SALT CONTROLLED SUB-BASINS IN NORTHERN SANTOS BASIN

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The interplay between the great amount of Aptian salt and the intense progradation of sediments during Late Cretaceous favored conditions for the formation of sub-basins controlled by salt movement in the Santos basin, in a time of dominant high stand of sea level. During Late Cretaceous, diastrophic tectonism and associated volcanism were intense and the denudated Mountain Range from Rio to Cabo Frio acted as a provenance area for sediments. Thick package of sediments were deposited in such a way that it overcame worldwide sea level rise during this time. Proximal facies represented by coarse siliciclastic are widespread in the platform area and distal facies were mainly deposited in sub-basins controlled by salt movement along the slope of the basin. Late Cretaceous sedimentation rate was so high that the progradation even bypassed the Cabo Frio Fault, a major structural feature which trends NE-SW and separated platform from slope areas mainly during Maastrichtian. Thousands of meters of sediments accumulated in the down thrown side of the fault. From Cenomanian into Maastrichtian sub-basins related to salt movement were formed in the distal area resulting in the deposition of sand and shale interbeded in these sub-basins. Additional movement of salt uplifted sequences during Upper Cretaceous, resulting in partial erosion of the sequences. These reworked sediments were deposited in neighboring sub-basins which are slightly diachronous in time.