

Jean-Philippe Nicot

Professional Summary

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Professional Preparation

Academic Background

Ph.D. Civil Engineering, The University of Texas at Austin, 1998

M.A. Geological Sciences, The University of Texas at Austin, 1995

B.S. Geological Engineering, Ecole Nationale Supérieure de Géologie Appliquée, Nancy, France, 1981

Professional Appointments

Senior Research Scientist, Bureau of Economic Geology, The University of Texas at Austin (May 2015-Present)

Conducting research on various aspects of subsurface fluid flow and solute transport including environmental issues related to unconventional energy production, deep carbon storage, desalination, nuclear waste storage, and water resources studies

Research Scientist, Bureau of Economic Geology, The University of Texas at Austin (May 2009-April 2015)

Investigated impacts of development of unconventional energy resources on water resources and groundwater quality: amount and source of water, demand vs. supply, characterization of brackish groundwater aquifers, source of methane in groundwater; explored rock-water interactions during hydraulic fracturing operations and their impact on production; continued CO₂ storage studies with a focus on field tests.

Research Associate, Bureau of Economic Geology, The University of Texas at Austin (April 2002-April 2009)

Researched and characterized different aspects of subsurface flow and transport. Desalination studies, specifically, definition of the brackish-water resource and feasibility of deep-well injection for concentrate disposal. CO₂ sequestration in saline aquifers, in particular, aspects related to leakage and associated risks. Studies of Central Texas water resources and aquifers through numerical modeling (Carrizo-Wilcox aquifer and Queen City and Sparta aquifers) and data interpretation (Edwards aquifer)

Senior Geosystems Engineer, Duke Engineering & Services, Austin, Texas (June 1999-March 2002)

Team member on the Yucca Mountain Project (potential high level waste repository for the U.S. Department of Energy). Responsible for geochemical simulations (with U.S.G.S. code PHREEQC and L. Livermore National Laboratory code EQ3/6) in the near-field (vicinity of emplacement drifts) and far-field (fractured host rock) environments. The goal of these studies is to determine the spatial distribution of fissile and other relevant material accumulations for nuclear criticality analysis. Also analyzed plugging by mineral precipitates of tiny cracks that can develop on waste packages and free surface flow over and flow into a typical waste package.

Geosystems Engineer, Duke Engineering & Services, Austin, Texas (January-June 1999)
Responsible for design and interpretation of partitioning interwell tracer tests for NAPL (Non-Aqueous Phase Liquids) characterization as well as design of surfactant enhanced aquifer remediation. Use of the compositional multi-phase flow and transport simulator UTCHEM

Part-Time Consultant, Bureau of Economic Geology, The University of Texas at Austin (1996-1998)

Assisted the Low-Level Radioactive Waste Disposal Authority with studies on air permeability. The purpose of these studies was to determine the parameters necessary for the simulation of the migration of radon and other gases

Senior Project Manager, Precious Metals Division, French Ministry of Foreign Affairs, Morocco - Moroccan Office of Exploration and Mining (B.R.P.M.) (1988-1991)

Supervised all aspects of exploration projects for gold and other precious metals in uncharted areas of southern Morocco. Managed teams of up to 20 workers (engineers, technicians and miners). Results included more than 10,000 samplings from 450 square miles containing previously unidentified sources of gold and other metals

Resident Geological Expert, French Ministry of Foreign Affairs, Morocco - Moroccan Office of Exploration and Mining (B.R.P.M.) (1986-1987)

Provided expertise in evaluating the potential of many types of metal deposits (Cu, Ag, Au, etc.)

Mining Geologist, French Ministry of Foreign Affairs, Morocco - Moroccan Office of Exploration and Mining (B.R.P.M.) (1984-1985)

Researched extensions of an operating mine. Responsible for quantifying amount and grade of mined substances

Production Engineer, Baufia A.G. (Swiss Construction Company) - Algeria (1983-1984)

Managed the quarrying operations for apartment building construction. Responsible for concrete formulation, quality control and management of ten workers

Staff Engineer, Screg Routes & P.P. - Paris and Nancy, France (1982)

Supervised road construction work sites. Managed staff of five. Worked closely with city administrations

Professional Registrations and Certificates

Texas Board of Professional Engineers #90429

Texas Board of Professional Geoscientists #697

Theses

Characterization of gas transport in a playa subsurface, Pantex site, Amarillo, Texas

Dissertations

Inverse modeling of subsurface environmental partitioning tracer tests

Areas of Expertise

Areas of Expertise

A. Subsurface hydrology--numerical modeling and optimization of groundwater resources; multiphase flow and contaminant transport in both the unsaturated and saturated zones

B. Geochemistry modeling and subsurface reactive transport

C. Mathematical geology--geostatistics, inverse modeling, optimization

D. Risk assessment and risk analysis

Awards

Awards and Honorary Societies

Fellow, Geological Society of America, 2015

Joseph C. Walter Jr. Excellence Award, Jackson School of Geosciences, The University of Texas at Austin, 2013

Jackson School of Geosciences Young Scientist Fellowship, 2006-2007

Bureau of Economic Geology Publication Support Award, 2006

Publications

Peer Reviewed Authored Books

Hosseini, S. A., Hovorka, S. D., Savvaidis, A., Kavoura, F., and Nicot, J.-P., 2022, Current state of knowledge regarding the risk of induced seismicity at CO₂ storage projects: Cheltenham, UK, IEA Environmental Projects Ltd., IEAGHG Technical Report, v. 2022-02, 63 p.

Peer Reviewed Journal Articles

Kyle, J. R., Fall, A., and Nicot, J.-P., 2025, Mississippi Valley-type mineralization in the Jurassic Smackover Formation, Gulf Coast Basin, USA: controls on the origin of Zn-Pb-Ag systems in deep sedimentary basins: *Journal of Geochemical Exploration*, v. 277, no. 107807, 14 p., <http://doi.org/10.1016/j.gexplo.2025.107807>.

Lin, N., Arzumanyan, M., Rodriguez Calzado, E., and Nicot, J.-P., 2025, Water requirements for hydrogen production: assessing future demand and impacts on Texas water resources: *Sustainability*, v. 17, no. 2, article no. 385, 25 p., <http://doi.org/10.3390/su17020385>.

Darvari, R., Nicot, J.-P., Scanlon, B. R., Kyle, J. R., Elliott, B. A., and Uhlman, K., 2024, Controls on lithium content of oilfield waters in Texas and neighboring states (USA): *Journal of Geochemical Exploration*, v. 257, no. 107363, 15 p., <http://doi.org/10.1016/j.gexplo.2023.107363>.

Ge, J., Nicot, J.-P., Smye, K. M., Calle, A. Z., Hennings, P., Horne, E. A., and Leng, J., 2024, Modeling the evolution of pore pressure from deep wastewater injection in the Midland Basin, Texas: *AAPG Bulletin*, v. 108, no. 12, p. 2287-2312, <http://doi.org/10.1306/09102424008>.

Hennings, P., Ge, J., Horne, E. A., Smye, K. M., and Nicot, J.-P., 2024, Pore pressure thresholds associated with seismogenic fault slip in the Midland Basin, west Texas, United States: *AAPG Bulletin*, v. 108, no. 12, p. 2347-2375, <http://doi.org/10.1306/07232424014>.

Kuang, X., Liu, J., Jiao, J. J., Scanlon, B. R., Jasechko, S., Lancia, M., Biskaborn, B. K., Wada, Y., Li, H., Zeng, Z., Guo, Z., Yao, Y., Gleeson, T., Nicot, J.-P., Luo, X., Zou, Y., and Zheng, C., 2024, The changing nature of groundwater in the global water cycle: *Science*, v. 383, no. 6686, 14 p., <http://doi.org/10.1126/science.adf0630>.

Smye, K. M., Ge, J., Calle, A., Morris, A., Horne, E. A., Eastwood, R. L., Darvari, R., Nicot, J. P., and Hennings, P., 2024, Role of deep fluid injection in induced seismicity in the Delaware Basin, West Texas and southeast New Mexico: *Geochemistry, Geophysics, Geosystems*, v. 25, no. 6, article no. e2023GC011260, 33 p., <http://doi.org/10.1029/2023GC011260>.

Smye, K. M., Yut, K., Reedy, R. C., Scanlon, B. R., Nicot, J.-P., and Hennings, P., 2024, Challenges with managing unconventional water production and disposal in the Permian Basin: *AAPG Bulletin*, v. 108, no. 12, p. 2215-2240, <http://doi.org/10.1306/08082424025>.

Haddad, M., Ahmadian, M., Ge, J., Nicot, J.-P., and Ambrose, W., 2023, Geomechanical and hydrogeological evaluation of a shallow hydraulic fracture at the Devine Fracture Pilot Site, Medina County, Texas: *Rock Mechanics and Rock Engineering*, v. 56, no. 10, p. 7049-7069, <http://doi.org/10.1007/s00603-022-03115-z>.

Hennings, P., Staniewicz, S., Smye, K., Chen, J., Horne, E., Nicot, J.-P., Ge, J., Reedy, R., and Scanlon, B., 2023, Development of complex patterns of anthropogenic uplift and subsidence in the Delaware Basin of West Texas and southeast New Mexico, USA: *Science of The Total*

Environment, v. 903, no. 166367, 16 p., <http://doi.org/10.1016/j.scitotenv.2023.166367>.

Nicot, J.-P., Darvari, R., Smye, K. M., and Goodman, E., 2023, Geochemical insights from formation waters produced from Wolfcampian and Leonardian intervals of the Midland Basin, Texas, USA: Applied Geochemistry, v. 150, no. 6, 33 p., <http://doi.org/10.1016/j.apgeochem.2023.105585>.

Bryndzia, L. T., Day-Stirrat, R. J., Hows, A. M., Nicot, J.-P., Nikitin, A., and Huvaz, O., 2022, A geochemical analysis of produced water(s) from the Wolfcamp formation in the Permian Delaware Basin, western Texas: AAPG Bulletin, v. 106, no. 6, p. 1265-1299, <http://doi.org/10.1306/01282220180>.

Ge, J., Nicot, J.-P., Hennings, P. H., Smye, K. M., Hosseini, S. A., Gao, R. S., and Breton, C. L., 2022, Recent water disposal and pore pressure evolution in the Delaware Mountain Group, Delaware Basin, Southeast New Mexico and West Texas, USA: Journal of Hydrology: Regional Studies, v. 40, no. 101041, 17 p., <http://doi.org/10.1016/j.ejrh.2022.101041>.

