Michael R. Hudec

Professional Summary

July 16, 2024

Business address:	The University of Texas at Austin Bureau of Economic Geology 10100 Burnet Rd., Bldg. 130 Austin, TX 78758
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Professional Preparation

Academic Background

Ph.D. Geology, University of Wyoming, 1990

M.S. Geology, University of Southern California, 1987

B.A. Geology, Amherst College, 1983

Professional Appointments

Present Position: Senior Research Scientist, Bureau of Economic Geology, The University of Texas at Austin (August 2000 - Present). Co-Principal Investigator of the Applied Geodynamics Lab Industrial Associates program studying salt tectonics. Responsibilities shared with Martin Jackson: establishing AGL research directions, administrative decision-making, visits to supporting companies. Sole responsibilities: computer issues, slide set distribution, annual meeting logistics, website maintenance, intra-team technical review meetings. Research responsibilities: developing guidelines for the interpretation and restoration of salt structures and techniques for understanding sediment geometries and hydrocarbon traps adjacent to salt structures.

Assistant Professor, Baylor University, Waco, TX (September 1997 - August 2000). Responsible for teaching graduate and undergraduate classes, advising graduate students, and developing and administering a research program in structural geology. Full member of graduate faculty.

Research Scientist, Exxon Production Research, Houston, TX (October 1989 - September 1997). Duties included research in structural geology, short-term research application assignments for Exxon exploration and production affiliates, and teaching in a variety of Exxon internal schools.

Theses

Geology of a portion of the Lewis thrust plate north of Two Medicine Lake, Glacier National Park, Montana: Los Angeles, California, University of Southern California, M.S. thesis, 192 p., 1987

Dissertations

The structural and thermal evolution of the central Ruby Mountains, Elko County, Nevada: Laramie, Wyoming, University of Wyoming, Ph.D. dissertation, 272 p., 1990

Continuing Education Courses Taken

Exxon Field Safety course: Austin, Texas, May 9-10, 2014

La Popa Basin Field Seminar: La Popa Basin Joint Industry Research Consortium, Monterrey, Mexico, December 2005

Fold-Thrust Belts: Petroleum Potential, Global Setting, Geodynamics: Dietrich Ryder, Austin, Texas, March 2003

Practical Seisworks: Landmark Graphics, Houston, Texas, March 2003

Photoshop Beyond the Basics: The University of Texas at Austin, Austin, Texas, July 2002

Photoshop Basics: The University of Texas at Austin, Austin, Texas, June 2002

Areas of Expertise

Areas of Expertise

3-D computer modeling

Cross-section restoration and balancing

Salt tectonics

Seismic interpretation

Shale tectonics

Structural geology

Awards

Awards and Honorary Societies

2019 Tinker Family BEG Publication Award for Exemplary Publication of Scientific or Economic Impact: "Structural evolution of salt-influenced fold-and-thrust belts: a synthesis and new insights from basins containing isolated salt diapirs," Journal of Structural Geology, 2018, v. 11, p 206-221.

Award of Excellence, "Top 10" Poster Presentation at AAPG Annual Convention, Canopy Evolution: Deformation Processes and Subsidence Patterns

AAPG/SEG IMAGE's Poster Paper Honorable Mention (runner up) at IMAGE 2023 for "What makes Campeche tick? Evaluating controls on
deformation patterns and styles in the salt-detached Campeche Basin, southern Gulf of Mexico: insights from physical models", 2023

2022 Robert Mitchum Award for best paper published in Basin Research journal in 2021, 2022

AAPG Jules Braunstein Memorial Award, 2019

Jules Braunstein Memorial Award - best poster presentation at AAPG Annual Meeting, 2019

AAPG Distinguished Lecturer, 2018-2019

Honorable Mention, Earth Science Category, Prose Award from Association of American Publishers, 2018

Mary B. Ansari Best Geoscience Research Resource Work Award, 2018

Runner Up, University of Texas at Austin Hamilton Book Award, 2018

Tinker Family Publication Award, 2018

Award of Excellence, Top 10 Oral Presentation at AAPG Annual Convention: Basement structure and Jurassic evolution of the southern Gulf of Mexico salt province, 2017

AAPG A. I. Levorsen Memorial Award for Best Paper Presented, 2012 GCAGS Convention, Austin, Texas, 2012

First Place Thomas A. Philpott Excellence of Presentation Award, 2012 GCAGS Convention, Austin, Texas, 2012

Publication Award, Bureau of Economic Geology, in Special Recognition by the Director for

Landmark Publication, "The Salt Mine: A Digital Atlas of Salt Tectonics", 2012

Award of Excellence, "Top 10" Poster Presentation at AAPG Annual Convention, Is There a Subsalt Foldbelt in the Central U.S. Gulf of Mexico?, 2010

Award of Excellence, "Top 10" Poster Presentation at AAPG Annual Convention, Deformation Styles and Linkage of Salt Walls during Oblique Shortening, 2009

Jules Braunstein Memorial Award for best poster at AAPG Annual Convention, Dismembered Sutures Formed during Asymmetric Salt-Sheet Collision, 2008

Publication Award, Bureau of Economic Geology (exemplary publication of scientific or economic impact), 2008

A. I. Levorsen Award as co-author of Best Paper presented at Gulf Coast Section, AAPG Annual Meeting, Importance of Allochthonous Salt in Texas State Waters: Paleo-Canopy Presence and New Exploration Paradigms, 2007

American Association of Petroleum Geologists George C. Matson Award for "A Compressional Origin for Minibasins near the Sigsbee Escarpment, Gulf of Mexico", 2005 - 2006

Outstanding Instructor Award, Exxon Production Research Company, 1993

National Science Foundation Graduate Fellowship, 1988 - 1989

National Science Foundation Graduate Fellowship, 1987 - 1988

National Science Foundation Graduate Fellowship, 1986 - 1987

University of Southern California All-University Merit Fellowship, 1985 - 1986

University of Southern California All-University Merit Fellowship, 1984 - 1985

Service

External Committees Participation

Member, Associate Director for Energy Search Committee, Bureau of Economic Geology, 2016

Senior Technical Advisor, Bureau of Economic Geology, 2012-2014

Session Chair, Salt, Sub-Salt and Pre-Salt Tectonics, Models and Hydrocarbon Traps, 2010 American Association of Petroleum Geologists Annual Convention, New OrleansApril, 2010

Member, Appointments Committee, Jackson School of Geosciences, 2008 - 2010

Session Chair, Salt Basins of the World: Broadening our Understanding of Salt Tectonics, 2009 Annual American Association of Petroleum Geologists Convention, Denver, Colorado June, 2009

Chair, Promotions Advisory Committee, Bureau of Economic Geology, 2008 - 2009

Member, Promotions Advisory Committee, Bureau of Economic Geology, 2007 - 2009

Session Chair, New Insights in Allochthonous Salt Tectonics, 2008 American Association of Petroleum Geologists Annual Convention, San AntonioApril, 2008

Member, Endowment Committee, John A. and Katherine G. Jackson School of Geosciences, The University of Texas at Austin, 2005 - 2006

Member, Initiative Review Committee, John A. and Katherine G. Jackson School of Geosciences, The University of Texas at Austin, 2005

Chair, Associate Director for Environmental Research Search Committee, Bureau of Economic Geology, 2003 - 2004

Member, Program Advisory Committee, Gulf Coast Section-Society of Economic Paleontologists and Mineralogists 24th Annual GCSSEPM Foundation Bob F. Perkins Research Conference,

Houston, Texas, 2002 - 2004

Leader, Salt and Extensional Tectonics in the Paradox Basin, Field Seminar, American Association of Petroleum Geologists, Moab, Utah, 2003

Member, Information Distribution System Task Force, Bureau of Economic Geology, Austin, Texas, 2002

Published Interviews

Thomas Smith, Dooley, T. P., and Hudec, M. R., 2015, Cover story for GEOExPro Article: Puzzling Salt Structures

Hudec, M. R., 2014, Series of podcasts for Virtual Field Trip to Upheaval Dome, Utah. Available on the Virtual Field Trip website and on YouTube.

Outreach Activities

Career Day: presented to Blazier Elementary School, Austin, Tex., February 22, 2019.

Career Day: presented to students of Blazier Elementary, Austin, Tex., May 11, 2016.

Volcanic eruptions and other geologic processes: presented at Blazier Elementary, Austin, Texas, February 19, 2013.

Geologic processes: presented to the 2nd and 4th grades at Blazier Elementary School, Austin, Texas, February 2012.

Proposal Review Panels Participation

AAPG Bulletin (Megaflaps adjacent to salt diapirs), 61 p., 2016

GCAGS (Distribution and detachment level of salt keels in the deep water northern Gulf of Mexico: insights into canopy advancement, salt sediment interplay, and evidence for unrecognized mass sediment displacement.), 42 p., 2016

Geological Society, London (The South Atlantic and Gulf of Mexico salt basins: crustal thinning, subsidence and accommodation for salt and presalt strata), 47 p., 2016

Geology (U-Pb ages of salt diapir xenoliths, northeastern Mexico: Late Jurassic magmatism and salt deposition in the Gulf of Mexico region), 29 p., 2016

International Journal of Earth Sciences (Structure of K-Mg layers in the Zechstein III of the Veendam Pillow, NE Netherlands: development of a tectonic mélange during salt flow), 48 p., 2016

JGR: Solid Earth (Topographic controlled forcing of salt flow: three-dimensional models of an active salt system, Canyonlands, Utah), 42 p., 2016

Springer (Rifting and salt deposition in continental margins: differences and similarities between the Red Sea and the South Atlantic sedimentary basins), 35 p., 2016

Wiley (Salt tectonics in sedimentary basins), 13 p., 2016

AAPG Bulletin (Exposed minibasins province and salt-related structures: The central Sivas basin, Turkey), 70 p., 2015

Geophysical Journal International (Deciphering internal salt-wall structure using AMS; the Naval diapir case [southern Pyrenees]), 43 p., 2015

AAPG Bulletin (Allochthonous salt initiation and advance in the northern Flinders and eastern Willouran ranges, South Australia: using outcrops to test subsurface-based models from the northern Gulf of Mexico), 68 p., 2014

AAPG Bulletin (Modelling the 3D evolution of salt controlled minibasins), 39 p., 2014

American Chemical Society / Petroleum Research Fund (Temperature-dependent physical

properties of evaporites and related rocks: new constraints on the thermal evolution of sedimentary basins), 25 p., 2014

Elsevier Journal of Marine and Petroleum Geology (Integrated salt studies), 120 p., 2014

Elsevier Marine and Petroleum Geology (Integrated salt studies), 120 p., 2014

Elsevier Marine and Petroleum Geology (The structural styles and formation mechanism of salt structures in the Southern Precaspian Basin: insights from seismic data and analogue modeling), 45 p., 2014

Basin Research (Article), 2013

Basin Research (Article), 2013

Basin Research (Article), 61 p., 2013

Marine and Petroleum Geology (Article), 2013

AAPG Bulletin (Article), 2012, 48 p.

AAPG Bulleting (Article), 2012, 52 p.

Geology (Article), 2012, 16 p.

Earth and Planetary Science Letters (Article), 2011, 51 p.

GCAGS Transactions (Article), 2011, 35 p

Geology (Article), 2011, 15 p

Marine and Petroleum Geology (Article), 2011, 46 p

National Science Foundation (Research Proposal), 2011, 53 p

GCAGS Transactions (Article), 2010, 15 p

Geological Society of America Bulletin (Article), 2010, 58 p

Geology (Article), 2009, 18 p

GSA Bulletin (Article), 2009, 58 p

Journal of the Geological Society (Article), 2009, 30 p

Geological Magazine (Article), 2008, 29 p

Journal of Structural Geology (Article), 2008, 40 p

Marine and Petroleum Geology (Article), 2008, 24 p

Marine and Petroleum Geology (Article), 2008, 46 p

AAPG Bulletin (Article), 2007, 39 p.

Deep Shelf Gas (BEG Contract Report), 2007, 37 p.

Earth-Science Reviews (Article), 2007, 56 p.

Journal of Structural Geology (Article), 2007, 40 p.

Marine and Petroleum Geology (Article), 2007, 24 p.

AAPG Bulletin (Article), 2006, 24 p

AAPG Bulletin (Article), 2006, 39 p

AAPG Bulletin (Article), 2006, 42 p

American Chemical Society (Research Proposal), 2006

Basin Research (Article), 2006, 31 p.

