# William A. Ambrose

# **Professional Summary**

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# **Professional Preparation**

# Academic Background

M.A. Geology, The University of Texas at Austin, 1983

B.S. Geology, The University of Texas at Austin, 1979

# **Professional Appointments**

Present Position: Research Scientist, Bureau of Economic Geology, The University of Texas at Austin (January 1987 - present). Reserve-growth analysis of oil and gas fields in Texas, New Mexico, Venezuela, Mexico, and Australia. Subsurface analysis of depositional systems, sedimentary modeling, and production trend analysis of major Texas oil and gas plays. Evaluation of geologic factors controlling occurrence and producibility of coalbed methane in the Western United States. Evaluation of geologic controls on saline aquifers for CO2 sequestration.

Research Geologist, Research Planning Institute of Texas (September 1984 - October 1986). Subsurface analysis of major Gulf Coast stratigraphic units (Vicksburg, Yegua, and Wilcox) through correlation of electric logs, seismic interpretation, depositional facies mapping, and detailed facies descriptions from cores and outcrops. Prepared written summaries of Gulf Coast exploration models for a variety of oil and gas companies.

### **Theses**

Aggraded fluvial and tide-dominated deltaic deposits of the Spoon Formation (Pennsylvanian) in the Southern Illinois Basin, a shallow embayment: The University of Texas at Austin, Master's thesis, 106 p., August 1983

## Continuing Education Courses Taken

Effective media communication skills: management short course presented by Ken Haizely (The Ammerman Experience) to AAPG officers and committee members, Galveston, Texas, February 2006

Getting things done: management short course presented by Hermann Eben (TrimTab Solutions): to AAPG Officersa and Committee Members, Houston, Texas, November 2005

Quantitative geologic modeling of siliciclastic rock sequences and their seismic expression: Bureau of Economic Geology, Austin, TX, August 1989

Electric Log Correlation in Growth-Faulted Areas: American Association of Petroleum Geologists Short Course, 1985

Modern Clastic Depositional Environments: American Association of Petroleum Geologists Field Seminar, 1985

### Areas of Expertise

## Areas of Expertise

Coalbed methane

Oil and gas production analysis

Sedimentology

Subsurface mapping of clastic depositional systems

### Awards

# Awards and Honorary Societies

Second Place, Thomas A. Philpott Excellence of Presentation Award for the paper "Regional variation in composition, diagenesis, and reservoir quality of onshore Jurassic Cotton Valley sandstones, northern Gulf of Mexico" presented at the 2017 GCAGS Convention in San Antonio, Tex., 2018

Southwest Section AAPG, A. I. Levorsen Memorial Award, 2016

AAPG Division of Environmental Geosciences Certificate of Merit, 2015

EMD (Energy Minerals Division of AAPG) Honorary Membership, presented at 2014 Annual AAPG Convention, Houston, Texas, April 9, 2014

EMD (Energy Minerals Division of AAPG) President's Certificate for Excellence in Poster Presentation for "Optimal Locations for Lunar Settlements and Industrial Facilities," presented at 2014 Annaul AAPG Convention, Houston, Texas, April 9, 2014

2012 BEG Publication Award: BEG Report of Investigations No. 275, 2012

Outstanding Research Award, Jackson School of Geosciences, STARR Project, Co-Principal Investigator, 2010

Wallace E. Pratt Award for best AAPG Bulletin article published in calendar year 2009, 2010

EMD Distinguished Service Award, Energy Minerals Division of the American Association of Petroleum Geologists, awarded June 10, 2009

First Place, Thomas A. Philpott Excellence of Presentation Award, Gulf Coast Association of Geological Societies (GCAGS), 59th Annual Convention, Shreveport, Louisiana, 2009

Past President's Award, Energy Minerals Division of the American Association of Petroleum Geologists, 2008

President's Certificate for Excellence in Presentation (Second-Best Oral Presentation), Energy Minerals Division, American Association of Petroleum Geologists, for "Near to Mid-Term Energy Mineral Sources: Bridging the Future to Alternative Energy", 2007

Best Presentation, Houston Geological Society International Series, "Upper Miocene and Pliocene Gas and Oil Plays in the Macuspana Basin, Southeastern Mexico", 2004

First Place Best Paper and A. I. Levorsen Memorial Awards, Gulf Coast Association of Geological Societies, "Miocene valley-fill, slope, and submarine-canyon systems in the Laguna Madre-Tuxpan area, Mexico", 2004

Best Paper (co-author), Society of Professional Well Analysts (SPWLA), 2002

First author of paper awarded as Best of AAPG for SPE (Society of Professional Engineers), 1997

First Author of second-best paper for in Gulf Coast Association of Geological Societies Transactions. Title of Paper: "Secondary natural gas recovery in mature fluvial sandstone reservoirs, Frio Formation, Agua Dulce field, South Texas, 1993

Co-author of best paper in Energy Minerals Division of the American Association of Petroleum

Geologists. Title of Paper: "Face-cleat patterns in Rocky Mountain foreland basins; permeability indicators for coalbed methane, 1992

Co-author of best paper in Energy Minerals Division of the American Association of Petroleum Geologists, "Geologic and hydrologic characterization of coalbed methane reservoirs, Fruitland Formation, San Juan Basin, Colorado and New Mexico", 1991

### Service

## **University Committees**

Member, Planetary Science Executive Committee, Jackson School of Geosciences, planetary science, Austin, Texas, January 1, 2014-December 2015

## **External Committees Participation**

Vice Chair, Astrogeology Committee, AAPG, July 1, 2018-June 30, 2020

Chairman, EMD Coal Committee, AAPG, July 1, 2018-June 30, 2019

Co-Chair, Theme 9 (Exploration Frontiers, Energy Minerals, and Planetary Geology), AAPG, July 1, 2018-June 30, 2019

Chairman, Coal Committee, AAPG Energy Minerals Division, September 1, 2014-August 31, 2015

Co-Chair, Astrogeology Committee, AAPG, astrogeology, extraterrestrial mineral resources, September 1, 2014-August 31, 2015

Technical Reviewer, Search and Discovery, AAPG, oil and gas exploration and production, September 1, 2014-August 31, 2015

Technical Session Co-Chair, New Views of the Solar System, AAPG, Denver, Colorado, June 2, 2015

Theme Co-Chair, Energy and the Environment Committee, 2014 AAPG Annual Convention, June, 2013 - 2014

Theme 6 Co-Chair, "Energy and the Environment," 2014 AAPG Annual Convention, Houston, Texas, April 6-9, , Houston, Texas, April 5,, 2014

AAPG Astrogeology Committee Co-Chair, 2014 Annual Business Meeting, Houston, Texas, April 8, , Houston, Texas, April, 2014

Field Trip Leader, "Inside NASA Space Center Houston," 2014 AAPG Annual Convention, Houston, Texas, April 5, April, 2014

Session Chair, "Energy Frontiers in Space," 2014 Annual AAPG Convention, Houston, Texas, April 9, , Houston, Texas, April, 2014

Session Chair, "Water Management and Induced Seismicity, CO2 Capture and EOR," 2014 Annual AAPG Convention, Houston, Texas, April 9, Houston, Texas, April, 2014

Chair, EMD Coal Committee, January, 2013 - 2014

Member, Planetary Science Executive Committee, Jackson School of Geosciences, , Austin, Texas, January, 2013 - 2014

Member, Planetary Science Executive Committee, Jackson School of Geosciences, , 2013 - 2014

Chair, EMD Luncheon, Gulf Coast Association of Geological Societies Convention, Austin, TexasOctober 23,, 2012

Co-Chair, Oral Session: Geology and the Environment, Gulf Coast Association of Geological Societies Convention, Austin, TexasOctober 22,, 2012

Citation Reader, Doris Malkin Curtis Medalist, Gulf Coast Association of Geological Societies Convention, Austin, TexasOctober 21,, 2012

Co-Chair, Astrogeology Oral Session, 2012 American Association of Petroleum Geologists Annual Convention, Long Beach, 2012

Co-Chair, Astrogeology Poster Session, 2012 American Association of Petroleum Geologists Annual Convention, Long Beach, 2012

Co-Vice Chair, Astrogeology Committee Annual Business Meeting, 2012 American Association of Petroleum Geologists Annual Convention, Long Beach, 2012

Coal Commodity Chair, Annual Business Meeting, EMD, 2012

Member, Honors and Awards Committee, Energy Minerals Division, American Association of Petroleum Geologists, 2012

Panel Moderator, First Grant Writer's Workshop, Bureau of Economic Geology, 2012

Co-Vice Chair, Astrogeology Committee, American Association of Petroleum Geologists, 2010 - 2012

