# GEOCHRONOLOGY OF SYENITES AND MONZONITES OF ESTREITO MASSIF, SOUTHWEST OF BAHIA STATE - BRAZIL

BARRETO DOS SANTOS, E.; ROSA, M.L.S.; CONCEIÇÃO, H.; PAIM, M.M. IGEO - UFBA - Salvador - Bahia -Brasil.

The end of cicle transamazonic (2.1-1.9 Ga.) in State of Bahia is characterized by stabilization of the paleoproterozoic mobile belts and emplacement of various alkalic-potassic syenites bodies. The Estreito Massif (EM) is a north-south aligned body, with an exposed area of 290 km2, intruded in a paleoproterozoic mobile belt, which reworked 3.3 Ga. Polimetamorphic rocks. The EM is constituted by syenites, monzonites, granites and monzodiorites. They are: silica saturated to oversaturaded (SiO2 ranging 56.5 to 71.5%); alkaline (Na2O+K2O.=.8-12%); potassic (K2O/Na2O = 1.3-3.4; 4.2% K2O 9.2%); metaluminous; enriched at Ba (602-3171 ppm), Sr (360-1812 ppm), P2O5 (0.12-0.82%), SETR (213-1010 ppm) and impoverished in Y (40 ppm), Nb (22 ppm) and Ti. These aspects appoint to a shoshonitic affinity. The analytic data U-Pb in single crystal of the zircon supplied a discordant age with superior intercept at Ma, which is interpreted as the emplacement age of the EM. The negative values of eNd (-10.00 to -10.61), associated with the low 87Sr/86Sr initial ratio (0.703) and the potassium and incompatible element enrichment are indicative that the rocks of the EM would have an origin from an enriched mantle.The geologic context and the emplacement age of the EM, as well as its isotopic and chemical characteristics are similar to those of the other paleoproterozoic potassic syenitic intrusions of Bahia state, where an enriched mantle source of the EMI-type has been proposed. Thus, the EM constitute more one representant of the transamazonic alkalic-potassic magmatism of Bahia state.