Au-SULFIDE MINERALIZATIONS IN THE MORERU AREA, SOUTHEASTERN AMAZONIAN CRATON

Pinho, Márcia A.S.B.; Chemale, F.; and Pinho, F.E.C.

The Moreru area is located near Aripuanã city in the northern part of the Mato grosso state, Brazil. It is situated in the southeastern portion of the Amazonian Craton. Au-sulfide mineralizations are hosted by felsic volcanic and sub-volcanic rocks from the Iriri Formation. This formation comprises herein felsic to mafic flows with intercalation of volcanoclastic and sedimentary rocks and associated with low level granitic intrusion. U/Pb dating for ignimbrites from this sequence, yielded an age of 1.8Ga. Sulfides occur disseminated in the rocks or in veins. Pyrite is the most abundant sulfide. Pyrite changes from idiomorphic to hypidiomorphic texture and milimetric to centimetric grained. More than one generation of pyrite is indicated by a clean boards that involves poikilitc nuclei rich in inclusions from matrix including zircons. Locally occurs some crystais of arsenopyrite and inclusions of Bi-Te in pyrite. Chalcopyrite mainly occurs in millimetric veins around pyrite and cross-cuting the rock. Galena is rare, however when it occurs, shows a planar contact with chalcopyrite in the vein phase. Ilmenite appears as probably crystallized before sulfides. The presence of ilmenite suggests sudden changes at oxygen fugacity, causing good conditions for gold precipitation. Minerographic and mineral chemistry show that the sulfide and gold are associated with felsic rocks strongly modified by hydrothermal alteration. It is possible to recognize alkali feldspar and quartz phenocrysts. They are dispersed in a completely altered zone with silicification, carbonatization, sericitization, chloritization and sulfidization. Silicification around pyrite crysts are frequent.