Nicot, J.-P., Smyth, R. C., Darvari, R., and McKinney, S. T., 2022, New hydrogeochemical insights on a West Texas desert spring cluster: Trans-Pecos Balmorhea-Area Springs: Applied Geochemistry, v. 142, no. 105331, 14 p., <http://doi.org/10.1016/j.apgeochem.2022.105331>.

Fakhreddine, S., Prommer, H., Scanlon, B. R., Ying, S. C., and Nicot, J.-P., 2021, Mobilization of arsenic and other naturally occurring contaminants during managed aquifer recharge: a critical review: Environmental Science & Technology, v. 55, no. 4, p. 2208-2223, <http://doi.org/10.1021/acs.est.0c07492>.

Gao, S., Nicot, J.-P., Hennings, P. H., La Pointe, P., Smye, K. M., Horne, E. A., and Dommissé, R., 2021, Low pressure buildup with large disposal volumes of oil field water: a flow model of the Ellenburger Group, Fort Worth Basin, northcentral Texas: AAPG Bulletin, v. 105, no. 12, p. 2575-2593, <http://doi.org/10.1306/03252120159>.

Hennings, P., Nicot, J.-P., Gao, R. S., DeShon, H. R., Lund Snee, J.-E., Morris, A. P., Brudzinski, M. R., Horne, E. A., and Breton, C., 2021, Pore pressure threshold and fault slip potential for induced earthquakes in the Dallas-Fort Worth area of north central Texas: Geophysical Research Letters, v. 48, no. 15, article no. e2021GL093564, 9 p., <http://doi.org/10.1029/2021GL093564>.

Nicot, J.-P., Darvari, R., Eichhubl, P., Scanlon, B. R., Elliott, B. A., Bryndzia, T. L., Gale, J. F. W., and Fall, A., 2020, Origin of low salinity, high volume produced waters in the Wolfcamp Shale (Permian), Delaware Basin, USA: Applied Geochemistry, v. 122, no. 104771, 18 p., <http://doi.org/10.1016/j.apgeochem.2020.104771>.

Scanlon, B. R., Reedy, R. C., Xu, P., Engle, M., Nicot, J. P., Yoxtheimer, D., Yang, Q., and Ikonnikova, S., 2020, Can we beneficially reuse produced water from oil and gas extraction in the U.S.?: Science of the Total Environment, v. 717, no. 137085, 12 p., <http://doi.org/10.1016/j.scitotenv.2020.137085>.

Dashtian, H., Bakhshian, S., Hajirezaie, S., Nicot, J.-P., and Hosseini, S. A., 2019, Convection-diffusion-reaction of CO₂-enriched brine in porous media: a pore-scale study: Computers and Geosciences, v. 125, p. 19-29, <http://doi.org/10.1016/j.cageo.2019.01.009>.

Hernández-Espriú, A., Wolaver, B. D., Arciniega-Esparza, S., Scanlon, B. R., Young, M. H., Nicot, J.-P., Macías-Medrano, S., and Breña-Naranjo, J. A., 2019, A screening approach to improve water management practices in undeveloped shale plays, with application to the transboundary Eagle Ford Formation in northeast Mexico: Journal of Environmental Management, v. 236, p. 146-162, <http://doi.org/10.1016/j.jenvman.2018.11.123>.

Darvari, R., Nicot, J.-P., Scanlon, B. R., Mickler, P., and Uhlman, K., 2018, Trace element behavior in methane-rich and methane-free groundwater in north and east Texas: Groundwater, v. 56, no. 5, p. 705-718, <http://doi.org/10.1111/gwat.12606>.

Entrekin, S., Trainor, A., Saiers, J., Patterson, L., Maloney, K., Fargione, J., Kiesecker, J., Baruch-Mordo, S., Konschnik, K., Wiseman, H., Nicot, J.-P., and Ryan, J. N., 2018, Water stress from high-volume hydraulic fracturing potentially threatens aquatic biodiversity and ecosystem services in Arkansas, United States: *Environmental Science and Technology*, v. 52, no. 4, p. 2349-2358, <http://doi.org/10.1021/acs.est.7b03304>.

Goudarzi, A., Hosseini, S. A., Sava, D., and Nicot, J.-P., 2018, Simulation and 4D seismic studies of pressure management and CO₂ plume control by means of brine extraction and monitoring at the Devine Test Site, South Texas, USA: *Greenhouse Gases: Science and Technology*, v. 8, p. 185-204, <http://doi.org/10.1002/ghg>.

Hosseini, S. A., Alfi, M., Nicot, J.-P., and Nuñez-López, V., 2018, Analysis of CO₂ storage mechanisms at a CO₂-EOR site, Cranfield, Mississippi: *Greenhouse Gases: Science and Technology*, v. 8, p. 469-482, <http://doi.org/10.1002/ghg.1754>.

Larson, T., Nicot, J.-P., Mickler, P., Castro, M. C., Darvari, R., Wen, T., and Hall, C. M., 2018, Monitoring stray natural gas in groundwater with dissolved nitrogen. An example from Parker County, Texas: *Water Resources Research*, v. 54, no. 9, p. 6024-6041, <http://doi.org/10.1029/2018WR022612>.

Nicot, J.-P., Gherabati, A., Darvari, R., and Mickler, P., 2018, Salinity reversal and water freshening in the Eagle Ford Shale, Texas, USA: *ACS Earth and Space Chemistry*, v. 2, no. 11, p. 1087-1094, <http://doi.org/10.1021/acsearthspacechem.8b00095>.

Arciniega-Esparza, S., Breña-Naranjo, J. A., Hernández-Espriú, A., Pedrozo-Acuña, A., Scanlon, B. R., Nicot, J.-P., Young, M. H., Wolaver, B. D., and Alcocer-Yamanaka, V. H., 2017, Baseflow recession analysis in a large shale play: Climate variability and anthropogenic alterations mask effects of hydraulic fracturing: *Journal of Hydrology*, v. 533, p. 160-171, <http://doi.org/10.1016/j.jhydrol.2017.07.059>.

Lu, J., Darvari, R., Nicot, J.-P., Mickler, P., and Hosseini, S. A., 2017, Geochemical impact of injection of Eagle Ford brine on Hosston sandstone formation--observations of autoclave water-rock interaction experiments: *Applied Geochemistry*, v. 84, p. 26-40, <http://doi.org/10.1016/j.apgeochem.2017.06.002>.

Lu, J., Mickler, P., Nicot, J.-P., Choi, W., Esch, W. L., and Darvari, R., 2017, Geochemical interactions of shale and brine in autoclave experiments--understanding mineral reactions during hydraulic fracturing of Marcellus and Eagle Ford Shales: *AAPG Bulletin*, v. 101, no. 10, p. 1567-1597, <http://doi.org/10.1306/11101616026>.

Maloney, K. O., Baruch-Mordo, S., Patterson, L. A., Nicot, J.-P., Entrekin, S. A., Fargione, J. E., Kiesecker, J. M., Konschnik, K. E., Ryan, J. N., Trainor, A. M., Saiers, J. E., and Wiseman, H. J., 2017, Unconventional oil and gas spills: materials, volumes, and risks to surface waters in four states of the U.S.: *Science of the Total Environment*, v. 581-582, p. 369-377, <http://doi.org/10.1016/j.scitotenv.2016.12.142>.

Nicot, J.-P., Larson, T., Darvari, R., Mickler, P., Sloten, M., Aldridge, J., Uhlman, K., and Costley, R., 2017, Controls on methane occurrences in shallow aquifers overlying the Haynesville Shale gas field, East Texas: *Groundwater*, v. 55, no. 4, p. 443-454, <http://doi.org/10.1111/gwat.12500>.

Nicot, J.-P., Larson, T., Darvari, R., Mickler, P., Uhlman, K., and Costley, R., 2017, Controls on methane occurrences in aquifers overlying the Eagle Ford Shale play, South Texas: *Groundwater*, v. 55, no. 4, p. 455-468, <http://doi.org/10.1111/gwat.12506>.

Nicot, J.-P., Mickler, P., Larson, T., Castro, M. C., Darvari, R., Uhlman, K., and Costley, R., 2017, Methane occurrences in aquifers overlying the Barnett Shale play with a focus on Parker County, Texas: *Groundwater*, v. 55, no. 4, p. 469-481, <http://doi.org/10.1111/gwat.12508>.

Patterson, L. A., Konschnik, K. E., Wiseman, H., Fargione, J., Maloney, K. O., Kiesecker, J., Nicot, J.-P., Baruch-Mordo, S., Entrekin, S., Trainor, A., and Saiers, J. E., 2017, Unconventional

oil and gas spills: risks, mitigation priorities, and state reporting requirements: *Environmental Science and Technology*, v. 51, no. 5, p. 2563-2573, <http://doi.org/10.1021/acs.est.6b05749>.

Wen, T., Castro, M. C., Nicot, J.-P., Hall, C. M., Pinti, D. L., Mickler, P., Darvari, R., and Larson, T., 2017, Characterizing the noble gas isotopic composition of the Barnett Shale and Strawn Group and constraining the source of stray gas in the Trinity Aquifer, North-Central Texas: *Environmental Science & Technology*, v. 51, no. 11, p. 6533-6541, <http://doi.org/10.1021/acs.est.6b06447>.

Gao, R. S., Sun, A. Y., and Nicot, J.-P., 2016, Identification of a representative dataset for long-term monitoring at the Weyburn CO₂-injection enhanced oil recovery site, Saskatchewan, Canada: *International Journal of Greenhouse Gas Control*, v. 54, p. 454-465, <http://doi.org/10.1016/j.ijggc.2016.05.028>.

Lu, J., Mickler, P., Nicot, J.-P., Yang, C., and Darvari, R., 2016, Geochemical impact of O₂ impurity in CO₂ stream on carbonate carbon-storage reservoirs: *International Journal of Greenhouse Gas Control*, v. 47, p. 159-175, <http://doi.org/10.1016/j.ijggc.2016.01.039>.

Lu, J., Nicot, J.-P., Mickler, P., Ribeiro, L. H., and Darvari, R., 2016, Alteration of Bakken reservoir rock during CO₂-based fracturing--An autoclave reaction experiment: *Journal of Unconventional Oil and Gas Resources*, v. 14, p. 72-85, <http://doi.org/10.1016/j.juogr.2016.03.002>.

Wen, T., Castro, M. C., Nicot, J.-P., Hall, C. M., Larson, T., Mickler, P., and Darvari, R., 2016, Methane sources and migration mechanisms in shallow groundwaters in Parker and Hood counties, Texas--A heavy noble gas analysis: *Environmental Science & Technology*, v. 50, no. 21, p. 12012-12021, <http://doi.org/10.1021/acs.est.6b01494>.

