Coalbed Methane Principles And Practice Prentice Hall

A world list of books in the English language.

We need new ways of thinking about, and approaching, the world's energy problems. Global energy security and access is one of the central justice issues of our time, with profound implications for happiness, welfare, freedom, equity, and due process. This book combines up-to-date data on global energy security and climate change with fresh perspectives on the meaning of justice in social decision-making. Benjamin K. Sovacool and Michael H. Dworkin address how justice theory can help people to make more meaningful decisions about the production, delivery, use, and effects of energy. Exploring energy dilemmas in real-life situations, they link recent events to eight global energy injustices and employ philosophy and ethics to make sense of justice as a tool in the decision-making process. They go on to provide remedies and policies that planners and individuals can utilize to create a more equitable and just energy future.

"This straightforward introduction to coalbed methane gives insight and detail to industry professionals involved with this unique energy resource. Author John Seidle reviews global and U.S. coals and coalbed methane resources, takes the reader through the fundamentals of coal and its importance to coal gas production, and finishes with a discussion of the calculation of probabilistic coalbed methane reserves and pilot philosophy." "In this long-awaited book, Seidle also examines coal deposits as reservoirs, discusses the physics of gas storage in coal and its production, and covers basic equations of mass balance and production rates, negative decline, simulation of coal gas recovery, and enhanced coalbed methane recovery."--Back cover.

Methane stored in coalbeds has emerged as an energy source that offers a viable alternative to fossil fuels. This reference discusses the principles of methane storage in coal and the practices of producing the methane economically, and provides an analysis of the coalbed methane process.

This volume provides detailed guidance for all those involved in the drafting, negotiating or interpretation of natural gas trading and transportation contracts. It identifies the legal and commercial issues involved at each stage and advises on how they should be handled in the contract.

Approximately 1700 references on coalbed methane resources (stratigraphy, coal geology, structural geology, petroleum geology) of the Green River, Powder River, Raton, and San Juan basins, plus a few references on the Wind River and Uinta basins. Disk contains a search macro for WordPerfect 5.1.

Many oil production processes present a significant challenge to the oil and gas field processing facilities and equipment design. The optimization of the sequential operations of handling the oil–gas mixture can be a major factor in increasing oil and gas production rates and reducing operating costs. Petroleum and Gas Field Processing provides an all-inclusive guide to surface petroleum operations and solves these and other problems encountered in the field processing of oil and gas. Fully revised and updated to reflect major changes over the past decade or so, this second edition builds on the success attained in the first edition. It delivers an expanded and updated treatment that covers the

principles and procedures related to the processing of reservoir fluids for the separation, handling, treatment, and production of quality petroleum oil and gas products. With five new chapters, this second edition covers additional subjects, in particular natural gas, economics and profitability, oil field chemicals, and piping and pumps. The book also contains worked-out examples and case studies from a variety of oil field operations.

Fundamentals of Enhanced Oil and Gas Recovery from Conventional and Unconventional Reservoirs delivers the proper foundation on all types of currently utilized and upcoming enhanced oil recovery, including methods used in emerging unconventional reservoirs. Going beyond traditional secondary methods, this reference includes advanced water-based EOR methods which are becoming more popular due to CO2 injection methods used in EOR and methods specific to target shale oil and gas activity. Rounding out with a chapter devoted to optimizing the application and economy of EOR methods, the book brings reservoir and petroleum engineers up-to-speed on the latest studies to apply. Enhanced oil recovery continues to grow in technology, and with ongoing unconventional reservoir activity underway, enhanced oil recovery methods of many kinds will continue to gain in studies and scientific advancements. Reservoir engineers currently have multiple outlets to gain

knowledge and are in need of one product go-to reference. Explains enhanced oil recovery methods, focusing specifically on those used for unconventional reservoirs Includes real-world case studies and examples to further illustrate points Creates a practical and theoretical foundation with multiple contributors from various backgrounds Includes a full range of the latest and future methods for enhanced oil recovery, including chemical, waterflooding, CO2 injection and thermal Provides comprehensive information about the key exploration, development and optimization concepts required for gas shale reservoirs Includes statistics about gas shale resources and countries that have shale gas potential Addresses the challenges that oil and gas industries may confront for gas shale reservoir exploration and development Introduces petrophysical analysis, rock physics, geomechanics and passive seismic methods for gas shale plays Details shale gas environmental issues and challenges, economic consideration for gas shale reservoirs Includes case studies of major producing gas shale formations

