

# ABSTRACT

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This Explanatory Note presents the results of the geological mapping of the Vila Riozinho (SB.21-Z-A) Sheet, at 1:250 000 scale, including a chapter with the main characteristics of the gold mineralization in the area.

Two tectonic domains have been recognized in the Tapajós Province: an orogenic and an extensional/post-orogenic to anorogenic domain. In the Vila Riozinho Sheet, the orogenic domain comprises Paleoproterozoic units, associated with the end of the Transamazonian Cycle, with ages between 2100 and 1960 Ma, represented by medium to high-grade orthogneiss of the Cuiú-Cuiú Complex, and by syn to late-orogenic granitoid plutons of the Creporizão Intrusive Suite. Both sequences are regarded as having developed in a magmatic arc environment. The second domain, with ages older than 1900 Ma, but still within the Paleoproterozoic, is formed predominantly by different generations of post-orogenic (Parauari Intrusive Suite) transitioning to anorogenic (Maloquinha Intrusive Suite) granitoid and by felsic to intermediate volcanic rocks, with associated epiclastic rocks (Iriri Group). The sparse basic (Rio Novo Olivine-gabbro and Crepori Diabase) to intermediate (Igarapé Jenipapo Quartz-monzogabbro, Joel-Mamoal Andesite and Jamanxim Lamprophyre) magmatism and the localized sedimentary cover of the Buiú Formation, are also associated to this domain.

The Mesoproterozoic is characterized by the localized intrusion of troctolitic basic rocks, whereas the Phanerozoic records the intrusion of at least two generations of mafic dykes (mainly diabase) and the develop-

ment of the lateritic, detrital and alluvial cover. The structural framework in the Vila Riozinho Sheet, and in the Tapajós Province as a whole, comprises dominant NW-SE trending lineaments. These major structures have played an important role in the definition of the geometry and/or the emplacement of the lithostratigraphic units, which are elongated according to this NW-SE strike. The structures have curvilinear and sigmoidal patterns and represent mainly brittle faults and, subordinately, brittle-ductile and ductile shear zones, developed in a dominantly strike-slip regime, which evolved from a possible oblique compression that would have affected the oldest rocks from the Cuiú-Cuiú Complex. The planar and linear features associated to these major structures indicate a predominantly sinistral movement.

Thirty-eight gold showings have been described in the Vila Riozinho Sheet, as well as occurrences of molybdenite, cassiterite, tourmaline and granite. The dominant style of gold mineralization is represented by quartz veins (simple and conjugate lodes and ductile veins) emplaced along-strike in faults, as well as minor disseminations in hydrothermalized zones and stockworks, spatially associated to the Creporizão and Parauari suite. Comments are also made on the secondary (alluvial and supergene) gold mineralization.

The NW-SW trending structures have played also a major role in gold distributions, which are located in the proximity of these structures, specially close to their inflexions, intersections with NE-SW structures, as well as along lithological contacts and on the periphery of shallow plutonic bodies.