

1. Record Nr.	UNINA9910132344703321
Titolo	Gas injection for disposal and enhanced recovery // edited by Ying Wu, John J. Carroll, Qi Li
Pubbl/distr/stampa	Hoboken, New Jersey ; ; Salem, Massachusetts : , : Scrivener Publishing : , : Wiley, , 2014 ©2014
ISBN	1-118-93857-7 1-118-93860-7 1-118-93858-5
Descrizione fisica	1 online resource (421 p.)
Collana	Advances in Natural Gas Engineering
Disciplina	622/.33827
Soggetti	Oil wells - Gas lift Gas wells Carbon dioxide - Industrial applications Geological carbon sequestration Atmospheric carbon dioxide - Storage
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	Cover; Title Page; Copyright Page; Contents; Preface; Section 1: Data and Correlations; 1 Densities of Carbon Dioxide-Rich Mixtures Part I: Comparison with Pure CO ₂ ; 1.1 Introduction; 1.2 Density; 1.3 Literature Review; 1.3.1 CO ₂ + Methane; 1.3.2 CO ₂ + Nitrogen; 1.4 Calculations; 1.4.1 Kay's Rule; 1.4.2 Modified Kay's Rule; 1.4.3 Prausnitz-Gunn; 1.5 Discussion; 1.6 Conclusion; References; 2 Densities of Carbon Dioxide-Rich Mixtures Part II: Comparison with Thermodynamic Models; 2.1 Introduction; 2.2 Literature Review; 2.3 Calculations; 2.4 Lee Kesler; 2.5 Benedict-Webb- Rubin (BWR) 2.6 Peng-Robinson 2.7 Soave-Redlich-Kwong; 2.8 AQUALibrium; 2.9 Discussion; 2.10 Conclusion; References; 3 On Transferring New Constant Pressure Heat Capacity Computation Methods to Engineering Practice; 3.1 Introduction; 3.2 Materials and Methods; 3.3 Results and Discussion; 3.4 Conclusions; References; 4 Developing High Precision Heat Capacity Correlations for Solids, Liquids and Ideal Gases; 4.1

Introduction; 4.2 Databases and Methods; 4.3 Results and Discussion; 4.4 Conclusion; References; 5 Method for Generating Shale Gas Fluid Composition from Depleted Sample; 5.1 Introduction
 5.2 Theory of Chemical Equilibrium Applied to Reservoir Fluids
 5.3 Reservoir Fluid Composition from a Non-Representative Sample; 5.3.1 Depleted Gas Condensate Samples; 5.3.2 Samples from Tight Reservoirs; 5.4 Numerical Examples; 5.4.1 Depleted Gas Condensate Samples; 5.4.2 Samples from Tight Reservoirs; 5.5 Discussion of the Results; 5.6 Conclusions; 5.7 Nomenclature; Greek letters; Sub and super indices; References; 6 Phase Equilibrium in the Systems Hydrogen Sulfide + Methanol and Carbon Dioxide + Methanol; 6.1 Introduction; 6.2 Literature Review; 6.2.1 Hydrogen Sulfide + Methanol
 6.2.2 Carbon Dioxide + Methanol
 6.3 Modelling With Equations Of State; 6.4 Nomenclature; Greek; References; 7 Vapour-Liquid Equilibrium, Viscosity and Interfacial Tension Modelling of Aqueous Solutions of Ethylene Glycol or Triethylene Glycol in the Presence of Methane, Carbon Dioxide and Hydrogen Sulfide; 7.1 Introduction; 7.2 Results and Discussion; 7.2.1 Experimental; 7.2.2 Vapour Liquid Equilibrium and Phase Density Modeling; 7.2.3 Liquid-Phase Viscosity Modeling; 7.2.4 Interfacial Tension Modeling; 7.2.5 Commercial Software Comparison; 7.3 Conclusions; 7.4 Nomenclature
 7.5 Acknowledgement
 References; Appendix 7.A; Section 2: Process Engineering; 8 Enhanced Gas Dehydration using Methanol Injection in an Acid Gas Compression System; 8.1 Introduction; 8.2 Methodology; 8.2.1 Modeling Software; 8.2.2 Simulation Setup; 8.3 CASE I: 100 % CO₂; 8.3.1 How Much to Dehydrate; 8.3.2 Dehydration using Air Coolers; 8.3.3 Methanol injection for hydrate suppression; 8.3.4 Methanol Injection for Achieving 2:1 Water Content; 8.3.5 DexPro™ for Achieving 2:1 Water Content; 8.4 CASE II: 50 Percent CO₂, 50 Percent H₂S; 8.4.1- How Much to Dehydrate?
 8.4.2 Dehydration using Air Coolers

Sommario/riassunto

This is the fourth volume in a series of books focusing on natural gas engineering, focusing on two of the most important issues facing the industry today: disposal and enhanced recovery of natural gas. This volume includes information for both upstream and downstream operations, including chapters on shale, geological issues, chemical and thermodynamic models, and much more. Written by some of the most well-known and respected chemical and process engineers working with natural gas today, the chapters in this important volume represent the most cutting-edge and state-of-the-art processes