Jeffrey G. Paine

Professional Summary
November 15, 2026

Business address:	The University of Texas at Austin Bureau of Economic Geology 10100 Burnet Rd., Bldg. 130 Austin, TX 78758
Telephone:	(512) 471-1260
E-mail address:	jeff.paine@beg.utexas.edu

Professional Preparation

Academic Background

Ph.D. Geology, The University of Texas at Austin, 1991
M.S. Geology, University of Washington, 1982
B.S. Geology, The University of Texas at Austin, 1980

Professional Appointments

Present Position: Research Scientist, Bureau of Economic Geology, The University of Texas at Austin (September 1996 - Present). Develop and apply geophysical exploration techniques (seismic reflection profiling, airborne and ground-based electromagnetic induction methods, and ground-penetrating radar) in near-surface hydrogeological and stratigraphic studies.

Program Director, Bureau of Economic Geology, The University of Texas at Austin (March 1998 - May 1998). Manage Geology, Geotechnology, and GIS group. Duties include identifying funding opportunities, writing and tracking proposals, allocating staff effort on projects, coordinating project use of research resources, tracking publication progress, and summarizing monthly staff activities.

Research Associate, Bureau of Economic Geology, The University of Texas at Austin (July 1991 - August 1996). Develop and apply geophysical exploration techniques (seismic reflection profiling, airborne and ground-based electromagnetic induction methods, and ground-penetrating radar) in near-surface hydrogeological and stratigraphic studies.

Research Scientist Associate, Bureau of Economic Geology, The University of Texas at Austin (July 1982 - June 1991). Study effects of recent and historical hurricanes on barrier islands, analyze shoreline movement from aerial photographs and topographic charts, and determine Quaternary paleogeography of the Texas coastal zone and shelf from cores and seismic data.

Geological Consultant, Prewitt and Associates, Inc., Consulting Archeologists (1986 - 1990). Determine geological context of archeological sites on Texas coastal plain and west Texas.

Research Assistant and Teaching Assistant, Department of Geological Sciences, University of Washington (September 1980 - June 1982). Conduct high-pressure geophysical measurements on inclusions from the Mt. St. Helens lava dome and teach laboratory sections of Physical Geology.

Research Assistant, Bureau of Economic Geology and Department of Geological Sciences (January 1978 - August 1979). Contour geochemical distribution in Texas bay and gulf sediments and write computer programs for geological analysis.

Professional Registrations and Certificates

State of Texas Board of Professional Geoscientists, License No. 3776, Geophysics Specialty

Theses

A computer method for plotting rectangular and triangular variation diagrams (undergraduate honors thesis), The University of Texas at Austin, Department of Geological Sciences, 1980, 60 p.

Crustal structure of volcanic arcs based on physical properties of andesites, volcaniclastic rocks, and inclusions in the Mount St. Helens lava dome: Seattle, Washington, University of Washington, M.S. thesis, 138 p., 1982

Dissertations

Late Quaternary depositional units, sea level, and vertical movement along the central Texas coast: Austin, Texas, The University of Texas at Austin, Ph.D. dissertation, 256 p., 1991

Areas of Expertise

Areas of Expertise

Coastal geology

Computer applications in the geological sciences

Near-surface geophysics in hydrogeology and environmental and Quaternary geology

Quaternary geology and geomorphology

Awards

Awards and Honorary Societies

Fellow, Geological Society of America, 2019-Present

Best Paper Award, “Discriminating Pleistocene alluvial terraces on the Colorado River in central Texas using lidar and near-surface geophysics," presented at the 33rd Symposium on the Application of Geophysics to Engineering and Environmental Problems, Portland, Oreg., 2019

The Gold Award, Environmental and Engineering Geophysical Society, 2010

Best Paper Award, “Applying airborne electromagnetic induction in groundwater salinization and resource studies, West Texas," presented at the Symposium on the Application of Geophysics to Engineering and Environmental Problems, 2003

Best Presentation Award, Technical Sessions, The University of Texas at Austin, 1990

Professional Development Awards (2), The University of Texas at Austin, 1990

Shell Chair Award, The University of Texas at Austin, 1990

Grant-in-Aid of Research, Sigma Xi, 1987

Gulf Coast Association of Geological Societies Financial Award, 1987

Francis L. Whitney Endowed Presidential Scholarship, The University of Texas at Austin, 1980

Service

External Committees Participation

Member, Board of Directors, EEGS Foundation, May 1, 2022-Present

Chairman, Environmental Geophysics Committee, Division of Environmental Geosciences, American Association of Petroleum Geologists, 2011 - present

Member, Nominations Committee, Environmental and Engineering Geophysical SocietyJanuary, 2010 - present

Associate Editor, FastTIMES, Environmental and Engineering Geophysical Society, April 1, 2009-Present

Member, Earth Surface and Hydrologic Processes Search Committee, Jackson School of Geosciences, 2007 - present

Member, Rapid Response Committee, Jackson School of Geosciences, 2007 - present

Member, Equipment Committee, Jackson School of Geosciences, 2006 - present

Session co-chair, Geophysical Site Characterization, 37th Symposium on the Application of Geophysics to Engineering and Environmental Problems, Denver, Colorado, April 16, 2025

Session Co-chair, Geophysical Site Characterization, 35th Symposium on the Application of Geophysics to Engineering and Environmental Problems, New Orleans, Louisiana, April 4, 2023

Moderator, Panel Session: Sustainable Engineering and Climate Change, 34th Symposium on the Application of Geophysics to Engineering and Environmental Problems, Denver, Colo., March 22, 2022

Panelist, Geohazards and Cascading Effects, Board on Earth Sciences and Resources, The National Academies of Sciences, Engineering, and Medicine, Washington, D.C., June 24, 2019

Session Chair, Seismic Methods, 32nd Symposium on the Application of Geophysics to Engineering and Environmental Problems (SAGEEP), Environmental and Engineering Geophysical Society, Portland, Oreg., March 19, 2019

Vice President, SAGEEP, Board of Directors, Environmental and Engineering Geophysical Society, March 22, 2017-March 21, 2018

At-Large Member, Technical Qualifications Board, Environmental Protection Agency, D. Werkema GS-15 review panel, February 7, 2018

Vice President Elect, SAGEEP, Board of Directors, Environmental and Engineering Geophysical Society, April 2016-March 2017

Chairman, Nominations Committee, Division of Environmental Geosciences, American Association of Petroleum Geologists, July 1, 2015-June 30, 2016

Past President, Division of Environmental Geosciences, American Association of Petroleum Geologists, July 2015-June 2016

Session Chair, Environmental and Coastal Geology, 65th Annual Convention, Gulf Coast Association of Geological Societies and Gulf Coast Section SEPM, Houston, Texas, September 22, 2015

Vice Chair, Organizing Committee, International Conference and Exhibition, American Association of Petroleum Geologists and Society of Exploration Geophysicists, Melbourne, Australia, September 13-16, 2015

Session Chair, Environment and Regulation, International Conference and Exhibition, American Association of Petroleum Geologists and Society of Exploration Geophysicists, Melbourne, Australia, September 15, 2015

Councilor, Advisory Council, American Association of Petroleum Geologists, July 2014-June 2015

President, Division of Environmental Geosciences, American Association of Petroleum Geologists, July 2014-June 2015

General Chairman, 28th Symposium on the Application of Geophysics to Engineering and Environmental Problems, Environmental and Engineering Geophysical Society, April 1, 2014-March 27, 2015

President-Elect, Division of Environmental Geosciences, American Association of Petroleum Geologists, July 2013-June 2014

Chair, Promotions Advisory Committee, Bureau of Economic Geology, Austin, Texas, January, 2013 - 2014

Member, Career Panel, Society of Exploration Geologists, , 2012

Member, Career Panel, Society of Exploration Geophysicists, 2012

Member, Short Courses and Workshops, Core Technical Advisory Committee, Texas General Land Office, 2012

Chair, Short Courses and Workshops, Planning and Organizing Committee, 2012 Symposium on the Application of Geophysics to Engineering and Environmental Problems, Tucson, Arizona, Environmental and Engineering Geophysical Society, 2011 - 2012

Convenor, Workshop W-2, Hydraulic Fracturing 101: What Is It, What Are the Issues, and How Can Geophysics Help?, 2012 Symposium on the Application of Geophysics to Engineering and Environmental Problems, Tucson, Arizona, Environmental and Engineering Geophysical Society; AAPG Division of Environmental Geosciences, 2011 - 2012

Chairman, Short Course and Workshop Organizing Committee, 2011 SAGEEP, 2011

Technical Program Reviewer, Potential Field Methods, Society for Exploration Geophysics Annual Meeting, San Antonio, Texas., 2011

Member, Advisory Council, Division of Environmental Geosciences, American Association of Petroleum Geologists, 2010 - 2011

Member, Publications Committee, Bureau of Economic Geology, 2010 - 2011

Review Panelist, Office of Biological And Environmental Research, Integrated Field Research Challenge Midterm Review Panel, U. S. Department of Energy, 2010

Session Chair, Integrated Geophysical Methods, 4th International Conference on Environmental and Engineering Geophysics, 2010 - 2010

Vice President, Division of Environmental Geosciences, American Association of Petroleum Geologists, 2009 - 2010

Member-at-Large, Board of Directors, Environmental and Engineering Geophysical Society, 2005 - 2010

Coordinator, Environmental and Engineering Geophysics University, Symposium on the Application of Geophysics to Engineering and Environmental Problems, Ft. Worth, Texas, 2009

Past President, Environmental and Engineering Geophysical Society, 2008 - 2009

Editor-in-Chief, FastTIMES: news magazine for near-surface geophysics, 2006-2009

Member, Environmental Geophysics Committee, American Association of Petroleum Geologists, 2008

Reviewer, National Laboratories Science Focus Area Review Panel, U.S. Department of Energy, Environmental Remediation Sciences Division,, 2008

Session Chair, Environmental Geophysics, Symposium on the Application of Geophysics to Engineering and Environmental Problems, Environmental and Engineering Geophysical Society, 2008

Texas House Select Committee on Hurricane Ike Storm Devastation to the Texas Gulf Coast and the Texas Senate Subcommittee on Flooding and Evacuations,Rep. Sylvester Turner, Hurricane Ike coastal impact and recovery.

President, Environmental and Engineering Geophysical Society, 2007 - 2008

Member, Near-Surface Geophysics Technical Program Committee, Annual Meeting, Society of Exploration Geophysicists, 2007

Member, Near-Surface Geophysics, Technical Program Committee, Annual Meeting, Society of Exploration Geophysicists, 2007

Session Chair, Hydrogeophysics, Symposium on the Application of Geophysics to Engineering and Environmental Problems, Environmental and Engineering Geophysical Society, 2007

Session Chair, Hydrologic Applications of Geophysics, SEG Annual Meeting, 2007

President-Elect, Environmental and Engineering Geophysical Society, 2006 - 2007

Review Panelist, Environmental Remediation Sciences Division, Solicitation 06-12, U.S. Department of Energy, 2006

Session Chair, Symposium on the Application of Geophysics to Engineering and Environmental Problems: Novel Geophysical Applications, Environmental and Engineering Geophysical Society, 2005

Session Chair, Symposium on the Application of Geophysics to Engineering and Environmental Problems: Mining and Landfill Site Investigations, Environmental and Engineering Geophysical Society, San Antonio, Texas, April, 2003

Review Panelist, Solid Earth and Natural Hazards Panel, National Aeronautics and Space Administration, Earth Science Enterprise, 1997 - 2002

Associate Editor, Environmental & Engineering Geoscience, 1995 - 2002

Member, Evaluations Task Force, Bureau of Economic Geology, 2001

Member, Technical Program Committee, Annual Meeting, Society of Exploration Geophysicists, 2001

Session Chair, Electromagnetics and resistivity, Annual Meeting, Society of Exploration Geophysicists, 2001

Session Chair, Near-surface seismic acquisition, processing, and interpretation, Annual Meeting, Society of Exploration Geophysicists, 2001

Member, Technical Advisory Board, Bureau of Economic Geology, 2000 - 2001

Chair, Recovery Plan Committee, Reporting to UT Vice President Juan Sanchez, Bureau of Economic Geology, 2000

Member, Standing Advisory Committee, Southern Coastal Corridor Cultural Resource Planning Region, 1987 - 1991