Co-Convenor, Third Writer's Workshop, March 11, Bureau of Economic Geology, 2011

Co-Vice Chair and Organizer, Astrogeology Committee Annual Business Meeting, 2011 Annual AAPG Conference, Houston, Texas, 2011

Field Trip Co-Leader, Behind-the-Scenes Tour of NASA Space Center, Houston, 2011 Annual AAPG Conference, Houston, Texas, 2011

Session Chair, Third Writer's Workshop, Editor's and Author's Experiences, Bureau of Economic Geology, 2011

Session Co-Chair, Astrogeology, 2011 Annual AAPG Conference, Houston, Texas, 2011

Session Co-Chair, Clean Coal and Coalbed Methane, 2011 Annual AAPG Conference, Houston, Texas, 2011

Chair, Coal Committee, EMD, 2010 - 2011

Member, Bylaws Committee, Energy Minerals Division, American Association of Petroleum Geologists, 2010 - 2011

Member, Honors and Awards Committee, EMD, 2010 - 2011

Co-Chair, Astrogeology Committee, AAPG, 2008 - 2011

Master of Ceremonies, AAPG Divisions Luncheon, 60th Annual GCAGS Convention, San Antonio, TexasOctober 12,, 2010

Co-Chair, Astrogeology Committee Annual Business Meeting, 2010 American Association of Petroleum Geologists Annual Convention, New Orleans, 2010

Session Co-Chair, Oral and Poster Sessions, Impact of Collisions on Earth's History and the Occurrence of Hydrocarbons and Mineral Resources, 2010 American Association of Petroleum Geologists Annual Convention, New Orleans, 2010

Chair, EMD Coal Committee, AAPG, 2008 - 2010

Session Co-Chair, Oral Session: Energy Minerals in the Solar System: Resources for the 21st Century, American Association of Petroleum Geologists Annual Convention, Denver, Colorado, June 9, 2009

Co-Chair, Astrogeology Committee Annual Business Meeting, American Association of Petroleum Geologists Annual Convention, Denver, Colorado, June 8, 2009

Judge, Poster Session: Lunar Field Exploration Equipment and Sample Documentation,

American Association of Petroleum Geologists Annual Convention, Denver, Colorado, June 8, 2009

Co-Editor, Technical Volume, 29th Annual Gulf Coast Section SEPM Foundation Bob F. Perkins Research Conference, Houston, Texas, December 7, 2009, 2009

Member, Lunar Consortium for Higher Education, Center for Lunar Science and Exploration, NASA, 2009

Session Chair, Gas Hydrates Oral Session, 29th Annual Gulf Coast Section SEPM Foundation Bob F. Perkins Research Conference, Houston, Texas, December 7, 2009, 2009

Chair, Coal Committee, Energy Minerals Division, American Association of Petroleum Geologists, 2008 - 2009

Co-Chair, Astrogeology Committee, American Association of Petroleum Geologists, 2008 - 2009

Technical Editor, National Resources Review, Springer-Verlag, 2008 - 2009

Session Co-Chair, Oral Session: Snowball Earth and Planetary Climate Change Through Time, American Association of Petroleum Geologists, 2008 International Conference and Exhibition, Cape Town, South Africa, October 27, 2008

Session Co-Chair, Sub-Continental Scale Layered Intrusives And Lunar Mare Structures, American Association of Petroleum Geologists, 2008 International Conference and Exhibition, Cape Town, South Africa, October 27, 2008

Session Co-Chair, Oral Session: Current Research Issues in Lunar Stratigraphy, 2008 Geological Society of America Annual Meeting, Houston October 8, 2008

Co-Chair, Poster Session: EMD Coal, CBM, Uranium: Fuel for the Future, 2008 International Conference and Exhibition, Cape Town, South Africa October, 2008

Judge, Oral Session: EMD Coal and Non-Traditional Energy Resources, 2008 International Conference and Exhibition, Cape Town, South AfricaOctober, 2008

Judge, Poster Session: EMD Gas Hydrates, 2008 International Conference and Exhibition, Cape Town, South Africa October, 2008

Co-Chair, Astrogeology Committee Annual Business Meeting, American Association of Petroleum Geologists Annual Convention, San Antonio, Texas April 21, 2008

Judge, Oral Session, Astrogeology: a Far-Sighted Look at Unconventional Resources, American Association of Petroleum Geologists Annual Convention, San Antonio, Texas April 21, 2008

Judge, Oral Session, Recent Advances in Coalbed Methane Exploration and Development, American Association of Petroleum Geologists Annual Convention, San Antonio, Texas April 21, 2008

Judge, Poster Session, Uranium Geology and Associated Ground Water Issues, American Association of Petroleum Geologists Annual Convention, San Antonio, Texas April 21, 2008

Session Co-Chair, Oral Session, Return to the Moon: Research, Resources, and Rewards, American Association of Petroleum Geologists Annual Convention, San Antonio, Texas April 21, 2008

Session Co-Chair, Poster Session, Geospatial Technology--a Map Gallery, American Association of Petroleum Geologists Annual Convention, San Antonio, Texas April 21, 2008

Session Co-Chair, Oral Session: Mars: Pingos, Polygons, and other Puzzles, XXXIX Lunar and Plantetary Society Conference, League City, Texas, March 10, 2008

Co Chair, Astrogeology Committee, American Association of Petroleum Geologists, 2007 - 2008

Panelist, Lunar Reconnaissance Orbiter Participating Scientists Support Meeting, Dana Point,

California, NASA November 14-16, 2007

Session Chair, Oral Session: Applications of Geophysical Techniques: Energy Frontiers, 2007 Gulf Coast Association of Geological Societies Annual Conference, Corpus Christi, Texas October 23, 2007

Judge, Oral Session: Applications of Geophysical Techniques, 2007 Gulf Coast Association of Geological Societies Annual Conference, Corpus Christi, Texas October 22, 2007

Alternate Delegate, AAPG House of Delegates Meeting, American Association of Petroleum Geologists Convention, Long Beach, Austin Geological Society, 2007

EMD Representative, Advisory Council, American Association of Petroleum Geologists, 2007

Judge, Heavy Oil Provinces of the World, American Association of Petroleum Geologists Convention, Long Beach, Oral Session, 2007

Judge, Heavy Oil Provinces of the World, American Association of Petroleum Geologists Convention, Long Beach, Poster Session, 2007

Judge, Oral Session, Applications of Geophysical Techniques, 2007 Gulf Coast Association of Geological Societies Annual Conference, Corpus Christi, Texas, 2007

Moderator, Annual Business Meeting, American Association of Petroleum Geologists Convention, Long Beach, EMD, 2007

Moderator, Luncheon, American Association of Petroleum Geologists Convention, Long Beach, EMD, 2007

Session Chair, Near- to Mid-Term Energy Mineral Sources: Bridging the Future to Alternative Energy, American Association of Petroleum Geologists Convention, Long Beach, Oral Session, 2007

Session Chair, Oral Session, Energy Frontiers, 2007 Gulf Coast Association of Geological Societies Annual Conference, Corpus Christi, Texas, 2007

Vice Chair, Annual Business Meeting, American Association of Petroleum Geologists Convention, Long Beach, Astrogeology, 2007

President, Energy Minerals Division, American Association of Petroleum Geologists, 2006 - 2007

Vice Chair, Astrology Committee, American Association of Petroleum Geologists, 2006 - 2007

Acting EMD Representative, Distinguished Lecturer Committee Meeting, Houston, American Association of Petroleum Geologists, 2006

EMD President Representative, Advisory Council, 2006 American Association of Petroleum Geologists Annual Meeting, Dallas, 2006

EMD President-Elect Representative, Annual Business Meeting, EMD, 2006

EMD President-Elect Representative, Annual Luncheon, Houston, EMD, 2006

EMD President-Elect Representative, Gas Hydrates Committee Meeting, Houston, EMD, 2006

EMD President-Elect Representative, Gas Hydrates Committee Meeting, Houston, EMD, 2006

EMD President-Elect Representative, Unconventional Gas Resources Committee Meeting, Houston, EMD, 2006

EMD Representative, Astrogeology Committee Meeting, Houston, American Association of Petroleum Geologists, 2006

Judge, Oral Session, Louisiana Hurricane Impacts and Coastal Processes, 56th Annual Meeting of the Gulf Coast Association of Geological Societies, Lafayette, LA, 2006

Judge, Oral Session: Black Shales--What We Know and What We Need to Know, 2006 Eastern Section of American Association of Petroleum Geologists Meeting, Buffalo, NY, 2006

Judge, Poster Session: CO2 sequestration--coals/shales/produced and unproduced reservoirs as sequestration targets, 2006 American Association of Petroleum Geologists Annual Meeting, Houston, 2006

Judge, Poster Session: Fractured clastics and carbonates--what constrains their reservoir limits?, 2006 American Association of Petroleum Geologists Annual Meeting, Houston, 2006