AAPG Bulletin (Article), 2005, 38 p

AAPG Bulletin (Article), 2005, 46 p

American Chemical Society (Research Proposal), 2005, 41 p

Springer International Geologische Rundschau (Article), 2004, 22

American Chemical Society (Research Proposal), 2003

Geological Society of America Bulletin (Article), 2003, 30

Gulf Coast Section SEPM Annual Research Conference (Article), 2002, 20

Gulf Coast Section SEPM Annual Research Conference (Article), 2002, 22

National Science Foundation (Research Proposal), 2002, 25

American Chemical Society Petroleum Research Fund (Research Proposal), 2001, 20

American Chemical Society Petroleum Research Fund (Research Proposal), 2001, 38

Bureau of Economic Geology Guidebook 28 (Article), 2001, 12

Bureau of Economic Geology Guidebook 28 (Article), 2001, 26

Bureau of Economic Geology Guidebook 28 (Article), 2001, 26

Bureau of Economic Geology Guidebook 28 (Article), 2001, 27

Bureau of Economic Geology Guidebook 28 (Article), 2001, 30

National Environment Research Council (Research Proposal), 2001, 31

AAPG Bulletin (Article), 51 p

GCAGS (Article), 13 p.

Geological Society of London (Article), 43 p

GSA Bulletin (Article), 58 p

Teaching and Advising

University Courses Taught

Salt Systems: presented to Seismic Structural Analysis - UT graduate-level course, online, April 6, 2021.

Influence of basement structure on evolution of the deepwater Gulf of Mexico: presented at BEG technical seminar, Austin, Texas, October 2010.

GEO 191, Earth Surface and Hydrologic Processes: presented at The University of Texas at Austin (co-taught with Peter Flemings), Austin, Texas, Fall 2009.

GEO 191, Earth Surface and Hydrologic Processes: presented at The University of Texas at Austin (co-taught with Peter Flemings), Austin, Texas, Fall 2008.

Principles and Applications of Salt Tectonics: presented to The University of Texas at Austin AAPG Student Chapter, Austin, Texas, January 26-27, 2006.

A compressional origin for minibasins near the Sigsbee Scarp, Gulf of Mexico: presented at BEG technical seminar, Austin, Texas, September 2005.

Regional restoration across the Kwanza Basin, Angola: salt tectonic triggered by repeated uplift of a metastable passive margin: presented at Baylor University Geology Colloquium, Waco, Texas, October 1, 2003.

Introducing "The Salt Mine": presented at BEG technical seminar, Austin, Texas, April 2002.

Physical geology: presented to Geology 1405, Baylor University, Waco, Texas, February 2000.

Structural geology: presented to Geology 3445, Baylor University, Waco, Texas, February 2000.

Geology 1405, Physical Geology: Baylor University, October 1999.

Geology 5377/4V90, Hydrocarbon Structural Styles: Baylor University, October 1999.

Geology 1405, Physical Geology: Baylor University, February 1999.

Geology 5325-03, Advanced Metamorphic Petrology: Baylor University, February 1999.

Geology 1405, Physical Geology: Baylor University, October 1998.

Geology 3445, Structural Geology: Baylor University, October 1998.

Geology 5V90-05, Construction of Balanced Cross-Sections: Baylor University, October 1998.

Geology 1405, Physical Geology: Baylor University, February 1998.

Geology 5377-02, Tectonic evolution of Western North America: Baylor University, February 1998.

Physical geology: presented to Geology 1405, Baylor University, Waco, Texas, October 1997.

Structural geology: presented to Geology 3445, Baylor University, Waco, Texas, October 1997.

Continuing Education Courses Taught

Principles and Applications of Salt Tectonics: presented to Petronas, Remotely, September 18-22, 2022.

Seismic and Reservoir Structural Analysis for North Sea Chalk Fields: presented to ConocoPhillips, remotely, June 20-21, 2022.

Principles and Applications of Salt Tectonics: presented to Schlumberger, online, October 25, 2021.

Principles and Applications of Salt Tectonics: presented to Schlumberger, online, May 17, 2021.

Introduction to Salt Tectonics: presented to WesternGeco, Houston, Tex., February 3, 2020.

Basics of Salt Tectonics: presented to BHP Billiton, Houston, Texas, July 22, 2019.

Principles and Applications of Salt Tectonics: presented to PETRONAS, Kuala Lumpur, Malaysia, March 27-28, 2019.

Principles and Applications of Salt Tectonics: presented to PETRONAS, Kuala Lumpur, Malaysia, March 25-26, 2019.

Principles and Applications of Salt Tectonics: presented to Woodside, Perth, Western Australia, April 12-13, 2018.

Principles and Applications of Salt Tectonics: presented to Petronas, Kuala Lumpur, Malaysia, January 23-24, 2018.

Principles and Applications of Salt Tectonics: presented to Petronas, Kuala Lumpur, Malaysia, January 22-23, 2018.

Advanced Salt Tectonics--Geologic Principles for Seismic Interpretation in the Northern Gulf of Mexico: presented to CGG, Houston, Texas, December 5-6, 2016.

Distribution of Salt Structural Styles in the Deepwater Gulf of Mexico: presented to CGG, Houston, Texas, August 22-23, 2016.

Principles and Applications of Salt Tectonics: presented to Woodside, Perth, Western Australia, February 15-16, 2016.

Distribution of salt structural styles in the deepwater Gulf of Mexico: presented to CGG,

Houston, December 7-8, 2015.

Advanced salt tectonics--geologic principles for seismic interpretation in the northern Gulf of Mexico: presented to CGG, Houston, Texas, July 13-14, 2015.

Principles and applications of salt tectonics: presented to CGG, Houston, Texas, June 18-19, 2015.

Principles and applications of salt tectonics: presented to Woodside, Ltd., Perth, Australia, May 11-12, 2015.

Advanced salt tectonics - geologic principles for seismic interpretation in the northern Gulf of Mexico: presented to CGG, Houston, TX, July 14-15, 2014.

Principles and applications of salt tectonics: presented to BHP Billiton, Houston, TX, February 26-27, 2014.

Principles and applications of salt tectonics: presented to Pemex, Villahermosa, Mexico, February 17-18, 2014.

Principles and applications of salt tectonics: presented to Woodside, Perth, Australia, October 2013.

Introduction to Salt Tectonics: presented to Cairn Energy, Grand Junction, Colorado, April 7-8, 2013.

Principles and applications of salt tectonics: presented to Cairn Energy, Grand Junction, Colorado, April 2013.

Advanced Salt Tectonics--Geologic Principles for Seismic Interpretation in the Northern Gulf of Mexico: presented to CGGVeritas, Houston, Texas, March 11-12, 2013.

Advanced salt tectonics--geologic principles for seismic interpretation in the northern Gulf of Mexico: presented to CGG, Houston, Texas, March 2013.

Advanced salt tectonics--geologic principles for seismic interpretation in the northern Gulf of Mexico: presented to CGGVeritas, Houston, Texas, October 8-9, 2012.

Introduction to salt tectonics: presented to Korea National Oil Corporation, Seoul, South Korea, September 11, 2012.

Principles and applications of salt tectonics: presented to GEMS, Houston, Texas, October 5-6, 2011.

Principles and applications of salt tectonics: presented to Fugro, Houston, Texas, October 3-4, 2011.

Principles and applications of salt tectonics: presented to PGS, Houston, Texas, August 17-18, 2011.

Principles and applications of salt tectonics: presented to TPAO, Ankara, Turkey, June 20-21, 2011.

Principles and applications of salt tectonics: presented to Saudi Aramco, Dhahran, Saudi Arabia, June 11-12, 2011.

Early history of the Gulf of Mexico Salt Basin: geologic evolution and implications: presented at CGGVeritas University, Houston, Texas, April 4, 2011.

Principles and applications of salt tectonics: presented to ENI, Houston, Texas, February 7-8, 2011.

Principles and applications of salt tectonics: presented to Fugro, Houston, Mexico, September 1-2, 2010.

Principles and applications of salt tectonics: presented to Fugro, Houston, Texas, September

1-2, 2010.

Principles and applications of salt tectonics: presented to Pemex, Ciudad del Carmen, Mexico, June 28-29, 2010.

Seismic Interpretation of allochthonous salt: part 1--top of salt: presented at CGGVeritas University, Houston, Texas, March 15, 2010.

Salt and plate tectonics in the deepwater South Atlantic and Gulf of Mexico: presented at Chevron Hydrocarbon Charge Workshop, Austin, Texas, March 31, 2009.

Principles and applications of salt tectonics: presented to TGS-NOPEC, Houston, Texas, March 26-27, 2008.

Principles and applications of salt tectonics: presented to Pemex, Villahermosa, Mexico, February 11-12, 2008.

Principles and applications of salt tectonics: presented to CGGVeritas, Houston, Texas, October 25-26, 2007.

Advanced concepts in salt tectonics: presented to CGGVeritas, Houston, Texas, October 24, 2007.

Principles and applications of salt tectonics: presented to CGGVeritas, Houston, Texas, October 22-23, 2007.

Principles and applications of salt tectonics: presented to Pemex, Poza Rica, Mexico, March 26-27, 2007.

Advanced concepts in salt tectonics: presented to PGS, Houston, Texas, February 22, 2007.

Principles and applications of salt tectonics: presented to ConocoPhillips, Houston, Texas, January 11-12, 2007.

Principles and applications of salt tectonics: presented to ConocoPhillips, Houston, Texas, January 11-12, 2007.

Principles and applications of salt tectonics: presented to Veritas, Houston, Texas, November 14-15, 2006.

Principles and applications of salt tectonics: presented to Fugro, Houston, Texas, November 9-10, 2006.

Principles and applications of salt tectonics: presented at Veritas Hampson Russell, Houston, Texas, November 6-7, 2006.

Deepwater salt tectonics: presented at AAPG Fall Education Conference, Houston, Texas, September 14-15, 2006.

Principles and applications of salt tectonics: presented to Woodside Energy, Ltd., Perth, Australia, August 2006.

Salt tectonics: presented at AAPG E&P Methods and Technologies School, Dallas, Texas, April 9, 2006.

Salt tectonics: presented at AAPG E&P Methods and Technologies School, Dallas, Texas, April 9, 2006.

Mechanics of the advance of buried salt sheets and implications for predicting subsalt pore pressure: presented at GX Technology Research Conference, Houston, Texas, March 21, 2006.

Evolution of compressional minibasins: presented at BP, Sunbury, England, February 20, 2006.

Import and export of salt from squeezed stocks: presented at BP, Sunbury, England, February 20, 2006.

Styles of active diapirism in offshore Mauritania: shortening vs. halokinesis: presented at BP, Sunbury, England, February 20, 2006.

The great West-African Tertiary coastal uplift: fact or fiction? A perspective from the Angoland divergent margin: presented at BP, Sunbury, England, February 20, 2006.

Thrust faults and salt welds associated with squeezed stocks: presented at BP, Sunbury, England, February 20, 2006.

Advanced course in allochthonous salt tectonics: presented to Veritas Hampson Russel, Houston, Texas, February 2006.

Principles and applications of salt tectonics: presented to Veritas Hampson Russel, Houston, Texas, February 2006.

Diachronous growth of fold limbs on the Mad Dog Anticline: implications for base-salt deformation in the Atwater Fold Belt: presented at ExxonMobil, Houston, Texas, January 16, 2006.

Emplacement of allochthonous salt sheets in passive margins and orogens: presented at ExxonMobil, Houston, Texas, January 16, 2006.

Evolution of compressional minibasins: presented at ExxonMobil, Houston, Texas, January 16, 2006.

Far-traveled minibasins and the great Plio-Pleistocene salt surge, Green Canyon, Gulf of Mexico: presented at ExxonMobil, Houston, Texas, January 16, 2006.

Import and export of salt from squeezed stocks: presented at ExxonMobil, Houston, Texas, January 16, 2006.

Thrust faults and salt welds associated with squeezed rocks: presented at ExxonMobil, Houston, Texas, January 16, 2006.

Principles and applications of salt tectonics: presented to Kerr-McGee Oil and Gas, Houston, Texas, November 2005.

Principles and applications of salt tectonics: presented to Forest Oil International, Denver, Colorado, October 2005.

Advanced Seminar in Allochthonous Salt Tectonics: presented to BHP Billiton Petroleum, Houston, Texas, July 2005.

Principles and applications of salt tectonics: presented to Hydro Oil and Energy, Bergen, Norway, May 2005.