Expert Witness, State of Texas v. Matcha, Testimony on the Effect of Hurricane Alicia on Texas Beaches, , 1984

Published Interviews

Paine, J. G., 2013, Jeffrey Paine: retreating shoreline along Texas Gulf coast: EarthSky, January 21, http://earthsky.org/earth/jeffrey-paine-retreating-shoreline-along-texas-gulf-coast [one-on-one interview with Paine]

Proposal Review Panels Participation

National Science Foundation, Major Research Instrument proposal (reviewer), 2024

Geophysics (Article), 2023

Journal of Applied Geophysics (Article), 2023

Journal of Applied Geophysics (Article), 2022

Geophysics (Article), 2021
Geophysics (Article), 2021
Journal of Applied Geophysics (Article), 2021
Journal of Applied Geophysics (Article), 2021
Journal of Applied Geophysics (Article), 2020
Geophysics (Article), 2019
Geophysics (Article), 2019
Journal of Applied Geophysics (Article), 2019
Journal of Environmental and Engineering Geophysics (Article), 2019
Environmental Earth Sciences (Article), 2018
Environmental Research Letters (Article), 2018
Geophysics (Article), 2018
Journal of Applied Geophysics (Article), 2018
Nature Communications (Article), 2018
Near Surface Geophysics (Article), 2018
U.S. Department of Energy, Office of Science SBIR/STTR Program, FY 2019,Technologies for characterizing and monitoring complex subsurface systems including the rhizosphere (Proposal), 2018
Water (Article), 2018
Applied Geography (Article), 2017
Environmental Earth Sciences (Article), 2017
Environmental Research Letters (Article), 2017
Geological Survey of Ireland Research Program, Griffith Fellowship (Proposal), 2017
Geophysical Prospecting (Article), 2017
Geophysics (Article), 2017
Journal of Applied Geophysics (Article), 2017
Journal of Applied Geophysics (Article), 2017
Journal of Applied Geophysics (Article), 2017
Journal of Environmental and Engineering Geophysics (Article), 2017
Near Surface Geophysics (Article), 2017
Remote Sensing (Article), 2017
Remote Sensing (Article), 2017
Environmental Earth Sciences (Article), 2016
Geology (Article), 2016
Journal of Applied Geophysics (Article), 2016
Journal of Coastal Research (Article), 2016
Journal of Coastal Research (Article), 2016
Journal of Coastal Research (Article), 2016
Journal of Geophysics and Engineering (Article), 2016
Journal of Maps (Article), 2016
Environmental Earth Sciences (Article), 2015
Geoarchaeology (Article), 2015
Geophysical Journal International (Article), 2015
Geophysics (Article), 2015
Hydrologic Sciences Competition, National Science Foundation, Division of Earth Sciences (Article), 2015
Journal of Coastal Research Special Issue on Advances in Topobathymetric Mapping, Models, and Applications (article), 2015
Environmental Earth Sciences (Article), 2014
Geophysics (Article), 2014
Geology (Article), 2013
Geophysical Journal International (Article), 2013

Geophysical Prospecting (Article), 2013
Geophysics (Article), 2013
Geophysics (Article), 2013
Interpretation (Article), 2013
Journal of Earth Science (Article), 2013
Remote Sensing of Environment (Article), 2013
Geophysics (Article), 2012
USAID Middle East Regional Cooperation Program (Research Proposal), 2012
Bureau of Economic Geology, Report of Investigations No. 275 (Article), 2011
Bureau of Economic Geology, Report of Investigations No. 275 (Article), 2011
Bureau of Economic Geology, Report of Investigations No. 275 (Article), 2011
International Journal of Greenhouse Gas Control (Article), 2011
Society of Exploration Geophysicists (Abstracts), 2011
U.S. Department of Energy, Office of Science, Technologies for subsurface characterization and monitoring (Proposals), 2011
U.S. Department of Energy, Office of Biological and Environmental Research, Technologies for subsurface characterization and monitoring (Proposal), 2010
Ecosystems (Article), 2009
Environmental & Engineering Geoscience (Article), 2009
Geophysics (Article), 2009
Geophysics (Article), 2009
Journal of Hydrology (Article), 2009
Near Surface Geophysics (Article), 2009
Cooperative Institute for Coastal and Estuarine Environmental Technology (Research Proposal), 2008
Environmental and Engineering Geoscience (Article), 2008
Geology (Article), 2008
Geophysical Journal International (Article), 2008
Wetlands (Article), 2008
Geophysics (Article), 2007
Geophysics (Article), 2006
Geophysics (Article), 2006
Geophysics (Article), 2006
Geophysics (Article), 2006
Southwest Consortium for Environmental Research and Policy (Proposal), 2006
U.S. Department of Energy Environmental Remediation Science Program (Proposal Review Panel), 2006
Environmental and Engineering Geoscience (Article), 2005
Vadose Zone Journal (Article), 2005
Australian Journal of Experimental Agriculture (Article), 2004
Environmental and Engineering Science (Article), 2004
Geophysics (Article), 2004
Environmental and Engineering Geoscience (Article), 2003
Journal of Environmental and Engineering Geophysics (Article), 2003
Geophysical Research Letters (Article), 2002
Tectonophysics (Article), 2002
Geophysics (Article), 2000
2014, Article: Geophysics.
2014, Article: Geophysics.
2014, Article: Geophysics.
2014, Article: Nature Communications.
Ecosystems (Article)
Environmental and Engineering Geoscience (Article)

Journal of Applied Geophysics (Article)
Journal of Hydrology (Article)

Teaching and Advising

University Courses Taught

GEO382W/476W Hydrogeophysics: presented to Jackson School of Geosciences, The University of Texas at Austin, Austin, Texas, August 31-December 8, 2017.

Near-surface geophysics: EM theory, methods, and applications (guest lecturer): presented to Department of Geological Sciences, The University of Texas at Austin, Austin, Texas, April 19, 2016.

Hydrogeophysics (GEO 382W/GEO 376W): presented to graduate and undergraduate students, presented at Jackson School of Geosciences, The University of Texas at Austin, September-December 2013.

Hydrogeophysics (GEO 391/371C): presented to graduate and undergraduate students, presented at Jackson School of Geosciences, The University of Texas at Austin, September-December 2012.

EM investigations to assess near-surface effects of hydrofracturing on water quality: presented at Bureau of Economic Geology Symposium, Austin, Texas, April 27, 2012.

GEO371C/391C Hydrogeophysics (co-instructor): presented at Jackson School of Geosciences, The University of Texas at Austin, Austin, Texas, 2012.

Hydrogeophysics (GEO 371C/GEO 391): presented to graduate and undergraduate students, presented at Jackson School of Geosciences, The University of Texas at Austin, September-December 2011.

Lecturer, Hydrogeophysics (GEO 391): Department of Geological Sciences, The University of Texas at Austin, Austin, Texas, Fall 2011.

Co-Instructor, Hydrogeophysics (GEO371C/391C): Department of Geological Sciences, The University of Texas at Austin, Austin, Texas, 2011.

Overview of near-surface geophysics in engineering and environmental studies: presented to CE 287, Engineering Geology class, Department of Civil, Architectural, and Environmental Engineering, The University of Texas at Austin, Austin, Texas, July 2008.

Hydrogeophysical field methods: presented to Hydrogeology Field Methods class (GEO 376L), Department of Geological Sciences, The University of Texas at Austin, Austin, Texas, May 2008.

Hydrogeophysical field methods: presented to Hydrogeology Field Methods class (GEO 376L), Department of Geological Sciences, The University of Texas at Austin, Austin, Texas, May 2007.

Flying the Colorado: finding salinity sources in stream-axis EM data from West Texas: presented at the Bureau of Economic Geology research seminar, Austin, Texas, April 2007.

Overview of near-surface geophysics in engineering and environmental studies: presented to Engineering Geology class (CE 387G), Department of Civil, Architectural, and Environmental Engineering, The University of Texas at Austin, Austin, Texas, July 2006.

Hydrogeophysical field methods: presented to Hydrogeology Field Methods class (GEO 376L), Department of Geological Sciences, The University of Texas at Austin, Austin, Texas, May 2006.

Hydrogeophysical field methods: presented to Hydrogeology Field Methods class, GEO 376L, Department of Geological Sciences, The University of Texas at Austin, Austin, Texas, May 2005.

Lecturer, Hydrogeophysics (GEO 391): Department of Geological Sciences, The University of Texas at Austin, Austin, Texas, February 2004.

Near-surface geophysical methods in hydrogeological investigations: lecture and field demonstration of electromagnetic methods for field methods: presented to Hydrogeology class, GEO376L, Department of Geological Sciences, The University of Texas at Austin, Austin, Texas, May 2002.

Imaging Cenozoic coastal-plain deposits and predicting groundwater quality using airborne 3-D EM: Bureau of Economic Geology Research Seminar, The University of Texas at Austin, Austin, Texas, March 2000.

Finding salinity sources in West Texas with airborne and ground-based electromagnetic surveys: presented at Bureau of Economic Geology research seminar, October 1996.

To bedrock and beyond: rationale, methods, and results of shallow seismic studies at the Bureau of Economic Geology: presented at Bureau of Economic Geology research seminar, April 1993.

Impact of Hurricane Gilbert on Beaches of the Texas Coast: presented (with R. A. Morton) at Bureau of Economic Geology research seminar, March 1989.

A Higher Holocene Sea-Level Highstand in Texas?: presented at Bureau of Economic Geology research seminar, October 1984.

Legal and Geologic Impacts of Hurricane Alicia: presented (with R. A. Morton) at Bureau of Economic Geology research seminar, March 1984.

Shoreline Changes in Corpus Christi and Galveston Bays: presented as Bureau of Economic Geology research seminar, October 1983.

Continuing Education Courses Taught

EM applications to water-quality studies: presented to Texas Commission of Environmental Quality, Austin, Texas, September 15, 2005.

Field Trips Leadership

Lead Instructor, GeoForce 11th Grade Academy (Southwest Texas students), Jackson School of Geosciences, The University of Texas at Austin, Oregon and Washington, July 20-26, 2019.

Co-leader, In the Footsteps of R. T. Hill: Geologic Forays Around Austin, Texas, in Honor of Edward W. Collins, Austin Geological Society, Austin, Texas, December 1, 2018.

Lead Instructor, GeoForce 11th Grade Academy (Southwest Texas students), Jackson School of Geosciences, The University of Texas at Austin, Oregon and Washington, July 21-27, 2018.

Lead Instructor, GeoForce 11th Grade Academy (Houston Independent School District students), Jackson School of Geosciences, The University of Texas at Austin, Oregon and Washington, July 7-13, 2018.

Lead Instructor, GeoForce 11th Grade Academy (Southwest Texas and Houston Independent School District students), Jackson School of Geosciences, The University of Texas at Austin, Oregon and Washington, July 22-28, 2017.

Lead Instructor, GeoForce 11th-grade Summer Academy (Houston Independent School District students), Jackson School of Geosciences, The University of Texas at Austin, Oregon and Washington, July 8-14, 2017.

Lead Instructor, GeoForce 11th Grade Academy (Southwest Texas students), Jackson School of Geosciences, The University of Texas at Austin, Oregon and Washington, July 23-29, 2016.

Lead Instructor, GeoForce 11th Grade Academy (mixed cohort; Houston and Southwest Texas students), Jackson School of Geosciences, The University of Texas at Austin, Oregon and Washington, July 9-16, 2016.

Lead Instructor, GeoForce 11th Grade Academy (Southwest Texas students), Jackson School of Geosciences, The University of Texas at Austin, Oregon and Washington, July 25-August 1, 2015.

Lead Instructor, GeoForce 11th Grade Academy (Houston ISD students), Jackson School of Geosciences, The University of Texas at Austin, Oregon and Washington, July 10-18, 2015.

Lead Instructor, GeoForce 11th Grade Academy (Houston ISD students), UT, Jackson School of Geosciences, Oregon and Washington, July 2014.

Lead Instructor, GeoForce 11th Grade Academy (Southwest Texas students), UT, Jackson School of Geosciences, Oregon and Washington, July 2014.

Lead Instructor, GeoForce 11th Grade Academy (Houston students): UT, Jackson School of Geosciences, Oregon, Washington, July 2013.

Lead Instructor, GeoForce 11th Grade Academy (Southwest students): UT, Jackson School of Geosciences, Oregon, Washington, July 2013.

