

CONTRIBUTION TO THE GEOLOGY AND HYDROGEOLOGY REGION JACIARA (MATO GROSSO), BRAZIL.

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The area in study with 1800 square kilometers, is located in southeast of the state of Mato Grosso. The principal objective was to accomplish a geological mapping to characterize the area for hydrogeological resources. The presence of sedimentary sequences of Furnas, Ponta Grossa, Aquidauana Formation of Grupo Parana and the Tertiary-quaternary coverings were verified. The Furnas Formation, of late Silurian to lower Devonian, is composed by thick packages of medium and coarse arenites with mean thickness of 94 meters, of coastal environment, forming free aquifer. The Ponta Grossa Formation, of late Devonian, consists of fine arenites to very fine argillaceous silti, locally fossiliferous, presenting a mean thickness of 140 meters and constituting confined aquifer, where the water temperature is approximately 40°C, due to the presence of flaws and deep fractures. The fossiliferous content (Trilobitas and Braquiópodos) confirms shallow sea environment. The Aquidauana Formation, of late Carboniferous to Middle Permian, constitutes sandstones shales and siltstones. The deposition environment, was characterized as fluvial lacustrine, interpreted by the progradation of clastic sedimentation of alluvial fans. The Tertiary-quaternary coverings are composed at the base by compact quartz arenites and top by sands, forming plains characterized by dissected relief. The hydrogeological structure of these two latter units are being defined.