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[Drilling Engineering Problems and Solutions](#) Jul 16 2021 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.

Well Planning at Molly Field Jun 02 2020 Technical Report from the year 2012 in the subject Geography / Earth Science - Geology, Mineralogy, Soil Science, grade: B, Robert Gordon University Aberdeen, course: MSC Oil and Gas Engineering, language: English, abstract: A new prospect is planned to be drilled by Kennac Petroleum Corporation on a new licensed Molly field located in the North Sea on Block 14a/b. The tasks involved in well planning are as follows: (a) the estimation and evaluation of pore and fracture pressure and their impact on well planning, (b) a lithology study of the different formations and the steps taken to minimize the occurrence of drilling problems through all different formations, (c) a casing scheme design, (d) a mud programme design for the given well, and (e) a cement type suitable for the application in the given well.

[Casing and Liners for Drilling and Completion](#) Feb 08 2021 The Gulf Drilling Series is a joint project between Gulf Publishing Company and the International Association of Drilling Contractors. The first text in this Series presents casing design and mechanics in a concise, two-part format. The first part focuses on basic casing design and instructs engineers and engineering students how to design a safe casing string. The second part covers more advanced material and special problems in casing design in a user-friendly format. Learn how to select sizes and setting depths to achieve well objectives, determine casing loads for design purposes, design casing properties to meet burst, collapse and tensile strength requirements and conduct casing running operations safely and successfully.

[Technical Guidance for Petroleum Exploration and Production Plans](#) Mar 24 2022 This book presents detailed explanations of how to formulate field development plans for oil and gas discovery. The data and case studies provided here, obtained from the authors' field experience in the oil and gas industry around the globe, offer a real-world context for the theories and procedures discussed. The book covers all aspects of field development plan processes, from reserve estimations to economic analyses. It shows readers in both the oil and gas industry and in academia how to prepare field development plans in a straightforward way, and with substantially less uncertainty.

Surfactants in Upstream E&P Sep 17 2021 This edited book explores the use of surfactants in upstream exploration and production (E&P). It provides a molecular, mechanistic and application-based approach to the topic, utilising contributions from the leading researchers in the field of organic surfactant chemistry and surfactant chemistry for upstream E&P. The book covers a wide range of problems in enhanced oil recovery and surfactant chemistry which have a large importance in drilling, fracturing, hydrate inhibition and conformance. It begins by discussing the fundamentals of surfactants and their synthesis. It then moves on to present their applicability to a variety of situations such as gas injections, shale swelling inhibition, and acid stimulation. This book presents research in an evolving field, making it interesting to academics, postgraduate students, and experts within the field of oil and gas.

[Petroleum Chemicals](#) May 14 2021 A vast amount has been written about petroleum fuels, including books and guidelines; hence, we thought it timely to produce a book [Petroleum Fuels: Recent Updates](#), which covers the most important areas in the topic. In its pages, we tried to include advances toward green and sustainable viable products in terms of biodiesel production and chemical transformation. The book contains rich extracts from experts in the fuel field, including technical/environmental and econometric aspects.

Enhanced Recovery of Oil and Gas Aug 17 2021

Abrasive Water Jet Perforation and Multi-Stage Fracturing Apr 24 2022 Abrasive Water Jet Perforation and Multi-Stage Fracturing gives petroleum engineers, well completion managers and fracturing specialists a critical guide to understanding all the details of the technology including materials, tools, design methods and field applications. The exploitation and development of unconventional oil and gas resources has continued to gain importance, and multi-stage fracturing with abrasive water jets has emerged as one of the top three principal methods to recover unconventional oil and gas, yet there is no one collective reference to explain the fundamentals, operations and influence this method can deliver. The book introduces current challenges and gives solutions for the problems encountered. Packed with references and real-world examples, the book equips engineers and specialists with a necessary reservoir stimulation tool to better understand today's fracturing technology. Provides understanding of the fundamentals, design and application of water jet perforation Examines the pressure boosting assembly in all phases including initiation, hydraulic isolation and production stage Evaluates production analysis, pump pressure predictions and the latest design software Introduces current challenges and gives solutions for the problems encountered

