

GEOLOGICAL AND LITHOGEOCHEMICAL ASPECTS OF AGULHAS E BANANAS AND SERRA DO PINTADO SYENITIC PLUTONS - SERRINHA NUCLEUS (BAHIA STATE - BRAZIL)

BURGOS, C.M.G.1; CONCEIÇÃO, H.1; RIOS, D.C.1; OLIVEIRA, L.L.1; PEIXOTO, A.A.1; CRUZ FILHO, B.E.1 IGEO - University Federal of Bahia - Salvador - Brazil

The Serrinha Nucleus is situated in the northeast of the Bahia State and the Agulhas e Bananas and Serra do Pintado syenitic plutons are located in the southwestern portion of this nucleus. They are small intrusions (30 km²) and are related as tardi to pos Transamazonic orogeny. Isotopic data, obtained by ²⁰⁷Pb/²⁰⁶Pb single zircon evaporation method, show age varying from 2067±22 to 2086±17 Ma. These plutons presents four petrographic facies, and the most abundant is the alkali syenitic. Major element chemical data for these rocks allowed to classify them as alkaline, potassic and metaluminous. The average contents of major elements are: SiO₂=63,79%; TiO₂=0,72%; Al₂O₃=4,16%; FeO_t=4,41%; MgO=1,73%; CaO=2,27%; Na₂O=3,40%; and K₂O=7,28%. The Harker diagrams for CaO, FeO_t, MgO, TiO₂ and P₂O₅, using SiO₂ as differentiation index, show negative correlations, suggesting the fractionation of diopside, hornblende, Fe-Ti oxides and apatite. The Al₂O₃, K₂O and Na₂O comportament exhibit a concentrations of samples between 62 and 66% of SiO₂ and reveal the fractionation and accumulation of alkali feldspar in the early stage of crystallization. Trace and minor elements diagrams, normalized by chondritic values, show Nb, Sr, P and Ti negative anomalies, that were interpreted as the Fe-Ti oxides and apatite fractionation. The REE diagrams, normalized by chondritic values, show a high LREE fractionation in relation to HREE. The lack of Eu anomaly reflects the secondary importance of the plagioclase in these magmatic evolution of these plutons. The authors thank CBPM, CAPES and CNPq. This is the 067-99 contribution to GPA-UFBA.