
Remaining Potential in the Tertiary Southeast Basins, Mexico

Miguel Varela, Guadalupe V. Flores-Moro, and José A. Martínez

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ABSTRACT

The Tertiary Southeast Basins are three depocenters located at the Gulf's coastal plain of the states of Tabasco, Veracruz, and Campeche, Mexico. These basins, filled with a thick Neogene terrigenous clastics section and deformed by the interaction of extension and salt tectonics, are from east to west: Macuspana, Comalcalco, and Salina del Istmo. Macuspana, discovered in 1958, produces only non-associated gas, whereas Salina del Istmo and Comalcalco, discovered in 1905 and 1958, respectively, produce light oil and gas. Previously to the discoveries in the 1970s of the giant and supergiant Mesozoic fields of Reforma and Sonda de Campeche provinces, these Tertiary basins played an important role in Mexico's petroleum industry. During that period, 110 fields were discovered, ranging in size from small to giant, and with 3658 mmbpce of total proved reserves. During the 1970s the exploration efforts moved toward the Mesozoic stratigraphic section, resulting in a drop in the percentage of success and size of fields in the Tertiary basins. Current remaining reserves are 971 mmbpce and 60 fields have been abandoned or have marginal production. Nevertheless, the production decline of the Mesozoic fields in the last decade has encouraged revitalization of the Tertiary basins. Plays, petroleum system, and field characterization studies have been undertaken and new exploratory concepts have been introduced. Exploration strategy is centered on deeper horizons, identifying and delineating new prospects.