

Salt Tectonics, Salt Rafting & Exploration for Oil in the Pinda Formation, Shallow Water Lower Congo Basin, Angola, West Africa

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Summary

The Lower Congo and Kwanza Basins of Angola are the global type areas for salt rafting. The Albian age Pinda carbonate is the unit which provides all of the oil production south of the Congo River in shallow water Blocks 2, 3 and also in the onshore parts of the Lower Congo and Kwanza Basins.

The principal structural elements affecting the Pinda strata includes syn-rift basin architecture, post-rift listric detachment and associated faulting, as well as transverse deformation and offset. Northwards oriented listric and antithetic faulting has resulted in a variety of oil-trapping structures including simple rollovers and horst blocks. Salt rafting and down-to-the basin (westwards) sliding of Pinda "rafts" resulted in a number of oil pools such as the Lombo East and Estrela fields consisting of blocks of Pinda carbonate with separate oil-water contacts. Although nowadays much of the focus for oil exploration is in the deep and ultradeepwaters of Angola for the Tertiary turbidite play, companies do continue to explore for hydrocarbons in the Pinda in the shallow waters of Angola. Application of extensive 3D seismic is the key to finding more oil in the Pinda in Angola.