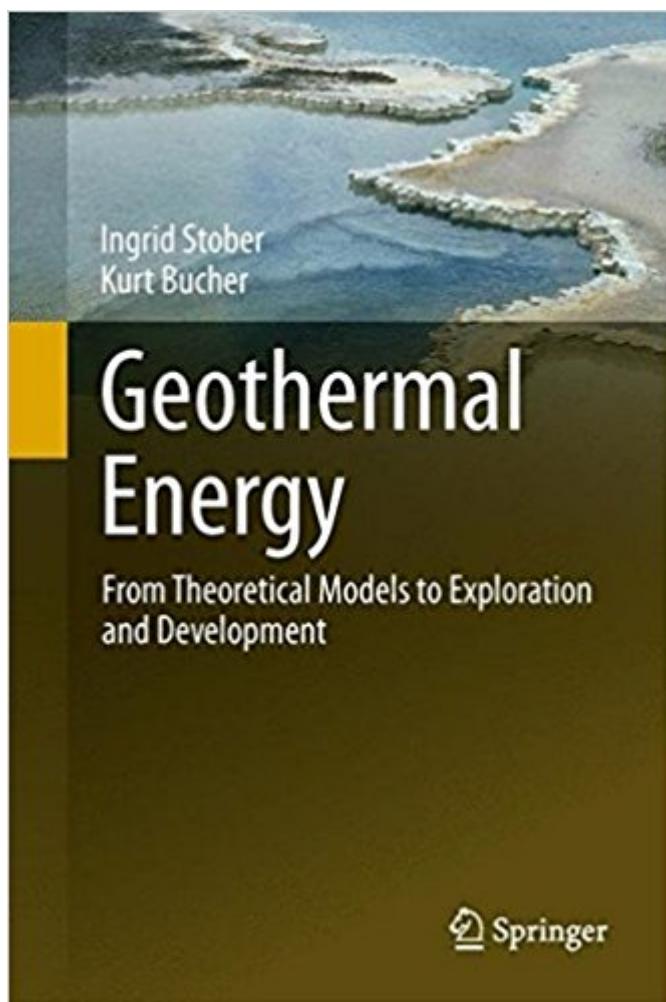


The book was found

# Geothermal Energy: From Theoretical Models To Exploration And Development



## Synopsis

The internal heat of the planet Earth represents an inexhaustible reservoir of thermal energy. This form of energy, known as geothermal energy has been utilized throughout human history in the form of hot water from hot springs. Modern utilization of geothermal energy includes direct use of the heat and its conversion to other forms of energy, mainly electricity. Geothermal energy is a form of renewable energy and its use is associated with very little or no CO<sub>2</sub>-emissions and its importance as an energy source has greatly increased as the effects of climate change become more prominent. Because of its inexhaustibility it is obvious that utilization of geothermal energy will become a cornerstone of future energy supplies. The exploration of geothermal resources has become an important topic of study as geology and earth science students prepare to meet the demands of a rapidly growing industry, which involves an increasing number professionals and public institutions participating in geothermal energy related projects. This book meets the demands of both groups of readers, students and professionals. Geothermal Energy and its utilization is systematically presented and contains the necessary technical information needed for developing and understanding geothermal energy projects. It presents basic knowledge on the Earth's thermal regime and its geothermal energy resources, the types of geothermal energy used as well as its future potential and the perspectives of the industry. Specific chapters of the book deal with borehole heat exchangers and with the direct use of groundwater and thermal water in hydrogeothermal systems. A central topic are Enhanced Geothermal Systems (hot-dry-rock systems), a key technology for energy supply in the near future. Pre-drilling site investigations, drilling technology, well logging and hydraulic test programs are important subjects related to the exploration phase of developing Geothermal Energy sites. The chemical composition of the natural waters used as a heat transport medium in geothermal systems can be used as an exploration tool, but chemistry is also important during operation of a geothermal power plant because of potential scale formation and corrosion of pipes and installations, which needs to be prevented. Graduate students and professionals will find in depth information on Geothermal Energy, its exploration and utilization.