Principles and applications of salt tectonics: presented to Forest Oil International, Denver, Colorado, November 2004.

Principles and applications of salt tectonics: presented to Veritas DGC, Houston, Texas, September 2004.

Near-salt deformation: formation of subsalt disturbed zones during salt-sheet advance: presented at BP Salt Symposium, Houston, Texas, June 30, 2004.

Principles and applications of salt tectonics: presented to Repsol-YPF, Madrid, Spain, May 3, 2004.

Salt tectonics: presented at AAPG E&P Methods and Technologies School, Dallas, Texas, April 23, 2004.

Principles and applications of salt tectonics: presented to ChevronTexaco, New Orleans, Louisiana, January 12-13, 2004.

Principles and applications of salt tectonics: 8th International Congress of the Brazilian

Geophysical Society, Rio de Janeiro, Brazil, September 19, 2003.

Effects of basement uplift on passive-margin salt basins: new insights from the Kwanza Basin, Angola: Petrobras Exploration and Production, Rio de Janeiro, Brazil, September 16, 2003.

AGL technology transfer: the Salt Mine and the AGL Website: Petrobras Corporate University, Rio de Janeiro, Brazil, September 12, 2003.

Effects of basement uplift on passive-margin salt basins: new insights from the Kwanza Basin, Angola: Petrobras Corporate University, Rio de Janeiro, Brazil, September 12, 2003.

Effects of rift segmentation on salt tectonics, Kwanza Basin, Angola: Petrobras Corporate University, Rio de Janeiro, Brazil, September 12, 2003.

Estranged neighbors: independent tectonic evolution of the onshore and offshore Kwanza salt basins, Angola: Petrobras Corporate University, Rio de Janeiro, Brazil, September 12, 2003.

Principles and applications of salt tectonics: presented to Veritas DGC, August 2003.

Principles and applications of salt tectonics: presented to Woodside Petroleum, Ltd., May 2003.

Principles and applications of salt tectonics: presented to Encana Petroleum, December 2002.

Principles and applications of salt tectonics: presented to EnCana (twice), Calgary, Canada, 2002.

Principles and applications of salt tectonics: presented to Veritas DGC (four times), Houston, Texas, 2002.

Field Trips Leadership

Leader, Salt and extensional tectonics in the Paradox Basin, Utah, BHP, Equinor, Fieldwood, Hess, Saudi Aramco, Shell, The University of Texas at Austin, September 8-13, 2019.

Leader, Salt and extensional tectonics in the Paradox Basin, Utah, Repsol, May 12-17, 2019.

Leader, Salt and extensional tectonics in the Paradox Basin, Utah, Autonomous University of Barcelona, BHP, BP, Noble, Repsol, Shell, Total, Moab, Utah, September 16-21, 2018.

Leader, Salt and extensional tectonics in the Paradox Basin, Utah, Hess, Moab, Utah, September 9-14, 2018.

Leader, Salt and extensional tectonics in the Paradox Basin, Utah, Equinor, Moab, Utah, June 3-8, 2018.

Leader, Salt and Extensional Tectonics in the Paradox Basin, BHP Billiton, Cairn Energy, Noble Energy, Saudi Aramco, Shell, Moab, Utah, September 11-16, 2016.

Leader, Exploration Around Salt Bodies Field School, Statoil, Moab, Utah, May 15-20, 2016.

Leader, Salt and extensional tectonics in the Paradox Basin, Utah, Moab, Utah, September 27-October 2, 2015.

Leader, Salt and extensional tectonics in the Paradox Basin, Kosmos Energy, Moab, Utah, September 27-29, 2014.

Leader, Salt and extensional tectonics in the Paradox Basin, Apache, BHP Billiton, ConocoPhillips, Freeport-McMoRan, Nexen, Noble, Repsol, Shell, Woodside, Moab, Utah, September 21-26, 2014.

Leader, Exploration around salt bodies field school, Statoil, Moab, Utah, September 15-19, 2014.

Leader, Salt and extensional tectonics in the Paradox Basin, CGG, Moab, Utah, September 11-14, 2014.

Leader, Salt and extensional tectonics in the Paradox Basin, CGG, Moab, Utah, September

21-23, 2013.

Leader, Exploration around salt bodies field school, Statoil, Moab, Utah, September 15-20, 2013.

Leader, Exploration around salt bodies field school, conducted for Statoil, September 2013.

Leader, Salt and extensional tectonics in the Paradox Basin, conducted for CGG, Moab, Utah, September 2013.

Leader, Salt and Extensional Tectonics in the Paradox Basin, conducted for delegates from Cairn Energy, Moab, Utah, May 7-13, 2013.

Leader, Salt and extensional tectonics in the Paradox Basin, conducted for delegates from Apache, Maersk, Marathon, Nexen, Noble, Repsol, Saudi Aramco, and Statoil, Moab, Utah, May 2013.

Leader, Salt and extensional tectonics in the Paradox Basin: conducted for delegates from Apache, BHP, Fugro, Hess, Nexen, Noble, Petrobras, PGS, Shell, and Statoil, Moab, Utah, September 2012.

Leader, Salt and extensional tectonics in the Paradox Basin: conducted for delegates from CGGVeritas, Moab, Utah, September 2012.

Leader, Salt and extensional tectonics in the Paradox Basin: conducted for delegates from Apache, ConocoPhillips, Fugro, Nexen, Noble, Shell, and Statoil, Moab, Utah, June 2012.

Leader, Salt and extensional tectonics in the Paradox Basin: conducted for delegates from Apache, Maersk, Marathon, Nexen, Noble, Repsol, Saudi Aramco, and Statoil, Moab, Utah, May 2012.

Leader, Salt and extensional tectonics in the Paradox Basin: conducted for delegates from Apache, BP, Nexen, Noble, PetroChina, Shell, and Statoil, Moab, Utah, September 2011.

Leader, Salt and extensional tectonics in the Paradox Basin: conducted for delegates from ConocoPhillips, Moab, Utah, September 2011.

Leader, Salt and extensional tectonics in the Paradox Basin: conducted for delegates from BP, Encana, Fugro, Nexen, Repsol, Samson, and Saudi Aramco, Moab, Utah, May 2011.

Leader, Salt and extensional tectonics in the Paradox Basin: conducted for delegates from CGGVeritas, Moab, Utah, May 2011.

Leader, Salt and extensional tectonics in the Paradox Basin: conducted for delegates from BHP Billiton, ConocoPhillips, Fugro, IMP, Nexen, Noble, Pemex, Statoil, Shell, and Total, Moab, Utah, September 2010.

Leader, Salt and extensional tectonics in the Paradox Basin: conducted for delegates from BHP Billiton, ConocoPhillips, Fugro, IMP. Nexen, Noble, Pemex, Shell, Statoil, and Total, Moab, Utah, September 2010.

Leader, Salt and extensional tectonics in the Paradox Basin: conducted for delegates from BP, Encana, Fugro, Nexen, Repsol, Samson, and Saudi Aramco, Moab, Utah, September 2010.

Leader, Salt and extensional tectonics in the Paradox Basin: conducted for delegates from BHP Billiton, CGGVeritas, ConocoPhillips, Hess, Nexen, Samson, and Shell, Moab, Utah, June 2010.

Leader, Salt and extensional tectonics in the Paradox Basin: conducted for delegates from BHP Billiton, BP, Hess, Maersk, Marathon, Nexen, StatoilHydro, and Woodside, Moab, Utah, September 2009.

Leader, Salt and extensional tectonics in the Paradox Basin: conducted for delegates from Fugro, Hess, Nexen, Repsol, and Saudi Aramco, Moab, Utah, June 2009.

Leader, Salt and extensional tectonics in the Paradox Basin: conducted for delegates from BHP,

CGGVeritas, ConocoPhillips, Hess, Marathon, Mariner, Nexen, and Woodside, Moab, Utah, September 2008.

Leader, Salt and extensional tectonics in the Paradox Basin: conducted for CGGVeritas, Moab, Utah, June 2008.

Leader, Salt and extensional tectonics in the Paradox Basin: conducted for Shell E&P, Moab, Utah, May 26-30, 2008.

Leader, Salt and extensional tectonics in the Paradox Basin: conducted at Applied Geodynamics Laboratory Industrial Associates Meeting, Moab, Utah, October 10-11, 2007.

Leader, Salt and extensional tectonics in the Paradox Basin: Statoil, Austin, Texas, May 2007.

Leader, Salt and extensional tectonics in the Paradox Basin: Kerr-McGee Oil and Gas, Moab, Utah, June 2006.

Leader, Salt and extensional tectonics in the Paradox Basin: Statoil Global Exploration, Moab, Utah, May 2006.

Leader, Salt and extensional tectonics in the Paradox Basin: Hydro Oil and Energy, Moab, Utah, September 2005.

Leader, Salt and extensional tectonics in the Paradox Basin: Shell Exploration and Production Company, Moab, Utah, October 2004.

Leader, Salt and extensional tectonics in the Paradox Basin: AAPG Field Seminar, Moab, UT, June 2003.

Leader, Salt and extensional tectonics in the Paradox Basin: AAPG Field Seminar, Moab, UT, May 2002.

Student Committee Supervision

Co-supervisor, Ph.D. Dissertation Committee, Patricia Montoya, Salt tectonics and sequence-stratigraphic history of minibasins near the Sigsbee Escarpment, Gulf of Mexico: The University of Texas at Austin, Austin, Texas, completed in May, 2006

Chair, M.S. Thesis Committee, Patrice Chauvin, Structural style of a normal fault system above the Salt Valley Salt Wall, Paradox Basin, Utah: Baylor University, Waco, Texas, 2001

Chair, M.S. Thesis Committee, Chris Boyers, Structural style and normal faulting adjacent to the Onion Creek Salt Diapir, Paradox Basin, Utah: Baylor University, Waco, Texas, 2000

Chair, M.S. Thesis Committee, Xin Luo, 3-D seismic interpretation of central offshore Louisiana, Gulf of Mexico: Baylor University, Waco, Texas, 2000

Student Committee Participation

Member, Ph.D., Xinggang Liu, The University of Texas at Austin, 2019

Member, M.S. Thesis Committee, Michael Merrill, The University of Texas at Austin, Completed, 2012

Member, Ph.D. Dissertation Committee, Bryce Wagner, The University of Texas at Austin, Completed, 2010

Member, M.S. Thesis Committee, Eric Tuitjer, The University of Texas at Austin, Austin, Texas, 2002

Member, M.S. Thesis Committee, Candice Carrell, Structural influences on the North Hickory aquifer, San Saba County, Texas: Baylor University, Waco, Texas, 2000

Member, M.S. Thesis Committee, Frank Hernandez, Seismic trace analysis of a mature oil field in Bee County, South Texas: Baylor University, Waco, Texas, 2000

Member, Thesis Committee, Hongxing Ge, Kinematics and dynamics of salt tectonics in the Paradox Basin, Utah and Colorado: field observations and scaled modeling: The University of Texas at Austin, Austin, Texas, 1996

Presentations

Invited Presentations

The Role of Salt Tectonics in the Energy Transition: An Overview and Future Challenges: presented to Salt as Store, Seal, Trap, and Repository Session, presented at Energy Geoscience Conference, Aberdeen, UK, May 16-18, 2023.

The Role of Salt Tectonics on Underground Storage: presented to SPE RWTH Aachen, presented at Online, April 14, 2023.

Salt Tectonics in the Southern Gulf of Mexico: a Window into Basin Opening: presented to AMGE, online, November 8, 2021.

A Critical Review of Models for Deposition of the Louann Salt, and Implications for Gulf of Mexico Evolution: presented at AAPG Geoscience Technology Workshop: Evaporite Process and Systems: Integrating Perspectives, online, October 19, 2021.

Recent Advances in Salt Tectonics at the Applied Geodynamics Laboratory: presented to OMV, online, October 13, 2021.

Salt Tectonics in the Southern Gulf of Mexico: a Window into Basin Opening: presented to AAPG Salt Basins Technical Interest Group, webinar, August 31, 2021.

The Subsidence and Mobility of Minibasins: presented to Shell PG/PS Forum, presented at Online Seminar, June 3, 2021.

Renaissance of North Sea Salt Tectonics: Permian and Triassic Salt Tectonics of the Central North Sea: presented to Norwegian Petroleum Directorate FORCE group (consortium of Norwegian oil companies), presented at Salt Tectonics Webinar, online webinar, December 9, 2020.