Judge, Student Job Quest Poster Session 1, 2006 Eastern Section of American Association of Petroleum Geologists Meeting, Buffalo, NY, 2006

President-Elect, Energy Minerals Division, American Association of Petroleum Geologists, 2005 - 2006

Judge, Technical Sessions, Calgary, 2005 Annual AAPG Convention, 2005

Gulf Coast Councilor, Energy Minerals Division, American Association of Petroleum Geologists, 2003 - 2005

Judge, Poster Session: Gas Hydrate Exploitation, Sediment Strength, and Slope Instability along Continental Margins, 2004 American Association of Petroleum Geologists Annual Meeting, 2004

Judge, Poster Session: Oil Sands and Other Unconventional Oil Plays, 2004 American Association of Petroleum Geologists Annual Meeting, 2004

Judge, Poster Session: Unconventional Gas, 2004 American Association of Petroleum Geologists Annual Meeting, 2004

Judge, Coastal Dynamics Technical Session, 53rd Annual Meeting of the Gulf Coast Association of Geological Societies, Baton Rouge, LA, 2003

Judge, Oral Session: Allocyclic Versus Autocyclic Processes, 2003 AAPG Annual Convention, 2003

Poster Judge, Technical Sessions and Poster Judges, Gulf Coast Association of Geological Societies 52nd Annual Convention, Austin, Texas, October, 2002

Judge, Case Histories II, Technical Session, Society of Exploration Geophysicists International Exposition, San Antonio, Texas, September 11, 2001

## Proposal Review Panels Participation

Gulf Coast Association of Geological Society Transactions (Article), 2003

American Association of Petroleum Geologists Special Publication (Article), 2002

American Association of Petroleum Geologists Special Publication (Article), 2002

Gulf Coast Association of Geological Societies Transactions (Article), 2002

## Teaching and Advising

## University Courses Taught

The first billion years of the Solar System: presented at Bureau of Economic Geology Summer Seminar Series, Austin, Texas, July 12, 2013.

Coalbed methane and fluvial-deltaic reservoirs, East Texas field: presented to GEO 383R class, "Reservoir Geology," Department of Geological Sciences, The University of Texas at Austin, Austin, Texas, September 26, 2012.

Clastic, carbonate, and shale-gas cores in the Gulf Coast: presented to Geology-1403 class, Austin Community College at the BEG Core Research Center, Austin, Texas, March 6, 2012.

Woodbine Group--Double A Wells field: presented at the Quantitative Clastics Laboratory Core Workshop: Wilcox Group, Lavaca Canyon/Woodbine Group, Double A Wells field, Houston, Texas, November 13, 2010.

Project STARR: geologic studies for oil and gas reserves growth in Texas: presented to the Iceland Trade Mission to the University of Texas, Austin, Texas, October 27, 2010.

Core description of the Glen Rose Formation, Alabama Ferry field, East Texas: presented to Geology 1403 class, Austin Community College at the BEG Core Research Center, Austin, Texas, October 18, 2010.

Destination: Moon: presented at Bureau of Economic Geology Summer Series seminar, Austin, Texas, August 13, 2010.

Observing the Moon through the telescope: presented at Bureau of Economic Geology Summer Series seminar, Austin, Texas, July 9, 2010.

Cosmic collisions in Earth's neighborhood: presented at the Bureau of Economic Geology, Summer Seminar Series, Austin, Texas, June 11, 2010.

The search for water on the Moon: presented at Bureau of Economic Geology research seminar, Austin, Texas, January 15, 2010.

Play and prospect characterization: examples from the southern Gulf of Mexico and the East Texas Basin: presented to The University of Texas at Austin GEO 384G class, Introduction to Subsurface Mapping and Petroleum Workstations, Austin, Texas, November 25, 2009.

Coalbed methane reservoirs and resources: presented to The University of Texas at Austin GEO 383R class, Reservoir Geology, Austin, Texas, October 15, 2009.

Big collisions in the solar system: the first billion years: presented at the Bureau of Economic Geology, Summer Seminar Series, Austin, Texas, July 17, 2009.

U.S. coalbed methane resources and reservoirs: presented to The University of Texas at Austin GEO 383R class, Reservoir Geology, Austin, Texas, November 20, 2008.

Mining the solar system for space exploration: presented at the Bureau of Economic Geology summer seminar series, Austin, Texas, June 27, 2008.

New interpretations of reservoir architecture in East Texas field: Sequence stratigraphic and depositional perspectives: presented at BEG Colloquium, Austin, Texas, November 30, 2007.

Energy mineral resources and economics: presented to GEO 391 (Current Issues in International Energy and Environmental Policy), The University of Texas at Austin, Austin, Texas, September 19, 2005.

What is an energy mineral and what can it do for you?: presented at BEG Seminar, Austin, Texas, August 26, 2005.

Moon crater morphology and styles of degradation: presented at BEG technical seminar, Austin, Texas, February 18, 2005.

Definition of the geological framework of the Neogene in the southern Laguna Madre-Tuxpan continental shelf of eastern Mexico: presented at BEG technical seminar, Austin, Texas, April 4, 2003.

Play assessment of Pliocene and Upper Miocene gas and oil reservoirs, Macuspana Basin, southeastern Mexico: Bureau of Economic Geology research seminar, The University of Texas at Austin, Austin, Texas, March 1, 2002.

History of the Bureau's coalbed methane investigations of the San Juan, Greater Green River, Piceance, Powder River, and Raton Basins in the late 1980's and early 1990's: Bureau of Economic Geology research seminar, The University of Texas at Austin, Austin, Texas, March 23, 2001.

Depositional controls on coalbed methane occurrence in the Fruitland Formation, San Juan Basin: Bureau of Economic Geology research seminar, The University of Texas at Austin, Austin, Texas, January 18, 2001.

Reservoir development and exploration: Bureau of Economic Geology research seminar, The University of Texas at Austin, Austin, Texas, August 18, 2000.

Interactive multidisciplinary continuing education website: Bureau of Economic Geology research seminar, The University of Texas at Austin (with Bob Hardage and Scott Rodgers), Austin, Texas, January 28, 2000.

Structural and Depositional Controls on Hydrocarbon Production in Estuarine, Tidal-Shelf, and Valley-Fill Sequences in the Misoa Formation (Eocene), Maraven Bloque I Area, Lake Maracaibo, Venezuela: Bureau of Economic Geology Weekly Seminar, Austin, Texas, March 19, 1997.

Characterization of tidally influenced deltaic reservoirs of Lagunillas field, Lake Maracaibo, Venezuela: Bureau of Economic Geology colloquium, May 12, 1993.

Structural and stratigraphic controls of coalbed methane in the Greater Green River, Piceance, Powder River, and Raton Basins (with Roger Tyler): Bureau of Economic Geology colloquium, May 1992.

Geologic controls on occurrence and producibility of coalbed methane resources in the Upper Cretaceous Fruitland Formation, San Juan Basin, Colorado and New Mexico: presented at the Bureau of Economic Geology, weekly seminar meeting, April 18, 1990.

Application of facies analysis to improve gas reserve growth in fluvial Frio reservoirs, La Gloria field, South Texas: Bureau of Economic Geology, weekly seminar meeting, March 9, 1988.

# Continuing Education Courses Taught

Incised-valley and estuarine deposits in the Pennsylvanian Cleveland Formation, western Anadarko Basin: presented at Bureau of Economic Geology, Austin, Texas, January 2013.

# Field Trips Leadership

Co-leader, Supplement to Guidebook 14, Field Trip to Pennsylvanian Depositional Systems: North-Central Area, Texas, October 8-10, 2009.

Co-leader, Paleokarst, Karst-Related Diagenesis, and Reservoir Development: Examples from Ordovician-Devonian Age Strata of West Texas and the Mid-Continent: Permian Basin Section - SEPM (Society for Sedimentary Geology), 1992.

## **Presentations**

### **Invited Presentations**

Exploring and living on the Moon: presented at UT OLLI SAGE Symposium Series, Austin, Tex., October 31, 2019.

State of Texas Advanced Oil and Gas Resource Recovery: presented at Bureau of Economic Geology 3E Research Symposium, Austin, Tex., October 18, 2019.

Exploring and living in space: presented at 20th Annual Austin Earth Science Career Day, Austin, Tex., October 11, 2019.

Oil and gas in Texas: the STARR program: presented at 10th East Texas Energy Symposium, Kilgore, Tex., May 7, 2019.

Canyon and Cisco Groups in the Eastern Shelf of the Permian Basin from outcrop to subsurface: presented to North Texas Geological Society, Wichita Falls, Tex., November 15, 2018

State of Texas Advanced Oil and Gas Resource Recovery program: presented to Texas

Governor's Office of Economic Development and Tourism, Austin, Tex., October 4, 2018.

