PETROLOGY OF THE ALKALINE GRANITES FROM SÃO JOSÉ DE CAMPESTRE MASSIF, EASTERNMOST DOMAIN OF BORBOREMA PROVINCE (NORTHEASTERN BRAZIL)

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The Caxexa Pluton is located in the southern border of the São José de Campestre Massif, extreme NE of Borborema Province. It includes an elongate N-S trending pluton, inflecting to NE in northern part of pluton, and covering near 50 km2 of area. The granite intruded in mylonitic interface between tonalitic-granodioritic ortogneisses of older gneiss-migmatite complex and garnet-biotite schists of metassediment unit. It is composed by hololeucocratic rocks, fine to medium grained and equigranular texture, occasionally microporphyritic. Are alkali feldspar granite contends high amounts of feldspars (microcline and albite) and quartz (90%), clinopyroxene (aegirine-augite and hedenbergite), andradite, sphene, allanite, zircon, apatite and opaques. Chemically, those rocks are classified as alkaline of high silica (70%), metaluminous (including those with normative corindon 1%), with high amounts of Na2O+K2O (10%) and elevated values in the reasons molars of Fe# (0,90-0,98) and agpaitic index (0,92-1,06). However, the low amounts of Nb, Ga, Y and Zr and high of Sr are not compatible with classic alkaline magmas, also observed by the patterns of the rare earth elements, with positives anomalies of Eu (Eu/Eu*=1,46-2,04). The interpreted data suggests that this intrusion was originated by fracionament of clinopyroxene, plagioclase, magnetite and zircon and that this magmatism can it is related the reativation of shear zones taken root in the base of crust or in the lithosferic mantle, in a regional extensional regime.