

Caroline Breton

Professional Summary

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Professional Preparation

Academic Background

B.A. Geography, The University of Texas at Austin, 2000

Professional Appointments

Present Position: Research Scientist Associate III, Bureau of Economic Geology, The University of Texas at Austin (October 2011 - Present).

Research Scientist Associate II, The University of Texas at Austin, Bureau of Economic Geology (May 2006 - September 2011).

Research Scientist Associate I, Bureau of Economic Geology, The University of Texas at Austin (September 2003-May 2006)

Research Assistant, Bureau of Economic Geology, The University of Texas at Austin (July 2001 - August 2003).

Office Assistant, Bureau of Economic Geology, The University of Texas at Austin (July 2001 - July 2002).

Continuing Education Courses Taken

Geohackweek 2019: eScience Institute, University of Washington, Seattle, Wash., September 9-13, 2019

Building GIS Web Applications with No Programming Using CartoDB: Texas Water Development Board (TWDB), Texas Natural Resources Information System (TNRIS), Austin, Tex., October 21, 2013

Texas GIS Forum-Creating Effective Webmaps: Texas Water Development Board (TWDB), Texas Natural Resources Information System (TNRIS), Austin, Tex., October 26, 2010

Texas GIS Forum-LIDAR Overview: Texas Natural Resources Information System (TNRIS), Austin, Tex., October 25, 2010

Introduction to the Multiuser Geodatabase: ESRI, Austin, Tex., September 30-October 1, 2010

ArcGIS Desktop III: GIS Workflows and Analysis: ESRI, Austin, Tex., August 30-31, 2010

Introduction to ArcGIS Server: ESRI, Austin, Tex., July 8-9, 2010

Areas of Expertise

Areas of Expertise

Cartography for publications, presentations, posters, and working maps.

Creation, translation, integration, and archival of project data within a GIS framework.

Geoprocessing, geostatistical analysis, spatial analysis, and model building for custom tools.

Database development and management within a multi-user environment.

Geographic Information Systems (GIS)

Service

University Committees

Member, JSG Rapid Response, Jackson School of Geosciences, The University of Texas at Austin, Austin, Tex., 2016-2019

External Committees Participation

Member, Consortium, Austin Earth Science Week, 2001 - present

Presentations

Presentations

The Geologic Basement in Texas: Results of a New State-Wide Synthesis: presented at Geological Society of America (GSA) 2020 Annual Meeting, Montréal, Québec, Canada (virtual), October 25-28, 2020.

Texas Basement Synthesis Project: Characterizing Geological Risk Factors of Basement-Involved Seismicity: presented at Geological Society of America (GSA) South-Central/North-Central/Rocky Mountain Section Meeting, Manhattan, Kans., March 2019.

GIS Database: Tectonic Map of Texas Compilation by Tom Ewing, 1990: presented to TNRI, presented at 2016 Texas GIS Forum, J.J. Pickle Research Campus, Austin Texas, October 24-27, 2016.

Digital oil-play maps of the Permian Basin: presented at the AAPG Annual Convention, San Antonio, Texas, April 2008.

Publications

Peer Reviewed Journal Articles

Breton, C., Shensky, M., and Savvaidis, A., 2024, Induced seismicity data prep: automate data processing and data set production in Texas and New Mexico using Python and ArcGIS Pro tools: Interpretation, v. 12, no. 2, p. SC1-SC7, <http://doi.org/10.1190/int-2023-0013.1>.

Chen, Yangkang, Savvaidis, A., Saad, O. M., Siervo, D., Huang, G.-C. D., Chen, Yunfeng, Grigoratos, I., Fomel, S., and Breton, C., 2024, Thousands of induced earthquakes per month in West Texas detected using EQCCT: Geosciences, v. 14, no. 5, article no. 114, 17 p., <http://doi.org/10.3390/geosciences14050114>.

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>.

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>.

Savvaidis, A., Lomax, A., and Breton, C., 2020, Induced seismicity in the Delaware Basin, West Texas is caused by hydraulic fracturing and wastewater disposal: Bulletin of the Seismological Society of America, v. 110, no. 5, p. 2225-2241, <http://doi.org/10.1785/0120200087>.