State of Texas advanced oil and gas resource recovery program: presented at 89th Panhandle Producers & Royalty Owners Association, Amarillo, Tex., September 20, 2018.

Unusual lunar craters: observations and origins: presented to Austin Astronomical Society, Austin, Tex., September 14, 2018.

STARR oil and gas program overview: presented to Bureau of Economic Geology Visiting Committee, University of Texas at Austin, August 16, 2018.

State of Texas advanced oil and gas resource recovery program: presented to staff members of Texas State Representative Four Price, Austin, Tex., May 25, 2018.

Oil and gas resources and challenges: local and global perspectives: presented at TCEQ Trade Fair and Conference, Austin, Tex., May 15, 2018.

State of Texas advanced oil and gas resource recovery program: presented at 9th East Texas Energy Symposium, Kilgore, Tex., May 1, 2018.

Giant impacts in the first billion years of the solar system: presented to East Texas Geological Society, Tyler, Tex., April 18, 2018.

Exploration, resource development, and settlement of the inner solar system: rewards and challenges: presented to Dallas Geological Society, Farmers Branch, Texas, December 13, 2017.

Lunar mysteries and wonders: presented to Austin Gem and Mineral Society, Austin, Texas, September 28, 2017.

The BEG STARR program: oil and gas for Texas: presented to SIPES, Corpus Christi Chapter, Corpus Christi, Texas, September 26, 2017.

Oil and gas in Texas: new life from old plays, new frontiers: presented to TCEQ Trade Fair, Austin, Texas, May 16, 2017.

The moon: stepping-stone to the planets: presented to Houston Geological Society, Houston, Texas, May 10, 2017.

Stratigraphic framework and depositional systems of the Canyon and Cisco Group, Eastern Shelf of the Permian Basin: presented to Abilene Geological Society, Abilene, Texas, April 20, 2017.

Depositional history of the upper Wilcox Group and lower Reklaw Formation, northern Bee County, Texas: presented to South Texas Geological Society, San Antonio, Texas, March 8, 2017.

The Shelf-to-Slope Transition in the Upper Cretaceous Woodbine Group in Northern Tyler and Southeastern Polk Counties, Texas:

Facies Variability and Controls on Reservoir Quality: presented to East Texas Geological Society, Tyler, Texas, December 16, 2015.

State of Texas Advanced Resource Recovery (STARR) oil and gas program overview: presented to Bureau of Economic Geology Visiting Committee, Austin, Texas, August 18, 2015.

State of Texas Advanced Resource Recovery (STARR) oil and gas program overview: presented to Texas Energy Resources Committee, Austin, Texas, July 20, 2015.

Bureau of Economic Geology-Pemex integrated basin and play assessment studies in Mexico: presented to Geology Foundation Advisory Council, Austin, Texas, March 27, 2015.

Water and hydrogen resources on the moon and Mars: presented to Austin Gem & Mineral Society, Austin, Texas, October 23, 2014.

Extraterrestrial water and hydrogen resources in the inner Solar System: presented to the Austin

Astronomical Society, Austin, Texas, September 12, 2014.

### Presentations

Reflections of the Lower and Middle Frio Formation Along the South Texas Gulf Coast: presented to Gulf Coast Association of Geological Societies GeoGulf 2024, presented at GeoGulf 2024, San Antonio, TX, April 10-12, 2024.

Integrating lithofacies and chemofacies characterizations for the Permian Basin Wolfcamp XY and Third Bone Spring Formation, Delaware Basin, Texas: presented to American Association of Petroleum Geologists (AAPG-ACE), Denver, Colorado, October 2021.

Lithofacies segmentation in cores of Wilcox Group (Gulf of Mexico) and Spraberry Formation (Permian Basin) using U-net based convolutional neural networks: presented to SWS AAPG, presented at SWS AAPG annual meeting, Dallas, Tex., 2021.

Lithofacies Segmentation in Cores Using U-Net Based Convolutional Neural Networks With Uncertainty Feedback: presented to AAPG, presented at AAPG ACE 2021, Denver, Colo., 2021.

Oil Recovery by Water Imbibition and Wettability in Shale: presented to MSRL members, presented at Mudrock Systems Research Laboratory Annual Meeting, Austin, TX, April 8-10, 2020.

Lithofacies and Diagenetic Features of the Strawn Carbonates in King County (Texas): Implication for Reservoir Quality: presented to Geological Society of America (GSA), presented at 54th Annual Meeting of the South-Central Section, GSA, Fort Worth, Tex., March 9-10, 2020.

Transition from paleosols in the Woodbine Group to carbonates in the Austin Chalk, East Texas Field: A compressed transgressive succession from subaerial processes to deepwater deposition: presented at 69th Annual GeoGulf (formerly Gulf Coast Association of Geological Societies [GCAGS]) Conference, Houston, Tex., October 24, 2019.

Dangerous places in the solar system: presented at Bureau of Economic Geology Summer Seminar Series, Austin, Tex., July 12, 2019.

Shelf-to-basin architecture and depositional trends, Missourian-Wolfcampian strata of the Eastern Shelf of the southern Midland Basin, West Texas: presented at AAPG National Convention, San Antonio, Texas, May 21, 2019.

Return to the Moon: resources, risks, and rewards: presented at AAPG Annual Convention and Exhibition, San Antonio, Tex., May 20, 2019.

Return to the Moon: resources, risks, and rewards: presented at UT OLLI SAGE Symposium Series, Austin, Tex., April 29, 2019.

Outcrop to subsurface linkages, Canyon and Cisco Groups, Eastern Shelf of the Permian Basin: presented at AAPG Southwest Section, Irving, Tex., April 9, 2019.

Letco MV 9696.02 No. TOH-2A Settlemyre core, Leon County, Texas: presented at BEG-AGS core workshop, Austin, Tex., December 5, 2018.

Application of Instantaneous Frequency Attributes and Gamma-Ray Wireline Logs in the Delineation of Lithology in Serbin Field, Southeast Texas: A Case Study: presented to Society of Exploration Geophysicists, presented at 88th SEG International Exposition and Annual Meeting, Anaheim, California, USA, October 15, 2018.

Preservation of reservoir quality by chlorite coats in deep Tuscaloosa sandstones, Central Louisiana, USA: presented at Annual Gulf Coast Association of Geological Societies Convention, Shreveport, La., October 2, 2018.

Depositional and diagenetic controls on reservoir quality in deepwater sandstones in the lower Wilcox Group, Lavaca Canyon Complex in the Hallettsville Embayment, Southeastern Texas Gulf Coast: presented at Annual Gulf Coast Association of Geological Societies Convention,

Shreveport, La., October 1, 2018.

A history of igneous activity on the moon: presented at Bureau of Economic Geology Summer Seminar series, University of Texas at Austin, June 22, 2018.

Depositional history and shoreline evolution of the upper Wilcox Group and lower Reklaw Formation, Northern Bee County, Texas: presented at AAPG Annual Convention and Exposition, Salt Lake City, Utah, May 23, 2018.

Volcanogenic resources for a sustained human presence on the moon: presented at AAPG Annual Convention and Exposition, Salt Lake City, Utah, May 23, 2018.

Depositional History and Shoreline Evolution of the Upper Wilcox Group and Lower Reklaw Formation, Northern Bee County, Texas: presented to AAPG Annual Meeting, Salt Lake City, Utah, May 20-23, 2018.

Depositional systems, facies variability, and their relationship to reservoir quality in the Jurassic Cotton Valley Group, Texas, Louisiana, and Mississippi onshore Gulf Coast: presented at annual GCAGS convention, San Antonio, Texas, November 3, 2017.

Slope channel and levee systems: Texaco No. 1-D Sterling, Sterling County, Texas: presented to Austin Geological Society, presented at BEG-STARR and Austin Geological Society core workshop: Shelf-to-Basin Architecture, Depositional Systems, and Facies Variability of the Southern Eastern Shelf of the Permian Basin, Austin, Texas, October 24, 2017.

Use of ejecta distribution to resolve relative ages of the Imbrium, Serenitatis, and Crisium Basins: presented to Bureau of Economic Geology, presented at Annual BEG Research Symposium, Austin, Texas, September 15, 2017.

The eight wonders of the lunar world: presented at Bureau of Economic Geology Summer Seminar Series, Austin, Texas, June 16, 2017.

STARR oil and gas program overview: presented to members and staff of the Texas State Government, presented at Bureau of Economic Geology, Austin, Texas, June 6, 2017.

STARR oil and gas program overview: presented to The University of Texas, Geology Foundation Advisory Council, presented at Bureau of Economic Geology, Austin, Texas, April 28, 2017.