Loading Complex Salt Isopachs: Progradational Loading of Salt-Filled Rift Systems: presented to Deutsches GeoForschungsZentrum Geodynamische Modellierung Sektion [German Research Center for Geosciences Geodynamic Modeling Section], presented at Rifts and Rifted Margins Online Seminar, https://www.youtube.com/watch?v=ln4jTw6yhzo&list=PLVfj9WkLxeDb2OeuFUqi2XZ_mv6E_H8w6&index=3, October 5, 2020.

The Subsidence and Mobility of Minibasins: Insights from Natural Examples and Physical Modelling: presented to The American Association of Petroleum Geologists, presented at AAPG Salt Basins Technical Interest Group, Online Seminar, July 21, 2020.

Jurassic Opening of the Gulf of Mexico, and Its Influence on Variations in Salt Structures around the Basin Margins: presented to Repsol, presented at Circum-GoM Workshop, Houston, Tex., February 26-27, 2020.

Loading Complex Salt Isopachs: Progradation Across Segmented Salt-Filled Rift Systems: presented at GCSSEPM, December 4-6, 2019.

Extension and inversion of salt-bearing rift systems: presented to Geological Society of America, presented at GSA Annual Meeting, Phoenix, AZ, September 22-25, 2019.

The Subsidence and Mobility of Minibasins: A Synthesis of Recent Findings: presented to Tulane University Department of Earth and Environmental Sciences, presented at departmental seminar, New Orleans, September 6, 2019.

Salt Tectonics in the Southern Gulf of Mexico: a Window into Basin Opening: presented to University of Houston, Houston, Tex., August 30, 2019.

Evolution of the Salina del Bravo, Mexico: the Bravo trough, Sigsbee canopy and Perdido fold belt: AAPG Distinguished Lecturer video presentation, Tulsa, Okla., November 12-13, 2018.

Fluid flow around evolving salt structures and its influence on metal deposits: presented at SEG 2018: Metals, Minerals, and Society, Keystone, Colo., September 22-25, 2018.

Basement Structure and Evolution of the Southern Gulf of Mexico Salt Province: presented at TGS Inforum, Houston, December 9, 2015.

Influence of Crustal Structure on Salt Tectonics, Seismic Imaging, and Hydrocarbon Exploration in the Deepwater Gulf of Mexico: presented at PGS Technology Day, Houston, September 22, 2015.

The Role of Salt Tectonics in the Energy Transition: An Overview and Future Challenges: presented to Multi-scale Laboratories Seminars, presented at Online, March 14, 2023-Present.

Presentations

Flow-parallel folds in the Messinian salt: Evidence for rotation of shale-canopy feeders in offshore Cyprus?: presented to Applied Geodynamics Laboratory Consortium Members, presented at Applied Geodynamics Laboratory Consortium Annual Meeting 2023, Austin, Tex., November 9-10, 2023.

Physical Models of Mobile Shale and Salt in Shortening: presented to Applied Geodynamics Laboratory Industrial Associates, presented at Applied Geodynamics Laboratory Industrial Associates Annual Meeting, November 9-10, 2023.

Salt-sheet buttressing and complex roof deformation near the Eratosthenes Seamount, Eastern Mediterranean: presented to Applied Geodynamics Laboratory Industrial Associates, presented at Applied Geodynamics Laboratory Industrial Associates Annual Meeting, November 9-10, 2023.

Shale diapirs indenting Messinian salt in offshore Cyprus: Mobile shales induced by salt flow?: presented to Applied Geodynamics Laboratory Consortium Members, presented at Applied Geodynamics Laboratory Consortium Annual Meeting 2023, Austin, Tex., November 9-10, 2023.

What makes Campeche tick? Evaluating controls on deformation patterns and styles in the salt-detached Campeche Basin, southern Gulf of Mexico: insights from physical models: presented to AAPG / SEG, presented at IMAGE 2023, Houston, Tex., August 27-31, 2023.

Minibasin Context and Behavior Controls the Expression of Submarine Canyons: An Example from the Northern Gulf of Mexico: presented to IMAGE, presented at Annual Conference and Exhibition, Houston, Tex., August 30, 2023.

Carbopol! An analog for mobile shale? Preliminary modeling results under contraction: presented to Applied Geodynamics Laboratory Consortium Members, presented at Applied Geodynamics Laboratory Consortium Annual Meeting 2022, Austin, Tex., November 10-11, 2022.

Contractional mobile-shale structures near salt diapirs in East Breaks, northern Gulf of Mexico: presented to Applied Geodynamics Laboratory Consortium Members, presented at Applied Geodynamics Laboratory Consortium Annual Meeting 2022, Austin, Tex., November 10-11, 2022.

Deformation and stresses in layered evaporite systems: presented to Applied Geodynamics Laboratory Consortium Members, presented at Applied Geodynamics Laboratory Consortium Annual Meeting 2022, Austin, Tex., November 10-11, 2022.

Ice sheet induced salt movements in Northern Germany - combining geomorphological investigations and physical modeling to understand the involved mechanisms: presented to Applied Geodynamics Laboratory Consortium Members, presented at Applied Geodynamics Laboratory Consortium Annual Meeting 2022, Austin, Tex., November 10-11, 2022.

Revisiting the Campeche Salt Basin: assessing controls on deformation patterns and styles: presented to Applied Geodynamics Laboratory Consortium Members, presented at Applied Geodynamics Laboratory Consortium Annual Meeting 2022, Austin, Tex., November 10-11, 2022.

Salt-Detached Thrusting near the Eratosthenes Seamount, Eastern Mediterranean: presented to Applied Geodynamics Laboratory Consortium Members, presented at Applied Geodynamics Laboratory Consortium Annual Meeting 2022, Austin, Tex., November 10-11, 2022.

Shale Sheets in the East Breaks Foldbelt: Geometry, origin, and evolution: presented to Applied Geodynamics Laboratory Consortium Members, presented at Applied Geodynamics Laboratory Consortium Annual Meeting 2022, Austin, Tex., November 10-11, 2022.

Shortening salt diapirs: how to generate a zig-zag weld: presented to Applied Geodynamics Laboratory Consortium Members, presented at Applied Geodynamics Laboratory Consortium Annual Meeting 2022, Austin, Tex., November 10-11, 2022.

The Importance of Active Rise Triggers in the Central North Sea: presented to Applied Geodynamics Laboratory Consortium Members, presented at Applied Geodynamics Laboratory Consortium Annual Meeting 2022, Austin, Texas, November 10-11, 2022.

The Role of Salt Tectonics in the Energy Transition: An Overview and Future Challenges: presented to Applied Geodynamics Laboratory Consortium Members, presented at Applied Geodynamics Laboratory Consortium Annual Meeting 2022, Austin, Texas, November 10-11, 2022.

Potential Controls on the Origin, Nature, and Distribution of Shear Zones in Salt Stocks: Salt Tectonic Insights with a Solution Mining Perspective: presented to Solution Mining Research Institute, presented at Solution Mining Research Institute Spring Technical Conference 2022, Rapid City, S. Dak., May 4, 2022.

Hydrogen Storage Potential in Salt Caverns: The Role of Salt Tectonics: presented to The University of Texas at Austin, Bureau of Economic Geology, presented at Bureau Seminar Series, Austin, Tex., December 10, 2021.

Fluids in shales and their implications for the seismic expression of mobile shales: presented at AGL annual meeting, online, November 5, 2021.

Proposal for a mechanical behavior of mobile shales: presented at AGL annual meeting, online, November 5, 2021.

Regional geology of the East Breaks fold-and-thrust belt, northwestern Gulf of Mexico: presented at AGL annual meeting, online, November 5, 2021.

Singular geometries of mobile shales in the NW Gulf of Mexico: presented at AGL annual meeting, online, November 5, 2021.

The structural framework of the East Breaks study area based on preliminary mapping. Four separate decollements, two distinct foldbelts, plus salt tectonics.: presented at AGL annual meeting, online, November 5, 2021.

Complex secondary welding during shortening of salt walls with highly irregular salt-sediment interfaces: presented at Applied Geodynamics Laboratory Annual Meeting, Virtual, November 3-5, 2021.

Preliminary modeling of detached extension in a layered evaporite sequence (LES): impact of LES on extensional styles and diapirism: presented at Applied Geodynamics Laboratory Annual Meeting, Virtual, November 3-5, 2021.

Revisiting the Bay of Campeche: Oblique dips in a narrowing basin during shortening: Part 1: presented at Applied Geodynamics Laboratory Annual Meeting, Virtual, November 3-5, 2021.

Revisiting the Bay of Campeche: Oblique dips in a narrowing basin during shortening: Part 2*

(*to hell with scaling!): presented at Applied Geodynamics Laboratory Annual Meeting, Virtual, November 3-5, 2021.

The Origin, Nature, and Distribution of Shear Zones in Salt Stocks: presented to Applied Geodynamic Laboratory Consortium, presented at Applied Geodynamic Laboratory Annual Meeting (2021), Virtual, November 3-5, 2021.

Opening remarks: presented at AGL annual meeting, online, November 3, 2021.

Preliminary analysis of salt tectonics in the Flex Trend, northern Gulf of Mexico: presented at AGL annual meeting, online, November 3, 2021.

A Critical Review of Models for Deposition of the Louann Salt, and Implications for Gulf of Mexico Evolution: presented at GeoGulf 2021, Austin, Tex., October 28, 2021.

H2 Storage Potential in Texas Salt: Early Insights: presented to GeoGulf 2021, presented at GeoGulf 2021, Austin, Texas, October 28, 2021.

Contrasting styles of salt-tectonic processes in the Ionian Fold and Thrust Belt (NW Greece and S Albania): presented to AAPG Europe Region, presented at AAPG Europe Region GTW (Evaporite Processes and Systems), Salzburg and Vienna, Austria, October 18-20, 2021.

Overview of AGL Consortium: presented to RIPED, online, March 22, 2021.

Renaissance of North Sea Salt Tectonics: Late Permian and Triassic Salt Tectonics of the Central North Sea: presented to AAPG Europe, presented at Stratigraphic and Reservoir Challenges with Triassic Plays in the North Sea - Workshop, Online conference, January 26, 2021.

3D Geometries of Natural and Physically Modelled Salt Walls: Salt Stocks, Salt Sheets, and Perched Minibasins: presented to AGL Consortium, presented at AGL Annual Consortium Meeting, Online, November 11-13, 2020.

Folding and Thrusting of Multilayered Sequences with Shales: presented to Applied Geodynamics Laboratory Consortium Members, presented at Applied Geodynamics Laboratory Consortium Annual Meeting 2020, Austin, Tex., November 11-13, 2020.

Geometry and Evolution of a Salt Wall and Flanking Minibasins in the Central North Sea: Along- and Across-Wall Variability: presented to AGL Consortium, presented at AGL Annual Consortium Meeting, Online, November 11-13, 2020.

Mechanical models of mobile shales: presented to Applied Geodynamics Laboratory Consortium Members, presented at Applied Geodynamics Laboratory Consortium Annual Meeting 2020, Austin, Tex., November 11-13, 2020.

Renaissance of North Sea Salt Tectonics: Permian and Triassic Salt Tectonics of the Central North Sea: presented to AGL Consortium, presented at AGL Annual Consortium Meeting, Online, November 11-13, 2020.

Status Report on Mobile Shales Database-(MOBshales v. 1.0): presented to Applied Geodynamics Laboratory Consortium Members, presented at Applied Geodynamics Laboratory Consortium Annual Meeting 2020, Austin, Tex., November 11-13, 2020.

The role of clay and hydrocarbon transformations in the formation of mobile shales: presented to Applied Geodynamics Laboratory Consortium Members, presented at Applied Geodynamics Laboratory Consortium Annual Meeting 2020, Austin, Tex., November 11-13, 2020.

Salt tectonics in the southern Gulf of Mexico: a window into basin opening: presented to WesternGeco, Houston, Tex., February 3, 2020.

The Subsidence and Mobility of Minibasins: A Synthesis of Recent Findings: presented to Basin Research Group Seminar, presented at Imperial College London, Royal School of Mines, January 8, 2020.

Summary of 2019 AGL Annual Meeting: presented to ExxonMobil, Houston, Texas, December 13, 2019.

Was the pre-salt GoM Basin wet, dry, or both? Spectacular imaging of arid mountains, meandering rivers, canyons, and evidence of a deep presalt lake on the base of the Louann Salt: presented to Total, Houston, Texas, December 12, 2019.