Applications of Artificial Intelligence Techniques in the Petroleum Industry Jul 28 2022 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 and Completion in Petroleum Engineering Aug 29 2022 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 development designs. Deploying these systems in numerical models is essential to the future success and efficiency of the petroleum industry. Multiphysics modeling has been widely applied in the petroleum industry since the 1960s. The rapid development of computer technology has enabled the numerical applications of multiphysics modeling in the petroleum industry: its applications are particularly popular for the numerical simulation of drilling and completion processes. This book covers theory and numerical applications of multiphysical modeling presenting various author-developed subroutines, used to address complex pore pressure input, complex initial geo-stress field input, etc. Some innovative methods in drilling and completion developed by the authors, such as trajectory optimization and a 3-dimensional workflow for calculation of mud weight window etc, are also presented. Detailed explanations are provided for the modeling process of each application example included in the book. In addition, details of the completed numerical models data are presented as supporting material which can be downloaded from the website of the publisher. Readers can easily understand key modeling techniques with the theory of multiphysics embedded in examples of applications, and can use the data to reproduce the results presented. While this book would be of interest to any student, academic or professional practitioner of engineering, mathematics and natural science, we believe those professionals and academics working in civil engineering, petroleum engineering and petroleum geomechanics would find the work especially relevant to their endeavors.

DRILLING ENGINEERING Oct 19 2021 Sustainable Oil and Gas Development Series: Drilling Engineering delivers research materials and emerging technologies that conform sustainability drilling criteria. Starting with ideal zero-waste solutions in drilling and long-term advantages, the reference discusses the sustainability approach through the use of non-linear solutions and works its way through the most conventional practices and procedures used today. Step-by-step formulations and examples are provided to demonstrate how to look at conventional practices versus sustainable approaches with eventually diverging towards a more sustainable alternative. Emerging technologies are covered and detailed sustainability analysis is included. Economic considerations, analysis, and long-term consequences, focusing on risk management round out the with conclusions and a extensive glossary. Sustainable Oil and Gas Development Series: Drilling Engineering gives today's petroleum and drilling engineers a guide how to analyze and evaluate their operations in a more environmentally-driven way. Proposes sustainable technical criteria and strategies for today's most common drilling practices such as horizontal drilling, managed pressure drilling, and unconventional shale activity Discusses economic benefits and development challenges to invest in environmentally-friendly operations Highlights the most recent research, analysis, and challenges that remain including global optimization

Subsea and Pipeline Engineering Oct 07 2020

[Petroleum Rock Mechanics](#) Nov 27 2019 [Petroleum Rock Mechanics: Drilling Operations and Well Design](#), Second Edition, keeps petroleum and drilling engineers centrally focused on the basic fundamentals surrounding geomechanics, while also keeping them up-to-speed on the latest issues and practical problems. Updated with new chapters on operations surrounding shale oil, shale gas, and hydraulic fracturing, and with new sections on in-situ stress, drilling design of optimal mud weight, and wellbore instability analysis, this book is an ideal resource. By creating a link between theory with practical problems, this updated edition continues to provide the most recent research and fundamentals critical to today's drilling operations. Helps readers grasp the techniques needed to analyze and solve drilling challenges, in particular wellbore instability analysis Teaches rock mechanic fundamentals and presents new concepts surrounding sand production and hydraulic fracturing operations Includes new case studies and sample problems to practice

Oil and Gas in Trinidad and Tobago Aug 05 2020 Oil and Gas in Trinidad and Tobago presents a historical economic review of the energy sector of Trinidad and Tobago, followed by a detailed evaluation of policies associated with resource abundance and the effects on the economy from various perspectives, including industrialization, labor productivity, education, export diversification, and competitiveness. This book utilizes a wide range of statistical data and methodologies to both economically and statistically analyze these issues at hand. The content of this book will be useful not only for policymakers but also for researchers and students interested in the field.

