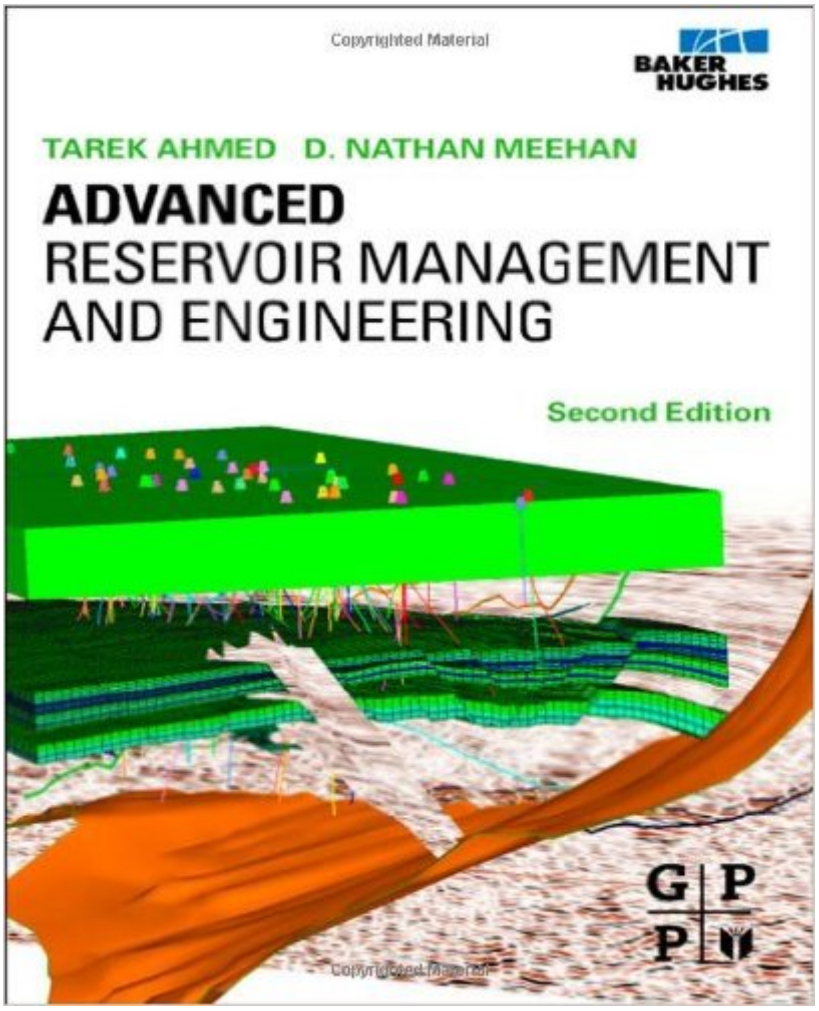
Advanced Reservoir Management And Engineering, Second Edition



Synopsis

Reservoir management is concerned with the geoscience and reservoir/production engineering required to plan and optimize the development of discovered or producing oil and gas assets. One of the only books to cover both management and engineering issues, Advanced Reservoir Management and Engineering is redesigned to be the only book you need throughout your career. Written by two of the industry's best-known and well respected reservoir engineers and managers, this new edition offers readers a complete guide for formulating workflow solutions on a day to day bases. Authoritative in its approach, the book begins with the theory and practice of transient flow analysis and offers a brief but thorough hands-on guide to gas and oil well testing. Chapter two documents water influx models and their practical applications in conducting comprehensive field studies, widely used throughout the industry. Essential topics such as Type-Curve Analysis, unconventional gas reservoirs, and gas hydrates are also covered. The book moves on to provide a clear exposition of key economic and financial management methods for evaluation criteria and cash flow analysis, analysis of fixed capital investments and advanced evaluation approaches. This is followed by a frank discussion of advanced evaluation approaches such as integration of decision analysis and professional ethics. Readers will find the website a valuable guide for enhancing their understanding of different techniques used for predicting reservoir performance and cost. The website will also include information such as properties, tables and simple calculations. This combination book and website arrangement will prove particularly useful to new professionals interested in increasing their skills or more experienced professional wishing to increase their knowledge of current industry best practices. The 2nd Edition of the book includes 3 new management chapters, representing a 30% increase over the previous edition. The new subjects include step by step approach to cash flow analysis, analysis of fixed capital investments, cash flow consequences, maintenance as well as a detailed approach to managing working capital. This is followed by a clear exposition of advanced evaluation approaches such as integration of decision analysis and economic evaluation and professional ethics. Maximize cash flow, subject to capital and operating budgetDeliver new high-quality investment opportunities to managementEffectively manage the development of oil and gas assetsMaximize the benefit to the legitimate stakeholders

Book Information

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Customer Reviews

I was extremely impressed with all of the information provided in this incredibly well put together text. The chapters are fairly long and insightful. This book is most definitely intended for those with prior knowledge on the subject. It is best suited for graduate students, those who are already working in the field and for anyone looking to build on whatever wealth of knowledge they already have on the subject matter. The First few chapters can seem a bit lengthy and almost a little overwhelming but once you get into the flow of it things become easier to understand. The math involved during these first chapters is going to seem a bit insane at times but I seemed to get the hang of it fast and found everything very fluid after a couple re-reads. I was most impressed with the chapters on Economic and Financial analysis because they were so well put together and informative. The info provided is almost overwhelming at first glance but it is far easier then the previous chapters in terms of the math skills needed to figure everything out. Overall, I really enjoyed the author’s writing style and the ease of understanding everything laid out for the reader. Anyone in the field of petroleum geology or reservoir engineering will find this a MUST HAVE text for improving upon their skills. Highly recommended!

