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# Drilling Engineering Association

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Applications of Artificial Intelligence Techniques  
in the Petroleum Industry

Drilling Engineering Problems and Solutions

Proposals to Develop and Evaluate Horizontal  
Drilling Technology

Drilling

Drilling Engineering

AADE 2006: American Association for Drilling  
Engineers National Technical Conference  
Proceedings

Guide to Petroleum Engineering Career

Drilling Engineering Problems and Solutions

Drilling Fluids Processing Handbook

AADE 2004: American Association of Drilling  
Engineers National Technical Conference  
Proceedings

Casing and Liners for Drilling and Completion

Applied Gaseous Fluid Drilling Engineering  
Drilling Conference

DRILLING ENGINEERING

Deepwater Drilling

Petroleum Rock Mechanics

The China Continental Scientific Drilling Project

Horizontal Directional Drilling (HDD)

Fundamentals of Drilling Engineering

ADSC Technical Library Catalog

Advanced Drilling Engineering

Drilling Fluids Processing Handbook  
Drilling Mechanics: Advanced Applications and  
Technology  
Drilling Engineering Handbook  
Horizontal Drilling Engineering - Theory, Methods  
and Applications  
Petroleum Engineering  
Drilling and Completion in Petroleum Engineering  
Shale Shakers and Drilling Fluids Systems  
Formulas and Calculations for Drilling, Production,  
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**HEATH FRENCH**

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**Applications of**

**Artificial Intelligence  
Techniques in the  
Petroleum Industry**

Gulf Professional  
Publishing

Master the principles

and practices of modern drilling mechanics This in-depth guide offers complete coverage of drilling mechanics with a focus on the horizontal drilling of shale plays and offshore wells. The book lays out drilling engineering fundamentals and clearly explains the latest technological developments. Written by a team of seasoned educators, *Drilling Engineering: Advanced Applications and Technology* covers every key topic, including geomechanics for drilling applications, well construction techniques, wellbore hydraulics, and optimization. You will enhance your understanding of drilling operations,

improve your designs, and plan for more productive and cost-effective wells. Coverage includes: Well construction and hydraulics Drillstring mechanics and casing design Drilling hydraulics Cuttings transport Geomechanics Fundamentals of rock mechanics Wellbore stress, stability, and strengthening Coupled fluid flow—stress formulation Drilling optimization methods Vector and tensor analysis Principles of deformable materials Elasticity concepts [Drilling Engineering Problems and Solutions](#) Elsevier The book clearly explains the concepts of the drilling engineering and presents the existing knowledge ranging

from the history of drilling technology to well completion. This textbook takes on the difficult issue of sustainability in drilling engineering and tries to present the engineering terminologies in a clear manner so that the new hire, as well as the veteran driller, will be able to understand the drilling concepts with minimum effort. This textbook is an excellent resource for petroleum engineering students, drilling engineers, supervisors & managers, researchers and environmental engineers for planning every aspect of rig operations in the most sustainable, environmentally responsible manner, using the most up-to-date technological

advancements in equipment and processes. *Proposals to Develop and Evaluate Horizontal Drilling Technology* John Wiley & Sons Applied Gaseous Fluid Drilling Engineering: Design and Field Case Studies provides an introduction on the benefits of using gaseous fluid drilling engineering. In addition, the book describes the multi-phase systems needed, along with discussions on stability control. Safety and economic considerations are also included, as well as key components of surface equipment needed and how to properly select equipment depending on the type of fluid system. Rounding out with proven case

studies that demonstrate good practices and lessons from failures, this book delivers a practical tool for understanding the guidelines and mitigations needed to utilize this valuable process and technology. Helps readers gain a framework of understanding regarding the basic processes, technology and equipment needed for gaseous fluid drilling operations Highlights benefits and challenges using drilling flow charts, photos of relevant equipment, and table comparisons of available fluid systems Presents multiple case studies involving successful and unsuccessful operations  
Drilling John Wiley &

