

ABSTRACT

Three significant geotectonic units were recognized and mapped in the area comprising Araguaia sheet through a 1:250.000 scale geological surveying: Gneissic Domes, Tocantins-Araguaia Orogenic Belt and the Parnaíba Syncline.

The Gneissic Domes represented by Colméia Complex of Archean age and Cantão and Rio Jardim Complexes assigned to the Middle Proterozoic which occupies the center-south part of the area.

Tocantins-Araguaia Orogenic Belt corresponds to an elongated NS zone in the central part of the sheet, extending away from its limits N and S. Stratigraphically it is composed of Estrondo Group (Morro do Campo, Xambioá e Pequizeiro Formations) and the Tocantins Group represented only by Couto Magalhães Formation.

These two groups represented by low to medium grade metamorphites (amphibolites, quartzites, biotite-quartz-schist, chlorite-quartz-schist, filites and slate) are assumed to belong to Middle Proterozoic age after a few radiometric datings.

Paleo-Mesozoic sediments of the Parnaíba Syncline which outcrops in the eastern part of the sheet comprise Pimenteiras, Cabeças, Longá, Poti, Piauí, Pedra de Fogo, Motuca, Sambaíba and Mosquito

Formations. Grabben structures filling sediments in the central portion were correlated to the Pedra de Fogo Formation.

Basic-ultrabasic intrusive bodies of uncertain age commonly oriented nearly N-S, are often found associated to the Tocantins and Estrondo groups occurrence area.

Rock sample analyses of major elements (oxides as well as trace elements) were performed in order to determine parameters which might possibly explain the environment of the main rock group genesis.

A new interpretation of gamma-spectrometric and magnetometric data of Projeto Geofísico Brasil-Canadá – PGBC was carried out as an auxiliary tool to the geological surveying.

Regional geochemical survey, complementary to previous Projeto Geofísico Brasil-Canadá – PGBC and semidetall survey in specific areas, as well, were carried out by stream sediments and pan concentrates sampling.

The most important mineral activities in the area are restricted to gold, amethyst and diamond exploration as well as raw materials for civil architecture. Other than these activities are less expressive and has low economic interest.