

Petroleum Composition in the Cuu Long Basin, Vietnam

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The Cuu Long Basin, situated offshore Vietnam is one out of a series of Cenozoic rift basins that also include the Song Hong, Phu Khanh and Nam Con Son basins, developed along the Vietnamese coast. Rifting in the Cuu Long Basin was initiated sometime during the period from the latest Cretaceous to the the earliest Oligocene; the precise timing is not known. The fill of the basins seem to be be rather similar, and include a thick syn-rift succession comprising various coarse-grained clastics, coals and lacustrine shales, separated from a predominantly marine-paralic post-rift succession by a major unconformity. The age of the unconformities is mostly poorly constrained, but seems to correspond closely to the Paleogene-Neogene boundary in the Cuu Long Basin. The entire rift succession often rests on weathered basement rocks of Jurassic-Cretaceous age. The Cuu Long Basin hosts important oil and gas resources, and several producing fields, including the Dragon (Rong), Black Lion (Sutu-Den), White Tiger (Bach Ho) and Sunrise (Rang ?ong) fields. Main reservoirs are weathered and fractured basement rocks and Neogene-age sandstones, and main source rocks are assumed to be coals and lacustrine shales of the syn-rift succession. Although oil and gas production has been going on for years in the Cuu Long Basin, little information on petroleum compositions is available in the public realm. Here we present compositional and molecular data on petroleum from four different fields, and compare these with data on petroleum from other Vietnamese Basins.