Lead Instructor, GeoForce 11th Grade Academy, presented to 11th graders (Houston students): chosen by Jackson School of Geosciences, Oregon, Washington, July 2012.

Lead Instructor, GeoForce 11th Grade Academy, presented to 11th graders (southwest students): chosen by Jackson School of Geosciences, Oregon, Washington, July 2012.

Lead Instructor, GeoForce 11th Grade Academy (Southwest students): UT, Jackson School of Geosciences, Oregon, Washington, July 2011.

Lead instructor, GeoForce Texas 11th Grade Academy: presented to 11th graders (Houston students) chosen by the Jackson School of Geosciences, The University of Texas at Austin, in Oregon and Washington, July 2011.

Lead instructor, GeoForce Texas 11th Grade Academy: presented to 11th graders (Southwest students) chosen by the Jackson School of Geosciences, The University of Texas at Austin, in Oregon and Washington, July 2011.

Lead Instructor, GeoForce 11th Grade Academy: presented to 11th graders (Houston students) chosen by the Jackson School of Geosciences, The University of Texas at Austin, , in Oregon and Washington, July 2010.

Lead Instructor, GeoForce 11th Grade Academy: presented to 11th graders (Uvalde area students) chosen by the Jackson School of Geosciences, The University of Texas at Austin, , in Oregon and Washington, July 2010.

Lead instructor, GeoForce Texas 11th Grade Academy: presented to 11th graders (Houston students) chosen by the Jackson School of Geosciences, The University of Texas at Austin, in Oregon and Washington, July 2009.

Lead instructor, GeoForce Texas 11th Grade Academy: presented to 11th graders (Uvalde students) chosen by the Jackson School of Geosciences, The University of Texas at Austin, in Oregon and Washington, July 2009.

Lead instructor, GeoForce Texas 11th Grade Academy: presented to 11th graders chosen by the Jackson School of Geosciences, The University of Texas at Austin, in Oregon and Washington, July 2008.

Lead instructor, GeoForce Texas 11th Grade Academy: presented to 11th graders chosen by the Jackson School of Geosciences, The University of Texas at Austin, in Oregon and Washington, June 2008.

Lead instructor, GeoForce Texas 11th Grade Academy: presented to 11th graders chosen by the Jackson School of Geosciences, The University of Texas at Austin, in Oregon and Washington, July 2007.

Student Committee Participation

M.S. Thesis Committee, Daniel Aylward, Jackson School of Geosciences, The University of Texas at Austin, 2017

M.S. Thesis Committee, Shawn Lee, Jackson School of Geosciences, The University of Texas at Austin, 2017

Member, Ph.D. Dissertation Committee, Eric Petersen, The University of Texas at Austin, 2014

Member, Ph.D. Dissertation Committee, Kevin Befus, The University of Texas at Austin, 2012

Member, M.S. Thesis Committee, Martin Hanzlik, The University of Texas at Austin, Austin, Texas, 2005

Member, Ph.D. Dissertation Committee, Joel D. Stevens, The University of Texas at Austin, Austin, Texas, 2004

Member, Ph.D. Dissertation Committee, Marcus O. Gary, The University of Texas at Austin, Austin, Texas, 2004

Member, Ph.D. Dissertation Committee, Nedra D. Bonal, The University of Texas at Austin, Austin, Texas, 2004

M.S. Thesis Committee, Kaveh Khorzad, Department of Geological Sciences: The University of Texas at Austin, Austin, Texas, 1998

Member, Ph.D. Dissertation Committee, Georgios P. Tsoflias, Department of Geological Sciences: The University of Texas at Austin, Austin, Texas, 1996

Member, M.S. Thesis Committee, David Hill, Department of Geological Sciences: The University of Texas at Austin, Austin, Texas, 1992

Presentations

Invited Presentations

Drone, GPS, and geophysical approaches to rapidly assess sinkhole status and development potential: presented at 9th Energy Drone & Robotics Summit, Houston, Texas, June 17, 2025.

Theory, history, and operation of transient electromagnetic induction instruments: presented to Exploration Instruments LLC, Austin, Texas, May 12, 2025.

Near-surface geophysics and remote sensing at the Near Surface Observatory: presented at GeoDayz 2022, American Institute of Professional Geologists, Austin, Tex., August 4, 2022.

Near-Surface Geophysics at Sewanee: presented to The University of the South, Sewanee, Tenn., February 27, 2020.

Rapid response on the Texas coast: acquiring post-Harvey lidar and imagery to assess storm impact and monitor recovery: presented at 45th International Association of Aquatic and Marine Science Libraries and Information Centers (IAMSLIC) Annual Conference and 29th SAIL Regional Meeting, Port Aransas, Texas, October 24, 2019.

Project and career research archives and comparative value of publication types: issues and discussion: presented at 45th International Association of Aquatic and Marine Science Libraries and Information Centers (IAMSLIC) Annual Conference and 29th SAIL Regional Meeting, Port Aransas, Texas, October 21, 2019.

Discriminating Pleistocene alluvial terraces on the Colorado River in central Texas using lidar and near-surface geophysics: presented at Near Surface Geoscience 2019, The Hague, The Netherlands, September 9, 2019.

Rapid response on the Texas coast: acquiring post-Harvey lidar and imagery to assess storm impact and monitor recovery: presented to Board on Earth Sciences and Resources, The National Academies of Sciences, Engineering, and Medicine, Washington, D.C., June 24, 2019.

Near-Surface Geophysics and Its Application to Environmental Geosciences: presented to Paleoecology and Soils classes, the University of the South, Sewanee, Tennessee, September 12, 2018.

Near-Surface Geophysics: Properties, Methods, Instruments, and Applications: presented to Optics class (PHYS 203A), The University of the South, Sewanee, Tennessee, September 12, 2018.

Rapid response on the Texas coast: acquiring post-Harvey lidar and imagery to assess storm impact and monitor recovery: presented at Geological Society of America Annual Meeting, Seattle, Washington, October 24, 2017.

What lidar and geophysics are telling us about the geology of Powderhorn Ranch, Central Texas coast: presented at Texas Mining and Reclamation Association Annual Meeting, Bastrop, Texas, October 30, 2016.

Quantifying subsidence and assessing collapse potential near the Wink sinkholes using airborne lidar, radar interferometry, and microgravity: presented to San Antonio Geophysical Society, San Antonio, Texas, October 25, 2016.

Quantifying Subsidence and Assessing Sinkhole Potential Near the Wink Sinkholes Using Airborne Lidar, Radar Interferometry, and Microgravity: presented to Society of Petroleum Engineers, Environmental Study Group, Midland, Texas, January 28, 2016.

Geologists and geologic hazards: presented at Texas Mining and Reclamation Assocation Annual Meeting, Bastrop, Texas, October 25, 2015.

Quantifying monthly to decadal subsidence and assessing collapse potential near the Wink sinkholes, West Texas, using airborne lidar, radar interferometry, and microgravity: presented at the American Geophysical Union Fall Meeting, San Francisco, California, December 18, 2014.

Airborne geophysics: applications to water resources, salinization, and carbon sequestration: presented at Texas Mining and Reclamation Association Annual Meeting, Bastrop, Texas, October 26, 2014.

Airborne geophysics in the oilfield: applications to salinization, water resources, and carbon sequestration: presented to San Antonio Geophysical Society, San Antonio, Texas, January 2014.

Historical shoreline change through 2007, Texas Gulf Coast: rates, contributing causes, and Holocene context: presented at Texas Mining and Reclamation Association Annual Meeting, San Antonio, Texas, October 21, 2012.

Hydrofracturing 101: What is it, what are the issues, and how can geophysics help?: presented at Texas Mining and Reclamation Association Annual Meeting, San Antonio, Texas, October 21, 2012.

Assessing collapse risk in evaporite sinkhole-prone areas using gravimetry and radar interferometry: presented at Keynote Session, 4th International Conference on Environmental and Engineering Geophysics, Chengdu, China, June 14, 2010.

Assessing collapse risk in evaporite sinkhole-prone areas using gravimetry and radar interferometry: presented at Geophysics and Geohazards Workshop, 4th International Conference on Environmental and Engineering Geophysics, Wuhan, China, June 11, 2010.

Applying geophysics to environmental and engineering problems: a Texas sampler: presented to the Association of Exploration Geologists (keynote lecture), Hderabad, Andhra Pradesh, India,

November 9, 2006.

Presentations

Matagorda Formation: a new Holocene coastal stratigraphic unit, Texas: presented at Geological Society of America Connects 2025, San Antonio, Texas, October 22, 2025.

Monitoring and assessing coastal change with lidar: historical shoreline movement and beach and dune volumetric trends along the Texas Gulf coast: presented at Geological Society of America Connects 2025, San Antonio, Texas, October 20, 2025.

NSO@BEG: overview and summary of water-related projects: presented to The University of Texas at Austin, Bureau of Economic Geology, Austin, Texas, October 1, 2025.

NSO@BEG: assessing geologic hazards, landscapes, and natural resources: presented to The University of Texas at Austin, Applied Research Laboratories, Austin, Texas, September 25, 2025.

Sinkholes in Texas: presented to The University of Texas at Austin, Bureau of Economic Geology, Austin, Texas, July 9, 2025.

Reconnaissance surveys of a developing sinkhole in the southern Permian Basin, west Texas: presented at 37th Symposium on the Application of Geophysicsl to Engineering and Environmental Problems, Denver, Colorado, April 16, 2025.

Some quick, helpful, and low-risk things that can be done when a major sinkhole forms: Daisetta, Texas, April 2023: presented at Geologic Mapping Forum 2024-2025, online, April 10, 2025.

Summary of the Texas STATEMAP geologic mapping program: presented to Texas Geologic Mapping Advisory Committee, Austin, Texas, December 11, 2024.

Shoreline Movement in the Galveston Bay System, Upper Texas Coast, 1930-2022: presented to American Shore and Beach Preservation Association, presented at National Coastal Conference, Galveston, Texas, August 26-29, 2024.

The Roaring Twenties, Texas style: Bridgetown, the Red River Boundary Dispute, and the Bureau: presented at Summer Seminar Series, Bureau of Economic Geology, Austin, Texas, August 16, 2024.

Shoreline Movement in the Galveston Bay System, Upper Texas Coast, 1930 to 2022: presented to Texas Chapter of the American Shore and Beach Preservation Association, presented at 2024 Coastal Symposium, Corpus Christi, Texas, April 11, 2024.

Ground and airborne surveys to determine size, identify precursors, and assess growth potential after the April 2023 Daisetta sinkhole collapse, SE Texas: presented at 36th Symposium on the Application of Geophysics to Engineering and Environmental Problems, Tucson, Arizona, March 27, 2024.

Summary of the Texas STATEMAP geologic mapping program: presented to Texas Geologic Mapping Advisory Committee, Austin, Tex., December 12, 2023.

Dr. Virgil E. Barnes – Champion of Geologic Mapping in Texas: presented to Geological Society of America, presented at GSA Connects 2023, Pittsburgh, Pennsylvannia, October 15-18, 2023.

Some quick, helpful, and low-risk things that can be done when a major sinkhole forms: ground and airborne surveys after the April 2023 Daisetta sinkhole collapse, southeastern Texas: presented at Geological Society of America Connects 2023, Pittsburgh, Pa., October 16, 2023.

Salt Domes, the Energy Transition, and a 21st Century Geospatial Database: presented to GCAGS, presented at GeoGulf 2023, Houston, Tex., April 24, 2023.

Applying bathymetric GPR, borehole logging, passive seismic, lidar and structure-from-motion methods in hydrogeologic studies of the Devils River, southwestern Texas: presented at 35th Symposium on the Application of Geophysics to Engineering and Environmental Problems, New Orleans, La., April 4, 2023.

Summary of the Texas STATEMAP geologic mapping program: presented to Texas Geologic Mapping Advisory Committee, Austin, Tex., December 13, 2022.

GPR, EM, and borehole geophysical investigations of the Bee Creek fault zone, central Texas: presented at 8th Annual Bureau Research Symposium, Austin, Tex., September 30, 2022.

Geologic mapping: presented to Visiting Committee, Bureau of Economic Geology, Austin, Tex., August 12, 2022.

Near-surface geophysics and remote sensing at the Near Surface Observatory: presented at GeoDayz 2022, American Institute of Professional Geologists, Austin, Tex., August 4, 2022.

