

Study and GIS Development of Geothermal Potential in South Algeria (Adrar Region)

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Abstract : The region of Adrar is located in the south-western Algeria and covers a total area of 443.782 km², occupied by a population of 432,193 inhabitants. The main activity of population is agriculture, mainly based on the date palm cultivation occupies a total area of 23,532 ha. Adrar region climate is a continental desert characterized by a high variation in temperature between months (July, August) it exceeds 48°C and coldest months (December, January) with 16°C. Rainfall is very limited in frequency and volume with an aridity index of 4.6 to 5 which corresponds to a type of arid climate. Geologically Adrar region is located on the edge North West and is characterized by a Precambrian basement cover stolen sedimentary deposit of Phanerozoic age transgressive. The depression is filled by Touat site Paleozoic deposits (Cambrian to Namurian) of a vast sedimentary basin extending secondary age of the Saharan Atlas to the north hamada Tinhirt Tademaït and the plateau of south and Touat Gourara west to Gulf of Gabes in the Northeast. In this work we have study geothermal potential of Adrar region from the borehole data eatable in various sites across the area of 400,000 square kilometres; from these data we developed a GIS (Adrar_GIS) that plots data on the various points and boreholes in the region specifying information on available geothermal potential has variable depths.

Keywords : sig, geothermal, potenteil, temperature

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