
**Plio-Pleistocene shelf margin deltas from Trinidad:
outcrop and subsurface examples**

G.D. WACH¹, J. FRAMPTON², J. SYDOW³, AND L. WOOD⁴

1. Department of Earth Sciences, Dalhousie University, Halifax, NS B3J 3J5, Canada <grant.wach@dal.ca> ¶ 2. Biostratigraphic Associates (Trinidad) Ltd., P.O. Bag 366B, General Post Office, Wrightson Road, Port of Spain, Trinidad and Tobago, West Indies ¶ 3. BP Trinidad and Tobago, P.O. Box 714, Port of Spain, Trinidad and Tobago, West Indies ¶ 4. Jackson School of Geosciences, Bureau of Economic Geology, University of Texas at Austin, University Station, Box X, Austin, TX 78 713-8924, U.S.A.

Offshore of eastern Trinidad in the Columbus Basin oil and gas reservoirs are in stacked reservoirs within a sedimentary succession of 10 000–30 000 feet deposited during the Plio-Pleistocene. Many of these reservoirs represent shelf margin deltas, produced as the precursor to the present day Orinoco River prograded basinward, and deposited thick wedges of sediment.

The outcrops of the Pliocene Mayaro Formation along the Mayaro coastline of southeastern Trinidad comprise thick successions of sand and shale units that are the direct analogs for the subsurface fields being produced offshore. Syndepositional faulting, slumping, injection features and turbidites, a paucity of trace fossils, the absence of delta plain deposits or distributary channel deposits coupled with foraminiferal data that indicate a middle neritic setting, all point to a delta system at the edge of the shelf. Autocyclic processes can be discerned within the abandonment phase of the delta with strong evidence of burrowing by suspension feeders, during reworking by wave action and alongshore drift of the delta deposits.