## Book Information

Hardcover: 291 pages

Publisher: Springer; 2013 edition (December 4, 2013)

Language: English

ISBN-10: 3642133517

ISBN-13: 978-3642133510

Product Dimensions: 6.2 x 1 x 9.3 inches

Shipping Weight: 1.2 pounds (View shipping rates and policies)

Average Customer Review: Be the first to review this item

Best Sellers Rank: #3,434,674 in Books (See Top 100 in Books) #48 in Books > Engineering & Transportation > Engineering > Energy Production & Extraction > Alternative & Renewable > Hydroelectric #335 in Books > Engineering & Transportation > Engineering > Energy Production & Extraction > Drilling Procedures #633 in Books > Engineering & Transportation > Engineering > Civil & Environmental > Hydrology

## Customer Reviews

Book: Petrogenesis of metamorphic rocks (Bucher & Frey) Springer-Verlag 2002 Customer reviews on .com one of the best textbooks available, 10. April 2000 Von Katharina Dubach Petrogenesis of metamorphic rocks is probably the best textbook available for students of metamorphic petrology. In a short, concise form it introduces the reader to the principles of metamorphic petrology as well as to the evolution of different rock types under changing metamorphic conditions. Excellent source for anyone studying metamorphic rocks., 2. Juni 1999 Von Ein Kunde This book is divided into two sections. The first section deals with the basic principles of metamorphism, including composition of source rocks, types, processes and conditions of metamorphism. A very detailed description on the construction of metamorphic projections is also included. Part two covers the metamorphism of different rock compositions including ultramafic, mafic, carbonate, pelitic, and granitoid rocks. This section is very detailed, without bogging down with specific examples of metamorphism.

The internal heat of the planet Earth represents an inexhaustible reservoir of thermal energy. This form of energy, known as geothermal energy has been utilized throughout human history in the form of hot water from hot springs. Modern utilization of geothermal energy includes direct use of the heat and its conversion to other forms of energy, mainly electricity. Geothermal energy is a form of renewable energy and its use is associated with very little or no CO<sub>2</sub>-emissions and its importance as an energy source has greatly increased as the effects of climate change become more prominent. Because of its inexhaustibility it is obvious that utilization of geothermal energy will become a cornerstone of future energy supplies. The exploration of geothermal resources has become an important topic of study as geology and earth science students prepare to meet the demands of a rapidly growing industry, which involves an increasing number professionals and

public institutions participating in geothermal energy related projects. This book meets the demands of both groups of readers, students and professionals.

[Download to continue reading...](#)

Geothermal Energy: From Theoretical Models to Exploration and Development Reference Book on Geothermal Direct Use: Case Studies, Residential Geothermal Heat Pumps, Greenhouses, Gold Processing Introduction to the Numerical Modeling of Groundwater and Geothermal Systems: Fundamentals of Mass, Energy and Solute Transport in Poroelastic Rocks (Multiphysics Modeling) Philosophical And Theoretical Perspectives For Advanced Nursing Practice (Cody, Philosophical and Theoretical Perspectives for Advances Nursing Practice) Reiki: The Healing Energy of Reiki - Beginnerâ™s Guide for Reiki Energy and Spiritual Healing: Reiki: Easy and Simple Energy Healing Techniques Using the ... Energy Healing for Beginners Book 1) Modern Geothermal HVAC Engineering and Control Applications Geothermal Engineering: Fundamentals and Applications Energy Harvesting: Solar, Wind, and Ocean Energy Conversion Systems (Energy, Power Electronics, and Machines) Theoretical Nursing: Development and Progress Renewable Energy Made Easy: Free Energy from Solar, Wind, Hydropower, and Other Alternative Energy Sources Crystals: The Ultimate Guide To: Energy Fields, Auras, Chakras and Emotional Healing (Aura, Healing Stones, Crystal Energy, Crystal Healing, Energy Fields, Emotional Healing, Gemstone) Energy, Justice, and Peace:A Reflection on Energy in the Current Context of Development and Environmental Protection Seismic Hydrocarbon Exploration: 2D and 3D Techniques (Advances in Oil and Gas Exploration & Production) Auras: Clairvoyance & Psychic Development: Energy Fields & Reading People (Mind Reading, Fortune Telling, Spirit Guides, Energy Work, Mediumship, Tarot, Empathy) A Generalized Approach To Primary Hydrocarbon Recovery Of Petroleum Exploration & Production, Volume 4 (Handbook of Petroleum Exploration and Production) URBEX: Urban Exploration For Beginners: Discover Abandoned Buildings, Hidden Cities & Access All Areas (Urban Exploration, City Hacking, Caving, Urbex) Transcultural Nursing Theory and Models: Application in Nursing Education, Practice, and Administration (Sager, Transcultural Nursing Theory and Models) Art Models 10: Photos for Figure Drawing, Painting, and Sculpting (Art Models series) Art Models 10 Companion Disk: Photos for Figure Drawing, Painting, and Sculpting (Art Models series) Art Models 6: The Female Figure in Shadow and Light (Art Models series)

[Contact Us](#)

[DMCA](#)

Privacy

FAQ & Help