

## HYDROCARBONS ABSTRACTS

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Petroleum Geology of Pacific Margin of Central America and Northern  
South America, from Guatemala to Ecuador

Exploration for hydrocarbons along the Pacific margin of Central America and northern South America has been limited and spasmodic. Less than 100 exploration wells have been drilled, with nearly 50 of these being in the Santa Elena, Progreso, and Guayas basins in Ecuador. Shows have been reported in some wells, and a few oil seeps are known. The only commercial production established to date has been from the Santa Elena Peninsula in Ecuador in the extreme south of the study area.

Understanding of the geology in this part of the continental margin is incomplete at best. This paper reviews present-day knowledge in an attempt to define the sedimentary basins better, to characterize their structure and stratigraphy, and to assess their petroleum prospects.

The area of continental margin reviewed is to the north, located northwest of the trench system where oceanic crust of the Cocos plate subducts under the Caribbean plate, and to the south, where the northern part of the Nazca plate collides with the South American plate. This plate tectonic setting forms the framework on which local structural and sedimentary events have created a series of relatively small trench-slope and forearc basins in what is now the coastal plain and adjacent offshore area of Central and South America, south or west of a line of mountain ranges with active volcanism. Sedimentary fill is generally of Tertiary age.

The basins and subbasins recognized and described include: in Ecuador—Guayas, Santa Elena, Progreso, Valdivia, Bajo Grande, Manta, Muisne-Esmeraldas, and Borbon; in Colombia—Choco-Pacific; in Panama—Gulf of Panama basin complex (Santiago, Tonosi, Sambu), and Burica-Chiriqui; in Costa Rica—Terraba and Coronado/Tempisque; in Nicaragua—San Juan del Sur; and in the Honduras, El Salvador, and Guatemala—the Pacific coastal basin.