

Analysis of tubewell performance as an evaluation of the physical aquifer model being developed

ABSTRACT

Physical aquifer model is used as a tool for further understanding of groundwater concept. Demonstration and observation activities on water level drawdown in the observation well, performance of pumping well, groundwater flow and solute transport of groundwater contamination can be carried out on this aquifer model. The objective of this study is to evaluate the physical aquifer model developed in the laboratory, used as a teaching tool and research material through the analysis of well performance. Well efficiency is an indicator in determination of the performance of pumping well developed in the aquifer model. Using stepdrawdown pumping test technique, the optimum pumping discharge rate for the pumping well is determined at 0.0612m³/hr and its efficiency is calculated to be 99%. This technical evaluation helps to study further of the aquifer hydraulic properties which accomplished on this artificial aquifer model.

Keyword: Aquifer model; Well performance; Well efficiency