The Alvo 118 Copper-Gold Deposit: geology and mineralization, Serra dos Carajás, Pará.

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Alvo 118 is a copper-gold deposit, distant about 70 km by road from Parauapebas city, being located in the southeastern portion of the Carajás Mineral Province, where together with other copper-gold deposits (Sossego, Cristalino) and occurrences defines an approximately 100 km long copper belt.

The regional setting of the deposit comprises, towards the south, isotropic to foliated granites and gneisses and NWW trending metavolcanics sequence (chlorite schists, magnetic schists, metarhyolites and tuffs), intruded by gabbros and granites bodies to the north. In the central portion of the volcanics sequence there is a zone of subvertical tectonics and hydrothermal breccias, host of the copper-gold mineralization, which are well exposed along a 250 m high N60W trending ridge.

The weathering profile on the deposit goes deep as 100 m, developing a saprolitic secondary copper mineralization consisting of malachite, chrysocolla, azurite, calcocite and native copper. Breccias of intensive chloritized granite and some mafic rocks (gabbros/schists) with the matrix composed by sulfides (chalcopyrite, pyrite, and bornite), constitute the primary mineralization. Intense carbonate (calcite and siderite) and silica alterations in veins or disseminated are associated with the mineralized zone.

Although the drilling program is still in progress, the estimated ore resources comprises more than 100 MT of oxidized ore with grades around 1,0% Cu and 0.3 g/t Au and more than 70 MT of copper sulfide ore with similar grades. Recent drill hole intercepted a copper rich sulfide breccia at depth of 300 m.

Metallurgical test and mineralogical studies of the oxidized and sulfide ores are being under development.