

Geology and gold metallogeny of NW portion of the Tapajós Mineral Province, Amazon Craton, Brazil

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The Tapajós Mineral Province located in the NW portion of the Amazon Craton, is characterised by Paleoproterozoic terranes that host many gold prospects explored at small-scale mines (*garimpos*). The basement consists of tonalitic-granodioritic orthogneiss, metagranitoids, amphibolites and migmatites (Cuiú-Cuiú Complex: 2.0Ga). Supracrustal sequence (Jacareacanga Group: 2.0Ga), comprises low grade volcanic-sedimentary rocks. These rocks are intruded by different granitic suites: medium-K calc-alkaline granitoids (Parauari Intrusive Suite: 1.90Ga); high-K calc-alkaline granite (Caroçal Granite: 1.87Ga); and A-type granites (Maloquinha Intrusive Suite; Igarapé Escondido Granite and Pepita Granite: 1.87-1.88Ga). Some of the granitoids have acid (Irirí Group: 1.87-1.89Ga) to intermediate (Bom Jardim Formation) cogenetic volcanic counterparts. Undeformed mafic rocks consist of gabbros (Ingarana Intrusive Suite: 1.89Ga), olivine dolerite (Crepório Suite: 1.78Ga) and younger dolerite dyke swarm (0.51 and 0.2Ga). Clastic sedimentary covers of Proterozoic (Buiúçu Formation: <1.78Ga) and Paleozoic (Alto Tapajós and Amazon basins) ages also occur. Two main structural features are recognised: (i) regional foliation with NNE-SSW to NNW/SSE trends, related to the basement rocks; and (ii) main oblique strike-slip shear zones with NW-SE trend. Gold is hosted by different lithologies (granitoids, volcanic and basic rocks) and occurs as bearing-quartz vein (lode-gold) and disseminated/stockwork (porphyry-gold). Epithermal gold adularia-sericite type was also found.