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### ABSTRACT

#### The Mode of Occurrence of Hydrocarbon in the Trinidad and Tobago "Continental" (Insular) Shelf

John Phillip Scott

The patterns of orogenesis and tectonic styles in the Caribbean have affected the mode of sedimentation in the continental margin around Trinidad and Tobago in a manner similar to other continental margins. These diastrophic events, together with intermittent pulses of eustatic rises and falls in sea levels have been responsible for the patterns of sedimentation and structural styles observed, not only on the continental margin around Trinidad and Tobago, but throughout the Eastern Venezuelan Basin of which Trinidad forms a sub-basin. The continental margins are particularly sensitive to changes in sea levels; the migrating shorelines, continuity of sedimentary units and the patterns of lithologies are responses to those changes. The tectonic styles which affected the entire Eastern Venezuelan Basin have resulted in a series of parallel folds trending generally in an ENE - SSW direction accompanied by a system of parallel faulting and under-thrusting which ran at right angles, ie NWW - SSE, to the

folding and to right lateral east-west movements which occurred along the northern margin of the basin giving rise to the Oca Fault in Eastern Venezuela and the El Pilar Fault both in Venezuela and in Trinidad.

The resulting complexity of structures and the developments of thick prisms of sediments in the contemporaneous sedimentary basins have made the area around Trinidad, especially south of the El Pilar Fault, a good potential and habitat for the entrapment of hydrocarbons. The bulk of petroleum apparently generated in upper Cretaceous source rocks, migrated along the parallel faults acting as conduits and finally came to rest up dip in sands of Eocene to Pliocene age.

While the bulk of petroleum exploited have come from the shelfal part of the margin, it is to the more distal Trinidad and Trintopac respectively, I say "Thank you" for allowing me access to data at a time when all doors seemed to be shut. To the Permanent Secretary and his staff of the Ministry of Energy for their co-operation and making me feel always "back home" in my former workplace. To Mrs. Medford and Callesta, Librarian and Assistant Librarian respectively and the Ministry of Energy, my grateful thanks are extended for assisting me in getting access to data, some of which I myself had prepared as Chief Geologist in that Ministry and finally, but by no means least, to Dr. Winston Mellows and Mr.