Was the pre-salt GoM Basin wet, dry, or both? Spectacular imaging of arid mountains, meandering rivers, canyons, and evidence of a deep presalt lake on the base of the Louann Salt: presented to Ecopetrol, Houston, Texas, December 11, 2019.

Redirection of Submarine Channels by Minibasin Obstruction on a Salt-Detached Slope: an Example from Above the Sigsbee Canopy: presented to GCSSEPM Foundation, presented at 2019 Perkins-Rosen Research Conference, Noble Energy offices, Houston, Tex., December 5, 2019.

Was the pre-salt GoM Basin wet, dry, or both? Spectacular imaging of arid mountains, meandering rivers, canyons, and evidence of a deep presalt lake on the base of the Louann Salt: presented to Repsol, Houston, Texas, November 21, 2019.

Linking the Style and Location of Lower-Slope Erosion to Salt Tectonics: presented to Applied Geodynamics Laboratory (AGL) Consortium, presented at AGL Annual Meeting, Austin, Tex., November 7-8, 2019.

Minibasin Context and Behavior Controls the Expression of Submarine Canyons: An Example from N. Gulf of Mexico: presented to Applied Geodynamics Laboratory (AGL) Consortium, presented at AGL Annual Meeting, Austin, Tex., November 7-8, 2019.

Overview of the Mobile-Shale Research Project of the AGL: presented to Applied Geodynamics Laboratory Consortium Members, presented at Applied Geodynamics Laboratory Consortium Annual Meeting 2019, Austin, Tex., November 7-8, 2019.

Salt-Tectonic Processes in the Ionian Fold and Thrust Belt (NW Greece and S Albania): presented to Applied Geodynamics Laboratory Consortium Members, presented at Applied Geodynamics Laboratory Consortium Annual Meeting 2019, Austin, Tex., November 7-8, 2019.

Alternative Models for Salt-Tectonic Evolution of the Pyrenees: presented at AGL Annual Meeting, Austin, Texas, November 7, 2019.

Controls on Styles of Salt Expulsion in Segmented Salt-Bearing Rifts: An Overview: presented at AGL Annual Meeting, Austin, Texas, November 7, 2019.

The High Atlas Mountains, Morocco: A Laboratory for Diapir Welding: presented at AGL Annual Meeting, Austin, Texas, November 7, 2019.

The Past, Present and Future of AGL Research: presented at AGL Annual Meeting, Austin, Texas, November 7, 2019.

Minibasin Obstruction by Base-Salt Welding on a Salt-Detached Slope: An Example from the Northern Gulf of Mexico: presented at AAPG ACE, San Antonio, Tex., May 19-22, 2019.

Lateral Mobility of Minibasins During Shortening: Insights from the SE Precaspian Basin, Kazakhstan: presented to AAPG Europe Region, presented at AAPG Geoscience Technology Workshop: Euroasian Mature Salt Basins, Krakow, April 16-18, 2019.

Minibasin Obstruction by Base-Salt Welding on a Salt-Detached Slope: An Example from the Northern Gulf of Mexico: presented to European Geosciences Union, presented at EGU General Assembly, Vienna, April 7-12, 2019.

Summary of AGL Research: presented to Petronas, Kuala Lumpur, Malaysia, March 29, 2019.

Was there depositional relief on the Louann salt?: presented to Shell, Houston, Texas, January 14, 2019.

Evolution of the Salina del Bravo, Mexico: the Bravo trough, Sigsbee canopy and Perdido fold belt: presented to New Orleans Geological Society, Covington, La., December 3, 2018.

Evolution of the Salina del Bravo, Mexico: the Bravo trough, Sigsbee canopy and Perdido fold belt: presented to New Orleans Geological Society, New Orleans, December 3, 2018.

Evolution of the Salina del Bravo, Mexico: the Bravo trough, Sigsbee canopy and Perdido fold belt: presented to Nexen, Houston, Tex., November 27, 2018.

Salt Diapir Influence on Channel Evolution in Deep-Water Minibasins, Gulf of Mexico: presented to Applied Geodynamics Laboratory Annual Meeting, Bureau of Economic Geology, The University of Texas at Austin, November 9, 2018.

AGL Overview: presented at Applied Geodynamics Laboratory: 2018 Industrial Associates Annual Review, Austin, Tex., November 8-9, 2018.

Deformation in and around an array of translating minibasins with variable mobility: presented at Applied Geodynamics Laboratory: 2018 Industrial Associates Annual Review, Austin, Tex., November 8-9, 2018.

From Physical Properties to Seismic Expression of Shale and Salt Structures: presented to Applied Geodynamics Laboratory Consortium Members, presented at Applied Geodynamics Laboratory Consortium Annual Meeting 2018, November 8-9, 2018.

Progradational loading of segmented salt-bearing rifts: presented to Applied Geodynamics Laboratory, presented at 2018 Industrial Associates Annual Review, Austin, Tex., November 8-9, 2018.

Revisiting the Salina del Bravo system, western GOM: a simpler model: presented at Applied Geodynamics Laboratory: 2018 Industrial Associates Annual Review, Austin, Tex., November 8-9, 2018.

Shale-Tectonic Geometries on Continental Margins, with Comparison to Salt: presented to Applied Geodynamics Laboratory Consortium Members, presented at Applied Geodynamics Laboratory Consortium Annual Meeting 2018, Austin, Tex., November 8-9, 2018.

Was there depositional relief on the Louann Salt?: presented at Applied Geodynamics Laboratory: 2018 Industrial Associates Annual Review, Austin, Tex., November 8-9, 2018.

Salt Diapir Influence on Channel Evolution in Deep-Water Minibasins, Gulf of Mexico: presented to Quantitative Clastics Laboratory Annual Meeting, Bureau of Economic Geology, The University of Texas at Austin, October 16, 2018.

Characteristics of diapir contacts as seen in field exposures: presented to BHP Billiton, Houston, Tex., August 18, 2018.

Overview of the Applied Geodynamics Laboratory: current AGL research and future plans: presented to Exxon, Houston, Tex., May 18, 2018.

Overview of the Applied Geodynamics Laboratory: current AGL research and future plans: presented to Woodside, Perth, Western Australia, April 9, 2018.

Bricks, Ellipses, and Hourglasses: A Tale of Contrasting Welding During Shortening: presented to GSA Penrose Conference in honor of Martin P. A. Jackson, presented at Advances in Salt Tectonics: Observations, Applications and Perspectives, Ein Boqeq, Israel, February 11-16, 2018.

Shortening of Diapir Provinces: Translation, Tilting and Rotation of Minibasins in Linked-Diapir Systems: presented to GSA Penrose Conference in honor of Martin P. A. Jackson, presented at Advances in Salt Tectonics: Observations, Applications, and Perspectives, Ein Boqeq, Israel, February 11-16, 2018.

The life and career of Martin Jackson: presented at Penrose Conference on Advances in Salt

Tectonics: Observations, Applications and Perspectives, Ein Boqeq, Israel, February 11-16, 2018.

Upper Jurassic structure and evolution of the Yucatan and Campeche subbasins, southern Gulf of Mexico: presented at Penrose Conference on Advances in Salt Tectonics: Observations, Applications and Perspectives, Ein Boqeq, Israel, February 11-16, 2018.

Overview of the Applied Geodynamics Laboratory: current AGL research and future plans: presented to Petronas, Kuala Lumpur, Malaysia, January 25, 2018.

Contrasting Seismic Examples of Shale Structures: presented to Applied Geodynamics Laboratory Consortium Members, presented at Applied Geodynamics Laboratory Consortium Annual Meeting 2017, Austin, Tex., November 9-10, 2017.

Shale Tectonics in the Alboran Sea Revisited from a Salt-Tectonics Perspective: presented to Applied Geodynamics Laboratory Consortium Members, presented at Applied Geodynamics Laboratory Consortium Annual Meeting 2017, Austin, Tex., November 9-10, 2017.

Deformation of Weak Sub-Salt Sediments Caused by Welding Minibasins: presented at 2016 AGL Annual Meeting, Austin, Tex., November 10, 2016.

Extension and Inversion of Salt-Bearing Rift Systems: presented at 2016 AGL Annual Meeting, Austin, Tex., November 10, 2016.

Shortening of Diapir Provinces (Part 2): Translation, Tilting and Rotation of Minibasins in Linked-Diapir Systems: presented at 2016 AGL Annual Meeting, Austin, Tex., November 10, 2016.

Salt Tectonics - Applied Geodynamics Laboratory (AGL) Consortium: presented at One Gulf meeting, Houston, Tex., May 12, 2016.

Salt Tectonics - Applied Geodynamics Laboratory (AGL) Consortium: presented to JSG Visiting Committee, Austin, Tex., April 26, 2016.

Influence of Crustal Structure on Salt Tectonics, Seismic Imaging, and Hydrocarbon Exploration in the Deepwater Gulf of Mexico: presented at De Ford lecture series, University of Texas at Austin, November 19, 2015.

Influence of raft density on salt tectonics: presented at AGL 2015 Industrial Associates Annual Review, Austin, Texas, November 13, 2015.

Structural styles of raft tectonics above rugose basement: presented at AGL 2015 Industrial Associates Annual Review, Austin, Texas, November 13, 2015.

AGL overview: presented at AGL 2015 Industrial Associates Annual Review, Austin, Texas, November 12, 2015.

Principles and Practice of Salt Tectonics: textbook status: presented at AGL 2015 Industrial Associates Annual Review, Austin, Texas, November 12, 2015.

Superimposed shale and salt tectonics above salt sheets: presented at AGL 2015 Industrial Associates Annual Review, Austin, Texas, November 12, 2015.

Influence of salt on petroleum systems VII: drilling hazards: presented to Woodside, Perth, Australia, May 14, 2015.

Breakup of the Campos-Kwanza salt basins: insights from regional restorations: presented to Nexen, Calgary, Canada, April 14, 2015.

Tectonic evolution of the South Atlantic and Gulf of Mexico salt basins: integrating plate reconstructions and basin analysis: presented to Nexen, Calgary, Canada, April 14, 2015.

Using ramp-derived fold belts to determine translation magnitude at salt-involved passive margins: Campos Basin, Brazil: presented to Nexen, Calgary, Canada, April 14, 2015.

Geological and geophysical characterization of a salt weld: Santos Basin, offshore Brazil: presented to Nexen, Calgary, Canada, April 13, 2015.

Internal structure and kinematics of salt walls: enigmatic examples from the Santos Basin, Brazil: presented to Nexen, Calgary, Canada, April 13, 2015.

Stratigraphy of salt giants: new insights from integration of 3D seismic and well data in Santos Basin, offshore Brazil: presented to Nexen, Calgary, Canada, April 13, 2015.

Understanding passive-margin kinematics: a critical test of competing hypotheses for the origin of the Albian Gap, Santos Basin, offshore Brazil: presented to Nexen, Calgary, Canada, April 13, 2015.

Influence of deep Louann structure on the evolution of the deepwater Gulf of Mexico: presented to Society of Independent Professional Earth Scientists (SIPES), San Antonio, Texas, February 19, 2015.

Stress, strain, and potential failure in upturned flaps around salt domes: presented to Shell, Houston, Texas, December 10, 2014.

Tectonic evolution of the South Atlantic salt basin: presented to Shell, Houston, Texas, December 10, 2014.

AGL 2014 presentations on Campos Basin: presented to TGS, Houston, Texas, December 9, 2014.

Bucket welding: where does all that salt go?: presented at AGL 2014 Industrial Associates Annual Review, Austin, Texas, November 14, 2014.

Formation of base-salt extensional keels: presented at AGL 2014 Industrial Associates Annual Review, Austin, Texas, November 14, 2014.

Influence of salt on petroleum systems VII: drilling hazards: presented at AGL 2014 Industrial Associates Annual Review, Austin, Texas, November 14, 2014.

Internal flow within salt-stock-canopy systems: presented at AGL 2014 Industrial Associates Annual Review, Austin, Texas, November 14, 2014.

Special topics in seismic interpretation of salt canopies: presented at AGL 2014 Industrial Associates Annual Review, Austin, Texas, November 14, 2014.

Deformation patterns in arrays of translating diapirs: presented at AGL 2014 Industrial Associates Annual Review, Austin, Texas, November 13, 2014.

Diapir rise rate: not as simple as we thought: presented at AGL 2014 Industrial Associates Annual Review, Austin, Texas, November 13, 2014.

