15 m from the shoe to correctly orient the bit in the desired direction and start a sidetrack. This necessary spacing had the potential to lead to a complete exit of the sandstone body, jeopardizing the well placement.

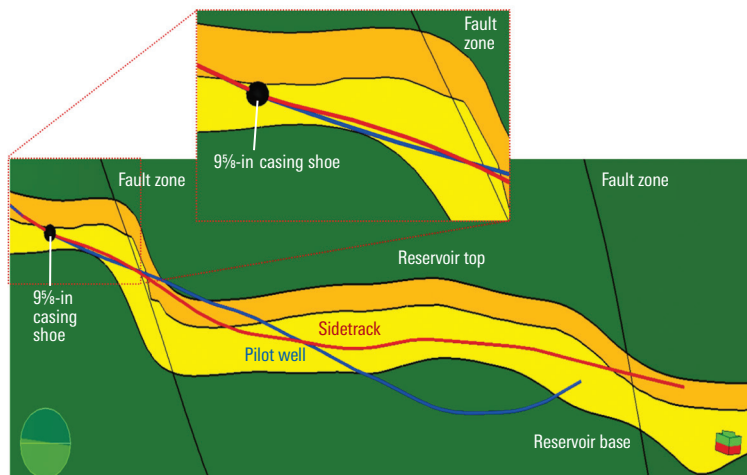
## Technologies

- PowerDrive Xceed\* ruggedized RSS
- GeoSphere\* reservoir mapping-while-drilling service

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## Petrobras Improves Well Placement Using RSS Technology and Gyrosteering Capability

PowerDrive Xceed RSS and GeoSphere service enable precise steering 1 m below casing shoe despite magnetic interference, deepwater Brazil



*The gyrosteering capability of the PowerDrive Xceed RSS enabled Petrobras sidetrack just 1 m below the casing shoe, achieve the full deviation from the pilot well after 16 m, and build inclination from 82° to 85° with a dogleg severity of 5½°/30 m (even greater than the planned 3½°/30 m) despite magnetic interference caused by the 9%-in casing. GeoSphere reservoir mapping-while-drilling service enabled accurate drilling of an additional 866 m to achieve a total net pay of 643 m and exceed expectations for reservoir exposure.*