

Typology of the Physic-Chemical Quality of the Water of the Area of Touggourt Case: Aquifers of the Intercalary Continental and the Terminal Complex, S-E of Algeria

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Abstract : The region of Touggourt is situated in the southern part of Algeria, it receives important quantities of waters, the latter are extracted from the fossil groundwater (the Intercalary Continental and the Terminal Complex). The mineralization of these waters of the Terminal Complex is between 3 and 6,5 g/l and for waters of Intercalary Continental is 1,8 and 8,7 g/l, thus it constitutes an obstacle as for its use. To highlight the origins of this mineralization, we used the hydrochemical tool. So the chemical analyses in our ownership, were treated by means of the software "Statistica", what allowed us to realize an analysis in main components (ACP), the latter showed a competition between sodic or magnesian chlorinated water and calcic bicarbonate water, rich in potassium for the TC, while for the IC, we have a competition between sodic or calcic chlorinated and magnesian water treated with copper sulphate waters. The simulation realized thermodynamics showed a variation of the index of saturation which do not exceed zero, for waters of two aquifer TC and IC, so indicating one under saturation of waters towards minerals, highlighting the influence of the geologic formation in the outcrop on the quality of waters. However, we notice that these waters remain acceptable for the irrigation of plants but must be treated before what are consumed by the human being.

Keywords : ACP, intercalary, continental, mineralization, SI, Terminal Complex

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