

BRAZIL - FRENCH GUIANA GEOLOGICAL INTEGRATION ON THE GUYANA SHIELD: MAP SHEET NA.22 (1:1 M)

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RESUMO: In the framework of the Geological and Mineral Resources Map of South America Project (GIS-South America, 1:1 M), under the aegis of the CGMW (Commission for the Geological Map of the World) and the ASGMI (Ibero- American Association of Geological and Mining Surveys), CPRM and BRGM carried out the Geological Map of the NA.22 Macapá Sheet (0°00' to 4°00' N latitude and 48°00' to 54°00' longitude), located on the north of South America and on the eastern part of the Guyana Shield. Approximately 60% of the whole sheet, corresponds to a continental area which holds Brazil (about 137,965.00 km²) and French Guiana (around 37,000.00 km²). The remaining 40% is occupied by the Atlantic Ocean. The Brazilian and French data were integrated and organized in a bilingual (English and Portuguese) layout, as well as in an ArcGIS/ArcMap 9.3 format. All of them have been geo-referenced on the WGS 84 datum. The subjects were distributed in several folders (geology, mineral resources, geophysical data, geochronology, structures, dikes, hydrography, ocean area, natural, forest, biological and Indian reserves, logistic, etc). The geology directory contains the data related to the lithostratigraphic and the geological contacts. The structural directory keeps the registered structures (several types of faults and shear zones, lineaments and dikes). The shapes of the high resolution geophysical surveys carried out by CPRM and by BRGM, respectively, in Brazil (Amapá State) and in French Guiana, are filed in the geophysical data directory. In addition to them, all the main merged airborne geophysical maps of the NA.22 Sheet, produced by a French-Brazilian geophysical team. The mineral resources directory includes data concerned to 196 mineral resources registered on the geological map. The geochronology directory holds 187 geochronological dating (mainly Pb-Pb, U-Pb and Ar-Ar), other than isotopic data. The Geological and Mineral Resources Map, carried out through the integration and interpretation of the geological, geophysical and geochronological data, identifies four tectonic-geochronological domains. The Central-SW Amapá Domain includes the oldest medium to high grade metamorphic complexes (2.86 -2.60 Ga, and 3.07 Ga inherited zircon) with TDM model ages ranging from 3.24 to 2.74 Ga. This domain contains Paleoproterozoic rocks, differentiated from 3.02 to 2.60 Ga. In the SE Amapá, the Falsino Domain represents a NW - SE granulitic belt (2.67 - 2.53 Ga, and > 2.90 Ga inherited zircon), with TDM model ages of 3.20 to ~2.60 Ga. It also encloses Paleoproterozoic charnockites and enderbites, differentiated from 3.05 to 2.64 Ga. The Paru - Ipitinga Domain is a Paleoproterozoic granite - greenstone terrain with TDM model ages of 3.07 to 2.40 Ga, and an Archean granulitic inlier. The North of Amapá -French Guiana Domain, holds exclusively Paleoproterozoic rocks (granitic suites and metavolcanosedimentary units), with a model age interval of 2.89 - 2.18 Ga. The Central - SW Amapá Domain is an Archean crustal fragment, reworked by the Transamazonian orogeny, around which the other domains developed.

PALAVRAS-CHAVE: BRAZIL-FRENCH GUIANA GEOLOGICAL INTEGRATION; GUYANA SHIELD; BRAZIL - FRENCH GUIANA GIS.