Post-Brasiliano (Pan-African) granitoids from the Pajeú Paraíba Terrane, Borborema Province, NE Brazil

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The Prata Complex (ca. 250 km^2) and small ($\leq 50 Km^2$) plutons (Pereiro; Serra do Velho Zuza; Boqueirão; Serra da Engabelada; Serrote Santo Antônio) generally aligned in a NNE direction, were studied in the Pajeú - Paraíba Terrane. They are mostly coarse to medium grained, equigranular to porphyritic biotite - sienogranites and biotite, hornblende - monzogranites with dioritic enclaves. Rapakivi texture occurs locally. Granites from the Prata Complex are associated with diabase and dacite dikes. Dioritic enclaves in the Prata Complex reflect coexistence and mixing of granitic and basaltic magmas. The studied granitoids are alkaline, metaluminous to slightly peraluminous, show ($Na_2O + K_2O$) > 9.0 wt%, SiO_2 contents > 70 wt% and within-plate granite signatures. Deep troughs at Sr, Ti and P and small troughs at Nb characterize the spidergrams. REE patterns show deep negative Eu anomalies, which are characteristics of A-type granites. U-Pb zircon ages are 530 – 540 Ma for the Pereiro and Serra do Velho Zuza, and Rb-Sr isochron gave 512 ± 30 Ma for the granites of the Prata Complex. All studied granitoids show low ϵNd (540 Ma) values (< -22) and model Nd T_{DM} age ≥ 2.2 Ga. Mineral chemistry data suggest crystallization under low fO_2 conditions, contrasting with the older granitoids from the Pajeú – Paraíba Terrane, which appear to have crystallized under relatively higher fO_2 conditions. The studied granitoids were probably originated by melting of a Paleoproterozoic age crust, during the early rift stage of the Jatobá Sedimentary Basin formation.