GPR, EM, and borehole geophysical investigations of the Bee Creek fault zone, central Texas: presented at 34th Symposium on the Application of Geophysics to Engineering and Environmental Problems, Denver, Colo., March 21, 2022.

NSO@BEG: assessing geologic hazards, landscapes, and natural resources: presented to Aon, Austin, Tex., March 8, 2022.

Summary of the Texas STATEMAP geologic mapping program: presented to Texas STATEMAP Mapping Advisory Committee, Austin, Tex., November 15, 2021.

Texas Gulf shoreline movement, land loss, and beach and dune volumes and peak elevations through 2019: presented at GeoGulf 2021, Austin, Texas, October 28, 2021.

Collaborative geophysical investigations of near-surface strata on the southern Cumberland Plateau, Sewanee, Tennessee: presented at 33rd Symposium on the Application of Geophysics to Engineering and Environmental Problems, online, March 16, 2021.

Summary of the Texas STATEMAP Geologic Mapping Program: presented to Texas STATEMAP Mapping Advisory Committee, Austin, Tex., December 10, 2020.

Shoreline movement along the Texas Gulf Coast, 1930's to 2019: presented to General Land Office, Austin, Tex., February 21, 2020.

Summary of the Texas STATEMAP geologic mapping program: presented to Texas STATEMAP Mapping Advisory Committee, Austin, Tex., November 12, 2019.

You might be a geologist if . . .: presented at 20th Annual Austin Earth Science Week Career Day, Austin, Tex., October 11, 2019.

Coastal mapping efforts at the Bureau of Economic Geology: presented at 2nd Annual Texas Coastal Habitat Mapping Workgroup Meeting, Austin, Tex., October 8, 2019.

Determining annual to decadal subsidence rates and areas using airborne lidar, GPS, and topographic maps at the Wink sinkholes, West Texas: presented at Geological Society of America Annual Meeting, Phoenix, Ariz., September 24, 2019.

Improving geologic mapping of low-relief Quaternary strata on the Texas Coastal Plain using airborne lidar and near-surface geophysics: presented at Geologic Mapping Forum, Minneapolis, Minn., April 12, 2019.

Discriminating Pleistocene alluvial terraces on the Colorado River in central Texas using lidar and near-surface geophysics: presented at 32nd Symposium on the Application of Geophysics to Engineering and Environmental Problems (SAGEEP), Portland, Oreg., March 20, 2019.

Airborne lidar on the Alaskan North Slope: wetlands mapping, lake volumes, and permafrost features: presented to ENI Petroleum, Austin, Texas, November 8, 2018.

Rapid response on the Texas coast: acquiring post-Harvey lidar and imagery to assess storm impact and monitor recovery: presented at 2018 National Coastal Conference, American Shore & Beach Preservation Association, Galveston, Texas, November 1, 2018.

Shoreline movement along the Texas Gulf Coast, 1930s to 2016: presented at 2018 National Coastal Conference, American Shore & Beach Preservation Association, Galveston, Texas, November 1, 2018.

Geologists and geologic hazards: presented at Earth Science Week, The University of Texas at Austin, Austin, Tex., October 19, 2018.

Rapid response on the Texas coast: acquiring post-Harvey lidar and imagery to assess storm impact and monitor recovery: presented to Texas Chapter American Shore & Beach Preservation Association, presented at ASBPA Texas Chapter 2018 Symposium, Corpus Christi, Texas, April 24, 2018.

Student-led hydrogeological characterization of Colorado River alluvial terraces near Austin, Texas, using integrated geophysical methods: presented at 31st Symposium on the Application of Geophysics to Engineering and Environmental Problems, Nashville, Tenn., March 25-29, 2018.

Shoreline movement along the Texas Gulf coast, 1930s to 2016: presented to Texas General Land Office, Austin, Texas, March 8, 2018.

Rapid response on the Texas coast: conducting post-Harvey surveys to assess storm impact and monitor recovery: presented to Austin Gem and Mineral Society, Austin, Tex., November 16, 2017.

Rapid response on the Texas coast: conducting post-Harvey surveys to assess storm impact and monitor recovery: presented to Geology Foundation Advisory Council, Jackson School of Geosciences, The University of Texas at Austin, Austin, Tex., November 10, 2017.

Rapid response on the Texas coast: acquiring post-Harvey lidar and imagery to assess storm impact and monitor recovery: presented to General Land Office, Austin, Texas, November 1, 2017.

Rapid response on the Texas coast: acquiring post-Harvey lidar and imagery to assess storm impact and monitor recovery: presented at Bureau of Economic Geology, The University of Texas at Austin, Austin, Texas, October 27, 2017.

Discriminating Quaternary coastal-plain strata using airborne lidar and near-surface geophysics: a helpful approach to low-relief geologic mapping: presented at Geological Society of America Annual Meeting, Seattle, Washington, October 25, 2017.

Rapid response: post-Harvey efforts at the Bureau's Near Surface Observatory: presented to Friends and Alumni Network Board Meeting, Jackson School of Geosciences, The University of Texas at Austin, Austin, Texas, October 6, 2017.

Geologic hazards, water resources, and landscapes: presented to SENER (Energy Secretariat, Mexico), Bureau of Economic Geology, The University of Texas at Austin, Austin, Tex., August 23, 2017.

Long- and short-term subsidence at the Wink Sinkholes, West Texas: results from airborne lidar, radar interferometry, and microgravity in a GIS framework: presented at Texas GIS Community Meeting, Austin, Texas, April 18, 2017.

Detecting buried paleosols in Quaternary coastal-plain strata using geophysical logs: presented at 30th Symposium on the Application of Geophysics to Engineering and Environmental Problems (SAGEEP), Denver, Colorado, March 21, 2017.

Determining bay shoreline movement and retreat susceptibility using airborne lidar: presented to Texas General Land Office, Austin, Texas, December 14, 2016.

Lithological and morphological framework of Pleistocene barrier islands and underlying strata from surface and borehole geophysics and airborne lidar in the Matagorda embayment: presented at 66th Annual Convention, Gulf Coast Association of Geological Societies and Gulf Coast Section of SEPM, Corpus Christi, Texas, September 20, 2016.

Lithological and morphological framework of Pleistocene barrier islands from surface and borehole geophysics and airborne lidar on the Texas coastal plain: presented at 29th Symposium on the Application of Geophysics to Engineering and Environmental Problems, Denver, Colorado, March 23, 2016.

Geologic mapping of the Texas Gulf of Mexico coastal plain: presented at Geological Society of America Annual Meeting, Baltimore, Maryland, November 1, 2015.

Geologists and geologic hazards: presented to Earth Science Week, The University of Texas at Austin, Austin, Texas, October 9, 2015.

Beach and dune analysis using Chiroptera imaging system, South Padre and Brazos Islands, Texas Gulf Coast: presented at Texas Beach and Dune Forum, Corpus Christi, Tex., September 25, 2015.

Monitoring the Texas Gulf shoreline: recent shoreline movement and volumetric patterns from repeat airborne lidar surveys: presented at Texas Beaches and Dunes: Science and Management Forum, Corpus Christi, Texas, September 25, 2015.

Airborne lidar and near-surface geophysics: a new approach to discriminating Quaternary depositional units on the Texas Coastal Plain: presented at 65th Annual Convention, Gulf Coast Association of Geological Societies and Gulf Coast Section SEPM, Houston, Texas, September 22, 2015.

Quantifying monthly to decadal subsidence and assessing collapse potential in a Texas oilfield using airborne lidar, radar interferometry, and microgravity: presented at International Conference and Exhibition, Melbourne, Australia, September 15, 2015.

Annual report of the Division of Environmental Geosciences: presented to American Association of Petroleum Geologists, presented at Annual Convention and Exhibition, Denver, Colorado, June 3, 2015.

Quantifying subsidence and assessing sinkhole potential in the Hendrick Field, Permian Basin, Texas, using airborne lidar, radar interferometry, and microgravity: presented at AAPG Annual Convention and Exhibition, Denver, Colorado, June 2, 2015.

Airborne lidar and near-surface geophysics: a new approach to discriminating Quaternary depositional units on the Texas Coastal Plain: presented at 28th Symposium on the Application of Geophysics to Engineering and Environmental Problems, Austin, Texas, March 25, 2015.

Welcoming address: presented at 28th Symposium on the Application of Geophysics to Engineering and Environmental Problems, Austin, Texas, March 23, 2015.

Characterizing initial-state conductivity distribution at a CO2 injection site with airborne, surface, and borehole electromagnetic induction methods: presented to Environmental and Engineering Geophysical Society (EEGS), presented at Symposium on the Application of Geophysics to Engineering and Environmental Problems (SAGEEP), Austin, Tex., March 2015.

Near-surface stratigraphy and geophysics: presented to Southeast Regional Carbon Sequestration Partnership (SECARB), presented at SECARB 10th Annual Stakeholders' Briefing, Atlanta, Ga., March 2015.

Historical and recent shoreline change, Texas Gulf Coast: rates, contributing causes, and postglacial context: presented to National Park Service, U.S. Department of the Interior, Port Aransas, Texas, February 25, 2015.

Historical to recent Texas Gulf shoreline movement and its postglacial context: presented at the Geological Society of America Annual Meeting, Vancouver, British Columbia, Canada, October 21, 2014.

Shoreline movement along the Texas Gulf coast, 1930’s to 2012: presented at General Land Office of Texas, Austin, Texas, August 2014.

Monitoring coastal change and vulnerability using airborne lidar, Texas Gulf Coast: presented to Nueces County Dune Protection Committee, Corpus Christi, Texas, May 2014.

Preliminary results of the Nov. 2013 airborne lidar survey, Wink/Kermit area: presented to Winkler Country officials, Kermit, Texas, May 2014.

Quantifying monthly to decadal subsidence rates and magnitudes near the Wink sinkholes, west Texas, using airborne lidar and radar interferometry: presented at Symposium on the Application of Geophysics to Engineering and Environmental Problems, Boston, Massachusetts, March 2014.

Monitoring coastal change and vulnerability using airborne lidar, Texas Gulf Coast: presented at Texas General Land Office, Austin, Texas, December 2013.

Airborne lidar survey of the Alaskan North Slope showing water-body depths and microtopography: presented at 2013 Texas Mining and Reclamation Association Annual Meeting, Bastrop, Texas, October 27, 2013.

Geologists and Geologic Hazards: presented at Earth Science Week, Austin, Texas, October 2013.

Historical and short-term shoreline change, Texas Gulf coast: rates, contributing causes, and postglacial context: presented at 2013 ASBPA National Coastal Conference, South Padre Island, Texas, October 2013.

Airborne lidar on the Alaskan North Slope: Wetlands mapping, lake volumes, and permafrost features: presented at the Society of Exploration Geophysicists Annual Meeting, Houston, Texas, September 2013.

Historical shoreline change through 2007, Texas Gulf coast: rates, contributing causes, and Holocene context: presented at Joint Penrose/Chapman Conference on Coastal Processes and Environments under Sea-Level Rise and Changing Climate: Science to Inform Management, Galveston, Texas, April 2013.

Assessing near-surface effects of hydraulic fracturing using electromagnetic induction: presented at Symposium on the Application of Geophysics to Engineering and Environmental Problems, Denver, Colorado, March 19, 2013.

Determining wetlands distribution, lake depths, and topography using airborne lidar and imagery on the North Slope, Alaska: presented at Symposium on the Application of Geophysics to Engineering and Environmental Problems, Denver, Colorado, March 18, 2013.

Determining wetlands distribution, lake depths, and topography using airborne lidar and imagery on the North Slope, Alaska: Great Bear Petroleum, Austin, Texas, February 2013.

Historical shoreline change through 2007, Texas Gulf coast: rates, contributing causes, and Holocene context: presented to Texas General Land Office, Austin, Texas, November 15, 2012.

Historical shoreline change through 2007, Texas Gulf coast: rates, contributing causes, and Holocene context: presented at Gulf Coast Association of Geological Societies Annual Meeting, Austin, Texas, October 22, 2012.

Conductivity measuring to access brine impact, Katherine Romanak on behalf of Jeff Paine, The University of Texas at Austin, Texas: presented at the IEAGHG Environmental Impacts of CO2 Storage Workshop, Bozeman, Montana, July 17–19, 2012.

EM investigations to assess near-surface effects of hydrofracturing on water quality: presented at Symposium on the Application of Geophysics to Engineering and Environmental Problems, Tucson, Arizona, March 29, 2012.