Sons  
Modern petroleum and petrotechnical engineering is increasingly challenging due to the inherently scarce and decreasing number of global petroleum resources. Exploiting these resources efficiently will require researchers, scientists, engineers and other practitioners to develop innovative mathematical solutions to serve as basis for new asset deve  
**Drilling Engineering**  
Gulf Professional Publishing  
Tight Oil Reservoirs: Characterization, Modeling, and Field Development, the latest release in the Unconventional Reservoir Engineering Series, delivers a full spectrum of reservoir engineering guidelines

so that the engineer can focus on every stage of development specific to tight oil. Covering characterization, micro- and nano-scale modeling, drilling horizontally, completing hydraulic fracturing, and field development, each section includes case studies, practice exercises, and future references for even deeper understanding. Rounding out with coverage on field economics and remaining challenges, this book puts control in the engineer's hands. In this ongoing series, each release will discuss the latest resources, explain their importance in the market, show the benefits of the resource through the latest research,

provide details and protocols on how to evaluate and develop the resource, and give case studies and practice questions to gain practicality. Supports the petroleum engineer with a structured table of contents focused on one unconventional resource, making research and solutions easier to find. Covers the full spectrum of reservoir engineering, including modern research, development and field development. Applies practicality with case studies, exercises and references included in every chapter. [AADE 2006: American Association for Drilling Engineers National Technical Conference Proceedings](#) Springer Science & Business Media

Rev. ed. of: Formulas and calculations for drilling, production, and workover / Norton J. Lapeyrouse.

**Guide to Petroleum Engineering Career**

Gulf Professional Publishing

Applications of Artificial Intelligence Techniques in the Petroleum Industry gives engineers a critical resource to help them understand the machine learning that will solve specific engineering challenges. The reference begins with fundamentals, covering preprocessing of data, types of intelligent models, and training and optimization algorithms. The book moves on to methodically address artificial intelligence technology and applications by the

upstream sector, covering exploration, drilling, reservoir and production engineering. Final sections cover current gaps and future challenges. Teaches how to apply machine learning algorithms that work best in exploration, drilling, reservoir or production engineering Helps readers increase their existing knowledge on intelligent data modeling, machine learning and artificial intelligence, with foundational chapters covering the preprocessing of data and training on algorithms Provides tactics on how to cover complex projects such as shale gas, tight oils, and other types of unconventional reservoirs with more advanced model input

## **Drilling Engineering Problems and Solutions**

Elsevier  
 Drilling engineering is a challenging discipline in the oil patch. It goes beyond what is found in textbooks. The technological advances in the past two decades have been very significant. These advances have allowed the oil industry worldwide to economically and successfully exploit oil and gas fields that may have not been possible before. The fundamentals of fluid mechanics and solid mechanics, along with the basic scientific concepts of chemistry, form the basis of drilling engineering. The rewards and successes of drilling projects are predicated on the ability of the drilling engineer who

fully understands all the engineering aspects and equipment required to drill a usable hole at the lowest dollar per foot, in vertical well drilling, or at the highest equivalent barrel of oil per foot in horizontal/multilateral well drilling. Horizontal Drilling Engineering book gives the fundamentals and field practices involved in horizontal drilling operations. Key Features Benefits: This textbook is an excellent resource for drilling engineers, directional drillers, drilling supervisors and managers, and petroleum engineering students.

*Drilling Fluids*

*Processing Handbook*

McGraw Hill

Professional

This book presents the



fundamental principles of drilling engineering, with the primary objective of making a good well using data that can be properly evaluated through geology, reservoir engineering, and management. It is written to assist the geologist, drilling engineer, reservoir engineer, and manager in performing their assignments. The topics are introduced at a level that should give a good basic understanding of the subject and encourage further investigation of specialized interests. Many organizations have separate departments, each performing certain functions that can be done by several methods. The reentering of old areas, as the industry is doing

today, particularly emphasizes the necessity of good holes, logs, casing design, and cement job. Proper planning and coordination can eliminate many mistakes, and I hope the topics discussed in this book will play a small part in the drilling of better wells. This book was developed using notes, comments, and ideas from a course I teach called "Drilling Engineering with Offshore Considerations." Some "rules of thumb" equations are used throughout, which have proven to be helpful when applied in the proper perspective. The topics are presented in the proper order for carrying through the

drilling of a well.

