

BIO FOR L. STEPHEN MELZER

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Texas A&M University: BS, Geological Engineering (1968)

Purdue University: MSE, Civil Engineering/Rock Mechanics (1969)

Registered Professional Engineer -Texas (#46859)

Member, Society of Petroleum Engineers (#1576321)



WORK EXPERIENCE SUMMARY

Mr. Melzer combines his thirty-plus years of technical experience working with both government and industry with an extensive familiarity with CO₂ enhanced oil recovery, CO₂ storage, as well as the science, distribution and properties of residual oil zones (ROZs). His research has revised the thinking of the reservoir intervals below the oil/water contacts and laid the foundation for commercial projects using both horizontal well reservoir depressuring technologies and enhanced oil recovery projects within the ROZs. He has developed an extensive familiarity with the design, project evaluation, regulatory environment, and business of waterfloods and enhanced oil recovery (EOR) projects. This background involves advising U.S. and International organizations on ROZs in their oil basins, EOR, carbon capture and storage (CCS), horizontal well depressuring in both conventional and unconventional reservoirs, and private clients on related business strategies. He assists clients and regulators with evolving policies involving carbon dioxide (CO₂) EOR and CCS. He also conducts reservoir characterization, engineering, and project planning studies on oil and gas projects and has served on the Texas Governor's Panel for FutureGen, a next generation pre-combustion capture coal gasification project. This work has taken him to China, Denmark, Lithuania, Canada, Abu Dhabi, Croatia, and Kuwait. For the past five years he has coauthored key reports for the Society of Petroleum Engineers, U.S. Department of Energy, National Petroleum Council and National Coal Council and consulted on a variety of projects which include the following sponsors: Shell International Exploration and Production, Inc., Pioneer Natural Resources, Mobil Exploration and Producing Inc., U.S., Kinder Morgan Energy Partners, L.P., El Paso Corporation, Natural Resources Defense Council, Praxair Corporation, Citation Oil and Gas, numerous independent oil and gas companies, the Interstate Oil and Gas Compact Commission, the Plains CO₂ Reduction Partnership, The Midwest Geological Sequestration Consortium, The University of Texas System, The University of Wyoming's Enhanced Oil Recovery Institute, the National Research Center for Coal and Energy, US Army, US Air Force, and the Defense Advanced Research Projects Agency.

Mr. Melzer was formerly a Department Manager and Senior Geotechnical Engineer for Science Applications International Corporation, a large consulting firm headquartered in San Diego, California. He headed the Midland, Texas office for SAIC from 1978 until October 1992.

Mr. Melzer has been actively engaged in oil and gas exploration and development through a family owned business, Melzer Exploration Company. The partnership, formed with his father in 1978, has invested in more than 85 successful oil and gas wells. Prior to accepting the post at the University of Texas' Center for Energy and Economic Diversification, he supervised drilling and production operations in over twenty-five company-operated wells.

MOST RECENT PUBLICATIONS

“The San Andres Play: Observations and Challenges in Horizontal Wells on the Central Basin Platform, Permian Basin,” Alimahomed, F., Melzer, L.S. et al, SPE-189865-MS, Presented at the SPE Hydraulic Fracturing Technology Conf, The Woodlands, TX, USA, 23-25 January 2018

ROZ Science, Activity Updates on Horizontal Depressuring the San Andres Formation and ROZ EOR, a Seminar at the 2017 CO₂ and ROZ Conference, Dec 2017, Melzer L.S. (editor and contributor), Midland Tx, www.CO2Conference.net

“Quantifying CO₂ Storage Efficiency Factors in Hydrocarbon Reservoirs: A Detailed Look at CO₂ Enhanced Oil Recovery,” Peck, W.D., Nicholas A. Azzolina, N.A. Melzer, L.S. (Dec 2017), et al, International Journal of Greenhouse Gas Control, <https://doi.org/10.1016/j.ijggc.2017.12.005>.

Identifying and Developing Technology for Enabling Small Producers to Pursue the Residual Oil Zone (ROZ) Fairways in the Permian Basin San Andres Formation, Coauthor with Trentham, R.C. & Vance. D. (2016) Research Partnership to Secure Energy for America and U.S. Dept of Energy Final Report, www.netl.doe.gov/file%20library/research/oil-gas/10123-17-final-report.pdf

Using Next Generation” CO₂ EOR Technologies to Optimize the Residual Oil Zone CO₂ Flood at the Goldsmith-Landreth Unit, Ector County, Texas, U.S. DOE Project, Award # DE-0005889, Coauthor with Trentham, R.C., Mr. Vello Kuuskraa, V. & Koperna, G. (2016) , U.S. Dept of Energy Report <http://www.netl.doe.gov/File%20Library/Research/Oil-Gas/enhanced%20oil%20recovery/DE-FE0005889-Final-Report.pdf>

“Origins, Processes and Exploitation of Residual Oil Zones,” (Director and Contributor), Seminar conducted at the 2015 CO₂ Conference, Dec 9, 2015 (www.CO2Cconference.net)

Produced Water Management for CO₂ EOR and Unconventional Plays, Melzer, L.S. (editor), Applied Petroleum Technology Academy Shortcourse #17 on Carbon Dioxide Flooding, Presented at the Annual CO₂ Flooding Conference, Midland, Tx, December 10, 2014.

Technical Challenges in the Conversion of CO₂-EOR Projects to CO₂ Storage Projects, Report Prepared for the CSLF Technical Group by the CSLF Task Force on Technical Challenges in the Transition from CO₂-EOR to CCS, Stefan Bachu, Alberta Innovates; L, Stephen Melzer. et al, Sep 2013, http://www.cslforum.org/publications/documents/CO2-EORtoCCS_FinalReport.pdf

Member of National Coal Council Study Task Force and coauthor of Chapter 4: Enhanced Oil Recovery Technology in NCC Report entitled Harnessing Coal’s Carbon Content to Advance the Economy, Environment, and Energy Security, Nat’l Coal Council, 6-22,12, http://www.nationalcoalcoalcouncil.org/reports/07-10-12-NCC_Harnessing_Coals_Carbon_Content_to_Advance_Economy_Environment_EnergySecurity.pdf