This book was everything that it advertised itself to be. There is a wonderful amount of information in this book for those interested in the very complex field of reservoir management and engineering. The book is for people who have a background in math and physics. This is not a subject for anyone who lacks that background. The preface does state that the book is designed for seniors and graduate students. The authors are obviously masters of their field. I plan to keep the book close to my desk as a quick reference.My only disappointments were that the diagrams were not

well drawn and were in several cases downright misleading. In this age of computer generation of perspective drawings there is no excuse for this book not having very clear drawings. The formulas and graphs on the other hand were very clear and easy to read.

Oil extraction is vital to keep the global economy running. An absolute necessity. Hence a text like this directed at students and professionals in petroleum engineering is timely. It is not an easy read. Nor should it be. The level of discourse appears to be at the senior undergraduate level or graduate level, if not for engineers in the field.The first chapter looks at what may be the most important topic. How to test a well and analyse the measurements. A long and very detailed discussion. Replete with charts of the behaviour of various key variables as a function of a typically dimensionless production time. Basically, the modelling of the history of a well's output.The book does not confine itself to oil wells. Chapter 3 looks at unconventional gas reservoirs. From a physical standpoint, the biggest difference from oil analysis is that the gas flow is often laminar. Many of the equations and modelling in this chapter are thus qualitatively different from oil flow analysis. Given the economic importance of extracting and using gas, you as a professional need to be facile in understanding both oil and gas extraction.Chapter 6 is an optimistic look at enhanced oil recovery. How to make this practical will improve extraction rates from old fields. Also important in meeting ever growing oil demands, especially from developing countries.There are 2 chapters on economic and financial analysis. I am unsure of the distinction. The maths at least is far easier than the earlier chapters on the physics of extraction.

For petroleum engineers and grad students. That is what the publisher mentioned, and it's true. The vast majority of this text contains nearly 700 pages of very advanced engineering math. This is not light reading, this text is targeted at a very small market of those in the field, or those soon to acquire a PhD in petroleum engineering.That said, the topics covered in the chapters are:1. Well testing analysis2. Water influx3. Unconventional gas reservoirs4. Performance of oil reservoirs5. Predicting oil reservoir performance6. Introduction to enhanced oil recovery7. Economic analysis8. Financial analysis9. Professionalism and ethicsThere are many examples and formulas, making this a wonderful reference text. And since it is geared towards petroleum engineering PhD students, there are many problems for students to work through and solve.Everything is written well and laid out in a very progressive format. The last three chapters are a great bonus as they cover some of the issues that other engineering texts may not get into.Lastly, the book is quite heavy and large and bound very well. It should take some punishment, but might be a bit big to lug around if you

have limited space in a messenger bag, backpack, or briefcase.Great textbook / reference text.

Advanced Reservoir Management and Engineering, Second Edition The Practice of Reservoir Engineering (Revised Edition), Volume 36 (Developments in Petroleum Science) Applied Petroleum Reservoir Engineering (3rd Edition) Coastal and Estuarine Processes (Advanced Series on Ocean Engineering) (Advanced Series on Ocean Engineering (Paperback)) Fundamentals of Reservoir Engineering, Volume 8 (Developments in Petroleum Science) Practical Enhanced Reservoir Engineering: Assisted with Simulation Software Introduction to Coastal Engineering and Management (Advanced Series on Ocean Engineering) INTRODUCTION TO COASTAL ENGINEERING AND MANAGEMENT (Advanced Series on Ocean Engineering - Vol. 16) Desert and River in Nubia: Geomorphology and Prehistoric Environments at the Aswan Reservoir A Practical Guide to Oil & Gas Resource Characterization For Geologists and Reservoir Engineers The Frozen Chosen: The 1st Marine Division and the Battle of the Chosin Reservoir (General Military) Seismic Stratigraphy, Basin Analysis and Reservoir Characterisation (Handbook of Geophysical Exploration: Seismic Exploration) Phase Behavior of Petroleum Reservoir Fluids Colder Than Hell: A Marine Rifle Company at Chosin Reservoir Colder than Hell: A Marine Rifle Company at Chosin Reservoir (Bluejacket Books) One Bugle, No Drums: The Marines at Chosin Reservoir Carbonate Reservoir Characterization: An Integrated Approach Random Seas and Design of Maritime Structures (Ocean Engineering) (Advanced Series on Ocean Engineering (Paperback)) The Daily Note Planner For Busy People: Make Use Of Your Time Effectively With This Easy To Follow Note Planning Guide (Note Taking, Time Management, Management ... Management For Dummies, Stress Reduction) Integrated Solid Waste Management: Engineering Principles and Management Issues