Seismic interpretation of salt structures: presented at AGL 2014 Industrial Associates Annual Review, Austin, Texas, November 13, 2014.

Welcome and AGL overview: presented at AGL 2014 Industrial Associates Annual Review, Austin, Texas, November 13, 2014.

Southeast Alaska in a small boat: presented at BEG summer seminar series, Austin, Texas, July 11, 2014.

East Gulf of Mexico geological review: presented at CGG luncheon: Florida 3D seismic survey results, Houston, Texas, July 9, 2014.

Salt-sheet emplacement and drilling hazards: presented at Operators' Geohazard Forum, Houston, Texas, January 10, 2014.

Formation, rotation, and translation of thrust systems formed at basement ramps: presented at Shell, Houston, Texas, December 2013.

The AGL consortium--applications to subsalt imaging: presented at Shell, Houston, Texas, December 2013.

Controls on fold-belt location, style, and timing, northern Gulf of Mexico: presented at Applied Geodynamics Laboratory Industrial Associates Meeting, Austin, Texas, November 2013.

Evaluating models of bucket-weld formation: presented at Applied Geodynamics Laboratory Industrial Associates Meeting, Austin, Texas, November 2013.

Formation, translation, and rotation of thrust systems formed at basement ramps: presented at Applied Geodynamics Laboratory Industrial Associates Meeting, Austin, Texas, November 2013.

Influence of salt on petroleum systems IV: reservoir: presented at Applied Geodynamics Laboratory Industrial Associates Meeting, Austin, Texas, November 2013.

Influence of salt on petroleum systems V: trap: presented to presented at Applied Geodynamics Laboratory Industrial Associates Meeting, Austin, Texas, November 2013.

Influence of salt on petroleum systems VI: seal: presented at Applied Geodynamics Laboratory Industrial Associates Meeting, Austin, Texas, November 2013.

Mesozoic evolution of the Gulf of Mexico basin: presented at Baylor University, Waco, Texas, November 2013.

Mesozoic evolution of the Gulf of Mexico basin: presented at ExxonMobil, Houston, Texas, November 2013.

What's happening at AGL: presented at Woodside, Perth, Australia, October 2013.

Mesozoic evolution of the Gulf of Mexico basin: presented at Maersk, Houston, Texas, September 2013.

Explanation for differences in deepwater salt tectonics between the north-central and northwestern Gulf of Mexico: presented at WesternGeco, Houston, Texas, August 2013.

Origin and structural style of encased minibasins: presented at TGS-TOPEC, Houston, Texas, December 6, 2012.

Suture zones in allochthonous salt: presented at TGS-TOPEC, Houston, Texas, December 6, 2012.

Origin and structural style of encased minibasins: presented at Applied Geodynamics Laboratory Industrial Associates Meeting, Austin, Texas, November 14, 2012.

Influence of salt on petroleum systems I: source rock: presented at Applied Geodynamics Laboratory Industrial Associates Meeting, Austin, Texas, November 13, 2012.

Influence of salt on petroleum systems II: maturation: presented at Applied Geodynamics Laboratory Industrial Associates Meeting, Austin, Texas, November 13, 2012.

Influence of salt on petroleum systems III: migration: presented at Applied Geodynamics Laboratory Industrial Associates Meeting, Austin, Texas, November 13, 2012.

Putting the pieces together: Mesozoic evolution of the Gulf of Mexico Basin: presented at Nexen Petroleum, Houston, Texas, August 23, 2012.

The structures and evolution of sutures in allochthonous salt: presented at Nexen Petroleum, Houston, Texas, August 23, 2012.

Encased minibasins--preliminary modeling results: presented at Marathon Oil, Houston, Texas, February 9, 2012.

AGL Mad Dog 2011: presented at BP, Houston, Texas, November 15, 2011.

Basement structure and Jurassic evolution of the southern Gulf of Mexico salt province: presented at Applied Geodynamics Laboratory Industrial Associates Meeting, Austin, Texas,

November 3, 2011.

Preliminary report of salt evolution in the northwestern Gulf of Mexico: presented at Applied Geodynamics Laboratory Industrial Associates Meeting, Austin, Texas, November 3, 2011.

Putting the pieces together: Mesozoic evolution of the Gulf of Mexico basin: presented at Applied Geodynamics Laboratory Industrial Associates Meeting, Austin, Texas, November 3, 2011.

The Salt Mine: presented at Applied Geodynamics Laboratory Industrial Associates Meeting, Austin, Texas, November 3, 2011.

Influence of basement structure on the evolution of the deepwater Gulf of Mexico: presented at Woodside, Houston, Texas, July 11, 2011.

Influence of basement structure on the evolution of the deepwater Gulf of Mexico: presented at Exxon, Houston, Texas, February 11, 2011.

Influence of basement structure on the evolution of the deepwater Gulf of Mexico: presented at Marathon Oil, Houston, Texas, February 10, 2011.

Influence of basement structure on the evolution of the deepwater Gulf of Mexico: presented at monthly meeting of Austin chapter of the Society of Independent Professional Earth Scientists (SIPES), Austin, Texas, December 2, 2010.

AGL technology transfer for 2010--salt-tectonics textbook, SEGY physical models and the final edition of The Salt Mine: presented at Applied Geodynamics Laboratory Industrial Associates Meeting, Austin, Texas, November 19, 2010.

Godzilla vs. Bambi: modeling how salt sheets override salt stocks: presented at Applied Geodynamics Laboratory Industrial Associates Meeting, Austin, Texas, November 19, 2010.

Early history of the Gulf of Mexico salt basin--part 1: geologic evolution: presented at Applied Geodynamics Laboratory Industrial Associates Meeting, Austin, Texas, November 18, 2010.

Early history of the Gulf of Mexico salt basin--part 2: implications: presented at Applied Geodynamics Laboratory Industrial Associates Meeting, Austin, Texas, November 18, 2010.

Early history of the Gulf of Mexico salt basin--part 2: implications: presented at Applied Geodynamics Laboratory Industrial Associates Meeting, Austin, Texas, November 18, 2010.

A proposed subsalt foldbelt beneath the outer shelf, central Gulf of Mexico: presented to Shell, Houston, Texas, July 13, 2010.

Overview of the Kwanza Basin, Angola: presented to Shell, Houston, Texas, July 13, 2010.

Pillow fold belts: recognition, modeling and a hypothesis for the northern Gulf of Mexico: presented to Shell, Houston, Texas, July 13, 2010.

Architecture of salt-canopy systems: a preliminary report: presented to WesternGeco, Houston, Texas, May 13, 2010.

Criteria for interpreting open salt-sheet feeders: presented to WesternGeco, Houston, Texas, May 13, 2010.

Influence of basement structure on evolution of the deepwater Gulf of Mexico: presented to WesternGeco, Houston, Texas, May 13, 2010.

Seismic interpretation of allochthonous salt: Part II--base of salt: presented to WesternGeco, Houston, Texas, May 13, 2010.

An analysis of salt welding: presented to ConocoPhillips, Houston, Texas, May 12, 2010.

Pillow fold belts: recognition, modeling and a hypothesis for the northern Gulf of Mexico: presented to ConocoPhillips, Houston, Texas, May 12, 2010.

A proposed subsalt foldbelt beneath the outer shelf, central Gulf of Mexico: presented at Deep Shelf Gas Industrial Associates Meeting, Austin, Texas, April 29, 2010.

AGL research in the Gulf of Mexico: presented to Cobalt Energy, Houston, Texas, March 18, 2010.

AGL research in West Africa: presented to Cobalt Energy, Houston, Texas, March 18, 2010.

Overview of AGL Consortium: presented to Cobalt Energy, Houston, Texas, March 18, 2010.

The geology of the Sigsbee salt canopy near Mad Dog field, deepwater Gulf of Mexico: presented at UT Geofluids Industrial Associates Meeting, Austin, Texas, February 11, 2010.

Overview of UT Geofluids Consortium: presented at BEG retreat, Austin, Texas, December 16, 2009.

AGL salt research in the Gulf of Mexico: presented to Statoil, Austin, Texas, December 10, 2009.

Folds and radial faults above a salt wing: structures on the north flank of the Onion Creek Diapir, paradox Basin, Utah: presented at Applied Geodynamics Laboratory Industrial Associates Meeting, Austin, Texas, December 4, 2009.

Influence of roof deformation on evolution of salt sheets: presented at Applied Geodynamics Laboratory Industrial Associates Meeting, Austin, Texas, December 3, 2009.

Seismic interpretation of allochthonous salt: Part II--base of salt: presented at Applied Geodynamics Laboratory Industrial Associates Meeting, Austin, Texas, December 3, 2009.

Seismic interpretation of allochthonous salt: Part I--top of salt: presented at Applied Geodynamics Laboratory Industrial Associates Meeting, Austin, Texas, December 3, 2009.

The Tudor Rose: unexpected topography above buried salt sheets: presented at Applied Geodynamics Laboratory Industrial Associates Meeting, Austin, Texas, December 3, 2009.

Criteria for interpreting open feeders beneath allochthonous salt sheets: presented to Marathon, Houston, Texas, November 4, 2009.

Inflation and deflation of deeply buried salt stocks during lateral shortening: presented at Applied Geodynamics Laboratory Industrial Associates Meeting, Houston, Texas, November 4, 2009.

Structural restorations in the deepwater Gulf of Mexico: presented to Nexen, Dallas, Texas, October 16, 2009.

Salt-tectonic structural styles in extension, shortening, and superposition of deformational events: presented to Pemex, Villahermosa, Mexico, September 4, 2009.

AGL finite-element modeling plans: presented to ExxonMobil, Austin, Texico, September 2, 2009.

Structural style and evolution of thrust systems driven by spreading of allochthonous salt sheets: BEG Centennial Lecture presented at the BEG's Houston Research Center, Houston, Texas, June 23, 2009.

Structural style and evolution of thrust systems driven by spreading of allochthonous salt sheets: BEG Centennial Lecture presented at the Universidad Nacional Autonoma de Mexico, Mexico City, Mexico, April 21, 2009.

Structural style and evolution of thrust systems driven by spreading of allochthonous salt sheets: BEG Centennial Lecture presented at The Pennsylvania State University, State College, Pennsylvania, March 24, 2009.

Preliminary interpretation of folds on the flank of the Onion Creek salt diapir, Paradox Basin, Utah: presented at Applied Geodynamics Laboratory Industrial Associates Meeting, Austin, Texas, October 17, 2008.

The effect of roof thickness on deformation style in gravity-driven strike-slip systems: presented at Applied Geodynamics Laboratory Industrial Associates Meeting, Austin, Texas, October 17, 2008.

Transtension, transpression and superposed deformation in gravity-driven strike-slip systems: presented at Applied Geodynamics Laboratory Industrial Associates Meeting, Austin, Texas, October 17, 2008.

A proposed subsalt foldbelt in the central Gulf of Mexico: presented at Applied Geodynamics Laboratory Industrial Associates Meeting, Austin, Texas, October 16, 2008.

Growth and inflation of an allochthonous fringe at the downdip end of a complex salt basin: presented at Applied Geodynamics Laboratory Industrial Associates Meeting, Austin, Texas, October 16, 2008.

Growth of salt-stock canopies--the Full Monty and beyond: presented at Applied Geodynamics Laboratory Industrial Associates Meeting, Austin, Texas, October 16, 2008.

How much shortening is there in sheet-margin thrust systems?: presented at Applied Geodynamics Laboratory Industrial Associates Meeting, Austin, Texas, October 16, 2008.

Influence of Louann structure on evolution of the deepwater Gulf of Mexico: presented at Applied Geodynamics Laboratory Industrial Associates Meeting, Austin, Texas, October 16, 2008.

Interpretation of the deep salt layer in the deepwater Gulf of Mexico: Where was the edge of the Louann salt basin?: presented at Applied Geodynamics Laboratory Industrial Associates Meeting, Austin, Texas, October 16, 2008.

A proposed foldbelt in the central Gulf of Mexico: presented to Statoil/Hydro, Houston, Texas, August 27, 2008.

A proposed subsalt foldbelt in the central Gulf of Mexico: presented to StatoilHydro, Houston, Texas, August 27, 2008.

Diachronous growth of fold limbs from the Mad Dog Anticline: implications for base-salt deformation in the Atwater Fold Belt: presented at the AAPG Annual Convention, San Antonio, Texas, April 2008.