EM investigations to assess near-surface effects of hydrofracturing on water quality: presented at Workshop W-2, Hydraulic Fracturing 101: What Is It, What Are the Issues, and How Can Geophysics Help? Symposium on the Application of Geophysics to Engineering and Environmental Problems, Tucson, Arizona, March 29, 2012.

Integrated, student-led hydrogeophysical investigations at a suspected central Texas sinkhole: presented at Symposium on the Application of Geophysics to Engineering and Environmental Problems, Tucson, Arizona, March 27, 2012.

Integrated, student-led hydrogeophysical investigations at a suspected central Texas sinkhole: presented at Symposium on the Application of Geophysics to Engineering and Environmental Problems, Tucson, Arizona, March 2012.

Lecture Title: The Great Wenchuan Earthquake (M 7.9), May 2008: surface rupture, landslides, lakes, and damage to infrastructure: presented at Texas Mining and Reclamation Association Annual Meeting, Bastrop, Texas, October 23, 2011.

Assessing collapse risk in evaporite sinkhole-prone areas using gravimetry and radar interferometry: invited talk presented at Workshop W-13: Geophysics Applied to Geohazards and Public Safety: Society of Exploration Geophysicists Annual Meeting, San Antonio, Texas, September 23, 2011.

Geophysical survey results at the Flowers Ranch blowout well, Hemphill County, Texas: presented to Intera, Austin, Texas, July 1, 2011.

Measuring conductivity to detect brine displacement: examples from Texas oil fields: invited talk presented at 7th IEAGHG Network Monitoring Meeting, Potsdam, Germany, June 2011.

Lessons for data integration: presented at EPA Geophysical Techniques Workshop for Shallow Ground Water, Dallas, Texas, May 12, 2011.

Ground-based EM techniques: presented at EPA Geophysical Techniques Workshop for Shallow Ground Water, Dallas, Texas, May 11, 2011.

Augmenting dense geologic, hydrologic, and geotechnical data with late-stage surface and borehole geophysics at a low-level radioactive waste repository in west Texas: presented at Symposium on the Application of Geophysics to Engineering and Environmental Problems, Charleston, South Carolina, April 13, 2011.

The Great Wenchuan Earthquake (M 7.9), May 2008: surface rupture, landslides, lakes, and damage to infrastructure: presented at Westlake High School Career Day, Jackson School of Geosciences, The University of Texas at Austin, Austin, Texas, April 6, 2011.

The Great Wenchuan Earthquake (M 7.9), May 2008: surface rupture, landslides, lakes, and damage to infrastructure: presented to the Undergraduate Geology Society, Jackson School of Geosciences, The University of Texas at Austin, Austin, Texas, March 23, 2011.

Assessing collapse risk in evaporite sinkhole-prone areas using gravimetry and radar interferometry: presented at SEG 2011: Energy Flowing from Innovation, San Antonio, Texas, September 18?23, 2011.

Assessing collapse risk in evaporite sinkhole-prone areas using gravimetry and radar interferometry: presented to Texas Mining and Reclamation Association, Bastrop, Texas, October 24, 2010.

Geophysics applied to environmental and geohazard issues: presented to Texas Commission on Environmental Quality, Austin, Texas, October 5, 2010.

Airborne EM for Environmental and Engineering Applications: a SAGEEP Workshop: presented at the 23rd SAGEEP Annual Meeting, Keystone, Colorado, April 15, 2010.

Examining shallow lithologic and water-saturation trends at the WCS site, West Texas, using EM methods: presented to Texas Commission on Environmental Quality and Waste Control Specialists, Austin, Texas, March 29, 2010.

Summary of geophysical studies of shallow strata and ground water at the WCS site, West Texas: presented to Texas Commission on Environmental Quality and Waste Control Specialists, Austin,

Texas, March 3, 2010.

Geophysics to examine stratigraphy and water saturation trends at the WCS site, West Texas: Phase 2: presented to Texas Commission on Environmental Quality, Austin, Texas, December 18, 2009.

Geophysics to examine stratigraphy and water saturation trends at the WCS site, West Texas: presented to Texas Commission on Environmental Quality, Austin, Texas, October 15, 2009.

Near surface geophysics and geohazards: presented to Texas Commission on Environmental Quality, Austin, Texas, September 24, 2009.

Sinkholes in Texas: presented to Visiting Committee, Bureau of Economic Geology, Austin, Texas, August 6, 2009.

Assessing sinkhole potential at Wink using gravity and radar interferometry: presented at Winkler County Courthouse, Kermit, Texas, April 3, 2009.

Assessing sinkhole potential at Wink and Daisetta using gravity and radar interferometry: presented at Symposium on the Application of Geophysics to Engineering and Environmental Problems, Fort Worth, Texas, March 31, 2009.

Applying electrical geophysical methods (EM and resistivity) at the WCS site, Andrews County, Texas: presented at Texas Commission on Environmental Quality, Austin, Texas, March 19, 2009.

Rapid-response gravity survey at Daisetta, Texas: presented at Joint Meeting of the Association of Environmental and Engineering Geologists (Texas Section) and the Houston Geological Society, Daisetta, Texas, January 17, 2009.

Overview of near-surface geophysics in engineering and environmental studies: presented to Texas Mining and Reclamation Association, Corpus Christi, Texas, October 13, 2008.

Preliminary microgravity results at the Daisetta Sinkhole: presented to Railroad Commission of Texas, Austin, Texas, August 2008.

Passive electrical monitoring of aerobic and anaerobic processes using septic systems as an analog: presented at the 21st Symposium on the Application of Geophysics to Engineering and Environmental Problems, Philadelphia, Pennsylvania, April 9, 2008.

Stream-axis EM from a helicopter: identifying salinity sources in a large river basin: presented at the 14th Annual International Petroleum Environmental Conference, Houston, Texas, November 7, 2007.

Stream-axis EM from a helicopter: identifying salinity sources in a large river basin: presented to European Association of Geoscientists and Engineers (EAGE), London, England, June 10, 2007.

After the helicopter is gone: investigating anomalies in stream-axis EM data from the Colorado River, Texas: presented at the Symposium on the Application of Geophysics to Engineering and Environmental Problems, Denver, Colorado, April 2007.

Surface and borehole geophysical investigations in the Wendkirk Oil Field area, Coke County, Texas: presented to the Railroad Commission of Texas, Austin, Texas, December 4, 2006.

Geophysical investigations of salinization along the Upper Colorado River: presented at Texas Water Conservation Association Fall Meeting, San Antonio, Texas, October 19, 2006.

Applying geophysics to environmental and engineering problems: a Texas sampler: presented at Southwest Research Institute, San Antonio, Texas, April 13, 2006.

Streambed induction logs: an airborne approach to identifying salinity sources and quantifying salinity loads: presented at Symposium on the Application of Geophysics to Engineering and Environmental Problems, Seattle, WA, April 3, 2006.

Combining airborne EM and surface-water analyses to identify natural and oil-field salinity sources that degrade water quality in two Texas streams: presented at Geological Society of America Annual Meeting, Salt Lake City, Utah, October 16, 2005.

Applying airborne electromagnetic induction in groundwater salinization and resource studies, West Texas: presented to Society of Petroleum Engineers, Permian, Midland, Texas, September 20, 2005.

Delineating salinity sources along the Colorado River and Petronila Creek using airborne geophysics: presented to Red River Authority, Wichita Falls, Texas, June 27, 2005.

Airborne geophysical investigations of salinization along Petronila Creek: presented at Petronila Creek Stakeholders' Meeting, Robstown, Texas, June 2, 2005.

Airborne geophysical investigations of salinization along the Colorado River: presented at Upper Colorado River Stakeholders' Meeting, Ballinger, TX, June 1, 2005.

Combining EM and lidar to map coastal wetlands: an example from Mustang Island, Texas: presented at the 18th Symposium on the Application of Geophysics to Engineering and Environmental Problems, Atlanta, Georgia, April 4, 2005.

Geophysical investigations of salinization along Petronila Creek: presented at Petronila Creek Stakeholders' Meeting, Robstown, Texas, December 1, 2004.

Geophysical investigations of salinization along the Colorado River: presented at Upper Colorado River Stakeholders' Meeting, Ballinger, Texas, November 30, 2004.

Evaluating the perched aquifer and Ogallala fine-grained zone using airborne geophysics: presented at Pantex Groundwater Public Meeting, Panhandle, Texas, June 7, 2004.

Assessing groundwater perching horizons using synthetic, ground, and airborne TDEM data at the Pantex Plant, Texas: presented to the Symposium on the Application of Geophysics to Engineering and Environmental Problems (SAGEEP), Colorado Springs, Colorado, February 24, 2004.

Oil-field salinization screening on the Edwards Plateau using airborne geophysics: presented at the Aquifers of the Edwards Plateau Conference, San Angelo, Texas, February 8, 2004.

Near-surface geophysics: instruments, platforms, and applications: presented to Daniel B. Stephens & Associates, Austin, Texas, December 12, 2003.

Time-domain electromagnetic survey of Pantex: presented at Pantex Groundwater Public Meeting, Amarillo, Texas, December 2003.

Evaluating the integrity of the Ogallala FGZ using airborne geophysics: presented to U.S. Department of Energy and BWXT Pantex, Amarillo, Texas, September 24, 2003.

Applying airborne electromagnetic induction in groundwater salinization and resource studies, West Texas: presented at the Ninth European Meeting of Environmental and Engineering Geophysics, Prague, Czech Republic, September 2003.

GPR investigation of the UT Charter School site, Travis County, Texas: presented to the University of Texas System and The University of Texas at Austin Environmental Health and Safety Office, Austin, Texas, May 2003.

Airborne geophysics: applications and advances in environmental and engineering investigations: presented at Symposium on the Application of Geophysics to Engineering and Environmental Problems, Environmental and Engineering Geophysical Society, San Antonio, Texas, April 2003.

Applying airborne electromagnetic induction in groundwater salinization and resource studies, West Texas: presented at the Symposium on the Application of Geophysics to Engineering and Environmental Problems, San Antonio, Texas, April 2003.

Assessing vibration susceptibility over shallow and deep bedrock using accelerometers and walkaway surveys: presented at the Symposium on the Application of Geophysics to Engineering and Environmental Problems, San Antonio, Texas, April 2003.

Evaluating the integrity of the Ogallala fine-grained zones using airborne electromagnetic induction: presented at U.S. Department of Energy/State of Texas Agreement in Principle Quarterly Status Meeting, Austin, Texas, January 2003.

Geophysics applied to oil field environmental assessment: instruments, platforms, and applications: presented at Gulf Coast Association of Geological Societies 52nd Annual Convention as part of short course titled Regulation, Assessment, and Remediation of Oil Field Exploration and Production Sites, Texas and Louisiana, Austin, Texas, November 2002.

Assessing Lacy Creek salinization using airborne geophysics: presented to Railroad Commission of Texas, Upper Colorado River Authority, and Sterling County Underground Water Conservation District, Sterling City, Texas, August 2002.

Applications of airborne electromagnetic induction in identifying groundwater resources and assessing salinization: presented to International Boundary and Water Commission and Mexican Federal and State officials, El Paso, Texas, June 2002.

Hydrogeological applications of airborne electromagnetic induction imaging: presented to World Bank, Austin, Texas, May 2002.

Assessing Lacy Creek salinization using airborne geophysics: presented to Upper Colorado River Authority and Sterling County Underground Water Conservation District, Sterling City, Texas,

February 2002.

Comparing ground motion at the current and proposed sites of the Metrology Laboratory: presented to General Services Commission, Austin, Texas, January 2002.

Comparing ground motion at the current and proposed sites of the Metrology Laboratory: presented to Texas Department of Agriculture, Austin, Texas, December 2001.

Hydrogeological applications of airborne electromagnetic induction imaging: presented at Technical Sessions, Department of Geological Sciences, The University of Texas at Austin, Austin, Texas, October 2001.

Establishing acceptable ground motion at the TDA Metrology Laboratory: presented to Texas Department of Agriculture, Austin, Texas, September 2001.

Near-surface geophysics for groundwater resources: Bureau of Economic Geology Advisory Committee meeting, Austin, Texas, September 2001.

Near-surface geophysical methods in hydrogeological investigations: lecture and field demonstration of electromagnetic methods for field methods: presented to Hydrogeology class, GEO376L, The University of Texas at Austin, Austin, Texas, May 2001.