Staniewicz, S., Chen, J., Lee, H., Olson, J., Savvaidis, A., Reedy, R., Breton, C., Rathje, E., and

Hennings, P., 2020, InSAR reveals complex surface deformation patterns over an 80,000 km² oil-producing region in the Permian Basin: *Geophysical Research Letters*, v. 47, no. e2020GL090151, 10 p., <http://doi.org/10.1029/2020GL090151>.

Pierre, J.P., Young, M. H., Wolaver, B. D., Andrews, J. R., and Breton, C., 2017, Time series analysis of energy production and associated landscape fragmentation in the Eagle Ford Shale Play: *Environmental Management*, v. 60, no. 5, p. 852-866, <http://doi.org/10.1007/s00267-017-0925-1>.

Ambrose, W. A., Breton, C., Nuñez-López, V., and Gülen, G., 2015, EOR potential from CO₂ captured from coal-fired power plants in the Upper Cretaceous (Cenomanian) Woodbine Group, East Texas Basin, and southeastern Texas Gulf Coast, USA: *Natural Resources Research*, v. 24, no. 2, p. 161-188, <http://doi.org/10.1007/s11053-014-9242-z>.

Ambrose, W. A., Breton, C., Nuñez-López, V., and Gülen, G., 2012, Geologic and economic criteria for siting clean-coal facilities in the Texas Gulf Coast, USA: *Natural Resources Research*, v. 21, no. 4, p. 461-481.

Ambrose, W. A., Breton, C., Hovorka, S. D., Duncan, I. J., Gülen, G., Holtz, M. H., and Nuñez-López, V., 2011, Geologic and infrastructure factors for delineating areas for clean coal: examples in Texas, USA: *Environmental Earth Science*, v. 63, p. 513?-532.

Ambrose, W. A., Breton, Caroline, Holtz, M. H., Nuñez-López, Vanessa, Hovorka, S. D., and Duncan, I. J., 2009, CO₂ source-sink matching in the lower 48 United States, with examples from the Texas Gulf Coast and Permian Basin: *Environmental Geology: Environmental Geology*, v. 57, p. 1537-1551.

Dutton, S. P., Kim, E. M., Broadhead, R. F., Raatz, W. D., Breton, C. L., Ruppel, S. C., and Kerans, Charles, 2005, Play analysis and leading-edge oil-reservoir development methods in the Permian basin: increased recovery through advanced technologies: *AAPG Bulletin*, v. 89, no. 5, p. 553-576.

Non Peer Reviewed Authored Books

Dutton, S. P., Kim, E. M., Broadhead, R. F., Breton, C., Raatz, William, Ruppel, S. C., and Kerans, C., 2005, Play analysis and digital portfolio of major oil reservoirs in the Permian Basin: The University of Texas at Austin, Bureau of Economic Geology, Report of Investigations, no. 271, 287 p.

Non Peer Reviewed Journal Articles

Ambrose, W. A., Holtz, M. H., Nuñez-Lopez, Vanessa, Breton, C. L., Gülen, Gürcan, Duncan, Ian, Smyth, R. C., Foss, M. M., Lakshminarasimhan, Srivatsan, and Hovorka, S. D., 2006, FutureGen: clean-coal and near-zero-emission power generation technology for the Gulf Coast: *Gulf Coast Association of Geological Societies Transactions*, v. 56, p. 5-13.

Holtz, M. H., Nuñez-Lopez, Vanessa, and Breton, C. L., 2005, Moving Permian Basin technology to the Gulf Coast: the geologic distribution of CO₂ EOR potential in Gulf Coast reservoirs, in Lufholm, Peter, and Cox, Denise, eds., *Unconventional reservoirs technology and strategies: alternative perspectives for the Permian Basin: West Texas Geological Society Fall Symposium*, October 26-28, Publication #05-115, CD-ROM [10 p.].

Dutton, S. P., Kim, E. M., Breton, C. L., Broadhead, R. F., and Raatz, W. D., 2003, Permian Basin play analysis: *The Class Act*, v. 9/2, p. 4-6.

Non Peer Reviewed Atlases and Maps

Breton, Caroline, 2013, Tectonic Map of Texas for GIS (CD-ROM): The University of Texas at Austin, Bureau of Economic Geology, GIS0001, scale 1:750000.

