ABSTRACT

The geology of Jacareacanga area (sheet SB.21-Y-B) in the southwestern and southeastern parts of the states of Amazonas and Pará, is presented here in terms of its main lithostratigrafic units, structural framework and mineral resources (gold) characteristics, as well as its geological evolution.

Fifteen lithostratigraphic units were mapped. The Paleoproterozoic age is represented by the Cuiú-Cuiú Complex, Jacareacanga Group, Parauari Intrusive Suite, Iriri Group, Maloquinha Intrusive Suite and Buiuçu Formation. The Cuiú-Cuiú Complex consists of orthogneiss and granitoid plutons (tonalitic to granodioritic in composition), and minor amphibolite, diorite and rarely garnet-bearing leucogranite. Several authors consider the Jacareacanga Group a greenstone belt sequence. It includes two main domains: quartzitic domain (quartzite, metachert and banded iron formation units) and a schistose domain (mica schist, quartz schist and rare actinolite-tremolite schist and talc schist). Both of them are intruded generally by granitoid bodies of the Parauari Intrusive Suite (sub-divided in granitic and granodioritic facies), the Maloquinha Intrusive Suite (alaskitic granite subdivided in amphibole-bearing and biotite-bearing facies), the Pepita Granite (riebeckite-arfvedsonite alkali feldspar granite) and also by Caroçal Granite (monzogranite to sienogranite and volcanic rocks of the Iriri Group (rhyolite, dacite and locally tuff and ignimbrite).

The Jacareacanga Group is unconformably overlain by the Buiuçu Formation (arkose sandstone, conglomeratic sandstone with minor interbedded tuff units). Paleozoic Sedimentary rocks are represented by the Jatuarana Group (Siluro-Devonian) and the Ipixuna Formation (Permo-Carboniferous). Jatuarana Group is formed, in decreasing order of age, by the Borrachudo, Capoeiras and São Benedito formations. The Jurassic Periquito Dolerite generally cross-cuts this Paleozoic cover.

Two main structural features are observed: 1) regional foliation with NNE-SSW and NNW-SSE trends (only basement rocks) and 2) main oblique strike-slip shear zones with NW-SE trend (on Parauari granitoid bodies and basement rocks, mainly). The Tapajós region was initially affected by crust generation in the Archean-Paleoproterozoic boundary (2,5 Ga?). However, the major units are formed during the Paleoproterozoic (2,0 to 1,9 Ga) with the production of large volumes of arc-related magma, generating juvenile continental crust in a collisional setting. Several post-collisional granite intrusions (often A-type), mafic dyke swarms and sedimentary basins were developed in extensional settings.

A wide variety of gold mineralization styles occur in the Jacareacanga region including that shear zone-quartz vein, quartz lode and porphyry-hosted stockwork/disseminated types. In total 37 small-scale prospector´s workings (*garimpos*) were identified in the area. Two hundred and four occurrences were described, including those for pyrite, cassiterite, turmaline, thorite, zircon, topaz, xenotime, monazite, fluorite and also potential areas for industrial minerals.