

# ABSTRACT

---

This Explanatory Note presents the results of the geological mapping of the Rio Novo (SB.21-Z-C) Sheet, which was undertaken 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 Rio Novo 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 Serra Comprida Gabbro and the extensive sedimentary cover of the Buiçu Formation, are also associated with this domain.

The Mesoproterozoic is characterized by the local intrusion of troctolitic basic rocks, whereas the Phanerozoic rocks show the intrusion of at least two generations of mafic dykes (mainly diabase), and the development of the lateritic, detrital and alluvial cover.

The structural framework in the area covered by the Rio Novo 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-four gold showings have been described in the Rio Novo Sheet. The dominant style of mineralization is represented by quartz veins (simple lodes, conjugate and ductile veins) emplaced along-strike in faults, as well as minor hydrothermal breccia, disseminations in hydrothermalized zones and stockworks, all spatially associated to the Cuiú-Cuiú Complex in the Creporizão Suite. Comments are also made on secondary (alluvial and supergene) gold mineralization.

The NW-SE trending structures have also played 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.