

Unsteady Flow to a Well Tapping Two Aquifers Separated by an Aquiclude

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Using a discrete kernel approach, a methodology has been described to analyse unsteady flow to a multi-aquifer well. The well taps two aquifers that are separated by an aquiclude. The contribution of an individual aquifer to a well discharge has been estimated when the well is pumped at a constant rate. It is found that the contribution of an aquifer is governed by its hydraulic diffusivity value. In case both the aquifers have equal diffusivity, the aquifers contributions are independent of time but proportional to the respective transmissivity values.

Analysis of Flow to a Large-Diameter Well During the Recovery Period.

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Unsteady flow of a large-diameter well in a confined aquifer during recovery has been analysed by discrete kernel approach. A family of type curves has been presented for different duration of pumping. These type curves provide a fairly accurate means of determining aquifer parameters of pump tests conducted in a large diameter well. The replenishment of well storage at various times has been estimated.