

Sponsored Projects Publications

Trentham, R. C., Melzer, L. S., Vance, D. B., Kuuskraa, V., and Petrusak, R., 2015, Identifying and Developing Technology for Enabling Small Producers to Pursue the Residual Oil Zone (ROZ) Fairways in the Permian Basin San Andres. Research Partnership to Secure Energy for America (RPSEA) 10123.17.FINAL, Final Report, 504 pages, plus appendices.

Trentham, R. C., Melzer, L. S., Kuuskraa, V., and Koperna, G., 2015, Case Studies of the ROZ CO₂ Flood and the Combined ROZ/MPZ CO₂ Flood at the Goldsmith Landreth Unit, Ector County, Texas. Using “Next Generation” CO₂ EOR Technologies to Optimize the Residual Oil Zone CO₂ Flood. DOE Award No.: DE- FE0005889, Final Report, 221 pages.

Trentham, R. C. and Stoudt, E. L., 2014, To Develop a Modular Curriculum for Training University Students in Industry Standard CO₂ Sequestration and Enhanced Oil Recovery Methodologies, DOE Award no.: DE-FE0002111 Final Report, 174 pages plus appendices.

Melzer, L. S. Kiker, R., Wackowski, R. and **Trentham, R. C.**, 2013, CO₂ Flooding School, presented to 40 professionals from the 3 Chinese oil companies in Beijing, **China**. The course was sponsored by the Clean Air Taskforce, and the U. S. Trade Office, U. S. China Embassy.

Trentham, R. C., Melzer, L. S., Vance, D., 2012. Commercial Exploitation and the Origin of Residual Oil Zones: Developing a Case History in the Permian Basin of New Mexico and West Texas. Research Partnership to Secure Energy for America (RPSEA), 08123-19-FINAL, Final Report. 121 pages, plus appendices.

Southwest Section AAPG Presentations and posting to AAPG Datapages/Search and Discovery.

Afuape, O., **Trentham, R. C.**, 2016 Depositional Lithofacies and Diagenetic Overprints of Pennsylvanian Lower Cisco Shelf Margin Carbonates, Wolf Flat Field, Motley County, Texas, AAPG Datapages/Search and Discovery #20352.

Trentham, R. C., Melzer, L. S., 2016, A “Cookbook” Approach to Exploring for, and Evaluating Residual Oil Zones in the San Andres Formation of the Permian Basin. AAPG Datapages/Search and Discovery #51259.

Trentham, R. C., 2014, Goldsmith Landreth San Andres Unit (GLSAU) #203-RW, a CO₂ Oil Bank Caught in the Act. AAPG Datapages/Search and Discovery #10648.

Trentham, R. C., 2011, Residual Oil Zones: The Long Term Future of Enhanced Oil recovery in the Permian Basin and Elsewhere. AAPG Datapages/Search and Discovery #40787.

Trentham, R. C., Melzer, L. S., 2011, Potential for Long Term Uses of Anthropogenic CO₂ in the Permian Basin. AAPG Datapages/Search and Discovery #80176.

Residual Oil Zones, CO₂ Enhanced Oil Recovery, and Sequestration/Utilization - Oral or Poster Presentations with Abstracts and/or Powerpoints :

***Trentham, R. C.,** *Vance, D., 2015, The Science of ROZ's. @ 21th Annual CO₂ Conference, Seminar on the Origins, Processes and Exploitation of Residual Oil Zones, Midland, TX. *Co-presenters.

***Trentham, R. C.,** *Melzer, L. S., 2015 CO₂ EOR and Depressuring the Upper ROZ (DUROZ), Case Histories 2015, @ 21th Annual CO₂ Conference, Seminar on the Origins, Processes and Exploitation of Residual Oil Zones. Midland, Tx. *Co-presenters.

