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PALEOPROTEROZOIC VOLCANISM IN THE SOUTHERN AMAZON CRATON (BRAZIL): INSIGHT INTO ITS ORIGIN AND DEPOSIT TEXTURES

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RESUMO: The Brazilian Amazon craton is a large Archean platform reworked and reactivated during the ca. 2.1 Ga Trans-Amazonian event (Almeida et al., 1981; Costa and Hasui, 1997) and hosts a primitive volcanic activity that took place in a region completely stable since 1.87 Ga. The current geotectonic context is very different from what caused the huge volcanism that we are presenting in this work. Volcanic rocks in several portions of the Amazon craton were grouped in the Proterozoic Uatumã supergroup, a well-preserved magmatic region that covers an area with more than 1,200,000 km^2. In this work one specific region is considered, the southwestern Tapajos Gold province (TGP) that is part of the Tapajós-Parina geochronological province (Tassinari and Macambira, 1999). TGP consists of metamorphic, igneous and sedimentary sequences resulted from a ca. 2.10-1.87 Ga ocean-continent orogeny. High-K andesites to felsic volcanic sequences and plutonic bodies, andesitic/rhyolitic epiclastic volcanic rocks and A-type granitic intrusions form part of this volcanism/plutonism. In this work we focus particularly our attention on welded, reomorphic and lava-like rhyolitic ignimbrites and co-ignimbrite brecchas. Fiamme texture of different welding intensity, stretched obsidian fragments, "glassy folds", relict pumices, lithics, rotated crystals of feldspars, bipiramidal quarz, and devetrification spherulites are the common features represented by our samples. Microscopical images are provided to characterize the deposits analyzed during this preliminary research. The lack of continuum outcrops in the field made more difficult the stratigraphic reconstruction, but the superb preservation of the deposits, apparently with no metamorphic grade higher than prehnite-pumpellyite facies, permits a clearly description of the textures and a differentiation between deposits. A detailed exploration of this ancient andesitic and rhyolitic volcanic activity could contribute greatly to the knowledge of the Amazon craton evolution and in particular for the recognition of the various units that form the supergroup Uatumã, especially in relation to different eruptive style that produced them and the associated porphyry and epithermal mineralization. The aim of this work is to provide a preliminary detailed description of the textural facies of this old volcanic units that outcrop in the southern region of Tapajós to better understand its origins, mechanisms of genesis, and, even possible, stratigraphic relationships.

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PALAVRAS-CHAVES: UATUMÁ GROUP, PALEOPROTEROZOIC VOLCANISM, IGNIMBRITES