

Use of Landscape Criteria in Prospecting Underground Water, North West Egypt as a Case Study

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Two different landforms dominated in north western Egypt, Limestone plateau reaching up to 400 m high and depressions lowering below sea level until -140m as first criteria, and playa, tufa, sabkhas and duricrust as second criteria. This observed landscape suggest to understand how and where the underground water had trapped and distributed in region about 75000 km². Evidences from hydrogeology, hydrology, lithology, geomorphology and structure are investigated using Landsat images, and field work. This definite landscape interacted with climatic changes to trapping underground water by three agents; i- the water in rainy times had infiltrated in limestone fracture and formed canyon fluvial horizontal water modeling inside Ed Defa plateau. ii- water penetrated deeply through faults to recharge the lower Nubia sandstone aquifer. iii- major steep scarps both in northern and southern plateau sides, are water divide lines participated by quick runoff to support the surrounded lower localities forming aquifers in Quaternary sediments. The underground waters south of the plateau are enough for oases people, the oases and depressions are located at the latest apparent water table in north western Desert of Egypt.