

HYDROTHERMAL ALTERATION ASSOCIATED TO GOLD MINERALIZATION IN RAPAKIVI LIKE GRANITES FROM GARIMPO DO BATALHA, TAPAJÓS PROVINCE, AMAZON CRATON, BRAZIL.

1CORRÊA SILVA, R.H.; 1JULIANI, C. and 1NUNES, C.M.D. 1Instituto de Geociências-USP, São Paulo, Brazil.

Gold mineralized granitic rocks observed of continuous profiles in drill cores from the Garimpo do Batalha are red to pinkish gray and have coarse granulation. Unaltered rocks are composed of mesoperthite, oligoclase-andesine, quartz, dark brown biotite, hornblende, zircon, allanite, fluorite and sulfides disseminated or filling small fractures. The mesoperthite is sometimes mantled by plagioclase, resembling rapakivitic textures. Not so well developed granophyric textures are also common. The pervasive hydrothermal alteration is propylitic, characterized by the association epidote + carbonate + chlorite + albite + microcline. Biotite and igneous amphibole are almost completely replaced by chlorite and epidote. Sericitic alteration is also observed, with characteristic assemblage quartz + sericite + pyrite, besides K-feldspar, clay minerals, calcite, green biotite, rutile and fluorite. This association overprints propylitic alteration appearing mainly as fissural style, filling veins, fractures and brecciated zones associated to small faults. Locally there is intense albitization and silicification. The surrounding plagioclase is partly generated by sodic alteration. Gold and sulfides are mainly associated with sericitic alteration and occur disseminated in veins. Pyrite is the main sulfide and calcopyrite is subordinate. Native gold is also present in carbonate and fluorite veins or in thin zones of fault breccias cemented by calcite and quartz, sulfides and epidote. Fapesp 98/2567-6 and Rio Tinto Desenvolvimento Minerais grants