Conference Proceedings

Savvaidis, A., Lomax, A., Dommissie, R., Breton, C., Shirley, M., and O'Sullivan, V., 2022,

Induced seismicity hypocentral depth stability and sensitivity to Vp/Vs in the South Delaware Basin, West Texas (abs.), Society of Exploration Geophysicists, Second International Meeting for Applied Geoscience & Energy, SEG Technical Program Expanded Abstracts, 5 p.

Callahan, O. A., Eichhubl, P., Hennings, P. H., Smye, K., Horne, E. A., Savvaidis, A., Huang, G.-C. D., Li, P., Lemons, C., Breton, C., and Dommissive, R., 2019, Texas Basement Synthesis Project: characterizing geological risk factors of basement-involved seismicity, 2019 Geological Society of America South-Central/North-Central/Rocky Mountain Section Meeting, Manhattan, Kans.

Callahan, O., Eichhubl, P., Hennings, P., Smye, K. G., Horne, L., Breton, C., Dommissive, R., Savvaidis, A., and Lemons, C., 2019, Texas Basement Synthesis Project: Understanding Geological Risk Factors of Basement-Involved Seismicity, 2019 AAPG Annual Convention and Exhibition.

Contract Reports

Wolaver, B. D., Sun, A. Y., Caldwell, T., Smyth, R. C., Mickler, P., Bongiovanni, T., Pierre, J. P., Sharp, J. M., Jr., Uliana, M., and Breton, C., 2019, Report on year one preliminary results: hydrogeologic evaluation and vulnerability analysis for Balmorhea-area springs: Bureau of Economic Geology, The University of Texas at Austin, Annual Report prepared for Apache Corporation, 52 p.

Hentz, T. F., and Breton, C., 2017, Subsurface oil-shale samples of the Upper Cretaceous Pepper Shale, Eagle Ford Group, and Austin Chalk, East Texas Basin: core sampling for measured vitrinite-reflectance (Ro) determination: prepared for U.S. Geological Survey, under contract no. 02ERAG0006, 10 p.

Pierre, J. P., Young, M. H., Wolaver, B. D., Andrews, J. R., and Breton, C., 2017, Time series analysis of energy production and associated landscape fragmentation in the Eagle Ford Shale Play: prepared for JP Morgan Chase Foundation, 16 p.

Dutton, S. P., Ambrose, W. A., Loucks, R. G., Breton, C., and Su, J., 2016, Stratigraphic architecture and sandstone reservoir quality in deep shelf gas plays, Phase 5: Wilcox study: The University of Texas at Austin, Bureau of Economic Geology, contract report prepared for Deep Shelf Gas Consortium, 570 figures, 98 p.

Dutton, S. P., Ambrose, W. A., Loucks, R. G., Horodecky, B. B., Breton, C., and Su, J., 2016, Stratigraphic architecture and sandstone reservoir quality in deep shelf gas plays, Phase 5: Jurassic Study: The University of Texas at Austin, Bureau of Economic Geology, contract report prepared for Deep Reservoir Quality Consortium, 916 figures, 101 p.

Hentz, T. F., Roush, R. S., and Breton, C., 2016, Subsurface oil-shale samples of the Upper Pennsylvanian Cline Shale, Midland Basin, West Texas: core sampling for measured vitrinite-reflectance (Ro) determination: final report prepared for U.S. Geological Survey, under contract no. 02ERAG0006, 10 p.

Hentz, T. F., Baumgardner, R. W., Jr., Hamlin, H. S., and Breton, C., 2015, Subsurface oil-shale samples of the Lower Permian Wolfcampian and Lower Leonardian mudrocks and upper Leonardian Spraberry Formation, Midland Basin, West Texas: Core sampling for measured vitrinite-reflectance (Ro) determination: The University of Texas at Austin, Bureau of Economic Geology, annual technical report prepared for NCRDS State Cooperative Program, under contract no. 02ERAG0006, 16 p.

