

1. Record Nr.	UNINA9910131541203321
Titolo	Fundamentals of gas shale reservoirs / / edited by Reza Rezaee, Department of Petroleum Engineering
Pubbl/distr/stampa	Hoboken, New Jersey : , : Wiley, , [2015] ©2015
ISBN	1-5231-1025-2 1-119-03926-6 1-119-03920-7 1-119-03922-3
Descrizione fisica	1 online resource (420 p.)
Classificazione	TEC031030
Disciplina	553.2/85
Soggetti	Shale gas reservoirs
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Title Page; Copyright Page; Contents; Contributors; Preface; CHAPTER 1 GAS SHALE: GLOBAL SIGNIFICANCE, DISTRIBUTION, AND CHALLENGES; 1.1 INTRODUCTION; 1.2 SHALE GAS OVERVIEW; 1.2.1 Shale Gas Geology; 1.2.2 Characteristics of Producing Shale Gas Play; 1.3 THE SIGNIFICANCE OF SHALE GAS; 1.4 GLOBAL SHALE GAS RESOURCES; 1.4.1 Sources of Information; 1.4.2 Resource Estimation Methodologies; 1.5 GLOBAL RESOURCE DATA; 1.5.1 China; 1.5.2 The United States; 1.5.3 Mexico; 1.5.4 Southern South America; 1.5.5 South Africa; 1.5.6 Australia; 1.5.7 Canada; 1.5.8 North Africa; 1.5.9 Poland; 1.5.10 France 1.5.11 Russia 1.5.12 Scandinavia; 1.5.13 Middle East; 1.5.14 India; 1.5.15 Pakistan; 1.5.16 Northwest Africa; 1.5.17 Eastern Europe (Outside of Poland); 1.5.18 Germany and Surrounding Nations; 1.5.19 The United Kingdom; 1.5.20 Northern South America; 1.5.21 Turkey; 1.6 DATA ASSESSMENT; 1.6.1 Distribution; 1.6.2 Basin Type; 1.6.3 Depositional Environment; 1.6.4 TOC Content; 1.6.5 Clay Content; 1.7 INDUSTRY CHALLENGES; 1.7.1 Environmental Challenges; 1.7.2 Commercial/Economic; 1.8 DISCUSSION; 1.9 CONCLUSIONS; APPENDIX A.1 GLOBAL SHALE GAS RESOURCE DATA; REFERENCES CHAPTER 2 ORGANIC MATTER-RICH SHALE DEPOSITIONAL

ENVIRONMENTS 2.1 INTRODUCTION; 2.2 PROCESSES BEHIND THE DEPOSITION OF ORGANIC MATTER 2010; RICH SHALE; 2.2.1 Processes Behind the Transport and Deposition of Mud; 2.2.2 Production, Destruction, and Dilution: The Many Roads to Black Shale; 2.3 STRATIGRAPHIC DISTRIBUTION OF ORGANIC MATTER-RICH SHALES; 2.4 GEOGRAPHIC DISTRIBUTION OF ORGANIC MATTER-RICH SHALES; 2.4.1 Background; 2.4.2 Controls on the Geographic Distribution of Black Shales; 2.5 ORGANIC MATTER-RICH SHALE DEPOSITIONAL ENVIRONMENTS; 2.5.1 Continental Depositional Environments 2.5.2 Paralic Depositional Environments 2.5.3 Shallow Marine Depositional Environments; 2.5.4 Deep Marine Depositional Environments; 2.6 CONCLUSION; ACKNOWLEDGMENTS; REFERENCES; CHAPTER 3 GEOCHEMICAL ASSESSMENT OF UNCONVENTIONAL SHALE GAS RESOURCE SYSTEMS; 3.1 INTRODUCTION; 3.2 OBJECTIVE AND BACKGROUND; 3.3 KEROGEN QUANTITY AND QUALITY; 3.4 SAMPLE TYPE AND QUALITY; 3.5 KEROGEN TYPE and COMPOSITIONAL YIELDS; 3.6 THERMAL MATURITY; 3.7 ORGANOPOROSITY DEVELOPMENT; 3.8 GAS CONTENTS; 3.9 EXPULSION-RETENTION OF PETROLEUM; 3.10 SECONDARY (PETROLEUM) CRACKING; 3.11 UPPER MATURITY LIMIT FOR SHALE GAS 3.12 GAS COMPOSITION AND CARBON ISOTOPES 3.13 ADDITIONAL GEOCHEMICAL ANALYSES FOR SHALE GAS RESOURCE SYSTEM EVALUATION; 3.14 OIL AND CONDENSATE WITH SHALE GAS; 3.15 MAJOR SHALE GAS RESOURCE SYSTEMS; 3.16 CONCLUSIONS; REFERENCES; CHAPTER 4 SEQUENCE STRATIGRAPHY OF UNCONVENTIONAL RESOURCE SHALES; SUMMARY; 4.1 INTRODUCTION; 4.2 GENERAL SEQUENCE STRATIGRAPHIC MODEL FOR UNCONVENTIONAL RESOURCE SHALES; 4.3 AGES OF SEA-LEVEL CYCLES; 4.4 WATER DEPTH OF MUD TRANSPORT AND DEPOSITION; 4.5 CRITERIA TO IDENTIFY SEQUENCES AND SYSTEMS TRACTS; 4.6 PALEOZOIC RESOURCE SHALE EXAMPLES 4.6.1 Barnett Shale (Devonian)

Sommario/riassunto

Provides comprehensive information about the key exploration, development and optimization concepts required for gas shale reservoirs. Includes statistics about gas shale resources and countries that have shale gas potential. Addresses the challenges that oil and gas industries may confront for gas shale reservoir exploration and development. Introduces petrophysical analysis, rock physics, geomechanics and passive seismic methods for gas shale plays. Details shale gas environmental issues and challenges, economic consideration for gas shale reservoirs. Includes case studies of major producing gas shale.
