

RECONNAISSANCE FIELD WORK, SOUTH AND SOUTHEAST COAST, TRINIDAD, 1989 NOVEMBER

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ABSTRACT

Reconnaissance geological mapping of the south and southeast coast of Trinidad was conducted in November 1989. The objective was to assess Plio./Pleistocene sediments which are exploration targets in the Columbus Channel. With the exception of the Lower Cruse and the Gros Morne sands and silts, the succession is well exposed along the coastal area. The succession has been explored down the Gros Morne in the Columbus w well to a depth of 17,153'.

The Plio./Pleistocene beds exposed along the south coast are steeply dipping towards the south. Dips vary from approximately 40° to almost vertical. The strike of the beds is ESE-WNW and occasionally eastward. Along the east coast, the Goudron sands and Mayaro silts dip towards the north. Dips increase southward from 10° near the Mayaro #3 well to approximately 45° at Galeota Point.

Several normal faults were observed in the cliff exposure along the Mayaro coast. One of these faults, which occurs near the wireless station, appears to be a growth fault downthrown to the north-northeast. Major faulting was not observed in the outcrops visited but folding was apparent in outcrops close to the Los Bajos Fault and La Lune Point.

The Trinity Hill, Casa Cruz, Mayaro and Goudron Sands are fine-medium grained with individual beds having parallel laminations, low angle cross-bedding or current / tidal ripples. Slumping phenomena and other soft sediment deformation such as loading, flame structures and minor faulting, indicative of rapid deposition, are common and layers of slump beds up to 1.5 m thick are found. Bioturbation is common in the Goudron Sands where entire beds up to 2.1 m thick have been thoroughly reworked with little or no preservation of primary sedimentary structures by Callianassa boring.

The St. Hilaire, Las Tablas and Mayaro Silts are often laminated with fine sand partings having abundant ripples and low angle cross-laminations. The Las Tablas silts are an interbedded sequence of light gray silts and dark clays which show extreme rhythmic layering with individual layers being less than 2 cm thick.

The Contact between the St. Hilaire Silts and the overlying Trinity Hill Sands is well exposed and conformable at the western end of the Guayaguayare Bay but it is, however, quite sharp. Further work, including biostratigraphic analyses to assist correlations, facies analysis and determination of depositional environments, is recommended to elucidate the regional structure