Ambrose, W. A., Smith, D. C., Cutright, B. L., Scanlon, B. R., Reedy, R. C., Elliott, B. A., Paine, J. G., Foss, M. M., Tremblay, T. A., Wolaver, B. D., Loucks, R. G., Frébourg, G., Hentz, T. F., Ogiesoba, O. C., Olariu, M. I., Fu, Q., Zeng, H., E. L. Frost, III, Hamlin, H. S., Nance, H. S., Duncan, I. J., Hammes, U., Rogers, H., Clift, S. J., Sivil, J. E., Zhang, T., Reed, R. M., Baumgardner, R. W., Jr., Eastwood, R., Breton, C., Rowe, H. D., Carr, D. L., Dunlap, D. B., Gale, J. F. W., and Peng, S., 2014, State of Texas Advanced Resource Recovery (STARR)

progress report: Bureau of Economic Geology, Biennium prepared for Texas State Comptroller of Public Accounts, 90 p.

Hentz, T. F., Breton, C., and Ruppel, S. C., 2014, Subsurface gas-shale samples of the Upper Devonian and Lower Mississippian Woodford Shale, Permian Basin, West Texas and southeastern New Mexico: core sampling for measured vitrinite-reflectance (Ro) determination: The University of Texas at Austin, Bureau of Economic Geology, 1 CD-ROM prepared for FY 2013 Annual Technical Report for NCRDS State Cooperative Program, submitted to NCRDS State Cooperative Program, under contract no. Award Number 02ERAG0006, U.S. Geological Survey.

Dutton, S. P., Ambrose, W. A., Loucks, R. G., Breton, Caroline, and Su, Jiandong (Joseph), 2013, Stratigraphic architecture and sandstone reservoir quality in deep shelf gas plays: phase 4: The University of Texas at Austin, Bureau of Economic Geology, contract report prepared for Deep Shelf Gas Consortium, 114 p. + CD ROM.

Hentz, T. F., Hamlin, H. S., and Breton, C., 2012, Subsurface gas-shale samples of the Lower Pennsylvanian Smithwick Shale, Fort Worth Basin, North Texas: core sampling for measured vitrinite-reflectance (Ro) determination: The University of Texas at Austin, Bureau of Economic Geology, final report prepared for prepared for NCRDS State Cooperative Program, 7 p p.

Nicot, J. -P., Wolaver, B. D., Huang, Y., Howard, T., Costley, R. A., Breton, C., Walden, S., Baier, R., Strassberg, G., McGlynn, E. R., Hingst, M., Mercier, J., Lam, C., and Hayes, T. D., 2012, Feasibility of using alternative water sources for shale gas well completions --a preliminary guidance document on current practices in the Barnett: The University of Texas at Austin, Bureau of Economic Geology, final report no. 08122-05.02 prepared for Gas Technologies Institute, Des Plaines, Illinois, under RPSEA contract 08122-05, Barnett and Appalachian Shale Water Management and Reuse Technologies, 3 volumes, variously paginated.

Carr, D. L., Treviño, R. H., Meckel, T., Breton, C., Yang, C., and Miller, Erin, 2011, Secarb "early" test, task 15: evaluation of offshore transport and storage of CO₂: unpublished preliminary report prepared for U.S. Dept. of Energy, National Energy Technology Lab, under contract no. DE-FC26-05NT42590, 19 p.

Hentz, T. F., Breton, Caroline, and Ruppel, S. C., 2011, Subsurface gas-shale samples of the Lower Cretaceous Pearsall Formation and Upper Cretaceous Eagle Ford Shale, Maverick Basin, South Texas: core sampling for measured vitrinite-reflectance (Ro) determination: The University of Texas at Austin, Bureau of Economic Geology, annual technical report prepared for NCRDS State Cooperative Program, under award no. 02ERAG0006, 10 p.

Nicot, J. -P., Hebel, A. K., Ritter, S. M., Walden, S., Baier, R., Galusky, P., Beach, J. A., Kyle, R., Symank, L., and Breton, C., 2011, Current and projected water use in the Texas mining and oil and gas industry: The University of Texas at Austin, Bureau of Economic Geology, Contract Report No. 090480939 prepared for Texas Water Development Board, 357 p.

Dutton, S. P., Loucks, R. G., McDonnell, Angela, Ambrose, W. A., Day-Stirrat, R. J., Breton, Caroline, and Schilling, J., 2010, Stratigraphic architecture and sandstone reservoir quality in deep shelf gas plays: phase 3: The University of Texas at Austin, Bureau of Economic Geology, contract report prepared for Deep Shelf Gas Consortium, 205 p.

