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ABSTRACT

SEISMIC ACQUISITION IN GULF OF PARIÁ, TRINIDAD: OPERATIONAL ISSUES AND RESULTS OF DATA ACQUISITION

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In July 2005, Petro-Canada acquired the exploration licenses for Block 1a and 1b, in the Gulf of Paria which lies between the west coast of Trinidad and the maritime border with Venezuela. The data available at the time of acquisition were; log data for 25 wells drilled in the Gulf, approximately 2900km of 2-D seismic data of varying quality, and 15km² of 3D data on the southern edge of Block 1a around the North Marine-5 well. However, a more extensive and detailed image was required to evaluate the full potential of the blocks. A project to acquire a 3D marine seismic survey over both blocks was therefore undertaken in February, 2006 using a configuration of five 3km length streamers and two source arrays. The survey covered a total of 1485km² and was acquired over a period of four months. Several operational issues had to be managed during the course of this project including the high congestion of marine traffic, liaison with local authorities, simultaneously operating with the local fishing trade, navigating shallow water depths (<20m) and avoiding several seabed hazards and obstructions which could potentially damage survey equipment. The survey was conducted successfully with no major incidents and the acquisition records were subsequently processed primarily in Trinidad. The product is a high quality, 3D Pre-Stack Time Migrated seismic volume which has been merged with data from the existing Petrotrin 2004 North Marine survey, and two mini-swaths that were acquired near areas with facilities. This final product has been used to identify new prospectivity in the Gulf of Paria to be explored during the 2007 drilling campaign.