

PETROGRAPHY AND GEOCHEMISTRY OF NORDESTINA BATHOLITH, NE OF THE BAHIA.

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The Nordestina batholith (NB) is situated in Serrinha Nucleus (SN), geotectonic unit located in the northeastern part of Bahia State. The SN is composed of archaean gneisses and migmatites which are the basement for the paleoproterozoic volcanosedimentary sequences of the Capim Group and Itapicuru River Greenstone Belt (IRGB). Emplaced in all of this set of rocks there are more than 60 plutons granites. The NB intruded both the terrains IRGB and SN basement. It covers an area of nearly 400 km² being the biggest granitic body. It has leucocratic rock that are texturally medium to coarse grain sized and exhibits a porphyritic subhedral to anhedral fabric. The body shows a gradational structure the center which has been characterized as isotropic rocks and its border characterized by the gneissic texture. The ²⁰⁷Pb/²⁰⁶Pb dating yielded ages of 2.0 Ga. The rocks of the NB vary in composition from hornblende granodiorites to granites. Zoned oligoclase, perthitic alkaline feldspar, quartz, biotite and hornblende represent the mineral assemblage. Common accessories are apatite, zircon, allanite and titanite. Nordestina massif has a calc-alkaline nature, and show peraluminous to weakly metaluminous character. Trace element patterns has the same characteristic as modern orogenic environments, and in Pearce diagrams they plot on volcanic arc granites and sin-collisional fields (Y vs. Rb). They exhibit through Ba (from 350 to 940 ppm), and low TiO₂ (from 0,19% to 0,36%) and Nb (from 5 to 19 ppm), which suggest a subduction zone. The authors thanks the financial support of the CBPM and CAPES.