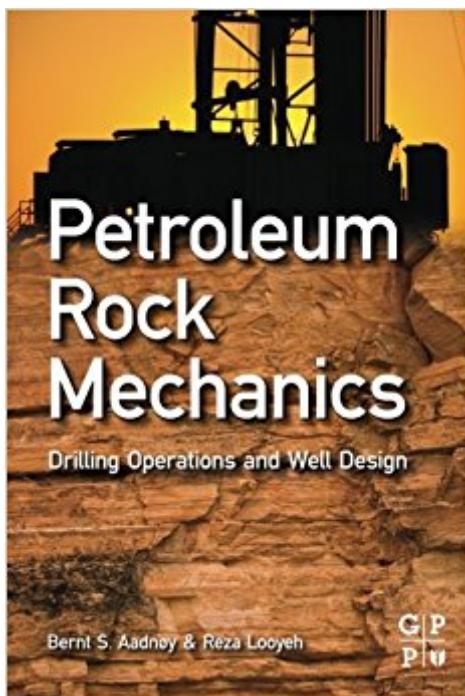


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# Petroleum Rock Mechanics: Drilling Operations And Well Design



## **Synopsis**

Petroleum Rock Mechanics: Drilling Operations and Well Design covers the fundamentals of solid mechanics and petroleum rock mechanics and their application to oil and gas-related drilling operations and well design. More specifically, it examines the role of formation, strength of rock materials, and wellbore mechanics, along with the impact of in-situ stress changes on wellbore and borehole behavior. Practical examples with solutions and a comprehensive glossary of terminologies are provided. Equations are incorporated into well-known failure criteria to predict stresses and to analyze a range of failure scenarios throughout drilling, well operation, and well completion processes. The book also discusses stress and strain components, principal and deviatoric stresses and strains, materials behavior, the theories of elasticity and inelasticity, probabilistic analysis of stress data, the tensile and shear strength of rocks, wellbore stability, and fracture and collapse behavior for both single and multi-lateral wells. Both inexperienced university students and experienced engineers will find this book extremely useful. Clearly applies rock mechanics to on and off shore oil and gas drilling Step by Step approach to the analyze wellbore instabilities Provides worked out examples with solutions to everyday problems

## **Book Information**

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## **Customer Reviews**

Department of Petroleum Engineering, University of Stavanger, Stavanger, Norway

Great book for any petroleum engineer, grad or undergraduate student. The book covers the main aspects of the subject within a very clean and organized approach, and brings exercises in the end of the chapters that helps to fix the contents.

thx good job

Excellent book

Very useful book, it covers almost all the fundamental knowledge in this area, I think it is necessary for petroleum engineers.

Perfect!

Fantastic book for the money. As an undergrad petroleum and civil engineering student, I appreciated the wealth of soil mechanics information pertaining to O&G.

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