Mukhopadhyay, S., Doughty, C., Bacon, D., Li, J., Wei, L., Yamamoto, H., Gasda, S., Hosseini, S. A., Nicot, J.-P., and Birkholzer, J. T., 2015, The Sim-SEQ Project: comparison of selected flow models for the S-3 site: *Transport in Porous Media*, v. 108, p. 207-231, <http://doi.org/10.1007/s11242-014-0361-0>.

Lu, J., Mickler, P., Nicot, J. -P., Yang, C., and Romanak, K. D., 2014, Geochemical impact of oxygen on siliciclastic carbon storage reservoirs: *International Journal of Greenhouse Gas Control*, v. 21, p. 214-231, <http://doi.org/10.1016/j.ijggc.2013.12.017>

Nicot, J. -P., Scanlon, B. R., Reedy, R. C., and Costley, R., 2014, Source and fate of hydraulic fracturing water in the Barnett Shale: a historical perspective: *Environmental Science & Technology*, v. 48, no. 4, p. 2464-2471, <http://doi.org/10.1021/es404050r>.

Scanlon, B. R., Reedy, R. C., and Nicot, J.-P., 2014, Comparison of water use for hydraulic fracturing for unconventional oil and gas versus conventional oil: *Environmental Science & Technology*, v. 48, no. 20, p. 12386-12393, <http://doi.org/10.1021/es502506v>.

Scanlon, B. R., Reedy, R. C., and Nicot, J.-P., 2014, Will water scarcity in semiarid regions limit hydraulic fracturing of shale plays?: *Environmental Research Letters*, v. 9, 14 p., <http://doi.org/10.1088/1748-9326/9/12/124011>.

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Presentations

Invited Presentations

Assessing Potential for Produced Water Reuse for Major Unconventional Plays in the U.S.: presented to Society of Petroleum Engineers, presented at SPE Workshop: Environmental Stewardship in Unconventional Resource Development, Austin, Texas, November 7-8, 2018.

Understanding and managing environmental roadblocks to shale gas development: an analysis of shallow gas, NORMs, and trace metals (Texas): presented at Best of RPSEA 10 Years of Research: Ultra-Deepwater and Onshore Technology Conference, Galveston, Texas, August 30-31, 2016.

Groundwater Baseline Monitoring: presented to Mexican Association of Hydrogeologists (AGM), presented at workshop on "Shale oil and gas: U.S. lessons learned on environmental monitoring, land use, water resources, fracking and regulations", National Autonomous University of Mexico (UNAM), Mexico City, November 11-13, 2015.

Shale Oil and Gas Fundamentals: presented to Mexican Association of Hydrogeologists (AGM), presented at workshop on "Shale oil and gas: U.S. lessons learned on environmental monitoring, land use, water resources, fracking and regulations", National Autonomous University of Mexico (UNAM), Mexico City, November 11-13, 2015.

Impacts of Hydraulic Fracturing on Groundwater Quality and Quantity: presented to Mexican Association of Hydrogeologists (AGM), presented at workshop on "Shale oil and gas: U.S. lessons learned on environmental monitoring, land use, water resources, fracking and regulations", National Autonomous University of Mexico (UNAM), Mexico City, November 11, 2015.

Selected Topics on Water Resources Management and Hydraulic Fracturing: Similar Information, Different Results: Fracking from State to State: presented to Pardee Symposium, presented at Geological Society of America 2015 Annual Meeting & Exposition, Baltimore, Maryland, November 1-4, 2015.

Water Demand of the Energy Industry in Texas and Impact on Aquifers: presented at Geological Society of America 2015 Annual Meeting & Exposition, Baltimore, Maryland, November 1-4, 2015.

Water Use in the Energy Sector: Improving Understanding and Reducing Conflicts: presented to The University of Texas at Austin Jackson School of Geosciences, presented at Latin American Forum on Energy and the Environment, Mexico City, Mexico, April 15-16, 2015.

Controls on Methane Occurrences in Aquifers in the Footprint of Texas Shale Plays: presented to American Chemical Society 249th National Meeting & Exposition, presented at Chemistry of Natural Resources, Denver, CO, March 23, 2015.

Preliminary results of a dissolved methane sampling campaign in Texas: presented to National Groundwater Association (NGWA) Workshop, presented at Groundwater Quality and Unconventional Gas Development: Is There a Connection?, Pittsburgh, Pennsylvania, November 13-14, 2014.

Hot topics in hydraulic fracturing: dissolved methane, NORMs, and seismicity: presented to the Colombian Association of Hydrogeologists, presented at Workshop on aquifers and exploration and production from unconventional, Bogota, Colombia, August 14-15, 2014.

Impact on aquifers of production from unconventional: presented to Colombian Association of Hydrogeologists, presented at Workshop on aquifers and exploration and production from

unconventionals, Bogota, Colombia, August 14-15, 2014.

Texas experience in shale gas development: presented to Colombian Association of Hydrogeologists, presented at Workshop on aquifers and exploration and production from unconventionals, Bogota, Colombia, August 14-15, 2014.

Oil and gas water use in Texas: the geological perspective: presented at 2014 Texas Water Summit, The Academy of Medicine, Engineering & Science of Texas, Austin, Texas, May 19, 2014.

Produced water accounting and characteristics: the case of hydraulic fracturing in Texas: presented at 2013 Geological Society of America Annual Meeting & Exposition, Denver, Colorado, October 27-30, 2013.

Presentations

Estimation of Formation Permeability Anisotropy in Delaware Mountain Group Using Injection Data in Water Disposal Project: presented to Industry technical session, presented at 2024 American Geophysical Union, Washington, D.C., December 9-13, 2024.

Injection Pore Pressure Model in the Delaware Mountain Group, v. 2: presented to Industry Sponsor Meeting, presented at 2024 CISR-Science Advisory Committee Meeting, Austin, TX, December 5-6, 2024.

Implications of Current Wastewater Disposal Practices in the Permian Basin Region: presented to 34th Annual Produced Water Society Conference, Houston, February 6-8, 2024.

Investigation of Inter-well Connectivity of the Ellenburger Formation in Central Midland Basin using a Rapid CRM Method: presented to Industry technical session, presented at American Geophysical Union 2023, San Francisco, December 11-15, 2023.

A Physics-Based Method for Forecasting Interwell Connectivity Using Injection Data: presented to Industry technical session, presented at The International Meeting for Applied Geoscience & Energy, Houston, August 28-September 1, 2023.

Controls on Lithium Content of Oilfield Brines in Texas and Neighboring States: presented at the 59th Forum on the Geology of Industrial Minerals, Society for Mining, Metallurgy & Exploration, Austin, Tex., May 21-23, 2023.

Hydrogeological modeling and pore pressure characterization of deep formations in the northern Delaware Basin Texas and New Mexico: presented at American Geophysical Union Fall Meeting, Chicago, IL, December 12-16, 2022.

Hydrogen Subsurface Storage: A Primer on a Texas-Size Opportunity: presented at The University of Texas at Austin, Bureau of Economic Geology Research Seminar, Austin, Tex., April 9, 2021.

Preliminary Hydrogeological Modeling of Deep Injection in the Delaware Basin for Pore Pressure Characterization with Application to Induced Seismicity: presented at American Geophysical Union, Fall Meeting, online everywhere, December 2020.

Origin of the Low Salinity Produced Waters of the Delaware Basin Wolfcamp Shale: presented at 2020 Geological Society of America (GSA) Annual Meeting & Exposition: GSA 2020 Connects Online, online, October 25-28, 2020.

Basin-Scale Hydrogeological Modeling of the Fort Worth Basin Ellenburger Group for Pore Pressure Characterization: presented at American Geophysical Union, Fall Meeting, San Francisco, Calif., December 2019.

Impact of Varied Approaches for Fault Slip Potential Analysis in the Fort Worth Basin, Texas: presented at The American Association of Petroleum Geologists 2019 Annual Convention and Exhibition, San Antonio, Tex., May 2019.

The Geology of Active Earthquake Sequences in Texas: presented at The American Association of Petroleum Geologists 2019 Annual Convention and Exhibition, San Antonio, Tex., May 2019.

Analysis of Seismogenic Pore Pressure Thresholds in the Fort Worth Basin from Comprehensive Hydrogeologic Modeling: presented at Society of Petroleum Engineers/Society of Exploration Geophysicists Workshop: Injection Induced Seismicity - The Next Chapter, Dallas, Tex., 2019.

Attribution of Natural Gas in Shallow Groundwater Using Dissolved Nitrogen and Alkane Chemistry in Parker County, Texas: presented to Goldschmidt Conference, presented at Yokohama, Japan, July 2016.

A Texas study of dissolved methane in fresh-water aquifers: presented at 10th National Monitoring Conference, Tampa, Florida, May 3, 2016.

Controls on methane occurrences in aquifers in the footprint of Texas shale plays: presented to Railroad Commission of Texas, Austin, Texas, January 26, 2016.

Dissolved Methane in Fresh-Water Aquifers in the Footprint of Some Texas Shale Plays: presented at Bureau of Economic Geology Research Seminar, The University of Texas at Austin, Austin, Tex., December 11, 2015.

Tracing natural gas transport into shallow groundwater using dissolved nitrogen and alkane chemistry in Parker County, Texas: presented to American Geophysical Union (AGU) Annual Meeting, San Francisco, Calif., December 2015.

Environmental Impacts of Shale Development: Water Quantity and Quality: presented to Petroleum Professional Development Center, Midland College, presented at 2015 Permian Basin Environmental Regulatory Seminar, Midland, Texas, May 14, 2015.

Selected Topics on Water Resources Management and Hydraulic Fracturing: presented at Workshop with Instituto Mexicano del Petróleo on the Environmental Impacts of Shale Gas and Oil Extraction in the U.S. and Applications to Mexico, University of California Berkeley, Berkeley, CA, April 27, 2015.

An Overview of Dissolved Methane in Fresh-Water Aquifers in the Footprint of Texas Shale Plays: presented at NGWA Ground Water Summit, San Antonio, Texas, March 17, 2015.

Preliminary results of a dissolved methane sampling campaign in Texas: presented to National Groundwater Association Workshop, presented at Groundwater Quality and Unconventional Gas Development: Is There a Connection?, Pittsburgh, Pennsylvania, November 13-14, 2014.

The Texas experience in shale development: presented to Department of Geography, Texas State University, San Marcos, Texas, October 29, 2014.

Preliminary results of dissolved methane sampling in the footprint of Texas shale plays: presented at 2014 Geological Society of America Annual Meeting & Exposition, Vancouver, British Columbia, Canada, October 19-22, 2014.

Impact of induced seismic events on seal integrity, Texas Gulf Coast: presented at 12th International Conference on Greenhouse Gas Control Technologies , International Energy Agency Greenhouse Gas R&D programme, Austin, Texas, October 5-9, 2014.