Dismembered sutures formed during asymmetric salt-sheet collision: presented at the AAPG Annual Convention, San Antonio, Texas, April 2008.

Episodic advance of the Sigsbee salt canopy, deepwater Gulf of Mexico: presented at the AAPG Annual Convention, San Antonio, Texas, April 2008.

Introduction to the Applied Geodynamics Laboratory: presented (twice) to prospective graduate students visiting UT, Austin, Texas, February 26, 2008.

Advance mechanisms of allochthonous salt sheets: implications for predicting subsalt pore pressure: presented at GeoFluidsIII Consortium Meeting, Austin, Texas, October 16, 2007.

Animations of diapir fall and salt-sheet advance: presented at Applied Geodynamics Laboratory Industrial Associates Meeting, Moab, Utah, October 9, 2007.

Deepwater shale diapirism in the northern Gulf of Mexico: diagnostic criteria and occurrences: presented at Applied Geodynamics Laboratory Industrial Associates Meeting, Moab, Utah, October 9, 2007.

Reactivation of salt domes during strike-slip deformation: presented at Applied Geodynamics Laboratory Industrial Associates Meeting, Moab, Utah, October 9, 2007.

Technology transfer fro 2007: The Salt Mine, AGL, website, and site visits: presented at Applied Geodynamics Laboratory Industrial Associates Meeting, Moab, Utah, October 9, 2007.

Criteria for interpreting pinchoff of salt-sheet feeders: presented at Applied Geodynamics Laboratory Industrial Associates Meeting, Moab, Utah, October 8, 2007.

Diagnostic criteria of minibasin subsidence mechanisms, with application to the deepwater Gulf of Mexico: presented at Applied Geodynamics Laboratory Industrial Associates Meeting, Moab, Utah, October 8, 2007.

Diagnostic criteria of minibasin subsidence mechanisms, with application to the deepwater Gulf of Mexico: presented at Applied Geodynamics Laboratory Industrial Associates Meeting, Moab, Utah, October 8, 2007.

Formation of minibasins in salt-stock-canopy systems: presented at Applied Geodynamics Laboratory Industrial Associates Meeting, Moab, Utah, October 8, 2007.

Introduction to the Paradox Basin: presented at Applied Geodynamics Laboratory Industrial Associates Meeting, Moab, Utah, October 8, 2007.

Is there a subsalt foldbelt in the central U.S. Gulf of Mexico?: presented at Applied Geodynamics Laboratory Industrial Associates Meeting, Moab, Utah, October 8, 2007.

Evolution of suprasalt minibasins in the deepwater Gulf of Mexico: presented at Miami International University, Miami, Florida, February 2, 2007.

Evolution of suprasalt minibasins in the deepwater Gulf of Mexico: presented at University of Kentucky, Lexington, Kentucky, January 31, 2007.

Evolution of suprasalt minibasins in the deepwater Gulf of Mexico: presented at University of Missouri-Rolla, Rolla, Missouri, January 30, 2007.

Evolution of suprasalt minibasins in the deepwater Gulf of Mexico: presented at Indiana University, Bloomington, Indiana, January 29, 2007.

Evolution of suprasalt minibasins in the deepwater Gulf of Mexico: presented at Northern Illinois University, De Kalb, Illinois, January 26, 2007.

Evolution of suprasalt minibasins in the deepwater Gulf of Mexico: presented at The Ohio State University, Columbus, Ohio, January 25, 2007.

Evolution of suprasalt minibasins in the deepwater Gulf of Mexico: presented at Bowling Green State University, Bowling Green, Ohio, January 24, 2007.

Advance mechanisms of allochthonous salt sheets: implications for predicting subsalt port pressure: presented at Dalhousie University, Halifax, Nova Scotia, January 23, 2007.

Evolution of suprasalt minibasins in the deepwater Gulf of Mexico: presented at Dalhousie University, Halifax, Nova Scotia, January 23, 2007.

Advance mechanisms of allochthonous salt sheets: implications for predicting subsalt port pressure: presented at University of Wyoming, Laramie, Wyoming, December 5, 2006.

Evolution of suprasalt minibasins in the deepwater Gulf of Mexico: presented at Montana Geological Society, Billings, Montana, December 4, 2006.

Evolution of suprasalt minibasins in the deepwater Gulf of Mexico: presented at Montana State University, Bozeman, Montana, December 1, 2006.

Advance mechanisms of allochthonous salt sheets: implications for predicting subsalt port pressure: presented at New Mexico State University, Las Cruces, New Mexico, November 30, 2006.

Evolution of suprasalt minibasins in the deepwater Gulf of Mexico: presented at The University of Texas at El Paso, El Paso, Texas, November 30, 2006.

Evolution of suprasalt minibasins in the deepwater Gulf of Mexico: presented at New Mexico State University, Las Cruces, New Mexico, November 29, 2006.

Evolution of suprasalt minibasins in the deepwater Gulf of Mexico: presented at Association Mexicana de Geologos Petroleros A.C., Delegacion Poza Rica, Poza Rica, Mexico, November 28, 2006.

Architecture of salt-canopy systems: a preliminary report: presented at Applied Geodynamics Laboratory Industrial Associates Meeting, Austin, Texas, November 3, 2006.

Godzilla vs. Bambi: when sheets and domes collide: a preliminary report: presented at Applied Geodynamics Laboratory Industrial Associates Meeting, Austin, Texas, November 3, 2006.

Overview of subsalt trap types in salt-canopy systems: presented at Applied Geodynamics Laboratory Industrial Associates Meeting, Austin, Texas, November 3, 2006.

Deformation associated with strike sutures between salt sheets: presented at Applied Geodynamics Laboratory Industrial Associates Meeting, Austin, Texas, November 2, 2006.

Episodic advance of the Sigsbee Salt Canopy, deepwater Gulf of Mexico: presented at Applied Geodynamics Laboratory Industrial Associates Meeting, Austin, Texas, November 2, 2006.

Influence of abyssal-plain sedimentation rates on style of salt breakouts: presented at Applied Geodynamics Laboratory Industrial Associates Meeting, Austin, Texas, November 2, 2006.

Introduction and AGL overview: presented at Applied Geodynamics Laboratory Industrial Associates Meeting, Austin, Texas, November 2, 2006.

Technology transfer for 2006: The Salt Mine, AGL Website, and site visits: presented at Applied Geodynamics Laboratory Industrial Associates Meeting, Austin, Texas, November 2, 2006.

Transported sutures, rotated roof blocks and salt breakouts in head-on and oblique salt-sheet collisions: presented at Applied Geodynamics Laboratory Industrial Associates Meeting, Austin, Texas, November 2, 2006.

Linkage between updip extension, downdip shortening, and basement tectonics on a passive margin, Kwanza Basin, Angola: presented to Woodside Energy Ltd., Perth, Australia, September 1, 2006.

AGL overview and models for salt-sheet advance: presented to Chevron Energy Technology Company, Austin, Texas, August 24, 2006.

Mechanics of the advance of buried salt sheets: presented to BP Production, Houston, Texas, July 11, 2006.

AGL models for deepwater Gulf of Mexico ascension zones: presented to ExxonMobil Exploration Company, Austin, Texas, June 21, 2006.

Overview of the Paradox Basin, Utah: presented to Statoil Global Exploration, Moab, Utah, May 30, 2006.

Overview of the Applied Geodynamics Laboratory: presented to Petrobras management, Austin, Texas, May 11, 2006.

Advance history of the Mad Dog salt sheet, Gulf of Mexico: presented to Total E&P USA, Houston, Texas, April 26, 2006.

Diachronous growth of fold limbs on the Mad Dog anticline: implications for base-salt deformation in the Atwater fold belt: presented to Total E&P USA, Houston, Texas, April 26, 2006.

Effects of salt-sheet shape and synkinematic loading on the structure of salt-sheet sutures: presented to Total E&P USA, Houston, Texas, April 26, 2006.

Emplacement of allochthonous salt sheets in passive margins and orogens: presented to Total E&P USA, Houston, Texas, April 26, 2006.

Factors affecting the ability of welds to seal: presented to Total E&P USA, Houston, Texas, April

26, 2006.

Far-traveled minibasins and the Great Plio-Pleistocene Salt Surge, Green Canyon, Gulf of Mexico: presented to Total E&P USA, Houston, Texas, April 26, 2006.

Influence of roof density and advance rates on the structure of salt-sheet sutures: presented to Total E&P USA, Houston, Texas, April 26, 2006.

Mechanics of allochthonous salt sheets in passive margins and orogens: presented to Total E&P USA, Houston, Texas, April 26, 2006.

Physical modeling of import and export of salt from squeezed stocks: presented to Total E&P USA, Houston, Texas, April 26, 2006.

Physical modeling of thrust faults and salt welds associate with squeezed stocks: presented to Total E&P USA, Houston, Texas, April 26, 2006.

Preliminary thoughts on the influence of advance history on the base-salt disturbed zone, Mad Dog salt sheet, Gulf of Mexico: presented to Total E&P USA, Houston, Texas, April 26, 2006.

A preliminary report on the advance history of the Mad Dog salt sheet, Gulf of Mexico: presented to Shell International Exploration and Production, Houston, Texas, April 25, 2006.

Far-traveled minibasins and the Great Plio-Pleistocene salt surge, Green Canyon, Gulf of Mexico: presented to Shell International Exploration and Production, Houston, Texas, April 25, 2006.

Models for the emplacement of allochthonous salt sheets: presented to Shell International Exploration and Production, Houston, Texas, April 25, 2006.

Physical models of salt-sheet sutures and drop-through basins: presented to Shell International Exploration and Production, Houston, Texas, April 25, 2006.

Preliminary thoughts on the influence of advance history on the base-salt disturbed zone, Mad Dog salt sheet, Gulf of Mexico: presented to Shell International Exploration and Production, Houston, Texas, April 25, 2006.

Thrust advance along the modern Sigsbee Escarpment: consequences for base-salt structure and overpressure: presented to Shell International Exploration and Production, Houston, Texas, April 25, 2006.

Overview of the Applied Geodynamics Laboratory: presented to staff of China Petroleum University, Austin, Texas, April 7, 2006.

Overview of the Applied Geodynamics Laboratory: presented to Dr. Simon Lang of Woodside Petroleum, Austin, Texas, April 5, 2006.

Far-traveled minibasins and the great Plio-Pleistocene salt surge, Green Canyon, Gulf of Mexico: presented at UTIG Seminar Series, The University of Texas at Austin, Austin, Texas, March 3, 2006.

A compressional origin for minibasins near the Sigsbee Scarp, Gulf of Mexico: presented at UT-DOGS Seminar Series, The University of Texas at Austin, Austin, Texas, November 22, 2005.

Cross-section balancing and analog modeling capabilities of the AGL: presented to representatives of the Polish Geological Institute and Polish Ministry of the Environment, Austin, Texas, October 26, 2005.

AGL plans for 2006: presented at Applied Geodynamics Laboratory Industrial Associates Meeting, Austin, Texas, October 21, 2005.

AGL technology transfer for 2005: introducing The Salt Mine: 3rd edition: presented at Applied Geodynamics Laboratory Industrial Associates Meeting, Austin, Texas, October 21, 2005.

Effects of salt-sheet shape and synkinematic loading on the structure of salt-sheet sutures: presented at Applied Geodynamics Laboratory Industrial Associates Meeting, Austin, Texas, October 21, 2005.

Diachronous growth of fold limbs on the Mad Dog anticline: implications for base-salt deformation in the Atwater Foldbelt: presented at Applied Geodynamics Laboratory Industrial Associates Meeting, Austin, Texas, October 20, 2005.

Emplacement of allochthonous salt sheets in passive margins and orogens: presented at Applied Geodynamics Laboratory Industrial Associates Meeting, Austin, Texas, October 20, 2005.

Evolution of compressional minibasins: presented at Applied Geodynamics Laboratory Industrial Associates Meeting, Austin, Texas, October 20, 2005.

Far-travelled minibasins and the Great Plio-Pleistocene Salt Surge, Green Canyon, Gulf of Mexico: presented at Applied Geodynamics Laboratory Industrial Associates Meeting, Austin, Texas, October 20, 2005.

Influence of roof density and advance rates on the structure of salt-sheet sutures: presented at Applied Geodynamics Laboratory Industrial Associates Meeting, Austin, Texas, October 20, 2005.

