

Performance of the Subsurface Hydraulics in a Doublet System Using the ThermoGIS Calculator

A. M. Al-Mukhtar

Abstract

The doublet system that consisting of injection and production wells is utilized for heat extracting from the aquifer. This work presents the doublet calculator using the ThermoGIS analysis. It is an analytical calculator software for subsurface flows. It contains a large variety of potential aquifer maps. The geothermal aquifer groups were determined. The relevant data were imported from the geological maps. Recently, the compiled geothermal location maps are collected in one framework. An example map and location have been used to show some parameters for geothermal extraction. The uncertainties of the hydro-geological properties could be also considered in term of standard deviations. ThermoGIS software has the abilities to describe the aquifer performance. The users can change the required data according to their measurements and desired performance. By using hydro-geotechnical and drilling parameters, the performance can be determined accordingly.