The Texas experience in shale development: presented at Graduate Seminar in Geology series, Department of Geological Sciences, The University of Texas at San Antonio, San Antonio, Texas, September 10, 2014.

Hydraulic fracturing and environmental issues: what to believe?: presented at West Texas Energy Consortium, 1st Annual Conference, Abilene, Texas, June 4, 2014.

Water sources and disposal related to hydraulic fracturing in Texas: presented at 2014 AAPG Annual Convention & Exhibition, Houston, Texas, April 7, 2014.

Flow and salinity patterns of the low-transmissivity Paleozoic aquifers of North-Central Texas, USA: presented at Gulf Coast Association of Geological Societies Annual Convention, New Orleans, Louisiana, October 2013.

Hydraulic fracturing and water resources: a Texas study: presented at Gulf Coast Association of Geological Societies Annual Convention, New Orleans, Louisiana, October 2013.

Socio-Environmental Aspects of the Development of Shale Gas and Shale Oil Projects: presented at Forum on Challenges for Evaluation and Development of Shale Gas and Shale Oil Deposits, October 2-4, 2013, Bucaramanga, Colombia, October 2013.

Water use and consumption for hydraulic fracturing: A Texas study: presented at ECI Conference Series: Overcoming the Technical and Community Challenges of Hydraulic Fracturing for Shale Gas, Boulder, Colorado, August 2013.

Water use for the development of Texas shale and tight plays: presented at Unconventional Oil & Gas Water Management Forum, Groundwater Protection Council, Grapevine, Texas, July 2013.

Source and Fate of Hydraulic Fracturing Water in Texas: presented at Atlantic Council Workshop on "Fossil fuel produced water: asset or waste", Washington, D.C., June 2013.

Sources of Data for Quantifying Hydraulic Fracturing Water Use in Texas: Water Acquisition Modeling Technical Workshop, U.S. EPA Conference Center, Arlington, Virginia, June 2013.

Hydraulic fracturing and water resources in Texas: presented at Water & Energy Workshop, Government Accountability Office (GAO) and National Research Council (NRC), Washington, DC, May 2013.

Hydraulic fracturing of unconventional and water resources: Workshop on Risks of Unconventional Shale Gas Development, National Research Council (NRC), Washington, DC, May 2013.

Hydraulic fracturing and water resources: a Texas study: presented at Permian Basin Oil & Gas Industry Water Use Symposium, Petroleum Professional Development Center, Midland College, Midland, Texas, April 2013.

Hydraulic fracturing: water use and consumption in Texas: presented at TCEQ Environmental Trade Fair and Conference, Austin, Texas, April 2013.

Hydraulic fracturing and water resources in Texas: presented at American Institute of Professional Geologists and American Ground Water Trust meeting, Shale-Gas Development and Water Issues, Austin, Texas, March 2013.

Hydraulic fracturing and water resources: a Texas study: AAPG Geosciences Technology Workshop: Solving Water Issues in the Oil Field: Using Geology and More, Fort Worth, Texas, February 2013.

Pressure-anomaly based leakage detection: presented at Progress Review of STAR Grant Research on Carbon Geosequestration, EPA Headquarters, Washington, D.C., January 7, 2013.

Potential subsurface impacts of CO₂ stream impurities on geologic carbon storage: presented at 11th International Conference on Greenhouse Gas Control Technologies (GHGT11), International Energy Agency Greenhouse Gas R&D programme, Kyoto, Japan, November 18-22, 2012.

Hydraulic fracturing and water resources: a Texas study: invited lecture presented at Pardee Keynote Symposium: Shale Gas Development and Hydraulic Fracturing Impacts on Water Resources in the United States, Geological Society of America 2012 Annual Meeting and Exposition, Charlotte, North Carolina, November 6, 2012.

Water demand of the energy industry in Texas and impact on aquifers: presented at NGWA

Ground Water Summit, Garden Grove, California, May 7, 2012.

An overview of the Sim-SEQ project and Sim-SEQ study site: presented at 11th Annual Carbon Capture, Utilization, and Sequestration Conference, Pittsburgh, Pennsylvania, May 2, 2012.

Potential impacts on carbon storage of impurities in the CO₂ stream: presented at 11th Annual Carbon Capture, Utilization, and Sequestration Conference, Pittsburgh, Pennsylvania, May 1, 2012.

Water needs of the upstream oil and gas industry in Texas and impact on aquifers: presented at Hydro Brown Bag, Department of Geological Sciences, The University of Texas at Austin, Austin, Texas, February 17, 2012.

Fact-based regulation for environmental protection in shale gas resource development: presented at UIC Conference of the Groundwater Protection Council, Houston, Texas, January 24, 2012.

Geochemistry of shale gas basins including NORMs and trace elements: presented at UIC Conference of the Groundwater Protection Council, Houston, Texas, January 23, 2012.

Water demand in Texas shale plays: presented at HGS Northsiders Luncheon Meeting, Houston, Texas, January 17, 2012.

Water demand in Texas shale plays: presented to the Houston Geological Society, Houston, Texas, January 17, 2012.

Potential impacts on carbon storage of impurities in the CO₂ stream: presented at International CCS Workshop, Austin, Texas, December 2, 2011.

Water efficiency of Texas shale plays: a discussion: presented at the Ground Water Protection Council Annual Forum, Atlanta, Georgia, September 25, 2011.

Brine reinjection into shallower aquifers during CO₂ sequestration: a pressure management practice: presented at NGWA Ground Water Summit & 2011 GWPC Spring Meeting, Baltimore, Maryland, May 4, 2011.

Water needs of the upstream segment of the oil and gas industry in Texas: presented at NGWA Ground Water Summit & 2011 GWPC Spring Meeting, Baltimore, Maryland, May 4, 2011.

Description of the Sim-SEQ Data Set: the S-3 Site: presented to the Sim-SEQ Technical Team, Lawrence Berkeley National Laboratory, at the Sim-SEQ Startup Meeting, Berkeley, California, April 20, 2011.

Interim results of the CO₂ impurities project: presented at Petroleum Technology Alliance Canada (PTAC), Alberta CO₂ Purity Project (ACPP) Phase I Completion Workshop, Calgary, Alberta, Canada, April 15, 2011.

An overview of current and projected shale and tight gas water use in Texas: implications for local water resources: presented as Technical Workshop #4 for the Hydraulic Fracturing Study (Water Resources Management), U.S. EPA, Arlington, Virginia, March 29, 2011.

What the subsurface tells us on how pure the CO₂ stream must be: presented at the Workshop on Chemical and Physical Property Data Needs for Supercritical CO₂, Pittsburgh, Pennsylvania, March 24, 2011.

What are the risks and potential impacts of geologic carbon storage?: presented at the School of Civil and Environmental Engineering, Cornell University, Ithaca, New York, March 2011.

Current and projected water needs of the upstream segment of the oil and gas industry in Texas: 2011 UIC Conference, The Ground Water Protection Council, Austin, Texas, January 24-26, 2011.

Water issues in the natural gas industry: presented at Center for Energy Economics Annual Meeting and Natural Gas Forum, Houston, Texas, November 30, 2010.

Water needs of the upstream segment of the oil and gas industry in Texas: presented at Hydro Brown Bag, Department of Geological Sciences, The University of Texas at Austin, Austin, Texas, November 19, 2010.

Sensitivity study of CO₂ storage in saline aquifers in the presence of a gas cap: presented at the 10th International Conference on Greenhouse Gas Control Technologies (GHGT10), International Energy Agency Greenhouse Gas R&D programme, Amsterdam, The Netherlands, September 23, 2010.

Are single-phase flow numerical models sufficient to estimate pressure distribution in CO₂ sequestration projects?: presented at 10th International Conference on Greenhouse Gas Control Technologies (GHGT10), International Energy Agency Greenhouse Gas R&D programme, Amsterdam, The Netherlands, September 21, 2010.

Are single-phase flow numerical models sufficient to estimate pressure distribution in CO₂ sequestration projects?: presented at the 10th International Conference on Greenhouse Gas Control Technologies (GHGT10), International Energy Agency Greenhouse Gas R&D programme, Amsterdam, The Netherlands, September 21, 2010.

Carbon dioxide injection into shallow sedimentary aquifer systems to assess potential degradation of groundwater quality at geological carbon sequestration sites: presented at Water Research Foundation's Climate Change Strategic Initiative Annual Review Meeting, Denver, Colorado, July 13, 2010.

Modeling activities and Cranfield, MS, model update and initial results: presented at Gulf Coast Carbon Center Semi-Annual Sponsor Meeting, Houston, Texas, June 25, 2010.

Role of geochemical monitoring in geologic sequestration: invited talk presented at Geologic Carbon Sequestration Site Integrity Workshop: Characterization and Monitoring Science and Technology, Ohio State University, Columbus, Ohio, June 7, 8, 2010.

Risk-based approach to assess CO₂ storage capacity: invited talk presented at UK-US CCS R&D Workshop, Pittsburgh, Pennsylvania, May 10, 2010.

Water needs of the shale gas industry in Texas: presented at NGWA Ground Water Summit and 2010 Ground Water Protection Council Spring Meeting, Denver, Colorado, April 12, 2010.

Evaluating potential environmental issues related to fracturing gas shales: presented at Advisory Council Meeting of the Energy Institute, The University of Texas at Austin, Austin, Texas, April 6, 2010.

Expert-based development of a site-specific standard in CO₂ sequestration monitoring technology: presented at DOE/EPA Collaborative Review--Tracking Geologically Sequestered CO₂: Monitoring, Verification, and Accounting (MVA), Simulation and Risk Assessment, March 23-24, 2010, Pittsburgh, Pennsylvania, March 23, 2010.

Update from BEG/SECARB Cranfield field experiment: presented at Geologic CO₂ Storage Joint Industry Project Annual Review Meeting, Center for Petroleum and Geosystems Engineering, The University of Texas at Austin, Austin, Texas, January 22, 2010.

Risks to water in geological sequestration: a 5-year retrospective: presented at Gulf Coast Carbon Center Annual Sponsor Meeting, Austin, Texas, January 21, 2010.

The Cranfield, MS, CO₂ injection test site: an example of carbon sequestration: presented at the 2009 National Ground Water Association Ground Water Expo, New Orleans, Louisiana, December 10, 2009.

Sim-SEQ Test Case: SECARB Phase III at Cranfield, MS: presented to Inter-Partnership Simulation and Risk Assessment Working Group, Regional Carbon Sequestration Partnerships Annual Review Meeting, Pittsburgh, Pennsylvania, November 18, 2009.

