1. Record Nr. UNICAMPANIASUN0133407

Autore	Ryutova, Margarita
Titolo	Physics of Magnetic Flux Tubes / Margarita Ryutova
Pubbl/distr/stampa	xxii, 559 p., : ill. ; 24 cm
Edizione	[Berlin]
Descrizione fisica	Pubblicazione in formato elettronico
Soggetti	86A25 - Geo-electricity and geomagnetism [MSC 2020] 00A79 (77-XX) - Physics [MSC 2020] 85-XX - Astronomy and Astrophysics [MSC 2020] 85A20 - Planetary atmospheres [MSC 2020]
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia

2. Record Nr. UNINA9911019984003321

Autore	Pinder George Francis <1942->
Titolo	Subsurface hydrology / / George F. Pinder, Michael A. Celia
Pubbl/distr/stampa	Hoboken, N.J., : Wiley-Interscience, c2006
ISBN	1-280-64900-3 9786610649006 0-470-04420-9 1-60119-842-6 0-470-04419-5
Edizione	[1st ed.]
Descrizione fisica	1 online resource (484 p.)
Altri autori (Persone)	CeliaMichael Anthony
Disciplina	551.49
Soggetti	Groundwater Groundwater - Pollution
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.

Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	SUBSURFACE HYDROLOGY; CONTENTS; PREFACE; 1 WATER AND THE SUBSURFACE ENVIRONMENT; 1.1 Groundwater Hydrology; 1.2 Groundwater and the Hydrologic Cycle; 1.3 Groundwater as a Resource; 1.4 Groundwater and the Subsurface; 1.5 The Near-Surface Environment; 1.5.1 Soil; 1.6 Porosity; 1.6.1 Primary Porosity; 1.6.2 Secondary Porosity; 1.7 Soil Water; 1.8 Groundwater Contamination; 1.8.1 Naturally Occurring Groundwater Contaminants; 1.8.2 Anthropogenic Contaminants; 1.8.3 Superfund; 1.9 Quantitative Analysis of Groundwater Problems; 1.9.1 Governing Equations; 1.9.2 Field Data 1.9.3 Behavior of Groundwater Systems1.10 Summary; 1.11 Problems; Bibliography; 2 FLUID FLOW AND MASS TRANSPORT; 2.1 Fluid Pressure; 2.2 Hydraulic Head; 2.3 Fluid Potential; 2.4 Concept of Saturation; 2.5 The Darcy Experiment; 2.5.1 Extended Forms of Darcy's Law; 2.5.2 Example of a Groundwater Flow Velocity Calculation in Two Dimensions; 2.5.3 Additional Concepts of Fluid Potential; 2.6 Fluid Flow and Mass and Energy Fluxes; 2.6.1 Convection, Diffusion, and Dispersion; 2.6.2 The Phenomena of Adsorption and Retardation; 2.7 Summary; 2.8 Problems; Bibliography; 3 THE GEOLOGIC SETTING 3.1 Unconsolidated Deposits3.1.1 Clastic Sedimentary Environment; 3.1.2 Precipitate Sedimentary Environment; 3.1.3 Glacial Environments; 3.2 Consolidated Rocks; 3.3 Metamorphic Rocks; 3.4 Igneous Rocks; 3.5 Geologic Time; 3.5.1 The Hadean Era; 3.5.2 The Archaean Era; 3.5.3 Proterozoic Era; 3.5.4 Paleozoic Era; 3.5.5 Mesozoic Era; 3.5.6 Cenozoic Era; 3.6 Field Investigation; 3.6.1 Near-Surface Investigation; 3.6.2 Deep Subsurface Investigation; 3.7 The Hydrogeological Record; 3.7.1 The Cross Section; 3.7.2 The Contour Map; 3.8 The Measurement of State Variables; 3.8.1 Water-Level Measurements 3.8.2 Solute Concentration Measurements3.9 Summary; 3.10 Problems; Bibliography; 4 WATER MOVEMENT IN GEOLOGICAL FORMATIONS; 4.1 Conservation of Fluid Mass; 4.2 Conservation of Fluid Mass in a Porous Medium; 4.3 Groundwater Flow Equations; 4.3.1 The Governing Equation; 4.3.2 Parameter Estimates; 4.3.3 Boundary Conditions; 4.3.4 Initial Conditions; 4.3.5 Sources and Sinks; 4.4 The Free-Surface Condition; 4.5 Reduction in Dimensionality; 4.5.1 Physical Dimensions of the Model; 4.5.2 Vertical Integration of the Flow Equation; 4.5.3 The Free-Surface Condition in the Areal Model 4.6 Salt-Water Intrusion4.7 One-Dimensional Formulation; 4.8 Cylindrical Coordinates; 4.9 Summary; 4.10 Problems; Bibliography; 5 ANALYTICAL SOLUTIONS FOR FLOW PROBLEMS; 5.1 One-dimensional Flow Problems; 5.1.1 Darcy Column Experiments; 5.1.2 One-Dimensional Regional Flow; 5.1.3 Flow in Radial Coordinates; 5.2 Two-dimensional Flow Problems; 5.2.1 Graphical Solutions; 5.2.2 Analytical Solutions in Two Dimensions; 5.3 Summary; 5.4 Problems; Bibliography; 6 WELL HYDRAULICS; 6.1 The Slug Test; 6.1.1 Hvorslev Method; 6.1.2 Cooper-Bredehoeft-Papadopulos Approach; 6.2 Pumping Tests 6.2.1 Thiem Method
Sommario/riassunto	With an emphasis on methodology, this reference provides a comprehensive examination of water movement as well as the movement of various pollutants in the earth's subsurface. The multidisciplinary approach integrates earth science, fluid mechanics, mathematics, statistics, and chemistry. Ideal for both professionals and students, this is a practical guide to the practices, procedures, and rules for dealing with groundwater.