

GEOLOGY AND PETROLOGY OF SYENITIC-GRANITIC CARA SUJA MASSIF, SOUTHWESTERN OF BAHIA STATE - BRAZIL

PAIM, M.M.; ROSA, M.L.S; CONCEIÇÃO, H. SANTOS, E. B. IGEO - Universidade Federal da Bahia - Salvador - Bahia - Brasil

The Cara Suja Massif (CSM), about 200 km², constitute a late member of the enormous alkalic-potassic magmatism which occur in southwestern part of the Bahia State. It intruded high grade metamorphic terrains (Santa Isabel Complex) and volcano-sedimentary sequences (Riacho de Santana Greenstone Belt), both with ages attributed to Archaean. Chemically, those intrusive rocks (quartz-syenites; alkali-feldspar syenites, granites and lamprophyric dikes) are characterized by high contents in LILE (e.g. Ba, Sr, Rb, LREE) and low contents in HFSE (Nb, Y, Ti). This signature is typical of magmas from orogenic environment. The ages obtained by different methods (Rb-Sr whole rock; U-Pb and Pb-Pb in zircon single crystal) sets the CSM in the Paleoproterozoic. The U-Pb age obtained (2053 ± 3 Ma) by isotopic dilution in four zircon grains is considerate the crystallization age of CSM. Sr and Nd initial ratios are low ($^{87}\text{Sr}/^{86}\text{Sr} = 0,703$ and $^{143}\text{Nd}/^{144}\text{Nd} = 0,510764$). The partial melting of a previous enriched mantle source has been proposed to explain these geochemical and isotopic signatures. (CBPM; Contribution number 62 of the Grupo de Petrologia Aplicada da UFBA)