Are single-phase flow models useful for CO₂ sequestration?: presented to U.S. Environmental

Protection Agency Region VI, Austin, Texas, November 10, 2009.

Elements of reactive transport modeling for CO₂ sequestration: presented to U.S. Environmental Protection Agency Region VI, Austin, Texas, November 10, 2009.

Elements of multiphase flow modeling for CO₂ sequestration: presented to U.S. Environmental Protection Agency Region VI, Austin, Texas, November 9, 2009.

Groundwater recharge in the Carrizo-Wilcox aquifer: presented at Texas Water Development Board, Aquifers of the Upper Coastal Plains of Texas Conference, College Station, Texas, October 13, 2009.

Introduction to CO₂ sequestration leakage risks and area of review issues: presented to U.S. Environmental Protection Agency Region VI, Austin, Texas, October 8, 2009.

Introduction to multiphase flow for CO₂ sequestration: presented to U.S. Environmental Protection Agency Region VI, Austin, Texas, October 7, 2009.

Looking back to water use projections in the gas-producing Barnett Shale of North Texas: presented at Geological Society of America 2009 Annual Meeting and Convention, Portland, Oregon, October 2009.

Assessment of Industry Water-Use in the Barnett Shale Gas Play (Fort Worth Basin): presented at Gulf Coast Association of Geological Societies Annual Convention, Shreveport, Louisiana, September 28, 2009.

Carbon sequestration and water displacement: what are the important parameters?: presented at the AAPG/SEG/SPE Hedberg Research Conference, Vancouver, British Columbia, August 18, 2009.

Cranfield numerical flow model update: presented at SECARB Predrilling Meeting, Austin, Texas, May 19, 2009.

Certification framework based on effective trapping for geologic CO₂ storage: presented at CO₂ Capture Project (CCP2) NGO Focus Group Meeting, BP America Offices, Washington, D.C., May 12, 2009.

Large and small impacts of pressure perturbations from carbon storage on aquifers: invited lecture presented at Geological CO₂ Storage Research Program Annual Review Meeting, Petroleum and Geosystems Engineering Department, The University of Texas at Austin, Austin, Texas, January 30, 2009.

Assessment of industry water-use in the gas-producing Barnett Shale area (Fort Worth Basin): presented at Ground Water Protection Council UIC & Deep Well Conference, San Antonio, Texas, January 27, 2009.

Update on work on risks of CCS to water resources: presented at Gulf Coast Carbon Center Annual Sponsor Meeting, Austin, Texas, January 14, 2009.

SECARB: candidate sites and modeling status: presented at Regional Carbon Sequestration Partnership (RCSP) Inter-Partnership Simulation and Risk Assessment Workshop, Berkeley, California, December 17, 2008.

U.S. EPA draft rules on geological storage: selected stakeholder feedback: invited talk presented at United Kingdom and BEG Carbon Capture and Storage Technical pre-Workshop Event, 6th Annual EOR Carbon Management Workshop, Houston, Texas, December 2008.

Investigation of water displacement following large CO₂ sequestration operations view boundaries and borehole leakage driving forces: presented at the GHGT-9 (Green House Gas Technology) Conference, Washington, D.C., November 16-20, 2008.

Pressure perturbations from geologic carbon sequestration: Area-of-review boundaries and borehole leakage driving forces: presented at the GHGT-9 (Green House Gas Technology)

Conference, Washington, D.C., November 16-20, 2008.

Risk assessment for future CO₂ sequestration projects based CO₂ enhanced oil recovery in the U.S: presented at the GHGT-9 (Green House Gas Technology) Conference, Washington, D.C., November 16-20, 2008.

Investigation of Water Displacement following Large CO₂ Sequestration Operations: presented at 9th International Conference on Greenhouse Gas Control Technologies (GHGT9), International Energy Agency Greenhouse Gas R&D programme, Washington, D.C., November 17, 2008.

Desalination of brackish water: regulations and other geological considerations: invited talk presented at Water Environment Association of Texas (WEAT) 2008 Brackish Groundwater Conference, El Paso, Texas, November 6, 2008.

Update on SECARB modeling activities at Cranfield, MS: presented at DOE NETL Regional Carbon Sequestration Partnership Simulation and Risk Assessment Working Group Meeting, Pittsburgh, Pennsylvania, October 8, 2008.

Geological carbon sequestration: what are the technical risks and how to handle them?: presented at the Southwest Research Institute, Carbon Capture, Conversion and Sequestration: Technology Challenges Forum, San Antonio, Texas, June 24, 2008.

Certification framework based on effective trapping for geologic CO₂ sequestration: presented to North American Carbon Capture and Storage Association, Austin, Texas, June 9, 2008.

Innovation at the state level in policy, legal, and regulatory frameworks for geological CO₂ sequestration: presented at the Seventh Annual Conference on Carbon Capture & Sequestration: addressing the knowledge, policy, regulatory and technology gaps to expedite CCS deployment, Pittsburgh, Pennsylvania, May 6, 2008.

Geologic carbon storage: leakage risks and impacts on groundwater: presented to TCEQ Environmental Trade Fair & Conference, Austin, Texas, April 30, 2008.

Can geologic carbon storage be the solution to global warming issues and recent developments?: presented to the Department of Earth and Environmental Services, Vanderbilt University, Nashville, Tennessee, February 8, 2008.

Role of geochemical monitoring in geologic sequestration: presented at Joint Ground Water Protection Council/U.S. EPA CO₂ MMV Meeting, 2008 Ground Water Protection Council UIC Conference, New Orleans, Louisiana, January 16, 2008.

Risk and liability of carbon storage and assessment of the risks of carbon storage to fresh water: presented at Gulf Coast Carbon Center Annual Sponsor Meeting, Austin, Texas, January 9, 2008.

Natural arsenic mobilization by counterion effect, Ogallala aquifer, Southern High Plains, Texas, USA: poster presented at American Geophysical Union Annual Meeting, San Francisco, California, December 2007.

SECARB modeling activities: presented to Inter-Partnership Modeling Group, Salt Lake City, Utah, November 9, 2007.

Current and future water use in the Northern Trinity aquifer: presented at Sierra Club Water Conference, Dallas, Texas, October 20, 2007.

Self-sealing evaporation ponds for desalination facilities in Texas: presented to Texas Water Development Board, Austin, Texas, May 15, 2007.

An attractive option for desalination concentrate disposal: self-sealing evaporation ponds in Texas: presented at 2007 NGWA Ground Water Summit, Albuquerque, New Mexico, May 1, 2007.

How much water is truly used by industry in the gas-producing Barnett Shale area: history and projections: presented at 2007 NGWA Ground Water Summit, Albuquerque, New Mexico, April 30, 2007.

Groundwater Availability Modeling (GAM) for the Dockum aquifer--Technical Review Meeting: Development of the Conceptual Model--Section on Recharge: presented to Texas Water Development Board, Austin, Texas, April 26, 2007.

Assessment of ground water use in the gas-producing Barnett Shale area (2005 to 2025): presented to Barnett Shale Water Conservation and Management Committee, Willow Park, Texas, April 11, 2007.

Oil and gas well statistics and geological carbon sequestration in the Texas Gulf Coast, USA: presented at 3rd Wellbore Integrity Network Meeting, International Energy Agency Greenhouse Gas (IEA GHG) R&D Programme, Santa Fe, New Mexico, March 12-13, 2007.

Groundwater use in the gas-producing Barnett Shale area: how much water is truly used by industry?: presented at Bureau of Economic Geology Research Seminar, The University of Texas at Austin, Austin, Texas, February 9, 2007.

Impact of carbon storage on shallow ground water and pressure-controlled regional capacity for brine aquifers: poster presented at American Geophysical Union Fall Meeting, San Francisco, California, December 12, 2006.

Impact of carbon storage on shallow groundwater and pressure-controlled regional capacity for brine aquifers: poster presented at American Geophysical Union Fall Meeting, San Francisco, California, December 12, 2006.

Criticality issues, or can Yucca Mountain explode?: presented at Bureau of Economic Geology Research Seminar, The University of Texas at Austin, Austin, Texas, December 1, 2006.

Water use in the Barnett gas play, Fort Worth Basin: presented at Texas Water Development Board, Austin, Texas, November 2, 2006.

Is there really enough space to "put it back"?: Capacity estimation for geologic storage of CO₂: presented at Bureau of Economic Geology Research Seminar, The University of Texas at Austin, Austin, Texas, September 8, 2006.

Overview of risk analysis and permitting issues in the Texas Gulf Coast: presented at 2nd Quarter Gulf Coast Center Partners Meeting, Austin, Texas, June 6, 2006.

Leakage pathways from potential CO₂ storage sites in the Texas Gulf Coast and implications for permitting: presented at Fifth Annual Conference on Carbon Capture & Sequestration, Alexandria, Virginia, May 8-11, 2006.

A desalination database for Texas: a survey of desalination facilities: presented at 2006 Ground Water Summit, San Antonio, Texas, April 22-27, 2006.

Carbon storage: what are the potential impacts on groundwater in the Texas Gulf Coast?: presented at 2006 Ground Water Summit, San Antonio, Texas, April 22-27, 2006.

Could oil fields be good recipients of desalination concentrates?: presented at 2006 Ground Water Summit, San Antonio, Texas, April 22-27, 2006.

Overview of desalination concentrate issues in Texas: presented to Sandia National Laboratories, Geochemistry Department, Albuquerque, New Mexico, April 11, 2006.

Capillary trapping in the overburden as a defense-in-depth mechanism against leakage from CO₂ storage sites: the case of the Tertiary Texas Gulf Coast: presented at CO₂SC Symposium, Lawrence Berkeley National Laboratory, Berkeley, California, March 20-22, 2006.

Area of review: how large is large enough for carbon storage? UIC Conference of the Groundwater Protection Council: UIC Conference of the Groundwater Protection Council,

Austin, Texas, January 24, 2006.

Geochemical sealing of stress corrosion cracks at Yucca Mountain, Nevada: presented at Southwest Research Institute, San Antonio, Texas, October 11, 2005.

Please pass the salt: using oil fields for disposal of concentrate from desalination plants: presented at Ground Water Summit Program, San Antonio, Texas, April 17-20, 2005.

Please pass the salt: using oil fields for the disposal of concentrate: presented to the U.S. Bureau of Reclamation, Denver, Colorado, September 29, 2004.

Desalination in Texas: what's next?: presented at Bureau of Economic Geology, The University of Texas at Austin, Austin, Texas, April 9, 2004.

Please pass the salt: can the oil industry benefit from desalination wastes?: presented to the Texas Independent Producers and Royalty Owners Association (TIPRO), Fort Worth, Texas, January 13, 2004.

