

## Hydrogeological Study of the Different Aquifers in the Area of Biskra

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**Abstract :** Biskra or Zibans, is located in a structural transition zone between the chain of the Saharan Atlas Mountains and the Sahara. It is an arid region where the superficial water resource is the mild, hence the importance of the lithological description and the evaluation of aquifers rock's volumes, which are highly dependent on the mobilized water contained in the various reservoirs (Quaternary, Mio-Pliocene, Eocene and Continental intercalary). Through a data synthesis which is particularly based on stratigraphic logs of drilling, the description of aquifers heterogeneity and the determining of the spatial variability of aquifer appearance became possible, by using geostatistical analysis, which allowed the representation of the aquifer thicknesses mapping and their space variation. The different thematic maps realized focus on drilling position, the substratum shape and finally the aquifers thicknesses of the region. It is found that the high density of water points especially these of drilling points are superposed on the hydrologic reservoirs with significant thicknesses.

**Keywords :** log stratigraphic ArcGIS 10, geometry of aquifers, rocks reservoir volume, Biskra

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