British Qualifications 2016 Aug 24 2019 Now in its 46th edition, British Qualifications is the definitive one-volume guide to every qualification on offer in the United Kingdom. With an equal focus on vocational studies, this essential guide has full details of all institutions and organizations involved in the provision of further and higher education and is an essential reference source for careers advisors, students and employers. It also includes a comprehensive and up-to-date

description of the structure of further and higher education in the UK. The book includes information on awards provided by over 350 professional institutions and accrediting bodies, details of academic universities and colleges and a full description of the current framework of academic and vocational education. It is compiled and checked annually to ensure accuracy of information.

Casing and Liners for Drilling and Completion Jun 14 2021 Once thought of as niche technology, operators today are utilizing more opportunities with casing and liners as formations and environments grow in difficulty, especially with the unconventional oil and gas boom. *Casing and Liners for Drilling and Completions*, 2nd Edition provides the engineer and well designer with up-to-date information on critical properties, mechanics, design basics and newest applications for today's type of well. Renovated and simplified to cover operational considerations, pressure loads, and selection steps, this handbook gives you the knowledge to execute the essential and fundamental features of casing and liners. Bonus features include: Additional glossary added to explain oil field terminology New appendix on useful every day formulas such as axial stress, shear stress in tubes and principal stress components Listing section of acronyms, notations, symbols and constants for quick reference Concise step-by-step basic casing design procedure with examples Thorough coverage and tips on important field practice for installation topics Advanced methods for critical and horizontal well casing design including hydraulic fracturing Exhaustive appendices on foundational topics: units & nomenclature, solid mechanics, hydrostatics, borehole environment & rock mechanics, and a summary of useful formulas

Multiphase Equilibria of Complex Reservoir Fluids Feb 20 2022 This short monograph focuses on the theoretical backgrounds and practical implementations concerning the thermodynamic modeling of multiphase equilibria of complex reservoir fluids using cubic equations of state. It aims to address the increasing needs of multiphase equilibrium calculations that arise in the compositional modeling of multiphase flow in reservoirs and wellbores. It provides a state-of-the-art coverage on the recent improvements of cubic equations of state. Considering that stability test and flash calculation are two basic tasks involved in any multiphase equilibrium calculations, it elaborates on the rigorous mathematical frameworks dedicated to stability test and flash calculation. A special treatment is given to the new algorithms that are recently developed to perform robust and efficient three-phase equilibrium calculations. This monograph will be of value to graduate students who conduct research in the field of phase behavior, as well as software engineers who work on the development of multiphase equilibrium calculation algorithms.

Fluid Chemistry, Drilling and Completion May 02 2020 Fluid Chemistry, Drilling and Completion, the latest release in the Oil and Gas Chemistry Management series that covers all sectors of oil and gas chemicals (from drilling to production, processing, storage and transportation), delivers critical chemical oilfield basics while also covering the latest research developments and practical solutions. Organized by type of chemical, the book allows engineers to fully understand how to effectively control chemistry issues, make sound decisions, and mitigate challenges. Sections cover downhole sampling, crude oil characterization, such as fingerprinting properties, data interpretation, chemicals specific to fluid loss control, and matrix stimulation chemicals. Supported by a list of contributing experts from both academia and industry, the book provides a necessary reference that bridges petroleum chemistry operations from theory, to safer, cost-effective applications. Offers a full range of oil field chemistry issues, including chapters focusing on unconventional reservoirs and water management Helps users gain effective control on problems Includes mitigation strategies from an industry list of experts and contributors Delivers both up-to-date research developments and practical applications, bridging between theory and practice

