The Contribution of Geophysical Prospecting for the Detection of Fracture Waters at Silidara (CBG Concession)

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ABSTRACT

The Guinea Bauxite company, in the context of supplying its mining sites at Silidara in Sangaredi (CBG Concession) with drinking water, has made use of the geophysical method for the location of structures favorable to the accumulation of water underground with a view to installing high-production hydraulic boreholes. The prospecting company TOUMNYNE SARL was commissioned to carry out this project. According to the results of the geological and hydrogeological studies already carried out in the region, the type of aquifer targeted, having a high hydrogeological potential, is the aquifer of the fractures at the level of the crushing and contact zones. The geophysical method used by the research team is the magnetic method with filtering of results. Magnetic prospecting was done following seven (07) profiles using the MMP-203MS brand proton magnetometer (Russian production). The processing of the results made it possible to highlight three zones of cracks accompanied by grinding (03 grinding zones) arranged in a linear fashion. The maximum value of the magnetic anomalies was set at 32 nT.

Keywords: Mine sites, Silidara, Aquifer, Fissures, Magnetic prospecting, Magnetic anomalies.

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