Regional depositional framework of the southern part of the Eastern Shelf of the Permian Basin: presented to San Angelo State University undergraduate students, presented at Bureau of Economic Geology, Austin, Texas, April 7, 2017.

Living on the moon: lessons for Mars: presented at AAPG Annual Convention and Exposition, Houston, Texas, April 4, 2017.

Carl No. 1 Gillette and Apache No. 1-B Tips cores, Bee County, Texas: presented at Bureau of Economic Geology, Jackson School of Geosciences, and Austin Geological Society core workshop, Austin, Texas, October 20, 2016.

Space destinations: Moon, asteroids, and Mars: presented to Austin Astronomical Society, Austin, Texas, October 14, 2016.

Depositional systems, facies variability, and their relationship to reservoir quality in the Eocene Upper Wilcox Group in Fandango field, Zapata County, Texas: presented at 66th Annual GCAGS Convention, Corpus Christi, Texas, September 19, 2016.

Space frontiers: Moon, asteroids, and Mars: presented at Bureau of Economic Geology Summer Seminar Series, Austin, Tex., August 5, 2016.

Resource-development and environmental challenges for life on the space frontier: presented at AAPG Annual Convention and Exposition, Calgary, Alberta, June 20, 2016.

Facies variability and reservoir quality of incised-valley fill and shallow-marine sandstones in the

Upper Cretaceous Tuscaloosa Formation, central Louisiana: presented at Bureau of Economic Geology Seminar Series, Austin, Tex., May 6, 2016.

Representative oil and gas plays in the East Texas, Fort Worth, and Anadarko Basins: presented to Dallas Geological Society, Dallas, Tex., April 12, 2016.

STARR oil and gas program overview: presented to University Lands, Houston, Tex., March 23, 2016.

STARR oil and gas program overview: presented to University Lands, Houston, Texas, October 26, 2015.

Coalbed methane reservoirs and resources: presented to GEO 383R (Reservoir Geology) class, The University of Texas at Austin, Austin, Texas, September 24, 2015.

Sequence-stratigraphic and depositional controls on reservoir quality in lowstand incised-valley-fill and highstand shallow-marine systems in the Upper Cretaceous (Cenomanian) Tuscaloosa Formation, Louisiana, U.S.A: presented to GCAGS, presented at 65th Annual GCAGS Convention, Houston, Texas, September 22, 2015.

History of East Texas field: presented at BEG-GCAGS Core Workshop: Woodbine Sand and Eagle Ford Shale, Houston, Texas, September 19, 2015.

Regional sequence stratigraphy of the Woodbine Group: presented at BEG-GCAGS Core Workshop: Woodbine Sand and Eagle Ford Shale, Houston, Texas, September 19, 2015.

Woodbine depositional systems in East Texas field: presented at BEG-GCAGS Core Workshop: Woodbine Sand and Eagle Ford Shale, Houston, Texas, September 19, 2015.

Terraforming Mars: presented at Bureau of Economic Geology Summer Seminar Series, Austin, Texas, June 19, 2015.

Water and other volatiles on Mars: resource base and implications for terraforming: presented at AAPG Annual Conference, Denver, Colorado, June 2, 2015.

Regional Wilcox stratigraphy: presented at Bureau of Economic Geology, Jackson School of Geosciences, Core Workshop, Houston, Texas, May 5, 2015.

Tidal depositional systems in Pennsylvanian strata in the Anadarko Basin, northeast Texas Panhandle: presented at Southwest Section-AAPG Convention, Wichita Falls, Texas, April 13, 2015.

Depositional systems and facies in the Cenomanian-Turonian (Upper Cretaceous) Eaglebine Trend, Leon County and adjacent areas, Texas: presented to Austin Geological Society, presented at Core Workshop: Facies, depositional systems, and chemostratigraphy of the Upper Cretaceous of the South Texas-Louisiana Shelf and the Western Interior Seaway, Austin, Texas. December 3, 2014.

Facies variability and reservoir quality in the shelf-to-slope transition, Upper Cretaceous (Cenomanian) Woodbine Group, northern Tyler and southeast Polk Counties, Texas, USA: presented to Bureau of Economic Geology, The University of Texas at Austin, presented at the Bureau of Economic Geology Research Seminar, Austin, Texas, October 10, 2014.

Facies variability and reservoir quality in the shelf-to-slope transition, Upper Cretaceous (Cenomanian) Woodbine Group, northern Tyler and southeast Polk Counties, Texas, USA: presented to Gulf Coast Association of Geological Societies, presented at the 64th GCAGS Annual Convention, Lafayette, Louisiana, October 6, 2014.

Water and hydrogen resources on the Moon, Mercury, and Mars: presented at 2014 Annual AAPG National Convention, Houston, Texas, April 9, 2014.

Lunar crater morphology and ejecta distribution of the Imbrium, Serenitatis, and Crisium basins: presented to Planetary Geology and Geophysics Graduate Class, University of Texas at Austin,

Austin, Texas, January 23, 2014.

Water resources in the Solar System: presented at the West Texas Geological Society Annual Meeting, Midland, Texas, September 2013.

The future of clean coal in Texas: presented at Highland Lakes Energy Group, Marble Falls, Texas, August 2, 2013.

Optimal locations for lunar settlements and industrial facilities: presented at AAPG Annual Convention, Pittsburgh, Pennsylvania, May 22, 2013.

Oil and gas fields in Texas: New life from old plays, new frontiers: presented at the 2013 annual TCEQ Environmental Trade Fair and Conference, Austin, Texas, May 2013.

Facies variability, fracture heterogeneity, and reservoir properties of the Marble Falls Limestone, Jack County Texas: presented at the annual AAPG Southwest Section Convention, Fredericksburg, Texas, April 10 2013.

Distribution and origin of Imbrium ejecta in the Cleomedes Quadrangle, north and northwest Crisium Basin: presented at the 44th Lunar and Planetary Science Conference, The Woodlands, Texas, March 21 2013.

BEG clean-coal projects and prospects: presented to University of Queensland, Australian Delegation, Austin, Texas, February 11 2013.

Incised-valley and estuarine deposits in the Pennsylvanian Cleveland Formation, western Anadarko Basin: presented at soft-rock seminar, Jackson School of Geosciences, Austin, Texas, November 5, 2012.

Shelf-edge deltaic depositional system in the upper Woodbine succession, Double A Wells field, Polk County Texas: presented at the 62nd Gulf Coast Association of Geological Societies Conference, Austin, Texas, October 23, 2012.

Clean coal in the Texas Gulf Coast: presented at the 62nd Gulf Coast Association of Geological Societies Conference, Austin, Texas, October 22, 2012.

Strange craters and other lunar oddities: presented at Bureau of Economic Geology Summer Seminar Series, Austin, Texas, June 15, 2012.

Geologic controls on clean coal in Texas: presented at the Hill Country Geoscientists Luncheon, Kerrville, Texas, May 21, 2012.

Origin and distribution of hydrogen and water resources on the Moon: presented at the Houston Geological Society Northsiders luncheon, Houston, Texas, May 15, 2012.

Cores and Depositional Systems in the Wilcox Group, Bee County, Texas: presented to Formosa Petrochemical Corporation, Austin, Texas, May 11, 2012.

Lunar energy and mineral resources: new insights from the Lunar Reconnaissance Orbiter: presented at the Annual AAPG Convention, Long Beach, California, April 24, 2012.

Ejecta distribution and relative ages of the Imbrium, Serenitatis, and Crisium Basins: presented at 43rd Lunar and Planetary Science Conference, The Woodlands, Texas, March 22, 2012.

Crisium and Humorum Basins on the Moon: presented to the Austin Geological Society, Austin, Texas, March 5, 2012.

Oil-recovery strategies in the lower Woodbine Group, East Texas field: presented at SIPES/SPE/SMU 2011 Dallas E&P Forum, Dallas, Texas, December 13, 2011.

STARR oil and gas program overview: presented at Center for Energy Economics Annual Meeting and Forum, Houston, Texas, December 7, 2011.

Geologic controls on production in low-permeability (tight) sandstones in the Pennsylvanian Cleveland Formation, northwest Anadarko Basin: presented at AAPG Mid-Continent Section

Convention, Oklahoma City, Oklahoma, October 3, 2011.

Whither now, NASA and the United States?: presented with Bruce Cutright at the Bureau of Economic Geology Summer Seminar Series, Austin, Texas, August 12, 2011.

New insights from the lunar reconnaissance orbiter: presented at the Bureau of Economic Geology Summer Seminar Series, Austin, Texas, June 12, 2011.

Lunar geology and resources: new insights from the lunar reconnaissance orbiter: presented to the Austin Astronomical Society, Austin, Texas, May 13, 2011.

An overview of clean coal technologies and carbon capture and storage (CCS): presented at the Annual AAPG Conference, Houston, Texas, April 12, 2011.