Styles of active diapirism in offshore Mauritania: shortening vs. halokinesis: presented at Applied Geodynamics Laboratory Industrial Associates Meeting, Austin, Texas, October 20, 2005.

The fate of raft blocks: presented at Applied Geodynamics Laboratory Industrial Associates Meeting, Austin, Texas, October 20, 2005.

Salt sheet advancement and its impact on the Mad Dog area: presented at BP, Houston, Texas, April 13, 2005.

The Salt Mine 2005--lather, rinse, repeat: presented to BEG project review panel, Austin, Texas, March 29, 2005.

Diachronous growth of fold limbs on the Mad Dog Anticline: implications for base-salt deformation in the Atwater Foldbelt: presented to ExxonMobil Exploration Company, Houston, Texas, January 16, 2005.

Emplacement of allochthonous salt sheets in passive margins and orogens: presented to ExxonMobil Exploration Company, Houston, Texas, January 16, 2005.

Evolution of compressional minibasins: presented to ExxonMobil Exploration Company, Houston, Texas, January 16, 2005.

Far-travelled minibasins and the Great Plio-Pleistocene Salt Surge, Green Canyon, Gulf of Mexico: presented to ExxonMobil Exploration Company, Houston, Texas, January 16, 2005.

Import and export of salt from squeezed stocks: presented to ExxonMobil Exploration Company, Houston, Texas, January 16, 2005.

Thrust faults and salt welds associated with squeezed stocks: presented to ExxonMobil Exploration Company, Houston, Texas, January 16, 2005.

AGL technology transfer for 2004: The Salt Mine, Website, and visits: presented at Applied Geodynamics Laboratory Industrial Associates Meeting, Austin, Texas, November 11, 2004.

Animations of simple (and not so simple) salt structures: presented at Applied Geodynamics Laboratory Industrial Associates Meeting, Austin, Texas, November 11, 2004.

Mechanics of salt-sheet advance: presented at Applied Geodynamics Laboratory Industrial Associates Meeting, Austin, Texas, November 11, 2004.

Models for the emplacement of allochthonous salt sheets: presented at Applied Geodynamics

Laboratory Industrial Associates Meeting, Austin, Texas, November 11, 2004.

Preliminary report on the advance history of the Mad Dog salt sheet, Gulf of Mexico: presented at Applied Geodynamics Laboratory Industrial Associates Meeting, Austin, Texas, November 11, 2004.

Preliminary thoughts on the influence of advance history on the base-salt, disturbed zone, Mad Dog salt sheet, Gulf of Mexcio: presented at Applied Geodynamics Laboratory Industrial Associates Meeting, Austin, Texas, November 11, 2004.

Techniques for identification of feeders and sutures in salt canopy systems: presented to Veritas DGC, Houston, Texas, August 16, 2004.

AGL technology transfer for 2003--improvements to The Salt Mine and the AGL website: presented at Applied Geodynamics Laboratory Industrial Associates meeting, Austin, Texas, November 13, 2003.

Animations of simple salt structures--new additions for 2003: presented at Applied Geodynamics Laboratory Industrial Associates meeting, Austin, Texas, November 13, 2003.

Early compressional history of minibasins near the Sigsbee Escarpment, Gulf of Mexico: presented at Applied Geodynamics Laboratory Industrial Associates meeting, Austin, Texas, November 13, 2003.

Effects of deep-water basement uplift in the Kwanza Basin, Angola: presented at Applied Geodynamics Laboratory Industrial Associates meeting, Austin, Texas, November 13, 2003.

Intrusion of salt during shortening: examples from northwest Germany: presented at Applied Geodynamics Laboratory Industrial Associates meeting, Austin, Texas, November 13, 2003.

Techniques for identification of feeders and sutures in salt canopy systems: presented at Applied Geodynamics Laboratory Industrial Associates meeting, Austin, Texas, November 13, 2003.

The Salt Mine: presented at BP Exploration Forum, Austin, Texas, October 21, 2003.

Deepwater deformation in the lower Congo Basin, Gabon: presented to Woodside Petroleum, Ltd., May 2003.

Overview of salt modeling: the Applied Geodynamics Laboratory: presented to Anne Rieckmann and managers from ExxonMobil, May 2003.

5th grade Science Fair judge: Hill Country Christian School, Austin, Texas, February 2003.

A new look at Angolan salt tectonics, tectonostratigraphy, and differential uplift in the Kwanza Basin: presented to ExxonMobil, January 2003.

Influence of precursor salt structures on thrust faulting, deepwater Gabon: presented to ExxonMobil, January 2003.

The Salt Mine: a progress report: presented to Bureau of Economic Geology Directorate, Austin, Texas, January 2003.

Alternating transtension and transpression on a strike-slip plate boundary: Aquitaine Basin, France: presented at the Applied Geodynamics Laboratory Industrial Associates Meeting, The University of Texas at Austin, Austin, Texas, November 2002.

Animations of simple salt structures: presented at the Applied Geodynamics Laboratory Industrial Associates Meeting, The University of Texas at Austin, Austin, Texas, November 2002.

Restorations of seismic data over contractional structures in the deepwater Lower Congo Basin, Gabon: presented at the Applied Geodynamics Laboratory Industrial Associates Meeting, The University of Texas at Austin, Austin, Texas, November 2002.

The new AGL website: now worth looking at!: presented at the Applied Geodynamics Laboratory Industrial Associates Meeting, The University of Texas at Austin, Austin, Texas, November 2002.

The Salt Mine status report: presented at the Applied Geodynamics Laboratory Industrial Associates Meeting, The University of Texas at Austin, Austin, Texas, November 2002.

Earthquakes: presented to the 5th grade at Hill Country Christian School (two presentations), Austin, Texas, October 2002.

Groundwater and caves: presented to the 6th grade at Hill Country Christian School (two presentations), Austin, Texas, October 2002.

The Applied Geodynamics Laboratory: presented to BEG Advisory Committee, The University of Texas at Austin, Austin, Texas, October 2002.

Using EarthVision to analyze normal fault relays: technical brief presented to Dynamic Graphics, Inc., Alameda, California, August 7, 2002.

Changes in location and style of deepwater contraction in the Kwanza Basin, Angola: in oil and gas in compressional belts: presented at joint meeting of the Tectonic Studies Group and Petroleum Group, Geological Society of London, 2002.

Contractional salt tectonics in deep water: presented to Woodside Petroleum, Ltd., Perth, Australia, 2002.

Contrasting modes and magnitudes of shortening in salt and sediment on the African Atlantic passive margin: in northwest African Atlantic margin and analogs: presented at the First Marrakech International Oil and Gas Conferences and Exhibition, Marrakech, Morocco, 2002.

Estranged neighbors: independent tectonic evolution of the onshore and offshore Kwanza Salt Basins, Angola: presented at the AAPG Annual Convention, 2002.

The Role of Salt Tectonics in the Energy Transition: An Overview and Future Challenges: presented to GeoH2 Consortium Members, presented at GeoH2 Annual Consortium Meeting, Austin, Texas, October 18, 2022-Present.

Activities of a Professional Nature

Professional Societies

American Association of Petroleum Geologists

Geological Society of America

Gulf Coast Section, SEPM

Major Field Campaigns

Field work in the Moroccan High Atlas. Examining compressional salt tectonics. October 3-12, 2019.

Fieldwork in Moroccan High Atlas, April 18 - May 2

Funding

Research Support

Principle Investigator: Applied Geodynamics Laboratory, Applied Geodynamics Laboratory consortium members (January 1-December 31, 2016; $1.2 million).

Publications

Peer Reviewed Journal Articles

Dooley, T. P., and Hudec, M. R., 2024, Evaluating controls on deformation patterns and styles in the salt-detached Sureste Basin, southern gulf of Mexico: insights from physical models: Journal

of Structural Geology, v. 179, no. 105046, 24 p., http://doi.org/10.1016/j.jsg.2023.105046.

Hardt, J., Dooley, T. P., and Hudec, M. R., 2024, Physical modeling of ice-sheet-induced salt movements using the example of northern Germany: Earth Surface Dynamics, v. 12, no. 2, p. 559-579, http://doi.org/10.5194/esurf-12-559-2024.

Soto, J. I., Tranos, M. D., Bega, Z., Dooley, T. P., Hernández, P., Hudec, M. R., Konstantopoulos, P. A., Lula, E., Nikolaou, K., Pérez, R., Pita, J. P., Titos, J. A., Tzimeas, C., and Herra Sánchez de Movellán, A., 2024, Contrasting styles of salt-tectonic processes in the Ionian Zone (Greece and Albania): integrating surface geology, subsurface data, and experimental models: Tectonics, v. 43, no. 1, article no. e2023TC008104, 46 p., http://doi.org/10.1029/2023TC008104.

Dooley, T. P., Jackson, M. P. A., and Hudec, M. R., 2023, Growth and evolution of salt canopies on a salt-detached slope: insights from physical models: AAPG Bulletin, v. 107, no. 12, p. 2053-2089, http://doi.org/10.1306/08072222013.

Duffy, O. B., Hudec, M. R., Peel, F., Apps, G., Bump, A., Moscardelli, L., Dooley, T. P., Fernandez, N., Bhattacharya, S., Wisian, K., and Shuster, M. W., 2023, The role of salt tectonics in the energy transition: an overview and future challenges: Tektonika, v. 1, no. 1, p. 18-48, http://doi.org/10.55575/tektonika2023.1.1.11.

Fernandez, N., Duffy, O. B., Jackson, C. A.-L., Kaus, B. J. P., Dooley, T., and Hudec, M., 2023, How fast can minibasins translate down a slope? Observations from 2D numerical models: Tektonika, v. 1, no. 2, p. 177-197, http://doi.org/10.55575/tektonika2023.1.2.22.

Gutiérrez, F., Zarei, M., Hudec, M. R., and Deirnik, H., 2023, Normal faulting and landsliding in morpho-structural domes related to buried salt stocks, Zagros Mountains, Iran. Insights into salt breakout: Marine and Petroleum Geology, v. 155, no. 106376, 19 p., http://doi.org/10.1016/j.marpetgeo.2023.106376.

Hudec, M. R., Peel, F. J., Soto, J. I., and Apps, G. M., 2023, Interaction between salt and mobile shale in the East Breaks foldbelt, northwestern Gulf of Mexico: Marine and Petroleum Geology, v. 155, no. 106391, 15 p., http://doi.org/10.1016/j.marpetgeo.2023.106391.

Portnov, A., Flemings, P. B., You, K., Meazell, K., Hudec, M. R., and Dunlap, D. B., 2023, Low temperature and high pressure dramatically thicken the gas hydrate stability zone in rapidly formed sedimentary basins: Marine and Petroleum Geology, v. 158, Part A, no. 106550, 15 p., http://doi.org/10.1016/j.marpetgeo.2023.106550.

Soto, J. I., and Hudec, M. R., 2023, Mud volcanoes guided by thrusting in compressional settings: Geology, v. 51, no. 8, p. 779-784, http://doi.org/10.1130/G51235.1.

Soto, J. I., Déverchère, J., Hudec, M. R., Medaouri, M., Badji, R., Gaullier, V., and Leffondré, P., 2022, Crustal structures and salt tectonics on the margins of the western Algerian Basin (Mediterranean Region): Marine and Petroleum Geology, v. 144, no. 105820, 30 p., http://doi.org/10.1016/j.marpetgeo.2022.105820.

Duffy, O. B., Dooley, T. P., Hudec, M. R., Fernandez, N., Jackson, C. A.-L., and Soto, J. I., 2021, Principles of shortening in salt basins containing isolated minibasins: Basin Research, v. 33, no. 3, p. 2089-2117, http://doi.org/10.1111/bre.12550.

Fernandez, N., Duffy, O. B., Peel, F. J., and Hudec, M. R., 2021, Influence of minibasin obstruction on canopy dynamics in the northern Gulf of Mexico: Basin Research, v. 33, no. 1, p. 427-446, http://doi.org/10.1111/bre.12480.

Heidari, M., Nikolinakou, M. A., Hudec, M. R., and Flemings, P. B., 2021, Impacts of vertical salt welding on pore pressure, stresses, and deformation near the weld: Marine and Petroleum Geology, v. 133, no. 105259, 18 p., http://doi.org/10.1016/j.marpetgeo.2021.105259.

Hudec, M. R., and Soto, J. I., 2021, Piercement mechanisms for mobile shales: Basin Research, v. 33, no. 5, p. 2862-2882, http://doi.org/10.1111/bre.12586.

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