Characterization of gas transport in a playa wetland: presented at the Spring Meeting of the American Geophysical Union, Baltimore, Maryland, May 20-24, 1996.

Activities of a Professional Nature

Activities of a Professional Nature

Panelist, "Progress in Understanding Pressures in the Permian," SPE/SEG Workshop: Injection Induced Seismicity, Fort Worth, Texas (June 4-5, 2024)

Panelist, "Injection Zone Pressure and Induced Seismicity," SPE Permian Basin Energy Conference, Midland, Tex. (September 25-27, 2023)

Panelist, "Water Use in Energy Production"; UT Energy Journalism Workshop, Austin, Texas (September 27-28, 2017)

Panelist, "Implications of Shale Development on Texas Water"; Texas Water Research Network 4th meeting, Austin, Texas (May 8-9, 2017)

Presenter (WebEx), Texas Shale Plays and Impacts on Aquifers with a Focus on the Eagle Ford, presented at Workshop on the Status of the Geological and Hydrogeological Knowledge in the Sabinas and Burgos Basins, Mexico, National Autonomous University of Mexico (UNAM), Mexico City, June 1-3, 2016 (June 2, 2016)

Panelist, workshop on "Shale oil and gas: U.S. lessons learned on environmental monitoring, land use, water resources, fracking and regulations," National Autonomous University of Mexico (UNAM), Mexico City (November 11-13, 2015)

Panelist, Pardee Symposium: Similar Information, Different Results: Fracking from State to State, Geological Society of America 2015 Annual Meeting & Exposition, Baltimore, Maryland (November 1-4, 2015)

Moderator (invited), Mexican Energy Opportunities Summit: Oil, Gas, and Power panel, Lessons Learned and Best Practices in Water Management for Oil and Gas Exploration, Mexico City, Mexico (April 30, 2015)

Participant, 2014 Geosciences Congressional Visits Day, Washington, D.C. (September 17, 2014)

Author, Op-ed, "Using Brackish Groundwater", The Houston Chronicle (May 19, 2014)

Panelist, Industrial water needs and opportunities, 2014 Texas Water Summit, The Academy of Medicine, Engineering & Science of Texas, Austin, Texas (May 19, 2014)

Presenter (invited), Water monitoring and hydraulic fracturing, presented at AWWA-WRF Hydraulic Fracturing Workshop: Developing Water and Oil & Gas Sector Partnership, Golden, Colorado (April 28-29, 2014)

Presenter, The multifaceted interactions between water and unconventional production: a Researcher's tale, Statoil Houston Office, Houston, TX (April 21, 2014)

Presenter, Hydraulic Fracturing and Water Resources: a Texas Study, presented to Pillsbury's Oil & Gas Environmental Working Group, Pillsbury Law Office, Houston, TX (October 16, 2013)

Participant (invited), Forum on Challenges for Evaluation and Development of Shale Gas and Shale Oil Deposits, Bucaramanga, Colombia (October 2-4, 2013)

Presenter, "Hydraulic fracturing and water resources in Texas" presented to NxNE Rotary Club, Austin, TX (June 12, 2013)

Panelist (invited), Water Acquisition Modeling Technical Workshop, Study of the Potential Impacts of Hydraulic Fracturing on Drinking Water Resources, US EPA, Arlington, VA (June 2013)

Panelist (invited), Risk of Unconventional Shale Gas Development Workshop, National Research Council (NRC), Washington D.C. (May 30-31, 2013)

Panelist (invited), Workshop on Assessment of Water Conservation Technologies in Energy Production and Resources Development, Government Accountability Office (GAO) and National Research Council (NRC), Washington D.C. (May 29-30, 2013)

Presenter, "Hydraulic fracturing and water resources: a Texas study" presented to Hill Country Geoscientists' Society, Kerrville, TX (March 18, 2013)

Panelist (invited), Shale Gas Production and Its Global Impacts, Webber Energy Group Conference on Comparative Energy Policies and Technologies in France and the U.S., Austin, TX (December 17, 2012)

Panelist (invited), Recognizing and Managing 'Risks' Associated with Development and Deployment of CCS/CCUS: What Has Been Done (or Being Done) to Mitigate Them, 11th Annual Conference on Carbon Capture Utilization & Sequestration, Pittsburgh, PA (April 30-May 3, 2012)

Participant (invited), 2011 CO₂ Geologic Sequestration and Water Resources Workshop, Lawrence Berkeley National Laboratory and EPA, Berkeley, CA (June 1-2, 2011)

Participant (invited), Workshop on Natural Gas Development Issues for Drinking Water Utilities, Water Research Foundation (WRF), Baltimore, MD (October 27-28, 2010)

Presenter, "Value of Numerical Modeling for CO₂ Injection History Match, Forecast, and Risk Assessment at Cranfield, MS," presented to UT's Energy Institute Directorate, Austin, TX (January 8, 2010)

Event Host for a roundtable discussion on "Shale Gas Production and Groundwater Resource Issues in the United States," NGWA Ground Water Expo, New Orleans (December 12, 2009)

Presenter, "Some of the Many Facets of Water Science in Texas," presented to Texas Commission on Environmental Quality (TCEQ) Professional Geoscientists Workgroup, Austin, TX (September 24, 2009)

Participant, First Joint Network Meeting, International Energy Agency Greenhouse Gas (IEA GHG) R&D Programme, New York, NY (June 11-13, 2008)

Panelist (invited), Joint Groundwater Protection Council/U.S. EPA CO₂ MMV Meeting, 2008 Ground Water Protection Council UIC Conference, New Orleans, Louisiana (January 16, 2008)

Expert for Texas Commission of Environmental Quality (TCEQ) during the license application review (hydrogeology and modeling) of the proposed Low-Level Radioactive Waste Disposal facility in Andrews County, Texas (2005-2008)

Panelist (invited), Workshop on Proposed UIC Regulations for Geologic Sequestration of Carbon Dioxide, Panel on "Perspectives and Considerations for Approaching Proposed

Regulations for Geologic Sequestration of Carbon Dioxide," EPA, Washington, DC (December 4, 2007)

Participant (invited), Workshop on the Vulnerability Evaluation Framework for Geologic Carbon Sequestration, EPA, Washington, D.C. (November 2, 2007)

Presenter, Certification Framework for Geological CO₂ Storage, by C. M. Oldenburg, S. L. Bryant, and J.-P. Nicot, poster, Carbon Sequestration Leadership Forum, Paris, France (March 26, 2007)

Consultant for U.S. DOE, Yucca Mountain Project, External Criticality Group (2002-2007)

Participant, 2nd Risk Assessment Network Workshop, International Energy Agency Greenhouse Gas (IEA GHG) R&D Programme, Berkeley, California (October 5-6, 2006)

Member, Joint Water Reuse & Desalination Task Force, Implementation of the Desalination & Water Purification Roadmap, Workshop on Concentrate Management, San Diego, California (October 20-21, 2005)

Invited Panelist, "Desalination: Getting Salt out of the Seas," Society of Environmental Journalists 15th Annual Conference, Austin, Texas (September 30, 2005)

Panelist (invited), Workshop on Assessment of Water Conservation Technologies in Energy Production and Resources Development

Professional Societies

American Geophysical Union

American Water Works Association

Austin Geological Society

Geological Society of America

National Ground Water Association

Society of Petroleum Engineers

Funding

Research Support

Principal Investigator: Minimum dataset requirements and development of a modeling workflow for CO₂ at Weyburn, SK, Canada, Petroleum Technology Research Center (June 2014-August 2015, \$183,000).

Principal Investigator: A study of rock-water interactions during hydraulic fracturing, Statoil (April 2014-June 2015, \$90,000).

Principal Investigator: Understanding and managing environmental roadblocks to shale gas development: an analysis of shallow gas, NORMs, and trace metals in Texas, , U.S. Department of Energy RPSEA program, including 20% cost-share from state-sourced BEG STARR funds (April 2013 - June 2015, \$1,585,000).

Principal Investigator: A study of rock-water interactions during CO₂-aided fracturing, Statoil (September 2014-April 2015, \$70,000).

Principal Investigator: Laboratory analysis of high temperature/pressure water rock reactions in shales, Exxon-Mobil (April 2013-2015, \$115,000, no overhead).

Principal Investigator: Optimizing frac water--rock interactions to reduce water footprint in unconventional shale plays, Shell (SUTUR Task4) (November 2011 - December 2014, \$680,000).

Principal Investigator: Reactive transport modeling, Petroleum Technology Alliance of Canada

(September 2013-March 2014, \$65,000).

Co-Principal Investigator: Integrated modeling and monitoring of geologic CO₂ sequestration to safeguard sources of drinking, Environmental Protection Agency (September 2009 - November 2013, \$900,000).

Principal Investigator: Technical studies to support TCEQ on environmental quality review of low-level radioactive waste, Environmental Protection Agency (September 2012 - August 2013, \$150,000).

Principal Investigator: Critical topics in geologic carbon sequestration, Subcontractor to the UT Petroleum and Geosystems Engineering Department (July 2012 - July 2013, \$60,000).

Principal Investigator: Geographical, geological and hydrogeological attributes of formations in the footprint of the Eagle Ford Shale, Subcontractor to Houston Advanced Research Center (HARC), Houston, TX (September 2012 - December 2012, \$50,000).

Principal Investigator: Hickory brackish water project, Brown County Water Improvement District #1 (January 2012 - December 2012, \$75,000).

Principal Investigator: Update to the 2011 Mining Water Use Report: oil & gas water use in Texas, Texas Oil and Gas Association (TXOGA) (March 2012 - September 2012, \$95,000).

Principal Investigator: Evaluation of specifications for sequestered CO₂, Carbon Capture Project Phase 3 (CCP3) (December 2009 - September 2012, \$320,000).

Principal Investigator: Technical studies to support TCEQ on environmental quality review of low-level radioactive waste, Texas Commission on Environmental Quality (September 2010 - August 2012, \$400,000).

Principal Investigator: Technical and economic feasibility of utilizing alternate sources of water in the Barnett Shale area, Subcontractor to Gas Technology Institute, Des Plaines, IL (October 2009 - February 2012, \$300,000).

Principal Investigator: CCP3 certification framework, Carbon Capture Project Phase 3 (CCP3), Subcontractor to the UT Petroleum and Geosystems Engineering Department (September 2009 - August 2011, \$80,000).

Principal Investigator: Water use in the Texas mining and oil and gas industry, Texas Water Development Board (July 2009 - June 2011, \$180,000).

Principal Investigator: Technical studies to support TCEQ on environmental quality review of low-level radioactive waste, Texas Commission on Environmental Quality (September 2009 - August 2010, \$180,000).