Nonrenewable natural resources – metallic and non-metallic minerals, industrial rocks and energy resources (both organic and inorganic), have been treated in a holistic manner in this book, including two important resources (soil and water), not commonly covered in most books on this topic. For

the uninitiated reader, an introductory chapter looks into some basic definitions as well as nature and characteristics of mineral deposits followed by a chapter on the different crustal processes that produce the various ore deposits in the endogenous and exogenous environments. The strength of the book lies in its critical treatment of the genetic processes of the mineral deposits, their classification and the geodynamic context of metallogeny, and coverage of sustainable development of mineral deposits with special reference to various socio-economic as well as regulatory and environmental issues that face the Indian mining industry today. The text is punctuated with examples of Indian deposits, balanced with classical deposits around the world, to cater to the interests of Indian students and the international readership. This is a book for advanced undergraduate and post-graduate students of Geology, Environmental Sciences and Natural Resource Management.

The coalbed methane (CBM) reserve in China ranks third in the world with a total resource of 36.8×1012 m3. Exploitation of CBM has an important practical significance to ensure the long-term rapid development of China natural gas industry. Therefore, in 2002, the Ministry of Science and Technology of China set up a national 973 program to study CBM system and resolve problems of CBM exploration and exploitation in China. All the main research results and new insights from the

program are presented in this book. The book is divided into 11 chapters. The first chapter mainly introduces the present situation of CBM exploration and development in China and abroad. Chapters 2 through 9 illustrate the geological theory and prospect evaluation methods. Then chapters 10 and 11 discuss CBM recovery mechanisms and technology. The book systematically describes the origin, storage, accumulation and emission of CBM in China, and also proposes new methods and technologies on resource evaluation, prospect prediction, seismic interpretation and enhanced recovery. The book will appeal to geologists, lecturers and students who are involved in the CBM industry and connected with coal and conventional hydrocarbon resources research.

Part I: Process design -- Introduction to design -- Process flowsheet development -- Utilities and energy efficient design -- Process simulation -- Instrumentation and process control -- Materials of construction -- Capital cost estimating -- Estimating revenues and production costs -- Economic evaluation of projects -- Safety and loss prevention -- General site considerations -- Optimization in design -- Part II: Plant design -- Equipment selection, specification and design -- Design of pressure vessels -- Design of reactors and mixers -- Separation of fluids -- Separation columns (distillation, absorption and extraction) -- Specification and design of solids-handling equipment -- Heat transfer equipment -- Transport and storage of fluids.

"Volume VI, Emerging and peripheral technologies" covers technologies that have come to the forefront of the industry in the past twenty years. Developments that

are on the periphery of the areas covered in the first five volumes or in emerging areas of technology are covered in this volume.

What makes this book so different and valuable to the engineer is the accompanying software, used by reservoir engineers all over the world every day. The new software, IFLO (replacing WINB4D, in previous editions), is a simulator that the engineer can easily install in a Windows operating environment. IFLO generates simulations of how the well can be tapped and feeds this to the engineer in dynamic 3D perspective. This completely new software is much more functional, with better graphics and more scenarios from which the engineer can generate simulations. BENEFIT TO THE READER: This book and software helps the reservoir engineer do his or her job on a daily basis, better, more economically, and more efficiently. Without simulations, the reservoir engineer would not be able to do his or her job at all, and the technology available in this product is far superior to most companies internal simulation software.-

Computer Methods and Recent Advances in Geomechanics contains the proceedings (abstracts book 472 pages + full paper USB-drive 2052 pages) of the 14th International Conference of the International Association for Computer Methods and Advances in Geomechanics (Kyoto, Japan, 22-25 September, 2014). The contributions cover computer methods, material m

