

## **Modern Seismic Processing Techniques are Vital to Unlocking the Potential of the Trinidad and Tobago Ultra-Deep Offshore Area**

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Offshore exploration in the Trinidad and Tobago eastern offshore area has historically been concentrated on shallow and deep-water plays of the Trinidad basin, with the Columbus sub basin providing the majority of Trinidad and Tobago's offshore production.

The Eastern Trinidad basin, deep/ultra deep area to the east of the Columbus basin remains, as yet, under explored. Water depth, difficulty in obtaining quality seismic imaging at depth and issues related to the complex offshore geology are some of the reasons why there has been a lack of recent exploration activity.

The data quality of a regional 2D seismic dataset shot in 2002 over the deep/ultra deep offshore area could be further improved by the application of modern imaging techniques. Initial processing has shown potential within both shallow and deep target sequences down to 6 seconds and has highlighted a series of amplitude anomalies which may be indicative of DHI's associated with prospective structural configurations. We will apply an integrated approach spanning pre-processing, prestack depth imaging and attribute analysis to extract the complete value of the seismic program.

Improved imaging of the seismic lines will better constrain the basin-ward extrapolation of successful shallow water plays and de-risk new play concepts in the deeper water trend. Together with improved government economic fiscal terms, low political risk and stable crude oil price, this will encourage oil and gas companies to once again look at ultra deep water Trinidad and Tobago.