Hentz, T. F., Breton, Caroline, and Ruppel, S. C., 2010, Subsurface gas-shale samples of the Upper Cretaceous Eagle Ford Shale, San Marcos Arch, central Texas: core sampling for measured vitrinite-reflectance (Ro) determination: The University of Texas at Austin, Bureau of Economic Geology, annual technical report NCRDS State Cooperative Program, under award no. 02ERAG0006, 6 p.

Hentz, T. F., Breton, Caroline, and Ruppel, S. C., 2009, Subsurface Jurassic and Cretaceous gas-shale samples, Haynesville and Bossier Formations (Sabine Uplift), and Eagleford Group (Rio Grande Embayment): core sampling for measured vitrinite-reflectance (Ro) determination:

The University of Texas at Austin, Bureau of Economic Geology, annual technical report prepared for NCRDS State Cooperative Program, under award no. 02ERAG0006, 6 p.

Hentz, T. F., Breton, Caroline, and Ruppel, S. C., 2008, Subsurface Devonian and Mississippian gas-shale samples, Barnett and Smithwick shales (Fort Worth Basin), and Woodford and Barnett Shales (Delaware Basin): core sampling for measured vitrinite-reflectance (Ro) determination: The University of Texas at Austin, Bureau of Economic Geology, annual technical report prepared for NCRDS State Cooperative Program, under award no. 02ERAG0006, 10 p.

Hentz, T. F., and Breton, Caroline, 2007, Subsurface Pennsylvanian coal samples, Lower Atoka Group, Fort Worth Basin, Wise and Jack Counties, North Texas: core sampling for coal-rank determination: The University of Texas at Austin, Bureau of Economic Geology, annual technical report prepared for NCRDS State Cooperative Program, under contract award number 02ERAG0006, U.S. Geological Survey, 14 p. + plates and CD-ROM.

Smyth, R. C., Hovorka, S. D., Meckel, T. A., Breton, C. A., Paine, J. G., and Hill, G. R., 2007, Potential sinks for geologic storage of CO₂ generated in the Carolinas: The University of Texas at Austin, Bureau of Economic Geology, final report prepared for Southern States Energy Board and Electric Power Research Institute (http://www.beg.utexas.edu/enviroqlty/co2seq/pubs_presentations/CarolinasSummary_16April07.pdf), 14 p.

Guevara, E. H., and Breton, Caroline, 2006, Pennsylvanian coal and coaly shale samples, Young County, North-Central Texas: drill cuttings sampling for coal-rank determination: Bureau of Economic Geology, The University of Texas at Austin, annual report prepared for U.S. Geological Survey, NCRDS State Cooperation Program, under award number 05ERAG0019, 29 p. + apps.

Paine, J. G., Ruppel, S. C., Nance, H. S., Smyth, R. C., Breton, Caroline, and Duncan, I. J., 2006, Subsurface data response, Odessa Site, Texas: The University of Texas at Austin, Bureau of Economic Geology, report prepared for the FutureGen Alliance, 113 p.

Holtz, M. H., Ambrose, W. A., Hovorka, S. D., Nuñez-Lopez, Vanessa, Guevara, E. H., and Breton, C. L., 2005, CO₂ sink analysis near U.S. BP refineries: The University of Texas at Austin, Bureau of Economic Geology, report prepared for BP, Charles Christopher, 18 p.

Hovorka, S. D., Holtz, M. H., Smyth, R. C., Nuñez-Lopez, Vanessa, Kim, E. M., Breton, Caroline, Scanlon, B. R., and Reedy, R. C., 2005, Southeast regional carbon sequestration partnership: The University of Texas at Austin, Bureau of Economic Geology, final report prepared for the U.S. Department of Energy, under DOE award number DE-FC26-03NT41980, 40 p.

Ruppel, S. C., Jones, R. H., Breton, C. L., and Kane, J. A., 2005, Preparation of maps depicting geothermal gradient and Precambrian structure in the Permian Basin: The University of Texas at Austin, Bureau of Economic Geology, contract report prepared for the U.S. Geological Survey, under order no. 04CRSA0834 and requisition no. 04CRPR01474, 23 p + CD-ROM.