The significance of lunar water-ice for rocket propellants and human settlement of the Moon: presented at AAPG field trip Behind-the-Scenes Tour of NASA Space Center, Houston, Texas, April 9, 2011.

Cores from the Woodbine Group in East Texas field and Tyler County and the Barnett Shale north of the Llano Uplift: presented to geology students from Austin Community College, Austin, Texas, April 6, 2011.

Woodbine Tyler County and Tuscaloosa Louisiana cores: presented to Border to Border Exploration, LLC, Austin, Texas, March 25, 2011.

Distribution and chronostratigraphy of ejecta complexes in the Humorum Basin mapped from LROC and Lidar data: presented at the 42nd Lunar and Planetary Science Conference, The Woodlands, Texas, March 10, 2011.

Core summary of the Woodbine Group in East Texas field: presented to RIPED (Research Institute of Petroleum Exploration and Development), PetroChina Company Limited, Austin, Texas, November 18, 2010.

Sequence stratigraphic framework and depositional history of Oligocene Frio slope-fan, lowstand prograding wedge, and shallow-marine transgressive-regressive deposits in the Lavaca Bay area, Texas: presented at the 60th Annual GCAGS Convention, San Antonio, Texas, October 12, 2010.

History of impacts in the inner solar system: presented to the UT Planetary Organization for Space Sciences and Exploration, Austin, Texas, October 6, 2010.

Core summary, Deep Shelf Gas--Phase 3 Project: presented in, Houston, Texas, September 21, 2010.

Origin, distribution, and chronostratigraphy of asymmetric secondary craters and ejecta complexes in the Crisium Basin: presented at the Research Symposium Honoring the Scientific Contributions of William R. Muehlberger, Austin, Texas, August 28, 2010.

Sequence stratigraphy and depositional systems in the lower Woodbine Group, East Texas field: presented to CML Exploration, LLC, Austin, Texas, August 19, 2010.

Core summary and workshop, Deep Shelf Gas--Phase 3 Project: presented at semiannual meeting of the Deep Shelf Gas Project, Austin, Texas, April 29, 2010.

A survey of impact craters in the inner solar system: perspectives from Earth: presented at the 2010 Annual AAPG Convention, New Orleans, Louisiana, April 13, 2010.

Sequence stratigraphy, reservoir quality, and oil-recovery strategies in the lower Woodbine Group, East Texas field: presented to RPSEA, Austin, Texas, March 29, 2010.

Origin and distribution of hydrogen and water on the moon: presented to the UT Planetary Organization for Space Sciences and Exploration, Austin, Texas, March 24, 2010.

Oil-recovery strategies related to depositional architecture in fluvial-dominated deltaic and

bedload fluvial reservoirs in the lower Woodbine Group in East Texas field: presented to the East Texas Geological Society, Tyler, Texas, March 17, 2010.

Regional geologic studies and basin evolution and play concepts: Laguna Madre-Tuxpan area, Mexico: presented to ÍSOR Iceland Geosurvey, Reykjavik, Iceland, March 5, 2010.

The STARR Program: regional geologic studies for assessing potential hydrocarbon reservoirs: presented to ÍSOR Iceland Geosurvey, Reykjavík, Iceland, March 5, 2010.

Sequence stratigraphy and depositional systems in the Pennsylvanian Cleveland and Marmaton tight-gas sandstones, Anadarko Basin: presented to RIPED, Austin, Texas, December 18, 2009.

Gas hydrates overview: presented at the 29th Annual Gulf Coast Section SEPM Foundation Bob F. Perkins Research Conference, Houston, Texas, December 7, 2009.

The STARR Program: regional geologic studies for assessing potential hydrocarbon reservoirs: presented to the Republic of Iceland Energy Trade Mission, Austin, Texas, November 18, 2009.

Tidal depositional systems: Cleveland and Marmaton examples: presented at the Ellison Miles Institute, Farmers Branch, Texas, November 10, 2009.

Energy resources in the solar system: presented at The University of Texas at Austin Planetary Science Symposium, Austin, Texas, October 2, 2009.

Strategies for optimized oil recovery in fluvial-dominated deltaic reservoirs in the Lower Woodbine Group in East Texas field: presented at the Gulf Coast Association of Societies 2009 Annual Convention, Shreveport, Louisiana, September 28, 2009.

The first billion years of the solar system: presented to the Austin Gem and Mineral Society, Austin, Texas, September 24, 2009.

Sequence stratigraphy and depositional framework of the Frio Formation and Anahuac-Miocene section, Lavaca Bay, Texas: presented to Neumin Production Company, Austin, Texas, July 28, 2009.

Giant impact basins of the solar system: presented at the Annual AAPG Convention, Denver, Colorado, June 10, 2009.

Giant impact basins of the solar system: presented at the Annual AAPG Convention, Denver, Colorado, June 10, 2009.

The nearside megabasin: the largest basin on the Moon: presented at the Annual AAPG Convention, Denver, Colorado, June 10, 2009.

Facies architectural elements and sandstone-body continuity in highstand, fluvial-dominated deltaic reservoirs in the Upper Cretaceous Woodbine Group, East Texas field: presented at the Annual AAPG Convention, Denver, Colorado, June 9, 2009.

Recognizing publishing opportunities: Water ice on Mars and the Moon: presented at the Annual AAPG Convention, Denver, Colorado, June 9, 2009.

Water ice on Mars and the Moon: presented at the Annual AAPG Convention, Denver, Colorado, June 9, 2009.

Recognizing publishing opportunities: presented at the Bureau of Economic Geology Publication Council Writer's Workshop, Austin, Texas, May 21, 2009.

Recognizing publishing opportunities: presented at the Bureau of Economic Geology Publication Council Writer's Workshop, Austin, Texas, May 21, 2009.

Core summary deep shelf gas--Phase 3 Project: presented at the Bureau of Economic Geology, The University of Texas at Austin, Austin, Texas, May 13, 2009.

East Texas Woodbine Project, STARR Program: presented at the Bureau of Economic Geology Industry Day Meeting, Austin, Texas, April 15, 2009.

Distribution and chronostratigraphy of asymmetric secondary craters in the Nectaris Basin: presented at the 40th Lunar and Planetary Science Conference, The Woodlands, Texas, March 24, 2009.

Highstand deltaic and lowstand valley-fill deposits in the Woodbine Group, East Texas field: presented to Excalibur Energy Corp., Austin, Texas, February 25, 2009.

Observing the geologic history of the Moon: presented to the Austin Astronomical Society, Austin, Texas, February 13, 2009.

Highstand deltaic and lowstand valley-fill deposits in the Woodbine Group, East Texas field: presented to Border to Border Exploration, L.L.C, Austin, Texas, January 21, 2009.

Core review of the Cleveland Formation, Lipscomb County, Texas: presented to Jones Energy, Inc., Austin, Texas, December 17, 2008.

Introduction to depositional systems, with application to East Texas field: presented to PTTC Texas/Southern New Mexico Region workshop, Sequence Stratigraphy and Depositional Systems of the Woodbine Group in East Texas Field: Core Workshop, Houston, Texas, November 18, 2008.

Sequence Stratigraphy and Depositional Systems of the Woodbine Group in East Texas Field: Core Workshop: BEG-PTTC Workshop No. SW0018 presented at Houston Research Center, Houston, Texas, November 18, 2008.

Clean coal: decarbonized power in North America: presented at American Association of Petroleum Geologists International Conference and Exhibition, Cape Town, South Africa, October 28, 2008.

The case for lunar maria as potential layered extrusives: presented at American Association of Petroleum Geologists International Conference and Exhibition, Cape Town, South Africa, October 27, 2008.

Timing, emplacement, and distribution of mare-fill units in Oceanus Procellarum, a large nearside lunar basin: presented at American Association of Petroleum Geologists International Conference and Exhibition, Cape Town, South Africa, October 27, 2008.

Distribution and chronostratigraphy of asymmetric secondary craters associated with lunar basins: presented at the Geological Society of America annual meeting, Houston, Texas, October 8, 2008.

Blackwood and Nichols No. 403 NEBU core, northern San Juan Basin and Lewis Shale, Pictured Cliffs Sandstone, and Fruitland Formation outcrop, State Highway 3, Durango, CO: core and outcrop presentation to QCL IA, Farmington, New Mexico, September 26, 2008.

Transgressive-regressive cycles in the Upper Pictured Cliffs Sandstone and controls on Fruitland Formation coal depocenters, NW San Juan Basin: presented to QCL IA, Farmington, New Mexico, September 25, 2008.

Core example of reservoir heterogeneity in the lower Woodbine Group, East Texas field: presented at SEG Development Forum, Austin, Texas, July 30, 2008.

