Peixoto de Azevedo gold district geology, Mato Grosso State, Amazon Craton, Brazil

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The Peixoto de Azevedo Province, located on the southwestern partion of the Amazonian Craton, has produced 40t of gold in the last two decades, mostly alluvial gold, exploitated by *garimpeiros*. The province has a proterozoic tectonical evolution, which development is important for gold mineralization.

The oldest unit, Paleoproterozoic in age, consists of migmatites and tonalitic gneisses of the Xingu Complex and represents the granitic-migmatitic basement. Undeformed granitoids are well spread out the area and cut the basement lithologies. These rocks are biotite granite and monzogranites (Juruena Granite Intrusive Suite) and were previously considered as the Xingu Complex domain. Massive, isotropic granodiorite, diorite and gabbro bodies, also part of the this unit, unknown in prior works, have in the Flor da Serra its utmost expression. The Mesoproterozoic period is marked by the Uatumã calc-alkaline magmatic event. It consists of volcanic rocks (Iriri Group) and the post-orogenic extensional granitoids (Teles Pires Intrusive Suite). Mafic dykes (andesites, diabases, and gabbros) of unknown ages are common. Cenozoic sediments, form the covers or alluvial and supergene deposits, responsible for the gold production in the area. Sulfide-gold-bearing quartz veins, occur in a variety of host rocks, such as granitoids, gabbros and volcanics. Gold also occurs as disseminated/stockwork type hosted by volcanic rocks. Hydrothermal wall-rock alteration (rich in sericite, potassium, epidote and chlorite) were developed along ductile-brittle extension faults, where bearing-gold quartz veins with different textures (laminated, comb and brecciated) are found.