Machine Learning in the Oil and Gas Industry Nov 07 2020 Apply machine and deep learning to solve some of the challenges in the oil and gas industry. The book begins with a brief discussion of the oil and gas exploration and production life cycle in the context of data flow through the different stages of industry operations. This leads to a survey of some interesting problems, which are good candidates for applying machine and deep learning approaches. The initial chapters provide a primer on the Python programming language used for implementing the algorithms; this is followed by an overview of supervised and unsupervised machine learning concepts. The authors provide industry examples using open source data sets along with practical explanations of the algorithms, without diving too deep into the theoretical aspects of the algorithms employed. Machine Learning in the Oil and Gas Industry covers problems encompassing diverse industry topics, including geophysics (seismic interpretation), geological modeling, reservoir engineering, and production engineering. Throughout the book, the emphasis is on providing a practical approach with step-by-step explanations and code examples for implementing machine and deep learning algorithms for solving real-life problems in the oil and gas industry. What You Will Learn Understanding the end-to-end industry life cycle and flow of data in the industrial operations of the oil and gas industry Get the basic concepts of computer programming and machine and deep learning required for implementing the algorithms used Study interesting industry problems that are good candidates for being solved by machine and deep learning Discover the practical considerations and challenges for executing machine and deep learning projects in the oil and gas industry Who This Book Is For Professionals in the oil and gas industry who can benefit from a practical understanding of the machine and deep learning approach to solving real-life problems.

Applied Petroleum Reservoir Engineering Jan 10 2021 Basic level textbook covering concepts and practical analytical techniques of reservoir engineering.

Advanced Reservoir Management and Engineering Jun 22 2019 Chapter 1. Fundamentals of Well Testing -- Chapter 2. Decline and Type-Curves Analysis -- Chapter 3. Water Influx -- Chapter 4. Unconventional Gas Reservoirs -- Chapter 5. Performance of Oil Reservoirs -- Chapter 6. Predicting Oil Reservoir Performance -- Chapter 7. Fundamentals of Enhanced Oil Recovery -- Chapter 8. Economic Analysis -- Chapter 9. Analysis of Fixed Capital Investments -- Chapter 10. Advanced Evaluation Approaches -- Chapter 11. Professionalism and Ethics.

Petroleum Review Jul 24 2019

Sustainable Materials for Oil and Gas Applications Jan 22 2022 Sustainable Materials for Oil and Gas Applications, a new release in the Advanced Materials and Sensors for the Oil and Gas Industry series, comprises a list of processes across the upstream and downstream sectors of the industry and the latest research on advanced nanomaterials. Topics include enhanced oil recovery mechanisms of nanofluids, health and safety features related to nanoparticle handling, and advanced materials for produced water treatments. Supplied from contributing experts in both academic and corporate backgrounds, the reference contains developments, applications, advantages and challenges. Located in one convenient resource, the book addresses real solutions as oil and gas companies try to lower emissions. As the oil and gas industry are shifting and implementing innovative ways to produce oil and gas in an environmentally friendly way, this resource is an ideal complement to their work. Covers developments, workflows and protocols in advanced materials for today's oil and gas sectors Helps readers gain insights from an experienced list of editors and contributors from both academia and corporate backgrounds Address environmental challenges in oil and gas through technological solutions in nanotechnology

Fundamentals of Sustainable Drilling Engineering Mar 12 2021 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.

