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Principles of Karst Hydrogeology

Conceptual Models, Time Series Analysis, Hydrogeochemistry and Groundwater Exploitation

This book reviews the hydrogeology of karst systems, starting with the classifications from the applied point of view, and then the hydraulic parameters (porosity, permeability, and transmissivity). It also addresses the karstification process, its resulting forms, and their hydrogeological significance. Besides, the author describes possible models of karstic aquifers and their characterization. The book also explains the classical methods for analyzing hydrograms of karst springs and deepens the analysis of time series, as a preliminary phase to the mathematical simulation of karst aquifers. Finally, it introduces the hydrogeochemical characterization of karst, of the processes involved as well as the possible pollution and protection of karst aquifers.

This book is intended to be of interest for professionals in hydrogeology as well as graduate and undergraduate students.

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