

## **A Regional Assessment to Understand Why the Deepwater Toe-Thrust Prospects of the Niger Delta Didn't Work - What Untapped Reserves May Remain?**

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In 2002 - 2005 industry had great expectations of continued success in drilling for large fields in the deepwater, offshore Nigeria. In hindsight, many wells have been drilled and then plugged and abandoned. A review of regional seismic data over these wells and some of the geologically analogous but successful wells enables some observations about why the failures happened. In addition an attempt has been made to suggest what untapped reserves may remain in these and other areas of the Niger Delta for future drilling.

A key to making this assessment has been the availability of long offset, long record, regional seismic lines that have been pre-stack depth migrated. The ability to view the complexity of structures in a true depth perspective and to also see what is happening in a regional context enables some insight into what leads to success or to failure. Resolving the timing of structural development of the complex traps in relation to hydrocarbon generation and migration leads to a better understanding of successful trapping conditions.

Comparing these cases in Nigeria to some successful analogues from other basins at the same scale and seismic attributes also is helpful in understanding what leads to success as well as predicting what other play types may exist in the Niger Delta.