HYDROCARBONS ABSTRACTS

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Energy Resources of Pacific Coast of Colombia

Despite failure of modest exploration efforts to yield commercial hydrocarbon production in the Choco-Pacific coastal basin of Colombia, recent geophysical, geochemical, and surface geologic investigations indicate a potential for petroleum accumulations, which could be related to fields located on the western basins of Ecuador that in fact constitute an extension of the Colombian Pacific geologic scheme.

The Choco-Pacific coastal basin of Colombia covers an area of approximately 70,000 km^2, of which 14,000 km^2 lies offshore. The structural style of this area corresponds to a convergent plate basin created over folded oceanic sediments and adjacent to the subduction zone. Such a framework could be conducive to an attractive array of potential hydrocarbon-bearing traps.

Geochemical knowledge of potential source rocks of Cretaceous and early Tertiary age confers an added attraction to the area. Most evaluations reveal kerogen-rich, gas-prone organic matter. Nevertheless, the existence of oil seeps from Cretaceous outcrops could indicate sufficient thermal maturity for oil generation. Adequate reservoirs could be found in sandy or calcareous rocks of late Eocene to Oligocene age, predominantly of marine origin with an estimated thickness exceeding 20,000 ft. Colombia has been one of the leading world producers of gold and platinum, mostly derived from the vast alluvial cover of the onshore area of the basin. In rocks cropping out in the Western Cordillera (eastern margin of the basin), deposits of potentially commercial value of porphyry copper and molybdenum, as well as massive sulfur, manganese, and bauxite, have been found.