*Melzer, L. S., ***Trentham, R.C.** *Vance, D., *Kuuskraa, V., *Eidan, A., *Gorecki, C., 2014, "Case History-Driven Research: Residual Oil Zones" ROZ Forum at the 20th Annual CO₂ Conference, Midland, Texas. *Co-presenters.

Trentham, R.C., 2014, San Andres ROZ Cores; Byrd #1 Pharr, Anschutz #1 Keating, Legado #203 RWGLSAU, presented as part of "Case History-Driven Research: Residual Oil Zones" ROZ Forum at the 20th Annual CO₂ Conference, Midland, Texas.

Trentham, R.C., 2014, Comparison of Brownfields, Greenfield and Potential DEROZ Targets, as Seen in Core", Permian Basin" Case History-Driven Research: Residual Oil Zones ROZ Forum at the 20th Annual CO₂ Conference, Midland, Texas.

*Melzer, L. S., **R.C. Trentham,** R. D. Kiker, D. A. Vance, M. Cassidy, P. A. Eager, Re-thinking Intervals Below the Oil/Water Contact and the Concept of "Inverted Transition Zones" Putting the Business Elements Together for CO₂ EOR Using Captured Carbon, Forum, Colorado School of Mines, April, 2012. *presenter.

***Trentham, R. C.,** Stoudt, E. L., 2012, Goldsmith Field: GLSAU Geology & Volumetrics. Putting the Business Elements Together for CO₂ EOR Using Captured Carbon, Forum, Colorado School of Mines, April, 2012.* Presenter.

Editor

Trentham, R. C., 2015, Around the Horn. Guadalupian Age Basinal Facies in the Western Delaware Mountain Group Outcrop Belt, Guadalupe and Apache Mountains. Led by: Dr. Perter Scholle, Dr. Dana Ulmer-Scholle, Dr. Merlynd Nestell, and Dr. Galina Nestell, West Texas Geological Society publication #15-131, with section pagination.

Stoudt, E. L., **R. C. Trentham,** and Peter Scholle, 2004, Fall 2004 WTGS Field Trip: "Recent Advances in Sequence Stratigraphy and Reservoir Compartmentalization in Upper Guadalupian Carbonates - Guadalupe Mountains, West Texas and Southeastern New Mexico." West Texas Geological Society publication. #04-113, not paginated.

Trentham, R. C., 2004, "Banking on the Basin: Plays, Field Studies and Techniques" West Texas Geological Society Fall Symposium, Publication #04-112, 284 pages.

DeMis, W. D. M. K. DeMis, and **R. C. Trentham**, 2000, The Permian Basin: Proving Ground for Tomorrow's Technologies. West Texas Geological Society Symposium, Publication # 00-109, 241 pages.

Lindsay, R. F., **R. C. Trentham**, A. H. Smith, and R. F. Ward, 2000, Classic Permian Geology of West Texas and Southeastern New Mexico, Geo2000 Field Trip Guidebook, West Texas Geological Society Publication # 00-108, 317 pages.

Abstracts for Oral presentations

Hart, Shazia, I., and **R. C. Trentham**, 2014, "Study of the Ramsey Sandstone in the Bell Canyon Formation of the Delaware Basin: Paduca Field, Lea County, New Mexico, USA" Presented at the West Texas Geological Society Fall Symposium, September, 25, 2014.

Trentham, R. C., 2014 "The Permian Basin: Past Present and Future". Keynote Speaker at the 28th Annual Colloquium, UTEP Geological Sciences Department, March 6, 2014.

***Trentham, R. C.**, and Burch, M., 2012, "Documentation of Surface Features Associated With the Continued Development of the Wink Sag, Winkler County, Texas." Presented at the 46th Annual Meeting of the South Central Section of the Geological Society of America. * Presenter.

*Erdlac, R. J. , Jr., **R. C. Trentham**, L. Armour, R. Lee, B. Miller 2009 "Adding to the Geothermal Portfolio from Deep Sedimentary Basins" Abstract for presentation in "Building the Bridge to Our Energy Future." S. Pollock, P. Welch, co-Technical Chairmen, AAPG Southwest Section 2009 Convention program with Abstracts. Midland, TX. Unpaginated. * Presenter.