*AADE 2004: American Association of Drilling Engineers National Technical Conference Proceedings* Springer Nature

Drilling engineering is a subset of petroleum engineering. Drilling engineers design and implement procedures to drill wells as safely and economically as possible. They work closely with the drilling contractor, service contractors, and compliance personnel, as well as with geologists and other technical specialists. The drilling engineer has the responsibility for ensuring that costs are minimized while getting information to evaluate the formations penetrated, protecting the health and safety of workers and other personnel,

and protecting the environment.

### **Casing and Liners for Drilling and Completion**

Gulf Professional Publishing  
Completely up to date and the most thorough and comprehensive reference work and learning tool available for drilling engineering, this groundbreaking volume is a must-have for anyone who works in drilling in the oil and gas sector. Petroleum and natural gas still remain the single biggest resource for energy on earth. Even as alternative and renewable sources are developed, petroleum and natural gas continue to be, by far, the most used and, if engineered properly, the most cost-effective and efficient, source of energy on the planet. Drilling engineering is

one of the most important links in the energy chain, being, after all, the science of getting the resources out of the ground for processing. Without drilling engineering, there would be no gasoline, jet fuel, and the myriad of other "have to have" products that people use all over the world every day. Following up on their previous books, also available from Wiley-Scrivener, the authors, two of the most well-respected, prolific, and progressive drilling engineers in the industry, offer this groundbreaking volume. They cover the basic tenets of drilling engineering, the most common problems that the drilling engineer faces day to day, and cutting-edge new

technology and processes through their unique lens. Written to reflect the new, changing world that we live in, this fascinating new volume offers a treasure of knowledge for the veteran engineer, new hire, or student. This book is an excellent resource for petroleum engineering students, reservoir engineers, supervisors & managers, researchers and environmental engineers for planning every aspect of rig operations in the most sustainable, environmentally responsible manner, using the most up-to-date technological advancements in equipment and processes. Applied Gaseous Fluid Drilling Engineering

John Wiley & Sons  
 Written by the Shale  
 Shaker Committee of  
 the American Society  
 of Mechanical  
 Engineers, originally of  
 the American  
 Association of Drilling  
 Engineers, the authors  
 of this book are some  
 of the most well-  
 respected names in the  
 world for drilling. The  
 first edition, *Shale  
 Shakers and Drilling  
 Fluid Systems*, was  
 only on shale shakers,  
 a very important piece  
 of machinery on a  
 drilling rig that  
 removes drill cuttings.  
 The original book has  
 been much expanded  
 to include many other  
 aspects of drilling  
 solids control, including  
 chapters on drilling  
 fluids, cut-point curves,  
 mud cleaners, and  
 many other pieces of  
 equipment that were  
 not covered in the

original book. .Written  
 by a team of more than  
 20 of the world's  
 foremost drilling  
 experts, from such  
 companies as Shell,  
 Conoco, Amoco, and  
 BP. .There has never  
 been a book that pulls  
 together such a vast  
 array of materials and  
 depth of topic  
 coverage in the area of  
 drilling fluids. .Covers  
 quickly changing  
 technology that  
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technology in the trenchless industry. Provides technical information on the design, permitting, construction, bid documents, specifications, and construction of HDD applications Numerous HDD calculations with examples

### *DRILLING*

*ENGINEERING* Gulf Professional Publishing  
Written by the Shale Shaker Committee of the American Society of Mechanical Engineers, originally of the American Association of Drilling Engineers, the authors of this book are some of the most well-respected names in the world for drilling. The first edition, *Shale Shakers and Drilling Fluid Systems*, was only on shale shakers, a very important piece

of machinery on a drilling rig that removes drill cuttings. The original book has been much expanded to include many other aspects of drilling solids control, including chapters on drilling fluids, cut-point curves, mud cleaners, and many other pieces of equipment that were not covered in the original book. Written by a team of more than 20 of the world's foremost drilling experts, from such companies as Shell, Conoco, Amoco, and BP There has never been a book that pulls together such a vast array of materials and depth of topic coverage in the area of drilling fluids Covers quickly changing technology that updates the drilling engineer on all of the

latest equipment, fluids, and techniques

**Deepwater Drilling**

Elsevier

Guide to Petroleum Engineering Career By: Engr. Azunna I. B. Ekejiuba (Ph.D.)