Dutton, S. P., Kim, E. M., Broadhead, R. F., Breton, C. L., Raatz, W. D., Ruppel, S. C., and Kerans, Charles, 2004, Play analysis and digital portfolio of major oil reservoirs in the Permian Basin: application and transfer of advanced geological and engineering technologies for incremental production opportunities: The University of Texas at Austin, Bureau of Economic Geology, and New Mexico Bureau of Geology and Mineral Resources, New Mexico Institute of Mining and Technology, annual report prepared for U.S. Department of Energy, under contract no. DE-FC26-02NT15131, 104.

Dutton, S. P., Kim, E. M., Broadhead, R. F., Breton, C. L., Ruppel, S. C., Raatz, William, and Kerans, Charles, 2004, Play analysis and digital portfolio of major oil reservoirs in the Permian Basin: application and transfer of advanced geological and engineering technologies for incremental production opportunities: The University of Texas at Austin, Bureau of Economic Geology, and New Mexico Institute of Mining and Technology, New Mexico Bureau of Geology

and Mineral Resources, final report prepared for U.S. Department of Energy, under contract no. DE-FC26-02NT15131, 408 p.

Dutton, S. P., Kim, E. M., Broadhead, R. F., Raatz, William, Breton, Cari, Ruppel, S. C., Kerans, Charles, and Holtz, M. H., 2003, Play analysis and digital portfolio of major oil reservoirs in the Permian Basin: application and transfer of advanced geological and engineering technologies for incremental production opportunities: The University of Texas at Austin, Bureau of Economic Geology, and New Mexico Bureau of Geology and Mineral Resources, annual report prepared for U.S. Department of Energy, under contract no. DE-FC26-02NT15131, 68 p.

Published Reports

Ambrose, W. A., Smith, D. C., Young, M. H., Scanlon, B. R., Reedy, R. C., Collins, E. W., Elliott, B. A., Wolaver, B. D., Paine, J. G., Hentz, T. F., Frébourg, G., Loucks, R. G., Reed, R. M., Ogiesoba, O. C., Olariu, M. I., Fu, Q., Zeng, H., Duncan, I. J., Rogers, H., Clift, S. J., Foss, M. M., Sivil, J. E., Zhang, T., Baumgardner, R. W., Jr., Eastwood, R., Breton, C., Brooks, D. L., Rowe, H. D., Carr, D. L., Dunlap, D. B., Gale, J. F. W., He, Y., Ko, L., Phelps, R., and Peng, S., 2016, State of Texas Advanced Resource Recovery (STARR) progress report: Bureau of Economic Geology, Biennium prepared for Texas State Comptroller of Public Accounts: 82 p.

Ambrose, W. A., Smith, D. C., Cutright, B. L., Scanlon, B. R., Reedy, R. C., Elliott, B. A., Paine, J. G., Foss, M. M., Tremblay, T. A., Wolaver, B. D., Loucks, R. G., Frébourg, G., Hentz, T. F., Ogiesoba, O. C., Olariu, M. I., Fu, Q., Zeng, H., Frost, E. L., III, Hamlin, H. S., Nance, H. S., Duncan, I. J., Hammes, U., Rogers, H., III, Clift, S. J., Sivil, J. E., Zhang, X., Reed, R. M., Baumgardner, R. W., Jr., Eastwood, R., Breton, C., Brooks, D. L., Rowe, H. D., Carr, D. L., Dunlap, D. B., Gale, J. F. W., and Peng, S., 2014, State of Texas Advanced Resource Recovery progress report and CD-ROM: Bureau of Economic Geology, The University of Texas at Austin, 90 p.

Ambrose, W. A., Breton, Caroline, Holtz, M. H., and Nuñez, Vanessa, 2005, Brine-bearing formations in Texas: The University of Texas at Austin, Bureau of Economic Geology FutureGen Fact Sheet, 3 p.

Ambrose, W. A., Breton, Caroline, Holtz, M. H., and Nuñez, Vanessa, 2005, Coal resources in Texas: The University of Texas at Austin, Bureau of Economic Geology FutureGen Fact Sheet, 5 p.

