PALAEOGEOGRAPHY AND INVERSION TECTONIC OF THE NEOPROTEROZOIC ARAÇUAÍ FOLD BELT, BRAZIL.

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The Araçuaí (Eastern Brazil) and West Congo (Southwestern Africa) belts are counterparts of the same Neoproterozoic orogen located between the São Francisco and Congo cratons. Two extensional events with rift formation and sedimentation and one compressional orogenic event were identified in the Araçuaí belt.The first extensional event, dated at 1750-1700 Ma, is represented by the N-S Espinhaço continental rift basin. The cross section shows a typical half-graben basin geometry. The second extensional phase corresponds to the Araçuaí Rift formation (1000-900 Ma). The Brasiliano Araçuaí Rift is associated with a regional glaciation. The metasedimentary material of the Brasiliano rift is represented by the Macaúbas Group. It is composed of metadiamictites associated with metaturbidites and metarhythmites interpreted as a slope apron system. The Araçuaí Rift is regarded as intracontinental or with a limited oceanization. The opening direction of the Araçuaí Rift was inherited from the geometry of the Espinhaço Rift. The compressional orogenic event (620 to 550 Ma) is characterized by asymetric folds and shear zones showing westward vergence. The normal faults, active during extensional tectonics, behaved as thrust faults during the inversion of the basin. The structural style changes from thin-skinned deformation in the São Francisco Craton to thick-skinned tectonics in the Araçuaí fold-thrust belt. Northward, the crustal shortening of the Araçuaí belt was accomodated in the Paramirim belt and by a lateral ramp reactivated as strike-slips faults.