Principal Investigator: Technical studies to support TCEQ on environmental quality review of low-level radioactive waste, Texas Commission on Environmental Quality (September 2007 - August 2008, \$280,000).

Principal Investigator: Texas Commission on Environmental Quality Work Order No. 2 under Umbrella Contract No. 582-4-69718 (TCEQ Uranium), Texas Commission on Environmental Quality (September 2007 - August 2008, \$167,397).

Principal Investigator: Framework for geological CO₂ storage certification and abandonment, Carbon Capture and Project Phase II, subcontractor to the UT Petroleum and Geosystems Engineering Department (September 2006 - August 2008, \$75,000).

Co-Principal Investigator: Creating a new analysis of water demand projections for power generation in Texas, Texas Water Development Board (June 2007 - June 2008, \$100,000).

Principal Investigator: A simulation-based study of the effect of impurities on CO₂ storage, Chevron Co. (October 2007 - May 2008, \$38,588).

Principal Investigator: Technical studies to support TCEQ on environmental quality review of

low-level radioactive waste, Texas Commission on Environmental Quality (January 2005 - August 2007, \$167,421).

Principal Investigator: Self-sealing evaporation ponds, Texas Water Development Board (August 2005 - March 2007, \$49,928).

Principal Investigator: Panhandle Groundwater District review, Panhandle Groundwater District (October 2006 - December 2006, \$10,000).

Principal Investigator: Update of Northern Trinity and Woodbine Aquifers, Subcontractor to R. W. Harden & Associates (December 2005 - August 2006, \$11,373).

Principal Investigator: Fate & transport of contaminants and arsenic short courses, Texas Commission on Environmental Quality (September 2005 - August 2006, \$22,000).

Principal Investigator: Development of science-based permitting guidance for geological sequestration of CO₂ in deep saline aquifers based on modeling and risk assessment, U.D. Department of Energy (October 2004 - June 2006, \$277,752).

Principal Investigator: Opportunities for geologic CO₂ storage at Matagorda County Triad site, Sargent & Lundy (February 2006 - May 2006, \$10,000).

Principal Investigator: Development of a database for desalination facilities in Texas, Texas Water Development Board (July 2004 - October 2005, \$75,000).

Principal Investigator: Please pass the salt: finding solutions for subsurface disposal of concentrate from desalination plants, Texas Water Development Board (October 2003 - December 2004, \$87,322).

Principal Investigator: Inclusion of Queen City and Sparta aquifers into existing Carrizo-Wilcox GAMs, subcontractor to Intera, Inc. (January 2003 - October 2004, \$191,658).

Service

External Committees Participation

Associate Editor, Journal, Groundwater, 2014-Present

Member, Hydraulic Fracturing Task Force, National Ground Water Association, 2009-Present

Co-Chair, Fluid Behavior in the Subsurface Related to Energy Development, Geological Society of America (GSA) 2020 Annual Meeting and Exposition: GSA 2020 Connects Online, Geological Society of America, online, October 25-28, 2020

Co-Chair, Characterization, Operations, and Impact Assessment of Oil, Gas, and Geothermal Technologies, 2019 AGU Annual Meeting, San Francisco, Calif., December 9-13, 2019

Member, NGWA workshop program advising committee, Groundwater and Oil and Gas Development: Improved Management Practices for Groundwater Protection and Water Supply, San Antonio, Tex., March 4-5, 2019

Associate Editor, Journal, International Journal of Greenhouse Gas Control, 2014-2019

Convener, Assessing Environmental Impacts, Characterization, Treatment, Injection, and Uses of Hydraulic Fracturing and Oil and Gas Waste Waters, 2018 AGU Fall Meeting, Washington, D.C., December 10-14, 2018

Convener, Addressing Environmental Concerns of Hydraulic Fracturing Focusing on Water Quantity and Quality, 2017 AGU Fall Meeting, New Orleans, La., December 11-15, 2017

Co-Chair, Environmental Impacts of Hydraulic Fracturing: Processes, Monitoring, Stewardship, and Solutions, American Geophysical Union Annual Meeting, San Francisco, December 14-18, 2015

Member, NGWA Groundwater Summit Organization Committee, 2015

Co-Chair, Natural and anthropogenic contamination of water resources related to oil and gas production from unconventionals: processes, monitoring, and stewardship, American Geophysical Union Annual Meeting, San Francisco, California, December 15-19, 2014

Co-Chair, Water Management and Induced Seismicity, CO₂ Capture and EOR, American Association of Petroleum Geologists Annual Convention & Exhibition, Houston, Texas, April 6-9, 2014

Co-Chair, Exploring environmental impacts of hydraulic fracturing in the subsurface, American Geophysical Union Annual Meeting, San Francisco, California, December 9-13, 2013

Co-Chair, Exploring Environmental Impacts of Hydraulic Fracturing in the Subsurface, American Geophysical Union Fall Meeting, San Francisco, CA, December 9-13, 2013

Guest Editor, Mid-project assessment of the SECARB Early Test at Cranfield, Mississippi: International Journal of Greenhouse Gas Control special issue, October 2013

Co-Chair, Hydraulic Fracturing and Protection of Groundwater Resources, National Groundwater Association Summit, National Ground Water Association, San Antonio, Texas, April 29-May 2, 2013

Guest Editor, Special Issue, International Journal of Greenhouse Gas Control: Midproject assessment of the SECARB Early Test at Cranfield, Mississippi, 2012-2013

Co-Chair, Geological CO₂ Storage Monitoring and Characterization from Injection Intervals to the Vadose Zone: Detection Methods and Field Applications, Geological Society of America 2012 Annual Meeting and Exposition, Charlotte, North Carolina, November 4-7, 2012

Associate Editor, Editorial Board, GCAGS Journal, 2012

Co-Chair, Exploring Environmental Impacts of Hydraulic Fracturing in the Subsurface, American Geophysical Union Annual Meeting, San Francisco, CA, 2012

Co-Chair, Water Issues of the Gulf Region--Use, Availability, and "Unconventional" Needs, 2012 Gulf Coast Association of Geological Societies Annual Convention, 2012

Joint Hearing of Energy Resources and Natural Resources Committees, Hydraulic-Fracturing Water Use, Austin, TX, 2012

Chair, Transport of Anthropogenic Radioactive Material in the Hydrosphere, American Geophysical Union Fall Meeting, San Francisco, CA, December 4-9, 2011

Workshop Lead, Technical Workshop #3 for the Hydraulic Fracturing Study (Fate and Transport), U.S. EPA, Arlington, VA, March 28-29, 2011

Member, Brackish Groundwater Committee, Water Environment Association of Texas (WEAT), 2007-2010

Member, Groundwater Committee, American Geophysical Union, 2007-2009

Associate Editor, Journal, Hydrogeology, 2006-2009

Member, Carbon Sequestration Task Force, National Ground Water Association, 2007-2008

Chair, Subsurface Contamination from Arsenic or Alternative Fuels, American Geophysical Union Annual Meeting, San Francisco, CA, 2007

Co-Chair, Monitoring and Modeling of CO₂ Migration Related to Geologic CO₂ Storage, American Geophysical Union Annual Meeting, San Francisco, CA, 2007

Chair, Surface and Shallow Subsurface Processes and Risks Related to Geological Carbon Storage, American Geophysical Union Fall Meeting, December 11-15, 2006

Member, Publication Board, Bureau of Economic Geology, 2004-2006

Published Interviews

Nicot, J.-P., 2024, Depleted Arkansas oil field could be a lithium gold mine, Marketplace NPR radio show, aired November 5, 2024 [Nicot interviewed]

Nicot, J.-P., 2023, in Rassenfoss, S., "Is Produced Water Really Water?", Journal of Petroleum Technology, v. 75(10), p. 30-35 [Nicot quoted].

Nicot, J.-P., 2023, Rassenfoss, S., "It Is Easy To Find Lithium; Turning a Profit Is Hard", Journal of Petroleum Technology, v. 75(11), p.26-31 [Nicot quoted]

Nicot, J.-P., 2019, in Nouyrigat, V., "Millions of abandoned wells..." [in French: Des millions de puits abandonnés: les sales fantômes du pétrole], Science & Vie, v. 1217, p. 90-97 [Nicot quoted].

Nicot, J.-P., 2018, in McKenna, P., Water Use in Fracking Soars -- Exceeding Rise in Fossil Fuels Produced, Study Says: InsideClimate News, August 15, 2018 [Nicot quoted]

Nicot, J.-P., 2017, in Soraghan, M., Most methane in groundwater is not a result of fracking -- study: E&E News, March 22, 2017 [Nicot quoted]

Nicot, J.-P., 2015, in Lobet, I., Texas has its own supply of cheap--and dirty--coal: Marketplace, NPR Radio program, August 6, 2015 [Nicot quoted]

Nicot, J.-P., 2015, in McEwen, M., 2015, Improved technology adds longevity to water use in fracturing: Midland Reporter-Telegram, May 24, 2015 [Nicot quoted]

Nicot, J. -P., 2014, in Crooks, E., 2014, US shale under fire over thirst for water: Financial Times, February 4, 2014 [Nicot quoted]

Nicot, J. -P., 2014, in Forsyth, J. M., 2014, Fracking fails to recycle huge amounts of water: WOAI, San Antonio, Texas, February 6, 2014 [Nicot quoted]

Nicot, J. -P., 2014, in Fuquay, J., 2014, Gas drilling used 4 percent of water in Barnett Shale in 2011, UT study says: Star Telegram, Dallas, Texas, February 12, 2014 [Nicot quoted]

Nicot, J. -P., 2014, in Guerin, E., 2014, Permian Basin: America's newest fracking boom where there's not much water: High Country News, March 19, 2014 [Nicot quoted]

Nicot, J. -P., 2014, in Schmit, J., 2014, Report: fracking raising water supply worries: USA Today, February 5, 2014 [Nicot quoted]

Nicot, J. -P., 2014, Summit examines water: On-camera interview, San Angelo Standard Times, San Angelo, Texas, May 19, 2014

Nicot, J. -P., 2014, Water experts and lawmakers hold emergency summit to discuss drought: On-camera interview, KXAN, Austin, Texas, May 19, 2014

Nicot, J.-P., 2014, in McPhate, C., 2014, Perry renews disaster proclamation: Denton Record-Chronicle, November 25, 2014 [Nicot quoted]

Nicot, J. -P., 2013, Galbraith, K., 2013, As fracking increases, so do fears about water supply: The New York Times, March 7, 2013 [Nicot quoted]

Nicot, J. -P., 2013, in Coombs, B., 2013, Texas drought sparks water woes and innovation: CNBC, March 22, 2013 [Nicot quoted]