Ambrose, W. A., Holtz, M. H., Nuñez, Vanessa, and Breton, Caroline, 2005, Candidate CO₂-EOR oil reservoirs in Texas and adjacent areas: The University of Texas at Austin, Bureau of Economic Geology FutureGen Fact Sheet, 5 p.

Published Abstracts

Gale, Julia F. W., Frohlich, Cliff, Eichhubl, Peter, Olson, J., Fan, Z. Q., Gono, V., Horvath, S. C., Breton, Caroline, and Davis, M. H., 2014, Relationships between induced seismicity and fluid injection: development of strategies to manage injection (abs.): in American Association of Petroleum Geologists Annual Convention and Exhibition, Houston, Texas, April 7-9, abstracts, CD-ROM.

Huang, Y., Wolaver, B. D., Nicot, J. -P., Mercier, M., Hingst, M., and Breton, C., 2011, Behavior of North-Central Texas Paleozoic aquifers: geological controls vs. surface water control (abs.), in AGU Meeting, San Francisco, December 5-9, Abstract #H41E-1096.

Breton, C. L., and Ruppel, S. C., 2008, Information dataset of Permian Basin geology: content, structure, and access (abs.), in West Texas Geological Society Fall 2008 Symposium, WTGS digital publication #08-120.

Breton, C. L., Dutton, S. P., and Broadhead, R. F., 2008, Digital oil-play maps of the Permian Basin (abs.): AAPG 2008 Annual Convention and Exhibition Abstracts Volume, v. 17, p. 23.

Ambrose, W. A., Breton, C. L., Duncan, Ian, Holtz, M. H., Hovorka, S. D., Nuñez-Lopez,

Vanessa, and Lakshminarasimhan, Srivatsan, 2006, Source-sink matching and potential for carbon capture and storage in the Gulf Coast, in Proceedings of the 2006 UIC Conference of the Groundwater Protection Council, Abstract 16.

Ambrose, W. A., Holtz, M. H., Nuñez López, Vanessa, Hovorka, S. D., Guevara, E. H., Breton, Caroline, and Christopher, Charles, 2006, Structural and stratigraphic controls on storage and CO₂ EOR potential in major basins in Texas, California, Illinois, and Michigan (abs.): American Association of Petroleum Geologists Annual Convention, v. 15, p. 4.

Dutton, S. P., Kim, E. M., Ruppel, S. C., Kerans, Charles, Broadhead, R. F., Raatz, W. D., and Breton, C. L., 2006, Oil-play analysis of the Permian Basin: a tool for increasing recovery from a mature oil-producing province (abs.): American Association of Petroleum Geologists Annual Convention, v. 15, p. 28.

Guevara, E. H., Hackley, P. C., Sakurai, Shinichi, Warwick, P. D., Breton, C. L., Hopkins, M. S., and Mendoza, Rosalba, 2006, Stratigraphic locations and rank determination of subsurface Pennsylvanian coals in North-Central Texas: pilot study for coalbed methane potential assessment (abs.): American Association of Petroleum Geologists Annual Convention, v. 15, p. 40.

Holtz, M. H., Nuñez-Lopez, Vanessa, and Breton, Caroline, 2005, Moving Permian Basin technology to the Gulf Coast: the geologic distribution of CO₂ EOR potential in Gulf Coast reservoirs (abs.), in Lufholm, Peter, and Cox, Denise, eds., Unconventional reservoirs technology and strategies: alternative perspectives for the Permian Basin: West Texas Geological Society Fall Symposium, October 26-28, Publication #05-115, p. 189.

Dutton, S. P., Kim, E. M., Breton, C. L., Broadhead, R. F., and Raatz, W. D., 2004, Digital play portfolio of a major U.S. oil province: the Permian Basin (abs.): American Association of Petroleum Geologists Annual Convention Abstracts Volume, v. 13, p. A38.

Dutton, S. P., Kim, E. M., Breton, C. L., Broadhead, R. F., Raatz, W. D., Ruppel, S. C., and Kerans, Charles, 2004, Digital portfolio of oil plays in the Permian Basin, in (abs.), in Trentham, R. C. (ed.), Banking on the Permian Basin: plays, field studies, and techniques: West Texas Geological Society Fall Symposium: West Texas Geological Society, Publication #04-112, p. 7.