Coal Bed Methane: From Prospect to Pipeline is the proceedings of the 25th anniversary of the North American Coal Bed Methane Forum. It provides the

latest advancements in the production of coal bed methane covering a variety of topics, from exploration to gas processing, for commercial utilization. Additionally, it presents the origin of gas in coal, reservoir engineering, control of methane in coal mines, production techniques, water management, and gas processing. The vast coal resources in the United States continue to produce tremendous amounts of natural gas, contributing to a diverse range energy assets. Following a rapid advancement and subsequent plateau in technological developments, this book captures the full life cycle of a well and offers petroleum geologists and engineers a single source of a broad range of coal bed methane applications. This book addresses crucial technical topics, including exploration and evaluation of coal bed reservoirs; hydraulic fracturing of CBM wells; coal seam degasification; and production engineering and processing, among others. It also covers legal issues, permitting, and economic analysis of CBM projects. Edited by a team of coal bed methane experts from industry, academia and government who have more than 75 years of combined experience in the field Authored by well-recognized members of the gas and coal industry, universities, US government departments, such as the Department of Energy and the National Institute of Occupational Safety and Health (NIOSH) More than

200 figures, photographs, and illustrations aid in the understanding of the fundamental concepts Presents the full scope of improvements in US energy independence, coal mine safety, and greenhouse gas emissions

Presenting new technologies in underground coal extraction, with special attention to mine galleries support and maintenance, load mechanism of "massif-support system-safety system" systems, analysis of face equipment for thin coal seams mining and substantiation of rational stoping parameters. Advanced surface mining technologies of coal and ore are discussed in an original form, stability calculations of internal dumps and open-cut faces are presented, as well as examination of land surface subsidence using modern methods of calculation experiments. Special attention is given to the complex mining of mineral resources, such as: iron ore, coal deposits with drilling advance degassing wells, methane extraction from coal and anthropogenic deposits, heat receipt from mine water with help of thermal pumps. The unique geological conditions for mining in Poland and the Ukraine require a new technological approach for mining thin and very thin coal seams with thickness of 1 meter and less, using selective coal extraction methods, leaving rock behind in the mine. Relevant technological solutions are discussed in this volume. Further, technological process control during coal

seams underground gasification is described together with pressure-temperature conditions of gas hydrates formation from gaseous mixtures of various content. Substantiation is also given to gas hydrates extraction technologies development and 21st century new pulse technologies of well drilling and a temperature mode of a rock-cutting tool and equipment with cryogenic-gravel filters is examined. Gas extraction processes located in flooded deposits with uniform and macroheterogeneous collectors are presented with the description of an effective methodology of two-subbench technology of ore deposits extraction.

"With today's heightened environmental awareness, decreased domestic oil production, and increased consumer demand for energy, the timing is right for the coalbed methane process. In this 2nd edition of Coalbed Methane: Principles and Practices, Halliburton engineers Ramurthy, Rodvelt and Mullen update and add valuable information on reservoir analysis, well construction, formation evaluations, logging, completions and hydraulic fracturing technology for successsful coalbed methane production."--Back cover.

Unconventional Petroleum Geology is the first book of its kind to collectively identify, catalog, and assess the exploration and recovery potential of the Earth's unconventional hydrocarbons. Advances in hydrocarbon technology and petroleum development

systems have recently made the exploration of unconventional hydrocarbons—such as shale gas, tight sandstone oil and gas, heavy oil, tar sand, and coalbed methane—the hottest trend in the petroleum industry. Detailed case studies act as real-world application templates, making the book's concepts immediately practical and useful by exploration geologists. The logical and intuitive three-part approach of systematically identifying an unconventional hydrocarbon, cataloguing its accumulation features, and assessing its exploration and recovery potential can be immediately implemented in the field—anywhere in the world. Provides a detailed assessment of the exploration and recovery potential of the full range of unconventional hydrocarbons More than 300 illustrations—many in full color—capture the detailed intricacies and associated technological advances in unconventional hydrocarbon exploration More than 20 case studies and examples from around the world conclude each chapter and aid in the application of key exploration and recovery techniques