Evaluating the integrity of the Ogallala fine-grained zones using airborne electromagnetic induction: presented at Innovative Technology and Remediation Demonstration, Pantex Southeast Groundwater Project Technical Advisory Group meeting, Austin, Texas, March 2001.

Applying airborne and ground geophysics in ground-water resource and contamination investigations: presented at Los Alamos National Laboratory, Los Alamos, New Mexico, February 2001.

Geophysical investigations of oil-field salinization in the Red River Basin, Texas: presented at Airborne Geophysics seminar, Austin, Texas, February 2001.

Geophysical investigations of oilfield salinization in the Red River Basin, Texas: presented at LBG-Guyton Associates, Austin, Texas, February 2001.

Identifying and assessing ground water in the Lower Rio Grande Valley, Texas using airborne electromagnetic induction: presented at Airborne Geophysics seminar , Austin, Texas, February 2001.

Identifying and assessing groundwater in the Lower Rio Grande Valley, Texas using airborne electromagnetic induction: presented at LBG–Guyton Associates, Austin, Texas, February 2001.

Perched groundwater leakage: geophysics scoping evaluation: presented at Innovative Treatment Remediation Demonstration meeting, Pantex Southeast Groundwater Project, Amarillo, Texas, October 2000.

Perched groundwater stratigraphic control: presented at Innovative Technology Remediation Demonstration meeting, Pantex Southeast Groundwater Project, Amarillo, Texas, July 2000.

Identifying and assessing ground water in the Lower Rio Grande Valley, Texas using airborne electromagnetic induction: presented to Executive Administrator, Texas Water Development Board, Austin, Texas, June 2000.

Identifying and assessing groundwater in the Lower Rio Grande Valley, Texas, using airborne electromagnetic induction: presented at Region M meeting, Harlingen, Texas, June 2000.

Identifying and assessing ground water in the Lower Rio Grande Valley, Texas using airborne electromagnetic induction: presented to Texas Water Development Board and U.S. Bureau of Reclamation, Austin, Texas, May 2000.

Near-surface geophysical methods in hydrogeological investigations: lecture and field demonstration of electromagnetic methods : presented to Hydrogeology class, GEO376L, The University of Texas at Austin, Austin, Texas, May 2000.

Imaging Cenozoic coastal-plain deposits and predicting ground-water quality using airborne 3-D EM: presented at Texas A&M University, Austin, Texas, April 2000.

Delineating Colorado River salinization sources using reconnaissance airborne EM: presented to Clean Rivers Program Steering Committee, Big Spring, Texas, July 1999.

Delineating Colorado River salinization sources using reconnaissance airborne EM: presented to Clean Rivers Program Steering Committee, San Angelo, Texas, May 1999.

Assessing salinization sources and extent using EM methods: Hydrogeology Brown Bag Seminar, Department of Geological Sciences, The University of Texas at Austin, Austin, Texas, April 1999.

Geophysical investigations at the Montague County site: presented at the District Oilfield Cleanup Coordinators' Conference, Austin, Texas, February 1998.

Estimating depth to bedrock feasibility study: presented at Texas Department of Transportation Research Management Committee Meeting, Austin, Texas, November 1997.

Near-Surface Applications of Seismic Reflection and Electromagnetic Induction Methods: Exploration Geophysics class, GEO465K, The University of Texas at Austin, October 1997.

Identifying salinity sources in West Texas using geophysical methods: presented to Upper Colorado River Authority, San Angelo, Texas, August 1997.

Application of research in geology, geologic processes, and geophysics to Texas transportation issues: presented at the Center for Transportation Research Symposium, Kerrville, Texas, July 1997.

Near-Surface Geophysical Methods in Hydrogeological Investigations: lecture and field demonstration of electromagnetic methods: Hydrogeology Field Methods class, GEO376L, The University of Texas at Austin, June 1997.

Combining high-resolution airborne and ground-based geophysical methods to identify salinity sources in West Texas: presented to the Center for Remote Sensing, The University of North Texas, Denton, Texas, May 1997.

Locating salinity sources with remotely sensed geophysical data: presented at EPA/NASA Remote Sensing Environmental Monitoring Conference, Washington, D.C., December 1996.

Shallow reflection programs at DOE's Pantex Plant, Texas: different methods, different results: presented at Shallow Seismic Reflection Workshop sponsored by the U.S. Department of Energy at Lawrence Berkeley National Laboratory, Berkeley, California, September 1996.

Geophysical screening of salinity sources in West Texas: presentation for Clean Rivers Program Steering Committee meeting, Lower Colorado River Authority, Austin, Texas, August 1996.

Applying 3-D seismic data to image geologic features and identify reservoir compartments: analysis at T-C-B field, South Texas: presentation for New Oil from Old Fields short course, Houston Geological Society, Houston, Texas, June 1996.

Geophysical identification of reservoir architecture: presentation for DOE Deltas New Oil from Old Fields short course, South Texas Geological Society, San Antonio, Texas, April 1996.

Hydrogeological applications of seismic reflection and electromagnetic methods: Hydrogeology Seminar, Department of Geological Sciences, The University of Texas at Austin, April 1996.

Shallow Seismic Reflection and Refraction Methods in Hydrogeological Investigations: lecture and field demonstration for Field Methods in Hydrogeology class, GEO376L, The University of Texas at Austin, June 1995.

Electromagnetic Induction Methods: lecture for Vadose Zone Hydrogeology class, GEO391, The University of Texas at Austin, February 1995.

Determining the role of subsidence in the formation of playa basins using shallow seismic reflection methods: presented at the Playa Basin Symposium, Texas Tech University, Water Resources Center, Lubbock, Texas, May 1994.

Geophysics in the shallow subsurface: it's not just for prospecting anymore: presented at Austin Geological Society monthly meeting, Austin, Texas, May 1994.

Geophysics in the shallow subsurface: it's not just for prospecting anymore: presented at Panhandle Geological Society monthly meeting, Amarillo, Texas, May 1994.

Environmental and Groundwater Geophysics: Shallow Seismic Reflection Surveying and Electromagnetic Methods: lecture for Field Methods in Hydrogeology class, GEO376L, The University of Texas at Austin, June 1993.

Shallow seismic studies of a large playa basin near Amarillo, Texas: presented at 6th Symposium on the Application of Geophysics to Engineering and Environmental Problems, San Diego, California, April 1993.

Shallow Seismic Methods in Environmental and Hydrogeological Studies: lecture for Geophysics for Geology Majors class, GEO368K, The University of Texas at Austin, February 1993.

Shallow Seismic Methods in Environmental and Hydrogeological Studies: presented at Hydrogeology Seminar, Department of Geological Sciences, The University of Texas at Austin, October 1992.

Sea Level and Vertical Movement along the Texas Coast: Inferences from Historical, Holocene, and Late Pleistocene Sea Levels: presented at Geological Perspectives on Global Change,

Geodynamics Research Institute Symposium, Texas A&M University, April 1991.

Historical Shoreline Changes in the Galveston Bay System: presented at Galveston Bay Characterization Workshop, Houston, Texas, February 1991.

Coastal Plain Development along the Central Texas Coast during the Late Quaternary: presented at Geological Society of America annual meeting, Dallas, Texas, November 1990.

Late Quaternary Depositional Units, Sea Level, and Vertical Movement along the Central Texas Coast: presented at Technical Sessions, Department of Geological Sciences, The University of Texas at Austin, November 1990.

Patterns of Erosion and Deposition on Galveston Island during and after a Major Hurricane: presented at U.S. Army Corps of Engineers Coastal Engineering Research Center, Vicksburg, Mississippi, August 1990.

Recent Vertical Movement and Sea-Level Changes, Texas Coastal Zone: presented at American Geophysical Union Spring Meeting, Baltimore, Maryland, May 1990.

Potential for Non-Energy Mineral Development in the Texas Exclusive Economic Zone: presented at Ninth Annual Information Transfer Meeting, Gulf of Mexico OCS Region, New Orleans, Louisiana, October 1988.

Late Quaternary Development of the San Jacinto River Valley Margin at Peggy Lake, Upper Texas Coast: presented at Gulf Coast Association of Geological Societies convention, San Antonio, Texas, October 1987.

Sea-Level Control of Clay Dune Development at the Swan Lake Site, Copano Bay, Texas: Evidence for a Holocene Highstand?: presented at Geological Society of America convention, Waco, Texas, March 1987.

Late Quaternary Evolution of the Texas Coast: presented at the Third Texas Coastal Bend Archeological Palaver, Corpus Christi, Texas, May 1986.

Barrier Island Response to Major Storms: Erosion, Deposition, and Recovery at Galveston Island, Texas: presented to Geological Society of America convention, Orlando, Florida, October 1985.

Xenoliths at Mount St. Helens: Do They Represent Major Volcanic Arc Constituents?: presented to University Student Geological Society, The University of Texas at Austin, April 1984.

Crustal Structure in Southwestern Washington: Implications from Wave Velocities in Mount St. Helens Lava Inclusions: presented to American Geophysical Union convention, San Francisco, California, December 1981.

Activities of a Professional Nature

Professional Societies

American Association of Petroleum Geologists

American Geophysical Union

Austin Geological Society

Environmental and Engineering Geophysical Society

Geological Society of America

Activities of a Professional Nature

Paine, J. G., 2002, Ground-penetrating radar survey of the Barton Springs Baptist Church Cemetery, Travis County, Texas: Austin, Earth Anomaly Associates, Project Report 3, 45 p.

Paine, J. G., 2003, Technical evaluation of aeromagnetic hydrocarbon exploration: report prepared for Crain, Caton & James, P.C., 68 p.

Paine, J. G., Smith, Lynn, and Dunlap, Ashley, 2008, EM-31 and EM-61 conductivity imaging to detect significant buried metal at the Luminant-Oncor Parkdale Facility, Dallas, Texas: Geophysical Reconnaissance Survey prepared for James McDaniel, P.E., Kleinfelder, 13 p.

Funding

Research Support

Principal Investigator: Airborne lidar system purchase and usage arrangement, General Land Office (August 22, 2023-August 31, 2030; $2,000,000).

Principal Investigator: Coastwide barrier island breaching study – phase 2, General Land Office of Texas (January 1, 2025-October 31, 2026; $431,838).

Principal Investigator: Earth MRI geologic mapping of Cornudas, Hueco Station, and Black Mountains quadrangles, Trans-Pecos, Texas, U.S. Geological Survey (January 23, 2023-January 22, 2026; $197,543).

Principal Investigator: Drilling Insight and Casing Estimator Site, FY2025, Railroad Commission of Texas (September 1, 2024-August 31, 2025; $200,000).

Principal Investigator: Texas STATEMAP FY2024-2025, U.S. Geological Survey (September 1, 2024-August 31, 2025; $609,750).

Principal Investigator: Texas Gulf shoreline update 2024, Texas General Land Office (December 19, 2023-August 31, 2025; $426,766).

Principal Investigator: Coastwide barrier island breaching study – phase 1, General Land Office (November 1, 2023-October 31, 2024; $202,098).

Principal Investigator: Surface casing estimator site and web database, FY2024, Railroad Commission of Texas (September 1, 2023-August 31, 2024; $200,000).

Principal Investigator: Texas STATEMAP FY2023-24, U.S. Geological Survey (September 1, 2023-August 31, 2024; $642,268).

Principal Investigator: STATEMAP Texas FY22-FY23: Geologic, water, and critical mineral-resource mapping on the Texas coastal plain and in central, western, and Trans-Pecos Texas, and U.S. GeoFramework Initiative tasks, U.S. Geological Survey (September 1, 2022-August 31, 2023; $515,606).

Principal Investigator: Surface casing estimator site and web database, FY2023, Railroad Commission of Texas (September 1, 2022-August 31, 2023; $200,000).

Principal Investigator: STATEMAP Texas FY21-FY22: Geologic and mineral-resource mapping on the Texas coastal plain and in central Texas and NGMDB updates, U.S. Geological Survey (September 17, 2021-September 16, 2022; $420,375).

Principal Investigator: Surface casing estimator site and web database, FY2022, Railroad Commission of Texas (September 1, 2021-August 31, 2022; $200,000).

Principal Investigator: Earth Mapping Resources Initiative (Earth MRI) geologic mapping in the Cornudas survey area, Trans-Pecos, Texas, U.S. Geological Survey (September 1, 2020-August 31, 2022; $100,000).

