A TECTONOSTRATIGRAPHIC MODEL IN CONTINENTAL RIFTS - CONCEPTUAL AND PRACTICAL MODEL WITH SEISMOFACIES, SEDIMENTARY FACIES AND LOG MOTIFS IN SOME NORTHEASTERN BRASILIAN BASINS.

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Lakes in pre-rift basins are normally shallow and wide with an assumed finite water volume. The rate of creation of space for sedimentary deposition is low and the fluvio-deltaic progradational deposition is common. When rift activity increases the basin becomes deep, lake area is reduced, water column increases and shoreline migrates toward the deeper parts and confine water below the hinge point. Lake level decreases with a negative eustatic signal. According to modern studies there are an increase in rates of subsidence, creation of accommodation space, erosion and sedimentary supply. These rates are ten times higher than many marine basins and were caused by sholders and footwall uplift beside an initial assimetric graben.During the initial rift phase deltaic deposition dominates. Silts and shales are deposited into the graben. In Recôncavo Basin, when the fault activity increases there are reworking of deltaic sediments toward the depocenter and deposition of sandy debris tansported by slides and slumps. Fan deltas and slope aprons conglomerates, transported through relay ramps or footwall fault scarps, respectively, are also deposited. The resultant sedimentary load associated with tilting, trigger shale diapirism at deep basin toward the flexural margin and create basement not involved listric faults that control the later sedimentation. Incised Valley are comomn on flexural margin and transfer zones. Subsequently, in quiet tectonic times, rifts experiment substantial increase of sedimento-eustasy and become shallow, wide and present a retrogradational and agradational pattern of deltaic deposits. These evolution are shown in kinematic analysis of Recôncavo and Sergipe-Alagoas basins.Pre-rifts sequences present some plano-parallel seismofacies and blocky and coarsing-upward log motifs. Rifts deposits exhibit: (a) weak shingled pattern on platform and logs with the same patterns of pre-rift phase; (b) mound, chaotic or strong shingled seismofacies on deep graben. These latter represent conglomerates or sandstones with a lot of vertical thick stacked blockies or continuos serrated log features. Post-rift layers show weak shingled or plano-parallel patterns with vertical stacked coarsing upward and thinning upward log motifs. Some other patterns are present on seismic and logs: continuos reflectors and decrease of the transit time represent correlative conformities; erosion or incisions are correlated with strong shift of facies.