

GENERAL NUMERICAL TOOLS FOR WATER MANAGEMENT APPLIED TO GHARB BASIN (MOROCCO)

Mridekh A., Mansouri A., El Mansouri B., Kili M., Chao J., & Echerfaoui H.

Geosciences and Georesources Laboratory. Hydroinformatic section. University Ibn Tofail, Faculty of Sciences, Maamora Campus. 14000 Kénitra. Morocco

Contact: mridekha@hotmail.fr

ABSTRACT:

The optimal exploitation of groundwater requires, among other information, the precise knowledge of the spatial distribution of reservoirs; such information can be collected only by the integration of data from various sources: geology of surface, drillings, geophysics, etc.

The computing tools of nowadays offer new possibilities of data visualization, crossing and analysis. Indeed, they allow the display of data in a network of points representing punctual information sources, such as drillings or sampling points, with the capability of representing these points on every type of cartographic support. If other types of data exist, geologic cross sections, geoelectric or well logs, solutions of automatic correlations exist between the well data and various cross sections.

Specific processing is possible by enabling automatic setting of the depth(s) and extracting information in various directions. Also, GIS tools enable many interpolation solutions that can be used in building, from punctual data, virtual surfaces representing the numerical modeling of a spatially distributed variable over the studied area.

Key words: Geological reservoir caractérisation – Cartography – GIS