Deltaic cores in the Woodbine Group, East Texas field: presented at Texas Regional Collaborative Teacher Workshop, Austin, Texas, June 10, 2008.

Depositional systems and sedimentary facies of coal-forming environments: presented in EMD Workshop 15, Coalbed Methane and Shale Gas Exploration Strategies: Workshop for Sorbed Gas Reservoir Systems, San Antonio, Texas, April 24, 2008.

Lunar oddities: asymmetric, non-main- sequence craters as indirect indicators of basin-scale impacts: presented at the Annual AAPG Convention, San Antonio, Texas, April 22, 2008.

Energy minerals in the solar system: resources for the 21st century: presented at the Annual

AAPG Convention, San Antonio, Texas, April 21, 2008.

Sequence stratigraphic controls from complex reservoir architecture in fluvial-dominated deltaic and lowstand valley-fill deposits in the Woodbine Group, East Texas field: presented at the Annual AAPG Convention, San Antonio, Texas, April 21, 2008.

Sequence stratigraphic controls on complex reservoir architecture in fluvial-dominated deltaic and lowstand valley-fill deposits in the Woodbine Group, East Texas field: presented to Jones Energy, Inc., Austin, Texas, April 3, 2008.

Origin, distribution, and chronostratigraphy of asymmetric secondary craters associated with nearside lunar basins: presented at the XXXIX Lunar and Planetary Society Conference, League City, Texas, March 11, 2008.

Transgressive-regressive cycles in the upper Pictured Cliffs Sandstone and controls on Fruitland coal depocenters, northwestern San Juan Basin: presented to the Four Corners Geological Society, Farmington, New Mexico, February 22, 2008.

Controls on crater degradation on the moon: presented at The University of Texas at Austin, Department of Geological Sciences Soft-Rock Seminar, Austin, Texas, January 28, 2008.

Pilot study of East Texas field: geology, engineering, and potential exploitation workshop: BEG-PTTC Workshop No. SW0017, Kilgore, Texas, October 30, 2007.

Woodbine depositional systems and facies in East Texas field: presented to PTTC Texas/Southern New Mexico Region workshop, Pilot Study of the East Texas Field: Geology, Engineering, and Potential Exploitation, Kilgore, Texas, October 30, 2007.

Woodbine depositional systems, southern pilot area, East Texas field: presented to PTTC Texas/Southern New Mexico Region workshop, Pilot Study of the East Texas Field: Geology, Engineering, and Potential Exploitation, Kilgore, Texas, October 30, 2007.

Depositional systems of uranium in south Texas: presented at the Gulf Coast Association of Geological Societies Annual Conference, Corpus Christi, Texas, October 23, 2007.

Woodbine depositional systems, southern pilot area, East Texas field: presented at the East Texas Engineering Association Annual Meeting, Kilgore, Texas, October 10, 2007.

Decarbonized power, energy for the future: clean coal, CO2 sequestration, and the EOR prize in the Gulf Coast and Permian Basin: invited talk presented at the All-Division Luncheon, Southwest Section, AAPG Annual Convention, Wichita Falls, Texas, April 24, 2007.

Near- to mid-term energy mineral resources: bridging the future to alternative energy: presented at the 2007 AAPG Annual Convention, Long Beach, California, April 3, 2007.

The Energy Minerals Division of AAPG: presented to the AAPG House of Delegates, Long Beach, California, April 1, 2007.

Geologic factors controlling CO2 storage capacity and permanence--techniques and case studies based on experience with heterogeneity in oil and gas reservoirs applied to CO2 storage: poster presented to Austin Geological Society, Austin, Texas, March 5, 2007.

Update on the Energy and Minerals Division of AAPG: presented at the All-Division Luncheon of the 2006 Eastern Section of American Association of Petroleum Geologists Meeting, Buffalo, New York, October 10, 2006.

The Energy and Minerals Division of AAPG: presented at the Opening Session of the 2006 Eastern Section of American Association of Petroleum Geologists Meeting, Buffalo, New York, October 8, 2006.

FutureGen: clean-coal and near-zero-emission power generation technology for the Gulf Coast: presented at GCAGS Annual Convention, Lafayette, Louisiana, September 27, 2006.

The Energy Minerals Division of AAPG: presented at DPA Luncheon, GCAGS Annual

Convention, Lafayette, Louisiana, September 27, 2006.

Worldwide tidal depositional systems: presented as core workshop and lecture, Quantitative Clastic Laboratory Field Course: Tidal Reservoir Architectures, Austin, Texas, September 5-9, 2006.

Worldwide tidal depositional systems: presented to Quantitative Clastics Laboratory consortium members, Grand Junction, Colorado, September 8, 2006.

BEG-Pemex integrated basin and play assessment of the southern Laguna Madre-Tuxpan continental shelf, northeastern Mexico: presented to Quantitative Clastics Laboratory consortium members, Grand Junction, Colorado, August 15, 2006.

U.S. energy mineral resources and frontiers: presented to San Antonio Chapter, SIPES, San Antonio, Texas, July 20, 2006.

CO2 EOR plays and geologic controls on CO2 sequestration in the Gulf Coast and Permian Basin: presented at Southwest Section AAPG Annual Meeting, Midland, Texas, May 22-24, 2006.

U.S. energy minerals: unconventional resources for the future: presented at Southwest Section AAPG Annual Meeting, Midland, Texas, May 22-24, 2006.

Update on CO2 injection research at the Gulf Coast Carbon Center: presented at the 2006 TCEQ Environmental Trade Fair and Conference, Austin, Texas, May 10, 2006.

First-order relationships between lunar crater morphology, degree of degradation, and relative age: the crater degradation index: presented at American Association of Petroleum Geologists Annual Meeting, Houston, Texas, April 11, 2006.

Structural and stratigraphic controls on storage and CO2 EOR potential in major basins in Texas, California, Illinois, and Michigan: presented at American Association of Petroleum Geologists Annual Meeting, Houston, Texas, April 10, 2006.

Depositional systems and sedimentary facies of coal-forming environments: presented as part of AAPG workshop: Application of depositional systems to coalbed methane and shale gas exploration: core workshop for sorbed gas reservoir systems, Houston, Texas, April 7, 2006.

Depositional systems and sedimentary facies of coal-forming environments: presented as part of Application of depositional systems to coalbed methane and shale gas exploration: core workshop for sorbed gas reservoir systems: AAPG Short Course #13, Houston, Texas, April 7, 2006.

Review and description of coal and shale whole cores and mobile injection falloff laboratory: presented as part of Application of depositional systems to coalbed methane and shale gas exploration: core workshop for sorbed gas reservoir systems: AAPG Short Course #13, Houston, Texas, April 7, 2006.

Source-sink matching and potential for carbon capture and storage in the Gulf Coast: presented at the 2006 UIC Conference of the Groundwater Protection Council, Austin, Texas, January 25, 2006.

Description of GCCC CO2 projects: presented at the GCCC-PTTC Workshop, Reserve Growth Potential of CO2 Enhanced Oil Recovery along the Gulf Coast, Houston, Texas, December 13, 2005

Geologic character of Gulf Coast reservoirs: presented at the GCCC-PTTC Workshop, Reserve Growth Potential of CO2 Enhanced Oil Recovery along the Gulf Coast, Houston, Texas, December 13, 2005.

Introduction to the Gulf Coast Carbon Center: presented at the GCCC-PTTC Workshop, Reserve Growth Potential of CO2 Enhanced Oil Recovery along the Gulf Coast, Houston, Texas, December 13, 2005.

FutureGen in Texas: alternative for electric generation: presented at the 2005 Global Energy and Environmental Issues Conference, Santa Fe, New Mexico, December 10, 2005.

The Gulf Coast Carbon Center: ongoing work: presented at the Third Annual CO2 Conference, Midland, Texas, December 7, 2005.

The Gulf Coast Carbon Center: presented to Mitteldeutsche Braunkohlengesellschaft mbH, Austin, Texas, November 22, 2005.

Gulf Coast Carbon Center: presented to Schlumberger Water and Carbon Services, Austin, Texas, August 19, 2005.

Gulf Coast Carbon Center update: presented to Gulf Coast Carbon Center partners, Houston, Texas, August 16, 2005.

Delineating CO2 sinks in the Gulf Coast: presented to Texas FutureGen project team, Austin, Texas, August 12, 2005.

Pliocene and upper Miocene gas plays in the Macuspana Basin: presented to Pemex Exploración y Producción, Coatzacoalcos, Mexico, April 27, 2004.

Geologic controls on Neogene deep-water and shelf gas plays, Laguna Madre-Tuxpan continental shelf, Eastern Mexico: presented at the American Association of Petroleum Geologists Annual Convention, Dallas, TX, April 19, 2004.

