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ABSTRACT

**DRILLING ON TRINIDAD’S SOUTHERN RANGE ANTICLINE – RESULTS FROM
HABANERO #1**

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Trinidad Exploration and Development (TED) drilled the Habanero #1 well near the crest of the Southern Range anticline in the Southwest Peninsula area of Trinidad’s Southern basin. The Southern Range anticline extends from the Orinoco delta region of Venezuela to the west, continues along Trinidad’s Southwest Peninsula and crosses the Los Bajos fault to the east. It is marked by the occurrence of mud volcanoes at the surface and is associated with many of the oil and gas accumulations in Trinidad and the surrounding region including the following fields: Southwest Soldado, Palo Seco, and Pedernales.

The primary objective was to test deepwater deposits of the Lower Cruse/Lengua formations in a structurally advantageous position based on 170 square kilometers of 3D seismic data from the Southwest Peninsula area. Data across the antiform in this area is poor leaving the structure difficult to image.

The well drilled from the surface through 3200 feet of interbedded mudflow material as confirmed by palynology, paleontology, velocity, and density information. From depths of 3200 to 8000 feet the well drilled interbedded sandstones, siltstones and shales of the Cruse formation and encountered numerous gas shows with minor oil shows. At a depth of 8000 feet drilling reached rig limitations before the Lower Cruse objective was penetrated. Perforations from two intervals produced water with a minor show of oil, and one interval yielded no flow. Pressures were very high while drilling, with mud weights exceeding 17 pounds per gallon. The well encountered several pressure reversals which made drilling the well challenging.