

*This book is dedicated to my parents, wife and kids for their
patience, understanding and encouragement which made
the completion of this book possible.*

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PREFACE

We can not see alternative fuels playing a substantial role in the short or medium terms, oil and natural gas will continue playing an essential part in the world's energy needs.

Oil and natural gas touch our lives in numerous ways every day. Together, they supply more than 65% of the world's energy. They fuel cars, heat homes, cook food, and generate the electricity that powers our daily lives.

Petroleum and natural gas engineering is the application of the basic sciences to the development, recovery and processing of oil and gas fields.

As its name suggests, this book provides readers with introductory information on oil and natural gas industry and engineering. It was written primarily to students at the university level, whose contribution will be crucial to the energy industry for continuing ability to supply the world.

This book also is an essential reference for non-engineering petroleum industry technical and non-technical professionals. It addresses several petroleum and natural gas engineering issues including principals of oil and gas generation, exploration techniques, reserves estimation, field development, production optimization, reservoir management, the aspects of well drilling and completing, oil refining, oil and gas transportation, oil spill, and basic oil and gas economics. Additionally, the essential units and conversion factors were discussed in a simplified manner.

It must be said that, this book has distilled many years of experience and knowledge from numerous sources worldwide as well as the long experience of the author.

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