

# **Using Planned Sidetracks to Efficiently Explore Lower Congo Basin Deepwater Miocene Play: Reducing Exploration Risk and Appraisal Uncertainty, Angola's Block 14**

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As part of the first Angola deepwater bid round, the Block 14 exploration permit was awarded in 1995 to the contractor group consisting of CABGOC (the operator, a Chevron company) Sonangol P&P, ENI, GALP, and Total. Key to quickly evaluating play potential over 4000 km<sup>2</sup> of deepwater was the use of pre-planned sidetracks in exploration and appraisal wells. To date, over 1 billion bbls of recoverable oil have been discovered in more than 25 Miocene reservoirs in the area covered by 2500 km<sup>2</sup> of pre-stack time migrated seismic with 6 km offsets. Utilization of this high quality seismic to pre-plan sidetracks enabled the drilling of 30 exploration and appraisal wells with only two dry holes. Sidetracks resulted in a step change reduction in deepwater cycle time and appraisal density for this play type.

In the ten years since this deepwater concession was granted, 30 exploration and appraisal wells have been drilled. Of these wells, approximately 40% utilized planned sidetracks. The discoveries to date in Block 14 are upper continental slope turbidite channel complexes at multiple stratigraphic intervals within the Miocene. Preplanned sidetracks are utilized in order to accomplish a multitude of objectives from pressure data correlation to test multiple fluid contacts, testing confidence in seismic-based sand predictive tools, the coring of various facies, and the targeting of new play types while drilling pre-development wells.

This paper illustrates examples of the beneficial use of sidetracks and the stacking of multiple objectives to assess a new play for an incremental price, abate uncertainty in subsurface characterization, and reduce cycle time to first oil in deepwater developments.