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**Techniques & Challenges of Illuminated Gas Sands in the Nile Delta; A geophysicist's view of Tertiary, slope turbidite systems**

BG and its partners have been exploring for, and developing gas fields in the Nile Delta for the last 6 years. The West Delta Marine Concession (WDDM), is an excellent place to be, both for the commercial requirement of discovering and developing gas (16 out of 16 successful exploration/appraisal wells), and for the technical requirement of developing a knowledge base of Tertiary slope turbidite systems.

This paper shows the seismic expression of a variety of turbidite channel/canyon systems, using examples from a selection of the WDDM fields. It highlights the advantages that the seismic illumination, provided by the gas-charged sands, has in fast-track development projects.

A variety of geophysical techniques, and issues, involved in the analysis of these unconsolidated sands are discussed, and include topics such as; the use of relative acoustic impedance volumes and their input into the geological model, reliability of wireline compressional sonic data, rock physics modeling and residual v live gas.

This paper aims to show a geophysical snapshot of the issues being tackled within these channel systems, and to discuss the next technologies that can be brought to bear, to improve our current geological and reservoir models.