Nicot, J. -P., 2013, in Durham, L. S., 2013, Water, water everywhere? More data needed: AAPG Explorer, v. 34, no. 10, http://www.aapg.org/explorer/2013/10oct/gom_hydrofracturing1013.cfm [Nicot extensively quoted]

Nicot, J. -P., 2013, in Galbraith, K., 2013, Texas study finds increase in water used for fracking: The Texas Tribune, January 15, 2013 [Nicot quoted]

Nicot, J. -P., 2013, in Hillel, J., 2013, Rancher: Oil and gas boom is requiring more water than we have. Period.: San Antonio Express News, December 15, 2013 [Nicot quoted]

Nicot, J. -P., 2013, in Koch, W., 2013, Climate change's heat intensifies drought in the USA: USA Today, July 9, 2013 [Nicot quoted]

Nicot, J. -P., 2013, in Osborne, J., 2013, Around oil and gas fields in Texas, water supplies run thin: Dallas Morning News, August 28, 2013 [Nicot quoted]

Nicot, J. -P., 2013, in Rassenfoss, S., 2013, Seeking lower-cost ways to deal with fracturing water: JPT, v. 65, no. 11, <http://www.spe.org/jpt> [Nicot quoted]

Nicot, J. -P., 2012, in Galbraith, K., 2012, Unlocking the secrets behind hydraulic fracturing: The New York Times, January 14, 2012 [Nicot quoted]

Nicot, J. -P., 2012, in Long, S., 2012, Pro/con: how should water be used?: The Victoria Advocate, Victoria, Texas, September 23, 2012 [Nicot quoted]

Nicot, J. -P., 2012, in Lustgarten, A., 2012, Injection wells: the poison beneath us: ProPublica, June 21, 2012 [Nicot quoted]

Nicot, J. -P., 2012, in Pickrell, E., 2012, Fracturing site to detail what's in the water: The Houston Chronicle, February 1, 2012 [Nicot quoted]

Nicot, J. -P., 2011, in Boyett, P., 2011, Just below the surface: Denton Record-Chronicle, March 29, 2011 [Nicot quoted]

Nicot, J. -P., 2010, in Marshall, C., 2010, Researchers worry that carbon sequestration could foul drinking water: Environment & Energy Publishing, November 15, 2010 [Nicot quoted]

Outreach Activities

The future of water in Central Texas: presented at SAGE lecture series Geological Perspectives on Human Affairs in Central Texas, 1850-2050, Austin, Texas, February 13, 2012.

Proposal Review Panels Participation

International Energy Agency GHG (Report), 2011

International Energy Agency GHG (Report), 2011

International Journal of Greenhouse Gas Control (Article), 2011

Journal of Contaminant Hydrology (Article), 2011

Alberta Innovates-- Technology Futures (Research Proposal), 2010

Applied Geochemistry (Article), 2010

Desalination and Water Treatment Journal (Article), 2010

Environmental Science & Technology (Article), 2010

Greenhouse Gases: Science and Technology (Article), 2010

International Journal of Greenhouse Gas Control (Article), 2010

International Journal of Greenhouse Gas Control (Article), 2010

Journal of Asian Earth Sciences (Article), 2010

Journal of Canadian Petroleum Technology (Article), 2010

Journal of Contaminant Hydrology (Article), 2010

Journal of Geophysical Research--Solid Earth (Article), 2010

NSF (Research Proposal), 2010

U.S. DOE NETL Carbon Sequestration Program (Report), 2010

Desalination and Water Treatment (Article), 2009

Desalination Journal (Article), 2009
Environmental Geology (Article), 2009
Environmental Science & Technology (Article), 2009
Environmental Science & Technology (Article), 2009
Geology (Article), 2009
Hydrogeology Journal (Article), 2009
International Journal of Greenhouse Gas Control (Article), 2009
Journal of Geophysical Research-Solid (Article), 2009
Oil & Gas Science and Technology (Article), 2009
Transport in Porous Media (Article), 2009
Environmental Geology (Article), 2008
Geochemical Transactions (Article), 2008
Hydrology Journal (Article), 2008
International Journal of Greenhouse Gas Control (Article), 2008
Vadose Zone Journal (Article), 2008
Bureau of Economic Geology (Report of Investigations), 2007
Environmental Geology (Article), 2007
Ground Water (Article), 2007
Hydrogeology Journal (Article), 2007
Journal of Contaminant Hydrology (Article), 2007
Journal of Environmental Engineering (Article), 2006
Journal of Hydrology (Article), 2006
Desalination Journal (Article), 2005
Hydrogeology Journal (Article), 2005
Journal of Hydrology (Article), 2005
International Science and Technology Center (Research Proposal), 2004
Bureau of Economic Geology (Report of Investigations), 2003
Water Science and Technology (Article), 2003
Water Resources Research (Article), 2000
In Situ (Article), 1999
In Situ (Article), 1998
Journal of Water Resources Planning and Management (Article), 1997

Teaching and Advising

University Courses Taught

Water needs of the upstream oil and gas industry in Texas and impact on aquifers: presented at Bureau of Economic Geology Research Seminar, The University of Texas at Austin, Austin, Texas, February 10, 2012.

Co-Instructor GEO391: Advances in CO₂ Injection and Storage in Geological Formations, Fall 2011: presented at Department of Geological Sciences, The University of Texas at Austin, Austin, Texas, Fall 2011.

Co-Instructor GEO391: Advances in CO₂ Injection and Storage in Geological Formations: presented at Department of Geological Sciences, The University of Texas at Austin, Austin, Texas, Fall 2010.

Continuing Education Courses Taught

Carbon sequestration: storage of CO₂ in geologic formations: short course presented by STORE (Sequestration Training, Outreach, Research and Education) at the SPE International Conference on CO₂ Capture, Storage, and Utilization, New Orleans, Louisiana, November 9, 2010.

Geology of the South Texas Uranium Province: presented to Texas Commission on Environmental Quality (TCEQ), Austin, Texas, January 15, 2010.

Introduction to CO₂ sequestration (with Dr. Ian Duncan): presented to U.S. Environmental Protection Agency Region VI, Austin, Texas, November 10, 2009.

Introduction to modeling CO₂ plumes in deep brine reservoirs (with Dr. Ian Duncan): presented to U.S. Environmental Protection Agency Region VI, Austin, Texas, November 9-10, 2009.

Elements of ground water geochemistry: presented to Texas Commission on Environmental Quality (TCEQ), Austin, Texas, June 18, 2008.

Ground Water Hydrology: presented to Texas Commission on Environmental Quality (TCEQ), Austin, Texas, May 28, 2008.

Fate and transport: presented to Texas Commission on Environmental Quality, Austin, Texas, April 24-25 2008.

Groundwater arsenic contamination in Texas: presented to Texas Commission on Environmental Quality (TCEQ), Austin, Texas, March 24, 2008.

Groundwater arsenic contamination in Texas: presented to Texas Commission on Environmental Quality (TCEQ), Austin, Texas, May 24, 2007.

Fate and transport: presented to Texas Commission on Environmental Quality (TCEQ), Austin, Texas, April 4-5, 2007.

Groundwater arsenic contamination in Texas: presented to Texas Commission on Environmental Quality (TCEQ), Austin, Texas, April 13, 2006.

Fate and transport: presented to Texas Commission on Environmental Quality (TCEQ), Austin, Texas, March 8-9, 2006.

Fate and transport: presented at Texas Commission on Environmental Quality (TCEQ), Austin, Texas, May 31, 2005.

Fate and Transport: presented to Texas Commission on Environmental Quality (TCEQ), Austin, Texas, May 3-4, 2004.

Fate and transport: presented to Texas Commission on Environmental Quality (TCEQ), Austin, Texas, March 9-10, 2004.

Fate and transport: presented to Texas Commission on Environmental Quality (TCEQ), Austin, Texas, June 17-18, 2003.

Fate and transport: presented to Texas Commission on Environmental Quality (TCEQ), Austin, Texas, May 21-22, 2003.

Student Committee Participation

Member, Ph.D. Dissertation Committee, Yun Wu, Strategies for mitigating risks of scalability and containment in geological CO₂ storage, The University of Texas at Austin, Austin, Texas, 2017

Co-advisor, M.S. Thesis Committee, Megan Leseberg, Fresh water reduction technologies and strategies for hydraulic fracturing: Case study of the Eagle Ford Shale play, Texas: The University of Texas at Austin, Austin, Texas, 2013

Co-Advisor, M.S., Thesis, Jeanne Eckhart, Water Use by the Oil and Gas Industry: An Assessment of Two Texas Regions, The University of Texas at Austin, 2013

Co-Advisor, M.S., Thesis, Junaid Yisa, Treatment of Shale Gas Wastewater in the Marcellus: A Comparative Analysis, The University of Texas at Austin, 2013

Co-Advisor, Ph.D., Dissertation, Kyung Won Chang, Carbon dioxide storage in geologically heterogeneous formations, Department of Geological Sciences, The University of Texas at Austin, 2013

Member, Ph.D. Dissertation Committee, Zhiyuan Luo, Modeling injection induced fractures and their impact in CO₂ geological storage: The University of Texas at Austin, Austin, Texas, 2013

Co-Advisor, M.A. Thesis Committee, Edward McGlynn, Alternative Groundwater Resources in North-Central Texas for the Development of the Barnett Shale Gas Play: U.T. Department of Geological Sciences, 2012

Co-Advisor, Thesis Committee, Fei Cao, A New Method of Data Quality Control in Production Data Using the Capacitance-Resistance Model: The University of Texas at Austin, 2011

Co-Advisor, M.A. Thesis Committee, Anna Kathleen Hebel, Energy-water nexus: sustainability of coal and water resources: The University of Texas at Austin, 2010

Co-Advisor, M.A. Thesis Committee, Silvia Veronica Solano, Sensitivity analysis of carbon dioxide storage in saline aquifers in the presence of a gas cap: The University of Texas at Austin, 2010

Reader, M.S. Thesis Committee, Yagna Deepika Oruganti, Geologic CO₂ Storage: Understanding Pressure Perturbations and Estimating Risk Due to Pressure Buildup: UT Dept. of Petroleum and Geosystems Engineering, 2010

Reader, M.S. Thesis Committee, McMillan Burton, Surface dissolution: addressing technical challenges of CO₂ injection and storage in brine aquifers: U.T. Dept. of Petroleum & Geosystems Engineering, 2008

Reader, M.S. Thesis Committee, Navanit Kumar, CO₂ sequestration: understanding plume dynamics and estimating risks: U.T. Dept. of Petroleum & Geosystems Engineering, 2008