McGuigan, Teri, L. Canter, **R. C. Trentham**, 2009 Preliminary Comparison of Upper Pennsylvanian Depositional Facies Through Core Observations- Western Edge, Central Basin Platform, Ward County, Texas. Abstract for poster in Elusive Hydrocarbons are Still to be Found in the Permian Basin, WTGS Fall Symposium, Abstracts with program. C. Bowman and D. Cromwell, co-Technical Chairmen, p. 71-73.

Chakraborty, S., **R. C. Trentham**, 2009, "Study of Calcite Cement in Submarine Fan Complex, South Wells Member of the Cherry Canyon Formation Delaware Mountain Group, Western Delaware Basin, West Texas." Abstract for poster in "Building the Bridge to Our Energy Future." S. Pollock, P. Welch, co-Technical Chairmen, AAPG Southwest Section 2009 Convention program with Abstracts. Unpaginated.

Wink Sink. Not Just Another Pretty Hole in the Ground. Presented to the Permian Historical Society, April, 2008

Industry Classes

R. C. Trentham, 2015, CO2 Flooding School. Presented modules on: A Quick Look at Residual Oil Zones (ROZ's); Key Elements of Reservoir Geology; Cycles, Stratigraphy, and Geologic Reasons Why floods Fail; Geophysical and Geochemical Techniques for Monitoring CO2 Floods; Latest Advances in ROZ's: GLSAU, Tall Cotton, Wellman, George Allen, DEOR, 4 County Evaluation. In APTA CO2 Flooding School, ed by. L. s. Melzer, R. C. Trentham., R. Wackowski, Present in Midland. Only section pagination.

Melzer, L. S., **R. C. Trentham**, V. Kuuskraa, D. Vance, 2014, "Case History-Driven Research: Residual Oil Zones" A forum presented in conjunction with the 20th Annual CO Flooding Conference, Midland, TX December 2014.

Searcy, K., L. S. Melzer, **R.C. Trentham**, R. McKaskle, A. Sexton, R. D. Kiker, 2013 Enhanced Oil Recovery. Presented to the Department of Energy NETL office, Morgantown, West Virginia. Not paginated.

R. C. Trentham, 2007 - 2014, "Key Elements of Reservoir Geology." And "Geologic Reasons Why Floods Fail: Permian Basin Examples," and "Geophysical and Geochemical Techniques for Monitoring CO2 Floods". Presented at Applied Petroleum Technology Academy (APTA) and Petroleum Professional Development Center (PPDC) CO2 Flooding School, Midland Texas.. Melzer L. S., **R. C. Trentham**, R. D. Kiker, W. H. Smith eds., Presented, 11 times between January 2007 and August 2014. Day 1, Section 9, 40 pages.

Stoudt*, E. L., **Trentham***, **R. C.**, Fling*, C., and Campbell*, R., 2008, 2010 – 2015, PBS-SEPM Summer Intern and New Hire Field Trip, Guadalupe Mountains, Texas and New Mexico. Field Guide and References, 2 volumes. Revised and presented each year: June 2010 - June, 2015, Originally presented: June 2008.* Co-presenters.

Melzer, L. S., **R. C. Trentham**, R., D., Kiker, 2011, CCS (and CO2 EOR) in the Permian Basin – Reservoir Characterization. Permian Basin CCS Center. Presented to the Texas Railroad Commission, Austin, June 2011, Midland, September 2011.

Trentham, R. C., 2009, The Geoscience of How to Start/Fix/Manage a Small Waterflood. *in* How to Start/Fix/Manage a Small Waterflood and Successful Practices Workshop PTTC Texas/SE New Mexico Region sponsored Workshop in Dallas, TX., May 2008, March 2009, and Aug 2009, 67 pages.