Historically, human beings have used petroleum in one form or another since ancient times (more than 8000 years ago). However, the birth of the modern petroleum industry was on August 27, 1859, when Colonel Edwin L. Drake used the then popular cable tool (also called churn or percussion) drilling method to drill the actual historically first oil well, on a stream called Oil Greek, near Titusville, Pennsylvania, at a depth of 69 feet, six inches (21 metres). In recent years, the advent of the

transcontinental transmission lines and petrochemical industries has increased the value of natural gas (methane) to a fuel in great demand and a chemical feedstock (raw material) for many modern commercial and industrial products, particularly the synthesis of plastics, rubber, fertilizers, solvents, adhesives, pesticides, gas-to-methanol (GTM), liquefied natural gas (LNG), et cetera. Guide to Petroleum Engineering Career is an ideal career guide, lecture note, practical manual, petrochemical production guide, information source (to all categories of practicing petroleum industry workers and enthusiasts who are

interested to know more about the current key mankind energy resources), as well as a reference on the emerging renewable fuel economy which reflects the challenges faced by the millennium petroleum engineers.

### **Petroleum Rock Mechanics**

Gulf Professional Publishing  
The book clearly explains the concepts of the drilling engineering and presents the existing knowledge ranging from the history of drilling technology to well completion. This textbook takes on the difficult issue of sustainability in drilling engineering and tries to present the engineering terminologies in a clear manner so that the new hire, as well as the

veteran driller, will be able to understand the drilling concepts with minimum effort.  
[The China Continental Scientific Drilling Project](#) Elsevier  
Deepwater Drilling: Well Planning, Design, Engineering, Operations, and Technology Application presents necessary coverage on drilling engineering and well construction through the entire lifecycle process of deepwater wells. Authored by an expert with real-world experience, this book delivers illustrations and practical examples throughout to keep engineers up-to-speed and relevant in today's offshore technology. Starting with pre-planning stages, this reference dives into the rig's elaborate rig and equipment

systems, including ROVs, rig inspection and auditing procedures. Moving on, critical drilling guidelines are covered, such as production casing, data acquisition and well control. Final sections cover managed pressure drilling, top and surface hole 'riserless' drilling, and decommissioning. Containing practical guidance and test questions, this book presents a long-awaited resource for today's offshore engineers and managers. Helps readers gain practical experience from an author with over 35 years of offshore field know-how Presents offshore drilling operational best practices and tactics on well integrity for the

entire lifecycle of deepwater wells Covers operations and personnel, from emergency response management, to drilling program outlines  
*Horizontal Directional Drilling (HDD) CRC Press*  
 This book presents the theory and technologies of drilling operations. It covers the gamut of formulas and calculations for petroleum engineers that have been compiled over several years. Some of these formulas and calculations have been used for decades, while others help guide engineers through some of the industry's more recent technological breakthroughs. Comprehensively discussing all aspects



of drilling technologies, and providing abundant figures, illustrations and tables, examples and exercises to facilitate the learning process, it is a valuable resource for students, scholars and engineers in the field of petroleum engineering.

Fundamentals of Drilling Engineering

Gulf Professional Publishing

This book details the major artificial lift methods that can be applied to hydrocarbon reservoirs with declining pressure.

These include: the sucker rod pump, gas lift, electrical submersible pump, progressive cavity pump, and plunger lift. The design and applications, as well as troubleshooting, are discussed for each

method, and examples, exercises and design projects are provided in order to support the concepts discussed in each chapter. The problems associated with oil recovery in horizontal wells are also explored, and the author proposes solutions to address the various extraction challenges that these wells present. The book represents a timely response to the difficulties associated with unconventional oil sources and declining wells, offering a valuable resource for students of petroleum engineering, as well as hydrocarbon recovery researchers and practicing engineers in the petroleum industry.

**ADSC Technical Library Catalog**

Springer

This is a binder of

materials from a conference presentation. "Applied drilling engineering for rotary and auger methods (for ground water-related investigations). November 9-10, 1989, Marriott Inn North Columbus, Ohio. March 21-22, 1990, Hyatt Regency at Ohio Center Columbus, Ohio. October 24-25, 1990, Sheraton Palace Hotel, San Francisco, California. Presented by The Association of Ground Water Scientists and Engineers, division of NWWA presents National Well Water Association."

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