Methods for Petroleum Well Optimization May 26 2022 Drilling and production wells are becoming more digitalized as oil and gas companies continue to implement machine learning and big data solutions to save money on projects while reducing energy and emissions. Up to now there has not been one cohesive resource that bridges the gap between theory and application, showing how to go from computer modeling to practical use. *Methods for Petroleum Well Optimization: Automation and Data Solutions* gives today's engineers and researchers real-time data solutions specific to drilling and production assets. Structured for training, this reference covers key concepts and detailed approaches from mathematical to real-time data solutions through technological advances. Topics include digital well planning and construction, moving teams into Onshore Collaboration Centers, operations with the best machine learning (ML) and metaheuristic algorithms, complex trajectories for wellbore stability, real-time predictive analytics by data mining, optimum decision-making, and case-based reasoning. Supported by practical case studies, and with references including links to open-source code and fit-for-use MATLAB, R, Julia, Python and other standard programming languages, *Methods for Petroleum Well Optimization* delivers a critical training guide for researchers and oil and gas engineers to take scientifically based approaches to solving real field problems. Bridges the gap between theory and practice (from models to code) with content from the latest research developments supported by practical case study examples and questions at the end of each chapter Enables understanding of real-time data solutions and automation methods available specific to drilling and production wells, such as digital well planning and construction through to automatic systems Promotes the use of open-source code which will help companies, engineers, and researchers develop their prediction and analysis software more quickly; this is especially appropriate in the application of multivariate techniques to the real-world problems of petroleum well optimization

Current Topics in the Utilization of Clay in Industrial and Medical Applications Feb 29 2020

Flow Assurance Dec 29 2019 Petroleum engineers search through endless sources to understand oil and gas chemicals, find problems, and discover solutions while operations are becoming more unconventional and driving towards more sustainable practices. The Oil and Gas Chemistry Management Series brings an all-inclusive suite of tools to cover all the sectors of oil and gas chemicals from drilling to production, processing, storage, and transportation. The second reference in the series, Flow Assurance, delivers the critical chemical oilfield basics while also covering latest research developments and practical solutions. Organized by the type of problems and mitigation methods, this reference allows the engineer to fully understand how to effectively control chemistry issues, make sound decisions, and mitigate challenges ahead. Basics include root cause, model prediction and laboratory simulation of the major chemistry related challenges during oil and gas productions, while more advanced discussions cover the chemical and non-chemical mitigation strategies for more efficient, safe and sustainable operations. Supported by a list of contributing experts from both academia and industry, Flow Assurance brings a necessary reference to bridge petroleum chemistry operations from theory into safer and cost-effective practical applications. Offers full range of oilfield production chemistry issues, including chapters focused on hydrate and organic deposition control, liquid blockage mitigation, and abiotic and microbially influenced corrosion prevention Gain effective control on problems and mitigation strategies from industry list of experts and contributors? Delivers both up to date research developments and practical applications, bridging between theory and practice

Reservoir Geomechanics Sep 05 2020 This interdisciplinary book encompasses the fields of rock mechanics, structural geology and petroleum engineering to address a wide range of geomechanical problems that arise during the exploitation of oil and gas reservoirs. It considers key practical issues such as prediction of pore pressure, estimation of hydrocarbon column heights and fault seal potential, determination of optimally stable well trajectories, casing set points and mud weights, changes in reservoir performance during depletion, and production-induced faulting and subsidence. The book establishes the basic principles involved before introducing practical measurement and experimental techniques to improve recovery and reduce exploitation costs. It illustrates their successful application through case studies taken from oil and gas fields around the world. This book is a practical reference for geoscientists and engineers in the petroleum and geothermal industries, and for research scientists interested in stress measurements and their application to problems of faulting and fluid flow in the crust.

Multiple Career Choices Sep 25 2019 Choosing the right career is critical to success in one's life. Overload of information on Internet only serves to confuse an already confused mind. This book provides information about jobs and educational openings for 1042, graduates and post graduates in technical, professional, science, commerce and arts faculty. Questionnaire helps the students to gauge his interests, abilities, aptitudes and opportunities to facilitate proper selection of job or study.

