

# Contents

<b>1 Geological Observations Supporting Dynamic Climatic Changes .....</b>	<b>1</b>
Ronald C. Surdam	
<b>2 The Story of the Wyoming Carbon Underground Storage Project (WY-CUSP), and the Regional Inventory and Prioritization of Potential CO<sub>2</sub> Storage Reservoirs in Wyoming .....</b>	<b>15</b>
Ramsey D. Bentley and Ronald C. Surdam	
<b>3 Legal Framework: Carbon Storage Regulations and Access for the Wyoming Carbon Underground Storage Project (WY-CUSP) .....</b>	<b>21</b>
Lynne Boomgaarden and Shanna C. Dahl	
<b>4 A Strategy for Designing an Optimal Characterization Study of the Premier Carbon Capture, Utilization and Storage Site in Wyoming .....</b>	<b>27</b>
Ronald C. Surdam	
<b>5 Regional Geologic History, CO<sub>2</sub> Source Inventory, and Groundwater Risk Assessment of a Potential CO<sub>2</sub> Sequestration Site on the Rock Springs Uplift in Southwest Wyoming .....</b>	<b>33</b>
J. Fred McLaughlin, Ramsey D. Bentley and Scott A. Quillinan	
<b>6 Detailed Geologic Characterization of Core and Well Data from the Weber and Madison Formations and Associated Seals at a Potential CO<sub>2</sub> Sequestration Site in Southwest Wyoming: Defining the Lithologic, Geochemical, Diagenetic, and Burial Histories Relative to Successful CO<sub>2</sub> Storage .....</b>	<b>55</b>
J. Fred McLaughlin and Mario Garcia-Gonzalez	

**7 Utility of 3-D Seismic Attribute Analysis and VSP for Assessing Potential Carbon Sequestration Targets on the Rock Springs Uplift, Southwest Wyoming ..... 97**  
Yuri Ganshin and Ronald C. Surdam

**8 Reservoir Fluid Characterization of the Weber Sandstone and Madison Limestone on the Rock Springs Uplift in Southwest Wyoming ..... 151**  
Scott A. Quillinan and J. Fred McLaughlin

**9 Predicting Permeability in the Target Reservoirs on the Rock Springs Uplift, Southwest Wyoming ..... 169**  
Yuri Ganshin

**10 Advances in Estimating the Geologic CO<sub>2</sub> Storage Capacity of the Madison Limestone and Weber Sandstone on the Rock Springs Uplift by Utilizing Detailed 3-D Reservoir Characterization and Geologic Uncertainty Reduction ..... 191**  
Zunsheng Jiao and Ronald C. Surdam

**11 Displaced Fluid Management—the Key to Commercial-Scale Geologic CO<sub>2</sub> Storage ..... 233**  
Ronald C. Surdam, Scott A. Quillinan and Zunsheng Jiao

**12 The Carbon Management Institute’s Integrated CO<sub>2</sub> Storage/EOR Strategy: the Advantages of Deploying Innovative, Multiple-Resource Development Strategies Designed to Foster Sustainability of Energy and Environmental Resources ..... 245**  
Ronald C. Surdam, Ramsey D. Bentley and Zunsheng Jiao

**13 A Feasibility Study of the Integration of Geologic CO<sub>2</sub> Storage with Enhanced Oil Recovery (CO<sub>2</sub> Flooding) in the Ordos Basin, China ..... 271**  
Zunsheng Jiao, Ronald C. Surdam, Lifa Zhou and Yajun Wang

**14 Summary of the WY-CUSP Characterization Program ..... 295**  
Ronald C. Surdam



<http://www.springer.com/978-1-4614-5787-9>

Geological CO<sub>2</sub> Storage Characterization  
The Key to Deploying Clean Fossil Energy Technology  
Surdam, R.C. (Ed.)  
2013, XV, 301 p. 134 illus., 111 illus. in color.,  
Hardcover  
ISBN: 978-1-4614-5787-9