

THE EVOLUTION OF THE CORUMBÁ BASIN (SOUTH AMERICA) IN THE CONTEXT OF NEOPROTEROZOIC GLOBAL CHANGE.

1BOGGIANI, P. C. & 2COIMBRA, A. M. 1Universidade Federal de Mato Grosso do Sul, Campo Grande, Brasil; 2Instituto de Geociências – USP, São Paulo, Brasil.

The units of the Corumbá Basin (Corumbá Group) crops out in the Bodoquena Plateau and adjacent to the Maciço de Urucum, in Mato Grosso do Sul State (Brazil). This group constitutes part of the Paraguay Mobile Belt and partially covers the southeast margin of the Amazon Craton. The Corumbá Basin comprises the Corumbá Group, in which the lower formations consist of terrigenous and carbonate sediment (Cadieus and Cerradinho Formations) deposited in a fault-limited and confined basin (rift phase). These bottom units are considered as fan-delta deposits which are probably penecontemporaneous with the Varanger glacial sediments of the Puga Formation. Overlying these sediments and the peneplaned granitic-gnaissic basement (Pedra Branca peneplain surface) there are dolomitic and phosphatic rocks of the Bocaina Formation which were deposited in a shallow-water environment, associated with stromatolites, teepee structures and giant ooids. Subsequent regression eroded part of these sediments and deposited them as slope breccia along the border of the Amazon Craton. Over this deposit, carbonaceous limestones and shales of the Tamengo Formation, containing Cloudina and Corumbella were formed and then covered by shales of Guaicurus Formation, under unconfined oceanic conditions (drift-phase). The Tamengo Formation exhibits a typical threshold of positive $\delta^{13}\text{C}$ PDB values (+3 ‰) and a change in $^{87}\text{Sr}/^{86}\text{Sr}$ from 0.70852 to 0.70862, which apparently places the sedimentation of this unit very near the Precambrian/Cambrian Boundary.