Bridging the gap in expertise between coal and coalbed gas, subfields in which opportunities for cross training have been nonexistent, Coal and Coalbed Gas sets the standard for publishing in these areas. This book treats coal and coalbed gas as mutually inclusive commodities in terms of their interrelated origin, accumulation, composition,

distribution, generation, and development, providing a balanced understanding of this energy mix. Currently considered a non-renewable energy resource, coalbed gas, or coalbed methane, is a form of natural gas extracted from coal beds. In recent years, countries have begun to seek and exploit coal for its clean gas energy in an effort to alleviate environmental issues that come with coal use, making a book on this topic particularly timely. This volume takes into account processes of coalification, gasification, and storage and reservoir characterization and evaluation and looks at water management and environmental impacts as well. Covers environmental issues in the development of coalbed gas Includes case studies, field guides and data, examples, and analytical procedures from previous studies and investigations Accessible by a large multidisciplinary market by one of the world's foremost experts on the topic

Chemical Methods, a new release in the Enhanced Oil Recovery series, helps engineers focus on the latest developments in one fast-growing area. Different techniques are described in addition to the latest technologies in data mining and hybrid processes. Beginning with an introduction to chemical concepts and polymer flooding, the book then focuses on more complex content, guiding readers into newer topics involving smart water injection and ionic liquids for EOR. Supported field case studies illustrate a bridge between

research and practical application, thus making the book useful for academics and practicing engineers. This series delivers a multi-volume approach that addresses the latest research on various types of EOR. Supported by a full spectrum of contributors, this book gives petroleum engineers and researchers the latest developments and field applications to drive innovation for the future of energy. Presents the latest research and practical applications specific to chemical enhanced oil recovery methods Helps users understand new research on available technology, including chemical flooding specific to unconventional reservoirs and hybrid chemical options Includes additional methods, such as data mining applications and economic and environmental considerations

In the lifetimes of the authors, the world and especially the United States have received three significant “wake-up calls” on energy production and consumption. The first of these occurred on October 15, 1973 when the Yom Kippur War began with an attack by Syria and Egypt on Israel. The United States and many western countries supported Israel. Because of the western support of Israel, several Arab oil exporting nations imposed an oil embargo on the west. These nations withheld five million barrels of oil per day. Other countries made up about one million barrels of oil per day but the net loss of four million barrels of oil production per day extended through March of 1974. This represented 7% of the free world’s (i. e. , excluding the USSR) oil production. In 1972 the price of crude oil was about $3. 00 per barrel and by the end of 1974 the

price of oil had risen by a factor of 4 to over $12. 00. This resulted in one of the worst recessions in the post World War II era. As a result, there was a movement in the United States to become energy independent. At that time the United States imported about one third of its oil (about five million barrels per day). After the embargo was lifted, the world chose to ignore the “wake-up call” and went on with business as usual.

Coal mines are not only a safety management challenge but also a major source of greenhouse gas emissions. Methane release during coal mining creates unsafe working conditions in underground coal mines around the world. This Guidance is intended to provide a genuine contribution to improve mine safety practices at active underground coal mines, by supporting safer mining practices to reduce fatalities, injuries, and property losses, while encouraging the use of coal mine methane (CMM) to reduce greenhouse gas emissions and utilize otherwise -wasted energy resources.

This book approaches the energy science sub-field carbon capture with an interdisciplinary discussion based upon fundamental chemical concepts ranging from thermodynamics, combustion, kinetics, mass transfer, material properties, and the relationship between the chemistry and process of carbon capture technologies. Energy science itself is a broad field that spans many disciplines -- policy, mathematics, physical chemistry, chemical engineering, geology, materials science and mineralogy -- and the author has selected the material, as well as end-of-chapter problems and policy discussions, that provide the necessary tools to

interested students.
Applies detailed knowledge toward the design and construction of underground civil works projects.
Develops critical skills for managing risk and designing reliable gas control measures within project time and cost constraints.