49º Congresso Brasileiro de Geologia
20 a 24 de agosto de 2018 – Rio de Janeiro

STRATIGRAPHIC REVIEW OF THE IGUATU BASINS, CEARÁ.

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The northeast of Brazil presents an extensive geological history related to the divergent tectonism and establishment of rift sequences that separated the South American and African continents during the Cretaceous. These events led to the formation of a series of sedimentary basins known as the Northeast Interior basins, among which are the Iguatu sedimentary basins. They are partially covered by the Orós and Lima Campos water reservoirs and strongly controlled by the Cariri-Potiguar trend and NE-SW Proterozoic shear zones. The Iguatu basins are composed by the sub-basins of Iguatu, Malhada Vermelha, Lima Campos and Icó, all filled by fluvial deposits and very fine sediments typical of floodplains and playa-lakes. Evidence of a fluvial-aeolian interaction between rainy seasons forming fluvial systems and dry periods with domination of aeolian processes can also be observed in the final stages of deposition. The chronology of events that created the Northeast Interior basins has a crucial significance for the evolution of the Iguatu basins, since the existing fossiliferous assembly does not allow a precise dating as in the Araripe basin. They were first described as small sedimentary areas near to the Araripe basin, composed of conglomerates correlated to the Brejo Santo Formation. Subsequently, with the development of the biostratigraphy, the Sousa Formation of the Rio do Peixe basins was described as belonging to the Rio da Serra and Aratu stages, without association to the sedimentation occurred in the Dom João stage. Due to tectonosedimentary and biostratigraphic similarities, the Iguatu basins started to be correlated to the same stages of the Rio do Peixe basins. However, chronostratigraphic data such as the correlation of the ostracofaunas of the NRT-002 to 008 biozones, or dating methods applied to volcanic rocks in surrounding sedimentary packages that are usually correlated to the Iguatu basins are questionable by the simple fact that the data are not obtained originally in the Iguatu basins. On this subject, the stratigraphic review, paired with the application of dating methods never used before in the region, provided new information about the origin and evolution of the Iguatu basins. Outcrops of the tectonostratigraphic framework, treated as main representatives of the sedimentation processes within the basin, allowed a more detailed geological mapping, a characterization about faciological content and a revision of the local stratigraphy, always considering the complexity of existing tectonosedimentary relationships. The paleomagnetic analysis developed at large exposures of siltstones and mudstones specimens allowed unprecedented data on the geochronology exclusive to the sedimentary sequences of the Iguatu basins during the Early Cretaceous, providing greater accuracy and precision to the preexisting biostratigraphic data.

KEYWORDS: STRATIGRAPHY, IGUATU, CEARÁ.