

Approach to New Petroleum Province in the Brazilian Offshore Basins: Focus on Upper Cretaceous Turbidite Systems

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During the last five years, as result of the new Brazilian Petroleum Law, a new scenario for the upstream segment has been established. Due to increase of the exploratory activities, important accumulations were discovered and supplied a large increment of oil and gas reserves. These discoveries occurred fundamentally in deep-water sandstones deposits at different portions and stratigraphic levels of the eastern passive margin basins. Examples of these recent discoveries are located at northern Campos basin where the Jubarte and Cachalote fields and other smaller related accumulations contain in place estimated and proved volumes of more than 3000 mmboe (heavy oil). At the north neighbor Espirito Santo basin, estimated volumes of 450 million barrels of light oil were also recently discovered. These accumulations configure a new petroleum province in this portion of deep and ultra-deep water Brazilian continental margin. Most part of the reserves is associated to deep-water sandstones deposited during the Late Cretaceous age. Subsidence history and rift-related mechanisms acted as main agents responsible by the conforming and differentiation of petroleum systems in the area. The relationship of these regional factors with the local tectonic, halokinesis and the sea-level changes provided the deposition of the Upper Cretaceous 2nd order transgressive sequence and the related turbidite systems. This report is addressed to present the seismic expressions and subsurface characteristics of these turbidite systems and to discuss about the roles played by the salt tectonic and other factors that controlled their distribution and stratigraphic architecture.
