

## **Design One and Build Two: Cycle Time Reductions in Angola's Block 14 Tombua-Landana Deepwater Development**

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The Tombua-Landana project is the third major deepwater development in Angola's prolific Block 14 by ChevronTexaco and the Block 14 Contractor Group (Sonangol P&P, Total, ENI, and Galp). The project follows the Kuito Field FPSO development in 1999 and the Benguela-Belize-Lobito-Tomboco (BBLT) Compliant Piled Tower development that is scheduled for first oil in 2005. The Tombua and Landana Fields are located in approximately 1200 feet of water and planned to also be developed with a Compliant Piled Tower.

There are 21 different reservoirs containing oil in place of approximately 1.2 billion barrels. The sands were deposited as part of an extensive Miocene age lower slope turbidite channel system. The reservoirs have excellent reservoir characteristics (up to 2 darcies permeability and 35-40 degree API gravity oil), and channel-axis sands are highly prolific, with individual DST's in excess of 10,000 STBOPD. The reservoirs are similar in age, composition, and depositional environment to those being developed in the BBLT project.

The Tombua-Landana project will utilize West Africa's second Compliant Piled Tower topped with a drilling and production facility and will have an extensive subsea system tied back to the Compliant Tower. The cycle time for maturing the project is expected to be reduced by incorporating subsurface and surface experience gained from the BBLT project. As the second Compliant Piled Tower development, Tombua-Landana will benefit from knowledge gained on the BBLT project that can be used to improve reservoir characterization, drilling, facility design, and operational efficiencies.

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