Definition of the geological framework and exploration plays of the Miocene of the Burgos Basin, northern Mexico: presented to Pemex Exploración y Producción, Poza Rica, Mexico, March 23, 2004.

Geologic framework of upper Miocene and Pliocene gas and oil plays in the Macuspana Basin, southeastern Mexico: presented to the Houston Geological Society, Houston, Texas, March 15, 2004.

BEG and Pemex basin- and play-analysis research: Laguna Madre-Tuxpan study: presented to Landmark Graphics Corporation, Austin, TX, March 4, 2004.

Play summary and workshop, Miocene plays, Burgos Basin: presented to Pemex Exploración y Producción, Reynosa, Mexico, February 25, 2004.

Final play definition and ranking: Miocene plays, Burgos Basin: presented to Pemex Exploración y Producción, Reynosa, Mexico, February 24, 2004.

Play definition and ranking: Miocene plays, Burgos Basin: presented to Pemex Exploración y Producción, Reynosa, Mexico, December 10, 2003.

BEG-Pemex integrated basin and play assessment studies in Mexico: presented to ChevronTexaco, Austin, TX, December 8, 2003.

Pliocene and upper Miocene gas plays in the Macuspana Basin: presented to Pemex Exploración y Producción, Villahermosa, Mexico, November 4, 2003.

Seismic facies and attribute analysis of the Miocene incised-valley-fill and submarine-canyon systems in Tuxpan Basin, offshore Mexico: presented at the International Exposition and 73rd Annual Meeting of the Society of Exploration Geophysicists, Dallas, TX, October 28, 2003.

Miocene valley-fill, slope, and submarine-canyon systems in the Laguna Madre-Tuxpan area, Mexico: presented at the Annual Meeting of the Gulf Coast Association of Geological Societies, Baton Rouge, LA, October 24, 2003.

BEG-Pemex integrated basin and play assessment of the southern Laguna Madre-Tuxpan continental shelf, northeastern Mexico: presented to the University of Texas Foundation Advisory Committee, Austin, TX, October 16, 2003.

Play summary and workshop, Miocene and Pliocene plays, Laguna Madre-Tuxpan area:

presented to Pemex Exploracion y Produccion, Poza Rica, Mexico, August 15, 2003.

Defining hydrocarbon plays in Mexico--a joint Bureau/PEMEX project: presented at Meeting of the Texas PTTC Producers Advisory Group (PAG) and State of Texas Policy Makers, Austin, Texas, May 22, 2003.

The Macuspana Basin, South Gulf of Mexico: impact of shale tectonics and late contraction of an extensional basin on hydrocarbon accumulation: presented at the American Association of Petroleum Geologists Annual Meeting, Salt Lake City, Utah, May 12, 2003.

Integrated study of the geologic framework and play assessment of the Macuspana Basin and Laguna Madre-Tuxpan projects: presented to Ing. Raul Muñoz-Leos and Pemex delegation, Austin, Texas, November 21, 2002.

BEG and Pemex basin- and play-analysis research: presented to Landmark Graphics Corporation, Austin, Texas, November 12, 2002.

Upper Miocene and Pliocene shallow-marine and deepwater, gas-producing systems in the Macuspana Basin, Southeastern México: presented at Gulf Coast Association of Geological Societies, 52nd Annual Convention, Austin, Texas, October 31, 2002.

Seismic imaging of upper Miocene fluvial reservoirs in the southern Macuspana Basin, Southeastern México: presented at Society of Exploration Geophysicists, International Exposition and Seventy-First Annual Meeting, Salt Lake City, Utah, October 10, 2002.

Play assessment of Pliocene and upper Miocene gas and oil reservoirs, Macuspana and Veracruz Basins, Southeastern México: presented to El Paso Production Company, Austin, Texas, July 10, 2002.

Study of evaluation of the Pliocene and upper Miocene plays of the Macuspana Basin: presented to Pemex Exploración y Producción, Tampico, Mexico, April 26, 2002.

Study of evaluation of the Pliocene and upper Miocene plays of the Macuspana Basin: presented to Pemex Exploración y Producción, Poza Rica, Mexico, April 24, 2002.

Pliocene and Miocene shoreface gas plays in the Macuspana Basin, southeastern México: presented at American Association of Petroleum Geologists Annual Meeting, Houston, Texas, March 12, 2002.

Gas reserves growth study of middle Frio fluvial gas reservoirs in La Gloria field, South Texas: presented to Katsumi Nakasuka (Teikoku Oil Co., Ltd.), Austin, Texas, January 17, 2002.

Coalbed methane: a significant source of unconventional gas in western North America, with additional potential in Texas and Mexico: presented at the 4th Conferencia Internacional Conjunta, Veracruz, Mexico, November 5, 2001.

Preliminary assessment of the coalbed methane potential of Mexico: presented at the 4th Conferencia Internacional Conjunta, Veracruz, Mexico, November 5, 2001.

Structural and stratigraphic controls on regional Miocene and Pliocene gas plays in the Macuspana Basin, southeastern Mexico: presented at the 4th Conferencia Internacional Conjunta, Veracruz, Mexico, November 5, 2001.

Valley-fill and estuarine depositional sequences inferred from cores and lithologic maps of Lower Eocene tide-dominated depositional reservoirs in the Lower Eocene Misoa Formation, Bloque I, Lake Maracaibo: guest lecture: L. F. Brown's Sequence Stratigraphy Short Course, Bureau of Economic Geology, The University of Texas at Austin, Austin, Texas, April 25, 2001.

Facies mapping of fluvial gas reservoirs in Seeligson field, South Texas: presented to American Geological Institute and American Association of Petroleum Geologists, Austin, Texas, January 16, 2001.

Correlation of fluvial gas reservoirs in Stratton field, South Texas: presented to American

Geological Institute, Austin, Texas, August 31, 2000.

Siliciclastic depositional systems and component lithofacies in petroleum exploration and production: presented to PEMEX Exploration and Production, S. A., Veracruz, Mexico, August 7-11, 2000.

Stratigraphic framework and depositional systems analysis of shoreface and fluvial reservoirs at Corpus Christi Northwest and East Corpus Christi fields, Corpus Christi Bay: presented to Royal Exploration Company, Inc., Corpus Christi, Texas, April 25, 2000.

Oil- and gas-related research in Latin America: presented to Philip Vasquez, Deputy Assistant Secretary of the U. S. Department of Energy, Austin, Texas, October 14, 1999.

Fluvial and deltaic models for oil production in the Mioceno Norte Area, Lake Maracaibo, Venezuela: presented at Revitalizacion de provincias petroliferas maduras, Tercera Conferencia Internacional Conjunta, Asociacion Mexicana de Geologos Petroleros and American Association of Petroleum Geologists, Veracruz, Mexico, October 12, 1999.

Application of RMS Amplitude anomaly mapping in inferring controls on fluid saturation and fault-bound reservoir compartments in the C4 Member (Lower Misoa Formation), Phase III Area, Bloque I Area, Lake Maracaibo, Venezuela: presented at 6th International Conference of the Brazilian Geophysical Society, Rio de Janeiro, August 18, 1999.

Seismic sedimentology of Miocene deposits in the Mioceno Norte Area, Lake Maracaibo, Venezuela: presented at 6th International Conference of the Brazilian Geophysical Society, Rio de Janeiro, August 17, 1999.

Mesotidal barrier, tidal-channel, and ebb-tidal delta depositional analogues for the Lower Merecure T- MFS 80 reservoir, Guarico 13/10 Area, Eastern Venezuela: presented to Teikoku Oil de Sanvi-Guere, Austin, Texas, July 8, 1999.

Production optimization project, Lagunillas LL-652 field, Lake Maracaibo: presented to Exxon, Inc., Austin, Texas, February 19, 1999.

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Application of facies analysis to improve gas reserve growth in fluvial Frio reservoirs, La Gloria field, South Texas: American Association of Petroleum Geologists (AAPG) annual meeting, Houston, Texas, March 23, 1988.

Fluid-injection potential of Miocene barrier island and wave-dominated deltaic sands in the Northeast Hitchcock and Alta Loma fields, Galveston County, Texas: Society of Economic Paleontologists and Mineralogists (SEPM) annual meeting, Austin, Texas, August 22, 1987.

## Activities of a Professional Nature

### **Professional Societies**

American Association of Petroleum Geologists

**Houston Geological Society** 

Society of Economic Paleontologists and Mineralogists

### Activities of a Professional Nature

Program Development: wrote proposal, Focused Research in Air Quality and Produced Water/Management in Oil and Gas E & P: Area of Interest 2: Produced Water Management, May 3, 2002

Program Development: wrote proposal, Macuspana Basin Updated Risked Onshore Play Assessment, 2004

### **Publications**

## Peer Reviewed Authored Books

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