Underbalanced Drilling: Limits and Extremes Oct 26 2019 The present crude oil and natural gas reservoirs around the world have depleted conventional production levels. To continue enhancing productivity for the remaining mature reservoirs, drilling decision-makers could no longer rely on traditional balanced or overbalanced methods of drilling. Derived from conventional air drilling, underbalanced drilling is increasingly necessary to meet today's energy and drilling needs. While more costly and extreme, underbalanced drilling can minimize pressure within the formation, increase drilling rate of penetration, reduce formation damage and lost circulation, making mature reservoirs once again viable and more productive. To further explain this essential drilling procedure, Bill Rehm, an experienced legend in drilling along with his co-editors, has compiled a handbook perfect for the drilling supervisor. *Underbalanced Drilling: Limits and Extremes*, written under the auspices of the IADC Technical Publications Committee, contain many great features and contributions including: Real case studies shared by major service companies to give the reader guidelines on what might happen in actual operations Questions and answers at the end of the chapters for upcoming engineers to test their knowledge Common procedures, typical and special equipment involved, and most importantly, the limits and challenges that still surround this technology

Evaluating Factors Controlling Damage and Productivity in Tight Gas Reservoirs Apr 12 2021 Tight gas reservoirs have very low permeability and porosity, which cannot be produced at economical flow rates unless the well is efficiently stimulated and completed using advanced and optimized technologies. Economical production on the basis of tight gas reservoirs is challenging in general, not only due to their very low permeability but also to several different forms of formation damage that can occur during drilling, completion, stimulation, and production operations. This study demonstrates in detail the effects of different well and reservoir static and dynamic parameters that influence damage mechanisms and well productivity in tight gas reservoirs. Geomechanics, petrophysics, production and reservoir engineering

expertise for reservoir characterization is combined with a reservoir simulation approach and core analysis experiments to understand the optimum strategy for tight gas development, delivering improved well productivity and gas recovery.

Petroleum Rock Mechanics Jun 26 2022 Pt. 1. Fundamentals of solid mechanics -- pt. 2. Petroleum rock mechanics.

Recent Insights in Petroleum Science and Engineering Jul 04 2020 This book presents new insights into the development of different aspects of petroleum science and engineering. The book contains 19 chapters divided into two main sections: (i) Exploration and Production and (ii) Environmental Solutions. There are 11 chapters in the first section, and the focus is on the topics related to exploration and production of oil and gas, such as characterization of petroleum source rocks, drilling technology, characterization of reservoir fluids, and enhanced oil recovery. In the second section, the special emphasis is on waste technologies and environmental cleanup in the downstream sector. The book written by numerous prominent scholars clearly shows the necessity of the multidisciplinary approach to sustainable development in the petroleum industry and stresses the most updated topics such as EOR and environmental cleanup of fossil fuel wastes.

Formulas and Calculations for Petroleum Engineering Oct 31 2022 Formulas and Calculations for Petroleum Engineering unlocks the capability for any petroleum engineering individual, experienced or not, to solve problems and locate quick answers, eliminating non-productive time spent searching for that right calculation.

Enhanced with lab data experiments, practice examples, and a complimentary online software toolbox, the book presents the most convenient and practical reference for all oil and gas phases of a given project. Covering the full spectrum, this reference gives single-point reference to all critical modules, including drilling, production, reservoir engineering, well testing, well logging, enhanced oil recovery, well completion, fracturing, fluid flow, and even petroleum economics. Presents single-point access to all petroleum engineering equations, including calculation of modules covering drilling, completion and fracturing Helps readers understand petroleum economics by including formulas on depreciation rate, cashflow analysis, and the optimum number of development wells