Principal Investigator: Surface geophysics across the Bee Creek Fault in southwestern Travis County, contract no. UTA21-000067, Travis County, Texas (April 5-September 30, 2021; $20,000).

Principal Investigator: 3Detail—state survey of geophysical log assets and organizational approaches, U.S. Geological Survey, Cooperative Agreement Number G20AC00421 (October 1, 2020-September 30, 2021; $100,000).

Principal Investigator: Surface casing estimator site and web database, FY2021, Railroad Commission of Texas (September 1, 2020-August 31, 2021; $200,000).

Principal Investigator: Geologic mapping of Texas Gulf of Mexico Coastal Plain, Mineral Resources of Texas, and the Central Texas Urban Corridor and STATEMAP Texas National Geologic Map Database (NGMDB) Phase 3, U.S. Geological Survey (August 1, 2020-July 31, 2021; $407,236).

Principal Investigator: Surface casing estimator site and web database, FY2020, Railroad Commission of Texas (September 1, 2019-August 31, 2020; $200,000).

Principal Investigator: Geologic mapping of upper Texas Gulf of Mexico Coastal Plain, middle Texas Gulf of Mexico Coastal Plain, mineral resources of Texas, and northeast Austin corridor, U.S. Geological Survey, Cooperative Agreement Number G19AC00225 (July 1, 2019-June 30, 2020; $140,571).

Principal Investigator: 2019 Airborne lidar survey and shoreline change update, Texas Gulf shoreline, Texas General Land Office (December 13, 2018-December 31, 2019; $409,248.40).

Principal Investigator: Collaborative near-surface geophysics teaching and research agreement, The University of the South (October 11, 2017-December 31, 2019; $100,000).

Principal Investigator: Surface casing estimator site and web database, Railroad Commission of Texas (September 1, 2018-August 31, 2019; $200,000).

Principal Investigator: Geologic mapping of the upper and middle Texas Gulf of Mexico coastal plain, Texas mineral/earth resources, and the west Austin corridor, U.S. Geological Survey (July 1, 2018-June 30, 2019; $151,038).

Principal Investigator: Seismic vulnerability and post-event actions, Texas Department of Transportation (January 1, 2016-December 31, 2018; $34,634).

Principal Investigator: Powderhorn Ranch Geoenvironmental Atlas: Geology, wetlands, and coastal hazards, General Land Office (October 1, 2016-March 31, 2018; $36,592).

Principal Investigator: Emergency response: post-Harvey lidar and imagery, Texas Gulf Coast, General Land Office (September 1-December 31, 2017; $99,930).

Principal Investigator: 2016 Airborne lidar survey of the Texas Gulf shoreline, General Land Office (November 7, 2016-December 31, 2017; $400,191).

Principal Investigator: Coastal geomorphology monitoring protocol development summary for Padre Island National Seashore, U.S. Department of the Interior, National Park Service (September 12, 2014-December 31, 2015, $10,601).

Principal Investigator: Measurement and characterization of bay shoreline change, GLO Contract Number 13-258-000-7485 (January 2013 - January 2015, $1,000,000).

Principal Investigator: Historical Texas Gulf shoreline change through 2012, GLO Contract Number 09-074-000, CEPRA Project No. 1563, Work Order No. 7776 (January 2013 - January 2014, $95,000).

Principal Investigator (with M. Young): Determining wetlands distribution, lake depths, and topography using airborne lidar and imagery on the North Slope, Deadhorse area, Alaska, Great Bear Petroleum LLC, SRA no. 12-000752 (January 2012 - January 2013, $661,318).

Principal Investigator: Shoreline change and beach/dune morphodynamics along the Texas Gulf coast, GLO Contract Number 09-242-000-3789 (January 2010 - September 2010, $800,000).

Principal Investigator: Updating long-term change rates of the Texas Gulf shoreline, GLO Contract Number 10-041-000-3737 (January 2010 - August 2010, $147,418).

Principal Investigator: Examining water saturation and stratigraphic trends at the WCS facility, Andrews County, Texas using electromagnetic induction, Texas Commission on Environmental Quality (2009 - 2010, $50,000).

Principal Investigator: Geophysical investigation of salinization in an oilfield in Winkler County, Texas, Heritage Standard Corporation (2008 - 2009, $5,589).

Principal Investigator: Geophysical investigation of salinization in an oilfield in Winkler County, Texas: phase two, Heritage Standard Corporation (2008 - 2009, $8520).

Principal Investigator: Preliminary geophysical survey to detect significant shallow voids near Timpson, Texas, Railroad Commission of Texas (2008 - 2009, $8000).

Principal Investigator: Preliminary Investigations of subsidence, collapse, and potential for continued growth of the Daisetta Sinkhole, Liberty County, Texas, Jackson School of Geosciences Rapid Response Program (2008 - 2009, $40,000).

Principal Investigator: Preliminary Investigations of subsidence, collapse, and potential for continued growth of the Daisetta Sinkhole, Liberty County, Texas, Railroad Commission of Texas (2008 - 2009, $10,000).

Principal Investigator: Seismic and radar imaging of a suspected growth fault near Matagorda, Texas, U.S. Department of Energy, subcontract through Texas A&M University (2008 - 2009, $5000).

Principal Investigator: Support for Environmental and Engineering University: geophysical instruction for nongeophysicists at SAGEEP, Department of Energy Office of Science Solicitation DE-PS02-08ER08-01 (2008, $5000.00).

Principal Investigator: Delineating salinity sources along segments of the Colorado River and Petronila Creek, phase 2, Texas Commission on Environmental Quality (2004 - 2005, $364,629).

Principal Investigator: Delineating salinity sources along segments of the Colorado River and Petronila Creek, phase 1, Texas Commission on Environmental Quality (2004, $90,066).

Principal Investigator: A new look at the Mustang Island Wetlands, Texas General Land Office (2003 - 2004, $45,131).

Principal Investigator: Investigation of recharge-related airborne geophysical anomalies in the Seco Creek area, year 2, U.S. Geological Survey (2003 - 2004, $10,000).

Principal Investigator: Lower Rio Grande Valley geophysics, U.S. Geological Survey (2003 - 2004, $10,000).

Principal Investigator: Evaluating the integrity of the Ogallala fine-grained zones using airborne electromagnetic induction, BWXT Pantex (2003, $317,185).

Principal Investigator: Ground-penetrating radar investigation of The University of Texas at Austin Charter School site, Travis County, Texas, Safety Office, The University of Texas at Austin (2003, ~$5,000).

Principal Investigator: Geomorphic and geologic services in support of archeological investigations, Texas Department of Transportation (2002 - 2003, $40,000).

Principal Investigator: Investigation of recharge-related airborne geophysical anomalies in the Seco Creek area, U.S. Geological Survey (2002 - 2003, $10,000).

Principal Investigator: Reconnaissance TDEM survey of the perched aquifer at the Pantex Plant, Sandia National Laboratories (2000 - 2003, $20,000).

Principal Investigator: Establishing minimum depths to bedrock for the Winedale water supply trench, Safety Office, The University of Texas at Austin (2002, ~$3,000).

Principal Investigator: Identifying buried utility lines on the UT Main Campus using ground-penetrating radar, Utilities Office, The University of Texas at Austin (2002, ~$3,000).

Principal Investigator: Training for seismic refraction instrument to determine bedrock depth beneath roads, Texas Department of Transportation (2001 - 2002, $61,938).

Principal Investigator: Comparing ground motion at the TDA Metrology Laboratory and Proposed Laboratory Sites, Texas Department of Transportation (2001, $14,998).

Principal Investigator: Establishing acceptable ground motion at the TDA Metrology Laboratory, Austin, Texas, Texas Department of Agriculture (2001, $8,884).

Principal Investigator: Evaluating potential ground-water resources on State Lands in El Paso County, Texas using airborne geophysics, Texas General Land Office (2001, $165,532).

Principal Investigator: Assessing Lacy Creek salinization using airborne geophysics, Upper Colorado River Authority (2000 - 2001, $45,847).

Principal Investigator: Detecting buried waste at the UT Pickle Research Campus using geophysics, Safety Office, The University of Texas at Austin (2000 - 2001, $4,102).

Principal Investigator: Geomorphic and geologic services in support of archeological investigations, Texas Department of Transportation (2000 - 2001, $40,000).

Principal Investigator: Rapid geophysical identification and assessment of ground water for the Lower Rio Grande Valley, Texas Water Development Board (1999 - 2000, $150,000).

Principal Investigator: Mapping near-surface salinization using long-wavelength AIRSAR, National Aeronautics and Space Administration (1998 - 2000, $126,000).

Principal Investigator: Estimating depth to bedrock feasibility study, Texas Department of Transportation (1998 - 1999, $78,000).

Principal Investigator: Supplementary study of inferred fault to support license application, Texas Low-Level Radioactive Waste Disposal Authority (1998 - 1999, $89,169).

Principal Investigator: Ground investigation of geophysical anomalies detected by airborne survey of the Hatchel area, Runnels County, Texas, Texas Railroad Commission (1998, $41,964).

Co-Investigator: Assessing the significance of nine archeological sites along the Houston Ship Channel in Harris County, Texas, U.S. Army Corps of Engineers (1997 - 1998, $26,812).

Principal Investigator: Obtaining depth to bedrock estimates from existing pedological, geological, and geomorphological data, FY96-98, Texas Department of Transportation (1996 - 1998, $60,000).

Principal Investigator: Geophysical screening of potential brine leakage sites, Runnels County, Texas, Texas Railroad Commission (1995 - 1996, $134,244).

Principal Investigator: Geophysical screening of potential brine leakage sites, Runnels County, Texas, Texas Railroad Commission (1994 - 1995, $23,444).

Publications

Peer Reviewed Journal Articles

Kyle, J. R., Paine, J. G., Elliott, B. A., Childress, T. M., and Scanlon, B. R., 2026, Opportunities and challenges for adaptive reuse of bauxite residue for U.S. critical minerals supply, geohazard reduction, and land restoration, Texas Gulf Coast, USA: Geological Society of America Today, v. 36, no. 9, p. 4–12, http://doi.org/https://doi.org/10.1130/GSATG616A.1.

Caudle, T., Paine, J. G., Andrews, J. R., and Saylam, K., 2019, Beach, dune, and nearshore analysis of southern Texas Gulf Coast using Chiroptera LIDAR and imaging system: Journal of Coastal Research, v. 35, no. 2, p. 251–268, http://doi.org/10.2112/JCOASTRES-D-18-00069.1.

Paine, J. G., Collins, E. W., and Costard, L., 2018, Spatial discrimination of complex, low-relief Quaternary siliciclastic strata using airborne lidar and near-surface geophysics: an example from the Texas coastal plain, USA: Engineering, v. 4, no. 5, p. 676–684, http://doi.org/10.1016/j.eng.2018.09.005.

Caudle, T., and Paine, J. G., 2017, Applications of coastal data collected in the Texas High School Coastal Monitoring Program (THSCMP): Journal of Coastal Research, v. 33, no. 3, p. 738-746, http://doi.org/10.2112/JCOASTRES-D-16-00033.1.

Paine, J. G., and Collins, E. W., 2017, Identifying ground-water resources and intrabasinal faults in the Hueco Bolson, West Texas, using airborne electromagnetic induction and magnetic-field data: Journal of Environmental & Engineering Geophysics, v. 22, no. 1, p. 63-81, http://doi.org/10.2113/JEEG22.1.63.

Paine, J. G., Caudle, T., and Andrews, J. R., 2017, Shoreline and sand storage dynamics from annual airborne lidar surveys, Texas Gulf Coast: Journal of Coastal Research, v. 33, no. 3, p. 487-506, http://doi.org/10.2112/JCOASTRES-D-15-00241.1.

Zalachoris, G., Rathje, E. M., and Paine, J. G., 2017, Vs30 characterization of Texas, Oklahoma, and Kansas using the P-wave seismogram method: Earthquake Spectra, v. 33, no. 3, p. 943-961, http://doi.org/10.1193/102416EQS179M.

Costard, L., and Paine, J. G., 2015, Characterizing initial-state conductivity distribution at a CO2 injection site with airborne, surface, and borehole electromagnetic induction methods: Environmental Geosciences, v. 22, no. 3, p. 75-83, http://doi.org/10.1306/eg.06191515004.

