Evolution of Archaean/Paleoproterozoic basement in northeastern São Francisco craton – Bahia, Brazil

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During review and integration of geological data of the Aracaju-SW Sheet, 1:500.000 scale, six tectono-stratigraphic domains belonging to Archaean/ Paleoproterozoic basement of São Francisco craton were been defined. These domains occur as alternate cratonic blocks and shear zones, N-S structured, with defined limits and peculiar features. However, there are severe difficulties in understanding the evolution of these terranes due to the many orogenic cycles that reworked them since the Archaean and due to the few and heterogeneous geochronological data available. The evolutive model here proposed is a synthesis of various models already published, added with new data. These terranes started to arise in the Archaean, probably after 3.2Ga, when TTG continental crust was produced. Still in the Archaean and throughout the Paleoproterozoic, consecutive extensional and compressional events were responsible for the breakup of cratonic blocks and developing of rifts, that represent the present shear belts. In these rifts there occurred deposition of volcano-sedimentary sequences, followed by syntectonic and post-tectonic plutonism. Only in one rift oceanic crust was produced. In the eastern portion of the basement area greenstone belts of Paleoproterozoic age were developed. The evolution of the basement culminated with a compressional event in the Transamazonic Orogenic Cycle (2.0-1.9Ga), responsible for the present N-S oriented spatial arrangement of shear belts alternated with cratonic blocks.