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Nota di contenuto	Sour Gas and Related Technologies; Contents; Preface; Introduction; Part 1: Data: Experiments and Correlation; 1. Equilibrium Water Content Measurements for Acid Gas at High Pressures and Temperatures; 1.1 Introduction; 1.2 Experimental; 1.3 Recent Results and Modelling; 1.3.1 Partitioning of Hydrogen Sulfide (H2S Solubility in Water); 1.3.2 Partitioning of Water (Water Content in H2S); 1.3.3 Discussion of Results; 1.4 Conclusions; References; 2. Comparative Study on Gas Deviation Factor Calculating Models for CO2 Rich Gas Reservoirs; 2.1 Introduction; 2.2 Deviation Factor Correlations 2.2.1 Empirical Formulas 2.2.1.1 Dranchuk-Purvis-Robinson (DPR) Model; 2.2.1.2 Dranchuk-Abu-Kassem (DAK) Model; 2.2.1.3 Hall-Yarborough (HY) Model; 2.2.1.4 Beggs and Brill (BB) Model; 2.2.1.5 Sarem Model; 2.2.1.6 Papay Model; 2.2.1.7 Li Xiangfang (LXF) Model; 2.2.1.8 Zhang Guodong Model; 2.2.2 Correction Methods; 2.2.2.1 Guo

Xuqiang Method; 2.2.2.2 Carr-Kobayshi-Burrows Correction Method; 2.2.2.3 Wiehert-Aziz Correction Method [16]; 2.3 Model Optimization; 2.4 Conclusions; References; 3. H₂S Viscosities and Densities at High-Temperatures and Pressures; 3.1 Introduction; 3.2 Experimental 3.3 Results and Discussion 3.4 Conclusions and Outlook; 3.5 Acknowledgement; References; 4. Solubility of Methane in Propylene Carbonate; 4.1 Introduction; 4.2 Results and Discussion; 4.3 Nomenclature; 4.4 Acknowledgement; References; Part 2: Process; 5. A Holistic Look at Gas Treating Simulation; 5.1 Introduction; 5.2 Clean Versus Dirty Solvents: Heat Stable Salts; 5.2.1 CO₂ Removal Using MEA, and MDEA Promoted With Piperazine; 5.2.2 Piperazine-promoted MDEA in an Ammonia Plant; 5.2.3 Post-combustion CO₂ Capture; 5.2.4 LNG Absorber; 5.3 Summary

6. Controlled Freeze Zone™ Commercial Demonstration Plant Advances Technology for the Commercialization of North American Sour Gas Resources 6.1 Introduction - Gas Demand and Sour Gas Challenges; 6.2 Acid Gas Injection; 6.3 Controlled Freeze Zone™ - Single Step Removal of CO₂ and H₂S; 6.4 Development Scenarios Suitable for Utilizing CFZ™ Technology; 6.5 Commercial Demonstration Plant Design & Initial Performance Data; 6.6 Conclusions and Forward Plans; Bibliography; 7. Acid Gas Dehydration - A DexPro™ Technology Update; 7.1 Introduction; 7.2 Necessity of Dehydration; 7.3 Dehydration Criteria 7.4 Acid Gas - Water Phase Behaviour 7.5 Conventional Dehydration Methods; 7.5.1 Desiccant Adsorption; 7.5.2 Desiccant Absorption; 7.5.3 Separation Based Processes; 7.5.4 Avoidance Based Processes; 7.5.5 Thermodynamic/Refrigerative Based Processes; 7.6 Development of DexPro; 7.7 DexPro Operating Update; 7.8 DexPro Next Steps; 7.9 Murphy Tupper - 2012 Update; 7.10 Acknowledgements; 8. A Look at Solid CO₂ Formation in Several High CO₂ Concentration Depressuring Scenarios; 8.1 Introduction; 8.2 Methodology; 8.3 Thermodynamic Property Package Description; 8.4 Model Configuration; 8.5 Results 8.6 Discussion

Sommario/riassunto

Carbon dioxide has been implicated in the global climate change, and CO₂ sequestration is a technology being explored to curb the anthropogenic emission of CO₂ into the atmosphere. The injection of CO₂ for enhanced oil recovery (EOR) has the dual benefit of sequestering the CO₂ and extending the life of some older fields. This volume presents some of the latest information on these processes covering physical properties, operations, design, reservoir engineering, and geochemistry for AGI and the related technologies.
