

The volcano-sedimentary sequence of Boa Vista. Occurrence of pillow lavas and pillow breccias in the Tertiary of NE Brazil

¹PETTA, R. A.; ²NUNES BARBOSA, R. V.; ³ARNDT WAUSCHKUHN ¹Departamento de Geologia UFRN-Natal-RN; ²Geologia e Mineração CEFET/RN; ³CAPES/DAAD - UFRN Brazil

The area is located in the district of Boa Vista -PB/NE-Brazil, inserted in the folded belt of Pajeú-Paraíba Transversal Zone. This paper reports new data of the tertiary basaltic volcanism that occur associated to the deposits of bentonite clays of the Boa Vista Basin. It presents a new focus on the environmental formation, discuss the lithostratigrafic and the new economic deposits identified in this area, and reports the occurrence of pillow lavas, for the first time described in this area.

The magmatic flows of olivine basalt of the superior unit preserve volcanic textures and structures, allowing to recognize solid flows and variations of pillow lavas in decimetric to metric dimensions, as well as the fragmentation of these, forming pillow breccias. These pillow structures are E-W orientated according to the longer axis, and evidence the displacement of the magma flow in the same sense. In some places on this basaltic unit, occurs blocks of volcanic agglomerate containing angular fragments of volcanic glass, representatives of contemporary piroclastic material, of sub-aerial volcanic exhibitions.

The pillow lavas show cooling borders varying from very fine until 8cm of thickness, and concentration of amygdale in the internal parts and along the borders. The extreme fluidity of the flows is corroborated by abundant pillowitic and hialophitic textures. Evidences denote that these bentonite deposits are part of a volcano-sedimentary association, with pelitic sandstone deposition and basaltic extrusions in continental environment of lacustrine to fluvio-deltaic type.