



The Bureau of Economic Geology

Where energy, the environment, and the economy converge.



Established in 1909, the Bureau of Economic Geology is the oldest organized research unit at The University of Texas at Austin. The Bureau functions as the State Geological Survey of Texas, and Scott W. Tinker as its director and state geologist. Bureau researchers spearhead basic and applied research projects globally in energy resources and economics, coastal and environmental studies, land resources and use, geologic and mineral mapping, hydrogeology, geochemistry, and subsurface nano-technology. The Bureau provides advisory, educational, technical, and informational services related to the resources and geology of Texas, the nation, and the world.

The Bureau is an international leader in a number of research thrusts, working at the intersection of energy, the environment, and the economy, with strengths that include:

- ▶ Unconventional oil and gas exploration and production
- ▶ Salt tectonics
- ▶ Natural fractures and structural diagenesis
- ▶ Subsurface micro- and nano-sensing
- ▶ Reservoir characterization in carbonates, mudrocks, and sandstones
- ▶ Carbon storage in geological reservoirs
- ▶ The water-energy nexus
- ▶ Energy economics

Talented people are the Bureau's formula for success. The research staff includes more than 140 scientists, engineers, and economists, representing 27 countries, working in integrated, multidisciplinary research teams. Together with 60 skilled graduate students, 15 postdocs, and 50 professional support staff, they find solutions to the world's greatest challenges in energy and environmental research.

Superb facilities and equipment give researchers the tools they need to find objective, rock-based research answers.

- ▶ More than 15 individual laboratories hosting research teams investigating everything from nanoparticles to shale porosity and permeability
- ▶ Three massive well core research and storage facilities, in Houston, Austin, and Midland — collectively, the largest archive of rock material in the world



- ▶ One of the largest collections of well logs in the U.S.
- ▶ An extensive inventory of modern imaging devices and integrated technologies for outcrop and land-surface mapping

Over 100 years of producing research results have earned the Bureau an unparalleled reputation.

Successful outcomes can be measured by many yardsticks, and Bureau researchers more than measure up.

- ▶ Over 150 peer-reviewed articles and books published annually
- ▶ Hundreds of abstracts and peer-reviewed articles published each year in conference proceedings volumes
- ▶ More than 50 keynote addresses made annually
- ▶ Researchers are frequently presidents of international professional societies, editors of major professional journals, and recognized by peers with top medals and awards in their fields



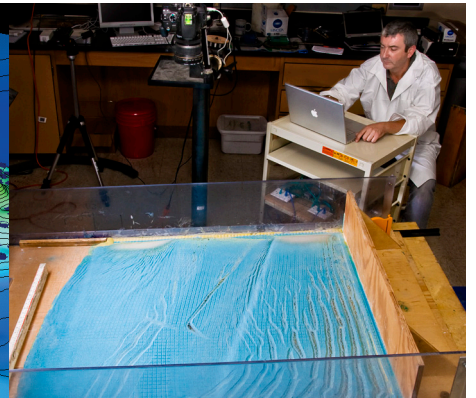
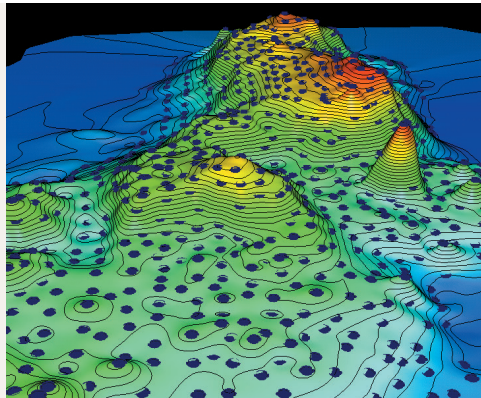
With its reputation for success, external financial support flows into the Bureau.

Research and operations expenditures have increased from roughly \$10 million to more than \$30 million over the last decade. Bureau research is funded mostly via grants and contracts with various federal, state, and local governments, private agencies and foundations, and industry-based sponsors.



Government, agency, foundation, and nongovernmental organization (NGO) partners include:

- ▶ State of Texas
- ▶ U.S. Department of Energy
- ▶ U.S. Geological Survey
- ▶ NASA
- ▶ Cynthia & George Mitchell Foundation
- ▶ O'Donnell Foundation
- ▶ Alfred P. Sloan Foundation
- ▶ Environmental Defense Fund



Partnerships drive strategy, innovation, and investigation, and the Bureau engages partners, new and old, on a multitude of levels. Investments in Bureau research provide incredible returns. Corporate partners participate in and gain vital new insights from the Bureau's many research consortia.

- ▶ Advanced Energy Consortium
- ▶ State of Texas Advanced Resource Recovery
- ▶ Reservoir Characterization Research Laboratory
- ▶ Applied Geodynamics Laboratory
- ▶ Center for Energy Economics
- ▶ Mudrock Systems Research Laboratory
- ▶ Fracture Research and Application Consortium
- ▶ Deep Reservoir Quality, Gulf of Mexico
- ▶ Gulf Coast Carbon Center
- ▶ Quantitative Clastics Laboratory
- ▶ Center for Integrated Seismicity Research
- ▶ Texas Consortium for Computational Seismology
- ▶ Tight Oil Resource Assessment



Service to society is a crucial element of the Bureau's mission, and every effort is made to inform people about geoscience issues and to provide educational outreach. The Bureau sponsors Earth Science Week Career Day for middle school students, lends personnel and expertise to the GeoFORCE college prep program for underserved students, conducts an annual Industry Day open house for company representatives, and hosts a professional Information Geologist to serve educators and the general public.



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Jackson School of Geosciences
The University of Texas at Austin