

## **PETROLOGY OF THE PALEOPROTEROZOIC SYENITIC GUANAMBI BATHOLITH, BAHIA STATE (BRAZIL)**

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The Guanambi Batholith (GB) covers an area of 6,000 km<sup>2</sup> in the center of the Urandi-Paratinga mobile belt. The batholith relates to a pull-apart system and yields U-Pb zircon ages in the range of 2,04 to 2,10 Ga. Two main domains can be distinguished: (i) multiple intrusions, covering 90% of the batholith, and (ii) late intrusions. The rocks fully preserve their original magmatic textures and are predominantly composed of leucocratic porphyritic syenites and monzonites, and potassic lamprophyric dykes (minettes). Geochemical data indicate that all syenites are saturated to oversaturated with respect to SiO<sub>2</sub>, alkalic to sub-alkalic and metaluminous. K<sub>2</sub>O/Na<sub>2</sub>O is always greater than 1, being highest in the mafic members. In some cases, the latter can be classified as ultrapotassic. Ba (up to 8,000 ppm), Sr (up to 6,000 ppm) and Rb (up to 940 ppm) are strongly enriched in these rocks. Cr (50-700 ppm), Ni (80-270 ppm) and Mg numbers (0.20-0.77) are relatively high compared to common syenitic rocks. Chondrite-normalized REE patterns are strongly LREE enriched and display small negative Eu anomalies. Epsilon Nd (T=2,05 Ga) ranges from -11 to -7, and Sri is around 0.705. The syenites are interpreted to represent products of fractional crystallization of a lamprophyric magma generated by melting of a Paleoproterozoic enriched mantle. On the other hand, a crustal contamination during the emplacement of GB can not be discarded. Acknowledgments: Companhia Baiana de Pesquisa Mineral (CBPM), CAPES and CNPq. This is the contribution number 65 of the GPA-UFBA.