# PALEOPROTEROZOIC QUARTZ-ALUNITE EPITHERMAL GOLD MINERALIZATION FROM TAPAJÓS (BRAZIL)*

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The Tapajós Gold Province is situated in the southeast part of the Pará State, Brazil, and belongs to the Amazonian craton. The studied area is composed of granitic rocks from Parauari (1.900 Ma) and Maloquinha (1.880-1.890 Ma) suites, rhyolitic to andesitic volcanic-volcaniclastic rocks from Iriri formation (1.870-1.890 Ma) and rhyolitic to dacitic porphyries, affected by low-grade metamorphism. The Maloquinha suite comprises red-coloured sub-volcanic calc-alkaline monzogranite affected by fissural and pervasive albitic, potassic, sericitic and propylitic hydrothermal alterations. Rhyolite/ignimbrite eruptive sequence occurs within an inverted conic shaped Au-mineralized volcanic-breccia alterated to pyrophyllite/sericite + andalusite + alunite + quartz + rutile + diaspore + kaolinite. Silica cap, strong hematitisation and alunitisation are observed on top of the conduits. Alunite also occurs in veins and disseminated in pyrophyllitic/sericitic silicified rocks. The volcanic sequence is crosscut by the younger porphyries, which exhibit volcaniclastic xenoliths and sericitic and carbonatic hydrothermal alterations. The field relationships between porphyries and volcaniclastic rocks suggest a link with a high sulphidation epithermal system.The alunite-veins bearing rhyolitic/silicified tuffs are found below the weathered level and the mineral association and textural features indicate a magmatic hydrothermal environment, which evolved, most probably, around 1.800 Ma.* Rio Tinto Desenvolvimentos Minerais Ltda, FAPESP 98/02567-6 and CNPq 130521/1998-1 grants.