Feagin, R. A., Yeager, K. M., Brunner, C. A., and Paine, J. G., 2013, Active fault motion in a coastal wetland: Matagorda, Texas, Geomorphology, v. 199, p. 150–159.

Paine, J. G., Buckley, S. M., Collins, E. W., and Wilson, C. R., 2012, Assessing collapse risk in evaporite sinkhole-prone areas using microgravimetry and radar interferometry: Journal of Environmental and Engineering Geophysics, v. 17, no. 2, p. 75?87.

Paine, J. G., Mathew, S., and Caudle, T., 2012, Historical shoreline change through 2007, Texas Gulf Coast: rates, contributing causes, and Holocene context: GCAGS Journal, v. 1, p. 13?26.

Paine, J. G., and Collins, E. W., 2010, Characterizing oil field salinization using airborne, surface, and borehole geophysics: an example from the upper Colorado River Basin, Texas: Environmental Geosciences, v. 17, no. 4, p. 193?207.

Paine, J. G., 2009, Geophysics over the Texas Coast, in Laubach, S. E., and Tinker, S. W., eds., Earth's art: celebrating the Centennial of the Bureau of Economic Geology, 1909–2009: The University of Texas at Austin, Bureau of Economic Geology, p. 36–37.

Paine, J. G., Collins, E. W., Nance, H. S., and Niemann, K. L., 2009, Combining airborne electromagnetic induction and hydrochemistry to quantify salinity contributions to a large-basin stream, Colorado River, Texas, USA: Near Surface Geophysics, v. 7, no. 4, p. 271–284.

Paine, J. G., Nance, H. S., Collins, E. W., and Niemann, K. L., 2007, Quantifying contributions to stream salinity using electromagnetic induction and hydrochemistry in a small Texas coastal-plain basin: Applied Geochemistry, v. 22, p. 2207–2224.

Paine, J. G., 2003, Determining salinization extent, identifying salinity sources, and estimating chloride mass using surface, borehole, and airborne electromagnetic induction methods: Water Resources Research, v. 39, no. 3, p. 3-1–3-10.

Morton, R. A., Paine, J. G., and Blum, M. D., 2000, Responses of stable bay-margin and barrier-island systems to Holocene sea-level highstands, western Gulf of Mexico: Journal of Sedimentary Research, v. 70, no. 3, p. 478–490.

Scanlon, B. R., Paine, J. G., and Goldsmith, R. S., 1999, Evaluation of electromagnetic induction as a reconnaissance technique to characterize unsaturated flow in an arid setting: Ground Water, v. 37 no. 2, p. 296–304.

Paine, J. G., Goldsmith, R. S., and Scanlon, B. R., 1998, Electrical conductivity and gamma-ray response to clay, water, and chloride content in fissured sediments, Trans-Pecos Texas: Environmental & Engineering Geoscience, v. 4, no. 2, p. 225–239.

Paine, J. G., Morton, R. A., and Garner, L. E., 1997, Site dependency of shallow seismic data quality in saturated, unconsolidated coastal sediments: Journal of Coastal Research, v. 13 no. 2, p. 564–574.

Scanlon, B. R., Goldsmith, R. S., and Paine, J. G., 1997, Analysis of focused unsaturated flow beneath fissures in the Chihuahuan Desert, Texas, USA: Journal of Hydrology, v. 203, p. 58–78.

Morton, R. A., Gibeaut, J. C., and Paine, J. G., 1995, Meso-scale transfer of sand during and after storms: implications for prediction of shoreline movement: Marine Geology, v. 126, p. 161–179.

Morton, R. A., Paine, J. G., and Gibeaut, J. C., 1994, Stages and durations of post-storm beach recovery, southeastern Texas coast, U.S.A.: Journal of Coastal Research, v. 10, no. 4, p. 884–908.

Paine, J. G., 1994, Subsidence beneath a playa basin on the Southern High Plains, U.S.A.: evidence from shallow seismic data: Geological Society of America Bulletin, v. 106 no. 2, p. 233–242.

Morton, R. A., Leach, M. P., Paine, J. G., and Cardoza, M. A., 1993, Monitoring beach changes using GPS surveying techniques: Journal of Coastal Research, v. 9 no. 3, p. 702–720.

Paine, J. G., 1993, Subsidence of the Texas coast: inferences from historical and late Pleistocene sea levels: Tectonophysics, v. 222 no. 3/4, p. 445–458.

Sharp, J. M., Jr., Raymond, R. H., Germiat, S. J., and Paine, J. G., 1991, Re-evaluation of the causes of subsidence along the Texas Gulf of Mexico coast and some extrapolations of future trends, in Land subsidence: IAHS, Publication No. 200, p. 397–405.

Prewitt, E. R., and Paine, J. G., 1988, The Swan Lake site (41AS16) on Copano Bay, Aransas County, Texas: settlement, subsistence, and sea level: Texas Archeological Society Bulletin, v. 58, p. 147–174.

Peer Reviewed Book Chapters

Paine, J. G., Collins, E. W., and Caudle, T. L., 2026, Matagorda Formation—A new Holocene coastal stratigraphic unit, Texas (chapter E), in Orndorff, R. C., Stamm, N. R., and Soller, D. R., eds., Stratigraphic notes—volume 2, 2025: U.S. Geological Survey, Professional Paper, no. 1879-2, 22 p., http://doi.org/10.3133/pp1879v2.

Paine, J. G., Costard, L., Andrews, J., Averett, A., Saylam, K., and Hupp, J., 2021, Determining annual to decadal subsidence areas and rates using airborne lidar, GPS surveys, and topographic maps at the Wink sinkholes, West Texas, in Johnson, K. S., Land, L., and Decker, D. D., eds., Evaporite karst in the Greater Permian Evaporite Basin (GPEB) of Texas, New Mexico, Oklahoma, Kansas, and Colorado: Norman, Oklahoma, Oklahoma Geological Survey, Circular, v. 113, p. 93-103.

Paine, J. G., Andrews, J. R., Saylam, K., and Tremblay, T. A., 2015, Airborne LiDAR-based wetland and permafrost-feature mapping on an Arctic coastal plain, North Slope, Alaska, in Tiner, R. W., Lang, M. W., and Klemas, V. V., eds., Remote sensing of wetlands: applications and advances: London, CRC Press, p. 413-434.

Paine, J. G., and Minty, B. R. S., 2005, Chapter 11. Airborne hydrogeophysics, in Rubin, Yoram, and Hubbard, S. S. (eds.), Hydrogeophysics: The Netherlands, Springer, Water Science and Technology Library: v. 50, p. 333–357.

Non Peer Reviewed Authored Books

Paine, J. G., and Murphy, M. R., 2000, Pavement deflection and seismic refraction for determining bedrock type, depth, and physical properties beneath roads: The University of Texas at Austin, Bureau of Economic Geology, Report of Investigations, no. 259, 53 p.

Paine, J. G., Dutton, A. R., and Blum, M. U., 1999, Using airborne geophysics to identify salinization in West Texas: The University of Texas at Austin, Bureau of Economic Geology, Report of Investigations, no. 257, 69 p.

Paine, J. G., 1995, Shallow-seismic evidence for playa basin development by dissolution-induced subsidence on the Southern High Plains, Texas: The University of Texas at Austin, Bureau of Economic Geology, Report of Investigations, no. 233, 47 p.

Paine, J. G., Avakian, A. J., Gustavson, T. C., Hovorka, S. D., and Richter, Bernd, 1994, Geophysical and geochemical delineation of sites of saline-water inflow to the Canadian River, New Mexico and Texas: The University of Texas at Austin, Bureau of Economic Geology, Report of Investigations, no. 225, 73 p.

White, W. A., and Paine, J. G., 1992, Wetland plant communities, Galveston Bay System: Galveston Bay National Estuary Program, Publication GBNEP-16, 124 p.

Non Peer Reviewed Journal Articles

Costard, L., and Paine, J. G., 2015, Characterizing initial-state conductivity distribution at a CO2 injection site with airborne, surface, and borehole electromagnetic induction measurements: Proceedings, 28th Symposium on the Application of Geophysics to Engineering and Environmental Problems, 9 p.

Paine, J. G., 2015, DEG invites open dialogue: AAPG Explorer, v. 36, no. 3, p. 54, ISSN 0195-2986.

Paine, J. G., 2015, Filling the information gap: AAPG Explorer, v. 36, no. 6, p. 50.

Paine, J. G., Collins, E. W., and Costard, L., 2015, Airborne lidar and near-surface geophysics: a new approach to discriminating Quaternary depositional units on the Texas Coastal Plain: GCAGS Transactions, v. 65, p. 313-322.

Paine, J. G., Collins, E. W., and Costard, L., 2015, Airborne lidar and near-surface geophysics: a new approach to discriminating Quaternary depositional units on the Texas Coastal Plain: Proceedings, 28th Symposium on the Application of Geophysics to Engineering and Environmental Problems, 10 p.

Smith, B. D., Paine, J. G., Thamke, J. N., Hammack, R., and Ball, L. B., 2015, Airborne electromagnetic surveys to map groundwater salinity in areas of hydrocarbon production: Proceedings, 28th Symposium on the Application of Geophysics to Engineering and Environmental Problems, Austin, Texas, p. 306-309.

Paine, J. G., 2014, Our license from society: AAPG Explorer, v. 35, no. 12, p. 54, ISSN 0195-2986.

Paine, J. G., 2014, President's Column: Environmental Geosciences, v. 21, no. 3, p. iii.

Paine, J. G., 2014, President's Column: Environmental Geosciences, v. 21, no. 4, p. iii.

Paine, J. G., 2014, Unintended consequences to anticipated issues: AAPG Explorer, v. 35, no. 9, p. 70, ISSN 0195-2986.

Paine, J. G., Andrews, J. R., Saylam, K., Tremblay, T. A., Averett, A. R., Caudle, T. L., Meyer, T., and Young, M. H., 2013, Airborne lidar on the Alaskan North Slope: wetlands mapping, lake volumes, and permafrost features: The Leading Edge, v. 32, no. 7, p. 798–805.

Caudle, Tiffany, and Paine, J. G., 2012, Pre-college student involvement in Texas coastal research: Gulf Coast Association of Geological Societies Transactions, v. 62, p. 27?38.

Paine, J. G., Holt, J. W., Sharp, J. M., Jr., Bass, B., Comair, G., Fathy, E., Goodwin, K., Gupta, P. R., Meyer, K. J., and Murphy, B., 2012, Integrated, student-led hydrogeophysical investigations at a suspected central Texas sinkhole, in Symposium on the Application of Geophysics to Engineering and Environmental Problems, Tucson, Arizona, March 29, 1 p.

Paine, J. G., 2010, Geophysics for environmental investigations: Guest Editor Special Issue Introduction: Environmental Geosciences, v. 17, no. 4, p. iv.

Paine, J. G., Buckley, S. M., Collins, E. W., and Wilson, C. R., 2010, Assessing collapse risk in evaporite sinkhole-prone areas using gravimetry and radar interferometry, in Near-surface geophysics and geohazards, volume 2, Proceedings of the 4th International Conference on Environmental and Engineering Geophysics, June 14–19, Chendu, China, p. 753–763.

Paine, J. G., 2009, Geophysics over the Texas Coast, in Laubach, S. E., and Tinker, S. W., eds., 2009, Earth’s art: celebrating the Centennial of the Bureau of Economic Geology, 1909–2009: The University of Texas at Austin, Bureau of Economic Geology, p. 36–37.

Paine, J. G., Buckley, Sean, Collins, E. W., Wilson, C. R., and Kress, Wade, 2009, Assessing sinkhole potential at Wink and Daisetta using gravity and radar interferometry, in Proceedings, 22nd Symposium on the Application of Geophysics to Engineering and Environmental Problems, Fort Worth, Texas, March 29–April 2, p. 480–488.

Paine, J. G., 2008, Passive electrical monitoring of aerobic and anaerobic processes using septic systems as an analog, in Proceedings, 21st Symposium on the Application of Geophysics to Engineering and Environmental Problems: new partnerships, new discoveries, Philadelphia, April 6–10, p. 255–263.

Paine, J. G., and Collins, E. W., 2007, After the helicopter is gone: investigating anomalies in stream-axis EM data from the Colorado River, Texas, in Proceedings, Symposium on the Application of Geophysics to Engineering and Environmental Problems: Environmental and Engineering Geophysical Society, p. 426–435 (CD-ROM).

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