Data Room Management for Mergers and Acquisitions in the Oil and Gas Industry Dec 21 2021 Data Room Management and Rapid Asset Evaluation - Theory and Case Studies in Oil and Gas, Volume 66 introduces frameworks and workflows that help streamline the data room process, highlight the essential data that must be assembled in the permitted time window, and accelerate the subsequent assessment of the opportunity. The book combines theory with case studies, some of which describe lessons learned directly by the author himself. Methodologies are presented that can be used immediately by those involved in the technical and commercial evaluation of oil and gas exploration and production ventures. The book is suitable for readers with a wide spectrum of experience, from those who are newcomers to the strange world of data rooms, to those diehards who may have spent too many hours in them. The purposes, strategies, and tactics of data rooms are explained, along with some suggestions on how to survive them, and how to get a fit-for-purpose evaluation in front of the decision makers in the shortest timeframe possible. Demonstrates what makes a good data room, including how vendors attract potential buyers to attend and how the latter can decide whether they should go or not Presents how to prepare for a data room, what needs to be done there, and how to evaluate the assets on offer as quickly as possible Covers which essential data should be gathered and questions to ask Suggests how to avoid common 'banana skins' when under pressure to provide a rapid but reasonable evaluation

Introduction to Permanent Plug and Abandonment of Wells Mar 31 2020 This open access book offers a timely guide to challenges and current practices to permanently plug and abandon hydrocarbon wells. With a focus on offshore North Sea, it analyzes the process of plug and abandonment of hydrocarbon wells through the establishment of permanent well barriers. It provides the reader with extensive knowledge on the type of barriers, their functioning and verification. It then discusses plug and abandonment methodologies, analyzing different types of permanent plugging materials. Last, it describes some tests for verifying the integrity and functionality of installed permanent barriers. The book offers a comprehensive reference guide to well plugging and abandonment (P & A) and well integrity testing. The book also presents new technologies that have been proposed to be used in plugging and abandoning of wells, which might be game-changing technologies, but they are still in laboratory or testing level. Given its scope, it addresses students and researchers in both academia and industry. It also provides information for engineers who work in petroleum industry and should be familiarized with P & A of hydrocarbon wells to reduce the time of P & A by considering it during well planning and construction.

Sustainable Materials for Transitional and Alternative Energy Dec 09 2020 Sustainable Materials for Transitional and Alternative Energy, a new release in the Advanced Materials and Sensors for the Oil and Gas Industry series, comprises a list of processes across the energy industry coupled with the latest research involving advanced nanomaterials. Topics include green-based nanomaterials towards carbon capture, the importance of coal gasification in terms of fossil fuels and advanced materials utilized for fuel cells. Supplied from contributing experts in both academic and corporate backgrounds, the reference contains a precise balance on the developments, applications, advantages and challenges remaining. The book addresses real solutions as energy companies continue to deliver energy needs while lowering emissions. The oil and gas industry are shifting and implementing innovative ways to produce energy in an environmentally friendly way. One approach involves solutions developed using advanced materials and nanotechnology. Nanomaterials are delivering new alternatives for engineers making this a timely product for today's market. Teaches readers about developments, workflows and protocols in advanced materials for today's oil and gas sectors Helps readers gain insights from an experienced list of editors and contributors from both academia and corporate backgrounds Addresses environmental challenges in oil and gas through technological solutions in nanotechnology

Deepwater Drilling Sep 29 2022 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

Drilling Engineering Jan 28 2020

Integrated Sand Management For Effective Hydrocarbon Flow Assurance Nov 19 2021 This Handbook provides solutions to the fundamental issues associated with wells and reservoirs experiencing sanding problems, especially in deepwater environments. Sand Management is a massive challenge for the petroleum industry as it extends its exploration activities to new frontiers. Challenging ultra deepwater, High Pressure-High Temperature (HP-HT) and Arctic environments require engineers to drill more complex wells and manage more complex reservoirs, the majority of which are prone to massive sand production. Covering such fundamentals as how to maximize individual wells and field development performance, as well as how to minimize operational cost, non-productive time and guarantee flow assurance across the entire composite production system from reservoirs through the wellbore to the topside and flow lines, this handbook explains that the biggest challenge facing operators is the shortage of sand management personnel and helps companies realize the value of their assets. Reference for knowledge transfer and skills development in sand management for effective flow assurance Emphasis on HP-HT and deepwater environments Meets the needs of new and practising engineers alike as well as non-technical personnel supporting the offshore industry

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