

GEOPHYSICAL STUDIES IN KARSTS TERRAINS OF THE GRUPO UNA, BAHIA

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During the 12th expedition to Toca da Boa Vista, geophysical studies were developed with the purpose of evaluating the potential of the Karstic system in which it is inserted, as well as to test the efficiency of geoelectric method. The adopted method was the inductive electromagnetic using, as equipment, a conductivity meter model EM34-3DL /Geonics. The Toca da Boa Vista is located in the Campo Formoso county (Bahia State) and it has 84km of linear development. There are other caves in its surroundings, where the occurrence is from the Toca da Barriguda, with about 20-km of development and it is located about 1 km to northeast of the Toca da Boa Vista. The caves are developed in the Grupo Una, carbonatic sequence of Upper Proterozoic, seated on the detritic units of the Grupo Chapada Diamantina. The accomplished study aimed at the characterisation definition, on the surface, possible connection zones between the two cavities. The water is scarce in the aquifers of the region, thus the conductivity anomalies are established by the relationship rock-air, condition which was subsidised in the definition of the background. Four different areas were chosen, two of in the middle them between the caves, with measurements made at a depth of 15 and 30 meters, the total of 50.800 m² of investigation. The inductive electromagnetic method was satisfactory for the handling and precision of the measures. The data were treated using the mathematical method of the Minimum Curvature, with the construction of isoconductivity maps that allowed to conclude that in the stretch strip and embraced depths the connection possibilities are rem