

## **Narrowing Uncertainty by Pre-Drilling Development Wells: Benguela, Belize, Lobito & Tomboco Fields, Block 14, Angola**

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Block 14 is located in the Lower Congo Basin, offshore Angola. The thick Miocene section consists of deepwater turbidite systems in a mid-lower bathyal slope setting. The Benguela-Belize-Lobito-Tomboco (BBLT) Development, located in the northern portion of Block 14 in 800-1300 ft of water, is composed of several, deepwater, turbidite-channel complexes of middle-lower Miocene age. Reservoir properties are excellent (25 to 32 % porosity and 1-4 darcies permeability). The development consists of seven main oil pools, vertically stacked and grouped geographically around structural traps, with oil in place approaching 1.5 billion barrels. Oil quality ranges from intermediate to light (~24-37 API).

ChevronTexaco and the other members of the Block 14 Contractor Group (Sonangol P&P, Total, ENI and GALP) are currently in the execution phase of the development, which is scheduled for first oil in late 2005.

A significant uncertainty for development is net to gross sand ratio. To evaluate this uncertainty 9 development wells, to be pre-drilled in 2004, will penetrate each reservoir interval. The wells will also provide valuable seismic calibration points, validation of geologic modeling and "pilot" information to evaluate placement of horizontal producers.

The cost of the pre-drill program is easily offset by the value of information collected in the wells and the rapid ramp up in production at first oil as these wells are completed. The rationale of the pre-drill strategy and the subsequent results of the pre-drill program will be presented in the paper.

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